



# Full wwPDB X-ray Structure Validation Report ⓘ

Feb 1, 2016 – 10:08 PM GMT

PDB ID : 4W29  
Title : 70S ribosome translocation intermediate containing elongation factor EFG/GDP/fusidic acid, mRNA, and tRNAs trapped in the AP/AP pe/E chimeric hybrid state.  
Authors : Zhou, J.; Lancaster, L.; Donohue, J.P.; Noller, H.F.  
Deposited on : 2014-07-02  
Resolution : 3.80 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

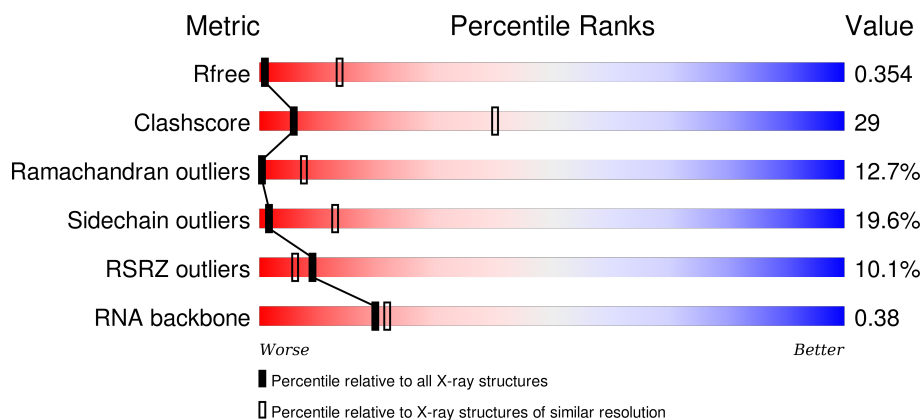
# 1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

## *X-RAY DIFFRACTION*

The reported resolution of this entry is 3.80 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	1317 (4.10-3.50)
Clashscore	102246	1458 (4.10-3.50)
Ramachandran outliers	100387	1397 (4.10-3.50)
Sidechain outliers	100360	1392 (4.10-3.50)
RSRZ outliers	91569	1325 (4.10-3.50)
RNA backbone	2183	1070 (4.76-2.80)

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>5%</div> <div>41%</div> <div>44%</div> <div>14%</div> </div>
1	CB	235	<div> <div>6%</div> <div>40%</div> <div>43%</div> <div>16%</div> </div>
2	AC	207	<div> <div>18%</div> <div>36%</div> <div>48%</div> <div>14%</div> </div>
2	CC	207	<div> <div>6%</div> <div>41%</div> <div>50%</div> <div>8%</div> </div>

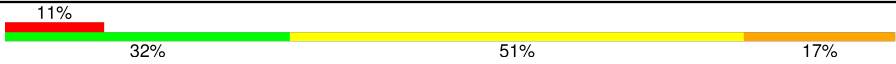
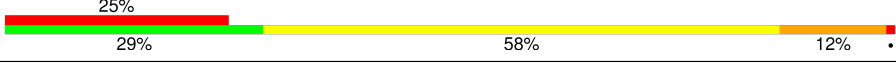
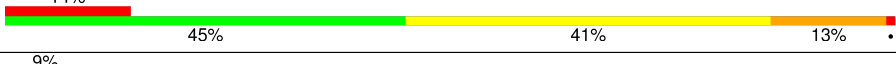
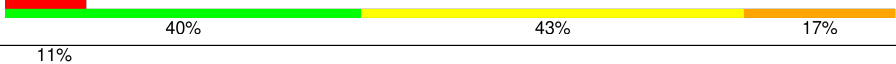
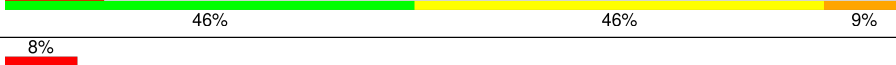

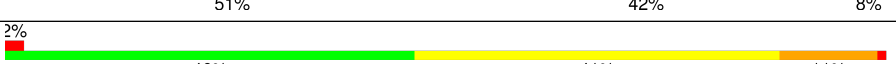
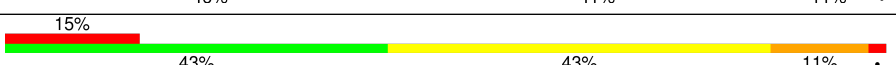
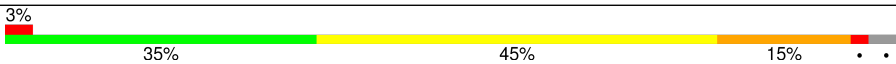

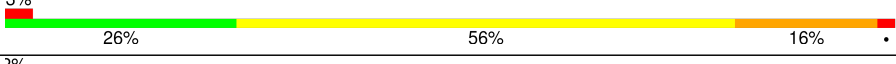
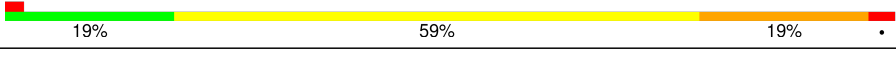
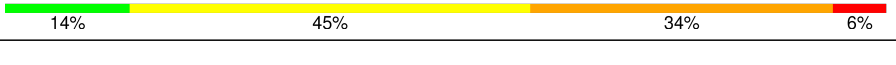


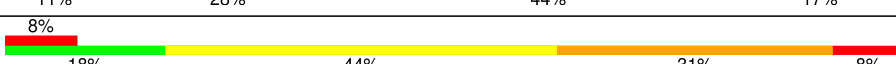
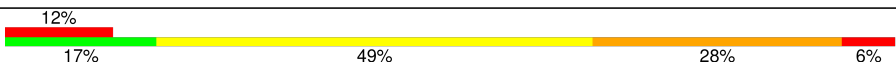
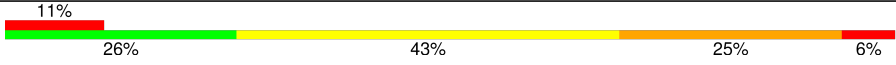
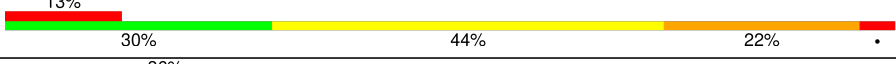






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Mol	Chain	Length	Quality of chain
3	AD	208	
3	CD	208	
4	AE	151	
4	CE	151	
5	AF	101	
5	CF	101	
6	AG	155	
6	CG	155	
7	AH	138	
7	CH	138	
8	AI	127	
8	CI	127	
9	AJ	99	
9	CJ	99	
10	AK	119	
10	CK	119	
11	AL	125	
11	CL	125	
12	AM	125	
12	CM	125	
13	AN	60	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

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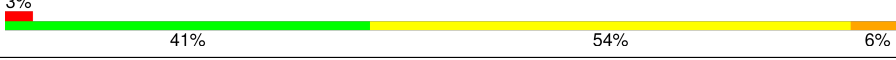
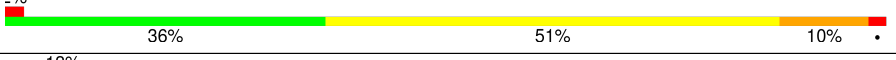
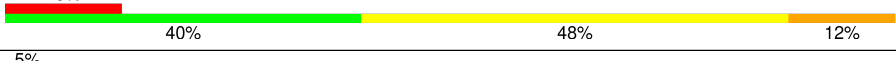
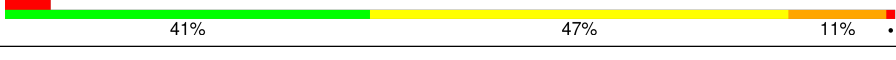

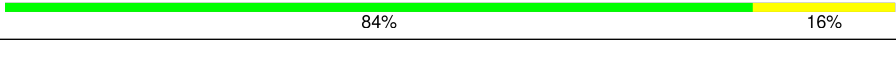
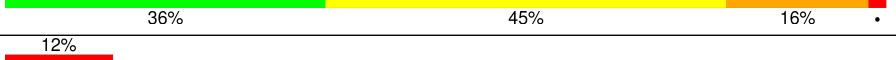


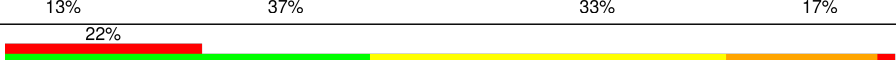
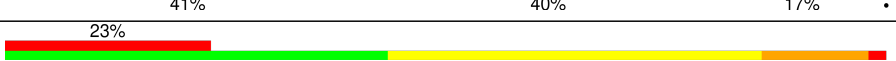
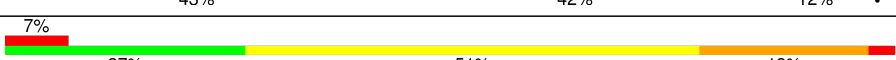
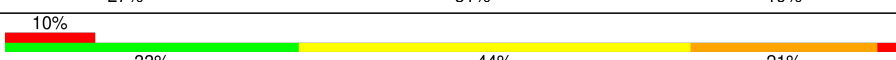
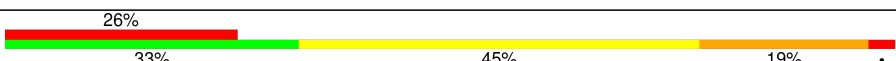
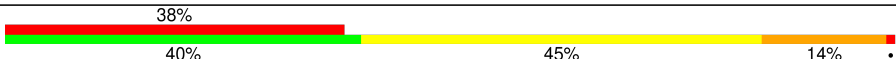
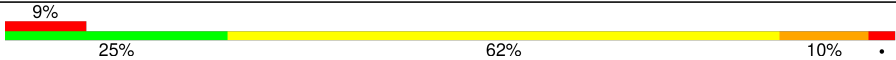
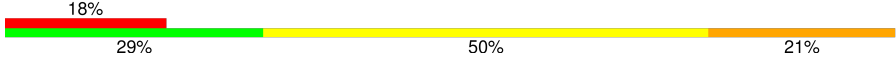
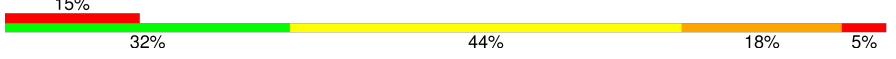
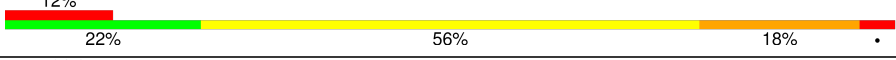
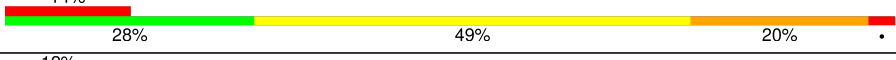
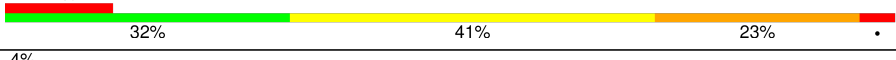
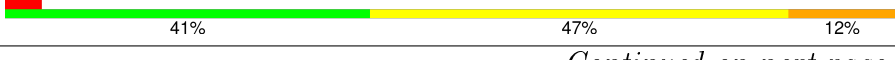

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Mol	Chain	Length	Quality of chain
15	CP	84	
16	AQ	100	
16	CQ	100	
17	AR	70	
17	CR	70	
18	AS	79	
18	CS	79	
19	AT	99	
19	CT	99	
20	AY	687	
20	CY	687	
21	AA	1511	
21	CA	1511	
22	AW	77	
22	CW	77	
23	AV	36	
23	CV	36	
24	AX	78	
24	CX	78	
25	BC	228	
25	DC	228	
26	BD	275	
26	DD	275	
27	BE	205	
27	DE	205	

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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	139	
33	DN	139	
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	B1	93	
47	D1	93	
48	B2	71	
48	D2	71	
49	B3	60	
49	D3	60	
50	B4	35	
50	D4	35	
51	B5	59	
51	D5	59	
52	B6	50	
52	D6	50	

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Mol	Chain	Length	Quality of chain
53	B7	49	
53	D7	49	
54	B8	64	
54	D8	64	
55	B9	37	
55	D9	37	
56	Be	103	
56	De	103	
57	Bf	31	
57	Bg	31	
57	Df	31	
57	Dg	31	
58	Bh	30	
58	Dh	30	
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	GDP	CY	701	-	-	X	-
62	FUA	AY	702	-	-	X	X
62	FUA	CY	702	-	-	-	X
63	NMY	AA	1601	-	-	X	X
63	NMY	BA	2902	-	-	-	X
63	NMY	BA	2903	-	-	-	X
63	NMY	BA	2904	-	-	X	X

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
63	NMY	CA	1601	-	-	X	-
63	NMY	DA	2901	-	-	X	-

## 2 Entry composition

There are 64 unique types of molecules in this entry. The entry contains 312066 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 protein called Elongation factor G.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
20	AY	661	Total	C	N	O	S	0	0	0
			5173	3288	884	983	18			
20	CY	661	Total	C	N	O	S	0	0	0
			5173	3288	884	983	18			

There are 6 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
AY	40	THR	HIS	CONFLICT	UNP Q72I01
AY	129	LYS	HIS	CONFLICT	UNP Q72I01
AY	226	ASN	HIS	CONFLICT	UNP Q72I01
CY	40	THR	HIS	CONFLICT	UNP Q72I01
CY	129	LYS	HIS	CONFLICT	UNP Q72I01
CY	226	ASN	HIS	CONFLICT	UNP Q72I01

- Molecule 21 is a RNA chain called 16S RRNA.

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

- Molecule 22 is a RNA chain called tRNA.

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

- Molecule 23 is a RNA chain called mRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	AV	36	Total	C	N	O	P	0	0	0
			783	351	159	237	36			
23	CV	36	Total	C	N	O	P	0	0	0
			781	352	159	235	35			

- Molecule 24 is a RNA chain called tRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
24	AX	78	Total	C	N	O	P	0	0	0
			1629	730	293	531	75			
24	CX	78	Total	C	N	O	P	0	0	0
			1629	730	293	531	75			

There are 4 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
AX	77	VAL	-	EXPRESSION TAG	GB U000096.3
AX	78	ACE	-	EXPRESSION TAG	GB U000096.3
CX	77	VAL	-	EXPRESSION TAG	GB U000096.3
CX	78	ACE	-	EXPRESSION TAG	GB U000096.3

- 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			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
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	-	EXPRESSION TAG	UNP Q72I05
BF	3	GLU	-	EXPRESSION TAG	UNP Q72I05
BF	4	VAL	-	EXPRESSION TAG	UNP Q72I05
BF	5	ALA	-	EXPRESSION TAG	UNP Q72I05
BF	6	VAL	-	EXPRESSION TAG	UNP Q72I05
DF	2	LYS	-	EXPRESSION TAG	UNP Q72I05
DF	3	GLU	-	EXPRESSION TAG	UNP Q72I05
DF	4	VAL	-	EXPRESSION TAG	UNP Q72I05
DF	5	ALA	-	EXPRESSION TAG	UNP Q72I05
DF	6	VAL	-	EXPRESSION TAG	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	S	0	0	0
			851	510	170	171				
31	DJ	170	Total	C	N	O	S	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	139	Total	C	N	O	S	0	0	0
			1114	717	207	186	4			
33	DN	139	Total	C	N	O	S	0	0	0
			1114	717	207	186	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			
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			
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 L28.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
47	B1	93	Total	C	N	O	S	0	0	0
			732	460	145	126	1			
47	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 48 is a protein called 50S ribosomal protein L29.

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

- Molecule 49 is a protein called 50S ribosomal protein L30.

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

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

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

- Molecule 51 is a protein called 50S ribosomal protein L32.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
51	B5	59	Total	C	N	O	S	0	0	0
			459	288	90	76	5			
51	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 52 is a protein called 50S ribosomal protein L33.

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

- Molecule 53 is a protein called 50S ribosomal protein L34.

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

- Molecule 54 is a protein called 50S ribosomal protein L35.

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

- Molecule 55 is a protein called 50S ribosomal protein L36.

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

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

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

- Molecule 57 is a protein called 50S ribosomal protein L7/L12.

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

- Molecule 58 is a protein called 50S ribosomal protein L7/L12.

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

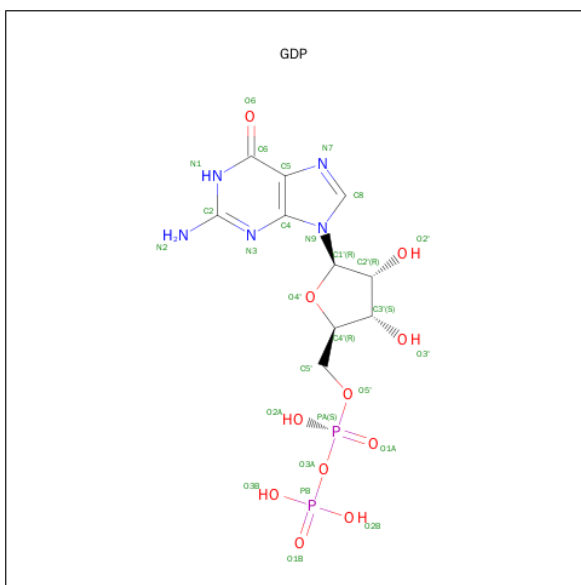
- Molecule 59 is a RNA chain called 23S RRNA.

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 RRNA.

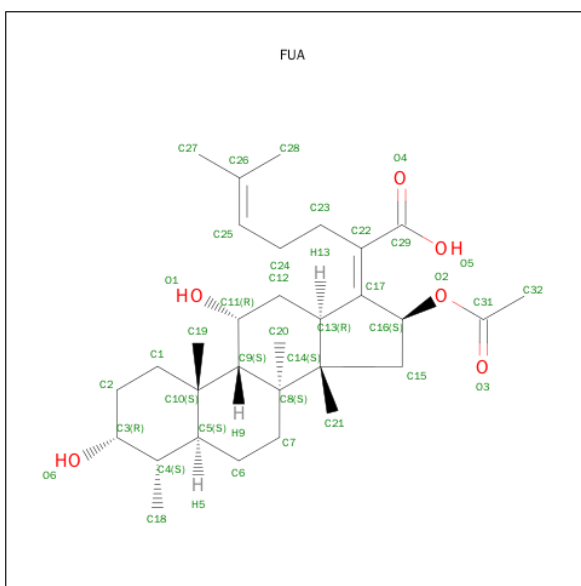
Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
60	BB	119	Total	C	N	O	P	0	0	0
			2551	1136	471	826	118			
60	DB	119	Total	C	N	O	P	0	0	0
			2551	1136	471	826	118			

- Molecule 61 is GUANOSINE-5'-DIPHOSPHATE (three-letter code: GDP) (formula: C<sub>10</sub>H<sub>15</sub>N<sub>5</sub>O<sub>11</sub>P<sub>2</sub>).



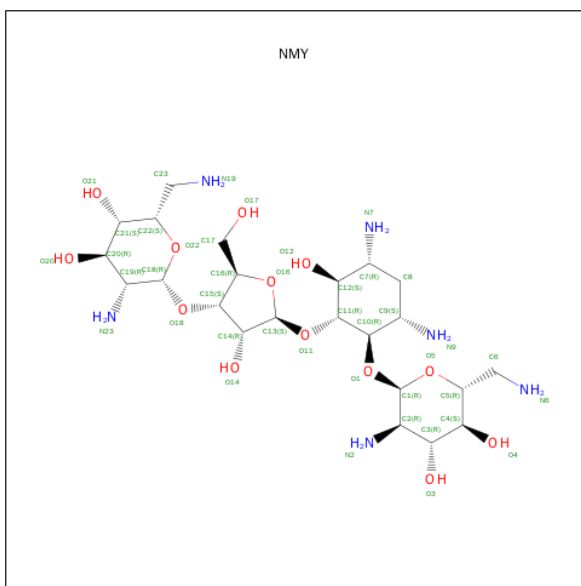
Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
61	AY	1	Total 28	C 10	N 5	O 11	P 2	0	0
61	CY	1	Total 28	C 10	N 5	O 11	P 2	0	0

- Molecule 62 is FUSIDIC ACID (three-letter code: FUA) (formula:  $\text{C}_{31}\text{H}_{48}\text{O}_6$ ).



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

- Molecule 63 is NEOMYCIN (three-letter code: NMY) (formula:  $C_{23}H_{46}N_6O_{13}$ ).



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
63	AA	1	Total	C	N	O	0	0
			42	23	6	13		
63	BA	1	Total	C	N	O	0	0
			42	23	6	13		
63	BA	1	Total	C	N	O	0	0
			42	23	6	13		
63	BA	1	Total	C	N	O	0	0
			42	23	6	13		
63	CA	1	Total	C	N	O	0	0
			42	23	6	13		
63	DA	1	Total	C	N	O	0	0
			42	23	6	13		

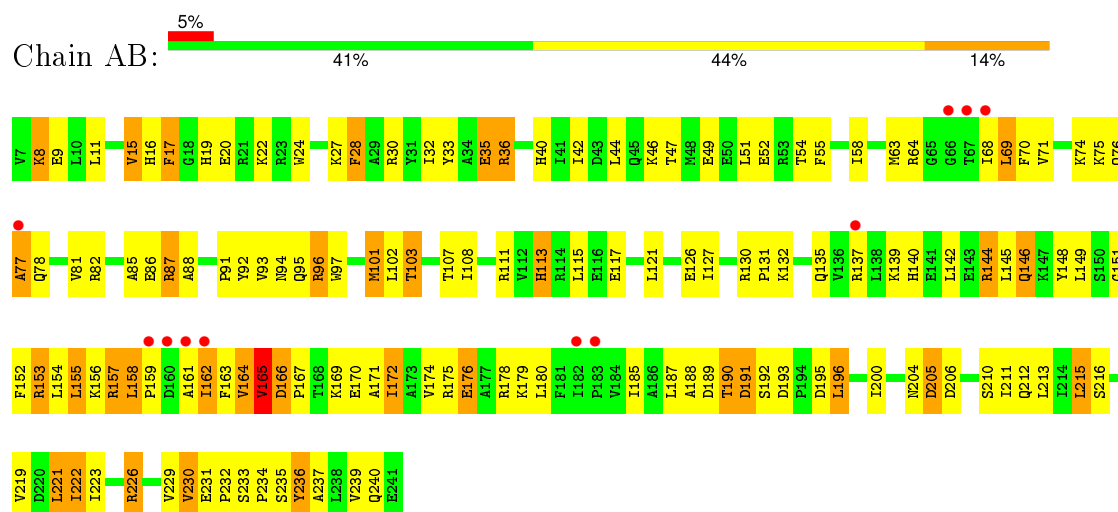
- Molecule 64 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

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

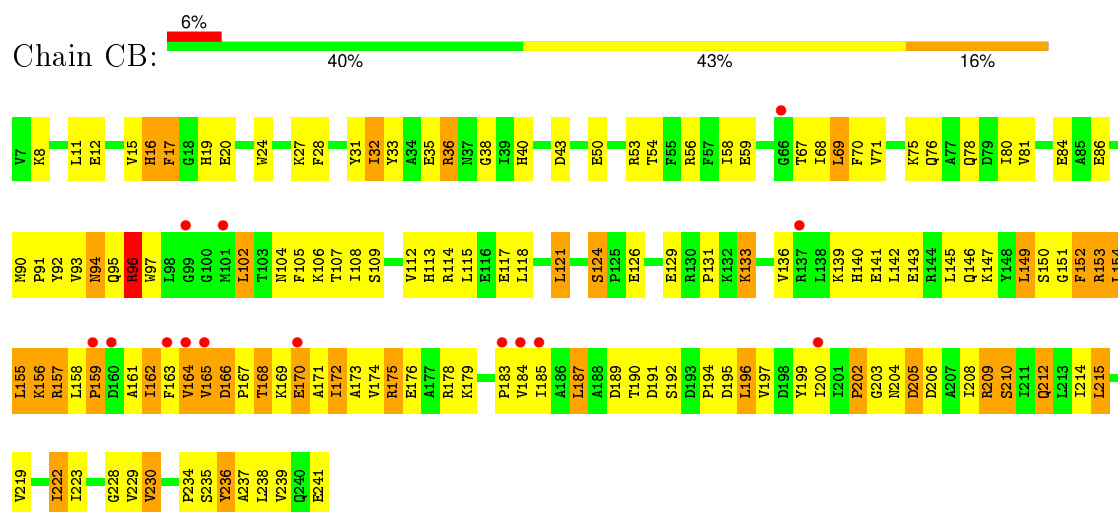
### 3 Residue-property plots

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

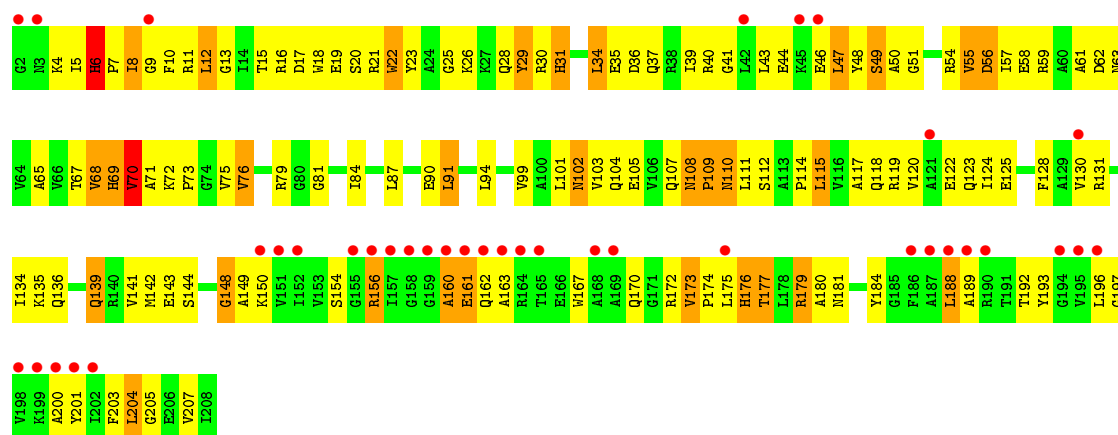


#### • Molecule 1: 30S ribosomal protein S2

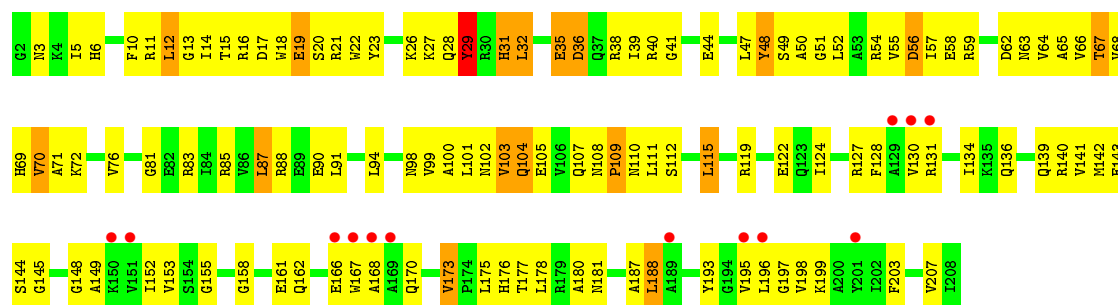
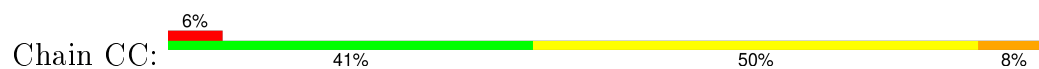


#### • Molecule 2: 30S ribosomal protein S3

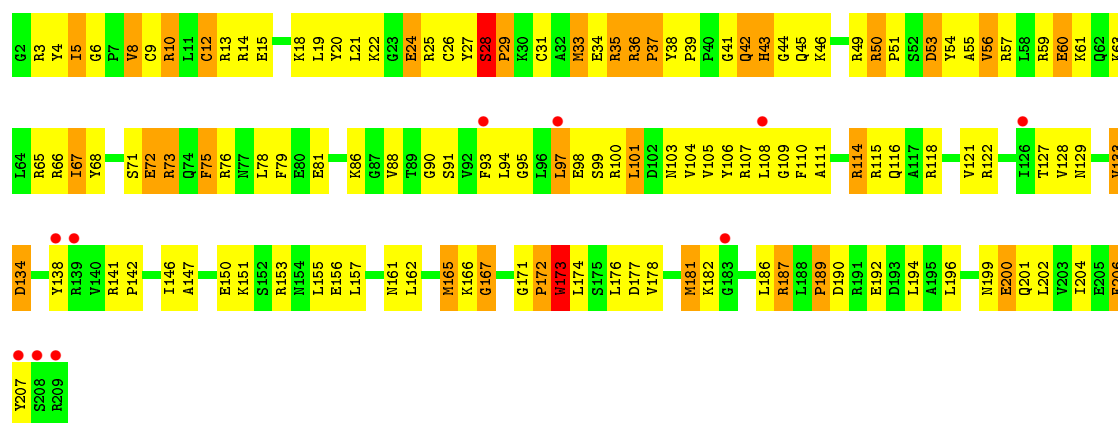




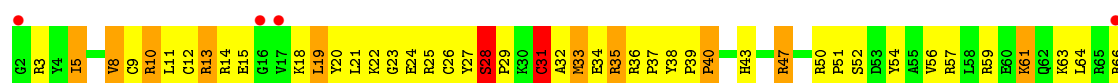
• Molecule 2: 30S ribosomal protein S3

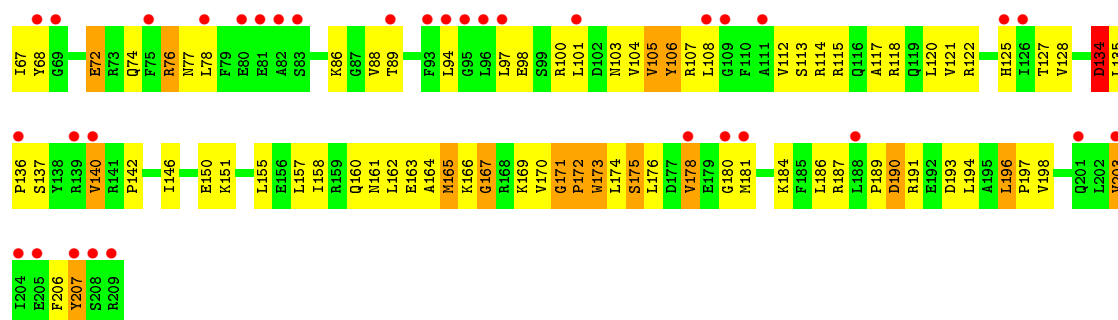


• Molecule 3: 30S ribosomal protein S4

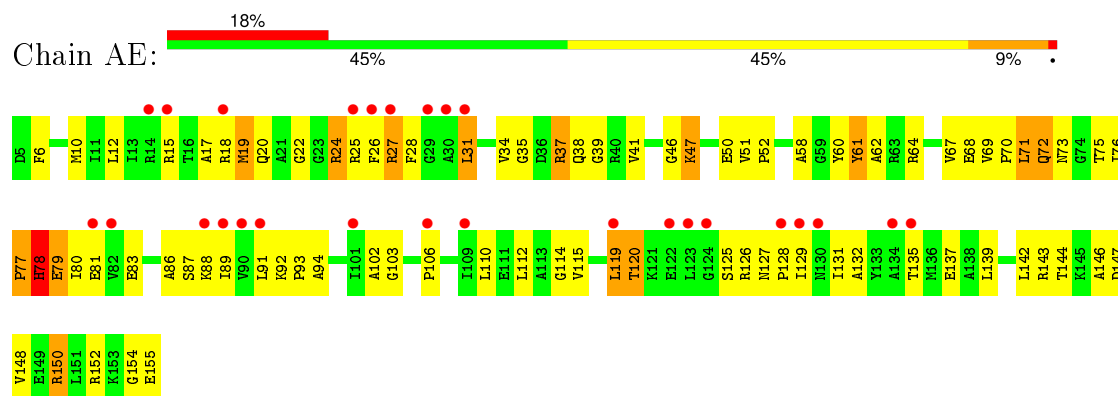


• Molecule 3: 30S ribosomal protein S4

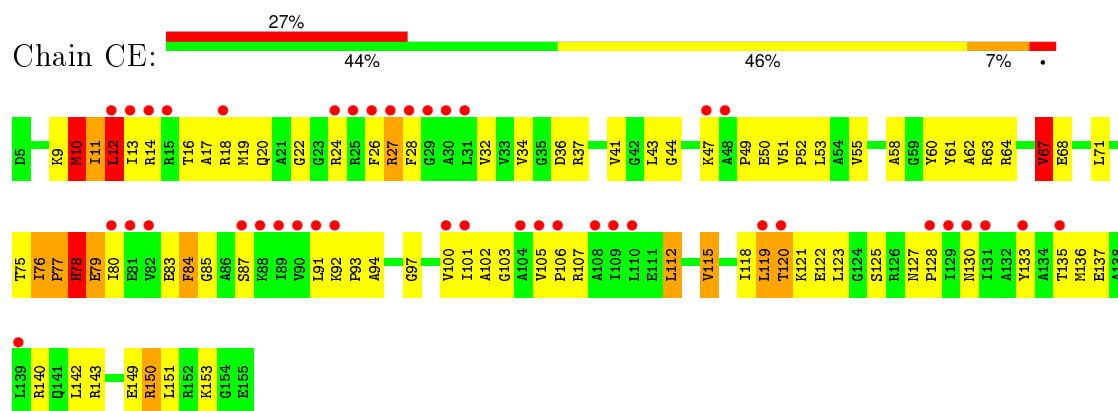




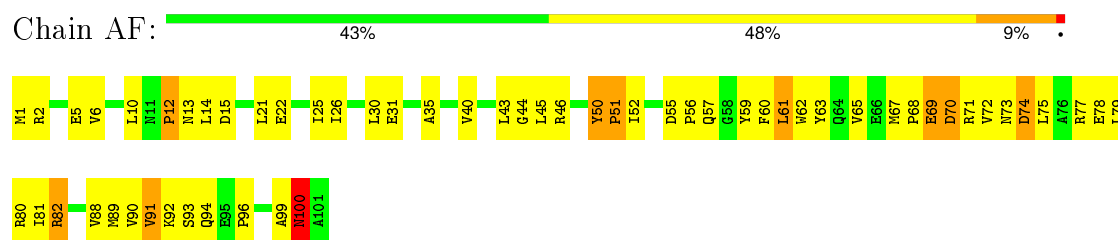
• Molecule 4: 30S ribosomal protein S5



• Molecule 4: 30S ribosomal protein S5

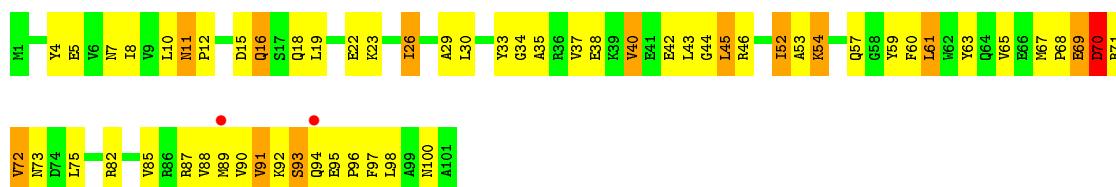


• Molecule 5: 30S ribosomal protein S6

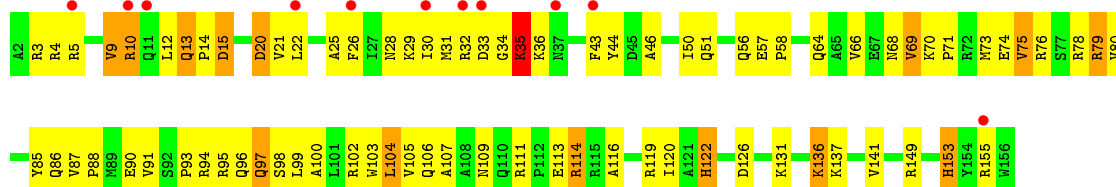


• Molecule 5: 30S ribosomal protein S6

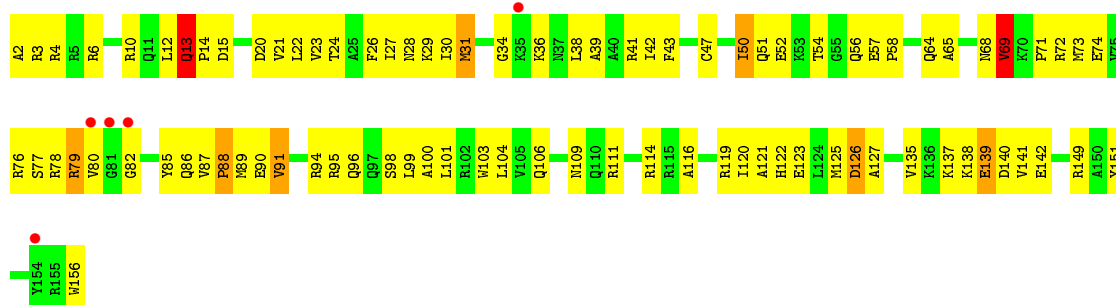
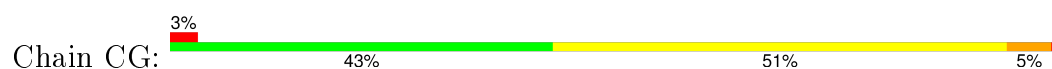




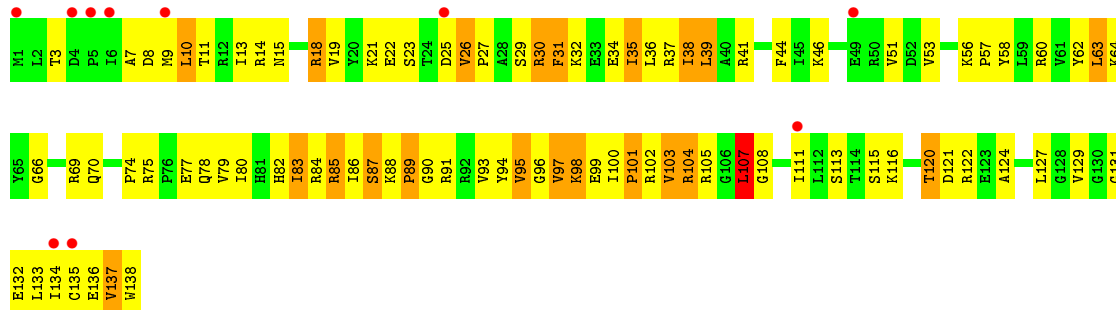
• Molecule 6: 30S ribosomal protein S7



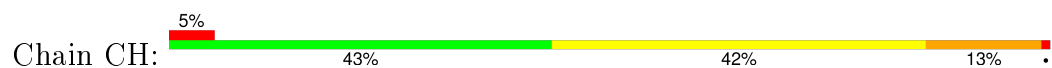
• Molecule 6: 30S ribosomal protein S7



• Molecule 7: 30S ribosomal protein S8



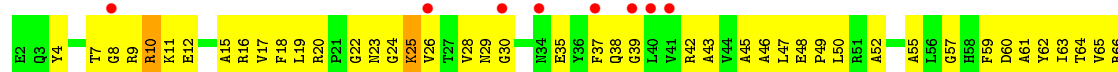
• Molecule 7: 30S ribosomal protein S8



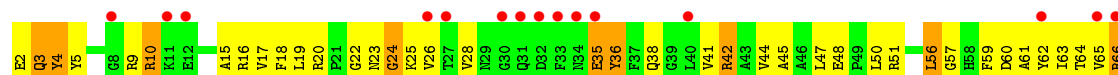




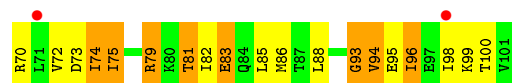
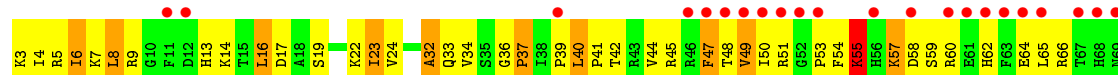
• Molecule 8: 30S ribosomal protein S9



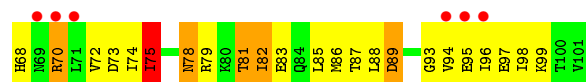
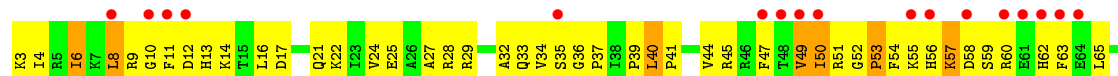
• Molecule 8: 30S ribosomal protein S9



• Molecule 9: 30S ribosomal protein S10

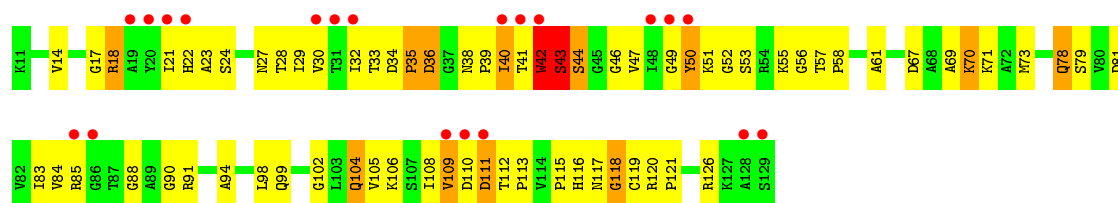


• Molecule 9: 30S ribosomal protein S10

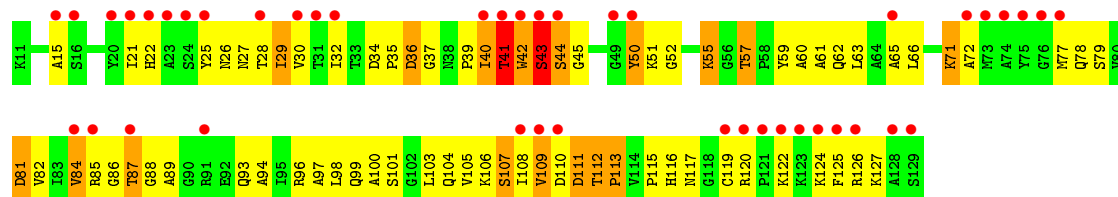


• Molecule 10: 30S ribosomal protein S11

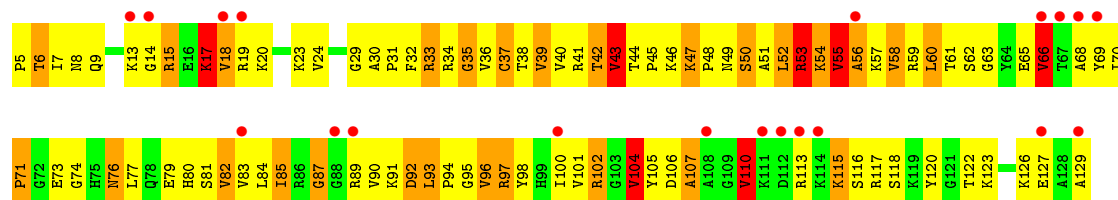




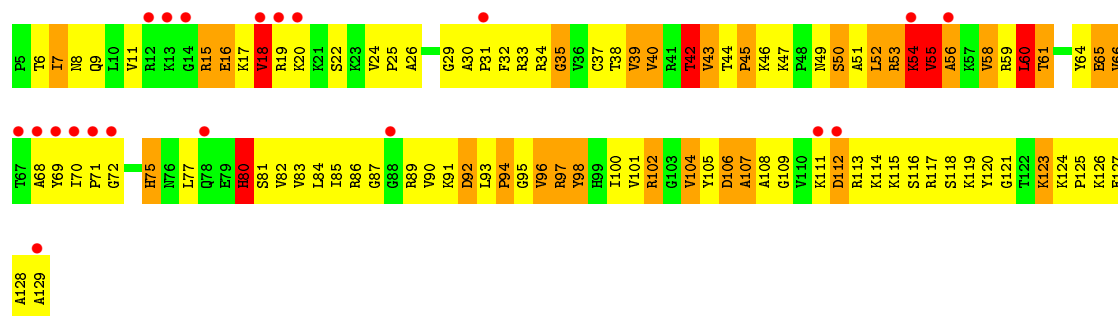
• Molecule 10: 30S ribosomal protein S11



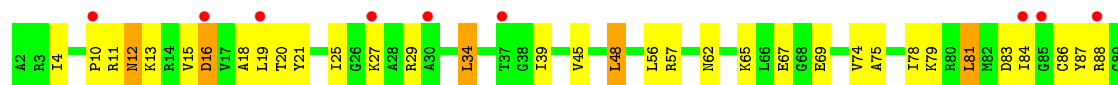
• Molecule 11: 30S ribosomal protein S12

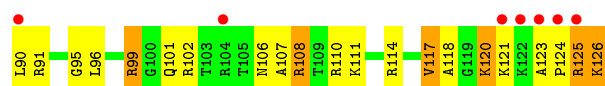


• Molecule 11: 30S ribosomal protein S12

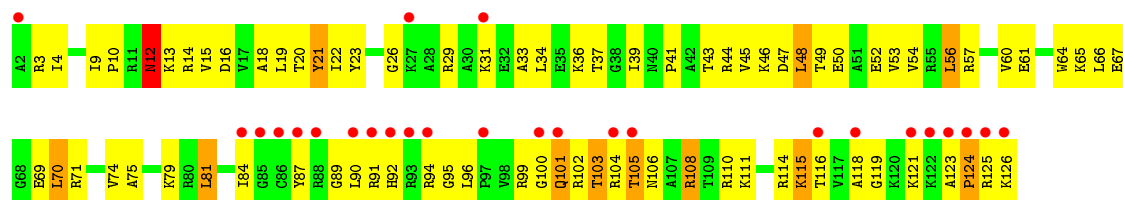


• Molecule 12: 30S ribosomal protein S13





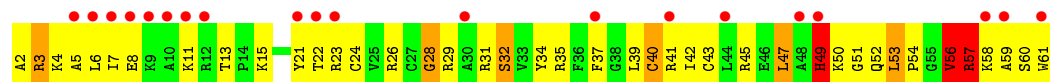
- Molecule 12: 30S ribosomal protein S13



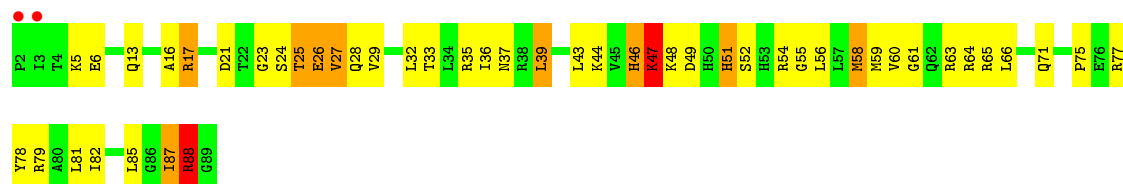
- Molecule 13: 30S ribosomal protein S14 type Z



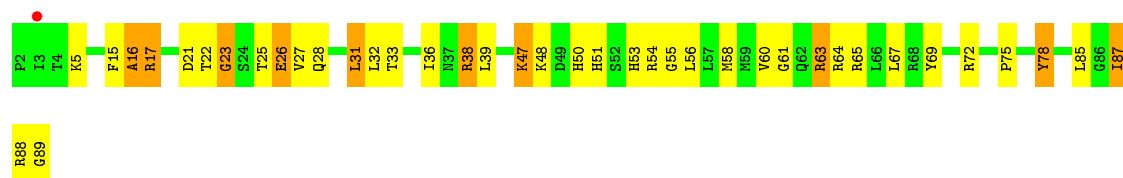
- Molecule 13: 30S ribosomal protein S14 type Z



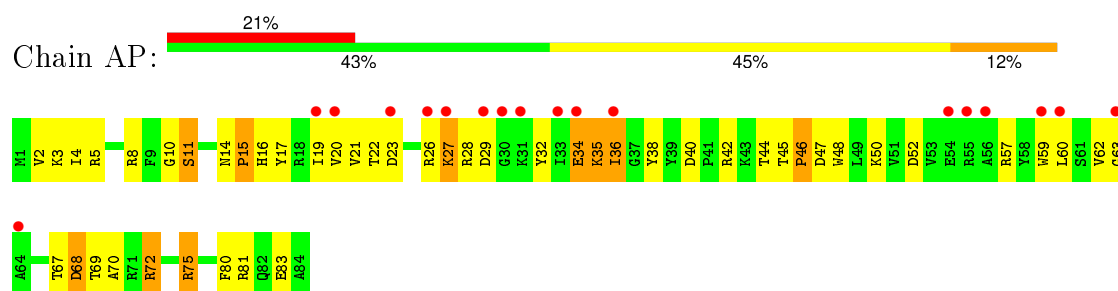
- Molecule 14: 30S ribosomal protein S15



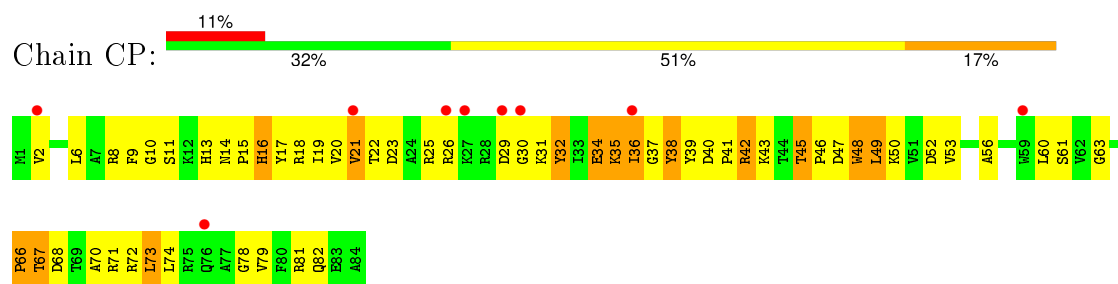
- Molecule 14: 30S ribosomal protein S15



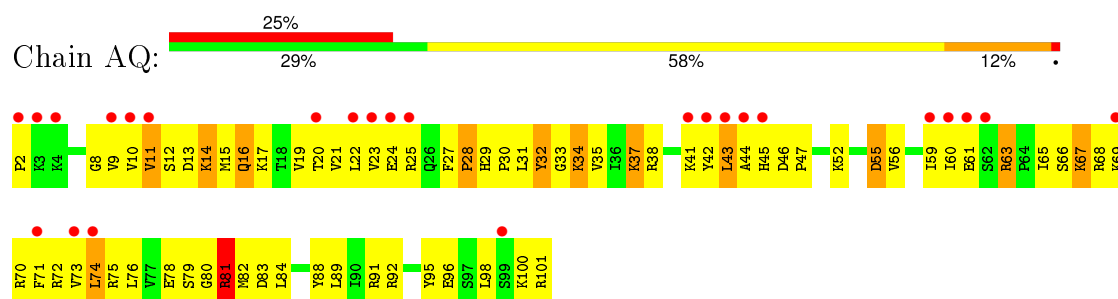
- Molecule 15: 30S ribosomal protein S16



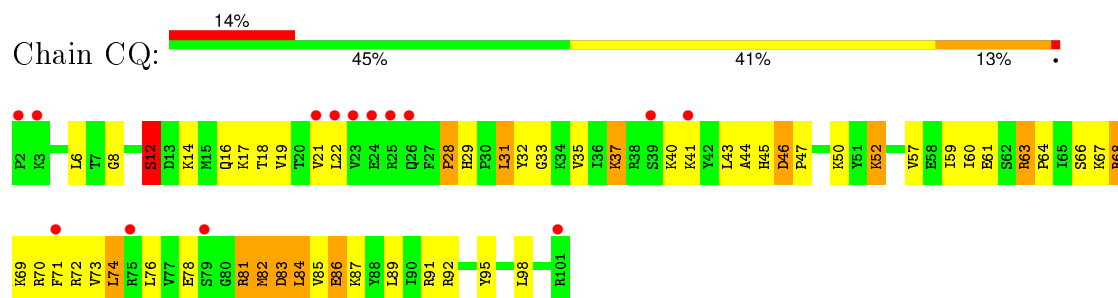
- Molecule 15: 30S ribosomal protein S16



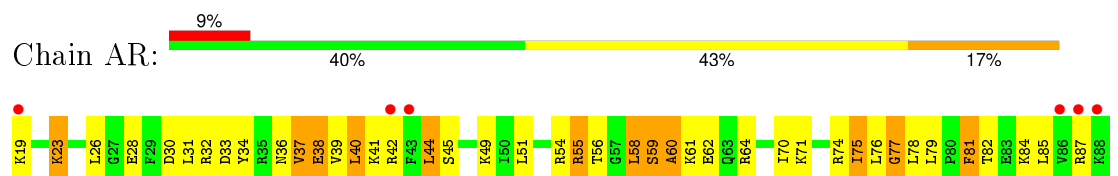
- Molecule 16: 30S ribosomal protein S17



- Molecule 16: 30S ribosomal protein S17

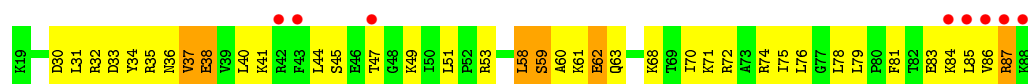


- Molecule 17: 30S ribosomal protein S18

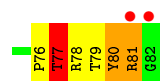
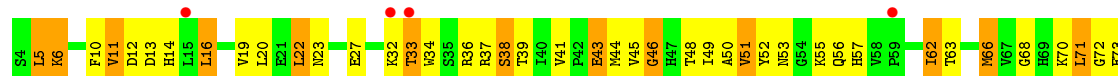


- Molecule 17: 30S ribosomal protein S18

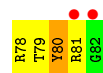
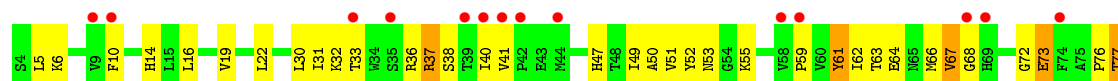




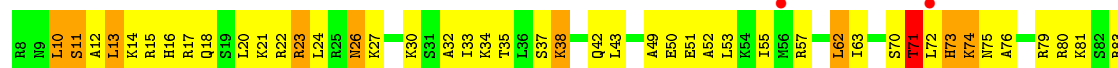
- Molecule 18: 30S ribosomal protein S19



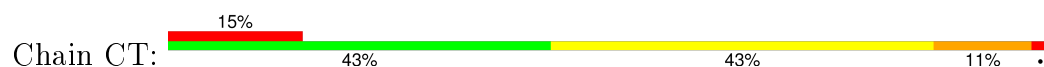
- Molecule 18: 30S ribosomal protein S19



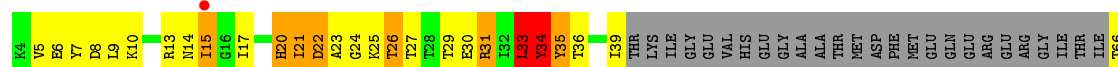
- Molecule 19: 30S ribosomal protein S20

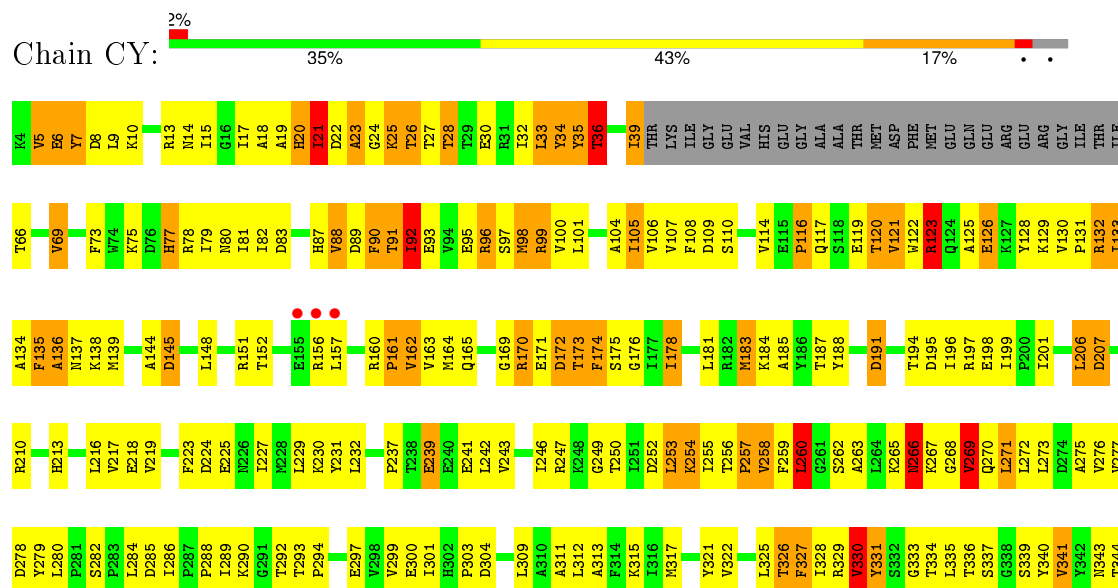
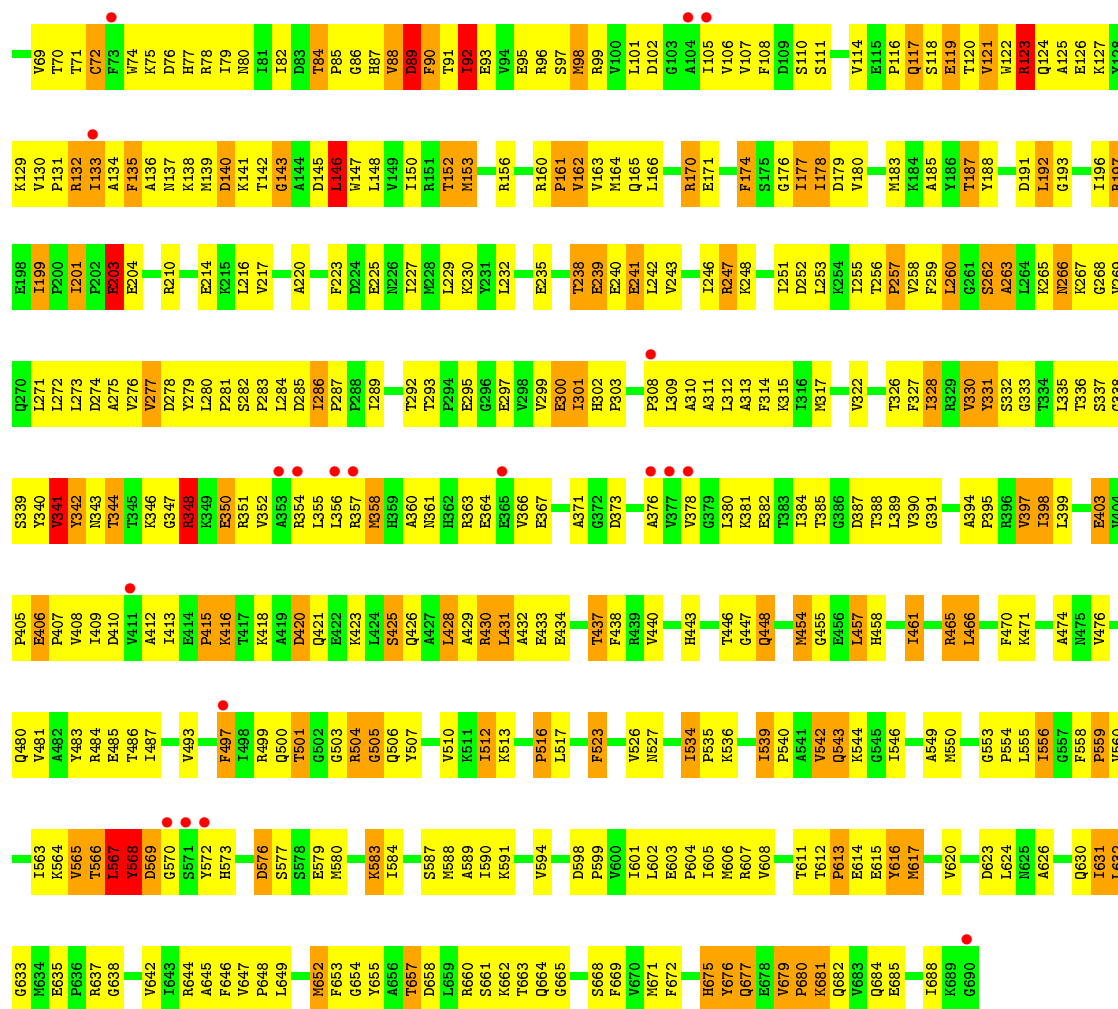


- Molecule 19: 30S ribosomal protein S20

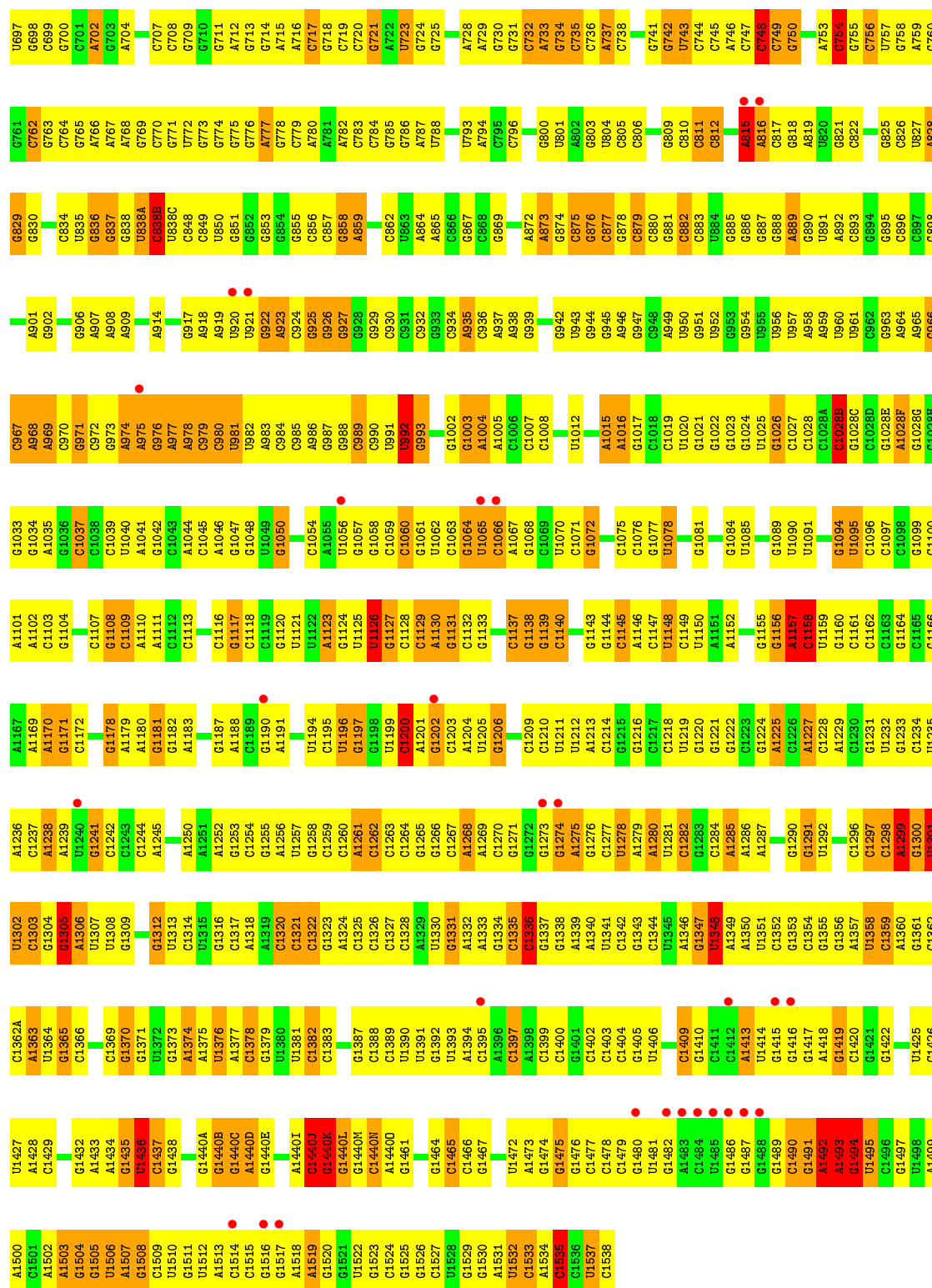


- Molecule 20: Elongation factor G







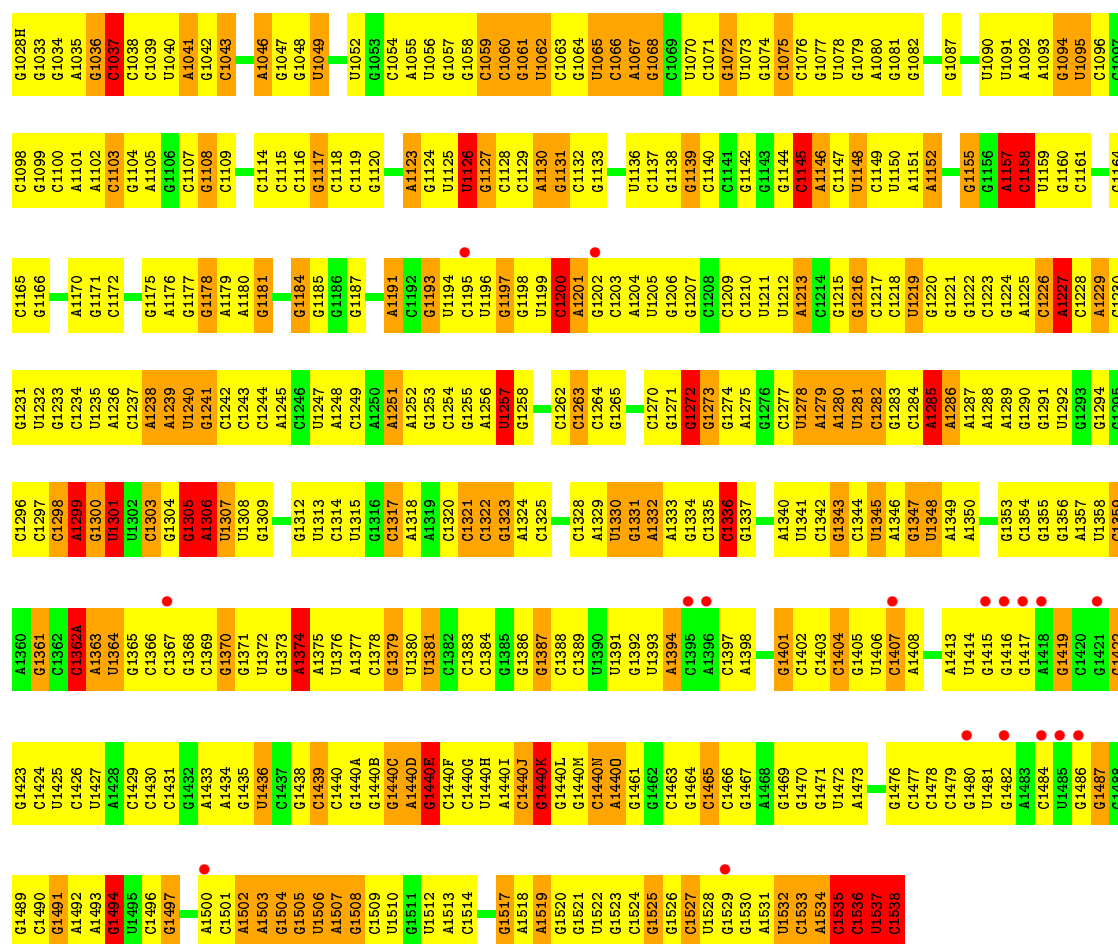


● Molecule 21: 16S rRNA

Chain CA: 2% 19% 59% 19%

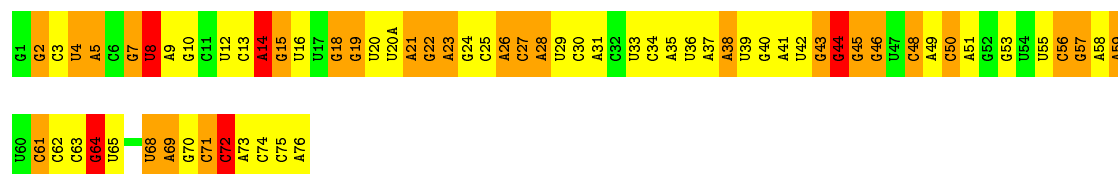






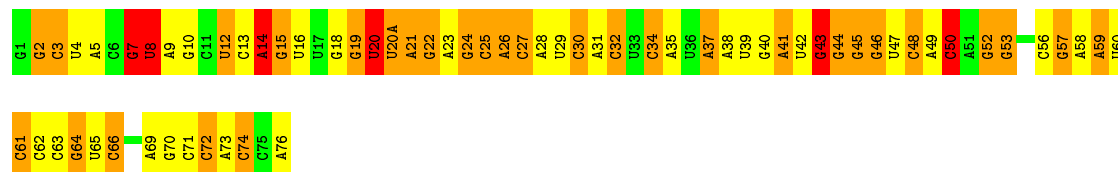
### • Molecule 22: tRNA

Chain AW: 14% 45% 34% 6%



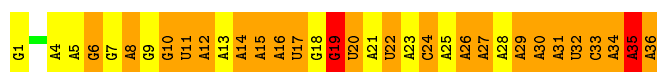
### • Molecule 22: tRNA

Chain CW: 16% 38% 39% 8%



### • Molecule 23: mRNA

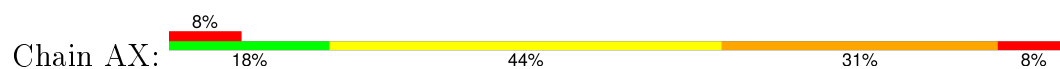
Chain AV: 6% 31% 58% 6%



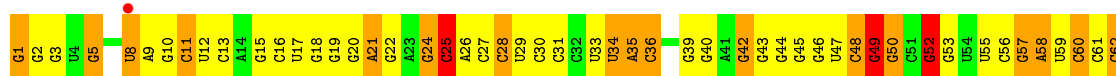
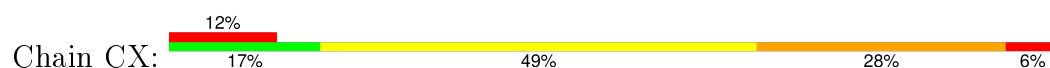
• Molecule 23: mRNA



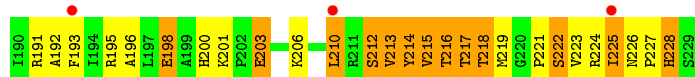
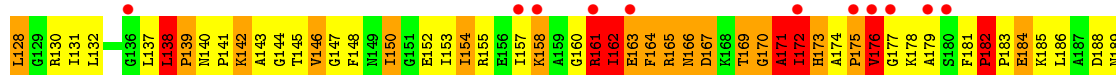
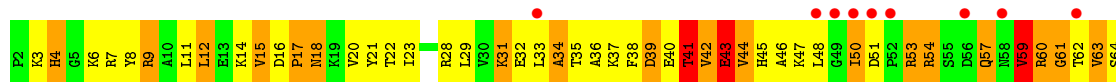
• Molecule 24: tRNA



• Molecule 24: tRNA

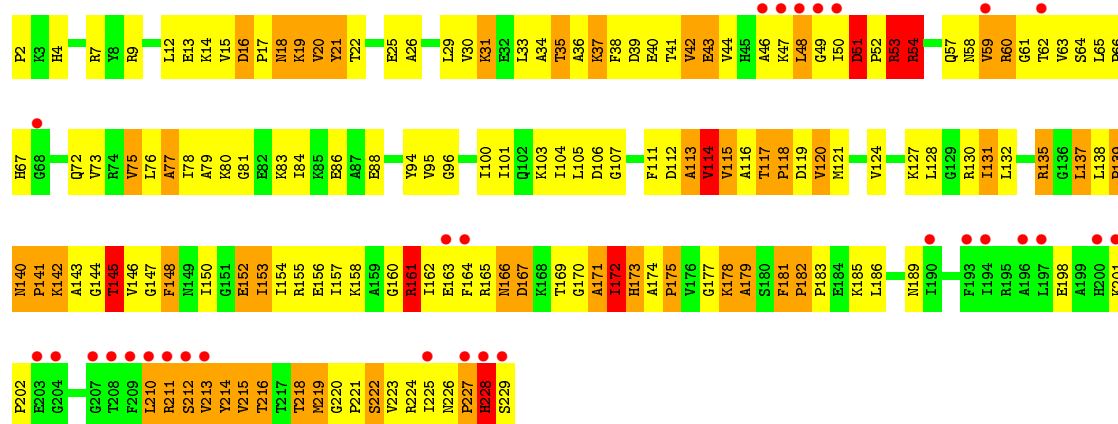


• Molecule 25: 50S ribosomal protein L1

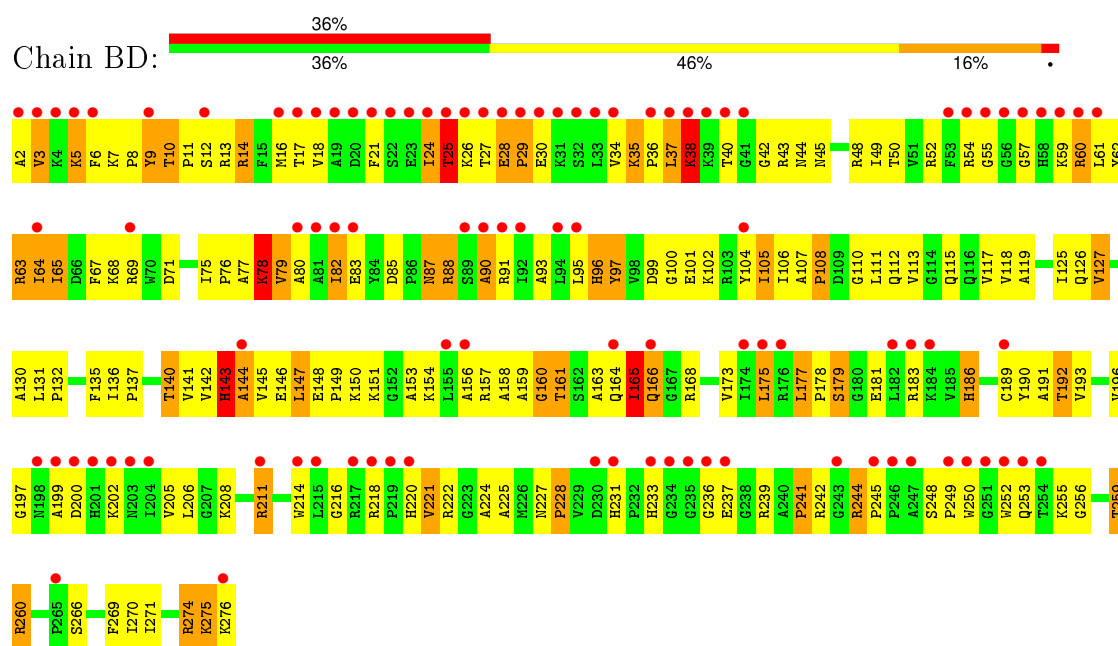


• Molecule 25: 50S ribosomal protein L1

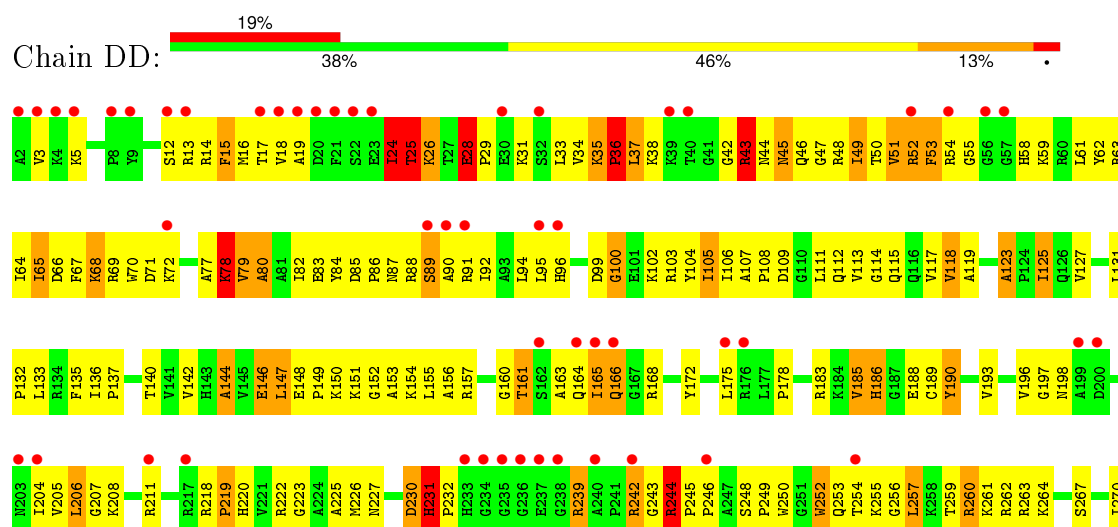




• Molecule 26: 50S ribosomal protein L2

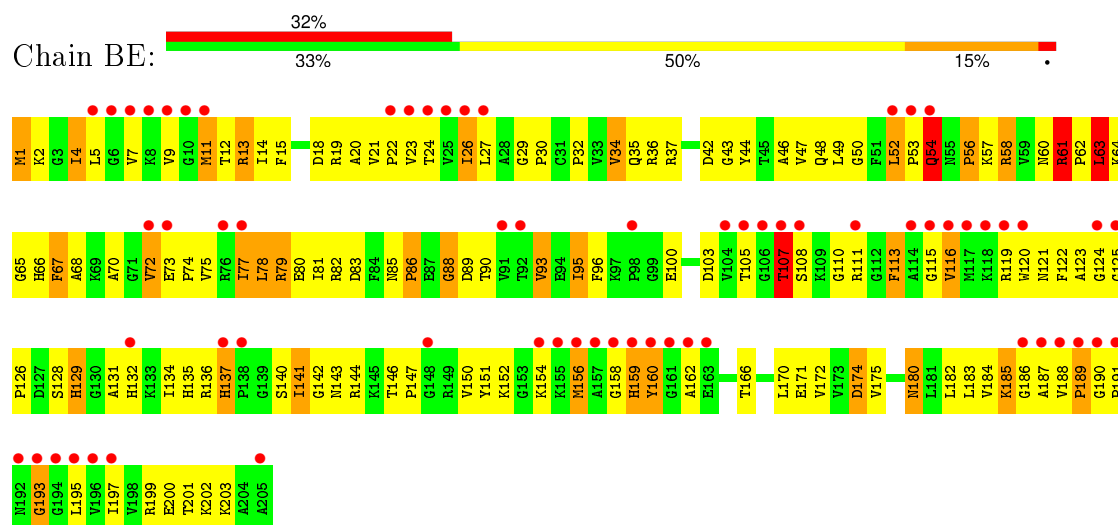


• Molecule 26: 50S ribosomal protein L2

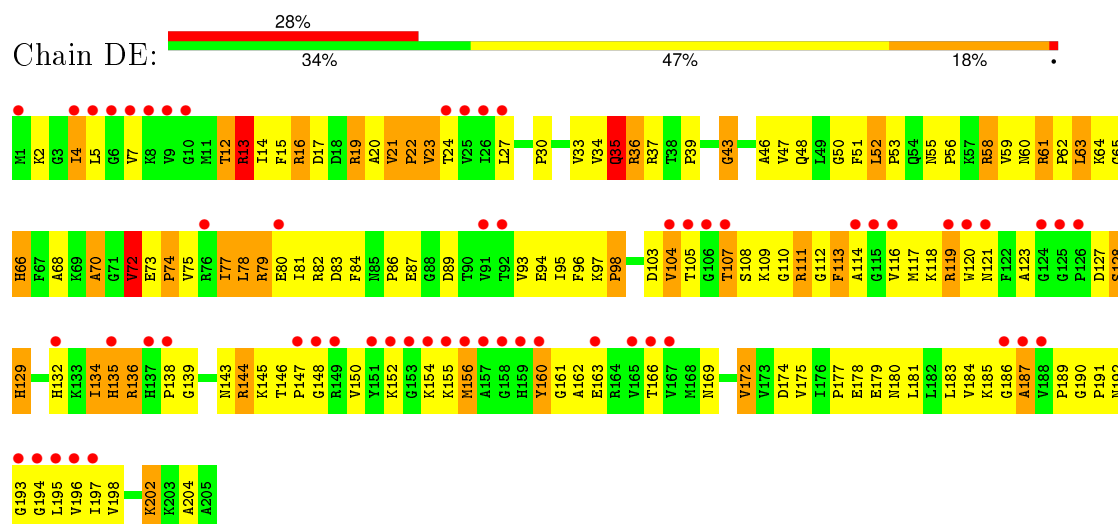




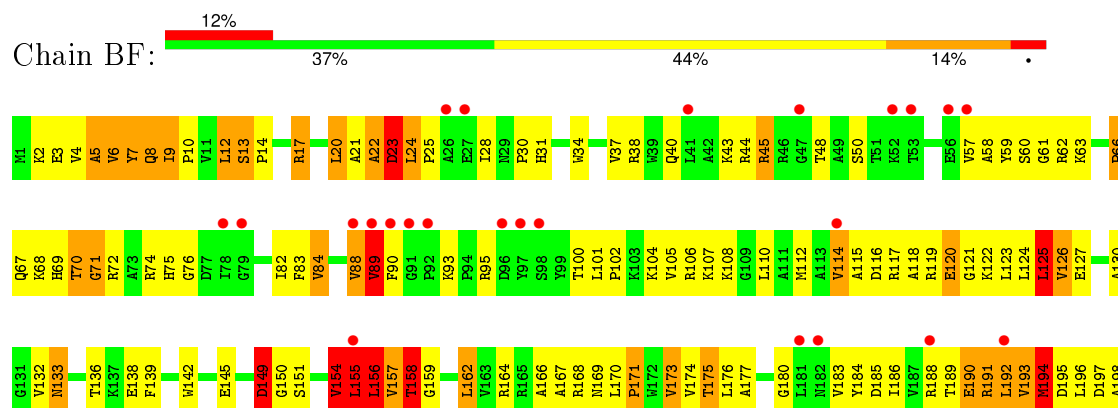
• Molecule 27: 50S ribosomal protein L3

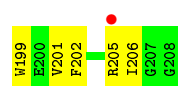


• Molecule 27: 50S ribosomal protein L3

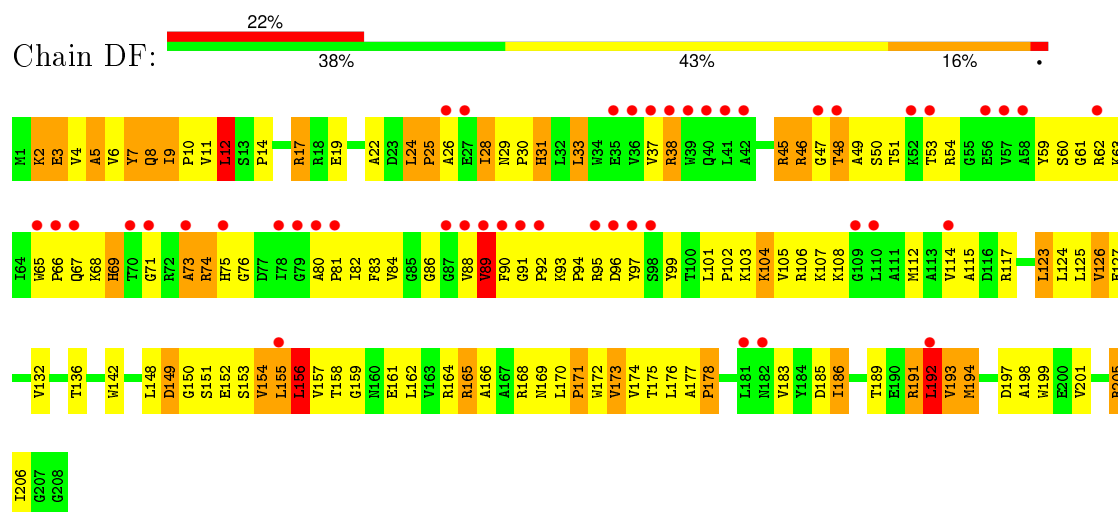


• Molecule 28: 50S ribosomal protein L4

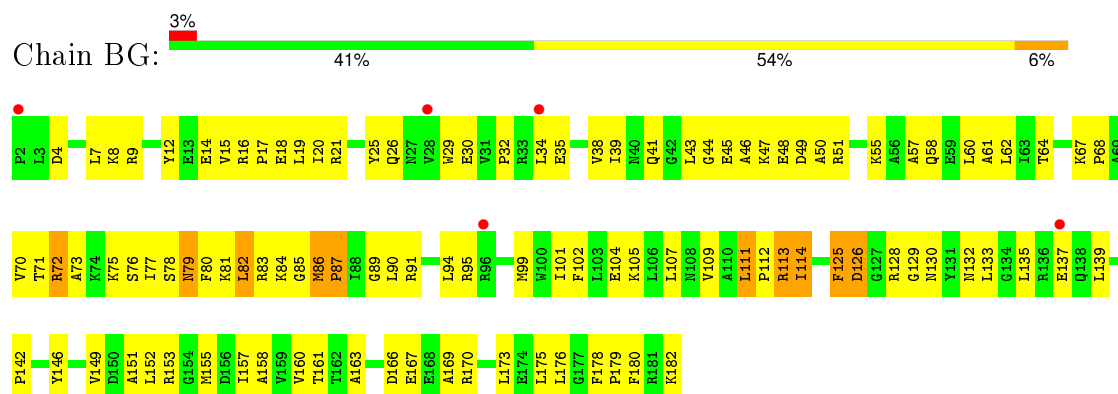




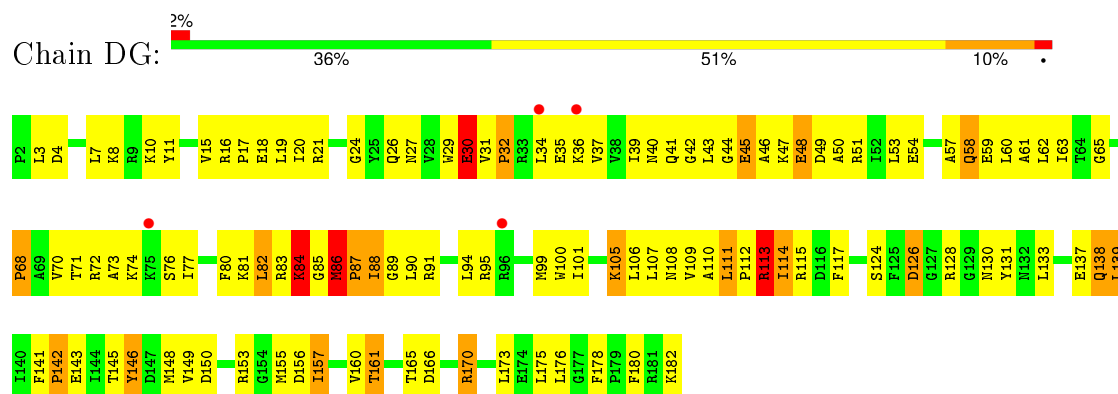
- Molecule 28: 50S ribosomal protein L4



- Molecule 29: 50S ribosomal protein L5

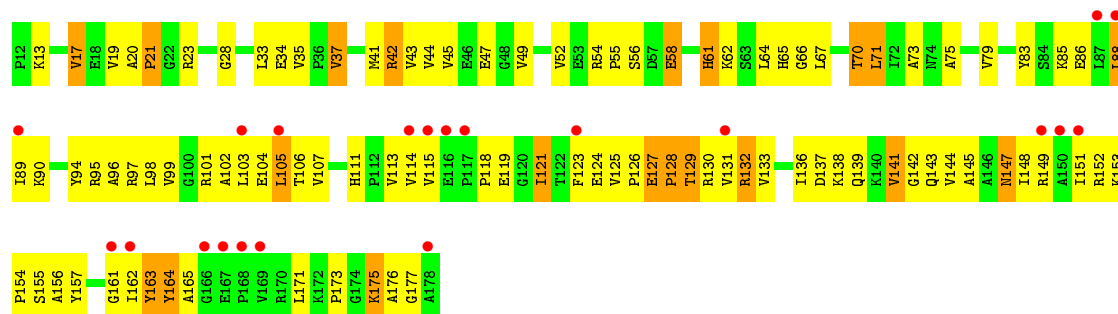


- Molecule 29: 50S ribosomal protein L5

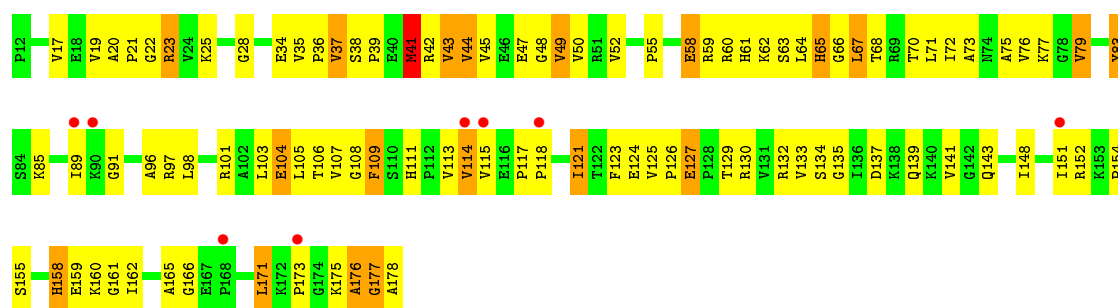
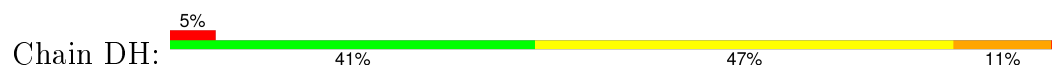


- Molecule 30: 50S ribosomal protein L6

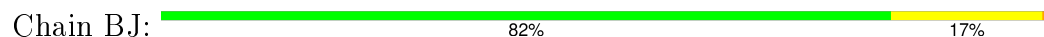




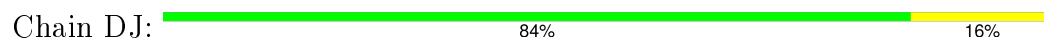
- Molecule 30: 50S ribosomal protein L6



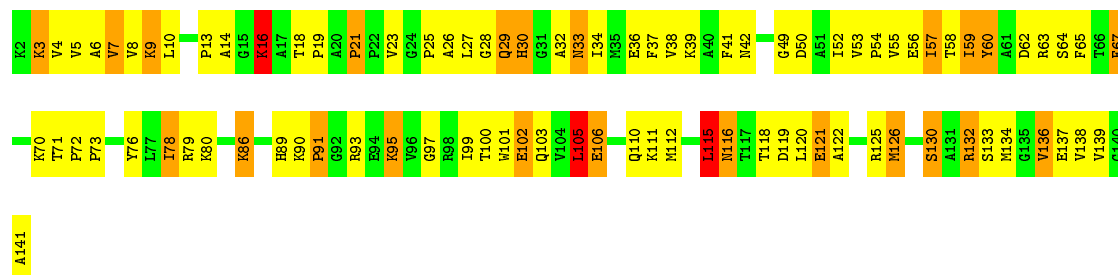
- Molecule 31: 50S ribosomal protein l10



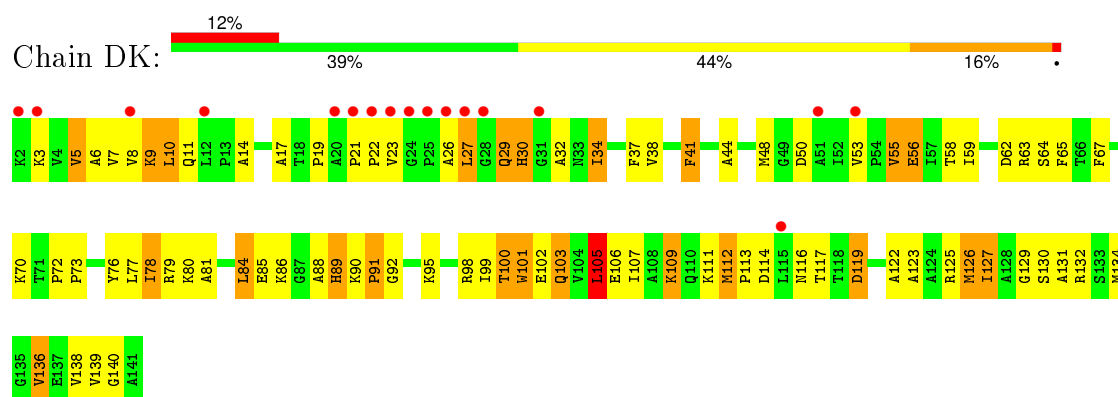
- Molecule 31: 50S ribosomal protein l10



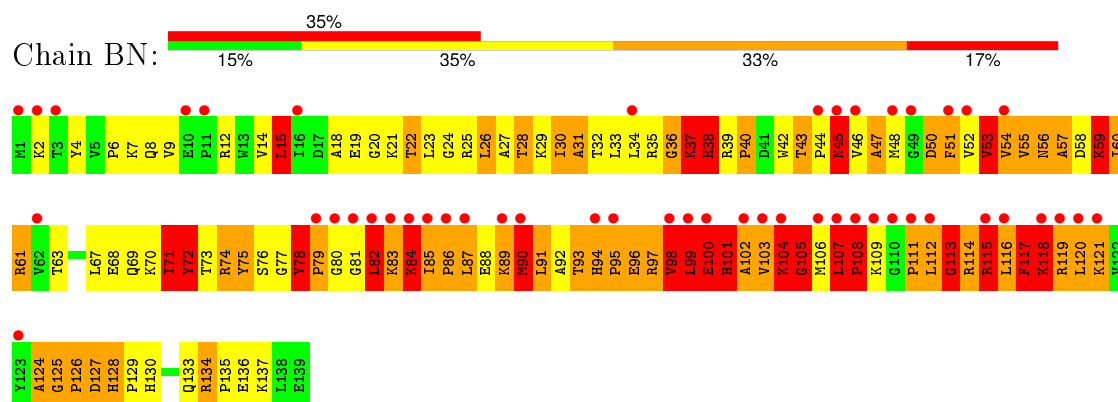
- Molecule 32: 50S ribosomal protein L11



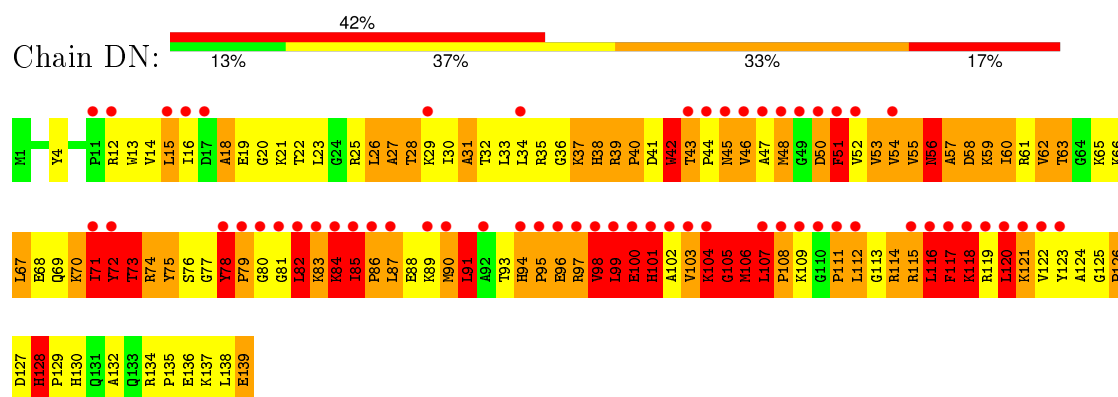
- Molecule 32: 50S ribosomal protein L11



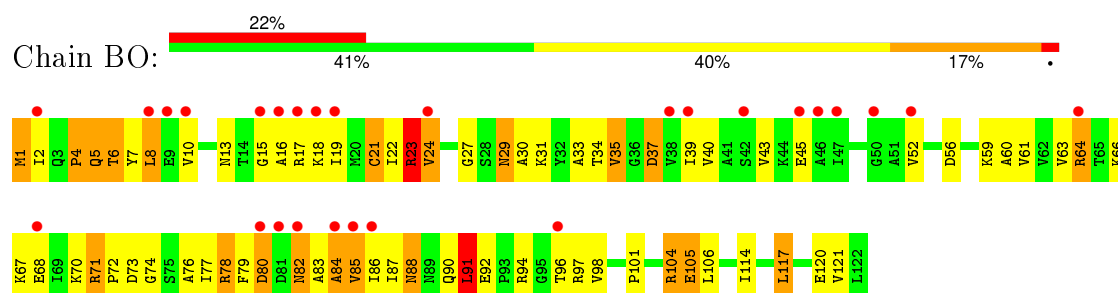
• Molecule 33: 50S ribosomal protein L13



• Molecule 33: 50S ribosomal protein L13

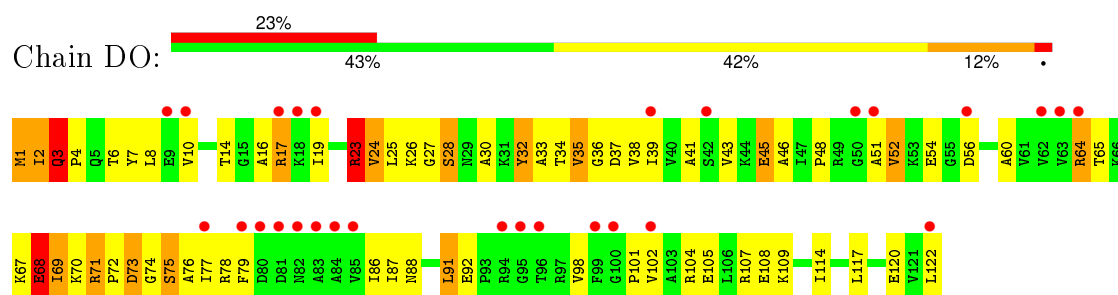


• Molecule 34: 50S ribosomal protein L14

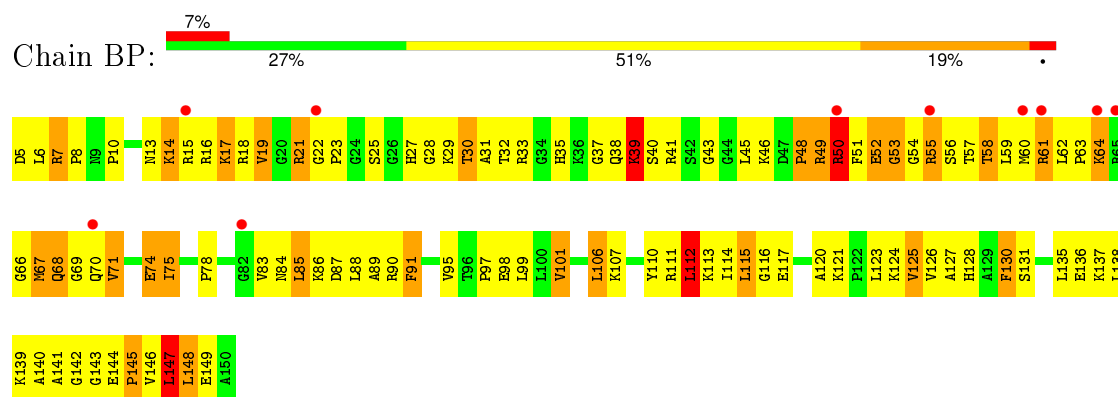


• Molecule 34: 50S ribosomal protein L14

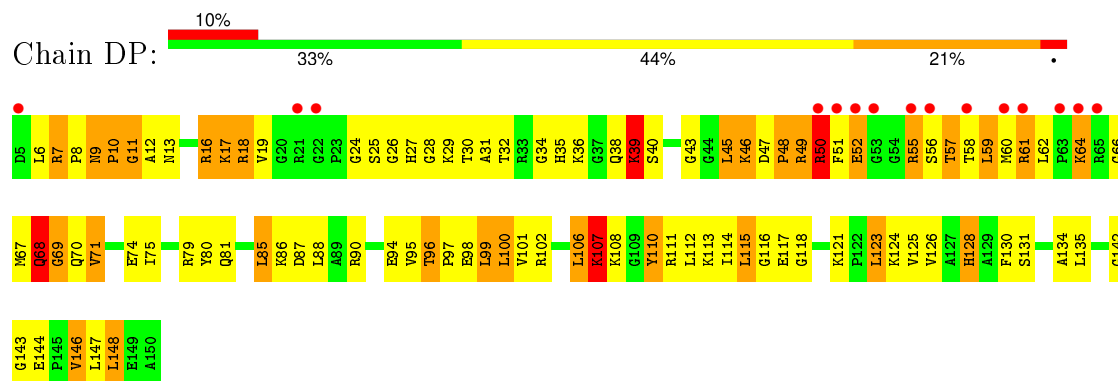




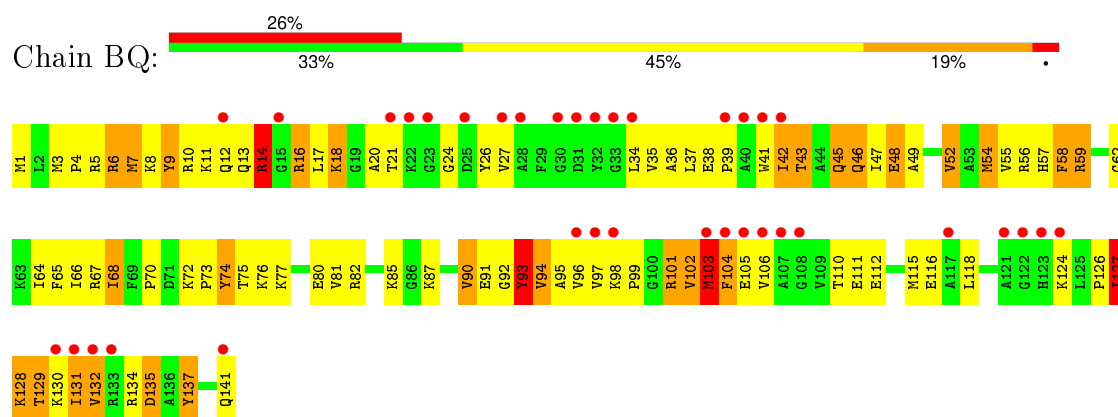
- Molecule 35: 50S ribosomal protein L15



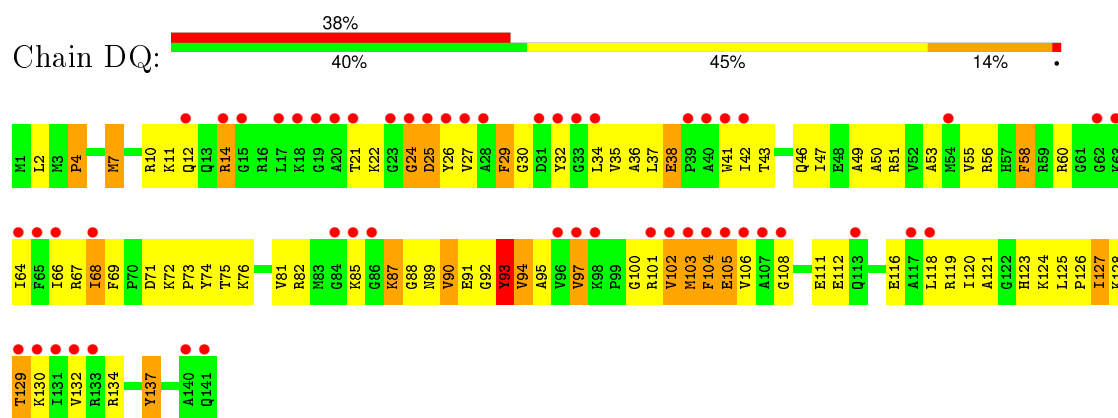
- Molecule 35: 50S ribosomal protein L15



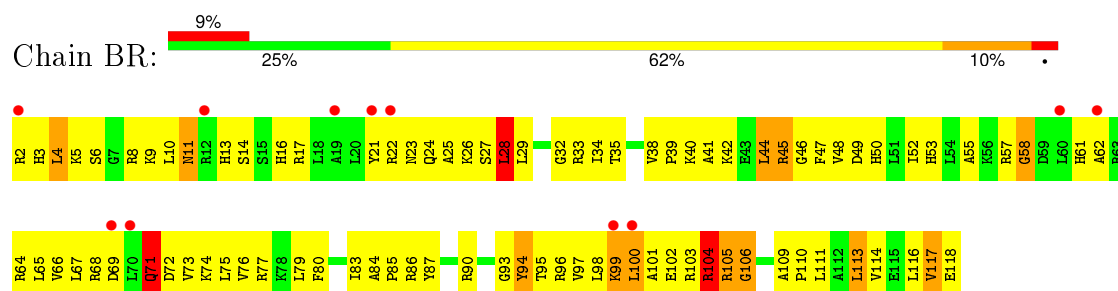
- Molecule 36: 50S ribosomal protein L16



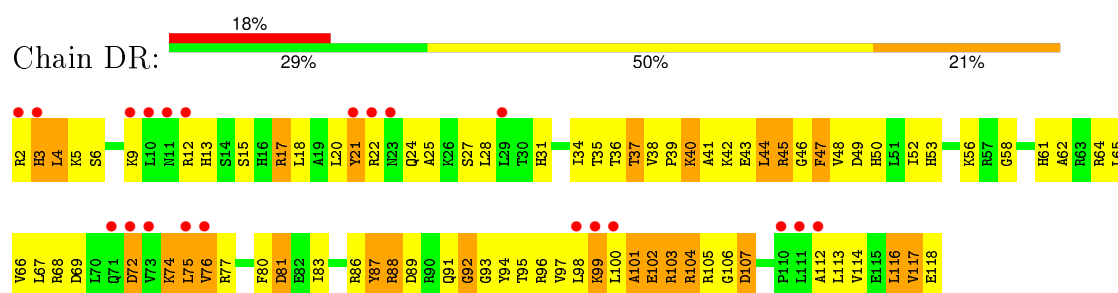
- Molecule 36: 50S ribosomal protein L16



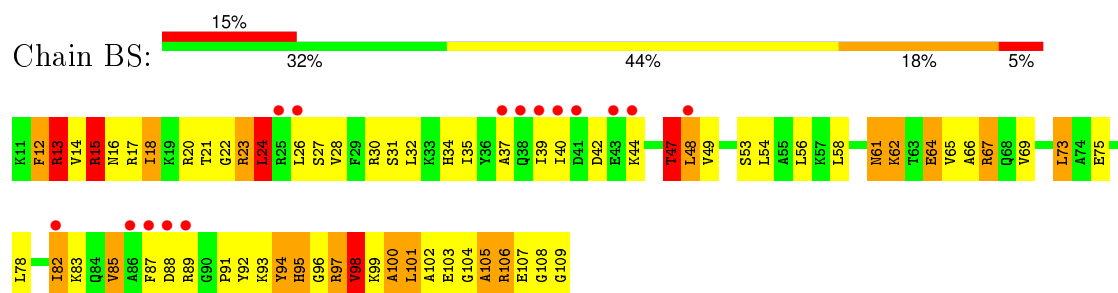
- Molecule 37: 50S ribosomal protein L17



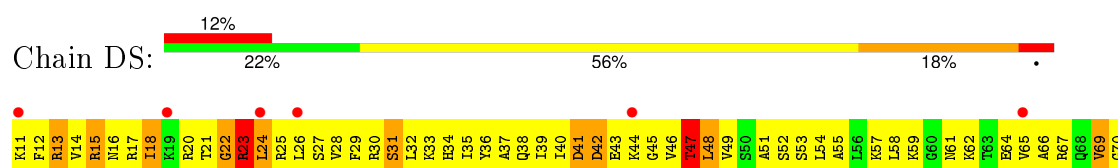
- Molecule 37: 50S ribosomal protein L17

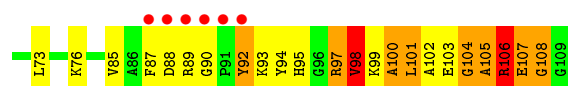


- Molecule 38: 50S ribosomal protein L18

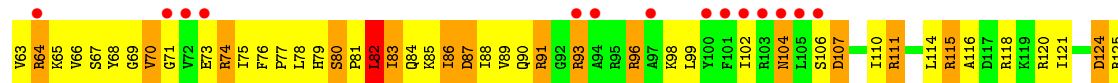
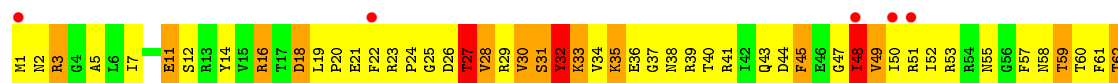


- Molecule 38: 50S ribosomal protein L18

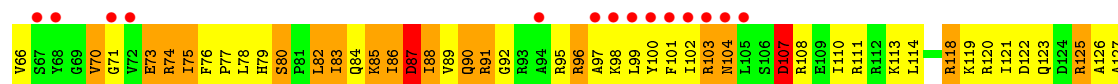
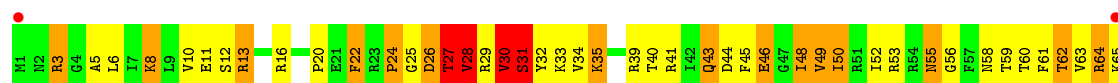




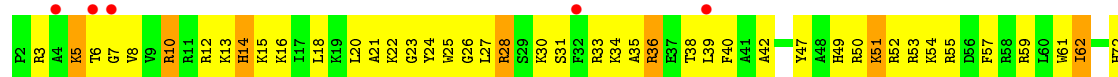
- Molecule 39: 50S ribosomal protein L19



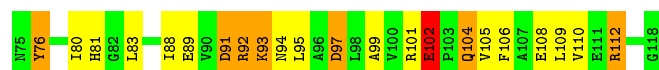
- Molecule 39: 50S ribosomal protein L19



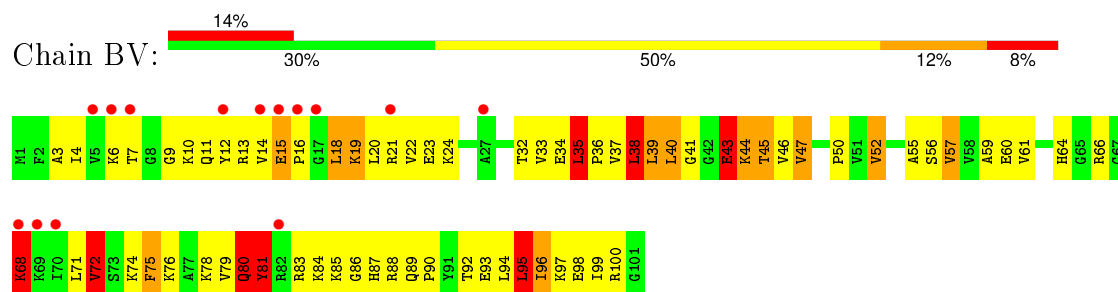
- Molecule 40: 50S ribosomal protein L20



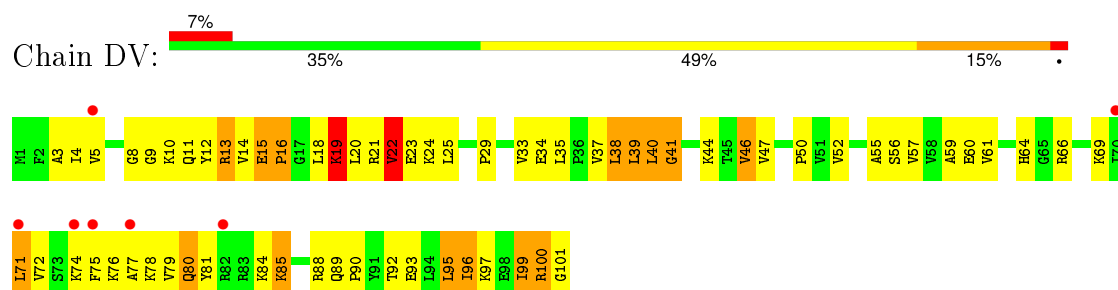
- Molecule 40: 50S ribosomal protein L20



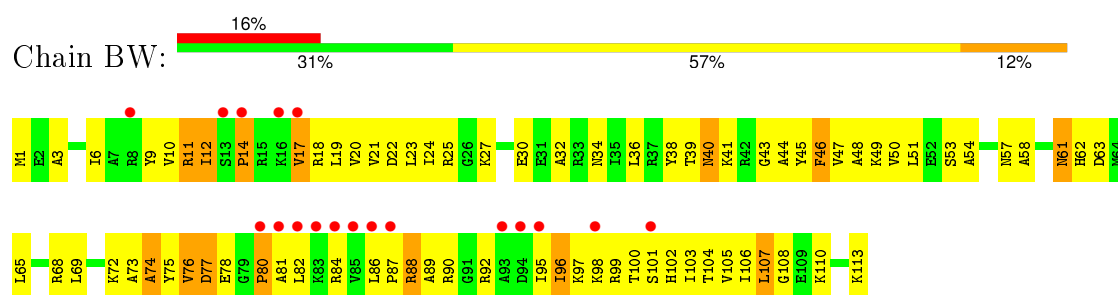
- Molecule 41: 50S ribosomal protein L21



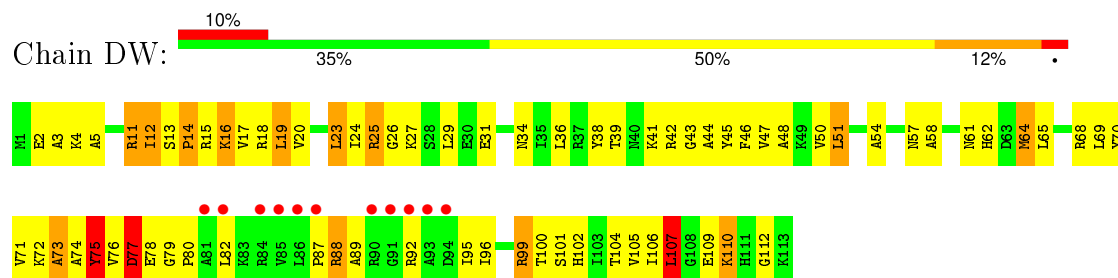
- Molecule 41: 50S ribosomal protein L21



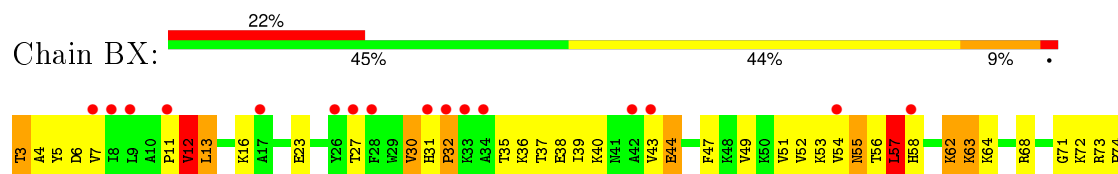
- Molecule 42: 50S ribosomal protein L22

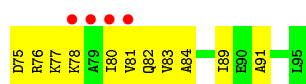


- Molecule 42: 50S ribosomal protein L22

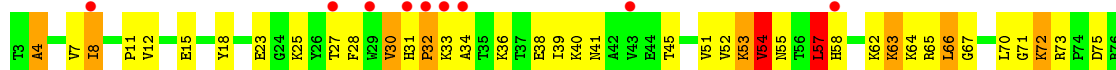


- Molecule 43: 50S ribosomal protein L23

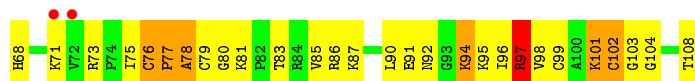
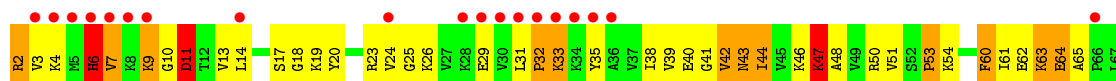




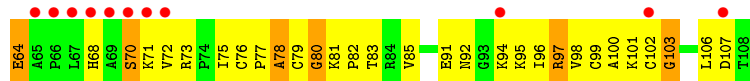
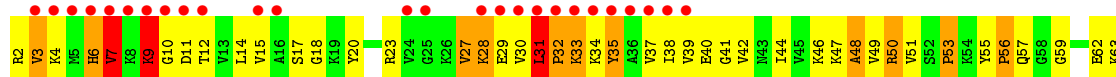
- Molecule 43: 50S ribosomal protein L23



- Molecule 44: 50S ribosomal protein L24



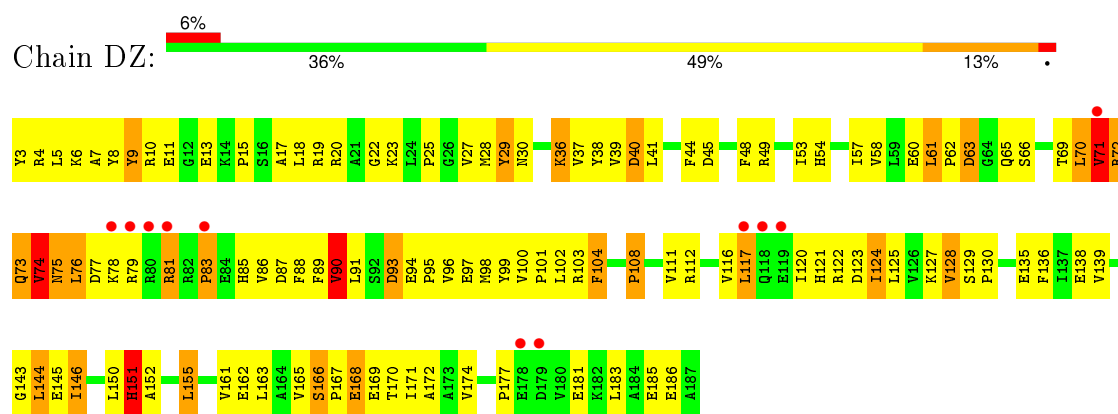
- Molecule 44: 50S ribosomal protein L24



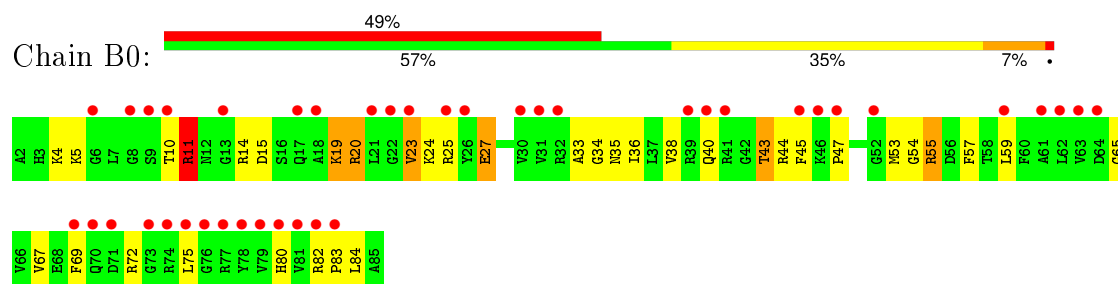
- Molecule 45: 50S ribosomal protein L25



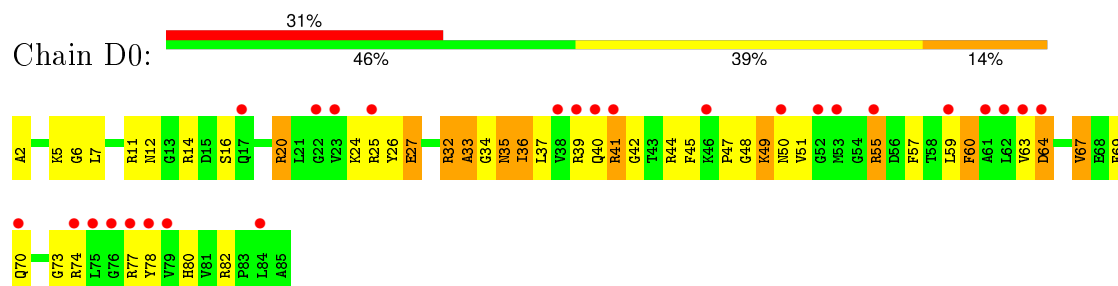
- Molecule 45: 50S ribosomal protein L25



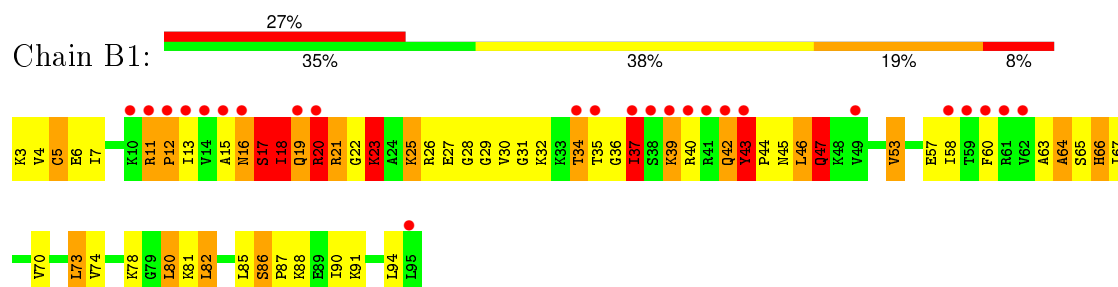
• Molecule 46: 50S ribosomal protein L27



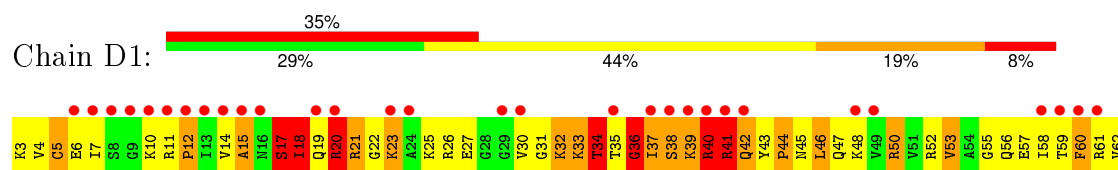
• Molecule 46: 50S ribosomal protein L27

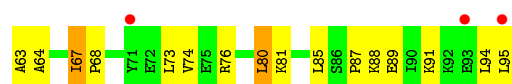


• Molecule 47: 50S ribosomal protein L28

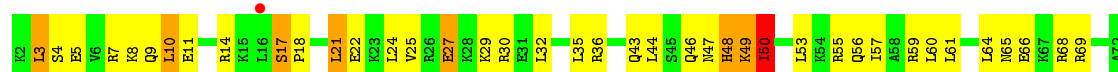
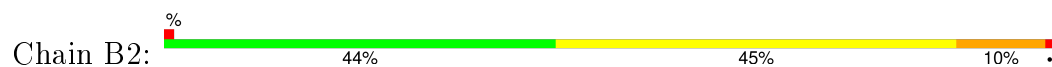


• Molecule 47: 50S ribosomal protein L28





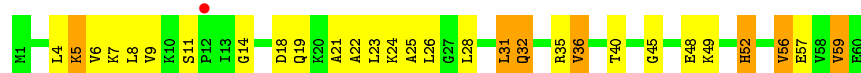
- Molecule 48: 50S ribosomal protein L29



- Molecule 48: 50S ribosomal protein L29



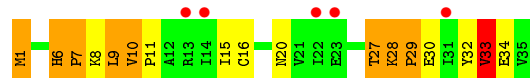
- Molecule 49: 50S ribosomal protein L30



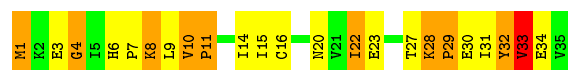
- Molecule 49: 50S ribosomal protein L30



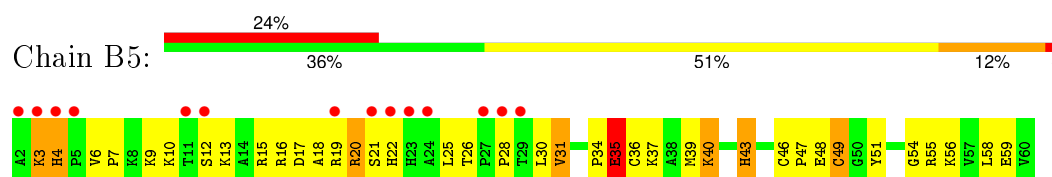
- Molecule 50: 50S ribosomal protein L31



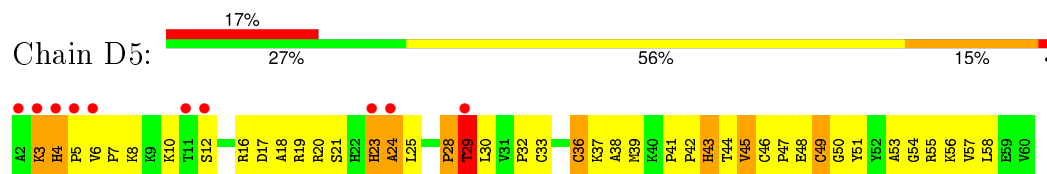
- Molecule 50: 50S ribosomal protein L31



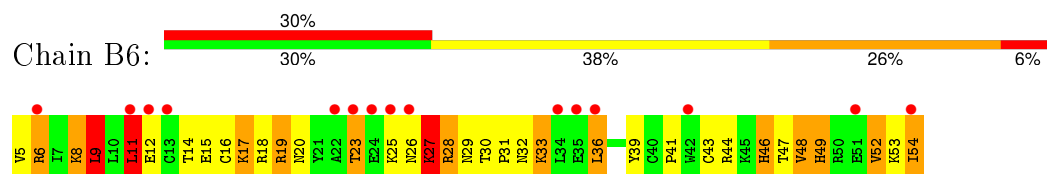
- Molecule 51: 50S ribosomal protein L32



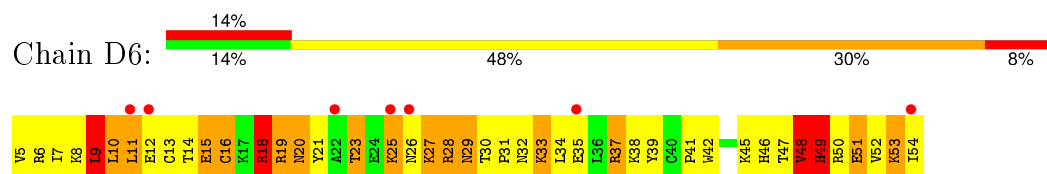
- Molecule 51: 50S ribosomal protein L32



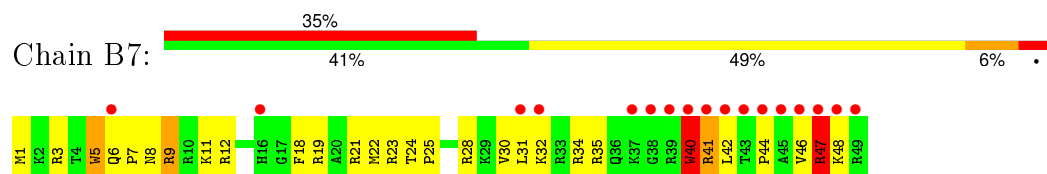
- Molecule 52: 50S ribosomal protein L33



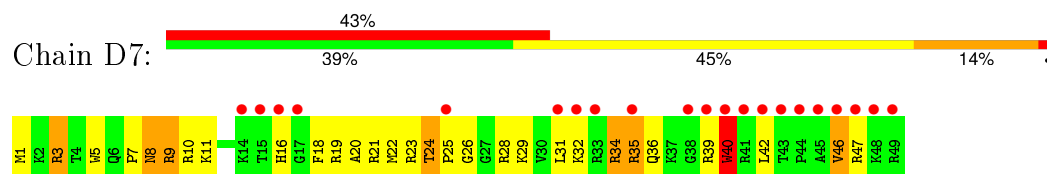
- Molecule 52: 50S ribosomal protein L33



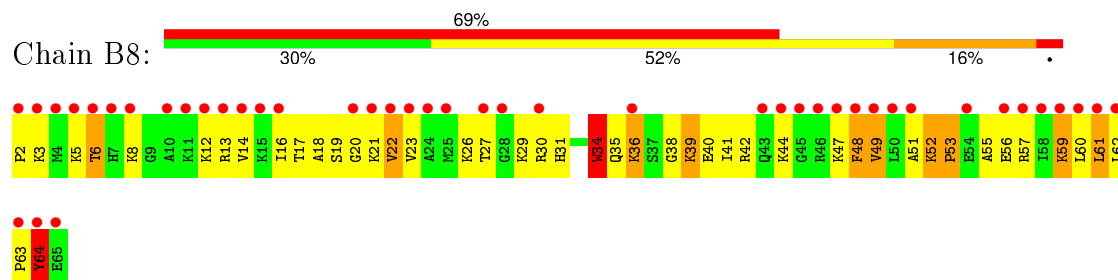
- Molecule 53: 50S ribosomal protein L34



- Molecule 53: 50S ribosomal protein L34

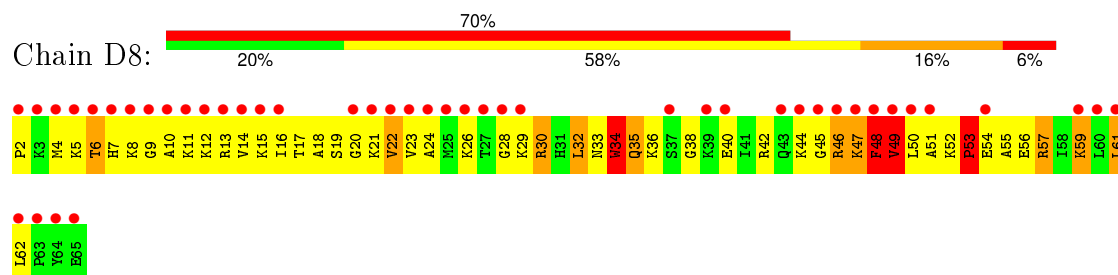


- Molecule 54: 50S ribosomal protein L35

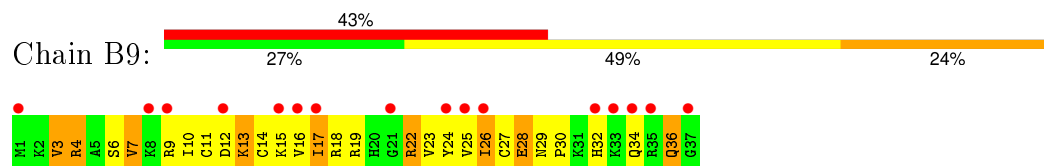




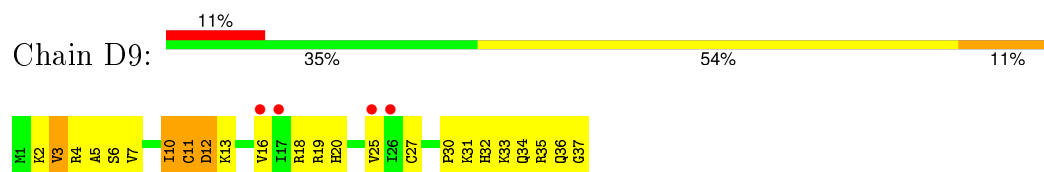
- Molecule 54: 50S ribosomal protein L35



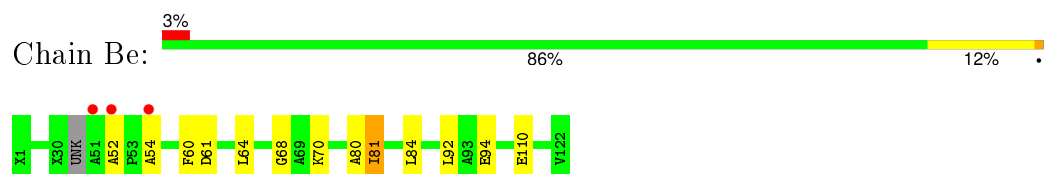
- Molecule 55: 50S ribosomal protein L36



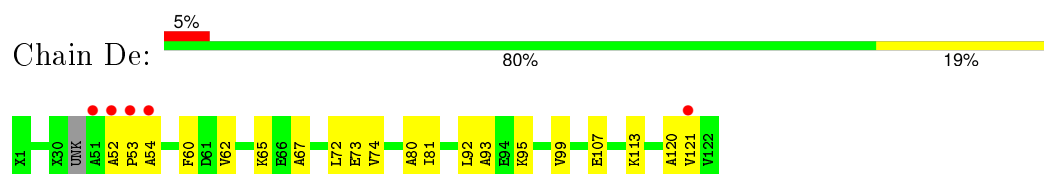
- Molecule 55: 50S ribosomal protein L36



- Molecule 56: 50S ribosomal protein L7/L12



- Molecule 56: 50S ribosomal protein L7/L12



- Molecule 57: 50S ribosomal protein L7/L12



There are no outlier residues recorded for this chain.

- Molecule 57: 50S ribosomal protein L7/L12



There are no outlier residues recorded for this chain.

- Molecule 57: 50S ribosomal protein L7/L12

Chain Df:  100%

There are no outlier residues recorded for this chain.

- Molecule 57: 50S ribosomal protein L7/L12

Chain Dg:  100%

There are no outlier residues recorded for this chain.

- Molecule 58: 50S ribosomal protein L7/L12

Chain Bh:  100%

There are no outlier residues recorded for this chain.

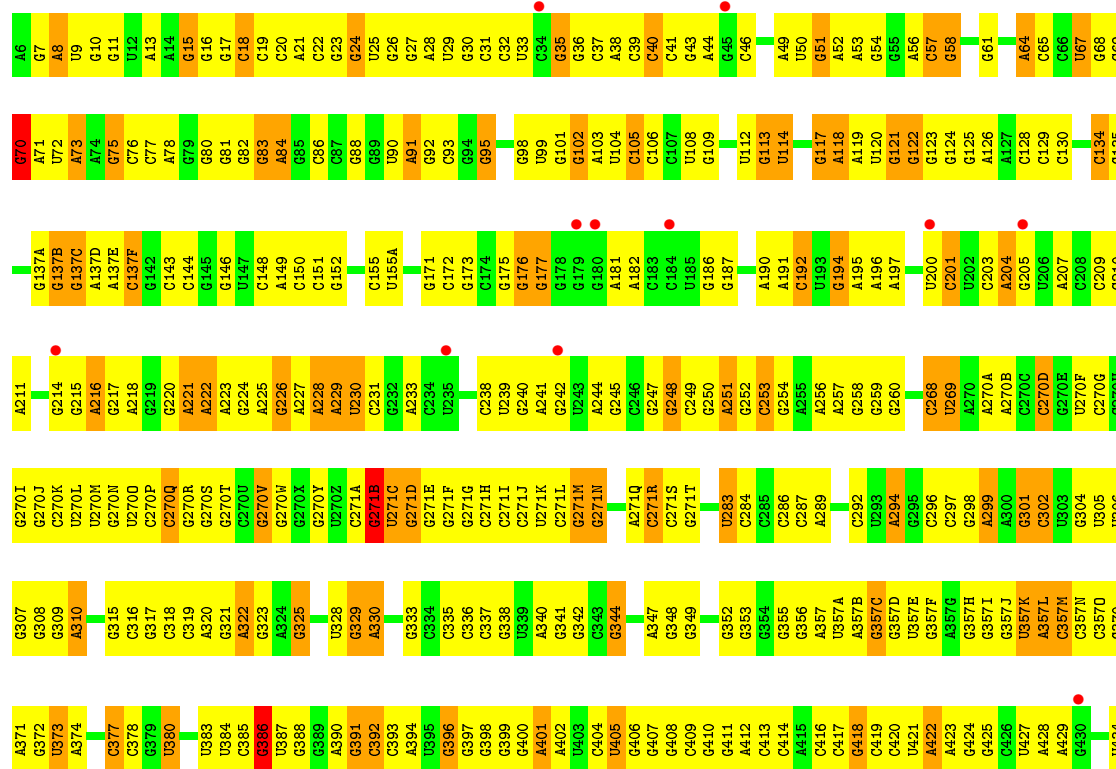
- Molecule 58: 50S ribosomal protein L7/L12

Chain Dh:  100%

There are no outlier residues recorded for this chain.

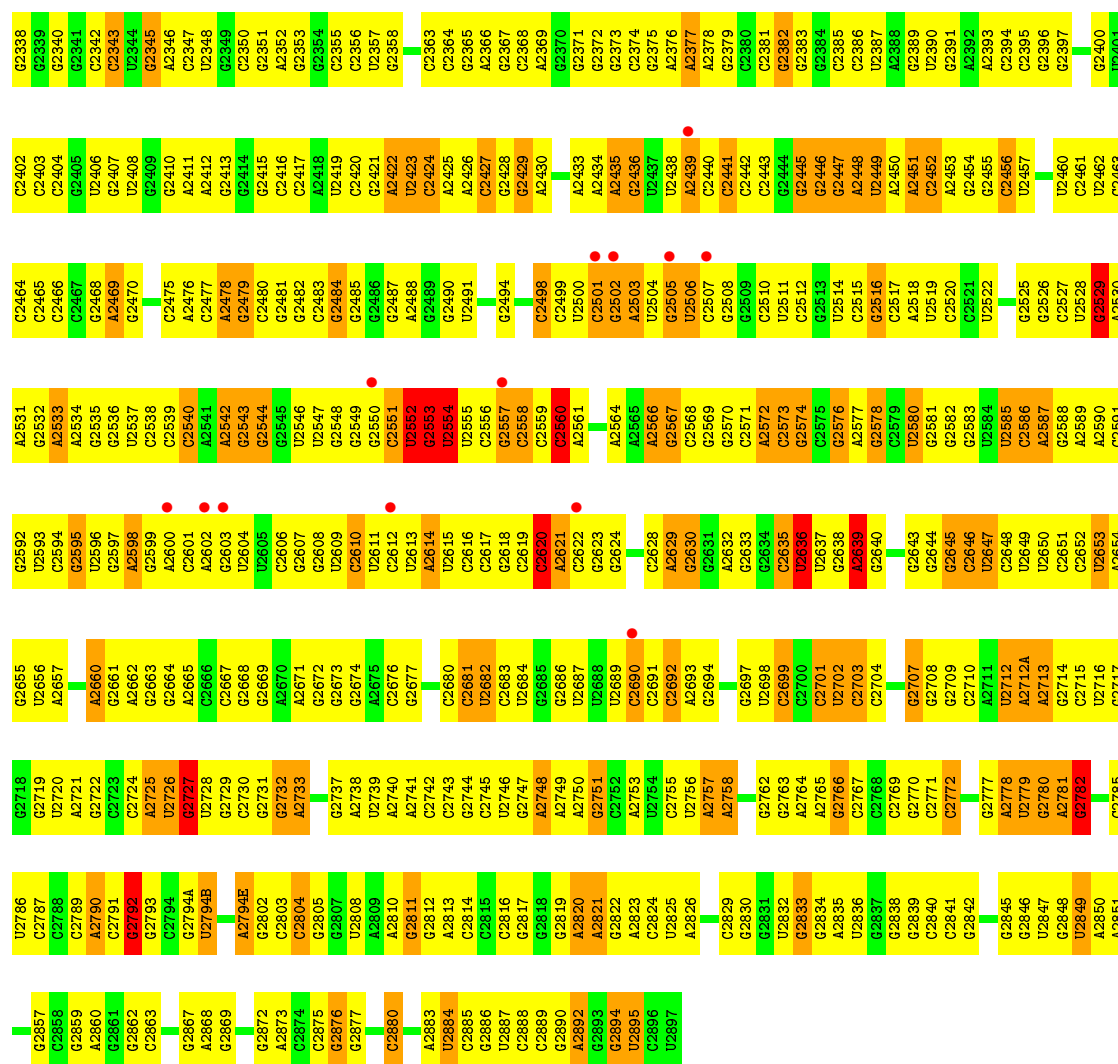
- Molecule 59: 23S RRNA

Chain BA: 

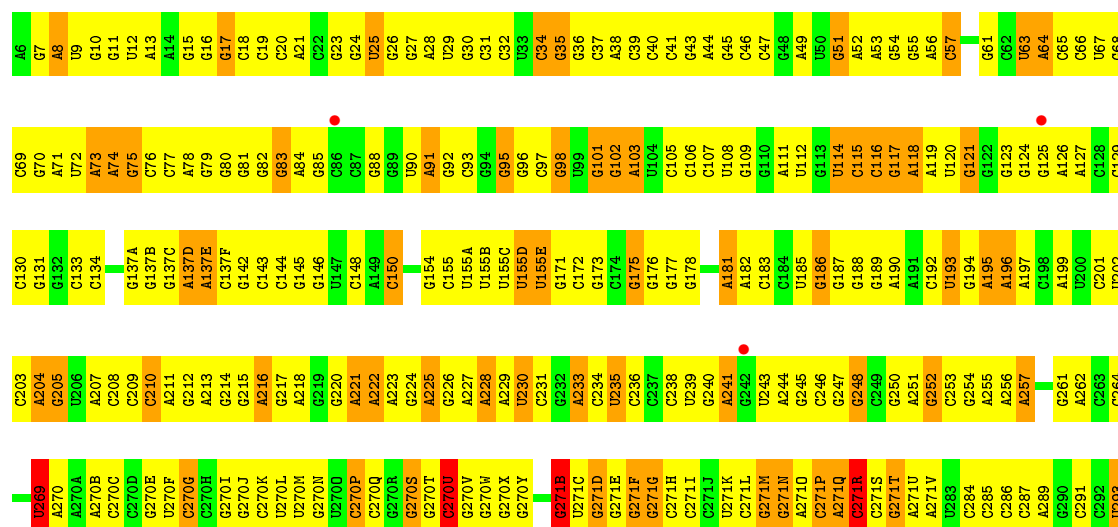


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A2288	G2202G	U2144	A2077	U2016	A1952	G1891	G1818		G1667	C1604	A1483D		C1407
	G2202H	C2145	G2080	G2017	A1953	C1892	A1819		A1668	G1605	G1468E		C1408
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G2306	G2235	G2159	A2031	A2031	G1968	C1908	G1835	G1772	C1687	U1621	C1556	C1493	G1422
G2307	G2236	G2160	C2032	G2032	G1969	C1909	C1836	A1773	U1688	G1622	C1557	A1494	G1423
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A2310		C2163	G2100	G2035	A1972	A1912	G1839	U1779	C1691	G1627	G1560	U1497	A1427
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G2321	G2252	A2173	G2110	C2045	C1983	G1922	G1849	C1788	A1702	A1637	A1571	A1506A	C1437
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	U2257	C2178	G2115	C2050	A1927	A1927	A1854	G1793		G1643	C1577	U1506G	A1444A
A2328	G2258	C2179	G2116	A2051	A1928	A1928	G1855	U1794	U1709	C1644	U1578	C1506H	C1445
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C2330		G2181	G2120	C2055	G1992	G1930	G1857	U1796	C1712	C1646	A1580	C1506J	A1448A
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A2333	U2265	U2122	U2121		C1994	A1932	A1859	U1798	G1712B	G1648	G1582	U1506L	C1450
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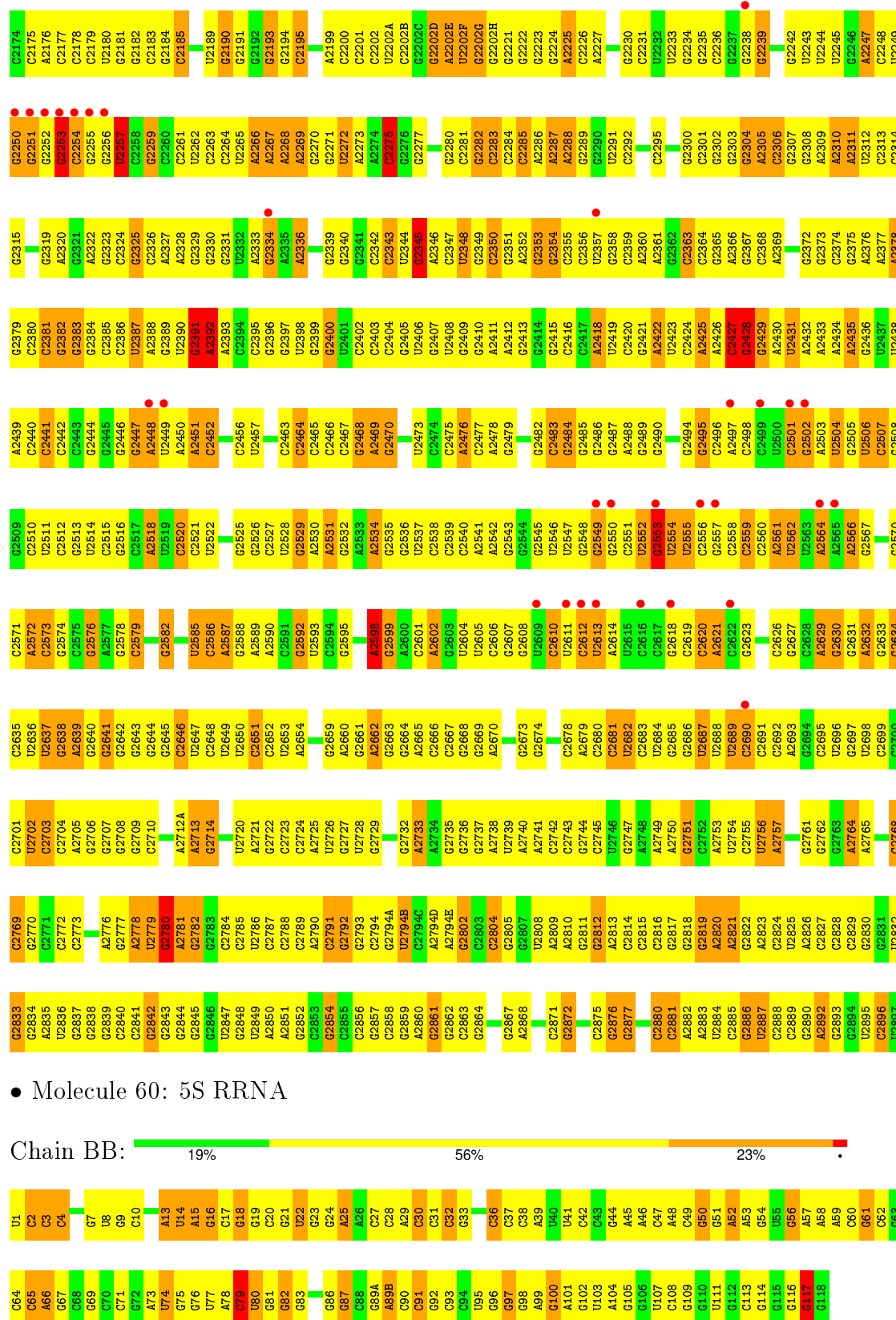


• Molecule 59: 23S rRNA



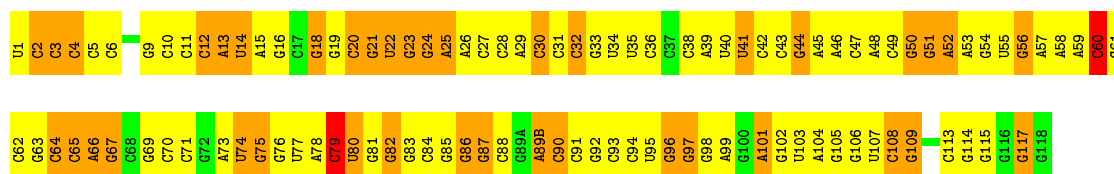
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A1189	G1124	U1060	G995	A932	G870	U807	U747	G680	G611G	U555	A492	A422	G357H	C296
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G1193	A1128	C1064	U999	G936	G873	U811	A751	G684	A621	G559	G496	U431	U357L	A300
A1194	U1129	U1065	A1000	U937	G874	C812	A752	G685		C560	A497	A432	A357M	G301
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U1198	A1136	A1069	C1004	A941	G878	C816	C756	G689	A627	C565	A501	U436	A371	U307
U1199	G1137	A1070	G1005	G942	G879	C817	U757	G690	G628	C566	A502	G433	G372	G307
G1200	G1138	G1071	C1006	U943	G880	G818	C758	G691	G629	U567	A503	G440	U373	G308
C1201	G1139	A1072	C1007	G944	G881	A819	G759	C692	G630	U568	U504	U441	A374	G309
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G1203	U1141	G1074	A1009	G946	G883	A821	A761	G694	A633	U569	G506	G443	C376	A311
A1204	U1141A	A1075	A1010	G947	C884	U822	U762		G634	A571	A507	U444	C377	G312
U1205	A1142	C1076	G1011	G948	C885	G823	G763	C697	C635	A572	G508	C445	C378	G317
G1206	A1143	A1077	U1012	G949	C886	A824	A764	C698	G636	G573	C509	C446	G379	C318
C1207	G1144	U1078	C1013	G950	A887	C825	G765	A699	G637	C574	C510	A447	U380	C319
G1208	C1145	C1079	U1014		C888	U826	U767	G700	G638	A575	U511	U448	G381	G320
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G1215	G1153	A1086	U1023	A960	A896	C834	U773	G711	C846	G582	G518	C456	G388	G329
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U1240	C1180	U1113	C986	G986	U922	G859	G798	C737	C671	U607	G543A	A482	C413	G356
A1241	C1181	G1114	G987	C923	C923	U860	G799	G738	C672	A608	C543B	A483	C414	G357
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A1246	G1186	A1057	C992	C992	G929	C865	A804	G744	A677	C611A	G552	G488	C419	U357E

U2109	U2110	C2111	C2112	U2113	A2114	C2115	U2118	A2119	C2120	U2121	U2122	C2123	C2124	C2125	A2126	C2129	U2130	U2132	U2133	A2134	A2135	C2136	C2137	C2138	C2139	C2140	C2141	C2142	C2143	U2144	C2145	C2146	C2147	C2148	U2149	U2150	C2151	C2152	C2153	C2154	C2155	C2156	C2157	A2158	C2159	C2160	C2161	C2162	U2167	C2168	A2169	A2170	U2171	U2172	U2173	C2173																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
U1846	A1847	A1848	G1849	U1850	U1851	A1854	G1855	G1856	A1857	C1858	A1859	G1860	G1861	G1864A	C1864B	A1864C	A1864D	G1878	C1879	C1880	C1881	C1882	G1883	A1884	A1885	A1886	A1887	A1888	A1889	A1890	G1891	C1892	C1893	C1894	C1895	C1896	G1899	A1900	A1901	C1902	C1903	G1904	C1905	G1906	C1907	C1908	C1909	G1910	U1911	A1912	A1913	C1914	U1915	U1916	A1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919	U1917	C1918	A1919





Chain DB:



## 4 Data and refinement statistics

Property	Value	Source
Space group	C 1 2 1	Depositor
Cell constants a, b, c, $\alpha$ , $\beta$ , $\gamma$	306.92Å 677.00Å 356.78Å 90.00° 89.90° 90.00°	Depositor
Resolution (Å)	49.98 – 3.80 127.40 – 3.80	Depositor EDS
% Data completeness (in resolution range)	(Not available) (49.98-3.80) 60.2 (127.40-3.80)	Depositor EDS
$R_{merge}$	(Not available)	Depositor
$R_{sym}$	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ <sup>1</sup>	1.05 (at 3.78Å)	Xtriage
Refinement program	PHENIX (phenix.refine: 1.9_1692)	Depositor
R, $R_{free}$	0.295 , 0.331 0.315 , 0.354	Depositor DCC
$R_{free}$ test set	6492 reflections (1.51%)	DCC
Wilson B-factor (Å <sup>2</sup> )	66.8	Xtriage
Anisotropy	0.219	Xtriage
Bulk solvent $k_{sol}$ (e/Å <sup>3</sup> ), $B_{sol}$ (Å <sup>2</sup> )	0.11 , -10.0	EDS
Estimated twinning fraction	0.340 for h,-k,-l	Xtriage
L-test for twinning <sup>2</sup>	$\langle  L  \rangle = 0.17$ , $\langle L^2 \rangle = 0.05$	Xtriage
Outliers	0 of 428645 reflections	Xtriage
$F_o, F_c$ correlation	0.83	EDS
Total number of atoms	312066	wwPDB-VP
Average B, all atoms (Å <sup>2</sup> )	85.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 2.07% 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, FUA, ACE, NMY

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	0.41	0/1945	0.69	0/2621
1	CB	0.41	0/1945	0.69	1/2621 (0.0%)
2	AC	0.27	0/1645	0.55	0/2216
2	CC	0.29	0/1645	0.56	0/2216
3	AD	0.31	0/1733	0.59	0/2318
3	CD	0.29	0/1733	0.61	1/2318 (0.0%)
4	AE	0.30	0/1172	0.57	0/1576
4	CE	0.30	0/1172	0.61	1/1576 (0.1%)
5	AF	0.28	0/856	0.56	0/1154
5	CF	0.30	0/856	0.59	0/1154
6	AG	0.27	0/1276	0.51	0/1709
6	CG	0.28	0/1276	0.51	0/1709
7	AH	0.29	0/1136	0.60	0/1527
7	CH	0.28	0/1136	0.55	0/1527
8	AI	0.27	0/1029	0.56	0/1379
8	CI	0.27	0/1029	0.50	0/1379
9	AJ	0.27	0/815	0.54	0/1095
9	CJ	0.28	0/815	0.56	0/1095
10	AK	0.38	0/900	0.62	0/1213
10	CK	0.39	0/900	0.61	0/1213
11	AL	0.43	0/992	0.80	0/1327
11	CL	0.45	0/992	0.81	1/1327 (0.1%)
12	AM	0.27	0/1008	0.53	0/1347
12	CM	0.27	0/1008	0.58	0/1347
13	AN	0.29	0/501	0.51	0/664
13	CN	0.34	0/501	0.57	0/664
14	AO	0.34	0/745	0.61	0/992
14	CO	0.33	0/745	0.57	1/992 (0.1%)
15	AP	0.32	0/722	0.61	0/970
15	CP	0.32	0/722	0.60	0/970
16	AQ	0.35	0/848	0.67	1/1131 (0.1%)
16	CQ	0.36	0/848	0.68	0/1131

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
17	AR	0.29	0/579	0.58	0/768
17	CR	0.29	0/579	0.57	0/768
18	AS	0.29	0/647	0.56	0/870
18	CS	0.26	0/647	0.53	0/870
19	AT	0.30	0/765	0.54	0/1007
19	CT	0.31	0/765	0.51	0/1007
20	AY	0.37	0/5270	0.66	1/7135 (0.0%)
20	CY	0.36	0/5270	0.67	3/7135 (0.0%)
21	AA	0.39	9/36351 (0.0%)	1.12	149/56736 (0.3%)
21	CA	0.42	6/36351 (0.0%)	1.17	239/56736 (0.4%)
22	AW	0.52	0/1827	1.42	41/2845 (1.4%)
22	CW	0.48	0/1827	1.36	23/2845 (0.8%)
23	AV	1.27	1/881 (0.1%)	1.42	12/1372 (0.9%)
23	CV	0.82	7/880 (0.8%)	2.11	42/1372 (3.1%)
24	AX	0.62	1/1815 (0.1%)	1.56	47/2826 (1.7%)
24	CX	0.60	3/1815 (0.2%)	1.54	43/2826 (1.5%)
25	BC	0.51	1/1774 (0.1%)	0.86	2/2391 (0.1%)
25	DC	0.51	0/1774	0.80	0/2391
26	BD	0.40	2/2195 (0.1%)	0.62	1/2955 (0.0%)
26	DD	0.31	0/2195	0.60	0/2955
27	BE	0.35	0/1602	0.69	2/2160 (0.1%)
27	DE	0.33	0/1602	0.67	0/2160
28	BF	0.39	0/1663	0.81	6/2249 (0.3%)
28	DF	0.38	0/1663	0.78	4/2249 (0.2%)
29	BG	0.27	0/1499	0.54	0/2016
29	DG	0.29	0/1499	0.58	0/2016
30	BH	0.28	0/1298	0.58	0/1751
30	DH	0.28	0/1298	0.55	0/1751
32	BK	0.28	0/1054	0.55	1/1427 (0.1%)
32	DK	0.31	0/1054	0.58	1/1427 (0.1%)
33	BN	0.81	3/1141 (0.3%)	1.39	16/1537 (1.0%)
33	DN	0.81	2/1141 (0.2%)	1.28	13/1537 (0.8%)
34	BO	0.32	0/943	0.63	2/1269 (0.2%)
34	DO	0.32	0/943	0.65	0/1269
35	BP	0.28	0/1131	0.64	2/1504 (0.1%)
35	DP	0.29	0/1131	0.63	0/1504
36	BQ	0.36	0/1143	0.67	0/1527
36	DQ	0.33	0/1143	0.63	0/1527
37	BR	0.33	0/974	0.64	1/1302 (0.1%)
37	DR	0.32	0/974	0.59	0/1302
38	BS	0.35	0/783	0.69	0/1041
38	DS	0.36	0/783	0.71	0/1041
39	BT	0.30	0/1161	0.63	0/1549

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
39	DT	0.30	0/1161	0.64	0/1549
40	BU	0.36	0/982	0.57	0/1306
40	DU	0.33	0/982	0.57	0/1306
41	BV	0.34	0/790	0.76	2/1057 (0.2%)
41	DV	0.31	0/790	0.65	1/1057 (0.1%)
42	BW	0.32	0/911	0.64	0/1220
42	DW	0.38	0/911	0.69	1/1220 (0.1%)
43	BX	0.28	0/748	0.56	1/1004 (0.1%)
43	DX	0.28	0/748	0.56	1/1004 (0.1%)
44	BY	0.28	0/831	0.54	0/1108
44	DY	0.27	0/831	0.57	1/1108 (0.1%)
45	BZ	0.28	0/1505	0.58	0/2042
45	DZ	0.29	0/1505	0.58	0/2042
46	B0	0.25	0/671	0.54	0/892
46	D0	0.25	0/671	0.50	0/892
47	B1	0.51	0/739	1.01	5/981 (0.5%)
47	D1	0.48	0/739	0.92	2/981 (0.2%)
48	B2	0.37	0/600	0.63	0/793
48	D2	0.34	0/600	0.65	0/793
49	B3	0.29	0/482	0.58	0/646
49	D3	0.26	0/482	0.58	0/646
50	B4	0.38	0/276	0.67	0/372
50	D4	0.37	0/276	0.68	0/372
51	B5	0.28	0/473	0.57	0/639
51	D5	0.32	0/473	0.62	0/639
52	B6	0.30	0/440	0.82	3/586 (0.5%)
52	D6	0.31	0/440	0.68	0/586
53	B7	1.14	6/438 (1.4%)	1.51	7/575 (1.2%)
53	D7	0.29	0/438	0.55	0/575
54	B8	0.31	0/525	0.58	0/691
54	D8	0.30	0/525	0.61	0/691
55	B9	0.28	0/310	0.55	0/407
55	D9	0.32	0/310	0.57	0/407
56	Be	0.25	0/538	0.53	0/715
56	De	0.27	0/538	0.51	0/715
59	BA	0.38	1/69437 (0.0%)	1.11	247/108401 (0.2%)
59	DA	0.40	2/69437 (0.0%)	1.14	333/108401 (0.3%)
60	BB	0.43	0/2853	1.28	29/4451 (0.7%)
60	DB	0.48	0/2853	1.34	49/4451 (1.1%)
All	All	0.40	44/334735 (0.0%)	1.04	1339/498724 (0.3%)

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	1
3	CD	0	1
10	AK	0	1
10	CK	0	1
15	AP	0	1
15	CP	0	1
20	AY	0	2
25	BC	0	6
25	DC	0	5
26	BD	0	1
26	DD	0	1
27	BE	0	1
28	BF	0	4
28	DF	0	2
29	DG	0	1
31	BJ	0	2
31	DJ	0	3
33	BN	0	17
33	DN	0	15
34	BO	0	1
34	DO	0	1
36	BQ	0	1
38	BS	0	1
38	DS	0	1
39	BT	0	1
39	DT	0	1
42	BW	0	1
42	DW	0	2
45	BZ	0	1
45	DZ	0	1
47	B1	0	4
47	D1	0	3
53	B7	0	1
All	All	0	86

All (44) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
23	AV	1	G	P-O5'	35.77	1.95	1.59
53	B7	40	TRP	CD2-CE2	-12.82	1.25	1.41
21	AA	1126	U	C2-O2	-9.80	1.13	1.22

*Continued on next page...*

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
21	CA	1126	U	C2-O2	-9.32	1.14	1.22
53	B7	40	TRP	CE3-CZ3	8.92	1.53	1.38
53	B7	40	TRP	CZ2-CH2	-8.40	1.21	1.37
23	CV	10	G	N1-C2	-8.30	1.31	1.37
21	CA	1374	A	N7-C5	-7.69	1.34	1.39
26	BD	143	HIS	CG-ND1	-7.55	1.22	1.38
53	B7	40	TRP	CZ3-CH2	7.38	1.51	1.40
33	BN	115	ARG	C-O	7.34	1.37	1.23
21	AA	1374	A	N3-C4	-7.05	1.30	1.34
24	CX	75	C	C4-C5	-6.80	1.37	1.43
24	CX	75	C	C4-N4	-6.71	1.27	1.33
33	BN	101	HIS	CA-C	-6.61	1.35	1.52
24	AX	36	C	C5-C6	-6.54	1.29	1.34
21	CA	1126	U	N1-C6	-6.53	1.32	1.38
33	DN	117	PHE	CA-C	-6.50	1.36	1.52
33	BN	85	ILE	CB-CG2	-6.47	1.32	1.52
26	BD	143	HIS	CE1-NE2	-6.42	1.17	1.32
53	B7	40	TRP	CD2-CE3	6.35	1.49	1.40
23	CV	7	G	N3-C4	-6.19	1.31	1.35
21	AA	1374	A	C6-N1	-6.12	1.31	1.35
59	DA	1971	A	N9-C4	5.99	1.41	1.37
23	CV	7	G	C2-N3	-5.94	1.27	1.32
21	AA	1126	U	N1-C6	-5.88	1.32	1.38
59	DA	2592	G	N9-C4	5.84	1.42	1.38
33	DN	101	HIS	CA-C	-5.81	1.37	1.52
21	AA	1126	U	N3-C4	-5.78	1.33	1.38
23	CV	10	G	C6-O6	-5.73	1.19	1.24
21	CA	1126	U	N3-C4	-5.63	1.33	1.38
21	CA	520	A	N3-C4	-5.40	1.31	1.34
21	CA	1374	A	C5-C6	-5.29	1.36	1.41
59	BA	2553	G	N9-C4	5.23	1.42	1.38
23	CV	10	G	C6-N1	-5.22	1.35	1.39
53	B7	41	ARG	CB-CG	5.20	1.66	1.52
21	AA	520	A	N3-C4	-5.15	1.31	1.34
23	CV	8	A	N3-C4	-5.12	1.31	1.34
23	CV	10	G	N9-C4	5.12	1.42	1.38
24	CX	75	C	C5-C6	-5.10	1.30	1.34
25	BC	43	GLU	C-O	5.09	1.33	1.23
21	AA	1374	A	C5-C6	-5.07	1.36	1.41
21	AA	1148	U	C2-N3	5.06	1.41	1.37
21	AA	1374	A	N7-C5	-5.04	1.36	1.39

All (1339) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	AV	1	G	O5'-P-OP2	24.05	139.56	110.70
23	CV	10	G	N1-C6-O6	-22.12	106.63	119.90
21	AA	1126	U	N1-C2-N3	18.77	126.16	114.90
53	B7	40	TRP	CE2-CD2-CG	18.75	122.30	107.30
21	CA	1126	U	N1-C2-N3	18.50	126.00	114.90
53	B7	40	TRP	CD1-CG-CD2	-16.51	93.09	106.30
23	CV	7	G	N9-C4-C5	16.31	111.93	105.40
21	CA	1126	U	C4-C5-C6	16.25	129.45	119.70
59	BA	2553	G	N3-C4-N9	15.91	135.55	126.00
23	CV	7	G	N3-C4-N9	-15.90	116.46	126.00
23	CV	10	G	C5-C6-N1	15.27	119.14	111.50
24	CX	75	C	C5-C4-N4	-15.19	109.57	120.20
21	AA	1126	U	C4-C5-C6	14.95	128.67	119.70
23	CV	10	G	N3-C2-N2	14.76	130.23	119.90
59	BA	2553	G	C6-C5-N7	-14.73	121.56	130.40
21	AA	1491	G	C8-N9-C4	-14.54	100.58	106.40
59	BA	2553	G	C4-N9-C1'	14.43	145.26	126.50
21	AA	1126	U	C6-N1-C2	-14.38	112.37	121.00
59	BA	2553	G	C8-N9-C1'	-14.38	108.31	127.00
21	AA	1374	A	C2-N3-C4	-14.25	103.48	110.60
59	DA	2553	G	N1-C6-O6	14.18	128.41	119.90
23	CV	10	G	N3-C4-C5	-13.70	121.75	128.60
21	AA	1374	A	N1-C2-N3	13.37	135.98	129.30
59	BA	2553	G	C5-C6-O6	-13.17	120.70	128.60
24	AX	37	A	N1-C2-N3	-13.03	122.79	129.30
23	CV	7	G	N3-C2-N2	-12.90	110.87	119.90
21	AA	815	A	N1-C6-N6	-12.83	110.90	118.60
21	CA	1535	C	N3-C2-O2	-12.81	112.94	121.90
59	BA	2553	G	N1-C6-O6	12.77	127.56	119.90
59	DA	2553	G	C6-C5-N7	-12.61	122.84	130.40
21	CA	1538	C	C2-N3-C4	12.42	126.11	119.90
24	AX	75	C	N1-C2-O2	12.29	126.27	118.90
23	AV	1	G	P-O5'-C5'	-12.05	101.62	120.90
23	CV	10	G	N1-C2-N2	-12.00	105.40	116.20
59	DA	2553	G	N9-C4-C5	-11.99	100.61	105.40
23	CV	7	G	C5-C6-O6	11.92	135.75	128.60
24	AX	37	A	C4-C5-C6	-11.89	111.06	117.00
23	CV	7	G	C4-C5-N7	-11.85	106.06	110.80
21	CA	1538	C	N3-C2-O2	11.76	130.13	121.90
21	AA	1148	U	C2-N3-C4	-11.66	120.00	127.00
24	CX	75	C	N1-C2-O2	11.61	125.86	118.90
59	BA	962	G	N3-C4-N9	11.53	132.92	126.00
24	CX	75	C	N3-C4-C5	11.50	126.50	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	CV	10	G	C2-N3-C4	11.48	117.64	111.90
59	BA	2553	G	N9-C4-C5	-11.45	100.82	105.40
21	AA	1374	A	C5-C6-N1	-11.44	111.98	117.70
59	BA	2553	G	C4-C5-N7	11.43	115.37	110.80
59	DA	2592	G	N3-C4-N9	11.36	132.81	126.00
59	DA	2553	G	C4-C5-N7	11.29	115.32	110.80
21	CA	1126	U	C6-N1-C2	-11.28	114.23	121.00
21	CA	1535	C	N3-C4-N4	-11.21	110.15	118.00
21	CA	1538	C	N3-C4-C5	-11.19	117.42	121.90
53	B7	40	TRP	CE2-CD2-CE3	-11.17	105.30	118.70
21	AA	815	A	C5-C6-N6	11.13	132.61	123.70
24	AX	75	C	N3-C2-O2	-11.06	114.16	121.90
21	AA	1126	U	N3-C4-C5	-10.95	108.03	114.60
59	DA	2601	C	N1-C2-O2	10.92	125.45	118.90
24	AX	75	C	N3-C4-C5	10.85	126.24	121.90
21	CA	1535	C	C6-N1-C2	-10.84	115.96	120.30
23	CV	7	G	C6-C5-N7	10.84	136.91	130.40
21	AA	1492	A	OP1-P-O3'	-10.83	81.37	105.20
21	AA	1126	U	N3-C2-O2	-10.79	114.64	122.20
21	CA	1538	C	C5-C4-N4	10.79	127.75	120.20
21	CA	815	A	N1-C6-N6	-10.78	112.14	118.60
23	CV	8	A	N9-C4-C5	10.62	110.05	105.80
59	DA	2553	G	C8-N9-C1'	-10.55	113.28	127.00
21	AA	1374	A	C4-C5-C6	10.46	122.23	117.00
21	CA	815	A	C5-C6-N6	10.42	132.04	123.70
21	CA	1299	A	N1-C6-N6	-10.34	112.39	118.60
24	CX	24	G	N3-C4-N9	10.34	132.20	126.00
24	CX	34	U	N3-C4-O4	-10.30	112.19	119.40
24	CX	74	C	N1-C2-O2	-10.18	112.79	118.90
21	CA	1148	U	C2-N3-C4	-10.10	120.94	127.00
59	BA	955	C	C5-C6-N1	10.05	126.03	121.00
23	CV	7	G	N1-C6-O6	-10.05	113.87	119.90
60	DB	89(B)	A	N1-C6-N6	10.05	124.63	118.60
24	AX	50	G	N1-C6-O6	-10.01	113.90	119.90
59	BA	1970	A	O4'-C1'-N9	-10.01	100.19	108.20
21	CA	1538	C	C2-N1-C1'	-10.01	107.79	118.80
23	CV	7	G	C8-N9-C1'	10.00	140.00	127.00
59	BA	2553	G	N3-C4-C5	-9.96	123.62	128.60
33	BN	91	LEU	CA-CB-CG	9.93	138.14	115.30
21	CA	1126	U	N3-C4-C5	-9.92	108.65	114.60
59	DA	2601	C	C2-N1-C1'	9.91	129.70	118.80
23	CV	10	G	N3-C4-N9	9.87	131.92	126.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	CA	1535	C	C5-C4-N4	9.85	127.10	120.20
21	AA	1299	A	N1-C6-N6	-9.83	112.70	118.60
59	DA	906	G	C5-C6-O6	9.81	134.49	128.60
59	BA	962	G	N3-C2-N2	9.78	126.74	119.90
59	BA	1967	C	C6-N1-C2	-9.76	116.40	120.30
21	CA	1126	U	N3-C2-O2	-9.76	115.37	122.20
53	B7	40	TRP	CE3-CZ3-CH2	-9.74	110.48	121.20
21	AA	1492	A	OP2-P-O3'	-9.74	83.77	105.20
59	BA	962	G	N9-C4-C5	-9.70	101.52	105.40
21	CA	1536	C	C5-C4-N4	9.65	126.96	120.20
21	CA	1535	C	C2-N1-C1'	9.64	129.41	118.80
21	CA	1348	U	C2-N3-C4	-9.61	121.23	127.00
21	CA	1538	C	N1-C2-O2	-9.61	113.13	118.90
21	AA	815	A	N9-C4-C5	9.58	109.63	105.80
59	DA	2553	G	C4-N9-C1'	9.58	138.96	126.50
21	AA	1491	G	N7-C8-N9	9.57	117.88	113.10
59	DA	2592	G	N3-C4-C5	-9.54	123.83	128.60
23	CV	8	A	N1-C6-N6	-9.52	112.89	118.60
21	CA	815	A	N9-C4-C5	9.50	109.60	105.80
24	CX	34	U	C5-C4-O4	9.50	131.60	125.90
24	AX	3	G	N3-C4-N9	9.49	131.70	126.00
59	BA	527	C	C2-N1-C1'	9.43	129.18	118.80
59	BA	955	C	N3-C4-N4	9.43	124.60	118.00
23	CV	19	G	N9-C4-C5	9.36	109.14	105.40
22	CW	61	C	C2-N1-C1'	9.31	129.04	118.80
21	CA	1535	C	N1-C2-O2	9.27	124.46	118.90
23	CV	10	G	C5-C6-O6	9.24	134.15	128.60
21	CA	1538	C	C6-N1-C1'	9.24	131.89	120.80
59	BA	955	C	N1-C2-O2	9.23	124.44	118.90
59	DA	103	A	N1-C6-N6	9.22	124.13	118.60
21	CA	1440(N)	C	N1-C2-O2	9.21	124.42	118.90
59	DA	962	G	N3-C4-N9	9.13	131.47	126.00
23	AV	19	G	C2-N3-C4	9.06	116.43	111.90
60	BB	2	C	C2-N1-C1'	9.06	128.76	118.80
59	DA	1966	A	C8-N9-C4	-9.02	102.19	105.80
21	CA	1052	U	N1-C2-O2	9.01	129.11	122.80
59	DA	2553	G	C5-C6-O6	-8.92	123.25	128.60
60	DB	3	C	C6-N1-C2	-8.89	116.74	120.30
59	DA	962	G	N9-C4-C5	-8.87	101.85	105.40
21	CA	1440(E)	G	N3-C4-N9	8.87	131.32	126.00
53	B7	40	TRP	CH2-CZ2-CE2	8.86	126.26	117.40
21	AA	1491	G	N9-C4-C5	8.86	108.94	105.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	B7	40	TRP	NE1-CE2-CD2	-8.84	98.46	107.30
21	AA	1374	A	N1-C6-N6	8.79	123.87	118.60
59	BA	962	G	C4-C5-N7	8.79	114.32	110.80
4	CE	12	LEU	CA-CB-CG	8.74	135.40	115.30
33	DN	117	PHE	N-CA-C	-8.72	87.44	111.00
28	DF	193	VAL	N-CA-C	-8.69	87.53	111.00
60	BB	3	C	C6-N1-C2	-8.68	116.83	120.30
59	DA	2553	G	N3-C4-N9	8.68	131.21	126.00
23	CV	10	G	C4-N9-C1'	8.67	137.78	126.50
28	BF	193	VAL	N-CA-C	-8.67	87.60	111.00
59	DA	357(D)	G	N3-C4-N9	-8.62	120.83	126.00
59	BA	955	C	C2-N3-C4	8.60	124.20	119.90
21	CA	1301	U	C2-N1-C1'	8.60	128.01	117.70
60	DB	3	C	N3-C4-C5	-8.54	118.48	121.90
23	CV	10	G	C6-N1-C2	-8.51	120.00	125.10
21	CA	1374	A	N1-C6-N6	8.49	123.69	118.60
24	CX	75	C	N3-C4-N4	8.47	123.93	118.00
59	BA	1048	A	N1-C6-N6	8.46	123.67	118.60
21	AA	723	U	C2-N1-C1'	8.42	127.81	117.70
22	AW	50	C	N1-C2-O2	8.41	123.95	118.90
28	BF	156	LEU	N-CA-C	-8.34	88.48	111.00
59	BA	527	C	C6-N1-C2	-8.33	116.97	120.30
21	CA	1127	G	N9-C4-C5	8.30	108.72	105.40
59	DA	271(R)	C	N1-C2-O2	-8.28	113.93	118.90
59	DA	294	A	N1-C6-N6	8.27	123.56	118.60
59	DA	906	G	N3-C4-N9	-8.26	121.05	126.00
21	CA	735	C	C2-N1-C1'	8.25	127.88	118.80
21	AA	1157	A	O4'-C1'-N9	8.24	114.79	108.20
24	CX	11	C	N1-C2-O2	8.24	123.84	118.90
21	CA	1306	A	N1-C6-N6	8.23	123.54	118.60
59	DA	2601	C	N3-C2-O2	-8.22	116.15	121.90
59	BA	2249	U	N1-C2-O2	8.21	128.54	122.80
21	CA	1494	G	N3-C4-C5	-8.19	124.50	128.60
22	AW	14	A	N1-C6-N6	8.18	123.51	118.60
24	CX	11	C	C2-N1-C1'	8.16	127.77	118.80
24	CX	75	C	N3-C2-O2	-8.15	116.19	121.90
23	CV	19	G	N3-C4-N9	-8.12	121.12	126.00
28	DF	156	LEU	N-CA-C	-8.12	89.07	111.00
59	DA	357(D)	G	N9-C4-C5	8.10	108.64	105.40
24	AX	72	C	N1-C2-O2	8.10	123.76	118.90
24	AX	75	C	O4'-C1'-N1	-8.09	101.73	108.20
22	CW	61	C	C6-N1-C1'	-8.07	111.12	120.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
47	B1	17	SER	N-CA-C	8.05	132.75	111.00
59	BA	1493	C	C2-N1-C1'	8.03	127.63	118.80
21	AA	1301	U	C2-N1-C1'	8.03	127.33	117.70
59	DA	2585	U	C2-N1-C1'	8.02	127.33	117.70
60	DB	18	G	N3-C4-N9	8.01	130.80	126.00
60	DB	4	C	C2-N1-C1'	7.99	127.59	118.80
59	BA	1945	G	N9-C4-C5	-7.99	102.20	105.40
22	AW	61	C	C2-N1-C1'	7.97	127.57	118.80
59	DA	1107	G	N9-C4-C5	7.95	108.58	105.40
24	AX	37	A	C6-N1-C2	7.95	123.37	118.60
21	AA	68(Q)	U	N1-C2-O2	7.94	128.36	122.80
21	CA	1494	G	C4-N9-C1'	7.94	136.82	126.50
24	CX	36	C	C2-N3-C4	7.93	123.87	119.90
60	BB	3	C	C2-N3-C4	7.92	123.86	119.90
59	BA	527	C	N1-C2-O2	7.92	123.65	118.90
21	AA	1409	C	C4-C5-C6	7.91	121.35	117.40
59	BA	2560	C	C6-N1-C2	-7.88	117.15	120.30
21	CA	1440(N)	C	N3-C2-O2	-7.87	116.39	121.90
24	AX	3	G	N9-C4-C5	-7.86	102.25	105.40
33	BN	118	LYS	C-N-CA	-7.86	102.05	121.70
59	DA	2681	C	C5-C4-N4	7.85	125.70	120.20
21	CA	68(H)	G	N9-C4-C5	7.84	108.54	105.40
59	DA	503	A	N9-C4-C5	7.83	108.93	105.80
59	DA	1107	G	N3-C2-N2	-7.83	114.42	119.90
59	DA	2592	G	C6-C5-N7	-7.83	125.70	130.40
21	CA	1052	U	N3-C2-O2	-7.80	116.74	122.20
59	DA	466	A	N1-C6-N6	7.79	123.28	118.60
21	AA	1302	U	C2-N1-C1'	7.75	127.00	117.70
59	BA	962	G	C5-C6-O6	-7.73	123.96	128.60
60	DB	89(B)	A	C5-C6-N6	-7.73	117.52	123.70
22	CW	14	A	N1-C6-N6	7.72	123.23	118.60
21	CA	1465	C	C5-C4-N4	-7.72	114.79	120.20
59	BA	1945	G	C4-C5-N7	7.72	113.89	110.80
59	DA	1970	A	O4'-C1'-N9	-7.70	102.04	108.20
24	AX	30	C	C2-N1-C1'	7.68	127.25	118.80
24	CX	75	C	O4'-C1'-N1	-7.67	102.06	108.20
59	DA	1396	U	C2-N1-C1'	7.67	126.90	117.70
21	CA	421	U	C2-N1-C1'	7.67	126.90	117.70
24	AX	74	C	C2-N1-C1'	7.65	127.21	118.80
59	BA	1493	C	N1-C2-O2	7.64	123.48	118.90
21	AA	1301	U	N1-C2-O2	7.62	128.13	122.80
21	AA	520	A	N1-C2-N3	7.62	133.11	129.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	BC	45	HIS	N-CA-C	-7.62	90.44	111.00
28	BF	156	LEU	CA-CB-CG	7.61	132.80	115.30
23	CV	7	G	C4-N9-C1'	-7.61	116.61	126.50
21	AA	1332	A	N1-C6-N6	7.61	123.16	118.60
33	BN	115	ARG	CA-C-N	-7.60	100.49	117.20
59	DA	121	G	N3-C4-N9	7.59	130.56	126.00
21	CA	815	A	N3-C4-N9	-7.59	121.33	127.40
23	CV	7	G	C8-N9-C4	-7.56	103.38	106.40
60	DB	65	C	N1-C2-O2	7.56	123.44	118.90
24	CX	74	C	N3-C2-O2	7.55	127.18	121.90
60	DB	101	A	C6-N1-C2	-7.54	114.08	118.60
24	AX	50	G	C5-C6-O6	7.53	133.12	128.60
21	AA	1374	A	C6-C5-N7	-7.53	127.03	132.30
21	CA	300	A	N1-C6-N6	7.52	123.11	118.60
24	CX	36	C	C5-C6-N1	7.52	124.76	121.00
59	DA	357(D)	G	C8-N9-C1'	7.51	136.77	127.00
24	AX	72	C	N3-C2-O2	-7.51	116.65	121.90
59	DA	294	A	C4-C5-C6	7.50	120.75	117.00
59	BA	962	G	C5-C6-N1	7.49	115.25	111.50
24	AX	3	G	C8-N9-C1'	-7.48	117.27	127.00
60	BB	2	C	C6-N1-C1'	-7.48	111.83	120.80
21	CA	1126	U	C2-N3-C4	-7.47	122.52	127.00
11	CL	60	LEU	CA-CB-CG	7.46	132.46	115.30
23	CV	19	G	N3-C2-N2	-7.45	114.69	119.90
22	AW	8	U	N1-C2-O2	7.44	128.01	122.80
33	BN	120	LEU	CA-CB-CG	7.43	132.39	115.30
59	BA	2249	U	N3-C2-O2	-7.43	117.00	122.20
22	CW	8	U	N1-C2-O2	7.43	128.00	122.80
60	DB	75	G	C6-N1-C2	-7.42	120.65	125.10
59	DA	2391	G	C4-N9-C1'	-7.42	116.86	126.50
52	B6	9	LEU	CA-CB-CG	7.42	132.36	115.30
59	DA	2391	G	N3-C4-N9	-7.41	121.55	126.00
21	CA	1103	C	C5-C6-N1	7.41	124.70	121.00
59	DA	962	G	C5-C6-N1	7.41	115.20	111.50
59	BA	466	A	N1-C6-N6	7.41	123.04	118.60
21	CA	815	A	C6-C5-N7	7.41	137.48	132.30
21	CA	1440(N)	C	C2-N1-C1'	7.39	126.93	118.80
21	AA	1126	U	C5-C4-O4	7.39	130.33	125.90
21	CA	1348	U	C5-C4-O4	-7.38	121.47	125.90
59	BA	1313	U	N1-C2-O2	7.36	127.95	122.80
60	DB	117	G	N9-C4-C5	7.36	108.34	105.40
59	DA	271(R)	C	C6-N1-C1'	7.36	129.63	120.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	CA	1126	U	C5-C6-N1	-7.35	119.02	122.70
59	BA	1414	G	N3-C4-N9	-7.35	121.59	126.00
24	AX	30	C	N1-C2-O2	7.34	123.31	118.90
59	BA	1048	A	C4-C5-C6	7.34	120.67	117.00
23	CV	8	A	C6-C5-N7	7.34	137.44	132.30
21	CA	500	G	N3-C4-N9	7.33	130.40	126.00
59	DA	1022	G	P-O3'-C3'	7.33	128.49	119.70
60	DB	65	C	C2-N1-C1'	7.32	126.86	118.80
59	DA	2681	C	C6-N1-C2	-7.31	117.38	120.30
22	AW	71	C	N1-C2-O2	7.30	123.28	118.90
23	AV	19	G	N1-C2-N2	7.30	122.78	116.20
59	DA	1048	A	N1-C6-N6	7.30	122.98	118.60
21	CA	68(H)	G	O4'-C1'-N9	7.29	114.04	108.20
21	CA	1362(A)	C	C2-N1-C1'	-7.29	110.78	118.80
59	BA	1961	C	C2-N1-C1'	7.26	126.79	118.80
21	AA	1148	U	N3-C4-C5	7.26	118.95	114.60
59	BA	194	G	N3-C4-N9	-7.26	121.65	126.00
59	DA	271(R)	C	C2-N1-C1'	-7.25	110.82	118.80
22	AW	14	A	C6-C5-N7	-7.25	127.23	132.30
21	CA	943	U	C5-C6-N1	7.24	126.32	122.70
59	DA	103	A	C4-C5-C6	7.24	120.62	117.00
59	DA	871	U	N1-C2-N3	7.23	119.24	114.90
59	DA	1107	G	N3-C4-N9	-7.23	121.66	126.00
21	AA	328	C	C2-N1-C1'	7.23	126.75	118.80
22	AW	61	C	N1-C2-O2	7.22	123.23	118.90
21	CA	1332	A	N1-C6-N6	7.22	122.93	118.60
21	CA	1336	C	C2-N1-C1'	7.22	126.74	118.80
59	DA	962	G	C8-N9-C1'	-7.21	117.63	127.00
21	AA	68(H)	G	O4'-C1'-N9	7.21	113.97	108.20
21	CA	1127	G	N3-C4-N9	-7.21	121.68	126.00
59	BA	2250	G	C4-N9-C1'	7.19	135.85	126.50
21	AA	520	A	N9-C4-C5	7.18	108.67	105.80
22	AW	68	U	C2-N1-C1'	-7.18	109.08	117.70
47	D1	17	SER	N-CA-C	7.17	130.37	111.00
24	AX	53	G	N3-C4-N9	-7.17	121.70	126.00
23	CV	8	A	N3-C4-N9	-7.17	121.67	127.40
60	DB	117	G	N3-C4-N9	-7.16	121.70	126.00
21	CA	1494	G	N3-C4-N9	7.16	130.29	126.00
22	CW	20	U	C2-N1-C1'	7.16	126.29	117.70
59	DA	2391	G	C8-N9-C1'	7.15	136.30	127.00
21	CA	1537	U	N3-C4-C5	-7.14	110.31	114.60
59	DA	543	C	C2-N1-C1'	7.14	126.66	118.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
59	DA	673	C	C2-N3-C4	-7.14	116.33	119.90
59	DA	503	A	C8-N9-C4	-7.13	102.95	105.80
21	CA	1494	G	N7-C8-N9	7.12	116.66	113.10
59	DA	271(B)	G	N3-C4-C5	-7.12	125.04	128.60
21	CA	1374	A	C4-C5-C6	7.12	120.56	117.00
59	DA	2601	C	C6-N1-C1'	-7.11	112.26	120.80
22	CW	61	C	N1-C2-O2	7.11	123.17	118.90
21	AA	533	A	N1-C2-N3	7.11	132.85	129.30
33	DN	101	HIS	CA-C-N	-7.09	101.59	117.20
21	AA	1302	U	N1-C2-O2	7.09	127.76	122.80
24	AX	74	C	C5-C6-N1	7.08	124.54	121.00
21	AA	1465	C	C5-C4-N4	-7.08	115.25	120.20
59	BA	1396	U	C2-N1-C1'	7.06	126.17	117.70
21	CA	1037	C	O4'-C1'-N1	7.05	113.84	108.20
60	BB	61	G	C5-C6-O6	-7.04	124.38	128.60
59	BA	1967	C	P-O3'-C3'	-7.03	111.26	119.70
33	BN	101	HIS	CA-C-N	-7.03	101.75	117.20
21	CA	1028(G)	G	C6-C5-N7	-7.02	126.19	130.40
23	CV	8	A	O4'-C1'-N9	7.02	113.81	108.20
59	BA	251	A	C6-N1-C2	-7.02	114.39	118.60
21	CA	68(H)	G	C8-N9-C1'	7.01	136.12	127.00
59	DA	2592	G	C4-N9-C1'	7.01	135.62	126.50
21	AA	328	C	N1-C2-O2	7.01	123.11	118.90
59	BA	270(V)	G	N3-C4-N9	-7.00	121.80	126.00
24	AX	3	G	C4-N9-C1'	7.00	135.60	126.50
59	BA	2553	G	C4-C5-C6	7.00	123.00	118.80
24	AX	36	C	C4-C5-C6	-6.99	113.90	117.40
22	AW	53	G	N3-C4-N9	6.99	130.19	126.00
59	DA	271(B)	G	N3-C4-N9	6.98	130.19	126.00
59	DA	383	U	N1-C2-O2	6.97	127.68	122.80
59	DA	83	G	C2-N3-C4	-6.96	108.42	111.90
59	BA	1313	U	C2-N1-C1'	6.95	126.04	117.70
59	BA	1945	G	N3-C4-N9	6.95	130.17	126.00
59	DA	1053	C	N1-C2-O2	6.95	123.07	118.90
59	DA	1971	A	C2-N3-C4	6.94	114.07	110.60
33	BN	115	ARG	CA-C-O	6.93	134.66	120.10
21	CA	500	G	N9-C4-C5	-6.93	102.63	105.40
59	BA	527	C	N3-C2-O2	-6.92	117.05	121.90
60	BB	2	C	N1-C2-O2	6.91	123.04	118.90
24	CX	24	G	N3-C4-C5	-6.89	125.15	128.60
24	CX	24	G	N9-C4-C5	-6.89	102.64	105.40
21	CA	1299	A	C5-C6-N6	6.89	129.21	123.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
60	BB	3	C	N1-C2-O2	6.88	123.03	118.90
23	AV	19	G	C8-N9-C4	-6.88	103.65	106.40
21	CA	1060	C	C5-C6-N1	6.88	124.44	121.00
21	CA	1037	C	N3-C4-C5	-6.87	119.15	121.90
21	CA	68(Q)	U	C5-C6-N1	6.87	126.14	122.70
23	CV	10	G	C8-N9-C1'	-6.87	118.07	127.00
59	DA	344	G	C2-N3-C4	-6.87	108.46	111.90
59	BA	906	G	N3-C4-N9	-6.87	121.88	126.00
21	AA	815	A	C8-N9-C4	-6.86	103.06	105.80
21	CA	1465	C	C2-N3-C4	-6.86	116.47	119.90
22	CW	20	U	N1-C2-O2	6.86	127.60	122.80
21	CA	1536	C	N3-C4-N4	-6.84	113.21	118.00
59	DA	1779	U	C2-N1-C1'	6.84	125.91	117.70
28	BF	156	LEU	C-N-CA	-6.84	104.60	121.70
59	BA	1961	C	C5-C6-N1	6.84	124.42	121.00
59	DA	1589	C	C2-N1-C1'	-6.83	111.29	118.80
59	BA	2727	G	N7-C8-N9	6.82	116.51	113.10
21	CA	1059	C	O4'-C1'-N1	6.82	113.65	108.20
24	AX	74	C	C6-N1-C1'	-6.82	112.62	120.80
60	DB	89(B)	A	C6-C5-N7	-6.80	127.54	132.30
1	CB	187	LEU	CA-CB-CG	6.80	130.94	115.30
23	AV	19	G	N9-C4-C5	6.79	108.12	105.40
20	CY	659	LEU	CA-CB-CG	6.78	130.90	115.30
59	DA	1589	C	C6-N1-C1'	6.77	128.92	120.80
21	AA	224	C	C2-N1-C1'	-6.76	111.37	118.80
22	AW	64	G	N3-C4-N9	6.75	130.05	126.00
21	CA	1374	A	C6-C5-N7	-6.75	127.57	132.30
24	AX	37	A	N3-C4-C5	6.75	131.52	126.80
21	CA	1440(E)	G	N3-C4-C5	-6.75	125.22	128.60
23	CV	8	A	C5-C6-N6	6.74	129.09	123.70
59	DA	270(U)	C	C2-N1-C1'	-6.74	111.39	118.80
59	BA	906	G	C5-C6-O6	6.73	132.64	128.60
59	DA	880	G	N3-C4-N9	6.73	130.04	126.00
21	CA	169	C	C2-N3-C4	6.72	123.26	119.90
22	AW	61	C	C6-N1-C1'	-6.72	112.74	120.80
21	CA	1059	C	C6-N1-C1'	6.72	128.86	120.80
33	DN	105	GLY	N-CA-C	-6.72	96.31	113.10
59	DA	2714	G	N3-C4-N9	6.72	130.03	126.00
21	CA	1272	G	C4-N9-C1'	6.71	135.22	126.50
21	CA	1537	U	N1-C2-O2	-6.70	118.11	122.80
59	DA	906	G	N1-C6-O6	-6.70	115.88	119.90
35	BP	112	LEU	CA-CB-CG	6.69	130.68	115.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	AA	1336	C	C2-N1-C1'	6.68	126.15	118.80
22	AW	71	C	N3-C2-O2	-6.68	117.22	121.90
59	BA	2249	U	C2-N1-C1'	6.68	125.72	117.70
21	CA	735	C	C6-N1-C1'	-6.68	112.79	120.80
60	BB	18	G	N3-C4-N9	6.68	130.01	126.00
21	CA	68(Q)	U	N1-C2-O2	6.68	127.47	122.80
59	DA	357(M)	C	C2-N1-C1'	6.66	126.12	118.80
59	DA	1545	A	C5-N7-C8	-6.66	100.57	103.90
21	CA	129(A)	G	N3-C2-N2	6.64	124.55	119.90
22	CW	53	G	N3-C4-N9	6.64	129.98	126.00
21	CA	1508	G	N3-C4-N9	6.63	129.98	126.00
21	CA	1037	C	C2-N3-C4	6.63	123.22	119.90
32	DK	105	LEU	CA-CB-CG	6.63	130.55	115.30
59	DA	962	G	C2-N3-C4	6.63	115.22	111.90
21	AA	68(E)	G	C5-C6-O6	6.63	132.58	128.60
59	DA	1313	U	C2-N1-C1'	6.62	125.65	117.70
59	BA	294	A	N1-C6-N6	6.62	122.57	118.60
21	CA	1157	A	O4'-C1'-N9	6.61	113.49	108.20
21	CA	1028(G)	G	N1-C6-O6	6.60	123.86	119.90
59	BA	1019	U	N3-C2-O2	-6.59	117.58	122.20
59	DA	1712(I)	U	C2-N1-C1'	6.59	125.61	117.70
21	CA	1227	A	N1-C6-N6	6.59	122.56	118.60
59	BA	422	A	C8-N9-C4	-6.59	103.16	105.80
21	CA	1336	C	N1-C2-O2	6.58	122.85	118.90
22	AW	14	A	C4-N9-C1'	6.58	138.14	126.30
47	B1	19	GLN	N-CA-C	-6.58	93.25	111.00
21	CA	1148	U	N3-C4-C5	6.58	118.55	114.60
59	BA	962	G	C6-C5-N7	-6.57	126.46	130.40
59	BA	2181	G	N3-C4-N9	-6.57	122.06	126.00
59	DA	103	A	C6-C5-N7	-6.57	127.70	132.30
21	AA	754	C	C2-N1-C1'	6.56	126.01	118.80
59	BA	1048	A	C6-C5-N7	-6.55	127.72	132.30
21	CA	838(A)	U	C2-N1-C1'	6.53	125.54	117.70
21	CA	1272	G	N3-C4-N9	6.53	129.92	126.00
59	BA	962	G	N1-C2-N2	-6.53	110.33	116.20
59	DA	1966	A	N9-C4-C5	6.53	108.41	105.80
33	DN	91	LEU	CA-CB-CG	6.52	130.30	115.30
60	BB	3	C	C5-C6-N1	6.52	124.26	121.00
21	CA	1305	G	N3-C2-N2	6.52	124.46	119.90
22	AW	14	A	C4-C5-C6	6.52	120.26	117.00
21	AA	1305	G	C2-N3-C4	-6.51	108.64	111.90
21	CA	1374	A	C5-C6-N1	-6.51	114.45	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
59	DA	1137	G	N3-C4-C5	-6.50	125.35	128.60
21	AA	1148	U	N1-C2-N3	6.50	118.80	114.90
24	AX	40	G	N3-C4-N9	6.50	129.90	126.00
59	BA	95	G	N3-C4-N9	-6.50	122.10	126.00
21	CA	1362(A)	C	O4'-C1'-N1	6.49	113.39	108.20
21	CA	1494	G	C8-N9-C4	-6.48	103.81	106.40
21	AA	1440(J)	C	O4'-C1'-N1	6.48	113.38	108.20
21	AA	1003	G	C5-C6-O6	6.48	132.49	128.60
21	CA	1305	G	N1-C2-N2	-6.47	110.38	116.20
59	DA	2780	G	O4'-C1'-N9	6.47	113.38	108.20
21	AA	815	A	C4-C5-N7	-6.47	107.47	110.70
21	CA	669	U	C5-C6-N1	6.46	125.93	122.70
21	CA	1440(N)	C	C6-N1-C2	-6.46	117.72	120.30
59	DA	807	U	C2-N3-C4	-6.45	123.13	127.00
59	BA	955	C	C2-N1-C1'	6.45	125.90	118.80
59	BA	2598	A	N1-C6-N6	6.45	122.47	118.60
59	DA	1139	G	N7-C8-N9	6.45	116.32	113.10
59	DA	2553	G	C5-C6-N1	-6.44	108.28	111.50
59	DA	1106	G	N3-C4-N9	6.44	129.86	126.00
21	AA	1409	C	C5-C6-N1	-6.43	117.78	121.00
21	CA	1145	C	C2-N1-C1'	-6.43	111.72	118.80
21	CA	68(I)	G	C5-C6-O6	-6.43	124.74	128.60
59	DA	2592	G	C8-N9-C1'	-6.43	118.64	127.00
22	AW	72	C	C5-C4-N4	-6.42	115.70	120.20
33	DN	116	LEU	N-CA-C	-6.42	93.66	111.00
23	CV	19	G	C8-N9-C4	-6.42	103.83	106.40
24	AX	62	C	N1-C2-O2	-6.42	115.05	118.90
59	BA	192	C	O4'-C1'-N1	6.42	113.33	108.20
59	DA	1484	G	N3-C4-N9	-6.42	122.15	126.00
60	DB	51	G	N3-C4-N9	6.42	129.85	126.00
21	AA	376	G	C5-C6-O6	6.42	132.45	128.60
59	BA	1945	G	C8-N9-C1'	-6.42	118.66	127.00
59	DA	481	G	O5'-P-OP1	6.41	118.39	110.70
33	BN	119	ARG	N-CA-C	6.41	128.30	111.00
21	CA	1362(A)	C	C6-N1-C1'	6.41	128.49	120.80
59	DA	2804	C	C6-N1-C1'	6.40	128.48	120.80
59	BA	702	G	N3-C4-N9	-6.40	122.16	126.00
21	CA	1003	G	N9-C4-C5	6.40	107.96	105.40
21	AA	1170	A	N1-C6-N6	6.39	122.44	118.60
21	CA	1037	C	C6-N1-C1'	6.39	128.47	120.80
23	CV	8	A	C8-N9-C1'	6.38	139.19	127.70
59	BA	422	A	N1-C6-N6	-6.38	114.77	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
59	DA	906	G	C6-C5-N7	6.38	134.23	130.40
59	BA	955	C	C6-N1-C2	-6.38	117.75	120.30
21	AA	1409	C	N1-C2-O2	-6.38	115.08	118.90
21	CA	1491	G	C8-N9-C4	-6.37	103.85	106.40
21	CA	500	G	C8-N9-C1'	-6.36	118.74	127.00
24	AX	61	C	C5-C6-N1	6.35	124.18	121.00
21	CA	929	G	N3-C4-N9	6.35	129.81	126.00
21	CA	1127	G	C6-C5-N7	6.34	134.21	130.40
59	BA	1961	C	N1-C2-O2	6.34	122.70	118.90
21	CA	68(H)	G	N3-C4-N9	-6.33	122.20	126.00
21	CA	421	U	N1-C2-O2	6.33	127.23	122.80
59	DA	962	G	C4-C5-N7	6.33	113.33	110.80
59	DA	1996	C	C2-N3-C4	6.32	123.06	119.90
60	BB	22	U	C2-N1-C1'	-6.31	110.12	117.70
59	DA	908	C	N1-C2-O2	-6.31	115.12	118.90
21	AA	1490	C	C6-N1-C2	-6.30	117.78	120.30
21	CA	1003	G	C5-C6-O6	6.30	132.38	128.60
59	BA	2712	U	C2-N1-C1'	6.29	125.25	117.70
21	AA	1348	U	C2-N3-C4	-6.29	123.23	127.00
21	CA	810	C	O4'-C1'-N1	6.29	113.23	108.20
24	CX	11	C	C6-N1-C1'	-6.28	113.26	120.80
59	BA	1945	G	C5-C6-O6	-6.28	124.83	128.60
21	CA	815	A	C4-C5-N7	-6.28	107.56	110.70
24	CX	24	G	C8-N9-C1'	-6.28	118.84	127.00
59	DA	1589	C	N1-C2-O2	-6.28	115.14	118.90
22	AW	14	A	C8-N9-C1'	-6.27	116.41	127.70
60	BB	117	G	C5-C6-O6	6.27	132.36	128.60
22	CW	72	C	C5-C4-N4	-6.27	115.81	120.20
33	DN	120	LEU	CB-CG-CD2	-6.27	100.34	111.00
59	DA	270(U)	C	O4'-C1'-N1	6.27	113.21	108.20
24	AX	3	G	C4-C5-N7	6.27	113.31	110.80
59	BA	2250	G	N3-C4-N9	6.26	129.76	126.00
59	BA	270(V)	G	N9-C4-C5	6.26	107.90	105.40
59	BA	955	C	C5-C4-N4	-6.25	115.82	120.20
60	DB	79	C	C2-N1-C1'	6.25	125.68	118.80
59	BA	422	A	N9-C4-C5	6.25	108.30	105.80
21	CA	1527	C	N3-C2-O2	-6.25	117.53	121.90
21	CA	1272	G	C8-N9-C1'	-6.24	118.89	127.00
24	CX	49	G	N3-C4-N9	-6.24	122.26	126.00
21	CA	1301	U	C6-N1-C1'	-6.23	112.47	121.20
60	DB	117	G	C5-C6-O6	6.22	132.34	128.60
23	CV	7	G	N1-C2-N3	6.22	127.63	123.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
59	DA	2804	C	C2-N1-C1'	-6.22	111.96	118.80
22	AW	72	C	N3-C4-C5	6.22	124.39	121.90
59	BA	1937	A	N1-C6-N6	-6.22	114.87	118.60
59	BA	1226	A	N1-C6-N6	6.21	122.32	118.60
59	BA	2024	G	N9-C4-C5	6.20	107.88	105.40
34	BO	91	LEU	CA-CB-CG	6.20	129.56	115.30
21	CA	1059	C	C2-N1-C1'	-6.20	111.98	118.80
21	CA	1200	C	P-O3'-C3'	6.20	127.14	119.70
59	BA	906	G	C6-N1-C2	6.20	128.82	125.10
21	CA	754	C	C2-N1-C1'	6.19	125.61	118.80
59	DA	955	C	N3-C4-N4	6.19	122.33	118.00
59	DA	1544	A	C8-N9-C4	-6.19	103.32	105.80
59	BA	807	U	C5-C4-O4	-6.19	122.19	125.90
59	BA	2111	C	C2-N1-C1'	6.19	125.61	118.80
24	CX	65	C	C2-N3-C4	6.18	122.99	119.90
24	AX	75	C	C5-C4-N4	-6.18	115.87	120.20
59	BA	2554	U	C2-N1-C1'	6.18	125.11	117.70
21	CA	500	G	C5-C6-O6	-6.18	124.89	128.60
33	BN	72	TYR	CA-CB-CG	6.17	125.13	113.40
21	CA	1145	C	C6-N1-C1'	6.17	128.21	120.80
59	BA	1967	C	C4'-C3'-O3'	6.17	125.34	113.00
21	AA	1494	G	N3-C4-N9	6.17	129.70	126.00
42	DW	107	LEU	CA-CB-CG	6.17	129.48	115.30
21	CA	520	A	N1-C2-N3	6.16	132.38	129.30
59	DA	809	G	C6-C5-N7	-6.16	126.70	130.40
59	BA	962	G	N3-C4-C5	-6.16	125.52	128.60
21	CA	68(R)	C	C6-N1-C2	-6.16	117.84	120.30
59	DA	962	G	C4-N9-C1'	6.15	134.50	126.50
24	AX	61	C	C2-N3-C4	6.15	122.98	119.90
22	AW	53	G	N9-C4-C5	-6.15	102.94	105.40
28	BF	125	LEU	CA-CB-CG	6.14	129.43	115.30
32	BK	105	LEU	CA-CB-CG	6.14	129.43	115.30
59	DA	828	U	C2-N1-C1'	6.14	125.07	117.70
59	DA	2585	U	N1-C2-O2	6.14	127.10	122.80
59	BA	392	C	C2-N1-C1'	6.14	125.55	118.80
21	AA	224	C	N1-C2-O2	-6.13	115.22	118.90
21	AA	1493	A	O5'-P-OP2	6.12	118.05	110.70
59	DA	809	G	N3-C4-N9	6.12	129.68	126.00
22	AW	30	C	C2-N1-C1'	6.12	125.53	118.80
21	CA	1126	U	N1-C2-O2	-6.12	118.52	122.80
59	DA	906	G	C8-N9-C1'	6.11	134.95	127.00
21	AA	1440(K)	G	C4-N9-C1'	6.11	134.44	126.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
59	DA	357(D)	G	C4-N9-C1'	-6.10	118.57	126.50
59	DA	2382	G	N3-C4-N9	6.09	129.66	126.00
22	AW	64	G	N9-C4-C5	-6.09	102.96	105.40
20	AY	33	LEU	CA-CB-CG	6.09	129.30	115.30
21	CA	1037	C	C6-N1-C2	-6.09	117.87	120.30
21	CA	500	G	C4-C5-N7	6.08	113.23	110.80
21	AA	809	G	O4'-C1'-N9	6.08	113.07	108.20
21	AA	762	C	C6-N1-C2	-6.08	117.87	120.30
33	BN	101	HIS	N-CA-C	-6.08	94.58	111.00
59	DA	1864(D)	A	N1-C6-N6	6.08	122.25	118.60
59	BA	401	A	N1-C6-N6	-6.08	114.95	118.60
59	BA	1653	G	O4'-C1'-N9	6.08	113.06	108.20
24	CX	3	G	N3-C4-N9	6.08	129.65	126.00
60	DB	51	G	N9-C4-C5	-6.07	102.97	105.40
21	CA	68(Q)	U	C2-N1-C1'	6.07	124.98	117.70
21	CA	68(W)	G	N3-C4-N9	-6.07	122.36	126.00
59	DA	2553	G	C6-N1-C2	6.07	128.74	125.10
24	AX	63	G	N3-C4-N9	-6.06	122.36	126.00
24	AX	3	G	N3-C2-N2	6.06	124.14	119.90
59	BA	1347	G	N3-C4-N9	-6.06	122.36	126.00
60	DB	75	G	C5-C6-N1	6.06	114.53	111.50
21	CA	169	C	N3-C4-C5	-6.05	119.48	121.90
21	AA	68(Q)	U	C2-N1-C1'	6.05	124.96	117.70
59	BA	1864(D)	A	N1-C6-N6	6.05	122.23	118.60
21	AA	1535	C	C5-C6-N1	6.05	124.02	121.00
24	CX	36	C	C4-C5-C6	-6.04	114.38	117.40
59	DA	2391	G	N3-C4-C5	6.04	131.62	128.60
21	AA	68(I)	G	C5-C6-O6	-6.04	124.98	128.60
59	BA	1563	G	N3-C4-N9	6.04	129.62	126.00
60	BB	3	C	N3-C4-C5	-6.04	119.49	121.90
21	CA	1158	C	N3-C2-O2	-6.04	117.68	121.90
21	CA	1127	G	C4-C5-N7	-6.03	108.39	110.80
59	BA	70	G	N3-C4-N9	6.03	129.62	126.00
23	CV	7	G	N3-C4-C5	6.03	131.61	128.60
21	CA	1052	U	C2-N1-C1'	6.03	124.93	117.70
21	AA	1508	G	N3-C4-N9	6.02	129.61	126.00
21	CA	1508	G	N1-C2-N3	6.01	127.51	123.90
33	DN	72	TYR	CA-CB-CG	6.01	124.82	113.40
59	DA	353	G	N3-C4-N9	6.01	129.61	126.00
59	DA	1017	G	N3-C4-N9	6.00	129.60	126.00
59	DA	1544	A	N7-C8-N9	6.00	116.80	113.80
41	BV	35	LEU	CA-CB-CG	6.00	129.10	115.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
59	DA	543(D)	A	C8-N9-C4	-6.00	103.40	105.80
59	DA	906	G	C6-N1-C2	6.00	128.70	125.10
24	CX	24	G	C4-N9-C1'	6.00	134.29	126.50
59	BA	1492	G	N3-C4-N9	5.99	129.59	126.00
59	DA	294	A	C6-C5-N7	-5.99	128.11	132.30
60	DB	4	C	C6-N1-C1'	-5.99	113.61	120.80
59	DA	1545	A	N7-C8-N9	5.99	116.79	113.80
59	DA	2585	U	C6-N1-C1'	-5.98	112.82	121.20
21	AA	1332	A	C4-C5-C6	5.98	119.99	117.00
33	BN	85	ILE	CB-CA-C	5.98	123.56	111.60
59	BA	1945	G	C6-C5-N7	-5.98	126.81	130.40
28	DF	156	LEU	CA-CB-CG	5.98	129.06	115.30
59	DA	1396	U	N1-C2-O2	5.98	126.99	122.80
21	AA	1486	G	C5-C6-O6	-5.98	125.01	128.60
59	BA	1416	G	N3-C4-N9	-5.98	122.41	126.00
59	DA	466	A	C4-C5-C6	5.98	119.99	117.00
59	BA	2250	G	C8-N9-C1'	-5.98	119.23	127.00
33	BN	102	ALA	C-N-CA	-5.98	106.76	121.70
59	BA	828	U	C2-N1-C1'	5.98	124.87	117.70
21	CA	1306	A	C5-C6-N6	-5.97	118.92	123.70
59	BA	836	G	C6-N1-C2	5.97	128.68	125.10
59	DA	306	U	C2-N1-C1'	5.97	124.86	117.70
22	AW	68	U	C6-N1-C1'	5.97	129.55	121.20
22	AW	8	U	C2-N1-C1'	5.96	124.86	117.70
59	BA	114	U	C2-N1-C1'	5.96	124.86	117.70
59	BA	2553	G	C2-N3-C4	5.96	114.88	111.90
21	CA	1332	A	C4-C5-C6	5.96	119.98	117.00
59	BA	702	G	N1-C2-N2	5.96	121.57	116.20
21	AA	1299	A	C5-C6-N6	5.96	128.47	123.70
59	DA	555	U	N1-C2-O2	-5.96	118.63	122.80
21	AA	1508	G	N9-C4-C5	-5.96	103.02	105.40
33	DN	85	ILE	CB-CA-C	5.96	123.51	111.60
59	DA	870	A	N9-C4-C5	5.95	108.18	105.80
59	BA	2804	C	C2-N1-C1'	-5.95	112.26	118.80
21	CA	1301	U	C5-C6-N1	5.95	125.67	122.70
22	CW	14	A	C6-C5-N7	-5.95	128.14	132.30
26	BD	143	HIS	CG-CD2-NE2	-5.95	97.91	109.20
59	DA	880	G	C4-N9-C1'	5.95	134.23	126.50
59	BA	1430	C	C5-C6-N1	5.94	123.97	121.00
24	AX	62	C	C2-N1-C1'	-5.94	112.26	118.80
59	BA	2250	G	N3-C4-C5	-5.94	125.63	128.60
43	BX	57	LEU	CA-CB-CG	5.94	128.96	115.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
59	DA	2171	A	C4-C5-C6	-5.94	114.03	117.00
21	AA	383	A	N1-C6-N6	5.94	122.16	118.60
60	BB	95	U	O4'-C1'-N1	5.93	112.95	108.20
21	CA	514	C	C2-N1-C1'	5.93	125.33	118.80
22	CW	66	C	N1-C2-O2	5.93	122.46	118.90
59	BA	2553	G	N3-C2-N2	5.93	124.05	119.90
59	DA	2553	G	N3-C2-N2	5.92	124.05	119.90
59	DA	270(U)	C	C6-N1-C1'	5.92	127.90	120.80
59	DA	1402	C	C6-N1-C1'	5.92	127.90	120.80
24	AX	30	C	C6-N1-C1'	-5.92	113.70	120.80
21	CA	1494	G	C8-N9-C1'	-5.92	119.31	127.00
59	DA	234	C	N1-C2-O2	5.92	122.45	118.90
59	DA	2592	G	N3-C2-N2	5.91	124.04	119.90
22	AW	64	G	C6-C5-N7	-5.91	126.85	130.40
59	DA	392	C	C2-N1-C1'	5.91	125.30	118.80
33	BN	85	ILE	CG1-CB-CG2	-5.91	98.41	111.40
59	BA	269	U	C2-N1-C1'	5.91	124.79	117.70
22	AW	64	G	C8-N9-C1'	-5.90	119.33	127.00
59	BA	2598	A	C4-C5-C6	5.90	119.95	117.00
59	DA	2601	C	C5-C6-N1	5.90	123.95	121.00
21	AA	129(A)	G	N3-C2-N2	5.90	124.03	119.90
22	AW	50	C	C2-N1-C1'	5.90	125.29	118.80
59	DA	2167	U	N1-C2-N3	5.90	118.44	114.90
59	BA	2501	C	O4'-C1'-N1	5.90	112.92	108.20
21	CA	230	G	N3-C4-N9	5.89	129.54	126.00
59	BA	1110	G	C2-N3-C4	-5.89	108.95	111.90
22	CW	20	U	N3-C2-O2	-5.89	118.08	122.20
59	DA	1934	C	C2-N1-C1'	5.88	125.27	118.80
21	AA	1301	U	C5-C6-N1	5.88	125.64	122.70
22	AW	8	U	C5-C6-N1	5.88	125.64	122.70
21	CA	1158	C	C6-N1-C2	-5.88	117.95	120.30
24	AX	36	C	N3-C4-C5	5.88	124.25	121.90
21	CA	838(A)	U	N1-C2-O2	5.88	126.91	122.80
21	CA	1440(E)	G	C4-N9-C1'	5.88	134.14	126.50
24	AX	62	C	C6-N1-C1'	5.87	127.85	120.80
59	DA	1137	G	C2-N3-C4	5.87	114.84	111.90
59	DA	2392	A	O4'-C1'-N9	5.87	112.90	108.20
59	DA	1544	A	C4-C5-C6	5.87	119.94	117.00
59	BA	1493	C	C6-N1-C1'	-5.87	113.76	120.80
21	CA	1343	G	N3-C4-N9	5.87	129.52	126.00
59	BA	1967	C	N3-C4-C5	-5.87	119.55	121.90
21	CA	500	G	C4-N9-C1'	5.87	134.13	126.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
59	DA	463	G	C2-N3-C4	-5.87	108.97	111.90
59	BA	1961	C	C6-N1-C1'	-5.87	113.76	120.80
21	CA	1257	U	C2-N1-C1'	5.86	124.73	117.70
59	DA	503	A	N1-C6-N6	-5.86	115.08	118.60
21	CA	68(R)	C	C5-C6-N1	5.86	123.93	121.00
23	CV	7	G	N1-C2-N2	5.86	121.47	116.20
60	DB	75	G	N3-C4-C5	-5.86	125.67	128.60
21	AA	1170	A	C4-C5-C6	5.85	119.93	117.00
21	CA	735	C	N1-C2-O2	5.85	122.41	118.90
33	DN	98	VAL	N-CA-C	5.85	126.79	111.00
21	CA	638	G	N3-C4-N9	-5.85	122.49	126.00
21	CA	1301	U	N1-C2-O2	5.85	126.89	122.80
60	DB	75	G	C5-C6-O6	-5.85	125.09	128.60
59	BA	466	A	C4-C5-C6	5.85	119.92	117.00
47	D1	36	GLY	N-CA-C	5.84	127.71	113.10
60	BB	22	U	N1-C2-O2	-5.84	118.71	122.80
59	BA	974(A)	C	C2-N1-C1'	5.84	125.22	118.80
59	BA	2804	C	C6-N1-C1'	5.84	127.80	120.80
21	CA	1216	G	N3-C4-N9	-5.83	122.50	126.00
59	BA	270(V)	G	N3-C2-N2	-5.83	115.82	119.90
22	CW	30	C	N1-C2-O2	5.83	122.40	118.90
21	CA	1537	U	N3-C2-O2	5.83	126.28	122.20
60	BB	50	G	N3-C4-N9	-5.82	122.51	126.00
21	CA	1497	G	N3-C4-N9	5.82	129.49	126.00
60	DB	98	G	N3-C4-N9	-5.82	122.51	126.00
21	CA	1003	G	N3-C4-N9	-5.82	122.51	126.00
59	DA	2641	G	O4'-C1'-N9	5.82	112.86	108.20
21	AA	1465	C	N3-C4-N4	5.82	122.07	118.00
24	AX	3	G	C6-C5-N7	-5.82	126.91	130.40
59	BA	955	C	N3-C4-C5	-5.81	119.57	121.90
23	CV	10	G	C8-N9-C4	-5.81	104.07	106.40
59	DA	1052	C	N3-C4-C5	-5.81	119.57	121.90
59	DA	2601	C	C6-N1-C2	-5.81	117.97	120.30
21	CA	1227	A	C5-C6-N6	-5.81	119.05	123.70
59	BA	1346	G	N3-C4-N9	-5.81	122.51	126.00
59	DA	862	G	N3-C4-N9	5.81	129.49	126.00
59	DA	1774	C	C2-N1-C1'	5.81	125.19	118.80
59	BA	1421	G	N3-C4-N9	5.81	129.49	126.00
59	DA	2275	C	N3-C2-O2	-5.81	117.84	121.90
28	BF	155	LEU	N-CA-C	-5.80	95.33	111.00
59	DA	1444	G	N3-C4-C5	-5.80	125.70	128.60
59	DA	2598	A	N1-C6-N6	5.80	122.08	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	AW	23	A	N9-C4-C5	-5.79	103.48	105.80
59	BA	2149	G	N3-C4-N9	-5.79	122.52	126.00
59	BA	513	A	N1-C6-N6	5.79	122.08	118.60
59	BA	527	C	C6-N1-C1'	-5.79	113.85	120.80
21	CA	1440(E)	G	C6-C5-N7	-5.79	126.93	130.40
24	CX	75	C	C2-N1-C1'	5.79	125.17	118.80
21	AA	139	G	N3-C4-N9	-5.78	122.53	126.00
59	BA	2595	G	C2-N3-C4	-5.78	109.01	111.90
59	DA	1172	G	O4'-C1'-N9	5.77	112.82	108.20
24	AX	75	C	C2-N3-C4	-5.77	117.01	119.90
59	BA	527	C	C5-C6-N1	5.77	123.89	121.00
21	AA	1508	G	C6-C5-N7	-5.76	126.94	130.40
59	DA	2363	C	O4'-C1'-N1	5.76	112.81	108.20
60	BB	95	U	C2-N1-C1'	-5.76	110.79	117.70
21	CA	407	G	N3-C4-N9	-5.76	122.54	126.00
21	CA	1158	C	N1-C2-O2	5.76	122.36	118.90
59	BA	1326	U	N1-C2-O2	5.76	126.83	122.80
21	CA	1148	U	N1-C2-N3	5.76	118.35	114.90
21	CA	1527	C	C2-N1-C1'	5.75	125.12	118.80
59	DA	271(B)	G	C4-N9-C1'	5.75	133.97	126.50
21	CA	1494	G	C6-C5-N7	-5.75	126.95	130.40
59	DA	1413	G	N9-C4-C5	5.75	107.70	105.40
59	BA	270(D)	C	C6-N1-C1'	5.74	127.69	120.80
60	BB	95	U	C5-C4-O4	5.74	129.35	125.90
21	CA	1263	C	C2-N1-C1'	5.74	125.12	118.80
21	AA	1494	G	C8-N9-C1'	-5.74	119.54	127.00
60	BB	89(B)	A	N1-C6-N6	5.74	122.04	118.60
59	DA	2129	C	N1-C2-O2	5.74	122.34	118.90
59	BA	1558	A	P-O3'-C3'	5.74	126.58	119.70
23	CV	8	A	C4-C5-N7	-5.73	107.83	110.70
59	DA	2382	G	N3-C4-C5	-5.73	125.73	128.60
23	AV	19	G	N3-C2-N2	-5.73	115.89	119.90
60	DB	89(B)	A	N9-C4-C5	-5.73	103.51	105.80
59	BA	1326	U	C2-N1-C1'	5.72	124.57	117.70
60	BB	36	C	C2-N1-C1'	5.72	125.09	118.80
59	BA	2580	U	N1-C2-O2	5.72	126.80	122.80
21	CA	421	U	N3-C2-O2	-5.72	118.20	122.20
59	DA	962	G	N3-C2-N2	5.72	123.90	119.90
59	DA	2275	C	N1-C2-O2	5.72	122.33	118.90
21	AA	1200	C	P-O3'-C3'	5.72	126.56	119.70
22	AW	64	G	C4-N9-C1'	5.71	133.93	126.50
59	DA	1052	C	C2-N3-C4	5.71	122.76	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
59	DA	1493	C	N1-C2-O2	5.71	122.33	118.90
59	DA	114	U	C2-N1-C1'	5.71	124.56	117.70
21	CA	1145	C	C5-C4-N4	5.71	124.20	120.20
59	BA	2111	C	N1-C2-O2	5.71	122.33	118.90
22	CW	74	C	O4'-C1'-N1	5.71	112.77	108.20
59	DA	1413	G	C5-C6-O6	5.71	132.03	128.60
23	AV	35	A	P-O3'-C3'	5.70	126.55	119.70
59	BA	194	G	N9-C4-C5	5.70	107.68	105.40
47	B1	43	TYR	C-N-CD	5.70	140.37	128.40
59	BA	2061	G	O4'-C1'-N9	5.70	112.76	108.20
59	DA	2275	C	C2-N1-C1'	5.70	125.07	118.80
59	DA	2378	A	N7-C8-N9	5.70	116.65	113.80
21	AA	1465	C	C2-N3-C4	-5.70	117.05	119.90
59	BA	270(D)	C	C2-N1-C1'	-5.69	112.54	118.80
21	AA	1494	G	C4-N9-C1'	5.69	133.90	126.50
59	BA	702	G	N3-C2-N2	-5.69	115.92	119.90
59	BA	611(G)	G	N3-C4-N9	5.69	129.41	126.00
59	BA	1414	G	N9-C4-C5	5.69	107.67	105.40
21	AA	723	U	C6-N1-C1'	-5.68	113.24	121.20
59	DA	2592	G	C5-C6-O6	-5.68	125.19	128.60
59	DA	2804	C	O4'-C1'-N1	5.68	112.74	108.20
59	BA	271(B)	G	P-O3'-C3'	5.68	126.51	119.70
59	DA	1139	G	N1-C6-O6	5.68	123.31	119.90
60	DB	79	C	C5-C6-N1	5.68	123.84	121.00
59	DA	2391	G	C6-C5-N7	5.67	133.80	130.40
33	BN	36	GLY	N-CA-C	-5.67	98.93	113.10
59	BA	386	G	C6-N1-C2	-5.67	121.70	125.10
21	AA	252	U	N1-C2-O2	5.66	126.77	122.80
21	CA	1075	C	C5-C6-N1	5.66	123.83	121.00
59	DA	906	G	C4-N9-C1'	-5.66	119.14	126.50
59	DA	2592	G	C4-C5-C6	5.66	122.20	118.80
59	DA	871	U	C2-N3-C4	-5.66	123.60	127.00
59	BA	83	G	C2-N3-C4	-5.66	109.07	111.90
59	BA	906	G	C8-N9-C1'	5.66	134.36	127.00
60	BB	33	G	N3-C4-N9	-5.66	122.61	126.00
59	DA	889	C	N3-C4-C5	5.66	124.16	121.90
59	DA	1106	G	N3-C4-C5	-5.66	125.77	128.60
27	BE	61	ARG	NE-CZ-NH1	5.66	123.13	120.30
21	CA	1003	G	N1-C6-O6	-5.66	116.51	119.90
60	BB	3	C	N3-C2-O2	-5.65	117.94	121.90
21	CA	1127	G	C8-N9-C1'	5.65	134.35	127.00
21	AA	723	U	N1-C2-O2	5.65	126.76	122.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
59	DA	2792	G	N9-C4-C5	5.65	107.66	105.40
21	AA	1301	U	C6-N1-C1'	-5.65	113.29	121.20
24	CX	75	C	C6-N1-C1'	-5.65	114.02	120.80
21	CA	520	A	C6-N1-C2	-5.65	115.21	118.60
59	BA	906	G	C4-N9-C1'	-5.64	119.16	126.50
59	DA	880	G	C8-N9-C1'	-5.64	119.66	127.00
59	DA	2167	U	C2-N3-C4	-5.64	123.61	127.00
22	AW	44	G	C4-C5-N7	5.64	113.06	110.80
21	CA	1037	C	C5-C4-N4	5.64	124.15	120.20
59	BA	2681	C	C5-C4-N4	5.64	124.15	120.20
59	BA	2181	G	N9-C4-C5	5.64	107.66	105.40
21	AA	328	C	N3-C2-O2	-5.64	117.95	121.90
21	AA	1302	U	N3-C2-O2	-5.64	118.25	122.20
21	AA	723	U	C5-C6-N1	5.63	125.52	122.70
21	CA	1072	G	N3-C2-N2	-5.63	115.96	119.90
59	DA	353	G	C4-N9-C1'	5.63	133.82	126.50
21	CA	68(H)	G	C4-N9-C1'	-5.63	119.18	126.50
60	DB	117	G	C4-C5-N7	-5.63	108.55	110.80
24	CX	1	G	C6-N1-C2	5.63	128.48	125.10
59	DA	2896	C	C5-C6-N1	5.63	123.82	121.00
22	CW	53	G	N9-C4-C5	-5.63	103.15	105.40
59	DA	1053	C	N3-C2-O2	-5.63	117.96	121.90
21	AA	1200	C	OP2-P-O3'	5.62	117.57	105.20
21	CA	1440(E)	G	C8-N9-C1'	-5.62	119.69	127.00
59	DA	439	G	N3-C4-N9	5.62	129.37	126.00
60	DB	22	U	C2-N1-C1'	-5.62	110.96	117.70
16	AQ	43	LEU	CA-CB-CG	-5.62	102.38	115.30
21	AA	224	C	C6-N1-C1'	5.62	127.54	120.80
21	CA	1028(F)	A	N1-C6-N6	5.62	121.97	118.60
28	DF	156	LEU	C-N-CA	-5.61	107.67	121.70
59	BA	301	G	N3-C4-N9	-5.61	122.63	126.00
59	BA	1810	A	N1-C6-N6	5.61	121.97	118.60
22	AW	30	C	N1-C2-O2	5.61	122.27	118.90
21	CA	930	C	C2-N1-C1'	5.61	124.97	118.80
24	CX	25	C	C2-N1-C1'	5.60	124.96	118.80
59	DA	1021	A	C5-N7-C8	-5.60	101.10	103.90
41	DV	39	LEU	CA-CB-CG	5.60	128.18	115.30
59	DA	543	C	C6-N1-C1'	-5.60	114.08	120.80
21	CA	1537	U	N3-C4-O4	5.60	123.32	119.40
59	DA	2253	G	C6-N1-C2	-5.60	121.74	125.10
60	DB	51	G	N3-C2-N2	5.60	123.82	119.90
59	DA	543(D)	A	N7-C8-N9	5.59	116.60	113.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
60	DB	32	C	C6-N1-C1'	5.59	127.51	120.80
59	DA	392	C	N1-C2-O2	5.59	122.25	118.90
21	CA	129(A)	G	N9-C4-C5	-5.59	103.17	105.40
21	CA	1332	A	C6-C5-N7	-5.59	128.39	132.30
59	BA	1019	U	N1-C2-O2	5.58	126.71	122.80
59	BA	1297	C	O5'-P-OP1	-5.58	100.67	105.70
59	BA	1961	C	C2-N3-C4	5.58	122.69	119.90
59	DA	645	C	C2-N1-C1'	5.58	124.94	118.80
21	AA	748	C	P-O3'-C3'	5.58	126.39	119.70
3	CD	28	SER	C-N-CD	5.58	140.11	128.40
59	DA	422	A	C8-N9-C4	-5.57	103.57	105.80
21	AA	1302	U	C5-C6-N1	5.57	125.49	122.70
59	DA	809	G	N1-C6-O6	5.57	123.24	119.90
59	DA	906	G	N3-C4-C5	5.57	131.38	128.60
21	AA	989	C	C6-N1-C1'	5.56	127.48	120.80
21	AA	1492	A	C6-C5-N7	5.56	136.19	132.30
60	DB	101	A	C5-C6-N1	5.56	120.48	117.70
59	DA	611(E)	G	O4'-C1'-N9	5.56	112.65	108.20
60	DB	65	C	C6-N1-C1'	-5.56	114.13	120.80
59	BA	1025	G	N1-C6-O6	5.56	123.23	119.90
59	DA	2559	C	C6-N1-C1'	5.56	127.47	120.80
60	BB	3	C	C5-C4-N4	5.55	124.09	120.20
20	CY	428	LEU	CA-CB-CG	5.55	128.07	115.30
21	CA	191	G	N3-C4-N9	5.55	129.33	126.00
59	BA	771	G	N3-C4-N9	-5.55	122.67	126.00
21	CA	1440(E)	G	N3-C2-N2	5.55	123.78	119.90
21	AA	1126	U	C2-N3-C4	-5.55	123.67	127.00
21	AA	989	C	O4'-C1'-N1	5.55	112.64	108.20
59	DA	1402	C	C2-N1-C1'	-5.55	112.70	118.80
60	DB	18	G	N3-C4-C5	-5.55	125.83	128.60
59	BA	543	C	C2-N1-C1'	5.54	124.90	118.80
21	CA	1028(G)	G	C5-C6-O6	-5.54	125.27	128.60
21	AA	1016	A	N1-C6-N6	5.54	121.93	118.60
59	DA	1396	U	N3-C2-O2	-5.54	118.32	122.20
60	DB	117	G	N1-C6-O6	-5.54	116.58	119.90
21	AA	1148	U	N3-C4-O4	-5.54	115.52	119.40
59	BA	1430	C	C2-N1-C1'	5.54	124.89	118.80
59	BA	463	G	N1-C2-N2	-5.54	111.22	116.20
59	BA	1945	G	C4-N9-C1'	5.53	133.69	126.50
60	DB	3	C	C2-N3-C4	5.53	122.67	119.90
59	BA	251	A	N1-C2-N3	5.53	132.06	129.30
59	BA	444	C	C2-N1-C1'	-5.53	112.72	118.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	CA	1072	G	N3-C4-N9	-5.52	122.69	126.00
59	DA	294	A	N3-C4-N9	5.52	131.81	127.40
21	CA	591	U	O4'-C1'-N1	5.52	112.61	108.20
59	DA	1810	A	C5-N7-C8	-5.52	101.14	103.90
21	CA	68(I)	G	N3-C4-N9	5.51	129.31	126.00
59	DA	1053	C	C2-N1-C1'	5.51	124.87	118.80
22	CW	50	C	N1-C2-O2	5.51	122.21	118.90
59	DA	306	U	N1-C2-O2	5.51	126.66	122.80
59	DA	1810	A	N7-C8-N9	5.51	116.55	113.80
21	AA	992	U	P-O3'-C3'	5.50	126.31	119.70
21	AA	1332	A	C6-C5-N7	-5.50	128.45	132.30
21	AA	300	A	N1-C6-N6	5.50	121.90	118.60
33	DN	117	PHE	CA-C-N	-5.50	105.10	117.20
60	DB	24	G	C5-C6-O6	-5.50	125.30	128.60
59	BA	2782	G	C4-C5-N7	5.50	113.00	110.80
21	AA	252	U	N3-C2-O2	-5.50	118.35	122.20
23	AV	24	C	O4'-C1'-N1	5.50	112.60	108.20
59	BA	906	G	N3-C4-C5	5.50	131.35	128.60
21	CA	526	C	C6-N1-C2	-5.50	118.10	120.30
59	BA	95	G	C4-N9-C1'	-5.49	119.36	126.50
23	CV	34	A	P-O3'-C3'	5.49	126.29	119.70
21	CA	68(W)	G	N1-C2-N2	5.49	121.14	116.20
59	BA	2522	U	N1-C2-O2	5.49	126.64	122.80
21	CA	600	C	C5-C6-N1	5.48	123.74	121.00
59	DA	1831	G	N3-C4-N9	5.48	129.29	126.00
21	AA	1037	C	N3-C4-C5	-5.47	119.71	121.90
21	AA	520	A	C4-C5-C6	5.47	119.74	117.00
21	CA	1404	C	N1-C2-O2	5.47	122.18	118.90
59	BA	2478	A	N1-C6-N6	5.47	121.88	118.60
21	CA	68(H)	G	C6-C5-N7	5.47	133.68	130.40
59	DA	2171	A	N1-C6-N6	-5.47	115.32	118.60
59	DA	1226	A	N1-C6-N6	5.47	121.88	118.60
59	DA	915	C	N1-C2-O2	5.47	122.18	118.90
59	DA	1107	G	C8-N9-C4	-5.47	104.21	106.40
59	DA	1547	C	C6-N1-C2	-5.46	118.11	120.30
59	BA	270(V)	G	C8-N9-C1'	5.46	134.09	127.00
21	CA	1103	C	C2-N3-C4	5.46	122.63	119.90
22	CW	14	A	C4-C5-C6	5.45	119.72	117.00
59	DA	2553	G	O4'-C1'-N9	-5.45	103.84	108.20
21	CA	1387	G	N3-C4-N9	5.44	129.27	126.00
22	CW	43	G	N3-C4-N9	5.44	129.27	126.00
59	DA	1139	G	C5-N7-C8	-5.44	101.58	104.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
59	DA	871	U	N1-C2-O2	-5.44	118.99	122.80
59	DA	895	U	N1-C2-O2	5.44	126.61	122.80
59	DA	2714	G	C4-N9-C1'	5.44	133.57	126.50
24	AX	53	G	N3-C4-C5	5.44	131.32	128.60
21	CA	68(I)	G	C6-C5-N7	-5.43	127.14	130.40
59	DA	809	G	C5-C6-O6	-5.43	125.34	128.60
21	CA	1535	C	C6-N1-C1'	-5.43	114.28	120.80
21	CA	1529	G	N3-C4-N9	5.43	129.26	126.00
24	CX	24	G	C5-C6-N1	5.43	114.21	111.50
59	DA	1964	G	C8-N9-C4	-5.43	104.23	106.40
21	AA	1494	G	N9-C4-C5	-5.43	103.23	105.40
59	BA	342	G	N3-C4-N9	-5.43	122.74	126.00
60	BB	95	U	C6-N1-C1'	5.43	128.80	121.20
59	BA	301	G	C4-N9-C1'	-5.43	119.44	126.50
59	DA	353	G	C8-N9-C1'	-5.42	119.95	127.00
59	BA	270(D)	C	N1-C2-O2	-5.42	115.65	118.90
21	CA	575	G	C4-N9-C1'	-5.42	119.45	126.50
59	DA	1968	G	O4'-C1'-N9	5.42	112.54	108.20
59	BA	1048	A	N3-C4-N9	5.42	131.73	127.40
59	DA	506	G	C2-N3-C4	-5.42	109.19	111.90
59	DA	870	A	N3-C4-N9	-5.42	123.06	127.40
59	DA	1905	C	N1-C2-O2	5.42	122.15	118.90
21	CA	1537	U	C5-C6-N1	5.42	125.41	122.70
20	CY	260	LEU	CA-CB-CG	5.42	127.76	115.30
59	DA	906	G	N9-C4-C5	5.41	107.56	105.40
60	DB	117	G	C8-N9-C1'	5.41	134.03	127.00
21	AA	520	A	C6-N1-C2	-5.41	115.35	118.60
59	BA	103	A	N1-C6-N6	5.41	121.84	118.60
59	DA	121	G	C8-N9-C1'	-5.41	119.97	127.00
59	DA	936	C	C6-N1-C2	-5.41	118.14	120.30
24	AX	1	G	N3-C4-N9	5.41	129.24	126.00
59	BA	1049	C	C6-N1-C2	-5.40	118.14	120.30
59	DA	121	G	C4-N9-C1'	5.40	133.52	126.50
21	AA	1378	C	C2-N1-C1'	5.40	124.74	118.80
59	BA	611(A)	C	N1-C2-O2	5.40	122.14	118.90
59	DA	915	C	N3-C2-O2	-5.40	118.12	121.90
59	DA	908	C	C2-N1-C1'	-5.40	112.86	118.80
33	DN	118	LYS	C-N-CA	-5.39	108.22	121.70
59	DA	897	C	C2-N1-C1'	5.39	124.73	118.80
21	CA	1155	G	N3-C4-N9	5.39	129.24	126.00
59	BA	2620	C	O4'-C1'-N1	5.39	112.51	108.20
24	CX	35	A	N7-C8-N9	5.39	116.50	113.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	CW	7	G	N3-C4-N9	5.39	129.23	126.00
59	DA	1945	G	C8-N9-C1'	-5.39	120.00	127.00
59	BA	1961	C	N3-C4-N4	5.39	121.77	118.00
23	CV	8	A	C4-N9-C1'	-5.39	116.60	126.30
59	DA	155(E)	U	N1-C2-O2	5.39	126.57	122.80
59	DA	577	G	N3-C4-N9	5.39	129.23	126.00
59	DA	2391	G	N1-C2-N2	5.39	121.05	116.20
59	DA	2483	C	C2-N1-C1'	5.39	124.73	118.80
59	DA	1019	U	C5-C4-O4	5.38	129.13	125.90
59	DA	646	A	N1-C6-N6	-5.38	115.37	118.60
59	BA	1223	G	C2-N3-C4	-5.38	109.21	111.90
21	CA	68(I)	G	C4-N9-C1'	5.38	133.50	126.50
22	CW	66	C	C2-N1-C1'	5.38	124.72	118.80
59	BA	1570	A	N1-C6-N6	5.38	121.83	118.60
21	CA	300	A	C6-C5-N7	-5.38	128.53	132.30
21	CA	1440(K)	G	C4-N9-C1'	5.38	133.49	126.50
21	AA	112	G	N3-C4-N9	-5.37	122.78	126.00
21	AA	1348	U	C2-N1-C1'	-5.37	111.25	117.70
59	BA	2529	G	N3-C2-N2	-5.37	116.14	119.90
60	BB	65	C	N1-C2-O2	5.37	122.12	118.90
59	DA	540	C	C6-N1-C1'	5.37	127.25	120.80
59	BA	520	G	N3-C4-N9	5.37	129.22	126.00
59	BA	2149	G	N9-C4-C5	5.37	107.55	105.40
21	AA	1126	U	N1-C2-O2	-5.37	119.04	122.80
59	BA	194	G	C8-N9-C1'	5.37	133.97	127.00
60	BB	79	C	C2-N1-C1'	5.37	124.70	118.80
24	CX	49	G	N9-C4-C5	5.37	107.55	105.40
59	DA	357(D)	G	N3-C2-N2	-5.37	116.14	119.90
21	AA	838(B)	C	O4'-C1'-N1	5.36	112.49	108.20
60	DB	22	U	O4'-C1'-N1	5.36	112.49	108.20
59	DA	1022	G	OP2-P-O3'	5.36	116.99	105.20
24	CX	24	G	C5-C6-O6	-5.36	125.39	128.60
59	DA	1774	C	C5-C6-N1	5.36	123.68	121.00
59	DA	1712(I)	U	N1-C2-O2	5.36	126.55	122.80
59	DA	1570	A	N7-C8-N9	5.35	116.48	113.80
59	DA	2295	C	C2-N1-C1'	5.35	124.69	118.80
22	AW	50	C	C6-N1-C1'	-5.35	114.38	120.80
59	DA	2171	A	C5-N7-C8	-5.35	101.23	103.90
24	AX	30	C	C5-C6-N1	5.35	123.67	121.00
47	B1	46	LEU	CA-CB-CG	5.35	127.60	115.30
59	BA	2250	G	O4'-C1'-N9	5.35	112.48	108.20
24	AX	72	C	C6-N1-C2	-5.35	118.16	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	AA	68(Q)	U	N3-C2-O2	-5.34	118.46	122.20
23	AV	1	G	O5'-P-OP1	-5.34	100.89	105.70
52	B6	36	LEU	CA-CB-CG	5.34	127.59	115.30
59	BA	2792	G	C8-N9-C4	-5.34	104.26	106.40
24	CX	11	C	N3-C2-O2	-5.34	118.16	121.90
59	BA	1493	C	N3-C2-O2	-5.34	118.16	121.90
59	DA	870	A	C5-C6-N6	5.34	127.97	123.70
24	AX	74	C	C4-C5-C6	-5.34	114.73	117.40
21	AA	1336	C	N1-C2-O2	5.33	122.10	118.90
59	DA	1945	G	N3-C4-N9	5.33	129.20	126.00
59	BA	1396	U	N1-C2-O2	5.33	126.53	122.80
21	CA	735	C	C5-C6-N1	5.33	123.67	121.00
24	CX	36	C	N3-C2-O2	5.33	125.63	121.90
59	BA	1964	G	N9-C4-C5	-5.33	103.27	105.40
60	DB	101	A	N3-C4-N9	5.33	131.66	127.40
59	BA	2257	U	C5-C6-N1	5.33	125.36	122.70
59	DA	357(M)	C	N1-C2-O2	5.33	122.09	118.90
59	DA	1965	C	OP1-P-OP2	-5.32	111.61	119.60
59	BA	194	G	N3-C2-N2	-5.32	116.17	119.90
21	CA	1407	C	N1-C2-O2	5.32	122.09	118.90
59	DA	671	C	N1-C2-O2	5.32	122.09	118.90
59	DA	2764	A	C4-C5-C6	-5.32	114.34	117.00
59	BA	2111	C	N3-C2-O2	-5.32	118.18	121.90
33	BN	101	HIS	O-C-N	5.32	131.21	122.70
59	DA	809	G	C4-N9-C1'	5.32	133.41	126.50
60	DB	87	G	C2-N3-C4	-5.32	109.24	111.90
59	DA	155(E)	U	C2-N1-C1'	5.32	124.08	117.70
21	CA	638	G	N3-C2-N2	-5.31	116.18	119.90
35	BP	53	GLY	N-CA-C	-5.31	99.82	113.10
59	DA	1380	G	N3-C4-N9	5.31	129.19	126.00
41	BV	39	LEU	CA-CB-CG	5.31	127.51	115.30
59	BA	1313	U	C6-N1-C1'	-5.31	113.77	121.20
21	CA	365	U	O4'-C1'-N1	5.31	112.44	108.20
59	DA	1945	G	C4-C5-N7	5.31	112.92	110.80
21	AA	1145	C	C5-C4-N4	5.31	123.91	120.20
59	BA	2077	A	N1-C6-N6	5.31	121.78	118.60
59	DA	1139	G	C4-C5-N7	5.30	112.92	110.80
60	DB	98	G	C4-N9-C1'	-5.30	119.60	126.50
59	DA	121	G	N3-C2-N2	5.30	123.61	119.90
59	BA	24	G	N3-C2-N2	-5.30	116.19	119.90
59	DA	1642	G	N3-C4-N9	5.30	129.18	126.00
21	AA	1314	C	C2-N1-C1'	5.30	124.63	118.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	AA	1440(K)	G	C8-N9-C1'	-5.30	120.12	127.00
59	DA	733	G	C5-C6-O6	-5.30	125.42	128.60
59	DA	1349	A	O4'-C1'-N9	5.30	112.44	108.20
21	CA	1508	G	N9-C4-C5	-5.29	103.28	105.40
24	CX	60	C	C6-N1-C2	-5.29	118.18	120.30
59	DA	121	G	N9-C4-C5	-5.29	103.28	105.40
59	BA	1414	G	C5-C6-O6	5.29	131.77	128.60
59	DA	509	C	C5-C6-N1	5.29	123.64	121.00
59	BA	1346	G	C8-N9-C1'	5.29	133.87	127.00
59	DA	1413	G	N3-C4-N9	-5.29	122.83	126.00
21	AA	221	C	N1-C2-O2	5.29	122.07	118.90
21	AA	1493	A	P-O3'-C3'	5.29	126.04	119.70
59	BA	146	G	N3-C4-N9	-5.29	122.83	126.00
59	DA	897	C	N1-C2-O2	5.29	122.07	118.90
59	BA	1313	U	N3-C2-O2	-5.28	118.50	122.20
24	CX	62	C	N1-C2-O2	-5.28	115.73	118.90
59	DA	1019	U	C6-N1-C2	-5.28	117.83	121.00
59	DA	1047	G	O4'-C1'-N9	5.28	112.43	108.20
21	AA	1492	A	N1-C6-N6	-5.28	115.43	118.60
21	CA	500	G	C6-C5-N7	-5.28	127.23	130.40
22	AW	14	A	N3-C4-N9	5.28	131.62	127.40
23	AV	19	G	C8-N9-C1'	5.28	133.86	127.00
59	DA	466	A	C5-C6-N6	-5.28	119.48	123.70
59	DA	880	G	N3-C4-C5	-5.28	125.96	128.60
59	DA	2639	A	O4'-C1'-N9	5.28	112.42	108.20
21	AA	46	G	N3-C4-N9	-5.28	122.83	126.00
59	DA	1048	A	C6-C5-N7	-5.27	128.61	132.30
60	DB	117	G	C6-C5-N7	5.27	133.56	130.40
59	BA	1346	G	N9-C4-C5	5.27	107.51	105.40
14	CO	31	LEU	CA-CB-CG	5.27	127.42	115.30
25	BC	44	VAL	N-CA-C	-5.27	96.77	111.00
59	BA	1172	G	O4'-C1'-N9	5.27	112.42	108.20
59	DA	155(E)	U	N3-C2-O2	-5.27	118.51	122.20
59	DA	1139	G	C6-C5-N7	-5.27	127.24	130.40
59	DA	1945	G	N9-C4-C5	-5.27	103.29	105.40
59	DA	2681	C	N3-C4-N4	-5.27	114.31	118.00
60	DB	87	G	N1-C2-N2	-5.27	111.46	116.20
21	AA	989	C	C2-N1-C1'	-5.26	113.01	118.80
22	CW	41	A	O4'-C1'-N9	5.26	112.41	108.20
59	BA	2181	G	N3-C2-N2	-5.26	116.22	119.90
21	CA	1336	C	C6-N1-C1'	-5.26	114.48	120.80
21	CA	68(W)	G	N3-C2-N2	-5.26	116.22	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
59	BA	2111	C	C6-N1-C2	-5.26	118.20	120.30
21	CA	1529	G	C4-N9-C1'	5.26	133.34	126.50
59	DA	357(A)	U	C5-C6-N1	5.26	125.33	122.70
24	AX	72	C	C2-N1-C1'	5.25	124.58	118.80
59	DA	1712(Q)	G	C5-C6-O6	5.25	131.75	128.60
21	AA	328	C	P-O3'-C3'	5.25	126.00	119.70
21	CA	930	C	N1-C2-O2	5.25	122.05	118.90
44	DY	31	LEU	C-N-CD	-5.25	109.05	120.60
37	BR	28	LEU	CA-CB-CG	5.25	127.37	115.30
21	CA	1536	C	N3-C4-C5	-5.25	119.80	121.90
59	DA	908	C	C6-N1-C1'	5.25	127.10	120.80
59	DA	2092	U	C2-N1-C1'	5.25	124.00	117.70
59	DA	2582	G	C5-C6-O6	-5.25	125.45	128.60
21	AA	328	C	C6-N1-C1'	-5.25	114.51	120.80
21	AA	1493	A	O5'-P-OP1	5.24	116.99	110.70
59	BA	2639	A	O4'-C1'-N9	5.24	112.39	108.20
60	DB	98	G	C8-N9-C1'	5.24	133.81	127.00
59	BA	1598	C	C6-N1-C2	-5.24	118.20	120.30
59	DA	1971	A	C5-C6-N1	5.24	120.32	117.70
21	CA	1348	U	N3-C4-C5	5.24	117.74	114.60
59	BA	2580	U	N3-C2-O2	-5.24	118.54	122.20
59	DA	257	A	N1-C6-N6	5.24	121.74	118.60
59	DA	540	C	O4'-C1'-N1	5.24	112.39	108.20
21	CA	68(A)	G	C8-N9-C4	-5.23	104.31	106.40
22	AW	68	U	N1-C2-O2	-5.23	119.14	122.80
59	DA	1945	G	C4-N9-C1'	5.23	133.30	126.50
59	BA	2647	U	N1-C2-O2	5.23	126.46	122.80
59	BA	1396	U	N3-C2-O2	-5.23	118.54	122.20
59	DA	1141	U	C2-N3-C4	-5.23	123.86	127.00
59	DA	2887	U	C5-C6-N1	5.23	125.31	122.70
21	CA	1126	U	C5-C4-O4	5.22	129.03	125.90
59	DA	2582	G	N9-C4-C5	-5.22	103.31	105.40
21	CA	1336	C	C5-C6-N1	5.22	123.61	121.00
59	DA	383	U	N3-C2-O2	-5.22	118.54	122.20
21	CA	68(H)	G	C4-C5-N7	-5.22	108.71	110.80
21	CA	1537	U	C6-N1-C1'	5.22	128.51	121.20
60	DB	96	G	C5-C6-O6	5.22	131.73	128.60
59	BA	1832	C	C2-N1-C1'	5.22	124.54	118.80
21	AA	1436	U	N3-C4-O4	-5.22	115.75	119.40
59	BA	1937	A	C5-C6-N6	5.22	127.88	123.70
23	CV	19	G	C4-C5-N7	-5.22	108.71	110.80
33	DN	71	ILE	N-CA-C	5.22	125.08	111.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
59	DA	703	U	N1-C2-O2	5.21	126.45	122.80
60	DB	18	G	N3-C2-N2	5.21	123.55	119.90
59	BA	57	C	C6-N1-C2	-5.21	118.22	120.30
59	DA	2428	G	OP1-P-O3'	5.21	116.66	105.20
21	CA	533	A	N1-C2-N3	5.21	131.90	129.30
43	DX	57	LEU	CA-CB-CG	5.21	127.28	115.30
59	DA	1048	A	C4-C5-C6	5.20	119.60	117.00
59	BA	807	U	C2-N3-C4	-5.20	123.88	127.00
59	DA	2011	U	C2-N1-C1'	-5.20	111.46	117.70
21	AA	762	C	C5-C6-N1	5.20	123.60	121.00
59	BA	95	G	C8-N9-C1'	5.20	133.76	127.00
59	DA	1712(O)	C	C2-N1-C1'	-5.20	113.08	118.80
21	AA	1158	C	C2-N1-C1'	5.20	124.52	118.80
22	AW	5	A	N1-C6-N6	-5.20	115.48	118.60
59	BA	466	A	C5-C6-N6	-5.20	119.54	123.70
59	BA	943	U	N1-C2-O2	-5.20	119.16	122.80
59	BA	1430	C	N1-C2-O2	5.19	122.02	118.90
60	DB	3	C	C5-C4-N4	5.19	123.84	120.20
59	BA	344	G	C2-N3-C4	-5.19	109.30	111.90
59	BA	353	G	N3-C4-N9	5.19	129.12	126.00
59	BA	1421	G	C6-C5-N7	-5.19	127.28	130.40
59	BA	2529	G	N3-C4-N9	-5.19	122.89	126.00
59	DA	1105	U	O4'-C1'-N1	5.19	112.35	108.20
59	BA	2636	U	N1-C2-O2	5.19	126.43	122.80
59	DA	269	U	C2-N1-C1'	5.18	123.92	117.70
59	DA	1300	U	P-O3'-C3'	5.18	125.92	119.70
59	DA	1141	U	N1-C2-N3	5.18	118.01	114.90
59	DA	1653	G	C5-C6-O6	-5.18	125.49	128.60
59	DA	1934	C	C6-N1-C2	-5.18	118.23	120.30
21	AA	1336	C	C6-N1-C1'	-5.18	114.59	120.80
59	BA	1022	G	P-O3'-C3'	5.17	125.91	119.70
59	DA	710	G	N3-C4-N9	5.17	129.10	126.00
59	BA	1430	C	C6-N1-C2	-5.17	118.23	120.30
59	BA	2136	C	N1-C2-O2	5.17	122.00	118.90
21	CA	1536	C	N1-C2-O2	-5.17	115.80	118.90
21	CA	712	A	C6-N1-C2	-5.17	115.50	118.60
21	CA	998	G	N9-C4-C5	5.17	107.47	105.40
33	BN	98	VAL	N-CA-C	5.17	124.95	111.00
59	BA	2792	G	N9-C4-C5	5.17	107.47	105.40
24	CX	24	G	C6-C5-N7	-5.17	127.30	130.40
24	AX	37	A	C6-C5-N7	5.16	135.91	132.30
59	DA	357(M)	C	C6-N1-C1'	-5.16	114.60	120.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
59	DA	2812	G	O4'-C1'-N9	5.16	112.33	108.20
23	CV	35	A	P-O3'-C3'	5.16	125.89	119.70
59	DA	271(G)	G	N1-C6-O6	5.16	123.00	119.90
21	AA	1028(F)	A	N1-C6-N6	5.16	121.69	118.60
21	CA	163	C	C6-N1-C1'	5.16	126.99	120.80
59	DA	2136	C	C5-C6-N1	5.16	123.58	121.00
59	DA	2739	U	N1-C2-N3	5.16	117.99	114.90
34	BO	8	LEU	CA-CB-CG	5.15	127.16	115.30
59	BA	2554	U	N1-C2-O2	5.15	126.41	122.80
59	DA	809	G	C8-N9-C1'	-5.15	120.30	127.00
23	AV	29	A	OP1-P-O3'	5.15	116.53	105.20
52	B6	11	LEU	CA-CB-CG	5.15	127.15	115.30
59	DA	2714	G	N3-C4-C5	-5.15	126.03	128.60
59	BA	121	G	C8-N9-C1'	-5.15	120.31	127.00
59	DA	40	C	C2-N1-C1'	5.15	124.46	118.80
59	BA	1569	A	O4'-C1'-N9	5.15	112.32	108.20
59	BA	733	G	C5-C6-O6	-5.14	125.51	128.60
59	DA	1210	A	P-O3'-C3'	5.14	125.87	119.70
53	B7	40	TRP	CZ3-CH2-CZ2	-5.14	115.43	121.60
24	CX	52	G	N3-C4-N9	-5.14	122.91	126.00
59	BA	1385	G	N3-C4-N9	-5.14	122.92	126.00
21	AA	1302	U	C6-N1-C1'	-5.14	114.00	121.20
59	BA	1047	G	O4'-C1'-N9	5.14	112.31	108.20
21	CA	68(X)	U	C2-N1-C1'	5.14	123.87	117.70
21	CA	1527	C	N1-C2-O2	5.14	121.98	118.90
59	DA	103	A	C5-C6-N6	-5.14	119.59	123.70
59	DA	306	U	C5-C6-N1	5.14	125.27	122.70
21	AA	687	A	P-O3'-C3'	5.14	125.86	119.70
33	DN	101	HIS	N-CA-C	-5.14	97.13	111.00
21	AA	1494	G	C6-C5-N7	-5.13	127.32	130.40
60	BB	50	G	N9-C4-C5	5.13	107.45	105.40
22	CW	61	C	C5-C6-N1	5.13	123.57	121.00
24	CX	69	A	C6-N1-C2	-5.13	115.52	118.60
59	BA	1653	G	C4-N9-C1'	-5.13	119.83	126.50
59	DA	2257	U	C5-C4-O4	-5.13	122.82	125.90
60	DB	32	C	O4'-C1'-N1	5.13	112.31	108.20
59	BA	2598	A	C6-C5-N7	-5.13	128.71	132.30
59	BA	1019	U	C6-N1-C2	-5.12	117.93	121.00
59	BA	1570	A	N7-C8-N9	5.12	116.36	113.80
21	CA	998	G	N3-C4-N9	-5.12	122.93	126.00
21	AA	1332	A	N3-C4-N9	5.12	131.50	127.40
59	BA	251	A	N3-C4-C5	-5.12	123.22	126.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	CA	998	G	C8-N9-C1'	5.12	133.65	127.00
59	DA	1547	C	N3-C2-O2	-5.12	118.32	121.90
21	AA	1348	U	N1-C2-O2	-5.12	119.22	122.80
59	BA	1468(D)	A	N1-C6-N6	5.12	121.67	118.60
59	BA	176	G	N3-C4-N9	-5.12	122.93	126.00
60	BB	32	C	C5-C4-N4	5.12	123.78	120.20
24	CX	62	C	C6-N1-C1'	5.12	126.94	120.80
59	DA	2592	G	N9-C4-C5	-5.12	103.35	105.40
60	DB	65	C	N3-C2-O2	-5.12	118.32	121.90
22	AW	23	A	N3-C4-N9	5.11	131.49	127.40
21	CA	1494	G	C4-C5-C6	5.11	121.87	118.80
59	DA	1968	G	C4-N9-C1'	-5.11	119.86	126.50
59	DA	2157	G	N3-C2-N2	5.11	123.48	119.90
59	DA	955	C	N3-C4-C5	-5.11	119.86	121.90
59	DA	2391	G	O4'-C1'-N9	5.11	112.29	108.20
59	BA	268	C	N1-C2-O2	5.11	121.96	118.90
21	CA	300	A	C4-C5-C6	5.10	119.55	117.00
24	AX	3	G	N3-C4-C5	-5.10	126.05	128.60
21	CA	1436	U	C2-N3-C4	-5.10	123.94	127.00
59	DA	484	C	C5-C6-N1	5.10	123.55	121.00
59	DA	1966	A	N7-C8-N9	5.10	116.35	113.80
24	CX	60	C	C2-N1-C1'	5.10	124.41	118.80
59	BA	296	C	C6-N1-C1'	5.09	126.91	120.80
24	CX	24	G	C4-C5-N7	5.09	112.84	110.80
59	DA	2427	C	N1-C2-O2	-5.09	115.84	118.90
21	CA	1075	C	C2-N1-C1'	5.09	124.40	118.80
21	AA	1003	G	N9-C4-C5	5.09	107.44	105.40
59	DA	701	G	O4'-C1'-N9	5.09	112.27	108.20
59	DA	1969	A	C5-N7-C8	-5.09	101.36	103.90
60	BB	3	C	C2-N1-C1'	5.08	124.39	118.80
59	DA	1711	C	O4'-C1'-N1	5.08	112.27	108.20
22	AW	14	A	N9-C4-C5	-5.08	103.77	105.80
22	AW	71	C	C6-N1-C2	-5.08	118.27	120.30
59	BA	2620	C	C6-N1-C1'	5.08	126.90	120.80
21	CA	1043	C	C2-N1-C1'	-5.08	113.21	118.80
21	CA	1061	G	C4-N9-C1'	5.08	133.10	126.50
21	AA	1003	G	N1-C6-O6	-5.08	116.85	119.90
59	DA	2592	G	N1-C2-N2	-5.08	111.63	116.20
21	CA	978	A	N9-C4-C5	5.08	107.83	105.80
21	AA	1437	C	C6-N1-C2	-5.07	118.27	120.30
22	AW	53	G	C6-C5-N7	-5.07	127.36	130.40
59	BA	2699	C	N1-C2-O2	-5.07	115.86	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	CA	810	C	C6-N1-C1'	5.07	126.89	120.80
24	CX	62	C	C2-N1-C1'	-5.07	113.22	118.80
60	DB	18	G	N9-C4-C5	-5.07	103.37	105.40
21	AA	1491	G	C5-N7-C8	-5.07	101.77	104.30
59	BA	836	G	C5-C6-O6	5.07	131.64	128.60
59	DA	344	G	N1-C2-N3	5.07	126.94	123.90
59	DA	2780	G	C4-N9-C1'	-5.07	119.91	126.50
21	AA	115	G	C4-N9-C1'	5.07	133.09	126.50
59	BA	296	C	C2-N1-C1'	-5.07	113.23	118.80
21	CA	1263	C	N1-C2-O2	5.07	121.94	118.90
59	DA	83	G	N9-C4-C5	-5.07	103.37	105.40
59	DA	454	A	N1-C6-N6	-5.07	115.56	118.60
59	BA	301	G	C8-N9-C1'	5.06	133.58	127.00
59	DA	103	A	N3-C4-N9	5.06	131.45	127.40
59	DA	1859	A	N1-C6-N6	5.06	121.64	118.60
59	BA	2792	G	N3-C2-N2	-5.05	116.36	119.90
59	DA	646	A	C5-C6-N6	5.05	127.74	123.70
59	DA	2780	G	N3-C4-N9	-5.05	122.97	126.00
22	AW	30	C	C5-C6-N1	5.05	123.53	121.00
59	BA	466	A	C6-C5-N7	-5.05	128.76	132.30
21	AA	815	A	C6-C5-N7	5.05	135.83	132.30
21	CA	1527	C	C6-N1-C2	-5.05	118.28	120.30
59	DA	2714	G	C8-N9-C1'	-5.05	120.44	127.00
21	CA	443	C	C2-N1-C1'	5.05	124.35	118.80
21	CA	1028(G)	G	C4-C5-N7	5.05	112.82	110.80
59	DA	271(B)	G	P-O3'-C3'	5.05	125.76	119.70
59	BA	1674	G	C6-C5-N7	-5.04	127.37	130.40
21	AA	115	G	C8-N9-C1'	-5.04	120.45	127.00
59	BA	2553	G	N7-C8-N9	5.04	115.62	113.10
21	AA	1028(B)	C	C5-C6-N1	5.04	123.52	121.00
24	AX	52	G	N3-C4-N9	-5.04	122.98	126.00
21	AA	45	U	N1-C2-O2	5.04	126.33	122.80
21	AA	1037	C	C5-C4-N4	5.04	123.72	120.20
59	DA	2345	G	N1-C6-O6	5.04	122.92	119.90
24	AX	37	A	N3-C4-N9	-5.03	123.37	127.40
21	CA	1158	C	C2-N1-C1'	5.03	124.33	118.80
59	DA	296	C	N1-C2-O2	-5.03	115.88	118.90
27	BE	63	LEU	CA-CB-CG	5.03	126.87	115.30
33	BN	15	LEU	CA-CB-CG	5.03	126.87	115.30
59	DA	1254	A	N1-C6-N6	-5.03	115.58	118.60
59	BA	2552	U	C2-N1-C1'	5.03	123.73	117.70
59	DA	1964	G	N3-C4-C5	-5.03	126.09	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	CA	1061	G	C8-N9-C1'	-5.03	120.47	127.00
21	CA	1285	A	P-O3'-C3'	5.03	125.73	119.70
59	DA	154	G	N3-C4-N9	5.03	129.02	126.00
59	DA	2641	G	C8-N9-C1'	5.03	133.53	127.00
21	AA	68(I)	G	N3-C4-N9	5.02	129.01	126.00
59	DA	506	G	N3-C4-C5	5.02	131.11	128.60
21	AA	1437	C	C5-C6-N1	5.02	123.51	121.00
22	AW	53	G	C8-N9-C1'	-5.02	120.47	127.00
21	AA	129(A)	G	N9-C4-C5	-5.02	103.39	105.40
21	AA	1440(N)	C	N1-C2-O2	5.02	121.91	118.90
60	DB	60	C	N1-C2-O2	5.02	121.91	118.90
59	BA	1982	C	N1-C2-O2	5.01	121.91	118.90
59	BA	2338	G	N3-C4-N9	-5.01	122.99	126.00
21	CA	1272	G	N3-C4-C5	-5.01	126.09	128.60
59	DA	1415	U	C2-N1-C1'	-5.01	111.68	117.70
21	AA	152	A	N1-C6-N6	-5.01	115.59	118.60
47	B1	17	SER	N-CA-CB	-5.01	102.98	110.50
59	BA	2136	C	C2-N1-C1'	5.01	124.31	118.80
59	BA	2553	G	O4'-C1'-N9	-5.01	104.19	108.20
59	DA	807	U	C5-C4-O4	-5.01	122.89	125.90
21	CA	328	C	P-O3'-C3'	5.01	125.71	119.70
59	DA	2695	C	C2-N1-C1'	5.01	124.31	118.80
21	AA	533	A	C4-C5-C6	5.01	119.50	117.00
59	DA	1484	G	N3-C4-C5	5.01	131.10	128.60
22	AW	64	G	C4-C5-N7	5.01	112.80	110.80
59	BA	2501	C	C2-N1-C1'	-5.01	113.29	118.80
21	CA	1508	G	C6-C5-N7	-5.01	127.40	130.40
22	CW	53	G	N3-C2-N2	5.01	123.40	119.90
59	DA	103	A	C8-N9-C1'	-5.01	118.69	127.70
59	BA	425	G	N3-C4-N9	5.00	129.00	126.00
60	BB	36	C	N1-C2-O2	5.00	121.90	118.90
21	CA	383	A	N1-C6-N6	5.00	121.60	118.60
59	DA	357(D)	G	C6-C5-N7	5.00	133.40	130.40
59	DA	540	C	C2-N1-C1'	-5.00	113.30	118.80
59	DA	1965	C	O5'-P-OP2	5.00	116.70	110.70
23	CV	26	A	P-O3'-C3'	5.00	125.70	119.70

There are no chirality outliers.

All (86) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	AB	163	PHE	Peptide

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>Group</b>
10	AK	43	SER	Peptide
15	AP	34	GLU	Peptide
20	AY	34	TYR	Peptide
20	AY	630	GLN	Peptide
47	B1	16	ASN	Peptide
47	B1	17	SER	Peptide
47	B1	18	ILE	Peptide
47	B1	20	ARG	Peptide
53	B7	40	TRP	Mainchain
25	BC	161	ARG	Peptide
25	BC	162	ILE	Peptide
25	BC	163	GLU	Peptide
25	BC	171	ALA	Peptide
25	BC	210	LEU	Peptide
25	BC	88	GLU	Peptide
26	BD	164	GLN	Peptide
27	BE	107	THR	Peptide
28	BF	154	VAL	Peptide
28	BF	156	LEU	Peptide
28	BF	173	VAL	Peptide
28	BF	194	MET	Peptide
31	BJ	25	UNK	Peptide
31	BJ	83	UNK	Peptide
33	BN	100	GLU	Peptide
33	BN	105	GLY	Peptide
33	BN	112	LEU	Peptide
33	BN	113	GLY	Peptide
33	BN	116	LEU	Peptide
33	BN	117	PHE	Peptide
33	BN	118	LYS	Peptide
33	BN	125	GLY	Peptide
33	BN	70	LYS	Peptide
33	BN	71	ILE	Peptide
33	BN	72	TYR	Peptide
33	BN	78	TYR	Peptide
33	BN	82	LEU	Peptide
33	BN	84	LYS	Peptide
33	BN	86	PRO	Peptide
33	BN	90	MET	Peptide
33	BN	99	LEU	Peptide
34	BO	23	ARG	Peptide
36	BQ	101	ARG	Peptide

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>Group</b>
38	BS	98	VAL	Peptide
39	BT	32	TYR	Peptide
42	BW	75	TYR	Peptide
45	BZ	73	GLN	Peptide
3	CD	31	CYS	Peptide
10	CK	43	SER	Peptide
15	CP	34	GLU	Peptide
47	D1	17	SER	Peptide
47	D1	18	ILE	Peptide
47	D1	19	GLN	Peptide
25	DC	161	ARG	Peptide
25	DC	171	ALA	Peptide
25	DC	210	LEU	Peptide
25	DC	211	ARG	Peptide
25	DC	88	GLU	Peptide
26	DD	164	GLN	Peptide
28	DF	154	VAL	Peptide
28	DF	156	LEU	Peptide
29	DG	111	LEU	Mainchain
31	DJ	25	UNK	Peptide
31	DJ	53	UNK	Peptide
31	DJ	83	UNK	Peptide
33	DN	100	GLU	Peptide
33	DN	105	GLY	Peptide
33	DN	116	LEU	Peptide
33	DN	117	PHE	Peptide
33	DN	118	LYS	Peptide
33	DN	128	HIS	Peptide
33	DN	70	LYS	Peptide
33	DN	71	ILE	Peptide
33	DN	72	TYR	Peptide
33	DN	73	THR	Peptide
33	DN	78	TYR	Peptide
33	DN	82	LEU	Peptide
33	DN	84	LYS	Peptide
33	DN	90	MET	Peptide
33	DN	99	LEU	Peptide
34	DO	23	ARG	Peptide
38	DS	98	VAL	Peptide
39	DT	28	VAL	Peptide
42	DW	75	TYR	Peptide
42	DW	77	ASP	Peptide

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Mol	Chain	Res	Type	Group
45	DZ	73	GLN	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	118	0
1	CB	1910	0	1957	112	0
2	AC	1621	0	1688	90	0
2	CC	1621	0	1688	85	0
3	AD	1703	0	1767	109	0
3	CD	1703	0	1767	92	0
4	AE	1156	0	1213	55	0
4	CE	1156	0	1213	57	0
5	AF	843	0	857	33	0
5	CF	843	0	857	49	0
6	AG	1257	0	1296	58	0
6	CG	1257	0	1296	61	0
7	AH	1116	0	1177	78	0
7	CH	1116	0	1177	76	0
8	AI	1010	0	1037	62	0
8	CI	1010	0	1037	59	0
9	AJ	802	0	849	48	0
9	CJ	802	0	849	57	0
10	AK	885	0	904	62	0
10	CK	885	0	904	63	0
11	AL	976	0	1062	107	0
11	CL	976	0	1062	105	0
12	AM	997	0	1072	35	0
12	CM	997	0	1072	68	0
13	AN	492	0	533	36	0
13	CN	492	0	533	40	0
14	AO	734	0	771	49	0
14	CO	734	0	771	32	0
15	AP	706	0	725	44	0
15	CP	706	0	725	45	0
16	AQ	835	0	904	69	0
16	CQ	835	0	904	63	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
17	AR	574	0	644	34	0
17	CR	574	0	644	35	0
18	AS	634	0	655	40	0
18	CS	634	0	655	28	0
19	AT	763	0	861	50	0
19	CT	763	0	861	44	0
20	AY	5173	0	5239	335	0
20	CY	5173	0	5239	330	0
21	AA	32474	0	16393	1203	0
21	CA	32474	0	16392	1571	0
22	AW	1635	0	831	83	0
22	CW	1635	0	831	86	0
23	AV	783	0	391	43	0
23	CV	781	0	393	76	0
24	AX	1629	0	832	75	0
24	CX	1629	0	832	92	0
25	BC	1742	0	1798	155	0
25	DC	1742	0	1798	126	0
26	BD	2145	0	2234	174	0
26	DD	2145	0	2234	154	0
27	BE	1569	0	1634	135	0
27	DE	1569	0	1634	124	0
28	BF	1628	0	1680	156	0
28	DF	1628	0	1680	128	0
29	BG	1474	0	1535	78	0
29	DG	1474	0	1535	102	0
30	BH	1274	0	1342	65	0
30	DH	1274	0	1342	75	0
31	BJ	851	0	207	26	0
31	DJ	851	0	207	18	0
32	BK	1035	0	1082	63	0
32	DK	1035	0	1082	72	0
33	BN	1114	0	1185	281	0
33	DN	1114	0	1185	309	0
34	BO	933	0	996	71	0
34	DO	933	0	996	60	0
35	BP	1114	0	1187	105	0
35	DP	1114	0	1187	106	0
36	BQ	1122	0	1179	91	0
36	DQ	1122	0	1179	85	0
37	BR	960	0	1021	85	0
37	DR	960	0	1021	85	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
38	BS	775	0	835	74	0
38	DS	775	0	835	82	0
39	BT	1147	0	1207	89	0
39	DT	1147	0	1207	92	0
40	BU	964	0	1022	77	0
40	DU	964	0	1022	69	0
41	BV	779	0	852	70	0
41	DV	779	0	852	54	0
42	BW	900	0	964	71	0
42	DW	900	0	964	58	0
43	BX	734	0	789	31	0
43	DX	734	0	789	28	0
44	BY	818	0	908	54	0
44	DY	818	0	908	62	0
45	BZ	1473	0	1497	85	0
45	DZ	1473	0	1497	80	0
46	B0	662	0	688	31	0
46	D0	662	0	688	47	0
47	B1	732	0	808	58	0
47	D1	732	0	808	67	0
48	B2	598	0	653	35	0
48	D2	598	0	653	52	0
49	B3	477	0	529	25	0
49	D3	477	0	529	29	0
50	B4	271	0	284	11	0
50	D4	271	0	284	21	0
51	B5	459	0	480	28	0
51	D5	459	0	480	36	0
52	B6	433	0	461	34	0
52	D6	433	0	461	43	0
53	B7	430	0	480	29	0
53	D7	430	0	480	33	0
54	B8	517	0	582	44	0
54	D8	517	0	582	43	0
55	B9	307	0	338	31	0
55	D9	307	0	338	26	0
56	Be	686	0	620	0	0
56	De	686	0	621	0	0
57	Bf	156	0	47	0	0
57	Bg	156	0	47	0	0
57	Df	156	0	48	0	0
57	Dg	156	0	46	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
58	Bh	151	0	41	0	0
58	Dh	151	0	48	0	0
59	BA	61997	0	31250	2493	0
59	DA	61997	0	31250	2828	0
60	BB	2551	0	1295	143	0
60	DB	2551	0	1295	165	0
61	AY	28	0	12	8	0
61	CY	28	0	12	14	0
62	AY	37	0	47	21	0
62	CY	37	0	47	14	0
63	AA	42	0	46	26	0
63	BA	126	0	138	60	0
63	CA	42	0	46	34	0
63	DA	42	0	46	23	0
64	BA	1	0	0	0	0
64	CY	1	0	0	0	0
All	All	312066	0	215233	14871	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 29.

All (14871) 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)
33:DN:114:ARG:HH21	59:DA:527:C:C1'	1.22	1.51
24:CX:75:C:N4	59:DA:2553:G:H1	1.11	1.47
59:DA:2681:C:N4	59:DA:2725:A:H62	1.09	1.47
33:DN:114:ARG:NH2	59:DA:527:C:H1'	1.12	1.44
21:CA:1538:C:C2	23:CV:7:G:N2	1.88	1.41
33:DN:78:TYR:CE2	33:DN:115:ARG:NH2	1.87	1.40
33:DN:114:ARG:CZ	59:DA:527:C:O2'	1.69	1.39
21:CA:408:A:H2	21:CA:434:U:N3	1.24	1.36
33:DN:98:VAL:O	33:DN:101:HIS:N	1.58	1.35
59:BA:2681:C:N4	59:BA:2725:A:H62	1.22	1.35
21:AA:453:A:N6	21:AA:479:C:H42	1.25	1.34
33:BN:98:VAL:O	33:BN:101:HIS:N	1.60	1.32
21:CA:1538:C:N3	23:CV:7:G:N2	1.75	1.32
21:AA:453:A:H62	21:AA:479:C:N4	1.26	1.30
59:DA:879:G:H1	59:DA:898:C:N4	1.30	1.28
21:AA:1239:A:H62	21:AA:1299:A:N6	1.30	1.28
59:DA:2681:C:H41	59:DA:2725:A:N6	1.29	1.28

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
63:BA:2902:NMY:H19	63:BA:2902:NMY:C16	1.61	1.27
63:AA:1601:NMY:C16	63:AA:1601:NMY:H19	1.61	1.27
63:CA:1601:NMY:C16	63:CA:1601:NMY:H19	1.61	1.27
63:DA:2901:NMY:C16	63:DA:2901:NMY:H19	1.61	1.26
59:DA:583:G:H1	59:DA:1257:C:N4	1.33	1.25
21:AA:1157:A:N6	21:AA:1178:G:N2	1.84	1.25
21:CA:1157:A:N6	21:CA:1178:G:N2	1.83	1.25
63:BA:2903:NMY:C16	63:BA:2903:NMY:H19	1.61	1.25
21:CA:1239:A:H62	21:CA:1299:A:N6	1.33	1.25
59:DA:271(Q):A:N6	59:DA:357(E):U:H3	1.31	1.25
21:AA:1239:A:N6	21:AA:1299:A:N6	1.84	1.24
24:AX:75:C:N4	59:BA:2553:G:H1	1.32	1.24
33:DN:78:TYR:CZ	33:DN:115:ARG:NH2	2.05	1.24
63:BA:2902:NMY:H16	63:BA:2902:NMY:C19	1.65	1.23
63:DA:2901:NMY:H16	63:DA:2901:NMY:C19	1.65	1.23
21:CA:1239:A:N6	21:CA:1299:A:N6	1.85	1.22
33:DN:114:ARG:NH2	59:DA:528:A:N7	1.85	1.22
63:BA:2904:NMY:H16	63:BA:2904:NMY:C19	1.65	1.21
63:BA:2904:NMY:C16	63:BA:2904:NMY:H19	1.61	1.21
63:CA:1601:NMY:H16	63:CA:1601:NMY:C19	1.65	1.19
33:BN:114:ARG:O	33:BN:117:PHE:N	1.73	1.19
59:BA:1782:C:H42	59:BA:2586:C:N4	1.40	1.19
59:BA:2475:C:H42	59:BA:2529:G:N2	1.39	1.19
24:CX:1:G:C6	24:CX:72:C:N4	2.11	1.18
63:AA:1601:NMY:C19	63:AA:1601:NMY:H16	1.65	1.18
59:DA:585:G:H21	59:DA:1254:A:N6	1.39	1.18
21:AA:520:A:N6	21:AA:533:A:H61	1.41	1.18
24:CX:27:C:N4	24:CX:43:G:H1	1.39	1.17
59:BA:1664:A:H61	59:BA:1996:C:N4	1.41	1.17
59:BA:1932:A:N6	59:BA:1968:G:H21	1.42	1.17
24:CX:30:C:N4	24:CX:40:G:H1	1.42	1.17
21:CA:600:C:N4	21:CA:638:G:H1	1.41	1.16
59:BA:1932:A:H62	59:BA:1968:G:N2	1.42	1.16
59:BA:1664:A:N6	59:BA:1996:C:H42	1.44	1.16
21:AA:408:A:H2	21:AA:434:U:N3	1.43	1.16
59:DA:1269:A:N6	59:DA:2011:U:H3	1.43	1.16
21:AA:438:G:N2	21:AA:497:A:H62	1.44	1.15
24:CX:75:C:N4	59:DA:2553:G:N1	1.92	1.15
29:DG:108:ASN:O	29:DG:112:PRO:HG2	1.44	1.15
59:DA:1316:U:H3	59:DA:1336:A:N6	1.44	1.15
59:BA:2681:C:H41	59:BA:2725:A:N6	1.43	1.15

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:2133:G:N2	59:BA:2158:A:H62	1.43	1.15
21:AA:438:G:H21	21:AA:497:A:N6	1.42	1.14
59:DA:1629:U:H3	59:DA:1637:A:N6	1.43	1.14
59:DA:1052:C:N3	59:DA:1107:G:N2	1.94	1.14
21:CA:372:C:N4	21:CA:389:A:H62	1.45	1.14
59:BA:1782:C:N4	59:BA:2586:C:H42	1.44	1.14
22:CW:4:U:H3	22:CW:69:A:N6	1.44	1.14
24:CX:49:G:N2	24:CX:65:C:N3	1.95	1.14
59:DA:2520:C:N4	59:DA:2545:G:H1	1.47	1.13
59:BA:2681:C:C5	59:BA:2725:A:N6	2.17	1.12
21:AA:367:U:H3	21:AA:393:A:N6	1.45	1.12
33:DN:114:ARG:NE	59:DA:527:C:O2'	1.80	1.12
33:DN:114:ARG:NH2	59:DA:527:C:C1'	1.93	1.12
59:DA:850:C:N4	59:DA:928:G:H1	1.48	1.12
59:DA:1311:G:N2	59:DA:1603:A:H62	1.46	1.12
21:CA:1239:A:N6	21:CA:1299:A:H62	1.44	1.11
21:CA:372:C:H42	21:CA:389:A:N6	1.45	1.11
59:DA:1317:A:N6	59:DA:1335:U:H3	1.47	1.11
59:DA:226:G:N2	59:DA:228:A:H62	1.48	1.11
59:DA:2247:A:N6	59:DA:2257:U:H3	1.47	1.11
22:AW:12:U:H3	22:AW:23:A:N6	1.48	1.11
24:AX:53:G:N2	24:AX:61:C:N3	1.99	1.11
21:CA:32:A:N6	21:CA:552:U:H3	1.46	1.11
23:CV:21:A:N1	24:CX:34:U:O4	1.84	1.10
33:BN:31:ALA:O	33:BN:33:LEU:N	1.84	1.10
21:CA:1072:G:N2	21:CA:1103:C:N3	2.00	1.10
63:BA:2903:NMY:H16	63:BA:2903:NMY:C19	1.65	1.10
59:DA:851:U:H3	59:DA:926:A:N6	1.48	1.10
33:DN:31:ALA:O	33:DN:33:LEU:N	1.84	1.09
59:BA:2133:G:H21	59:BA:2158:A:N6	1.50	1.09
11:CL:56:ALA:HB3	11:CL:68:ALA:HB3	1.27	1.09
62:CY:702:FUA:H5	62:CY:702:FUA:H202	1.29	1.09
21:CA:1126:U:C4	21:CA:1148:U:O4	2.04	1.09
21:CA:1157:A:N6	21:CA:1178:G:H21	1.46	1.09
24:CX:2:G:H1	24:CX:71:C:N4	1.49	1.09
60:DB:3:C:N3	60:DB:117:G:N2	2.01	1.09
24:CX:1:G:N1	24:CX:72:C:C4	2.20	1.09
21:CA:152:A:H62	21:CA:169:C:N4	1.51	1.09
59:DA:271(F):G:H1	59:DA:357(M):C:N4	1.51	1.08
59:BA:271(Q):A:N6	59:BA:357(E):U:H3	1.50	1.08
23:CV:8:A:C8	23:CV:9:G:N2	2.22	1.08

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CA:1241:G:H1	21:CA:1296:C:N4	1.50	1.08
59:DA:1666:G:H1	59:DA:1994:C:N4	1.51	1.08
59:DA:1311:G:H21	59:DA:1603:A:N6	1.50	1.08
23:CV:19:G:N2	24:CX:36:C:N3	2.00	1.08
36:DQ:35:VAL:HA	36:DQ:102:VAL:HA	1.34	1.08
62:AY:702:FUA:H5	62:AY:702:FUA:H202	1.29	1.08
59:DA:585:G:N2	59:DA:1254:A:H62	1.50	1.08
21:CA:1070:U:H3	21:CA:1105:A:N6	1.50	1.07
59:DA:2634:G:H1	59:DA:2784:C:N4	1.52	1.07
59:BA:271(F):G:H1	59:BA:357(M):C:N4	1.51	1.07
21:CA:815:A:C2	21:CA:1527:C:O2	2.08	1.07
59:BA:955:C:N3	59:BA:962:G:O6	1.88	1.07
33:BN:74:ARG:H	33:BN:84:LYS:HB3	1.05	1.07
21:AA:408:A:C2	21:AA:434:U:N3	2.20	1.07
59:DA:949:C:N4	59:DA:968:G:H1	1.52	1.07
59:DA:1348:G:H1	59:DA:1598:C:N4	1.50	1.06
60:BB:22:U:O2	60:BB:61:G:O6	1.73	1.06
24:AX:50:G:O6	24:AX:64:U:O4	1.71	1.06
21:CA:590:C:N4	21:CA:649:G:H1	1.53	1.06
60:DB:70:C:N4	60:DB:106:G:H1	1.53	1.06
21:CA:1063:C:N4	21:CA:1193:G:H1	1.53	1.06
59:BA:2749:A:H62	59:BA:2753:A:N6	1.52	1.06
33:DN:117:PHE:O	33:DN:119:ARG:N	1.88	1.06
59:DA:1708:C:N4	59:DA:1750:G:H1	1.53	1.06
21:CA:987:G:H1	21:CA:1218:C:N4	1.51	1.06
59:DA:641:C:N4	59:DA:647:G:H1	1.53	1.06
60:DB:86:G:H1	60:DB:90:C:N4	1.54	1.05
59:BA:996:A:H2	59:BA:1159:U:N3	1.54	1.05
33:BN:114:ARG:O	33:BN:116:LEU:N	1.88	1.05
59:DA:2532:G:N2	59:DA:2663:G:H21	1.53	1.05
59:DA:2652:C:N4	59:DA:2668:G:H1	1.54	1.05
59:DA:1468(J):G:H1	59:DA:1506(H):C:N4	1.54	1.05
21:CA:998(A):C:N4	21:CA:1042:G:H1	1.53	1.05
59:DA:1324:G:H1	59:DA:1330:C:N4	1.55	1.05
23:CV:8:A:H8	23:CV:9:G:N2	1.53	1.04
59:BA:2681:C:N4	59:BA:2725:A:N6	2.00	1.04
60:BB:23:G:H1	60:BB:60:C:N4	1.54	1.04
21:CA:443:C:N4	21:CA:491:G:H1	1.55	1.04
11:AL:56:ALA:HB3	11:AL:68:ALA:HB3	1.35	1.04
33:DN:71:ILE:HB	33:DN:97:ARG:HB2	1.37	1.04
21:CA:815:A:H2	21:CA:1527:C:O2	1.40	1.04

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:DB:22:U:O2	60:DB:61:G:O6	1.74	1.04
21:AA:1126:U:C4	21:AA:1148:U:O4	2.09	1.04
59:BA:1311:G:N2	59:BA:1603:A:H62	1.56	1.04
59:BA:2475:C:N4	59:BA:2529:G:H22	1.55	1.04
21:CA:1047:G:H1	21:CA:1210:C:N4	1.54	1.04
21:CA:680:C:N4	21:CA:710:G:H1	1.56	1.04
60:DB:5:C:N4	60:DB:115:G:H1	1.54	1.04
22:CW:12:U:H3	22:CW:23:A:N6	1.57	1.03
60:DB:34:U:H3	60:DB:48:A:N6	1.55	1.03
59:BA:585:G:N2	59:BA:1254:A:H62	1.55	1.03
59:DA:32:C:N4	59:DA:473:G:H1	1.56	1.03
21:AA:782:A:H62	21:AA:800:G:N2	1.55	1.03
24:CX:50:G:O6	24:CX:64:U:O4	1.77	1.03
59:BA:150:C:N3	59:BA:176:G:N2	2.07	1.03
59:DA:2842:G:H1	59:DA:2875:C:N4	1.57	1.03
59:BA:692:C:H42	59:BA:770:G:H1	1.03	1.03
24:AX:52:G:N1	24:AX:62:C:O2	1.90	1.02
21:CA:600:C:N3	21:CA:638:G:N2	2.06	1.02
59:DA:134:C:N4	59:DA:145:G:H1	1.56	1.02
25:BC:47:LYS:HB3	25:BC:212:SER:HB2	1.39	1.02
59:DA:1415:U:H3	59:DA:1587:A:N6	1.57	1.02
59:BA:585:G:H21	59:BA:1254:A:N6	1.56	1.02
25:BC:43:GLU:HB2	25:BC:216:THR:O	1.59	1.02
21:CA:139:G:H1	21:CA:224:C:N4	1.57	1.02
59:BA:2119:A:N6	59:BA:2168:G:H21	1.56	1.02
21:CA:668:G:H1	21:CA:738:C:N4	1.57	1.01
59:BA:2119:A:H61	59:BA:2168:G:N2	1.56	1.01
59:DA:1430:C:N4	59:DA:1563:G:H1	1.58	1.01
59:DA:2681:C:N4	59:DA:2725:A:N6	1.93	1.01
59:BA:2749:A:N6	59:BA:2753:A:H61	1.56	1.01
22:AW:4:U:H3	22:AW:69:A:H61	1.05	1.01
21:CA:662:G:H1	21:CA:743:U:H3	1.02	1.01
22:AW:15:G:N2	22:AW:48:C:O2	1.93	1.00
47:D1:14:VAL:HA	47:D1:41:ARG:HB2	1.39	1.00
21:CA:1538:C:O2	23:CV:7:G:N2	1.93	1.00
21:CA:253:U:H3	21:CA:273:A:H2	1.05	1.00
59:DA:708:C:H42	59:DA:723:G:H1	1.02	1.00
21:CA:998:G:N2	21:CA:1043:C:N3	2.07	1.00
59:DA:2066:C:H42	59:DA:2444:G:H1	1.01	1.00
24:AX:75:C:N4	59:BA:2553:G:N1	2.08	1.00
21:CA:612:C:H42	21:CA:628:G:H1	1.08	1.00

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CA:1072:G:C2	21:CA:1103:C:N3	2.29	1.00
59:DA:2359:C:H42	59:DA:2428:G:H1	1.06	1.00
23:CV:19:G:H1	24:CX:36:C:N4	1.59	1.00
24:AX:53:G:H1	24:AX:61:C:N4	1.58	1.00
59:DA:2119:A:N6	59:DA:2168:G:H21	1.60	1.00
59:DA:2049:G:H1	59:DA:2619:C:N4	1.59	1.00
59:DA:36:G:N2	59:DA:444:C:N3	2.10	1.00
60:BB:80:U:H3	60:BB:96:G:H1	1.03	0.99
33:DN:113:GLY:HA2	33:DN:117:PHE:HB2	1.41	0.99
21:CA:408:A:C2	21:CA:434:U:N3	2.05	0.99
59:BA:1945:G:O6	59:BA:1961:C:N3	1.95	0.99
59:DA:585:G:N2	59:DA:1254:A:N6	2.07	0.99
59:DA:376:C:H42	59:DA:398:G:H1	1.09	0.99
59:DA:950:G:H1	59:DA:967:C:N4	1.59	0.99
21:AA:782:A:N6	21:AA:800:G:H21	1.61	0.99
21:CA:186(E):C:N4	21:CA:186(L):G:H1	1.59	0.99
59:DA:2749:A:H62	59:DA:2753:A:N6	1.59	0.99
21:CA:147:G:H1	21:CA:175:C:N4	1.58	0.99
59:DA:2255:G:H1	59:DA:2275:C:H42	1.09	0.99
59:DA:1356:G:H1	59:DA:1375:C:H42	1.04	0.99
33:DN:78:TYR:CE2	33:DN:115:ARG:CZ	2.45	0.99
59:DA:589:C:H42	59:DA:668:G:H1	1.00	0.99
59:DA:1416:G:N2	59:DA:1582:C:N3	2.10	0.98
16:CQ:21:VAL:HG11	16:CQ:59:ILE:HD11	1.42	0.98
59:DA:2681:C:C5	59:DA:2725:A:N6	2.31	0.98
59:DA:2532:G:N2	59:DA:2663:G:N2	2.11	0.98
21:CA:925:G:H1	21:CA:1391:U:H3	1.10	0.98
21:CA:1224:G:N2	21:CA:1362(A):C:N3	2.12	0.98
36:BQ:35:VAL:HA	36:BQ:102:VAL:HA	1.45	0.98
59:DA:47:C:N4	59:DA:178:G:H1	1.62	0.98
59:DA:1710:C:H42	59:DA:1748:G:H1	1.10	0.98
21:AA:429:U:H3	21:AA:431:A:N6	1.60	0.98
22:AW:71:C:O2	22:AW:72:C:N4	1.96	0.98
59:DA:1709:U:O2	59:DA:2859:G:N2	1.97	0.98
59:BA:2681:C:H5	59:BA:2725:A:H61	1.04	0.97
59:DA:2631:G:H1	59:DA:2787:C:H42	1.06	0.97
21:CA:943:U:O4	21:CA:1340:A:N1	1.97	0.97
59:DA:1170:G:H1	59:DA:1179:C:H42	0.99	0.97
59:DA:1674:G:H21	59:DA:1677:A:N6	1.63	0.97
33:DN:114:ARG:NE	59:DA:527:C:C6	2.31	0.97
21:AA:1157:A:C6	21:AA:1178:G:N2	2.31	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:2326:C:H42	59:DA:2389:G:H1	1.01	0.97
47:B1:18:ILE:HA	47:B1:20:ARG:H	1.28	0.97
21:CA:27:G:H1	21:CA:556:C:N4	1.62	0.97
59:BA:271(S):C:H42	59:BA:357(C):G:H1	1.09	0.97
60:DB:23:G:H1	60:DB:60:C:H42	1.10	0.97
59:DA:2133:G:H21	59:DA:2158:A:H62	0.98	0.97
59:DA:61:G:H1	59:DA:93:C:N4	1.62	0.97
59:DA:539:G:H1	59:DA:554:U:H3	1.05	0.97
59:DA:1168:G:H1	59:DA:1181:C:H42	1.11	0.97
59:DA:380:U:H3	59:DA:394:A:H61	1.00	0.97
33:BN:97:ARG:HH11	33:BN:108:PRO:HB2	1.27	0.97
59:DA:947:G:H1	59:DA:970:C:H42	1.02	0.97
59:DA:1348:G:N2	59:DA:1598:C:N3	2.12	0.97
59:DA:2525:G:H1	59:DA:2538:C:H42	1.04	0.97
21:CA:680:C:H42	21:CA:710:G:H1	1.01	0.97
21:CA:1305:G:N2	21:CA:1332:A:C8	2.31	0.97
59:BA:586:A:H62	59:BA:1251:C:H42	1.06	0.97
21:AA:1003:G:N2	21:AA:1037:C:N3	2.13	0.97
59:DA:291:C:N4	59:DA:349:G:H1	1.63	0.97
33:DN:84:LYS:HG2	33:DN:86:PRO:HD3	1.45	0.97
21:AA:1239:A:N6	21:AA:1299:A:H62	1.55	0.97
59:BA:996:A:C2	59:BA:1159:U:N3	2.29	0.97
59:BA:1414:G:N2	59:BA:1588:C:N3	2.12	0.96
59:DA:2819:G:H1	59:DA:2827:C:H42	1.12	0.96
21:CA:998:G:H1	21:CA:1043:C:N4	1.63	0.96
24:AX:31:C:H42	24:AX:39:G:H1	1.01	0.96
59:BA:539:G:H1	59:BA:554:U:H3	1.13	0.96
21:CA:371:G:H1	21:CA:390:C:H42	1.13	0.96
59:DA:2749:A:N6	59:DA:2753:A:H61	1.61	0.96
59:DA:131:G:H1	59:DA:148:C:H42	1.02	0.96
59:DA:1797:C:H42	59:DA:1822:G:H1	1.01	0.96
59:BA:639:U:H3	59:BA:649:G:H1	1.12	0.96
3:CD:115:ARG:HB3	21:CA:407:G:H5''	1.44	0.96
33:BN:46:VAL:HG13	33:BN:112:LEU:HD23	1.48	0.96
22:CW:7:G:H1	22:CW:66:C:H42	1.04	0.96
59:DA:2814:C:H42	59:DA:2886:G:H1	1.03	0.96
21:CA:1006:C:N3	21:CA:1023:G:N2	2.13	0.96
59:BA:2726:U:HO2'	59:BA:2727:G:H8	1.09	0.96
59:DA:1831:G:H1	59:DA:1974:C:H42	1.10	0.96
59:BA:1970:A:H4'	63:BA:2904:NMY:C23	1.95	0.96
59:BA:1354:A:H62	59:BA:1377:G:H21	1.09	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:225:A:H61	59:DA:230:U:H3	1.09	0.96
16:CQ:45:HIS:HB3	16:CQ:72:ARG:HA	1.48	0.96
22:CW:31:A:H2	22:CW:39:U:H3	1.01	0.96
59:BA:1857:G:H21	59:BA:1885:A:H62	1.10	0.96
33:DN:74:ARG:HD3	59:DA:1138:G:H5''	1.46	0.96
21:AA:520:A:H61	21:AA:533:A:N6	1.64	0.96
59:DA:2549:G:H1	59:DA:2559:C:H42	1.12	0.96
21:CA:146:G:H1	21:CA:176:C:N4	1.64	0.95
59:DA:55:G:H1	59:DA:115:C:H42	1.11	0.95
59:DA:2475:C:H42	59:DA:2529:G:H22	1.11	0.95
59:DA:1207:C:H42	59:DA:1239:G:H1	1.11	0.95
21:CA:672:U:H3	21:CA:734:G:H1	1.13	0.95
24:AX:29:U:H3	24:AX:41:A:H61	1.13	0.95
59:BA:2681:C:C4	59:BA:2725:A:N6	2.31	0.95
59:DA:1052:C:H42	59:DA:1107:G:H1	1.04	0.95
21:CA:1224:G:H1	21:CA:1362(A):C:H42	0.98	0.95
60:BB:3:C:C2	60:BB:117:G:N2	2.35	0.95
22:CW:3:C:H42	22:CW:70:G:H1	0.97	0.95
59:DA:850:C:N3	59:DA:928:G:N2	2.14	0.95
59:DA:134:C:N3	59:DA:145:G:N2	2.14	0.95
21:CA:668:G:N2	21:CA:738:C:N3	2.12	0.95
21:CA:1401:G:H1	21:CA:1501:C:H42	1.00	0.95
59:DA:36:G:H1	59:DA:444:C:N4	1.64	0.95
21:AA:372:C:N4	21:AA:389:A:H62	1.63	0.95
21:CA:897:C:N4	21:CA:902:G:H1	1.64	0.95
21:AA:520:A:N6	21:AA:533:A:N6	2.14	0.95
24:CX:49:G:H1	24:CX:65:C:H42	1.11	0.95
59:DA:1347:G:H1	59:DA:1599:C:H42	1.00	0.95
59:DA:595:C:H42	59:DA:662:G:H1	1.06	0.95
59:DA:1217:C:H42	59:DA:1232:G:H1	1.00	0.95
33:DN:35:ARG:HG2	33:DN:38:HIS:HB2	1.46	0.95
59:BA:918:A:O2'	60:BB:96:G:N2	2.00	0.95
59:DA:1040:C:H42	59:DA:1115:G:H1	1.05	0.95
21:CA:815:A:N6	21:CA:1508:G:H21	1.63	0.95
59:DA:1483:G:H1	59:DA:1506:C:N4	1.63	0.95
21:CA:658:G:H1	21:CA:747:C:H42	1.11	0.95
59:DA:583:G:N2	59:DA:1257:C:N3	2.15	0.95
59:BA:540:C:N4	59:BA:553:G:H1	1.64	0.95
59:DA:692:C:H42	59:DA:770:G:H1	0.99	0.95
59:DA:61:G:H1	59:DA:93:C:H42	0.95	0.94
45:DZ:76:LEU:HD22	45:DZ:83:PRO:HA	1.47	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:584:C:N4	59:DA:1256:G:H1	1.64	0.94
21:CA:773:G:H1	21:CA:806:C:H42	1.01	0.94
59:DA:955:C:N3	59:DA:962:G:O6	2.00	0.94
59:DA:1939:U:H3	59:DA:1967:C:HO2'	1.10	0.94
59:DA:226:G:H21	59:DA:228:A:N6	1.64	0.94
21:CA:1303:C:H42	21:CA:1334:G:H1	1.04	0.94
59:BA:2587:A:H62	59:BA:2608:G:N2	1.66	0.94
59:DA:671:C:H42	59:DA:809:G:H1	0.95	0.94
21:CA:1072:G:N2	21:CA:1103:C:C2	2.35	0.94
59:DA:1674:G:N2	59:DA:1677:A:H61	1.65	0.94
21:CA:258:G:H1	21:CA:268:C:H42	0.97	0.94
20:AY:22:ASP:OD1	61:AY:701:GDP:H5'	1.68	0.94
59:DA:1793:C:H42	59:DA:1826:G:H1	1.15	0.94
59:DA:1691:C:H42	59:DA:1696:G:H1	0.96	0.94
59:DA:846:C:H42	59:DA:931:G:H1	0.97	0.94
21:CA:505:G:H1	21:CA:526:C:H42	1.01	0.94
21:CA:500:G:O6	21:CA:545:C:N3	1.99	0.94
59:BA:1712(F):U:H3	59:BA:1712(L):G:H1	1.15	0.94
59:BA:572:A:H61	59:BA:2029:G:N2	1.66	0.94
59:BA:1970:A:H4'	63:BA:2904:NMY:N19	1.81	0.94
59:DA:2134:A:C8	59:DA:2157:G:N2	2.36	0.94
24:CX:1:G:N1	24:CX:72:C:N4	2.14	0.94
59:DA:2133:G:N2	59:DA:2158:A:H62	1.64	0.94
27:BE:22:PRO:HB2	27:BE:186:GLY:HA3	1.48	0.94
21:CA:1413:A:H61	21:CA:1487:G:H1	0.96	0.94
31:DJ:54:UNK:HA	31:DJ:79:UNK:HA	1.50	0.93
59:DA:226:G:H21	59:DA:228:A:H62	0.94	0.93
11:AL:58:VAL:HG12	11:AL:60:LEU:H	1.31	0.93
59:BA:572:A:N6	59:BA:2029:G:H21	1.65	0.93
60:DB:30:C:H42	60:DB:54:G:H1	1.16	0.93
59:DA:2119:A:H61	59:DA:2168:G:N2	1.65	0.93
59:DA:671:C:N4	59:DA:809:G:H1	1.64	0.93
60:DB:82:G:H1	60:DB:94:C:H42	1.01	0.93
59:DA:1908:C:H42	59:DA:1922:G:H1	0.97	0.93
21:AA:618:C:H5'	21:AA:619:U:H5''	1.50	0.93
21:CA:147:G:N2	21:CA:175:C:N3	2.16	0.93
59:BA:32:C:H42	59:BA:473:G:H1	1.08	0.93
59:DA:29:U:H3	59:DA:511:U:H3	1.04	0.93
24:AX:53:G:H1	24:AX:61:C:H42	0.96	0.93
59:DA:1208:C:H42	59:DA:1238:G:H1	1.13	0.93
21:CA:1413:A:N6	21:CA:1487:G:H1	1.66	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CA:1348:U:N3	21:CA:1374:A:N1	2.16	0.93
21:CA:184:G:O6	21:CA:193:C:N3	2.01	0.93
41:BV:76:LYS:HB2	41:BV:81:TYR:HB3	1.46	0.93
24:AX:27:C:H42	24:AX:43:G:H1	1.06	0.93
59:DA:8:A:N1	59:DA:2895:U:O4	2.01	0.93
21:CA:139:G:N2	21:CA:224:C:N3	2.16	0.93
59:DA:2134:A:H8	59:DA:2157:G:H21	1.15	0.93
6:CG:28:ASN:HB3	21:CA:1374:A:H4'	1.51	0.93
59:DA:701:G:H1	59:DA:731:C:H42	1.03	0.93
21:CA:367:U:H3	21:CA:393:A:H61	1.07	0.93
43:BX:55:ASN:HB2	43:BX:80:ILE:HG12	1.49	0.93
59:BA:1311:G:H21	59:BA:1603:A:N6	1.65	0.93
21:AA:372:C:H42	21:AA:389:A:N6	1.65	0.93
59:DA:2202:C:H42	59:DA:2221:G:H1	0.95	0.93
21:CA:68(H):G:H1	21:CA:68(R):C:H42	1.09	0.93
21:CA:442:C:H42	21:CA:492:G:H1	0.96	0.93
59:DA:854:G:H1	59:DA:923:C:N4	1.67	0.93
59:BA:221:A:H62	59:BA:427:U:H3	1.15	0.93
21:CA:186(E):C:N3	21:CA:186(L):G:N2	2.16	0.92
21:CA:296:U:H3	21:CA:301:G:H1	1.16	0.92
59:DA:864:G:H21	59:DA:866:A:H61	1.03	0.92
21:AA:1126:U:O4	21:AA:1148:U:O4	1.87	0.92
59:DA:997:G:H1	59:DA:1158:C:H42	0.94	0.92
59:DA:236:C:H42	59:DA:261:G:H1	1.17	0.92
22:AW:9:A:C8	22:AW:12:U:O4	2.22	0.92
59:DA:1483:G:N2	59:DA:1506:C:N3	2.15	0.92
24:CX:10:G:H1	24:CX:25:C:N4	1.67	0.92
59:DA:582:G:H1	59:DA:1258:C:H42	1.09	0.92
59:DA:641:C:N3	59:DA:647:G:N2	2.17	0.92
59:DA:861:A:H62	59:DA:916:G:H21	0.97	0.92
59:DA:188:G:H1	59:DA:208:C:H42	0.95	0.92
59:DA:2061:G:H1	59:DA:2451:A:H61	0.95	0.92
59:DA:1653:G:H5'	59:DA:2822:G:H1	1.34	0.92
11:AL:45:PRO:HA	11:AL:92:ASP:HB3	1.49	0.92
59:DA:1166:C:H42	59:DA:1183:G:H1	1.08	0.92
59:DA:269:U:H3	59:DA:370:G:H1	1.18	0.92
2:CC:22:TRP:HA	9:CJ:93:GLY:HA2	1.50	0.92
59:DA:2466:C:H42	59:DA:2484:G:H1	1.16	0.92
21:CA:774:G:H1	21:CA:805:C:N4	1.66	0.92
6:CG:78:ARG:HB3	6:CG:85:TYR:HB2	1.52	0.92
21:CA:152:A:H62	21:CA:169:C:H42	0.98	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CA:1423:G:H1	21:CA:1477:C:N4	1.66	0.92
24:CX:75:C:H3'	24:CX:76:A:H5''	1.52	0.92
60:BB:30:C:H42	60:BB:54:G:H1	1.16	0.92
59:DA:949:C:N3	59:DA:968:G:N2	2.17	0.92
21:CA:240:C:H42	21:CA:286:G:H1	1.00	0.92
59:DA:1782:C:H42	59:DA:2586:C:H42	1.18	0.92
22:AW:36:U:H3	23:AV:16:A:N6	1.67	0.92
21:CA:1072:G:N1	21:CA:1103:C:N4	2.16	0.91
21:CA:1006:C:H42	21:CA:1023:G:H1	1.01	0.91
63:BA:2902:NMY:C16	63:BA:2902:NMY:C19	2.36	0.91
59:BA:150:C:H42	59:BA:176:G:H1	1.12	0.91
59:DA:854:G:H1	59:DA:923:C:H42	0.94	0.91
59:DA:2463:C:H42	59:DA:2487:G:H1	0.95	0.91
35:BP:53:GLY:HA2	59:BA:832:G:H21	1.35	0.91
60:DB:83:G:H1	60:DB:93:C:H42	0.94	0.91
59:DA:1752:C:H42	59:DA:1756:G:H1	1.18	0.91
59:DA:271(D):G:H1	59:DA:357(O):C:H42	1.17	0.91
59:BA:2322:A:H61	59:BA:2335:A:H61	0.94	0.91
21:CA:156:G:H1	21:CA:165:C:H42	1.01	0.91
35:DP:60:MET:HB2	59:DA:2392:A:H1'	1.53	0.91
21:CA:782:A:H62	21:CA:800:G:H21	0.92	0.91
21:AA:1003:G:N2	21:AA:1037:C:C2	2.38	0.91
59:DA:864:G:H21	59:DA:866:A:N6	1.68	0.91
26:BD:24:ILE:HG13	26:BD:83:GLU:HA	1.50	0.91
21:AA:1304:G:H21	21:AA:1333:A:H62	1.18	0.91
59:DA:592:G:H1	59:DA:665:C:H42	1.08	0.91
59:BA:8:A:N1	59:BA:2895:U:O4	2.04	0.91
59:DA:1416:G:H1	59:DA:1582:C:H42	1.03	0.91
59:BA:572:A:H61	59:BA:2029:G:H21	0.96	0.91
59:DA:2121:G:H1	59:DA:2177:C:N4	1.67	0.91
24:CX:75:C:N3	59:DA:2553:G:N2	2.18	0.91
21:CA:782:A:H62	21:CA:800:G:N2	1.68	0.91
59:DA:691:C:H42	59:DA:771:G:H1	0.95	0.91
59:DA:691:C:N4	59:DA:771:G:H1	1.69	0.91
15:AP:19:ILE:H	15:AP:38:TYR:HA	1.35	0.91
59:BA:858:U:H3	59:BA:919:G:H1	1.08	0.91
21:CA:258:G:H1	21:CA:268:C:N4	1.68	0.91
20:CY:176:GLY:HA3	20:CY:187:THR:HA	1.53	0.91
29:DG:113:ARG:O	29:DG:114:ILE:O	1.89	0.91
59:DA:997:G:H1	59:DA:1158:C:N4	1.68	0.91
59:DA:270(G):C:H42	59:DA:270(S):G:H1	1.10	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:1110:G:HO2'	59:DA:1111:A:H8	0.96	0.91
23:CV:18:G:O6	22:CW:34:C:N3	2.03	0.91
59:DA:1945:G:O6	59:DA:1961:C:N3	2.04	0.91
59:DA:2106:G:H1	59:DA:2183:C:H42	1.17	0.91
59:DA:572:A:H61	59:DA:2029:G:H21	1.16	0.91
59:DA:1630(A):C:O2	59:DA:1635:G:N1	2.03	0.91
59:DA:2475:C:H42	59:DA:2529:G:N2	1.68	0.91
59:DA:2475:C:N4	59:DA:2529:G:H22	1.69	0.91
59:BA:1312:U:O4	59:BA:1340:U:O4	1.89	0.91
23:CV:8:A:H8	23:CV:9:G:C2	1.88	0.90
33:BN:74:ARG:N	33:BN:84:LYS:HB3	1.86	0.90
20:AY:611:THR:HA	20:AY:642:VAL:HG22	1.50	0.90
42:DW:14:PRO:HD2	42:DW:99:ARG:HG3	1.54	0.90
59:DA:2681:C:H5	59:DA:2725:A:H61	1.18	0.90
60:DB:83:G:H1	60:DB:93:C:N4	1.68	0.90
59:DA:150:C:H42	59:DA:176:G:H1	1.16	0.90
59:DA:1281:G:H1	59:DA:1289:C:H42	1.06	0.90
33:BN:101:HIS:O	33:BN:106:MET:N	2.04	0.90
33:BN:74:ARG:HB2	59:BA:1138:G:H4'	1.52	0.90
21:CA:442:C:N3	21:CA:492:G:N2	2.18	0.90
60:DB:32:C:O2	60:DB:50:G:N1	2.03	0.90
59:DA:1691:C:N4	59:DA:1696:G:H1	1.70	0.90
21:CA:1514:C:H42	21:CA:1521:G:H1	1.10	0.90
59:DA:2074:U:H3	59:DA:2435:A:H61	1.19	0.90
21:CA:1002:G:N2	21:CA:1038:C:N3	2.19	0.90
59:DA:1198:U:H3	59:DA:1247:A:H2	1.15	0.90
33:BN:26:LEU:HD11	33:BN:99:LEU:HD21	1.52	0.90
33:BN:74:ARG:H	33:BN:84:LYS:CB	1.85	0.90
59:DA:946:G:H1	59:DA:971:C:H42	1.20	0.90
21:AA:1124:G:H1	21:AA:1149:C:H42	1.19	0.90
59:BA:536:A:H61	59:BA:557:U:H3	1.19	0.90
24:AX:3:G:O6	24:AX:70:C:N3	2.05	0.90
59:DA:1708:C:N3	59:DA:1750:G:N2	2.20	0.90
59:DA:872:A:H61	59:DA:905:U:H3	1.17	0.90
21:CA:774:G:N2	21:CA:805:C:N3	2.20	0.90
59:DA:869:G:N2	59:DA:908:C:N3	2.20	0.90
59:DA:864:G:N2	59:DA:866:A:H61	1.68	0.90
60:DB:87:G:N2	60:DB:89(B):A:C8	2.39	0.90
25:BC:64:SER:HA	25:BC:160:GLY:HA2	1.53	0.90
33:DN:111:PRO:O	33:DN:114:ARG:N	2.05	0.90
59:DA:1953:A:H2	59:DA:2549:G:H21	1.20	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CA:257:G:H1	21:CA:269:C:N4	1.68	0.90
59:DA:1021:A:H2'	59:DA:1022:G:H4'	1.50	0.90
59:DA:1052:C:N4	59:DA:1107:G:H1	1.68	0.89
22:AW:9:A:N6	22:AW:23:A:N7	2.20	0.89
59:DA:188:G:H1	59:DA:208:C:N4	1.71	0.89
22:AW:36:U:H3	23:AV:16:A:H61	0.90	0.89
59:BA:2322:A:H61	59:BA:2335:A:N6	1.69	0.89
21:CA:47:C:H42	21:CA:361:G:H1	1.14	0.89
59:DA:2587:A:H62	59:DA:2608:G:H21	1.20	0.89
59:DA:2397:G:O6	59:DA:2419:U:O2	1.89	0.89
59:BA:271(F):G:H1	59:BA:357(M):C:H42	0.92	0.89
59:DA:2121:G:H1	59:DA:2177:C:H42	0.93	0.89
59:DA:884:C:H42	59:DA:892:G:H1	1.14	0.89
59:DA:817:C:H42	59:DA:1190:G:H1	1.19	0.89
59:DA:193:U:H3	59:DA:202:U:H3	1.20	0.89
59:DA:2137:C:H42	59:DA:2154:G:H1	0.97	0.89
21:CA:144:G:H1	21:CA:178:C:H42	1.20	0.89
33:DN:54:VAL:HG23	33:DN:103:VAL:HG23	1.53	0.89
63:BA:2903:NMY:C16	63:BA:2903:NMY:C19	2.36	0.89
59:DA:871:U:O2	59:DA:906:G:N2	2.06	0.89
25:BC:43:GLU:HB3	25:BC:216:THR:HG23	1.54	0.89
25:DC:47:LYS:HB3	25:DC:212:SER:HB2	1.53	0.89
59:DA:1276:A:H61	59:DA:1294:U:H3	1.13	0.89
21:AA:1535:C:H42	23:AV:8:A:H2	1.19	0.89
60:DB:3:C:H42	60:DB:117:G:H1	1.17	0.89
22:CW:15:G:N2	22:CW:48:C:O2	2.05	0.89
59:DA:2134:A:H62	59:DA:2157:G:H1'	1.36	0.89
59:DA:535:C:H42	59:DA:558:G:H1	0.96	0.89
22:AW:9:A:N7	22:AW:12:U:O4	2.05	0.89
59:DA:815:C:H42	59:DA:1192:G:H1	1.16	0.89
10:AK:118:GLY:HA2	21:AA:716:A:H1'	1.53	0.89
21:CA:1423:G:H1	21:CA:1477:C:H42	0.93	0.89
21:CA:774:G:H1	21:CA:805:C:H42	0.90	0.89
59:DA:2681:C:C4	59:DA:2725:A:N6	2.34	0.89
24:CX:27:C:N3	24:CX:43:G:N2	2.20	0.89
43:DX:53:LYS:HB3	43:DX:82:GLN:HB3	1.54	0.89
28:DF:49:ALA:HB1	28:DF:92:PRO:HB2	1.55	0.89
59:BA:2475:C:N4	59:BA:2529:G:N2	2.18	0.89
21:CA:1306:A:N6	21:CA:1331:G:O2'	2.06	0.89
21:CA:897:C:H42	21:CA:902:G:H1	0.89	0.89
59:DA:948:G:H1	59:DA:969:U:H3	0.93	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:1586:A:H3'	59:BA:1587:A:H8	1.38	0.89
21:CA:897:C:N3	21:CA:902:G:N2	2.20	0.89
59:DA:1345:C:H42	59:DA:1601:G:H1	0.95	0.89
34:DO:68:GLU:H	34:DO:78:ARG:HD3	1.38	0.89
27:BE:65:GLY:HA2	27:BE:70:ALA:HA	1.54	0.89
21:AA:520:A:H61	21:AA:533:A:H61	0.93	0.88
21:CA:257:G:H1	21:CA:269:C:H42	0.93	0.88
59:DA:2129:C:N3	59:DA:2159:G:O6	2.06	0.88
59:BA:51:G:H21	59:BA:118:A:H62	1.20	0.88
10:CK:113:PRO:HB3	21:CA:676:A:H4'	1.52	0.88
21:CA:152:A:N6	21:CA:169:C:H42	1.70	0.88
59:DA:639:U:H3	59:DA:649:G:H1	0.89	0.88
21:CA:618:C:H42	21:CA:622:A:H62	1.18	0.88
59:BA:1394:U:H4'	59:BA:1603:A:H4'	1.56	0.88
20:CY:135:PHE:HA	20:CY:260:LEU:HA	1.54	0.88
59:DA:535:C:N4	59:DA:558:G:H1	1.70	0.88
59:BA:2475:C:H42	59:BA:2529:G:H22	0.95	0.88
21:CA:146:G:H1	21:CA:176:C:H42	0.92	0.88
59:DA:947:G:H1	59:DA:970:C:N4	1.71	0.88
11:AL:34:ARG:HB2	11:AL:61:THR:HG23	1.54	0.88
59:DA:1483:G:H1	59:DA:1506:C:H42	0.89	0.88
20:CY:329:ARG:HD3	20:CY:374:LEU:HG	1.54	0.88
24:CX:31:C:H42	24:CX:39:G:H1	1.16	0.88
24:CX:10:G:H1	24:CX:25:C:H42	0.94	0.88
45:BZ:29:TYR:HB3	45:BZ:34:ASN:HA	1.56	0.88
60:DB:86:G:H1	60:DB:90:C:H42	0.88	0.88
22:CW:9:A:C8	22:CW:12:U:O4	2.26	0.88
59:DA:2202:C:N4	59:DA:2221:G:H1	1.71	0.88
59:DA:1166:C:N3	59:DA:1183:G:N2	2.20	0.88
59:BA:2322:A:N6	59:BA:2335:A:H61	1.71	0.88
59:DA:244:A:H62	59:DA:254:G:H21	1.17	0.88
36:DQ:73:PRO:HB3	36:DQ:90:VAL:HG12	1.55	0.88
59:DA:1385:G:N1	59:DA:1402:C:O2	2.05	0.88
59:BA:2681:C:H41	59:BA:2725:A:H62	0.88	0.88
21:CA:954:G:H22	21:CA:1227:A:H61	1.18	0.88
59:DA:950:G:H1	59:DA:967:C:H42	0.89	0.88
24:AX:29:U:H3	24:AX:41:A:N6	1.70	0.88
59:DA:1039:G:H1	59:DA:1116:C:H42	1.20	0.88
1:CB:171:ALA:HA	1:CB:174:VAL:HB	1.56	0.88
33:DN:100:GLU:O	33:DN:105:GLY:N	2.07	0.88
21:CA:146:G:N2	21:CA:176:C:N3	2.22	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:226:G:N2	59:DA:228:A:N6	2.21	0.88
21:CA:1066:C:H42	21:CA:1191:A:H62	1.18	0.88
24:AX:49:G:H1	24:AX:65:C:H42	1.21	0.88
21:CA:1157:A:C6	21:CA:1178:G:N2	2.37	0.88
59:DA:918:A:O2'	60:DB:96:G:N2	2.06	0.88
59:DA:406:G:H1	59:DA:421:U:H3	0.91	0.88
59:BA:2453:A:H4'	59:BA:2572:A:H1'	1.56	0.88
21:CA:27:G:H1	21:CA:556:C:H42	0.89	0.87
17:AR:74:ARG:HG2	17:AR:79:LEU:HD22	1.54	0.87
21:CA:683:G:H1	21:CA:707:C:H42	1.22	0.87
59:BA:918:A:H62	59:BA:2268:A:H62	1.18	0.87
59:BA:2756:U:H3	59:BA:2758:A:H62	1.19	0.87
21:AA:943:U:O4	21:AA:1340:A:N1	2.07	0.87
21:CA:590:C:N3	21:CA:649:G:N2	2.22	0.87
21:CA:442:C:N4	21:CA:492:G:H1	1.72	0.87
21:CA:1047:G:H1	21:CA:1210:C:H42	0.90	0.87
59:BA:2587:A:H62	59:BA:2608:G:H21	0.88	0.87
59:DA:854:G:N2	59:DA:923:C:N3	2.21	0.87
59:DA:2200:C:H42	59:DA:2223:G:H1	1.21	0.87
59:DA:699:A:H62	59:DA:733:G:H21	1.22	0.87
21:CA:1224:G:H1	21:CA:1362(A):C:N4	1.71	0.87
59:DA:1908:C:N4	59:DA:1922:G:H1	1.71	0.87
16:AQ:45:HIS:HB3	16:AQ:72:ARG:HA	1.57	0.87
33:BN:114:ARG:C	33:BN:116:LEU:H	1.77	0.87
59:DA:836:G:H1	59:DA:943:U:H3	1.21	0.87
59:DA:2066:C:N4	59:DA:2444:G:H1	1.73	0.87
59:DA:2137:C:N4	59:DA:2154:G:H1	1.73	0.87
59:DA:324:A:H62	59:DA:338:G:H21	1.19	0.87
59:DA:235:U:H3	59:DA:262:A:H61	1.15	0.87
21:CA:886:G:H1	21:CA:911:U:H3	1.22	0.87
21:CA:671:G:H1	21:CA:735:C:H42	1.23	0.87
33:DN:114:ARG:NE	59:DA:527:C:C2'	2.38	0.87
59:DA:36:G:H1	59:DA:444:C:H42	0.91	0.87
24:AX:6:A:N1	24:AX:67:U:O4	2.07	0.87
59:BA:1005:C:H42	59:BA:1138:G:H1	1.20	0.87
20:AY:465:ARG:HG2	62:AY:702:FUA:H3	1.56	0.87
59:BA:955:C:C4	59:BA:962:G:O6	2.27	0.87
22:CW:9:A:N7	22:CW:12:U:O4	2.08	0.87
59:DA:1172:G:O2'	59:DA:1177:A:N6	2.08	0.87
8:CI:2:GLU:N	8:CI:88:TYR:HH	1.73	0.87
33:DN:114:ARG:CZ	59:DA:527:C:C2'	2.53	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BN:54:VAL:HB	33:BN:100:GLU:HG2	1.56	0.86
21:CA:815:A:H61	21:CA:1508:G:H21	0.89	0.86
21:CA:956:U:O2	21:CA:960:U:O2	1.93	0.86
59:DA:2202:C:N3	59:DA:2221:G:N2	2.21	0.86
36:BQ:73:PRO:HB3	36:BQ:90:VAL:HG12	1.57	0.86
21:CA:835:U:H3	21:CA:851:G:H1	0.89	0.86
59:DA:2137:C:N3	59:DA:2154:G:N2	2.21	0.86
28:DF:74:ARG:HH22	59:DA:673:C:H2'	1.40	0.86
33:DN:50:ASP:O	33:DN:53:VAL:N	2.07	0.86
27:BE:20:ALA:HB2	34:BO:74:GLY:HA2	1.57	0.86
21:CA:590:C:H42	21:CA:649:G:H1	0.91	0.86
59:DA:47:C:H42	59:DA:178:G:H1	0.88	0.86
40:DU:25:TRP:HD1	40:DU:26:GLY:H	1.21	0.86
59:DA:291:C:N3	59:DA:349:G:N2	2.23	0.86
21:CA:658:G:N2	21:CA:747:C:N3	2.21	0.86
59:DA:133:C:H42	59:DA:146:G:H1	1.23	0.86
25:BC:78:ILE:HG13	25:BC:124:VAL:HG21	1.57	0.86
33:BN:20:GLY:HA2	33:BN:60:ILE:HG21	1.55	0.86
21:CA:815:A:H61	21:CA:1508:G:N2	1.73	0.86
59:DA:1674:G:H21	59:DA:1677:A:H61	0.88	0.86
59:DA:291:C:H42	59:DA:349:G:H1	0.89	0.86
21:CA:240:C:N3	21:CA:286:G:N2	2.23	0.86
59:DA:644:A:H61	59:DA:2349:G:H21	1.18	0.86
28:DF:156:LEU:H	28:DF:176:LEU:H	1.22	0.86
7:AH:95:VAL:HG22	7:AH:99:GLU:HB3	1.55	0.86
59:DA:879:G:N2	59:DA:898:C:N3	2.23	0.86
59:DA:1925:C:H42	59:DA:1929:G:H22	1.23	0.86
22:CW:3:C:N4	22:CW:70:G:H1	1.72	0.86
21:CA:984:C:H42	21:CA:1221:G:H1	1.19	0.86
59:DA:1170:G:H1	59:DA:1179:C:N4	1.74	0.86
59:DA:2547:U:H3	59:DA:2561:A:H61	1.23	0.86
59:BA:44:A:H61	59:BA:434:U:H3	1.24	0.86
27:BE:53:PRO:HA	27:BE:74:PRO:HA	1.57	0.86
59:DA:380:U:H3	59:DA:394:A:N6	1.73	0.86
59:BA:2587:A:N6	59:BA:2608:G:H21	1.72	0.86
21:CA:240:C:N4	21:CA:286:G:H1	1.74	0.86
59:DA:1446:C:H42	59:DA:1465:G:H1	1.21	0.86
59:DA:2650:U:N3	59:DA:2670:A:H2	1.72	0.86
63:BA:2904:NMY:C16	63:BA:2904:NMY:C19	2.36	0.86
59:DA:38:A:H61	59:DA:441:U:H3	1.19	0.86
59:DA:846:C:N4	59:DA:931:G:H1	1.74	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:2463:C:N4	59:DA:2487:G:H1	1.72	0.86
59:DA:1345:C:N4	59:DA:1601:G:H1	1.72	0.86
33:DN:78:TYR:OH	33:DN:115:ARG:NH2	2.09	0.86
59:DA:1347:G:H1	59:DA:1599:C:N4	1.74	0.86
59:DA:1416:G:H1	59:DA:1582:C:N4	1.73	0.86
21:CA:17:U:O2	21:CA:1079:G:N2	2.09	0.86
60:BB:23:G:H1	60:BB:60:C:H42	1.04	0.85
59:DA:708:C:N4	59:DA:723:G:H1	1.74	0.85
21:AA:950:U:H3	21:AA:1231:G:H1	1.22	0.85
6:CG:111:ARG:HH22	6:CG:126:ASP:HB2	1.40	0.85
33:DN:40:PRO:HD2	59:DA:1007:C:H1'	1.58	0.85
21:CA:147:G:H1	21:CA:175:C:H42	0.86	0.85
59:DA:1198:U:O4	59:DA:1247:A:N1	2.09	0.85
18:AS:80:TYR:HB2	21:AA:957:U:H5'	1.58	0.85
59:BA:877:U:H3	59:BA:899:A:H2	1.21	0.85
27:BE:172:VAL:HA	27:BE:184:VAL:HG12	1.57	0.85
27:DE:172:VAL:HA	27:DE:184:VAL:HG12	1.58	0.85
59:DA:2699:C:H42	59:DA:2708:G:H1	1.24	0.85
11:CL:39:VAL:HG12	11:CL:40:VAL:H	1.41	0.85
59:DA:1430:C:H42	59:DA:1563:G:H1	0.86	0.85
59:BA:1650:G:H1	59:BA:2007:C:H42	1.21	0.85
59:DA:1687:G:H21	59:DA:1701:A:H62	1.24	0.85
33:DN:54:VAL:HB	33:DN:100:GLU:HG2	1.58	0.85
59:DA:589:C:N4	59:DA:668:G:H1	1.74	0.85
59:BA:540:C:H42	59:BA:553:G:H1	0.86	0.85
21:CA:1401:G:H1	21:CA:1501:C:N4	1.73	0.85
24:CX:13:C:H42	24:CX:22:G:H1	1.19	0.85
27:BE:61:ARG:HB3	27:BE:62:PRO:HD2	1.59	0.85
21:AA:815:A:H61	21:AA:1508:G:H21	1.24	0.85
63:CA:1601:NMY:C16	63:CA:1601:NMY:C19	2.35	0.85
59:BA:271(F):G:N2	59:BA:357(M):C:N3	2.24	0.85
59:BA:1416:G:N2	59:BA:1582:C:N3	2.24	0.85
60:DB:81:G:H1	60:DB:95:U:H3	1.22	0.85
21:CA:378:G:H1	21:CA:385:C:H42	1.22	0.85
21:AA:1028(B):C:N3	21:AA:1028(G):G:O6	2.09	0.85
38:BS:95:HIS:NE2	60:BB:37:C:O2	2.09	0.85
59:BA:1970:A:H4'	63:BA:2904:NMY:H231	1.58	0.85
22:CW:70:G:H21	59:DA:1851:U:H4'	1.42	0.85
24:CX:49:G:H1	24:CX:65:C:N4	1.73	0.85
11:CL:58:VAL:HG12	11:CL:60:LEU:H	1.41	0.85
21:CA:1312:G:H1	21:CA:1325:C:H42	1.23	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:2326:C:N4	59:DA:2389:G:H1	1.74	0.85
59:DA:1217:C:N4	59:DA:1232:G:H1	1.74	0.85
22:AW:34:C:N3	23:AV:18:G:O6	2.09	0.85
33:DN:37:LYS:HE2	33:DN:38:HIS:HD2	1.42	0.85
59:DA:1797:C:N4	59:DA:1822:G:H1	1.73	0.85
33:DN:114:ARG:CZ	59:DA:527:C:C6	2.60	0.85
11:CL:45:PRO:HA	11:CL:92:ASP:HB3	1.59	0.85
20:AY:461:ILE:HG13	62:AY:702:FUA:H21	1.58	0.85
59:DA:539:G:N2	59:DA:554:U:O2	2.09	0.85
59:DA:2456:C:H42	59:DA:2495:G:H1	1.24	0.85
59:DA:271(L):C:H42	59:DA:357(F):G:H1	1.22	0.85
59:DA:584:C:N3	59:DA:1256:G:N2	2.23	0.85
21:CA:1072:G:H1	21:CA:1103:C:N4	1.75	0.85
59:BA:151:C:H42	59:BA:175:G:H1	1.22	0.85
60:DB:87:G:O2'	60:DB:89(B):A:N6	2.09	0.85
22:CW:30:C:H42	22:CW:40:G:H1	1.22	0.85
33:DN:56:ASN:HD22	33:DN:56:ASN:H	1.24	0.84
22:AW:2:G:H22	22:AW:72:C:H42	1.25	0.84
20:CY:185:ALA:HB2	20:CY:201:ILE:HG13	1.59	0.84
59:DA:227:A:H61	59:DA:410:G:H21	1.22	0.84
59:DA:47:C:N3	59:DA:178:G:N2	2.24	0.84
27:DE:13:ARG:HA	27:DE:21:VAL:O	1.77	0.84
60:DB:85:G:N1	60:DB:91:C:O2	2.09	0.84
59:BA:298:G:H21	59:BA:340:A:H62	1.22	0.84
24:CX:2:G:H1	24:CX:71:C:H42	0.88	0.84
21:CA:954:G:N2	21:CA:1227:A:H61	1.74	0.84
59:DA:32:C:H42	59:DA:473:G:H1	0.86	0.84
59:DA:2075:U:O4	59:DA:2077:A:N7	2.10	0.84
59:DA:869:G:H1	59:DA:908:C:H42	1.24	0.84
3:CD:122:ARG:HD3	3:CD:136:PRO:HD3	1.59	0.84
21:AA:658:G:H1	21:AA:747:C:H42	1.24	0.84
33:DN:72:TYR:HA	33:DN:73:THR:HG22	1.58	0.84
60:DB:14:U:H1'	60:DB:107:U:H1'	1.60	0.84
33:DN:114:ARG:HB2	59:DA:2779:U:OP2	1.77	0.84
59:BA:1414:G:N2	59:BA:1588:C:C2	2.45	0.84
24:AX:31:C:N4	24:AX:39:G:H1	1.75	0.84
18:AS:70:LYS:HG3	21:AA:1320:C:H5'	1.60	0.84
42:DW:58:ALA:HA	42:DW:62:HIS:HB2	1.60	0.84
54:D8:53:PRO:HA	54:D8:56:GLU:HB2	1.60	0.84
21:CA:408:A:N1	21:CA:434:U:O4	2.11	0.84
33:BN:100:GLU:O	33:BN:105:GLY:N	2.11	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:1394:U:H4'	59:DA:1603:A:H4'	1.59	0.84
59:DA:1415:U:O2	59:DA:1587:A:N1	2.10	0.84
59:DA:61:G:N2	59:DA:93:C:N3	2.24	0.84
59:BA:1414:G:H1	59:BA:1588:C:H42	1.20	0.84
59:DA:2650:U:H3	59:DA:2670:A:H2	0.88	0.84
1:AB:78:GLN:HG3	1:AB:94:ASN:HB2	1.59	0.84
59:DA:134:C:H42	59:DA:145:G:H1	0.84	0.84
21:CA:1006:C:N4	21:CA:1023:G:H1	1.76	0.84
24:CX:28:C:N3	24:CX:42:G:O6	2.11	0.84
59:DA:2685:G:H1	59:DA:2724:C:H42	1.24	0.83
59:DA:1831:G:H1	59:DA:1974:C:N4	1.75	0.83
21:CA:66:G:H1	21:CA:103:C:H42	1.22	0.83
59:DA:692:C:N4	59:DA:770:G:H1	1.74	0.83
59:BA:2450:A:H62	59:BA:2501:C:H42	1.22	0.83
55:B9:9:ARG:HH21	55:B9:16:VAL:HG12	1.42	0.83
21:CA:9:G:H1	21:CA:25:C:H42	1.26	0.83
21:CA:186(F):C:H42	21:CA:186(K):G:H1	1.24	0.83
59:DA:2352:A:H62	59:DA:2365:G:H21	1.25	0.83
59:DA:1314:C:H42	59:DA:1338:G:H1	1.25	0.83
33:DN:114:ARG:CZ	59:DA:527:C:C1'	2.56	0.83
20:AY:614:GLU:HA	20:AY:617:MET:HB3	1.58	0.83
38:DS:25:ARG:HH12	60:DB:9:G:H5'	1.43	0.83
54:B8:53:PRO:HA	54:B8:56:GLU:HB2	1.59	0.83
27:BE:13:ARG:HA	27:BE:21:VAL:O	1.77	0.83
20:CY:22:ASP:HB3	61:CY:701:GDP:H5''	1.60	0.83
59:DA:1855:G:H1	59:DA:1887:C:H42	1.21	0.83
59:DA:1051:G:N2	59:DA:1108:U:O2	2.10	0.83
60:DB:11:C:H42	60:DB:109:G:H1	1.21	0.83
60:DB:21:G:H1	60:DB:62:C:H42	1.24	0.83
21:CA:1419:G:H1	21:CA:1481:U:H3	1.22	0.83
21:CA:1535:C:N4	23:CV:9:G:H4'	1.92	0.83
59:BA:2682:U:O4	59:BA:2727:G:N2	2.11	0.83
21:CA:782:A:N6	21:CA:800:G:H21	1.75	0.83
59:DA:2818:G:H1	59:DA:2828:C:H42	1.24	0.83
59:DA:1011:G:O6	59:DA:1150:C:N3	2.11	0.83
25:DC:150:ILE:HA	25:DC:153:ILE:HB	1.59	0.83
59:BA:1820:U:H3'	59:BA:1821:A:H8	1.43	0.83
3:CD:103:ASN:HA	3:CD:106:TYR:HB3	1.61	0.83
59:DA:584:C:H42	59:DA:1256:G:H1	0.85	0.83
21:CA:104:G:H4'	21:CA:174:C:H4'	1.60	0.83
25:DC:214:TYR:HD2	25:DC:222:SER:HB2	1.42	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BD:244:ARG:NH2	59:BA:1902:C:O2	2.11	0.83
59:DA:1091:G:H1	59:DA:1100:C:H42	1.25	0.83
20:AY:413:ILE:HD11	20:AY:474:ALA:HB1	1.59	0.83
21:AA:429:U:O2	21:AA:431:A:N7	2.11	0.83
21:CA:156:G:H1	21:CA:165:C:N4	1.75	0.83
20:CY:682:GLN:HA	20:CY:685:GLU:HB2	1.58	0.83
12:CM:108:ARG:HG3	12:CM:108:ARG:HH11	1.44	0.83
59:BA:404:C:H4'	59:BA:405:U:H5'	1.60	0.83
59:DA:225:A:N6	59:DA:230:U:H3	1.76	0.83
21:CA:68(H):G:H1	21:CA:68(R):C:N4	1.76	0.83
59:DA:1044:G:H4'	59:DA:1047:G:H5''	1.61	0.83
59:BA:2061:G:H1	59:BA:2451:A:H61	1.22	0.83
35:DP:66:GLY:HA2	59:DA:2415:G:H4'	1.61	0.83
22:AW:4:U:H3	22:AW:69:A:N6	1.75	0.83
21:CA:505:G:H1	21:CA:526:C:N4	1.75	0.83
21:CA:933:G:H1	21:CA:1384:C:H42	1.26	0.83
31:DJ:110:UNK:HA	31:DJ:116:UNK:HA	1.60	0.83
59:DA:2064:C:H42	59:DA:2446:G:H1	1.26	0.83
59:DA:1414:G:H1	59:DA:1588:C:H42	1.27	0.83
20:CY:467:LYS:HA	20:CY:471:LYS:HA	1.60	0.83
10:AK:111:ASP:HA	17:AR:84:LYS:HG3	1.61	0.83
21:CA:593:G:H1	21:CA:646:U:H3	1.21	0.83
59:DA:1030:G:H1	59:DA:1124:C:H42	1.27	0.83
21:CA:375:U:H3	21:CA:389:A:H61	1.21	0.82
59:BA:540:C:N3	59:BA:553:G:N2	2.24	0.82
48:B2:14:ARG:HH22	59:BA:78:A:H5'	1.43	0.82
59:DA:2477:C:O2'	59:DA:2479:G:N7	2.12	0.82
33:DN:113:GLY:CA	33:DN:117:PHE:HB2	2.09	0.82
59:DA:962:G:H1'	59:DA:2496:C:H4'	1.60	0.82
24:CX:1:G:C6	24:CX:72:C:C4	2.64	0.82
21:CA:152:A:N6	21:CA:169:C:N4	2.25	0.82
59:BA:996:A:N1	59:BA:1159:U:O4	2.12	0.82
21:CA:1002:G:N2	21:CA:1038:C:C2	2.47	0.82
21:CA:1003:G:N2	21:CA:1037:C:C2	2.48	0.82
60:DB:38:C:H2'	60:DB:39:A:H8	1.42	0.82
59:BA:828:U:O4	59:BA:2246:G:N2	2.12	0.82
38:DS:13:ARG:O	38:DS:15:ARG:N	2.12	0.82
59:BA:1858:G:H1'	59:BA:1884:A:H61	1.43	0.82
28:DF:3:GLU:HB2	28:DF:24:LEU:H	1.43	0.82
21:CA:1494:G:N2	59:DA:1912:A:N3	2.27	0.82
36:BQ:12:GLN:HA	59:BA:910:A:H62	1.45	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:32:C:N3	59:DA:473:G:N2	2.26	0.82
59:DA:1356:G:H1	59:DA:1375:C:N4	1.76	0.82
21:CA:773:G:H1	21:CA:806:C:N4	1.76	0.82
27:DE:108:SER:HB3	27:DE:189:PRO:HB2	1.61	0.82
59:DA:75:G:H1	59:DA:111:A:H2	1.26	0.82
59:DA:659:C:H2'	59:DA:660:G:H8	1.45	0.82
21:CA:1535:C:H41	23:CV:9:G:H4'	1.43	0.82
59:DA:1040:C:N4	59:DA:1115:G:H1	1.78	0.82
29:BG:113:ARG:HE	29:BG:113:ARG:HA	1.43	0.82
19:AT:23:ARG:HH12	19:AT:24:LEU:HD23	1.44	0.82
59:DA:2283:C:H42	59:DA:2325:G:H1	1.25	0.82
2:CC:88:ARG:HH21	2:CC:100:ALA:HA	1.43	0.82
21:CA:998(A):C:N3	21:CA:1042:G:N2	2.27	0.82
59:BA:1312:U:O2	59:BA:1339:G:N1	2.12	0.82
59:BA:584:C:H42	59:BA:1256:G:H1	1.24	0.82
59:BA:1288:U:H3	59:BA:1326:U:H3	1.26	0.82
33:BN:116:LEU:C	33:BN:118:LYS:N	2.32	0.82
59:BA:1968:G:H5''	63:BA:2904:NMY:N2	1.95	0.82
59:DA:948:G:N2	59:DA:969:U:O2	2.10	0.82
21:AA:829:G:H2'	21:AA:830:G:C8	2.14	0.82
25:DC:20:VAL:HG13	25:DC:226:ASN:HB2	1.61	0.82
59:DA:2520:C:N3	59:DA:2545:G:N2	2.23	0.82
21:CA:1303:C:N4	21:CA:1334:G:H1	1.76	0.82
59:DA:2259:G:O6	59:DA:2281:C:N3	2.13	0.82
25:DC:138:LEU:HD22	25:DC:139:PRO:HD2	1.61	0.82
26:DD:88:ARG:HE	59:DA:1817:G:H5''	1.45	0.82
59:DA:840:C:H42	59:DA:938:G:H1	1.25	0.82
20:AY:633:GLY:HA3	20:AY:644:ARG:HB2	1.62	0.82
36:BQ:34:LEU:HB2	36:BQ:118:LEU:HD22	1.61	0.82
21:CA:1126:U:O4	21:CA:1148:U:O4	1.98	0.82
59:DA:131:G:H1	59:DA:148:C:N4	1.78	0.82
60:BB:56:G:H21	60:BB:59:A:H61	1.28	0.82
59:DA:1281:G:H1	59:DA:1289:C:N4	1.78	0.82
20:CY:20:HIS:HB2	20:CY:117:GLN:HB3	1.61	0.82
59:DA:1846:G:H1	59:DA:1894:C:H42	1.27	0.82
32:DK:23:VAL:HG13	32:DK:27:LEU:HB3	1.60	0.82
59:BA:586:A:H62	59:BA:1251:C:N4	1.77	0.82
21:AA:1003:G:H1	21:AA:1037:C:H42	1.28	0.82
59:DA:406:G:N2	59:DA:421:U:O2	2.12	0.82
36:BQ:70:PRO:HA	36:BQ:95:ALA:HB2	1.60	0.82
59:DA:1297:C:H42	59:DA:1643:G:H1	1.26	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:1207:C:N3	59:DA:1239:G:N2	2.27	0.81
21:AA:956:U:O2	21:AA:960:U:O2	1.96	0.81
59:DA:1712(B):G:H1	59:DA:1712(P):C:H42	1.22	0.81
59:DA:183:C:H42	59:DA:214:G:H1	1.27	0.81
35:BP:43:GLY:HA2	59:BA:670:A:H5'	1.62	0.81
33:DN:74:ARG:HA	33:DN:83:LYS:O	1.79	0.81
63:BA:2904:NMY:H16	63:BA:2904:NMY:H19	0.83	0.81
59:BA:692:C:N4	59:BA:770:G:H1	1.78	0.81
59:DA:466:A:H1'	59:DA:683:C:H4'	1.60	0.81
3:CD:13:ARG:NH2	3:CD:32:ALA:O	2.12	0.81
55:D9:27:CYS:HG	55:D9:32:HIS:HD1	1.26	0.81
59:DA:1768:U:H3	59:DA:1984:G:H1	1.25	0.81
59:BA:2681:C:H5	59:BA:2725:A:N6	1.67	0.81
63:AA:1601:NMY:C16	63:AA:1601:NMY:C19	2.35	0.81
59:DA:871:U:O2	59:DA:906:G:N1	2.13	0.81
22:CW:15:G:N2	22:CW:48:C:C2	2.47	0.81
60:DB:82:G:H1	60:DB:94:C:N4	1.76	0.81
59:BA:32:C:N4	59:BA:473:G:H1	1.77	0.81
60:BB:56:G:H21	60:BB:59:A:N6	1.78	0.81
22:CW:50:C:N3	22:CW:65:U:O4	2.13	0.81
59:DA:521:G:H2'	59:DA:522:G:H8	1.46	0.81
59:BA:1220:C:H42	59:BA:1229:G:H1	1.29	0.81
59:BA:113:G:H5'	59:BA:114:U:H5'	1.61	0.81
21:CA:1028(B):C:H42	21:CA:1028(G):G:H1	1.25	0.81
21:CA:1414:U:H2'	21:CA:1415:G:C8	2.14	0.81
59:DA:1064:C:N4	59:DA:1070:A:OP1	2.12	0.81
21:CA:1123:A:H2	21:CA:1150:U:H3	1.27	0.81
8:CI:23:ASN:H	8:CI:60:ASP:HB2	1.45	0.81
21:CA:998:G:H1	21:CA:1043:C:H42	0.86	0.81
21:AA:815:A:N6	21:AA:1508:G:H21	1.78	0.81
59:DA:2679:A:H61	59:DA:2728:U:H3	1.23	0.81
47:B1:18:ILE:CA	47:B1:20:ARG:H	1.93	0.81
59:DA:2525:G:H1	59:DA:2538:C:N4	1.77	0.81
59:DA:1028:A:N6	59:DA:1126:A:OP1	2.13	0.81
10:CK:62:GLN:HG2	10:CK:93:GLN:HB3	1.62	0.81
63:AA:1601:NMY:H16	63:AA:1601:NMY:H19	0.83	0.81
59:BA:1955:U:H3	59:BA:2552:U:HO2'	1.25	0.81
11:CL:85:ILE:HG13	11:CL:98:TYR:HB3	1.61	0.81
59:DA:595:C:N4	59:DA:662:G:H1	1.79	0.81
48:D2:21:LEU:HD22	48:D2:64:LEU:HB2	1.60	0.81
59:DA:2631:G:H1	59:DA:2787:C:N4	1.78	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:542:C:H42	59:DA:551:G:H1	1.28	0.81
42:DW:72:LYS:H	42:DW:107:LEU:HA	1.44	0.81
2:CC:50:ALA:HB1	2:CC:72:LYS:HG3	1.63	0.81
21:AA:1127:G:N1	21:AA:1145:C:O2	2.13	0.81
59:DA:1414:G:N2	59:DA:1588:C:N3	2.27	0.81
22:AW:2:G:N2	22:AW:72:C:H42	1.78	0.81
2:CC:161:GLU:HG3	21:CA:1055:A:H4'	1.61	0.81
24:AX:2:G:H1	24:AX:71:C:H42	1.29	0.81
59:DA:2061:G:H1	59:DA:2451:A:N6	1.76	0.81
21:CA:598:U:H3	21:CA:640:A:H2	1.28	0.81
21:CA:506:G:O6	21:CA:525:C:N3	2.13	0.81
30:BH:85:LYS:HE2	30:BH:141:VAL:HG22	1.63	0.81
33:BN:37:LYS:HB3	59:BA:1138:G:H21	1.46	0.80
63:BA:2903:NMY:H16	63:BA:2903:NMY:H19	0.83	0.80
59:DA:2650:U:O4	59:DA:2670:A:N1	2.13	0.80
59:BA:1207:C:H42	59:BA:1239:G:H1	1.27	0.80
43:BX:16:LYS:HE3	59:BA:1393:A:H62	1.43	0.80
9:CJ:51:ARG:NH1	21:CA:1061:G:OP1	2.13	0.80
21:CA:651:C:N4	21:CA:753:A:OP2	2.14	0.80
33:DN:117:PHE:C	33:DN:119:ARG:N	2.33	0.80
63:DA:2901:NMY:H19	63:DA:2901:NMY:H16	0.83	0.80
59:DA:2706:G:H4'	59:DA:2851:A:H5''	1.63	0.80
22:CW:15:G:C2	22:CW:48:C:O2	2.34	0.80
59:DA:2814:C:N4	59:DA:2886:G:H1	1.78	0.80
33:DN:117:PHE:C	33:DN:119:ARG:H	1.83	0.80
59:DA:2532:G:H21	59:DA:2663:G:N2	1.78	0.80
59:DA:1207:C:N4	59:DA:1239:G:H1	1.78	0.80
38:DS:26:LEU:HG	38:DS:39:ILE:HG13	1.61	0.80
26:DD:79:VAL:HG12	26:DD:80:ALA:H	1.45	0.80
32:DK:130:SER:OG	59:DA:1059:G:N2	2.13	0.80
12:AM:108:ARG:HH12	12:AM:111:LYS:HB3	1.46	0.80
51:B5:36:CYS:SG	51:B5:37:LYS:N	2.53	0.80
22:CW:7:G:H1	22:CW:66:C:N4	1.79	0.80
59:DA:1413:G:N2	59:DA:1589:C:N3	2.26	0.80
60:BB:3:C:O2	60:BB:117:G:N2	2.14	0.80
21:CA:1245:A:N1	21:CA:1292:U:O4	2.14	0.80
21:CA:1538:C:N3	23:CV:7:G:C2	2.50	0.80
59:BA:1933:G:H4'	63:BA:2902:NMY:H71	1.47	0.80
21:CA:1241:G:N2	21:CA:1296:C:N3	2.25	0.80
21:CA:68(H):G:N2	21:CA:68(R):C:N3	2.28	0.80
59:DA:28:A:N6	59:DA:512:G:H1'	1.96	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CY:656:ALA:HA	20:CY:659:LEU:HB3	1.63	0.80
59:DA:16:G:H1	59:DA:524:U:H3	1.25	0.80
10:CK:27:ASN:ND2	10:CK:44:SER:OG	2.14	0.80
21:AA:1428:A:H61	21:AA:1472:U:H3	1.30	0.80
30:DH:98:LEU:HB2	30:DH:125:VAL:HB	1.61	0.80
59:BA:585:G:H21	59:BA:1254:A:H62	0.82	0.80
25:DC:46:ALA:HA	25:DC:212:SER:O	1.82	0.80
22:CW:50:C:N4	22:CW:64:G:N1	2.28	0.80
59:BA:90:U:H4'	59:BA:91:A:H5'	1.63	0.80
63:DA:2901:NMY:C16	63:DA:2901:NMY:C19	2.36	0.80
27:DE:82:ARG:HH21	59:DA:2637:U:H5''	1.47	0.80
59:DA:67:U:H2'	59:DA:68:G:H8	1.45	0.80
25:BC:79:ALA:HB1	25:BC:83:LYS:HB2	1.63	0.80
21:AA:1157:A:N6	21:AA:1178:G:C2	2.50	0.80
59:DA:1347:G:N2	59:DA:1599:C:N3	2.27	0.80
59:BA:271(S):C:N4	59:BA:357(C):G:H1	1.79	0.80
21:CA:1003:G:H2'	21:CA:1004:A:H4'	1.63	0.80
59:DA:1442:G:H1	59:DA:1549:C:H42	1.28	0.80
27:DE:139:GLY:HA2	59:DA:2578:G:H1'	1.64	0.80
59:BA:761:A:H5''	59:BA:762:U:H5''	1.64	0.80
59:BA:1413:G:H1	59:BA:1589:C:H42	1.27	0.80
59:BA:1971:A:H5'	63:BA:2904:NMY:H232	1.64	0.80
59:BA:954:G:O6	59:BA:963:U:O2	2.00	0.80
60:DB:14:U:O2	60:DB:106:G:N2	2.14	0.80
21:CA:1001:G:N1	21:CA:1039:C:O2	2.14	0.80
7:CH:96:GLY:H	7:CH:99:GLU:HB2	1.47	0.80
21:AA:408:A:N1	21:AA:434:U:O4	2.14	0.80
29:BG:4:ASP:HA	29:BG:8:LYS:HD3	1.64	0.80
4:CE:50:GLU:HG3	4:CE:52:PRO:HD2	1.63	0.80
59:DA:701:G:H1	59:DA:731:C:N4	1.79	0.79
42:BW:53:SER:O	42:BW:57:ASN:ND2	2.16	0.79
24:CX:49:G:N2	24:CX:65:C:C2	2.50	0.79
21:CA:33:A:H2'	21:CA:34:C:C6	2.17	0.79
60:DB:86:G:N2	60:DB:90:C:N3	2.29	0.79
59:DA:1468(J):G:H2'	59:DA:1468(K):G:H8	1.48	0.79
38:DS:39:ILE:HD11	38:DS:73:LEU:HD21	1.64	0.79
16:AQ:66:SER:HB3	16:AQ:69:LYS:HB3	1.64	0.79
29:BG:72:ARG:HB3	29:BG:86:MET:HA	1.62	0.79
21:CA:34:C:H2'	21:CA:35:G:H8	1.47	0.79
21:CA:987:G:N2	21:CA:1218:C:N3	2.25	0.79
59:DA:2814:C:N3	59:DA:2886:G:N2	2.29	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:691:C:N3	59:DA:771:G:N2	2.29	0.79
59:BA:1858:G:H1'	59:BA:1884:A:N6	1.98	0.79
59:DA:1138:G:H2'	59:DA:1139:G:O4'	1.83	0.79
33:DN:35:ARG:HD3	33:DN:76:SER:HA	1.63	0.79
33:BN:111:PRO:O	33:BN:114:ARG:N	2.15	0.79
59:BA:1578:U:H2'	59:BA:1579:A:H5''	1.63	0.79
2:AC:17:ASP:O	2:AC:54:ARG:NH2	2.15	0.79
36:DQ:85:LYS:HB2	46:D0:7:LEU:HD22	1.61	0.79
33:BN:77:GLY:N	33:BN:82:LEU:O	2.15	0.79
63:BA:2902:NMY:H16	63:BA:2902:NMY:H19	0.83	0.79
63:CA:1601:NMY:H19	63:CA:1601:NMY:H16	0.83	0.79
59:DA:1052:C:C2	59:DA:1107:G:N2	2.44	0.79
21:CA:1047:G:N2	21:CA:1210:C:N3	2.28	0.79
21:CA:612:C:N4	21:CA:628:G:H1	1.80	0.79
24:AX:2:G:H1	24:AX:71:C:N4	1.80	0.79
20:CY:620:VAL:HG12	20:CY:662:LYS:HB3	1.64	0.79
21:AA:1427:U:H2'	21:AA:1428:A:H8	1.46	0.79
52:D6:41:PRO:HD3	52:D6:47:THR:HG22	1.64	0.79
32:BK:72:PRO:HG2	32:BK:111:LYS:HZ1	1.46	0.79
59:BA:880:G:H2'	59:BA:881:G:H8	1.46	0.79
59:BA:2559:C:H2'	59:BA:2560:C:C6	2.18	0.79
34:BO:59:LYS:HB3	34:BO:87:ILE:HG13	1.62	0.79
59:BA:817:C:H3'	59:BA:818:G:C8	2.18	0.79
59:DA:861:A:H62	59:DA:916:G:N2	1.76	0.79
21:CA:618:C:N4	21:CA:621:A:N7	2.30	0.79
1:CB:91:PRO:HG2	1:CB:155:LEU:HB2	1.65	0.79
4:AE:39:GLY:HA2	4:AE:71:LEU:HD11	1.63	0.79
34:BO:19:ILE:HG22	34:BO:43:VAL:HA	1.63	0.79
1:CB:69:LEU:HB2	1:CB:162:ILE:HB	1.64	0.79
34:BO:63:VAL:HG23	34:BO:64:ARG:HG3	1.63	0.79
16:CQ:43:LEU:HD12	16:CQ:69:LYS:HA	1.64	0.79
21:AA:458(A):G:N2	21:AA:458(E):A:C8	2.51	0.79
39:BT:47:GLY:HA3	39:BT:65:LYS:HD3	1.64	0.79
21:CA:975:A:H4'	21:CA:976:G:H5''	1.65	0.79
21:AA:1436:U:O4	21:AA:1465:C:N3	2.16	0.79
59:BA:294:A:H62	59:BA:344:G:H21	1.29	0.79
59:BA:1937:A:HO2'	59:BA:1939:U:H6	1.31	0.79
59:BA:1583:A:H61	21:CA:838(A):U:H5''	1.47	0.79
24:AX:27:C:N4	24:AX:43:G:H1	1.80	0.79
21:CA:367:U:H3	21:CA:393:A:N6	1.81	0.79
59:DA:1076:C:H2'	59:DA:1077:A:H4'	1.65	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:249:U:H3	21:AA:275:G:H1	1.25	0.79
40:BU:25:TRP:HD1	40:BU:26:GLY:H	1.29	0.79
11:CL:45:PRO:HD2	11:CL:49:ASN:HB2	1.62	0.79
59:BA:2653:U:H3	59:BA:2667:C:H42	1.31	0.79
59:BA:713:G:H21	59:BA:718:A:H62	1.28	0.79
59:BA:673:C:H42	59:BA:807:U:H3	1.28	0.79
21:AA:898:G:N2	21:AA:901:A:OP2	2.15	0.79
11:AL:41:ARG:HD2	11:AL:55:VAL:HG11	1.65	0.79
1:AB:132:LYS:HG2	21:AA:1158:C:H1'	1.64	0.79
59:DA:271(F):G:H1	59:DA:357(M):C:H42	0.80	0.79
38:DS:30:ARG:HH22	38:DS:62:LYS:HB3	1.47	0.79
1:CB:162:ILE:O	1:CB:162:ILE:HG13	1.81	0.79
59:DA:1506(I):U:H2'	59:DA:1506(J):G:C8	2.18	0.79
21:CA:456:C:H42	21:CA:476:G:H1	1.29	0.79
59:DA:639:U:O2	59:DA:649:G:N2	2.13	0.78
39:DT:5:ALA:HA	39:DT:8:LYS:HB2	1.65	0.78
50:D4:33:VAL:HG12	50:D4:34:GLU:HG3	1.65	0.78
25:BC:139:PRO:HA	25:BC:145:THR:HG21	1.63	0.78
21:CA:720:C:H3'	21:CA:721:G:H2'	1.64	0.78
37:DR:9:LYS:HG3	37:DR:43:GLU:HB2	1.64	0.78
59:BA:2065:C:H2'	59:BA:2066:C:H6	1.48	0.78
2:AC:142:MET:HG3	2:AC:170:GLN:HB3	1.63	0.78
24:AX:53:G:N1	24:AX:61:C:N4	2.21	0.78
21:CA:1002:G:H1	21:CA:1038:C:H42	1.30	0.78
59:BA:698:C:O2'	59:BA:734:A:N6	2.17	0.78
3:AD:172:PRO:HD2	3:AD:194:LEU:HD21	1.65	0.78
21:CA:930:C:H42	21:CA:1387:G:H1	1.32	0.78
19:CT:40:ALA:HB2	19:CT:55:ILE:HG21	1.66	0.78
59:BA:2726:U:O2'	59:BA:2727:G:H8	1.67	0.78
11:AL:35:GLY:HA2	11:AL:58:VAL:HA	1.65	0.78
22:CW:31:A:N1	22:CW:39:U:O4	2.16	0.78
21:AA:618:C:N4	21:AA:621:A:N7	2.31	0.78
21:CA:973:G:H3'	21:CA:974:A:H5''	1.64	0.78
33:BN:15:LEU:HA	33:BN:52:VAL:HA	1.65	0.78
21:CA:979:C:OP1	21:CA:1223:C:N4	2.16	0.78
21:CA:443:C:H42	21:CA:491:G:H1	0.79	0.78
59:DA:2222:G:H2'	59:DA:2223:G:C8	2.19	0.78
59:DA:1166:C:N4	59:DA:1183:G:H1	1.81	0.78
21:CA:1422:G:H1	21:CA:1478:C:H42	1.31	0.78
39:BT:30:VAL:HA	39:BT:44:ASP:HB3	1.63	0.78
21:CA:829:G:H1	21:CA:857:C:H42	1.30	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:2743:C:H42	59:DA:2761:G:H1	1.29	0.78
21:CA:112:G:H1	21:CA:315:A:H61	1.32	0.78
20:AY:384:ILE:HG12	20:AY:387:ASP:HB3	1.65	0.78
21:CA:20:U:H3	21:CA:915:A:H61	1.31	0.78
6:AG:51:GLN:NE2	6:AG:56:GLN:O	2.16	0.78
33:DN:114:ARG:NH2	59:DA:527:C:C6	2.51	0.78
59:DA:529:A:H62	59:DA:2041:U:H3	1.32	0.78
33:DN:114:ARG:CZ	59:DA:527:C:HO2'	1.95	0.78
12:CM:91:ARG:HH22	12:CM:103:THR:HG21	1.49	0.78
59:BA:1636:C:H2'	59:BA:1637:A:C8	2.18	0.78
52:B6:5:VAL:HB	59:BA:2283:C:H5'	1.64	0.78
59:BA:999:U:O2	59:BA:1155:A:N7	2.17	0.78
47:D1:34:THR:HG21	59:DA:2432:A:H1'	1.64	0.78
34:DO:88:ASN:ND2	34:DO:92:GLU:O	2.16	0.78
59:DA:1779:U:OP2	59:DA:1784:A:N6	2.16	0.78
33:BN:35:ARG:HB2	33:BN:75:TYR:O	1.83	0.78
59:DA:1666:G:N2	59:DA:1994:C:N3	2.25	0.78
11:AL:30:ALA:HB1	11:AL:33:ARG:HB2	1.66	0.78
29:BG:113:ARG:O	29:BG:114:ILE:O	1.99	0.78
21:AA:1354:C:H2'	21:AA:1355:G:C8	2.18	0.78
25:BC:214:TYR:HD2	25:BC:222:SER:HB2	1.48	0.78
59:BA:1043:C:O2	59:BA:1048:A:O2'	2.00	0.78
59:DA:2396:G:H1	59:DA:2420:C:H42	1.32	0.78
21:CA:408:A:H2	21:CA:434:U:C2	2.01	0.78
21:CA:186(E):C:H42	21:CA:186(L):G:H1	0.81	0.78
59:BA:1857:G:N2	59:BA:1885:A:H62	1.80	0.78
60:DB:81:G:O6	60:DB:95:U:O2	2.00	0.78
21:CA:144:G:H1	21:CA:178:C:N4	1.81	0.78
59:BA:2255:G:H3'	59:BA:2256:G:O4'	1.82	0.78
35:BP:62:LEU:HB3	59:BA:2393:A:H5''	1.66	0.78
21:AA:967:C:H3'	21:AA:968:A:H2'	1.65	0.78
59:BA:2701:C:H2'	59:BA:2702:U:H2'	1.65	0.78
31:BJ:25:UNK:HA	31:BJ:80:UNK:HA	1.64	0.78
59:BA:722:A:H2'	59:BA:723:G:C8	2.18	0.78
24:AX:1:G:H1	24:AX:72:C:H42	1.29	0.78
44:DY:51:VAL:HG12	44:DY:53:PRO:HD2	1.66	0.78
59:DA:2842:G:H1	59:DA:2875:C:H42	0.82	0.78
59:BA:2450:A:H62	59:BA:2501:C:N4	1.81	0.78
50:B4:9:LEU:HA	50:B4:27:THR:HA	1.66	0.78
21:CA:68(E):G:N2	21:CA:68(U):U:O2	2.15	0.78
59:DA:1629:U:O2	59:DA:1637:A:N1	2.17	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:1630(A):C:N3	59:DA:1635:G:O6	2.17	0.77
24:AX:53:G:C2	24:AX:61:C:N3	2.52	0.77
21:CA:1514:C:N4	21:CA:1521:G:H1	1.82	0.77
59:DA:2267:A:N1	59:DA:2272:U:O2	2.16	0.77
59:DA:2650:U:N3	59:DA:2670:A:C2	2.47	0.77
27:DE:134:ILE:HG12	27:DE:135:HIS:H	1.48	0.77
59:DA:2345:G:H1'	59:DA:2382:G:H5'	1.65	0.77
59:BA:470:A:H2'	59:BA:471:A:H8	1.48	0.77
54:B8:5:LYS:NZ	59:BA:254:G:N7	2.32	0.77
59:DA:2812:G:H2'	59:DA:2813:A:H8	1.47	0.77
59:DA:2489:G:H4'	59:DA:2518:A:H61	1.49	0.77
20:AY:66:THR:N	62:AY:702:FUA:H121	2.00	0.77
59:BA:150:C:N4	59:BA:176:G:H1	1.81	0.77
28:DF:123:LEU:HD13	28:DF:192:LEU:HD23	1.65	0.77
59:DA:227:A:H61	59:DA:410:G:N2	1.82	0.77
20:CY:409:ILE:HG21	20:CY:456:GLU:HG2	1.65	0.77
38:DS:85:VAL:HG22	38:DS:106:ARG:HD3	1.65	0.77
59:DA:1496:A:H1'	59:DA:1577:C:O2'	1.84	0.77
36:DQ:58:PHE:HZ	36:DQ:64:ILE:HD11	1.48	0.77
37:DR:105:ARG:HH12	42:DW:41:LYS:H	1.31	0.77
33:DN:78:TYR:HE2	33:DN:115:ARG:HH21	0.84	0.77
3:AD:5:ILE:HG21	21:AA:406:G:H5''	1.65	0.77
26:BD:59:LYS:HB3	59:BA:1568:G:H4'	1.66	0.77
26:BD:148:GLU:HB3	26:BD:151:LYS:HG3	1.65	0.77
26:DD:165:ILE:HG22	26:DD:166:GLN:H	1.48	0.77
55:D9:18:ARG:NH1	59:DA:1123:C:O2'	2.16	0.77
27:BE:13:ARG:NH1	34:BO:74:GLY:O	2.13	0.77
21:CA:967:C:H3'	21:CA:968:A:H2'	1.65	0.77
24:AX:28:C:N3	24:AX:42:G:O6	2.17	0.77
55:D9:6:SER:HB3	59:DA:2466:C:H5''	1.66	0.77
59:DA:270(G):C:N4	59:DA:270(S):G:H1	1.83	0.77
44:BY:97:ARG:HH11	44:BY:97:ARG:HA	1.49	0.77
21:CA:566:G:H4'	21:CA:567:G:H5'	1.65	0.77
37:BR:4:LEU:HB2	59:BA:1653:G:H3'	1.66	0.77
33:DN:114:ARG:NH2	59:DA:527:C:C2'	2.48	0.77
46:D0:27:GLU:HA	46:D0:67:VAL:HB	1.65	0.77
21:CA:618:C:H5'	21:CA:619:U:H5''	1.66	0.77
25:BC:138:LEU:HD22	25:BC:139:PRO:HD2	1.67	0.77
59:BA:827:U:H1'	59:BA:2246:G:H1'	1.66	0.77
27:BE:107:THR:HG23	27:BE:195:LEU:HB3	1.66	0.77
11:CL:6:THR:O	11:CL:8:ASN:N	2.18	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CA:1139:G:N2	21:CA:1142:G:O6	2.18	0.77
21:AA:1405:G:H3'	63:AA:1601:NMY:C23	2.15	0.77
59:DA:1468(J):G:N2	59:DA:1506(H):C:N3	2.26	0.77
59:DA:2427:C:H5''	59:DA:2429:G:H5'	1.67	0.77
59:DA:1710:C:N4	59:DA:1748:G:H1	1.83	0.77
2:CC:59:ARG:HD3	2:CC:64:VAL:HG22	1.66	0.77
34:DO:68:GLU:HA	34:DO:78:ARG:HB3	1.67	0.77
10:CK:22:HIS:HB3	10:CK:29:ILE:HG22	1.66	0.77
40:DU:55:ARG:HH12	59:DA:977:G:H5'	1.48	0.77
59:DA:23:G:H1	59:DA:517:C:H42	1.33	0.77
59:DA:1804:C:H42	59:DA:1813:G:H1	1.30	0.77
23:CV:9:G:H3'	23:CV:10:G:N3	1.99	0.77
33:BN:116:LEU:C	33:BN:118:LYS:H	1.88	0.77
33:BN:26:LEU:HD21	33:BN:99:LEU:HG	1.65	0.77
21:AA:413:G:H4'	21:AA:414:A:H5''	1.66	0.77
59:DA:592:G:H1	59:DA:665:C:N4	1.82	0.77
59:DA:1345:C:N3	59:DA:1601:G:N2	2.28	0.77
40:BU:55:ARG:HD3	59:BA:1155:A:H5'	1.66	0.77
59:BA:1459:G:O2'	59:BA:1461:G:OP2	2.03	0.77
59:DA:2404:C:H42	59:DA:2413:G:H1	1.32	0.77
20:AY:507:TYR:H	20:AY:577:SER:HA	1.49	0.77
22:CW:4:U:O2	22:CW:69:A:N1	2.17	0.77
60:DB:70:C:N3	60:DB:106:G:N2	2.28	0.77
59:DA:1168:G:H1	59:DA:1181:C:N4	1.83	0.77
59:BA:1416:G:H1	59:BA:1582:C:H42	1.29	0.77
60:BB:30:C:N3	60:BB:54:G:N2	2.32	0.77
59:BA:589:C:H42	59:BA:668:G:H1	1.32	0.77
59:DA:413:C:H42	59:DA:2410:G:H1	1.29	0.77
59:BA:270(A):A:H62	59:BA:270(Y):G:H21	1.30	0.77
59:BA:2122:U:O4	59:BA:2176:A:N1	2.18	0.77
13:AN:60:SER:HB2	21:AA:1187:G:H21	1.50	0.77
13:AN:24:CYS:HB2	13:AN:40:CYS:H	1.49	0.77
59:BA:1947:C:H2'	59:BA:1948:G:C8	2.19	0.77
28:BF:154:VAL:HG12	28:BF:156:LEU:HB3	1.65	0.77
33:DN:56:ASN:H	33:DN:56:ASN:ND2	1.82	0.77
59:DA:956:G:O2'	59:DA:959:A:N6	2.16	0.77
39:BT:53:ARG:NH2	39:BT:58:ASN:O	2.17	0.77
59:DA:2636:U:H2'	59:DA:2637:U:C6	2.20	0.77
59:BA:1311:G:H21	59:BA:1603:A:H62	0.81	0.77
43:DX:57:LEU:HB3	59:DA:1341:U:H4'	1.65	0.77
4:CE:78:HIS:HB2	7:CH:104:ARG:HG3	1.65	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DD:108:PRO:HA	26:DD:197:GLY:H	1.47	0.77
60:DB:23:G:H1	60:DB:60:C:N4	1.83	0.77
21:CA:27:G:N2	21:CA:556:C:N3	2.30	0.77
21:CA:1003:G:N2	21:CA:1037:C:N3	2.33	0.77
59:BA:2103:C:H42	59:BA:2186:G:H1	1.33	0.77
21:AA:112:G:HO2'	21:AA:354:G:HO2'	1.24	0.77
33:BN:71:ILE:H	33:BN:87:LEU:HA	1.48	0.76
21:AA:1406:U:OP2	63:AA:1601:NMY:H232	1.85	0.76
23:CV:19:G:H1	24:CX:36:C:H42	0.81	0.76
59:BA:1820:U:H3'	59:BA:1821:A:C8	2.20	0.76
59:DA:2139:C:N3	59:DA:2152:G:O6	2.18	0.76
26:DD:256:GLY:H	59:DA:1796:U:H4'	1.50	0.76
34:BO:23:ARG:NH2	59:BA:2547:U:O2	2.17	0.76
59:BA:2751:G:OP1	59:BA:2751:G:N2	2.18	0.76
59:BA:2549:G:H2'	59:BA:2550:G:C8	2.20	0.76
21:AA:782:A:H62	21:AA:800:G:H21	0.82	0.76
60:DB:38:C:H2'	60:DB:39:A:C8	2.20	0.76
3:CD:13:ARG:NH1	3:CD:36:ARG:O	2.19	0.76
26:DD:100:GLY:HA3	59:DA:1500:G:H21	1.48	0.76
21:AA:1200:C:O2	21:AA:1205:U:N3	2.18	0.76
59:BA:729:G:H4'	59:BA:763:G:H5'	1.66	0.76
21:CA:1494:G:P	63:CA:1601:NMY:H81	2.25	0.76
21:CA:1324:A:H5''	21:CA:1362(A):C:H5'	1.68	0.76
59:DA:1324:G:H1	59:DA:1330:C:H42	0.79	0.76
59:DA:861:A:N6	59:DA:916:G:H21	1.79	0.76
16:AQ:60:ILE:HG23	16:AQ:72:ARG:HB3	1.68	0.76
2:AC:11:ARG:O	2:AC:13:GLY:N	2.18	0.76
59:BA:1172:G:O2'	59:BA:1177:A:N6	2.19	0.76
21:CA:1166:G:N2	21:CA:1170:A:OP2	2.18	0.76
59:DA:630:G:N2	59:DA:633:A:OP2	2.17	0.76
31:BJ:23:UNK:O	31:BJ:85:UNK:N	2.18	0.76
33:DN:84:LYS:NZ	59:DA:2040:C:OP1	2.17	0.76
33:DN:71:ILE:O	33:DN:72:TYR:HB2	1.84	0.76
33:DN:85:ILE:N	33:DN:106:MET:HA	2.00	0.76
59:BA:2121:G:H1	59:BA:2177:C:H42	1.31	0.76
59:DA:2359:C:N4	59:DA:2428:G:H1	1.81	0.76
21:CA:371:G:H1	21:CA:390:C:N4	1.82	0.76
28:DF:54:ARG:NH1	59:DA:801:G:O4'	2.19	0.76
21:CA:953:G:H5''	21:CA:965:A:H2	1.51	0.76
59:DA:582:G:H1	59:DA:1258:C:N4	1.82	0.76
59:DA:1312:U:O4	59:DA:1340:U:O4	2.04	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CA:354:G:N2	21:CA:388:G:O2'	2.18	0.76
18:AS:52:TYR:OH	21:AA:986:A:N3	2.19	0.76
60:DB:85:G:O6	60:DB:91:C:N3	2.18	0.76
41:DV:56:SER:HB2	41:DV:100:ARG:HE	1.51	0.76
21:CA:616:G:H1	21:CA:624:C:H42	1.31	0.76
36:DQ:34:LEU:HB2	36:DQ:118:LEU:HD13	1.66	0.76
38:BS:40:ILE:HA	38:BS:47:THR:HA	1.65	0.76
59:BA:1003:G:H1	59:BA:1152:C:H42	1.33	0.76
59:BA:2133:G:H2'	59:BA:2157:G:H22	1.48	0.76
59:DA:2532:G:N2	59:DA:2663:G:C2	2.52	0.76
20:AY:135:PHE:O	20:AY:137:ASN:N	2.18	0.76
59:DA:821:A:H62	59:DA:972:G:H21	1.30	0.76
21:CA:658:G:H1	21:CA:747:C:N4	1.83	0.76
1:AB:69:LEU:HB3	1:AB:71:VAL:HG23	1.68	0.76
44:DY:10:GLY:HA2	44:DY:28:LYS:HG3	1.65	0.76
28:BF:3:GLU:HA	28:BF:24:LEU:HB2	1.66	0.76
59:BA:1800:C:H42	59:BA:1817:G:H22	1.33	0.76
46:B0:25:ARG:HH12	59:BA:2355:C:H5''	1.51	0.76
59:DA:271(T):G:H21	59:DA:357(B):A:H62	1.34	0.76
52:B6:11:LEU:HG	52:B6:26:ASN:HD22	1.51	0.76
45:DZ:97:GLU:HG2	45:DZ:127:LYS:HB3	1.68	0.76
33:DN:16:ILE:HG22	33:DN:52:VAL:HG13	1.67	0.76
33:DN:35:ARG:NH2	33:DN:75:TYR:HB3	2.01	0.76
21:AA:1157:A:N6	21:AA:1178:G:H21	1.78	0.76
59:DA:871:U:O2	59:DA:906:G:C2	2.39	0.76
59:BA:954:G:C6	59:BA:963:U:O2	2.38	0.76
10:CK:61:ALA:HB1	10:CK:94:ALA:HB2	1.67	0.76
59:BA:1530:G:O6	59:BA:1541:U:O2	2.03	0.76
12:AM:20:THR:HG21	12:AM:27:LYS:HD2	1.66	0.76
24:AX:21:A:N6	24:AX:48:C:O2	2.17	0.76
2:AC:22:TRP:HA	9:AJ:93:GLY:HA2	1.66	0.76
20:CY:169:GLY:HA3	20:CY:173:THR:HB	1.67	0.76
60:DB:31:C:N3	60:DB:51:G:O6	2.19	0.76
21:CA:1348:U:H2'	21:CA:1349:A:C8	2.21	0.76
59:BA:840:C:H2'	59:BA:841:A:C8	2.21	0.76
21:CA:589:C:O2	21:CA:650:G:N1	2.19	0.76
59:DA:851:U:H2'	59:DA:852:G:C8	2.21	0.76
59:DA:638:G:H1	59:DA:650:C:H42	1.33	0.76
59:DA:2134:A:H2	59:DA:2159:G:H1'	1.50	0.76
29:DG:113:ARG:O	29:DG:114:ILE:C	2.24	0.76
59:DA:815:C:N4	59:DA:1192:G:H1	1.84	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:1323:G:H2'	21:AA:1324:A:C8	2.21	0.76
24:CX:28:C:O2	24:CX:42:G:N1	2.19	0.76
59:DA:2049:G:H1	59:DA:2619:C:H42	0.81	0.76
59:DA:1676:A:H2'	59:DA:1677:A:C8	2.21	0.76
21:CA:401:C:O2'	21:CA:621:A:N3	2.19	0.76
21:AA:829:G:H2'	21:AA:830:G:H8	1.50	0.76
59:DA:740:U:H2'	59:DA:741:G:C8	2.20	0.76
59:BA:2442:C:H2'	59:BA:2443:C:C6	2.21	0.76
30:BH:28:GLY:HA3	30:BH:79:VAL:HB	1.68	0.76
59:DA:1525:G:H2'	59:DA:1526:G:C8	2.21	0.76
20:AY:163:VAL:HG13	20:AY:258:VAL:HG22	1.68	0.76
59:DA:1413:G:H1	59:DA:1589:C:H42	1.33	0.75
59:DA:2134:A:N6	59:DA:2157:G:H1'	2.00	0.75
26:BD:61:LEU:HD13	59:BA:1568:G:H5''	1.66	0.75
39:DT:63:VAL:O	39:DT:73:GLU:HA	1.86	0.75
21:AA:1026:G:O6	21:AA:1035:A:N1	2.19	0.75
33:DN:111:PRO:O	33:DN:114:ARG:HB3	1.86	0.75
27:BE:34:VAL:HG13	27:BE:48:GLN:HB3	1.68	0.75
21:CA:1405:G:O5'	63:CA:1601:NMY:H231	1.85	0.75
20:CY:243:VAL:HA	20:CY:279:TYR:HE1	1.51	0.75
21:CA:152:A:N6	21:CA:169:C:C4	2.54	0.75
59:DA:1208:C:N4	59:DA:1238:G:H1	1.84	0.75
25:DC:76:LEU:HB2	25:DC:111:PHE:HB3	1.66	0.75
14:AO:85:LEU:HD22	14:AO:87:ILE:HG12	1.67	0.75
28:DF:101:LEU:HD12	28:DF:102:PRO:HD2	1.68	0.75
25:DC:41:THR:O	25:DC:43:GLU:N	2.19	0.75
59:BA:1414:G:H1	59:BA:1588:C:N4	1.85	0.75
60:DB:82:G:N2	60:DB:94:C:N3	2.31	0.75
21:AA:1221:G:OP1	21:AA:1320:C:N4	2.19	0.75
59:DA:2687:U:O4	59:DA:2722:G:O6	2.05	0.75
59:BA:190:A:H5''	59:BA:204:A:H61	1.51	0.75
60:DB:3:C:C2	60:DB:117:G:N2	2.51	0.75
59:DA:1110:G:O2'	59:DA:1111:A:O5'	2.05	0.75
59:BA:877:U:O4	59:BA:899:A:N1	2.20	0.75
44:DY:97:ARG:HA	44:DY:97:ARG:HH11	1.51	0.75
47:B1:18:ILE:HA	47:B1:20:ARG:N	2.00	0.75
54:B8:26:LYS:HB3	54:B8:44:LYS:HE2	1.69	0.75
25:BC:44:VAL:HB	25:BC:174:ALA:HB3	1.67	0.75
46:B0:55:ARG:HE	59:BA:2386:C:H5''	1.50	0.75
32:BK:33:ASN:HB3	32:BK:36:GLU:HB3	1.67	0.75
49:B3:14:GLY:HA2	59:BA:970:C:H5'	1.68	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CA:661:G:H1	21:CA:744:C:H42	1.35	0.75
33:DN:35:ARG:HH22	33:DN:40:PRO:HD3	1.52	0.75
59:DA:463:G:N2	59:DA:466:A:OP2	2.13	0.75
40:DU:53:ARG:NH2	59:DA:994:C:OP1	2.19	0.75
20:CY:573:HIS:HB3	20:CY:576:ASP:HB2	1.67	0.75
2:AC:56:ASP:HB2	2:AC:67:THR:HB	1.67	0.75
59:BA:2136:C:H42	59:BA:2155:G:H1	1.35	0.75
20:AY:30:GLU:HA	20:AY:33:LEU:HB3	1.68	0.75
21:AA:452:A:O2'	21:AA:478:A:N6	2.20	0.75
21:CA:106:C:H2'	21:CA:107:G:H8	1.51	0.75
59:BA:581:C:H2'	59:BA:582:G:C8	2.21	0.75
54:D8:8:LYS:NZ	59:DA:243:U:OP2	2.18	0.75
21:CA:66:G:H1	21:CA:103:C:N4	1.85	0.74
60:BB:23:G:N2	60:BB:60:C:N3	2.31	0.74
20:CY:24:GLY:H	61:CY:701:GDP:H5'	1.52	0.74
59:DA:1768:U:O2	59:DA:1984:G:N2	2.19	0.74
21:AA:1113:C:H42	21:AA:1187:G:H1	1.32	0.74
44:DY:68:HIS:HB3	44:DY:71:LYS:HE3	1.69	0.74
25:DC:51:ASP:HB2	25:DC:54:ARG:HD2	1.69	0.74
59:DA:1024:G:H3'	59:DA:1025:G:H5''	1.69	0.74
39:DT:49:VAL:HA	39:DT:63:VAL:HA	1.67	0.74
20:AY:30:GLU:HG3	20:AY:31:ARG:HH11	1.52	0.74
38:DS:100:ALA:O	38:DS:102:ALA:N	2.20	0.74
43:DX:8:ILE:O	48:D2:36:ARG:NH2	2.19	0.74
36:BQ:38:GLU:HB2	36:BQ:127:ILE:HD12	1.69	0.74
40:DU:28:ARG:HD3	40:DU:38:THR:HG21	1.69	0.74
22:AW:3:C:H42	22:AW:70:G:H1	1.31	0.74
59:DA:55:G:H1	59:DA:115:C:N4	1.86	0.74
59:DA:407:G:H2'	59:DA:408:G:H8	1.52	0.74
40:BU:15:LYS:HA	40:BU:18:LEU:HB3	1.68	0.74
59:BA:749:C:H1'	59:BA:1618:A:H2'	1.67	0.74
20:CY:10:LYS:HG2	20:CY:284:LEU:HD12	1.69	0.74
21:CA:935:A:H61	21:CA:1380:U:H3	1.35	0.74
59:BA:2532:G:H21	59:BA:2663:G:H21	1.32	0.74
1:CB:204:ASN:HD21	1:CB:206:ASP:HB3	1.53	0.74
26:BD:108:PRO:HA	26:BD:197:GLY:H	1.53	0.74
59:BA:1896:G:H2'	59:BA:1897:G:C8	2.23	0.74
20:AY:485:GLU:HG2	20:AY:601:ILE:HG12	1.70	0.74
59:DA:1002:G:H1	59:DA:1153:C:H42	1.33	0.74
59:DA:2819:G:H1	59:DA:2827:C:N4	1.85	0.74
27:DE:134:ILE:H	27:DE:134:ILE:HD13	1.52	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BW:76:VAL:HA	42:BW:102:HIS:O	1.86	0.74
59:DA:990:A:O2'	59:DA:992:C:OP2	2.06	0.74
62:AY:702:FUA:H202	62:AY:702:FUA:C5	2.15	0.74
25:BC:44:VAL:HG22	25:BC:215:VAL:HG22	1.68	0.74
48:D2:54:LYS:HE2	48:D2:55:ARG:HH12	1.51	0.74
59:DA:2687:U:H3	59:DA:2722:G:H1	0.79	0.74
20:CY:563:ILE:HG22	20:CY:565:VAL:H	1.52	0.74
59:DA:2551:C:O2	59:DA:2557:G:N1	2.19	0.74
35:BP:101:VAL:HG12	35:BP:106:LEU:HB3	1.69	0.74
32:BK:3:LYS:HE3	32:BK:29:GLN:HB3	1.69	0.74
59:BA:586:A:N6	59:BA:1251:C:H42	1.82	0.74
59:BA:1189:A:H3'	59:BA:1190:G:H8	1.52	0.74
16:CQ:17:LYS:HD2	21:CA:255:G:H4'	1.69	0.74
27:BE:150:VAL:HG21	59:BA:2618:G:H21	1.51	0.74
1:CB:68:ILE:HG23	1:CB:163:PHE:H	1.51	0.74
12:AM:45:VAL:HG23	12:AM:48:LEU:HD12	1.67	0.74
26:DD:132:PRO:HB3	26:DD:188:GLU:HA	1.69	0.74
40:DU:32:PHE:HZ	59:DA:514:A:H4'	1.52	0.74
21:AA:376:G:H2'	21:AA:377:G:C8	2.23	0.74
59:DA:2119:A:H61	59:DA:2168:G:H21	0.81	0.74
35:BP:113:LYS:HE3	35:BP:131:SER:HB2	1.70	0.74
59:DA:1276:A:N6	59:DA:1294:U:H3	1.85	0.74
21:CA:299:G:N2	21:CA:566:G:O6	2.15	0.74
59:BA:2661:G:H2'	59:BA:2662:A:C8	2.23	0.74
21:CA:614:A:H61	21:CA:626:U:H3	1.36	0.74
20:CY:512:ILE:HD12	20:CY:589:ALA:HB1	1.70	0.74
59:BA:2141:G:O6	59:BA:2150:U:O2	2.05	0.74
59:BA:1970:A:H4'	63:BA:2904:NMY:H192	1.52	0.74
59:DA:872:A:N6	59:DA:905:U:H3	1.86	0.74
59:DA:572:A:N6	59:DA:2029:G:H21	1.85	0.74
59:DA:67:U:H2'	59:DA:68:G:C8	2.22	0.74
2:AC:17:ASP:HB3	2:AC:21:ARG:HH12	1.53	0.74
59:DA:2812:G:H2'	59:DA:2813:A:C8	2.22	0.74
19:AT:85:MET:SD	21:AA:186:C:O2'	2.46	0.74
51:B5:12:SER:HB2	59:BA:2020:A:H5'	1.68	0.74
23:CV:26:A:H2'	23:CV:27:A:C8	2.22	0.74
20:AY:292:THR:HG23	20:AY:398:ILE:HB	1.69	0.74
33:DN:78:TYR:CE2	33:DN:115:ARG:NE	2.56	0.74
42:DW:11:ARG:NH2	42:DW:99:ARG:O	2.20	0.74
23:CV:10:G:OP2	23:CV:10:G:N2	2.20	0.74
59:BA:1969:A:OP1	63:BA:2904:NMY:H18	1.88	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
62:CY:702:FUA:C5	62:CY:702:FUA:H202	2.14	0.74
59:DA:2842:G:N2	59:DA:2875:C:N3	2.29	0.74
21:CA:668:G:H1	21:CA:738:C:H42	0.81	0.74
59:BA:271(S):C:N3	59:BA:357(C):G:N2	2.35	0.74
59:DA:592:G:N2	59:DA:665:C:N3	2.30	0.74
36:DQ:72:LYS:HB3	36:DQ:94:VAL:HG23	1.68	0.74
45:DZ:99:TYR:HE2	45:DZ:125:LEU:HB2	1.53	0.74
59:BA:1271:G:H22	59:BA:1615:C:H42	1.35	0.74
43:BX:71:GLY:HA3	59:BA:64:A:H4'	1.70	0.74
45:DZ:93:ASP:HA	45:DZ:130:PRO:HD2	1.69	0.74
59:BA:1965:C:H4'	63:BA:2903:NMY:H4	1.70	0.73
11:CL:86:ARG:HG3	21:CA:552:U:H4'	1.70	0.73
59:DA:1820:U:H3'	59:DA:1821:A:C8	2.23	0.73
44:BY:76:CYS:HB3	44:BY:96:ILE:HG13	1.69	0.73
25:DC:43:GLU:OE2	59:DA:2124:G:H1'	1.88	0.73
25:DC:64:SER:HA	25:DC:160:GLY:HA3	1.68	0.73
36:BQ:46:GLN:HG2	36:BQ:126:PRO:HD3	1.70	0.73
21:CA:320:C:H2'	21:CA:321:A:C8	2.22	0.73
21:CA:1034:G:H2'	21:CA:1035:A:C8	2.23	0.73
21:CA:131:C:H42	21:CA:231:G:H1	1.36	0.73
42:DW:77:ASP:O	42:DW:101:SER:HA	1.87	0.73
59:DA:2636:U:H2'	59:DA:2637:U:H6	1.50	0.73
27:DE:111:ARG:H	27:DE:161:GLY:HA2	1.53	0.73
59:DA:2326:C:N3	59:DA:2389:G:N2	2.34	0.73
59:DA:15:G:N2	59:DA:525:U:O2	2.17	0.73
40:BU:28:ARG:HD3	40:BU:38:THR:HG21	1.70	0.73
21:CA:424:G:H2'	21:CA:425:G:H8	1.53	0.73
9:AJ:45:ARG:HB3	9:AJ:65:LEU:HB2	1.70	0.73
55:D9:19:ARG:NH1	59:DA:2756:U:OP2	2.21	0.73
52:D6:28:ARG:O	52:D6:30:THR:N	2.20	0.73
9:CJ:3:LYS:N	9:CJ:75:ILE:O	2.21	0.73
59:BA:2134:A:N6	59:BA:2157:G:H1'	2.03	0.73
21:AA:1127:G:H21	21:AA:1147:C:H41	1.37	0.73
21:CA:139:G:H1	21:CA:224:C:H42	0.79	0.73
59:DA:376:C:N4	59:DA:398:G:H1	1.83	0.73
21:CA:1380:U:H4'	21:CA:1381:U:H5'	1.70	0.73
35:DP:35:HIS:H	59:DA:1190:G:H5''	1.53	0.73
21:CA:1028(B):C:N4	21:CA:1028(G):G:H1	1.87	0.73
59:BA:1183:G:H2'	59:BA:1184:G:C8	2.23	0.73
59:BA:2202(E):A:H1'	59:BA:2202(G):G:C5	2.23	0.73
21:AA:1391:U:H2'	21:AA:1392:G:H8	1.52	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:2308:G:O2'	59:DA:2310:A:OP2	2.06	0.73
3:CD:25:ARG:NH2	21:CA:411:A:OP2	2.21	0.73
59:DA:1793:C:N4	59:DA:1826:G:H1	1.86	0.73
24:AX:33:U:O2'	24:AX:36:C:N4	2.21	0.73
59:DA:137(A):G:H1	59:DA:137(F):C:H42	1.35	0.73
59:DA:481:G:H4'	59:DA:481:G:OP1	1.87	0.73
21:CA:520:A:N6	21:CA:533:A:H61	1.87	0.73
59:DA:1436:G:N1	59:DA:1556:C:O2	2.18	0.73
59:BA:1654:A:H2'	59:BA:1655:A:H8	1.52	0.73
1:AB:19:HIS:CG	1:AB:20:GLU:H	2.06	0.73
27:DE:50:GLY:HA2	27:DE:78:LEU:HB3	1.70	0.73
11:AL:23:LYS:HE2	11:AL:89:ARG:HD3	1.70	0.73
26:BD:24:ILE:HG12	26:BD:25:THR:N	2.03	0.73
28:DF:176:LEU:HG	28:DF:177:ALA:N	2.04	0.73
20:AY:485:GLU:HB2	20:AY:560:VAL:HG22	1.71	0.73
36:DQ:37:LEU:HA	36:DQ:100:GLY:H	1.52	0.73
59:BA:28:A:H61	59:BA:512:G:H1'	1.53	0.73
3:CD:3:ARG:HH21	3:CD:118:ARG:HE	1.37	0.73
26:BD:242:ARG:NH1	59:BA:1971:A:OP2	2.22	0.73
59:DA:271(F):G:H2'	59:DA:271(G):G:H8	1.54	0.73
7:CH:10:LEU:HB3	7:CH:83:ILE:HD11	1.71	0.73
7:CH:85:ARG:HA	7:CH:85:ARG:HH11	1.52	0.73
33:DN:78:TYR:CD2	33:DN:115:ARG:NE	2.56	0.73
27:BE:15:PHE:HA	27:BE:19:ARG:O	1.87	0.73
21:AA:34:C:H2'	21:AA:35:G:H8	1.54	0.73
21:CA:1348:U:H2'	21:CA:1349:A:H8	1.54	0.73
28:BF:20:LEU:HD22	28:BF:21:ALA:H	1.53	0.73
59:BA:2630:G:H1'	59:BA:2894:G:H1'	1.71	0.73
59:DA:38:A:N6	59:DA:441:U:H3	1.86	0.73
59:DA:1676:A:H2'	59:DA:1677:A:H8	1.53	0.73
10:CK:51:LYS:HA	10:CK:55:LYS:HE3	1.70	0.73
32:BK:125:ARG:HB2	59:BA:1080:C:H4'	1.69	0.73
20:AY:310:ALA:HB3	20:AY:332:SER:HB2	1.70	0.73
59:BA:392:C:H4'	59:BA:409:C:H5''	1.71	0.73
6:CG:73:MET:HG2	6:CG:90:GLU:HG2	1.69	0.73
21:CA:1027:C:H2'	21:CA:1028:C:C6	2.24	0.73
43:BX:49:VAL:HB	43:BX:83:VAL:HG11	1.70	0.73
29:DG:73:ALA:H	29:DG:87:PRO:HD2	1.53	0.73
21:AA:540:G:H2'	21:AA:541:G:C8	2.23	0.73
19:AT:17:ARG:NH1	21:AA:102:G:OP1	2.21	0.73
59:DA:577:G:O2'	59:DA:1254:A:OP1	2.05	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BQ:5:ARG:NH2	59:BA:871:U:OP1	2.22	0.73
21:AA:777:A:H2'	21:AA:778:G:C8	2.23	0.73
60:BB:66:A:O2'	60:BB:67:G:N7	2.21	0.73
47:B1:47:GLN:HA	47:B1:47:GLN:HE21	1.53	0.73
21:CA:1535:C:N4	23:CV:10:G:N2	2.36	0.73
33:BN:45:ASN:HB3	33:BN:115:ARG:HB3	1.70	0.73
16:CQ:60:ILE:HG23	16:CQ:72:ARG:HB2	1.70	0.73
21:AA:401:C:O2'	21:AA:621:A:N3	2.20	0.73
32:DK:91:PRO:HG2	59:DA:1062:G:N2	2.04	0.73
21:AA:1473:A:H2'	21:AA:1474:G:C8	2.24	0.73
47:D1:33:LYS:HD2	47:D1:34:THR:HG22	1.70	0.73
26:BD:206:LEU:HB2	59:BA:1791:A:H4'	1.70	0.73
59:DA:224:G:H1	59:DA:231:C:H42	1.33	0.73
21:CA:824:C:H2'	21:CA:825:G:H8	1.54	0.73
21:CA:1440:C:O2	21:CA:1461:G:N1	2.22	0.73
21:AA:1148:U:H2'	21:AA:1149:C:O4'	1.88	0.72
26:DD:206:LEU:O	59:DA:1791:A:O2'	2.06	0.72
59:DA:150:C:N4	59:DA:176:G:H1	1.86	0.72
59:BA:1183:G:H2'	59:BA:1184:G:H8	1.54	0.72
59:DA:90:U:H4'	59:DA:91:A:H5'	1.71	0.72
44:BY:73:ARG:NH1	59:BA:302:C:OP2	2.19	0.72
59:DA:1636:C:H2'	59:DA:1637:A:H8	1.53	0.72
60:BB:3:C:O2	60:BB:117:G:C2	2.42	0.72
38:DS:15:ARG:HB3	38:DS:18:ILE:HB	1.71	0.72
21:AA:599:C:H2'	21:AA:600:C:C6	2.23	0.72
47:D1:5:CYS:SG	47:D1:6:GLU:N	2.62	0.72
59:BA:453:C:H4'	59:BA:472:A:H62	1.53	0.72
20:AY:25:LYS:HB2	20:AY:84:THR:HG23	1.71	0.72
12:CM:4:ILE:HG23	12:CM:57:ARG:HB2	1.71	0.72
59:DA:851:U:O2	59:DA:926:A:N1	2.23	0.72
59:BA:1890:A:HO2'	59:BA:2085:C:HO2'	1.29	0.72
59:DA:543:C:N3	59:DA:550:G:O6	2.22	0.72
59:DA:884:C:N4	59:DA:892:G:H1	1.86	0.72
35:BP:49:ARG:HB3	54:B8:59:LYS:HD2	1.70	0.72
59:DA:1091:G:H1	59:DA:1100:C:N4	1.88	0.72
26:DD:144:ALA:H	26:DD:156:ALA:HB3	1.54	0.72
33:DN:50:ASP:HA	33:DN:103:VAL:HG11	1.71	0.72
33:DN:58:ASP:HB2	33:DN:98:VAL:HG11	1.71	0.72
21:CA:1071:C:N3	21:CA:1104:G:O6	2.22	0.72
59:DA:1664:A:H61	59:DA:1996:C:H42	1.37	0.72
59:BA:271(F):G:H2'	59:BA:271(G):G:H8	1.53	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CM:91:ARG:HH21	12:CM:96:LEU:HB3	1.53	0.72
59:DA:882:G:H1	59:DA:894:C:H42	1.35	0.72
59:BA:882:G:H2'	59:BA:883:G:C8	2.24	0.72
59:BA:709:U:H2'	59:BA:710:G:C8	2.24	0.72
41:BV:24:LYS:HB3	59:BA:1162:G:H4'	1.71	0.72
59:DA:2331:G:H21	59:DA:2336:A:H2	1.37	0.72
10:AK:34:ASP:O	10:AK:36:ASP:N	2.23	0.72
3:AD:115:ARG:NH2	21:AA:408:A:OP2	2.21	0.72
18:CS:36:ARG:O	21:CA:1320:C:N4	2.23	0.72
60:DB:5:C:H42	60:DB:115:G:H1	0.77	0.72
44:BY:85:VAL:HA	44:BY:94:LYS:HA	1.69	0.72
1:CB:71:VAL:HB	1:CB:164:VAL:HG23	1.72	0.72
27:DE:107:THR:HG23	27:DE:195:LEU:HB3	1.71	0.72
21:AA:258:G:H1	21:AA:268:C:H42	1.38	0.72
33:BN:85:ILE:HG22	33:BN:97:ARG:CZ	2.19	0.72
21:CA:375:U:H3	21:CA:389:A:N6	1.88	0.72
21:CA:30:U:O4	21:CA:553:A:N1	2.22	0.72
11:CL:33:ARG:HG2	11:CL:60:LEU:HD12	1.72	0.72
21:AA:1124:G:H1	21:AA:1149:C:N4	1.87	0.72
21:CA:715:A:H2'	21:CA:716:A:C8	2.25	0.72
21:AA:406:G:N7	21:AA:495:A:O2'	2.20	0.72
59:BA:817:C:H4'	59:BA:932:G:C6	2.24	0.72
59:DA:2466:C:N4	59:DA:2484:G:H1	1.87	0.72
21:AA:987:G:H2'	21:AA:988:G:H8	1.53	0.72
59:DA:521:G:H2'	59:DA:522:G:C8	2.24	0.72
21:CA:424:G:H2'	21:CA:425:G:C8	2.24	0.72
59:BA:1019:U:C2	59:BA:1020:A:N7	2.58	0.72
31:BJ:110:UNK:HA	31:BJ:116:UNK:HA	1.69	0.72
7:AH:89:PRO:HG2	21:AA:878:G:H5'	1.72	0.72
63:BA:2904:NMY:O11	63:BA:2904:NMY:H1	1.90	0.72
24:CX:49:G:C2	24:CX:65:C:N3	2.57	0.72
59:DA:1032:A:H2	59:DA:1122:G:H1	1.37	0.72
28:DF:176:LEU:HG	28:DF:177:ALA:H	1.54	0.72
38:DS:49:VAL:HG13	38:DS:76:LYS:HD2	1.72	0.72
59:DA:1082:U:H2'	59:DA:1083:U:H5'	1.71	0.72
27:DE:134:ILE:HD12	59:DA:2579:C:H4'	1.71	0.72
21:CA:339:C:H42	21:CA:350:G:H1	1.38	0.72
59:DA:1663:C:H42	59:DA:1997:G:H1	1.35	0.72
20:AY:408:VAL:HG22	20:AY:454:MET:HA	1.72	0.72
33:DN:46:VAL:HG12	33:DN:107:LEU:HD22	1.71	0.72
24:CX:75:C:N4	59:DA:2553:G:C6	2.58	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CA:1537:U:O4	23:CV:8:A:N1	2.16	0.72
21:AA:1516:G:N1	21:AA:1519:A:OP2	2.17	0.72
59:DA:2049:G:N2	59:DA:2619:C:N3	2.30	0.72
18:CS:80:TYR:HB2	21:CA:957:U:H5'	1.71	0.72
9:AJ:40:LEU:HD13	9:AJ:41:PRO:HD2	1.72	0.72
1:CB:167:PRO:O	1:CB:171:ALA:HB2	1.89	0.72
24:AX:49:G:N2	24:AX:65:C:N3	2.33	0.72
25:BC:75:VAL:HG21	25:BC:154:ILE:HG12	1.70	0.72
27:DE:21:VAL:O	27:DE:23:VAL:N	2.21	0.72
39:DT:60:THR:HB	39:DT:75:ILE:HG23	1.72	0.72
46:D0:24:LYS:HE3	46:D0:39:ARG:HG3	1.72	0.72
29:DG:43:LEU:HB3	29:DG:45:GLU:HG2	1.72	0.72
20:AY:351:ARG:NH1	21:AA:368:U:OP1	2.23	0.72
59:DA:409:C:H42	59:DA:418:G:H1	1.37	0.72
59:BA:1864(C):A:H2'	59:BA:1864(D):A:C8	2.25	0.72
10:CK:79:SER:HA	10:CK:104:GLN:HB3	1.72	0.72
33:DN:106:MET:HB2	33:DN:107:LEU:HD23	1.70	0.72
59:DA:235:U:H3	59:DA:262:A:N6	1.87	0.72
21:AA:1500:A:H5''	21:AA:1508:G:H5''	1.72	0.72
1:AB:235:SER:OG	1:AB:236:TYR:N	2.22	0.72
2:AC:11:ARG:HB2	2:AC:16:ARG:HB2	1.72	0.72
28:BF:25:PRO:HD3	28:BF:115:ALA:HB1	1.72	0.72
21:AA:419:C:H42	21:AA:424:G:H1	1.37	0.72
21:AA:424:G:H2'	21:AA:425:G:H8	1.55	0.72
59:BA:1659:U:H3	59:BA:2001:A:H61	1.37	0.72
51:B5:19:ARG:NH2	59:BA:1264:G:OP1	2.23	0.72
35:BP:61:ARG:HH11	54:B8:13:ARG:HD2	1.55	0.72
21:CA:892:A:H2'	21:CA:893:C:C6	2.25	0.72
21:CA:1429:C:H42	21:CA:1471:G:H1	1.38	0.72
27:DE:174:ASP:HB3	27:DE:183:LEU:HD13	1.71	0.72
20:AY:505:GLY:HA3	20:AY:576:ASP:HA	1.72	0.72
59:DA:2634:G:N2	59:DA:2784:C:N3	2.32	0.72
59:DA:1468(J):G:H2'	59:DA:1468(K):G:C8	2.24	0.72
60:BB:3:C:H2'	60:BB:4:C:H5	1.54	0.72
21:AA:424:G:H2'	21:AA:425:G:C8	2.24	0.72
20:AY:567:LEU:HD23	20:AY:568:TYR:H	1.54	0.72
10:CK:21:ILE:HD11	10:CK:98:LEU:HD11	1.71	0.72
33:DN:45:ASN:HB2	33:DN:46:VAL:HG22	1.71	0.71
63:BA:2903:NMY:H1	63:BA:2903:NMY:O11	1.90	0.71
23:CV:20:U:H3	24:CX:35:A:H2	1.35	0.71
59:DA:2478:A:O2'	59:DA:2536:G:N2	2.23	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:841:A:H2'	59:BA:842:G:C8	2.25	0.71
59:DA:572:A:H61	59:DA:2029:G:N2	1.87	0.71
26:DD:125:ILE:HG21	26:DD:137:PRO:HG2	1.71	0.71
2:CC:11:ARG:HB3	2:CC:15:THR:HB	1.71	0.71
20:CY:428:LEU:HD13	20:CY:440:VAL:HG11	1.71	0.71
60:DB:33:G:H1	60:DB:49:C:H42	1.39	0.71
59:DA:538:G:N2	59:DA:555:U:O2	2.22	0.71
59:DA:939:G:H2'	59:DA:940:G:C8	2.25	0.71
26:BD:67:PHE:HB3	26:BD:153:ALA:H	1.55	0.71
21:AA:757:U:O2'	21:AA:879:C:O2	2.08	0.71
27:BE:126:PRO:HD2	27:BE:134:ILE:HD11	1.72	0.71
35:DP:26:GLY:HA2	35:DP:30:THR:HG23	1.71	0.71
21:AA:1127:G:N1	21:AA:1145:C:C2	2.58	0.71
25:BC:41:THR:O	25:BC:175:PRO:HA	1.90	0.71
59:DA:692:C:N3	59:DA:770:G:N2	2.33	0.71
59:DA:106:C:HO2'	59:DA:294:A:HO2'	1.38	0.71
1:AB:75:LYS:O	1:AB:78:GLN:HB3	1.90	0.71
59:DA:1030:G:H2'	59:DA:1031:G:H8	1.55	0.71
7:CH:11:THR:HA	7:CH:14:ARG:HD2	1.71	0.71
59:DA:2307:G:N2	59:DA:2311:A:OP2	2.23	0.71
32:BK:14:ALA:HB3	32:BK:50:ASP:HA	1.71	0.71
21:AA:1503:A:H61	23:AV:14:A:H2'	1.55	0.71
7:CH:26:VAL:HG12	7:CH:59:LEU:HB3	1.70	0.71
3:CD:140:VAL:HG11	3:CD:146:ILE:HD11	1.71	0.71
45:BZ:73:GLN:O	45:BZ:87:ASP:N	2.22	0.71
59:DA:77:C:H2'	59:DA:78:A:C8	2.25	0.71
35:BP:45:LEU:HG	35:BP:46:LYS:H	1.54	0.71
59:DA:1008:C:H1'	59:DA:1009:A:N7	2.05	0.71
59:BA:1971:A:H3'	63:BA:2904:NMY:O21	1.90	0.71
36:DQ:35:VAL:O	36:DQ:129:THR:OG1	2.08	0.71
59:BA:1189:A:H3'	59:BA:1190:G:C8	2.25	0.71
59:BA:298:G:N2	59:BA:340:A:H62	1.88	0.71
59:BA:880:G:H2'	59:BA:881:G:C8	2.24	0.71
6:AG:113:GLU:HB2	6:AG:119:ARG:HG2	1.72	0.71
59:BA:357(H):G:H2'	59:BA:357(I):G:H8	1.56	0.71
40:DU:36:ARG:HG3	40:DU:40:PHE:HE1	1.54	0.71
2:AC:58:GLU:HB2	2:AC:65:ALA:HB3	1.71	0.71
21:AA:1040:U:H2'	21:AA:1041:A:C8	2.25	0.71
59:BA:2345:G:O2'	59:BA:2381:C:O2	2.05	0.71
15:AP:40:ASP:HB3	15:AP:48:TRP:HB3	1.71	0.71
31:DJ:60:UNK:O	31:DJ:64:UNK:N	2.23	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CA:1440(D):A:H4'	21:CA:1440(E):G:H5'	1.72	0.71
26:BD:88:ARG:NH2	59:BA:1817:G:OP1	2.23	0.71
55:D9:35:ARG:HH12	59:DA:2741:A:H5''	1.55	0.71
4:AE:19:MET:HA	4:AE:24:ARG:HA	1.72	0.71
54:D8:14:VAL:HG23	54:D8:24:ALA:HB2	1.71	0.71
41:BV:47:VAL:HA	41:BV:52:VAL:HG23	1.72	0.71
59:BA:1675:C:H2'	59:BA:1676:A:C8	2.26	0.71
5:CF:89:MET:HB2	17:CR:76:LEU:HD21	1.72	0.71
21:CA:987:G:H1	21:CA:1218:C:H42	0.75	0.71
60:DB:51:G:H2'	60:DB:52:A:H5''	1.72	0.71
21:AA:815:A:N3	21:AA:1527:C:O2'	2.19	0.71
59:DA:1027:A:H2'	59:DA:1028:A:C8	2.25	0.71
59:BA:77:C:H2'	59:BA:78:A:C8	2.26	0.71
25:DC:132:LEU:HB2	25:DC:138:LEU:HD23	1.72	0.71
20:CY:614:GLU:HA	20:CY:617:MET:HB3	1.71	0.71
21:AA:825:G:H2'	21:AA:826:C:C6	2.26	0.71
33:DN:116:LEU:O	33:DN:118:LYS:N	2.23	0.71
33:DN:30:ILE:O	33:DN:34:LEU:HB2	1.91	0.71
33:BN:53:VAL:HG12	33:BN:120:LEU:HD12	1.71	0.71
63:DA:2901:NMY:O11	63:DA:2901:NMY:H1	1.90	0.71
11:CL:42:THR:OG1	11:CL:43:VAL:N	2.24	0.71
48:D2:50:ILE:HG21	59:DA:61:G:H5'	1.73	0.71
21:CA:184:G:N1	21:CA:193:C:O2	2.22	0.71
25:BC:115:VAL:HA	25:BC:145:THR:HG22	1.71	0.71
24:CX:13:C:N4	24:CX:22:G:H1	1.88	0.71
26:DD:165:ILE:HG22	26:DD:166:GLN:N	2.06	0.71
38:BS:17:ARG:O	38:BS:21:THR:N	2.24	0.71
29:DG:42:GLY:O	59:DA:2305:A:N6	2.24	0.71
36:BQ:124:LYS:NZ	59:BA:2483:C:N3	2.34	0.71
21:CA:757:U:O2'	21:CA:879:C:O2	2.07	0.71
21:CA:1376:U:H2'	21:CA:1377:A:C8	2.25	0.71
21:AA:144:G:H1	21:AA:178:C:H42	1.36	0.71
33:BN:90:MET:HB3	33:BN:97:ARG:CZ	2.20	0.71
59:DA:946:G:H1	59:DA:971:C:N4	1.88	0.71
59:DA:1708:C:H42	59:DA:1750:G:H1	0.76	0.71
59:DA:2841:C:H2'	59:DA:2842:G:H8	1.54	0.71
21:CA:715:A:H2'	21:CA:716:A:H8	1.56	0.71
21:CA:1348:U:N3	21:CA:1374:A:C6	2.58	0.71
59:BA:881:G:O6	59:BA:895:U:O2	2.09	0.71
28:BF:125:LEU:HB3	28:BF:194:MET:HB2	1.72	0.71
59:BA:1565:C:H1'	59:BA:1566:A:H8	1.55	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AL:6:THR:O	11:AL:8:ASN:N	2.24	0.71
20:CY:315:LYS:HB2	20:CY:327:PHE:HB2	1.71	0.71
21:CA:1200:C:H4'	21:CA:1201:A:H5''	1.72	0.71
20:CY:163:VAL:HG13	20:CY:258:VAL:HG23	1.72	0.71
20:CY:256:THR:O	20:CY:258:VAL:N	2.24	0.71
33:BN:79:PRO:O	33:BN:81:GLY:N	2.24	0.71
62:AY:702:FUA:H231	62:AY:702:FUA:H122	1.73	0.71
59:BA:271(F):G:N1	59:BA:357(M):C:N4	2.20	0.71
47:B1:18:ILE:HG12	59:BA:380:U:OP1	1.91	0.71
59:DA:808:G:H2'	59:DA:809:G:H8	1.55	0.71
28:DF:106:ARG:HH11	28:DF:107:LYS:HE2	1.56	0.71
39:BT:23:ARG:NH2	59:BA:2849:U:O4	2.23	0.71
7:AH:83:ILE:HG22	7:AH:137:VAL:HG13	1.71	0.71
59:BA:1346:G:H2'	59:BA:1347:G:C8	2.26	0.71
59:DA:514:A:H2'	59:DA:515:A:H8	1.55	0.71
59:BA:1006:C:H2'	59:BA:1007:C:C6	2.26	0.71
8:CI:9:ARG:O	8:CI:104:ARG:NH1	2.21	0.71
16:AQ:72:ARG:HG2	16:AQ:73:VAL:H	1.56	0.71
28:BF:157:VAL:H	28:BF:193:VAL:H	1.39	0.71
46:B0:72:ARG:HD2	46:B0:75:LEU:HD12	1.73	0.71
47:D1:48:LYS:HE2	47:D1:61:ARG:HG2	1.73	0.71
21:CA:1200:C:O2'	21:CA:1201:A:OP2	2.09	0.71
35:DP:8:PRO:HA	59:DA:1243:G:H1'	1.73	0.71
21:AA:232:G:O2'	21:AA:262:A:N6	2.24	0.71
26:BD:111:LEU:HD11	26:BD:117:VAL:HG11	1.72	0.71
10:CK:119:CYS:HB2	21:CA:778:G:H1'	1.73	0.71
59:DA:2685:G:N2	59:DA:2724:C:N3	2.36	0.70
63:BA:2902:NMY:O11	63:BA:2902:NMY:H1	1.90	0.70
63:AA:1601:NMY:C17	63:AA:1601:NMY:H19	2.21	0.70
21:CA:1408:A:H62	63:CA:1601:NMY:H14	1.56	0.70
28:DF:157:VAL:H	28:DF:193:VAL:H	1.37	0.70
29:BG:113:ARG:CA	29:BG:113:ARG:HE	2.04	0.70
10:CK:122:LYS:HG3	21:CA:779:C:H5''	1.73	0.70
9:AJ:16:LEU:HD23	9:AJ:94:VAL:HG11	1.71	0.70
21:CA:581:G:N2	21:CA:759:A:OP2	2.22	0.70
17:AR:38:GLU:HA	17:AR:41:LYS:HB3	1.73	0.70
33:BN:85:ILE:N	33:BN:106:MET:HA	2.07	0.70
21:AA:1157:A:H62	21:AA:1178:G:N2	1.89	0.70
12:CM:45:VAL:HG23	12:CM:48:LEU:HD12	1.73	0.70
63:BA:2904:NMY:H19	63:BA:2904:NMY:C17	2.21	0.70
21:CA:253:U:N3	21:CA:273:A:H2	1.85	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:2391:G:H1'	59:DA:2429:G:N2	2.06	0.70
59:DA:236:C:N4	59:DA:261:G:H1	1.88	0.70
59:DA:817:C:N4	59:DA:1190:G:H1	1.89	0.70
21:CA:186(F):C:N3	21:CA:186(K):G:N2	2.37	0.70
39:DT:26:ASP:HA	39:DT:48:ILE:HG23	1.72	0.70
32:BK:8:VAL:HG21	32:BK:26:ALA:HB1	1.73	0.70
3:CD:162:LEU:HD11	3:CD:181:MET:HG3	1.73	0.70
21:CA:413:G:H4'	21:CA:414:A:H5''	1.72	0.70
60:DB:30:C:N3	60:DB:54:G:N2	2.33	0.70
6:CG:76:ARG:NH1	6:CG:89:MET:SD	2.64	0.70
29:BG:113:ARG:O	29:BG:114:ILE:C	2.26	0.70
59:DA:13:A:N6	59:DA:526:A:OP2	2.24	0.70
36:BQ:9:TYR:OH	59:BA:912:C:OP1	2.09	0.70
21:AA:29:G:H4'	21:AA:295:C:H4'	1.72	0.70
21:AA:68(D):C:H42	21:AA:68(V):G:H1	1.35	0.70
44:DY:50:ARG:HB3	44:DY:59:GLY:H	1.56	0.70
3:AD:103:ASN:HA	3:AD:106:TYR:HB3	1.73	0.70
21:AA:1440(J):C:H1'	21:AA:1440(K):G:N2	2.06	0.70
33:DN:37:LYS:HB3	59:DA:1138:G:H21	1.56	0.70
21:AA:453:A:N6	21:AA:479:C:N4	2.05	0.70
59:BA:1021:A:H2'	59:BA:1022:G:H4'	1.72	0.70
59:BA:2639:A:H2'	59:BA:2640:G:C8	2.26	0.70
63:DA:2901:NMY:C17	63:DA:2901:NMY:H19	2.21	0.70
59:DA:2006:C:H5''	59:DA:2048:G:H5''	1.72	0.70
25:BC:169:THR:C	25:BC:171:ALA:H	1.94	0.70
59:DA:855:G:H1	59:DA:922:U:H3	1.37	0.70
59:DA:2106:G:H1	59:DA:2183:C:N4	1.89	0.70
38:DS:40:ILE:HA	38:DS:47:THR:HA	1.74	0.70
11:CL:34:ARG:HD3	11:CL:82:VAL:HG13	1.72	0.70
59:DA:2098:U:H3	59:DA:2191:G:H1	1.38	0.70
19:AT:49:ALA:HB1	19:AT:53:LEU:HD23	1.73	0.70
4:AE:154:GLY:HA2	7:AH:64:LYS:HD3	1.73	0.70
20:AY:91:THR:O	20:AY:93:GLU:N	2.25	0.70
59:BA:413:C:H42	59:BA:2410:G:H1	1.40	0.70
60:DB:71:C:H42	60:DB:105:G:H1	1.39	0.70
33:DN:78:TYR:CZ	33:DN:115:ARG:CZ	2.73	0.70
63:BA:2902:NMY:C17	63:BA:2902:NMY:H19	2.21	0.70
59:DA:2528:U:H3	59:DA:2535:G:H1	1.40	0.70
59:BA:539:G:N2	59:BA:554:U:O2	2.20	0.70
21:AA:815:A:N6	21:AA:1509:C:H1'	2.06	0.70
59:BA:470:A:H2'	59:BA:471:A:C8	2.26	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DC:43:GLU:HB2	25:DC:216:THR:O	1.90	0.70
21:AA:575:G:O2'	21:AA:821:G:OP2	2.07	0.70
21:AA:1064:G:O2'	21:AA:1065:U:OP2	2.06	0.70
25:BC:31:LYS:HD2	25:BC:182:PRO:HA	1.72	0.70
59:BA:2397:G:O6	59:BA:2419:U:O2	2.09	0.70
59:BA:851:U:H2'	59:BA:852:G:C8	2.27	0.70
22:CW:19:G:H1'	22:CW:57:G:H21	1.55	0.70
49:B3:5:LYS:HB2	49:B3:36:VAL:HG12	1.72	0.70
21:CA:237:C:H2'	21:CA:238:G:H8	1.55	0.70
34:BO:101:PRO:HB3	34:BO:120:GLU:HB3	1.73	0.70
21:CA:598:U:O4	21:CA:640:A:N1	2.25	0.70
59:DA:2133:G:H21	59:DA:2158:A:N6	1.81	0.70
21:CA:520:A:C6	21:CA:533:A:N6	2.54	0.70
35:BP:67:MET:O	35:BP:69:GLY:N	2.24	0.70
35:BP:89:ALA:HA	35:BP:121:LYS:HD2	1.73	0.70
59:DA:357(J):G:H2'	59:DA:357(K):U:O4'	1.92	0.70
59:BA:500:G:H21	59:BA:505:A:H62	1.37	0.70
51:B5:21:SER:HB2	59:BA:15:G:H4'	1.73	0.70
62:CY:702:FUA:H231	62:CY:702:FUA:H122	1.73	0.70
47:D1:40:ARG:O	47:D1:41:ARG:HB3	1.91	0.70
8:CI:120:ARG:HB2	21:CA:1349:A:H5'	1.71	0.70
60:BB:30:C:N4	60:BB:54:G:H1	1.90	0.70
59:BA:71:A:H62	59:BA:114:U:H1'	1.56	0.70
59:BA:1412:A:H61	59:BA:1590:U:H3	1.39	0.70
59:BA:2868:A:H2'	59:BA:2869:G:C8	2.26	0.70
24:CX:21:A:N6	24:CX:48:C:O2	2.23	0.70
15:CP:13:HIS:O	15:CP:42:ARG:NH2	2.25	0.70
48:D2:65:ASN:HB3	48:D2:69:ARG:HH21	1.57	0.70
21:CA:26:A:H62	21:CA:558:G:H21	1.40	0.70
29:BG:16:ARG:HB2	29:BG:17:PRO:HD3	1.74	0.70
21:AA:908:A:H2'	21:AA:909:A:C8	2.27	0.70
63:BA:2903:NMY:C17	63:BA:2903:NMY:H19	2.21	0.70
59:DA:1269:A:N1	59:DA:2011:U:O2	2.24	0.70
22:CW:71:C:H2'	22:CW:72:C:C6	2.26	0.70
22:CW:71:C:OP1	59:DA:1892:C:O2'	2.10	0.70
59:BA:873:G:H2'	59:BA:874:G:C8	2.26	0.70
38:BS:93:LYS:HD3	60:BB:47:C:H1'	1.73	0.70
44:BY:85:VAL:HG21	59:BA:297:C:H5''	1.73	0.70
32:DK:91:PRO:HG3	59:DA:1063:G:H1'	1.74	0.70
21:AA:975:A:H4'	21:AA:976:G:H5''	1.74	0.70
41:BV:24:LYS:HD2	41:BV:90:PRO:HB2	1.73	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:B5:3:LYS:HG2	51:B5:4:HIS:H	1.57	0.70
31:DJ:58:UNK:O	31:DJ:60:UNK:N	2.25	0.70
20:AY:97:SER:O	20:AY:101:LEU:HG	1.92	0.70
41:DV:60:GLU:H	41:DV:96:ILE:HA	1.54	0.70
59:DA:1570:A:H2'	59:DA:1571:A:C8	2.27	0.70
59:BA:299:A:N3	59:BA:319:C:O2'	2.23	0.70
59:BA:269:U:O2	59:BA:370:G:N2	2.15	0.70
21:AA:720:C:H3'	21:AA:721:G:H2'	1.73	0.70
24:CX:33:U:O2'	24:CX:36:C:N4	2.25	0.70
21:CA:1305:G:H21	21:CA:1332:A:H8	1.26	0.70
59:DA:2398:U:H2'	59:DA:2399:G:H8	1.57	0.70
59:BA:51:G:N2	59:BA:118:A:H62	1.88	0.70
59:DA:227:A:N6	59:DA:410:G:H21	1.88	0.70
21:AA:1427:U:H2'	21:AA:1428:A:C8	2.25	0.70
38:BS:20:ARG:HD3	38:BS:88:ASP:HA	1.74	0.70
21:CA:615:C:H42	21:CA:625:G:H1	1.38	0.70
21:AA:1290:G:H3'	21:AA:1291:G:H8	1.55	0.70
43:BX:53:LYS:HB3	43:BX:82:GLN:HB3	1.74	0.70
17:CR:30:ASP:O	17:CR:36:ASN:ND2	2.18	0.70
21:AA:737:A:H2'	21:AA:738:C:C6	2.27	0.70
31:BJ:58:UNK:N	59:BA:1107:G:OP1	2.25	0.70
14:AO:43:LEU:HD12	59:BA:715:G:H22	1.56	0.70
15:CP:21:VAL:HG13	15:CP:34:GLU:HB3	1.74	0.70
33:BN:35:ARG:HD2	33:BN:39:ARG:O	1.92	0.70
33:BN:85:ILE:HG22	33:BN:97:ARG:NE	2.07	0.70
33:BN:90:MET:SD	33:BN:97:ARG:NH2	2.64	0.70
63:AA:1601:NMY:H1	63:AA:1601:NMY:O11	1.90	0.70
21:CA:1300:G:O2'	21:CA:1301:U:O5'	2.10	0.70
59:DA:271(Q):A:N6	59:DA:357(E):U:N3	2.10	0.70
59:DA:1413:G:N2	59:DA:1589:C:C2	2.60	0.70
46:B0:20:ARG:O	46:B0:24:LYS:NZ	2.25	0.70
59:BA:521:G:H2'	59:BA:522:G:H8	1.57	0.70
21:AA:987:G:H2'	21:AA:988:G:C8	2.26	0.70
26:BD:37:LEU:HB3	26:BD:62:TYR:HB3	1.74	0.70
19:CT:23:ARG:HD2	21:CA:322:C:H4'	1.74	0.70
41:BV:96:ILE:HG22	41:BV:97:LYS:H	1.55	0.70
59:BA:1468(J):G:H2'	59:BA:1468(K):G:H8	1.55	0.70
45:DZ:144:LEU:HD21	45:DZ:150:LEU:HD22	1.72	0.70
37:DR:117:VAL:HG11	59:DA:2881:C:H5'	1.72	0.70
30:DH:176:ALA:HA	59:DA:2529:G:H5''	1.74	0.69
59:DA:1029:A:H3'	59:DA:1030:G:C8	2.27	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:2333:A:H5''	59:DA:2334:G:H3'	1.73	0.69
59:DA:246:C:H42	59:DA:252:G:H1	1.37	0.69
21:CA:824:C:H2'	21:CA:825:G:C8	2.27	0.69
21:CA:1358:U:OP2	21:CA:1359:C:N4	2.24	0.69
28:BF:130:ALA:HB3	28:BF:142:TRP:HB2	1.73	0.69
35:DP:101:VAL:HG12	35:DP:106:LEU:HB3	1.73	0.69
59:DA:1364:G:H4'	59:DA:1808:U:H3	1.56	0.69
35:DP:113:LYS:HE2	35:DP:131:SER:HB2	1.74	0.69
3:CD:8:VAL:HG11	3:CD:115:ARG:HD3	1.74	0.69
20:AY:88:VAL:O	20:AY:90:PHE:N	2.24	0.69
59:BA:1354:A:H62	59:BA:1377:G:N2	1.86	0.69
21:AA:1300:G:O2'	21:AA:1301:U:O5'	2.10	0.69
59:DA:465:G:H22	59:DA:794:G:H22	1.40	0.69
20:CY:89:ASP:HB2	20:CY:457:LEU:HD22	1.74	0.69
59:BA:883:G:N1	59:BA:893:C:O2	2.21	0.69
25:DC:44:VAL:O	25:DC:173:HIS:HA	1.91	0.69
21:CA:166:G:H2'	21:CA:167:G:C8	2.27	0.69
37:BR:101:ALA:O	37:BR:103:ARG:N	2.24	0.69
15:CP:78:GLY:HA2	15:CP:81:ARG:HB3	1.75	0.69
20:CY:317:MET:HB3	20:CY:325:LEU:HB2	1.72	0.69
51:D5:45:VAL:HG11	51:D5:51:TYR:H	1.57	0.69
33:BN:116:LEU:CB	33:BN:118:LYS:HB2	2.21	0.69
21:AA:1298:C:H4'	21:AA:1299:A:C4	2.27	0.69
24:AX:76:A:OP1	24:AX:77:VAL:HB	1.92	0.69
27:DE:34:VAL:HG11	27:DE:64:LYS:HB3	1.73	0.69
36:BQ:18:LYS:HA	60:BB:90:C:H5'	1.73	0.69
2:CC:22:TRP:HB3	2:CC:59:ARG:H	1.57	0.69
35:DP:62:LEU:HB3	59:DA:2393:A:H5''	1.74	0.69
59:DA:1069:A:H4'	59:DA:1070:A:H5''	1.74	0.69
25:DC:79:ALA:HB1	25:DC:83:LYS:HB2	1.74	0.69
26:DD:111:LEU:HD22	26:DD:115:GLN:HB3	1.75	0.69
59:BA:1214:A:H62	59:BA:1235:G:H21	1.38	0.69
59:BA:1426:G:H21	59:BA:1572:A:H62	1.36	0.69
41:BV:10:LYS:HE2	41:BV:23:GLU:HB2	1.73	0.69
21:CA:1494:G:OP2	63:CA:1601:NMY:H81	1.91	0.69
60:BB:60:C:H2'	60:BB:61:G:H8	1.55	0.69
25:BC:40:GLU:HA	25:BC:217:THR:HB	1.73	0.69
21:CA:253:U:O4	21:CA:273:A:N1	2.25	0.69
21:AA:1003:G:H1	21:AA:1037:C:N4	1.89	0.69
59:BA:515:A:O2'	59:BA:580:C:O2	2.10	0.69
40:BU:25:TRP:HD1	40:BU:26:GLY:N	1.91	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AD:171:GLY:O	3:AD:173:TRP:N	2.25	0.69
39:DT:28:VAL:HG21	39:DT:89:VAL:HB	1.73	0.69
25:BC:9:ARG:HA	25:BC:12:LEU:HB3	1.73	0.69
37:DR:25:ALA:HB2	37:DR:47:PHE:HZ	1.57	0.69
59:BA:777:A:H2'	59:BA:778:G:C8	2.27	0.69
20:AY:133:ILE:HG13	20:AY:272:LEU:HD11	1.74	0.69
21:AA:980:C:H5''	21:AA:981:U:C5	2.26	0.69
59:BA:1527:G:N2	59:BA:1544:A:H2'	2.08	0.69
24:CX:31:C:N4	24:CX:39:G:H1	1.89	0.69
21:AA:429:U:H4'	21:AA:430:A:H5'	1.75	0.69
36:DQ:129:THR:OG1	36:DQ:130:LYS:N	2.25	0.69
60:DB:70:C:H42	60:DB:106:G:H1	0.75	0.69
21:CA:253:U:N3	21:CA:273:A:C2	2.53	0.69
7:AH:87:SER:HB2	7:AH:133:LEU:O	1.93	0.69
3:CD:76:ARG:NH1	3:CD:207:TYR:OH	2.24	0.69
24:CX:9:A:H4'	24:CX:46:G:H4'	1.74	0.69
59:DA:357:A:H2'	59:DA:357(A):U:C6	2.28	0.69
59:BA:1506(H):C:H2'	59:BA:1506(I):U:C6	2.27	0.69
63:CA:1601:NMY:H1	63:CA:1601:NMY:O11	1.90	0.69
59:DA:226:G:C2	59:DA:228:A:N6	2.60	0.69
21:CA:984:C:N4	21:CA:1221:G:H1	1.91	0.69
59:BA:692:C:N3	59:BA:770:G:N2	2.32	0.69
21:CA:925:G:O6	21:CA:1391:U:O4	2.11	0.69
59:DA:92:G:H2'	59:DA:93:C:C6	2.28	0.69
22:CW:31:A:C2	22:CW:39:U:N3	2.55	0.69
59:DA:883:G:N1	59:DA:893:C:O2	2.24	0.69
21:CA:1095:U:H2'	21:CA:1096:C:O4'	1.93	0.69
28:DF:154:VAL:O	28:DF:156:LEU:N	2.24	0.69
29:BG:107:LEU:HA	29:BG:111:LEU:HD12	1.72	0.69
59:DA:1062:G:N2	59:DA:1077:A:O2'	2.24	0.69
59:DA:1466:G:O2'	59:DA:1546:C:O2'	2.10	0.69
21:CA:766:A:H3'	21:CA:767:A:H8	1.57	0.69
20:AY:276:VAL:HA	20:AY:280:LEU:HD23	1.72	0.69
59:BA:1506(K):C:H2'	59:BA:1506(L):G:C8	2.28	0.69
24:CX:19:G:H8	24:CX:57:G:H21	1.38	0.69
53:B7:40:TRP:CD1	53:B7:41:ARG:N	2.58	0.69
59:BA:2543:G:H21	59:BA:2646:C:H5''	1.56	0.69
12:CM:26:GLY:H	21:CA:1329:A:H5''	1.58	0.69
36:BQ:35:VAL:CA	36:BQ:102:VAL:HA	2.22	0.69
24:AX:37:A:H2'	24:AX:38:A:O4'	1.92	0.69
1:CB:19:HIS:HB2	1:CB:204:ASN:HD22	1.57	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DR:24:GLN:O	37:DR:28:LEU:HB2	1.93	0.69
59:BA:1221:C:H42	59:BA:1228:G:H1	1.37	0.69
30:BH:175:LYS:O	30:BH:177:GLY:N	2.25	0.69
3:AD:101:LEU:HA	3:AD:104:VAL:HB	1.74	0.69
34:DO:45:GLU:HA	34:DO:54:GLU:HG2	1.74	0.69
33:DN:57:ALA:HA	33:DN:126:PRO:HD3	1.75	0.69
21:CA:1494:G:C8	63:CA:1601:NMV:N7	2.60	0.69
11:CL:39:VAL:HB	11:CL:55:VAL:HG11	1.75	0.69
21:CA:1040:U:H2'	21:CA:1041:A:C8	2.28	0.69
59:DA:1285:G:N2	59:DA:1328:G:H5''	2.07	0.69
11:AL:35:GLY:HA3	11:AL:83:VAL:HG22	1.75	0.69
21:AA:1127:G:C2	21:AA:1145:C:O2	2.45	0.69
21:CA:680:C:N3	21:CA:710:G:N2	2.38	0.69
22:CW:7:G:H2'	22:CW:49:A:H1'	1.74	0.69
59:DA:2200:C:N4	59:DA:2223:G:H1	1.89	0.69
20:CY:139:MET:HB3	20:CY:174:PHE:HE1	1.56	0.69
22:CW:50:C:N4	22:CW:64:G:H1	1.91	0.69
59:DA:2139:C:O2	59:DA:2152:G:N1	2.18	0.69
59:DA:1544:A:N7	59:DA:1545:A:N6	2.41	0.69
45:DZ:99:TYR:HB3	45:DZ:123:ASP:HB2	1.74	0.69
36:DQ:82:ARG:HD2	59:DA:2250:G:C8	2.28	0.69
40:DU:112:ARG:HD3	41:DV:46:VAL:HG11	1.74	0.69
7:CH:39:LEU:HB3	7:CH:45:ILE:HG12	1.74	0.69
59:DA:709:U:H2'	59:DA:710:G:H8	1.57	0.69
46:B0:47:PRO:HG3	46:B0:59:LEU:HD22	1.74	0.69
32:BK:54:PRO:HB2	32:BK:70:LYS:HD3	1.75	0.69
36:BQ:17:LEU:HB3	36:BQ:98:LYS:HE2	1.73	0.69
34:DO:27:GLY:HA3	59:DA:2674:G:H1'	1.73	0.69
27:BE:1:MET:N	27:BE:1:MET:SD	2.53	0.69
8:CI:28:VAL:HG13	8:CI:63:ILE:HB	1.75	0.69
20:AY:357:ARG:NH1	20:AY:373:ASP:OD1	2.25	0.69
21:AA:1346:A:O3'	21:AA:1347:G:H4'	1.93	0.69
21:CA:160:A:H2'	21:CA:161:A:O4'	1.93	0.69
59:BA:2589:A:H2'	59:BA:2590:A:C8	2.27	0.69
7:AH:84:ARG:HB3	7:AH:136:GLU:HG3	1.74	0.69
59:BA:659:C:H2'	59:BA:660:G:H8	1.57	0.69
59:BA:481:G:OP1	59:BA:481:G:H4'	1.92	0.69
18:AS:19:VAL:HA	18:AS:22:LEU:HB2	1.74	0.69
33:DN:114:ARG:NH2	59:DA:527:C:O2'	2.24	0.69
21:CA:1538:C:H42	23:CV:7:G:H1	1.41	0.69
21:CA:34:C:H2'	21:CA:35:G:C8	2.28	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:CX:34:U:H3'	24:CX:35:A:C8	2.27	0.69
60:DB:34:U:H3	60:DB:48:A:H61	0.78	0.69
46:D0:27:GLU:OE2	59:DA:855:G:N2	2.23	0.69
28:DF:117:ARG:HH21	28:DF:186:ILE:HG23	1.58	0.69
38:DS:39:ILE:HD13	38:DS:49:VAL:HB	1.75	0.69
59:DA:603:A:N6	59:DA:625:G:O2'	2.25	0.69
20:CY:428:LEU:HA	20:CY:431:LEU:HB2	1.75	0.69
21:CA:284:G:H2'	21:CA:285:G:H8	1.57	0.69
26:DD:253:GLN:NE2	26:DD:255:LYS:O	2.25	0.69
2:AC:154:SER:HB2	21:AA:1057:G:H5''	1.75	0.69
21:AA:626:U:H2'	21:AA:627:G:C8	2.27	0.69
21:CA:1063:C:H42	21:CA:1193:G:H1	0.74	0.69
21:CA:954:G:H22	21:CA:1227:A:N6	1.91	0.69
59:DA:808:G:H2'	59:DA:809:G:C8	2.28	0.69
59:DA:2392:A:H2	59:DA:2424:C:H42	1.41	0.69
21:CA:47:C:N4	21:CA:361:G:H1	1.90	0.69
36:BQ:72:LYS:O	36:BQ:93:TYR:HA	1.92	0.69
21:AA:1218:C:H2'	21:AA:1219:U:C6	2.28	0.69
59:DA:75:G:O6	59:DA:111:A:N1	2.25	0.69
20:CY:255:ILE:HG22	20:CY:257:PRO:HD3	1.76	0.69
20:CY:294:PRO:HD3	20:CY:397:VAL:HG12	1.73	0.69
16:AQ:27:PHE:HE2	16:AQ:30:PRO:HD3	1.58	0.69
59:DA:956:G:H2'	59:DA:957:A:H2'	1.75	0.68
59:DA:852:G:H1	59:DA:925:C:H42	1.40	0.68
60:BB:24:G:N2	60:BB:28:C:O2	2.26	0.68
59:DA:1712(B):G:H1	59:DA:1712(P):C:N4	1.89	0.68
21:CA:1028(H):G:H2'	21:CA:1033:G:H8	1.59	0.68
21:AA:1427:U:O4	21:AA:1473:A:N1	2.26	0.68
52:D6:16:CYS:SG	52:D6:47:THR:OG1	2.51	0.68
59:DA:479:A:H1'	59:DA:481:G:H5''	1.73	0.68
59:BA:2886:G:H2'	59:BA:2887:U:C6	2.27	0.68
59:BA:2620:C:H2'	59:BA:2621:A:C8	2.29	0.68
1:CB:12:GLU:HA	1:CB:16:HIS:CD2	2.28	0.68
7:CH:69:ARG:HH22	7:CH:75:ARG:HB3	1.57	0.68
59:BA:2491:U:H4'	59:BA:2570:G:H5''	1.73	0.68
51:B5:15:ARG:HH21	59:BA:2021:C:H4'	1.58	0.68
7:AH:38:ILE:HD13	7:AH:41:ARG:HH12	1.58	0.68
42:DW:18:ARG:HH11	42:DW:76:VAL:HG13	1.58	0.68
59:DA:2066:C:N3	59:DA:2444:G:N2	2.33	0.68
33:BN:22:THR:HG21	33:BN:25:ARG:HB2	1.76	0.68
33:BN:28:THR:H	33:BN:37:LYS:HD2	1.58	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BN:50:ASP:HA	33:BN:103:VAL:HG11	1.74	0.68
59:DA:38:A:H2'	59:DA:39:C:C6	2.28	0.68
59:DA:2546:U:H5''	59:DA:2547:U:H5'	1.75	0.68
43:DX:53:LYS:O	43:DX:81:VAL:HA	1.93	0.68
59:BA:1368:G:H2'	59:BA:1369:G:H8	1.58	0.68
25:DC:216:THR:HG21	59:DA:2176:A:H1'	1.74	0.68
23:CV:26:A:H2'	23:CV:27:A:H8	1.58	0.68
35:BP:48:PRO:HB2	59:BA:833:U:H5'	1.76	0.68
30:DH:152:ARG:HB3	30:DH:162:ILE:HG13	1.73	0.68
47:B1:27:GLU:O	47:B1:32:LYS:NZ	2.26	0.68
6:AG:12:LEU:HD12	6:AG:21:VAL:HB	1.75	0.68
15:CP:43:LYS:NZ	21:CA:452:A:OP1	2.22	0.68
35:DP:7:ARG:HH21	59:DA:1203:G:H4'	1.56	0.68
21:AA:147:G:H1	21:AA:175:C:H42	1.39	0.68
59:DA:24:G:H1	59:DA:516:C:H42	1.39	0.68
33:DN:85:ILE:HG21	33:DN:109:LYS:H	1.58	0.68
59:BA:1005:C:N4	59:BA:1138:G:H1	1.90	0.68
21:AA:516:U:O2	21:AA:533:A:N7	2.26	0.68
59:DA:1348:G:H1	59:DA:1598:C:H42	0.74	0.68
60:DB:65:C:C5	60:DB:66:A:H1'	2.28	0.68
59:DA:1430:C:N3	59:DA:1563:G:N2	2.34	0.68
35:BP:25:SER:HA	59:BA:811:U:H2'	1.75	0.68
59:BA:20:C:H2'	59:BA:21:A:H8	1.56	0.68
59:DA:1039:G:H1	59:DA:1116:C:N4	1.91	0.68
28:DF:191:ARG:O	28:DF:193:VAL:N	2.25	0.68
42:BW:14:PRO:HB3	42:BW:18:ARG:HH21	1.56	0.68
59:DA:1466:G:HO2'	59:DA:1546:C:HO2'	1.41	0.68
25:DC:40:GLU:O	25:DC:218:THR:N	2.26	0.68
41:BV:59:ALA:HA	41:BV:96:ILE:HA	1.74	0.68
35:DP:98:GLU:HA	35:DP:101:VAL:HG22	1.75	0.68
20:AY:309:LEU:HD23	20:AY:391:GLY:HA3	1.75	0.68
18:CS:32:LYS:HA	18:CS:50:ALA:HB3	1.76	0.68
21:AA:838(A):U:O2'	21:AA:838(B):C:H5''	1.92	0.68
4:AE:34:VAL:H	4:AE:62:ALA:HB1	1.58	0.68
46:B0:43:THR:O	46:B0:43:THR:OG1	2.09	0.68
59:BA:1786:A:OP1	59:BA:1980:G:N2	2.27	0.68
60:DB:18:G:H2'	60:DB:19:G:O4'	1.92	0.68
33:DN:88:GLU:O	33:DN:91:LEU:HB3	1.93	0.68
33:BN:75:TYR:H	33:BN:82:LEU:HB2	1.58	0.68
59:DA:642:G:N2	59:DA:645:C:OP2	2.26	0.68
59:DA:1820:U:H3'	59:DA:1821:A:H8	1.58	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:BB:3:C:C2	60:BB:117:G:C2	2.81	0.68
21:CA:832:C:H2'	21:CA:833:U:O4'	1.92	0.68
59:BA:1654:A:H2'	59:BA:1655:A:C8	2.27	0.68
33:BN:125:GLY:O	33:BN:127:ASP:N	2.26	0.68
59:BA:355:G:H2'	59:BA:356:G:H8	1.59	0.68
59:DA:2745:C:H41	59:DA:2755:C:H4'	1.59	0.68
37:DR:106:GLY:O	59:DA:2009:G:N2	2.26	0.68
60:BB:108:C:H5'	60:BB:109:G:H4'	1.75	0.68
25:DC:61:GLY:O	25:DC:163:GLU:HA	1.94	0.68
59:BA:1613:G:H3'	59:BA:1617:C:H42	1.58	0.68
59:BA:1939:U:N3	59:BA:1967:C:O2'	2.27	0.68
59:BA:584:C:N4	59:BA:1256:G:H1	1.91	0.68
59:BA:2178:C:H2'	59:BA:2179:C:H6	1.57	0.68
59:BA:2086:U:H3	59:BA:2233:U:H3	1.38	0.68
59:DA:882:G:H2'	59:DA:883:G:C8	2.29	0.68
59:DA:1399:C:H2'	59:DA:1400:G:H8	1.59	0.68
59:DA:1687:G:N2	59:DA:1701:A:H62	1.90	0.68
26:BD:260:ARG:HH21	26:BD:270:ILE:HD13	1.59	0.68
59:BA:73:A:H5'	59:BA:75:G:H1'	1.75	0.68
59:BA:1207:C:N3	59:BA:1239:G:N2	2.41	0.68
21:CA:1291:G:H2'	21:CA:1292:U:H6	1.59	0.68
11:AL:71:PRO:HD2	11:AL:102:ARG:HD3	1.75	0.68
29:DG:173:LEU:HB3	29:DG:178:PHE:HB2	1.75	0.68
59:BA:2708:G:H2'	59:BA:2709:G:C8	2.28	0.68
45:DZ:61:LEU:HG	45:DZ:62:PRO:HD2	1.75	0.68
20:CY:529:ILE:HD12	20:CY:532:GLY:HA2	1.76	0.68
29:DG:36:LYS:HG2	29:DG:160:VAL:HB	1.75	0.68
59:BA:605:C:O2	59:BA:657:U:O2'	2.12	0.68
59:DA:2777:G:H5''	59:DA:2778:A:H5'	1.76	0.68
33:DN:34:LEU:O	33:DN:35:ARG:HG3	1.94	0.68
33:DN:45:ASN:HB3	33:DN:78:TYR:HD2	1.58	0.68
33:BN:35:ARG:HD3	33:BN:75:TYR:C	2.13	0.68
59:BA:2552:U:H3'	59:BA:2553:G:H5'	1.75	0.68
21:CA:66:G:N2	21:CA:103:C:N3	2.40	0.68
59:DA:2115:G:H1'	59:DA:2171:A:H61	1.59	0.68
59:DA:1061:U:H3'	59:DA:1062:G:H5''	1.76	0.68
59:BA:2065:C:H2'	59:BA:2066:C:C6	2.29	0.68
20:AY:328:ILE:HD12	20:AY:330:VAL:H	1.58	0.68
8:CI:19:LEU:HD22	8:CI:59:PHE:HB3	1.76	0.68
59:DA:2314:C:H2'	59:DA:2315:G:C8	2.29	0.68
27:BE:36:ARG:HH12	27:BE:86:PRO:HD2	1.58	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BN:104:LYS:NZ	33:BN:121:LYS:O	2.26	0.68
63:CA:1601:NMY:C17	63:CA:1601:NMY:H19	2.21	0.68
59:DA:2255:G:H1	59:DA:2275:C:N4	1.85	0.68
59:BA:18:C:O2'	59:BA:554:U:OP1	2.12	0.68
21:AA:1537:U:N3	23:AV:8:A:O2'	2.27	0.68
10:CK:30:VAL:N	10:CK:43:SER:O	2.27	0.68
59:BA:2064:C:H2'	59:BA:2065:C:C6	2.29	0.68
21:CA:766:A:H3'	21:CA:767:A:C8	2.28	0.68
19:AT:49:ALA:O	19:AT:52:ALA:N	2.27	0.68
37:BR:40:LYS:O	37:BR:44:LEU:HB2	1.92	0.68
40:BU:21:ALA:HA	40:BU:39:LEU:HD21	1.76	0.68
59:DA:729:G:H4'	59:DA:763:G:H5'	1.76	0.68
15:AP:57:ARG:NH2	15:AP:81:ARG:O	2.27	0.68
59:DA:1415:U:H3	59:DA:1587:A:H61	0.81	0.68
59:DA:2167:U:H2'	59:DA:2168:G:C8	2.29	0.68
28:DF:89:VAL:HG21	59:DA:586:A:H5'	1.76	0.68
59:DA:244:A:H62	59:DA:254:G:N2	1.89	0.68
21:CA:1028(H):G:H2'	21:CA:1033:G:C8	2.28	0.68
35:BP:27:HIS:HE1	59:BA:814:C:H41	1.39	0.68
21:CA:877:C:H2'	21:CA:878:G:H8	1.59	0.68
40:DU:92:ARG:HB3	40:DU:95:LEU:HG	1.76	0.68
59:DA:796:C:H2'	59:DA:797:C:C6	2.28	0.68
45:BZ:60:GLU:HA	45:BZ:66:SER:HA	1.76	0.68
21:CA:1076:C:H42	21:CA:1081:G:H1	1.42	0.68
32:DK:14:ALA:HB3	32:DK:50:ASP:HA	1.76	0.68
20:AY:10:LYS:HE2	20:AY:284:LEU:HD13	1.75	0.68
16:AQ:28:PRO:HA	16:AQ:35:VAL:HA	1.75	0.68
59:BA:2096:U:H2'	59:BA:2097:C:C6	2.29	0.68
20:CY:621:ILE:O	20:CY:625:ASN:ND2	2.26	0.68
33:DN:18:ALA:N	33:DN:56:ASN:OD1	2.27	0.68
34:BO:1:MET:SD	34:BO:1:MET:N	2.64	0.68
7:CH:95:VAL:HG22	7:CH:99:GLU:HB3	1.76	0.68
43:DX:66:LEU:HD11	59:DA:64:A:H1'	1.76	0.68
59:DA:1753:G:N2	59:DA:1756:G:O5'	2.27	0.68
21:CA:403:C:N4	21:CA:547:A:H5'	2.09	0.68
32:DK:21:PRO:HA	32:DK:23:VAL:H	1.59	0.68
42:BW:58:ALA:HA	42:BW:62:HIS:HB2	1.74	0.68
21:AA:458(A):G:C2	21:AA:458(E):A:N7	2.62	0.68
38:BS:85:VAL:H	38:BS:106:ARG:HD3	1.58	0.68
25:DC:44:VAL:HG13	25:DC:213:VAL:O	1.94	0.68
59:BA:969:U:H2'	59:BA:970:C:C6	2.28	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:DZ:150:LEU:HD21	45:DZ:171:ILE:HD11	1.76	0.68
37:BR:39:PRO:HG2	59:BA:1651:G:H4'	1.74	0.68
3:CD:5:ILE:HD13	21:CA:406:G:H5''	1.76	0.68
21:AA:927:G:H1	21:AA:1390:U:H3	1.38	0.68
15:AP:36:ILE:HB	15:AP:52:ASP:HB3	1.74	0.68
28:DF:12:LEU:HA	28:DF:17:ARG:HB3	1.76	0.68
59:DA:1682:G:H2'	59:DA:1683:C:O4'	1.92	0.68
59:DA:1009:A:H1'	59:DA:1153:C:O2'	1.93	0.68
24:CX:76:A:OP2	59:DA:2573:C:N4	2.25	0.68
59:DA:1589:C:H2'	59:DA:1590:U:C6	2.29	0.68
59:DA:922:U:H2'	59:DA:923:C:C6	2.29	0.68
59:DA:1446:C:N4	59:DA:1465:G:H1	1.92	0.68
48:B2:32:LEU:HB2	48:B2:53:LEU:HD22	1.76	0.68
29:BG:111:LEU:HB2	29:BG:112:PRO:HD3	1.75	0.68
28:BF:156:LEU:HB2	28:BF:193:VAL:HB	1.75	0.68
21:CA:320:C:H1'	21:CA:1434:A:H2	1.59	0.68
59:DA:2329:G:H2'	59:DA:2330:G:C8	2.29	0.68
59:BA:2647:U:H2'	59:BA:2648:C:C6	2.29	0.68
59:BA:1358:G:H21	59:BA:1373:A:H62	1.43	0.68
20:AY:649:LEU:H	20:AY:652:MET:HB3	1.58	0.68
21:CA:934:C:N3	21:CA:938:A:N1	2.42	0.68
59:BA:1949:G:H2'	59:BA:1950:G:C8	2.29	0.68
21:AA:352:C:O2	21:AA:355:C:N4	2.27	0.68
32:DK:30:HIS:NE2	32:DK:64:SER:O	2.26	0.68
33:BN:112:LEU:O	33:BN:115:ARG:N	2.26	0.67
7:CH:129:VAL:HA	21:CA:600:C:H4'	1.75	0.67
60:BB:23:G:N1	60:BB:60:C:N4	2.19	0.67
26:DD:51:VAL:HG22	26:DD:52:ARG:H	1.59	0.67
60:DB:83:G:N2	60:DB:93:C:N3	2.37	0.67
21:CA:1002:G:H1	21:CA:1038:C:N4	1.91	0.67
55:D9:27:CYS:HB3	55:D9:32:HIS:HB2	1.75	0.67
38:BS:26:LEU:HD12	38:BS:85:VAL:HG21	1.75	0.67
59:BA:2532:G:H21	59:BA:2663:G:N2	1.91	0.67
59:BA:2313:C:H2'	59:BA:2314:C:C6	2.29	0.67
2:AC:109:PRO:O	2:AC:111:LEU:N	2.27	0.67
14:AO:16:ALA:HA	14:AO:27:VAL:HG22	1.76	0.67
32:BK:105:LEU:HD23	32:BK:106:GLU:H	1.59	0.67
21:AA:992:U:H3	21:AA:1044:A:H62	1.39	0.67
30:BH:98:LEU:HB2	30:BH:125:VAL:HB	1.76	0.67
33:DN:114:ARG:HE	59:DA:527:C:C1'	2.07	0.67
33:DN:65:LYS:O	33:DN:67:LEU:N	2.27	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:955:C:N3	59:BA:962:G:C6	2.62	0.67
21:AA:1323:G:H2'	21:AA:1324:A:H8	1.57	0.67
59:BA:1018:C:H2'	59:BA:1019:U:H6	1.57	0.67
59:DA:1712(G):G:H1'	59:DA:1712(K):A:N6	2.09	0.67
20:CY:519:ARG:HH12	20:CY:678:GLU:HB2	1.59	0.67
35:BP:66:GLY:HA2	59:BA:2415:G:H4'	1.75	0.67
37:DR:40:LYS:O	37:DR:44:LEU:HB2	1.94	0.67
21:AA:695:A:H2'	21:AA:696:A:C8	2.29	0.67
37:DR:107:ASP:O	59:DA:1649:G:N2	2.26	0.67
59:BA:223:A:N1	59:BA:407:G:O2'	2.26	0.67
7:AH:36:LEU:HA	7:AH:39:LEU:HB2	1.76	0.67
59:BA:2817:G:H21	59:BA:2836:U:H1'	1.60	0.67
33:DN:74:ARG:N	33:DN:84:LYS:HB3	2.09	0.67
59:DA:2699:C:N4	59:DA:2708:G:H1	1.92	0.67
34:DO:2:ILE:HG12	34:DO:33:ALA:HB3	1.77	0.67
46:B0:20:ARG:HH21	59:BA:2271:G:H5''	1.57	0.67
49:D3:31:LEU:HD22	49:D3:32:GLN:HG2	1.76	0.67
21:AA:673:G:H1	21:AA:717:C:H42	1.42	0.67
43:DX:4:ALA:HB2	48:D2:26:ARG:HG2	1.77	0.67
42:BW:14:PRO:HD2	42:BW:99:ARG:HB2	1.76	0.67
21:AA:898:G:H1'	21:AA:901:A:N6	2.09	0.67
38:DS:97:ARG:O	38:DS:99:LYS:N	2.27	0.67
59:BA:2001:A:H2'	59:BA:2002:G:C8	2.30	0.67
27:DE:98:PRO:HD3	32:DK:62:ASP:HB2	92.23	0.67
25:DC:26:ALA:O	25:DC:30:VAL:HB	1.94	0.67
30:BH:96:ALA:H	30:BH:128:PRO:HB3	1.59	0.67
12:AM:99:ARG:NH2	21:AA:1309:G:OP2	2.27	0.67
35:BP:95:VAL:HB	35:BP:125:VAL:HA	1.75	0.67
59:DA:52:A:OP2	59:DA:117:G:N2	2.27	0.67
59:DA:514:A:H2'	59:DA:515:A:C8	2.30	0.67
33:BN:30:ILE:HG23	33:BN:34:LEU:HD12	1.76	0.67
21:AA:1405:G:O5'	63:AA:1601:NMY:H231	1.93	0.67
22:AW:2:G:H22	22:AW:72:C:N4	1.92	0.67
59:DA:225:A:N1	59:DA:230:U:O2	2.28	0.67
21:CA:1343:G:H21	21:CA:1349:A:H4'	1.60	0.67
60:BB:28:C:H2'	60:BB:29:A:H8	1.58	0.67
59:DA:1046:A:H3'	59:DA:1047:G:H5'	1.76	0.67
21:CA:17:U:H3	21:CA:918:A:H2	1.42	0.67
48:B2:32:LEU:HD13	48:B2:53:LEU:HB3	1.77	0.67
59:DA:520:G:H2'	59:DA:521:G:O4'	1.94	0.67
42:BW:77:ASP:OD1	59:BA:23:G:N2	2.26	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CA:974:A:H4'	21:CA:975:A:H3'	1.76	0.67
2:AC:12:LEU:HB2	13:AN:57:ARG:HH21	1.59	0.67
59:DA:500:G:H21	59:DA:505:A:H62	1.39	0.67
10:CK:120:ARG:HB3	21:CA:778:G:H21	1.60	0.67
21:AA:1061:G:H1	21:AA:1195:C:H42	1.40	0.67
59:BA:2006:C:H5''	59:BA:2048:G:H5''	1.76	0.67
10:CK:34:ASP:O	10:CK:36:ASP:N	2.24	0.67
22:AW:50:C:N4	22:AW:64:G:N1	2.41	0.67
27:BE:170:LEU:HD23	27:BE:185:LYS:HB2	1.77	0.67
33:BN:50:ASP:O	33:BN:52:VAL:N	2.28	0.67
59:BA:2167:U:H2'	59:BA:2168:G:C8	2.30	0.67
1:AB:95:GLN:HG3	1:AB:148:TYR:HA	1.75	0.67
21:AA:859:A:OP2	21:AA:869:G:N1	2.26	0.67
21:CA:953:G:H5''	21:CA:965:A:C2	2.29	0.67
26:BD:145:VAL:HG12	26:BD:147:LEU:H	1.59	0.67
21:CA:1440:C:N3	21:CA:1461:G:O6	2.26	0.67
35:DP:6:LEU:HG	35:DP:8:PRO:HD2	1.76	0.67
5:CF:12:PRO:HG3	5:CF:57:GLN:HG3	1.76	0.67
59:BA:2651:C:H42	59:BA:2669:G:H1	1.40	0.67
21:CA:1440(N):C:H2'	21:CA:1440(O):A:O4'	1.94	0.67
59:BA:1344:G:H4'	59:BA:1384:A:C5	2.29	0.67
21:CA:951:G:N3	21:CA:970:C:O2'	2.24	0.67
3:AD:67:ILE:HG23	3:AD:68:TYR:HD1	1.58	0.67
59:BA:644:A:H2	59:BA:2369:A:H1'	1.60	0.67
33:DN:78:TYR:HB3	33:DN:79:PRO:HD3	1.76	0.67
15:AP:28:ARG:NH1	21:AA:375:U:O2	2.27	0.67
3:AD:25:ARG:HG3	21:AA:410:G:OP2	1.95	0.67
24:AX:53:G:N2	24:AX:61:C:C2	2.62	0.67
59:DA:2819:G:N2	59:DA:2827:C:N3	2.36	0.67
59:DA:997:G:N2	59:DA:1158:C:N3	2.37	0.67
59:DA:1045:A:N3	59:DA:1047:G:N2	2.43	0.67
59:BA:1636:C:H2'	59:BA:1637:A:H8	1.57	0.67
59:BA:390:A:H4'	59:BA:391:G:H5'	1.75	0.67
59:DA:1074:G:H2'	59:DA:1075:C:C6	2.29	0.67
20:CY:679:VAL:O	20:CY:681:LYS:N	2.28	0.67
26:BD:183:ARG:HH22	26:BD:266:SER:HB2	1.60	0.67
4:CE:18:ARG:NH1	21:CA:1082:G:OP1	2.27	0.67
47:B1:22:GLY:O	47:B1:23:LYS:HB2	1.93	0.67
33:DN:114:ARG:NE	59:DA:527:C:C1'	2.57	0.67
59:DA:1974:C:O2	63:DA:2901:NMY:N9	2.28	0.67
62:AY:702:FUA:H201	62:AY:702:FUA:O1	1.95	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CA:773:G:N2	21:CA:806:C:N3	2.36	0.67
59:DA:1691:C:N3	59:DA:1696:G:N2	2.37	0.67
60:DB:80:U:H2'	60:DB:81:G:H21	1.57	0.67
21:CA:1090:U:O2	21:CA:1095:U:O4	2.13	0.67
6:CG:69:VAL:HG21	6:CG:104:LEU:HD21	1.75	0.67
37:BR:42:LYS:O	37:BR:45:ARG:HG3	1.95	0.67
30:DH:139:GLN:NE2	59:DA:2745:C:O2	2.24	0.67
45:BZ:67:LEU:HD12	45:BZ:68:PRO:HD2	1.75	0.67
44:DY:46:LYS:H	44:DY:62:GLU:HB2	1.60	0.67
21:AA:614:A:H2'	21:AA:615:C:C6	2.30	0.67
33:DN:97:ARG:HH11	33:DN:108:PRO:HB2	1.60	0.67
33:BN:104:LYS:HG3	33:BN:120:LEU:HD21	1.75	0.67
59:DA:2525:G:H2'	59:DA:2526:G:C8	2.29	0.67
59:BA:1416:G:H1	59:BA:1582:C:N4	1.93	0.67
59:BA:2450:A:N6	59:BA:2501:C:H42	1.91	0.67
59:DA:2679:A:N6	59:DA:2728:U:H3	1.92	0.67
59:DA:1855:G:H1	59:DA:1887:C:N4	1.91	0.67
32:BK:53:VAL:HG13	32:BK:70:LYS:H	1.58	0.67
8:AI:107:ARG:HB3	21:AA:1347:G:H5'	1.76	0.67
45:DZ:60:GLU:HA	45:DZ:66:SER:HA	1.76	0.67
59:DA:842:G:H2'	59:DA:843:G:C8	2.30	0.67
8:AI:65:VAL:HG11	8:AI:77:ILE:HD11	1.77	0.67
40:BU:14:HIS:NE2	59:BA:1252:G:OP2	2.28	0.67
19:CT:73:HIS:HB3	19:CT:74:LYS:HD3	1.75	0.67
4:AE:83:GLU:HB2	4:AE:88:LYS:HD3	1.75	0.67
21:AA:34:C:H2'	21:AA:35:G:C8	2.29	0.67
22:AW:68:U:H2'	22:AW:69:A:C8	2.30	0.67
21:CA:68(H):G:HO2'	21:CA:68(I):G:H8	1.37	0.67
21:CA:68(R):C:H2'	21:CA:68(S):C:H5	1.58	0.67
59:BA:2331:G:H21	59:BA:2336:A:H2	1.43	0.67
38:BS:97:ARG:O	38:BS:100:ALA:N	2.25	0.67
21:AA:658:G:H1	21:AA:747:C:N4	1.93	0.67
53:B7:34:ARG:HH12	59:BA:466:A:H5''	1.59	0.67
21:AA:416:G:O6	21:AA:427:U:O2	2.13	0.67
21:AA:1440(K):G:N2	21:AA:1440(L):G:N7	2.43	0.67
26:DD:112:GLN:H	26:DD:115:GLN:HG3	1.60	0.67
45:DZ:128:VAL:HG22	45:DZ:129:SER:H	1.60	0.67
34:DO:16:ALA:HA	34:DO:46:ALA:HA	1.76	0.67
20:CY:647:VAL:HG11	20:CY:652:MET:HG2	1.77	0.67
59:DA:579:G:O6	59:DA:1261:C:N3	2.28	0.67
22:CW:21:A:H61	22:CW:46:G:H5''	1.59	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AX:52:G:N1	24:AX:62:C:C2	2.52	0.67
59:BA:1586:A:H3'	59:BA:1587:A:C8	2.27	0.67
59:BA:841:A:H2'	59:BA:842:G:H8	1.59	0.67
59:BA:1413:G:N2	59:BA:1589:C:N3	2.36	0.67
40:DU:95:LEU:HD22	41:DV:13:ARG:HB2	1.77	0.67
59:BA:1712(A):U:H2'	59:BA:1712(B):G:C8	2.30	0.67
19:AT:33:ILE:HD11	19:AT:62:LEU:HD13	1.77	0.67
28:DF:8:GLN:HB2	28:DF:22:ALA:HB2	1.77	0.67
26:DD:142:VAL:HG23	26:DD:193:VAL:HA	1.77	0.67
21:AA:170:U:H2'	21:AA:171:A:C8	2.29	0.67
59:BA:1061:U:H4'	59:BA:1070:A:O3'	1.95	0.67
33:DN:114:ARG:CZ	59:DA:527:C:H6	2.08	0.66
33:DN:37:LYS:O	33:DN:75:TYR:HB3	1.94	0.66
59:DA:1925:C:N4	59:DA:1929:G:H22	1.94	0.66
59:DA:2247:A:H61	59:DA:2257:U:H3	0.74	0.66
59:DA:2535:G:H2'	59:DA:2536:G:C8	2.30	0.66
59:BA:20:C:H2'	59:BA:21:A:C8	2.29	0.66
35:BP:112:LEU:HD11	35:BP:114:ILE:HG23	1.77	0.66
24:CX:29:U:H1'	24:CX:42:G:C2	2.30	0.66
21:CA:892:A:H62	21:CA:906:G:H21	1.40	0.66
8:CI:10:ARG:HB2	8:CI:76:ALA:HA	1.77	0.66
47:B1:19:GLN:HB3	47:B1:40:ARG:HD3	1.76	0.66
54:B8:36:LYS:HE3	54:B8:40:GLU:HG3	1.77	0.66
9:CJ:27:ALA:HB1	9:CJ:34:VAL:HG21	1.77	0.66
31:BJ:54:UNK:HA	31:BJ:79:UNK:HA	1.75	0.66
59:BA:1486:A:H2'	59:BA:1487:G:H8	1.58	0.66
59:BA:836:G:N1	59:BA:943:U:O2	2.18	0.66
48:B2:48:HIS:CD2	48:B2:49:LYS:H	2.12	0.66
12:AM:65:LYS:HD2	12:AM:69:GLU:HG2	1.76	0.66
35:BP:17:LYS:HD3	35:BP:19:VAL:HG23	1.78	0.66
59:BA:2252:G:H5'	59:BA:2253:G:OP2	1.95	0.66
33:DN:75:TYR:OH	59:DA:2039:C:OP1	2.11	0.66
59:DA:529:A:N7	59:DA:2041:U:O4	2.28	0.66
33:DN:97:ARG:HB3	33:DN:105:GLY:HA2	1.75	0.66
33:BN:27:ALA:HA	33:BN:30:ILE:HG22	1.77	0.66
33:BN:31:ALA:HB1	33:BN:38:HIS:HB2	1.76	0.66
59:BA:2134:A:H62	59:BA:2157:G:H1'	1.59	0.66
59:DA:2350:C:N3	59:DA:2367:G:O6	2.28	0.66
15:CP:31:LYS:HG2	15:CP:32:TYR:H	1.59	0.66
16:CQ:45:HIS:HB3	16:CQ:72:ARG:HG2	1.77	0.66
59:BA:1650:G:H1	59:BA:2007:C:N4	1.92	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:DB:11:C:N4	60:DB:109:G:H1	1.93	0.66
59:BA:1225:G:H2'	59:BA:1226:A:C8	2.30	0.66
59:DA:373:U:H2'	59:DA:374:A:H8	1.59	0.66
59:DA:2551:C:N3	59:DA:2557:G:O6	2.28	0.66
21:CA:520:A:N6	21:CA:533:A:N6	2.43	0.66
37:BR:41:ALA:HB1	37:BR:97:VAL:HG11	1.75	0.66
20:AY:272:LEU:HD12	20:AY:275:ALA:HB3	1.76	0.66
8:AI:105:ASP:HB3	8:AI:107:ARG:HG2	1.76	0.66
20:CY:547:GLU:HA	20:CY:550:MET:HB3	1.77	0.66
21:CA:1264:C:H2'	21:CA:1265:G:C8	2.30	0.66
26:BD:253:GLN:HG2	26:BD:255:LYS:H	1.60	0.66
42:DW:92:ARG:NH1	59:DA:2014:A:O2'	2.28	0.66
25:BC:7:ARG:HE	59:BA:2128:C:H5''	1.60	0.66
29:DG:86:MET:N	29:DG:86:MET:SD	2.69	0.66
59:DA:1967:C:H2'	59:DA:1968:G:H5'	1.77	0.66
62:CY:702:FUA:O1	62:CY:702:FUA:H201	1.95	0.66
59:DA:2535:G:H2'	59:DA:2536:G:H8	1.59	0.66
59:DA:649:G:H2'	59:DA:650:C:C6	2.31	0.66
53:D7:3:ARG:NE	59:DA:1613:G:O2'	2.29	0.66
59:DA:2426:A:H3'	59:DA:2427:C:H5'	1.76	0.66
59:DA:1416:G:N2	59:DA:1582:C:C2	2.60	0.66
25:BC:132:LEU:HB2	25:BC:138:LEU:HB2	1.78	0.66
21:AA:1321:C:H3'	21:AA:1322:C:H5''	1.77	0.66
18:AS:79:THR:HB	21:AA:957:U:H4'	1.76	0.66
59:DA:659:C:H2'	59:DA:660:G:C8	2.27	0.66
21:AA:1476:G:H2'	21:AA:1477:C:C6	2.29	0.66
20:CY:413:ILE:HD13	20:CY:476:VAL:HG22	1.78	0.66
59:BA:2479:G:OP1	59:BA:2536:G:N2	2.27	0.66
35:DP:96:THR:HG23	35:DP:99:LEU:HB3	1.76	0.66
28:DF:149:ASP:OD1	28:DF:149:ASP:N	2.28	0.66
59:BA:1336:A:H2'	59:BA:1337:G:C8	2.30	0.66
33:BN:116:LEU:HB3	33:BN:118:LYS:HB2	1.77	0.66
24:AX:75:C:N4	59:BA:2553:G:C6	2.63	0.66
21:CA:512:U:O4	21:CA:539:A:N1	2.28	0.66
25:BC:169:THR:HG21	59:BA:2121:G:H21	1.60	0.66
59:DA:1281:G:N2	59:DA:1289:C:N3	2.38	0.66
1:AB:78:GLN:NE2	1:AB:94:ASN:OD1	2.28	0.66
35:DP:96:THR:H	35:DP:99:LEU:HD23	1.60	0.66
59:DA:1223:G:N2	59:DA:1226:A:OP2	2.27	0.66
30:DH:41:MET:HB3	30:DH:55:PRO:HD3	1.77	0.66
21:AA:579:G:O6	21:AA:762:C:N3	2.28	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AH:30:ARG:HD3	21:AA:590:C:H5'	1.78	0.66
39:BT:53:ARG:NH1	39:BT:60:THR:OG1	2.24	0.66
59:BA:540:C:H2'	59:BA:541:C:C6	2.30	0.66
59:DA:1290:C:H2'	59:DA:1291:C:C6	2.29	0.66
1:AB:95:GLN:OE1	1:AB:96:ARG:NH2	2.29	0.66
60:DB:44:G:N2	60:DB:47:C:N3	2.43	0.66
1:CB:91:PRO:HB3	1:CB:152:PHE:HA	1.78	0.66
21:AA:901:A:O2'	21:AA:1513:A:OP1	2.13	0.66
34:BO:104:ARG:HB3	34:BO:104:ARG:HH11	1.60	0.66
59:BA:2136:C:N4	59:BA:2155:G:H1	1.92	0.66
5:AF:96:PRO:HA	17:AR:32:ARG:HB2	1.77	0.66
21:CA:1278:U:H5'	21:CA:1279:A:C8	2.29	0.66
59:BA:597:U:H2'	59:BA:598:G:C8	2.30	0.66
33:BN:35:ARG:NH1	33:BN:40:PRO:HB3	2.10	0.66
33:BN:74:ARG:O	33:BN:83:LYS:O	2.13	0.66
59:BA:1960:A:H2'	59:BA:1961:C:C6	2.31	0.66
21:CA:324:G:N1	21:CA:327:A:OP2	2.29	0.66
60:DB:5:C:N3	60:DB:115:G:N2	2.36	0.66
60:DB:79:C:H42	60:DB:97:G:H1	1.42	0.66
8:CI:107:ARG:HA	21:CA:1347:G:H5'	1.78	0.66
21:CA:68(P):C:H2'	21:CA:68(Q):U:C6	2.29	0.66
21:AA:946:A:H2'	21:AA:947:G:C8	2.31	0.66
21:CA:683:G:H1	21:CA:707:C:N4	1.94	0.66
21:AA:1512:U:H2'	21:AA:1513:A:H8	1.61	0.66
14:AO:87:ILE:O	14:AO:88:ARG:HB2	1.94	0.66
35:BP:46:LYS:HB3	35:BP:48:PRO:HB3	1.78	0.66
6:AG:116:ALA:HA	6:AG:119:ARG:HG3	1.77	0.66
26:DD:253:GLN:HB3	26:DD:257:LEU:HD12	1.78	0.66
29:BG:38:VAL:HB	29:BG:158:ALA:HB3	1.77	0.66
41:DV:85:LYS:HD2	59:DA:814:C:H5''	1.78	0.66
59:DA:199:A:N6	59:DA:2434:A:N7	2.44	0.66
40:BU:92:ARG:HD3	40:BU:95:LEU:HG	1.77	0.66
45:BZ:69:THR:HG22	45:BZ:90:VAL:HG13	1.77	0.66
21:AA:672:U:O2	21:AA:734:G:O6	2.14	0.66
25:BC:181:PHE:HB3	25:BC:185:LYS:HB2	1.77	0.66
52:B6:15:GLU:HG3	52:B6:41:PRO:HB3	1.76	0.66
4:CE:10:MET:HA	4:CE:32:VAL:HG13	1.77	0.66
59:BA:1689:A:OP2	59:BA:1698:A:N6	2.29	0.66
59:DA:2641:G:H1	59:DA:2773:C:H42	1.43	0.66
27:BE:13:ARG:HH21	39:BT:60:THR:HG21	1.59	0.66
26:DD:206:LEU:HB2	59:DA:1791:A:H4'	1.77	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:271(D):G:H1	59:DA:357(O):C:N4	1.90	0.66
20:CY:135:PHE:O	20:CY:137:ASN:N	2.28	0.66
21:CA:17:U:H2'	21:CA:18:C:C6	2.31	0.66
20:AY:415:PRO:HA	20:AY:474:ALA:HA	1.78	0.66
59:BA:581:C:H2'	59:BA:582:G:H8	1.59	0.66
39:DT:25:GLY:HA3	39:DT:92:GLY:HA2	1.77	0.66
59:DA:2122:U:H3	59:DA:2176:A:H61	1.42	0.66
45:BZ:74:VAL:HA	45:BZ:86:VAL:HA	1.77	0.66
21:CA:452:A:H62	21:CA:480:U:H3	1.44	0.66
20:CY:28:THR:O	20:CY:32:ILE:HG12	1.94	0.66
37:BR:53:HIS:CG	59:BA:2840:C:H5''	2.31	0.66
31:DJ:68:UNK:O	31:DJ:70:UNK:N	2.29	0.66
33:DN:79:PRO:O	33:DN:81:GLY:N	2.26	0.66
33:BN:74:ARG:HH11	33:BN:84:LYS:HD2	1.59	0.66
59:DA:2634:G:H1	59:DA:2784:C:H42	0.75	0.66
21:CA:1218:C:H2'	21:CA:1219:U:C6	2.31	0.66
60:DB:50:G:H2'	60:DB:51:G:H8	1.60	0.66
59:BA:150:C:C2	59:BA:176:G:N2	2.63	0.66
59:DA:2841:C:H2'	59:DA:2842:G:C8	2.31	0.66
48:D2:32:LEU:HD13	48:D2:53:LEU:HB3	1.77	0.66
59:DA:2074:U:H3	59:DA:2435:A:N6	1.93	0.66
25:BC:132:LEU:HB3	25:BC:138:LEU:H	1.61	0.66
44:DY:96:ILE:HB	44:DY:99:CYS:HB2	1.78	0.66
11:CL:16:GLU:O	21:CA:562:C:O2'	2.09	0.66
41:DV:5:VAL:HA	41:DV:39:LEU:HD23	1.78	0.66
59:DA:2512:C:H42	59:DA:2574:G:H1	1.44	0.66
59:BA:1141:U:O2	59:BA:1142:A:N6	2.28	0.66
33:BN:83:LYS:HE3	33:BN:112:LEU:HD13	1.78	0.66
33:BN:78:TYR:HB3	33:BN:79:PRO:HD3	1.76	0.66
33:BN:71:ILE:HB	33:BN:97:ARG:HB2	1.78	0.66
21:CA:1312:G:H1	21:CA:1325:C:N4	1.93	0.66
21:CA:998(A):C:H42	21:CA:1042:G:H1	0.77	0.66
35:BP:112:LEU:HD12	35:BP:128:HIS:H	1.61	0.66
60:DB:81:G:H5''	60:DB:82:G:H8	1.59	0.66
48:D2:58:ALA:HA	59:DA:72:U:H1'	1.78	0.66
21:CA:559:A:H4'	21:CA:560:U:H5''	1.77	0.66
59:DA:2303:G:H1	59:DA:2313:C:H42	1.42	0.66
21:AA:1440(J):C:H1'	21:AA:1440(K):G:C2	2.31	0.66
59:BA:2698:U:H2'	59:BA:2699:C:C6	2.31	0.66
1:CB:70:PHE:HE1	1:CB:90:MET:HB2	1.61	0.66
20:CY:334:THR:HG22	20:CY:370:LYS:HA	1.78	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:BB:18:G:H2'	60:BB:19:G:O4'	1.96	0.66
10:AK:32:ILE:O	10:AK:40:ILE:HG12	1.96	0.66
10:AK:33:THR:HG22	10:AK:39:PRO:HA	1.77	0.66
21:CA:1440(H):U:O2	21:CA:1440(K):G:N2	2.28	0.66
49:D3:24:LYS:HB3	59:DA:849:A:H2	1.61	0.66
21:AA:218:C:H4'	21:AA:458(C):G:H1	1.60	0.66
21:AA:1404:C:H2'	21:AA:1405:G:H8	1.60	0.66
21:CA:1241:G:H2'	21:CA:1242:C:C6	2.31	0.66
43:DX:64:LYS:HD2	43:DX:73:ARG:HH21	1.61	0.66
22:AW:14:A:H1'	22:AW:22:G:H22	1.60	0.66
21:CA:32:A:H1'	21:CA:48:C:H41	1.61	0.66
21:CA:37:U:O2	21:CA:397:A:N1	2.28	0.66
59:DA:1664:A:H61	59:DA:1996:C:N4	1.93	0.66
21:CA:1217:C:H2'	21:CA:1218:C:C6	2.31	0.66
21:CA:979:C:H3'	21:CA:980:C:H5''	1.78	0.66
21:CA:1513:A:H2'	21:CA:1514:C:C6	2.31	0.66
59:DA:2134:A:H8	59:DA:2157:G:N2	1.83	0.66
59:DA:1782:C:N4	59:DA:2586:C:H42	1.90	0.66
59:DA:1752:C:N4	59:DA:1756:G:H1	1.91	0.66
38:DS:70:GLY:HA3	38:DS:99:LYS:HB2	1.77	0.66
59:BA:1069:A:O2'	59:BA:1073:A:N6	2.26	0.66
59:BA:270(G):C:H42	59:BA:270(S):G:H1	1.43	0.66
59:DA:2647:U:H2'	59:DA:2648:C:C6	2.31	0.66
59:DA:65:C:O2'	59:DA:456:C:N3	2.25	0.66
54:D8:34:TRP:CG	54:D8:35:GLN:N	2.63	0.66
21:CA:745:C:H2'	21:CA:746:A:C8	2.30	0.66
59:DA:215:G:H4'	59:DA:216:A:H4'	1.78	0.66
21:AA:411:A:H2'	21:AA:412:A:H4'	1.75	0.65
21:CA:378:G:H1	21:CA:385:C:N4	1.92	0.65
59:DA:1709:U:O2'	59:DA:2859:G:N3	2.27	0.65
28:BF:193:VAL:O	28:BF:194:MET:HG2	1.96	0.65
59:BA:1019:U:O2	59:BA:1020:A:N7	2.28	0.65
21:AA:1290:G:H3'	21:AA:1291:G:C8	2.31	0.65
25:DC:14:LYS:HD3	25:DC:33:LEU:HB3	1.77	0.65
47:B1:13:ILE:H	47:B1:43:TYR:HA	1.61	0.65
21:CA:665:A:N7	21:CA:724:G:O6	2.28	0.65
59:BA:1028:A:N6	59:BA:1126:A:OP1	2.28	0.65
38:DS:42:ASP:O	38:DS:44:LYS:N	2.29	0.65
47:B1:78:LYS:HA	47:B1:82:LEU:HD11	1.77	0.65
33:DN:81:GLY:HA3	33:DN:82:LEU:HD22	1.77	0.65
23:CV:8:A:C8	23:CV:9:G:C2	2.76	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:1139:G:H8	59:BA:1139:G:O5'	1.80	0.65
33:BN:72:TYR:HB3	33:BN:101:HIS:CD2	2.31	0.65
33:BN:84:LYS:NZ	59:BA:2041:U:OP2	2.28	0.65
59:DA:1832:C:C2	63:DA:2901:NMY:N6	2.63	0.65
24:AX:76:A:H4'	24:AX:77:VAL:HA	1.78	0.65
20:AY:465:ARG:CG	62:AY:702:FUA:H3	2.26	0.65
14:CO:48:LYS:HB2	21:CA:668:G:H4'	1.77	0.65
59:DA:882:G:H2'	59:DA:883:G:H8	1.61	0.65
41:DV:18:LEU:H	41:DV:96:ILE:HG12	1.61	0.65
21:CA:452:A:O2'	21:CA:453:A:O5'	2.09	0.65
60:DB:19:G:H1	60:DB:64:C:H42	1.43	0.65
22:CW:52:G:H1	22:CW:62:C:H42	1.44	0.65
44:DY:38:ILE:HD11	44:DY:64:GLU:HB2	1.77	0.65
9:CJ:13:HIS:HA	9:CJ:16:LEU:HB3	1.77	0.65
59:BA:702:G:N1	59:BA:730:C:O2	2.28	0.65
2:AC:176:HIS:N	21:AA:1108:G:OP1	2.27	0.65
27:BE:123:ALA:HB3	59:BA:2511:U:H5''	1.78	0.65
20:AY:70:THR:HG23	20:AY:360:ALA:H	1.60	0.65
26:BD:118:VAL:HG22	26:BD:119:ALA:H	1.61	0.65
32:DK:105:LEU:HD23	32:DK:106:GLU:H	1.61	0.65
59:BA:1422:G:H2'	59:BA:1423:G:C8	2.31	0.65
14:AO:36:ILE:HG23	14:AO:56:LEU:HD11	1.77	0.65
40:DU:8:VAL:HG13	40:DU:11:ARG:HE	1.59	0.65
11:CL:35:GLY:HA2	11:CL:58:VAL:HA	1.77	0.65
11:CL:52:LEU:HG	11:CL:53:ARG:H	1.61	0.65
21:CA:1072:G:N1	21:CA:1103:C:C4	2.64	0.65
21:CA:887:G:H1	21:CA:910:C:H42	1.44	0.65
59:DA:858:U:O3'	59:DA:2268:A:O2'	2.15	0.65
59:DA:150:C:N3	59:DA:176:G:N2	2.39	0.65
21:AA:1028(B):C:N3	21:AA:1028(G):G:C6	2.64	0.65
59:DA:1804:C:N4	59:DA:1813:G:H1	1.93	0.65
59:BA:1080:C:H2'	59:BA:1081:U:C6	2.31	0.65
20:CY:422:GLU:HA	20:CY:425:SER:HB2	1.76	0.65
7:AH:11:THR:HG21	21:AA:825:G:H21	1.59	0.65
21:AA:500:G:O6	21:AA:545:C:N3	2.28	0.65
49:D3:4:LEU:O	49:D3:36:VAL:HA	1.96	0.65
29:BG:173:LEU:HB3	29:BG:178:PHE:HB2	1.78	0.65
34:DO:64:ARG:HB3	34:DO:79:PHE:HB2	1.78	0.65
4:CE:100:VAL:HG12	4:CE:118:ILE:HG22	1.78	0.65
46:B0:65:GLY:HA3	46:B0:82:ARG:O	1.97	0.65
33:DN:35:ARG:NH2	33:DN:40:PRO:HD3	2.11	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CA:411:A:H2	21:CA:430:A:H62	1.40	0.65
33:BN:88:GLU:O	33:BN:91:LEU:N	2.30	0.65
22:CW:2:G:N2	22:CW:72:C:H42	1.94	0.65
59:DA:2456:C:N4	59:DA:2495:G:H1	1.94	0.65
59:DA:2283:C:N4	59:DA:2325:G:H1	1.95	0.65
25:DC:41:THR:O	25:DC:175:PRO:HA	1.95	0.65
59:DA:247:G:H1'	59:DA:251:A:H61	1.60	0.65
20:AY:485:GLU:N	20:AY:559:PRO:O	2.22	0.65
59:BA:2487:G:H2'	59:BA:2488:A:C8	2.32	0.65
20:AY:513:LYS:H	20:AY:567:LEU:HA	1.61	0.65
59:DA:2287:A:H61	59:DA:2346:A:H2	1.45	0.65
4:AE:79:GLU:HB3	4:AE:93:PRO:HD2	1.78	0.65
59:BA:357(J):G:H2'	59:BA:357(K):U:O4'	1.96	0.65
59:BA:1090:U:H2'	59:BA:1091:G:C8	2.31	0.65
59:BA:1113:U:H2'	59:BA:1114:G:C8	2.31	0.65
59:DA:56:A:N1	59:DA:114:U:O4	2.29	0.65
59:DA:1861:G:H1	59:DA:1881:C:H42	1.43	0.65
59:BA:1021:A:H62	59:BA:1141:U:H3	1.45	0.65
59:BA:1905:C:H5''	63:BA:2904:NMY:H81	1.78	0.65
21:CA:33:A:H4'	21:CA:364:A:H1'	1.78	0.65
59:DA:1326:U:O2'	59:DA:2010:G:O2'	2.13	0.65
59:BA:1333:C:H2'	59:BA:1334:G:H8	1.62	0.65
24:AX:52:G:C2	24:AX:62:C:O2	2.48	0.65
21:CA:618:C:N4	21:CA:622:A:H62	1.91	0.65
21:CA:186(F):C:N4	21:CA:186(K):G:H1	1.95	0.65
25:BC:214:TYR:CD2	25:BC:222:SER:HB2	2.32	0.65
59:DA:247:G:H4'	59:DA:386:G:C5	2.31	0.65
44:DY:68:HIS:NE2	44:DY:70:SER:HB3	2.12	0.65
21:CA:877:C:H2'	21:CA:878:G:C8	2.32	0.65
3:CD:165:MET:O	3:CD:167:GLY:N	2.29	0.65
21:AA:593:G:H1	21:AA:646:U:H3	1.45	0.65
45:DZ:17:ALA:HA	45:DZ:20:ARG:HG2	1.77	0.65
20:AY:322:VAL:O	21:AA:358:U:O2'	2.10	0.65
39:BT:48:ILE:HG22	39:BT:49:VAL:HG12	1.79	0.65
59:DA:390:A:H4'	59:DA:391:G:H5'	1.79	0.65
32:DK:55:VAL:HG22	32:DK:56:GLU:H	1.61	0.65
3:CD:115:ARG:CB	21:CA:407:G:H5''	2.24	0.65
33:BN:59:LYS:HD3	33:BN:59:LYS:N	2.11	0.65
23:CV:18:G:N1	22:CW:34:C:O2	2.19	0.65
9:AJ:41:PRO:HG3	21:AA:1150:U:H4'	1.78	0.65
59:BA:627:A:H4'	59:BA:628:G:H5'	1.79	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:DB:81:G:H5''	60:DB:82:G:C8	2.32	0.65
13:CN:58:LYS:O	13:CN:60:SER:N	2.29	0.65
25:BC:114:VAL:O	25:BC:116:ALA:N	2.21	0.65
22:CW:30:C:N4	22:CW:40:G:H1	1.93	0.65
21:CA:1419:G:N2	21:CA:1481:U:O2	2.27	0.65
59:BA:1207:C:N4	59:BA:1239:G:H1	1.93	0.65
52:D6:15:GLU:HG3	52:D6:47:THR:HG21	1.77	0.65
21:CA:68(E):G:H1	21:CA:68(U):U:H3	1.42	0.65
59:DA:1422:G:H2'	59:DA:1423:G:C8	2.32	0.65
40:DU:47:TYR:OH	59:DA:992:C:OP1	2.14	0.65
48:B2:48:HIS:CG	48:B2:49:LYS:H	2.14	0.65
26:DD:148:GLU:HB3	26:DD:151:LYS:HG3	1.77	0.65
21:CA:133:U:O2'	21:CA:134:A:N7	2.27	0.65
59:BA:271(A):C:O2	59:BA:271(D):G:N2	2.30	0.65
59:DA:1414:G:H1	59:DA:1588:C:N4	1.94	0.65
22:AW:2:G:N2	22:AW:72:C:N4	2.45	0.65
21:CA:296:U:O2	21:CA:301:G:N2	2.24	0.65
59:DA:2549:G:H1	59:DA:2559:C:N4	1.91	0.65
2:CC:19:GLU:HB3	2:CC:40:ARG:NH2	2.12	0.65
1:AB:211:ILE:O	1:AB:215:LEU:HG	1.94	0.65
59:DA:1149:G:H2'	59:DA:1150:C:C6	2.31	0.65
3:CD:13:ARG:NH1	3:CD:38:TYR:H	1.95	0.65
59:DA:1080:C:H2'	59:DA:1081:U:C6	2.32	0.65
28:DF:54:ARG:HB3	28:DF:81:PRO:HD3	1.79	0.65
25:DC:213:VAL:HG11	25:DC:225:ILE:HG12	1.79	0.65
59:DA:1541:U:H3'	59:DA:1542:G:H3'	1.78	0.65
39:DT:31:SER:HB2	39:DT:45:PHE:H	1.62	0.65
59:BA:287:C:H2'	59:BA:289:A:C8	2.32	0.65
21:CA:629:G:H2'	21:CA:630:G:H8	1.61	0.65
21:CA:366:C:O2	21:CA:394:G:N2	2.27	0.65
59:BA:108:U:H2'	59:BA:109:G:C8	2.32	0.65
33:DN:38:HIS:HA	59:DA:1006:C:H1'	1.77	0.65
59:DA:2685:G:H1	59:DA:2724:C:N4	1.95	0.65
59:DA:1925:C:H42	59:DA:1929:G:N2	1.94	0.65
11:CL:53:ARG:NH2	21:CA:521:G:H5''	2.12	0.65
15:AP:8:ARG:HE	15:AP:15:PRO:HA	1.60	0.65
34:DO:1:MET:SD	34:DO:1:MET:N	2.66	0.65
12:AM:126:LYS:HG2	21:AA:966:G:H4'	1.79	0.65
21:CA:9:G:H2'	21:CA:10:A:C8	2.31	0.65
38:DS:39:ILE:HD12	38:DS:39:ILE:H	1.62	0.65
21:CA:321:A:N6	21:CA:329:A:OP2	2.30	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CA:284:G:H2'	21:CA:285:G:C8	2.31	0.65
30:DH:55:PRO:HG2	30:DH:61:HIS:HE1	1.62	0.65
9:CJ:16:LEU:HD23	9:CJ:94:VAL:HG21	1.78	0.65
7:AH:69:ARG:HH22	7:AH:75:ARG:HB3	1.62	0.65
59:DA:341:G:H2'	59:DA:342:G:O4'	1.96	0.65
59:BA:2508:G:OP2	59:BA:2573:C:O2'	2.14	0.65
21:CA:1020:U:H2'	21:CA:1021:G:C8	2.32	0.65
9:CJ:49:VAL:HG21	13:CN:41:ARG:HA	1.77	0.65
21:CA:1535:C:H1'	23:CV:11:U:O4	1.97	0.65
18:CS:37:ARG:HB3	21:CA:1320:C:H41	1.61	0.65
60:DB:30:C:N4	60:DB:54:G:H1	1.90	0.65
21:CA:296:U:O2'	21:CA:556:C:O2	2.15	0.65
59:DA:1797:C:N3	59:DA:1822:G:N2	2.36	0.65
59:DA:133:C:N4	59:DA:146:G:H1	1.94	0.65
59:DA:1030:G:H1	59:DA:1124:C:N4	1.94	0.65
60:DB:44:G:N3	60:DB:47:C:N4	2.45	0.65
2:CC:58:GLU:HB2	2:CC:65:ALA:HB3	1.77	0.65
59:DA:1297:C:N4	59:DA:1643:G:H1	1.94	0.65
59:DA:15:G:O6	59:DA:525:U:O4	2.14	0.65
39:BT:31:SER:HB2	39:BT:45:PHE:HB2	1.78	0.65
21:AA:104:G:H4'	21:AA:174:C:H4'	1.78	0.65
21:CA:1151:A:H2'	21:CA:1152:A:C8	2.31	0.65
10:AK:27:ASN:ND2	21:AA:690:G:OP2	2.30	0.65
6:AG:79:ARG:HG3	21:AA:1382:C:H5'	1.78	0.65
4:CE:9:LYS:HB2	4:CE:112:LEU:HD21	1.79	0.65
59:BA:1167:U:H3	59:BA:1182:A:H61	1.43	0.65
6:CG:106:GLN:HA	6:CG:109:ASN:HB2	1.77	0.65
35:DP:49:ARG:O	54:D8:59:LYS:HE3	1.97	0.65
59:BA:1292:U:H2'	59:BA:1293:C:C6	2.32	0.65
1:AB:88:ALA:HB2	1:AB:219:VAL:HG22	1.77	0.65
21:CA:65:U:O2'	21:CA:381:C:OP1	2.14	0.65
20:CY:262:SER:H	20:CY:267:LYS:HB2	1.61	0.65
25:DC:7:ARG:NH1	25:DC:35:THR:O	2.30	0.65
29:BG:48:GLU:O	29:BG:50:ALA:N	2.27	0.65
59:DA:583:G:H1	59:DA:1257:C:H42	0.68	0.65
23:CV:9:G:H3'	23:CV:10:G:C4	2.31	0.65
59:BA:2781:A:H5"	59:BA:2782:G:H8	1.62	0.65
27:BE:36:ARG:HH22	27:BE:86:PRO:HG2	1.60	0.65
23:CV:19:G:N2	24:CX:36:C:C2	2.55	0.65
59:BA:271(D):G:N7	59:BA:404:C:O2'	2.29	0.65
21:CA:1048:G:H1	21:CA:1209:C:H42	1.43	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BF:76:GLY:H	59:BA:674:G:H5''	1.62	0.65
59:BA:2119:A:H61	59:BA:2168:G:H21	0.77	0.65
59:BA:858:U:O4	59:BA:919:G:O6	2.13	0.65
25:DC:214:TYR:CD2	25:DC:222:SER:HB2	2.29	0.65
59:DA:1022:G:O2'	59:DA:1023:U:OP2	2.15	0.65
59:DA:2587:A:H62	59:DA:2608:G:N2	1.93	0.65
24:AX:49:G:H1	24:AX:65:C:N4	1.94	0.65
59:DA:644:A:H61	59:DA:2349:G:N2	1.93	0.65
59:DA:1854:A:H62	59:DA:1888:G:H8	1.44	0.65
60:DB:21:G:H1	60:DB:62:C:N4	1.95	0.65
12:AM:108:ARG:HH21	21:AA:1228:C:P	2.19	0.65
59:BA:1368:G:H2'	59:BA:1369:G:C8	2.31	0.65
3:AD:36:ARG:NH2	21:AA:427:U:OP2	2.29	0.65
59:DA:2324:C:H42	59:DA:2331:G:H1	1.44	0.65
59:BA:319:C:H2'	59:BA:320:A:C8	2.31	0.65
45:DZ:19:ARG:NH2	60:DB:76:G:O2'	2.30	0.65
59:DA:137(E):A:C8	59:DA:1408:C:H1'	2.32	0.65
21:CA:341:C:H42	21:CA:348:G:H1	1.45	0.65
59:BA:1462:C:H4'	59:BA:2703:C:H5'	1.78	0.65
59:DA:1660:C:H2'	59:DA:1661:G:H8	1.62	0.65
25:DC:60:ARG:HG2	25:DC:142:LYS:HD3	1.77	0.65
20:CY:402:ILE:HG22	20:CY:404:VAL:HG23	1.79	0.65
30:DH:103:LEU:HB3	30:DH:115:VAL:HB	1.79	0.65
21:AA:1404:C:H2'	21:AA:1405:G:C8	2.32	0.64
59:DA:648:G:H2'	59:DA:649:G:H8	1.62	0.64
59:DA:2652:C:H42	59:DA:2668:G:H1	0.74	0.64
59:DA:1468(I):A:H2'	59:DA:1468(J):G:O4'	1.97	0.64
13:CN:3:ARG:HB3	21:CA:1048:G:H5''	1.79	0.64
59:BA:151:C:N4	59:BA:175:G:H1	1.92	0.64
11:AL:90:VAL:HG22	11:AL:96:VAL:HG11	1.79	0.64
21:AA:1224:G:O2'	21:AA:1322:C:OP2	2.15	0.64
38:BS:97:ARG:O	38:BS:99:LYS:N	2.30	0.64
59:DA:2064:C:N4	59:DA:2446:G:H1	1.95	0.64
59:DA:525:U:H5'	59:DA:556:G:H5'	1.79	0.64
21:CA:828:A:H2'	21:CA:829:G:O4'	1.97	0.64
21:CA:112:G:N2	21:CA:315:A:N1	2.44	0.64
59:DA:371:A:C8	59:DA:402:A:N6	2.64	0.64
10:AK:17:GLY:HA2	10:AK:35:PRO:HD3	1.78	0.64
21:AA:736:C:H2'	21:AA:737:A:C8	2.32	0.64
21:AA:1346:A:C5	21:AA:1374:A:H2	2.14	0.64
47:B1:12:PRO:HA	47:B1:43:TYR:HB2	1.80	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:1108:G:H2'	21:AA:1109:C:H5'	1.79	0.64
20:AY:111:SER:HB3	20:AY:141:LYS:HE3	1.79	0.64
12:AM:16:ASP:N	12:AM:16:ASP:OD2	2.28	0.64
28:DF:11:VAL:HG12	28:DF:127:GLU:HB2	1.77	0.64
33:BN:134:ARG:H	33:BN:134:ARG:HD2	1.62	0.64
59:DA:2233:U:H2'	59:DA:2234:G:C8	2.32	0.64
33:BN:106:MET:O	33:BN:107:LEU:HB2	1.97	0.64
33:BN:113:GLY:HA2	33:BN:117:PHE:HB2	1.79	0.64
33:BN:15:LEU:HD12	33:BN:55:VAL:HG11	1.79	0.64
22:AW:14:A:H3'	22:AW:15:G:O4'	1.96	0.64
59:DA:1468(J):G:H1	59:DA:1506(H):C:H42	0.76	0.64
59:DA:869:G:N2	59:DA:908:C:C2	2.62	0.64
21:AA:320:C:H2'	21:AA:321:A:C8	2.32	0.64
11:CL:9:GLN:NE2	21:CA:881:G:OP2	2.30	0.64
10:CK:21:ILE:HD12	10:CK:84:VAL:HG12	1.79	0.64
59:DA:764:A:H62	59:DA:1775:U:H3	1.45	0.64
59:BA:1806:C:H42	59:BA:1811:G:H1	1.45	0.64
2:CC:177:THR:HG22	2:CC:178:LEU:H	1.62	0.64
33:BN:75:TYR:OH	59:BA:1137:G:H1'	1.96	0.64
59:DA:2707:G:H2'	59:DA:2708:G:C8	2.32	0.64
27:DE:30:PRO:HD2	27:DE:52:LEU:HD11	1.79	0.64
27:DE:79:ARG:NH1	59:DA:2635:C:OP1	2.29	0.64
16:CQ:45:HIS:H	16:CQ:72:ARG:HA	1.63	0.64
59:BA:32:C:N3	59:BA:473:G:N2	2.43	0.64
26:BD:259:THR:OG1	26:BD:260:ARG:N	2.27	0.64
55:D9:27:CYS:SG	55:D9:32:HIS:ND1	2.63	0.64
59:BA:2104:G:H2'	59:BA:2105:C:C6	2.31	0.64
59:BA:2532:G:N2	59:BA:2663:G:H21	1.94	0.64
59:BA:2597:G:H2'	59:BA:2598:A:C8	2.32	0.64
43:BX:64:LYS:HB3	59:BA:64:A:H5'	1.79	0.64
59:DA:481:G:H1'	59:DA:506:G:N2	2.12	0.64
7:CH:85:ARG:HH12	7:CH:135:CYS:HB3	1.62	0.64
47:D1:7:ILE:HD13	47:D1:63:ALA:H	1.61	0.64
21:AA:757:U:H2'	21:AA:758:G:O4'	1.98	0.64
52:B6:15:GLU:HB2	52:B6:20:ASN:HB2	1.79	0.64
45:BZ:112:ARG:O	45:BZ:112:ARG:NH1	2.30	0.64
20:CY:13:ARG:HB2	20:CY:79:ILE:HG12	1.78	0.64
59:DA:2815:C:H2'	59:DA:2816:C:O4'	1.97	0.64
21:AA:662:G:O2'	21:AA:836:G:OP1	2.16	0.64
9:AJ:50:ILE:HG22	9:AJ:60:ARG:HG2	1.78	0.64
44:DY:9:LYS:HE2	44:DY:103:GLY:HA3	1.79	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:2202(E):A:H1'	59:DA:2202(G):G:C4	2.32	0.64
35:DP:94:GLU:HG2	35:DP:124:LYS:HB2	1.77	0.64
21:AA:768:A:OP1	21:AA:804:U:H4'	1.96	0.64
59:DA:580:C:H2'	59:DA:581:C:C6	2.32	0.64
59:BA:1971:A:N7	63:BA:2904:NMY:H15	2.12	0.64
21:CA:62:U:H5''	21:CA:385:C:O2	1.97	0.64
59:DA:1565:C:H1'	59:DA:1566:A:H8	1.63	0.64
59:DA:324:A:H62	59:DA:338:G:N2	1.93	0.64
59:BA:668:G:H2'	59:BA:670:A:H62	1.60	0.64
28:BF:10:PRO:HB2	28:BF:17:ARG:HB2	1.79	0.64
59:DA:975:G:O6	59:DA:989:G:N2	2.31	0.64
20:AY:27:THR:O	20:AY:30:GLU:HG2	1.97	0.64
21:CA:890:G:O2'	21:CA:906:G:O6	2.14	0.64
21:AA:1348:U:N3	21:AA:1374:A:C6	2.61	0.64
59:BA:2589:A:H2'	59:BA:2590:A:H8	1.62	0.64
59:BA:1712(C):G:H2'	59:BA:1712(D):G:H8	1.61	0.64
59:BA:259:G:H2'	59:BA:260:G:C8	2.32	0.64
30:BH:127:GLU:O	30:BH:129:THR:N	2.21	0.64
55:D9:10:ILE:HG13	55:D9:11:CYS:H	1.63	0.64
1:CB:117:GLU:O	1:CB:121:LEU:HB2	1.98	0.64
59:BA:1905:C:OP2	63:BA:2904:NMY:H82	1.98	0.64
21:CA:603:U:O2	21:CA:635:G:O6	2.16	0.64
11:CL:70:ILE:HG13	11:CL:72:GLY:H	1.62	0.64
11:CL:93:LEU:O	11:CL:95:GLY:N	2.30	0.64
20:AY:22:ASP:CG	61:AY:701:GDP:H5'	2.17	0.64
59:DA:2822:G:O2'	59:DA:2824:C:OP2	2.13	0.64
59:DA:2840:C:H2'	59:DA:2841:C:O4'	1.98	0.64
59:BA:693:C:O2'	59:BA:1353:A:N3	2.24	0.64
22:AW:3:C:N4	22:AW:70:G:H1	1.96	0.64
20:CY:100:VAL:HG21	20:CY:329:ARG:HG2	1.80	0.64
36:DQ:42:ILE:HG23	36:DQ:97:VAL:HG21	1.79	0.64
59:BA:532:A:H4'	59:BA:533:G:C8	2.32	0.64
59:DA:243:U:H3	59:DA:255:A:H62	1.46	0.64
1:CB:165:VAL:HG12	1:CB:166:ASP:H	1.61	0.64
3:AD:33:MET:O	3:AD:35:ARG:N	2.26	0.64
59:DA:2099:U:H2'	59:DA:2100:G:C8	2.32	0.64
59:BA:2886:G:H2'	59:BA:2887:U:H6	1.62	0.64
12:CM:101:GLN:NE2	21:CA:949:A:OP1	2.29	0.64
59:BA:383:U:H2'	59:BA:385:C:H5	1.61	0.64
32:DK:19:PRO:HB3	32:DK:34:ILE:HD11	1.79	0.64
25:BC:226:ASN:O	25:BC:228:HIS:N	2.31	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BN:37:LYS:HZ3	33:BN:38:HIS:HD2	1.45	0.64
21:CA:637:G:H2'	21:CA:638:G:O4'	1.98	0.64
22:AW:4:U:O2	22:AW:69:A:N1	2.31	0.64
59:DA:2359:C:H2'	59:DA:2360:A:O4'	1.97	0.64
48:D2:48:HIS:CD2	48:D2:49:LYS:H	2.16	0.64
21:AA:1504:G:OP1	21:AA:1507:A:O2'	2.10	0.64
20:CY:25:LYS:HE2	61:CY:701:GDP:O2B	1.98	0.64
42:BW:53:SER:HA	59:BA:487:C:H1'	1.79	0.64
59:BA:270(B):A:H61	59:BA:270(Y):G:H1'	1.62	0.64
21:CA:1440(J):C:O2'	21:CA:1440(K):G:N3	2.27	0.64
21:AA:37:U:O2'	21:AA:547:A:N1	2.31	0.64
13:CN:24:CYS:SG	13:CN:40:CYS:HB3	2.37	0.64
26:DD:66:ASP:HB3	26:DD:105:ILE:HG12	1.78	0.64
59:DA:44:A:H2	59:DA:435:C:H41	1.45	0.64
59:DA:2507:C:H42	59:DA:2582:G:H1	1.46	0.64
33:BN:76:SER:HB2	33:BN:106:MET:SD	2.37	0.64
42:DW:12:ILE:HD11	42:DW:42:ARG:HD3	1.80	0.64
21:CA:552:U:H2'	21:CA:553:A:C8	2.33	0.64
59:BA:1583:A:N6	21:CA:838(A):U:H5''	2.13	0.64
60:BB:3:C:N3	60:BB:117:G:N1	2.45	0.64
20:AY:133:ILE:HD12	20:AY:280:LEU:HD21	1.80	0.64
32:BK:54:PRO:HD2	32:BK:70:LYS:HB2	1.79	0.64
45:BZ:58:VAL:HA	45:BZ:68:PRO:HA	1.79	0.64
10:CK:99:GLN:HG2	10:CK:105:VAL:HG11	1.79	0.64
21:CA:681:C:H42	21:CA:709:G:H1	1.43	0.64
5:CF:43:LEU:HB3	5:CF:60:PHE:HB2	1.78	0.64
2:CC:155:GLY:HA3	2:CC:196:LEU:HD12	1.80	0.64
21:AA:114:U:H2'	21:AA:115:G:C8	2.33	0.64
16:AQ:92:ARG:HA	16:AQ:95:TYR:HD2	1.63	0.64
59:BA:1102:C:H2'	59:BA:1103:A:C8	2.33	0.64
59:BA:2810:A:H62	59:BA:2890:G:H21	1.43	0.64
18:AS:13:ASP:HA	18:AS:16:LEU:HB2	1.77	0.64
33:DN:38:HIS:HB3	33:DN:39:ARG:HG3	1.78	0.64
33:BN:88:GLU:C	33:BN:90:MET:N	2.52	0.64
24:AX:75:C:N3	59:BA:2553:G:N2	2.42	0.64
3:AD:10:ARG:HB2	21:AA:429:U:OP1	1.97	0.64
37:DR:39:PRO:HG2	59:DA:1651:G:H4'	1.78	0.64
59:DA:1414:G:N2	59:DA:1588:C:C2	2.65	0.64
23:CV:15:A:H3'	23:CV:16:A:H5''	1.78	0.64
22:CW:31:A:H2	22:CW:39:U:N3	1.85	0.64
59:DA:1399:C:H2'	59:DA:1400:G:C8	2.33	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:B9:17:ILE:HD11	55:B9:19:ARG:HE	1.61	0.64
21:CA:7:G:H5'	21:CA:298:A:H5'	1.79	0.64
59:BA:949:C:H42	59:BA:968:G:H1	1.46	0.64
42:BW:92:ARG:HD2	59:BA:747:U:H1'	1.78	0.64
21:CA:1376:U:H2'	21:CA:1377:A:H8	1.62	0.64
37:BR:103:ARG:HA	37:BR:111:LEU:HG	1.80	0.64
21:AA:980:C:H5''	21:AA:981:U:H5	1.63	0.64
59:DA:53:A:H61	59:DA:117:G:H1'	1.63	0.64
59:BA:108:U:H2'	59:BA:109:G:H8	1.63	0.64
27:BE:72:VAL:HG12	27:BE:73:GLU:H	1.62	0.64
16:AQ:96:GLU:HG2	21:AA:278:G:H1	1.61	0.64
54:B8:42:ARG:NH2	59:BA:2348:U:OP2	2.31	0.64
59:BA:250:G:O6	59:BA:386:G:N2	2.31	0.64
20:AY:14:ASN:HB3	20:AY:102:ASP:HB2	1.79	0.64
1:CB:78:GLN:O	1:CB:81:VAL:HG22	1.98	0.64
20:AY:187:THR:OG1	20:AY:188:TYR:N	2.31	0.64
59:BA:2089:U:H2'	59:BA:2090:G:C8	2.32	0.64
33:DN:114:ARG:NH2	59:DA:527:C:H6	1.92	0.64
33:DN:114:ARG:NH2	59:DA:528:A:C8	2.58	0.64
33:DN:37:LYS:NZ	59:DA:1005:C:O2'	2.31	0.64
33:DN:74:ARG:HA	33:DN:84:LYS:HB3	1.80	0.64
6:AG:114:ARG:HA	21:AA:1298:C:H41	1.62	0.64
25:BC:41:THR:OG1	59:BA:2124:G:O2'	2.15	0.64
59:DA:189:G:H1'	59:DA:207:A:H61	1.62	0.64
26:BD:274:ARG:NH2	59:BA:1798:U:O5'	2.23	0.64
2:CC:48:TYR:O	2:CC:50:ALA:N	2.31	0.64
28:BF:122:LYS:HD2	28:BF:191:ARG:HH21	1.63	0.64
21:CA:589:C:N3	21:CA:650:G:O6	2.31	0.64
10:CK:79:SER:HB3	10:CK:106:LYS:HE2	1.80	0.64
35:BP:14:LYS:HB2	59:BA:598:G:H4'	1.80	0.64
39:DT:31:SER:O	39:DT:84:GLN:NE2	2.31	0.64
52:B6:53:LYS:HG3	52:B6:54:ILE:HG12	1.78	0.64
59:BA:450:G:H5'	59:BA:1248:G:H1	1.63	0.64
12:AM:13:LYS:HD2	12:AM:18:ALA:HB2	1.80	0.64
59:DA:357(G):A:H2'	59:DA:357(H):G:C8	2.32	0.64
46:B0:27:GLU:HA	46:B0:67:VAL:HB	1.80	0.64
24:AX:51:C:O2	24:AX:63:G:N1	2.28	0.64
21:CA:1056:U:H2'	21:CA:1057:G:H8	1.62	0.64
3:CD:170:VAL:HB	3:CD:174:LEU:HB2	1.79	0.64
59:DA:24:G:N2	59:DA:516:C:N3	2.40	0.64
33:DN:85:ILE:HG22	33:DN:97:ARG:CZ	2.28	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BT:53:ARG:HH21	39:BT:58:ASN:HB3	1.62	0.64
59:DA:1314:C:N4	59:DA:1338:G:H1	1.96	0.64
11:CL:102:ARG:HG2	11:CL:109:GLY:HA2	1.80	0.64
59:BA:960:A:H2'	59:BA:962:G:H5''	1.78	0.64
22:CW:24:G:C2	22:CW:25:C:H1'	2.33	0.64
59:DA:2547:U:H3	59:DA:2561:A:N6	1.94	0.64
59:DA:1030:G:N2	59:DA:1124:C:N3	2.44	0.64
59:DA:1846:G:H1	59:DA:1894:C:N4	1.96	0.64
21:CA:112:G:H1	21:CA:315:A:N6	1.96	0.64
28:BF:191:ARG:O	28:BF:193:VAL:N	2.31	0.64
59:BA:1541:U:H3'	59:BA:1542:G:H3'	1.80	0.64
21:CA:335:C:O2'	21:CA:1433:A:N3	2.30	0.64
21:AA:877:C:H2'	21:AA:878:G:C8	2.33	0.64
59:BA:797:C:H2'	59:BA:798:G:C8	2.33	0.64
29:DG:72:ARG:HB3	29:DG:86:MET:HA	1.80	0.64
59:BA:2292:C:H42	59:BA:2340:G:H1	1.44	0.64
42:DW:74:ALA:HA	42:DW:104:THR:O	1.98	0.64
59:BA:738:G:H3'	59:BA:739:G:C8	2.33	0.64
21:CA:186(C):G:H1	21:CA:186(N):U:H3	0.76	0.64
21:CA:186(C):G:O6	21:CA:186(N):U:O4	2.16	0.64
21:AA:492:G:H2'	21:AA:493:G:O4'	1.98	0.64
25:BC:14:LYS:HD3	25:BC:33:LEU:HD22	1.80	0.64
2:CC:52:LEU:HD11	2:CC:55:VAL:HG12	1.80	0.64
59:BA:1496:A:H2'	59:BA:1498:C:C5	2.33	0.64
20:CY:98:MET:HG2	20:CY:125:ALA:HB1	1.79	0.64
8:AI:93:ARG:HH22	8:AI:97:LYS:HD3	1.62	0.64
20:AY:5:VAL:O	20:AY:7:TYR:N	2.25	0.64
59:BA:1431:U:H3	59:BA:1562:A:H61	1.44	0.64
6:AG:22:LEU:HD21	6:AG:66:VAL:HG21	1.79	0.64
59:DA:535:C:N3	59:DA:558:G:N2	2.39	0.63
33:DN:19:GLU:HB3	33:DN:56:ASN:HB3	1.80	0.63
33:BN:119:ARG:NE	59:BA:8:A:OP1	2.28	0.63
24:CX:26:A:N6	24:CX:43:G:O6	2.30	0.63
59:BA:2749:A:H62	59:BA:2753:A:H61	0.76	0.63
35:DP:43:GLY:HA2	59:DA:670:A:H5'	1.79	0.63
21:CA:671:G:H1	21:CA:735:C:N4	1.96	0.63
20:CY:656:ALA:HB2	20:CY:669:PHE:HE2	1.62	0.63
1:CB:71:VAL:HG22	1:CB:93:VAL:HB	1.79	0.63
25:BC:213:VAL:HG12	25:BC:214:TYR:H	1.63	0.63
21:AA:1113:C:N4	21:AA:1187:G:H1	1.96	0.63
28:DF:102:PRO:HB3	59:DA:606:U:H5''	1.81	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DU:45:TYR:O	40:DU:49:HIS:ND1	2.25	0.63
59:BA:371:A:H61	59:BA:401:A:H3'	1.62	0.63
59:BA:355:G:H2'	59:BA:356:G:C8	2.33	0.63
28:DF:12:LEU:HD23	28:DF:124:LEU:HD11	1.79	0.63
15:CP:38:TYR:CE1	15:CP:50:LYS:HG3	2.33	0.63
59:BA:826:U:H5''	59:BA:2429:G:OP1	1.98	0.63
29:BG:73:ALA:HA	59:BA:2312:U:OP1	1.98	0.63
59:DA:712:G:H1	59:DA:719:C:H42	1.46	0.63
21:CA:445:G:H1	21:CA:489:C:H42	1.45	0.63
1:CB:209:ARG:HD3	1:CB:239:VAL:HG11	1.78	0.63
59:BA:239:U:O2	59:BA:258:G:O6	2.16	0.63
59:BA:890:A:H2'	59:BA:892:G:C8	2.33	0.63
6:AG:102:ARG:NH2	21:AA:939:G:OP1	2.30	0.63
21:CA:1535:C:N4	23:CV:10:G:C2	2.66	0.63
21:CA:408:A:N1	21:CA:434:U:C4	2.67	0.63
27:BE:34:VAL:HG11	27:BE:78:LEU:HD22	1.80	0.63
33:BN:36:GLY:H	33:BN:37:LYS:HG3	1.63	0.63
21:AA:951:G:H2'	21:AA:952:U:C6	2.33	0.63
27:DE:13:ARG:HH21	39:DT:60:THR:HG21	1.63	0.63
21:CA:333:G:H2'	21:CA:334:C:C6	2.33	0.63
59:BA:1506(I):U:H2'	59:BA:1506(J):G:C8	2.33	0.63
2:AC:176:HIS:HB3	21:AA:1111:A:H61	1.61	0.63
32:DK:106:GLU:HA	32:DK:109:LYS:HB2	1.80	0.63
59:DA:382:G:H1	59:DA:392:C:H42	1.44	0.63
17:AR:45:SER:HB3	17:AR:51:LEU:HD11	1.80	0.63
39:BT:124:ASP:HB3	39:BT:125:ARG:HH21	1.62	0.63
23:AV:19:G:N3	23:AV:19:G:O2'	2.30	0.63
59:BA:576:U:H2'	59:BA:577:G:C8	2.33	0.63
28:DF:63:LYS:HG3	28:DF:76:GLY:HA2	1.80	0.63
9:CJ:6:ILE:HB	9:CJ:98:ILE:HG12	1.80	0.63
33:DN:111:PRO:C	33:DN:114:ARG:H	2.01	0.63
33:BN:116:LEU:HB2	33:BN:118:LYS:H	1.61	0.63
33:BN:74:ARG:CB	59:BA:1138:G:H4'	2.26	0.63
12:CM:13:LYS:HD2	12:CM:18:ALA:HB2	1.81	0.63
59:DA:2247:A:N6	59:DA:2257:U:N3	2.22	0.63
59:DA:1652:A:H3'	59:DA:1653:G:H8	1.64	0.63
59:DA:92:G:H2'	59:DA:93:C:H6	1.62	0.63
21:CA:908:A:H2'	21:CA:909:A:C8	2.33	0.63
21:AA:986:A:H2'	21:AA:987:G:O4'	1.98	0.63
59:DA:224:G:OP2	59:DA:408:G:N2	2.32	0.63
20:AY:512:ILE:H	20:AY:512:ILE:HD13	1.62	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BT:23:ARG:HD3	39:BT:120:ARG:HH12	1.64	0.63
59:BA:1428:C:C5	59:BA:1569:A:H5''	2.33	0.63
9:CJ:10:GLY:HA2	9:CJ:94:VAL:HG23	1.79	0.63
45:BZ:112:ARG:NH1	59:BA:1077:A:OP1	2.31	0.63
20:AY:76:ASP:O	20:AY:77:HIS:ND1	2.31	0.63
30:DH:121:ILE:HG22	30:DH:135:GLY:HA2	1.79	0.63
33:DN:35:ARG:HD3	33:DN:76:SER:CA	2.28	0.63
33:BN:71:ILE:O	33:BN:72:TYR:HB2	1.93	0.63
21:AA:1494:G:N7	63:AA:1601:NMY:H12	2.13	0.63
59:DA:271(Q):A:H61	59:DA:357(E):U:H3	0.72	0.63
60:DB:51:G:C2'	60:DB:52:A:H5''	2.28	0.63
36:BQ:129:THR:OG1	36:BQ:130:LYS:N	2.31	0.63
24:AX:31:C:N3	24:AX:39:G:N2	2.42	0.63
59:BA:434:U:H1'	59:BA:435:C:H5	1.63	0.63
1:AB:167:PRO:O	1:AB:171:ALA:HB2	1.99	0.63
1:AB:71:VAL:HG22	1:AB:93:VAL:HB	1.79	0.63
39:BT:31:SER:HB3	39:BT:32:TYR:HD2	1.64	0.63
60:BB:14:U:HO2'	60:BB:107:U:HO2'	1.47	0.63
13:AN:2:ALA:HB3	21:AA:983:A:H5'	1.80	0.63
59:BA:2543:G:N2	59:BA:2646:C:H5''	2.13	0.63
14:AO:54:ARG:NE	21:AA:579:G:O2'	2.31	0.63
16:AQ:9:VAL:HG13	16:AQ:56:VAL:HG22	1.79	0.63
21:CA:1425:U:H2'	21:CA:1426:C:C6	2.33	0.63
21:AA:41:G:H2'	21:AA:42:G:C8	2.34	0.63
59:DA:1197:G:H22	59:DA:1249:U:H1'	1.61	0.63
29:DG:105:LYS:HB3	29:DG:142:PRO:HG3	1.79	0.63
35:BP:147:LEU:O	35:BP:148:LEU:HB2	1.98	0.63
59:BA:2142:C:H2'	59:BA:2143:C:C6	2.34	0.63
59:DA:2791:C:O2	59:DA:2893:G:O2'	2.14	0.63
33:BN:119:ARG:HH21	59:BA:8:A:H5''	1.63	0.63
21:AA:1117:G:H21	21:AA:1180:A:H1'	1.63	0.63
60:DB:34:U:O2	60:DB:48:A:N1	2.30	0.63
21:CA:68(I):G:O6	21:CA:68(Q):U:O4	2.17	0.63
59:DA:2487:G:H2'	59:DA:2488:A:H8	1.63	0.63
59:DA:462:C:H42	59:DA:467:G:H1	1.44	0.63
21:CA:830:G:H1	21:CA:856:C:H42	1.46	0.63
59:BA:2082:A:H62	59:BA:2237:G:H21	1.45	0.63
21:AA:148:G:H2'	21:AA:149:A:C8	2.32	0.63
59:BA:1060:U:H3	59:BA:1088:A:H8	1.46	0.63
21:AA:565:U:H3'	21:AA:566:G:H8	1.62	0.63
30:BH:64:LEU:HA	30:BH:67:LEU:HB3	1.81	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CY:97:SER:O	20:CY:101:LEU:HG	1.98	0.63
59:BA:1681:G:N3	59:BA:1762:A:H2'	2.14	0.63
33:DN:45:ASN:HB3	33:DN:78:TYR:CD2	2.34	0.63
59:DA:2449:U:O2'	59:DA:2501:C:N4	2.32	0.63
21:CA:998:G:N2	21:CA:1043:C:C2	2.64	0.63
21:CA:1532:U:N3	23:CV:13:A:N7	2.46	0.63
21:AA:621:A:H2'	21:AA:622:A:C8	2.34	0.63
1:AB:171:ALA:HA	1:AB:174:VAL:HB	1.80	0.63
42:BW:102:HIS:CD2	59:BA:24:G:H4'	2.32	0.63
44:BY:75:ILE:HA	44:BY:80:GLY:HA2	1.79	0.63
28:BF:154:VAL:O	28:BF:156:LEU:N	2.31	0.63
32:BK:3:LYS:HD2	32:BK:3:LYS:H	1.63	0.63
21:CA:320:C:H1'	21:CA:1434:A:C2	2.33	0.63
14:AO:48:LYS:HB2	21:AA:668:G:H4'	1.79	0.63
59:DA:357:A:H2'	59:DA:357(A):U:H6	1.63	0.63
28:BF:110:LEU:HD23	28:BF:206:ILE:HD11	1.81	0.63
59:DA:1530:G:C2	59:DA:1541:U:O2	2.52	0.63
59:DA:1660:C:H2'	59:DA:1661:G:C8	2.33	0.63
21:AA:745:C:H2'	21:AA:746:A:C8	2.33	0.63
59:DA:1844:C:H42	59:DA:1896:G:H1	1.46	0.63
59:BA:377:C:H2'	59:BA:378:C:C6	2.33	0.63
59:BA:283:U:H2'	59:BA:284:C:C6	2.33	0.63
20:AY:148:LEU:O	20:AY:152:THR:OG1	2.16	0.63
33:BN:12:ARG:HG3	33:BN:14:VAL:HG23	1.80	0.63
40:DU:21:ALA:HB2	40:DU:39:LEU:HD11	1.80	0.63
27:BE:152:LYS:HA	59:BA:2619:C:H5''	1.79	0.63
59:BA:1406:U:H2'	59:BA:1407:C:C6	2.33	0.63
20:AY:283:PRO:HA	20:AY:286:ILE:HB	1.79	0.63
59:BA:1203:G:N1	59:BA:1241:A:OP2	2.27	0.63
33:DN:74:ARG:H	33:DN:84:LYS:HB3	1.64	0.63
59:DA:955:C:H2'	59:DA:956:G:H5'	1.81	0.63
33:BN:35:ARG:HE	33:BN:38:HIS:C	2.02	0.63
8:CI:5:TYR:OH	21:CA:1147:C:O2'	2.16	0.63
60:DB:3:C:N4	60:DB:117:G:H1	1.95	0.63
42:BW:25:ARG:NH2	59:BA:519:U:O2'	2.32	0.63
59:DA:670:A:H4'	59:DA:671:C:H5'	1.80	0.63
59:DA:869:G:H1	59:DA:908:C:N4	1.94	0.63
59:DA:1028:A:H2'	59:DA:1029:A:C8	2.34	0.63
22:CW:50:C:N4	22:CW:64:G:C6	2.66	0.63
16:AQ:61:GLU:HA	16:AQ:71:PHE:HD1	1.63	0.63
21:AA:757:U:O2	21:AA:879:C:O2'	2.17	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:1105:U:H2'	59:BA:1106:G:C8	2.34	0.63
59:BA:1058:G:H2'	59:BA:1059:G:C8	2.33	0.63
44:BY:102:CYS:SG	44:BY:103:GLY:N	2.64	0.63
20:CY:289:ILE:HG22	20:CY:290:LYS:H	1.63	0.63
29:DG:57:ALA:HB1	29:DG:90:LEU:HD13	1.81	0.63
20:AY:428:LEU:HA	20:AY:431:LEU:HB2	1.79	0.63
59:BA:1398:C:H2'	59:BA:1399:C:C6	2.34	0.63
24:CX:56:C:H1'	29:DG:76:SER:HB2	1.80	0.63
55:B9:30:PRO:HG2	59:BA:2527:C:H5''	1.80	0.63
59:BA:228:A:H3'	59:BA:229:A:C5'	2.29	0.63
39:DT:52:ILE:HD13	39:DT:61:PHE:HB2	1.81	0.63
59:BA:1960:A:H2'	59:BA:1961:C:H6	1.64	0.63
11:CL:114:LYS:HB2	21:CA:538:G:H5''	1.81	0.63
36:BQ:14:ARG:HH12	59:BA:956:G:H8	1.46	0.63
25:BC:34:ALA:HB2	25:BC:217:THR:HG21	1.81	0.63
59:DA:2537:U:H2'	59:DA:2538:C:C6	2.34	0.63
59:BA:1712(K):A:H2'	59:BA:1712(L):G:O4'	1.98	0.63
59:BA:2336:A:H3'	59:BA:2337:G:H8	1.63	0.63
20:CY:188:TYR:HA	20:CY:196:ILE:HA	1.81	0.63
1:CB:191:ASP:OD1	1:CB:192:SER:N	2.30	0.63
21:CA:1066:C:N4	21:CA:1191:A:H62	1.95	0.63
59:DA:686:G:H2'	59:DA:788:A:H61	1.63	0.63
28:DF:156:LEU:HD12	28:DF:193:VAL:HB	1.80	0.63
22:CW:50:C:N3	22:CW:65:U:C4	2.67	0.63
21:CA:456:C:N4	21:CA:476:G:H1	1.97	0.63
26:BD:206:LEU:HD12	59:BA:1791:A:H5''	1.79	0.63
21:CA:963:G:H2'	21:CA:964:A:C8	2.34	0.63
20:AY:388:THR:HA	20:AY:399:LEU:HD12	1.80	0.63
59:DA:2564:A:OP1	59:DA:2648:C:H4'	1.99	0.63
59:DA:1230:C:H2'	59:DA:1231:G:C8	2.34	0.63
47:B1:4:VAL:HG21	47:B1:11:ARG:HD2	1.79	0.63
25:BC:164:PHE:HZ	25:BC:196:ALA:HB1	1.64	0.63
37:BR:62:ALA:HA	37:BR:65:LEU:HB2	1.78	0.63
21:AA:1046:A:H3'	21:AA:1047:G:H8	1.64	0.63
59:DA:2589:A:H2	59:DA:2605:U:H3	1.45	0.63
3:CD:172:PRO:O	3:CD:187:ARG:NH1	2.31	0.63
28:BF:162:LEU:H	28:BF:162:LEU:HD12	1.63	0.63
1:CB:235:SER:O	1:CB:237:ALA:N	2.32	0.63
4:CE:27:ARG:HG2	4:CE:49:PRO:HA	1.79	0.63
21:CA:1405:G:H3'	63:CA:1601:NMY:C23	2.29	0.63
59:DA:2708:G:H2'	59:DA:2709:G:C8	2.33	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DO:6:THR:HA	59:DA:1667:G:H5''	1.80	0.63
11:CL:124:LYS:HZ1	21:CA:500:G:H5'	1.64	0.63
59:DA:1527:G:N3	59:DA:1544:A:C8	2.67	0.63
21:CA:1440(C):G:H3'	21:CA:1440(D):A:H5'	1.80	0.63
59:BA:500:G:N2	59:BA:505:A:H62	1.97	0.63
32:DK:106:GLU:HG3	32:DK:109:LYS:HD3	1.81	0.63
35:DP:16:ARG:O	59:DA:661:C:O2'	2.12	0.63
16:AQ:16:GLN:HE22	21:AA:273:A:H1'	1.62	0.63
59:DA:608:A:H2'	59:DA:609:A:C8	2.33	0.63
3:CD:33:MET:O	3:CD:35:ARG:N	2.26	0.63
59:DA:1194:A:H2'	59:DA:1195:G:H8	1.64	0.63
59:BA:1054:A:H2'	59:BA:1055:G:C8	2.34	0.63
21:AA:25:C:H5'	21:AA:524:G:H1'	1.81	0.63
21:AA:162:A:H8	21:AA:162:A:O5'	1.82	0.63
59:DA:2553:G:N2	59:DA:2554:U:H1'	2.14	0.62
21:AA:452:A:O2'	21:AA:453:A:O5'	2.16	0.62
24:CX:34:U:H3'	24:CX:35:A:H8	1.62	0.62
21:CA:1219:U:H2'	21:CA:1220:G:C8	2.34	0.62
59:DA:553:G:H2'	59:DA:554:U:C6	2.34	0.62
36:BQ:26:TYR:CE1	59:BA:906:G:H5''	2.34	0.62
59:DA:271(L):C:N4	59:DA:357(F):G:H1	1.96	0.62
48:D2:64:LEU:O	48:D2:68:ARG:N	2.32	0.62
21:CA:1059:C:H2'	21:CA:1060:C:C6	2.34	0.62
27:BE:110:GLY:HA2	27:BE:162:ALA:N	2.14	0.62
26:DD:100:GLY:HA3	59:DA:1500:G:N2	2.14	0.62
59:BA:2598:A:O5'	59:BA:2598:A:H8	1.81	0.62
21:AA:777:A:H2'	21:AA:778:G:H8	1.62	0.62
20:CY:259:PHE:HB2	20:CY:272:LEU:HD13	1.80	0.62
21:AA:579:G:N1	21:AA:762:C:O2	2.28	0.62
40:DU:106:PHE:HA	40:DU:109:LEU:HD12	1.81	0.62
29:BG:77:ILE:O	29:BG:80:PHE:N	2.31	0.62
21:CA:1087:G:N1	21:CA:1098:C:O2	2.27	0.62
20:CY:388:THR:HG23	20:CY:399:LEU:HG	1.81	0.62
20:AY:420:ASP:HA	20:AY:423:LYS:HE2	1.80	0.62
35:BP:7:ARG:HH11	35:BP:7:ARG:H	1.47	0.62
33:DN:113:GLY:HA2	33:DN:117:PHE:CB	2.24	0.62
21:CA:1404:C:H2'	21:CA:1405:G:H8	1.63	0.62
48:D2:47:ASN:HB3	48:D2:50:ILE:HD11	1.81	0.62
21:CA:933:G:H1	21:CA:1384:C:N4	1.96	0.62
59:BA:2256:G:H2'	59:BA:2257:U:C6	2.34	0.62
28:BF:125:LEU:CB	28:BF:194:MET:HB2	2.29	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BD:206:LEU:HD13	26:BD:211:ARG:HB3	1.80	0.62
41:BV:96:ILE:HG22	41:BV:97:LYS:N	2.14	0.62
59:DA:2836:U:H2'	59:DA:2837:G:C8	2.34	0.62
20:AY:13:ARG:HH11	20:AY:282:SER:HB3	1.64	0.62
21:AA:115:G:O2'	21:AA:116:A:OP2	2.17	0.62
59:BA:1657:C:H2'	59:BA:1658:C:C6	2.34	0.62
20:CY:542:VAL:HA	20:CY:583:LYS:HA	1.81	0.62
27:BE:26:ILE:HG13	27:BE:182:LEU:HB3	1.80	0.62
1:CB:131:PRO:HB2	1:CB:133:LYS:HE3	1.80	0.62
33:DN:45:ASN:OD1	33:DN:115:ARG:NE	2.32	0.62
33:BN:72:TYR:H	33:BN:87:LEU:H	1.46	0.62
59:BA:1933:G:H4'	63:BA:2902:NMY:N7	2.13	0.62
59:DA:2630:G:N2	59:DA:2892:A:N3	2.46	0.62
27:DE:116:VAL:HG23	27:DE:120:TRP:HD1	1.64	0.62
22:AW:70:G:H21	59:BA:1851:U:H4'	1.64	0.62
47:D1:14:VAL:HA	47:D1:41:ARG:CB	2.22	0.62
59:DA:826:U:H5''	59:DA:2429:G:OP1	1.99	0.62
16:CQ:21:VAL:O	16:CQ:41:LYS:HA	1.98	0.62
59:DA:269:U:O2	59:DA:370:G:N2	2.21	0.62
60:BB:24:G:N1	60:BB:56:G:N2	2.46	0.62
52:D6:5:VAL:HB	59:DA:2283:C:H5'	1.80	0.62
25:DC:104:ILE:HG21	25:DC:132:LEU:HD11	1.82	0.62
37:BR:5:LYS:HE3	59:BA:2820:A:H4'	1.81	0.62
28:BF:154:VAL:HG23	28:BF:173:VAL:HA	1.81	0.62
59:DA:373:U:H2'	59:DA:374:A:C8	2.34	0.62
55:D9:19:ARG:HG3	59:DA:2756:U:H3'	1.81	0.62
47:D1:5:CYS:SG	47:D1:7:ILE:N	2.72	0.62
20:CY:77:HIS:CG	20:CY:277:VAL:HG21	2.35	0.62
26:DD:95:LEU:HD22	26:DD:117:VAL:HG21	1.80	0.62
47:B1:17:SER:H	47:B1:39:LYS:HA	1.65	0.62
21:CA:1440(G):C:N3	21:CA:1440(L):G:O6	2.33	0.62
21:CA:1184:G:H2'	21:CA:1185:G:C8	2.34	0.62
59:DA:738:G:H3'	59:DA:739:G:C8	2.34	0.62
33:DN:112:LEU:O	33:DN:115:ARG:HB3	1.99	0.62
33:DN:104:LYS:HZ2	33:DN:122:VAL:HA	1.63	0.62
33:DN:14:VAL:HG12	33:DN:15:LEU:H	1.64	0.62
21:CA:408:A:H2'	21:CA:409:G:C8	2.34	0.62
59:BA:1259:G:H2'	59:BA:1260:G:C8	2.34	0.62
59:BA:26:G:H4'	59:BA:1260:G:H4'	1.81	0.62
21:CA:1512:U:H2'	21:CA:1513:A:C8	2.34	0.62
59:BA:538:G:H2'	59:BA:539:G:H8	1.64	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DO:25:LEU:HB3	34:DO:38:VAL:HB	1.80	0.62
21:CA:11:G:H2'	21:CA:12:U:O4'	1.99	0.62
43:DX:55:ASN:ND2	59:DA:1341:U:O2'	2.31	0.62
59:DA:97:C:H2'	59:DA:98:G:H8	1.63	0.62
24:AX:35:A:C2	24:AX:36:C:C2	2.88	0.62
13:CN:45:ARG:HH22	21:CA:1059:C:H5''	1.64	0.62
59:BA:270(A):A:H62	59:BA:270(Y):G:N2	1.98	0.62
59:BA:661:C:H2'	59:BA:662:G:C8	2.34	0.62
21:AA:186(D):C:H2'	21:AA:186(E):C:C6	2.33	0.62
59:DA:1485:G:H1	59:DA:1504:C:H42	1.45	0.62
21:CA:530:G:H5''	21:CA:531:U:H5''	1.80	0.62
59:BA:1283:G:N2	59:BA:1286:A:OP2	2.31	0.62
59:BA:1838:C:H4'	59:BA:1839:G:C8	2.34	0.62
20:CY:507:TYR:O	20:CY:581:ALA:HB1	1.99	0.62
21:CA:837:G:H2'	21:CA:838:G:H8	1.63	0.62
59:BA:417:C:H2'	59:BA:418:G:C8	2.35	0.62
28:DF:162:LEU:HD12	28:DF:162:LEU:H	1.64	0.62
21:AA:609:A:H2'	21:AA:610:G:C8	2.34	0.62
33:DN:100:GLU:HA	33:DN:103:VAL:H	1.65	0.62
27:DE:143:ASN:HB3	27:DE:147:PRO:HD2	1.81	0.62
23:CV:9:G:H5'	23:CV:10:G:C6	2.35	0.62
21:CA:106:C:H2'	21:CA:107:G:C8	2.33	0.62
21:CA:988:G:N1	21:CA:1217:C:O2	2.31	0.62
59:DA:708:C:N3	59:DA:723:G:N2	2.36	0.62
47:B1:18:ILE:HG21	59:BA:380:U:H4'	1.81	0.62
21:CA:947:G:N1	21:CA:1234:C:O2	2.32	0.62
7:AH:96:GLY:N	7:AH:99:GLU:OE1	2.31	0.62
59:DA:1687:G:H21	59:DA:1701:A:N6	1.98	0.62
59:DA:1081:U:H2'	59:DA:1082:U:H5	1.64	0.62
21:AA:235:C:H2'	21:AA:236:G:C8	2.35	0.62
21:AA:1434:A:H61	21:AA:1467:G:H1'	1.65	0.62
26:BD:149:PRO:HG2	59:BA:2222:G:H4'	1.81	0.62
26:DD:108:PRO:HA	26:DD:197:GLY:N	2.14	0.62
59:BA:64:A:H2'	59:BA:65:C:C6	2.35	0.62
59:BA:1081:U:H2'	59:BA:1082:U:C5	2.34	0.62
29:DG:91:ARG:HG3	59:DA:2313:C:H4'	1.81	0.62
10:CK:21:ILE:HB	10:CK:84:VAL:HA	1.79	0.62
21:CA:1271:G:H2'	21:CA:1272:G:H5''	1.81	0.62
21:AA:130:A:H1'	21:AA:263:A:O2'	1.99	0.62
21:CA:1020:U:H2'	21:CA:1021:G:H8	1.65	0.62
21:CA:1184:G:H2'	21:CA:1185:G:H8	1.64	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:1838:C:H4'	59:BA:1839:G:H8	1.64	0.62
59:BA:2008:C:H2'	59:BA:2009:G:C8	2.35	0.62
21:AA:920:U:HO2'	21:AA:1081:G:HO2'	1.47	0.62
44:DY:30:VAL:HG22	44:DY:37:VAL:HG12	1.82	0.62
21:AA:373:A:H4'	21:AA:480:U:O2'	1.99	0.62
34:DO:73:ASP:OD1	34:DO:75:SER:OG	2.17	0.62
3:AD:57:ARG:HB3	3:AD:206:PHE:CB	2.30	0.62
59:BA:2525:G:H2'	59:BA:2526:G:C8	2.34	0.62
19:CT:54:LYS:HA	19:CT:57:ARG:HE	1.64	0.62
27:BE:56:PRO:HG2	27:BE:57:LYS:HD2	1.80	0.62
59:DA:694:U:O2	59:DA:768:G:N2	2.32	0.62
30:BH:35:VAL:HG11	30:BH:71:LEU:HB3	1.81	0.62
33:DN:27:ALA:O	33:DN:29:LYS:N	2.32	0.62
21:AA:1491:G:H5"	21:AA:1492:A:OP2	2.00	0.62
11:CL:90:VAL:HG22	11:CL:96:VAL:HG21	1.81	0.62
21:AA:1003:G:C2	21:AA:1037:C:N3	2.66	0.62
21:CA:269:C:H2'	21:CA:270:A:C8	2.35	0.62
59:DA:2485:G:H2'	59:DA:2486:G:C8	2.34	0.62
6:CG:79:ARG:HB3	21:CA:1381:U:O2'	2.00	0.62
21:AA:986:A:H61	21:AA:1219:U:H3	1.47	0.62
20:CY:21:ILE:HG13	20:CY:22:ASP:N	2.14	0.62
59:DA:2447:G:N2	59:DA:2450:A:OP2	2.33	0.62
59:BA:1220:C:N4	59:BA:1229:G:H1	1.97	0.62
19:CT:49:ALA:O	19:CT:52:ALA:N	2.31	0.62
26:BD:87:ASN:N	26:BD:87:ASN:OD1	2.32	0.62
21:AA:427:U:O2'	21:AA:541:G:OP1	2.18	0.62
41:BV:40:LEU:HD13	41:BV:41:GLY:H	1.64	0.62
21:AA:129(A):G:H5'	21:AA:186(K):G:H5'	1.81	0.62
21:AA:546:G:H4'	21:AA:548:G:H4'	1.81	0.62
59:DA:2804:C:H2'	59:DA:2805:G:C8	2.35	0.62
17:AR:56:THR:HB	17:AR:58:LEU:HD23	1.81	0.62
1:AB:189:ASP:O	1:AB:191:ASP:N	2.32	0.62
59:BA:1703:G:H2'	59:BA:1704:G:C8	2.34	0.62
59:DA:2698:U:H3	59:DA:2709:G:H1	1.47	0.62
59:DA:1413:G:H2'	59:DA:1414:G:C8	2.35	0.62
59:DA:683:C:N3	59:DA:794:G:O6	2.32	0.62
59:DA:644:A:N6	59:DA:2349:G:H21	1.95	0.62
20:CY:117:GLN:HE22	20:CY:665:GLY:HA3	1.64	0.62
2:CC:48:TYR:OH	2:CC:122:GLU:OE2	2.17	0.62
21:CA:695:A:H2'	21:CA:696:A:C8	2.34	0.62
40:BU:31:SER:OG	59:BA:581:C:OP1	2.16	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DR:105:ARG:NH2	42:DW:39:THR:O	2.32	0.62
59:BA:190:A:H3'	59:BA:191:A:H8	1.65	0.62
19:AT:83:ARG:NH2	21:AA:260:G:N7	2.48	0.62
21:AA:908:A:H2'	21:AA:909:A:H8	1.64	0.62
59:BA:269:U:H3	59:BA:370:G:H1	0.69	0.62
21:AA:38:G:N1	21:AA:397:A:OP1	2.33	0.62
30:DH:127:GLU:HG2	30:DH:129:THR:H	1.64	0.62
59:DA:1711:C:H2'	59:DA:1712:C:H6	1.64	0.62
15:CP:68:ASP:HA	15:CP:71:ARG:HD2	1.81	0.62
3:CD:15:GLU:HA	3:CD:59:ARG:HH22	1.64	0.62
38:DS:28:VAL:HA	38:DS:37:ALA:HA	1.82	0.62
34:BO:13:ASN:HB3	34:BO:97:ARG:HB3	1.81	0.62
59:DA:2641:G:H2'	59:DA:2642:G:C8	2.35	0.62
33:DN:58:ASP:OD2	33:DN:59:LYS:NZ	2.32	0.62
33:DN:85:ILE:HG12	33:DN:109:LYS:HB2	1.82	0.62
59:BA:2728:U:H2'	59:BA:2729:G:C8	2.35	0.62
33:BN:30:ILE:O	33:BN:34:LEU:HB2	2.00	0.62
59:BA:1964:G:N2	59:BA:1967:C:H1'	2.14	0.62
62:AY:702:FUA:H12	62:AY:702:FUA:O1	2.00	0.62
59:DA:55:G:N2	59:DA:115:C:N3	2.39	0.62
59:DA:918:A:N3	60:DB:80:U:O2'	2.32	0.62
21:CA:1423:G:N2	21:CA:1477:C:N3	2.42	0.62
59:DA:193:U:H4'	59:DA:803:U:H5'	1.80	0.62
21:CA:1091:U:N3	21:CA:1094:G:OP2	2.33	0.62
59:BA:44:A:N6	59:BA:434:U:H3	1.94	0.62
42:BW:47:VAL:HA	42:BW:50:VAL:HG12	1.80	0.62
38:BS:16:ASN:HB3	38:BS:20:ARG:HH21	1.65	0.62
59:BA:676:A:N7	59:BA:2070:G:H1'	2.15	0.62
37:BR:50:HIS:HB2	59:BA:2839:G:H5''	1.82	0.62
45:DZ:15:PRO:HG3	60:DB:76:G:H5''	1.81	0.62
46:B0:34:GLY:HA3	59:BA:2353:G:H1'	1.81	0.62
45:BZ:99:TYR:HB3	45:BZ:123:ASP:HB2	1.82	0.62
38:BS:39:ILE:HB	38:BS:49:VAL:HB	1.82	0.62
43:DX:89:ILE:HG22	43:DX:92:LEU:H	1.64	0.62
20:AY:631:ILE:HG22	20:AY:632:LEU:N	2.13	0.62
53:D7:39:ARG:HE	53:D7:39:ARG:HA	1.65	0.62
45:BZ:15:PRO:HB2	45:BZ:19:ARG:HE	1.65	0.62
33:BN:67:LEU:HD22	33:BN:68:GLU:H	1.64	0.62
33:DN:114:ARG:HE	59:DA:527:C:C2'	2.13	0.62
28:DF:82:ILE:HG13	28:DF:83:PHE:HD1	1.65	0.62
27:DE:109:LYS:NZ	59:DA:2681:C:OP1	2.31	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
62:CY:702:FUA:H271	59:DA:2662:A:OP1	1.99	0.62
21:CA:1040:U:H2'	21:CA:1041:A:H8	1.64	0.62
21:CA:139:G:H2'	21:CA:140:A:C8	2.35	0.62
59:BA:18:C:O2'	59:BA:554:U:H5''	2.00	0.62
59:BA:523:C:O2	59:BA:554:U:O2'	2.17	0.62
59:DA:858:U:O4	59:DA:919:G:O6	2.17	0.62
2:CC:32:LEU:O	2:CC:36:ASP:HB3	2.00	0.62
22:AW:29:U:O4	22:AW:41:A:N1	2.33	0.62
21:CA:831:U:H3	21:CA:855:G:H1	1.48	0.62
59:DA:15:G:H2'	59:DA:16:G:C8	2.34	0.62
59:DA:16:G:N2	59:DA:524:U:O2	2.28	0.62
38:DS:106:ARG:HB3	38:DS:108:GLY:H	1.65	0.62
13:AN:53:LEU:HD13	13:AN:56:VAL:HG21	1.82	0.62
29:DG:72:ARG:HH11	60:DB:41:U:H3	1.47	0.62
41:DV:39:LEU:HD12	41:DV:47:VAL:HG11	1.80	0.62
20:CY:309:LEU:HA	20:CY:333:GLY:HA3	1.82	0.62
20:AY:315:LYS:HB2	20:AY:327:PHE:HB2	1.81	0.62
16:AQ:81:ARG:HH21	16:AQ:83:ASP:HB2	1.64	0.62
7:AH:88:LYS:O	7:AH:90:GLY:N	2.32	0.62
3:CD:134:ASP:OD2	3:CD:134:ASP:N	2.31	0.62
53:D7:26:GLY:HA3	59:DA:682:G:H5'	1.82	0.62
37:DR:2:ARG:HB3	59:DA:2723:C:H5''	1.81	0.62
21:CA:1535:C:C4	23:CV:10:G:N2	2.67	0.62
21:CA:430:A:H2'	21:CA:431:A:H5'	1.81	0.62
59:DA:35:G:H2'	59:DA:36:G:O4'	2.00	0.62
59:DA:38:A:N1	59:DA:441:U:O2	2.33	0.62
59:DA:17:G:H2'	59:DA:18:C:C6	2.34	0.62
59:DA:1166:C:H2'	59:DA:1167:U:C6	2.35	0.62
59:DA:2487:G:H2'	59:DA:2488:A:C8	2.35	0.62
25:BC:125:GLY:HA2	25:BC:138:LEU:HD11	1.82	0.62
21:AA:1012:U:H3	21:AA:1017:G:H1	1.45	0.62
59:DA:101:G:O2'	59:DA:102:G:OP1	2.15	0.62
21:AA:1028(B):C:C4	21:AA:1028(G):G:O6	2.52	0.62
59:DA:1091:G:N2	59:DA:1100:C:N3	2.44	0.62
9:CJ:54:PHE:O	9:CJ:56:HIS:N	2.32	0.62
21:CA:166:G:H2'	21:CA:167:G:H8	1.64	0.62
59:BA:1570:A:O5'	59:BA:1570:A:H8	1.82	0.62
27:BE:171:GLU:HB3	27:BE:185:LYS:HE3	1.80	0.62
52:D6:9:LEU:HD13	52:D6:9:LEU:H	1.64	0.62
59:BA:1430:C:H2'	59:BA:1431:U:O4'	1.99	0.62
42:DW:43:GLY:HA2	42:DW:46:PHE:HB2	1.82	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BF:28:ILE:HG22	28:BF:30:PRO:HD3	1.82	0.62
10:AK:29:ILE:HA	10:AK:44:SER:HA	1.81	0.62
21:AA:68(H):G:H1	21:AA:68(R):C:H42	1.48	0.62
34:DO:69:ILE:HG23	34:DO:71:ARG:HD3	1.82	0.62
37:BR:67:LEU:HG	37:BR:73:VAL:HG22	1.81	0.62
59:BA:86:C:H4'	59:BA:104:U:H1'	1.81	0.62
33:BN:85:ILE:HG21	33:BN:109:LYS:H	1.65	0.61
33:BN:27:ALA:O	33:BN:29:LYS:N	2.33	0.61
33:BN:43:THR:N	33:BN:78:TYR:HA	2.15	0.61
21:AA:408:A:H2	21:AA:434:U:C2	2.18	0.61
62:CY:702:FUA:O1	62:CY:702:FUA:H12	2.00	0.61
20:AY:86:GLY:HA2	62:AY:702:FUA:H283	1.80	0.61
60:DB:24:G:N2	60:DB:28:C:O2	2.33	0.61
47:D1:50:ARG:N	59:DA:2200:C:OP1	2.27	0.61
38:BS:31:SER:OG	38:BS:32:LEU:N	2.31	0.61
59:DA:194:G:H1	59:DA:201:C:H42	1.46	0.61
1:AB:93:VAL:HG11	1:AB:97:TRP:HB2	1.81	0.61
21:AA:1354:C:H2'	21:AA:1355:G:H8	1.63	0.61
59:DA:319:C:H2'	59:DA:320:A:O4'	1.99	0.61
3:AD:26:CYS:HA	3:AD:31:CYS:HA	1.81	0.61
19:AT:83:ARG:NH1	21:AA:260:G:OP2	2.32	0.61
17:CR:33:ASP:O	17:CR:36:ASN:ND2	2.32	0.61
59:BA:600:G:H2'	59:BA:601:C:C6	2.35	0.61
59:BA:820:A:N3	59:BA:943:U:H4'	2.15	0.61
41:DV:84:LYS:N	59:DA:814:C:OP1	2.30	0.61
35:BP:54:GLY:HA3	59:BA:826:U:H1'	1.81	0.61
59:DA:1504:C:H2'	59:DA:1505:C:C6	2.35	0.61
20:AY:580:MET:HA	20:AY:583:LYS:HB3	1.81	0.61
19:AT:34:LYS:O	19:AT:37:SER:OG	2.15	0.61
26:BD:11:PRO:HA	26:BD:14:ARG:HB3	1.81	0.61
21:AA:766:A:H2'	21:AA:767:A:O4'	2.00	0.61
59:BA:1306:C:H2'	59:BA:1307:A:C8	2.34	0.61
25:BC:80:LYS:HE3	25:BC:120:VAL:HG13	1.82	0.61
21:AA:1440(D):A:H1'	21:AA:1440(E):G:H8	1.64	0.61
59:DA:1626:G:H5''	59:DA:1627:G:H5'	1.82	0.61
6:CG:12:LEU:HB2	6:CG:21:VAL:HB	1.82	0.61
33:DN:35:ARG:HH11	33:DN:76:SER:C	2.04	0.61
33:DN:71:ILE:CB	33:DN:97:ARG:HB2	2.21	0.61
21:CA:411:A:H2'	21:CA:412:A:H4'	1.82	0.61
21:CA:1405:G:H3'	63:CA:1601:NMY:N19	2.14	0.61
21:CA:1491:G:C4	63:CA:1601:NMY:H4	2.35	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:1935:G:O2'	59:BA:1964:G:N2	2.33	0.61
24:CX:39:G:H2'	24:CX:40:G:C8	2.35	0.61
21:CA:1041:A:C2	21:CA:1042:G:H1'	2.35	0.61
59:BA:1583:A:H61	21:CA:838(A):U:C5'	2.13	0.61
6:CG:77:SER:HA	6:CG:85:TYR:O	2.00	0.61
46:B0:40:GLN:HB2	46:B0:44:ARG:HD3	1.81	0.61
1:CB:168:THR:HG23	1:CB:192:SER:HB2	1.82	0.61
21:CA:9:G:H1	21:CA:25:C:N4	1.98	0.61
35:BP:50:ARG:HD2	54:B8:59:LYS:HE3	1.82	0.61
59:DA:524:U:H2'	59:DA:525:U:C6	2.35	0.61
59:BA:1413:G:H1	59:BA:1589:C:N4	1.97	0.61
28:BF:6:VAL:HG22	28:BF:121:GLY:HA2	1.82	0.61
59:BA:1540:G:C2	59:BA:1541:U:H1'	2.35	0.61
35:DP:115:LEU:HA	35:DP:134:ALA:HB2	1.82	0.61
59:BA:1525:G:H2'	59:BA:1526:G:H8	1.65	0.61
59:BA:129:C:H2'	59:BA:130:C:C6	2.34	0.61
26:BD:45:ASN:HB3	59:BA:1813:G:H1'	1.82	0.61
59:DA:51:G:O2'	59:DA:119:A:N1	2.32	0.61
59:DA:24:G:H1	59:DA:516:C:N4	1.98	0.61
59:DA:2641:G:H2'	59:DA:2642:G:H8	1.64	0.61
33:DN:116:LEU:C	33:DN:118:LYS:N	2.45	0.61
59:BA:1005:C:N3	59:BA:1138:G:N2	2.43	0.61
33:BN:97:ARG:CA	33:BN:105:GLY:HA2	2.30	0.61
59:BA:1965:C:O5'	63:BA:2903:NMY:H62	1.99	0.61
30:DH:107:VAL:O	30:DH:109:PHE:N	2.28	0.61
60:DB:24:G:H1	60:DB:59:A:H61	1.46	0.61
59:BA:1354:A:N6	59:BA:1377:G:H21	1.90	0.61
59:DA:2549:G:N2	59:DA:2559:C:N3	2.33	0.61
59:DA:778:G:H3'	59:DA:779:U:C6	2.35	0.61
59:DA:1921:G:H2'	59:DA:1922:G:O4'	2.00	0.61
8:CI:122:ALA:HB3	21:CA:1343:G:H4'	1.81	0.61
60:BB:32:C:O2	60:BB:50:G:N1	2.33	0.61
59:DA:410:G:O6	59:DA:417:C:N3	2.33	0.61
59:DA:1028:A:N6	59:DA:1125:G:H2'	2.15	0.61
59:DA:1058:G:H2'	59:DA:1059:G:C8	2.35	0.61
59:DA:28:A:H61	59:DA:512:G:H1'	1.62	0.61
9:AJ:55:LYS:HG2	21:AA:973:G:H1'	1.83	0.61
36:DQ:55:VAL:HA	36:DQ:58:PHE:CE2	2.35	0.61
37:BR:10:LEU:HB2	59:BA:1653:G:N7	2.15	0.61
59:BA:2069:G:H1	59:BA:2442:C:H42	1.48	0.61
59:BA:2487:G:H2'	59:BA:2488:A:H8	1.63	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:1686:C:H42	59:BA:1702:G:H1	1.48	0.61
53:B7:1:MET:N	59:BA:1619:G:N3	2.48	0.61
10:AK:51:LYS:HA	10:AK:55:LYS:HB2	1.81	0.61
59:DA:1864(D):A:H8	59:DA:1864(D):A:O5'	1.83	0.61
28:DF:169:ASN:ND2	59:DA:322:A:H3'	2.16	0.61
33:BN:104:LYS:NZ	33:BN:124:ALA:HB3	2.15	0.61
59:DA:1337:G:H2'	59:DA:1338:G:H8	1.66	0.61
59:DA:2662:A:H8	59:DA:2662:A:O5'	1.83	0.61
59:BA:271(D):G:H2'	59:BA:271(E):G:H8	1.64	0.61
59:BA:1312:U:C4	59:BA:1340:U:O4	2.54	0.61
24:AX:52:G:O6	24:AX:62:C:N3	2.33	0.61
21:CA:923:A:H61	21:CA:1393:U:H3	1.46	0.61
59:DA:188:G:N2	59:DA:208:C:N3	2.37	0.61
59:DA:882:G:H1	59:DA:894:C:N4	1.96	0.61
30:BH:138:LYS:HB3	59:BA:2746:U:H4'	1.83	0.61
59:DA:698:C:OP1	59:DA:1634:A:N6	2.28	0.61
21:CA:17:U:O2'	21:CA:1079:G:N3	2.26	0.61
1:AB:97:TRP:CH2	1:AB:176:GLU:HG3	2.36	0.61
20:CY:24:GLY:N	61:CY:701:GDP:H5'	2.15	0.61
26:DD:157:ARG:HH21	59:DA:1818:U:H6	1.47	0.61
21:CA:532:A:H3'	21:CA:533:A:H5'	1.82	0.61
7:AH:85:ARG:NH1	7:AH:134:ILE:O	2.31	0.61
59:BA:2645:G:H3'	59:BA:2646:C:H5'	1.82	0.61
7:AH:135:CYS:SG	7:AH:136:GLU:N	2.73	0.61
59:BA:2146:C:H4'	59:BA:2147:G:C8	2.35	0.61
54:B8:34:TRP:CG	54:B8:35:GLN:N	2.69	0.61
59:DA:2377:A:H2'	59:DA:2378:A:C8	2.35	0.61
47:D1:12:PRO:HD3	47:D1:44:PRO:HG3	1.81	0.61
27:BE:174:ASP:HB3	27:BE:183:LEU:HD13	1.83	0.61
6:CG:91:VAL:O	6:CG:96:GLN:NE2	2.34	0.61
21:AA:1409:C:H2'	21:AA:1410:G:C8	2.35	0.61
21:AA:349:A:H2'	21:AA:350:G:C8	2.36	0.61
59:DA:2339:G:H2'	59:DA:2340:G:H8	1.65	0.61
21:AA:1157:A:N1	21:AA:1180:A:H2'	2.16	0.61
21:CA:1157:A:N6	21:CA:1178:G:C2	2.64	0.61
21:AA:413:G:H1'	21:AA:428:G:N2	2.15	0.61
21:CA:1126:U:C5	21:CA:1127:G:N3	2.69	0.61
21:AA:1126:U:C5	21:AA:1148:U:N3	2.69	0.61
59:BA:2121:G:N2	59:BA:2177:C:N3	2.46	0.61
25:BC:43:GLU:CB	25:BC:216:THR:HG23	2.28	0.61
36:BQ:68:ILE:HD12	36:BQ:103:MET:HB2	1.82	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:DB:101:A:H2'	60:DB:102:G:O4'	2.00	0.61
35:DP:60:MET:O	59:DA:2392:A:O2'	2.19	0.61
59:BA:536:A:N6	59:BA:557:U:H3	1.93	0.61
12:AM:126:LYS:HG3	22:AW:34:C:O3'	1.98	0.61
21:AA:1428:A:N6	21:AA:1472:U:H3	1.97	0.61
28:BF:125:LEU:HA	28:BF:194:MET:HB2	1.81	0.61
59:DA:2329:G:H2'	59:DA:2330:G:H8	1.64	0.61
59:BA:357(H):G:H2'	59:BA:357(I):G:C8	2.35	0.61
42:DW:75:TYR:O	42:DW:104:THR:N	2.34	0.61
59:BA:2389:G:H5''	59:BA:2390:U:O4'	1.99	0.61
6:AG:78:ARG:HB3	6:AG:85:TYR:HB2	1.82	0.61
25:BC:16:ASP:O	25:BC:18:ASN:N	2.33	0.61
59:DA:1164:G:H2'	59:DA:1165:U:C6	2.35	0.61
59:DA:1352:U:H3	59:DA:1378:A:H62	1.46	0.61
32:BK:97:GLY:HA3	32:BK:136:VAL:HG22	1.82	0.61
2:CC:70:VAL:HG12	2:CC:71:ALA:H	1.64	0.61
21:CA:1118:C:H2'	21:CA:1119:C:C6	2.35	0.61
59:DA:585:G:C2	59:DA:1254:A:N6	2.69	0.61
21:AA:430:A:H2'	21:AA:431:A:O4'	2.01	0.61
21:CA:32:A:N6	21:CA:552:U:N3	2.24	0.61
11:CL:35:GLY:HA3	11:CL:83:VAL:HG22	1.82	0.61
60:BB:60:C:H2'	60:BB:61:G:C8	2.35	0.61
54:D8:45:GLY:O	54:D8:46:ARG:HB2	2.00	0.61
15:CP:22:THR:OG1	15:CP:23:ASP:N	2.27	0.61
60:BB:28:C:H2'	60:BB:29:A:C8	2.34	0.61
20:CY:139:MET:HB3	20:CY:174:PHE:CE1	2.35	0.61
20:CY:178:ILE:HG12	20:CY:185:ALA:HA	1.81	0.61
25:BC:112:ASP:HA	25:BC:137:LEU:HD23	1.83	0.61
31:BJ:23:UNK:HA	31:BJ:111:UNK:O	2.01	0.61
59:DA:2844:G:H2'	59:DA:2845:G:O4'	2.01	0.61
45:BZ:40:ASP:O	45:BZ:44:PHE:HB2	1.99	0.61
30:DH:25:LYS:HA	30:DH:34:GLU:HG2	1.82	0.61
59:DA:1712(C):G:H2'	59:DA:1712(D):G:H8	1.64	0.61
36:BQ:134:ARG:HA	36:BQ:137:TYR:HE2	1.65	0.61
12:CM:31:LYS:HA	12:CM:34:LEU:HD12	1.82	0.61
59:DA:2847:U:H2'	59:DA:2848:G:O4'	2.01	0.61
42:DW:18:ARG:NH1	42:DW:76:VAL:HG13	2.15	0.61
59:DA:2063:C:H42	59:DA:2501:C:H1'	1.66	0.61
33:BN:100:GLU:HA	33:BN:103:VAL:H	1.64	0.61
21:CA:1491:G:C2	63:CA:1601:NMY:H61	2.35	0.61
7:CH:94:TYR:OH	21:CA:597:G:N2	2.33	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CA:551:U:H2'	21:CA:552:U:C6	2.36	0.61
59:DA:271(F):G:H2'	59:DA:271(G):G:C8	2.34	0.61
62:AY:702:FUA:O2	62:AY:702:FUA:H211	2.00	0.61
21:CA:815:A:N6	21:CA:1508:G:N2	2.41	0.61
59:DA:2749:A:H62	59:DA:2753:A:H61	0.78	0.61
20:AY:512:ILE:HD12	20:AY:589:ALA:HB1	1.81	0.61
16:AQ:63:ARG:HG3	21:AA:264:U:H1'	1.81	0.61
36:BQ:7:MET:N	36:BQ:7:MET:SD	2.73	0.61
7:AH:44:PHE:HE1	7:AH:80:ILE:HG13	1.65	0.61
37:BR:103:ARG:HG2	37:BR:110:PRO:HA	1.83	0.61
39:DT:20:PRO:HG2	39:DT:86:ILE:HG23	1.82	0.61
55:B9:7:VAL:HB	55:B9:25:VAL:HG21	1.83	0.61
16:CQ:61:GLU:HA	16:CQ:71:PHE:HD1	1.65	0.61
59:BA:1410:G:H1	59:BA:1592:C:H42	1.49	0.61
16:CQ:84:LEU:H	16:CQ:84:LEU:HD23	1.64	0.61
6:CG:27:ILE:HA	6:CG:30:ILE:HD12	1.83	0.61
2:CC:47:LEU:HD23	2:CC:76:VAL:HB	1.83	0.61
59:BA:1993:U:H2'	59:BA:1994:C:O4'	2.00	0.61
21:AA:377:G:H1	21:AA:386:C:H42	1.49	0.61
33:BN:100:GLU:C	33:BN:102:ALA:N	2.48	0.61
21:CA:1118:C:H2'	21:CA:1119:C:H6	1.66	0.61
21:CA:1126:U:C5	21:CA:1148:U:O4	2.54	0.61
59:BA:1341:U:OP1	59:BA:1602:U:O2'	2.17	0.61
59:BA:858:U:H1'	59:BA:2268:A:O2'	2.01	0.61
59:DA:1356:G:N2	59:DA:1375:C:N3	2.42	0.61
20:AY:500:GLN:HG3	20:AY:504:ARG:O	2.01	0.61
21:CA:1374:A:H2'	21:CA:1375:A:O4'	2.00	0.61
59:DA:2222:G:H2'	59:DA:2223:G:H8	1.63	0.61
21:AA:1304:G:N2	21:AA:1333:A:H62	1.94	0.61
27:DE:185:LYS:HD2	59:DA:2729:G:H4'	1.81	0.61
42:DW:72:LYS:O	42:DW:106:ILE:HB	2.01	0.61
59:DA:372:G:O2'	59:DA:400:G:O6	2.19	0.61
59:DA:407:G:H2'	59:DA:408:G:C8	2.36	0.61
21:CA:614:A:H2'	21:CA:615:C:C6	2.36	0.61
40:DU:92:ARG:HD3	40:DU:95:LEU:HG	1.83	0.61
1:CB:12:GLU:HA	1:CB:16:HIS:HD2	1.65	0.61
28:BF:101:LEU:HG	28:BF:106:ARG:HB2	1.82	0.61
59:BA:1357:U:H3	59:BA:1374:G:H1	1.48	0.61
21:CA:950:U:H3	21:CA:1231:G:H1	0.74	0.61
21:AA:148:G:H2'	21:AA:149:A:H8	1.64	0.61
2:AC:175:LEU:N	21:AA:1108:G:OP1	2.34	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CE:27:ARG:HH21	4:CE:49:PRO:HG3	1.65	0.61
21:AA:1096:C:H2'	21:AA:1097:C:C6	2.35	0.61
26:BD:132:PRO:HB2	26:BD:135:PHE:CD1	2.36	0.61
26:BD:77:ALA:HA	26:BD:97:TYR:HA	1.82	0.61
25:DC:16:ASP:O	25:DC:18:ASN:N	2.34	0.61
47:D1:42:GLN:NE2	59:DA:379:G:H21	1.99	0.61
24:AX:30:C:H42	24:AX:40:G:H1	1.49	0.61
33:DN:85:ILE:HB	33:DN:107:LEU:N	2.16	0.61
59:BA:1133:U:O2	59:BA:1137:G:H5''	2.01	0.61
33:BN:114:ARG:HG2	59:BA:2779:U:H2'	1.81	0.61
36:DQ:35:VAL:CA	36:DQ:102:VAL:HA	2.22	0.61
59:DA:638:G:H1	59:DA:650:C:N4	1.98	0.61
45:DZ:72:ARG:NH1	60:DB:103:U:O3'	2.34	0.61
59:DA:733:G:O6	59:DA:761:A:H3'	2.01	0.61
18:AS:39:THR:HA	18:AS:70:LYS:HA	1.82	0.61
59:BA:340:A:H2'	59:BA:341:G:O4'	2.00	0.61
21:CA:829:G:H1	21:CA:857:C:N4	1.97	0.61
59:BA:1153:C:H3'	59:BA:1154:G:H8	1.65	0.61
60:BB:13:A:O2'	60:BB:15:A:N7	2.34	0.61
21:CA:1271:G:H5'	21:CA:1314:C:H5''	1.83	0.61
28:BF:61:GLY:N	59:BA:798:G:OP2	2.32	0.61
59:BA:481:G:H2'	59:BA:507:A:N1	2.15	0.61
59:DA:1073:A:H2'	59:DA:1074:G:O4'	2.00	0.61
59:DA:2647:U:H3	59:DA:2673:G:H1	1.48	0.61
44:DY:39:VAL:HG23	44:DY:40:GLU:H	1.64	0.61
21:CA:1019:C:H2'	21:CA:1020:U:O4'	2.01	0.61
59:BA:1612:C:H42	59:BA:1619:G:H1	1.47	0.61
59:DA:2372:G:H2'	59:DA:2373:G:C8	2.36	0.61
32:DK:17:ALA:HB2	32:DK:38:VAL:HG11	1.83	0.61
59:DA:566:U:H2'	59:DA:567:A:C8	2.36	0.61
59:DA:2703:C:H2'	59:DA:2704:C:C6	2.36	0.61
21:CA:1179:A:H2'	21:CA:1180:A:O4'	2.01	0.61
21:CA:1145:C:H5'	21:CA:1146:A:H5'	1.83	0.61
59:DA:1654:A:H2'	59:DA:1655:A:H8	1.66	0.61
38:DS:31:SER:OG	38:DS:32:LEU:N	2.33	0.61
25:BC:173:HIS:ND1	59:BA:2123:G:H1'	2.16	0.61
23:CV:17:U:H3	22:CW:35:A:H61	1.47	0.61
21:CA:258:G:N2	21:CA:268:C:N3	2.41	0.61
29:BG:30:GLU:HB2	60:BB:57:A:H1'	1.83	0.61
28:DF:154:VAL:O	28:DF:175:THR:HA	2.01	0.61
59:BA:2786:U:H2'	59:BA:2787:C:H6	1.66	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DD:88:ARG:HG3	26:DD:89:SER:H	1.66	0.61
59:DA:183:C:N4	59:DA:214:G:H1	1.99	0.61
59:BA:1800:C:H42	59:BA:1817:G:N2	1.97	0.61
60:BB:14:U:H1'	60:BB:107:U:H1'	1.82	0.61
59:BA:1570:A:H2'	59:BA:1571:A:C8	2.36	0.61
59:BA:2645:G:H3'	59:BA:2646:C:C5'	2.31	0.61
59:BA:1486:A:H2'	59:BA:1487:G:C8	2.36	0.61
47:D1:45:ASN:OD1	47:D1:46:LEU:N	2.33	0.61
26:DD:261:LYS:HB3	26:DD:264:LYS:HB2	1.83	0.61
59:BA:1179:C:H2'	59:BA:1180:C:C6	2.36	0.61
21:AA:651:C:N4	21:AA:753:A:OP2	2.34	0.61
21:CA:827:U:H3	21:CA:872:A:H61	1.48	0.61
42:BW:6:ILE:HG22	59:BA:494:G:H4'	1.83	0.61
20:AY:265:LYS:O	20:AY:267:LYS:N	2.30	0.61
1:CB:109:SER:O	1:CB:113:HIS:ND1	2.33	0.61
20:CY:130:VAL:O	20:CY:132:ARG:NH1	2.34	0.61
59:DA:2639:A:H2'	59:DA:2640:G:H8	1.66	0.60
33:DN:100:GLU:O	33:DN:103:VAL:N	2.34	0.60
27:DE:110:GLY:N	59:DA:2821:A:OP1	2.34	0.60
59:BA:954:G:O6	59:BA:963:U:C2	2.54	0.60
21:CA:1321:C:H3'	21:CA:1322:C:H5''	1.83	0.60
21:CA:662:G:O6	21:CA:743:U:O4	2.19	0.60
59:BA:2328:A:H2'	59:BA:2329:G:C8	2.36	0.60
28:DF:74:ARG:NH2	59:DA:674:G:O4'	2.34	0.60
28:BF:9:ILE:HG21	28:BF:125:LEU:H	1.66	0.60
59:BA:1800:C:N4	59:BA:1817:G:H22	1.99	0.60
52:D6:30:THR:O	52:D6:32:ASN:N	2.34	0.60
3:AD:18:LYS:HB2	3:AD:31:CYS:SG	2.41	0.60
59:BA:742:G:H1'	59:BA:1676:A:H4'	1.81	0.60
21:AA:131:C:H2'	21:AA:132:C:C6	2.36	0.60
20:AY:92:ILE:HG21	20:AY:437:THR:HG22	1.81	0.60
43:BX:52:VAL:N	43:BX:82:GLN:O	2.20	0.60
45:DZ:6:LYS:NZ	45:DZ:7:ALA:O	2.33	0.60
21:CA:949:A:H2'	21:CA:950:U:C6	2.36	0.60
20:AY:176:GLY:HA3	20:AY:187:THR:HA	1.82	0.60
59:DA:2589:A:H2'	59:DA:2590:A:C8	2.36	0.60
16:AQ:67:LYS:HE3	21:AA:266:G:H2'	1.83	0.60
21:CA:996:A:H2'	21:CA:997:U:H6	1.66	0.60
21:AA:666:G:H2'	21:AA:667:G:C8	2.36	0.60
55:B9:29:ASN:HB2	55:B9:32:HIS:CE1	2.36	0.60
20:CY:394:ALA:O	20:CY:396:ARG:N	2.34	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BH:143:GLN:HG3	59:BA:2745:C:H1'	1.81	0.60
59:DA:747:U:H5''	59:DA:748:G:H5'	1.83	0.60
60:BB:78:A:H62	60:BB:98:G:H21	1.49	0.60
54:D8:2:PRO:HB3	59:DA:591:C:H1'	1.83	0.60
59:DA:1338:G:H2'	59:DA:1339:G:H8	1.66	0.60
60:DB:24:G:H4'	60:DB:25:A:C8	2.36	0.60
59:BA:2330:G:H3'	59:BA:2331:G:H8	1.66	0.60
28:DF:185:ASP:O	28:DF:189:THR:OG1	2.19	0.60
1:AB:97:TRP:HH2	1:AB:176:GLU:HG3	1.66	0.60
26:BD:54:ARG:HH22	59:BA:1822:G:H5''	1.66	0.60
26:DD:260:ARG:HH12	59:DA:1799:G:H3'	1.66	0.60
59:DA:1085:A:O2'	59:DA:1104:C:O2'	2.16	0.60
59:BA:1450:C:H42	59:BA:1461:G:H1	1.49	0.60
42:BW:21:VAL:HG13	42:BW:74:ALA:HB3	1.83	0.60
45:DZ:166:SER:H	45:DZ:167:PRO:HA	1.64	0.60
59:DA:142:G:H2'	59:DA:143:C:C6	2.36	0.60
7:CH:37:ARG:HD3	7:CH:41:ARG:HD3	1.83	0.60
34:BO:98:VAL:HG22	34:BO:117:LEU:HD22	1.82	0.60
33:DN:125:GLY:O	33:DN:127:ASP:N	2.34	0.60
40:BU:40:PHE:HB3	41:BV:75:PHE:CD1	2.35	0.60
20:CY:610:VAL:O	20:CY:642:VAL:HA	2.01	0.60
42:DW:48:ALA:O	42:DW:51:LEU:HB3	2.01	0.60
59:BA:2286:A:H4'	59:BA:2287:A:O4'	2.01	0.60
33:BN:50:ASP:O	33:BN:53:VAL:N	2.24	0.60
33:BN:88:GLU:C	33:BN:90:MET:H	2.04	0.60
59:BA:1941:C:N4	59:BA:1965:C:OP2	2.35	0.60
59:DA:576:U:H2'	59:DA:577:G:C8	2.37	0.60
11:AL:84:LEU:HB2	11:AL:101:VAL:HG23	1.82	0.60
59:BA:1890:A:O2'	59:BA:2085:C:O2'	2.08	0.60
59:BA:357(C):G:H2'	59:BA:357(D):G:C8	2.35	0.60
1:CB:69:LEU:HB3	1:CB:71:VAL:HG23	1.83	0.60
59:BA:2448:A:H4'	59:BA:2449:U:OP2	2.01	0.60
19:CT:74:LYS:H	19:CT:74:LYS:HD3	1.66	0.60
21:AA:150:C:H42	21:AA:171:A:H62	1.49	0.60
32:DK:56:GLU:O	32:DK:67:PHE:HA	2.01	0.60
25:BC:61:GLY:O	25:BC:163:GLU:HA	2.00	0.60
59:BA:800:A:H4'	59:BA:801:G:H2'	1.83	0.60
1:AB:32:ILE:HD11	1:AB:42:ILE:HD13	1.81	0.60
59:BA:736:C:H2'	59:BA:737:C:C6	2.36	0.60
11:AL:43:VAL:HG12	11:AL:44:THR:H	1.65	0.60
9:AJ:5:ARG:NH1	9:AJ:73:ASP:OD2	2.35	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:1777:U:O4	59:BA:1787:A:N1	2.34	0.60
29:DG:126:ASP:OD1	59:DA:2302:G:N2	2.22	0.60
49:D3:8:LEU:HD12	49:D3:33:GLN:HB3	1.82	0.60
44:BY:39:VAL:HG23	44:BY:40:GLU:H	1.64	0.60
51:D5:19:ARG:NH1	59:DA:1265:A:O5'	2.34	0.60
33:DN:100:GLU:C	33:DN:102:ALA:N	2.48	0.60
33:DN:117:PHE:HD2	33:DN:118:LYS:C	2.04	0.60
27:BE:36:ARG:HH21	27:BE:88:GLY:HA2	1.65	0.60
11:CL:70:ILE:HG13	11:CL:72:GLY:N	2.16	0.60
59:DA:2006:C:O2'	59:DA:2823:A:N3	2.32	0.60
27:DE:62:PRO:HD3	59:DA:2787:C:H5'	1.84	0.60
21:CA:1224:G:N2	21:CA:1362(A):C:C2	2.66	0.60
21:CA:1502:A:H8	21:CA:1505:G:H22	1.46	0.60
55:B9:19:ARG:HG3	59:BA:2756:U:H3'	1.82	0.60
59:DA:836:G:H2'	59:DA:837:C:C5	2.36	0.60
21:CA:21:G:H21	21:CA:914:A:H62	1.47	0.60
59:DA:2743:C:N4	59:DA:2761:G:H1	1.99	0.60
21:CA:299:G:H2'	21:CA:300:A:C8	2.37	0.60
14:AO:82:ILE:HG13	14:AO:87:ILE:HG13	1.82	0.60
59:BA:1020:A:OP1	59:BA:1034:G:N2	2.33	0.60
45:BZ:52:SER:OG	45:BZ:53:ILE:N	2.34	0.60
16:AQ:63:ARG:NH1	21:AA:130:A:OP2	2.30	0.60
31:BJ:58:UNK:O	31:BJ:60:UNK:N	2.34	0.60
20:AY:129:LYS:HB3	20:AY:253:LEU:HD11	1.83	0.60
59:BA:2514:U:H3	59:BA:2570:G:H1	1.49	0.60
30:BH:125:VAL:HG22	30:BH:131:VAL:HG13	1.82	0.60
59:BA:2508:G:H1	59:BA:2580:U:H3	1.49	0.60
59:DA:2202(E):A:H1'	59:DA:2202(G):G:C5	2.36	0.60
59:BA:449:A:H2'	59:BA:450:G:O4'	2.01	0.60
25:BC:32:GLU:HG2	25:BC:33:LEU:HD23	1.84	0.60
25:BC:61:GLY:HA3	25:BC:164:PHE:CD1	2.36	0.60
20:CY:541:ALA:HB1	20:CY:583:LYS:HE2	1.84	0.60
3:AD:57:ARG:HB3	3:AD:206:PHE:HB3	1.81	0.60
6:AG:74:GLU:O	6:AG:88:PRO:HA	2.01	0.60
20:AY:210:ARG:O	20:AY:214:GLU:HG2	2.01	0.60
59:BA:40:C:H2'	59:BA:41:C:O4'	2.01	0.60
20:AY:248:LYS:NZ	20:AY:252:ASP:OD2	2.27	0.60
3:CD:161:ASN:HA	3:CD:164:ALA:HB3	1.83	0.60
21:CA:486:U:H2'	21:CA:487:A:H8	1.66	0.60
59:DA:2018:G:H2'	59:DA:2019:A:O4'	2.00	0.60
59:BA:2726:U:O2'	59:BA:2727:G:O5'	2.19	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:1132:A:N6	59:BA:2025:C:O2'	2.33	0.60
59:BA:1138:G:H2'	59:BA:1139:G:O4'	2.02	0.60
33:BN:38:HIS:NE2	59:BA:1006:C:H4'	2.17	0.60
41:BV:81:TYR:CE2	59:BA:1187:G:H5''	2.36	0.60
59:DA:2398:U:H2'	59:DA:2399:G:C8	2.37	0.60
3:CD:122:ARG:HH21	21:CA:403:C:H4'	1.65	0.60
21:AA:942:G:H1	21:AA:1341:U:H3	1.48	0.60
59:DA:460:A:H62	59:DA:469:G:H21	1.49	0.60
59:DA:464:U:H5	59:DA:788:A:HO2'	1.49	0.60
1:AB:162:ILE:O	1:AB:164:VAL:HG12	2.01	0.60
26:BD:177:LEU:HD13	26:BD:179:SER:H	1.66	0.60
59:DA:1579:A:H2'	59:DA:1580:A:C8	2.37	0.60
59:DA:2405:G:H21	59:DA:2412:A:H62	1.49	0.60
20:AY:256:THR:O	20:AY:258:VAL:N	2.35	0.60
59:BA:2073:C:H2'	59:BA:2074:U:C6	2.37	0.60
28:BF:169:ASN:ND2	59:BA:320:A:N3	2.50	0.60
7:AH:69:ARG:NH1	7:AH:75:ARG:O	2.35	0.60
47:B1:3:LYS:HG3	47:B1:4:VAL:HG12	1.82	0.60
44:BY:40:GLU:HA	44:BY:64:GLU:HG2	1.82	0.60
55:D9:30:PRO:HG2	59:DA:2527:C:H5''	1.82	0.60
14:CO:54:ARG:NH1	21:CA:728:A:OP1	2.34	0.60
12:CM:81:LEU:HD23	12:CM:92:HIS:HE1	1.66	0.60
59:BA:926:A:H2'	59:BA:928:G:C8	2.36	0.60
59:DA:352:G:O2'	59:DA:354:G:N7	2.34	0.60
20:CY:321:TYR:HD1	21:CA:55:A:H1'	1.66	0.60
1:AB:91:PRO:HB3	1:AB:152:PHE:HA	1.83	0.60
52:D6:19:ARG:NH2	52:D6:21:TYR:OH	2.34	0.60
32:DK:7:VAL:HB	32:DK:58:THR:HG23	1.83	0.60
37:DR:67:LEU:HD21	37:DR:76:VAL:HG21	1.84	0.60
33:DN:46:VAL:CG2	33:DN:115:ARG:HG2	2.32	0.60
33:DN:38:HIS:NE2	59:DA:1006:C:H4'	2.17	0.60
21:AA:1518:A:H2'	21:AA:1519:A:H8	1.65	0.60
59:BA:1905:C:H6	63:BA:2904:NMY:H72	1.48	0.60
21:AA:408:A:N1	21:AA:434:U:C4	2.69	0.60
62:CY:702:FUA:H211	62:CY:702:FUA:O2	2.00	0.60
54:B8:17:THR:HB	59:BA:650:C:O3'	2.01	0.60
46:B0:40:GLN:HE22	46:B0:45:PHE:HB2	1.66	0.60
21:CA:621:A:H2'	21:CA:622:A:H8	1.65	0.60
16:AQ:43:LEU:HD13	16:AQ:69:LYS:HA	1.83	0.60
21:CA:973:G:OP2	21:CA:974:A:H3'	2.01	0.60
36:DQ:58:PHE:CZ	36:DQ:64:ILE:HD11	2.33	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:CJ:57:LYS:HB2	21:CA:972:C:H4'	1.83	0.60
52:D6:8:LYS:HA	52:D6:28:ARG:HB2	1.84	0.60
20:AY:13:ARG:HB2	20:AY:79:ILE:HG12	1.82	0.60
59:DA:455:C:H3'	59:DA:456:C:H5''	1.84	0.60
5:CF:60:PHE:HZ	17:CR:78:LEU:HD21	1.66	0.60
42:BW:19:LEU:HD12	51:B5:25:LEU:H	1.67	0.60
21:AA:384:G:H2'	21:AA:385:C:C6	2.37	0.60
26:BD:161:THR:HG22	26:BD:178:PRO:HG2	1.84	0.60
33:DN:107:LEU:O	33:DN:109:LYS:N	2.35	0.60
21:CA:1157:A:H61	21:CA:1178:G:N2	1.91	0.60
11:CL:49:ASN:HD21	21:CA:528:C:H42	1.49	0.60
27:DE:78:LEU:O	27:DE:79:ARG:HD3	2.02	0.60
13:CN:2:ALA:N	21:CA:1049:U:HO2'	1.99	0.60
28:BF:45:ARG:NH2	59:BA:444:C:OP1	2.23	0.60
59:DA:722:A:H2'	59:DA:723:G:O4'	2.01	0.60
30:BH:70:THR:HG21	59:BA:2747:G:H5''	1.83	0.60
21:AA:1342:C:H2'	21:AA:1343:G:C8	2.36	0.60
18:AS:10:PHE:CG	21:AA:1318:A:H4'	2.36	0.60
59:DA:1686:C:H42	59:DA:1702:G:H1	1.48	0.60
20:CY:91:THR:O	20:CY:93:GLU:N	2.35	0.60
38:BS:24:LEU:HB3	38:BS:85:VAL:HA	1.82	0.60
22:AW:25:C:H2'	22:AW:26:A:H8	1.67	0.60
21:AA:1391:U:H2'	21:AA:1392:G:C8	2.35	0.60
59:BA:1080:C:H2'	59:BA:1081:U:H6	1.66	0.60
21:AA:877:C:H2'	21:AA:878:G:H8	1.67	0.60
59:DA:709:U:H2'	59:DA:710:G:C8	2.37	0.60
27:BE:2:LYS:HB2	27:BE:200:GLU:HB2	1.84	0.60
59:BA:482:A:OP2	59:BA:507:A:N6	2.26	0.60
7:AH:34:GLU:O	7:AH:37:ARG:HB3	2.02	0.60
21:CA:1087:G:O6	21:CA:1098:C:N3	2.35	0.60
59:BA:38:A:H61	59:BA:441:U:H3	1.50	0.60
34:DO:77:ILE:HB	39:DT:74:ARG:HG2	1.82	0.60
29:DG:37:VAL:HB	29:DG:94:LEU:HB2	1.83	0.60
28:BF:88:VAL:HG22	28:BF:89:VAL:H	1.67	0.60
5:CF:87:ARG:NH1	21:CA:673:G:H5''	2.15	0.60
20:AY:516:PRO:HA	20:AY:563:ILE:HA	1.84	0.60
59:DA:1468(F):C:H2'	59:DA:1468(G):G:O4'	2.01	0.60
59:DA:2041:U:H2'	59:DA:2042:A:C8	2.37	0.60
33:DN:35:ARG:CZ	33:DN:75:TYR:HB3	2.32	0.60
21:AA:1491:G:H2'	63:AA:1601:NMY:H4	1.83	0.60
21:CA:1241:G:H1	21:CA:1296:C:H42	0.71	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:996:A:N1	59:BA:1159:U:C4	2.70	0.60
59:DA:18:C:O2'	59:DA:554:U:OP1	2.20	0.60
59:DA:1790:C:H3'	59:DA:1828:G:H22	1.66	0.60
59:BA:2756:U:H3	59:BA:2758:A:N6	1.96	0.60
20:AY:413:ILE:HD13	20:AY:476:VAL:HG22	1.82	0.60
25:DC:100:ILE:HG23	25:DC:103:LYS:HD2	1.84	0.60
21:CA:692:U:H5'	21:CA:797:C:H5'	1.84	0.60
11:AL:70:ILE:HG22	11:AL:100:ILE:HD12	1.82	0.60
59:DA:1577:C:H2'	59:DA:1578:U:C6	2.37	0.60
59:BA:2122:U:H3	59:BA:2176:A:H2	1.48	0.60
21:CA:616:G:H1	21:CA:624:C:N4	1.99	0.60
15:CP:9:PHE:HE2	15:CP:18:ARG:HB2	1.65	0.60
44:DY:81:LYS:HB2	44:DY:96:ILE:HG22	1.84	0.60
59:DA:1570:A:H2'	59:DA:1571:A:H8	1.67	0.60
59:BA:1525:G:H2'	59:BA:1526:G:C8	2.37	0.60
59:BA:2832:U:H5''	59:BA:2833:G:H2'	1.84	0.60
8:CI:26:VAL:HG22	8:CI:61:ALA:HB3	1.84	0.60
37:DR:107:ASP:N	37:DR:107:ASP:OD2	2.35	0.60
40:BU:92:ARG:O	40:BU:95:LEU:N	2.34	0.60
45:DZ:54:HIS:HB3	45:DZ:101:PRO:HG3	1.84	0.60
6:CG:2:ALA:N	21:CA:1379:G:N7	2.50	0.60
8:AI:46:ALA:HA	8:AI:78:LYS:HB2	1.82	0.60
59:BA:2230:G:H2'	59:BA:2231:C:H6	1.67	0.60
47:D1:21:ARG:HD3	59:DA:2080:G:OP1	2.01	0.60
21:AA:1532:U:O2'	21:AA:1533:C:OP1	2.19	0.60
33:DN:72:TYR:CA	33:DN:73:THR:HG22	2.29	0.60
36:DQ:87:LYS:HZ3	59:DA:955:C:H5''	1.66	0.60
20:AY:165:GLN:NE2	20:AY:260:LEU:H	2.00	0.60
59:BA:1333:C:H2'	59:BA:1334:G:C8	2.37	0.60
59:DA:36:G:N2	59:DA:444:C:C2	2.65	0.60
59:DA:115:C:H2'	59:DA:116:C:O4'	2.01	0.60
45:DZ:74:VAL:HG12	45:DZ:86:VAL:HG12	1.83	0.60
21:AA:673:G:H2'	21:AA:674:G:C8	2.37	0.60
11:AL:74:GLY:O	11:AL:102:ARG:NH2	2.35	0.60
59:DA:1388:G:H2'	59:DA:1389:G:H8	1.67	0.60
25:DC:44:VAL:HB	25:DC:174:ALA:HB3	1.83	0.60
21:CA:339:C:N4	21:CA:350:G:H1	2.00	0.60
40:DU:37:GLU:OE2	59:DA:1252:G:N1	2.34	0.60
55:D9:3:VAL:HG21	59:DA:2539:C:H4'	1.83	0.60
21:CA:768:A:OP1	21:CA:804:U:H4'	2.01	0.60
21:AA:1061:G:N2	21:AA:1195:C:N3	2.43	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:1337:G:H2'	59:BA:1338:G:C8	2.37	0.60
59:BA:1292:U:H2'	59:BA:1293:C:H6	1.67	0.60
29:DG:101:ILE:O	29:DG:105:LYS:HG2	2.01	0.60
59:DA:781:A:H5''	59:DA:782:A:N7	2.17	0.60
45:DZ:151:HIS:HB3	45:DZ:170:THR:HA	1.84	0.60
8:CI:56:LEU:H	8:CI:56:LEU:HD23	1.66	0.60
59:BA:1506:C:H2'	59:BA:1506(A):A:C8	2.37	0.60
3:CD:171:GLY:O	3:CD:173:TRP:N	2.35	0.60
47:B1:58:ILE:HD11	47:B1:91:LYS:HD3	1.84	0.60
19:CT:98:PRO:HB2	19:CT:104:LEU:HD21	1.84	0.60
21:AA:269:C:H2'	21:AA:270:A:C8	2.37	0.60
21:CA:408:A:C2	21:CA:434:U:C4	2.88	0.60
59:BA:2037:G:H2'	59:BA:2038:G:C8	2.37	0.60
33:BN:50:ASP:HB3	33:BN:53:VAL:HG13	1.83	0.60
21:CA:1178:G:N2	21:CA:1181:G:C8	2.69	0.60
59:DA:2520:C:H42	59:DA:2545:G:H1	0.70	0.60
59:BA:956:G:O2'	59:BA:959:A:N6	2.31	0.60
59:BA:966:G:H2'	59:BA:967:C:C6	2.37	0.60
59:BA:523:C:H5''	59:BA:540:C:O2'	2.01	0.60
21:AA:618:C:H42	21:AA:622:A:H62	1.50	0.60
8:CI:121:ARG:NH1	21:CA:1343:G:N3	2.50	0.60
59:BA:971:C:H5''	59:BA:974:G:O2'	2.02	0.60
59:DA:2463:C:N3	59:DA:2487:G:N2	2.38	0.60
52:D6:15:GLU:HG2	52:D6:16:CYS:SG	2.42	0.60
59:BA:579:G:H2'	59:BA:580:C:C6	2.36	0.60
11:AL:39:VAL:HG12	11:AL:40:VAL:H	1.67	0.60
59:BA:1676:A:H2'	59:BA:1677:A:C8	2.36	0.60
59:DA:1365:A:H2'	59:DA:1366:A:C8	2.37	0.60
14:AO:36:ILE:HD13	14:AO:60:VAL:HG22	1.84	0.60
59:BA:2377:A:H2'	59:BA:2378:A:C8	2.37	0.60
3:CD:173:TRP:HB2	3:CD:186:LEU:HB2	1.84	0.60
59:BA:767:U:O2'	59:BA:1622:G:H4'	2.02	0.60
24:CX:11:C:H2'	24:CX:12:U:O4'	2.01	0.60
30:BH:105:LEU:HD23	30:BH:113:VAL:HB	1.83	0.60
49:B3:25:ALA:HB2	59:BA:849:A:N1	2.16	0.60
9:CJ:45:ARG:HB3	9:CJ:65:LEU:HB2	1.84	0.60
59:BA:2791:C:H5''	59:BA:2792:G:C8	2.37	0.60
45:BZ:75:ASN:OD1	60:BB:75:G:N2	2.35	0.60
45:DZ:146:ILE:HA	45:DZ:174:VAL:HB	1.82	0.60
59:BA:1435:G:H2'	59:BA:1436:G:C8	2.35	0.60
22:CW:71:C:H2'	22:CW:72:C:C5	2.37	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CA:1312:G:H2'	21:CA:1313:U:C6	2.37	0.59
59:DA:121:G:O6	59:DA:130:C:N3	2.35	0.59
59:DA:840:C:N4	59:DA:938:G:H1	1.97	0.59
28:BF:125:LEU:HD22	28:BF:194:MET:SD	2.42	0.59
41:BV:85:LYS:HA	59:BA:1225:G:H5'	1.83	0.59
34:DO:43:VAL:HB	34:DO:56:ASP:H	1.67	0.59
32:DK:30:HIS:ND1	32:DK:32:ALA:HB2	2.17	0.59
52:B6:41:PRO:HD3	52:B6:47:THR:HG22	1.84	0.59
32:DK:100:THR:C	32:DK:102:GLU:H	2.05	0.59
9:CJ:52:GLY:O	13:CN:41:ARG:NH1	2.35	0.59
1:CB:102:LEU:HG	1:CB:176:GLU:HB3	1.83	0.59
4:AE:15:ARG:HG3	4:AE:28:PHE:HE2	1.65	0.59
5:CF:95:GLU:O	17:CR:32:ARG:NH1	2.35	0.59
59:DA:1595:G:H2'	59:DA:1596:A:C8	2.37	0.59
59:BA:529:A:H62	59:BA:2041:U:H3	1.48	0.59
24:CX:39:G:H2'	24:CX:40:G:H8	1.68	0.59
59:DA:2256:G:H2'	59:DA:2257:U:C6	2.37	0.59
59:BA:2119:A:N1	59:BA:2171:A:H1'	2.17	0.59
47:D1:22:GLY:O	47:D1:23:LYS:HB2	2.01	0.59
59:DA:920:G:H2'	59:DA:921:G:O4'	2.02	0.59
3:AD:122:ARG:HH21	21:AA:403:C:H4'	1.67	0.59
60:DB:87:G:N2	60:DB:89(B):A:H8	1.97	0.59
21:AA:715:A:H2'	21:AA:716:A:C8	2.37	0.59
21:AA:966:G:H22	23:AV:18:G:H22	1.49	0.59
24:AX:33:U:O2	24:AX:36:C:H5	1.85	0.59
20:AY:161:PRO:O	20:AY:256:THR:N	2.34	0.59
49:D3:13:ILE:HG21	59:DA:989:G:C6	2.37	0.59
59:BA:2073:C:H2'	59:BA:2074:U:H6	1.66	0.59
21:CA:1434:A:H62	21:CA:1467:G:H21	1.48	0.59
10:CK:84:VAL:HG22	10:CK:110:ASP:HA	1.84	0.59
59:DA:1530:G:H22	59:DA:1541:U:H2'	1.66	0.59
21:AA:491:G:H2'	21:AA:492:G:H8	1.65	0.59
59:DA:1538:G:H2'	59:DA:1539:G:H8	1.66	0.59
59:DA:383:U:H2'	59:DA:385:C:H5	1.68	0.59
1:AB:240:GLN:O	1:AB:240:GLN:NE2	2.35	0.59
45:BZ:115:GLY:HA3	45:BZ:146:ILE:HD11	1.83	0.59
36:BQ:11:LYS:HE3	59:BA:2278:A:OP1	2.03	0.59
59:DA:647:G:H2'	59:DA:648:G:C8	2.37	0.59
59:DA:2651:C:H42	59:DA:2669:G:H1	1.50	0.59
59:DA:826:U:H5''	59:DA:2429:G:P	2.42	0.59
60:BB:80:U:H2'	60:BB:81:G:H21	1.67	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BW:25:ARG:HH21	59:BA:520:G:H5'	1.67	0.59
16:CQ:67:LYS:HD2	21:CA:266:G:C8	2.37	0.59
59:DA:2108:C:O2	59:DA:2181:G:N1	2.30	0.59
36:DQ:11:LYS:HG2	36:DQ:90:VAL:HG13	1.83	0.59
59:BA:2572:A:OP1	59:BA:2574:G:O2'	2.20	0.59
59:DA:410:G:N1	59:DA:417:C:O2	2.28	0.59
59:DA:1800:C:H42	59:DA:1817:G:H22	1.50	0.59
32:DK:90:LYS:HE3	59:DA:1076:C:H4'	1.84	0.59
59:BA:733:G:O6	59:BA:761:A:H3'	2.02	0.59
32:BK:13:PRO:HG3	32:BK:52:ILE:HG12	1.83	0.59
40:BU:33:ARG:NE	59:BA:581:C:OP2	2.30	0.59
59:BA:749:C:N3	59:BA:753:C:O2'	2.33	0.59
29:DG:73:ALA:HB3	29:DG:85:GLY:HA2	1.84	0.59
15:AP:40:ASP:H	15:AP:48:TRP:HB2	1.66	0.59
20:CY:133:ILE:HD11	20:CY:276:VAL:HG22	1.84	0.59
28:BF:126:VAL:HG21	28:BF:142:TRP:CZ2	2.37	0.59
26:BD:48:ARG:HE	59:BA:778:G:H5'	1.67	0.59
21:AA:1057:G:H2'	21:AA:1058:G:O4'	2.03	0.59
59:BA:2505:G:N2	59:BA:2610:C:O2	2.34	0.59
20:AY:428:LEU:HD13	20:AY:440:VAL:HG11	1.84	0.59
45:DZ:25:PRO:HA	45:DZ:38:TYR:HB3	1.85	0.59
21:AA:748:C:O2'	21:AA:749:C:OP2	2.19	0.59
28:BF:149:ASP:OD1	28:BF:149:ASP:N	2.35	0.59
21:AA:692:U:H4'	21:AA:796:C:O2'	2.02	0.59
26:BD:44:ASN:HB3	26:BD:49:ILE:HG22	1.83	0.59
21:AA:17:U:H2'	21:AA:18:C:C6	2.37	0.59
59:DA:959:A:O2'	59:DA:2457:U:H4'	2.03	0.59
22:CW:4:U:H3	22:CW:69:A:H61	0.70	0.59
59:DA:270(X):G:O2'	59:DA:271(G):G:H4'	2.01	0.59
60:BB:61:G:H2'	60:BB:62:C:O4'	2.02	0.59
21:CA:1015:A:H1'	21:CA:1218:C:O2'	2.02	0.59
38:DS:30:ARG:NH2	38:DS:62:LYS:HB3	2.16	0.59
25:BC:47:LYS:HB2	25:BC:169:THR:O	2.02	0.59
21:CA:835:U:O4	21:CA:851:G:O6	2.21	0.59
59:DA:75:G:N1	59:DA:111:A:C2	2.67	0.59
59:DA:597:U:O2	59:DA:660:G:O6	2.20	0.59
21:CA:757:U:H2'	21:CA:758:G:O4'	2.02	0.59
20:AY:164:MET:HE1	20:AY:216:LEU:HD12	1.84	0.59
59:BA:239:U:H2'	59:BA:240:G:C8	2.37	0.59
59:DA:209:C:H5'	59:DA:681:G:H4'	1.85	0.59
59:DA:1352:U:O4	59:DA:1378:A:N7	2.35	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:489:G:H2'	59:DA:491:G:O4'	2.02	0.59
26:DD:69:ARG:O	26:DD:71:ASP:N	2.34	0.59
59:BA:1011:G:H1'	59:BA:1013:C:O4'	2.01	0.59
28:BF:166:ALA:HA	59:BA:321:G:H5'	1.82	0.59
21:CA:1489:G:H2'	21:CA:1490:C:H6	1.67	0.59
41:DV:35:LEU:HB2	41:DV:57:VAL:O	2.02	0.59
27:BE:189:PRO:HA	59:BA:2680:C:H5'	1.84	0.59
21:CA:1116:C:H2'	21:CA:1117:G:H5''	1.85	0.59
21:CA:1118:C:N3	21:CA:1155:G:O6	2.35	0.59
60:BB:56:G:N2	60:BB:59:A:H61	2.00	0.59
38:DS:13:ARG:HE	38:DS:13:ARG:H	1.49	0.59
59:BA:105:C:H2'	59:BA:106:C:C6	2.36	0.59
59:DA:2395:C:H42	59:DA:2421:G:H1	1.50	0.59
28:BF:5:ALA:HB3	28:BF:8:GLN:HA	1.85	0.59
38:BS:105:ALA:O	38:BS:107:GLU:N	2.35	0.59
59:BA:2137:C:H42	59:BA:2154:G:H1	1.49	0.59
20:AY:484:ARG:HG2	20:AY:559:PRO:HB2	1.84	0.59
59:BA:1019:U:H3	59:BA:1020:A:H62	1.49	0.59
21:AA:983:A:O2'	21:AA:1050:G:OP2	2.17	0.59
44:DY:42:VAL:O	44:DY:64:GLU:HA	2.02	0.59
20:AY:624:LEU:HB3	20:AY:631:ILE:HD11	1.83	0.59
47:D1:21:ARG:NH1	59:DA:2079:U:O3'	2.35	0.59
21:AA:1275:A:H2'	21:AA:1276:G:C8	2.36	0.59
42:BW:90:ARG:HA	59:BA:751:A:H5'	1.83	0.59
59:BA:815:C:H2'	59:BA:816:C:H6	1.68	0.59
8:AI:118:LYS:O	8:AI:120:ARG:N	2.34	0.59
59:DA:2832:U:H5''	59:DA:2833:G:C8	2.38	0.59
52:D6:53:LYS:HG3	52:D6:54:ILE:H	1.67	0.59
21:AA:730:G:C5	21:AA:731:G:H1'	2.37	0.59
33:DN:106:MET:CB	33:DN:107:LEU:HD23	2.32	0.59
33:BN:35:ARG:HH12	33:BN:40:PRO:HB3	1.66	0.59
21:CA:1145:C:H4'	21:CA:1146:A:H5'	1.84	0.59
59:DA:2631:G:N2	59:DA:2787:C:N3	2.44	0.59
30:DH:62:LYS:HB3	59:DA:2749:A:H4'	1.84	0.59
21:CA:1305:G:N2	21:CA:1332:A:H8	1.87	0.59
59:DA:1047:G:H1'	59:DA:1110:G:N2	2.18	0.59
21:CA:43:C:H2'	21:CA:44:G:O4'	2.02	0.59
8:AI:126:SER:HB3	21:AA:1231:G:H4'	1.85	0.59
59:BA:669:G:N2	59:BA:670:A:N1	2.51	0.59
59:BA:881:G:H2'	59:BA:882:G:O4'	2.02	0.59
21:CA:299:G:C6	21:CA:300:A:C6	2.91	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DS:103:GLU:O	38:DS:105:ALA:N	2.35	0.59
35:BP:59:LEU:O	35:BP:61:ARG:N	2.35	0.59
19:AT:80:ARG:NH2	21:AA:260:G:OP1	2.36	0.59
21:AA:68(D):C:N4	21:AA:68(V):G:H1	2.00	0.59
59:BA:269:U:O4	59:BA:370:G:O6	2.20	0.59
21:AA:668:G:H1	21:AA:738:C:H42	1.49	0.59
26:BD:48:ARG:HH21	59:BA:774:A:H5''	1.68	0.59
41:BV:6:LYS:HG3	41:BV:11:GLN:HG2	1.85	0.59
60:BB:17:C:H2'	60:BB:18:G:H8	1.68	0.59
4:CE:92:LYS:HG3	4:CE:93:PRO:HD2	1.85	0.59
29:DG:15:VAL:HA	29:DG:175:LEU:HD13	1.83	0.59
21:AA:155:C:H42	21:AA:166:G:H1	1.50	0.59
8:AI:26:VAL:HG22	8:AI:61:ALA:HB3	1.85	0.59
45:BZ:54:HIS:HB3	45:BZ:101:PRO:HG3	1.83	0.59
9:AJ:3:LYS:HG3	9:AJ:4:ILE:HD12	1.85	0.59
19:CT:14:LYS:HA	19:CT:17:ARG:HH21	1.67	0.59
59:BA:1923:U:H2'	59:BA:1924:C:C5	2.38	0.59
59:DA:1210:A:H4'	59:DA:1211:U:H2'	1.84	0.59
60:BB:22:U:C2	60:BB:61:G:O6	2.53	0.59
21:CA:1312:G:N2	21:CA:1325:C:N3	2.43	0.59
11:AL:61:THR:HB	21:AA:362:G:H5''	1.84	0.59
59:BA:918:A:N3	60:BB:80:U:O2'	2.33	0.59
59:DA:131:G:N2	59:DA:148:C:N3	2.41	0.59
21:AA:714:G:H2'	21:AA:715:A:C8	2.38	0.59
20:CY:144:ALA:HB3	20:CY:170:ARG:HB3	1.85	0.59
36:DQ:72:LYS:N	36:DQ:94:VAL:O	2.36	0.59
59:DA:133:C:N3	59:DA:146:G:N2	2.41	0.59
21:CA:17:U:O4	21:CA:918:A:N1	2.35	0.59
38:DS:27:SER:H	38:DS:40:ILE:HG22	1.67	0.59
10:AK:109:VAL:HG12	10:AK:110:ASP:H	1.68	0.59
21:AA:334:C:O2	21:AA:1434:A:O2'	2.21	0.59
59:BA:2717:G:N2	59:BA:2847:U:O3'	2.35	0.59
59:BA:1571:A:H2'	59:BA:1572:A:C8	2.37	0.59
40:DU:3:ARG:HE	59:DA:449:A:H4'	1.68	0.59
59:DA:2375:G:N2	59:DA:2378:A:OP2	2.35	0.59
6:AG:69:VAL:HG12	6:AG:71:PRO:HD3	1.84	0.59
3:AD:59:ARG:HH12	3:AD:66:ARG:HH12	1.49	0.59
37:BR:90:ARG:HG2	37:BR:94:TYR:HD2	1.68	0.59
59:DA:1000:A:H2'	59:DA:1001:A:C8	2.38	0.59
21:CA:1298:C:H4'	21:CA:1299:A:C4	2.37	0.59
59:BA:2267:A:N1	59:BA:2272:U:O2	2.35	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:810:U:H4'	59:BA:811:U:C5	2.38	0.59
59:DA:2546:U:H4'	59:DA:2566:A:C2	2.37	0.59
21:CA:20:U:H2'	21:CA:21:G:O4'	2.02	0.59
59:DA:2008:C:H2'	59:DA:2009:G:H8	1.68	0.59
21:CA:406:G:H1	21:CA:436:C:H42	1.51	0.59
21:AA:1476:G:H2'	21:AA:1477:C:H6	1.66	0.59
16:AQ:92:ARG:O	16:AQ:95:TYR:HB2	2.02	0.59
5:CF:44:GLY:HA2	5:CF:59:TYR:CG	2.37	0.59
14:CO:75:PRO:HA	14:CO:78:TYR:HD2	1.68	0.59
59:BA:2537:U:H2'	59:BA:2538:C:C6	2.36	0.59
20:CY:230:LYS:HE3	20:CY:237:PRO:HA	1.85	0.59
50:D4:15:ILE:HB	50:D4:32:TYR:HB3	1.84	0.59
20:CY:350:GLU:HB3	20:CY:380:LEU:HD12	1.83	0.59
33:DN:55:VAL:HG22	33:DN:126:PRO:HA	1.85	0.59
36:DQ:74:TYR:OH	59:DA:957:A:H4'	2.03	0.59
21:AA:542:G:H2'	21:AA:543:C:C6	2.38	0.59
22:AW:48:C:H2'	22:AW:59:A:H1'	1.85	0.59
11:CL:33:ARG:H	11:CL:85:ILE:HB	1.68	0.59
59:BA:271(Q):A:H61	59:BA:357(E):U:H3	0.69	0.59
59:DA:635:C:O2'	59:DA:639:U:OP1	2.20	0.59
22:CW:14:A:C4	22:CW:15:G:H1'	2.38	0.59
30:DH:62:LYS:HA	30:DH:65:HIS:HB3	1.84	0.59
2:CC:20:SER:HB3	2:CC:57:ILE:HD13	1.85	0.59
59:DA:1110:G:H4'	59:DA:1111:A:H5'	1.85	0.59
32:DK:90:LYS:O	32:DK:92:GLY:N	2.32	0.59
9:CJ:51:ARG:HB3	21:CA:1060:C:H5''	1.85	0.59
1:CB:185:ILE:HD12	1:CB:199:TYR:HB2	1.85	0.59
59:BA:675:A:N7	59:BA:803:U:O2	2.36	0.59
59:DA:409:C:N4	59:DA:418:G:H1	2.01	0.59
16:AQ:29:HIS:HB3	16:AQ:33:GLY:H	1.67	0.59
21:AA:491:G:H2'	21:AA:492:G:C8	2.38	0.59
17:AR:58:LEU:HD12	17:AR:62:GLU:HB3	1.84	0.59
20:AY:631:ILE:HA	20:AY:645:ALA:HA	1.83	0.59
59:DA:2251:G:N2	59:DA:2602:A:O2'	2.36	0.59
12:CM:65:LYS:HE3	12:CM:70:LEU:HD23	1.84	0.59
20:AY:124:GLN:HB3	20:AY:127:LYS:HD2	1.85	0.59
29:BG:62:LEU:HD12	50:B4:7:PRO:HG3	1.83	0.59
59:DA:1102:C:H2'	59:DA:1103:A:C8	2.38	0.59
4:AE:146:ALA:O	4:AE:150:ARG:NE	2.35	0.59
23:AV:12:A:OP1	23:AV:12:A:H4'	2.03	0.59
35:BP:84:ASN:HA	35:BP:116:GLY:HA3	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BT:129:ARG:HD3	39:BT:132:LYS:HB2	1.83	0.59
26:BD:90:ALA:HB2	26:BD:159:ALA:HA	1.83	0.59
59:BA:2306:C:H5'	59:BA:2307:G:C8	2.38	0.59
46:D0:55:ARG:NH1	59:DA:2384:G:OP2	2.35	0.59
21:AA:399:G:H2'	21:AA:400:C:C6	2.38	0.59
4:CE:16:THR:HB	21:CA:1080:A:H5''	1.84	0.59
32:DK:99:ILE:HG23	32:DK:103:GLN:HB2	1.84	0.59
21:AA:773:G:H1	21:AA:806:C:H42	1.50	0.59
3:AD:93:PHE:O	3:AD:97:LEU:HB2	2.02	0.59
59:DA:685:A:O2'	59:DA:773:U:O4	2.16	0.59
46:D0:2:ALA:HB1	59:DA:2494:G:H5'	1.84	0.59
33:BN:75:TYR:HE1	59:BA:1137:G:HO2'	1.51	0.59
34:BO:60:ALA:HA	34:BO:87:ILE:H	1.68	0.59
34:BO:63:VAL:HG12	34:BO:106:LEU:HD21	1.84	0.59
34:BO:64:ARG:HG2	34:BO:79:PHE:CG	2.38	0.59
59:DA:271(F):G:N2	59:DA:357(M):C:N3	2.39	0.59
59:DA:1652:A:N1	59:DA:2005:A:N6	2.51	0.59
59:BA:996:A:H2	59:BA:1159:U:H3	0.71	0.59
21:CA:1006:C:C2	21:CA:1023:G:N2	2.66	0.59
21:CA:1304:G:H21	21:CA:1333:A:H62	1.51	0.59
16:CQ:67:LYS:C	16:CQ:69:LYS:H	2.06	0.59
2:CC:17:ASP:HB3	2:CC:21:ARG:NH1	2.18	0.59
29:DG:113:ARG:HB2	50:D4:34:GLU:OE1	2.02	0.59
59:DA:80:G:H1	59:DA:106:C:H42	1.51	0.59
20:CY:24:GLY:H	61:CY:701:GDP:C5'	2.15	0.59
59:DA:597:U:H2'	59:DA:598:G:C8	2.38	0.59
59:BA:1800:C:O2	59:BA:1817:G:O6	2.21	0.59
2:AC:22:TRP:HB3	2:AC:59:ARG:H	1.67	0.59
20:AY:388:THR:HG21	20:AY:398:ILE:HA	1.85	0.59
20:AY:513:LYS:HB3	20:AY:567:LEU:O	2.03	0.59
20:CY:249:GLY:HA3	20:CY:255:ILE:HD12	1.85	0.59
37:DR:45:ARG:HB3	37:DR:97:VAL:HG21	1.85	0.59
60:BB:64:C:H2'	60:BB:108:C:H41	1.68	0.59
21:AA:1306:A:N6	21:AA:1331:G:O2'	2.36	0.59
59:BA:569:U:O2'	59:BA:946:G:N2	2.31	0.59
59:DA:1372:U:H2'	59:DA:1373:A:H8	1.67	0.59
16:CQ:82:MET:O	16:CQ:85:VAL:N	2.36	0.59
59:DA:2141:G:O6	59:DA:2150:U:O2	2.20	0.59
59:DA:2147:G:H2'	59:DA:2148:G:O4'	2.03	0.59
29:DG:62:LEU:O	50:D4:27:THR:HG21	2.03	0.59
12:CM:52:GLU:O	12:CM:56:LEU:HB2	2.03	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CA:597:G:H2'	21:CA:598:U:H5'	1.84	0.58
36:DQ:66:ILE:HG23	36:DQ:104:PHE:HE2	1.68	0.58
60:DB:24:G:H1'	60:DB:26:A:H62	1.67	0.58
25:BC:40:GLU:O	25:BC:42:VAL:N	2.36	0.58
12:CM:126:LYS:HE3	22:CW:35:A:H4'	1.85	0.58
59:BA:357(C):G:H2'	59:BA:357(D):G:H8	1.66	0.58
21:AA:946:A:H2'	21:AA:947:G:H8	1.66	0.58
59:DA:1294:U:H2'	59:DA:1295:C:C6	2.38	0.58
8:AI:121:ARG:HH22	21:AA:1343:G:N2	2.01	0.58
21:AA:1426:C:H2'	21:AA:1427:U:C6	2.38	0.58
32:BK:72:PRO:HG2	32:BK:111:LYS:NZ	2.17	0.58
21:CA:718:G:OP2	21:CA:720:C:N4	2.36	0.58
28:BF:185:ASP:O	28:BF:189:THR:OG1	2.12	0.58
39:DT:29:ARG:HA	39:DT:46:GLU:HB3	1.84	0.58
59:BA:812:C:H42	59:BA:1195:G:H1	1.50	0.58
59:DA:1436:G:O6	59:DA:1556:C:N3	2.36	0.58
29:DG:51:ARG:HD3	29:DG:54:GLU:HB2	1.85	0.58
20:AY:130:VAL:N	20:AY:253:LEU:HD21	2.18	0.58
59:DA:1277:G:H2'	59:DA:1278:A:C8	2.38	0.58
40:BU:92:ARG:HB3	40:BU:95:LEU:HG	1.83	0.58
21:AA:163:C:H2'	21:AA:164:U:C6	2.38	0.58
19:AT:30:LYS:HG2	19:AT:34:LYS:HE3	1.85	0.58
26:BD:79:VAL:O	26:BD:95:LEU:HA	2.03	0.58
7:CH:38:ILE:HG21	7:CH:111:ILE:HG21	1.84	0.58
29:DG:143:GLU:HB3	50:D4:31:ILE:HG12	1.85	0.58
5:CF:18:GLN:O	5:CF:22:GLU:HG2	2.03	0.58
20:CY:555:LEU:HB2	20:CY:556:ILE:HD13	1.85	0.58
44:BY:104:GLY:HA2	44:BY:108:THR:HB	1.85	0.58
42:DW:87:PRO:HB3	59:DA:1614:A:C6	2.38	0.58
21:AA:68(A):G:H2'	21:AA:68(B):G:H8	1.68	0.58
59:DA:2102:U:H2'	59:DA:2103:C:C6	2.38	0.58
38:BS:66:ALA:O	38:BS:69:VAL:HG12	2.03	0.58
20:AY:554:PRO:HG2	20:AY:594:VAL:HB	1.84	0.58
59:BA:1958:C:H2'	59:BA:1959:G:C8	2.38	0.58
59:DA:1113:U:H2'	59:DA:1114:G:C8	2.37	0.58
33:BN:45:ASN:HB2	33:BN:47:ALA:H	1.68	0.58
59:BA:2548:G:H2'	59:BA:2549:G:O4'	2.03	0.58
21:CA:1126:U:O4	21:CA:1127:G:N2	2.37	0.58
59:BA:962:G:H2'	59:BA:963:U:H5'	1.83	0.58
21:CA:1015:A:H2'	21:CA:1016:A:C8	2.38	0.58
36:DQ:126:PRO:HA	59:DA:2485:G:H4'	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BE:64:LYS:NZ	59:BA:2785:C:O2	2.35	0.58
45:BZ:149:SER:HB2	59:BA:875:G:H5''	1.85	0.58
59:DA:2352:A:H62	59:DA:2365:G:N2	1.97	0.58
29:BG:7:LEU:HD12	29:BG:104:GLU:HA	1.84	0.58
59:BA:2106:G:H2'	59:BA:2107:C:O4'	2.03	0.58
26:BD:208:LYS:HB2	59:BA:729:G:C5	2.37	0.58
59:DA:1527:G:C2	59:DA:1544:A:H8	2.21	0.58
59:BA:1654:A:N6	59:BA:2005:A:H2'	2.18	0.58
21:CA:861:G:H21	21:CA:874:G:H5'	1.68	0.58
59:BA:453:C:H4'	59:BA:472:A:N6	2.17	0.58
21:AA:231:G:H2'	21:AA:232:G:C8	2.38	0.58
28:BF:117:ARG:HB2	28:BF:186:ILE:HD11	1.85	0.58
13:CN:24:CYS:SG	13:CN:40:CYS:N	2.76	0.58
47:B1:17:SER:N	47:B1:39:LYS:HA	2.18	0.58
59:BA:122:G:H2'	59:BA:123:G:H8	1.68	0.58
59:BA:2742:C:H2'	59:BA:2743:C:H6	1.67	0.58
59:BA:1538:G:H2'	59:BA:1539:G:H8	1.68	0.58
55:B9:14:CYS:HA	55:B9:26:ILE:O	2.03	0.58
2:CC:12:LEU:HB2	13:CN:57:ARG:HH21	1.68	0.58
42:BW:12:ILE:HG21	42:BW:17:VAL:HG13	1.85	0.58
59:BA:67:U:H2'	59:BA:68:G:H8	1.67	0.58
59:BA:1853:A:H2'	59:BA:1854:A:C8	2.37	0.58
59:DA:1559:G:O2'	59:DA:1560:G:H5'	2.03	0.58
59:DA:377:C:H2'	59:DA:378:C:H6	1.68	0.58
21:CA:1417:G:H2'	21:CA:1482:G:N2	2.18	0.58
21:AA:888:G:H3'	21:AA:889:A:H5''	1.85	0.58
59:BA:1025:G:H1	59:BA:1139:G:H1	1.50	0.58
59:BA:1939:U:OP1	59:BA:2604:U:O2'	2.16	0.58
21:AA:414:A:H3'	21:AA:415:A:C8	2.38	0.58
11:CL:55:VAL:O	11:CL:68:ALA:N	2.37	0.58
21:CA:1126:U:C5	21:CA:1148:U:N3	2.71	0.58
36:DQ:101:ARG:HH22	59:DA:907:U:H4'	1.68	0.58
59:BA:959:A:O2'	59:BA:2457:U:H4'	2.03	0.58
59:DA:641:C:H42	59:DA:647:G:H1	0.73	0.58
59:BA:91:A:H2'	59:BA:92:G:O4'	2.03	0.58
40:BU:25:TRP:CE2	59:BA:17:G:H4'	2.38	0.58
37:BR:5:LYS:HB3	59:BA:2722:G:O2'	2.03	0.58
38:BS:13:ARG:O	38:BS:15:ARG:N	2.36	0.58
28:BF:25:PRO:HG2	28:BF:119:ARG:HH21	1.68	0.58
14:CO:64:ARG:NH2	21:CA:582:U:OP1	2.35	0.58
21:CA:1510:U:O2	21:CA:1525:G:O6	2.21	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:460:A:H62	59:BA:469:G:H21	1.50	0.58
20:AY:327:PHE:CE1	20:AY:376:ALA:HB2	2.39	0.58
28:DF:169:ASN:HB2	59:DA:322:A:P	2.42	0.58
30:BH:102:ALA:HB1	30:BH:115:VAL:O	2.03	0.58
23:AV:11:U:H3'	23:AV:12:A:H5''	1.85	0.58
13:CN:50:LYS:O	13:CN:52:GLN:N	2.33	0.58
45:DZ:77:ASP:O	45:DZ:79:ARG:N	2.36	0.58
59:DA:308:G:H1'	59:DA:501:A:C8	2.38	0.58
59:BA:210:C:H2'	59:BA:211:A:H8	1.68	0.58
59:DA:2095:C:H2'	59:DA:2096:U:O4'	2.03	0.58
22:AW:27:C:H2'	22:AW:28:A:C8	2.38	0.58
21:AA:862:C:H1'	21:AA:874:G:H5''	1.85	0.58
59:DA:2595:G:H21	59:DA:2598:A:H62	1.51	0.58
32:DK:3:LYS:HE3	32:DK:29:GLN:HG3	1.86	0.58
29:BG:46:ALA:HB1	29:BG:51:ARG:HH22	1.68	0.58
1:CB:136:VAL:HG13	1:CB:140:HIS:CE1	2.38	0.58
33:DN:20:GLY:HA2	33:DN:60:ILE:HG21	1.85	0.58
21:CA:1405:G:H3'	63:CA:1601:NMY:H192	1.67	0.58
59:BA:1956:U:C4	59:BA:2551:C:H4'	2.39	0.58
16:CQ:60:ILE:HD13	16:CQ:72:ARG:HH21	1.66	0.58
59:DA:2559:C:H2'	59:DA:2560:C:H6	1.67	0.58
21:CA:773:G:H2'	21:CA:774:G:H8	1.68	0.58
16:CQ:28:PRO:HA	16:CQ:35:VAL:HA	1.85	0.58
28:BF:9:ILE:HG21	28:BF:124:LEU:HA	1.84	0.58
28:DF:105:VAL:HG22	59:DA:600:G:H1'	1.84	0.58
35:DP:9:ASN:H	35:DP:10:PRO:HD3	1.67	0.58
21:CA:677:U:O2	21:CA:777:A:O2'	2.21	0.58
59:BA:2643:G:H2'	59:BA:2644:G:O4'	2.03	0.58
45:DZ:9:TYR:CD2	45:DZ:61:LEU:HD21	2.38	0.58
59:BA:2668:G:H2'	59:BA:2669:G:O4'	2.04	0.58
30:DH:118:PRO:HG2	30:DH:121:ILE:HD11	1.85	0.58
10:AK:84:VAL:HG11	10:AK:91:ARG:HG3	1.85	0.58
42:BW:19:LEU:HB3	51:B5:25:LEU:HB2	1.85	0.58
59:DA:1102:C:H2'	59:DA:1103:A:H8	1.68	0.58
59:DA:1405:U:H3	59:DA:1597:A:H2	1.46	0.58
21:AA:892:A:H62	21:AA:906:G:H21	1.51	0.58
35:DP:56:SER:O	35:DP:58:THR:N	2.37	0.58
20:CY:628:ARG:HH21	20:CY:651:GLU:HB2	1.68	0.58
59:DA:330:A:O2'	59:DA:331:A:H2'	2.03	0.58
21:AA:22:G:H2'	21:AA:23:C:C6	2.39	0.58
24:CX:35:A:H2'	24:CX:36:C:C6	2.37	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AY:114:VAL:HG23	20:AY:116:PRO:HD3	1.86	0.58
59:DA:750:A:OP1	59:DA:1615:C:N4	2.35	0.58
11:AL:58:VAL:HG11	11:AL:60:LEU:HD23	1.86	0.58
21:AA:1126:U:C5	21:AA:1148:U:O4	2.55	0.58
59:BA:649:G:H2'	59:BA:650:C:C6	2.38	0.58
21:CA:621:A:H2'	21:CA:622:A:C8	2.37	0.58
1:AB:71:VAL:HB	1:AB:164:VAL:HG23	1.86	0.58
20:CY:457:LEU:HD23	20:CY:458:HIS:H	1.69	0.58
59:DA:2818:G:H1	59:DA:2828:C:N4	1.97	0.58
59:BA:515:A:H1'	59:BA:581:C:H1'	1.85	0.58
47:D1:30:VAL:HG11	59:DA:2421:G:H21	1.68	0.58
26:BD:151:LYS:NZ	59:BA:2221:G:H21	2.02	0.58
21:CA:320:C:H42	21:CA:333:G:H1	1.50	0.58
20:CY:163:VAL:HG12	20:CY:164:MET:H	1.69	0.58
20:CY:134:ALA:HB2	20:CY:258:VAL:HG12	1.85	0.58
59:DA:2099:U:H2'	59:DA:2100:G:H8	1.68	0.58
28:BF:110:LEU:HA	28:BF:183:VAL:HG11	1.86	0.58
59:BA:1074:G:H2'	59:BA:1075:C:C6	2.38	0.58
21:CA:689:C:N3	21:CA:698:G:N2	2.49	0.58
59:BA:2525:G:H2'	59:BA:2526:G:H8	1.68	0.58
15:CP:36:ILE:HB	15:CP:52:ASP:HB3	1.84	0.58
59:DA:714:U:N3	59:DA:717:G:OP2	2.35	0.58
59:DA:1368:G:H2'	59:DA:1369:G:H8	1.68	0.58
8:AI:48:GLU:HG3	8:AI:101:PHE:CZ	2.38	0.58
59:DA:1437:C:H42	59:DA:1555:G:H1	1.51	0.58
21:CA:587:G:N1	21:CA:754:C:OP2	2.36	0.58
54:D8:29:LYS:HB2	54:D8:44:LYS:HZ2	1.69	0.58
59:BA:979:G:H2'	59:BA:982:C:H42	1.68	0.58
32:BK:95:LYS:HB3	32:BK:137:GLU:HB3	1.85	0.58
33:BN:100:GLU:HB3	33:BN:104:LYS:N	2.18	0.58
59:DA:1964:G:O3'	59:DA:1966:A:H3'	2.04	0.58
36:DQ:25:ASP:N	36:DQ:25:ASP:OD1	2.36	0.58
20:AY:165:GLN:HE21	20:AY:260:LEU:HD13	1.69	0.58
59:DA:1309:G:O2'	59:DA:1611:C:H4'	2.03	0.58
11:AL:33:ARG:HB3	11:AL:60:LEU:HD22	1.86	0.58
59:DA:37:C:H2'	59:DA:38:A:C8	2.38	0.58
59:DA:2549:G:H2'	59:DA:2550:G:N7	2.17	0.58
21:CA:156:G:H2'	21:CA:157:G:H8	1.67	0.58
15:AP:38:TYR:CE2	15:AP:50:LYS:HG3	2.39	0.58
60:BB:9:G:H2'	60:BB:10:C:H6	1.68	0.58
38:BS:13:ARG:HE	38:BS:13:ARG:H	1.52	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:CV:26:A:O2'	23:CV:27:A:O5'	2.21	0.58
59:BA:2252:G:N3	59:BA:2252:G:H5''	2.17	0.58
21:CA:689:C:C2	21:CA:698:G:N2	2.69	0.58
59:DA:1895:C:H2'	59:DA:1896:G:C8	2.38	0.58
32:DK:131:ALA:HB1	32:DK:136:VAL:HG12	1.86	0.58
39:DT:91:ARG:HH22	39:DT:114:LEU:HD11	1.68	0.58
59:DA:2735:G:H2'	59:DA:2736:G:C8	2.39	0.58
59:BA:745:G:H21	59:BA:750:A:H61	1.52	0.58
59:DA:540:C:H2'	59:DA:541:C:C6	2.37	0.58
9:AJ:6:ILE:HG23	9:AJ:72:VAL:HB	1.86	0.58
59:DA:2025:C:H2'	59:DA:2026:C:C6	2.39	0.58
33:DN:23:LEU:HD21	33:DN:62:VAL:HG23	1.85	0.58
33:DN:74:ARG:HH11	33:DN:74:ARG:HG2	1.69	0.58
34:BO:82:ASN:ND2	34:BO:82:ASN:O	2.37	0.58
11:CL:24:VAL:HG11	21:CA:553:A:H5''	1.85	0.58
59:DA:1665:A:N1	59:DA:1995:U:O4	2.37	0.58
59:DA:744:G:H2'	59:DA:745:G:O4'	2.02	0.58
11:AL:60:LEU:HD12	11:AL:62:SER:OG	2.03	0.58
59:DA:1238:G:H2'	59:DA:1239:G:H8	1.69	0.58
13:CN:60:SER:HB2	21:CA:1187:G:H21	1.69	0.58
6:CG:94:ARG:HH22	21:CA:1378:C:H4'	1.69	0.58
15:AP:8:ARG:HA	15:AP:17:TYR:HA	1.84	0.58
59:DA:2107:C:N3	59:DA:2182:G:O6	2.37	0.58
28:DF:24:LEU:HB3	28:DF:25:PRO:HD2	1.85	0.58
59:DA:68:G:H2'	59:DA:69:C:O4'	2.02	0.58
9:CJ:40:LEU:HD13	9:CJ:41:PRO:HD2	1.86	0.58
41:BV:66:ARG:HG2	41:BV:88:ARG:HG2	1.84	0.58
59:DA:2262:U:H2'	59:DA:2263:C:C6	2.38	0.58
21:CA:582:U:OP2	21:CA:758:G:N1	2.37	0.58
44:DY:50:ARG:HG2	59:DA:484:C:H5'	1.85	0.58
43:BX:53:LYS:O	43:BX:81:VAL:HA	2.03	0.58
20:AY:132:ARG:HH22	20:AY:253:LEU:HA	1.68	0.58
59:BA:2644:G:H3'	59:BA:2645:G:C8	2.37	0.58
35:BP:66:GLY:O	35:BP:68:GLN:N	2.36	0.58
22:AW:50:C:N4	22:AW:64:G:H1	1.99	0.58
3:AD:67:ILE:O	3:AD:114:ARG:NH1	2.37	0.58
59:BA:1712(A):U:H2'	59:BA:1712(B):G:H8	1.69	0.58
14:AO:54:ARG:HH21	21:AA:579:G:H4'	1.69	0.58
35:DP:47:ASP:CG	35:DP:49:ARG:HE	2.06	0.58
59:BA:890:A:H2'	59:BA:892:G:H8	1.67	0.58
21:AA:299:G:N2	21:AA:566:G:O6	2.31	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AB:205:ASP:OD1	1:AB:205:ASP:N	2.31	0.58
10:AK:30:VAL:HG22	10:AK:43:SER:O	2.04	0.58
42:DW:29:LEU:HD11	42:DW:51:LEU:HD21	1.84	0.58
59:DA:2199:A:H61	59:DA:2224:G:H1'	1.69	0.58
38:BS:35:ILE:HB	38:BS:53:SER:HB2	1.83	0.58
21:AA:587:G:N1	21:AA:754:C:OP2	2.36	0.58
26:DD:48:ARG:HD2	59:DA:1806:C:H4'	1.85	0.58
3:CD:14:ARG:HA	3:CD:39:PRO:HG3	1.86	0.58
39:BT:18:ASP:OD1	39:BT:18:ASP:N	2.37	0.58
28:BF:44:ARG:HB3	59:BA:611(E):G:C2	2.38	0.58
59:DA:1153:C:H2'	59:DA:1154:G:C8	2.39	0.58
34:BO:35:VAL:HG13	34:BO:63:VAL:HA	1.84	0.58
34:BO:64:ARG:O	34:BO:82:ASN:HA	2.04	0.58
21:CA:639:G:H2'	21:CA:640:A:O4'	2.02	0.58
59:DA:648:G:H2'	59:DA:649:G:C8	2.38	0.58
53:D7:9:ARG:NH1	53:D7:47:ARG:O	2.36	0.58
59:BA:2270:G:H2'	59:BA:2271:G:O4'	2.04	0.58
59:DA:1213:A:O2'	59:DA:1239:G:O4'	2.20	0.58
45:DZ:44:PHE:HZ	45:DZ:86:VAL:HG21	1.69	0.58
41:BV:81:TYR:HE2	59:BA:1187:G:H5''	1.68	0.58
21:CA:675:A:H2'	21:CA:676:A:O4'	2.03	0.58
59:DA:105:C:H2'	59:DA:106:C:C6	2.38	0.58
42:BW:76:VAL:HG23	42:BW:103:ILE:HG13	1.84	0.58
21:CA:626:U:H2'	21:CA:627:G:C8	2.39	0.58
20:AY:311:ALA:HA	20:AY:330:VAL:O	2.04	0.58
44:DY:47:LYS:HG2	59:DA:482:A:H4'	1.84	0.58
3:CD:3:ARG:HH21	3:CD:118:ARG:NE	2.01	0.58
3:AD:31:CYS:N	3:AD:33:MET:H	2.02	0.58
21:CA:1440(E):G:H2'	21:CA:1440(F):C:H5'	1.86	0.58
45:DZ:111:VAL:HG12	45:DZ:112:ARG:H	1.68	0.58
37:BR:24:GLN:O	37:BR:28:LEU:HB2	2.04	0.58
59:DA:1775:U:H2'	59:DA:1776:G:O4'	2.04	0.58
53:B7:3:ARG:HB2	59:BA:1612:C:O2'	2.04	0.58
59:DA:717:G:H2'	59:DA:718:A:H8	1.69	0.58
59:DA:248:G:C4	59:DA:2431:U:H4'	2.38	0.58
3:AD:147:ALA:HA	3:AD:182:LYS:HG3	1.85	0.58
41:DV:23:GLU:O	41:DV:92:THR:OG1	2.17	0.58
21:CA:740:U:H2'	21:CA:741:G:C8	2.38	0.58
59:BA:861:A:H62	59:BA:916:G:H21	1.50	0.58
19:CT:50:GLU:HA	19:CT:100:ILE:HG21	1.86	0.58
17:AR:36:ASN:HB3	17:AR:39:VAL:HB	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:2780:G:H3'	59:DA:2781:A:C8	2.39	0.58
33:BN:75:TYR:CE1	33:BN:82:LEU:HG	2.39	0.58
24:CX:1:G:C2	24:CX:72:C:N3	2.71	0.58
21:CA:104:G:H2'	21:CA:105:G:C8	2.39	0.58
21:CA:1127:G:H21	21:CA:1147:C:N4	2.02	0.58
18:CS:55:LYS:O	21:CA:986:A:O2'	2.22	0.58
22:CW:22:G:H2'	22:CW:23:A:O4'	2.03	0.58
59:DA:380:U:H2'	59:DA:381:G:C8	2.39	0.58
59:DA:777:A:H2'	59:DA:778:G:C8	2.39	0.58
59:BA:76:C:H2'	59:BA:77:C:C6	2.39	0.58
60:DB:44:G:H5''	60:DB:45:A:N7	2.19	0.58
22:CW:50:C:N3	22:CW:64:G:N2	2.51	0.58
21:CA:1291:G:H2'	21:CA:1292:U:C6	2.37	0.58
59:BA:22:C:H42	59:BA:518:G:H1	1.50	0.58
34:BO:71:ARG:NH2	34:BO:104:ARG:HG3	2.19	0.58
59:DA:2396:G:H1	59:DA:2420:C:N4	1.99	0.58
59:DA:993:G:O6	59:DA:1161:C:N3	2.37	0.58
20:CY:567:LEU:HG	20:CY:568:TYR:H	1.68	0.58
59:BA:851:U:H2'	59:BA:852:G:H8	1.68	0.58
59:BA:1131:G:OP2	59:BA:2515:C:H4'	2.04	0.58
1:CB:212:GLN:HG3	1:CB:235:SER:HB3	1.84	0.58
10:AK:42:TRP:CZ2	21:AA:687:A:H5'	2.39	0.58
6:AG:74:GLU:OE1	6:AG:76:ARG:NH1	2.37	0.58
34:DO:122:LEU:HD23	39:DT:43:GLN:HE22	1.68	0.58
44:DY:32:PRO:HD2	44:DY:34:LYS:H	1.69	0.58
59:BA:1281:G:H1	59:BA:1289:C:H42	1.50	0.58
59:DA:1658:C:H42	59:DA:2002:G:H1	1.50	0.58
21:CA:666:G:H4'	21:CA:731:G:H22	1.68	0.58
59:BA:936:C:H2'	59:BA:937:U:O4'	2.04	0.58
41:BV:71:LEU:HA	41:BV:86:GLY:HA2	1.86	0.58
39:BT:52:ILE:HD13	39:BT:61:PHE:HB2	1.85	0.58
31:DJ:50:UNK:H	31:DJ:82:UNK:C	2.17	0.58
19:CT:72:LEU:HB3	19:CT:76:ALA:HB3	1.84	0.58
5:AF:61:LEU:HD13	5:AF:63:TYR:HE2	1.68	0.58
33:DN:74:ARG:HB3	59:DA:1138:G:H4'	1.86	0.58
59:DA:2570:G:H2'	59:DA:2571:C:O4'	2.04	0.58
59:BA:1951:U:C2	59:BA:1954:G:H8	2.22	0.58
59:DA:850:C:H42	59:DA:928:G:H1	0.71	0.58
11:CL:90:VAL:HG22	11:CL:96:VAL:HG11	1.86	0.58
21:CA:1124:G:H1	21:CA:1149:C:H42	1.51	0.58
59:DA:1654:A:H2'	59:DA:1655:A:C8	2.39	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:910:A:H2'	59:BA:2264:C:O2'	2.04	0.58
48:D2:32:LEU:HB2	48:D2:53:LEU:HD22	1.86	0.58
59:DA:236:C:N3	59:DA:261:G:N2	2.44	0.58
59:DA:2397:G:C6	59:DA:2419:U:O2	2.57	0.58
25:BC:132:LEU:HB3	25:BC:137:LEU:HB2	1.85	0.58
21:AA:978:A:OP1	21:AA:978:A:H8	1.87	0.58
27:BE:62:PRO:HB3	59:BA:2786:U:O2'	2.04	0.58
38:DS:17:ARG:O	38:DS:21:THR:N	2.36	0.58
20:CY:19:ALA:HB2	20:CY:107:VAL:HB	1.86	0.58
59:DA:838:C:H2'	59:DA:839:U:O4'	2.04	0.58
59:BA:947:G:H1	59:BA:970:C:H42	1.50	0.58
59:BA:2150:U:H2'	59:BA:2151:G:C8	2.39	0.58
35:BP:61:ARG:O	54:B8:13:ARG:NH1	2.37	0.58
21:AA:757:U:H1'	21:AA:879:C:H1'	1.85	0.58
20:CY:133:ILE:HD13	20:CY:280:LEU:HD21	1.84	0.58
49:B3:5:LYS:HA	49:B3:35:ARG:O	2.03	0.58
59:BA:374:A:H61	59:BA:400:G:H1'	1.68	0.58
41:BV:35:LEU:HB2	41:BV:57:VAL:HG13	1.85	0.58
21:AA:1387:G:H2'	21:AA:1388:C:C6	2.38	0.58
19:CT:74:LYS:HG2	19:CT:75:ASN:H	1.68	0.58
59:DA:391:G:H2'	59:DA:392:C:H6	1.68	0.58
59:DA:717:G:H2'	59:DA:718:A:C8	2.38	0.58
15:AP:67:THR:H	15:AP:70:ALA:HB3	1.69	0.58
29:BG:109:VAL:HG21	29:BG:142:PRO:HD3	1.85	0.58
59:DA:1506(C):A:H2'	59:DA:1506(D):A:C8	2.39	0.58
39:DT:50:ILE:HG12	39:DT:102:ILE:HD11	1.85	0.58
21:CA:1177:G:O6	21:CA:1181:G:N7	2.37	0.57
21:CA:599:C:N3	21:CA:639:G:O6	2.37	0.57
21:CA:966:G:N3	22:CW:34:C:O2'	2.28	0.57
59:BA:961:C:H4'	59:BA:962:G:OP2	2.04	0.57
59:BA:2121:G:H1	59:BA:2177:C:N4	1.99	0.57
25:BC:42:VAL:O	25:BC:44:VAL:N	2.37	0.57
59:DA:689:A:H2'	59:DA:690:G:C8	2.38	0.57
21:CA:715:A:H5''	21:CA:805:C:O2'	2.04	0.57
6:CG:79:ARG:HD2	6:CG:79:ARG:H	1.69	0.57
21:AA:1341:U:H2'	21:AA:1342:C:H6	1.69	0.57
59:BA:904:C:H2'	59:BA:905:U:H6	1.69	0.57
1:AB:70:PHE:HB2	1:AB:92:TYR:HB2	1.86	0.57
32:BK:52:ILE:HB	32:BK:73:PRO:HD3	1.86	0.57
21:AA:780:A:H4'	21:AA:1523:G:H4'	1.86	0.57
21:AA:975:A:H2	21:AA:1357:A:HO2'	1.52	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:1422:G:H2'	59:DA:1423:G:H8	1.67	0.57
26:BD:150:LYS:HD3	59:BA:2202(H):G:N2	2.19	0.57
59:BA:1792:G:H2'	59:BA:1793:C:C6	2.39	0.57
21:AA:231:G:H2'	21:AA:232:G:H8	1.69	0.57
46:B0:47:PRO:HG2	46:B0:53:MET:HB2	1.85	0.57
37:DR:48:VAL:O	37:DR:52:ILE:HG12	2.04	0.57
20:CY:413:ILE:HB	20:CY:476:VAL:HG13	1.87	0.57
59:BA:1290:C:H2'	59:BA:1291:C:C6	2.39	0.57
16:AQ:15:MET:SD	21:AA:253:U:O2'	2.60	0.57
19:CT:57:ARG:HH11	19:CT:102:GLY:HA3	1.68	0.57
59:DA:2848:G:O2'	59:DA:2867:G:N2	2.37	0.57
21:CA:1255:G:O2'	21:CA:1258:G:N3	2.32	0.57
59:BA:1558:A:O2'	59:BA:1559:G:OP2	2.20	0.57
12:CM:61:GLU:HA	12:CM:66:LEU:HD11	1.86	0.57
34:BO:68:GLU:HA	34:BO:78:ARG:HB3	1.85	0.57
21:AA:1397:C:N4	23:AV:24:C:O2'	2.37	0.57
59:DA:998:C:H2'	59:DA:999:U:O4'	2.03	0.57
59:BA:2406:U:H5''	59:BA:2408:U:OP2	2.04	0.57
21:CA:643:C:H2'	21:CA:644:G:C8	2.38	0.57
5:AF:44:GLY:HA2	5:AF:59:TYR:CE1	2.39	0.57
59:DA:557:U:H2'	59:DA:558:G:C8	2.39	0.57
59:DA:558:G:H2'	59:DA:559:G:H8	1.69	0.57
33:DN:98:VAL:HG23	33:DN:100:GLU:HG3	1.86	0.57
59:BA:2777:G:H5''	59:BA:2778:A:H5'	1.86	0.57
59:DA:1965:C:H5'	59:DA:1966:A:H2'	1.85	0.57
59:BA:1945:G:C6	59:BA:1961:C:N3	2.71	0.57
59:BA:1945:G:O6	59:BA:1961:C:C4	2.56	0.57
24:CX:30:C:N3	24:CX:40:G:N2	2.41	0.57
21:AA:367:U:O2	21:AA:393:A:N1	2.36	0.57
59:BA:271(B):G:H4'	59:BA:271(C):U:H5'	1.86	0.57
11:AL:117:ARG:HH22	21:AA:501:C:H5'	1.68	0.57
59:DA:1562:A:H2'	59:DA:1563:G:C8	2.39	0.57
21:CA:909:A:O2'	21:CA:1413:A:O2'	2.21	0.57
21:CA:1343:G:N2	21:CA:1349:A:O2'	2.37	0.57
35:BP:53:GLY:HA3	35:BP:55:ARG:HD2	1.86	0.57
21:AA:716:A:H2'	21:AA:717:C:C6	2.39	0.57
17:CR:60:ALA:HB2	21:CA:834:C:H5''	1.86	0.57
40:BU:25:TRP:CD1	40:BU:26:GLY:N	2.71	0.57
59:BA:2202(A):U:O2	59:BA:2202(H):G:O6	2.22	0.57
7:CH:91:ARG:HH22	16:CQ:32:TYR:HA	1.69	0.57
59:BA:2103:C:N4	59:BA:2186:G:H1	2.01	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DC:42:VAL:O	25:DC:44:VAL:N	2.37	0.57
59:DA:2556:C:H2'	59:DA:2557:G:H4'	1.87	0.57
59:BA:1506(P):U:H2'	59:BA:1524:G:C8	2.39	0.57
25:BC:185:LYS:HA	25:BC:188:ASP:HB2	1.84	0.57
59:BA:1689:A:H2'	59:BA:1690:A:C8	2.39	0.57
13:CN:40:CYS:SG	13:CN:41:ARG:N	2.76	0.57
1:CB:75:LYS:O	1:CB:78:GLN:HB3	2.04	0.57
53:D7:29:LYS:NZ	59:DA:681:G:O2'	2.37	0.57
59:DA:1165:U:H3	59:DA:1184:G:H1	1.52	0.57
59:BA:2567:G:H2'	59:BA:2568:C:C6	2.40	0.57
35:BP:124:LYS:HD3	35:BP:143:GLY:HA3	1.84	0.57
59:DA:2194:G:H2'	59:DA:2195:C:C6	2.37	0.57
13:AN:42:ILE:HG21	21:AA:1202:G:C6	2.39	0.57
23:CV:34:A:H4'	23:CV:35:A:OP1	2.03	0.57
20:AY:623:ASP:HA	20:AY:626:ALA:HB3	1.87	0.57
45:BZ:166:SER:H	45:BZ:167:PRO:HA	1.69	0.57
48:B2:66:GLU:O	48:B2:69:ARG:HG2	2.04	0.57
59:BA:2024:G:H2'	59:BA:2025:C:O4'	2.04	0.57
21:CA:983:A:H2	21:CA:984:C:C6	2.21	0.57
22:CW:8:U:H4'	22:CW:49:A:H5'	1.86	0.57
21:CA:186(L):G:H2'	21:CA:186(M):G:C8	2.39	0.57
59:BA:521:G:H2'	59:BA:522:G:C8	2.39	0.57
60:BB:51:G:N2	60:BB:53:A:H62	2.02	0.57
59:DA:1047:G:H1'	59:DA:1110:G:H22	1.68	0.57
59:DA:699:A:H62	59:DA:733:G:N2	1.98	0.57
59:DA:2683:C:H42	59:DA:2727:G:H2'	1.69	0.57
59:BA:297:C:H2'	59:BA:298:G:O4'	2.03	0.57
27:DE:105:THR:HB	27:DE:197:ILE:HG12	1.84	0.57
59:DA:1442:G:H1	59:DA:1549:C:N4	1.98	0.57
21:AA:1512:U:H2'	21:AA:1513:A:C8	2.38	0.57
21:CA:964:A:H2'	21:CA:965:A:H5'	1.86	0.57
59:BA:1003:G:H1	59:BA:1152:C:N4	2.00	0.57
1:CB:161:ALA:HA	1:CB:183:PRO:O	2.04	0.57
7:CH:89:PRO:HG2	21:CA:878:G:H5'	1.85	0.57
53:B7:40:TRP:HD1	53:B7:41:ARG:H	1.44	0.57
59:BA:481:G:O2'	59:BA:506:G:N2	2.38	0.57
59:BA:2885:C:H2'	59:BA:2886:G:O4'	2.03	0.57
52:B6:20:ASN:ND2	52:B6:43:CYS:SG	2.65	0.57
42:BW:89:ALA:HB1	59:BA:748:G:C8	2.39	0.57
8:AI:120:ARG:HB3	21:AA:1344:C:H4'	1.85	0.57
4:CE:101:ILE:HD11	4:CE:119:LEU:HD13	1.85	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BY:46:LYS:H	44:BY:62:GLU:HB2	1.68	0.57
35:DP:36:LYS:H	59:DA:942:G:H5'	1.69	0.57
1:AB:233:SER:H	1:AB:234:PRO:HD2	1.69	0.57
59:BA:1468(B):G:N2	59:BA:1506(O):G:OP2	2.37	0.57
21:CA:124:G:H2'	21:CA:125:U:O4'	2.04	0.57
20:AY:348:ARG:HB3	20:AY:350:GLU:HG2	1.86	0.57
21:CA:1307:U:H3	21:CA:1330:U:H3	1.51	0.57
33:DN:29:LYS:O	33:DN:31:ALA:O	2.21	0.57
33:BN:35:ARG:HB3	33:BN:37:LYS:H	1.69	0.57
20:AY:506:GLN:OE1	59:BA:1913:A:N6	2.38	0.57
21:CA:1126:U:C5	21:CA:1148:U:C4	2.92	0.57
25:BC:169:THR:O	25:BC:171:ALA:N	2.34	0.57
25:BC:44:VAL:O	25:BC:173:HIS:HA	2.05	0.57
49:D3:30:ARG:HH11	59:DA:1158:C:H5''	1.70	0.57
59:DA:1782:C:H42	59:DA:2586:C:N4	1.95	0.57
35:DP:62:LEU:H	35:DP:62:LEU:HD23	1.69	0.57
59:DA:817:C:H2'	59:DA:818:G:O4'	2.03	0.57
20:CY:165:GLN:HB2	20:CY:178:ILE:O	2.05	0.57
8:AI:117:HIS:N	8:AI:121:ARG:O	2.37	0.57
36:BQ:26:TYR:HE1	59:BA:906:G:H5''	1.70	0.57
21:CA:976:G:O4'	21:CA:1363:A:N6	2.37	0.57
11:AL:53:ARG:HG3	11:AL:69:TYR:CZ	2.40	0.57
59:DA:2404:C:N4	59:DA:2413:G:H1	2.01	0.57
40:BU:81:HIS:CG	59:BA:1151:G:H4'	2.39	0.57
59:BA:661:C:H2'	59:BA:662:G:H8	1.70	0.57
59:DA:1663:C:N4	59:DA:1997:G:H1	2.02	0.57
59:DA:2098:U:H2'	59:DA:2099:U:O4'	2.05	0.57
37:DR:104:ARG:HE	59:DA:1287:A:H5'	1.68	0.57
21:AA:1305:G:H1	21:AA:1331:G:H2'	1.70	0.57
59:DA:295:G:N1	59:DA:343:C:O2	2.31	0.57
44:DY:9:LYS:HB3	44:DY:94:LYS:NZ	2.20	0.57
59:DA:1895:C:H2'	59:DA:1896:G:H8	1.67	0.57
3:CD:31:CYS:O	3:CD:33:MET:HE3	2.04	0.57
3:CD:15:GLU:HB3	3:CD:63:LYS:HE2	1.87	0.57
59:DA:308:G:O2'	59:DA:329:G:N2	2.33	0.57
25:DC:63:VAL:O	25:DC:161:ARG:N	2.37	0.57
52:B6:16:CYS:O	52:B6:17:LYS:HB2	2.04	0.57
51:D5:36:CYS:SG	51:D5:37:LYS:N	2.77	0.57
38:BS:58:LEU:HD23	38:BS:65:VAL:HG13	1.86	0.57
19:AT:63:ILE:HD13	19:AT:81:LYS:HG2	1.85	0.57
37:DR:46:GLY:HA2	59:DA:2838:G:O2'	2.05	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:D9:5:ALA:O	55:D9:36:GLN:NE2	2.37	0.57
6:AG:13:GLN:HG3	6:AG:13:GLN:O	2.04	0.57
59:DA:515:A:H3'	59:DA:516:C:H6	1.68	0.57
59:DA:583:G:N1	59:DA:1257:C:N4	2.14	0.57
33:BN:97:ARG:NH1	33:BN:108:PRO:HB2	2.09	0.57
33:BN:37:LYS:HB3	59:BA:1138:G:N2	2.19	0.57
59:DA:878:A:H5'	59:DA:879:G:OP2	2.04	0.57
21:AA:1405:G:H3'	63:AA:1601:NMY:H232	1.87	0.57
21:AA:1491:G:C4	63:AA:1601:NMY:H4	2.40	0.57
42:DW:42:ARG:NH1	59:DA:2011:U:OP1	2.38	0.57
29:DG:108:ASN:O	29:DG:112:PRO:CG	2.36	0.57
11:CL:113:ARG:HG2	11:CL:120:TYR:HB2	1.87	0.57
21:CA:1148:U:H2'	21:CA:1149:C:O4'	2.04	0.57
59:DA:1654:A:N1	59:DA:2048:G:O2'	2.36	0.57
59:DA:947:G:N2	59:DA:970:C:N3	2.45	0.57
21:CA:1224:G:O2'	21:CA:1322:C:OP2	2.15	0.57
21:CA:1039:C:H2'	21:CA:1040:U:C6	2.39	0.57
21:CA:947:G:H4'	21:CA:1332:A:H2	1.69	0.57
26:DD:51:VAL:O	26:DD:52:ARG:HB2	2.05	0.57
60:BB:31:C:H1'	60:BB:54:G:N2	2.19	0.57
29:DG:109:VAL:HB	50:D4:33:VAL:HG11	1.86	0.57
25:DC:118:PRO:O	25:DC:121:MET:HB3	2.05	0.57
59:DA:2809:A:H2'	59:DA:2810:A:C8	2.39	0.57
44:BY:81:LYS:HD2	44:BY:97:ARG:HB3	1.86	0.57
28:BF:176:LEU:HG	28:BF:177:ALA:N	2.20	0.57
28:BF:157:VAL:H	28:BF:193:VAL:N	2.00	0.57
59:BA:2102:U:H2'	59:BA:2103:C:C5	2.38	0.57
37:DR:50:HIS:HB2	59:DA:2839:G:H5''	1.86	0.57
37:DR:36:THR:OG1	37:DR:37:THR:N	2.38	0.57
59:BA:1077:A:C2	59:BA:1088:A:H2'	2.40	0.57
59:BA:2143:C:N3	59:BA:2148:G:N2	2.51	0.57
45:DZ:151:HIS:HB2	45:DZ:168:GLU:O	2.04	0.57
29:DG:34:LEU:HD13	29:DG:99:MET:HE1	1.86	0.57
59:BA:2426:A:H3'	59:BA:2427:C:H5'	1.86	0.57
6:CG:13:GLN:O	6:CG:24:THR:HG21	2.03	0.57
59:DA:2040:C:H2'	59:DA:2041:U:C6	2.39	0.57
33:DN:101:HIS:CD2	33:DN:101:HIS:C	2.77	0.57
33:DN:59:LYS:HD3	33:DN:59:LYS:H	1.70	0.57
12:CM:45:VAL:HA	12:CM:48:LEU:HG	1.86	0.57
21:CA:33:A:H5''	21:CA:364:A:O2'	2.05	0.57
20:AY:107:VAL:HG22	20:AY:135:PHE:HB3	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BD:218:ARG:NH2	59:BA:690:G:O3'	2.38	0.57
25:BC:42:VAL:HG13	25:BC:215:VAL:HG13	1.85	0.57
15:CP:31:LYS:HG3	21:CA:607:A:N3	2.19	0.57
21:AA:372:C:H42	21:AA:389:A:H62	0.79	0.57
16:CQ:66:SER:HA	21:CA:265:G:O3'	2.05	0.57
9:CJ:62:HIS:HD2	13:CN:61:TRP:HZ3	1.51	0.57
60:BB:24:G:C2	60:BB:56:G:N2	2.72	0.57
59:BA:589:C:N4	59:BA:668:G:H1	2.00	0.57
39:BT:27:THR:HG23	39:BT:28:VAL:H	1.69	0.57
21:CA:930:C:N4	21:CA:1387:G:H1	2.02	0.57
53:B7:21:ARG:NH2	59:BA:465:G:O2'	2.38	0.57
20:AY:130:VAL:O	20:AY:132:ARG:NH1	2.38	0.57
59:BA:1388:G:HO2'	59:BA:1525:G:HO2'	1.50	0.57
22:AW:50:C:N4	22:AW:64:G:C6	2.72	0.57
25:BC:8:TYR:HA	25:BC:11:LEU:HB2	1.87	0.57
21:AA:766:A:H61	21:AA:1511:G:H1'	1.69	0.57
21:CA:338:A:N1	21:CA:351:G:O6	2.37	0.57
59:BA:2876:G:H2'	59:BA:2877:G:C8	2.39	0.57
33:BN:112:LEU:HG	33:BN:115:ARG:HB2	1.87	0.57
21:CA:602:A:H61	21:CA:636:U:H3	1.51	0.57
59:DA:1052:C:N3	59:DA:1107:G:C2	2.71	0.57
53:D7:9:ARG:N	59:DA:1309:G:OP1	2.37	0.57
21:AA:1127:G:H21	21:AA:1147:C:N4	2.02	0.57
36:BQ:68:ILE:H	36:BQ:68:ILE:HD13	1.70	0.57
21:CA:1233:G:H2'	21:CA:1234:C:C6	2.39	0.57
3:AD:3:ARG:NH2	21:AA:405:U:OP2	2.37	0.57
59:DA:1959:G:H2'	59:DA:1960:A:O4'	2.04	0.57
21:AA:676:A:N1	21:AA:714:G:O6	2.38	0.57
30:BH:66:GLY:O	30:BH:70:THR:OG1	2.21	0.57
21:AA:1320:C:H2'	21:AA:1321:C:C6	2.39	0.57
59:BA:904:C:H2'	59:BA:905:U:C6	2.39	0.57
29:BG:111:LEU:HD13	29:BG:179:PRO:HG2	1.86	0.57
21:CA:1414:U:H2'	21:CA:1415:G:H8	1.67	0.57
59:BA:1638:C:H4'	59:BA:2710:C:O2	2.05	0.57
28:BF:8:GLN:HB2	28:BF:22:ALA:HB2	1.86	0.57
3:AD:13:ARG:HB2	3:AD:38:TYR:H	1.68	0.57
21:AA:600:C:H42	21:AA:638:G:H1	1.53	0.57
45:BZ:73:GLN:HB2	45:BZ:87:ASP:HB2	1.87	0.57
41:DV:60:GLU:H	41:DV:96:ILE:CA	2.18	0.57
5:AF:70:ASP:O	5:AF:73:ASN:ND2	2.37	0.57
45:BZ:30:ASN:H	45:BZ:33:LEU:HB3	1.69	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:1102:C:H2'	59:BA:1103:A:H8	1.69	0.57
26:DD:77:ALA:HB3	26:DD:117:VAL:HG23	1.86	0.57
21:AA:1440(N):C:H2'	21:AA:1440(O):A:O4'	2.04	0.57
55:B9:4:ARG:HA	59:BA:2465:C:H5''	1.86	0.57
27:DE:150:VAL:HG21	59:DA:2618:G:H21	1.69	0.57
59:BA:2301:C:H2'	59:BA:2302:G:C8	2.39	0.57
38:BS:92:TYR:C	38:BS:94:TYR:H	2.08	0.57
16:AQ:17:LYS:HZ3	21:AA:256:U:H5'	1.69	0.57
51:D5:16:ARG:HD3	59:DA:1263:U:H5''	1.87	0.57
33:DN:94:HIS:HB3	33:DN:95:PRO:HD3	1.87	0.57
11:AL:47:LYS:NZ	21:AA:1492:A:H1'	2.19	0.57
34:BO:66:LYS:HB3	59:BA:1665:A:H4'	1.86	0.57
27:DE:33:VAL:HG23	27:DE:47:VAL:HG13	1.85	0.57
54:D8:23:VAL:HA	54:D8:48:PHE:O	2.05	0.57
59:DA:1170:G:N2	59:DA:1179:C:N3	2.43	0.57
59:DA:915:C:H2'	59:DA:916:G:O4'	2.05	0.57
59:BA:2332:U:O2	59:BA:2335:A:H2	1.88	0.57
21:AA:1333:A:H2'	21:AA:1334:G:O4'	2.05	0.57
59:BA:1802:A:H2'	59:BA:1803:A:C8	2.39	0.57
59:DA:1712(A):U:H2'	59:DA:1712(B):G:C8	2.39	0.57
9:AJ:53:PRO:HD3	21:AA:1059:C:O2'	2.04	0.57
40:BU:76:TYR:CD2	59:BA:1010:A:H4'	2.40	0.57
35:BP:21:ARG:HG2	59:BA:663:G:H5''	1.85	0.57
59:DA:246:C:N4	59:DA:252:G:H1	2.02	0.57
59:BA:1019:U:H3	59:BA:1020:A:N6	2.03	0.57
37:DR:41:ALA:HB1	37:DR:97:VAL:HG11	1.85	0.57
59:BA:2081:C:H2'	59:BA:2082:A:H8	1.70	0.57
9:CJ:45:ARG:HH12	21:CA:1255:G:P	2.28	0.57
37:BR:90:ARG:HH12	59:BA:2880:C:H4'	1.70	0.57
1:CB:136:VAL:O	1:CB:140:HIS:ND1	2.37	0.57
59:DA:1506(D):A:H2'	59:DA:1506(E):G:O4'	2.05	0.57
4:CE:142:LEU:C	4:CE:143:ARG:HE	2.07	0.57
37:DR:77:ARG:NH2	59:DA:1453:A:O2'	2.34	0.57
13:AN:17:LYS:HD2	21:AA:1316:G:H5''	1.86	0.57
30:DH:28:GLY:HA3	30:DH:79:VAL:HB	1.87	0.57
59:BA:134:C:H2'	59:BA:135:G:C8	2.40	0.57
59:DA:212:G:H2'	59:DA:213:A:H8	1.68	0.57
28:BF:105:VAL:O	28:BF:108:LYS:HB2	2.05	0.57
33:DN:27:ALA:C	33:DN:31:ALA:H	2.08	0.57
33:BN:75:TYR:N	33:BN:83:LYS:H	2.03	0.57
21:AA:1494:G:C8	63:AA:1601:NMY:N7	2.72	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CL:83:VAL:HB	11:CL:100:ILE:HG23	1.87	0.57
59:BA:1849:G:H2'	59:BA:1850:G:C8	2.40	0.57
21:CA:257:G:N2	21:CA:269:C:N3	2.39	0.57
2:CC:19:GLU:HG2	2:CC:54:ARG:HG3	1.87	0.57
59:DA:2466:C:N3	59:DA:2484:G:N2	2.47	0.57
7:AH:19:VAL:HG21	21:AA:827:U:H4'	1.87	0.57
59:BA:1043:C:H42	59:BA:1112:G:H1	1.53	0.57
59:DA:413:C:N4	59:DA:2410:G:H1	2.01	0.57
59:BA:1829:A:H3'	59:BA:1830:C:H6	1.69	0.57
25:DC:218:THR:HG22	25:DC:219:MET:SD	2.45	0.57
38:DS:67:ARG:HA	38:DS:99:LYS:N	2.20	0.57
26:BD:108:PRO:HA	26:BD:197:GLY:N	2.19	0.57
21:AA:144:G:H1	21:AA:178:C:N4	2.02	0.57
3:CD:108:LEU:HD13	3:CD:174:LEU:HB3	1.86	0.57
59:BA:2342:C:H2'	59:BA:2343:C:O4'	2.05	0.57
59:DA:767:U:H2'	59:DA:768:G:C8	2.40	0.57
59:DA:2374:C:H2'	59:DA:2375:G:O4'	2.05	0.57
59:DA:143:C:H2'	59:DA:144:C:H6	1.69	0.57
59:BA:2230:G:H2'	59:BA:2231:C:C6	2.40	0.57
21:AA:21:G:H2'	21:AA:22:G:C8	2.40	0.57
59:DA:210:C:H2'	59:DA:211:A:C8	2.40	0.57
25:DC:59:VAL:HG22	25:DC:202:PRO:HD3	1.87	0.57
21:AA:895:G:H2'	21:AA:896:C:C6	2.40	0.57
49:D3:11:SER:N	59:DA:988:A:OP2	2.31	0.57
59:DA:2696:U:H2'	59:DA:2697:G:C8	2.40	0.57
45:BZ:77:ASP:N	45:BZ:77:ASP:OD2	2.29	0.57
20:AY:178:ILE:HA	20:AY:185:ALA:HA	1.86	0.57
3:CD:47:ARG:HB3	23:CV:31:A:OP1	2.04	0.57
26:BD:35:LYS:HG2	26:BD:63:ARG:HG3	1.87	0.57
50:D4:1:MET:HG3	60:DB:43:C:H4'	1.86	0.57
33:DN:95:PRO:HD2	33:DN:108:PRO:HA	1.87	0.57
33:DN:56:ASN:HD22	33:DN:56:ASN:N	2.00	0.57
27:BE:13:ARG:NH2	39:BT:60:THR:HG21	2.19	0.57
39:BT:60:THR:HG22	39:BT:77:PRO:HB3	1.87	0.57
33:BN:107:LEU:O	33:BN:109:LYS:N	2.38	0.57
21:CA:1405:G:H1'	21:CA:1519:A:O4'	2.05	0.57
22:CW:71:C:H1'	59:DA:1851:U:O2'	2.05	0.57
27:DE:33:VAL:HG21	27:DE:36:ARG:HH21	1.69	0.57
21:AA:1127:G:N2	21:AA:1147:C:H41	2.03	0.57
59:DA:36:G:H2'	59:DA:37:C:C6	2.40	0.57
55:D9:2:LYS:HG2	55:D9:33:LYS:HG2	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AY:500:GLN:O	20:AY:501:THR:OG1	2.23	0.57
21:AA:951:G:N3	21:AA:970:C:O2'	2.38	0.57
21:CA:831:U:O2	21:CA:855:G:N2	2.32	0.57
27:BE:61:ARG:HH11	27:BE:61:ARG:CG	2.16	0.57
59:BA:1820:U:H5''	59:BA:1821:A:N7	2.20	0.57
25:DC:131:ILE:O	25:DC:135:ARG:HB2	2.05	0.57
11:AL:102:ARG:HG3	11:AL:107:ALA:HB1	1.86	0.57
14:AO:88:ARG:HE	14:AO:88:ARG:HA	1.70	0.57
21:CA:615:C:N4	21:CA:625:G:H1	2.03	0.57
21:AA:598:U:H2'	21:AA:599:C:C6	2.40	0.57
21:CA:1274:G:H2'	21:CA:1275:A:C8	2.40	0.57
19:AT:80:ARG:HA	19:AT:83:ARG:HD2	1.86	0.57
59:BA:1569:A:H2'	59:BA:1570:A:C8	2.40	0.57
49:B3:21:ALA:HB1	59:BA:849:A:N3	2.20	0.57
59:DA:954:G:N2	59:DA:963:U:O2	2.36	0.57
20:CY:424:LEU:HA	20:CY:427:ALA:HB3	1.85	0.57
29:DG:60:LEU:HD21	29:DG:153:ARG:HD3	1.87	0.57
35:DP:67:MET:O	35:DP:69:GLY:N	2.38	0.57
21:AA:109:A:N6	21:AA:324:G:H1'	2.20	0.57
59:DA:1428:C:C5	59:DA:1569:A:H5''	2.40	0.57
16:AQ:10:VAL:HA	16:AQ:21:VAL:HG22	1.87	0.57
33:DN:72:TYR:HB2	33:DN:101:HIS:HA	1.86	0.56
33:DN:104:LYS:N	33:DN:120:LEU:HD21	2.20	0.56
59:BA:2041:U:H2'	59:BA:2042:A:C8	2.40	0.56
33:BN:118:LYS:HE3	59:BA:2780:G:H5''	1.86	0.56
33:BN:37:LYS:NZ	59:BA:1005:C:O2'	2.37	0.56
27:DE:53:PRO:HA	27:DE:74:PRO:HA	1.86	0.56
59:BA:1376:C:H2'	59:BA:1377:G:O4'	2.04	0.56
21:CA:1303:C:H2'	21:CA:1304:G:O4'	2.04	0.56
60:BB:50:G:H2'	60:BB:51:G:H8	1.70	0.56
25:BC:76:LEU:HD22	25:BC:111:PHE:HB3	1.86	0.56
4:CE:121:LYS:HG3	4:CE:122:GLU:H	1.69	0.56
59:DA:71:A:H4'	59:DA:72:U:H3'	1.87	0.56
19:AT:12:ALA:HB1	21:AA:332:G:H4'	1.86	0.56
25:DC:21:TYR:HE2	25:DC:29:LEU:HD22	1.70	0.56
39:BT:32:TYR:HA	39:BT:83:ILE:HG12	1.87	0.56
28:BF:6:VAL:HB	28:BF:7:TYR:HD1	1.70	0.56
35:BP:27:HIS:O	35:BP:29:LYS:N	2.38	0.56
59:BA:1563:G:H2'	59:BA:1564:C:O4'	2.05	0.56
59:BA:2080:G:H2'	59:BA:2081:C:C6	2.40	0.56
28:BF:31:HIS:HB2	35:BP:13:ASN:ND2	2.20	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:1067:A:N6	21:AA:1109:C:OP1	2.33	0.56
59:BA:1058:G:H2'	59:BA:1059:G:H8	1.69	0.56
53:D7:8:ASN:HB3	53:D7:11:LYS:HB3	1.85	0.56
32:BK:42:ASN:ND2	32:BK:49:GLY:O	2.38	0.56
59:BA:1212:G:H1'	59:BA:1237:A:H61	1.70	0.56
9:CJ:88:LEU:O	9:CJ:89:ASP:HB2	2.04	0.56
33:BN:57:ALA:HB2	33:BN:126:PRO:HD3	1.86	0.56
33:BN:85:ILE:CG2	33:BN:97:ARG:CZ	2.82	0.56
59:DA:1750:G:H21	59:DA:2860:A:H2	1.53	0.56
22:CW:12:U:H3	22:CW:23:A:H61	0.75	0.56
37:DR:53:HIS:CG	59:DA:2840:C:H5''	2.40	0.56
47:D1:18:ILE:HG12	59:DA:380:U:O3'	2.05	0.56
59:DA:595:C:H2'	59:DA:596:G:H8	1.70	0.56
59:DA:919:G:H4'	60:DB:81:G:H1'	1.86	0.56
2:CC:21:ARG:N	2:CC:57:ILE:O	2.34	0.56
59:DA:253:C:H2'	59:DA:254:G:O4'	2.05	0.56
38:DS:25:ARG:NH1	60:DB:9:G:H5'	2.19	0.56
60:DB:20:C:H42	60:DB:63:G:H1	1.52	0.56
39:BT:27:THR:O	39:BT:87:ASP:HB2	2.05	0.56
39:BT:32:TYR:O	39:BT:33:LYS:HB2	2.04	0.56
20:AY:34:TYR:CG	20:AY:35:TYR:N	2.74	0.56
26:BD:108:PRO:CB	26:BD:196:VAL:HA	2.35	0.56
23:CV:27:A:O2'	23:CV:28:A:OP1	2.22	0.56
37:DR:31:HIS:HB2	37:DR:34:ILE:HD11	1.87	0.56
37:DR:97:VAL:HG22	37:DR:114:VAL:HG13	1.87	0.56
21:AA:689:C:H2'	21:AA:690:G:O4'	2.05	0.56
1:CB:78:GLN:HG3	1:CB:94:ASN:HB2	1.86	0.56
1:AB:91:PRO:HG2	1:AB:155:LEU:HD23	1.85	0.56
21:CA:1354:C:H2'	21:CA:1355:G:C8	2.40	0.56
5:CF:40:VAL:HG23	5:CF:63:TYR:HE1	1.69	0.56
59:BA:860:U:H2'	59:BA:861:A:C8	2.40	0.56
59:DA:873:G:H2'	59:DA:874:G:C8	2.39	0.56
26:BD:50:THR:HB	59:BA:1805:U:H1'	1.85	0.56
21:AA:1102:A:H2'	21:AA:1103:C:C6	2.40	0.56
29:DG:4:ASP:HA	29:DG:8:LYS:HD3	1.85	0.56
59:BA:1990:C:H2'	59:BA:1991:U:O4'	2.04	0.56
21:CA:1472:U:H2'	21:CA:1473:A:H8	1.70	0.56
32:BK:60:TYR:O	32:BK:62:ASP:N	2.36	0.56
59:BA:1593:G:H2'	59:BA:1594:G:C8	2.40	0.56
24:AX:56:C:H2'	24:AX:57:G:H5'	1.87	0.56
47:B1:86:SER:O	47:B1:90:ILE:N	2.38	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:B6:28:ARG:O	52:B6:30:THR:N	2.39	0.56
20:AY:616:TYR:O	20:AY:620:VAL:HG13	2.03	0.56
33:DN:40:PRO:HD2	59:DA:1007:C:C1'	2.32	0.56
33:DN:74:ARG:CA	33:DN:84:LYS:HB3	2.34	0.56
59:DA:960:A:H2'	59:DA:962:G:H5''	1.85	0.56
27:BE:15:PHE:HZ	39:BT:77:PRO:HG2	1.69	0.56
59:BA:2781:A:H5''	59:BA:2782:G:C8	2.40	0.56
21:CA:1491:G:N7	63:CA:1601:NMY:H2	2.20	0.56
59:DA:2248:C:N3	59:DA:2256:G:O6	2.39	0.56
21:CA:1072:G:C2	21:CA:1103:C:C4	2.91	0.56
59:DA:1653:G:H5'	59:DA:2822:G:N1	2.11	0.56
27:DE:64:LYS:HG3	27:DE:78:LEU:HD21	1.87	0.56
54:D8:26:LYS:HG2	54:D8:47:LYS:HG3	1.86	0.56
11:AL:31:PRO:HG2	11:AL:32:PHE:CE2	2.39	0.56
40:BU:3:ARG:HH22	59:BA:584:C:H5''	1.69	0.56
59:BA:2233:U:H2'	59:BA:2234:G:C8	2.40	0.56
59:DA:2114:A:C2	59:DA:2168:G:H1'	2.40	0.56
59:DA:1217:C:N3	59:DA:1232:G:N2	2.45	0.56
59:BA:974:G:O2'	59:BA:974(A):C:OP1	2.20	0.56
59:DA:862:G:H2'	59:DA:863:A:O4'	2.06	0.56
59:DA:2463:C:H2'	59:DA:2464:C:O4'	2.05	0.56
25:DC:212:SER:HG	59:DA:2177:C:HO2'	1.54	0.56
59:DA:1110:G:O2'	59:DA:1111:A:H8	1.77	0.56
59:BA:2061:G:O2'	59:BA:2062:A:OP2	2.23	0.56
46:D0:47:PRO:HG3	46:D0:59:LEU:HD21	1.87	0.56
25:DC:118:PRO:HD3	25:DC:147:GLY:HA2	1.86	0.56
25:DC:115:VAL:O	25:DC:117:THR:N	2.38	0.56
21:AA:1436:U:H2'	21:AA:1437:C:O4'	2.04	0.56
21:AA:1436:U:O4	21:AA:1465:C:C4	2.59	0.56
26:BD:151:LYS:HZ1	59:BA:2221:G:H21	1.53	0.56
59:BA:1000:A:H2'	59:BA:1001:A:C8	2.40	0.56
28:BF:24:LEU:HD13	28:BF:25:PRO:HD2	1.87	0.56
7:CH:17:THR:HB	7:CH:78:GLN:HG2	1.86	0.56
10:AK:120:ARG:HG3	10:AK:126:ARG:CZ	2.36	0.56
20:CY:438:PHE:HA	20:CY:453:GLY:HA2	1.86	0.56
28:DF:106:ARG:NH1	28:DF:107:LYS:HE2	2.18	0.56
15:CP:14:ASN:HA	15:CP:42:ARG:HH21	1.68	0.56
28:BF:126:VAL:HG21	28:BF:142:TRP:HZ2	1.70	0.56
59:BA:238:C:H4'	59:BA:608:A:O2'	2.06	0.56
11:AL:15:ARG:NH1	21:AA:563:A:N3	2.52	0.56
21:AA:1440(C):G:H3'	21:AA:1440(D):A:H5'	1.86	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BT:93:ARG:HD2	39:BT:115:ARG:HB2	1.86	0.56
59:BA:736:C:H2'	59:BA:737:C:H6	1.68	0.56
30:BH:103:LEU:HB3	30:BH:115:VAL:HB	1.87	0.56
59:BA:745:G:O6	59:BA:746:A:N6	2.38	0.56
19:CT:76:ALA:HB2	21:CA:262:A:H5''	1.88	0.56
36:DQ:89:ASN:O	36:DQ:91:GLU:N	2.36	0.56
5:AF:5:GLU:HG3	5:AF:93:SER:HA	1.86	0.56
21:AA:58:C:O2'	21:AA:388:G:OP1	2.23	0.56
41:DV:77:ALA:O	41:DV:79:VAL:N	2.37	0.56
59:BA:574:C:O4'	59:BA:2055:C:H5'	2.06	0.56
21:CA:928:G:H2'	21:CA:929:G:C8	2.41	0.56
59:DA:287:C:H2'	59:DA:289:A:C8	2.40	0.56
59:DA:875:G:H2'	59:DA:876:C:O4'	2.05	0.56
21:AA:1019:C:H2'	21:AA:1020:U:O4'	2.04	0.56
21:AA:1020:U:H2'	21:AA:1021:G:C8	2.40	0.56
59:BA:2422:A:H4'	59:BA:2423:U:OP1	2.06	0.56
47:B1:7:ILE:HG21	47:B1:66:HIS:HB3	1.88	0.56
20:CY:500:GLN:HG3	20:CY:504:ARG:O	2.05	0.56
59:BA:1696:G:O2'	59:BA:1978:A:H4'	2.04	0.56
34:DO:10:VAL:HG22	34:DO:17:ARG:HA	1.87	0.56
14:CO:28:GLN:O	14:CO:32:LEU:HG	2.06	0.56
3:AD:141:ARG:HH12	21:AA:616:G:P	2.28	0.56
33:DN:83:LYS:HG3	33:DN:112:LEU:HD21	1.87	0.56
27:BE:79:ARG:O	27:BE:81:ILE:N	3.39	0.56
33:BN:37:LYS:HZ3	33:BN:38:HIS:CD2	2.23	0.56
59:DA:1652:A:H3'	59:DA:1653:G:C8	2.41	0.56
27:DE:60:ASN:O	27:DE:61:ARG:HB2	2.05	0.56
12:CM:94:ARG:HE	18:CS:81:ARG:HB3	1.70	0.56
59:DA:628:G:O2'	59:DA:651:G:O2'	2.18	0.56
59:DA:1328:G:H4'	59:DA:1329:U:H5	1.70	0.56
21:AA:33:A:OP2	21:AA:398:C:H5'	2.06	0.56
11:AL:34:ARG:HD3	11:AL:82:VAL:HG13	1.86	0.56
59:BA:444:C:H2'	59:BA:445:C:C6	2.40	0.56
59:BA:674:G:H2'	59:BA:804:A:H61	1.70	0.56
59:BA:1849:G:H2'	59:BA:1850:G:H8	1.69	0.56
16:CQ:21:VAL:CG2	16:CQ:44:ALA:HB2	2.36	0.56
59:DA:2525:G:N2	59:DA:2538:C:N3	2.42	0.56
21:AA:404:U:H2'	21:AA:405:U:H6	1.71	0.56
59:DA:833:U:H2'	59:DA:834:C:C6	2.41	0.56
59:DA:1177:A:H8	59:DA:1177:A:O5'	1.89	0.56
21:CA:1028(G):G:H2'	21:CA:1028(H):G:O4'	2.04	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CY:616:TYR:CG	20:CY:663:THR:HA	2.41	0.56
39:BT:32:TYR:HB3	39:BT:82:LEU:HA	1.87	0.56
59:DA:1576:U:H2'	59:DA:1577:C:C6	2.41	0.56
28:BF:3:GLU:CA	28:BF:24:LEU:HB2	2.36	0.56
59:DA:1525:G:H2'	59:DA:1526:G:H8	1.65	0.56
42:BW:92:ARG:NH1	59:BA:2014:A:O2'	2.38	0.56
21:AA:144:G:H2'	21:AA:145:G:H8	1.70	0.56
26:DD:208:LYS:HD2	59:DA:729:G:C5	2.40	0.56
22:AW:56:C:C6	59:BA:2169:A:H1'	2.40	0.56
52:B6:53:LYS:HG3	52:B6:54:ILE:H	1.71	0.56
59:BA:2143:C:C2	59:BA:2148:G:N2	2.70	0.56
59:DA:1711:C:H2'	59:DA:1712:C:C6	2.41	0.56
53:B7:7:PRO:HD3	59:BA:1612:C:H5'	1.87	0.56
51:D5:6:VAL:HG13	59:DA:2015:A:C2	2.41	0.56
47:B1:5:CYS:SG	47:B1:6:GLU:N	2.77	0.56
32:BK:16:LYS:NZ	32:BK:18:THR:OG1	2.38	0.56
59:DA:443:A:H1'	59:DA:1201:C:O4'	2.04	0.56
30:BH:152:ARG:HB3	30:BH:162:ILE:HG13	1.85	0.56
59:DA:270(C):C:H42	59:DA:270(W):G:H1	1.51	0.56
2:AC:91:LEU:HB3	2:AC:99:VAL:HG12	1.88	0.56
33:DN:37:LYS:HB3	59:DA:1138:G:N2	2.20	0.56
21:CA:411:A:H2	21:CA:430:A:N6	2.03	0.56
12:CM:14:ARG:HG3	12:CM:44:ARG:HH11	1.70	0.56
59:DA:1326:U:H2'	59:DA:1327:C:H6	1.70	0.56
48:D2:55:ARG:NH1	59:DA:73:A:H5'	2.21	0.56
41:BV:81:TYR:CE1	41:BV:83:ARG:HG2	2.40	0.56
21:AA:1016:A:H2'	21:AA:1017:G:O4'	2.05	0.56
27:DE:13:ARG:C	27:DE:21:VAL:H	2.07	0.56
26:BD:244:ARG:HH22	59:BA:1840:G:N2	2.04	0.56
32:DK:116:ASN:ND2	59:DA:1081:U:O2	2.39	0.56
13:AN:45:ARG:HH22	21:AA:1059:C:H5''	1.70	0.56
21:CA:68(T):G:C2	21:CA:68(U):U:H1'	2.41	0.56
38:BS:27:SER:H	38:BS:40:ILE:HG22	1.70	0.56
32:BK:122:ALA:HB1	59:BA:1081:U:H5''	1.88	0.56
20:CY:257:PRO:O	20:CY:259:PHE:N	2.37	0.56
59:BA:1213:A:H2'	59:BA:1214:A:C8	2.39	0.56
21:AA:992:U:O2'	21:AA:993:G:OP2	2.19	0.56
21:AA:1109:C:H2'	21:AA:1110:A:O4'	2.06	0.56
27:BE:131:ALA:HB2	59:BA:2580:U:OP1	2.04	0.56
21:AA:563:A:O2'	21:AA:566:G:O3'	2.22	0.56
59:DA:306:U:O4	59:DA:310:A:N7	2.38	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AH:3:THR:HB	21:AA:587:G:H4'	1.86	0.56
59:DA:676:A:N7	59:DA:2070:G:H1'	2.20	0.56
26:BD:75:ILE:HG21	26:BD:99:ASP:HB2	1.86	0.56
59:DA:2189:U:H2'	59:DA:2190:G:C8	2.41	0.56
59:BA:2673:G:H2'	59:BA:2674:G:H8	1.71	0.56
21:AA:1393:U:H2'	21:AA:1395:C:C5	2.41	0.56
29:BG:76:SER:HA	29:BG:83:ARG:HA	1.87	0.56
27:DE:15:PHE:HA	27:DE:19:ARG:O	2.05	0.56
7:CH:107:LEU:H	7:CH:107:LEU:HD23	1.70	0.56
60:DB:1:U:H2'	60:DB:2:C:H5	1.71	0.56
45:BZ:144:LEU:HD11	45:BZ:150:LEU:HD22	1.86	0.56
33:DN:82:LEU:HD22	33:DN:82:LEU:N	2.21	0.56
33:BN:27:ALA:C	33:BN:31:ALA:H	2.09	0.56
59:DA:1336:A:H2'	59:DA:1337:G:C8	2.41	0.56
59:BA:955:C:H2'	59:BA:956:G:H5'	1.86	0.56
21:CA:443:C:N3	21:CA:491:G:N2	2.43	0.56
11:AL:60:LEU:HB2	11:AL:62:SER:H	1.71	0.56
17:CR:71:LYS:NZ	21:CA:734:G:O2'	2.28	0.56
59:DA:1506:C:H2'	59:DA:1506(A):A:C8	2.40	0.56
59:DA:2200:C:N3	59:DA:2223:G:N2	2.44	0.56
59:DA:863:A:H2'	59:DA:864:G:H8	1.71	0.56
59:DA:2244:U:O4	59:DA:2435:A:N7	2.39	0.56
27:BE:61:ARG:HH11	27:BE:61:ARG:HG2	1.70	0.56
38:DS:25:ARG:HH21	38:DS:27:SER:HB2	1.71	0.56
26:BD:259:THR:N	59:BA:1798:U:OP1	2.38	0.56
4:CE:50:GLU:HB3	4:CE:53:LEU:HG	1.86	0.56
16:AQ:43:LEU:H	16:AQ:71:PHE:HD2	1.53	0.56
50:B4:10:VAL:HG22	50:B4:11:PRO:HD2	1.88	0.56
59:DA:23:G:N2	59:DA:517:C:N3	2.45	0.56
59:DA:1570:A:O5'	59:DA:1570:A:H8	1.89	0.56
59:DA:1712(F):U:H2'	59:DA:1712(G):G:O4'	2.05	0.56
39:BT:49:VAL:O	39:BT:64:ARG:HB3	2.06	0.56
10:AK:27:ASN:HA	10:AK:56:GLY:HA2	1.87	0.56
5:CF:43:LEU:N	5:CF:60:PHE:O	2.38	0.56
21:AA:41:G:H2'	21:AA:42:G:H8	1.70	0.56
59:BA:2147:G:H2'	59:BA:2148:G:O4'	2.05	0.56
59:DA:1372:U:H2'	59:DA:1373:A:C8	2.39	0.56
59:DA:1806:C:H2'	59:DA:1807:G:O4'	2.06	0.56
21:AA:1261:A:H4'	21:AA:1284:C:OP1	2.05	0.56
59:BA:187:G:H21	59:BA:1366:A:H1'	1.69	0.56
59:DA:1986:A:H2'	59:DA:1987:G:C8	2.41	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DD:78:LYS:HE2	26:DD:114:GLY:HA2	1.88	0.56
2:AC:189:ALA:HB3	2:AC:196:LEU:HB2	1.88	0.56
2:CC:14:ILE:HA	9:CJ:14:LYS:HZ3	1.70	0.56
32:BK:6:ALA:H	32:BK:59:ILE:HG22	1.70	0.56
33:BN:2:LYS:HE3	40:BU:101:ARG:HH22	1.70	0.56
26:BD:220:HIS:N	59:BA:1790:C:OP1	2.39	0.56
26:DD:34:VAL:HG21	26:DD:102:LYS:HG3	1.86	0.56
21:CA:1535:C:H41	23:CV:9:G:C4'	2.17	0.56
21:CA:1536:C:N4	23:CV:8:A:C6	2.74	0.56
36:DQ:35:VAL:HA	36:DQ:102:VAL:CA	2.24	0.56
21:CA:957:U:O2	21:CA:959:A:H8	1.88	0.56
26:DD:242:ARG:NH2	59:DA:1825:A:O2'	2.39	0.56
59:BA:221:A:H4'	59:BA:222:A:O5'	2.05	0.56
46:B0:44:ARG:NH1	59:BA:2330:G:O2'	2.37	0.56
59:DA:2392:A:H2'	59:DA:2393:A:O4'	2.04	0.56
59:DA:1296:G:N1	59:DA:1644:C:O2	2.33	0.56
59:DA:1172:G:H2'	59:DA:1174:U:H5'	1.87	0.56
21:AA:1015:A:H1'	21:AA:1218:C:O2'	2.06	0.56
21:AA:1465:C:H2'	21:AA:1466:C:O4'	2.05	0.56
21:CA:565:U:H5''	21:CA:566:G:H2'	1.88	0.56
59:BA:1830:C:H2'	59:BA:1831:G:H8	1.71	0.56
21:CA:1440(C):G:C3'	21:CA:1440(D):A:H5'	2.36	0.56
48:D2:66:GLU:O	48:D2:69:ARG:HG2	2.05	0.56
28:BF:117:ARG:NH2	28:BF:186:ILE:O	2.33	0.56
59:BA:1027:A:H2'	59:BA:1028:A:H8	1.71	0.56
21:CA:837:G:H2'	21:CA:838:G:C8	2.40	0.56
60:BB:99:A:H3'	60:BB:100:G:H8	1.69	0.56
21:CA:55:A:H62	21:CA:357:G:H21	1.54	0.56
21:AA:1266:G:N2	21:AA:1270:C:N3	2.53	0.56
59:DA:1972:A:H2'	59:DA:1973:G:C8	2.41	0.56
8:CI:42:ARG:HA	8:CI:45:ALA:HB3	1.87	0.56
21:AA:571:U:O4	21:AA:864:A:N6	2.39	0.56
59:BA:1506(E):G:H2'	59:BA:1506(F):C:H6	1.70	0.56
46:D0:48:GLY:HA3	46:D0:80:HIS:CD2	2.40	0.56
21:AA:341:C:H2'	21:AA:342:C:H6	1.71	0.56
21:CA:312:C:H2'	21:CA:313:A:C8	2.41	0.56
29:BG:19:LEU:HD11	29:BG:32:PRO:HG2	1.88	0.56
59:DA:2777:G:H4'	59:DA:2779:U:H5''	1.88	0.56
33:DN:28:THR:H	33:DN:37:LYS:HD3	1.70	0.56
33:DN:45:ASN:HB3	33:DN:115:ARG:HE	1.71	0.56
21:AA:1118:C:H1'	21:AA:1179:A:C4	2.41	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DW:12:ILE:HG21	42:DW:17:VAL:HG13	1.88	0.56
24:CX:2:G:N1	24:CX:71:C:N4	2.21	0.56
11:AL:118:SER:HB3	21:AA:35:G:H21	1.70	0.56
21:AA:1129:C:H5'	21:AA:1130:A:OP1	2.05	0.56
59:DA:542:C:N4	59:DA:551:G:H1	2.00	0.56
59:DA:863:A:H2'	59:DA:864:G:C8	2.40	0.56
59:DA:1023:U:O2'	59:DA:1122:G:H5''	2.06	0.56
4:CE:14:ARG:HH22	21:CA:1079:G:H4'	1.71	0.56
1:AB:92:TYR:CD2	1:AB:151:GLY:HA3	2.41	0.56
48:D2:23:LYS:HA	48:D2:26:ARG:HD2	1.88	0.56
3:AD:173:TRP:HD1	3:AD:186:LEU:H	1.52	0.56
59:DA:1496:A:H2'	59:DA:1498:C:C5	2.40	0.56
28:BF:156:LEU:H	28:BF:176:LEU:H	1.53	0.56
7:CH:10:LEU:O	7:CH:13:ILE:HB	2.06	0.56
21:AA:419:C:N4	21:AA:424:G:H1	2.04	0.56
28:BF:142:TRP:HA	28:BF:145:GLU:HG3	1.87	0.56
35:BP:13:ASN:OD1	59:BA:598:G:O2'	2.24	0.56
21:AA:298:A:H2'	21:AA:299:G:C8	2.40	0.56
11:AL:15:ARG:NH2	21:AA:567:G:N7	2.53	0.56
59:DA:694:U:H3	59:DA:768:G:H1	1.53	0.56
59:BA:1812:A:H2'	59:BA:1813:G:C8	2.39	0.56
53:B7:7:PRO:HB2	59:BA:1309:G:H4'	1.87	0.56
21:AA:1100:C:N4	21:AA:1103:C:OP1	2.39	0.56
59:BA:2741:A:H62	59:BA:2763:G:H21	1.54	0.56
10:CK:25:TYR:HE1	10:CK:125:PHE:HZ	1.52	0.56
25:DC:165:ARG:HG2	25:DC:166:ASN:H	1.71	0.56
32:BK:9:LYS:HA	32:BK:56:GLU:HA	1.88	0.56
10:CK:39:PRO:HD2	21:CA:684:A:H1'	1.87	0.56
59:BA:706:A:H2'	59:BA:707:G:O4'	2.06	0.56
59:DA:1002:G:H1	59:DA:1153:C:N4	2.02	0.56
33:DN:85:ILE:HB	33:DN:106:MET:C	2.26	0.56
33:DN:71:ILE:O	33:DN:97:ARG:O	2.24	0.56
34:BO:66:LYS:NZ	34:BO:80:ASP:O	2.38	0.56
59:DA:969:U:H2'	59:DA:970:C:C6	2.40	0.56
36:BQ:35:VAL:HG23	36:BQ:102:VAL:H	1.70	0.56
59:BA:519:U:H2'	59:BA:520:G:C8	2.41	0.56
59:DA:29:U:O4	59:DA:511:U:O4	2.24	0.56
21:AA:1535:C:N4	23:AV:8:A:H2	1.98	0.56
17:AR:74:ARG:HD3	17:AR:81:PHE:HE2	1.71	0.56
21:CA:20:U:H3	21:CA:915:A:N6	2.03	0.56
28:DF:154:VAL:HG21	28:DF:173:VAL:HG13	1.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:DB:44:G:H4'	60:DB:46:A:N7	2.21	0.56
3:CD:13:ARG:NH1	3:CD:38:TYR:O	2.39	0.56
20:CY:655:TYR:CZ	20:CY:659:LEU:HB2	2.41	0.56
51:B5:9:LYS:HA	59:BA:2017:U:H4'	1.88	0.56
20:CY:243:VAL:HA	20:CY:279:TYR:CE1	2.37	0.56
21:CA:1027:C:H2'	21:CA:1028:C:H6	1.68	0.56
40:DU:92:ARG:O	40:DU:95:LEU:N	2.38	0.56
59:BA:1526:G:H3'	59:BA:1527:G:C8	2.41	0.56
59:BA:1526:G:H2'	59:BA:1527:G:O4'	2.06	0.56
3:CD:72:GLU:HB2	3:CD:76:ARG:HH12	1.70	0.56
35:DP:27:HIS:NE2	59:DA:814:C:OP2	2.37	0.56
19:CT:84:LEU:HG	19:CT:85:MET:N	2.21	0.56
59:BA:377:C:H2'	59:BA:378:C:H6	1.68	0.56
20:CY:312:LEU:HD13	20:CY:399:LEU:HD12	1.87	0.56
59:DA:2339:G:H2'	59:DA:2340:G:C8	2.40	0.56
55:B9:25:VAL:HB	55:B9:34:GLN:HB2	1.86	0.56
55:B9:10:ILE:HG13	55:B9:11:CYS:H	1.70	0.56
59:BA:37:C:H2'	59:BA:38:A:C8	2.41	0.56
21:CA:1489:G:H2'	21:CA:1490:C:C6	2.41	0.56
59:BA:2842:G:H1	59:BA:2875:C:H42	1.52	0.56
7:AH:56:LYS:HD3	7:AH:57:PRO:HD2	1.87	0.56
59:DA:787:U:H3'	59:DA:791:C:H41	1.71	0.56
37:BR:55:ALA:HB1	37:BR:79:LEU:HD11	1.87	0.56
30:DH:63:SER:O	30:DH:67:LEU:HB2	2.05	0.56
4:AE:102:ALA:HB2	4:AE:120:THR:HG23	1.87	0.56
21:CA:1398:A:OP1	23:CV:24:C:N4	2.38	0.56
21:CA:762:C:H2'	21:CA:763:G:C8	2.41	0.56
4:CE:150:ARG:HA	4:CE:150:ARG:HE	1.71	0.56
33:DN:50:ASP:O	33:DN:52:VAL:N	2.39	0.56
24:CX:75:C:H3'	24:CX:76:A:C5'	2.30	0.56
59:DA:2681:C:H41	59:DA:2725:A:H62	0.66	0.56
33:BN:31:ALA:C	33:BN:33:LEU:N	2.57	0.56
33:BN:97:ARG:HB3	33:BN:105:GLY:HA2	1.87	0.56
22:AW:8:U:H5'	22:AW:49:A:H5'	1.88	0.56
21:AA:552:U:H2'	21:AA:553:A:H8	1.71	0.56
60:DB:29:A:H2'	60:DB:30:C:O4'	2.06	0.56
15:CP:31:LYS:HG3	21:CA:607:A:C2	2.41	0.56
59:BA:839:U:H2'	59:BA:840:C:C6	2.41	0.56
21:CA:68(R):C:H2'	21:CA:68(S):C:C5	2.40	0.56
59:BA:877:U:N3	59:BA:899:A:C2	2.66	0.56
2:AC:69:HIS:HA	2:AC:104:GLN:O	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BU:24:TYR:HD1	40:BU:28:ARG:HD2	1.71	0.56
11:AL:38:THR:HG23	11:AL:39:VAL:HG23	1.88	0.56
11:AL:52:LEU:HD12	11:AL:54:LYS:NZ	2.21	0.56
59:BA:270(A):A:N3	59:BA:357(N):C:O2'	2.28	0.56
59:DA:300:A:N3	59:DA:319:C:H1'	2.21	0.56
7:CH:17:THR:HA	7:CH:78:GLN:HE21	1.71	0.56
59:BA:299:A:N1	59:BA:322:A:O2'	2.40	0.56
59:BA:371:A:N6	59:BA:401:A:H3'	2.21	0.56
59:BA:2350:C:H2'	59:BA:2351:G:O4'	2.06	0.56
30:DH:41:MET:SD	30:DH:43:VAL:HG13	2.45	0.56
22:CW:52:G:H1	22:CW:62:C:N4	2.03	0.56
29:BG:176:LEU:HB3	29:BG:178:PHE:HE1	1.70	0.56
9:AJ:49:VAL:HG22	9:AJ:50:ILE:H	1.71	0.56
59:DA:43:G:H2'	59:DA:44:A:C8	2.40	0.56
21:CA:1058:G:H1	21:CA:1199:U:H3	1.53	0.56
21:CA:486:U:H2'	21:CA:487:A:C8	2.41	0.56
59:DA:1468(E):G:H2'	59:DA:1468(F):C:C6	2.41	0.56
60:BB:87:G:N2	60:BB:89(B):A:OP2	2.39	0.56
21:CA:664:G:H22	21:CA:741:G:H1	1.52	0.56
35:BP:6:LEU:HG	35:BP:8:PRO:HD2	1.88	0.56
59:BA:2298:A:H3'	59:BA:2299:G:H8	1.70	0.56
20:CY:114:VAL:HG23	20:CY:116:PRO:HD3	1.88	0.56
7:AH:97:VAL:HG13	7:AH:98:LYS:H	1.71	0.56
36:BQ:81:VAL:HA	46:B0:4:LYS:HG2	1.86	0.56
20:AY:160:ARG:HE	20:AY:162:VAL:HG23	1.71	0.56
59:BA:307:G:N2	59:BA:310:A:O4'	2.38	0.56
32:BK:132:ARG:HH11	32:BK:132:ARG:HB2	1.70	0.56
59:BA:137(A):G:H5''	59:BA:137(B):G:OP2	2.04	0.56
60:BB:83:G:H1	60:BB:93:C:H42	1.54	0.56
33:DN:114:ARG:HA	59:DA:2779:U:OP1	2.07	0.55
33:DN:46:VAL:HG11	33:DN:112:LEU:HB3	1.88	0.55
33:DN:74:ARG:H	33:DN:84:LYS:CB	2.18	0.55
33:BN:28:THR:CA	33:BN:31:ALA:HB3	2.36	0.55
21:AA:428:G:H4'	21:AA:429:U:OP1	2.05	0.55
3:AD:25:ARG:HB2	21:AA:409:G:O5'	2.06	0.55
21:CA:538:G:H2'	21:CA:539:A:C8	2.41	0.55
10:CK:117:ASN:OD1	21:CA:716:A:O2'	2.24	0.55
21:CA:156:G:N2	21:CA:165:C:N3	2.43	0.55
59:DA:2121:G:N2	59:DA:2177:C:N3	2.44	0.55
35:DP:35:HIS:N	59:DA:1190:G:H5''	2.19	0.55
59:DA:1385:G:O6	59:DA:1402:C:N3	2.39	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AI:128:ARG:NH2	21:AA:1231:G:OP1	2.39	0.55
21:AA:1028(E):G:N7	21:AA:1028(F):A:N6	2.54	0.55
46:D0:33:ALA:HB1	59:DA:2352:A:N3	2.20	0.55
26:DD:183:ARG:HH21	26:DD:260:ARG:HH22	1.53	0.55
9:CJ:40:LEU:HD22	9:CJ:41:PRO:HD2	1.88	0.55
59:BA:515:A:H3'	59:BA:516:C:C6	2.41	0.55
24:AX:1:G:H1	24:AX:72:C:N4	2.02	0.55
28:BF:125:LEU:CA	28:BF:194:MET:HB2	2.36	0.55
59:BA:1153:C:H3'	59:BA:1154:G:C8	2.41	0.55
52:B6:26:ASN:OD1	52:B6:27:LYS:N	2.37	0.55
59:DA:137(A):G:H2'	59:DA:137(C):G:N7	2.21	0.55
15:AP:20:VAL:HA	15:AP:35:LYS:HA	1.89	0.55
42:DW:89:ALA:HB1	59:DA:748:G:C8	2.41	0.55
59:DA:1362:C:O2	59:DA:1810:A:O2'	2.24	0.55
59:DA:1227:G:H2'	59:DA:1228:G:H8	1.71	0.55
2:AC:7:PRO:HG3	2:AC:201:TYR:HE2	1.71	0.55
2:AC:31:HIS:HA	2:AC:34:LEU:HB2	1.89	0.55
3:AD:162:LEU:HD22	3:AD:178:VAL:HG13	1.88	0.55
28:DF:7:TYR:HD2	28:DF:19:GLU:HG3	1.70	0.55
6:CG:64:GLN:NE2	6:CG:68:ASN:OD1	2.39	0.55
2:AC:136:GLN:HA	2:AC:139:GLN:HB3	1.88	0.55
21:CA:68(A):G:H2'	21:CA:68(B):G:H8	1.70	0.55
59:BA:2248:C:H2'	59:BA:2275:C:H41	1.71	0.55
15:AP:5:ARG:NH2	15:AP:26:ARG:O	2.38	0.55
21:AA:1414:U:H2'	21:AA:1415:G:C8	2.41	0.55
43:BX:36:LYS:HB3	59:BA:1598:C:H5'	1.89	0.55
59:BA:793:A:H4'	59:BA:794:G:H5'	1.88	0.55
9:CJ:82:ILE:O	9:CJ:86:MET:HG2	2.06	0.55
30:DH:143:GLN:HG3	59:DA:2744:G:H21	1.71	0.55
59:BA:2099:U:O2	59:BA:2190:G:O6	2.23	0.55
33:DN:97:ARG:HA	33:DN:104:LYS:O	2.07	0.55
33:DN:62:VAL:HG11	33:DN:67:LEU:HG	1.88	0.55
33:BN:21:LYS:HG2	33:BN:22:THR:H	1.71	0.55
33:BN:29:LYS:O	33:BN:31:ALA:O	2.25	0.55
59:BA:1782:C:H42	59:BA:2586:C:H42	0.68	0.55
59:BA:1664:A:H3'	59:BA:1665:A:H8	1.69	0.55
59:DA:649:G:H2'	59:DA:650:C:H6	1.71	0.55
21:CA:947:G:H4'	21:CA:1332:A:C2	2.40	0.55
21:CA:658:G:N2	21:CA:747:C:C2	2.72	0.55
2:CC:20:SER:O	13:CN:54:PRO:HB3	2.06	0.55
25:DC:124:VAL:HB	25:DC:139:PRO:HG2	1.87	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CC:161:GLU:HB3	23:CV:25:A:H61	1.71	0.55
59:BA:1172:G:H5''	59:BA:1173:A:OP2	2.06	0.55
59:BA:2355:C:H2'	59:BA:2356:C:O4'	2.06	0.55
35:BP:56:SER:O	35:BP:58:THR:N	2.39	0.55
59:BA:1356:G:H2'	59:BA:1357:U:H6	1.71	0.55
35:BP:88:LEU:HD11	35:BP:95:VAL:HG21	1.88	0.55
44:BY:68:HIS:HB3	44:BY:71:LYS:HE3	1.88	0.55
30:BH:103:LEU:O	30:BH:114:VAL:HA	2.06	0.55
7:AH:98:LYS:H	7:AH:98:LYS:HD3	1.72	0.55
26:BD:225:ALA:HB1	59:BA:1788:C:H5''	1.89	0.55
21:AA:106:C:H2'	21:AA:107:G:H8	1.71	0.55
59:BA:2623:G:H2'	59:BA:2624:G:H8	1.71	0.55
1:CB:27:LYS:HG2	1:CB:195:ASP:HB2	1.86	0.55
23:AV:34:A:O2'	23:AV:35:A:OP1	2.24	0.55
59:BA:755:C:H2'	59:BA:756:C:C6	2.41	0.55
32:BK:7:VAL:HB	32:BK:58:THR:HG23	1.88	0.55
10:CK:111:ASP:HA	17:CR:84:LYS:HG3	1.88	0.55
14:CO:88:ARG:HA	14:CO:88:ARG:NE	2.22	0.55
27:BE:14:ILE:O	27:BE:21:VAL:HG22	2.06	0.55
59:DA:1849:G:H2'	59:DA:1850:G:H8	1.71	0.55
11:CL:113:ARG:HE	11:CL:116:SER:H	1.53	0.55
59:DA:2633:G:O6	59:DA:2785:C:N3	2.39	0.55
21:CA:815:A:N6	21:CA:1509:C:H1'	2.21	0.55
59:DA:1347:G:H2'	59:DA:1348:G:C8	2.41	0.55
21:CA:184:G:C6	21:CA:193:C:N3	2.73	0.55
59:DA:2678:C:N3	59:DA:2729:G:O6	2.39	0.55
48:B2:4:SER:HA	48:B2:7:ARG:HB2	1.88	0.55
29:BG:113:ARG:NE	29:BG:113:ARG:HA	2.18	0.55
59:BA:590:A:H2'	59:BA:591:C:O4'	2.06	0.55
42:BW:10:VAL:HG12	42:BW:11:ARG:H	1.71	0.55
21:CA:315:A:H4'	21:CA:317:G:OP2	2.06	0.55
31:BJ:23:UNK:O	31:BJ:84:UNK:C	2.55	0.55
35:DP:24:GLY:O	59:DA:811:U:H2'	2.06	0.55
48:D2:14:ARG:HH22	59:DA:78:A:H5'	1.71	0.55
7:AH:113:SER:HB3	7:AH:134:ILE:HD13	1.87	0.55
43:BX:53:LYS:HB3	43:BX:82:GLN:CB	2.35	0.55
21:AA:1347:G:N1	21:AA:1374:A:OP2	2.34	0.55
59:DA:797:C:H2'	59:DA:798:G:C8	2.41	0.55
59:BA:224:G:OP2	59:BA:408:G:N2	2.36	0.55
59:DA:357(G):A:H2'	59:DA:357(H):G:H8	1.70	0.55
20:AY:146:LEU:O	20:AY:150:ILE:HG12	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BE:151:TYR:O	27:BE:154:LYS:HB2	2.06	0.55
21:AA:609:A:O5'	21:AA:609:A:H8	1.90	0.55
10:AK:52:GLY:O	10:AK:55:LYS:HB3	2.06	0.55
26:BD:132:PRO:HB2	26:BD:135:PHE:HD1	1.70	0.55
51:D5:19:ARG:HD3	59:DA:1265:A:H5''	1.88	0.55
59:BA:926:A:H2'	59:BA:928:G:H8	1.71	0.55
21:AA:691:G:H2'	21:AA:692:U:C6	2.42	0.55
52:D6:53:LYS:HG3	52:D6:54:ILE:HG12	1.87	0.55
59:DA:331:A:OP1	59:DA:1209:G:N2	2.40	0.55
21:AA:395:C:H2'	21:AA:396:G:C8	2.41	0.55
59:BA:2715:C:H2'	59:BA:2716:U:C6	2.41	0.55
20:AY:227:ILE:HA	20:AY:230:LYS:HB3	1.87	0.55
9:CJ:50:ILE:HA	9:CJ:60:ARG:HA	1.89	0.55
59:BA:837:C:N3	59:BA:941:A:N6	2.54	0.55
14:AO:58:MET:SD	14:AO:58:MET:N	2.79	0.55
55:D9:7:VAL:HB	55:D9:25:VAL:HG21	1.87	0.55
59:DA:1689:A:OP2	59:DA:1698:A:N6	2.38	0.55
33:BN:82:LEU:HD21	59:BA:2039:C:P	2.47	0.55
33:BN:90:MET:HA	33:BN:93:THR:H	1.72	0.55
8:AI:103:THR:HG23	21:AA:1180:A:H5''	1.88	0.55
59:BA:1954:G:N3	59:BA:2551:C:H5'	2.22	0.55
21:AA:542:G:H2'	21:AA:543:C:H6	1.71	0.55
59:DA:2661:G:C6	59:DA:2662:A:C2	2.95	0.55
21:CA:943:U:C4	21:CA:1340:A:N1	2.74	0.55
59:BA:628:G:H1'	59:BA:637:A:N1	2.20	0.55
59:DA:939:G:H2'	59:DA:940:G:H8	1.70	0.55
20:CY:145:ASP:OD2	20:CY:148:LEU:HB3	2.07	0.55
21:AA:1526:G:H2'	21:AA:1527:C:O4'	2.06	0.55
20:CY:87:HIS:NE2	20:CY:117:GLN:HG3	2.22	0.55
26:BD:67:PHE:CD2	26:BD:153:ALA:HB3	2.41	0.55
59:DA:374:A:H62	59:DA:400:G:H21	1.54	0.55
19:AT:75:ASN:HB2	21:AA:262:A:H4'	1.88	0.55
13:AN:2:ALA:N	21:AA:1048:G:HO2'	2.04	0.55
28:BF:62:ARG:NH1	59:BA:468:G:O2'	2.39	0.55
21:CA:452:A:N7	21:CA:480:U:O4	2.40	0.55
26:DD:12:SER:HB2	26:DD:208:LYS:HB3	1.87	0.55
60:BB:19:G:H2'	60:BB:20:C:H6	1.72	0.55
20:CY:77:HIS:CD2	20:CY:277:VAL:HG21	2.41	0.55
3:CD:170:VAL:HG13	3:CD:176:LEU:HD23	1.88	0.55
3:CD:31:CYS:N	3:CD:33:MET:H	2.04	0.55
26:DD:95:LEU:HD11	26:DD:103:ARG:HB2	1.89	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:2696:U:H2'	59:DA:2697:G:H8	1.71	0.55
59:DA:2086:U:H2'	59:DA:2087:G:C8	2.41	0.55
43:BX:57:LEU:HD21	43:BX:78:LYS:HE2	1.87	0.55
17:CR:45:SER:HB3	17:CR:51:LEU:HD11	1.88	0.55
59:DA:20:C:H2'	59:DA:21:A:H8	1.70	0.55
5:CF:90:VAL:O	21:CA:736:C:O2'	2.14	0.55
59:BA:780:G:H21	59:BA:783:A:H62	1.53	0.55
33:DN:35:ARG:NH2	33:DN:37:LYS:O	2.40	0.55
21:AA:376:G:H2'	21:AA:377:G:H8	1.69	0.55
33:BN:93:THR:HA	59:BA:2639:A:H4'	1.89	0.55
33:BN:50:ASP:C	33:BN:53:VAL:H	2.08	0.55
59:DA:1831:G:H21	63:DA:2901:NMY:HN61	1.53	0.55
21:CA:145:G:H1	21:CA:177:C:H42	1.55	0.55
22:CW:4:U:O2'	59:DA:1850:G:O3'	2.24	0.55
11:CL:95:GLY:C	11:CL:97:ARG:H	2.10	0.55
36:BQ:35:VAL:HA	36:BQ:102:VAL:CA	2.29	0.55
35:BP:113:LYS:HE2	59:BA:636:G:C5	2.41	0.55
59:DA:918:A:H62	59:DA:2268:A:H62	1.55	0.55
19:CT:68:LYS:HZ3	21:CA:195:A:H4'	1.72	0.55
59:DA:2398:U:O4	59:DA:2418:A:N1	2.40	0.55
8:AI:128:ARG:NH1	22:AW:31:A:OP1	2.39	0.55
1:AB:97:TRP:CZ3	1:AB:172:ILE:HG13	2.41	0.55
55:D9:13:LYS:HB2	55:D9:27:CYS:SG	2.47	0.55
10:CK:30:VAL:HG22	10:CK:43:SER:O	2.06	0.55
39:BT:35:LYS:HD3	39:BT:41:ARG:HD2	1.89	0.55
35:BP:61:ARG:HD2	54:B8:13:ARG:HH11	1.70	0.55
21:AA:68(C):C:H2'	21:AA:68(D):C:H6	1.72	0.55
59:DA:797:C:H2'	59:DA:798:G:H8	1.71	0.55
47:B1:21:ARG:HD3	59:BA:2080:G:OP1	2.06	0.55
25:BC:185:LYS:O	25:BC:189:ASN:ND2	2.40	0.55
6:AG:29:LYS:HD2	6:AG:102:ARG:HG3	1.87	0.55
59:BA:2008:C:H2'	59:BA:2009:G:H8	1.70	0.55
50:D4:28:LYS:HB3	50:D4:31:ILE:HD11	1.87	0.55
20:CY:628:ARG:NH2	20:CY:651:GLU:HB2	2.22	0.55
59:DA:307:G:N2	59:DA:330:A:H62	2.04	0.55
28:DF:31:HIS:HB2	35:DP:13:ASN:HB3	1.89	0.55
35:DP:11:GLY:O	35:DP:13:ASN:N	2.39	0.55
41:DV:4:ILE:HA	41:DV:12:TYR:O	2.07	0.55
21:CA:1161:C:H42	21:CA:1175:G:H1	1.53	0.55
59:BA:270(I):G:H2'	59:BA:270(J):G:O4'	2.05	0.55
7:AH:127:LEU:HB3	7:AH:129:VAL:HG22	1.89	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:CF:7:ASN:ND2	17:CR:34:TYR:HE1	2.05	0.55
12:AM:25:ILE:HG23	12:AM:29:ARG:HB2	1.87	0.55
3:CD:23:GLY:HA3	3:CD:113:SER:HB2	1.89	0.55
32:DK:9:LYS:HD3	32:DK:9:LYS:H	1.72	0.55
41:DV:71:LEU:H	41:DV:71:LEU:HD23	1.72	0.55
59:BA:2546:U:H4'	59:BA:2566:A:H2	1.70	0.55
48:B2:5:GLU:HA	48:B2:8:LYS:HB3	1.87	0.55
15:AP:10:GLY:HA2	21:AA:624:C:H4'	1.89	0.55
59:DA:1777:U:O4	59:DA:1787:A:N1	2.39	0.55
59:DA:2701:C:H2'	59:DA:2702:U:H2'	1.88	0.55
33:DN:106:MET:O	33:DN:108:PRO:HD2	2.06	0.55
59:BA:1133:U:O4	59:BA:2026:C:H1'	2.06	0.55
21:CA:1404:C:H2'	21:CA:1405:G:C8	2.40	0.55
59:DA:1339:G:H21	59:DA:1603:A:H1'	1.71	0.55
21:CA:1128:C:H1'	21:CA:1144:G:H22	1.71	0.55
59:DA:2820:A:OP2	59:DA:2821:A:N6	2.28	0.55
26:BD:43:ARG:HD3	59:BA:691:C:H4'	1.88	0.55
59:BA:538:G:H2'	59:BA:539:G:C8	2.40	0.55
16:CQ:18:THR:OG1	16:CQ:69:LYS:HD2	2.07	0.55
21:CA:936:C:H2'	21:CA:937:A:H8	1.70	0.55
21:CA:1476:G:H2'	21:CA:1477:C:H6	1.69	0.55
1:CB:167:PRO:HG2	1:CB:192:SER:HB3	1.89	0.55
21:CA:834:C:H2'	21:CA:835:U:C6	2.42	0.55
21:AA:966:G:N2	23:AV:18:G:H22	2.05	0.55
1:AB:92:TYR:CE1	1:AB:94:ASN:HB3	2.42	0.55
38:DS:25:ARG:NH2	38:DS:40:ILE:HG21	2.21	0.55
20:CY:22:ASP:CB	61:CY:701:GDP:H5''	2.34	0.55
25:DC:115:VAL:HG12	25:DC:154:ILE:HD11	1.88	0.55
13:CN:45:ARG:NH2	21:CA:1059:C:H5''	2.21	0.55
59:BA:883:G:O6	59:BA:893:C:N3	2.39	0.55
37:BR:10:LEU:HB3	37:BR:17:ARG:NH2	2.22	0.55
59:DA:247:G:H1'	59:DA:251:A:N6	2.21	0.55
20:CY:566:THR:HG22	20:CY:567:LEU:H	1.72	0.55
59:DA:504:U:H5''	59:DA:505:A:H5'	1.86	0.55
37:BR:3:HIS:HB3	59:BA:1654:A:OP2	2.06	0.55
41:BV:24:LYS:HD3	59:BA:1163:G:H5'	1.87	0.55
21:CA:237:C:H2'	21:CA:238:G:C8	2.41	0.55
21:AA:784:C:H2'	21:AA:785:G:C8	2.42	0.55
21:AA:293:G:H5'	21:AA:610:G:N2	2.22	0.55
59:BA:1306:C:H2'	59:BA:1307:A:H8	1.71	0.55
6:CG:30:ILE:HD13	6:CG:43:PHE:HB2	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:566:U:H2'	59:DA:567:A:H8	1.72	0.55
59:DA:307:G:H21	59:DA:330:A:H62	1.53	0.55
48:D2:5:GLU:HA	48:D2:8:LYS:HB3	1.89	0.55
3:CD:125:HIS:CD2	3:CD:151:LYS:HE3	2.41	0.55
1:CB:179:LYS:NZ	21:CA:1075:C:H5'	2.22	0.55
7:CH:46:LYS:HB3	7:CH:62:TYR:HB3	1.86	0.55
26:BD:165:ILE:HG22	26:BD:166:GLN:H	1.72	0.55
10:AK:61:ALA:HB1	10:AK:94:ALA:HB2	1.87	0.55
20:AY:466:LEU:HA	20:AY:470:PHE:HD2	1.70	0.55
21:AA:1268:A:H2'	21:AA:1269:A:C8	2.41	0.55
59:DA:2819:G:H2'	59:DA:2821:A:N7	2.22	0.55
60:DB:22:U:C2	60:DB:61:G:O6	2.54	0.55
21:CA:138:G:H2'	21:CA:139:G:O4'	2.07	0.55
21:CA:1392:G:O2'	21:CA:1502:A:OP1	2.18	0.55
60:DB:79:C:N4	60:DB:97:G:H1	2.05	0.55
21:CA:1422:G:H1	21:CA:1478:C:N4	2.00	0.55
21:AA:1015:A:H2'	21:AA:1016:A:C8	2.42	0.55
10:CK:30:VAL:O	10:CK:42:TRP:HA	2.07	0.55
59:BA:531:C:H4'	59:BA:532:A:O5'	2.07	0.55
34:BO:71:ARG:HH22	34:BO:104:ARG:HG3	1.70	0.55
15:CP:8:ARG:HE	15:CP:15:PRO:HA	1.71	0.55
59:DA:224:G:H1	59:DA:231:C:N4	2.01	0.55
60:BB:14:U:H4'	60:BB:69:G:N2	2.22	0.55
26:DD:112:GLN:HG2	26:DD:113:VAL:H	1.71	0.55
39:DT:30:VAL:HG13	39:DT:84:GLN:HE21	1.71	0.55
21:AA:186(D):C:H2'	21:AA:186(E):C:H6	1.72	0.55
28:DF:169:ASN:O	59:DA:323:G:O2'	2.17	0.55
21:AA:244:U:O4	21:AA:893:C:N3	2.39	0.55
9:AJ:6:ILE:HB	9:AJ:98:ILE:HG23	1.87	0.55
32:BK:9:LYS:H	32:BK:9:LYS:HD3	1.71	0.55
59:DA:20:C:H2'	59:DA:21:A:C8	2.42	0.55
59:BA:172:C:H2'	59:BA:173:G:H8	1.72	0.55
59:DA:155(D):U:H5"	59:DA:155(E):U:OP2	2.07	0.55
44:DY:95:LYS:HG3	44:DY:100:ALA:HA	1.89	0.55
59:BA:611(G):G:H2'	59:BA:617:G:O4'	2.05	0.55
4:AE:135:THR:O	4:AE:139:LEU:HG	2.06	0.55
59:BA:1165:U:H2'	59:BA:1166:C:C6	2.41	0.55
59:DA:2020:A:N1	59:DA:2034:U:O4	2.40	0.55
33:DN:74:ARG:HG2	33:DN:74:ARG:NH1	2.22	0.55
59:BA:1139:G:H2'	59:BA:1140:C:C6	2.41	0.55
33:BN:72:TYR:HB3	33:BN:101:HIS:CG	2.41	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BN:100:GLU:O	33:BN:103:VAL:N	2.40	0.55
59:DA:1905:C:N4	59:DA:1969:A:OP2	2.40	0.55
21:CA:598:U:H2'	21:CA:599:C:H6	1.72	0.55
27:DE:112:GLY:HA3	59:DA:2822:G:H5''	1.89	0.55
59:DA:1327:C:H3'	59:DA:1328:G:C8	2.41	0.55
40:BU:6:THR:HB	59:BA:584:C:OP1	2.07	0.55
17:CR:71:LYS:O	17:CR:75:ILE:HG12	2.07	0.55
59:DA:2134:A:C2	59:DA:2159:G:H1'	2.37	0.55
59:DA:2266:A:H1'	59:DA:2272:U:C4	2.41	0.55
59:DA:2075:U:H2'	59:DA:2077:A:OP2	2.07	0.55
59:DA:190:A:N6	59:DA:207:A:H1'	2.21	0.55
10:AK:115:PRO:HA	21:AA:675:A:C2	2.41	0.55
1:AB:81:VAL:HG12	1:AB:215:LEU:HD13	1.88	0.55
38:DS:46:VAL:HG13	60:DB:113:C:H4'	1.89	0.55
26:DD:157:ARG:NH2	59:DA:1817:G:H3'	2.22	0.55
59:BA:515:A:H3'	59:BA:516:C:H6	1.72	0.55
53:B7:21:ARG:HH22	59:BA:466:A:H5'	1.71	0.55
59:DA:2175:C:H2'	59:DA:2176:A:C8	2.41	0.55
24:CX:52:G:N2	24:CX:62:C:C2	2.75	0.55
37:BR:99:LYS:H	37:BR:99:LYS:HD3	1.72	0.55
59:BA:601:C:H2'	59:BA:602:G:O4'	2.06	0.55
21:CA:950:U:O4	21:CA:1231:G:O6	2.24	0.55
59:BA:596:G:H2'	59:BA:597:U:O4'	2.05	0.55
35:DP:49:ARG:O	35:DP:50:ARG:HB3	2.07	0.55
1:CB:208:ILE:H	1:CB:208:ILE:HD12	1.72	0.55
6:AG:25:ALA:O	6:AG:29:LYS:HG2	2.07	0.55
59:BA:1406:U:H2'	59:BA:1407:C:H6	1.69	0.55
26:DD:69:ARG:C	26:DD:71:ASP:H	2.09	0.55
59:BA:1853:A:H2'	59:BA:1854:A:H8	1.71	0.55
20:AY:663:THR:O	20:AY:665:GLY:N	2.40	0.55
27:BE:103:ASP:OD2	27:BE:199:ARG:NH2	2.39	0.55
21:AA:196:A:O3'	21:AA:197:A:H2'	2.07	0.55
10:CK:78:GLN:HA	10:CK:103:LEU:HD12	1.89	0.55
41:BV:19:LYS:HG3	41:BV:20:LEU:N	2.22	0.55
37:BR:26:LYS:HZ2	59:BA:1295:C:H5'	1.72	0.55
21:CA:1203:C:H2'	21:CA:1204:A:C8	2.41	0.55
20:CY:266:ASN:OD1	20:CY:266:ASN:N	2.30	0.55
59:BA:1986:A:H2'	59:BA:1987:G:C8	2.42	0.55
59:DA:558:G:H2'	59:DA:559:G:C8	2.42	0.55
33:DN:107:LEU:C	33:DN:117:PHE:HE1	2.11	0.55
27:BE:47:VAL:HG21	27:BE:85:ASN:HA	1.89	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CL:116:SER:O	11:CL:120:TYR:N	2.39	0.55
20:AY:165:GLN:HA	20:AY:180:VAL:H	1.72	0.55
21:CA:1016:A:H2'	21:CA:1017:G:O4'	2.07	0.55
59:DA:1586:A:H3'	59:DA:1587:A:H8	1.71	0.55
59:BA:2086:U:H2'	59:BA:2087:G:C8	2.42	0.55
21:CA:293:G:H5'	21:CA:610:G:N2	2.21	0.55
40:DU:25:TRP:NE1	59:DA:17:G:H4'	2.22	0.55
45:DZ:44:PHE:O	45:DZ:48:PHE:HB2	2.07	0.55
59:DA:1290:C:H2'	59:DA:1291:C:H6	1.72	0.55
59:DA:675:A:H8	59:DA:803:U:H3	1.50	0.55
27:BE:60:ASN:CG	27:BE:61:ARG:N	2.61	0.55
1:AB:92:TYR:HE1	1:AB:94:ASN:HB3	1.71	0.55
59:BA:1821:A:H2'	59:BA:1822:G:C8	2.42	0.55
3:CD:13:ARG:HH12	3:CD:38:TYR:H	1.53	0.55
9:CJ:40:LEU:HD21	21:CA:1280:A:C8	2.42	0.55
9:CJ:51:ARG:O	13:CN:45:ARG:NH1	2.40	0.55
1:CB:152:PHE:CZ	1:CB:155:LEU:HB3	2.42	0.55
38:BS:85:VAL:HG23	38:BS:106:ARG:HH11	1.72	0.55
59:DA:271(R):C:H2'	59:DA:271(S):C:C6	2.42	0.55
52:D6:8:LYS:HD2	52:D6:27:LYS:HD2	1.89	0.55
1:AB:19:HIS:CG	1:AB:20:GLU:N	2.74	0.55
59:DA:240:G:O2'	59:DA:257:A:N6	2.39	0.55
59:BA:2884:U:H3'	59:BA:2885:C:H6	1.72	0.55
59:DA:1074:G:H2'	59:DA:1075:C:H6	1.71	0.55
45:BZ:89:PHE:CE2	60:BB:104:A:H4'	2.41	0.55
4:AE:79:GLU:O	7:AH:104:ARG:NH1	2.40	0.55
35:DP:48:PRO:C	35:DP:50:ARG:H	2.10	0.55
45:BZ:99:TYR:HA	45:BZ:124:ILE:O	2.06	0.55
59:DA:1807:G:O2'	59:DA:1810:A:N6	2.40	0.55
21:AA:139:G:N2	21:AA:224:C:C2	2.75	0.55
47:D1:27:GLU:HA	47:D1:31:GLY:HA2	1.88	0.55
36:DQ:124:LYS:NZ	59:DA:2467:C:O2	2.40	0.55
45:DZ:120:ILE:HG13	45:DZ:172:ALA:HA	1.89	0.55
5:AF:99:ALA:O	5:AF:100:ASN:ND2	2.28	0.55
59:DA:1012:U:O2	59:DA:1143:A:N7	2.40	0.55
16:AQ:79:SER:OG	16:AQ:80:GLY:N	2.40	0.55
59:DA:108:U:H2'	59:DA:109:G:C8	2.42	0.55
21:AA:849:C:H2'	21:AA:850:U:O4'	2.06	0.55
21:CA:302:G:H2'	21:CA:303:A:C8	2.41	0.55
21:CA:783:C:H2'	21:CA:784:C:C6	2.42	0.55
7:AH:21:LYS:O	7:AH:63:LEU:HD11	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:1071:G:H1'	59:BA:1089:G:H2'	1.88	0.55
33:DN:35:ARG:NE	33:DN:37:LYS:O	2.40	0.55
33:DN:38:HIS:HA	59:DA:1006:C:O2'	2.07	0.55
21:CA:1239:A:N6	21:CA:1299:A:C6	2.57	0.55
24:CX:1:G:N2	24:CX:72:C:N3	2.55	0.55
7:CH:96:GLY:HA3	21:CA:600:C:OP1	2.07	0.55
59:DA:1636:C:H2'	59:DA:1637:A:C8	2.40	0.55
22:AW:15:G:N2	22:AW:48:C:C2	2.64	0.55
20:AY:108:PHE:O	20:AY:137:ASN:N	2.40	0.55
28:DF:93:LYS:HD3	28:DF:94:PRO:HD2	1.88	0.55
46:B0:19:LYS:HG2	46:B0:20:ARG:H	1.73	0.55
59:BA:629:G:H2'	59:BA:630:G:H8	1.70	0.55
11:CL:124:LYS:O	11:CL:126:LYS:N	2.39	0.55
29:BG:29:TRP:HB3	60:BB:57:A:C2	2.42	0.55
27:BE:143:ASN:ND2	27:BE:146:THR:O	2.40	0.55
28:DF:155:LEU:HD22	28:DF:186:ILE:HA	1.87	0.55
10:AK:83:ILE:HA	10:AK:109:VAL:HB	1.89	0.55
28:DF:24:LEU:HB3	28:DF:25:PRO:CD	2.37	0.55
42:DW:69:LEU:HD22	42:DW:107:LEU:HD23	1.89	0.55
21:CA:692:U:H1'	21:CA:695:A:N7	2.22	0.55
42:BW:100:THR:OG1	42:BW:101:SER:N	2.40	0.55
59:DA:1389:G:H5'	59:DA:1526:G:H5''	1.89	0.55
37:DR:25:ALA:HB2	37:DR:47:PHE:CZ	2.39	0.55
21:CA:934:C:H42	21:CA:938:A:H2	1.51	0.55
29:BG:126:ASP:HB3	29:BG:128:ARG:H	1.70	0.55
59:DA:2646:C:H2'	59:DA:2647:U:O4'	2.07	0.55
59:DA:1215:G:H2'	59:DA:1216:G:H8	1.71	0.55
59:BA:2090:G:H2'	59:BA:2091:U:O4'	2.07	0.55
21:CA:995:C:H2'	21:CA:996:A:C8	2.41	0.55
2:AC:30:ARG:O	2:AC:34:LEU:HB2	2.07	0.55
59:DA:1406:U:H2'	59:DA:1407:C:C6	2.42	0.55
20:CY:489:LYS:HG2	20:CY:598:ASP:HB2	1.89	0.55
21:AA:1203:C:H2'	21:AA:1204:A:C8	2.42	0.55
51:D5:4:HIS:HB2	51:D5:5:PRO:HD3	1.88	0.55
21:AA:1120:G:H2'	21:AA:1121:U:H6	1.70	0.55
45:BZ:132:ASN:HB3	45:BZ:134:PRO:HD3	1.88	0.55
59:DA:2751:G:N2	59:DA:2751:G:OP1	2.40	0.55
59:DA:2639:A:H2'	59:DA:2640:G:C8	2.41	0.54
27:BE:50:GLY:HA3	27:BE:78:LEU:HD23	1.88	0.54
59:BA:2553:G:H5''	59:BA:2554:U:C6	2.42	0.54
59:BA:2133:G:N2	59:BA:2158:A:N6	2.29	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:2048:G:H2'	59:DA:2049:G:O4'	2.06	0.54
30:BH:62:LYS:HA	30:BH:65:HIS:HB3	1.88	0.54
12:CM:87:TYR:HA	12:CM:90:LEU:HD12	1.88	0.54
59:DA:2652:C:N3	59:DA:2668:G:N2	2.43	0.54
11:AL:36:VAL:H	11:AL:58:VAL:HA	1.72	0.54
21:AA:1126:U:C5	21:AA:1148:U:C4	2.95	0.54
59:DA:193:U:H5'	59:DA:802:A:H2'	1.87	0.54
20:CY:467:LYS:NZ	20:CY:472:VAL:O	2.32	0.54
59:DA:1800:C:H42	59:DA:1817:G:N2	2.05	0.54
40:BU:25:TRP:O	40:BU:28:ARG:NE	2.36	0.54
38:DS:106:ARG:C	38:DS:108:GLY:H	2.09	0.54
37:DR:42:LYS:O	37:DR:45:ARG:HG3	2.06	0.54
8:CI:28:VAL:HG22	8:CI:63:ILE:HG13	1.89	0.54
59:BA:2814:C:H42	59:BA:2886:G:H1	1.53	0.54
28:DF:2:LYS:O	28:DF:4:VAL:N	2.40	0.54
20:AY:150:ILE:HA	20:AY:153:MET:SD	2.47	0.54
59:DA:238:C:H4'	59:DA:608:A:O2'	2.07	0.54
26:BD:45:ASN:N	26:BD:45:ASN:OD1	2.39	0.54
1:AB:28:PHE:O	1:AB:32:ILE:HG12	2.07	0.54
25:DC:166:ASN:HB2	25:DC:170:GLY:HA2	1.89	0.54
7:AH:124:ALA:HA	7:AH:127:LEU:HB2	1.89	0.54
20:CY:554:PRO:HG2	20:CY:594:VAL:HB	1.88	0.54
28:DF:45:ARG:HB3	28:DF:97:TYR:HD2	1.70	0.54
21:CA:1285:A:H4'	21:CA:1286:A:O5'	2.06	0.54
39:DT:22:PHE:HD2	39:DT:85:LYS:HZ2	1.53	0.54
44:DY:7:VAL:HG21	59:DA:336:C:H5''	1.89	0.54
28:BF:40:GLN:NE2	28:BF:184:TYR:HB2	2.23	0.54
21:AA:1359:C:H1'	21:AA:1362:C:N4	2.22	0.54
59:BA:2628:C:O2'	59:BA:2781:A:H2'	2.07	0.54
33:BN:73:THR:HA	33:BN:84:LYS:HB2	1.89	0.54
11:CL:56:ALA:CB	11:CL:68:ALA:HB3	2.19	0.54
59:DA:641:C:H2'	59:DA:642:G:O4'	2.07	0.54
29:DG:27:ASN:HB3	29:DG:30:GLU:HB3	1.89	0.54
26:DD:50:THR:HB	59:DA:1805:U:O2	2.07	0.54
2:CC:54:ARG:O	2:CC:69:HIS:HB2	2.07	0.54
17:AR:71:LYS:HA	17:AR:74:ARG:HG3	1.89	0.54
48:D2:21:LEU:O	48:D2:25:VAL:HG23	2.07	0.54
48:D2:25:VAL:HG22	48:D2:60:LEU:HB3	1.88	0.54
16:AQ:43:LEU:HB3	16:AQ:69:LYS:HG3	1.89	0.54
59:DA:1779:U:H2'	59:DA:1783:A:H62	1.72	0.54
26:BD:206:LEU:HB3	26:BD:211:ARG:HD3	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:600:G:N2	59:DA:605:C:O3'	2.41	0.54
21:CA:1272:G:H3'	21:CA:1273:G:H5''	1.89	0.54
37:BR:45:ARG:O	37:BR:49:ASP:HB2	2.06	0.54
7:CH:36:LEU:HA	7:CH:39:LEU:HB2	1.90	0.54
59:BA:1423:G:H1'	59:BA:1492:G:H21	1.71	0.54
59:BA:889:C:O2'	59:BA:890:A:O4'	2.24	0.54
59:DA:1194:A:H2'	59:DA:1195:G:C8	2.42	0.54
59:DA:1503:U:H2'	59:DA:1504:C:C6	2.42	0.54
21:AA:1094:G:O2'	21:AA:1095:U:OP2	2.24	0.54
21:AA:666:G:H2'	21:AA:667:G:H8	1.72	0.54
59:BA:848:G:H2'	59:BA:849:A:C8	2.42	0.54
59:BA:848:G:C2	59:BA:933:A:H1'	2.43	0.54
6:AG:94:ARG:NH2	21:AA:1378:C:O4'	2.41	0.54
21:AA:109:A:H61	21:AA:324:G:H1'	1.71	0.54
21:CA:1345:U:H4'	21:CA:1346:A:H5'	1.88	0.54
3:AD:19:LEU:HB2	3:AD:21:LEU:HG	1.89	0.54
4:AE:26:PHE:O	4:AE:27:ARG:HB2	2.08	0.54
1:AB:156:LYS:O	1:AB:157:ARG:HB2	2.08	0.54
33:DN:43:THR:OG1	59:DA:558:G:OP1	2.26	0.54
33:BN:104:LYS:N	33:BN:120:LEU:HD11	2.23	0.54
33:BN:76:SER:H	33:BN:82:LEU:C	2.10	0.54
21:CA:1238:A:H2	21:CA:1241:G:N3	2.05	0.54
7:CH:96:GLY:O	7:CH:100:ILE:HG13	2.07	0.54
22:AW:12:U:H3	22:AW:23:A:H61	0.70	0.54
21:CA:1320:C:H2'	21:CA:1321:C:C6	2.43	0.54
59:BA:1414:G:C2	59:BA:1588:C:N3	2.74	0.54
16:AQ:45:HIS:CB	16:AQ:72:ARG:HA	2.35	0.54
53:D7:21:ARG:NH2	59:DA:684:G:OP1	2.36	0.54
21:CA:920:U:H2'	21:CA:921:U:C6	2.41	0.54
1:AB:162:ILE:O	1:AB:162:ILE:HG13	2.08	0.54
59:DA:2810:A:H62	59:DA:2890:G:H21	1.55	0.54
28:BF:7:TYR:HD1	28:BF:7:TYR:N	2.05	0.54
38:BS:15:ARG:HH11	38:BS:17:ARG:HD2	1.72	0.54
39:DT:27:THR:HG23	39:DT:28:VAL:H	1.72	0.54
59:BA:65:C:O2	59:BA:456:C:N4	2.40	0.54
59:BA:1527:G:H2'	59:BA:1544:A:N7	2.21	0.54
59:BA:1073:A:H2'	59:BA:1074:G:O4'	2.08	0.54
7:AH:86:ILE:O	7:AH:88:LYS:N	2.40	0.54
59:DA:1301:A:N6	59:DA:1626:G:HO2'	2.05	0.54
44:DY:31:LEU:HD13	44:DY:32:PRO:HG3	1.90	0.54
59:DA:1468(D):A:N6	59:DA:1506(N):G:H1'	2.23	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:741:G:H2'	21:AA:742:G:H8	1.71	0.54
2:AC:39:ILE:O	2:AC:43:LEU:HG	2.07	0.54
59:BA:594:U:H2'	59:BA:595:C:C6	2.42	0.54
1:CB:106:LYS:HD2	1:CB:106:LYS:H	1.71	0.54
59:DA:1135:C:H42	59:DA:1138:G:H8	1.55	0.54
59:BA:1832:C:H2'	59:BA:1833:U:O4'	2.08	0.54
59:DA:1932:A:H2'	59:DA:1933:G:O4'	2.07	0.54
22:CW:72:C:H2'	22:CW:73:A:H5'	1.90	0.54
21:CA:648:A:H2'	21:CA:649:G:O4'	2.08	0.54
16:CQ:19:VAL:HB	16:CQ:44:ALA:HB3	1.88	0.54
21:CA:780:A:H2	21:CA:802:A:N7	2.05	0.54
59:BA:1418:G:H8	59:BA:1418:G:O5'	1.91	0.54
4:CE:14:ARG:NH1	21:CA:1079:G:O2'	2.40	0.54
59:DA:2408:U:H2'	59:DA:2409:G:C8	2.43	0.54
40:BU:28:ARG:HH11	40:BU:38:THR:HG21	1.71	0.54
28:BF:157:VAL:O	28:BF:193:VAL:O	2.26	0.54
25:DC:50:ILE:HG21	25:DC:57:GLN:HB2	1.89	0.54
59:DA:223:A:H1'	59:DA:407:G:H21	1.71	0.54
22:AW:25:C:H2'	22:AW:26:A:C8	2.42	0.54
20:AY:289:ILE:HD12	20:AY:289:ILE:H	1.71	0.54
45:DZ:61:LEU:HD23	45:DZ:63:ASP:H	1.70	0.54
1:CB:70:PHE:O	1:CB:92:TYR:HB2	2.07	0.54
21:CA:341:C:H2'	21:CA:342:C:H6	1.72	0.54
59:BA:826:U:H5''	59:BA:2429:G:P	2.48	0.54
39:DT:96:ARG:HB2	39:DT:96:ARG:HH11	1.72	0.54
59:BA:38:A:H2'	59:BA:39:C:C6	2.43	0.54
21:CA:1355:G:H2'	21:CA:1356:G:H8	1.71	0.54
41:DV:35:LEU:HB2	41:DV:57:VAL:HG13	1.88	0.54
59:DA:2070:G:H1	59:DA:2441:C:H42	1.54	0.54
26:DD:161:THR:HG22	26:DD:178:PRO:HG2	1.89	0.54
2:AC:68:VAL:HG12	2:AC:70:VAL:HG22	1.88	0.54
25:BC:118:PRO:O	25:BC:121:MET:HB2	2.07	0.54
59:DA:2041:U:H2'	59:DA:2042:A:H8	1.71	0.54
59:BA:1937:A:N7	59:BA:1940:U:H5'	2.23	0.54
59:BA:1940:U:H1'	59:BA:1941:C:H5	1.73	0.54
59:BA:1972:A:C4'	63:BA:2904:NMY:H21	2.37	0.54
59:BA:2133:G:H21	59:BA:2158:A:H62	0.66	0.54
11:CL:84:LEU:HD22	11:CL:104:VAL:HG12	1.88	0.54
59:DA:2528:U:H2'	59:DA:2530:A:O5'	2.08	0.54
24:CX:2:G:N2	24:CX:71:C:N3	2.44	0.54
46:B0:15:ASP:CG	59:BA:2264:C:H41	2.10	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:1245:G:H2'	59:BA:1246:A:C8	2.42	0.54
28:BF:82:ILE:HG13	28:BF:83:PHE:HD1	1.71	0.54
59:BA:150:C:H2'	59:BA:151:C:C6	2.43	0.54
45:DZ:73:GLN:OE1	45:DZ:75:ASN:ND2	2.41	0.54
59:DA:1791:A:N6	59:DA:1828:G:O2'	2.41	0.54
59:BA:1187:G:O5'	59:BA:1187:G:H8	1.91	0.54
59:DA:1051:G:H1	59:DA:1108:U:H3	0.71	0.54
59:DA:2576:G:H5'	59:DA:2578:G:N7	2.23	0.54
25:BC:213:VAL:O	25:BC:214:TYR:HD1	1.91	0.54
59:BA:457:A:H61	59:BA:470:A:H3'	1.72	0.54
28:BF:7:TYR:CE2	28:BF:10:PRO:HD3	2.43	0.54
26:DD:160:GLY:H	26:DD:196:VAL:HB	1.71	0.54
59:BA:1171:G:H2'	59:BA:1172:G:H5'	1.88	0.54
21:CA:614:A:N6	21:CA:626:U:H3	2.02	0.54
28:BF:136:THR:HG21	59:BA:320:A:C8	2.42	0.54
21:CA:154:C:H42	21:CA:167:G:H1	1.55	0.54
21:CA:1151:A:H2'	21:CA:1152:A:H8	1.72	0.54
1:CB:94:ASN:H	1:CB:94:ASN:HD22	1.56	0.54
59:BA:2292:C:N4	59:BA:2340:G:H1	2.06	0.54
55:B9:13:LYS:HB2	55:B9:27:CYS:SG	2.48	0.54
36:BQ:48:GLU:O	36:BQ:52:VAL:HG23	2.08	0.54
47:B1:29:GLY:N	47:B1:31:GLY:O	2.38	0.54
5:AF:26:ILE:O	5:AF:30:LEU:HG	2.07	0.54
59:BA:1149:G:H2'	59:BA:1150:C:C6	2.42	0.54
59:DA:1947:C:H2'	59:DA:1948:G:H8	1.73	0.54
59:DA:679:C:H2'	59:DA:680:G:H8	1.73	0.54
59:BA:1842:G:H1	59:BA:1898:U:H3	1.54	0.54
5:CF:30:LEU:HD13	5:CF:37:VAL:HG21	1.90	0.54
26:DD:45:ASN:O	26:DD:47:GLY:N	2.41	0.54
33:DN:50:ASP:OD1	33:DN:120:LEU:HB2	2.07	0.54
33:DN:31:ALA:C	33:DN:33:LEU:N	2.57	0.54
21:AA:1157:A:O2'	21:AA:1158:C:C2	2.61	0.54
21:CA:61:G:H1	21:CA:106:C:H42	1.56	0.54
11:CL:111:LYS:O	11:CL:113:ARG:N	2.40	0.54
59:DA:2659:G:H2'	59:DA:2661:G:OP2	2.08	0.54
59:DA:1347:G:H2'	59:DA:1348:G:H8	1.72	0.54
60:DB:66:A:N6	60:DB:107:U:H2'	2.23	0.54
21:CA:1063:C:N3	21:CA:1193:G:N2	2.39	0.54
35:BP:113:LYS:HG3	35:BP:115:LEU:HD23	1.90	0.54
59:DA:2546:U:H4'	59:DA:2566:A:H2	1.73	0.54
59:DA:2270:G:H2'	59:DA:2271:G:O4'	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:BB:51:G:H2'	60:BB:52:A:H5''	1.89	0.54
60:DB:84:C:N3	60:DB:92:G:O6	2.40	0.54
59:DA:775:G:C5	59:DA:794:G:C8	2.96	0.54
59:DA:102:G:O3'	59:DA:103:A:H8	1.91	0.54
22:AW:34:C:H2'	22:AW:35:A:C8	2.43	0.54
59:BA:589:C:N3	59:BA:668:G:N2	2.51	0.54
59:DA:27:G:H22	59:DA:512:G:H2'	1.73	0.54
20:CY:456:GLU:HG3	20:CY:657:THR:HB	1.90	0.54
27:DE:139:GLY:HA3	59:DA:2511:U:O2	2.07	0.54
21:AA:1513:A:H2'	21:AA:1514:C:C6	2.42	0.54
59:DA:2395:C:H2'	59:DA:2396:G:C8	2.42	0.54
44:BY:75:ILE:HG12	44:BY:76:CYS:H	1.72	0.54
27:BE:111:ARG:HA	37:BR:2:ARG:N	2.23	0.54
59:DA:2410:G:H2'	59:DA:2411:A:C8	2.42	0.54
21:CA:589:C:H4'	21:CA:653:A:H61	1.72	0.54
59:DA:223:A:H61	59:DA:374:A:H4'	1.72	0.54
29:DG:70:VAL:HG11	29:DG:88:ILE:HG12	1.89	0.54
14:CO:64:ARG:HH22	21:CA:582:U:P	2.31	0.54
7:AH:44:PHE:CE1	7:AH:80:ILE:HG13	2.43	0.54
8:AI:11:LYS:NZ	21:AA:1347:G:N7	2.48	0.54
59:BA:656:G:H2'	59:BA:657:U:C6	2.42	0.54
59:BA:2236:C:H2'	59:BA:2237:G:C8	2.42	0.54
47:B1:12:PRO:HD3	47:B1:44:PRO:HG3	1.89	0.54
59:BA:1028:A:N6	59:BA:1125:G:H2'	2.23	0.54
59:BA:1429:G:H2'	59:BA:1430:C:C6	2.43	0.54
60:BB:87:G:O2'	60:BB:89(B):A:N6	2.40	0.54
59:BA:815:C:H2'	59:BA:816:C:C6	2.43	0.54
59:BA:1907:G:O6	59:BA:1923:U:O2	2.26	0.54
21:CA:1417:G:N2	21:CA:1482:G:H2'	2.23	0.54
2:CC:87:LEU:O	2:CC:91:LEU:HB2	2.07	0.54
41:DV:9:GLY:O	59:DA:1160:G:N2	2.35	0.54
59:DA:1105:U:H2'	59:DA:1106:G:H8	1.72	0.54
45:DZ:103:ARG:HB3	45:DZ:138:GLU:HA	1.89	0.54
26:DD:152:GLY:O	26:DD:154:LYS:HG2	2.07	0.54
21:AA:1350:A:H2'	21:AA:1351:U:O4'	2.07	0.54
21:CA:599:C:O2	21:CA:639:G:N1	2.36	0.54
11:CL:53:ARG:HH21	21:CA:521:G:H5''	1.73	0.54
59:DA:949:C:H42	59:DA:968:G:H1	0.74	0.54
36:DQ:116:GLU:O	36:DQ:119:ARG:HB3	2.08	0.54
53:D7:28:ARG:HA	53:D7:31:LEU:HG	1.90	0.54
21:CA:9:G:H2'	21:CA:10:A:H8	1.71	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:321:A:H61	21:AA:332:G:H1	1.55	0.54
35:BP:27:HIS:NE2	59:BA:814:C:H5	2.05	0.54
21:CA:423:G:H2'	21:CA:424:G:O4'	2.06	0.54
7:CH:14:ARG:NH1	21:CA:875:C:O3'	2.40	0.54
29:DG:39:ILE:HG12	29:DG:157:ILE:HG23	1.89	0.54
35:DP:6:LEU:HD23	35:DP:9:ASN:HB2	1.89	0.54
37:BR:41:ALA:HB1	37:BR:97:VAL:CG1	2.38	0.54
37:DR:100:LEU:HD22	37:DR:101:ALA:H	1.72	0.54
21:CA:1328:C:H2'	21:CA:1329:A:C8	2.43	0.54
59:BA:2832:U:C5	59:BA:2884:U:H5'	2.43	0.54
7:AH:34:GLU:O	7:AH:38:ILE:HG12	2.08	0.54
20:CY:621:ILE:HG22	20:CY:625:ASN:HD21	1.73	0.54
48:B2:48:HIS:HB3	59:BA:95:G:O2'	2.08	0.54
59:DA:2301:C:H2'	59:DA:2302:G:C8	2.43	0.54
59:BA:210:C:H2'	59:BA:211:A:C8	2.41	0.54
1:AB:233:SER:N	1:AB:234:PRO:HD2	2.23	0.54
21:AA:1316:G:H1'	21:AA:1360:A:H2	1.72	0.54
59:BA:1909:C:H2'	59:BA:1910:G:H8	1.72	0.54
29:BG:68:PRO:HB2	29:BG:90:LEU:HD11	1.89	0.54
59:DA:1444:G:H2'	59:DA:1445:C:C5	2.43	0.54
37:BR:96:ARG:CB	37:BR:117:VAL:HG21	2.38	0.54
34:BO:29:ASN:H	34:BO:29:ASN:HD22	1.54	0.54
59:DA:693:C:H42	59:DA:769:G:H1	1.55	0.54
59:BA:2732:G:H3'	59:BA:2733:A:O4'	2.06	0.54
38:DS:34:HIS:NE2	38:DS:54:LEU:HB3	2.23	0.54
21:CA:1536:C:H5''	21:CA:1537:U:OP2	2.08	0.54
27:BE:4:ILE:HB	27:BE:96:PHE:HE2	1.73	0.54
33:BN:92:ALA:O	33:BN:94:HIS:N	2.40	0.54
21:CA:60:A:H62	21:CA:110:C:N4	2.06	0.54
21:CA:1071:C:O2	21:CA:1104:G:N1	2.26	0.54
34:DO:3:GLN:NE2	34:DO:4:PRO:O	2.40	0.54
59:DA:903:C:H2'	59:DA:904:C:C6	2.43	0.54
59:BA:2749:A:H3'	59:BA:2750:A:C8	2.42	0.54
59:DA:1588:C:H2'	59:DA:1589:C:C6	2.43	0.54
21:CA:1305:G:O2'	21:CA:1306:A:O4'	2.25	0.54
59:BA:2336:A:H3'	59:BA:2337:G:C8	2.42	0.54
21:AA:966:G:H22	23:AV:18:G:N2	2.06	0.54
59:DA:271(L):C:H3'	59:DA:271(M):G:H5''	1.90	0.54
1:AB:172:ILE:HB	1:AB:175:ARG:HH12	1.72	0.54
46:D0:35:ASN:N	59:DA:2353:G:O2'	2.38	0.54
38:DS:17:ARG:NH1	38:DS:88:ASP:OD2	2.41	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BT:66:VAL:HA	39:BT:71:GLY:HA2	1.89	0.54
59:BA:2065:C:H1'	59:BA:2449:U:N3	2.22	0.54
40:BU:51:LYS:HB3	40:BU:55:ARG:HH21	1.72	0.54
59:BA:1045:A:N3	59:BA:1047:G:N2	2.56	0.54
38:DS:104:GLY:O	38:DS:106:ARG:N	2.40	0.54
28:BF:7:TYR:CD1	28:BF:7:TYR:N	2.76	0.54
36:BQ:45:GLN:HB2	36:BQ:46:GLN:NE2	2.22	0.54
59:DA:2262:U:H4'	59:DA:2328:A:C2	2.43	0.54
21:CA:894:G:H1	21:CA:905:U:H3	1.54	0.54
49:B3:4:LEU:O	49:B3:36:VAL:HA	2.07	0.54
59:BA:422:A:H2'	59:BA:423:A:C8	2.42	0.54
21:AA:1061:G:H1	21:AA:1195:C:N4	2.06	0.54
9:CJ:13:HIS:HB3	9:CJ:68:HIS:NE2	2.22	0.54
30:DH:85:LYS:HD2	30:DH:133:VAL:HB	1.88	0.54
21:AA:338:A:H2'	21:AA:339:C:H5'	1.90	0.54
21:AA:687:A:O2'	21:AA:688:G:OP2	2.24	0.54
26:BD:8:PRO:HA	26:BD:14:ARG:HB2	1.90	0.54
1:AB:101:MET:HG3	1:AB:108:ILE:HG12	1.88	0.54
21:CA:1355:G:H2'	21:CA:1356:G:C8	2.42	0.54
21:AA:892:A:H2'	21:AA:893:C:C6	2.43	0.54
37:BR:26:LYS:HE2	37:BR:71:GLN:HB2	1.88	0.54
21:AA:456:C:H42	21:AA:476:G:H1	1.56	0.54
40:BU:42:ALA:HB1	59:BA:534:U:H5'	1.89	0.54
20:CY:156:ARG:HB3	20:CY:157:LEU:HD12	1.89	0.54
20:CY:491:VAL:HB	20:CY:493:VAL:HG23	1.90	0.54
21:AA:770:C:H2'	21:AA:771:G:O4'	2.08	0.54
59:DA:195:A:P	59:DA:196:A:H4'	2.47	0.54
40:DU:27:LEU:O	40:DU:31:SER:N	2.34	0.54
8:AI:23:ASN:O	8:AI:57:GLY:HA2	2.08	0.54
33:DN:42:TRP:C	33:DN:78:TYR:HA	2.28	0.54
21:CA:407:G:H2'	21:CA:408:A:C8	2.43	0.54
33:BN:116:LEU:CA	33:BN:118:LYS:H	2.21	0.54
33:BN:34:LEU:HD13	33:BN:102:ALA:HB1	1.88	0.54
33:BN:35:ARG:NH1	33:BN:82:LEU:HB3	2.22	0.54
33:BN:37:LYS:HE2	59:BA:1006:C:H1'	1.90	0.54
33:BN:54:VAL:HG23	33:BN:103:VAL:HG23	1.88	0.54
20:CY:660:ARG:HB2	59:DA:2660:A:N3	2.22	0.54
59:DA:971:C:O2'	59:DA:983:A:H1'	2.08	0.54
21:CA:986:A:H2'	21:CA:987:G:C8	2.43	0.54
59:DA:745:G:H21	59:DA:750:A:H61	1.56	0.54
59:DA:779:U:H2'	59:DA:780:G:H8	1.73	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CA:144:G:N2	21:CA:178:C:N3	2.47	0.54
59:BA:2447:G:HO2'	59:BA:2500:U:H5	1.55	0.54
21:AA:963:G:H2'	21:AA:964:A:O4'	2.08	0.54
59:BA:876:C:H2'	59:BA:877:U:O4'	2.08	0.54
59:BA:877:U:C4	59:BA:899:A:N1	2.76	0.54
27:BE:62:PRO:HG3	59:BA:2633:G:H21	1.73	0.54
59:DA:2356:C:H2'	59:DA:2357:U:O4'	2.08	0.54
59:DA:2446:G:O2'	59:DA:2448:A:H5''	2.08	0.54
21:AA:345:C:H4'	21:AA:346:G:C4	2.42	0.54
47:D1:30:VAL:HG11	59:DA:2421:G:N2	2.23	0.54
7:CH:103:VAL:HG12	7:CH:104:ARG:HD3	1.90	0.54
26:BD:13:ARG:NH1	59:BA:729:G:OP2	2.40	0.54
21:CA:614:A:H2'	21:CA:615:C:H6	1.71	0.54
19:AT:17:ARG:O	19:AT:20:LEU:HB2	2.08	0.54
45:BZ:74:VAL:HG22	45:BZ:86:VAL:HG12	1.90	0.54
59:BA:786:C:H5''	59:BA:1780:A:C8	2.43	0.54
59:BA:2530:A:OP2	59:BA:2535:G:N2	2.41	0.54
59:BA:2834:G:O2'	59:BA:2883:A:N6	2.33	0.54
14:AO:36:ILE:HD12	14:AO:63:ARG:NH2	2.23	0.54
21:AA:545:C:H2'	21:AA:546:G:C8	2.43	0.54
59:DA:2202(D):G:H4'	59:DA:2202(E):A:C2	2.43	0.54
21:AA:565:U:H5''	21:AA:566:G:H2'	1.88	0.54
21:AA:272:C:H2'	21:AA:273:A:H8	1.73	0.54
47:D1:42:GLN:HE22	59:DA:379:G:H21	1.55	0.54
20:CY:99:ARG:HD3	20:CY:128:TYR:HB2	1.89	0.54
19:AT:18:GLN:HA	19:AT:21:LYS:HE3	1.89	0.54
21:AA:936:C:H2'	21:AA:937:A:O4'	2.08	0.54
21:CA:216:G:H2'	21:CA:217:C:C6	2.42	0.54
20:AY:657:THR:O	20:AY:661:SER:OG	2.23	0.54
23:CV:7:G:H2'	23:CV:8:A:H1'	1.89	0.54
33:BN:75:TYR:N	33:BN:82:LEU:HB2	2.22	0.54
59:DA:897:C:H42	59:DA:898:C:H41	1.57	0.54
20:CY:661:SER:HB2	59:DA:2660:A:N6	2.23	0.54
59:DA:1707:G:H2'	59:DA:1708:C:C6	2.43	0.54
38:DS:30:ARG:HB3	38:DS:89:ARG:NH2	2.23	0.54
48:D2:50:ILE:HD13	59:DA:61:G:O4'	2.08	0.54
59:BA:1416:G:N2	59:BA:1582:C:C2	2.68	0.54
59:DA:2561:A:H2'	59:DA:2562:U:O4'	2.08	0.54
59:DA:595:C:H2'	59:DA:596:G:C8	2.43	0.54
59:DA:1792:G:H2'	59:DA:1793:C:C6	2.42	0.54
59:DA:815:C:N3	59:DA:1192:G:N2	2.45	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DD:157:ARG:HB2	59:DA:1818:U:H3'	1.89	0.54
22:CW:50:C:C4	22:CW:65:U:O4	2.61	0.54
59:DA:1076:C:H2'	59:DA:1077:A:C4'	2.37	0.54
59:BA:879:G:H2'	59:BA:880:G:C8	2.43	0.54
59:BA:270(B):A:H1'	59:BA:357(N):C:H1'	1.89	0.54
44:DY:76:CYS:O	44:DY:78:ALA:N	2.34	0.54
29:DG:41:GLN:HG2	59:DA:2305:A:N6	2.22	0.54
21:AA:1041:A:H2'	21:AA:1042:G:O4'	2.09	0.54
59:BA:2482:G:H2'	59:BA:2483:C:O4'	2.08	0.54
21:AA:131:C:H2'	21:AA:132:C:H6	1.73	0.54
21:AA:1346:A:C5	21:AA:1374:A:C2	2.95	0.54
27:BE:158:GLY:HA3	59:BA:2620:C:O2'	2.08	0.54
21:CA:1277:C:H1'	21:CA:1282:C:O2	2.08	0.54
21:AA:786:G:H2'	21:AA:787:A:C8	2.42	0.54
32:DK:106:GLU:O	32:DK:109:LYS:HB2	2.08	0.54
32:BK:133:SER:HB3	59:BA:1088:A:N6	2.22	0.54
21:AA:1440(D):A:H1'	21:AA:1440(E):G:C8	2.43	0.54
21:CA:869:G:H4'	21:CA:872:A:C8	2.43	0.54
21:CA:1307:U:H2'	21:CA:1308:U:C6	2.43	0.54
23:AV:35:A:H8	23:AV:35:A:H5''	1.71	0.54
3:CD:125:HIS:HD2	3:CD:151:LYS:HE3	1.73	0.54
20:CY:488:THR:HA	20:CY:516:PRO:HG3	1.90	0.54
40:BU:7:GLY:HA2	59:BA:29:U:H5''	1.90	0.54
2:AC:25:GLY:O	2:AC:29:TYR:N	2.33	0.54
37:DR:22:ARG:HH12	37:DR:69:ASP:HB3	1.73	0.54
41:DV:24:LYS:HD2	41:DV:90:PRO:HG2	1.89	0.54
5:CF:5:GLU:HG3	5:CF:93:SER:HA	1.89	0.54
39:BT:106:SER:HB2	39:BT:110:ILE:HD11	1.89	0.54
51:B5:17:ASP:HA	51:B5:20:ARG:HB2	1.90	0.54
45:BZ:10:ARG:NH2	45:BZ:26:GLY:O	2.41	0.54
4:CE:19:MET:SD	4:CE:24:ARG:HB3	2.48	0.54
37:DR:86:ARG:HH22	37:DR:116:LEU:HD13	1.72	0.54
59:DA:1665:A:H2'	59:DA:1666:G:O4'	2.07	0.53
54:D8:23:VAL:HG13	54:D8:48:PHE:HA	1.89	0.53
28:BF:63:LYS:NZ	28:BF:75:HIS:O	2.36	0.53
59:DA:2134:A:N7	59:DA:2157:G:N3	2.56	0.53
35:BP:52:GLU:HG2	59:BA:832:G:H1'	1.90	0.53
35:DP:35:HIS:NE2	59:DA:1191:G:OP1	2.40	0.53
59:DA:1464:C:H2'	59:DA:1465:G:O4'	2.07	0.53
1:AB:169:LYS:O	1:AB:172:ILE:N	2.37	0.53
48:D2:57:ILE:HA	48:D2:60:LEU:HD12	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CY:616:TYR:O	20:CY:620:VAL:HG13	2.07	0.53
59:DA:13:A:H61	59:DA:525:U:H3'	1.71	0.53
34:BO:71:ARG:HH11	34:BO:72:PRO:HD2	1.72	0.53
59:BA:1637:A:H2'	59:BA:1638:C:C6	2.43	0.53
59:BA:1530:G:C6	59:BA:1541:U:O2	2.61	0.53
21:AA:425:G:H2'	21:AA:426:G:O4'	2.08	0.53
20:AY:354:ARG:NH1	21:AA:368:U:O4	2.41	0.53
59:BA:1864(A):G:N2	59:BA:1864(D):A:OP2	2.41	0.53
59:BA:2351:G:H21	59:BA:2366:A:H62	1.56	0.53
59:DA:2647:U:H2'	59:DA:2648:C:H6	1.73	0.53
21:AA:662:G:H1'	21:AA:836:G:H5''	1.90	0.53
3:CD:22:LYS:HB3	3:CD:26:CYS:SG	2.48	0.53
59:DA:2199:A:N6	59:DA:2224:G:H1'	2.23	0.53
16:AQ:19:VAL:N	16:AQ:46:ASP:OD1	2.41	0.53
6:CG:68:ASN:ND2	6:CG:127:ALA:O	2.41	0.53
59:BA:784:A:N6	59:BA:2072:G:O2'	2.41	0.53
44:DY:14:LEU:HD11	44:DY:73:ARG:HB2	1.90	0.53
34:BO:37:ASP:N	34:BO:37:ASP:OD1	2.40	0.53
5:CF:72:VAL:HG13	5:CF:73:ASN:H	1.73	0.53
59:DA:285:C:H42	59:DA:355:G:H1	1.55	0.53
2:AC:101:LEU:HD12	2:AC:102:ASN:N	2.22	0.53
14:AO:23:GLY:O	14:AO:28:GLN:NE2	2.41	0.53
21:AA:1327:C:H2'	21:AA:1328:C:C6	2.43	0.53
36:DQ:108:GLY:HA3	45:DZ:116:VAL:HG11	1.89	0.53
21:AA:707:C:H2'	21:AA:708:C:H6	1.73	0.53
21:AA:1432:G:HO2'	21:AA:1433:A:H8	1.55	0.53
59:BA:2737:G:H2'	59:BA:2738:A:C8	2.43	0.53
33:BN:37:LYS:HE3	59:BA:1005:C:O2	2.08	0.53
33:BN:111:PRO:C	33:BN:114:ARG:H	2.12	0.53
33:BN:96:GLU:O	33:BN:104:LYS:HG2	2.08	0.53
21:CA:372:C:N3	21:CA:375:U:O4	2.41	0.53
21:CA:384:G:H2'	21:CA:385:C:C6	2.43	0.53
12:CM:115:LYS:N	21:CA:1228:C:OP1	2.40	0.53
21:CA:1306:A:C8	21:CA:1331:G:N2	2.74	0.53
41:BV:80:GLN:O	41:BV:81:TYR:HB2	2.08	0.53
20:CY:139:MET:SD	20:CY:144:ALA:HB1	2.49	0.53
59:DA:1342:A:O2'	59:DA:1344:G:OP1	2.25	0.53
21:CA:20:U:H1'	21:CA:572:A:C4	2.43	0.53
6:CG:104:LEU:HD12	6:CG:123:GLU:HG3	1.90	0.53
20:CY:22:ASP:HB3	61:CY:701:GDP:C5'	2.34	0.53
26:BD:274:ARG:NH2	59:BA:1798:U:H3'	2.23	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:75:G:N1	59:DA:111:A:H2	2.02	0.53
21:CA:1123:A:H2	21:CA:1150:U:N3	1.98	0.53
59:BA:1044:G:H4'	59:BA:1047:G:H5''	1.90	0.53
44:BY:76:CYS:O	44:BY:78:ALA:N	2.41	0.53
59:BA:1530:G:N2	59:BA:1542:G:OP1	2.41	0.53
59:DA:1527:G:N3	59:DA:1544:A:H8	2.07	0.53
59:BA:662:G:H2'	59:BA:663:G:H8	1.73	0.53
35:DP:71:VAL:HA	59:DA:245:G:H4'	1.90	0.53
59:DA:223:A:O2'	59:DA:420:C:O2	2.27	0.53
59:BA:2151:G:H2'	59:BA:2152:G:H8	1.72	0.53
1:AB:19:HIS:ND1	1:AB:20:GLU:OE1	2.41	0.53
59:DA:2303:G:H2'	59:DA:2304:G:O4'	2.08	0.53
21:CA:776:G:N2	21:CA:803:G:O6	2.42	0.53
21:AA:38:G:H22	21:AA:397:A:C5'	2.22	0.53
54:D8:59:LYS:HD3	54:D8:59:LYS:N	2.23	0.53
23:AV:19:G:H2'	23:AV:20:U:C5	2.43	0.53
1:AB:32:ILE:HD12	1:AB:42:ILE:HA	1.90	0.53
21:CA:673:G:H2'	21:CA:674:G:C8	2.43	0.53
38:BS:30:ARG:HD3	38:BS:35:ILE:HG13	1.90	0.53
44:BY:62:GLU:HG2	44:BY:63:LYS:H	1.72	0.53
59:BA:1267:U:H2'	59:BA:1268:A:C8	2.43	0.53
59:DA:2291:U:H2'	59:DA:2292:C:C6	2.43	0.53
35:BP:120:ALA:HB2	35:BP:137:LYS:HD2	1.91	0.53
2:CC:23:TYR:CD2	9:CJ:95:GLU:HB2	2.43	0.53
1:CB:50:GLU:OE2	1:CB:53:ARG:NH1	2.42	0.53
26:BD:69:ARG:NH2	26:BD:192:THR:HG21	2.23	0.53
21:AA:606:G:H1'	21:AA:632:A:H61	1.72	0.53
59:BA:2528:U:O2'	59:BA:2529:G:H3'	2.08	0.53
59:DA:1317:A:H61	59:DA:1335:U:H3	0.68	0.53
20:CY:660:ARG:HB2	59:DA:2660:A:C2	2.44	0.53
59:BA:271(D):G:H2'	59:BA:271(E):G:C8	2.43	0.53
59:BA:271(H):C:H2'	59:BA:271(I):C:C6	2.43	0.53
11:AL:33:ARG:HG2	11:AL:60:LEU:HB3	1.89	0.53
59:DA:2105:C:H2'	59:DA:2106:G:C8	2.43	0.53
21:AA:978:A:O2'	21:AA:1322:C:N3	2.40	0.53
18:AS:36:ARG:HD3	21:AA:1220:G:O2'	2.08	0.53
18:AS:36:ARG:HH12	18:AS:77:THR:HB	1.73	0.53
1:AB:94:ASN:ND2	1:AB:95:GLN:HG2	2.24	0.53
38:DS:20:ARG:NH1	38:DS:88:ASP:OD2	2.42	0.53
59:DA:658:C:H2'	59:DA:659:C:C6	2.44	0.53
59:BA:71:A:N3	59:BA:73:A:N6	2.56	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:1058:G:H2'	59:DA:1059:G:H8	1.70	0.53
21:AA:901:A:H8	21:AA:901:A:O5'	1.92	0.53
21:AA:1356:G:H2'	21:AA:1357:A:C8	2.44	0.53
59:BA:1151:G:H2'	59:BA:1152:C:C6	2.44	0.53
21:CA:661:G:H1	21:CA:744:C:N4	2.05	0.53
7:AH:11:THR:HA	7:AH:14:ARG:HD2	1.91	0.53
21:CA:1270:C:H2'	21:CA:1271:G:C8	2.43	0.53
35:DP:80:TYR:HB3	35:DP:113:LYS:HB2	1.89	0.53
30:BH:177:GLY:HA2	59:BA:2530:A:H5'	1.89	0.53
27:BE:1:MET:HG2	27:BE:200:GLU:HB3	1.89	0.53
59:BA:1129:A:H5'	59:BA:2516:G:H5'	1.90	0.53
59:DA:1712(J):G:O2'	59:DA:1712(K):A:H8	1.91	0.53
20:CY:674:ASP:OD1	20:CY:675:HIS:ND1	2.41	0.53
37:DR:37:THR:HG23	37:DR:40:LYS:HG3	1.90	0.53
45:BZ:30:ASN:O	45:BZ:32:HIS:N	2.41	0.53
20:CY:265:LYS:O	20:CY:267:LYS:N	2.40	0.53
21:CA:1057:G:H2'	21:CA:1058:G:O4'	2.08	0.53
3:CD:9:CYS:HB3	3:CD:31:CYS:O	2.08	0.53
37:BR:90:ARG:NH1	59:BA:2880:C:O2'	2.41	0.53
4:AE:150:ARG:HE	4:AE:150:ARG:H	1.56	0.53
21:CA:762:C:H2'	21:CA:763:G:H8	1.73	0.53
59:BA:829:A:N7	59:BA:2247:A:O2'	2.38	0.53
21:AA:106:C:H2'	21:AA:107:G:C8	2.44	0.53
20:AY:117:GLN:CD	59:BA:2660:A:H4'	2.29	0.53
26:DD:263:ARG:NH1	59:DA:2227:A:OP1	2.42	0.53
55:B9:12:ASP:O	55:B9:15:LYS:NZ	2.33	0.53
15:AP:14:ASN:O	15:AP:16:HIS:N	2.41	0.53
59:BA:271(L):C:H3'	59:BA:271(M):G:H5''	1.91	0.53
37:BR:48:VAL:O	37:BR:52:ILE:HG12	2.08	0.53
21:AA:702:A:H61	59:BA:1895:C:H1'	1.72	0.53
59:BA:1349:A:N3	59:BA:1349:A:H5'	2.23	0.53
59:BA:2639:A:H2'	59:BA:2640:G:H8	1.72	0.53
59:DA:1939:U:N3	59:DA:1967:C:O2'	2.23	0.53
42:DW:16:LYS:NZ	59:DA:1266:G:O6	2.42	0.53
59:DA:1635:G:H2'	59:DA:1636:C:O4'	2.08	0.53
59:DA:2247:A:N6	59:DA:2257:U:C4	2.74	0.53
11:CL:100:ILE:HG22	11:CL:102:ARG:H	1.74	0.53
20:AY:138:LYS:HE2	61:AY:701:GDP:C4	2.44	0.53
20:AY:137:ASN:ND2	61:AY:701:GDP:O6	2.42	0.53
59:BA:2749:A:H3'	59:BA:2750:A:H8	1.73	0.53
21:CA:1226:C:HO2'	21:CA:1228:C:H5	1.56	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AL:58:VAL:HG12	11:AL:60:LEU:N	2.11	0.53
60:DB:24:G:N1	60:DB:56:G:N2	2.56	0.53
19:CT:68:LYS:NZ	21:CA:195:A:H4'	2.24	0.53
38:DS:27:SER:HA	38:DS:88:ASP:HB3	1.89	0.53
20:CY:26:THR:OG1	61:CY:701:GDP:O2A	2.27	0.53
2:AC:54:ARG:HB2	2:AC:69:HIS:HB2	1.89	0.53
59:BA:2018:G:H2'	59:BA:2019:A:O4'	2.08	0.53
54:B8:26:LYS:HD3	54:B8:27:THR:H	1.73	0.53
59:BA:393:C:H2'	59:BA:394:A:H8	1.73	0.53
59:BA:1506(H):C:H2'	59:BA:1506(I):U:H6	1.74	0.53
59:BA:2884:U:H3'	59:BA:2885:C:C6	2.43	0.53
1:CB:8:LYS:O	1:CB:12:GLU:HB2	2.07	0.53
59:DA:199:A:H61	59:DA:2433:A:H2'	1.72	0.53
41:DV:25:LEU:H	41:DV:92:THR:HG23	1.73	0.53
59:DA:2194:G:H2'	59:DA:2195:C:H6	1.74	0.53
21:CA:216:G:H2'	21:CA:217:C:H6	1.74	0.53
59:BA:719:C:H2'	59:BA:720:C:C6	2.43	0.53
20:CY:633:GLY:HA3	20:CY:644:ARG:HB2	1.90	0.53
45:DZ:11:GLU:HB2	45:DZ:13:GLU:HG3	1.90	0.53
39:BT:16:ARG:HG3	39:BT:79:HIS:O	2.08	0.53
10:CK:108:ILE:HD13	17:CR:87:ARG:HG2	1.90	0.53
4:CE:83:GLU:HA	4:CE:87:SER:O	2.08	0.53
20:CY:572:TYR:HB3	20:CY:582:PHE:HZ	1.73	0.53
17:CR:37:VAL:HG23	17:CR:38:GLU:H	1.73	0.53
26:DD:25:THR:HB	26:DD:26:LYS:HD2	1.90	0.53
59:DA:1838:C:H4'	59:DA:1839:G:C8	2.43	0.53
60:BB:71:C:H42	60:BB:105:G:H1	1.54	0.53
59:BA:1695:G:H3'	59:BA:1695:G:N3	2.23	0.53
59:BA:1323:U:H2'	59:BA:1324:G:H5'	1.90	0.53
33:BN:38:HIS:CD2	59:BA:1006:C:H4'	2.44	0.53
59:BA:1023:U:H1'	59:BA:1122:G:H5''	1.91	0.53
59:BA:2585:U:HO2'	59:BA:2586:C:P	2.32	0.53
11:CL:102:ARG:HG3	11:CL:107:ALA:HB1	1.91	0.53
20:AY:90:PHE:HB2	20:AY:458:HIS:ND1	2.24	0.53
7:CH:30:ARG:NE	21:CA:591:U:OP2	2.33	0.53
21:CA:990:C:H5'	21:CA:1017:G:O2'	2.08	0.53
59:DA:1468(K):G:H1	59:DA:1506(G):U:H3	1.57	0.53
22:AW:69:A:H2'	22:AW:70:G:C8	2.43	0.53
21:CA:1503:A:H61	23:CV:14:A:H1'	1.73	0.53
48:D2:47:ASN:O	48:D2:50:ILE:HG13	2.08	0.53
36:DQ:42:ILE:HD13	36:DQ:68:ILE:HB	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:1344:G:H1	59:DA:1403:C:H42	1.57	0.53
59:DA:2650:U:C4	59:DA:2670:A:N1	2.77	0.53
59:BA:874:G:H2'	59:BA:875:G:O4'	2.08	0.53
59:BA:298:G:O6	59:BA:338:G:H5''	2.09	0.53
46:D0:33:ALA:O	59:DA:2353:G:O2'	2.26	0.53
21:AA:346:G:O4'	39:BT:35:LYS:NZ	2.41	0.53
60:BB:9:G:H2'	60:BB:10:C:C6	2.43	0.53
59:DA:1466:G:H5'	59:DA:1545:A:C2	2.44	0.53
41:DV:76:LYS:HB2	41:DV:81:TYR:CD1	2.44	0.53
59:DA:1434:A:H2'	59:DA:1435:G:C8	2.43	0.53
7:AH:14:ARG:NH1	21:AA:876:G:O5'	2.41	0.53
21:AA:1291:G:H2'	21:AA:1292:U:H6	1.73	0.53
28:DF:5:ALA:HB3	28:DF:8:GLN:HA	1.89	0.53
28:DF:166:ALA:HA	59:DA:321:G:OP2	2.07	0.53
3:CD:26:CYS:HA	3:CD:31:CYS:HA	1.90	0.53
20:AY:87:HIS:CD2	20:AY:121:VAL:HG22	2.43	0.53
3:CD:117:ALA:O	3:CD:121:VAL:HG23	2.09	0.53
21:AA:935:A:N3	21:AA:1383:C:N4	2.57	0.53
5:CF:33:TYR:HD2	5:CF:71:ARG:HB3	1.74	0.53
45:DZ:10:ARG:H	45:DZ:37:VAL:HA	1.72	0.53
22:AW:19:G:H1'	22:AW:57:G:H21	1.73	0.53
59:BA:1837:C:HO2'	59:BA:1927:A:HO2'	1.52	0.53
40:BU:52:ARG:HH12	59:BA:560:C:H4'	1.74	0.53
21:AA:225:C:H2'	21:AA:226:G:C8	2.43	0.53
27:DE:7:VAL:HG12	27:DE:27:LEU:HB3	1.91	0.53
33:DN:102:ALA:O	33:DN:106:MET:HG2	2.08	0.53
33:DN:15:LEU:HD12	33:DN:55:VAL:HG21	1.90	0.53
33:DN:34:LEU:HD13	33:DN:102:ALA:HB1	1.90	0.53
33:DN:93:THR:HG23	59:DA:2639:A:O2'	2.08	0.53
30:DH:177:GLY:HA2	59:DA:2530:A:H5'	1.91	0.53
20:AY:165:GLN:HB2	20:AY:177:ILE:HG12	1.89	0.53
60:DB:28:C:H2'	60:DB:29:A:H8	1.73	0.53
59:DA:1586:A:H2'	59:DA:1587:A:O4'	2.08	0.53
21:CA:1022:G:H2'	21:CA:1023:G:O4'	2.08	0.53
59:DA:2559:C:H2'	59:DA:2560:C:C6	2.43	0.53
59:DA:779:U:H2'	59:DA:780:G:C8	2.44	0.53
16:CQ:16:GLN:HE22	21:CA:254:G:H21	1.55	0.53
59:BA:1712(F):U:O4	59:BA:1712(L):G:O6	2.25	0.53
59:DA:701:G:N2	59:DA:731:C:N3	2.45	0.53
60:BB:30:C:H2'	60:BB:31:C:O4'	2.08	0.53
59:DA:2074:U:H2'	59:DA:2075:U:C5	2.44	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:203:C:H3'	59:DA:204:A:H5''	1.91	0.53
21:AA:1339:A:H1'	22:AW:40:G:H21	1.73	0.53
25:BC:84:ILE:O	25:BC:88:GLU:N	2.41	0.53
25:DC:76:LEU:HD21	25:DC:100:ILE:HG22	1.89	0.53
36:DQ:85:LYS:HD2	46:D0:7:LEU:HD13	1.91	0.53
59:BA:16:G:H2'	59:BA:17:G:O4'	2.09	0.53
59:BA:1638:C:H2'	59:BA:1639:U:O4'	2.09	0.53
38:BS:15:ARG:HB3	38:BS:18:ILE:HB	1.90	0.53
26:BD:157:ARG:HB2	59:BA:1818:U:H2'	1.91	0.53
38:DS:97:ARG:O	38:DS:100:ALA:N	2.24	0.53
21:CA:626:U:H2'	21:CA:627:G:H8	1.72	0.53
59:DA:137(A):G:H1	59:DA:137(F):C:N4	2.03	0.53
60:BB:65:C:N4	60:BB:67:G:O6	2.42	0.53
59:DA:90:U:H4'	59:DA:91:A:C5'	2.39	0.53
21:CA:1429:C:N4	21:CA:1471:G:H1	2.06	0.53
27:BE:116:VAL:HG21	27:BE:122:PHE:CD2	2.43	0.53
3:CD:101:LEU:HA	3:CD:104:VAL:HB	1.89	0.53
59:BA:609:A:H2'	59:BA:610:G:O4'	2.08	0.53
32:BK:126:MET:HG2	59:BA:1059:G:N2	2.23	0.53
53:D7:39:ARG:NE	53:D7:39:ARG:HA	2.23	0.53
21:CA:996:A:H2'	21:CA:997:U:C6	2.43	0.53
10:CK:82:VAL:HB	10:CK:108:ILE:HA	1.88	0.53
59:DA:845:G:H1'	59:DA:847:U:O4	2.08	0.53
2:AC:6:HIS:HB3	2:AC:9:GLY:H	1.74	0.53
31:BJ:68:UNK:O	31:BJ:70:UNK:N	2.41	0.53
30:BH:148:ILE:HG23	30:BH:151:ILE:HD12	1.91	0.53
21:CA:1206:G:H2'	21:CA:1207:G:H8	1.73	0.53
8:CI:66:ARG:HH11	8:CI:66:ARG:HB3	1.74	0.53
25:DC:48:LEU:CD1	25:DC:49:GLY:H	2.22	0.53
27:DE:144:ARG:O	59:DA:2052:G:O2'	2.25	0.53
21:AA:1239:A:N1	21:AA:1297:C:H1'	2.23	0.53
59:BA:1955:U:H5'	59:BA:1956:U:H5	1.74	0.53
21:CA:60:A:H8	21:CA:331:G:H1	1.54	0.53
1:CB:107:THR:HG21	21:CA:1103:C:H1'	1.89	0.53
11:CL:39:VAL:HG12	11:CL:40:VAL:N	2.19	0.53
21:AA:33:A:H2'	21:AA:34:C:C6	2.44	0.53
8:CI:111:ARG:HG2	8:CI:112:LYS:N	2.24	0.53
60:DB:92:G:H2'	60:DB:93:C:C6	2.43	0.53
12:AM:87:TYR:CE2	12:AM:91:ARG:HD2	2.43	0.53
12:CM:119:GLY:HA2	21:CA:953:G:H21	1.73	0.53
36:DQ:118:LEU:HA	36:DQ:121:ALA:HB3	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:605:C:H1'	59:DA:657:U:O2'	2.09	0.53
21:AA:186:C:H2'	21:AA:186(A):C:C6	2.44	0.53
59:BA:1079:C:H2'	59:BA:1080:C:O4'	2.09	0.53
59:DA:2306:C:H5'	59:DA:2307:G:C8	2.43	0.53
45:BZ:87:ASP:OD2	60:BB:102:G:N2	2.42	0.53
32:DK:30:HIS:CG	32:DK:59:ILE:HB	2.44	0.53
32:BK:105:LEU:HD23	32:BK:106:GLU:N	2.24	0.53
59:DA:450:G:H5'	59:DA:1248:G:H1	1.74	0.53
21:AA:545:C:O2'	21:AA:549:C:OP1	2.27	0.53
20:CY:13:ARG:HE	20:CY:277:VAL:HG23	1.73	0.53
59:DA:1230:C:H2'	59:DA:1231:G:H8	1.72	0.53
19:CT:35:THR:OG1	21:CA:1440(M):G:OP1	2.23	0.53
20:AY:69:VAL:HG11	20:AY:327:PHE:CE1	2.43	0.53
59:BA:2791:C:OP1	59:BA:2792:G:H8	1.91	0.53
59:BA:2539:C:H2'	59:BA:2540:C:H6	1.74	0.53
37:DR:12:ARG:O	59:DA:2002:G:H5''	2.09	0.53
30:BH:89:ILE:HG22	30:BH:162:ILE:HG12	1.90	0.53
28:BF:37:VAL:HA	28:BF:40:GLN:NE2	2.24	0.53
26:BD:125:ILE:HG12	26:BD:137:PRO:HG2	1.91	0.53
59:BA:2850:A:H2'	59:BA:2851:A:C8	2.43	0.53
44:DY:6:HIS:HD1	44:DY:35:TYR:HE1	1.55	0.53
6:CG:50:ILE:HG13	6:CG:121:ALA:HB1	1.90	0.53
35:DP:88:LEU:HD21	35:DP:123:LEU:HD21	1.91	0.53
33:DN:72:TYR:CB	33:DN:101:HIS:HA	2.39	0.53
21:CA:595:G:O2'	21:CA:640:A:N6	2.42	0.53
24:CX:50:G:O6	24:CX:64:U:C4	2.59	0.53
21:CA:1128:C:O2'	21:CA:1146:A:N6	2.41	0.53
21:CA:988:G:H21	21:CA:1015:A:H2	1.54	0.53
21:CA:1220:G:H2'	21:CA:1221:G:H8	1.73	0.53
18:CS:77:THR:HG22	21:CA:958:A:H61	1.74	0.53
59:DA:1308:A:H2'	59:DA:1309:G:O4'	2.09	0.53
21:CA:1046:A:H3'	21:CA:1047:G:H8	1.73	0.53
28:BF:76:GLY:N	59:BA:674:G:H5''	2.24	0.53
48:D2:32:LEU:HA	48:D2:35:LEU:HD12	1.90	0.53
59:BA:553:G:H2'	59:BA:554:U:C6	2.43	0.53
59:DA:2886:G:H2'	59:DA:2887:U:C6	2.44	0.53
34:DO:39:ILE:HG13	34:DO:60:ALA:HB3	1.90	0.53
2:CC:29:TYR:HA	2:CC:32:LEU:HD11	1.91	0.53
60:BB:51:G:C2'	60:BB:52:A:H5''	2.38	0.53
21:CA:286:G:H2'	21:CA:287:U:C6	2.43	0.53
21:CA:1002:G:C2	21:CA:1038:C:N3	2.76	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:817:C:H4'	59:DA:932:G:C5	2.44	0.53
21:CA:129(A):G:H5'	21:CA:186(K):G:H5'	1.89	0.53
10:AK:85:ARG:HA	10:AK:110:ASP:O	2.08	0.53
59:DA:1060:U:H4'	59:DA:1061:U:H2'	1.91	0.53
59:BA:579:G:H2'	59:BA:580:C:H6	1.74	0.53
38:BS:26:LEU:O	38:BS:88:ASP:HB3	2.09	0.53
40:BU:93:LYS:HE3	59:BA:997:G:H5''	1.90	0.53
20:AY:330:VAL:O	20:AY:331:TYR:HB2	2.09	0.53
3:AD:33:MET:HG3	3:AD:37:PRO:HB3	1.91	0.53
15:CP:10:GLY:HA3	15:CP:14:ASN:O	2.08	0.53
60:DB:19:G:N2	60:DB:64:C:N3	2.47	0.53
8:CI:19:LEU:HD23	8:CI:61:ALA:HB2	1.91	0.53
21:CA:934:C:N4	21:CA:938:A:C2	2.73	0.53
59:BA:1806:C:H2'	59:BA:1807:G:O4'	2.09	0.53
59:BA:979:G:H2'	59:BA:982:C:N4	2.22	0.53
14:CO:63:ARG:O	14:CO:67:LEU:HG	2.09	0.53
59:DA:1688:U:H2'	59:DA:1698:A:N6	2.24	0.53
59:DA:1785:A:C2	59:DA:1787:A:H1'	2.44	0.53
21:CA:513:C:H2'	21:CA:514:C:C5	2.44	0.53
8:AI:17:VAL:HG21	8:AI:80:GLY:HA3	1.91	0.53
1:CB:172:ILE:HA	1:CB:175:ARG:HH12	1.73	0.53
16:CQ:68:ARG:HA	16:CQ:70:ARG:HH12	1.74	0.53
55:B9:36:GLN:HB3	59:BA:1124:C:O2'	2.09	0.53
59:BA:309:G:H1	59:BA:1210:A:H2	1.56	0.53
60:BB:79:C:H42	60:BB:97:G:H1	1.56	0.53
5:CF:35:ALA:HB1	5:CF:65:VAL:HG21	1.90	0.53
59:DA:1139:G:H8	59:DA:1139:G:OP2	1.91	0.53
59:DA:579:G:H4'	59:DA:2017:U:H2'	1.91	0.53
63:BA:2902:NMY:O12	63:BA:2902:NMY:H13	2.09	0.53
21:AA:1491:G:C5	63:AA:1601:NMY:H2	2.44	0.53
34:BO:39:ILE:HG13	34:BO:60:ALA:HB3	1.90	0.53
3:AD:25:ARG:NH2	21:AA:411:A:OP2	2.38	0.53
30:DH:171:LEU:HD13	59:DA:2530:A:H62	1.74	0.53
30:DH:176:ALA:O	30:DH:178:ALA:N	2.35	0.53
59:DA:948:G:H2'	59:DA:949:C:C6	2.43	0.53
59:BA:1199:U:H3	59:BA:1246:A:H2	1.52	0.53
59:DA:1413:G:H1	59:DA:1589:C:N4	2.03	0.53
21:CA:737:A:H2'	21:CA:738:C:H6	1.73	0.53
59:DA:2360:A:H2'	59:DA:2361:A:O4'	2.08	0.53
59:BA:918:A:N6	59:BA:2268:A:H62	1.98	0.53
59:DA:1674:G:O6	59:DA:1990:C:N3	2.41	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:1857:G:H21	59:BA:1885:A:N6	1.93	0.53
60:BB:3:C:H2'	60:BB:4:C:C5	2.41	0.53
20:CY:176:GLY:HA2	20:CY:188:TYR:CE2	2.44	0.53
59:DA:1279:G:H1	59:DA:1291:C:H42	1.56	0.53
21:CA:22:G:H2'	21:CA:23:C:C6	2.43	0.53
36:BQ:141:GLN:HA	59:BA:906:G:OP1	2.09	0.53
1:AB:70:PHE:HB3	1:AB:81:VAL:HB	1.90	0.53
46:D0:25:ARG:HH21	46:D0:35:ASN:HD22	1.57	0.53
11:AL:69:TYR:O	11:AL:100:ILE:HG13	2.09	0.53
59:BA:1638:C:H5''	59:BA:2710:C:O2'	2.09	0.53
36:DQ:55:VAL:HA	36:DQ:58:PHE:HE2	1.73	0.53
21:AA:1205:U:H2'	21:AA:1206:G:C8	2.43	0.53
38:BS:106:ARG:O	38:BS:107:GLU:HB3	2.08	0.53
40:DU:49:HIS:O	40:DU:53:ARG:HB2	2.08	0.53
59:BA:269:U:H1'	59:BA:424:G:N2	2.24	0.53
37:DR:92:GLY:O	59:DA:2880:C:H1'	2.09	0.53
59:BA:2651:C:N4	59:BA:2669:G:H1	2.06	0.53
8:AI:15:ALA:HA	8:AI:65:VAL:HA	1.91	0.53
32:BK:91:PRO:HG3	59:BA:1063:G:H1'	1.89	0.53
1:CB:96:ARG:NE	1:CB:96:ARG:H	2.07	0.53
59:BA:328:U:H3'	59:BA:329:G:C5'	2.39	0.53
35:DP:18:ARG:HD3	59:DA:1246:A:OP2	2.08	0.53
5:CF:97:PHE:CG	5:CF:98:LEU:N	2.77	0.53
3:AD:177:ASP:HB2	3:AD:182:LYS:HB3	1.90	0.53
21:CA:730:G:O2'	21:CA:814:A:N6	2.41	0.53
59:BA:2740:A:H2'	59:BA:2741:A:C8	2.44	0.53
21:CA:303:A:H2'	21:CA:304:U:O4'	2.09	0.53
21:AA:741:G:H2'	21:AA:742:G:C8	2.44	0.53
10:AK:22:HIS:CE1	10:AK:24:SER:HB2	2.42	0.53
20:AY:605:ILE:HG22	20:AY:675:HIS:H	1.74	0.53
31:BJ:44:UNK:C	31:BJ:46:UNK:H	2.22	0.53
53:D7:19:ARG:HA	53:D7:22:MET:HG2	1.91	0.53
26:BD:91:ARG:C	26:BD:107:ALA:HB3	2.29	0.53
9:AJ:79:ARG:O	9:AJ:83:GLU:HG2	2.08	0.53
3:CD:190:ASP:H	3:CD:193:ASP:HB2	1.73	0.53
59:BA:1687:G:N1	59:BA:1700:A:OP1	2.42	0.53
51:B5:34:PRO:O	51:B5:35:GLU:HB2	2.08	0.53
21:CA:1129:C:O2	21:CA:1132:C:N4	2.38	0.53
59:BA:897:C:H2'	59:BA:898:C:C6	2.43	0.53
40:DU:76:TYR:HE2	59:DA:1153:C:H5'	1.73	0.53
33:DN:59:LYS:HB3	33:DN:98:VAL:HG12	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BN:58:ASP:N	33:BN:58:ASP:OD2	2.40	0.53
59:BA:1912:A:N7	59:BA:1917:U:O2	2.42	0.53
30:BH:171:LEU:HD21	59:BA:2529:G:OP2	2.09	0.53
21:CA:33:A:H2'	21:CA:34:C:H6	1.72	0.53
11:CL:90:VAL:HB	21:CA:523:A:C5	2.43	0.53
27:DE:79:ARG:O	27:DE:81:ILE:N	4.76	0.53
59:BA:271(A):C:H2'	59:BA:271(B):G:C8	2.44	0.53
21:CA:948:C:H5'	21:CA:1306:A:O2'	2.09	0.53
59:BA:1415:U:H3	59:BA:1587:A:H61	1.55	0.53
20:AY:501:THR:O	24:AX:37:A:H4'	2.09	0.53
45:DZ:73:GLN:NE2	60:DB:102:G:N3	2.56	0.53
60:BB:31:C:H2'	60:BB:53:A:H61	1.73	0.53
60:BB:24:G:C6	60:BB:56:G:N3	2.78	0.53
38:BS:61:ASN:ND2	60:BB:50:G:OP1	2.41	0.53
38:BS:67:ARG:HD3	38:BS:98:VAL:HB	1.90	0.53
21:CA:1123:A:C2	21:CA:1150:U:N3	2.58	0.53
48:D2:22:GLU:OE2	48:D2:64:LEU:HG	2.09	0.53
10:CK:29:ILE:HA	10:CK:44:SER:HA	1.90	0.53
54:D8:8:LYS:HG3	59:DA:252:G:O6	2.09	0.53
21:AA:638:G:H2'	21:AA:639:G:C8	2.44	0.53
59:BA:1278:A:H2'	59:BA:1279:G:C8	2.43	0.53
21:CA:1328:C:H2'	21:CA:1329:A:H8	1.74	0.53
59:BA:1356:G:H2'	59:BA:1357:U:C6	2.43	0.53
21:AA:990:C:H2'	21:AA:991:U:O4'	2.08	0.53
59:DA:52:A:H2'	59:DA:53:A:C8	2.44	0.53
27:BE:24:THR:HG22	27:BE:185:LYS:O	2.09	0.53
59:BA:108:U:H4'	59:BA:347:A:C2	2.44	0.53
30:BH:35:VAL:HG23	30:BH:75:ALA:HB2	1.90	0.53
21:CA:1255:G:H2'	21:CA:1258:G:H21	1.74	0.53
9:AJ:74:ILE:HD12	9:AJ:75:ILE:HD12	1.90	0.53
59:BA:2539:C:H2'	59:BA:2540:C:C6	2.44	0.53
35:DP:61:ARG:O	54:D8:13:ARG:NH1	2.38	0.53
59:BA:705:A:H2'	59:BA:706:A:C8	2.44	0.53
25:DC:127:LYS:HB3	25:DC:128:LEU:HD12	1.91	0.53
42:DW:68:ARG:HA	42:DW:110:LYS:HB3	1.90	0.53
23:AV:31:A:H3'	23:AV:32:U:H5''	1.90	0.53
59:DA:2386:C:H2'	59:DA:2387:U:C6	2.44	0.53
21:AA:313:A:H2'	21:AA:314:C:C6	2.44	0.53
3:AD:201:GLN:HA	3:AD:204:ILE:HB	1.90	0.53
14:CO:22:THR:OG1	21:CA:657:G:N2	2.42	0.53
36:DQ:14:ARG:NH1	59:DA:958:U:OP2	2.38	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DN:93:THR:HA	59:DA:2639:A:H4'	1.91	0.52
42:DW:14:PRO:HB3	42:DW:18:ARG:NE	2.23	0.52
39:BT:53:ARG:NH2	59:BA:2683:C:H5''	2.24	0.52
33:BN:112:LEU:O	33:BN:114:ARG:C	2.47	0.52
59:DA:63:U:H1'	59:DA:64:A:N7	2.24	0.52
21:CA:667:G:H2'	21:CA:668:G:O4'	2.09	0.52
21:CA:773:G:H2'	21:CA:774:G:C8	2.44	0.52
59:DA:941:A:O2'	59:DA:1190:G:H4'	2.10	0.52
59:DA:467:G:H2'	59:DA:468:G:O4'	2.09	0.52
25:BC:101:ILE:HD13	25:BC:124:VAL:HG22	1.90	0.52
38:BS:67:ARG:HA	38:BS:99:LYS:N	2.25	0.52
24:AX:35:A:H2'	24:AX:36:C:C6	2.43	0.52
59:DA:1090:U:H2'	59:DA:1091:G:C8	2.44	0.52
59:DA:1030:G:H2'	59:DA:1031:G:C8	2.40	0.52
59:BA:1288:U:O2	59:BA:1326:U:O4	2.26	0.52
27:BE:111:ARG:HB2	27:BE:160:TYR:O	2.10	0.52
12:CM:124:PRO:HG2	21:CA:965:A:C2	2.44	0.52
45:DZ:99:TYR:HA	45:DZ:124:ILE:O	2.08	0.52
7:CH:36:LEU:HD22	7:CH:45:ILE:HD13	1.91	0.52
45:BZ:7:ALA:HA	45:BZ:39:VAL:HG12	1.91	0.52
16:AQ:29:HIS:CG	16:AQ:32:TYR:HB2	2.44	0.52
13:CN:24:CYS:HB2	13:CN:28:GLY:H	1.72	0.52
59:BA:2889:C:H2'	59:BA:2890:G:O4'	2.09	0.52
20:AY:631:ILE:O	20:AY:645:ALA:HA	2.10	0.52
6:AG:78:ARG:NH1	6:AG:155:ARG:O	2.42	0.52
41:DV:38:LEU:HG	41:DV:57:VAL:HB	1.91	0.52
59:DA:2736:G:H1	59:DA:2768:C:H42	1.57	0.52
59:BA:860:U:H2'	59:BA:861:A:H8	1.74	0.52
39:BT:3:ARG:HG2	59:BA:2876:G:H4'	1.90	0.52
16:AQ:17:LYS:HD2	21:AA:255:G:H4'	1.90	0.52
30:DH:67:LEU:HD11	59:DA:2757:A:N1	2.24	0.52
21:AA:702:A:N6	59:BA:1895:C:H1'	2.24	0.52
23:AV:30:A:O2'	23:AV:31:A:OP1	2.23	0.52
59:DA:404:C:O2'	59:DA:405:U:OP2	2.25	0.52
59:DA:1788:C:H2'	59:DA:1789:A:H8	1.74	0.52
21:AA:288:A:H2'	21:AA:289:G:H4'	1.90	0.52
1:AB:178:ARG:NH2	7:AH:70:GLN:OE1	2.42	0.52
59:BA:923:C:H2'	59:BA:924:C:C6	2.44	0.52
59:BA:245:G:O2'	59:BA:384:U:O2	2.24	0.52
59:BA:397:G:H2'	59:BA:398:G:C8	2.43	0.52
59:BA:1504:C:H2'	59:BA:1505:C:C6	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BZ:93:ASP:HA	45:BZ:130:PRO:HD2	1.92	0.52
6:AG:64:GLN:O	6:AG:68:ASN:ND2	2.29	0.52
33:DN:85:ILE:CG2	33:DN:109:LYS:HB2	2.39	0.52
33:DN:97:ARG:CB	33:DN:105:GLY:HA2	2.39	0.52
33:BN:34:LEU:HD21	33:BN:103:VAL:HG22	1.90	0.52
33:BN:99:LEU:C	33:BN:101:HIS:N	2.62	0.52
21:AA:1518:A:H2'	21:AA:1519:A:C8	2.43	0.52
8:CI:103:THR:HG23	21:CA:1180:A:H5'	1.91	0.52
11:CL:123:LYS:HA	21:CA:36:C:H5''	1.90	0.52
23:CV:19:G:H3'	23:CV:20:U:H5''	1.91	0.52
21:CA:1224:G:C6	21:CA:1322:C:H1'	2.44	0.52
59:BA:1890:A:H2	59:BA:2235:G:H1'	1.73	0.52
59:DA:2427:C:C5'	59:DA:2429:G:H5'	2.39	0.52
21:CA:1233:G:HO2'	21:CA:1364:U:HO2'	1.54	0.52
59:DA:1827:C:H2'	59:DA:1828:G:C8	2.45	0.52
8:CI:116:LYS:HE2	8:CI:122:ALA:HB2	1.90	0.52
21:AA:1236:A:H4'	21:AA:1304:G:H4'	1.90	0.52
21:AA:716:A:H2'	21:AA:717:C:H6	1.75	0.52
21:AA:949:A:H2'	21:AA:950:U:C6	2.45	0.52
22:AW:38:A:H5''	22:AW:39:U:C5	2.44	0.52
27:BE:61:ARG:HB3	27:BE:62:PRO:CD	2.35	0.52
4:CE:121:LYS:HG2	21:CA:7:G:H21	1.74	0.52
4:CE:121:LYS:HD2	21:CA:8:A:H5''	1.90	0.52
59:DA:1126:A:H4'	59:DA:1127:A:H5''	1.90	0.52
59:BA:92:G:H2'	59:BA:93:C:C6	2.44	0.52
11:AL:70:ILE:HD12	11:AL:102:ARG:NH2	2.24	0.52
26:DD:99:ASP:O	59:DA:1500:G:N2	2.42	0.52
59:DA:1388:G:H2'	59:DA:1389:G:C8	2.45	0.52
59:DA:2720:U:H1'	59:DA:2845:G:O2'	2.08	0.52
59:BA:190:A:H5''	59:BA:204:A:N6	2.23	0.52
59:BA:2661:G:H8	59:BA:2661:G:O5'	1.91	0.52
1:CB:163:PHE:CZ	1:CB:187:LEU:HB2	2.45	0.52
21:AA:639:G:H2'	21:AA:640:A:C8	2.43	0.52
21:AA:1291:G:H2'	21:AA:1292:U:C6	2.44	0.52
5:AF:69:GLU:O	5:AF:71:ARG:N	2.42	0.52
37:DR:101:ALA:O	37:DR:103:ARG:N	2.37	0.52
59:BA:468:G:H2'	59:BA:469:G:O4'	2.08	0.52
31:BJ:54:UNK:O	31:BJ:56:UNK:N	2.41	0.52
40:DU:3:ARG:H	59:DA:445:C:H5''	1.74	0.52
12:AM:16:ASP:HB3	12:AM:34:LEU:HD13	1.91	0.52
59:BA:1410:G:H2'	59:BA:1411:C:C6	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BW:74:ALA:HA	42:BW:104:THR:O	2.10	0.52
32:DK:79:ARG:HA	32:DK:84:LEU:HB3	1.90	0.52
37:DR:77:ARG:NH1	59:DA:1454:U:OP1	2.41	0.52
59:BA:134:C:H2'	59:BA:135:G:H8	1.73	0.52
47:B1:5:CYS:SG	47:B1:63:ALA:HB2	2.49	0.52
25:DC:58:ASN:HB3	25:DC:165:ARG:HG3	1.91	0.52
21:CA:68(Y):C:H2'	21:CA:101:A:C8	2.44	0.52
7:AH:116:LYS:HE2	7:AH:129:VAL:HG11	1.91	0.52
29:BG:70:VAL:HA	29:BG:90:LEU:HA	1.90	0.52
2:CC:180:ALA:HB1	2:CC:203:PHE:CE1	2.44	0.52
1:CB:24:TRP:HB3	1:CB:40:HIS:CE1	2.44	0.52
4:AE:20:GLN:HG2	4:AE:22:GLY:H	1.74	0.52
20:AY:603:GLU:HG3	20:AY:677:GLN:O	2.09	0.52
45:DZ:41:LEU:O	45:DZ:45:ASP:N	2.22	0.52
59:BA:2126:A:H61	59:BA:2163:C:H4'	1.73	0.52
4:AE:70:PRO:O	4:AE:72:GLN:N	2.42	0.52
28:DF:83:PHE:HA	59:DA:1257:C:H1'	1.91	0.52
33:BN:116:LEU:O	59:BA:2780:G:H5'	2.09	0.52
33:BN:105:GLY:N	33:BN:106:MET:O	2.43	0.52
33:BN:71:ILE:O	33:BN:97:ARG:O	2.27	0.52
63:DA:2901:NMY:O12	63:DA:2901:NMY:H13	2.09	0.52
59:BA:1669:A:O3'	59:BA:2549:G:H5''	2.10	0.52
21:CA:110:C:H2'	21:CA:111:G:O4'	2.09	0.52
36:DQ:30:GLY:HA3	36:DQ:105:GLU:HB2	1.90	0.52
18:CS:79:THR:HB	21:CA:957:U:H4'	1.89	0.52
60:DB:33:G:H1	60:DB:49:C:N4	2.07	0.52
36:BQ:68:ILE:HD11	36:BQ:104:PHE:CE2	2.44	0.52
59:BA:357(B):A:H2'	59:BA:357(C):G:O4'	2.10	0.52
42:BW:25:ARG:NH2	59:BA:520:G:H5'	2.24	0.52
16:CQ:45:HIS:H	16:CQ:72:ARG:CA	2.22	0.52
41:BV:81:TYR:HE1	41:BV:83:ARG:HG2	1.75	0.52
21:AA:673:G:H1	21:AA:717:C:N4	2.06	0.52
59:DA:1395:A:O2'	59:DA:1396:U:H5'	2.10	0.52
21:CA:1130:A:N6	21:CA:1131:G:O6	2.42	0.52
21:CA:864:A:P	21:CA:864:A:H8	2.33	0.52
27:BE:100:GLU:O	27:BE:172:VAL:N	2.38	0.52
55:D9:37:GLY:HA2	59:DA:1125:G:H5'	1.91	0.52
59:BA:1046:A:H3'	59:BA:1047:G:H5'	1.90	0.52
21:CA:963:G:H2'	21:CA:964:A:H8	1.72	0.52
14:AO:88:ARG:NE	14:AO:88:ARG:HA	2.24	0.52
31:BJ:58:UNK:HA	59:BA:1107:G:H5''	1.90	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:1468(J):G:H2'	59:BA:1468(K):G:C8	2.42	0.52
59:BA:1526:G:H3'	59:BA:1527:G:H8	1.74	0.52
47:B1:26:ARG:O	47:B1:32:LYS:N	2.32	0.52
45:BZ:30:ASN:HA	45:BZ:89:PHE:CE2	2.44	0.52
9:CJ:8:LEU:HD22	9:CJ:16:LEU:HD21	1.91	0.52
59:BA:701:G:H1	59:BA:731:C:H42	1.56	0.52
30:DH:113:VAL:HG11	30:DH:151:ILE:HD13	1.91	0.52
59:BA:1712(C):G:H2'	59:BA:1712(D):G:C8	2.42	0.52
59:DA:2507:C:N4	59:DA:2582:G:H1	2.07	0.52
20:AY:77:HIS:HD2	20:AY:277:VAL:HB	1.74	0.52
59:DA:1352:U:H2'	59:DA:1353:A:H8	1.74	0.52
59:BA:1179:C:H2'	59:BA:1180:C:H6	1.74	0.52
59:BA:41:C:C2	59:BA:43:G:C8	2.97	0.52
1:AB:153:ARG:O	1:AB:156:LYS:NZ	2.41	0.52
14:CO:21:ASP:OD2	21:CA:750:G:O2'	2.19	0.52
20:AY:139:MET:HB3	20:AY:174:PHE:CE1	2.44	0.52
24:CX:15:G:H1	24:CX:59:U:H3	1.56	0.52
21:CA:652:U:O4	21:CA:752:G:O2'	2.24	0.52
20:CY:626:ALA:HA	59:DA:2473:U:O4'	2.10	0.52
20:AY:243:VAL:O	20:AY:247:ARG:HB2	2.09	0.52
59:BA:2794(A):G:H3'	59:BA:2794(B):U:C5'	2.40	0.52
10:AK:18:ARG:HA	10:AK:81:ASP:HB2	1.91	0.52
33:DN:71:ILE:HD11	33:DN:91:LEU:HD12	1.90	0.52
24:CX:76:A:H61	46:D0:2:ALA:HB2	1.74	0.52
33:BN:75:TYR:HA	33:BN:82:LEU:CB	2.39	0.52
3:AD:10:ARG:NH2	21:AA:542:G:OP1	2.41	0.52
59:DA:1312:U:C4	59:DA:1340:U:O4	2.62	0.52
59:DA:1328:G:H4'	59:DA:1329:U:C5	2.44	0.52
21:CA:27:G:H2'	21:CA:28:G:C8	2.45	0.52
55:D9:2:LYS:O	59:DA:2538:C:O2'	2.27	0.52
15:AP:38:TYR:H	15:AP:50:LYS:HB2	1.74	0.52
59:DA:2075:U:C4	59:DA:2077:A:N7	2.78	0.52
36:DQ:72:LYS:O	36:DQ:93:TYR:HA	2.08	0.52
60:BB:36:C:C2	60:BB:49:C:H1'	2.45	0.52
19:AT:23:ARG:HA	19:AT:26:ASN:HB2	1.91	0.52
26:DD:79:VAL:O	26:DD:96:HIS:HB2	2.10	0.52
16:AQ:43:LEU:HB2	16:AQ:70:ARG:O	2.10	0.52
59:BA:884:C:N4	59:BA:885:C:O2	2.43	0.52
59:BA:2018:G:C2	59:BA:2019:A:H1'	2.45	0.52
9:AJ:53:PRO:O	9:AJ:55:LYS:N	2.43	0.52
22:CW:76:A:N1	59:DA:2421:G:H2'	2.24	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:B6:11:LEU:HG	52:B6:26:ASN:ND2	2.21	0.52
59:DA:1467:C:C5	59:DA:1546:C:H2'	2.45	0.52
14:AO:82:ILE:HD11	14:AO:88:ARG:HG2	1.90	0.52
59:BA:393:C:H2'	59:BA:394:A:C8	2.45	0.52
3:AD:38:TYR:OH	21:AA:426:G:OP1	2.23	0.52
31:DJ:58:UNK:C	31:DJ:60:UNK:N	2.73	0.52
59:BA:1565:C:H1'	59:BA:1566:A:C8	2.40	0.52
37:DR:45:ARG:NH2	59:DA:2837:G:H21	2.07	0.52
32:DK:41:PHE:HA	32:DK:44:ALA:HB3	1.91	0.52
59:BA:730:C:H2'	59:BA:731:C:C5	2.45	0.52
26:DD:105:ILE:HD12	26:DD:106:ILE:HG22	1.91	0.52
21:CA:681:C:N4	21:CA:709:G:H1	2.07	0.52
20:CY:289:ILE:HD12	20:CY:289:ILE:H	1.74	0.52
25:BC:61:GLY:HA3	25:BC:164:PHE:CG	2.44	0.52
37:BR:62:ALA:O	37:BR:66:VAL:HG23	2.09	0.52
21:CA:1440(L):G:H2'	21:CA:1440(M):G:O4'	2.09	0.52
21:AA:336:C:H2'	21:AA:337:C:C6	2.45	0.52
20:AY:248:LYS:O	20:AY:252:ASP:HB2	2.09	0.52
39:DT:98:LYS:HG3	39:DT:100:TYR:HE2	1.75	0.52
59:BA:2876:G:H2'	59:BA:2877:G:H8	1.73	0.52
19:CT:38:LYS:HD2	21:CA:1439:C:OP1	2.08	0.52
59:BA:981:A:N1	59:BA:2028:U:H5'	2.24	0.52
34:BO:6:THR:HG1	59:BA:1666:G:HO2'	1.55	0.52
41:DV:99:ILE:O	41:DV:101:GLY:N	2.42	0.52
10:AK:116:HIS:HA	21:AA:718:G:H1'	1.91	0.52
36:DQ:56:ARG:HD3	59:DA:2469:A:H1'	1.90	0.52
59:BA:2243:U:H2'	59:BA:2244:U:C6	2.44	0.52
59:BA:325:G:H1	59:BA:337:C:H42	1.56	0.52
4:CE:34:VAL:HG11	4:CE:63:ARG:HG3	1.90	0.52
59:DA:1139:G:OP2	59:DA:1139:G:C8	2.63	0.52
33:BN:50:ASP:CA	33:BN:103:VAL:HG11	2.40	0.52
21:AA:1491:G:C2	63:AA:1601:NMY:H61	2.44	0.52
63:BA:2903:NMY:H13	63:BA:2903:NMY:O12	2.09	0.52
21:CA:1241:G:H2'	21:CA:1242:C:H6	1.72	0.52
59:DA:2630:G:H3'	59:DA:2631:G:H8	1.74	0.52
11:AL:24:VAL:HG12	11:AL:98:TYR:HE2	1.74	0.52
21:AA:1132:C:H2'	21:AA:1133:G:H8	1.73	0.52
59:BA:444:C:H2'	59:BA:445:C:H6	1.73	0.52
59:DA:1416:G:H2'	59:DA:1417:C:C6	2.44	0.52
21:CA:1504:G:H4'	21:CA:1505:G:O5'	2.09	0.52
48:D2:49:LYS:HE2	48:D2:53:LEU:HD12	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:839:U:H2'	59:BA:840:C:H6	1.74	0.52
2:CC:54:ARG:HB3	2:CC:69:HIS:CG	2.45	0.52
36:DQ:123:HIS:CE1	59:DA:2466:C:HO2'	2.25	0.52
60:DB:92:G:H2'	60:DB:93:C:H6	1.73	0.52
59:DA:1032:A:N1	59:DA:1122:G:O6	2.42	0.52
36:BQ:72:LYS:HB2	36:BQ:94:VAL:O	2.10	0.52
59:DA:2349:G:N1	59:DA:2368:C:O2	2.38	0.52
59:DA:1701:A:H4'	59:DA:1765:C:O2'	2.10	0.52
4:CE:121:LYS:HG2	21:CA:7:G:N2	2.25	0.52
9:CJ:53:PRO:HD2	21:CA:1059:C:O2'	2.09	0.52
21:AA:458(A):G:H1'	21:AA:458(E):A:N6	2.24	0.52
59:DA:740:U:H5''	59:DA:1784:A:O5'	2.09	0.52
46:B0:75:LEU:HD21	59:BA:2334:G:N1	2.25	0.52
25:DC:22:THR:HA	25:DC:225:ILE:O	2.10	0.52
40:DU:36:ARG:HG2	40:DU:37:GLU:N	2.24	0.52
21:AA:1039:C:H2'	21:AA:1040:U:C6	2.45	0.52
10:CK:120:ARG:HH12	21:CA:1524:C:H5''	1.74	0.52
14:AO:46:HIS:HE1	21:AA:669:U:H5'	1.74	0.52
20:AY:133:ILE:HG22	20:AY:257:PRO:HD2	1.92	0.52
59:BA:1506(I):U:O2	59:BA:1557:C:H4'	2.10	0.52
59:BA:259:G:H2'	59:BA:260:G:H8	1.71	0.52
21:AA:253:U:H3	21:AA:273:A:H2	1.58	0.52
21:AA:162:A:H3'	21:AA:163:C:H4'	1.92	0.52
1:AB:189:ASP:HB3	1:AB:205:ASP:H	1.74	0.52
21:AA:1440(C):G:O6	39:BT:93:ARG:NH2	2.43	0.52
16:AQ:21:VAL:HG23	16:AQ:44:ALA:HB2	1.91	0.52
59:BA:611(C):U:H4'	59:BA:611(F):A:C5	2.45	0.52
6:CG:50:ILE:O	6:CG:54:THR:HG22	2.09	0.52
8:AI:28:VAL:HG13	8:AI:63:ILE:HB	1.91	0.52
1:CB:20:GLU:HB2	1:CB:190:THR:HB	1.91	0.52
21:AA:642:A:H2'	21:AA:643:C:C6	2.43	0.52
42:BW:36:LEU:HD13	42:BW:48:ALA:HA	1.90	0.52
20:AY:615:GLU:H	20:AY:615:GLU:CD	2.12	0.52
4:AE:94:ALA:HB2	4:AE:119:LEU:HD22	1.90	0.52
34:BO:18:LYS:HB2	34:BO:45:GLU:HG2	1.90	0.52
59:BA:2519:U:O2	59:BA:2542:A:N6	2.42	0.52
21:AA:712:A:H2'	21:AA:713:G:O4'	2.10	0.52
51:D5:18:ALA:O	51:D5:21:SER:N	2.40	0.52
33:DN:34:LEU:HD11	33:DN:103:VAL:HG22	1.91	0.52
40:DU:62:ILE:HD11	40:DU:93:LYS:HD3	1.92	0.52
27:DE:191:PRO:O	27:DE:193:GLY:N	2.43	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:2683:C:H41	59:BA:2727:G:H21	1.57	0.52
33:BN:25:ARG:NH1	59:BA:1141:U:OP1	2.43	0.52
21:CA:1239:A:C6	21:CA:1299:A:N6	2.72	0.52
59:DA:1337:G:H2'	59:DA:1338:G:C8	2.44	0.52
21:CA:1048:G:N2	21:CA:1209:C:N3	2.55	0.52
21:CA:608:A:H2'	21:CA:609:A:O4'	2.10	0.52
23:CV:13:A:H4'	23:CV:14:A:OP2	2.07	0.52
59:DA:965:C:H2'	59:DA:966:G:C8	2.44	0.52
21:CA:156:G:H2'	21:CA:157:G:C8	2.45	0.52
21:CA:886:G:H4'	21:CA:915:A:H1'	1.91	0.52
53:D7:16:HIS:CE1	59:DA:686:G:H1	2.28	0.52
25:BC:109:MET:HA	25:BC:111:PHE:CE2	2.45	0.52
21:CA:571:U:O2	21:CA:918:A:H5'	2.08	0.52
59:BA:2632:A:H2'	59:BA:2633:G:C8	2.45	0.52
39:DT:53:ARG:HD3	59:DA:2684:U:OP2	2.10	0.52
42:BW:50:VAL:HG11	42:BW:103:ILE:HG21	1.92	0.52
16:AQ:70:ARG:HH21	21:AA:234:C:H5''	1.75	0.52
40:BU:76:TYR:O	40:BU:80:ILE:HG12	2.09	0.52
39:DT:87:ASP:O	39:DT:88:ILE:HB	2.09	0.52
21:CA:892:A:H2'	21:CA:893:C:H6	1.73	0.52
4:AE:19:MET:SD	21:AA:15:G:H1'	2.49	0.52
15:AP:20:VAL:HG23	15:AP:35:LYS:HA	1.92	0.52
9:CJ:4:ILE:HB	9:CJ:74:ILE:HG22	1.90	0.52
54:B8:39:LYS:HE3	59:BA:2382:G:O2'	2.10	0.52
25:BC:11:LEU:HA	25:BC:14:LYS:HB2	1.91	0.52
6:AG:29:LYS:NZ	21:AA:1375:A:O3'	2.43	0.52
16:CQ:61:GLU:HA	16:CQ:71:PHE:CD1	2.45	0.52
6:AG:95:ARG:HE	6:AG:99:LEU:HD23	1.74	0.52
32:DK:99:ILE:O	32:DK:138:VAL:HA	2.09	0.52
59:DA:307:G:H1	59:DA:310:A:C5'	2.23	0.52
15:CP:35:LYS:O	15:CP:36:ILE:HG12	2.10	0.52
37:DR:77:ARG:O	37:DR:81:ASP:HB2	2.09	0.52
59:BA:1667:G:H1'	59:BA:1991:U:C5	2.44	0.52
21:AA:68(O):A:C5	21:AA:68(P):C:H1'	2.45	0.52
21:AA:124:G:H4'	21:AA:291:C:O2'	2.10	0.52
59:DA:1909:C:H2'	59:DA:1910:G:H8	1.74	0.52
59:BA:2050:C:H2'	59:BA:2051:A:O4'	2.09	0.52
35:DP:114:ILE:HG12	35:DP:130:PHE:HA	1.91	0.52
1:AB:139:LYS:O	1:AB:142:LEU:HB2	2.09	0.52
2:AC:119:ARG:HG3	2:AC:123:GLN:HE21	1.74	0.52
59:DA:493:G:H2'	59:DA:494:G:O4'	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:1262:C:H2'	21:AA:1263:C:C6	2.45	0.52
59:BA:2622:C:O2'	59:BA:2824:C:N4	2.42	0.52
28:DF:75:HIS:CD2	28:DF:82:ILE:HD12	2.45	0.52
33:DN:100:GLU:HB3	33:DN:104:LYS:N	2.24	0.52
40:DU:33:ARG:HD3	59:DA:581:C:OP1	2.09	0.52
27:DE:143:ASN:HD21	59:DA:2572:A:P	2.32	0.52
59:BA:1006:C:H2'	59:BA:1007:C:C5	2.44	0.52
33:BN:45:ASN:HB3	33:BN:115:ARG:HG3	1.91	0.52
21:CA:1493:A:H5''	63:CA:1601:NMY:H92	1.74	0.52
21:CA:1115:C:H2'	21:CA:1116:C:O4'	2.10	0.52
21:CA:537:G:H2'	21:CA:538:G:O4'	2.08	0.52
23:CV:20:U:O4	24:CX:35:A:N1	2.42	0.52
60:DB:13:A:N3	60:DB:14:U:H5''	2.25	0.52
11:AL:32:PHE:HB3	11:AL:84:LEU:HD23	1.92	0.52
60:BB:24:G:H1'	60:BB:27:C:H42	1.72	0.52
59:BA:2453:A:H2	59:BA:2500:U:O2	1.93	0.52
25:BC:78:ILE:CG1	25:BC:124:VAL:HG21	2.37	0.52
59:BA:2786:U:H2'	59:BA:2787:C:C6	2.44	0.52
60:BB:36:C:N3	60:BB:49:C:H1'	2.25	0.52
21:AA:657:G:H2'	21:AA:658:G:O4'	2.10	0.52
1:AB:211:ILE:HG13	1:AB:212:GLN:N	2.25	0.52
26:BD:274:ARG:C	26:BD:276:LYS:H	2.12	0.52
43:BX:75:ASP:N	59:BA:58:G:OP1	2.43	0.52
59:DA:1063:G:H2'	59:DA:1064:C:O4'	2.09	0.52
16:AQ:25:ARG:CZ	21:AA:237:C:H5''	2.39	0.52
19:CT:43:LEU:HA	19:CT:46:GLU:HB3	1.92	0.52
29:DG:44:GLY:HA3	59:DA:2311:A:C6	2.45	0.52
16:AQ:63:ARG:HB2	21:AA:130:A:N7	2.25	0.52
19:AT:32:ALA:HA	21:AA:1440(M):G:H5'	1.91	0.52
41:DV:15:GLU:HB3	41:DV:16:PRO:HD2	1.91	0.52
21:AA:1307:U:H2'	21:AA:1308:U:C6	2.45	0.52
21:AA:1194:U:H2'	21:AA:1195:C:C6	2.43	0.52
21:AA:171:A:H2'	21:AA:172:A:C8	2.45	0.52
59:BA:1337:G:H2'	59:BA:1338:G:H8	1.74	0.52
21:CA:848:C:H2'	21:CA:849:C:H6	1.74	0.52
45:BZ:15:PRO:HD3	60:BB:76:G:H5''	1.90	0.52
2:AC:139:GLN:O	2:AC:143:GLU:HB2	2.10	0.52
3:CD:21:LEU:O	3:CD:113:SER:OG	2.16	0.52
59:BA:2546:U:H4'	59:BA:2566:A:C2	2.45	0.52
5:CF:70:ASP:O	5:CF:73:ASN:ND2	2.42	0.52
21:CA:540:G:H2'	21:CA:541:G:O4'	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:AW:21:A:N1	22:AW:46:G:H2'	2.25	0.52
59:BA:1016:G:O6	59:BA:1146:C:N3	2.42	0.52
44:BY:91:GLU:HG2	44:BY:92:ASN:H	1.74	0.52
21:CA:1025:U:H5''	21:CA:1026:G:H5'	1.91	0.52
41:BV:61:VAL:HG23	41:BV:93:GLU:O	2.10	0.52
21:AA:160:A:C2	21:AA:343:U:H1'	2.45	0.52
40:BU:88:ILE:HG22	40:BU:90:VAL:O	2.10	0.52
25:BC:63:VAL:N	25:BC:161:ARG:O	2.43	0.52
33:DN:37:LYS:HE2	33:DN:38:HIS:CD2	2.32	0.52
33:DN:85:ILE:H	33:DN:106:MET:HA	1.75	0.52
33:BN:82:LEU:N	33:BN:82:LEU:HD22	2.24	0.52
21:CA:1405:G:P	63:CA:1601:NMY:H231	2.50	0.52
63:CA:1601:NMY:O12	63:CA:1601:NMY:H13	2.09	0.52
59:DA:852:G:H1	59:DA:925:C:N4	2.07	0.52
59:DA:1666:G:H1	59:DA:1994:C:H42	0.71	0.52
59:BA:910:A:H5'	59:BA:911:A:OP2	2.10	0.52
59:DA:635:C:H2'	59:DA:636:G:O4'	2.09	0.52
25:BC:43:GLU:CD	59:BA:2123:G:H21	2.12	0.52
59:BA:635:C:H2'	59:BA:636:G:O4'	2.10	0.52
59:DA:1297:C:N3	59:DA:1643:G:N2	2.49	0.52
59:DA:1061:U:O2'	59:DA:1063:G:OP1	2.28	0.52
21:AA:521:G:N2	21:AA:536:C:O4'	2.31	0.52
59:BA:2386:C:H2'	59:BA:2387:U:C6	2.44	0.52
20:AY:30:GLU:HG3	20:AY:31:ARG:NH1	2.21	0.52
59:BA:2593:U:H2'	59:BA:2594:C:C6	2.44	0.52
20:CY:567:LEU:O	20:CY:568:TYR:HB3	2.09	0.52
59:BA:1654:A:H61	59:BA:2005:A:H2'	1.74	0.52
20:AY:332:SER:HA	20:AY:371:ALA:HB1	1.90	0.52
20:CY:105:ILE:HG23	20:CY:133:ILE:HG13	1.91	0.52
35:DP:9:ASN:N	35:DP:10:PRO:HD3	2.25	0.52
59:BA:1428:C:O2'	59:BA:1569:A:OP2	2.19	0.52
59:BA:1779:U:H2'	59:BA:1783:A:N6	2.24	0.52
37:DR:45:ARG:O	37:DR:49:ASP:HB2	2.09	0.52
15:AP:35:LYS:O	15:AP:36:ILE:HG12	2.10	0.52
59:DA:1712(G):G:O2'	59:DA:1712(K):A:N6	2.43	0.52
39:BT:121:ILE:O	39:BT:125:ARG:HG2	2.10	0.52
52:D6:19:ARG:HA	52:D6:21:TYR:HE1	1.75	0.52
21:AA:269:C:H2'	21:AA:270:A:H8	1.74	0.52
55:B9:24:TYR:OH	59:BA:2742:C:OP2	2.20	0.52
35:DP:58:THR:HG1	35:DP:61:ARG:HH21	1.56	0.52
59:BA:2875:C:H2'	59:BA:2876:G:O4'	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:CO:32:LEU:HD12	14:CO:63:ARG:HB3	1.92	0.52
59:BA:2546:U:O2'	59:BA:2566:A:H1'	2.09	0.52
28:BF:37:VAL:HA	28:BF:40:GLN:HE21	1.75	0.52
6:CG:38:LEU:O	6:CG:42:ILE:HG12	2.10	0.52
59:BA:1441:G:H4'	59:BA:1628:G:OP1	2.10	0.52
26:DD:136:ILE:O	26:DD:168:ARG:NH2	2.42	0.52
33:DN:72:TYR:O	33:DN:85:ILE:O	2.28	0.52
36:DQ:75:THR:HB	36:DQ:88:GLY:HA3	1.91	0.52
59:BA:529:A:N7	59:BA:2041:U:O4	2.43	0.52
33:BN:35:ARG:NH2	33:BN:75:TYR:HD2	2.07	0.52
59:BA:1937:A:O2'	59:BA:1939:U:H6	1.90	0.52
36:BQ:13:GLN:HB3	59:BA:954:G:H5''	1.92	0.52
21:CA:1222:G:OP1	21:CA:1321:C:H2'	2.10	0.52
18:CS:77:THR:HG21	21:CA:1221:G:H4'	1.90	0.52
25:BC:172:ILE:HD13	25:BC:173:HIS:H	1.73	0.52
48:D2:48:HIS:CG	59:DA:95:G:HO2'	2.27	0.52
47:D1:20:ARG:HG2	47:D1:22:GLY:HA3	1.92	0.52
59:BA:222:A:H5''	59:BA:421:U:OP1	2.10	0.52
59:BA:832:G:N7	59:BA:944:G:N2	2.57	0.52
59:DA:1124:C:H2'	59:DA:1125:G:O4'	2.08	0.52
59:DA:1080:C:H2'	59:DA:1081:U:H6	1.71	0.52
1:CB:71:VAL:HB	1:CB:164:VAL:CG2	2.39	0.52
59:DA:1506(I):U:H2'	59:DA:1506(J):G:H8	1.71	0.52
39:BT:78:LEU:HA	39:BT:82:LEU:HD21	1.90	0.52
21:AA:638:G:H2'	21:AA:639:G:H8	1.75	0.52
21:CA:660:G:H1	21:CA:745:C:H42	1.57	0.52
59:BA:2463:C:H2'	59:BA:2464:C:O4'	2.09	0.52
21:CA:579:G:H4'	21:CA:728:A:H1'	1.91	0.52
3:CD:173:TRP:HD1	3:CD:186:LEU:H	1.57	0.52
20:AY:119:GLU:O	20:AY:123:ARG:HB2	2.09	0.52
22:AW:76:A:N1	59:BA:2421:G:H2'	2.25	0.52
21:AA:1203:C:H2'	21:AA:1204:A:H8	1.75	0.52
21:AA:1120:G:H2'	21:AA:1121:U:C6	2.44	0.52
11:AL:81:SER:HB3	11:AL:106:ASP:HB2	1.92	0.52
45:DZ:4:ARG:HA	45:DZ:58:VAL:HB	1.91	0.52
21:AA:1197:G:H8	21:AA:1197:G:H5'	1.75	0.52
11:CL:65:GLU:O	11:CL:66:VAL:HG22	2.10	0.52
59:DA:1769:G:O2'	59:DA:1958:C:OP1	2.19	0.52
33:BN:55:VAL:HG22	33:BN:126:PRO:HA	1.92	0.52
34:BO:1:MET:HG2	59:BA:1665:A:H1'	1.92	0.52
22:CW:25:C:C4	22:CW:26:A:N6	2.77	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:1356:G:H2'	59:DA:1357:U:C6	2.45	0.52
59:BA:1418:G:OP1	59:BA:1588:C:H4'	2.10	0.52
59:BA:629:G:H2'	59:BA:630:G:C8	2.45	0.52
60:BB:3:C:N3	60:BB:117:G:C2	2.78	0.52
6:CG:76:ARG:O	6:CG:86:GLN:HA	2.09	0.52
21:CA:1476:G:H2'	21:CA:1477:C:C6	2.44	0.52
10:AK:115:PRO:HA	21:AA:675:A:H2	1.75	0.52
21:AA:717:C:H5''	21:AA:733:A:O2'	2.09	0.52
59:DA:836:G:H2'	59:DA:837:C:C6	2.45	0.52
7:AH:95:VAL:HB	7:AH:133:LEU:HG	1.91	0.52
18:AS:37:ARG:HD2	21:AA:1220:G:OP1	2.10	0.52
10:CK:97:ALA:HA	10:CK:100:ALA:HB3	1.90	0.52
21:CA:1060:C:H2'	21:CA:1061:G:O4'	2.09	0.52
59:BA:1412:A:N6	59:BA:1590:U:H3	2.08	0.52
11:AL:53:ARG:HH21	21:AA:521:G:H5''	1.75	0.52
59:BA:1636:C:O2	59:BA:1760:A:H2	1.91	0.52
21:CA:319:G:H1	21:CA:334:C:H42	1.56	0.52
59:DA:2262:U:H2'	59:DA:2263:C:H6	1.74	0.52
59:BA:1674:G:H21	59:BA:1677:A:H61	1.56	0.52
21:AA:68(C):C:H2'	21:AA:68(D):C:C6	2.45	0.52
27:BE:2:LYS:NZ	27:BE:95:ILE:O	2.36	0.52
21:AA:626:U:H2'	21:AA:627:G:H8	1.75	0.52
59:BA:731:C:O5'	59:BA:731:C:H6	1.93	0.52
4:AE:78:HIS:HB2	7:AH:104:ARG:HG3	1.92	0.52
30:DH:103:LEU:O	30:DH:114:VAL:HA	2.10	0.52
20:AY:668:SER:OG	20:AY:669:PHE:N	2.42	0.52
21:AA:22:G:H4'	21:AA:885:G:C8	2.45	0.52
23:CV:33:C:HO2'	23:CV:34:A:H8	1.57	0.52
44:BY:43:ASN:HA	44:BY:63:LYS:O	2.11	0.52
52:B6:48:VAL:O	52:B6:49:HIS:HB2	2.10	0.52
21:CA:928:G:H2'	21:CA:929:G:H8	1.75	0.52
5:CF:92:LYS:O	5:CF:94:GLN:N	2.43	0.52
1:CB:172:ILE:HA	1:CB:175:ARG:NH1	2.25	0.52
59:DA:1910:G:C2	59:DA:1911:U:H1'	2.45	0.52
59:DA:2081:C:H2'	59:DA:2082:A:H8	1.73	0.52
31:DJ:33:UNK:HA	59:DA:1055:G:H5'	1.92	0.52
59:DA:2643:G:H2'	59:DA:2644:G:O4'	2.10	0.52
34:BO:91:LEU:HD22	34:BO:92:GLU:N	2.24	0.52
1:CB:115:LEU:HD11	1:CB:146:GLN:HE22	1.75	0.52
50:D4:10:VAL:HG22	50:D4:11:PRO:HD2	1.92	0.52
59:BA:740:U:H1'	59:BA:1981:A:C4	2.46	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CA:883:C:H2'	21:CA:884:U:C6	2.45	0.52
33:DN:19:GLU:HG3	33:DN:20:GLY:N	2.25	0.51
42:DW:18:ARG:HH12	42:DW:77:ASP:HA	1.75	0.51
33:BN:104:LYS:CB	33:BN:120:LEU:HD21	2.40	0.51
33:BN:60:ILE:HG22	33:BN:61:ARG:HB2	1.92	0.51
33:BN:71:ILE:HD11	33:BN:91:LEU:HG	1.91	0.51
26:BD:224:ALA:HB2	26:BD:233:HIS:HD1	1.75	0.51
42:DW:13:SER:H	42:DW:16:LYS:HE2	1.76	0.51
59:DA:2851:A:H2'	59:DA:2852:G:C8	2.45	0.51
21:CA:109:A:N6	21:CA:324:G:H1'	2.26	0.51
11:CL:90:VAL:O	11:CL:92:ASP:N	2.43	0.51
59:DA:1651:G:H2'	59:DA:1652:A:H8	1.75	0.51
11:AL:60:LEU:HB2	11:AL:63:GLY:H	1.75	0.51
59:DA:950:G:N2	59:DA:967:C:N3	2.47	0.51
34:DO:23:ARG:HG2	59:DA:2562:U:H1'	1.92	0.51
21:CA:1251:A:N3	21:CA:1369:C:O2'	2.37	0.51
55:B9:17:ILE:HD11	55:B9:19:ARG:HB2	1.93	0.51
59:DA:2649:U:H2'	59:DA:2650:U:C6	2.45	0.51
4:CE:121:LYS:HG3	4:CE:122:GLU:N	2.25	0.51
48:B2:10:LEU:HD22	48:B2:14:ARG:HH21	1.75	0.51
59:BA:805:G:H5'	59:BA:806:C:C6	2.45	0.51
42:BW:18:ARG:HA	42:BW:76:VAL:HG11	1.92	0.51
7:CH:91:ARG:NH2	21:CA:564:C:H4'	2.25	0.51
59:BA:1653:G:H5'	59:BA:2822:G:H22	1.75	0.51
28:BF:9:ILE:HG21	28:BF:125:LEU:N	2.25	0.51
39:DT:48:ILE:HG22	39:DT:49:VAL:HG12	1.93	0.51
28:DF:102:PRO:HA	59:DA:607:U:P	2.50	0.51
35:BP:30:THR:O	35:BP:33:ARG:N	2.43	0.51
38:DS:105:ALA:O	38:DS:107:GLU:N	2.43	0.51
20:AY:512:ILE:HA	20:AY:567:LEU:HG	1.91	0.51
21:CA:1440(D):A:C6	39:DT:118:ARG:HD3	2.45	0.51
59:BA:422:A:C2	59:BA:423:A:C4	2.98	0.51
35:DP:81:GLN:HE21	35:DP:106:LEU:HA	1.75	0.51
59:BA:1214:A:H62	59:BA:1235:G:N2	2.07	0.51
59:BA:1221:C:N4	59:BA:1228:G:H1	2.04	0.51
21:CA:950:U:O2	21:CA:1231:G:N2	2.25	0.51
59:BA:1028:A:H2'	59:BA:1029:A:C8	2.45	0.51
59:BA:1422:G:H2'	59:BA:1423:G:H8	1.72	0.51
3:CD:173:TRP:HZ3	3:CD:194:LEU:HD21	1.75	0.51
30:DH:72:ILE:O	30:DH:76:VAL:HG23	2.10	0.51
59:BA:2298:A:H3'	59:BA:2299:G:C8	2.44	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:108:U:H2'	59:DA:109:G:H8	1.75	0.51
38:DS:34:HIS:CE1	38:DS:54:LEU:HB3	2.45	0.51
59:BA:1765:C:H2'	59:BA:1766:U:C6	2.45	0.51
42:DW:70:TYR:HD2	42:DW:110:LYS:HA	1.74	0.51
25:DC:185:LYS:O	25:DC:189:ASN:ND2	2.43	0.51
55:B9:18:ARG:NH2	59:BA:1032:A:H1'	2.26	0.51
59:BA:2655:G:O2'	59:BA:2664:G:O6	2.22	0.51
6:AG:73:MET:HG2	6:AG:90:GLU:HG2	1.91	0.51
21:CA:811:C:H5'	21:CA:812:C:OP2	2.10	0.51
21:CA:606:G:H2'	21:CA:631:G:N2	2.25	0.51
53:B7:8:ASN:HB3	53:B7:11:LYS:HB3	1.93	0.51
20:CY:345:THR:HG22	20:CY:346:LYS:HG2	1.92	0.51
42:BW:72:LYS:HD2	42:BW:108:GLY:HA3	1.91	0.51
21:AA:629:G:H2'	21:AA:630:G:O4'	2.10	0.51
33:DN:114:ARG:O	33:DN:114:ARG:HD3	2.10	0.51
33:DN:40:PRO:HA	33:DN:77:GLY:HA2	1.92	0.51
21:CA:1491:G:H2'	63:CA:1601:NMY:H4	1.91	0.51
21:CA:1116:C:C2'	21:CA:1117:G:H5''	2.40	0.51
63:BA:2904:NMY:H13	63:BA:2904:NMY:O12	2.09	0.51
3:AD:115:ARG:HB3	21:AA:407:G:H5''	1.92	0.51
59:DA:1340:U:H4'	59:DA:1394:U:O2'	2.10	0.51
36:DQ:36:ALA:HA	36:DQ:129:THR:HB	1.91	0.51
21:CA:1048:G:H1	21:CA:1209:C:N4	2.06	0.51
12:AM:123:ALA:HB1	24:AX:31:C:H1'	1.92	0.51
59:BA:2331:G:H2'	59:BA:2332:U:C6	2.45	0.51
59:DA:204:A:OP1	59:DA:204:A:H8	1.93	0.51
25:BC:114:VAL:HB	25:BC:139:PRO:HD3	1.92	0.51
20:CY:87:HIS:NE2	20:CY:117:GLN:O	2.43	0.51
34:BO:71:ARG:HG3	39:BT:74:ARG:HH21	1.75	0.51
37:BR:11:ASN:O	37:BR:17:ARG:NE	2.37	0.51
40:BU:81:HIS:CE1	40:BU:85:LYS:HB2	2.46	0.51
44:DY:97:ARG:NE	59:DA:300:A:OP1	2.43	0.51
21:AA:1040:U:H2'	21:AA:1041:A:H8	1.74	0.51
5:AF:69:GLU:HB2	21:AA:738:C:H4'	1.91	0.51
47:B1:43:TYR:HB2	47:B1:44:PRO:HD3	1.91	0.51
21:AA:272:C:H2'	21:AA:273:A:C8	2.45	0.51
20:AY:315:LYS:O	20:AY:326:THR:HA	2.09	0.51
59:DA:1536:A:H5''	59:DA:1537:C:OP2	2.10	0.51
59:DA:2002:G:H2'	59:DA:2003:G:C8	2.45	0.51
59:DA:1468(D):A:H61	59:DA:1506(N):G:H1'	1.75	0.51
21:AA:604:G:O6	21:AA:634:C:N3	2.43	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BH:148:ILE:HA	30:BH:151:ILE:HG13	1.92	0.51
34:DO:34:THR:OG1	34:DO:35:VAL:N	2.44	0.51
3:CD:94:LEU:HD12	3:CD:191:ARG:HB2	1.93	0.51
40:BU:112:ARG:HH11	41:BV:46:VAL:HG21	1.74	0.51
12:CM:95:GLY:HA2	12:CM:110:ARG:NH1	2.26	0.51
20:CY:15:ILE:HB	20:CY:104:ALA:HA	1.91	0.51
21:CA:898:G:N2	21:CA:901:A:OP2	2.44	0.51
43:DX:65:ARG:HD3	43:DX:70:LEU:HD23	1.91	0.51
38:BS:102:ALA:HB2	38:BS:109:GLY:H	1.75	0.51
5:AF:2:ARG:HD3	5:AF:92:LYS:HE2	1.92	0.51
3:CD:196:LEU:O	3:CD:198:VAL:N	2.42	0.51
15:AP:32:TYR:HB2	15:AP:34:GLU:O	2.09	0.51
25:BC:53:ARG:HG2	25:BC:54:ARG:N	2.24	0.51
39:BT:67:SER:O	39:BT:69:GLY:N	2.43	0.51
2:CC:67:THR:HG22	2:CC:104:GLN:HB2	1.92	0.51
21:CA:235:C:H2'	21:CA:236:G:H8	1.75	0.51
59:DA:448:U:H3	59:DA:583:G:H1'	1.73	0.51
33:DN:100:GLU:HB3	33:DN:104:LYS:H	1.76	0.51
33:DN:99:LEU:C	33:DN:101:HIS:N	2.63	0.51
59:DA:955:C:N3	59:DA:962:G:C6	2.76	0.51
59:DA:1936:A:H1'	59:DA:1940:U:O2'	2.10	0.51
59:BA:1930:G:O6	63:BA:2904:NMY:H7	2.11	0.51
59:DA:2789:C:H4'	59:DA:2892:A:H61	1.75	0.51
18:CS:73:GLU:HB3	21:CA:1320:C:H1'	1.91	0.51
59:BA:151:C:N3	59:BA:175:G:N2	2.43	0.51
59:BA:151:C:H2'	59:BA:152:G:H8	1.74	0.51
59:BA:2166:G:H2'	59:BA:2167:U:O4'	2.10	0.51
21:CA:1506:U:O2'	21:CA:1507:A:OP1	2.24	0.51
21:CA:926:G:H22	23:CV:17:U:H5"	1.74	0.51
36:BQ:129:THR:HG1	36:BQ:130:LYS:H	1.58	0.51
48:D2:48:HIS:O	48:D2:50:ILE:N	2.43	0.51
11:AL:49:ASN:HA	21:AA:529:G:O6	2.09	0.51
54:D8:33:ASN:HD22	59:DA:2419:U:P	2.34	0.51
59:DA:836:G:N2	59:DA:943:U:O2	2.30	0.51
54:B8:16:ILE:HG22	54:B8:22:VAL:HA	1.91	0.51
54:B8:2:PRO:HD3	59:BA:590:A:C2	2.45	0.51
42:BW:103:ILE:H	42:BW:103:ILE:HD12	1.75	0.51
59:BA:893:C:H2'	59:BA:894:C:C6	2.45	0.51
21:AA:1434:A:N6	21:AA:1467:G:H1'	2.25	0.51
59:BA:1653:G:H5'	59:BA:2822:G:N2	2.25	0.51
28:BF:157:VAL:HG12	28:BF:194:MET:HG2	1.91	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BF:154:VAL:O	28:BF:175:THR:HA	2.11	0.51
28:BF:4:VAL:HA	28:BF:22:ALA:HB3	1.92	0.51
26:BD:157:ARG:NH2	59:BA:1817:G:O5'	2.31	0.51
54:B8:47:LYS:HG2	54:B8:48:PHE:H	1.74	0.51
35:BP:97:PRO:HD3	35:BP:126:VAL:HB	1.92	0.51
21:CA:130:A:N6	21:CA:233:C:O2	2.44	0.51
21:AA:1440(K):G:N2	21:AA:1440(L):G:C5	2.79	0.51
11:CL:34:ARG:O	11:CL:82:VAL:HA	2.10	0.51
25:BC:31:LYS:HG2	25:BC:186:LEU:HD12	1.92	0.51
59:BA:373:U:H2'	59:BA:374:A:C8	2.46	0.51
59:DA:1277:G:H2'	59:DA:1278:A:H8	1.75	0.51
59:DA:1203:G:N1	59:DA:1241:A:OP2	2.28	0.51
26:DD:12:SER:OG	26:DD:208:LYS:HD3	2.11	0.51
59:DA:813:U:H2'	59:DA:814:C:C6	2.44	0.51
20:CY:32:ILE:O	20:CY:35:TYR:HD2	1.94	0.51
59:BA:2291:U:H2'	59:BA:2292:C:C6	2.45	0.51
9:CJ:6:ILE:HG23	9:CJ:72:VAL:HB	1.91	0.51
45:DZ:102:LEU:HB2	45:DZ:122:ARG:HA	1.92	0.51
32:BK:55:VAL:HG22	32:BK:56:GLU:H	1.74	0.51
21:AA:1268:A:H1'	21:AA:1326:C:O2'	2.10	0.51
2:AC:4:LYS:HZ3	21:AA:1191:A:H5''	1.74	0.51
9:CJ:39:PRO:HB3	9:CJ:70:ARG:HE	1.75	0.51
4:CE:75:THR:OG1	4:CE:76:ILE:N	2.43	0.51
59:BA:2769:C:H2'	59:BA:2770:G:C8	2.46	0.51
20:AY:503:GLY:O	23:AV:21:A:H1'	2.11	0.51
27:DE:72:VAL:HG12	27:DE:73:GLU:H	1.75	0.51
3:AD:190:ASP:OD1	3:AD:192:GLU:N	2.43	0.51
27:DE:119:ARG:NH1	27:DE:156:MET:O	2.40	0.51
20:CY:606:MET:SD	20:CY:671:MET:HB3	2.50	0.51
33:BN:116:LEU:CB	33:BN:118:LYS:H	2.24	0.51
59:DA:1965:C:P	59:DA:1966:A:H3'	2.51	0.51
60:DB:36:C:N4	60:DB:49:C:H1'	2.26	0.51
16:CQ:45:HIS:CB	16:CQ:72:ARG:HA	2.33	0.51
11:AL:93:LEU:HD12	11:AL:96:VAL:HG13	1.92	0.51
21:CA:935:A:N6	21:CA:1380:U:H3	2.04	0.51
6:CG:74:GLU:O	6:CG:88:PRO:HA	2.11	0.51
28:DF:59:TYR:HB3	59:DA:469:G:OP1	2.10	0.51
6:CG:69:VAL:HG21	6:CG:104:LEU:CD2	2.40	0.51
18:AS:73:GLU:HB3	21:AA:1320:C:O2'	2.10	0.51
21:AA:957:U:N3	21:AA:960:U:OP2	2.36	0.51
46:D0:37:LEU:HD12	46:D0:59:LEU:HB3	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DC:153:ILE:O	25:DC:157:ILE:HG13	2.09	0.51
11:AL:69:TYR:CG	11:AL:70:ILE:N	2.75	0.51
59:DA:2761:G:H2'	59:DA:2762:G:O4'	2.10	0.51
38:BS:22:GLY:O	38:BS:23:ARG:NE	2.43	0.51
60:BB:15:A:H3'	60:BB:16:G:H8	1.76	0.51
20:AY:95:GLU:O	20:AY:99:ARG:NH1	2.44	0.51
37:BR:103:ARG:O	37:BR:105:ARG:N	2.44	0.51
21:AA:917:G:H2'	21:AA:918:A:C8	2.46	0.51
55:B9:27:CYS:SG	55:B9:32:HIS:ND1	2.83	0.51
59:BA:767:U:H2'	59:BA:768:G:C8	2.45	0.51
59:DA:1594:G:H2'	59:DA:1595:G:C8	2.46	0.51
5:CF:42:GLU:HA	5:CF:61:LEU:HA	1.91	0.51
59:BA:1958:C:H2'	59:BA:1959:G:H8	1.76	0.51
21:AA:395:C:H2'	21:AA:396:G:H8	1.75	0.51
1:AB:187:LEU:HD23	1:AB:188:ALA:H	1.76	0.51
60:BB:38:C:H2'	60:BB:39:A:H8	1.75	0.51
59:DA:458:G:H1'	59:DA:459:U:H5	1.75	0.51
29:BG:60:LEU:HD21	29:BG:153:ARG:HD3	1.93	0.51
49:B3:7:LYS:HE2	49:B3:32:GLN:HA	1.91	0.51
13:CN:47:LEU:HD22	13:CN:53:LEU:HB2	1.93	0.51
28:DF:82:ILE:HG13	28:DF:83:PHE:CD1	2.45	0.51
33:DN:114:ARG:NH2	59:DA:528:A:C5	2.76	0.51
33:BN:101:HIS:C	33:BN:101:HIS:CD2	2.84	0.51
59:DA:271(Q):A:N1	59:DA:357(E):U:O2	2.44	0.51
21:CA:107:G:H1'	21:CA:378:G:H4'	1.93	0.51
20:AY:22:ASP:OD1	61:AY:701:GDP:C5'	2.52	0.51
30:DH:111:HIS:NE2	59:DA:2668:G:H1'	2.26	0.51
59:DA:733:G:O2'	59:DA:734:A:O5'	2.25	0.51
60:DB:6:C:H42	60:DB:114:G:H1	1.58	0.51
19:AT:22:ARG:O	19:AT:26:ASN:HB2	2.11	0.51
59:BA:734:A:H2'	59:BA:735:A:C8	2.46	0.51
59:DA:1494:A:H8	59:DA:1496:A:OP2	1.93	0.51
28:BF:167:ALA:HB1	28:BF:173:VAL:HG11	1.93	0.51
59:BA:2071:A:H2	59:BA:2438:U:H3	1.54	0.51
59:DA:2175:C:H2'	59:DA:2176:A:H8	1.74	0.51
44:DY:81:LYS:HB3	44:DY:97:ARG:HB2	1.91	0.51
21:AA:416:G:H2'	21:AA:417:C:O4'	2.11	0.51
40:DU:3:ARG:HH21	59:DA:449:A:H5'	1.76	0.51
1:AB:85:ALA:C	1:AB:87:ARG:H	2.14	0.51
1:CB:96:ARG:HD3	21:CA:1099:G:P	2.50	0.51
59:BA:308:G:H1'	59:BA:329:G:H22	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CM:31:LYS:HA	12:CM:34:LEU:HB2	1.91	0.51
6:CG:43:PHE:O	6:CG:47:CYS:HB2	2.11	0.51
37:BR:87:TYR:CE1	37:BR:94:TYR:HB3	2.46	0.51
16:AQ:21:VAL:HG21	16:AQ:59:ILE:HD11	1.92	0.51
28:BF:180:GLY:HA2	59:BA:611(G):G:H1'	1.92	0.51
7:AH:63:LEU:HD22	7:AH:63:LEU:H	1.76	0.51
59:BA:1330:C:H2'	59:BA:1331:A:C8	2.45	0.51
20:CY:604:PRO:HA	20:CY:676:TYR:HB3	1.92	0.51
3:CD:157:LEU:HA	3:CD:160:GLN:HB3	1.92	0.51
8:CI:24:GLY:HA3	8:CI:57:GLY:HA2	1.93	0.51
46:B0:54:GLY:O	46:B0:57:PHE:N	2.43	0.51
59:BA:501:A:H2'	59:BA:502:A:O4'	2.10	0.51
59:BA:1030:G:H2'	59:BA:1031:G:H8	1.74	0.51
42:BW:39:THR:O	42:BW:41:LYS:N	2.44	0.51
59:DA:1019:U:OP1	59:DA:1035:U:O2'	2.17	0.51
59:DA:582:G:H2'	59:DA:583:G:C8	2.46	0.51
59:BA:1665:A:N6	59:BA:1992:G:O6	2.44	0.51
21:CA:956:U:H2'	21:CA:957:U:C6	2.46	0.51
47:D1:17:SER:H	47:D1:39:LYS:HA	1.75	0.51
25:BC:75:VAL:HG11	25:BC:154:ILE:HD11	1.92	0.51
59:DA:71:A:OP1	59:DA:112:U:H2'	2.10	0.51
59:BA:669:G:OP1	59:BA:670:A:N6	2.44	0.51
51:B5:10:LYS:N	59:BA:2017:U:O2'	2.44	0.51
24:AX:72:C:H5'	24:AX:73:A:OP1	2.11	0.51
59:BA:463:G:N2	59:BA:466:A:C8	2.77	0.51
60:BB:13:A:H2'	60:BB:13:A:N3	2.26	0.51
20:CY:425:SER:O	20:CY:428:LEU:HG	2.11	0.51
20:CY:133:ILE:HG22	20:CY:257:PRO:HD2	1.91	0.51
7:AH:83:ILE:HD13	7:AH:83:ILE:H	1.75	0.51
19:AT:35:THR:HG21	21:AA:1440(M):G:OP1	2.10	0.51
37:DR:117:VAL:O	37:DR:118:GLU:HB2	2.10	0.51
27:BE:115:GLY:O	27:BE:119:ARG:HB2	2.10	0.51
40:BU:91:ASP:O	40:BU:95:LEU:HB2	2.10	0.51
21:AA:382:A:N7	21:AA:383:A:N6	2.59	0.51
21:CA:724:G:H2'	21:CA:725:G:H8	1.75	0.51
4:AE:78:HIS:NE2	4:AE:142:LEU:HD23	2.26	0.51
32:DK:53:VAL:HG13	32:DK:70:LYS:H	1.76	0.51
30:DH:85:LYS:HZ1	30:DH:121:ILE:HD12	1.75	0.51
20:CY:128:TYR:HD2	20:CY:130:VAL:HB	1.75	0.51
59:BA:1923:U:H2'	59:BA:1924:C:H5	1.76	0.51
59:DA:2199:A:N6	59:DA:2224:G:O2'	2.44	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:1700:A:C2	59:BA:1766:U:H5''	2.45	0.51
59:DA:886:C:H2'	59:DA:889:C:N4	2.26	0.51
29:BG:61:ALA:HA	29:BG:64:THR:HG22	1.91	0.51
59:DA:1370:C:H2'	59:DA:1371:G:O4'	2.10	0.51
20:AY:358:MET:HA	20:AY:363:ARG:HG2	1.92	0.51
21:AA:881:G:H2'	21:AA:882:C:O4'	2.11	0.51
32:BK:79:ARG:HD2	32:BK:86:LYS:HA	1.92	0.51
59:BA:1400:G:H2'	59:BA:1401:G:O4'	2.11	0.51
9:CJ:83:GLU:O	9:CJ:87:THR:OG1	2.20	0.51
3:AD:98:GLU:O	3:AD:100:ARG:N	2.44	0.51
33:DN:107:LEU:HB3	33:DN:117:PHE:CE1	2.46	0.51
33:DN:73:THR:HB	33:DN:86:PRO:HA	1.93	0.51
59:DA:959:A:H1'	59:DA:2457:U:O2'	2.10	0.51
27:BE:47:VAL:O	27:BE:80:GLU:HA	2.11	0.51
63:AA:1601:NMY:O12	63:AA:1601:NMY:H13	2.09	0.51
59:BA:2551:C:C2	59:BA:2552:U:H1'	2.46	0.51
21:CA:388:G:H4'	21:CA:389:A:H5''	1.93	0.51
59:DA:1664:A:N6	59:DA:1996:C:H42	2.06	0.51
20:AY:90:PHE:HB2	20:AY:458:HIS:HD1	1.75	0.51
59:DA:2005:A:O2'	59:DA:2049:G:OP1	2.28	0.51
59:DA:1310:G:H5'	59:DA:1611:C:H5''	1.93	0.51
22:CW:21:A:N6	22:CW:46:G:H5''	2.23	0.51
21:CA:1521:G:H2'	21:CA:1522:U:C6	2.45	0.51
26:DD:54:ARG:NH2	59:DA:1822:G:H5''	2.25	0.51
59:DA:856:C:H2'	59:DA:857:C:C6	2.45	0.51
60:BB:24:G:H4'	60:BB:25:A:C8	2.45	0.51
21:CA:41:G:C6	21:CA:402:G:C6	2.99	0.51
59:DA:244:A:N6	59:DA:254:G:H21	1.98	0.51
59:BA:2445:G:H2'	59:BA:2446:G:C8	2.45	0.51
59:DA:2408:U:H2'	59:DA:2409:G:H8	1.75	0.51
21:CA:8:A:O2'	21:CA:9:G:O4'	2.24	0.51
38:DS:17:ARG:O	38:DS:21:THR:OG1	2.19	0.51
21:CA:593:G:H2'	21:CA:594:G:C8	2.45	0.51
38:DS:92:TYR:HD1	38:DS:93:LYS:H	1.58	0.51
12:AM:95:GLY:O	12:AM:96:LEU:HG	2.11	0.51
59:BA:883:G:H2'	59:BA:884:C:C6	2.45	0.51
26:BD:13:ARG:HA	26:BD:16:MET:HB2	1.93	0.51
35:BP:23:PRO:HB2	35:BP:33:ARG:HG2	1.92	0.51
32:BK:36:GLU:HA	32:BK:39:LYS:HE3	1.93	0.51
20:CY:512:ILE:HG22	20:CY:567:LEU:HD12	1.92	0.51
59:BA:2717:G:H21	59:BA:2848:G:P	2.34	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AT:49:ALA:O	19:AT:51:GLU:N	2.43	0.51
59:BA:1506(I):U:H2'	59:BA:1506(J):G:O4'	2.11	0.51
59:DA:842:G:H2'	59:DA:843:G:H8	1.72	0.51
21:AA:834:C:H2'	21:AA:835:U:O4'	2.11	0.51
44:DY:85:VAL:HG12	44:DY:94:LYS:HG2	1.92	0.51
19:CT:32:ALA:HA	21:CA:1440(M):G:H5'	1.93	0.51
28:DF:171:PRO:HA	59:DA:1205:U:C4	2.45	0.51
20:CY:131:PRO:HB3	20:CY:250:THR:O	2.10	0.51
59:BA:192:C:O2'	59:BA:802:A:H1'	2.11	0.51
59:BA:1434:A:H2'	59:BA:1435:G:C8	2.46	0.51
59:DA:1810:A:H2'	59:DA:1811:G:O4'	2.10	0.51
21:CA:1308:U:H2'	21:CA:1309:G:H8	1.76	0.51
21:AA:633:G:H2'	21:AA:634:C:C6	2.46	0.51
59:DA:1019:U:O2	59:DA:1020:A:C8	2.64	0.51
59:DA:1878:G:H2'	59:DA:1879:C:C6	2.45	0.51
59:DA:1233:C:H2'	59:DA:1234:U:C6	2.45	0.51
31:DJ:51:UNK:O	59:DA:1084:A:H5'	2.11	0.51
3:CD:28:SER:HB2	3:CD:29:PRO:CD	2.41	0.51
21:AA:1233:G:H2'	21:AA:1234:C:C6	2.46	0.51
59:BA:1160:G:H2'	59:BA:1161:C:C6	2.46	0.51
59:DA:2639:A:H1'	59:DA:2778:A:N1	2.26	0.51
27:BE:44:TYR:CE2	27:BE:46:ALA:HB2	2.46	0.51
33:BN:104:LYS:CG	33:BN:120:LEU:HD21	2.41	0.51
24:CX:65:C:H2'	24:CX:66:A:C8	2.46	0.51
11:CL:32:PHE:HB3	11:CL:84:LEU:HG	1.92	0.51
20:CY:66:THR:HG21	62:CY:702:FUA:H193	1.91	0.51
27:DE:34:VAL:HG12	27:DE:35:GLN:H	1.76	0.51
7:CH:30:ARG:NH1	21:CA:590:C:OP2	2.44	0.51
59:BA:918:A:HO2'	60:BB:96:G:N2	2.06	0.51
21:CA:1505:G:H4'	23:CV:15:A:H61	1.75	0.51
47:B1:18:ILE:O	47:B1:18:ILE:HG22	2.11	0.51
26:DD:230:ASP:O	26:DD:231:HIS:HB2	2.09	0.51
21:CA:888:G:H3'	21:CA:889:A:H5''	1.93	0.51
3:AD:133:VAL:HG13	21:AA:619:U:C2	2.45	0.51
21:CA:1003:G:H1	21:CA:1037:C:H42	1.58	0.51
59:DA:1198:U:N3	59:DA:1247:A:C2	2.73	0.51
59:DA:1295:C:H2'	59:DA:1296:G:O4'	2.10	0.51
43:DX:53:LYS:HB3	43:DX:82:GLN:CB	2.33	0.51
25:BC:115:VAL:HB	25:BC:150:ILE:HG13	1.93	0.51
18:AS:78:ARG:HH11	21:AA:960:U:H5	1.57	0.51
59:DA:2683:C:H41	59:DA:2727:G:H21	1.59	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AB:174:VAL:HG11	1:AB:196:LEU:HD13	1.92	0.51
1:AB:212:GLN:HG3	1:AB:235:SER:OG	2.11	0.51
20:CY:467:LYS:HE3	20:CY:473:ASP:HA	1.92	0.51
59:BA:2246:G:O6	59:BA:2258:C:N3	2.44	0.51
59:BA:24:G:H2'	59:BA:25:U:O4'	2.11	0.51
16:AQ:14:LYS:HD3	21:AA:275:G:H5'	1.91	0.51
59:BA:1109:C:H2'	59:BA:1110:G:C8	2.45	0.51
38:BS:103:GLU:O	38:BS:105:ALA:N	2.43	0.51
24:AX:48:C:H2'	24:AX:59:U:O2'	2.10	0.51
59:BA:664:C:H2'	59:BA:665:C:C6	2.45	0.51
20:AY:301:ILE:CG2	20:AY:331:TYR:HB3	2.41	0.51
59:BA:374:A:H1'	59:BA:401:A:N6	2.26	0.51
1:CB:178:ARG:HD3	7:CH:73:ASP:H	1.75	0.51
21:CA:1076:C:N4	21:CA:1081:G:H1	2.08	0.51
13:CN:41:ARG:HG3	13:CN:42:ILE:H	1.75	0.51
21:AA:724:G:H2'	21:AA:725:G:O4'	2.11	0.51
59:BA:2841:C:H2'	59:BA:2842:G:C8	2.45	0.51
59:DA:270(U):C:H2'	59:DA:270(V):G:C8	2.46	0.51
8:CI:45:ALA:O	8:CI:48:GLU:HB2	2.11	0.51
32:BK:7:VAL:HA	32:BK:58:THR:HA	1.91	0.51
20:AY:220:ALA:HB3	20:AY:227:ILE:HG21	1.93	0.51
2:CC:180:ALA:HB1	2:CC:203:PHE:HE1	1.75	0.51
45:DZ:40:ASP:CG	45:DZ:41:LEU:H	2.14	0.51
41:BV:9:GLY:HA3	59:BA:1160:G:H21	1.75	0.51
59:BA:2506:U:H6	59:BA:2583:G:H22	1.58	0.51
2:CC:27:LYS:HE2	21:CA:1257:U:H5''	1.92	0.51
6:CG:95:ARG:O	6:CG:99:LEU:HG	2.11	0.51
27:DE:37:ARG:HB2	27:DE:46:ALA:N	2.25	0.51
59:DA:1136:G:H2'	59:DA:1137:G:O4'	2.11	0.51
21:CA:411:A:C2'	21:CA:412:A:H4'	2.40	0.51
33:BN:27:ALA:HB1	33:BN:31:ALA:HB2	1.93	0.51
21:CA:1157:A:O2'	21:CA:1158:C:C2	2.63	0.51
21:CA:66:G:N7	21:CA:104:G:N2	2.58	0.51
21:CA:1070:U:H2'	21:CA:1071:C:C6	2.46	0.51
36:DQ:29:PHE:HD1	36:DQ:30:GLY:H	1.59	0.51
59:DA:2785:C:H2'	59:DA:2786:U:O4'	2.11	0.51
36:BQ:13:GLN:HG3	59:BA:910:A:C6	2.46	0.51
60:DB:13:A:N6	60:DB:69:G:O2'	2.43	0.51
21:CA:980:C:H5'	21:CA:981:U:C5	2.45	0.51
25:BC:169:THR:C	25:BC:171:ALA:N	2.63	0.51
59:DA:538:G:H2'	59:DA:539:G:C8	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BP:53:GLY:HA2	59:BA:832:G:N2	2.16	0.51
20:CY:110:SER:N	20:CY:137:ASN:O	2.28	0.51
24:AX:9:A:H4'	24:AX:46:G:H4'	1.92	0.51
59:DA:733:G:H4'	59:DA:734:A:OP1	2.09	0.51
8:CI:2:GLU:N	8:CI:88:TYR:OH	2.39	0.51
20:CY:87:HIS:O	20:CY:89:ASP:N	2.44	0.51
8:CI:114:TYR:OH	9:CJ:51:ARG:NH2	2.44	0.51
59:DA:1081:U:H2'	59:DA:1082:U:C5	2.46	0.51
12:AM:108:ARG:HG2	12:AM:114:ARG:HG3	1.93	0.51
37:BR:5:LYS:NZ	59:BA:2821:A:OP2	2.40	0.51
40:BU:81:HIS:CE1	59:BA:1151:G:H5''	2.46	0.51
26:BD:37:LEU:HD22	26:BD:62:TYR:HD1	1.76	0.51
35:BP:27:HIS:HB2	59:BA:813:U:OP2	2.11	0.51
45:BZ:73:GLN:O	45:BZ:86:VAL:HA	2.10	0.51
41:BV:4:ILE:HD13	41:BV:40:LEU:HG	1.92	0.51
15:CP:81:ARG:HA	21:CA:458(E):A:H4'	1.93	0.51
59:BA:1524:G:H2'	59:BA:1525:G:O4'	2.11	0.51
7:CH:69:ARG:NH1	7:CH:75:ARG:O	2.43	0.51
21:CA:1231:G:H2'	21:CA:1232:U:C6	2.45	0.51
14:AO:39:LEU:HB3	14:AO:56:LEU:HD22	1.92	0.51
35:BP:54:GLY:HA3	59:BA:826:U:C1'	2.41	0.51
11:AL:15:ARG:HB3	21:AA:562:C:H1'	1.92	0.51
59:DA:1485:G:H2'	59:DA:1486:A:C8	2.46	0.51
59:DA:1538:G:H2'	59:DA:1539:G:C8	2.45	0.51
8:AI:116:LYS:NZ	21:AA:1344:C:OP1	2.44	0.51
59:BA:2623:G:H2'	59:BA:2624:G:C8	2.46	0.51
1:CB:172:ILE:HG12	1:CB:173:ALA:N	2.25	0.51
59:BA:922:U:H2'	59:BA:923:C:C6	2.46	0.51
21:AA:1262:C:H2'	21:AA:1263:C:H6	1.75	0.51
59:DA:1859:A:N6	59:DA:1883:G:O2'	2.44	0.51
27:DE:58:ARG:NH2	59:DA:2830:G:OP1	2.44	0.51
16:CQ:63:ARG:O	16:CQ:63:ARG:HG2	2.10	0.51
59:BA:764:A:O2'	59:BA:765:G:H5'	2.10	0.51
37:DR:87:TYR:HD1	37:DR:94:TYR:CD2	2.28	0.51
21:CA:434:U:H2'	21:CA:435:C:C6	2.46	0.51
59:BA:1022:G:H1'	59:BA:1023:U:OP2	2.11	0.51
59:BA:1024:G:OP2	59:BA:1025:G:H3'	2.11	0.51
33:BN:118:LYS:O	33:BN:119:ARG:HG3	2.11	0.51
21:CA:172:A:H3'	21:CA:174:C:H5	1.75	0.51
20:AY:22:ASP:OD1	20:AY:23:ALA:N	2.44	0.51
20:AY:24:GLY:HA3	61:AY:701:GDP:H8	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CA:780:A:N6	21:CA:801:U:OP2	2.44	0.51
21:CA:258:G:H2'	21:CA:259:G:C8	2.46	0.51
60:DB:81:G:O6	60:DB:95:U:C2	2.64	0.51
59:DA:1960:A:H2'	59:DA:1961:C:C6	2.45	0.51
59:DA:1294:U:H2'	59:DA:1295:C:H6	1.75	0.51
59:DA:1172:G:H5''	59:DA:1173:A:OP2	2.11	0.51
59:DA:294:A:N7	59:DA:345:A:N6	2.59	0.51
27:DE:13:ARG:HA	27:DE:21:VAL:C	2.30	0.51
59:BA:2256:G:H2'	59:BA:2257:U:H6	1.75	0.51
59:DA:1088:A:H2'	59:DA:1088:A:N3	2.25	0.51
32:DK:117:THR:HG21	32:DK:123:ALA:HB2	1.93	0.51
25:BC:117:THR:HG22	25:BC:147:GLY:HA2	1.92	0.51
52:D6:41:PRO:HD2	52:D6:45:LYS:O	2.11	0.51
25:BC:213:VAL:O	25:BC:214:TYR:HB2	2.11	0.51
59:BA:709:U:H3	59:BA:722:A:H2	1.54	0.51
31:BJ:83:UNK:C	31:BJ:85:UNK:N	2.74	0.51
35:BP:32:THR:OG1	35:BP:35:HIS:O	2.28	0.51
25:DC:52:PRO:O	25:DC:53:ARG:HB3	2.11	0.51
1:CB:165:VAL:HG13	1:CB:187:LEU:HD12	1.92	0.51
27:BE:136:ARG:HH12	59:BA:1998:G:P	2.33	0.51
21:AA:1065:U:OP2	21:AA:1190:G:N2	2.44	0.51
59:BA:2129:C:H2'	59:BA:2130:U:H5'	1.92	0.51
13:AN:19:ARG:HD3	21:AA:980:C:H1'	1.92	0.51
32:BK:102:GLU:O	32:BK:105:LEU:HD22	2.10	0.51
21:AA:993:G:O6	21:AA:1045:C:N3	2.44	0.51
26:DD:127:VAL:HA	26:DD:193:VAL:HG13	1.93	0.51
20:CY:474:ALA:HB1	20:CY:476:VAL:HG23	1.93	0.51
59:DA:449:A:H2'	59:DA:450:G:O4'	2.11	0.51
40:DU:8:VAL:HG13	40:DU:11:ARG:NE	2.25	0.51
25:BC:164:PHE:CZ	25:BC:196:ALA:HB1	2.46	0.51
12:CM:16:ASP:OD2	12:CM:16:ASP:N	2.44	0.51
59:DA:248:G:H5'	59:DA:250:G:N7	2.25	0.51
2:AC:8:ILE:HD11	2:AC:184:TYR:HB3	1.93	0.51
19:AT:15:ARG:HG3	21:AA:108:G:N7	2.26	0.51
59:DA:1012:U:H3	59:DA:1143:A:H62	1.59	0.51
59:BA:2244:U:O2	59:BA:2435:A:N7	2.44	0.51
59:DA:1019:U:C2	59:DA:1020:A:N7	2.79	0.51
41:DV:33:VAL:HG13	41:DV:59:ALA:HB3	1.93	0.51
21:AA:157:G:H2'	21:AA:158:G:C8	2.46	0.51
29:DG:19:LEU:HD13	29:DG:31:VAL:HG21	1.93	0.51
54:B8:52:LYS:HG2	59:BA:834:C:H4'	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BH:97:ARG:HB3	30:BH:99:VAL:HG23	1.92	0.51
2:CC:187:ALA:HB3	2:CC:198:VAL:HB	1.93	0.51
33:DN:111:PRO:O	33:DN:114:ARG:CB	2.57	0.50
33:DN:62:VAL:O	33:DN:63:THR:OG1	2.25	0.50
59:DA:2724:C:H2'	59:DA:2725:A:C8	2.46	0.50
59:BA:2023:G:H8	59:BA:2023:G:P	2.34	0.50
33:BN:93:THR:HB	33:BN:97:ARG:NH1	2.26	0.50
59:DA:1340:U:H4'	59:DA:1394:U:HO2'	1.76	0.50
59:DA:1849:G:H2'	59:DA:1850:G:C8	2.47	0.50
11:CL:33:ARG:HD2	21:CA:363:A:OP1	2.11	0.50
21:CA:1124:G:N2	21:CA:1148:U:O4	2.44	0.50
59:BA:271(Q):A:N6	59:BA:357(E):U:N3	2.29	0.50
27:DE:111:ARG:H	27:DE:161:GLY:CA	2.24	0.50
59:BA:966:G:O3'	59:BA:2271:G:N2	2.44	0.50
48:D2:46:GLN:HB3	48:D2:48:HIS:HE1	1.77	0.50
40:DU:25:TRP:CD1	40:DU:26:GLY:N	2.76	0.50
59:DA:2267:A:H2	59:DA:2272:U:H3	1.59	0.50
59:DA:1043:C:O2	59:DA:1048:A:O2'	2.26	0.50
21:CA:1093:A:O2'	21:CA:1095:U:OP1	2.22	0.50
25:DC:115:VAL:O	25:DC:150:ILE:HG21	2.12	0.50
29:BG:7:LEU:HD13	29:BG:107:LEU:HD12	1.92	0.50
21:CA:1365:G:N2	21:CA:1366:C:H1'	2.25	0.50
38:DS:102:ALA:HA	38:DS:107:GLU:C	2.31	0.50
21:CA:131:C:N4	21:CA:231:G:H1	2.06	0.50
43:BX:83:VAL:HG12	43:BX:84:ALA:N	2.26	0.50
59:DA:2539:C:H2'	59:DA:2540:C:H6	1.76	0.50
59:BA:1569:A:H2'	59:BA:1570:A:N7	2.26	0.50
59:BA:1130:U:O2'	59:BA:1131:G:H2'	2.11	0.50
30:DH:89:ILE:HG22	30:DH:162:ILE:HA	1.93	0.50
7:AH:29:SER:HA	21:AA:590:C:OP1	2.10	0.50
59:BA:730:C:H2'	59:BA:731:C:C6	2.46	0.50
59:BA:286:C:H2'	59:BA:287:C:C6	2.45	0.50
59:BA:1076:C:H2'	59:BA:1077:A:H4'	1.93	0.50
2:CC:199:LYS:HE2	21:CA:1058:G:H5''	1.93	0.50
28:DF:169:ASN:ND2	59:DA:323:G:H3'	2.26	0.50
55:B9:4:ARG:HB2	59:BA:2466:C:P	2.51	0.50
21:CA:860:A:N6	21:CA:869:G:H1'	2.26	0.50
7:CH:34:GLU:O	7:CH:37:ARG:HB3	2.11	0.50
4:CE:142:LEU:O	4:CE:143:ARG:NE	2.39	0.50
59:BA:1593:G:H2'	59:BA:1594:G:H8	1.74	0.50
59:DA:270(U):C:O2'	59:DA:270(V):G:O4'	2.18	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:1359:C:H1'	21:AA:1362:C:H42	1.77	0.50
59:BA:1348:G:H2'	59:BA:1349:A:H5''	1.92	0.50
25:DC:101:ILE:HD11	25:DC:128:LEU:HD13	1.93	0.50
59:BA:2824:C:H2'	59:BA:2825:U:O4'	2.11	0.50
44:BY:11:ASP:OD2	44:BY:11:ASP:N	2.43	0.50
21:AA:1425:U:O2	21:AA:1475:G:O6	2.29	0.50
36:BQ:64:ILE:HG13	36:BQ:106:VAL:HG12	1.93	0.50
59:DA:2289:G:O6	59:DA:2343:C:N3	2.44	0.50
49:D3:12:PRO:HB2	49:D3:20:LYS:NZ	2.26	0.50
45:BZ:120:ILE:HG13	45:BZ:172:ALA:HA	1.92	0.50
13:CN:31:ARG:NH2	21:CA:977:A:OP1	2.44	0.50
51:D5:43:HIS:NE2	59:DA:2883:A:O3'	2.44	0.50
42:DW:23:LEU:HG	42:DW:24:ILE:HG23	1.93	0.50
20:CY:536:LYS:H	20:CY:536:LYS:HD2	1.76	0.50
59:DA:1306:C:H2'	59:DA:1307:A:H8	1.75	0.50
59:DA:515:A:H3'	59:DA:516:C:C6	2.46	0.50
33:DN:74:ARG:O	33:DN:83:LYS:C	2.50	0.50
33:BN:115:ARG:O	33:BN:116:LEU:HD12	2.12	0.50
33:BN:58:ASP:HB2	33:BN:98:VAL:HG11	1.92	0.50
36:DQ:29:PHE:CZ	36:DQ:67:ARG:HD2	2.45	0.50
38:DS:38:GLN:HE22	60:DB:115:G:H1'	1.76	0.50
59:DA:1431:U:H2'	59:DA:1432:C:H6	1.75	0.50
21:CA:1506:U:H5''	23:CV:15:A:H62	1.76	0.50
47:D1:18:ILE:C	47:D1:20:ARG:N	2.65	0.50
45:DZ:73:GLN:HE21	60:DB:103:U:H5'	1.76	0.50
15:AP:15:PRO:HD2	15:AP:42:ARG:NH1	2.25	0.50
59:DA:462:C:N4	59:DA:467:G:H1	2.08	0.50
26:BD:260:ARG:NH1	59:BA:1799:G:OP1	2.39	0.50
25:DC:131:ILE:HG12	25:DC:132:LEU:N	2.26	0.50
21:CA:1244:C:H2'	21:CA:1245:A:O4'	2.11	0.50
20:CY:616:TYR:HB3	20:CY:662:LYS:O	2.11	0.50
42:BW:82:LEU:HB3	42:BW:98:LYS:HB2	1.92	0.50
59:BA:294:A:N6	59:BA:344:G:H21	2.05	0.50
59:DA:974:G:C6	59:DA:989:G:C6	2.99	0.50
60:BB:13:A:N3	60:BB:14:U:H5''	2.25	0.50
59:DA:2328:A:H2'	59:DA:2329:G:C8	2.46	0.50
21:AA:147:G:H1	21:AA:175:C:N4	2.08	0.50
21:AA:992:U:O4	21:AA:1044:A:N7	2.45	0.50
12:CM:105:THR:HG21	21:CA:951:G:O6	2.11	0.50
21:AA:162:A:N7	21:AA:163:C:H1'	2.25	0.50
59:DA:322:A:O4'	59:DA:340:A:H1'	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:D1:11:ARG:HB2	47:D1:12:PRO:HD2	1.92	0.50
59:BA:2464:C:H2'	59:BA:2465:C:C6	2.46	0.50
26:BD:77:ALA:HB2	26:BD:97:TYR:CD1	2.46	0.50
21:AA:62:U:H5''	21:AA:385:C:O2	2.10	0.50
21:CA:730:G:C5	21:CA:731:G:H1'	2.46	0.50
59:BA:1594:G:H2'	59:BA:1595:G:O4'	2.11	0.50
59:BA:172:C:H2'	59:BA:173:G:C8	2.46	0.50
21:CA:750:G:H2'	21:CA:751:U:C6	2.45	0.50
34:BO:91:LEU:O	34:BO:92:GLU:HB2	2.12	0.50
3:CD:94:LEU:HD23	3:CD:97:LEU:HD12	1.94	0.50
59:DA:2125:G:N1	59:DA:2172:U:OP1	2.41	0.50
26:DD:35:LYS:HG2	26:DD:63:ARG:HG3	1.93	0.50
49:D3:9:VAL:HG23	49:D3:10:LYS:H	1.75	0.50
39:BT:36:GLU:O	39:BT:38:ASN:N	2.44	0.50
11:AL:57:LYS:O	11:AL:65:GLU:HA	2.11	0.50
59:DA:1823:G:H2'	59:DA:1824:G:H8	1.76	0.50
42:BW:69:LEU:HD22	42:BW:107:LEU:HB2	1.92	0.50
33:DN:97:ARG:O	33:DN:105:GLY:HA2	2.10	0.50
33:DN:67:LEU:HD22	33:DN:68:GLU:H	1.77	0.50
33:DN:91:LEU:HG	33:DN:96:GLU:CD	2.32	0.50
3:CD:115:ARG:NE	21:CA:408:A:OP2	2.44	0.50
33:BN:56:ASN:H	33:BN:56:ASN:ND2	2.09	0.50
33:BN:59:LYS:HB3	33:BN:98:VAL:HG12	1.93	0.50
21:AA:408:A:H2'	21:AA:409:G:C8	2.46	0.50
30:DH:175:LYS:O	30:DH:177:GLY:N	2.45	0.50
60:DB:60:C:H2'	60:DB:61:G:H8	1.76	0.50
54:D8:32:LEU:HD11	59:DA:2391:G:OP1	2.10	0.50
21:CA:1091:U:H3	21:CA:1093:A:H3'	1.76	0.50
46:D0:36:ILE:HA	46:D0:60:PHE:HA	1.93	0.50
20:CY:87:HIS:HE2	20:CY:117:GLN:HG3	1.75	0.50
30:BH:137:ASP:O	30:BH:141:VAL:HG23	2.10	0.50
21:CA:830:G:H1	21:CA:856:C:N4	2.08	0.50
40:BU:59:ARG:HH12	59:BA:1154:G:H5'	1.76	0.50
59:BA:2438:U:H5'	59:BA:2599:G:H4'	1.91	0.50
37:BR:101:ALA:HB1	42:BW:38:TYR:HE2	1.77	0.50
28:BF:107:LYS:HZ3	28:BF:110:LEU:HD13	1.76	0.50
59:BA:2096:U:H2'	59:BA:2097:C:H6	1.75	0.50
21:AA:1308:U:H2'	21:AA:1309:G:H8	1.75	0.50
48:B2:47:ASN:O	48:B2:50:ILE:HG13	2.12	0.50
26:BD:118:VAL:HG22	26:BD:119:ALA:N	2.26	0.50
59:BA:2581:G:N2	59:BA:2581:G:OP2	2.44	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:609:A:H3'	59:BA:610:G:H8	1.76	0.50
59:DA:1844:C:H2'	59:DA:1845:G:O4'	2.11	0.50
59:DA:1504:C:H2'	59:DA:1505:C:H6	1.75	0.50
59:DA:487:C:H2'	59:DA:488:G:C8	2.46	0.50
21:CA:1077:G:N2	21:CA:1080:A:OP2	2.38	0.50
12:CM:33:ALA:HB1	12:CM:56:LEU:HD11	1.94	0.50
45:BZ:166:SER:N	45:BZ:167:PRO:HA	2.26	0.50
59:DA:1450:C:O2'	59:DA:1453:A:N1	2.43	0.50
16:AQ:19:VAL:HG22	16:AQ:46:ASP:OD1	2.11	0.50
21:AA:1250:A:H2	21:AA:1370:G:N3	2.10	0.50
21:AA:922:G:H2'	21:AA:923:A:C8	2.47	0.50
20:CY:5:VAL:O	20:CY:7:TYR:N	2.44	0.50
30:DH:37:VAL:HG13	30:DH:71:LEU:HD13	1.92	0.50
17:CR:44:LEU:HD22	17:CR:79:LEU:HD21	1.93	0.50
21:CA:196:A:O3'	21:CA:197:A:H2'	2.11	0.50
1:CB:36:ARG:C	1:CB:38:GLY:H	2.14	0.50
21:CA:770:C:H2'	21:CA:771:G:H8	1.76	0.50
59:DA:495:G:H8	59:DA:495:G:O5'	1.94	0.50
59:BA:2697:G:O5'	59:BA:2697:G:H8	1.95	0.50
46:D0:32:ARG:HA	46:D0:64:ASP:HA	1.93	0.50
59:BA:2460:U:O4	59:BA:2490:G:N2	2.39	0.50
59:DA:1024:G:H1	59:DA:1140:C:H42	1.57	0.50
33:DN:101:HIS:O	33:DN:106:MET:N	2.43	0.50
33:DN:90:MET:HB2	33:DN:97:ARG:CZ	2.42	0.50
42:DW:77:ASP:HB3	42:DW:102:HIS:HD2	1.77	0.50
39:BT:53:ARG:NH1	39:BT:53:ARG:HB3	2.26	0.50
33:BN:35:ARG:NE	33:BN:38:HIS:C	2.64	0.50
21:CA:363:A:H2'	21:CA:364:A:O4'	2.10	0.50
21:CA:1102:A:H2'	21:CA:1103:C:C6	2.47	0.50
8:CI:125:TYR:OH	21:CA:967:C:O3'	2.28	0.50
59:DA:648:G:H4'	59:DA:2351:G:H5''	1.92	0.50
11:AL:117:ARG:NH2	21:AA:501:C:OP1	2.45	0.50
11:AL:31:PRO:HB3	21:AA:553:A:O4'	2.11	0.50
22:AW:71:C:H2'	22:AW:72:C:C5	2.46	0.50
59:DA:37:C:H2'	59:DA:38:A:H8	1.76	0.50
60:BB:4:C:N3	60:BB:116:G:O6	2.44	0.50
21:CA:1347:G:O2'	21:CA:1348:U:OP2	2.29	0.50
10:CK:113:PRO:O	10:CK:115:PRO:HD3	2.11	0.50
20:CY:87:HIS:CE1	20:CY:121:VAL:HG22	2.47	0.50
10:AK:112:THR:H	17:AR:84:LYS:HE3	1.76	0.50
59:DA:181:A:H2'	59:DA:182:A:C8	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:578:A:C4	59:BA:2018:G:H5'	2.46	0.50
26:BD:208:LYS:HB2	59:BA:729:G:C6	2.46	0.50
59:BA:2154:G:H2'	59:BA:2155:G:H8	1.76	0.50
26:BD:160:GLY:N	26:BD:196:VAL:HB	2.27	0.50
59:BA:1659:U:H3	59:BA:2001:A:N6	2.04	0.50
48:D2:14:ARG:NH2	59:DA:78:A:H5'	2.26	0.50
20:AY:95:GLU:HB3	20:AY:99:ARG:CZ	2.41	0.50
59:BA:323:G:H8	59:BA:1205:U:O2	1.94	0.50
51:D5:44:THR:HG22	51:D5:45:VAL:H	1.75	0.50
15:CP:39:TYR:OH	15:CP:72:ARG:NH1	2.45	0.50
21:AA:1389:C:H2'	21:AA:1390:U:H6	1.76	0.50
59:BA:2368:C:H2'	59:BA:2369:A:C8	2.46	0.50
7:AH:104:ARG:HD2	7:AH:104:ARG:N	2.27	0.50
59:DA:2202(D):G:H4'	59:DA:2202(E):A:N1	2.26	0.50
59:BA:608:A:H2'	59:BA:609:A:C8	2.45	0.50
23:AV:19:G:H2'	23:AV:20:U:C6	2.46	0.50
29:DG:76:SER:HA	29:DG:83:ARG:HB3	1.93	0.50
21:AA:1440(O):A:H2'	21:AA:1461:G:O4'	2.11	0.50
10:AK:51:LYS:HA	10:AK:55:LYS:HE3	1.92	0.50
21:AA:1095:U:H2'	21:AA:1096:C:O4'	2.10	0.50
1:AB:155:LEU:HD11	1:AB:159:PRO:HD3	1.92	0.50
3:AD:63:LYS:HA	3:AD:66:ARG:HD2	1.93	0.50
21:CA:68(C):C:O2	21:CA:68(W):G:N1	2.42	0.50
59:BA:779:U:H2'	59:BA:780:G:C8	2.46	0.50
8:AI:55:ALA:C	8:AI:57:GLY:H	2.15	0.50
60:BB:79:C:N4	60:BB:97:G:H1	2.07	0.50
7:CH:28:ALA:HB2	7:CH:57:PRO:O	2.11	0.50
59:BA:2845:G:H2'	59:BA:2846:G:C8	2.46	0.50
59:BA:2391:G:O2'	59:BA:2424:C:N4	2.38	0.50
21:AA:390:C:H2'	21:AA:391:G:C8	2.47	0.50
21:AA:856:C:H2'	21:AA:857:C:O4'	2.11	0.50
28:BF:13:SER:HB3	28:BF:14:PRO:HD2	1.92	0.50
6:AG:153:HIS:ND1	6:AG:153:HIS:O	2.45	0.50
33:BN:97:ARG:HD3	33:BN:108:PRO:HD2	1.93	0.50
33:BN:44:PRO:HD2	33:BN:78:TYR:H	1.77	0.50
24:CX:27:C:H42	24:CX:43:G:H1	0.63	0.50
27:DE:116:VAL:HG23	27:DE:120:TRP:CD1	2.46	0.50
37:DR:39:PRO:HG2	59:DA:1651:G:H5'	1.94	0.50
21:CA:1227:A:H8	21:CA:1227:A:P	2.35	0.50
59:DA:2282:G:H1	59:DA:2427:C:H42	1.58	0.50
21:CA:269:C:H2'	21:CA:270:A:H8	1.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:858:U:H3	59:DA:919:G:H1	0.73	0.50
26:DD:186:HIS:CE1	59:DA:2222:G:H5''	2.46	0.50
6:CG:78:ARG:HG2	6:CG:79:ARG:N	2.26	0.50
59:DA:1047:G:H4'	59:DA:1048:A:H8	1.76	0.50
36:DQ:42:ILE:O	36:DQ:94:VAL:HA	2.12	0.50
17:AR:44:LEU:HD13	17:AR:79:LEU:HD21	1.93	0.50
21:AA:1323:G:H4'	21:AA:1362(A):C:C4	2.46	0.50
39:DT:62:THR:HB	39:DT:75:ILE:HG13	1.92	0.50
21:AA:976:G:OP2	21:AA:1358:U:O2'	2.24	0.50
59:DA:23:G:H1	59:DA:517:C:N4	2.03	0.50
38:BS:85:VAL:HG22	38:BS:106:ARG:HD3	1.92	0.50
20:AY:30:GLU:C	20:AY:33:LEU:H	2.15	0.50
59:BA:2530:A:O2'	59:BA:2534:A:N6	2.44	0.50
20:CY:397:VAL:O	20:CY:398:ILE:HG13	2.12	0.50
45:BZ:30:ASN:HB2	45:BZ:90:VAL:HB	1.93	0.50
59:BA:2505:G:H2'	59:BA:2576:G:H1	1.77	0.50
20:CY:13:ARG:NH1	20:CY:282:SER:HB3	2.26	0.50
21:AA:744:C:H2'	21:AA:745:C:C6	2.47	0.50
59:BA:2812:G:H1	59:BA:2888:C:H42	1.59	0.50
59:BA:201:C:O4'	59:BA:386:G:N2	2.44	0.50
20:AY:580:MET:HG3	20:AY:583:LYS:HE3	1.94	0.50
5:CF:52:ILE:HG13	5:CF:87:ARG:HH22	1.76	0.50
59:BA:694:U:H2'	59:BA:695:G:H8	1.75	0.50
59:BA:210:C:H4'	59:BA:1367:A:H4'	1.92	0.50
10:AK:22:HIS:HE1	10:AK:24:SER:HB2	1.75	0.50
59:BA:2825:U:H2'	59:BA:2826:A:O4'	2.12	0.50
53:B7:11:LYS:HE2	59:BA:686:G:C4	2.46	0.50
46:B0:11:ARG:CZ	46:B0:14:ARG:HH22	2.25	0.50
21:AA:371:G:H1'	21:AA:482:A:H1'	1.92	0.50
9:AJ:44:VAL:HG22	9:AJ:66:ARG:HA	1.94	0.50
40:BU:13:LYS:O	40:BU:16:LYS:HB3	2.11	0.50
30:DH:49:VAL:HG12	30:DH:50:VAL:H	1.77	0.50
19:AT:71:THR:HG22	19:AT:72:LEU:H	1.77	0.50
6:AG:15:ASP:OD2	6:AG:44:TYR:OH	2.28	0.50
6:CG:103:TRP:CD1	6:CG:137:LYS:HD3	2.46	0.50
6:CG:41:ARG:HB3	6:CG:41:ARG:HH11	1.76	0.50
59:BA:474:G:H1'	59:BA:475:U:OP1	2.12	0.50
17:AR:49:LYS:HB3	21:AA:719:C:H1'	1.93	0.50
21:AA:453:A:C6	21:AA:479:C:N4	2.76	0.50
33:BN:114:ARG:O	33:BN:115:ARG:C	2.47	0.50
33:BN:116:LEU:O	33:BN:118:LYS:HG3	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CA:32:A:N6	21:CA:552:U:C4	2.78	0.50
11:CL:32:PHE:CE1	21:CA:34:C:H1'	2.46	0.50
59:DA:1652:A:O2'	59:DA:2822:G:N2	2.45	0.50
21:AA:1128:C:H1'	21:AA:1144:G:H22	1.76	0.50
21:AA:1124:G:N2	21:AA:1149:C:N3	2.48	0.50
22:CW:25:C:H42	22:CW:45:G:N2	2.09	0.50
22:CW:26:A:N1	22:CW:44:G:O6	2.44	0.50
40:DU:23:GLY:N	59:DA:19:C:OP1	2.43	0.50
59:BA:1712(J):G:O2'	59:BA:1712(K):A:H8	1.95	0.50
59:BA:1712(L):G:H2'	59:BA:1712(M):C:C6	2.46	0.50
59:DA:2201:C:H42	59:DA:2222:G:H1	1.59	0.50
28:DF:156:LEU:HB3	28:DF:176:LEU:O	2.12	0.50
21:AA:1224:G:H1	21:AA:1362(A):C:H42	1.58	0.50
54:B8:2:PRO:HA	59:BA:591:C:O2'	2.12	0.50
21:AA:954:G:N2	21:AA:1227:A:N6	2.59	0.50
20:CY:617:MET:HA	20:CY:620:VAL:HG22	1.93	0.50
59:BA:2105:C:N4	59:BA:2106:G:O6	2.43	0.50
38:BS:17:ARG:O	38:BS:21:THR:OG1	2.23	0.50
28:BF:25:PRO:CD	28:BF:115:ALA:HB1	2.42	0.50
59:BA:2202(B):C:O5'	59:BA:2202(B):C:H6	1.94	0.50
59:BA:28:A:N6	59:BA:512:G:H1'	2.25	0.50
60:DB:71:C:N4	60:DB:105:G:H1	2.07	0.50
21:AA:1308:U:H2'	21:AA:1309:G:C8	2.46	0.50
59:BA:1344:G:O2'	59:BA:1385:G:H2'	2.12	0.50
31:BJ:54:UNK:HA	31:BJ:78:UNK:O	2.12	0.50
59:DA:137(E):A:H8	59:DA:1408:C:H1'	1.75	0.50
55:D9:11:CYS:SG	55:D9:12:ASP:N	2.84	0.50
5:CF:60:PHE:CZ	17:CR:78:LEU:HD21	2.47	0.50
45:DZ:117:LEU:HA	45:DZ:174:VAL:HA	1.92	0.50
3:AD:60:GLU:HA	3:AD:63:LYS:HD2	1.92	0.50
20:CY:555:LEU:HD11	20:CY:599:PRO:HB2	1.94	0.50
21:AA:243:A:C2	21:AA:245:C:H2'	2.46	0.50
59:DA:331:A:N6	59:DA:1209:G:H2'	2.26	0.50
21:CA:643:C:H2'	21:CA:644:G:H8	1.75	0.50
21:AA:254:G:H2'	21:AA:255:G:C8	2.46	0.50
59:DA:1947:C:H2'	59:DA:1948:G:C8	2.46	0.50
20:CY:484:ARG:HG3	20:CY:676:TYR:CZ	2.46	0.50
34:BO:85:VAL:HG12	34:BO:86:ILE:H	1.76	0.50
2:CC:28:GLN:O	2:CC:31:HIS:N	2.41	0.50
21:CA:438:G:O2'	21:CA:494:U:O4	2.30	0.50
21:AA:1352:C:H2'	21:AA:1353:G:C8	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:B5:47:PRO:HB3	51:B5:59:GLU:HG3	1.92	0.50
40:DU:34:LYS:NZ	59:DA:2018:G:N3	2.47	0.50
33:BN:45:ASN:HB3	33:BN:115:ARG:CB	2.40	0.50
33:BN:93:THR:HG23	59:BA:2639:A:O2'	2.12	0.50
21:AA:1405:G:H1'	21:AA:1519:A:O4'	2.12	0.50
21:CA:1494:G:H8	63:CA:1601:NMY:N7	2.08	0.50
59:BA:2551:C:N3	59:BA:2552:U:H1'	2.27	0.50
22:AW:9:A:H8	22:AW:12:U:O4	1.90	0.50
59:DA:2661:G:H2'	59:DA:2662:A:C8	2.45	0.50
59:DA:1348:G:H2'	59:DA:1349:A:H5''	1.93	0.50
21:CA:957:U:C2	21:CA:960:U:H5''	2.47	0.50
21:AA:501:C:H2'	21:AA:502:G:C8	2.47	0.50
59:BA:1602:U:H3'	59:BA:1603:A:H5'	1.93	0.50
21:AA:800:G:H2'	21:AA:801:U:C6	2.47	0.50
28:DF:50:SER:HB2	59:DA:37:C:O2'	2.12	0.50
21:AA:1505:G:O2'	23:AV:17:U:OP2	2.24	0.50
43:DX:80:ILE:HG21	59:DA:1341:U:O2	2.12	0.50
17:AR:74:ARG:HA	17:AR:79:LEU:HB3	1.94	0.50
30:BH:66:GLY:HA3	59:BA:2748:A:H4'	1.93	0.50
59:DA:83:G:N2	59:DA:103:A:OP2	2.44	0.50
59:DA:2406:U:H5''	59:DA:2408:U:OP2	2.11	0.50
59:DA:2678:C:O2	59:DA:2729:G:N1	2.34	0.50
25:DC:146:VAL:H	25:DC:150:ILE:HD13	1.76	0.50
59:DA:2283:C:N3	59:DA:2325:G:N2	2.48	0.50
16:AQ:43:LEU:CD1	16:AQ:69:LYS:HA	2.42	0.50
11:AL:76:ASN:HB3	11:AL:107:ALA:HA	1.93	0.50
19:CT:43:LEU:CD2	19:CT:51:GLU:HB3	2.41	0.50
28:BF:12:LEU:HD22	28:BF:17:ARG:HB3	1.92	0.50
59:BA:2333:A:H5''	59:BA:2334:G:H3'	1.93	0.50
59:BA:2069:G:H2'	59:BA:2070:G:C8	2.47	0.50
26:BD:106:ILE:O	26:BD:108:PRO:HD3	2.12	0.50
59:DA:482:A:H1'	59:DA:498:G:H21	1.77	0.50
59:DA:503:A:H5'	59:DA:505:A:H8	1.76	0.50
37:DR:96:ARG:HH21	59:DA:2881:C:H5''	1.77	0.50
40:DU:112:ARG:HH11	41:DV:46:VAL:HG21	1.77	0.50
59:BA:659:C:H2'	59:BA:660:G:C8	2.43	0.50
59:DA:382:G:H1	59:DA:392:C:N4	2.09	0.50
26:DD:105:ILE:HD12	26:DD:106:ILE:H	1.76	0.50
21:AA:558:G:H3'	21:AA:559:A:H2'	1.94	0.50
45:BZ:19:ARG:HH21	60:BB:76:G:H4'	1.77	0.50
20:AY:140:ASP:OD1	20:AY:262:SER:OG	2.28	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:1537:C:C2	59:DA:1538:G:H1'	2.46	0.50
59:DA:2096:U:H2'	59:DA:2097:C:C6	2.47	0.50
34:BO:27:GLY:HA3	59:BA:2674:G:O2'	2.12	0.50
2:AC:173:VAL:C	21:AA:1107:C:H5''	2.32	0.50
59:BA:755:C:H2'	59:BA:756:C:H6	1.76	0.50
59:BA:1842:G:N2	59:BA:1898:U:O2	2.41	0.50
59:BA:1210:A:H4'	59:BA:1211:U:O5'	2.12	0.50
1:CB:40:HIS:CG	1:CB:190:THR:HG21	2.46	0.50
26:DD:63:ARG:HD2	26:DD:63:ARG:H	1.76	0.50
24:CX:55:U:O2	24:CX:58:A:N6	2.45	0.50
27:BE:140:SER:HB2	59:BA:2578:G:C5	2.47	0.50
59:DA:155:C:H2'	59:DA:155(A):U:O4'	2.11	0.50
20:AY:426:GLN:O	20:AY:430:ARG:HD2	2.12	0.50
59:BA:81:G:H2'	59:BA:82:G:O4'	2.12	0.50
59:DA:543(D):A:O5'	59:DA:543(D):A:H8	1.94	0.50
48:B2:21:LEU:HD22	48:B2:64:LEU:HB2	1.93	0.50
45:DZ:69:THR:HA	45:DZ:91:LEU:HG	1.93	0.50
33:DN:45:ASN:H	33:DN:45:ASN:ND2	2.09	0.50
33:DN:78:TYR:HB3	33:DN:79:PRO:CD	2.41	0.50
3:CD:115:ARG:NH2	21:CA:408:A:OP2	2.45	0.50
21:CA:411:A:C2	21:CA:430:A:N6	2.71	0.50
39:BT:55:ASN:HB2	39:BT:58:ASN:HB2	1.93	0.50
33:BN:103:VAL:O	33:BN:107:LEU:HD23	2.12	0.50
21:CA:1178:G:H5'	21:CA:1179:A:OP2	2.12	0.50
22:AW:8:U:O4	22:AW:14:A:H8	1.94	0.50
62:CY:702:FUA:O1	62:CY:702:FUA:C1	2.60	0.50
59:DA:2534:A:H2'	59:DA:2535:G:H8	1.77	0.50
27:DE:55:ASN:HB2	27:DE:74:PRO:O	2.12	0.50
46:B0:15:ASP:HA	59:BA:2263:C:H41	1.75	0.50
59:DA:2115:G:H21	59:DA:2171:A:H2	1.60	0.50
21:CA:947:G:O6	21:CA:1234:C:N3	2.45	0.50
34:DO:24:VAL:HG11	34:DO:32:TYR:O	2.11	0.50
60:BB:3:C:H2'	60:BB:3:C:O2	2.11	0.50
21:CA:192:U:H2'	21:CA:193:C:C6	2.47	0.50
21:CA:68(H):G:O2'	21:CA:68(I):G:H8	1.92	0.50
21:AA:1237:C:O2'	21:AA:1300:G:N2	2.45	0.50
20:CY:24:GLY:N	61:CY:701:GDP:O4'	2.44	0.50
38:DS:92:TYR:O	38:DS:93:LYS:HB3	2.12	0.50
27:DE:108:SER:HA	27:DE:190:GLY:HA2	1.92	0.50
25:DC:21:TYR:O	25:DC:25:GLU:HB2	2.12	0.50
10:CK:81:ASP:HA	10:CK:106:LYS:O	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:DV:60:GLU:HG2	41:DV:97:LYS:HD3	1.94	0.50
31:BJ:58:UNK:C	31:BJ:60:UNK:N	2.75	0.50
59:BA:687:C:H2'	59:BA:688:U:O4'	2.11	0.50
17:AR:59:SER:OG	17:AR:60:ALA:N	2.43	0.50
44:DY:102:CYS:SG	44:DY:103:GLY:N	2.85	0.50
23:AV:19:G:N3	23:AV:19:G:C2'	2.74	0.50
59:BA:308:G:H1'	59:BA:329:G:N2	2.27	0.50
29:BG:77:ILE:O	29:BG:79:ASN:N	2.44	0.50
59:BA:1703:G:H2'	59:BA:1704:G:H8	1.74	0.50
1:AB:35:GLU:HG3	1:AB:40:HIS:CE1	2.47	0.50
59:BA:1777:U:H2'	59:BA:1778:U:O4'	2.11	0.50
29:DG:65:GLY:HA2	50:D4:27:THR:HB	1.94	0.50
22:AW:76:A:C2	59:BA:2421:G:H2'	2.47	0.50
20:CY:504:ARG:HD2	20:CY:504:ARG:N	2.27	0.50
59:BA:706:A:H3'	59:BA:707:G:H8	1.76	0.50
59:BA:921:G:H2'	59:BA:922:U:O4'	2.12	0.50
11:AL:9:GLN:NE2	21:AA:881:G:N7	2.59	0.50
5:CF:53:ALA:O	5:CF:54:LYS:HB2	2.11	0.50
59:DA:414:C:H2'	59:DA:415:A:O4'	2.11	0.50
21:CA:358:U:H2'	21:CA:359:U:C6	2.47	0.50
59:DA:1712(L):G:H2'	59:DA:1712(M):C:O4'	2.10	0.50
26:BD:28:GLU:HB2	26:BD:29:PRO:HD3	1.93	0.50
17:CR:59:SER:N	17:CR:62:GLU:OE1	2.44	0.50
59:BA:1771:C:H2'	59:BA:1772:G:H8	1.77	0.50
16:CQ:87:LYS:O	16:CQ:91:ARG:HG3	2.12	0.50
23:CV:6:G:H8	23:CV:6:G:O5'	1.94	0.50
21:AA:1117:G:N2	21:AA:1180:A:H1'	2.26	0.50
21:CA:145:G:H2'	21:CA:146:G:C8	2.47	0.50
21:CA:32:A:H61	21:CA:552:U:H3	0.63	0.50
59:BA:271(B):G:H4'	59:BA:271(C):U:C5'	2.42	0.50
38:DS:62:LYS:HG3	60:DB:50:G:OP2	2.12	0.50
59:BA:1199:U:O4	59:BA:1246:A:N1	2.45	0.50
59:BA:953:A:N6	59:BA:964:C:N3	2.60	0.50
47:D1:20:ARG:O	47:D1:38:SER:HB2	2.12	0.50
22:CW:31:A:N1	22:CW:39:U:C4	2.80	0.50
1:CB:170:GLU:O	1:CB:174:VAL:HG23	2.12	0.50
53:D7:34:ARG:NH2	53:D7:42:LEU:HB3	2.26	0.50
48:B2:32:LEU:HD12	48:B2:35:LEU:HD22	1.93	0.50
9:CJ:56:HIS:NE2	21:CA:1061:G:O2'	2.44	0.50
59:BA:1173:A:H3'	59:BA:1174:U:C5'	2.42	0.50
59:BA:2662:A:H2'	59:BA:2663:G:O4'	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AY:292:THR:OG1	20:AY:293:THR:N	2.42	0.50
21:AA:1506:U:H4'	23:AV:15:A:H61	1.77	0.50
21:CA:777:A:H2'	21:CA:778:G:H8	1.76	0.50
20:AY:93:GLU:OE2	20:AY:97:SER:OG	2.30	0.50
59:BA:500:G:H21	59:BA:505:A:N6	2.09	0.50
29:BG:39:ILE:HD11	29:BG:94:LEU:HD11	1.92	0.50
35:DP:96:THR:HA	35:DP:126:VAL:HB	1.94	0.50
45:BZ:111:VAL:O	45:BZ:112:ARG:HB3	2.11	0.50
21:CA:1198:G:H2'	21:CA:1199:U:C6	2.46	0.50
59:BA:1055:G:N2	59:BA:1085:A:H1'	2.27	0.50
22:CW:32:C:O2	22:CW:37:A:N6	2.45	0.50
59:BA:2742:C:H2'	59:BA:2743:C:C6	2.45	0.50
20:AY:230:LYS:NZ	20:AY:235:GLU:OE1	2.45	0.50
41:DV:61:VAL:HG23	41:DV:93:GLU:O	2.12	0.50
28:DF:46:ARG:HH21	28:DF:48:THR:HG21	1.77	0.50
59:BA:1193:G:H2'	59:BA:1194:A:O4'	2.12	0.50
46:B0:23:VAL:HA	46:B0:38:VAL:HG22	1.93	0.50
40:DU:94:ASN:O	40:DU:97:ASP:HB2	2.11	0.50
21:CA:183:G:N2	21:CA:223:U:O2'	2.41	0.50
59:DA:571:A:H1'	59:DA:573:G:C8	2.47	0.50
35:DP:55:ARG:HD2	59:DA:825:C:O2'	2.12	0.50
59:DA:1459:G:H2'	59:DA:1459:G:N3	2.26	0.50
5:CF:29:ALA:HB1	5:CF:75:LEU:HD11	1.94	0.50
59:DA:527:C:H1'	59:DA:528:A:N7	2.25	0.49
21:CA:1300:G:H21	21:CA:1301:U:H5	1.59	0.49
59:DA:1338:G:H2'	59:DA:1339:G:C8	2.46	0.49
21:AA:33:A:H5''	21:AA:364:A:O2'	2.12	0.49
59:BA:1256:G:H2'	59:BA:1257:C:C5	2.47	0.49
28:DF:47:GLY:O	28:DF:94:PRO:HA	2.12	0.49
34:DO:25:LEU:HD12	59:DA:2562:U:O3'	2.12	0.49
21:CA:618:C:H5''	21:CA:620:C:OP1	2.12	0.49
59:BA:2747:G:O6	59:BA:2755:C:H5''	2.12	0.49
25:BC:77:ALA:HA	25:BC:114:VAL:O	2.12	0.49
27:DE:22:PRO:O	27:DE:186:GLY:HA3	2.12	0.49
39:BT:28:VAL:HG21	39:BT:89:VAL:HB	1.93	0.49
40:DU:55:ARG:NH1	59:DA:977:G:H5'	2.24	0.49
21:CA:1170:A:O5'	21:CA:1170:A:H8	1.95	0.49
59:BA:190:A:H3'	59:BA:191:A:C8	2.47	0.49
21:CA:861:G:H1	21:CA:868:C:H42	1.59	0.49
59:BA:373:U:H2'	59:BA:374:A:H8	1.77	0.49
59:BA:1426:G:N2	59:BA:1572:A:H62	2.07	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:992:U:HO2'	21:AA:993:G:P	2.34	0.49
59:DA:1712(G):G:H1'	59:DA:1712(K):A:H62	1.76	0.49
8:AI:73:GLN:O	8:AI:77:ILE:HG13	2.12	0.49
59:DA:1225:G:H2'	59:DA:1226:A:C8	2.47	0.49
14:AO:36:ILE:HG12	14:AO:56:LEU:HD11	1.94	0.49
59:DA:1215:G:H2'	59:DA:1216:G:C8	2.47	0.49
59:DA:609:A:H2'	59:DA:610:G:O4'	2.12	0.49
26:BD:7:LYS:HE3	26:BD:8:PRO:HD2	1.92	0.49
20:CY:610:VAL:HB	20:CY:643:ILE:HB	1.93	0.49
59:DA:2300:G:H2'	59:DA:2301:C:C6	2.47	0.49
49:D3:8:LEU:HD11	49:D3:28:LEU:HG	1.93	0.49
59:BA:2790:A:H2'	59:BA:2791:C:H5'	1.94	0.49
1:CB:97:TRP:CH2	1:CB:176:GLU:HG3	2.48	0.49
40:BU:47:TYR:HA	40:BU:50:ARG:HD2	1.94	0.49
27:DE:15:PHE:HZ	39:DT:77:PRO:HG2	1.77	0.49
20:AY:605:ILE:H	20:AY:676:TYR:HA	1.76	0.49
59:DA:1910:G:H2'	59:DA:1911:U:O4'	2.12	0.49
21:AA:1197:G:H3'	21:AA:1197:G:OP2	2.12	0.49
49:B3:32:GLN:HB2	59:BA:1158:C:H4'	1.94	0.49
59:DA:1823:G:H2'	59:DA:1824:G:C8	2.47	0.49
21:CA:143:A:H5'	21:CA:196:A:N1	2.27	0.49
59:BA:1532:C:H2'	59:BA:1533:C:H6	1.77	0.49
26:BD:248:SER:OG	26:BD:249:PRO:HD2	2.12	0.49
50:D4:6:HIS:NE2	60:DB:42:C:O3'	2.45	0.49
41:BV:15:GLU:HB3	41:BV:16:PRO:HD2	1.93	0.49
44:BY:86:ARG:CZ	44:BY:95:LYS:HD2	2.42	0.49
21:AA:1422:G:H1	21:AA:1478:C:H42	1.59	0.49
26:DD:146:GLU:HG2	26:DD:190:TYR:H	1.76	0.49
15:CP:26:ARG:HH22	21:CA:310:G:H5''	1.77	0.49
33:DN:50:ASP:HA	33:DN:120:LEU:HD13	1.94	0.49
33:DN:75:TYR:CE2	59:DA:1137:G:N3	2.80	0.49
23:CV:9:G:H5'	23:CV:10:G:C5	2.46	0.49
21:CA:431:A:H2'	21:CA:432:A:O4'	2.12	0.49
59:BA:2777:G:H4'	59:BA:2779:U:H5''	1.93	0.49
21:AA:1157:A:N3	21:AA:1157:A:H2'	2.27	0.49
59:BA:1970:A:C4'	63:BA:2904:NMY:H231	2.38	0.49
21:CA:109:A:H61	21:CA:324:G:H1'	1.75	0.49
59:DA:1664:A:H5''	59:DA:1665:A:OP2	2.12	0.49
59:DA:1356:G:H2'	59:DA:1357:U:H6	1.76	0.49
20:AY:504:ARG:HH11	21:AA:1495:U:P	2.35	0.49
59:DA:1039:G:H2'	59:DA:1040:C:H6	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DD:43:ARG:O	26:DD:51:VAL:HG11	2.11	0.49
59:DA:1794:U:H2'	59:DA:1795:C:O4'	2.12	0.49
8:CI:112:LYS:HG3	8:CI:117:HIS:O	2.12	0.49
59:DA:665:C:H2'	59:DA:666:G:C8	2.47	0.49
59:DA:193:U:H2'	59:DA:194:G:H8	1.76	0.49
21:CA:1067:A:H4'	21:CA:1068:G:OP1	2.12	0.49
27:BE:62:PRO:HB2	27:BE:66:HIS:HE2	1.78	0.49
26:BD:199:ALA:O	26:BD:202:LYS:HG2	2.13	0.49
28:DF:3:GLU:HB2	28:DF:24:LEU:N	2.21	0.49
21:AA:321:A:H2'	21:AA:322:C:C6	2.47	0.49
59:BA:71:A:OP1	59:BA:112:U:O2'	2.23	0.49
21:AA:237:C:H2'	21:AA:238:G:C8	2.47	0.49
47:D1:34:THR:OG1	47:D1:35:THR:N	2.46	0.49
59:DA:1544:A:H2'	59:DA:1545:A:C8	2.47	0.49
59:BA:948:G:O6	59:BA:969:U:O2	2.30	0.49
22:CW:53:G:N2	25:DC:53:ARG:HG3	2.27	0.49
7:CH:85:ARG:HA	7:CH:85:ARG:NH1	2.22	0.49
29:DG:73:ALA:HA	59:DA:2312:U:OP1	2.11	0.49
29:DG:82:LEU:HD12	29:DG:87:PRO:HB3	1.94	0.49
3:CD:128:VAL:HG13	3:CD:146:ILE:HG13	1.95	0.49
59:DA:2539:C:H2'	59:DA:2540:C:C6	2.47	0.49
59:BA:1105:U:H2'	59:BA:1106:G:H8	1.76	0.49
21:AA:218:C:H2'	21:AA:219:C:C6	2.47	0.49
7:AH:103:VAL:O	7:AH:104:ARG:HB2	2.12	0.49
11:AL:44:THR:HG22	11:AL:50:SER:HA	1.94	0.49
9:CJ:44:VAL:HA	9:CJ:65:LEU:O	2.13	0.49
37:BR:90:ARG:HH22	59:BA:2880:C:H4'	1.77	0.49
59:BA:945:A:O2'	59:BA:946:G:H4'	2.12	0.49
59:DA:270(V):G:H2'	59:DA:270(W):G:C8	2.47	0.49
59:DA:2071:A:H2'	59:DA:2072:G:H8	1.76	0.49
5:AF:99:ALA:HB2	17:AR:31:LEU:HG	1.93	0.49
2:AC:70:VAL:HG12	2:AC:71:ALA:H	1.77	0.49
26:DD:263:ARG:O	59:DA:2227:A:H4'	2.12	0.49
15:AP:11:SER:HB3	21:AA:43:C:H4'	1.93	0.49
59:BA:309:G:H22	59:BA:1210:A:H2	1.59	0.49
42:BW:72:LYS:O	42:BW:106:ILE:HB	2.12	0.49
2:CC:153:VAL:HG12	2:CC:198:VAL:HG13	1.93	0.49
28:DF:28:ILE:HG23	28:DF:30:PRO:HD3	1.94	0.49
21:CA:994:A:C4	21:CA:1216:G:H4'	2.47	0.49
25:BC:20:VAL:HG12	25:BC:22:THR:H	1.78	0.49
8:AI:49:PRO:HG2	8:AI:81:ILE:HB	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:1186:G:H2'	59:DA:1187:G:O4'	2.12	0.49
2:CC:188:LEU:HD13	2:CC:188:LEU:H	1.77	0.49
1:CB:210:SER:O	1:CB:214:ILE:HG12	2.11	0.49
21:AA:774:G:H1	21:AA:805:C:H42	1.59	0.49
27:BE:34:VAL:HG13	27:BE:35:GLN:H	1.77	0.49
59:DA:897:C:N4	59:DA:898:C:H41	2.10	0.49
59:DA:576:U:H4'	59:DA:2502:G:C5	2.48	0.49
59:DA:2708:G:H2'	59:DA:2709:G:H8	1.77	0.49
59:DA:900:A:H3'	59:DA:901:A:C8	2.47	0.49
20:AY:107:VAL:HG13	20:AY:137:ASN:HB2	1.93	0.49
62:AY:702:FUA:C1	62:AY:702:FUA:O1	2.60	0.49
21:CA:442:C:C2	21:CA:492:G:N2	2.77	0.49
21:CA:1047:G:H2'	21:CA:1048:G:C8	2.47	0.49
21:CA:662:G:H2'	21:CA:663:A:C8	2.48	0.49
35:BP:112:LEU:HD22	35:BP:113:LYS:H	1.77	0.49
21:CA:1353:G:H1	21:CA:1369:C:H42	1.60	0.49
8:CI:113:LYS:HB2	8:CI:116:LYS:HB2	1.93	0.49
24:AX:28:C:O2	24:AX:42:G:N1	2.32	0.49
59:DA:862:G:H1	59:DA:915:C:H42	1.60	0.49
6:CG:86:GLN:O	6:CG:88:PRO:HD3	2.12	0.49
21:AA:1504:G:H4'	21:AA:1505:G:O5'	2.12	0.49
39:DT:113:LYS:HZ1	59:DA:1753:G:H8	1.60	0.49
59:DA:817:C:N3	59:DA:1190:G:N2	2.53	0.49
27:BE:63:LEU:C	27:BE:65:GLY:N	2.66	0.49
59:BA:2453:A:C2	59:BA:2500:U:N3	2.76	0.49
18:AS:78:ARG:CZ	21:AA:1222:G:H5''	2.42	0.49
59:BA:871:U:H2'	59:BA:872:A:N7	2.27	0.49
59:BA:31:C:H5''	59:BA:1239:G:OP1	2.12	0.49
2:AC:12:LEU:HB2	13:AN:57:ARG:NH2	2.26	0.49
36:DQ:34:LEU:HD22	36:DQ:118:LEU:HD22	1.94	0.49
38:BS:17:ARG:NH2	60:BB:8:U:OP1	2.45	0.49
39:DT:28:VAL:HG12	39:DT:29:ARG:N	2.27	0.49
25:DC:218:THR:O	59:DA:2124:G:N2	2.38	0.49
59:DA:500:G:N2	59:DA:505:A:H62	2.08	0.49
20:CY:161:PRO:O	20:CY:256:THR:N	2.44	0.49
20:CY:322:VAL:HG21	20:CY:325:LEU:HG	1.95	0.49
59:BA:1506(J):G:H2'	59:BA:1506(K):C:O4'	2.12	0.49
21:AA:627:G:H2'	21:AA:628:G:O4'	2.13	0.49
59:BA:407:G:H2'	59:BA:408:G:H8	1.78	0.49
59:DA:295:G:O6	59:DA:343:C:N3	2.45	0.49
59:BA:1576:U:H2'	59:BA:1577:C:H6	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DH:85:LYS:NZ	30:DH:121:ILE:HD12	2.27	0.49
59:DA:1218:C:H42	59:DA:1231:G:H1	1.59	0.49
1:CB:235:SER:OG	1:CB:236:TYR:N	2.43	0.49
59:DA:210:C:H2'	59:DA:211:A:H8	1.75	0.49
52:B6:28:ARG:HA	52:B6:28:ARG:HH11	1.77	0.49
59:DA:1376:C:H2'	59:DA:1377:G:C8	2.48	0.49
59:BA:1700:A:H3'	59:BA:1701:A:H8	1.76	0.49
3:CD:24:GLU:HG2	3:CD:112:VAL:HG11	1.93	0.49
50:B4:15:ILE:HB	50:B4:32:TYR:HB2	1.94	0.49
10:CK:59:TYR:O	10:CK:63:LEU:HG	2.13	0.49
21:CA:1283:G:H2'	21:CA:1284:C:C6	2.47	0.49
21:AA:1399:C:H4'	21:AA:1400:C:H3'	1.94	0.49
30:DH:101:ARG:HB2	30:DH:117:PRO:HG3	1.95	0.49
59:BA:1878:G:H2'	59:BA:1879:C:C6	2.47	0.49
33:DN:37:LYS:CE	33:DN:38:HIS:HD2	2.20	0.49
21:CA:413:G:H1'	21:CA:428:G:N2	2.27	0.49
21:AA:1491:G:N2	63:AA:1601:NMY:H61	2.27	0.49
59:BA:1943:U:H1'	59:BA:1945:G:H5'	1.95	0.49
22:CW:70:G:O2'	59:DA:1850:G:N2	2.44	0.49
22:CW:70:G:N2	59:DA:1851:U:H4'	2.21	0.49
11:CL:30:ALA:HB1	11:CL:33:ARG:HD3	1.94	0.49
59:DA:2006:C:H2'	59:DA:2007:C:C6	2.48	0.49
18:CS:76:PRO:C	18:CS:78:ARG:H	2.15	0.49
59:DA:640:C:H2'	59:DA:641:C:C6	2.46	0.49
60:DB:24:G:C6	60:DB:56:G:N3	2.80	0.49
59:BA:1414:G:H2'	59:BA:1415:U:C6	2.48	0.49
59:BA:19:C:H2'	59:BA:20:C:C6	2.47	0.49
59:BA:520:G:H2'	59:BA:521:G:O4'	2.11	0.49
28:DF:90:PHE:CE2	59:DA:586:A:H4'	2.47	0.49
59:DA:857:C:N4	59:DA:858:U:O4	2.46	0.49
36:BQ:5:ARG:HB3	36:BQ:6:ARG:NH2	2.27	0.49
31:DJ:111:UNK:H	31:DJ:116:UNK:C	2.26	0.49
59:BA:56:A:H2'	59:BA:57:C:C6	2.47	0.49
39:BT:74:ARG:HB3	39:BT:76:PHE:CE1	2.47	0.49
52:B6:8:LYS:HE3	52:B6:25:LYS:NZ	2.27	0.49
59:DA:2122:U:H3	59:DA:2176:A:N6	2.07	0.49
1:CB:68:ILE:HA	1:CB:161:ALA:O	2.12	0.49
52:D6:26:ASN:CG	52:D6:27:LYS:H	2.13	0.49
47:D1:7:ILE:HD11	47:D1:62:VAL:HA	1.94	0.49
21:CA:26:A:H62	21:CA:558:G:N2	2.10	0.49
16:AQ:29:HIS:ND1	16:AQ:32:TYR:HB2	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:270(P):C:HO2'	59:BA:270(Q):C:H5	1.57	0.49
9:CJ:13:HIS:HB3	9:CJ:68:HIS:CE1	2.47	0.49
59:DA:1215:G:C4	59:DA:1216:G:C8	3.00	0.49
59:BA:2576:G:H8	59:BA:2581:G:O6	1.96	0.49
59:DA:1410:G:H2'	59:DA:1411:C:H6	1.77	0.49
59:BA:416:C:H2'	59:BA:417:C:O4'	2.11	0.49
59:DA:1864(A):G:N2	59:DA:1864(D):A:OP2	2.41	0.49
59:BA:2538:C:H2'	59:BA:2539:C:C6	2.48	0.49
20:AY:121:VAL:O	20:AY:125:ALA:HB2	2.11	0.49
35:DP:123:LEU:O	35:DP:142:GLY:HA2	2.12	0.49
1:AB:135:GLN:O	1:AB:139:LYS:HG3	2.12	0.49
51:B5:46:CYS:SG	51:B5:47:PRO:HD2	2.53	0.49
17:CR:58:LEU:O	17:CR:63:GLN:HB2	2.12	0.49
15:CP:26:ARG:NH2	21:CA:310:G:H5''	2.27	0.49
2:AC:160:ALA:O	2:AC:162:GLN:N	2.46	0.49
44:BY:7:VAL:HG21	59:BA:336:C:H4'	1.94	0.49
59:DA:2626:C:H2'	59:DA:2627:G:C8	2.47	0.49
59:BA:1317:A:H2'	59:BA:1318:C:C6	2.47	0.49
33:DN:138:LEU:O	33:DN:139:GLU:HB3	2.11	0.49
49:B3:22:ALA:O	49:B3:26:LEU:HG	2.12	0.49
45:BZ:94:GLU:O	45:BZ:96:VAL:N	2.46	0.49
21:CA:398:C:H2'	21:CA:399:G:H8	1.76	0.49
59:DA:2036:C:H2'	59:DA:2037:G:H8	1.78	0.49
33:DN:111:PRO:O	33:DN:114:ARG:CA	2.60	0.49
33:DN:50:ASP:OD2	33:DN:119:ARG:HB3	2.12	0.49
33:BN:74:ARG:HG3	59:BA:1138:G:H5''	1.93	0.49
33:BN:81:GLY:HA3	33:BN:82:LEU:HD22	1.94	0.49
34:BO:66:LYS:CG	59:BA:1665:A:H5''	2.43	0.49
59:DA:635:C:O2'	59:DA:639:U:H5''	2.13	0.49
11:AL:33:ARG:HD3	11:AL:60:LEU:HD13	1.95	0.49
22:CW:7:G:O2'	22:CW:8:U:OP1	2.26	0.49
39:DT:5:ALA:HB3	59:DA:2875:C:H1'	1.94	0.49
59:BA:1889:A:H3'	59:BA:1890:A:H8	1.76	0.49
21:CA:612:C:N3	21:CA:628:G:N2	2.44	0.49
30:DH:65:HIS:CG	30:DH:66:GLY:N	2.80	0.49
59:DA:1341:U:O2'	59:DA:1342:A:H5'	2.13	0.49
28:DF:155:LEU:HD12	28:DF:176:LEU:HB3	1.92	0.49
59:BA:434:U:H1'	59:BA:435:C:C5	2.45	0.49
59:DA:2683:C:H41	59:DA:2727:G:N2	2.10	0.49
39:DT:75:ILE:HD13	59:DA:2684:U:H5''	1.94	0.49
59:BA:2356:C:H2'	59:BA:2357:U:O4'	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:B6:11:LEU:HD22	52:B6:12:GLU:O	2.12	0.49
29:BG:91:ARG:HG3	59:BA:2313:C:H4'	1.93	0.49
59:BA:407:G:H2'	59:BA:408:G:C8	2.47	0.49
59:DA:455:C:H3'	59:DA:456:C:C5'	2.43	0.49
59:BA:1062:G:H2'	59:BA:1063:G:H8	1.77	0.49
32:BK:91:PRO:HD2	59:BA:1076:C:O2	2.13	0.49
17:AR:64:ARG:HH22	21:AA:835:U:H5''	1.76	0.49
47:B1:88:LYS:HB2	47:B1:91:LYS:HE2	1.93	0.49
21:CA:337:C:H2'	21:CA:338:A:O4'	2.13	0.49
59:BA:2247:A:C2	59:BA:2248:C:H1'	2.48	0.49
3:CD:120:LEU:O	3:CD:125:HIS:HB2	2.12	0.49
59:DA:155(E):U:H2'	59:DA:171:G:O4'	2.13	0.49
33:DN:25:ARG:HA	59:DA:1012:U:O4	2.13	0.49
35:BP:10:PRO:HD2	59:BA:1243:G:O2'	2.12	0.49
59:BA:1503:U:H2'	59:BA:1504:C:O4'	2.11	0.49
40:BU:61:TRP:CE2	40:BU:94:ASN:HB2	2.48	0.49
30:DH:154:PRO:HA	30:DH:161:GLY:HA3	1.93	0.49
21:CA:186(P):U:H2'	21:CA:191:G:C8	2.47	0.49
33:DN:132:ALA:O	33:DN:134:ARG:NH1	2.45	0.49
59:DA:2235:G:H2'	59:DA:2236:C:C6	2.47	0.49
21:AA:1070:U:H2'	21:AA:1071:C:C6	2.47	0.49
20:CY:359:HIS:HB2	20:CY:364:GLU:HG2	1.95	0.49
59:DA:2780:G:H3'	59:DA:2781:A:H8	1.78	0.49
59:DA:527:C:N4	59:DA:2777:G:O2'	2.43	0.49
33:DN:45:ASN:CB	33:DN:115:ARG:HE	2.26	0.49
33:DN:74:ARG:O	33:DN:76:SER:N	2.45	0.49
21:CA:1491:G:C5	63:CA:1601:NMY:H2	2.47	0.49
11:CL:42:THR:HA	11:CL:52:LEU:HA	1.95	0.49
21:CA:1072:G:N2	21:CA:1103:C:C4	2.79	0.49
27:DE:79:ARG:HD2	59:DA:2636:U:P	2.52	0.49
21:CA:669:U:H3	21:CA:737:A:H2	1.60	0.49
22:AW:69:A:H2'	22:AW:70:G:H8	1.77	0.49
21:CA:186(L):G:H2'	21:CA:186(M):G:H8	1.76	0.49
47:D1:18:ILE:HD12	47:D1:20:ARG:HD3	1.94	0.49
47:D1:23:LYS:HB2	47:D1:36:GLY:HA3	1.94	0.49
59:DA:1110:G:O2'	59:DA:1111:A:P	2.71	0.49
34:DO:68:GLU:N	34:DO:78:ARG:HD3	2.17	0.49
26:BD:179:SER:HB3	59:BA:1819:A:O2'	2.13	0.49
36:BQ:34:LEU:HA	36:BQ:131:ILE:HG22	1.93	0.49
25:BC:83:LYS:HD2	25:BC:117:THR:HG21	1.93	0.49
11:AL:102:ARG:HA	11:AL:107:ALA:HB3	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BT:32:TYR:CG	39:BT:33:LYS:N	2.81	0.49
20:AY:33:LEU:HD23	20:AY:34:TYR:HB3	1.93	0.49
20:AY:302:HIS:O	20:AY:332:SER:OG	2.28	0.49
15:AP:46:PRO:HA	15:AP:48:TRP:CD1	2.48	0.49
37:BR:97:VAL:HA	37:BR:113:LEU:O	2.12	0.49
36:BQ:37:LEU:C	36:BQ:99:PRO:HA	2.33	0.49
59:BA:1129:A:O2'	59:BA:2515:C:O2	2.30	0.49
20:AY:309:LEU:HD12	20:AY:333:GLY:HA3	1.94	0.49
37:DR:44:LEU:O	37:DR:48:VAL:HG23	2.12	0.49
59:DA:1226:A:O5'	59:DA:1226:A:H8	1.95	0.49
14:AO:29:VAL:O	14:AO:63:ARG:NH1	2.46	0.49
21:AA:37:U:H2'	21:AA:38:G:C8	2.47	0.49
59:BA:2811:G:N2	59:BA:2890:G:H1'	2.28	0.49
46:B0:27:GLU:HB3	46:B0:69:PHE:HE1	1.77	0.49
59:BA:2378:A:H8	59:BA:2378:A:O5'	1.95	0.49
42:BW:40:ASN:O	59:BA:2009:G:H4'	2.12	0.49
55:B9:4:ARG:HD3	55:B9:34:GLN:HE21	1.76	0.49
30:BH:143:GLN:HG2	59:BA:2744:G:N2	2.27	0.49
59:BA:737:C:H42	59:BA:759:G:H1	1.60	0.49
59:BA:37:C:H2'	59:BA:38:A:H8	1.78	0.49
9:AJ:3:LYS:N	9:AJ:75:ILE:O	2.45	0.49
59:DA:1810:A:H8	59:DA:1810:A:O5'	1.95	0.49
24:AX:19:G:H4'	24:AX:57:G:O2'	2.12	0.49
52:B6:30:THR:O	52:B6:32:ASN:N	2.43	0.49
59:DA:1306:C:H2'	59:DA:1307:A:C8	2.48	0.49
5:CF:16:GLN:O	5:CF:19:LEU:HB3	2.12	0.49
59:BA:2395:C:H2'	59:BA:2396:G:C8	2.47	0.49
18:CS:10:PHE:CD1	18:CS:38:SER:HA	2.48	0.49
29:DG:170:ARG:HH22	29:DG:182:LYS:HE2	1.77	0.49
1:AB:47:THR:O	1:AB:51:LEU:HG	2.12	0.49
59:DA:45:G:H1	59:DA:433:C:H42	1.61	0.49
35:BP:138:LEU:HG	35:BP:142:GLY:HA3	1.93	0.49
59:DA:1668:A:H1'	59:DA:1670:C:N4	2.27	0.49
20:AY:607:ARG:HB3	20:AY:672:PHE:HB2	1.95	0.49
15:CP:53:VAL:HG12	15:CP:79:VAL:HG22	1.93	0.49
59:DA:185:U:H2'	59:DA:186:G:O4'	2.13	0.49
44:BY:20:TYR:O	44:BY:23:ARG:HG2	2.12	0.49
20:AY:192:LEU:O	20:AY:266:ASN:HB2	2.12	0.49
37:BR:64:ARG:O	37:BR:68:ARG:HB2	2.12	0.49
30:DH:35:VAL:HG21	30:DH:75:ALA:HB2	1.95	0.49
4:AE:76:ILE:HB	4:AE:77:PRO:HD2	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:137(D):A:H8	59:BA:1408:C:O2'	1.95	0.49
10:CK:86:GLY:HA2	10:CK:112:THR:HG23	1.94	0.49
59:DA:579:G:C4'	59:DA:2017:U:H2'	2.42	0.49
40:DU:59:ARG:O	40:DU:63:VAL:HG23	2.12	0.49
59:DA:961:C:H4'	59:DA:962:G:OP2	2.11	0.49
33:BN:120:LEU:HG	33:BN:121:LYS:H	1.77	0.49
33:BN:52:VAL:O	33:BN:55:VAL:N	2.45	0.49
59:BA:1951:U:C2	59:BA:1954:G:C8	3.01	0.49
21:AA:408:A:C2	21:AA:434:U:C4	2.99	0.49
24:CX:49:G:N1	24:CX:65:C:N4	2.42	0.49
11:CL:49:ASN:O	11:CL:50:SER:OG	2.27	0.49
59:BA:692:C:H2'	59:BA:693:C:H6	1.77	0.49
59:BA:1890:A:C2	59:BA:2235:G:H1'	2.47	0.49
59:BA:1712(F):U:H2'	59:BA:1712(G):G:O4'	2.12	0.49
59:DA:2107:C:O2	59:DA:2182:G:N1	2.33	0.49
21:CA:44:G:H2'	21:CA:45:U:O4'	2.12	0.49
21:CA:886:G:O6	21:CA:911:U:O4	2.30	0.49
59:BA:901:A:H2'	59:BA:902:C:O4'	2.12	0.49
1:AB:167:PRO:HG2	1:AB:192:SER:HB3	1.94	0.49
59:DA:1800:C:N4	59:DA:1817:G:H22	2.10	0.49
59:BA:696:G:H2'	59:BA:697:C:C6	2.47	0.49
59:BA:1412:A:H2'	59:BA:1413:G:O4'	2.13	0.49
42:BW:57:ASN:O	42:BW:62:HIS:N	2.45	0.49
40:BU:34:LYS:HE2	59:BA:2018:G:H21	1.76	0.49
59:BA:713:G:H2'	59:BA:714:U:C6	2.47	0.49
21:AA:600:C:H2'	21:AA:601:C:H6	1.77	0.49
20:AY:493:VAL:HB	20:AY:512:ILE:HD11	1.95	0.49
29:BG:16:ARG:O	29:BG:20:ILE:HG12	2.13	0.49
21:AA:977:A:O2'	21:AA:981:U:O2	2.13	0.49
29:DG:7:LEU:HD11	29:DG:107:LEU:HD12	1.95	0.49
40:BU:21:ALA:HB2	40:BU:35:ALA:HB1	1.94	0.49
59:DA:65:C:H2'	59:DA:66:C:C6	2.48	0.49
59:DA:1410:G:H2'	59:DA:1411:C:C6	2.47	0.49
10:AK:29:ILE:HG13	10:AK:42:TRP:O	2.12	0.49
51:D5:19:ARG:HH22	59:DA:1264:G:H5''	1.76	0.49
41:DV:8:GLY:HA3	41:DV:23:GLU:HG2	1.94	0.49
14:CO:38:ARG:NH1	21:CA:740:U:OP1	2.45	0.49
59:BA:1925:C:H2'	59:BA:1926:U:H5'	1.94	0.49
59:DA:844:C:H5''	59:DA:845:G:N2	2.28	0.49
20:AY:358:MET:HG2	20:AY:363:ARG:HE	1.76	0.49
26:DD:35:LYS:NZ	26:DD:61:LEU:HG	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CA:181:G:O2'	21:CA:183:G:O6	2.27	0.49
16:AQ:100:LYS:N	21:AA:247:G:OP2	2.34	0.49
15:AP:75:ARG:HG3	15:AP:80:PHE:CD1	2.47	0.49
3:AD:43:HIS:H	3:AD:43:HIS:CD2	2.29	0.49
59:BA:209:C:H5'	59:BA:681:G:H4'	1.95	0.49
55:D9:4:ARG:HG3	55:D9:34:GLN:HE21	1.78	0.49
35:DP:111:ARG:HB3	35:DP:128:HIS:HB2	1.95	0.49
9:CJ:78:ASN:OD1	9:CJ:78:ASN:N	2.46	0.49
33:DN:21:LYS:HZ2	33:DN:21:LYS:HB3	1.77	0.49
33:DN:59:LYS:HZ3	33:DN:60:ILE:H	1.60	0.49
33:BN:72:TYR:H	33:BN:87:LEU:N	2.11	0.49
33:BN:78:TYR:HB3	33:BN:79:PRO:CD	2.41	0.49
21:CA:1494:G:OP1	63:CA:1601:NMY:H81	2.13	0.49
59:DA:1905:C:O2'	59:DA:1929:G:H8	1.95	0.49
60:DB:24:G:C2	60:DB:56:G:N2	2.80	0.49
21:CA:1486:G:H2'	21:CA:1487:G:O4'	2.12	0.49
59:DA:511:U:H4'	59:DA:1235:G:H4'	1.94	0.49
27:BE:64:LYS:O	27:BE:67:PHE:HB3	2.12	0.49
21:AA:1338:G:H2'	21:AA:1339:A:C8	2.48	0.49
21:CA:19:C:H2'	21:CA:20:U:C6	2.48	0.49
59:BA:872:A:C2	59:BA:905:U:N3	2.75	0.49
21:CA:593:G:H2'	21:CA:594:G:H8	1.78	0.49
38:DS:13:ARG:HE	38:DS:13:ARG:N	2.10	0.49
59:DA:1641:A:H2'	59:DA:1642:G:O4'	2.13	0.49
24:AX:2:G:N1	24:AX:71:C:N4	2.47	0.49
27:DE:134:ILE:HG12	27:DE:135:HIS:N	2.24	0.49
59:BA:880:G:O2'	59:BA:881:G:OP1	2.29	0.49
51:B5:10:LYS:HD2	59:BA:579:G:H1'	1.94	0.49
59:DA:1496:A:H2'	59:DA:1498:C:C4	2.48	0.49
26:BD:150:LYS:HD3	59:BA:2202(H):G:H21	1.77	0.49
59:BA:2319:G:H1'	59:BA:2320:A:C8	2.48	0.49
52:B6:12:GLU:HG2	52:B6:23:THR:HA	1.94	0.49
59:BA:813:U:O2'	59:BA:1225:G:H1'	2.12	0.49
19:AT:84:LEU:O	19:AT:88:VAL:HG23	2.12	0.49
7:AH:11:THR:HG21	21:AA:825:G:N2	2.28	0.49
59:DA:271(U):A:H2	59:DA:271(V):A:HO2'	1.61	0.49
59:BA:2884:U:OP2	59:BA:2885:C:N4	2.46	0.49
45:DZ:9:TYR:HD2	45:DZ:61:LEU:HD21	1.77	0.49
20:AY:606:MET:HG3	20:AY:649:LEU:HG	1.94	0.49
3:CD:15:GLU:HA	3:CD:59:ARG:NH2	2.27	0.49
59:DA:1301:A:N6	59:DA:1626:G:O2'	2.46	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DP:64:LYS:HG3	59:DA:2416:C:OP1	2.13	0.49
59:BA:1855:G:H1	59:BA:1887:C:H42	1.61	0.49
32:BK:100:THR:HG22	32:BK:139:VAL:HB	1.93	0.49
59:DA:1453:A:H3'	59:DA:1454:U:H3'	1.94	0.49
59:BA:922:U:H2'	59:BA:923:C:H6	1.78	0.49
25:DC:181:PHE:HB3	25:DC:185:LYS:HB2	1.94	0.49
21:AA:246:A:C2	21:AA:282:A:C5	3.00	0.49
9:AJ:24:VAL:HG21	9:AJ:37:PRO:HD3	1.93	0.49
27:DE:4:ILE:HD13	27:DE:5:LEU:N	2.27	0.49
26:DD:84:TYR:CD2	26:DD:86:PRO:HD3	2.47	0.49
59:DA:1533:C:H2'	59:DA:1534:G:H5'	1.95	0.49
59:BA:305:U:H2'	59:BA:306:U:C6	2.47	0.49
45:DZ:36:LYS:N	45:DZ:36:LYS:HD3	2.27	0.49
15:CP:19:ILE:HB	15:CP:37:GLY:HA3	1.93	0.49
1:AB:15:VAL:HG23	1:AB:16:HIS:CE1	2.47	0.49
33:DN:93:THR:O	33:DN:94:HIS:HB2	2.12	0.49
27:DE:191:PRO:O	27:DE:194:GLY:N	2.45	0.49
33:BN:97:ARG:HA	33:BN:105:GLY:HA2	1.93	0.49
21:CA:1238:A:H5'	21:CA:1336:C:H41	1.78	0.49
34:BO:63:VAL:N	34:BO:84:ALA:HB2	2.27	0.49
59:DA:1891:G:H2'	59:DA:1892:C:C6	2.47	0.49
37:DR:3:HIS:HB2	59:DA:1654:A:OP1	2.13	0.49
59:BA:956:G:HO2'	59:BA:959:A:H62	1.58	0.49
59:DA:821:A:H62	59:DA:972:G:N2	2.06	0.49
59:DA:2366:A:H2'	59:DA:2367:G:O4'	2.12	0.49
30:DH:109:PHE:CE2	59:DA:2667:C:H1'	2.47	0.49
47:B1:20:ARG:NH2	47:B1:37:ILE:HA	2.28	0.49
59:DA:2560:C:C2'	59:DA:2561:A:H5'	2.43	0.49
21:CA:545:C:O2'	21:CA:549:C:OP1	2.30	0.49
60:BB:24:G:H1'	60:BB:27:C:N4	2.28	0.49
59:DA:2108:C:H2'	59:DA:2109:U:C5	2.47	0.49
28:DF:157:VAL:HG21	28:DF:192:LEU:HD12	1.94	0.49
24:CX:13:C:N3	24:CX:22:G:N2	2.48	0.49
20:CY:656:ALA:HB2	20:CY:669:PHE:CE2	2.45	0.49
3:AD:173:TRP:NE1	3:AD:174:LEU:HG	2.28	0.49
59:BA:465:G:H21	59:BA:683:C:H2'	1.77	0.49
14:AO:79:ARG:HA	14:AO:82:ILE:HG22	1.95	0.49
45:DZ:100:VAL:HB	45:DZ:124:ILE:HD11	1.95	0.49
21:CA:1434:A:H2'	21:CA:1435:G:O4'	2.12	0.49
7:CH:83:ILE:HG12	7:CH:84:ARG:N	2.27	0.49
59:DA:1243:G:H2'	59:DA:1244:G:O4'	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:129(A):G:H4'	21:AA:130:A:H5''	1.93	0.49
21:AA:1440(J):C:O2'	21:AA:1440(K):G:H5''	2.13	0.49
59:BA:413:C:N4	59:BA:2410:G:H1	2.08	0.49
15:CP:14:ASN:HA	15:CP:42:ARG:NH2	2.28	0.49
59:BA:1428:C:H42	59:BA:1570:A:H62	1.59	0.49
8:CI:28:VAL:HB	8:CI:36:TYR:CD1	2.47	0.49
21:AA:1195:C:H3'	21:AA:1196:U:C5'	2.43	0.49
59:DA:34:C:N3	59:DA:455:C:H5'	2.28	0.49
1:CB:94:ASN:N	1:CB:94:ASN:HD22	2.11	0.49
21:AA:557:G:H2'	21:AA:558:G:O4'	2.13	0.49
59:DA:1352:U:H2'	59:DA:1353:A:C8	2.48	0.49
59:DA:487:C:H2'	59:DA:488:G:H8	1.78	0.49
49:D3:7:LYS:HG2	49:D3:8:LEU:H	1.77	0.49
35:DP:36:LYS:H	59:DA:942:G:C5'	2.26	0.49
47:B1:86:SER:O	47:B1:86:SER:OG	2.11	0.49
59:DA:687:C:N3	59:DA:787:U:H4'	2.28	0.49
21:CA:784:C:H2'	21:CA:785:G:O4'	2.13	0.49
4:AE:17:ALA:HA	4:AE:26:PHE:HA	1.95	0.49
22:AW:18:G:H22	22:AW:57:G:H2'	1.78	0.49
21:CA:1206:G:C4	21:CA:1207:G:C8	3.01	0.49
25:DC:105:LEU:HB2	25:DC:128:LEU:HD11	1.95	0.49
17:AR:54:ARG:O	17:AR:55:ARG:HB2	2.13	0.49
21:CA:1440(A):G:H5''	21:CA:1440(B):G:O4'	2.13	0.49
3:CD:88:VAL:HG13	4:CE:97:GLY:HA3	1.95	0.49
10:AK:78:GLN:OE1	10:AK:104:GLN:HB3	2.13	0.49
32:DK:80:LYS:HE2	32:DK:80:LYS:HA	1.95	0.49
21:AA:511:C:C2	21:AA:512:U:C5	3.00	0.49
39:DT:107:ASP:N	39:DT:110:ILE:HG13	2.27	0.49
33:DN:104:LYS:HE2	33:DN:104:LYS:HB3	1.56	0.49
33:BN:103:VAL:O	33:BN:105:GLY:N	2.40	0.49
33:BN:90:MET:CB	33:BN:97:ARG:CZ	2.91	0.49
59:BA:2552:U:H3'	59:BA:2553:G:C5'	2.42	0.49
59:BA:1972:A:O4'	63:BA:2904:NMY:H21	2.13	0.49
11:CL:109:GLY:HA3	11:CL:120:TYR:C	2.33	0.49
21:CA:1070:U:H3	21:CA:1105:A:H61	0.69	0.49
62:AY:702:FUA:C20	62:AY:702:FUA:H5	2.12	0.49
59:DA:2351:G:O2'	59:DA:2366:A:N6	2.46	0.49
38:DS:30:ARG:HH21	38:DS:33:LYS:HA	1.77	0.49
21:CA:1046:A:C8	21:CA:1047:G:C8	3.00	0.49
59:BA:175:G:H2'	59:BA:176:G:O4'	2.13	0.49
21:CA:224:C:H2'	21:CA:225:C:C6	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CA:737:A:H2'	21:CA:738:C:C6	2.48	0.49
59:DA:1430:C:C4	59:DA:1431:U:C4	3.01	0.49
16:CQ:45:HIS:N	16:CQ:72:ARG:HA	2.28	0.49
21:AA:715:A:H2'	21:AA:716:A:H8	1.77	0.49
25:BC:114:VAL:HG11	25:BC:124:VAL:HG11	1.94	0.49
59:BA:902:C:H2'	59:BA:903:C:H6	1.77	0.49
38:BS:97:ARG:CZ	60:BB:48:A:H5'	2.43	0.49
21:AA:321:A:H2'	21:AA:322:C:H6	1.78	0.49
32:DK:126:MET:HG3	59:DA:1058:G:H22	1.78	0.49
59:BA:253:C:H2'	59:BA:254:G:O4'	2.12	0.49
59:DA:1578:U:O5'	59:DA:1578:U:H6	1.96	0.49
59:DA:241:A:H5'	59:DA:243:U:H1'	1.95	0.49
59:BA:2595:G:HO2'	59:BA:2596:U:H5	1.60	0.49
13:AN:31:ARG:NH2	21:AA:977:A:OP1	2.46	0.49
59:DA:53:A:N6	59:DA:117:G:H1'	2.26	0.49
28:DF:51:THR:HG23	59:DA:450:G:H5''	1.94	0.49
59:BA:2292:C:N3	59:BA:2340:G:N2	2.54	0.49
59:DA:719:C:H2'	59:DA:720:C:C6	2.48	0.49
26:BD:97:TYR:HB2	26:BD:102:LYS:HA	1.95	0.49
59:DA:377:C:H2'	59:DA:378:C:C6	2.46	0.49
59:DA:1368:G:H2'	59:DA:1369:G:C8	2.47	0.49
59:DA:1437:C:O2'	59:DA:1506(K):C:H4'	2.12	0.49
59:DA:286:C:H2'	59:DA:287:C:C6	2.48	0.49
59:DA:693:C:H1'	59:DA:1354:A:H1'	1.95	0.49
48:B2:64:LEU:O	48:B2:68:ARG:N	2.46	0.49
40:BU:97:ASP:C	40:BU:99:ALA:H	2.16	0.49
17:AR:40:LEU:HD12	17:AR:70:ILE:HG12	1.95	0.49
21:AA:1062:U:H2'	21:AA:1063:C:C6	2.48	0.49
26:DD:262:ARG:NH1	59:DA:2085:C:OP1	2.46	0.49
45:BZ:8:TYR:HB2	45:BZ:38:TYR:CZ	2.48	0.49
2:AC:161:GLU:HB2	23:AV:25:A:H61	1.77	0.49
28:DF:104:LYS:HE2	28:DF:108:LYS:HG3	1.94	0.49
16:AQ:91:ARG:NH1	21:AA:583:A:O2'	2.46	0.49
43:BX:3:THR:N	48:B2:29:LYS:HZ3	2.10	0.49
59:BA:1668:A:N3	59:BA:1670:C:N4	2.61	0.49
59:DA:2110:G:H4'	59:DA:2145:C:H42	1.78	0.49
9:AJ:17:ASP:OD2	21:AA:1152:A:O2'	2.20	0.49
19:CT:79:ARG:NH1	19:CT:80:ARG:HE	2.11	0.49
23:CV:6:G:H2'	23:CV:7:G:O4'	2.13	0.48
59:BA:1917:U:H6	59:BA:1917:U:O5'	1.96	0.48
59:DA:1832:C:Cl'	63:DA:2901:NMY:HN62	2.25	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CA:1117:G:N2	21:CA:1180:A:H1'	2.28	0.48
24:CX:27:C:N4	24:CX:43:G:N1	2.21	0.48
22:AW:7:G:H2'	22:AW:49:A:H1'	1.94	0.48
11:CL:24:VAL:HG21	21:CA:553:A:H5''	1.93	0.48
59:BA:2115:G:H1'	59:BA:2171:A:N1	2.28	0.48
22:AW:72:C:H2'	22:AW:73:A:H5'	1.93	0.48
59:BA:2267:A:OP2	59:BA:2268:A:H5''	2.13	0.48
36:BQ:16:ARG:HD2	60:BB:90:C:OP1	2.12	0.48
59:BA:811:U:O3'	59:BA:1251:C:H5'	2.13	0.48
35:BP:115:LEU:HD22	59:BA:636:G:C2	2.48	0.48
59:DA:1952:A:C6	59:DA:1953:A:N6	2.81	0.48
26:DD:52:ARG:NH1	26:DD:249:PRO:HG3	2.28	0.48
21:CA:919:A:H2'	21:CA:920:U:C6	2.48	0.48
38:DS:15:ARG:HG2	59:DA:2334:G:C2	2.48	0.48
59:DA:75:G:C6	59:DA:111:A:N1	2.81	0.48
29:BG:111:LEU:C	29:BG:113:ARG:H	2.15	0.48
28:BF:157:VAL:O	28:BF:158:THR:HB	2.13	0.48
59:BA:1225:G:C5	59:BA:1226:A:C6	3.01	0.48
21:CA:255:G:H2'	21:CA:256:U:C6	2.47	0.48
28:DF:107:LYS:HE3	28:DF:205:ARG:HG3	1.95	0.48
37:BR:97:VAL:HG22	37:BR:114:VAL:HG13	1.95	0.48
28:BF:59:TYR:HA	59:BA:469:G:OP1	2.12	0.48
37:DR:20:LEU:O	37:DR:24:GLN:HB2	2.13	0.48
21:AA:1348:U:N3	21:AA:1374:A:C2	2.81	0.48
20:AY:341:VAL:HG12	20:AY:391:GLY:HA2	1.95	0.48
29:DG:173:LEU:HD22	29:DG:178:PHE:CD1	2.48	0.48
59:DA:2506:U:H5'	59:DA:2507:C:OP1	2.12	0.48
59:BA:247:G:H4'	59:BA:386:G:C5	2.48	0.48
59:BA:1055:G:H21	59:BA:1085:A:H1'	1.78	0.48
29:DG:126:ASP:CG	29:DG:130:ASN:HB2	2.33	0.48
45:BZ:27:VAL:HG11	60:BB:75:G:H1'	1.95	0.48
45:BZ:152:ALA:HA	45:BZ:167:PRO:O	2.13	0.48
21:AA:124:G:H2'	21:AA:125:U:O4'	2.13	0.48
20:CY:561:VAL:HG21	20:CY:676:TYR:HE2	1.77	0.48
13:CN:8:GLU:HA	13:CN:11:LYS:HB2	1.95	0.48
49:D3:45:GLY:O	49:D3:48:GLU:HG2	2.12	0.48
59:BA:1359:A:OP2	59:BA:1371:G:N1	2.43	0.48
41:DV:72:VAL:HB	41:DV:74:LYS:HE2	1.95	0.48
59:BA:1551:C:H2'	59:BA:1552:G:O4'	2.12	0.48
27:DE:65:GLY:HA2	27:DE:70:ALA:O	2.13	0.48
15:CP:56:ALA:O	15:CP:60:LEU:HG	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BT:39:ARG:O	39:BT:40:THR:OG1	2.31	0.48
4:CE:43:LEU:HB2	4:CE:136:MET:HG3	1.95	0.48
7:CH:56:LYS:O	7:CH:58:TYR:N	2.46	0.48
38:BS:34:HIS:NE2	38:BS:54:LEU:HB3	2.28	0.48
44:DY:91:GLU:HG2	44:DY:92:ASN:H	1.77	0.48
28:BF:159:GLY:HA2	28:BF:164:ARG:HH21	1.77	0.48
34:BO:10:VAL:HG22	34:BO:17:ARG:HA	1.95	0.48
59:BA:2364:C:H2'	59:BA:2365:G:O4'	2.12	0.48
59:DA:2023:G:O6	59:DA:2040:C:N3	2.46	0.48
33:DN:95:PRO:O	33:DN:108:PRO:HG3	2.13	0.48
33:DN:107:LEU:HG	33:DN:120:LEU:HD22	1.93	0.48
33:DN:12:ARG:HG3	33:DN:14:VAL:HG23	1.95	0.48
33:DN:88:GLU:C	33:DN:90:MET:N	2.67	0.48
33:DN:88:GLU:O	33:DN:91:LEU:N	2.46	0.48
37:DR:2:ARG:HH12	59:DA:2680:C:P	2.36	0.48
59:BA:8:A:C2	59:BA:9:U:C2	3.01	0.48
27:BE:47:VAL:HG21	27:BE:86:PRO:HD2	1.95	0.48
33:BN:97:ARG:CB	33:BN:105:GLY:HA2	2.43	0.48
33:BN:75:TYR:HA	33:BN:82:LEU:HB3	1.95	0.48
34:BO:40:VAL:HG22	34:BO:59:LYS:HG3	1.94	0.48
59:BA:1970:A:C4'	63:BA:2904:NMY:H192	2.23	0.48
26:BD:242:ARG:NH2	59:BA:1826:G:H4'	2.28	0.48
11:CL:33:ARG:HG2	11:CL:60:LEU:CD1	2.40	0.48
12:CM:87:TYR:CE2	21:CA:1321:C:H4'	2.48	0.48
12:CM:96:LEU:HD13	21:CA:1226:C:OP2	2.13	0.48
60:DB:24:G:H4'	60:DB:25:A:N7	2.28	0.48
22:CW:20(A):U:H2'	22:CW:21:A:H5'	1.94	0.48
59:DA:1178:C:H2'	59:DA:1179:C:C6	2.49	0.48
54:B8:18:ALA:HB1	59:BA:628:G:H5"	1.95	0.48
26:DD:218:ARG:NH2	59:DA:691:C:OP1	2.46	0.48
59:BA:971:C:H5"	59:BA:974:G:HO2'	1.76	0.48
59:DA:189:G:H2'	59:DA:205:G:H22	1.77	0.48
59:BA:2447:G:H4'	59:BA:2447:G:OP1	2.12	0.48
59:BA:2063:C:H1'	59:BA:2451:A:C2	2.48	0.48
30:BH:139:GLN:HE22	59:BA:2746:U:H1'	1.78	0.48
59:DA:2678:C:H2'	59:DA:2679:A:C8	2.48	0.48
27:DE:12:THR:HG22	39:DT:58:ASN:HD21	1.78	0.48
26:DD:260:ARG:NH1	59:DA:1799:G:OP1	2.44	0.48
39:BT:31:SER:H	39:BT:44:ASP:HA	1.78	0.48
59:BA:723:G:H2'	59:BA:724:U:O4'	2.13	0.48
31:BJ:82:UNK:O	31:BJ:84:UNK:N	2.46	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DT:28:VAL:HG12	39:DT:29:ARG:HG3	1.95	0.48
59:BA:947:G:H1	59:BA:970:C:N4	2.11	0.48
20:CY:573:HIS:O	20:CY:576:ASP:N	2.45	0.48
59:BA:1271:G:H22	59:BA:1615:C:N4	2.07	0.48
28:BF:20:LEU:HD22	28:BF:21:ALA:N	2.27	0.48
59:BA:1082:U:H2'	59:BA:1083:U:H5'	1.95	0.48
43:BX:83:VAL:HG12	43:BX:84:ALA:H	1.77	0.48
21:AA:258:G:H1	21:AA:268:C:N4	2.05	0.48
27:BE:134:ILE:O	27:BE:136:ARG:N	2.46	0.48
37:DR:96:ARG:HB2	37:DR:117:VAL:CG2	2.43	0.48
35:DP:98:GLU:O	35:DP:102:ARG:N	2.46	0.48
59:DA:797:C:O5'	59:DA:797:C:H6	1.96	0.48
21:AA:989:C:H2'	21:AA:990:C:H6	1.78	0.48
40:BU:36:ARG:NH1	59:BA:1252:G:N7	2.61	0.48
59:BA:2251:G:H2'	59:BA:2252:G:O5'	2.13	0.48
59:DA:296:C:H42	59:DA:342:G:H1	1.60	0.48
59:DA:697:C:H42	59:DA:765:G:H1	1.61	0.48
20:AY:14:ASN:HA	20:AY:80:ASN:H	1.78	0.48
21:AA:1046:A:H3'	21:AA:1047:G:C8	2.46	0.48
30:BH:103:LEU:HD11	30:BH:105:LEU:HB3	1.95	0.48
59:BA:1435:G:H2'	59:BA:1436:G:H8	1.77	0.48
59:BA:1559:G:O2'	59:BA:1560:G:H5'	2.13	0.48
6:AG:71:PRO:O	6:AG:96:GLN:HG2	2.12	0.48
20:AY:546:ILE:HA	20:AY:590:ILE:HG13	1.95	0.48
29:BG:101:ILE:O	29:BG:105:LYS:HG2	2.13	0.48
29:DG:60:LEU:O	29:DG:63:ILE:HG12	2.13	0.48
59:BA:705:A:H2'	59:BA:706:A:O4'	2.13	0.48
7:AH:97:VAL:HG13	7:AH:98:LYS:HD3	1.95	0.48
2:AC:28:GLN:HA	2:AC:31:HIS:NE2	2.28	0.48
28:DF:7:TYR:CD1	28:DF:7:TYR:N	2.81	0.48
59:BA:783:A:H2'	59:BA:784:A:H4'	1.94	0.48
59:BA:397:G:H2'	59:BA:398:G:H8	1.78	0.48
59:DA:1054:A:H2'	59:DA:1055:G:C8	2.47	0.48
59:DA:1056:G:H5''	59:DA:1057:A:O4'	2.12	0.48
30:DH:37:VAL:HG11	30:DH:68:THR:HA	1.95	0.48
39:DT:121:ILE:O	39:DT:125:ARG:HG2	2.14	0.48
59:DA:2045:C:H42	59:DA:2623:G:H1	1.61	0.48
36:BQ:97:VAL:HG13	36:BQ:101:ARG:HB3	1.95	0.48
34:DO:51:ALA:O	34:DO:52:VAL:HG22	2.13	0.48
59:BA:2030:A:H5''	59:BA:2031:A:N7	2.28	0.48
36:BQ:74:TYR:CE1	36:BQ:76:LYS:HD3	2.47	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:2225:A:H4'	59:BA:2226:C:C6	2.48	0.48
59:DA:172:C:H2'	59:DA:173:G:O4'	2.13	0.48
50:D4:16:CYS:HB2	50:D4:20:ASN:HB2	1.93	0.48
21:AA:517:G:H4'	21:AA:519:C:C2	2.48	0.48
59:BA:2194:G:H2'	59:BA:2195:C:O4'	2.13	0.48
21:AA:1241:G:H2'	21:AA:1242:C:C6	2.49	0.48
21:AA:1241:G:H1	21:AA:1296:C:H42	1.60	0.48
33:DN:114:ARG:NH2	59:DA:527:C:N1	2.57	0.48
33:DN:74:ARG:O	33:DN:75:TYR:C	2.48	0.48
59:DA:1932:A:N6	59:DA:1968:G:H1'	2.28	0.48
21:CA:1148:U:C4	21:CA:1149:C:C2	3.00	0.48
21:CA:1015:A:O2'	21:CA:1218:C:H4'	2.13	0.48
38:DS:32:LEU:HD11	60:DB:29:A:N7	2.28	0.48
59:BA:2115:G:H5''	59:BA:2166:G:O2'	2.14	0.48
59:DA:1430:C:H2'	59:DA:1431:U:C6	2.48	0.48
21:CA:1502:A:H8	21:CA:1505:G:N2	2.08	0.48
21:CA:1305:G:H2'	21:CA:1331:G:N2	2.27	0.48
59:DA:1952:A:H2	59:DA:2548:G:H22	1.61	0.48
45:DZ:74:VAL:HB	45:DZ:76:LEU:HD21	1.94	0.48
26:DD:220:HIS:N	59:DA:1790:C:OP1	2.47	0.48
21:CA:500:G:C6	21:CA:545:C:N3	2.78	0.48
21:CA:1370:G:C2	21:CA:1371:G:C8	3.01	0.48
59:DA:2587:A:N6	59:DA:2608:G:H21	2.00	0.48
59:DA:883:G:O6	59:DA:893:C:N3	2.46	0.48
25:BC:114:VAL:HG12	25:BC:139:PRO:HG3	1.95	0.48
22:AW:34:C:H2'	22:AW:35:A:H8	1.78	0.48
1:AB:235:SER:O	1:AB:237:ALA:N	2.46	0.48
20:CY:89:ASP:O	20:CY:91:THR:N	2.46	0.48
59:DA:1027:A:H2'	59:DA:1028:A:H8	1.77	0.48
26:DD:183:ARG:HG2	26:DD:270:ILE:HG22	1.96	0.48
26:DD:165:ILE:O	26:DD:166:GLN:HB2	2.12	0.48
20:CY:239:GLU:HA	20:CY:242:LEU:HD12	1.95	0.48
25:DC:39:ASP:HA	25:DC:178:LYS:O	2.13	0.48
7:AH:94:TYR:CD2	21:AA:598:U:H4'	2.48	0.48
21:AA:639:G:H2'	21:AA:640:A:H8	1.78	0.48
17:CR:47:THR:HB	17:CR:85:LEU:HD23	1.94	0.48
21:AA:294:U:H2'	21:AA:295:C:C6	2.48	0.48
14:AO:44:LYS:HD3	59:BA:716:A:O2'	2.14	0.48
59:BA:1544:A:O2'	59:BA:1545:A:C8	2.62	0.48
59:DA:2836:U:H2'	59:DA:2837:G:H8	1.79	0.48
47:B1:19:GLN:OE1	47:B1:40:ARG:NH1	2.47	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:447:A:H2	59:DA:455:C:N3	2.11	0.48
59:BA:2374:C:H2'	59:BA:2375:G:H8	1.78	0.48
35:BP:146:VAL:O	35:BP:148:LEU:N	2.39	0.48
29:DG:68:PRO:HB2	29:DG:90:LEU:HD11	1.94	0.48
59:BA:1537:C:C2	59:BA:1538:G:H1'	2.48	0.48
21:AA:890:G:H22	21:AA:906:G:H2'	1.78	0.48
29:DG:95:ARG:H	50:D4:1:MET:HE3	1.77	0.48
21:AA:197:A:N3	21:AA:198:G:H1'	2.29	0.48
59:DA:123:G:H2'	59:DA:124:G:O4'	2.13	0.48
44:BY:9:LYS:HE3	44:BY:11:ASP:OD1	2.13	0.48
21:CA:770:C:H2'	21:CA:771:G:C8	2.48	0.48
50:B4:33:VAL:HB	50:B4:34:GLU:H	1.54	0.48
9:AJ:48:THR:HB	9:AJ:62:HIS:CE1	2.49	0.48
59:BA:645:C:H3'	59:BA:646:A:C5'	2.43	0.48
59:BA:292:C:H42	59:BA:348:G:H1	1.60	0.48
38:BS:12:PHE:CZ	38:BS:91:PRO:HB3	2.49	0.48
6:AG:30:ILE:O	6:AG:32:ARG:HG2	2.14	0.48
20:AY:191:ASP:OD1	20:AY:191:ASP:N	2.46	0.48
12:AM:83:ASP:OD2	12:AM:84:ILE:N	2.46	0.48
59:BA:1025:G:H4'	59:BA:1026:U:O4'	2.13	0.48
20:AY:499:ARG:NH2	59:BA:1913:A:OP1	2.47	0.48
24:CX:26:A:H2'	24:CX:27:C:C6	2.48	0.48
43:DX:63:LYS:HA	43:DX:71:GLY:O	2.13	0.48
59:DA:1629:U:O2'	59:DA:2698:U:OP1	2.31	0.48
11:CL:71:PRO:HB3	11:CL:120:TYR:CE2	2.48	0.48
23:CV:18:G:C6	22:CW:34:C:N3	2.79	0.48
27:DE:111:ARG:HB2	27:DE:160:TYR:O	2.13	0.48
30:BH:58:GLU:O	30:BH:62:LYS:HG3	2.13	0.48
24:AX:37:A:C5	24:AX:38:A:C5	3.01	0.48
59:BA:541:C:H2'	59:BA:542:C:C6	2.48	0.48
59:DA:1821:A:H2'	59:DA:1822:G:C8	2.49	0.48
59:DA:1793:C:N3	59:DA:1826:G:N2	2.54	0.48
60:BB:24:G:H1	60:BB:59:A:H61	1.60	0.48
27:BE:143:ASN:ND2	59:BA:2572:A:OP1	2.44	0.48
21:AA:971:G:P	21:AA:1231:G:H21	2.36	0.48
53:D7:25:PRO:HA	53:D7:28:ARG:HE	1.78	0.48
25:BC:100:ILE:O	25:BC:104:ILE:HG13	2.14	0.48
25:BC:105:LEU:HB2	25:BC:128:LEU:HD11	1.96	0.48
59:BA:805:G:N3	59:BA:831:G:H1'	2.28	0.48
9:CJ:51:ARG:HB2	9:CJ:59:SER:HB3	1.94	0.48
59:BA:882:G:H2'	59:BA:883:G:H8	1.73	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AL:69:TYR:CE1	11:AL:70:ILE:HG12	2.48	0.48
7:CH:91:ARG:HH21	21:CA:564:C:H4'	1.78	0.48
38:BS:13:ARG:N	38:BS:13:ARG:HE	2.10	0.48
25:DC:174:ALA:HA	25:DC:175:PRO:HD3	1.57	0.48
59:BA:2591:C:H2'	59:BA:2592:G:O4'	2.13	0.48
59:BA:1662:C:O2'	59:BA:2687:U:OP1	2.27	0.48
45:DZ:89:PHE:CE2	60:DB:104:A:H4'	2.48	0.48
20:AY:259:PHE:HB2	20:AY:272:LEU:HD13	1.95	0.48
33:BN:127:ASP:C	33:BN:128:HIS:HD1	2.17	0.48
28:BF:110:LEU:HD12	28:BF:183:VAL:HG13	1.95	0.48
59:DA:1530:G:N1	59:DA:1541:U:C2	2.81	0.48
59:BA:701:G:H1	59:BA:731:C:N4	2.10	0.48
2:AC:176:HIS:HB3	21:AA:1111:A:N6	2.27	0.48
4:AE:79:GLU:OE2	7:AH:105:ARG:HB2	2.14	0.48
20:AY:145:ASP:O	20:AY:146:LEU:HB2	2.14	0.48
21:AA:337:C:H2'	21:AA:338:A:O4'	2.13	0.48
10:AK:21:ILE:HD11	10:AK:98:LEU:HD11	1.94	0.48
10:AK:21:ILE:HB	10:AK:84:VAL:HA	1.96	0.48
21:AA:1440(O):A:H3'	21:AA:1461:G:H8	1.77	0.48
21:AA:349:A:H2'	21:AA:350:G:H8	1.77	0.48
21:AA:1091:U:N3	21:AA:1094:G:OP2	2.27	0.48
26:BD:77:ALA:HB3	26:BD:95:LEU:HD23	1.95	0.48
11:AL:42:THR:HG23	11:AL:43:VAL:H	1.77	0.48
5:CF:40:VAL:HG23	5:CF:63:TYR:CE1	2.47	0.48
3:AD:90:GLY:O	3:AD:93:PHE:HB3	2.13	0.48
59:DA:1506(K):C:H2'	59:DA:1506(L):G:C8	2.48	0.48
59:BA:1595:G:H2'	59:BA:1596:A:C8	2.49	0.48
21:AA:1020:U:H2'	21:AA:1021:G:H8	1.76	0.48
21:CA:115:G:O2'	21:CA:116:A:P	2.71	0.48
30:BH:17:VAL:HB	30:BH:45:VAL:HG22	1.95	0.48
29:DG:11:TYR:HB2	29:DG:176:LEU:HD21	1.95	0.48
20:AY:72:CYS:O	20:AY:78:ARG:HA	2.13	0.48
3:AD:165:MET:SD	3:AD:176:LEU:HD22	2.53	0.48
59:BA:991:C:H5'	59:BA:1185:C:H2'	1.94	0.48
59:BA:2802:G:H2'	59:BA:2803:C:O4'	2.13	0.48
59:DA:1685:C:H42	59:DA:1703:G:H1	1.62	0.48
51:D5:46:CYS:SG	51:D5:47:PRO:HD2	2.53	0.48
21:AA:1420:C:H42	21:AA:1480:G:H1	1.62	0.48
36:DQ:32:TYR:CE2	36:DQ:111:GLU:HG3	2.48	0.48
35:DP:40:SER:O	35:DP:45:LEU:HD22	2.13	0.48
35:BP:87:ASP:OD1	35:BP:90:ARG:NH2	2.45	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:1137:C:O2'	21:AA:1138:G:N2	2.46	0.48
37:BR:84:ALA:HB3	37:BR:85:PRO:HD3	1.95	0.48
59:DA:477:A:H2'	59:DA:478:A:C8	2.49	0.48
18:CS:53:ASN:O	18:CS:53:ASN:ND2	2.47	0.48
35:DP:147:LEU:O	35:DP:148:LEU:HB2	2.13	0.48
7:CH:97:VAL:HG13	7:CH:98:LYS:HD3	1.94	0.48
59:BA:2829:C:H2'	59:BA:2830:G:C8	2.48	0.48
59:DA:2778:A:O2'	59:DA:2780:G:C8	2.67	0.48
33:BN:38:HIS:HA	59:BA:1006:C:O2'	2.13	0.48
33:BN:94:HIS:HB3	33:BN:95:PRO:CD	2.43	0.48
59:BA:2585:U:O2'	59:BA:2586:C:O5'	2.29	0.48
7:CH:100:ILE:HG21	7:CH:125:ARG:HG2	1.96	0.48
11:CL:113:ARG:NH1	21:CA:537:G:H5''	2.29	0.48
11:CL:32:PHE:HZ	21:CA:33:A:N3	2.11	0.48
11:AL:85:ILE:HG13	11:AL:98:TYR:HB3	1.95	0.48
28:BF:82:ILE:HG13	28:BF:83:PHE:CD1	2.48	0.48
25:BC:169:THR:HB	59:BA:2178:C:H1'	1.94	0.48
59:BA:2178:C:H2'	59:BA:2179:C:C6	2.44	0.48
48:D2:51:ARG:O	48:D2:54:LYS:HB3	2.13	0.48
6:CG:28:ASN:O	6:CG:31:MET:HB3	2.13	0.48
6:CG:78:ARG:HD3	6:CG:85:TYR:HD1	1.79	0.48
59:BA:51:G:H21	59:BA:118:A:N6	2.00	0.48
28:DF:125:LEU:HD23	28:DF:194:MET:HG3	1.95	0.48
59:DA:98:G:N3	59:DA:98:G:H2'	2.29	0.48
59:DA:2450:A:N3	59:DA:2450:A:H2'	2.27	0.48
21:AA:236:G:H2'	21:AA:237:C:C6	2.49	0.48
59:BA:1578:U:C2'	59:BA:1579:A:H5''	2.37	0.48
28:BF:9:ILE:HG23	28:BF:124:LEU:HD12	1.95	0.48
59:BA:1448:G:O2'	59:BA:1529:A:N6	2.46	0.48
59:DA:2303:G:H1	59:DA:2313:C:N4	2.10	0.48
10:CK:109:VAL:HA	17:CR:85:LEU:O	2.13	0.48
21:CA:1440(D):A:H3'	21:CA:1440(D):A:OP2	2.14	0.48
41:BV:4:ILE:HG22	41:BV:39:LEU:HB2	1.94	0.48
17:AR:38:GLU:O	17:AR:42:ARG:HG3	2.13	0.48
20:CY:77:HIS:CE1	20:CY:277:VAL:HG11	2.47	0.48
21:AA:835:U:H2'	21:AA:836:G:H8	1.79	0.48
60:BB:76:G:H2'	60:BB:77:U:H6	1.79	0.48
59:BA:1612:C:N4	59:BA:1619:G:H1	2.11	0.48
10:AK:46:GLY:HA3	10:AK:55:LYS:HG3	1.95	0.48
59:DA:143:C:H2'	59:DA:144:C:C6	2.48	0.48
59:BA:39:C:H2'	59:BA:40:C:C5	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:2224:G:H4'	59:DA:2226:C:N3	2.28	0.48
2:AC:173:VAL:O	21:AA:1107:C:H5''	2.13	0.48
45:DZ:120:ILE:HG22	45:DZ:121:HIS:ND1	2.29	0.48
21:AA:604:G:N1	21:AA:634:C:O2	2.38	0.48
17:CR:38:GLU:HA	17:CR:41:LYS:HB3	1.95	0.48
59:BA:1926:U:H2'	59:BA:1927:A:H3'	1.95	0.48
26:DD:262:ARG:H	26:DD:262:ARG:HD2	1.77	0.48
59:BA:301:G:C6	59:BA:317:G:C6	3.02	0.48
59:DA:848:G:N3	59:DA:933:A:O2'	2.36	0.48
59:BA:2693:A:H2'	59:BA:2694:G:C8	2.49	0.48
25:DC:152:GLU:O	25:DC:155:ARG:HB2	2.14	0.48
12:AM:90:LEU:HD11	18:AS:81:ARG:NH2	2.28	0.48
18:CS:64:GLU:O	18:CS:67:VAL:N	2.39	0.48
59:BA:230:U:H2'	59:BA:231:C:C6	2.49	0.48
48:B2:57:ILE:HD13	48:B2:60:LEU:HD12	1.94	0.48
1:AB:179:LYS:NZ	21:AA:1075:C:H5'	2.28	0.48
1:CB:139:LYS:HA	1:CB:142:LEU:HD12	1.96	0.48
40:DU:76:TYR:O	40:DU:80:ILE:HG12	2.13	0.48
24:CX:76:A:O2'	59:DA:2452:C:H4'	2.14	0.48
39:BT:53:ARG:NE	39:BT:55:ASN:OD1	2.46	0.48
24:CX:30:C:H42	24:CX:40:G:H1	0.63	0.48
21:CA:596:C:H2'	21:CA:597:G:O4'	2.14	0.48
21:CA:109:A:H2'	21:CA:109:A:N3	2.28	0.48
22:AW:8:U:H4'	22:AW:49:A:H5'	1.96	0.48
30:DH:176:ALA:HA	59:DA:2529:G:C5'	2.43	0.48
21:CA:1126:U:C4	21:CA:1148:U:C4	2.96	0.48
21:CA:1217:C:H2'	21:CA:1218:C:H6	1.75	0.48
38:DS:33:LYS:HG2	38:DS:62:LYS:HE2	1.96	0.48
21:CA:781:A:H5'	21:CA:782:A:OP2	2.13	0.48
59:DA:130:C:H2'	59:DA:131:G:O4'	2.14	0.48
60:DB:96:G:H2'	60:DB:97:G:O4'	2.12	0.48
55:D9:6:SER:HB3	59:DA:2466:C:C5'	2.40	0.48
23:AV:9:G:H5''	23:AV:10:G:OP2	2.14	0.48
23:AV:8:A:H3'	23:AV:9:G:C8	2.49	0.48
21:AA:675:A:C2	21:AA:676:A:H1'	2.49	0.48
36:DQ:92:GLY:O	36:DQ:94:VAL:N	2.34	0.48
20:CY:21:ILE:HG13	20:CY:23:ALA:H	1.78	0.48
42:BW:76:VAL:HA	42:BW:102:HIS:C	2.34	0.48
21:CA:297:G:H4'	21:CA:557:G:O2'	2.14	0.48
28:BF:188:ARG:HG3	28:BF:189:THR:HG23	1.95	0.48
2:AC:12:LEU:HD22	2:AC:18:TRP:HE1	1.79	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:AW:43:G:C4	22:AW:44:G:H1'	2.49	0.48
37:BR:13:HIS:O	37:BR:16:HIS:N	2.47	0.48
59:BA:2345:G:H2'	59:BA:2372:G:N2	2.28	0.48
59:BA:2570:G:H2'	59:BA:2571:C:O4'	2.13	0.48
59:DA:1409:C:H2'	59:DA:1410:G:C8	2.48	0.48
29:BG:71:THR:OG1	29:BG:89:GLY:O	2.23	0.48
34:DO:77:ILE:HD13	39:DT:74:ARG:HG2	1.95	0.48
20:AY:523:PHE:CE1	20:AY:563:ILE:HB	2.48	0.48
13:CN:56:VAL:O	13:CN:57:ARG:HB2	2.13	0.48
33:BN:2:LYS:HG3	40:BU:101:ARG:HH12	1.78	0.48
59:BA:1317:A:H2'	59:BA:1318:C:O4'	2.14	0.48
15:CP:47:ASP:O	15:CP:49:LEU:N	2.37	0.48
59:BA:181:A:H2'	59:BA:182:A:C8	2.48	0.48
18:AS:53:ASN:C	18:AS:55:LYS:H	2.17	0.48
21:CA:31:G:C6	21:CA:306:G:H1'	2.49	0.48
3:CD:10:ARG:HE	3:CD:40:PRO:HG3	1.79	0.48
28:DF:148:LEU:HD23	28:DF:152:GLU:HG3	1.94	0.48
16:CQ:37:LYS:HD2	16:CQ:37:LYS:H	1.79	0.48
4:AE:38:GLN:HG2	4:AE:114:GLY:HA3	1.94	0.48
59:BA:428:A:H2'	59:BA:429:A:O4'	2.13	0.48
59:DA:2514:U:H2'	59:DA:2515:C:C6	2.48	0.48
42:DW:34:ASN:O	42:DW:38:TYR:HD1	1.97	0.48
33:DN:113:GLY:HA2	33:DN:117:PHE:CD1	2.49	0.48
27:DE:109:LYS:HB3	27:DE:191:PRO:HD3	1.95	0.48
59:DA:897:C:N3	59:DA:898:C:C5	2.82	0.48
21:AA:1405:G:C8	63:AA:1601:NMY:N19	2.82	0.48
59:DA:1830:C:H2'	59:DA:1831:G:H8	1.78	0.48
59:DA:1974:C:O2'	63:DA:2901:NMY:H81	2.14	0.48
59:BA:1944:U:O2'	59:BA:1945:G:H5''	2.14	0.48
34:BO:63:VAL:H	34:BO:84:ALA:HB2	1.78	0.48
3:AD:115:ARG:CB	21:AA:407:G:H5''	2.44	0.48
11:AL:84:LEU:HB2	11:AL:101:VAL:CG2	2.44	0.48
21:CA:669:U:O4	21:CA:737:A:N1	2.46	0.48
59:DA:95:G:H2'	59:DA:96:G:H8	1.78	0.48
59:DA:2537:U:H2'	59:DA:2538:C:H6	1.78	0.48
59:DA:2221:G:H2'	59:DA:2222:G:C8	2.48	0.48
36:DQ:119:ARG:O	36:DQ:123:HIS:HB2	2.14	0.48
60:BB:51:G:O2'	60:BB:52:A:H8	1.95	0.48
25:DC:46:ALA:N	25:DC:171:ALA:O	2.44	0.48
8:AI:125:TYR:HB3	21:AA:1342:C:H4'	1.95	0.48
25:BC:150:ILE:HD12	25:BC:153:ILE:HB	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DF:157:VAL:CG2	28:DF:192:LEU:HD12	2.43	0.48
21:CA:919:A:H2'	21:CA:920:U:H6	1.78	0.48
59:BA:1798:U:H4'	59:BA:1803:A:O4'	2.13	0.48
36:BQ:118:LEU:HB3	36:BQ:131:ILE:HG21	1.96	0.48
2:CC:161:GLU:H	23:CV:25:A:N6	2.10	0.48
20:CY:659:LEU:O	20:CY:663:THR:OG1	2.21	0.48
21:AA:1437:C:N3	21:AA:1464:G:O6	2.47	0.48
25:BC:213:VAL:HG11	25:BC:225:ILE:HG12	1.95	0.48
40:BU:76:TYR:CE1	40:BU:80:ILE:HD11	2.49	0.48
21:AA:1026:G:C2	21:AA:1027:C:H1'	2.49	0.48
14:AO:81:LEU:HD11	14:AO:85:LEU:HD12	1.95	0.48
3:AD:13:ARG:NH1	3:AD:36:ARG:HE	2.12	0.48
20:CY:438:PHE:HB2	20:CY:452:SER:O	2.14	0.48
32:BK:8:VAL:HB	32:BK:27:LEU:HD21	1.96	0.48
59:BA:786:C:H5''	59:BA:1780:A:N7	2.28	0.48
21:CA:479:C:H2'	21:CA:480:U:O4'	2.14	0.48
30:BH:98:LEU:HD22	30:BH:125:VAL:H	1.78	0.48
59:BA:2816:C:H2'	59:BA:2817:G:C8	2.48	0.48
21:CA:1018:C:H2'	21:CA:1019:C:C6	2.49	0.48
1:CB:96:ARG:HE	1:CB:96:ARG:H	1.61	0.48
21:CA:1426:C:H2'	21:CA:1427:U:H6	1.78	0.48
1:CB:212:GLN:HG3	1:CB:235:SER:CB	2.44	0.48
21:AA:920:U:H2'	21:AA:921:U:H6	1.77	0.48
30:BH:37:VAL:HG13	30:BH:71:LEU:HD12	1.96	0.48
45:BZ:14:LYS:HB2	45:BZ:15:PRO:HD2	1.96	0.48
10:AK:42:TRP:HZ2	21:AA:687:A:H5'	1.77	0.48
12:CM:16:ASP:HB3	12:CM:41:PRO:HB3	1.96	0.48
14:CO:60:VAL:HG13	14:CO:63:ARG:HH21	1.78	0.48
59:DA:2070:G:H2'	59:DA:2071:A:O4'	2.14	0.48
26:DD:92:ILE:HD13	26:DD:104:TYR:HD2	1.78	0.48
51:D5:3:LYS:HG2	51:D5:4:HIS:N	2.29	0.48
21:CA:383:A:H8	21:CA:383:A:O5'	1.97	0.48
21:AA:632:A:H2'	21:AA:633:G:O4'	2.14	0.48
4:AE:148:VAL:HG13	4:AE:152:ARG:HD2	1.95	0.48
12:CM:75:ALA:O	12:CM:79:LYS:HG3	2.14	0.48
28:DF:197:ASP:OD2	28:DF:198:ALA:N	2.43	0.48
59:DA:2468:G:H2'	59:DA:2476:A:N7	2.28	0.48
31:DJ:165:UNK:C	31:DJ:167:UNK:H	2.26	0.48
14:AO:21:ASP:OD2	21:AA:750:G:O2'	2.25	0.48
52:B6:19:ARG:HG2	59:BA:2400:G:H4'	1.94	0.48
59:BA:1679:U:H2'	59:BA:1680:U:H5'	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:866:A:N3	59:BA:866:A:H2'	2.28	0.48
50:B4:28:LYS:HA	50:B4:28:LYS:HD2	1.60	0.48
60:BB:45:A:N3	60:BB:45:A:H2'	2.29	0.48
27:DE:94:GLU:H	27:DE:94:GLU:CD	2.17	0.48
20:CY:162:VAL:HG22	20:CY:219:VAL:HG21	1.96	0.48
14:CO:36:ILE:HG23	14:CO:56:LEU:HD11	1.96	0.48
19:CT:63:ILE:HG23	19:CT:77:ALA:HB1	1.94	0.48
15:CP:25:ARG:NH2	21:CA:230:G:H4'	2.29	0.48
59:DA:1025:G:H8	59:DA:1025:G:OP1	1.97	0.48
24:CX:78:ACE:H1	59:DA:2451:A:N3	2.29	0.48
33:BN:23:LEU:HD22	33:BN:63:THR:H	1.79	0.48
59:DA:1974:C:H1'	63:DA:2901:NMY:H81	1.96	0.48
59:DA:1268:A:N6	59:DA:2012:G:H1'	2.28	0.48
59:DA:2532:G:O5'	59:DA:2532:G:H8	1.97	0.48
59:DA:905:U:C4	59:DA:906:G:N7	2.82	0.48
36:DQ:21:THR:CG2	36:DQ:101:ARG:HB2	2.42	0.48
27:DE:120:TRP:CD2	27:DE:155:LYS:HB3	2.47	0.48
59:BA:271(E):G:H2'	59:BA:271(F):G:O4'	2.13	0.48
21:CA:1016:A:H8	21:CA:1016:A:O5'	1.95	0.48
21:CA:1224:G:C2	21:CA:1362(A):C:N3	2.80	0.48
21:CA:1001:G:C2	21:CA:1039:C:O2	2.67	0.48
22:CW:8:U:O4	22:CW:14:A:H8	1.96	0.48
59:BA:691:C:H2'	59:BA:692:C:C6	2.49	0.48
25:BC:44:VAL:O	25:BC:172:ILE:O	2.31	0.48
21:CA:1506:U:H5''	23:CV:15:A:N6	2.28	0.48
21:CA:943:U:H6	21:CA:943:U:O5'	1.97	0.48
25:DC:2:PRO:HB3	59:DA:2129:C:O3'	2.14	0.48
3:AD:133:VAL:HG12	3:AD:134:ASP:H	1.79	0.48
59:DA:864:G:N2	59:DA:866:A:N6	2.40	0.48
15:AP:17:TYR:O	15:AP:38:TYR:HB2	2.14	0.48
59:DA:1961:C:C4	59:DA:1962:C:N4	2.81	0.48
21:CA:1065:U:H3	21:CA:1109:C:H5''	1.78	0.48
24:AX:7:U:O2'	24:AX:8:U:H5'	2.14	0.48
21:AA:971:G:O6	21:AA:1364:U:N3	2.47	0.48
60:BB:47:C:H2'	60:BB:48:A:C8	2.49	0.48
20:AY:614:GLU:C	20:AY:617:MET:H	2.17	0.48
38:DS:93:LYS:HG2	38:DS:95:HIS:CE1	2.49	0.48
43:BX:6:ASP:OD1	59:BA:71:A:O2'	2.31	0.48
26:DD:79:VAL:HG12	26:DD:80:ALA:N	2.23	0.48
4:CE:28:PHE:CG	4:CE:51:VAL:HG22	2.48	0.48
13:CN:32:SER:N	21:CA:976:G:OP2	2.47	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BU:24:TYR:CG	59:BA:533:G:H5'	2.49	0.48
59:DA:740:U:H2'	59:DA:741:G:H8	1.78	0.48
59:DA:300:A:H2'	59:DA:334:C:O2'	2.14	0.48
41:BV:84:LYS:O	59:BA:1225:G:H4'	2.13	0.48
59:DA:373:U:C2	59:DA:374:A:C8	3.02	0.48
59:BA:1271:G:N2	59:BA:1615:C:H42	2.07	0.48
31:BJ:51:UNK:O	59:BA:1084:A:H5'	2.13	0.48
7:AH:7:ALA:O	7:AH:11:THR:OG1	2.16	0.48
17:CR:30:ASP:OD2	17:CR:33:ASP:HB2	2.13	0.48
59:BA:1389:G:H5'	59:BA:1526:G:H5'	1.96	0.48
44:DY:3:VAL:HG23	59:DA:295:G:H5'	1.94	0.48
32:BK:90:LYS:HB3	59:BA:1076:C:O2'	2.14	0.48
59:BA:2810:A:H62	59:BA:2890:G:N2	2.11	0.48
59:DA:238:C:H2'	59:DA:239:U:C6	2.49	0.48
20:CY:130:VAL:HA	20:CY:131:PRO:HD3	1.63	0.48
16:AQ:67:LYS:O	16:AQ:68:ARG:HB3	2.14	0.48
44:BY:25:GLY:HA2	44:BY:39:VAL:HG21	1.95	0.48
12:CM:60:VAL:HG12	12:CM:66:LEU:HD21	1.96	0.48
59:DA:329:G:OP1	59:DA:329:G:H8	1.97	0.48
59:DA:2002:G:H2'	59:DA:2003:G:H8	1.78	0.48
59:BA:2673:G:H2'	59:BA:2674:G:C8	2.48	0.48
39:BT:102:ILE:O	39:BT:106:SER:HB3	2.13	0.48
26:DD:225:ALA:HB1	59:DA:1788:C:H5''	1.96	0.48
59:BA:2162:G:H2'	59:BA:2163:C:O4'	2.14	0.48
21:AA:630:G:H2'	21:AA:631:G:H8	1.79	0.48
2:CC:131:ARG:HA	2:CC:134:ILE:HG22	1.96	0.48
44:DY:15:VAL:HA	44:DY:72:VAL:HG12	1.95	0.48
27:BE:18:ASP:O	34:BO:73:ASP:HA	2.14	0.48
21:CA:808:C:H2'	21:CA:809:G:C8	2.49	0.48
47:D1:91:LYS:HA	47:D1:94:LEU:HD13	1.95	0.48
54:D8:17:THR:C	54:D8:19:SER:H	2.16	0.48
21:CA:5:U:H1'	21:CA:6:G:C5	2.48	0.48
59:BA:868:U:H2'	59:BA:869:G:O4'	2.14	0.48
40:BU:108:GLU:HG3	41:BV:44:LYS:HE2	1.95	0.48
29:DG:84:LYS:HD2	29:DG:84:LYS:H	1.79	0.48
5:AF:60:PHE:CZ	17:AR:78:LEU:HD21	2.48	0.48
39:BT:53:ARG:HH22	39:BT:60:THR:HG23	1.79	0.48
33:BN:25:ARG:HA	59:BA:1012:U:C4	2.48	0.48
33:BN:38:HIS:O	59:BA:1006:C:O2'	2.32	0.48
33:BN:75:TYR:CZ	33:BN:82:LEU:HG	2.48	0.48
33:BN:44:PRO:HB2	33:BN:77:GLY:HA3	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:576:U:H4'	59:DA:2502:G:C6	2.49	0.48
59:BA:271(Q):A:C2	59:BA:271(R):C:H1'	2.49	0.48
60:DB:28:C:H2'	60:DB:29:A:C8	2.49	0.48
59:DA:589:C:N3	59:DA:668:G:N2	2.49	0.48
59:DA:1669:A:O3'	59:DA:2549:G:H5''	2.14	0.48
59:DA:1039:G:H2'	59:DA:1040:C:C6	2.49	0.48
59:DA:690:G:H2'	59:DA:691:C:C6	2.49	0.48
21:CA:889:A:OP1	21:CA:889:A:H8	1.96	0.48
21:AA:405:U:H3'	21:AA:406:G:H5'	1.96	0.48
21:CA:392:G:H2'	21:CA:393:A:O4'	2.14	0.48
53:D7:31:LEU:HA	53:D7:34:ARG:HG2	1.95	0.48
59:DA:1173:A:H3'	59:DA:1174:U:C5'	2.44	0.48
22:AW:34:C:N3	23:AV:18:G:C6	2.82	0.48
24:AX:32:C:H2'	24:AX:33:U:O4'	2.13	0.48
39:DT:75:ILE:CD1	59:DA:2684:U:H5''	2.43	0.48
38:DS:26:LEU:O	38:DS:88:ASP:HB3	2.13	0.48
48:B2:32:LEU:O	48:B2:35:LEU:HB3	2.14	0.48
32:DK:21:PRO:HA	32:DK:23:VAL:N	2.26	0.48
10:CK:65:ALA:HB3	10:CK:97:ALA:HB3	1.95	0.48
20:CY:409:ILE:HD11	20:CY:656:ALA:HB3	1.96	0.48
11:CL:9:GLN:HE21	21:CA:880:C:H3'	1.78	0.48
28:BF:8:GLN:HG2	28:BF:22:ALA:HA	1.95	0.48
31:BJ:23:UNK:N	31:BJ:119:UNK:HA	2.29	0.48
59:DA:1387:C:H2'	59:DA:1388:G:O4'	2.14	0.48
40:DU:28:ARG:HH12	59:DA:532:A:H5'	1.78	0.48
21:CA:1434:A:H62	21:CA:1467:G:N2	2.12	0.48
21:CA:1466:C:H2'	21:CA:1467:G:O4'	2.14	0.48
51:B5:3:LYS:HZ2	59:BA:747:U:H5	1.61	0.48
21:CA:1440(C):G:H2'	21:CA:1440(D):A:C2	2.48	0.48
7:AH:10:LEU:HB2	7:AH:83:ILE:HG13	1.94	0.48
40:DU:92:ARG:HD2	41:DV:11:GLN:HB2	1.96	0.48
21:CA:167:G:H2'	21:CA:168:G:O4'	2.14	0.48
37:BR:9:LYS:HE2	37:BR:39:PRO:HB3	1.95	0.48
37:DR:101:ALA:HB2	51:D5:41:PRO:HG3	1.95	0.48
12:CM:26:GLY:HA3	21:CA:1329:A:OP1	2.14	0.48
37:DR:24:GLN:OE1	59:DA:1277:G:O2'	2.31	0.48
32:DK:30:HIS:CD2	32:DK:59:ILE:HB	2.48	0.48
45:BZ:30:ASN:HA	45:BZ:89:PHE:HE2	1.78	0.48
40:DU:21:ALA:CB	40:DU:35:ALA:HB1	2.44	0.48
21:AA:338:A:H3'	34:BO:97:ARG:HH12	1.79	0.48
21:AA:68(H):G:H1	21:AA:68(R):C:N4	2.12	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CA:827:U:H3	21:CA:872:A:N6	2.11	0.48
20:AY:263:ALA:N	20:AY:265:LYS:O	2.47	0.48
20:CY:321:TYR:CD1	21:CA:55:A:H1'	2.48	0.48
27:BE:108:SER:HA	27:BE:190:GLY:HA2	1.95	0.48
59:BA:2305:A:H3'	59:BA:2306:C:H5''	1.96	0.48
8:AI:96:LEU:HA	8:AI:99:LEU:HD23	1.95	0.48
29:BG:101:ILE:HG23	29:BG:105:LYS:HE2	1.95	0.48
60:BB:82:G:H2'	60:BB:83:G:C8	2.49	0.48
21:AA:1416:G:H3'	21:AA:1417:G:C8	2.49	0.48
59:DA:1785:A:N1	59:DA:1787:A:H1'	2.28	0.48
28:BF:34:TRP:O	28:BF:37:VAL:HB	2.14	0.48
59:DA:1087:G:H2'	59:DA:1089:G:C8	2.49	0.48
25:BC:53:ARG:HG2	25:BC:54:ARG:H	1.79	0.48
7:CH:52:ASP:HA	7:CH:56:LYS:O	2.13	0.48
35:DP:45:LEU:HG	35:DP:46:LYS:HD2	1.95	0.48
59:DA:786:C:H5''	59:DA:1780:A:C8	2.49	0.48
42:DW:5:ALA:HB2	42:DW:57:ASN:ND2	2.29	0.48
26:DD:17:THR:H	26:DD:205:VAL:HB	1.79	0.48
9:AJ:7:LYS:HE3	9:AJ:9:ARG:HG3	1.95	0.48
12:AM:74:VAL:O	12:AM:78:ILE:HG12	2.14	0.48
6:CG:116:ALA:O	6:CG:120:ILE:HG12	2.14	0.48
21:AA:763:G:H2'	21:AA:764:C:C6	2.49	0.48
59:DA:758:C:H2'	59:DA:759:G:H8	1.79	0.48
29:BG:139:LEU:HD21	29:BG:149:VAL:HG21	1.95	0.48
5:AF:82:ARG:CZ	5:AF:82:ARG:HA	2.43	0.48
7:AH:25:ASP:HA	7:AH:60:ARG:HG2	1.95	0.48
20:AY:658:ASP:HB3	20:AY:662:LYS:NZ	2.28	0.48
20:AY:390:VAL:HG12	20:AY:397:VAL:HG22	1.94	0.48
59:DA:2553:G:C2	59:DA:2554:U:C6	3.02	0.48
33:BN:88:GLU:HG3	33:BN:91:LEU:CD1	2.44	0.48
34:BO:66:LYS:HG3	59:BA:1665:A:H5''	1.96	0.48
59:DA:1311:G:H21	59:DA:1603:A:H62	0.66	0.48
43:DX:71:GLY:O	43:DX:73:ARG:N	2.45	0.48
21:CA:60:A:H4'	21:CA:61:G:C4'	2.44	0.48
11:CL:56:ALA:HB3	11:CL:68:ALA:CB	2.19	0.48
20:AY:134:ALA:O	20:AY:135:PHE:HB2	2.13	0.48
36:BQ:87:LYS:NZ	59:BA:955:C:OP1	2.47	0.48
18:CS:78:ARG:CZ	21:CA:1222:G:H5''	2.43	0.48
25:BC:174:ALA:HA	25:BC:175:PRO:HD3	1.62	0.48
26:DD:54:ARG:HH22	59:DA:1822:G:H5''	1.78	0.48
35:DP:43:GLY:CA	59:DA:670:A:H5'	2.44	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:DF:192:LEU:HG	28:DF:194:MET:SD	2.54	0.48
38:DS:16:ASN:O	38:DS:20:ARG:HG2	2.14	0.48
26:BD:244:ARG:HA	26:BD:245:PRO:HA	1.74	0.48
19:AT:23:ARG:NH1	19:AT:24:LEU:HD23	2.22	0.48
26:DD:260:ARG:NH1	59:DA:1799:G:H3'	2.29	0.48
12:AM:95:GLY:HA2	12:AM:110:ARG:HH12	1.79	0.48
27:DE:136:ARG:HB2	59:DA:1657:C:OP1	2.13	0.48
1:CB:149:LEU:HD23	1:CB:152:PHE:O	2.14	0.48
52:B6:5:VAL:HG22	52:B6:6:ARG:HD2	1.96	0.48
59:BA:722:A:H2'	59:BA:723:G:H8	1.71	0.48
59:DA:1421:G:H8	59:DA:1421:G:O5'	1.97	0.48
36:DQ:50:ALA:HB1	36:DQ:121:ALA:HB1	1.96	0.48
38:DS:100:ALA:C	38:DS:102:ALA:H	2.16	0.48
21:CA:767:A:O2'	21:CA:1524:C:O2	2.31	0.48
26:BD:48:ARG:HE	59:BA:778:G:C5'	2.27	0.48
21:CA:1263:C:H2'	21:CA:1264:C:H5'	1.95	0.48
41:DV:47:VAL:HG12	41:DV:52:VAL:HG23	1.95	0.48
14:AO:33:THR:N	14:AO:63:ARG:HH12	2.11	0.48
59:BA:385:C:O2'	59:BA:388:G:N2	2.46	0.48
42:DW:88:ARG:NE	59:DA:748:G:OP2	2.46	0.48
59:DA:2251:G:H2'	59:DA:2251:G:N3	2.29	0.48
21:CA:1308:U:H2'	21:CA:1309:G:C8	2.49	0.48
21:AA:929:G:H2'	21:AA:930:C:C6	2.49	0.48
4:AE:126:ARG:NH2	21:AA:9:G:H5''	2.29	0.48
37:DR:18:LEU:HD23	37:DR:21:TYR:HD1	1.79	0.48
20:AY:238:THR:OG1	20:AY:239:GLU:N	2.47	0.48
1:CB:56:ARG:O	1:CB:59:GLU:HB3	2.13	0.48
27:DE:93:VAL:HB	27:DE:175:VAL:CG2	2.43	0.48
54:B8:8:LYS:NZ	59:BA:244:A:OP2	2.36	0.48
29:DG:40:ASN:HD22	29:DG:156:ASP:HB2	1.78	0.48
21:CA:791:G:O6	21:CA:792:A:N6	2.47	0.48
33:DN:62:VAL:HG22	33:DN:63:THR:N	2.29	0.47
33:BN:87:LEU:O	33:BN:97:ARG:HG3	2.13	0.47
33:BN:98:VAL:HG23	33:BN:100:GLU:HG3	1.95	0.47
59:BA:1937:A:O2'	59:BA:1939:U:H5''	2.13	0.47
59:BA:1953:A:H2	59:BA:2549:G:N3	2.12	0.47
21:CA:106:C:O2'	21:CA:379:C:OP1	2.25	0.47
37:DR:4:LEU:HD12	59:DA:1653:G:H5''	1.96	0.47
53:D7:9:ARG:HB3	59:DA:125:G:H22	1.79	0.47
59:DA:1327:C:H42	59:DA:1647:G:N2	2.12	0.47
22:CW:14:A:H3'	22:CW:15:G:O4'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:1353:A:H2'	59:BA:1354:A:C8	2.48	0.47
59:BA:689:A:H2'	59:BA:690:G:C8	2.49	0.47
16:CQ:21:VAL:HG22	16:CQ:44:ALA:HB2	1.96	0.47
47:B1:18:ILE:HD13	59:BA:380:U:H5'	1.95	0.47
59:DA:920:G:H21	59:DA:2269:A:H8	1.62	0.47
26:DD:149:PRO:HB2	59:DA:2221:G:O2'	2.14	0.47
21:AA:717:C:H5''	21:AA:733:A:HO2'	1.78	0.47
21:AA:971:G:O2'	21:AA:1365:G:O3'	2.31	0.47
59:DA:833:U:H2'	59:DA:834:C:H6	1.78	0.47
18:AS:33:THR:HG23	18:AS:51:VAL:HG13	1.96	0.47
59:BA:878:A:N6	59:BA:899:A:H1'	2.29	0.47
27:DE:12:THR:O	27:DE:22:PRO:HA	2.14	0.47
42:DW:79:GLY:HA2	59:DA:25:U:H5'	1.96	0.47
12:CM:123:ALA:HB3	12:CM:124:PRO:HD3	1.95	0.47
59:DA:601:C:H2'	59:DA:602:G:O4'	2.14	0.47
36:BQ:43:THR:HG22	36:BQ:45:GLN:HG2	1.96	0.47
20:CY:431:LEU:HB3	20:CY:438:PHE:HZ	1.79	0.47
55:D9:3:VAL:HG22	55:D9:35:ARG:HE	1.78	0.47
59:DA:2540:C:H2'	59:DA:2541:A:O4'	2.14	0.47
59:DA:484:C:O5'	59:DA:484:C:H6	1.97	0.47
34:DO:19:ILE:HG22	34:DO:43:VAL:HA	1.96	0.47
4:AE:78:HIS:N	4:AE:78:HIS:CD2	2.82	0.47
17:AR:61:LYS:HE3	17:AR:64:ARG:HH22	1.79	0.47
59:DA:2202(G):G:C2	59:DA:2202(H):G:C8	3.02	0.47
59:BA:2374:C:H2'	59:BA:2375:G:C8	2.49	0.47
20:CY:289:ILE:HD13	20:CY:331:TYR:CE1	2.49	0.47
60:BB:77:U:H3	60:BB:99:A:H62	1.62	0.47
59:DA:118:A:OP2	59:DA:119:A:H5''	2.14	0.47
21:AA:667:G:OP1	21:AA:732:C:O2'	2.21	0.47
59:DA:1594:G:H2'	59:DA:1595:G:H8	1.79	0.47
42:BW:88:ARG:HG3	59:BA:748:G:OP2	2.13	0.47
59:DA:1554:A:H3'	59:DA:1555:G:C8	2.49	0.47
59:DA:2735:G:H2'	59:DA:2736:G:H8	1.77	0.47
39:BT:51:ARG:HG2	39:BT:62:THR:HG22	1.95	0.47
21:AA:1360:A:H2'	21:AA:1361:G:O4'	2.14	0.47
59:BA:1212:G:H1'	59:BA:1237:A:N6	2.29	0.47
26:BD:144:ALA:O	26:BD:192:THR:HG23	2.14	0.47
59:BA:897:C:H2'	59:BA:898:C:H6	1.79	0.47
21:AA:123:C:H2'	21:AA:124:G:H8	1.78	0.47
25:DC:67:HIS:CE1	25:DC:185:LYS:HG2	2.48	0.47
2:AC:163:ALA:HB2	21:AA:1056:U:H5'	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:2712:U:O2'	59:BA:2712(A):A:OP2	2.27	0.47
21:CA:891:U:H3	21:CA:907:A:H62	1.62	0.47
26:BD:168:ARG:HG2	26:BD:173:VAL:HG12	1.96	0.47
21:AA:110:C:H2'	21:AA:111:G:O4'	2.14	0.47
21:CA:1249:C:O2	21:CA:1288:A:N6	2.47	0.47
21:AA:221:C:C2'	21:AA:222:U:H5'	2.44	0.47
11:CL:29:GLY:O	11:CL:31:PRO:HD3	2.14	0.47
38:BS:82:ILE:HG22	38:BS:83:LYS:H	1.79	0.47
53:B7:9:ARG:NH2	59:BA:1310:G:OP2	2.46	0.47
21:AA:783:C:OP1	21:AA:1515:C:O2'	2.32	0.47
8:AI:19:LEU:HD21	8:AI:59:PHE:HB3	1.96	0.47
16:CQ:95:TYR:CE1	21:CA:279:A:H5'	2.48	0.47
21:AA:1336:C:H4'	21:AA:1337:G:N3	2.29	0.47
21:CA:410:G:N1	21:CA:431:A:OP2	2.37	0.47
33:BN:75:TYR:CD1	33:BN:75:TYR:N	2.82	0.47
21:CA:60:A:H4'	21:CA:61:G:H4'	1.96	0.47
62:CY:702:FUA:C20	62:CY:702:FUA:O1	2.62	0.47
60:DB:3:C:H2'	60:DB:4:C:H5	1.80	0.47
20:AY:20:HIS:NE2	20:AY:116:PRO:HD2	2.30	0.47
21:CA:815:A:N1	21:CA:1527:C:O2	2.44	0.47
60:DB:69:G:H2'	60:DB:70:C:C6	2.49	0.47
21:AA:1126:U:C5	21:AA:1127:G:H1'	2.49	0.47
9:AJ:39:PRO:HG2	21:AA:1150:U:O2	2.14	0.47
59:DA:691:C:H2'	59:DA:692:C:H6	1.79	0.47
26:DD:231:HIS:HD2	26:DD:249:PRO:HA	1.78	0.47
21:CA:940:C:O2	21:CA:1349:A:O2'	2.21	0.47
21:CA:164:U:H2'	21:CA:165:C:C6	2.49	0.47
59:DA:1945:G:C6	59:DA:1961:C:N3	2.81	0.47
59:DA:2106:G:H2'	59:DA:2107:C:O4'	2.13	0.47
59:BA:557:U:H2'	59:BA:558:G:C8	2.48	0.47
12:AM:126:LYS:HE2	24:AX:32:C:O2'	2.13	0.47
48:B2:7:ARG:HA	48:B2:10:LEU:HD12	1.96	0.47
3:CD:36:ARG:O	3:CD:38:TYR:N	2.47	0.47
42:BW:77:ASP:HB3	42:BW:78:GLU:H	1.39	0.47
1:CB:71:VAL:HA	1:CB:93:VAL:O	2.14	0.47
59:BA:2652:C:H2'	59:BA:2653:U:O4'	2.14	0.47
37:BR:10:LEU:O	37:BR:11:ASN:HB2	2.13	0.47
21:AA:112:G:H22	21:AA:315:A:H2	1.59	0.47
40:BU:85:LYS:HD2	40:BU:117:GLN:HE21	1.78	0.47
59:BA:203:C:H3'	59:BA:204:A:H5''	1.96	0.47
59:DA:371:A:H8	59:DA:402:A:N6	2.09	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:249:C:H3'	59:BA:2394:C:O2'	2.13	0.47
40:DU:36:ARG:HG3	40:DU:40:PHE:CE1	2.43	0.47
20:CY:275:ALA:O	20:CY:278:ASP:HB2	2.14	0.47
21:AA:980:C:H3'	21:AA:981:U:C6	2.49	0.47
30:BH:98:LEU:HD13	30:BH:125:VAL:HG23	1.96	0.47
59:DA:52:A:H2'	59:DA:53:A:H8	1.79	0.47
5:CF:45:LEU:HD13	5:CF:57:GLN:HB2	1.96	0.47
47:B1:21:ARG:HG3	59:BA:2080:G:H5''	1.96	0.47
59:DA:843:G:H1	59:DA:935:C:H42	1.62	0.47
21:AA:382:A:H2'	21:AA:383:A:C8	2.49	0.47
21:CA:745:C:H2'	21:CA:746:A:H8	1.74	0.47
44:DY:38:ILE:HD11	44:DY:64:GLU:CB	2.43	0.47
27:BE:122:PHE:CD2	59:BA:2512:C:H5''	2.49	0.47
44:DY:85:VAL:HA	44:DY:94:LYS:HA	1.95	0.47
59:BA:1494:A:H1'	59:BA:1495:A:H5''	1.95	0.47
20:AY:145:ASP:OD2	20:AY:148:LEU:N	2.47	0.47
10:AK:51:LYS:HB3	10:AK:51:LYS:HE2	1.64	0.47
27:BE:108:SER:CB	27:BE:189:PRO:HB2	2.44	0.47
20:AY:554:PRO:HD3	20:AY:591:LYS:HZ2	1.79	0.47
59:DA:2193:G:H2'	59:DA:2194:G:O4'	2.14	0.47
13:AN:18:VAL:HG11	21:AA:1316:G:O2'	2.14	0.47
60:DB:1:U:H2'	60:DB:2:C:C5	2.49	0.47
34:BO:24:VAL:HG21	34:BO:31:LYS:HA	1.96	0.47
26:DD:24:ILE:HG23	26:DD:25:THR:H	1.78	0.47
42:BW:45:TYR:HA	42:BW:48:ALA:HB3	1.96	0.47
19:CT:63:ILE:HG21	19:CT:81:LYS:HD2	1.96	0.47
59:DA:1899:G:H21	59:DA:1902:C:H41	1.60	0.47
20:CY:578:SER:OG	20:CY:579:GLU:N	2.48	0.47
49:D3:15:TYR:CG	49:D3:16:PRO:HD2	2.50	0.47
4:CE:17:ALA:HB2	4:CE:26:PHE:HD2	1.78	0.47
59:BA:1325:G:OP2	59:BA:1616:A:H2'	2.14	0.47
29:BG:125:PHE:CE2	29:BG:166:ASP:HA	2.49	0.47
41:DV:19:LYS:HG3	41:DV:20:LEU:N	2.28	0.47
4:AE:110:LEU:HD22	4:AE:115:VAL:HG21	1.96	0.47
26:BD:112:GLN:HG2	26:BD:113:VAL:H	1.79	0.47
59:BA:155:C:H2'	59:BA:155(A):U:H5'	1.95	0.47
33:DN:95:PRO:HG3	33:DN:121:LYS:HG2	1.97	0.47
59:DA:2061:G:N7	59:DA:2501:C:H4'	2.30	0.47
59:BA:2635:C:H2'	59:BA:2636:U:O4'	2.13	0.47
59:BA:2794(E):A:H5''	59:BA:2895:U:O2'	2.15	0.47
59:BA:8:A:N1	59:BA:2895:U:C4	2.81	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BN:85:ILE:CG2	33:BN:109:LYS:HB2	2.43	0.47
59:DA:1974:C:C2'	63:DA:2901:NMY:H81	2.44	0.47
21:AA:431:A:H2'	21:AA:432:A:O4'	2.14	0.47
21:AA:429:U:H3	21:AA:431:A:H62	0.74	0.47
21:AA:408:A:H2	21:AA:434:U:H3	0.63	0.47
22:CW:3:C:N3	22:CW:70:G:N2	2.48	0.47
22:AW:15:G:C2	22:AW:48:C:O2	2.63	0.47
11:CL:69:TYR:CG	11:CL:70:ILE:N	2.82	0.47
54:D8:47:LYS:HD3	54:D8:48:PHE:H	1.79	0.47
59:BA:1258:C:H2'	59:BA:1259:G:C8	2.48	0.47
21:CA:769:G:H4'	21:CA:1513:A:H4'	1.95	0.47
21:CA:390:C:H2'	21:CA:391:G:O4'	2.15	0.47
8:CI:120:ARG:HD2	21:CA:1344:C:H4'	1.96	0.47
6:CG:31:MET:HA	6:CG:39:ALA:HB2	1.96	0.47
21:CA:68(P):C:H2'	21:CA:68(Q):U:H6	1.76	0.47
59:DA:194:G:H1	59:DA:201:C:N4	2.11	0.47
59:BA:2447:G:N2	59:BA:2450:A:OP2	2.46	0.47
59:BA:2450:A:C2	59:BA:2451:A:H5'	2.49	0.47
59:DA:465:G:N2	59:DA:794:G:H22	2.11	0.47
28:DF:155:LEU:HD21	28:DF:192:LEU:HD13	1.95	0.47
28:DF:157:VAL:O	28:DF:193:VAL:O	2.32	0.47
21:AA:1323:G:H4'	21:AA:1362(A):C:C5	2.49	0.47
24:CX:28:C:N3	24:CX:42:G:C6	2.82	0.47
59:DA:1028:A:H4'	60:DB:88:C:N4	2.29	0.47
39:BT:83:ILE:HG13	39:BT:84:GLN:H	1.78	0.47
26:BD:148:GLU:HG3	26:BD:149:PRO:HD2	1.96	0.47
28:BF:112:MET:HA	28:BF:115:ALA:HB3	1.96	0.47
59:BA:1195:G:H1'	59:BA:1225:G:H22	1.80	0.47
20:AY:398:ILE:HG22	20:AY:399:LEU:H	1.79	0.47
21:CA:825:G:H2'	21:CA:826:C:C6	2.48	0.47
59:BA:2002:G:H2'	59:BA:2003:G:C8	2.48	0.47
45:BZ:72:ARG:HB3	45:BZ:73:GLN:HE22	1.79	0.47
21:AA:132:C:H2'	21:AA:133:U:H6	1.78	0.47
21:CA:1524:C:H2'	21:CA:1525:G:O4'	2.15	0.47
21:AA:668:G:H1	21:AA:738:C:N4	2.12	0.47
59:BA:1387:C:O2'	59:BA:1524:G:N2	2.48	0.47
59:BA:600:G:N2	59:BA:605:C:O2'	2.46	0.47
28:BF:101:LEU:HD12	28:BF:102:PRO:HD2	1.96	0.47
3:AD:67:ILE:HG23	3:AD:68:TYR:CD1	2.46	0.47
19:CT:73:HIS:HB3	19:CT:74:LYS:H	1.48	0.47
28:DF:4:VAL:HA	28:DF:22:ALA:HB3	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DH:60:ARG:O	30:DH:64:LEU:HG	2.14	0.47
59:BA:270(G):C:N4	59:BA:270(S):G:H1	2.11	0.47
39:DT:83:ILE:HG13	39:DT:84:GLN:H	1.79	0.47
38:BS:39:ILE:HD13	38:BS:73:LEU:HD11	1.96	0.47
29:DG:18:GLU:HG2	29:DG:175:LEU:HD21	1.95	0.47
37:BR:90:ARG:HG2	37:BR:94:TYR:CD2	2.48	0.47
39:BT:51:ARG:O	39:BT:61:PHE:HB2	2.14	0.47
20:AY:616:TYR:CD1	20:AY:663:THR:HA	2.50	0.47
59:DA:2441:C:H2'	59:DA:2442:C:O4'	2.13	0.47
26:DD:34:VAL:HB	26:DD:104:TYR:CE1	2.49	0.47
59:BA:2739:U:H2'	59:BA:2740:A:H8	1.79	0.47
38:DS:34:HIS:NE2	60:DB:27:C:OP1	2.47	0.47
23:AV:31:A:H3'	23:AV:32:U:C5'	2.44	0.47
59:BA:1316:U:H2'	59:BA:1317:A:H8	1.79	0.47
51:D5:46:CYS:HB3	51:D5:49:CYS:SG	2.54	0.47
29:DG:17:PRO:HA	29:DG:20:ILE:HG12	1.96	0.47
32:DK:73:PRO:HG2	32:DK:76:TYR:HB2	1.96	0.47
39:BT:7:ILE:HG22	39:BT:11:GLU:OE2	2.14	0.47
2:CC:142:MET:HG3	2:CC:170:GLN:HB3	1.95	0.47
2:AC:148:GLY:HA3	2:AC:172:ARG:O	2.13	0.47
25:BC:23:ILE:HD13	25:BC:191:ARG:HG2	1.96	0.47
30:BH:94:TYR:HA	30:BH:106:THR:O	2.14	0.47
59:DA:909:A:H2'	59:DA:912:C:H5	1.79	0.47
37:BR:74:LYS:HA	37:BR:77:ARG:HG3	1.97	0.47
20:AY:446:THR:OG1	20:AY:447:GLY:N	2.47	0.47
32:BK:99:ILE:O	32:BK:138:VAL:HA	2.15	0.47
28:BF:196:LEU:HD23	28:BF:199:TRP:HB3	1.96	0.47
59:BA:611:C:H2'	59:BA:611(A):C:C6	2.49	0.47
53:B7:19:ARG:HD3	59:BA:125:G:OP2	2.13	0.47
59:DA:2451:A:H8	59:DA:2452:C:C6	2.33	0.47
59:DA:2573:C:OP1	59:DA:2574:G:H5''	2.15	0.47
23:CV:9:G:C5'	23:CV:10:G:C5	2.98	0.47
33:BN:84:LYS:C	33:BN:106:MET:HA	2.35	0.47
21:CA:63:C:H42	21:CA:104:G:H1	1.61	0.47
20:AY:21:ILE:HG13	20:AY:23:ALA:N	2.29	0.47
37:DR:38:VAL:HB	37:DR:39:PRO:HD3	1.96	0.47
36:BQ:11:LYS:HD2	59:BA:2277:G:H5'	1.96	0.47
60:BB:60:C:H6	60:BB:60:C:O5'	1.97	0.47
7:CH:30:ARG:NE	21:CA:590:C:H5'	2.28	0.47
29:DG:27:ASN:HD21	60:DB:56:G:H5''	1.79	0.47
16:CQ:45:HIS:NE2	16:CQ:47:PRO:HD3	2.30	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:372:C:H2'	21:AA:387:U:O4	2.13	0.47
21:CA:887:G:H2'	21:CA:888:G:O4'	2.14	0.47
59:DA:966:G:O3'	59:DA:2271:G:N2	2.47	0.47
11:AL:90:VAL:H	11:AL:96:VAL:HG21	1.79	0.47
2:CC:22:TRP:CG	2:CC:59:ARG:HB2	2.49	0.47
35:DP:62:LEU:HB3	59:DA:2393:A:C5'	2.43	0.47
59:DA:1280:G:H2'	59:DA:1281:G:O4'	2.14	0.47
21:AA:677:U:H2'	21:AA:678:U:C6	2.49	0.47
38:DS:47:THR:HG22	38:DS:48:LEU:H	1.79	0.47
28:DF:25:PRO:HD3	28:DF:115:ALA:HB1	1.96	0.47
25:DC:139:PRO:HA	25:DC:145:THR:CB	2.44	0.47
20:CY:456:GLU:HA	20:CY:459:LEU:HD13	1.97	0.47
59:BA:713:G:N2	59:BA:718:A:H62	2.04	0.47
59:DA:603:A:N1	59:DA:656:G:H1'	2.30	0.47
21:CA:320:C:H2'	21:CA:321:A:H8	1.77	0.47
37:BR:103:ARG:HB3	37:BR:109:ALA:O	2.14	0.47
3:AD:128:VAL:HG22	3:AD:146:ILE:HG23	1.95	0.47
45:DZ:7:ALA:O	45:DZ:62:PRO:HD3	2.14	0.47
59:DA:798:G:H2'	59:DA:799:G:C8	2.50	0.47
21:AA:1388:C:H2'	21:AA:1389:C:O4'	2.15	0.47
21:CA:949:A:H2'	21:CA:950:U:C5	2.50	0.47
59:BA:270(R):G:H2'	59:BA:270(S):G:C8	2.49	0.47
29:BG:73:ALA:HB3	29:BG:85:GLY:HA2	1.96	0.47
20:AY:274:ASP:HA	20:AY:277:VAL:HG13	1.97	0.47
1:AB:155:LEU:HD21	1:AB:159:PRO:HB3	1.95	0.47
59:BA:1854:A:H3'	59:BA:1855:G:H8	1.78	0.47
21:AA:624:C:H2'	21:AA:625:G:H8	1.78	0.47
21:AA:1267:C:O2	21:AA:1327:C:H4'	2.14	0.47
20:AY:605:ILE:HD12	20:AY:648:PRO:HA	1.97	0.47
26:DD:219:PRO:HB2	59:DA:1789:A:H4'	1.96	0.47
51:D5:18:ALA:C	51:D5:21:SER:H	2.16	0.47
42:BW:54:ALA:HB1	42:BW:107:LEU:HD21	1.95	0.47
1:AB:44:LEU:O	1:AB:47:THR:HB	2.15	0.47
26:BD:269:PHE:HZ	59:BA:2224:G:OP1	1.98	0.47
59:BA:1270:C:O2'	59:BA:1325:G:H2'	2.14	0.47
19:AT:103:GLY:HA2	21:AA:191:G:H21	1.80	0.47
29:BG:67:LYS:O	60:BB:42:C:O2'	2.15	0.47
24:CX:5:G:O6	24:CX:68:C:N3	2.47	0.47
35:DP:39:LYS:HB3	35:DP:39:LYS:HE3	1.50	0.47
26:BD:127:VAL:HA	26:BD:193:VAL:HG13	1.95	0.47
20:AY:540:PRO:O	20:AY:544:LYS:HG3	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CY:191:ASP:OD1	20:CY:191:ASP:N	2.47	0.47
59:DA:643:A:H8	59:DA:643:A:OP1	1.98	0.47
2:CC:108:ASN:HB3	2:CC:111:LEU:HD23	1.97	0.47
59:BA:1249:U:H2'	59:BA:1250:G:C8	2.49	0.47
33:BN:72:TYR:CD1	33:BN:101:HIS:HB2	2.50	0.47
33:BN:88:GLU:O	33:BN:90:MET:N	2.48	0.47
21:CA:1336:C:H1'	21:CA:1337:G:N2	2.29	0.47
59:BA:2552:U:C2	59:BA:2557:G:C5	3.03	0.47
59:DA:2660:A:H2'	59:DA:2661:G:C8	2.50	0.47
59:DA:2660:A:H2'	59:DA:2661:G:O4'	2.15	0.47
21:AA:1126:U:H5	21:AA:1127:G:H1'	1.78	0.47
59:DA:1675:C:C4	59:DA:1676:A:C5	3.02	0.47
48:D2:51:ARG:HE	48:D2:55:ARG:NH2	2.11	0.47
23:AV:16:A:O2'	23:AV:17:U:OP1	2.28	0.47
17:AR:74:ARG:HE	17:AR:79:LEU:HD22	1.79	0.47
46:D0:25:ARG:HH21	46:D0:35:ASN:ND2	2.12	0.47
48:D2:26:ARG:O	48:D2:29:LYS:HB2	2.15	0.47
59:BA:2019:A:H61	59:BA:2035:G:H1	1.61	0.47
11:AL:53:ARG:HG3	11:AL:69:TYR:CE1	2.49	0.47
59:BA:2103:C:H2'	59:BA:2104:G:O4'	2.13	0.47
59:BA:1830:C:H2'	59:BA:1831:G:C8	2.47	0.47
53:B7:12:ARG:NH2	59:BA:465:G:H5'	2.30	0.47
39:DT:49:VAL:O	39:DT:64:ARG:HB3	2.15	0.47
59:BA:948:G:H2'	59:BA:949:C:C6	2.50	0.47
36:BQ:126:PRO:HA	59:BA:2485:G:H4'	1.96	0.47
21:CA:532:A:H3'	21:CA:533:A:C5'	2.44	0.47
35:BP:61:ARG:NH1	54:B8:13:ARG:HD2	2.26	0.47
35:BP:56:SER:O	35:BP:59:LEU:N	2.44	0.47
59:BA:1998:G:H4'	59:BA:2724:C:H4'	1.96	0.47
45:BZ:48:PHE:O	45:BZ:52:SER:HB2	2.14	0.47
59:BA:1676:A:H2'	59:BA:1677:A:H8	1.78	0.47
21:AA:670:G:H2'	21:AA:671:G:O4'	2.14	0.47
28:BF:60:SER:OG	59:BA:468:G:OP1	2.32	0.47
36:DQ:82:ARG:HH11	59:DA:2250:G:H8	1.63	0.47
21:AA:1057:G:H3'	21:AA:1058:G:C8	2.50	0.47
29:DG:107:LEU:HD21	29:DG:178:PHE:CD1	2.50	0.47
40:DU:3:ARG:HE	59:DA:449:A:C4'	2.26	0.47
59:DA:2202(E):A:O2'	59:DA:2202(F):U:O5'	2.27	0.47
21:AA:810:C:H2'	21:AA:811:C:O4'	2.14	0.47
27:BE:189:PRO:HA	59:BA:2680:C:C5'	2.44	0.47
39:DT:33:LYS:HB2	39:DT:43:GLN:H	1.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:CQ:64:PRO:HA	16:CQ:70:ARG:HG2	1.95	0.47
49:B3:8:LEU:HD22	49:B3:31:LEU:HA	1.97	0.47
45:BZ:25:PRO:HA	45:BZ:38:TYR:CB	2.45	0.47
43:BX:3:THR:O	43:BX:5:TYR:N	2.47	0.47
21:CA:229:U:H2'	21:CA:230:G:O4'	2.15	0.47
2:CC:109:PRO:C	2:CC:111:LEU:H	2.17	0.47
21:AA:891:U:H3	21:AA:907:A:H62	1.61	0.47
30:DH:20:ALA:HB3	30:DH:23:ARG:O	2.15	0.47
21:CA:1171:G:H2'	21:CA:1172:C:C6	2.49	0.47
29:BG:81:LYS:HB3	29:BG:82:LEU:H	1.44	0.47
1:CB:54:THR:O	1:CB:58:ILE:HG12	2.15	0.47
34:DO:98:VAL:HG22	34:DO:117:LEU:HD13	1.95	0.47
2:AC:188:LEU:H	2:AC:188:LEU:HD22	1.80	0.47
37:DR:62:ALA:O	37:DR:66:VAL:HG23	2.14	0.47
33:DN:97:ARG:CA	33:DN:105:GLY:HA2	2.44	0.47
21:CA:411:A:O2'	21:CA:413:G:OP1	2.31	0.47
27:BE:48:GLN:HG2	27:BE:78:LEU:HB2	1.96	0.47
21:AA:1405:G:H3'	63:AA:1601:NMY:N19	2.28	0.47
59:DA:1940:U:N3	59:DA:1964:G:H5'	2.30	0.47
60:DB:4:C:H41	60:DB:117:G:N2	2.12	0.47
21:CA:1323:G:H2'	21:CA:1324:A:C8	2.49	0.47
59:DA:1326:U:H2'	59:DA:1327:C:C6	2.49	0.47
22:CW:26:A:O2'	22:CW:27:C:OP1	2.28	0.47
21:CA:1522:U:H2'	21:CA:1523:G:H8	1.80	0.47
21:CA:923:A:H2'	21:CA:924:C:C6	2.50	0.47
34:DO:24:VAL:C	34:DO:38:VAL:O	2.53	0.47
59:DA:966:G:H1'	59:DA:2267:A:N6	2.29	0.47
21:CA:1347:G:N2	21:CA:1374:A:OP2	2.47	0.47
19:CT:65:LYS:HE2	19:CT:68:LYS:HZ2	1.79	0.47
20:CY:340:TYR:OH	21:CA:367:U:OP1	2.27	0.47
28:DF:154:VAL:CG1	28:DF:156:LEU:HD13	2.45	0.47
54:B8:55:ALA:O	54:B8:59:LYS:HD3	2.15	0.47
20:CY:461:ILE:HG13	20:CY:462:ILE:N	2.29	0.47
59:BA:2257:U:O4	59:BA:2258:C:N4	2.47	0.47
42:BW:14:PRO:HG3	42:BW:78:GLU:HA	1.96	0.47
21:AA:973:G:H3'	21:AA:974:A:H5''	1.97	0.47
59:BA:2532:G:O2'	59:BA:2657:A:N1	2.46	0.47
7:AH:10:LEU:HD21	7:AH:85:ARG:HD2	1.96	0.47
37:DR:27:SER:OG	59:DA:1278:A:H1'	2.14	0.47
37:DR:92:GLY:HA2	59:DA:2839:G:O2'	2.13	0.47
6:AG:28:ASN:HB3	21:AA:1374:A:O3'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BE:119:ARG:NH1	27:BE:156:MET:O	2.42	0.47
35:BP:127:ALA:H	35:BP:145:PRO:HD2	1.78	0.47
1:CB:70:PHE:HB2	1:CB:92:TYR:CB	2.44	0.47
38:DS:42:ASP:O	38:DS:45:GLY:N	2.42	0.47
14:AO:36:ILE:HD12	14:AO:63:ARG:HH22	1.80	0.47
27:BE:122:PHE:CG	59:BA:2512:C:H5'	2.49	0.47
59:DA:51:G:H21	59:DA:118:A:H62	1.63	0.47
55:B9:6:SER:HB3	59:BA:2466:C:H5'	1.96	0.47
21:CA:1254:C:H2'	21:CA:1255:G:O4'	2.15	0.47
3:AD:55:ALA:O	3:AD:59:ARG:HG2	2.14	0.47
5:CF:44:GLY:HA2	5:CF:59:TYR:CD2	2.48	0.47
59:BA:1506(E):G:H2'	59:BA:1506(F):C:C6	2.49	0.47
21:CA:113:G:H2'	21:CA:114:U:C6	2.50	0.47
59:DA:1777:U:H2'	59:DA:1778:U:O4'	2.14	0.47
8:AI:28:VAL:O	8:AI:30:GLY:N	2.48	0.47
59:DA:1019:U:N3	59:DA:1020:A:N7	2.62	0.47
49:B3:45:GLY:O	49:B3:48:GLU:HG2	2.14	0.47
45:BZ:70:LEU:HD23	45:BZ:70:LEU:HA	1.72	0.47
59:DA:1332:G:H5'	59:DA:1333:C:H5	1.79	0.47
20:CY:106:VAL:HG21	20:CY:122:TRP:CE3	2.50	0.47
23:AV:22:U:H3'	23:AV:23:A:H8	1.80	0.47
21:CA:502:G:H4'	21:CA:550:G:H4'	1.96	0.47
20:AY:17:ILE:HG13	20:AY:105:ILE:HB	1.97	0.47
24:AX:5:G:O6	24:AX:68:C:N3	2.48	0.47
59:BA:1605:C:H2'	59:BA:1606:G:O4'	2.15	0.47
21:AA:1084:G:O5'	21:AA:1085:U:H2'	2.14	0.47
59:DA:579:G:H2'	59:DA:580:C:O4'	2.13	0.47
33:DN:39:ARG:HG2	59:DA:1007:C:H5'	1.97	0.47
59:DA:1261:C:H2'	59:DA:1262:A:H8	1.78	0.47
33:DN:26:LEU:HD12	33:DN:30:ILE:HD12	1.97	0.47
33:DN:31:ALA:HA	33:DN:34:LEU:O	2.14	0.47
59:DA:2504:U:H1'	59:DA:2572:A:N1	2.30	0.47
33:BN:107:LEU:HB2	33:BN:108:PRO:HD3	1.96	0.47
33:BN:38:HIS:HB3	33:BN:39:ARG:H	1.48	0.47
59:DA:897:C:C4	59:DA:898:C:H5	2.32	0.47
59:DA:1834:U:OP1	59:DA:1835:G:H5'	2.15	0.47
59:DA:853:G:H1	59:DA:924:C:H42	1.62	0.47
59:DA:2248:C:C2'	59:DA:2275:C:H41	2.28	0.47
59:DA:2248:C:O2	59:DA:2256:G:N1	2.30	0.47
22:AW:12:U:H2'	22:AW:13:C:O4'	2.14	0.47
59:DA:870:A:H2	59:DA:907:U:O2	1.98	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DE:110:GLY:HA2	27:DE:162:ALA:N	2.30	0.47
12:CM:104:ARG:HG3	21:CA:1226:C:C4	2.50	0.47
22:CW:48:C:H2'	22:CW:59:A:H1'	1.96	0.47
28:BF:63:LYS:HE3	28:BF:66:PRO:O	2.14	0.47
59:BA:1256:G:H2'	59:BA:1257:C:C6	2.49	0.47
28:BF:38:ARG:HH21	59:BA:1245:G:H5''	1.78	0.47
59:DA:1710:C:H4'	59:DA:2858:C:C2	2.49	0.47
59:DA:17:G:H2'	59:DA:18:C:H6	1.79	0.47
59:BA:1583:A:H4'	59:BA:1586:A:C8	2.48	0.47
21:AA:621:A:H2'	21:AA:622:A:H8	1.78	0.47
3:AD:73:ARG:HD2	21:AA:401:C:OP2	2.14	0.47
49:D3:31:LEU:HB2	59:DA:1157:G:O2'	2.15	0.47
2:CC:62:ASP:O	2:CC:98:ASN:HB3	2.14	0.47
50:D4:14:ILE:HG23	50:D4:33:VAL:HG23	1.96	0.47
59:DA:1198:U:H2'	59:DA:1199:U:C5	2.49	0.47
30:BH:70:THR:CG2	59:BA:2747:G:H5''	2.44	0.47
21:AA:952:U:H4'	21:AA:964:A:N1	2.28	0.47
25:BC:150:ILE:HA	25:BC:153:ILE:HB	1.96	0.47
25:BC:78:ILE:HG12	25:BC:114:VAL:HG22	1.97	0.47
18:AS:76:PRO:O	18:AS:78:ARG:N	2.44	0.47
18:AS:76:PRO:C	18:AS:78:ARG:H	2.17	0.47
1:AB:192:SER:OG	1:AB:193:ASP:N	2.47	0.47
59:DA:70:G:OP1	59:DA:112:U:N3	2.43	0.47
59:BA:30:G:H2'	59:BA:31:C:C6	2.49	0.47
59:DA:15:G:H1	59:DA:525:U:H3	0.66	0.47
59:BA:2017:U:O2'	59:BA:2019:A:OP2	2.23	0.47
47:D1:25:LYS:HA	47:D1:34:THR:O	2.14	0.47
34:DO:91:LEU:HD22	34:DO:92:GLU:H	1.79	0.47
59:BA:1046:A:H5''	59:BA:1047:G:H8	1.80	0.47
21:AA:1355:G:H2'	21:AA:1356:G:O4'	2.13	0.47
9:AJ:47:PHE:HE1	21:AA:1357:A:H4'	1.80	0.47
59:BA:2137:C:N3	59:BA:2154:G:N2	2.56	0.47
21:CA:321:A:H62	21:CA:328:C:H1'	1.80	0.47
21:CA:321:A:N6	21:CA:328:C:H1'	2.30	0.47
21:CA:1465:C:H2'	21:CA:1466:C:O4'	2.14	0.47
21:AA:417:C:H42	21:AA:426:G:H1	1.62	0.47
12:CM:54:VAL:O	12:CM:57:ARG:HG2	2.15	0.47
51:B5:4:HIS:O	51:B5:6:VAL:N	2.47	0.47
20:CY:259:PHE:CE1	20:CY:275:ALA:HB1	2.49	0.47
20:CY:276:VAL:O	20:CY:280:LEU:HB2	2.15	0.47
60:DB:104:A:H2'	60:DB:105:G:O4'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DP:116:GLY:HA2	59:DA:627:A:N6	2.29	0.47
47:D1:3:LYS:HD2	47:D1:3:LYS:HA	1.72	0.47
42:BW:38:TYR:O	51:B5:28:PRO:HG3	2.15	0.47
21:CA:373:A:H4'	21:CA:480:U:O2'	2.14	0.47
59:DA:1530:G:N2	59:DA:1541:U:H2'	2.28	0.47
9:AJ:51:ARG:HE	9:AJ:59:SER:HB3	1.80	0.47
3:AD:72:GLU:OE1	21:AA:545:C:H5''	2.15	0.47
59:BA:2580:U:P	59:BA:2581:G:H1	2.37	0.47
44:DY:9:LYS:HD2	44:DY:94:LYS:HZ2	1.80	0.47
59:BA:2343:C:O2'	59:BA:2373:G:H4'	2.14	0.47
59:BA:238:C:H4'	59:BA:608:A:HO2'	1.78	0.47
26:DD:72:LYS:HG3	26:DD:103:ARG:HH12	1.79	0.47
20:AY:542:VAL:HA	20:AY:583:LYS:HA	1.96	0.47
55:B9:10:ILE:HD11	55:B9:32:HIS:CD2	2.50	0.47
59:DA:305:U:H2'	59:DA:306:U:C6	2.50	0.47
59:DA:306:U:O4	59:DA:310:A:C8	2.68	0.47
59:BA:1646:C:H5''	59:BA:1647:G:H5''	1.97	0.47
41:BV:71:LEU:HA	41:BV:86:GLY:CA	2.45	0.47
52:B6:16:CYS:SG	52:B6:48:VAL:HG23	2.54	0.47
16:AQ:19:VAL:HG23	16:AQ:44:ALA:HB3	1.97	0.47
51:D5:5:PRO:HG3	59:DA:2614:A:H5'	1.97	0.47
59:BA:1243:G:H2'	59:BA:1244:G:O4'	2.14	0.47
59:DA:1468(C):A:H2'	59:DA:1468(D):A:O4'	2.15	0.47
59:DA:1105:U:H2'	59:DA:1106:G:C8	2.49	0.47
26:BD:144:ALA:H	26:BD:156:ALA:HB3	1.79	0.47
21:CA:277:C:H2'	21:CA:278:G:H5'	1.97	0.47
59:DA:1788:C:H2'	59:DA:1789:A:C8	2.50	0.47
48:B2:21:LEU:HD13	48:B2:64:LEU:HA	1.97	0.47
50:D4:6:HIS:O	50:D4:8:LYS:N	2.47	0.47
13:CN:5:ALA:HB3	21:CA:1216:G:H5''	1.97	0.47
59:BA:230:U:H2'	59:BA:231:C:H6	1.79	0.47
59:BA:867:C:C4	59:BA:868:U:C4	3.03	0.47
59:DA:936:C:H2'	59:DA:937:U:O4'	2.14	0.47
59:BA:640:C:H2'	59:BA:641:C:C6	2.50	0.47
25:BC:66:PRO:HB2	25:BC:67:HIS:CD2	2.50	0.47
60:BB:1:U:H2'	60:BB:2:C:C5	2.50	0.47
59:BA:1116:C:H2'	59:BA:1117:G:H8	1.79	0.47
59:BA:1882:C:H2'	59:BA:1883:G:O4'	2.14	0.47
2:AC:73:PRO:HA	2:AC:76:VAL:HG13	1.96	0.47
2:AC:40:ARG:CZ	13:AN:52:GLN:HB3	2.44	0.47
25:BC:70:GLY:O	25:BC:71:LYS:HB2	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CY:253:LEU:C	20:CY:254:LYS:HG2	2.34	0.47
20:CY:607:ARG:HB3	20:CY:672:PHE:O	2.15	0.47
14:AO:75:PRO:O	14:AO:78:TYR:HB3	2.15	0.47
52:B6:46:HIS:ND1	59:BA:2371:G:O2'	2.48	0.47
41:DV:69:LYS:HA	41:DV:88:ARG:HG2	1.96	0.47
59:BA:2498:C:O2'	59:BA:2499:C:H5'	2.14	0.47
9:CJ:28:ARG:HH21	9:CJ:36:GLY:N	2.12	0.47
38:BS:42:ASP:O	38:BS:44:LYS:N	2.45	0.47
28:BF:90:PHE:HB3	59:BA:588:U:H1'	1.97	0.47
54:D8:6:THR:HG22	54:D8:62:LEU:HB2	1.96	0.47
52:D6:25:LYS:HE3	52:D6:25:LYS:HB2	1.59	0.47
41:DV:10:LYS:HE3	41:DV:10:LYS:HB2	1.65	0.47
21:AA:1255:G:H4'	21:AA:1258:G:O2'	2.14	0.47
59:BA:2461:C:H2'	59:BA:2462:U:C6	2.49	0.47
59:DA:2776:A:N3	59:DA:2778:A:H2'	2.30	0.47
33:DN:46:VAL:HG12	33:DN:107:LEU:CD2	2.44	0.47
34:BO:22:ILE:HB	34:BO:40:VAL:O	2.15	0.47
59:BA:1930:G:O6	63:BA:2904:NMY:H9	2.14	0.47
3:AD:41:GLY:HA3	21:AA:542:G:H5'	1.96	0.47
59:DA:2255:G:H3'	59:DA:2256:G:C8	2.50	0.47
21:CA:1321:C:H5''	21:CA:1322:C:H5''	1.96	0.47
21:AA:33:A:H4'	21:AA:364:A:H1'	1.96	0.47
21:CA:680:C:N4	21:CA:710:G:N1	2.31	0.47
25:BC:42:VAL:O	25:BC:43:GLU:C	2.53	0.47
59:BA:2114:A:C2	59:BA:2168:G:H1'	2.50	0.47
59:DA:2390:U:H2'	59:DA:2391:G:H8	1.79	0.47
21:CA:1340:A:C2	21:CA:1341:U:O2	2.68	0.47
21:AA:1002:G:H2'	21:AA:1003:G:O4'	2.14	0.47
21:CA:1343:G:H2'	21:CA:1344:C:O4'	2.14	0.47
59:DA:193:U:H2'	59:DA:194:G:C8	2.50	0.47
24:AX:49:G:N2	24:AX:65:C:C2	2.80	0.47
21:AA:1340:A:C2	21:AA:1341:U:C2	3.03	0.47
18:AS:77:THR:O	21:AA:958:A:N6	2.41	0.47
27:DE:108:SER:HA	27:DE:190:GLY:CA	2.45	0.47
59:DA:1817:G:H2'	59:DA:1818:U:H5'	1.97	0.47
10:CK:29:ILE:HA	10:CK:43:SER:O	2.14	0.47
1:CB:91:PRO:HG3	1:CB:154:LEU:HG	1.95	0.47
21:AA:1513:A:H61	21:AA:1522:U:H3	1.63	0.47
11:AL:39:VAL:HG12	11:AL:40:VAL:N	2.29	0.47
11:AL:52:LEU:H	11:AL:53:ARG:HD2	1.79	0.47
12:CM:119:GLY:HA2	21:CA:953:G:N2	2.30	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BE:136:ARG:NE	59:BA:1656:C:OP1	2.38	0.47
41:DV:95:LEU:O	41:DV:96:ILE:O	2.33	0.47
41:BV:22:VAL:HG23	41:BV:23:GLU:O	2.15	0.47
20:AY:251:ILE:HG12	20:AY:281:PRO:HG3	1.96	0.47
53:B7:40:TRP:CH2	59:BA:469:G:N1	2.83	0.47
44:BY:47:LYS:HG3	44:BY:60:PHE:CE2	2.50	0.47
18:CS:30:LEU:HD22	59:DA:888:C:OP1	2.15	0.47
60:DB:19:G:H1	60:DB:64:C:N4	2.10	0.47
28:BF:107:LYS:HA	28:BF:107:LYS:HD3	1.55	0.47
21:AA:989:C:H2'	21:AA:990:C:C6	2.50	0.47
21:CA:950:U:O2'	21:CA:971:G:H5'	2.15	0.47
48:B2:46:GLN:HB3	48:B2:48:HIS:HE1	1.79	0.47
21:AA:591:U:H2'	21:AA:592:G:O4'	2.15	0.47
40:BU:92:ARG:NH1	41:BV:11:GLN:O	2.33	0.47
27:BE:116:VAL:HG23	27:BE:120:TRP:CD1	2.50	0.47
32:BK:90:LYS:NZ	32:BK:93:ARG:HE	2.13	0.47
17:AR:60:ALA:HB2	21:AA:834:C:H5''	1.96	0.47
29:DG:141:PHE:HB3	29:DG:142:PRO:HD2	1.96	0.47
5:CF:59:TYR:CD2	5:CF:61:LEU:HD23	2.50	0.47
59:DA:540:C:H2'	59:DA:541:C:C5	2.49	0.47
7:CH:31:PHE:HZ	21:CA:643:C:H5'	1.78	0.47
4:CE:94:ALA:HB2	4:CE:119:LEU:HB2	1.96	0.47
34:BO:7:TYR:N	59:BA:1667:G:OP1	2.47	0.47
59:BA:2672:G:H2'	59:BA:2673:G:C8	2.50	0.47
59:DA:124:G:H5'	59:DA:1376:C:H4'	1.96	0.47
59:BA:398:G:H2'	59:BA:399:G:O4'	2.15	0.47
21:CA:901:A:O5'	21:CA:901:A:H8	1.96	0.47
26:DD:119:ALA:HB1	26:DD:190:TYR:HE2	1.79	0.47
35:DP:46:LYS:HG3	35:DP:51:PHE:CD1	2.50	0.47
32:BK:78:ILE:HG12	32:BK:99:ILE:HD12	1.97	0.47
11:CL:108:ALA:C	11:CL:121:GLY:HA3	2.35	0.47
20:AY:299:VAL:HG22	20:AY:300:GLU:H	1.80	0.47
5:AF:6:VAL:HG22	5:AF:90:VAL:HG13	1.97	0.47
42:BW:49:LYS:NZ	59:BA:489:G:O6	2.47	0.47
19:CT:56:MET:O	19:CT:60:GLU:HB2	2.15	0.47
8:CI:47:LEU:O	8:CI:51:ARG:N	2.47	0.47
52:D6:35:GLU:HB3	52:D6:51:GLU:HB3	1.96	0.47
9:AJ:81:THR:HG22	9:AJ:85:LEU:HD12	1.96	0.47
59:BA:121:G:H4'	59:BA:148:C:H2'	1.97	0.47
21:CA:575:G:H4'	21:CA:576:G:O5'	2.15	0.47
2:AC:50:ALA:HB1	2:AC:72:LYS:HG3	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:2254:C:H4'	59:BA:2254:C:OP1	2.14	0.47
26:BD:78:LYS:N	26:BD:96:HIS:O	2.48	0.47
59:DA:1955:U:H3'	59:DA:1956:U:C6	2.49	0.47
21:AA:27:G:H2'	21:AA:28:G:C8	2.49	0.47
59:DA:2016:U:H2'	59:DA:2017:U:O4'	2.13	0.47
59:DA:2781:A:H5''	59:DA:2782:G:H8	1.80	0.47
33:DN:100:GLU:O	33:DN:101:HIS:C	2.53	0.47
33:BN:97:ARG:O	33:BN:105:GLY:HA3	2.14	0.47
33:BN:86:PRO:O	33:BN:90:MET:HB2	2.15	0.47
59:DA:1933:G:O2'	63:DA:2901:NMY:H12	2.15	0.47
59:BA:2558:C:H2'	59:BA:2559:C:C6	2.50	0.47
21:CA:1324:A:H2'	21:CA:1325:C:O4'	2.15	0.47
59:DA:2667:C:H2'	59:DA:2668:G:O4'	2.13	0.47
21:CA:442:C:H2'	21:CA:443:C:C6	2.50	0.47
59:BA:1340:U:H4'	59:BA:1394:U:O2'	2.14	0.47
22:AW:72:C:N3	59:BA:1852:C:H5''	2.30	0.47
21:CA:253:U:C4	21:CA:273:A:N1	2.82	0.47
21:CA:927:G:OP1	21:CA:1505:G:N2	2.48	0.47
47:D1:20:ARG:HG3	47:D1:38:SER:H	1.80	0.47
59:BA:650:C:H2'	59:BA:651:G:O4'	2.15	0.47
26:DD:250:TRP:CZ2	59:DA:1805:U:H4'	2.50	0.47
16:CQ:67:LYS:HD2	21:CA:266:G:H8	1.79	0.47
3:AD:73:ARG:HD2	21:AA:401:C:P	2.55	0.47
59:DA:593:G:H2'	59:DA:594:U:C6	2.50	0.47
15:AP:42:ARG:HG2	21:AA:449:C:O2'	2.15	0.47
21:AA:676:A:H2	21:AA:714:G:H1	1.62	0.47
21:AA:1363:A:H5'	21:AA:1364:U:C5	2.50	0.47
27:BE:61:ARG:NH2	59:BA:2632:A:O2'	2.47	0.47
46:D0:25:ARG:HH12	59:DA:2355:C:H5'	1.80	0.47
20:CY:654:GLY:O	20:CY:657:THR:HG22	2.15	0.47
3:AD:173:TRP:CZ3	3:AD:189:PRO:HG3	2.50	0.47
26:DD:91:ARG:C	26:DD:107:ALA:HB3	2.35	0.47
2:AC:12:LEU:HD12	13:AN:58:LYS:H	1.79	0.47
26:BD:85:ASP:OD2	26:BD:87:ASN:ND2	2.48	0.47
41:DV:76:LYS:H	41:DV:81:TYR:HD1	1.63	0.47
59:DA:498:G:H2'	59:DA:499:U:C6	2.49	0.47
59:DA:503:A:H4'	59:DA:504:U:H5''	1.96	0.47
59:BA:1264:G:H21	59:BA:2015:A:H62	1.61	0.47
21:AA:186(G):C:H1'	21:AA:186(K):G:N2	2.30	0.47
41:DV:60:GLU:N	41:DV:96:ILE:HA	2.24	0.47
59:DA:187:G:N3	59:DA:1365:A:H2	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:1277:G:H2'	59:BA:1278:A:O4'	2.14	0.47
26:DD:254:THR:HG23	26:DD:255:LYS:HD2	1.97	0.47
59:DA:2008:C:H2'	59:DA:2009:G:C8	2.48	0.47
21:AA:613:C:H2'	21:AA:614:A:O4'	2.15	0.47
35:DP:27:HIS:HB2	59:DA:813:U:OP2	2.14	0.47
27:BE:123:ALA:O	27:BE:125:GLY:N	2.48	0.47
59:BA:2703:C:H2'	59:BA:2704:C:C6	2.50	0.47
59:BA:2373:G:H2'	59:BA:2374:C:C6	2.50	0.47
59:BA:2377:A:C6	59:BA:2378:A:C6	3.03	0.47
20:AY:631:ILE:O	20:AY:632:LEU:HB2	2.15	0.47
59:DA:2692:C:H1'	59:DA:2847:U:H1'	1.95	0.47
59:DA:2689:U:H5'	59:DA:2713:A:C2	2.50	0.47
21:AA:243:A:H4'	21:AA:244:U:H3'	1.97	0.47
59:DA:1807:G:H1'	59:DA:1810:A:H61	1.80	0.47
34:BO:4:PRO:HA	34:BO:21:CYS:O	2.14	0.47
45:DZ:45:ASP:OD2	45:DZ:49:ARG:NH2	2.47	0.47
59:DA:1909:C:H2'	59:DA:1910:G:C8	2.50	0.47
16:CQ:63:ARG:NH2	21:CA:186(J):G:N7	2.62	0.47
26:DD:63:ARG:HD3	26:DD:87:ASN:HD21	1.80	0.47
16:CQ:91:ARG:CZ	21:CA:584:G:H5'	2.45	0.47
59:BA:1532:C:H2'	59:BA:1533:C:C6	2.50	0.47
59:BA:317:G:H2'	59:BA:318:C:O4'	2.14	0.47
37:DR:18:LEU:HA	37:DR:21:TYR:HB2	1.97	0.47
7:AH:53:VAL:HB	7:AH:58:TYR:CD1	2.48	0.47
26:DD:59:LYS:HB3	59:DA:1568:G:H4'	1.95	0.47
36:DQ:46:GLN:O	36:DQ:49:ALA:HB3	2.15	0.47
20:CY:39:ILE:HG13	20:CY:75:LYS:HG3	1.96	0.47
52:D6:14:THR:HG22	52:D6:52:VAL:HB	1.97	0.47
59:DA:2856:C:H2'	59:DA:2857:G:C8	2.50	0.47
1:CB:31:TYR:O	1:CB:43:ASP:HB3	2.15	0.47
59:BA:2517:C:H4'	59:BA:2518:A:C8	2.50	0.47
25:DC:177:GLY:O	25:DC:179:ALA:N	2.48	0.47
29:BG:15:VAL:HG22	29:BG:175:LEU:HD13	1.96	0.47
21:CA:419:C:H2'	21:CA:420:U:O4'	2.15	0.47
33:DN:74:ARG:CB	59:DA:1138:G:H4'	2.45	0.47
59:DA:955:C:C4	59:DA:962:G:O6	2.67	0.47
21:CA:1408:A:N6	63:CA:1601:NMY:H14	2.27	0.47
59:BA:2551:C:H2'	59:BA:2552:U:H4'	1.96	0.47
37:DR:64:ARG:O	37:DR:68:ARG:N	2.45	0.47
21:CA:1072:G:C6	21:CA:1103:C:N4	2.74	0.47
20:AY:461:ILE:HG13	62:AY:702:FUA:C2	2.38	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
62:AY:702:FUA:C20	62:AY:702:FUA:O1	2.62	0.47
21:CA:815:A:C6	21:CA:1508:G:N2	2.83	0.47
21:CA:947:G:H2'	21:CA:948:C:C6	2.50	0.47
59:DA:2885:C:H2'	59:DA:2886:G:O4'	2.15	0.47
59:DA:1954:G:H5'	59:DA:2550:G:H21	1.80	0.47
59:DA:809:G:H2'	59:DA:810:U:H5'	1.97	0.47
21:CA:1372:U:C4	21:CA:1373:G:C6	3.02	0.47
8:CI:121:ARG:HD3	8:CI:121:ARG:HA	1.41	0.47
59:DA:1048:A:C6	59:DA:1111:A:C4	3.02	0.47
59:DA:1398:C:H2'	59:DA:1399:C:O4'	2.15	0.47
16:AQ:74:LEU:HB3	16:AQ:75:ARG:H	1.57	0.47
25:BC:74:ARG:C	25:BC:76:LEU:H	2.17	0.47
21:AA:815:A:C2	21:AA:1527:C:O2	2.67	0.47
12:AM:124:PRO:HB3	12:AM:126:LYS:NZ	2.30	0.47
25:DC:117:THR:HG22	25:DC:147:GLY:O	2.15	0.47
9:CJ:40:LEU:HD11	21:CA:1280:A:O4'	2.14	0.47
21:AA:954:G:H21	21:AA:1227:A:N6	2.12	0.47
12:AM:95:GLY:O	12:AM:111:LYS:HD3	2.13	0.47
20:CY:408:VAL:HG23	20:CY:409:ILE:HG12	1.97	0.47
4:CE:51:VAL:HB	4:CE:52:PRO:HD3	1.96	0.47
51:B5:16:ARG:HH12	59:BA:517:C:H5''	1.80	0.47
59:BA:882:G:N2	59:BA:894:C:C2	2.82	0.47
21:AA:1437:C:H2'	21:AA:1438:G:C8	2.49	0.47
37:BR:10:LEU:HB2	59:BA:1653:G:C5	2.50	0.47
28:BF:157:VAL:HG12	28:BF:193:VAL:O	2.15	0.47
59:DA:1526:G:O6	59:DA:1527:G:N1	2.47	0.47
39:DT:29:ARG:HA	39:DT:46:GLU:CB	2.45	0.47
38:DS:97:ARG:HB2	38:DS:97:ARG:CZ	2.44	0.47
20:AY:556:ILE:HD11	20:AY:601:ILE:HD11	1.96	0.47
59:BA:1083:U:O2'	59:BA:1084:A:H3'	2.15	0.47
59:DA:2330:G:H2'	59:DA:2331:G:O4'	2.15	0.47
59:BA:1018:C:H2'	59:BA:1019:U:C6	2.45	0.47
41:BV:40:LEU:HD22	41:BV:45:THR:O	2.15	0.47
10:CK:120:ARG:NH1	21:CA:1524:C:H5''	2.30	0.47
25:BC:182:PRO:HB2	25:BC:184:GLU:HG3	1.97	0.47
41:BV:33:VAL:HG12	41:BV:35:LEU:HD22	1.97	0.47
20:AY:132:ARG:HA	20:AY:280:LEU:HD11	1.97	0.47
37:DR:104:ARG:HH22	59:DA:1278:A:P	2.38	0.47
8:CI:28:VAL:HB	8:CI:36:TYR:HD1	1.79	0.47
29:DG:173:LEU:HD12	29:DG:180:PHE:CZ	2.50	0.47
40:BU:92:ARG:HB2	41:BV:11:GLN:CD	2.36	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:1167:U:H2'	59:BA:1168:G:H8	1.80	0.47
21:CA:848:C:H2'	21:CA:849:C:C6	2.49	0.47
19:AT:27:LYS:HD3	19:AT:30:LYS:HD3	1.97	0.47
28:DF:164:ARG:O	28:DF:168:ARG:HB3	2.15	0.47
59:DA:590:A:H2'	59:DA:591:C:C6	2.50	0.47
59:BA:43:G:C4	59:BA:438:G:C2	3.03	0.47
9:CJ:45:ARG:HG3	9:CJ:47:PHE:CE1	2.50	0.47
4:AE:15:ARG:HG3	4:AE:28:PHE:CE2	2.48	0.47
59:DA:305:U:H2'	59:DA:306:U:C5	2.50	0.47
8:AI:99:LEU:HB3	8:AI:101:PHE:CE1	2.50	0.47
39:DT:33:LYS:HB2	39:DT:43:GLN:N	2.30	0.47
1:AB:107:THR:HG21	21:AA:1103:C:H1'	1.96	0.47
25:DC:165:ARG:HG2	25:DC:166:ASN:N	2.30	0.47
1:CB:169:LYS:O	1:CB:172:ILE:N	2.44	0.47
21:AA:774:G:H2'	21:AA:775:G:O4'	2.15	0.47
59:BA:2363:C:H2'	59:BA:2364:C:C6	2.50	0.47
59:DA:757:U:H2'	59:DA:758:C:O4'	2.15	0.47
29:BG:82:LEU:HD12	29:BG:87:PRO:HB3	1.97	0.47
20:CY:607:ARG:HA	20:CY:645:ALA:O	2.15	0.47
21:AA:1277:C:H1'	21:AA:1282:C:O2	2.15	0.47
21:CA:509:A:N7	21:CA:510:A:N6	2.63	0.47
25:DC:73:VAL:C	25:DC:75:VAL:H	2.18	0.47
51:D5:32:PRO:HA	51:D5:38:ALA:O	2.15	0.47
8:AI:20:ARG:O	8:AI:60:ASP:N	2.47	0.47
8:AI:18:PHE:HB2	8:AI:62:TYR:O	2.15	0.47
28:BF:133:ASN:HB2	28:BF:138:GLU:OE2	2.15	0.47
37:BR:104:ARG:O	37:BR:106:GLY:N	2.41	0.47
14:CO:89:GLY:C	59:DA:715:G:H5''	2.35	0.47
22:AW:75:C:H4'	47:B1:30:VAL:HG22	1.97	0.47
31:DJ:40:UNK:O	31:DJ:44:UNK:N	2.48	0.47
25:BC:203:GLU:OE1	25:BC:203:GLU:N	2.47	0.47
7:AH:9:MET:SD	7:AH:32:LYS:HD2	2.55	0.47
30:DH:126:PRO:HG3	30:DH:130:ARG:NH2	2.30	0.47
53:B7:18:PHE:N	59:BA:126:A:OP2	2.48	0.47
59:DA:217:G:H2'	59:DA:218:A:O4'	2.15	0.47
33:DN:85:ILE:O	33:DN:105:GLY:O	2.34	0.46
59:BA:1937:A:C8	59:BA:1939:U:H2'	2.51	0.46
21:CA:600:C:H42	21:CA:638:G:H1	0.64	0.46
36:DQ:67:ARG:NH2	59:DA:906:G:O3'	2.48	0.46
59:DA:634:C:H2'	59:DA:635:C:C6	2.50	0.46
21:AA:501:C:H2'	21:AA:502:G:H8	1.79	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:D2:48:HIS:CG	48:D2:49:LYS:H	2.32	0.46
59:DA:1238:G:H2'	59:DA:1239:G:C8	2.48	0.46
59:DA:1791:A:H2'	59:DA:1792:G:O4'	2.15	0.46
59:DA:510:C:H2'	59:DA:511:U:O4'	2.16	0.46
24:AX:27:C:H2'	24:AX:28:C:H6	1.80	0.46
11:AL:93:LEU:O	11:AL:95:GLY:N	2.49	0.46
59:DA:2485:G:H2'	59:DA:2486:G:H8	1.79	0.46
6:CG:79:ARG:NE	21:CA:1381:U:H4'	2.29	0.46
27:BE:100:GLU:H	27:BE:172:VAL:HG12	1.80	0.46
59:DA:83:G:H22	59:DA:103:A:P	2.38	0.46
46:D0:20:ARG:HB2	46:D0:24:LYS:HZ3	1.79	0.46
46:D0:20:ARG:NH1	59:DA:2356:C:O3'	2.47	0.46
38:DS:51:ALA:CB	38:DS:73:LEU:HB2	2.45	0.46
59:DA:2064:C:N3	59:DA:2446:G:N2	2.50	0.46
59:DA:2261:C:H1'	59:DA:2388:A:N3	2.30	0.46
59:DA:1642:G:H2'	59:DA:1643:G:O4'	2.15	0.46
10:CK:52:GLY:HA2	21:CA:692:U:H3	1.79	0.46
59:BA:733:G:H3'	59:BA:761:A:H61	1.79	0.46
21:AA:1435:G:O2'	21:AA:1436:U:H5'	2.14	0.46
16:CQ:29:HIS:CE1	16:CQ:32:TYR:HB2	2.50	0.46
59:BA:1177:A:C6	59:BA:1178:C:C2	3.03	0.46
26:BD:65:ILE:HG13	26:BD:67:PHE:CE2	2.50	0.46
53:B7:28:ARG:NH2	59:BA:1368:G:OP1	2.35	0.46
29:DG:77:ILE:HG22	29:DG:80:PHE:H	1.78	0.46
59:DA:1435:G:H2'	59:DA:1436:G:H8	1.80	0.46
59:DA:2305:A:H2'	59:DA:2306:C:H4'	1.97	0.46
29:DG:47:LYS:HB3	29:DG:81:LYS:HD2	1.97	0.46
59:BA:1265:A:H61	59:BA:2013:A:H3'	1.81	0.46
21:CA:766:A:C2	21:CA:767:A:H1'	2.49	0.46
37:BR:101:ALA:HB1	42:BW:38:TYR:CE2	2.50	0.46
59:BA:2095:C:H2'	59:BA:2096:U:C6	2.50	0.46
21:AA:696:A:O5'	21:AA:696:A:H8	1.99	0.46
59:DA:1528:A:H2'	59:DA:1529:A:O4'	2.15	0.46
35:BP:13:ASN:ND2	35:BP:14:LYS:H	2.13	0.46
21:AA:383:A:H8	21:AA:383:A:O5'	1.98	0.46
46:B0:27:GLU:HB3	46:B0:69:PHE:CE1	2.50	0.46
21:CA:1426:C:H2'	21:CA:1427:U:C6	2.51	0.46
21:AA:566:G:H4'	21:AA:567:G:H5'	1.95	0.46
21:AA:1429:C:O2'	59:BA:1704:G:H5'	2.14	0.46
20:AY:631:ILE:HD12	20:AY:631:ILE:H	1.80	0.46
39:DT:95:ARG:O	39:DT:96:ARG:NH1	2.48	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CA:1253:G:H2'	21:CA:1254:C:C6	2.50	0.46
50:D4:15:ILE:H	50:D4:32:TYR:HA	1.80	0.46
21:AA:23:C:H5	21:AA:561:U:O4	1.97	0.46
37:DR:12:ARG:HB2	37:DR:17:ARG:HG2	1.97	0.46
21:AA:255:G:H2'	21:AA:256:U:C6	2.50	0.46
36:DQ:10:ARG:NH2	36:DQ:89:ASN:OD1	2.49	0.46
21:AA:865:A:H5'	21:AA:1078:U:H5	1.80	0.46
21:AA:742:G:C2	21:AA:743:U:H1'	2.51	0.46
5:CF:91:VAL:HG13	5:CF:92:LYS:O	2.15	0.46
59:BA:2769:C:H2'	59:BA:2770:G:H8	1.80	0.46
11:AL:37:CYS:HA	11:AL:57:LYS:H	1.79	0.46
29:BG:47:LYS:HD3	29:BG:81:LYS:HB2	1.97	0.46
43:BX:30:VAL:HG22	43:BX:77:LYS:O	2.15	0.46
59:DA:2363:C:H2'	59:DA:2364:C:C6	2.50	0.46
20:CY:603:GLU:N	20:CY:677:GLN:O	2.39	0.46
2:AC:117:ALA:HB2	2:AC:200:ALA:HB2	1.97	0.46
59:DA:2592:G:H2'	59:DA:2593:U:O4'	2.16	0.46
1:CB:114:ARG:O	1:CB:118:LEU:HG	2.14	0.46
59:BA:2730:C:H2'	59:BA:2731:G:C8	2.50	0.46
59:DA:2612:C:H2'	59:DA:2613:U:H5'	1.97	0.46
33:DN:100:GLU:CD	33:DN:104:LYS:HZ1	2.18	0.46
33:DN:113:GLY:C	33:DN:117:PHE:HB2	2.35	0.46
33:DN:28:THR:C	33:DN:31:ALA:HB3	2.36	0.46
27:DE:148:GLY:HA2	59:DA:2052:G:O2'	2.15	0.46
21:CA:407:G:H1	21:CA:435:C:H42	1.62	0.46
33:BN:54:VAL:HG13	33:BN:56:ASN:OD1	2.13	0.46
28:DF:73:ALA:HB2	59:DA:1256:G:H4'	1.96	0.46
62:AY:702:FUA:H322	62:AY:702:FUA:H16	1.74	0.46
27:DE:61:ARG:HD3	27:DE:62:PRO:HD2	1.96	0.46
18:CS:80:TYR:CB	21:CA:957:U:H5'	2.43	0.46
53:D7:46:VAL:HG12	53:D7:47:ARG:HG2	1.96	0.46
21:CA:925:G:N3	21:CA:1502:A:H1'	2.30	0.46
23:CV:14:A:O2'	23:CV:15:A:O5'	2.29	0.46
54:B8:18:ALA:HB2	59:BA:629:G:P	2.55	0.46
59:DA:779:U:C2	59:DA:780:G:C8	3.03	0.46
2:CC:19:GLU:HB3	2:CC:40:ARG:HH21	1.80	0.46
6:CG:78:ARG:HD3	6:CG:85:TYR:CD1	2.51	0.46
38:BS:32:LEU:HD11	60:BB:29:A:N7	2.30	0.46
38:BS:61:ASN:HD22	38:BS:62:LYS:N	2.13	0.46
23:AV:8:A:H2'	23:AV:9:G:O4'	2.15	0.46
20:CY:201:ILE:H	20:CY:201:ILE:HD12	1.79	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:2445:G:H2'	59:BA:2446:G:H8	1.80	0.46
59:DA:834:C:H2'	59:DA:835:A:O4'	2.14	0.46
21:CA:21:G:N2	21:CA:914:A:H62	2.11	0.46
11:CL:94:PRO:HB3	21:CA:911:U:H5''	1.97	0.46
6:CG:111:ARG:CZ	6:CG:123:GLU:HA	2.45	0.46
21:AA:957:U:H2'	21:AA:959:A:OP2	2.15	0.46
59:DA:2683:C:N4	59:DA:2728:U:O4'	2.48	0.46
34:DO:76:ALA:HB2	59:DA:2684:U:H4'	1.96	0.46
59:BA:879:G:H2'	59:BA:880:G:O4'	2.14	0.46
39:BT:41:ARG:HD3	39:BT:43:GLN:HB2	1.97	0.46
27:BE:191:PRO:C	27:BE:193:GLY:H	2.19	0.46
59:BA:1450:C:N4	59:BA:1461:G:H1	2.13	0.46
25:DC:50:ILE:O	25:DC:50:ILE:HG22	2.16	0.46
59:BA:2592:G:H2'	59:BA:2593:U:O4'	2.16	0.46
21:CA:758:G:H5'	21:CA:821:G:N2	2.30	0.46
59:BA:1564:C:H2'	59:BA:1565:C:C6	2.50	0.46
37:BR:33:ARG:HA	37:BR:114:VAL:O	2.14	0.46
59:BA:2564:A:C2	59:BA:2647:U:H4'	2.51	0.46
7:AH:91:ARG:NH1	16:AQ:32:TYR:O	2.48	0.46
30:DH:41:MET:SD	30:DH:42:ARG:N	2.88	0.46
30:DH:58:GLU:HB2	30:DH:61:HIS:HD2	1.80	0.46
59:DA:1861:G:H1	59:DA:1881:C:N4	2.12	0.46
59:BA:1431:U:H2'	59:BA:1432:C:C6	2.50	0.46
45:BZ:19:ARG:HA	45:BZ:23:LYS:O	2.14	0.46
20:AY:563:ILE:HG22	20:AY:564:LYS:N	2.30	0.46
59:BA:1538:G:H2'	59:BA:1539:G:C8	2.50	0.46
59:DA:1450:C:H42	59:DA:1461:G:H1	1.61	0.46
21:AA:64:G:H4'	21:AA:66:G:OP1	2.15	0.46
21:AA:606:G:H3'	21:AA:607:A:H5'	1.97	0.46
40:BU:52:ARG:NH1	59:BA:560:C:H4'	2.30	0.46
1:CB:32:ILE:HG21	1:CB:40:HIS:HB3	1.96	0.46
59:BA:2126:A:N6	59:BA:2163:C:H4'	2.30	0.46
19:CT:38:LYS:O	19:CT:41:ILE:HG12	2.16	0.46
3:CD:94:LEU:O	3:CD:97:LEU:HB2	2.15	0.46
59:DA:2161:C:H2'	59:DA:2162:G:C8	2.50	0.46
59:DA:2110:G:H4'	59:DA:2145:C:N4	2.31	0.46
5:AF:80:ARG:NH2	5:AF:88:VAL:O	2.48	0.46
29:DG:35:GLU:HB2	29:DG:161:THR:HA	1.97	0.46
54:B8:38:GLY:HA2	54:B8:41:ILE:HD12	1.98	0.46
38:BS:28:VAL:HG12	38:BS:37:ALA:HA	1.96	0.46
42:BW:30:GLU:OE2	42:BW:34:ASN:ND2	2.48	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:315:G:H2'	59:BA:316:C:C6	2.51	0.46
50:D4:22:ILE:HG22	50:D4:23:GLU:H	1.80	0.46
33:BN:69:GLN:O	33:BN:87:LEU:HD23	2.16	0.46
21:CA:1176:A:H2'	21:CA:1177:G:O4'	2.16	0.46
3:AD:115:ARG:HB2	21:AA:407:G:H4'	1.96	0.46
59:DA:1316:U:O2	59:DA:1336:A:N1	2.49	0.46
59:BA:2131:G:OP1	59:BA:2133:G:H1'	2.14	0.46
11:CL:104:VAL:HG23	11:CL:106:ASP:H	1.80	0.46
21:CA:1070:U:O2	21:CA:1105:A:N1	2.48	0.46
20:AY:24:GLY:HA3	61:AY:701:GDP:C8	2.50	0.46
24:AX:50:G:O6	24:AX:64:U:C4	2.62	0.46
12:CM:91:ARG:NH1	12:CM:100:GLY:HA2	2.30	0.46
13:CN:4:LYS:O	13:CN:7:ILE:HG12	2.16	0.46
22:AW:4:U:O2'	59:BA:1850:G:O3'	2.32	0.46
59:BA:1889:A:N3	59:BA:2086:U:O2'	2.48	0.46
59:BA:917:A:C2	60:BB:80:U:H1'	2.50	0.46
21:CA:838(A):U:O2'	21:CA:838(B):C:H5''	2.15	0.46
8:CI:111:ARG:HH12	21:CA:1187:G:H4'	1.80	0.46
59:DA:2465:C:N3	59:DA:2485:G:O6	2.48	0.46
21:CA:1422:G:H2'	21:CA:1423:G:C8	2.49	0.46
60:BB:24:G:C6	60:BB:56:G:C2	3.04	0.46
29:BG:25:TYR:HE1	29:BG:30:GLU:HG2	1.80	0.46
35:DP:35:HIS:H	59:DA:1190:G:C5'	2.26	0.46
54:D8:42:ARG:HD3	59:DA:2349:G:H3'	1.97	0.46
27:BE:62:PRO:HB2	27:BE:66:HIS:NE2	2.30	0.46
8:AI:127:LYS:NZ	22:AW:34:C:OP2	2.23	0.46
46:D0:60:PHE:HE1	59:DA:2365:G:HO2'	1.64	0.46
48:B2:59:ARG:HB3	59:BA:76:C:O3'	2.15	0.46
21:AA:1436:U:H3'	21:AA:1437:C:C6	2.50	0.46
13:AN:43:CYS:O	13:AN:46:GLU:HG2	2.16	0.46
28:BF:155:LEU:HB3	28:BF:189:THR:OG1	2.15	0.46
40:BU:62:ILE:HG23	40:BU:76:TYR:CE1	2.50	0.46
59:DA:503:A:H5'	59:DA:505:A:H5''	1.97	0.46
3:AD:24:GLU:HG2	3:AD:24:GLU:H	1.42	0.46
6:AG:116:ALA:O	6:AG:120:ILE:HG12	2.15	0.46
59:BA:2692:C:O2	59:BA:2847:U:O2'	2.17	0.46
11:CL:80:HIS:O	11:CL:82:VAL:N	2.42	0.46
59:BA:787:U:H3'	59:BA:791:C:H41	1.79	0.46
37:DR:28:LEU:HA	37:DR:34:ILE:HD13	1.97	0.46
2:AC:197:GLY:HA3	21:AA:1057:G:O3'	2.15	0.46
59:BA:605:C:H2'	59:BA:606:U:O4'	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BF:102:PRO:HA	59:BA:607:U:OP2	2.16	0.46
59:BA:631:A:H2'	59:BA:632:A:O4'	2.15	0.46
1:CB:96:ARG:HH12	1:CB:147:LYS:NZ	2.13	0.46
59:BA:1575:C:H2'	59:BA:1576:U:C6	2.50	0.46
20:AY:425:SER:HA	20:AY:428:LEU:HD23	1.96	0.46
59:DA:2400:G:H1	59:DA:2416:C:H42	1.64	0.46
21:CA:740:U:H2'	21:CA:741:G:H8	1.79	0.46
21:AA:139:G:N2	21:AA:224:C:N3	2.64	0.46
21:AA:633:G:H2'	21:AA:634:C:H6	1.79	0.46
27:BE:137:HIS:NE2	59:BA:2050:C:H5''	2.30	0.46
25:BC:165:ARG:HG3	25:BC:166:ASN:N	2.30	0.46
59:DA:438:G:H2'	59:DA:439:G:C8	2.50	0.46
14:AO:17:ARG:HA	14:AO:17:ARG:NE	2.30	0.46
59:BA:1751:C:H2'	59:BA:1752:C:C6	2.50	0.46
50:B4:6:HIS:O	50:B4:8:LYS:N	2.43	0.46
59:DA:1000:A:H62	59:DA:1154:G:H2'	1.79	0.46
33:DN:14:VAL:HG12	33:DN:15:LEU:N	2.31	0.46
33:DN:19:GLU:HG3	33:DN:20:GLY:H	1.80	0.46
24:CX:78:ACE:CH3	59:DA:2451:A:H1'	2.45	0.46
21:CA:413:G:N2	21:CA:428:G:O2'	2.48	0.46
33:BN:74:ARG:O	33:BN:75:TYR:C	2.53	0.46
21:CA:1491:G:H3'	63:CA:1601:NMY:O3	2.15	0.46
12:CM:13:LYS:H	12:CM:45:VAL:HG12	1.80	0.46
19:CT:22:ARG:HD3	21:CA:324:G:OP1	2.15	0.46
21:CA:66:G:C6	21:CA:104:G:C2	3.04	0.46
11:CL:26:ALA:HB1	11:CL:30:ALA:HB3	1.97	0.46
59:DA:2534:A:H2'	59:DA:2535:G:C8	2.50	0.46
27:DE:50:GLY:CA	27:DE:78:LEU:HB3	2.43	0.46
59:BA:960:A:H4'	59:BA:2456:C:O2'	2.16	0.46
21:CA:591:U:H2'	21:CA:592:G:C8	2.50	0.46
21:CA:272:C:H2'	21:CA:273:A:H8	1.81	0.46
59:BA:638:G:H2'	59:BA:639:U:C6	2.51	0.46
34:DO:28:SER:HB3	59:DA:2566:A:N1	2.30	0.46
20:CY:339:SER:OG	20:CY:340:TYR:N	2.49	0.46
21:CA:1090:U:H2'	21:CA:1091:U:C6	2.51	0.46
18:AS:36:ARG:HD2	18:AS:52:TYR:O	2.16	0.46
60:BB:48:A:H2'	60:BB:49:C:C6	2.51	0.46
38:BS:99:LYS:O	38:BS:101:LEU:N	2.49	0.46
38:DS:17:ARG:HA	38:DS:20:ARG:HG3	1.98	0.46
59:BA:827:U:H4'	59:BA:828:U:O2	2.15	0.46
42:DW:3:ALA:O	42:DW:106:ILE:HG23	2.14	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BT:33:LYS:HG3	39:BT:43:GLN:HB3	1.98	0.46
59:BA:2106:G:C2	59:BA:2107:C:H1'	2.50	0.46
59:BA:1174:U:H2'	59:BA:1175:G:C8	2.49	0.46
41:DV:76:LYS:NZ	59:DA:975:G:OP1	2.29	0.46
21:CA:322:C:H5	21:CA:328:C:H5	1.63	0.46
41:BV:3:ALA:HA	41:BV:40:LEU:HB3	1.97	0.46
11:CL:80:HIS:HB2	11:CL:81:SER:H	1.57	0.46
20:AY:96:ARG:HA	20:AY:99:ARG:HD2	1.97	0.46
37:BR:9:LYS:HE3	59:BA:1652:A:OP1	2.15	0.46
59:BA:1427:A:H4'	59:BA:1428:C:O4'	2.15	0.46
59:BA:687:C:N3	59:BA:787:U:H4'	2.30	0.46
59:BA:1388:G:H2'	59:BA:1389:G:H8	1.80	0.46
18:AS:19:VAL:HG11	18:AS:44:MET:HG2	1.97	0.46
25:DC:61:GLY:HA3	25:DC:164:PHE:CD1	2.50	0.46
25:BC:7:ARG:NE	59:BA:2128:C:H5''	2.30	0.46
35:DP:49:ARG:HD2	54:D8:59:LYS:HD2	1.96	0.46
59:DA:1408:C:H2'	59:DA:1409:C:C6	2.50	0.46
1:CB:96:ARG:HH22	1:CB:147:LYS:HE2	1.81	0.46
21:CA:445:G:H1	21:CA:489:C:N4	2.12	0.46
59:DA:1844:C:N4	59:DA:1896:G:H1	2.14	0.46
21:AA:919:A:H2'	21:AA:920:U:H6	1.80	0.46
59:BA:800:A:O4'	59:BA:802:A:H5'	2.14	0.46
21:CA:55:A:H62	21:CA:357:G:N2	2.13	0.46
59:BA:695:G:H1	59:BA:767:U:H3	1.64	0.46
20:CY:227:ILE:HA	20:CY:230:LYS:HB3	1.97	0.46
2:AC:150:LYS:HB2	2:AC:173:VAL:HG11	1.96	0.46
59:BA:756:C:H2'	59:BA:757:U:O4'	2.15	0.46
59:DA:355:G:H2'	59:DA:356:G:H8	1.80	0.46
20:CY:572:TYR:HB3	20:CY:582:PHE:CZ	2.50	0.46
59:BA:2637:U:H3'	59:BA:2638:G:C8	2.51	0.46
27:BE:54:GLN:HB2	27:BE:75:VAL:HB	1.96	0.46
29:BG:57:ALA:HA	29:BG:60:LEU:HD23	1.98	0.46
24:CX:55:U:N3	24:CX:58:A:N7	2.63	0.46
17:CR:53:ARG:HD2	17:CR:59:SER:HA	1.97	0.46
16:AQ:100:LYS:NZ	21:AA:246:A:OP2	2.48	0.46
39:BT:34:VAL:HG13	39:BT:39:ARG:HA	1.96	0.46
38:DS:52:SER:HB3	38:DS:55:ALA:HB3	1.98	0.46
59:BA:1444:G:HO2'	59:BA:1444(A):A:H8	1.64	0.46
20:CY:207:ASP:HA	20:CY:210:ARG:HG2	1.98	0.46
30:BH:88:LEU:HB3	30:BH:130:ARG:HG3	1.98	0.46
20:AY:343:ASN:ND2	20:AY:346:LYS:O	2.48	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CB:156:LYS:N	1:CB:156:LYS:HD2	2.30	0.46
26:BD:5:LYS:HE3	26:BD:5:LYS:HB2	1.55	0.46
53:B7:5:TRP:HA	53:B7:5:TRP:CE3	2.51	0.46
59:BA:845:G:N2	59:BA:845:G:OP2	2.49	0.46
33:DN:38:HIS:CE1	59:DA:1006:C:H4'	2.49	0.46
51:D5:12:SER:HB2	59:DA:2020:A:H5'	1.96	0.46
33:DN:95:PRO:O	33:DN:104:LYS:HD2	2.15	0.46
21:CA:407:G:N2	21:CA:435:C:N3	2.56	0.46
15:AP:72:ARG:NH1	21:AA:452:A:N3	2.64	0.46
33:BN:35:ARG:HD3	33:BN:76:SER:N	2.31	0.46
21:CA:1405:G:C8	63:CA:1601:NMY:N19	2.83	0.46
59:DA:1833:U:C4	59:DA:1834:U:C4	3.03	0.46
59:DA:576:U:H2'	59:DA:577:G:H8	1.80	0.46
21:CA:637:G:C2	21:CA:638:G:H1'	2.51	0.46
21:CA:638:G:H2'	21:CA:639:G:C8	2.51	0.46
21:CA:174:C:H2'	21:CA:175:C:H6	1.81	0.46
30:DH:176:ALA:C	30:DH:178:ALA:H	2.17	0.46
60:DB:13:A:N3	60:DB:13:A:H2'	2.31	0.46
21:CA:957:U:N3	21:CA:960:U:OP2	2.24	0.46
9:AJ:40:LEU:HD21	21:AA:1280:A:H5''	1.96	0.46
39:DT:11:GLU:O	39:DT:13:ARG:N	2.48	0.46
59:DA:1178:C:H2'	59:DA:1179:C:H6	1.80	0.46
34:DO:24:VAL:HA	34:DO:39:ILE:HA	1.98	0.46
34:DO:39:ILE:HD12	34:DO:41:ALA:HB2	1.98	0.46
21:CA:258:G:C2	21:CA:259:G:C5	3.03	0.46
21:CA:545:C:H1'	21:CA:549:C:H5''	1.97	0.46
24:AX:3:G:O6	24:AX:70:C:C4	2.68	0.46
30:BH:70:THR:O	30:BH:73:ALA:N	2.48	0.46
59:DA:734:A:H2'	59:DA:735:A:C8	2.50	0.46
53:D7:34:ARG:NH2	59:DA:467:G:OP2	2.49	0.46
39:DT:53:ARG:HB3	39:DT:53:ARG:NH1	2.31	0.46
10:AK:85:ARG:HE	10:AK:111:ASP:HB3	1.81	0.46
60:DB:39:A:H1'	60:DB:46:A:N1	2.29	0.46
21:CA:692:U:O2'	21:CA:694:A:N7	2.42	0.46
50:B4:9:LEU:O	50:B4:10:VAL:HB	2.15	0.46
59:BA:2186:G:H2'	59:BA:2187:G:H8	1.80	0.46
20:AY:311:ALA:O	20:AY:399:LEU:HD11	2.15	0.46
21:CA:232:G:H2'	21:CA:233:C:H6	1.80	0.46
47:D1:7:ILE:H	47:D1:7:ILE:HD12	1.81	0.46
21:CA:1440(D):A:H1'	21:CA:1440(E):G:H8	1.80	0.46
59:BA:2692:C:H1'	59:BA:2847:U:H1'	1.96	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BQ:39:PRO:N	36:BQ:99:PRO:HD3	2.30	0.46
8:AI:74:ILE:HA	8:AI:77:ILE:HD12	1.97	0.46
59:BA:1336:A:H2'	59:BA:1337:G:H8	1.76	0.46
3:CD:104:VAL:O	3:CD:108:LEU:HB2	2.16	0.46
21:CA:186(B):C:H2'	21:CA:186(C):G:O4'	2.16	0.46
21:AA:302:G:O2'	21:AA:556:C:H5'	2.16	0.46
32:BK:115:LEU:HB3	32:BK:116:ASN:H	1.55	0.46
59:DA:2589:A:N1	59:DA:2605:U:O4	2.48	0.46
20:AY:655:TYR:HB3	20:AY:669:PHE:CZ	2.51	0.46
10:AK:43:SER:H	10:AK:71:LYS:NZ	2.13	0.46
47:D1:64:ALA:HB3	59:DA:397:G:OP1	2.16	0.46
55:B9:27:CYS:SG	55:B9:28:GLU:N	2.88	0.46
37:BR:87:TYR:HA	37:BR:90:ARG:HB3	1.96	0.46
34:DO:104:ARG:NH1	39:DT:35:LYS:HA	2.30	0.46
59:BA:782:A:O5'	59:BA:782:A:H8	1.97	0.46
13:AN:22:THR:OG1	21:AA:1359:C:OP2	2.34	0.46
59:DA:679:C:H2'	59:DA:680:G:C8	2.48	0.46
26:BD:93:ALA:N	26:BD:107:ALA:HB2	2.30	0.46
59:BA:1766:U:H2'	59:BA:1767:C:C6	2.50	0.46
2:AC:119:ARG:O	2:AC:123:GLN:HG3	2.15	0.46
59:DA:2834:G:H1'	59:DA:2883:A:H61	1.80	0.46
3:CD:10:ARG:HG2	3:CD:40:PRO:HG3	1.96	0.46
59:DA:438:G:H2'	59:DA:439:G:H8	1.81	0.46
37:DR:98:LEU:HD21	59:DA:2882:A:O3'	2.15	0.46
59:BA:1299:G:O2'	59:BA:1301:A:N6	2.48	0.46
59:BA:2615:U:H2'	59:BA:2616:C:C6	2.51	0.46
43:DX:15:GLU:HA	43:DX:18:TYR:HD2	1.80	0.46
6:CG:98:SER:O	6:CG:101:LEU:HB2	2.16	0.46
25:DC:9:ARG:O	25:DC:12:LEU:HB3	2.16	0.46
26:BD:222:ARG:N	59:BA:1789:A:OP1	2.36	0.46
28:DF:178:PRO:HB2	28:DF:201:VAL:HG21	1.96	0.46
33:DN:107:LEU:HD12	33:DN:117:PHE:CZ	2.49	0.46
33:DN:33:LEU:HD23	33:DN:48:MET:HG2	1.97	0.46
33:BN:93:THR:HB	33:BN:97:ARG:HH12	1.81	0.46
59:BA:2557:G:C2	59:BA:2558:C:C2	3.04	0.46
27:DE:33:VAL:HG22	27:DE:36:ARG:HE	1.80	0.46
60:BB:23:G:C6	60:BB:60:C:N4	2.78	0.46
21:CA:1227:A:O5'	21:CA:1227:A:H8	1.98	0.46
13:CN:2:ALA:HB3	21:CA:983:A:H5'	1.98	0.46
54:D8:46:ARG:HG2	54:D8:47:LYS:H	1.81	0.46
60:DB:32:C:N3	60:DB:50:G:O6	2.48	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:2133:G:C2	59:DA:2158:A:N6	2.80	0.46
26:DD:50:THR:HA	59:DA:1805:U:O2'	2.16	0.46
3:AD:133:VAL:HG13	21:AA:619:U:N1	2.31	0.46
59:DA:1751:C:H2'	59:DA:1752:C:C6	2.51	0.46
35:DP:62:LEU:HD12	54:D8:30:ARG:NH2	2.31	0.46
25:BC:104:ILE:HG22	25:BC:128:LEU:HD22	1.96	0.46
48:B2:56:GLN:O	48:B2:59:ARG:HG3	2.16	0.46
59:BA:57:C:H2'	59:BA:58:G:O4'	2.16	0.46
10:CK:62:GLN:OE1	10:CK:97:ALA:HB2	2.16	0.46
11:AL:52:LEU:O	11:AL:53:ARG:HB2	2.15	0.46
40:BU:80:ILE:HB	59:BA:1152:C:H4'	1.96	0.46
52:B6:8:LYS:NZ	52:B6:27:LYS:HD3	2.31	0.46
59:DA:1544:A:C5	59:DA:1545:A:N6	2.83	0.46
1:CB:163:PHE:HZ	1:CB:187:LEU:HB2	1.80	0.46
59:DA:480:A:N1	59:DA:505:A:N1	2.64	0.46
20:AY:567:LEU:CD2	20:AY:568:TYR:H	2.24	0.46
51:D5:45:VAL:HG11	51:D5:51:TYR:N	2.28	0.46
28:BF:106:ARG:HD2	28:BF:107:LYS:HE2	1.96	0.46
59:DA:678:C:H42	59:DA:799:G:H1	1.63	0.46
28:DF:10:PRO:HB2	28:DF:17:ARG:HB2	1.97	0.46
59:BA:2510:C:H2'	59:BA:2511:U:H5'	1.98	0.46
30:DH:115:VAL:HG21	30:DH:151:ILE:HD11	1.98	0.46
35:DP:16:ARG:NH1	35:DP:18:ARG:HD2	2.31	0.46
10:AK:51:LYS:CA	10:AK:55:LYS:HB2	2.46	0.46
55:B9:27:CYS:HG	55:B9:32:HIS:CE1	2.33	0.46
59:DA:142:G:H2'	59:DA:143:C:H6	1.79	0.46
8:AI:75:ASP:O	8:AI:78:LYS:HB3	2.14	0.46
20:AY:553:GLY:HA3	20:AY:558:PHE:O	2.16	0.46
29:DG:59:GLU:O	29:DG:63:ILE:HG23	2.16	0.46
59:BA:2672:G:H2'	59:BA:2673:G:H8	1.81	0.46
8:AI:17:VAL:HG13	8:AI:63:ILE:HD12	1.97	0.46
21:CA:1132:C:H2'	21:CA:1133:G:H8	1.80	0.46
21:CA:1463:C:H2'	21:CA:1464:G:O4'	2.15	0.46
3:AD:165:MET:O	3:AD:167:GLY:N	2.49	0.46
30:DH:158:HIS:HB2	30:DH:159:GLU:H	1.50	0.46
30:BH:41:MET:HA	30:BH:55:PRO:HD3	1.97	0.46
59:DA:1468(L):G:H1	59:DA:1506(F):C:H42	1.62	0.46
26:BD:140:THR:HG22	26:BD:141:VAL:H	1.81	0.46
39:DT:3:ARG:HG2	59:DA:2876:G:H4'	1.97	0.46
28:DF:68:LYS:HB3	28:DF:69:HIS:H	1.50	0.46
7:CH:108:GLY:O	7:CH:109:ILE:HB	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AB:68:ILE:HA	1:AB:161:ALA:O	2.16	0.46
33:DN:135:PRO:O	33:DN:137:LYS:N	2.49	0.46
59:DA:637:A:C5	59:DA:652:U:H4'	2.51	0.46
26:DD:65:ILE:H	26:DD:65:ILE:HD13	1.80	0.46
35:DP:86:LYS:HA	35:DP:86:LYS:HD2	1.74	0.46
20:CY:14:ASN:HA	20:CY:80:ASN:O	2.16	0.46
32:BK:101:TRP:HB2	32:BK:141:ALA:HB3	1.98	0.46
59:DA:1120:G:H2'	59:DA:1121:C:C6	2.50	0.46
27:BE:113:PHE:N	59:BA:2823:A:OP1	2.47	0.46
59:DA:2024:G:OP2	59:DA:2034:U:H4'	2.16	0.46
27:BE:37:ARG:HD2	27:BE:42:ASP:CG	2.36	0.46
33:BN:35:ARG:HH12	33:BN:82:LEU:HB3	1.80	0.46
21:CA:1493:A:H5'	63:CA:1601:NMY:H9	1.98	0.46
20:CY:465:ARG:HD2	20:CY:465:ARG:O	2.16	0.46
20:AY:24:GLY:O	20:AY:26:THR:N	2.48	0.46
22:CW:27:C:H2'	22:CW:28:A:H8	1.79	0.46
59:DA:2428:G:H5''	59:DA:2429:G:O5'	2.14	0.46
59:DA:2429:G:H3'	59:DA:2429:G:OP2	2.16	0.46
21:CA:925:G:H1'	21:CA:1502:A:C8	2.51	0.46
3:AD:118:ARG:HH11	21:AA:403:C:H5''	1.81	0.46
3:AD:118:ARG:NH1	21:AA:403:C:H5''	2.31	0.46
21:CA:936:C:H1'	21:CA:1383:C:H42	1.80	0.46
21:CA:286:G:H2'	21:CA:287:U:H6	1.81	0.46
25:BC:76:LEU:HA	25:BC:93:ASP:O	2.15	0.46
38:DS:26:LEU:CG	38:DS:39:ILE:HG13	2.38	0.46
59:BA:697:C:H2'	59:BA:698:C:C6	2.51	0.46
21:AA:522:C:H1'	21:AA:536:C:H5''	1.96	0.46
59:BA:1046:A:H5''	59:BA:1047:G:C8	2.50	0.46
27:BE:191:PRO:HB3	59:BA:2820:A:C8	2.51	0.46
54:B8:26:LYS:HA	54:B8:47:LYS:HD2	1.97	0.46
59:DA:1556:C:H2'	59:DA:1557:C:C6	2.51	0.46
59:BA:798:G:H2'	59:BA:799:G:C8	2.50	0.46
36:BQ:98:LYS:HB3	45:BZ:79:ARG:HH12	1.81	0.46
30:DH:19:VAL:HG11	30:DH:43:VAL:O	2.15	0.46
52:D6:10:LEU:HB2	54:D8:34:TRP:HB2	1.98	0.46
20:CY:13:ARG:HH12	20:CY:282:SER:HB3	1.81	0.46
59:BA:1498:C:H2'	59:BA:1499:C:O4'	2.15	0.46
20:AY:77:HIS:CD2	20:AY:277:VAL:HB	2.50	0.46
10:AK:29:ILE:HA	10:AK:43:SER:O	2.16	0.46
28:DF:170:LEU:HD13	28:DF:171:PRO:HD2	1.97	0.46
49:D3:22:ALA:O	49:D3:26:LEU:HG	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:821:A:H2'	59:BA:946:G:O4'	2.15	0.46
31:DJ:50:UNK:O	31:DJ:82:UNK:N	2.49	0.46
19:AT:81:LYS:HB3	19:AT:81:LYS:HE2	1.70	0.46
26:BD:35:LYS:HB3	26:BD:35:LYS:HE3	1.71	0.46
21:CA:1472:U:H2'	21:CA:1473:A:C8	2.49	0.46
3:CD:117:ALA:O	3:CD:120:LEU:HG	2.16	0.46
59:BA:29:U:H3	59:BA:511:U:H3	1.64	0.46
20:AY:679:VAL:O	20:AY:681:LYS:N	2.49	0.46
6:AG:15:ASP:HB3	6:AG:20:ASP:H	1.81	0.46
26:DD:86:PRO:HB3	59:DA:1567:A:OP2	2.16	0.46
28:BF:90:PHE:CB	59:BA:588:U:H1'	2.46	0.46
21:CA:701:C:OP1	21:CA:702:A:O2'	2.33	0.46
21:AA:39:G:H2'	21:AA:40:C:H6	1.81	0.46
20:AY:406:GLU:HG3	20:AY:407:PRO:HD2	1.98	0.46
8:AI:111:ARG:HA	21:AA:1369:C:OP2	2.15	0.46
21:AA:1481:U:H2'	21:AA:1482:G:C8	2.51	0.46
8:AI:8:GLY:O	8:AI:76:ALA:HB1	2.15	0.46
30:DH:17:VAL:HB	30:DH:45:VAL:HG21	1.98	0.46
10:AK:79:SER:HB3	10:AK:106:LYS:HE2	1.96	0.46
18:CS:49:ILE:O	18:CS:59:PRO:HA	2.15	0.46
59:BA:2135:A:H1'	59:BA:2160:G:H4'	1.97	0.46
44:BY:31:LEU:HA	44:BY:32:PRO:HA	1.65	0.46
59:BA:2025:C:H2'	59:BA:2026:C:C5	2.51	0.46
27:BE:4:ILE:HD13	27:BE:5:LEU:H	1.81	0.46
33:BN:22:THR:O	33:BN:26:LEU:HD13	2.16	0.46
59:BA:1832:C:C2	63:BA:2902:NMY:N6	2.82	0.46
21:AA:1491:G:H3'	63:AA:1601:NMY:O3	2.15	0.46
21:CA:1406:U:OP2	63:CA:1601:NMY:H232	2.15	0.46
59:BA:1936:A:N3	59:BA:1940:U:N3	2.64	0.46
59:BA:1972:A:H4'	63:BA:2904:NMY:H21	1.97	0.46
21:AA:516:U:C2	21:AA:533:A:N7	2.84	0.46
21:AA:413:G:N2	21:AA:428:G:O2'	2.49	0.46
59:DA:63:U:H1'	59:DA:64:A:C8	2.50	0.46
59:DA:2698:U:H2'	59:DA:2699:C:C6	2.51	0.46
59:DA:928:G:H3'	59:DA:929:G:C8	2.51	0.46
30:DH:177:GLY:HA3	59:DA:2531:A:OP1	2.16	0.46
20:AY:86:GLY:C	20:AY:88:VAL:H	2.19	0.46
27:DE:120:TRP:CE2	27:DE:155:LYS:HB3	2.50	0.46
59:DA:948:G:H2'	59:DA:949:C:H6	1.81	0.46
7:CH:30:ARG:CZ	21:CA:590:C:H5'	2.46	0.46
13:CN:2:ALA:CB	21:CA:983:A:H5'	2.46	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:1328:G:H2'	59:DA:1330:C:C5	2.51	0.46
11:AL:31:PRO:HG2	11:AL:32:PHE:CD2	2.51	0.46
11:AL:34:ARG:N	21:AA:363:A:OP1	2.49	0.46
11:AL:34:ARG:O	11:AL:83:VAL:N	2.49	0.46
21:AA:1130:A:N6	21:AA:1131:G:O6	2.49	0.46
43:BX:63:LYS:HD2	59:BA:1312:U:P	2.55	0.46
28:BF:45:ARG:NH2	59:BA:443:A:H3'	2.30	0.46
21:CA:1522:U:H2'	21:CA:1523:G:C8	2.51	0.46
21:CA:1532:U:O2'	21:CA:1533:C:OP1	2.33	0.46
34:DO:60:ALA:N	34:DO:87:ILE:HG12	2.31	0.46
59:DA:1506(A):A:H2'	59:DA:1506(B):A:O4'	2.16	0.46
45:DZ:74:VAL:HB	45:DZ:76:LEU:CD2	2.46	0.46
21:CA:505:G:OP2	21:CA:535:A:H5'	2.16	0.46
59:BA:974:G:C2	59:BA:1186:G:H1'	2.50	0.46
36:DQ:22:LYS:HA	59:DA:863:A:OP1	2.16	0.46
59:DA:1166:C:C2	59:DA:1183:G:N2	2.75	0.46
4:CE:122:GLU:HG2	4:CE:123:LEU:N	2.31	0.46
60:DB:62:C:C2	60:DB:63:G:C8	3.04	0.46
26:BD:202:LYS:HB3	59:BA:1820:U:H1'	1.98	0.46
59:DA:69:C:H2'	59:DA:70:G:H8	1.80	0.46
27:DE:123:ALA:HB3	59:DA:2511:U:H5''	1.98	0.46
42:BW:10:VAL:O	42:BW:100:THR:OG1	2.27	0.46
21:AA:235:C:H2'	21:AA:236:G:H8	1.79	0.46
3:AD:171:GLY:HA2	3:AD:194:LEU:HD11	1.96	0.46
13:AN:40:CYS:HB3	13:AN:43:CYS:SG	2.56	0.46
21:CA:623:C:H2'	21:CA:624:C:H6	1.80	0.46
2:AC:61:ALA:C	2:AC:63:ASN:H	2.18	0.46
59:BA:2069:G:H2'	59:BA:2070:G:H8	1.81	0.46
25:DC:53:ARG:HE	25:DC:54:ARG:H	1.64	0.46
7:CH:10:LEU:HD22	7:CH:83:ILE:HG13	1.98	0.46
59:DA:2305:A:H3'	59:DA:2306:C:H5''	1.98	0.46
35:DP:25:SER:O	35:DP:30:THR:HA	2.16	0.46
59:BA:1674:G:H21	59:BA:1677:A:N6	2.13	0.46
39:BT:23:ARG:O	39:BT:25:GLY:N	2.49	0.46
21:AA:821:G:H2'	21:AA:822:C:C6	2.51	0.46
41:BV:95:LEU:O	41:BV:96:ILE:O	2.33	0.46
20:AY:106:VAL:HG23	20:AY:132:ARG:HG3	1.98	0.46
59:BA:2647:U:H2'	59:BA:2648:C:H6	1.79	0.46
59:BA:2081:C:H2'	59:BA:2082:A:C8	2.49	0.46
21:CA:1264:C:H2'	21:CA:1265:G:H8	1.80	0.46
59:DA:391:G:C4	59:DA:392:C:C6	3.04	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:B8:42:ARG:CZ	59:BA:2382:G:H21	2.28	0.46
59:BA:449:A:O5'	59:BA:449:A:H8	1.98	0.46
29:BG:71:THR:OG1	59:BA:2312:U:O3'	2.34	0.46
59:BA:329:G:OP1	59:BA:329:G:H8	1.98	0.46
21:AA:920:U:H2'	21:AA:921:U:C6	2.50	0.46
16:AQ:81:ARG:HB3	16:AQ:82:MET:H	1.33	0.46
59:DA:118:A:OP2	59:DA:119:A:H2'	2.16	0.46
59:DA:2301:C:H2'	59:DA:2302:G:H8	1.80	0.46
21:AA:155:C:H2'	21:AA:156:G:C8	2.50	0.46
21:CA:666:G:H4'	21:CA:731:G:N2	2.31	0.46
32:BK:60:TYR:C	32:BK:62:ASP:H	2.16	0.46
32:BK:16:LYS:H	32:BK:38:VAL:HG11	1.81	0.46
46:D0:49:LYS:HB2	46:D0:80:HIS:HB3	1.98	0.46
21:CA:1438:G:H2'	21:CA:1439:C:O4'	2.16	0.46
59:DA:1054:A:C6	59:DA:1055:G:C6	3.04	0.46
21:CA:900:A:H2'	21:CA:901:A:C8	2.50	0.46
59:DA:2162:G:H1'	59:DA:2173:A:H1'	1.98	0.46
21:AA:504:C:H2'	21:AA:511:C:H5	1.81	0.46
7:CH:98:LYS:H	7:CH:98:LYS:HD3	1.80	0.46
2:AC:180:ALA:HB1	2:AC:203:PHE:CE1	2.51	0.46
25:DC:75:VAL:HA	25:DC:112:ASP:O	2.15	0.46
6:CG:57:GLU:HB3	6:CG:58:PRO:HD2	1.97	0.46
10:AK:69:ALA:O	10:AK:73:MET:HG2	2.16	0.46
19:AT:76:ALA:HB1	19:AT:79:ARG:HH21	1.81	0.46
59:DA:1552:G:O2'	59:DA:1553:A:O4'	2.31	0.46
3:CD:175:SER:HB3	3:CD:184:LYS:HB2	1.97	0.46
5:AF:74:ASP:OD1	5:AF:74:ASP:N	2.33	0.46
59:BA:2202(D):G:N3	59:BA:2202(D):G:H3'	2.31	0.46
10:CK:87:THR:O	10:CK:89:ALA:N	2.49	0.46
33:DN:38:HIS:CD2	59:DA:1006:C:H4'	2.51	0.46
33:BN:23:LEU:HB3	59:BA:1140:C:OP1	2.16	0.46
59:BA:2781:A:H8	59:BA:2781:A:OP2	1.99	0.46
33:BN:108:PRO:HA	59:BA:2780:G:O6	2.16	0.46
59:DA:1831:G:N2	63:DA:2901:NMY:HN61	2.12	0.46
26:BD:233:HIS:NE2	26:BD:242:ARG:HG3	2.31	0.46
19:CT:22:ARG:HH22	21:CA:105:G:P	2.39	0.46
24:CX:50:G:C6	24:CX:64:U:O4	2.63	0.46
11:CL:44:THR:HG22	11:CL:50:SER:HA	1.98	0.46
20:AY:135:PHE:HA	20:AY:260:LEU:HA	1.98	0.46
59:DA:1707:G:H2'	59:DA:1708:C:H6	1.79	0.46
18:CS:52:TYR:OH	21:CA:986:A:N3	2.33	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AL:104:VAL:HB	11:AL:105:TYR:CD1	2.51	0.46
25:BC:34:ALA:CB	25:BC:217:THR:HG21	2.46	0.46
59:DA:1674:G:H1'	59:DA:1676:A:H62	1.80	0.46
59:BA:520:G:C6	59:BA:521:G:C6	3.04	0.46
59:BA:635:C:O2'	59:BA:639:U:H5''	2.15	0.46
59:DA:2134:A:N7	59:DA:2157:G:C2	2.84	0.46
59:DA:1279:G:H2'	59:DA:1280:G:C8	2.50	0.46
59:BA:118:A:OP2	59:BA:119:A:H2'	2.15	0.46
39:DT:53:ARG:HH22	39:DT:58:ASN:C	2.19	0.46
1:AB:96:ARG:HD3	21:AA:1099:G:OP1	2.16	0.46
48:D2:25:VAL:HG22	48:D2:60:LEU:HD13	1.97	0.46
59:BA:734:A:H2'	59:BA:735:A:H8	1.80	0.46
42:BW:11:ARG:HD2	42:BW:98:LYS:HZ2	1.81	0.46
59:BA:514:A:H2'	59:BA:515:A:C8	2.51	0.46
9:AJ:47:PHE:CE1	21:AA:1357:A:H4'	2.51	0.46
59:BA:1043:C:N4	59:BA:1112:G:H1	2.14	0.46
59:BA:708:C:H2'	59:BA:709:U:H6	1.81	0.46
59:DA:1576:U:H2'	59:DA:1577:C:H6	1.81	0.46
40:DU:28:ARG:CZ	59:DA:532:A:H3'	2.46	0.46
26:DD:132:PRO:HB2	26:DD:135:PHE:HB2	1.98	0.46
21:CA:333:G:H2'	21:CA:334:C:H6	1.79	0.46
41:DV:16:PRO:O	41:DV:96:ILE:HG13	2.16	0.46
59:BA:1278:A:H2'	59:BA:1279:G:H8	1.81	0.46
59:BA:685:A:C2	59:BA:787:U:H1'	2.51	0.46
20:AY:272:LEU:HG	20:AY:276:VAL:HG23	1.98	0.46
59:BA:1357:U:H2'	59:BA:1358:G:O4'	2.15	0.46
21:AA:149:A:H2'	21:AA:150:C:C6	2.51	0.46
20:CY:413:ILE:HA	20:CY:476:VAL:HA	1.97	0.46
21:CA:1277:C:O4'	21:CA:1282:C:H1'	2.16	0.46
3:AD:72:GLU:O	3:AD:76:ARG:HB2	2.16	0.46
21:AA:300:A:O5'	21:AA:300:A:H8	1.99	0.46
29:DG:126:ASP:C	29:DG:128:ARG:H	2.20	0.46
59:DA:1265:A:H61	59:DA:2013:A:H3'	1.81	0.46
28:BF:48:THR:HA	59:BA:38:A:O2'	2.16	0.46
52:D6:19:ARG:N	52:D6:19:ARG:HD2	2.31	0.46
55:D9:7:VAL:HB	55:D9:25:VAL:CG2	2.45	0.46
44:DY:73:ARG:CZ	59:DA:335:C:H5'	2.45	0.46
28:BF:34:TRP:HZ2	59:BA:1244:G:O3'	1.99	0.46
59:BA:474:G:O2'	59:BA:510:C:OP2	2.34	0.46
16:CQ:92:ARG:O	16:CQ:95:TYR:HB2	2.15	0.46
35:DP:39:LYS:NZ	59:DA:805:G:OP2	2.47	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:1322:A:H2'	59:DA:1323:U:H6	1.80	0.46
20:CY:293:THR:OG1	20:CY:297:GLU:HG2	2.15	0.46
45:DZ:27:VAL:HG21	60:DB:74:U:O2	2.16	0.46
3:AD:28:SER:HB2	3:AD:29:PRO:HD3	1.98	0.46
21:AA:68(T):G:C2	21:AA:68(U):U:H1'	2.51	0.46
25:BC:192:ALA:HA	25:BC:195:ARG:NE	2.31	0.46
16:CQ:73:VAL:HG12	16:CQ:74:LEU:N	2.30	0.46
59:DA:911:A:H1'	59:DA:2264:C:H1'	1.98	0.46
12:CM:29:ARG:HB3	12:CM:64:TRP:CZ2	2.51	0.46
17:CR:68:LYS:O	17:CR:72:ARG:HG3	2.16	0.46
27:BE:129:HIS:HD1	27:BE:129:HIS:H	1.64	0.46
32:DK:112:MET:H	32:DK:113:PRO:HD2	1.81	0.46
33:DN:101:HIS:CA	33:DN:105:GLY:HA3	2.46	0.46
40:DU:59:ARG:NH2	59:DA:1154:G:H5'	2.31	0.46
59:DA:2065:C:H1'	59:DA:2449:U:N3	2.30	0.46
33:BN:45:ASN:OD1	33:BN:115:ARG:NE	2.48	0.46
33:BN:90:MET:SD	33:BN:93:THR:OG1	2.68	0.46
59:DA:1832:C:C2	59:DA:1833:U:C6	3.03	0.46
3:AD:116:GLN:HG3	21:AA:407:G:O2'	2.15	0.46
59:DA:902:C:C2	59:DA:903:C:C5	3.03	0.46
60:DB:33:G:N2	60:DB:49:C:N3	2.52	0.46
59:DA:2391:G:H1'	59:DA:2429:G:H21	1.78	0.46
36:BQ:41:TRP:HB3	36:BQ:94:VAL:HB	1.98	0.46
25:BC:131:ILE:HG13	25:BC:132:LEU:H	1.80	0.46
21:CA:917:G:H2'	21:CA:918:A:O4'	2.16	0.46
59:DA:69:C:H2'	59:DA:70:G:C8	2.51	0.46
2:CC:65:ALA:HA	2:CC:100:ALA:HB3	1.98	0.46
26:DD:67:PHE:CZ	26:DD:157:ARG:HD3	2.51	0.46
42:DW:54:ALA:HB1	42:DW:107:LEU:HD11	1.98	0.46
24:AX:2:G:N3	46:B0:5:LYS:HD2	2.31	0.46
59:BA:2065:C:H1'	59:BA:2449:U:C4	2.51	0.46
26:BD:67:PHE:HZ	26:BD:157:ARG:NH1	2.14	0.46
59:DA:2682:U:OP2	59:DA:2721:A:H5''	2.16	0.46
38:DS:67:ARG:HA	38:DS:99:LYS:HB3	1.98	0.46
59:BA:391:G:H2'	59:BA:392:C:H6	1.81	0.46
54:D8:10:ALA:O	54:D8:14:VAL:HG12	2.16	0.46
41:BV:35:LEU:C	41:BV:37:VAL:H	2.19	0.46
21:AA:838:G:H2'	21:AA:838(A):U:H5'	1.98	0.46
14:AO:51:HIS:O	14:AO:54:ARG:HB3	2.16	0.46
7:AH:30:ARG:NE	21:AA:591:U:OP2	2.46	0.46
59:BA:2508:G:O6	59:BA:2580:U:O4	2.34	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:2581:G:H2'	59:BA:2581:G:N3	2.31	0.46
59:BA:1576:U:H2'	59:BA:1577:C:C6	2.51	0.46
27:BE:57:LYS:H	27:BE:57:LYS:HD2	1.81	0.46
47:D1:45:ASN:CG	47:D1:64:ALA:HB2	2.37	0.46
45:BZ:85:HIS:NE2	60:BB:75:G:O2'	2.45	0.46
59:DA:2689:U:H4'	59:DA:2690:C:O5'	2.16	0.46
21:CA:115:G:O6	21:CA:312:C:N3	2.49	0.46
26:BD:165:ILE:HA	26:BD:175:LEU:HD22	1.98	0.46
59:BA:1294:U:H2'	59:BA:1295:C:H6	1.81	0.46
7:AH:21:LYS:O	7:AH:23:SER:N	2.49	0.46
21:CA:514:C:H2'	21:CA:515:G:O4'	2.16	0.46
16:CQ:68:ARG:NH2	21:CA:277:C:OP1	2.49	0.46
59:BA:2655:G:H1'	59:BA:2656:U:H5	1.80	0.46
49:B3:8:LEU:HG	49:B3:28:LEU:HD21	1.98	0.46
27:DE:93:VAL:HB	27:DE:175:VAL:HG23	1.98	0.46
30:DH:23:ARG:HG2	30:DH:23:ARG:O	2.16	0.46
59:DA:1438:U:H3	59:DA:1553:A:H62	1.64	0.46
30:BH:43:VAL:HG12	30:BH:52:VAL:HA	1.97	0.46
10:CK:41:THR:HB	10:CK:71:LYS:HZ3	1.81	0.46
2:CC:35:GLU:O	2:CC:39:ILE:HG13	2.15	0.46
59:BA:2173:A:P	59:BA:2174:C:H5	2.39	0.46
45:DZ:139:VAL:HG12	45:DZ:155:LEU:HD13	1.96	0.46
9:AJ:19:SER:O	9:AJ:23:ILE:HG13	2.15	0.46
5:AF:35:ALA:HB1	5:AF:65:VAL:HG21	1.98	0.46
59:DA:7:G:H1	59:DA:2896:C:H42	1.64	0.46
25:BC:90:ALA:HB1	25:BC:155:ARG:HE	1.80	0.46
33:DN:114:ARG:HH21	59:DA:527:C:H1'	0.39	0.45
59:BA:2550:G:H2'	59:BA:2551:C:C6	2.50	0.45
21:CA:598:U:H2'	21:CA:599:C:C6	2.50	0.45
43:DX:63:LYS:HD2	59:DA:1312:U:OP1	2.16	0.45
11:CL:89:ARG:HG2	11:CL:95:GLY:O	2.16	0.45
1:CB:104:ASN:HB3	1:CB:107:THR:HB	1.97	0.45
36:DQ:24:GLY:HA2	59:DA:907:U:OP1	2.16	0.45
21:CA:1323:G:H2'	21:CA:1324:A:H8	1.81	0.45
21:CA:957:U:O2'	21:CA:959:A:N7	2.47	0.45
59:DA:1612:C:C4	59:DA:1613:G:C8	3.04	0.45
21:AA:1132:C:H2'	21:AA:1133:G:C8	2.51	0.45
59:BA:689:A:H2'	59:BA:690:G:H8	1.81	0.45
59:DA:1564:C:O2'	59:DA:1565:C:H5'	2.16	0.45
59:BA:2268:A:C2'	59:BA:2269:A:H5''	2.45	0.45
48:D2:51:ARG:HB2	48:D2:55:ARG:NH2	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:2548:G:C2	59:DA:2549:G:H1'	2.50	0.45
25:DC:47:LYS:CB	25:DC:212:SER:HB2	2.37	0.45
47:D1:81:LYS:HE2	59:DA:270(I):G:H5'	1.98	0.45
43:DX:25:LYS:HG2	43:DX:82:GLN:HB2	1.97	0.45
21:AA:944:G:N1	21:AA:1338:G:OP2	2.36	0.45
28:DF:153:SER:HB2	28:DF:189:THR:HG22	1.98	0.45
21:AA:1220:G:H2'	21:AA:1221:G:C8	2.51	0.45
38:DS:35:ILE:HG21	38:DS:69:VAL:HG11	1.98	0.45
38:DS:93:LYS:HE3	60:DB:47:C:O2'	2.15	0.45
59:BA:31:C:H4'	59:BA:1238:G:H5'	1.98	0.45
9:CJ:56:HIS:CE1	21:CA:1061:G:HO2'	2.35	0.45
39:DT:64:ARG:HH21	39:DT:103:ARG:HG2	1.81	0.45
39:DT:26:ASP:HB3	39:DT:90:GLN:O	2.16	0.45
20:CY:510:VAL:HG11	20:CY:589:ALA:HB2	1.98	0.45
29:DG:44:GLY:HA3	59:DA:2311:A:N1	2.31	0.45
45:BZ:72:ARG:HB3	45:BZ:73:GLN:NE2	2.31	0.45
36:BQ:49:ALA:HB1	36:BQ:124:LYS:HD3	1.97	0.45
41:DV:13:ARG:NH2	41:DV:15:GLU:OE2	2.48	0.45
59:BA:684:G:H2'	59:BA:774:A:H61	1.81	0.45
21:AA:1346:A:C4	21:AA:1374:A:H2	2.33	0.45
59:BA:2491:U:H1'	59:BA:2569:G:H4'	1.96	0.45
33:BN:128:HIS:O	33:BN:130:HIS:HB2	2.16	0.45
20:CY:30:GLU:O	20:CY:33:LEU:HB3	2.16	0.45
44:DY:29:GLU:HB2	44:DY:38:ILE:O	2.17	0.45
30:DH:148:ILE:O	30:DH:151:ILE:HB	2.16	0.45
59:BA:1056:G:H5''	59:BA:1057:A:O4'	2.15	0.45
59:BA:1762:A:H5''	59:BA:1763:G:OP2	2.16	0.45
38:BS:48:LEU:HB3	38:BS:49:VAL:HG23	1.98	0.45
59:BA:123:G:H3'	59:BA:124:G:C8	2.50	0.45
14:AO:49:ASP:OD2	14:AO:52:SER:OG	2.24	0.45
59:DA:748:G:O6	59:DA:751:A:H4'	2.16	0.45
59:BA:35:G:H2'	59:BA:36:G:O4'	2.16	0.45
59:BA:38:A:N6	59:BA:441:U:H3	2.14	0.45
59:DA:2690:C:H4'	59:DA:2872:G:N2	2.31	0.45
32:BK:137:GLU:HB2	32:BK:139:VAL:HG23	1.98	0.45
21:CA:113:G:H2'	21:CA:114:U:H6	1.79	0.45
39:DT:82:LEU:HB2	39:DT:85:LYS:HB2	1.97	0.45
59:BA:920:G:H2'	59:BA:921:G:C8	2.50	0.45
59:BA:765:G:H2'	59:BA:766:C:C6	2.51	0.45
26:DD:85:ASP:OD2	26:DD:87:ASN:ND2	2.44	0.45
4:CE:43:LEU:HD22	4:CE:136:MET:HG3	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AY:344:THR:OG1	20:AY:390:VAL:HG13	2.17	0.45
59:DA:828:U:H4'	59:DA:831:G:N1	2.30	0.45
59:BA:489:G:OP1	59:BA:1284:A:H1'	2.16	0.45
44:DY:17:SER:OG	44:DY:18:GLY:N	2.48	0.45
7:AH:100:ILE:HG22	7:AH:101:PRO:O	2.16	0.45
39:BT:19:LEU:HD22	39:BT:85:LYS:HB3	1.98	0.45
8:AI:16:ARG:HB3	8:AI:64:THR:HB	1.97	0.45
25:DC:78:ILE:HG22	25:DC:120:VAL:HG11	1.98	0.45
11:AL:5:PRO:HD3	21:AA:568:G:O6	2.15	0.45
5:CF:67:MET:HB2	5:CF:68:PRO:HD2	1.98	0.45
12:AM:75:ALA:O	12:AM:79:LYS:HG3	2.16	0.45
1:AB:102:LEU:HB3	1:AB:180:LEU:HD12	1.98	0.45
54:D8:54:GLU:O	54:D8:57:ARG:HB2	2.16	0.45
39:DT:6:LEU:O	39:DT:10:VAL:HG23	2.16	0.45
32:BK:32:ALA:HB1	32:BK:57:ILE:HG21	1.98	0.45
20:AY:394:ALA:HA	20:AY:395:PRO:HD3	1.73	0.45
33:BN:117:PHE:CD1	59:BA:2780:G:C6	3.04	0.45
59:BA:1971:A:OP1	63:BA:2904:NMY:N19	2.49	0.45
21:CA:599:C:H2'	21:CA:600:C:C6	2.51	0.45
21:CA:59:A:N6	21:CA:331:G:H1'	2.32	0.45
1:CB:104:ASN:O	1:CB:108:ILE:HG12	2.17	0.45
27:DE:61:ARG:HB3	27:DE:62:PRO:HD2	1.98	0.45
60:DB:65:C:OP2	60:DB:108:C:N4	2.48	0.45
11:AL:35:GLY:HA3	11:AL:83:VAL:CG2	2.45	0.45
11:AL:87:GLY:HA2	11:AL:98:TYR:HD2	1.81	0.45
43:BX:63:LYS:HD2	59:BA:1312:U:OP1	2.16	0.45
14:CO:48:LYS:O	21:CA:667:G:O2'	2.34	0.45
59:DA:1169:G:H2'	59:DA:1170:G:O4'	2.17	0.45
48:D2:54:LYS:HE2	48:D2:55:ARG:NH1	2.25	0.45
59:DA:854:G:N2	59:DA:923:C:C2	2.77	0.45
28:DF:117:ARG:NH2	28:DF:186:ILE:O	2.49	0.45
59:BA:904:C:C2	59:BA:905:U:C5	3.04	0.45
12:AM:111:LYS:NZ	21:AA:1227:A:H5''	2.32	0.45
10:CK:52:GLY:O	10:CK:55:LYS:HB3	2.16	0.45
40:BU:27:LEU:O	40:BU:31:SER:N	2.49	0.45
59:DA:1423:G:H2'	59:DA:1424:G:H8	1.81	0.45
59:DA:1575:C:H2'	59:DA:1576:U:O4'	2.16	0.45
21:CA:963:G:H1	21:CA:972:C:H42	1.65	0.45
38:BS:15:ARG:HG2	59:BA:2334:G:N2	2.32	0.45
28:BF:25:PRO:HG2	28:BF:119:ARG:NH2	2.30	0.45
59:BA:1817:G:H2'	59:BA:1818:U:H5'	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:2202(C):G:H3'	59:BA:2202(C):G:N3	2.30	0.45
59:BA:1999:C:H1'	59:BA:2687:U:H1'	1.96	0.45
26:BD:21:PHE:HZ	59:BA:1565:C:H3'	1.82	0.45
20:CY:163:VAL:HG12	20:CY:164:MET:N	2.30	0.45
59:DA:484:C:H2'	59:DA:485:C:C6	2.51	0.45
3:AD:106:TYR:HA	3:AD:111:ALA:HB3	1.98	0.45
59:BA:373:U:O2'	59:BA:423:A:H1'	2.16	0.45
5:AF:77:ARG:HH12	21:AA:671:G:H4'	1.81	0.45
37:BR:100:LEU:HD22	37:BR:101:ALA:H	1.81	0.45
59:DA:2817:G:H21	59:DA:2836:U:H1'	1.81	0.45
9:AJ:51:ARG:HG3	21:AA:1060:C:H4'	1.97	0.45
22:AW:64:G:H2'	22:AW:65:U:C6	2.51	0.45
21:CA:1281:U:H5''	21:CA:1282:C:C5	2.51	0.45
4:CE:93:PRO:HA	4:CE:118:ILE:HD12	1.97	0.45
59:DA:321:G:C2	59:DA:341:G:H4'	2.51	0.45
59:BA:1291:C:H2'	59:BA:1292:U:C6	2.51	0.45
21:AA:1440(A):G:H4'	21:AA:1440(B):G:C8	2.52	0.45
39:DT:96:ARG:NH2	59:DA:2848:G:H5''	2.30	0.45
21:CA:859:A:H2'	21:CA:860:A:O4'	2.16	0.45
12:CM:56:LEU:O	12:CM:60:VAL:HG23	2.16	0.45
59:DA:270(C):C:N3	59:DA:270(W):G:N2	2.55	0.45
59:BA:307:G:H21	59:BA:330:A:H62	1.65	0.45
4:AE:132:ALA:O	4:AE:135:THR:HB	2.17	0.45
2:CC:83:ARG:O	2:CC:87:LEU:HB2	2.16	0.45
5:CF:69:GLU:HG2	5:CF:70:ASP:H	1.81	0.45
59:BA:1030:G:H2'	59:BA:1031:G:C8	2.50	0.45
4:AE:77:PRO:HG3	4:AE:143:ARG:O	2.16	0.45
59:DA:909:A:H2'	59:DA:912:C:C5	2.51	0.45
59:DA:2136:C:N3	59:DA:2155:G:O6	2.49	0.45
21:CA:1430:C:H2'	21:CA:1431:C:C6	2.51	0.45
20:CY:335:LEU:HD21	20:CY:341:VAL:HG12	1.99	0.45
25:DC:77:ALA:HA	25:DC:114:VAL:O	2.17	0.45
9:AJ:57:LYS:HA	9:AJ:57:LYS:HD2	1.55	0.45
21:AA:660:G:H2'	21:AA:661:G:C8	2.51	0.45
2:AC:47:LEU:O	2:AC:49:SER:N	2.38	0.45
59:BA:477:A:H2'	59:BA:478:A:C8	2.51	0.45
10:AK:99:GLN:HG2	10:AK:105:VAL:HG21	1.98	0.45
40:DU:13:LYS:O	40:DU:16:LYS:HB3	2.17	0.45
21:CA:1479:C:H2'	21:CA:1480:G:O4'	2.16	0.45
21:AA:508:C:H1'	21:AA:509:A:N7	2.31	0.45
39:DT:39:ARG:O	39:DT:40:THR:OG1	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AL:17:LYS:HB3	11:AL:17:LYS:HE2	1.64	0.45
59:BA:647:G:OP2	59:BA:647:G:H8	1.99	0.45
16:CQ:52:LYS:HB3	16:CQ:52:LYS:HE3	1.84	0.45
33:BN:7:LYS:HB3	33:BN:8:GLN:H	1.65	0.45
26:BD:2:ALA:O	26:BD:3:VAL:HB	2.16	0.45
29:BG:43:LEU:O	29:BG:45:GLU:N	2.47	0.45
11:CL:75:HIS:HB2	11:CL:77:LEU:HG	1.98	0.45
59:DA:1005:C:O2'	59:DA:1006:C:H5'	2.17	0.45
59:DA:581:C:H2'	59:DA:582:G:O4'	2.17	0.45
33:BN:107:LEU:HG	33:BN:120:LEU:HD13	1.99	0.45
59:DA:1933:G:O2'	63:DA:2901:NMY:C12	2.64	0.45
21:CA:603:U:O2	21:CA:635:G:C6	2.69	0.45
43:DX:71:GLY:HA2	59:DA:64:A:H4'	1.98	0.45
59:BA:2133:G:H2'	59:BA:2157:G:N2	2.26	0.45
24:CX:49:G:O2'	24:CX:50:G:H5'	2.16	0.45
20:AY:88:VAL:HG21	62:AY:702:FUA:H272	1.98	0.45
27:DE:62:PRO:HG3	59:DA:2786:U:O2'	2.16	0.45
59:BA:2456:C:H2'	59:BA:2457:U:H5'	1.98	0.45
59:DA:970:C:H2'	59:DA:971:C:C6	2.52	0.45
21:CA:999:U:C4	21:CA:1042:G:C2	3.05	0.45
60:DB:31:C:H1'	60:DB:54:G:N2	2.31	0.45
13:CN:3:ARG:HA	13:CN:6:LEU:HD12	1.98	0.45
59:DA:1583:A:H4'	59:DA:1586:A:C4	2.51	0.45
47:B1:20:ARG:HH21	47:B1:37:ILE:HA	1.81	0.45
59:DA:380:U:O2	59:DA:394:A:N1	2.49	0.45
35:BP:114:ILE:HG12	35:BP:130:PHE:HA	1.98	0.45
21:CA:259:G:C2	21:CA:260:G:H1'	2.52	0.45
11:AL:45:PRO:HB2	11:AL:49:ASN:OD1	2.16	0.45
25:DC:47:LYS:HB3	25:DC:212:SER:CB	2.37	0.45
21:CA:1037:C:H2'	21:CA:1038:C:C6	2.51	0.45
59:DA:940:G:H21	59:DA:1191:G:H4'	1.82	0.45
27:DE:187:ALA:HB2	59:DA:2729:G:H1'	1.98	0.45
1:AB:77:ALA:HA	1:AB:211:ILE:HD13	1.97	0.45
26:BD:54:ARG:NH2	59:BA:1822:G:H5''	2.32	0.45
48:B2:9:GLN:HE22	48:B2:56:GLN:HG2	1.80	0.45
59:DA:1078:U:O2'	59:DA:1088:A:N1	2.42	0.45
59:BA:699:A:O2'	59:BA:1633:G:O2'	2.20	0.45
42:BW:103:ILE:HG22	42:BW:105:VAL:HG23	1.98	0.45
39:BT:28:VAL:HA	39:BT:47:GLY:H	1.81	0.45
39:BT:89:VAL:HG12	39:BT:91:ARG:HG3	1.98	0.45
11:AL:52:LEU:HD12	11:AL:54:LYS:HZ1	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AD:105:VAL:HA	3:AD:108:LEU:HB3	1.97	0.45
59:DA:1424:G:H2'	59:DA:1425:G:O4'	2.17	0.45
26:DD:109:ASP:HB2	26:DD:197:GLY:HA2	1.98	0.45
59:BA:1791:A:N1	59:BA:1829:A:H4'	2.31	0.45
26:BD:16:MET:SD	26:BD:211:ARG:NH1	2.89	0.45
59:BA:2296:U:N3	59:BA:2333:A:H1'	2.32	0.45
59:BA:675:A:H8	59:BA:803:U:H3	1.60	0.45
39:DT:90:GLN:HG3	39:DT:90:GLN:H	1.49	0.45
59:BA:512:G:OP1	59:BA:1234:U:O2'	2.18	0.45
59:BA:392:C:H4'	59:BA:409:C:C5'	2.43	0.45
3:AD:31:CYS:H	3:AD:33:MET:HB2	1.82	0.45
59:BA:1565:C:O2'	59:BA:1567:A:N7	2.38	0.45
59:BA:322:A:H4'	59:BA:323:G:OP2	2.16	0.45
41:BV:37:VAL:O	41:BV:57:VAL:HG12	2.16	0.45
20:AY:164:MET:HB2	20:AY:259:PHE:CE1	2.52	0.45
47:B1:21:ARG:NH1	47:B1:23:LYS:HG2	2.31	0.45
59:DA:342:G:H2'	59:DA:343:C:O4'	2.17	0.45
21:CA:1011:G:O6	21:CA:1018:C:N3	2.50	0.45
18:AS:11:VAL:HG22	18:AS:12:ASP:H	1.82	0.45
2:CC:197:GLY:HA3	21:CA:1057:G:O3'	2.15	0.45
59:BA:1395:A:N1	59:BA:1398:C:H1'	2.32	0.45
59:DA:1503:U:H2'	59:DA:1504:C:H6	1.81	0.45
21:AA:1440(A):G:H5''	21:AA:1440(B):G:O4'	2.16	0.45
28:DF:169:ASN:HD21	59:DA:322:A:H3'	1.81	0.45
26:BD:132:PRO:HA	26:BD:189:CYS:O	2.15	0.45
59:DA:489:G:C4	59:DA:1284:A:C6	3.05	0.45
21:AA:730:G:H5'	21:AA:816:A:O2'	2.16	0.45
59:DA:307:G:H1	59:DA:310:A:H5''	1.81	0.45
59:BA:2301:C:H2'	59:BA:2302:G:H8	1.81	0.45
16:AQ:17:LYS:NZ	21:AA:256:U:H5'	2.30	0.45
29:DG:95:ARG:HA	29:DG:95:ARG:HH11	1.81	0.45
21:CA:763:G:H2'	21:CA:764:C:H6	1.81	0.45
35:BP:85:LEU:HD21	35:BP:137:LYS:HG3	1.99	0.45
59:BA:1331:A:O2'	59:BA:1332:G:H8	1.98	0.45
59:BA:1765:C:H2'	59:BA:1766:U:H6	1.82	0.45
21:AA:123:C:H5''	21:AA:311:C:O2'	2.16	0.45
27:BE:82:ARG:HH21	59:BA:2638:G:P	2.40	0.45
1:AB:187:LEU:HD23	1:AB:188:ALA:N	2.32	0.45
60:BB:38:C:H2'	60:BB:39:A:C8	2.51	0.45
29:BG:41:GLN:NE2	29:BG:153:ARG:O	2.50	0.45
39:BT:34:VAL:HG13	39:BT:39:ARG:H	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AB:68:ILE:HG13	1:AB:161:ALA:O	2.16	0.45
21:AA:655:A:H2'	21:AA:656:C:C6	2.52	0.45
59:DA:422:A:H2'	59:DA:423:A:C8	2.51	0.45
32:BK:23:VAL:O	32:BK:28:GLY:N	2.49	0.45
18:AS:32:LYS:HA	18:AS:50:ALA:HB3	1.98	0.45
59:DA:2285:C:H1'	59:DA:2288:A:O2'	2.16	0.45
52:D6:20:ASN:HB3	52:D6:42:TRP:H	1.81	0.45
44:DY:49:VAL:HA	59:DA:483:A:H4'	1.97	0.45
21:CA:1388:C:H2'	21:CA:1389:C:O4'	2.17	0.45
2:AC:204:LEU:HB3	2:AC:205:GLY:H	1.44	0.45
8:CI:95:LYS:HB2	8:CI:95:LYS:HE2	1.61	0.45
21:CA:686:U:HO2'	21:CA:687:A:H8	1.65	0.45
14:AO:61:GLY:O	14:AO:65:ARG:HG3	2.15	0.45
59:DA:582:G:N2	59:DA:1258:C:N3	2.54	0.45
33:DN:46:VAL:HG23	33:DN:47:ALA:N	2.32	0.45
33:DN:91:LEU:HA	33:DN:97:ARG:HG2	1.98	0.45
42:DW:18:ARG:HH22	42:DW:77:ASP:HA	1.82	0.45
59:BA:2681:C:H4'	59:BA:2682:U:H5'	1.99	0.45
59:BA:1135:C:H3'	59:BA:1137:G:OP1	2.16	0.45
59:BA:1832:C:H1'	63:BA:2902:NMY:HN62	1.82	0.45
59:BA:1945:G:H2'	59:BA:1946:U:O4'	2.16	0.45
24:AX:75:C:H3'	24:AX:76:A:H5"	1.98	0.45
59:DA:271(F):G:N1	59:DA:357(M):C:N4	2.29	0.45
59:DA:872:A:N1	59:DA:905:U:O2	2.49	0.45
21:AA:1129:C:O2	21:AA:1132:C:N4	2.48	0.45
59:BA:1375:C:H2'	59:BA:1376:C:C6	2.52	0.45
59:DA:134:C:C2	59:DA:145:G:N2	2.76	0.45
59:BA:2232:U:H2'	59:BA:2233:U:C6	2.51	0.45
23:CV:14:A:HO2'	23:CV:15:A:P	2.40	0.45
35:BP:114:ILE:O	35:BP:131:SER:HB3	2.16	0.45
26:DD:53:PHE:C	26:DD:218:ARG:HG2	2.37	0.45
59:DA:1158:C:H2'	59:DA:1159:U:H6	1.80	0.45
36:DQ:125:LEU:HD23	36:DQ:126:PRO:HD2	1.98	0.45
38:BS:31:SER:HB2	60:BB:29:A:OP2	2.17	0.45
59:DA:2108:C:N3	59:DA:2181:G:O6	2.49	0.45
21:CA:401:C:C2	21:CA:402:G:C8	3.04	0.45
59:DA:468:G:H3'	59:DA:469:G:H8	1.81	0.45
59:DA:775:G:C6	59:DA:794:G:C8	3.04	0.45
20:CY:680:PRO:O	20:CY:682:GLN:N	2.47	0.45
20:CY:616:TYR:CD2	20:CY:663:THR:HA	2.52	0.45
30:DH:96:ALA:O	30:DH:125:VAL:HG11	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CB:152:PHE:HD1	1:CB:153:ARG:N	2.14	0.45
21:CA:974:A:H4'	21:CA:975:A:C3'	2.45	0.45
59:DA:1578:U:C2'	59:DA:1579:A:H5'	2.47	0.45
59:BA:1448:G:H2'	59:BA:1448(A):A:C8	2.51	0.45
59:DA:601:C:H1'	59:DA:605:C:H5''	1.98	0.45
28:DF:102:PRO:HB2	28:DF:105:VAL:HG23	1.99	0.45
59:DA:2845:G:N2	59:DA:2871:C:O2	2.29	0.45
59:BA:2662:A:O5'	59:BA:2662:A:H8	1.99	0.45
21:AA:1064:G:HO2'	21:AA:1065:U:P	2.34	0.45
37:BR:97:VAL:HG22	37:BR:114:VAL:HA	1.99	0.45
59:BA:1779:U:O4	59:BA:1784:A:N7	2.50	0.45
37:DR:97:VAL:HG22	37:DR:114:VAL:HG22	1.99	0.45
28:BF:183:VAL:HA	28:BF:186:ILE:HG22	1.98	0.45
47:B1:12:PRO:CA	47:B1:43:TYR:HB2	2.44	0.45
51:D5:42:PRO:HB2	59:DA:2815:C:H1'	1.98	0.45
59:DA:2202(E):A:H1'	59:DA:2202(G):G:C8	2.52	0.45
59:DA:41:C:C2	59:DA:43:G:C8	3.04	0.45
59:BA:2291:U:H2'	59:BA:2292:C:H6	1.80	0.45
32:BK:126:MET:HG2	59:BA:1059:G:C2	2.52	0.45
40:DU:106:PHE:O	40:DU:110:VAL:HG23	2.15	0.45
30:BH:142:GLY:HA3	59:BA:2745:C:H4'	1.99	0.45
45:DZ:101:PRO:HG2	45:DZ:136:PHE:CB	2.46	0.45
21:AA:155:C:H2'	21:AA:156:G:H8	1.79	0.45
21:AA:888:G:C3'	21:AA:889:A:H5''	2.45	0.45
21:AA:109:A:C8	21:AA:327:A:O4'	2.70	0.45
5:AF:5:GLU:HB3	5:AF:62:TRP:HZ2	1.82	0.45
59:DA:1986:A:H2'	59:DA:1987:G:H8	1.79	0.45
26:BD:165:ILE:HA	26:BD:175:LEU:HD13	1.97	0.45
59:BA:2469:A:H61	59:BA:2481:G:H1'	1.81	0.45
59:BA:1837:C:O2'	59:BA:1927:A:O2'	2.25	0.45
49:B3:7:LYS:HD2	49:B3:9:VAL:HG12	1.99	0.45
8:AI:123:PRO:HA	21:AA:1233:G:OP1	2.16	0.45
8:AI:66:ARG:NH1	21:AA:1250:A:OP1	2.49	0.45
21:CA:197:A:H4'	21:CA:198:G:H4'	1.97	0.45
21:AA:370:C:H2'	21:AA:371:G:H8	1.82	0.45
17:CR:58:LEU:HB3	17:CR:62:GLU:HB2	1.97	0.45
33:DN:21:LYS:HG2	33:DN:22:THR:HG23	1.99	0.45
45:BZ:55:HIS:O	45:BZ:70:LEU:HD21	2.17	0.45
2:AC:117:ALA:HA	2:AC:120:VAL:HB	1.98	0.45
54:D8:38:GLY:N	59:DA:2348:U:OP2	2.41	0.45
39:DT:70:VAL:HB	39:DT:71:GLY:H	1.58	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DX:32:PRO:O	43:DX:34:ALA:N	2.48	0.45
59:DA:2178:C:H2'	59:DA:2179:C:H6	1.80	0.45
2:CC:139:GLN:O	2:CC:143:GLU:HB2	2.17	0.45
21:CA:440:A:OP2	21:CA:493:G:N2	2.50	0.45
28:BF:93:LYS:HD3	28:BF:93:LYS:HA	1.72	0.45
30:BH:118:PRO:HG2	30:BH:121:ILE:HD11	1.98	0.45
46:D0:14:ARG:NH1	59:DA:2280:G:N7	2.64	0.45
59:BA:939:G:H2'	59:BA:940:G:C8	2.51	0.45
30:DH:91:GLY:HA2	30:DH:160:LYS:HG3	1.98	0.45
59:DA:2242:G:H2'	59:DA:2243:U:O4'	2.17	0.45
59:DA:559:G:H2'	59:DA:560:C:O4'	2.17	0.45
33:BN:46:VAL:HG12	33:BN:107:LEU:HD22	1.99	0.45
34:BO:22:ILE:HG21	59:BA:1952:A:C2	2.52	0.45
21:CA:602:A:C2	21:CA:603:U:H1'	2.51	0.45
21:CA:146:G:H2'	21:CA:147:G:H8	1.81	0.45
49:D3:49:LYS:HE2	59:DA:850:C:H4'	1.97	0.45
59:DA:926:A:H2'	59:DA:928:G:O4'	2.17	0.45
59:DA:870:A:H2'	59:DA:871:U:O4'	2.16	0.45
59:DA:821:A:C5	59:DA:946:G:C8	3.05	0.45
59:DA:945:A:O2'	59:DA:946:G:H4'	2.16	0.45
59:DA:946:G:H2'	59:DA:947:G:C8	2.52	0.45
11:AL:84:LEU:HD13	11:AL:104:VAL:HG11	1.98	0.45
28:BF:45:ARG:HA	28:BF:45:ARG:HE	1.81	0.45
59:BA:396:G:N2	59:BA:2232:U:H5'	2.31	0.45
59:DA:2425:A:H4'	59:DA:2426:A:O5'	2.16	0.45
59:BA:2267:A:P	59:BA:2268:A:H5''	2.56	0.45
47:D1:20:ARG:O	47:D1:22:GLY:N	2.49	0.45
59:DA:2266:A:H1'	59:DA:2272:U:N3	2.31	0.45
3:AD:121:VAL:O	3:AD:134:ASP:HA	2.16	0.45
11:AL:93:LEU:O	11:AL:96:VAL:N	2.39	0.45
2:CC:59:ARG:HH11	2:CC:64:VAL:HG22	1.80	0.45
59:DA:1962:C:H2'	59:DA:1962:C:H6	1.56	0.45
20:AY:637:ARG:HG3	20:AY:642:VAL:HB	1.98	0.45
35:DP:35:HIS:HA	59:DA:1190:G:H5''	1.98	0.45
21:CA:1066:C:H2'	21:CA:1067:A:O4'	2.17	0.45
59:DA:465:G:H22	59:DA:794:G:N2	2.10	0.45
25:BC:104:ILE:HB	25:BC:128:LEU:HD13	1.99	0.45
25:BC:132:LEU:HD12	25:BC:138:LEU:HD23	1.99	0.45
25:BC:139:PRO:CA	25:BC:145:THR:HG21	2.42	0.45
28:DF:154:VAL:O	28:DF:155:LEU:C	2.52	0.45
22:CW:64:G:N2	22:CW:65:U:C4	2.84	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:1060:U:C6	59:DA:1062:G:H4'	2.51	0.45
59:DA:1083:U:H2'	59:DA:1085:A:OP2	2.17	0.45
27:DE:134:ILE:O	27:DE:136:ARG:N	2.41	0.45
59:BA:883:G:H2'	59:BA:884:C:H6	1.81	0.45
28:BF:157:VAL:N	28:BF:193:VAL:H	2.11	0.45
59:BA:2102:U:O2	59:BA:2187:G:O6	2.34	0.45
38:BS:17:ARG:HG2	38:BS:20:ARG:CZ	2.47	0.45
41:DV:89:GLN:HG3	59:DA:993:G:O2'	2.17	0.45
1:CB:68:ILE:HD11	1:CB:161:ALA:HB3	1.99	0.45
41:BV:66:ARG:HE	41:BV:88:ARG:HH11	1.64	0.45
11:AL:8:ASN:OD1	16:AQ:34:LYS:NZ	2.49	0.45
21:AA:68(V):G:H2'	21:AA:68(W):G:O4'	2.16	0.45
59:BA:853:G:H2'	59:BA:854:G:O4'	2.17	0.45
37:BR:35:THR:O	59:BA:1278:A:H5''	2.15	0.45
44:BY:47:LYS:HG3	44:BY:60:PHE:HE2	1.81	0.45
45:BZ:7:ALA:O	45:BZ:62:PRO:HD3	2.17	0.45
29:BG:126:ASP:CG	29:BG:130:ASN:HB2	2.37	0.45
29:DG:72:ARG:NH1	60:DB:41:U:H3	2.12	0.45
59:BA:2580:U:OP2	59:BA:2581:G:N1	2.37	0.45
17:AR:61:LYS:HB2	21:AA:835:U:OP1	2.16	0.45
5:CF:60:PHE:CE2	17:CR:78:LEU:HD11	2.51	0.45
59:BA:2089:U:H2'	59:BA:2090:G:H8	1.77	0.45
3:AD:53:ASP:OD2	3:AD:57:ARG:NH2	2.48	0.45
43:DX:28:PHE:CZ	43:DX:92:LEU:HD11	2.50	0.45
51:D5:6:VAL:O	51:D5:8:LYS:N	2.50	0.45
60:BB:89(B):A:H8	60:BB:89(B):A:O5'	2.00	0.45
19:CT:53:LEU:HD23	19:CT:100:ILE:HG23	1.99	0.45
21:CA:729:A:H2'	21:CA:730:G:C8	2.51	0.45
26:BD:63:ARG:HB3	26:BD:104:TYR:CE1	2.51	0.45
20:AY:660:ARG:HD3	20:AY:665:GLY:HA2	1.99	0.45
47:B1:5:CYS:SG	47:B1:7:ILE:N	2.74	0.45
28:DF:6:VAL:HB	28:DF:7:TYR:HD1	1.82	0.45
43:BX:36:LYS:HG3	43:BX:56:THR:HG23	1.99	0.45
33:DN:25:ARG:HG2	59:DA:1012:U:N3	2.32	0.45
59:DA:108:U:H5'	59:DA:293:U:O2	2.17	0.45
20:AY:117:GLN:OE1	59:BA:2660:A:H4'	2.16	0.45
35:DP:88:LEU:HG	35:DP:123:LEU:HD11	1.97	0.45
59:BA:2376:A:OP1	59:BA:2376:A:H8	2.00	0.45
59:DA:1703:G:H2'	59:DA:1704:G:H8	1.81	0.45
46:D0:45:PHE:HA	46:D0:77:ARG:O	2.16	0.45
2:CC:81:GLY:O	2:CC:85:ARG:HB3	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:1155:G:H2'	21:AA:1156:G:O4'	2.15	0.45
59:DA:1988:C:H2'	59:DA:1989:G:C8	2.51	0.45
16:AQ:41:LYS:NZ	16:AQ:88:TYR:OH	2.44	0.45
48:B2:3:LEU:HG	59:BA:98:G:O5'	2.16	0.45
59:BA:2862:G:H2'	59:BA:2863:C:C6	2.52	0.45
21:AA:328:C:H1'	21:AA:329:A:OP2	2.15	0.45
59:DA:2769:C:H2'	59:DA:2770:G:C8	2.51	0.45
21:CA:68(K):U:N3	21:CA:68(N):U:OP2	2.50	0.45
21:CA:1028(C):G:H2'	21:CA:1028(E):G:OP2	2.16	0.45
20:AY:197:ARG:NE	20:AY:197:ARG:HA	2.30	0.45
60:BB:74:U:O5'	60:BB:74:U:H6	1.99	0.45
59:BA:1794:U:H4'	59:BA:1900:A:C5	2.51	0.45
7:AH:31:PHE:O	7:AH:35:ILE:HG12	2.17	0.45
48:D2:30:ARG:O	48:D2:33:MET:HB3	2.16	0.45
6:AG:46:ALA:O	6:AG:50:ILE:HG13	2.16	0.45
59:DA:1128:A:H2	59:DA:2516:G:H21	1.65	0.45
42:BW:68:ARG:HG2	42:BW:110:LYS:HD2	1.97	0.45
59:DA:563:G:C6	59:DA:2018:G:C5	3.05	0.45
59:DA:986:C:H2'	59:DA:987:G:H8	1.82	0.45
40:DU:58:ARG:O	40:DU:62:ILE:HG12	2.16	0.45
33:BN:117:PHE:O	33:BN:117:PHE:CG	2.69	0.45
21:CA:1239:A:N1	21:CA:1297:C:H1'	2.31	0.45
59:DA:271(Q):A:N6	59:DA:357(E):U:C4	2.83	0.45
59:BA:1951:U:H3	59:BA:1954:G:P	2.40	0.45
8:CI:16:ARG:HB2	8:CI:64:THR:O	2.17	0.45
60:DB:12:C:O3'	60:DB:13:A:H4'	2.16	0.45
8:CI:125:TYR:HB3	21:CA:1342:C:H4'	1.98	0.45
22:CW:21:A:H1'	22:CW:48:C:C4	2.51	0.45
22:CW:9:A:H62	22:CW:23:A:H62	1.65	0.45
59:BA:2266:A:H4'	59:BA:2267:A:N3	2.32	0.45
21:CA:1532:U:H2'	21:CA:1534:A:C2	2.50	0.45
6:CG:80:VAL:HG21	6:CG:85:TYR:CE2	2.52	0.45
36:DQ:41:TRP:HB3	36:DQ:94:VAL:HB	1.98	0.45
59:DA:1385:G:H1'	59:DA:1386:C:C6	2.51	0.45
59:DA:788:A:H4'	59:DA:789:A:C5'	2.47	0.45
25:BC:103:LYS:HA	25:BC:107:GLY:H	1.82	0.45
25:BC:100:ILE:HG23	25:BC:103:LYS:HD2	1.98	0.45
39:DT:56:GLY:H	39:DT:59:THR:HB	1.82	0.45
46:D0:24:LYS:N	46:D0:37:LEU:O	2.50	0.45
20:CY:263:ALA:HB3	61:CY:701:GDP:N7	2.32	0.45
59:DA:1886:C:H2'	59:DA:1887:C:C6	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BD:177:LEU:HD11	26:BD:181:GLU:HB3	1.97	0.45
29:BG:111:LEU:C	29:BG:113:ARG:N	2.70	0.45
25:DC:132:LEU:HD22	25:DC:137:LEU:HB2	1.99	0.45
21:AA:1473:A:H2'	21:AA:1474:G:H8	1.75	0.45
34:BO:104:ARG:NH2	39:BT:43:GLN:OE1	2.50	0.45
59:BA:1829:A:H3'	59:BA:1830:C:C6	2.50	0.45
31:BJ:82:UNK:C	31:BJ:84:UNK:N	2.80	0.45
60:BB:8:U:H2'	60:BB:9:G:H8	1.81	0.45
20:CY:514:VAL:HG13	20:CY:565:VAL:HA	1.99	0.45
21:AA:925:G:H1'	21:AA:1502:A:C5	2.52	0.45
29:DG:41:GLN:HG3	29:DG:155:MET:HA	1.98	0.45
21:AA:104:G:H2'	21:AA:105:G:H8	1.81	0.45
19:AT:13:LEU:O	19:AT:17:ARG:HG3	2.16	0.45
44:BY:14:LEU:HD11	44:BY:73:ARG:HB2	1.99	0.45
51:B5:3:LYS:H	51:B5:3:LYS:HD3	1.80	0.45
28:DF:107:LYS:HD3	28:DF:107:LYS:HA	1.53	0.45
35:DP:97:PRO:O	35:DP:101:VAL:HG13	2.16	0.45
20:AY:131:PRO:HG3	20:AY:251:ILE:HA	1.97	0.45
59:BA:2588:G:H2'	59:BA:2589:A:O4'	2.17	0.45
59:DA:1529:A:H3'	59:DA:1530:G:C8	2.51	0.45
30:DH:41:MET:HE1	30:DH:43:VAL:HG22	1.99	0.45
28:DF:91:GLY:HA2	59:DA:1248:G:H5'	1.98	0.45
59:DA:1860:G:H2'	59:DA:1861:G:O4'	2.15	0.45
35:DP:124:LYS:HD3	35:DP:143:GLY:HA3	1.99	0.45
11:AL:15:ARG:O	21:AA:562:C:O2'	2.35	0.45
16:AQ:31:LEU:HD11	21:AA:300:A:O2'	2.17	0.45
21:AA:186(E):C:H2'	21:AA:186(F):C:C6	2.52	0.45
59:BA:226:G:O6	59:BA:419:C:H1'	2.17	0.45
20:CY:95:GLU:O	20:CY:99:ARG:HB2	2.16	0.45
59:BA:1785:A:C6	59:BA:1787:A:C4	3.04	0.45
44:BY:38:ILE:HD12	44:BY:39:VAL:H	1.82	0.45
26:BD:42:GLY:C	26:BD:44:ASN:H	2.20	0.45
5:CF:44:GLY:HA2	5:CF:59:TYR:CD1	2.52	0.45
59:DA:2224:G:H4'	59:DA:2226:C:C4	2.52	0.45
5:CF:69:GLU:O	5:CF:71:ARG:N	2.49	0.45
21:CA:1206:G:H2'	21:CA:1207:G:C8	2.52	0.45
3:CD:190:ASP:N	3:CD:193:ASP:HB2	2.32	0.45
20:AY:110:SER:OG	20:AY:139:MET:HA	2.17	0.45
59:BA:834:C:H1'	59:BA:2358:G:N3	2.31	0.45
26:DD:35:LYS:HZ2	26:DD:37:LEU:H	1.64	0.45
37:BR:74:LYS:HG2	37:BR:77:ARG:HE	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CY:637:ARG:HB3	20:CY:638:GLY:H	1.56	0.45
28:DF:33:LEU:O	28:DF:37:VAL:HG23	2.17	0.45
21:AA:45:U:H2'	21:AA:46:G:C8	2.51	0.45
42:BW:86:LEU:HD12	42:BW:87:PRO:HD2	1.99	0.45
46:D0:40:GLN:HG2	46:D0:57:PHE:O	2.16	0.45
20:AY:246:ILE:HB	20:AY:279:TYR:CE1	2.51	0.45
21:CA:1194:U:H2'	21:CA:1195:C:C6	2.51	0.45
7:CH:115:SER:O	21:CA:641:U:H4'	2.16	0.45
59:BA:2416:C:H2'	59:BA:2417:C:H6	1.81	0.45
20:AY:443:HIS:HB2	20:AY:448:GLN:O	2.15	0.45
17:AR:76:LEU:HD23	17:AR:76:LEU:HA	1.80	0.45
7:CH:6:ILE:HD12	7:CH:6:ILE:H	1.81	0.45
36:BQ:77:LYS:HZ3	36:BQ:77:LYS:HB3	1.81	0.45
31:DJ:63:UNK:O	31:DJ:67:UNK:N	2.50	0.45
21:AA:1164:G:H1	21:AA:1172:C:H42	1.64	0.45
16:AQ:11:VAL:HG22	16:AQ:20:THR:O	2.16	0.45
59:DA:579:G:O2'	59:DA:2019:A:OP1	2.34	0.45
33:BN:35:ARG:NH2	33:BN:37:LYS:O	2.49	0.45
33:BN:81:GLY:C	33:BN:82:LEU:HD13	2.36	0.45
33:BN:74:ARG:NH1	33:BN:84:LYS:HD2	2.31	0.45
59:BA:2550:G:C5	59:BA:2551:C:N4	2.85	0.45
21:CA:59:A:H1'	21:CA:354:G:N2	2.32	0.45
59:DA:2248:C:H5"	59:DA:2249:U:C5	2.52	0.45
21:CA:1062:U:H2'	21:CA:1063:C:C6	2.51	0.45
21:CA:1015:A:C6	21:CA:1016:A:C6	3.05	0.45
21:CA:1001:G:O6	21:CA:1039:C:N3	2.50	0.45
11:AL:117:ARG:HH22	21:AA:501:C:C5'	2.29	0.45
25:BC:173:HIS:HD1	59:BA:2123:G:H1'	1.80	0.45
59:DA:723:G:H2'	59:DA:724:U:C6	2.51	0.45
36:BQ:16:ARG:NH2	59:BA:953:A:OP2	2.50	0.45
20:AY:501:THR:OG1	21:AA:1495:U:OP1	2.35	0.45
16:CQ:46:ASP:OD2	16:CQ:50:LYS:HG2	2.17	0.45
35:DP:31:ALA:HB1	59:DA:810:U:C5	2.52	0.45
59:BA:818:G:C6	59:BA:1187:G:H2'	2.51	0.45
2:CC:36:ASP:OD2	2:CC:40:ARG:HD2	2.17	0.45
25:DC:222:SER:OG	25:DC:223:VAL:N	2.41	0.45
35:DP:74:GLU:HB2	59:DA:244:A:O3'	2.17	0.45
44:DY:2:ARG:HH22	59:DA:81:G:H1'	1.82	0.45
26:BD:244:ARG:NH2	59:BA:1841:U:H1'	2.31	0.45
59:BA:828:U:H4'	59:BA:831:G:C6	2.51	0.45
59:BA:1220:C:N3	59:BA:1229:G:N2	2.57	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BW:53:SER:OG	59:BA:493:G:N2	2.50	0.45
42:BW:57:ASN:O	42:BW:62:HIS:ND1	2.38	0.45
28:BF:176:LEU:HG	28:BF:177:ALA:H	1.81	0.45
53:B7:28:ARG:HA	53:B7:31:LEU:HD12	1.98	0.45
25:DC:213:VAL:CG2	25:DC:227:PRO:HG3	2.47	0.45
21:CA:425:G:H2'	21:CA:426:G:O4'	2.17	0.45
7:CH:83:ILE:HA	7:CH:136:GLU:O	2.15	0.45
20:AY:573:HIS:HB3	20:AY:576:ASP:HB2	1.98	0.45
41:BV:4:ILE:HA	41:BV:12:TYR:O	2.16	0.45
19:AT:53:LEU:HD12	19:AT:102:GLY:HA3	1.99	0.45
4:AE:154:GLY:HA2	7:AH:64:LYS:CD	2.42	0.45
13:CN:34:TYR:HA	21:CA:1358:U:OP1	2.16	0.45
59:BA:497:A:H2'	59:BA:498:G:C8	2.51	0.45
32:DK:102:GLU:O	32:DK:105:LEU:N	2.36	0.45
4:AE:78:HIS:H	4:AE:78:HIS:CD2	2.35	0.45
21:CA:629:G:H2'	21:CA:630:G:C8	2.48	0.45
35:DP:48:PRO:O	35:DP:50:ARG:N	2.50	0.45
59:BA:2292:C:H4'	59:BA:2375:G:O4'	2.16	0.45
59:BA:2143:C:H42	59:BA:2148:G:H1	1.65	0.45
59:BA:2143:C:N4	59:BA:2148:G:H1	2.14	0.45
47:B1:3:LYS:HA	59:BA:1365:A:OP2	2.17	0.45
59:DA:2378:A:O5'	59:DA:2378:A:H8	2.00	0.45
42:DW:36:LEU:HD12	42:DW:51:LEU:HD12	1.99	0.45
29:DG:126:ASP:N	29:DG:126:ASP:OD2	2.50	0.45
21:AA:890:G:O2'	21:AA:906:G:O6	2.35	0.45
15:CP:20:VAL:HA	15:CP:35:LYS:HA	1.99	0.45
45:BZ:167:PRO:C	45:BZ:169:GLU:H	2.20	0.45
45:BZ:167:PRO:O	45:BZ:169:GLU:N	2.49	0.45
59:BA:1709:U:O2'	59:BA:2859:G:H1'	2.15	0.45
59:BA:2303:G:H2'	59:BA:2304:G:O4'	2.17	0.45
34:BO:6:THR:HG23	59:BA:1666:G:O3'	2.17	0.45
6:CG:42:ILE:HD13	6:CG:42:ILE:HA	1.83	0.45
59:DA:1057:A:N7	59:DA:1086:A:H2'	2.31	0.45
5:AF:92:LYS:O	5:AF:94:GLN:N	2.47	0.45
37:DR:83:ILE:HG23	37:DR:87:TYR:CD2	2.52	0.45
59:DA:824:A:H2'	59:DA:825:C:O4'	2.16	0.45
59:BA:2224:G:H4'	59:BA:2226:C:C2	2.52	0.45
1:CB:139:LYS:O	1:CB:142:LEU:HB2	2.17	0.45
59:BA:864:G:O2'	59:BA:866:A:N6	2.45	0.45
44:BY:77:PRO:HD2	44:BY:101:LYS:HB3	1.99	0.45
2:AC:36:ASP:OD2	2:AC:57:ILE:HD13	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:CO:85:LEU:HD22	14:CO:87:ILE:HG12	1.98	0.45
59:BA:69:C:H2'	59:BA:70:G:C8	2.52	0.45
19:AT:43:LEU:HA	19:AT:43:LEU:HD12	1.79	0.45
30:BH:20:ALA:HB1	30:BH:21:PRO:HD2	1.98	0.45
20:CY:268:GLY:HA2	20:CY:271:LEU:HD13	1.99	0.45
59:BA:2682:U:O4	59:BA:2728:U:H1'	2.17	0.45
33:BN:85:ILE:HB	33:BN:107:LEU:N	2.32	0.45
33:BN:87:LEU:HB3	33:BN:88:GLU:H	1.40	0.45
59:BA:1995:U:OP2	59:BA:1996:C:H3'	2.17	0.45
21:CA:107:G:OP1	21:CA:325:A:N6	2.49	0.45
21:CA:35:G:C6	21:CA:36:C:C4	3.04	0.45
59:DA:2662:A:C5	59:DA:2663:G:H1'	2.51	0.45
36:DQ:102:VAL:HG12	36:DQ:103:MET:N	2.32	0.45
20:AY:20:HIS:CG	20:AY:21:ILE:HG23	2.51	0.45
59:DA:2787:C:H2'	59:DA:2788:C:O4'	2.16	0.45
43:DX:36:LYS:HE3	59:DA:1598:C:H5'	1.98	0.45
60:DB:34:U:H4'	60:DB:35:U:O5'	2.17	0.45
47:B1:18:ILE:HG21	59:BA:380:U:C4'	2.46	0.45
59:DA:1797:C:H2'	59:DA:1798:U:O4'	2.17	0.45
8:CI:121:ARG:HG2	21:CA:1350:A:P	2.57	0.45
2:CC:29:TYR:OH	13:CN:54:PRO:O	2.34	0.45
6:CG:88:PRO:HD2	6:CG:151:TYR:C	2.36	0.45
21:AA:945:G:H1	21:AA:1236:A:H61	1.63	0.45
35:DP:35:HIS:NE2	59:DA:941:A:H4'	2.31	0.45
59:DA:1401:G:H2'	59:DA:1402:C:O4'	2.17	0.45
59:BA:2756:U:H4'	59:BA:2757:A:OP1	2.16	0.45
21:CA:833:U:O2	21:CA:853:G:O6	2.35	0.45
21:AA:815:A:H62	21:AA:1509:C:H1'	1.82	0.45
25:DC:115:VAL:CG1	25:DC:154:ILE:HD11	2.46	0.45
59:BA:589:C:H2'	59:BA:590:A:C8	2.52	0.45
59:BA:699:A:H2'	59:BA:700:G:O4'	2.16	0.45
39:BT:86:ILE:HG22	39:BT:87:ASP:O	2.17	0.45
21:CA:829:G:N2	21:CA:857:C:N3	2.60	0.45
38:DS:24:LEU:HG	38:DS:85:VAL:HG12	1.99	0.45
26:BD:208:LYS:NZ	59:BA:729:G:OP1	2.50	0.45
2:AC:12:LEU:HA	2:AC:16:ARG:HB3	1.99	0.45
15:CP:8:ARG:HG2	15:CP:9:PHE:N	2.32	0.45
39:DT:103:ARG:HG3	39:DT:103:ARG:H	1.52	0.45
35:BP:30:THR:O	35:BP:32:THR:N	2.50	0.45
20:AY:33:LEU:HD23	20:AY:34:TYR:N	2.32	0.45
59:BA:2074:U:O2'	59:BA:2597:G:N3	2.45	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:AY:289:ILE:HD13	20:AY:331:TYR:CD1	2.52	0.45
21:CA:1466:C:H2'	21:CA:1467:G:C8	2.52	0.45
21:CA:520:A:C2	21:CA:536:C:H1'	2.51	0.45
47:D1:7:ILE:HD11	47:D1:60:PHE:HE1	1.82	0.45
47:D1:47:GLN:HE21	59:DA:2091:U:H1'	1.81	0.45
20:CY:259:PHE:CB	20:CY:272:LEU:HD13	2.46	0.45
59:BA:2867:G:O3'	59:BA:2868:A:H8	2.00	0.45
59:DA:271(I):C:H42	59:DA:357(I):G:H1	1.64	0.45
37:DR:99:LYS:O	51:D5:44:THR:HG23	2.17	0.45
21:AA:1348:U:C2	21:AA:1374:A:C6	3.05	0.45
21:CA:950:U:H2'	21:CA:951:G:O4'	2.16	0.45
59:DA:454:A:H3'	59:DA:455:C:C6	2.52	0.45
2:CC:52:LEU:C	2:CC:115:LEU:HD11	2.37	0.45
21:AA:302:G:H2'	21:AA:303:A:O4'	2.16	0.45
12:CM:16:ASP:HA	12:CM:34:LEU:HD11	1.98	0.45
49:D3:5:LYS:HA	49:D3:35:ARG:O	2.16	0.45
59:BA:38:A:N1	59:BA:441:U:O2	2.50	0.45
59:BA:137(C):G:O5'	59:BA:137(C):G:H8	2.00	0.45
20:AY:227:ILE:HG22	20:AY:227:ILE:O	2.17	0.45
20:CY:493:VAL:HG13	20:CY:592:GLU:CD	2.37	0.45
35:BP:120:ALA:HB1	35:BP:140:ALA:HB3	1.98	0.45
2:CC:148:GLY:HA3	2:CC:203:PHE:HB3	1.99	0.45
11:AL:57:LYS:HD3	11:AL:65:GLU:HB2	1.98	0.45
17:CR:70:ILE:O	17:CR:74:ARG:HG3	2.17	0.45
6:AG:26:PHE:CE2	6:AG:30:ILE:HD11	2.52	0.45
21:AA:1252:A:H4'	21:AA:1369:C:H4'	1.99	0.45
46:D0:40:GLN:HG3	46:D0:42:GLY:H	1.81	0.45
21:AA:1244:C:H2'	21:AA:1245:A:C8	2.52	0.45
3:CD:68:TYR:HA	3:CD:114:ARG:NH1	2.32	0.45
49:D3:6:VAL:O	49:D3:34:GLU:HA	2.17	0.45
36:BQ:55:VAL:HA	36:BQ:58:PHE:HD2	1.82	0.45
36:BQ:58:PHE:HE1	36:BQ:62:GLY:H	1.64	0.45
35:DP:87:ASP:OD1	35:DP:90:ARG:NH2	2.50	0.45
43:BX:37:THR:HG21	59:BA:137(F):C:O2	2.17	0.45
30:DH:59:ARG:NH2	59:DA:2750:A:H62	2.15	0.45
41:BV:34:GLU:O	41:BV:36:PRO:HD3	2.17	0.45
54:B8:3:LYS:HB3	59:BA:242:G:N7	2.32	0.45
59:DA:2521:C:H2'	59:DA:2522:U:O4'	2.15	0.45
33:DN:121:LYS:HD2	33:DN:123:TYR:CZ	2.52	0.45
33:DN:38:HIS:HB3	33:DN:39:ARG:H	1.40	0.45
33:DN:73:THR:OG1	33:DN:74:ARG:HD2	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DE:143:ASN:CG	59:DA:2571:C:H2'	2.37	0.45
27:DE:109:LYS:O	37:DR:2:ARG:NH2	2.35	0.45
59:BA:2038:G:H2'	59:BA:2039:C:C6	2.52	0.45
59:BA:2628:C:H4'	59:BA:2781:A:C5	2.52	0.45
33:BN:100:GLU:O	33:BN:103:VAL:C	2.55	0.45
34:BO:34:THR:OG1	34:BO:35:VAL:N	2.50	0.45
59:DA:270(Y):G:H5'	59:DA:271(G):G:OP1	2.17	0.45
34:DO:3:GLN:HB2	34:DO:4:PRO:CD	2.47	0.45
59:DA:901:A:H2'	59:DA:902:C:O4'	2.17	0.45
59:DA:904:C:H2'	59:DA:905:U:H6	1.81	0.45
59:DA:1650:G:H1	59:DA:2007:C:H42	1.64	0.45
59:DA:2842:G:H2'	59:DA:2843:G:O4'	2.16	0.45
59:BA:690:G:H2'	59:BA:691:C:O4'	2.17	0.45
21:CA:1534:A:H1'	23:CV:13:A:N1	2.31	0.45
27:DE:128:SER:OG	27:DE:129:HIS:N	2.50	0.45
59:DA:552:G:H2'	59:DA:553:G:O4'	2.17	0.45
16:CQ:16:GLN:NE2	21:CA:254:G:H21	2.15	0.45
21:AA:618:C:N4	21:AA:622:A:H62	2.14	0.45
21:AA:926:G:N2	23:AV:16:A:O3'	2.50	0.45
59:DA:270(S):G:C2	59:DA:270(T):G:N7	2.85	0.45
21:AA:978:A:H3'	21:AA:979:C:C6	2.52	0.45
59:BA:828:U:H4'	59:BA:831:G:N1	2.32	0.45
25:DC:131:ILE:HD13	25:DC:131:ILE:H	1.82	0.45
59:BA:668:G:H2'	59:BA:670:A:N6	2.31	0.45
32:DK:117:THR:C	32:DK:119:ASP:H	2.21	0.45
1:CB:145:LEU:O	1:CB:149:LEU:HB2	2.17	0.45
47:D1:34:THR:HG21	59:DA:2432:A:N3	2.31	0.45
25:BC:213:VAL:O	25:BC:214:TYR:CD1	2.70	0.45
22:CW:76:A:N6	59:DA:2422:A:O4'	2.50	0.45
16:CQ:29:HIS:CD2	16:CQ:32:TYR:HB2	2.52	0.45
52:B6:8:LYS:HG2	59:BA:2284:C:OP2	2.17	0.45
53:B7:25:PRO:HG3	59:BA:1368:G:O5'	2.17	0.45
52:D6:30:THR:HG21	59:DA:2286:A:OP1	2.17	0.45
21:CA:861:G:H1	21:CA:868:C:N4	2.14	0.45
20:CY:431:LEU:HB3	20:CY:438:PHE:CZ	2.52	0.45
59:BA:372:G:H1'	59:BA:400:G:N1	2.32	0.45
28:BF:57:VAL:C	28:BF:59:TYR:H	2.18	0.45
59:BA:356:G:H2'	59:BA:357:A:C8	2.51	0.45
28:BF:102:PRO:HB3	59:BA:606:U:H5''	1.98	0.45
9:CJ:81:THR:O	9:CJ:85:LEU:HB2	2.16	0.45
20:CY:30:GLU:O	20:CY:33:LEU:N	2.50	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AO:36:ILE:HG21	14:AO:60:VAL:HG22	1.99	0.45
39:DT:30:VAL:HA	39:DT:44:ASP:HB3	1.99	0.45
29:DG:61:ALA:HB3	29:DG:68:PRO:HD3	1.99	0.45
20:AY:432:ALA:HB2	20:AY:438:PHE:CE2	2.52	0.45
3:CD:18:LYS:HB3	3:CD:33:MET:SD	2.57	0.45
38:BS:39:ILE:HD11	38:BS:73:LEU:HD21	1.97	0.45
20:AY:608:VAL:HG12	20:AY:645:ALA:HB3	1.99	0.45
47:D1:12:PRO:HA	47:D1:44:PRO:HD3	1.99	0.45
49:D3:28:LEU:HD13	49:D3:35:ARG:HG2	1.98	0.45
59:BA:35:G:C6	59:BA:36:G:C5	3.05	0.45
6:AG:94:ARG:HG3	6:AG:95:ARG:H	1.82	0.45
29:BG:105:LYS:O	29:BG:109:VAL:HG22	2.17	0.45
20:CY:504:ARG:HH21	20:CY:504:ARG:HB3	1.82	0.45
60:BB:82:G:H2'	60:BB:83:G:H8	1.82	0.45
21:AA:1327:C:H2'	21:AA:1328:C:H6	1.81	0.45
40:BU:49:HIS:CE1	59:BA:559:G:H22	2.33	0.45
59:BA:1701:A:H4'	59:BA:1765:C:O2'	2.17	0.45
10:CK:63:LEU:O	10:CK:66:LEU:HB3	2.17	0.45
59:BA:570:G:H1'	59:BA:983:A:N6	2.32	0.45
59:BA:1444:G:H2'	59:BA:1445:C:C5	2.51	0.45
59:DA:2876:G:H2'	59:DA:2877:G:C8	2.52	0.45
25:BC:140:ASN:O	25:BC:142:LYS:N	2.50	0.45
3:AD:153:ARG:HA	3:AD:181:MET:SD	2.57	0.45
29:BG:102:PHE:HZ	29:BG:157:ILE:HD13	1.81	0.45
53:B7:35:ARG:HH22	59:BA:54:G:H1'	1.81	0.45
20:AY:337:SER:HB3	20:AY:367:GLU:HA	1.99	0.45
5:AF:21:LEU:O	5:AF:25:ILE:HG12	2.17	0.45
7:CH:70:GLN:HG2	7:CH:71:GLY:H	1.81	0.45
1:AB:121:LEU:HD22	1:AB:126:GLU:HG3	1.97	0.45
11:AL:113:ARG:HG2	11:AL:120:TYR:HD1	1.81	0.45
59:DA:749:C:O2	59:DA:1618:A:H2'	2.17	0.45
28:BF:68:LYS:HD2	28:BF:68:LYS:HA	1.83	0.45
25:BC:37:LYS:HD2	25:BC:218:THR:HG21	1.98	0.45
21:AA:514:C:H2'	21:AA:515:G:O4'	2.16	0.45
45:BZ:176:PRO:HA	45:BZ:177:PRO:HD3	1.81	0.45
59:BA:1024:G:H3'	59:BA:1025:G:H5''	1.97	0.45
21:AA:1491:G:H2'	63:AA:1601:NMY:C4	2.47	0.45
59:BA:1945:G:H3'	59:BA:1946:U:H6	1.82	0.45
59:BA:1972:A:H4'	63:BA:2904:NMY:C21	2.47	0.45
26:BD:224:ALA:HB2	26:BD:233:HIS:ND1	2.32	0.45
34:BO:83:ALA:O	34:BO:84:ALA:HB2	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:1268:A:H2'	59:DA:1269:A:O4'	2.17	0.45
37:DR:68:ARG:HA	59:DA:2707:G:O2'	2.16	0.45
11:CL:90:VAL:HB	21:CA:523:A:C6	2.52	0.45
27:DE:113:PHE:HB3	59:DA:1654:A:O2'	2.17	0.45
18:CS:36:ARG:HD3	21:CA:1220:G:O2'	2.17	0.45
59:DA:2652:C:H2'	59:DA:2653:U:O4'	2.17	0.45
60:DB:24:G:H1	60:DB:59:A:N6	2.14	0.45
21:CA:1046:A:H3'	21:CA:1047:G:C8	2.50	0.45
59:DA:1429:G:H2'	59:DA:1430:C:H6	1.82	0.45
59:BA:1888:G:O2'	59:BA:1889:A:O4'	2.33	0.45
21:CA:1503:A:N6	23:CV:14:A:H1'	2.32	0.45
47:D1:18:ILE:HA	47:D1:20:ARG:HB2	1.98	0.45
21:CA:1305:G:C2	21:CA:1332:A:N7	2.84	0.45
35:BP:115:LEU:HD13	59:BA:627:A:C6	2.52	0.45
59:DA:1953:A:H2'	59:DA:2550:G:N2	2.32	0.45
11:CL:124:LYS:HZ3	21:CA:501:C:P	2.40	0.45
59:DA:2180:U:H2'	59:DA:2181:G:C8	2.52	0.45
21:AA:950:U:H2'	21:AA:951:G:C8	2.52	0.45
59:DA:733:G:HO2'	59:DA:734:A:C5'	2.30	0.45
59:DA:1712(A):U:H2'	59:DA:1712(B):G:H8	1.81	0.45
42:DW:71:VAL:HA	42:DW:107:LEU:HB3	1.99	0.45
42:BW:14:PRO:HB3	42:BW:18:ARG:NH2	2.30	0.45
21:AA:458(A):G:H1'	21:AA:458(E):A:H62	1.81	0.45
21:AA:59:A:H1'	21:AA:354:G:C2	2.52	0.45
39:DT:27:THR:OG1	39:DT:87:ASP:HB3	2.17	0.45
20:AY:30:GLU:O	20:AY:33:LEU:HB3	2.17	0.45
7:CH:26:VAL:CG1	7:CH:59:LEU:HB3	2.44	0.45
21:CA:757:U:O3'	21:CA:821:G:N2	2.50	0.45
26:BD:21:PHE:CZ	59:BA:1565:C:H3'	2.52	0.45
20:CY:315:LYS:O	20:CY:326:THR:HA	2.17	0.45
40:DU:92:ARG:HB2	41:DV:11:GLN:CD	2.37	0.45
59:BA:1779:U:H3	59:BA:1784:A:H62	1.65	0.45
44:BY:47:LYS:HD2	59:BA:481:G:OP2	2.17	0.45
59:BA:2515:C:H2'	59:BA:2516:G:C8	2.52	0.45
28:BF:31:HIS:ND1	35:BP:13:ASN:OD1	2.50	0.45
21:CA:659:U:H2'	21:CA:660:G:O4'	2.16	0.45
32:DK:100:THR:HG22	32:DK:139:VAL:HB	1.99	0.45
32:DK:100:THR:HG22	32:DK:139:VAL:O	2.17	0.45
32:DK:109:LYS:HB3	32:DK:109:LYS:HE3	1.67	0.45
14:AO:25:THR:OG1	14:AO:26:GLU:N	2.48	0.45
59:BA:2811:G:H2'	59:BA:2812:G:O4'	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AS:11:VAL:HG22	18:AS:12:ASP:N	2.32	0.45
54:B8:42:ARG:NH2	59:BA:2382:G:H21	2.15	0.45
8:AI:97:LYS:HB3	8:AI:98:PRO:HD3	1.99	0.45
59:DA:609:A:H3'	59:DA:610:G:H8	1.82	0.45
59:BA:1180:C:H2'	59:BA:1181:C:O4'	2.16	0.45
21:CA:1255:G:H4'	21:CA:1258:G:O2'	2.16	0.45
34:DO:104:ARG:HH21	39:DT:33:LYS:HD2	1.82	0.45
2:CC:14:ILE:HD12	9:CJ:14:LYS:HZ2	1.81	0.45
32:DK:9:LYS:HD3	32:DK:9:LYS:N	2.31	0.45
10:CK:82:VAL:HB	10:CK:107:SER:O	2.17	0.45
14:CO:69:TYR:OH	21:CA:752:G:H4'	2.17	0.45
59:BA:1981:A:H5''	59:BA:1982:C:OP2	2.17	0.45
11:AL:65:GLU:O	11:AL:66:VAL:HG22	2.17	0.45
30:DH:37:VAL:HG12	30:DH:38:SER:H	1.82	0.45
59:BA:704:G:N2	59:BA:727:A:H62	2.15	0.45
21:CA:1288:A:H2'	21:CA:1289:A:C8	2.52	0.45
30:BH:94:TYR:HE2	30:BH:161:GLY:H	1.65	0.45
32:DK:112:MET:C	32:DK:114:ASP:H	2.21	0.45
25:DC:77:ALA:HB1	25:DC:95:VAL:HG13	1.99	0.45
21:CA:687:A:C2	21:CA:704:A:C6	3.05	0.45
11:AL:116:SER:HB2	11:AL:120:TYR:CG	2.51	0.45
11:CL:127:GLU:O	11:CL:129:ALA:N	2.50	0.45
6:AG:126:ASP:O	6:AG:131:LYS:N	2.50	0.45
26:BD:6:PHE:CE1	26:BD:18:VAL:HB	2.52	0.45
35:BP:136:GLU:HA	35:BP:139:LYS:HB2	1.99	0.45
1:AB:113:HIS:O	1:AB:117:GLU:HG2	2.17	0.45
59:DA:2482:G:H2'	59:DA:2483:C:H6	1.82	0.45
59:DA:2861:G:C6	59:DA:2862:G:C6	3.06	0.45
20:AY:179:ASP:OD1	20:AY:183:MET:N	2.49	0.45
4:AE:10:MET:N	4:AE:10:MET:SD	2.90	0.45
3:AD:78:LEU:HA	3:AD:81:GLU:HB3	1.99	0.45
59:DA:2794(A):G:H3'	59:DA:2794(B):U:H5''	1.98	0.45
7:AH:46:LYS:HD3	7:AH:62:TYR:HB3	1.99	0.45
21:CA:148:G:H2'	21:CA:149:A:C8	2.52	0.45
59:DA:2025:C:O2	59:DA:2038:G:N1	2.43	0.44
42:DW:102:HIS:CD2	59:DA:24:G:H4'	2.52	0.44
40:DU:76:TYR:CE2	40:DU:80:ILE:HG13	2.52	0.44
59:BA:2023:G:H1	59:BA:2040:C:H42	1.64	0.44
33:BN:97:ARG:HD2	33:BN:105:GLY:O	2.17	0.44
33:BN:79:PRO:HD2	33:BN:83:LYS:HE2	1.99	0.44
21:AA:1405:G:C2	21:AA:1406:U:C4	3.05	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:1951:U:H2'	59:BA:1953:A:OP2	2.16	0.44
22:AW:8:U:C5'	22:AW:49:A:H5'	2.46	0.44
21:CA:36:C:C4	21:CA:37:U:C4	3.05	0.44
59:DA:1565:C:H1'	59:DA:1566:A:C8	2.46	0.44
16:CQ:45:HIS:CD2	16:CQ:72:ARG:HD2	2.53	0.44
59:DA:2105:C:N4	59:DA:2106:G:O6	2.50	0.44
59:DA:761:A:O5'	59:DA:761:A:H8	2.01	0.44
18:AS:38:SER:O	18:AS:71:LEU:HB2	2.17	0.44
12:CM:108:ARG:HG3	12:CM:108:ARG:NH1	2.17	0.44
25:DC:20:VAL:HG12	25:DC:21:TYR:N	2.31	0.44
25:DC:104:ILE:HG23	25:DC:111:PHE:CZ	2.51	0.44
59:DA:1060:U:H3	59:DA:1088:A:H8	1.65	0.44
59:DA:27:G:N2	59:DA:512:G:H2'	2.32	0.44
1:CB:69:LEU:HA	1:CB:69:LEU:HD22	1.84	0.44
59:BA:106:C:O2'	59:BA:294:A:O2'	2.23	0.44
21:AA:974:A:H4'	21:AA:975:A:H3'	1.99	0.44
28:BF:6:VAL:HG13	28:BF:121:GLY:HA3	1.99	0.44
28:BF:8:GLN:O	28:BF:9:ILE:HB	2.17	0.44
39:DT:26:ASP:CG	39:DT:27:THR:H	2.19	0.44
39:DT:92:GLY:HA3	39:DT:120:ARG:NH2	2.32	0.44
29:DG:124:SER:HA	59:DA:2303:G:O3'	2.17	0.44
21:CA:758:G:H5'	21:CA:821:G:H21	1.81	0.44
21:AA:1440(L):G:H2'	21:AA:1440(M):G:O4'	2.17	0.44
49:B3:49:LYS:NZ	59:BA:851:U:OP1	2.40	0.44
13:AN:29:ARG:HG2	13:AN:31:ARG:H	1.82	0.44
37:DR:35:THR:O	59:DA:1278:A:H5''	2.16	0.44
20:CY:397:VAL:HB	20:CY:398:ILE:H	1.62	0.44
28:BF:107:LYS:HD2	28:BF:110:LEU:HD22	1.98	0.44
20:CY:605:ILE:HG21	20:CY:646:PHE:HD1	1.82	0.44
52:B6:43:CYS:SG	52:B6:44:ARG:NH2	2.90	0.44
59:BA:256:A:H2'	59:BA:257:A:H8	1.82	0.44
6:AG:29:LYS:HB3	6:AG:105:VAL:HG21	1.98	0.44
21:AA:559:A:H4'	21:AA:560:U:H3'	1.98	0.44
20:AY:632:LEU:HG	59:BA:1067:A:C8	2.51	0.44
60:BB:76:G:H2'	60:BB:77:U:C6	2.52	0.44
59:DA:1300:U:H1'	59:DA:1301:A:OP2	2.17	0.44
10:CK:116:HIS:CD2	21:CA:674:G:H21	2.34	0.44
41:DV:64:HIS:ND1	41:DV:92:THR:HG22	2.32	0.44
25:DC:201:LYS:HA	25:DC:202:PRO:HD3	1.85	0.44
22:AW:76:A:N6	59:BA:2422:A:O4'	2.50	0.44
19:AT:21:LYS:HB2	19:AT:21:LYS:HE3	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AC:84:ILE:HD11	2:AC:101:LEU:HD13	1.99	0.44
40:BU:49:HIS:O	40:BU:53:ARG:HB2	2.17	0.44
25:DC:48:LEU:HD12	25:DC:49:GLY:H	1.82	0.44
25:BC:161:ARG:HD2	25:BC:161:ARG:HA	1.59	0.44
26:DD:37:LEU:O	26:DD:62:TYR:HB3	2.17	0.44
21:AA:923:A:H2'	21:AA:924:C:C6	2.51	0.44
17:CR:58:LEU:HD22	17:CR:58:LEU:H	1.82	0.44
2:AC:37:GLN:O	2:AC:40:ARG:HB2	2.17	0.44
14:CO:61:GLY:O	14:CO:65:ARG:HG3	2.18	0.44
23:AV:26:A:O2'	23:AV:27:A:OP1	2.30	0.44
19:CT:21:LYS:O	19:CT:24:LEU:HB2	2.17	0.44
30:BH:124:GLU:OE2	30:BH:132:ARG:HD2	2.17	0.44
21:AA:699:C:H2'	21:AA:700:G:H5'	1.99	0.44
44:BY:29:GLU:N	44:BY:29:GLU:OE1	2.51	0.44
14:CO:26:GLU:H	14:CO:26:GLU:HG2	1.56	0.44
27:BE:58:ARG:H	27:BE:58:ARG:HG3	1.51	0.44
33:DN:51:PHE:HA	33:DN:51:PHE:HD2	1.67	0.44
45:BZ:119:GLU:CD	45:BZ:119:GLU:H	2.21	0.44
42:DW:18:ARG:NH1	59:DA:518:G:H4'	2.31	0.44
33:DN:54:VAL:HG12	33:DN:56:ASN:HB2	1.99	0.44
33:BN:116:LEU:HB2	33:BN:118:LYS:HB2	1.99	0.44
33:BN:54:VAL:HB	33:BN:100:GLU:CG	2.39	0.44
59:BA:1965:C:C4'	63:BA:2903:NMY:H4	2.42	0.44
59:BA:2553:G:H3'	59:BA:2554:U:O4'	2.17	0.44
24:CX:1:G:C5	24:CX:72:C:N4	2.81	0.44
55:D9:31:LYS:HD3	59:DA:2528:U:H5''	1.99	0.44
59:BA:271(B):G:H1'	59:BA:271(C):U:OP2	2.16	0.44
18:CS:73:GLU:CB	21:CA:1320:C:H1'	2.47	0.44
11:AL:60:LEU:HG	11:AL:63:GLY:O	2.17	0.44
60:DB:30:C:H2'	60:DB:31:C:H5'	1.99	0.44
59:BA:1313:U:O2	59:BA:1313:U:H2'	2.16	0.44
59:BA:2330:G:H3'	59:BA:2331:G:C8	2.49	0.44
21:AA:1300:G:N2	21:AA:1335:C:O4'	2.40	0.44
59:DA:1111:A:O3'	59:DA:1112:G:H4'	2.16	0.44
21:CA:18:C:H4'	21:CA:1078:U:O2	2.17	0.44
6:CG:69:VAL:HB	6:CG:100:ALA:HB1	1.99	0.44
21:AA:1222:G:OP2	21:AA:1322:C:N4	2.50	0.44
24:AX:33:U:C2'	24:AX:36:C:H41	2.31	0.44
59:DA:2353:G:H2'	59:DA:2354:G:O4'	2.17	0.44
38:DS:66:ALA:O	38:DS:69:VAL:HG12	2.17	0.44
20:CY:17:ILE:CG2	20:CY:107:VAL:HG23	2.48	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DC:146:VAL:H	25:DC:150:ILE:CD1	2.31	0.44
25:DC:135:ARG:HG3	59:DA:2170:A:H5'	1.98	0.44
36:BQ:118:LEU:HD13	36:BQ:131:ILE:HG21	1.99	0.44
52:D6:15:GLU:CG	52:D6:47:THR:HG21	2.44	0.44
39:BT:31:SER:CB	39:BT:45:PHE:HB2	2.46	0.44
21:CA:828:A:H62	21:CA:858:G:H21	1.64	0.44
26:DD:107:ALA:HA	26:DD:108:PRO:HD3	1.43	0.44
59:BA:1800:C:N3	59:BA:1817:G:N1	2.52	0.44
59:DA:1544:A:H2'	59:DA:1545:A:N7	2.32	0.44
35:DP:107:LYS:HZ2	59:DA:624:C:H41	1.64	0.44
29:DG:124:SER:HB3	29:DG:131:TYR:HE1	1.82	0.44
60:BB:69:G:H1	60:BB:107:U:H3	1.64	0.44
21:CA:825:G:H2'	21:CA:826:C:H6	1.81	0.44
59:BA:1162:G:H2'	59:BA:1163:G:H8	1.82	0.44
21:AA:575:G:H4'	21:AA:576:G:H5''	1.99	0.44
15:CP:81:ARG:HG3	21:CA:474:G:H5'	1.99	0.44
59:BA:644:A:C2	59:BA:2369:A:H1'	2.48	0.44
21:AA:380:G:N2	21:AA:383:A:OP2	2.46	0.44
3:AD:72:GLU:HA	3:AD:75:PHE:HB3	1.98	0.44
16:AQ:9:VAL:HG21	16:AQ:84:LEU:HD13	1.99	0.44
59:BA:1434:A:H61	59:BA:1558:A:H62	1.64	0.44
26:DD:48:ARG:HH11	59:DA:1806:C:H4'	1.82	0.44
40:BU:50:ARG:HH22	41:BV:72:VAL:HG12	1.82	0.44
16:AQ:46:ASP:HA	16:AQ:47:PRO:HD2	1.80	0.44
21:AA:1415:G:C4	21:AA:1416:G:C8	3.05	0.44
1:CB:179:LYS:HZ1	21:CA:1075:C:H5'	1.82	0.44
59:BA:611(C):U:H1'	59:BA:611(F):A:O2'	2.17	0.44
59:BA:1294:U:H2'	59:BA:1295:C:C6	2.53	0.44
44:DY:73:ARG:NH2	59:DA:302:C:OP2	2.49	0.44
5:CF:35:ALA:HB1	5:CF:65:VAL:CG2	2.46	0.44
3:CD:28:SER:HB2	3:CD:29:PRO:HD2	1.99	0.44
40:BU:57:PHE:HD2	40:BU:61:TRP:HE1	1.66	0.44
19:AT:76:ALA:O	19:AT:79:ARG:HB3	2.18	0.44
21:AA:1171:G:H2'	21:AA:1172:C:C6	2.53	0.44
15:CP:40:ASP:H	15:CP:48:TRP:HB2	1.80	0.44
7:AH:121:ASP:OD2	7:AH:122:ARG:N	2.45	0.44
21:AA:1413:A:H61	21:AA:1487:G:H1	1.64	0.44
9:AJ:64:GLU:HG2	13:AN:59:ALA:HB2	1.99	0.44
7:AH:93:VAL:O	7:AH:132:GLU:HG3	2.17	0.44
29:DG:106:LEU:HA	29:DG:110:ALA:HB3	1.98	0.44
41:BV:68:LYS:HA	41:BV:68:LYS:HD2	1.74	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:B5:30:LEU:HB3	51:B5:39:MET:HB3	1.99	0.44
59:BA:986:C:H2'	59:BA:987:G:H8	1.82	0.44
4:AE:31:LEU:HD11	4:AE:129:ILE:HD13	1.98	0.44
59:BA:525:U:C5'	59:BA:556:G:H5'	2.47	0.44
27:DE:143:ASN:ND2	27:DE:144:ARG:H	2.16	0.44
59:BA:2040:C:H2'	59:BA:2041:U:C6	2.52	0.44
27:BE:44:TYR:HE1	59:BA:2636:U:HO2'	1.66	0.44
21:CA:1407:C:N3	21:CA:1494:G:O6	2.50	0.44
34:BO:40:VAL:HG11	59:BA:2561:A:H4'	1.99	0.44
26:BD:241:PRO:HB3	59:BA:1971:A:H1'	1.99	0.44
24:CX:35:A:H2'	24:CX:36:C:H6	1.81	0.44
27:DE:113:PHE:HB2	59:DA:2823:A:OP1	2.17	0.44
21:CA:967:C:H2'	21:CA:968:A:C8	2.52	0.44
36:BQ:18:LYS:HG2	60:BB:91:C:OP1	2.17	0.44
21:CA:924:C:O2'	21:CA:1502:A:N1	2.38	0.44
21:CA:800:G:H2'	21:CA:801:U:C6	2.52	0.44
59:DA:2131:G:H5'	59:DA:2158:A:N1	2.33	0.44
59:DA:2267:A:H5''	59:DA:2268:A:C5'	2.47	0.44
60:BB:56:G:H4'	60:BB:57:A:H8	1.82	0.44
59:DA:1341:U:C4	59:DA:1395:A:C2	3.05	0.44
1:CB:168:THR:O	1:CB:171:ALA:HB3	2.18	0.44
8:CI:3:GLN:NE2	21:CA:1130:A:O2'	2.50	0.44
8:AI:127:LYS:HD2	22:AW:33:U:P	2.57	0.44
59:DA:597:U:O2	59:DA:660:G:C6	2.70	0.44
10:CK:96:ARG:O	10:CK:100:ALA:N	2.47	0.44
10:CK:26:ASN:ND2	21:CA:691:G:OP2	2.41	0.44
42:BW:18:ARG:CZ	59:BA:518:G:H4'	2.47	0.44
1:CB:162:ILE:O	1:CB:185:ILE:O	2.36	0.44
3:AD:108:LEU:HD13	3:AD:174:LEU:HD22	1.99	0.44
37:BR:2:ARG:HA	37:BR:5:LYS:CE	2.47	0.44
59:BA:2104:G:H1	59:BA:2185:C:H42	1.64	0.44
26:BD:88:ARG:HE	26:BD:157:ARG:HH12	1.64	0.44
59:DA:1389:G:H5'	59:DA:1526:G:C5'	2.48	0.44
39:DT:90:GLN:HB2	39:DT:120:ARG:CD	2.48	0.44
14:AO:82:ILE:HG13	14:AO:87:ILE:CG1	2.48	0.44
21:CA:321:A:H2'	21:CA:322:C:C6	2.53	0.44
7:CH:85:ARG:HB3	7:CH:88:LYS:HG2	1.99	0.44
3:AD:18:LYS:HB2	3:AD:18:LYS:HE3	1.81	0.44
19:AT:14:LYS:HA	19:AT:17:ARG:NE	2.32	0.44
20:CY:428:LEU:O	20:CY:432:ALA:N	2.30	0.44
21:AA:756:C:H2'	21:AA:757:U:C6	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:CP:82:GLN:H	21:CA:458(E):A:H4'	1.83	0.44
37:DR:35:THR:HA	37:DR:112:ALA:O	2.17	0.44
28:DF:62:ARG:HD2	59:DA:797:C:OP1	2.18	0.44
20:CY:33:LEU:HD23	20:CY:34:TYR:N	2.32	0.44
52:D6:9:LEU:HB2	52:D6:10:LEU:H	1.64	0.44
32:BK:133:SER:HB3	59:BA:1088:A:H62	1.83	0.44
59:DA:297:C:H2'	59:DA:298:G:O4'	2.18	0.44
21:AA:299:G:C6	21:AA:300:A:C6	3.06	0.44
59:DA:2372:G:H1	59:DA:2381:C:H42	1.64	0.44
27:BE:108:SER:HA	27:BE:190:GLY:CA	2.47	0.44
46:D0:78:TYR:HB3	46:D0:80:HIS:NE2	2.33	0.44
4:AE:102:ALA:C	21:AA:8:A:H1'	2.38	0.44
16:CQ:68:ARG:HA	16:CQ:70:ARG:NH1	2.32	0.44
20:AY:675:HIS:CG	20:AY:676:TYR:H	2.35	0.44
59:DA:2469:A:H2'	59:DA:2470:G:O4'	2.17	0.44
4:CE:34:VAL:H	4:CE:62:ALA:HB1	1.83	0.44
29:DG:31:VAL:HA	29:DG:32:PRO:HD2	1.77	0.44
20:CY:536:LYS:C	20:CY:538:TYR:H	2.21	0.44
2:CC:134:ILE:HG23	2:CC:168:ALA:HB2	1.99	0.44
21:AA:1255:G:O2'	21:AA:1258:G:N3	2.43	0.44
59:DA:1120:G:H2'	59:DA:1121:C:H6	1.81	0.44
59:DA:2794(A):G:H3'	59:DA:2794(B):U:C5'	2.47	0.44
49:D3:40:THR:O	49:D3:44:ARG:N	2.49	0.44
4:AE:144:THR:H	4:AE:147:ASP:HB2	1.83	0.44
6:AG:75:VAL:HA	6:AG:87:VAL:O	2.18	0.44
59:BA:1468(F):C:H2'	59:BA:1468(G):G:H8	1.82	0.44
59:DA:2825:U:H2'	59:DA:2826:A:O4'	2.17	0.44
9:AJ:82:ILE:O	9:AJ:86:MET:HB2	2.18	0.44
37:BR:58:GLY:HA2	37:BR:80:PHE:CE1	2.53	0.44
59:BA:862:G:H2'	59:BA:863:A:O4'	2.17	0.44
16:CQ:83:ASP:O	16:CQ:86:GLU:HB3	2.17	0.44
25:DC:31:LYS:HD3	25:DC:31:LYS:O	2.17	0.44
25:BC:127:LYS:HB3	25:BC:127:LYS:HE2	1.79	0.44
47:D1:26:ARG:HA	47:D1:26:ARG:HD2	1.55	0.44
26:BD:34:VAL:O	26:BD:64:ILE:HG22	2.18	0.44
32:BK:130:SER:HB3	32:BK:134:MET:HE2	2.00	0.44
21:AA:19:C:H2'	21:AA:20:U:C6	2.53	0.44
27:DE:179:GLU:O	27:DE:180:ASN:HB2	2.18	0.44
33:DN:103:VAL:O	33:DN:106:MET:HB2	2.17	0.44
33:DN:58:ASP:HB2	33:DN:98:VAL:CG1	2.46	0.44
59:BA:1132:A:H2'	59:BA:1133:U:C6	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:2037:G:H2'	59:BA:2038:G:O4'	2.17	0.44
33:BN:100:GLU:HB3	33:BN:104:LYS:H	1.81	0.44
33:BN:30:ILE:C	33:BN:31:ALA:O	2.54	0.44
21:AA:1493:A:OP2	63:AA:1601:NMY:H9	2.17	0.44
34:BO:59:LYS:HB3	34:BO:87:ILE:CG1	2.41	0.44
7:CH:100:ILE:HA	7:CH:101:PRO:HD3	1.77	0.44
21:AA:429:U:H4'	21:AA:430:A:C5'	2.47	0.44
21:AA:410:G:N1	21:AA:431:A:OP2	2.48	0.44
31:DJ:54:UNK:O	59:DA:1107:G:H5'	2.17	0.44
59:DA:2660:A:C6	59:DA:2661:G:C6	3.06	0.44
7:CH:30:ARG:O	7:CH:33:GLU:HB3	2.17	0.44
21:AA:552:U:H2'	21:AA:553:A:C8	2.52	0.44
11:AL:97:ARG:HD3	11:AL:98:TYR:CE1	2.51	0.44
21:AA:1126:U:H1'	21:AA:1280:A:C5	2.52	0.44
47:D1:15:ALA:H	47:D1:41:ARG:HB3	1.83	0.44
26:DD:49:ILE:HG23	59:DA:779:U:OP1	2.18	0.44
59:DA:921:G:H2'	59:DA:922:U:C6	2.53	0.44
21:CA:682:G:H2'	21:CA:683:G:O4'	2.17	0.44
4:CE:133:TYR:HE1	21:CA:1078:U:H4'	1.82	0.44
36:BQ:65:PHE:CE1	59:BA:873:G:H4'	2.53	0.44
1:AB:166:ASP:O	1:AB:170:GLU:HB2	2.17	0.44
59:DA:2352:A:N6	59:DA:2365:G:H21	2.05	0.44
59:DA:839:U:H2'	59:DA:840:C:H6	1.82	0.44
21:CA:317:G:H2'	21:CA:318:G:C8	2.52	0.44
59:DA:2811:G:H2'	59:DA:2812:G:O4'	2.17	0.44
28:DF:54:ARG:HB2	28:DF:80:ALA:HA	2.00	0.44
40:BU:62:ILE:HD11	40:BU:93:LYS:HD3	1.98	0.44
26:BD:67:PHE:HZ	26:BD:157:ARG:CZ	2.30	0.44
59:DA:2686:G:H2'	59:DA:2687:U:C6	2.52	0.44
40:DU:54:LYS:NZ	59:DA:994:C:H3'	2.32	0.44
20:AY:486:THR:HA	20:AY:560:VAL:HG13	1.99	0.44
29:DG:81:LYS:HB3	29:DG:82:LEU:H	1.51	0.44
59:DA:611:C:H2'	59:DA:611(A):C:C5	2.53	0.44
35:DP:81:GLN:O	35:DP:112:LEU:HD22	2.17	0.44
35:DP:85:LEU:HB2	35:DP:118:GLY:H	1.83	0.44
21:CA:154:C:C4	21:CA:168:G:C2	3.06	0.44
51:D5:45:VAL:HG21	51:D5:50:GLY:HA2	1.98	0.44
36:DQ:82:ARG:NH1	59:DA:2250:G:H8	2.16	0.44
45:BZ:6:LYS:HG3	45:BZ:7:ALA:H	1.82	0.44
32:DK:30:HIS:HA	32:DK:59:ILE:HD12	1.99	0.44
59:BA:1028:A:H3'	59:BA:1125:G:H22	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:DK:55:VAL:O	32:DK:56:GLU:HB2	2.18	0.44
25:DC:140:ASN:O	25:DC:142:LYS:N	2.49	0.44
59:BA:1060:U:H6	59:BA:1060:U:O5'	1.99	0.44
20:CY:77:HIS:CE1	20:CY:277:VAL:HG21	2.53	0.44
1:CB:94:ASN:CG	1:CB:95:GLN:HE21	2.21	0.44
21:CA:1197:G:H2'	21:CA:1198:G:O4'	2.18	0.44
59:BA:1203:G:H2'	59:BA:1204:A:C2	2.52	0.44
59:DA:238:C:O2'	59:DA:608:A:H1'	2.17	0.44
59:BA:1283:G:H8	59:BA:1283:G:O5'	2.00	0.44
28:BF:50:SER:HB3	59:BA:38:A:H5'	1.99	0.44
39:DT:74:ARG:HB3	39:DT:76:PHE:HE1	1.82	0.44
5:CF:8:ILE:HB	5:CF:61:LEU:HD12	2.00	0.44
32:DK:84:LEU:HD22	32:DK:85:GLU:H	1.81	0.44
59:DA:714:U:H1'	59:DA:717:G:C8	2.52	0.44
12:CM:23:TYR:CD2	21:CA:1330:U:H5'	2.53	0.44
21:AA:184:G:H4'	21:AA:224:C:O3'	2.17	0.44
59:DA:270(U):C:H2'	59:DA:270(V):G:H8	1.82	0.44
39:DT:77:PRO:O	39:DT:79:HIS:N	2.49	0.44
32:BK:56:GLU:O	32:BK:67:PHE:HA	2.18	0.44
21:CA:763:G:H2'	21:CA:764:C:C6	2.52	0.44
21:CA:68(A):G:C2	21:CA:68(B):G:N7	2.85	0.44
37:BR:96:ARG:HB3	37:BR:117:VAL:HG21	1.99	0.44
30:DH:20:ALA:O	30:DH:22:GLY:N	2.51	0.44
59:BA:1444:G:O2'	59:BA:1444(A):A:H2'	2.16	0.44
52:D6:38:LYS:HD3	52:D6:48:VAL:HA	1.99	0.44
20:CY:269:VAL:HB	20:CY:270:GLN:H	1.46	0.44
21:CA:1164:G:H2'	21:CA:1165:C:C6	2.53	0.44
26:DD:207:GLY:H	26:DD:211:ARG:HD3	1.83	0.44
10:CK:57:THR:HG23	10:CK:60:ALA:HB2	1.98	0.44
59:DA:2202(A):U:H2'	59:DA:2202(B):C:C6	2.53	0.44
4:CE:11:ILE:O	4:CE:12:LEU:HD13	2.18	0.44
30:DH:73:ALA:HB1	30:DH:77:LYS:HE3	1.99	0.44
21:CA:787:A:H2'	21:CA:788:U:C6	2.53	0.44
59:DA:579:G:N1	59:DA:1261:C:O2	2.33	0.44
33:DN:101:HIS:CG	33:DN:102:ALA:N	2.82	0.44
24:CX:74:C:C5	59:DA:2554:U:C5	3.05	0.44
33:BN:71:ILE:CG2	33:BN:98:VAL:HA	2.48	0.44
21:AA:1491:G:N7	63:AA:1601:NMY:H2	2.32	0.44
21:CA:1158:C:H3'	21:CA:1158:C:O2	2.18	0.44
21:CA:1240:U:H5"	21:CA:1241:G:C8	2.53	0.44
12:CM:13:LYS:HG2	12:CM:14:ARG:N	2.31	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:2475:C:H42	59:BA:2529:G:H21	1.48	0.44
21:AA:367:U:H3	21:AA:393:A:H61	0.64	0.44
11:CL:118:SER:HB3	21:CA:35:G:H21	1.83	0.44
59:DA:904:C:C4	59:DA:905:U:C5	3.06	0.44
59:BA:910:A:O2'	59:BA:2265:U:H5'	2.18	0.44
12:CM:87:TYR:CZ	21:CA:1321:C:H4'	2.53	0.44
59:DA:2668:G:H2'	59:DA:2669:G:C8	2.53	0.44
11:AL:58:VAL:HG21	11:AL:85:ILE:HD11	1.99	0.44
15:CP:22:THR:HB	15:CP:32:TYR:HB3	1.98	0.44
36:BQ:35:VAL:HG23	36:BQ:102:VAL:N	2.32	0.44
59:DA:9:U:H2'	59:DA:2629:A:H62	1.83	0.44
21:CA:68(I):G:C6	21:CA:68(J):G:C5	3.06	0.44
2:CC:173:VAL:O	21:CA:1107:C:H5''	2.18	0.44
53:D7:34:ARG:HG2	53:D7:34:ARG:H	1.67	0.44
59:DA:81:G:O6	59:DA:105:C:N3	2.50	0.44
46:D0:47:PRO:HB3	46:D0:51:VAL:O	2.17	0.44
21:AA:458:C:N4	21:AA:458(A):G:O6	2.50	0.44
9:AJ:55:LYS:HG2	21:AA:973:G:C1'	2.47	0.44
16:CQ:29:HIS:HB3	16:CQ:33:GLY:N	2.32	0.44
35:DP:107:LYS:NZ	59:DA:624:C:H41	2.15	0.44
44:DY:97:ARG:C	44:DY:99:CYS:H	2.19	0.44
35:BP:21:ARG:HH22	35:BP:29:LYS:HE3	1.83	0.44
59:BA:1081:U:H2'	59:BA:1082:U:H5	1.80	0.44
29:DG:87:PRO:HB2	29:DG:88:ILE:H	1.52	0.44
19:AT:51:GLU:O	19:AT:55:ILE:HG12	2.17	0.44
49:B3:5:LYS:HG3	49:B3:5:LYS:O	2.14	0.44
27:BE:119:ARG:NH2	27:BE:159:HIS:O	2.49	0.44
59:BA:600:G:H1	59:BA:657:U:H3	1.65	0.44
35:DP:27:HIS:O	35:DP:29:LYS:N	2.50	0.44
28:DF:162:LEU:CD1	28:DF:162:LEU:H	2.30	0.44
10:AK:23:ALA:HA	10:AK:28:THR:HG23	1.98	0.44
25:BC:80:LYS:O	25:BC:82:GLU:N	2.50	0.44
59:DA:1264:G:H21	59:DA:2015:A:H62	1.66	0.44
45:BZ:146:ILE:HG12	45:BZ:174:VAL:HG12	1.99	0.44
17:AR:30:ASP:OD2	17:AR:33:ASP:HB2	2.17	0.44
21:AA:1393:U:H2'	21:AA:1395:C:H5	1.80	0.44
21:CA:114:U:H3	21:CA:313:A:H2	1.59	0.44
21:CA:68(W):G:H2'	21:CA:68(X):U:C6	2.52	0.44
38:DS:34:HIS:CE1	60:DB:27:C:H5''	2.53	0.44
21:AA:43:C:H2'	21:AA:44:G:O4'	2.17	0.44
23:AV:30:A:HO2'	23:AV:31:A:P	2.39	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DQ:53:ALA:O	36:DQ:56:ARG:HB3	2.17	0.44
4:AE:92:LYS:O	4:AE:119:LEU:HB2	2.17	0.44
30:DH:38:SER:HA	30:DH:39:PRO:HD3	1.75	0.44
53:B7:32:LYS:O	53:B7:35:ARG:HB2	2.18	0.44
47:D1:67:ILE:HG12	47:D1:67:ILE:H	1.52	0.44
16:AQ:8:GLY:HA2	16:AQ:23:VAL:HG13	1.98	0.44
14:CO:58:MET:SD	21:CA:580:U:H5''	2.58	0.44
59:BA:2077:A:O2'	59:BA:2434:A:H4'	2.18	0.44
46:D0:12:ASN:ND2	59:DA:2277:G:OP2	2.50	0.44
21:CA:1469:G:H2'	21:CA:1470:G:C8	2.53	0.44
59:BA:1391:U:HO2'	59:BA:1392:A:H8	1.62	0.44
59:BA:1607:C:H4'	59:BA:1608:A:C8	2.53	0.44
59:DA:1000:A:OP2	59:DA:1154:G:N1	2.45	0.44
33:DN:71:ILE:HD11	33:DN:91:LEU:HB2	1.98	0.44
59:DA:2512:C:N4	59:DA:2574:G:H1	2.10	0.44
33:BN:50:ASP:OD1	33:BN:120:LEU:HB2	2.17	0.44
21:AA:1493:A:C8	59:BA:1913:A:H2	2.36	0.44
21:CA:1494:G:OP1	63:CA:1601:NMY:N7	2.44	0.44
21:AA:1157:A:H4'	21:AA:1157:A:OP1	2.17	0.44
59:BA:1943:U:C2	59:BA:1945:G:O4'	2.71	0.44
42:DW:16:LYS:O	42:DW:20:VAL:HG23	2.18	0.44
11:CL:86:ARG:O	21:CA:552:U:O2'	2.29	0.44
59:DA:1611:C:H2'	59:DA:1612:C:C6	2.53	0.44
21:CA:1047:G:H2'	21:CA:1048:G:H8	1.81	0.44
16:CQ:8:GLY:HA3	16:CQ:59:ILE:HD13	2.00	0.44
36:BQ:35:VAL:C	36:BQ:129:THR:HG1	2.15	0.44
59:BA:635:C:O2	59:BA:639:U:H4'	2.18	0.44
59:DA:1483:G:N2	59:DA:1506:C:C2	2.76	0.44
45:DZ:71:VAL:O	45:DZ:72:ARG:HB2	2.18	0.44
16:CQ:66:SER:HB3	16:CQ:69:LYS:HB3	2.00	0.44
59:DA:2202:C:C2	59:DA:2221:G:N2	2.80	0.44
59:DA:2075:U:H3	59:DA:2077:A:H8	1.62	0.44
36:DQ:42:ILE:HB	36:DQ:47:ILE:HD11	2.00	0.44
21:CA:1094:G:O2'	21:CA:1095:U:P	2.74	0.44
34:DO:76:ALA:H	39:DT:75:ILE:HB	1.82	0.44
27:DE:117:MET:HG3	27:DE:136:ARG:HG3	1.99	0.44
59:BA:1553:A:H5'	59:BA:1554:A:OP2	2.18	0.44
59:BA:1155:A:H8	59:BA:1155:A:OP2	2.01	0.44
59:DA:271(T):G:N2	59:DA:357(B):A:H62	2.07	0.44
59:BA:2599:G:H2'	59:BA:2600:A:C8	2.53	0.44
59:BA:675:A:H3'	59:BA:676:A:H2	1.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:625:G:H2'	59:DA:626:U:O4'	2.16	0.44
44:DY:76:CYS:HB2	44:DY:96:ILE:HG13	1.99	0.44
59:DA:255:A:O2'	59:DA:384:U:OP1	2.35	0.44
59:DA:271(B):G:O2'	59:DA:420:C:H3'	2.18	0.44
26:BD:106:ILE:C	26:BD:108:PRO:HD3	2.38	0.44
59:BA:2151:G:H2'	59:BA:2152:G:C8	2.51	0.44
21:CA:1028:C:C4	21:CA:1028(A):C:C4	3.06	0.44
59:DA:2324:C:N4	59:DA:2331:G:H1	2.13	0.44
10:CK:85:ARG:HA	10:CK:110:ASP:O	2.18	0.44
45:BZ:48:PHE:HE2	45:BZ:71:VAL:HG21	1.83	0.44
47:D1:3:LYS:HG3	47:D1:4:VAL:H	1.82	0.44
37:DR:97:VAL:HA	37:DR:113:LEU:O	2.18	0.44
8:AI:107:ARG:HB3	21:AA:1347:G:C5'	2.45	0.44
21:AA:447:G:O6	21:AA:485:G:H1'	2.18	0.44
59:DA:1541:U:H5''	59:DA:1542:G:H3'	1.99	0.44
21:CA:951:G:H2'	21:CA:952:U:C6	2.53	0.44
21:AA:697:U:H1'	21:AA:786:G:H1'	2.00	0.44
1:CB:70:PHE:HB2	1:CB:92:TYR:HB2	2.00	0.44
21:AA:836:G:C6	21:AA:851:G:C6	3.06	0.44
2:CC:55:VAL:HA	2:CC:68:VAL:HA	1.99	0.44
20:CY:312:LEU:HA	20:CY:312:LEU:HD12	1.83	0.44
59:DA:1485:G:H1	59:DA:1504:C:N4	2.13	0.44
10:AK:28:THR:O	10:AK:44:SER:HA	2.18	0.44
26:BD:11:PRO:O	26:BD:12:SER:OG	2.27	0.44
8:CI:50:LEU:HD13	8:CI:56:LEU:HA	1.99	0.44
59:BA:1759:A:H4'	59:BA:2715:C:H5'	2.00	0.44
24:CX:15:G:N3	24:CX:15:G:H2'	2.32	0.44
21:CA:771:G:H2'	21:CA:772:U:C5	2.52	0.44
17:CR:58:LEU:HD12	17:CR:62:GLU:HB3	1.99	0.44
41:BV:87:HIS:CE1	59:BA:992:C:H1'	2.53	0.44
9:AJ:57:LYS:HG2	21:AA:972:C:P	2.58	0.44
3:CD:64:LEU:HD22	3:CD:203:VAL:HG11	1.99	0.44
59:DA:220:G:N3	59:DA:233:A:H2	2.15	0.44
52:D6:11:LEU:HD22	52:D6:12:GLU:O	2.18	0.44
43:DX:30:VAL:HG22	43:DX:77:LYS:O	2.17	0.44
39:DT:24:PRO:HB3	39:DT:97:ALA:HA	2.00	0.44
2:AC:115:LEU:HA	2:AC:118:GLN:HB2	2.00	0.44
33:DN:114:ARG:NE	59:DA:527:C:N1	2.38	0.44
33:DN:47:ALA:HA	33:DN:50:ASP:OD2	2.18	0.44
33:DN:75:TYR:OH	59:DA:1137:G:H1'	2.17	0.44
33:BN:104:LYS:HB2	33:BN:120:LEU:HD11	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:1494:G:H4'	59:BA:1913:A:N7	2.33	0.44
21:AA:1157:A:N6	21:AA:1180:A:C8	2.86	0.44
59:BA:2560:C:H2'	59:BA:2561:A:C8	2.52	0.44
59:DA:820:A:OP2	59:DA:973:A:N6	2.38	0.44
12:CM:94:ARG:HD3	12:CM:94:ARG:HA	1.85	0.44
59:DA:2350:C:H2'	59:DA:2351:G:O4'	2.18	0.44
11:AL:56:ALA:O	11:AL:58:VAL:HG23	2.18	0.44
21:CA:611:A:C6	21:CA:612:C:C5	3.06	0.44
59:DA:538:G:C2	59:DA:555:U:O2	2.70	0.44
59:BA:633:A:H5'	59:BA:2404:C:H4'	1.98	0.44
35:DP:17:LYS:HD3	59:DA:662:G:H4'	2.00	0.44
45:DZ:29:TYR:HE2	60:DB:103:U:HO2'	1.62	0.44
59:DA:2130:U:H1'	59:DA:2159:G:C6	2.52	0.44
15:AP:8:ARG:HB2	15:AP:17:TYR:CE2	2.53	0.44
47:D1:80:LEU:HG	59:DA:270(S):G:O2'	2.18	0.44
59:DA:1044:G:O2'	59:DA:1045:A:H5''	2.17	0.44
59:BA:2446:G:H2'	59:BA:2447:G:OP1	2.18	0.44
59:BA:2755:C:H6	59:BA:2755:C:O5'	2.01	0.44
18:AS:10:PHE:HZ	18:AS:37:ARG:HH21	1.65	0.44
38:BS:95:HIS:O	38:BS:97:ARG:N	2.51	0.44
1:AB:164:VAL:CG2	1:AB:170:GLU:HB3	2.48	0.44
4:CE:102:ALA:HA	21:CA:8:A:O4'	2.17	0.44
21:AA:858:G:OP2	21:AA:858:G:H8	2.01	0.44
9:CJ:51:ARG:HD2	9:CJ:59:SER:HB3	2.00	0.44
42:DW:79:GLY:HA3	42:DW:100:THR:HG23	2.00	0.44
21:CA:829:G:H2'	21:CA:830:G:C8	2.53	0.44
59:BA:2202:C:H2'	59:BA:2202(A):U:C6	2.53	0.44
28:BF:125:LEU:HD22	28:BF:194:MET:CG	2.47	0.44
28:BF:9:ILE:CG2	28:BF:124:LEU:HA	2.47	0.44
60:BB:9:G:O6	60:BB:111:U:O2	2.36	0.44
52:B6:26:ASN:CG	52:B6:27:LYS:H	2.20	0.44
25:DC:50:ILE:O	25:DC:54:ARG:HB2	2.18	0.44
59:DA:401:A:H2'	59:DA:402:A:O4'	2.18	0.44
59:BA:2202(B):C:H2'	59:BA:2202(C):G:N2	2.32	0.44
41:BV:89:GLN:HA	41:BV:90:PRO:HD3	1.81	0.44
49:B3:5:LYS:HB3	49:B3:59:VAL:HB	1.99	0.44
45:DZ:108:PRO:HB3	45:DZ:144:LEU:H	1.83	0.44
37:BR:25:ALA:O	37:BR:28:LEU:HB3	2.17	0.44
13:AN:29:ARG:O	13:AN:33:VAL:HG21	2.17	0.44
59:BA:1545:A:H2'	59:BA:1546:C:O4'	2.17	0.44
37:BR:99:LYS:HZ1	51:B5:43:HIS:HB3	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:B5:43:HIS:NE2	59:BA:2883:A:H4'	2.33	0.44
15:AP:35:LYS:CG	15:AP:36:ILE:H	2.29	0.44
22:AW:50:C:C5	22:AW:51:A:C8	3.05	0.44
20:CY:605:ILE:HG13	20:CY:647:VAL:O	2.18	0.44
20:CY:605:ILE:HG21	20:CY:646:PHE:CD1	2.52	0.44
1:CB:92:TYR:O	1:CB:151:GLY:HA3	2.18	0.44
1:AB:219:VAL:O	1:AB:223:ILE:HG13	2.18	0.44
21:AA:565:U:H3'	21:AA:566:G:C8	2.49	0.44
59:BA:2049:G:H1	59:BA:2619:C:H42	1.65	0.44
4:AE:18:ARG:HD3	21:AA:1081:G:H5''	2.00	0.44
3:CD:56:VAL:HA	3:CD:59:ARG:HB2	1.99	0.44
46:B0:35:ASN:OD1	59:BA:2353:G:O2'	2.32	0.44
6:AG:4:ARG:NH1	21:AA:1091:U:OP2	2.50	0.44
21:AA:138:G:H2'	21:AA:139:G:O4'	2.18	0.44
10:AK:58:PRO:HA	10:AK:90:GLY:HA3	2.00	0.44
24:CX:15:G:H22	24:CX:59:U:H3	1.65	0.44
1:AB:142:LEU:O	1:AB:146:GLN:HB2	2.18	0.44
38:BS:109:GLY:HA3	59:BA:2376:A:H1'	2.00	0.44
20:CY:534:ILE:HD11	20:CY:570:GLY:C	2.38	0.44
20:CY:534:ILE:HA	20:CY:535:PRO:HD3	1.64	0.44
26:DD:262:ARG:HD3	59:DA:2085:C:OP1	2.17	0.44
54:D8:17:THR:O	54:D8:19:SER:N	2.49	0.44
4:CE:17:ALA:HA	4:CE:26:PHE:HA	1.98	0.44
14:CO:55:GLY:HA2	14:CO:58:MET:HG2	1.99	0.44
59:BA:1608:A:H62	59:BA:1621:U:H3	1.65	0.44
47:D1:76:ARG:HH22	47:D1:95:LEU:HD22	1.82	0.44
36:BQ:80:GLU:HG2	59:BA:2494:G:O2'	2.17	0.44
59:DA:2737:G:H2'	59:DA:2738:A:C8	2.53	0.44
48:B2:17:SER:HA	48:B2:18:PRO:HD2	1.70	0.44
59:DA:530:G:H21	59:DA:2021:C:H1'	1.82	0.44
28:BF:170:LEU:HA	28:BF:171:PRO:HD2	1.73	0.44
2:CC:41:GLY:O	2:CC:44:GLU:HG2	2.17	0.44
59:DA:388:G:H5'	59:DA:389:G:OP2	2.17	0.44
20:CY:574:GLU:OE1	20:CY:574:GLU:N	2.49	0.44
38:DS:11:LYS:HD3	38:DS:11:LYS:HA	1.84	0.44
59:BA:2228:G:H8	59:BA:2228:G:O5'	2.00	0.44
2:AC:141:VAL:HG11	2:AC:149:ALA:HB2	1.99	0.44
51:D5:17:ASP:HA	51:D5:20:ARG:HB2	1.99	0.44
33:DN:114:ARG:CD	33:DN:114:ARG:C	2.86	0.44
21:CA:1408:A:H62	63:CA:1601:NMY:C14	2.29	0.44
21:CA:1238:A:N3	21:CA:1241:G:H1'	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BO:1:MET:CE	34:BO:67:LYS:HB3	2.48	0.44
59:DA:1630:G:H2'	59:DA:1630(A):C:O4'	2.18	0.44
59:DA:2706:G:H2'	59:DA:2707:G:O4'	2.18	0.44
59:DA:2633:G:H2'	59:DA:2634:G:O4'	2.18	0.44
27:DE:47:VAL:O	27:DE:80:GLU:HA	2.18	0.44
59:DA:1613:G:C2	59:DA:1617:C:C2	3.06	0.44
60:DB:24:G:N7	60:DB:56:G:O2'	2.51	0.44
25:BC:169:THR:HG21	59:BA:2121:G:N2	2.29	0.44
21:CA:1505:G:O2'	23:CV:17:U:OP2	2.31	0.44
35:BP:111:ARG:HB3	35:BP:128:HIS:HB2	1.98	0.44
21:CA:733:A:O2'	21:CA:734:G:H5'	2.17	0.44
46:D0:27:GLU:HB3	46:D0:69:PHE:CD1	2.52	0.44
21:CA:1371:G:C6	21:CA:1372:U:C4	3.05	0.44
19:CT:61:SER:HA	21:CA:193:C:O2'	2.18	0.44
59:DA:1281:G:H2'	59:DA:1282:U:C6	2.53	0.44
21:CA:1003:G:H1	21:CA:1037:C:N4	2.16	0.44
53:D7:34:ARG:CZ	53:D7:42:LEU:HB3	2.48	0.44
25:BC:73:VAL:HB	25:BC:112:ASP:HB3	2.00	0.44
21:AA:1218:C:H2'	21:AA:1219:U:C5	2.52	0.44
12:AM:87:TYR:CE2	21:AA:1321:C:H4'	2.53	0.44
59:BA:878:A:H61	59:BA:899:A:H1'	1.81	0.44
60:DB:9:G:H2'	60:DB:10:C:O4'	2.17	0.44
59:BA:1797:C:H2'	59:BA:1798:U:O4'	2.17	0.44
2:CC:88:ARG:HG2	2:CC:99:VAL:HG21	1.99	0.44
21:CA:1059:C:O2'	21:CA:1060:C:O4'	2.30	0.44
32:BK:52:ILE:O	32:BK:72:PRO:HA	2.17	0.44
3:AD:194:LEU:HD13	3:AD:194:LEU:HA	1.90	0.44
13:AN:41:ARG:HH22	21:AA:973:G:H4'	1.83	0.44
59:DA:1496:A:H1'	59:DA:1577:C:HO2'	1.78	0.44
26:BD:59:LYS:NZ	26:BD:60:ARG:O	2.51	0.44
28:BF:6:VAL:HB	28:BF:7:TYR:CD1	2.52	0.44
2:AC:12:LEU:HD13	13:AN:56:VAL:O	2.18	0.44
53:B7:34:ARG:HE	53:B7:42:LEU:HD13	1.82	0.44
21:CA:522:C:H4'	21:CA:536:C:O5'	2.18	0.44
59:DA:2304:G:H5'	59:DA:2305:A:OP2	2.18	0.44
29:DG:51:ARG:HH12	29:DG:88:ILE:HG13	1.81	0.44
36:BQ:7:MET:O	36:BQ:9:TYR:N	2.51	0.44
21:AA:1058:G:H1	21:AA:1199:U:H3	1.66	0.44
59:BA:2082:A:H3'	59:BA:2083:G:H8	1.83	0.44
44:DY:46:LYS:N	44:DY:62:GLU:HB2	2.29	0.44
9:CJ:34:VAL:HG22	9:CJ:74:ILE:HG13	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:1806:C:N4	59:BA:1811:G:H1	2.11	0.44
44:DY:85:VAL:CG2	59:DA:297:C:H5''	2.48	0.44
59:DA:2507:C:O5'	59:DA:2507:C:H6	2.01	0.44
59:BA:1101:U:H2'	59:BA:1102:C:C6	2.53	0.44
19:CT:85:MET:SD	21:CA:186(A):C:H1'	2.58	0.44
28:DF:168:ARG:NH2	59:DA:322:A:OP1	2.47	0.44
7:CH:37:ARG:HD2	7:CH:38:ILE:N	2.32	0.44
44:BY:38:ILE:HD13	44:BY:65:ALA:O	2.18	0.44
49:B3:18:ASP:O	49:B3:21:ALA:HB3	2.17	0.44
52:D6:53:LYS:HA	52:D6:53:LYS:HD2	1.81	0.44
59:DA:2440:C:H2'	59:DA:2441:C:H4'	2.00	0.44
9:CJ:60:ARG:NH2	21:CA:1367:C:OP1	2.51	0.44
59:BA:780:G:N2	59:BA:783:A:H62	2.14	0.44
36:BQ:52:VAL:O	36:BQ:56:ARG:HB2	2.18	0.44
59:DA:2291:U:H5''	59:DA:2380:C:O2'	2.18	0.44
55:B9:18:ARG:NH1	55:B9:23:VAL:HG22	2.33	0.44
59:BA:2769:C:C4	59:BA:2770:G:C5	3.05	0.44
20:AY:358:MET:HG2	20:AY:363:ARG:NE	2.33	0.44
21:AA:158:G:H2'	21:AA:159:G:O4'	2.18	0.44
59:BA:1771:C:H2'	59:BA:1772:G:C8	2.52	0.44
35:DP:55:ARG:HH21	59:DA:825:C:H1'	1.83	0.44
44:DY:15:VAL:HB	44:DY:23:ARG:H	1.83	0.44
59:DA:805:G:N3	59:DA:831:G:H1'	2.32	0.44
45:BZ:51:ALA:HA	45:BZ:55:HIS:HD2	1.82	0.44
26:DD:58:HIS:HE1	59:DA:1568:G:H1'	1.82	0.44
20:CY:210:ARG:O	20:CY:213:HIS:HB3	2.18	0.44
44:BY:32:PRO:HB2	44:BY:33:LYS:H	1.58	0.44
20:CY:341:VAL:HA	20:CY:391:GLY:HA2	2.00	0.44
21:AA:659:U:H2'	21:AA:660:G:C8	2.53	0.44
42:BW:86:LEU:HB2	42:BW:96:ILE:HG21	2.00	0.44
20:AY:549:ALA:HB2	20:AY:587:SER:HA	1.99	0.44
8:AI:69:GLY:HA3	21:AA:1371:G:O3'	2.17	0.44
1:AB:24:TRP:HA	1:AB:190:THR:HG22	2.00	0.44
16:CQ:57:VAL:HA	16:CQ:76:LEU:HA	1.98	0.44
30:DH:97:ARG:HB3	30:DH:104:GLU:HB3	1.99	0.44
27:BE:93:VAL:HB	27:BE:175:VAL:HG23	2.00	0.44
1:CB:189:ASP:N	1:CB:205:ASP:OD2	2.43	0.44
20:CY:419:ALA:O	20:CY:423:LYS:HE2	2.17	0.44
16:AQ:24:GLU:HA	16:AQ:38:ARG:O	2.18	0.44
12:AM:81:LEU:HD12	12:AM:86:CYS:SG	2.58	0.44
12:AM:81:LEU:HD11	12:AM:88:ARG:HH21	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DN:94:HIS:HB3	33:DN:95:PRO:CD	2.47	0.44
24:CX:76:A:HO2'	59:DA:2452:C:H4'	1.83	0.44
27:DE:109:LYS:HG3	37:DR:2:ARG:CZ	2.48	0.44
3:CD:25:ARG:HB2	21:CA:409:G:O5'	2.18	0.44
15:AP:69:THR:HA	15:AP:72:ARG:HB2	1.99	0.44
33:BN:100:GLU:O	33:BN:101:HIS:C	2.51	0.44
33:BN:31:ALA:HA	33:BN:34:LEU:C	2.38	0.44
63:DA:2901:NMY:H172	63:DA:2901:NMY:H19	1.99	0.44
20:AY:21:ILE:HG13	20:AY:22:ASP:N	2.32	0.44
38:DS:32:LEU:HG	60:DB:29:A:OP2	2.17	0.44
48:D2:54:LYS:HE3	59:DA:73:A:H5''	2.00	0.44
35:BP:117:GLU:OE2	59:BA:637:A:H5'	2.18	0.44
59:BA:638:G:H2'	59:BA:639:U:H6	1.83	0.44
21:CA:11:G:O2'	21:CA:506:G:N2	2.51	0.44
2:CC:20:SER:HB2	2:CC:22:TRP:NE1	2.33	0.44
21:AA:1303:C:H2'	21:AA:1304:G:O4'	2.18	0.44
20:CY:136:ALA:H	20:CY:260:LEU:CB	2.30	0.44
59:DA:674:G:C4	59:DA:804:A:N6	2.86	0.44
25:BC:74:ARG:HH11	25:BC:110:ASP:HB3	1.83	0.44
28:DF:156:LEU:HD12	28:DF:193:VAL:CB	2.48	0.44
21:AA:959:A:H4'	21:AA:984:C:O2'	2.18	0.44
22:AW:33:U:H2'	22:AW:35:A:OP2	2.18	0.44
27:DE:16:ARG:O	27:DE:17:ASP:HB3	2.17	0.44
1:AB:96:ARG:NH1	1:AB:148:TYR:OH	2.51	0.44
19:AT:23:ARG:HG3	21:AA:322:C:O3'	2.18	0.44
42:DW:72:LYS:O	42:DW:73:ALA:O	2.36	0.44
40:BU:24:TYR:CD1	40:BU:28:ARG:HD2	2.53	0.44
34:BO:71:ARG:HG2	34:BO:76:ALA:HA	1.99	0.44
59:BA:1629:U:H3	59:BA:1637:A:H61	1.66	0.44
59:DA:2811:G:N2	59:DA:2890:G:H1'	2.33	0.44
28:BF:9:ILE:CG2	28:BF:125:LEU:H	2.30	0.44
26:BD:10:THR:HG21	59:BA:728:G:H1'	2.00	0.44
21:AA:1027:C:H2'	21:AA:1028:C:C6	2.53	0.44
25:DC:43:GLU:OE1	59:DA:2123:G:N2	2.45	0.44
41:BV:84:LYS:HD3	59:BA:1226:A:H5'	1.99	0.44
23:CV:27:A:HO2'	23:CV:28:A:P	2.39	0.44
20:AY:313:ALA:HA	20:AY:328:ILE:HA	1.98	0.44
7:CH:13:ILE:O	7:CH:17:THR:HG23	2.16	0.44
37:BR:13:HIS:HB3	59:BA:2002:G:C5'	2.48	0.44
20:AY:95:GLU:O	20:AY:99:ARG:HD2	2.17	0.44
43:BX:40:LYS:HG3	43:BX:51:VAL:HB	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:684:G:H2'	59:BA:774:A:N6	2.33	0.44
21:AA:981:U:H2'	21:AA:982:U:C5	2.53	0.44
20:AY:10:LYS:HA	20:AY:282:SER:OG	2.17	0.44
31:BJ:55:UNK:N	31:BJ:78:UNK:O	2.51	0.44
6:CG:26:PHE:CE2	6:CG:30:ILE:HD11	2.53	0.44
1:AB:108:ILE:HG21	1:AB:152:PHE:HZ	1.81	0.44
21:AA:62:U:H5'	21:AA:378:G:H21	1.82	0.44
21:CA:1253:G:H1'	21:CA:1355:G:O2'	2.17	0.44
28:BF:166:ALA:HA	59:BA:321:G:C5'	2.46	0.44
32:DK:78:ILE:HG12	32:DK:99:ILE:HD11	2.00	0.44
59:BA:978:G:H2'	59:BA:979:G:O4'	2.18	0.44
38:BS:30:ARG:HB3	38:BS:89:ARG:NH2	2.33	0.44
29:BG:132:ASN:CG	59:BA:2303:G:H21	2.21	0.44
32:BK:60:TYR:HB2	32:BK:64:SER:HB3	2.00	0.44
17:CR:49:LYS:O	17:CR:51:LEU:HD12	2.18	0.44
60:BB:71:C:N4	60:BB:105:G:H1	2.16	0.44
4:CE:44:GLY:HA3	4:CE:62:ALA:HB2	2.00	0.44
42:BW:72:LYS:HB3	42:BW:106:ILE:HG22	1.98	0.44
39:BT:34:VAL:HG22	39:BT:39:ARG:HG2	2.00	0.44
21:AA:1479:C:H2'	21:AA:1480:G:O4'	2.18	0.44
39:DT:66:VAL:HG13	39:DT:70:VAL:O	2.18	0.44
37:BR:22:ARG:HD3	37:BR:69:ASP:O	2.18	0.44
17:AR:75:ILE:HG13	21:AA:735:C:O2'	2.17	0.44
6:AG:107:ALA:O	6:AG:111:ARG:HG3	2.18	0.44
59:DA:1141:U:H4'	59:DA:1142:A:C8	2.53	0.44
54:D8:61:LEU:HD12	54:D8:61:LEU:HA	1.79	0.44
59:BA:458:G:H1'	59:BA:459:U:H5	1.83	0.44
43:BX:89:ILE:HG22	43:BX:91:ALA:H	1.83	0.44
26:DD:28:GLU:H	26:DD:29:PRO:HD2	1.83	0.44
59:DA:270(N):G:O2'	59:DA:270(P):C:H5'	2.18	0.44
21:CA:748:C:H4'	21:CA:749:C:O5'	2.18	0.44
47:B1:70:VAL:O	47:B1:73:LEU:HB3	2.18	0.44
29:BG:14:GLU:O	29:BG:18:GLU:HB2	2.18	0.44
2:AC:87:LEU:HA	2:AC:87:LEU:HD13	1.83	0.44
2:AC:179:ARG:HG3	2:AC:179:ARG:H	1.55	0.44
12:CM:99:ARG:HD3	12:CM:99:ARG:HA	1.79	0.44
21:AA:1302:U:H2'	21:AA:1302:U:O2	2.16	0.44
12:CM:12:ASN:ND2	12:CM:12:ASN:O	2.49	0.44
59:DA:2090:G:C6	59:DA:2230:G:C6	3.06	0.44
6:AG:9:VAL:O	6:AG:10:ARG:HB2	2.18	0.44
59:DA:2038:G:H2'	59:DA:2039:C:O4'	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:377:G:H1	21:AA:386:C:N4	2.14	0.43
59:BA:1905:C:H6	63:BA:2904:NMV:N7	2.15	0.43
3:AD:25:ARG:CZ	21:AA:429:U:H2'	2.48	0.43
21:CA:62:U:H2'	21:CA:63:C:C6	2.53	0.43
59:DA:1850:G:H2'	59:DA:1851:U:O4'	2.17	0.43
11:CL:24:VAL:C	11:CL:26:ALA:H	2.21	0.43
21:CA:591:U:H2'	21:CA:592:G:H8	1.83	0.43
60:DB:66:A:O2'	60:DB:67:G:N7	2.44	0.43
30:BH:56:SER:HB3	30:BH:61:HIS:CE1	2.53	0.43
59:BA:1313:U:C2	59:BA:1610:A:C2	3.06	0.43
59:BA:1852:C:N4	59:BA:1889:A:OP2	2.48	0.43
21:CA:608:A:H2'	21:CA:609:A:C8	2.53	0.43
59:BA:966:G:O4'	59:BA:2267:A:N6	2.51	0.43
36:BQ:102:VAL:HG12	36:BQ:103:MET:N	2.33	0.43
59:BA:810:U:H4'	59:BA:811:U:C6	2.53	0.43
35:BP:83:VAL:HG12	35:BP:114:ILE:HA	1.99	0.43
21:CA:897:C:C2	21:CA:902:G:N2	2.80	0.43
59:DA:783:A:H2'	59:DA:784:A:H4'	1.99	0.43
59:BA:1712(F):U:C4	59:BA:1712(G):G:C5	3.06	0.43
59:BA:817:C:H2'	59:BA:839:U:H5''	2.00	0.43
59:DA:815:C:H2'	59:DA:816:C:H6	1.83	0.43
21:AA:676:A:H2'	21:AA:677:U:C6	2.53	0.43
43:DX:53:LYS:HG3	43:DX:54:VAL:N	2.33	0.43
59:BA:49:A:C8	59:BA:51:G:C2	3.06	0.43
3:CD:77:ASN:ND2	21:CA:401:C:OP1	2.47	0.43
55:B9:17:ILE:CD1	55:B9:19:ARG:HH21	2.31	0.43
28:DF:155:LEU:H	28:DF:189:THR:HB	1.83	0.43
20:CY:466:LEU:O	20:CY:471:LYS:N	2.51	0.43
59:BA:669:G:N3	59:BA:669:G:H2'	2.32	0.43
32:DK:123:ALA:O	32:DK:127:ILE:HG12	2.18	0.43
59:DA:27:G:H1'	59:DA:513:A:N6	2.33	0.43
10:CK:28:THR:O	10:CK:44:SER:HA	2.18	0.43
52:D6:16:CYS:C	52:D6:18:ARG:H	2.21	0.43
21:AA:898:G:H1'	21:AA:901:A:H61	1.83	0.43
59:BA:1458:C:H4'	59:BA:1459:G:O5'	2.18	0.43
59:DA:2411:A:H2'	59:DA:2412:A:C8	2.53	0.43
59:BA:2107:C:O2	59:BA:2182:G:N1	2.44	0.43
59:BA:1177:A:H2'	59:BA:1178:C:O4'	2.18	0.43
38:BS:17:ARG:HA	38:BS:20:ARG:HB2	2.00	0.43
44:DY:82:PRO:HB2	44:DY:97:ARG:HD3	1.99	0.43
36:BQ:38:GLU:OE2	36:BQ:128:LYS:HG2	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:CV:26:A:O2'	23:CV:27:A:P	2.76	0.43
29:DG:82:LEU:HA	29:DG:82:LEU:HD23	1.81	0.43
10:AK:120:ARG:HD2	21:AA:779:C:H1'	1.98	0.43
21:AA:357:G:H1'	21:AA:368:U:O2	2.18	0.43
21:CA:756:C:H2'	21:CA:757:U:C6	2.53	0.43
39:BT:96:ARG:NH2	59:BA:2717:G:H1'	2.32	0.43
21:AA:131:C:C2	21:AA:132:C:C5	3.06	0.43
25:BC:182:PRO:HB3	25:BC:183:PRO:HD2	1.99	0.43
14:AO:46:HIS:CE1	21:AA:669:U:H5'	2.53	0.43
41:BV:23:GLU:OE2	59:BA:993:G:N2	2.49	0.43
59:BA:797:C:H2'	59:BA:798:G:H8	1.80	0.43
59:BA:2564:A:H5'	59:BA:2648:C:H4'	2.00	0.43
20:AY:309:LEU:HA	20:AY:333:GLY:HA3	1.99	0.43
29:DG:173:LEU:HD12	29:DG:180:PHE:HZ	1.83	0.43
16:AQ:28:PRO:HB2	16:AQ:29:HIS:H	1.60	0.43
22:AW:64:G:N2	22:AW:65:U:C2	2.86	0.43
48:B2:50:ILE:H	48:B2:50:ILE:HG13	1.65	0.43
59:DA:2202(D):G:H4'	59:DA:2202(E):A:C6	2.53	0.43
20:AY:431:LEU:HB3	20:AY:438:PHE:CZ	2.53	0.43
21:AA:253:U:O4	21:AA:273:A:N1	2.52	0.43
21:AA:1440(E):G:H1	21:AA:1440(N):C:H42	1.65	0.43
29:DG:126:ASP:CG	59:DA:2302:G:H21	2.15	0.43
20:AY:516:PRO:HA	20:AY:563:ILE:HG23	2.00	0.43
6:AG:71:PRO:HG2	6:AG:96:GLN:HA	2.00	0.43
59:DA:2598:A:O2'	59:DA:2599:G:OP1	2.35	0.43
4:CE:77:PRO:HD2	4:CE:142:LEU:HD22	2.00	0.43
59:DA:211:A:C4	59:DA:212:G:C8	3.06	0.43
47:B1:64:ALA:O	47:B1:66:HIS:N	2.46	0.43
45:BZ:151:HIS:HA	45:BZ:171:ILE:HG12	2.00	0.43
7:AH:97:VAL:HG22	7:AH:98:LYS:N	2.33	0.43
20:CY:489:LYS:HD3	20:CY:597:GLY:HA2	2.00	0.43
59:BA:593:G:H2'	59:BA:594:U:C6	2.53	0.43
34:BO:24:VAL:HG13	34:BO:37:ASP:HB3	1.99	0.43
59:BA:1903:G:H2'	59:BA:1904:G:C8	2.53	0.43
20:CY:561:VAL:HG21	20:CY:676:TYR:CE2	2.53	0.43
44:BY:6:HIS:HB2	44:BY:7:VAL:H	1.46	0.43
14:CO:33:THR:O	14:CO:36:ILE:HB	2.18	0.43
59:DA:1899:G:H21	59:DA:1902:C:N4	2.16	0.43
26:BD:221:VAL:HA	59:BA:1789:A:H5''	1.99	0.43
5:AF:35:ALA:HB1	5:AF:65:VAL:CG2	2.48	0.43
21:AA:306:G:H2'	21:AA:307:C:H6	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CY:183:MET:O	20:CY:184:LYS:HG3	2.18	0.43
20:AY:684:GLN:O	20:AY:688:ILE:HG12	2.17	0.43
21:AA:1007:C:H2'	21:AA:1008:C:O4'	2.18	0.43
59:BA:2676:C:H2'	59:BA:2677:G:C8	2.53	0.43
36:BQ:67:ARG:HD2	36:BQ:105:GLU:OE2	2.18	0.43
9:CJ:24:VAL:HG21	9:CJ:37:PRO:HD3	2.01	0.43
10:AK:67:ASP:O	10:AK:70:LYS:HB3	2.18	0.43
20:CY:218:GLU:HG2	20:CY:231:TYR:CE1	2.53	0.43
54:B8:63:PRO:O	54:B8:64:TYR:HB2	2.18	0.43
59:DA:30:G:C5	59:DA:31:C:C5	3.06	0.43
59:BA:216:A:H2'	59:BA:217:G:O4'	2.18	0.43
30:BH:153:LYS:HG3	30:BH:154:PRO:HD2	2.00	0.43
40:DU:102:GLU:HG3	40:DU:104:GLN:OE1	2.18	0.43
33:DN:52:VAL:HG12	33:DN:54:VAL:HA	2.00	0.43
33:DN:23:LEU:CD2	33:DN:62:VAL:HG23	2.47	0.43
27:BE:50:GLY:HA2	27:BE:78:LEU:HA	2.00	0.43
33:BN:72:TYR:HA	33:BN:73:THR:HG22	1.99	0.43
63:CA:1601:NMY:H172	63:CA:1601:NMY:H19	1.99	0.43
59:BA:1905:C:C6	63:BA:2904:NMY:N7	2.86	0.43
21:CA:146:G:H2'	21:CA:147:G:C8	2.53	0.43
59:DA:2478:A:H1'	59:DA:2528:U:O2'	2.19	0.43
59:DA:2632:A:H2	59:DA:2786:U:O2	2.01	0.43
21:CA:1218:C:O2'	21:CA:1219:U:H5'	2.17	0.43
21:CA:1041:A:C5	21:CA:1042:G:C8	3.06	0.43
60:DB:52:A:H5'	60:DB:53:A:OP2	2.17	0.43
21:CA:610:G:H2'	21:CA:611:A:H8	1.83	0.43
59:DA:922:U:H2'	59:DA:923:C:H6	1.79	0.43
21:CA:1348:U:C4	21:CA:1374:A:C2	3.06	0.43
21:CA:1347:G:O2'	21:CA:1373:G:O6	2.34	0.43
59:DA:8:A:C2	59:DA:9:U:C2	3.06	0.43
34:DO:67:LYS:C	34:DO:68:GLU:HG2	2.39	0.43
27:BE:63:LEU:C	27:BE:65:GLY:H	2.20	0.43
21:CA:400:C:H2'	21:CA:401:C:C6	2.52	0.43
36:DQ:92:GLY:O	36:DQ:94:VAL:HG22	2.18	0.43
21:AA:1340:A:C6	21:AA:1341:U:N3	2.86	0.43
59:DA:699:A:N3	59:DA:1634:A:O2'	2.41	0.43
59:DA:684:G:N2	59:DA:775:G:N7	2.63	0.43
59:BA:1326:U:H2'	59:BA:1327:C:O4'	2.17	0.43
25:DC:132:LEU:C	25:DC:138:LEU:HB2	2.38	0.43
42:BW:50:VAL:O	42:BW:53:SER:HB2	2.18	0.43
59:DA:2742:C:H2'	59:DA:2743:C:C6	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BS:13:ARG:C	38:BS:15:ARG:N	2.70	0.43
2:AC:22:TRP:HB3	2:AC:59:ARG:N	2.31	0.43
39:DT:46:GLU:O	39:DT:65:LYS:HD2	2.17	0.43
59:DA:975:G:H1'	59:DA:990:A:N1	2.33	0.43
15:CP:16:HIS:HB3	21:CA:625:G:H5'	2.00	0.43
60:BB:65:C:C5	60:BB:66:A:H1'	2.52	0.43
10:CK:84:VAL:N	10:CK:109:VAL:O	2.51	0.43
19:AT:73:HIS:O	19:AT:75:ASN:N	2.50	0.43
21:CA:776:G:O2'	21:CA:777:A:N7	2.50	0.43
25:BC:6:LYS:HA	25:BC:9:ARG:HB3	1.99	0.43
59:BA:2533:A:H2'	59:BA:2534:A:O4'	2.19	0.43
20:AY:341:VAL:HB	20:AY:342:TYR:H	1.55	0.43
28:BF:110:LEU:HA	28:BF:183:VAL:CG1	2.48	0.43
59:BA:2082:A:H62	59:BA:2237:G:N2	2.14	0.43
59:DA:814:C:H1'	59:DA:1224:C:H42	1.83	0.43
59:BA:287:C:H2'	59:BA:289:A:H8	1.79	0.43
59:DA:712:G:H1	59:DA:719:C:N4	2.14	0.43
20:AY:286:ILE:HA	20:AY:287:PRO:HD3	1.76	0.43
53:D7:29:LYS:HG3	53:D7:29:LYS:H	1.45	0.43
59:BA:122:G:H2'	59:BA:123:G:C8	2.50	0.43
59:BA:1812:A:H2'	59:BA:1813:G:H8	1.83	0.43
59:DA:1164:G:H1	59:DA:1185:C:H42	1.66	0.43
20:AY:563:ILE:HG22	20:AY:564:LYS:H	1.82	0.43
5:CF:8:ILE:HG23	5:CF:88:VAL:HG22	2.00	0.43
59:DA:1506(L):G:H2'	59:DA:1506(M):U:O4'	2.18	0.43
20:AY:347:GLY:O	20:AY:348:ARG:NE	2.51	0.43
19:AT:70:SER:HB2	21:AA:324:G:OP1	2.18	0.43
59:BA:1667:G:H1'	59:BA:1991:U:H5	1.81	0.43
59:DA:1785:A:H2'	59:DA:1787:A:C8	2.54	0.43
3:AD:19:LEU:O	3:AD:21:LEU:N	2.50	0.43
34:BO:4:PRO:HG2	34:BO:31:LYS:HE2	2.00	0.43
59:BA:1864:U:H3	59:BA:1878:G:H1	1.66	0.43
21:CA:5:U:H1'	21:CA:6:G:C6	2.53	0.43
29:BG:82:LEU:HA	29:BG:82:LEU:HD23	1.87	0.43
8:AI:111:ARG:HG3	13:AN:61:TRP:CZ2	2.52	0.43
11:AL:113:ARG:HE	11:AL:115:LYS:HB3	1.83	0.43
21:AA:31:G:H5'	21:AA:306:G:H22	1.83	0.43
21:CA:346:G:H4'	39:DT:41:ARG:CZ	2.48	0.43
4:CE:127:ASN:HA	4:CE:128:PRO:HD3	1.82	0.43
32:BK:34:ILE:HA	32:BK:37:PHE:HB3	2.01	0.43
59:BA:1008:C:H1'	59:BA:1009:A:N7	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:2854:G:H1	59:DA:2863:C:H42	1.66	0.43
4:AE:51:VAL:HB	4:AE:52:PRO:HD3	2.00	0.43
59:BA:2439:A:H2	59:BA:2601:C:OP2	2.01	0.43
50:B4:1:MET:N	50:B4:1:MET:SD	2.78	0.43
42:BW:84:ARG:HA	42:BW:84:ARG:HD3	1.87	0.43
12:AM:125:ARG:HE	21:AA:969:A:H61	1.66	0.43
21:CA:722:A:H3'	21:CA:722:A:N3	2.34	0.43
29:DG:146:TYR:O	29:DG:149:VAL:HG12	2.18	0.43
13:CN:23:ARG:NH1	13:CN:29:ARG:HA	2.33	0.43
3:CD:57:ARG:HD2	3:CD:206:PHE:HB2	2.00	0.43
16:CQ:12:SER:HB2	16:CQ:14:LYS:HE3	2.00	0.43
33:DN:50:ASP:CG	33:DN:119:ARG:HB3	2.39	0.43
33:DN:71:ILE:HB	33:DN:97:ARG:CB	2.28	0.43
23:CV:8:A:N7	23:CV:9:G:N2	2.58	0.43
21:AA:375:U:H2'	21:AA:376:G:O4'	2.18	0.43
33:BN:47:ALA:HB1	33:BN:119:ARG:HH11	1.83	0.43
33:BN:84:LYS:CG	33:BN:86:PRO:HD3	2.48	0.43
63:DA:2901:NMY:O21	63:DA:2901:NMY:N23	2.52	0.43
21:CA:1158:C:C6	21:CA:1160:G:H1'	2.53	0.43
59:DA:1630(A):C:N3	59:DA:1635:G:C6	2.84	0.43
21:CA:145:G:N2	21:CA:177:C:N3	2.59	0.43
11:CL:54:LYS:HB3	11:CL:55:VAL:H	1.58	0.43
21:CA:1145:C:C4'	21:CA:1146:A:H5'	2.48	0.43
20:AY:26:THR:O	20:AY:29:THR:HB	2.17	0.43
59:BA:271(F):G:N3	59:BA:271(G):G:C8	2.87	0.43
59:DA:1348:G:N1	59:DA:1598:C:N4	2.30	0.43
59:BA:953:A:H1'	59:BA:2266:A:OP2	2.19	0.43
45:DZ:73:GLN:HB3	45:DZ:75:ASN:ND2	2.33	0.43
45:DZ:71:VAL:HA	45:DZ:88:PHE:HD2	1.81	0.43
21:CA:774:G:N2	21:CA:805:C:C2	2.80	0.43
60:DB:78:A:H3'	60:DB:79:C:C6	2.54	0.43
59:DA:1908:C:N3	59:DA:1922:G:N2	2.49	0.43
6:CG:94:ARG:NH2	21:CA:1378:C:H4'	2.33	0.43
59:DA:1198:U:C4	59:DA:1247:A:N1	2.83	0.43
59:BA:902:C:H2'	59:BA:903:C:C6	2.52	0.43
59:DA:79:G:H2'	59:DA:80:G:O4'	2.17	0.43
27:DE:14:ILE:O	27:DE:21:VAL:HG22	2.18	0.43
19:AT:10:LEU:HD13	21:AA:331:G:H2'	2.00	0.43
59:BA:1327:C:H2'	59:BA:1328:G:O4'	2.18	0.43
25:DC:19:LYS:HB3	25:DC:20:VAL:H	1.71	0.43
26:DD:267:SER:O	26:DD:270:ILE:HG12	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:CI:20:ARG:N	8:CI:60:ASP:O	2.50	0.43
16:AQ:43:LEU:CB	16:AQ:69:LYS:HG3	2.47	0.43
59:BA:1047:G:O2'	59:BA:1110:G:N1	2.45	0.43
59:BA:709:U:O4	59:BA:722:A:N1	2.51	0.43
59:BA:1000:A:H2'	59:BA:1001:A:H8	1.82	0.43
53:B7:30:VAL:O	53:B7:34:ARG:HG2	2.18	0.43
54:B8:23:VAL:HA	54:B8:48:PHE:O	2.18	0.43
36:BQ:45:GLN:HB3	59:BA:2484:G:OP1	2.19	0.43
21:CA:335:C:H2'	21:CA:336:C:C6	2.53	0.43
29:DG:43:LEU:HB2	29:DG:88:ILE:CG2	2.48	0.43
21:CA:677:U:O2	21:CA:778:G:H5'	2.17	0.43
3:AD:109:GLY:O	3:AD:111:ALA:N	2.51	0.43
12:CM:26:GLY:N	21:CA:1329:A:H5''	2.30	0.43
21:AA:837:G:H2'	21:AA:838:G:H8	1.83	0.43
40:BU:21:ALA:HB2	40:BU:39:LEU:HD11	1.99	0.43
21:AA:1389:C:H2'	21:AA:1390:U:C6	2.53	0.43
29:BG:38:VAL:HG11	59:BA:2313:C:O2'	2.17	0.43
26:BD:76:PRO:HA	26:BD:118:VAL:HG23	1.99	0.43
39:DT:84:GLN:O	39:DT:86:ILE:N	2.48	0.43
20:AY:141:LYS:O	20:AY:143:GLY:N	2.52	0.43
59:BA:2811:G:N2	59:BA:2812:G:H1'	2.34	0.43
21:AA:556:C:H2'	21:AA:557:G:H8	1.83	0.43
20:AY:428:LEU:HD22	20:AY:440:VAL:HG11	1.99	0.43
10:AK:42:TRP:H	10:AK:71:LYS:NZ	2.15	0.43
47:D1:43:TYR:HB3	59:DA:2231:C:OP1	2.18	0.43
59:BA:695:G:H4'	59:BA:1380:G:H4'	2.00	0.43
35:BP:5:ASP:OD2	35:BP:6:LEU:N	2.50	0.43
60:BB:92:G:H2'	60:BB:93:C:C6	2.53	0.43
59:BA:534:U:H2'	59:BA:535:C:C6	2.53	0.43
42:BW:48:ALA:O	42:BW:51:LEU:HB3	2.18	0.43
59:BA:2845:G:H2'	59:BA:2846:G:H8	1.84	0.43
35:DP:111:ARG:HB3	35:DP:128:HIS:CG	2.53	0.43
21:AA:504:C:H2'	21:AA:511:C:C5	2.53	0.43
53:B7:5:TRP:HA	53:B7:5:TRP:HE3	1.83	0.43
9:AJ:57:LYS:HZ1	21:AA:1366:C:H4'	1.83	0.43
28:DF:33:LEU:HD11	28:DF:112:MET:HB3	2.00	0.43
20:CY:181:LEU:C	20:CY:183:MET:H	2.21	0.43
21:AA:186(O):G:H2'	21:AA:186(P):U:C6	2.54	0.43
42:DW:47:VAL:HA	42:DW:50:VAL:HG12	2.00	0.43
3:AD:9:CYS:O	3:AD:12:CYS:HB2	2.18	0.43
21:CA:457:C:H2'	21:CA:458:C:C6	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BJ:86:UNK:O	31:BJ:91:UNK:N	2.51	0.43
29:BG:75:LYS:HD3	29:BG:75:LYS:HA	1.70	0.43
45:DZ:186:GLU:H	45:DZ:186:GLU:HG2	1.67	0.43
12:CM:125:ARG:NH1	21:CA:969:A:N1	2.67	0.43
6:AG:57:GLU:HB3	6:AG:58:PRO:HD2	2.00	0.43
26:BD:57:GLY:HA2	26:BD:214:TRP:O	2.18	0.43
59:DA:2023:G:H2'	59:DA:2024:G:O4'	2.18	0.43
33:BN:97:ARG:O	33:BN:105:GLY:CA	2.67	0.43
21:CA:1405:G:H3'	63:CA:1601:NMY:H232	1.99	0.43
59:DA:1932:A:H3'	59:DA:1933:G:H8	1.84	0.43
21:AA:1157:A:C2	21:AA:1181:G:C4	3.06	0.43
59:BA:1968:G:P	59:BA:1968:G:O4'	2.76	0.43
23:CV:19:G:C2	24:CX:36:C:N3	2.80	0.43
11:CL:39:VAL:CG1	11:CL:40:VAL:H	2.23	0.43
59:BA:910:A:H2'	59:BA:2264:C:HO2'	1.81	0.43
46:D0:74:ARG:HG3	60:DB:12:C:O2'	2.18	0.43
18:CS:36:ARG:HD2	18:CS:52:TYR:O	2.19	0.43
60:DB:32:C:O2	60:DB:50:G:C2	2.67	0.43
21:AA:1127:G:O2'	21:AA:1128:C:H5'	2.18	0.43
22:CW:43:G:H2'	22:CW:44:G:C1'	2.49	0.43
48:D2:32:LEU:O	48:D2:35:LEU:HB2	2.19	0.43
47:D1:18:ILE:HD12	47:D1:18:ILE:HA	1.81	0.43
59:DA:1951:U:H2'	59:DA:1953:A:OP2	2.18	0.43
59:DA:784:A:O2'	59:DA:785:G:H8	2.00	0.43
21:CA:192:U:H2'	21:CA:193:C:H6	1.82	0.43
59:DA:893:C:H2'	59:DA:894:C:C6	2.52	0.43
36:DQ:41:TRP:HB3	36:DQ:94:VAL:CB	2.48	0.43
21:AA:1016:A:O5'	21:AA:1016:A:H8	2.01	0.43
27:BE:61:ARG:HA	27:BE:61:ARG:HD3	1.56	0.43
38:BS:99:LYS:HG2	38:BS:100:ALA:N	2.34	0.43
39:DT:62:THR:CB	39:DT:75:ILE:HG13	2.49	0.43
54:D8:49:VAL:HG12	54:D8:50:LEU:H	1.84	0.43
1:AB:71:VAL:O	1:AB:165:VAL:HG23	2.18	0.43
1:AB:78:GLN:O	1:AB:81:VAL:HG22	2.18	0.43
1:AB:69:LEU:HD13	1:AB:92:TYR:HA	2.00	0.43
20:AY:415:PRO:HG2	20:AY:418:LYS:HA	1.99	0.43
2:CC:88:ARG:NH2	2:CC:100:ALA:HA	2.24	0.43
9:CJ:58:ASP:CG	9:CJ:59:SER:H	2.22	0.43
39:BT:74:ARG:HD2	39:BT:76:PHE:CE2	2.54	0.43
37:BR:2:ARG:HA	37:BR:5:LYS:HE2	2.00	0.43
38:BS:15:ARG:HG3	38:BS:18:ILE:N	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BS:27:SER:HA	38:BS:88:ASP:HB3	2.00	0.43
53:B7:31:LEU:O	53:B7:34:ARG:HB2	2.19	0.43
40:BU:15:LYS:HG2	40:BU:18:LEU:HD13	2.01	0.43
22:AW:44:G:H3'	22:AW:45:G:C8	2.53	0.43
20:CY:8:ASP:C	20:CY:10:LYS:H	2.21	0.43
26:BD:108:PRO:HB3	26:BD:196:VAL:HA	2.00	0.43
20:AY:485:GLU:HA	20:AY:601:ILE:HA	2.01	0.43
59:DA:482:A:H1'	59:DA:498:G:N2	2.33	0.43
59:DA:2311:A:O5'	59:DA:2312:U:H5	2.01	0.43
47:D1:48:LYS:HA	47:D1:60:PHE:O	2.18	0.43
59:BA:1659:U:O2	59:BA:2001:A:N1	2.51	0.43
21:CA:893:C:C2	21:CA:894:G:C8	3.06	0.43
20:AY:99:ARG:HE	20:AY:403:GLU:HG2	1.82	0.43
21:CA:1359:C:O2'	21:CA:1361:G:N7	2.52	0.43
37:BR:38:VAL:HG23	37:BR:110:PRO:HB2	1.99	0.43
20:AY:71:THR:HG21	20:AY:357:ARG:HD3	2.00	0.43
59:BA:357:A:H2'	59:BA:357(A):U:H6	1.83	0.43
59:BA:1949:G:C6	59:BA:1950:G:C6	3.07	0.43
20:CY:519:ARG:HB3	20:CY:675:HIS:CD2	2.53	0.43
59:BA:2816:C:H2'	59:BA:2817:G:H8	1.84	0.43
59:DA:52:A:H8	59:DA:52:A:O5'	2.01	0.43
35:DP:99:LEU:HG	35:DP:100:LEU:HD13	2.00	0.43
59:BA:270(Q):C:H2'	59:BA:270(R):G:O4'	2.18	0.43
13:CN:40:CYS:SG	13:CN:42:ILE:N	2.91	0.43
3:CD:98:GLU:O	3:CD:104:VAL:HG23	2.19	0.43
10:AK:71:LYS:HE2	10:AK:71:LYS:HB2	1.70	0.43
59:BA:767:U:H2'	59:BA:768:G:H8	1.82	0.43
59:BA:2538:C:H2'	59:BA:2539:C:H6	1.83	0.43
1:AB:107:THR:CG2	21:AA:1103:C:H1'	2.48	0.43
20:AY:120:THR:HG21	20:AY:665:GLY:O	2.18	0.43
59:DA:270(C):C:N4	59:DA:270(W):G:H1	2.15	0.43
59:BA:1324:G:H1	59:BA:1330:C:H42	1.65	0.43
4:AE:20:GLN:C	4:AE:22:GLY:H	2.22	0.43
20:AY:679:VAL:HA	20:AY:680:PRO:HD2	1.81	0.43
21:AA:123:C:O2'	21:AA:290:C:O2	2.33	0.43
49:B3:23:LEU:HB3	49:B3:28:LEU:HB3	1.99	0.43
6:CG:103:TRP:CH2	6:CG:141:VAL:HG21	2.54	0.43
37:BR:68:ARG:HG3	59:BA:2707:G:O2'	2.18	0.43
59:BA:1250:G:H8	59:BA:1250:G:OP2	2.01	0.43
41:DV:66:ARG:HG2	41:DV:88:ARG:HD3	2.00	0.43
59:BA:2862:G:H2'	59:BA:2863:C:H6	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CA:346:G:H4'	39:DT:41:ARG:NH2	2.33	0.43
12:CM:71:ARG:HA	12:CM:74:VAL:HB	1.99	0.43
59:BA:1644:C:H2'	59:BA:1645:G:O4'	2.19	0.43
36:BQ:111:GLU:O	36:BQ:115:MET:HG3	2.19	0.43
59:BA:1768:U:H2'	59:BA:1769:G:C8	2.52	0.43
2:AC:23:TYR:HB3	9:AJ:95:GLU:HB2	1.99	0.43
12:AM:120:LYS:HA	12:AM:120:LYS:HD2	1.85	0.43
59:DA:82:G:H8	59:DA:82:G:O5'	2.00	0.43
59:BA:957:A:OP1	59:BA:957:A:H8	2.01	0.43
59:BA:1692:U:O2'	59:BA:1693:U:H2'	2.18	0.43
45:BZ:183:LEU:O	45:BZ:186:GLU:HB3	2.19	0.43
59:DA:2641:G:H1	59:DA:2773:C:N4	2.11	0.43
33:DN:114:ARG:NH1	59:DA:527:C:O2'	2.36	0.43
33:DN:100:GLU:HB2	33:DN:104:LYS:O	2.19	0.43
40:DU:59:ARG:HD2	59:DA:1009:A:H5'	2.01	0.43
59:BA:2042:A:H2'	59:BA:2043:C:H5'	2.01	0.43
33:BN:114:ARG:O	33:BN:116:LEU:C	2.51	0.43
21:AA:1157:A:H61	21:AA:1180:A:H3'	1.84	0.43
21:CA:1158:C:H42	21:CA:1177:G:H22	1.66	0.43
63:BA:2904:NMY:O21	63:BA:2904:NMY:N23	2.52	0.43
59:BA:1664:A:H3'	59:BA:1665:A:C8	2.51	0.43
21:CA:103:C:O2'	21:CA:172:A:N1	2.46	0.43
30:DH:176:ALA:CA	59:DA:2529:G:H5''	2.47	0.43
30:BH:62:LYS:HB3	59:BA:2749:A:H4'	1.99	0.43
60:DB:24:G:N1	60:DB:56:G:C2	2.86	0.43
22:CW:20:U:H3	22:CW:59:A:N6	2.16	0.43
39:DT:5:ALA:N	59:DA:2875:C:O2'	2.38	0.43
59:BA:692:C:H2'	59:BA:693:C:C6	2.53	0.43
21:CA:272:C:C2	21:CA:273:A:C8	3.07	0.43
21:CA:607:A:H2'	21:CA:608:A:O4'	2.18	0.43
59:DA:36:G:C2	59:DA:444:C:N3	2.83	0.43
59:DA:1170:G:H2'	59:DA:1171:G:H8	1.83	0.43
59:DA:1038:C:H2'	59:DA:1039:G:C8	2.54	0.43
21:CA:1090:U:H2'	21:CA:1091:U:H6	1.82	0.43
59:BA:2450:A:N3	59:BA:2451:A:H5'	2.33	0.43
25:BC:104:ILE:HG21	25:BC:132:LEU:HD11	2.00	0.43
25:BC:104:ILE:HA	25:BC:111:PHE:CE2	2.54	0.43
25:BC:77:ALA:CB	25:BC:95:VAL:HG13	2.49	0.43
25:BC:84:ILE:HG12	25:BC:95:VAL:HG12	2.00	0.43
59:DA:271(K):U:O2'	59:DA:271(L):C:H5'	2.18	0.43
1:AB:70:PHE:O	1:AB:92:TYR:HB2	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CY:18:ALA:HB1	20:CY:121:VAL:CG1	2.49	0.43
59:BA:77:C:H2'	59:BA:78:A:H8	1.81	0.43
59:DA:2281:C:H5'	59:DA:2388:A:C6	2.53	0.43
59:DA:525:U:H5'	59:DA:556:G:C5'	2.45	0.43
40:BU:28:ARG:HA	40:BU:34:LYS:HB3	2.00	0.43
59:BA:1048:A:H3'	59:BA:1049:C:H6	1.83	0.43
59:BA:1110:G:O5'	59:BA:1110:G:H8	2.02	0.43
11:CL:15:ARG:NH2	21:CA:567:G:O6	2.50	0.43
11:CL:6:THR:HG21	21:CA:880:C:H5	1.83	0.43
28:BF:7:TYR:CZ	28:BF:10:PRO:HD3	2.53	0.43
13:AN:53:LEU:HA	13:AN:54:PRO:HD3	1.86	0.43
38:BS:20:ARG:NH1	38:BS:88:ASP:OD2	2.46	0.43
2:AC:22:TRP:CG	2:AC:59:ARG:HB2	2.53	0.43
2:AC:59:ARG:HH12	2:AC:62:ASP:H	1.65	0.43
59:DA:2687:U:C4	59:DA:2688:U:C5	3.07	0.43
59:BA:2594:C:N4	59:BA:2595:G:O6	2.51	0.43
35:BP:97:PRO:O	35:BP:101:VAL:HG13	2.19	0.43
59:BA:1674:G:N2	59:BA:1677:A:H61	2.17	0.43
3:CD:162:LEU:HD13	3:CD:178:VAL:HG12	2.00	0.43
27:BE:95:ILE:HD13	27:BE:95:ILE:H	1.83	0.43
35:DP:96:THR:O	35:DP:100:LEU:HD22	2.17	0.43
21:CA:134:A:O5'	21:CA:134:A:H8	2.02	0.43
59:DA:764:A:O2'	59:DA:765:G:H5'	2.19	0.43
21:AA:556:C:H2'	21:AA:557:G:C8	2.53	0.43
47:B1:58:ILE:HD11	47:B1:91:LYS:HB3	2.00	0.43
59:DA:2103:C:H2'	59:DA:2104:G:O4'	2.19	0.43
59:DA:1384:A:N3	59:DA:1405:U:H1'	2.33	0.43
21:AA:892:A:H2'	21:AA:893:C:H6	1.81	0.43
59:DA:310:A:H2'	59:DA:312:G:N7	2.33	0.43
59:DA:270(V):G:H2'	59:DA:270(W):G:H8	1.83	0.43
21:AA:865:A:H5'	21:AA:1078:U:C5	2.52	0.43
23:AV:34:A:HO2'	23:AV:35:A:P	2.42	0.43
26:DD:152:GLY:O	26:DD:154:LYS:N	2.52	0.43
60:BB:71:C:N3	60:BB:105:G:N2	2.62	0.43
4:CE:44:GLY:HA3	4:CE:58:ALA:O	2.19	0.43
17:CR:74:ARG:HG2	17:CR:79:LEU:HD22	2.00	0.43
21:AA:370:C:H2'	21:AA:371:G:C8	2.53	0.43
45:DZ:90:VAL:HG12	45:DZ:91:LEU:H	1.84	0.43
30:DH:101:ARG:O	30:DH:117:PRO:HD3	2.18	0.43
40:BU:106:PHE:O	40:BU:110:VAL:HG23	2.18	0.43
35:DP:146:VAL:O	35:DP:148:LEU:N	2.49	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AS:53:ASN:N	18:AS:56:GLN:O	2.50	0.43
21:CA:279:A:C8	21:CA:281:G:C2	3.06	0.43
29:DG:16:ARG:HB2	29:DG:17:PRO:HD3	2.00	0.43
59:DA:2769:C:H2'	59:DA:2770:G:H8	1.83	0.43
16:AQ:12:SER:HB3	16:AQ:20:THR:OG1	2.19	0.43
32:BK:19:PRO:HB3	32:BK:34:ILE:HD11	1.99	0.43
41:DV:3:ALA:O	41:DV:14:VAL:N	2.41	0.43
1:AB:49:GLU:O	1:AB:52:GLU:HB3	2.18	0.43
18:AS:46:GLY:HA2	18:AS:62:ILE:HG23	2.00	0.43
25:BC:21:TYR:CE2	25:BC:29:LEU:HD22	2.54	0.43
52:B6:14:THR:HB	52:B6:52:VAL:HG11	2.00	0.43
20:CY:618:GLY:HA2	59:DA:1095:A:OP1	2.17	0.43
59:DA:1098:A:H2'	59:DA:1099:G:O4'	2.17	0.43
27:BE:32:PRO:HA	27:BE:90:THR:HG23	2.00	0.43
20:AY:268:GLY:HA2	20:AY:271:LEU:HD12	2.01	0.43
15:AP:60:LEU:HD23	15:AP:60:LEU:HA	1.84	0.43
59:BA:543(D):A:O5'	59:BA:543(D):A:H8	2.01	0.43
21:AA:653:A:N3	21:AA:653:A:H2'	2.34	0.43
59:DA:1535:U:H6	59:DA:1535:U:O5'	2.01	0.43
37:BR:98:LEU:HA	37:BR:98:LEU:HD23	1.84	0.43
7:AH:26:VAL:HG13	7:AH:27:PRO:O	2.18	0.43
33:DN:120:LEU:HG	33:DN:124:ALA:HB2	2.00	0.43
33:BN:104:LYS:HE2	33:BN:104:LYS:HB3	1.75	0.43
59:BA:1825:A:H2'	59:BA:1826:G:O4'	2.19	0.43
21:AA:440:A:C4	21:AA:497:A:C2	3.06	0.43
34:DO:2:ILE:HB	34:DO:6:THR:HG21	2.00	0.43
59:DA:902:C:H2'	59:DA:903:C:C6	2.54	0.43
59:DA:2006:C:C5'	59:DA:2048:G:H5''	2.45	0.43
60:DB:29:A:N1	60:DB:55:U:O4	2.51	0.43
28:BF:63:LYS:CG	28:BF:76:GLY:HA2	2.49	0.43
59:DA:1415:U:C2	59:DA:1587:A:N1	2.83	0.43
59:DA:1416:G:C2	59:DA:1582:C:N3	2.84	0.43
40:DU:25:TRP:CE2	59:DA:17:G:H4'	2.53	0.43
59:DA:129:C:H2'	59:DA:130:C:C6	2.54	0.43
35:BP:131:SER:OG	59:BA:637:A:OP2	2.35	0.43
26:DD:242:ARG:HG2	26:DD:246:PRO:HG3	2.00	0.43
59:BA:2335:A:H1'	59:BA:2336:A:H2'	2.01	0.43
59:DA:190:A:H5''	59:DA:204:A:N6	2.33	0.43
21:AA:943:U:O4	21:AA:1340:A:C6	2.70	0.43
1:AB:82:ARG:HB2	1:AB:92:TYR:CZ	2.54	0.43
59:DA:2259:G:C6	59:DA:2281:C:N3	2.86	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:1207:C:H2'	59:BA:1208:C:C6	2.53	0.43
59:BA:531:C:OP1	59:BA:561:G:N1	2.52	0.43
59:BA:712:G:H2'	59:BA:713:G:O4'	2.19	0.43
39:BT:35:LYS:HD2	39:BT:41:ARG:NH1	2.34	0.43
21:CA:317:G:H2'	21:CA:318:G:H8	1.83	0.43
21:AA:1285:A:H62	21:AA:1355:G:H4'	1.83	0.43
59:BA:708:C:H2'	59:BA:709:U:C6	2.54	0.43
59:DA:1578:U:O2'	59:DA:1579:A:H5'	2.18	0.43
28:BF:156:LEU:HA	28:BF:191:ARG:O	2.18	0.43
59:BA:1152:C:H2'	59:BA:1153:C:O4'	2.19	0.43
26:BD:62:TYR:OH	59:BA:1817:G:OP1	2.24	0.43
35:DP:107:LYS:HB2	35:DP:107:LYS:HE3	1.67	0.43
45:DZ:100:VAL:O	45:DZ:123:ASP:HA	2.17	0.43
29:DG:74:LYS:NZ	59:DA:2313:C:OP2	2.45	0.43
37:BR:13:HIS:HB3	59:BA:2002:G:H5'	2.01	0.43
43:BX:51:VAL:HG13	43:BX:81:VAL:HG13	1.99	0.43
37:BR:38:VAL:HB	37:BR:39:PRO:HD3	2.00	0.43
59:DA:34:C:C4	59:DA:455:C:H5'	2.54	0.43
21:CA:724:G:OP1	21:CA:854:G:O2'	2.36	0.43
59:BA:576:U:H5''	59:BA:2502:G:O2'	2.18	0.43
3:CD:18:LYS:HB2	3:CD:31:CYS:SG	2.58	0.43
52:D6:19:ARG:NE	59:DA:2400:G:H4'	2.33	0.43
28:BF:149:ASP:HB2	28:BF:150:GLY:H	1.56	0.43
21:AA:1170:A:O5'	21:AA:1170:A:H8	2.01	0.43
21:CA:316:G:C8	21:CA:351:G:C2	3.07	0.43
59:BA:1788:C:O5'	59:BA:1788:C:H6	2.01	0.43
59:DA:1506(O):G:O5'	59:DA:1506(O):G:H8	2.02	0.43
20:AY:661:SER:HA	59:BA:2660:A:N7	2.34	0.43
42:BW:32:ALA:O	42:BW:36:LEU:HG	2.19	0.43
2:AC:148:GLY:O	2:AC:203:PHE:HB3	2.18	0.43
59:DA:2794(A):G:O2'	59:DA:2794(E):A:N6	2.50	0.43
26:DD:239:ARG:HG2	59:DA:1971:A:O2'	2.17	0.43
37:BR:46:GLY:HA2	59:BA:2838:G:O2'	2.18	0.43
53:D7:20:ALA:O	53:D7:24:THR:HG22	2.18	0.43
39:BT:111:ARG:HA	39:BT:114:LEU:HB3	2.01	0.43
20:AY:409:ILE:HB	20:AY:455:GLY:O	2.19	0.43
29:BG:84:LYS:H	29:BG:84:LYS:HD2	1.83	0.43
20:AY:335:LEU:HA	20:AY:335:LEU:HD12	1.89	0.43
59:DA:270(J):G:H8	59:DA:270(J):G:O5'	2.01	0.43
21:AA:436:C:H2'	21:AA:437:U:C6	2.54	0.43
59:DA:2606:C:N4	59:DA:2607:G:O6	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:2649:U:H2'	59:BA:2650:U:C6	2.54	0.43
15:AP:59:TRP:CE3	15:AP:62:VAL:HG21	2.54	0.43
33:DN:46:VAL:HG21	33:DN:115:ARG:HG2	1.99	0.43
33:DN:39:ARG:HA	59:DA:1007:C:O4'	2.19	0.43
33:DN:99:LEU:HA	33:DN:99:LEU:HD12	1.86	0.43
27:DE:143:ASN:O	59:DA:2052:G:H4'	2.19	0.43
63:CA:1601:NMY:N23	63:CA:1601:NMY:O21	2.52	0.43
3:AD:25:ARG:HD2	21:AA:410:G:N7	2.34	0.43
27:DE:154:LYS:HG3	27:DE:155:LYS:H	1.83	0.43
27:DE:51:PHE:HD1	27:DE:52:LEU:HB2	1.82	0.43
59:BA:271(G):G:H3'	59:BA:271(H):C:H6	1.83	0.43
21:CA:989:C:O2'	21:CA:1017:G:O2'	2.33	0.43
21:CA:225:C:H2'	21:CA:226:G:O4'	2.18	0.43
59:DA:2113:U:H2'	59:DA:2114:A:O4'	2.18	0.43
60:BB:116:G:H2'	60:BB:116:G:N3	2.34	0.43
59:DA:761:A:H5''	59:DA:762:U:H5''	2.01	0.43
25:BC:114:VAL:C	25:BC:116:ALA:H	2.14	0.43
20:CY:87:HIS:CD2	20:CY:117:GLN:HG3	2.54	0.43
20:CY:457:LEU:O	20:CY:461:ILE:HG12	2.18	0.43
26:BD:260:ARG:HH12	59:BA:1799:G:H3'	1.83	0.43
59:DA:839:U:C2	59:DA:840:C:C5	3.07	0.43
21:CA:1415:G:C2	21:CA:1416:G:H1'	2.53	0.43
48:D2:57:ILE:O	48:D2:60:LEU:HB2	2.18	0.43
59:DA:15:G:H2'	59:DA:16:G:H8	1.80	0.43
21:AA:1254:C:H4'	21:AA:1357:A:OP1	2.18	0.43
44:BY:81:LYS:NZ	44:BY:99:CYS:SG	2.86	0.43
59:BA:1448(A):A:N3	59:BA:1530:G:O2'	2.41	0.43
35:BP:27:HIS:CE1	59:BA:814:C:H5	2.36	0.43
20:AY:289:ILE:O	20:AY:301:ILE:HG13	2.18	0.43
19:AT:16:HIS:O	19:AT:20:LEU:HG	2.19	0.43
41:BV:40:LEU:CD1	41:BV:41:GLY:H	2.31	0.43
20:AY:92:ILE:HG23	20:AY:93:GLU:H	1.83	0.43
45:DZ:108:PRO:CB	45:DZ:144:LEU:H	2.32	0.43
47:D1:3:LYS:HD3	59:DA:1364:G:C8	2.53	0.43
21:CA:154:C:N4	21:CA:167:G:H1	2.16	0.43
59:BA:786:C:H2'	59:BA:787:U:C6	2.53	0.43
21:CA:453:A:N7	21:CA:454:C:N4	2.66	0.43
60:BB:64:C:H2'	60:BB:108:C:N4	2.32	0.43
59:BA:601:C:O2'	59:BA:605:C:OP1	2.36	0.43
20:AY:8:ASP:C	20:AY:10:LYS:H	2.21	0.43
12:CM:102:ARG:NH1	21:CA:950:U:OP2	2.52	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:579:G:H4'	21:AA:728:A:H1'	1.99	0.43
1:CB:95:GLN:OE1	1:CB:96:ARG:NH2	2.51	0.43
20:AY:425:SER:O	20:AY:428:LEU:HG	2.19	0.43
21:AA:1440(O):A:H3'	21:AA:1461:G:C8	2.54	0.43
1:AB:149:LEU:HB3	1:AB:152:PHE:O	2.19	0.43
8:AI:118:LYS:HB3	21:AA:1349:A:OP1	2.18	0.43
3:AD:56:VAL:O	3:AD:59:ARG:HB2	2.18	0.43
59:BA:1506(N):G:O3'	59:BA:1506(O):G:H8	2.02	0.43
13:AN:18:VAL:HG12	21:AA:1360:A:C4	2.54	0.43
29:DG:8:LYS:HG3	29:DG:100:TRP:CE2	2.53	0.43
21:CA:1203:C:H2'	21:CA:1204:A:H8	1.82	0.43
46:B0:10:THR:HB	46:B0:11:ARG:H	1.71	0.43
59:DA:414:C:C2	59:DA:415:A:C8	3.07	0.43
36:BQ:36:ALA:HB3	36:BQ:101:ARG:O	2.19	0.43
59:DA:2363:C:H2'	59:DA:2364:C:H6	1.83	0.43
54:B8:38:GLY:HA2	54:B8:41:ILE:HB	2.00	0.43
9:AJ:57:LYS:HB2	21:AA:972:C:H4'	2.00	0.43
36:BQ:24:GLY:HA2	36:BQ:67:ARG:HH22	1.84	0.43
38:DS:58:LEU:HD23	38:DS:65:VAL:HG13	2.00	0.43
33:BN:135:PRO:O	33:BN:137:LYS:N	2.51	0.43
59:DA:1608:A:H62	59:DA:1621:U:H3	1.65	0.43
11:CL:18:VAL:HG23	11:CL:19:ARG:H	1.84	0.43
20:AY:339:SER:O	20:AY:352:VAL:HG22	2.18	0.43
18:CS:40:ILE:HB	18:CS:68:GLY:HA2	2.01	0.43
20:CY:69:VAL:HG23	20:CY:82:ILE:HG12	1.99	0.43
20:AY:170:ARG:HB3	20:AY:171:GLU:H	1.66	0.43
12:AM:106:ASN:HB3	12:AM:107:ALA:H	1.43	0.43
59:DA:2030:A:H4'	59:DA:2031:A:C8	2.53	0.43
2:AC:156:ARG:H	2:AC:156:ARG:HG3	1.62	0.43
33:DN:121:LYS:HZ2	59:DA:2780:G:N2	2.16	0.43
40:DU:34:LYS:HE2	59:DA:563:G:H21	1.83	0.43
21:CA:1538:C:N4	23:CV:7:G:H1	2.12	0.43
27:BE:15:PHE:CD1	39:BT:80:SER:HB2	2.54	0.43
27:BE:47:VAL:HG21	27:BE:86:PRO:CD	2.48	0.43
33:BN:95:PRO:HD2	33:BN:108:PRO:HA	2.00	0.43
63:BA:2902:NMY:N23	63:BA:2902:NMY:O21	2.52	0.43
21:AA:1494:G:N2	59:BA:1912:A:N3	2.67	0.43
21:AA:1179:A:H2'	21:AA:1180:A:C8	2.53	0.43
24:CX:2:G:C6	24:CX:71:C:N4	2.79	0.43
34:DO:2:ILE:HG22	59:DA:1666:G:H4'	2.00	0.43
59:DA:2048:G:C2	59:DA:2049:G:H1'	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:DE:52:LEU:HA	27:DE:53:PRO:HD3	1.55	0.43
30:BH:58:GLU:HB2	30:BH:61:HIS:CG	2.54	0.43
21:CA:959:A:H2	21:CA:1221:G:N3	2.17	0.43
60:DB:31:C:H1'	60:DB:54:G:C2	2.54	0.43
40:BU:6:THR:HG21	40:BU:10:ARG:HH21	1.83	0.43
21:CA:294:U:P	21:CA:610:G:H21	2.41	0.43
54:B8:17:THR:OG1	54:B8:21:LYS:HB2	2.19	0.43
59:DA:691:C:H2'	59:DA:692:C:C6	2.54	0.43
3:AD:122:ARG:NH1	3:AD:134:ASP:OD1	2.49	0.43
21:CA:1423:G:H2'	21:CA:1424:C:C6	2.53	0.43
21:CA:1003:G:N2	21:CA:1038:C:C4	2.87	0.43
20:CY:145:ASP:CG	20:CY:148:LEU:HB3	2.39	0.43
59:DA:1396:U:H2'	59:DA:1396:U:O2	2.18	0.43
27:BE:143:ASN:O	59:BA:2052:G:O2'	2.25	0.43
21:AA:971:G:H1'	21:AA:1365:G:O2'	2.19	0.43
59:BA:872:A:H2'	59:BA:873:G:O4'	2.17	0.43
39:DT:53:ARG:NH1	59:DA:2683:C:O3'	2.51	0.43
38:DS:21:THR:C	38:DS:23:ARG:H	2.21	0.43
35:BP:50:ARG:N	35:BP:50:ARG:HD3	2.34	0.43
59:DA:1011:G:C6	59:DA:1150:C:N3	2.83	0.43
59:DA:111:A:H2'	59:DA:112:U:C6	2.54	0.43
19:AT:10:LEU:C	19:AT:12:ALA:H	2.22	0.43
59:BA:30:G:C6	59:BA:31:C:N4	2.87	0.43
21:AA:1426:C:H2'	21:AA:1427:U:H6	1.81	0.43
1:CB:155:LEU:HD11	1:CB:159:PRO:HG3	2.01	0.43
11:CL:6:THR:HG21	21:CA:880:C:C5	2.54	0.43
13:AN:24:CYS:HB2	13:AN:40:CYS:N	2.24	0.43
15:CP:8:ARG:HG2	15:CP:9:PHE:H	1.83	0.43
20:CY:239:GLU:O	20:CY:243:VAL:HG23	2.19	0.43
41:BV:84:LYS:N	59:BA:814:C:OP1	2.49	0.43
38:DS:99:LYS:O	38:DS:100:ALA:C	2.57	0.43
41:BV:66:ARG:HG3	41:BV:90:PRO:HA	2.01	0.43
26:DD:123:ALA:O	26:DD:125:ILE:HG13	2.19	0.43
55:D9:35:ARG:NH1	59:DA:2741:A:H5''	2.30	0.43
59:DA:611(A):C:O5'	59:DA:611(A):C:H6	2.01	0.43
28:DF:103:LYS:HE3	59:DA:618:C:OP1	2.19	0.43
16:AQ:63:ARG:O	16:AQ:65:ILE:HG12	2.19	0.43
21:CA:778:G:H2'	21:CA:779:C:O4'	2.18	0.43
37:BR:45:ARG:HB3	37:BR:97:VAL:HG21	2.00	0.43
59:BA:631:A:H61	59:BA:2415:G:H21	1.66	0.43
35:BP:95:VAL:HA	35:BP:99:LEU:HD22	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:CY:679:VAL:HG12	20:CY:683:VAL:HB	2.00	0.43
59:BA:1056:G:H4'	59:BA:1086:A:C8	2.54	0.43
59:BA:256:A:H2'	59:BA:257:A:C8	2.54	0.43
59:DA:1218:C:H2'	59:DA:1219:G:O4'	2.19	0.43
35:BP:7:ARG:NH1	35:BP:7:ARG:H	2.15	0.43
19:AT:30:LYS:O	19:AT:34:LYS:HG3	2.18	0.43
14:CO:51:HIS:O	14:CO:54:ARG:HB3	2.18	0.43
59:DA:1536:A:H3'	59:DA:1537:C:C6	2.53	0.43
59:DA:2832:U:H5''	59:DA:2833:G:H8	1.83	0.43
5:CF:44:GLY:C	5:CF:59:TYR:HA	2.38	0.43
59:BA:67:U:H2'	59:BA:68:G:C8	2.50	0.43
59:DA:1368:G:H8	59:DA:1368:G:OP2	2.01	0.43
59:BA:1468(D):A:N6	59:BA:1506(N):G:O2'	2.51	0.43
21:AA:109:A:C6	21:AA:326:G:C6	3.07	0.43
59:DA:2070:G:H2'	59:DA:2071:A:C8	2.53	0.43
59:BA:137(B):G:N3	59:BA:137(B):G:H5'	2.34	0.43
21:AA:936:C:H1'	21:AA:1383:C:H42	1.84	0.43
59:BA:2737:G:H1	59:BA:2767:C:H42	1.66	0.43
26:BD:69:ARG:C	26:BD:71:ASP:H	2.20	0.43
31:BJ:68:UNK:O	31:BJ:69:UNK:C	2.66	0.43
30:BH:145:ALA:HA	30:BH:148:ILE:HG12	1.99	0.43
25:BC:143:ALA:O	25:BC:161:ARG:NH2	2.49	0.43
21:CA:126:G:C6	21:CA:236:G:C6	3.07	0.43
33:DN:4:TYR:OH	40:DU:94:ASN:ND2	2.52	0.43
15:AP:75:ARG:HG3	15:AP:80:PHE:HD1	1.84	0.43
34:BO:10:VAL:HG21	34:BO:16:ALA:O	2.19	0.43
59:BA:2352:A:H62	59:BA:2365:G:H21	1.67	0.43
35:BP:74:GLU:HB2	59:BA:244:A:H4'	1.99	0.43
59:DA:1331:A:O2'	59:DA:1332:G:H8	2.02	0.43
20:AY:268:GLY:HA2	20:AY:271:LEU:HB2	2.00	0.43
20:CY:384:ILE:HD11	20:CY:387:ASP:HB3	2.01	0.43
9:AJ:8:LEU:HG	9:AJ:96:ILE:HG22	2.00	0.43
9:AJ:99:LYS:HD3	9:AJ:100:THR:N	2.34	0.43
52:D6:33:LYS:HB2	52:D6:34:LEU:HD12	2.01	0.43
20:CY:445:GLU:HG3	20:CY:482:ALA:HB1	2.00	0.43
4:AE:47:LYS:NZ	4:AE:61:TYR:HE1	2.17	0.43
21:AA:1033:G:H2'	21:AA:1034:G:C8	2.54	0.43
31:BJ:123:UNK:O	31:BJ:124:UNK:C	2.66	0.43
15:AP:27:LYS:H	15:AP:27:LYS:HG2	1.40	0.43
21:AA:711:G:H2'	21:AA:711:G:N3	2.34	0.43
20:AY:89:ASP:OD2	20:AY:89:ASP:N	2.49	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BF:195:ASP:HB3	28:BF:197:ASP:OD2	2.19	0.43
21:AA:635:G:H2'	21:AA:636:U:C6	2.53	0.43
51:D5:10:LYS:HB2	59:DA:2017:U:O2	2.18	0.43
59:DA:2019:A:H61	59:DA:2035:G:H1	1.66	0.43
33:DN:107:LEU:HB3	33:DN:117:PHE:CZ	2.54	0.43
33:DN:85:ILE:CG2	33:DN:97:ARG:CZ	2.96	0.43
59:DA:2552:U:H5'	59:DA:2553:G:P	2.59	0.43
33:BN:74:ARG:NH1	59:BA:2040:C:H5''	2.33	0.43
59:BA:1936:A:N7	59:BA:1943:U:O2	2.52	0.43
59:BA:2560:C:H2'	59:BA:2561:A:H8	1.84	0.43
24:CX:30:C:N4	24:CX:40:G:N1	2.22	0.43
11:CL:49:ASN:ND2	21:CA:521:G:O6	2.52	0.43
11:CL:83:VAL:HG11	11:CL:100:ILE:HD13	2.00	0.43
36:DQ:29:PHE:HZ	36:DQ:67:ARG:HD2	1.83	0.43
30:BH:62:LYS:CB	59:BA:2749:A:H4'	2.49	0.43
25:BC:46:ALA:N	25:BC:171:ALA:O	2.42	0.43
36:BQ:18:LYS:HE3	60:BB:80:U:OP1	2.18	0.43
23:CV:14:A:H2'	23:CV:14:A:H8	1.61	0.43
59:DA:1676:A:C2	59:DA:1677:A:C5	3.07	0.43
47:D1:17:SER:HB3	47:D1:18:ILE:H	1.45	0.43
55:D9:2:LYS:HD3	59:DA:2538:C:O2	2.19	0.43
21:CA:838(A):U:H4'	21:CA:838(B):C:C5	2.54	0.43
45:DZ:72:ARG:O	45:DZ:87:ASP:HB2	2.18	0.43
8:CI:111:ARG:HA	21:CA:1369:C:OP2	2.19	0.43
59:DA:861:A:C2	59:DA:862:G:H1'	2.53	0.43
2:CC:18:TRP:O	2:CC:21:ARG:NH1	2.52	0.43
21:CA:45:U:O2	21:CA:396:G:O6	2.37	0.43
21:AA:1339:A:C2	22:AW:31:A:H5'	2.54	0.43
8:AI:121:ARG:HH22	21:AA:1343:G:H21	1.67	0.43
53:D7:31:LEU:HA	53:D7:34:ARG:CG	2.49	0.43
59:DA:788:A:H4'	59:DA:789:A:H5'	1.99	0.43
18:AS:49:ILE:HB	18:AS:51:VAL:HG22	2.01	0.43
59:DA:98:G:HO2'	59:DA:102:G:HO2'	1.54	0.43
27:BE:60:ASN:CG	27:BE:61:ARG:H	2.22	0.43
55:D9:13:LYS:H	55:D9:13:LYS:HG2	1.70	0.43
42:DW:26:GLY:HA2	42:DW:71:VAL:O	2.18	0.43
32:DK:126:MET:HB2	59:DA:1080:C:O2'	2.19	0.43
20:CY:614:GLU:HG3	20:CY:614:GLU:H	1.49	0.43
20:CY:653:PHE:O	20:CY:654:GLY:C	2.58	0.43
21:AA:333:G:C2	21:AA:334:C:C5	3.07	0.43
21:CA:68(U):U:O2'	21:CA:68(V):G:OP1	2.23	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CA:559:A:H4'	21:CA:560:U:C5'	2.47	0.43
26:BD:9:TYR:CD2	26:BD:10:THR:HG22	2.54	0.43
39:DT:90:GLN:HB2	39:DT:120:ARG:HD2	2.00	0.43
20:CY:246:ILE:HB	20:CY:279:TYR:CE1	2.53	0.43
59:BA:968:G:H2'	59:BA:969:U:O4'	2.19	0.43
21:CA:231:G:H2'	21:CA:232:G:H8	1.83	0.43
59:DA:1435:G:H2'	59:DA:1436:G:C8	2.54	0.43
59:BA:392:C:H2'	59:BA:393:C:O4'	2.19	0.43
12:CM:54:VAL:HA	12:CM:57:ARG:NE	2.32	0.43
7:CH:49:GLU:O	7:CH:59:LEU:HG	2.18	0.43
59:BA:2419:U:H2'	59:BA:2420:C:C6	2.54	0.43
43:BX:40:LYS:O	43:BX:44:GLU:HB2	2.19	0.43
20:AY:216:LEU:HD23	20:AY:217:VAL:N	2.33	0.43
59:DA:1203:G:H2'	59:DA:1204:A:C2	2.54	0.43
59:DA:1204:A:C5	59:DA:1206:G:C6	3.07	0.43
59:DA:1240:U:HO2'	59:DA:1241:A:P	2.41	0.43
28:DF:17:ARG:HG3	28:DF:17:ARG:H	1.43	0.43
29:BG:126:ASP:HB2	29:BG:130:ASN:H	1.84	0.43
28:DF:149:ASP:HB2	28:DF:150:GLY:H	1.70	0.43
20:CY:35:TYR:CD1	20:CY:36:THR:N	2.87	0.43
59:DA:2564:A:N1	59:DA:2647:U:H4'	2.34	0.43
59:BA:1702:G:H2'	59:BA:1703:G:O4'	2.19	0.43
34:DO:71:ARG:HH11	34:DO:72:PRO:HD2	1.84	0.43
19:AT:34:LYS:O	19:AT:38:LYS:HG2	2.19	0.43
44:BY:42:VAL:HB	44:BY:65:ALA:HB3	1.99	0.43
59:BA:914:C:H2'	59:BA:915:C:H5'	2.01	0.43
15:AP:23:ASP:OD1	15:AP:26:ARG:HG3	2.18	0.43
59:BA:1909:C:H2'	59:BA:1910:G:C8	2.52	0.43
6:CG:50:ILE:HD11	6:CG:125:MET:HG3	2.00	0.43
9:AJ:7:LYS:HB3	9:AJ:7:LYS:HE2	1.88	0.43
54:D8:6:THR:CG2	54:D8:62:LEU:HB2	2.49	0.43
59:BA:1444:G:O3'	59:BA:1444(A):A:H8	2.02	0.43
49:D3:40:THR:HB	49:D3:43:ILE:HB	2.00	0.43
59:BA:1468(F):C:H2'	59:BA:1468(G):G:C8	2.54	0.43
59:BA:1808:U:H2'	59:BA:1809:A:O4'	2.18	0.43
59:DA:2083:G:H2'	59:DA:2084:C:O4'	2.18	0.43
59:BA:270(N):G:HO2'	59:BA:270(O):U:H3'	1.84	0.43
59:BA:1196:C:H2'	59:BA:1197:G:O4'	2.19	0.43
29:BG:129:GLY:HA3	29:BG:163:ALA:O	2.18	0.43
34:DO:101:PRO:HA	34:DO:120:GLU:O	2.19	0.43
34:DO:105:GLU:HA	34:DO:108:GLU:HG3	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AD:14:ARG:HA	3:AD:39:PRO:HA	2.00	0.43
59:BA:2440:C:H2'	59:BA:2441:C:H4'	2.00	0.43
54:D8:7:HIS:O	54:D8:11:LYS:HD3	2.19	0.43
59:BA:2720:U:C2	59:BA:2721:A:C8	3.07	0.43
21:AA:1264:C:H42	21:AA:1271:G:H1	1.66	0.43
59:DA:1681:G:N3	59:DA:1762:A:H2'	2.33	0.43
59:DA:2037:G:H2'	59:DA:2038:G:H8	1.83	0.43
59:DA:558:G:C2	59:DA:559:G:C5	3.07	0.43
33:DN:100:GLU:O	33:DN:105:GLY:CA	2.67	0.43
33:DN:35:ARG:HB3	33:DN:75:TYR:O	2.19	0.43
59:DA:897:C:H2'	59:DA:898:C:H5''	2.00	0.43
59:DA:1965:C:C5'	59:DA:1966:A:H2'	2.49	0.43
59:BA:1965:C:O5'	63:BA:2903:NMY:H4	2.18	0.43
23:CV:18:G:H4'	23:CV:19:G:OP1	2.19	0.43
34:DO:3:GLN:O	34:DO:6:THR:HB	2.18	0.43
21:CA:1317:C:N4	21:CA:1318:A:N1	2.67	0.43
53:D7:9:ARG:HG2	59:DA:1309:G:OP1	2.19	0.43
59:DA:1613:G:C2	59:DA:1619:G:C5	3.07	0.43
22:AW:71:C:OP1	59:BA:1892:C:O2'	2.35	0.43
28:DF:50:SER:OG	28:DF:94:PRO:HD3	2.19	0.43
59:BA:952:G:C6	59:BA:966:G:C6	3.07	0.43
48:D2:46:GLN:HB3	48:D2:48:HIS:CE1	2.53	0.43
21:CA:1023:G:C2	21:CA:1024:G:H1'	2.53	0.43
8:CI:122:ALA:HB1	8:CI:123:PRO:HD2	2.00	0.43
41:BV:76:LYS:HD3	41:BV:76:LYS:HA	1.90	0.43
15:AP:19:ILE:N	15:AP:38:TYR:HA	2.18	0.43
21:CA:44:G:H3'	21:CA:45:U:C6	2.54	0.43
24:AX:8:U:H5''	24:AX:9:A:P	2.59	0.43
59:BA:2061:G:C8	59:BA:2501:C:H4'	2.54	0.43
17:CR:61:LYS:HB2	21:CA:835:U:OP1	2.19	0.43
28:DF:155:LEU:O	28:DF:191:ARG:O	2.37	0.43
1:AB:74:LYS:O	1:AB:78:GLN:HB2	2.18	0.43
26:BD:202:LYS:HD2	59:BA:1820:U:C6	2.54	0.43
28:BF:154:VAL:HG21	28:BF:173:VAL:HG13	2.00	0.43
21:CA:616:G:N2	21:CA:624:C:N3	2.55	0.43
38:BS:15:ARG:O	38:BS:18:ILE:HB	2.19	0.43
7:CH:14:ARG:HE	7:CH:83:ILE:CD1	2.32	0.43
21:AA:600:C:N4	21:AA:638:G:H1	2.16	0.43
59:BA:2849:U:N3	59:BA:2867:G:O4'	2.45	0.43
59:BA:2411:A:H2'	59:BA:2412:A:O4'	2.18	0.43
37:BR:28:LEU:O	37:BR:32:GLY:N	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BE:159:HIS:HB3	59:BA:2621:A:O2'	2.19	0.43
32:DK:37:PHE:HB2	32:DK:41:PHE:CD2	2.54	0.43
35:BP:68:GLN:HB2	54:B8:12:LYS:HE2	2.00	0.43
60:BB:17:C:H2'	60:BB:18:G:C8	2.52	0.43
40:DU:8:VAL:HG11	59:DA:1216:G:OP1	2.19	0.43
29:BG:176:LEU:HA	29:BG:176:LEU:HD23	1.78	0.43
39:DT:20:PRO:HD2	39:DT:86:ILE:HG12	2.00	0.43
32:BK:90:LYS:HA	59:BA:1076:C:H1'	1.99	0.43
59:BA:1056:G:O2'	59:BA:1103:A:N6	2.32	0.43
59:BA:1495:A:H2'	59:BA:1496:A:N3	2.32	0.43
1:CB:80:ILE:HG23	1:CB:212:GLN:HG2	2.01	0.43
35:BP:7:ARG:HH11	35:BP:7:ARG:N	2.16	0.43
45:BZ:24:LEU:HD22	45:BZ:44:PHE:HE2	1.84	0.43
55:B9:6:SER:CB	59:BA:2466:C:H5''	2.49	0.43
20:AY:262:SER:HB3	20:AY:265:LYS:HB2	2.01	0.43
28:BF:48:THR:HB	59:BA:442:G:H21	1.84	0.43
6:AG:99:LEU:HD13	6:AG:103:TRP:CE2	2.54	0.43
21:AA:68(A):G:C2	21:AA:68(B):G:N7	2.87	0.43
41:DV:22:VAL:HB	41:DV:23:GLU:H	1.55	0.43
19:CT:99:LEU:HB3	19:CT:100:ILE:H	1.57	0.43
41:BV:72:VAL:HB	41:BV:74:LYS:HE2	2.01	0.43
9:CJ:12:ASP:OD2	9:CJ:14:LYS:HE2	2.19	0.43
21:AA:707:C:H2'	21:AA:708:C:C6	2.53	0.43
59:BA:1330:C:H2'	59:BA:1331:A:H8	1.84	0.43
59:BA:559:G:H2'	59:BA:560:C:O4'	2.19	0.43
20:CY:606:MET:HB2	20:CY:649:LEU:HD12	2.01	0.43
59:BA:2506:U:H2'	59:BA:2583:G:N2	2.34	0.43
21:CA:197:A:C6	21:CA:221:C:H4'	2.54	0.43
59:DA:2476:A:N3	59:DA:2476:A:H3'	2.34	0.43
59:BA:2108:C:H2'	59:BA:2109:U:C6	2.54	0.43
59:BA:2109:U:H3	59:BA:2180:U:H3	1.66	0.43
53:B7:19:ARG:O	53:B7:23:ARG:HG3	2.18	0.43
59:DA:1129:A:H1'	59:DA:2516:G:H1'	2.01	0.43
20:CY:549:ALA:HB3	20:CY:590:ILE:HB	2.00	0.43
21:CA:243:A:C2	21:CA:282:A:N6	2.83	0.43
21:AA:938:A:O2'	21:AA:1376:U:O3'	2.37	0.43
28:BF:70:THR:HB	28:BF:71:GLY:H	1.48	0.43
33:DN:70:LYS:HA	33:DN:87:LEU:HD23	2.01	0.43
2:AC:75:VAL:HG13	23:AV:36:A:N1	2.34	0.43
29:BG:95:ARG:O	29:BG:99:MET:HB2	2.19	0.43
2:CC:56:ASP:O	2:CC:66:VAL:HA	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CA:1243:C:H42	21:CA:1294:G:H1	1.66	0.43
20:CY:407:PRO:HG3	20:CY:439:ARG:HG3	2.01	0.43
26:DD:13:ARG:HA	26:DD:16:MET:HB3	2.00	0.43
12:CM:36:LYS:HA	12:CM:36:LYS:HD3	1.73	0.43
23:AV:6:G:O5'	23:AV:6:G:H8	2.01	0.43
36:DQ:76:LYS:HA	36:DQ:76:LYS:HD2	1.80	0.43
59:BA:143:C:H2'	59:BA:144:C:H6	1.83	0.43
15:AP:45:THR:O	15:AP:47:ASP:N	2.49	0.43
33:DN:53:VAL:HG11	33:DN:128:HIS:CE1	2.54	0.42
33:DN:19:GLU:C	33:DN:60:ILE:HG13	2.39	0.42
33:DN:60:ILE:HG22	33:DN:61:ARG:N	2.34	0.42
27:BE:12:THR:O	27:BE:23:VAL:N	2.40	0.42
33:BN:59:LYS:HA	33:BN:99:LEU:H	1.83	0.42
33:BN:85:ILE:HG21	33:BN:109:LYS:HB2	2.01	0.42
21:CA:1157:A:OP1	21:CA:1157:A:H4'	2.18	0.42
21:CA:1300:G:H1'	21:CA:1301:U:H6	1.83	0.42
42:DW:12:ILE:HG23	42:DW:16:LYS:HD2	2.01	0.42
59:DA:2248:C:H2'	59:DA:2275:C:H41	1.84	0.42
21:CA:1526:G:H2'	21:CA:1527:C:O4'	2.18	0.42
11:AL:118:SER:OG	21:AA:501:C:O3'	2.37	0.42
59:BA:1312:U:H1'	59:BA:1314:C:C5	2.54	0.42
59:BA:1258:C:H2'	59:BA:1259:G:H8	1.84	0.42
37:DR:53:HIS:CE1	37:DR:56:LYS:HD3	2.54	0.42
36:BQ:18:LYS:HG2	60:BB:91:C:P	2.60	0.42
59:DA:1710:C:H4'	59:DA:2858:C:O2	2.19	0.42
48:D2:50:ILE:HB	48:D2:51:ARG:H	1.64	0.42
21:CA:1234:C:H2'	21:CA:1235:U:C6	2.54	0.42
26:DD:250:TRP:HB2	26:DD:252:TRP:HE1	1.84	0.42
59:DA:918:A:H3'	59:DA:919:G:O4'	2.19	0.42
21:CA:68(I):G:O6	21:CA:68(Q):U:C4	2.71	0.42
26:BD:24:ILE:HA	26:BD:82:ILE:HD12	2.00	0.42
59:DA:2106:G:N2	59:DA:2183:C:N3	2.55	0.42
59:DA:883:G:H2'	59:DA:884:C:C6	2.54	0.42
36:DQ:93:TYR:HA	36:DQ:93:TYR:HD2	1.66	0.42
59:DA:823:G:O6	59:DA:834:C:N3	2.52	0.42
21:CA:913:A:H4'	21:CA:914:A:H4'	2.01	0.42
46:D0:36:ILE:HD11	59:DA:2355:C:H4'	2.01	0.42
21:AA:828:A:H2'	21:AA:829:G:O4'	2.18	0.42
25:DC:139:PRO:HA	25:DC:145:THR:OG1	2.19	0.42
26:DD:88:ARG:CG	26:DD:89:SER:H	2.27	0.42
13:AN:41:ARG:NH2	21:AA:973:G:H4'	2.33	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DR:105:ARG:NH1	42:DW:41:LYS:H	2.09	0.42
21:CA:560:U:OP2	21:CA:566:G:N2	2.49	0.42
59:BA:2070:G:H2'	59:BA:2071:A:O4'	2.18	0.42
59:DA:2687:U:H2'	59:DA:2688:U:O4'	2.19	0.42
59:DA:374:A:H1'	59:DA:401:A:N6	2.34	0.42
21:CA:874:G:H2'	21:CA:875:C:C6	2.54	0.42
59:BA:2013:A:H2'	59:BA:2014:A:C8	2.54	0.42
59:BA:2410:G:C6	59:BA:2411:A:C6	3.07	0.42
59:BA:2491:U:OP1	59:BA:2570:G:H4'	2.19	0.42
25:DC:164:PHE:CD2	25:DC:172:ILE:HD11	2.54	0.42
8:CI:4:TYR:HB2	8:CI:19:LEU:O	2.19	0.42
27:DE:98:PRO:HG3	32:DK:64:SER:HB2	94.22	0.42
59:DA:451:C:H41	59:DA:454:A:H5'	1.84	0.42
21:CA:341:C:N4	21:CA:348:G:H1	2.12	0.42
18:AS:11:VAL:HG13	18:AS:12:ASP:H	1.84	0.42
21:CA:1057:G:H3'	21:CA:1058:G:H8	1.84	0.42
30:DH:83:TYR:HA	30:DH:135:GLY:O	2.18	0.42
21:AA:6:G:O2'	21:AA:298:A:H4'	2.18	0.42
21:AA:524:G:H3'	21:AA:525:C:C5	2.54	0.42
21:AA:725:G:H1	21:AA:732:C:H42	1.67	0.42
8:AI:116:LYS:HD2	8:AI:119:ALA:O	2.19	0.42
21:AA:68(A):G:H2'	21:AA:68(B):G:C8	2.51	0.42
44:DY:32:PRO:HG2	44:DY:33:LYS:HE3	2.01	0.42
21:CA:814:A:OP2	21:CA:816:A:N6	2.47	0.42
39:BT:5:ALA:H	59:BA:2875:C:H4'	1.83	0.42
21:CA:313:A:H2'	21:CA:314:C:C6	2.53	0.42
20:AY:227:ILE:HD11	20:AY:241:GLU:CD	2.40	0.42
41:BV:18:LEU:HB2	41:BV:19:LYS:H	1.72	0.42
59:DA:335:C:C2	59:DA:336:C:C5	3.07	0.42
26:BD:93:ALA:HB3	26:BD:105:ILE:HG22	2.01	0.42
59:DA:1359:A:OP2	59:DA:1371:G:N1	2.43	0.42
54:B8:52:LYS:NZ	59:BA:834:C:O2'	2.44	0.42
59:DA:2468:G:H2'	59:DA:2476:A:C8	2.53	0.42
44:DY:20:TYR:O	44:DY:23:ARG:HG2	2.19	0.42
8:AI:24:GLY:HA2	8:AI:59:PHE:O	2.19	0.42
29:BG:47:LYS:HA	29:BG:82:LEU:HG	2.01	0.42
2:AC:19:GLU:HB2	13:AN:52:GLN:HA	2.00	0.42
8:CI:44:VAL:O	8:CI:47:LEU:HB2	2.18	0.42
37:DR:98:LEU:HD23	37:DR:98:LEU:HA	1.81	0.42
21:CA:703:G:O3'	21:CA:704:A:H8	2.02	0.42
30:BH:20:ALA:HB3	30:BH:23:ARG:O	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:D1:67:ILE:N	47:D1:68:PRO:HD2	2.34	0.42
21:CA:749:C:O2	21:CA:749:C:H2'	2.18	0.42
20:CY:69:VAL:HG23	20:CY:82:ILE:CG1	2.49	0.42
36:DQ:38:GLU:HB3	36:DQ:127:ILE:HG21	2.01	0.42
4:CE:71:LEU:HD21	4:CE:115:VAL:HG22	2.01	0.42
20:CY:197:ARG:HA	20:CY:197:ARG:NE	2.33	0.42
26:BD:142:VAL:HG22	26:BD:143:HIS:H	1.84	0.42
43:DX:40:LYS:HA	43:DX:51:VAL:HG11	2.01	0.42
26:BD:100:GLY:HA2	59:BA:1501:C:H1'	2.01	0.42
59:BA:1843:C:H2'	59:BA:1844:C:O4'	2.19	0.42
2:AC:131:ARG:HH12	2:AC:135:LYS:HE2	1.84	0.42
4:AE:35:GLY:C	4:AE:37:ARG:H	2.23	0.42
59:DA:1487:G:H2'	59:DA:1488:G:O4'	2.19	0.42
20:CY:313:ALA:HB1	20:CY:328:ILE:HG22	2.00	0.42
21:AA:872:A:O2'	21:AA:873:A:OP2	2.31	0.42
12:CM:20:THR:O	12:CM:22:ILE:N	2.43	0.42
21:CA:482:A:H2'	21:CA:483:C:O4'	2.19	0.42
11:AL:73:GLU:O	11:AL:110:VAL:HG21	2.19	0.42
54:D8:52:LYS:O	54:D8:55:ALA:N	2.52	0.42
36:DQ:134:ARG:HA	36:DQ:137:TYR:CE2	2.53	0.42
2:AC:110:ASN:HB2	2:AC:144:SER:OG	2.19	0.42
59:DA:2640:G:H2'	59:DA:2641:G:H5'	2.01	0.42
42:DW:18:ARG:CZ	59:DA:518:G:H4'	2.49	0.42
59:DA:986:C:H2'	59:DA:987:G:C8	2.55	0.42
27:BE:37:ARG:HG3	27:BE:80:GLU:CD	2.39	0.42
33:BN:23:LEU:HA	33:BN:26:LEU:HD22	2.01	0.42
63:AA:1601:NMY:N23	63:AA:1601:NMY:O21	2.52	0.42
59:BA:2603:G:H2'	59:BA:2604:U:H5'	2.01	0.42
34:BO:5:GLN:NE2	59:BA:1669:A:OP1	2.41	0.42
24:AX:74:C:N4	59:BA:2554:U:N1	2.67	0.42
63:BA:2904:NMY:H172	63:BA:2904:NMY:H19	1.99	0.42
21:CA:602:A:N6	21:CA:636:U:H3	2.17	0.42
21:CA:378:G:N2	21:CA:385:C:N3	2.54	0.42
59:DA:1324:G:C2	59:DA:1328:G:N1	2.87	0.42
59:DA:2115:G:C1'	59:DA:2171:A:H61	2.30	0.42
21:CA:186(E):C:C2	21:CA:186(L):G:N2	2.80	0.42
59:DA:1180:C:H2'	59:DA:1181:C:H6	1.84	0.42
21:AA:1004:A:H5'	21:AA:1005:A:OP2	2.19	0.42
26:DD:249:PRO:HG2	26:DD:250:TRP:CE3	2.54	0.42
59:DA:2159:G:C2	59:DA:2160:G:H1'	2.54	0.42
59:BA:1186:G:H2'	59:BA:1187:G:C8	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CA:68(H):G:N2	21:CA:68(I):G:N7	2.68	0.42
59:DA:189:G:H2'	59:DA:205:G:N2	2.34	0.42
59:DA:1385:G:C6	59:DA:1403:C:C4	3.07	0.42
25:BC:103:LYS:HA	25:BC:107:GLY:N	2.34	0.42
28:DF:183:VAL:O	28:DF:186:ILE:HG22	2.19	0.42
1:AB:211:ILE:HG13	1:AB:212:GLN:H	1.83	0.42
59:DA:1887:C:H3'	59:DA:1888:G:H5''	2.01	0.42
48:D2:19:VAL:O	48:D2:22:GLU:HB2	2.18	0.42
48:D2:57:ILE:HD13	48:D2:60:LEU:HD12	1.99	0.42
16:AQ:14:LYS:H	16:AQ:14:LYS:HG3	1.66	0.42
11:AL:39:VAL:HB	11:AL:55:VAL:HG21	2.00	0.42
38:BS:15:ARG:HD3	38:BS:15:ARG:HA	1.98	0.42
26:BD:37:LEU:HD13	26:BD:62:TYR:CD1	2.54	0.42
52:D6:37:ARG:NH2	59:DA:2286:A:C8	2.87	0.42
60:BB:102:G:H2'	60:BB:103:U:H5'	2.01	0.42
59:DA:611(G):G:H2'	59:DA:617:G:C8	2.54	0.42
20:AY:130:VAL:HA	20:AY:131:PRO:HD3	1.69	0.42
3:CD:72:GLU:OE2	3:CD:76:ARG:NH2	2.52	0.42
21:AA:1347:G:H22	21:AA:1374:A:P	2.42	0.42
21:AA:1305:G:N1	21:AA:1331:G:H2'	2.34	0.42
21:CA:1229:A:H2'	21:CA:1230:C:C6	2.54	0.42
21:CA:951:G:H1	21:CA:1230:C:H42	1.66	0.42
30:DH:60:ARG:HG3	30:DH:61:HIS:N	2.34	0.42
59:BA:702:G:C2	59:BA:730:C:O2	2.72	0.42
25:DC:140:ASN:HA	25:DC:141:PRO:HD2	1.61	0.42
9:CJ:6:ILE:HG13	9:CJ:97:GLU:O	2.19	0.42
30:DH:85:LYS:HE3	30:DH:135:GLY:HA3	2.01	0.42
45:BZ:123:ASP:OD1	45:BZ:123:ASP:N	2.47	0.42
34:DO:71:ARG:HA	34:DO:71:ARG:HD2	1.81	0.42
28:DF:171:PRO:HD3	59:DA:323:G:C8	2.54	0.42
6:AG:80:VAL:HG21	6:AG:85:TYR:CE2	2.54	0.42
49:D3:26:LEU:O	49:D3:28:LEU:N	2.53	0.42
8:CI:50:LEU:HB3	8:CI:56:LEU:HB3	2.01	0.42
9:AJ:4:ILE:HB	9:AJ:74:ILE:HG12	2.01	0.42
50:D4:28:LYS:HA	50:D4:29:PRO:HD3	1.90	0.42
29:DG:58:GLN:O	29:DG:62:LEU:HB2	2.18	0.42
21:CA:730:G:H5'	21:CA:816:A:O2'	2.18	0.42
59:BA:1468(B):G:O5'	59:BA:1468(B):G:H8	2.02	0.42
45:BZ:150:LEU:O	45:BZ:171:ILE:HG12	2.19	0.42
60:BB:92:G:H2'	60:BB:93:C:H6	1.83	0.42
44:DY:14:LEU:HG	44:DY:73:ARG:O	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:769:G:H2'	21:AA:770:C:H6	1.84	0.42
21:CA:813:U:H5''	21:CA:903:G:O3'	2.20	0.42
20:CY:538:TYR:O	20:CY:539:ILE:HG13	2.18	0.42
21:AA:482:A:H2'	21:AA:483:C:O4'	2.19	0.42
28:BF:93:LYS:HB2	28:BF:95:ARG:NE	2.34	0.42
21:CA:1164:G:H2'	21:CA:1165:C:H6	1.84	0.42
59:DA:530:G:N2	59:DA:2021:C:H1'	2.34	0.42
20:CY:443:HIS:CE1	20:CY:445:GLU:HB2	2.54	0.42
59:BA:1844:C:C2	59:BA:1845:G:C8	3.07	0.42
39:DT:123:GLN:HA	39:DT:126:ALA:HB3	1.99	0.42
59:BA:566:U:H2'	59:BA:567:A:O4'	2.19	0.42
20:AY:385:THR:OG1	20:AY:434:GLU:O	2.26	0.42
36:DQ:4:PRO:HA	36:DQ:69:PHE:CZ	2.54	0.42
21:AA:1418:A:H3'	21:AA:1419:G:O4'	2.19	0.42
4:AE:46:GLY:HA3	4:AE:58:ALA:HB2	2.01	0.42
29:DG:166:ASP:N	29:DG:166:ASP:OD2	2.47	0.42
21:AA:1225:A:N3	21:AA:1225:A:H2'	2.33	0.42
7:CH:121:ASP:OD2	7:CH:121:ASP:N	2.52	0.42
59:DA:126:A:H2'	59:DA:127:A:C8	2.53	0.42
33:DN:43:THR:N	33:DN:78:TYR:HA	2.34	0.42
40:DU:32:PHE:HB2	59:DA:581:C:H5''	2.01	0.42
59:DA:2685:G:N2	59:DA:2724:C:C2	2.82	0.42
23:CV:7:G:H5''	23:CV:8:A:OP2	2.19	0.42
33:BN:89:LYS:H	33:BN:89:LYS:HD2	1.85	0.42
59:DA:1937:A:N7	59:DA:1939:U:H2'	2.34	0.42
63:BA:2903:NMY:N23	63:BA:2903:NMY:O21	2.52	0.42
34:BO:63:VAL:HG22	34:BO:83:ALA:O	2.19	0.42
3:AD:22:LYS:HE3	21:AA:430:A:OP2	2.19	0.42
11:CL:87:GLY:HA2	11:CL:98:TYR:H	1.84	0.42
59:BA:357(L):A:H1'	59:BA:357(M):C:C5	2.54	0.42
21:AA:363:A:H2'	21:AA:364:A:O4'	2.18	0.42
22:CW:43:G:H2'	22:CW:44:G:H1'	2.00	0.42
25:BC:47:LYS:HA	25:BC:170:GLY:HA3	2.01	0.42
36:BQ:102:VAL:HG12	36:BQ:103:MET:H	1.84	0.42
59:BA:553:G:H2'	59:BA:554:U:H6	1.84	0.42
21:CA:716:A:H2'	21:CA:717:C:C6	2.54	0.42
21:CA:264:U:H2'	21:CA:265:G:H5'	2.00	0.42
60:DB:80:U:O2	60:DB:96:G:N2	2.40	0.42
49:D3:32:GLN:HG3	59:DA:1158:C:H1'	2.01	0.42
59:DA:2465:C:O2'	59:DA:2466:C:H5'	2.19	0.42
34:DO:65:THR:O	34:DO:78:ARG:HB2	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CA:43:C:Cl'	21:CA:622:A:H2	2.32	0.42
5:AF:50:TYR:HA	5:AF:51:PRO:HD2	1.83	0.42
21:AA:1341:U:H2'	21:AA:1342:C:C6	2.52	0.42
59:DA:464:U:H2'	59:DA:465:G:O4'	2.19	0.42
25:BC:138:LEU:HA	25:BC:139:PRO:HD2	1.74	0.42
25:BC:154:ILE:O	25:BC:157:ILE:HB	2.19	0.42
38:BS:99:LYS:HG3	38:BS:101:LEU:HG	2.00	0.42
59:DA:1150:C:H2'	59:DA:1151:G:H8	1.84	0.42
39:BT:26:ASP:CG	39:BT:27:THR:H	2.21	0.42
59:BA:448:U:O4	59:BA:582:G:N2	2.52	0.42
59:DA:1499:C:H2'	59:DA:1500:G:H8	1.84	0.42
59:DA:656:G:H2'	59:DA:657:U:H6	1.84	0.42
59:DA:2686:G:H2'	59:DA:2687:U:C5	2.54	0.42
20:AY:27:THR:HA	20:AY:30:GLU:CD	2.39	0.42
35:BP:98:GLU:HA	35:BP:101:VAL:HG22	2.01	0.42
3:AD:13:ARG:N	3:AD:33:MET:HE1	2.34	0.42
20:AY:568:TYR:HD1	20:AY:569:ASP:N	2.17	0.42
16:AQ:65:ILE:C	21:AA:265:G:H4'	2.40	0.42
21:AA:1065:U:H4'	21:AA:1066:C:H5'	2.01	0.42
40:DU:91:ASP:O	40:DU:95:LEU:HB2	2.18	0.42
59:BA:371:A:N6	59:BA:402:A:OP2	2.47	0.42
5:AF:70:ASP:OD2	5:AF:71:ARG:HG2	2.19	0.42
41:BV:35:LEU:O	41:BV:56:SER:HB3	2.20	0.42
35:DP:85:LEU:HD21	35:DP:134:ALA:HA	2.00	0.42
20:AY:251:ILE:HG21	20:AY:285:ASP:HB2	2.00	0.42
21:AA:982:U:H5'	21:AA:983:A:C8	2.55	0.42
59:BA:460:A:H62	59:BA:469:G:N2	2.16	0.42
33:BN:127:ASP:N	33:BN:127:ASP:OD1	2.52	0.42
45:BZ:69:THR:HB	45:BZ:89:PHE:O	2.19	0.42
20:CY:34:TYR:O	20:CY:36:THR:N	2.52	0.42
14:AO:29:VAL:O	14:AO:32:LEU:HB2	2.18	0.42
4:CE:100:VAL:HG23	4:CE:107:ARG:HG3	2.01	0.42
32:BK:115:LEU:HD21	32:BK:126:MET:SD	2.58	0.42
59:BA:227:A:H4'	59:BA:228:A:C4	2.55	0.42
28:DF:170:LEU:HA	28:DF:171:PRO:HD2	1.79	0.42
59:BA:1410:G:H1	59:BA:1592:C:N4	2.15	0.42
20:AY:590:ILE:O	20:AY:594:VAL:HG23	2.19	0.42
7:AH:15:ASN:OD1	21:AA:874:G:N2	2.52	0.42
21:CA:684:A:H2'	21:CA:685:G:C8	2.55	0.42
59:BA:1759:A:H5'	59:BA:2715:C:H4'	2.00	0.42
3:CD:19:LEU:O	3:CD:21:LEU:N	2.41	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BR:71:GLN:NE2	59:BA:1295:C:OP1	2.48	0.42
36:BQ:56:ARG:HG3	59:BA:2469:A:H4'	2.01	0.42
59:BA:271(K):U:H2'	59:BA:271(L):C:H5'	2.01	0.42
26:BD:136:ILE:HG12	26:BD:137:PRO:HD2	2.01	0.42
1:AB:142:LEU:O	1:AB:146:GLN:NE2	2.39	0.42
59:DA:889:C:O2'	59:DA:890:A:P	2.77	0.42
26:DD:35:LYS:HE3	26:DD:35:LYS:HB3	1.64	0.42
59:BA:1859:A:H2'	59:BA:1860:G:O4'	2.19	0.42
44:BY:31:LEU:HD22	44:BY:32:PRO:HA	2.02	0.42
20:CY:337:SER:HB3	20:CY:367:GLU:OE1	2.20	0.42
59:DA:483:A:N7	59:DA:497:A:H2	2.17	0.42
6:AG:111:ARG:NH1	6:AG:122:HIS:HB3	2.34	0.42
21:CA:243:A:C2	21:CA:245:C:H2'	2.54	0.42
47:D1:53:VAL:HG13	47:D1:74:VAL:HG13	2.00	0.42
49:D3:2:PRO:O	49:D3:39:ASP:HB2	2.19	0.42
18:CS:16:LEU:HA	18:CS:19:VAL:HB	2.01	0.42
21:CA:448:A:C2	21:CA:449:C:C2	3.07	0.42
27:DE:118:LYS:HE2	59:DA:1998:G:H5''	2.01	0.42
59:DA:1623:G:H2'	59:DA:1624:G:H8	1.84	0.42
35:DP:57:THR:C	35:DP:59:LEU:H	2.23	0.42
20:AY:612:THR:HG23	20:AY:613:PRO:O	2.19	0.42
39:BT:14:TYR:HB2	39:BT:57:PHE:HE2	1.84	0.42
7:CH:120:THR:H	7:CH:123:GLU:HB2	1.85	0.42
48:D2:12:GLU:HG2	48:D2:16:LEU:HD11	2.00	0.42
20:CY:475:ASN:OD1	20:CY:475:ASN:N	2.51	0.42
6:AG:3:ARG:HB3	21:AA:932:C:P	2.59	0.42
59:DA:1771:C:H2'	59:DA:1772:G:O4'	2.19	0.42
33:DN:114:ARG:CB	59:DA:2779:U:OP2	2.58	0.42
33:DN:118:LYS:HE3	33:DN:118:LYS:HB2	1.74	0.42
33:DN:53:VAL:HG12	33:DN:120:LEU:HD12	2.01	0.42
21:CA:432:A:C8	21:CA:433:C:C5	3.07	0.42
33:BN:25:ARG:HG2	59:BA:1012:U:C4	2.54	0.42
8:CI:104:ARG:NE	21:CA:1117:G:O2'	2.49	0.42
63:BA:2903:NMY:H172	63:BA:2903:NMY:H19	1.99	0.42
21:AA:413:G:H4'	21:AA:414:A:C5'	2.43	0.42
60:DB:3:C:H2'	60:DB:4:C:C5	2.53	0.42
21:CA:1224:G:O6	21:CA:1322:C:H1'	2.19	0.42
12:CM:91:ARG:HA	12:CM:94:ARG:HB2	2.01	0.42
53:D7:1:MET:N	59:DA:1619:G:N3	2.68	0.42
59:DA:553:G:H2'	59:DA:554:U:H6	1.84	0.42
26:DD:52:ARG:O	26:DD:53:PHE:HB2	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:D0:26:TYR:OH	59:DA:921:G:N2	2.44	0.42
20:CY:108:PHE:O	20:CY:137:ASN:N	2.52	0.42
21:CA:1066:C:H42	21:CA:1191:A:N6	2.00	0.42
21:AA:943:U:H2'	21:AA:944:G:H5'	2.01	0.42
59:DA:227:A:C6	59:DA:2407:G:C8	3.07	0.42
44:BY:85:VAL:HA	44:BY:94:LYS:CA	2.45	0.42
38:DS:39:ILE:O	38:DS:47:THR:HG22	2.20	0.42
12:AM:108:ARG:HH22	12:AM:111:LYS:NZ	2.17	0.42
30:DH:98:LEU:HD22	30:DH:125:VAL:H	1.85	0.42
59:BA:2066:C:H2'	59:BA:2067:G:H5'	2.01	0.42
3:AD:108:LEU:HB2	3:AD:174:LEU:HD13	2.01	0.42
39:BT:32:TYR:CE1	39:BT:81:PRO:HB2	2.54	0.42
28:BF:22:ALA:HB1	28:BF:23:ASP:H	1.59	0.42
59:BA:2186:G:C2	59:BA:2187:G:N7	2.87	0.42
38:BS:17:ARG:HG2	38:BS:20:ARG:NH1	2.34	0.42
28:DF:101:LEU:HA	28:DF:102:PRO:HD2	1.81	0.42
25:DC:40:GLU:HA	25:DC:218:THR:H	1.84	0.42
20:AY:293:THR:OG1	20:AY:297:GLU:HG2	2.19	0.42
7:AH:94:TYR:OH	21:AA:597:G:N2	2.51	0.42
51:B5:6:VAL:HG22	59:BA:2015:A:N3	2.33	0.42
59:BA:1265:A:N6	59:BA:2013:A:H3'	2.35	0.42
20:CY:436:PRO:O	20:CY:438:PHE:N	2.52	0.42
35:DP:6:LEU:HG	35:DP:8:PRO:CD	2.49	0.42
20:AY:357:ARG:HB2	20:AY:364:GLU:HG3	2.01	0.42
44:BY:60:PHE:HD2	44:BY:60:PHE:HA	1.71	0.42
27:DE:97:LYS:HD3	27:DE:98:PRO:HD2	2.00	0.42
30:DH:19:VAL:HG21	30:DH:44:VAL:HA	2.02	0.42
21:AA:579:G:C6	21:AA:762:C:N3	2.88	0.42
21:CA:1277:C:H2'	21:CA:1279:A:H8	1.85	0.42
59:BA:1167:U:H2'	59:BA:1168:G:C8	2.53	0.42
60:DB:76:G:H2'	60:DB:77:U:O4'	2.20	0.42
17:AR:61:LYS:HA	17:AR:64:ARG:CZ	2.49	0.42
3:AD:57:ARG:HB3	3:AD:206:PHE:HB2	1.98	0.42
12:CM:67:GLU:N	12:CM:70:LEU:HD12	2.34	0.42
59:DA:328:U:H3'	59:DA:329:G:C5'	2.50	0.42
32:BK:95:LYS:CB	32:BK:137:GLU:HB3	2.49	0.42
21:AA:1203:C:C2	21:AA:1204:A:C8	3.08	0.42
21:AA:708:C:H2'	21:AA:709:G:H8	1.84	0.42
35:DP:121:LYS:O	35:DP:123:LEU:HD22	2.19	0.42
36:BQ:54:MET:SD	36:BQ:64:ILE:HG21	2.60	0.42
59:BA:1604:C:H2'	59:BA:1605:C:C6	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BY:33:LYS:H	44:BY:33:LYS:HG2	1.65	0.42
59:DA:2264:C:H2'	59:DA:2265:U:O4'	2.20	0.42
59:BA:2173:A:H3'	59:BA:2174:C:C6	2.55	0.42
29:DG:138:GLN:NE2	29:DG:139:LEU:HD23	2.33	0.42
21:CA:246:A:C2	21:CA:282:A:C5	3.07	0.42
26:BD:100:GLY:HA2	59:BA:1501:C:C1'	2.49	0.42
20:CY:313:ALA:CB	20:CY:328:ILE:HG22	2.50	0.42
3:AD:151:LYS:O	3:AD:155:LEU:HG	2.19	0.42
35:BP:107:LYS:HD2	59:BA:624:C:H41	1.84	0.42
59:BA:1465:G:H2'	59:BA:1466:G:H5'	2.00	0.42
21:AA:663:A:H2'	21:AA:664:G:C8	2.55	0.42
26:DD:147:LEU:HD12	26:DD:155:LEU:HD21	2.01	0.42
35:BP:91:PHE:HD2	35:BP:91:PHE:HA	1.69	0.42
49:B3:6:VAL:HG12	49:B3:56:VAL:HA	2.01	0.42
21:AA:1161:C:H2'	21:AA:1162:C:H6	1.83	0.42
5:CF:10:LEU:HG	5:CF:85:VAL:HA	2.01	0.42
6:AG:100:ALA:O	6:AG:104:LEU:HD23	2.19	0.42
1:CB:219:VAL:O	1:CB:223:ILE:HG13	2.19	0.42
59:BA:1437:C:H2'	59:BA:1438:U:C6	2.55	0.42
59:DA:2552:U:H5'	59:DA:2553:G:O5'	2.19	0.42
33:BN:71:ILE:N	33:BN:87:LEU:HA	2.26	0.42
63:BA:2902:NMY:H19	63:BA:2902:NMY:H172	1.99	0.42
59:DA:1831:G:H21	63:DA:2901:NMY:H91	1.67	0.42
21:CA:1238:A:N7	21:CA:1301:U:O4	2.52	0.42
24:AX:74:C:N4	59:BA:2554:U:C6	2.86	0.42
59:DA:1630(A):C:C2	59:DA:1635:G:N1	2.77	0.42
37:DR:64:ARG:HH21	59:DA:2851:A:H4'	1.84	0.42
22:AW:22:G:H2'	22:AW:23:A:O4'	2.19	0.42
11:CL:53:ARG:HG3	11:CL:69:TYR:CZ	2.55	0.42
59:DA:2531:A:H2'	59:DA:2532:G:C8	2.54	0.42
36:DQ:104:PHE:HA	36:DQ:104:PHE:HD2	1.73	0.42
61:AY:701:GDP:O3B	62:AY:702:FUA:H282	2.20	0.42
21:CA:989:C:H2'	21:CA:990:C:C6	2.53	0.42
53:D7:5:TRP:HB3	59:DA:1612:C:H4'	2.00	0.42
59:DA:1285:G:C5	59:DA:1329:U:C4	3.07	0.42
59:BA:1312:U:H4'	59:BA:1313:U:O5'	2.20	0.42
21:CA:1506:U:O4	21:CA:1521:G:H5''	2.19	0.42
21:CA:1533:C:H3'	21:CA:1534:A:O4'	2.20	0.42
59:BA:649:G:H2'	59:BA:650:C:H6	1.81	0.42
21:CA:258:G:C2	21:CA:269:C:C4	3.07	0.42
16:CQ:67:LYS:HD3	21:CA:254:G:OP2	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AD:122:ARG:HD2	3:AD:122:ARG:HA	1.86	0.42
21:CA:1348:U:N3	21:CA:1374:A:C2	2.85	0.42
8:CI:111:ARG:HG3	13:CN:61:TRP:CZ2	2.54	0.42
59:DA:864:G:C2	59:DA:866:A:N6	2.83	0.42
60:BB:57:A:H2'	60:BB:58:A:H8	1.85	0.42
25:DC:214:TYR:CE1	59:DA:2177:C:H4'	2.55	0.42
59:DA:2074:U:H2'	59:DA:2075:U:C6	2.55	0.42
59:BA:52:A:OP2	59:BA:119:A:N6	2.47	0.42
20:CY:139:MET:SD	20:CY:145:ASP:N	2.82	0.42
20:CY:148:LEU:CD1	20:CY:151:ARG:HH21	2.32	0.42
21:CA:1107:C:C4	21:CA:1108:G:C8	3.07	0.42
21:AA:1015:A:C6	21:AA:1016:A:C6	3.07	0.42
1:AB:22:LYS:O	21:AA:830:G:H4'	2.19	0.42
2:CC:6:HIS:HE1	21:CA:1059:C:OP1	2.02	0.42
32:DK:123:ALA:O	32:DK:126:MET:HB3	2.19	0.42
2:AC:54:ARG:HB2	2:AC:69:HIS:CB	2.49	0.42
40:BU:51:LYS:HG2	59:BA:1156:A:C8	2.55	0.42
54:B8:5:LYS:HD3	54:B8:5:LYS:HA	1.75	0.42
59:DA:1495:A:H2'	59:DA:1496:A:N3	2.35	0.42
28:BF:9:ILE:HD12	28:BF:124:LEU:HD12	2.01	0.42
59:BA:2320:A:N1	59:BA:2333:A:H3'	2.34	0.42
26:BD:146:GLU:O	26:BD:147:LEU:HB3	2.19	0.42
21:AA:103:C:C4	21:AA:104:G:N7	2.88	0.42
21:AA:582:U:OP2	21:AA:758:G:N1	2.47	0.42
21:CA:820:U:H4'	21:CA:821:G:OP2	2.20	0.42
37:BR:28:LEU:HA	37:BR:34:ILE:HD13	2.02	0.42
13:AN:3:ARG:NH2	21:AA:1048:G:OP1	2.52	0.42
47:B1:25:LYS:HA	47:B1:34:THR:O	2.19	0.42
18:CS:30:LEU:HD11	18:CS:32:LYS:HE3	2.01	0.42
59:DA:1530:G:H8	59:DA:1530:G:O5'	2.02	0.42
48:B2:48:HIS:O	48:B2:50:ILE:N	2.52	0.42
59:BA:270(S):G:C2	59:BA:270(T):G:N7	2.88	0.42
59:DA:34:C:N4	59:DA:454:A:O2'	2.46	0.42
9:CJ:9:ARG:O	9:CJ:94:VAL:HG23	2.19	0.42
59:BA:1423:G:H5'	59:BA:1492:G:O2'	2.19	0.42
44:BY:19:LYS:HA	59:BA:329:G:O6	2.20	0.42
59:BA:1204:A:N1	59:BA:1241:A:N1	2.68	0.42
21:CA:517:G:H21	21:CA:530:G:P	2.42	0.42
3:CD:63:LYS:HA	3:CD:66:ARG:HB2	2.01	0.42
20:CY:95:GLU:HG2	20:CY:95:GLU:H	1.60	0.42
1:AB:40:HIS:CD2	1:AB:40:HIS:N	2.87	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:759:G:H2'	59:BA:760:G:H8	1.84	0.42
5:CF:97:PHE:HB2	17:CR:32:ARG:NH1	2.33	0.42
45:DZ:18:LEU:HD23	45:DZ:25:PRO:HB3	2.01	0.42
50:D4:29:PRO:O	50:D4:31:ILE:HD12	2.20	0.42
41:BV:72:VAL:H	41:BV:86:GLY:HA2	1.84	0.42
21:AA:1361:G:O5'	21:AA:1361:G:H8	2.01	0.42
45:BZ:77:ASP:HB3	45:BZ:84:GLU:OE1	2.19	0.42
39:DT:79:HIS:O	39:DT:80:SER:HB2	2.20	0.42
59:DA:107:C:H4'	59:DA:293:U:H2'	2.00	0.42
4:AE:20:GLN:HG2	4:AE:22:GLY:N	2.35	0.42
21:CA:359:U:H2'	21:CA:360:A:O4'	2.20	0.42
40:BU:97:ASP:C	40:BU:99:ALA:N	2.73	0.42
21:CA:1171:G:H2'	21:CA:1172:C:H6	1.85	0.42
45:BZ:51:ALA:HA	45:BZ:55:HIS:CD2	2.54	0.42
1:CB:112:VAL:HG11	1:CB:156:LYS:HE2	2.01	0.42
43:DX:31:HIS:HA	43:DX:32:PRO:HD3	1.93	0.42
36:DQ:134:ARG:HA	36:DQ:137:TYR:HE2	1.83	0.42
5:CF:10:LEU:HB3	5:CF:11:ASN:H	1.62	0.42
20:CY:630:GLN:HE22	20:CY:632:LEU:HD12	1.83	0.42
14:CO:50:HIS:O	14:CO:53:HIS:HB3	2.19	0.42
59:DA:1259:G:H2'	59:DA:1260:G:O4'	2.19	0.42
1:AB:55:PHE:HD1	1:AB:221:LEU:HG	1.84	0.42
26:BD:17:THR:OG1	26:BD:205:VAL:N	2.48	0.42
4:CE:149:GLU:O	4:CE:153:LYS:HB2	2.20	0.42
47:B1:53:VAL:HG13	47:B1:74:VAL:HG13	2.00	0.42
27:DE:166:THR:HB	59:DA:2772:C:H4'	2.02	0.42
18:AS:20:LEU:HD23	18:AS:20:LEU:HA	1.87	0.42
48:B2:25:VAL:HG11	48:B2:61:LEU:HD21	2.00	0.42
59:BA:1642:G:O5'	59:BA:1642:G:H8	2.03	0.42
36:DQ:2:LEU:HA	36:DQ:2:LEU:HD13	1.82	0.42
5:AF:67:MET:HB2	5:AF:68:PRO:HD2	2.01	0.42
34:BO:2:ILE:HB	34:BO:33:ALA:HB3	2.01	0.42
59:DA:1007:C:OP2	59:DA:1008:C:O2'	2.20	0.42
59:DA:528:A:N1	59:DA:2042:A:H2'	2.35	0.42
33:DN:37:LYS:NZ	59:DA:1005:C:HO2'	2.16	0.42
33:DN:45:ASN:ND2	33:DN:45:ASN:N	2.68	0.42
59:DA:957:A:HO2'	59:DA:959:A:H8	1.66	0.42
36:DQ:75:THR:HG21	36:DQ:87:LYS:HZ2	1.85	0.42
59:BA:2894:G:H5"	59:BA:2895:U:OP1	2.19	0.42
33:BN:90:MET:C	33:BN:92:ALA:N	2.70	0.42
59:BA:1966:A:H5"	63:BA:2903:NMY:O3	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DX:63:LYS:HE2	43:DX:63:LYS:HB3	1.82	0.42
59:DA:2532:G:P	59:DA:2532:G:H8	2.43	0.42
59:BA:357(O):C:H41	59:BA:404:C:P	2.42	0.42
22:CW:9:A:C2	22:CW:46:G:C4	3.08	0.42
28:BF:75:HIS:HA	59:BA:674:G:H5''	2.01	0.42
59:BA:692:C:H1'	59:BA:1354:A:O2'	2.18	0.42
21:CA:27:G:H2'	21:CA:28:G:H8	1.82	0.42
21:AA:1003:G:H2'	21:AA:1004:A:H4'	2.01	0.42
26:DD:43:ARG:HB3	59:DA:691:C:O2'	2.19	0.42
21:CA:506:G:C6	21:CA:525:C:N3	2.86	0.42
21:CA:888:G:C3'	21:CA:889:A:H5''	2.50	0.42
59:BA:817:C:C2'	59:BA:839:U:H5''	2.49	0.42
59:BA:975:G:H1'	59:BA:990:A:C2	2.54	0.42
11:AL:92:ASP:HB2	11:AL:93:LEU:H	1.59	0.42
21:CA:935:A:H2'	21:CA:936:C:O4'	2.20	0.42
21:AA:1238:A:N6	21:AA:1303:C:H5'	2.35	0.42
21:AA:674:G:H2'	21:AA:675:A:H8	1.83	0.42
21:CA:43:C:H1'	21:CA:622:A:H2	1.85	0.42
36:DQ:72:LYS:HA	36:DQ:73:PRO:HD2	1.63	0.42
21:CA:1093:A:O2'	21:CA:1094:G:H3'	2.19	0.42
21:AA:951:G:H2'	21:AA:952:U:H6	1.80	0.42
21:AA:984:C:H42	21:AA:1221:G:H1	1.68	0.42
1:AB:170:GLU:O	1:AB:174:VAL:HG23	2.20	0.42
38:DS:46:VAL:O	38:DS:47:THR:O	2.37	0.42
54:B8:56:GLU:HA	54:B8:59:LYS:HE2	2.00	0.42
59:BA:1820:U:O2'	59:BA:1821:A:H5'	2.19	0.42
59:BA:1327:C:H3'	59:BA:1328:G:C8	2.55	0.42
59:DA:182:A:H2'	59:DA:183:C:H6	1.85	0.42
25:BC:117:THR:HG22	25:BC:147:GLY:CA	2.50	0.42
59:BA:699:A:H62	59:BA:733:G:H21	1.66	0.42
39:BT:28:VAL:HG12	39:BT:29:ARG:N	2.35	0.42
40:BU:27:LEU:HA	40:BU:27:LEU:HD23	1.79	0.42
59:BA:1637:A:H2'	59:BA:1638:C:H6	1.84	0.42
59:BA:723:G:H2'	59:BA:724:U:C6	2.55	0.42
59:BA:2101:G:H2'	59:BA:2102:U:O4'	2.19	0.42
59:BA:2599:G:OP2	59:BA:2599:G:H8	2.02	0.42
21:CA:1433:A:H2'	21:CA:1434:A:C8	2.54	0.42
10:CK:98:LEU:O	10:CK:101:SER:OG	2.36	0.42
20:CY:422:GLU:CA	20:CY:425:SER:HB2	2.47	0.42
21:CA:1271:G:C2	21:CA:1272:G:C8	3.07	0.42
44:DY:50:ARG:HG3	44:DY:50:ARG:H	1.61	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:852:G:C6	59:BA:853:G:C5	3.08	0.42
59:BA:1388:G:H2'	59:BA:1389:G:C8	2.53	0.42
59:DA:2817:G:H1	59:DA:2829:C:H42	1.68	0.42
59:BA:1227:G:H2'	59:BA:1228:G:H8	1.83	0.42
59:BA:2832:U:O4	59:BA:2883:A:H5''	2.19	0.42
59:BA:356:G:H2'	59:BA:357:A:O4'	2.18	0.42
28:DF:10:PRO:HG2	28:DF:12:LEU:HD22	2.01	0.42
31:BJ:54:UNK:C	31:BJ:56:UNK:N	2.82	0.42
21:AA:787:A:H2'	21:AA:788:U:C6	2.55	0.42
41:BV:6:LYS:HE2	41:BV:6:LYS:HB3	1.76	0.42
37:BR:50:HIS:O	37:BR:53:HIS:HB3	2.20	0.42
59:BA:1167:U:H3	59:BA:1182:A:N6	2.13	0.42
59:BA:1076:C:H2'	59:BA:1077:A:C4'	2.49	0.42
16:AQ:95:TYR:HE1	21:AA:279:A:H5'	1.85	0.42
2:CC:197:GLY:N	21:CA:1057:G:H4'	2.34	0.42
59:BA:2147:G:H8	59:BA:2147:G:O5'	2.03	0.42
59:DA:737:C:C4	59:DA:738:G:C8	3.07	0.42
59:BA:419:C:H2'	59:BA:420:C:O4'	2.19	0.42
55:B9:13:LYS:HG2	55:B9:13:LYS:H	1.70	0.42
26:BD:158:ALA:HB3	26:BD:161:THR:HG23	2.01	0.42
47:D1:21:ARG:NH2	59:DA:2079:U:O2'	2.53	0.42
19:CT:13:LEU:HD12	19:CT:14:LYS:N	2.35	0.42
59:BA:1289:C:OP1	59:BA:1647:G:N1	2.52	0.42
21:AA:1169:A:H2'	21:AA:1170:A:C8	2.55	0.42
26:BD:250:TRP:CZ2	59:BA:1805:U:H4'	2.55	0.42
20:AY:616:TYR:O	20:AY:620:VAL:HG22	2.19	0.42
33:BN:2:LYS:CE	40:BU:101:ARG:HH22	2.32	0.42
21:AA:1265:G:C6	21:AA:1266:G:C6	3.07	0.42
15:AP:2:VAL:HA	15:AP:23:ASP:HA	2.01	0.42
28:BF:40:GLN:HA	28:BF:43:LYS:HD2	2.02	0.42
5:CF:5:GLU:O	5:CF:91:VAL:HG12	2.19	0.42
1:CB:115:LEU:HD21	1:CB:146:GLN:HE22	1.85	0.42
59:DA:2834:G:H1'	59:DA:2883:A:N6	2.35	0.42
20:CY:534:ILE:HG22	20:CY:538:TYR:CG	2.54	0.42
26:DD:35:LYS:N	26:DD:36:PRO:HD2	2.34	0.42
40:BU:99:ALA:HB1	40:BU:106:PHE:CE2	2.54	0.42
7:CH:53:VAL:O	7:CH:56:LYS:HB2	2.20	0.42
36:BQ:74:TYR:HE1	36:BQ:76:LYS:HD3	1.85	0.42
24:AX:68:C:H2'	24:AX:69:A:C8	2.54	0.42
59:BA:2614:A:H4'	59:BA:2615:U:OP1	2.19	0.42
3:AD:150:GLU:O	3:AD:153:ARG:HG2	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BP:107:LYS:CD	59:BA:624:C:H41	2.33	0.42
15:CP:45:THR:HG22	15:CP:46:PRO:HD2	2.02	0.42
39:DT:127:ALA:HA	39:DT:130:ALA:HB3	2.01	0.42
21:CA:1073:U:H2'	21:CA:1074:G:O4'	2.19	0.42
26:DD:18:VAL:HG22	26:DD:19:ALA:H	1.85	0.42
45:BZ:104:PHE:HD1	45:BZ:139:VAL:HG23	1.85	0.42
15:CP:6:LEU:HB3	15:CP:17:TYR:CD2	2.55	0.42
59:BA:1750:G:H21	59:BA:2860:A:H2	1.66	0.42
21:AA:119:A:H4'	21:AA:120:A:C8	2.54	0.42
59:DA:1917:U:H2'	59:DA:1918:A:O4'	2.20	0.42
6:AG:136:LYS:HB3	6:AG:136:LYS:HE3	1.80	0.42
34:DO:109:LYS:HD3	34:DO:109:LYS:HA	1.74	0.42
33:BN:6:PRO:HB2	33:BN:9:VAL:HG22	2.00	0.42
33:DN:23:LEU:O	33:DN:26:LEU:HB2	2.19	0.42
21:CA:411:A:N6	21:CA:429:U:O5'	2.52	0.42
33:BN:53:VAL:O	33:BN:124:ALA:HB1	2.20	0.42
33:BN:75:TYR:HE1	59:BA:1137:G:O2'	2.03	0.42
7:CH:95:VAL:HG22	7:CH:99:GLU:CB	2.48	0.42
22:CW:71:C:N3	22:CW:72:C:N4	2.67	0.42
27:DE:2:LYS:HA	27:DE:84:PHE:CD2	2.55	0.42
59:DA:1587:A:H2'	59:DA:1588:C:O4'	2.20	0.42
25:BC:162:ILE:HD13	25:BC:175:PRO:HD2	2.02	0.42
59:DA:1431:U:H2'	59:DA:1432:C:C6	2.55	0.42
21:CA:609:A:C5	21:CA:610:G:C5	3.07	0.42
35:BP:112:LEU:HD22	35:BP:113:LYS:N	2.34	0.42
59:DA:1207:C:C2	59:DA:1239:G:N2	2.80	0.42
16:CQ:67:LYS:C	16:CQ:69:LYS:N	2.71	0.42
60:BB:57:A:H2'	60:BB:58:A:C8	2.55	0.42
25:BC:64:SER:HA	25:BC:160:GLY:CA	2.36	0.42
59:DA:2397:G:H2'	59:DA:2398:U:C6	2.54	0.42
59:DA:1190:G:H2'	59:DA:1191:G:H8	1.85	0.42
59:DA:1294:U:C2	59:DA:1295:C:C5	3.07	0.42
20:CY:110:SER:HB3	20:CY:145:ASP:HB2	2.02	0.42
21:CA:831:U:H2'	21:CA:832:C:H6	1.85	0.42
25:BC:115:VAL:CA	25:BC:145:THR:HG22	2.45	0.42
18:AS:34:TRP:HH2	21:AA:987:G:O2'	2.03	0.42
54:D8:22:VAL:HG11	54:D8:53:PRO:O	2.20	0.42
1:AB:94:ASN:HD21	1:AB:95:GLN:HG2	1.84	0.42
51:B5:16:ARG:NH1	59:BA:517:C:H5''	2.35	0.42
59:BA:515:A:C8	59:BA:516:C:C5	3.08	0.42
19:CT:51:GLU:O	19:CT:55:ILE:HG12	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:DD:165:ILE:CG2	26:DD:166:GLN:N	2.78	0.42
59:BA:270(B):A:H1'	59:BA:357(N):C:C1'	2.48	0.42
26:DD:108:PRO:HB3	26:DD:196:VAL:HA	2.01	0.42
59:BA:1817:G:H2'	59:BA:1817:G:N3	2.35	0.42
26:BD:85:ASP:OD1	26:BD:88:ARG:HG2	2.20	0.42
2:AC:22:TRP:CD2	2:AC:59:ARG:HB2	2.55	0.42
59:BA:1226:A:O5'	59:BA:1226:A:H8	2.01	0.42
20:AY:301:ILE:H	20:AY:301:ILE:HG12	1.68	0.42
52:D6:8:LYS:HD2	52:D6:27:LYS:CD	2.49	0.42
21:AA:102:G:H2'	21:AA:103:C:H6	1.85	0.42
7:AH:115:SER:HB2	21:AA:640:A:H2'	2.01	0.42
2:CC:11:ARG:HB2	2:CC:16:ARG:HB2	2.00	0.42
21:CA:585:G:O2'	21:CA:879:C:OP1	2.27	0.42
8:CI:63:ILE:HG21	8:CI:77:ILE:HG12	2.02	0.42
44:BY:47:LYS:HG2	59:BA:482:A:H4'	2.00	0.42
45:DZ:60:GLU:HG2	45:DZ:60:GLU:H	1.72	0.42
29:BG:39:ILE:O	29:BG:91:ARG:HA	2.20	0.42
52:B6:41:PRO:HD3	52:B6:47:THR:H	1.84	0.42
4:CE:10:MET:O	4:CE:32:VAL:HA	2.20	0.42
44:DY:40:GLU:O	44:DY:64:GLU:HB3	2.20	0.42
60:DB:76:G:H2'	60:DB:77:U:H6	1.83	0.42
59:DA:137(E):A:H2'	59:DA:137(E):A:N3	2.35	0.42
59:BA:283:U:H2'	59:BA:284:C:H6	1.82	0.42
47:B1:39:LYS:HG2	47:B1:39:LYS:O	2.19	0.42
7:CH:38:ILE:HG21	7:CH:111:ILE:CG2	2.49	0.42
23:CV:31:A:N6	23:CV:32:U:O2	2.52	0.42
21:AA:1260:C:H4'	21:AA:1284:C:H4'	2.01	0.42
21:AA:1266:G:H1	21:AA:1270:C:N4	2.17	0.42
36:BQ:85:LYS:HG2	59:BA:2275:C:O2	2.19	0.42
21:AA:107:G:H3'	21:AA:108:G:H21	1.85	0.42
40:DU:70:ARG:NH2	59:DA:1012:U:OP1	2.51	0.42
44:DY:6:HIS:CD2	44:DY:6:HIS:H	2.37	0.42
59:BA:2163:C:H2'	59:BA:2164:C:H6	1.85	0.42
3:AD:43:HIS:HA	3:AD:46:LYS:NZ	2.34	0.42
20:CY:252:ASP:O	20:CY:253:LEU:HB2	2.19	0.42
59:BA:121:G:C4'	59:BA:148:C:H2'	2.50	0.42
20:CY:213:HIS:O	20:CY:216:LEU:HB3	2.19	0.42
44:DY:18:GLY:HA2	59:DA:309:G:O3'	2.20	0.42
21:AA:965:A:H4'	21:AA:969:A:C8	2.55	0.42
59:DA:1681:G:H21	59:DA:1763:G:H5'	1.83	0.42
59:BA:624:C:H2'	59:BA:625:G:C8	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CB:222:ILE:HG13	1:CB:223:ILE:N	2.34	0.42
44:DY:11:ASP:OD2	44:DY:11:ASP:N	2.52	0.42
21:AA:1273:G:C5	21:AA:1274:G:H1'	2.54	0.42
25:DC:182:PRO:HB3	25:DC:183:PRO:HD2	2.02	0.42
5:AF:78:GLU:O	5:AF:81:ILE:HB	2.19	0.42
14:CO:15:PHE:HB3	14:CO:16:ALA:H	1.58	0.42
4:CE:67:VAL:HB	4:CE:140:ARG:NH1	2.34	0.42
2:AC:174:PRO:HB2	2:AC:177:THR:OG1	2.20	0.42
29:DG:48:GLU:HB3	29:DG:49:ASP:H	1.65	0.42
21:AA:1489:G:H2'	21:AA:1490:C:O4'	2.20	0.42
49:B3:11:SER:HB3	59:BA:988:A:P	2.59	0.42
1:CB:196:LEU:H	1:CB:196:LEU:HG	1.61	0.42
42:BW:20:VAL:O	42:BW:23:LEU:HB3	2.20	0.42
44:DY:75:ILE:HA	44:DY:80:GLY:CA	2.50	0.42
40:BU:74:LEU:HD22	40:BU:74:LEU:H	1.84	0.42
55:B9:22:ARG:H	55:B9:22:ARG:HD2	1.85	0.42
59:DA:2376:A:OP1	59:DA:2376:A:H8	2.02	0.42
59:BA:218:A:O5'	59:BA:218:A:H8	2.02	0.42
46:D0:5:LYS:HB3	46:D0:6:GLY:H	1.70	0.42
25:BC:198:GLU:OE2	25:BC:210:LEU:HD11	2.20	0.42
43:BX:39:ILE:O	43:BX:43:VAL:HG23	2.20	0.42
35:BP:39:LYS:C	35:BP:41:ARG:H	2.22	0.42
8:AI:37:PHE:HB3	8:AI:43:ALA:HB2	2.01	0.42
59:DA:534:U:C2	59:DA:535:C:C5	3.07	0.42
59:DA:2061:G:C8	59:DA:2501:C:H4'	2.55	0.42
27:BE:37:ARG:HH11	27:BE:42:ASP:HB3	1.85	0.42
33:BN:116:LEU:HB2	33:BN:118:LYS:N	2.29	0.42
59:DA:1933:G:HO2'	63:DA:2901:NMY:C12	2.33	0.42
59:DA:1834:U:H1'	59:DA:1969:A:H2'	2.01	0.42
59:DA:1832:C:H1'	63:DA:2901:NMY:HN62	1.84	0.42
34:BO:39:ILE:O	34:BO:60:ALA:HB3	2.20	0.42
21:CA:602:A:C6	21:CA:637:G:C6	3.08	0.42
21:AA:430:A:C2	21:AA:431:A:H1'	2.54	0.42
59:DA:1637:A:H2'	59:DA:1638:C:C6	2.55	0.42
22:CW:4:U:H3'	22:CW:5:A:C8	2.55	0.42
11:CL:119:LYS:HE3	21:CA:551:U:H4'	2.02	0.42
21:CA:152:A:H3'	21:CA:153:C:H6	1.84	0.42
59:DA:2006:C:H2'	59:DA:2007:C:H6	1.83	0.42
27:DE:64:LYS:HD3	27:DE:64:LYS:HA	1.75	0.42
59:DA:972:G:H3'	59:DA:973:A:H2'	2.00	0.42
21:CA:1219:U:H2'	21:CA:1220:G:H8	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CA:1219:U:H2'	21:CA:1220:G:O4'	2.19	0.42
59:DA:650:C:H2'	59:DA:651:G:O4'	2.19	0.42
59:DA:1324:G:H4'	59:DA:1616:A:C6	2.54	0.42
21:AA:1129:C:H4'	21:AA:1130:A:H5'	2.00	0.42
59:BA:1257:C:H2'	59:BA:1258:C:O4'	2.20	0.42
25:BC:34:ALA:CB	25:BC:40:GLU:HG2	2.50	0.42
59:DA:1748:G:H2'	59:DA:1749:A:C8	2.55	0.42
48:D2:55:ARG:HH11	59:DA:73:A:H5'	1.85	0.42
59:DA:18:C:H1'	59:DA:554:U:H5''	2.01	0.42
35:BP:86:LYS:HB2	35:BP:117:GLU:O	2.19	0.42
51:D5:28:PRO:HB2	51:D5:29:THR:H	1.61	0.42
26:DD:242:ARG:HB3	26:DD:243:GLY:H	1.44	0.42
59:BA:974:G:H8	59:BA:974:G:H2'	1.72	0.42
59:BA:557:U:H2'	59:BA:558:G:O4'	2.20	0.42
34:DO:1:MET:HE1	34:DO:65:THR:HB	2.02	0.42
20:AY:229:LEU:HD23	20:AY:232:LEU:HD22	2.02	0.42
21:CA:38:G:H4'	21:CA:547:A:N6	2.35	0.42
59:DA:775:G:H4'	59:DA:776:G:O5'	2.20	0.42
28:DF:126:VAL:HG21	28:DF:142:TRP:CH2	2.55	0.42
36:BQ:65:PHE:CD1	59:BA:873:G:H4'	2.54	0.42
27:BE:60:ASN:O	27:BE:61:ARG:HB2	2.19	0.42
26:DD:157:ARG:NH2	59:DA:1818:U:H6	2.14	0.42
26:DD:157:ARG:HG3	59:DA:1818:U:H2'	2.01	0.42
21:CA:1123:A:H2	21:CA:1150:U:C2	2.38	0.42
59:BA:1238:G:H2'	59:BA:1239:G:O4'	2.19	0.42
1:CB:155:LEU:HD21	1:CB:159:PRO:HB3	2.02	0.42
59:BA:563:G:C5	59:BA:2018:G:C6	3.07	0.42
59:BA:717:G:H3'	59:BA:718:A:C8	2.55	0.42
21:AA:346:G:P	39:BT:35:LYS:HZ1	2.43	0.42
26:BD:151:LYS:HE3	59:BA:2202:C:O2	2.20	0.42
35:BP:23:PRO:HG2	35:BP:33:ARG:C	2.40	0.42
1:AB:19:HIS:HB2	1:AB:204:ASN:ND2	2.35	0.42
35:DP:25:SER:HA	59:DA:811:U:H2'	2.01	0.42
7:AH:10:LEU:O	7:AH:13:ILE:HB	2.19	0.42
44:DY:50:ARG:HD2	59:DA:484:C:OP1	2.20	0.42
41:DV:60:GLU:H	41:DV:96:ILE:C	2.22	0.42
5:AF:72:VAL:HG13	5:AF:73:ASN:N	2.35	0.42
59:BA:1106:G:H2'	59:BA:1107:G:O4'	2.20	0.42
37:BR:24:GLN:HG2	59:BA:1277:G:O2'	2.20	0.42
25:BC:6:LYS:HG3	59:BA:2129:C:O3'	2.20	0.42
7:CH:73:ASP:OD1	7:CH:75:ARG:NH2	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:146:G:H2'	21:AA:147:G:O4'	2.19	0.42
8:CI:126:SER:HB3	21:CA:1231:G:H4'	2.01	0.42
20:CY:550:MET:SD	20:CY:551:GLN:HG2	2.58	0.42
32:DK:105:LEU:HG	32:DK:106:GLU:OE2	2.20	0.42
1:AB:85:ALA:O	1:AB:87:ARG:N	2.45	0.42
21:CA:186(A):C:H2'	21:CA:186(B):C:C6	2.54	0.42
29:BG:89:GLY:HA3	59:BA:2312:U:H4'	2.01	0.42
59:BA:240:G:OP2	59:BA:241:A:O2'	2.29	0.42
44:BY:68:HIS:CD2	59:BA:328:U:H4'	2.54	0.42
40:DU:4:ALA:HB3	59:DA:1249:U:H5'	2.01	0.42
27:BE:154:LYS:HB3	59:BA:2619:C:O2'	2.20	0.42
21:AA:186(E):C:H2'	21:AA:186(F):C:H6	1.83	0.42
21:CA:837:G:H1	21:CA:849:C:H42	1.67	0.42
1:AB:189:ASP:N	1:AB:205:ASP:OD2	2.52	0.42
21:AA:1440(A):G:H1'	21:AA:1440(O):A:N6	2.34	0.42
28:DF:171:PRO:HB2	28:DF:172:TRP:H	1.59	0.42
14:CO:39:LEU:HD21	21:CA:741:G:O5'	2.20	0.42
23:AV:33:C:O2'	23:AV:34:A:O4'	2.37	0.42
21:CA:783:C:H2'	21:CA:784:C:H6	1.81	0.42
8:AI:7:THR:O	8:AI:80:GLY:HA2	2.20	0.42
20:AY:602:LEU:HB2	20:AY:676:TYR:HB2	2.02	0.42
2:AC:4:LYS:NZ	21:AA:1191:A:H5''	2.35	0.42
27:DE:119:ARG:HH22	59:DA:2621:A:P	2.43	0.42
49:B3:19:GLN:O	49:B3:23:LEU:HG	2.20	0.42
59:BA:1408:C:H2'	59:BA:1409:C:C6	2.55	0.42
59:BA:983:A:C6	59:BA:984:A:N6	2.88	0.42
59:BA:2712:U:HO2'	59:BA:2712(A):A:P	2.42	0.42
20:CY:336:THR:HG23	20:CY:367:GLU:HG3	2.02	0.42
59:BA:477:A:OP1	59:BA:477:A:H8	2.03	0.42
59:DA:1068:G:N2	59:DA:1095:A:O2'	2.52	0.42
26:BD:227:ASN:HB3	26:BD:228:PRO:HD2	2.02	0.42
31:DJ:134:UNK:O	31:DJ:136:UNK:N	2.52	0.42
59:BA:271(N):G:N7	59:BA:357(F):G:N1	2.68	0.42
43:BX:31:HIS:HA	43:BX:32:PRO:HD3	1.94	0.42
59:DA:1443:G:H1	59:DA:1548:C:H42	1.68	0.42
40:DU:15:LYS:HA	40:DU:18:LEU:HB3	2.01	0.42
1:CB:202:PRO:HB2	1:CB:203:GLY:H	1.64	0.42
42:DW:19:LEU:HB3	51:D5:25:LEU:HD13	2.02	0.42
45:DZ:70:LEU:HA	45:DZ:70:LEU:HD23	1.82	0.42
33:DN:95:PRO:HD2	33:DN:108:PRO:CA	2.49	0.42
33:DN:94:HIS:CB	33:DN:95:PRO:HD3	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BT:53:ARG:HH22	39:BT:60:THR:CG2	2.33	0.42
33:BN:45:ASN:HB3	33:BN:115:ARG:CG	2.50	0.42
37:DR:65:LEU:HA	37:DR:68:ARG:HB3	2.02	0.42
59:DA:1317:A:N1	59:DA:1335:U:O2	2.53	0.42
60:DB:106:G:H2'	60:DB:107:U:C6	2.55	0.42
21:CA:1220:G:H2'	21:CA:1221:G:C8	2.52	0.42
12:CM:87:TYR:CE2	12:CM:91:ARG:HD2	2.55	0.42
53:D7:10:ARG:HG2	59:DA:125:G:C6	2.55	0.42
22:AW:2:G:H2'	22:AW:3:C:C6	2.54	0.42
22:AW:70:G:O2'	59:BA:1850:G:N2	2.52	0.42
21:CA:716:A:H2'	21:CA:717:C:H6	1.85	0.42
21:CA:1236:A:H4'	21:CA:1304:G:H4'	2.02	0.42
59:BA:572:A:C5	59:BA:573:G:C8	3.08	0.42
8:CI:120:ARG:HB3	21:CA:1344:C:H4'	2.02	0.42
59:BA:1186:G:C6	59:BA:1187:G:C2	3.08	0.42
36:DQ:22:LYS:HG3	59:DA:863:A:O5'	2.20	0.42
20:CY:165:GLN:HE21	20:CY:260:LEU:HD22	1.84	0.42
21:CA:1095:U:P	21:CA:1108:G:H1	2.43	0.42
59:DA:463:G:N2	59:DA:466:A:C8	2.85	0.42
59:DA:2349:G:O6	59:DA:2368:C:N3	2.53	0.42
28:DF:157:VAL:HB	28:DF:193:VAL:O	2.20	0.42
1:AB:212:GLN:HG3	1:AB:235:SER:CB	2.50	0.42
60:DB:20:C:N4	60:DB:63:G:H1	2.17	0.42
26:DD:183:ARG:HH21	26:DD:260:ARG:NH2	2.16	0.42
59:DA:1847:A:O2'	59:DA:1848:A:H5'	2.19	0.42
21:AA:1436:U:H3'	21:AA:1437:C:H6	1.84	0.42
59:BA:563:G:H22	59:BA:578:A:H2	1.67	0.42
34:BO:71:ARG:HA	34:BO:71:ARG:HD2	1.65	0.42
59:BA:1046:A:H3'	59:BA:1047:G:C5'	2.50	0.42
21:AA:1205:U:H2'	21:AA:1206:G:H8	1.84	0.42
59:DA:271(S):C:H2'	59:DA:271(T):G:O4'	2.19	0.42
2:AC:59:ARG:HA	2:AC:63:ASN:O	2.19	0.42
59:DA:1544:A:C5	59:DA:1545:A:C6	3.08	0.42
40:DU:50:ARG:NH2	59:DA:993:G:OP1	2.53	0.42
21:AA:600:C:H2'	21:AA:601:C:C6	2.55	0.42
47:D1:47:GLN:O	47:D1:62:VAL:N	2.53	0.42
21:CA:1440(D):A:N1	39:DT:118:ARG:HD3	2.35	0.42
28:DF:103:LYS:HG2	28:DF:106:ARG:NH1	2.34	0.42
40:DU:101:ARG:NH2	41:DV:13:ARG:HH11	2.17	0.42
2:AC:108:ASN:HA	2:AC:109:PRO:HD2	1.78	0.42
21:AA:990:C:C2	21:AA:1216:G:C2	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:991:U:O2'	21:AA:993:G:H1'	2.20	0.42
59:BA:702:G:H2'	59:BA:703:U:C6	2.54	0.42
14:AO:56:LEU:HD12	14:AO:56:LEU:HA	1.84	0.42
29:BG:173:LEU:HD12	29:BG:180:PHE:CZ	2.55	0.42
39:DT:31:SER:HB3	39:DT:32:TYR:H	1.44	0.42
30:DH:103:LEU:HD23	30:DH:115:VAL:HB	2.00	0.42
35:BP:148:LEU:HB3	35:BP:149:GLU:H	1.66	0.42
21:AA:1046:A:C8	21:AA:1047:G:C8	3.07	0.42
59:BA:122:G:H1	59:BA:129:C:H42	1.68	0.42
59:DA:2867:G:O3'	59:DA:2868:A:H8	2.02	0.42
6:CG:26:PHE:O	6:CG:30:ILE:HG13	2.20	0.42
55:B9:13:LYS:HB2	55:B9:28:GLU:H	1.85	0.42
7:CH:38:ILE:HA	7:CH:41:ARG:HH11	1.84	0.42
59:DA:488:G:N2	59:DA:491:G:H3'	2.35	0.42
52:D6:19:ARG:H	52:D6:19:ARG:NH1	2.18	0.42
20:AY:125:ALA:C	20:AY:127:LYS:H	2.22	0.42
32:DK:78:ILE:HD11	32:DK:136:VAL:HG21	2.01	0.42
21:AA:862:C:H4'	21:AA:875:C:OP1	2.20	0.42
21:AA:885:G:C2	21:AA:886:G:C8	3.08	0.42
59:DA:1658:C:N4	59:DA:2002:G:H1	2.17	0.42
59:BA:574:C:H1'	59:BA:2055:C:C6	2.55	0.42
59:DA:287:C:H2'	59:DA:289:A:H8	1.81	0.42
20:CY:114:VAL:HA	20:CY:152:THR:HG21	2.02	0.42
46:B0:11:ARG:NH2	59:BA:2279:G:H8	2.18	0.42
15:CP:70:ALA:O	15:CP:74:LEU:HG	2.20	0.42
45:BZ:8:TYR:HB2	45:BZ:38:TYR:CE2	2.54	0.42
50:B4:28:LYS:HG3	50:B4:29:PRO:HD2	2.01	0.42
25:DC:75:VAL:HG13	25:DC:113:ALA:HB3	2.01	0.42
52:D6:20:ASN:HD22	52:D6:20:ASN:N	2.17	0.42
20:AY:412:ALA:HB3	20:AY:448:GLN:HE21	1.85	0.42
28:BF:197:ASP:OD2	28:BF:198:ALA:N	2.52	0.42
51:D5:23:HIS:HB3	51:D5:24:ALA:H	1.48	0.42
21:AA:574:A:H1'	21:AA:883:C:O4'	2.20	0.42
59:BA:2771:C:H2'	59:BA:2772:C:C6	2.55	0.42
59:BA:2606:C:H2'	59:BA:2607:G:O4'	2.20	0.42
2:CC:107:GLN:OE1	2:CC:107:GLN:N	2.53	0.42
16:CQ:6:LEU:HA	16:CQ:6:LEU:HD23	1.76	0.42
34:BO:77:ILE:HD12	39:BT:73:GLU:O	2.19	0.42
20:AY:534:ILE:HD11	20:AY:570:GLY:HA3	2.00	0.42
59:DA:987:G:O2'	59:DA:1000:A:N3	2.43	0.42
33:DN:35:ARG:NE	33:DN:39:ARG:N	2.68	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:2065:C:H2'	59:DA:2066:C:C6	2.54	0.42
27:DE:144:ARG:HB3	27:DE:145:LYS:H	1.59	0.42
33:BN:25:ARG:C	33:BN:27:ALA:H	2.24	0.42
11:CL:58:VAL:HG22	11:CL:85:ILE:HD11	2.01	0.42
21:CA:1145:C:C5'	21:CA:1146:A:H5'	2.49	0.42
12:CM:87:TYR:O	12:CM:91:ARG:HG3	2.20	0.42
11:AL:87:GLY:N	11:AL:98:TYR:HA	2.35	0.42
22:AW:72:C:C2	59:BA:1852:C:H5''	2.54	0.42
21:CA:611:A:H2'	21:CA:612:C:H5'	2.02	0.42
21:CA:610:G:C5	21:CA:611:A:N7	2.88	0.42
21:CA:1305:G:N2	21:CA:1332:A:OP2	2.49	0.42
59:BA:1586:A:H5''	59:BA:1587:A:OP2	2.20	0.42
35:BP:113:LYS:HG2	59:BA:636:G:C6	2.55	0.42
59:DA:1115:G:H2'	59:DA:1116:C:C6	2.54	0.42
21:CA:501:C:O2'	21:CA:549:C:O2	2.38	0.42
60:DB:80:U:H3	60:DB:96:G:H1	1.68	0.42
19:CT:61:SER:O	19:CT:65:LYS:HG2	2.20	0.42
59:DA:8:A:C2	59:DA:9:U:N3	2.87	0.42
21:CA:68(P):C:H2'	21:CA:68(Q):U:C5	2.54	0.42
2:CC:64:VAL:HG23	2:CC:98:ASN:O	2.20	0.42
21:CA:41:G:H2'	21:CA:42:G:O4'	2.20	0.42
27:BE:141:ILE:HB	27:BE:142:GLY:H	1.63	0.42
21:CA:19:C:H2'	21:CA:20:U:H6	1.85	0.42
53:D7:21:ARG:HB3	53:D7:31:LEU:HD21	2.00	0.42
28:DF:154:VAL:O	28:DF:154:VAL:HG12	2.20	0.42
20:CY:457:LEU:HD23	20:CY:458:HIS:N	2.35	0.42
10:CK:55:LYS:NZ	21:CA:690:G:O6	2.52	0.42
21:CA:691:G:H2'	21:CA:692:U:C6	2.54	0.42
59:BA:487:C:N3	59:BA:493:G:O6	2.53	0.42
16:AQ:42:TYR:HD2	16:AQ:71:PHE:CE2	2.38	0.42
59:BA:1048:A:C8	59:BA:1110:G:N2	2.87	0.42
44:BY:75:ILE:HG12	44:BY:76:CYS:N	2.34	0.42
21:CA:560:U:H5'	21:CA:566:G:N2	2.35	0.42
59:DA:2405:G:N2	59:DA:2412:A:H62	2.16	0.42
28:BF:9:ILE:HG23	28:BF:10:PRO:HD2	2.01	0.42
26:BD:146:GLU:HA	26:BD:153:ALA:HA	2.02	0.42
20:AY:328:ILE:O	20:AY:328:ILE:HG13	2.19	0.42
36:BQ:46:GLN:NE2	59:BA:2484:G:H4'	2.34	0.42
21:CA:1028:C:H2'	21:CA:1028(A):C:O4'	2.19	0.42
17:CR:76:LEU:HD23	17:CR:76:LEU:HA	1.87	0.42
21:CA:1273:G:H5'	21:CA:1274:G:OP2	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CA:768:A:H5'	21:CA:1524:C:H1'	2.02	0.42
59:DA:357(I):G:C2	59:DA:357(J):G:C5	3.07	0.42
14:AO:48:LYS:HB3	14:AO:48:LYS:HE2	1.94	0.42
14:AO:43:LEU:HD22	14:AO:47:LYS:CB	2.50	0.42
32:BK:41:PHE:HZ	32:BK:53:VAL:HB	1.84	0.42
52:B6:43:CYS:O	52:B6:44:ARG:HB2	2.20	0.42
59:DA:711:G:H2'	59:DA:712:G:O4'	2.20	0.42
49:D3:26:LEU:HD11	49:D3:46:ASN:OD1	2.20	0.42
45:DZ:104:PHE:HZ	45:DZ:122:ARG:HG2	1.84	0.42
59:BA:958:U:O2	60:BB:89(B):A:H4'	2.20	0.42
20:AY:553:GLY:HA2	20:AY:554:PRO:HD3	1.85	0.42
59:DA:2598:A:HO2'	59:DA:2599:G:P	2.43	0.42
35:DP:32:THR:HB	35:DP:36:LYS:HB2	2.01	0.42
20:AY:166:LEU:HB2	20:AY:178:ILE:HG23	2.02	0.42
45:BZ:151:HIS:HB3	45:BZ:170:THR:HA	2.01	0.42
26:DD:83:GLU:HB2	26:DD:92:ILE:HD11	2.01	0.42
21:AA:864:A:C6	21:AA:865:A:C6	3.07	0.42
59:BA:2248:C:H3'	59:BA:2249:U:O4'	2.20	0.42
59:BA:775:G:C5	59:BA:794:G:N7	2.88	0.42
26:BD:165:ILE:O	26:BD:166:GLN:CB	2.67	0.42
28:BF:180:GLY:HA3	59:BA:611(F):A:N3	2.35	0.42
15:AP:11:SER:H	15:AP:14:ASN:HB3	1.85	0.42
59:BA:2769:C:N4	59:BA:2770:G:C6	2.88	0.42
59:BA:2802:G:OP2	59:BA:2802:G:H8	2.03	0.42
14:AO:21:ASP:OD1	14:AO:24:SER:HB2	2.20	0.42
45:BZ:57:ILE:HG22	45:BZ:70:LEU:HA	2.02	0.42
21:CA:502:G:O6	21:CA:543:C:N3	2.53	0.42
60:DB:74:U:H2'	60:DB:75:G:O4'	2.20	0.42
42:BW:96:ILE:HD11	59:BA:2012:G:H4'	2.02	0.42
19:CT:20:LEU:O	19:CT:24:LEU:HG	2.20	0.42
51:B5:30:LEU:HD22	51:B5:39:MET:O	2.20	0.42
26:DD:68:LYS:NZ	59:DA:2202(B):C:OP1	2.52	0.42
59:DA:1142:A:C4	59:DA:1144:G:C8	3.08	0.42
59:BA:2056:G:N2	59:BA:2577:A:N3	2.68	0.42
21:CA:352:C:H1'	21:CA:355:C:H41	1.85	0.42
20:CY:120:THR:HA	20:CY:123:ARG:HB3	2.02	0.42
59:DA:270(E):G:H2'	59:DA:270(F):U:C6	2.54	0.42
38:BS:75:GLU:HA	38:BS:78:LEU:HD12	2.02	0.42
14:AO:55:GLY:O	14:AO:59:MET:HG3	2.19	0.42
20:AY:497:PHE:O	20:AY:497:PHE:CG	2.73	0.42
59:DA:1067:A:OP1	59:DA:1067:A:H8	2.03	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AB:115:LEU:HA	1:AB:115:LEU:HD12	1.81	0.42
59:BA:1974:C:H2'	59:BA:1975:G:O4'	2.20	0.42
21:AA:259:G:H1	21:AA:267:C:H42	1.68	0.42
29:BG:170:ARG:NH2	29:BG:182:LYS:HG2	2.35	0.42
32:DK:77:LEU:HD12	32:DK:107:ILE:HG23	2.02	0.42
28:DF:161:GLU:O	28:DF:165:ARG:HG2	2.20	0.42
45:DZ:94:GLU:O	45:DZ:96:VAL:N	2.52	0.42
33:DN:104:LYS:HD3	33:DN:121:LYS:C	2.41	0.41
33:DN:85:ILE:HG23	33:DN:109:LYS:HB2	2.02	0.41
11:CL:49:ASN:ND2	21:CA:528:C:H42	2.17	0.41
11:CL:85:ILE:CG1	11:CL:98:TYR:HB3	2.42	0.41
62:CY:702:FUA:H212	62:CY:702:FUA:H72	1.88	0.41
62:AY:702:FUA:H323	62:AY:702:FUA:C15	2.49	0.41
27:DE:66:HIS:NE2	59:DA:2786:U:H5'	2.35	0.41
27:DE:33:VAL:HG23	27:DE:47:VAL:CG1	2.49	0.41
59:DA:1615:C:O2'	59:DA:1616:A:H5'	2.20	0.41
21:CA:442:C:H2'	21:CA:443:C:H6	1.85	0.41
59:BA:2123:G:H2'	59:BA:2124:G:H8	1.85	0.41
59:BA:964:C:C4	59:BA:965:C:C5	3.08	0.41
59:DA:1178:C:C2	59:DA:1179:C:C5	3.07	0.41
27:DE:129:HIS:CE1	59:DA:1675:C:N4	2.88	0.41
59:BA:541:C:H6	59:BA:541:C:O5'	2.03	0.41
21:CA:1401:G:N2	21:CA:1501:C:N3	2.54	0.41
6:CG:87:VAL:O	6:CG:89:MET:N	2.53	0.41
60:DB:89(B):A:H8	60:DB:89(B):A:O5'	2.03	0.41
43:DX:53:LYS:NZ	59:DA:1398:C:H5''	2.35	0.41
24:AX:7:U:O4	24:AX:66:A:N1	2.53	0.41
59:DA:835:A:H2'	59:DA:836:G:O4'	2.20	0.41
36:BQ:72:LYS:HA	36:BQ:73:PRO:HD2	1.73	0.41
18:AS:51:VAL:HG21	18:AS:71:LEU:HD21	2.02	0.41
59:BA:875:G:H2'	59:BA:876:C:O4'	2.20	0.41
59:DA:85:G:O6	59:DA:97:C:N3	2.53	0.41
38:BS:87:PHE:CZ	38:BS:101:LEU:HD12	2.55	0.41
59:DA:2683:C:H2'	59:DA:2684:U:H6	1.85	0.41
60:DB:113:C:H2'	60:DB:114:G:C8	2.54	0.41
20:CY:138:LYS:HG2	61:CY:701:GDP:C6	2.55	0.41
48:B2:35:LEU:HD23	48:B2:36:ARG:N	2.35	0.41
28:DF:24:LEU:HD23	28:DF:24:LEU:HA	1.81	0.41
21:AA:234:C:H2'	21:AA:235:C:O4'	2.19	0.41
21:AA:1522:U:H2'	21:AA:1523:G:C8	2.55	0.41
21:AA:967:C:C3'	21:AA:968:A:H2'	2.45	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:2889:C:C2	59:DA:2890:G:C8	3.08	0.41
59:DA:1422:G:H1	59:DA:1576:U:H3	1.68	0.41
21:CA:560:U:H4'	21:CA:561:U:H5''	2.02	0.41
28:BF:154:VAL:CG2	28:BF:173:VAL:HA	2.49	0.41
59:BA:1815:A:H5'	59:BA:1817:G:H1'	2.01	0.41
25:DC:39:ASP:O	25:DC:41:THR:N	2.52	0.41
35:BP:35:HIS:HE1	59:BA:664:C:H5''	1.85	0.41
21:CA:335:C:H4'	21:CA:1433:A:O2'	2.20	0.41
59:BA:1082:U:O5'	59:BA:1082:U:H6	2.03	0.41
60:BB:66:A:N6	60:BB:107:U:H2'	2.35	0.41
46:D0:16:SER:HB3	59:DA:2262:U:OP2	2.20	0.41
35:BP:63:PRO:HD2	59:BA:2394:C:OP1	2.20	0.41
41:BV:4:ILE:O	41:BV:39:LEU:N	2.53	0.41
20:CY:315:LYS:CB	20:CY:327:PHE:HB2	2.44	0.41
35:DP:98:GLU:O	35:DP:102:ARG:HB2	2.20	0.41
35:DP:115:LEU:HB2	35:DP:116:GLY:H	1.62	0.41
28:BF:62:ARG:HB3	59:BA:797:C:OP1	2.20	0.41
59:BA:481:G:H2'	59:BA:507:A:C6	2.55	0.41
59:BA:2832:U:H5''	59:BA:2833:G:C8	2.55	0.41
7:AH:38:ILE:HG21	7:AH:120:THR:HG22	2.01	0.41
28:BF:117:ARG:HA	28:BF:117:ARG:HD3	1.81	0.41
21:AA:1307:U:H2'	21:AA:1308:U:H6	1.83	0.41
59:BA:701:G:N2	59:BA:731:C:N3	2.63	0.41
26:BD:119:ALA:CB	26:BD:130:ALA:HB3	2.50	0.41
3:AD:71:SER:HB2	21:AA:546:G:OP1	2.20	0.41
44:DY:9:LYS:HB3	44:DY:94:LYS:HZ3	1.85	0.41
21:AA:918:A:H2'	21:AA:919:A:C8	2.54	0.41
3:AD:199:ASN:HB3	3:AD:202:LEU:HG	2.02	0.41
19:CT:53:LEU:HD13	19:CT:53:LEU:HA	1.88	0.41
21:CA:68(A):G:H2'	21:CA:68(B):G:C8	2.52	0.41
59:BA:1759:A:H5'	59:BA:2715:C:C4'	2.49	0.41
59:DA:1506(N):G:H5''	59:DA:1506(O):G:OP1	2.20	0.41
21:AA:771:G:H2'	21:AA:772:U:C6	2.55	0.41
59:DA:284:C:H2'	59:DA:285:C:C6	2.54	0.41
59:BA:1926:U:O2	59:BA:1928:A:H8	2.03	0.41
21:AA:390:C:H2'	21:AA:391:G:H8	1.84	0.41
20:AY:426:GLN:O	20:AY:429:ALA:HB3	2.20	0.41
26:DD:118:VAL:HG22	26:DD:119:ALA:N	2.35	0.41
59:BA:304:G:H2'	59:BA:305:U:O4'	2.20	0.41
59:BA:2030:A:H5''	59:BA:2031:A:C8	2.54	0.41
21:CA:808:C:H2'	21:CA:809:G:H8	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BD:110:GLY:HA3	26:BD:127:VAL:HG11	2.02	0.41
25:DC:31:LYS:HE3	25:DC:31:LYS:HA	2.02	0.41
52:D6:38:LYS:HG3	59:DA:2344:U:OP1	2.20	0.41
43:BX:47:PHE:CD2	43:BX:89:ILE:HG12	2.55	0.41
15:AP:27:LYS:HG3	15:AP:29:ASP:O	2.19	0.41
59:DA:1770:G:H2'	59:DA:1771:C:O4'	2.20	0.41
1:CB:196:LEU:HD12	1:CB:197:VAL:HG23	2.02	0.41
31:BJ:165:UNK:C	31:BJ:167:UNK:H	2.32	0.41
8:AI:47:LEU:HG	8:AI:50:LEU:HD12	2.01	0.41
21:CA:1213:A:C8	21:CA:1215:G:C5	3.08	0.41
29:BG:34:LEU:H	29:BG:34:LEU:HD23	1.85	0.41
19:CT:90:GLN:HG3	19:CT:90:GLN:H	1.50	0.41
10:AK:50:TYR:HD2	10:AK:50:TYR:HA	1.76	0.41
59:BA:1050:A:H2'	59:BA:1051:G:C8	2.54	0.41
4:AE:127:ASN:HA	4:AE:128:PRO:HD3	1.94	0.41
59:BA:1065:U:H2'	59:BA:1066:U:O4'	2.19	0.41
21:CA:141:A:H2'	21:CA:142:G:O4'	2.20	0.41
33:DN:46:VAL:O	33:DN:50:ASP:N	2.51	0.41
59:BA:2043:C:H1'	59:BA:2779:U:C5	2.55	0.41
59:BA:2628:C:O5'	59:BA:2629:A:H5''	2.20	0.41
27:BE:4:ILE:HG23	27:BE:5:LEU:O	2.20	0.41
33:BN:40:PRO:HA	33:BN:77:GLY:HA2	2.02	0.41
21:AA:1116:C:C2'	21:AA:1117:G:H5'	2.50	0.41
21:CA:1157:A:N3	21:CA:1157:A:H2'	2.36	0.41
59:DA:577:G:H2'	59:DA:578:A:O4'	2.19	0.41
24:CX:26:A:C6	24:CX:27:C:N4	2.89	0.41
21:CA:66:G:O2'	21:CA:173:U:H2'	2.20	0.41
21:CA:1102:A:H2'	21:CA:1103:C:C5	2.55	0.41
62:CY:702:FUA:C12	62:CY:702:FUA:H231	2.45	0.41
59:DA:2630:G:C2	59:DA:2631:G:C4	3.09	0.41
59:DA:2637:U:C4	59:DA:2638:G:C6	3.08	0.41
59:BA:1313:U:H4'	59:BA:1333:C:P	2.60	0.41
40:BU:3:ARG:H	59:BA:445:C:H5''	1.84	0.41
21:CA:1502:A:C8	21:CA:1505:G:N1	2.85	0.41
16:CQ:31:LEU:HD11	21:CA:301:G:OP1	2.20	0.41
21:CA:525:C:H2'	21:CA:526:C:C6	2.55	0.41
59:DA:919:G:H2'	59:DA:920:G:H8	1.85	0.41
59:DA:700:G:C2	59:DA:701:G:H1'	2.55	0.41
11:AL:90:VAL:O	11:AL:92:ASP:N	2.45	0.41
36:DQ:126:PRO:CA	59:DA:2485:G:H4'	2.49	0.41
27:BE:65:GLY:CA	27:BE:70:ALA:HA	2.39	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CA:21:G:H2'	21:CA:22:G:C8	2.55	0.41
28:DF:157:VAL:HG23	28:DF:192:LEU:HA	2.02	0.41
22:CW:40:G:H2'	22:CW:41:A:H5'	2.02	0.41
39:DT:53:ARG:HH21	39:DT:55:ASN:CG	2.24	0.41
1:AB:70:PHE:HD2	1:AB:92:TYR:HB3	1.85	0.41
31:DJ:110:UNK:HA	31:DJ:116:UNK:CA	2.42	0.41
48:B2:10:LEU:HD22	48:B2:14:ARG:HE	1.85	0.41
9:CJ:41:PRO:HD3	21:CA:1150:U:O2'	2.20	0.41
25:BC:83:LYS:CD	25:BC:117:THR:HG21	2.49	0.41
21:CA:1363:A:H1'	21:CA:1365:G:N7	2.35	0.41
47:D1:34:THR:HG23	47:D1:35:THR:H	1.85	0.41
59:DA:1527:G:C2	59:DA:1544:A:C8	3.04	0.41
36:BQ:126:PRO:HA	59:BA:2485:G:O3'	2.20	0.41
52:D6:37:ARG:NH2	59:DA:2286:A:H8	2.18	0.41
21:AA:1392:G:O2'	21:AA:1502:A:OP1	2.38	0.41
59:DA:479:A:C2	59:DA:480:A:C4	3.08	0.41
59:DA:481:G:O2'	59:DA:482:A:O5'	2.32	0.41
26:DD:123:ALA:O	26:DD:125:ILE:N	2.53	0.41
23:AV:14:A:H4'	23:AV:15:A:OP1	2.20	0.41
21:CA:1274:G:H2'	21:CA:1275:A:H8	1.84	0.41
19:AT:32:ALA:HB2	21:AA:1440(M):G:H4'	2.02	0.41
25:BC:7:ARG:NH1	25:BC:35:THR:O	2.53	0.41
21:CA:1281:U:H5'	21:CA:1282:C:OP2	2.20	0.41
21:CA:1440(J):C:H1'	21:CA:1440(K):G:N2	2.35	0.41
21:AA:358:U:H2'	21:AA:359:U:C6	2.55	0.41
26:DD:105:ILE:CD1	26:DD:106:ILE:H	2.33	0.41
7:CH:34:GLU:O	7:CH:38:ILE:HG13	2.20	0.41
6:AG:76:ARG:O	6:AG:86:GLN:HA	2.20	0.41
59:DA:1594:G:H2'	59:DA:1595:G:O4'	2.20	0.41
32:DK:78:ILE:CD1	32:DK:84:LEU:HB2	2.50	0.41
21:AA:887:G:H2'	21:AA:888:G:O4'	2.21	0.41
59:BA:1281:G:H1	59:BA:1289:C:N4	2.17	0.41
39:DT:100:TYR:C	39:DT:102:ILE:H	2.22	0.41
30:DH:76:VAL:O	30:DH:79:VAL:HG22	2.21	0.41
26:BD:105:ILE:HA	26:BD:105:ILE:HD13	1.67	0.41
36:DQ:56:ARG:HD3	59:DA:2469:A:C1'	2.50	0.41
59:DA:1055:G:H3'	59:DA:1056:G:H8	1.84	0.41
21:CA:126:G:OP1	21:CA:605:U:O2'	2.27	0.41
59:DA:886:C:H2'	59:DA:889:C:H42	1.85	0.41
21:CA:771:G:H2'	21:CA:772:U:C6	2.55	0.41
13:CN:5:ALA:CB	21:CA:1216:G:H5''	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AD:42:GLN:O	3:AD:46:LYS:NZ	2.52	0.41
59:BA:428:A:N6	59:BA:429:A:N1	2.68	0.41
29:BG:125:PHE:CZ	29:BG:169:ALA:HB3	2.55	0.41
21:AA:1258:G:H2'	21:AA:1259:C:C6	2.55	0.41
10:CK:41:THR:HB	10:CK:71:LYS:NZ	2.35	0.41
3:CD:61:LYS:O	3:CD:64:LEU:HB3	2.20	0.41
59:BA:623:G:H2'	59:BA:624:C:O4'	2.20	0.41
45:BZ:104:PHE:HZ	45:BZ:121:HIS:O	2.03	0.41
42:BW:23:LEU:HG	42:BW:24:ILE:HG23	2.01	0.41
29:BG:55:LYS:O	29:BG:58:GLN:HG2	2.20	0.41
6:CG:3:ARG:HB3	21:CA:932:C:P	2.60	0.41
59:BA:1915:U:H2'	59:BA:1916:A:O4'	2.19	0.41
21:AA:1209:C:H2'	21:AA:1210:C:H6	1.84	0.41
59:DA:271(O):A:H2'	59:DA:271(P):C:C5	2.55	0.41
21:AA:1402:C:H2'	21:AA:1403:C:O4'	2.20	0.41
37:DR:74:LYS:HE3	37:DR:74:LYS:HB2	1.72	0.41
59:DA:2056:G:H2'	59:DA:2056:G:N3	2.35	0.41
10:CK:50:TYR:HD2	10:CK:50:TYR:HA	1.69	0.41
20:AY:526:VAL:CG2	20:AY:566:THR:HG23	2.50	0.41
6:CG:20:ASP:HB2	6:CG:23:VAL:HG23	2.02	0.41
28:DF:83:PHE:CZ	59:DA:1257:C:H4'	2.56	0.41
21:CA:1535:C:N3	23:CV:10:G:N2	2.68	0.41
33:BN:75:TYR:OH	59:BA:2039:C:OP1	2.27	0.41
34:BO:79:PHE:HB3	34:BO:80:ASP:H	1.76	0.41
21:AA:440:A:H3'	21:AA:441:A:C8	2.56	0.41
11:CL:43:VAL:HB	11:CL:93:LEU:HD21	2.02	0.41
59:DA:2528:U:O2'	59:DA:2529:G:H3'	2.19	0.41
27:DE:160:TYR:HD2	27:DE:160:TYR:HA	1.70	0.41
53:D7:1:MET:SD	59:DA:753:C:H5'	2.60	0.41
22:AW:72:C:C6	22:AW:72:C:H3'	2.55	0.41
59:BA:953:A:H1'	59:BA:2266:A:P	2.60	0.41
21:CA:1340:A:C6	21:CA:1341:U:N3	2.89	0.41
34:DO:32:TYR:HA	34:DO:32:TYR:HD2	1.79	0.41
45:DZ:48:PHE:CZ	45:DZ:71:VAL:HG21	2.54	0.41
21:CA:1369:C:H2'	21:CA:1370:G:O4'	2.20	0.41
59:BA:990:A:C5	59:BA:1186:G:H4'	2.55	0.41
11:AL:89:ARG:HA	11:AL:96:VAL:HB	2.01	0.41
2:CC:29:TYR:HB3	13:CN:37:PHE:HE2	1.84	0.41
12:AM:102:ARG:HB3	21:AA:949:A:P	2.60	0.41
21:AA:985:C:H2'	21:AA:986:A:H8	1.86	0.41
38:BS:64:GLU:O	38:BS:67:ARG:HB2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:DT:62:THR:HA	39:DT:75:ILE:HA	2.01	0.41
4:CE:103:GLY:C	4:CE:106:PRO:HD2	2.40	0.41
20:CY:90:PHE:HB3	20:CY:457:LEU:HD21	2.02	0.41
60:DB:62:C:H2'	60:DB:63:G:H8	1.85	0.41
28:DF:3:GLU:HA	28:DF:24:LEU:HB2	2.03	0.41
59:BA:1413:G:N2	59:BA:1589:C:C2	2.80	0.41
44:BY:2:ARG:N	59:BA:105:C:HO2'	2.17	0.41
19:CT:49:ALA:O	19:CT:51:GLU:N	2.53	0.41
59:DA:1494:A:H2'	59:DA:1494:A:N3	2.35	0.41
44:BY:81:LYS:HB2	44:BY:96:ILE:HG23	2.01	0.41
15:CP:9:PHE:HB3	21:CA:624:C:O3'	2.20	0.41
20:CY:171:GLU:C	20:CY:173:THR:H	2.22	0.41
40:DU:50:ARG:HG2	40:DU:53:ARG:NH2	2.36	0.41
21:CA:231:G:H2'	21:CA:232:G:C8	2.54	0.41
21:AA:131:C:O2	21:AA:262:A:H2	2.03	0.41
3:CD:162:LEU:O	3:CD:165:MET:HB3	2.21	0.41
59:BA:401:A:H2'	59:BA:402:A:H8	1.85	0.41
37:DR:93:GLY:HA3	59:DA:2880:C:O2	2.20	0.41
59:BA:659:C:C2	59:BA:660:G:C8	3.08	0.41
35:BP:125:VAL:O	35:BP:145:PRO:HD3	2.21	0.41
9:AJ:51:ARG:CG	9:AJ:59:SER:HB3	2.50	0.41
59:DA:215:G:C4'	59:DA:216:A:H4'	2.48	0.41
14:AO:33:THR:HA	14:AO:63:ARG:NH2	2.35	0.41
59:BA:248:G:H5'	59:BA:250:G:C6	2.55	0.41
20:CY:344:THR:HB	20:CY:388:THR:HB	2.03	0.41
10:AK:47:VAL:HG22	21:AA:688:G:O3'	2.19	0.41
28:DF:159:GLY:HA2	28:DF:164:ARG:HH21	1.86	0.41
47:D1:43:TYR:CG	47:D1:44:PRO:HD2	2.55	0.41
21:AA:1096:C:H2'	21:AA:1097:C:H6	1.81	0.41
16:AQ:67:LYS:HD2	21:AA:266:G:C8	2.55	0.41
59:BA:37:C:C2	59:BA:38:A:C8	3.08	0.41
52:D6:19:ARG:H	52:D6:19:ARG:HH11	1.68	0.41
26:BD:163:ALA:HB2	26:BD:178:PRO:HD3	2.00	0.41
20:AY:516:PRO:HB2	20:AY:517:LEU:H	1.66	0.41
5:CF:97:PHE:HD2	17:CR:31:LEU:HD12	1.84	0.41
55:B9:3:VAL:HG11	59:BA:2539:C:H5'	2.02	0.41
21:CA:1077:G:H8	21:CA:1077:G:O5'	2.03	0.41
20:AY:543:GLN:O	20:AY:546:ILE:HB	2.20	0.41
15:CP:35:LYS:CG	15:CP:36:ILE:H	2.32	0.41
8:AI:48:GLU:O	8:AI:52:ALA:N	2.53	0.41
59:DA:1809:A:H2'	59:DA:1810:A:O4'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CE:101:ILE:O	4:CE:120:THR:HG23	2.20	0.41
59:BA:2298:A:H2'	59:BA:2299:G:O4'	2.20	0.41
6:AG:33:ASP:OD1	21:AA:1350:A:O2'	2.39	0.41
59:DA:1057:A:H62	59:DA:1087:G:P	2.43	0.41
34:DO:98:VAL:HG22	34:DO:117:LEU:HD22	2.01	0.41
6:CG:22:LEU:HD11	6:CG:101:LEU:HD21	2.02	0.41
59:DA:2794(E):A:H2'	59:DA:2802:G:C4'	2.50	0.41
59:DA:1095:A:H2'	59:DA:1096:A:C8	2.54	0.41
27:DE:104:VAL:HG12	27:DE:198:VAL:HA	2.02	0.41
59:DA:2184:G:H2'	59:DA:2185:C:C6	2.56	0.41
25:BC:177:GLY:C	25:BC:179:ALA:H	2.23	0.41
1:AB:54:THR:O	1:AB:58:ILE:HG12	2.20	0.41
21:CA:290:C:H2'	21:CA:291:C:O4'	2.20	0.41
30:BH:144:VAL:HA	30:BH:147:ASN:HB3	2.02	0.41
26:DD:14:ARG:HG3	26:DD:15:PHE:H	1.85	0.41
47:D1:37:ILE:HD13	47:D1:37:ILE:HG21	1.88	0.41
59:BA:1641:A:H8	59:BA:1641:A:O5'	2.02	0.41
26:BD:30:GLU:HG2	26:BD:30:GLU:H	1.71	0.41
35:DP:75:ILE:HG13	35:DP:75:ILE:H	1.69	0.41
41:BV:43:GLU:H	41:BV:43:GLU:HG2	1.58	0.41
21:CA:1496:C:O2	21:CA:1517:G:N2	2.36	0.41
60:DB:57:A:N6	60:DB:58:A:H62	2.18	0.41
41:DV:40:LEU:HD13	41:DV:41:GLY:H	1.85	0.41
33:DN:75:TYR:CE1	33:DN:82:LEU:HG	2.55	0.41
21:CA:407:G:H2'	21:CA:408:A:H8	1.86	0.41
27:BE:52:LEU:HD23	27:BE:53:PRO:HD2	2.02	0.41
33:BN:19:GLU:HA	33:BN:99:LEU:CD2	2.50	0.41
33:BN:98:VAL:O	33:BN:100:GLU:C	2.48	0.41
21:CA:1518:A:H2'	21:CA:1519:A:C8	2.55	0.41
59:DA:1925:C:O2	59:DA:1929:G:O6	2.37	0.41
21:CA:601:C:N3	21:CA:637:G:O6	2.54	0.41
21:CA:103:C:O2	21:CA:172:A:C2	2.73	0.41
59:DA:1850:G:H2'	59:DA:1851:U:C6	2.55	0.41
24:CX:8:U:H5'	24:CX:49:G:OP2	2.19	0.41
59:DA:271(E):G:H2'	59:DA:271(F):G:O4'	2.21	0.41
36:DQ:66:ILE:HB	59:DA:872:A:O2'	2.21	0.41
21:CA:1223:C:OP2	21:CA:1224:G:H2'	2.21	0.41
54:D8:46:ARG:NH1	59:DA:649:G:O2'	2.54	0.41
11:AL:32:PHE:HA	11:AL:84:LEU:HB3	2.01	0.41
59:BA:176:G:H3'	59:BA:177:G:C2	2.55	0.41
25:BC:65:LEU:HD11	25:BC:162:ILE:HD11	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:1563:G:C2	59:DA:1564:C:C2	3.08	0.41
59:DA:1563:G:H2'	59:DA:1564:C:O4'	2.20	0.41
21:CA:887:G:H1	21:CA:910:C:N4	2.13	0.41
59:DA:2271:G:H2'	59:DA:2272:U:C6	2.55	0.41
21:AA:618:C:OP1	21:AA:618:C:H4'	2.20	0.41
6:CG:78:ARG:HG3	6:CG:156:TRP:HA	2.02	0.41
60:BB:32:C:O2	60:BB:50:G:C2	2.73	0.41
21:AA:926:G:N2	21:AA:1505:G:O2'	2.53	0.41
59:DA:1751:C:H2'	59:DA:1752:C:H6	1.85	0.41
59:BA:2329:G:H2'	59:BA:2330:G:O4'	2.21	0.41
59:DA:1279:G:H1	59:DA:1291:C:N4	2.19	0.41
10:AK:117:ASN:O	21:AA:716:A:O2'	2.27	0.41
5:AF:50:TYR:CZ	17:AR:77:GLY:HA2	2.55	0.41
21:AA:942:G:H2'	21:AA:943:U:C5	2.56	0.41
22:AW:31:A:H2	22:AW:39:U:O2	2.03	0.41
59:DA:1174:U:H2'	59:DA:1175:G:N7	2.35	0.41
36:BQ:41:TRP:HA	36:BQ:95:ALA:O	2.21	0.41
25:BC:101:ILE:HD12	25:BC:104:ILE:HD12	2.02	0.41
18:AS:36:ARG:NH2	18:AS:72:GLY:O	2.54	0.41
21:AA:1028(C):G:N2	21:AA:1028(G):G:N7	2.68	0.41
1:AB:172:ILE:O	1:AB:175:ARG:HB3	2.21	0.41
38:DS:21:THR:C	38:DS:23:ARG:N	2.73	0.41
54:B8:22:VAL:HG21	54:B8:53:PRO:O	2.20	0.41
25:DC:25:GLU:O	25:DC:29:LEU:HB2	2.21	0.41
32:DK:91:PRO:HB3	32:DK:134:MET:C	2.40	0.41
48:D2:19:VAL:O	48:D2:23:LYS:HG3	2.21	0.41
42:DW:4:LYS:HG3	42:DW:106:ILE:HG12	2.03	0.41
42:DW:65:LEU:O	42:DW:69:LEU:HG	2.20	0.41
21:CA:696:A:H8	21:CA:696:A:O5'	2.04	0.41
4:CE:51:VAL:O	4:CE:55:VAL:HG23	2.20	0.41
21:CA:68(U):U:H2'	21:CA:68(V):G:C8	2.55	0.41
59:DA:1423:G:H5'	59:DA:1492:G:O2'	2.21	0.41
7:CH:103:VAL:O	7:CH:104:ARG:HB2	2.19	0.41
59:BA:1172:G:H2'	59:BA:1174:U:H5'	2.02	0.41
26:BD:154:LYS:HD3	59:BA:1818:U:O4	2.20	0.41
39:DT:87:ASP:OD2	39:DT:90:GLN:HG2	2.20	0.41
59:DA:603:A:N3	59:DA:604:G:H1'	2.35	0.41
59:DA:2688:U:C6	59:DA:2721:A:N6	2.88	0.41
59:DA:251:A:H2'	59:DA:252:G:O4'	2.20	0.41
27:BE:150:VAL:O	59:BA:2618:G:O2'	2.29	0.41
20:AY:311:ALA:O	20:AY:389:LEU:HB3	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:D6:8:LYS:HG3	52:D6:8:LYS:O	2.21	0.41
59:DA:2307:G:H1'	59:DA:2311:A:N7	2.35	0.41
21:AA:426:G:H2'	21:AA:427:U:C6	2.55	0.41
21:AA:758:G:H5'	21:AA:880:C:H1'	2.01	0.41
20:CY:164:MET:HG3	20:CY:259:PHE:CE1	2.55	0.41
59:BA:1345:C:C4	59:BA:1346:G:N7	2.88	0.41
59:BA:374:A:N6	59:BA:400:G:H1'	2.32	0.41
21:AA:669:U:O5'	21:AA:669:U:H6	2.03	0.41
59:BA:2351:G:N2	59:BA:2366:A:H62	2.18	0.41
37:DR:49:ASP:HB3	59:DA:2839:G:H4'	2.03	0.41
34:DO:43:VAL:HG12	34:DO:54:GLU:HA	2.02	0.41
45:DZ:6:LYS:HD2	45:DZ:60:GLU:O	2.20	0.41
8:CI:19:LEU:CD2	8:CI:61:ALA:HB2	2.51	0.41
45:BZ:6:LYS:HA	45:BZ:60:GLU:HG3	2.02	0.41
21:AA:992:U:H1'	21:AA:993:G:O5'	2.21	0.41
21:AA:1060:C:H2'	21:AA:1061:G:H8	1.85	0.41
32:DK:102:GLU:O	32:DK:105:LEU:HD22	2.21	0.41
32:DK:56:GLU:HB2	32:DK:70:LYS:NZ	2.35	0.41
1:AB:223:ILE:HA	1:AB:226:ARG:HB2	2.01	0.41
59:BA:248:G:H21	59:BA:2433:A:H62	1.68	0.41
59:BA:2146:C:H2'	59:BA:2146:C:H6	1.72	0.41
45:BZ:14:LYS:HE3	45:BZ:14:LYS:HB2	1.81	0.41
21:AA:729:A:H2'	21:AA:730:G:O4'	2.20	0.41
59:BA:915:C:H2'	59:BA:916:G:C8	2.56	0.41
59:BA:2302:G:H2'	59:BA:2303:G:C8	2.55	0.41
46:D0:48:GLY:O	46:D0:50:ASN:N	2.53	0.41
59:BA:2762:G:H2'	59:BA:2763:G:O4'	2.20	0.41
59:BA:1331:A:O2'	59:BA:1332:G:H2'	2.20	0.41
59:BA:1687:G:N2	59:BA:1688:U:O2	2.53	0.41
59:DA:2473:U:P	59:DA:2473:U:H6	2.43	0.41
25:DC:66:PRO:HB2	25:DC:67:HIS:CE1	2.56	0.41
37:DR:83:ILE:HG23	37:DR:87:TYR:CE2	2.55	0.41
36:BQ:21:THR:HG23	36:BQ:101:ARG:HB2	2.01	0.41
6:AG:26:PHE:O	6:AG:30:ILE:HG13	2.20	0.41
35:DP:51:PHE:O	35:DP:52:GLU:HB3	2.20	0.41
30:DH:23:ARG:HA	30:DH:36:PRO:HA	2.02	0.41
59:BA:1605:C:H3'	59:BA:1606:G:H8	1.86	0.41
59:BA:117:G:H5'	59:BA:126:A:H2	1.85	0.41
14:AO:17:ARG:HD2	14:AO:77:ARG:HH22	1.84	0.41
21:AA:659:U:H2'	21:AA:660:G:O4'	2.21	0.41
8:AI:109:VAL:HG23	21:AA:1371:G:OP2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AB:46:LYS:HA	1:AB:49:GLU:HB3	2.01	0.41
34:BO:88:ASN:HB3	34:BO:94:ARG:HG3	2.02	0.41
50:D4:3:GLU:HB3	50:D4:4:GLY:H	1.53	0.41
59:DA:2732:G:H3'	59:DA:2733:A:O4'	2.21	0.41
30:DH:70:THR:CG2	59:DA:2747:G:H5''	2.50	0.41
3:CD:155:LEU:HB3	3:CD:158:ILE:HD13	2.02	0.41
20:AY:555:LEU:HD11	20:AY:599:PRO:HB2	2.02	0.41
48:D2:7:ARG:O	48:D2:10:LEU:HB2	2.20	0.41
46:D0:41:ARG:HD2	46:D0:41:ARG:HA	1.71	0.41
11:CL:61:THR:O	11:CL:61:THR:OG1	2.36	0.41
59:BA:1632:A:H8	59:BA:1632:A:O5'	2.03	0.41
3:AD:161:ASN:HD22	3:AD:161:ASN:N	2.18	0.41
42:DW:78:GLU:O	42:DW:78:GLU:HG2	2.20	0.41
19:CT:36:LEU:HA	19:CT:36:LEU:HD22	1.90	0.41
26:DD:232:PRO:HG2	59:DA:2239:G:H5''	2.01	0.41
21:CA:1403:C:H1'	21:CA:1500:A:N1	2.35	0.41
1:AB:11:LEU:HB3	1:AB:213:LEU:HD11	2.03	0.41
33:DN:37:LYS:HB3	59:DA:1138:G:N3	2.35	0.41
51:D5:10:LYS:HD2	59:DA:579:G:H1'	2.02	0.41
33:DN:72:TYR:CD1	33:DN:101:HIS:HB2	2.55	0.41
40:DU:62:ILE:HD12	40:DU:76:TYR:OH	2.21	0.41
24:CX:76:A:H1'	59:DA:2451:A:O2'	2.21	0.41
27:BE:15:PHE:CZ	39:BT:77:PRO:HB2	2.56	0.41
33:BN:35:ARG:NH2	33:BN:75:TYR:CD2	2.88	0.41
33:BN:84:LYS:HZ1	59:BA:2041:U:P	2.40	0.41
59:DA:1638:C:H4'	59:DA:2710:C:O2	2.20	0.41
21:CA:364:A:H2'	21:CA:365:U:C2	2.55	0.41
11:CL:70:ILE:HG22	11:CL:100:ILE:HD12	2.01	0.41
60:DB:4:C:N4	60:DB:117:G:N2	2.68	0.41
59:DA:2786:U:H2'	59:DA:2787:C:C5	2.56	0.41
11:AL:82:VAL:HB	11:AL:105:TYR:CD1	2.55	0.41
59:BA:1610:A:OP1	59:BA:1611:C:H5	2.04	0.41
59:BA:443:A:N1	59:BA:1245:G:O2'	2.50	0.41
28:BF:63:LYS:HG3	28:BF:76:GLY:HA2	2.02	0.41
59:DA:177:G:OP2	59:DA:177:G:N2	2.48	0.41
59:DA:1677:A:H2	59:DA:1991:U:O2'	2.03	0.41
59:DA:1677:A:C2	59:DA:1678:G:H1'	2.55	0.41
59:BA:1582:C:H2'	59:BA:1583:A:H8	1.84	0.41
59:BA:637:A:N3	59:BA:638:G:H1'	2.35	0.41
16:CQ:43:LEU:HD12	16:CQ:69:LYS:CA	2.43	0.41
26:DD:244:ARG:HA	26:DD:245:PRO:HA	1.91	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:BB:29:A:C4	60:BB:30:C:H1'	2.55	0.41
59:DA:592:G:H2'	59:DA:593:G:C8	2.55	0.41
21:AA:676:A:C2	21:AA:677:U:C4	3.08	0.41
10:CK:115:PRO:HA	21:CA:675:A:C2	2.55	0.41
36:DQ:71:ASP:H	36:DQ:95:ALA:HB2	1.85	0.41
25:BC:144:GLY:C	25:BC:150:ILE:HD11	2.40	0.41
21:CA:918:A:H2'	21:CA:919:A:C8	2.55	0.41
12:AM:124:PRO:HG2	24:AX:32:C:H1'	2.02	0.41
27:DE:13:ARG:O	27:DE:20:ALA:HB1	2.21	0.41
39:DT:53:ARG:O	39:DT:59:THR:HA	2.21	0.41
46:D0:20:ARG:HB2	46:D0:24:LYS:NZ	2.36	0.41
20:CY:23:ALA:O	20:CY:107:VAL:HG11	2.19	0.41
20:CY:88:VAL:HG23	20:CY:90:PHE:HE1	1.86	0.41
39:BT:33:LYS:HA	39:BT:33:LYS:HD3	1.91	0.41
59:BA:2819:G:H2'	59:BA:2821:A:N7	2.35	0.41
27:BE:110:GLY:O	37:BR:2:ARG:HG3	2.20	0.41
26:DD:91:ARG:HA	26:DD:91:ARG:HD3	1.73	0.41
28:BF:112:MET:O	28:BF:116:ASP:N	2.48	0.41
40:DU:47:TYR:HD1	40:DU:50:ARG:HH22	1.69	0.41
1:CB:68:ILE:HG13	1:CB:161:ALA:O	2.20	0.41
21:CA:232:G:H2'	21:CA:233:C:C6	2.55	0.41
21:CA:821:G:O6	21:CA:879:C:N3	2.53	0.41
59:BA:1342:A:C4	59:BA:1345:C:C4	3.08	0.41
21:AA:232:G:H21	21:AA:263:A:H2	1.67	0.41
25:BC:186:LEU:HA	25:BC:186:LEU:HD23	1.77	0.41
6:AG:35:LYS:HD2	21:AA:1290:G:H4'	2.02	0.41
33:BN:127:ASP:O	33:BN:128:HIS:ND1	2.49	0.41
59:BA:600:G:H2'	59:BA:601:C:H6	1.82	0.41
59:BA:2314:C:H2'	59:BA:2315:G:C8	2.55	0.41
45:DZ:128:VAL:HG13	45:DZ:129:SER:N	2.36	0.41
14:AO:25:THR:O	14:AO:29:VAL:HG23	2.21	0.41
1:AB:222:ILE:O	1:AB:226:ARG:N	2.46	0.41
1:CB:212:GLN:OE1	1:CB:234:PRO:HG2	2.20	0.41
3:CD:26:CYS:CA	3:CD:31:CYS:HA	2.49	0.41
47:B1:17:SER:CA	47:B1:39:LYS:HA	2.50	0.41
20:AY:608:VAL:CG2	20:AY:669:PHE:HB2	2.50	0.41
21:AA:1090:U:H2'	21:AA:1091:U:C6	2.54	0.41
49:D3:5:LYS:HE2	49:D3:59:VAL:HB	2.01	0.41
45:DZ:101:PRO:HA	45:DZ:122:ARG:O	2.20	0.41
6:AG:69:VAL:HB	6:AG:70:LYS:H	1.68	0.41
37:BR:83:ILE:O	37:BR:87:TYR:HD2	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:DK:78:ILE:HD13	32:DK:84:LEU:HB2	2.02	0.41
50:D4:27:THR:HG23	50:D4:28:LYS:N	2.35	0.41
7:CH:31:PHE:O	7:CH:35:ILE:HG12	2.20	0.41
21:AA:1166:G:N2	21:AA:1170:A:OP2	2.37	0.41
4:AE:86:ALA:HB2	21:AA:864:A:OP1	2.21	0.41
45:BZ:93:ASP:OD2	45:BZ:131:ARG:HB2	2.21	0.41
49:B3:8:LEU:HD22	49:B3:31:LEU:HG	2.02	0.41
9:AJ:24:VAL:HG13	9:AJ:34:VAL:HB	2.01	0.41
18:AS:81:ARG:HD2	18:AS:81:ARG:HA	1.96	0.41
9:AJ:57:LYS:NZ	21:AA:972:C:OP2	2.46	0.41
59:BA:2416:C:H2'	59:BA:2417:C:C6	2.54	0.41
12:CM:125:ARG:CZ	21:CA:969:A:H61	2.34	0.41
31:BJ:123:UNK:O	31:BJ:125:UNK:N	2.54	0.41
20:CY:407:PRO:HD3	20:CY:439:ARG:HE	1.86	0.41
20:CY:197:ARG:HE	20:CY:198:GLU:H	1.67	0.41
31:DJ:24:UNK:HA	31:DJ:84:UNK:O	2.20	0.41
28:BF:201:VAL:O	28:BF:205:ARG:HD3	2.20	0.41
1:AB:27:LYS:O	1:AB:30:ARG:HG2	2.20	0.41
21:AA:1139:G:H5'	21:AA:1140:C:OP1	2.20	0.41
59:BA:1119:C:H2'	59:BA:1120:G:H8	1.85	0.41
29:BG:35:GLU:HB2	29:BG:160:VAL:O	2.20	0.41
32:BK:80:LYS:HE2	32:BK:80:LYS:HB3	1.78	0.41
14:CO:5:LYS:H	14:CO:5:LYS:HG2	1.57	0.41
59:DA:790:C:H6	59:DA:790:C:H2'	1.68	0.41
4:AE:103:GLY:C	4:AE:106:PRO:HD2	2.41	0.41
15:CP:73:LEU:HA	15:CP:73:LEU:HD22	1.84	0.41
33:DN:35:ARG:NH2	33:DN:38:HIS:O	2.54	0.41
21:CA:413:G:H1'	21:CA:428:G:H21	1.85	0.41
21:AA:1494:G:H5''	63:AA:1601:NMY:H72	1.85	0.41
21:CA:1493:A:H2'	59:DA:1913:A:H61	1.84	0.41
21:CA:1300:G:HO2'	21:CA:1301:U:C4'	2.34	0.41
21:AA:413:G:H1'	21:AA:428:G:H21	1.84	0.41
59:BA:2156:G:H2'	59:BA:2157:G:O4'	2.20	0.41
59:DA:970:C:H2'	59:DA:971:C:H6	1.84	0.41
43:DX:36:LYS:HB2	59:DA:1598:C:H5'	2.02	0.41
11:AL:34:ARG:HB3	11:AL:60:LEU:C	2.40	0.41
21:AA:1126:U:O4	21:AA:1127:G:N2	2.54	0.41
22:CW:9:A:H62	22:CW:23:A:N6	2.18	0.41
28:BF:83:PHE:CZ	59:BA:1257:C:H4'	2.55	0.41
59:BA:691:C:H2'	59:BA:692:C:C5	2.55	0.41
21:CA:998:G:C2	21:CA:1043:C:N3	2.83	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CA:186(D):C:H2'	21:CA:186(E):C:C6	2.56	0.41
59:DA:1180:C:H2'	59:DA:1181:C:C6	2.56	0.41
21:CA:716:A:H2'	21:CA:717:C:O4'	2.20	0.41
28:DF:90:PHE:HZ	59:DA:671:C:O2'	2.04	0.41
26:DD:206:LEU:HD12	59:DA:1791:A:H5''	2.02	0.41
59:DA:1793:C:H2'	59:DA:1794:U:O4'	2.21	0.41
8:CI:112:LYS:HB3	21:CA:1368:G:H5''	2.02	0.41
59:DA:1189:A:H3'	59:DA:1190:G:H8	1.86	0.41
59:DA:1385:G:C2	59:DA:1402:C:O2	2.71	0.41
59:DA:2684:U:C2	59:DA:2727:G:H1'	2.55	0.41
39:DT:55:ASN:HA	39:DT:55:ASN:HD22	1.67	0.41
1:AB:210:SER:OG	1:AB:211:ILE:N	2.54	0.41
4:CE:105:VAL:HB	4:CE:106:PRO:HD3	2.03	0.41
20:CY:93:GLU:HA	20:CY:96:ARG:HH21	1.86	0.41
20:CY:92:ILE:HG23	20:CY:93:GLU:H	1.85	0.41
59:BA:1819:A:O4'	59:BA:1821:A:C4	2.74	0.41
48:B2:53:LEU:O	48:B2:56:GLN:HB2	2.21	0.41
21:AA:858:G:H3'	21:AA:869:G:O6	2.20	0.41
59:DA:1062:G:OP2	59:DA:1070:A:H4'	2.20	0.41
21:CA:1059:C:H2'	21:CA:1060:C:C5	2.55	0.41
59:DA:25:U:H5''	59:DA:26:G:OP2	2.21	0.41
34:BO:104:ARG:NH1	39:BT:35:LYS:HA	2.35	0.41
16:CQ:28:PRO:HB2	16:CQ:29:HIS:H	1.64	0.41
4:CE:78:HIS:CG	4:CE:79:GLU:H	2.37	0.41
59:BA:1000:A:OP2	59:BA:1154:G:N1	2.33	0.41
59:DA:624:C:H2'	59:DA:625:G:H8	1.86	0.41
28:DF:99:TYR:HE2	28:DF:101:LEU:HD13	1.86	0.41
21:CA:1433:A:C6	21:CA:1434:A:C6	3.08	0.41
29:DG:77:ILE:HG23	59:DA:2310:A:C2	2.55	0.41
29:DG:70:VAL:CG1	29:DG:88:ILE:HG12	2.49	0.41
59:BA:2001:A:H2'	59:BA:2002:G:H8	1.78	0.41
32:BK:27:LEU:HA	32:BK:30:HIS:HB3	2.03	0.41
7:AH:78:GLN:HE21	7:AH:79:VAL:H	1.69	0.41
14:AO:43:LEU:HD12	14:AO:44:LYS:HG3	2.03	0.41
59:BA:2646:C:H2'	59:BA:2647:U:O4'	2.20	0.41
7:AH:36:LEU:H	7:AH:36:LEU:HG	1.72	0.41
59:BA:2047:U:H2'	59:BA:2048:G:C8	2.56	0.41
45:DZ:128:VAL:HG23	45:DZ:161:VAL:HA	2.03	0.41
20:CY:27:THR:O	20:CY:30:GLU:HG2	2.21	0.41
14:AO:56:LEU:O	14:AO:60:VAL:HG23	2.21	0.41
21:CA:689:C:H42	21:CA:698:G:H1	1.69	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:2812:G:H2'	59:BA:2813:A:C8	2.55	0.41
59:BA:2889:C:C2	59:BA:2890:G:C8	3.08	0.41
23:AV:19:G:N2	23:AV:20:U:C2	2.89	0.41
59:BA:1085:A:H4'	59:BA:1104:C:O2'	2.20	0.41
20:AY:608:VAL:CG1	20:AY:645:ALA:HB3	2.50	0.41
21:AA:767:A:O2'	21:AA:1524:C:O2	2.30	0.41
59:DA:323:G:H1'	59:DA:1205:U:O2	2.21	0.41
47:B1:45:ASN:ND2	59:BA:2230:G:N3	2.68	0.41
45:BZ:54:HIS:HA	45:BZ:101:PRO:HD3	2.02	0.41
59:BA:859:G:H4'	59:BA:860:U:O2	2.21	0.41
26:BD:63:ARG:N	26:BD:63:ARG:HD2	2.35	0.41
20:AY:119:GLU:OE2	20:AY:120:THR:HG23	2.21	0.41
21:AA:1266:G:N2	21:AA:1270:C:C2	2.88	0.41
59:BA:137(B):G:N2	59:BA:137(C):G:O6	2.53	0.41
2:AC:7:PRO:HG2	2:AC:184:TYR:HB2	2.03	0.41
59:BA:2099:U:H2'	59:BA:2100:G:C8	2.56	0.41
20:CY:119:GLU:HB3	20:CY:156:ARG:HD2	2.02	0.41
16:CQ:68:ARG:O	16:CQ:70:ARG:N	2.50	0.41
21:AA:160:A:N6	21:AA:347:G:O2'	2.53	0.41
21:CA:812:C:H4'	21:CA:813:U:C6	2.56	0.41
59:BA:2031:A:O2'	59:BA:2455:G:H1'	2.21	0.41
51:D5:33:CYS:SG	51:D5:49:CYS:HB3	2.60	0.41
4:AE:152:ARG:HH22	7:AH:108:GLY:HA2	1.86	0.41
20:AY:239:GLU:HA	20:AY:242:LEU:HB3	2.02	0.41
21:AA:1171:G:H2'	21:AA:1172:C:H6	1.86	0.41
4:AE:35:GLY:HA3	4:AE:112:LEU:HD12	2.01	0.41
1:CB:84:GLU:HG3	1:CB:215:LEU:HB3	2.03	0.41
26:DD:19:ALA:HB2	26:DD:204:ILE:HD11	2.03	0.41
44:DY:11:ASP:CG	44:DY:12:THR:H	2.24	0.41
21:AA:1209:C:H2'	21:AA:1210:C:C6	2.55	0.41
30:DH:70:THR:HG21	59:DA:2747:G:H5''	2.01	0.41
59:DA:2253:G:O5'	59:DA:2254:C:H5''	2.20	0.41
59:DA:221:A:H4'	59:DA:222:A:O5'	2.20	0.41
20:AY:201:ILE:O	20:AY:203:GLU:N	2.51	0.41
21:CA:1247:U:H2'	21:CA:1248:A:O4'	2.21	0.41
4:AE:155:GLU:CD	7:AH:66:GLY:HA2	2.41	0.41
59:DA:1712(H):A:H1'	59:DA:1712(I):U:O2	2.21	0.41
13:AN:27:CYS:SG	13:AN:28:GLY:N	2.93	0.41
59:BA:1846:G:H22	59:BA:1848:A:H62	1.66	0.41
21:AA:304:U:H2'	21:AA:305:G:C8	2.56	0.41
27:BE:29:GLY:H	27:BE:180:ASN:HD22	1.68	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:BB:113:C:H2'	60:BB:114:G:O4'	2.20	0.41
29:DG:10:LYS:HD2	29:DG:10:LYS:HA	1.82	0.41
20:AY:584:ILE:HA	20:AY:584:ILE:HD12	1.92	0.41
37:DR:13:HIS:N	37:DR:13:HIS:CD2	2.89	0.41
41:BV:13:ARG:O	41:BV:13:ARG:HG2	2.21	0.41
44:BY:87:LYS:HE3	44:BY:87:LYS:HB2	1.82	0.41
33:DN:89:LYS:HG3	33:DN:89:LYS:H	1.72	0.41
39:BT:98:LYS:HE2	59:BA:2719:G:H5'	2.02	0.41
59:BA:527:C:H6	59:BA:528:A:C5	2.39	0.41
33:DN:36:GLY:H	33:DN:37:LYS:HG2	1.86	0.41
42:DW:14:PRO:C	42:DW:18:ARG:HG3	2.40	0.41
59:DA:2451:A:C8	59:DA:2452:C:C6	3.09	0.41
59:DA:957:A:H62	59:DA:2494:G:H22	1.69	0.41
27:BE:49:LEU:O	27:BE:78:LEU:HA	2.21	0.41
33:BN:31:ALA:HB1	33:BN:38:HIS:CB	2.46	0.41
33:BN:28:THR:HA	33:BN:37:LYS:NZ	2.34	0.41
24:CX:1:G:C2	24:CX:72:C:N4	2.87	0.41
24:CX:26:A:H2'	24:CX:27:C:H6	1.86	0.41
34:BO:35:VAL:HB	34:BO:105:GLU:HG2	2.02	0.41
34:BO:63:VAL:O	34:BO:83:ALA:O	2.39	0.41
11:CL:53:ARG:HG3	11:CL:69:TYR:CE1	2.56	0.41
11:CL:92:ASP:HB2	11:CL:93:LEU:H	1.70	0.41
59:DA:906:G:H2'	59:DA:907:U:O4'	2.21	0.41
27:DE:161:GLY:N	27:DE:163:GLU:OE1	2.41	0.41
36:BQ:14:ARG:NH1	59:BA:955:C:OP2	2.47	0.41
60:BB:22:U:O2	60:BB:61:G:C6	2.63	0.41
46:D0:74:ARG:HH21	60:DB:13:A:H1'	1.85	0.41
12:CM:87:TYR:HE2	12:CM:91:ARG:HD2	1.85	0.41
53:D7:5:TRP:HB3	59:DA:1612:C:O3'	2.21	0.41
28:BF:45:ARG:NH2	59:BA:443:A:O5'	2.54	0.41
28:DF:50:SER:HG	28:DF:94:PRO:HD3	1.84	0.41
23:CV:17:U:H3	22:CW:35:A:N6	2.15	0.41
59:DA:551:G:H2'	59:DA:552:G:C8	2.56	0.41
24:AX:38:A:C6	24:AX:39:G:C4	3.09	0.41
59:DA:2547:U:O2	59:DA:2561:A:N1	2.53	0.41
59:DA:858:U:O2	59:DA:919:G:N2	2.29	0.41
21:CA:68(I):G:H1	21:CA:68(Q):U:H3	1.67	0.41
2:CC:59:ARG:HA	2:CC:63:ASN:O	2.21	0.41
60:BB:24:G:H1	60:BB:59:A:N6	2.19	0.41
21:CA:163:C:H2'	21:CA:164:U:C6	2.56	0.41
21:CA:1003:G:C2	21:CA:1037:C:N3	2.88	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CA:1091:U:H3	21:CA:1094:G:P	2.44	0.41
25:BC:76:LEU:CD2	25:BC:111:PHE:HB3	2.48	0.41
25:BC:75:VAL:O	25:BC:77:ALA:N	2.45	0.41
18:AS:51:VAL:HG12	18:AS:52:TYR:H	1.85	0.41
59:BA:903:C:H2'	59:BA:904:C:C6	2.55	0.41
59:DA:1686:C:H2'	59:DA:1687:G:O4'	2.21	0.41
27:DE:22:PRO:HG3	59:DA:2728:U:O2'	2.21	0.41
21:CA:9:G:N2	21:CA:25:C:N3	2.53	0.41
20:CY:19:ALA:O	20:CY:121:VAL:HG21	2.21	0.41
59:BA:1822:G:C6	59:BA:1823:G:N7	2.89	0.41
10:AK:85:ARG:NH2	10:AK:111:ASP:OD1	2.54	0.41
19:AT:10:LEU:HD23	19:AT:11:SER:N	2.35	0.41
32:DK:88:ALA:HB3	32:DK:134:MET:O	2.20	0.41
59:DA:2576:G:O2'	59:DA:2579:C:OP2	2.22	0.41
52:B6:25:LYS:HE2	52:B6:26:ASN:O	2.20	0.41
59:DA:2122:U:O2	59:DA:2176:A:N1	2.53	0.41
20:AY:30:GLU:CA	20:AY:33:LEU:HB3	2.42	0.41
54:D8:8:LYS:HB3	54:D8:12:LYS:HE3	2.02	0.41
36:BQ:45:GLN:HB2	36:BQ:46:GLN:HE22	1.85	0.41
59:DA:479:A:H4'	59:DA:480:A:OP1	2.20	0.41
12:CM:53:VAL:HG12	12:CM:57:ARG:HH21	1.86	0.41
59:BA:2002:G:H2'	59:BA:2003:G:H8	1.85	0.41
59:DA:2740:A:H2'	59:DA:2741:A:C8	2.55	0.41
21:AA:295:C:H2'	21:AA:296:U:O4'	2.21	0.41
25:BC:28:ARG:O	25:BC:31:LYS:HB2	2.21	0.41
59:BA:2543:G:O2'	59:BA:2645:G:H2'	2.21	0.41
8:AI:105:ASP:HB3	8:AI:106:ALA:H	1.59	0.41
28:BF:114:VAL:HA	28:BF:186:ILE:CD1	2.50	0.41
59:BA:1358:G:N2	59:BA:1373:A:H62	2.14	0.41
41:DV:85:LYS:HA	59:DA:1225:G:H4'	2.02	0.41
52:D6:23:THR:OG1	54:D8:34:TRP:O	2.35	0.41
47:B1:13:ILE:HG23	47:B1:42:GLN:O	2.20	0.41
47:B1:81:LYS:C	47:B1:82:LEU:HG	2.41	0.41
21:AA:38:G:N2	21:AA:397:A:O5'	2.50	0.41
7:AH:104:ARG:HB3	7:AH:107:LEU:HG	2.02	0.41
59:BA:1498:C:O4'	59:BA:1577:C:H4'	2.20	0.41
34:DO:73:ASP:O	34:DO:75:SER:N	2.53	0.41
59:DA:681:G:C6	59:DA:682:G:C5	3.09	0.41
21:AA:1068:G:OP2	21:AA:1094:G:C8	2.74	0.41
7:CH:37:ARG:NH1	7:CH:38:ILE:HG13	2.35	0.41
59:BA:439:G:H2'	59:BA:440:G:O4'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:751:A:H8	59:BA:751:A:O5'	2.04	0.41
29:DG:15:VAL:HG22	29:DG:175:LEU:HB3	2.03	0.41
21:AA:889:A:H8	21:AA:889:A:OP1	2.04	0.41
59:DA:211:A:H2'	59:DA:212:G:H8	1.86	0.41
26:DD:102:LYS:HE2	26:DD:102:LYS:HB3	1.74	0.41
59:BA:271(L):C:H5''	59:BA:271(M):G:OP2	2.21	0.41
10:CK:107:SER:C	10:CK:108:ILE:HD12	2.40	0.41
59:BA:1926:U:H2'	59:BA:1928:A:OP2	2.20	0.41
20:AY:603:GLU:HG2	20:AY:679:VAL:HG22	2.02	0.41
21:CA:1438:G:O6	21:CA:1463:C:N3	2.53	0.41
11:CL:65:GLU:H	11:CL:65:GLU:HG3	1.61	0.41
34:DO:34:THR:O	34:DO:36:GLY:N	2.54	0.41
49:B3:31:LEU:HD23	49:B3:32:GLN:H	1.86	0.41
8:AI:12:GLU:HG3	21:AA:1370:G:O3'	2.21	0.41
48:B2:57:ILE:HA	48:B2:60:LEU:HD12	2.02	0.41
37:BR:104:ARG:HG3	59:BA:1287:A:OP1	2.20	0.41
30:BH:19:VAL:HG11	30:BH:43:VAL:O	2.21	0.41
4:AE:50:GLU:HG3	4:AE:52:PRO:HD2	2.03	0.41
38:DS:58:LEU:HA	38:DS:58:LEU:HD12	1.81	0.41
20:CY:443:HIS:ND1	20:CY:445:GLU:HB2	2.36	0.41
59:DA:270(E):G:H2'	59:DA:270(F):U:H6	1.85	0.41
48:D2:4:SER:HA	48:D2:7:ARG:HD3	2.03	0.41
27:DE:39:PRO:HA	27:DE:43:GLY:C	2.41	0.41
47:D1:88:LYS:HG3	47:D1:89:GLU:HG3	2.03	0.41
1:AB:144:ARG:HG2	1:AB:145:LEU:HD22	2.02	0.41
6:AG:137:LYS:O	6:AG:141:VAL:HG23	2.21	0.41
8:AI:124:GLN:O	21:AA:1232:U:H5''	2.21	0.41
11:CL:7:ILE:O	11:CL:11:VAL:HG23	2.21	0.41
20:CY:126:GLU:C	20:CY:129:LYS:H	2.24	0.41
6:CG:135:VAL:O	6:CG:139:GLU:HB2	2.21	0.41
43:BX:12:VAL:HG23	43:BX:13:LEU:H	1.85	0.41
37:BR:86:ARG:HB3	37:BR:118:GLU:HG2	2.02	0.41
2:AC:94:LEU:HD23	2:AC:94:LEU:HA	1.93	0.41
59:DA:2610:C:H6	59:DA:2610:C:H2'	1.73	0.41
25:BC:158:LYS:HB2	25:BC:158:LYS:HE2	1.88	0.41
13:AN:39:LEU:HD23	13:AN:39:LEU:HA	1.95	0.41
36:DQ:7:MET:H	36:DQ:7:MET:HG3	1.56	0.41
51:B5:31:VAL:O	51:B5:40:LYS:HG3	2.21	0.41
59:DA:583:G:C6	59:DA:1257:C:N4	2.81	0.41
33:DN:85:ILE:HG21	33:DN:109:LYS:HB2	2.03	0.41
24:CX:74:C:N4	59:DA:2554:U:C2	2.89	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BE:12:THR:O	27:BE:23:VAL:HG22	2.21	0.41
27:BE:5:LEU:HD11	27:BE:49:LEU:O	2.20	0.41
33:BN:21:LYS:HG2	33:BN:22:THR:HG23	2.03	0.41
33:BN:97:ARG:O	33:BN:98:VAL:O	2.39	0.41
21:AA:1116:C:H2'	21:AA:1117:G:H5'	2.01	0.41
24:AX:76:A:O2'	59:BA:2452:C:H5''	2.21	0.41
21:AA:440:A:H2'	21:AA:441:A:O4'	2.20	0.41
21:CA:551:U:H2'	21:CA:552:U:H6	1.83	0.41
21:CA:1072:G:C2	21:CA:1104:G:C5	3.08	0.41
27:DE:79:ARG:HD2	59:DA:2635:C:O3'	2.20	0.41
59:DA:638:G:H2'	59:DA:639:U:C6	2.55	0.41
28:BF:82:ILE:HG12	28:BF:82:ILE:H	1.62	0.41
28:BF:75:HIS:CE1	28:BF:82:ILE:HD12	2.56	0.41
59:DA:1565:C:O2'	59:DA:1566:A:OP2	2.36	0.41
59:DA:1709:U:O4	59:DA:1749:A:N1	2.54	0.41
59:DA:1212:G:HO2'	59:DA:1213:A:P	2.43	0.41
26:DD:245:PRO:HA	26:DD:246:PRO:HD3	1.94	0.41
59:BA:2322:A:C8	59:BA:2323:G:C8	3.08	0.41
21:AA:1300:G:O2'	21:AA:1303:C:N4	2.54	0.41
36:DQ:71:ASP:N	36:DQ:94:VAL:O	2.54	0.41
21:CA:1068:G:N7	21:CA:1094:G:O2'	2.34	0.41
59:BA:2756:U:O2	59:BA:2758:A:N7	2.54	0.41
16:AQ:60:ILE:HG21	16:AQ:74:LEU:HD23	2.03	0.41
36:BQ:72:LYS:N	36:BQ:93:TYR:HD2	2.19	0.41
17:CR:60:ALA:HB3	21:CA:835:U:OP1	2.21	0.41
28:DF:9:ILE:HG12	28:DF:123:LEU:HG	2.03	0.41
6:CG:65:ALA:O	6:CG:69:VAL:HG23	2.21	0.41
21:CA:186(F):C:C2	21:CA:186(K):G:N2	2.82	0.41
25:DC:154:ILE:HA	25:DC:157:ILE:HD12	2.03	0.41
48:B2:59:ARG:HA	59:BA:76:C:O2'	2.21	0.41
21:AA:827:U:HO2'	21:AA:859:A:H2	1.66	0.41
2:CC:161:GLU:CB	23:CV:25:A:H61	2.34	0.41
20:CY:620:VAL:O	20:CY:624:LEU:HD13	2.21	0.41
59:BA:24:G:C2	59:BA:517:C:C2	3.09	0.41
42:BW:78:GLU:HA	42:BW:100:THR:O	2.21	0.41
59:DA:2395:C:N4	59:DA:2421:G:H1	2.19	0.41
59:BA:1801:G:H2'	59:BA:1801:G:N3	2.36	0.41
59:BA:2105:C:H2'	59:BA:2106:G:C8	2.56	0.41
59:BA:729:G:O2'	59:BA:763:G:H4'	2.20	0.41
46:B0:75:LEU:HD23	46:B0:75:LEU:HA	1.77	0.41
26:BD:65:ILE:HD13	26:BD:65:ILE:H	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:DC:42:VAL:O	25:DC:43:GLU:C	2.58	0.41
59:DA:255:A:N3	59:DA:255:A:H2'	2.36	0.41
21:CA:1035:A:H2'	21:CA:1036:G:O4'	2.21	0.41
59:DA:2754:U:O2'	59:DA:2756:U:OP2	2.30	0.41
59:BA:27:G:C5	59:BA:512:G:C2	3.09	0.41
7:CH:10:LEU:HB3	7:CH:83:ILE:CD1	2.43	0.41
29:DG:71:THR:HG21	59:DA:2313:C:C5'	2.51	0.41
29:DG:46:ALA:HB2	29:DG:88:ILE:HB	2.02	0.41
10:AK:119:CYS:O	10:AK:121:PRO:HD3	2.21	0.41
59:BA:1019:U:O2	59:BA:1019:U:H2'	2.20	0.41
59:DA:409:C:H6	59:DA:409:C:O5'	2.03	0.41
35:BP:63:PRO:HA	54:B8:13:ARG:HB3	2.03	0.41
21:CA:1440(E):G:C6	21:CA:1440(F):C:C5	3.09	0.41
41:BV:39:LEU:HA	41:BV:52:VAL:HB	2.02	0.41
7:AH:8:ASP:O	7:AH:11:THR:HB	2.21	0.41
21:AA:144:G:H2'	21:AA:145:G:C8	2.51	0.41
7:AH:78:GLN:HE21	7:AH:79:VAL:N	2.19	0.41
2:AC:5:ILE:N	21:AA:1190:G:OP1	2.41	0.41
22:CW:19:G:H1'	22:CW:57:G:N2	2.30	0.41
59:BA:323:G:C2	59:BA:333:G:H1'	2.55	0.41
14:AO:43:LEU:O	14:AO:47:LYS:HB3	2.21	0.41
41:BV:59:ALA:CA	41:BV:96:ILE:HA	2.44	0.41
37:DR:96:ARG:HB2	37:DR:117:VAL:HG21	2.03	0.41
59:BA:1351:C:O2'	59:BA:1571:A:N3	2.43	0.41
59:BA:1506(I):U:H2'	59:BA:1506(J):G:H8	1.80	0.41
59:BA:2543:G:H4'	59:BA:2645:G:C2	2.55	0.41
30:BH:111:HIS:CE1	59:BA:2668:G:H1'	2.55	0.41
12:CM:114:ARG:NH1	21:CA:1229:A:OP2	2.54	0.41
35:BP:13:ASN:CG	35:BP:14:LYS:H	2.24	0.41
59:BA:1068:G:O6	59:BA:1069:A:N6	2.53	0.41
59:DA:450:G:N1	59:DA:454:A:OP2	2.50	0.41
17:AR:61:LYS:HE2	21:AA:836:G:OP1	2.20	0.41
17:AR:60:ALA:O	17:AR:64:ARG:HG3	2.21	0.41
21:AA:297:G:C5'	21:AA:557:G:H1'	2.51	0.41
20:AY:153:MET:HG2	20:AY:153:MET:H	1.68	0.41
25:BC:164:PHE:CE1	25:BC:200:HIS:HB2	2.56	0.41
28:DF:38:ARG:HH21	35:DP:16:ARG:HH22	1.69	0.41
21:AA:919:A:H2'	21:AA:920:U:C6	2.56	0.41
38:BS:48:LEU:HA	38:BS:48:LEU:HD23	1.96	0.41
59:DA:2704:C:H3'	59:DA:2705:A:C8	2.56	0.41
21:CA:860:A:N6	21:CA:869:G:O2'	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:BB:87:G:N2	60:BB:89(B):A:C8	2.89	0.41
15:AP:67:THR:HB	15:AP:68:ASP:H	1.71	0.41
28:DF:45:ARG:HB3	28:DF:97:TYR:CD2	2.54	0.41
21:AA:769:G:H2'	21:AA:770:C:C6	2.55	0.41
35:DP:95:VAL:HB	35:DP:125:VAL:HA	2.01	0.41
21:CA:541:G:H2'	21:CA:542:G:H8	1.86	0.41
15:AP:32:TYR:OH	21:AA:608:A:H4'	2.21	0.41
2:CC:104:GLN:HG2	2:CC:105:GLU:H	1.85	0.41
21:CA:398:C:H2'	21:CA:399:G:C8	2.56	0.41
28:BF:138:GLU:HG2	28:BF:138:GLU:H	1.71	0.41
59:DA:910:A:H5'	59:DA:911:A:OP2	2.20	0.41
36:BQ:55:VAL:HA	36:BQ:58:PHE:CD2	2.55	0.41
49:D3:43:ILE:O	49:D3:47:VAL:HG23	2.20	0.41
59:DA:2863:C:H2'	59:DA:2864:G:H8	1.85	0.41
1:CB:215:LEU:O	1:CB:219:VAL:HG23	2.20	0.41
32:DK:72:PRO:HG2	32:DK:111:LYS:NZ	2.36	0.41
59:BA:1712(E):G:N2	59:BA:1712(N):U:H1'	2.36	0.41
1:AB:230:VAL:HB	1:AB:231:GLU:H	1.65	0.41
32:BK:21:PRO:HG3	32:BK:25:PRO:HD3	2.02	0.41
20:CY:311:ALA:HB3	20:CY:389:LEU:O	2.21	0.41
35:BP:70:GLN:O	35:BP:71:VAL:HG23	2.19	0.41
59:DA:565:C:H4'	59:DA:1253:A:C6	2.55	0.41
21:CA:29:G:H4'	21:CA:295:C:H4'	2.02	0.41
20:CY:415:PRO:HB2	20:CY:416:LYS:H	1.62	0.41
40:DU:24:TYR:HB2	40:DU:29:SER:HB3	2.02	0.41
21:AA:1072:G:O5'	21:AA:1072:G:H8	2.04	0.41
44:BY:61:ILE:HD12	44:BY:61:ILE:HA	1.95	0.41
59:DA:1858:G:O2'	59:DA:1884:A:N6	2.54	0.41
59:DA:2034:U:H2'	59:DA:2035:G:O4'	2.21	0.41
33:DN:123:TYR:N	33:DN:123:TYR:CD2	2.89	0.41
33:DN:30:ILE:C	33:DN:31:ALA:O	2.59	0.41
33:DN:35:ARG:HB3	33:DN:37:LYS:H	1.86	0.41
33:DN:56:ASN:O	33:DN:57:ALA:HB3	2.21	0.41
27:DE:145:LYS:HE3	59:DA:574:C:N4	2.35	0.41
37:DR:2:ARG:HG2	37:DR:5:LYS:HE2	2.03	0.41
21:CA:432:A:H2'	21:CA:433:C:O4'	2.21	0.41
59:BA:2683:C:H41	59:BA:2727:G:N2	2.19	0.41
59:BA:2684:U:C2	59:BA:2727:G:H1'	2.56	0.41
27:BE:21:VAL:O	27:BE:23:VAL:HG13	2.21	0.41
59:BA:2023:G:H4'	59:BA:2617:C:O2'	2.20	0.41
33:BN:84:LYS:HG2	33:BN:85:ILE:HA	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BE:48:GLN:HA	27:BE:79:ARG:O	2.21	0.41
33:BN:72:TYR:CG	33:BN:101:HIS:CG	3.09	0.41
33:BN:31:ALA:HA	33:BN:34:LEU:N	2.36	0.41
33:BN:35:ARG:HG2	33:BN:39:ARG:H	1.86	0.41
33:BN:56:ASN:N	33:BN:56:ASN:ND2	2.68	0.41
59:BA:1917:U:H2'	59:BA:1918:A:O4'	2.21	0.41
59:DA:1832:C:H2'	59:DA:1833:U:O4'	2.21	0.41
21:CA:1119:C:C2	21:CA:1120:G:C8	3.08	0.41
59:BA:1965:C:P	63:BA:2903:NMY:H62	2.60	0.41
59:BA:1955:U:H3'	59:BA:1956:U:H6	1.86	0.41
59:BA:2475:C:N3	59:BA:2529:G:N1	2.69	0.41
21:AA:433:C:H2'	21:AA:434:U:C6	2.56	0.41
59:DA:1314:C:C6	59:DA:1603:A:H2	2.39	0.41
59:DA:2707:G:H2'	59:DA:2708:G:H8	1.83	0.41
21:CA:109:A:C8	21:CA:327:A:O4'	2.74	0.41
11:CL:58:VAL:CG1	11:CL:60:LEU:HD13	2.51	0.41
11:CL:58:VAL:HG12	11:CL:60:LEU:N	2.22	0.41
11:CL:100:ILE:HG22	11:CL:102:ARG:N	2.35	0.41
8:CI:5:TYR:OH	8:CI:16:ARG:HG2	2.21	0.41
59:DA:271(G):G:C6	59:DA:271(H):C:N4	2.89	0.41
36:BQ:14:ARG:HH22	59:BA:956:G:H3'	1.85	0.41
21:CA:968:A:C5	21:CA:1062:U:H4'	2.55	0.41
30:BH:54:ARG:NH1	30:BH:62:LYS:HG2	2.36	0.41
18:CS:37:ARG:HH21	21:CA:1318:A:H1'	1.86	0.41
53:D7:3:ARG:HA	53:D7:3:ARG:HD3	1.91	0.41
59:DA:750:A:H5'	59:DA:1617:C:O2	2.21	0.41
21:AA:1132:C:C2	21:AA:1133:G:C8	3.09	0.41
21:AA:1143:G:H2'	21:AA:1144:G:C8	2.56	0.41
21:AA:1127:G:N2	21:AA:1147:C:N4	2.66	0.41
13:CN:4:LYS:HD3	21:CA:1047:G:H5''	2.03	0.41
22:CW:21:A:N1	22:CW:46:G:H2'	2.36	0.41
28:BF:83:PHE:HB3	28:BF:84:VAL:H	1.50	0.41
39:DT:8:LYS:HA	39:DT:11:GLU:CD	2.41	0.41
59:BA:2166:G:H22	59:BA:2172:U:H5	1.69	0.41
21:CA:782:A:H5'	21:CA:1514:C:O2	2.21	0.41
21:CA:799:G:H2'	21:CA:800:G:C8	2.56	0.41
59:DA:542:C:H2'	59:DA:543:C:H6	1.85	0.41
47:D1:17:SER:N	47:D1:39:LYS:HA	2.36	0.41
21:AA:1005:A:H5''	21:AA:1037:C:O2'	2.20	0.41
21:CA:1305:G:H2'	21:CA:1331:G:H22	1.86	0.41
59:BA:18:C:H2'	59:BA:19:C:O4'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:521:G:C2	59:BA:522:G:C5	3.09	0.41
35:BP:113:LYS:CG	35:BP:115:LEU:HD23	2.51	0.41
51:D5:29:THR:HG21	59:DA:2814:C:O2'	2.21	0.41
34:DO:39:ILE:HG13	34:DO:39:ILE:O	2.20	0.41
59:DA:690:G:H2'	59:DA:691:C:H6	1.86	0.41
26:DD:242:ARG:NH1	59:DA:1826:G:H4'	2.36	0.41
46:D0:27:GLU:HB3	46:D0:69:PHE:HD1	1.85	0.41
21:CA:936:C:H2'	21:CA:937:A:C8	2.53	0.41
60:BB:24:G:N1	60:BB:56:G:C2	2.89	0.41
60:BB:30:C:C2	60:BB:54:G:N2	2.82	0.41
59:DA:270(S):G:C2	59:DA:270(T):G:C8	3.09	0.41
36:DQ:72:LYS:HB3	36:DQ:94:VAL:CG2	2.45	0.41
59:DA:834:C:H1'	59:DA:2358:G:N2	2.36	0.41
59:DA:460:A:H62	59:DA:469:G:N2	2.18	0.41
8:CI:2:GLU:HG3	8:CI:3:GLN:OE1	2.21	0.41
59:DA:674:G:H2'	59:DA:804:A:H61	1.85	0.41
21:AA:984:C:H2'	21:AA:985:C:O4'	2.21	0.41
59:DA:80:G:HO2'	59:DA:346:A:N6	2.17	0.41
59:DA:2406:U:H4'	59:DA:2407:G:H5''	2.03	0.41
20:CY:22:ASP:C	61:CY:701:GDP:H5''	2.41	0.41
20:CY:92:ILE:HB	20:CY:454:MET:SD	2.60	0.41
20:CY:22:ASP:HA	61:CY:701:GDP:O2B	2.21	0.41
25:DC:148:PHE:C	25:DC:150:ILE:H	2.24	0.41
59:DA:68:G:H21	59:DA:74:A:H5'	1.86	0.41
59:BA:1326:U:C2	59:BA:1327:C:C6	3.09	0.41
26:DD:260:ARG:HD2	59:DA:1799:G:OP2	2.21	0.41
59:DA:1846:G:N2	59:DA:1894:C:N3	2.58	0.41
42:DW:64:MET:HB2	42:DW:69:LEU:HD21	2.03	0.41
13:CN:45:ARG:O	13:CN:49:HIS:HB2	2.19	0.41
32:DK:119:ASP:OD2	32:DK:122:ALA:N	2.54	0.41
59:DA:13:A:O2'	59:DA:15:G:N7	2.54	0.41
27:DE:136:ARG:HB3	59:DA:1656:C:H5''	2.02	0.41
42:BW:18:ARG:HH12	42:BW:77:ASP:HA	1.86	0.41
59:BA:294:A:H3'	59:BA:294:A:C8	2.55	0.41
11:AL:52:LEU:C	11:AL:53:ARG:HD2	2.40	0.41
47:D1:25:LYS:HG2	47:D1:34:THR:O	2.21	0.41
59:DA:2888:C:H2'	59:DA:2889:C:H6	1.86	0.41
44:BY:97:ARG:HD2	44:BY:97:ARG:HA	1.76	0.41
28:BF:5:ALA:HB2	28:BF:118:ALA:HB1	2.03	0.41
26:BD:13:ARG:NE	59:BA:728:G:H4'	2.35	0.41
15:CP:9:PHE:O	21:CA:624:C:H4'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BS:40:ILE:HG13	38:BS:47:THR:HA	2.02	0.41
26:BD:87:ASN:HD22	26:BD:88:ARG:HH12	1.68	0.41
52:B6:25:LYS:HE3	52:B6:25:LYS:HB2	1.75	0.41
59:BA:2069:G:H1	59:BA:2442:C:N4	2.16	0.41
20:CY:239:GLU:HG2	20:CY:239:GLU:O	2.19	0.41
59:DA:2720:U:C2	59:DA:2721:A:C8	3.08	0.41
54:B8:29:LYS:HB2	54:B8:44:LYS:NZ	2.36	0.41
54:B8:48:PHE:O	54:B8:49:VAL:HB	2.21	0.41
59:BA:949:C:N4	59:BA:968:G:H1	2.14	0.41
35:BP:27:HIS:CE1	59:BA:813:U:C4	3.09	0.41
54:D8:9:GLY:HA2	54:D8:12:LYS:HD2	2.03	0.41
59:BA:2151:G:H8	59:BA:2151:G:P	2.44	0.41
19:AT:84:LEU:HG	19:AT:85:MET:N	2.35	0.41
59:DA:137(A):G:O6	59:DA:137(C):G:O2'	2.32	0.41
59:DA:481:G:H1'	59:DA:506:G:H22	1.86	0.41
59:DA:1557:C:H2'	59:DA:1558:A:C2	2.55	0.41
29:DG:53:LEU:HD23	29:DG:88:ILE:HD12	2.02	0.41
3:AD:33:MET:C	3:AD:35:ARG:N	2.74	0.41
60:BB:13:A:H2	60:BB:69:G:H21	1.67	0.41
10:AK:119:CYS:HB3	21:AA:778:G:H1'	2.02	0.41
20:AY:84:THR:N	20:AY:85:PRO:HD3	2.36	0.41
20:AY:25:LYS:HE3	20:AY:84:THR:HA	2.03	0.41
59:DA:409:C:N3	59:DA:418:G:N2	2.58	0.41
59:BA:1998:G:H2'	59:BA:1999:C:C6	2.56	0.41
45:BZ:71:VAL:O	45:BZ:72:ARG:HB2	2.21	0.41
35:BP:45:LEU:CG	35:BP:46:LYS:H	2.28	0.41
7:AH:14:ARG:O	7:AH:18:ARG:HB2	2.21	0.41
59:DA:611(A):C:H42	59:DA:611(G):G:H1	1.68	0.41
21:CA:775:G:H2'	21:CA:776:G:O4'	2.21	0.41
7:AH:78:GLN:HG3	7:AH:80:ILE:N	2.35	0.41
20:AY:95:GLU:O	20:AY:98:MET:HB2	2.21	0.41
28:BF:169:ASN:HD21	59:BA:323:G:N2	2.19	0.41
40:DU:92:ARG:HB2	41:DV:11:GLN:HB2	2.02	0.41
21:AA:670:G:H1	21:AA:736:C:H42	1.69	0.41
21:CA:1357:A:O5'	21:CA:1359:C:N4	2.54	0.41
59:DA:1366:A:H2'	59:DA:1367:A:O4'	2.21	0.41
51:D5:41:PRO:HG2	51:D5:44:THR:HB	2.02	0.41
3:AD:101:LEU:HD21	3:AD:128:VAL:HG21	2.03	0.41
8:CI:77:ILE:O	8:CI:81:ILE:HG13	2.21	0.41
59:BA:2814:C:N4	59:BA:2886:G:H1	2.19	0.41
59:BA:2514:U:H2'	59:BA:2515:C:O4'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:CP:41:PRO:O	15:CP:43:LYS:NZ	2.41	0.41
25:DC:172:ILE:HD12	25:DC:172:ILE:HG23	1.73	0.41
29:BG:126:ASP:OD1	59:BA:2315:G:H1'	2.20	0.41
9:CJ:27:ALA:HB2	9:CJ:85:LEU:HD11	2.02	0.41
48:B2:49:LYS:O	48:B2:50:ILE:C	2.59	0.41
59:BA:2251:G:C2'	59:BA:2252:G:O5'	2.68	0.41
10:AK:32:ILE:H	10:AK:41:THR:HG1	1.69	0.41
59:DA:56:A:H2'	59:DA:57:C:O4'	2.21	0.41
1:AB:87:ARG:CG	1:AB:219:VAL:HG11	2.51	0.41
20:CY:265:LYS:HB3	20:CY:267:LYS:HE2	2.03	0.41
26:DD:105:ILE:HG23	26:DD:106:ILE:N	2.36	0.41
18:AS:12:ASP:O	18:AS:16:LEU:HD23	2.21	0.41
1:CB:208:ILE:HD13	1:CB:239:VAL:O	2.21	0.41
59:BA:227:A:C2	59:BA:2407:G:H1'	2.56	0.41
28:BF:162:LEU:H	28:BF:162:LEU:CD1	2.30	0.41
20:CY:344:THR:OG1	20:CY:390:VAL:HG22	2.20	0.41
3:AD:57:ARG:NH1	3:AD:202:LEU:HD22	2.36	0.41
21:AA:339:C:H2'	21:AA:340:U:H6	1.85	0.41
59:BA:129:C:H2'	59:BA:130:C:H6	1.82	0.41
25:BC:17:PRO:O	25:BC:18:ASN:ND2	2.54	0.41
6:CG:47:CYS:O	6:CG:51:GLN:HG2	2.20	0.41
24:AX:30:C:N4	24:AX:40:G:H1	2.18	0.41
12:CM:89:GLY:O	12:CM:92:HIS:HB2	2.20	0.41
47:D1:21:ARG:HG3	59:DA:2080:G:H5'	2.03	0.41
47:B1:91:LYS:HA	47:B1:94:LEU:HD13	2.01	0.41
9:CJ:45:ARG:CB	9:CJ:65:LEU:HB2	2.49	0.41
45:BZ:101:PRO:O	45:BZ:102:LEU:HD12	2.21	0.41
9:AJ:32:ALA:HB3	9:AJ:75:ILE:HD11	2.03	0.41
5:CF:61:LEU:HD13	5:CF:63:TYR:OH	2.20	0.41
59:DA:2383:G:H2'	59:DA:2384:G:H8	1.86	0.41
59:BA:84:A:H62	59:BA:102:G:H21	1.69	0.41
17:AR:33:ASP:HB3	17:AR:36:ASN:OD1	2.21	0.41
40:BU:47:TYR:HD1	40:BU:50:ARG:HH21	1.69	0.41
21:CA:729:A:H2'	21:CA:730:G:H8	1.86	0.41
20:CY:500:GLN:O	20:CY:501:THR:HB	2.21	0.41
2:AC:150:LYS:O	2:AC:201:TYR:HB2	2.21	0.41
10:AK:58:PRO:O	10:AK:61:ALA:HB3	2.21	0.41
8:AI:23:ASN:HB3	8:AI:25:LYS:HG2	2.02	0.41
21:AA:1432:G:O2'	21:AA:1433:A:H8	2.03	0.41
59:DA:845:G:H8	59:DA:847:U:O4	2.02	0.41
14:CO:23:GLY:O	21:CA:750:G:N2	2.44	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AA:1234:C:H2'	21:AA:1235:U:C6	2.56	0.41
27:BE:140:SER:HB2	59:BA:2578:G:N7	2.36	0.41
40:BU:61:TRP:CD2	40:BU:94:ASN:HB2	2.55	0.41
59:BA:2195:C:H2'	59:BA:2196:C:C6	2.55	0.41
59:DA:1703:G:H2'	59:DA:1704:G:C8	2.55	0.41
54:D8:15:LYS:NZ	54:D8:17:THR:HA	2.36	0.41
21:CA:5:U:O2'	21:CA:6:G:O5'	2.38	0.41
29:DG:84:LYS:CD	29:DG:84:LYS:H	2.34	0.41
59:BA:2712:U:O2'	59:BA:2712(A):A:P	2.79	0.41
41:DV:19:LYS:HE2	41:DV:19:LYS:HB2	1.70	0.41
20:AY:539:ILE:HB	20:AY:540:PRO:HD3	2.03	0.41
20:CY:335:LEU:HD12	20:CY:336:THR:H	1.85	0.41
59:DA:1129:A:H62	59:DA:2490:G:H5''	1.85	0.41
16:AQ:38:ARG:HG2	21:AA:280:C:C2	2.55	0.41
20:AY:339:SER:OG	20:AY:340:TYR:N	2.53	0.41
7:CH:64:LYS:HD2	7:CH:79:VAL:HG21	2.02	0.41
10:CK:32:ILE:HB	10:CK:40:ILE:O	2.21	0.41
5:AF:12:PRO:O	5:AF:14:LEU:N	2.54	0.41
59:BA:2245:U:O2	59:BA:2436:G:H8	2.04	0.41
5:CF:23:LYS:HE3	5:CF:23:LYS:HB3	1.84	0.41
37:DR:91:GLN:N	37:DR:91:GLN:OE1	2.53	0.41
32:DK:86:LYS:HB2	32:DK:86:LYS:HE3	1.92	0.41
37:BR:8:ARG:HA	37:BR:8:ARG:HD3	1.90	0.41
59:BA:53:A:P	59:BA:53:A:H8	2.44	0.41
59:DA:1942:C:H2'	59:DA:1943:U:C5	2.56	0.41
42:BW:9:TYR:CZ	42:BW:80:PRO:HG3	2.55	0.41
10:CK:72:ALA:HB1	10:CK:77:MET:HG2	2.03	0.41
3:CD:50:ARG:HA	3:CD:51:PRO:HD3	1.85	0.41
3:AD:91:SER:HA	3:AD:94:LEU:HG	2.02	0.41
26:DD:42:GLY:C	26:DD:44:ASN:H	2.24	0.41
16:AQ:37:LYS:HD3	21:AA:585:G:OP1	2.21	0.41
21:CA:654:G:H21	21:CA:755:G:H4'	1.86	0.41
30:BH:149:ARG:HD2	30:BH:164:TYR:CZ	2.55	0.41
3:AD:50:ARG:HA	3:AD:51:PRO:HD3	1.89	0.41
6:CG:138:LYS:O	6:CG:142:GLU:HG2	2.21	0.41
35:BP:75:ILE:HG12	35:BP:75:ILE:H	1.60	0.41
53:D7:40:TRP:N	53:D7:40:TRP:CD1	2.89	0.41
26:DD:185:VAL:HG12	26:DD:189:CYS:SG	2.61	0.41
59:DA:534:U:H2'	59:DA:535:C:C6	2.56	0.41
33:DN:101:HIS:N	33:DN:105:GLY:HA3	2.36	0.41
33:DN:35:ARG:CB	33:DN:75:TYR:O	2.70	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:DN:23:LEU:HD13	33:DN:62:VAL:HA	2.03	0.41
59:DA:2680:C:H2'	59:DA:2681:C:O2	2.21	0.41
27:BE:34:VAL:HG22	27:BE:35:GLN:N	2.37	0.41
27:BE:80:GLU:OE2	59:BA:2635:C:O2'	2.38	0.41
59:DA:1829:A:H2'	59:DA:1830:C:H5'	2.02	0.41
21:CA:552:U:H2'	21:CA:553:A:H8	1.85	0.41
11:CL:39:VAL:O	11:CL:55:VAL:HG21	2.22	0.41
11:AL:58:VAL:CG2	11:AL:85:ILE:HD11	2.51	0.41
29:DG:29:TRP:CD1	60:DB:55:U:H1'	2.56	0.41
22:CW:9:A:C2	22:CW:46:G:C5	3.08	0.41
59:DA:1583:A:H4'	59:DA:1586:A:C8	2.56	0.41
47:B1:36:GLY:O	47:B1:37:ILE:HB	2.19	0.41
59:DA:61:G:N2	59:DA:93:C:C2	2.78	0.41
59:BA:1581:G:H2'	59:BA:1582:C:O4'	2.21	0.41
45:DZ:73:GLN:NE2	60:DB:102:G:H2'	2.36	0.41
59:BA:1712(G):G:N2	59:BA:1712(J):G:C8	2.89	0.41
2:CC:18:TRP:N	2:CC:21:ARG:HH12	2.19	0.41
2:CC:22:TRP:CD1	2:CC:59:ARG:HB2	2.56	0.41
36:DQ:120:ILE:HA	36:DQ:123:HIS:HB3	2.03	0.41
35:BP:53:GLY:C	35:BP:55:ARG:H	2.22	0.41
59:BA:2330:G:H2'	59:BA:2331:G:O4'	2.21	0.41
59:DA:2107:C:H2'	59:DA:2108:C:O4'	2.21	0.41
59:DA:2182:G:H2'	59:DA:2183:C:H6	1.86	0.41
35:DP:35:HIS:CA	59:DA:1190:G:H5''	2.51	0.41
59:DA:192:C:O2'	59:DA:802:A:N3	2.42	0.41
21:AA:950:U:H2'	21:AA:951:G:H8	1.86	0.41
21:AA:1338:G:N2	22:AW:41:A:N3	2.69	0.41
21:CA:834:C:C4	21:CA:853:G:C6	3.09	0.41
46:D0:34:GLY:HA3	59:DA:2353:G:H1'	2.03	0.41
20:CY:22:ASP:HB3	61:CY:701:GDP:H4'	2.02	0.41
40:DU:81:HIS:HB2	59:DA:1151:G:O3'	2.21	0.41
25:DC:150:ILE:O	25:DC:154:ILE:HG13	2.21	0.41
26:BD:179:SER:O	26:BD:275:LYS:N	2.54	0.41
32:DK:90:LYS:C	32:DK:92:GLY:H	2.18	0.41
59:DA:2510:C:C4	59:DA:2511:U:C5	3.09	0.41
59:BA:1633:G:H2'	59:BA:1634:A:H2'	2.02	0.41
54:B8:5:LYS:O	54:B8:6:THR:OG1	2.35	0.41
59:DA:357(B):A:H2'	59:DA:357(C):G:O4'	2.21	0.41
54:D8:8:LYS:HD2	59:DA:245:G:O6	2.20	0.41
25:DC:54:ARG:O	25:DC:57:GLN:NE2	2.51	0.41
38:DS:64:GLU:O	38:DS:67:ARG:HB2	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BD:108:PRO:CA	26:BD:196:VAL:HA	2.51	0.41
7:CH:10:LEU:HD13	7:CH:83:ILE:HD11	2.03	0.41
41:BV:38:LEU:HB3	41:BV:52:VAL:HG12	2.01	0.41
21:CA:821:G:H2'	21:CA:822:C:O4'	2.20	0.41
7:AH:64:LYS:HG2	7:AH:79:VAL:HG21	2.03	0.41
59:BA:370:G:H4'	59:BA:371:A:OP2	2.20	0.41
59:BA:401:A:C2	59:BA:402:A:C4	3.09	0.41
37:BR:39:PRO:HG2	59:BA:1651:G:OP1	2.21	0.41
8:CI:17:VAL:HG22	8:CI:63:ILE:HG23	2.03	0.41
59:BA:483:A:H2'	59:BA:483:A:N3	2.36	0.41
22:AW:64:G:C2	22:AW:65:U:C2	3.08	0.41
26:DD:142:VAL:HG12	26:DD:163:ALA:O	2.21	0.41
45:BZ:89:PHE:HA	45:BZ:89:PHE:HD2	1.78	0.41
52:B6:15:GLU:CB	52:B6:20:ASN:HB2	2.49	0.41
47:B1:13:ILE:O	47:B1:42:GLN:O	2.39	0.41
21:CA:724:G:C4	21:CA:725:G:C8	3.09	0.41
21:AA:545:C:H2'	21:AA:546:G:H8	1.84	0.41
4:CE:9:LYS:HD2	4:CE:112:LEU:HD22	2.03	0.41
59:DA:137(D):A:O2'	59:DA:137(E):A:H5'	2.21	0.41
20:AY:188:TYR:HA	20:AY:196:ILE:HA	2.02	0.41
47:B1:17:SER:H	47:B1:39:LYS:CA	2.32	0.41
21:AA:1076:C:N4	21:AA:1077:G:O6	2.54	0.41
47:B1:91:LYS:O	47:B1:94:LEU:HB2	2.20	0.41
6:AG:94:ARG:HG3	6:AG:95:ARG:N	2.36	0.41
59:DA:772:C:H2'	59:DA:773:U:C6	2.55	0.41
5:CF:22:GLU:O	5:CF:26:ILE:HG13	2.21	0.41
59:DA:717:G:H2'	59:DA:718:A:O4'	2.20	0.41
13:AN:16:PHE:HB2	13:AN:18:VAL:HG22	2.02	0.41
26:DD:24:ILE:HD13	26:DD:25:THR:H	1.85	0.41
21:CA:812:C:H4'	21:CA:813:U:H6	1.85	0.41
20:CY:484:ARG:HG3	20:CY:676:TYR:CE1	2.56	0.41
37:DR:87:TYR:N	37:DR:87:TYR:CD2	2.88	0.41
4:AE:25:ARG:HH12	21:AA:1070:U:H4'	1.85	0.41
59:BA:2829:C:H2'	59:BA:2830:G:H8	1.84	0.41
2:AC:118:GLN:O	2:AC:122:GLU:HG2	2.20	0.41
29:DG:139:LEU:HD22	29:DG:149:VAL:HG11	2.03	0.41
59:BA:270(N):G:O2'	59:BA:270(O):U:H3'	2.21	0.41
1:AB:231:GLU:HA	1:AB:232:PRO:HD3	1.79	0.41
10:CK:40:ILE:HD13	10:CK:40:ILE:H	1.85	0.41
5:AF:12:PRO:HG3	5:AF:57:GLN:HG3	2.03	0.41
6:AG:34:GLY:HA2	21:AA:1373:G:H1'	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:2093:G:H2'	59:DA:2094:G:C8	2.56	0.41
25:DC:228:HIS:HB3	25:DC:229:SER:H	1.56	0.41
4:CE:84:PHE:HD1	4:CE:85:GLY:N	2.19	0.41
32:DK:129:GLY:HA3	59:DA:1079:C:O2'	2.20	0.41
2:AC:41:GLY:O	2:AC:44:GLU:HG2	2.21	0.41
30:BH:157:TYR:CZ	59:BA:2531:A:H5''	2.55	0.41
49:B3:24:LYS:NZ	59:BA:931:G:O3'	2.54	0.41
45:BZ:128:VAL:HG22	45:BZ:129:SER:H	1.86	0.41
48:B2:27:GLU:HA	48:B2:30:ARG:HD3	2.02	0.41
21:AA:318:G:H2'	21:AA:319:G:H8	1.86	0.41
30:BH:90:LYS:HB2	30:BH:163:TYR:CE1	2.56	0.41
3:AD:6:GLY:O	3:AD:8:VAL:N	2.54	0.41
10:AK:53:SER:HB2	21:AA:694:A:OP1	2.21	0.41
21:AA:505:G:OP2	21:AA:535:A:H5'	2.21	0.41
37:DR:75:LEU:HA	37:DR:75:LEU:HD22	1.98	0.41
3:CD:169:LYS:HB2	3:CD:169:LYS:HE2	1.77	0.41
35:DP:38:GLN:NE2	59:DA:944:G:OP2	2.54	0.41
4:AE:73:ASN:O	4:AE:75:THR:HG22	2.21	0.41
27:BE:105:THR:HA	27:BE:166:THR:HA	2.03	0.41
59:BA:2285:C:H5'	59:BA:2288:A:N6	2.36	0.41
59:DA:1140:C:H6	59:DA:1140:C:O5'	2.04	0.40
33:DN:28:THR:O	33:DN:31:ALA:HB3	2.21	0.40
33:DN:43:THR:H	33:DN:44:PRO:CD	2.35	0.40
24:CX:74:C:O2	59:DA:2555:U:C2	2.74	0.40
27:BE:15:PHE:HZ	39:BT:77:PRO:CG	2.33	0.40
33:BN:104:LYS:H	33:BN:120:LEU:HD11	1.86	0.40
33:BN:89:LYS:O	33:BN:92:ALA:HB3	2.20	0.40
59:DA:879:G:C2	59:DA:880:G:C8	3.08	0.40
21:CA:1296:C:H5'	21:CA:1297:C:OP2	2.20	0.40
59:BA:1953:A:O2'	59:BA:2550:G:N2	2.55	0.40
21:CA:362:G:N2	21:CA:365:U:H3	2.19	0.40
36:DQ:67:ARG:HB2	36:DQ:103:MET:HA	2.03	0.40
20:AY:88:VAL:O	20:AY:457:LEU:HD21	2.21	0.40
21:CA:957:U:O2	21:CA:959:A:H3'	2.21	0.40
60:DB:23:G:H2'	60:DB:24:G:C8	2.56	0.40
60:DB:31:C:C4	60:DB:51:G:O6	2.74	0.40
59:BA:584:C:H2'	59:BA:585:G:O4'	2.21	0.40
59:BA:2168:G:N1	59:BA:2171:A:C8	2.89	0.40
21:CA:1393:U:O3'	21:CA:1394:A:H8	2.03	0.40
59:DA:18:C:H2'	59:DA:19:C:C6	2.56	0.40
59:DA:225:A:N1	59:DA:230:U:C2	2.89	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:2548:G:H2'	59:DA:2549:G:O4'	2.21	0.40
26:DD:43:ARG:HH12	59:DA:779:U:H5''	1.85	0.40
35:DP:60:MET:C	59:DA:2392:A:HO2'	2.24	0.40
59:DA:175:G:H2'	59:DA:176:G:O4'	2.22	0.40
20:CY:136:ALA:H	20:CY:260:LEU:HB2	1.86	0.40
59:DA:834:C:H1'	59:DA:2358:G:H21	1.86	0.40
28:DF:126:VAL:CG2	28:DF:193:VAL:HG13	2.50	0.40
21:AA:956:U:O2	21:AA:960:U:C2	2.72	0.40
38:BS:97:ARG:HD2	60:BB:49:C:OP1	2.21	0.40
59:DA:2679:A:N1	59:DA:2728:U:O2	2.54	0.40
54:D8:50:LEU:O	54:D8:53:PRO:HD2	2.21	0.40
4:CE:102:ALA:HB3	4:CE:106:PRO:HB2	2.03	0.40
38:DS:22:GLY:O	38:DS:23:ARG:HB2	2.20	0.40
25:DC:153:ILE:HA	25:DC:156:GLU:HB3	2.03	0.40
38:DS:93:LYS:HZ3	60:DB:38:C:H1'	1.86	0.40
59:DA:1848:A:H2'	59:DA:1848:A:N3	2.36	0.40
59:DA:521:G:C2	59:DA:522:G:C5	3.08	0.40
32:DK:126:MET:HE3	59:DA:1059:G:H21	1.86	0.40
12:AM:117:VAL:HG23	21:AA:1228:C:H1'	2.04	0.40
10:CK:27:ASN:ND2	10:CK:44:SER:HG	2.16	0.40
59:BA:22:C:N4	59:BA:518:G:H1	2.17	0.40
39:BT:65:LYS:HD2	39:BT:66:VAL:H	1.85	0.40
26:BD:186:HIS:NE2	59:BA:2222:G:H5''	2.35	0.40
27:BE:111:ARG:N	59:BA:2822:G:OP1	2.54	0.40
59:BA:1177:A:H8	59:BA:1177:A:O5'	2.04	0.40
28:BF:116:ASP:O	28:BF:120:GLU:HG2	2.20	0.40
59:BA:465:G:C6	59:BA:466:A:C6	3.09	0.40
59:DA:1544:A:C8	59:DA:1545:A:N6	2.89	0.40
44:DY:81:LYS:HD3	44:DY:97:ARG:HB3	2.02	0.40
20:CY:526:VAL:CG2	20:CY:566:THR:HG23	2.51	0.40
20:AY:312:LEU:HD12	20:AY:313:ALA:H	1.85	0.40
45:DZ:99:TYR:CE2	45:DZ:125:LEU:HB2	2.44	0.40
7:CH:88:LYS:HE2	21:CA:877:C:OP1	2.21	0.40
29:DG:39:ILE:O	29:DG:91:ARG:HA	2.21	0.40
29:DG:71:THR:HG21	59:DA:2313:C:H5'	2.04	0.40
10:AK:120:ARG:HB3	21:AA:778:G:H21	1.86	0.40
59:BA:371:A:N7	59:BA:402:A:N7	2.69	0.40
35:DP:113:LYS:HG2	35:DP:115:LEU:HD23	2.04	0.40
59:BA:1779:U:H5''	59:BA:1780:A:H5''	2.02	0.40
59:BA:1543:A:C6	59:BA:1544:A:C5	3.09	0.40
20:AY:357:ARG:NH2	20:AY:366:VAL:HG11	2.36	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:DK:14:ALA:HA	32:DK:41:PHE:HE2	1.86	0.40
59:DA:813:U:C2	59:DA:814:C:C5	3.09	0.40
59:DA:813:U:H2'	59:DA:814:C:H6	1.86	0.40
46:B0:82:ARG:HA	46:B0:83:PRO:HD3	1.87	0.40
44:DY:3:VAL:CG2	59:DA:295:G:H5'	2.50	0.40
25:DC:142:LYS:O	25:DC:144:GLY:N	2.46	0.40
52:B6:54:ILE:HG12	52:B6:54:ILE:H	1.55	0.40
24:AX:63:G:H5''	36:BQ:10:ARG:CZ	2.52	0.40
59:BA:238:C:H2'	59:BA:239:U:C6	2.56	0.40
44:BY:17:SER:HB2	44:BY:71:LYS:HD3	2.03	0.40
21:AA:560:U:O5'	21:AA:566:G:N2	2.54	0.40
40:DU:21:ALA:HA	40:DU:39:LEU:HD21	2.03	0.40
3:CD:18:LYS:HE3	3:CD:31:CYS:SG	2.61	0.40
3:CD:33:MET:O	3:CD:35:ARG:HG2	2.22	0.40
20:AY:631:ILE:HA	20:AY:645:ALA:CA	2.49	0.40
59:DA:1864(C):A:H2'	59:DA:1864(D):A:C8	2.56	0.40
42:DW:36:LEU:CD1	42:DW:51:LEU:HD12	2.51	0.40
59:BA:438:G:C2	59:BA:439:G:C5	3.09	0.40
39:BT:132:LYS:O	39:BT:132:LYS:HD3	2.21	0.40
59:BA:2259:G:H1'	59:BA:2427:C:C6	2.57	0.40
34:BO:30:ALA:HB2	59:BA:2674:G:O2'	2.21	0.40
29:BG:83:ARG:HD2	29:BG:83:ARG:N	2.36	0.40
59:BA:780:G:H3'	59:BA:782:A:H62	1.86	0.40
3:CD:105:VAL:HG11	3:CD:120:LEU:HD11	2.02	0.40
26:BD:165:ILE:O	26:BD:166:GLN:HB2	2.21	0.40
59:DA:1444:G:H1	59:DA:1547:C:H42	1.69	0.40
5:CF:69:GLU:O	5:CF:72:VAL:HG12	2.21	0.40
20:AY:605:ILE:HG22	20:AY:675:HIS:C	2.41	0.40
21:AA:759:A:H4'	21:AA:881:G:OP1	2.20	0.40
59:BA:2507:C:C5	59:BA:2583:G:N2	2.89	0.40
59:DA:2342:C:H2'	59:DA:2343:C:O4'	2.21	0.40
59:BA:80:G:H2'	59:BA:81:G:H8	1.85	0.40
8:AI:22:GLY:HA3	8:AI:60:ASP:OD1	2.21	0.40
22:AW:75:C:O2'	47:B1:30:VAL:HG11	2.20	0.40
20:CY:206:LEU:HB3	20:CY:207:ASP:H	1.71	0.40
21:AA:508:C:H2'	21:AA:508:C:H6	1.64	0.40
6:AG:43:PHE:O	6:AG:46:ALA:HB3	2.22	0.40
35:BP:64:LYS:HG3	59:BA:2416:C:OP1	2.21	0.40
19:CT:16:HIS:O	19:CT:20:LEU:HG	2.21	0.40
2:CC:41:GLY:HA2	2:CC:44:GLU:CD	2.41	0.40
21:CA:448:A:H2'	21:CA:449:C:C6	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AE:127:ASN:O	4:AE:131:ILE:HG12	2.20	0.40
21:AA:1278:U:H5''	21:AA:1279:A:C8	2.56	0.40
59:BA:621:A:C2	59:BA:622:G:H1'	2.56	0.40
20:CY:355:LEU:HD13	20:CY:377:VAL:HG23	2.04	0.40
45:DZ:8:TYR:HD1	45:DZ:23:LYS:HZ1	1.64	0.40
40:BU:12:ARG:HH21	59:BA:1216:G:P	2.44	0.40
21:AA:68(J):G:H2'	21:AA:68(K):U:O4'	2.20	0.40
44:DY:56:PRO:HB2	44:DY:57:GLN:H	1.62	0.40
8:CI:15:ALA:HA	8:CI:65:VAL:HB	2.03	0.40
32:DK:8:VAL:HG21	32:DK:26:ALA:HB1	2.03	0.40
25:BC:59:VAL:HG12	25:BC:60:ARG:H	1.87	0.40
20:AY:471:LYS:HB2	20:AY:471:LYS:HE2	1.86	0.40
59:BA:1157:G:H3'	59:BA:1157:G:OP2	2.21	0.40
59:BA:1774:C:H2'	59:BA:1774:C:O2	2.20	0.40
5:AF:75:LEU:O	5:AF:79:LEU:HG	2.21	0.40
33:DN:52:VAL:C	33:DN:54:VAL:N	2.75	0.40
21:CA:107:G:N2	21:CA:108:G:H1'	2.36	0.40
62:CY:702:FUA:H323	62:CY:702:FUA:C15	2.50	0.40
20:AY:20:HIS:HB3	20:AY:118:SER:CA	2.51	0.40
27:DE:110:GLY:HA2	27:DE:161:GLY:C	2.41	0.40
27:DE:48:GLN:HA	27:DE:79:ARG:O	2.21	0.40
59:DA:819:A:H2'	59:DA:820:A:C8	2.57	0.40
30:DH:109:PHE:HA	59:DA:2666:C:H42	1.85	0.40
22:CW:25:C:H2'	22:CW:26:A:C8	2.56	0.40
59:BA:1199:U:H2'	59:BA:1200:C:O4'	2.21	0.40
26:BD:38:LYS:NZ	59:BA:1353:A:H4'	2.36	0.40
26:BD:38:LYS:HB3	26:BD:38:LYS:HE3	1.69	0.40
20:AY:504:ARG:NH1	21:AA:1495:U:OP1	2.48	0.40
16:CQ:66:SER:HB3	16:CQ:69:LYS:CB	2.51	0.40
9:CJ:63:PHE:CE1	13:CN:58:LYS:HA	2.56	0.40
6:CG:76:ARG:HB3	6:CG:77:SER:H	1.57	0.40
21:CA:836:G:C6	21:CA:851:G:C6	3.09	0.40
27:BE:62:PRO:HG3	59:BA:2633:G:N2	2.35	0.40
59:DA:271(M):G:H2'	59:DA:271(N):G:C1'	2.51	0.40
1:AB:96:ARG:NE	1:AB:96:ARG:H	2.19	0.40
52:D6:5:VAL:HG12	59:DA:2284:C:P	2.61	0.40
36:DQ:81:VAL:HB	46:D0:7:LEU:HD21	2.03	0.40
21:AA:1466:C:H2'	21:AA:1467:G:O4'	2.21	0.40
59:BA:530:G:H1'	59:BA:532:A:H62	1.86	0.40
11:AL:54:LYS:HB3	11:AL:55:VAL:H	1.76	0.40
39:BT:83:ILE:HG13	39:BT:84:GLN:N	2.36	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:B6:5:VAL:HG13	52:B6:6:ARG:O	2.21	0.40
50:B4:9:LEU:HB3	50:B4:10:VAL:H	1.55	0.40
21:CA:559:A:H4'	21:CA:560:U:H3'	2.02	0.40
11:CL:6:THR:HG21	21:CA:880:C:H41	1.85	0.40
13:AN:43:CYS:HA	13:AN:46:GLU:HG2	2.03	0.40
28:BF:155:LEU:HD23	28:BF:191:ARG:N	2.37	0.40
59:BA:2751:G:N3	59:BA:2751:G:H2'	2.37	0.40
38:BS:15:ARG:C	38:BS:18:ILE:H	2.25	0.40
38:BS:20:ARG:C	38:BS:22:GLY:H	2.24	0.40
59:BA:675:A:N7	59:BA:803:U:C2	2.90	0.40
20:CY:243:VAL:O	20:CY:247:ARG:HB2	2.21	0.40
25:DC:220:GLY:O	59:DA:2175:C:O2'	2.39	0.40
20:CY:505:GLY:CA	20:CY:576:ASP:HA	2.51	0.40
59:DA:241:A:H5'	59:DA:243:U:C1'	2.51	0.40
26:BD:160:GLY:HA2	26:BD:196:VAL:O	2.22	0.40
29:DG:46:ALA:CB	29:DG:88:ILE:HB	2.51	0.40
21:AA:419:C:N3	21:AA:424:G:N2	2.56	0.40
3:AD:24:GLU:C	3:AD:26:CYS:H	2.24	0.40
41:BV:24:LYS:HB2	41:BV:90:PRO:O	2.22	0.40
20:CY:422:GLU:HA	20:CY:425:SER:CB	2.48	0.40
51:B5:18:ALA:O	51:B5:21:SER:N	2.55	0.40
21:AA:908:A:C2	21:AA:909:A:C5	3.09	0.40
37:BR:9:LYS:HZ3	37:BR:42:LYS:HD2	1.86	0.40
59:BA:207:A:O2'	59:BA:798:G:O2'	2.39	0.40
59:BA:2543:G:H2'	59:BA:2544:G:O4'	2.20	0.40
24:CX:62:C:H2'	24:CX:63:G:C8	2.56	0.40
36:BQ:99:PRO:HD2	45:BZ:79:ARG:HH22	1.85	0.40
15:CP:39:TYR:OH	15:CP:41:PRO:HB3	2.21	0.40
29:DG:107:LEU:HD21	29:DG:178:PHE:CG	2.56	0.40
59:BA:1712:C:H2'	59:BA:1712(A):U:C6	2.56	0.40
32:DK:100:THR:OG1	32:DK:102:GLU:HB3	2.22	0.40
47:B1:3:LYS:HB2	59:BA:1364:G:OP2	2.20	0.40
21:AA:610:G:C6	21:AA:611:A:N7	2.89	0.40
30:BH:35:VAL:CG2	30:BH:75:ALA:HB2	2.51	0.40
60:BB:100:G:H2'	60:BB:101:A:O4'	2.22	0.40
20:AY:69:VAL:HG23	20:AY:82:ILE:HG13	2.03	0.40
10:AK:21:ILE:HD12	10:AK:84:VAL:HG22	2.03	0.40
1:AB:32:ILE:HG21	1:AB:40:HIS:HB3	2.02	0.40
9:AJ:5:ARG:NH1	21:AA:1125:U:O4	2.54	0.40
6:AG:71:PRO:HG3	6:AG:99:LEU:HD11	2.03	0.40
3:AD:59:ARG:NH1	3:AD:66:ARG:HH12	2.18	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:BA:750:A:N3	59:BA:752:A:H5'	2.36	0.40
44:BY:46:LYS:N	44:BY:62:GLU:HB2	2.33	0.40
5:AF:5:GLU:O	5:AF:91:VAL:HG12	2.20	0.40
2:AC:84:ILE:HG12	2:AC:101:LEU:HD22	2.03	0.40
30:BH:148:ILE:O	30:BH:151:ILE:N	2.53	0.40
21:CA:1205:U:H2'	21:CA:1206:G:H8	1.87	0.40
25:DC:105:LEU:CA	25:DC:128:LEU:HD21	2.51	0.40
14:CO:23:GLY:HA2	21:CA:657:G:O2'	2.22	0.40
55:B9:18:ARG:HH21	59:BA:1032:A:H1'	1.86	0.40
42:BW:3:ALA:O	42:BW:106:ILE:HG23	2.22	0.40
15:AP:21:VAL:HG13	15:AP:34:GLU:HB2	2.02	0.40
15:AP:4:ILE:HG12	15:AP:21:VAL:HG23	2.02	0.40
1:CB:114:ARG:HA	1:CB:114:ARG:HD2	1.85	0.40
59:BA:1794:U:H2'	59:BA:1795:C:C6	2.56	0.40
20:CY:615:GLU:O	20:CY:618:GLY:N	2.54	0.40
59:BA:2720:U:O4	59:BA:2873:A:N7	2.54	0.40
59:BA:2857:G:N2	59:BA:2860:A:OP2	2.49	0.40
27:DE:202:LYS:O	59:DA:2733:A:N6	2.54	0.40
42:BW:80:PRO:HB2	42:BW:81:ALA:H	1.75	0.40
3:AD:94:LEU:HD21	3:AD:200:GLU:HB2	2.03	0.40
9:AJ:36:GLY:HA3	21:AA:1123:A:H4'	2.03	0.40
48:D2:59:ARG:HG2	59:DA:76:C:O3'	2.22	0.40
59:BA:270(V):G:H2'	59:BA:270(W):G:C8	2.56	0.40
24:AX:11:C:H2'	24:AX:12:U:O4'	2.21	0.40
29:DG:111:LEU:HB3	29:DG:117:PHE:CZ	2.56	0.40
35:DP:79:ARG:HG2	35:DP:110:TYR:CG	2.56	0.40
38:DS:101:LEU:HG	38:DS:101:LEU:H	1.75	0.40
14:AO:5:LYS:HG2	14:AO:5:LYS:H	1.62	0.40
59:BA:2766:G:N3	59:BA:2766:G:H2'	2.35	0.40
18:AS:6:LYS:H	18:AS:6:LYS:HD3	1.85	0.40
20:AY:416:LYS:HB3	20:AY:416:LYS:HE2	1.82	0.40
59:DA:2143:C:H2'	59:DA:2144:U:O4'	2.22	0.40
59:DA:1766:U:H2'	59:DA:1767:C:O4'	2.21	0.40
33:DN:88:GLU:C	33:DN:90:MET:H	2.24	0.40
42:DW:76:VAL:O	42:DW:77:ASP:O	2.40	0.40
21:CA:1538:C:N3	23:CV:6:G:O6	2.54	0.40
21:AA:453:A:H62	21:AA:479:C:H42	0.52	0.40
59:BA:1025:G:OP1	59:BA:1025:G:H8	2.05	0.40
33:BN:31:ALA:HA	33:BN:34:LEU:CA	2.51	0.40
33:BN:71:ILE:HG22	33:BN:98:VAL:HA	2.04	0.40
59:DA:1964:G:O2'	59:DA:1967:C:OP1	2.23	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:CA:174:C:H2'	21:CA:175:C:C6	2.56	0.40
22:AW:12:U:N3	22:AW:23:A:N6	2.30	0.40
34:DO:7:TYR:N	59:DA:1667:G:OP1	2.54	0.40
18:CS:80:TYR:CE2	21:CA:956:U:H4'	2.57	0.40
11:AL:31:PRO:C	11:AL:85:ILE:O	2.59	0.40
60:DB:22:U:O2	60:DB:61:G:C6	2.66	0.40
59:BA:1341:U:H5'	59:BA:1602:U:N3	2.36	0.40
40:BU:3:ARG:NH1	40:BU:5:LYS:HA	2.36	0.40
25:BC:42:VAL:HG21	25:BC:176:VAL:HG23	2.03	0.40
25:BC:65:LEU:HD23	25:BC:65:LEU:HA	1.83	0.40
59:DA:177:G:H3'	59:DA:178:G:H8	1.87	0.40
21:CA:716:A:C2	21:CA:717:C:C2	3.09	0.40
16:CQ:18:THR:OG1	21:CA:254:G:H4'	2.22	0.40
59:DA:940:G:H21	59:DA:1191:G:C4'	2.34	0.40
36:DQ:12:GLN:HG2	36:DQ:73:PRO:HG2	2.03	0.40
5:AF:50:TYR:OH	17:AR:74:ARG:O	2.39	0.40
59:BA:2755:C:H4'	59:BA:2756:U:H5	1.86	0.40
18:AS:14:HIS:NE2	21:AA:1015:A:OP1	2.55	0.40
26:BD:274:ARG:NH1	59:BA:1798:U:OP2	2.55	0.40
10:AK:83:ILE:HD13	10:AK:109:VAL:HG21	2.03	0.40
26:DD:260:ARG:HD2	59:DA:1799:G:P	2.62	0.40
48:D2:23:LYS:O	48:D2:27:GLU:HG3	2.22	0.40
59:DA:26:G:N2	59:DA:513:A:OP2	2.55	0.40
26:BD:59:LYS:O	59:BA:1568:G:H5'	2.21	0.40
21:CA:564:C:N4	21:CA:565:U:O4	2.53	0.40
26:BD:208:LYS:HB2	59:BA:729:G:N7	2.36	0.40
13:AN:53:LEU:HD23	13:AN:54:PRO:HD2	2.03	0.40
41:DV:56:SER:HB2	41:DV:100:ARG:NE	2.28	0.40
59:BA:203:C:C3'	59:BA:204:A:H5''	2.51	0.40
59:BA:812:C:N4	59:BA:1195:G:H1	2.17	0.40
59:BA:663:G:H2'	59:BA:664:C:O4'	2.21	0.40
36:BQ:127:ILE:HB	36:BQ:128:LYS:H	1.59	0.40
7:CH:14:ARG:HD3	21:CA:875:C:O2'	2.22	0.40
59:DA:617:G:N2	59:DA:618:C:H1'	2.36	0.40
21:CA:1314:C:O2'	21:CA:1315:U:H5'	2.21	0.40
20:AY:93:GLU:HA	20:AY:96:ARG:HE	1.87	0.40
41:BV:35:LEU:HD21	41:BV:59:ALA:HB3	2.03	0.40
59:BA:1279:G:H2'	59:BA:1280:G:O4'	2.21	0.40
20:AY:276:VAL:O	20:AY:280:LEU:HB2	2.21	0.40
3:AD:128:VAL:HA	3:AD:146:ILE:HA	2.03	0.40
20:CY:519:ARG:HB3	20:CY:675:HIS:HD2	1.86	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:CM:101:GLN:HE21	12:CM:101:GLN:HB2	1.63	0.40
59:BA:270(F):U:H2'	59:BA:270(G):C:C6	2.56	0.40
59:BA:250:G:C6	59:BA:251:A:N1	2.89	0.40
25:BC:4:HIS:O	25:BC:8:TYR:HB3	2.21	0.40
10:AK:21:ILE:HG23	10:AK:30:VAL:HG12	2.02	0.40
19:AT:38:LYS:HG2	19:AT:38:LYS:H	1.62	0.40
59:DA:1184:G:H2'	59:DA:1185:C:C6	2.57	0.40
29:DG:126:ASP:O	59:DA:2302:G:O2'	2.33	0.40
27:BE:108:SER:HB2	27:BE:189:PRO:HB2	2.02	0.40
12:CM:65:LYS:HD2	12:CM:70:LEU:HA	2.03	0.40
3:AD:95:GLY:C	3:AD:97:LEU:H	2.23	0.40
21:AA:1100:C:C2	21:AA:1102:A:H5'	2.57	0.40
21:CA:114:U:O4	21:CA:313:A:N1	2.54	0.40
21:CA:68(A):G:N2	21:CA:101:A:N1	2.69	0.40
3:AD:15:GLU:OE2	3:AD:19:LEU:HD11	2.21	0.40
35:DP:88:LEU:HD12	35:DP:95:VAL:HG21	2.03	0.40
21:AA:68(P):C:H2'	21:AA:68(Q):U:C6	2.55	0.40
49:D3:12:PRO:HB2	49:D3:20:LYS:HZ1	1.84	0.40
59:DA:543(D):A:O5'	59:DA:543(D):A:C8	2.74	0.40
59:BA:414:C:H5''	59:BA:1879:C:O2'	2.20	0.40
59:BA:570:G:H2'	59:BA:2030:A:N7	2.37	0.40
59:BA:2454:G:H2'	59:BA:2455:G:C8	2.57	0.40
30:BH:41:MET:O	30:BH:42:ARG:HB2	2.21	0.40
25:BC:192:ALA:HA	25:BC:195:ARG:HG3	2.03	0.40
2:CC:35:GLU:O	2:CC:38:ARG:N	2.54	0.40
25:DC:84:ILE:HG12	25:DC:95:VAL:HG11	2.02	0.40
49:B3:11:SER:HB3	59:BA:988:A:OP2	2.21	0.40
42:DW:19:LEU:HD12	51:D5:25:LEU:HB2	2.02	0.40
48:D2:6:VAL:O	48:D2:9:GLN:HB2	2.21	0.40
43:BX:62:LYS:C	43:BX:73:ARG:HG3	2.42	0.40
59:BA:1094:U:H3	59:BA:1096:A:H3'	1.86	0.40
59:BA:2690:C:H41	59:BA:2713:A:H1'	1.87	0.40
42:BW:43:GLY:HA2	42:BW:46:PHE:HB2	2.03	0.40
15:CP:66:PRO:HB2	15:CP:67:THR:H	1.67	0.40
53:D7:32:LYS:O	53:D7:35:ARG:HB2	2.20	0.40
59:BA:2789:C:H4'	59:BA:2892:A:H61	1.87	0.40
16:AQ:2:PRO:HB2	21:AA:127:G:O2'	2.22	0.40
54:B8:61:LEU:HB3	54:B8:62:LEU:H	1.53	0.40
59:BA:2503:A:H4'	59:BA:2504:U:OP1	2.20	0.40
21:CA:56:U:H2'	21:CA:57:G:O4'	2.21	0.40
14:CO:17:ARG:HA	14:CO:17:ARG:NE	2.35	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:DZ:53:ILE:HG13	45:DZ:53:ILE:H	1.69	0.40
18:CS:61:TYR:HA	18:CS:61:TYR:HD2	1.79	0.40
13:CN:39:LEU:HB3	13:CN:43:CYS:SG	2.61	0.40
59:DA:1137:G:C2'	59:DA:1138:G:H5'	2.51	0.40
33:DN:117:PHE:HE2	33:DN:120:LEU:N	2.19	0.40
59:BA:1023:U:H2'	59:BA:1024:G:H5'	2.02	0.40
33:BN:83:LYS:HD2	33:BN:84:LYS:NZ	2.37	0.40
59:DA:1831:G:N2	63:DA:2901:NMY:N9	2.69	0.40
21:CA:1118:C:H1'	21:CA:1179:A:C5	2.55	0.40
12:CM:14:ARG:HD2	21:CA:1296:C:OP1	2.21	0.40
59:DA:584:C:H2'	59:DA:585:G:C8	2.57	0.40
24:AX:53:G:N1	24:AX:61:C:C4	2.88	0.40
34:DO:6:THR:HG23	59:DA:1666:G:O3'	2.21	0.40
20:AY:465:ARG:NH1	62:AY:702:FUA:H183	2.36	0.40
62:AY:702:FUA:H231	62:AY:702:FUA:C12	2.45	0.40
27:DE:62:PRO:O	27:DE:63:LEU:HD12	2.21	0.40
21:CA:1222:G:O5'	21:CA:1222:G:H8	2.03	0.40
54:D8:21:LYS:HG3	59:DA:651:G:OP1	2.21	0.40
11:AL:87:GLY:HA2	11:AL:98:TYR:CD2	2.57	0.40
8:AI:9:ARG:NH2	21:AA:1149:C:OP1	2.54	0.40
22:CW:9:A:C2	22:CW:45:G:C2	3.09	0.40
59:BA:690:G:H2'	59:BA:691:C:C6	2.57	0.40
59:DA:2118:U:H5''	59:DA:2119:A:OP1	2.22	0.40
59:BA:2268:A:OP2	59:BA:2268:A:H8	2.05	0.40
59:BA:522:G:C6	59:BA:523:C:C4	3.09	0.40
59:DA:54:G:H1	59:DA:116:C:H42	1.68	0.40
60:BB:4:C:O2	60:BB:116:G:N1	2.47	0.40
21:AA:403:C:H2'	21:AA:404:U:C6	2.56	0.40
13:CN:60:SER:HB2	21:CA:1114:C:H1'	2.03	0.40
6:CG:29:LYS:HZ3	21:CA:1375:A:H4'	1.86	0.40
59:DA:2486:G:H2'	59:DA:2487:G:O4'	2.21	0.40
21:CA:402:G:H2'	21:CA:403:C:O4'	2.21	0.40
27:BE:141:ILE:HG13	59:BA:2052:G:OP1	2.21	0.40
21:AA:1324:A:H2'	21:AA:1325:C:O4'	2.22	0.40
22:AW:34:C:O2	23:AV:18:G:N1	2.27	0.40
39:DT:53:ARG:CZ	59:DA:2683:C:H5''	2.51	0.40
27:DE:14:ILE:HG22	27:DE:16:ARG:H	1.86	0.40
46:D0:24:LYS:HD2	59:DA:2355:C:O3'	2.20	0.40
46:D0:60:PHE:CZ	59:DA:2365:G:H4'	2.56	0.40
38:DS:51:ALA:HB1	38:DS:69:VAL:HG22	2.03	0.40
26:BD:54:ARG:HA	26:BD:216:GLY:O	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:DA:2447:G:H4'	59:DA:2448:A:O5'	2.21	0.40
29:BG:111:LEU:H	29:BG:112:PRO:HD2	1.86	0.40
59:DA:519:U:H2'	59:DA:520:G:H8	1.87	0.40
2:CC:161:GLU:H	23:CV:25:A:H61	1.67	0.40
59:BA:717:G:H3'	59:BA:718:A:H8	1.86	0.40
40:BU:51:LYS:HA	40:BU:54:LYS:HD2	2.02	0.40
20:AY:312:LEU:HD13	20:AY:399:LEU:HD12	2.02	0.40
52:D6:28:ARG:HB3	52:D6:29:ASN:H	1.58	0.40
59:DA:500:G:C4	59:DA:502:A:OP2	2.75	0.40
7:CH:88:LYS:C	7:CH:90:GLY:H	2.25	0.40
21:AA:417:C:H2'	21:AA:418:C:C6	2.57	0.40
21:AA:104:G:H2'	21:AA:105:G:C8	2.56	0.40
20:AY:354:ARG:HB2	20:AY:378:VAL:HB	2.04	0.40
59:BA:1676:A:H2'	59:BA:1677:A:O4'	2.21	0.40
20:CY:163:VAL:HA	20:CY:258:VAL:HG22	2.02	0.40
59:DA:484:C:H2'	59:DA:485:C:H6	1.86	0.40
28:BF:126:VAL:HG11	28:BF:142:TRP:HZ2	1.86	0.40
26:DD:111:LEU:HD22	26:DD:115:GLN:CB	2.49	0.40
13:AN:31:ARG:NE	13:AN:31:ARG:HA	2.37	0.40
8:AI:10:ARG:NE	8:AI:105:ASP:OD2	2.54	0.40
59:BA:2814:C:N3	59:BA:2886:G:N2	2.62	0.40
59:BA:357:A:H2'	59:BA:357(A):U:O4'	2.20	0.40
30:BH:111:HIS:CE1	59:BA:2668:G:N3	2.89	0.40
25:DC:141:PRO:O	25:DC:142:LYS:HB2	2.22	0.40
28:DF:168:ARG:HH21	59:DA:322:A:P	2.44	0.40
59:DA:395:U:O2	59:DA:396:G:N7	2.54	0.40
59:DA:379:G:N1	59:DA:396:G:C6	2.89	0.40
51:D5:19:ARG:HH12	59:DA:1264:G:C5'	2.34	0.40
59:BA:36:G:C6	59:BA:37:C:C4	3.10	0.40
14:CO:54:ARG:HH12	21:CA:728:A:P	2.44	0.40
59:DA:725:G:O5'	59:DA:725:G:H8	2.05	0.40
59:DA:2096:U:H2'	59:DA:2097:C:C5	2.56	0.40
40:BU:50:ARG:NH2	41:BV:72:VAL:HG12	2.36	0.40
39:BT:62:THR:HA	39:BT:75:ILE:HA	2.02	0.40
59:BA:1468(C):A:N6	59:BA:1506(N):G:H2'	2.37	0.40
35:DP:67:MET:HB3	35:DP:68:GLN:H	1.55	0.40
21:AA:1261:A:N3	21:AA:1261:A:H2'	2.37	0.40
2:CC:14:ILE:HA	9:CJ:14:LYS:NZ	2.35	0.40
4:AE:102:ALA:HB2	4:AE:120:THR:CG2	2.51	0.40
1:AB:157:ARG:HB3	1:AB:158:LEU:H	1.65	0.40
59:BA:593:G:H2'	59:BA:594:U:H6	1.86	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BT:16:ARG:HB3	39:BT:16:ARG:HH11	1.85	0.40
59:BA:991:C:H2'	59:BA:992:C:H6	1.85	0.40
26:BD:222:ARG:HG3	59:BA:1789:A:OP1	2.21	0.40
59:BA:938:G:O2'	59:BA:939:G:H5'	2.22	0.40
59:DA:2794(E):A:H2'	59:DA:2802:G:H4'	2.02	0.40
54:D8:4:MET:HG3	54:D8:61:LEU:HD23	2.03	0.40
59:DA:2089:U:H2'	59:DA:2090:G:H8	1.87	0.40
39:BT:63:VAL:O	39:BT:73:GLU:HA	2.22	0.40
8:AI:42:ARG:HA	8:AI:45:ALA:HB3	2.03	0.40
44:BY:53:PRO:HB2	44:BY:54:LYS:H	1.65	0.40
51:D5:30:LEU:CB	51:D5:39:MET:HB3	2.52	0.40
59:DA:1842:G:H2'	59:DA:1843:C:C6	2.56	0.40
2:CC:141:VAL:HG11	2:CC:149:ALA:HB2	2.03	0.40
6:AG:97:GLN:HG2	6:AG:98:SER:N	2.35	0.40
59:BA:194:G:H2'	59:BA:195:A:C8	2.57	0.40
59:BA:653:C:H5''	59:BA:654:U:O4'	2.21	0.40
16:AQ:98:LEU:HD22	21:AA:760:G:O2'	2.21	0.40
27:BE:7:VAL:CG1	27:BE:27:LEU:HB3	2.52	0.40
20:AY:122:TRP:O	20:AY:122:TRP:HD1	2.05	0.40
41:BV:64:HIS:ND1	41:BV:92:THR:HG22	2.36	0.40
15:AP:3:LYS:O	15:AP:22:THR:O	2.40	0.40
3:CD:100:ARG:HG3	3:CD:137:SER:HA	2.04	0.40
6:AG:106:GLN:HA	6:AG:109:ASN:ND2	2.36	0.40
21:CA:789:U:O2'	21:CA:790:A:N7	2.48	0.40
33:DN:100:GLU:O	33:DN:104:LYS:C	2.59	0.40
33:DN:117:PHE:CD1	59:DA:2780:G:C6	3.10	0.40
33:DN:74:ARG:H	33:DN:84:LYS:HA	1.86	0.40
33:DN:97:ARG:CD	33:DN:108:PRO:HG2	2.51	0.40
27:DE:143:ASN:OD1	59:DA:2574:G:O2'	2.17	0.40
15:AP:69:THR:HG22	21:AA:375:U:H5''	2.03	0.40
59:BA:2780:G:H4'	59:BA:2781:A:OP2	2.13	0.40
33:BN:46:VAL:CG1	33:BN:107:LEU:HD22	2.51	0.40
33:BN:59:LYS:HE2	33:BN:60:ILE:HD13	2.04	0.40
59:DA:2699:C:N3	59:DA:2708:G:N2	2.57	0.40
59:DA:852:G:H2'	59:DA:853:G:C8	2.55	0.40
20:CY:465:ARG:HG3	62:CY:702:FUA:H183	2.04	0.40
36:DQ:25:ASP:HB3	36:DQ:102:VAL:HG23	2.03	0.40
20:AY:86:GLY:O	20:AY:88:VAL:N	2.49	0.40
27:DE:114:ALA:HB3	27:DE:160:TYR:HB3	2.03	0.40
27:DE:52:LEU:HA	27:DE:52:LEU:HD12	1.73	0.40
59:BA:271(F):G:H2'	59:BA:271(G):G:C8	2.44	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:AW:5:A:C2	22:AW:68:U:O2	2.75	0.40
59:DA:2389:G:H5''	59:DA:2390:U:O4'	2.21	0.40
28:DF:93:LYS:HB2	28:DF:95:ARG:NE	2.36	0.40
28:DF:93:LYS:HE2	28:DF:93:LYS:HA	2.02	0.40
21:CA:1512:U:H2'	21:CA:1513:A:H8	1.84	0.40
35:BP:114:ILE:CG1	35:BP:130:PHE:HA	2.52	0.40
16:CQ:46:ASP:HA	16:CQ:47:PRO:HD2	1.87	0.40
59:DA:2559:C:O2'	59:DA:2560:C:H5'	2.21	0.40
59:BA:1712(L):G:H2'	59:BA:1712(M):C:H6	1.83	0.40
46:D0:69:PHE:CG	59:DA:856:C:H4'	2.56	0.40
21:CA:1374:A:N3	21:CA:1374:A:H3'	2.36	0.40
59:BA:972:G:OP2	59:BA:974:G:H2'	2.21	0.40
21:AA:946:A:O2'	21:AA:1333:A:H1'	2.21	0.40
59:DA:593:G:H2'	59:DA:594:U:H6	1.85	0.40
47:D1:80:LEU:CD2	47:D1:81:LYS:H	2.34	0.40
59:BA:2453:A:H2	59:BA:2500:U:C2	2.40	0.40
59:DA:2349:G:C6	59:DA:2369:A:C6	3.10	0.40
59:DA:1686:C:N4	59:DA:1702:G:H1	2.15	0.40
27:DE:12:THR:OG1	27:DE:23:VAL:HG23	2.21	0.40
1:AB:74:LYS:H	1:AB:74:LYS:HG2	1.65	0.40
38:DS:41:ASP:HB3	38:DS:47:THR:O	2.22	0.40
20:CY:22:ASP:O	20:CY:24:GLY:N	2.55	0.40
25:DC:138:LEU:HD13	25:DC:139:PRO:N	2.36	0.40
59:BA:1207:C:C2	59:BA:1239:G:N2	2.86	0.40
10:CK:27:ASN:OD1	10:CK:55:LYS:HG2	2.21	0.40
44:BY:2:ARG:N	59:BA:105:C:O2'	2.54	0.40
59:BA:1801:G:N7	59:BA:2202:C:H5'	2.37	0.40
59:BA:2722:G:H5''	59:BA:2820:A:C2	2.56	0.40
59:DA:2404:C:H2'	59:DA:2405:G:O4'	2.22	0.40
59:BA:1791:A:H2'	59:BA:1792:G:O4'	2.21	0.40
2:AC:11:ARG:CB	2:AC:16:ARG:HB2	2.45	0.40
54:B8:29:LYS:O	54:B8:31:HIS:N	2.49	0.40
21:CA:255:G:H2'	21:CA:256:U:H6	1.85	0.40
10:AK:34:ASP:HB2	10:AK:35:PRO:HD2	2.03	0.40
41:BV:38:LEU:O	41:BV:52:VAL:HB	2.21	0.40
19:AT:53:LEU:HA	19:AT:53:LEU:HD13	1.84	0.40
59:DA:1570:A:H8	59:DA:1570:A:P	2.45	0.40
41:BV:56:SER:O	41:BV:100:ARG:HG3	2.21	0.40
45:DZ:108:PRO:HG2	45:DZ:111:VAL:HG23	2.04	0.40
37:BR:33:ARG:O	37:BR:34:ILE:HD12	2.22	0.40
37:DR:34:ILE:O	37:DR:113:LEU:HA	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AD:101:LEU:HD12	3:AD:101:LEU:HA	1.84	0.40
47:B1:25:LYS:HD3	47:B1:26:ARG:H	1.86	0.40
21:CA:373:A:H1'	21:CA:481:G:N3	2.36	0.40
8:CI:4:TYR:CD1	8:CI:4:TYR:N	2.90	0.40
21:CA:934:C:N4	21:CA:938:A:H2	2.16	0.40
26:BD:130:ALA:HA	26:BD:191:ALA:O	2.21	0.40
21:AA:37:U:H4'	21:AA:500:G:O2'	2.22	0.40
21:AA:745:C:H1'	21:AA:836:G:O2'	2.20	0.40
29:DG:105:LYS:HD2	29:DG:142:PRO:HG3	2.03	0.40
11:AL:15:ARG:NH1	21:AA:563:A:H3'	2.37	0.40
59:BA:227:A:H61	59:BA:410:G:H21	1.68	0.40
59:DA:2588:G:H2'	59:DA:2589:A:O4'	2.20	0.40
39:BT:115:ARG:HB2	39:BT:116:ALA:H	1.76	0.40
53:B7:3:ARG:NH2	59:BA:789:A:N1	2.70	0.40
49:D3:29:ARG:HB3	59:DA:1184:G:OP1	2.21	0.40
12:CM:15:VAL:HG23	12:CM:41:PRO:HA	2.03	0.40
14:AO:49:ASP:CG	21:AA:667:G:H1'	2.42	0.40
59:BA:748:G:O6	59:BA:751:A:H4'	2.22	0.40
21:AA:765:G:N1	21:AA:812:C:H1'	2.36	0.40
59:DA:2225:A:H4'	59:DA:2226:C:O4'	2.22	0.40
38:BS:92:TYR:C	38:BS:94:TYR:N	2.74	0.40
41:DV:77:ALA:C	41:DV:79:VAL:H	2.22	0.40
21:CA:68(B):G:C2	21:CA:68(C):C:H1'	2.56	0.40
59:BA:2249:U:H2'	59:BA:2249:U:O2	2.20	0.40
59:BA:897:C:C2	59:BA:898:C:C5	3.09	0.40
26:DD:133:LEU:O	26:DD:136:ILE:HG22	2.21	0.40
59:DA:2620:C:H2'	59:DA:2621:A:C8	2.56	0.40
46:B0:14:ARG:NH2	59:BA:2279:G:N7	2.69	0.40
59:BA:335:C:H2'	59:BA:336:C:H6	1.86	0.40
15:CP:74:LEU:HD22	15:CP:79:VAL:HG21	2.02	0.40
2:CC:109:PRO:O	2:CC:111:LEU:N	2.44	0.40
20:CY:160:ARG:HB3	20:CY:254:LYS:O	2.21	0.40
59:BA:1128:A:C4	59:BA:2518:A:N6	2.89	0.40
20:CY:337:SER:HA	20:CY:353:ALA:O	2.22	0.40
20:CY:353:ALA:HB3	20:CY:378:VAL:O	2.21	0.40
23:AV:26:A:H2'	23:AV:27:A:C8	2.56	0.40
6:AG:10:ARG:HA	6:AG:10:ARG:NE	2.36	0.40
34:BO:88:ASN:HD22	34:BO:90:GLN:H	1.69	0.40
20:CY:311:ALA:CB	20:CY:330:VAL:HA	2.52	0.40
8:CI:18:PHE:HB2	8:CI:62:TYR:O	2.21	0.40
36:BQ:42:ILE:CD1	36:BQ:47:ILE:HD11	2.52	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:B7:46:VAL:O	53:B7:47:ARG:HG2	2.22	0.40
52:D6:13:CYS:SG	52:D6:49:HIS:ND1	2.70	0.40
44:DY:48:ALA:HB1	44:DY:55:TYR:CE1	2.56	0.40
20:AY:336:THR:C	20:AY:338:GLY:H	2.25	0.40
21:AA:1312:G:H2'	21:AA:1313:U:C6	2.56	0.40
11:AL:127:GLU:O	11:AL:129:ALA:N	2.46	0.40
25:DC:186:LEU:HA	25:DC:186:LEU:HD23	1.87	0.40
34:DO:26:LYS:HA	34:DO:26:LYS:HD2	1.93	0.40
16:CQ:22:LEU:HA	16:CQ:22:LEU:HD12	1.90	0.40
34:DO:37:ASP:N	34:DO:37:ASP:OD1	2.54	0.40
3:CD:11:LEU:HA	3:CD:11:LEU:HD23	1.81	0.40
1:CB:124:SER:C	1:CB:126:GLU:H	2.25	0.40

There are no symmetry-related clashes.

## 5.3 Torsion angles [i](#)

### 5.3.1 Protein backbone [i](#)

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all 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%)	168 (72%)	45 (19%)	20 (9%)	1	17
1	CB	233/235 (99%)	171 (73%)	45 (19%)	17 (7%)	1	22
2	AC	205/207 (99%)	137 (67%)	39 (19%)	29 (14%)	0	6
2	CC	205/207 (99%)	150 (73%)	35 (17%)	20 (10%)	1	14
3	AD	206/208 (99%)	140 (68%)	41 (20%)	25 (12%)	0	8
3	CD	206/208 (99%)	152 (74%)	33 (16%)	21 (10%)	1	13
4	AE	149/151 (99%)	122 (82%)	20 (13%)	7 (5%)	3	33
4	CE	149/151 (99%)	115 (77%)	24 (16%)	10 (7%)	1	25
5	AF	99/101 (98%)	76 (77%)	15 (15%)	8 (8%)	1	18
5	CF	99/101 (98%)	74 (75%)	16 (16%)	9 (9%)	1	16

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
6	AG	153/155 (99%)	123 (80%)	22 (14%)	8 (5%)	2	30
6	CG	153/155 (99%)	118 (77%)	23 (15%)	12 (8%)	1	20
7	AH	136/138 (99%)	102 (75%)	23 (17%)	11 (8%)	1	18
7	CH	136/138 (99%)	96 (71%)	30 (22%)	10 (7%)	1	21
8	AI	125/127 (98%)	97 (78%)	22 (18%)	6 (5%)	3	32
8	CI	125/127 (98%)	98 (78%)	21 (17%)	6 (5%)	3	32
9	AJ	97/99 (98%)	71 (73%)	15 (16%)	11 (11%)	0	10
9	CJ	97/99 (98%)	74 (76%)	16 (16%)	7 (7%)	1	22
10	AK	117/119 (98%)	83 (71%)	21 (18%)	13 (11%)	0	10
10	CK	117/119 (98%)	79 (68%)	21 (18%)	17 (14%)	0	6
11	AL	123/125 (98%)	41 (33%)	44 (36%)	38 (31%)	0	0
11	CL	123/125 (98%)	49 (40%)	37 (30%)	37 (30%)	0	0
12	AM	123/125 (98%)	94 (76%)	19 (15%)	10 (8%)	1	18
12	CM	123/125 (98%)	95 (77%)	17 (14%)	11 (9%)	1	16
13	AN	58/60 (97%)	38 (66%)	17 (29%)	3 (5%)	2	30
13	CN	58/60 (97%)	35 (60%)	14 (24%)	9 (16%)	0	5
14	AO	86/88 (98%)	72 (84%)	12 (14%)	2 (2%)	8	51
14	CO	86/88 (98%)	65 (76%)	18 (21%)	3 (4%)	4	42
15	AP	82/84 (98%)	58 (71%)	16 (20%)	8 (10%)	1	14
15	CP	82/84 (98%)	62 (76%)	13 (16%)	7 (8%)	1	17
16	AQ	98/100 (98%)	70 (71%)	22 (22%)	6 (6%)	2	27
16	CQ	98/100 (98%)	76 (78%)	16 (16%)	6 (6%)	2	27
17	AR	68/70 (97%)	50 (74%)	9 (13%)	9 (13%)	0	6
17	CR	68/70 (97%)	56 (82%)	8 (12%)	4 (6%)	2	27
18	AS	77/79 (98%)	43 (56%)	23 (30%)	11 (14%)	0	6
18	CS	77/79 (98%)	47 (61%)	27 (35%)	3 (4%)	4	38
19	AT	97/99 (98%)	72 (74%)	17 (18%)	8 (8%)	1	18
19	CT	97/99 (98%)	82 (84%)	10 (10%)	5 (5%)	2	30
20	AY	657/687 (96%)	407 (62%)	174 (26%)	76 (12%)	0	9
20	CY	657/687 (96%)	437 (66%)	135 (20%)	85 (13%)	0	7
25	BC	226/228 (99%)	107 (47%)	63 (28%)	56 (25%)	0	1

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
25	DC	226/228 (99%)	114 (50%)	52 (23%)	60 (26%)	0	1
26	BD	273/275 (99%)	174 (64%)	60 (22%)	39 (14%)	0	6
26	DD	273/275 (99%)	180 (66%)	59 (22%)	34 (12%)	0	8
27	BE	203/205 (99%)	134 (66%)	41 (20%)	28 (14%)	0	6
27	DE	203/205 (99%)	124 (61%)	49 (24%)	30 (15%)	0	5
28	BF	206/208 (99%)	139 (68%)	43 (21%)	24 (12%)	0	9
28	DF	206/208 (99%)	127 (62%)	51 (25%)	28 (14%)	0	6
29	BG	179/181 (99%)	131 (73%)	37 (21%)	11 (6%)	2	27
29	DG	179/181 (99%)	127 (71%)	37 (21%)	15 (8%)	1	17
30	BH	165/167 (99%)	117 (71%)	31 (19%)	17 (10%)	1	12
30	DH	165/167 (99%)	116 (70%)	30 (18%)	19 (12%)	0	9
32	BK	138/140 (99%)	91 (66%)	32 (23%)	15 (11%)	0	11
32	DK	138/140 (99%)	77 (56%)	44 (32%)	17 (12%)	0	8
33	BN	137/139 (99%)	52 (38%)	32 (23%)	53 (39%)	0	0
33	DN	137/139 (99%)	55 (40%)	28 (20%)	54 (39%)	0	0
34	BO	120/122 (98%)	89 (74%)	21 (18%)	10 (8%)	1	18
34	DO	120/122 (98%)	86 (72%)	22 (18%)	12 (10%)	1	13
35	BP	144/146 (99%)	84 (58%)	36 (25%)	24 (17%)	0	4
35	DP	144/146 (99%)	82 (57%)	39 (27%)	23 (16%)	0	5
36	BQ	139/141 (99%)	84 (60%)	35 (25%)	20 (14%)	0	6
36	DQ	139/141 (99%)	94 (68%)	34 (24%)	11 (8%)	1	19
37	BR	115/117 (98%)	80 (70%)	20 (17%)	15 (13%)	0	7
37	DR	115/117 (98%)	80 (70%)	22 (19%)	13 (11%)	0	10
38	BS	97/99 (98%)	52 (54%)	26 (27%)	19 (20%)	0	3
38	DS	97/99 (98%)	51 (53%)	27 (28%)	19 (20%)	0	3
39	BT	136/138 (99%)	81 (60%)	27 (20%)	28 (21%)	0	2
39	DT	136/138 (99%)	79 (58%)	31 (23%)	26 (19%)	0	3
40	BU	115/117 (98%)	88 (76%)	17 (15%)	10 (9%)	1	16
40	DU	115/117 (98%)	90 (78%)	17 (15%)	8 (7%)	1	23
41	BV	99/101 (98%)	56 (57%)	28 (28%)	15 (15%)	0	5
41	DV	99/101 (98%)	64 (65%)	21 (21%)	14 (14%)	0	6

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
42	BW	111/113 (98%)	74 (67%)	25 (22%)	12 (11%)	0	11
42	DW	111/113 (98%)	76 (68%)	23 (21%)	12 (11%)	0	11
43	BX	91/93 (98%)	71 (78%)	13 (14%)	7 (8%)	1	20
43	DX	91/93 (98%)	67 (74%)	10 (11%)	14 (15%)	0	5
44	BY	105/107 (98%)	54 (51%)	31 (30%)	20 (19%)	0	3
44	DY	105/107 (98%)	59 (56%)	26 (25%)	20 (19%)	0	3
45	BZ	183/185 (99%)	121 (66%)	43 (24%)	19 (10%)	1	12
45	DZ	183/185 (99%)	109 (60%)	45 (25%)	29 (16%)	0	5
46	B0	82/84 (98%)	63 (77%)	14 (17%)	5 (6%)	2	27
46	D0	82/84 (98%)	59 (72%)	18 (22%)	5 (6%)	2	27
47	B1	91/93 (98%)	48 (53%)	24 (26%)	19 (21%)	0	2
47	D1	91/93 (98%)	52 (57%)	20 (22%)	19 (21%)	0	2
48	B2	69/71 (97%)	51 (74%)	12 (17%)	6 (9%)	1	16
48	D2	69/71 (97%)	53 (77%)	12 (17%)	4 (6%)	2	28
49	B3	58/60 (97%)	49 (84%)	7 (12%)	2 (3%)	5	43
49	D3	58/60 (97%)	47 (81%)	8 (14%)	3 (5%)	2	30
50	B4	33/35 (94%)	15 (46%)	13 (39%)	5 (15%)	0	5
50	D4	33/35 (94%)	17 (52%)	11 (33%)	5 (15%)	0	5
51	B5	57/59 (97%)	36 (63%)	14 (25%)	7 (12%)	0	8
51	D5	57/59 (97%)	38 (67%)	6 (10%)	13 (23%)	0	1
52	B6	48/50 (96%)	24 (50%)	15 (31%)	9 (19%)	0	3
52	D6	48/50 (96%)	20 (42%)	17 (35%)	11 (23%)	0	1
53	B7	47/49 (96%)	33 (70%)	11 (23%)	3 (6%)	2	26
53	D7	47/49 (96%)	26 (55%)	14 (30%)	7 (15%)	0	5
54	B8	62/64 (97%)	34 (55%)	16 (26%)	12 (19%)	0	3
54	D8	62/64 (97%)	35 (56%)	13 (21%)	14 (23%)	0	1
55	B9	35/37 (95%)	29 (83%)	5 (14%)	1 (3%)	6	46
55	D9	35/37 (95%)	25 (71%)	7 (20%)	3 (9%)	1	17
56	Be	70/103 (68%)	39 (56%)	23 (33%)	8 (11%)	0	9
56	De	70/103 (68%)	40 (57%)	17 (24%)	13 (19%)	0	3
All	All	13246/13568 (98%)	8764 (66%)	2800 (21%)	1682 (13%)	0	7

All (1682) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	AB	76	GLN
1	AB	190	THR
2	AC	12	LEU
2	AC	110	ASN
2	AC	130	VAL
2	AC	160	ALA
2	AC	161	GLU
3	AD	20	TYR
3	AD	166	LYS
3	AD	172	PRO
3	AD	187	ARG
4	AE	27	ARG
4	AE	77	PRO
4	AE	78	HIS
4	AE	79	GLU
5	AF	69	GLU
5	AF	70	ASP
6	AG	10	ARG
6	AG	35	LYS
7	AH	22	GLU
7	AH	97	VAL
8	AI	110	GLU
9	AJ	75	ILE
10	AK	35	PRO
10	AK	109	VAL
11	AL	7	ILE
11	AL	15	ARG
11	AL	17	LYS
11	AL	39	VAL
11	AL	43	VAL
11	AL	55	VAL
11	AL	66	VAL
11	AL	71	PRO
11	AL	94	PRO
11	AL	97	ARG
11	AL	104	VAL
11	AL	122	THR
11	AL	123	LYS
11	AL	126	LYS
14	AO	88	ARG
15	AP	35	LYS
15	AP	36	ILE

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Mol	Chain	Res	Type
16	AQ	28	PRO
16	AQ	34	LYS
17	AR	37	VAL
17	AR	55	ARG
17	AR	60	ALA
18	AS	5	LEU
18	AS	27	GLU
19	AT	50	GLU
19	AT	74	LYS
20	AY	21	ILE
20	AY	22	ASP
20	AY	35	TYR
20	AY	92	ILE
20	AY	136	ALA
20	AY	142	THR
20	AY	146	LEU
20	AY	192	LEU
20	AY	204	GLU
20	AY	330	VAL
20	AY	331	TYR
20	AY	350	GLU
20	AY	382	GLU
20	AY	448	GLN
20	AY	480	GLN
20	AY	497	PHE
20	AY	501	THR
20	AY	559	PRO
20	AY	566	THR
20	AY	567	LEU
20	AY	613	PRO
20	AY	631	ILE
20	AY	680	PRO
25	BC	17	PRO
25	BC	36	ALA
25	BC	41	THR
25	BC	42	VAL
25	BC	43	GLU
25	BC	71	LYS
25	BC	80	LYS
25	BC	114	VAL
25	BC	115	VAL
25	BC	117	THR

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Mol	Chain	Res	Type
25	BC	119	ASP
25	BC	141	PRO
25	BC	161	ARG
25	BC	162	ILE
25	BC	182	PRO
25	BC	212	SER
25	BC	214	TYR
25	BC	221	PRO
25	BC	227	PRO
25	BC	228	HIS
26	BD	25	THR
26	BD	40	THR
26	BD	166	GLN
26	BD	256	GLY
27	BE	56	PRO
27	BE	61	ARG
27	BE	63	LEU
27	BE	68	ALA
27	BE	72	VAL
27	BE	77	ILE
27	BE	129	HIS
27	BE	135	HIS
27	BE	144	ARG
27	BE	180	ASN
27	BE	185	LYS
27	BE	188	VAL
28	BF	22	ALA
28	BF	66	PRO
28	BF	67	GLN
28	BF	69	HIS
28	BF	88	VAL
28	BF	158	THR
29	BG	78	SER
29	BG	87	PRO
29	BG	114	ILE
30	BH	21	PRO
30	BH	47	GLU
30	BH	126	PRO
30	BH	128	PRO
30	BH	176	ALA
32	BK	5	VAL
32	BK	115	LEU

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Mol	Chain	Res	Type
33	BN	22	THR
33	BN	28	THR
33	BN	31	ALA
33	BN	32	THR
33	BN	38	HIS
33	BN	40	PRO
33	BN	43	THR
33	BN	47	ALA
33	BN	50	ASP
33	BN	51	PHE
33	BN	59	LYS
33	BN	60	ILE
33	BN	72	TYR
33	BN	78	TYR
33	BN	80	GLY
33	BN	83	LYS
33	BN	93	THR
33	BN	94	HIS
33	BN	95	PRO
33	BN	98	VAL
33	BN	101	HIS
33	BN	107	LEU
33	BN	114	ARG
33	BN	115	ARG
33	BN	117	PHE
33	BN	121	LYS
33	BN	129	PRO
34	BO	52	VAL
34	BO	84	ALA
35	BP	14	LYS
35	BP	38	GLN
35	BP	57	THR
35	BP	60	MET
35	BP	68	GLN
35	BP	110	TYR
35	BP	148	LEU
36	BQ	8	LYS
36	BQ	75	THR
36	BQ	93	TYR
36	BQ	102	VAL
36	BQ	103	MET
36	BQ	127	ILE

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
37	BR	11	ASN
37	BR	14	SER
37	BR	57	ARG
37	BR	104	ARG
38	BS	13	ARG
38	BS	47	THR
38	BS	48	LEU
38	BS	98	VAL
38	BS	100	ALA
38	BS	101	LEU
38	BS	106	ARG
39	BT	2	ASN
39	BT	30	VAL
39	BT	33	LYS
39	BT	37	GLY
39	BT	48	ILE
39	BT	68	TYR
39	BT	83	ILE
39	BT	107	ASP
40	BU	91	ASP
41	BV	14	VAL
41	BV	32	THR
41	BV	78	LYS
41	BV	81	TYR
41	BV	95	LEU
41	BV	96	ILE
42	BW	40	ASN
42	BW	74	ALA
42	BW	77	ASP
43	BX	12	VAL
44	BY	32	PRO
44	BY	53	PRO
44	BY	98	VAL
44	BY	101	LYS
45	BZ	71	VAL
45	BZ	85	HIS
45	BZ	135	GLU
46	B0	33	ALA
46	B0	55	ARG
47	B1	17	SER
47	B1	18	ILE
47	B1	20	ARG

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Mol	Chain	Res	Type
47	B1	47	GLN
47	B1	53	VAL
48	B2	50	ILE
49	B3	52	HIS
50	B4	29	PRO
50	B4	33	VAL
51	B5	35	GLU
51	B5	49	CYS
52	B6	8	LYS
52	B6	9	LEU
52	B6	17	LYS
52	B6	29	ASN
52	B6	33	LYS
53	B7	47	ARG
54	B8	34	TRP
1	CB	35	GLU
1	CB	76	GLN
1	CB	153	ARG
1	CB	202	PRO
1	CB	236	TYR
2	CC	49	SER
2	CC	127	ARG
2	CC	130	VAL
2	CC	207	VAL
3	CD	28	SER
3	CD	89	THR
3	CD	134	ASP
3	CD	166	LYS
3	CD	172	PRO
3	CD	175	SER
4	CE	77	PRO
4	CE	78	HIS
4	CE	115	VAL
5	CF	100	ASN
7	CH	107	LEU
8	CI	35	GLU
9	CJ	55	LYS
10	CK	41	THR
10	CK	43	SER
10	CK	109	VAL
11	CL	7	ILE
11	CL	17	LYS

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Mol	Chain	Res	Type
11	CL	22	SER
11	CL	39	VAL
11	CL	43	VAL
11	CL	47	LYS
11	CL	51	ALA
11	CL	56	ALA
11	CL	66	VAL
11	CL	94	PRO
11	CL	96	VAL
11	CL	104	VAL
11	CL	112	ASP
11	CL	123	LYS
12	CM	12	ASN
12	CM	21	TYR
13	CN	15	LYS
13	CN	49	HIS
13	CN	51	GLY
13	CN	56	VAL
13	CN	57	ARG
13	CN	59	ALA
15	CP	11	SER
15	CP	35	LYS
15	CP	36	ILE
16	CQ	28	PRO
16	CQ	83	ASP
17	CR	87	ARG
19	CT	50	GLU
19	CT	73	HIS
19	CT	100	ILE
20	CY	21	ILE
20	CY	23	ALA
20	CY	35	TYR
20	CY	36	THR
20	CY	88	VAL
20	CY	92	ILE
20	CY	136	ALA
20	CY	161	PRO
20	CY	206	LEU
20	CY	269	VAL
20	CY	303	PRO
20	CY	330	VAL
20	CY	331	TYR

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Mol	Chain	Res	Type
20	CY	359	HIS
20	CY	395	PRO
20	CY	501	THR
20	CY	535	PRO
20	CY	566	THR
20	CY	567	LEU
20	CY	631	ILE
20	CY	680	PRO
25	DC	17	PRO
25	DC	43	GLU
25	DC	53	ARG
25	DC	60	ARG
25	DC	80	LYS
25	DC	96	GLY
25	DC	116	ALA
25	DC	119	ASP
25	DC	141	PRO
25	DC	182	PRO
25	DC	211	ARG
25	DC	212	SER
25	DC	221	PRO
25	DC	227	PRO
25	DC	228	HIS
26	DD	3	VAL
26	DD	46	GLN
26	DD	52	ARG
26	DD	53	PHE
26	DD	90	ALA
26	DD	165	ILE
26	DD	166	GLN
26	DD	231	HIS
26	DD	273	ARG
27	DE	12	THR
27	DE	35	GLN
27	DE	56	PRO
27	DE	68	ALA
27	DE	72	VAL
27	DE	74	PRO
27	DE	75	VAL
27	DE	144	ARG
28	DF	3	GLU
28	DF	48	THR

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Mol	Chain	Res	Type
28	DF	66	PRO
28	DF	69	HIS
28	DF	84	VAL
28	DF	89	VAL
28	DF	158	THR
28	DF	171	PRO
28	DF	192	LEU
29	DG	30	GLU
29	DG	50	ALA
29	DG	113	ARG
29	DG	114	ILE
30	DH	109	PHE
30	DH	124	GLU
32	DK	5	VAL
32	DK	56	GLU
32	DK	89	HIS
33	DN	18	ALA
33	DN	28	THR
33	DN	31	ALA
33	DN	32	THR
33	DN	37	LYS
33	DN	38	HIS
33	DN	43	THR
33	DN	46	VAL
33	DN	50	ASP
33	DN	51	PHE
33	DN	54	VAL
33	DN	56	ASN
33	DN	57	ALA
33	DN	63	THR
33	DN	66	LYS
33	DN	72	TYR
33	DN	74	ARG
33	DN	78	TYR
33	DN	83	LYS
33	DN	84	LYS
33	DN	86	PRO
33	DN	94	HIS
33	DN	95	PRO
33	DN	96	GLU
33	DN	98	VAL
33	DN	101	HIS

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Mol	Chain	Res	Type
33	DN	106	MET
33	DN	107	LEU
33	DN	108	PRO
33	DN	115	ARG
33	DN	118	LYS
33	DN	128	HIS
33	DN	129	PRO
34	DO	24	VAL
34	DO	35	VAL
34	DO	68	GLU
35	DP	12	ALA
35	DP	50	ARG
35	DP	55	ARG
35	DP	57	THR
35	DP	68	GLN
35	DP	71	VAL
36	DQ	90	VAL
36	DQ	93	TYR
36	DQ	94	VAL
36	DQ	102	VAL
36	DQ	103	MET
38	DS	14	VAL
38	DS	23	ARG
38	DS	47	THR
38	DS	48	LEU
38	DS	53	SER
38	DS	94	TYR
38	DS	98	VAL
38	DS	101	LEU
38	DS	104	GLY
38	DS	105	ALA
38	DS	106	ARG
38	DS	108	GLY
39	DT	12	SER
39	DT	30	VAL
39	DT	78	LEU
39	DT	80	SER
39	DT	83	ILE
39	DT	88	ILE
39	DT	104	ASN
39	DT	119	LYS
40	DU	91	ASP

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Mol	Chain	Res	Type
40	DU	92	ARG
40	DU	99	ALA
40	DU	102	GLU
41	DV	46	VAL
41	DV	96	ILE
42	DW	73	ALA
42	DW	77	ASP
44	DY	6	HIS
44	DY	32	PRO
44	DY	53	PRO
44	DY	56	PRO
45	DZ	65	GLN
45	DZ	71	VAL
45	DZ	72	ARG
45	DZ	74	VAL
45	DZ	85	HIS
45	DZ	128	VAL
45	DZ	152	ALA
45	DZ	169	GLU
46	D0	35	ASN
46	D0	49	LYS
46	D0	55	ARG
47	D1	15	ALA
47	D1	34	THR
47	D1	36	GLY
47	D1	37	ILE
47	D1	40	ARG
48	D2	50	ILE
49	D3	27	GLY
50	D4	29	PRO
51	D5	28	PRO
51	D5	49	CYS
52	D6	7	ILE
52	D6	16	CYS
52	D6	29	ASN
52	D6	31	PRO
52	D6	49	HIS
53	D7	8	ASN
53	D7	46	VAL
54	D8	32	LEU
54	D8	34	TRP
54	D8	35	GLN

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Mol	Chain	Res	Type
54	D8	46	ARG
54	D8	49	VAL
56	De	52	ALA
56	De	120	ALA
1	AB	17	PHE
1	AB	35	GLU
1	AB	36	ARG
1	AB	103	THR
1	AB	157	ARG
1	AB	164	VAL
1	AB	165	VAL
1	AB	229	VAL
1	AB	236	TYR
2	AC	51	GLY
2	AC	55	VAL
2	AC	102	ASN
2	AC	207	VAL
3	AD	5	ILE
3	AD	73	ARG
3	AD	75	PHE
3	AD	99	SER
4	AE	6	PHE
4	AE	71	LEU
5	AF	13	ASN
5	AF	43	LEU
5	AF	100	ASN
6	AG	9	VAL
6	AG	114	ARG
7	AH	74	PRO
7	AH	107	LEU
8	AI	29	ASN
8	AI	106	ALA
9	AJ	54	PHE
10	AK	42	TRP
10	AK	49	GLY
10	AK	88	GLY
10	AK	108	ILE
10	AK	111	ASP
10	AK	113	PRO
11	AL	6	THR
11	AL	29	GLY
11	AL	46	LYS

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Mol	Chain	Res	Type
11	AL	50	SER
11	AL	56	ALA
11	AL	58	VAL
11	AL	96	VAL
12	AM	12	ASN
12	AM	67	GLU
12	AM	101	GLN
13	AN	14	PRO
13	AN	27	CYS
14	AO	47	LYS
15	AP	11	SER
15	AP	15	PRO
15	AP	68	ASP
16	AQ	55	ASP
17	AR	23	LYS
17	AR	59	SER
17	AR	87	ARG
18	AS	46	GLY
18	AS	48	THR
19	AT	11	SER
19	AT	71	THR
19	AT	100	ILE
20	AY	36	THR
20	AY	75	LYS
20	AY	89	ASP
20	AY	121	VAL
20	AY	123	ARG
20	AY	135	PHE
20	AY	161	PRO
20	AY	162	VAL
20	AY	203	GLU
20	AY	266	ASN
20	AY	341	VAL
20	AY	437	THR
20	AY	466	LEU
20	AY	505	GLY
20	AY	565	VAL
20	AY	568	TYR
20	AY	654	GLY
20	AY	664	GLN
20	AY	675	HIS
25	BC	15	VAL

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Mol	Chain	Res	Type
25	BC	18	ASN
25	BC	34	ALA
25	BC	57	GLN
25	BC	59	VAL
25	BC	65	LEU
25	BC	67	HIS
25	BC	81	GLY
25	BC	97	GLY
25	BC	118	PRO
25	BC	142	LYS
25	BC	213	VAL
25	BC	217	THR
25	BC	222	SER
25	BC	225	ILE
26	BD	38	LYS
26	BD	68	LYS
26	BD	78	LYS
26	BD	79	VAL
26	BD	90	ALA
26	BD	127	VAL
26	BD	165	ILE
26	BD	228	PRO
26	BD	237	GLU
26	BD	259	THR
27	BE	11	MET
27	BE	34	VAL
27	BE	124	GLY
27	BE	128	SER
27	BE	203	LYS
28	BF	5	ALA
28	BF	8	GLN
28	BF	23	ASP
28	BF	84	VAL
28	BF	104	LYS
28	BF	190	GLU
28	BF	192	LEU
29	BG	82	LEU
30	BH	71	LEU
30	BH	101	ARG
30	BH	165	ALA
30	BH	175	LYS
32	BK	3	LYS

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Mol	Chain	Res	Type
32	BK	76	TYR
32	BK	121	GLU
33	BN	18	ALA
33	BN	37	LYS
33	BN	45	ASN
33	BN	54	VAL
33	BN	57	ALA
33	BN	75	TYR
33	BN	79	PRO
33	BN	89	LYS
33	BN	96	GLU
33	BN	100	GLU
33	BN	104	LYS
33	BN	113	GLY
33	BN	126	PRO
33	BN	136	GLU
34	BO	5	GLN
34	BO	24	VAL
35	BP	17	LYS
35	BP	22	GLY
35	BP	28	GLY
35	BP	31	ALA
35	BP	50	ARG
35	BP	64	LYS
35	BP	71	VAL
36	BQ	27	VAL
36	BQ	54	MET
36	BQ	59	ARG
36	BQ	90	VAL
36	BQ	92	GLY
37	BR	6	SER
37	BR	102	GLU
37	BR	116	LEU
38	BS	14	VAL
38	BS	23	ARG
38	BS	96	GLY
38	BS	104	GLY
38	BS	105	ALA
39	BT	3	ARG
39	BT	28	VAL
39	BT	32	TYR
39	BT	35	LYS

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Mol	Chain	Res	Type
39	BT	50	ILE
39	BT	59	THR
39	BT	86	ILE
39	BT	104	ASN
40	BU	92	ARG
41	BV	43	GLU
41	BV	50	PRO
41	BV	55	ALA
41	BV	68	LYS
42	BW	12	ILE
44	BY	6	HIS
44	BY	41	GLY
44	BY	44	ILE
44	BY	77	PRO
44	BY	78	ALA
45	BZ	31	ARG
45	BZ	34	ASN
45	BZ	72	ARG
45	BZ	75	ASN
46	B0	84	LEU
47	B1	12	PRO
47	B1	15	ALA
47	B1	16	ASN
47	B1	21	ARG
47	B1	23	LYS
47	B1	64	ALA
47	B1	80	LEU
48	B2	43	GLN
48	B2	48	HIS
48	B2	49	LYS
51	B5	48	GLU
52	B6	49	HIS
54	B8	19	SER
54	B8	36	LYS
54	B8	49	VAL
56	Be	54	ALA
56	Be	80	ALA
56	Be	81	ILE
56	Be	92	LEU
1	CB	96	ARG
1	CB	230	VAL
2	CC	103	VAL

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Mol	Chain	Res	Type
3	CD	20	TYR
3	CD	52	SER
3	CD	173	TRP
4	CE	27	ARG
5	CF	69	GLU
5	CF	70	ASP
6	CG	114	ARG
7	CH	103	VAL
7	CH	109	ILE
8	CI	118	LYS
9	CJ	53	PRO
9	CJ	75	ILE
9	CJ	89	ASP
10	CK	88	GLY
10	CK	111	ASP
11	CL	35	GLY
11	CL	58	VAL
11	CL	91	LYS
11	CL	128	ALA
12	CM	10	PRO
12	CM	118	ALA
14	CO	47	LYS
15	CP	48	TRP
17	CR	37	VAL
17	CR	59	SER
18	CS	67	VAL
20	CY	5	VAL
20	CY	6	GLU
20	CY	90	PHE
20	CY	109	ASP
20	CY	123	ARG
20	CY	183	MET
20	CY	266	ASN
20	CY	271	LEU
20	CY	343	ASN
20	CY	347	GLY
20	CY	396	ARG
20	CY	416	LYS
20	CY	437	THR
20	CY	471	LYS
20	CY	502	GLY
20	CY	557	GLY

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Mol	Chain	Res	Type
20	CY	565	VAL
20	CY	568	TYR
25	DC	35	THR
25	DC	37	LYS
25	DC	42	VAL
25	DC	72	GLN
25	DC	75	VAL
25	DC	77	ALA
25	DC	81	GLY
25	DC	107	GLY
25	DC	115	VAL
25	DC	142	LYS
25	DC	162	ILE
25	DC	172	ILE
25	DC	222	SER
26	DD	24	ILE
26	DD	36	PRO
26	DD	43	ARG
26	DD	70	TRP
26	DD	79	VAL
26	DD	80	ALA
26	DD	125	ILE
26	DD	153	ALA
26	DD	222	ARG
27	DE	13	ARG
27	DE	61	ARG
27	DE	77	ILE
27	DE	86	PRO
27	DE	121	ASN
27	DE	128	SER
27	DE	129	HIS
27	DE	187	ALA
27	DE	204	ALA
28	DF	5	ALA
28	DF	8	GLN
28	DF	25	PRO
28	DF	46	ARG
29	DG	24	GLY
29	DG	87	PRO
30	DH	37	VAL
30	DH	41	MET
30	DH	67	LEU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
30	DH	123	PHE
30	DH	155	SER
30	DH	165	ALA
30	DH	166	GLY
30	DH	176	ALA
32	DK	6	ALA
32	DK	10	LEU
32	DK	30	HIS
32	DK	100	THR
32	DK	103	GLN
32	DK	105	LEU
33	DN	40	PRO
33	DN	42	TRP
33	DN	60	ILE
33	DN	71	ILE
33	DN	80	GLY
34	DO	14	THR
34	DO	69	ILE
35	DP	10	PRO
35	DP	11	GLY
35	DP	17	LYS
35	DP	45	LEU
35	DP	107	LYS
37	DR	72	ASP
37	DR	88	ARG
37	DR	101	ALA
38	DS	43	GLU
38	DS	100	ALA
39	DT	27	THR
39	DT	28	VAL
39	DT	31	SER
39	DT	50	ILE
39	DT	70	VAL
39	DT	107	ASP
40	DU	88	ILE
41	DV	19	LYS
41	DV	22	VAL
41	DV	44	LYS
41	DV	50	PRO
41	DV	78	LYS
41	DV	80	GLN
41	DV	100	ARG

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Mol	Chain	Res	Type
42	DW	15	ARG
42	DW	44	ALA
42	DW	109	GLU
43	DX	4	ALA
43	DX	33	LYS
44	DY	41	GLY
44	DY	63	LYS
44	DY	98	VAL
44	DY	107	ASP
45	DZ	5	LEU
45	DZ	76	LEU
45	DZ	81	ARG
45	DZ	90	VAL
45	DZ	95	PRO
45	DZ	151	HIS
47	D1	12	PRO
47	D1	20	ARG
47	D1	21	ARG
47	D1	23	LYS
47	D1	41	ARG
47	D1	52	ARG
47	D1	55	GLY
48	D2	48	HIS
49	D3	52	HIS
50	D4	7	PRO
50	D4	33	VAL
51	D5	48	GLU
51	D5	56	LYS
52	D6	9	LEU
52	D6	48	VAL
53	D7	3	ARG
53	D7	7	PRO
54	D8	6	THR
54	D8	28	GLY
54	D8	30	ARG
54	D8	48	PHE
56	De	62	VAL
56	De	65	LYS
56	De	80	ALA
56	De	81	ILE
1	AB	8	LYS
1	AB	77	ALA

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Mol	Chain	Res	Type
1	AB	206	ASP
2	AC	6	HIS
2	AC	10	PHE
2	AC	56	ASP
2	AC	91	LEU
2	AC	109	PRO
2	AC	112	SER
2	AC	181	ASN
3	AD	4	TYR
3	AD	27	TYR
3	AD	37	PRO
3	AD	110	PHE
3	AD	165	MET
3	AD	173	TRP
3	AD	181	MET
5	AF	51	PRO
8	AI	127	LYS
9	AJ	42	THR
9	AJ	55	LYS
9	AJ	83	GLU
9	AJ	94	VAL
10	AK	36	ASP
10	AK	102	GLY
11	AL	13	LYS
11	AL	14	GLY
11	AL	19	ARG
11	AL	35	GLY
11	AL	48	PRO
11	AL	51	ALA
11	AL	60	LEU
11	AL	107	ALA
11	AL	115	LYS
12	AM	39	ILE
15	AP	83	GLU
16	AQ	14	LYS
16	AQ	67	LYS
17	AR	58	LEU
18	AS	11	VAL
18	AS	66	MET
18	AS	68	GLY
18	AS	77	THR
19	AT	90	GLN

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Mol	Chain	Res	Type
19	AT	95	ALA
20	AY	6	GLU
20	AY	147	TRP
20	AY	193	GLY
20	AY	405	PRO
20	AY	433	GLU
20	AY	516	PRO
20	AY	535	PRO
20	AY	536	LYS
20	AY	539	ILE
20	AY	638	GLY
25	BC	39	ASP
25	BC	61	GLY
25	BC	167	ASP
25	BC	170	GLY
25	BC	175	PRO
25	BC	215	VAL
25	BC	224	ARG
26	BD	3	VAL
26	BD	9	TYR
26	BD	27	THR
26	BD	36	PRO
26	BD	52	ARG
26	BD	55	GLY
26	BD	80	ALA
26	BD	88	ARG
26	BD	144	ALA
26	BD	200	ASP
26	BD	239	ARG
26	BD	274	ARG
26	BD	275	LYS
27	BE	187	ALA
28	BF	72	ARG
28	BF	89	VAL
28	BF	151	SER
28	BF	171	PRO
29	BG	12	TYR
29	BG	146	TYR
29	BG	151	ALA
30	BH	155	SER
30	BH	156	ALA
32	BK	63	ARG

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Mol	Chain	Res	Type
32	BK	89	HIS
33	BN	24	GLY
33	BN	26	LEU
33	BN	74	ARG
33	BN	87	LEU
33	BN	105	GLY
33	BN	124	ALA
34	BO	6	THR
34	BO	64	ARG
35	BP	30	THR
35	BP	52	GLU
35	BP	67	MET
35	BP	141	ALA
36	BQ	4	PRO
36	BQ	14	ARG
36	BQ	82	ARG
36	BQ	135	ASP
37	BR	58	GLY
37	BR	105	ARG
38	BS	24	LEU
38	BS	56	LEU
38	BS	94	TYR
38	BS	108	GLY
39	BT	27	THR
39	BT	80	SER
40	BU	22	LYS
40	BU	36	ARG
41	BV	44	LYS
41	BV	80	GLN
42	BW	73	ALA
42	BW	80	PRO
43	BX	32	PRO
43	BX	62	LYS
44	BY	26	LYS
44	BY	48	ALA
44	BY	97	ARG
45	BZ	22	GLY
45	BZ	73	GLN
45	BZ	93	ASP
45	BZ	95	PRO
45	BZ	168	GLU
46	B0	19	LYS

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Mol	Chain	Res	Type
47	B1	43	TYR
47	B1	87	PRO
48	B2	17	SER
50	B4	7	PRO
52	B6	31	PRO
54	B8	6	THR
54	B8	51	ALA
54	B8	53	PRO
56	Be	52	ALA
56	Be	110	GLU
1	CB	17	PHE
1	CB	157	ARG
1	CB	164	VAL
1	CB	166	ASP
1	CB	210	SER
2	CC	10	PHE
2	CC	35	GLU
2	CC	102	ASN
2	CC	110	ASN
2	CC	112	SER
2	CC	158	GLY
2	CC	181	ASN
3	CD	47	ARG
3	CD	189	PRO
4	CE	10	MET
4	CE	12	LEU
5	CF	34	GLY
5	CF	54	LYS
5	CF	93	SER
6	CG	6	ARG
6	CG	14	PRO
6	CG	15	ASP
6	CG	82	GLY
7	CH	72	PRO
8	CI	24	GLY
8	CI	115	GLY
9	CJ	32	ALA
10	CK	15	ALA
10	CK	35	PRO
10	CK	42	TRP
10	CK	124	LYS
10	CK	126	ARG

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Mol	Chain	Res	Type
11	CL	46	LYS
11	CL	55	VAL
11	CL	65	GLU
11	CL	92	ASP
11	CL	98	TYR
11	CL	107	ALA
12	CM	101	GLN
12	CM	106	ASN
12	CM	121	LYS
14	CO	16	ALA
15	CP	66	PRO
16	CQ	12	SER
18	CS	80	TYR
20	CY	25	LYS
20	CY	91	THR
20	CY	116	PRO
20	CY	162	VAL
20	CY	175	SER
20	CY	257	PRO
20	CY	285	ASP
20	CY	345	THR
20	CY	353	ALA
20	CY	415	PRO
20	CY	436	PRO
20	CY	448	GLN
20	CY	539	ILE
20	CY	614	GLU
20	CY	628	ARG
20	CY	654	GLY
25	DC	18	ASN
25	DC	21	TYR
25	DC	38	PHE
25	DC	59	VAL
25	DC	117	THR
25	DC	145	THR
25	DC	161	ARG
25	DC	167	ASP
25	DC	175	PRO
25	DC	178	LYS
25	DC	179	ALA
25	DC	224	ARG
26	DD	25	THR

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Mol	Chain	Res	Type
26	DD	28	GLU
26	DD	89	SER
26	DD	144	ALA
27	DE	22	PRO
27	DE	43	GLY
27	DE	138	PRO
27	DE	177	PRO
27	DE	192	ASN
28	DF	12	LEU
28	DF	26	ALA
28	DF	60	SER
28	DF	73	ALA
28	DF	151	SER
28	DF	155	LEU
29	DG	32	PRO
29	DG	82	LEU
29	DG	84	LYS
29	DG	86	MET
30	DH	21	PRO
30	DH	47	GLU
30	DH	134	SER
30	DH	137	ASP
30	DH	173	PRO
32	DK	91	PRO
33	DN	41	ASP
33	DN	100	GLU
33	DN	111	PRO
33	DN	117	PHE
33	DN	121	LYS
33	DN	136	GLU
34	DO	28	SER
34	DO	52	VAL
35	DP	39	LYS
35	DP	64	LYS
35	DP	106	LEU
36	DQ	4	PRO
37	DR	6	SER
37	DR	40	LYS
37	DR	92	GLY
37	DR	103	ARG
37	DR	104	ARG
38	DS	57	LYS

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Mol	Chain	Res	Type
38	DS	59	LYS
38	DS	61	ASN
39	DT	3	ARG
39	DT	48	ILE
39	DT	87	ASP
39	DT	137	LYS
40	DU	30	LYS
42	DW	12	ILE
42	DW	14	PRO
42	DW	25	ARG
42	DW	61	ASN
42	DW	80	PRO
43	DX	32	PRO
43	DX	72	LYS
44	DY	27	VAL
44	DY	78	ALA
44	DY	80	GLY
45	DZ	30	ASN
45	DZ	75	ASN
45	DZ	78	LYS
45	DZ	135	GLU
45	DZ	168	GLU
45	DZ	177	PRO
46	D0	33	ALA
46	D0	73	GLY
47	D1	17	SER
48	D2	49	LYS
49	D3	16	PRO
50	D4	4	GLY
51	D5	58	LEU
52	D6	15	GLU
53	D7	23	ARG
54	D8	18	ALA
54	D8	47	LYS
55	D9	11	CYS
56	De	54	ALA
56	De	60	PHE
56	De	93	ALA
1	AB	86	GLU
1	AB	130	ARG
1	AB	153	ARG
2	AC	35	GLU

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Mol	Chain	Res	Type
2	AC	47	LEU
2	AC	48	TYR
2	AC	49	SER
2	AC	108	ASN
3	AD	29	PRO
3	AD	34	GLU
3	AD	134	ASP
5	AF	12	PRO
6	AG	69	VAL
7	AH	87	SER
7	AH	89	PRO
7	AH	103	VAL
8	AI	119	ALA
9	AJ	23	ILE
9	AJ	37	PRO
11	AL	47	LYS
11	AL	53	ARG
11	AL	91	LYS
12	AM	11	ARG
12	AM	118	ALA
12	AM	121	LYS
16	AQ	81	ARG
20	AY	74	TRP
20	AY	239	GLU
20	AY	262	SER
20	AY	380	LEU
20	AY	403	GLU
20	AY	416	LYS
20	AY	579	GLU
20	AY	604	PRO
20	AY	681	LYS
25	BC	51	ASP
25	BC	60	ARG
25	BC	171	ALA
25	BC	176	VAL
26	BD	101	GLU
26	BD	108	PRO
26	BD	126	GLN
26	BD	147	LEU
26	BD	231	HIS
26	BD	244	ARG
27	BE	54	GLN

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Mol	Chain	Res	Type
27	BE	86	PRO
27	BE	88	GLY
27	BE	189	PRO
27	BE	193	GLY
28	BF	9	ILE
28	BF	58	ALA
28	BF	149	ASP
28	BF	155	LEU
29	BG	111	LEU
30	BH	13	LYS
30	BH	37	VAL
30	BH	42	ARG
32	BK	16	LYS
32	BK	91	PRO
32	BK	102	GLU
34	BO	15	GLY
35	BP	39	LYS
35	BP	145	PRO
36	BQ	20	ALA
36	BQ	52	VAL
37	BR	28	LEU
37	BR	71	GLN
38	BS	15	ARG
38	BS	67	ARG
39	BT	24	PRO
39	BT	91	ARG
39	BT	93	ARG
40	BU	5	LYS
40	BU	93	LYS
41	BV	38	LEU
42	BW	44	ALA
42	BW	65	LEU
43	BX	4	ALA
44	BY	11	ASP
44	BY	47	LYS
44	BY	63	LYS
44	BY	102	CYS
47	B1	28	GLY
47	B1	65	SER
48	B2	10	LEU
50	B4	16	CYS
51	B5	56	LYS

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Mol	Chain	Res	Type
54	B8	20	GLY
54	B8	39	LYS
54	B8	64	TYR
2	CC	5	ILE
2	CC	12	LEU
2	CC	13	GLY
2	CC	29	TYR
2	CC	109	PRO
3	CD	34	GLU
3	CD	37	PRO
3	CD	167	GLY
3	CD	180	GLY
4	CE	11	ILE
4	CE	79	GLU
5	CF	96	PRO
6	CG	10	ARG
6	CG	69	VAL
6	CG	71	PRO
6	CG	72	ARG
7	CH	31	PHE
9	CJ	29	ARG
10	CK	44	SER
10	CK	113	PRO
11	CL	38	THR
11	CL	42	THR
11	CL	64	TYR
12	CM	39	ILE
12	CM	124	PRO
13	CN	3	ARG
16	CQ	68	ARG
16	CQ	81	ARG
19	CT	95	ALA
20	CY	78	ARG
20	CY	135	PHE
20	CY	191	ASP
20	CY	224	ASP
20	CY	273	LEU
20	CY	397	VAL
20	CY	479	PRO
20	CY	503	GLY
20	CY	508	GLY
20	CY	516	PRO

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Mol	Chain	Res	Type
20	CY	573	HIS
20	CY	637	ARG
20	CY	653	PHE
25	DC	16	ASP
25	DC	34	ALA
25	DC	65	LEU
25	DC	86	GLU
25	DC	113	ALA
25	DC	215	VAL
26	DD	68	LYS
26	DD	78	LYS
26	DD	198	ASN
26	DD	239	ARG
26	DD	244	ARG
27	DE	16	ARG
27	DE	70	ALA
27	DE	83	ASP
27	DE	98	PRO
27	DE	152	LYS
28	DF	67	GLN
28	DF	71	GLY
28	DF	165	ARG
29	DG	105	LYS
33	DN	53	VAL
33	DN	104	LYS
33	DN	120	LEU
34	DO	30	ALA
34	DO	64	ARG
34	DO	74	GLY
36	DQ	14	ARG
36	DQ	87	LYS
37	DR	15	SER
37	DR	102	GLU
37	DR	116	LEU
38	DS	22	GLY
39	DT	26	ASP
39	DT	35	LYS
42	DW	75	TYR
43	DX	41	ASN
43	DX	67	GLY
44	DY	3	VAL
44	DY	77	PRO

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
45	DZ	143	GLY
47	D1	10	LYS
47	D1	32	LYS
47	D1	44	PRO
47	D1	53	VAL
47	D1	87	PRO
48	D2	17	SER
51	D5	4	HIS
51	D5	7	PRO
51	D5	23	HIS
51	D5	29	THR
51	D5	53	ALA
52	D6	18	ARG
52	D6	27	LYS
53	D7	9	ARG
55	D9	3	VAL
56	De	113	LYS
1	AB	131	PRO
2	AC	68	VAL
2	AC	103	VAL
2	AC	114	PRO
2	AC	192	THR
2	AC	193	TYR
3	AD	28	SER
3	AD	189	PRO
9	AJ	32	ALA
10	AK	43	SER
10	AK	118	GLY
11	AL	92	ASP
13	AN	13	THR
17	AR	28	GLU
17	AR	77	GLY
18	AS	43	GLU
18	AS	80	TYR
19	AT	10	LEU
20	AY	88	VAL
20	AY	199	ILE
20	AY	257	PRO
20	AY	263	ALA
20	AY	314	PHE
20	AY	342	TYR
20	AY	348	ARG

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Mol	Chain	Res	Type
20	AY	598	ASP
25	BC	76	LEU
25	BC	130	ARG
25	BC	172	ILE
25	BC	184	GLU
26	BD	28	GLU
26	BD	160	GLY
27	BE	141	ILE
28	BF	13	SER
28	BF	127	GLU
29	BG	44	GLY
29	BG	49	ASP
29	BG	167	GLU
30	BH	61	HIS
32	BK	30	HIS
32	BK	112	MET
32	BK	116	ASN
33	BN	108	PRO
33	BN	128	HIS
34	BO	96	THR
35	BP	78	PRO
35	BP	147	LEU
36	BQ	18	LYS
39	BT	82	LEU
39	BT	87	ASP
39	BT	88	ILE
40	BU	30	LYS
40	BU	88	ILE
42	BW	14	PRO
42	BW	61	ASN
42	BW	63	ASP
43	BX	11	PRO
44	BY	79	CYS
45	BZ	74	VAL
45	BZ	159	PRO
45	BZ	165	VAL
46	B0	11	ARG
47	B1	34	THR
47	B1	37	ILE
51	B5	4	HIS
51	B5	54	GLY
52	B6	19	ARG

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Mol	Chain	Res	Type
53	B7	9	ARG
54	B8	30	ARG
54	B8	61	LEU
55	B9	3	VAL
56	Be	61	ASP
3	CD	5	ILE
3	CD	40	PRO
3	CD	135	LEU
3	CD	197	PRO
4	CE	22	GLY
6	CG	34	GLY
7	CH	27	PRO
7	CH	35	ILE
7	CH	74	PRO
8	CI	127	LYS
10	CK	36	ASP
10	CK	55	LYS
11	CL	25	PRO
11	CL	50	SER
11	CL	54	LYS
11	CL	60	LEU
11	CL	115	LYS
12	CM	115	LYS
12	CM	116	THR
13	CN	13	THR
16	CQ	82	MET
17	CR	58	LEU
19	CT	34	LYS
20	CY	286	ILE
20	CY	301	ILE
20	CY	341	VAL
20	CY	390	VAL
20	CY	537	GLU
20	CY	597	GLY
20	CY	604	PRO
20	CY	635	GLU
20	CY	681	LYS
25	DC	20	VAL
25	DC	36	ALA
25	DC	51	ASP
25	DC	54	ARG
25	DC	94	TYR

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Mol	Chain	Res	Type
25	DC	210	LEU
25	DC	214	TYR
26	DD	55	GLY
26	DD	100	GLY
26	DD	123	ALA
27	DE	119	ARG
27	DE	135	HIS
29	DG	3	LEU
29	DG	142	PRO
30	DH	108	GLY
32	DK	55	VAL
32	DK	81	ALA
32	DK	101	TRP
32	DK	112	MET
33	DN	27	ALA
33	DN	58	ASP
33	DN	75	TYR
33	DN	126	PRO
35	DP	28	GLY
35	DP	34	GLY
35	DP	49	ARG
35	DP	52	GLU
35	DP	70	GLN
36	DQ	27	VAL
36	DQ	127	ILE
37	DR	117	VAL
39	DT	85	LYS
39	DT	86	ILE
40	DU	93	LYS
41	DV	16	PRO
41	DV	55	ALA
43	DX	7	VAL
43	DX	62	LYS
44	DY	7	VAL
44	DY	48	ALA
44	DY	70	SER
44	DY	79	CYS
44	DY	103	GLY
45	DZ	40	ASP
45	DZ	166	SER
51	D5	24	ALA
52	D6	33	LYS

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Mol	Chain	Res	Type
53	D7	40	TRP
54	D8	51	ALA
56	De	67	ALA
1	AB	226	ARG
6	AG	15	ASP
10	AK	78	GLN
11	AL	18	VAL
15	AP	63	GLY
18	AS	45	VAL
25	BC	75	VAL
25	BC	138	LEU
25	BC	139	PRO
26	BD	29	PRO
26	BD	241	PRO
27	BE	30	PRO
27	BE	83	ASP
28	BF	71	GLY
32	BK	86	LYS
33	BN	111	PRO
33	BN	134	ARG
37	BR	61	HIS
37	BR	93	GLY
39	BT	12	SER
39	BT	49	VAL
39	BT	70	VAL
43	BX	74	PRO
45	BZ	82	ARG
45	BZ	128	VAL
47	B1	66	HIS
49	B3	57	GLU
50	B4	10	VAL
51	B5	7	PRO
52	B6	27	LYS
53	B7	44	PRO
3	CD	171	GLY
6	CG	88	PRO
8	CI	22	GLY
9	CJ	82	ILE
10	CK	107	SER
11	CL	40	VAL
11	CL	80	HIS
20	CY	172	ASP

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Mol	Chain	Res	Type
20	CY	288	PRO
20	CY	498	ILE
25	DC	114	VAL
25	DC	118	PRO
25	DC	140	ASN
25	DC	143	ALA
25	DC	218	THR
26	DD	219	PRO
28	DF	61	GLY
30	DH	177	GLY
32	DK	63	ARG
33	DN	79	PRO
33	DN	105	GLY
34	DO	3	GLN
35	DP	148	LEU
39	DT	49	VAL
39	DT	91	ARG
40	DU	76	TYR
41	DV	29	PRO
41	DV	41	GLY
43	DX	39	ILE
44	DY	9	LYS
44	DY	101	LYS
45	DZ	93	ASP
45	DZ	146	ILE
47	D1	38	SER
55	D9	10	ILE
1	AB	127	ILE
2	AC	70	VAL
2	AC	148	GLY
3	AD	44	GLY
3	AD	88	VAL
3	AD	133	VAL
6	AG	14	PRO
11	AL	110	VAL
20	AY	15	ILE
20	AY	143	GLY
25	BC	146	VAL
25	BC	223	VAL
26	BD	271	ILE
30	BH	141	VAL
30	BH	173	PRO

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Mol	Chain	Res	Type
34	BO	35	VAL
36	BQ	94	VAL
37	BR	117	VAL
38	BS	85	VAL
43	BX	7	VAL
44	BY	18	GLY
45	BZ	15	PRO
56	Be	68	GLY
7	CH	73	ASP
10	CK	45	GLY
11	CL	45	PRO
11	CL	125	PRO
13	CN	28	GLY
20	CY	258	VAL
20	CY	638	GLY
20	CY	665	GLY
28	DF	178	PRO
29	DG	89	GLY
30	DH	141	VAL
43	DX	86	GLY
45	DZ	22	GLY
45	DZ	83	PRO
45	DZ	108	PRO
51	D5	57	VAL
56	De	53	PRO
2	AC	81	GLY
3	AD	167	GLY
4	AE	67	VAL
5	AF	56	PRO
9	AJ	49	VAL
12	AM	4	ILE
12	AM	10	PRO
20	AY	308	PRO
20	AY	397	VAL
25	BC	50	ILE
26	BD	236	GLY
32	BK	21	PRO
33	BN	53	VAL
34	BO	4	PRO
40	BU	73	GLY
41	BV	79	VAL
42	BW	76	VAL

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Mol	Chain	Res	Type
1	CB	159	PRO
1	CB	194	PRO
2	CC	51	GLY
2	CC	70	VAL
10	CK	37	GLY
14	CO	23	GLY
18	CS	72	GLY
25	DC	139	PRO
34	DO	48	PRO
41	DV	15	GLU
42	DW	112	GLY
43	DX	11	PRO
43	DX	54	VAL
54	D8	53	PRO
3	AD	142	PRO
6	AG	93	PRO
7	AH	51	VAL
8	AI	39	GLY
11	AL	82	VAL
15	AP	46	PRO
20	AY	303	PRO
27	BE	43	GLY
33	BN	71	ILE
35	BP	37	GLY
37	BR	106	GLY
40	BU	23	GLY
41	BV	72	VAL
44	BY	3	VAL
44	BY	10	GLY
45	BZ	177	PRO
1	CB	165	VAL
3	CD	142	PRO
4	CE	67	VAL
6	CG	13	GLN
11	CL	18	VAL
15	CP	30	GLY
15	CP	63	GLY
20	CY	398	ILE
25	DC	181	PHE
26	DD	51	VAL
26	DD	118	VAL
26	DD	223	GLY

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Mol	Chain	Res	Type
28	DF	24	LEU
28	DF	173	VAL
30	DH	48	GLY
32	DK	140	GLY
33	DN	103	VAL
36	DQ	24	GLY
37	DR	58	GLY
39	DT	24	PRO
43	DX	52	VAL
7	AH	131	GLY
11	AL	87	GLY
20	AY	269	VAL
36	BQ	132	VAL
39	BT	20	PRO
1	CB	229	VAL
2	CC	145	GLY
5	CF	26	ILE
27	DE	59	VAL
28	DF	86	GLY
29	DG	68	PRO
35	DP	69	GLY
39	DT	34	VAL
50	D4	11	PRO
54	D8	20	GLY
56	De	121	VAL
7	AH	35	ILE
7	AH	101	PRO
9	AJ	93	GLY
12	AM	117	VAL
20	AY	415	PRO
1	CB	228	GLY
5	CF	72	VAL
7	CH	89	PRO
20	CY	559	PRO
28	DF	14	PRO
35	DP	9	ASN
38	DS	90	GLY
43	DX	94	GLY
45	DZ	165	VAL
51	D5	54	GLY
35	DP	48	PRO
32	DK	22	PRO

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Mol	Chain	Res	Type
27	BE	147	PRO
35	BP	48	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%)	163 (80%)	40 (20%)	1	13
1	CB	203/203 (100%)	158 (78%)	45 (22%)	1	9
2	AC	161/161 (100%)	129 (80%)	32 (20%)	1	12
2	CC	161/161 (100%)	128 (80%)	33 (20%)	1	11
3	AD	180/180 (100%)	142 (79%)	38 (21%)	1	10
3	CD	180/180 (100%)	148 (82%)	32 (18%)	2	17
4	AE	116/116 (100%)	92 (79%)	24 (21%)	1	11
4	CE	116/116 (100%)	89 (77%)	27 (23%)	1	8
5	AF	90/90 (100%)	73 (81%)	17 (19%)	2	14
5	CF	90/90 (100%)	77 (86%)	13 (14%)	4	28
6	AG	126/126 (100%)	111 (88%)	15 (12%)	6	35
6	CG	126/126 (100%)	110 (87%)	16 (13%)	5	32
7	AH	119/119 (100%)	98 (82%)	21 (18%)	2	17
7	CH	119/119 (100%)	94 (79%)	25 (21%)	1	10
8	AI	98/98 (100%)	83 (85%)	15 (15%)	3	25
8	CI	98/98 (100%)	78 (80%)	20 (20%)	1	11
9	AJ	89/89 (100%)	71 (80%)	18 (20%)	1	12
9	CJ	89/89 (100%)	68 (76%)	21 (24%)	1	7
10	AK	90/90 (100%)	80 (89%)	10 (11%)	8	39
10	CK	90/90 (100%)	79 (88%)	11 (12%)	6	34
11	AL	104/104 (100%)	82 (79%)	22 (21%)	1	10
11	CL	104/104 (100%)	82 (79%)	22 (21%)	1	10

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
12	AM	100/100 (100%)	84 (84%)	16 (16%)	3	22
12	CM	100/100 (100%)	79 (79%)	21 (21%)	1	10
13	AN	49/49 (100%)	40 (82%)	9 (18%)	2	15
13	CN	49/49 (100%)	38 (78%)	11 (22%)	1	9
14	AO	79/79 (100%)	61 (77%)	18 (23%)	1	8
14	CO	79/79 (100%)	68 (86%)	11 (14%)	4	30
15	AP	72/72 (100%)	68 (94%)	4 (6%)	26	67
15	CP	72/72 (100%)	60 (83%)	12 (17%)	3	20
16	AQ	95/95 (100%)	80 (84%)	15 (16%)	3	23
16	CQ	95/95 (100%)	81 (85%)	14 (15%)	4	27
17	AR	61/61 (100%)	49 (80%)	12 (20%)	1	13
17	CR	61/61 (100%)	54 (88%)	7 (12%)	7	37
18	AS	69/69 (100%)	52 (75%)	17 (25%)	1	7
18	CS	69/69 (100%)	53 (77%)	16 (23%)	1	8
19	AT	76/76 (100%)	64 (84%)	12 (16%)	3	23
19	CT	76/76 (100%)	58 (76%)	18 (24%)	1	7
20	AY	558/579 (96%)	450 (81%)	108 (19%)	2	13
20	CY	558/579 (96%)	446 (80%)	112 (20%)	1	12
25	BC	180/180 (100%)	130 (72%)	50 (28%)	0	4
25	DC	180/180 (100%)	146 (81%)	34 (19%)	2	14
26	BD	217/217 (100%)	182 (84%)	35 (16%)	3	22
26	DD	217/217 (100%)	173 (80%)	44 (20%)	1	11
27	BE	165/165 (100%)	134 (81%)	31 (19%)	2	14
27	DE	165/165 (100%)	127 (77%)	38 (23%)	1	8
28	BF	165/165 (100%)	129 (78%)	36 (22%)	1	9
28	DF	165/165 (100%)	132 (80%)	33 (20%)	1	12
29	BG	155/155 (100%)	140 (90%)	15 (10%)	10	45
29	DG	155/155 (100%)	131 (84%)	24 (16%)	3	24
30	BH	136/136 (100%)	111 (82%)	25 (18%)	2	15
30	DH	136/136 (100%)	117 (86%)	19 (14%)	4	29
32	BK	105/105 (100%)	77 (73%)	28 (27%)	0	5

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
32	DK	105/105 (100%)	81 (77%)	24 (23%)	1	8
33	BN	118/118 (100%)	88 (75%)	30 (25%)	1	6
33	DN	118/118 (100%)	84 (71%)	34 (29%)	0	4
34	BO	100/100 (100%)	79 (79%)	21 (21%)	1	10
34	DO	100/100 (100%)	82 (82%)	18 (18%)	2	16
35	BP	112/112 (100%)	84 (75%)	28 (25%)	1	6
35	DP	112/112 (100%)	88 (79%)	24 (21%)	1	10
36	BQ	111/111 (100%)	78 (70%)	33 (30%)	0	4
36	DQ	111/111 (100%)	91 (82%)	20 (18%)	2	16
37	BR	100/100 (100%)	82 (82%)	18 (18%)	2	16
37	DR	100/100 (100%)	78 (78%)	22 (22%)	1	9
38	BS	77/77 (100%)	64 (83%)	13 (17%)	2	19
38	DS	77/77 (100%)	58 (75%)	19 (25%)	1	7
39	BT	120/120 (100%)	93 (78%)	27 (22%)	1	9
39	DT	120/120 (100%)	91 (76%)	29 (24%)	1	7
40	BU	93/93 (100%)	78 (84%)	15 (16%)	3	22
40	DU	93/93 (100%)	76 (82%)	17 (18%)	2	15
41	BV	82/82 (100%)	59 (72%)	23 (28%)	0	4
41	DV	82/82 (100%)	68 (83%)	14 (17%)	2	19
42	BW	92/92 (100%)	79 (86%)	13 (14%)	4	29
42	DW	92/92 (100%)	72 (78%)	20 (22%)	1	9
43	BX	75/75 (100%)	58 (77%)	17 (23%)	1	8
43	DX	75/75 (100%)	59 (79%)	16 (21%)	1	10
44	BY	88/88 (100%)	65 (74%)	23 (26%)	0	5
44	DY	88/88 (100%)	74 (84%)	14 (16%)	3	23
45	BZ	162/162 (100%)	127 (78%)	35 (22%)	1	9
45	DZ	162/162 (100%)	135 (83%)	27 (17%)	3	20
46	B0	66/66 (100%)	59 (89%)	7 (11%)	8	41
46	D0	66/66 (100%)	53 (80%)	13 (20%)	1	13
47	B1	78/78 (100%)	56 (72%)	22 (28%)	0	4
47	D1	78/78 (100%)	57 (73%)	21 (27%)	0	5

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
48	B2	66/66 (100%)	56 (85%)	10 (15%)	3	25
48	D2	66/66 (100%)	57 (86%)	9 (14%)	5	30
49	B3	52/52 (100%)	44 (85%)	8 (15%)	3	24
49	D3	52/52 (100%)	45 (86%)	7 (14%)	5	30
50	B4	31/31 (100%)	23 (74%)	8 (26%)	0	6
50	D4	31/31 (100%)	22 (71%)	9 (29%)	0	4
51	B5	51/51 (100%)	38 (74%)	13 (26%)	1	6
51	D5	51/51 (100%)	45 (88%)	6 (12%)	6	35
52	B6	49/49 (100%)	35 (71%)	14 (29%)	0	4
52	D6	49/49 (100%)	31 (63%)	18 (37%)	0	1
53	B7	42/42 (100%)	35 (83%)	7 (17%)	3	20
53	D7	42/42 (100%)	36 (86%)	6 (14%)	4	28
54	B8	54/54 (100%)	45 (83%)	9 (17%)	3	20
54	D8	54/54 (100%)	42 (78%)	12 (22%)	1	9
55	B9	34/34 (100%)	26 (76%)	8 (24%)	1	7
55	D9	34/34 (100%)	31 (91%)	3 (9%)	12	50
56	Be	54/54 (100%)	48 (89%)	6 (11%)	8	39
56	De	54/54 (100%)	47 (87%)	7 (13%)	5	32
All	All	11130/11172 (100%)	8951 (80%)	2179 (20%)	1	13

All (2179) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	AB	8	LYS
1	AB	9	GLU
1	AB	15	VAL
1	AB	17	PHE
1	AB	28	PHE
1	AB	33	TYR
1	AB	36	ARG
1	AB	63	MET
1	AB	64	ARG
1	AB	69	LEU
1	AB	87	ARG
1	AB	96	ARG
1	AB	101	MET

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Mol	Chain	Res	Type
1	AB	103	THR
1	AB	111	ARG
1	AB	113	HIS
1	AB	137	ARG
1	AB	140	HIS
1	AB	144	ARG
1	AB	146	GLN
1	AB	154	LEU
1	AB	155	LEU
1	AB	158	LEU
1	AB	162	ILE
1	AB	165	VAL
1	AB	166	ASP
1	AB	172	ILE
1	AB	176	GLU
1	AB	185	ILE
1	AB	191	ASP
1	AB	195	ASP
1	AB	196	LEU
1	AB	200	ILE
1	AB	205	ASP
1	AB	215	LEU
1	AB	216	SER
1	AB	221	LEU
1	AB	222	ILE
1	AB	230	VAL
1	AB	239	VAL
2	AC	6	HIS
2	AC	8	ILE
2	AC	15	THR
2	AC	20	SER
2	AC	22	TRP
2	AC	26	LYS
2	AC	29	TYR
2	AC	31	HIS
2	AC	34	LEU
2	AC	46	GLU
2	AC	55	VAL
2	AC	69	HIS
2	AC	70	VAL
2	AC	76	VAL
2	AC	79	ARG

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Mol	Chain	Res	Type
2	AC	90	GLU
2	AC	105	GLU
2	AC	107	GLN
2	AC	115	LEU
2	AC	124	ILE
2	AC	125	GLU
2	AC	128	PHE
2	AC	134	ILE
2	AC	139	GLN
2	AC	156	ARG
2	AC	167	TRP
2	AC	173	VAL
2	AC	176	HIS
2	AC	177	THR
2	AC	179	ARG
2	AC	188	LEU
2	AC	204	LEU
3	AD	8	VAL
3	AD	10	ARG
3	AD	12	CYS
3	AD	24	GLU
3	AD	28	SER
3	AD	33	MET
3	AD	35	ARG
3	AD	36	ARG
3	AD	42	GLN
3	AD	43	HIS
3	AD	45	GLN
3	AD	49	ARG
3	AD	50	ARG
3	AD	53	ASP
3	AD	54	TYR
3	AD	56	VAL
3	AD	60	GLU
3	AD	61	LYS
3	AD	65	ARG
3	AD	67	ILE
3	AD	72	GLU
3	AD	79	PHE
3	AD	86	LYS
3	AD	97	LEU
3	AD	101	LEU

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Mol	Chain	Res	Type
3	AD	107	ARG
3	AD	114	ARG
3	AD	127	THR
3	AD	129	ASN
3	AD	138	TYR
3	AD	156	GLU
3	AD	157	LEU
3	AD	173	TRP
3	AD	187	ARG
3	AD	196	LEU
3	AD	200	GLU
3	AD	206	PHE
3	AD	207	TYR
4	AE	12	LEU
4	AE	19	MET
4	AE	24	ARG
4	AE	31	LEU
4	AE	37	ARG
4	AE	41	VAL
4	AE	47	LYS
4	AE	60	TYR
4	AE	61	TYR
4	AE	64	ARG
4	AE	68	GLU
4	AE	69	VAL
4	AE	72	GLN
4	AE	78	HIS
4	AE	80	ILE
4	AE	81	GLU
4	AE	87	SER
4	AE	89	ILE
4	AE	91	LEU
4	AE	119	LEU
4	AE	120	THR
4	AE	125	SER
4	AE	137	GLU
4	AE	150	ARG
5	AF	1	MET
5	AF	10	LEU
5	AF	15	ASP
5	AF	22	GLU
5	AF	31	GLU

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Mol	Chain	Res	Type
5	AF	40	VAL
5	AF	45	LEU
5	AF	46	ARG
5	AF	50	TYR
5	AF	52	ILE
5	AF	55	ASP
5	AF	61	LEU
5	AF	74	ASP
5	AF	82	ARG
5	AF	89	MET
5	AF	91	VAL
5	AF	100	ASN
6	AG	5	ARG
6	AG	13	GLN
6	AG	20	ASP
6	AG	31	MET
6	AG	35	LYS
6	AG	36	LYS
6	AG	75	VAL
6	AG	79	ARG
6	AG	91	VAL
6	AG	97	GLN
6	AG	104	LEU
6	AG	122	HIS
6	AG	136	LYS
6	AG	149	ARG
6	AG	153	HIS
7	AH	10	LEU
7	AH	18	ARG
7	AH	26	VAL
7	AH	30	ARG
7	AH	31	PHE
7	AH	38	ILE
7	AH	39	LEU
7	AH	63	LEU
7	AH	77	GLU
7	AH	82	HIS
7	AH	83	ILE
7	AH	85	ARG
7	AH	95	VAL
7	AH	98	LYS
7	AH	102	ARG

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Mol	Chain	Res	Type
7	AH	104	ARG
7	AH	107	LEU
7	AH	111	ILE
7	AH	120	THR
7	AH	137	VAL
7	AH	138	TRP
8	AI	4	TYR
8	AI	10	ARG
8	AI	25	LYS
8	AI	35	GLU
8	AI	38	GLN
8	AI	79	LEU
8	AI	88	TYR
8	AI	89	ASN
8	AI	91	ASP
8	AI	93	ARG
8	AI	95	LYS
8	AI	104	ARG
8	AI	108	VAL
8	AI	118	LYS
8	AI	126	SER
9	AJ	6	ILE
9	AJ	8	LEU
9	AJ	13	HIS
9	AJ	14	LYS
9	AJ	16	LEU
9	AJ	22	LYS
9	AJ	33	GLN
9	AJ	40	LEU
9	AJ	47	PHE
9	AJ	55	LYS
9	AJ	57	LYS
9	AJ	58	ASP
9	AJ	70	ARG
9	AJ	74	ILE
9	AJ	79	ARG
9	AJ	81	THR
9	AJ	88	LEU
9	AJ	96	ILE
10	AK	14	VAL
10	AK	18	ARG
10	AK	38	ASN

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Mol	Chain	Res	Type
10	AK	40	ILE
10	AK	42	TRP
10	AK	44	SER
10	AK	50	TYR
10	AK	57	THR
10	AK	70	LYS
10	AK	104	GLN
11	AL	17	LYS
11	AL	18	VAL
11	AL	20	LYS
11	AL	33	ARG
11	AL	37	CYS
11	AL	42	THR
11	AL	43	VAL
11	AL	52	LEU
11	AL	53	ARG
11	AL	54	LYS
11	AL	55	VAL
11	AL	59	ARG
11	AL	66	VAL
11	AL	76	ASN
11	AL	77	LEU
11	AL	79	GLU
11	AL	80	HIS
11	AL	85	ILE
11	AL	93	LEU
11	AL	102	ARG
11	AL	104	VAL
11	AL	110	VAL
12	AM	12	ASN
12	AM	15	VAL
12	AM	16	ASP
12	AM	19	LEU
12	AM	21	TYR
12	AM	34	LEU
12	AM	48	LEU
12	AM	56	LEU
12	AM	57	ARG
12	AM	62	ASN
12	AM	81	LEU
12	AM	99	ARG
12	AM	108	ARG

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Mol	Chain	Res	Type
12	AM	120	LYS
12	AM	125	ARG
12	AM	126	LYS
13	AN	16	PHE
13	AN	22	THR
13	AN	25	VAL
13	AN	27	CYS
13	AN	29	ARG
13	AN	35	ARG
13	AN	40	CYS
13	AN	43	CYS
13	AN	61	TRP
14	AO	6	GLU
14	AO	13	GLN
14	AO	17	ARG
14	AO	25	THR
14	AO	26	GLU
14	AO	27	VAL
14	AO	35	ARG
14	AO	37	ASN
14	AO	39	LEU
14	AO	46	HIS
14	AO	47	LYS
14	AO	51	HIS
14	AO	58	MET
14	AO	64	ARG
14	AO	66	LEU
14	AO	71	GLN
14	AO	87	ILE
14	AO	88	ARG
15	AP	27	LYS
15	AP	44	THR
15	AP	72	ARG
15	AP	75	ARG
16	AQ	11	VAL
16	AQ	13	ASP
16	AQ	16	GLN
16	AQ	22	LEU
16	AQ	32	TYR
16	AQ	37	LYS
16	AQ	52	LYS
16	AQ	55	ASP

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Mol	Chain	Res	Type
16	AQ	63	ARG
16	AQ	74	LEU
16	AQ	76	LEU
16	AQ	78	GLU
16	AQ	81	ARG
16	AQ	89	LEU
16	AQ	101	ARG
17	AR	19	LYS
17	AR	23	LYS
17	AR	26	LEU
17	AR	34	TYR
17	AR	37	VAL
17	AR	38	GLU
17	AR	40	LEU
17	AR	44	LEU
17	AR	75	ILE
17	AR	81	PHE
17	AR	82	THR
17	AR	85	LEU
18	AS	5	LEU
18	AS	6	LYS
18	AS	16	LEU
18	AS	22	LEU
18	AS	23	ASN
18	AS	33	THR
18	AS	38	SER
18	AS	41	VAL
18	AS	43	GLU
18	AS	51	VAL
18	AS	57	HIS
18	AS	62	ILE
18	AS	63	THR
18	AS	66	MET
18	AS	71	LEU
18	AS	77	THR
18	AS	81	ARG
19	AT	13	LEU
19	AT	23	ARG
19	AT	26	ASN
19	AT	38	LYS
19	AT	42	GLN
19	AT	57	ARG

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Mol	Chain	Res	Type
19	AT	62	LEU
19	AT	71	THR
19	AT	73	HIS
19	AT	74	LYS
19	AT	84	LEU
19	AT	85	MET
20	AY	9	LEU
20	AY	15	ILE
20	AY	20	HIS
20	AY	26	THR
20	AY	31	ARG
20	AY	33	LEU
20	AY	34	TYR
20	AY	39	ILE
20	AY	72	CYS
20	AY	84	THR
20	AY	89	ASP
20	AY	90	PHE
20	AY	92	ILE
20	AY	98	MET
20	AY	117	GLN
20	AY	119	GLU
20	AY	123	ARG
20	AY	126	GLU
20	AY	132	ARG
20	AY	133	ILE
20	AY	140	ASP
20	AY	146	LEU
20	AY	152	THR
20	AY	153	MET
20	AY	156	ARG
20	AY	170	ARG
20	AY	174	PHE
20	AY	177	ILE
20	AY	178	ILE
20	AY	187	THR
20	AY	197	ARG
20	AY	199	ILE
20	AY	201	ILE
20	AY	203	GLU
20	AY	223	PHE
20	AY	225	GLU

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Mol	Chain	Res	Type
20	AY	238	THR
20	AY	240	GLU
20	AY	241	GLU
20	AY	247	ARG
20	AY	255	ILE
20	AY	260	LEU
20	AY	273	LEU
20	AY	277	VAL
20	AY	278	ASP
20	AY	286	ILE
20	AY	295	GLU
20	AY	300	GLU
20	AY	301	ILE
20	AY	317	MET
20	AY	328	ILE
20	AY	341	VAL
20	AY	344	THR
20	AY	348	ARG
20	AY	355	LEU
20	AY	356	LEU
20	AY	358	MET
20	AY	361	ASN
20	AY	381	LYS
20	AY	398	ILE
20	AY	406	GLU
20	AY	410	ASP
20	AY	420	ASP
20	AY	421	GLN
20	AY	425	SER
20	AY	428	LEU
20	AY	430	ARG
20	AY	431	LEU
20	AY	454	MET
20	AY	457	LEU
20	AY	461	ILE
20	AY	465	ARG
20	AY	481	VAL
20	AY	483	TYR
20	AY	487	ILE
20	AY	504	ARG
20	AY	510	VAL
20	AY	512	ILE

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Mol	Chain	Res	Type
20	AY	523	PHE
20	AY	527	ASN
20	AY	534	ILE
20	AY	542	VAL
20	AY	543	GLN
20	AY	550	MET
20	AY	556	ILE
20	AY	565	VAL
20	AY	567	LEU
20	AY	568	TYR
20	AY	569	ASP
20	AY	572	TYR
20	AY	576	ASP
20	AY	583	LYS
20	AY	588	MET
20	AY	616	TYR
20	AY	617	MET
20	AY	632	LEU
20	AY	635	GLU
20	AY	646	PHE
20	AY	647	VAL
20	AY	652	MET
20	AY	653	PHE
20	AY	657	THR
20	AY	671	MET
20	AY	676	TYR
20	AY	677	GLN
20	AY	679	VAL
20	AY	682	GLN
20	AY	685	GLU
25	BC	3	LYS
25	BC	4	HIS
25	BC	9	ARG
25	BC	12	LEU
25	BC	15	VAL
25	BC	31	LYS
25	BC	38	PHE
25	BC	39	ASP
25	BC	41	THR
25	BC	48	LEU
25	BC	50	ILE
25	BC	53	ARG

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Mol	Chain	Res	Type
25	BC	54	ARG
25	BC	57	GLN
25	BC	59	VAL
25	BC	62	THR
25	BC	63	VAL
25	BC	67	HIS
25	BC	86	GLU
25	BC	110	ASP
25	BC	114	VAL
25	BC	117	THR
25	BC	120	VAL
25	BC	128	LEU
25	BC	138	LEU
25	BC	146	VAL
25	BC	148	PHE
25	BC	150	ILE
25	BC	152	GLU
25	BC	154	ILE
25	BC	158	LYS
25	BC	161	ARG
25	BC	164	PHE
25	BC	165	ARG
25	BC	166	ASN
25	BC	167	ASP
25	BC	169	THR
25	BC	172	ILE
25	BC	173	HIS
25	BC	176	VAL
25	BC	178	LYS
25	BC	182	PRO
25	BC	193	PHE
25	BC	198	GLU
25	BC	201	LYS
25	BC	203	GLU
25	BC	206	LYS
25	BC	216	THR
25	BC	218	THR
25	BC	219	MET
26	BD	5	LYS
26	BD	10	THR
26	BD	14	ARG
26	BD	24	ILE

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Mol	Chain	Res	Type
26	BD	25	THR
26	BD	26	LYS
26	BD	35	LYS
26	BD	37	LEU
26	BD	38	LYS
26	BD	60	ARG
26	BD	63	ARG
26	BD	64	ILE
26	BD	65	ILE
26	BD	78	LYS
26	BD	82	ILE
26	BD	87	ASN
26	BD	96	HIS
26	BD	97	TYR
26	BD	105	ILE
26	BD	115	GLN
26	BD	131	LEU
26	BD	140	THR
26	BD	143	HIS
26	BD	161	THR
26	BD	165	ILE
26	BD	175	LEU
26	BD	177	LEU
26	BD	179	SER
26	BD	186	HIS
26	BD	190	TYR
26	BD	192	THR
26	BD	211	ARG
26	BD	221	VAL
26	BD	252	TRP
26	BD	260	ARG
27	BE	1	MET
27	BE	4	ILE
27	BE	9	VAL
27	BE	11	MET
27	BE	13	ARG
27	BE	26	ILE
27	BE	52	LEU
27	BE	54	GLN
27	BE	58	ARG
27	BE	61	ARG
27	BE	63	LEU

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Mol	Chain	Res	Type
27	BE	67	PHE
27	BE	77	ILE
27	BE	78	LEU
27	BE	79	ARG
27	BE	89	ASP
27	BE	93	VAL
27	BE	95	ILE
27	BE	107	THR
27	BE	113	PHE
27	BE	116	VAL
27	BE	121	ASN
27	BE	132	HIS
27	BE	137	HIS
27	BE	156	MET
27	BE	159	HIS
27	BE	160	TYR
27	BE	174	ASP
27	BE	197	ILE
27	BE	201	THR
27	BE	202	LYS
28	BF	2	LYS
28	BF	6	VAL
28	BF	7	TYR
28	BF	12	LEU
28	BF	17	ARG
28	BF	20	LEU
28	BF	23	ASP
28	BF	24	LEU
28	BF	45	ARG
28	BF	70	THR
28	BF	74	ARG
28	BF	89	VAL
28	BF	100	THR
28	BF	114	VAL
28	BF	120	GLU
28	BF	123	LEU
28	BF	125	LEU
28	BF	126	VAL
28	BF	132	VAL
28	BF	133	ASN
28	BF	139	PHE
28	BF	149	ASP

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Mol	Chain	Res	Type
28	BF	154	VAL
28	BF	155	LEU
28	BF	156	LEU
28	BF	157	VAL
28	BF	158	THR
28	BF	162	LEU
28	BF	168	ARG
28	BF	174	VAL
28	BF	175	THR
28	BF	190	GLU
28	BF	191	ARG
28	BF	192	LEU
28	BF	194	MET
28	BF	202	PHE
29	BG	9	ARG
29	BG	21	ARG
29	BG	26	GLN
29	BG	72	ARG
29	BG	79	ASN
29	BG	86	MET
29	BG	113	ARG
29	BG	125	PHE
29	BG	126	ASP
29	BG	133	LEU
29	BG	135	LEU
29	BG	137	GLU
29	BG	152	LEU
29	BG	155	MET
29	BG	161	THR
30	BH	17	VAL
30	BH	33	LEU
30	BH	34	GLU
30	BH	44	VAL
30	BH	49	VAL
30	BH	58	GLU
30	BH	70	THR
30	BH	83	TYR
30	BH	86	GLU
30	BH	88	LEU
30	BH	95	ARG
30	BH	104	GLU
30	BH	105	LEU

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Mol	Chain	Res	Type
30	BH	107	VAL
30	BH	119	GLU
30	BH	121	ILE
30	BH	123	PHE
30	BH	127	GLU
30	BH	129	THR
30	BH	132	ARG
30	BH	133	VAL
30	BH	136	ILE
30	BH	147	ASN
30	BH	163	TYR
30	BH	164	TYR
32	BK	4	VAL
32	BK	7	VAL
32	BK	9	LYS
32	BK	10	LEU
32	BK	16	LYS
32	BK	29	GLN
32	BK	33	ASN
32	BK	57	ILE
32	BK	59	ILE
32	BK	60	TYR
32	BK	65	PHE
32	BK	67	PHE
32	BK	71	THR
32	BK	78	ILE
32	BK	95	LYS
32	BK	103	GLN
32	BK	105	LEU
32	BK	106	GLU
32	BK	110	GLN
32	BK	115	LEU
32	BK	118	THR
32	BK	119	ASP
32	BK	120	LEU
32	BK	121	GLU
32	BK	126	MET
32	BK	130	SER
32	BK	132	ARG
32	BK	136	VAL
33	BN	4	TYR
33	BN	15	LEU

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Mol	Chain	Res	Type
33	BN	30	ILE
33	BN	37	LYS
33	BN	38	HIS
33	BN	42	TRP
33	BN	45	ASN
33	BN	48	MET
33	BN	51	PHE
33	BN	53	VAL
33	BN	55	VAL
33	BN	56	ASN
33	BN	59	LYS
33	BN	61	ARG
33	BN	71	ILE
33	BN	72	TYR
33	BN	78	TYR
33	BN	82	LEU
33	BN	84	LYS
33	BN	90	MET
33	BN	97	ARG
33	BN	99	LEU
33	BN	101	HIS
33	BN	103	VAL
33	BN	104	LYS
33	BN	107	LEU
33	BN	108	PRO
33	BN	115	ARG
33	BN	127	ASP
33	BN	133	GLN
34	BO	1	MET
34	BO	8	LEU
34	BO	21	CYS
34	BO	23	ARG
34	BO	29	ASN
34	BO	37	ASP
34	BO	56	ASP
34	BO	61	VAL
34	BO	70	LYS
34	BO	71	ARG
34	BO	78	ARG
34	BO	80	ASP
34	BO	82	ASN
34	BO	85	VAL

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Mol	Chain	Res	Type
34	BO	88	ASN
34	BO	91	LEU
34	BO	104	ARG
34	BO	105	GLU
34	BO	114	ILE
34	BO	117	LEU
34	BO	121	VAL
35	BP	7	ARG
35	BP	15	ARG
35	BP	16	ARG
35	BP	18	ARG
35	BP	19	VAL
35	BP	21	ARG
35	BP	39	LYS
35	BP	40	SER
35	BP	49	ARG
35	BP	50	ARG
35	BP	51	PHE
35	BP	55	ARG
35	BP	58	THR
35	BP	61	ARG
35	BP	74	GLU
35	BP	75	ILE
35	BP	85	LEU
35	BP	91	PHE
35	BP	101	VAL
35	BP	106	LEU
35	BP	112	LEU
35	BP	115	LEU
35	BP	123	LEU
35	BP	125	VAL
35	BP	130	PHE
35	BP	135	LEU
35	BP	144	GLU
35	BP	147	LEU
36	BQ	1	MET
36	BQ	3	MET
36	BQ	6	ARG
36	BQ	7	MET
36	BQ	9	TYR
36	BQ	14	ARG
36	BQ	16	ARG

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Mol	Chain	Res	Type
36	BQ	42	ILE
36	BQ	43	THR
36	BQ	45	GLN
36	BQ	46	GLN
36	BQ	48	GLU
36	BQ	57	HIS
36	BQ	58	PHE
36	BQ	59	ARG
36	BQ	66	ILE
36	BQ	68	ILE
36	BQ	74	TYR
36	BQ	91	GLU
36	BQ	93	TYR
36	BQ	96	VAL
36	BQ	103	MET
36	BQ	104	PHE
36	BQ	110	THR
36	BQ	112	GLU
36	BQ	116	GLU
36	BQ	127	ILE
36	BQ	128	LYS
36	BQ	129	THR
36	BQ	131	ILE
36	BQ	132	VAL
36	BQ	135	ASP
36	BQ	137	TYR
37	BR	4	LEU
37	BR	21	TYR
37	BR	23	ASN
37	BR	27	SER
37	BR	29	LEU
37	BR	44	LEU
37	BR	45	ARG
37	BR	47	PHE
37	BR	71	GLN
37	BR	72	ASP
37	BR	75	LEU
37	BR	76	VAL
37	BR	94	TYR
37	BR	95	THR
37	BR	99	LYS
37	BR	100	LEU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
37	BR	104	ARG
37	BR	113	LEU
38	BS	12	PHE
38	BS	13	ARG
38	BS	15	ARG
38	BS	18	ILE
38	BS	24	LEU
38	BS	47	THR
38	BS	61	ASN
38	BS	62	LYS
38	BS	64	GLU
38	BS	73	LEU
38	BS	82	ILE
38	BS	95	HIS
38	BS	97	ARG
39	BT	1	MET
39	BT	11	GLU
39	BT	16	ARG
39	BT	18	ASP
39	BT	21	GLU
39	BT	22	PHE
39	BT	27	THR
39	BT	31	SER
39	BT	32	TYR
39	BT	45	PHE
39	BT	48	ILE
39	BT	59	THR
39	BT	62	THR
39	BT	64	ARG
39	BT	70	VAL
39	BT	74	ARG
39	BT	82	LEU
39	BT	90	GLN
39	BT	96	ARG
39	BT	99	LEU
39	BT	104	ASN
39	BT	107	ASP
39	BT	111	ARG
39	BT	115	ARG
39	BT	118	ARG
39	BT	124	ASP
39	BT	134	GLU

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Mol	Chain	Res	Type
40	BU	8	VAL
40	BU	10	ARG
40	BU	14	HIS
40	BU	20	LEU
40	BU	28	ARG
40	BU	51	LYS
40	BU	62	ILE
40	BU	72	HIS
40	BU	74	LEU
40	BU	79	PHE
40	BU	98	LEU
40	BU	102	GLU
40	BU	104	GLN
40	BU	108	GLU
40	BU	117	GLN
41	BV	7	THR
41	BV	15	GLU
41	BV	18	LEU
41	BV	19	LYS
41	BV	21	ARG
41	BV	35	LEU
41	BV	38	LEU
41	BV	40	LEU
41	BV	43	GLU
41	BV	45	THR
41	BV	47	VAL
41	BV	52	VAL
41	BV	57	VAL
41	BV	60	GLU
41	BV	68	LYS
41	BV	72	VAL
41	BV	75	PHE
41	BV	80	GLN
41	BV	81	TYR
41	BV	94	LEU
41	BV	95	LEU
41	BV	98	GLU
41	BV	99	ILE
42	BW	1	MET
42	BW	11	ARG
42	BW	17	VAL
42	BW	22	ASP

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Mol	Chain	Res	Type
42	BW	27	LYS
42	BW	46	PHE
42	BW	61	ASN
42	BW	88	ARG
42	BW	95	ILE
42	BW	96	ILE
42	BW	97	LYS
42	BW	107	LEU
42	BW	113	LYS
43	BX	3	THR
43	BX	12	VAL
43	BX	13	LEU
43	BX	23	GLU
43	BX	27	THR
43	BX	30	VAL
43	BX	35	THR
43	BX	38	GLU
43	BX	44	GLU
43	BX	54	VAL
43	BX	55	ASN
43	BX	57	LEU
43	BX	58	HIS
43	BX	63	LYS
43	BX	68	ARG
43	BX	72	LYS
43	BX	76	ARG
44	BY	2	ARG
44	BY	4	LYS
44	BY	6	HIS
44	BY	7	VAL
44	BY	9	LYS
44	BY	11	ASP
44	BY	13	VAL
44	BY	24	VAL
44	BY	33	LYS
44	BY	35	TYR
44	BY	42	VAL
44	BY	43	ASN
44	BY	44	ILE
44	BY	47	LYS
44	BY	50	ARG
44	BY	51	VAL

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Mol	Chain	Res	Type
44	BY	60	PHE
44	BY	64	GLU
44	BY	76	CYS
44	BY	83	THR
44	BY	90	LEU
44	BY	94	LYS
44	BY	97	ARG
45	BZ	3	TYR
45	BZ	9	TYR
45	BZ	13	GLU
45	BZ	14	LYS
45	BZ	28	MET
45	BZ	29	TYR
45	BZ	32	HIS
45	BZ	36	LYS
45	BZ	42	VAL
45	BZ	44	PHE
45	BZ	50	GLN
45	BZ	60	GLU
45	BZ	63	ASP
45	BZ	65	GLN
45	BZ	77	ASP
45	BZ	82	ARG
45	BZ	87	ASP
45	BZ	89	PHE
45	BZ	98	MET
45	BZ	121	HIS
45	BZ	124	ILE
45	BZ	132	ASN
45	BZ	133	ILE
45	BZ	136	PHE
45	BZ	139	VAL
45	BZ	140	ASP
45	BZ	141	VAL
45	BZ	144	LEU
45	BZ	154	ASP
45	BZ	156	LYS
45	BZ	163	LEU
45	BZ	165	VAL
45	BZ	179	ASP
45	BZ	181	GLU
45	BZ	186	GLU

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Mol	Chain	Res	Type
46	B0	11	ARG
46	B0	20	ARG
46	B0	23	VAL
46	B0	27	GLU
46	B0	36	ILE
46	B0	43	THR
46	B0	80	HIS
47	B1	5	CYS
47	B1	11	ARG
47	B1	17	SER
47	B1	18	ILE
47	B1	20	ARG
47	B1	23	LYS
47	B1	25	LYS
47	B1	35	THR
47	B1	37	ILE
47	B1	39	LYS
47	B1	42	GLN
47	B1	43	TYR
47	B1	46	LEU
47	B1	47	GLN
47	B1	57	GLU
47	B1	60	PHE
47	B1	67	ILE
47	B1	73	LEU
47	B1	80	LEU
47	B1	82	LEU
47	B1	85	LEU
47	B1	86	SER
48	B2	3	LEU
48	B2	11	GLU
48	B2	21	LEU
48	B2	22	GLU
48	B2	24	LEU
48	B2	27	GLU
48	B2	44	LEU
48	B2	50	ILE
48	B2	55	ARG
48	B2	65	ASN
49	B3	5	LYS
49	B3	31	LEU
49	B3	32	GLN

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Mol	Chain	Res	Type
49	B3	36	VAL
49	B3	40	THR
49	B3	52	HIS
49	B3	56	VAL
49	B3	59	VAL
50	B4	1	MET
50	B4	6	HIS
50	B4	9	LEU
50	B4	20	ASN
50	B4	27	THR
50	B4	28	LYS
50	B4	30	GLU
50	B4	33	VAL
51	B5	3	LYS
51	B5	13	LYS
51	B5	20	ARG
51	B5	22	HIS
51	B5	26	THR
51	B5	31	VAL
51	B5	35	GLU
51	B5	40	LYS
51	B5	43	HIS
51	B5	49	CYS
51	B5	51	TYR
51	B5	55	ARG
51	B5	58	LEU
52	B6	6	ARG
52	B6	9	LEU
52	B6	11	LEU
52	B6	18	ARG
52	B6	23	THR
52	B6	27	LYS
52	B6	28	ARG
52	B6	33	LYS
52	B6	36	LEU
52	B6	39	TYR
52	B6	46	HIS
52	B6	48	VAL
52	B6	52	VAL
52	B6	54	ILE
53	B7	5	TRP
53	B7	6	GLN

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Mol	Chain	Res	Type
53	B7	22	MET
53	B7	24	THR
53	B7	40	TRP
53	B7	47	ARG
53	B7	48	LYS
54	B8	14	VAL
54	B8	22	VAL
54	B8	34	TRP
54	B8	48	PHE
54	B8	52	LYS
54	B8	57	ARG
54	B8	59	LYS
54	B8	60	LEU
54	B8	64	TYR
55	B9	4	ARG
55	B9	7	VAL
55	B9	13	LYS
55	B9	17	ILE
55	B9	22	ARG
55	B9	26	ILE
55	B9	28	GLU
55	B9	36	GLN
56	Be	60	PHE
56	Be	64	LEU
56	Be	70	LYS
56	Be	81	ILE
56	Be	84	LEU
56	Be	94	GLU
1	CB	11	LEU
1	CB	15	VAL
1	CB	16	HIS
1	CB	17	PHE
1	CB	28	PHE
1	CB	32	ILE
1	CB	33	TYR
1	CB	36	ARG
1	CB	67	THR
1	CB	69	LEU
1	CB	86	GLU
1	CB	94	ASN
1	CB	96	ARG
1	CB	102	LEU

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Mol	Chain	Res	Type
1	CB	105	PHE
1	CB	121	LEU
1	CB	124	SER
1	CB	129	GLU
1	CB	133	LYS
1	CB	141	GLU
1	CB	143	GLU
1	CB	149	LEU
1	CB	150	SER
1	CB	152	PHE
1	CB	154	LEU
1	CB	155	LEU
1	CB	156	LYS
1	CB	157	ARG
1	CB	158	LEU
1	CB	162	ILE
1	CB	168	THR
1	CB	170	GLU
1	CB	172	ILE
1	CB	175	ARG
1	CB	184	VAL
1	CB	196	LEU
1	CB	200	ILE
1	CB	205	ASP
1	CB	209	ARG
1	CB	212	GLN
1	CB	215	LEU
1	CB	222	ILE
1	CB	230	VAL
1	CB	238	LEU
1	CB	241	GLU
2	CC	3	ASN
2	CC	19	GLU
2	CC	26	LYS
2	CC	29	TYR
2	CC	31	HIS
2	CC	32	LEU
2	CC	36	ASP
2	CC	48	TYR
2	CC	56	ASP
2	CC	67	THR
2	CC	87	LEU

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Mol	Chain	Res	Type
2	CC	90	GLU
2	CC	94	LEU
2	CC	101	LEU
2	CC	103	VAL
2	CC	104	GLN
2	CC	115	LEU
2	CC	119	ARG
2	CC	124	ILE
2	CC	128	PHE
2	CC	136	GLN
2	CC	140	ARG
2	CC	144	SER
2	CC	152	ILE
2	CC	162	GLN
2	CC	166	GLU
2	CC	167	TRP
2	CC	173	VAL
2	CC	175	LEU
2	CC	176	HIS
2	CC	188	LEU
2	CC	193	TYR
2	CC	195	VAL
3	CD	8	VAL
3	CD	10	ARG
3	CD	12	CYS
3	CD	13	ARG
3	CD	19	LEU
3	CD	27	TYR
3	CD	31	CYS
3	CD	33	MET
3	CD	35	ARG
3	CD	43	HIS
3	CD	54	TYR
3	CD	61	LYS
3	CD	67	ILE
3	CD	72	GLU
3	CD	74	GLN
3	CD	76	ARG
3	CD	78	LEU
3	CD	86	LYS
3	CD	105	VAL
3	CD	106	TYR

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Mol	Chain	Res	Type
3	CD	107	ARG
3	CD	127	THR
3	CD	134	ASP
3	CD	140	VAL
3	CD	150	GLU
3	CD	163	GLU
3	CD	165	MET
3	CD	178	VAL
3	CD	190	ASP
3	CD	196	LEU
3	CD	203	VAL
3	CD	207	TYR
4	CE	10	MET
4	CE	12	LEU
4	CE	13	ILE
4	CE	20	GLN
4	CE	36	ASP
4	CE	37	ARG
4	CE	41	VAL
4	CE	47	LYS
4	CE	60	TYR
4	CE	61	TYR
4	CE	64	ARG
4	CE	67	VAL
4	CE	68	GLU
4	CE	76	ILE
4	CE	78	HIS
4	CE	80	ILE
4	CE	84	PHE
4	CE	91	LEU
4	CE	112	LEU
4	CE	119	LEU
4	CE	120	THR
4	CE	125	SER
4	CE	130	ASN
4	CE	135	THR
4	CE	137	GLU
4	CE	150	ARG
4	CE	151	LEU
5	CF	4	TYR
5	CF	11	ASN
5	CF	15	ASP

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Mol	Chain	Res	Type
5	CF	16	GLN
5	CF	38	GLU
5	CF	40	VAL
5	CF	45	LEU
5	CF	46	ARG
5	CF	52	ILE
5	CF	61	LEU
5	CF	70	ASP
5	CF	82	ARG
5	CF	91	VAL
6	CG	4	ARG
6	CG	13	GLN
6	CG	31	MET
6	CG	36	LYS
6	CG	50	ILE
6	CG	52	GLU
6	CG	56	GLN
6	CG	69	VAL
6	CG	79	ARG
6	CG	91	VAL
6	CG	119	ARG
6	CG	122	HIS
6	CG	126	ASP
6	CG	139	GLU
6	CG	140	ASP
6	CG	149	ARG
7	CH	11	THR
7	CH	18	ARG
7	CH	26	VAL
7	CH	30	ARG
7	CH	31	PHE
7	CH	37	ARG
7	CH	41	ARG
7	CH	44	PHE
7	CH	51	VAL
7	CH	52	ASP
7	CH	63	LEU
7	CH	75	ARG
7	CH	82	HIS
7	CH	83	ILE
7	CH	85	ARG
7	CH	98	LYS

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Mol	Chain	Res	Type
7	CH	102	ARG
7	CH	104	ARG
7	CH	107	LEU
7	CH	111	ILE
7	CH	112	LEU
7	CH	114	THR
7	CH	116	LYS
7	CH	129	VAL
7	CH	138	TRP
8	CI	3	GLN
8	CI	4	TYR
8	CI	10	ARG
8	CI	25	LYS
8	CI	35	GLU
8	CI	36	TYR
8	CI	38	GLN
8	CI	41	VAL
8	CI	42	ARG
8	CI	56	LEU
8	CI	66	ARG
8	CI	79	LEU
8	CI	88	TYR
8	CI	93	ARG
8	CI	95	LYS
8	CI	97	LYS
8	CI	107	ARG
8	CI	114	TYR
8	CI	118	LYS
8	CI	121	ARG
9	CJ	6	ILE
9	CJ	8	LEU
9	CJ	11	PHE
9	CJ	17	ASP
9	CJ	21	GLN
9	CJ	22	LYS
9	CJ	25	GLU
9	CJ	33	GLN
9	CJ	35	SER
9	CJ	40	LEU
9	CJ	49	VAL
9	CJ	50	ILE
9	CJ	57	LYS

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Mol	Chain	Res	Type
9	CJ	70	ARG
9	CJ	73	ASP
9	CJ	75	ILE
9	CJ	78	ASN
9	CJ	79	ARG
9	CJ	81	THR
9	CJ	96	ILE
9	CJ	99	LYS
10	CK	29	ILE
10	CK	40	ILE
10	CK	41	THR
10	CK	50	TYR
10	CK	57	THR
10	CK	71	LYS
10	CK	81	ASP
10	CK	84	VAL
10	CK	87	THR
10	CK	112	THR
10	CK	127	LYS
11	CL	15	ARG
11	CL	16	GLU
11	CL	18	VAL
11	CL	20	LYS
11	CL	37	CYS
11	CL	42	THR
11	CL	52	LEU
11	CL	53	ARG
11	CL	54	LYS
11	CL	55	VAL
11	CL	59	ARG
11	CL	60	LEU
11	CL	61	THR
11	CL	75	HIS
11	CL	80	HIS
11	CL	97	ARG
11	CL	101	VAL
11	CL	102	ARG
11	CL	105	TYR
11	CL	106	ASP
11	CL	112	ASP
11	CL	117	ARG
12	CM	3	ARG

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Mol	Chain	Res	Type
12	CM	9	ILE
12	CM	12	ASN
12	CM	19	LEU
12	CM	21	TYR
12	CM	37	THR
12	CM	43	THR
12	CM	46	LYS
12	CM	47	ASP
12	CM	48	LEU
12	CM	49	THR
12	CM	50	GLU
12	CM	56	LEU
12	CM	69	GLU
12	CM	70	LEU
12	CM	81	LEU
12	CM	84	ILE
12	CM	103	THR
12	CM	105	THR
12	CM	108	ARG
12	CM	111	LYS
13	CN	21	TYR
13	CN	22	THR
13	CN	26	ARG
13	CN	32	SER
13	CN	35	ARG
13	CN	40	CYS
13	CN	47	LEU
13	CN	49	HIS
13	CN	53	LEU
13	CN	56	VAL
13	CN	57	ARG
14	CO	17	ARG
14	CO	25	THR
14	CO	26	GLU
14	CO	27	VAL
14	CO	31	LEU
14	CO	38	ARG
14	CO	47	LYS
14	CO	63	ARG
14	CO	72	ARG
14	CO	78	TYR
14	CO	87	ILE

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Mol	Chain	Res	Type
15	CP	2	VAL
15	CP	16	HIS
15	CP	21	VAL
15	CP	29	ASP
15	CP	32	TYR
15	CP	38	TYR
15	CP	42	ARG
15	CP	45	THR
15	CP	49	LEU
15	CP	61	SER
15	CP	67	THR
15	CP	73	LEU
16	CQ	12	SER
16	CQ	31	LEU
16	CQ	37	LYS
16	CQ	40	LYS
16	CQ	46	ASP
16	CQ	52	LYS
16	CQ	63	ARG
16	CQ	74	LEU
16	CQ	78	GLU
16	CQ	81	ARG
16	CQ	84	LEU
16	CQ	86	GLU
16	CQ	89	LEU
16	CQ	98	LEU
17	CR	35	ARG
17	CR	38	GLU
17	CR	40	LEU
17	CR	62	GLU
17	CR	81	PHE
17	CR	83	GLU
17	CR	86	VAL
18	CS	5	LEU
18	CS	6	LYS
18	CS	14	HIS
18	CS	22	LEU
18	CS	31	ILE
18	CS	33	THR
18	CS	37	ARG
18	CS	41	VAL
18	CS	47	HIS

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Mol	Chain	Res	Type
18	CS	51	VAL
18	CS	61	TYR
18	CS	62	ILE
18	CS	63	THR
18	CS	66	MET
18	CS	73	GLU
18	CS	77	THR
19	CT	10	LEU
19	CT	13	LEU
19	CT	33	ILE
19	CT	36	LEU
19	CT	41	ILE
19	CT	50	GLU
19	CT	53	LEU
19	CT	56	MET
19	CT	57	ARG
19	CT	63	ILE
19	CT	64	ASP
19	CT	71	THR
19	CT	73	HIS
19	CT	74	LYS
19	CT	75	ASN
19	CT	84	LEU
19	CT	86	ARG
19	CT	93	GLU
20	CY	6	GLU
20	CY	7	TYR
20	CY	9	LEU
20	CY	20	HIS
20	CY	21	ILE
20	CY	26	THR
20	CY	28	THR
20	CY	33	LEU
20	CY	34	TYR
20	CY	36	THR
20	CY	39	ILE
20	CY	69	VAL
20	CY	73	PHE
20	CY	77	HIS
20	CY	81	ILE
20	CY	83	ASP
20	CY	92	ILE

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Mol	Chain	Res	Type
20	CY	96	ARG
20	CY	98	MET
20	CY	99	ARG
20	CY	105	ILE
20	CY	120	THR
20	CY	121	VAL
20	CY	123	ARG
20	CY	126	GLU
20	CY	132	ARG
20	CY	133	ILE
20	CY	145	ASP
20	CY	170	ARG
20	CY	172	ASP
20	CY	173	THR
20	CY	174	PHE
20	CY	178	ILE
20	CY	194	THR
20	CY	195	ASP
20	CY	199	ILE
20	CY	207	ASP
20	CY	217	VAL
20	CY	223	PHE
20	CY	225	GLU
20	CY	229	LEU
20	CY	232	LEU
20	CY	239	GLU
20	CY	241	GLU
20	CY	253	LEU
20	CY	254	LYS
20	CY	260	LEU
20	CY	266	ASN
20	CY	269	VAL
20	CY	292	THR
20	CY	299	VAL
20	CY	300	GLU
20	CY	304	ASP
20	CY	326	THR
20	CY	327	PHE
20	CY	330	VAL
20	CY	356	LEU
20	CY	358	MET
20	CY	362	HIS

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Mol	Chain	Res	Type
20	CY	370	LYS
20	CY	380	LEU
20	CY	381	LYS
20	CY	383	THR
20	CY	389	LEU
20	CY	406	GLU
20	CY	410	ASP
20	CY	413	ILE
20	CY	414	GLU
20	CY	417	THR
20	CY	428	LEU
20	CY	437	THR
20	CY	442	THR
20	CY	443	HIS
20	CY	449	THR
20	CY	457	LEU
20	CY	465	ARG
20	CY	472	VAL
20	CY	475	ASN
20	CY	487	ILE
20	CY	488	THR
20	CY	491	VAL
20	CY	498	ILE
20	CY	504	ARG
20	CY	510	VAL
20	CY	512	ILE
20	CY	525	PHE
20	CY	537	GLU
20	CY	542	VAL
20	CY	550	MET
20	CY	556	ILE
20	CY	565	VAL
20	CY	568	TYR
20	CY	580	MET
20	CY	588	MET
20	CY	598	ASP
20	CY	605	ILE
20	CY	615	GLU
20	CY	617	MET
20	CY	624	LEU
20	CY	625	ASN
20	CY	634	MET

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Mol	Chain	Res	Type
20	CY	635	GLU
20	CY	651	GLU
20	CY	655	TYR
20	CY	659	LEU
20	CY	660	ARG
20	CY	668	SER
20	CY	671	MET
20	CY	676	TYR
20	CY	677	GLN
20	CY	684	GLN
20	CY	685	GLU
25	DC	4	HIS
25	DC	13	GLU
25	DC	15	VAL
25	DC	19	LYS
25	DC	31	LYS
25	DC	37	LYS
25	DC	48	LEU
25	DC	51	ASP
25	DC	53	ARG
25	DC	54	ARG
25	DC	62	THR
25	DC	106	ASP
25	DC	114	VAL
25	DC	120	VAL
25	DC	130	ARG
25	DC	131	ILE
25	DC	135	ARG
25	DC	137	LEU
25	DC	145	THR
25	DC	148	PHE
25	DC	152	GLU
25	DC	153	ILE
25	DC	158	LYS
25	DC	166	ASN
25	DC	167	ASP
25	DC	169	THR
25	DC	172	ILE
25	DC	173	HIS
25	DC	198	GLU
25	DC	213	VAL
25	DC	215	VAL

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Mol	Chain	Res	Type
25	DC	216	THR
25	DC	219	MET
25	DC	228	HIS
26	DD	5	LYS
26	DD	15	PHE
26	DD	24	ILE
26	DD	25	THR
26	DD	26	LYS
26	DD	28	GLU
26	DD	31	LYS
26	DD	33	LEU
26	DD	35	LYS
26	DD	36	PRO
26	DD	37	LEU
26	DD	38	LYS
26	DD	43	ARG
26	DD	45	ASN
26	DD	49	ILE
26	DD	64	ILE
26	DD	65	ILE
26	DD	78	LYS
26	DD	82	ILE
26	DD	94	LEU
26	DD	105	ILE
26	DD	131	LEU
26	DD	140	THR
26	DD	146	GLU
26	DD	147	LEU
26	DD	150	LYS
26	DD	161	THR
26	DD	172	TYR
26	DD	175	LEU
26	DD	185	VAL
26	DD	186	HIS
26	DD	190	TYR
26	DD	206	LEU
26	DD	226	MET
26	DD	227	ASN
26	DD	230	ASP
26	DD	231	HIS
26	DD	242	ARG
26	DD	244	ARG

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Mol	Chain	Res	Type
26	DD	248	SER
26	DD	252	TRP
26	DD	257	LEU
26	DD	259	THR
26	DD	260	ARG
27	DE	4	ILE
27	DE	13	ARG
27	DE	19	ARG
27	DE	21	VAL
27	DE	23	VAL
27	DE	24	THR
27	DE	35	GLN
27	DE	36	ARG
27	DE	52	LEU
27	DE	58	ARG
27	DE	63	LEU
27	DE	66	HIS
27	DE	72	VAL
27	DE	77	ILE
27	DE	78	LEU
27	DE	79	ARG
27	DE	87	GLU
27	DE	89	ASP
27	DE	95	ILE
27	DE	96	PHE
27	DE	103	ASP
27	DE	104	VAL
27	DE	107	THR
27	DE	111	ARG
27	DE	113	PHE
27	DE	127	ASP
27	DE	132	HIS
27	DE	134	ILE
27	DE	136	ARG
27	DE	146	THR
27	DE	156	MET
27	DE	160	TYR
27	DE	169	ASN
27	DE	172	VAL
27	DE	178	GLU
27	DE	181	LEU
27	DE	196	VAL

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
27	DE	202	LYS
28	DF	2	LYS
28	DF	7	TYR
28	DF	9	ILE
28	DF	12	LEU
28	DF	17	ARG
28	DF	28	ILE
28	DF	29	ASN
28	DF	31	HIS
28	DF	33	LEU
28	DF	38	ARG
28	DF	45	ARG
28	DF	53	THR
28	DF	65	TRP
28	DF	74	ARG
28	DF	88	VAL
28	DF	89	VAL
28	DF	96	ASP
28	DF	104	LYS
28	DF	114	VAL
28	DF	123	LEU
28	DF	126	VAL
28	DF	132	VAL
28	DF	136	THR
28	DF	149	ASP
28	DF	156	LEU
28	DF	174	VAL
28	DF	186	ILE
28	DF	191	ARG
28	DF	192	LEU
28	DF	194	MET
28	DF	199	TRP
28	DF	205	ARG
28	DF	206	ILE
29	DG	21	ARG
29	DG	26	GLN
29	DG	30	GLU
29	DG	45	GLU
29	DG	48	GLU
29	DG	58	GLN
29	DG	84	LYS
29	DG	86	MET

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Mol	Chain	Res	Type
29	DG	88	ILE
29	DG	113	ARG
29	DG	115	ARG
29	DG	126	ASP
29	DG	133	LEU
29	DG	137	GLU
29	DG	138	GLN
29	DG	139	LEU
29	DG	145	THR
29	DG	146	TYR
29	DG	148	MET
29	DG	150	ASP
29	DG	157	ILE
29	DG	161	THR
29	DG	165	THR
29	DG	170	ARG
30	DH	23	ARG
30	DH	41	MET
30	DH	43	VAL
30	DH	44	VAL
30	DH	49	VAL
30	DH	52	VAL
30	DH	58	GLU
30	DH	65	HIS
30	DH	79	VAL
30	DH	83	TYR
30	DH	104	GLU
30	DH	105	LEU
30	DH	106	THR
30	DH	114	VAL
30	DH	121	ILE
30	DH	127	GLU
30	DH	132	ARG
30	DH	158	HIS
30	DH	171	LEU
32	DK	5	VAL
32	DK	9	LYS
32	DK	10	LEU
32	DK	11	GLN
32	DK	27	LEU
32	DK	29	GLN
32	DK	34	ILE

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Mol	Chain	Res	Type
32	DK	41	PHE
32	DK	48	MET
32	DK	65	PHE
32	DK	78	ILE
32	DK	84	LEU
32	DK	89	HIS
32	DK	95	LYS
32	DK	98	ARG
32	DK	101	TRP
32	DK	105	LEU
32	DK	109	LYS
32	DK	119	ASP
32	DK	125	ARG
32	DK	126	MET
32	DK	127	ILE
32	DK	132	ARG
32	DK	136	VAL
33	DN	13	TRP
33	DN	15	LEU
33	DN	26	LEU
33	DN	39	ARG
33	DN	42	TRP
33	DN	45	ASN
33	DN	48	MET
33	DN	51	PHE
33	DN	55	VAL
33	DN	56	ASN
33	DN	59	LYS
33	DN	62	VAL
33	DN	67	LEU
33	DN	69	GLN
33	DN	71	ILE
33	DN	72	TYR
33	DN	73	THR
33	DN	78	TYR
33	DN	82	LEU
33	DN	84	LYS
33	DN	85	ILE
33	DN	87	LEU
33	DN	91	LEU
33	DN	97	ARG
33	DN	99	LEU

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Mol	Chain	Res	Type
33	DN	101	HIS
33	DN	104	LYS
33	DN	106	MET
33	DN	107	LEU
33	DN	112	LEU
33	DN	114	ARG
33	DN	117	PHE
33	DN	130	HIS
33	DN	139	GLU
34	DO	1	MET
34	DO	2	ILE
34	DO	3	GLN
34	DO	8	LEU
34	DO	17	ARG
34	DO	23	ARG
34	DO	32	TYR
34	DO	45	GLU
34	DO	68	GLU
34	DO	70	LYS
34	DO	71	ARG
34	DO	73	ASP
34	DO	75	SER
34	DO	86	ILE
34	DO	91	LEU
34	DO	102	VAL
34	DO	107	ARG
34	DO	114	ILE
35	DP	7	ARG
35	DP	16	ARG
35	DP	18	ARG
35	DP	19	VAL
35	DP	39	LYS
35	DP	46	LYS
35	DP	50	ARG
35	DP	59	LEU
35	DP	61	ARG
35	DP	68	GLN
35	DP	85	LEU
35	DP	96	THR
35	DP	99	LEU
35	DP	100	LEU
35	DP	107	LYS

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Mol	Chain	Res	Type
35	DP	108	LYS
35	DP	110	TYR
35	DP	115	LEU
35	DP	117	GLU
35	DP	123	LEU
35	DP	128	HIS
35	DP	135	LEU
35	DP	144	GLU
35	DP	146	VAL
36	DQ	7	MET
36	DQ	25	ASP
36	DQ	26	TYR
36	DQ	29	PHE
36	DQ	38	GLU
36	DQ	43	THR
36	DQ	51	ARG
36	DQ	58	PHE
36	DQ	60	ARG
36	DQ	68	ILE
36	DQ	93	TYR
36	DQ	97	VAL
36	DQ	104	PHE
36	DQ	105	GLU
36	DQ	106	VAL
36	DQ	112	GLU
36	DQ	128	LYS
36	DQ	129	THR
36	DQ	132	VAL
36	DQ	137	TYR
37	DR	3	HIS
37	DR	4	LEU
37	DR	17	ARG
37	DR	21	TYR
37	DR	37	THR
37	DR	44	LEU
37	DR	45	ARG
37	DR	47	PHE
37	DR	61	HIS
37	DR	72	ASP
37	DR	74	LYS
37	DR	75	LEU
37	DR	76	VAL

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
37	DR	80	PHE
37	DR	81	ASP
37	DR	87	TYR
37	DR	88	ARG
37	DR	89	ASP
37	DR	95	THR
37	DR	99	LYS
37	DR	102	GLU
37	DR	107	ASP
38	DS	12	PHE
38	DS	13	ARG
38	DS	15	ARG
38	DS	18	ILE
38	DS	23	ARG
38	DS	24	LEU
38	DS	29	PHE
38	DS	31	SER
38	DS	36	TYR
38	DS	41	ASP
38	DS	42	ASP
38	DS	47	THR
38	DS	69	VAL
38	DS	87	PHE
38	DS	92	TYR
38	DS	97	ARG
38	DS	98	VAL
38	DS	106	ARG
38	DS	107	GLU
39	DT	8	LYS
39	DT	13	ARG
39	DT	16	ARG
39	DT	22	PHE
39	DT	27	THR
39	DT	30	VAL
39	DT	31	SER
39	DT	43	GLN
39	DT	46	GLU
39	DT	55	ASN
39	DT	62	THR
39	DT	64	ARG
39	DT	73	GLU
39	DT	74	ARG

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Mol	Chain	Res	Type
39	DT	75	ILE
39	DT	82	LEU
39	DT	87	ASP
39	DT	90	GLN
39	DT	96	ARG
39	DT	99	LEU
39	DT	101	PHE
39	DT	103	ARG
39	DT	104	ASN
39	DT	107	ASP
39	DT	108	ARG
39	DT	111	ARG
39	DT	118	ARG
39	DT	122	ASP
39	DT	125	ARG
40	DU	14	HIS
40	DU	27	LEU
40	DU	28	ARG
40	DU	30	LYS
40	DU	36	ARG
40	DU	51	LYS
40	DU	57	PHE
40	DU	72	HIS
40	DU	74	LEU
40	DU	83	LEU
40	DU	89	GLU
40	DU	97	ASP
40	DU	102	GLU
40	DU	104	GLN
40	DU	105	VAL
40	DU	108	GLU
40	DU	112	ARG
41	DV	13	ARG
41	DV	19	LYS
41	DV	21	ARG
41	DV	22	VAL
41	DV	34	GLU
41	DV	37	VAL
41	DV	38	LEU
41	DV	40	LEU
41	DV	71	LEU
41	DV	75	PHE

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Mol	Chain	Res	Type
41	DV	80	GLN
41	DV	85	LYS
41	DV	95	LEU
41	DV	99	ILE
42	DW	2	GLU
42	DW	11	ARG
42	DW	16	LYS
42	DW	19	LEU
42	DW	23	LEU
42	DW	25	ARG
42	DW	27	LYS
42	DW	31	GLU
42	DW	45	TYR
42	DW	51	LEU
42	DW	64	MET
42	DW	77	ASP
42	DW	82	LEU
42	DW	88	ARG
42	DW	95	ILE
42	DW	96	ILE
42	DW	99	ARG
42	DW	105	VAL
42	DW	107	LEU
42	DW	110	LYS
43	DX	8	ILE
43	DX	12	VAL
43	DX	23	GLU
43	DX	27	THR
43	DX	30	VAL
43	DX	38	GLU
43	DX	45	THR
43	DX	53	LYS
43	DX	54	VAL
43	DX	57	LEU
43	DX	58	HIS
43	DX	63	LYS
43	DX	66	LEU
43	DX	72	LYS
43	DX	75	ASP
43	DX	80	ILE
44	DY	4	LYS
44	DY	7	VAL

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Mol	Chain	Res	Type
44	DY	9	LYS
44	DY	27	VAL
44	DY	28	LYS
44	DY	31	LEU
44	DY	33	LYS
44	DY	35	TYR
44	DY	44	ILE
44	DY	50	ARG
44	DY	64	GLU
44	DY	83	THR
44	DY	97	ARG
44	DY	106	LEU
45	DZ	3	TYR
45	DZ	9	TYR
45	DZ	28	MET
45	DZ	29	TYR
45	DZ	36	LYS
45	DZ	39	VAL
45	DZ	57	ILE
45	DZ	61	LEU
45	DZ	63	ASP
45	DZ	70	LEU
45	DZ	71	VAL
45	DZ	74	VAL
45	DZ	81	ARG
45	DZ	90	VAL
45	DZ	98	MET
45	DZ	104	PHE
45	DZ	117	LEU
45	DZ	124	ILE
45	DZ	144	LEU
45	DZ	145	GLU
45	DZ	151	HIS
45	DZ	155	LEU
45	DZ	162	GLU
45	DZ	163	LEU
45	DZ	181	GLU
45	DZ	183	LEU
45	DZ	185	GLU
46	D0	11	ARG
46	D0	20	ARG
46	D0	27	GLU

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Mol	Chain	Res	Type
46	D0	32	ARG
46	D0	36	ILE
46	D0	41	ARG
46	D0	44	ARG
46	D0	60	PHE
46	D0	63	VAL
46	D0	64	ASP
46	D0	67	VAL
46	D0	70	GLN
46	D0	82	ARG
47	D1	5	CYS
47	D1	18	ILE
47	D1	20	ARG
47	D1	32	LYS
47	D1	33	LYS
47	D1	34	THR
47	D1	39	LYS
47	D1	40	ARG
47	D1	41	ARG
47	D1	42	GLN
47	D1	46	LEU
47	D1	50	ARG
47	D1	56	GLN
47	D1	57	GLU
47	D1	58	ILE
47	D1	59	THR
47	D1	60	PHE
47	D1	67	ILE
47	D1	73	LEU
47	D1	80	LEU
47	D1	85	LEU
48	D2	22	GLU
48	D2	24	LEU
48	D2	34	GLU
48	D2	44	LEU
48	D2	50	ILE
48	D2	55	ARG
48	D2	64	LEU
48	D2	66	GLU
48	D2	68	ARG
49	D3	15	TYR
49	D3	26	LEU

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Mol	Chain	Res	Type
49	D3	29	ARG
49	D3	31	LEU
49	D3	35	ARG
49	D3	37	LEU
49	D3	44	ARG
50	D4	1	MET
50	D4	8	LYS
50	D4	9	LEU
50	D4	10	VAL
50	D4	22	ILE
50	D4	28	LYS
50	D4	30	GLU
50	D4	32	TYR
50	D4	33	VAL
51	D5	3	LYS
51	D5	29	THR
51	D5	36	CYS
51	D5	43	HIS
51	D5	45	VAL
51	D5	55	ARG
52	D6	6	ARG
52	D6	9	LEU
52	D6	10	LEU
52	D6	11	LEU
52	D6	18	ARG
52	D6	19	ARG
52	D6	20	ASN
52	D6	23	THR
52	D6	25	LYS
52	D6	28	ARG
52	D6	37	ARG
52	D6	39	TYR
52	D6	46	HIS
52	D6	48	VAL
52	D6	49	HIS
52	D6	50	ARG
52	D6	51	GLU
52	D6	53	LYS
53	D7	18	PHE
53	D7	24	THR
53	D7	34	ARG
53	D7	35	ARG

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Mol	Chain	Res	Type
53	D7	36	GLN
53	D7	40	TRP
54	D8	5	LYS
54	D8	16	ILE
54	D8	22	VAL
54	D8	34	TRP
54	D8	36	LYS
54	D8	40	GLU
54	D8	48	PHE
54	D8	49	VAL
54	D8	53	PRO
54	D8	57	ARG
54	D8	59	LYS
54	D8	61	LEU
55	D9	12	ASP
55	D9	16	VAL
55	D9	20	HIS
56	De	72	LEU
56	De	73	GLU
56	De	74	VAL
56	De	92	LEU
56	De	95	LYS
56	De	99	VAL
56	De	107	GLU

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (79) such sidechains are listed below:

Mol	Chain	Res	Type
1	AB	40	HIS
1	AB	78	GLN
2	AC	123	GLN
3	AD	45	GLN
3	AD	123	HIS
3	AD	125	HIS
3	AD	161	ASN
10	AK	38	ASN
20	AY	165	GLN
20	AY	448	GLN
20	AY	500	GLN
28	BF	67	GLN
28	BF	169	ASN
30	BH	111	HIS

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Mol	Chain	Res	Type
32	BK	30	HIS
32	BK	42	ASN
33	BN	38	HIS
33	BN	101	HIS
34	BO	29	ASN
35	BP	27	HIS
35	BP	38	GLN
36	BQ	46	GLN
37	BR	24	GLN
38	BS	61	ASN
40	BU	81	HIS
40	BU	104	GLN
40	BU	117	GLN
42	BW	57	ASN
42	BW	61	ASN
45	BZ	73	GLN
48	B2	48	HIS
52	B6	20	ASN
55	B9	34	GLN
1	CB	94	ASN
1	CB	95	GLN
3	CD	125	HIS
5	CF	7	ASN
6	CG	153	HIS
8	CI	3	GLN
10	CK	27	ASN
10	CK	116	HIS
11	CL	8	ASN
11	CL	49	ASN
12	CM	92	HIS
12	CM	101	GLN
18	CS	53	ASN
20	CY	77	HIS
20	CY	117	GLN
20	CY	625	ASN
20	CY	630	GLN
25	DC	45	HIS
25	DC	67	HIS
26	DD	45	ASN
26	DD	164	GLN
27	DE	35	GLN
27	DE	129	HIS

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Mol	Chain	Res	Type
28	DF	40	GLN
28	DF	75	HIS
28	DF	169	ASN
29	DG	138	GLN
30	DH	61	HIS
32	DK	116	ASN
33	DN	38	HIS
33	DN	56	ASN
33	DN	101	HIS
34	DO	29	ASN
35	DP	68	GLN
37	DR	71	GLN
39	DT	43	GLN
39	DT	84	GLN
42	DW	57	ASN
42	DW	102	HIS
44	DY	43	ASN
44	DY	68	HIS
45	DZ	73	GLN
45	DZ	75	ASN
47	D1	42	GLN
47	D1	47	GLN
55	D9	34	GLN

### 5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
21	AA	1510/1511 (99%)	358 (23%)	16 (1%)
21	CA	1511/1511 (100%)	377 (24%)	16 (1%)
22	AW	76/77 (98%)	37 (48%)	1 (1%)
22	CW	76/77 (98%)	42 (55%)	2 (2%)
23	AV	35/36 (97%)	24 (68%)	9 (25%)
23	CV	35/36 (97%)	27 (77%)	7 (20%)
24	AX	75/78 (96%)	29 (38%)	1 (1%)
24	CX	75/78 (96%)	30 (40%)	0
59	BA	2878/2879 (99%)	748 (25%)	28 (0%)
59	DA	2878/2879 (99%)	715 (24%)	29 (1%)
60	BB	118/119 (99%)	27 (22%)	0
60	DB	118/119 (99%)	32 (27%)	0
All	All	9385/9400 (99%)	2446 (26%)	109 (1%)

All (2446) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
21	AA	6	G
21	AA	7	G
21	AA	9	G
21	AA	31	G
21	AA	32	A
21	AA	39	G
21	AA	47	C
21	AA	48	C
21	AA	51	A
21	AA	60	A
21	AA	65	U
21	AA	68	G
21	AA	68(A)	G
21	AA	68(H)	G
21	AA	68(L)	U
21	AA	68(M)	U
21	AA	68(P)	C
21	AA	68(Q)	U
21	AA	68(S)	C
21	AA	101	A
21	AA	115	G
21	AA	121	C
21	AA	122	G
21	AA	126	G
21	AA	129(A)	G
21	AA	131	C
21	AA	134	A
21	AA	135	C
21	AA	147	G
21	AA	151	A
21	AA	163	C
21	AA	170	U
21	AA	174	C
21	AA	176	C
21	AA	182	U
21	AA	186(J)	G
21	AA	192	U
21	AA	195	A
21	AA	196	A
21	AA	197	A
21	AA	198	G
21	AA	201(C)	U
21	AA	216	G

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Mol	Chain	Res	Type
21	AA	222	U
21	AA	231	G
21	AA	236	G
21	AA	244	U
21	AA	247	G
21	AA	251	G
21	AA	253	U
21	AA	258	G
21	AA	267	C
21	AA	275	G
21	AA	279	A
21	AA	280	C
21	AA	281	G
21	AA	289	G
21	AA	298	A
21	AA	300	A
21	AA	301	G
21	AA	324	G
21	AA	325	A
21	AA	328	C
21	AA	329	A
21	AA	331	G
21	AA	332	G
21	AA	335	C
21	AA	345	C
21	AA	346	G
21	AA	347	G
21	AA	348	G
21	AA	352	C
21	AA	353	A
21	AA	354	G
21	AA	367	U
21	AA	372	C
21	AA	373	A
21	AA	388	G
21	AA	396	G
21	AA	397	A
21	AA	398	C
21	AA	408	A
21	AA	412	A
21	AA	413	G
21	AA	414	A

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Mol	Chain	Res	Type
21	AA	422	C
21	AA	423	G
21	AA	424	G
21	AA	429	U
21	AA	440	A
21	AA	443	C
21	AA	452	A
21	AA	453	A
21	AA	458(B)	A
21	AA	481	G
21	AA	484	G
21	AA	485	G
21	AA	491	G
21	AA	497	A
21	AA	498	U
21	AA	505	G
21	AA	509	A
21	AA	510	A
21	AA	511	C
21	AA	514	C
21	AA	517	G
21	AA	518	C
21	AA	520	A
21	AA	523	A
21	AA	524	G
21	AA	527	G
21	AA	531	U
21	AA	532	A
21	AA	533	A
21	AA	536	C
21	AA	547	A
21	AA	559	A
21	AA	560	U
21	AA	562	C
21	AA	564	C
21	AA	565	U
21	AA	567	G
21	AA	568	G
21	AA	572	A
21	AA	574	A
21	AA	576	G
21	AA	603	U

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Mol	Chain	Res	Type
21	AA	616	G
21	AA	618	C
21	AA	623	C
21	AA	628	G
21	AA	629	G
21	AA	642	A
21	AA	653	A
21	AA	654	G
21	AA	659	U
21	AA	665	A
21	AA	671	G
21	AA	685	G
21	AA	688	G
21	AA	698	G
21	AA	702	A
21	AA	704	A
21	AA	717	C
21	AA	721	G
21	AA	723	U
21	AA	732	C
21	AA	733	A
21	AA	734	G
21	AA	735	C
21	AA	737	A
21	AA	742	G
21	AA	743	U
21	AA	749	C
21	AA	750	G
21	AA	754	C
21	AA	755	G
21	AA	756	C
21	AA	776	G
21	AA	777	A
21	AA	793	U
21	AA	794	A
21	AA	803	G
21	AA	811	C
21	AA	812	C
21	AA	815	A
21	AA	816	A
21	AA	817	C
21	AA	818	G

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Mol	Chain	Res	Type
21	AA	819	A
21	AA	828	A
21	AA	829	G
21	AA	836	G
21	AA	837	G
21	AA	838(A)	U
21	AA	838(B)	C
21	AA	838(C)	U
21	AA	848	C
21	AA	853	G
21	AA	855	G
21	AA	858	G
21	AA	859	A
21	AA	867	G
21	AA	873	A
21	AA	875	C
21	AA	876	G
21	AA	877	C
21	AA	879	C
21	AA	882	C
21	AA	889	A
21	AA	902	G
21	AA	914	A
21	AA	922	G
21	AA	923	A
21	AA	925	G
21	AA	926	G
21	AA	927	G
21	AA	934	C
21	AA	935	A
21	AA	961	U
21	AA	966	G
21	AA	967	C
21	AA	968	A
21	AA	969	A
21	AA	971	G
21	AA	974	A
21	AA	975	A
21	AA	976	G
21	AA	977	A
21	AA	978	A
21	AA	979	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
21	AA	980	C
21	AA	981	U
21	AA	992	U
21	AA	993	G
21	AA	1004	A
21	AA	1015	A
21	AA	1022	G
21	AA	1023	G
21	AA	1024	G
21	AA	1025	U
21	AA	1026	G
21	AA	1028(B)	C
21	AA	1050	G
21	AA	1054	C
21	AA	1060	C
21	AA	1064	G
21	AA	1065	U
21	AA	1066	C
21	AA	1072	G
21	AA	1078	U
21	AA	1089	G
21	AA	1094	G
21	AA	1095	U
21	AA	1101	A
21	AA	1104	G
21	AA	1108	G
21	AA	1109	C
21	AA	1117	G
21	AA	1123	A
21	AA	1126	U
21	AA	1127	G
21	AA	1129	C
21	AA	1130	A
21	AA	1131	G
21	AA	1137	C
21	AA	1138	G
21	AA	1139	G
21	AA	1140	C
21	AA	1146	A
21	AA	1156	G
21	AA	1157	A
21	AA	1158	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
21	AA	1159	U
21	AA	1160	G
21	AA	1171	G
21	AA	1178	G
21	AA	1181	G
21	AA	1182	G
21	AA	1183	A
21	AA	1188	A
21	AA	1196	U
21	AA	1197	G
21	AA	1200	C
21	AA	1201	A
21	AA	1202	G
21	AA	1206	G
21	AA	1211	U
21	AA	1212	U
21	AA	1213	A
21	AA	1214	C
21	AA	1225	A
21	AA	1227	A
21	AA	1229	A
21	AA	1238	A
21	AA	1241	G
21	AA	1253	G
21	AA	1256	A
21	AA	1257	U
21	AA	1261	A
21	AA	1262	C
21	AA	1268	A
21	AA	1274	G
21	AA	1275	A
21	AA	1278	U
21	AA	1280	A
21	AA	1281	U
21	AA	1282	C
21	AA	1286	A
21	AA	1287	A
21	AA	1291	G
21	AA	1297	C
21	AA	1298	C
21	AA	1299	A
21	AA	1300	G

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Mol	Chain	Res	Type
21	AA	1301	U
21	AA	1303	C
21	AA	1305	G
21	AA	1306	A
21	AA	1312	G
21	AA	1317	C
21	AA	1320	C
21	AA	1321	C
21	AA	1322	C
21	AA	1330	U
21	AA	1331	G
21	AA	1335	C
21	AA	1336	C
21	AA	1347	G
21	AA	1348	U
21	AA	1359	C
21	AA	1363	A
21	AA	1365	G
21	AA	1370	G
21	AA	1376	U
21	AA	1377	A
21	AA	1379	G
21	AA	1381	U
21	AA	1382	C
21	AA	1394	A
21	AA	1397	C
21	AA	1413	A
21	AA	1419	G
21	AA	1435	G
21	AA	1436	U
21	AA	1440(B)	G
21	AA	1440(C)	G
21	AA	1440(D)	A
21	AA	1440(I)	A
21	AA	1440(J)	C
21	AA	1440(K)	G
21	AA	1440(L)	G
21	AA	1475	G
21	AA	1492	A
21	AA	1493	A
21	AA	1494	G
21	AA	1495	U

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Mol	Chain	Res	Type
21	AA	1497	G
21	AA	1499	A
21	AA	1503	A
21	AA	1504	G
21	AA	1505	G
21	AA	1506	U
21	AA	1507	A
21	AA	1510	U
21	AA	1517	G
21	AA	1519	A
21	AA	1520	G
21	AA	1525	G
21	AA	1529	G
21	AA	1530	G
21	AA	1531	A
21	AA	1532	U
21	AA	1533	C
21	AA	1534	A
21	AA	1535	C
21	AA	1537	U
21	AA	1538	C
22	AW	2	G
22	AW	4	U
22	AW	8	U
22	AW	10	G
22	AW	14	A
22	AW	15	G
22	AW	16	U
22	AW	18	G
22	AW	19	G
22	AW	20	U
22	AW	20(A)	U
22	AW	21	A
22	AW	22	G
22	AW	24	G
22	AW	26	A
22	AW	27	C
22	AW	28	A
22	AW	37	A
22	AW	38	A
22	AW	42	U
22	AW	43	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
22	AW	44	G
22	AW	45	G
22	AW	46	G
22	AW	48	C
22	AW	55	U
22	AW	56	C
22	AW	57	G
22	AW	58	A
22	AW	59	A
22	AW	61	C
22	AW	62	C
22	AW	63	C
22	AW	64	G
22	AW	69	A
22	AW	72	C
22	AW	74	C
23	AV	4	A
23	AV	5	A
23	AV	7	G
23	AV	8	A
23	AV	10	G
23	AV	11	U
23	AV	12	A
23	AV	13	A
23	AV	14	A
23	AV	15	A
23	AV	16	A
23	AV	17	U
23	AV	19	G
23	AV	20	U
23	AV	22	U
23	AV	26	A
23	AV	27	A
23	AV	28	A
23	AV	30	A
23	AV	31	A
23	AV	32	U
23	AV	33	C
23	AV	35	A
23	AV	36	A
24	AX	6	A
24	AX	8	U

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
24	AX	9	A
24	AX	16	C
24	AX	17	U
24	AX	18	G
24	AX	20	G
24	AX	21	A
24	AX	34	U
24	AX	39	G
24	AX	42	G
24	AX	45	G
24	AX	46	G
24	AX	47	U
24	AX	48	C
24	AX	50	G
24	AX	51	C
24	AX	52	G
24	AX	55	U
24	AX	60	C
24	AX	63	G
24	AX	64	U
24	AX	66	A
24	AX	68	C
24	AX	72	C
24	AX	73	A
24	AX	74	C
24	AX	75	C
24	AX	76	A
59	BA	7	G
59	BA	8	A
59	BA	10	G
59	BA	11	G
59	BA	13	A
59	BA	15	G
59	BA	18	C
59	BA	33	U
59	BA	35	G
59	BA	40	C
59	BA	46	C
59	BA	50	U
59	BA	51	G
59	BA	58	G
59	BA	61	G

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Mol	Chain	Res	Type
59	BA	64	A
59	BA	67	U
59	BA	70	G
59	BA	72	U
59	BA	73	A
59	BA	75	G
59	BA	83	G
59	BA	84	A
59	BA	88	G
59	BA	91	A
59	BA	99	U
59	BA	101	G
59	BA	102	G
59	BA	105	C
59	BA	113	G
59	BA	117	G
59	BA	118	A
59	BA	120	U
59	BA	122	G
59	BA	128	C
59	BA	134	C
59	BA	137(B)	G
59	BA	137(C)	G
59	BA	137(E)	A
59	BA	137(F)	C
59	BA	149	A
59	BA	171	G
59	BA	177	G
59	BA	186	G
59	BA	196	A
59	BA	197	A
59	BA	200	U
59	BA	201	C
59	BA	204	A
59	BA	205	G
59	BA	215	G
59	BA	216	A
59	BA	220	G
59	BA	221	A
59	BA	222	A
59	BA	225	A
59	BA	226	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
59	BA	228	A
59	BA	229	A
59	BA	230	U
59	BA	233	A
59	BA	248	G
59	BA	252	G
59	BA	253	C
59	BA	268	C
59	BA	270(D)	C
59	BA	270(K)	C
59	BA	270(L)	U
59	BA	270(M)	U
59	BA	270(Q)	C
59	BA	271(B)	G
59	BA	271(C)	U
59	BA	271(D)	G
59	BA	271(J)	C
59	BA	271(M)	G
59	BA	271(N)	G
59	BA	271(R)	C
59	BA	271(T)	G
59	BA	283	U
59	BA	299	A
59	BA	302	C
59	BA	310	A
59	BA	322	A
59	BA	325	G
59	BA	329	G
59	BA	330	A
59	BA	349	G
59	BA	352	G
59	BA	357(C)	G
59	BA	357(K)	U
59	BA	357(M)	C
59	BA	373	U
59	BA	377	C
59	BA	380	U
59	BA	386	G
59	BA	387	U
59	BA	391	G
59	BA	396	G
59	BA	405	U

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
59	BA	406	G
59	BA	411	G
59	BA	412	A
59	BA	418	G
59	BA	436	C
59	BA	444	C
59	BA	451	C
59	BA	456	C
59	BA	457	A
59	BA	467	G
59	BA	470	A
59	BA	473	G
59	BA	475	U
59	BA	480	A
59	BA	481	G
59	BA	484	C
59	BA	487	C
59	BA	491	G
59	BA	492	A
59	BA	504	U
59	BA	505	A
59	BA	508	G
59	BA	509	C
59	BA	512	G
59	BA	518	G
59	BA	527	C
59	BA	530	G
59	BA	531	C
59	BA	532	A
59	BA	533	G
59	BA	541	C
59	BA	550	G
59	BA	556	G
59	BA	563	G
59	BA	572	A
59	BA	573	G
59	BA	584	C
59	BA	588	U
59	BA	589	C
59	BA	591	C
59	BA	593	G
59	BA	602	G

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Mol	Chain	Res	Type
59	BA	603	A
59	BA	611(D)	U
59	BA	611(E)	G
59	BA	611(F)	A
59	BA	611(G)	G
59	BA	620	G
59	BA	621	A
59	BA	627	A
59	BA	628	G
59	BA	634	C
59	BA	637	A
59	BA	645	C
59	BA	646	A
59	BA	653	C
59	BA	654	U
59	BA	655	A
59	BA	656	G
59	BA	661	C
59	BA	666	G
59	BA	668	G
59	BA	684	G
59	BA	686	G
59	BA	689	A
59	BA	692	C
59	BA	699	A
59	BA	719	C
59	BA	730	C
59	BA	738	G
59	BA	746	A
59	BA	747	U
59	BA	748	G
59	BA	750	A
59	BA	752	A
59	BA	757	U
59	BA	761	A
59	BA	764	A
59	BA	765	G
59	BA	772	C
59	BA	776	G
59	BA	777	A
59	BA	782	A
59	BA	784	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
59	BA	785	G
59	BA	791	C
59	BA	792	G
59	BA	793	A
59	BA	798	G
59	BA	799	G
59	BA	805	G
59	BA	807	U
59	BA	812	C
59	BA	819	A
59	BA	827	U
59	BA	828	U
59	BA	831	G
59	BA	833	U
59	BA	843	G
59	BA	845	G
59	BA	846	C
59	BA	847	U
59	BA	857	C
59	BA	861	A
59	BA	865	C
59	BA	866	A
59	BA	868	U
59	BA	872	A
59	BA	881	G
59	BA	883	G
59	BA	885	C
59	BA	886	C
59	BA	887	A
59	BA	889	C
59	BA	890	A
59	BA	895	U
59	BA	896	A
59	BA	897	C
59	BA	906	G
59	BA	910	A
59	BA	914	C
59	BA	917	A
59	BA	919	G
59	BA	930	U
59	BA	932	G
59	BA	933	A

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Mol	Chain	Res	Type
59	BA	938	G
59	BA	939	G
59	BA	941	A
59	BA	943	U
59	BA	945	A
59	BA	946	G
59	BA	957	A
59	BA	959	A
59	BA	961	C
59	BA	962	G
59	BA	963	U
59	BA	964	C
59	BA	974	G
59	BA	974(A)	C
59	BA	980	A
59	BA	983	A
59	BA	988	A
59	BA	990	A
59	BA	996	A
59	BA	1003	G
59	BA	1004	C
59	BA	1005	C
59	BA	1008	C
59	BA	1009	A
59	BA	1011	G
59	BA	1012	U
59	BA	1013	C
59	BA	1022	G
59	BA	1023	U
59	BA	1025	G
59	BA	1026	U
59	BA	1027	A
59	BA	1033	U
59	BA	1035	U
59	BA	1042	G
59	BA	1046	A
59	BA	1047	G
59	BA	1048	A
59	BA	1052	C
59	BA	1061	U
59	BA	1062	G
59	BA	1064	C

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Mol	Chain	Res	Type
59	BA	1070	A
59	BA	1071	G
59	BA	1072	C
59	BA	1073	A
59	BA	1077	A
59	BA	1078	U
59	BA	1079	C
59	BA	1082	U
59	BA	1088	A
59	BA	1090	U
59	BA	1095	A
59	BA	1097	U
59	BA	1098	A
59	BA	1101	U
59	BA	1112	G
59	BA	1129	A
59	BA	1130	U
59	BA	1131	G
59	BA	1132	A
59	BA	1133	U
59	BA	1135	C
59	BA	1136	G
59	BA	1139	G
59	BA	1142	A
59	BA	1144	G
59	BA	1155	A
59	BA	1157	G
59	BA	1173	A
59	BA	1174	U
59	BA	1186	G
59	BA	1188	U
59	BA	1199	U
59	BA	1204	A
59	BA	1205	U
59	BA	1210	A
59	BA	1211	U
59	BA	1212	G
59	BA	1213	A
59	BA	1215	G
59	BA	1219(A)	A
59	BA	1220	C
59	BA	1225	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
59	BA	1236	G
59	BA	1239	G
59	BA	1241	A
59	BA	1248	G
59	BA	1250	G
59	BA	1252	G
59	BA	1253	A
59	BA	1256	G
59	BA	1257	C
59	BA	1265	A
59	BA	1266	G
59	BA	1272	A
59	BA	1273	U
59	BA	1274	A
59	BA	1275	A
59	BA	1284	A
59	BA	1287	A
59	BA	1288	U
59	BA	1299	G
59	BA	1300	U
59	BA	1301	A
59	BA	1302	A
59	BA	1303	G
59	BA	1313	U
59	BA	1314	C
59	BA	1321	A
59	BA	1329	U
59	BA	1330	C
59	BA	1331	A
59	BA	1332	G
59	BA	1341	U
59	BA	1345	C
59	BA	1349	A
59	BA	1352	U
59	BA	1359	A
59	BA	1360	A
59	BA	1371	G
59	BA	1378	A
59	BA	1380	G
59	BA	1384	A
59	BA	1385	G
59	BA	1386	C

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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	1416	G
59	BA	1417	C
59	BA	1420	U
59	BA	1421	G
59	BA	1422	G
59	BA	1427	A
59	BA	1428	C
59	BA	1438	U
59	BA	1444(A)	A
59	BA	1453	A
59	BA	1454	U
59	BA	1455	G
59	BA	1458	C
59	BA	1459	G
59	BA	1461	G
59	BA	1465	G
59	BA	1467	C
59	BA	1468(C)	A
59	BA	1483	G
59	BA	1486	A
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	1506(C)	A
59	BA	1506(K)	C
59	BA	1506(O)	G
59	BA	1536	A
59	BA	1538	G
59	BA	1541	U
59	BA	1542	G
59	BA	1543	A
59	BA	1543(A)	C
59	BA	1544	A
59	BA	1545	A
59	BA	1546	C
59	BA	1547	C

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Mol	Chain	Res	Type
59	BA	1553	A
59	BA	1554	A
59	BA	1555	G
59	BA	1558	A
59	BA	1559	G
59	BA	1560	G
59	BA	1565	C
59	BA	1566	A
59	BA	1569	A
59	BA	1579	A
59	BA	1581	G
59	BA	1584	C
59	BA	1586	A
59	BA	1598	C
59	BA	1603	A
59	BA	1607	C
59	BA	1610	A
59	BA	1615	C
59	BA	1617	C
59	BA	1618	A
59	BA	1619	G
59	BA	1631	A
59	BA	1635	G
59	BA	1640	C
59	BA	1646	C
59	BA	1648	C
59	BA	1651	G
59	BA	1653	G
59	BA	1654	A
59	BA	1664	A
59	BA	1671	U
59	BA	1673	U
59	BA	1674	G
59	BA	1690	A
59	BA	1695	G
59	BA	1696	G
59	BA	1698	A
59	BA	1702	G
59	BA	1705	G
59	BA	1712(H)	A
59	BA	1712(J)	G
59	BA	1712(K)	A

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Mol	Chain	Res	Type
59	BA	1712(O)	C
59	BA	1750	G
59	BA	1756	G
59	BA	1759	A
59	BA	1763	G
59	BA	1764	G
59	BA	1773	A
59	BA	1781	C
59	BA	1782	C
59	BA	1783	A
59	BA	1784	A
59	BA	1787	A
59	BA	1788	C
59	BA	1793	C
59	BA	1794	U
59	BA	1800	C
59	BA	1801	G
59	BA	1806	C
59	BA	1815	A
59	BA	1816	G
59	BA	1821	A
59	BA	1829	A
59	BA	1831	G
59	BA	1835	G
59	BA	1839	G
59	BA	1840	G
59	BA	1841	U
59	BA	1847	A
59	BA	1848	A
59	BA	1860	G
59	BA	1878	G
59	BA	1888	G
59	BA	1895	C
59	BA	1899	G
59	BA	1900	A
59	BA	1901	A
59	BA	1902	C
59	BA	1906	G
59	BA	1913	A
59	BA	1914	C
59	BA	1915	U
59	BA	1917	U

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
59	BA	1923	U
59	BA	1927	A
59	BA	1929	G
59	BA	1930	G
59	BA	1933	G
59	BA	1935	G
59	BA	1936	A
59	BA	1938	A
59	BA	1939	U
59	BA	1940	U
59	BA	1944	U
59	BA	1951	U
59	BA	1955	U
59	BA	1961	C
59	BA	1962	C
59	BA	1963	U
59	BA	1965	C
59	BA	1967	C
59	BA	1968	G
59	BA	1970	A
59	BA	1971	A
59	BA	1972	A
59	BA	1981	A
59	BA	1982	C
59	BA	1991	U
59	BA	1992	G
59	BA	1993	U
59	BA	1997	G
59	BA	1998	G
59	BA	2009	G
59	BA	2015	A
59	BA	2019	A
59	BA	2020	A
59	BA	2023	G
59	BA	2025	C
59	BA	2031	A
59	BA	2032	G
59	BA	2033	A
59	BA	2036	C
59	BA	2041	U
59	BA	2042	A
59	BA	2043	C

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Mol	Chain	Res	Type
59	BA	2045	C
59	BA	2047	U
59	BA	2050	C
59	BA	2051	A
59	BA	2055	C
59	BA	2056	G
59	BA	2059	A
59	BA	2060	A
59	BA	2061	G
59	BA	2068	U
59	BA	2069	G
59	BA	2075	U
59	BA	2104	G
59	BA	2105	C
59	BA	2107	C
59	BA	2111	C
59	BA	2112	G
59	BA	2113	U
59	BA	2114	A
59	BA	2116	G
59	BA	2120	G
59	BA	2131	G
59	BA	2132	U
59	BA	2133	G
59	BA	2136	C
59	BA	2144	U
59	BA	2145	C
59	BA	2148	G
59	BA	2154	G
59	BA	2156	G
59	BA	2158	A
59	BA	2159	G
59	BA	2161	C
59	BA	2169	A
59	BA	2170	A
59	BA	2171	A
59	BA	2172	U
59	BA	2185	C
59	BA	2186	G
59	BA	2198	A
59	BA	2202(D)	G
59	BA	2202(E)	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
59	BA	2202(F)	U
59	BA	2223	G
59	BA	2225	A
59	BA	2226	C
59	BA	2232	U
59	BA	2235	G
59	BA	2238	G
59	BA	2243	U
59	BA	2245	U
59	BA	2246	G
59	BA	2247	A
59	BA	2249	U
59	BA	2250	G
59	BA	2251	G
59	BA	2252	G
59	BA	2253	G
59	BA	2254	C
59	BA	2255	G
59	BA	2256	G
59	BA	2259	G
59	BA	2266	A
59	BA	2268	A
59	BA	2270	G
59	BA	2275	C
59	BA	2277	G
59	BA	2278	A
59	BA	2283	C
59	BA	2285	C
59	BA	2286	A
59	BA	2287	A
59	BA	2304	G
59	BA	2305	A
59	BA	2306	C
59	BA	2307	G
59	BA	2308	G
59	BA	2309	A
59	BA	2310	A
59	BA	2319	G
59	BA	2320	A
59	BA	2325	G
59	BA	2334	G
59	BA	2336	A

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Mol	Chain	Res	Type
59	BA	2343	C
59	BA	2345	G
59	BA	2346	A
59	BA	2347	C
59	BA	2367	G
59	BA	2377	A
59	BA	2379	G
59	BA	2382	G
59	BA	2383	G
59	BA	2385	C
59	BA	2402	C
59	BA	2403	C
59	BA	2413	G
59	BA	2423	U
59	BA	2424	C
59	BA	2425	A
59	BA	2427	C
59	BA	2428	G
59	BA	2429	G
59	BA	2430	A
59	BA	2435	A
59	BA	2436	G
59	BA	2439	A
59	BA	2441	C
59	BA	2445	G
59	BA	2446	G
59	BA	2447	G
59	BA	2448	A
59	BA	2449	U
59	BA	2451	A
59	BA	2452	C
59	BA	2456	C
59	BA	2468	G
59	BA	2469	A
59	BA	2470	G
59	BA	2476	A
59	BA	2477	C
59	BA	2478	A
59	BA	2479	G
59	BA	2480	C
59	BA	2484	G
59	BA	2498	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
59	BA	2502	G
59	BA	2503	A
59	BA	2505	G
59	BA	2506	U
59	BA	2516	G
59	BA	2520	C
59	BA	2529	G
59	BA	2533	A
59	BA	2540	C
59	BA	2542	A
59	BA	2543	G
59	BA	2544	G
59	BA	2551	C
59	BA	2552	U
59	BA	2553	G
59	BA	2554	U
59	BA	2555	U
59	BA	2556	C
59	BA	2557	G
59	BA	2558	C
59	BA	2560	C
59	BA	2566	A
59	BA	2567	G
59	BA	2572	A
59	BA	2573	C
59	BA	2574	G
59	BA	2576	G
59	BA	2578	G
59	BA	2582	G
59	BA	2586	C
59	BA	2587	A
59	BA	2602	A
59	BA	2609	U
59	BA	2610	C
59	BA	2611	U
59	BA	2612	C
59	BA	2614	A
59	BA	2620	C
59	BA	2621	A
59	BA	2629	A
59	BA	2630	G
59	BA	2635	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
59	BA	2636	U
59	BA	2639	A
59	BA	2645	G
59	BA	2646	C
59	BA	2653	U
59	BA	2654	A
59	BA	2660	A
59	BA	2665	A
59	BA	2671	A
59	BA	2682	U
59	BA	2686	G
59	BA	2689	U
59	BA	2690	C
59	BA	2691	C
59	BA	2692	C
59	BA	2701	C
59	BA	2702	U
59	BA	2703	C
59	BA	2707	G
59	BA	2712(A)	A
59	BA	2713	A
59	BA	2714	G
59	BA	2725	A
59	BA	2726	U
59	BA	2727	G
59	BA	2732	G
59	BA	2733	A
59	BA	2748	A
59	BA	2751	G
59	BA	2757	A
59	BA	2758	A
59	BA	2764	A
59	BA	2765	A
59	BA	2766	G
59	BA	2772	C
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	2792	G

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Mol	Chain	Res	Type
59	BA	2793	G
59	BA	2794(B)	U
59	BA	2794(E)	A
59	BA	2804	C
59	BA	2805	G
59	BA	2808	U
59	BA	2811	G
59	BA	2820	A
59	BA	2821	A
59	BA	2833	G
59	BA	2835	A
59	BA	2849	U
59	BA	2872	G
59	BA	2876	G
59	BA	2880	C
59	BA	2884	U
59	BA	2892	A
59	BA	2894	G
59	BA	2895	U
60	BB	4	C
60	BB	7	G
60	BB	13	A
60	BB	14	U
60	BB	15	A
60	BB	16	G
60	BB	21	G
60	BB	25	A
60	BB	30	C
60	BB	41	U
60	BB	44	G
60	BB	46	A
60	BB	52	A
60	BB	56	G
60	BB	66	A
60	BB	73	A
60	BB	74	U
60	BB	79	C
60	BB	80	U
60	BB	82	G
60	BB	86	G
60	BB	87	G
60	BB	89(A)	G

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Mol	Chain	Res	Type
60	BB	91	C
60	BB	97	G
60	BB	100	G
60	BB	117	G
21	CA	6	G
21	CA	9	G
21	CA	16	A
21	CA	31	G
21	CA	32	A
21	CA	39	G
21	CA	47	C
21	CA	48	C
21	CA	49	U
21	CA	51	A
21	CA	59	A
21	CA	65	U
21	CA	66	G
21	CA	68	G
21	CA	68(H)	G
21	CA	68(L)	U
21	CA	68(M)	U
21	CA	68(P)	C
21	CA	68(S)	C
21	CA	68(T)	G
21	CA	68(V)	G
21	CA	68(W)	G
21	CA	68(X)	U
21	CA	101	A
21	CA	108	G
21	CA	109	A
21	CA	116	A
21	CA	120	A
21	CA	121	C
21	CA	123	C
21	CA	129	U
21	CA	129(A)	G
21	CA	131	C
21	CA	136	C
21	CA	144	G
21	CA	151	A
21	CA	161	A
21	CA	163	C

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Mol	Chain	Res	Type
21	CA	174	C
21	CA	176	C
21	CA	185	A
21	CA	186(C)	G
21	CA	186(H)	U
21	CA	186(J)	G
21	CA	186(K)	G
21	CA	186(M)	G
21	CA	195	A
21	CA	197	A
21	CA	201	C
21	CA	201(C)	U
21	CA	216	G
21	CA	219	C
21	CA	230	G
21	CA	231	G
21	CA	247	G
21	CA	250	A
21	CA	251	G
21	CA	258	G
21	CA	262	A
21	CA	264	U
21	CA	267	C
21	CA	268	C
21	CA	279	A
21	CA	280	C
21	CA	281	G
21	CA	283	C
21	CA	289	G
21	CA	291	C
21	CA	306	G
21	CA	308	C
21	CA	315	A
21	CA	316	G
21	CA	328	C
21	CA	329	A
21	CA	332	G
21	CA	340	U
21	CA	345	C
21	CA	346	G
21	CA	347	G
21	CA	352	C

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Mol	Chain	Res	Type
21	CA	353	A
21	CA	354	G
21	CA	367	U
21	CA	372	C
21	CA	373	A
21	CA	378	G
21	CA	384	G
21	CA	389	A
21	CA	397	A
21	CA	398	C
21	CA	404	U
21	CA	412	A
21	CA	413	G
21	CA	414	A
21	CA	422	C
21	CA	423	G
21	CA	424	G
21	CA	427	U
21	CA	429	U
21	CA	430	A
21	CA	434	U
21	CA	440	A
21	CA	441	A
21	CA	452	A
21	CA	453	A
21	CA	455	C
21	CA	478	A
21	CA	481	G
21	CA	485	G
21	CA	497	A
21	CA	498	U
21	CA	499	A
21	CA	501	C
21	CA	505	G
21	CA	511	C
21	CA	514	C
21	CA	516	U
21	CA	518	C
21	CA	519	C
21	CA	521	G
21	CA	524	G
21	CA	527	G

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Mol	Chain	Res	Type
21	CA	532	A
21	CA	533	A
21	CA	535	A
21	CA	536	C
21	CA	547	A
21	CA	555	C
21	CA	559	A
21	CA	562	C
21	CA	567	G
21	CA	568	G
21	CA	572	A
21	CA	573	A
21	CA	574	A
21	CA	576	G
21	CA	585	G
21	CA	590	C
21	CA	596	C
21	CA	598	U
21	CA	603	U
21	CA	607	A
21	CA	616	G
21	CA	618	C
21	CA	620	C
21	CA	629	G
21	CA	638	G
21	CA	641	U
21	CA	652	U
21	CA	653	A
21	CA	661	G
21	CA	665	A
21	CA	671	G
21	CA	676	A
21	CA	687	A
21	CA	688	G
21	CA	702	A
21	CA	704	A
21	CA	717	C
21	CA	721	G
21	CA	723	U
21	CA	734	G
21	CA	735	C
21	CA	741	G

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Mol	Chain	Res	Type
21	CA	749	C
21	CA	754	C
21	CA	755	G
21	CA	762	C
21	CA	766	A
21	CA	777	A
21	CA	781	A
21	CA	782	A
21	CA	789	U
21	CA	793	U
21	CA	794	A
21	CA	796	C
21	CA	815	A
21	CA	816	A
21	CA	817	C
21	CA	818	G
21	CA	819	A
21	CA	828	A
21	CA	838(A)	U
21	CA	838(B)	C
21	CA	838(C)	U
21	CA	848	C
21	CA	853	G
21	CA	855	G
21	CA	859	A
21	CA	867	G
21	CA	870	U
21	CA	873	A
21	CA	876	G
21	CA	885	G
21	CA	887	G
21	CA	889	A
21	CA	890	G
21	CA	892	A
21	CA	900	A
21	CA	907	A
21	CA	908	A
21	CA	909	A
21	CA	914	A
21	CA	916	G
21	CA	926	G
21	CA	927	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
21	CA	930	C
21	CA	936	C
21	CA	939	G
21	CA	941	G
21	CA	945	G
21	CA	950	U
21	CA	958	A
21	CA	960	U
21	CA	961	U
21	CA	965	A
21	CA	966	G
21	CA	967	C
21	CA	968	A
21	CA	969	A
21	CA	971	G
21	CA	974	A
21	CA	976	G
21	CA	977	A
21	CA	978	A
21	CA	979	C
21	CA	980	C
21	CA	992	U
21	CA	993	G
21	CA	1004	A
21	CA	1005	A
21	CA	1006	C
21	CA	1008	C
21	CA	1017	G
21	CA	1020	U
21	CA	1024	G
21	CA	1025	U
21	CA	1028(B)	C
21	CA	1028(C)	G
21	CA	1036	G
21	CA	1037	C
21	CA	1041	A
21	CA	1046	A
21	CA	1049	U
21	CA	1054	C
21	CA	1062	U
21	CA	1065	U
21	CA	1066	C

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Mol	Chain	Res	Type
21	CA	1068	G
21	CA	1092	A
21	CA	1094	G
21	CA	1095	U
21	CA	1100	C
21	CA	1101	A
21	CA	1108	G
21	CA	1117	G
21	CA	1123	A
21	CA	1125	U
21	CA	1126	U
21	CA	1130	A
21	CA	1131	G
21	CA	1136	U
21	CA	1137	C
21	CA	1138	G
21	CA	1139	G
21	CA	1140	C
21	CA	1145	C
21	CA	1146	A
21	CA	1152	A
21	CA	1157	A
21	CA	1158	C
21	CA	1159	U
21	CA	1178	G
21	CA	1181	G
21	CA	1184	G
21	CA	1191	A
21	CA	1193	G
21	CA	1196	U
21	CA	1197	G
21	CA	1201	A
21	CA	1202	G
21	CA	1211	U
21	CA	1212	U
21	CA	1213	A
21	CA	1219	U
21	CA	1225	A
21	CA	1226	C
21	CA	1227	A
21	CA	1229	A
21	CA	1237	C

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Mol	Chain	Res	Type
21	CA	1238	A
21	CA	1239	A
21	CA	1240	U
21	CA	1241	G
21	CA	1251	A
21	CA	1252	A
21	CA	1256	A
21	CA	1257	U
21	CA	1262	C
21	CA	1272	G
21	CA	1273	G
21	CA	1278	U
21	CA	1279	A
21	CA	1280	A
21	CA	1281	U
21	CA	1282	C
21	CA	1285	A
21	CA	1286	A
21	CA	1287	A
21	CA	1290	G
21	CA	1298	C
21	CA	1299	A
21	CA	1300	G
21	CA	1301	U
21	CA	1303	C
21	CA	1305	G
21	CA	1306	A
21	CA	1307	U
21	CA	1317	C
21	CA	1321	C
21	CA	1322	C
21	CA	1323	G
21	CA	1330	U
21	CA	1331	G
21	CA	1335	C
21	CA	1336	C
21	CA	1345	U
21	CA	1347	G
21	CA	1359	C
21	CA	1361	G
21	CA	1362(A)	C
21	CA	1363	A

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Mol	Chain	Res	Type
21	CA	1364	U
21	CA	1370	G
21	CA	1374	A
21	CA	1379	G
21	CA	1381	U
21	CA	1386	G
21	CA	1394	A
21	CA	1397	C
21	CA	1401	G
21	CA	1402	C
21	CA	1419	G
21	CA	1422	G
21	CA	1436	U
21	CA	1439	C
21	CA	1440(C)	G
21	CA	1440(D)	A
21	CA	1440(E)	G
21	CA	1440(I)	A
21	CA	1440(J)	C
21	CA	1440(K)	G
21	CA	1440(O)	A
21	CA	1484	C
21	CA	1487	G
21	CA	1492	A
21	CA	1494	G
21	CA	1497	G
21	CA	1502	A
21	CA	1503	A
21	CA	1504	G
21	CA	1505	G
21	CA	1506	U
21	CA	1507	A
21	CA	1517	G
21	CA	1519	A
21	CA	1520	G
21	CA	1525	G
21	CA	1528	U
21	CA	1530	G
21	CA	1531	A
21	CA	1532	U
21	CA	1533	C
21	CA	1534	A

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Mol	Chain	Res	Type
21	CA	1535	C
21	CA	1536	C
21	CA	1538	C
23	CV	3	C
23	CV	4	A
23	CV	5	A
23	CV	8	A
23	CV	9	G
23	CV	10	G
23	CV	11	U
23	CV	12	A
23	CV	13	A
23	CV	14	A
23	CV	15	A
23	CV	16	A
23	CV	17	U
23	CV	18	G
23	CV	19	G
23	CV	20	U
23	CV	21	A
23	CV	22	U
23	CV	24	C
23	CV	26	A
23	CV	27	A
23	CV	28	A
23	CV	30	A
23	CV	31	A
23	CV	32	U
23	CV	35	A
23	CV	36	A
22	CW	2	G
22	CW	3	C
22	CW	8	U
22	CW	10	G
22	CW	12	U
22	CW	13	C
22	CW	14	A
22	CW	15	G
22	CW	16	U
22	CW	18	G
22	CW	19	G
22	CW	20	U

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Mol	Chain	Res	Type
22	CW	20(A)	U
22	CW	21	A
22	CW	22	G
22	CW	24	G
22	CW	25	C
22	CW	26	A
22	CW	27	C
22	CW	29	U
22	CW	32	C
22	CW	34	C
22	CW	37	A
22	CW	38	A
22	CW	42	U
22	CW	43	G
22	CW	44	G
22	CW	45	G
22	CW	46	G
22	CW	47	U
22	CW	48	C
22	CW	50	C
22	CW	52	G
22	CW	56	C
22	CW	57	G
22	CW	58	A
22	CW	59	A
22	CW	60	U
22	CW	61	C
22	CW	63	C
22	CW	64	G
22	CW	74	C
24	CX	5	G
24	CX	8	U
24	CX	16	C
24	CX	17	U
24	CX	18	G
24	CX	20	G
24	CX	21	A
24	CX	24	G
24	CX	25	C
24	CX	28	C
24	CX	42	G
24	CX	44	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
24	CX	45	G
24	CX	47	U
24	CX	48	C
24	CX	49	G
24	CX	50	G
24	CX	52	G
24	CX	53	G
24	CX	57	G
24	CX	58	A
24	CX	60	C
24	CX	61	C
24	CX	64	U
24	CX	65	C
24	CX	68	C
24	CX	72	C
24	CX	73	A
24	CX	74	C
24	CX	76	A
59	DA	8	A
59	DA	10	G
59	DA	11	G
59	DA	12	U
59	DA	17	G
59	DA	25	U
59	DA	34	C
59	DA	35	G
59	DA	46	C
59	DA	49	A
59	DA	51	G
59	DA	57	C
59	DA	63	U
59	DA	64	A
59	DA	73	A
59	DA	74	A
59	DA	75	G
59	DA	84	A
59	DA	88	G
59	DA	91	A
59	DA	95	G
59	DA	98	G
59	DA	101	G
59	DA	102	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
59	DA	115	C
59	DA	116	C
59	DA	117	G
59	DA	118	A
59	DA	120	U
59	DA	137(B)	G
59	DA	137(D)	A
59	DA	150	C
59	DA	155(B)	U
59	DA	155(C)	U
59	DA	155(D)	U
59	DA	175	G
59	DA	181	A
59	DA	186	G
59	DA	193	U
59	DA	195	A
59	DA	196	A
59	DA	197	A
59	DA	204	A
59	DA	205	G
59	DA	210	C
59	DA	216	A
59	DA	221	A
59	DA	222	A
59	DA	225	A
59	DA	228	A
59	DA	229	A
59	DA	230	U
59	DA	233	A
59	DA	235	U
59	DA	241	A
59	DA	248	G
59	DA	252	G
59	DA	256	A
59	DA	264	C
59	DA	269	U
59	DA	270	A
59	DA	270(B)	A
59	DA	270(G)	C
59	DA	270(K)	C
59	DA	270(L)	U
59	DA	270(M)	U

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Mol	Chain	Res	Type
59	DA	270(P)	C
59	DA	270(Q)	C
59	DA	270(S)	G
59	DA	270(U)	C
59	DA	271(C)	U
59	DA	271(D)	G
59	DA	271(F)	G
59	DA	271(M)	G
59	DA	271(N)	G
59	DA	271(P)	C
59	DA	271(Q)	A
59	DA	271(R)	C
59	DA	271(T)	G
59	DA	293	U
59	DA	294	A
59	DA	299	A
59	DA	302	C
59	DA	317	G
59	DA	321	G
59	DA	322	A
59	DA	323	G
59	DA	324	A
59	DA	329	G
59	DA	330	A
59	DA	345	A
59	DA	346	A
59	DA	352	G
59	DA	353	G
59	DA	357(F)	G
59	DA	357(K)	U
59	DA	357(L)	A
59	DA	357(M)	C
59	DA	372	G
59	DA	375	C
59	DA	380	U
59	DA	386	G
59	DA	389	G
59	DA	390	A
59	DA	394	A
59	DA	405	U
59	DA	409	C
59	DA	411	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
59	DA	412	A
59	DA	421	U
59	DA	431	U
59	DA	439	G
59	DA	444	C
59	DA	449	A
59	DA	451	C
59	DA	456	C
59	DA	457	A
59	DA	467	G
59	DA	470	A
59	DA	473	G
59	DA	475	U
59	DA	476	G
59	DA	480	A
59	DA	481	G
59	DA	482	A
59	DA	505	A
59	DA	508	G
59	DA	509	C
59	DA	510	C
59	DA	517	C
59	DA	527	C
59	DA	528	A
59	DA	530	G
59	DA	531	C
59	DA	532	A
59	DA	540	C
59	DA	543(B)	C
59	DA	543(C)	A
59	DA	550	G
59	DA	559	G
59	DA	563	G
59	DA	573	G
59	DA	575	A
59	DA	577	G
59	DA	582	G
59	DA	586	A
59	DA	588	U
59	DA	603	A
59	DA	604	G
59	DA	611	C

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Mol	Chain	Res	Type
59	DA	611(A)	C
59	DA	611(E)	G
59	DA	611(F)	A
59	DA	611(G)	G
59	DA	621	A
59	DA	627	A
59	DA	629	G
59	DA	634	C
59	DA	636	G
59	DA	637	A
59	DA	645	C
59	DA	646	A
59	DA	654	U
59	DA	655	A
59	DA	662	G
59	DA	668	G
59	DA	670	A
59	DA	671	C
59	DA	686	G
59	DA	699	A
59	DA	701	G
59	DA	723	G
59	DA	730	C
59	DA	734	A
59	DA	747	U
59	DA	748	G
59	DA	755	C
59	DA	760	G
59	DA	764	A
59	DA	765	G
59	DA	771	G
59	DA	775	G
59	DA	776	G
59	DA	782	A
59	DA	784	A
59	DA	785	G
59	DA	788	A
59	DA	790	C
59	DA	791	C
59	DA	792	G
59	DA	796	C
59	DA	800	A

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Mol	Chain	Res	Type
59	DA	805	G
59	DA	806	C
59	DA	808	G
59	DA	812	C
59	DA	819	A
59	DA	827	U
59	DA	828	U
59	DA	843	G
59	DA	844	C
59	DA	846	C
59	DA	847	U
59	DA	859	G
59	DA	861	A
59	DA	874	G
59	DA	882	G
59	DA	885	C
59	DA	886	C
59	DA	887	A
59	DA	890	A
59	DA	896	A
59	DA	897	C
59	DA	898	C
59	DA	903	C
59	DA	907	U
59	DA	910	A
59	DA	917	A
59	DA	918	A
59	DA	919	G
59	DA	921	G
59	DA	929	G
59	DA	932	G
59	DA	933	A
59	DA	938	G
59	DA	941	A
59	DA	945	A
59	DA	946	G
59	DA	948	G
59	DA	959	A
59	DA	961	C
59	DA	962	G
59	DA	963	U
59	DA	964	C

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Mol	Chain	Res	Type
59	DA	967	C
59	DA	972	G
59	DA	974	G
59	DA	974(A)	C
59	DA	980	A
59	DA	983	A
59	DA	985	C
59	DA	988	A
59	DA	990	A
59	DA	996	A
59	DA	1003	G
59	DA	1004	C
59	DA	1005	C
59	DA	1006	C
59	DA	1009	A
59	DA	1011	G
59	DA	1012	U
59	DA	1013	C
59	DA	1022	G
59	DA	1023	U
59	DA	1025	G
59	DA	1026	U
59	DA	1033	U
59	DA	1047	G
59	DA	1048	A
59	DA	1051	G
59	DA	1053	C
59	DA	1060	U
59	DA	1065	U
59	DA	1070	A
59	DA	1072	C
59	DA	1073	A
59	DA	1074	G
59	DA	1077	A
59	DA	1083	U
59	DA	1086	A
59	DA	1088	A
59	DA	1090	U
59	DA	1098	A
59	DA	1100	C
59	DA	1105	U
59	DA	1111	A

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Mol	Chain	Res	Type
59	DA	1112	G
59	DA	1115	G
59	DA	1129	A
59	DA	1130	U
59	DA	1135	C
59	DA	1136	G
59	DA	1137	G
59	DA	1142	A
59	DA	1143	A
59	DA	1146	C
59	DA	1154	G
59	DA	1155	A
59	DA	1157	G
59	DA	1173	A
59	DA	1174	U
59	DA	1175	G
59	DA	1178	C
59	DA	1186	G
59	DA	1198	U
59	DA	1199	U
59	DA	1204	A
59	DA	1205	U
59	DA	1210	A
59	DA	1211	U
59	DA	1212	G
59	DA	1219(A)	A
59	DA	1220	C
59	DA	1221	C
59	DA	1229	G
59	DA	1235	G
59	DA	1241	A
59	DA	1244	G
59	DA	1248	G
59	DA	1250	G
59	DA	1253	A
59	DA	1255	U
59	DA	1256	G
59	DA	1271	G
59	DA	1272	A
59	DA	1273	U
59	DA	1285	G
59	DA	1287	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
59	DA	1289	C
59	DA	1295	C
59	DA	1296	G
59	DA	1300	U
59	DA	1301	A
59	DA	1302	A
59	DA	1303	G
59	DA	1309	G
59	DA	1313	U
59	DA	1314	C
59	DA	1324	G
59	DA	1325	G
59	DA	1329	U
59	DA	1332	G
59	DA	1341	U
59	DA	1343	G
59	DA	1345	C
59	DA	1349	A
59	DA	1352	U
59	DA	1359	A
59	DA	1360	A
59	DA	1366	A
59	DA	1372	U
59	DA	1378	A
59	DA	1380	G
59	DA	1382	G
59	DA	1384	A
59	DA	1385	G
59	DA	1392	A
59	DA	1395	A
59	DA	1396	U
59	DA	1398	C
59	DA	1416	G
59	DA	1420	U
59	DA	1421	G
59	DA	1428	C
59	DA	1438	U
59	DA	1441	G
59	DA	1443	G
59	DA	1444(A)	A
59	DA	1453	A
59	DA	1454	U

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
59	DA	1455	G
59	DA	1461	G
59	DA	1465	G
59	DA	1467	C
59	DA	1468(C)	A
59	DA	1468(H)	C
59	DA	1468(I)	A
59	DA	1483	G
59	DA	1484	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	1506(B)	A
59	DA	1506(C)	A
59	DA	1538	G
59	DA	1540	G
59	DA	1541	U
59	DA	1542	G
59	DA	1543(A)	C
59	DA	1545	A
59	DA	1547	C
59	DA	1551	C
59	DA	1554	A
59	DA	1558	A
59	DA	1565	C
59	DA	1566	A
59	DA	1569	A
59	DA	1572	A
59	DA	1575	C
59	DA	1576	U
59	DA	1579	A
59	DA	1581	G
59	DA	1584	C
59	DA	1586	A
59	DA	1589	C
59	DA	1598	C
59	DA	1607	C
59	DA	1608	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
59	DA	1610	A
59	DA	1613	G
59	DA	1615	C
59	DA	1617	C
59	DA	1618	A
59	DA	1627	G
59	DA	1645	G
59	DA	1646	C
59	DA	1648	C
59	DA	1651	G
59	DA	1653	G
59	DA	1654	A
59	DA	1664	A
59	DA	1665	A
59	DA	1667	G
59	DA	1670	C
59	DA	1671	U
59	DA	1674	G
59	DA	1678	G
59	DA	1696	G
59	DA	1698	A
59	DA	1708	C
59	DA	1712(F)	U
59	DA	1712(J)	G
59	DA	1712(K)	A
59	DA	1712(L)	G
59	DA	1712(Q)	G
59	DA	1756	G
59	DA	1763	G
59	DA	1764	G
59	DA	1769	G
59	DA	1773	A
59	DA	1775	U
59	DA	1793	C
59	DA	1800	C
59	DA	1801	G
59	DA	1803	A
59	DA	1816	G
59	DA	1819	A
59	DA	1821	A
59	DA	1829	A
59	DA	1830	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
59	DA	1832	C
59	DA	1835	G
59	DA	1840	G
59	DA	1847	A
59	DA	1878	G
59	DA	1888	G
59	DA	1889	A
59	DA	1895	C
59	DA	1900	A
59	DA	1902	C
59	DA	1904	G
59	DA	1905	C
59	DA	1906	G
59	DA	1913	A
59	DA	1914	C
59	DA	1919	A
59	DA	1927	A
59	DA	1929	G
59	DA	1930	G
59	DA	1934	C
59	DA	1936	A
59	DA	1937	A
59	DA	1938	A
59	DA	1939	U
59	DA	1955	U
59	DA	1964	G
59	DA	1965	C
59	DA	1966	A
59	DA	1967	C
59	DA	1968	G
59	DA	1970	A
59	DA	1971	A
59	DA	1972	A
59	DA	1974	C
59	DA	1981	A
59	DA	1982	C
59	DA	1984	G
59	DA	1987	G
59	DA	1992	G
59	DA	1993	U
59	DA	1997	G
59	DA	2011	U

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
59	DA	2014	A
59	DA	2020	A
59	DA	2027	G
59	DA	2031	A
59	DA	2032	G
59	DA	2033	A
59	DA	2034	U
59	DA	2036	C
59	DA	2041	U
59	DA	2043	C
59	DA	2045	C
59	DA	2047	U
59	DA	2052	G
59	DA	2055	C
59	DA	2056	G
59	DA	2060	A
59	DA	2061	G
59	DA	2069	G
59	DA	2077	A
59	DA	2080	G
59	DA	2093	G
59	DA	2108	C
59	DA	2111	C
59	DA	2112	G
59	DA	2118	U
59	DA	2120	G
59	DA	2126	A
59	DA	2132	U
59	DA	2133	G
59	DA	2136	C
59	DA	2147	G
59	DA	2153	G
59	DA	2156	G
59	DA	2158	A
59	DA	2159	G
59	DA	2160	G
59	DA	2172	U
59	DA	2185	C
59	DA	2190	G
59	DA	2193	G
59	DA	2195	C
59	DA	2202(D)	G

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Mol	Chain	Res	Type
59	DA	2202(E)	A
59	DA	2202(F)	U
59	DA	2202(G)	G
59	DA	2225	A
59	DA	2238	G
59	DA	2239	G
59	DA	2245	U
59	DA	2247	A
59	DA	2250	G
59	DA	2251	G
59	DA	2252	G
59	DA	2253	G
59	DA	2254	C
59	DA	2257	U
59	DA	2259	G
59	DA	2266	A
59	DA	2267	A
59	DA	2268	A
59	DA	2269	A
59	DA	2272	U
59	DA	2273	A
59	DA	2275	C
59	DA	2282	G
59	DA	2283	C
59	DA	2285	C
59	DA	2287	A
59	DA	2288	A
59	DA	2304	G
59	DA	2305	A
59	DA	2306	C
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	2323	G
59	DA	2325	G
59	DA	2327	A
59	DA	2334	G
59	DA	2336	A
59	DA	2343	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
59	DA	2345	G
59	DA	2347	C
59	DA	2348	U
59	DA	2350	C
59	DA	2353	G
59	DA	2354	G
59	DA	2379	G
59	DA	2381	C
59	DA	2383	G
59	DA	2385	C
59	DA	2387	U
59	DA	2391	G
59	DA	2392	A
59	DA	2400	G
59	DA	2402	C
59	DA	2403	C
59	DA	2418	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	2447	G
59	DA	2448	A
59	DA	2451	A
59	DA	2452	C
59	DA	2464	C
59	DA	2468	G
59	DA	2469	A
59	DA	2470	G
59	DA	2476	A
59	DA	2484	G
59	DA	2495	G
59	DA	2498	C
59	DA	2501	C
59	DA	2502	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
59	DA	2504	U
59	DA	2505	G
59	DA	2506	U
59	DA	2507	C
59	DA	2508	G
59	DA	2513	G
59	DA	2518	A
59	DA	2520	C
59	DA	2529	G
59	DA	2531	A
59	DA	2534	A
59	DA	2542	A
59	DA	2543	G
59	DA	2549	G
59	DA	2552	U
59	DA	2553	G
59	DA	2554	U
59	DA	2555	U
59	DA	2558	C
59	DA	2561	A
59	DA	2562	U
59	DA	2564	A
59	DA	2566	A
59	DA	2567	G
59	DA	2572	A
59	DA	2573	C
59	DA	2576	G
59	DA	2579	C
59	DA	2586	C
59	DA	2587	A
59	DA	2599	G
59	DA	2602	A
59	DA	2604	U
59	DA	2610	C
59	DA	2611	U
59	DA	2612	C
59	DA	2613	U
59	DA	2620	C
59	DA	2621	A
59	DA	2629	A
59	DA	2630	G
59	DA	2632	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
59	DA	2634	G
59	DA	2637	U
59	DA	2638	G
59	DA	2645	G
59	DA	2646	C
59	DA	2651	C
59	DA	2654	A
59	DA	2662	A
59	DA	2664	G
59	DA	2665	A
59	DA	2682	U
59	DA	2687	U
59	DA	2689	U
59	DA	2690	C
59	DA	2691	C
59	DA	2693	A
59	DA	2702	U
59	DA	2703	C
59	DA	2712(A)	A
59	DA	2713	A
59	DA	2714	G
59	DA	2726	U
59	DA	2733	A
59	DA	2751	G
59	DA	2757	A
59	DA	2764	A
59	DA	2765	A
59	DA	2768	C
59	DA	2769	C
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	2792	G
59	DA	2793	G
59	DA	2794	C
59	DA	2794(B)	U
59	DA	2794(D)	A
59	DA	2802	G

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Mol	Chain	Res	Type
59	DA	2808	U
59	DA	2819	G
59	DA	2820	A
59	DA	2821	A
59	DA	2833	G
59	DA	2835	A
59	DA	2842	G
59	DA	2849	U
59	DA	2850	A
59	DA	2854	G
59	DA	2861	G
59	DA	2872	G
59	DA	2876	G
59	DA	2877	G
59	DA	2880	C
59	DA	2881	C
59	DA	2884	U
59	DA	2886	G
59	DA	2892	A
60	DB	2	C
60	DB	12	C
60	DB	13	A
60	DB	14	U
60	DB	15	A
60	DB	16	G
60	DB	20	C
60	DB	21	G
60	DB	23	G
60	DB	25	A
60	DB	30	C
60	DB	40	U
60	DB	41	U
60	DB	44	G
60	DB	50	G
60	DB	52	A
60	DB	56	G
60	DB	60	C
60	DB	64	C
60	DB	66	A
60	DB	67	G
60	DB	73	A
60	DB	74	U

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Mol	Chain	Res	Type
60	DB	79	C
60	DB	80	U
60	DB	82	G
60	DB	86	G
60	DB	90	C
60	DB	97	G
60	DB	99	A
60	DB	108	C
60	DB	109	G

All (109) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
21	AA	266	G
21	AA	328	C
21	AA	687	A
21	AA	748	C
21	AA	815	A
21	AA	992	U
21	AA	1139	G
21	AA	1182	G
21	AA	1200	C
21	AA	1280	A
21	AA	1285	A
21	AA	1297	C
21	AA	1300	G
21	AA	1358	U
21	AA	1504	G
21	AA	1537	U
22	AW	7	G
23	AV	6	G
23	AV	14	A
23	AV	16	A
23	AV	26	A
23	AV	27	A
23	AV	29	A
23	AV	30	A
23	AV	34	A
23	AV	35	A
24	AX	71	C
59	BA	214	G
59	BA	221	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
59	BA	271(B)	G
59	BA	357(L)	A
59	BA	474	G
59	BA	479	A
59	BA	611(F)	A
59	BA	775	G
59	BA	846	C
59	BA	880	G
59	BA	895	U
59	BA	961	C
59	BA	963	U
59	BA	1012	U
59	BA	1022	G
59	BA	1187	G
59	BA	1210	A
59	BA	1240	U
59	BA	1300	U
59	BA	1558	A
59	BA	1663	C
59	BA	2111	C
59	BA	2250	G
59	BA	2422	A
59	BA	2447	G
59	BA	2585	U
59	BA	2613	U
59	BA	2780	G
21	CA	5	U
21	CA	68(U)	U
21	CA	115	G
21	CA	266	G
21	CA	328	C
21	CA	429	U
21	CA	748	C
21	CA	992	U
21	CA	1064	G
21	CA	1067	A
21	CA	1200	C
21	CA	1280	A
21	CA	1285	A
21	CA	1300	G
21	CA	1504	G
21	CA	1537	U

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
23	CV	14	A
23	CV	16	A
23	CV	18	G
23	CV	26	A
23	CV	27	A
23	CV	34	A
23	CV	35	A
22	CW	7	G
22	CW	26	A
59	DA	137(E)	A
59	DA	221	A
59	DA	271(B)	G
59	DA	479	A
59	DA	481	G
59	DA	611(F)	A
59	DA	733	G
59	DA	775	G
59	DA	846	C
59	DA	889	C
59	DA	1022	G
59	DA	1110	G
59	DA	1210	A
59	DA	1240	U
59	DA	1300	U
59	DA	1506(A)	A
59	DA	1964	G
59	DA	1966	A
59	DA	2202(E)	A
59	DA	2422	A
59	DA	2438	U
59	DA	2447	G
59	DA	2497	A
59	DA	2503	A
59	DA	2553	G
59	DA	2585	U
59	DA	2598	A
59	DA	2689	U
59	DA	2756	U

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

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

## 5.5 Carbohydrates [i](#)

There are no carbohydrates in this entry.

## 5.6 Ligand geometry [i](#)

Of 12 ligands modelled in this entry, 2 are monoatomic - leaving 10 for Mogul analysis.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# $ Z  > 2$	Counts	RMSZ	# $ Z  > 2$
63	NMY	AA	1601	-	45,45,45	0.57	0	58,67,67	0.95	2 (3%)
61	GDP	AY	701	-	23,30,30	1.37	3 (13%)	30,47,47	2.34	10 (33%)
62	FUA	AY	702	-	37,40,40	1.69	6 (16%)	45,64,64	1.66	7 (15%)
63	NMY	BA	2902	-	45,45,45	0.57	0	58,67,67	0.95	2 (3%)
63	NMY	BA	2903	-	45,45,45	0.58	0	58,67,67	0.95	2 (3%)
63	NMY	BA	2904	-	45,45,45	0.57	0	58,67,67	0.95	3 (5%)
63	NMY	CA	1601	-	45,45,45	0.57	0	58,67,67	0.95	2 (3%)
61	GDP	CY	701	-	23,30,30	1.35	4 (17%)	30,47,47	1.89	8 (26%)
62	FUA	CY	702	-	37,40,40	1.70	6 (16%)	45,64,64	1.66	7 (15%)
63	NMY	DA	2901	-	45,45,45	0.57	0	58,67,67	0.95	2 (3%)

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
63	NMY	AA	1601	-	-	1/18/94/94	0/4/4/4
61	GDP	AY	701	-	-	0/12/32/32	0/3/3/3
62	FUA	AY	702	-	-	0/10/92/92	0/4/4/4
63	NMY	BA	2902	-	-	1/18/94/94	0/4/4/4
63	NMY	BA	2903	-	-	1/18/94/94	0/4/4/4
63	NMY	BA	2904	-	-	1/18/94/94	0/4/4/4
63	NMY	CA	1601	-	-	1/18/94/94	0/4/4/4

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
61	GDP	CY	701	-	-	0/12/32/32	0/3/3/3
62	FUA	CY	702	-	-	0/10/92/92	0/4/4/4
63	NMY	DA	2901	-	-	1/18/94/94	0/4/4/4

All (19) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
62	CY	702	FUA	C23-C22	-5.99	1.39	1.51
62	AY	702	FUA	C23-C22	-5.91	1.40	1.51
62	AY	702	FUA	C23-C24	-4.19	1.39	1.53
62	CY	702	FUA	C23-C24	-4.17	1.39	1.53
62	AY	702	FUA	C24-C25	-3.83	1.39	1.50
62	CY	702	FUA	C24-C25	-3.82	1.39	1.50
62	CY	702	FUA	C14-C8	-2.83	1.53	1.58
62	AY	702	FUA	C14-C8	-2.83	1.53	1.58
61	CY	701	GDP	PB-O3B	-2.17	1.46	1.54
62	AY	702	FUA	C10-C9	-2.07	1.53	1.57
62	CY	702	FUA	C10-C9	-2.01	1.53	1.57
62	AY	702	FUA	C25-C26	2.27	1.39	1.32
61	AY	701	GDP	O4'-C1'	2.28	1.44	1.41
62	CY	702	FUA	C25-C26	2.29	1.39	1.32
61	CY	701	GDP	O4'-C1'	2.29	1.44	1.41
61	AY	701	GDP	C2-N1	2.70	1.40	1.35
61	CY	701	GDP	C2-N1	2.76	1.40	1.35
61	AY	701	GDP	C6-N1	3.71	1.40	1.33
61	CY	701	GDP	C6-N1	3.73	1.40	1.33

All (45) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
61	AY	701	GDP	N3-C2-N1	-5.36	119.28	127.44
61	CY	701	GDP	N3-C2-N1	-4.63	120.39	127.44
62	CY	702	FUA	C13-C12-C11	-4.51	105.84	111.95
62	AY	702	FUA	C13-C12-C11	-4.49	105.87	111.95
62	AY	702	FUA	C16-O2-C31	-3.73	111.13	117.14
62	CY	702	FUA	C16-O2-C31	-3.71	111.16	117.14
61	AY	701	GDP	PA-O3A-PB	-3.57	120.70	132.67
62	CY	702	FUA	C8-C9-C10	-3.51	112.75	116.45
62	AY	702	FUA	C8-C9-C10	-3.47	112.79	116.45
61	CY	701	GDP	C4'-O4'-C1'	-3.47	105.91	109.72
61	AY	701	GDP	C4'-O4'-C1'	-3.42	105.97	109.72
61	AY	701	GDP	C5-C6-N1	-3.17	119.25	123.59

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
61	AY	701	GDP	C5'-C4'-C3'	-2.92	103.62	115.21
61	CY	701	GDP	PA-O3A-PB	-2.85	123.12	132.67
61	CY	701	GDP	C5-C6-N1	-2.78	119.78	123.59
61	CY	701	GDP	C4-C5-N7	-2.76	106.94	109.48
61	AY	701	GDP	C6-C5-C4	-2.73	117.63	120.90
63	CA	1601	NMY	C13-O11-C11	-2.72	110.89	118.01
63	BA	2903	NMY	C13-O11-C11	-2.72	110.89	118.01
63	AA	1601	NMY	C13-O11-C11	-2.72	110.89	118.01
63	BA	2904	NMY	C13-O11-C11	-2.72	110.89	118.01
63	DA	2901	NMY	C13-O11-C11	-2.71	110.92	118.01
63	BA	2902	NMY	C13-O11-C11	-2.71	110.92	118.01
61	CY	701	GDP	C5'-C4'-C3'	-2.67	104.61	115.21
63	BA	2904	NMY	C1-O1-C10	-2.01	112.77	118.01
62	CY	702	FUA	C28-C26-C27	2.10	119.79	114.64
62	AY	702	FUA	C28-C26-C27	2.10	119.79	114.64
63	DA	2901	NMY	O22-C22-C23	2.10	110.21	106.10
63	BA	2902	NMY	O22-C22-C23	2.12	110.23	106.10
63	CA	1601	NMY	O22-C22-C23	2.12	110.25	106.10
63	BA	2904	NMY	O22-C22-C23	2.13	110.26	106.10
63	AA	1601	NMY	O22-C22-C23	2.13	110.27	106.10
63	BA	2903	NMY	O22-C22-C23	2.16	110.32	106.10
62	CY	702	FUA	C23-C24-C25	2.17	117.38	111.69
62	AY	702	FUA	C23-C24-C25	2.19	117.42	111.69
61	AY	701	GDP	O4'-C1'-N9	2.20	112.71	108.10
61	CY	701	GDP	O2B-PB-O1B	2.77	119.50	110.58
61	AY	701	GDP	O5'-C5'-C4'	2.79	119.39	109.12
62	CY	702	FUA	O2-C31-C32	2.89	116.56	111.10
61	AY	701	GDP	C6-N1-C2	2.90	119.96	115.94
62	AY	702	FUA	O2-C31-C32	2.90	116.56	111.10
61	CY	701	GDP	O4'-C1'-N9	3.77	116.00	108.10
62	AY	702	FUA	C24-C23-C22	4.83	124.05	112.02
62	CY	702	FUA	C24-C23-C22	4.84	124.08	112.02
61	AY	701	GDP	C2'-C1'-N9	6.40	124.07	114.29

There are no chirality outliers.

All (6) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
63	BA	2903	NMY	C15-O18-C18-C19
63	CA	1601	NMY	C15-O18-C18-C19
63	AA	1601	NMY	C15-O18-C18-C19
63	BA	2902	NMY	C15-O18-C18-C19

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Mol	Chain	Res	Type	Atoms
63	DA	2901	NMY	C15-O18-C18-C19
63	BA	2904	NMY	C15-O18-C18-C19

There are no ring outliers.

10 monomers are involved in 199 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
63	AA	1601	NMY	26	0
61	AY	701	GDP	8	0
62	AY	702	FUA	21	0
63	BA	2902	NMY	13	0
63	BA	2903	NMY	15	0
63	BA	2904	NMY	32	0
63	CA	1601	NMY	34	0
61	CY	701	GDP	14	0
62	CY	702	FUA	14	0
63	DA	2901	NMY	23	0

## 5.7 Other polymers [i](#)

There are no such residues in this entry.

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

There are no chain breaks in this entry.

## 6 Fit of model and data ⓘ

### 6.1 Protein, DNA and RNA chains ⓘ

In the following table, the column labelled ‘#RSRZ> 2’ contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 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(Å²)	Q<0.9
1	AB	235/235 (100%)	-0.00	11 (4%)	35	23	17, 55, 103, 129	0
1	CB	235/235 (100%)	0.01	14 (5%)	25	15	17, 63, 111, 140	0
2	AC	207/207 (100%)	0.67	38 (18%)	2	1	18, 52, 99, 118	0
2	CC	207/207 (100%)	0.04	13 (6%)	23	14	15, 58, 99, 132	0
3	AD	208/208 (100%)	0.02	10 (4%)	34	22	14, 59, 107, 137	0
3	CD	208/208 (100%)	0.88	38 (18%)	2	1	20, 52, 102, 136	0
4	AE	151/151 (100%)	0.60	27 (17%)	2	2	26, 62, 96, 129	0
4	CE	151/151 (100%)	1.13	41 (27%)	1	1	19, 56, 99, 143	0
5	AF	101/101 (100%)	-0.17	0	100	100	22, 57, 111, 128	0
5	CF	101/101 (100%)	-0.28	2 (1%)	68	53	19, 56, 106, 128	0
6	AG	155/155 (100%)	0.19	11 (7%)	19	11	26, 78, 122, 150	0
6	CG	155/155 (100%)	-0.28	5 (3%)	51	35	38, 85, 120, 147	0
7	AH	138/138 (100%)	0.17	10 (7%)	18	11	16, 43, 87, 109	0
7	CH	138/138 (100%)	0.17	7 (5%)	32	21	10, 49, 86, 102	0
8	AI	127/127 (100%)	0.55	15 (11%)	6	5	30, 64, 101, 127	0
8	CI	127/127 (100%)	0.67	21 (16%)	2	2	9, 77, 108, 134	0
9	AJ	99/99 (100%)	1.00	24 (24%)	1	1	34, 64, 104, 146	0
9	CJ	99/99 (100%)	0.98	23 (23%)	1	1	22, 57, 107, 115	0
10	AK	119/119 (100%)	0.82	20 (16%)	2	2	13, 74, 139, 160	0
10	CK	119/119 (100%)	1.59	43 (36%)	0	1	21, 71, 125, 161	0
11	AL	125/125 (100%)	0.91	20 (16%)	3	2	15, 73, 145, 164	0
11	CL	125/125 (100%)	0.83	20 (16%)	3	2	27, 85, 148, 170	0
12	AM	125/125 (100%)	0.79	16 (12%)	5	4	43, 86, 129, 159	0
12	CM	125/125 (100%)	0.78	26 (20%)	1	1	27, 63, 103, 139	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
13	AN	60/60 (100%)	2.27	34 (56%) 0 1	33, 70, 116, 128	0
13	CN	60/60 (100%)	1.54	20 (33%) 0 1	30, 58, 105, 128	0
14	AO	88/88 (100%)	-0.10	2 (2%) 64 48	26, 53, 99, 110	0
14	CO	88/88 (100%)	-0.10	1 (1%) 82 69	8, 44, 84, 109	0
15	AP	84/84 (100%)	1.02	18 (21%) 1 1	33, 71, 110, 143	0
15	CP	84/84 (100%)	0.49	9 (10%) 8 5	39, 69, 111, 165	0
16	AQ	100/100 (100%)	1.03	25 (25%) 1 1	27, 62, 107, 131	0
16	CQ	100/100 (100%)	0.72	14 (14%) 4 3	22, 66, 120, 135	0
17	AR	70/70 (100%)	0.44	6 (8%) 13 8	19, 61, 102, 130	0
17	CR	70/70 (100%)	0.36	8 (11%) 7 5	24, 56, 100, 125	0
18	AS	79/79 (100%)	0.27	6 (7%) 17 10	17, 69, 111, 124	0
18	CS	79/79 (100%)	1.03	16 (20%) 1 1	28, 65, 108, 130	0
19	AT	99/99 (100%)	0.35	2 (2%) 68 53	17, 51, 85, 128	0
19	CT	99/99 (100%)	0.63	15 (15%) 3 2	26, 69, 110, 139	0
20	AY	661/687 (96%)	-0.23	20 (3%) 54 37	19, 64, 113, 178	0
20	CY	661/687 (96%)	-0.26	11 (1%) 73 58	11, 66, 108, 152	0
21	AA	1511/1511 (100%)	0.11	39 (2%) 59 43	10, 90, 161, 248	0
21	CA	1511/1511 (100%)	0.04	23 (1%) 76 62	10, 88, 160, 242	0
22	AW	77/77 (100%)	-0.04	0 100 100	15, 71, 130, 150	0
22	CW	77/77 (100%)	-0.14	0 100 100	30, 88, 145, 178	0
23	AV	36/36 (100%)	0.37	0 100 100	32, 89, 137, 186	0
23	CV	36/36 (100%)	0.62	3 (8%) 14 9	23, 139, 232, 237	0
24	AX	77/78 (98%)	0.69	6 (7%) 16 9	3, 65, 233, 320	0
24	CX	77/78 (98%)	0.84	9 (11%) 6 5	37, 123, 185, 285	0
25	BC	228/228 (100%)	0.46	26 (11%) 7 5	55, 104, 139, 159	0
25	DC	228/228 (100%)	0.45	30 (13%) 4 4	37, 90, 130, 169	0
26	BD	275/275 (100%)	1.52	99 (36%) 0 1	10, 61, 103, 125	0
26	DD	275/275 (100%)	0.91	52 (18%) 2 1	16, 57, 100, 127	0
27	BE	205/205 (100%)	1.47	65 (31%) 1 1	21, 60, 107, 131	0
27	DE	205/205 (100%)	1.19	58 (28%) 1 1	22, 57, 97, 142	0
28	BF	208/208 (100%)	0.55	25 (12%) 6 5	20, 67, 108, 149	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2		OWAB(Å <sup>2</sup> )	Q<0.9
28	DF	208/208 (100%)	0.77	46 (22%)	1 1	23, 75, 120, 140	0
29	BG	181/181 (100%)	-0.06	5 (2%)	56 40	28, 69, 113, 148	0
29	DG	181/181 (100%)	-0.19	4 (2%)	65 50	25, 71, 113, 148	0
30	BH	167/167 (100%)	0.37	21 (12%)	5 4	29, 65, 108, 121	0
30	DH	167/167 (100%)	0.11	8 (4%)	34 22	24, 59, 100, 132	0
31	BJ	0/170	-	-	-	-	-
31	DJ	0/170	-	-	-	-	-
32	BK	140/140 (100%)	-0.29	0	100 100	32, 71, 114, 126	0
32	DK	140/140 (100%)	0.26	17 (12%)	6 5	34, 77, 113, 138	0
33	BN	139/139 (100%)	1.86	49 (35%)	0 1	23, 105, 298, 334	0
33	DN	139/139 (100%)	2.97	59 (42%)	0 1	16, 116, 252, 312	0
34	BO	122/122 (100%)	1.00	27 (22%)	1 1	12, 50, 93, 111	0
34	DO	122/122 (100%)	1.19	28 (22%)	1 1	28, 59, 103, 132	0
35	BP	146/146 (100%)	0.18	10 (6%)	20 12	25, 63, 106, 123	0
35	DP	146/146 (100%)	0.31	15 (10%)	9 6	25, 67, 104, 131	0
36	BQ	141/141 (100%)	1.32	36 (25%)	1 1	5, 54, 93, 109	0
36	DQ	141/141 (100%)	1.82	53 (37%)	0 1	27, 70, 113, 141	0
37	BR	117/117 (100%)	0.64	11 (9%)	11 6	29, 65, 116, 145	0
37	DR	117/117 (100%)	0.90	21 (17%)	2 2	27, 62, 97, 126	0
38	BS	99/99 (100%)	0.70	15 (15%)	3 2	14, 70, 108, 117	0
38	DS	99/99 (100%)	0.75	12 (12%)	6 5	19, 52, 96, 120	0
39	BT	138/138 (100%)	0.37	19 (13%)	4 3	16, 59, 101, 123	0
39	DT	138/138 (100%)	0.14	16 (11%)	6 5	15, 51, 109, 140	0
40	BU	117/117 (100%)	0.33	5 (4%)	39 25	20, 56, 96, 121	0
40	DU	117/117 (100%)	0.16	0	100 100	13, 53, 94, 142	0
41	BV	101/101 (100%)	0.75	14 (13%)	4 3	21, 66, 108, 127	0
41	DV	101/101 (100%)	0.51	7 (6%)	20 12	15, 65, 101, 126	0
42	BW	113/113 (100%)	0.66	18 (15%)	3 2	13, 54, 99, 111	0
42	DW	113/113 (100%)	0.39	11 (9%)	10 6	15, 64, 116, 148	0
43	BX	93/93 (100%)	1.06	20 (21%)	1 1	20, 54, 96, 115	0
43	DX	93/93 (100%)	0.78	14 (15%)	3 2	13, 45, 87, 126	0
44	BY	107/107 (100%)	0.78	21 (19%)	1 1	29, 58, 109, 149	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
44	DY	107/107 (100%)	1.47	37 (34%) 0 1	25, 62, 97, 138	0
45	BZ	185/185 (100%)	-0.22	3 (1%) 74 60	17, 58, 97, 113	0
45	DZ	185/185 (100%)	-0.03	11 (5%) 26 15	33, 64, 101, 138	0
46	B0	84/84 (100%)	2.11	41 (48%) 0 1	26, 75, 117, 131	0
46	D0	84/84 (100%)	1.71	26 (30%) 1 1	19, 65, 108, 116	0
47	B1	93/93 (100%)	1.27	25 (26%) 1 1	21, 84, 140, 156	0
47	D1	93/93 (100%)	2.03	33 (35%) 0 1	31, 103, 148, 181	0
48	B2	71/71 (100%)	0.00	1 (1%) 78 63	23, 55, 95, 116	0
48	D2	71/71 (100%)	0.28	3 (4%) 40 26	35, 61, 103, 118	0
49	B3	60/60 (100%)	-0.05	1 (1%) 73 58	29, 60, 99, 112	0
49	D3	60/60 (100%)	0.16	5 (8%) 14 9	36, 68, 94, 110	0
50	B4	35/35 (100%)	0.44	5 (14%) 4 3	27, 71, 110, 122	0
50	D4	35/35 (100%)	-0.29	0 100 100	64, 109, 144, 185	0
51	B5	59/59 (100%)	0.77	14 (23%) 1 1	25, 63, 106, 123	0
51	D5	59/59 (100%)	0.57	10 (16%) 2 2	31, 68, 113, 138	0
52	B6	50/50 (100%)	0.78	15 (30%) 1 1	13, 57, 107, 154	0
52	D6	50/50 (100%)	0.30	7 (14%) 4 3	26, 65, 120, 154	0
53	B7	49/49 (100%)	1.87	17 (34%) 0 1	46, 91, 136, 164	0
53	D7	49/49 (100%)	1.99	21 (42%) 0 1	51, 73, 109, 134	0
54	B8	64/64 (100%)	2.65	44 (68%) 0 1	26, 58, 109, 132	0
54	D8	64/64 (100%)	2.99	45 (70%) 0 1	30, 64, 104, 118	0
55	B9	37/37 (100%)	1.78	16 (43%) 0 1	39, 64, 109, 116	0
55	D9	37/37 (100%)	0.73	4 (10%) 8 5	34, 65, 116, 134	0
56	Be	72/103 (69%)	-0.06	3 (4%) 40 26	15, 49, 122, 163	0
56	De	72/103 (69%)	0.03	5 (6%) 20 12	14, 57, 118, 157	0
57	Bf	0/31	-	-	-	-
57	Bg	0/31	-	-	-	-
57	Df	0/31	-	-	-	-
57	Dg	0/31	-	-	-	-
58	Bh	0/30	-	-	-	-
58	Dh	0/30	-	-	-	-
59	BA	2879/2879 (100%)	0.25	109 (3%) 44 30	11, 89, 164, 284	0
59	DA	2879/2879 (100%)	0.28	122 (4%) 40 26	9, 88, 171, 274	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
60	BB	119/119 (100%)	-0.33	0 100 100	18, 80, 158, 172	0
60	DB	119/119 (100%)	-0.23	0 100 100	30, 88, 150, 175	0
All	All	22852/23492 (97%)	0.42	2302 (10%) 9 6	3, 73, 146, 334	0

All (2302) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
33	DN	108	PRO	21.5
33	DN	81	GLY	18.6
33	DN	95	PRO	15.4
33	DN	86	PRO	14.7
33	DN	107	LEU	14.1
33	DN	94	HIS	12.3
33	BN	107	LEU	12.1
33	BN	86	PRO	11.6
33	DN	103	VAL	10.2
33	BN	80	GLY	9.6
33	BN	103	VAL	9.5
33	DN	79	PRO	9.4
33	DN	102	ALA	9.2
59	DA	2061	G	9.2
33	DN	100	GLU	9.1
25	DC	49	GLY	9.0
53	B7	38	GLY	9.0
59	DA	2502	G	9.0
33	DN	80	GLY	8.7
47	D1	59	THR	8.6
44	DY	3	VAL	8.6
19	CT	11	SER	8.5
9	AJ	48	THR	8.5
59	DA	2060	A	8.4
33	DN	109	LYS	8.4
33	DN	99	LEU	8.4
33	DN	85	ILE	8.3
42	BW	94	ASP	8.3
47	B1	42	GLN	8.2
33	BN	118	LYS	8.1
54	B8	65	GLU	8.1
34	DO	96	THR	8.0
33	BN	99	LEU	7.9
9	AJ	61	GLU	7.9

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Mol	Chain	Res	Type	RSRZ
23	CV	11	U	7.9
59	BA	2060	A	7.9
33	BN	81	GLY	7.8
33	DN	84	LYS	7.8
10	CK	41	THR	7.8
47	D1	12	PRO	7.8
33	BN	79	PRO	7.6
4	CE	91	LEU	7.5
36	DQ	25	ASP	7.5
36	DQ	31	ASP	7.5
33	DN	110	GLY	7.4
54	D8	23	VAL	7.4
44	DY	8	LYS	7.3
36	DQ	32	TYR	7.3
33	DN	98	VAL	7.3
33	DN	87	LEU	7.2
36	BQ	33	GLY	7.1
33	DN	82	LEU	7.1
26	BD	20	ASP	7.0
44	BY	3	VAL	7.0
33	BN	85	ILE	7.0
33	DN	111	PRO	6.9
54	D8	26	LYS	6.9
51	D5	5	PRO	6.9
10	AK	41	THR	6.9
36	DQ	33	GLY	6.9
59	BA	34	C	6.8
47	D1	60	PHE	6.8
33	DN	83	LYS	6.7
13	AN	21	TYR	6.7
33	DN	71	ILE	6.6
10	AK	31	THR	6.6
59	BA	2061	G	6.5
59	DA	2057	A	6.5
33	DN	49	GLY	6.5
33	BN	102	ALA	6.5
54	D8	22	VAL	6.5
19	CT	9	ASN	6.5
33	DN	104	LYS	6.5
10	CK	42	TRP	6.5
33	BN	119	ARG	6.5
44	BY	4	LYS	6.5

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Mol	Chain	Res	Type	RSRZ
44	DY	36	ALA	6.5
9	CJ	48	THR	6.4
36	DQ	20	ALA	6.4
47	D1	16	ASN	6.4
33	BN	84	LYS	6.4
28	DF	97	TYR	6.4
59	DA	1936	A	6.4
36	DQ	19	GLY	6.3
9	AJ	47	PHE	6.3
53	B7	49	ARG	6.3
32	DK	25	PRO	6.3
51	D5	4	HIS	6.2
54	B8	14	VAL	6.2
59	BA	1971	A	6.2
10	CK	31	THR	6.2
33	DN	112	LEU	6.2
26	BD	90	ALA	6.2
10	AK	21	ILE	6.1
46	D0	62	LEU	6.1
47	D1	19	GLN	6.1
36	DQ	106	VAL	6.1
44	BY	5	MET	6.1
42	DW	94	ASP	6.1
54	B8	64	TYR	6.1
13	AN	49	HIS	6.1
26	BD	58	HIS	6.1
33	BN	120	LEU	6.1
33	DN	51	PHE	6.1
33	DN	120	LEU	6.0
23	CV	28	A	6.0
9	AJ	49	VAL	6.0
28	DF	79	GLY	6.0
47	D1	14	VAL	5.9
47	D1	38	SER	5.9
19	CT	10	LEU	5.9
44	DY	4	LYS	5.9
33	DN	34	LEU	5.9
59	DA	574	C	5.9
27	BE	187	ALA	5.9
2	AC	201	TYR	5.9
17	CR	88	LYS	5.8
33	DN	90	MET	5.8

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Mol	Chain	Res	Type	RSRZ
44	BY	8	LYS	5.8
46	B0	70	GLN	5.8
54	D8	25	MET	5.8
27	BE	115	GLY	5.8
27	DE	125	GLY	5.7
26	BD	4	LYS	5.7
13	CN	6	LEU	5.7
36	DQ	97	VAL	5.7
47	B1	14	VAL	5.7
13	CN	5	ALA	5.7
42	DW	93	ALA	5.7
47	B1	60	PHE	5.7
19	CT	8	ARG	5.7
54	D8	64	TYR	5.7
47	D1	42	GLN	5.7
11	CL	14	GLY	5.6
59	DA	2250	G	5.6
27	DE	9	VAL	5.6
36	BQ	97	VAL	5.6
46	B0	75	LEU	5.6
9	AJ	62	HIS	5.6
27	BE	107	THR	5.6
25	DC	48	LEU	5.6
16	AQ	3	LYS	5.6
46	B0	26	TYR	5.6
27	DE	5	LEU	5.6
33	DN	116	LEU	5.6
26	BD	3	VAL	5.5
33	BN	100	GLU	5.5
10	AK	110	ASP	5.5
46	B0	78	TYR	5.5
17	AR	88	LYS	5.5
33	BN	116	LEU	5.5
36	DQ	15	GLY	5.5
34	DO	95	GLY	5.5
36	DQ	141	GLN	5.5
47	B1	16	ASN	5.5
59	DA	1963	U	5.5
59	DA	2612	C	5.5
6	AG	32	ARG	5.5
26	BD	235	GLY	5.5
33	DN	89	LYS	5.5

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Mol	Chain	Res	Type	RSRZ
16	AQ	73	VAL	5.4
47	D1	8	SER	5.4
4	CE	81	GLU	5.4
21	AA	1202	G	5.4
36	DQ	40	ALA	5.4
46	B0	79	VAL	5.4
27	DE	115	GLY	5.4
26	BD	2	ALA	5.4
42	DW	86	LEU	5.3
10	CK	110	ASP	5.3
36	DQ	104	PHE	5.3
59	DA	2449	U	5.3
27	DE	156	MET	5.3
47	D1	13	ILE	5.3
4	CE	90	VAL	5.3
33	BN	123	TYR	5.3
33	BN	115	ARG	5.3
4	CE	24	ARG	5.3
28	BF	90	PHE	5.2
44	DY	31	LEU	5.2
53	D7	49	ARG	5.2
51	B5	23	HIS	5.2
59	BA	2502	G	5.2
4	CE	101	ILE	5.2
59	DA	1945	G	5.2
47	B1	59	THR	5.2
47	D1	15	ALA	5.2
4	CE	25	ARG	5.2
25	BC	176	VAL	5.2
11	AL	67	THR	5.2
16	CQ	26	GLN	5.2
33	DN	97	ARG	5.2
33	BN	112	LEU	5.2
6	AG	33	ASP	5.2
30	BH	167	GLU	5.1
44	BY	30	VAL	5.1
59	DA	2501	C	5.1
16	AQ	2	PRO	5.1
54	D8	2	PRO	5.1
59	BA	1963	U	5.1
59	BA	2047	U	5.1
9	CJ	47	PHE	5.1

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Mol	Chain	Res	Type	RSRZ
54	B8	15	LYS	5.1
6	CG	81	GLY	5.1
33	DN	119	ARG	5.1
30	BH	162	ILE	5.1
47	B1	41	ARG	5.1
9	AJ	11	PHE	5.1
55	B9	9	ARG	5.1
59	DA	1966	A	5.1
53	D7	39	ARG	5.1
59	BA	180	G	5.1
59	DA	1935	G	5.0
4	CE	120	THR	5.0
11	CL	112	ASP	5.0
33	BN	111	PRO	5.0
59	DA	1941	C	5.0
26	BD	19	ALA	5.0
27	BE	10	GLY	5.0
11	AL	112	ASP	5.0
53	B7	43	THR	5.0
51	D5	2	ALA	5.0
10	CK	21	ILE	5.0
36	DQ	21	THR	5.0
2	AC	188	LEU	5.0
44	DY	6	HIS	5.0
59	DA	2334	G	5.0
47	D1	29	GLY	5.0
3	CD	207	TYR	5.0
51	B5	2	ALA	5.0
33	DN	117	PHE	5.0
55	B9	34	GLN	5.0
28	BF	97	TYR	5.0
27	BE	158	GLY	4.9
33	BN	98	VAL	4.9
33	DN	52	VAL	4.9
19	CT	71	THR	4.9
2	AC	195	VAL	4.9
37	BR	99	LYS	4.9
4	CE	15	ARG	4.9
9	CJ	49	VAL	4.9
26	BD	91	ARG	4.9
33	DN	17	ASP	4.9
44	DY	32	PRO	4.9

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Mol	Chain	Res	Type	RSRZ
53	B7	45	ALA	4.9
26	BD	200	ASP	4.9
42	DW	91	GLY	4.9
59	DA	1971	A	4.9
47	D1	41	ARG	4.9
34	BO	80	ASP	4.8
45	DZ	81	ARG	4.8
27	BE	195	LEU	4.8
33	DN	72	TYR	4.8
53	B7	39	ARG	4.8
36	DQ	41	TRP	4.8
36	DQ	105	GLU	4.8
1	AB	183	PRO	4.8
44	BY	7	VAL	4.8
11	AL	68	ALA	4.8
33	DN	115	ARG	4.8
30	BH	168	PRO	4.8
2	AC	2	GLY	4.8
59	DA	1970	A	4.7
10	AK	128	ALA	4.7
9	AJ	63	PHE	4.7
12	CM	122	LYS	4.7
10	CK	129	SER	4.7
12	CM	85	GLY	4.7
33	DN	101	HIS	4.7
36	BQ	40	ALA	4.7
44	DY	35	TYR	4.7
54	D8	24	ALA	4.7
54	D8	46	ARG	4.7
54	B8	63	PRO	4.7
34	BO	9	GLU	4.7
46	B0	81	VAL	4.7
44	DY	10	GLY	4.7
29	DG	34	LEU	4.7
38	DS	89	ARG	4.6
47	D1	11	ARG	4.6
43	BX	31	HIS	4.6
36	BQ	133	ARG	4.6
2	AC	196	LEU	4.6
44	DY	7	VAL	4.6
37	DR	11	ASN	4.6
26	BD	57	GLY	4.6

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Mol	Chain	Res	Type	RSRZ
9	AJ	50	ILE	4.6
25	BC	50	ILE	4.6
47	B1	19	GLN	4.6
59	BA	1824	G	4.6
59	DA	945	A	4.6
54	D8	47	LYS	4.6
28	DF	96	ASP	4.6
47	B1	15	ALA	4.6
4	AE	101	ILE	4.6
27	BE	7	VAL	4.6
38	BS	41	ASP	4.6
44	DY	30	VAL	4.6
26	DD	40	THR	4.6
51	D5	23	HIS	4.6
33	BN	87	LEU	4.6
21	CA	965	A	4.6
26	DD	3	VAL	4.6
46	D0	53	MET	4.6
54	D8	63	PRO	4.6
13	AN	46	GLU	4.6
44	BY	31	LEU	4.6
26	BD	246	PRO	4.6
28	DF	114	VAL	4.6
10	CK	128	ALA	4.5
27	BE	118	LYS	4.5
36	DQ	140	ALA	4.5
44	DY	66	PRO	4.5
54	D8	7	HIS	4.5
4	CE	89	ILE	4.5
26	BD	253	GLN	4.5
59	BA	1945	G	4.5
33	BN	34	LEU	4.5
59	DA	1962	C	4.5
54	D8	16	ILE	4.5
59	BA	1970	A	4.5
59	DA	2056	G	4.5
30	BH	89	ILE	4.5
2	CC	201	TYR	4.5
20	CY	570	GLY	4.5
33	DN	45	ASN	4.5
33	DN	46	VAL	4.5
47	B1	13	ILE	4.5

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Mol	Chain	Res	Type	RSRZ
12	AM	124	PRO	4.5
13	AN	10	ALA	4.4
27	DE	106	GLY	4.4
2	AC	151	VAL	4.4
36	BQ	104	PHE	4.4
46	B0	74	ARG	4.4
12	AM	123	ALA	4.4
46	D0	17	GLN	4.4
59	DA	1942	C	4.4
59	DA	242	G	4.4
27	DE	105	THR	4.4
27	BE	196	VAL	4.4
10	AK	129	SER	4.4
34	DO	84	ALA	4.4
53	D7	40	TRP	4.4
2	CC	150	LYS	4.4
26	BD	56	GLY	4.4
53	D7	17	GLY	4.4
27	BE	120	TRP	4.4
27	BE	25	VAL	4.4
54	B8	3	LYS	4.4
8	AI	40	LEU	4.4
27	BE	159	HIS	4.4
54	B8	61	LEU	4.4
55	D9	26	ILE	4.4
11	CL	67	THR	4.3
13	AN	48	ALA	4.3
26	BD	23	GLU	4.3
59	BA	1930	G	4.3
33	DN	118	LYS	4.3
44	DY	72	VAL	4.3
12	AM	122	LYS	4.3
25	BC	161	ARG	4.3
26	BD	254	THR	4.3
47	D1	10	LYS	4.3
59	DA	2613	U	4.3
4	CE	80	ILE	4.3
54	D8	10	ALA	4.3
54	D8	60	LEU	4.3
28	DF	27	GLU	4.3
42	DW	92	ARG	4.3
37	BR	21	TYR	4.3

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Mol	Chain	Res	Type	RSRZ
59	BA	588	U	4.3
36	BQ	32	TYR	4.3
13	CN	7	ILE	4.3
46	D0	75	LEU	4.3
53	D7	38	GLY	4.3
27	BE	119	ARG	4.3
59	BA	1941	C	4.3
28	DF	40	GLN	4.3
54	B8	57	ARG	4.3
33	BN	44	PRO	4.3
47	B1	12	PRO	4.3
59	BA	508	G	4.3
59	DA	1964	G	4.3
37	DR	21	TYR	4.3
46	D0	61	ALA	4.2
51	B5	3	LYS	4.2
36	DQ	23	GLY	4.2
32	DK	24	GLY	4.2
54	D8	15	LYS	4.2
26	DD	18	VAL	4.2
13	AN	59	ALA	4.2
59	BA	2046	G	4.2
54	B8	4	MET	4.2
36	DQ	98	LYS	4.2
44	DY	33	LYS	4.2
18	CS	74	PHE	4.2
35	BP	82	GLY	4.2
46	B0	17	GLN	4.2
33	DN	54	VAL	4.2
27	BE	24	THR	4.2
55	B9	35	ARG	4.2
46	B0	63	VAL	4.2
36	BQ	31	ASP	4.2
9	CJ	11	PHE	4.2
12	CM	125	ARG	4.2
11	CL	68	ALA	4.2
26	DD	2	ALA	4.2
27	BE	73	GLU	4.2
27	BE	193	GLY	4.2
19	CT	72	LEU	4.2
4	CE	26	PHE	4.2
2	AC	200	ALA	4.2

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Mol	Chain	Res	Type	RSRZ
36	DQ	107	ALA	4.1
28	BF	56	GLU	4.1
27	BE	194	GLY	4.1
33	BN	83	LYS	4.1
54	D8	27	THR	4.1
34	BO	96	THR	4.1
10	CK	50	TYR	4.1
4	AE	31	LEU	4.1
42	DW	85	VAL	4.1
3	CD	181	MET	4.1
39	DT	1	MET	4.1
3	CD	208	SER	4.1
53	D7	43	THR	4.1
13	AN	6	LEU	4.1
26	BD	233	HIS	4.1
46	B0	21	LEU	4.1
33	DN	11	PRO	4.1
27	DE	187	ALA	4.1
54	D8	14	VAL	4.1
42	DW	87	PRO	4.1
27	BE	114	ALA	4.1
53	B7	46	VAL	4.1
11	CL	20	LYS	4.1
36	DQ	103	MET	4.1
53	B7	48	LYS	4.1
18	CS	40	ILE	4.1
54	D8	4	MET	4.1
46	B0	18	ALA	4.1
4	AE	88	LYS	4.1
53	D7	16	HIS	4.1
25	DC	203	GLU	4.1
25	DC	204	GLY	4.1
26	BD	183	ARG	4.1
37	BR	2	ARG	4.1
53	D7	48	LYS	4.1
25	DC	163	GLU	4.1
26	BD	204	ILE	4.1
56	De	53	PRO	4.1
18	CS	33	THR	4.1
47	B1	11	ARG	4.1
42	BW	93	ALA	4.1
10	CK	121	PRO	4.1

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Mol	Chain	Res	Type	RSRZ
27	BE	191	PRO	4.1
44	DY	28	LYS	4.1
59	BA	1936	A	4.1
2	AC	162	GLN	4.1
59	DA	1965	C	4.0
10	AK	42	TRP	4.0
12	CM	88	ARG	4.0
42	BW	98	LYS	4.0
47	D1	48	LYS	4.0
2	AC	186	PHE	4.0
39	BT	1	MET	4.0
26	BD	89	SER	4.0
18	CS	82	GLY	4.0
47	B1	38	SER	4.0
10	CK	25	TYR	4.0
59	BA	1946	U	4.0
26	BD	184	LYS	4.0
38	BS	26	LEU	4.0
55	B9	1	MET	4.0
11	CL	71	PRO	4.0
26	DD	4	LYS	4.0
27	DE	10	GLY	4.0
42	BW	85	VAL	4.0
25	DC	200	HIS	4.0
59	BA	1935	G	4.0
54	D8	5	LYS	4.0
43	DX	79	ALA	4.0
44	DY	37	VAL	4.0
12	CM	123	ALA	4.0
36	BQ	105	GLU	4.0
34	DO	18	LYS	4.0
59	BA	1938	A	4.0
26	BD	21	PHE	4.0
26	BD	81	ALA	4.0
26	BD	27	THR	4.0
36	BQ	132	VAL	4.0
41	DV	71	LEU	4.0
27	BE	160	TYR	4.0
12	AM	88	ARG	4.0
56	De	52	ALA	4.0
6	AG	11	GLN	4.0
10	AK	20	TYR	4.0

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Mol	Chain	Res	Type	RSRZ
11	AL	14	GLY	4.0
19	CT	15	ARG	4.0
47	D1	61	ARG	4.0
33	BN	46	VAL	4.0
17	CR	87	ARG	4.0
26	BD	236	GLY	3.9
54	D8	28	GLY	3.9
54	D8	50	LEU	3.9
59	BA	1906	G	3.9
16	AQ	24	GLU	3.9
54	B8	43	GLN	3.9
26	BD	83	GLU	3.9
59	BA	1947	C	3.9
26	BD	203	ASN	3.9
15	AP	29	ASP	3.9
26	DD	235	GLY	3.9
25	DC	210	LEU	3.9
33	BN	89	LYS	3.9
25	DC	227	PRO	3.9
27	DE	107	THR	3.9
27	BE	116	VAL	3.9
4	AE	14	ARG	3.9
16	CQ	2	PRO	3.9
4	AE	89	ILE	3.9
33	BN	82	LEU	3.9
53	D7	45	ALA	3.9
12	AM	121	LYS	3.9
54	B8	21	LYS	3.9
36	DQ	34	LEU	3.9
51	B5	11	THR	3.9
26	DD	238	GLY	3.9
21	CA	1395	C	3.9
26	BD	198	ASN	3.9
27	BE	124	GLY	3.9
54	D8	6	THR	3.9
8	CI	127	LYS	3.9
4	CE	29	GLY	3.9
33	DN	121	LYS	3.9
51	D5	3	LYS	3.9
59	BA	1944	U	3.9
44	BY	33	LYS	3.9
36	DQ	18	LYS	3.9

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Mol	Chain	Res	Type	RSRZ
36	BQ	12	GLN	3.9
44	DY	67	LEU	3.9
47	B1	49	VAL	3.9
50	B4	14	ILE	3.9
26	BD	156	ALA	3.8
13	CN	49	HIS	3.8
53	B7	16	HIS	3.8
26	DD	56	GLY	3.8
26	DD	236	GLY	3.8
33	BN	109	LYS	3.8
33	BN	49	GLY	3.8
44	BY	34	LYS	3.8
26	BD	40	THR	3.8
26	BD	80	ALA	3.8
28	BF	181	LEU	3.8
47	B1	40	ARG	3.8
54	B8	48	PHE	3.8
4	CE	119	LEU	3.8
28	DF	47	GLY	3.8
24	AX	20	G	3.8
55	D9	16	VAL	3.8
2	AC	46	GLU	3.8
32	DK	27	LEU	3.8
15	AP	30	GLY	3.8
25	DC	209	PHE	3.8
13	AN	11	LYS	3.8
15	AP	31	LYS	3.8
26	DD	19	ALA	3.8
9	CJ	50	ILE	3.8
34	DO	9	GLU	3.8
59	DA	1916	A	3.8
9	CJ	60	ARG	3.8
43	BX	80	ILE	3.8
59	BA	2251	G	3.8
27	BE	53	PRO	3.8
28	DF	75	HIS	3.8
45	DZ	117	LEU	3.8
53	B7	41	ARG	3.8
3	AD	183	GLY	3.8
26	BD	18	VAL	3.8
27	BE	138	PRO	3.8
4	CE	139	LEU	3.8

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Mol	Chain	Res	Type	RSRZ
27	DE	26	ILE	3.8
54	B8	51	ALA	3.8
45	DZ	78	LYS	3.8
27	DE	25	VAL	3.8
46	D0	50	ASN	3.8
4	CE	30	ALA	3.8
46	B0	52	GLY	3.8
10	AK	30	VAL	3.8
59	BA	1966	A	3.8
4	AE	130	ASN	3.8
26	DD	237	GLU	3.8
45	DZ	83	PRO	3.8
15	CP	29	ASP	3.8
16	CQ	22	LEU	3.8
35	DP	52	GLU	3.8
43	BX	32	PRO	3.8
16	AQ	10	VAL	3.7
25	BC	136	GLY	3.7
36	BQ	15	GLY	3.7
59	DA	2058	A	3.7
3	CD	93	PHE	3.7
54	D8	51	ALA	3.7
59	BA	1383	C	3.7
36	DQ	102	VAL	3.7
59	DA	1946	U	3.7
26	BD	59	LYS	3.7
13	AN	52	GLN	3.7
2	AC	164	ARG	3.7
15	AP	36	ILE	3.7
39	BT	73	GLU	3.7
44	DY	29	GLU	3.7
4	AE	81	GLU	3.7
46	D0	23	VAL	3.7
21	AA	1517	G	3.7
27	DE	195	LEU	3.7
4	CE	92	LYS	3.7
36	DQ	26	TYR	3.7
37	DR	29	LEU	3.7
44	DY	38	ILE	3.7
38	DS	11	LYS	3.7
21	AA	577	G	3.7
36	DQ	86	GLY	3.7

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Mol	Chain	Res	Type	RSRZ
56	De	51	ALA	3.7
59	DA	2251	G	3.7
8	CI	128	ARG	3.7
59	DA	1943	U	3.7
56	Be	51	ALA	3.7
46	B0	25	ARG	3.7
53	B7	44	PRO	3.7
34	DO	10	VAL	3.7
36	DQ	24	GLY	3.7
52	B6	12	GLU	3.7
26	BD	60	ARG	3.7
43	BX	27	THR	3.7
54	D8	3	LYS	3.7
53	D7	15	THR	3.7
59	BA	1964	G	3.7
53	D7	41	ARG	3.7
59	BA	1932	A	3.7
46	D0	52	GLY	3.7
12	CM	86	CYS	3.7
36	BQ	131	ILE	3.7
52	D6	54	ILE	3.7
59	BA	1965	C	3.7
59	BA	2501	C	3.7
27	DE	6	GLY	3.7
37	DR	99	LYS	3.7
20	AY	378	VAL	3.7
47	D1	30	VAL	3.7
34	DO	83	ALA	3.7
18	CS	39	THR	3.6
26	BD	30	GLU	3.6
18	CS	81	ARG	3.6
54	D8	43	GLN	3.6
9	CJ	63	PHE	3.6
16	AQ	61	GLU	3.6
29	BG	2	PRO	3.6
35	BP	22	GLY	3.6
36	DQ	39	PRO	3.6
44	DY	69	ALA	3.6
21	CA	1485	U	3.6
26	BD	32	SER	3.6
27	DE	186	GLY	3.6
33	DN	16	ILE	3.6

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Mol	Chain	Res	Type	RSRZ
43	BX	79	ALA	3.6
32	DK	2	LYS	3.6
47	B1	34	THR	3.6
27	BE	188	VAL	3.6
45	DZ	79	ARG	3.6
59	DA	1907	G	3.6
21	AA	239	U	3.6
1	CB	165	VAL	3.6
34	DO	85	VAL	3.6
59	DA	2690	C	3.6
54	D8	45	GLY	3.6
33	BN	1	MET	3.6
28	BF	98	SER	3.6
59	DA	747	U	3.6
6	CG	82	GLY	3.6
28	BF	89	VAL	3.6
27	BE	117	MET	3.6
33	BN	51	PHE	3.6
4	CE	13	ILE	3.6
21	AA	921	U	3.6
12	AM	125	ARG	3.6
1	AB	68	ILE	3.6
4	AE	91	LEU	3.6
38	DS	26	LEU	3.6
59	DA	2031	A	3.6
27	DE	155	LYS	3.6
27	BE	132	HIS	3.6
59	BA	1972	A	3.6
19	CT	18	GLN	3.6
26	DD	200	ASP	3.6
41	BV	5	VAL	3.6
6	AG	26	PHE	3.6
39	BT	97	ALA	3.6
54	D8	21	LYS	3.6
12	AM	85	GLY	3.5
44	DY	11	ASP	3.5
49	D3	14	GLY	3.5
10	CK	20	TYR	3.5
9	CJ	61	GLU	3.5
10	CK	30	VAL	3.5
36	BQ	96	VAL	3.5
26	DD	175	LEU	3.5

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Mol	Chain	Res	Type	RSRZ
36	DQ	133	ARG	3.5
54	D8	61	LEU	3.5
8	CI	66	ARG	3.5
11	AL	111	LYS	3.5
59	BA	2334	G	3.5
59	DA	1947	C	3.5
26	BD	22	SER	3.5
34	BO	81	ASP	3.5
38	DS	88	ASP	3.5
54	B8	24	ALA	3.5
26	DD	13	ARG	3.5
4	CE	128	PRO	3.5
13	AN	5	ALA	3.5
39	DT	100	TYR	3.5
44	BY	32	PRO	3.5
33	DN	96	GLU	3.5
27	BE	155	LYS	3.5
26	BD	94	LEU	3.5
46	D0	63	VAL	3.5
53	B7	6	GLN	3.5
26	BD	37	LEU	3.5
28	DF	42	ALA	3.5
38	BS	87	PHE	3.5
54	B8	60	LEU	3.5
8	CI	31	GLN	3.5
33	DN	50	ASP	3.5
38	BS	39	ILE	3.5
52	B6	54	ILE	3.5
20	CY	155	GLU	3.5
27	DE	196	VAL	3.5
46	B0	8	GLY	3.5
54	B8	47	LYS	3.5
3	CD	94	LEU	3.5
32	DK	26	ALA	3.5
36	DQ	68	ILE	3.5
41	DV	70	ILE	3.5
39	BT	104	ASN	3.5
40	BU	4	ALA	3.5
59	DA	1909	C	3.5
36	DQ	130	LYS	3.5
10	CK	22	HIS	3.5
2	AC	189	ALA	3.5

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Mol	Chain	Res	Type	RSRZ
17	CR	84	LYS	3.5
30	DH	168	PRO	3.5
34	BO	18	LYS	3.5
33	DN	44	PRO	3.5
53	D7	14	LYS	3.5
54	D8	11	LYS	3.5
9	AJ	60	ARG	3.4
36	BQ	30	GLY	3.4
46	B0	47	PRO	3.4
47	D1	20	ARG	3.4
10	AK	40	ILE	3.4
55	B9	26	ILE	3.4
55	D9	17	ILE	3.4
35	BP	60	MET	3.4
26	DD	22	SER	3.4
13	AN	47	LEU	3.4
16	CQ	21	VAL	3.4
44	DY	5	MET	3.4
46	B0	9	SER	3.4
11	CL	19	ARG	3.4
10	AK	19	ALA	3.4
36	BQ	107	ALA	3.4
44	DY	34	LYS	3.4
54	B8	16	ILE	3.4
42	BW	84	ARG	3.4
27	BE	205	ALA	3.4
18	AS	32	LYS	3.4
54	B8	11	LYS	3.4
59	DA	1273	U	3.4
27	BE	105	THR	3.4
27	BE	163	GLU	3.4
59	BA	2622	C	3.4
15	CP	2	VAL	3.4
28	DF	89	VAL	3.4
16	CQ	24	GLU	3.4
55	D9	25	VAL	3.4
12	AM	27	LYS	3.4
2	AC	202	ILE	3.4
38	BS	38	GLN	3.4
2	AC	163	ALA	3.4
12	CM	104	ARG	3.4
25	BC	49	GLY	3.4

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Mol	Chain	Res	Type	RSRZ
32	DK	12	LEU	3.4
59	DA	1955	U	3.4
47	D1	6	GLU	3.4
54	D8	44	LYS	3.4
59	DA	508	G	3.4
59	DA	573	G	3.4
43	BX	34	ALA	3.4
47	D1	37	ILE	3.4
4	AE	15	ARG	3.4
26	BD	17	THR	3.4
52	B6	35	GLU	3.4
13	AN	42	ILE	3.4
59	BA	1379	A	3.4
38	DS	91	PRO	3.4
46	D0	46	LYS	3.4
30	BH	103	LEU	3.4
42	BW	95	ILE	3.4
10	CK	109	VAL	3.4
26	BD	29	PRO	3.4
27	DE	7	VAL	3.4
46	D0	78	TYR	3.4
27	BE	5	LEU	3.4
36	BQ	34	LEU	3.4
12	CM	92	HIS	3.4
52	B6	26	ASN	3.4
37	DR	72	ASP	3.3
19	CT	73	HIS	3.3
54	B8	13	ARG	3.3
54	D8	48	PHE	3.3
26	DD	90	ALA	3.3
42	BW	81	ALA	3.3
46	D0	79	VAL	3.3
12	AM	104	ARG	3.3
10	CK	16	SER	3.3
12	AM	16	ASP	3.3
26	BD	38	LYS	3.3
19	CT	12	ALA	3.3
27	DE	157	ALA	3.3
53	D7	47	ARG	3.3
26	DD	23	GLU	3.3
59	BA	1937	A	3.3
3	CD	82	ALA	3.3

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
15	AP	64	ALA	3.3
21	AA	289	G	3.3
2	CC	131	ARG	3.3
10	AK	86	GLY	3.3
4	CE	28	PHE	3.3
47	D1	35	THR	3.3
21	AA	1516	G	3.3
25	BC	157	ILE	3.3
10	CK	23	ALA	3.3
44	DY	24	VAL	3.3
25	BC	58	ASN	3.3
34	DO	82	ASN	3.3
54	B8	36	LYS	3.3
8	CI	34	ASN	3.3
34	DO	79	PHE	3.3
21	AA	1190	G	3.3
36	BQ	27	VAL	3.3
39	BT	103	ARG	3.3
55	B9	8	LYS	3.3
34	DO	50	GLY	3.3
36	BQ	23	GLY	3.3
4	CE	31	LEU	3.3
4	AE	90	VAL	3.3
25	BC	225	ILE	3.3
46	D0	25	ARG	3.3
1	CB	183	PRO	3.3
2	AC	169	ALA	3.3
3	CD	108	LEU	3.3
27	BE	76	ARG	3.3
1	AB	67	THR	3.3
44	BY	6	HIS	3.3
4	CE	14	ARG	3.3
34	DO	17	ARG	3.3
12	CM	84	ILE	3.3
21	AA	1484	C	3.3
36	DQ	27	VAL	3.3
8	AI	26	VAL	3.3
27	BE	8	LYS	3.3
43	DX	78	LYS	3.3
4	AE	123	LEU	3.3
26	BD	28	GLU	3.3
10	CK	74	ALA	3.3

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Mol	Chain	Res	Type	RSRZ
4	CE	88	LYS	3.3
54	B8	7	HIS	3.3
33	DN	78	TYR	3.3
36	BQ	41	TRP	3.3
16	AQ	45	HIS	3.3
25	DC	228	HIS	3.3
27	BE	9	VAL	3.3
33	DN	122	VAL	3.3
25	BC	48	LEU	3.2
42	BW	82	LEU	3.2
59	BA	1922	G	3.2
59	DA	2055	C	3.2
26	BD	31	LYS	3.2
26	BD	175	LEU	3.2
26	BD	252	TRP	3.2
27	BE	27	LEU	3.2
27	BE	192	ASN	3.2
59	BA	1943	U	3.2
13	AN	50	LYS	3.2
55	B9	15	LYS	3.2
32	DK	23	VAL	3.2
16	AQ	25	ARG	3.2
18	CS	59	PRO	3.2
59	BA	1962	C	3.2
59	DA	1948	G	3.2
1	CB	200	ILE	3.2
27	BE	157	ALA	3.2
59	DA	1937	A	3.2
27	DE	197	ILE	3.2
37	DR	22	ARG	3.2
26	BD	55	GLY	3.2
28	DF	98	SER	3.2
55	B9	33	LYS	3.2
20	AY	377	VAL	3.2
27	DE	4	ILE	3.2
34	DO	42	SER	3.2
38	BS	40	ILE	3.2
10	AK	22	HIS	3.2
39	BT	50	ILE	3.2
43	BX	8	ILE	3.2
52	B6	25	LYS	3.2
39	DT	104	ASN	3.2

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
11	AL	83	VAL	3.2
15	AP	59	TRP	3.2
33	BN	52	VAL	3.2
47	D1	58	ILE	3.2
25	BC	180	SER	3.2
30	BH	87	LEU	3.2
36	DQ	17	LEU	3.2
53	D7	46	VAL	3.2
3	CD	209	ARG	3.2
15	CP	59	TRP	3.2
44	DY	102	CYS	3.2
59	BA	2255	G	3.2
27	DE	153	GLY	3.2
28	DF	71	GLY	3.2
3	CD	81	GLU	3.2
27	DE	126	PRO	3.2
59	BA	2612	C	3.2
59	DA	1956	U	3.2
45	DZ	118	GLN	3.2
4	CE	135	THR	3.2
25	BC	62	THR	3.2
46	B0	10	THR	3.2
33	DN	92	ALA	3.2
9	CJ	56	HIS	3.2
34	BO	45	GLU	3.2
41	BV	17	GLY	3.2
1	CB	163	PHE	3.2
28	DF	48	THR	3.2
9	AJ	53	PRO	3.2
17	CR	85	LEU	3.2
18	AS	15	LEU	3.2
37	DR	100	LEU	3.2
2	AC	150	LYS	3.2
26	DD	52	ARG	3.2
36	BQ	106	VAL	3.2
34	BO	50	GLY	3.2
17	CR	43	PHE	3.2
59	BA	214	G	3.2
27	DE	91	VAL	3.2
59	BA	1942	C	3.2
2	AC	152	ILE	3.2
35	DP	56	SER	3.2

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Mol	Chain	Res	Type	RSRZ
34	BO	84	ALA	3.2
10	CK	28	THR	3.2
34	DO	64	ARG	3.2
34	DO	102	VAL	3.2
3	CD	95	GLY	3.2
9	AJ	98	ILE	3.2
27	DE	194	GLY	3.2
43	DX	80	ILE	3.2
54	B8	62	LEU	3.2
13	AN	58	LYS	3.2
3	CD	126	ILE	3.1
9	CJ	58	ASP	3.1
16	AQ	71	PHE	3.1
25	BC	193	PHE	3.1
9	AJ	52	GLY	3.1
18	CS	68	GLY	3.1
20	AY	570	GLY	3.1
59	BA	242	G	3.1
20	AY	354	ARG	3.1
27	DE	124	GLY	3.1
36	DQ	131	ILE	3.1
10	CK	73	MET	3.1
11	CL	13	LYS	3.1
15	AP	60	LEU	3.1
59	DA	1944	U	3.1
45	DZ	119	GLU	3.1
11	CL	69	TYR	3.1
51	B5	5	PRO	3.1
59	BA	1957	C	3.1
26	DD	91	ARG	3.1
44	DY	9	LYS	3.1
34	DO	80	ASP	3.1
39	BT	102	ILE	3.1
26	BD	251	GLY	3.1
33	BN	108	PRO	3.1
26	DD	254	THR	3.1
8	AI	115	GLY	3.1
12	AM	10	PRO	3.1
25	DC	68	GLY	3.1
26	BD	26	LYS	3.1
52	D6	12	GLU	3.1
12	CM	105	THR	3.1

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Mol	Chain	Res	Type	RSRZ
26	BD	218	ARG	3.1
59	BA	1266	G	3.1
59	BA	2550	G	3.1
13	AN	44	LEU	3.1
49	B3	12	PRO	3.1
4	AE	122	GLU	3.1
1	CB	99	GLY	3.1
2	CC	167	TRP	3.1
47	D1	49	VAL	3.1
54	D8	29	LYS	3.1
59	DA	1647	G	3.1
26	BD	36	PRO	3.1
28	DF	91	GLY	3.1
12	CM	126	LYS	3.1
12	AM	84	ILE	3.1
15	AP	19	ILE	3.1
46	B0	82	ARG	3.1
36	BQ	25	ASP	3.1
44	BY	29	GLU	3.1
16	AQ	4	LYS	3.1
27	DE	120	TRP	3.1
4	CE	130	ASN	3.1
35	DP	65	ARG	3.1
4	CE	131	ILE	3.1
26	BD	245	PRO	3.1
35	DP	22	GLY	3.1
38	BS	88	ASP	3.1
54	B8	12	LYS	3.1
16	AQ	62	SER	3.1
19	AT	72	LEU	3.1
27	DE	114	ALA	3.1
54	B8	27	THR	3.1
27	BE	106	GLY	3.1
46	D0	64	ASP	3.0
1	CB	66	GLY	3.0
54	D8	13	ARG	3.0
3	CD	111	ALA	3.0
28	DF	37	VAL	3.0
9	AJ	64	GLU	3.0
27	DE	149	ARG	3.0
28	DF	65	TRP	3.0
25	BC	56	ASP	3.0

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Mol	Chain	Res	Type	RSRZ
27	DE	137	HIS	3.0
47	D1	23	LYS	3.0
51	B5	22	HIS	3.0
55	B9	25	VAL	3.0
2	AC	161	GLU	3.0
13	AN	28	GLY	3.0
59	BA	1958	C	3.0
33	DN	12	ARG	3.0
34	BO	17	ARG	3.0
37	DR	3	HIS	3.0
51	D5	12	SER	3.0
37	DR	10	LEU	3.0
47	D1	7	ILE	3.0
8	AI	119	ALA	3.0
28	DF	70	THR	3.0
33	BN	3	THR	3.0
59	DA	2035	G	3.0
21	CA	1484	C	3.0
43	BX	58	HIS	3.0
59	DA	1938	A	3.0
10	CK	122	LYS	3.0
26	BD	33	LEU	3.0
53	B7	47	ARG	3.0
33	DN	123	TYR	3.0
17	AR	43	PHE	3.0
33	BN	94	HIS	3.0
6	CG	80	VAL	3.0
11	CL	18	VAL	3.0
21	AA	1486	G	3.0
21	AA	1066	C	3.0
59	DA	2622	C	3.0
13	AN	20	ALA	3.0
10	CK	87	THR	3.0
38	DS	90	GLY	3.0
47	B1	61	ARG	3.0
11	AL	56	ALA	3.0
37	DR	112	ALA	3.0
38	BS	37	ALA	3.0
41	BV	6	LYS	3.0
42	BW	83	LYS	3.0
46	D0	74	ARG	3.0
6	AG	155	ARG	3.0

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Mol	Chain	Res	Type	RSRZ
26	DD	17	THR	3.0
32	DK	22	PRO	3.0
36	DQ	118	LEU	3.0
59	DA	1959	G	3.0
51	B5	29	THR	3.0
1	AB	161	ALA	3.0
9	AJ	69	ASN	3.0
12	CM	94	ARG	3.0
13	CN	9	LYS	3.0
28	DF	52	LYS	3.0
3	CD	68	TYR	3.0
46	D0	22	GLY	3.0
59	DA	1930	G	3.0
33	BN	104	LYS	3.0
43	DX	33	LYS	3.0
47	B1	58	ILE	3.0
54	B8	50	LEU	3.0
10	AK	85	ARG	2.9
59	BA	1823	G	2.9
26	BD	214	TRP	2.9
35	BP	64	LYS	2.9
41	BV	69	LYS	2.9
34	DO	99	PHE	2.9
36	BQ	103	MET	2.9
54	B8	46	ARG	2.9
12	AM	30	ALA	2.9
26	BD	234	GLY	2.9
38	DS	65	VAL	2.9
21	AA	1415	G	2.9
28	DF	88	VAL	2.9
33	BN	95	PRO	2.9
46	B0	69	PHE	2.9
36	DQ	85	LYS	2.9
59	BA	1918	A	2.9
16	AQ	42	TYR	2.9
47	D1	9	GLY	2.9
38	DS	87	PHE	2.9
9	CJ	71	LEU	2.9
10	CK	123	LYS	2.9
10	AK	32	ILE	2.9
46	B0	76	GLY	2.9
34	DO	94	ARG	2.9

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Mol	Chain	Res	Type	RSRZ
59	BA	2690	C	2.9
43	DX	27	THR	2.9
54	B8	54	GLU	2.9
37	DR	73	VAL	2.9
3	CD	109	GLY	2.9
13	CN	59	ALA	2.9
1	CB	160	ASP	2.9
21	CA	1202	G	2.9
12	AM	19	LEU	2.9
26	BD	276	LYS	2.9
52	B6	36	LEU	2.9
4	AE	18	ARG	2.9
24	CX	68	C	2.9
26	BD	144	ALA	2.9
40	BU	7	GLY	2.9
54	B8	20	GLY	2.9
54	D8	9	GLY	2.9
27	BE	6	GLY	2.9
41	BV	70	ILE	2.9
18	CS	35	SER	2.9
3	CD	136	PRO	2.9
4	CE	109	ILE	2.9
35	BP	65	ARG	2.9
59	DA	1960	A	2.9
46	B0	62	LEU	2.9
3	CD	125	HIS	2.9
54	B8	25	MET	2.9
10	CK	65	ALA	2.9
28	BF	91	GLY	2.9
16	CQ	3	LYS	2.9
38	BS	44	LYS	2.9
26	DD	95	LEU	2.9
54	D8	62	LEU	2.9
59	DA	2497	A	2.9
2	AC	157	ILE	2.9
27	DE	76	ARG	2.9
11	CL	72	GLY	2.9
13	CN	10	ALA	2.9
9	AJ	65	LEU	2.9
28	DF	41	LEU	2.9
43	BX	81	VAL	2.9
10	CK	108	ILE	2.9

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Mol	Chain	Res	Type	RSRZ
29	BG	96	ARG	2.9
59	DA	125	G	2.9
59	DA	1972	A	2.9
18	CS	9	VAL	2.9
10	CK	40	ILE	2.9
46	B0	41	ARG	2.9
13	AN	51	GLY	2.9
27	BE	137	HIS	2.9
54	D8	20	GLY	2.9
36	DQ	117	ALA	2.9
41	BV	7	THR	2.9
59	BA	1974	C	2.9
59	BA	2238	G	2.9
2	AC	187	ALA	2.9
16	AQ	74	LEU	2.9
50	B4	13	ARG	2.9
54	B8	23	VAL	2.9
34	DO	81	ASP	2.9
52	D6	26	ASN	2.9
2	CC	196	LEU	2.8
28	DF	95	ARG	2.8
54	B8	58	ILE	2.8
1	AB	160	ASP	2.8
29	BG	137	GLU	2.8
4	CE	27	ARG	2.8
13	CN	12	ARG	2.8
16	CQ	39	SER	2.8
9	CJ	8	LEU	2.8
13	AN	30	ALA	2.8
21	AA	816	A	2.8
21	AA	1273	G	2.8
43	DX	58	HIS	2.8
59	BA	1948	G	2.8
17	AR	42	ARG	2.8
37	BR	70	LEU	2.8
28	DF	110	LEU	2.8
42	BW	86	LEU	2.8
59	DA	1913	A	2.8
25	DC	46	ALA	2.8
27	BE	98	PRO	2.8
11	CL	12	ARG	2.8
36	DQ	101	ARG	2.8

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Mol	Chain	Res	Type	RSRZ
20	AY	411	VAL	2.8
34	BO	10	VAL	2.8
42	DW	82	LEU	2.8
44	DY	39	VAL	2.8
51	B5	21	SER	2.8
10	CK	32	ILE	2.8
26	BD	174	ILE	2.8
26	DD	21	PHE	2.8
46	B0	64	ASP	2.8
25	BC	177	GLY	2.8
26	DD	234	GLY	2.8
27	BE	11	MET	2.8
27	DE	152	LYS	2.8
1	CB	184	VAL	2.8
39	BT	105	LEU	2.8
26	DD	203	ASN	2.8
44	DY	25	GLY	2.8
24	AX	69	A	2.8
59	BA	1566	A	2.8
35	BP	70	GLN	2.8
43	DX	32	PRO	2.8
27	DE	158	GLY	2.8
4	CE	47	LYS	2.8
9	CJ	55	LYS	2.8
39	BT	101	PHE	2.8
2	AC	121	ALA	2.8
4	AE	135	THR	2.8
6	AG	30	ILE	2.8
11	CL	70	ILE	2.8
13	CN	58	LYS	2.8
27	DE	154	LYS	2.8
44	BY	9	LYS	2.8
54	B8	6	THR	2.8
7	AH	5	PRO	2.8
11	AL	66	VAL	2.8
25	BC	175	PRO	2.8
59	BA	1904	G	2.8
15	AP	27	LYS	2.8
16	CQ	41	LYS	2.8
34	BO	46	ALA	2.8
53	B7	40	TRP	2.8
27	DE	165	VAL	2.8

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
46	B0	80	HIS	2.8
9	AJ	58	ASP	2.8
15	AP	23	ASP	2.8
11	CL	78	GLN	2.8
26	BD	164	GLN	2.8
27	BE	156	MET	2.8
59	DA	1933	G	2.8
2	AC	199	LYS	2.8
42	BW	80	PRO	2.8
15	AP	56	ALA	2.8
26	DD	276	LYS	2.8
56	De	54	ALA	2.8
28	BF	114	VAL	2.8
46	D0	84	LEU	2.8
26	BD	243	GLY	2.8
21	AA	290	C	2.8
24	AX	25	C	2.8
25	DC	62	THR	2.8
46	B0	46	LYS	2.8
54	D8	12	LYS	2.8
50	B4	31	ILE	2.8
59	DA	1953	A	2.8
26	BD	247	ALA	2.7
35	DP	21	ARG	2.7
55	B9	32	HIS	2.7
8	AI	123	PRO	2.7
12	AM	37	THR	2.7
27	BE	92	THR	2.7
52	B6	13	CYS	2.7
53	D7	44	PRO	2.7
3	AD	97	LEU	2.7
25	DC	197	LEU	2.7
21	AA	121	C	2.7
34	BO	47	ILE	2.7
56	Be	52	ALA	2.7
56	Be	54	ALA	2.7
27	BE	26	ILE	2.7
14	AO	2	PRO	2.7
21	AA	1482	G	2.7
59	DA	1910	G	2.7
59	DA	2550	G	2.7
26	DD	12	SER	2.7

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Mol	Chain	Res	Type	RSRZ
43	DX	31	HIS	2.7
26	BD	34	VAL	2.7
27	DE	188	VAL	2.7
41	BV	14	VAL	2.7
59	BA	1939	U	2.7
12	CM	93	ARG	2.7
37	DR	110	PRO	2.7
43	BX	11	PRO	2.7
46	D0	41	ARG	2.7
47	B1	20	ARG	2.7
13	CN	61	TRP	2.7
28	DF	53	THR	2.7
51	D5	29	THR	2.7
13	AN	7	ILE	2.7
25	DC	164	PHE	2.7
9	AJ	56	HIS	2.7
21	AA	570	G	2.7
24	CX	74	C	2.7
59	BA	1908	C	2.7
59	BA	1960	A	2.7
59	DA	1266	G	2.7
46	B0	39	ARG	2.7
39	BT	71	GLY	2.7
7	CH	133	LEU	2.7
13	CN	11	LYS	2.7
20	AY	356	LEU	2.7
26	DD	199	ALA	2.7
3	CD	69	GLY	2.7
3	CD	180	GLY	2.7
24	CX	75	C	2.7
59	BA	2254	C	2.7
10	CK	124	LYS	2.7
16	AQ	20	THR	2.7
25	BC	158	LYS	2.7
27	DE	24	THR	2.7
36	DQ	54	MET	2.7
13	AN	45	ARG	2.7
16	CQ	25	ARG	2.7
26	BD	211	ARG	2.7
29	DG	96	ARG	2.7
39	BT	106	SER	2.7
46	B0	30	VAL	2.7

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
16	AQ	41	LYS	2.7
25	DC	193	PHE	2.7
6	AG	5	ARG	2.7
13	AN	57	ARG	2.7
26	BD	54	ARG	2.7
27	DE	104	VAL	2.7
11	CL	111	LYS	2.7
43	BX	78	LYS	2.7
50	B4	22	ILE	2.7
33	DN	48	MET	2.7
38	DS	92	TYR	2.7
4	AE	30	ALA	2.7
1	CB	185	ILE	2.7
8	AI	113	LYS	2.7
33	BN	2	LYS	2.7
13	AN	26	ARG	2.7
54	B8	45	GLY	2.7
26	BD	82	ILE	2.7
41	BV	68	LYS	2.7
41	BV	21	ARG	2.7
59	BA	2069	G	2.7
59	BA	2250	G	2.7
26	BD	6	PHE	2.7
36	BQ	130	LYS	2.7
3	CD	66	ARG	2.7
7	CH	1	MET	2.7
16	AQ	43	LEU	2.7
21	AA	1240	U	2.7
33	BN	48	MET	2.7
53	B7	42	LEU	2.7
2	AC	168	ALA	2.7
20	AY	104	ALA	2.7
4	AE	106	PRO	2.7
36	BQ	22	LYS	2.7
43	BX	33	LYS	2.7
36	DQ	42	ILE	2.7
26	BD	95	LEU	2.7
26	DD	57	GLY	2.7
10	AK	50	TYR	2.7
27	DE	138	PRO	2.7
41	BV	12	TYR	2.7
59	DA	1906	G	2.7

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Mol	Chain	Res	Type	RSRZ
59	DA	2032	G	2.7
25	BC	69	LEU	2.6
12	CM	87	TYR	2.6
13	CN	21	TYR	2.6
59	BA	1916	A	2.6
28	DF	38	ARG	2.6
54	D8	37	SER	2.6
2	CC	129	ALA	2.6
11	CL	88	GLY	2.6
15	AP	34	GLU	2.6
30	BH	169	VAL	2.6
25	DC	47	LYS	2.6
54	B8	28	GLY	2.6
28	DF	81	PRO	2.6
42	BW	87	PRO	2.6
59	DA	1949	G	2.6
4	CE	82	VAL	2.6
28	BF	41	LEU	2.6
29	BG	28	VAL	2.6
33	DN	29	LYS	2.6
53	D7	32	LYS	2.6
59	DA	2556	C	2.6
36	BQ	123	HIS	2.6
3	CD	83	SER	2.6
2	AC	159	GLY	2.6
33	BN	121	LYS	2.6
10	CK	85	ARG	2.6
59	BA	1933	G	2.6
59	DA	2448	A	2.6
11	AL	13	LYS	2.6
15	CP	27	LYS	2.6
25	BC	33	LEU	2.6
27	BE	189	PRO	2.6
36	DQ	108	GLY	2.6
15	CP	26	ARG	2.6
45	DZ	80	ARG	2.6
54	B8	30	ARG	2.6
26	BD	64	ILE	2.6
27	BE	23	VAL	2.6
43	BX	9	LEU	2.6
24	AX	47	U	2.6
54	B8	10	ALA	2.6

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Mol	Chain	Res	Type	RSRZ
51	D5	11	THR	2.6
44	DY	107	ASP	2.6
27	DE	8	LYS	2.6
2	CC	168	ALA	2.6
4	CE	87	SER	2.6
52	B6	24	GLU	2.6
9	CJ	12	ASP	2.6
13	AN	9	LYS	2.6
25	DC	225	ILE	2.6
30	BH	115	VAL	2.6
8	AI	39	GLY	2.6
28	BF	188	ARG	2.6
26	BD	104	TYR	2.6
39	DT	68	TYR	2.6
11	AL	19	ARG	2.6
35	DP	50	ARG	2.6
53	D7	33	ARG	2.6
27	BE	190	GLY	2.6
8	AI	41	VAL	2.6
10	CK	44	SER	2.6
11	AL	100	ILE	2.6
21	AA	1416	G	2.6
28	BF	26	ALA	2.6
26	DD	166	GLN	2.6
28	BF	79	GLY	2.6
37	BR	69	ASP	2.6
11	CL	31	PRO	2.6
28	BF	27	GLU	2.6
54	D8	54	GLU	2.6
32	DK	8	VAL	2.6
37	DR	111	LEU	2.6
41	DV	5	VAL	2.6
13	CN	41	ARG	2.6
16	AQ	44	ALA	2.6
43	BX	28	PHE	2.6
1	AB	162	ILE	2.6
21	AA	815	A	2.6
13	AN	23	ARG	2.6
15	AP	26	ARG	2.6
25	DC	194	ILE	2.6
30	BH	131	VAL	2.6
54	B8	2	PRO	2.6

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Mol	Chain	Res	Type	RSRZ
36	BQ	121	ALA	2.6
4	CE	129	ILE	2.6
13	CN	23	ARG	2.6
32	DK	21	PRO	2.6
38	BS	25	ARG	2.6
42	BW	14	PRO	2.6
1	AB	182	ILE	2.6
20	AY	357	ARG	2.6
33	BN	16	ILE	2.6
59	DA	1908	C	2.6
59	DA	2611	U	2.6
1	AB	66	GLY	2.6
28	DF	26	ALA	2.6
36	BQ	108	GLY	2.6
17	CR	42	ARG	2.6
17	CR	86	VAL	2.6
18	CS	41	VAL	2.6
36	DQ	132	VAL	2.6
39	BT	72	VAL	2.6
5	CF	89	MET	2.6
41	BV	15	GLU	2.6
47	B1	37	ILE	2.6
52	D6	35	GLU	2.6
30	DH	173	PRO	2.6
44	DY	94	LYS	2.6
49	D3	12	PRO	2.6
59	DA	1274	A	2.6
18	AS	82	GLY	2.6
13	AN	12	ARG	2.5
20	CY	530	VAL	2.5
3	AD	208	SER	2.5
12	CM	121	LYS	2.5
21	AA	306	G	2.5
3	AD	139	ARG	2.5
28	DF	36	VAL	2.5
9	CJ	96	ILE	2.5
10	CK	43	SER	2.5
13	AN	37	PHE	2.5
47	D1	24	ALA	2.5
54	B8	5	LYS	2.5
3	CD	75	PHE	2.5
17	CR	47	THR	2.5

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Mol	Chain	Res	Type	RSRZ
25	DC	212	SER	2.5
44	DY	70	SER	2.5
1	AB	137	ARG	2.5
26	DD	72	LYS	2.5
52	D6	11	LEU	2.5
59	DA	1939	U	2.5
4	CE	106	PRO	2.5
12	CM	101	GLN	2.5
10	CK	72	ALA	2.5
21	CA	1421	G	2.5
49	D3	13	ILE	2.5
3	CD	80	GLU	2.5
28	BF	96	ASP	2.5
16	CQ	23	VAL	2.5
26	DD	176	ARG	2.5
59	DA	1247	A	2.5
3	CD	188	LEU	2.5
26	BD	41	GLY	2.5
19	CT	16	HIS	2.5
59	BA	2507	C	2.5
11	AL	127	GLU	2.5
2	AC	160	ALA	2.5
10	CK	15	ALA	2.5
28	DF	67	GLN	2.5
59	DA	1921	G	2.5
4	AE	27	ARG	2.5
26	DD	9	TYR	2.5
54	D8	65	GLU	2.5
26	BD	39	LYS	2.5
37	DR	9	LYS	2.5
34	BO	19	ILE	2.5
2	AC	190	ARG	2.5
19	CT	17	ARG	2.5
3	CD	17	VAL	2.5
24	AX	1	G	2.5
27	DE	27	LEU	2.5
13	CN	30	ALA	2.5
59	DA	2030	A	2.5
8	CI	12	GLU	2.5
9	CJ	62	HIS	2.5
15	AP	54	GLU	2.5
20	CY	411	VAL	2.5

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
28	DF	57	VAL	2.5
20	AY	133	ILE	2.5
43	DX	8	ILE	2.5
9	AJ	46	ARG	2.5
11	AL	18	VAL	2.5
12	CM	27	LYS	2.5
26	BD	5	LYS	2.5
26	DD	5	LYS	2.5
39	DT	65	LYS	2.5
54	D8	39	LYS	2.5
59	BA	1915	U	2.5
3	CD	89	THR	2.5
26	BD	237	GLU	2.5
59	BA	179	G	2.5
59	DA	1984	G	2.5
59	DA	2255	G	2.5
8	CI	122	ALA	2.5
10	CK	125	PHE	2.5
12	CM	2	ALA	2.5
44	DY	65	ALA	2.5
46	B0	77	ARG	2.5
26	BD	249	PRO	2.5
33	BN	45	ASN	2.5
27	DE	160	TYR	2.5
8	CI	27	THR	2.5
30	BH	178	ALA	2.5
36	BQ	98	LYS	2.5
18	CS	44	MET	2.5
59	BA	1032	A	2.5
20	CY	393	ASP	2.5
21	CA	1415	G	2.5
34	BO	68	GLU	2.5
59	BA	205	G	2.5
59	BA	1169	G	2.5
12	CM	100	GLY	2.5
35	DP	61	ARG	2.5
41	DV	82	ARG	2.5
3	CD	178	VAL	2.5
21	AA	1056	U	2.5
9	CJ	64	GLU	2.5
6	CG	35	LYS	2.5
20	AY	376	ALA	2.5

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Mol	Chain	Res	Type	RSRZ
39	DT	97	ALA	2.5
41	DV	75	PHE	2.5
42	DW	81	ALA	2.5
44	DY	16	ALA	2.5
24	AX	5	G	2.5
46	D0	59	LEU	2.5
59	BA	1149	G	2.5
59	BA	1929	G	2.5
59	BA	1985	G	2.5
59	DA	2557	G	2.5
27	DE	159	HIS	2.5
52	D6	25	LYS	2.5
4	CE	100	VAL	2.5
10	CK	84	VAL	2.5
27	BE	91	VAL	2.5
39	DT	67	SER	2.5
14	AO	3	ILE	2.4
30	BH	151	ILE	2.4
36	BQ	124	LYS	2.4
46	B0	73	GLY	2.4
59	DA	1918	A	2.4
21	CA	1529	G	2.4
52	B6	22	ALA	2.4
59	DA	794	G	2.4
59	DA	1905	C	2.4
26	BD	182	LEU	2.4
39	DT	105	LEU	2.4
7	AH	111	ILE	2.4
8	CI	8	GLY	2.4
26	BD	201	HIS	2.4
28	DF	73	ALA	2.4
43	DX	81	VAL	2.4
12	CM	97	PRO	2.4
20	AY	365	GLU	2.4
28	BF	92	PRO	2.4
34	DO	100	GLY	2.4
2	CC	195	VAL	2.4
11	AL	108	ALA	2.4
12	CM	118	ALA	2.4
21	CA	13	U	2.4
59	BA	1816	G	2.4
59	BA	2252	G	2.4

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Mol	Chain	Res	Type	RSRZ
26	BD	61	LEU	2.4
39	DT	99	LEU	2.4
16	AQ	99	SER	2.4
3	CD	2	GLY	2.4
3	CD	16	GLY	2.4
9	CJ	10	GLY	2.4
8	CI	26	VAL	2.4
34	BO	24	VAL	2.4
4	CE	12	LEU	2.4
8	CI	111	ARG	2.4
10	CK	120	ARG	2.4
37	BR	100	LEU	2.4
44	DY	71	LYS	2.4
24	CX	72	C	2.4
7	AH	49	GLU	2.4
10	CK	24	SER	2.4
10	CK	119	CYS	2.4
26	DD	20	ASP	2.4
13	CN	8	GLU	2.4
37	DR	23	ASN	2.4
9	AJ	67	THR	2.4
21	AA	305	G	2.4
27	DE	116	VAL	2.4
47	B1	35	THR	2.4
54	B8	22	VAL	2.4
55	B9	16	VAL	2.4
3	CD	96	LEU	2.4
16	CQ	101	ARG	2.4
47	B1	10	LYS	2.4
49	D3	53	LEU	2.4
53	B7	31	LEU	2.4
1	CB	170	GLU	2.4
10	AK	49	GLY	2.4
20	CY	410	ASP	2.4
30	BH	166	GLY	2.4
26	BD	155	LEU	2.4
26	DD	39	LYS	2.4
59	BA	1905	C	2.4
46	B0	45	PHE	2.4
33	BN	54	VAL	2.4
33	BN	62	VAL	2.4
28	BF	182	ASN	2.4

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Mol	Chain	Res	Type	RSRZ
37	DR	71	GLN	2.4
42	BW	13	SER	2.4
13	CN	22	THR	2.4
25	BC	172	ILE	2.4
26	DD	96	HIS	2.4
13	AN	41	ARG	2.4
25	DC	211	ARG	2.4
28	DF	56	GLU	2.4
30	DH	90	LYS	2.4
42	DW	90	ARG	2.4
54	D8	49	VAL	2.4
59	DA	958	U	2.4
25	BC	210	LEU	2.4
8	CI	32	ASP	2.4
2	AC	156	ARG	2.4
11	AL	88	GLY	2.4
16	AQ	9	VAL	2.4
34	BO	85	VAL	2.4
47	B1	62	VAL	2.4
59	BA	430	G	2.4
21	AA	975	A	2.4
48	B2	16	LEU	2.4
3	AD	207	TYR	2.4
4	AE	26	PHE	2.4
11	AL	69	TYR	2.4
59	BA	200	U	2.4
4	CE	18	ARG	2.4
46	B0	13	GLY	2.4
47	D1	39	LYS	2.4
3	CD	205	GLU	2.4
12	CM	90	LEU	2.4
20	CY	157	LEU	2.4
18	CS	42	PRO	2.4
26	BD	92	ILE	2.4
44	BY	35	TYR	2.4
46	D0	70	GLN	2.4
51	B5	24	ALA	2.4
19	CT	37	SER	2.4
20	CY	156	ARG	2.4
28	BF	52	LYS	2.4
54	B8	44	LYS	2.4
59	DA	1954	G	2.4

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
27	BE	186	GLY	2.4
52	B6	11	LEU	2.4
59	DA	569	U	2.4
59	DA	1940	U	2.4
4	CE	48	ALA	2.4
20	AY	353	ALA	2.4
25	DC	190	ILE	2.4
36	BQ	117	ALA	2.4
59	DA	1958	C	2.4
29	DG	75	LYS	2.4
54	D8	8	LYS	2.4
26	DD	32	SER	2.4
19	CT	13	LEU	2.4
27	BE	125	GLY	2.4
30	BH	161	GLY	2.4
55	B9	21	GLY	2.4
27	BE	162	ALA	2.4
4	AE	29	GLY	2.4
32	DK	115	LEU	2.4
35	DP	53	GLY	2.4
42	BW	101	SER	2.4
26	DD	204	ILE	2.4
28	BF	78	ILE	2.4
44	DY	12	THR	2.4
36	BQ	28	ALA	2.4
13	AN	53	LEU	2.4
28	DF	109	GLY	2.4
51	B5	28	PRO	2.4
21	AA	607	A	2.4
2	AC	165	THR	2.4
4	AE	134	ALA	2.4
26	BD	176	ARG	2.4
30	DH	89	ILE	2.4
59	DA	1975	G	2.4
34	DO	62	VAL	2.4
10	CK	49	GLY	2.3
36	DQ	62	GLY	2.3
35	DP	64	LYS	2.3
3	AD	126	ILE	2.3
30	DH	151	ILE	2.3
39	DT	101	PHE	2.3
8	CI	119	ALA	2.3

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Mol	Chain	Res	Type	RSRZ
27	BE	72	VAL	2.3
30	DH	115	VAL	2.3
39	BT	100	TYR	2.3
49	D3	54	VAL	2.3
59	BA	235	U	2.3
4	AE	119	LEU	2.3
8	AI	30	GLY	2.3
13	CN	44	LEU	2.3
26	BD	215	LEU	2.3
30	BH	117	PRO	2.3
30	DH	118	PRO	2.3
39	DT	71	GLY	2.3
4	AE	109	ILE	2.3
25	BC	73	VAL	2.3
27	BE	197	ILE	2.3
59	BA	2318	G	2.3
43	BX	43	VAL	2.3
54	B8	49	VAL	2.3
26	BD	250	TRP	2.3
2	AC	42	LEU	2.3
47	B1	95	LEU	2.3
3	CD	139	ARG	2.3
12	CM	31	LYS	2.3
59	DA	588	U	2.3
59	DA	2047	U	2.3
8	AI	122	ALA	2.3
47	D1	71	TYR	2.3
59	DA	575	A	2.3
7	AH	25	ASP	2.3
7	CH	24	THR	2.3
21	CA	1486	G	2.3
10	AK	48	ILE	2.3
59	DA	1967	C	2.3
37	DR	98	LEU	2.3
46	B0	61	ALA	2.3
1	CB	137	ARG	2.3
26	BD	217	ARG	2.3
37	BR	12	ARG	2.3
24	CX	69	A	2.3
46	B0	23	VAL	2.3
21	CA	1417	G	2.3
59	BA	2050	C	2.3

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Mol	Chain	Res	Type	RSRZ
25	BC	51	ASP	2.3
28	BF	53	THR	2.3
44	BY	24	VAL	2.3
56	De	121	VAL	2.3
54	D8	40	GLU	2.3
2	CC	189	ALA	2.3
34	BO	16	ALA	2.3
37	BR	22	ARG	2.3
41	BV	27	ALA	2.3
21	CA	1500	A	2.3
20	AY	105	ILE	2.3
20	AY	571	SER	2.3
21	CA	1418	A	2.3
59	BA	1755	A	2.3
59	BA	2059	A	2.3
27	BE	104	VAL	2.3
27	DE	135	HIS	2.3
34	DO	19	ILE	2.3
1	AB	159	PRO	2.3
3	CD	78	LEU	2.3
30	BH	116	GLU	2.3
37	BR	62	ALA	2.3
48	D2	10	LEU	2.3
21	AA	1488	G	2.3
21	CA	1480	G	2.3
53	D7	35	ARG	2.3
13	CN	37	PHE	2.3
34	BO	82	ASN	2.3
45	BZ	81	ARG	2.3
46	B0	71	ASP	2.3
15	AP	63	GLY	2.3
36	DQ	65	PHE	2.3
2	CC	151	VAL	2.3
13	AN	25	VAL	2.3
24	CX	71	C	2.3
36	DQ	96	VAL	2.3
43	BX	7	VAL	2.3
16	AQ	22	LEU	2.3
27	DE	147	PRO	2.3
28	DF	92	PRO	2.3
38	DS	24	LEU	2.3
42	DW	84	ARG	2.3

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Mol	Chain	Res	Type	RSRZ
47	D1	93	GLU	2.3
15	CP	30	GLY	2.3
40	BU	32	PHE	2.3
11	CL	54	LYS	2.3
12	AM	90	LEU	2.3
26	DD	54	ARG	2.3
9	CJ	35	SER	2.3
26	DD	30	GLU	2.3
51	B5	12	SER	2.3
51	D5	24	ALA	2.3
12	CM	116	THR	2.3
20	AY	15	ILE	2.3
21	AA	1485	U	2.3
26	BD	25	THR	2.3
42	BW	17	VAL	2.3
59	DA	1931	U	2.3
2	AC	175	LEU	2.3
26	DD	211	ARG	2.3
21	AA	1487	G	2.3
28	BF	155	LEU	2.3
28	BF	192	LEU	2.3
28	BF	205	ARG	2.3
38	BS	48	LEU	2.3
45	DZ	178	GLU	2.3
59	BA	1559	G	2.3
55	B9	24	TYR	2.3
30	DH	114	VAL	2.3
13	AN	22	THR	2.3
34	DO	39	ILE	2.3
59	BA	2439	A	2.3
47	D1	95	LEU	2.3
59	BA	184	C	2.3
59	DA	2021	C	2.3
59	DA	2616	C	2.3
2	AC	45	LYS	2.3
8	CI	123	PRO	2.3
27	BE	161	GLY	2.3
34	BO	52	VAL	2.3
39	DT	72	VAL	2.3
43	BX	54	VAL	2.3
27	DE	166	THR	2.3
44	BY	14	LEU	2.3

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Mol	Chain	Res	Type	RSRZ
2	AC	198	VAL	2.3
3	CD	203	VAL	2.3
29	DG	36	LYS	2.3
46	B0	59	LEU	2.3
36	DQ	129	THR	2.3
52	D6	22	ALA	2.3
27	BE	77	ILE	2.3
34	DO	122	LEU	2.2
59	BA	1172	G	2.2
59	DA	2565	A	2.2
4	CE	105	VAL	2.2
33	DN	47	ALA	2.2
42	BW	8	ARG	2.2
46	D0	77	ARG	2.2
51	D5	6	VAL	2.2
9	AJ	68	HIS	2.2
35	DP	60	MET	2.2
9	CJ	69	ASN	2.2
8	CI	30	GLY	2.2
28	DF	35	GLU	2.2
32	DK	53	VAL	2.2
36	BQ	42	ILE	2.2
38	BS	82	ILE	2.2
24	CX	73	A	2.2
52	B6	34	LEU	2.2
59	DA	2357	U	2.2
16	CQ	71	PHE	2.2
7	AH	6	ILE	2.2
26	DD	240	ALA	2.2
46	B0	32	ARG	2.2
27	BE	148	GLY	2.2
27	DE	148	GLY	2.2
32	DK	28	GLY	2.2
27	DE	132	HIS	2.2
35	DP	51	PHE	2.2
13	AN	32	SER	2.2
9	CJ	95	GLU	2.2
11	CL	56	ALA	2.2
14	CO	3	ILE	2.2
16	CQ	79	SER	2.2
21	AA	920	U	2.2
30	BH	114	VAL	2.2

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Mol	Chain	Res	Type	RSRZ
34	DO	77	ILE	2.2
39	DT	94	ALA	2.2
30	BH	105	LEU	2.2
46	B0	6	GLY	2.2
54	B8	56	GLU	2.2
59	DA	2553	G	2.2
41	DV	74	LYS	2.2
1	CB	164	VAL	2.2
3	AD	209	ARG	2.2
6	AG	10	ARG	2.2
20	CY	497	PHE	2.2
28	BF	88	VAL	2.2
37	DR	2	ARG	2.2
51	B5	4	HIS	2.2
6	CG	154	TYR	2.2
55	B9	17	ILE	2.2
16	AQ	69	LYS	2.2
27	DE	1	MET	2.2
33	BN	90	MET	2.2
25	DC	208	THR	2.2
2	AC	130	VAL	2.2
26	DD	233	HIS	2.2
51	B5	27	PRO	2.2
34	BO	2	ILE	2.2
9	AJ	71	LEU	2.2
27	BE	52	LEU	2.2
47	B1	39	LYS	2.2
16	CQ	75	ARG	2.2
39	BT	22	PHE	2.2
51	B5	19	ARG	2.2
17	AR	86	VAL	2.2
27	BE	54	GLN	2.2
36	BQ	39	PRO	2.2
40	BU	6	THR	2.2
2	AC	9	GLY	2.2
37	BR	19	ALA	2.2
53	D7	31	LEU	2.2
55	B9	37	GLY	2.2
59	DA	1917	U	2.2
9	CJ	70	ARG	2.2
10	CK	126	ARG	2.2
18	CS	10	PHE	2.2

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Mol	Chain	Res	Type	RSRZ
23	CV	27	A	2.2
26	DD	89	SER	2.2
59	DA	2062	A	2.2
34	DO	63	VAL	2.2
44	BY	72	VAL	2.2
21	CA	1407	C	2.2
28	DF	66	PRO	2.2
44	BY	66	PRO	2.2
1	AB	77	ALA	2.2
2	AC	194	GLY	2.2
3	AD	138	TYR	2.2
6	AG	22	LEU	2.2
29	BG	34	LEU	2.2
55	B9	12	ASP	2.2
26	BD	16	MET	2.2
26	BD	219	PRO	2.2
36	DQ	64	ILE	2.2
39	DT	102	ILE	2.2
36	BQ	21	THR	2.2
36	DQ	113	GLN	2.2
59	BA	1928	A	2.2
59	BA	2602	A	2.2
59	DA	1912	A	2.2
33	BN	106	MET	2.2
17	AR	19	LYS	2.2
21	CA	1367	C	2.2
21	CA	1482	G	2.2
44	BY	28	LYS	2.2
45	BZ	78	LYS	2.2
59	DA	1961	C	2.2
28	DF	78	ILE	2.2
59	DA	2252	G	2.2
3	CD	201	GLN	2.2
9	AJ	39	PRO	2.2
28	DF	181	LEU	2.2
34	BO	8	LEU	2.2
28	BF	47	GLY	2.2
28	DF	80	ALA	2.2
34	BO	64	ARG	2.2
38	BS	43	GLU	2.2
38	BS	89	ARG	2.2
46	B0	22	GLY	2.2

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Mol	Chain	Res	Type	RSRZ
48	D2	13	ALA	2.2
59	DA	576	U	2.2
16	AQ	23	VAL	2.2
25	DC	201	LYS	2.2
10	CK	75	TYR	2.2
53	D7	42	LEU	2.2
36	DQ	28	ALA	2.2
39	BT	51	ARG	2.2
16	AQ	11	VAL	2.2
25	DC	59	VAL	2.2
25	DC	213	VAL	2.2
26	BD	220	HIS	2.2
21	CA	693	G	2.2
34	DO	56	ASP	2.2
59	BA	741	G	2.2
37	DR	75	LEU	2.2
26	DD	246	PRO	2.2
46	D0	40	GLN	2.2
39	BT	48	ILE	2.2
15	AP	55	ARG	2.2
28	DF	87	GLY	2.2
59	DA	2499	C	2.2
46	B0	83	PRO	2.2
54	B8	59	LYS	2.2
21	AA	1274	G	2.2
59	DA	2238	G	2.2
59	DA	2253	G	2.2
36	DQ	14	ARG	2.2
40	BU	39	LEU	2.2
27	BE	22	PRO	2.2
52	B6	51	GLU	2.2
53	D7	25	PRO	2.2
7	AH	134	ILE	2.1
12	CM	91	ARG	2.1
17	AR	87	ARG	2.1
21	AA	314	C	2.1
21	AA	1514	C	2.1
37	DR	12	ARG	2.1
48	D2	36	ARG	2.1
59	DA	86	C	2.1
6	AG	37	ASN	2.1
36	BQ	122	GLY	2.1

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Mol	Chain	Res	Type	RSRZ
36	DQ	63	LYS	2.1
39	DT	98	LYS	2.1
54	B8	8	LYS	2.1
1	CB	159	PRO	2.1
8	CI	35	GLU	2.1
59	BA	1674	G	2.1
59	BA	2603	G	2.1
26	DD	162	SER	2.1
34	BO	42	SER	2.1
35	BP	55	ARG	2.1
39	BT	93	ARG	2.1
59	BA	1676	A	2.1
2	AC	155	GLY	2.1
4	AE	124	GLY	2.1
11	CL	129	ALA	2.1
45	DZ	71	VAL	2.1
7	AH	1	MET	2.1
15	AP	33	ILE	2.1
26	BD	69	ARG	2.1
28	DF	192	LEU	2.1
36	BQ	141	GLN	2.1
26	BD	202	LYS	2.1
20	AY	572	TYR	2.1
30	BH	123	PHE	2.1
27	DE	92	THR	2.1
32	DK	31	GLY	2.1
33	BN	110	GLY	2.1
32	DK	20	ALA	2.1
35	DP	58	THR	2.1
59	BA	1910	G	2.1
59	BA	2141	G	2.1
59	BA	2505	G	2.1
59	BA	2557	G	2.1
21	AA	1483	A	2.1
27	BE	111	ARG	2.1
28	DF	182	ASN	2.1
52	B6	42	TRP	2.1
59	DA	572	A	2.1
59	DA	1969	A	2.1
18	AS	59	PRO	2.1
30	BH	88	LEU	2.1
35	DP	63	PRO	2.1

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Mol	Chain	Res	Type	RSRZ
37	BR	60	LEU	2.1
3	CD	140	VAL	2.1
4	CE	133	TYR	2.1
47	B1	43	TYR	2.1
59	DA	2609	U	2.1
32	DK	51	ALA	2.1
59	DA	1761	C	2.1
59	DA	2050	C	2.1
35	BP	50	ARG	2.1
27	DE	80	GLU	2.1
50	B4	23	GLU	2.1
7	AH	4	ASP	2.1
25	BC	52	PRO	2.1
53	B7	37	LYS	2.1
7	AH	135	CYS	2.1
2	CC	130	VAL	2.1
8	CI	33	PHE	2.1
26	BD	166	GLN	2.1
25	DC	207	GLY	2.1
36	DQ	84	GLY	2.1
59	BA	1626	G	2.1
59	BA	2152	G	2.1
59	BA	2600	A	2.1
7	CH	3	THR	2.1
19	CT	30	LYS	2.1
21	AA	1065	U	2.1
24	CX	8	U	2.1
27	DE	163	GLU	2.1
44	BY	71	LYS	2.1
21	AA	1412	C	2.1
25	BC	112	ASP	2.1
28	BF	57	VAL	2.1
28	DF	90	PHE	2.1
10	AK	111	ASP	2.1
26	BD	231	HIS	2.1
27	DE	119	ARG	2.1
45	BZ	117	LEU	2.1
15	AP	20	VAL	2.1
59	DA	1614	A	2.1
11	AL	89	ARG	2.1
26	DD	217	ARG	2.1
7	CH	135	CYS	2.1

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Mol	Chain	Res	Type	RSRZ
26	BD	189	CYS	2.1
16	AQ	59	ILE	2.1
25	DC	50	ILE	2.1
39	BT	94	ALA	2.1
43	BX	17	ALA	2.1
6	AG	43	PHE	2.1
10	AK	109	VAL	2.1
13	AN	36	PHE	2.1
26	DD	242	ARG	2.1
39	DT	103	ARG	2.1
5	CF	94	GLN	2.1
43	BX	26	TYR	2.1
46	B0	40	GLN	2.1
11	AL	129	ALA	2.1
20	CY	571	SER	2.1
25	DC	196	ALA	2.1
26	BD	199	ALA	2.1
30	BH	150	ALA	2.1
7	AH	9	MET	2.1
10	CK	77	MET	2.1
59	BA	521	G	2.1
59	DA	2618	G	2.1
10	CK	91	ARG	2.1
7	CH	27	PRO	2.1
15	CP	76	GLN	2.1
54	D8	59	LYS	2.1
19	AT	56	MET	2.1
34	BO	86	ILE	2.1
15	CP	21	VAL	2.1
43	DX	43	VAL	2.1
8	AI	8	GLY	2.1
8	AI	114	TYR	2.1
21	CA	968	A	2.1
26	BD	9	TYR	2.1
3	AD	108	LEU	2.1
59	DA	2564	A	2.1
41	DV	77	ALA	2.1
8	CI	65	VAL	2.1
59	BA	1984	G	2.1
59	DA	1248	G	2.1
33	BN	10	GLU	2.1
34	BO	38	VAL	2.1

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
38	DS	44	LYS	2.1
59	DA	1957	C	2.1
2	AC	158	GLY	2.1
3	CD	204	ILE	2.1
4	AE	128	PRO	2.1
12	CM	124	PRO	2.1
34	BO	15	GLY	2.1
13	CN	48	ALA	2.1
20	AY	73	PHE	2.1
44	BY	36	ALA	2.1
30	BH	149	ARG	2.1
44	DY	15	VAL	2.1
11	AL	114	LYS	2.1
26	BD	230	ASP	2.1
27	DE	121	ASN	2.1
4	AE	129	ILE	2.1
8	CI	40	LEU	2.1
4	AE	25	ARG	2.1
4	CE	104	ALA	2.1
26	BD	24	ILE	2.1
26	DD	165	ILE	2.1
39	BT	64	ARG	2.1
47	D1	40	ARG	2.1
59	BA	1283	G	2.1
18	AS	33	THR	2.1
27	BE	154	LYS	2.1
53	B7	32	LYS	2.1
18	CS	69	HIS	2.1
20	CY	690	GLY	2.1
45	DZ	179	ASP	2.1
21	CA	1396	A	2.1
26	BD	53	PHE	2.1
35	DP	55	ARG	2.1
41	BV	82	ARG	2.1
46	D0	39	ARG	2.1
25	BC	163	GLU	2.1
33	DN	43	THR	2.1
8	CI	62	TYR	2.1
16	AQ	60	ILE	2.1
21	CA	1416	G	2.1
24	CX	70	C	2.1
34	DO	51	ALA	2.1

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Mol	Chain	Res	Type	RSRZ
41	BV	16	PRO	2.1
46	B0	31	VAL	2.1
46	D0	55	ARG	2.1
59	DA	1606	G	2.1
59	DA	2254	C	2.1
59	DA	2256	G	2.1
1	CB	101	MET	2.1
4	AE	82	VAL	2.1
8	AI	106	ALA	2.1
9	CJ	94	VAL	2.1
59	BA	1917	U	2.1
52	B6	23	THR	2.0
27	DE	193	GLY	2.0
46	D0	76	GLY	2.0
20	AY	497	PHE	2.0
26	BD	12	SER	2.0
7	CH	9	MET	2.0
26	DD	8	PRO	2.0
33	BN	11	PRO	2.0
43	DX	34	ALA	2.0
2	CC	166	GLU	2.0
33	DN	15	LEU	2.0
59	DA	1920	C	2.0
15	CP	36	ILE	2.0
44	DY	68	HIS	2.0
59	BA	1975	G	2.0
2	CC	169	ALA	2.0
25	DC	229	SER	2.0
28	DF	58	ALA	2.0
35	DP	5	ASP	2.0
3	CD	101	LEU	2.0
36	DQ	12	GLN	2.0
59	DA	746	A	2.0
27	DE	151	TYR	2.0
28	DF	39	TRP	2.0
28	DF	62	ARG	2.0
42	BW	16	LYS	2.0
43	DX	29	TRP	2.0
52	B6	6	ARG	2.0
20	AY	308	PRO	2.0
2	AC	3	ASN	2.0
4	CE	110	LEU	2.0

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Mol	Chain	Res	Type	RSRZ
8	AI	34	ASN	2.0
8	CI	11	LYS	2.0
18	AS	81	ARG	2.0
20	AY	690	GLY	2.0
21	AA	292	G	2.0
34	BO	39	ILE	2.0
43	DX	77	LYS	2.0
59	BA	1973	G	2.0
59	DA	2549	G	2.0
27	DE	167	VAL	2.0
21	CA	977	A	2.0
3	AD	93	PHE	2.0
8	AI	37	PHE	2.0
9	AJ	12	ASP	2.0
10	CK	76	GLY	2.0
36	DQ	66	ILE	2.0
21	CA	1195	C	2.0
25	BC	179	ALA	2.0
59	BA	1951	U	2.0
9	AJ	51	ARG	2.0
21	AA	1480	G	2.0
26	BD	265	PRO	2.0
32	DK	3	LYS	2.0
38	DS	19	LYS	2.0
18	CS	58	VAL	2.0
26	DD	164	GLN	2.0
27	BE	108	SER	2.0
13	AN	34	TYR	2.0
46	D0	38	VAL	2.0
4	CE	108	ALA	2.0
43	BX	42	ALA	2.0
35	BP	15	ARG	2.0
21	AA	1395	C	2.0
37	DR	76	VAL	2.0
59	BA	1920	C	2.0
3	CD	97	LEU	2.0
11	AL	113	ARG	2.0
28	DF	155	LEU	2.0
35	BP	61	ARG	2.0
38	BS	86	ALA	2.0
59	BA	45	G	2.0
59	BA	2056	G	2.0

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

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

## 6.3 Carbohydrates [i](#)

There are no 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
62	FUA	AY	702	37/37	0.74	0.63	4.35	198,199,200,201	0
62	FUA	CY	702	37/37	0.80	0.64	3.75	194,196,197,197	0
63	NMY	AA	1601	42/42	0.76	0.43	3.18	16,27,36,38	42
63	NMY	BA	2902	42/42	0.74	0.44	1.86	14,24,43,44	42
63	NMY	CA	1601	42/42	0.82	0.34	1.54	14,25,34,37	42
61	GDP	CY	701	28/28	0.77	0.21	1.41	104,108,109,110	0
63	NMY	DA	2901	42/42	0.77	0.37	1.29	31,42,51,53	42
61	GDP	AY	701	28/28	0.69	0.24	1.01	179,183,185,185	0
63	NMY	BA	2903	42/42	0.74	0.56	0.76	18,29,38,41	42
63	NMY	BA	2904	42/42	0.67	0.52	0.71	42,50,59,62	42
64	MG	CY	703	1/1	0.91	0.19	-0.08	6,6,6,6	0
64	MG	BA	2901	1/1	0.56	0.14	-1.28	2,2,2,2	0

## 6.5 Other polymers [i](#)

There are no such residues in this entry.