



# Full wwPDB X-ray Structure Validation Report

Jun 16, 2014 – 07:18 PM BST

PDB ID : 4V7W  
Title : Structure of the Thermus thermophilus ribosome complexed with chloramphenicol.  
Authors : Bulkley, D.P.; Innis, C.A.; Blaha, G.; Steitz, T.A.  
Deposited on : 2010-08-16  
Resolution : 3.00 Å(reported)

This is a full wwPDB 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/ValidationPDFNotes.html>

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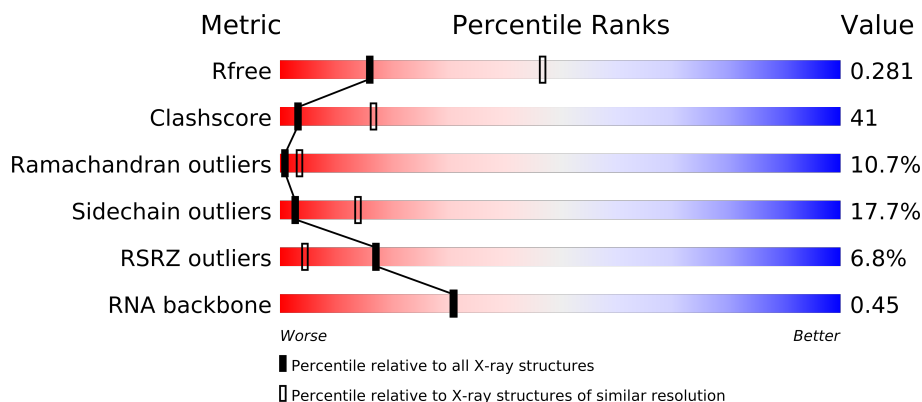
The following versions of software and data (see [references](#)) were used in the production of this report:

MolProbity : 4.02b-467  
Mogul : 1.16 November 2013  
Xtriage (Phenix) : dev-1323  
EDS : stable23397  
Percentile statistics : 21963  
Refmac : 5.8.0049  
CCP4 : 6.3.0 (Settle)  
Ideal geometry (proteins) : Engh & Huber (2001)  
Ideal geometry (DNA, RNA) : Parkinson et. al. (1996)  
Validation Pipeline (wwPDB-VP) : stable23397

# 1 Overall quality at a glance

The reported resolution of this entry is 3.00 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))
$R_{free}$	66092	1216 (3.00-3.00)
Clashscore	79885	1594 (3.00-3.00)
Ramachandran outliers	78287	1537 (3.00-3.00)
Sidechain outliers	78261	1540 (3.00-3.00)
RSRZ outliers	66119	1217 (3.00-3.00)
RNA backbone	1838	1070 (3.50-2.50)

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. The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density.

Mol	Chain	Length	Quality of chain
1	AA	1522	
1	CA	1522	
2	AB	256	
2	CB	256	
3	AC	239	
3	CC	239	
4	AD	209	
4	CD	209	
5	AE	162	
5	CE	162	
6	AF	101	
6	CF	101	

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Mol	Chain	Length	Quality of chain
7	AG	156	
7	CG	156	
8	AH	138	
8	CH	138	
9	AI	128	
9	CI	128	
10	AJ	105	
10	CJ	105	
11	AK	129	
11	CK	129	
12	AL	135	
12	CL	135	
13	AM	126	
13	CM	126	
14	AN	61	
14	CN	61	
15	AO	89	
15	CO	89	
16	AP	88	
16	CP	88	
17	AQ	105	
17	CQ	105	
18	AR	88	
18	CR	88	
19	AS	93	
19	CS	93	
20	AT	106	
20	CT	106	
21	AU	27	
21	CU	27	
22	B0	85	
22	D0	85	
23	B1	98	
23	D1	98	
24	B2	72	
24	D2	72	
25	B3	60	
25	D3	60	
26	B4	71	
26	D4	71	
27	B5	60	
27	D5	60	

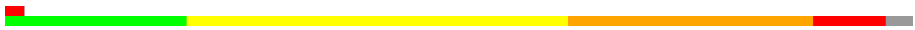

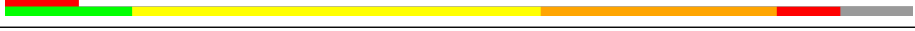
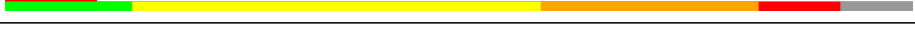
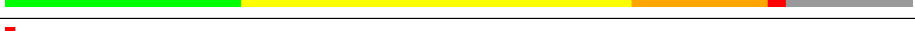

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Mol	Chain	Length	Quality of chain
28	B6	54	
28	D6	54	
29	B7	49	
29	D7	49	
30	B8	65	
30	D8	65	
31	BA	2787	
31	DA	2787	
32	BB	122	
32	DB	122	
33	BD	276	
33	DD	276	
34	BE	206	
34	DE	206	
35	BF	210	
35	DF	210	
36	BG	182	
36	DG	182	
37	BH	180	
37	DH	180	
38	BI	148	
38	DI	148	
39	BN	140	
39	DN	140	
40	BO	122	
40	DO	122	
41	BP	150	
41	DP	150	
42	BQ	141	
42	DQ	141	
43	BR	118	
43	DR	118	
44	BS	112	
44	DS	112	
45	BT	146	
45	DT	146	
46	BU	118	
46	DU	118	
47	BV	101	
47	DV	101	
48	BW	113	
48	DW	113	

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Mol	Chain	Length	Quality of chain
49	BX	96	
49	DX	96	
50	BY	110	
50	DY	110	
51	BZ	206	
51	DZ	206	

## 2 Entry composition

There are 55 unique types of molecules in this entry. The entry contains 277987 atoms, of which 0 are hydrogen and 0 are deuterium.

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

- Molecule 1 is a RNA chain called 16S rRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	AA	1504	Total	C	N	O	P	0	0	0
			32329	14390	5992	10444	1503			
1	CA	1504	Total	C	N	O	P	0	0	0
			32329	14390	5992	10444	1503			

- Molecule 2 is a protein called 30S ribosomal protein S2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	AB	235	Total	C	N	O	S	0	0	1
			1901	1213	342	341	5			
2	CB	235	Total	C	N	O	S	0	0	1
			1901	1213	342	341	5			

- Molecule 3 is a protein called 30S ribosomal protein S3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	AC	207	Total	C	N	O	S	0	0	1
			1613	1016	315	281	1			
3	CC	207	Total	C	N	O	S	0	0	1
			1613	1016	315	281	1			

- Molecule 4 is a protein called 30S ribosomal protein S4.

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

- Molecule 5 is a protein called 30S ribosomal protein S5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	AE	151	Total	C	N	O	S	0	0	1
			1147	724	218	201	4			
5	CE	151	Total	C	N	O	S	0	0	1
			1147	724	218	201	4			

- Molecule 6 is a protein called 30S ribosomal protein S6.

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

- Molecule 7 is a protein called 30S ribosomal protein S7.

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

- Molecule 8 is a protein called 30S ribosomal protein S8.

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

- Molecule 9 is a protein called 30S ribosomal protein S9.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
9	AI	127	Total	C	N	O	0	0	0
			1011	639	198	174			
9	CI	127	Total	C	N	O	0	0	0
			1011	639	198	174			

There are 2 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
AI	58	ARG	HIS	CONFLICT	UNP P80374
CI	58	ARG	HIS	CONFLICT	UNP P80374

- Molecule 10 is a protein called 30S ribosomal protein S10.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	AJ	99	Total	C	N	O	S	0	0	1
			795	499	157	138	1			
10	CJ	99	Total	C	N	O	S	0	0	1
			795	499	157	138	1			

- Molecule 11 is a protein called 30S ribosomal protein S11.

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

- Molecule 12 is a protein called 30S ribosomal protein S12.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
12	AL	125	Total	C	N	O	S	0	0	1
			971	611	196	163	1			
12	CL	125	Total	C	N	O	S	0	0	1
			971	611	196	163	1			

There are 6 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
AL	2	VAL	-	INSERTION	UNP Q5SHN3
AL	3	ALA	-	INSERTION	UNP Q5SHN3
AL	4	LEU	-	INSERTION	UNP Q5SHN3
CL	2	VAL	-	INSERTION	UNP Q5SHN3
CL	3	ALA	-	INSERTION	UNP Q5SHN3
CL	4	LEU	-	INSERTION	UNP Q5SHN3

- Molecule 13 is a protein called 30S ribosomal protein S13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
13	AM	115	Total	C	N	O	S	0	0	0
			921	569	190	160	2			
13	CM	115	Total	C	N	O	S	0	0	0
			921	569	190	160	2			

- Molecule 14 is a protein called 30S ribosomal protein S14.



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

- Molecule 15 is a protein called 30S ribosomal protein S15.

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

- Molecule 16 is a protein called 30S ribosomal protein S16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
16	AP	84	Total	C	N	O	S	0	0	1
			701	443	140	117	1			
16	CP	84	Total	C	N	O	S	0	0	1
			701	443	140	117	1			

- Molecule 17 is a protein called 30S ribosomal protein S17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
17	AQ	100	Total	C	N	O	S	0	0	1
			824	528	152	142	2			
17	CQ	100	Total	C	N	O	S	0	0	1
			824	528	152	142	2			

- Molecule 18 is a protein called 30S ribosomal protein S18.

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

- Molecule 19 is a protein called 30S ribosomal protein S19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
19	AS	79	Total	C	N	O	S	0	0	1
			630	403	115	110	2			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
19	CS	79	Total	C	N	O	S	0	0	1
			630	403	115	110	2			

- Molecule 20 is a protein called 30S ribosomal protein S20.

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

- Molecule 21 is a protein called 30S ribosomal protein Thx.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
21	AU	25	Total	C	N	O	0	0	1
			209	128	51	30			
21	CU	25	Total	C	N	O	0	0	1
			209	128	51	30			

- Molecule 22 is a protein called 50S ribosomal protein L27.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	B0	85	Total	C	N	O	S	0	0	0
			650	401	137	111	1			
22	D0	85	Total	C	N	O	S	0	0	0
			650	401	137	111	1			

- Molecule 23 is a protein called 50S ribosomal protein L28.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
23	B1	89	Total	C	N	O	0	0	1
			693	435	140	118			
23	D1	89	Total	C	N	O	0	0	1
			693	435	140	118			

- Molecule 24 is a protein called 50S ribosomal protein L29.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
24	B2	51	Total	C	N	O	S	0	0	1
			421	263	85	72	1			
24	D2	51	Total	C	N	O	S	0	0	1
			421	263	85	72	1			

- Molecule 25 is a protein called 50S ribosomal protein L30.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
25	B3	60	Total	C	N	O	S	0	0	1
			468	298	91	78	1			
25	D3	60	Total	C	N	O	S	0	0	1
			468	298	91	78	1			

- Molecule 26 is a protein called 50S ribosomal protein L31.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
26	B4	32	Total	C	N	O	0	0	0
			157	93	32	32			
26	D4	32	Total	C	N	O	0	0	0
			157	93	32	32			

- Molecule 27 is a protein called 50S ribosomal protein L32.

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

- Molecule 28 is a protein called 50S ribosomal protein L33.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
28	B6	45	Total	C	N	O	S	0	0	1
			381	235	78	64	4			
28	D6	45	Total	C	N	O	S	0	0	1
			381	235	78	64	4			

- Molecule 29 is a protein called 50S ribosomal protein L34.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
29	B7	49	Total	C	N	O	S	0	0	1
			419	257	105	55	2			
29	D7	49	Total	C	N	O	S	0	0	1
			419	257	105	55	2			

- Molecule 30 is a protein called 50S ribosomal protein L35.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
30	B8	64	Total	C	N	O	S	0	0	1
			508	326	102	78	2			
30	D8	64	Total	C	N	O	S	0	0	1
			508	326	102	78	2			

- Molecule 31 is a RNA chain called 23S ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
31	BA	2725	Total	C	N	O	P	0	0	0
			58698	26124	10986	18864	2724			
31	DA	2725	Total	C	N	O	P	0	0	0
			58698	26124	10986	18864	2724			

- Molecule 32 is a RNA chain called 5S ribosomal RNA.

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

- Molecule 33 is a protein called 50S ribosomal protein L2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
33	BD	272	Total	C	N	O	S	0	0	1
			2105	1329	417	356	3			
33	DD	272	Total	C	N	O	S	0	0	1
			2105	1329	417	356	3			

- Molecule 34 is a protein called 50S ribosomal protein L3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
34	BE	205	Total	C	N	O	S	0	0	1
			1564	988	300	270	6			
34	DE	205	Total	C	N	O	S	0	0	1
			1564	988	300	270	6			

- Molecule 35 is a protein called 50S ribosomal protein L4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
35	BF	208	Total	C	N	O	S	0	0	1
			1624	1035	304	282	3			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
35	DF	208	Total	C	N	O	S	0	0	1
			1624	1035	304	282	3			

- Molecule 36 is a protein called 50S ribosomal protein L5.

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

- Molecule 37 is a protein called 50S ribosomal protein L6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
37	BH	160	Total	C	N	O	S	0	0	1
			1223	773	229	220	1			
37	DH	160	Total	C	N	O	S	0	0	1
			1223	773	229	220	1			

- Molecule 38 is a protein called 50S ribosomal protein L9.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
38	BI	146	Total	C	N	O	S	0	0	1
			1132	723	201	207	1			
38	DI	146	Total	C	N	O	S	0	0	1
			1132	723	201	207	1			

- Molecule 39 is a protein called 50S ribosomal protein L13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
39	BN	139	Total	C	N	O	S	0	0	1
			1105	712	207	182	4			
39	DN	139	Total	C	N	O	S	0	0	1
			1105	712	207	182	4			

- Molecule 40 is a protein called 50S ribosomal protein L14.

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

- Molecule 41 is a protein called 50S ribosomal protein L15.

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

- Molecule 42 is a protein called 50S ribosomal protein L16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
42	BQ	136	Total	C	N	O	S	0	0	0
			1080	688	204	183	5			
42	DQ	136	Total	C	N	O	S	0	0	0
			1080	688	204	183	5			

- Molecule 43 is a protein called 50S ribosomal protein L17.

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

- Molecule 44 is a protein called 50S ribosomal protein L18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
44	BS	99	Total	C	N	O	0	0	1
			771	486	155	130			
44	DS	99	Total	C	N	O	0	0	1
			771	486	155	130			

- Molecule 45 is a protein called 50S ribosomal protein L19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
45	BT	132	Total	C	N	O	S	0	0	0
			1100	686	227	186	1			
45	DT	132	Total	C	N	O	S	0	0	0
			1100	686	227	186	1			

- Molecule 46 is a protein called 50S ribosomal protein L20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
46	BU	117	Total	C	N	O	S	0	0	0
			958	604	202	151	1			
46	DU	117	Total	C	N	O	S	0	0	0
			958	604	202	151	1			

- Molecule 47 is a protein called 50S ribosomal protein L21.

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

- Molecule 48 is a protein called 50S ribosomal protein L22.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
48	BW	113	Total	C	N	O	S	0	0	0
			896	563	176	155	2			
48	DW	113	Total	C	N	O	S	0	0	0
			896	563	176	155	2			

- Molecule 49 is a protein called 50S ribosomal protein L23.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
49	BX	93	Total	C	N	O	0	0	1
			726	471	132	123			
49	DX	93	Total	C	N	O	0	0	1
			726	471	132	123			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
50	BY	101	Total	C	N	O	S	0	0	1
			776	500	149	123	4			
50	DY	101	Total	C	N	O	S	0	0	1
			776	500	149	123	4			

- Molecule 51 is a protein called 50S ribosomal protein L25.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
51	BZ	177	Total	C	N	O	S	0	0	1
			1404	897	253	252	2			

*Continued on next page...*

*Continued from previous page...*

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
51	DZ	177	Total	C	N	O	S	0	0	1
			1404	897	253	252	2			

- Molecule 52 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
52	BA	368	Total	Mg	0	0
			368	368		
52	CA	53	Total	Mg	0	0
			53	53		
52	DQ	1	Total	Mg	0	0
			1	1		
52	DF	1	Total	Mg	0	0
			1	1		
52	BE	1	Total	Mg	0	0
			1	1		
52	DU	1	Total	Mg	0	0
			1	1		
52	B1	1	Total	Mg	0	0
			1	1		
52	BP	2	Total	Mg	0	0
			2	2		
52	DR	1	Total	Mg	0	0
			1	1		
52	B5	2	Total	Mg	0	0
			2	2		
52	BB	7	Total	Mg	0	0
			7	7		
52	BF	1	Total	Mg	0	0
			1	1		
52	BX	1	Total	Mg	0	0
			1	1		
52	AA	56	Total	Mg	0	0
			56	56		
52	BQ	2	Total	Mg	0	0
			2	2		
52	BU	1	Total	Mg	0	0
			1	1		
52	DD	1	Total	Mg	0	0
			1	1		
52	BR	2	Total	Mg	0	0
			2	2		

*Continued on next page...*



*Continued from previous page...*

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
52	DA	332	Total 332	Mg 332	0	0
52	DE	1	Total 1	Mg 1	0	0
52	D1	1	Total 1	Mg 1	0	0
52	DX	1	Total 1	Mg 1	0	0
52	DP	1	Total 1	Mg 1	0	0
52	D5	2	Total 2	Mg 2	0	0
52	BD	1	Total 1	Mg 1	0	0
52	DB	4	Total 4	Mg 4	0	0

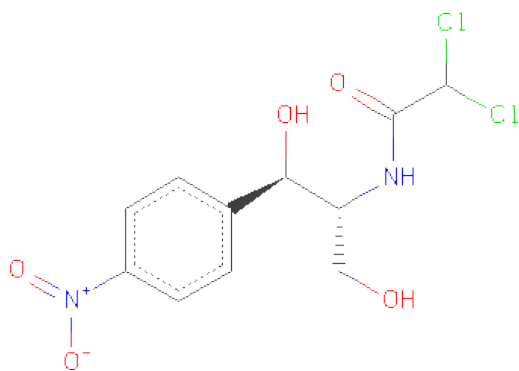
- Molecule 53 is ZINC ION (three-letter code: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
53	CN	1	Total 1	Zn 1	0	0
53	AD	1	Total 1	Zn 1	0	0
53	CD	1	Total 1	Zn 1	0	0
53	AN	1	Total 1	Zn 1	0	0

- Molecule 54 is POTASSIUM ION (three-letter code: K) (formula: K).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
54	BA	1	Total 1	K 1	0	0
54	DA	1	Total 1	K 1	0	0

- Molecule 55 is CHLORAMPHENICOL (three-letter code: CLM) (formula: C<sub>11</sub>H<sub>12</sub>Cl<sub>2</sub>N<sub>2</sub>O<sub>5</sub>).

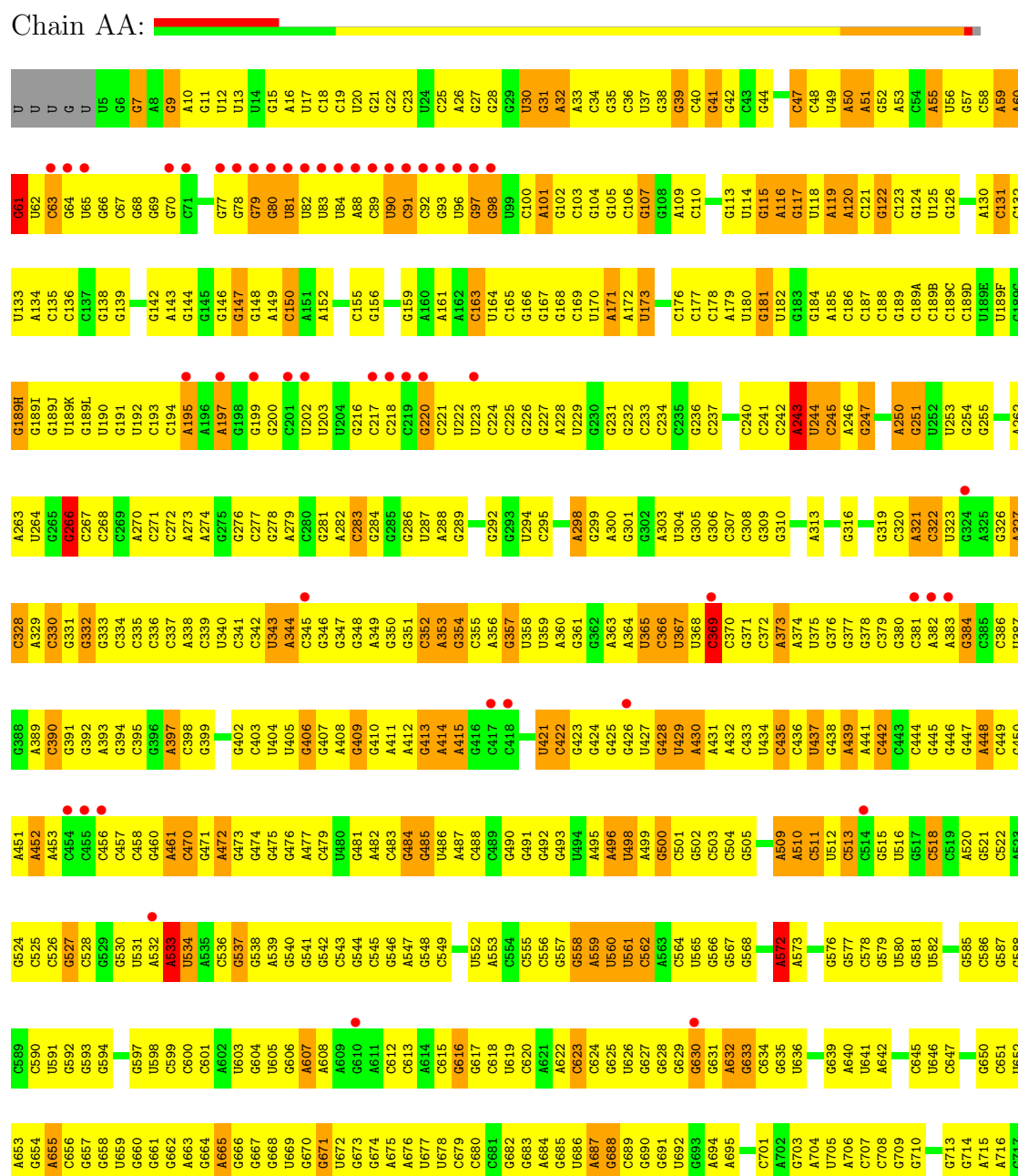


Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
55	BA	1	Total	C	Cl	N	O	0	0
			20	11	2	2	5		
55	DA	1	Total	C	Cl	N	O	0	0
			20	11	2	2	5		

### 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.

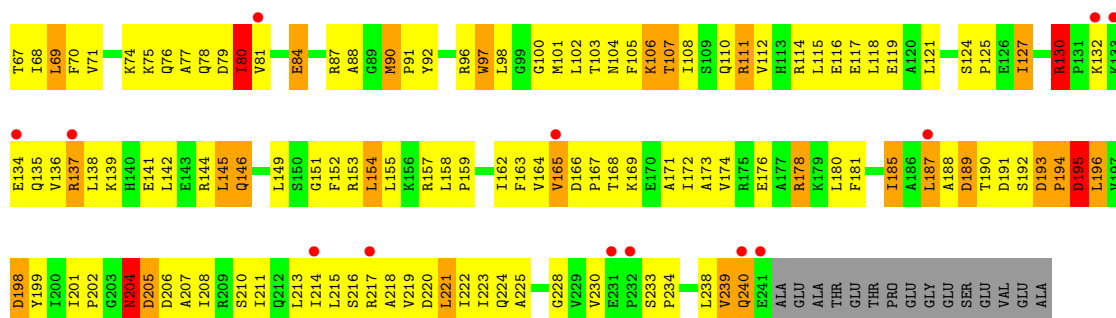
#### • Molecule 1: 16S rRNA





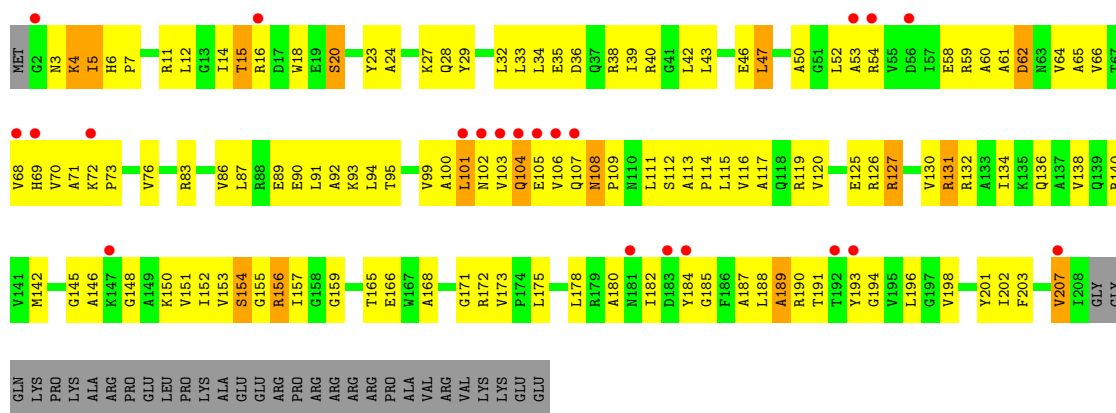






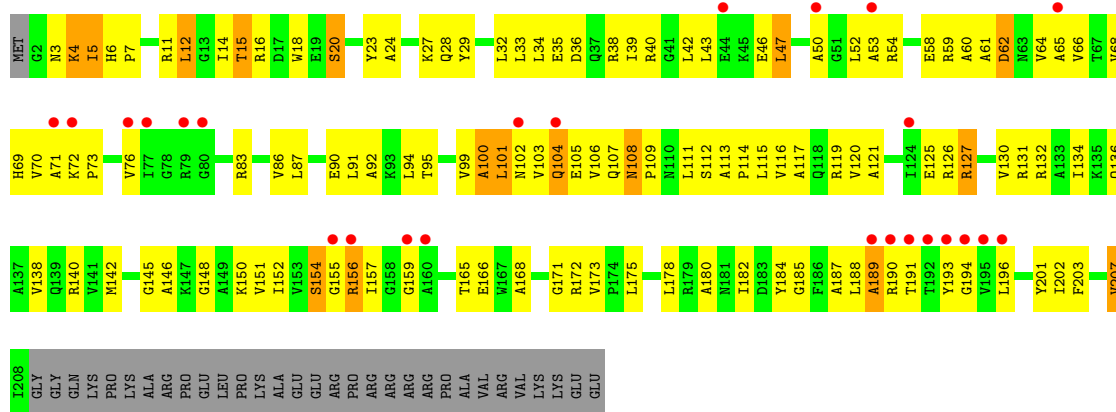
• Molecule 3: 30S ribosomal protein S3

Chain AC:



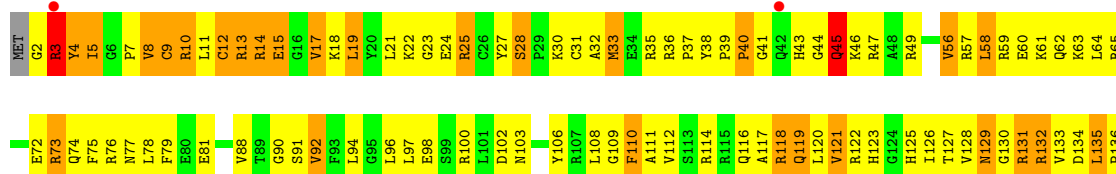
• Molecule 3: 30S ribosomal protein S3

Chain CC:



• Molecule 4: 30S ribosomal protein S4

Chain AD:



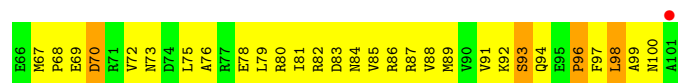
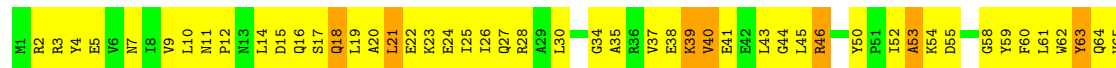






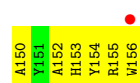
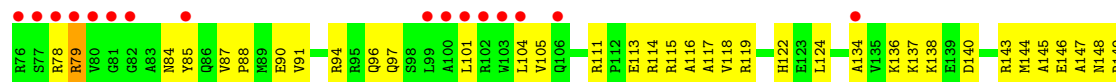
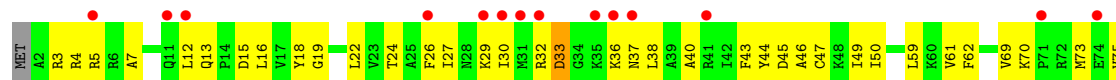
• Molecule 6: 30S ribosomal protein S6

Chain CF:



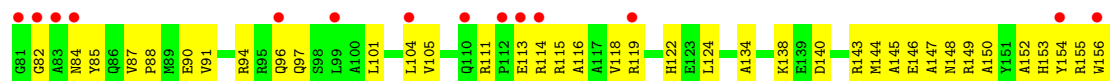
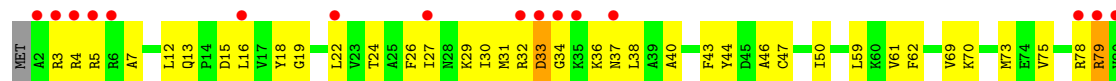
• Molecule 7: 30S ribosomal protein S7

Chain AG:



• Molecule 7: 30S ribosomal protein S7

Chain CG:



• Molecule 8: 30S ribosomal protein S8

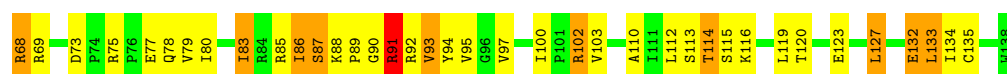
Chain AH:



• Molecule 8: 30S ribosomal protein S8

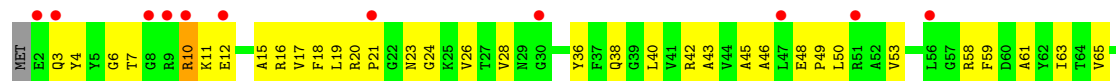
Chain CH:





• Molecule 9: 30S ribosomal protein S9

Chain AI:



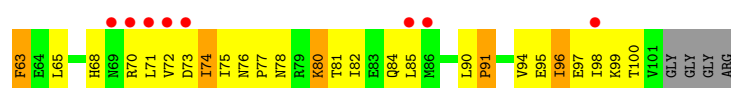
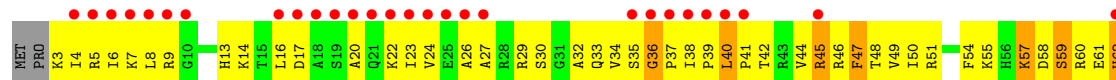
• Molecule 9: 30S ribosomal protein S9

Chain CI:



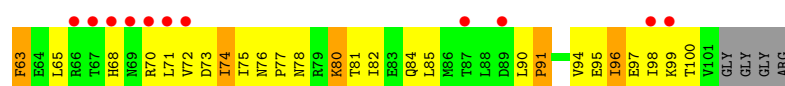
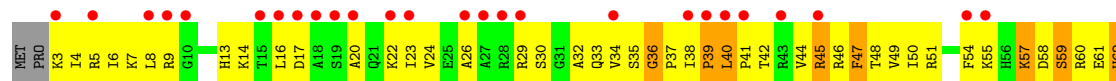
• Molecule 10: 30S ribosomal protein S10

Chain AJ:



• Molecule 10: 30S ribosomal protein S10

Chain CJ:



• Molecule 11: 30S ribosomal protein S11

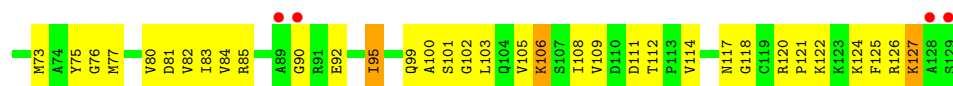
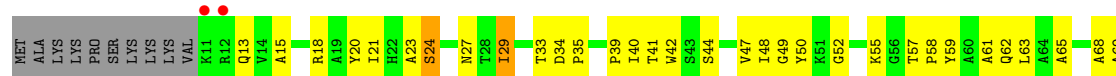
Chain AK:





• Molecule 11: 30S ribosomal protein S11

Chain CK:



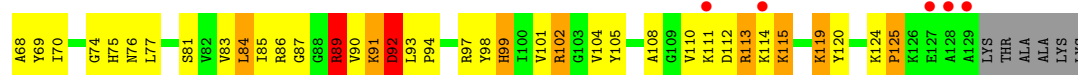
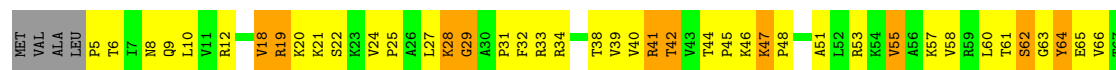
• Molecule 12: 30S ribosomal protein S12

Chain AL:



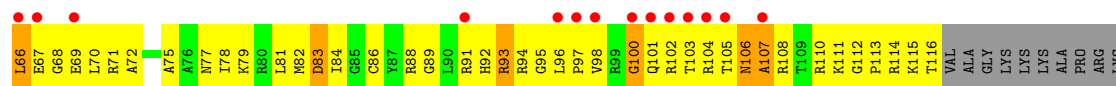
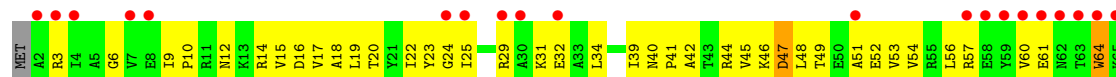
• Molecule 12: 30S ribosomal protein S12

Chain CL:



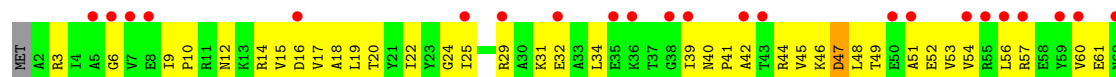
• Molecule 13: 30S ribosomal protein S13

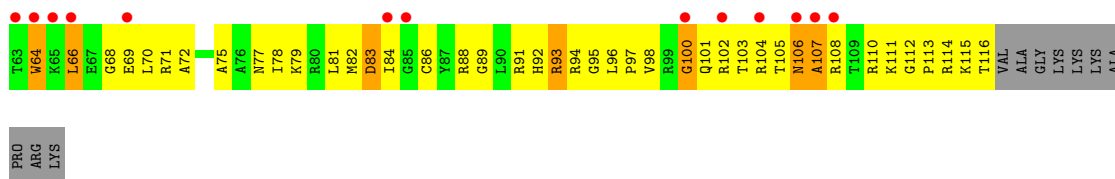
Chain AM:



• Molecule 13: 30S ribosomal protein S13

Chain CM:





- Molecule 14: 30S ribosomal protein S14

Chain AN:

- Molecule 14: 30S ribosomal protein S14

Chain CN:

- Molecule 15: 30S ribosomal protein S15

Chain AO:

- Molecule 15: 30S ribosomal protein S15

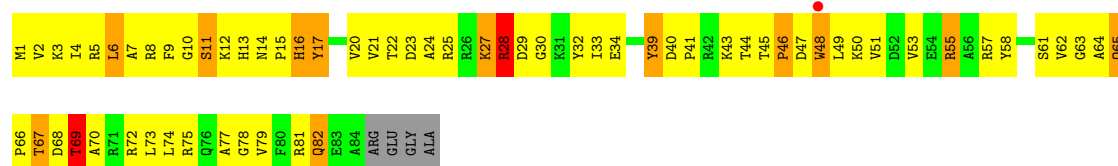
Chain CO:

- Molecule 16: 30S ribosomal protein S16

Chain AP:

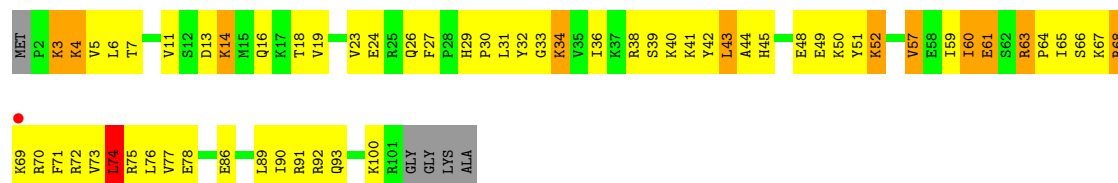
- Molecule 16: 30S ribosomal protein S16

Chain CP:



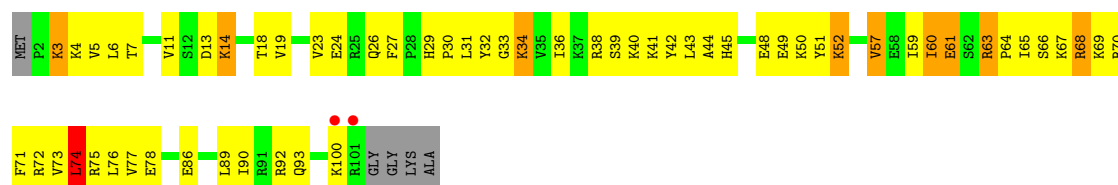
- Molecule 17: 30S ribosomal protein S17

Chain AQ:



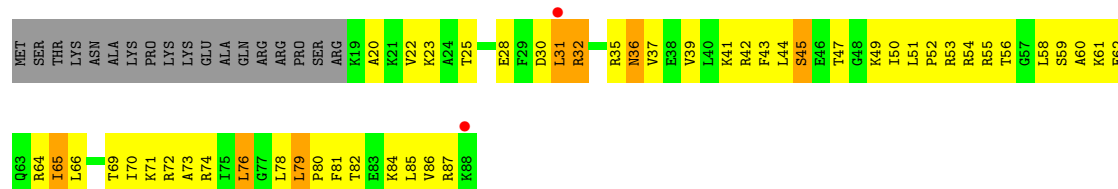
- Molecule 17: 30S ribosomal protein S17

Chain CQ:



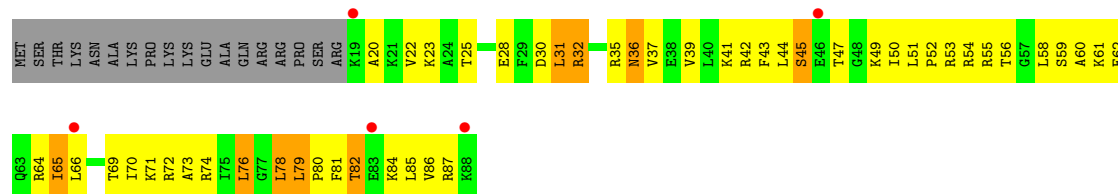
- Molecule 18: 30S ribosomal protein S18

Chain AR:



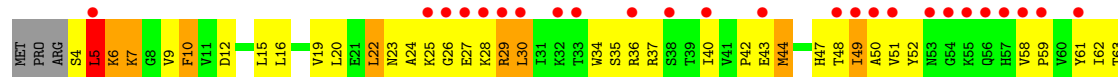
- Molecule 18: 30S ribosomal protein S18

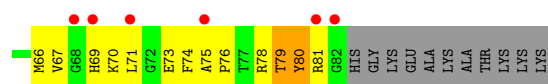
Chain CR:



- Molecule 19: 30S ribosomal protein S19

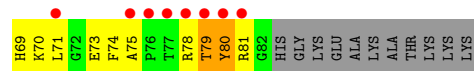
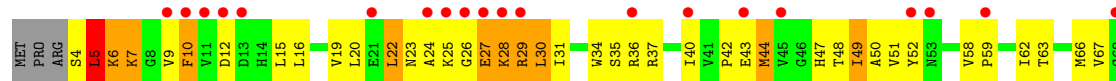
Chain AS:





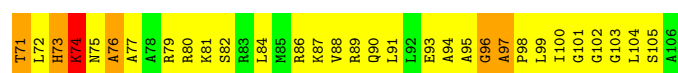
- Molecule 19: 30S ribosomal protein S19

Chain CS:



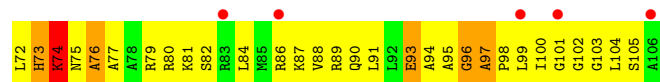
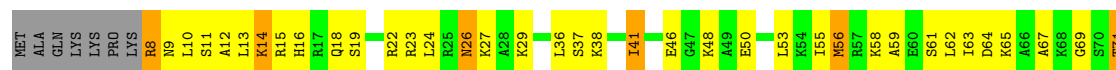
- Molecule 20: 30S ribosomal protein S20

Chain AT:



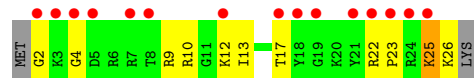
- Molecule 20: 30S ribosomal protein S20

Chain CT:



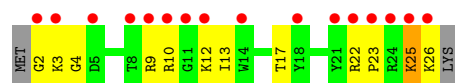
- Molecule 21: 30S ribosomal protein Thx

Chain AU:



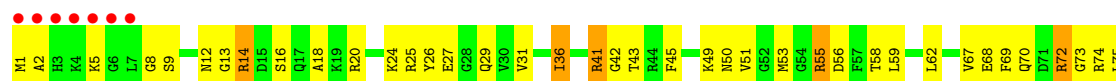
- Molecule 21: 30S ribosomal protein Thx

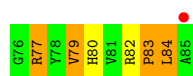
Chain CU:



- Molecule 22: 50S ribosomal protein L27

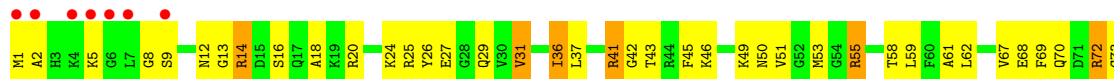
Chain B0:





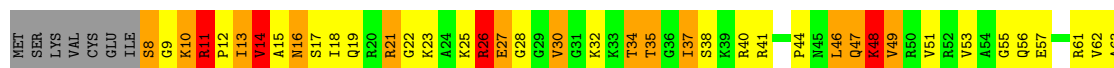
- Molecule 22: 50S ribosomal protein L27

Chain D0:



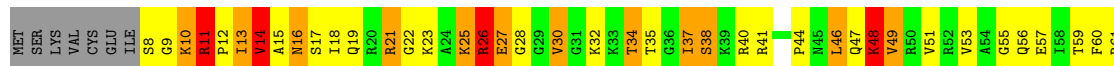
- Molecule 23: 50S ribosomal protein L28

Chain B1:



- Molecule 23: 50S ribosomal protein L28

Chain D1:



- Molecule 24: 50S ribosomal protein L29

Chain B2:

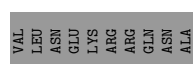


- Molecule 24: 50S ribosomal protein L29

Chain D2:



- Molecule 25: 50S ribosomal protein L30

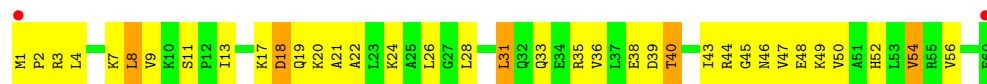


Chain B3: 



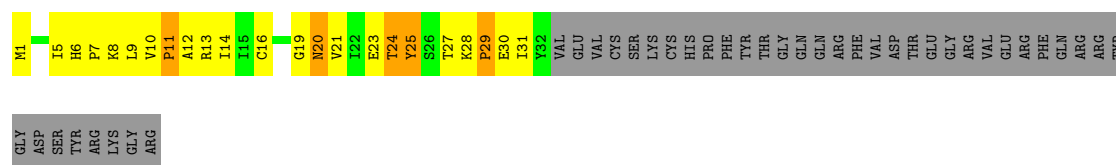
- Molecule 25: 50S ribosomal protein L30

Chain D3: 



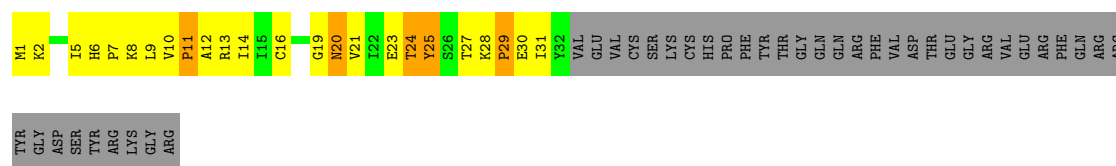
- Molecule 26: 50S ribosomal protein L31

Chain B4: 



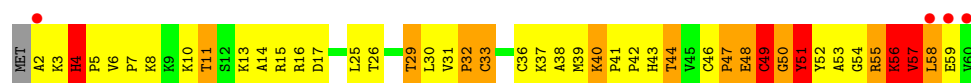
- Molecule 26: 50S ribosomal protein L31

Chain D4: 



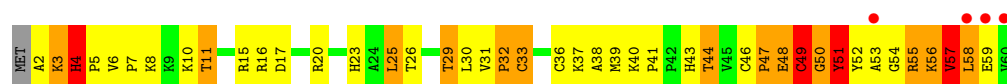
- Molecule 27: 50S ribosomal protein L32

Chain B5: 



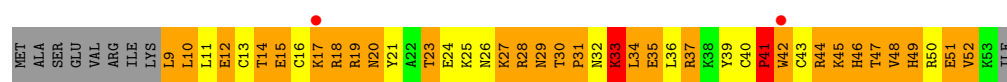
- Molecule 27: 50S ribosomal protein L32

Chain D5: 



- Molecule 28: 50S ribosomal protein L33

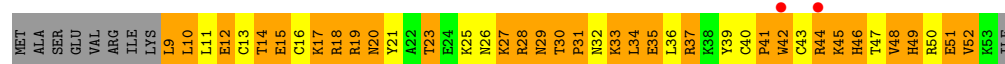
Chain B6: 



- Molecule 28: 50S ribosomal protein L33



Chain D6: 



- Molecule 29: 50S ribosomal protein L34

Chain B7: 



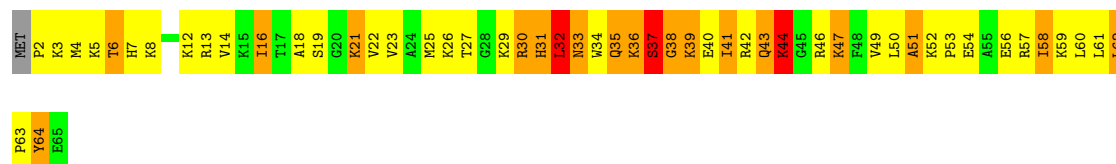
- Molecule 29: 50S ribosomal protein L34

Chain D7: 



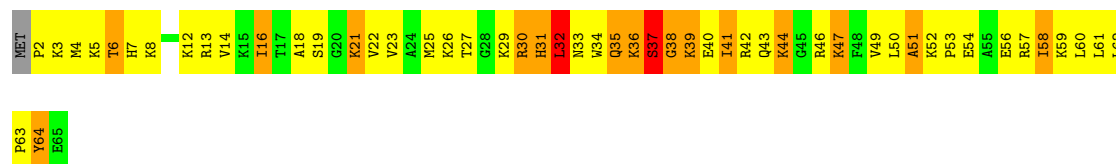
- Molecule 30: 50S ribosomal protein L35

Chain B8: 



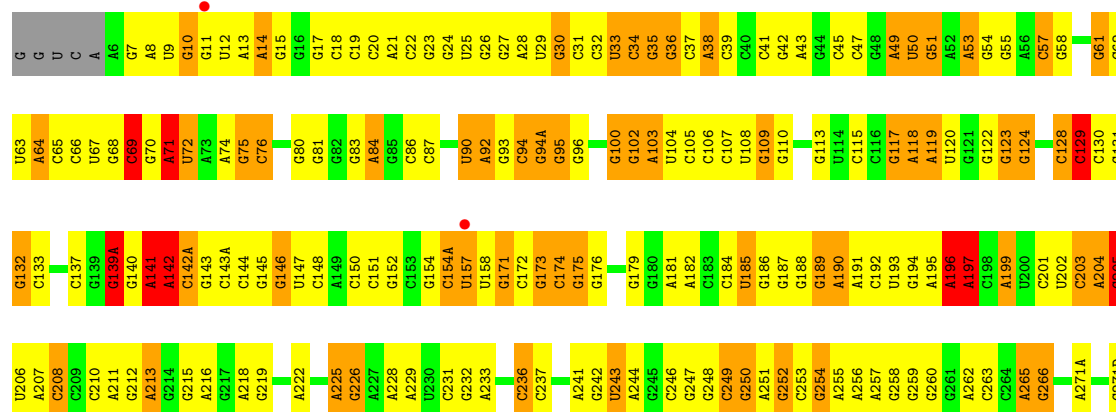
- Molecule 30: 50S ribosomal protein L35

Chain D8: 



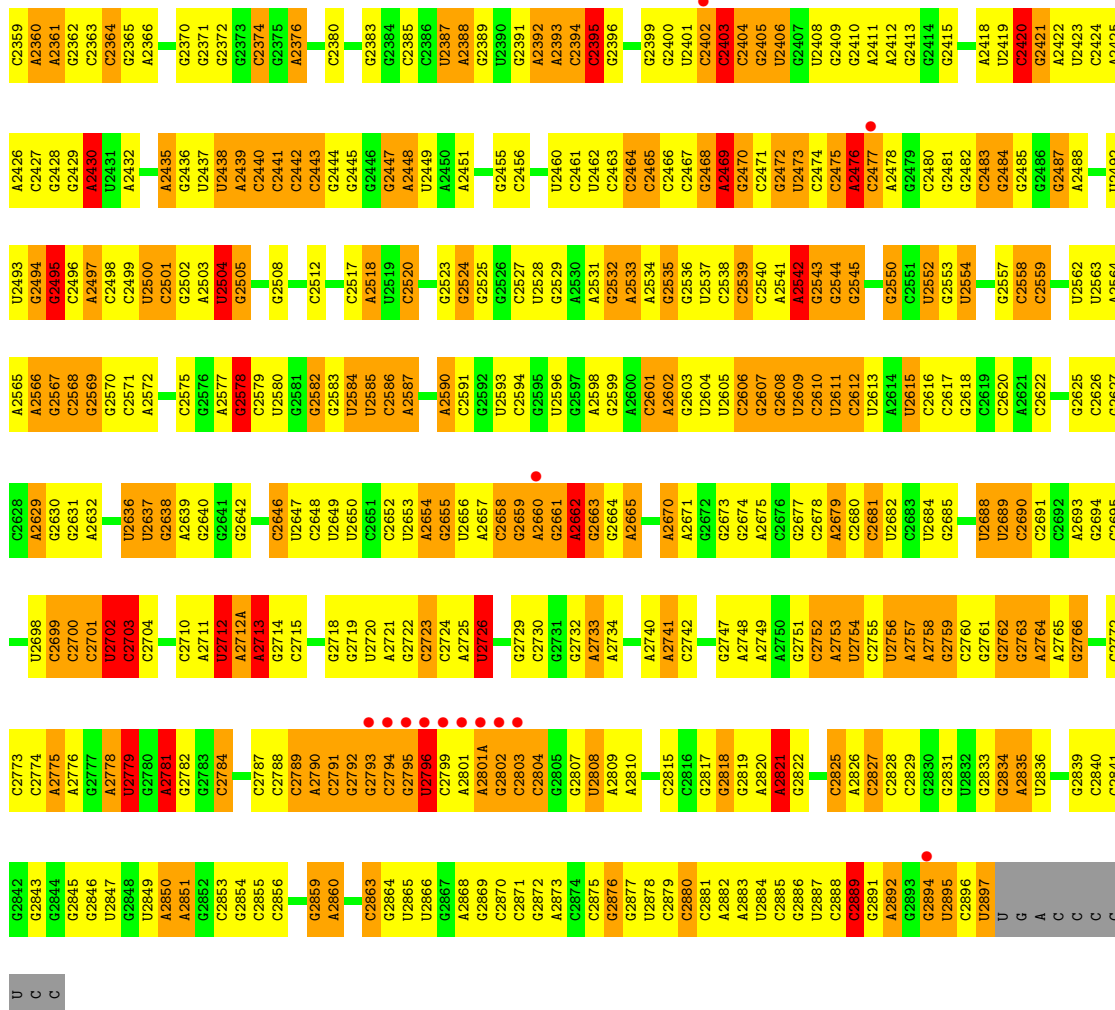
- Molecule 31: 23S ribosomal RNA

Chain BA: 



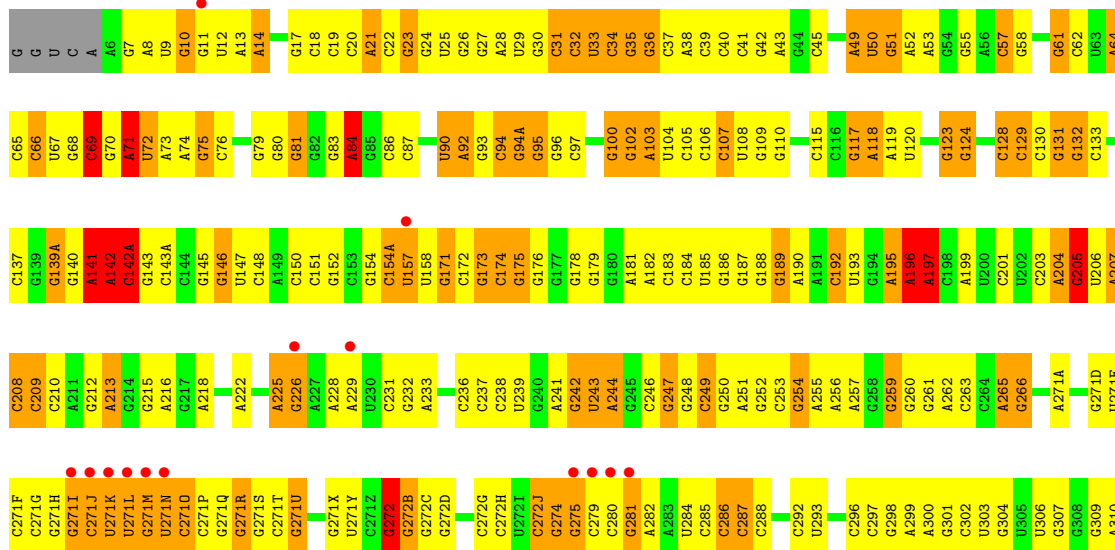
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G1236	C1166	A1045	A983	A918	G646	G780	A718	A643	G583	A513	U448	G372	A311	C271F
A1237	U1167	A1046	A984	G919	A849	A781	C719	A644	C594	A514	U449	U373	G312	C271G
G1238	C1168	G1047	C985	G920	C850	A782	C720	C645	G585	A515	U450	A374	G313	G271H
G1239	A1169	A1048	C986	G921	U851	A783	C721	A646	A596	C516	C451	C375	G314	G271I
A1240	G1170	G1049	G987	U922	G854	A784	A722	G647	G587	C517	U452	C376	G315	G271J
G1241	G1171	A1050	A988	C923	G855	G785	G723	G648	U588	G518	C453	C377	C316	U271K
A1242	A1172	G1051	G989	C924	G856	C786	U724	G651	C589	U519	C455	C378	C319	U271L
G1243	U1173	C1052	A990	C925	C856	G787	G725	C652	A590	G520	C456	G379	G319	U271M
A1244	U1175	C1053	C991	A926	C857	U787	G726	G656	C591	G521	A457	U380	A320	U271N
G1245	A1176	A1106	C992	G927	U858	A789	A727	U657	G592	G522	U458	G321	G321	G271O
A1246	C1177	G928	G993	G928	G859	G728	C728	C658	G593	C523	U459	U384	A322	G271P
G1250	A1178	U930	C994	U930	U860	G729	G729	C659	C594	U524	A460	C385	G323	G271Q
C1251	C1179	G931	C995	G931	A861	G792	C730	G660	C595	U525	C461	G386	A324	G271R
A1252	C1180	G932	A996	G932	G862	A793	C731	C661	A526	A526	C462	U387	G325	G271S
G1253	C1181	A933	C998	A933	A863	G732	G732	G662	U597	A527	U464	G388	G326	G271T
A1254	U1182	G934	C998	G934	G864	C733	G733	G663	G598	A528	U464	G389	G327	G271U
G1255	C1185	U935	C999	C935	C865	A734	C664	C665	G600	G530	A466	A394	G328	G271V
A1256	G1186	U936	A1000	U936	A866	G797	A735	G666	C601	C531	U467	U395	A390	G271X
G1257	U1187	G937	A1001	U937	C867	G736	C736	G668	G602	A532	U468	G396	A331	U271Y
C1258	C1188	G938	A1002	G938	U868	C737	C737	G669	A603	G533	U469	G397	A332	G272
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G1268	G1204	A1129	G1015	G951	G880	U811	G748	C679	G613	A548	U479	A412	G344	
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A2320	G2258	U2096	G2032	A1960	A1812		C1662	C1598	G1519	G1459	U1398	C1329
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G2345	G2282	G	A2057	C1988	A1916	A1773	U1688	G1624	G1552	G1484	U1420	A1353
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C2347	C2284	G	A2060	C1990	A1918	U1777	U1693	G1626		A1486		A1354
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	G2230	C	U2068	C1925	U1851	A1785	A1700	A1633	G1568	A1494	U1433	G1364
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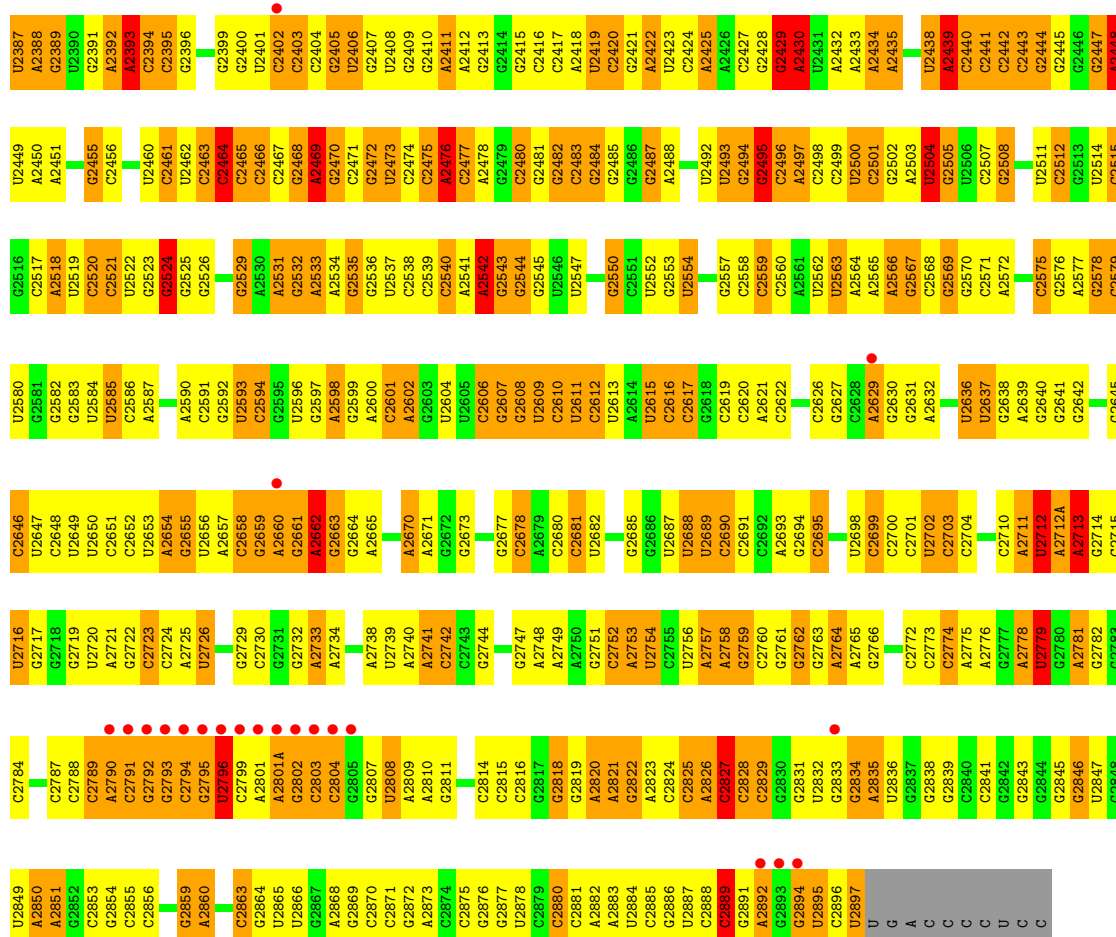
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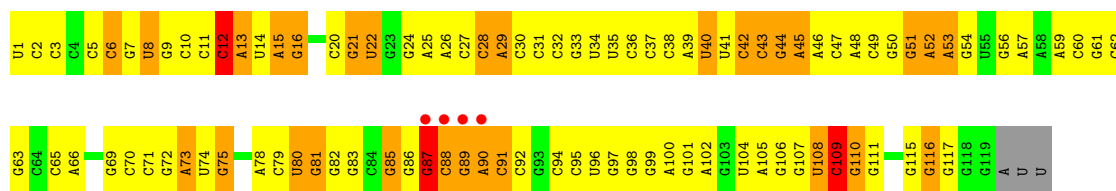
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G2323	C2261	U2189	G2100	C2039	A1972	G1904	G1831	C1767	C1685	G1620	A1554	G1485	A1353
G2324	U2262	G2190	G2101	C2040	G1973	G1905	C1832	U1768	C1686	G1621	G1555	A1486	A1354
G2325	C2263	G2191	U2102	U2041	G1974	G1906	U1833	G1769	G1687	G1622	G1556	G1487	G1355
A2326	C2264	G2192	C2103	A2042	A1978	C1909	G1835	G1770	U1688	G1625	C1557	G1488	G1356
A2327	U2265	G2193	G2104	G2043	G1978	C1910	C1836	G1771	A1689	G1626	A1558	U1489	U1357
A2328	A2266	C2194	G2105	C2044	G1979	G1911	C1837	G1772	G1693	G1627	G1559	A1490	G1358
G2329	A2267	U2197	G2106	C2045	C1982	U1912	C1838	A1773	U1694	G1629	G1563	G1491	A1360
A2330	A2268	U2198	C	G2046	C1983	G1913	G1839	C1774	C1695	G1630	G1564	G1492	G1361
G2331	A2269	G2199	U	U2047	G1984	A1914	C1840	G1775	G1696	G1631A	C1565	U1493	A1362
U2332	C2270	G2200	C	G2048	G1985	C1914	G1940	U1777	G1697	G1632	A1566	A1494	A1363
A2333	G2271	C2201	G	G2049	A1986	U1915	U1842	U1778	G1698	G1633	A1567	A1495	G1371
G2334	C2272	C2202	C	C2050	A1987	U1916	G1843	U1779	A1698	G1634	G1568	A1496	A1365
A2335	A2273	C2203	G	A2051	C1988	U1917	C1844	A1780	G1699	A1634	G1569	U1497	A1366
A2336	C2274	U2203	U	G2052	G1989	A1918	G1845	C1781	G1701	G1635	A1570	C1498	A1367
G2337	A2275	G2204	C	G2053	C1990	G1922	G1846	C1782	A1702	A1570	G1571	G1499	G1368
G2338	G2276	C2205	A	A2054	U1991	U1923	G1847	G1783	G1703	C1638	A1572	C1501	G1369
G2339	G2277	G2206	G	G2055	G1992	U1924	A1847	A1784	G1704	U1639	G1573	C1502	C1370
G2340	A2278	A2208	G	G2056	U1993	G1924	A1848	A1785	G1705	G1640	G1574	U1503	G1372
G2341	G2279	U2218	U	A2057	C1994	C1925	G1849	A1786	U1706	G1641	G1575	C1504	A1373
G2342	G2280	G2220	A	A2058	G1997	U1926	G1850	A1787	G1709	G1642	C1577	A1641	G1374
G2343	C2281	G2221	G	A2059	G1998	A1928	U1851	G1791	C1710	G1643	U1578	C1505	C1375
U2344	G2282	A2060	G	G2061	G1999	G1929	C1852	G1792	C1711	G1644	A1580	C1506	C1376
G2345	C2283	U2061	U	C2062	G2000	G1930	A1853	C1793	C1712	G1645	C1581	A1507	G1377
A2346	C2284	G2224	G	A2063	A2005	C1931	G1856	U1794	U1713	G1646	C1582	C1509	A1384
C2347	C2285	A2225	G	C2064	G2002	G1932	G1857	C1795	G1714	G1647	A1583	A1509A	G1385
U2348	A2286	C2226	G	C2065	A2006	G1933	G1858	U1796	G1715	G1648	C1584	G1510	G1386
G2349	A2287	G2227	A	G2066	C2007	A1936	G1859	U1797	G1716	G1649	A1585	G1511	C1387
C2350	G2288	G2228	C	C2067	C2008	A1937	G1860	U1798	G1717	G1650	A1586	C1512	G1388
G2351	C2289	C2229	G	U2068	C2009	A1938	G1861	U1799	U1718	G1651	C1587	U1512	A1392
A2352	G2290	G2230	U	G2069	C2010	G1942	U1862	C1799	G1719	G1652	C1588	U1513	A1393
G2353	U2291	C2231	C	G2070	G2011	C1943	G1863	C1800	G1721	G1653	C1589	U1514	U1394
G2354	C2292	U2232	G	U2071	G2012	U1944	G1864	G1801	A1722	U1514	U1590	G1460	A1395
U2355	C2293	G2233	C	A2072	U2011	U1945	U1865	A1802	U1739	A1654	G1591	G1461	U1397
U2356	G2294	G2234	G	G2073	G2012	G1946	A1866	A1803	G1740	G1655	C1592	G1462	C1398
A2357	U2295	G2235	G	C2074	G2013	U1947	A1867	A1804	A1741	G1656	G1593	A1457	C1399
G2358	A2298	C2236	C	U2075	A2014	G1948	C1868	U1805	G1742	C1657	G1594	U1518	G1400
C2359	G2299	G2237	C	U2076	A2015	G1949	C1869	U1806	C1743	U1658	G1595	G1458	A1399
A2360	G2300	G2238	G	A2077	U2016	G1948	C1870	G1807	C1744	U1659	A1596	U1519	U1396
A2361	C2301	G2239	G	C2078	U2017	G1949	C1871	U1808	C1745	G1660	C1597	G1461	C1397
G2362	G2302	U2078	U	U2079	G2018	G1952	C1872	A1809	C1745A	G1661	C1598	G1462	U1397
C2363	C2303	A2241	G	G2080	U2019	G1953	C1873	A1810	C1746	G1662	C1599	G1463	C1398
G2364	G2304	U2242	A	G2081	A2020	G1954	A1878	G1811	G1746	G1663	G1600	G1464	C1399
G2365	A2305	U2243	A	C2082	C2021	U1955	C1866	G1812	G1748	G1664	G1601	G1465	G1400
A2366	C2306	U2244	A	A2083	U2022	U1956	C1867	A1813	U1749	G1665	U1602	G1466	C1403
G2370	G2307	U2245	U	G2084	C2023	C1957	C1868	G1814	G1750	A1668	G1603	G1467	C1404
G2371	C2308	A2247	C	C2085	G2024	G1958	A1869	A1815	C1751	A1669	C1604	C1468	C1405
A2372	A2310	U2248	A	U2086	C2025	G1959	A1890	G1752	G1752	C1670	C1607	G1470	U1406
G2373	U2311	G2249	C	G2087	C2026	A1960	G1891	G1753	G1753	G1671	A1608	A1471	C1407
A2374	U2312	G2250	C	C2088	G2027	C1961	C1892	C1754	C1754	G1672	C1609	A1472	C1408
G2375	C2313	G2251	C	U2089	U2028	C1962	C1893	U1620	C1755	C1673	A1610	G1473	C1409
A2376	G2314	G2252	U	G2090	C2029	U1963	C1894	A1821	G1756	A1676	C1611	A1474	G1410
G2377	U2315	G2253	G	U2091	A2030	G1964	C1895	U1757	G1677	C1677	C1612	G1475	G1411
A2378	C2316	C2254	G	G2092	A2031	G1965	G1896	G1758	G1678	U1679	G1613	C1547	A1412
G2379	U2317	G2255	G	G2093	G2032	A1966	A1897	A1825	U1679	G1679	A1614	C1548	A1413
A2380	C2318	G2256	C	G2094	A2033	C1967	G1899	G1826	A1762	U1680	C1615	C1549	G1416
G2381	G2319	U2257	C	U2095	A2034	G1968	A1900	G1827	G1763	G1681	C1616	C1550	G1417
U2382	C2320	G2258	G	U2096	C2036	A1969	A1901	G1828	G1764	G1682	C1617	C1551	G1418
G2383	G2321	G2259	G		G2037	A1970	C1902	A1829	C1765	G1683	A1618	G1552	



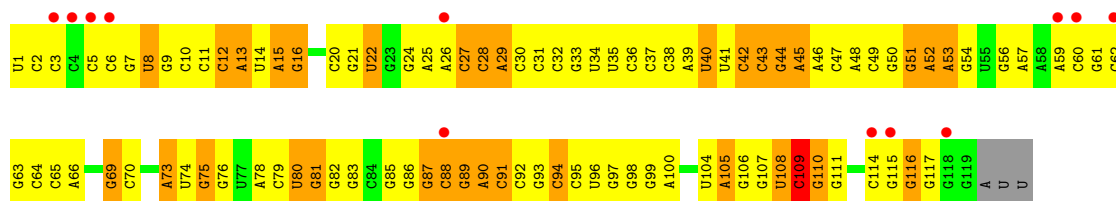
• Molecule 32: 5S ribosomal RNA

Chain BB:



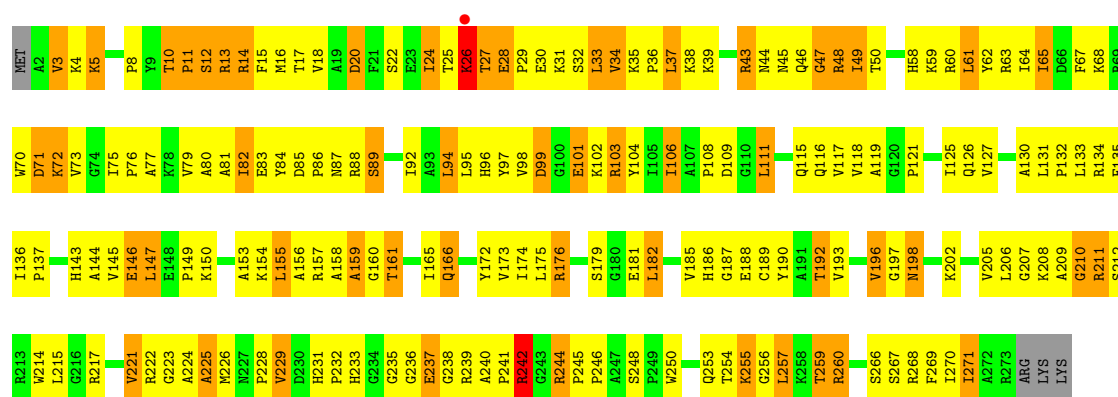
• Molecule 32: 5S ribosomal RNA

Chain DB:



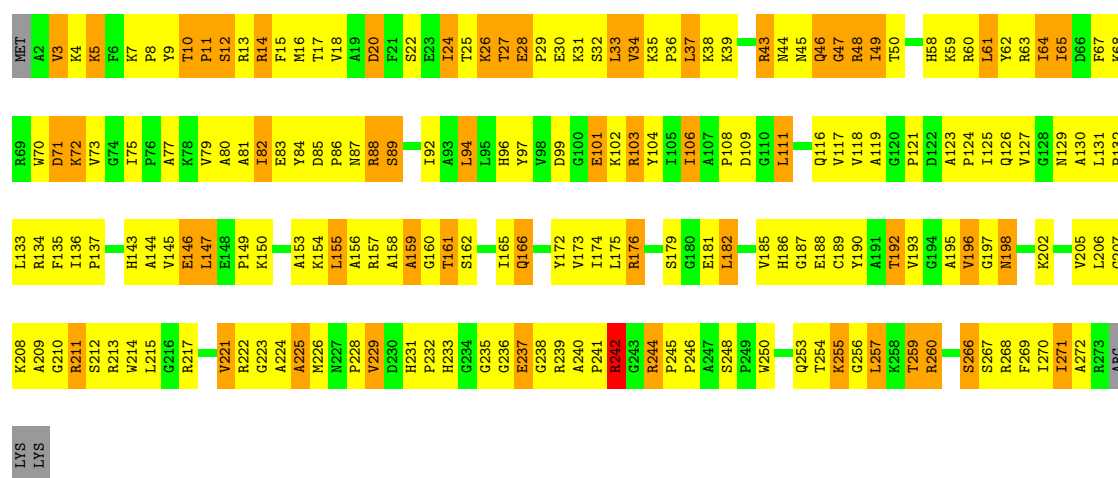
• Molecule 33: 50S ribosomal protein L2

Chain BD:



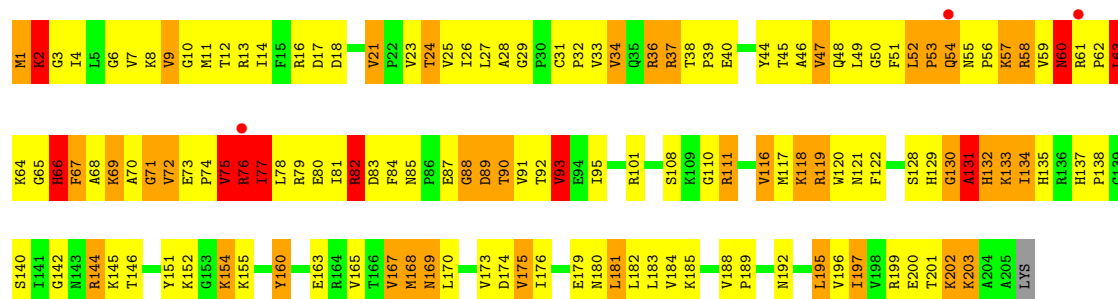
• Molecule 33: 50S ribosomal protein L2

Chain DD:



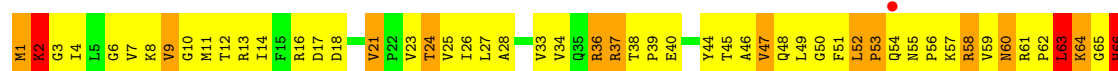
• Molecule 34: 50S ribosomal protein L3

Chain BE:

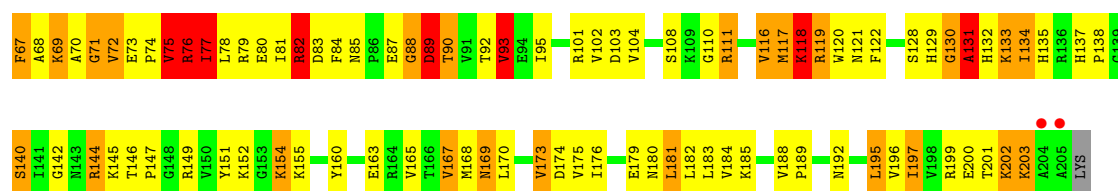


• Molecule 34: 50S ribosomal protein L3

Chain DE:

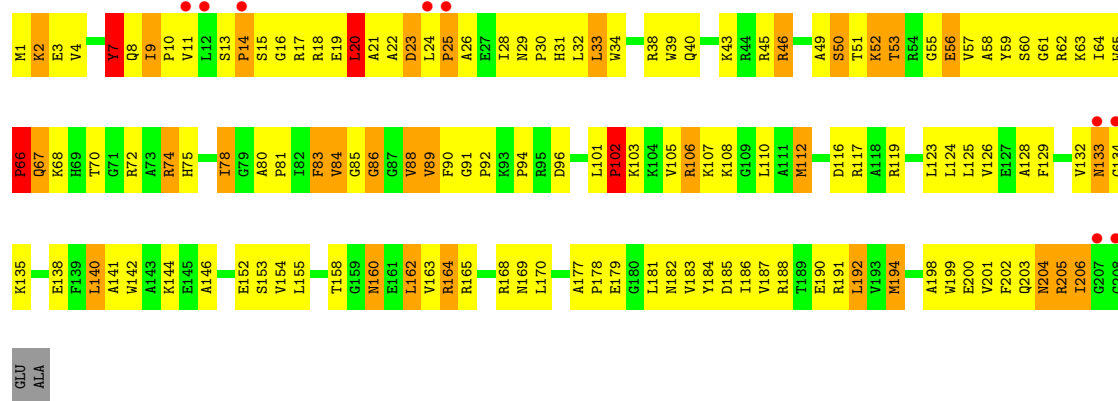






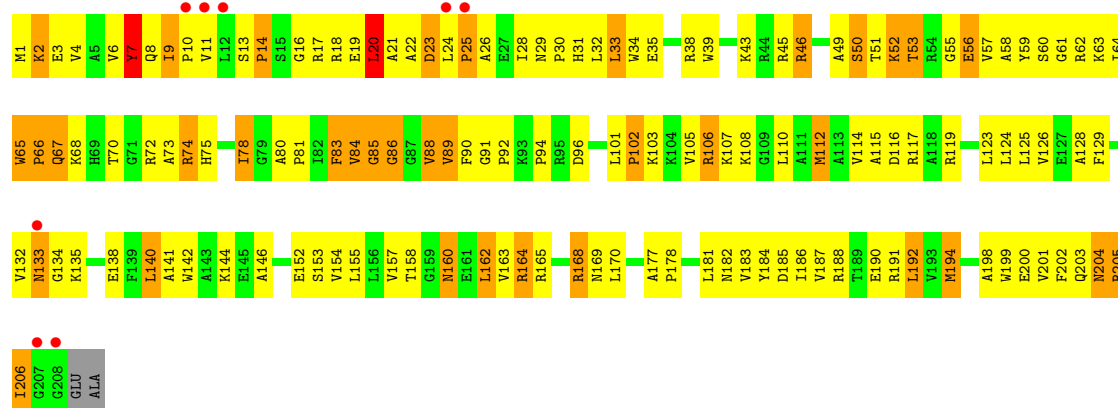
• Molecule 35: 50S ribosomal protein L4

Chain BF:



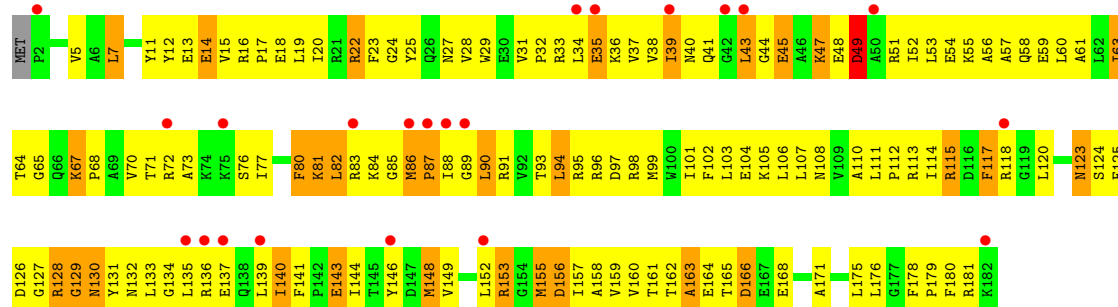
• Molecule 35: 50S ribosomal protein L4

Chain DF:



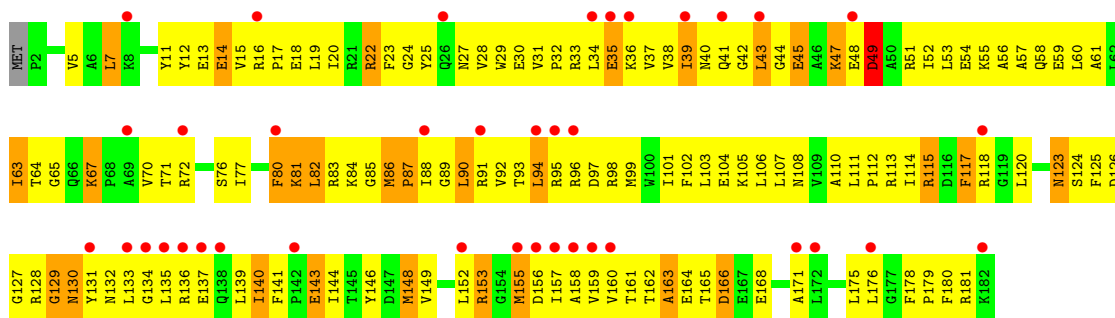
• Molecule 36: 50S ribosomal protein L5

Chain BG:



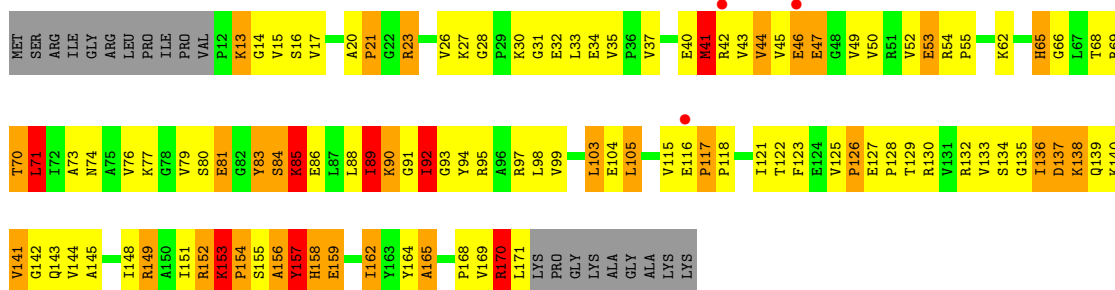
- Molecule 36: 50S ribosomal protein L5

Chain DG:



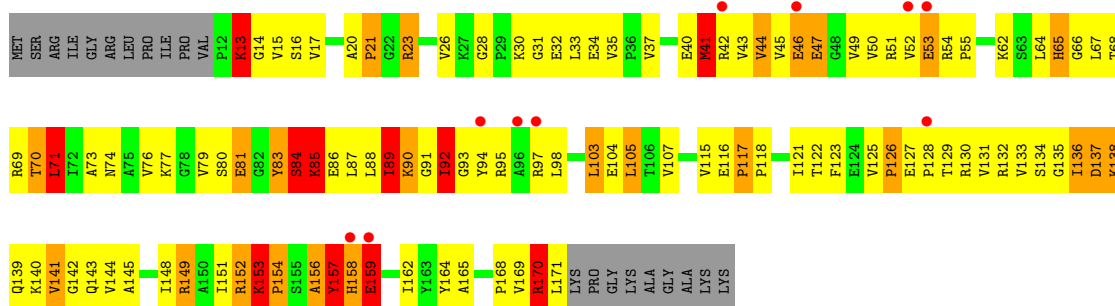
- Molecule 37: 50S ribosomal protein L6

Chain BH:



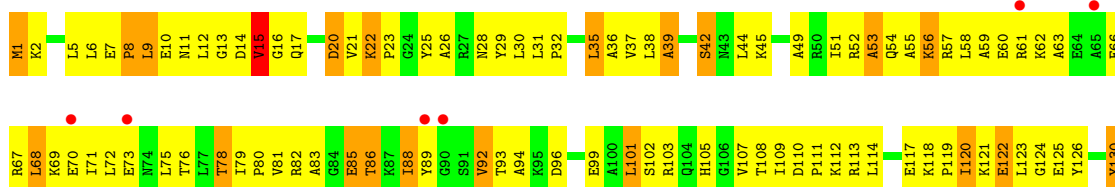
- Molecule 37: 50S ribosomal protein L6

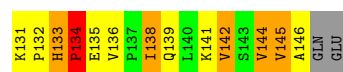
Chain DH:



- Molecule 38: 50S ribosomal protein L9

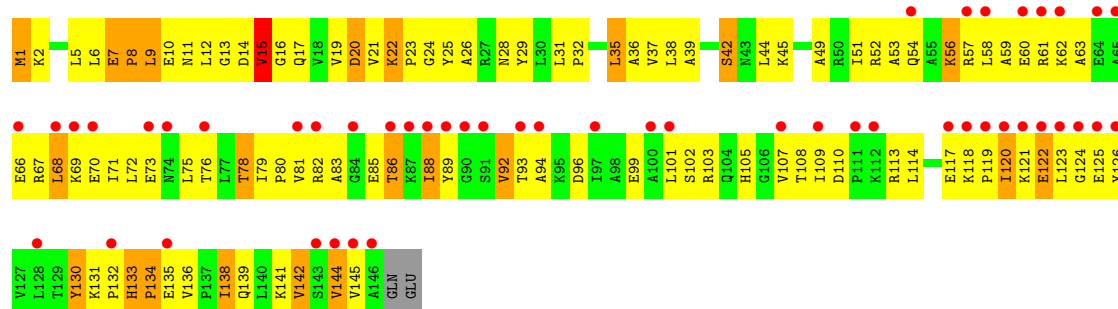
Chain BI:





• Molecule 38: 50S ribosomal protein L9

Chain DI:



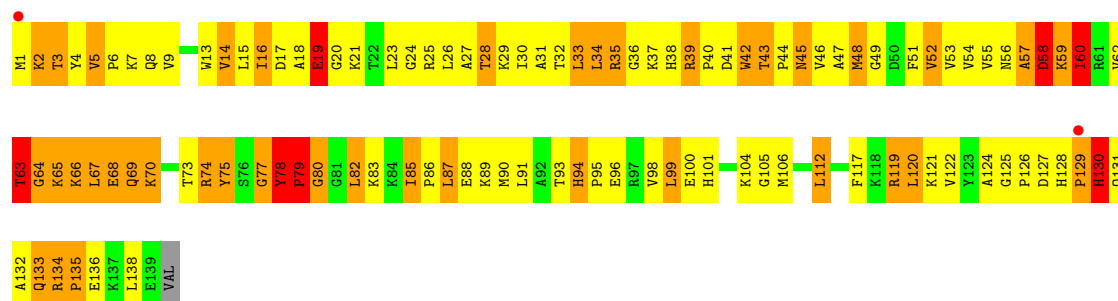
• Molecule 39: 50S ribosomal protein L13

Chain BN:



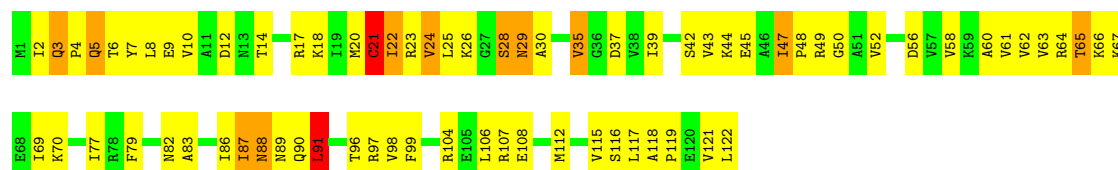
• Molecule 39: 50S ribosomal protein L13

Chain DN:



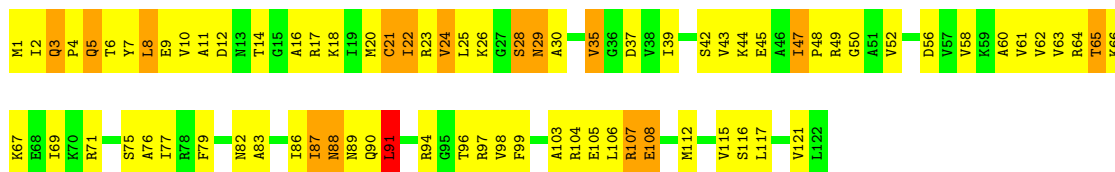
• Molecule 40: 50S ribosomal protein L14

Chain BO:



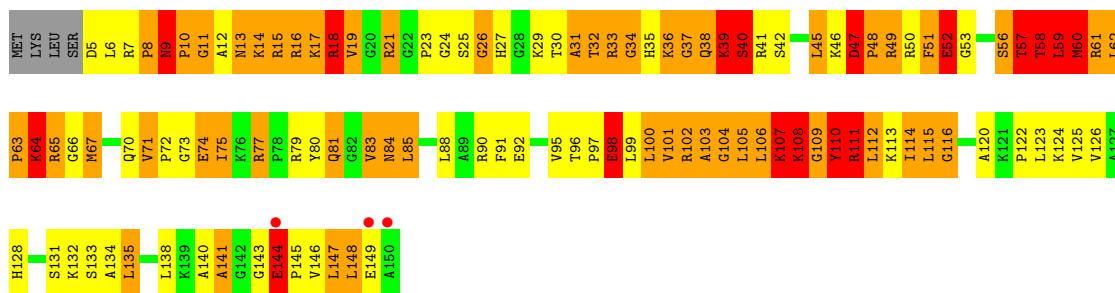
- Molecule 40: 50S ribosomal protein L14

Chain DO:



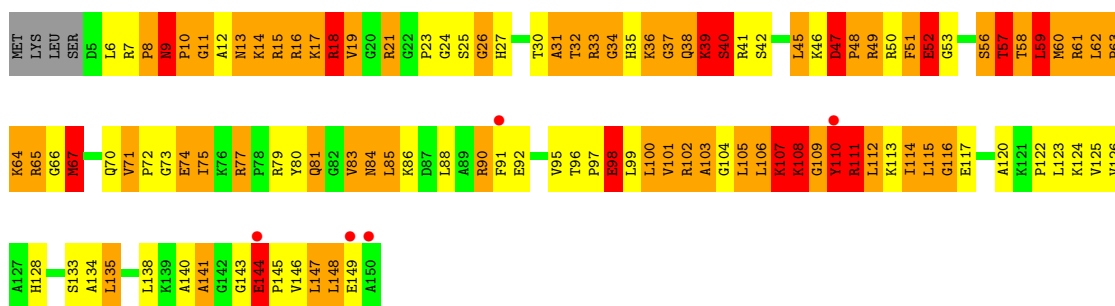
- Molecule 41: 50S ribosomal protein L15

Chain BP:



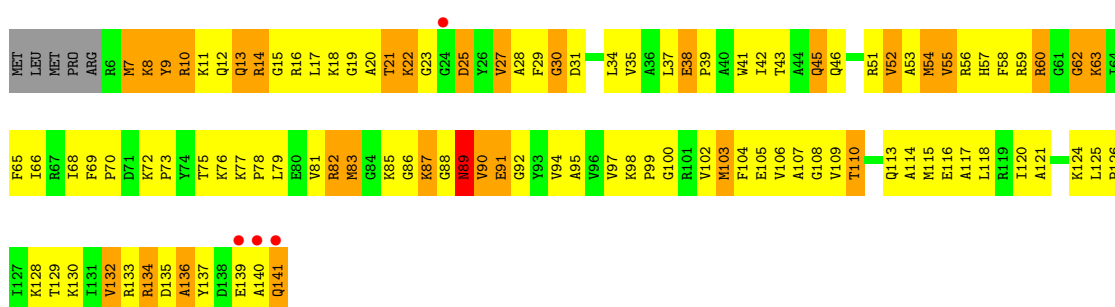
- Molecule 41: 50S ribosomal protein L15

Chain DP:



- Molecule 42: 50S ribosomal protein L16

Chain BQ:

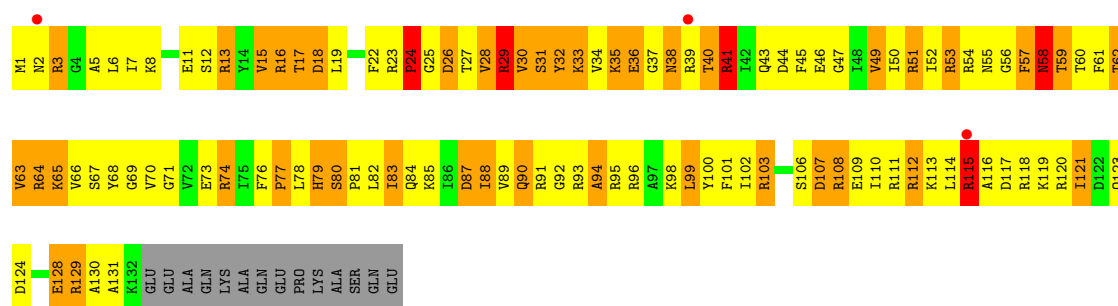


- Molecule 42: 50S ribosomal protein L16

Chain DQ:

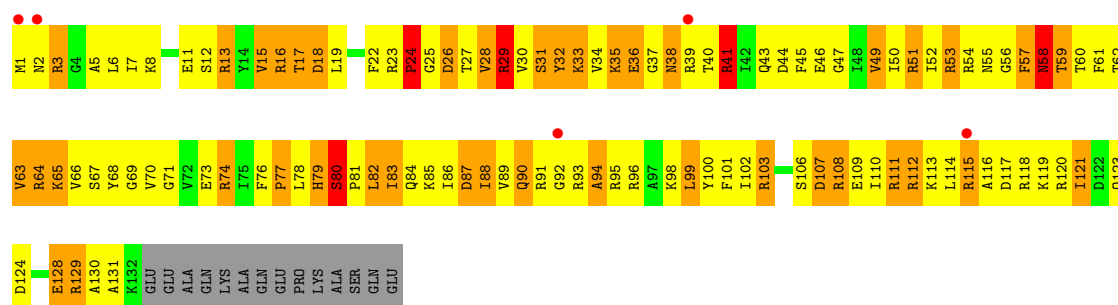






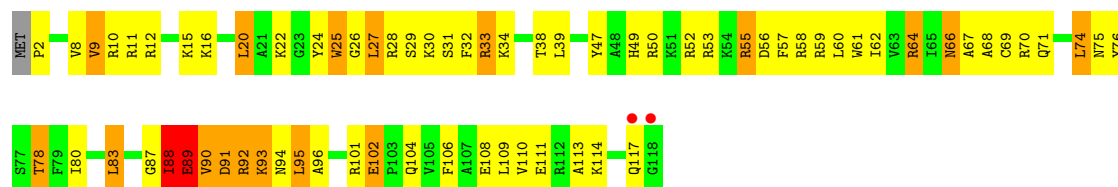
- Molecule 45: 50S ribosomal protein L19

Chain DT:



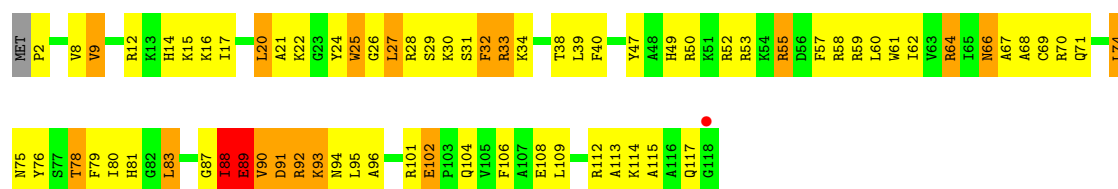
- Molecule 46: 50S ribosomal protein L20

Chain BU:



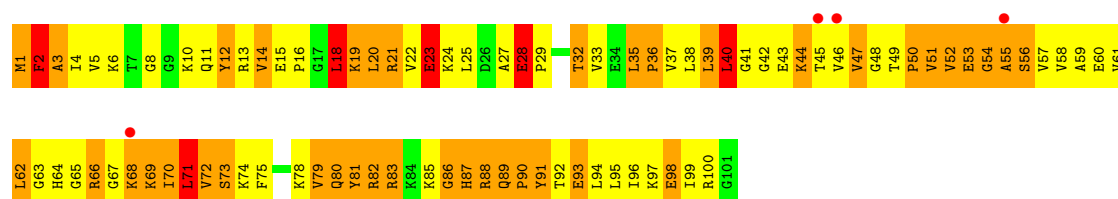
- Molecule 46: 50S ribosomal protein L20

Chain DU:

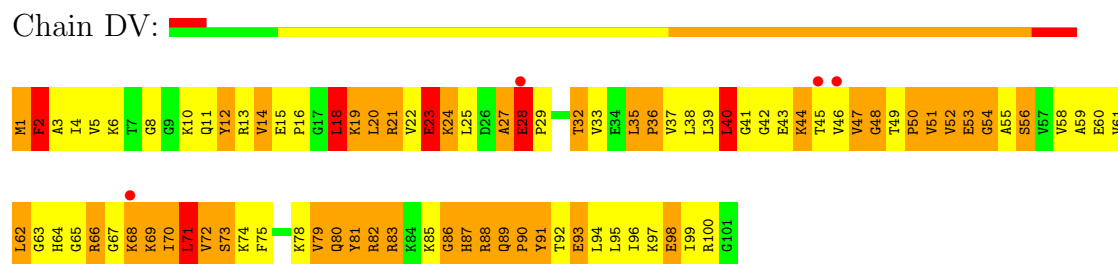


- Molecule 47: 50S ribosomal protein L21

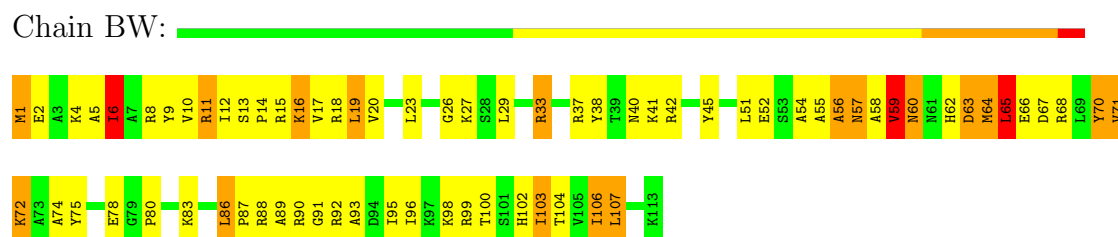
Chain BV:



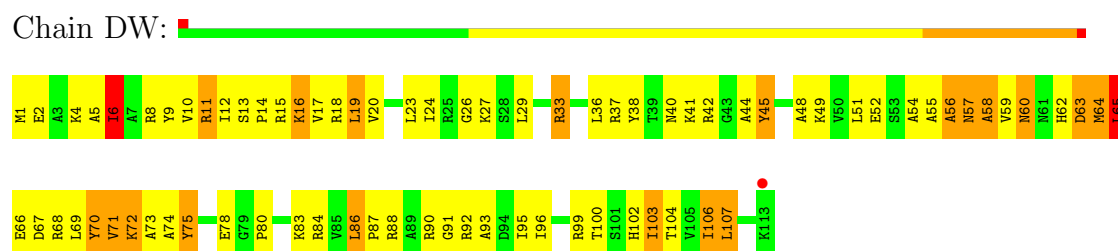
- Molecule 47: 50S ribosomal protein L21



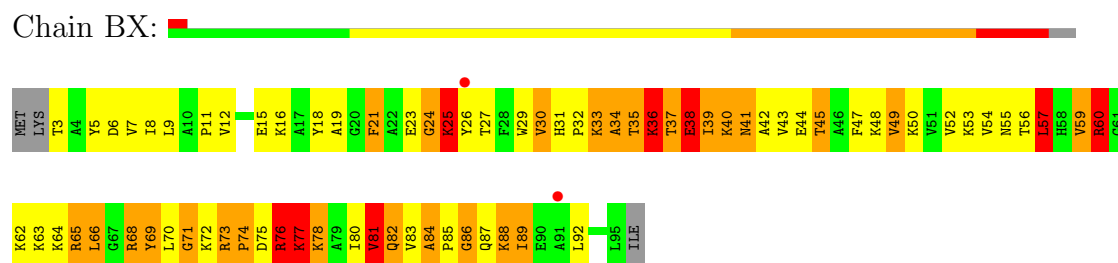
- Molecule 48: 50S ribosomal protein L22



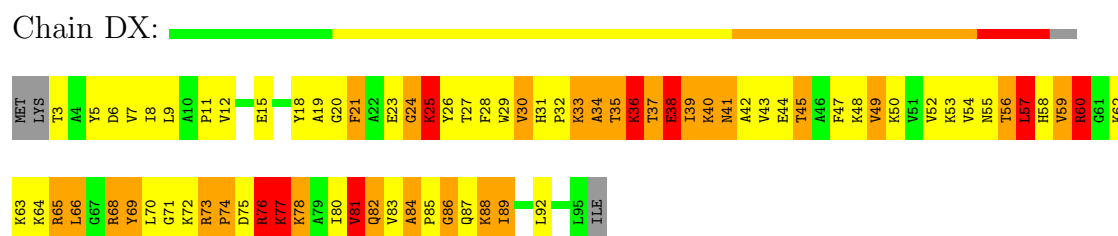
- Molecule 48: 50S ribosomal protein L22



- Molecule 49: 50S ribosomal protein L23

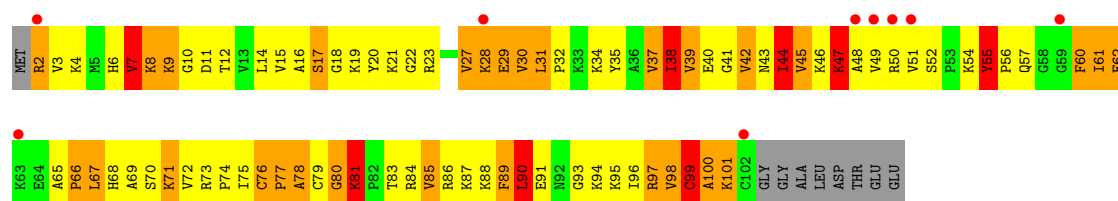


- Molecule 49: 50S ribosomal protein L23



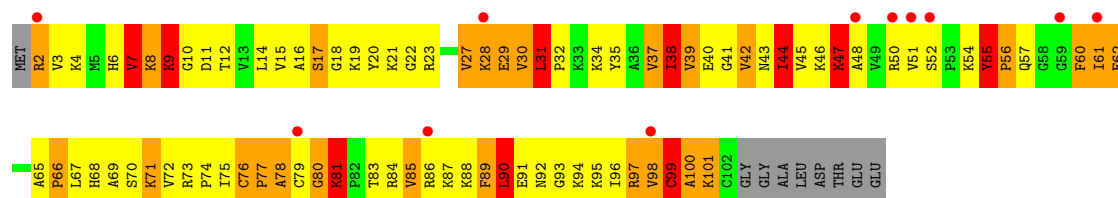
- Molecule 50: 50S ribosomal protein L24





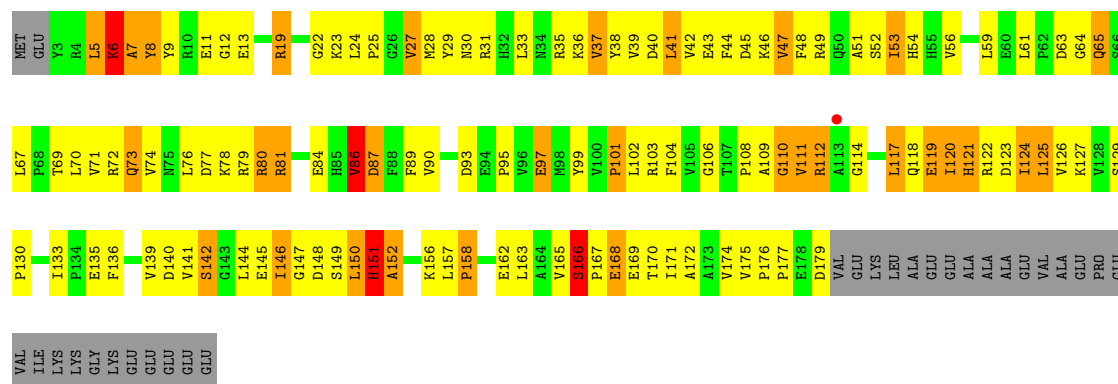
- Molecule 50: 50S ribosomal protein L24

Chain DY:



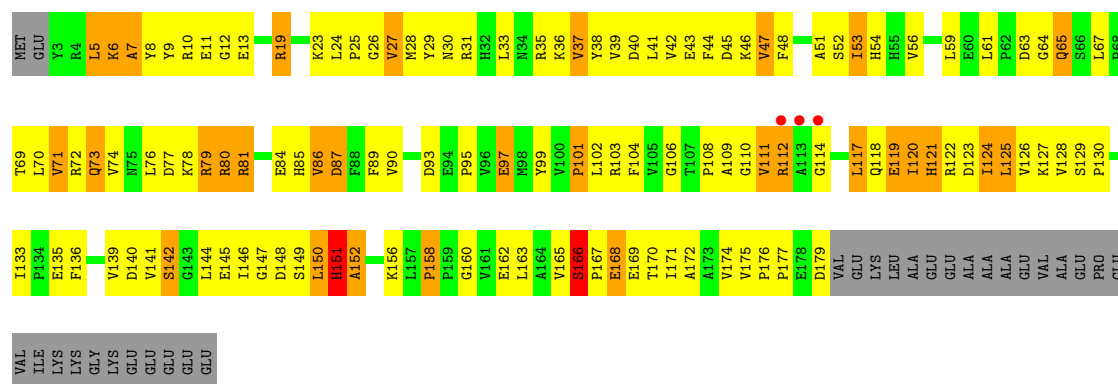
- Molecule 51: 50S ribosomal protein L25

Chain BZ:



- Molecule 51: 50S ribosomal protein L25

Chain DZ: 





## 4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, $\alpha$ , $\beta$ , $\gamma$	210.18Å 448.40Å 621.05Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	49.57 – 3.00 49.57 – 3.00	Depositor EDS
% Data completeness (in resolution range)	(Not available) (49.57-3.00) 98.6 (49.57-3.00)	Depositor EDS
$R_{merge}$	0.32	Depositor
$R_{sym}$	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ <sup>1</sup>	1.07 (at 3.01Å)	Xtriage
Refinement program	Phenix	Depositor
R, $R_{free}$	0.244 , 0.281 0.249 , 0.281	Depositor DCC
$R_{free}$ test set	57089 reflections (5.27%)	DCC
Wilson B-factor (Å <sup>2</sup> )	73.9	Xtriage
Anisotropy	0.178	Xtriage
Bulk solvent $k_{sol}$ (e/Å <sup>3</sup> ), $B_{sol}$ (Å <sup>2</sup> )	0.30 , 61.3	EDS
Estimated twinning fraction	No twinning to report.	Xtriage
L-test for twinning	$\langle  L  \rangle = 0.47$ , $\langle L^2 \rangle = 0.29$	Xtriage
Outliers	0 of 1140008 reflections	Xtriage
$F_o, F_c$ correlation	0.90	EDS
Total number of atoms	277987	wwPDB-VP
Average B, all atoms (Å <sup>2</sup> )	89.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.66% of the height of the origin peak. No significant pseudotranslation is detected.*

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

## 5 Model quality

### 5.1 Standard geometry

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

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\# Z  > 5$	RMSZ	$\# Z  > 5$
1	AA	0.54	0/36190	0.92	37/56486 (0.1%)
1	CA	0.53	0/36190	0.93	55/56486 (0.1%)
2	AB	0.29	0/1936	0.51	0/2611
2	CB	0.29	0/1936	0.50	0/2611
3	AC	0.27	0/1637	0.44	0/2207
3	CC	0.26	0/1637	0.44	0/2207
4	AD	0.36	0/1733	0.54	0/2318
4	CD	0.38	1/1733 (0.1%)	0.55	0/2318
5	AE	0.38	0/1163	0.58	0/1566
5	CE	0.37	0/1163	0.59	0/1566
6	AF	0.38	0/856	0.58	0/1154
6	CF	0.36	0/856	0.58	0/1154
7	AG	0.25	0/1276	0.44	0/1709
7	CG	0.25	0/1276	0.44	0/1709
8	AH	0.34	0/1136	0.56	0/1527
8	CH	0.34	0/1136	0.55	0/1527
9	AI	0.25	0/1028	0.44	0/1375
9	CI	0.25	0/1028	0.44	0/1375
10	AJ	0.27	0/808	0.48	0/1087
10	CJ	0.26	0/808	0.49	0/1087
11	AK	0.33	0/900	0.55	0/1213
11	CK	0.35	0/900	0.54	0/1213
12	AL	0.42	0/987	0.65	0/1322
12	CL	0.42	0/987	0.65	0/1322
13	AM	0.26	0/928	0.47	0/1238
13	CM	0.26	0/928	0.46	0/1238
14	AN	0.26	0/501	0.42	0/664
14	CN	0.26	0/501	0.42	0/664
15	AO	0.36	0/745	0.59	0/992
15	CO	0.35	0/745	0.58	0/992
16	AP	0.34	0/717	0.59	0/965
16	CP	0.35	0/717	0.60	0/965

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
17	AQ	0.36	0/837	0.58	0/1119
17	CQ	0.37	0/837	0.59	0/1119
18	AR	0.35	0/579	0.58	0/768
18	CR	0.36	0/579	0.57	0/768
19	AS	0.26	0/643	0.43	0/867
19	CS	0.26	0/643	0.44	0/867
20	AT	0.36	0/765	0.57	0/1007
20	CT	0.35	0/765	0.56	0/1007
21	AU	0.26	0/213	0.43	0/279
21	CU	0.26	0/213	0.43	0/279
22	B0	0.53	0/658	0.70	0/878
22	D0	0.49	0/658	0.70	0/878
23	B1	0.78	0/700	0.99	2/931 (0.2%)
23	D1	0.67	0/700	0.95	1/931 (0.1%)
24	B2	0.66	0/423	0.94	0/560
24	D2	0.55	0/423	0.89	0/560
25	B3	0.61	0/473	0.69	0/636
25	D3	0.49	0/473	0.67	0/636
26	B4	0.30	0/156	0.68	0/215
26	D4	0.30	0/156	0.65	0/215
27	B5	0.84	1/473 (0.2%)	1.02	2/639 (0.3%)
27	D5	0.77	0/473	0.97	1/639 (0.2%)
28	B6	0.89	0/387	1.07	0/517
28	D6	0.71	0/387	1.01	0/517
29	B7	0.64	0/427	0.79	0/563
29	D7	0.67	0/427	0.76	0/563
30	B8	0.72	0/516	1.09	2/681 (0.3%)
30	D8	0.64	0/516	1.04	0/681
31	BA	1.06	84/65745 (0.1%)	1.42	971/102639 (0.9%)
31	DA	0.85	35/65745 (0.1%)	1.41	1008/102639 (1.0%)
32	BB	0.83	0/2853	1.18	23/4451 (0.5%)
32	DB	0.66	0/2853	1.13	19/4451 (0.4%)
33	BD	0.63	0/2155	0.85	2/2907 (0.1%)
33	DD	0.59	0/2155	0.83	1/2907 (0.0%)
34	BE	0.63	0/1597	0.82	0/2155
34	DE	0.56	0/1597	0.81	0/2155
35	BF	0.60	0/1659	0.76	0/2246
35	DF	0.52	1/1659 (0.1%)	0.74	0/2246
36	BG	0.34	0/1498	0.55	0/2013
36	DG	0.30	0/1498	0.54	0/2013
37	BH	0.60	0/1246	0.74	0/1684
37	DH	0.44	0/1246	0.69	0/1684
38	BI	0.38	0/1147	0.61	0/1553

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
38	DI	0.40	0/1147	0.61	0/1553
39	BN	0.71	0/1132	0.93	2/1527 (0.1%)
39	DN	0.59	0/1132	0.87	1/1527 (0.1%)
40	BO	0.59	1/943 (0.1%)	0.73	0/1269
40	DO	0.52	0/943	0.73	1/1269 (0.1%)
41	BP	0.69	0/1131	1.03	8/1504 (0.5%)
41	DP	0.60	0/1131	0.98	6/1504 (0.4%)
42	BQ	0.70	0/1100	0.85	1/1470 (0.1%)
42	DQ	0.60	0/1100	0.83	0/1470
43	BR	0.63	0/974	0.82	1/1302 (0.1%)
43	DR	0.56	0/974	0.80	1/1302 (0.1%)
44	BS	0.50	0/779	0.77	0/1038
44	DS	0.43	0/779	0.73	0/1038
45	BT	0.59	0/1114	0.85	2/1488 (0.1%)
45	DT	0.52	0/1114	0.83	1/1488 (0.1%)
46	BU	0.69	0/975	0.76	0/1297
46	DU	0.56	0/975	0.72	0/1297
47	BV	0.72	0/789	0.95	1/1054 (0.1%)
47	DV	0.58	0/789	0.89	1/1054 (0.1%)
48	BW	0.68	0/907	0.84	2/1216 (0.2%)
48	DW	0.58	0/907	0.81	2/1216 (0.2%)
49	BX	0.70	0/740	0.96	2/995 (0.2%)
49	DX	0.63	0/740	0.94	2/995 (0.2%)
50	BY	0.70	1/789 (0.1%)	0.91	0/1053
50	DY	0.60	0/789	0.87	1/1053 (0.1%)
51	BZ	0.47	0/1436	0.67	2/1951 (0.1%)
51	DZ	0.41	0/1436	0.66	1/1951 (0.1%)
All	All	0.75	124/301000 (0.0%)	1.13	2162/449812 (0.5%)

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
23	B1	0	1
23	D1	0	1
24	B2	0	1
24	D2	0	1
27	B5	0	1
27	D5	0	1
28	B6	0	1

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Mol	Chain	#Chirality outliers	#Planarity outliers
31	BA	19	0
31	DA	19	0
33	BD	0	3
33	DD	0	3
34	BE	0	2
34	DE	0	2
37	BH	0	1
37	DH	0	1
41	BP	0	5
41	DP	0	4
42	BQ	0	1
42	DQ	0	1
43	BR	0	2
43	DR	0	2
44	BS	0	1
44	DS	0	1
45	BT	0	2
45	DT	0	2
46	BU	0	1
47	BV	0	3
47	DV	0	3
49	BX	0	4
49	DX	0	4
All	All	38	55

All (124) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
31	BA	669	G	C4'-C3'	-11.30	1.40	1.53
31	DA	669	G	C4'-C3'	-10.33	1.41	1.53
31	BA	1300	U	C4'-C3'	-9.89	1.42	1.53
31	BA	1332	G	N9-C4	-9.70	1.30	1.38
31	DA	783	A	N9-C4	-9.28	1.32	1.37
31	DA	1300	U	C4'-C3'	-9.04	1.43	1.53
31	BA	1694	C	C4'-C3'	-8.79	1.43	1.53
31	DA	1694	C	C4'-C3'	-8.60	1.43	1.53
31	BA	1142(A)	A	N9-C4	-8.39	1.32	1.37
31	BA	783	A	N9-C4	-8.31	1.32	1.37
31	BA	676	A	N3-C4	-8.20	1.29	1.34
31	BA	774	A	N9-C4	-8.05	1.33	1.37
31	BA	1021	A	N9-C4	-8.02	1.33	1.37
31	DA	528	A	N9-C4	-7.92	1.33	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
31	BA	2346	A	N9-C4	-7.70	1.33	1.37
31	BA	528	A	N9-C4	-7.69	1.33	1.37
31	BA	2518	A	N9-C4	-7.58	1.33	1.37
31	BA	751	A	N3-C4	-7.56	1.30	1.34
31	DA	774	A	N9-C4	-7.54	1.33	1.37
31	DA	1142(A)	A	N9-C4	-7.34	1.33	1.37
31	BA	330	A	N9-C4	-7.32	1.33	1.37
31	DA	2476	A	N9-C4	7.24	1.42	1.37
31	BA	1616	A	N7-C5	-7.23	1.34	1.39
31	DA	1332	G	N9-C4	-7.10	1.32	1.38
31	BA	2713	A	N9-C4	-6.76	1.33	1.37
31	BA	2046	G	N7-C5	-6.56	1.35	1.39
31	DA	945	A	C5-C6	-6.32	1.35	1.41
31	BA	652	C	O3'-P	6.31	1.68	1.61
31	BA	1332	G	C5-C6	-6.26	1.36	1.42
31	BA	783	A	N3-C4	-6.25	1.31	1.34
31	BA	2346	A	N7-C5	-6.24	1.35	1.39
31	BA	2346	A	C5-C6	-6.18	1.35	1.41
31	DA	652	C	O3'-P	6.13	1.68	1.61
31	DA	1971	A	N9-C4	-6.11	1.34	1.37
31	BA	1204	A	N9-C4	-6.10	1.34	1.37
31	BA	2575	C	N1-C6	-6.10	1.33	1.37
50	BY	45	VAL	CA-CB	6.09	1.67	1.54
31	DA	2346	A	N9-C4	-6.05	1.34	1.37
31	BA	945	A	N9-C4	-6.00	1.34	1.37
31	BA	1677	A	N3-C4	-5.98	1.31	1.34
31	DA	1890	A	N9-C4	-5.97	1.34	1.37
31	BA	800	A	N3-C4	-5.96	1.31	1.34
31	BA	211	A	N3-C4	-5.94	1.31	1.34
31	BA	197	A	N3-C4	-5.92	1.31	1.34
31	BA	2042	A	N9-C4	-5.89	1.34	1.37
31	DA	1021	A	N9-C4	-5.87	1.34	1.37
31	BA	2392	A	N9-C4	-5.86	1.34	1.37
27	B5	40	LYS	CD-CE	5.84	1.65	1.51
31	BA	1762	A	N9-C4	5.84	1.41	1.37
31	BA	1142(A)	A	N3-C4	-5.83	1.31	1.34
31	BA	2476	A	N9-C4	5.80	1.41	1.37
31	DA	2518	A	N9-C4	-5.78	1.34	1.37
31	DA	1021	A	N7-C5	-5.75	1.35	1.39
31	BA	1934	C	C4'-C3'	-5.72	1.46	1.52
31	BA	933	A	N9-C4	-5.72	1.34	1.37
31	BA	1616	A	N9-C4	-5.71	1.34	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
31	BA	652	C	C3'-O3'	5.70	1.50	1.42
31	DA	1786	A	C5-C6	-5.68	1.35	1.41
31	BA	2287	A	N9-C4	-5.67	1.34	1.37
31	BA	749	C	N1-C6	-5.65	1.33	1.37
31	DA	1204	A	N9-C4	-5.61	1.34	1.37
31	BA	676	A	N9-C4	-5.59	1.34	1.37
31	BA	197	A	N9-C4	-5.58	1.34	1.37
31	BA	1021	A	N7-C5	-5.58	1.35	1.39
31	BA	975	C	N3-C4	-5.56	1.30	1.33
31	DA	676	A	N9-C8	5.55	1.42	1.37
31	BA	945	A	N3-C4	-5.53	1.31	1.34
31	BA	933	A	C5-C6	-5.52	1.36	1.41
31	BA	2590	A	N9-C4	-5.50	1.34	1.37
31	BA	71	A	N3-C4	-5.50	1.31	1.34
31	BA	579	G	C2-N3	-5.47	1.28	1.32
31	BA	1162	G	N9-C8	-5.47	1.34	1.37
31	BA	1779	U	C2-N3	-5.46	1.33	1.37
31	BA	2274	A	N9-C4	-5.45	1.34	1.37
31	DA	652	C	C3'-O3'	5.44	1.49	1.42
31	BA	14	A	N7-C5	-5.42	1.35	1.39
31	BA	1786	A	N7-C5	-5.42	1.36	1.39
31	BA	734	A	N9-C4	-5.40	1.34	1.37
40	BO	21	CYS	CB-SG	-5.39	1.73	1.81
31	BA	2741	A	N9-C4	-5.38	1.34	1.37
31	BA	1616	A	C5-C6	-5.36	1.36	1.41
31	BA	1632	A	N3-C4	-5.34	1.31	1.34
31	DA	197	A	N3-C4	-5.34	1.31	1.34
31	BA	2469	A	N7-C5	-5.33	1.36	1.39
31	BA	503	A	N3-C4	-5.32	1.31	1.34
31	BA	2018	G	C5-C4	-5.31	1.34	1.38
31	BA	525	U	N1-C2	-5.30	1.33	1.38
31	DA	783	A	N7-C5	-5.30	1.36	1.39
31	BA	652	C	P-O5'	5.28	1.65	1.59
31	BA	751	A	C6-N1	-5.28	1.31	1.35
31	DA	652	C	P-O5'	5.28	1.65	1.59
31	DA	1899	G	N9-C4	-5.27	1.33	1.38
31	BA	676	A	C5-C6	-5.26	1.36	1.41
31	DA	2287	A	N9-C4	-5.26	1.34	1.37
31	BA	579	G	N3-C4	-5.26	1.31	1.35
31	DA	1918	A	N9-C4	-5.25	1.34	1.37
31	BA	211	A	N9-C4	-5.25	1.34	1.37
31	BA	2703	C	N1-C6	-5.23	1.34	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
31	BA	1332	G	N3-C4	-5.22	1.31	1.35
31	BA	2430	A	N7-C5	-5.19	1.36	1.39
31	DA	685	A	N9-C4	-5.18	1.34	1.37
35	DF	65	TRP	CB-CG	-5.18	1.41	1.50
31	BA	2613	U	C2-N3	-5.17	1.34	1.37
31	DA	1762	A	N9-C4	5.17	1.41	1.37
31	DA	483	A	N9-C4	-5.16	1.34	1.37
31	BA	2497	A	N3-C4	-5.16	1.31	1.34
4	CD	9	CYS	CB-SG	5.16	1.91	1.82
31	BA	1323	U	N1-C2	-5.16	1.33	1.38
31	BA	2346	A	N3-C4	-5.15	1.31	1.34
31	DA	2393	A	N3-C4	-5.15	1.31	1.34
31	BA	1189	A	C5-C6	-5.15	1.36	1.41
31	BA	2245	U	C4-O4	5.14	1.27	1.23
31	DA	676	A	C5-C4	5.12	1.42	1.38
31	BA	2031	A	P-O5'	-5.10	1.54	1.59
31	BA	1992	G	N9-C4	5.10	1.42	1.38
31	BA	1314	C	N1-C6	-5.08	1.34	1.37
31	BA	2456	C	N1-C6	-5.04	1.34	1.37
31	BA	1786	A	C5-C6	-5.03	1.36	1.41
31	DA	2713	A	N9-C4	-5.02	1.34	1.37
31	DA	2042	A	N9-C4	-5.02	1.34	1.37
31	BA	71	A	N9-C4	-5.01	1.34	1.37
31	DA	2430	A	N7-C5	-5.01	1.36	1.39
31	BA	836	G	C6-N1	-5.00	1.36	1.39
31	BA	2014	A	C5-C6	-5.00	1.36	1.41

All (2162) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	1332	G	N3-C4-C5	18.18	137.69	128.60
31	DA	1779	U	C5-C6-N1	-17.02	114.19	122.70
31	BA	1779	U	C5-C6-N1	-16.17	114.61	122.70
31	BA	1332	G	N3-C4-N9	-15.97	116.42	126.00
31	BA	1332	G	C2-N3-C4	-15.30	104.25	111.90
31	BA	856	C	C6-N1-C2	-14.45	114.52	120.30
31	DA	1332	G	N3-C4-C5	14.06	135.63	128.60
31	DA	676	A	C5-N7-C8	-13.48	97.16	103.90
31	BA	2346	A	C2-N3-C4	-13.17	104.02	110.60
31	DA	945	A	N1-C6-N6	13.14	126.48	118.60
31	DA	2346	A	C2-N3-C4	-12.67	104.27	110.60
31	DA	1332	G	N3-C4-N9	-12.60	118.44	126.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	1204	A	C2-N3-C4	-12.36	104.42	110.60
31	BA	1142(A)	A	C2-N3-C4	-12.35	104.43	110.60
31	BA	676	A	C5-N7-C8	-12.02	97.89	103.90
31	BA	2518	A	N1-C6-N6	12.01	125.81	118.60
31	BA	1332	G	C5-N7-C8	-11.95	98.32	104.30
31	BA	141	A	N1-C6-N6	11.93	125.76	118.60
31	DA	678	C	C6-N1-C2	11.93	125.07	120.30
31	DA	1899	G	N3-C4-N9	-11.75	118.95	126.00
31	BA	945	A	N1-C6-N6	11.69	125.61	118.60
31	DA	676	A	N7-C8-N9	11.53	119.57	113.80
31	BA	1021	A	C2-N3-C4	-11.51	104.84	110.60
31	DA	1698	A	N1-C6-N6	11.41	125.45	118.60
31	BA	330	A	C2-N3-C4	-11.37	104.91	110.60
31	DA	856	C	C6-N1-C2	-11.37	115.75	120.30
31	BA	409	C	C6-N1-C2	11.33	124.83	120.30
31	DA	1786	A	C5-N7-C8	-11.29	98.25	103.90
31	BA	1899	G	N3-C4-N9	-11.09	119.35	126.00
31	DA	1261	C	C6-N1-C2	11.03	124.71	120.30
31	DA	2518	A	N1-C6-N6	10.88	125.13	118.60
31	BA	676	A	N1-C6-N6	10.74	125.04	118.60
31	DA	679	C	N1-C2-O2	-10.73	112.46	118.90
31	BA	783	A	C5-N7-C8	-10.67	98.56	103.90
31	DA	1698	A	C2-N3-C4	-10.61	105.30	110.60
31	DA	1786	A	N7-C8-N9	10.57	119.08	113.80
31	DA	1698	A	C6-C5-N7	-10.53	124.93	132.30
31	BA	2242	G	N1-C6-O6	10.52	126.21	119.90
31	BA	945	A	C6-C5-N7	-10.43	125.00	132.30
31	BA	2518	A	C5-N7-C8	-10.42	98.69	103.90
31	DA	1204	A	C2-N3-C4	-10.38	105.41	110.60
31	DA	945	A	C6-C5-N7	-10.36	125.05	132.30
31	BA	1698	A	N1-C6-N6	10.34	124.81	118.60
31	BA	2392	A	C2-N3-C4	-10.27	105.47	110.60
31	BA	2544	G	N1-C6-O6	10.27	126.06	119.90
31	DA	1899	G	N3-C4-C5	10.27	133.73	128.60
31	DA	995	C	N1-C2-O2	-10.25	112.75	118.90
31	DA	676	A	C2-N3-C4	-10.22	105.49	110.60
31	DA	2544	G	N1-C6-O6	10.20	126.02	119.90
31	BA	1022	G	C8-N9-C4	-10.18	102.33	106.40
31	DA	1142(A)	A	C2-N3-C4	-10.15	105.53	110.60
1	CA	899	C	C6-N1-C2	10.12	124.35	120.30
31	BA	1698	A	C6-C5-N7	-10.02	125.28	132.30
31	DA	2575	C	C6-N1-C2	10.00	124.30	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	774	A	C5-N7-C8	-9.98	98.91	103.90
31	DA	1959	G	N1-C6-O6	-9.95	113.93	119.90
31	BA	141	A	C5-N7-C8	-9.95	98.93	103.90
31	DA	774	A	C2-N3-C4	-9.93	105.64	110.60
31	BA	2575	C	C6-N1-C2	9.90	124.26	120.30
31	DA	1779	U	C2-N3-C4	-9.87	121.08	127.00
31	DA	676	A	C4-C5-N7	9.86	115.63	110.70
31	BA	142	A	N7-C8-N9	9.80	118.70	113.80
31	BA	2430	A	C2-N3-C4	-9.79	105.70	110.60
31	BA	1698	A	C5-N7-C8	-9.76	99.02	103.90
31	BA	1678	G	C6-C5-N7	-9.74	124.56	130.40
31	DA	1786	A	C6-C5-N7	-9.73	125.49	132.30
31	DA	141	A	N1-C6-N6	9.72	124.43	118.60
31	DA	676	A	N1-C6-N6	9.72	124.43	118.60
31	BA	933	A	C5-N7-C8	-9.70	99.05	103.90
31	DA	1493	C	C2-N1-C1'	9.69	129.45	118.80
31	BA	1210	A	N1-C6-N6	9.68	124.41	118.60
31	DA	1021	A	C2-N3-C4	-9.65	105.77	110.60
31	DA	1999	C	C6-N1-C2	9.63	124.15	120.30
31	BA	1332	G	C4-C5-N7	9.62	114.65	110.80
31	DA	2346	A	C5-C6-N1	-9.62	112.89	117.70
31	DA	676	A	C6-C5-N7	-9.61	125.58	132.30
31	BA	1899	G	N3-C4-C5	9.59	133.39	128.60
31	BA	2346	A	N1-C6-N6	9.58	124.35	118.60
31	BA	2713	A	C5-N7-C8	-9.58	99.11	103.90
31	DA	783	A	C5-N7-C8	-9.57	99.11	103.90
31	DA	2045	C	C6-N1-C2	9.55	124.12	120.30
31	BA	933	A	N1-C6-N6	9.53	124.31	118.60
31	BA	2438	U	C5-C6-N1	-9.50	117.95	122.70
31	DA	1332	G	C2-N3-C4	-9.47	107.17	111.90
31	DA	1934	C	C6-N1-C2	9.46	124.08	120.30
31	BA	2287	A	C2-N3-C4	-9.44	105.88	110.60
31	DA	1241	A	C2-N3-C4	-9.38	105.91	110.60
31	BA	1698	A	C4-C5-N7	9.38	115.39	110.70
31	BA	1616	A	C5-N7-C8	-9.36	99.22	103.90
31	BA	676	A	N7-C8-N9	9.32	118.46	113.80
31	BA	2518	A	C4-C5-N7	9.32	115.36	110.70
31	BA	201	C	C6-N1-C2	9.30	124.02	120.30
31	DA	1779	U	N3-C4-O4	-9.27	112.91	119.40
31	BA	676	A	C4-C5-N7	9.25	115.33	110.70
31	DA	330	A	N9-C4-C5	-9.22	102.11	105.80
31	BA	1678	G	C4-C5-N7	9.21	114.48	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	142	A	C5-N7-C8	-9.19	99.30	103.90
31	BA	2253	G	C8-N9-C4	9.19	110.08	106.40
31	DA	1899	G	C2-N3-C4	-9.18	107.31	111.90
31	DA	1786	A	C4-C5-N7	9.18	115.29	110.70
31	DA	786	C	C5-C6-N1	-9.17	116.41	121.00
31	DA	1786	A	N1-C6-N6	9.15	124.09	118.60
31	BA	676	A	C2-N3-C4	-9.13	106.03	110.60
31	BA	1210	A	C6-C5-N7	-9.12	125.92	132.30
31	BA	1022	G	N9-C4-C5	9.11	109.05	105.40
31	BA	1493	C	C2-N1-C1'	9.09	128.80	118.80
31	DA	2828	C	C6-N1-C2	9.09	123.94	120.30
31	DA	2287	A	C2-N3-C4	-9.04	106.08	110.60
31	BA	272	G	N3-C4-C5	-9.04	124.08	128.60
31	DA	783	A	C2-N3-C4	-9.04	106.08	110.60
31	DA	2346	A	N1-C6-N6	9.04	124.02	118.60
31	DA	774	A	N1-C6-N6	9.03	124.02	118.60
31	DA	330	A	C2-N3-C4	-8.99	106.10	110.60
31	BA	71	A	C5-N7-C8	-8.96	99.42	103.90
31	BA	2346	A	C5-C6-N1	-8.95	113.22	117.70
31	BA	1616	A	N7-C8-N9	8.95	118.27	113.80
31	DA	1786	A	C2-N3-C4	-8.94	106.13	110.60
31	BA	1616	A	C8-N9-C4	-8.93	102.23	105.80
31	DA	1678	G	N7-C8-N9	8.93	117.57	113.10
31	BA	2253	G	N9-C4-C5	-8.91	101.84	105.40
31	DA	1204	A	C5-N7-C8	-8.89	99.45	103.90
31	DA	1558	A	C2-N3-C4	-8.89	106.16	110.60
31	BA	1942	C	N1-C2-O2	-8.88	113.57	118.90
31	BA	1779	U	C4-C5-C6	8.87	125.02	119.70
31	DA	133	C	C6-N1-C2	8.86	123.84	120.30
31	BA	1786	A	C6-C5-N7	-8.86	126.10	132.30
31	DA	1698	A	C4-C5-N7	8.83	115.11	110.70
31	DA	2518	A	C4-C5-N7	8.83	115.11	110.70
31	DA	679	C	N3-C2-O2	8.80	128.06	121.90
31	DA	2242	G	N1-C6-O6	8.79	125.17	119.90
31	BA	945	A	C5-N7-C8	-8.78	99.51	103.90
31	BA	676	A	C6-C5-N7	-8.78	126.15	132.30
31	DA	945	A	C4-C5-N7	8.76	115.08	110.70
1	AA	899	C	C6-N1-C2	8.75	123.80	120.30
31	DA	566	U	C5-C6-N1	-8.74	118.33	122.70
31	BA	1786	A	C5-N7-C8	-8.74	99.53	103.90
31	DA	676	A	C8-N9-C4	-8.71	102.31	105.80
31	BA	783	A	C2-N3-C4	-8.69	106.26	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	945	A	N1-C2-N3	8.68	133.64	129.30
31	BA	141	A	C6-C5-N7	-8.65	126.24	132.30
31	BA	774	A	C5-N7-C8	-8.65	99.58	103.90
31	DA	201	C	C6-N1-C2	8.62	123.75	120.30
31	DA	210	C	C6-N1-C2	8.62	123.75	120.30
31	DA	773	U	C5-C6-N1	-8.62	118.39	122.70
31	BA	814	C	C6-N1-C2	8.62	123.75	120.30
31	BA	2542	A	C2-N3-C4	-8.62	106.29	110.60
31	BA	933	A	C4-C5-N7	8.58	114.99	110.70
31	DA	1678	G	C6-C5-N7	-8.58	125.25	130.40
31	BA	1786	A	N7-C8-N9	8.56	118.08	113.80
31	BA	1261	C	C6-N1-C2	8.56	123.72	120.30
32	BB	81	G	C4-C5-N7	8.54	114.22	110.80
31	DA	210	C	C5-C6-N1	-8.54	116.73	121.00
31	BA	995	C	N1-C2-O2	-8.53	113.78	118.90
31	DA	1698	A	C5-N7-C8	-8.52	99.64	103.90
31	BA	2518	A	C6-C5-N7	-8.48	126.36	132.30
31	DA	1779	U	C4-C5-C6	8.48	124.79	119.70
31	BA	141	A	C4-C5-N7	8.46	114.93	110.70
31	BA	1616	A	C6-C5-N7	-8.46	126.37	132.30
31	BA	1678	G	C5-N7-C8	-8.46	100.07	104.30
31	DA	945	A	C5-N7-C8	-8.46	99.67	103.90
31	DA	1779	U	C5-C4-O4	8.46	130.98	125.90
31	DA	1678	G	C5-N7-C8	-8.46	100.07	104.30
31	BA	142	A	C8-N9-C4	-8.44	102.42	105.80
31	DA	1204	A	N1-C6-N6	8.44	123.66	118.60
1	CA	322	C	C6-N1-C2	8.43	123.67	120.30
31	BA	141	A	N7-C8-N9	8.43	118.01	113.80
31	BA	945	A	C2-N3-C4	-8.42	106.39	110.60
31	DA	141	A	C5-N7-C8	-8.41	99.69	103.90
31	DA	469	G	C8-N9-C4	8.41	109.77	106.40
31	DA	755	C	C6-N1-C2	8.38	123.65	120.30
31	DA	1779	U	N1-C2-N3	8.39	119.93	114.90
31	DA	2045	C	C5-C6-N1	-8.37	116.82	121.00
31	DA	2579	C	C6-N1-C2	8.36	123.64	120.30
31	DA	1304	C	C6-N1-C2	8.36	123.64	120.30
31	BA	1762	A	C8-N9-C4	-8.36	102.46	105.80
31	DA	1210	A	N1-C6-N6	8.32	123.59	118.60
31	DA	1350	C	N1-C2-O2	-8.32	113.91	118.90
31	BA	1653	G	N3-C4-C5	-8.31	124.45	128.60
31	BA	774	A	C2-N3-C4	-8.30	106.45	110.60
31	BA	1397	U	N3-C2-O2	-8.31	116.39	122.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	1332	G	C5-N7-C8	-8.30	100.15	104.30
31	BA	528	A	C2-N3-C4	-8.30	106.45	110.60
31	DA	2518	A	C5-N7-C8	-8.30	99.75	103.90
31	BA	226	G	N1-C6-O6	8.29	124.88	119.90
31	DA	1762	A	C8-N9-C4	-8.29	102.48	105.80
31	BA	210	C	C6-N1-C2	8.29	123.61	120.30
31	BA	1021	A	C5-N7-C8	-8.27	99.77	103.90
31	DA	409	C	C6-N1-C2	8.26	123.61	120.30
31	DA	1258	C	C6-N1-C2	8.26	123.60	120.30
31	BA	1820	U	C5-C6-N1	-8.25	118.57	122.70
31	BA	528	A	C5-N7-C8	-8.25	99.78	103.90
31	BA	100	G	O4'-C1'-N9	8.24	114.79	108.20
31	BA	2430	A	N1-C6-N6	8.24	123.54	118.60
31	DA	130	C	C6-N1-C2	8.23	123.59	120.30
31	DA	949	C	C6-N1-C2	8.22	123.59	120.30
31	BA	945	A	C4-C5-C6	8.21	121.11	117.00
1	CA	893	C	C6-N1-C2	8.21	123.58	120.30
31	BA	1779	U	N1-C2-N3	8.21	119.83	114.90
31	DA	850	C	C6-N1-C2	8.21	123.58	120.30
31	DA	1662	C	C6-N1-C2	8.19	123.58	120.30
31	DA	1021	A	N1-C6-N6	8.19	123.51	118.60
31	DA	2430	A	C2-N3-C4	-8.18	106.51	110.60
31	BA	1543	C	C5-C6-N1	8.16	125.08	121.00
31	DA	840	C	C6-N1-C2	8.14	123.56	120.30
31	BA	142	A	N1-C6-N6	8.13	123.48	118.60
32	BB	99	G	C8-N9-C4	8.12	109.65	106.40
31	BA	1899	G	C2-N3-C4	-8.12	107.84	111.90
31	BA	330	A	N3-C4-C5	8.11	132.47	126.80
31	BA	1678	G	N7-C8-N9	8.10	117.15	113.10
31	BA	1543	C	N3-C4-N4	8.10	123.67	118.00
31	DA	1617	C	C6-N1-C2	8.10	123.54	120.30
31	DA	1204	A	C5-C6-N1	-8.09	113.65	117.70
31	DA	148	C	C6-N1-C2	8.07	123.53	120.30
31	DA	1992	G	N3-C4-C5	-8.07	124.56	128.60
31	BA	1698	A	C2-N3-C4	-8.06	106.57	110.60
31	DA	774	A	C4-C5-N7	8.06	114.73	110.70
31	DA	2364	C	C6-N1-C2	8.05	123.52	120.30
31	DA	141	A	N7-C8-N9	8.03	117.82	113.80
31	BA	783	A	N1-C6-N6	8.02	123.41	118.60
31	BA	1204	A	C5-N7-C8	-8.01	99.89	103.90
31	BA	2477	C	N3-C4-C5	-7.99	118.70	121.90
1	AA	322	C	C6-N1-C2	7.98	123.49	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	783	A	N1-C6-N6	7.96	123.38	118.60
31	BA	1558	A	C2-N3-C4	-7.96	106.62	110.60
31	BA	1678	G	C2-N3-C4	-7.95	107.92	111.90
31	BA	1779	U	C2-N3-C4	-7.95	122.23	127.00
31	DA	377	C	C6-N1-C2	7.95	123.48	120.30
31	DA	133	C	C5-C6-N1	-7.94	117.03	121.00
31	BA	1203	G	C8-N9-C4	-7.94	103.22	106.40
31	DA	671	C	N1-C2-O2	-7.94	114.14	118.90
31	DA	100	G	O4'-C1'-N9	7.91	114.53	108.20
31	BA	530	G	N3-C4-N9	-7.91	121.25	126.00
31	DA	2392	A	C2-N3-C4	-7.91	106.65	110.60
31	BA	2476	A	C2-N3-C4	7.90	114.55	110.60
31	DA	683	C	N3-C4-C5	7.90	125.06	121.90
31	DA	2741	A	C8-N9-C4	7.90	108.96	105.80
31	DA	2438	U	C5-C6-N1	-7.89	118.75	122.70
31	BA	1493	C	C5-C6-N1	7.89	124.94	121.00
31	DA	141	A	C4-C5-N7	7.88	114.64	110.70
31	DA	1259	G	C8-N9-C4	7.88	109.55	106.40
31	DA	621	A	C2-N3-C4	-7.88	106.66	110.60
31	BA	1799	G	N1-C6-O6	-7.88	115.17	119.90
31	DA	141	A	C6-C5-N7	-7.88	126.79	132.30
31	DA	2042	A	C2-N3-C4	-7.87	106.67	110.60
31	DA	1207	C	C6-N1-C2	7.87	123.45	120.30
31	BA	1616	A	N1-C6-N6	7.86	123.32	118.60
31	BA	2242	G	C5-C6-O6	-7.85	123.89	128.60
31	BA	1495	A	C8-N9-C4	-7.84	102.66	105.80
31	BA	2014	A	N1-C6-N6	7.84	123.30	118.60
31	DA	1300	U	O4'-C1'-N1	7.84	114.47	108.20
31	BA	845	G	N7-C8-N9	7.83	117.02	113.10
31	DA	2713	A	N1-C6-N6	7.83	123.30	118.60
31	BA	1142(A)	A	C5-N7-C8	-7.82	99.99	103.90
31	BA	1574	C	C6-N1-C2	7.82	123.43	120.30
31	DA	2329	G	C8-N9-C4	7.82	109.53	106.40
31	DA	1496	A	N1-C6-N6	7.81	123.29	118.60
1	AA	123	C	C6-N1-C2	7.81	123.42	120.30
31	DA	142	A	N7-C8-N9	7.80	117.70	113.80
31	BA	1786	A	C2-N3-C4	-7.79	106.70	110.60
31	DA	330	A	C4-C5-N7	7.79	114.60	110.70
31	BA	587	C	N3-C2-O2	-7.78	116.46	121.90
31	BA	2713	A	N1-C6-N6	7.78	123.27	118.60
31	BA	751	A	N1-C6-N6	-7.78	113.93	118.60
31	BA	141	A	C5-C6-N6	-7.77	117.48	123.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	752	A	C6-N1-C2	-7.77	113.94	118.60
31	BA	783	A	C4-C5-N7	7.76	114.58	110.70
32	BB	81	G	C6-C5-N7	-7.76	125.75	130.40
31	BA	1142(A)	A	N1-C2-N3	7.76	133.18	129.30
31	DA	660	G	C5-C6-N1	-7.76	107.62	111.50
31	BA	148	C	C6-N1-C2	7.75	123.40	120.30
31	DA	142	A	C8-N9-C4	-7.74	102.70	105.80
31	BA	1616	A	C4-C5-N7	7.73	114.56	110.70
31	BA	528	A	N3-C4-C5	7.73	132.21	126.80
31	BA	845	G	C5-N7-C8	-7.72	100.44	104.30
31	BA	2346	A	C6-C5-N7	-7.72	126.90	132.30
31	BA	786	C	C5-C6-N1	-7.71	117.14	121.00
31	BA	1332	G	N1-C6-O6	7.70	124.52	119.90
31	DA	933	A	C2-N3-C4	-7.69	106.75	110.60
31	DA	2544	G	C5-C6-O6	-7.68	123.99	128.60
31	DA	933	A	N1-C6-N6	7.68	123.21	118.60
1	AA	123	C	C5-C6-N1	-7.67	117.17	121.00
31	DA	339	U	C6-N1-C2	7.67	125.60	121.00
31	DA	1899	G	C8-N9-C1'	7.66	136.96	127.00
31	BA	1210	A	C4-C5-C6	7.66	120.83	117.00
31	BA	679	C	C6-N1-C2	7.65	123.36	120.30
31	BA	679	C	N1-C2-O2	-7.62	114.33	118.90
31	BA	621	A	C5-N7-C8	-7.62	100.09	103.90
31	DA	272	G	N3-C4-C5	-7.61	124.80	128.60
31	DA	330	A	N3-C4-C5	7.61	132.12	126.80
31	DA	528	A	C5-N7-C8	-7.60	100.10	103.90
31	BA	2426	A	N1-C6-N6	7.59	123.16	118.60
31	BA	2518	A	C2-N3-C4	-7.59	106.80	110.60
31	BA	678	C	N3-C4-C5	7.59	124.94	121.90
31	DA	1269	A	C8-N9-C4	7.59	108.83	105.80
1	CA	245	C	C6-N1-C2	7.58	123.33	120.30
31	DA	2829	C	C6-N1-C2	7.58	123.33	120.30
32	BB	109	C	C6-N1-C2	7.57	123.33	120.30
32	DB	115	G	C8-N9-C4	7.57	109.43	106.40
31	BA	1022	G	N3-C4-C5	-7.57	124.81	128.60
31	BA	1992	G	N3-C4-C5	-7.57	124.81	128.60
31	DA	832	G	N1-C6-O6	-7.57	115.36	119.90
31	BA	857	C	C6-N1-C2	-7.57	117.27	120.30
31	DA	1261	C	N3-C4-C5	7.57	124.93	121.90
31	DA	2518	A	N9-C4-C5	-7.57	102.77	105.80
31	DA	1678	G	C4-C5-N7	7.56	113.82	110.80
31	BA	1899	G	C8-N9-C1'	7.55	136.81	127.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	859	G	C4-N9-C1'	-7.55	116.69	126.50
31	DA	1653	G	N3-C4-C5	-7.53	124.83	128.60
32	DB	104	U	C5-C6-N1	-7.53	118.94	122.70
31	BA	2392	A	C5-N7-C8	-7.52	100.14	103.90
31	DA	530	G	N3-C4-N9	-7.52	121.49	126.00
31	BA	376	C	C2-N1-C1'	-7.52	110.53	118.80
31	BA	1204	A	C5-C6-N1	-7.52	113.94	117.70
31	BA	57	C	C6-N1-C2	7.51	123.31	120.30
31	DA	1899	G	N3-C2-N2	-7.51	114.64	119.90
31	DA	2713	A	C5-N7-C8	-7.50	100.15	103.90
31	BA	678	C	C6-N1-C2	7.50	123.30	120.30
31	DA	2293	C	C6-N1-C2	7.50	123.30	120.30
32	BB	102	A	C8-N9-C4	7.49	108.80	105.80
31	DA	1779	U	C2-N1-C1'	-7.49	108.71	117.70
31	BA	1779	U	C5-C4-O4	7.47	130.38	125.90
31	BA	783	A	N7-C8-N9	7.46	117.53	113.80
31	BA	2699	C	C6-N1-C2	7.46	123.28	120.30
31	DA	1308	A	C2-N3-C4	-7.46	106.87	110.60
31	BA	652	C	C6-N1-C2	-7.45	117.32	120.30
31	DA	933	A	C5-N7-C8	-7.45	100.18	103.90
31	BA	1779	U	C2-N1-C1'	-7.45	108.76	117.70
31	DA	461	C	N3-C2-O2	7.45	127.11	121.90
41	BP	37	GLY	N-CA-C	7.42	131.66	113.10
31	DA	2515	C	C6-N1-C2	7.41	123.27	120.30
31	DA	673	C	C6-N1-C2	7.41	123.26	120.30
31	DA	945	A	C5-C6-N6	-7.41	117.78	123.70
31	BA	784	A	N9-C4-C5	7.40	108.76	105.80
31	BA	774	A	N1-C6-N6	7.40	123.04	118.60
31	BA	2318	G	N7-C8-N9	7.40	116.80	113.10
31	DA	195	A	N1-C6-N6	7.40	123.04	118.60
31	DA	226	G	N1-C6-O6	7.39	124.34	119.90
31	DA	678	C	N3-C4-C5	7.39	124.85	121.90
31	DA	1959	G	C5-C6-O6	7.38	133.03	128.60
31	DA	2394	C	C2-N3-C4	-7.38	116.21	119.90
31	BA	1496	A	N1-C6-N6	7.38	123.03	118.60
31	BA	828	U	C5-C4-O4	7.38	130.32	125.90
31	BA	528	A	N3-C4-N9	-7.37	121.50	127.40
31	BA	142	A	C6-C5-N7	-7.37	127.14	132.30
31	DA	1210	A	C6-C5-N7	-7.37	127.14	132.30
31	BA	2688	U	C5-C4-O4	7.37	130.32	125.90
43	DR	4	LEU	CB-CG-CD2	7.35	123.50	111.00
31	BA	1495	A	N7-C8-N9	7.35	117.47	113.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	621	A	N1-C6-N6	7.35	123.01	118.60
31	DA	1022	G	N9-C4-C5	7.35	108.34	105.40
31	DA	1543	C	C5-C6-N1	7.34	124.67	121.00
31	BA	559	G	N1-C6-O6	7.34	124.30	119.90
31	BA	1241	A	C5-C6-N1	-7.34	114.03	117.70
31	DA	2779	U	N3-C2-O2	-7.33	117.07	122.20
31	BA	2040	C	N3-C4-C5	7.33	124.83	121.90
31	DA	560	C	C6-N1-C2	7.33	123.23	120.30
31	DA	811	U	C5-C4-O4	7.33	130.29	125.90
31	DA	1497	U	N1-C2-N3	-7.32	110.51	114.90
1	CA	117	G	N1-C6-O6	7.32	124.29	119.90
31	BA	69	C	C5-C6-N1	-7.32	117.34	121.00
31	DA	1544	A	O4'-C1'-N9	7.32	114.05	108.20
31	BA	752	A	N1-C2-N3	7.31	132.95	129.30
31	DA	1782	C	N3-C4-N4	7.31	123.11	118.00
31	BA	1897	G	N1-C6-O6	7.30	124.28	119.90
31	BA	62	C	C6-N1-C2	7.30	123.22	120.30
31	BA	1325	G	C5-C6-O6	-7.30	124.22	128.60
31	DA	1698	A	N1-C2-N3	7.29	132.95	129.30
31	BA	1544	A	O4'-C1'-N9	7.29	114.03	108.20
31	DA	678	C	C5-C6-N1	-7.29	117.36	121.00
31	BA	859	G	C4-N9-C1'	-7.28	117.03	126.50
31	BA	1049	C	C6-N1-C2	-7.28	117.39	120.30
31	BA	1245	G	N1-C6-O6	-7.28	115.53	119.90
31	DA	1349	A	N1-C6-N6	7.27	122.96	118.60
31	DA	1678	G	C8-N9-C4	-7.27	103.49	106.40
31	DA	731	C	C6-N1-C2	7.26	123.20	120.30
31	BA	686	G	C5-C6-O6	-7.26	124.24	128.60
31	DA	133	C	C2-N3-C4	-7.26	116.27	119.90
31	DA	2346	A	C6-C5-N7	-7.26	127.22	132.30
31	DA	2518	A	C6-C5-N7	-7.25	127.22	132.30
31	BA	2477	C	C6-N1-C2	-7.25	117.40	120.30
31	BA	1832	C	N1-C2-O2	-7.24	114.55	118.90
31	DA	826	U	C5-C6-N1	-7.24	119.08	122.70
31	BA	1698	A	N7-C8-N9	7.24	117.42	113.80
31	DA	2476	A	C2-N3-C4	7.24	114.22	110.60
32	BB	109	C	C5-C6-N1	-7.23	117.39	121.00
31	DA	376	C	C2-N1-C1'	-7.22	110.86	118.80
31	DA	1678	G	C4-N9-C1'	7.22	135.88	126.50
1	CA	895	G	N1-C6-O6	7.21	124.23	119.90
31	DA	330	A	N1-C6-N6	7.21	122.92	118.60
32	DB	81	G	C6-C5-N7	-7.21	126.08	130.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	774	A	N7-C8-N9	7.20	117.40	113.80
31	DA	1771	C	N1-C2-O2	-7.20	114.58	118.90
31	BA	2318	G	C6-C5-N7	-7.20	126.08	130.40
31	DA	1899	G	C4-N9-C1'	-7.20	117.14	126.50
31	DA	1123	C	C6-N1-C2	7.19	123.18	120.30
31	BA	2503	A	C2-N3-C4	7.18	114.19	110.60
31	DA	1336	A	N1-C6-N6	-7.18	114.29	118.60
31	BA	1955	U	C5-C6-N1	-7.17	119.11	122.70
31	BA	945	A	C5-C6-N6	-7.17	117.97	123.70
31	BA	2763	G	C5-C6-O6	-7.16	124.30	128.60
31	BA	1899	G	N3-C2-N2	-7.16	114.89	119.90
31	DA	131	G	C8-N9-C4	7.16	109.27	106.40
31	BA	587	C	C6-N1-C2	-7.16	117.44	120.30
31	BA	1786	A	N1-C6-N6	7.16	122.90	118.60
31	DA	2469	A	N1-C6-N6	7.16	122.89	118.60
31	BA	2763	G	C6-C5-N7	-7.15	126.11	130.40
31	BA	1899	G	C4-N9-C1'	-7.15	117.21	126.50
31	BA	2030	A	C8-N9-C4	7.15	108.66	105.80
31	DA	1771	C	C2-N3-C4	-7.15	116.33	119.90
31	BA	2699	C	C5-C6-N1	-7.14	117.43	121.00
31	DA	2542	A	C2-N3-C4	-7.14	107.03	110.60
31	DA	945	A	C2-N3-C4	-7.14	107.03	110.60
31	BA	1241	A	C2-N3-C4	-7.14	107.03	110.60
31	DA	1333	C	N3-C4-C5	7.13	124.75	121.90
31	BA	1021	A	C5-C6-N1	-7.12	114.14	117.70
31	BA	731	C	C6-N1-C2	7.12	123.15	120.30
31	BA	2028	U	N3-C4-C5	-7.11	110.34	114.60
31	DA	1493	C	C6-N1-C1'	-7.11	112.27	120.80
31	BA	1142(A)	A	C5-C6-N1	-7.10	114.15	117.70
31	DA	1786	A	C8-N9-C4	-7.10	102.96	105.80
31	DA	2827	C	C6-N1-C2	7.09	123.14	120.30
31	DA	1999	C	C5-C6-N1	-7.09	117.46	121.00
31	DA	2713	A	C2-N3-C4	-7.08	107.06	110.60
31	BA	1799	G	C5-C6-O6	7.08	132.85	128.60
31	DA	2231	C	C5-C6-N1	-7.08	117.46	121.00
31	BA	71	A	N7-C8-N9	7.08	117.34	113.80
31	BA	1804	C	C6-N1-C2	7.07	123.13	120.30
31	DA	2394	C	C5-C6-N1	-7.07	117.47	121.00
31	BA	1332	G	C5-C6-N1	-7.07	107.97	111.50
31	DA	190	A	C8-N9-C4	7.06	108.62	105.80
31	BA	377	C	N1-C2-O2	-7.06	114.66	118.90
31	BA	1409	C	C6-N1-C2	7.06	123.12	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	1496	A	C6-C5-N7	-7.06	127.36	132.30
31	BA	2260	C	N1-C2-O2	-7.06	114.67	118.90
31	DA	2330	G	C8-N9-C4	7.06	109.22	106.40
31	DA	2619	C	C5-C6-N1	-7.06	117.47	121.00
31	DA	1204	A	C6-C5-N7	-7.05	127.36	132.30
31	DA	2487	G	N1-C6-O6	7.04	124.12	119.90
31	DA	2260	C	C5-C6-N1	-7.04	117.48	121.00
31	DA	2715	C	C6-N1-C2	7.04	123.11	120.30
31	DA	376	C	C6-N1-C2	7.03	123.11	120.30
31	DA	1260	G	C8-N9-C4	7.02	109.21	106.40
31	DA	1204	A	C4-C5-N7	7.01	114.21	110.70
31	BA	859	G	N3-C4-N9	-7.01	121.79	126.00
43	BR	4	LEU	CB-CG-CD2	7.01	122.92	111.00
31	BA	1384	A	C8-N9-C4	-7.00	103.00	105.80
31	DA	2058	A	N1-C6-N6	7.00	122.80	118.60
31	DA	652	C	C6-N1-C2	-7.00	117.50	120.30
31	DA	1021	A	C5-N7-C8	-7.00	100.40	103.90
31	BA	2014	A	C5-C6-N6	-7.00	118.10	123.70
31	BA	2715	C	C5-C6-N1	-7.00	117.50	121.00
31	DA	1600	C	C5-C6-N1	-7.00	117.50	121.00
31	BA	201	C	C5-C6-N1	-6.99	117.50	121.00
31	DA	566	U	C6-N1-C2	6.99	125.19	121.00
31	BA	2713	A	N7-C8-N9	6.99	117.29	113.80
31	BA	2518	A	C5-C6-N6	-6.98	118.11	123.70
31	DA	783	A	C4-C5-N7	6.98	114.19	110.70
31	DA	1971	A	C8-N9-C4	6.98	108.59	105.80
31	BA	2469	A	C6-C5-N7	-6.98	127.42	132.30
31	BA	2392	A	C5-C6-N1	-6.98	114.21	117.70
31	DA	1662	C	C5-C6-N1	-6.98	117.51	121.00
31	DA	461	C	N1-C2-O2	-6.97	114.72	118.90
31	BA	826	U	C5-C6-N1	-6.97	119.22	122.70
31	DA	2044	C	C6-N1-C2	6.96	123.09	120.30
31	BA	376	C	N1-C2-O2	-6.96	114.72	118.90
31	BA	142	A	C4-C5-N7	6.96	114.18	110.70
31	BA	1373	A	C8-N9-C4	6.96	108.58	105.80
31	BA	1497	U	N1-C2-N3	-6.95	110.73	114.90
31	DA	330	A	C8-N9-C4	6.95	108.58	105.80
31	DA	1820	U	C6-N1-C2	6.95	125.17	121.00
41	DP	37	GLY	N-CA-C	6.95	130.46	113.10
31	DA	811	U	N3-C4-O4	-6.94	114.54	119.40
31	DA	2463	C	N1-C2-O2	-6.93	114.74	118.90
31	DA	2236	C	C6-N1-C2	6.93	123.07	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	1241	A	C5-C6-N1	-6.92	114.24	117.70
31	DA	1565	C	C6-N1-C2	6.92	123.07	120.30
31	BA	377	C	C6-N1-C2	6.92	123.07	120.30
31	BA	1493	C	C6-N1-C1'	-6.91	112.51	120.80
31	BA	409	C	N3-C2-O2	6.91	126.73	121.90
31	DA	2440	C	C2-N1-C1'	-6.91	111.20	118.80
31	BA	728	G	C8-N9-C4	6.90	109.16	106.40
31	BA	2245	U	N3-C4-C5	-6.90	110.46	114.60
31	BA	2713	A	C2-N3-C4	-6.90	107.15	110.60
31	BA	196	A	N1-C6-N6	6.89	122.74	118.60
31	BA	265	A	C5-N7-C8	-6.89	100.45	103.90
31	BA	945	A	N7-C8-N9	6.88	117.24	113.80
31	DA	71	A	C5-N7-C8	-6.88	100.46	103.90
31	BA	1360	A	C8-N9-C4	6.88	108.55	105.80
31	DA	2828	C	C5-C6-N1	-6.88	117.56	121.00
31	BA	2442	C	N1-C2-O2	-6.88	114.77	118.90
31	DA	774	A	C6-C5-N7	-6.88	127.49	132.30
31	BA	828	U	N3-C4-O4	-6.87	114.59	119.40
31	DA	1266	G	C8-N9-C4	6.87	109.15	106.40
31	DA	832	G	C5-C6-O6	6.86	132.72	128.60
31	BA	2456	C	C6-N1-C2	6.86	123.04	120.30
1	CA	1509	C	C6-N1-C2	6.86	123.04	120.30
31	BA	2532	G	N1-C6-O6	6.85	124.01	119.90
31	BA	2040	C	C6-N1-C2	6.85	123.04	120.30
32	BB	101	G	C8-N9-C4	6.85	109.14	106.40
31	BA	621	A	C2-N3-C4	-6.84	107.18	110.60
31	BA	1021	A	N3-C4-C5	6.84	131.59	126.80
31	DA	2619	C	C6-N1-C2	6.84	123.04	120.30
31	BA	1353	A	C8-N9-C4	-6.84	103.06	105.80
31	DA	24	G	N1-C6-O6	6.83	124.00	119.90
31	DA	1022	G	C8-N9-C4	-6.83	103.67	106.40
31	DA	2042	A	C8-N9-C4	6.83	108.53	105.80
31	DA	2477	C	N3-C4-C5	-6.83	119.17	121.90
31	DA	265	A	N1-C6-N6	6.82	122.69	118.60
31	DA	2477	C	C6-N1-C2	-6.81	117.58	120.30
31	DA	732	C	C6-N1-C2	6.81	123.02	120.30
31	DA	2524	G	C5-C6-O6	-6.81	124.52	128.60
31	DA	205	G	C8-N9-C4	6.81	109.12	106.40
31	DA	528	A	N3-C4-N9	-6.80	121.96	127.40
31	BA	2607	G	N3-C2-N2	6.80	124.66	119.90
31	DA	671	C	C4-C5-C6	6.80	120.80	117.40
31	BA	265	A	C2-N3-C4	-6.80	107.20	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	679	C	N3-C2-O2	6.80	126.66	121.90
31	BA	1300	U	O4'-C1'-N1	6.80	113.64	108.20
31	DA	2190	G	C4-N9-C1'	6.80	135.34	126.50
31	BA	2542	A	C5-C6-N1	-6.79	114.30	117.70
31	DA	131	G	N9-C4-C5	-6.79	102.69	105.40
31	BA	1269	A	C8-N9-C4	6.79	108.51	105.80
31	BA	378	C	C6-N1-C2	6.78	123.01	120.30
31	BA	1653	G	C4-N9-C1'	6.78	135.32	126.50
31	BA	1403	C	C4-C5-C6	6.78	120.79	117.40
31	BA	933	A	C6-C5-N7	-6.77	127.56	132.30
31	DA	2518	A	C5-C6-N6	-6.77	118.28	123.70
31	BA	1204	A	C6-C5-N7	-6.77	127.56	132.30
31	DA	507	A	C8-N9-C4	6.77	108.51	105.80
31	DA	912	C	C6-N1-C2	-6.76	117.59	120.30
31	BA	330	A	C5-N7-C8	-6.76	100.52	103.90
31	BA	800	A	N1-C6-N6	-6.76	114.54	118.60
31	BA	2253	G	C8-N9-C1'	-6.76	118.22	127.00
31	BA	1021	A	N1-C6-N6	6.75	122.65	118.60
31	BA	1609	A	C3'-C2'-C1'	6.75	106.90	101.50
31	BA	1384	A	N9-C4-C5	6.74	108.50	105.80
31	BA	2318	G	C8-N9-C4	-6.74	103.70	106.40
31	DA	2487	G	C6-C5-N7	-6.74	126.36	130.40
31	BA	1049	C	C5-C6-N1	6.74	124.37	121.00
31	DA	1359	A	C8-N9-C4	6.74	108.49	105.80
31	BA	2190	G	C4-N9-C1'	6.73	135.25	126.50
31	DA	210	C	N1-C2-O2	-6.73	114.86	118.90
31	BA	1012	U	C6-N1-C2	-6.72	116.97	121.00
31	BA	2053	G	N1-C6-O6	6.72	123.94	119.90
31	BA	2713	A	C4-C5-N7	6.72	114.06	110.70
31	DA	1529	G	C4-N9-C1'	6.72	135.24	126.50
31	BA	1306	C	C6-N1-C2	6.72	122.99	120.30
31	DA	1049	C	C2-N1-C1'	6.72	126.19	118.80
31	DA	1372	U	C6-N1-C2	-6.72	116.97	121.00
31	DA	2779	U	N1-C2-N3	6.71	118.93	114.90
31	DA	2593	U	N3-C4-C5	-6.71	110.58	114.60
31	BA	1332	G	C6-N1-C2	6.71	129.12	125.10
31	BA	1674	G	C6-C5-N7	-6.70	126.38	130.40
31	BA	1544	A	N1-C6-N6	-6.70	114.58	118.60
31	DA	1049	C	C6-N1-C2	-6.70	117.62	120.30
31	DA	814	C	C6-N1-C2	6.69	122.98	120.30
31	BA	1657	C	C5-C6-N1	-6.69	117.66	121.00
1	AA	756	C	C6-N1-C2	6.69	122.97	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	2796	U	O4'-C1'-N1	6.68	113.55	108.20
31	DA	2519	U	C6-N1-C2	6.68	125.01	121.00
31	BA	1261	C	N3-C2-O2	6.68	126.58	121.90
31	DA	1204	A	N7-C8-N9	6.68	117.14	113.80
31	BA	1495	A	C5-N7-C8	-6.68	100.56	103.90
31	BA	2495	G	N1-C6-O6	6.68	123.91	119.90
31	BA	2508	G	N1-C6-O6	6.68	123.91	119.90
31	DA	2318	G	C6-C5-N7	-6.68	126.39	130.40
31	BA	949	C	C6-N1-C2	6.67	122.97	120.30
31	BA	1230	C	C5-C6-N1	-6.67	117.67	121.00
31	DA	1293	C	N3-C4-C5	6.67	124.57	121.90
31	BA	47	C	C2-N3-C4	-6.67	116.57	119.90
31	DA	694	U	N3-C4-O4	-6.66	114.74	119.40
31	BA	376	C	N3-C2-O2	6.66	126.56	121.90
31	BA	1496	A	C6-C5-N7	-6.66	127.64	132.30
31	DA	676	A	N1-C2-N3	6.66	132.63	129.30
31	DA	272	G	C8-N9-C4	-6.66	103.74	106.40
31	BA	1049	C	C2-N1-C1'	6.66	126.12	118.80
31	BA	1327	C	N1-C2-O2	-6.65	114.91	118.90
31	BA	1543	C	C2-N3-C4	6.65	123.23	119.90
31	BA	2226	C	C6-N1-C2	6.65	122.96	120.30
31	DA	528	A	C2-N3-C4	-6.65	107.28	110.60
31	DA	2252	G	C2-N3-C4	-6.65	108.58	111.90
31	BA	621	A	N7-C8-N9	6.64	117.12	113.80
31	BA	2403	C	N1-C2-O2	-6.64	114.92	118.90
31	BA	2607	G	N1-C2-N2	-6.64	110.23	116.20
31	DA	800	A	N1-C2-N3	6.64	132.62	129.30
31	BA	253	C	N1-C2-O2	-6.63	114.92	118.90
31	DA	1543	C	C2-N3-C4	6.63	123.21	119.90
31	DA	2796	U	O4'-C1'-N1	6.62	113.50	108.20
31	BA	1368	G	C8-N9-C4	-6.62	103.75	106.40
31	BA	1543	C	N3-C2-O2	6.62	126.53	121.90
31	DA	2464	C	C6-N1-C2	6.62	122.95	120.30
1	CA	810	C	C6-N1-C2	6.61	122.95	120.30
31	DA	57	C	C6-N1-C2	6.61	122.94	120.30
31	DA	1493	C	C5-C6-N1	6.61	124.31	121.00
31	DA	69	C	C6-N1-C2	6.61	122.94	120.30
31	DA	682	G	C8-N9-C4	6.60	109.04	106.40
31	BA	2587	A	N1-C2-N3	6.60	132.60	129.30
31	DA	1123	C	C5-C6-N1	-6.60	117.70	121.00
31	BA	1448	G	N1-C6-O6	6.60	123.86	119.90
31	DA	1826	G	C5-N7-C8	6.60	107.60	104.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	246	C	N1-C2-O2	-6.59	114.94	118.90
31	BA	2252	G	C2-N3-C4	-6.59	108.60	111.90
31	DA	2715	C	C5-C6-N1	-6.59	117.70	121.00
31	BA	139(A)	G	C8-N9-C4	-6.59	103.77	106.40
31	BA	1021	A	C4-C5-N7	6.59	113.99	110.70
31	BA	1328	G	N3-C4-N9	6.59	129.95	126.00
31	DA	847	U	N3-C4-O4	-6.59	114.79	119.40
31	BA	2779	U	C5-C4-O4	6.58	129.85	125.90
31	DA	2053	G	N1-C6-O6	6.58	123.84	119.90
31	BA	1128	A	N1-C6-N6	6.57	122.54	118.60
31	BA	1210	A	C5-N7-C8	-6.57	100.61	103.90
31	BA	1786	A	C8-N9-C4	-6.57	103.17	105.80
31	DA	213	A	C8-N9-C4	6.57	108.43	105.80
31	DA	933	A	C4-C5-N7	6.57	113.99	110.70
31	DA	2607	G	C8-N9-C1'	-6.57	118.46	127.00
31	DA	1207	C	N3-C2-O2	6.57	126.50	121.90
31	DA	2083	G	N1-C6-O6	6.57	123.84	119.90
1	AA	1442	G	C6-C5-N7	-6.56	126.47	130.40
31	BA	1210	A	N7-C8-N9	6.56	117.08	113.80
31	DA	209	C	C6-N1-C2	6.56	122.92	120.30
31	BA	1788	C	C5-C6-N1	-6.55	117.72	121.00
31	DA	2622	C	C6-N1-C2	6.55	122.92	120.30
31	BA	1639	U	N3-C2-O2	-6.55	117.61	122.20
31	DA	2699	C	C6-N1-C2	6.55	122.92	120.30
31	BA	189	G	N9-C4-C5	-6.54	102.78	105.40
31	DA	2488	A	C8-N9-C4	6.54	108.42	105.80
31	BA	530	G	N3-C4-C5	6.54	131.87	128.60
31	BA	1332	G	N7-C8-N9	6.54	116.37	113.10
1	CA	904	C	C6-N1-C2	6.54	122.92	120.30
31	DA	588	U	C5-C4-O4	-6.54	121.98	125.90
31	DA	1826	G	N7-C8-N9	-6.54	109.83	113.10
31	DA	2013	A	C8-N9-C4	6.54	108.42	105.80
31	BA	774	A	C4-C5-N7	6.54	113.97	110.70
31	DA	1820	U	C5-C6-N1	-6.53	119.43	122.70
31	DA	2329	G	N7-C8-N9	-6.53	109.84	113.10
31	DA	453	C	C6-N1-C2	6.53	122.91	120.30
31	DA	2042	A	N3-C4-C5	6.53	131.37	126.80
31	BA	1142(A)	A	N7-C8-N9	6.52	117.06	113.80
31	DA	797	C	N1-C2-O2	-6.52	114.99	118.90
1	CA	1508	G	C8-N9-C4	6.52	109.01	106.40
31	DA	244	A	N1-C6-N6	6.52	122.51	118.60
31	DA	1762	A	N7-C8-N9	6.52	117.06	113.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	2594	C	N1-C2-O2	-6.51	114.99	118.90
31	BA	1779	U	N3-C4-O4	-6.51	114.84	119.40
31	DA	2061	G	C8-N9-C4	6.51	109.00	106.40
31	DA	2253	G	N9-C4-C5	-6.51	102.80	105.40
31	DA	2532	G	N1-C6-O6	6.51	123.80	119.90
31	DA	1609	A	C3'-C2'-C1'	6.50	106.70	101.50
31	DA	736	C	N3-C2-O2	6.49	126.45	121.90
31	DA	1698	A	N9-C4-C5	-6.49	103.20	105.80
31	BA	1373	A	N7-C8-N9	-6.49	110.56	113.80
31	BA	1806	C	N1-C2-O2	-6.49	115.00	118.90
31	BA	191	A	C5-N7-C8	6.49	107.14	103.90
1	AA	1431	C	C6-N1-C2	6.49	122.89	120.30
31	BA	577	G	C2-N3-C4	-6.49	108.66	111.90
31	BA	1698	A	C4-N9-C1'	6.49	137.97	126.30
31	DA	2825	C	C6-N1-C2	6.49	122.89	120.30
31	BA	599	G	C8-N9-C4	6.48	108.99	106.40
31	DA	2053	G	C5-C6-O6	-6.48	124.71	128.60
31	BA	202	U	C6-N1-C2	6.47	124.89	121.00
31	DA	2508	G	N1-C6-O6	6.47	123.78	119.90
31	DA	1657	C	C5-C6-N1	-6.47	117.76	121.00
31	DA	2456	C	C6-N1-C2	6.47	122.89	120.30
31	BA	330	A	N1-C6-N6	6.47	122.48	118.60
31	DA	2079	U	C4-C5-C6	6.47	123.58	119.70
31	BA	1559	G	N3-C4-C5	6.47	131.83	128.60
31	DA	580	C	N1-C2-O2	-6.47	115.02	118.90
31	BA	1994	C	C5-C6-N1	-6.46	117.77	121.00
32	BB	81	G	C5-N7-C8	-6.46	101.07	104.30
31	DA	679	C	C6-N1-C2	6.46	122.89	120.30
31	DA	2889	C	C6-N1-C2	6.46	122.89	120.30
31	DA	66	C	C6-N1-C2	6.46	122.88	120.30
31	BA	1786	A	C4-C5-N7	6.46	113.93	110.70
31	DA	1983	C	N1-C2-O2	-6.46	115.03	118.90
31	BA	2477	C	C4-C5-C6	6.45	120.63	117.40
31	DA	1306	C	C6-N1-C2	6.45	122.88	120.30
31	BA	656	G	C8-N9-C4	-6.45	103.82	106.40
31	BA	621	A	N1-C6-N6	6.45	122.47	118.60
31	BA	845	G	C4-C5-N7	6.45	113.38	110.80
31	DA	1678	G	C2-N3-C4	-6.45	108.68	111.90
31	DA	2079	U	C5-C6-N1	-6.45	119.48	122.70
31	DA	201	C	C5-C6-N1	-6.44	117.78	121.00
32	DB	109	C	C6-N1-C2	6.44	122.88	120.30
31	BA	837	C	C6-N1-C2	-6.44	117.72	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	CA	897	C	C6-N1-C2	6.44	122.87	120.30
31	BA	2329	G	C8-N9-C4	6.43	108.97	106.40
31	DA	441	U	C6-N1-C2	6.43	124.86	121.00
31	DA	2713	A	C4-C5-N7	6.43	113.92	110.70
31	DA	1653	G	C4-N9-C1'	6.43	134.86	126.50
31	BA	1694	C	C2-N1-C1'	6.43	125.87	118.80
31	BA	1972	A	N1-C6-N6	6.43	122.46	118.60
31	DA	870	A	C8-N9-C4	6.43	108.37	105.80
31	BA	1633	G	N1-C6-O6	6.43	123.76	119.90
31	BA	1022	G	C6-N1-C2	-6.42	121.25	125.10
31	BA	1266	G	N9-C4-C5	-6.42	102.83	105.40
31	DA	2392	A	C5-C6-N1	-6.41	114.49	117.70
31	BA	933	A	C2-N3-C4	-6.41	107.40	110.60
31	DA	2292	C	C6-N1-C2	6.40	122.86	120.30
31	DA	62	C	C6-N1-C2	6.40	122.86	120.30
31	DA	542	C	N3-C2-O2	-6.40	117.42	121.90
31	DA	2022	U	C5-C4-O4	-6.40	122.06	125.90
1	CA	572	A	C8-N9-C4	6.39	108.36	105.80
31	BA	945	A	C4-C5-N7	6.38	113.89	110.70
31	DA	783	A	N7-C8-N9	6.38	116.99	113.80
31	DA	847	U	C5-C6-N1	-6.38	119.51	122.70
31	DA	2014	A	N1-C6-N6	6.38	122.43	118.60
31	DA	665	C	N3-C4-C5	6.38	124.45	121.90
32	DB	81	G	C4-C5-N7	6.38	113.35	110.80
1	CA	34	C	C6-N1-C2	6.38	122.85	120.30
31	DA	335	C	N1-C2-O2	-6.38	115.08	118.90
31	BA	1529	G	C4-N9-C1'	6.37	134.78	126.50
31	DA	1694	C	C2-N1-C1'	6.37	125.81	118.80
31	DA	2495	G	N1-C6-O6	6.37	123.72	119.90
31	BA	122	G	N7-C8-N9	-6.37	109.91	113.10
31	DA	1261	C	C5-C6-N1	-6.37	117.81	121.00
31	BA	2688	U	C5-C6-N1	-6.37	119.52	122.70
31	BA	474	G	C8-N9-C4	-6.37	103.85	106.40
31	BA	845	G	C8-N9-C4	-6.37	103.85	106.40
31	DA	2040	C	C6-N1-C2	6.37	122.85	120.30
31	DA	837	C	C6-N1-C2	-6.37	117.75	120.30
31	BA	189	G	C8-N9-C4	6.36	108.95	106.40
31	DA	2841	C	C6-N1-C2	6.36	122.84	120.30
31	DA	783	A	C6-C5-N7	-6.36	127.85	132.30
31	DA	1210	A	N7-C8-N9	6.36	116.98	113.80
31	DA	859	G	N3-C4-N9	-6.35	122.19	126.00
31	DA	2231	C	C2-N3-C4	-6.35	116.72	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	1349	A	N1-C6-N6	6.35	122.41	118.60
31	BA	337	C	C2-N1-C1'	-6.34	111.83	118.80
31	DA	530	G	N3-C4-C5	6.34	131.77	128.60
31	DA	2242	G	C5-C6-O6	-6.34	124.80	128.60
31	BA	543	C	C5-C4-N4	-6.34	115.77	120.20
1	AA	1442	G	C4-N9-C1'	6.33	134.73	126.50
31	BA	806	C	N1-C2-O2	6.33	122.70	118.90
31	BA	1340	U	C5-C6-N1	-6.33	119.53	122.70
31	DA	469	G	N7-C8-N9	-6.33	109.94	113.10
31	BA	860	U	N3-C2-O2	-6.33	117.77	122.20
31	DA	1373	A	C8-N9-C4	6.33	108.33	105.80
31	BA	2476	A	C8-N9-C4	-6.33	103.27	105.80
31	BA	2518	A	N7-C8-N9	6.33	116.96	113.80
31	DA	130	C	C5-C6-N1	-6.33	117.84	121.00
31	BA	1204	A	C4-C5-N7	6.32	113.86	110.70
31	BA	1258	C	C6-N1-C2	6.32	122.83	120.30
31	BA	2040	C	C2-N3-C4	-6.32	116.74	119.90
31	BA	676	A	N1-C2-N3	6.32	132.46	129.30
31	DA	543	C	C5-C4-N4	-6.32	115.78	120.20
31	DA	2318	G	C4-N9-C1'	6.32	134.71	126.50
31	BA	2280	G	C8-N9-C4	-6.31	103.88	106.40
31	DA	621	A	C6-C5-N7	-6.31	127.88	132.30
31	DA	2007	C	C5-C6-N1	-6.31	117.84	121.00
31	DA	2346	A	C5-N7-C8	-6.31	100.74	103.90
31	DA	1647	G	C8-N9-C4	6.31	108.92	106.40
31	BA	203	C	N1-C2-O2	-6.31	115.11	118.90
31	BA	2625	G	C6-N1-C2	-6.31	121.31	125.10
31	BA	2779	U	N1-C2-N3	6.31	118.69	114.90
31	DA	2318	G	N7-C8-N9	6.30	116.25	113.10
31	BA	2691	C	C6-N1-C2	6.30	122.82	120.30
31	BA	2825	C	N1-C2-O2	-6.30	115.12	118.90
31	DA	694	U	C5-C4-O4	6.30	129.68	125.90
31	BA	2607	G	C4-N9-C1'	6.30	134.69	126.50
31	DA	14	A	N1-C6-N6	6.30	122.38	118.60
31	DA	1308	A	N1-C2-N3	6.30	132.45	129.30
31	BA	1001	A	C8-N9-C4	6.29	108.32	105.80
31	BA	847	U	C2-N1-C1'	-6.29	110.15	117.70
31	DA	2496	C	C6-N1-C2	6.29	122.82	120.30
31	BA	1784	A	C8-N9-C4	6.29	108.32	105.80
31	DA	572	A	N1-C2-N3	6.29	132.45	129.30
31	DA	1662	C	N3-C4-C5	6.29	124.42	121.90
31	BA	530	G	C2-N3-C4	-6.29	108.76	111.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	2363	C	C5-C6-N1	-6.29	117.86	121.00
31	DA	859	G	N3-C4-C5	6.29	131.75	128.60
31	DA	1332	G	C5-C6-N1	-6.29	108.36	111.50
1	CA	139	G	N1-C6-O6	6.28	123.67	119.90
31	BA	1622	G	C4-C5-N7	-6.28	108.29	110.80
1	AA	139	G	N1-C6-O6	6.28	123.67	119.90
31	DA	123	G	C8-N9-C4	6.28	108.91	106.40
31	DA	1644	C	C6-N1-C2	6.28	122.81	120.30
31	BA	783	A	N3-C4-C5	6.28	131.19	126.80
31	BA	71	A	C4-C5-N7	6.27	113.84	110.70
31	BA	859	G	C8-N9-C1'	6.27	135.16	127.00
31	BA	1496	A	C4-C5-N7	6.27	113.84	110.70
31	BA	1138	G	C5-C6-N1	6.26	114.63	111.50
31	DA	2723	C	C6-N1-C2	6.26	122.81	120.30
31	BA	729	G	C5-C6-O6	-6.26	124.84	128.60
31	BA	2779	U	C5-C6-N1	-6.26	119.57	122.70
31	DA	142	A	C5-N7-C8	-6.26	100.77	103.90
31	DA	1142(A)	A	N1-C2-N3	6.26	132.43	129.30
31	BA	2763	G	N1-C6-O6	6.26	123.65	119.90
31	DA	755	C	C5-C6-N1	-6.26	117.87	121.00
31	BA	564	C	N1-C2-O2	-6.25	115.15	118.90
31	DA	1281	G	N3-C2-N2	-6.25	115.53	119.90
31	BA	2318	G	C4-N9-C1'	6.25	134.62	126.50
31	BA	1698	A	N9-C4-C5	-6.25	103.30	105.80
31	BA	2374	C	C6-N1-C2	6.24	122.80	120.30
31	DA	62	C	C2-N1-C1'	-6.24	111.93	118.80
31	DA	1498	C	C6-N1-C2	6.24	122.80	120.30
31	BA	956	G	C5-C6-N1	-6.23	108.38	111.50
31	BA	1403	C	C5-C6-N1	-6.23	117.88	121.00
32	BB	99	G	N9-C4-C5	-6.23	102.91	105.40
31	BA	944	G	C4-N9-C1'	6.23	134.59	126.50
31	BA	179	G	C2-N3-C4	-6.23	108.79	111.90
31	BA	1678	G	C8-N9-C4	-6.22	103.91	106.40
31	BA	2688	U	N3-C4-O4	-6.22	115.04	119.40
31	DA	621	A	C5-N7-C8	-6.22	100.79	103.90
31	BA	265	A	N7-C8-N9	6.22	116.91	113.80
51	BZ	110	GLY	N-CA-C	-6.22	97.56	113.10
31	DA	1350	C	N3-C2-O2	6.21	126.25	121.90
31	BA	330	A	C4-C5-N7	6.21	113.80	110.70
31	BA	518	G	C8-N9-C4	-6.21	103.92	106.40
31	DA	107	C	C2-N3-C4	-6.21	116.80	119.90
31	DA	1201	C	C5-C6-N1	-6.21	117.90	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	1678	G	C4-N9-C1'	6.21	134.57	126.50
31	BA	527	C	N1-C2-O2	-6.21	115.18	118.90
31	DA	560	C	C5-C6-N1	-6.20	117.90	121.00
31	DA	2449	U	C5-C4-O4	-6.20	122.18	125.90
31	DA	1614	A	C8-N9-C4	-6.20	103.32	105.80
31	DA	2522	U	C5-C6-N1	-6.20	119.60	122.70
31	DA	1682	G	C8-N9-C4	6.20	108.88	106.40
31	BA	2364	C	C6-N1-C2	6.19	122.78	120.30
41	BP	29	LYS	CD-CE-NZ	6.19	125.94	111.70
31	DA	205	G	N9-C4-C5	-6.19	102.92	105.40
31	DA	588	U	N3-C4-O4	6.19	123.73	119.40
31	BA	2469	A	N1-C6-N6	6.19	122.31	118.60
31	DA	1659	U	C5-C6-N1	-6.19	119.61	122.70
31	DA	1698	A	C4-N9-C1'	6.19	137.44	126.30
31	DA	1230	C	C5-C6-N1	-6.19	117.91	121.00
31	BA	587	C	C2-N1-C1'	6.18	125.60	118.80
31	BA	2711	A	C8-N9-C4	6.18	108.27	105.80
32	DB	109	C	C5-C6-N1	-6.18	117.91	121.00
1	AA	283	C	N1-C2-O2	6.18	122.61	118.90
31	DA	1648	C	C5-C6-N1	-6.18	117.91	121.00
1	AA	1442	G	C8-N9-C1'	-6.18	118.97	127.00
31	BA	2420	C	C6-N1-C2	6.18	122.77	120.30
31	DA	445	C	C5-C6-N1	-6.18	117.91	121.00
31	DA	933	A	C6-C5-N7	-6.17	127.98	132.30
31	DA	1784	A	N1-C2-N3	6.17	132.39	129.30
31	BA	179	G	N1-C6-O6	6.17	123.60	119.90
31	DA	1792	G	N7-C8-N9	-6.17	110.01	113.10
31	DA	2253	G	N1-C6-O6	6.17	123.60	119.90
31	DA	2475	C	C2-N1-C1'	6.17	125.59	118.80
31	BA	2821	A	C8-N9-C4	6.17	108.27	105.80
31	DA	2066	C	C6-N1-C2	6.17	122.77	120.30
31	DA	673	C	C5-C6-N1	-6.17	117.92	121.00
1	CA	689	C	C6-N1-C2	-6.16	117.83	120.30
31	DA	2688	U	N3-C4-O4	-6.16	115.09	119.40
31	DA	2622	C	N3-C4-C5	6.16	124.36	121.90
41	BP	59	LEU	N-CA-C	-6.16	94.38	111.00
31	DA	1123	C	C2-N3-C4	-6.15	116.82	119.90
31	DA	2364	C	C5-C6-N1	-6.15	117.92	121.00
31	DA	71	A	N7-C8-N9	6.14	116.87	113.80
31	BA	517	C	C5-C4-N4	-6.14	115.90	120.20
31	DA	2607	G	C4-N9-C1'	6.14	134.48	126.50
31	DA	1678	G	N1-C2-N2	-6.14	110.68	116.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	62	C	C2-N1-C1'	-6.14	112.05	118.80
49	BX	57	LEU	CA-CB-CG	6.13	129.41	115.30
31	BA	2447	G	C8-N9-C4	6.13	108.85	106.40
31	DA	1600	C	C6-N1-C2	6.13	122.75	120.30
31	DA	2594	C	N3-C2-O2	6.13	126.19	121.90
31	BA	465	G	C5-C6-O6	6.13	132.28	128.60
31	DA	651	G	C4-N9-C1'	6.13	134.47	126.50
31	DA	2827	C	C5-C6-N1	-6.13	117.94	121.00
31	DA	814	C	C5-C6-N1	-6.13	117.94	121.00
31	DA	1930	G	C8-N9-C4	6.13	108.85	106.40
31	DA	1942	C	N1-C2-O2	-6.13	115.22	118.90
31	DA	2444	G	N1-C6-O6	-6.13	116.22	119.90
31	DA	2826	A	N1-C2-N3	6.13	132.36	129.30
31	DA	265	A	C5-C6-N1	-6.12	114.64	117.70
31	DA	2346	A	N3-C4-C5	6.12	131.09	126.80
31	DA	1294	U	C5-C6-N1	-6.12	119.64	122.70
41	DP	59	LEU	N-CA-C	-6.12	94.48	111.00
31	DA	1934	C	C5-C6-N1	-6.12	117.94	121.00
31	BA	1325	G	N1-C6-O6	6.12	123.57	119.90
31	BA	2440	C	C2-N1-C1'	-6.11	112.08	118.80
31	BA	2568	C	C6-N1-C2	6.11	122.75	120.30
31	DA	2475	C	C6-N1-C1'	-6.11	113.46	120.80
31	DA	2607	G	N3-C4-N9	6.11	129.67	126.00
31	BA	774	A	N7-C8-N9	6.11	116.86	113.80
31	BA	1622	G	N1-C6-O6	-6.11	116.23	119.90
31	DA	955	C	C2-N1-C1'	-6.11	112.08	118.80
1	CA	266	G	C6-C5-N7	-6.11	126.73	130.40
31	DA	928	G	N1-C6-O6	6.11	123.57	119.90
31	BA	141	A	C2-N3-C4	-6.11	107.55	110.60
31	DA	1959	G	N9-C4-C5	6.11	107.84	105.40
31	BA	686	G	N9-C4-C5	-6.10	102.96	105.40
1	CA	1442	G	C4-N9-C1'	6.10	134.43	126.50
31	DA	1496	A	N7-C8-N9	6.10	116.85	113.80
31	BA	2512	C	C5-C6-N1	-6.10	117.95	121.00
31	DA	190	A	C2-N3-C4	-6.10	107.55	110.60
31	DA	2016	U	C5-C6-N1	-6.10	119.65	122.70
31	BA	2575	C	C5-C6-N1	-6.10	117.95	121.00
31	BA	812	C	N1-C2-O2	-6.09	115.24	118.90
31	BA	2404	C	C6-N1-C2	6.09	122.74	120.30
31	DA	2469	A	C6-C5-N7	-6.09	128.04	132.30
32	DB	104	U	C6-N1-C2	6.09	124.66	121.00
31	BA	621	A	C4-C5-N7	6.09	113.75	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	676	A	C8-N9-C4	-6.09	103.36	105.80
31	BA	949	C	N1-C2-O2	-6.09	115.25	118.90
31	BA	1326	U	C5-C6-N1	-6.09	119.66	122.70
31	BA	2430	A	C6-C5-N7	-6.09	128.04	132.30
31	DA	2048	G	N1-C2-N3	6.09	127.55	123.90
31	DA	2332	U	C5-C6-N1	-6.09	119.66	122.70
31	BA	933	A	N7-C8-N9	6.09	116.84	113.80
31	DA	189	G	C8-N9-C4	6.09	108.83	106.40
31	DA	847	U	C2-N1-C1'	-6.09	110.40	117.70
31	BA	1204	A	N1-C6-N6	6.08	122.25	118.60
31	BA	2060	A	C2-N3-C4	-6.08	107.56	110.60
31	BA	2430	A	C5-C6-N1	-6.08	114.66	117.70
31	BA	1752	C	N3-C2-O2	6.08	126.15	121.90
31	DA	330	A	C5-N7-C8	-6.08	100.86	103.90
31	DA	683	C	C2-N3-C4	-6.08	116.86	119.90
31	BA	69	C	C2-N3-C4	-6.07	116.86	119.90
31	BA	838	C	N3-C4-C5	6.07	124.33	121.90
1	CA	1442	G	C6-C5-N7	-6.07	126.76	130.40
31	BA	190	A	C8-N9-C4	6.07	108.23	105.80
31	DA	2442	C	C5-C6-N1	-6.07	117.97	121.00
31	BA	1622	G	C5-C6-O6	6.06	132.24	128.60
1	CA	1442	G	C8-N9-C1'	-6.06	119.12	127.00
31	DA	1683	C	N1-C2-O2	-6.06	115.26	118.90
31	DA	1698	A	C5-C6-N6	-6.06	118.85	123.70
31	DA	1827	C	N3-C4-N4	-6.06	113.76	118.00
31	BA	2449	U	N3-C4-O4	6.06	123.64	119.40
31	BA	2253	G	C5-C6-O6	-6.06	124.97	128.60
31	BA	1336	A	N1-C6-N6	-6.05	114.97	118.60
31	DA	1558	A	C5-C6-N1	-6.05	114.67	117.70
31	BA	1021	A	C6-C5-N7	-6.05	128.06	132.30
31	BA	932	G	N1-C6-O6	-6.05	116.27	119.90
31	BA	1220	A	C8-N9-C4	-6.05	103.38	105.80
31	DA	2056	G	C6-C5-N7	-6.04	126.77	130.40
31	BA	2226	C	C2-N3-C4	-6.04	116.88	119.90
31	DA	2544	G	C6-C5-N7	-6.04	126.77	130.40
31	DA	2814	C	C6-N1-C2	6.04	122.72	120.30
31	DA	69	C	C5-C6-N1	-6.04	117.98	121.00
31	BA	2318	G	C5-N7-C8	-6.04	101.28	104.30
31	DA	2043	C	N3-C4-C5	6.04	124.32	121.90
31	BA	53	A	N1-C2-N3	6.04	132.32	129.30
31	DA	1332	G	C6-N1-C2	6.04	128.72	125.10
32	BB	5	C	C6-N1-C2	6.03	122.71	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	784	A	N1-C6-N6	-6.03	114.98	118.60
31	DA	1793	C	C5-C6-N1	-6.03	117.98	121.00
31	BA	1207	C	N1-C2-O2	-6.03	115.28	118.90
31	DA	682	G	N7-C8-N9	-6.02	110.09	113.10
31	DA	859	G	C8-N9-C1'	6.02	134.83	127.00
39	DN	67	LEU	CA-CB-CG	6.02	129.15	115.30
31	BA	2533	A	C8-N9-C4	6.02	108.21	105.80
31	DA	664	C	C6-N1-C2	6.02	122.71	120.30
31	BA	925	C	N1-C2-O2	-6.01	115.29	118.90
31	BA	2518	A	N9-C4-C5	-6.01	103.40	105.80
31	DA	1647	G	C5-C6-O6	-6.01	124.99	128.60
31	BA	139(A)	G	N7-C8-N9	6.01	116.10	113.10
32	DB	114	C	C5-C6-N1	-6.01	118.00	121.00
1	CA	697	U	C5-C6-N1	-6.00	119.70	122.70
31	DA	2542	A	N1-C6-N6	6.00	122.20	118.60
31	DA	2084	C	C6-N1-C2	6.00	122.70	120.30
31	DA	1021	A	C6-C5-N7	-6.00	128.10	132.30
31	BA	1005	C	N3-C4-C5	6.00	124.30	121.90
31	BA	1496	A	N7-C8-N9	6.00	116.80	113.80
31	BA	441	U	C5-C4-O4	-6.00	122.30	125.90
31	DA	25	U	N1-C2-O2	-6.00	118.60	122.80
32	DB	69	G	C8-N9-C4	5.99	108.80	106.40
41	DP	52	GLU	N-CA-C	5.99	127.18	111.00
31	DA	2531	A	C8-N9-C4	5.99	108.19	105.80
31	DA	659	C	C6-N1-C2	5.99	122.69	120.30
31	DA	1006	C	N1-C2-O2	-5.99	115.31	118.90
31	DA	2283	C	N1-C2-O2	-5.99	115.31	118.90
31	BA	2042	A	N3-C4-C5	5.98	130.99	126.80
31	DA	2501	C	N3-C4-C5	5.98	124.29	121.90
31	BA	665	C	C6-N1-C2	5.98	122.69	120.30
31	BA	736	C	N1-C2-O2	-5.98	115.31	118.90
31	BA	1662	C	C6-N1-C2	5.98	122.69	120.30
48	BW	6	ILE	CB-CA-C	-5.97	99.65	111.60
31	DA	930	U	C5-C6-N1	-5.97	119.72	122.70
31	BA	751	A	C5-C6-N6	5.97	128.47	123.70
31	BA	990	A	C2-N3-C4	-5.97	107.62	110.60
40	DO	8	LEU	CA-CB-CG	5.97	129.03	115.30
31	BA	1241	A	C6-N1-C2	5.97	122.18	118.60
31	BA	2447	G	N7-C8-N9	-5.97	110.12	113.10
31	DA	1641	A	N1-C2-N3	5.97	132.28	129.30
31	DA	2448	A	C5-C6-N1	5.97	120.68	117.70
1	CA	117	G	C6-C5-N7	-5.96	126.82	130.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	734	A	C2-N3-C4	-5.96	107.62	110.60
31	BA	213	A	C8-N9-C4	5.96	108.19	105.80
31	BA	732	C	N1-C2-O2	-5.96	115.32	118.90
31	BA	1799	G	C5-N7-C8	5.96	107.28	104.30
31	DA	2678	C	N1-C2-O2	-5.96	115.32	118.90
31	BA	109	G	N1-C6-O6	-5.96	116.32	119.90
31	BA	265	A	C6-C5-N7	-5.96	128.13	132.30
31	BA	2380	C	C6-N1-C2	5.96	122.69	120.30
31	BA	847	U	N3-C4-O4	-5.96	115.23	119.40
31	DA	2542	A	C5-C6-N1	-5.96	114.72	117.70
1	AA	7	G	C4-N9-C1'	-5.96	118.75	126.50
31	BA	1204	A	N7-C8-N9	5.96	116.78	113.80
31	DA	786	C	C4-C5-C6	5.96	120.38	117.40
31	DA	1142(A)	A	C5-N7-C8	-5.96	100.92	103.90
31	BA	2469	A	C8-N9-C4	-5.95	103.42	105.80
31	DA	672	C	C5-C6-N1	-5.95	118.02	121.00
1	AA	895	G	C2-N3-C4	-5.95	108.92	111.90
31	DA	1698	A	N7-C8-N9	5.95	116.78	113.80
31	BA	1678	G	N1-C2-N2	-5.95	110.85	116.20
1	CA	896	C	N1-C2-O2	-5.95	115.33	118.90
31	DA	2017	U	C4-C5-C6	5.95	123.27	119.70
31	BA	144	C	C6-N1-C2	5.95	122.68	120.30
31	BA	2763	G	C4-C5-N7	5.95	113.18	110.80
31	DA	21	A	N1-C6-N6	-5.95	115.03	118.60
31	DA	1206	G	C4-C5-N7	5.95	113.18	110.80
31	DA	1614	A	N7-C8-N9	5.95	116.77	113.80
31	BA	1241	A	C5-N7-C8	-5.95	100.93	103.90
31	BA	1644	C	C6-N1-C2	5.95	122.68	120.30
31	BA	2392	A	N1-C6-N6	5.95	122.17	118.60
31	DA	530	G	C2-N3-C4	-5.95	108.93	111.90
31	DA	1573	G	N3-C4-C5	5.94	131.57	128.60
31	DA	1826	G	C8-N9-C4	5.94	108.78	106.40
31	DA	1496	A	C4-N9-C1'	5.94	137.00	126.30
31	DA	2841	C	N3-C4-C5	5.94	124.28	121.90
31	BA	1786	A	C4-C5-C6	5.94	119.97	117.00
31	BA	130	C	C6-N1-C2	5.94	122.68	120.30
31	BA	1403	C	C2-N3-C4	-5.94	116.93	119.90
39	BN	67	LEU	CA-CB-CG	5.94	128.96	115.30
31	DA	832	G	C4-C5-N7	-5.94	108.42	110.80
31	DA	2253	G	C8-N9-C1'	-5.94	119.28	127.00
31	BA	622	G	C8-N9-C4	5.93	108.77	106.40
31	BA	43	A	C2-N3-C4	-5.93	107.63	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	142	A	C2-N3-C4	-5.93	107.63	110.60
31	BA	2234	G	C8-N9-C4	5.93	108.77	106.40
31	DA	736	C	C6-N1-C2	5.93	122.67	120.30
31	BA	1955	U	C2-N3-C4	-5.93	123.44	127.00
31	DA	1241	A	C5-N7-C8	-5.93	100.94	103.90
31	DA	942	G	N1-C6-O6	-5.92	116.34	119.90
31	DA	2829	C	C5-C4-N4	-5.92	116.05	120.20
31	BA	1544	A	C5-C6-N6	5.92	128.44	123.70
31	DA	2284	C	C5-C6-N1	-5.92	118.04	121.00
31	DA	2699	C	C5-C6-N1	-5.92	118.04	121.00
31	DA	1543	C	N3-C2-O2	5.92	126.04	121.90
31	DA	2540	C	C2-N3-C4	-5.92	116.94	119.90
31	BA	1237	A	N1-C6-N6	5.91	122.15	118.60
31	BA	1496	A	C5-N7-C8	-5.91	100.94	103.90
31	BA	1614	A	N7-C8-N9	5.91	116.76	113.80
31	DA	148	C	N3-C4-C5	5.91	124.27	121.90
31	DA	2091	U	C5-C6-N1	-5.91	119.75	122.70
31	BA	124	G	C5-C6-O6	-5.91	125.06	128.60
31	DA	142(A)	C	C6-N1-C2	5.91	122.66	120.30
31	BA	1328	G	N3-C4-C5	-5.91	125.65	128.60
31	DA	97	C	C6-N1-C2	5.91	122.66	120.30
31	DA	242	G	C8-N9-C4	5.91	108.76	106.40
31	DA	2084	C	C5-C6-N1	-5.90	118.05	121.00
31	DA	2380	C	C6-N1-C2	5.90	122.66	120.30
31	DA	2563	U	C5-C6-N1	-5.90	119.75	122.70
31	BA	1694	C	C5-C6-N1	5.90	123.95	121.00
31	DA	1695	G	C6-C5-N7	-5.90	126.86	130.40
31	DA	1698	A	C4-C5-C6	5.90	119.95	117.00
31	DA	2688	U	C5-C4-O4	5.89	129.44	125.90
31	DA	2253	G	C6-C5-N7	-5.89	126.86	130.40
31	DA	2430	A	N1-C6-N6	5.89	122.14	118.60
31	DA	1332	G	C4-C5-N7	5.89	113.16	110.80
31	BA	2447	G	C4-N9-C1'	-5.89	118.84	126.50
31	BA	252	G	C8-N9-C4	-5.89	104.05	106.40
31	BA	1698	A	C8-N9-C1'	-5.89	117.10	127.70
31	DA	728	G	C2-N3-C4	-5.89	108.96	111.90
31	BA	1256	G	C8-N9-C1'	-5.89	119.35	127.00
31	DA	196	A	C5-C6-N6	-5.88	118.99	123.70
31	DA	728	G	C8-N9-C4	5.88	108.75	106.40
31	DA	2681	C	N3-C4-N4	-5.88	113.88	118.00
31	DA	71	A	N1-C6-N6	5.88	122.13	118.60
31	DA	1694	C	C5-C6-N1	5.88	123.94	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
49	DX	62	LYS	N-CA-C	5.88	126.88	111.00
31	BA	2353	G	C8-N9-C4	5.88	108.75	106.40
31	DA	1784	A	N1-C6-N6	5.88	122.13	118.60
31	BA	2010	G	N1-C6-O6	5.88	123.43	119.90
31	BA	196	A	C6-C5-N7	-5.88	128.19	132.30
31	DA	2575	C	C5-C6-N1	-5.88	118.06	121.00
31	DA	2023	G	C5-C6-O6	-5.88	125.08	128.60
31	BA	194	G	N3-C4-C5	5.87	131.54	128.60
31	BA	659	C	N3-C4-C5	5.87	124.25	121.90
31	BA	840	C	C6-N1-C2	5.87	122.65	120.30
31	DA	132	G	N1-C6-O6	5.87	123.42	119.90
31	BA	113	G	N1-C6-O6	5.87	123.42	119.90
31	DA	2501	C	C2-N1-C1'	-5.87	112.35	118.80
31	BA	2544	G	C5-C6-N1	-5.87	108.57	111.50
32	BB	12	C	N1-C2-O2	5.86	122.42	118.90
31	BA	2475	C	C2-N1-C1'	5.86	125.25	118.80
31	DA	2447	G	C4-N9-C1'	-5.86	118.89	126.50
31	BA	1253	A	N9-C4-C5	5.86	108.14	105.80
23	B1	55	GLY	N-CA-C	-5.85	98.46	113.10
31	DA	774	A	N3-C4-C5	5.85	130.90	126.80
31	DA	2447	G	C8-N9-C4	5.85	108.74	106.40
31	DA	671	C	C5-C6-N1	-5.85	118.07	121.00
31	DA	2571	C	N1-C2-O2	-5.85	115.39	118.90
31	BA	1934	C	C4'-C3'-C2'	5.85	108.45	102.60
31	BA	2779	U	N3-C4-O4	-5.85	115.31	119.40
31	DA	337	C	C2-N1-C1'	-5.85	112.36	118.80
31	BA	1333	C	N1-C2-O2	-5.85	115.39	118.90
31	BA	2043	C	C5-C4-N4	-5.85	116.11	120.20
31	DA	932	G	C4-N9-C1'	-5.85	118.90	126.50
31	DA	2260	C	C2-N3-C4	-5.85	116.98	119.90
31	BA	420	C	C6-N1-C2	5.85	122.64	120.30
31	BA	2512	C	N1-C2-O2	-5.85	115.39	118.90
31	DA	339	U	N1-C2-N3	-5.84	111.39	114.90
31	DA	1619	G	N3-C2-N2	-5.84	115.81	119.90
31	DA	2469	A	C4-C5-C6	5.84	119.92	117.00
31	DA	429	A	N1-C6-N6	5.84	122.10	118.60
32	DB	94	C	C5-C4-N4	-5.84	116.11	120.20
31	DA	2051	A	N1-C6-N6	5.84	122.10	118.60
31	DA	519	U	C5-C6-N1	-5.83	119.78	122.70
31	BA	246	C	N3-C2-O2	5.83	125.98	121.90
31	BA	2607	G	C4-C5-C6	5.83	122.30	118.80
31	DA	945	A	N7-C8-N9	5.83	116.72	113.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	2779	U	C5-C6-N1	-5.83	119.78	122.70
31	BA	189	G	N1-C6-O6	5.83	123.40	119.90
31	BA	1602	U	C4-C5-C6	5.83	123.20	119.70
31	DA	618	C	C6-N1-C2	5.83	122.63	120.30
31	DA	1934	C	C4'-C3'-C2'	5.83	108.43	102.60
31	BA	199	A	N1-C6-N6	-5.83	115.10	118.60
31	BA	1544	A	N9-C1'-C2'	5.83	121.58	114.00
31	BA	2625	G	C5-C6-O6	-5.83	125.11	128.60
1	CA	899	C	N3-C2-O2	5.83	125.98	121.90
48	DW	6	ILE	CB-CA-C	-5.83	99.95	111.60
51	DZ	110	GLY	N-CA-C	-5.83	98.54	113.10
31	BA	194	G	C2-N3-C4	-5.82	108.99	111.90
31	BA	2715	C	C2-N3-C4	-5.82	116.99	119.90
31	DA	2236	C	C5-C6-N1	-5.82	118.09	121.00
31	BA	1697	G	C4'-C3'-C2'	5.82	108.42	102.60
31	DA	834	C	C5-C6-N1	-5.82	118.09	121.00
31	DA	1616	A	N7-C8-N9	5.82	116.71	113.80
31	BA	2552	U	N1-C2-O2	-5.81	118.73	122.80
31	DA	2695	C	C6-N1-C2	5.81	122.62	120.30
31	BA	1242	A	N1-C6-N6	5.81	122.09	118.60
31	BA	2443	C	C6-N1-C2	-5.81	117.98	120.30
31	DA	2363	C	C6-N1-C2	5.81	122.62	120.30
31	BA	1897	G	C5-C6-O6	-5.81	125.11	128.60
1	CA	7	G	C8-N9-C1'	5.81	134.55	127.00
31	BA	1807	G	C5-C6-O6	-5.81	125.12	128.60
31	DA	2742	C	C5-C6-N1	-5.81	118.10	121.00
31	BA	1833	U	N1-C2-O2	-5.80	118.74	122.80
31	DA	1544	A	N9-C1'-C2'	5.80	121.55	114.00
31	DA	1325	G	C5-C6-O6	-5.80	125.12	128.60
31	DA	254	G	C4-C5-N7	5.80	113.12	110.80
31	DA	1698	A	C8-N9-C1'	-5.80	117.26	127.70
31	BA	2469	A	N7-C8-N9	5.80	116.70	113.80
31	DA	25	U	N3-C2-O2	5.80	126.26	122.20
31	BA	661	C	N3-C4-C5	5.79	124.22	121.90
31	DA	468	G	N1-C6-O6	5.79	123.38	119.90
31	DA	43	A	C8-N9-C4	5.79	108.12	105.80
31	BA	2274	A	C8-N9-C4	5.79	108.12	105.80
1	CA	1525	G	C4-N9-C1'	-5.79	118.98	126.50
47	DV	40	LEU	CA-CB-CG	5.79	128.61	115.30
31	BA	1359	A	C8-N9-C4	5.79	108.11	105.80
1	CA	1432	G	C5-C6-N1	-5.79	108.61	111.50
31	DA	254	G	N1-C6-O6	5.79	123.37	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	2048	G	C6-N1-C2	-5.79	121.63	125.10
31	BA	2781	A	C8-N9-C4	-5.78	103.49	105.80
1	CA	1509	C	C5-C6-N1	-5.78	118.11	121.00
31	DA	2225	A	C8-N9-C4	-5.78	103.49	105.80
31	DA	25	U	C2-N1-C1'	-5.78	110.77	117.70
31	DA	651	G	C8-N9-C1'	-5.78	119.49	127.00
31	BA	1983	C	C2-N3-C4	-5.78	117.01	119.90
31	DA	1987	G	N1-C6-O6	5.77	123.36	119.90
31	BA	434	U	N1-C2-O2	-5.77	118.76	122.80
31	DA	2521	C	N1-C2-O2	-5.77	115.44	118.90
31	BA	419	C	C6-N1-C2	5.77	122.61	120.30
31	BA	2438	U	C6-N1-C2	5.77	124.46	121.00
31	BA	2436	G	N3-C2-N2	-5.77	115.86	119.90
31	DA	141	A	C2-N3-C4	-5.77	107.72	110.60
31	DA	1992	G	C5-C6-N1	5.76	114.38	111.50
31	DA	124	G	N1-C2-N2	5.76	121.39	116.20
31	BA	2876	G	C8-N9-C4	5.76	108.70	106.40
31	DA	84	A	N7-C8-N9	-5.76	110.92	113.80
31	DA	528	A	N3-C4-C5	5.76	130.83	126.80
31	BA	1192	G	C8-N9-C4	5.76	108.70	106.40
31	BA	2432	A	N1-C6-N6	5.76	122.06	118.60
31	BA	2713	A	C6-C5-N7	-5.76	128.27	132.30
31	BA	621	A	C6-C5-N7	-5.76	128.27	132.30
1	CA	917	G	C8-N9-C4	-5.76	104.10	106.40
31	DA	1558	A	N1-C2-N3	5.76	132.18	129.30
31	DA	650	C	N1-C2-O2	5.75	122.35	118.90
31	DA	1543	C	N3-C4-C5	-5.75	119.60	121.90
31	DA	1616	A	C5-N7-C8	-5.75	101.02	103.90
31	DA	2688	U	C5-C6-N1	-5.75	119.82	122.70
31	DA	2616	C	C5-C6-N1	-5.75	118.13	121.00
31	BA	272	G	C8-N9-C4	-5.75	104.10	106.40
31	BA	793	A	C5-C6-N6	-5.75	119.10	123.70
31	BA	1807	G	C4-C5-N7	5.75	113.10	110.80
31	BA	205	G	N3-C2-N2	5.74	123.92	119.90
31	BA	530	G	C8-N9-C1'	5.74	134.47	127.00
31	DA	115	C	C5-C6-N1	-5.74	118.13	121.00
31	DA	449	A	C5-N7-C8	-5.74	101.03	103.90
31	BA	1403	C	N1-C2-O2	-5.74	115.45	118.90
31	BA	2253	G	N1-C6-O6	5.74	123.34	119.90
31	DA	975	C	N3-C4-C5	-5.74	119.60	121.90
31	DA	1648	C	C6-N1-C2	5.74	122.60	120.30
31	BA	671	C	C2-N1-C1'	-5.74	112.49	118.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	671	C	N1-C2-N3	5.74	123.22	119.20
33	BD	238	GLY	N-CA-C	-5.74	98.76	113.10
31	DA	693	C	N3-C4-C5	5.74	124.19	121.90
31	DA	2685	G	C5-C6-N1	-5.74	108.63	111.50
31	BA	2346	A	N3-C4-C5	5.73	130.81	126.80
31	BA	2596	U	N1-C2-O2	-5.73	118.79	122.80
1	CA	817	C	C6-N1-C2	5.73	122.59	120.30
31	DA	664	C	C5-C6-N1	-5.73	118.14	121.00
1	CA	7	G	C4-N9-C1'	-5.73	119.05	126.50
31	DA	1493	C	N1-C2-O2	5.73	122.34	118.90
31	DA	1261	C	C2-N1-C1'	-5.73	112.50	118.80
31	DA	671	C	C6-N1-C1'	5.72	127.67	120.80
31	DA	2041	U	C5-C6-N1	-5.72	119.84	122.70
31	BA	786	C	C4-C5-C6	5.72	120.26	117.40
31	BA	2544	G	N3-C2-N2	-5.72	115.90	119.90
31	DA	1697	G	C4'-C3'-C2'	5.72	108.32	102.60
31	DA	945	A	C4-C5-C6	5.72	119.86	117.00
31	DA	977	G	N1-C6-O6	-5.72	116.47	119.90
31	BA	1614	A	C5-N7-C8	-5.71	101.04	103.90
31	BA	2607	G	C6-C5-N7	-5.71	126.97	130.40
31	BA	581	C	C6-N1-C2	5.71	122.58	120.30
31	DA	671	C	C2-N1-C1'	-5.71	112.52	118.80
31	DA	1022	G	C6-N1-C2	-5.71	121.67	125.10
31	DA	516	C	C6-N1-C2	5.71	122.58	120.30
31	BA	2538	C	C6-N1-C2	5.71	122.58	120.30
31	DA	1029	A	N1-C6-N6	5.71	122.03	118.60
31	DA	1657	C	C6-N1-C2	5.71	122.58	120.30
31	BA	2380	C	N3-C4-C5	5.71	124.18	121.90
31	DA	1409	C	C6-N1-C2	5.71	122.58	120.30
31	DA	1992	G	C2-N3-C4	5.71	114.75	111.90
31	DA	2241	A	N1-C2-N3	5.70	132.15	129.30
31	BA	189	G	C2-N3-C4	-5.70	109.05	111.90
31	DA	249	C	C6-N1-C2	5.70	122.58	120.30
31	DA	259	G	N1-C6-O6	5.70	123.32	119.90
31	DA	944	G	C4-N9-C1'	5.70	133.91	126.50
31	DA	1978	A	C2-N3-C4	-5.70	107.75	110.60
31	BA	651	G	C4-N9-C1'	5.70	133.91	126.50
31	DA	2386	C	C5-C6-N1	-5.70	118.15	121.00
31	BA	2817	G	C8-N9-C4	-5.70	104.12	106.40
31	DA	472	A	C4'-C3'-C2'	5.70	108.30	102.60
31	DA	584	C	C4-C5-C6	5.70	120.25	117.40
31	BA	2287	A	N1-C2-N3	5.69	132.15	129.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	61	G	C4-C5-N7	-5.69	108.52	110.80
1	CA	107	G	N1-C6-O6	5.69	123.31	119.90
31	DA	465	G	C8-N9-C4	-5.69	104.12	106.40
31	BA	226	G	C5-C6-O6	-5.69	125.19	128.60
31	DA	1992	G	N1-C6-O6	-5.69	116.49	119.90
31	DA	2252	G	N3-C4-C5	5.69	131.44	128.60
31	DA	2606	C	C6-N1-C2	5.69	122.57	120.30
31	BA	814	C	C5-C6-N1	-5.68	118.16	121.00
31	DA	2843	G	C5-C6-O6	-5.68	125.19	128.60
32	DB	99	G	C8-N9-C4	5.68	108.67	106.40
31	BA	1119	C	C6-N1-C2	5.68	122.57	120.30
31	BA	1786	A	C4-N9-C1'	5.68	136.52	126.30
31	BA	2042	A	C2-N3-C4	-5.68	107.76	110.60
31	DA	1228	G	C5-C6-O6	-5.68	125.19	128.60
31	DA	2497	A	C8-N9-C4	5.68	108.07	105.80
31	DA	1210	A	C4-C5-C6	5.68	119.84	117.00
31	DA	1543	C	N3-C4-N4	5.68	121.97	118.00
31	BA	2430	A	C5-N7-C8	-5.67	101.06	103.90
31	DA	179	G	C8-N9-C4	5.67	108.67	106.40
31	BA	1266	G	N3-C2-N2	5.67	123.87	119.90
31	DA	1196	C	C5-C6-N1	-5.67	118.16	121.00
31	BA	337	C	N1-C2-O2	-5.67	115.50	118.90
31	BA	2242	G	N3-C2-N2	-5.67	115.93	119.90
31	BA	2586	C	N1-C2-O2	-5.67	115.50	118.90
31	DA	208	C	C6-N1-C2	5.67	122.57	120.30
31	DA	2008	C	C5-C6-N1	-5.67	118.17	121.00
31	DA	847	U	C5-C4-O4	5.67	129.30	125.90
31	DA	2547	U	C5-C6-N1	-5.67	119.87	122.70
31	DA	1565	C	N3-C4-C5	5.67	124.17	121.90
31	BA	568	U	C5-C4-O4	5.66	129.30	125.90
31	DA	2744	G	C5-C6-O6	-5.66	125.20	128.60
31	DA	825	C	C4-C5-C6	5.66	120.23	117.40
31	BA	2363	C	C6-N1-C2	5.66	122.56	120.30
32	BB	5	C	C5-C6-N1	-5.66	118.17	121.00
31	BA	647	G	C8-N9-C4	-5.66	104.14	106.40
31	DA	2430	A	N1-C2-N3	5.66	132.13	129.30
31	BA	463	G	C5-C6-O6	5.66	131.99	128.60
31	BA	1313	U	C6-N1-C2	-5.66	117.61	121.00
31	BA	2469	A	C4-C5-C6	5.66	119.83	117.00
31	DA	84	A	C8-N9-C4	5.66	108.06	105.80
31	DA	265	A	C6-C5-N7	-5.66	128.34	132.30
31	DA	1253	A	N1-C6-N6	-5.66	115.21	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	378	C	C6-N1-C2	5.65	122.56	120.30
31	BA	2040	C	C5-C4-N4	-5.65	116.24	120.20
31	DA	1832	C	N1-C2-O2	-5.65	115.51	118.90
30	B8	44	LYS	CD-CE-NZ	5.65	124.70	111.70
31	BA	825	C	N3-C4-C5	-5.65	119.64	121.90
31	BA	967	C	C5-C6-N1	-5.65	118.17	121.00
31	BA	2073	C	C5-C6-N1	-5.65	118.17	121.00
49	BX	62	LYS	N-CA-C	5.65	126.26	111.00
31	DA	733	G	N9-C4-C5	-5.65	103.14	105.40
31	BA	2779	U	N3-C2-O2	-5.65	118.25	122.20
31	BA	2318	G	C4-C5-N7	5.65	113.06	110.80
31	BA	2430	A	N1-C2-N3	5.65	132.12	129.30
31	DA	734	A	N3-C4-C5	5.65	130.75	126.80
31	DA	1647	G	N1-C6-O6	5.65	123.29	119.90
31	DA	2621	A	C2-N3-C4	-5.65	107.78	110.60
31	BA	656	G	C6-C5-N7	-5.65	127.01	130.40
31	DA	1698	A	C3'-C2'-C1'	-5.65	96.98	101.50
31	BA	1022	G	N3-C2-N2	-5.64	115.95	119.90
31	DA	1317	A	C6-N1-C2	-5.64	115.21	118.60
31	DA	2032	G	C5-C6-O6	-5.64	125.21	128.60
31	BA	272	G	N1-C6-O6	-5.64	116.52	119.90
31	DA	1328	G	N3-C4-N9	5.64	129.39	126.00
31	BA	1397	U	N1-C2-N3	5.64	118.28	114.90
31	BA	2441	C	N3-C2-O2	-5.64	117.95	121.90
31	BA	1559	G	N1-C6-O6	5.64	123.28	119.90
31	DA	2518	A	C2-N3-C4	-5.64	107.78	110.60
31	BA	1205	U	N3-C2-O2	-5.63	118.25	122.20
31	BA	729	G	N3-C2-N2	-5.63	115.96	119.90
31	DA	1399	C	N3-C4-C5	5.63	124.15	121.90
31	DA	1022	G	C4-C5-N7	-5.63	108.55	110.80
31	DA	1799	G	N3-C4-C5	-5.63	125.79	128.60
31	DA	2420	C	C6-N1-C2	5.63	122.55	120.30
31	DA	597	U	N1-C2-O2	-5.62	118.86	122.80
31	BA	686	G	C4-C5-N7	5.62	113.05	110.80
31	DA	468	G	C8-N9-C4	5.62	108.65	106.40
31	DA	621	A	C4-C5-N7	5.62	113.51	110.70
31	DA	1826	G	C4-C5-N7	-5.62	108.55	110.80
31	DA	2345	G	N3-C4-N9	-5.62	122.63	126.00
31	DA	378	C	N3-C4-C5	5.62	124.15	121.90
27	B5	51	TYR	CA-CB-CG	5.62	124.08	113.40
1	CA	1442	G	C4-C5-N7	5.62	113.05	110.80
31	BA	179	G	C5-C6-O6	-5.62	125.23	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	783	A	C6-C5-N7	-5.62	128.37	132.30
31	BA	1021	A	N7-C8-N9	5.62	116.61	113.80
31	DA	397	G	C2-N3-C4	-5.62	109.09	111.90
31	DA	928	G	C6-C5-N7	-5.61	127.03	130.40
31	BA	1624	G	C8-N9-C4	5.61	108.64	106.40
31	BA	1959	G	N1-C6-O6	-5.61	116.53	119.90
31	BA	2084	C	C6-N1-C2	5.61	122.55	120.30
1	CA	123	C	C6-N1-C2	5.61	122.55	120.30
31	DA	734	A	C8-N9-C4	5.61	108.04	105.80
31	DA	1432	C	C6-N1-C2	5.61	122.54	120.30
31	DA	2223	G	C8-N9-C4	5.61	108.64	106.40
31	DA	2726	U	N3-C4-O4	-5.61	115.47	119.40
31	DA	2085	C	N1-C2-O2	-5.61	115.54	118.90
31	BA	2685	G	C5-C6-N1	-5.60	108.70	111.50
31	BA	2606	C	C6-N1-C2	5.60	122.54	120.30
31	DA	1799	G	C5-N7-C8	5.60	107.10	104.30
31	BA	2345	G	C5-C6-O6	5.59	131.96	128.60
31	DA	2073	C	C5-C6-N1	-5.59	118.20	121.00
31	DA	2741	A	N9-C4-C5	-5.59	103.56	105.80
31	BA	530	G	C8-N9-C4	-5.59	104.17	106.40
31	BA	1972	A	C5-C6-N6	-5.59	119.23	123.70
31	DA	459	U	C5-C6-N1	-5.59	119.91	122.70
31	BA	272	G	N3-C4-N9	5.59	129.35	126.00
31	BA	774	A	C6-C5-N7	-5.59	128.39	132.30
31	BA	849	A	C8-N9-C4	5.59	108.03	105.80
31	BA	2607	G	N3-C4-C5	-5.59	125.81	128.60
31	DA	130	C	N3-C4-C5	5.59	124.14	121.90
31	DA	2495	G	N3-C2-N2	-5.58	115.99	119.90
31	BA	130	C	C5-C6-N1	-5.58	118.21	121.00
31	BA	784	A	N3-C4-N9	-5.58	122.93	127.40
31	BA	1984	G	N1-C6-O6	-5.58	116.55	119.90
31	BA	671	C	C6-N1-C1'	5.58	127.50	120.80
31	BA	2395	C	N3-C2-O2	5.58	125.81	121.90
31	DA	833	U	N3-C2-O2	5.58	126.11	122.20
31	DA	2044	C	N3-C4-C5	5.58	124.13	121.90
31	BA	671	C	C4-C5-C6	5.58	120.19	117.40
31	BA	2070	G	C8-N9-C4	5.58	108.63	106.40
31	DA	784	A	C5-C6-N6	5.58	128.16	123.70
31	DA	1022	G	N1-C2-N3	5.58	127.25	123.90
31	BA	2681	C	N1-C2-O2	-5.58	115.55	118.90
31	DA	2691	C	C6-N1-C2	5.57	122.53	120.30
31	BA	1323	U	N3-C2-O2	5.57	126.10	122.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	2702	U	C2-N3-C4	-5.57	123.66	127.00
32	DB	64	C	C6-N1-C2	5.57	122.53	120.30
31	BA	2392	A	N3-C4-C5	5.57	130.70	126.80
31	DA	2346	A	C4-C5-N7	5.57	113.49	110.70
31	BA	1266	G	C4-C5-N7	5.57	113.03	110.80
47	BV	40	LEU	CA-CB-CG	5.57	128.10	115.30
31	BA	581	C	C5-C6-N1	-5.56	118.22	121.00
31	BA	1997	G	C5-C6-O6	5.56	131.94	128.60
31	BA	2545	G	N1-C6-O6	5.56	123.24	119.90
31	BA	2012	G	C4-C5-N7	5.56	113.03	110.80
31	DA	1459	G	C4-N9-C1'	5.56	133.73	126.50
31	BA	676	A	C5-C6-N6	-5.56	119.25	123.70
31	BA	1771	C	C5-C6-N1	-5.56	118.22	121.00
31	BA	2202	C	N1-C2-O2	-5.56	115.57	118.90
31	DA	1485	G	N3-C4-N9	5.56	129.33	126.00
31	DA	1830	C	C6-N1-C2	5.56	122.52	120.30
31	BA	933	A	C5-C6-N6	-5.56	119.25	123.70
31	DA	1799	G	N3-C4-N9	5.56	129.33	126.00
31	DA	2607	G	C4-C5-C6	5.56	122.13	118.80
31	BA	191	A	N7-C8-N9	-5.55	111.02	113.80
31	BA	332	A	C2-N3-C4	-5.55	107.82	110.60
31	BA	148	C	N3-C4-C5	5.55	124.12	121.90
31	BA	1459	G	C4-N9-C1'	5.55	133.71	126.50
31	BA	2345	G	N3-C4-N9	-5.55	122.67	126.00
31	DA	774	A	C5-C6-N1	-5.55	114.93	117.70
31	BA	1897	G	C6-C5-N7	-5.54	127.07	130.40
31	DA	2544	G	N3-C2-N2	-5.54	116.02	119.90
31	DA	2822	G	C8-N9-C4	5.54	108.62	106.40
31	BA	472	A	C4'-C3'-C2'	5.54	108.14	102.60
31	BA	647	G	C4-N9-C1'	5.54	133.71	126.50
31	DA	1820	U	N3-C4-C5	5.54	117.93	114.60
31	DA	2622	C	N3-C2-O2	5.54	125.78	121.90
31	DA	933	A	N7-C8-N9	5.54	116.57	113.80
1	AA	369	C	C6-N1-C2	-5.54	118.08	120.30
31	BA	1485	G	N3-C4-N9	5.54	129.32	126.00
31	DA	2569	G	N9-C4-C5	-5.53	103.19	105.40
31	BA	516	C	N3-C4-C5	5.53	124.11	121.90
31	BA	1782	C	N1-C2-O2	-5.53	115.58	118.90
31	DA	1784	A	C6-N1-C2	-5.53	115.28	118.60
31	BA	446	G	C5-C6-O6	-5.53	125.28	128.60
31	DA	1930	G	N7-C8-N9	-5.53	110.34	113.10
31	DA	2519	U	C5-C6-N1	-5.53	119.94	122.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	813	U	C6-N1-C2	5.53	124.32	121.00
31	DA	2253	G	C5-C6-O6	-5.52	125.28	128.60
1	CA	899	C	C5-C6-N1	-5.52	118.24	121.00
31	DA	2017	U	C5-C6-N1	-5.52	119.94	122.70
31	BA	1260	G	C8-N9-C4	5.52	108.61	106.40
31	BA	1614	A	C8-N9-C4	-5.52	103.59	105.80
31	DA	449	A	C4-C5-N7	5.52	113.46	110.70
31	DA	683	C	C5-C4-N4	-5.52	116.34	120.20
31	BA	2841	C	C6-N1-C2	5.52	122.51	120.30
31	DA	660	G	C5-C6-O6	5.52	131.91	128.60
31	BA	1399	C	C5-C6-N1	-5.52	118.24	121.00
31	BA	122	G	C8-N9-C4	5.51	108.61	106.40
31	BA	1782	C	C4-C5-C6	5.51	120.16	117.40
31	BA	2364	C	C5-C6-N1	-5.51	118.24	121.00
31	DA	1841	U	C5-C6-N1	-5.51	119.94	122.70
31	BA	2622	C	C6-N1-C2	5.51	122.50	120.30
31	DA	2190	G	C8-N9-C1'	-5.51	119.84	127.00
31	BA	182	A	N1-C6-N6	5.51	121.91	118.60
31	DA	2231	C	C6-N1-C2	5.51	122.50	120.30
31	DA	2430	A	C5-C6-N1	-5.51	114.94	117.70
31	DA	2742	C	C6-N1-C2	5.51	122.50	120.30
31	BA	2392	A	C6-C5-N7	-5.51	128.44	132.30
1	CA	895	G	C2-N3-C4	-5.51	109.15	111.90
31	DA	32	C	C6-N1-C2	-5.51	118.10	120.30
31	BA	1519	G	C8-N9-C4	-5.50	104.20	106.40
31	DA	811	U	C5-C6-N1	-5.50	119.95	122.70
31	DA	728	G	N1-C6-O6	5.50	123.20	119.90
31	DA	1529	G	C8-N9-C1'	-5.50	119.85	127.00
32	DB	5	C	C6-N1-C2	5.50	122.50	120.30
31	BA	2334	G	N1-C2-N2	-5.50	111.25	116.20
31	DA	1489	U	C5-C4-O4	5.50	129.20	125.90
31	BA	857	C	C5-C6-N1	5.50	123.75	121.00
31	BA	2257	U	N3-C2-O2	5.50	126.05	122.20
31	DA	115	C	C6-N1-C2	5.50	122.50	120.30
31	DA	733	G	C4-C5-N7	5.50	113.00	110.80
31	DA	1978	A	C8-N9-C4	5.50	108.00	105.80
31	DA	2711	A	C8-N9-C4	5.50	108.00	105.80
31	BA	1786	A	N1-C2-N3	5.50	132.05	129.30
31	BA	265	A	C8-N9-C4	-5.49	103.60	105.80
31	BA	2487	G	N1-C6-O6	5.49	123.20	119.90
31	BA	2553	G	C8-N9-C1'	-5.49	119.86	127.00
31	DA	2598	A	C8-N9-C4	5.49	108.00	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	795	C	N1-C2-O2	5.49	122.19	118.90
31	BA	958	U	C2-N1-C1'	5.49	124.29	117.70
31	DA	1813	G	C8-N9-C4	5.49	108.60	106.40
31	BA	141	A	C8-N9-C4	-5.49	103.60	105.80
31	BA	2601	C	N1-C2-O2	-5.49	115.61	118.90
31	DA	1397	U	N3-C2-O2	-5.49	118.36	122.20
31	BA	752	A	C4-C5-C6	5.48	119.74	117.00
41	BP	52	GLU	N-CA-C	5.48	125.80	111.00
31	DA	2022	U	N3-C2-O2	5.48	126.04	122.20
31	DA	179	G	N1-C6-O6	5.48	123.19	119.90
31	BA	2715	C	C6-N1-C2	5.48	122.49	120.30
31	DA	925	C	N1-C2-O2	-5.48	115.61	118.90
32	DB	99	G	N9-C4-C5	-5.48	103.21	105.40
31	BA	2258	C	C2-N3-C4	-5.47	117.16	119.90
31	BA	2504	U	C5-C6-N1	-5.47	119.96	122.70
31	DA	1300	U	N1-C1'-C2'	5.47	121.11	114.00
31	DA	1600	C	C2-N3-C4	-5.47	117.16	119.90
31	BA	498	G	C2-N3-C4	5.47	114.64	111.90
31	DA	2464	C	C6-N1-C1'	-5.47	114.24	120.80
31	DA	2542	A	C5-N7-C8	-5.47	101.17	103.90
31	BA	113	G	C5-C6-O6	-5.47	125.32	128.60
31	BA	38	A	C6-N1-C2	-5.47	115.32	118.60
31	BA	328	U	C5-C6-N1	-5.47	119.97	122.70
31	BA	1942	C	N3-C2-O2	5.46	125.73	121.90
31	BA	2257	U	N1-C2-O2	-5.46	118.97	122.80
31	DA	141	A	C8-N9-C4	-5.46	103.61	105.80
31	DA	2416	C	C6-N1-C2	5.46	122.49	120.30
31	BA	859	G	N3-C4-C5	5.46	131.33	128.60
1	AA	1524	C	N1-C2-O2	-5.46	115.62	118.90
31	BA	838	C	C2-N3-C4	-5.46	117.17	119.90
31	BA	945	A	C6-N1-C2	-5.46	115.32	118.60
31	BA	1662	C	C5-C6-N1	-5.46	118.27	121.00
31	BA	1698	A	C3'-C2'-C1'	-5.46	97.13	101.50
31	BA	856	C	C5-C6-N1	5.46	123.73	121.00
49	DX	57	LEU	CA-CB-CG	5.46	127.86	115.30
31	BA	2362	G	C8-N9-C4	5.46	108.58	106.40
31	BA	2392	A	N7-C8-N9	5.46	116.53	113.80
31	BA	2606	C	C5-C6-N1	-5.46	118.27	121.00
31	DA	988	A	N1-C6-N6	5.46	121.87	118.60
31	DA	2056	G	C4-C5-N7	5.46	112.98	110.80
31	DA	2617	C	C6-N1-C2	5.46	122.48	120.30
31	BA	1196	C	C6-N1-C2	5.45	122.48	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	1210	A	C5-N7-C8	-5.45	101.17	103.90
31	BA	949	C	C5-C6-N1	-5.45	118.27	121.00
31	BA	1204	A	C3'-C2'-C1'	-5.45	97.14	101.50
31	DA	820	A	N1-C6-N6	-5.45	115.33	118.60
31	DA	2422	A	C2-N3-C4	-5.45	107.87	110.60
1	CA	123	C	C5-C6-N1	-5.45	118.28	121.00
31	DA	2040	C	N3-C4-C5	5.45	124.08	121.90
31	BA	2293	C	C6-N1-C2	5.45	122.48	120.30
31	BA	2346	A	C4-C5-C6	5.45	119.72	117.00
31	DA	460	A	C8-N9-C4	5.45	107.98	105.80
31	DA	773	U	C2-N3-C4	-5.45	123.73	127.00
31	DA	1167	U	C6-N1-C2	5.45	124.27	121.00
31	DA	1485	G	N3-C4-C5	-5.45	125.88	128.60
31	DA	2014	A	C8-N9-C4	5.45	107.98	105.80
1	CA	266	G	C4-C5-N7	5.45	112.98	110.80
31	DA	682	G	C8-N9-C1'	-5.45	119.92	127.00
31	DA	786	C	C6-N1-C2	5.45	122.48	120.30
31	DA	1294	U	C2-N3-C4	-5.45	123.73	127.00
31	BA	2260	C	C5-C6-N1	-5.44	118.28	121.00
39	BN	120	LEU	CA-CB-CG	5.44	127.82	115.30
31	DA	1767	C	C2-N3-C4	-5.44	117.18	119.90
31	BA	1529	G	C8-N9-C1'	-5.44	119.93	127.00
31	BA	2438	U	N3-C4-O4	-5.44	115.59	119.40
31	DA	2439	A	N1-C6-N6	5.44	121.86	118.60
31	DA	2514	U	C6-N1-C2	5.44	124.26	121.00
31	BA	1241	A	N3-C4-C5	5.44	130.60	126.80
31	BA	543	C	C6-N1-C2	5.43	122.47	120.30
31	BA	1983	C	N1-C2-O2	-5.43	115.64	118.90
31	DA	2240	C	C5-C4-N4	-5.43	116.40	120.20
31	BA	1403	C	N1-C2-N3	5.43	123.00	119.20
31	BA	1319	G	N3-C4-N9	5.43	129.26	126.00
31	DA	1319	G	C4-N9-C1'	5.43	133.56	126.50
31	DA	2477	C	C4-C5-C6	5.42	120.11	117.40
31	DA	699	A	N7-C8-N9	-5.42	111.09	113.80
31	DA	1236	G	C8-N9-C4	5.42	108.57	106.40
1	CA	549	C	N1-C2-O2	-5.42	115.65	118.90
31	DA	1771	C	C5-C6-N1	-5.42	118.29	121.00
31	BA	686	G	N1-C6-O6	5.42	123.15	119.90
31	BA	2392	A	C4-C5-N7	5.42	113.41	110.70
45	BT	80	SER	N-CA-C	5.42	125.62	111.00
31	BA	2662	A	N9-C1'-C2'	5.42	121.04	114.00
31	BA	133	C	N1-C2-O2	-5.41	115.65	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	1204	A	N3-C4-C5	5.41	130.59	126.80
31	DA	1638	C	C5-C6-N1	-5.41	118.29	121.00
31	DA	2375	G	C8-N9-C4	5.41	108.57	106.40
31	BA	1485	G	N3-C4-C5	-5.41	125.89	128.60
31	BA	1834	U	N3-C2-O2	-5.41	118.41	122.20
31	BA	2031	A	N9-C4-C5	5.41	107.96	105.80
31	BA	751	A	N9-C4-C5	5.41	107.96	105.80
31	BA	763	G	N1-C2-N3	5.41	127.14	123.90
31	BA	1204	A	N3-C4-C5	5.41	130.58	126.80
31	BA	1799	G	N3-C2-N2	5.41	123.68	119.90
1	AA	1401	G	N1-C6-O6	5.40	123.14	119.90
31	BA	330	A	C5-C6-N1	-5.40	115.00	117.70
31	BA	669	G	C1'-O4'-C4'	-5.40	105.58	109.90
32	BB	99	G	C8-N9-C1'	-5.40	119.97	127.00
31	DA	507	A	N9-C4-C5	-5.40	103.64	105.80
31	DA	671	C	N3-C4-C5	-5.40	119.74	121.90
31	DA	1243	G	C4-C5-N7	-5.40	108.64	110.80
31	BA	208	C	C6-N1-C2	5.40	122.46	120.30
31	DA	1261	C	N3-C2-O2	5.40	125.68	121.90
31	BA	1558	A	C5-C6-N1	-5.40	115.00	117.70
31	BA	2475	C	C6-N1-C1'	-5.40	114.32	120.80
31	DA	2601	C	N1-C2-O2	-5.40	115.66	118.90
31	BA	912	C	C6-N1-C2	-5.40	118.14	120.30
31	BA	928	G	C6-C5-N7	-5.40	127.16	130.40
31	BA	958	U	C3'-C2'-C1'	5.39	105.82	101.50
31	DA	1021	A	C4-C5-N7	5.39	113.40	110.70
31	DA	1496	A	C8-N9-C4	-5.39	103.64	105.80
1	AA	245	C	C6-N1-C2	5.39	122.46	120.30
31	BA	928	G	N1-C6-O6	5.39	123.14	119.90
31	BA	2544	G	C4-C5-C6	5.39	122.04	118.80
31	BA	2784	C	N3-C4-C5	5.39	124.06	121.90
31	DA	2007	C	N1-C2-O2	-5.39	115.66	118.90
31	DA	2293	C	N3-C4-C5	5.39	124.06	121.90
31	BA	377	C	C5-C6-N1	-5.39	118.31	121.00
31	BA	1900	A	N1-C6-N6	-5.39	115.37	118.60
31	DA	2032	G	N1-C6-O6	5.39	123.13	119.90
32	BB	87	G	C8-N9-C4	5.39	108.56	106.40
31	DA	1239	G	N3-C4-C5	5.39	131.29	128.60
31	BA	2544	G	C5-C6-O6	-5.39	125.37	128.60
31	DA	801	G	C8-N9-C4	5.39	108.56	106.40
31	DA	1616	A	C2-N3-C4	-5.39	107.91	110.60
31	BA	2253	G	C4-C5-N7	5.38	112.95	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	272(D)	G	C5-C6-O6	-5.38	125.37	128.60
31	BA	2477	C	N3-C2-O2	-5.38	118.14	121.90
31	DA	246	C	N1-C2-O2	-5.38	115.67	118.90
31	BA	592	G	C8-N9-C4	-5.38	104.25	106.40
31	BA	1574	C	C5-C6-N1	-5.38	118.31	121.00
31	DA	680	G	N3-C2-N2	-5.38	116.14	119.90
31	DA	1021	A	C5-C6-N1	-5.38	115.01	117.70
31	DA	1960	A	C8-N9-C4	5.38	107.95	105.80
31	DA	932	G	C8-N9-C1'	5.38	133.99	127.00
31	BA	272(D)	G	C8-N9-C4	5.37	108.55	106.40
31	DA	32	C	C6-N1-C1'	5.37	127.25	120.80
31	DA	751	A	N9-C4-C5	5.37	107.95	105.80
31	DA	1698	A	C1'-O4'-C4'	-5.37	105.60	109.90
31	DA	944	G	C8-N9-C1'	-5.37	120.02	127.00
31	DA	265	A	C2-N3-C4	-5.37	107.92	110.60
31	DA	794	G	C5-N7-C8	5.37	106.98	104.30
31	DA	1210	A	C5-C6-N6	-5.37	119.41	123.70
31	BA	190	A	N9-C4-C5	-5.37	103.65	105.80
31	DA	208	C	C5-C6-N1	-5.37	118.32	121.00
31	DA	1428	C	C6-N1-C2	5.36	122.44	120.30
31	DA	2651	C	C6-N1-C2	5.36	122.44	120.30
31	BA	559	G	C5-C6-O6	-5.36	125.38	128.60
31	BA	69	C	C6-N1-C2	5.36	122.44	120.30
31	BA	1602	U	N3-C4-C5	-5.36	111.38	114.60
31	DA	1049	C	C5-C6-N1	5.36	123.68	121.00
31	DA	1270	C	N1-C2-O2	-5.36	115.68	118.90
31	DA	2713	A	N7-C8-N9	5.36	116.48	113.80
31	BA	1142(A)	A	N3-C4-C5	5.36	130.55	126.80
31	DA	958	U	C3'-C2'-C1'	5.36	105.79	101.50
31	DA	2442	C	C2-N3-C4	-5.36	117.22	119.90
31	BA	543	C	N1-C2-N3	-5.36	115.45	119.20
31	BA	1570	A	N1-C6-N6	5.36	121.81	118.60
31	BA	2346	A	C4-C5-N7	5.36	113.38	110.70
32	BB	12	C	N3-C2-O2	-5.35	118.15	121.90
31	DA	1685	C	C6-N1-C2	5.35	122.44	120.30
31	BA	2702	U	N3-C2-O2	-5.35	118.45	122.20
31	DA	721	C	C6-N1-C2	5.35	122.44	120.30
31	DA	1509	C	C6-N1-C2	-5.35	118.16	120.30
31	DA	2480	C	C6-N1-C2	5.35	122.44	120.30
31	BA	682	G	N9-C4-C5	-5.35	103.26	105.40
31	BA	2700	C	C6-N1-C2	5.35	122.44	120.30
31	BA	1655	A	C8-N9-C4	5.35	107.94	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	1839	G	C8-N9-C4	5.35	108.54	106.40
31	DA	2432	A	C5-C6-N6	-5.35	119.42	123.70
31	DA	2607	G	C6-C5-N7	-5.35	127.19	130.40
31	BA	594	U	N1-C2-N3	5.34	118.11	114.90
31	BA	1227	G	N1-C6-O6	5.34	123.11	119.90
31	BA	1967	C	N1-C2-O2	-5.34	115.69	118.90
31	BA	2320	A	C8-N9-C4	-5.34	103.66	105.80
31	DA	1508	A	C3'-C2'-C1'	5.34	105.77	101.50
23	B1	8	SER	N-CA-C	-5.34	96.58	111.00
31	BA	1830	C	C6-N1-C2	5.34	122.44	120.30
31	BA	1936	A	N1-C6-N6	5.34	121.81	118.60
31	BA	2226	C	C5-C6-N1	-5.34	118.33	121.00
31	DA	247	G	C8-N9-C4	5.34	108.54	106.40
31	BA	2077	A	C5-C6-N1	5.34	120.37	117.70
31	DA	2617	C	C5-C6-N1	-5.34	118.33	121.00
31	BA	1215	G	C8-N9-C4	5.34	108.53	106.40
31	DA	210	C	C2-N3-C4	-5.34	117.23	119.90
31	BA	1495	A	C4-C5-N7	5.34	113.37	110.70
31	DA	874	G	C8-N9-C4	5.34	108.53	106.40
31	DA	1278	A	N7-C8-N9	-5.34	111.13	113.80
31	DA	2240	C	N3-C4-C5	5.34	124.03	121.90
31	DA	789	A	N1-C6-N6	-5.33	115.40	118.60
31	BA	2568	C	N3-C2-O2	5.33	125.63	121.90
31	DA	1241	A	N3-C4-C5	5.33	130.53	126.80
31	BA	1138	G	C5-C6-O6	-5.33	125.40	128.60
31	BA	1142(A)	A	N3-C4-N9	-5.33	123.13	127.40
31	BA	1967	C	C2-N3-C4	-5.33	117.23	119.90
31	BA	1370	C	C6-N1-C2	5.33	122.43	120.30
31	BA	2487	G	C6-C5-N7	-5.33	127.20	130.40
31	DA	800	A	C2-N3-C4	-5.33	107.94	110.60
31	DA	949	C	N3-C4-C5	5.33	124.03	121.90
31	DA	2440	C	C5-C6-N1	-5.33	118.34	121.00
31	DA	2443	C	N1-C2-O2	-5.33	115.70	118.90
32	BB	85	G	C5-C6-O6	-5.33	125.40	128.60
31	BA	1142(A)	A	C6-C5-N7	-5.33	128.57	132.30
31	BA	2044	C	C5-C4-N4	-5.33	116.47	120.20
31	BA	2329	G	N3-C4-C5	5.33	131.26	128.60
1	CA	1469	G	C5-C6-O6	-5.33	125.40	128.60
31	DA	2247	A	C2-N3-C4	-5.33	107.94	110.60
31	DA	1450(A)	C	C6-N1-C2	5.32	122.43	120.30
31	DA	1959	G	C8-N9-C4	-5.32	104.27	106.40
31	DA	2318	G	C8-N9-C4	-5.32	104.27	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	494	G	C5-C6-O6	-5.32	125.41	128.60
31	DA	1616	A	C6-C5-N7	-5.32	128.57	132.30
31	DA	2016	U	C4-C5-C6	5.32	122.89	119.70
1	AA	1512	U	C5-C6-N1	-5.32	120.04	122.70
31	BA	517	C	N1-C2-O2	-5.32	115.71	118.90
31	BA	1698	A	C5-C6-N6	-5.32	119.45	123.70
31	BA	2539	C	C2-N3-C4	-5.32	117.24	119.90
31	DA	2512	C	C6-N1-C2	5.32	122.43	120.30
31	DA	2662	A	N9-C1'-C2'	5.32	120.91	114.00
31	BA	774	A	N3-C4-C5	5.32	130.52	126.80
31	BA	1217	C	C6-N1-C2	5.32	122.43	120.30
31	BA	449	A	N1-C6-N6	5.31	121.79	118.60
31	DA	1241	A	N1-C6-N6	5.31	121.79	118.60
31	BA	2606	C	C2-N1-C1'	-5.31	112.95	118.80
31	DA	834	C	C6-N1-C2	5.31	122.42	120.30
31	DA	1135	C	C6-N1-C2	5.31	122.42	120.30
31	DA	568	U	C5-C4-O4	5.31	129.09	125.90
31	BA	671	C	N1-C2-O2	-5.31	115.72	118.90
31	BA	1662	C	N3-C4-C5	5.31	124.02	121.90
31	DA	2073	C	C6-N1-C2	5.31	122.42	120.30
31	BA	1353	A	N7-C8-N9	5.30	116.45	113.80
31	BA	1820	U	C6-N1-C2	5.30	124.18	121.00
1	CA	917	G	N7-C8-N9	5.30	115.75	113.10
1	CA	877	C	C6-N1-C2	5.30	122.42	120.30
31	DA	676	A	C5-C6-N6	-5.30	119.46	123.70
31	BA	30	G	N1-C2-N3	5.30	127.08	123.90
1	CA	889	A	C8-N9-C4	5.30	107.92	105.80
31	DA	57	C	N3-C4-C5	5.30	124.02	121.90
31	DA	693	C	C2-N3-C4	-5.30	117.25	119.90
31	DA	2287	A	N1-C2-N3	5.30	131.95	129.30
48	DW	65	LEU	CA-CB-CG	5.30	127.49	115.30
31	BA	250	G	N3-C4-C5	-5.30	125.95	128.60
42	BQ	62	GLY	N-CA-C	5.30	126.35	113.10
31	DA	2394	C	N3-C4-C5	5.30	124.02	121.90
31	DA	543	C	C6-N1-C1'	-5.30	114.44	120.80
31	BA	2469	A	N1-C2-N3	5.29	131.95	129.30
31	BA	2638	G	C8-N9-C4	-5.29	104.28	106.40
31	BA	129	C	N3-C4-N4	5.29	121.71	118.00
31	BA	2421	G	N1-C6-O6	5.29	123.08	119.90
41	BP	60	MET	CG-SD-CE	5.29	108.67	100.20
31	BA	191	A	C4-C5-N7	-5.29	108.05	110.70
31	BA	678	C	N1-C2-O2	-5.29	115.72	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	749	C	C6-N1-C2	5.29	122.42	120.30
31	BA	2726	U	N3-C4-O4	-5.29	115.70	119.40
31	BA	2843	G	N1-C6-O6	5.29	123.08	119.90
32	BB	81	G	N7-C8-N9	5.29	115.75	113.10
31	DA	2014	A	N9-C4-C5	-5.29	103.68	105.80
31	DA	2226	C	C6-N1-C2	5.29	122.42	120.30
31	DA	2501	C	C6-N1-C2	5.29	122.42	120.30
31	BA	975	C	C5-C4-N4	5.29	123.90	120.20
31	BA	1266	G	C8-N9-C4	5.29	108.52	106.40
31	DA	1694	C	C1'-O4'-C4'	-5.29	105.67	109.90
31	BA	1475	G	C4-N9-C1'	5.28	133.37	126.50
31	BA	2395	C	C5-C4-N4	-5.28	116.50	120.20
31	DA	688	U	N1-C2-O2	-5.28	119.10	122.80
31	DA	768	G	N3-C2-N2	-5.28	116.20	119.90
31	DA	1021	A	N7-C8-N9	5.28	116.44	113.80
41	BP	59	LEU	CA-CB-CG	5.28	127.45	115.30
31	DA	377	C	C5-C6-N1	-5.28	118.36	121.00
31	DA	419	C	C6-N1-C2	5.28	122.41	120.30
31	BA	2618	G	C8-N9-C4	-5.28	104.29	106.40
31	BA	529	A	C5-N7-C8	-5.28	101.26	103.90
31	BA	1304	C	C6-N1-C2	5.28	122.41	120.30
31	DA	142	A	C6-C5-N7	-5.28	128.61	132.30
31	DA	243	U	C2-N1-C1'	5.28	124.03	117.70
31	DA	2232	U	C5-C6-N1	-5.28	120.06	122.70
1	AA	117	G	C6-C5-N7	-5.28	127.23	130.40
31	BA	47	C	C5-C6-N1	-5.28	118.36	121.00
31	BA	1941	C	C2-N1-C1'	5.28	124.60	118.80
31	DA	132	G	C5-C6-N1	-5.28	108.86	111.50
31	DA	567	A	N1-C6-N6	5.27	121.76	118.60
31	DA	1814	G	C4-C5-C6	5.27	121.96	118.80
31	BA	2569	G	N1-C6-O6	5.27	123.06	119.90
31	DA	1972	A	N1-C6-N6	5.27	121.76	118.60
31	BA	1012	U	N3-C2-O2	-5.27	118.51	122.20
31	BA	1280	G	N1-C2-N3	5.27	127.06	123.90
41	BP	58	THR	N-CA-C	-5.27	96.77	111.00
31	BA	197	A	N1-C6-N6	5.27	121.76	118.60
31	BA	2253	G	C6-C5-N7	-5.27	127.24	130.40
31	DA	1792	G	C8-N9-C4	5.27	108.51	106.40
31	BA	1613	G	N9-C4-C5	-5.27	103.29	105.40
31	BA	1694	C	C4-C5-C6	-5.27	114.77	117.40
31	BA	123	G	C8-N9-C4	5.26	108.51	106.40
31	BA	2240	C	C5-C4-N4	-5.26	116.52	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	2245	U	C4-C5-C6	5.26	122.86	119.70
31	DA	1794	U	C2-N3-C4	-5.26	123.84	127.00
31	DA	2520	C	C5-C6-N1	-5.26	118.37	121.00
31	BA	2073	C	C6-N1-C2	5.26	122.41	120.30
31	DA	2284	C	C2-N3-C4	-5.26	117.27	119.90
31	BA	543	C	C6-N1-C1'	-5.26	114.49	120.80
31	BA	1543	C	C5-C4-N4	-5.26	116.52	120.20
31	BA	1819	A	N1-C2-N3	5.26	131.93	129.30
31	BA	2190	G	C8-N9-C1'	-5.26	120.16	127.00
31	DA	1022	G	N3-C2-N2	-5.26	116.22	119.90
31	DA	2547	U	C6-N1-C2	5.26	124.16	121.00
31	DA	2713	A	C6-C5-N7	-5.26	128.62	132.30
31	BA	947	G	N1-C6-O6	5.26	123.05	119.90
31	DA	1319	G	C8-N9-C1'	-5.26	120.17	127.00
31	DA	2495	G	N3-C4-C5	5.26	131.23	128.60
32	DB	105	A	C8-N9-C4	5.26	107.90	105.80
31	DA	2827	C	C2-N3-C4	-5.25	117.27	119.90
27	D5	51	TYR	CA-CB-CG	5.25	123.38	113.40
31	DA	1201	C	C2-N3-C4	-5.25	117.27	119.90
31	DA	1698	A	O4'-C1'-N9	5.25	112.40	108.20
31	DA	1786	A	N1-C2-N3	5.25	131.93	129.30
31	BA	579	G	C5-C6-N1	-5.25	108.88	111.50
31	DA	530	G	C8-N9-C1'	5.25	133.82	127.00
31	DA	694	U	N3-C2-O2	-5.25	118.53	122.20
31	DA	825	C	C2-N3-C4	-5.25	117.28	119.90
31	DA	2443	C	C2-N3-C4	-5.25	117.28	119.90
31	DA	2260	C	C4-C5-C6	5.25	120.02	117.40
31	BA	210	C	C5-C6-N1	-5.24	118.38	121.00
31	DA	192	C	C5-C6-N1	-5.24	118.38	121.00
31	BA	1496	A	C4-N9-C1'	5.24	135.73	126.30
31	BA	1508	A	C3'-C2'-C1'	5.24	105.69	101.50
31	DA	1256	G	C8-N9-C1'	-5.24	120.19	127.00
31	DA	2389	G	N1-C6-O6	5.24	123.05	119.90
31	DA	1142(A)	A	C5-C6-N1	-5.24	115.08	117.70
32	BB	101	G	N7-C8-N9	-5.24	110.48	113.10
31	BA	1616	A	C2-N3-C4	-5.24	107.98	110.60
31	BA	2319	G	C8-N9-C4	-5.24	104.31	106.40
31	BA	2741	A	C8-N9-C4	5.24	107.89	105.80
31	DA	1616	A	N1-C6-N6	5.24	121.74	118.60
31	DA	2033	A	C5-C6-N1	5.24	120.32	117.70
31	DA	2448	A	C6-N1-C2	-5.23	115.46	118.60
31	DA	2774	C	N3-C4-C5	5.23	123.99	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	195	A	C2-N3-C4	-5.23	107.98	110.60
31	DA	1260	G	N7-C8-N9	-5.23	110.48	113.10
31	DA	196	A	N1-C6-N6	5.23	121.74	118.60
31	DA	729	G	C5-C6-O6	-5.23	125.46	128.60
31	DA	783	A	N3-C4-C5	5.23	130.46	126.80
31	BA	528	A	C4-C5-N7	5.23	113.31	110.70
31	BA	2756	U	N3-C2-O2	-5.23	118.54	122.20
31	BA	1653	G	P-O3'-C3'	5.23	125.97	119.70
31	BA	330	A	N3-C4-N9	-5.23	123.22	127.40
31	DA	1573	G	C2-N3-C4	-5.23	109.29	111.90
41	DP	59	LEU	CA-CB-CG	5.23	127.32	115.30
31	BA	1937	A	N1-C2-N3	5.22	131.91	129.30
31	BA	2374	C	C5-C6-N1	-5.22	118.39	121.00
31	DA	2475	C	N1-C2-O2	5.22	122.03	118.90
41	DP	53	GLY	N-CA-C	-5.22	100.04	113.10
31	DA	2533	A	C8-N9-C4	5.22	107.89	105.80
31	BA	2505	G	C5-C6-N1	-5.22	108.89	111.50
31	DA	210	C	N3-C2-O2	5.22	125.55	121.90
31	DA	794	G	N7-C8-N9	-5.22	110.49	113.10
31	DA	949	C	N3-C2-O2	5.22	125.56	121.90
31	DA	2065	C	C5-C6-N1	-5.22	118.39	121.00
31	BA	1256	G	C4-N9-C1'	5.22	133.29	126.50
1	CA	733	A	N1-C6-N6	5.22	121.73	118.60
31	DA	856	C	C5-C6-N1	5.22	123.61	121.00
31	DA	1284	A	N1-C6-N6	5.22	121.73	118.60
31	DA	1207	C	N1-C2-O2	-5.22	115.77	118.90
31	BA	1543	C	N3-C4-C5	-5.22	119.81	121.90
31	BA	2061	G	C5-C6-N1	5.22	114.11	111.50
31	BA	2261	C	N3-C4-C5	-5.22	119.81	121.90
31	DA	2493	U	C5-C6-N1	-5.22	120.09	122.70
31	BA	2226	C	N3-C4-C5	5.21	123.99	121.90
31	DA	807	U	N1-C2-O2	-5.21	119.15	122.80
31	BA	731	C	N3-C2-O2	5.21	125.55	121.90
31	BA	332	A	N1-C2-N3	5.21	131.91	129.30
31	BA	2466	C	N3-C2-O2	5.21	125.55	121.90
31	BA	2712	U	N3-C4-O4	-5.21	115.75	119.40
1	CA	1469	G	N1-C6-O6	5.21	123.03	119.90
31	DA	2048	G	N7-C8-N9	5.21	115.70	113.10
31	BA	397	G	N1-C6-O6	5.21	123.03	119.90
31	BA	2346	A	N1-C2-N3	5.21	131.90	129.30
31	DA	2330	G	N7-C8-N9	-5.21	110.50	113.10
45	DT	80	SER	N-CA-C	5.21	125.06	111.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	2208	A	N1-C6-N6	5.21	121.72	118.60
31	BA	2701	C	N3-C2-O2	-5.21	118.26	121.90
31	DA	1259	G	N7-C8-N9	-5.21	110.50	113.10
31	DA	2010	G	N1-C6-O6	5.21	123.02	119.90
31	BA	1496	A	C5-C6-N6	-5.21	119.54	123.70
1	CA	770	C	C5-C6-N1	-5.21	118.40	121.00
31	BA	2232	U	C5-C6-N1	-5.20	120.10	122.70
31	DA	2253	G	C4-C5-N7	5.20	112.88	110.80
32	DB	115	G	N7-C8-N9	-5.20	110.50	113.10
31	BA	2618	G	N3-C4-C5	-5.20	126.00	128.60
31	BA	1317	A	C6-N1-C2	-5.20	115.48	118.60
31	BA	1528	A	C2-N3-C4	-5.20	108.00	110.60
31	BA	2578	G	C5-C6-O6	-5.20	125.48	128.60
32	BB	21	G	C5-C6-O6	-5.20	125.48	128.60
31	DA	2010	G	N3-C2-N2	-5.20	116.26	119.90
31	DA	2455	G	N1-C6-O6	5.20	123.02	119.90
31	BA	243	U	C2-N1-C1'	5.20	123.94	117.70
31	DA	2442	C	C4-C5-C6	5.20	120.00	117.40
31	DA	2419	U	C5-C6-N1	-5.20	120.10	122.70
31	BA	774	A	C5-C6-N1	-5.20	115.10	117.70
31	BA	793	A	N1-C6-N6	5.20	121.72	118.60
31	DA	148	C	C5-C6-N1	-5.20	118.40	121.00
31	DA	559	G	N1-C6-O6	5.20	123.02	119.90
32	DB	81	G	N7-C8-N9	5.20	115.70	113.10
31	DA	786	C	C2-N3-C4	-5.19	117.30	119.90
31	BA	1653	G	C8-N9-C4	-5.19	104.32	106.40
31	BA	1694	C	C1'-O4'-C4'	-5.19	105.75	109.90
31	BA	2723	C	C6-N1-C2	5.19	122.38	120.30
31	DA	661	C	N1-C2-O2	-5.19	115.78	118.90
31	DA	1674	G	C4-N9-C1'	5.19	133.25	126.50
1	CA	308	C	C6-N1-C2	5.19	122.38	120.30
31	BA	730	C	N3-C4-C5	5.19	123.97	121.90
31	BA	967	C	C6-N1-C2	5.19	122.38	120.30
31	BA	1992	G	N1-C6-O6	-5.19	116.79	119.90
31	DA	577	G	C8-N9-C4	5.19	108.47	106.40
31	DA	1258	C	C5-C6-N1	-5.19	118.41	121.00
41	DP	116	GLY	N-CA-C	5.19	126.07	113.10
31	BA	375	C	C5-C6-N1	-5.19	118.41	121.00
31	DA	948	G	N1-C6-O6	5.19	123.01	119.90
31	BA	682	G	C8-N9-C1'	-5.18	120.26	127.00
31	BA	932	G	C6-C5-N7	5.18	133.51	130.40
1	AA	7	G	C8-N9-C1'	5.18	133.74	127.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	599	G	C8-N9-C4	5.18	108.47	106.40
1	AA	55	A	C8-N9-C4	-5.18	103.73	105.80
31	DA	686	G	C8-N9-C4	5.18	108.47	106.40
31	BA	2607	G	N3-C4-N9	5.18	129.11	126.00
31	BA	71	A	C8-N9-C4	-5.17	103.73	105.80
31	DA	81	G	C5-C6-O6	-5.17	125.50	128.60
31	DA	1782	C	C5-C4-N4	-5.17	116.58	120.20
31	BA	2889	C	N3-C2-O2	5.17	125.52	121.90
1	CA	1442	G	N1-C6-O6	5.17	123.00	119.90
31	DA	742	G	N1-C6-O6	5.17	123.00	119.90
31	DA	2022	U	N3-C4-O4	5.17	123.02	119.40
31	BA	468	G	C8-N9-C4	5.17	108.47	106.40
48	BW	65	LEU	CA-CB-CG	5.17	127.19	115.30
31	BA	569	U	N1-C2-O2	-5.17	119.18	122.80
31	DA	934	G	C8-N9-C4	5.17	108.47	106.40
31	DA	1123	C	N1-C2-O2	-5.17	115.80	118.90
31	BA	1758	G	C8-N9-C4	-5.17	104.33	106.40
31	DA	2202	C	C6-N1-C2	5.17	122.37	120.30
31	DA	2716	U	C5-C6-N1	-5.17	120.12	122.70
1	AA	991	U	C3'-C2'-C1'	5.16	105.63	101.50
31	BA	139(A)	G	C4-N9-C1'	5.16	133.21	126.50
31	BA	236	C	C5-C6-N1	-5.16	118.42	121.00
31	BA	1328	G	C8-N9-C1'	-5.16	120.29	127.00
31	DA	1123	C	N3-C4-C5	5.16	123.97	121.90
31	DA	1319	G	N3-C4-N9	5.16	129.10	126.00
31	BA	1317	A	C5-C6-N1	5.16	120.28	117.70
31	BA	132	G	C5-C6-N1	-5.16	108.92	111.50
31	BA	897	C	C6-N1-C2	-5.16	118.24	120.30
31	BA	2394	C	N3-C4-C5	5.16	123.96	121.90
31	DA	2050	C	C5-C6-N1	-5.16	118.42	121.00
31	BA	133	C	C6-N1-C2	5.16	122.36	120.30
31	BA	1653	G	N3-C4-N9	5.16	129.09	126.00
31	DA	751	A	N1-C6-N6	-5.16	115.51	118.60
31	BA	2010	G	N7-C8-N9	5.16	115.68	113.10
31	BA	2056	G	C4-C5-N7	5.16	112.86	110.80
32	BB	104	U	C5-C6-N1	-5.16	120.12	122.70
31	DA	1192	G	C8-N9-C4	5.16	108.46	106.40
31	BA	936	C	N1-C2-O2	-5.15	115.81	118.90
31	BA	1782	C	N3-C4-N4	5.15	121.61	118.00
31	BA	2334	G	N3-C2-N2	5.15	123.51	119.90
31	BA	2441	C	C2-N3-C4	-5.15	117.32	119.90
1	CA	245	C	N3-C4-C5	5.15	123.96	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	1333	C	C6-N1-C2	5.15	122.36	120.30
32	DB	81	G	C4-N9-C1'	5.15	133.20	126.50
31	BA	376	C	C6-N1-C2	5.15	122.36	120.30
31	BA	2449	U	C5-C4-O4	-5.15	122.81	125.90
31	DA	2385	C	C5-C4-N4	-5.15	116.59	120.20
31	DA	207	A	C8-N9-C4	5.15	107.86	105.80
31	BA	226	G	C6-C5-N7	-5.15	127.31	130.40
31	BA	2569	G	C8-N9-C4	5.15	108.46	106.40
31	DA	1304	C	N3-C4-C5	5.15	123.96	121.90
31	DA	2712	U	C5-C6-N1	-5.15	120.13	122.70
31	BA	1378	A	N1-C6-N6	-5.14	115.51	118.60
31	BA	1657	C	C2-N3-C4	-5.14	117.33	119.90
1	CA	542	G	N1-C6-O6	5.14	122.99	119.90
31	DA	543	C	N3-C4-N4	5.14	121.60	118.00
31	DA	2501	C	C2-N3-C4	-5.14	117.33	119.90
31	BA	376	C	C6-N1-C1'	5.14	126.97	120.80
31	BA	800	A	C5-C6-N6	5.14	127.81	123.70
31	DA	975(A)	G	C8-N9-C4	5.14	108.46	106.40
31	DA	2466	C	N1-C2-O2	-5.14	115.81	118.90
31	DA	2514	U	C5-C6-N1	-5.14	120.13	122.70
31	DA	2607	G	C5-C6-N1	-5.14	108.93	111.50
31	BA	205	G	N9-C4-C5	-5.14	103.34	105.40
31	BA	473	G	C5-C6-O6	5.14	131.68	128.60
31	BA	543	C	N3-C4-N4	5.14	121.60	118.00
31	DA	2028	U	N3-C4-C5	-5.14	111.52	114.60
1	AA	107	G	C8-N9-C4	5.14	108.46	106.40
31	BA	774	A	C3'-C2'-C1'	5.14	105.61	101.50
31	BA	932	G	C8-N9-C1'	5.14	133.68	127.00
31	BA	2726	U	C5-C6-N1	-5.14	120.13	122.70
51	BZ	86	VAL	CB-CA-C	-5.14	101.63	111.40
31	DA	1022	G	N3-C4-C5	-5.14	126.03	128.60
31	DA	1167	U	C5-C6-N1	-5.14	120.13	122.70
31	DA	2044	C	C5-C4-N4	-5.14	116.60	120.20
23	D1	55	GLY	N-CA-C	-5.14	100.26	113.10
31	BA	71	A	N1-C6-N6	5.14	121.68	118.60
31	BA	378	C	N3-C4-C5	5.14	123.95	121.90
31	BA	2346	A	C5-N7-C8	-5.14	101.33	103.90
1	CA	783	C	C6-N1-C2	5.14	122.35	120.30
31	DA	14	A	C6-C5-N7	-5.14	128.71	132.30
31	BA	1208	C	C6-N1-C2	-5.13	118.25	120.30
31	DA	1633	G	N1-C6-O6	5.13	122.98	119.90
31	DA	2393	A	N9-C4-C5	5.13	107.85	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	1311	G	C5-C6-O6	5.13	131.68	128.60
31	DA	1006	C	C6-N1-C2	5.13	122.35	120.30
31	BA	1639	U	N1-C2-O2	5.13	126.39	122.80
31	DA	473	G	N1-C6-O6	-5.13	116.82	119.90
31	DA	2389	G	C5-C6-O6	-5.13	125.52	128.60
31	BA	2329	G	N7-C8-N9	-5.13	110.53	113.10
31	BA	2590	A	N3-C4-C5	5.13	130.39	126.80
31	DA	1814	G	C5-C6-N1	-5.13	108.94	111.50
31	DA	1140	C	N3-C4-C5	-5.13	119.85	121.90
31	DA	1653	G	C4-C5-C6	5.13	121.88	118.80
31	BA	1902	C	N1-C2-O2	5.12	121.97	118.90
31	DA	179	G	C2-N3-C4	-5.12	109.34	111.90
31	DA	1779	U	N3-C2-O2	-5.12	118.61	122.20
31	DA	2328	A	C8-N9-C4	5.12	107.85	105.80
31	DA	2447	G	N7-C8-N9	-5.12	110.54	113.10
31	BA	1261	C	C2-N1-C1'	-5.12	113.17	118.80
31	DA	601	C	C6-N1-C2	5.12	122.35	120.30
31	BA	494	G	N1-C6-O6	5.12	122.97	119.90
31	BA	1955	U	C6-N1-C2	5.12	124.07	121.00
31	DA	2430	A	C6-C5-N7	-5.12	128.72	132.30
31	DA	2292	C	C5-C6-N1	-5.12	118.44	121.00
31	DA	2524	G	C6-N1-C2	-5.12	122.03	125.10
31	DA	1322	A	C8-N9-C4	5.12	107.85	105.80
31	DA	1496	A	C4-C5-C6	5.12	119.56	117.00
31	DA	1791	A	N1-C6-N6	5.12	121.67	118.60
1	AA	1525	G	C4-N9-C1'	-5.11	119.85	126.50
32	DB	109	C	C2-N3-C4	-5.11	117.34	119.90
31	BA	115	C	N1-C2-O2	-5.11	115.83	118.90
31	BA	1653	G	C8-N9-C1'	-5.11	120.36	127.00
31	BA	2037	G	C6-N1-C2	-5.11	122.03	125.10
1	AA	243	A	N9-C4-C5	5.11	107.84	105.80
31	BA	464	U	N1-C2-N3	5.11	117.96	114.90
31	BA	671	C	C5-C6-N1	-5.11	118.45	121.00
31	BA	944	G	C8-N9-C1'	-5.11	120.36	127.00
31	BA	2775	A	C8-N9-C4	5.11	107.84	105.80
45	BT	30	VAL	CB-CA-C	-5.11	101.69	111.40
31	DA	31	C	C5-C6-N1	-5.11	118.45	121.00
31	DA	1633	G	C5-C6-O6	-5.11	125.53	128.60
31	BA	2584	U	C5-C4-O4	5.11	128.96	125.90
31	DA	1681	G	N3-C4-C5	5.11	131.15	128.60
1	AA	1524	C	C6-N1-C2	5.10	122.34	120.30
31	BA	185	U	C5-C6-N1	-5.10	120.15	122.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	BA	850	C	C6-N1-C2	5.10	122.34	120.30
31	BA	1566	A	C6-N1-C2	-5.10	115.54	118.60
31	BA	1698	A	N1-C2-N3	5.10	131.85	129.30
31	BA	2040	C	C5-C6-N1	-5.10	118.45	121.00
31	BA	2569	G	N9-C4-C5	-5.10	103.36	105.40
31	BA	1210	A	C4-C5-N7	5.10	113.25	110.70
31	BA	1791	A	N1-C6-N6	5.10	121.66	118.60
31	BA	1997	G	N1-C2-N3	5.10	126.96	123.90
31	DA	840	C	C5-C6-N1	-5.10	118.45	121.00
31	BA	847	U	C5-C6-N1	-5.10	120.15	122.70
31	BA	946	G	C5-C6-O6	-5.10	125.54	128.60
31	BA	1189	A	N1-C6-N6	5.10	121.66	118.60
31	BA	189	G	C6-C5-N7	-5.10	127.34	130.40
31	BA	1559	G	C4-C5-N7	5.10	112.84	110.80
1	CA	690	G	C8-N9-C4	5.10	108.44	106.40
31	DA	774	A	C3'-C2'-C1'	5.10	105.58	101.50
31	BA	2466	C	N1-C2-O2	-5.10	115.84	118.90
31	DA	2456	C	C5-C6-N1	-5.10	118.45	121.00
31	BA	2083	G	N1-C6-O6	5.09	122.96	119.90
32	BB	115	G	C8-N9-C4	5.09	108.44	106.40
31	DA	337	C	C5-C6-N1	-5.09	118.45	121.00
31	DA	969	U	C5-C6-N1	-5.09	120.15	122.70
31	DA	1936	A	N1-C6-N6	5.09	121.66	118.60
31	DA	542	C	N1-C2-O2	5.09	121.96	118.90
31	DA	1992	G	C6-N1-C2	-5.09	122.04	125.10
31	BA	1369	G	C8-N9-C4	5.09	108.44	106.40
31	DA	1493	C	C6-N1-C2	-5.09	118.26	120.30
1	AA	533	A	C8-N9-C4	-5.09	103.76	105.80
31	BA	205	G	C8-N9-C4	5.09	108.44	106.40
31	BA	265	A	N1-C6-N6	5.09	121.65	118.60
31	BA	2331	G	N1-C6-O6	5.09	122.95	119.90
31	BA	2726	U	C5-C4-O4	5.09	128.95	125.90
32	BB	6	C	C6-N1-C2	5.09	122.34	120.30
31	DA	1328	G	C8-N9-C1'	-5.09	120.38	127.00
31	DA	1815	A	N9-C4-C5	5.09	107.83	105.80
31	BA	1921	G	C2-N3-C4	-5.09	109.36	111.90
31	BA	1349	A	C2-N3-C4	-5.08	108.06	110.60
31	BA	1533	G	C3'-C2'-C1'	5.08	105.57	101.50
31	DA	1204	A	C3'-C2'-C1'	-5.08	97.43	101.50
31	BA	1799	G	N1-C2-N2	-5.08	111.63	116.20
31	BA	2476	A	N3-C4-C5	-5.08	123.24	126.80
32	BB	109	C	C2-N3-C4	-5.08	117.36	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	1409	C	C5-C6-N1	-5.08	118.46	121.00
31	DA	2048	G	C8-N9-C4	-5.08	104.37	106.40
31	BA	1222	C	N3-C4-C5	5.08	123.93	121.90
31	BA	1509	C	C6-N1-C2	-5.08	118.27	120.30
1	AA	1493	A	C3'-C2'-C1'	5.08	105.56	101.50
31	BA	1771	C	C2-N3-C4	-5.08	117.36	119.90
31	BA	1829	A	C8-N9-C4	5.08	107.83	105.80
31	DA	2058	A	C5-C6-N6	-5.08	119.64	123.70
1	AA	1502	A	N1-C6-N6	5.08	121.65	118.60
31	DA	676	A	O4'-C1'-N9	5.08	112.26	108.20
31	DA	2362	G	C8-N9-C4	5.08	108.43	106.40
31	DA	2779	U	C2-N3-C4	-5.08	123.95	127.00
30	B8	33	ASN	N-CA-C	-5.08	97.30	111.00
1	CA	991	U	C3'-C2'-C1'	5.08	105.56	101.50
31	DA	1281	G	C5-N7-C8	-5.08	101.76	104.30
31	DA	594	U	N1-C2-O2	-5.07	119.25	122.80
31	DA	1459	G	C6-C5-N7	-5.07	127.36	130.40
31	DA	1544	A	C5-C6-N6	5.07	127.76	123.70
31	DA	1655	A	C2-N3-C4	-5.07	108.06	110.60
31	BA	2532	G	C6-C5-N7	-5.07	127.36	130.40
31	DA	793	A	C6-N1-C2	-5.07	115.56	118.60
31	DA	2037	G	N3-C4-N9	5.07	129.04	126.00
1	AA	572	A	C8-N9-C4	5.07	107.83	105.80
31	DA	669	G	C1'-O4'-C4'	-5.07	105.84	109.90
31	DA	1667	G	C8-N9-C4	5.07	108.43	106.40
31	DA	2461	C	C5-C6-N1	-5.07	118.47	121.00
31	BA	124	G	N1-C6-O6	5.07	122.94	119.90
31	BA	1698	A	C1'-O4'-C4'	-5.07	105.84	109.90
31	DA	2377	A	C2-N3-C4	-5.07	108.06	110.60
31	DA	2553	G	C8-N9-C1'	-5.07	120.41	127.00
31	BA	789	A	N1-C6-N6	-5.07	115.56	118.60
31	BA	1813	G	C8-N9-C4	5.07	108.43	106.40
31	DA	254	G	N9-C4-C5	-5.07	103.37	105.40
31	BA	1382	G	N3-C4-C5	5.07	131.13	128.60
31	BA	2542	A	N1-C6-N6	5.07	121.64	118.60
31	DA	1533	G	C3'-C2'-C1'	5.07	105.55	101.50
31	DA	1674	G	C8-N9-C1'	-5.07	120.42	127.00
31	DA	2570	G	C5-C6-N1	-5.07	108.97	111.50
31	DA	2622	C	N1-C2-O2	-5.07	115.86	118.90
1	AA	1442	G	C4-C5-N7	5.06	112.83	110.80
31	BA	1323	U	N1-C2-O2	-5.06	119.26	122.80
31	BA	1694	C	C6-N1-C1'	-5.06	114.72	120.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	2504	U	C6-N1-C2	5.06	124.04	121.00
50	DY	31	LEU	CA-CB-CG	-5.06	103.66	115.30
31	DA	621	A	N7-C8-N9	5.06	116.33	113.80
31	DA	688	U	C4-C5-C6	5.06	122.73	119.70
31	DA	1786	A	C4-N9-C1'	5.06	135.41	126.30
31	BA	820	A	N1-C6-N6	-5.06	115.57	118.60
31	BA	2077	A	C6-N1-C2	-5.06	115.57	118.60
31	BA	1426	G	C8-N9-C4	5.05	108.42	106.40
31	DA	1650	G	C2-N3-C4	-5.05	109.37	111.90
31	BA	1343	G	C4-N9-C1'	5.05	133.07	126.50
31	BA	2012	G	N9-C4-C5	-5.05	103.38	105.40
31	DA	133	C	N1-C2-O2	-5.05	115.87	118.90
31	BA	2520	C	C2-N3-C4	-5.05	117.38	119.90
31	DA	2477	C	N3-C2-O2	-5.05	118.36	121.90
1	CA	245	C	C5-C6-N1	-5.05	118.48	121.00
31	BA	659	C	C4-C5-C6	-5.05	114.88	117.40
1	CA	108	G	C4-C5-N7	5.05	112.82	110.80
31	DA	856	C	N3-C2-O2	-5.05	118.37	121.90
31	DA	2386	C	C4-C5-C6	5.05	119.92	117.40
31	BA	1617	C	C6-N1-C2	5.04	122.32	120.30
31	BA	1814	G	C5-C6-N1	-5.04	108.98	111.50
1	AA	122	G	C8-N9-C4	5.04	108.42	106.40
31	BA	686	G	C6-C5-N7	-5.04	127.37	130.40
31	DA	2726	U	C5-C6-N1	-5.04	120.18	122.70
31	BA	1765	C	C5-C6-N1	-5.04	118.48	121.00
31	BA	2045	C	C6-N1-C2	5.04	122.32	120.30
31	BA	2702	U	N3-C4-O4	-5.04	115.87	119.40
31	DA	1612	C	N1-C2-O2	-5.04	115.88	118.90
31	BA	932	G	C4-N9-C1'	-5.04	119.95	126.50
31	DA	253	C	N1-C2-O2	-5.04	115.88	118.90
33	DD	238	GLY	N-CA-C	-5.04	100.50	113.10
31	DA	1989	G	N3-C2-N2	-5.04	116.37	119.90
31	BA	1674	G	C4-C5-N7	5.04	112.81	110.80
31	BA	2362	G	C2-N3-C4	-5.04	109.38	111.90
41	BP	116	GLY	N-CA-C	5.04	125.69	113.10
31	BA	457	A	N1-C6-N6	-5.03	115.58	118.60
31	BA	681	G	C5-N7-C8	5.03	106.82	104.30
31	BA	2702	U	N1-C2-N3	5.03	117.92	114.90
31	DA	629	G	N1-C6-O6	5.03	122.92	119.90
31	DA	1653	G	C8-N9-C1'	-5.03	120.46	127.00
31	BA	71	A	C6-C5-N7	-5.03	128.78	132.30
31	BA	1934	C	N3-C4-C5	5.03	123.91	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	B5	40	LYS	CD-CE-NZ	5.03	123.27	111.70
31	BA	2421	G	C5-C6-O6	-5.03	125.58	128.60
31	DA	463	G	C5-C6-O6	5.03	131.62	128.60
33	BD	210	GLY	N-CA-C	-5.03	100.53	113.10
31	DA	1275	A	C8-N9-C4	5.03	107.81	105.80
1	AA	899	C	N3-C2-O2	5.03	125.42	121.90
31	BA	2283	C	N1-C2-O2	-5.03	115.88	118.90
31	DA	1243	G	C5-N7-C8	5.03	106.81	104.30
31	DA	1674	G	N3-C4-N9	5.03	129.02	126.00
31	DA	1797	C	C5-C6-N1	-5.03	118.49	121.00
1	AA	243	A	C8-N9-C4	-5.03	103.79	105.80
31	BA	129	C	C5-C4-N4	-5.03	116.68	120.20
31	BA	530	G	C5-N7-C8	-5.03	101.79	104.30
31	BA	970	C	N1-C2-O2	-5.03	115.89	118.90
31	BA	2242	G	C2-N3-C4	-5.03	109.39	111.90
31	DA	2604	U	C5-C6-N1	-5.03	120.19	122.70
31	BA	753	C	N1-C2-O2	-5.02	115.89	118.90
31	BA	847	U	C6-N1-C1'	5.02	128.23	121.20
31	DA	842	G	C5-C6-O6	-5.02	125.59	128.60
1	AA	266	G	C6-C5-N7	-5.02	127.39	130.40
31	DA	494	G	C2-N3-C4	-5.02	109.39	111.90
31	DA	523	C	N1-C2-O2	-5.02	115.89	118.90
31	DA	2429	G	C8-N9-C4	-5.02	104.39	106.40
31	DA	2476	A	C8-N9-C4	-5.02	103.79	105.80
31	BA	728	G	C2-N3-C4	-5.02	109.39	111.90
31	BA	2247	A	N1-C2-N3	5.02	131.81	129.30
31	BA	2665	A	C8-N9-C4	-5.02	103.79	105.80
31	DA	2229	C	C5-C6-N1	-5.02	118.49	121.00
31	BA	2501	C	C5-C6-N1	-5.02	118.49	121.00
31	DA	1997	G	N1-C2-N2	-5.02	111.69	116.20
31	BA	2613	U	N1-C2-O2	5.01	126.31	122.80
31	DA	631	A	C8-N9-C4	5.01	107.81	105.80
31	DA	1006	C	N3-C2-O2	5.01	125.41	121.90
31	BA	76	C	C2-N1-C1'	5.01	124.31	118.80
31	DA	2440	C	C6-N1-C1'	5.01	126.81	120.80
31	DA	427	U	N3-C2-O2	5.01	125.71	122.20
31	DA	190	A	N3-C4-C5	5.01	130.31	126.80
31	DA	2208	A	N1-C6-N6	5.01	121.60	118.60
31	DA	2619	C	N1-C2-O2	-5.01	115.90	118.90
31	BA	254	G	C6-C5-N7	-5.00	127.40	130.40
31	BA	870	A	C8-N9-C4	5.00	107.80	105.80
31	BA	1315	C	C2-N3-C4	-5.00	117.40	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
31	DA	79	G	C5-C6-O6	-5.00	125.60	128.60
31	DA	1246	A	N1-C2-N3	5.00	131.80	129.30
31	DA	1985	G	N1-C2-N3	5.00	126.90	123.90
31	DA	2032	G	C4-C5-N7	5.00	112.80	110.80
31	DA	2198	A	N7-C8-N9	-5.00	111.30	113.80
31	BA	1203	G	N9-C4-C5	5.00	107.40	105.40
31	BA	1992	G	C2-N3-C4	5.00	114.40	111.90
1	CA	817	C	C5-C6-N1	-5.00	118.50	121.00

All (38) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
31	BA	100	G	C1'
31	BA	472	A	C3'
31	BA	669	G	C4',C3',C1'
31	BA	945	A	C1'
31	BA	1300	U	C4',C3',C1'
31	BA	1379	A	C1'
31	BA	1544	A	C1'
31	BA	1609	A	C2'
31	BA	1694	C	C4',C3'
31	BA	1697	G	C3'
31	BA	1934	C	C3'
31	BA	2286	A	C1'
31	BA	2662	A	C1'
31	BA	2796	U	C1'
31	DA	100	G	C1'
31	DA	472	A	C3'
31	DA	669	G	C4',C3',C1'
31	DA	945	A	C1'
31	DA	1300	U	C4',C3',C1'
31	DA	1379	A	C1'
31	DA	1544	A	C1'
31	DA	1609	A	C2'
31	DA	1694	C	C4',C3'
31	DA	1697	G	C3'
31	DA	1934	C	C3'
31	DA	2286	A	C1'
31	DA	2662	A	C1'
31	DA	2796	U	C1'

All (55) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
23	B1	30	VAL	Peptide
24	B2	55	ARG	Peptide
27	B5	51	TYR	Peptide
28	B6	47	THR	Peptide
33	BD	237	GLU	Peptide
33	BD	244	ARG	Peptide
33	BD	47	GLY	Peptide
34	BE	131	ALA	Peptide
34	BE	76	ARG	Peptide
37	BH	156	ALA	Peptide
41	BP	37	GLY	Peptide
41	BP	39	LYS	Peptide
41	BP	51	PHE	Peptide
41	BP	57	THR	Peptide
41	BP	9	ASN	Peptide
42	BQ	10	ARG	Peptide
43	BR	5	LYS	Peptide
43	BR	7	GLY	Peptide
44	BS	88	ASP	Peptide
45	BT	29	ARG	Peptide
45	BT	79	HIS	Peptide
46	BU	95	LEU	Peptide
47	BV	18	LEU	Peptide
47	BV	81	TYR	Peptide
47	BV	87	HIS	Peptide
49	BX	38	GLU	Peptide
49	BX	64	LYS	Peptide
49	BX	76	ARG	Peptide
49	BX	77	LYS	Peptide
23	D1	30	VAL	Peptide
24	D2	55	ARG	Peptide
27	D5	51	TYR	Peptide
33	DD	237	GLU	Peptide
33	DD	244	ARG	Peptide
33	DD	47	GLY	Peptide
34	DE	131	ALA	Peptide
34	DE	76	ARG	Peptide
37	DH	156	ALA	Peptide
41	DP	37	GLY	Peptide
41	DP	51	PHE	Peptide
41	DP	57	THR	Peptide
41	DP	9	ASN	Peptide
42	DQ	10	ARG	Peptide

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Mol	Chain	Res	Type	Group
43	DR	5	LYS	Peptide
43	DR	7	GLY	Peptide
44	DS	88	ASP	Peptide
45	DT	29	ARG	Peptide
45	DT	79	HIS	Peptide
47	DV	18	LEU	Peptide
47	DV	81	TYR	Peptide
47	DV	87	HIS	Peptide
49	DX	38	GLU	Peptide
49	DX	64	LYS	Peptide
49	DX	76	ARG	Peptide
49	DX	77	LYS	Peptide

## 5.2 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 hydrogens added by MolProbity. The Clashes column lists the number of clashes within the asymmetric unit, and the number in parentheses is this value normalized per 1000 atoms of the molecule in the chain. The Symm-Clashes column gives symmetry related clashes, in the same way as for the Clashes column.

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	AA	32329	0	16318	1597	0
1	CA	32329	0	16318	1553	0
2	AB	1901	0	1951	215	0
2	CB	1901	0	1951	207	0
3	AC	1613	0	1677	116	0
3	CC	1613	0	1677	116	0
4	AD	1703	0	1765	190	0
4	CD	1703	0	1764	192	0
5	AE	1147	0	1207	101	0
5	CE	1147	0	1207	100	0
6	AF	843	0	857	96	0
6	CF	843	0	857	98	0
7	AG	1257	0	1296	75	0
7	CG	1257	0	1296	75	0
8	AH	1116	0	1177	101	0
8	CH	1116	0	1177	99	0
9	AI	1011	0	1042	101	0
9	CI	1011	0	1042	104	0
10	AJ	795	0	840	105	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
10	CJ	795	0	840	102	0
11	AK	885	0	904	63	0
11	CK	885	0	904	68	0
12	AL	971	0	1057	100	0
12	CL	971	0	1057	103	0
13	AM	921	0	976	88	0
13	CM	921	0	976	91	0
14	AN	492	0	530	47	0
14	CN	492	0	529	46	0
15	AO	734	0	771	76	0
15	CO	734	0	771	78	0
16	AP	701	0	720	91	0
16	CP	701	0	720	97	0
17	AQ	824	0	891	66	0
17	CQ	824	0	891	55	0
18	AR	574	0	644	76	0
18	CR	574	0	644	78	0
19	AS	630	0	652	51	0
19	CS	630	0	652	52	0
20	AT	763	0	861	82	0
20	CT	763	0	861	73	0
21	AU	209	0	221	9	0
21	CU	209	0	221	9	0
22	B0	650	0	654	55	0
22	D0	650	0	654	57	0
23	B1	693	0	764	146	0
23	D1	693	0	764	143	0
24	B2	421	0	461	119	0
24	D2	421	0	461	123	0
25	B3	468	0	523	32	0
25	D3	468	0	523	41	0
26	B4	157	0	69	20	0
26	D4	157	0	69	21	0
27	B5	459	0	480	94	0
27	D5	459	0	480	86	0
28	B6	381	0	390	102	0
28	D6	381	0	390	97	0
29	B7	419	0	467	37	0
29	D7	419	0	467	39	0
30	B8	508	0	576	158	0
30	D8	508	0	576	154	0
31	BA	58698	0	29590	2607	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
31	DA	58698	0	29591	2784	0
32	BB	2551	0	1295	145	0
32	DB	2551	0	1295	156	0
33	BD	2105	0	2182	325	0
33	DD	2105	0	2182	333	0
34	BE	1564	0	1629	240	0
34	DE	1564	0	1629	249	0
35	BF	1624	0	1677	182	0
35	DF	1624	0	1677	185	0
36	BG	1474	0	1534	190	0
36	DG	1474	0	1534	187	0
37	BH	1223	0	1282	162	0
37	DH	1223	0	1282	157	0
38	BI	1132	0	1218	120	0
38	DI	1132	0	1218	125	0
39	BN	1105	0	1180	218	0
39	DN	1105	0	1180	229	0
40	BO	933	0	996	77	0
40	DO	933	0	996	86	0
41	BP	1114	0	1187	302	0
41	DP	1114	0	1187	289	0
42	BQ	1080	0	1127	165	0
42	DQ	1080	0	1127	176	0
43	BR	960	0	1021	135	0
43	DR	960	0	1021	132	0
44	BS	771	0	832	149	0
44	DS	771	0	832	139	0
45	BT	1100	0	1164	210	0
45	DT	1100	0	1164	201	0
46	BU	958	0	1015	145	0
46	DU	958	0	1015	151	0
47	BV	779	0	851	224	0
47	DV	779	0	851	225	0
48	BW	896	0	953	76	0
48	DW	896	0	953	84	0
49	BX	726	0	778	168	0
49	DX	726	0	778	164	0
50	BY	776	0	870	177	0
50	DY	776	0	870	178	0
51	BZ	1404	0	1432	153	0
51	DZ	1404	0	1432	149	0
52	AA	56	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
52	B1	1	0	0	0	0
52	B5	2	0	0	0	0
52	BA	368	0	0	0	0
52	BB	7	0	0	0	0
52	BD	1	0	0	0	0
52	BE	1	0	0	0	0
52	BF	1	0	0	0	0
52	BP	2	0	0	0	0
52	BQ	2	0	0	0	0
52	BR	2	0	0	0	0
52	BU	1	0	0	0	0
52	BX	1	0	0	0	0
52	CA	53	0	0	0	0
52	D1	1	0	0	0	0
52	D5	2	0	0	0	0
52	DA	332	0	0	0	0
52	DB	4	0	0	0	0
52	DD	1	0	0	0	0
52	DE	1	0	0	0	0
52	DF	1	0	0	0	0
52	DP	1	0	0	0	0
52	DQ	1	0	0	0	0
52	DR	1	0	0	0	0
52	DU	1	0	0	0	0
52	DX	1	0	0	0	0
53	AD	1	0	0	0	0
53	AN	1	0	0	0	0
53	CD	1	0	0	2	0
53	CN	1	0	0	0	0
54	BA	1	0	0	0	0
54	DA	1	0	0	0	0
55	BA	20	0	10	0	0
55	DA	20	0	10	0	0
All	All	277987	0	189127	18994	0

Clashscore is defined as the number of clashes calculated for the entry per 1000 atoms (including hydrogens) of the entry. The overall clashscore for this entry is 41.

All (18994) close contacts within the same asymmetric unit are listed below.

Atom-1	Atom-2	Distance(Å)	Clash(Å)
27:B5:46:CYS:SG	27:B5:47:PRO:HD2	1.78	1.22
31:BA:1899:G:H22	31:BA:1902:C:N4	1.41	1.18

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
30:B8:32:LEU:CB	30:B8:35:GLN:H	1.57	1.17
32:DB:20:C:H2'	32:DB:21:G:H5''	1.25	1.17
1:CA:1442:G:O2'	1:CA:1442(A):G:H5''	1.43	1.16
41:BP:141:ALA:HB3	25:D3:1:MET:SD	1.86	1.16
41:DP:16:ARG:HD3	41:DP:18:ARG:H	1.11	1.16
31:DA:1899:G:H22	31:DA:1902:C:N4	1.41	1.16
39:DN:42:TRP:HB3	46:DU:64:ARG:HH11	1.04	1.16
2:AB:185:ILE:HG22	2:AB:199:TYR:HB2	1.26	1.15
47:BV:19:LYS:HE2	47:BV:20:LEU:H	1.03	1.15
42:DQ:9:TYR:O	42:DQ:9:TYR:HD2	1.29	1.15
2:CB:185:ILE:HG22	2:CB:199:TYR:HB2	1.28	1.15
16:AP:28:ARG:HG2	16:AP:28:ARG:HH11	1.09	1.15
31:BA:1494:A:H4'	31:BA:1495:A:OP1	1.46	1.15
33:BD:65:ILE:HD11	33:BD:67:PHE:CE1	1.82	1.15
33:DD:27:THR:HG21	33:DD:83:GLU:HG2	1.24	1.14
50:BY:10:GLY:HA2	50:BY:27:VAL:HG13	1.16	1.14
46:DU:64:ARG:HA	46:DU:64:ARG:NH2	1.61	1.14
31:BA:1884:A:H2'	31:BA:1885:A:H5''	1.23	1.14
31:BA:1899:G:N2	31:BA:1902:C:H41	1.46	1.14
31:DA:1899:G:N2	31:DA:1902:C:H41	1.46	1.14
31:DA:2317:C:H2'	31:DA:2318:G:H5'	1.15	1.14
30:B8:32:LEU:HB3	30:B8:35:GLN:H	1.09	1.13
47:DV:21:ARG:HG2	47:DV:93:GLU:HG3	1.27	1.13
31:BA:2701:C:H3'	31:BA:2702:U:C5'	1.77	1.13
31:BA:2206:G:H21	31:BA:2207:G:H5'	1.06	1.13
46:BU:64:ARG:NH2	46:BU:64:ARG:HA	1.63	1.13
31:DA:1494:A:H4'	31:DA:1495:A:OP1	1.45	1.13
31:DA:1826:G:H4'	33:DD:242:ARG:HH21	1.12	1.12
31:BA:2317:C:H2'	31:BA:2318:G:H5'	1.14	1.12
39:DN:120:LEU:HD11	39:DN:122:VAL:HG23	1.31	1.12
50:DY:10:GLY:HA2	50:DY:27:VAL:HG13	1.27	1.12
42:BQ:9:TYR:HD2	42:BQ:9:TYR:O	1.33	1.12
31:DA:2206:G:H21	31:DA:2207:G:H5'	1.06	1.12
4:AD:128:VAL:HG13	4:AD:129:ASN:HD22	1.00	1.12
41:DP:59:LEU:HA	41:DP:61:ARG:NH1	1.65	1.12
33:DD:32:SER:O	33:DD:33:LEU:HB2	1.48	1.12
31:BA:2787:C:H1'	34:BE:61:ARG:HB2	1.30	1.12
31:DA:2787:C:H1'	34:DE:61:ARG:HB2	1.29	1.11
30:D8:32:LEU:CB	30:D8:35:GLN:H	1.62	1.11
50:BY:95:LYS:HD3	50:BY:100:ALA:HB1	1.22	1.11
31:BA:102:G:H5''	31:BA:102:G:H8	1.09	1.11
31:DA:154:G:H1	31:DA:172:C:N4	1.49	1.11

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
46:DU:64:ARG:HA	46:DU:64:ARG:CZ	1.81	1.10
33:BD:32:SER:O	33:BD:33:LEU:HB2	1.45	1.10
35:DF:101:LEU:HD12	35:DF:102:PRO:HD2	1.33	1.10
51:DZ:151:HIS:HB3	51:DZ:170:THR:HA	1.12	1.10
25:D3:8:LEU:HD13	25:D3:31:LEU:HD23	1.26	1.10
33:BD:35:LYS:HD3	33:BD:63:ARG:HB3	1.27	1.10
50:DY:95:LYS:HD3	50:DY:100:ALA:HB1	1.23	1.10
33:BD:27:THR:HG21	33:BD:83:GLU:HG2	1.26	1.10
33:DD:65:ILE:HD11	33:DD:67:PHE:CE1	1.85	1.10
49:DX:25:LYS:HG3	49:DX:26:TYR:H	0.97	1.10
31:DA:2701:C:H3'	31:DA:2702:U:C5'	1.81	1.10
47:BV:21:ARG:HG2	47:BV:93:GLU:HG3	1.27	1.10
51:BZ:151:HIS:HB3	51:BZ:170:THR:HA	1.13	1.09
31:BA:154:G:H1	31:BA:172:C:N4	1.49	1.09
1:AA:1442:G:O2'	1:AA:1442(A):G:H5''	1.49	1.09
31:DA:1884:A:H2'	31:DA:1885:A:H5''	1.22	1.09
39:BN:42:TRP:HB3	46:BU:64:ARG:HH11	1.04	1.09
42:BQ:75:THR:HA	42:BQ:88:GLY:HA2	1.26	1.09
4:CD:128:VAL:HG13	4:CD:129:ASN:HD22	0.94	1.09
31:BA:2394:C:OP1	41:BP:63:PRO:HD2	1.52	1.09
32:BB:20:C:H2'	32:BB:21:G:H5''	1.25	1.09
42:DQ:75:THR:HA	42:DQ:88:GLY:HA2	1.26	1.09
45:DT:65:LYS:HE3	45:DT:66:VAL:H	1.10	1.09
33:BD:35:LYS:NZ	33:BD:104:TYR:HB2	1.67	1.08
31:DA:2759:G:H8	31:DA:2759:G:H5'	1.16	1.08
49:BX:65:ARG:CZ	49:BX:66:LEU:H	1.65	1.08
31:DA:102:G:H8	31:DA:102:G:H5''	1.10	1.08
2:CB:84:GLU:HB3	2:CB:219:VAL:HG21	1.34	1.08
46:BU:64:ARG:CZ	46:BU:64:ARG:HA	1.82	1.08
49:DX:65:ARG:CZ	49:DX:66:LEU:H	1.66	1.08
41:BP:16:ARG:HD3	41:BP:18:ARG:H	1.10	1.08
1:CA:585:G:H4'	12:CL:8:ASN:HD21	1.10	1.08
39:DN:42:TRP:HB3	46:DU:64:ARG:NH1	1.68	1.08
33:BD:25:THR:HG21	33:BD:81:ALA:HB1	1.14	1.07
44:DS:28:VAL:HB	44:DS:89:ARG:HB2	1.34	1.07
42:BQ:81:VAL:O	42:BQ:82:ARG:HG2	1.53	1.07
47:DV:19:LYS:HE2	47:DV:20:LEU:H	0.95	1.07
32:DB:44:G:H5''	32:DB:45:A:OP1	1.55	1.07
39:DN:18:ALA:HB1	39:DN:21:LYS:HB2	1.32	1.07
15:AO:17:ARG:HH11	15:AO:17:ARG:HG3	1.14	1.07
45:BT:65:LYS:HE3	45:BT:66:VAL:H	1.10	1.07
33:DD:35:LYS:NZ	33:DD:104:TYR:HB2	1.69	1.07

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:585:G:H4'	12:AL:8:ASN:HD21	1.07	1.07
16:CP:28:ARG:HH11	16:CP:28:ARG:HG2	1.15	1.07
39:BN:18:ALA:HB1	39:BN:21:LYS:HB2	1.30	1.07
39:BN:3:THR:HG22	39:BN:4:TYR:H	1.17	1.07
35:BF:53:THR:HG22	35:BF:55:GLY:H	1.15	1.06
49:BX:25:LYS:HG3	49:BX:26:TYR:H	1.00	1.06
25:B3:8:LEU:HD13	25:B3:31:LEU:HD23	1.31	1.06
31:BA:1210:A:H8	31:BA:1210:A:C5'	1.68	1.06
30:D8:59:LYS:HB2	30:D8:59:LYS:NZ	1.67	1.06
47:DV:19:LYS:HE2	47:DV:20:LEU:N	1.71	1.06
33:BD:159:ALA:H	33:BD:161:THR:HG22	1.15	1.06
39:BN:42:TRP:HB3	46:BU:64:ARG:NH1	1.70	1.06
15:CO:17:ARG:HG3	15:CO:17:ARG:HH11	1.11	1.06
31:BA:2317:C:C2'	31:BA:2318:G:H5'	1.86	1.06
47:DV:1:MET:HE3	47:DV:44:LYS:HB2	1.32	1.06
1:CA:1256:A:H61	1:CA:1278:U:H1'	1.18	1.06
1:CA:673:G:H2'	1:CA:674:G:C8	1.91	1.06
1:AA:673:G:H2'	1:AA:674:G:C8	1.89	1.06
31:DA:1210:A:C5'	31:DA:1210:A:H8	1.69	1.06
30:B8:59:LYS:HB2	30:B8:59:LYS:NZ	1.66	1.05
1:AA:1103:C:H5''	2:AB:98:LEU:HD13	1.38	1.05
47:DV:19:LYS:CE	47:DV:20:LEU:H	1.68	1.05
2:AB:84:GLU:HB3	2:AB:219:VAL:HG21	1.38	1.05
45:DT:54:ARG:HA	45:DT:59:THR:HB	1.37	1.05
31:DA:2758:A:H2'	31:DA:2759:G:H5''	1.36	1.05
44:BS:28:VAL:HB	44:BS:89:ARG:HB2	1.33	1.05
45:BT:54:ARG:HA	45:BT:59:THR:HB	1.34	1.05
44:DS:34:HIS:CE1	44:DS:54:LEU:HB3	1.92	1.05
28:B6:9:LEU:HD22	28:B6:10:LEU:N	1.71	1.04
47:BV:1:MET:HE3	47:BV:44:LYS:HB2	1.34	1.04
31:BA:875:G:H4'	51:BZ:170:THR:HG21	1.39	1.04
35:DF:53:THR:HG22	35:DF:55:GLY:H	1.15	1.04
32:BB:20:C:C2'	32:BB:21:G:H5''	1.86	1.04
31:BA:1652:A:O2'	31:BA:1653:G:H5'	1.55	1.04
32:BB:74:U:H2'	32:BB:75:G:H5''	1.37	1.04
33:DD:186:HIS:CD2	33:DD:188:GLU:H	1.75	1.04
30:D8:32:LEU:HB3	30:D8:35:GLN:H	1.19	1.04
1:AA:1256:A:H61	1:AA:1278:U:H1'	1.17	1.04
31:BA:2610:C:H4'	31:BA:2611:U:OP2	1.57	1.04
31:BA:1826:G:H4'	33:BD:242:ARG:HH21	1.22	1.04
32:DB:20:C:C2'	32:DB:21:G:H5''	1.86	1.04
41:BP:59:LEU:HA	41:BP:61:ARG:NH1	1.70	1.04

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
39:BN:120:LEU:HD11	39:BN:122:VAL:HG23	1.31	1.04
31:DA:1779:U:H5	31:DA:1784:A:N7	1.55	1.04
33:BD:35:LYS:HD2	33:BD:104:TYR:CD1	1.92	1.04
33:BD:35:LYS:HD3	33:BD:63:ARG:CB	1.88	1.04
31:BA:2759:G:H5'	31:BA:2759:G:H8	1.19	1.04
29:D7:8:ASN:C	29:D7:8:ASN:HD22	1.58	1.04
33:DD:25:THR:HG21	33:DD:81:ALA:HB1	1.08	1.03
31:DA:2206:G:N2	31:DA:2207:G:H5'	1.73	1.03
47:BV:85:LYS:O	47:BV:87:HIS:N	1.89	1.03
27:D5:46:CYS:SG	27:D5:47:PRO:HD2	1.96	1.03
33:BD:186:HIS:CD2	33:BD:188:GLU:H	1.74	1.03
41:BP:71:VAL:HG13	41:BP:72:PRO:HD3	1.39	1.03
41:BP:23:PRO:HB2	41:BP:33:ARG:HG3	1.39	1.03
31:DA:2317:C:C2'	31:DA:2318:G:H5'	1.88	1.03
32:DB:74:U:H2'	32:DB:75:G:H5''	1.36	1.03
33:BD:44:ASN:HB3	33:BD:49:ILE:HA	1.39	1.03
23:B1:89:GLU:H	23:B1:89:GLU:CD	1.61	1.03
34:DE:38:THR:HG22	34:DE:40:GLU:H	1.23	1.03
46:BU:92:ARG:HD2	47:BV:11:GLN:HG2	1.39	1.03
47:BV:22:VAL:O	47:BV:23:GLU:HB2	1.58	1.03
39:DN:3:THR:HG22	39:DN:4:TYR:H	1.22	1.03
2:AB:111:ARG:HG2	2:AB:111:ARG:HH11	1.17	1.03
23:D1:89:GLU:CD	23:D1:89:GLU:H	1.62	1.02
8:AH:86:ILE:HG22	8:AH:87:SER:H	1.19	1.02
29:B7:8:ASN:HD22	29:B7:8:ASN:C	1.61	1.02
37:BH:137:ASP:O	37:BH:138:LYS:HB2	1.59	1.02
34:DE:132:HIS:CD2	34:DE:135:HIS:CE1	2.48	1.02
31:BA:2206:G:N2	31:BA:2207:G:H5'	1.72	1.02
31:DA:2415:G:H4'	41:DP:67:MET:H	1.22	1.02
31:DA:996:A:H4'	46:DU:92:ARG:NE	1.75	1.02
37:DH:70:THR:HG22	37:DH:74:ASN:HD21	1.25	1.02
31:BA:1884:A:C2'	31:BA:1885:A:H5''	1.89	1.02
31:DA:1884:A:C2'	31:DA:1885:A:H5''	1.89	1.02
15:CO:82:ILE:HG12	15:CO:87:ILE:HB	1.42	1.02
47:BV:82:ARG:CG	47:BV:82:ARG:HH11	1.72	1.02
41:DP:71:VAL:HG13	41:DP:72:PRO:HD3	1.41	1.02
47:DV:75:PHE:CE1	47:DV:89:GLN:HB3	1.94	1.02
31:BA:2758:A:H2'	31:BA:2759:G:H5''	1.40	1.02
31:DA:1653:G:H3'	43:DR:4:LEU:HD12	1.42	1.02
33:DD:35:LYS:HD3	33:DD:63:ARG:HB3	1.37	1.01
34:BE:38:THR:HG22	34:BE:40:GLU:H	1.23	1.01
41:DP:23:PRO:HB2	41:DP:33:ARG:HG3	1.39	1.01

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
35:BF:101:LEU:HD12	35:BF:102:PRO:HD2	1.39	1.01
34:BE:36:ARG:HH21	34:BE:88:GLY:HA2	1.25	1.01
31:DA:2610:C:H4'	31:DA:2611:U:OP2	1.61	1.01
30:B8:25:MET:HG3	41:BP:64:LYS:HB3	1.42	1.01
47:BV:75:PHE:CE1	47:BV:89:GLN:HB3	1.94	1.01
31:DA:1652:A:O2'	31:DA:1653:G:H5'	1.61	1.01
50:BY:10:GLY:HA2	50:BY:27:VAL:CG1	1.91	1.01
44:BS:34:HIS:HB3	44:BS:53:SER:HB3	1.43	1.01
16:AP:4:ILE:HG13	16:AP:21:VAL:HG12	1.41	1.01
44:DS:29:PHE:N	44:DS:89:ARG:HD2	1.76	1.01
34:BE:93:VAL:H	34:BE:95:ILE:HD13	1.25	1.01
37:DH:44:VAL:HG12	37:DH:45:VAL:H	1.25	1.01
1:CA:922:G:H4'	5:CE:20:GLN:HA	1.41	1.01
33:DD:44:ASN:HB3	33:DD:49:ILE:HA	1.39	1.01
1:CA:1442(A):G:H3'	1:CA:1442(B):A:H5''	1.43	1.00
47:DV:22:VAL:O	47:DV:23:GLU:HB2	1.60	1.00
41:BP:30:THR:HG22	41:BP:31:ALA:H	1.22	1.00
31:BA:1779:U:H5	31:BA:1784:A:N7	1.57	1.00
35:BF:46:ARG:HH11	35:BF:46:ARG:HG2	1.23	1.00
15:AO:82:ILE:HG12	15:AO:87:ILE:HB	1.41	1.00
31:BA:348:G:H2'	31:BA:349:G:H5''	1.42	1.00
47:BV:19:LYS:CE	47:BV:20:LEU:H	1.74	1.00
31:DA:875:G:H4'	51:DZ:170:THR:HG21	1.40	1.00
47:BV:79:VAL:O	47:BV:80:GLN:HB3	1.55	1.00
37:DH:137:ASP:O	37:DH:138:LYS:HB2	1.61	1.00
28:D6:9:LEU:HD22	28:D6:10:LEU:N	1.75	1.00
31:DA:1210:A:H5''	31:DA:1210:A:H8	1.23	1.00
44:BS:34:HIS:CE1	44:BS:54:LEU:HB3	1.96	1.00
23:B1:19:GLN:NE2	31:BA:379:G:H21	1.59	1.00
34:BE:132:HIS:CD2	34:BE:135:HIS:CE1	2.50	1.00
49:BX:24:GLY:HA3	49:BX:80:ILE:HG13	1.43	1.00
31:BA:996:A:H4'	46:BU:92:ARG:NE	1.77	0.99
33:DD:35:LYS:HD2	33:DD:104:TYR:CD1	1.97	0.99
31:DA:1019:U:H3	31:DA:1142(A):A:H62	1.00	0.99
35:DF:18:ARG:HG2	35:DF:19:GLU:H	1.24	0.99
46:DU:92:ARG:HD2	47:DV:11:GLN:HG2	1.44	0.99
8:CH:86:ILE:HG22	8:CH:87:SER:H	1.25	0.99
31:BA:2701:C:C3'	31:BA:2702:U:H5''	1.92	0.99
50:DY:75:ILE:HD12	50:DY:76:CYS:H	1.25	0.99
42:DQ:81:VAL:O	42:DQ:82:ARG:HG2	1.60	0.99
30:D8:16:ILE:HD11	30:D8:57:ARG:HG2	1.42	0.99
31:DA:2701:C:H3'	31:DA:2702:U:H5''	1.00	0.99

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
16:CP:4:ILE:HG13	16:CP:21:VAL:HG12	1.44	0.99
1:AA:1442(A):G:H3'	1:AA:1442(B):A:H5''	1.44	0.99
32:BB:44:G:H5''	32:BB:45:A:OP1	1.62	0.99
31:DA:348:G:H2'	31:DA:349:G:H5''	1.41	0.99
2:CB:111:ARG:HG2	2:CB:111:ARG:HH11	1.22	0.99
34:DE:36:ARG:HH21	34:DE:88:GLY:HA2	1.23	0.99
31:BA:2834:G:H5'	31:BA:2835:A:OP2	1.63	0.99
50:BY:75:ILE:HD12	50:BY:76:CYS:H	1.25	0.99
16:CP:72:ARG:HH21	16:CP:73:LEU:HD21	1.24	0.99
31:DA:2469:A:H2	31:DA:2481:G:H21	1.02	0.99
31:BA:1019:U:H3	31:BA:1142(A):A:H62	1.04	0.99
49:BX:25:LYS:CG	49:BX:26:TYR:H	1.74	0.99
31:DA:1188:U:C2'	31:DA:1189:A:H5'	1.93	0.99
31:BA:1210:A:H5''	31:BA:1210:A:H8	1.23	0.99
49:DX:25:LYS:HG3	49:DX:26:TYR:N	1.77	0.98
34:DE:93:VAL:H	34:DE:95:ILE:HD13	1.27	0.98
31:DA:2394:C:OP1	41:DP:63:PRO:HD2	1.61	0.98
28:D6:9:LEU:HD22	28:D6:10:LEU:H	1.28	0.98
32:BB:7:G:H2'	32:BB:8:U:H5''	1.43	0.98
39:DN:58:ASP:O	39:DN:60:ILE:HG12	1.62	0.98
29:B7:8:ASN:ND2	29:B7:11:LYS:H	1.59	0.98
31:DA:1879:C:H2'	31:DA:1880:C:H5''	1.46	0.98
47:DV:69:LYS:HG3	47:DV:70:ILE:H	1.29	0.98
41:DP:30:THR:HG22	41:DP:31:ALA:H	1.24	0.98
31:BA:811:U:O2	31:BA:1250:G:H3'	1.64	0.98
47:DV:79:VAL:O	47:DV:80:GLN:HB3	1.61	0.98
31:DA:811:U:O2	31:DA:1250:G:H3'	1.63	0.98
31:DA:102:G:C8	31:DA:102:G:H5''	1.98	0.98
27:B5:46:CYS:SG	27:B5:47:PRO:CD	2.51	0.98
49:DX:24:GLY:HA3	49:DX:80:ILE:HG13	1.45	0.98
31:DA:2759:G:H5'	31:DA:2759:G:C8	1.99	0.98
31:BA:2801:A:H4'	31:BA:2801(A):A:H5'	1.44	0.98
47:DV:82:ARG:CG	47:DV:82:ARG:HH11	1.77	0.98
42:DQ:37:LEU:HB2	42:DQ:128:LYS:O	1.64	0.98
35:BF:18:ARG:HG2	35:BF:19:GLU:H	1.24	0.98
11:CK:127:LYS:HA	11:CK:127:LYS:HE2	1.45	0.98
41:BP:140:ALA:HB1	25:D3:38:GLU:HG2	1.46	0.97
31:BA:2658:C:H5'	31:BA:2659:G:OP2	1.64	0.97
31:DA:2334:G:H21	44:DS:18:ILE:HD11	1.26	0.97
1:CA:509:A:H2'	1:CA:510:A:C8	1.99	0.97
42:BQ:22:LYS:HE2	42:BQ:22:LYS:HA	1.43	0.97
47:BV:19:LYS:HG3	47:BV:20:LEU:N	1.76	0.97

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
36:DG:76:SER:HB2	36:DG:83:ARG:HB3	1.45	0.97
30:B8:16:ILE:HD11	30:B8:57:ARG:HG2	1.42	0.97
47:BV:19:LYS:HB3	47:BV:96:ILE:O	1.65	0.97
31:BA:102:G:H5''	31:BA:102:G:C8	1.98	0.97
31:BA:1658:C:OP1	34:BE:132:HIS:CE1	2.17	0.97
31:BA:2469:A:H2	31:BA:2481:G:H21	1.10	0.97
44:DS:34:HIS:HB3	44:DS:53:SER:HB3	1.46	0.97
35:BF:53:THR:CG2	35:BF:55:GLY:H	1.76	0.97
28:D6:10:LEU:HD12	30:D8:35:GLN:HE22	1.27	0.97
35:DF:53:THR:CG2	35:DF:55:GLY:H	1.77	0.97
13:CM:3:ARG:HH22	36:DG:139:LEU:HD13	1.26	0.97
47:BV:19:LYS:HE2	47:BV:20:LEU:N	1.79	0.97
30:D8:32:LEU:O	30:D8:33:ASN:HB3	1.64	0.97
31:DA:1497:U:H5'	31:DA:1498:C:H5	1.26	0.97
41:DP:105:LEU:O	41:DP:106:LEU:HB2	1.61	0.97
28:B6:9:LEU:HD22	28:B6:10:LEU:H	1.22	0.97
42:BQ:8:LYS:HG3	42:BQ:9:TYR:H	1.27	0.97
49:BX:25:LYS:HG3	49:BX:26:TYR:N	1.78	0.97
31:DA:330:A:H2	31:DA:1210:A:H2'	1.26	0.97
41:BP:71:VAL:HG13	41:BP:72:PRO:CD	1.95	0.97
27:D5:16:ARG:HG2	27:D5:16:ARG:HH11	1.28	0.97
27:B5:57:VAL:HB	27:B5:58:LEU:HD12	1.44	0.96
47:DV:18:LEU:HD22	47:DV:19:LYS:HA	1.46	0.96
35:DF:46:ARG:HH11	35:DF:46:ARG:HG2	1.29	0.96
31:BA:1902:C:O2'	33:BD:244:ARG:HB2	1.64	0.96
4:CD:128:VAL:HG13	4:CD:129:ASN:ND2	1.79	0.96
32:DB:94:C:H2'	32:DB:95:C:H6	1.30	0.96
23:D1:19:GLN:NE2	31:DA:379:G:H21	1.61	0.96
31:BA:1529:G:H21	31:BA:1530:C:H5''	1.30	0.96
30:B8:32:LEU:O	30:B8:33:ASN:HB3	1.65	0.96
31:DA:259:G:H21	31:DA:621:A:H8	1.04	0.96
41:BP:71:VAL:CG1	41:BP:72:PRO:HD3	1.95	0.96
12:CL:47:LYS:HB3	12:CL:48:PRO:HD3	1.45	0.96
31:BA:2565:A:H5''	31:BA:2566:A:OP2	1.64	0.96
28:B6:10:LEU:HD12	30:B8:35:GLN:HE22	1.27	0.96
33:DD:35:LYS:HD3	33:DD:63:ARG:CB	1.93	0.96
39:DN:65:LYS:HE2	39:DN:65:LYS:HA	1.46	0.96
31:BA:676:A:H8	31:BA:2069:G:H21	1.11	0.96
41:BP:105:LEU:O	41:BP:106:LEU:HB2	1.62	0.96
24:D2:25:VAL:HG13	24:D2:26:ARG:HD3	1.46	0.96
31:BA:330:A:H2	31:BA:1210:A:H2'	1.28	0.96
39:BN:65:LYS:HE2	39:BN:65:LYS:HA	1.46	0.96

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
36:BG:124:SER:HB2	36:BG:131:TYR:CE1	2.01	0.96
34:DE:151:TYR:HD2	34:DE:154:LYS:HZ3	1.04	0.96
31:DA:870:A:H5''	42:DQ:7:MET:HB2	1.44	0.96
47:DV:85:LYS:O	47:DV:87:HIS:N	1.97	0.96
49:DX:25:LYS:CG	49:DX:26:TYR:H	1.76	0.96
31:BA:2334:G:H21	44:BS:18:ILE:HD11	1.31	0.96
45:DT:29:ARG:HB3	45:DT:85:LYS:HA	1.48	0.96
45:BT:29:ARG:HB3	45:BT:85:LYS:HA	1.46	0.96
41:DP:59:LEU:HA	41:DP:61:ARG:HH11	1.21	0.96
31:BA:1887:C:H2'	31:BA:1888:G:H5'	1.46	0.96
31:DA:2801:A:H4'	31:DA:2801(A):A:H5'	1.43	0.96
42:BQ:81:VAL:HG12	42:BQ:82:ARG:HG3	1.45	0.95
29:D7:8:ASN:ND2	29:D7:11:LYS:H	1.62	0.95
27:D5:57:VAL:HB	27:D5:58:LEU:HD12	1.46	0.95
30:D8:25:MET:HB2	41:DP:62:LEU:CD2	1.96	0.95
16:AP:72:ARG:HH21	16:AP:73:LEU:HD21	1.28	0.95
36:DG:85:GLY:O	36:DG:87:PRO:HD2	1.65	0.95
39:BN:58:ASP:O	39:BN:60:ILE:HG12	1.63	0.95
1:CA:1502:A:H2	1:CA:1505:G:H1	1.06	0.95
41:BP:143:GLY:C	41:BP:145:PRO:HD3	1.85	0.95
31:BA:911:A:H2'	42:BQ:9:TYR:OH	1.65	0.95
38:DI:9:LEU:H	38:DI:13:GLY:HA2	1.32	0.95
31:BA:1651:G:H2'	31:BA:1652:A:H5''	1.48	0.95
24:B2:25:VAL:HG13	24:B2:26:ARG:HD3	1.48	0.95
44:BS:29:PHE:N	44:BS:89:ARG:HD2	1.80	0.95
50:BY:17:SER:HA	50:BY:71:LYS:HD2	1.47	0.95
39:BN:45:ASN:HD22	39:BN:45:ASN:H	1.12	0.95
30:B8:35:GLN:NE2	30:B8:36:LYS:HZ2	1.65	0.95
31:DA:911:A:H2'	42:DQ:9:TYR:OH	1.64	0.95
33:BD:35:LYS:HD2	33:BD:104:TYR:CE1	2.02	0.95
42:BQ:81:VAL:C	42:BQ:82:ARG:HG2	1.86	0.95
24:B2:37:PHE:HE2	24:B2:40:SER:HA	1.31	0.95
31:BA:2656:U:H3	31:BA:2665:A:H2	1.03	0.95
31:BA:171:G:H2'	31:BA:172:C:O4'	1.67	0.95
43:DR:10:LEU:HB3	43:DR:17:ARG:NE	1.82	0.95
1:AA:509:A:H2'	1:AA:510:A:C8	2.02	0.95
41:BP:62:LEU:N	41:BP:62:LEU:HD22	1.80	0.94
31:BA:995:C:O2	39:BN:4:TYR:OH	1.84	0.94
33:BD:35:LYS:HZ1	33:BD:104:TYR:HB2	1.26	0.94
47:BV:71:LEU:HD22	47:BV:72:VAL:HG23	1.48	0.94
31:DA:997:G:OP1	46:DU:93:LYS:HD3	1.66	0.94
37:BH:70:THR:HG22	37:BH:74:ASN:HD21	1.29	0.94

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
41:DP:143:GLY:C	41:DP:145:PRO:HD3	1.87	0.94
30:B8:25:MET:HB2	41:BP:62:LEU:CD2	1.96	0.94
31:BA:1497:U:H5'	31:BA:1498:C:H5	1.29	0.94
41:DP:71:VAL:CG1	41:DP:72:PRO:HD3	1.96	0.94
31:DA:2658:C:H5'	31:DA:2659:G:OP2	1.66	0.94
38:BI:133:HIS:HB2	38:BI:134:PRO:HD2	1.49	0.94
47:BV:19:LYS:HG3	47:BV:20:LEU:O	1.65	0.94
39:DN:18:ALA:HB3	39:DN:26:LEU:HD22	1.49	0.94
30:D8:4:MET:SD	30:D8:61:LEU:HD12	2.07	0.94
37:BH:44:VAL:HG12	37:BH:45:VAL:H	1.31	0.94
31:DA:1887:C:H2'	31:DA:1888:G:H5'	1.49	0.94
4:AD:15:GLU:HG3	4:AD:63:LYS:HE2	1.47	0.94
30:D8:32:LEU:C	30:D8:34:TRP:H	1.70	0.94
4:CD:15:GLU:HG3	4:CD:63:LYS:HE2	1.47	0.94
48:BW:92:ARG:HH11	48:BW:92:ARG:HG2	1.32	0.94
12:AL:47:LYS:HB3	12:AL:48:PRO:HD3	1.45	0.94
31:DA:2415:G:H4'	41:DP:67:MET:N	1.82	0.94
49:DX:65:ARG:NE	49:DX:66:LEU:H	1.65	0.94
23:D1:85:LEU:HB3	23:D1:87:PRO:HD3	1.46	0.94
31:BA:870:A:H5''	42:BQ:7:MET:HB2	1.47	0.94
49:BX:55:ASN:HB2	49:BX:78:LYS:HD2	1.49	0.94
44:BS:14:VAL:HG12	44:BS:15:ARG:H	1.32	0.94
1:AA:1502:A:H2	1:AA:1505:G:H1	1.04	0.94
36:DG:82:LEU:HB3	36:DG:87:PRO:HG3	1.49	0.94
36:BG:76:SER:HB2	36:BG:83:ARG:HB3	1.45	0.94
31:DA:1278:A:OP1	43:DR:36:THR:HG22	1.68	0.94
42:DQ:75:THR:CA	42:DQ:88:GLY:HA2	1.97	0.94
47:DV:19:LYS:HG3	47:DV:20:LEU:N	1.82	0.94
31:DA:1658:C:OP1	34:DE:132:HIS:CE1	2.21	0.94
43:BR:10:LEU:HB3	43:BR:17:ARG:NE	1.83	0.94
51:DZ:101:PRO:O	51:DZ:102:LEU:HD23	1.66	0.94
31:DA:1464:C:HO2'	31:DA:1528:A:H8	0.95	0.94
1:CA:954:G:H21	1:CA:1227:A:H62	1.14	0.94
30:B8:25:MET:HB2	41:BP:62:LEU:HD23	1.50	0.94
31:DA:1902:C:O2'	33:DD:244:ARG:HB2	1.68	0.94
31:BA:2701:C:H3'	31:BA:2702:U:H5''	0.96	0.94
13:CM:34:LEU:HD13	13:CM:41:PRO:HG3	1.50	0.94
27:B5:16:ARG:HG2	27:B5:16:ARG:HH11	1.31	0.94
38:DI:133:HIS:HB2	38:DI:134:PRO:HD2	1.48	0.94
31:BA:102:G:O2'	31:BA:103:A:OP2	1.86	0.94
47:DV:19:LYS:HG3	47:DV:20:LEU:O	1.66	0.94
31:BA:1879:C:H2'	31:BA:1880:C:H5''	1.47	0.94

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
24:D2:37:PHE:HE2	24:D2:40:SER:HA	1.32	0.94
24:D2:49:LYS:HD2	24:D2:53:LEU:HD22	1.49	0.94
50:DY:10:GLY:HA2	50:DY:27:VAL:CG1	1.98	0.93
23:B1:85:LEU:HB3	23:B1:87:PRO:HD3	1.48	0.93
31:BA:2681:C:H5	31:BA:2725:A:H62	1.06	0.93
31:DA:1403:C:H5''	31:DA:1471:A:H1'	1.49	0.93
31:BA:2415:G:H4'	41:BP:67:MET:H	1.30	0.93
31:BA:997:G:OP1	46:BU:93:LYS:HD3	1.68	0.93
31:BA:1653:G:H3'	43:BR:4:LEU:HD12	1.51	0.93
31:DA:171:G:H2'	31:DA:172:C:O4'	1.67	0.93
35:DF:20:LEU:HD22	35:DF:203:GLN:HE22	1.34	0.93
31:DA:1678:G:N2	31:DA:1989:G:H22	1.66	0.93
32:DB:7:G:H2'	32:DB:8:U:H5''	1.49	0.93
32:DB:74:U:C2'	32:DB:75:G:H5''	1.98	0.93
49:DX:82:GLN:O	49:DX:85:PRO:HD2	1.69	0.93
31:DA:285:C:H2'	31:DA:286:C:H5''	1.49	0.93
11:AK:127:LYS:HE2	11:AK:127:LYS:HA	1.46	0.93
1:AA:250:A:H4'	1:AA:251:G:O5'	1.69	0.93
31:DA:995:C:O2	39:DN:4:TYR:OH	1.86	0.93
50:DY:28:LYS:O	50:DY:38:ILE:HB	1.68	0.93
30:D8:25:MET:HB2	41:DP:62:LEU:HD23	1.49	0.93
31:BA:285:C:H2'	31:BA:286:C:H5''	1.49	0.93
6:CF:18:GLN:HA	6:CF:21:LEU:HD23	1.47	0.93
30:D8:25:MET:HG3	41:DP:64:LYS:HB3	1.50	0.93
31:DA:1022:G:H22	31:DA:1142(A):A:H2	0.94	0.93
31:DA:2359:C:H2'	31:DA:2360:A:H5'	1.51	0.93
31:BA:571:A:H5'	31:BA:2030:A:H62	1.34	0.93
1:CA:1412:C:H2'	1:CA:1413:A:H8	1.31	0.93
24:B2:49:LYS:HD2	24:B2:53:LEU:HD22	1.51	0.93
31:BA:259:G:H21	31:BA:621:A:H8	1.05	0.93
31:DA:1188:U:H2'	31:DA:1189:A:H5'	1.50	0.93
43:BR:71:GLN:HE21	43:BR:71:GLN:HA	1.34	0.93
38:BI:9:LEU:H	38:BI:13:GLY:HA2	1.34	0.93
50:BY:46:LYS:O	50:BY:47:LYS:HE3	1.69	0.93
42:DQ:9:TYR:CD2	42:DQ:9:TYR:O	2.21	0.93
31:BA:2632:A:H1'	34:BE:61:ARG:NH1	1.83	0.93
39:BN:18:ALA:HB3	39:BN:26:LEU:HD22	1.51	0.93
49:BX:82:GLN:O	49:BX:85:PRO:HD2	1.69	0.93
41:DP:71:VAL:HG13	41:DP:72:PRO:CD	1.98	0.93
6:AF:18:GLN:HA	6:AF:21:LEU:HD23	1.49	0.93
31:BA:1678:G:N2	31:BA:1989:G:H22	1.65	0.93
36:BG:82:LEU:HB3	36:BG:87:PRO:HG3	1.48	0.92

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
36:DG:124:SER:HB2	36:DG:131:TYR:CE1	2.04	0.92
31:DA:2565:A:H5''	31:DA:2566:A:OP2	1.68	0.92
4:CD:158:ILE:HG23	4:CD:162:LEU:HD12	1.50	0.92
16:AP:20:VAL:HG21	16:AP:32:TYR:CG	2.02	0.92
47:DV:75:PHE:HE1	47:DV:89:GLN:HB3	1.30	0.92
31:DA:571:A:H5'	31:DA:2030:A:H62	1.33	0.92
31:DA:2632:A:H1'	34:DE:61:ARG:NH1	1.85	0.92
37:DH:85:LYS:HE2	37:DH:145:ALA:HB2	1.51	0.92
1:AA:954:G:H21	1:AA:1227:A:H62	1.14	0.92
35:DF:178:PRO:HB2	35:DF:201:VAL:HG11	1.52	0.92
47:BV:75:PHE:HE1	47:BV:89:GLN:HB3	1.32	0.92
32:DB:75:G:H5'	32:DB:75:G:H8	1.33	0.92
31:DA:1529:G:H21	31:DA:1530:C:H5''	1.35	0.92
16:CP:20:VAL:HG21	16:CP:32:TYR:CG	2.04	0.92
42:DQ:81:VAL:C	42:DQ:82:ARG:HG2	1.88	0.92
41:BP:41:ARG:HA	41:BP:41:ARG:HH21	1.30	0.92
42:DQ:8:LYS:HG3	42:DQ:9:TYR:H	1.35	0.92
40:DO:107:ARG:HH12	45:DT:35:LYS:HB2	1.31	0.92
42:DQ:22:LYS:HA	42:DQ:22:LYS:HE2	1.48	0.92
42:BQ:75:THR:CA	42:BQ:88:GLY:HA2	1.98	0.92
37:BH:85:LYS:HE2	37:BH:145:ALA:HB2	1.51	0.92
37:DH:83:TYR:HB3	37:DH:135:GLY:H	1.35	0.92
13:AM:34:LEU:HD13	13:AM:41:PRO:HG3	1.49	0.92
31:DA:2834:G:H5'	31:DA:2835:A:OP2	1.69	0.92
31:BA:2415:G:H4'	41:BP:67:MET:N	1.85	0.92
31:DA:661:C:O3'	41:DP:18:ARG:HG2	1.69	0.92
31:BA:2652:C:C2'	31:BA:2653:U:H5'	2.00	0.92
41:DP:97:PRO:O	41:DP:98:GLU:HB3	1.70	0.92
39:DN:45:ASN:HD22	39:DN:45:ASN:H	1.14	0.92
31:BA:2359:C:H2'	31:BA:2360:A:H5'	1.49	0.92
42:DQ:140:ALA:HB3	51:DZ:53:ILE:HG13	1.50	0.92
30:B8:32:LEU:C	30:B8:34:TRP:H	1.66	0.91
50:BY:75:ILE:HG12	50:BY:79:CYS:HA	1.52	0.91
50:BY:96:ILE:HG21	50:BY:99:CYS:HB3	1.52	0.91
42:DQ:81:VAL:HG12	42:DQ:82:ARG:HG3	1.52	0.91
1:AA:1412:C:H2'	1:AA:1413:A:H8	1.35	0.91
31:DA:2681:C:H5	31:DA:2725:A:H62	0.98	0.91
31:DA:2656:U:H3	31:DA:2665:A:H2	0.99	0.91
37:BH:43:VAL:HG23	37:BH:43:VAL:O	1.68	0.91
46:BU:27:LEU:N	46:BU:27:LEU:HD23	1.85	0.91
31:DA:1484:G:H22	31:DA:1505:C:H5	1.16	0.91
1:CA:1072:G:H2'	1:CA:1073:U:C6	2.06	0.91

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:BA:1494:A:C4'	31:BA:1495:A:OP1	2.19	0.91
31:DA:2652:C:C2'	31:DA:2653:U:H5'	2.00	0.91
48:DW:92:ARG:HG2	48:DW:92:ARG:HH11	1.34	0.91
31:BA:389:G:H22	41:BP:71:VAL:HG12	1.35	0.91
33:DD:147:LEU:HD12	33:DD:155:LEU:HD21	1.53	0.91
34:DE:34:VAL:HG22	34:DE:48:GLN:HE21	1.32	0.91
31:DA:141:A:H8	31:DA:1408:C:HO2'	1.15	0.91
41:BP:59:LEU:HA	41:BP:61:ARG:HH11	1.27	0.91
33:DD:35:LYS:HD2	33:DD:104:TYR:CE1	2.04	0.91
41:BP:146:VAL:HG22	41:BP:147:LEU:H	1.35	0.91
1:CA:929:G:H1	1:CA:1388:C:H42	1.19	0.91
30:B8:32:LEU:HB3	30:B8:35:GLN:N	1.85	0.91
4:AD:128:VAL:HG13	4:AD:129:ASN:ND2	1.85	0.91
39:DN:128:HIS:CD2	39:DN:131:GLN:HB2	2.05	0.91
35:BF:24:LEU:HB3	35:BF:25:PRO:HD2	1.53	0.91
39:BN:128:HIS:CD2	39:BN:131:GLN:HB2	2.05	0.91
30:B8:4:MET:SD	30:B8:61:LEU:HD12	2.10	0.91
31:DA:1281:G:H5'	31:DA:1281:G:H8	1.33	0.91
37:BH:156:ALA:N	37:BH:158:HIS:H	1.68	0.91
41:BP:62:LEU:HD22	41:BP:62:LEU:H	1.35	0.91
2:AB:187:LEU:HD23	2:AB:201:ILE:HG22	1.53	0.91
34:BE:197:ILE:HD11	34:BE:199:ARG:NH2	1.86	0.91
8:CH:88:LYS:HB3	8:CH:89:PRO:HD2	1.53	0.91
31:DA:1651:G:H2'	31:DA:1652:A:H5''	1.52	0.91
31:DA:751:A:H5'	48:DW:90:ARG:HA	1.50	0.91
23:D1:47:GLN:HG2	31:DA:2230:G:H1'	1.53	0.91
1:CA:975:A:H4'	1:CA:976:G:H5''	1.53	0.91
32:BB:74:U:C2'	32:BB:75:G:H5''	2.01	0.90
1:CA:1412:C:H2'	1:CA:1413:A:C8	2.06	0.90
33:DD:235:GLY:O	33:DD:237:GLU:HG2	1.72	0.90
42:BQ:9:TYR:CD2	42:BQ:9:TYR:O	2.24	0.90
30:B8:46:ARG:HH22	41:BP:65:ARG:NH2	1.68	0.90
35:BF:53:THR:HG22	35:BF:55:GLY:N	1.86	0.90
50:BY:76:CYS:SG	50:BY:77:PRO:HD2	2.10	0.90
39:DN:47:ALA:HB2	39:DN:112:LEU:HD11	1.52	0.90
10:CJ:32:ALA:HB2	10:CJ:76:ASN:HB3	1.54	0.90
31:DA:2463:C:H2'	31:DA:2464:C:H5'	1.54	0.90
24:B2:17:SER:O	24:B2:21:LEU:HD12	1.72	0.90
1:CA:102:G:H2'	1:CA:103:C:H6	1.36	0.90
42:BQ:140:ALA:HB3	51:BZ:53:ILE:HG13	1.49	0.90
31:DA:145:G:H2'	31:DA:146:G:H5''	1.52	0.90
39:DN:91:LEU:HA	39:DN:95:PRO:HB3	1.52	0.90

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
34:DE:197:ILE:HD11	34:DE:199:ARG:NH2	1.86	0.90
47:BV:47:VAL:HG13	47:BV:48:GLY:H	1.37	0.90
31:BA:1022:G:H22	31:BA:1142(A):A:H2	0.95	0.90
1:AA:929:G:H1	1:AA:1388:C:H42	1.20	0.90
30:D8:6:THR:HB	30:D8:63:PRO:HG3	1.54	0.90
45:BT:91:ARG:HB2	45:BT:116:ALA:HA	1.54	0.90
47:DV:19:LYS:HB3	47:DV:96:ILE:O	1.71	0.90
33:DD:186:HIS:HD2	33:DD:188:GLU:N	1.70	0.90
33:BD:186:HIS:HD2	33:BD:188:GLU:N	1.69	0.90
31:BA:2096:U:H3	31:BA:2193:G:H1	1.20	0.90
46:BU:92:ARG:HD2	47:BV:11:GLN:CG	2.01	0.90
31:BA:2758:A:C2'	31:BA:2759:G:H5''	2.01	0.90
39:BN:47:ALA:HB2	39:BN:112:LEU:HD11	1.54	0.90
12:AL:102:ARG:HG3	12:AL:102:ARG:HH11	1.36	0.90
49:BX:72:LYS:HG3	49:BX:74:PRO:HD3	1.53	0.90
37:DH:70:THR:CG2	37:DH:74:ASN:HD21	1.84	0.90
15:CO:87:ILE:HG22	15:CO:88:ARG:H	1.35	0.90
35:BF:135:LYS:HB3	35:BF:138:GLU:HG3	1.51	0.90
48:DW:9:TYR:H	48:DW:102:HIS:HD2	1.18	0.90
33:DD:166:GLN:HE21	33:DD:166:GLN:HA	1.37	0.90
50:DY:75:ILE:HG12	50:DY:79:CYS:HA	1.52	0.89
47:DV:71:LEU:HD22	47:DV:72:VAL:HG23	1.52	0.89
33:DD:186:HIS:HD2	33:DD:188:GLU:H	0.91	0.89
1:AA:975:A:H4'	1:AA:976:G:H5''	1.53	0.89
2:AB:172:ILE:HD12	2:AB:172:ILE:H	1.35	0.89
33:BD:35:LYS:HG2	33:BD:64:ILE:N	1.87	0.89
39:BN:39:ARG:HD3	39:BN:41:ASP:HB2	1.52	0.89
31:BA:661:C:O3'	41:BP:18:ARG:HG2	1.70	0.89
1:AA:1072:G:H2'	1:AA:1073:U:C6	2.07	0.89
9:CI:96:LEU:HG	9:CI:102:LEU:HB2	1.53	0.89
44:DS:14:VAL:HG12	44:DS:15:ARG:H	1.34	0.89
31:DA:2068:U:H3	31:DA:2430:A:H2	1.19	0.89
31:BA:1188:U:C2'	31:BA:1189:A:H5'	2.03	0.89
31:BA:145:G:H2'	31:BA:146:G:H5''	1.53	0.89
31:BA:2463:C:H2'	31:BA:2464:C:H5'	1.53	0.89
31:BA:141:A:H8	31:BA:1408:C:HO2'	0.90	0.89
33:BD:131:LEU:HB2	33:BD:136:ILE:HD11	1.53	0.89
12:AL:102:ARG:CG	12:AL:102:ARG:HH11	1.85	0.89
40:BO:107:ARG:HH12	45:BT:35:LYS:HB2	1.34	0.89
31:BA:1484:G:H22	31:BA:1505:C:H5	1.17	0.89
1:AA:685:G:O2'	1:AA:686:U:H5'	1.71	0.89
42:DQ:75:THR:HG21	42:DQ:85:LYS:HE2	1.54	0.89

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
33:DD:131:LEU:HB2	33:DD:136:ILE:HD11	1.53	0.89
31:DA:2758:A:C2'	31:DA:2759:G:H5''	2.01	0.89
27:D5:40:LYS:HE2	27:D5:46:CYS:HB3	1.54	0.89
47:DV:82:ARG:HG3	47:DV:82:ARG:HH11	1.38	0.89
45:BT:83:ILE:HG13	45:BT:84:GLN:H	1.37	0.89
1:AA:102:G:H2'	1:AA:103:C:H6	1.36	0.89
15:AO:39:LEU:CD1	15:AO:56:LEU:HB2	2.03	0.89
2:CB:172:ILE:H	2:CB:172:ILE:HD12	1.37	0.89
31:BA:2287:A:N6	31:BA:2344:U:H3	1.70	0.89
31:DA:2701:C:C3'	31:DA:2702:U:H5''	1.96	0.89
33:BD:108:PRO:HB3	33:BD:143:HIS:CE1	2.08	0.89
31:BA:2307:G:N2	31:BA:2308:G:H5'	1.88	0.89
31:BA:1019:U:HO2'	31:BA:1021:A:H2	0.89	0.89
36:BG:127:GLY:HA2	36:BG:166:ASP:HB3	1.53	0.89
20:CT:13:LEU:H	20:CT:13:LEU:HD12	1.36	0.89
33:DD:25:THR:CG2	33:DD:81:ALA:HB1	2.01	0.88
50:DY:17:SER:HA	50:DY:71:LYS:HD2	1.52	0.88
36:BG:52:ILE:HG22	36:BG:54:GLU:HG3	1.53	0.88
41:DP:38:GLN:HG3	41:DP:39:LYS:H	1.36	0.88
4:AD:158:ILE:HG23	4:AD:162:LEU:HD12	1.54	0.88
23:B1:46:LEU:H	23:B1:46:LEU:HD12	1.35	0.88
1:AA:673:G:H2'	1:AA:674:G:H8	1.36	0.88
37:BH:83:TYR:HB3	37:BH:135:GLY:H	1.33	0.88
15:AO:87:ILE:HG22	15:AO:88:ARG:H	1.37	0.88
37:BH:70:THR:CG2	37:BH:74:ASN:HD21	1.85	0.88
31:BA:1281:G:H8	31:BA:1281:G:H5'	1.37	0.88
37:BH:20:ALA:HB1	37:BH:21:PRO:HD2	1.52	0.88
33:BD:159:ALA:H	33:BD:161:THR:CG2	1.86	0.88
33:DD:158:ALA:H	33:DD:161:THR:HG21	1.37	0.88
31:DA:676:A:H8	31:DA:2069:G:H21	1.20	0.88
31:BA:2759:G:C8	31:BA:2759:G:H5'	2.06	0.88
1:CA:685:G:O2'	1:CA:686:U:H5'	1.72	0.88
12:CL:102:ARG:CG	12:CL:102:ARG:HH11	1.87	0.88
20:AT:13:LEU:HD12	20:AT:13:LEU:H	1.36	0.88
50:BY:96:ILE:HG13	50:BY:99:CYS:O	1.73	0.88
36:DG:127:GLY:HA2	36:DG:166:ASP:HB3	1.54	0.88
50:BY:8:LYS:HZ1	50:BY:74:PRO:HD3	1.35	0.88
1:AA:1097:C:H1'	1:AA:1170:A:H1'	1.53	0.88
31:BA:172:C:H3'	31:BA:173:G:H5''	1.55	0.88
42:BQ:75:THR:HG21	42:BQ:85:LYS:HE2	1.55	0.88
31:BA:2305:A:H5''	36:BG:134:GLY:HA3	1.54	0.88
44:BS:87:PHE:O	44:BS:88:ASP:HB2	1.73	0.88

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
35:DF:53:THR:HG22	35:DF:55:GLY:N	1.88	0.88
45:DT:83:ILE:HG13	45:DT:84:GLN:H	1.37	0.88
50:DY:38:ILE:HG22	50:DY:39:VAL:N	1.88	0.88
31:DA:856:C:H4'	31:DA:857:C:OP1	1.73	0.88
49:BX:65:ARG:NE	49:BX:66:LEU:H	1.70	0.88
31:DA:102:G:O2'	31:DA:103:A:OP2	1.90	0.88
31:BA:1278:A:OP1	43:BR:36:THR:HG22	1.73	0.88
31:DA:2463:C:C2'	31:DA:2464:C:H5'	2.04	0.88
1:AA:254:G:OP1	17:AQ:67:LYS:O	1.92	0.88
6:CF:69:GLU:O	6:CF:72:VAL:HG12	1.74	0.88
35:BF:164:ARG:HH11	35:BF:164:ARG:HG2	1.38	0.88
44:BS:95:HIS:CG	44:BS:96:GLY:H	1.90	0.88
50:DY:38:ILE:HG22	50:DY:39:VAL:H	1.38	0.88
1:CA:240:C:H2'	1:CA:241:C:H6	1.39	0.88
31:DA:1790:C:H5''	31:DA:1791:A:OP1	1.74	0.88
9:AI:96:LEU:HG	9:AI:102:LEU:HB2	1.55	0.88
43:DR:71:GLN:HA	43:DR:71:GLN:HE21	1.39	0.88
33:BD:166:GLN:HA	33:BD:166:GLN:HE21	1.37	0.88
30:B8:6:THR:HB	30:B8:63:PRO:HG3	1.54	0.88
9:AI:19:LEU:HD22	9:AI:59:PHE:HB3	1.55	0.88
8:AH:10:LEU:HD13	8:AH:83:ILE:HD11	1.56	0.88
31:DA:1494:A:C4'	31:DA:1495:A:OP1	2.20	0.87
31:DA:2206:G:H21	31:DA:2207:G:C5'	1.87	0.87
31:DA:2096:U:H3	31:DA:2193:G:H1	1.22	0.87
33:DD:253:GLN:HB3	33:DD:255:LYS:HZ3	1.38	0.87
33:DD:25:THR:HG21	33:DD:81:ALA:CB	2.02	0.87
42:BQ:8:LYS:CG	42:BQ:9:TYR:H	1.86	0.87
1:CA:677:U:H3	1:CA:713:G:H22	1.23	0.87
23:D1:19:GLN:HE21	31:DA:379:G:H21	1.20	0.87
31:BA:1464:C:HO2'	31:BA:1528:A:H8	0.94	0.87
31:BA:2036:C:H5'	31:BA:2036:C:H6	1.40	0.87
37:DH:41:MET:HB3	37:DH:43:VAL:HG13	1.56	0.87
50:DY:46:LYS:O	50:DY:47:LYS:HE3	1.74	0.87
37:DH:156:ALA:N	37:DH:158:HIS:H	1.70	0.87
41:BP:120:ALA:O	25:D3:1:MET:HG2	1.73	0.87
31:DA:2287:A:N6	31:DA:2344:U:H3	1.72	0.87
33:BD:186:HIS:HD2	33:BD:188:GLU:H	0.90	0.87
34:DE:92:THR:H	34:DE:95:ILE:HD11	1.39	0.87
45:BT:23:ARG:HB2	45:BT:24:PRO:HD2	1.56	0.87
31:BA:2463:C:C2'	31:BA:2464:C:H5'	2.05	0.87
1:CA:1097:C:H1'	1:CA:1170:A:H1'	1.55	0.87
31:DA:143:G:H2'	31:DA:143(A):C:H6	1.39	0.87

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:CB:187:LEU:HD23	2:CB:201:ILE:HG22	1.56	0.87
46:DU:92:ARG:HD2	47:DV:11:GLN:CG	2.04	0.87
31:DA:2359:C:C2'	31:DA:2360:A:H5'	2.05	0.87
31:BA:482:A:H4'	50:BY:47:LYS:NZ	1.89	0.87
40:DO:107:ARG:NH1	45:DT:35:LYS:HB2	1.88	0.87
45:BT:3:ARG:HB2	45:BT:6:LEU:HB3	1.54	0.87
4:AD:119:GLN:HG3	4:AD:123:HIS:CD2	2.09	0.87
6:AF:69:GLU:O	6:AF:72:VAL:HG12	1.74	0.87
11:CK:111:ASP:HA	18:CR:84:LYS:HG3	1.56	0.87
31:BA:2523:G:H2'	31:BA:2524:G:H5'	1.57	0.87
8:CH:10:LEU:HD13	8:CH:83:ILE:HD11	1.54	0.87
35:DF:164:ARG:HG2	35:DF:164:ARG:HH11	1.38	0.87
20:CT:50:GLU:HB3	20:CT:100:ILE:HG12	1.56	0.87
31:BA:2206:G:H21	31:BA:2207:G:C5'	1.86	0.87
47:BV:69:LYS:HG3	47:BV:70:ILE:H	1.35	0.87
31:BA:2068:U:H3	31:BA:2430:A:H2	1.13	0.87
4:CD:119:GLN:HG3	4:CD:123:HIS:CD2	2.10	0.87
31:DA:2305:A:H5''	36:DG:134:GLY:HA3	1.56	0.87
31:BA:1887:C:C2'	31:BA:1888:G:H5'	2.05	0.87
31:DA:1210:A:C5'	31:DA:1210:A:C8	2.58	0.87
9:AI:4:TYR:HB2	9:AI:19:LEU:HB2	1.57	0.87
31:DA:669:G:H4'	31:DA:670:A:OP2	1.72	0.87
43:BR:11:ASN:OD1	43:BR:12:ARG:N	2.08	0.87
1:AA:444:C:H2'	1:AA:445:G:H8	1.39	0.87
44:DS:87:PHE:O	44:DS:88:ASP:HB2	1.73	0.87
30:D8:46:ARG:HH22	41:DP:65:ARG:NH2	1.70	0.87
47:DV:47:VAL:HG13	47:DV:48:GLY:H	1.39	0.87
50:DY:71:LYS:HB2	50:DY:71:LYS:NZ	1.90	0.87
31:DA:389:G:H22	41:DP:71:VAL:HG12	1.40	0.87
31:DA:2475:C:H5'	31:DA:2476:A:OP2	1.74	0.87
51:BZ:101:PRO:O	51:BZ:102:LEU:HD23	1.74	0.87
31:BA:2789:C:OP1	31:BA:2789:C:H4'	1.74	0.87
31:BA:674:G:O2'	35:BF:74:ARG:HG3	1.73	0.87
41:DP:146:VAL:HG22	41:DP:147:LEU:H	1.38	0.87
30:D8:35:GLN:NE2	30:D8:36:LYS:HZ2	1.71	0.87
49:BX:82:GLN:HB3	49:BX:85:PRO:HG2	1.55	0.87
23:B1:17:SER:O	23:B1:44:PRO:HD2	1.74	0.87
35:BF:178:PRO:HB2	35:BF:201:VAL:HG11	1.56	0.87
32:BB:94:C:H2'	32:BB:95:C:H6	1.39	0.87
31:DA:141:A:C8	31:DA:1408:C:O2'	2.27	0.86
4:CD:9:CYS:HA	4:CD:12:CYS:HB2	1.55	0.86
39:BN:91:LEU:HA	39:BN:95:PRO:HB3	1.57	0.86

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
43:DR:117:VAL:O	43:DR:118:GLU:HB2	1.74	0.86
20:AT:50:GLU:HB3	20:AT:100:ILE:HG12	1.55	0.86
33:DD:35:LYS:HZ1	33:DD:104:TYR:HB2	1.40	0.86
49:DX:55:ASN:HB2	49:DX:78:LYS:HD2	1.54	0.86
4:CD:119:GLN:HG3	4:CD:123:HIS:HD2	1.40	0.86
4:AD:9:CYS:HA	4:AD:12:CYS:HB2	1.54	0.86
4:AD:119:GLN:HG3	4:AD:123:HIS:HD2	1.38	0.86
9:CI:4:TYR:HB2	9:CI:19:LEU:HB2	1.57	0.86
33:BD:147:LEU:HD12	33:BD:155:LEU:HD21	1.54	0.86
12:AL:38:THR:HG23	12:AL:39:VAL:HG23	1.57	0.86
47:BV:18:LEU:HD22	47:BV:19:LYS:HA	1.56	0.86
44:DS:95:HIS:CG	44:DS:96:GLY:H	1.94	0.86
31:DA:2307:G:N2	31:DA:2308:G:H5'	1.91	0.86
50:DY:28:LYS:HA	50:DY:39:VAL:H	1.40	0.86
33:DD:158:ALA:N	33:DD:161:THR:HG21	1.90	0.86
9:CI:19:LEU:HD22	9:CI:59:PHE:HB3	1.57	0.86
31:DA:370:G:H4'	31:DA:371:A:OP2	1.74	0.86
41:DP:41:ARG:HH21	41:DP:41:ARG:HA	1.38	0.86
45:DT:3:ARG:HB2	45:DT:6:LEU:HB3	1.55	0.86
1:AA:1090:U:H2'	1:AA:1091:U:H6	1.37	0.86
41:BP:64:LYS:O	41:BP:66:GLY:N	2.08	0.86
1:CA:1169:A:H2'	1:CA:1170:A:C8	2.10	0.86
1:AA:737:A:H2'	1:AA:738:C:C6	2.11	0.86
28:B6:27:LYS:HD3	31:BA:2285:C:OP2	1.74	0.86
39:BN:78:TYR:HD1	39:BN:79:PRO:CD	1.88	0.86
1:AA:585:G:H4'	12:AL:8:ASN:ND2	1.88	0.86
23:B1:87:PRO:HD2	23:B1:88:LYS:H	1.39	0.86
31:DA:2681:C:H5	31:DA:2725:A:N6	1.72	0.86
31:BA:1019:U:H3	31:BA:1142(A):A:N6	1.73	0.86
1:CA:1065:U:H1'	1:CA:1066:C:OP2	1.76	0.86
31:BA:370:G:H4'	31:BA:371:A:OP2	1.75	0.86
3:CC:150:LYS:HB3	3:CC:201:TYR:HB2	1.58	0.86
31:DA:271(O):C:HO2'	31:DA:271(P):C:H5	1.22	0.86
31:BA:1771:C:O2'	31:BA:1786:A:H8	1.57	0.86
39:DN:39:ARG:HD3	39:DN:41:ASP:HB2	1.55	0.86
33:DD:35:LYS:HG2	33:DD:64:ILE:N	1.91	0.86
31:BA:2012:G:H4'	48:BW:96:ILE:HD11	1.57	0.86
1:CA:1090:U:H2'	1:CA:1091:U:H6	1.38	0.86
31:DA:2012:G:H4'	48:DW:96:ILE:HD11	1.58	0.86
35:DF:135:LYS:HB3	35:DF:138:GLU:HG3	1.55	0.86
51:DZ:73:GLN:HG2	51:DZ:87:ASP:OD1	1.75	0.86
31:DA:2789:C:H4'	31:DA:2789:C:OP1	1.74	0.86

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
27:B5:51:TYR:CD2	27:B5:52:TYR:CE2	2.64	0.86
31:BA:1210:A:C8	31:BA:1210:A:C5'	2.58	0.86
2:AB:111:ARG:NH1	2:AB:111:ARG:HG2	1.90	0.86
31:DA:1019:U:H3	31:DA:1142(A):A:N6	1.72	0.86
49:DX:82:GLN:HB3	49:DX:85:PRO:HG2	1.55	0.86
37:BH:41:MET:SD	37:BH:55:PRO:HD3	2.16	0.86
1:CA:59:A:H5''	1:CA:60:A:H5''	1.58	0.86
16:AP:28:ARG:HG2	16:AP:28:ARG:NH1	1.91	0.86
16:CP:20:VAL:HG21	16:CP:32:TYR:HB2	1.57	0.86
31:DA:2223:G:H2'	31:DA:2224:G:H5'	1.58	0.86
15:CO:39:LEU:CD1	15:CO:56:LEU:HB2	2.05	0.86
51:BZ:73:GLN:HG2	51:BZ:87:ASP:OD1	1.74	0.86
22:B0:72:ARG:HB2	22:B0:75:LEU:HB2	1.58	0.86
10:AJ:32:ALA:HB2	10:AJ:76:ASN:HB3	1.54	0.86
35:DF:24:LEU:HB3	35:DF:25:PRO:HD2	1.55	0.86
35:BF:20:LEU:HD22	35:BF:203:GLN:HE22	1.40	0.86
8:AH:88:LYS:HB3	8:AH:89:PRO:HD2	1.55	0.86
11:CK:29:ILE:HB	11:CK:44:SER:HB3	1.58	0.86
1:CA:737:A:H2'	1:CA:738:C:C6	2.10	0.86
31:BA:143:G:H2'	31:BA:143(A):C:H6	1.40	0.86
31:BA:1210:A:H5''	31:BA:1210:A:C8	2.10	0.86
31:BA:587:C:C5	41:BP:33:ARG:HG2	2.11	0.86
36:DG:52:ILE:HG22	36:DG:54:GLU:HG3	1.55	0.86
40:BO:107:ARG:NH1	45:BT:35:LYS:HB2	1.89	0.86
1:CA:250:A:H4'	1:CA:251:G:O5'	1.73	0.86
34:DE:116:VAL:HG21	34:DE:122:PHE:CD2	2.10	0.86
33:DD:35:LYS:HZ1	33:DD:65:ILE:HA	1.39	0.85
1:AA:1442(A):G:H3'	1:AA:1442(B):A:C5'	2.02	0.85
23:D1:85:LEU:C	23:D1:87:PRO:HD3	1.96	0.85
11:AK:29:ILE:HB	11:AK:44:SER:HB3	1.58	0.85
1:CA:1070:U:H2'	1:CA:1071:C:H6	1.41	0.85
48:DW:4:LYS:HB2	48:DW:106:ILE:HG22	1.58	0.85
31:BA:1798:U:H5''	33:BD:259:THR:HG22	1.56	0.85
31:BA:1024:G:H3'	31:BA:1025:G:H5''	1.58	0.85
1:AA:240:C:H2'	1:AA:241:C:H6	1.41	0.85
5:CE:101:ILE:HD11	5:CE:119:LEU:HA	1.58	0.85
1:AA:336:C:O2'	1:AA:337:C:H5'	1.75	0.85
50:DY:76:CYS:SG	50:DY:77:PRO:HD2	2.15	0.85
34:BE:132:HIS:CD2	34:BE:135:HIS:NE2	2.45	0.85
45:BT:30:VAL:HG12	45:BT:44:ASP:OD2	1.75	0.85
31:BA:2359:C:C2'	31:BA:2360:A:H5'	2.06	0.85
1:AA:1169:A:H2'	1:AA:1170:A:C8	2.10	0.85

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:1493:A:H2'	31:BA:1913:A:N1	1.91	0.85
45:DT:91:ARG:HB2	45:DT:116:ALA:HA	1.56	0.85
28:D6:12:GLU:HB3	28:D6:23:THR:HA	1.58	0.85
1:AA:1412:C:H2'	1:AA:1413:A:C8	2.10	0.85
1:AA:1065:U:H1'	1:AA:1066:C:OP2	1.76	0.85
31:DA:1434:A:H61	31:DA:1558:A:H62	1.24	0.85
39:DN:78:TYR:HD1	39:DN:79:PRO:CD	1.88	0.85
1:CA:973:G:H3'	1:CA:974:A:H5''	1.58	0.85
31:DA:1778:U:H2'	31:DA:1784:A:N6	1.92	0.85
23:B1:19:GLN:HE21	31:BA:379:G:H21	1.23	0.85
36:BG:85:GLY:O	36:BG:87:PRO:HD2	1.76	0.85
1:CA:444:C:H2'	1:CA:445:G:H8	1.40	0.85
43:BR:117:VAL:O	43:BR:118:GLU:HB2	1.76	0.85
31:DA:1024:G:H3'	31:DA:1025:G:H5''	1.59	0.85
31:BA:863:A:O2'	31:BA:864:G:H5'	1.77	0.85
22:D0:72:ARG:HB2	22:D0:75:LEU:HB2	1.58	0.85
33:BD:25:THR:HG21	33:BD:81:ALA:CB	2.05	0.85
32:BB:66:A:H61	32:BB:108:U:H2'	1.42	0.85
13:CM:66:LEU:HD12	13:CM:66:LEU:H	1.42	0.85
50:DY:95:LYS:CD	50:DY:100:ALA:HB1	2.05	0.85
31:DA:996:A:H4'	46:DU:92:ARG:HE	1.40	0.85
39:BN:65:LYS:CE	39:BN:65:LYS:HA	2.03	0.85
33:DD:159:ALA:H	33:DD:161:THR:HG22	1.41	0.85
1:AA:444:C:H2'	1:AA:445:G:C8	2.11	0.85
1:CA:444:C:H2'	1:CA:445:G:C8	2.12	0.85
24:D2:17:SER:O	24:D2:21:LEU:HD12	1.76	0.85
28:D6:27:LYS:HD3	31:DA:2285:C:OP2	1.76	0.85
51:BZ:166:SER:OG	51:BZ:167:PRO:HA	1.77	0.85
1:AA:1070:U:H2'	1:AA:1071:C:H6	1.40	0.85
48:BW:9:TYR:H	48:BW:102:HIS:HD2	1.20	0.85
31:DA:863:A:O2'	31:DA:864:G:H5'	1.77	0.85
50:BY:95:LYS:CD	50:BY:100:ALA:HB1	2.07	0.85
1:CA:1279:A:H5''	1:CA:1280:A:OP1	1.77	0.85
1:CA:336:C:O2'	1:CA:337:C:H5'	1.76	0.85
31:BA:141:A:C8	31:BA:1408:C:O2'	2.28	0.85
37:DH:41:MET:SD	37:DH:55:PRO:HD3	2.16	0.85
37:BH:33:LEU:HD21	37:BH:136:ILE:HD12	1.57	0.85
31:DA:172:C:H3'	31:DA:173:G:H5''	1.56	0.85
45:BT:65:LYS:HE3	45:BT:66:VAL:N	1.89	0.85
31:DA:2030:A:H5''	31:DA:2031:A:OP1	1.77	0.85
31:BA:1503:U:C4	31:BA:1504:C:N4	2.45	0.85
50:BY:38:ILE:HG22	50:BY:39:VAL:N	1.90	0.85

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:DA:796:C:H2'	31:DA:797:C:C6	2.11	0.85
31:DA:1639:U:H2'	31:DA:1640:C:H5''	1.59	0.85
42:BQ:37:LEU:HB2	42:BQ:128:LYS:O	1.76	0.85
47:DV:21:ARG:CG	47:DV:93:GLU:HG3	2.05	0.85
31:DA:1210:A:H5''	31:DA:1210:A:C8	2.11	0.85
23:B1:85:LEU:C	23:B1:87:PRO:HD3	1.97	0.85
23:D1:86:SER:N	23:D1:87:PRO:HD3	1.91	0.85
33:DD:253:GLN:HB3	33:DD:255:LYS:NZ	1.92	0.85
41:DP:115:LEU:HA	41:DP:134:ALA:HB2	1.57	0.85
33:BD:25:THR:CG2	33:BD:81:ALA:HB1	2.06	0.84
42:DQ:75:THR:HA	42:DQ:88:GLY:CA	2.06	0.84
32:BB:7:G:C2'	32:BB:8:U:H5''	2.06	0.84
50:DY:8:LYS:HZ1	50:DY:74:PRO:HD3	1.42	0.84
33:BD:235:GLY:O	33:BD:237:GLU:HG2	1.77	0.84
48:DW:59:VAL:HG12	48:DW:60:ASN:N	1.89	0.84
43:DR:11:ASN:OD1	43:DR:12:ARG:N	2.09	0.84
1:CA:949:A:H61	1:CA:1232:U:H3	1.25	0.84
30:B8:31:HIS:CG	31:BA:2419:U:O4	2.29	0.84
39:DN:14:VAL:HG12	39:DN:52:VAL:HA	1.56	0.84
47:DV:62:LEU:HD22	47:DV:98:GLU:HB2	1.58	0.84
31:DA:1887:C:C2'	31:DA:1888:G:H5'	2.07	0.84
12:CL:102:ARG:HG3	12:CL:102:ARG:HH11	1.40	0.84
3:AC:70:VAL:HG12	3:AC:72:LYS:H	1.42	0.84
42:BQ:75:THR:HA	42:BQ:88:GLY:CA	2.06	0.84
23:B1:46:LEU:N	23:B1:46:LEU:HD12	1.89	0.84
50:DY:45:VAL:HG13	50:DY:62:GLU:HB2	1.56	0.84
1:AA:59:A:H5''	1:AA:60:A:H5''	1.58	0.84
30:D8:50:LEU:HD12	30:D8:51:ALA:H	1.40	0.84
36:DG:47:LYS:HG2	36:DG:82:LEU:HG	1.59	0.84
31:BA:1403:C:H5''	31:BA:1471:A:H1'	1.58	0.84
1:AA:671:G:H2'	1:AA:672:U:H6	1.41	0.84
1:AA:949:A:H1'	1:AA:1364:U:H3	1.43	0.84
1:CA:585:G:H4'	12:CL:8:ASN:ND2	1.92	0.84
15:CO:17:ARG:HH11	15:CO:17:ARG:CG	1.90	0.84
1:CA:673:G:H2'	1:CA:674:G:H8	1.38	0.84
31:BA:2321:G:H5''	31:BA:2322:A:OP2	1.75	0.84
31:DA:1332:G:C8	31:DA:1332:G:H5''	2.13	0.84
31:DA:1798:U:H5''	33:DD:259:THR:HG22	1.57	0.84
1:CA:600:C:H2'	1:CA:601:C:H6	1.40	0.84
27:B5:40:LYS:HE2	27:B5:46:CYS:HB3	1.56	0.84
1:CA:1442(A):G:H3'	1:CA:1442(B):A:C5'	2.02	0.84
31:BA:996:A:H4'	46:BU:92:ARG:HE	1.41	0.84

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
33:BD:159:ALA:N	33:BD:161:THR:HG22	1.92	0.84
31:DA:1503:U:C4	31:DA:1504:C:N4	2.45	0.84
51:BZ:53:ILE:CG2	51:BZ:71:VAL:HB	2.07	0.84
37:BH:30:LYS:NZ	37:BH:81:GLU:HA	1.93	0.84
41:DP:62:LEU:N	41:DP:62:LEU:HD22	1.90	0.84
41:BP:97:PRO:O	41:BP:98:GLU:HB3	1.75	0.84
1:AA:55:A:C5	1:AA:56:U:C5	2.65	0.84
31:BA:1047:G:H21	31:BA:1111:A:H62	1.25	0.84
31:BA:1790:C:H5''	31:BA:1791:A:OP1	1.78	0.84
42:BQ:81:VAL:HG12	42:BQ:82:ARG:CG	2.08	0.84
41:BP:146:VAL:HG13	41:BP:147:LEU:HG	1.60	0.84
31:DA:271(L):U:H4'	31:DA:271(M):G:C5	2.13	0.84
15:CO:39:LEU:HD12	15:CO:56:LEU:HB2	1.60	0.84
1:AA:677:U:H3	1:AA:713:G:H22	1.25	0.84
31:DA:1019:U:HO2'	31:DA:1021:A:H2	0.86	0.84
31:BA:1188:U:H2'	31:BA:1189:A:H5'	1.58	0.84
28:B6:44:ARG:O	28:B6:45:LYS:HG2	1.76	0.84
48:BW:29:LEU:O	48:BW:33:ARG:HG3	1.78	0.84
23:D1:10:LYS:HB2	23:D1:14:VAL:H	1.40	0.84
1:CA:1502:A:H2	1:CA:1505:G:N1	1.75	0.84
31:BA:146:G:H5'	31:BA:146:G:H8	1.43	0.84
31:BA:271(L):U:H4'	31:BA:271(M):G:C5	2.13	0.84
31:BA:92:A:O2'	31:BA:93:G:H5'	1.78	0.84
28:D6:44:ARG:O	28:D6:45:LYS:HG2	1.77	0.84
31:BA:1434:A:H61	31:BA:1558:A:H62	1.26	0.84
1:CA:1442:G:HO2'	1:CA:1442(A):G:H5''	1.42	0.83
39:DN:40:PRO:HA	46:DU:64:ARG:HH22	1.41	0.83
30:D8:6:THR:HG21	31:DA:243:U:OP1	1.78	0.83
45:DT:65:LYS:HE3	45:DT:66:VAL:N	1.92	0.83
47:DV:19:LYS:HG2	47:DV:96:ILE:HB	1.58	0.83
50:BY:28:LYS:O	50:BY:38:ILE:HB	1.78	0.83
22:D0:43:THR:H	31:DA:2331:G:H4'	1.42	0.83
48:DW:29:LEU:O	48:DW:33:ARG:HG3	1.77	0.83
33:BD:25:THR:HG23	33:BD:27:THR:HB	1.59	0.83
41:BP:47:ASP:HB3	41:BP:48:PRO:C	1.97	0.83
31:DA:1771:C:O2'	31:DA:1786:A:H8	1.59	0.83
44:BS:34:HIS:HB3	44:BS:53:SER:CB	2.08	0.83
42:BQ:52:VAL:HA	42:BQ:55:VAL:HG13	1.60	0.83
39:DN:65:LYS:HA	39:DN:65:LYS:CE	2.03	0.83
31:DA:92:A:O2'	31:DA:93:G:H5'	1.78	0.83
13:AM:66:LEU:H	13:AM:66:LEU:HD12	1.43	0.83
31:DA:674:G:O2'	35:DF:74:ARG:HG3	1.78	0.83

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
27:B5:40:LYS:CE	27:B5:46:CYS:HB3	2.08	0.83
28:B6:12:GLU:HB3	28:B6:23:THR:HA	1.60	0.83
44:DS:89:ARG:HA	44:DS:89:ARG:HE	1.40	0.83
28:D6:16:CYS:O	28:D6:17:LYS:HB2	1.76	0.83
12:CL:38:THR:HG23	12:CL:39:VAL:HG23	1.59	0.83
41:DP:47:ASP:HB3	41:DP:48:PRO:C	1.97	0.83
41:DP:50:ARG:HH21	41:DP:50:ARG:HG2	1.42	0.83
50:DY:96:ILE:HD12	50:DY:99:CYS:SG	2.17	0.83
44:BS:89:ARG:O	44:BS:92:TYR:HB3	1.78	0.83
31:DA:2036:C:H6	31:DA:2036:C:H5'	1.42	0.83
41:DP:64:LYS:O	41:DP:66:GLY:N	2.11	0.83
15:AO:17:ARG:NH1	15:AO:17:ARG:HG3	1.93	0.83
32:BB:75:G:H5'	32:BB:75:G:H8	1.42	0.83
31:DA:1962:C:O2'	31:DA:1964:G:OP2	1.96	0.83
47:BV:21:ARG:CG	47:BV:93:GLU:HG3	2.06	0.83
45:DT:23:ARG:HB2	45:DT:24:PRO:HD2	1.60	0.83
1:AA:1502:A:H2	1:AA:1505:G:N1	1.74	0.83
37:DH:41:MET:HB3	37:DH:43:VAL:CG1	2.09	0.83
1:AA:737:A:H2'	1:AA:738:C:H6	1.44	0.83
50:BY:45:VAL:HG13	50:BY:62:GLU:HB2	1.59	0.83
1:AA:63:C:H42	1:AA:104:G:H1	1.26	0.83
44:DS:89:ARG:O	44:DS:92:TYR:HB3	1.79	0.83
30:B8:59:LYS:HB2	30:B8:59:LYS:HZ2	1.34	0.83
34:DE:47:VAL:HG22	34:DE:84:PHE:O	1.79	0.83
36:BG:47:LYS:HG2	36:BG:82:LEU:HG	1.61	0.83
20:AT:50:GLU:HB3	20:AT:100:ILE:CG1	2.08	0.83
31:DA:2818:G:O2'	31:DA:2819:G:H5'	1.78	0.83
1:CA:254:G:OP1	17:CQ:67:LYS:O	1.95	0.83
31:BA:1952:A:C5	40:BO:22:ILE:HD11	2.12	0.83
50:BY:96:ILE:HD12	50:BY:99:CYS:SG	2.18	0.83
23:B1:65:SER:H	23:B1:67:ILE:CD1	1.90	0.83
1:AA:409:G:H2'	1:AA:410:G:H5'	1.60	0.83
37:BH:41:MET:HB3	37:BH:43:VAL:CG1	2.09	0.83
15:AO:39:LEU:HD12	15:AO:56:LEU:HB2	1.60	0.83
23:B1:10:LYS:HB2	23:B1:14:VAL:H	1.42	0.83
1:CA:63:C:H42	1:CA:104:G:H1	1.23	0.83
27:B5:2:ALA:HA	31:BA:2015:A:H1'	1.59	0.83
41:BP:115:LEU:HA	41:BP:134:ALA:HB2	1.59	0.83
31:BA:1882:C:H5'	31:BA:1883:G:OP2	1.79	0.83
39:BN:3:THR:HG22	39:BN:4:TYR:N	1.94	0.83
47:BV:90:PRO:HG2	47:BV:91:TYR:H	1.44	0.83
31:BA:141:A:H8	31:BA:1408:C:O2'	1.61	0.83

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:BA:669:G:H4'	31:BA:670:A:OP2	1.78	0.83
34:BE:92:THR:H	34:BE:95:ILE:HD11	1.43	0.83
37:DH:85:LYS:CE	37:DH:133:VAL:HB	2.09	0.83
23:B1:10:LYS:HD3	23:B1:14:VAL:HA	1.61	0.83
37:DH:156:ALA:H	37:DH:158:HIS:H	1.26	0.83
1:AA:600:C:H2'	1:AA:601:C:H6	1.41	0.83
41:DP:122:PRO:HA	41:DP:141:ALA:O	1.78	0.83
34:BE:116:VAL:HG21	34:BE:122:PHE:CD2	2.13	0.83
7:AG:113:GLU:HB2	7:AG:119:ARG:HG2	1.60	0.83
44:BS:89:ARG:HA	44:BS:89:ARG:HE	1.41	0.83
27:D5:40:LYS:CE	27:D5:46:CYS:HB3	2.09	0.83
29:B7:8:ASN:HD21	29:B7:11:LYS:H	1.22	0.83
34:BE:47:VAL:HG22	34:BE:84:PHE:O	1.79	0.83
31:BA:2801(A):A:H4'	31:BA:2802:G:H5'	1.61	0.83
38:BI:133:HIS:HB2	38:BI:134:PRO:CD	2.09	0.83
20:CT:50:GLU:HB3	20:CT:100:ILE:CG1	2.08	0.83
7:CG:150:ALA:HB2	11:CK:50:TYR:CZ	2.14	0.83
33:BD:253:GLN:HB3	33:BD:255:LYS:HZ3	1.43	0.83
42:DQ:8:LYS:CG	42:DQ:9:TYR:H	1.92	0.82
50:DY:96:ILE:HG21	50:DY:99:CYS:HB3	1.60	0.82
49:BX:77:LYS:HG2	49:BX:78:LYS:HG3	1.61	0.82
23:D1:89:GLU:CD	23:D1:89:GLU:N	2.28	0.82
38:DI:133:HIS:HB2	38:DI:134:PRO:CD	2.09	0.82
31:BA:1484:G:N2	31:BA:1505:C:H5	1.77	0.82
41:DP:146:VAL:HG13	41:DP:147:LEU:HG	1.60	0.82
1:AA:333:G:H4'	20:AT:16:HIS:CE1	2.14	0.82
16:AP:20:VAL:HG21	16:AP:32:TYR:HB2	1.60	0.82
31:DA:197:A:H8	31:DA:197:A:H5'	1.44	0.82
28:D6:15:GLU:OE1	28:D6:18:ARG:HG3	1.77	0.82
31:BA:2068:U:N3	31:BA:2430:A:H2	1.77	0.82
45:DT:30:VAL:HG21	45:DT:83:ILE:HG13	1.60	0.82
1:AA:949:A:H61	1:AA:1232:U:H3	1.26	0.82
33:DD:77:ALA:HB2	33:DD:97:TYR:CD2	2.13	0.82
31:DA:1839:G:C8	31:DA:1927:A:H1'	2.13	0.82
47:BV:15:GLU:HB3	47:BV:16:PRO:HD2	1.60	0.82
31:BA:1651:G:C2'	31:BA:1652:A:H5''	2.09	0.82
50:DY:37:VAL:HG23	50:DY:67:LEU:HB3	1.61	0.82
37:BH:156:ALA:H	37:BH:158:HIS:H	1.23	0.82
33:DD:108:PRO:HB3	33:DD:143:HIS:CE1	2.15	0.82
34:BE:117:MET:O	34:BE:118:LYS:HB2	1.79	0.82
46:DU:27:LEU:HD23	46:DU:27:LEU:N	1.93	0.82
31:BA:2712(A):A:H5''	31:BA:2713:A:OP2	1.80	0.82

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:DA:1348:G:H2'	31:DA:1349:A:H5''	1.59	0.82
27:D5:2:ALA:HA	31:DA:2015:A:H1'	1.59	0.82
46:BU:92:ARG:HB2	47:BV:11:GLN:NE2	1.94	0.82
47:BV:43:GLU:HA	47:BV:48:GLY:HA2	1.61	0.82
23:D1:87:PRO:HD2	23:D1:88:LYS:H	1.43	0.82
31:BA:481:G:OP2	50:BY:47:LYS:HD2	1.79	0.82
45:DT:32:TYR:CG	45:DT:81:PRO:HB2	2.14	0.82
31:DA:1484:G:N2	31:DA:1505:C:H5	1.78	0.82
51:DZ:166:SER:OG	51:DZ:167:PRO:HA	1.79	0.82
5:AE:101:ILE:HD11	5:AE:119:LEU:HD23	1.62	0.82
31:BA:1348:G:H2'	31:BA:1349:A:H5''	1.59	0.82
31:DA:2292:C:O2'	31:DA:2293:C:H5'	1.77	0.82
39:BN:40:PRO:HA	46:BU:64:ARG:HH22	1.42	0.82
1:AA:1279:A:H5''	1:AA:1280:A:OP1	1.79	0.82
50:BY:38:ILE:HG22	50:BY:39:VAL:H	1.44	0.82
31:DA:1434:A:H61	31:DA:1558:A:N6	1.78	0.82
31:BA:1434:A:H61	31:BA:1558:A:N6	1.78	0.82
11:AK:111:ASP:HA	18:AR:84:LYS:HG3	1.60	0.82
1:AA:973:G:H3'	1:AA:974:A:H5''	1.61	0.82
31:DA:993:G:H5''	47:DV:75:PHE:CE2	2.14	0.82
30:D8:32:LEU:HB3	30:D8:35:GLN:N	1.94	0.82
30:D8:31:HIS:CG	31:DA:2419:U:O4	2.31	0.82
15:CO:33:THR:HG21	15:CO:85:LEU:HD22	1.62	0.82
34:DE:132:HIS:CD2	34:DE:135:HIS:NE2	2.47	0.82
1:CA:737:A:H2'	1:CA:738:C:H6	1.43	0.82
31:BA:2476:A:C6	31:BA:2477:C:C5	2.67	0.82
45:BT:12:SER:O	45:BT:13:ARG:HG2	1.79	0.82
31:DA:518:G:H4'	48:DW:18:ARG:NH1	1.94	0.82
24:B2:14:ARG:O	24:B2:18:PRO:HD3	1.79	0.82
1:CA:678:U:H2'	1:CA:679:C:C6	2.14	0.82
47:BV:19:LYS:CG	47:BV:20:LEU:N	2.41	0.82
50:DY:27:VAL:HB	50:DY:29:GLU:OE1	1.78	0.82
41:DP:62:LEU:H	41:DP:62:LEU:HD13	1.41	0.82
36:BG:55:LYS:O	36:BG:59:GLU:HB2	1.80	0.82
39:DN:56:ASN:H	39:DN:125:GLY:HA3	1.45	0.82
31:BA:856:C:H4'	31:BA:857:C:OP1	1.78	0.82
1:CA:17:U:H2'	1:CA:18:C:C6	2.14	0.82
31:BA:1639:U:H2'	31:BA:1640:C:H5''	1.61	0.82
31:DA:1396:U:H2'	31:DA:1396:U:O2	1.78	0.82
31:BA:1971:A:H1'	33:BD:240:ALA:O	1.79	0.82
31:DA:1826:G:H4'	33:DD:242:ARG:NH2	1.94	0.82
49:DX:72:LYS:HG3	49:DX:74:PRO:HD3	1.59	0.82

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:DA:2702:U:HO2'	31:DA:2703:C:H5	1.23	0.82
10:CJ:40:LEU:HB2	10:CJ:41:PRO:HD2	1.62	0.82
45:DT:30:VAL:HG12	45:DT:44:ASP:OD2	1.78	0.82
37:DH:20:ALA:HB1	37:DH:21:PRO:HD2	1.60	0.82
14:AN:4:LYS:O	14:AN:7:ILE:HG12	1.78	0.82
31:BA:1292:U:H2'	31:BA:1293:C:C6	2.15	0.82
38:DI:85:GLU:O	38:DI:123:LEU:HD12	1.79	0.82
31:DA:2334:G:H21	44:DS:18:ILE:CD1	1.93	0.82
15:CO:17:ARG:HG3	15:CO:17:ARG:NH1	1.91	0.82
31:BA:1654:A:OP1	43:BR:3:HIS:HB2	1.80	0.82
31:DA:587:C:C5	41:DP:33:ARG:HG2	2.15	0.82
5:AE:101:ILE:HD11	5:AE:119:LEU:HA	1.59	0.82
7:CG:113:GLU:HB2	7:CG:119:ARG:HG2	1.59	0.82
31:DA:2321:G:H5''	31:DA:2322:A:OP2	1.79	0.82
31:BA:1332:G:H5''	31:BA:1332:G:C8	2.14	0.82
51:BZ:69:THR:HG22	51:BZ:90:VAL:HA	1.62	0.82
32:DB:20:C:H2'	32:DB:21:G:C5'	2.07	0.82
33:DD:25:THR:HG23	33:DD:27:THR:HB	1.60	0.82
31:DA:1497:U:C5'	31:DA:1498:C:H5	1.93	0.82
51:BZ:141:VAL:HG23	51:BZ:144:LEU:HD23	1.61	0.82
51:BZ:151:HIS:CB	51:BZ:170:THR:HA	2.05	0.82
47:DV:43:GLU:HA	47:DV:48:GLY:HA2	1.62	0.82
2:AB:204:ASN:ND2	2:AB:206:ASP:H	1.77	0.82
37:BH:85:LYS:CE	37:BH:133:VAL:HB	2.10	0.82
31:DA:860:U:H5	31:DA:917:A:N7	1.78	0.82
34:DE:152:LYS:HD3	39:DN:78:TYR:HB2	1.60	0.82
1:AA:1199:U:H4'	10:AJ:54:PHE:CE1	2.15	0.82
38:DI:72:LEU:HD12	38:DI:138:ILE:HG23	1.59	0.82
30:D8:62:LEU:HD13	31:DA:242:G:H5''	1.62	0.81
50:BY:97:ARG:O	50:BY:97:ARG:HG3	1.79	0.81
50:DY:96:ILE:HG13	50:DY:99:CYS:O	1.79	0.81
41:BP:50:ARG:HG2	41:BP:50:ARG:HH21	1.42	0.81
34:DE:36:ARG:NH2	34:DE:88:GLY:HA2	1.94	0.81
33:DD:146:GLU:HB2	33:DD:189:CYS:HB3	1.61	0.81
41:BP:122:PRO:HA	41:BP:141:ALA:O	1.79	0.81
34:BE:34:VAL:HG22	34:BE:48:GLN:HE21	1.42	0.81
31:BA:993:G:H5''	47:BV:75:PHE:CE2	2.13	0.81
42:DQ:52:VAL:HA	42:DQ:55:VAL:HG13	1.62	0.81
31:BA:1528(A):A:N7	31:BA:1529:G:C8	2.48	0.81
1:CA:949:A:H1'	1:CA:1364:U:H3	1.44	0.81
33:BD:210:GLY:O	33:BD:211:ARG:HB3	1.78	0.81
27:B5:48:GLU:O	27:B5:50:GLY:N	2.14	0.81

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
47:DV:25:LEU:H	47:DV:94:LEU:CD1	1.94	0.81
46:DU:92:ARG:HB2	47:DV:11:GLN:NE2	1.96	0.81
47:BV:82:ARG:HG2	47:BV:82:ARG:HH11	1.44	0.81
39:BN:14:VAL:HG12	39:BN:52:VAL:HA	1.61	0.81
42:BQ:141:GLN:HG3	51:BZ:72:ARG:HH11	1.45	0.81
1:CA:1199:U:H4'	10:CJ:54:PHE:CE1	2.15	0.81
31:DA:1292:U:H2'	31:DA:1293:C:C6	2.15	0.81
8:AH:102:ARG:H	8:AH:102:ARG:HE	1.29	0.81
48:BW:4:LYS:HB2	48:BW:106:ILE:HG22	1.63	0.81
1:CA:333:G:H4'	20:CT:16:HIS:CE1	2.16	0.81
39:BN:56:ASN:H	39:BN:125:GLY:HA3	1.44	0.81
30:B8:32:LEU:HG	30:B8:34:TRP:CE3	2.15	0.81
33:BD:35:LYS:CD	33:BD:63:ARG:HB3	2.07	0.81
30:D8:59:LYS:HZ2	30:D8:59:LYS:HB2	1.38	0.81
41:BP:51:PHE:HB3	41:BP:52:GLU:HG2	1.61	0.81
35:BF:52:LYS:HG3	35:BF:56:GLU:HB3	1.61	0.81
23:B1:89:GLU:N	23:B1:89:GLU:CD	2.25	0.81
31:DA:1019:U:O2'	31:DA:1021:A:H2	1.62	0.81
1:CA:1072:G:H2'	1:CA:1073:U:H6	1.44	0.81
31:DA:271(O):C:O2'	31:DA:271(P):C:H5	1.62	0.81
31:BA:2712:U:H5''	31:BA:2712:U:O2	1.80	0.81
1:AA:382:A:H2'	1:AA:383:A:C8	2.16	0.81
4:AD:133:VAL:HG13	4:AD:135:LEU:HD22	1.62	0.81
14:CN:4:LYS:O	14:CN:7:ILE:HG12	1.80	0.81
22:D0:43:THR:HG22	31:DA:2331:G:O3'	1.79	0.81
1:AA:382:A:H2'	1:AA:383:A:H8	1.46	0.81
3:CC:70:VAL:HG12	3:CC:72:LYS:H	1.44	0.81
33:BD:8:PRO:HB3	33:BD:14:ARG:HB2	1.60	0.81
49:DX:65:ARG:CZ	49:DX:66:LEU:N	2.43	0.81
42:BQ:82:ARG:O	42:BQ:83:MET:HB2	1.80	0.81
33:BD:158:ALA:N	33:BD:161:THR:HG21	1.94	0.81
23:B1:87:PRO:CD	23:B1:88:LYS:H	1.92	0.81
34:BE:36:ARG:NH2	34:BE:88:GLY:HA2	1.94	0.81
39:DN:24:GLY:HA2	39:DN:27:ALA:HB3	1.61	0.81
42:DQ:81:VAL:HG12	42:DQ:82:ARG:CG	2.10	0.81
37:BH:41:MET:HB3	37:BH:43:VAL:HG13	1.61	0.81
30:B8:50:LEU:HD12	30:B8:51:ALA:H	1.43	0.81
31:BA:1396:U:H2'	31:BA:1396:U:O2	1.79	0.81
33:BD:35:LYS:HG2	33:BD:64:ILE:H	1.44	0.81
47:BV:66:ARG:HD2	47:BV:67:GLY:N	1.96	0.81
33:BD:158:ALA:H	33:BD:161:THR:HG21	1.45	0.81
33:BD:44:ASN:CB	33:BD:49:ILE:HA	2.10	0.81

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:559:A:H5''	1:AA:560:U:H3'	1.62	0.81
6:CF:63:TYR:HD2	6:CF:63:TYR:N	1.78	0.81
45:DT:12:SER:O	45:DT:13:ARG:HG2	1.81	0.81
48:BW:59:VAL:HG12	48:BW:60:ASN:N	1.95	0.81
33:BD:30:GLU:HG3	33:BD:63:ARG:NE	1.96	0.81
31:DA:1654:A:OP1	43:DR:3:HIS:HB2	1.81	0.81
31:DA:286:C:C2'	31:DA:287:C:H5'	2.10	0.81
50:DY:38:ILE:CG2	50:DY:39:VAL:N	2.43	0.81
31:BA:2475:C:H5'	31:BA:2476:A:OP2	1.81	0.81
31:BA:1839:G:C8	31:BA:1927:A:H1'	2.16	0.81
1:AA:622:A:C8	1:AA:623:C:C6	2.69	0.81
50:BY:10:GLY:CA	50:BY:27:VAL:HG13	2.05	0.81
41:BP:24:GLY:HA3	41:BP:33:ARG:HH21	1.46	0.81
41:BP:36:LYS:O	41:BP:38:GLN:HG2	1.80	0.81
23:D1:65:SER:H	23:D1:67:ILE:CD1	1.94	0.81
28:B6:46:HIS:CB	28:B6:47:THR:N	2.43	0.81
31:DA:2712:U:O2	31:DA:2712:U:H5''	1.81	0.81
28:B6:15:GLU:OE1	28:B6:18:ARG:HG3	1.81	0.81
1:CA:1003:G:H2'	1:CA:1004:A:H4'	1.62	0.81
43:BR:53:HIS:HD2	43:BR:94:TYR:OH	1.64	0.81
42:BQ:60:ARG:HA	51:BZ:179:ASP:N	1.96	0.81
1:AA:1452:C:H5'	1:AA:1456:G:C4	2.16	0.81
49:BX:55:ASN:HB2	49:BX:78:LYS:CD	2.11	0.81
36:BG:67:LYS:H	36:BG:67:LYS:HD2	1.45	0.81
33:BD:267:SER:HA	33:BD:270:ILE:HG13	1.62	0.81
28:D6:46:HIS:CB	28:D6:47:THR:N	2.44	0.81
25:D3:40:THR:HG23	25:D3:43:ILE:HG12	1.63	0.81
31:DA:1882:C:H5'	31:DA:1883:G:OP2	1.81	0.81
30:B8:35:GLN:HE21	30:B8:36:LYS:HZ2	1.29	0.80
22:B0:8:GLY:HA3	31:BA:2255:G:H21	1.46	0.80
47:BV:82:ARG:HG3	47:BV:82:ARG:HH11	1.45	0.80
34:BE:37:ARG:HD3	34:BE:44:TYR:OH	1.81	0.80
22:D0:8:GLY:HA3	31:DA:2255:G:H21	1.47	0.80
31:BA:286:C:C2'	31:BA:287:C:H5'	2.11	0.80
30:B8:6:THR:HG21	31:BA:243:U:OP1	1.81	0.80
31:BA:271(O):C:O2'	31:BA:271(P):C:H5	1.63	0.80
6:AF:63:TYR:N	6:AF:63:TYR:HD2	1.78	0.80
1:CA:671:G:H2'	1:CA:672:U:H6	1.45	0.80
1:CA:134:A:H61	16:CP:25:ARG:HH12	1.29	0.80
31:DA:867:C:O2	31:DA:913:U:H5'	1.81	0.80
47:BV:62:LEU:HD22	47:BV:98:GLU:HB2	1.61	0.80
33:BD:35:LYS:HA	33:BD:64:ILE:HG22	1.64	0.80

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
47:DV:90:PRO:HG2	47:DV:91:TYR:H	1.46	0.80
2:CB:204:ASN:ND2	2:CB:206:ASP:H	1.78	0.80
23:B1:86:SER:N	23:B1:87:PRO:HD3	1.95	0.80
23:D1:87:PRO:CD	23:D1:88:LYS:H	1.94	0.80
34:DE:37:ARG:HD3	34:DE:44:TYR:OH	1.80	0.80
31:DA:2801(A):A:H4'	31:DA:2802:G:H5'	1.61	0.80
31:BA:2030:A:H5''	31:BA:2031:A:OP1	1.82	0.80
45:DT:129:ARG:NH1	45:DT:131:ALA:HB3	1.97	0.80
31:DA:1108:U:H2'	31:DA:1109:C:H5'	1.63	0.80
23:D1:26:ARG:HB3	23:D1:35:THR:H	1.46	0.80
1:AA:17:U:H2'	1:AA:18:C:C6	2.16	0.80
51:BZ:109:ALA:HB1	51:BZ:145:GLU:OE2	1.81	0.80
32:BB:20:C:H2'	32:BB:21:G:C5'	2.07	0.80
49:BX:65:ARG:CZ	49:BX:66:LEU:N	2.43	0.80
33:DD:267:SER:HA	33:DD:270:ILE:HG13	1.61	0.80
1:AA:1256:A:N6	1:AA:1278:U:H1'	1.96	0.80
31:BA:2801(A):A:O3'	31:BA:2802:G:H3'	1.81	0.80
50:BY:71:LYS:NZ	50:BY:71:LYS:HB2	1.94	0.80
31:DA:2476:A:C6	31:DA:2477:C:C5	2.70	0.80
1:AA:1063:C:H3'	1:AA:1064:G:H2'	1.64	0.80
23:D1:10:LYS:HD3	23:D1:14:VAL:HA	1.63	0.80
23:B1:47:GLN:HG2	31:BA:2230:G:H1'	1.63	0.80
31:DA:2523:G:H2'	31:DA:2524:G:H5'	1.60	0.80
31:DA:2334:G:N2	44:DS:18:ILE:HD11	1.95	0.80
41:BP:51:PHE:HB3	41:BP:52:GLU:OE2	1.79	0.80
49:BX:53:LYS:HE3	49:BX:55:ASN:HD21	1.47	0.80
29:D7:11:LYS:HE2	31:DA:686:G:H5''	1.61	0.80
33:DD:44:ASN:CB	33:DD:49:ILE:HA	2.11	0.80
1:CA:409:G:H2'	1:CA:410:G:H5'	1.61	0.80
51:DZ:53:ILE:CG2	51:DZ:71:VAL:HB	2.12	0.80
45:BT:32:TYR:CG	45:BT:81:PRO:HB2	2.15	0.80
50:BY:38:ILE:CG2	50:BY:39:VAL:N	2.45	0.80
31:DA:481:G:OP2	50:DY:47:LYS:HD2	1.80	0.80
23:D1:46:LEU:H	23:D1:46:LEU:HD12	1.45	0.80
28:B6:16:CYS:O	28:B6:17:LYS:HB2	1.81	0.80
31:DA:2287:A:H2	31:DA:2346:A:N1	1.80	0.80
37:DH:85:LYS:HE3	37:DH:133:VAL:HB	1.64	0.80
31:BA:2681:C:H5	31:BA:2725:A:N6	1.79	0.80
42:BQ:141:GLN:HA	51:BZ:53:ILE:HB	1.64	0.80
5:CE:101:ILE:HD11	5:CE:119:LEU:HD23	1.62	0.80
37:DH:33:LEU:HD21	37:DH:136:ILE:HD12	1.63	0.80
1:CA:382:A:H2'	1:CA:383:A:H8	1.46	0.80

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:CT:89:ARG:HB2	20:CT:104:LEU:HD11	1.62	0.80
31:DA:2287:A:H62	31:DA:2344:U:H3	1.28	0.80
2:AB:88:ALA:HB2	2:AB:219:VAL:HG13	1.63	0.80
31:DA:2801(A):A:O3'	31:DA:2802:G:H3'	1.82	0.80
51:DZ:5:LEU:HG	51:DZ:47:VAL:HG21	1.62	0.80
4:AD:180:GLY:HA3	4:AD:182:LYS:HE2	1.64	0.80
36:DG:55:LYS:O	36:DG:59:GLU:HB2	1.81	0.80
1:CA:55:A:C5	1:CA:56:U:C5	2.70	0.80
44:BS:36:TYR:HD1	44:BS:36:TYR:N	1.78	0.80
31:BA:2652:C:H2'	31:BA:2653:U:H5'	1.62	0.80
48:DW:9:TYR:H	48:DW:102:HIS:CD2	2.00	0.80
31:DA:1047:G:H21	31:DA:1111:A:H62	1.28	0.80
31:BA:2223:G:H2'	31:BA:2224:G:H5'	1.61	0.80
3:AC:150:LYS:HB3	3:AC:201:TYR:HB2	1.62	0.80
49:DX:57:LEU:HD11	49:DX:77:LYS:HD2	1.64	0.80
33:DD:267:SER:C	33:DD:269:PHE:H	1.86	0.80
2:CB:111:ARG:HG2	2:CB:111:ARG:NH1	1.93	0.80
31:DA:146:G:H5'	31:DA:146:G:H8	1.47	0.80
33:BD:253:GLN:HB3	33:BD:255:LYS:NZ	1.96	0.80
1:AA:1201:A:H1'	1:AA:1202:G:OP2	1.82	0.80
45:BT:17:THR:O	45:BT:18:ASP:HB3	1.81	0.80
38:BI:72:LEU:HD12	38:BI:138:ILE:HG23	1.63	0.80
31:DA:2068:U:N3	31:DA:2430:A:H2	1.80	0.80
51:DZ:109:ALA:HB1	51:DZ:145:GLU:OE2	1.82	0.80
41:BP:17:LYS:HG3	41:BP:19:VAL:HG23	1.64	0.80
37:DH:85:LYS:HD2	37:DH:141:VAL:HG13	1.64	0.80
31:DA:1528(A):A:N7	31:DA:1529:G:C8	2.50	0.80
31:BA:2287:A:H2	31:BA:2346:A:N1	1.80	0.80
31:BA:2287:A:H62	31:BA:2344:U:H3	1.26	0.80
50:BY:28:LYS:HA	50:BY:39:VAL:H	1.46	0.80
31:BA:1108:U:H2'	31:BA:1109:C:H5'	1.63	0.80
1:CA:382:A:H2'	1:CA:383:A:C8	2.17	0.80
1:AA:475:G:H2'	1:AA:476:G:H8	1.46	0.80
45:DT:17:THR:O	45:DT:18:ASP:HB3	1.82	0.80
22:B0:43:THR:HG22	31:BA:2331:G:O3'	1.81	0.80
1:AA:134:A:H61	16:AP:25:ARG:HH12	1.29	0.80
32:DB:66:A:H61	32:DB:108:U:H2'	1.46	0.80
41:BP:58:THR:O	41:BP:61:ARG:NE	2.14	0.80
44:BS:14:VAL:CG1	44:BS:15:ARG:N	2.44	0.80
31:BA:1962:C:O2'	31:BA:1964:G:OP2	1.99	0.80
2:CB:188:ALA:HB1	2:CB:192:SER:HB2	1.63	0.80
3:CC:108:ASN:HB3	3:CC:111:LEU:HB2	1.62	0.80

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:CD:108:LEU:HD23	4:CD:183:GLY:HA3	1.63	0.80
49:BX:57:LEU:HD11	49:BX:77:LYS:HD2	1.63	0.79
32:BB:8:U:H5'	32:BB:8:U:H6	1.47	0.79
31:BA:389:G:N2	41:BP:71:VAL:HG12	1.97	0.79
4:CD:62:GLN:HE22	4:CD:65:ARG:HE	1.29	0.79
1:CA:1063:C:H3'	1:CA:1064:G:H2'	1.64	0.79
33:DD:210:GLY:O	33:DD:211:ARG:HB3	1.81	0.79
37:DH:30:LYS:NZ	37:DH:81:GLU:HA	1.97	0.79
31:BA:860:U:H5	31:BA:917:A:N7	1.80	0.79
31:DA:542:C:C4	31:DA:543:C:N4	2.50	0.79
1:CA:1285:A:H1'	1:CA:1286:A:OP2	1.82	0.79
4:CD:180:GLY:HA3	4:CD:182:LYS:HE2	1.64	0.79
31:DA:1971:A:H1'	33:DD:240:ALA:O	1.82	0.79
51:DZ:151:HIS:CB	51:DZ:170:THR:HA	2.04	0.79
47:DV:15:GLU:HB3	47:DV:16:PRO:HD2	1.61	0.79
1:AA:678:U:H2'	1:AA:679:C:C6	2.17	0.79
27:D5:46:CYS:SG	27:D5:47:PRO:CD	2.69	0.79
15:CO:87:ILE:HG22	15:CO:88:ARG:N	1.98	0.79
31:DA:806:C:OP2	41:DP:39:LYS:HD2	1.82	0.79
35:BF:46:ARG:HH11	35:BF:46:ARG:CG	1.95	0.79
1:AA:445:G:H2'	1:AA:446:G:H8	1.47	0.79
33:BD:77:ALA:HB2	33:BD:97:TYR:CD2	2.17	0.79
1:CA:84:U:H5	1:CA:88:A:C8	2.00	0.79
41:BP:140:ALA:O	25:D3:1:MET:SD	2.40	0.79
23:D1:46:LEU:N	23:D1:46:LEU:HD12	1.97	0.79
23:D1:8:SER:N	23:D1:46:LEU:HD11	1.96	0.79
10:AJ:40:LEU:HB2	10:AJ:41:PRO:HD2	1.62	0.79
8:AH:120:THR:H	8:AH:123:GLU:HB2	1.47	0.79
1:CA:1452:C:H5'	1:CA:1456:G:C4	2.18	0.79
1:AA:1003:G:H2'	1:AA:1004:A:H4'	1.62	0.79
38:BI:85:GLU:O	38:BI:123:LEU:HD12	1.82	0.79
38:DI:130:TYR:HB3	38:DI:136:VAL:HG13	1.64	0.79
33:BD:27:THR:HG23	33:BD:28:GLU:N	1.97	0.79
42:DQ:141:GLN:HA	51:DZ:53:ILE:HB	1.64	0.79
1:CA:1435:G:H2'	1:CA:1436:U:C6	2.17	0.79
12:AL:6:THR:HG23	12:AL:9:GLN:HE21	1.45	0.79
1:AA:84:U:H5	1:AA:88:A:C8	2.00	0.79
13:CM:49:THR:HG22	13:CM:51:ALA:H	1.46	0.79
47:BV:19:LYS:HG2	47:BV:96:ILE:HB	1.64	0.79
33:BD:25:THR:HG22	33:BD:82:ILE:O	1.82	0.79
33:BD:35:LYS:CD	33:BD:104:TYR:CD1	2.66	0.79
33:DD:35:LYS:HA	33:DD:64:ILE:HG22	1.63	0.79

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
32:DB:7:G:C2'	32:DB:8:U:H5''	2.12	0.79
41:DP:58:THR:O	41:DP:61:ARG:NE	2.15	0.79
31:BA:102:G:HO2'	31:BA:103:A:P	2.05	0.79
49:DX:77:LYS:HG2	49:DX:78:LYS:HG3	1.63	0.79
31:BA:2660:A:H5''	31:BA:2661:G:N3	1.98	0.79
38:BI:130:TYR:HB3	38:BI:136:VAL:HG13	1.63	0.79
22:D0:51:VAL:N	22:D0:62:LEU:HD12	1.98	0.79
51:DZ:141:VAL:HG23	51:DZ:144:LEU:HD23	1.61	0.79
1:AA:1442(A):G:H8	45:BT:118:ARG:HH11	1.29	0.79
31:DA:83:G:H22	31:DA:102:G:HO2'	1.27	0.79
15:AO:17:ARG:CG	15:AO:17:ARG:HH11	1.92	0.79
42:BQ:23:GLY:O	42:BQ:100:GLY:HA3	1.82	0.79
32:DB:94:C:H2'	32:DB:95:C:C6	2.16	0.79
31:BA:676:A:H2	31:BA:802:A:H61	1.27	0.79
41:BP:41:ARG:HA	41:BP:41:ARG:NH2	1.97	0.79
4:AD:108:LEU:HD23	4:AD:183:GLY:HA3	1.63	0.79
31:DA:1833:U:H2'	31:DA:1834:U:H6	1.47	0.79
44:DS:36:TYR:HD1	44:DS:36:TYR:N	1.80	0.79
31:BA:993:G:H5''	47:BV:75:PHE:CZ	2.17	0.79
33:DD:172:TYR:CD1	33:DD:186:HIS:HA	2.17	0.79
27:D5:51:TYR:CD2	27:D5:52:TYR:CE2	2.71	0.79
31:BA:2646:C:OP2	31:BA:2732:G:O2'	2.00	0.79
45:DT:27:THR:O	45:DT:28:VAL:HG23	1.83	0.79
51:DZ:39:VAL:HG21	51:DZ:44:PHE:HB2	1.64	0.79
31:DA:482:A:H4'	50:DY:47:LYS:NZ	1.98	0.79
31:BA:807:U:H2'	31:BA:808:G:O5'	1.83	0.79
31:DA:2469:A:H2	31:DA:2481:G:N2	1.79	0.79
45:BT:27:THR:O	45:BT:28:VAL:HG23	1.82	0.79
31:DA:1678:G:H21	31:DA:1989:G:H22	1.29	0.79
42:DQ:141:GLN:HG3	51:DZ:72:ARG:HH11	1.48	0.79
31:DA:2712(A):A:H5''	31:DA:2713:A:OP2	1.83	0.79
31:BA:2292:C:O2'	31:BA:2293:C:H5'	1.81	0.79
19:AS:40:ILE:HD13	19:AS:62:ILE:HD11	1.63	0.79
31:BA:751:A:H5'	48:BW:90:ARG:HA	1.65	0.79
33:DD:35:LYS:HG2	33:DD:64:ILE:H	1.46	0.79
30:D8:32:LEU:HB2	30:D8:35:GLN:H	1.48	0.79
31:DA:142:A:H5'	31:DA:142(A):C:OP2	1.83	0.79
50:BY:8:LYS:CE	50:BY:72:VAL:HG23	2.12	0.79
1:AA:600:C:H2'	1:AA:601:C:C6	2.18	0.79
19:AS:6:LYS:HG2	19:AS:7:LYS:HD3	1.65	0.79
13:AM:49:THR:HG22	13:AM:51:ALA:H	1.47	0.79
33:BD:35:LYS:HZ1	33:BD:65:ILE:HA	1.47	0.79

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:DA:2316:C:H2'	31:DA:2317:C:H6	1.48	0.79
23:B1:65:SER:N	23:B1:67:ILE:HD11	1.98	0.79
29:B7:9:ARG:NH1	31:BA:1310:G:OP2	2.16	0.79
45:BT:28:VAL:HG21	45:BT:46:GLU:HG3	1.63	0.79
31:DA:145:G:C2'	31:DA:146:G:H5''	2.12	0.79
40:BO:104:ARG:CZ	45:BT:33:LYS:HD2	2.12	0.79
1:CA:1201:A:H1'	1:CA:1202:G:OP2	1.82	0.79
33:DD:8:PRO:HB3	33:DD:14:ARG:HB2	1.64	0.79
22:B0:13:GLY:O	22:B0:14:ARG:HB2	1.81	0.79
3:AC:108:ASN:HB3	3:AC:111:LEU:HB2	1.63	0.79
1:CA:559:A:H5''	1:CA:560:U:H3'	1.64	0.79
1:AA:1432:G:OP1	45:BT:107:ASP:HB2	1.82	0.79
34:BE:52:LEU:HD12	34:BE:53:PRO:HD3	1.65	0.79
33:BD:35:LYS:HB3	33:BD:63:ARG:HA	1.63	0.78
41:BP:16:ARG:HD3	41:BP:18:ARG:N	1.94	0.78
31:DA:307:G:N2	31:DA:310:A:H5'	1.98	0.78
35:DF:52:LYS:HG3	35:DF:56:GLU:HB3	1.65	0.78
31:DA:2652:C:H2'	31:DA:2653:U:H5'	1.62	0.78
34:DE:52:LEU:HD12	34:DE:53:PRO:HD3	1.65	0.78
20:AT:89:ARG:HB2	20:AT:104:LEU:HD11	1.64	0.78
31:BA:2818:G:O2'	31:BA:2819:G:H5'	1.83	0.78
1:AA:389:A:H2'	1:AA:390:C:H5'	1.66	0.78
31:DA:70:G:H21	31:DA:71:A:H62	1.31	0.78
33:BD:267:SER:C	33:BD:269:PHE:H	1.85	0.78
31:DA:1651:G:C2'	31:DA:1652:A:H5''	2.13	0.78
31:DA:2660:A:H5''	31:DA:2661:G:N3	1.97	0.78
11:CK:29:ILE:HB	11:CK:44:SER:CB	2.14	0.78
3:CC:47:LEU:HD21	3:CC:68:VAL:HG11	1.63	0.78
1:CA:622:A:C8	1:CA:623:C:C6	2.71	0.78
31:DA:1952:A:C5	40:DO:22:ILE:HD11	2.18	0.78
31:BA:1973:G:H2'	31:BA:1974:C:H6	1.49	0.78
41:BP:56:SER:O	41:BP:58:THR:N	2.15	0.78
16:CP:43:LYS:HA	16:CP:48:TRP:HB3	1.64	0.78
31:DA:1786:A:H1'	31:DA:1938:A:N6	1.99	0.78
31:BA:1021:A:H62	31:BA:1141:U:H3	1.32	0.78
31:DA:94:C:H5'	31:DA:94(A):G:OP2	1.83	0.78
40:DO:104:ARG:CZ	45:DT:33:LYS:HD2	2.12	0.78
42:BQ:140:ALA:HA	51:BZ:99:TYR:CD2	2.18	0.78
37:BH:32:GLU:O	37:BH:33:LEU:HD23	1.83	0.78
17:CQ:67:LYS:HA	17:CQ:70:ARG:HH12	1.47	0.78
8:CH:120:THR:H	8:CH:123:GLU:HB2	1.48	0.78
2:AB:188:ALA:HB1	2:AB:192:SER:HB2	1.65	0.78

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
30:D8:32:LEU:HD11	30:D8:41:ILE:HD13	1.66	0.78
37:BH:85:LYS:HD2	37:BH:141:VAL:HG13	1.66	0.78
4:CD:31:CYS:C	4:CD:33:MET:H	1.87	0.78
31:DA:8:A:H2'	31:DA:9:U:C5	2.19	0.78
50:BY:15:VAL:HG12	50:BY:17:SER:H	1.49	0.78
1:CA:600:C:H2'	1:CA:601:C:C6	2.18	0.78
36:DG:33:ARG:H	36:DG:162:THR:HB	1.48	0.78
41:DP:17:LYS:HG3	41:DP:19:VAL:HG23	1.66	0.78
33:BD:35:LYS:HZ3	33:BD:104:TYR:HD1	1.31	0.78
44:DS:14:VAL:CG1	44:DS:15:ARG:N	2.46	0.78
31:BA:197:A:H5'	31:BA:197:A:H8	1.46	0.78
15:AO:87:ILE:HG22	15:AO:88:ARG:N	1.99	0.78
34:DE:36:ARG:NH2	34:DE:88:GLY:CA	2.47	0.78
35:BF:22:ALA:O	35:BF:26:ALA:HB2	1.84	0.78
31:DA:1448:G:H1'	31:DA:1528:A:H62	1.49	0.78
31:DA:2646:C:OP2	31:DA:2732:G:O2'	2.01	0.78
34:DE:73:GLU:HG3	34:DE:74:PRO:HD2	1.65	0.78
40:BO:66:LYS:H	40:BO:82:ASN:ND2	1.80	0.78
1:AA:1285:A:H1'	1:AA:1286:A:OP2	1.82	0.78
23:B1:26:ARG:HB3	23:B1:35:THR:H	1.48	0.78
1:CA:180:U:H2'	1:CA:181:G:H5'	1.64	0.78
31:DA:1495:A:N3	31:DA:1496:A:C2	2.52	0.78
35:DF:101:LEU:HD12	35:DF:102:PRO:CD	2.11	0.78
47:BV:72:VAL:HA	47:BV:88:ARG:HH12	1.49	0.78
49:BX:38:GLU:N	49:BX:38:GLU:OE1	2.17	0.78
3:AC:47:LEU:HD21	3:AC:68:VAL:HG11	1.64	0.78
1:CA:67:C:H2'	1:CA:68:G:C8	2.19	0.78
36:BG:33:ARG:H	36:BG:162:THR:HB	1.47	0.78
2:CB:185:ILE:CG2	2:CB:199:TYR:HB2	2.12	0.78
31:DA:743:G:C2'	31:DA:744:G:H5'	2.13	0.78
23:D1:17:SER:O	23:D1:44:PRO:HD2	1.83	0.78
31:BA:145:G:C2'	31:BA:146:G:H5''	2.13	0.78
28:D6:46:HIS:HB2	28:D6:47:THR:N	1.99	0.78
1:CA:937:A:H1'	1:CA:1379:G:H22	1.48	0.78
35:DF:67:GLN:O	35:DF:67:GLN:HG3	1.81	0.78
16:AP:28:ARG:HH11	16:AP:28:ARG:CG	1.96	0.78
41:DP:51:PHE:HB3	41:DP:52:GLU:OE2	1.83	0.78
15:AO:33:THR:HG21	15:AO:85:LEU:HD22	1.65	0.78
1:CA:1256:A:N6	1:CA:1278:U:H1'	1.97	0.78
35:DF:2:LYS:HG3	35:DF:25:PRO:HB2	1.66	0.78
45:DT:28:VAL:CG2	45:DT:46:GLU:HG3	2.14	0.78
45:BT:28:VAL:CG2	45:BT:46:GLU:HG3	2.14	0.78

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
50:DY:8:LYS:CE	50:DY:72:VAL:HG23	2.14	0.78
45:DT:33:LYS:HB2	45:DT:41:ARG:O	1.84	0.78
35:DF:89:VAL:HG12	35:DF:90:PHE:N	1.96	0.78
20:CT:71:THR:HG22	20:CT:72:LEU:N	1.99	0.78
1:AA:1530:G:H4'	1:AA:1530:G:OP1	1.84	0.78
33:BD:25:THR:CG2	33:BD:82:ILE:H	1.97	0.78
2:CB:88:ALA:HB2	2:CB:219:VAL:HG13	1.65	0.78
16:CP:20:VAL:HG21	16:CP:32:TYR:CB	2.13	0.78
31:BA:1678:G:H21	31:BA:1989:G:H22	1.28	0.78
1:CA:457:C:H2'	1:CA:458:C:H6	1.48	0.78
2:CB:20:GLU:HG3	2:CB:191:ASP:HB2	1.66	0.78
1:CA:475:G:H2'	1:CA:476:G:H8	1.47	0.78
19:CS:6:LYS:HG2	19:CS:7:LYS:HD3	1.64	0.78
47:BV:5:VAL:HB	47:BV:60:GLU:OE1	1.83	0.78
12:AL:27:LEU:HD11	12:AL:64:TYR:CE1	2.19	0.78
31:DA:996:A:C4'	46:DU:92:ARG:HE	1.96	0.78
41:DP:24:GLY:CA	41:DP:33:ARG:HH21	1.97	0.78
4:AD:112:VAL:HG12	4:AD:116:GLN:OE1	1.84	0.78
51:BZ:5:LEU:HG	51:BZ:47:VAL:HG21	1.65	0.78
31:BA:2471:C:H3'	31:BA:2472:G:H5''	1.66	0.78
31:BA:2580:U:H5'	34:BE:131:ALA:HB3	1.66	0.78
4:CD:26:CYS:HG	53:CD:301:ZN:ZN	0.97	0.78
49:DX:53:LYS:HE3	49:DX:55:ASN:HD21	1.48	0.77
45:DT:28:VAL:HG21	45:DT:46:GLU:HG3	1.65	0.77
35:DF:185:ASP:HA	35:DF:188:ARG:HD3	1.65	0.77
18:AR:53:ARG:HH21	18:AR:60:ALA:N	1.81	0.77
1:CA:942:G:H21	9:CI:124:GLN:HE22	1.32	0.77
43:DR:100:LEU:HD22	43:DR:100:LEU:H	1.49	0.77
35:DF:160:ASN:C	35:DF:160:ASN:HD22	1.87	0.77
33:BD:244:ARG:HG2	33:BD:245:PRO:HD3	1.65	0.77
16:AP:43:LYS:HA	16:AP:48:TRP:HB3	1.66	0.77
31:BA:1495:A:N3	31:BA:1496:A:C2	2.53	0.77
33:DD:35:LYS:HZ3	33:DD:104:TYR:HB2	1.45	0.77
31:BA:83:G:H22	31:BA:102:G:HO2'	1.29	0.77
31:DA:141:A:H8	31:DA:1408:C:O2'	1.61	0.77
31:BA:2334:G:H21	44:BS:18:ILE:CD1	1.95	0.77
42:DQ:82:ARG:O	42:DQ:83:MET:HB2	1.83	0.77
4:CD:23:GLY:HA3	4:CD:112:VAL:HG22	1.65	0.77
4:AD:23:GLY:HA3	4:AD:112:VAL:HG22	1.65	0.77
34:DE:117:MET:O	34:DE:118:LYS:HB2	1.84	0.77
28:B6:14:THR:O	28:B6:49:HIS:HA	1.84	0.77
46:DU:75:ASN:HB2	46:DU:78:THR:OG1	1.85	0.77

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
45:BT:129:ARG:NH1	45:BT:131:ALA:HB3	1.99	0.77
1:AA:942:G:H21	9:AI:124:GLN:HE22	1.32	0.77
23:D1:30:VAL:O	23:D1:30:VAL:HG12	1.85	0.77
31:BA:1833:U:H2'	31:BA:1834:U:H6	1.47	0.77
39:BN:73:THR:O	39:BN:75:TYR:N	2.17	0.77
42:BQ:42:ILE:HD13	42:BQ:97:VAL:HG21	1.67	0.77
27:B5:46:CYS:SG	27:B5:47:PRO:HG2	2.23	0.77
46:BU:83:LEU:HG	46:BU:88:ILE:HG12	1.65	0.77
42:BQ:8:LYS:HG3	42:BQ:9:TYR:N	1.98	0.77
31:DA:330:A:C2	31:DA:1210:A:H2'	2.17	0.77
41:BP:24:GLY:CA	41:BP:33:ARG:HH21	1.98	0.77
41:DP:24:GLY:HA3	41:DP:33:ARG:HH21	1.48	0.77
44:DS:78:LEU:HD11	44:DS:103:GLU:HB3	1.64	0.77
47:BV:28:GLU:HG3	47:BV:29:PRO:HD3	1.67	0.77
31:DA:2208:A:H1'	31:DA:2219:G:C5	2.19	0.77
2:AB:185:ILE:CG2	2:AB:199:TYR:HB2	2.11	0.77
46:BU:95:LEU:HD12	47:BV:11:GLN:HG3	1.67	0.77
33:BD:25:THR:O	33:BD:27:THR:N	2.17	0.77
46:DU:95:LEU:HD12	47:DV:11:GLN:HG3	1.64	0.77
30:B8:6:THR:HG22	30:B8:63:PRO:HD3	1.67	0.77
1:AA:1072:G:H2'	1:AA:1073:U:H6	1.45	0.77
1:CA:445:G:H2'	1:CA:446:G:H8	1.47	0.77
33:BD:125:ILE:O	33:BD:125:ILE:HG22	1.85	0.77
1:AA:370:C:H2'	1:AA:371:G:C8	2.19	0.77
30:D8:43:GLN:O	30:D8:44:LYS:HD2	1.84	0.77
1:AA:457:C:H2'	1:AA:458:C:H6	1.47	0.77
16:AP:20:VAL:HG21	16:AP:32:TYR:CB	2.14	0.77
31:DA:2394:C:C2'	31:DA:2395:C:H5'	2.15	0.77
50:DY:75:ILE:HD12	50:DY:76:CYS:N	1.99	0.77
27:D5:48:GLU:O	27:D5:50:GLY:N	2.18	0.77
31:DA:1021:A:H62	31:DA:1141:U:H3	1.33	0.77
50:BY:39:VAL:HG12	50:BY:40:GLU:N	1.99	0.77
18:AR:45:SER:HB3	18:AR:51:LEU:HD21	1.67	0.77
31:BA:542:C:C4	31:BA:543:C:N4	2.52	0.77
1:CA:555:C:H2'	1:CA:556:C:H6	1.48	0.77
7:CG:79:ARG:NE	7:CG:84:ASN:HD21	1.82	0.77
5:AE:71:LEU:O	5:AE:72:GLN:HG3	1.84	0.77
12:CL:27:LEU:HD11	12:CL:64:TYR:CE1	2.19	0.77
1:CA:499:A:H4'	1:CA:500:G:OP1	1.84	0.77
31:DA:142:A:C8	31:DA:1408:C:H1'	2.19	0.77
47:BV:69:LYS:HB2	47:BV:93:GLU:OE2	1.83	0.77
15:CO:63:ARG:HH11	15:CO:87:ILE:HD13	1.50	0.77

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
34:BE:36:ARG:NH2	34:BE:88:GLY:CA	2.48	0.77
45:BT:28:VAL:O	45:BT:29:ARG:HD2	1.84	0.77
23:B1:8:SER:N	23:B1:46:LEU:HD11	2.00	0.77
31:BA:2208:A:H1'	31:BA:2219:G:C5	2.20	0.77
5:CE:51:VAL:HB	5:CE:52:PRO:HD3	1.66	0.77
16:AP:20:VAL:CG2	16:AP:32:TYR:HB2	2.15	0.77
31:DA:1224:C:O3'	47:DV:88:ARG:HB3	1.84	0.77
47:BV:25:LEU:H	47:BV:94:LEU:CD1	1.96	0.77
37:BH:85:LYS:HE3	37:BH:133:VAL:HB	1.64	0.77
31:DA:389:G:N2	41:DP:71:VAL:HG12	1.99	0.77
5:CE:102:ALA:HB1	5:CE:106:PRO:HG2	1.66	0.77
35:BF:185:ASP:HA	35:BF:188:ARG:HD3	1.66	0.77
40:DO:66:LYS:H	40:DO:82:ASN:ND2	1.82	0.77
1:CA:1148:U:H2'	1:CA:1149:C:O4'	1.84	0.77
31:DA:2762:G:H8	31:DA:2762:G:H5'	1.50	0.77
44:BS:78:LEU:HD11	44:BS:103:GLU:HB3	1.65	0.77
31:BA:786:C:C2'	31:BA:787:U:H5'	2.15	0.77
33:BD:27:THR:CG2	33:BD:28:GLU:H	1.98	0.77
31:DA:993:G:H5''	47:DV:75:PHE:CZ	2.19	0.77
31:BA:2787:C:C1'	34:BE:61:ARG:HB2	2.13	0.77
31:DA:2808:U:H5'	31:DA:2891:G:O6	1.84	0.77
28:D6:10:LEU:HD12	30:D8:35:GLN:NE2	1.99	0.77
31:BA:94:C:H5'	31:BA:94(A):G:OP2	1.85	0.77
31:DA:2404:C:H2'	31:DA:2405:G:C5'	2.15	0.77
31:BA:1778:U:H2'	31:BA:1784:A:N6	1.99	0.77
1:CA:509:A:C2	1:CA:510:A:C2	2.73	0.77
13:CM:3:ARG:HG2	13:CM:9:ILE:HD11	1.67	0.77
31:DA:2660:A:H5'	31:DA:2661:G:H21	1.50	0.77
39:BN:131:GLN:HG2	39:BN:134:ARG:H	1.47	0.77
17:AQ:67:LYS:HA	17:AQ:70:ARG:HH12	1.50	0.77
48:BW:9:TYR:H	48:BW:102:HIS:CD2	2.01	0.77
1:AA:1435:G:H2'	1:AA:1436:U:C6	2.20	0.77
31:DA:1509:C:OP1	31:DA:1509:C:H4'	1.85	0.77
19:CS:40:ILE:HD13	19:CS:62:ILE:HD11	1.65	0.77
42:DQ:60:ARG:HA	51:DZ:179:ASP:N	1.99	0.77
31:BA:139(A):G:N2	49:BX:44:GLU:OE1	2.18	0.77
25:B3:40:THR:HG23	25:B3:43:ILE:HG12	1.65	0.77
31:DA:314:A:O2'	31:DA:315:G:H5'	1.84	0.77
28:B6:10:LEU:HD12	30:B8:35:GLN:NE2	2.00	0.77
50:DY:10:GLY:CA	50:DY:27:VAL:HG13	2.13	0.77
23:B1:94:LEU:O	23:B1:95:LEU:HG	1.85	0.77
41:BP:98:GLU:HG3	41:BP:99:LEU:N	2.00	0.77

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:CH:51:VAL:HG11	8:CH:60:ARG:HG3	1.67	0.77
23:D1:22:GLY:HA2	23:D1:38:SER:O	1.85	0.77
31:BA:2808:U:H5'	31:BA:2891:G:O6	1.83	0.77
33:BD:11:PRO:O	33:BD:13:ARG:N	2.17	0.77
31:DA:786:C:C2'	31:DA:787:U:H5'	2.15	0.77
1:AA:180:U:H2'	1:AA:181:G:H5'	1.66	0.77
1:CA:1442(B):A:N1	45:DT:118:ARG:NH2	2.32	0.77
33:DD:25:THR:HG22	33:DD:82:ILE:O	1.84	0.77
32:DB:7:G:H5'	44:DS:29:PHE:CE1	2.20	0.77
4:CD:58:LEU:HD22	4:CD:62:GLN:HG2	1.67	0.77
33:DD:159:ALA:N	33:DD:161:THR:HG22	2.00	0.77
51:BZ:27:VAL:HG23	51:BZ:36:LYS:HA	1.65	0.77
22:B0:41:ARG:H	22:B0:41:ARG:HD2	1.50	0.77
31:BA:1509:C:OP1	31:BA:1509:C:H4'	1.84	0.77
16:AP:22:THR:HG22	16:AP:32:TYR:HA	1.65	0.76
33:DD:30:GLU:HG3	33:DD:63:ARG:NE	1.99	0.76
49:BX:36:LYS:HD2	49:BX:36:LYS:O	1.85	0.76
31:BA:2404:C:H2'	31:BA:2405:G:C5'	2.15	0.76
42:DQ:23:GLY:O	42:DQ:100:GLY:HA3	1.85	0.76
31:BA:2523:G:C2'	31:BA:2524:G:H5'	2.15	0.76
1:CA:1422:G:O2'	1:CA:1423:G:H5'	1.84	0.76
2:AB:87:ARG:HE	2:AB:233:SER:HB3	1.50	0.76
24:D2:14:ARG:O	24:D2:18:PRO:HD3	1.85	0.76
22:D0:41:ARG:HD2	22:D0:41:ARG:H	1.50	0.76
12:CL:34:ARG:O	12:CL:61:THR:HG23	1.84	0.76
1:CA:1442(B):A:OP1	1:CA:1442(B):A:H4'	1.83	0.76
31:BA:996:A:C4'	46:BU:92:ARG:HE	1.96	0.76
16:AP:39:TYR:CD2	16:AP:73:LEU:HD11	2.20	0.76
41:DP:58:THR:O	41:DP:61:ARG:CZ	2.33	0.76
41:BP:51:PHE:O	41:BP:52:GLU:HB2	1.83	0.76
29:D7:8:ASN:HD21	29:D7:11:LYS:H	1.32	0.76
29:D7:9:ARG:NH1	31:DA:1310:G:OP2	2.17	0.76
2:AB:115:LEU:HD13	2:AB:145:LEU:HB3	1.67	0.76
37:DH:70:THR:HG22	37:DH:74:ASN:ND2	1.99	0.76
45:DT:25:GLY:O	45:DT:26:ASP:HB2	1.85	0.76
31:BA:370:G:H5''	31:BA:423:A:N6	1.99	0.76
1:CA:735:C:H2'	1:CA:736:C:H6	1.49	0.76
41:DP:120:ALA:CB	41:DP:138:LEU:HB3	2.14	0.76
2:CB:167:PRO:HG3	2:CB:188:ALA:HB2	1.68	0.76
30:B8:43:GLN:O	30:B8:44:LYS:HD2	1.83	0.76
44:BS:38:GLN:HG2	44:BS:47:THR:HG21	1.66	0.76
43:DR:51:LEU:CD2	43:DR:70:LEU:HD21	2.16	0.76

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
46:BU:90:VAL:HG12	46:BU:91:ASP:H	1.48	0.76
31:DA:2810:A:H2'	34:DE:61:ARG:NH2	2.01	0.76
2:CB:77:ALA:HB2	2:CB:211:ILE:HD13	1.67	0.76
29:B7:11:LYS:HE2	31:BA:686:G:H5''	1.66	0.76
15:AO:63:ARG:HH11	15:AO:87:ILE:HD13	1.48	0.76
31:BA:1771:C:HO2'	31:BA:1786:A:H8	0.79	0.76
1:AA:1003:G:H2'	1:AA:1004:A:C4'	2.16	0.76
2:AB:20:GLU:HG3	2:AB:191:ASP:HB2	1.67	0.76
1:AA:1148:U:H2'	1:AA:1149:C:O4'	1.84	0.76
23:B1:30:VAL:O	23:B1:30:VAL:HG12	1.86	0.76
47:DV:72:VAL:HA	47:DV:88:ARG:HH12	1.49	0.76
31:BA:2723:C:H5''	43:BR:2:ARG:CD	2.14	0.76
4:CD:9:CYS:SG	4:CD:22:LYS:HD2	2.26	0.76
45:DT:28:VAL:O	45:DT:28:VAL:HG12	1.85	0.76
31:DA:2657:A:H2	31:DA:2664:G:H21	1.32	0.76
1:AA:1236:A:O2'	1:AA:1304:G:H4'	1.85	0.76
34:BE:201:THR:HG22	34:BE:203:LYS:H	1.49	0.76
17:AQ:6:LEU:HD13	17:AQ:23:VAL:HG11	1.67	0.76
47:DV:69:LYS:HB2	47:DV:93:GLU:OE2	1.84	0.76
41:DP:56:SER:O	41:DP:58:THR:N	2.19	0.76
31:DA:1138:G:O2'	39:DN:105:GLY:HA3	1.85	0.76
45:BT:30:VAL:HG21	45:BT:83:ILE:HG13	1.68	0.76
43:BR:42:LYS:HA	43:BR:45:ARG:HD2	1.67	0.76
31:BA:2584:U:H2'	31:BA:2585:U:C6	2.20	0.76
38:BI:75:LEU:HD11	38:BI:105:HIS:HE1	1.50	0.76
35:BF:160:ASN:C	35:BF:160:ASN:HD22	1.87	0.76
8:CH:102:ARG:H	8:CH:102:ARG:HE	1.30	0.76
2:CB:69:LEU:HB3	2:CB:162:ILE:HG22	1.68	0.76
1:AA:67:C:H2'	1:AA:68:G:C8	2.21	0.76
50:BY:75:ILE:HD12	50:BY:76:CYS:N	1.99	0.76
35:DF:46:ARG:HH11	35:DF:46:ARG:CG	1.99	0.76
1:AA:877:C:H5''	8:AH:88:LYS:HD2	1.66	0.76
23:D1:12:PRO:HD2	23:D1:62:VAL:HG23	1.67	0.76
1:CA:555:C:H2'	1:CA:556:C:C6	2.20	0.76
7:AG:79:ARG:NE	7:AG:84:ASN:HD21	1.83	0.76
3:CC:180:ALA:HB1	3:CC:182:ILE:HG13	1.66	0.76
47:DV:28:GLU:HG3	47:DV:29:PRO:HD3	1.66	0.76
35:BF:9:ILE:HG23	35:BF:13:SER:O	1.85	0.76
5:CE:42:GLY:HA3	5:CE:66:MET:HG2	1.66	0.76
31:BA:2557:G:O2'	31:BA:2558:C:H5'	1.86	0.76
47:DV:19:LYS:CG	47:DV:20:LEU:N	2.47	0.76
16:CP:20:VAL:CG2	16:CP:32:TYR:HB2	2.15	0.76

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
44:BS:14:VAL:HG12	44:BS:15:ARG:N	2.00	0.76
30:D8:26:LYS:HZ1	30:D8:47:LYS:HD3	1.51	0.76
1:CA:80:G:H1	1:CA:89:C:H41	1.33	0.76
30:D8:51:ALA:HA	30:D8:54:GLU:OE1	1.86	0.76
31:DA:1885:A:H5'	31:DA:1885:A:H8	1.50	0.76
31:BA:142:A:C8	31:BA:1408:C:H1'	2.21	0.76
44:DS:34:HIS:HB3	44:DS:53:SER:CB	2.15	0.76
31:DA:1141:U:H2'	39:DN:63:THR:HG21	1.67	0.76
50:DY:28:LYS:HB2	50:DY:37:VAL:HB	1.68	0.76
50:BY:7:VAL:HB	50:BY:8:LYS:NZ	2.00	0.76
31:BA:1786:A:H2	31:BA:2606:C:H1'	1.51	0.76
11:AK:29:ILE:HB	11:AK:44:SER:CB	2.14	0.76
32:DB:65:C:H41	32:DB:109:C:H2'	1.50	0.76
39:BN:24:GLY:HA2	39:BN:27:ALA:HB3	1.67	0.76
33:BD:146:GLU:HB2	33:BD:189:CYS:HB3	1.66	0.76
33:BD:118:VAL:HG22	33:BD:119:ALA:N	2.01	0.76
47:DV:5:VAL:HB	47:DV:60:GLU:OE1	1.85	0.76
31:BA:2273:A:O2'	31:BA:2274:A:H5'	1.86	0.76
30:B8:32:LEU:C	30:B8:34:TRP:N	2.38	0.76
41:DP:16:ARG:HD3	41:DP:18:ARG:N	1.95	0.76
28:D6:12:GLU:HB3	28:D6:23:THR:CA	2.15	0.76
31:DA:996:A:C4'	46:DU:92:ARG:NE	2.49	0.76
31:DA:1786:A:H2	31:DA:2606:C:H1'	1.51	0.76
31:BA:259:G:N2	31:BA:621:A:H8	1.82	0.76
4:CD:112:VAL:HG12	4:CD:116:GLN:OE1	1.85	0.76
1:CA:977:A:H2'	1:CA:978:A:H5'	1.68	0.76
1:CA:1003:G:H2'	1:CA:1004:A:C4'	2.16	0.76
1:AA:913:A:H4'	1:AA:914:A:O5'	1.86	0.76
32:DB:15:A:H5'	32:DB:16:G:C8	2.20	0.76
31:DA:2584:U:H2'	31:DA:2585:U:C6	2.21	0.76
1:AA:394:G:H2'	1:AA:395:C:H6	1.51	0.76
36:DG:67:LYS:HD2	36:DG:67:LYS:H	1.51	0.76
31:DA:2787:C:C1'	34:DE:61:ARG:HB2	2.12	0.76
50:BY:96:ILE:HG21	50:BY:99:CYS:CB	2.16	0.76
39:BN:18:ALA:HB1	39:BN:21:LYS:CB	2.14	0.76
29:B7:7:PRO:HB2	31:BA:1309:G:H4'	1.67	0.76
31:BA:8:A:H2'	31:BA:9:U:C5	2.21	0.76
35:BF:2:LYS:HG3	35:BF:25:PRO:HB2	1.66	0.76
1:CA:1086:U:H2'	1:CA:1087:G:H8	1.51	0.76
22:B0:26:TYR:CE2	31:BA:857:C:H1'	2.21	0.76
1:AA:1281:U:H4'	1:AA:1282:C:OP2	1.86	0.76
1:CA:1117:G:H4'	9:CI:104:ARG:CZ	2.15	0.76

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
33:DD:125:ILE:O	33:DD:125:ILE:HG22	1.85	0.76
37:BH:89:ILE:HD11	37:BH:129:THR:HB	1.67	0.76
1:CA:1236:A:O2'	1:CA:1304:G:H4'	1.85	0.76
1:AA:633:G:H5'	1:AA:634:C:OP2	1.86	0.76
1:AA:1184:G:H2'	1:AA:1185:G:H8	1.51	0.76
33:DD:25:THR:O	33:DD:27:THR:N	2.19	0.75
44:DS:89:ARG:HA	44:DS:89:ARG:NE	2.00	0.75
39:DN:120:LEU:CD1	39:DN:122:VAL:HG23	2.13	0.75
49:DX:55:ASN:HB2	49:DX:78:LYS:CD	2.15	0.75
31:BA:142:A:H5'	31:BA:142(A):C:OP2	1.85	0.75
31:DA:2273:A:O2'	31:DA:2274:A:H5'	1.86	0.75
45:BT:30:VAL:O	45:BT:30:VAL:HG23	1.87	0.75
4:AD:58:LEU:HD22	4:AD:62:GLN:HG2	1.67	0.75
34:BE:152:LYS:HD3	39:BN:78:TYR:HB2	1.68	0.75
13:CM:25:ILE:HD11	13:CM:66:LEU:HD23	1.68	0.75
22:B0:43:THR:H	31:BA:2331:G:H4'	1.51	0.75
33:DD:16:MET:HB2	33:DD:207:GLY:HA3	1.66	0.75
33:BD:34:VAL:HG21	33:BD:103:ARG:HA	1.66	0.75
5:AE:42:GLY:HA3	5:AE:66:MET:HG2	1.68	0.75
31:BA:314:A:O2'	31:BA:315:G:H5'	1.86	0.75
41:BP:62:LEU:HD13	41:BP:62:LEU:H	1.50	0.75
39:BN:3:THR:C	39:BN:4:TYR:CG	2.59	0.75
47:BV:96:ILE:CG2	47:BV:97:LYS:N	2.48	0.75
31:BA:1885:A:H5'	31:BA:1885:A:H8	1.50	0.75
30:D8:61:LEU:HD13	31:DA:593:G:H4'	1.67	0.75
39:DN:3:THR:HG22	39:DN:4:TYR:N	1.99	0.75
31:DA:1779:U:C5	31:DA:1784:A:N7	2.47	0.75
31:BA:1779:U:C5	31:BA:1784:A:N7	2.49	0.75
31:DA:1403:C:C5'	31:DA:1471:A:H1'	2.16	0.75
50:DY:7:VAL:HB	50:DY:8:LYS:NZ	2.01	0.75
30:B8:52:LYS:N	30:B8:53:PRO:HD2	2.01	0.75
42:BQ:141:GLN:CA	51:BZ:53:ILE:HB	2.16	0.75
23:B1:12:PRO:HD2	23:B1:62:VAL:HG23	1.67	0.75
4:CD:189:PRO:HB2	4:CD:194:LEU:HD21	1.67	0.75
40:DO:43:VAL:HG23	40:DO:56:ASP:O	1.86	0.75
37:DH:86:GLU:HB3	37:DH:132:ARG:HB3	1.67	0.75
5:AE:102:ALA:HB1	5:AE:106:PRO:HG2	1.69	0.75
31:DA:2243:U:O2'	31:DA:2244:U:H5'	1.85	0.75
31:BA:2810:A:H2'	34:BE:61:ARG:NH2	2.01	0.75
28:D6:39:TYR:O	28:D6:49:HIS:HE1	1.68	0.75
32:BB:21:G:HO2'	32:BB:22:U:H6	1.33	0.75
16:CP:22:THR:HG22	16:CP:32:TYR:HA	1.68	0.75

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:BA:814:C:C5	41:BP:27:HIS:NE2	2.53	0.75
31:BA:1448:G:H1'	31:BA:1528:A:H62	1.51	0.75
1:AA:1505:G:H4'	1:AA:1506:U:H5''	1.67	0.75
51:DZ:102:LEU:HD21	51:DZ:124:ILE:HG23	1.66	0.75
30:B8:61:LEU:HD13	31:BA:593:G:H4'	1.67	0.75
30:B8:61:LEU:HD22	31:BA:593:G:O3'	1.87	0.75
31:BA:1280:G:C2'	31:BA:1281:G:H5''	2.16	0.75
1:AA:193:C:H2'	1:AA:194:C:H6	1.52	0.75
18:CR:53:ARG:HH21	18:CR:60:ALA:N	1.84	0.75
51:DZ:27:VAL:HG23	51:DZ:36:LYS:HA	1.65	0.75
39:DN:82:LEU:H	39:DN:82:LEU:HD12	1.52	0.75
47:DV:65:GLY:O	47:DV:66:ARG:HB3	1.87	0.75
23:D1:27:GLU:OE2	23:D1:32:LYS:HB2	1.85	0.75
31:DA:2394:C:H2'	31:DA:2395:C:H5'	1.68	0.75
24:B2:26:ARG:HA	24:B2:29:LYS:HE3	1.68	0.75
31:DA:307:G:H22	31:DA:310:A:H5'	1.49	0.75
44:BS:89:ARG:HA	44:BS:89:ARG:NE	2.02	0.75
43:BR:87:TYR:O	43:BR:89:ASP:N	2.20	0.75
2:AB:22:LYS:HZ3	2:AB:22:LYS:HA	1.51	0.75
33:DD:126:GLN:O	33:DD:193:VAL:HG11	1.86	0.75
31:BA:1722:A:C6	31:BA:1741:A:N1	2.55	0.75
51:DZ:61:LEU:HB2	51:DZ:65:GLN:HB2	1.68	0.75
1:AA:390:C:O3'	16:AP:28:ARG:NH2	2.20	0.75
33:DD:35:LYS:CD	33:DD:63:ARG:HB3	2.15	0.75
44:DS:28:VAL:HB	44:DS:89:ARG:CB	2.14	0.75
31:BA:2334:G:N2	44:BS:18:ILE:HD11	2.01	0.75
31:BA:2404:C:H2'	31:BA:2405:G:H5'	1.67	0.75
23:D1:87:PRO:HB2	23:D1:91:LYS:NZ	2.02	0.75
35:DF:3:GLU:O	35:DF:19:GLU:HA	1.86	0.75
1:AA:1086:U:H2'	1:AA:1087:G:H8	1.52	0.75
13:AM:25:ILE:HD11	13:AM:66:LEU:HD23	1.68	0.75
31:BA:518:G:H4'	48:BW:18:ARG:NH1	2.01	0.75
35:BF:67:GLN:HG3	35:BF:67:GLN:O	1.86	0.75
1:CA:170:U:O2'	1:CA:171:A:H5'	1.87	0.75
35:DF:9:ILE:HG23	35:DF:13:SER:O	1.87	0.75
31:DA:1826:G:C4'	33:DD:242:ARG:HH21	1.95	0.75
41:DP:62:LEU:H	41:DP:62:LEU:HD22	1.51	0.75
33:BD:108:PRO:HA	33:BD:196:VAL:O	1.87	0.75
31:BA:2723:C:H5''	43:BR:2:ARG:HD3	1.69	0.75
33:DD:132:PRO:HG3	33:DD:190:TYR:CE1	2.21	0.75
41:DP:33:ARG:O	41:DP:35:HIS:N	2.19	0.75
31:DA:626:U:C2	41:DP:105:LEU:HG	2.22	0.75

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
41:BP:95:VAL:HG22	41:BP:125:VAL:HB	1.69	0.75
30:B8:62:LEU:HD13	31:BA:242:G:H5''	1.68	0.75
37:DH:43:VAL:HG23	37:DH:43:VAL:O	1.84	0.75
1:AA:862:C:H2'	1:AA:863:U:H5'	1.68	0.75
32:DB:87:G:H3'	32:DB:88:C:H5''	1.68	0.75
42:DQ:42:ILE:HD13	42:DQ:97:VAL:HG21	1.68	0.75
47:BV:19:LYS:CG	47:BV:20:LEU:O	2.34	0.75
1:AA:377:G:O2'	1:AA:378:G:H5'	1.86	0.75
50:BY:27:VAL:HB	50:BY:29:GLU:OE1	1.85	0.75
32:DB:8:U:H5'	32:DB:8:U:H6	1.49	0.75
30:D8:32:LEU:HG	30:D8:34:TRP:CE3	2.21	0.75
1:CA:389:A:H2'	1:CA:390:C:H5'	1.69	0.75
1:CA:428:G:H4'	1:CA:429:U:O5'	1.86	0.75
31:BA:1529:G:N2	31:BA:1530:C:H5''	2.01	0.75
50:DY:28:LYS:HA	50:DY:38:ILE:HG22	1.69	0.75
42:DQ:140:ALA:HA	51:DZ:99:TYR:CD2	2.22	0.75
50:BY:7:VAL:HB	50:BY:8:LYS:HZ2	1.51	0.75
34:BE:77:ILE:HG23	34:BE:78:LEU:O	1.86	0.75
34:BE:120:TRP:O	34:BE:121:ASN:HB2	1.86	0.75
31:BA:1169:G:H1	31:BA:1180:C:H42	1.34	0.75
31:DA:2471:C:H3'	31:DA:2472:G:H5''	1.69	0.75
22:B0:51:VAL:N	22:B0:62:LEU:HD12	2.02	0.75
13:AM:3:ARG:HG2	13:AM:9:ILE:HD11	1.67	0.75
14:AN:29:ARG:HD3	14:AN:40:CYS:SG	2.27	0.75
6:AF:67:MET:HB2	6:AF:68:PRO:HD2	1.69	0.75
47:BV:43:GLU:HA	47:BV:48:GLY:CA	2.17	0.75
33:DD:34:VAL:HG21	33:DD:103:ARG:HA	1.68	0.75
31:DA:1278:A:O2'	43:DR:34:ILE:HD11	1.87	0.75
1:CA:877:C:H5''	8:CH:88:LYS:HD2	1.69	0.75
31:DA:747:U:O2	31:DA:2014:A:H1'	1.87	0.75
38:DI:82:ARG:HG2	38:DI:89:TYR:CD2	2.22	0.75
31:DA:991:C:H5'	31:DA:991:C:H6	1.51	0.75
1:AA:1117:G:H4'	9:AI:104:ARG:CZ	2.17	0.75
33:DD:27:THR:HG23	33:DD:28:GLU:N	2.01	0.75
47:DV:43:GLU:HA	47:DV:48:GLY:CA	2.17	0.75
41:BP:38:GLN:HG3	41:BP:39:LYS:H	1.52	0.75
2:CB:115:LEU:HD13	2:CB:145:LEU:HB3	1.69	0.75
31:BA:9:U:C4	31:BA:2629:A:N6	2.54	0.75
45:BT:33:LYS:HB2	45:BT:41:ARG:O	1.87	0.75
1:CA:963:G:H21	10:CJ:55:LYS:HD3	1.51	0.75
31:BA:1963:U:H2'	31:BA:1963:U:O2	1.86	0.75
1:AA:663:A:O2'	1:AA:664:G:H5'	1.87	0.75

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:CA:1530:G:OP1	1:CA:1530:G:H4'	1.87	0.75
31:DA:2023:G:H5'	31:DA:2617:C:H4'	1.69	0.75
31:DA:1766:U:H2'	31:DA:1767:C:H6	1.52	0.75
1:AA:1321:C:C5'	1:AA:1322:C:H5''	2.17	0.75
42:BQ:29:PHE:O	42:BQ:30:GLY:O	2.03	0.75
45:DT:91:ARG:HA	45:DT:117:ASP:H	1.51	0.74
47:DV:69:LYS:CG	47:DV:70:ILE:H	1.97	0.74
31:DA:259:G:N2	31:DA:621:A:H8	1.83	0.74
46:DU:90:VAL:HG12	46:DU:91:ASP:H	1.51	0.74
2:AB:187:LEU:HD11	2:AB:204:ASN:O	1.87	0.74
31:BA:1528(A):A:N7	31:BA:1529:G:H8	1.85	0.74
31:BA:1607:C:H4'	31:BA:1608:A:O5'	1.86	0.74
6:CF:63:TYR:CD2	6:CF:63:TYR:N	2.53	0.74
35:DF:160:ASN:HD21	35:DF:162:LEU:HB2	1.51	0.74
31:BA:351:G:H5''	31:BA:352:G:OP2	1.87	0.74
31:BA:2688:U:H5	31:BA:2720:U:OP2	1.70	0.74
1:AA:80:G:H1	1:AA:89:C:H41	1.35	0.74
31:BA:2680:C:H5'	34:BE:189:PRO:HA	1.69	0.74
34:DE:120:TRP:O	34:DE:121:ASN:HB2	1.87	0.74
30:B8:30:ARG:O	30:B8:31:HIS:C	2.24	0.74
47:DV:69:LYS:HG3	47:DV:70:ILE:N	2.01	0.74
30:D8:35:GLN:HE21	30:D8:36:LYS:HZ2	1.33	0.74
31:BA:806:C:OP2	41:BP:39:LYS:HD2	1.87	0.74
38:DI:133:HIS:CB	38:DI:134:PRO:HD2	2.16	0.74
31:DA:1280:G:C2'	31:DA:1281:G:H5''	2.18	0.74
33:DD:255:LYS:NZ	33:DD:255:LYS:H	1.85	0.74
31:DA:2523:G:C2'	31:DA:2524:G:H5'	2.16	0.74
1:AA:937:A:H1'	1:AA:1379:G:H22	1.51	0.74
11:CK:48:ILE:HG21	11:CK:63:LEU:HD13	1.69	0.74
37:DH:89:ILE:HD11	37:DH:129:THR:HB	1.69	0.74
1:CA:804:U:H5''	1:CA:805:C:OP2	1.86	0.74
46:BU:75:ASN:HB2	46:BU:78:THR:OG1	1.87	0.74
50:DY:75:ILE:HG12	50:DY:79:CYS:CA	2.18	0.74
31:DA:1884:A:H2'	31:DA:1885:A:C5'	2.11	0.74
39:DN:3:THR:C	39:DN:4:TYR:CG	2.60	0.74
31:DA:811:U:H3'	41:DP:25:SER:O	1.87	0.74
1:CA:1505:G:H4'	1:CA:1506:U:H5''	1.69	0.74
37:BH:86:GLU:HB3	37:BH:132:ARG:HB3	1.69	0.74
32:DB:28:C:H2'	32:DB:29:A:C8	2.22	0.74
39:DN:39:ARG:HG3	39:DN:41:ASP:H	1.49	0.74
2:AB:69:LEU:HB3	2:AB:162:ILE:HG22	1.68	0.74
33:DD:35:LYS:CD	33:DD:104:TYR:CD1	2.70	0.74

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
33:DD:25:THR:CG2	33:DD:82:ILE:H	2.00	0.74
31:DA:993:G:H1'	47:DV:91:TYR:CD1	2.21	0.74
16:CP:39:TYR:CD2	16:CP:73:LEU:HD11	2.23	0.74
31:DA:1652:A:H5'	31:DA:1652:A:H8	1.52	0.74
31:BA:307:G:N2	31:BA:310:A:H5'	2.02	0.74
50:BY:8:LYS:HE2	50:BY:72:VAL:HG23	1.68	0.74
13:AM:19:LEU:HB3	13:AM:25:ILE:HG21	1.67	0.74
2:AB:20:GLU:O	2:AB:40:HIS:HB2	1.87	0.74
31:BA:1713:U:O2'	31:BA:1714:G:H5'	1.87	0.74
22:D0:20:ARG:NH1	31:DA:2357:U:OP1	2.20	0.74
1:CA:1184:G:H2'	1:CA:1185:G:H8	1.51	0.74
32:BB:87:G:H3'	32:BB:88:C:H5''	1.67	0.74
1:AA:1422:G:O2'	1:AA:1423:G:H5'	1.87	0.74
4:AD:189:PRO:HB2	4:AD:194:LEU:HD21	1.68	0.74
31:BA:17:G:H4'	46:BU:25:TRP:CH2	2.22	0.74
30:B8:32:LEU:HD11	30:B8:41:ILE:HD13	1.68	0.74
1:CA:1066:C:H5'	1:CA:1067:A:OP2	1.87	0.74
1:CA:35:G:H2'	1:CA:36:C:C6	2.21	0.74
1:CA:1216:G:OP1	14:CN:2:ALA:HA	1.86	0.74
31:DA:2580:U:H5'	34:DE:131:ALA:HB3	1.69	0.74
1:AA:1216:G:OP1	14:AN:2:ALA:HA	1.86	0.74
44:DS:38:GLN:HG2	44:DS:47:THR:HG21	1.66	0.74
47:BV:83:ARG:CG	47:BV:83:ARG:HH11	2.01	0.74
28:B6:12:GLU:HB3	28:B6:23:THR:CA	2.17	0.74
31:DA:1899:G:H21	31:DA:1902:C:H5	1.35	0.74
33:DD:39:LYS:HB2	33:DD:62:TYR:HB2	1.70	0.74
31:BA:1278:A:O2'	43:BR:34:ILE:HD11	1.87	0.74
29:D7:8:ASN:C	29:D7:8:ASN:ND2	2.33	0.74
41:BP:26:GLY:HA2	41:BP:30:THR:CG2	2.17	0.74
47:BV:79:VAL:HG23	47:BV:82:ARG:HD2	1.68	0.74
34:DE:1:MET:HB3	34:DE:84:PHE:HB2	1.69	0.74
31:BA:2657:A:H2	31:BA:2664:G:H21	1.34	0.74
37:BH:70:THR:HG22	37:BH:74:ASN:ND2	2.03	0.74
36:BG:127:GLY:CA	36:BG:166:ASP:HB3	2.18	0.74
1:CA:678:U:H2'	1:CA:679:C:H6	1.51	0.74
1:CA:1342:C:H4'	9:CI:125:TYR:HB3	1.70	0.74
31:DA:807:U:H2'	31:DA:808:G:O5'	1.88	0.74
43:BR:55:ALA:HB2	43:BR:79:LEU:HD13	1.69	0.74
1:CA:862:C:C2'	1:CA:863:U:H5'	2.18	0.74
31:BA:1826:G:H4'	33:BD:242:ARG:NH2	2.02	0.74
30:D8:6:THR:HG22	30:D8:63:PRO:HD3	1.68	0.74
41:BP:58:THR:O	41:BP:61:ARG:CZ	2.35	0.74

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
24:B2:37:PHE:CE2	24:B2:40:SER:HA	2.20	0.74
33:DD:270:ILE:O	33:DD:270:ILE:HD12	1.87	0.74
45:BT:25:GLY:O	45:BT:26:ASP:HB2	1.87	0.74
31:DA:1278:A:OP1	43:DR:36:THR:CG2	2.36	0.74
31:BA:287:C:H42	31:BA:354:G:H1	1.33	0.74
33:DD:108:PRO:HA	33:DD:196:VAL:O	1.88	0.74
1:AA:735:C:H2'	1:AA:736:C:H6	1.53	0.74
18:CR:45:SER:HB3	18:CR:51:LEU:HD21	1.68	0.74
1:CA:913:A:H4'	1:CA:914:A:O5'	1.87	0.74
3:AC:180:ALA:HB1	3:AC:182:ILE:HG13	1.69	0.74
46:BU:88:ILE:H	46:BU:88:ILE:HD12	1.53	0.74
31:BA:1497:U:C5'	31:BA:1498:C:H5	2.00	0.74
2:CB:187:LEU:HD11	2:CB:204:ASN:O	1.86	0.74
47:DV:53:GLU:O	47:DV:55:ALA:N	2.21	0.74
39:DN:56:ASN:H	39:DN:125:GLY:CA	2.01	0.74
41:DP:112:LEU:O	41:DP:128:HIS:HB2	1.87	0.74
24:D2:49:LYS:O	24:D2:52:ASP:HB3	1.87	0.74
33:DD:166:GLN:HA	33:DD:166:GLN:NE2	2.02	0.74
31:DA:2790:A:H2'	31:DA:2791:C:H5''	1.68	0.74
39:BN:56:ASN:H	39:BN:125:GLY:CA	2.00	0.74
31:DA:543:C:C6	31:DA:547:A:N7	2.56	0.74
2:CB:87:ARG:HE	2:CB:233:SER:HB3	1.52	0.74
25:D3:19:GLN:HE22	25:D3:52:HIS:HE1	1.33	0.74
31:DA:1028:A:N6	31:DA:1125:G:H2'	2.03	0.74
30:B8:32:LEU:HG	30:B8:34:TRP:HE3	1.50	0.74
47:BV:15:GLU:O	47:BV:98:GLU:CD	2.26	0.74
33:BD:35:LYS:HD3	33:BD:63:ARG:CA	2.17	0.74
41:DP:51:PHE:HB3	41:DP:52:GLU:HG2	1.69	0.74
50:DY:96:ILE:HG21	50:DY:99:CYS:SG	2.27	0.74
50:DY:97:ARG:O	50:DY:97:ARG:HG3	1.85	0.74
47:BV:90:PRO:CG	47:BV:91:TYR:H	2.00	0.74
23:B1:87:PRO:HB2	23:B1:91:LYS:NZ	2.03	0.74
34:DE:167:VAL:HG22	34:DE:170:LEU:HD11	1.70	0.74
34:DE:1:MET:HB2	34:DE:83:ASP:O	1.87	0.74
31:DA:287:C:H42	31:DA:354:G:H1	1.35	0.74
34:DE:117:MET:HG2	34:DE:117:MET:O	1.87	0.74
28:B6:46:HIS:HB2	28:B6:47:THR:N	2.01	0.74
31:BA:543:C:C6	31:BA:547:A:N7	2.56	0.74
31:BA:2261:C:O2'	31:BA:2262:U:H5'	1.87	0.74
22:D0:13:GLY:O	22:D0:14:ARG:HB2	1.87	0.74
33:BD:30:GLU:HG3	33:BD:63:ARG:CZ	2.18	0.74
33:DD:25:THR:O	33:DD:25:THR:HG23	1.86	0.74

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
44:DS:92:TYR:CD1	44:DS:93:LYS:N	2.56	0.74
31:DA:2068:U:N3	31:DA:2430:A:C2	2.54	0.74
47:DV:47:VAL:HG13	47:DV:48:GLY:N	2.03	0.74
33:BD:144:ALA:HB3	33:BD:192:THR:HG23	1.69	0.74
35:BF:32:LEU:HD11	35:BF:105:VAL:HG13	1.70	0.74
31:BA:1019:U:O2'	31:BA:1021:A:H2	1.67	0.74
35:BF:21:ALA:HB3	35:BF:23:ASP:OD2	1.88	0.74
4:CD:8:VAL:HG12	4:CD:21:LEU:CD1	2.17	0.74
45:BT:51:ARG:HG3	45:BT:98:LYS:HD2	1.70	0.74
45:BT:29:ARG:CB	45:BT:85:LYS:HA	2.18	0.74
31:DA:1607:C:H4'	31:DA:1608:A:O5'	1.88	0.74
2:CB:20:GLU:O	2:CB:40:HIS:HB2	1.87	0.74
36:DG:16:ARG:NH1	36:DG:31:VAL:HG21	2.02	0.74
1:CA:1281:U:H4'	1:CA:1282:C:OP2	1.86	0.74
36:BG:16:ARG:NH1	36:BG:31:VAL:HG21	2.03	0.74
1:CA:1321:C:C5'	1:CA:1322:C:H5''	2.17	0.74
1:AA:1442(B):A:OP1	1:AA:1442(B):A:H4'	1.85	0.73
23:D1:65:SER:N	23:D1:67:ILE:HD11	2.03	0.73
38:BI:133:HIS:CB	38:BI:134:PRO:HD2	2.17	0.73
51:BZ:53:ILE:HG22	51:BZ:71:VAL:HB	1.69	0.73
1:AA:1066:C:H5'	1:AA:1067:A:OP2	1.86	0.73
32:BB:65:C:H41	32:BB:109:C:H2'	1.53	0.73
31:DA:1963:U:O2	31:DA:1963:U:H2'	1.87	0.73
31:DA:247:G:H4'	31:DA:386:G:C5	2.23	0.73
10:AJ:34:VAL:HG22	10:AJ:74:ILE:HG22	1.70	0.73
1:AA:862:C:C2'	1:AA:863:U:H5'	2.17	0.73
31:DA:323:G:H5'	35:DF:169:ASN:HD21	1.50	0.73
31:DA:17:G:H4'	46:DU:25:TRP:CH2	2.23	0.73
31:BA:27:G:N2	31:BA:512:G:H1'	2.03	0.73
38:DI:52:ARG:HG3	38:DI:53:ALA:H	1.52	0.73
31:BA:1762:A:H8	31:BA:1762:A:O5'	1.70	0.73
31:BA:796:C:H2'	31:BA:797:C:C6	2.23	0.73
15:AO:62:GLN:HA	15:AO:65:ARG:HH11	1.53	0.73
47:BV:69:LYS:HG3	47:BV:70:ILE:N	2.02	0.73
41:BP:47:ASP:HB3	41:BP:48:PRO:O	1.88	0.73
8:AH:86:ILE:HG22	8:AH:87:SER:N	2.00	0.73
31:DA:588:U:H2'	31:DA:589:C:C6	2.23	0.73
31:BA:2660:A:H5'	31:BA:2661:G:H21	1.52	0.73
31:BA:626:U:C2	41:BP:105:LEU:HG	2.23	0.73
31:BA:2790:A:H2'	31:BA:2791:C:H5''	1.69	0.73
13:CM:19:LEU:HB3	13:CM:25:ILE:HG21	1.68	0.73
1:CA:559:A:C5'	1:CA:560:U:H3'	2.18	0.73

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:DA:1430:C:H2'	31:DA:1431:U:C6	2.23	0.73
31:DA:1722:A:C6	31:DA:1741:A:N1	2.56	0.73
31:BA:1884:A:H2'	31:BA:1885:A:C5'	2.10	0.73
44:DS:14:VAL:HG12	44:DS:15:ARG:N	2.01	0.73
28:D6:10:LEU:CD1	30:D8:35:GLN:HE22	1.98	0.73
30:B8:46:ARG:HH22	41:BP:65:ARG:HH22	1.36	0.73
2:CB:55:PHE:HE1	2:CB:218:ALA:HA	1.54	0.73
33:BD:260:ARG:HH22	33:BD:266:SER:HB2	1.53	0.73
34:DE:38:THR:HG22	34:DE:40:GLU:N	2.02	0.73
34:BE:38:THR:HG22	34:BE:40:GLU:N	2.00	0.73
31:DA:348:G:C2'	31:DA:349:G:H5''	2.18	0.73
4:AD:31:CYS:C	4:AD:33:MET:H	1.89	0.73
31:DA:1281:G:C8	31:DA:1281:G:H5'	2.22	0.73
50:BY:28:LYS:HB2	50:BY:37:VAL:HB	1.69	0.73
5:CE:101:ILE:HG12	5:CE:101:ILE:O	1.89	0.73
34:BE:73:GLU:HG3	34:BE:74:PRO:HD2	1.69	0.73
3:CC:132:ARG:O	3:CC:136:GLN:HB2	1.87	0.73
1:CA:370:C:H2'	1:CA:371:G:C8	2.24	0.73
5:CE:31:LEU:HD11	5:CE:129:ILE:HA	1.69	0.73
31:BA:1316:U:O2'	31:BA:1317:A:H5'	1.87	0.73
31:DA:2517:C:C6	31:DA:2542:A:C2	2.76	0.73
31:DA:1316:U:O2'	31:DA:1317:A:H5'	1.87	0.73
46:BU:88:ILE:N	46:BU:88:ILE:HD12	2.03	0.73
30:D8:50:LEU:HD12	30:D8:51:ALA:N	2.03	0.73
30:B8:13:ARG:NH2	31:BA:250:G:OP2	2.21	0.73
1:CA:390:C:O3'	16:CP:28:ARG:NH2	2.21	0.73
45:BT:56:GLY:O	45:BT:59:THR:HG23	1.88	0.73
33:BD:172:TYR:CD1	33:BD:186:HIS:HA	2.24	0.73
23:D1:94:LEU:O	23:D1:95:LEU:HG	1.88	0.73
31:DA:2680:C:H5'	34:DE:189:PRO:HA	1.70	0.73
42:DQ:141:GLN:CA	51:DZ:53:ILE:HB	2.17	0.73
40:BO:35:VAL:HA	40:BO:62:VAL:HG12	1.70	0.73
31:DA:910:A:H62	42:DQ:12:GLN:HA	1.53	0.73
31:DA:528:A:C2	31:DA:2043:C:H4'	2.23	0.73
32:BB:37:C:C5	32:BB:38:C:C5	2.77	0.73
25:B3:19:GLN:HE22	25:B3:52:HIS:HE1	1.36	0.73
37:BH:153:LYS:H	37:BH:153:LYS:HD3	1.52	0.73
7:CG:15:ASP:HB3	7:CG:19:GLY:H	1.53	0.73
28:B6:10:LEU:CD1	30:B8:35:GLN:HE22	2.00	0.73
30:D8:32:LEU:C	30:D8:34:TRP:N	2.42	0.73
31:BA:2394:C:C2'	31:BA:2395:C:H5'	2.17	0.73
50:DY:15:VAL:HG12	50:DY:17:SER:H	1.51	0.73

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:1256:A:H5'	1:AA:1257:U:OP1	1.88	0.73
23:B1:67:ILE:N	23:B1:68:PRO:HD2	2.02	0.73
31:DA:2723:C:H5''	43:DR:2:ARG:CD	2.18	0.73
31:BA:1529:G:H21	31:BA:1530:C:C5'	2.01	0.73
45:BT:28:VAL:O	45:BT:28:VAL:HG12	1.88	0.73
39:BN:131:GLN:NE2	39:BN:134:ARG:HA	2.03	0.73
30:B8:50:LEU:HD12	30:B8:51:ALA:N	2.04	0.73
33:DD:144:ALA:HB3	33:DD:192:THR:HG23	1.69	0.73
1:AA:977:A:H2'	1:AA:978:A:H5'	1.68	0.73
31:BA:1973:G:H2'	31:BA:1974:C:C6	2.23	0.73
1:AA:170:U:O2'	1:AA:171:A:H5'	1.89	0.73
1:AA:386:C:C2'	1:AA:387:U:H5'	2.18	0.73
31:BA:1497:U:H5'	31:BA:1498:C:C5	2.19	0.73
39:BN:39:ARG:HG3	39:BN:41:ASP:H	1.54	0.73
41:BP:48:PRO:O	41:BP:49:ARG:C	2.25	0.73
49:BX:33:LYS:O	49:BX:35:THR:N	2.21	0.73
45:DT:56:GLY:O	45:DT:59:THR:HG23	1.89	0.73
35:BF:101:LEU:HD12	35:BF:102:PRO:CD	2.14	0.73
4:CD:62:GLN:NE2	4:CD:62:GLN:HA	2.04	0.73
45:DT:64:ARG:HB2	45:DT:73:GLU:HG2	1.70	0.73
36:BG:76:SER:CB	36:BG:83:ARG:HB3	2.16	0.73
1:AA:976:G:H5'	1:AA:1358:U:O2'	1.89	0.73
1:CA:240:C:H2'	1:CA:241:C:C6	2.22	0.73
12:CL:24:VAL:HG13	12:CL:98:TYR:CE2	2.24	0.73
1:CA:189(B):C:H42	1:CA:189(I):G:H1	1.37	0.73
31:DA:1169:G:H1	31:DA:1180:C:H42	1.34	0.73
31:BA:1766:U:H2'	31:BA:1767:C:H6	1.54	0.73
46:DU:55:ARG:HA	46:DU:58:ARG:HD2	1.71	0.73
1:AA:38:G:C2	1:AA:397:A:C2	2.75	0.73
27:B5:46:CYS:SG	27:B5:47:PRO:CG	2.77	0.73
41:BP:140:ALA:HB1	25:D3:38:GLU:CG	2.18	0.73
31:BA:996:A:C4'	46:BU:92:ARG:NE	2.51	0.73
31:DA:1497:U:H5'	31:DA:1498:C:C5	2.17	0.73
39:DN:131:GLN:HG2	39:DN:134:ARG:H	1.51	0.73
31:DA:83:G:H1	31:DA:102:G:H2'	1.53	0.73
36:DG:76:SER:CB	36:DG:83:ARG:HB3	2.17	0.73
45:DT:28:VAL:O	45:DT:29:ARG:HD2	1.88	0.73
46:BU:27:LEU:H	46:BU:27:LEU:HD23	1.53	0.73
6:CF:76:ALA:O	6:CF:80:ARG:HG3	1.88	0.73
31:DA:2475:C:C5'	31:DA:2476:A:OP2	2.36	0.73
31:DA:107:C:H2'	31:DA:108:U:H6	1.54	0.73
31:DA:430:G:H5''	31:DA:431:U:OP2	1.89	0.73

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
43:BR:60:LEU:O	43:BR:64:ARG:HG3	1.88	0.73
1:CA:22:G:H2'	1:CA:23:C:C6	2.24	0.73
33:DD:224:ALA:HB2	33:DD:233:HIS:HB3	1.70	0.73
26:D4:19:GLY:C	26:D4:21:VAL:H	1.92	0.73
31:BA:1204:A:C2	31:BA:1241:A:N1	2.57	0.73
1:AA:819:A:H4'	1:AA:820:U:OP2	1.88	0.73
1:AA:353:A:H5'	1:AA:353:A:H8	1.54	0.73
16:AP:4:ILE:HB	16:AP:66:PRO:HB3	1.70	0.73
33:BD:27:THR:CG2	33:BD:28:GLU:N	2.51	0.73
1:AA:678:U:H2'	1:AA:679:C:H6	1.52	0.73
44:BS:67:ARG:H	44:BS:69:VAL:HG12	1.53	0.73
34:BE:1:MET:HB3	34:BE:84:PHE:HB2	1.69	0.73
35:BF:3:GLU:O	35:BF:19:GLU:HA	1.89	0.73
36:DG:105:LYS:HB2	36:DG:105:LYS:HZ2	1.53	0.73
31:DA:814:C:C5	41:DP:27:HIS:NE2	2.57	0.73
43:DR:87:TYR:O	43:DR:89:ASP:N	2.22	0.73
31:DA:370:G:H5''	31:DA:423:A:N6	2.03	0.73
23:D1:10:LYS:HB2	23:D1:14:VAL:N	2.03	0.73
41:DP:120:ALA:HB1	41:DP:138:LEU:HB3	1.71	0.73
31:DA:1882:C:H2'	31:DA:1882:C:O2	1.89	0.73
40:DO:65:THR:HG23	40:DO:69:ILE:HD11	1.69	0.73
40:BO:65:THR:HG23	40:BO:69:ILE:HD11	1.71	0.73
31:DA:2557:G:O2'	31:DA:2558:C:H5'	1.88	0.73
10:CJ:65:LEU:HD13	14:CN:56:VAL:HG22	1.69	0.73
44:DS:42:ASP:C	44:DS:44:LYS:H	1.92	0.73
20:AT:71:THR:HG22	20:AT:72:LEU:N	2.03	0.73
47:DV:83:ARG:HH11	47:DV:83:ARG:CG	2.02	0.73
50:DY:8:LYS:HE2	50:DY:72:VAL:HG23	1.70	0.73
36:DG:127:GLY:CA	36:DG:166:ASP:HB3	2.19	0.73
31:DA:2476:A:H2'	31:DA:2477:C:H5''	1.70	0.73
41:DP:41:ARG:NH2	41:DP:41:ARG:HA	2.04	0.73
48:DW:4:LYS:CB	48:DW:106:ILE:HG22	2.19	0.73
1:AA:328:C:O2	1:AA:328:C:H2'	1.88	0.73
5:AE:101:ILE:O	5:AE:101:ILE:HG12	1.87	0.73
31:DA:2712:U:H1'	31:DA:2712(A):A:C8	2.23	0.73
31:DA:2712:U:O2'	31:DA:2712(A):A:OP2	2.07	0.73
34:DE:77:ILE:HG23	34:DE:78:LEU:O	1.89	0.73
1:CA:180:U:C2'	1:CA:181:G:H5'	2.19	0.73
28:B6:36:LEU:HD13	28:B6:50:ARG:CZ	2.18	0.73
18:AR:45:SER:H	18:AR:51:LEU:HD11	1.53	0.73
37:BH:153:LYS:N	37:BH:153:LYS:HD3	2.03	0.73
19:AS:36:ARG:HH12	19:AS:75:ALA:HB3	1.54	0.73

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
14:CN:29:ARG:HD3	14:CN:40:CYS:SG	2.29	0.73
39:BN:82:LEU:H	39:BN:82:LEU:HD12	1.52	0.73
8:AH:51:VAL:HG11	8:AH:60:ARG:HG3	1.68	0.73
44:DS:28:VAL:CB	44:DS:89:ARG:HB2	2.16	0.73
50:BY:75:ILE:HG12	50:BY:79:CYS:CA	2.19	0.73
23:B1:27:GLU:OE2	23:B1:32:LYS:HB2	1.89	0.73
1:CA:1256:A:H5'	1:CA:1257:U:OP1	1.88	0.73
45:DT:29:ARG:CB	45:DT:85:LYS:HA	2.19	0.73
31:DA:2029:G:H2'	31:DA:2031:A:OP2	1.89	0.73
1:AA:266:G:H5''	1:AA:268:C:H41	1.54	0.73
25:D3:44:ARG:O	25:D3:48:GLU:HG2	1.89	0.73
31:BA:867:C:O2	31:BA:913:U:H5'	1.89	0.73
31:BA:2023:G:H5'	31:BA:2617:C:H4'	1.71	0.73
31:BA:527:C:OP2	31:BA:2779:U:H5	1.71	0.73
33:DD:35:LYS:HZ3	33:DD:104:TYR:HD1	1.37	0.72
24:D2:26:ARG:CZ	24:D2:29:LYS:HE2	2.19	0.72
32:BB:48:A:OP1	44:BS:93:LYS:HB3	1.89	0.72
41:BP:33:ARG:O	41:BP:35:HIS:N	2.22	0.72
31:DA:2405:G:O2'	31:DA:2406:U:OP1	2.07	0.72
41:DP:36:LYS:O	41:DP:38:GLN:HG2	1.87	0.72
15:AO:67:LEU:HD22	15:AO:78:TYR:HE1	1.54	0.72
4:AD:8:VAL:HG12	4:AD:21:LEU:CD1	2.19	0.72
37:BH:157:TYR:O	37:BH:158:HIS:HB2	1.89	0.72
12:AL:102:ARG:HG3	12:AL:102:ARG:NH1	2.03	0.72
31:DA:484:C:H2'	31:DA:485:C:H6	1.52	0.72
43:BR:116:LEU:O	43:BR:117:VAL:HB	1.87	0.72
2:AB:97:TRP:CH2	2:AB:173:ALA:HA	2.24	0.72
35:DF:39:TRP:O	35:DF:43:LYS:HG2	1.89	0.72
15:CO:62:GLN:HA	15:CO:65:ARG:HH11	1.54	0.72
2:CB:61:LEU:HA	2:CB:64:ARG:HG2	1.71	0.72
51:BZ:61:LEU:HB2	51:BZ:65:GLN:HB2	1.71	0.72
40:DO:64:ARG:HG2	40:DO:79:PHE:CG	2.24	0.72
1:CA:693:G:H1'	7:CG:82:GLY:HA3	1.71	0.72
26:B4:19:GLY:C	26:B4:21:VAL:H	1.92	0.72
38:DI:75:LEU:HD11	38:DI:105:HIS:HE1	1.52	0.72
4:AD:146:ILE:HD12	4:AD:146:ILE:N	2.04	0.72
33:DD:71:ASP:CB	33:DD:103:ARG:HH22	2.02	0.72
31:DA:1568:G:P	33:DD:63:ARG:HH22	2.11	0.72
49:DX:89:ILE:HA	49:DX:92:LEU:HB2	1.69	0.72
31:DA:743:G:H2'	31:DA:744:G:H5'	1.70	0.72
31:DA:587:C:H4'	31:DA:588:U:OP2	1.88	0.72
31:BA:743:G:C2'	31:BA:744:G:H5'	2.19	0.72

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:DA:1109:C:H5	31:DA:1110:G:C5	2.07	0.72
28:B6:20:ASN:O	28:B6:21:TYR:CG	2.43	0.72
1:AA:1342:C:H4'	9:AI:125:TYR:HB3	1.70	0.72
25:D3:11:SER:OG	25:D3:13:ILE:HG12	1.89	0.72
31:DA:1300:U:H3'	31:DA:1301:A:H5''	1.70	0.72
31:BA:107:C:H2'	31:BA:108:U:H6	1.53	0.72
1:AA:667:G:H4'	15:AO:51:HIS:CE1	2.25	0.72
31:DA:2688:U:H5	31:DA:2720:U:OP2	1.72	0.72
47:DV:90:PRO:CG	47:DV:91:TYR:H	2.02	0.72
31:BA:2316:C:H2'	31:BA:2317:C:H6	1.53	0.72
39:DN:13:TRP:HZ3	39:DN:130:HIS:HE1	1.37	0.72
24:D2:32:LEU:HD23	31:DA:61:G:O2'	1.88	0.72
41:BP:17:LYS:HG2	41:BP:17:LYS:O	1.89	0.72
24:B2:49:LYS:HD2	24:B2:53:LEU:CD2	2.18	0.72
2:AB:77:ALA:HB2	2:AB:211:ILE:HD13	1.70	0.72
29:B7:8:ASN:C	29:B7:8:ASN:ND2	2.37	0.72
33:BD:255:LYS:H	33:BD:255:LYS:NZ	1.86	0.72
6:AF:62:TRP:CH2	6:AF:64:GLN:HB2	2.24	0.72
31:DA:527:C:OP2	31:DA:2779:U:H5	1.71	0.72
1:CA:818:G:O2'	1:CA:819:A:H5'	1.89	0.72
12:AL:119:LYS:HB2	12:AL:120:TYR:CD1	2.24	0.72
51:BZ:11:GLU:H	51:BZ:11:GLU:CD	1.91	0.72
41:DP:17:LYS:O	41:DP:17:LYS:HG2	1.89	0.72
30:D8:30:ARG:O	30:D8:31:HIS:C	2.28	0.72
1:AA:1442(A):G:C8	45:BT:118:ARG:HD2	2.23	0.72
1:CA:102:G:C4	1:CA:103:C:C5	2.77	0.72
31:BA:1109:C:H5	31:BA:1110:G:C5	2.06	0.72
31:DA:542:C:N3	31:DA:543:C:N4	2.36	0.72
33:BD:71:ASP:CB	33:BD:103:ARG:HH22	2.03	0.72
1:CA:862:C:H2'	1:CA:863:U:H5'	1.69	0.72
2:CB:97:TRP:CH2	2:CB:173:ALA:HA	2.24	0.72
1:AA:1112:C:N3	3:AC:178:LEU:HD23	2.05	0.72
1:CA:1159:U:H4'	1:CA:1160:G:OP1	1.88	0.72
12:AL:124:LYS:HD2	12:AL:125:PRO:HD2	1.71	0.72
25:B3:44:ARG:O	25:B3:48:GLU:HG2	1.88	0.72
31:BA:631:A:OP1	41:BP:64:LYS:HE2	1.89	0.72
41:BP:120:ALA:CB	41:BP:138:LEU:HB3	2.19	0.72
1:AA:359:U:H2'	1:AA:360:A:C8	2.24	0.72
33:DD:32:SER:O	33:DD:33:LEU:CB	2.35	0.72
50:DY:27:VAL:HG12	50:DY:29:GLU:H	1.54	0.72
31:BA:2307:G:H21	31:BA:2308:G:H5'	1.54	0.72
31:BA:482:A:H4'	50:BY:47:LYS:HZ3	1.53	0.72

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
32:BB:94:C:H2'	32:BB:95:C:C6	2.25	0.72
1:AA:963:G:H21	10:AJ:55:LYS:HD3	1.52	0.72
2:AB:167:PRO:HG3	2:AB:188:ALA:HB2	1.71	0.72
38:BI:2:LYS:HB2	38:BI:39:ALA:HB3	1.72	0.72
30:D8:18:ALA:HB3	31:DA:651:G:H4'	1.71	0.72
51:DZ:11:GLU:H	51:DZ:11:GLU:CD	1.93	0.72
31:DA:1246:A:OP1	41:DP:18:ARG:HD3	1.89	0.72
28:D6:11:LEU:HD23	28:D6:26:ASN:H	1.53	0.72
31:BA:1246:A:OP1	41:BP:18:ARG:HD3	1.90	0.72
49:BX:33:LYS:HA	49:BX:35:THR:HG22	1.70	0.72
31:BA:1652:A:H8	31:BA:1652:A:H5'	1.54	0.72
44:BS:56:LEU:HD23	44:BS:57:LYS:N	2.05	0.72
31:DA:1527:G:H5''	31:DA:1528:A:OP1	1.90	0.72
22:D0:26:TYR:CE2	31:DA:857:C:H1'	2.25	0.72
31:DA:484:C:H2'	31:DA:485:C:C6	2.24	0.72
1:CA:937:A:H1'	1:CA:1379:G:N2	2.04	0.72
12:CL:69:TYR:HB3	12:CL:99:HIS:CD2	2.24	0.72
51:DZ:69:THR:HG22	51:DZ:90:VAL:HA	1.69	0.72
32:BB:87:G:C3'	32:BB:88:C:H5''	2.20	0.72
31:DA:1670:C:O2	34:DE:129:HIS:HE1	1.72	0.72
1:AA:365:U:H5''	1:AA:366:C:OP1	1.90	0.72
31:DA:2199:A:H3'	31:DA:2200:C:H6	1.55	0.72
1:CA:38:G:C2	1:CA:397:A:C2	2.77	0.72
1:CA:1238:A:H62	1:CA:1299:A:N6	1.87	0.72
6:CF:89:MET:HG2	6:CF:91:VAL:HG23	1.70	0.72
32:DB:37:C:C5	32:DB:38:C:C5	2.77	0.72
39:DN:73:THR:O	39:DN:75:TYR:N	2.21	0.72
50:BY:27:VAL:HG12	50:BY:29:GLU:H	1.54	0.72
49:DX:38:GLU:OE1	49:DX:38:GLU:N	2.21	0.72
16:CP:4:ILE:HB	16:CP:66:PRO:HB3	1.70	0.72
31:BA:142:A:H8	31:BA:1595:G:H21	1.32	0.72
2:AB:55:PHE:HE1	2:AB:218:ALA:HA	1.53	0.72
44:BS:28:VAL:CB	44:BS:89:ARG:HB2	2.17	0.72
33:DD:260:ARG:HH22	33:DD:266:SER:HB2	1.53	0.72
35:BF:20:LEU:HD23	35:BF:23:ASP:OD2	1.90	0.72
24:D2:41:ILE:O	24:D2:42:GLY:C	2.28	0.72
39:DN:78:TYR:HD1	39:DN:79:PRO:HD3	1.52	0.72
1:AA:559:A:H4'	1:AA:560:U:H3'	1.71	0.72
20:CT:23:ARG:HA	20:CT:26:ASN:HD21	1.54	0.72
36:DG:20:ILE:O	36:DG:24:GLY:HA2	1.90	0.72
31:BA:2106:G:H1'	31:BA:2184:G:N2	2.04	0.72
31:DA:2106:G:H1'	31:DA:2184:G:N2	2.03	0.72

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:DA:2094:G:OP1	38:DI:22:LYS:HD3	1.89	0.72
43:DR:53:HIS:HD2	43:DR:94:TYR:OH	1.72	0.72
50:BY:75:ILE:CD1	50:BY:76:CYS:H	2.01	0.72
50:BY:95:LYS:HE2	50:BY:101:LYS:HA	1.70	0.72
24:D2:26:ARG:HA	24:D2:29:LYS:HE3	1.71	0.72
23:B1:85:LEU:CB	23:B1:87:PRO:HD3	2.20	0.72
31:DA:1022:G:N2	31:DA:1142(A):A:C2	2.56	0.72
35:DF:18:ARG:HG2	35:DF:19:GLU:N	2.02	0.72
31:DA:639:U:H2'	31:DA:640:C:C6	2.24	0.72
31:DA:1531:C:H3'	31:DA:1532:C:C5'	2.20	0.72
37:BH:66:GLY:HA2	37:BH:69:ARG:HB2	1.72	0.72
37:DH:66:GLY:HA2	37:DH:69:ARG:HB2	1.71	0.72
34:DE:201:THR:HG22	34:DE:203:LYS:H	1.54	0.72
37:DH:92:ILE:O	37:DH:94:TYR:N	2.23	0.72
32:DB:48:A:OP1	44:DS:93:LYS:HB3	1.90	0.72
41:DP:48:PRO:O	41:DP:49:ARG:C	2.27	0.72
31:BA:1190:G:H5'	41:BP:35:HIS:CB	2.20	0.72
39:BN:112:LEU:HD12	39:BN:112:LEU:O	1.89	0.72
34:BE:203:LYS:O	34:BE:203:LYS:HD2	1.90	0.72
1:CA:441:A:H3'	1:CA:442:C:H6	1.55	0.72
31:DA:1713:U:O2'	31:DA:1714:G:H5'	1.89	0.72
31:BA:2781:A:H8	31:BA:2781:A:H5''	1.54	0.72
38:DI:2:LYS:HB2	38:DI:39:ALA:HB3	1.70	0.72
51:DZ:8:TYR:O	51:DZ:37:VAL:HG12	1.90	0.72
31:BA:2517:C:C6	31:BA:2542:A:C2	2.77	0.72
1:AA:1159:U:H4'	1:AA:1160:G:OP1	1.88	0.72
28:D6:10:LEU:H	28:D6:10:LEU:CD2	2.03	0.72
31:BA:1225:G:OP1	47:BV:88:ARG:HB3	1.90	0.72
47:DV:19:LYS:CG	47:DV:20:LEU:O	2.38	0.72
31:BA:669:G:H8	31:BA:669:G:HO2'	1.37	0.72
47:DV:82:ARG:HG3	47:DV:82:ARG:NH1	2.05	0.72
45:BT:29:ARG:HG3	45:BT:30:VAL:HG13	1.72	0.72
1:AA:545:C:H5''	4:AD:72:GLU:HG2	1.72	0.72
48:DW:92:ARG:NH1	48:DW:92:ARG:HG2	2.00	0.72
15:CO:56:LEU:O	15:CO:60:VAL:HG23	1.90	0.72
38:DI:88:ILE:HD11	38:DI:123:LEU:HD23	1.70	0.72
38:DI:83:ALA:HB3	38:DI:144:VAL:HG13	1.72	0.72
35:DF:89:VAL:HG12	35:DF:90:PHE:H	1.53	0.72
37:BH:92:ILE:O	37:BH:94:TYR:N	2.23	0.72
32:DB:87:G:C3'	32:DB:88:C:H5''	2.20	0.72
31:BA:1168:G:C2'	31:BA:1169:G:H5'	2.19	0.72
10:AJ:63:PHE:HZ	14:AN:45:ARG:HG3	1.55	0.72

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
43:DR:33:ARG:HG2	43:DR:115:GLU:CG	2.20	0.72
31:BA:1847:A:H4'	31:BA:1848:A:OP2	1.90	0.72
43:DR:55:ALA:HB2	43:DR:79:LEU:HD13	1.72	0.72
33:DD:28:GLU:HB2	33:DD:29:PRO:HD3	1.72	0.71
28:D6:19:ARG:CG	28:D6:20:ASN:H	2.01	0.71
30:D8:35:GLN:HA	31:DA:2420:C:OP2	1.89	0.71
1:AA:1104:G:H4'	2:AB:111:ARG:NH1	2.04	0.71
35:DF:20:LEU:HD22	35:DF:203:GLN:NE2	2.05	0.71
1:AA:428:G:H4'	1:AA:429:U:O5'	1.90	0.71
43:DR:97:VAL:HG22	43:DR:114:VAL:HG22	1.72	0.71
31:BA:1880:C:C5'	31:BA:1880:C:H6	2.03	0.71
1:AA:102:G:C4	1:AA:103:C:C5	2.78	0.71
1:AA:102:G:H2'	1:AA:103:C:C6	2.25	0.71
23:B1:10:LYS:HB2	23:B1:14:VAL:N	2.04	0.71
31:DA:2012:G:H4'	48:DW:96:ILE:CD1	2.20	0.71
35:BF:160:ASN:HD21	35:BF:162:LEU:HB2	1.54	0.71
33:DD:11:PRO:O	33:DD:13:ARG:N	2.22	0.71
33:BD:16:MET:HB2	33:BD:207:GLY:HA3	1.70	0.71
1:AA:499:A:H4'	1:AA:500:G:OP1	1.88	0.71
9:AI:53:VAL:HB	9:AI:92:TYR:HE2	1.55	0.71
12:CL:6:THR:HG23	12:CL:9:GLN:HE21	1.54	0.71
2:AB:61:LEU:HA	2:AB:64:ARG:HG2	1.72	0.71
37:DH:153:LYS:H	37:DH:153:LYS:HD3	1.53	0.71
30:D8:52:LYS:N	30:D8:53:PRO:HD2	2.05	0.71
49:DX:36:LYS:HD2	49:DX:36:LYS:O	1.89	0.71
45:BT:91:ARG:HA	45:BT:117:ASP:H	1.54	0.71
30:B8:59:LYS:CB	30:B8:59:LYS:NZ	2.51	0.71
24:D2:37:PHE:CE2	24:D2:40:SER:HA	2.21	0.71
1:CA:1101:A:H4'	1:CA:1102:A:O5'	1.90	0.71
1:AA:688:G:H2'	1:AA:689:C:H6	1.55	0.71
31:BA:1313:U:H2'	31:BA:1610:A:C2	2.25	0.71
31:DA:774:A:H2	31:DA:787:U:HO2'	1.38	0.71
31:DA:2752:C:H2'	31:DA:2752:C:O2	1.90	0.71
16:AP:53:VAL:O	16:AP:57:ARG:HG2	1.90	0.71
6:CF:67:MET:HB2	6:CF:68:PRO:HD2	1.71	0.71
1:CA:624:C:H4'	16:CP:10:GLY:HA2	1.72	0.71
1:CA:552:U:H4'	12:CL:86:ARG:HG2	1.72	0.71
3:AC:157:ILE:HD11	3:AC:166:GLU:HB2	1.72	0.71
1:AA:66:G:H4'	1:AA:173:U:C5	2.24	0.71
33:DD:30:GLU:HG3	33:DD:63:ARG:CZ	2.20	0.71
51:BZ:151:HIS:CD2	51:BZ:151:HIS:N	2.58	0.71
24:B2:49:LYS:O	24:B2:52:ASP:HB3	1.89	0.71

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
34:BE:1:MET:HB2	34:BE:83:ASP:O	1.91	0.71
35:DF:20:LEU:HD23	35:DF:23:ASP:OD2	1.91	0.71
31:BA:2469:A:H2	31:BA:2481:G:N2	1.87	0.71
1:CA:102:G:H2'	1:CA:103:C:C6	2.25	0.71
8:CH:5:PRO:O	8:CH:8:ASP:HB3	1.90	0.71
19:CS:36:ARG:HH12	19:CS:75:ALA:HB3	1.56	0.71
1:AA:1054:C:O2'	1:AA:1055:A:H5''	1.90	0.71
31:BA:780:G:H21	31:BA:783:A:H62	1.37	0.71
31:DA:251:A:H5''	41:DP:51:PHE:HZ	1.56	0.71
47:BV:65:GLY:O	47:BV:66:ARG:HB3	1.90	0.71
47:BV:72:VAL:HA	47:BV:88:ARG:HH22	1.56	0.71
47:DV:62:LEU:HD22	47:DV:98:GLU:CB	2.21	0.71
24:B2:32:LEU:HD23	31:BA:61:G:O2'	1.91	0.71
1:AA:509:A:C2	1:AA:510:A:C2	2.78	0.71
1:CA:976:G:H5'	1:CA:1358:U:O2'	1.90	0.71
28:B6:25:LYS:O	31:BA:2286:A:H2	1.73	0.71
31:BA:747:U:O2	31:BA:2014:A:H1'	1.90	0.71
43:DR:100:LEU:HD22	43:DR:100:LEU:N	2.04	0.71
25:D3:19:GLN:NE2	25:D3:52:HIS:HE1	1.88	0.71
9:AI:53:VAL:HB	9:AI:92:TYR:CE2	2.25	0.71
31:DA:1847:A:H4'	31:DA:1848:A:OP2	1.90	0.71
5:CE:139:LEU:HA	5:CE:142:LEU:HD12	1.70	0.71
5:AE:51:VAL:HB	5:AE:52:PRO:HD3	1.73	0.71
1:CA:1112:C:N3	3:CC:178:LEU:HD23	2.05	0.71
31:BA:1899:G:H21	31:BA:1902:C:H5	1.38	0.71
32:DB:44:G:H1'	32:DB:47:C:N4	2.05	0.71
15:AO:81:LEU:HD11	15:AO:85:LEU:HD12	1.73	0.71
39:BN:120:LEU:CD1	39:BN:122:VAL:HG23	2.13	0.71
31:BA:2758:A:H2'	31:BA:2759:G:C5'	2.17	0.71
45:DT:29:ARG:HG3	45:DT:30:VAL:HG13	1.73	0.71
40:BO:107:ARG:HH12	45:BT:35:LYS:CB	2.02	0.71
39:BN:78:TYR:HD1	39:BN:79:PRO:HD3	1.54	0.71
28:B6:16:CYS:C	28:B6:18:ARG:HE	1.94	0.71
45:BT:102:ILE:HB	45:BT:110:ILE:CD1	2.21	0.71
34:BE:51:PHE:CE1	34:BE:52:LEU:HD13	2.26	0.71
31:BA:2472:G:H8	31:BA:2472:G:H5''	1.54	0.71
10:AJ:8:LEU:HG	10:AJ:96:ILE:HG22	1.73	0.71
31:DA:1794:U:H2'	31:DA:1795:C:H6	1.52	0.71
9:CI:53:VAL:HB	9:CI:92:TYR:HE2	1.56	0.71
9:AI:45:ALA:O	9:AI:48:GLU:HB2	1.90	0.71
47:BV:64:HIS:HB3	47:BV:96:ILE:HG12	1.73	0.71
41:BP:48:PRO:O	41:BP:50:ARG:N	2.24	0.71

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
24:B2:41:ILE:O	24:B2:42:GLY:C	2.29	0.71
49:BX:26:TYR:OH	49:BX:89:ILE:HG21	1.90	0.71
34:BE:36:ARG:HH21	34:BE:88:GLY:CA	2.02	0.71
31:BA:7:G:H2'	31:BA:8:A:O4'	1.90	0.71
41:DP:98:GLU:HG3	41:DP:99:LEU:N	2.04	0.71
31:DA:528:A:O2'	31:DA:529:A:H5'	1.90	0.71
1:CA:992:U:H1'	1:CA:993:G:OP2	1.89	0.71
31:DA:351:G:H5''	31:DA:352:G:OP2	1.91	0.71
7:AG:15:ASP:HB3	7:AG:19:GLY:H	1.54	0.71
12:AL:76:ASN:O	12:AL:77:LEU:HD23	1.91	0.71
30:B8:32:LEU:HB2	30:B8:35:GLN:H	1.54	0.71
28:D6:15:GLU:HB3	28:D6:18:ARG:HG2	1.71	0.71
49:DX:23:GLU:HG3	49:DX:24:GLY:H	1.54	0.71
49:DX:26:TYR:OH	49:DX:89:ILE:HG21	1.91	0.71
31:DA:1022:G:N2	31:DA:1142(A):A:H2	1.79	0.71
37:DH:157:TYR:O	37:DH:158:HIS:HB2	1.88	0.71
1:AA:559:A:C5'	1:AA:560:U:H3'	2.19	0.71
28:B6:20:ASN:O	28:B6:21:TYR:CD1	2.44	0.71
31:DA:1171:G:C8	31:DA:1173:G:H1'	2.26	0.71
20:AT:23:ARG:HA	20:AT:26:ASN:HD21	1.55	0.71
50:BY:90:LEU:HD12	50:BY:91:GLU:HG2	1.73	0.71
31:BA:484:C:H2'	31:BA:485:C:C6	2.25	0.71
31:BA:960:A:H5''	31:BA:961:C:OP2	1.89	0.71
31:BA:1590:U:H2'	31:BA:1591:G:H5''	1.72	0.71
4:AD:49:ARG:HE	4:AD:49:ARG:HA	1.55	0.71
31:DA:1118:C:H5'	51:DZ:80:ARG:HH22	1.56	0.71
51:BZ:8:TYR:O	51:BZ:37:VAL:HG12	1.91	0.71
46:DU:47:TYR:HA	46:DU:50:ARG:NH2	2.06	0.71
47:DV:70:ILE:O	47:DV:71:LEU:HB2	1.89	0.71
28:D6:51:GLU:O	28:D6:52:VAL:HB	1.90	0.71
31:DA:102:G:HO2'	31:DA:103:A:P	2.13	0.71
23:B1:65:SER:H	23:B1:67:ILE:HD11	1.56	0.71
36:DG:63:ILE:HA	36:DG:143:GLU:HG3	1.73	0.71
50:DY:7:VAL:HB	50:DY:8:LYS:HZ2	1.53	0.71
38:BI:82:ARG:HG2	38:BI:89:TYR:CD2	2.26	0.71
12:AL:87:GLY:HA2	12:AL:98:TYR:HA	1.71	0.71
31:DA:2261:C:O2'	31:DA:2262:U:H5'	1.90	0.71
10:CJ:34:VAL:HG22	10:CJ:74:ILE:HG22	1.73	0.71
11:AK:52:GLY:H	11:AK:55:LYS:HG3	1.56	0.71
31:DA:1204:A:C2	31:DA:1241:A:N1	2.59	0.71
33:BD:25:THR:HG23	33:BD:25:THR:O	1.90	0.71
33:BD:39:LYS:HB2	33:BD:62:TYR:HB2	1.72	0.71

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
28:D6:12:GLU:HB3	28:D6:23:THR:HG22	1.72	0.71
31:DA:142:A:H8	31:DA:1595:G:H21	1.37	0.71
49:BX:24:GLY:O	49:BX:25:LYS:O	2.09	0.71
31:DA:1879:C:C2'	31:DA:1880:C:H5''	2.21	0.71
1:AA:240:C:H2'	1:AA:241:C:C6	2.24	0.71
46:DU:31:SER:O	46:DU:33:ARG:N	2.24	0.71
4:AD:133:VAL:HG11	4:AD:138:TYR:CD1	2.26	0.71
12:AL:27:LEU:O	12:AL:29:GLY:N	2.23	0.71
31:DA:536:A:H2'	31:DA:537:C:H6	1.56	0.71
38:DI:38:LEU:H	38:DI:38:LEU:HD12	1.55	0.71
31:DA:184:C:H2'	31:DA:185:U:C6	2.26	0.71
31:DA:1257:C:H4'	35:DF:83:PHE:CE2	2.26	0.71
45:DT:60:THR:HG22	45:DT:77:PRO:HA	1.71	0.71
41:BP:120:ALA:HB1	41:BP:138:LEU:HB3	1.72	0.71
42:BQ:8:LYS:CG	42:BQ:9:TYR:N	2.53	0.71
30:D8:46:ARG:HH22	41:DP:65:ARG:HH22	1.39	0.71
41:DP:47:ASP:HB3	41:DP:48:PRO:O	1.90	0.71
49:DX:33:LYS:O	49:DX:35:THR:N	2.24	0.71
31:BA:2250:G:C5	42:BQ:82:ARG:HD3	2.26	0.71
23:B1:85:LEU:HB3	23:B1:87:PRO:CD	2.21	0.71
36:BG:86:MET:HB2	36:BG:87:PRO:CD	2.19	0.71
1:CA:102:G:C5	1:CA:103:C:C5	2.79	0.71
31:DA:494:G:OP1	48:DW:8:ARG:NH1	2.23	0.71
33:BD:166:GLN:HA	33:BD:166:GLN:NE2	2.04	0.71
31:BA:2712:U:O2'	31:BA:2712(A):A:OP2	2.08	0.71
35:BF:65:TRP:CZ3	35:BF:75:HIS:HD2	2.09	0.71
10:AJ:65:LEU:HD13	14:AN:56:VAL:HG22	1.72	0.71
22:B0:20:ARG:NH1	31:BA:2357:U:OP1	2.23	0.71
1:AA:624:C:H4'	16:AP:10:GLY:HA2	1.72	0.71
33:DD:244:ARG:HG2	33:DD:245:PRO:HD3	1.71	0.70
32:DB:48:A:H4'	44:DS:95:HIS:HD2	1.56	0.70
30:D8:34:TRP:O	30:D8:35:GLN:HB2	1.91	0.70
44:DS:56:LEU:HD23	44:DS:57:LYS:N	2.06	0.70
27:D5:32:PRO:O	27:D5:33:CYS:HB3	1.91	0.70
41:DP:30:THR:HG22	41:DP:31:ALA:N	2.03	0.70
31:DA:1880:C:H6	31:DA:1880:C:C5'	2.04	0.70
31:DA:1528(A):A:N7	31:DA:1529:G:H8	1.88	0.70
31:DA:1529:G:H21	31:DA:1530:C:C5'	2.04	0.70
40:DO:107:ARG:HH12	45:DT:35:LYS:CB	2.02	0.70
1:AA:445:G:H2'	1:AA:446:G:C8	2.25	0.70
28:B6:15:GLU:HB3	28:B6:18:ARG:HG2	1.73	0.70
1:CA:84:U:C5	1:CA:88:A:C8	2.79	0.70

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
28:B6:39:TYR:O	28:B6:49:HIS:HE1	1.74	0.70
9:CI:10:ARG:HD3	9:CI:75:ASP:HB3	1.72	0.70
1:AA:662:G:H2'	1:AA:663:A:C8	2.26	0.70
31:DA:1205:U:H4'	31:DA:1206:G:OP2	1.90	0.70
1:CA:819:A:H4'	1:CA:820:U:OP2	1.90	0.70
31:DA:780:G:H21	31:DA:783:A:H62	1.38	0.70
3:CC:157:ILE:HD11	3:CC:166:GLU:HB2	1.72	0.70
8:AH:5:PRO:O	8:AH:8:ASP:HB3	1.90	0.70
4:CD:146:ILE:HD12	4:CD:146:ILE:N	2.05	0.70
1:AA:992:U:H1'	1:AA:993:G:OP2	1.89	0.70
47:BV:47:VAL:HG13	47:BV:48:GLY:N	2.05	0.70
31:DA:2317:C:O2	31:DA:2317:C:H2'	1.91	0.70
31:BA:83:G:N2	31:BA:102:G:O2'	2.23	0.70
49:DX:33:LYS:HA	49:DX:35:THR:HG22	1.72	0.70
46:DU:83:LEU:HG	46:DU:88:ILE:HG12	1.71	0.70
1:CA:359:U:H2'	1:CA:360:A:H8	1.56	0.70
1:CA:386:C:C2'	1:CA:387:U:H5'	2.21	0.70
1:CA:394:G:H2'	1:CA:395:C:H6	1.56	0.70
49:BX:23:GLU:HG3	49:BX:24:GLY:H	1.56	0.70
31:DA:2223:G:C2'	31:DA:2224:G:H5'	2.21	0.70
34:BE:92:THR:H	34:BE:95:ILE:CD1	2.04	0.70
31:BA:1777:U:O2'	31:BA:1778:U:H5'	1.90	0.70
1:CA:430:A:OP2	4:CD:8:VAL:HG23	1.91	0.70
38:DI:61:ARG:O	38:DI:133:HIS:CE1	2.44	0.70
1:CA:878:G:H5'	8:CH:89:PRO:HG2	1.73	0.70
1:AA:194:C:H2'	1:AA:195:A:H5''	1.73	0.70
31:DA:1168:G:C2'	31:DA:1169:G:H5'	2.22	0.70
38:DI:2:LYS:HB2	38:DI:39:ALA:CB	2.21	0.70
33:BD:126:GLN:O	33:BD:193:VAL:HG11	1.91	0.70
33:DD:35:LYS:HB3	33:DD:63:ARG:HA	1.73	0.70
31:BA:2317:C:H2'	31:BA:2317:C:O2	1.89	0.70
24:B2:33:MET:HG2	49:BX:11:PRO:HD2	1.72	0.70
44:BS:28:VAL:HB	44:BS:89:ARG:CB	2.15	0.70
31:BA:2444:G:OP2	35:BF:68:LYS:HE2	1.91	0.70
42:DQ:34:LEU:HD11	42:DQ:129:THR:HB	1.73	0.70
41:DP:95:VAL:HG22	41:DP:125:VAL:HB	1.71	0.70
34:BE:117:MET:O	34:BE:117:MET:HG2	1.91	0.70
1:CA:328:C:H2'	1:CA:328:C:O2	1.90	0.70
1:CA:1118:C:H1'	1:CA:1179:A:C4	2.26	0.70
1:CA:193:C:H2'	1:CA:194:C:H6	1.57	0.70
51:DZ:130:PRO:HA	51:DZ:133:ILE:HD11	1.73	0.70
3:AC:132:ARG:O	3:AC:136:GLN:HB2	1.90	0.70

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
30:B8:34:TRP:O	30:B8:35:GLN:HB2	1.90	0.70
1:AA:359:U:H2'	1:AA:360:A:H8	1.55	0.70
44:DS:87:PHE:O	44:DS:88:ASP:CB	2.39	0.70
50:BY:76:CYS:O	50:BY:99:CYS:SG	2.48	0.70
45:DT:56:GLY:O	45:DT:59:THR:CG2	2.39	0.70
31:BA:2307:G:H3'	31:BA:2307:G:N3	2.06	0.70
37:BH:141:VAL:HG12	37:BH:142:GLY:N	2.07	0.70
36:DG:86:MET:HB2	36:DG:87:PRO:CD	2.21	0.70
31:BA:307:G:H22	31:BA:310:A:H5'	1.55	0.70
31:BA:2029:G:H2'	31:BA:2031:A:OP2	1.91	0.70
1:AA:1101:A:H4'	1:AA:1102:A:O5'	1.90	0.70
31:DA:676:A:H2	31:DA:802:A:H61	1.35	0.70
9:AI:10:ARG:HD3	9:AI:75:ASP:HB3	1.71	0.70
37:DH:153:LYS:N	37:DH:153:LYS:HD3	2.06	0.70
9:CI:53:VAL:HB	9:CI:92:TYR:CE2	2.26	0.70
42:DQ:35:VAL:HG13	42:DQ:130:LYS:HB3	1.72	0.70
42:DQ:8:LYS:HG3	42:DQ:9:TYR:N	2.06	0.70
47:DV:72:VAL:HA	47:DV:88:ARG:HH22	1.56	0.70
31:BA:2394:C:H2'	31:BA:2395:C:H5'	1.71	0.70
23:D1:88:LYS:O	23:D1:92:LYS:HB2	1.91	0.70
31:DA:7:G:H2'	31:DA:8:A:O4'	1.90	0.70
24:D2:49:LYS:HD2	24:D2:53:LEU:CD2	2.20	0.70
31:DA:286:C:H2'	31:DA:287:C:H5'	1.73	0.70
6:CF:11:ASN:HB3	6:CF:14:LEU:HG	1.72	0.70
28:D6:40:CYS:SG	28:D6:45:LYS:NZ	2.57	0.70
4:AD:108:LEU:HD11	4:AD:174:LEU:HD22	1.73	0.70
37:BH:88:LEU:O	37:BH:89:ILE:HG23	1.91	0.70
1:AA:1321:C:H5'	1:AA:1322:C:H5''	1.73	0.70
1:AA:937:A:H1'	1:AA:1379:G:N2	2.05	0.70
36:BG:20:ILE:O	36:BG:24:GLY:HA2	1.91	0.70
32:BB:15:A:H5'	32:BB:16:G:C8	2.25	0.70
31:BA:1205:U:H4'	31:BA:1206:G:OP2	1.90	0.70
31:BA:910:A:H62	42:BQ:12:GLN:HA	1.57	0.70
31:DA:1970:A:H5'	31:DA:1972:A:H1'	1.74	0.70
31:DA:251:A:H5''	41:DP:51:PHE:CZ	2.27	0.70
1:CA:359:U:H2'	1:CA:360:A:C8	2.26	0.70
24:B2:47:ASN:ND2	24:B2:48:HIS:N	2.39	0.70
31:BA:71:A:H5'	31:BA:71:A:H8	1.54	0.70
49:BX:73:ARG:H	49:BX:74:PRO:CD	2.05	0.70
49:BX:89:ILE:HA	49:BX:92:LEU:HB2	1.72	0.70
32:BB:7:G:H5'	44:BS:29:PHE:CE1	2.26	0.70
31:DA:1779:U:H6	31:DA:1784:A:H62	1.39	0.70

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:DA:1771:C:HO2'	31:DA:1786:A:H8	0.76	0.70
31:DA:2307:G:N3	31:DA:2307:G:H3'	2.07	0.70
45:BT:45:PHE:HE2	45:BT:63:VAL:HG22	1.56	0.70
30:B8:52:LYS:N	30:B8:53:PRO:CD	2.54	0.70
51:BZ:102:LEU:HD21	51:BZ:124:ILE:HG23	1.72	0.70
1:AA:1064:G:H1'	1:AA:1065:U:OP2	1.92	0.70
44:BS:36:TYR:N	44:BS:36:TYR:CD1	2.52	0.70
23:B1:34:THR:HG23	31:BA:388:G:OP1	1.91	0.70
31:BA:2688:U:C5	31:BA:2720:U:OP2	2.44	0.70
35:BF:182:ASN:O	35:BF:186:ILE:HG12	1.91	0.70
44:BS:42:ASP:C	44:BS:44:LYS:H	1.93	0.70
31:BA:1472:A:C2'	31:BA:1473:G:H5'	2.22	0.70
31:DA:1805:U:O2	33:DD:50:THR:HB	1.91	0.70
42:BQ:89:ASN:O	42:BQ:91:GLU:N	2.25	0.70
27:B5:47:PRO:O	27:B5:48:GLU:HG3	1.92	0.70
33:DD:35:LYS:NZ	33:DD:65:ILE:HA	2.06	0.70
31:DA:1225:G:P	47:DV:88:ARG:HB3	2.32	0.70
30:D8:61:LEU:HD22	31:DA:593:G:O3'	1.92	0.70
28:D6:14:THR:O	28:D6:49:HIS:HA	1.90	0.70
31:BA:2394:C:OP1	41:BP:63:PRO:CD	2.38	0.70
39:DN:3:THR:HA	39:DN:4:TYR:CE1	2.27	0.70
31:BA:142:A:H1'	31:BA:1408:C:O4'	1.91	0.70
44:DS:67:ARG:H	44:DS:69:VAL:HG12	1.56	0.70
31:BA:1531:C:H3'	31:BA:1532:C:C5'	2.20	0.70
24:D2:41:ILE:HG21	31:DA:95:G:H21	1.56	0.70
33:DD:228:PRO:HD3	33:DD:235:GLY:HA3	1.73	0.70
1:AA:1169:A:H2'	1:AA:1170:A:H8	1.56	0.70
43:DR:87:TYR:HE1	43:DR:117:VAL:HG12	1.56	0.70
1:CA:1064:G:H1'	1:CA:1065:U:OP2	1.90	0.70
31:DA:271(K):U:H3'	31:DA:271(L):U:H5'	1.74	0.70
1:CA:445:G:H2'	1:CA:446:G:C8	2.26	0.70
31:BA:271(K):U:H3'	31:BA:271(L):U:H5'	1.74	0.70
1:AA:616:G:C2	1:AA:617:G:C8	2.80	0.70
32:BB:82:G:C2'	32:BB:83:G:H5'	2.21	0.70
35:BF:66:PRO:O	35:BF:67:GLN:HB3	1.90	0.70
1:CA:194:C:H2'	1:CA:195:A:H5''	1.73	0.70
45:DT:128:GLU:O	45:DT:130:ALA:N	2.24	0.70
4:CD:133:VAL:HG13	4:CD:135:LEU:HD22	1.72	0.70
31:DA:2772:C:H2'	31:DA:2773:C:H6	1.56	0.70
4:CD:49:ARG:HE	4:CD:49:ARG:HA	1.56	0.70
12:CL:76:ASN:O	12:CL:77:LEU:HD23	1.92	0.70
12:CL:119:LYS:HB2	12:CL:120:TYR:CD1	2.26	0.70

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:DA:1973:G:H2'	31:DA:1974:C:H6	1.57	0.70
47:DV:61:VAL:HG12	47:DV:99:ILE:HB	1.72	0.70
34:DE:111:ARG:NH1	43:DR:2:ARG:HH21	1.89	0.70
31:DA:9:U:C4	31:DA:2629:A:N6	2.60	0.70
39:BN:14:VAL:HA	39:BN:135:PRO:HD2	1.74	0.70
33:DD:159:ALA:H	33:DD:161:THR:CG2	2.04	0.70
50:BY:28:LYS:HE3	50:BY:30:VAL:HG22	1.73	0.70
31:DA:669:G:HO2'	31:DA:669:G:H8	1.36	0.70
42:DQ:57:HIS:CE1	42:DQ:116:GLU:HB3	2.27	0.70
42:BQ:34:LEU:HD11	42:BQ:129:THR:HB	1.72	0.70
3:AC:50:ALA:HB1	3:AC:70:VAL:HG11	1.72	0.70
31:BA:2712:U:H1'	31:BA:2712(A):A:C8	2.26	0.70
1:AA:560:U:H4'	1:AA:561:U:O5'	1.92	0.70
1:AA:84:U:C5	1:AA:88:A:C8	2.79	0.70
31:BA:2584:U:H2'	31:BA:2585:U:H6	1.56	0.70
1:CA:1321:C:H5'	1:CA:1322:C:H5''	1.74	0.70
6:CF:91:VAL:HG11	18:CR:72:ARG:NH1	2.07	0.70
31:BA:484:C:H2'	31:BA:485:C:H6	1.56	0.70
29:B7:16:HIS:HB2	29:B7:44:PRO:HG2	1.73	0.70
31:BA:2199:A:H3'	31:BA:2200:C:H6	1.57	0.70
31:DA:848:G:H2'	31:DA:849:A:C8	2.26	0.70
42:BQ:134:ARG:HH21	51:BZ:122:ARG:HD2	1.57	0.70
1:AA:1128:C:H5'	9:AI:16:ARG:HH12	1.57	0.70
31:BA:2267:A:H5''	31:BA:2268:A:H5'	1.72	0.70
41:BP:14:LYS:O	41:BP:15:ARG:HB2	1.92	0.70
45:BT:128:GLU:O	45:BT:130:ALA:N	2.25	0.70
31:DA:1497:U:C5'	31:DA:1498:C:C5	2.74	0.70
28:D6:36:LEU:HD13	28:D6:50:ARG:CZ	2.22	0.70
31:BA:84:A:H61	31:BA:102:G:H1'	1.57	0.70
44:BS:92:TYR:CD1	44:BS:93:LYS:N	2.60	0.70
35:DF:21:ALA:HB3	35:DF:23:ASP:OD2	1.92	0.70
31:BA:2531:A:H2	31:BA:2658:C:O2	1.75	0.70
4:CD:8:VAL:HG12	4:CD:21:LEU:HD13	1.74	0.70
4:AD:8:VAL:HG12	4:AD:21:LEU:HD13	1.73	0.70
31:DA:288:C:H42	31:DA:353:G:H1	1.39	0.70
33:BD:166:GLN:CA	33:BD:166:GLN:HE21	2.01	0.70
1:AA:437:U:OP1	4:AD:155:LEU:HD22	1.91	0.70
44:BS:38:GLN:HG2	44:BS:47:THR:CG2	2.21	0.70
1:AA:192:U:O4'	20:AT:103:GLY:HA2	1.91	0.70
1:CA:1386:G:C2	1:CA:1387:G:C8	2.80	0.70
13:AM:68:GLY:HA2	13:AM:71:ARG:HB3	1.74	0.70
40:BO:43:VAL:HG23	40:BO:56:ASP:O	1.92	0.70

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:BA:708:C:H5'	31:BA:709:U:OP2	1.92	0.70
31:BA:1430:C:H2'	31:BA:1431:U:C6	2.27	0.70
33:BD:35:LYS:NZ	33:BD:65:ILE:HA	2.06	0.70
31:DA:71:A:H2	49:DX:31:HIS:HE1	1.40	0.70
49:DX:65:ARG:NE	49:DX:66:LEU:N	2.40	0.70
41:BP:16:ARG:CD	41:BP:18:ARG:H	1.97	0.70
27:D5:52:TYR:CD2	27:D5:52:TYR:N	2.60	0.70
34:DE:92:THR:H	34:DE:95:ILE:CD1	2.03	0.70
39:DN:66:LYS:HA	39:DN:69:GLN:HB2	1.72	0.70
45:BT:24:PRO:HA	45:BT:49:VAL:HG22	1.74	0.70
4:AD:62:GLN:HE22	4:AD:65:ARG:HE	1.36	0.70
48:BW:92:ARG:HG2	48:BW:92:ARG:NH1	1.98	0.70
22:B0:13:GLY:O	22:B0:14:ARG:CB	2.40	0.70
49:BX:44:GLU:HG3	49:BX:49:VAL:O	1.92	0.70
1:AA:180:U:C2'	1:AA:181:G:H5'	2.21	0.70
13:CM:81:LEU:HB3	13:CM:89:GLY:HA2	1.74	0.70
12:CL:75:HIS:HD2	12:CL:77:LEU:H	1.39	0.70
3:AC:173:VAL:O	3:AC:175:LEU:HD12	1.91	0.70
31:BA:1300:U:H3'	31:BA:1301:A:C5'	2.22	0.70
44:BS:77:ALA:O	44:BS:80:LEU:HD12	1.92	0.70
3:CC:112:SER:O	3:CC:116:VAL:HG23	1.90	0.70
33:DD:27:THR:CG2	33:DD:28:GLU:H	2.05	0.69
33:DD:35:LYS:HD3	33:DD:63:ARG:CA	2.21	0.69
39:DN:131:GLN:NE2	39:DN:134:ARG:HA	2.06	0.69
31:DA:631:A:OP1	41:DP:64:LYS:HE2	1.91	0.69
50:BY:99:CYS:SG	50:BY:99:CYS:O	2.49	0.69
16:CP:22:THR:HA	16:CP:33:ILE:HG12	1.74	0.69
32:BB:44:G:H1'	32:BB:47:C:N4	2.07	0.69
36:BG:63:ILE:HA	36:BG:143:GLU:HG3	1.74	0.69
31:BA:348:G:C2'	31:BA:349:G:H5''	2.21	0.69
32:DB:79:C:C2'	32:DB:80:U:H5'	2.23	0.69
1:CA:1399:C:C2	1:CA:1502:A:N6	2.59	0.69
51:BZ:39:VAL:HG21	51:BZ:44:PHE:HB2	1.72	0.69
1:CA:353:A:H5'	1:CA:353:A:H8	1.56	0.69
1:AA:555:C:H2'	1:AA:556:C:H6	1.56	0.69
31:DA:543:C:N4	31:DA:551:G:H1	1.90	0.69
38:BI:83:ALA:HB3	38:BI:144:VAL:HG13	1.73	0.69
31:DA:314:A:C2'	31:DA:315:G:H5'	2.22	0.69
31:BA:1171:G:C8	31:BA:1173:G:H1'	2.27	0.69
31:DA:2688:U:C5	31:DA:2720:U:OP2	2.45	0.69
1:CA:1346:A:N1	1:CA:1374:A:H5''	2.06	0.69
31:BA:1300:U:H3'	31:BA:1301:A:H5''	1.74	0.69

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:CA:1446:U:H4'	1:CA:1447:A:N7	2.07	0.69
31:DA:1598:C:H2'	31:DA:1599:C:H6	1.57	0.69
31:DA:1973:G:H2'	31:DA:1974:C:C6	2.27	0.69
24:D2:33:MET:HG2	49:DX:11:PRO:CD	2.22	0.69
31:DA:2723:C:H5''	43:DR:2:ARG:HD3	1.72	0.69
4:CD:28:SER:HB3	4:CD:30:LYS:HG2	1.74	0.69
1:CA:688:G:H2'	1:CA:689:C:H6	1.57	0.69
31:DA:2790:A:H2'	31:DA:2791:C:C5'	2.22	0.69
24:B2:14:ARG:NH1	24:B2:57:ILE:HG22	2.07	0.69
1:AA:22:G:H2'	1:AA:23:C:C6	2.27	0.69
23:D1:34:THR:HG23	31:DA:388:G:OP1	1.91	0.69
12:AL:24:VAL:HG13	12:AL:98:TYR:CE2	2.27	0.69
8:CH:102:ARG:N	8:CH:102:ARG:HE	1.90	0.69
44:DS:38:GLN:HG2	44:DS:47:THR:CG2	2.22	0.69
12:AL:34:ARG:O	12:AL:61:THR:HG23	1.91	0.69
1:CA:616:G:C2	1:CA:617:G:C8	2.80	0.69
1:AA:1238:A:H62	1:AA:1299:A:N6	1.89	0.69
1:AA:1372:U:H5''	9:AI:71:SER:HB3	1.72	0.69
7:CG:73:MET:HG2	7:CG:90:GLU:HA	1.73	0.69
31:BA:528:A:C2	31:BA:2043:C:H4'	2.27	0.69
1:CA:1372:U:H5''	9:CI:71:SER:HB3	1.72	0.69
31:DA:272:G:H4'	31:DA:272(B):G:OP1	1.92	0.69
1:CA:763:G:H2'	1:CA:764:C:H6	1.57	0.69
46:BU:88:ILE:C	46:BU:90:VAL:N	2.44	0.69
1:AA:585:G:C4'	12:AL:8:ASN:HD21	1.96	0.69
35:BF:52:LYS:CG	35:BF:56:GLU:HB3	2.23	0.69
29:D7:7:PRO:HB2	31:DA:1309:G:H4'	1.72	0.69
31:BA:588:U:H2'	31:BA:589:C:C6	2.26	0.69
23:D1:65:SER:H	23:D1:67:ILE:HD11	1.58	0.69
15:AO:63:ARG:NH1	15:AO:87:ILE:HD13	2.07	0.69
31:BA:2658:C:O2	31:BA:2658:C:H2'	1.91	0.69
1:CA:544:G:H2'	1:CA:545:C:H6	1.57	0.69
50:BY:37:VAL:HG23	50:BY:67:LEU:HB3	1.72	0.69
1:CA:266:G:H5''	1:CA:268:C:H41	1.56	0.69
31:DA:1839:G:N7	31:DA:1927:A:H1'	2.07	0.69
7:CG:113:GLU:HB2	7:CG:119:ARG:CG	2.22	0.69
1:AA:555:C:H2'	1:AA:556:C:C6	2.27	0.69
31:DA:910:A:C5	42:DQ:13:GLN:HG3	2.28	0.69
38:BI:2:LYS:HB2	38:BI:39:ALA:CB	2.22	0.69
31:BA:2236:C:C2'	31:BA:2237:G:H5'	2.22	0.69
28:B6:10:LEU:CD2	28:B6:10:LEU:H	2.06	0.69
32:DB:21:G:HO2'	32:DB:22:U:H6	1.39	0.69

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
39:DN:13:TRP:HZ3	39:DN:130:HIS:CE1	2.10	0.69
31:DA:244:A:C2	31:DA:255:A:C4	2.80	0.69
30:D8:32:LEU:HD13	30:D8:32:LEU:H	1.57	0.69
50:DY:96:ILE:HG21	50:DY:99:CYS:CB	2.21	0.69
31:DA:309:G:H4'	50:DY:18:GLY:HA3	1.74	0.69
31:BA:587:C:H4'	31:BA:588:U:OP2	1.91	0.69
23:D1:85:LEU:HB3	23:D1:87:PRO:CD	2.19	0.69
31:BA:2476:A:H2'	31:BA:2477:C:H5''	1.74	0.69
3:CC:50:ALA:HB1	3:CC:70:VAL:HG11	1.73	0.69
1:CA:66:G:H4'	1:CA:173:U:C5	2.27	0.69
10:CJ:8:LEU:HG	10:CJ:96:ILE:HG22	1.74	0.69
31:DA:1719:G:H2'	31:DA:1720:U:H5'	1.72	0.69
2:AB:21:ARG:HB3	2:AB:39:ILE:HA	1.73	0.69
1:CA:1162:C:H2'	1:CA:1163:C:C6	2.28	0.69
1:AA:659:U:C2'	1:AA:660:G:H5'	2.23	0.69
16:CP:53:VAL:O	16:CP:57:ARG:HG2	1.92	0.69
23:B1:56:GLN:HA	23:B1:56:GLN:OE1	1.93	0.69
46:BU:8:VAL:HG11	46:BU:12:ARG:CZ	2.22	0.69
35:BF:34:TRP:CZ2	41:BP:12:ALA:HB2	2.27	0.69
1:AA:1446:U:H4'	1:AA:1447:A:N7	2.07	0.69
31:DA:661:C:H4'	41:DP:16:ARG:HH12	1.56	0.69
33:DD:27:THR:CG2	33:DD:28:GLU:N	2.55	0.69
1:AA:674:G:H2'	1:AA:675:A:H8	1.57	0.69
31:DA:1777:U:O2'	31:DA:1778:U:H5'	1.92	0.69
27:D5:46:CYS:SG	27:D5:47:PRO:HG2	2.32	0.69
41:BP:30:THR:HG22	41:BP:31:ALA:N	2.03	0.69
23:D1:85:LEU:CB	23:D1:87:PRO:HD3	2.19	0.69
35:DF:22:ALA:O	35:DF:26:ALA:HB2	1.92	0.69
31:BA:2544:G:O5'	31:BA:2544:G:H8	1.75	0.69
24:D2:49:LYS:CD	24:D2:53:LEU:HD22	2.22	0.69
42:BQ:140:ALA:HB1	51:BZ:99:TYR:HB2	1.73	0.69
42:BQ:141:GLN:HG2	51:BZ:71:VAL:O	1.92	0.69
31:DA:867:C:C5	31:DA:868:U:C5	2.81	0.69
47:DV:28:GLU:CG	47:DV:29:PRO:HD3	2.22	0.69
42:DQ:42:ILE:HD13	42:DQ:97:VAL:CG2	2.21	0.69
31:DA:2472:G:H5''	31:DA:2472:G:H8	1.57	0.69
4:CD:133:VAL:HG11	4:CD:138:TYR:CD1	2.28	0.69
1:AA:749:C:O2'	1:AA:750:G:H5'	1.92	0.69
31:DA:151:C:O2'	31:DA:152:G:H5'	1.91	0.69
10:CJ:63:PHE:HZ	14:CN:45:ARG:HG3	1.58	0.69
5:AE:57:LYS:O	5:AE:61:TYR:HD2	1.75	0.69
1:AA:441:A:H3'	1:AA:442:C:H6	1.58	0.69

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
47:BV:53:GLU:O	47:BV:55:ALA:N	2.25	0.69
33:BD:35:LYS:HZ3	33:BD:104:TYR:HB2	1.55	0.69
34:DE:34:VAL:CG2	34:DE:48:GLN:HE21	2.03	0.69
47:BV:72:VAL:CA	47:BV:88:ARG:HH22	2.06	0.69
31:BA:661:C:H4'	41:BP:16:ARG:HH12	1.57	0.69
31:BA:70:G:H21	31:BA:71:A:H62	1.39	0.69
33:BD:158:ALA:O	33:BD:159:ALA:CB	2.40	0.69
36:BG:105:LYS:HZ2	36:BG:105:LYS:HB2	1.56	0.69
15:CO:67:LEU:HD22	15:CO:78:TYR:HE1	1.57	0.69
1:AA:542:G:H5'	4:AD:41:GLY:HA3	1.74	0.69
6:CF:17:SER:O	6:CF:21:LEU:HD22	1.93	0.69
33:DD:254:THR:N	33:DD:255:LYS:HZ1	1.89	0.69
7:AG:113:GLU:HB2	7:AG:119:ARG:CG	2.23	0.69
1:CA:920:U:H2'	1:CA:921:U:C6	2.26	0.69
1:AA:820:U:H4'	1:AA:821:G:OP2	1.93	0.69
1:CA:983:A:H2	1:CA:984:C:C6	2.11	0.69
5:AE:139:LEU:HA	5:AE:142:LEU:HD12	1.72	0.69
17:CQ:6:LEU:HD13	17:CQ:23:VAL:HG11	1.75	0.69
10:AJ:51:ARG:HE	10:AJ:61:GLU:HB2	1.58	0.69
31:DA:901:A:H5'	31:DA:902:C:OP2	1.93	0.69
43:DR:42:LYS:HA	43:DR:45:ARG:HD2	1.74	0.69
27:B5:4:HIS:HB3	27:B5:5:PRO:HD3	1.74	0.69
11:CK:52:GLY:H	11:CK:55:LYS:HG3	1.57	0.69
23:D1:56:GLN:OE1	23:D1:56:GLN:HA	1.92	0.69
31:DA:2205:C:O2	31:DA:2220:G:C2	2.46	0.69
31:BA:2094:G:OP1	38:BI:22:LYS:HD3	1.90	0.69
27:B5:33:CYS:SG	27:B5:49:CYS:CB	2.81	0.69
39:DN:40:PRO:HA	46:DU:64:ARG:NH2	2.08	0.69
31:DA:1341:U:H2'	31:DA:1397:U:O2	1.92	0.69
24:B2:26:ARG:CZ	24:B2:29:LYS:HE2	2.22	0.69
31:BA:71:A:H5'	31:BA:71:A:C8	2.28	0.69
35:DF:52:LYS:CG	35:DF:56:GLU:HB3	2.23	0.69
31:DA:2404:C:H2'	31:DA:2405:G:H5'	1.75	0.69
31:DA:1188:U:O2'	31:DA:1189:A:H5'	1.92	0.69
1:CA:539:A:H2'	1:CA:540:G:C8	2.27	0.69
36:BG:47:LYS:HD3	36:BG:81:LYS:HD2	1.73	0.69
31:DA:1529:G:N2	31:DA:1530:C:H5''	2.05	0.69
37:BH:157:TYR:CE1	37:BH:171:LEU:N	2.59	0.69
31:BA:1882:C:O2	31:BA:1882:C:H2'	1.91	0.69
6:AF:63:TYR:N	6:AF:63:TYR:CD2	2.52	0.69
3:CC:130:VAL:O	3:CC:134:ILE:HG12	1.92	0.69
31:DA:2267:A:H5''	31:DA:2268:A:H5'	1.74	0.69

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:41:G:H2'	1:AA:42:G:C8	2.27	0.69
31:DA:2781:A:H5'	31:DA:2782:G:H5'	1.75	0.69
31:BA:901:A:H5'	31:BA:902:C:OP2	1.93	0.69
33:DD:221:VAL:HG22	33:DD:226:MET:CE	2.23	0.69
23:B1:22:GLY:HA2	23:B1:38:SER:O	1.91	0.69
1:AA:804:U:H5''	1:AA:805:C:OP2	1.92	0.69
13:CM:10:PRO:HB2	13:CM:18:ALA:HB1	1.75	0.69
45:BT:60:THR:HG22	45:BT:77:PRO:HA	1.73	0.69
1:CA:1442:G:C8	1:CA:1442(B):A:C2	2.81	0.69
28:D6:25:LYS:O	31:DA:2286:A:H2	1.75	0.69
50:BY:97:ARG:HH21	50:BY:98:VAL:HG21	1.58	0.69
50:BY:96:ILE:HG21	50:BY:99:CYS:SG	2.33	0.69
31:BA:102:G:O2'	31:BA:103:A:P	2.51	0.69
50:DY:76:CYS:O	50:DY:99:CYS:SG	2.51	0.69
31:DA:142:A:H1'	31:DA:1408:C:O4'	1.92	0.69
24:D2:33:MET:HG2	49:DX:11:PRO:HD2	1.75	0.69
1:CA:365:U:H5''	1:CA:366:C:OP1	1.93	0.69
24:B2:47:ASN:ND2	24:B2:48:HIS:H	1.91	0.69
31:BA:2307:G:C2	31:BA:2308:G:H5'	2.28	0.69
23:B1:94:LEU:HD22	23:B1:95:LEU:O	1.93	0.69
23:D1:67:ILE:N	23:D1:68:PRO:HD2	2.08	0.69
31:BA:1022:G:N2	31:BA:1142(A):A:H2	1.80	0.69
31:BA:811:U:H3'	41:BP:25:SER:O	1.92	0.69
47:DV:79:VAL:HG23	47:DV:82:ARG:HD2	1.74	0.69
1:CA:437:U:OP1	4:CD:155:LEU:HD22	1.92	0.69
1:CA:542:G:H5'	4:CD:41:GLY:HA3	1.75	0.69
31:BA:1464:C:O2'	31:BA:1528:A:H8	1.72	0.69
31:BA:286:C:H2'	31:BA:287:C:H5'	1.75	0.69
1:AA:102:G:C5	1:AA:103:C:C5	2.81	0.69
18:CR:45:SER:H	18:CR:51:LEU:HD11	1.58	0.69
47:BV:28:GLU:CG	47:BV:29:PRO:HD3	2.22	0.69
10:CJ:8:LEU:HD22	10:CJ:20:ALA:HB2	1.75	0.69
24:D2:15:LYS:O	24:D2:16:LEU:CB	2.40	0.69
24:D2:14:ARG:NH1	24:D2:57:ILE:HG22	2.08	0.69
36:BG:18:GLU:O	36:BG:22:ARG:HB2	1.93	0.69
34:DE:203:LYS:HD2	34:DE:203:LYS:O	1.93	0.69
29:D7:16:HIS:HB2	29:D7:44:PRO:HG2	1.73	0.69
31:DA:1472:A:O2'	31:DA:1473:G:H5'	1.92	0.69
1:CA:1054:C:O2'	1:CA:1055:A:H5''	1.93	0.69
1:CA:159:G:H2'	1:CA:161:A:OP2	1.93	0.69
31:DA:971:C:H2'	31:DA:972:G:H5'	1.73	0.69
36:BG:115:ARG:NH1	36:BG:136:ARG:HG3	2.08	0.69

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:CC:173:VAL:O	3:CC:175:LEU:HD12	1.92	0.69
31:BA:2243:U:O2'	31:BA:2244:U:H5'	1.92	0.69
31:BA:151:C:O2'	31:BA:152:G:H5'	1.93	0.69
31:DA:2335:A:C8	31:DA:2337:G:C5	2.81	0.69
1:AA:33:A:H2'	1:AA:34:C:C6	2.27	0.69
31:DA:2887:U:H2'	31:DA:2888:C:C6	2.28	0.69
49:DX:35:THR:O	49:DX:36:LYS:O	2.10	0.69
1:CA:377:G:O2'	1:CA:378:G:H5'	1.93	0.69
49:BX:33:LYS:C	49:BX:35:THR:N	2.44	0.69
31:BA:143:G:H1'	49:BX:38:GLU:HG3	1.74	0.69
45:BT:56:GLY:O	45:BT:59:THR:CG2	2.41	0.69
34:BE:111:ARG:NH1	43:BR:2:ARG:HH21	1.91	0.69
33:BD:270:ILE:HD12	33:BD:270:ILE:O	1.93	0.69
31:BA:1190:G:H5'	41:BP:35:HIS:HA	1.74	0.69
1:AA:544:G:H2'	1:AA:545:C:H6	1.57	0.69
33:DD:143:HIS:HD2	33:DD:144:ALA:HB2	1.58	0.69
31:BA:271(O):C:O2'	31:BA:271(P):C:C5	2.43	0.69
31:BA:2475:C:C5'	31:BA:2476:A:OP2	2.41	0.69
6:CF:62:TRP:CH2	6:CF:64:GLN:HB2	2.28	0.69
45:BT:129:ARG:CZ	45:BT:131:ALA:HB3	2.23	0.69
1:CA:1446:U:O2'	1:CA:1447:A:H8	1.76	0.69
1:CA:1162:C:H2'	1:CA:1163:C:H6	1.58	0.69
41:BP:10:PRO:CD	41:BP:11:GLY:H	2.04	0.69
40:BO:64:ARG:HG2	40:BO:79:PHE:CG	2.28	0.69
42:DQ:29:PHE:O	42:DQ:30:GLY:O	2.11	0.69
5:AE:68:GLU:O	5:AE:68:GLU:HG3	1.93	0.69
31:BA:251:A:H5''	41:BP:51:PHE:HZ	1.58	0.69
24:B2:33:MET:HG2	49:BX:11:PRO:CD	2.23	0.69
32:DB:74:U:C3'	32:DB:75:G:H5''	2.23	0.69
23:D1:87:PRO:HB2	23:D1:91:LYS:HZ2	1.57	0.69
41:DP:35:HIS:O	41:DP:36:LYS:HG3	1.93	0.69
31:BA:2652:C:O2'	31:BA:2653:U:H5'	1.93	0.69
31:BA:2360:A:O2'	31:BA:2361:A:P	2.50	0.69
31:BA:1280:G:H2'	31:BA:1281:G:H5''	1.74	0.69
1:CA:1169:A:H2'	1:CA:1170:A:H8	1.57	0.69
45:BT:3:ARG:HB2	45:BT:6:LEU:CB	2.22	0.69
1:CA:1090:U:H2'	1:CA:1091:U:C6	2.26	0.69
31:BA:1639:U:C2'	31:BA:1640:C:H5''	2.23	0.69
31:DA:2761:G:H2'	31:DA:2762:G:H5''	1.74	0.69
9:CI:45:ALA:O	9:CI:48:GLU:HB2	1.92	0.69
31:DA:2022:U:O2'	31:DA:2617:C:H5'	1.93	0.69
31:DA:1300:U:H3'	31:DA:1301:A:C5'	2.21	0.69

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
38:BI:38:LEU:HD12	38:BI:38:LEU:H	1.57	0.69
1:AA:1346:A:N1	1:AA:1374:A:H5''	2.06	0.69
31:DA:1450(A):C:N4	31:DA:1451:C:H41	1.91	0.69
42:DQ:89:ASN:O	42:DQ:91:GLU:N	2.26	0.69
39:DN:14:VAL:HA	39:DN:135:PRO:HD2	1.74	0.68
47:BV:69:LYS:CG	47:BV:70:ILE:H	1.99	0.68
31:DA:84:A:H61	31:DA:102:G:H1'	1.57	0.68
33:BD:132:PRO:HG3	33:BD:190:TYR:CE1	2.28	0.68
47:DV:79:VAL:CG2	47:DV:82:ARG:HD2	2.23	0.68
31:BA:2790:A:H2'	31:BA:2791:C:C5'	2.22	0.68
43:DR:118:GLU:HA	43:DR:118:GLU:OE1	1.92	0.68
23:D1:26:ARG:HB2	23:D1:34:THR:HA	1.75	0.68
31:DA:1693:U:H4'	31:DA:1694:C:OP2	1.93	0.68
1:AA:460:G:O6	1:AA:470:C:H5''	1.93	0.68
37:BH:89:ILE:O	37:BH:90:LYS:HG2	1.93	0.68
3:AC:130:VAL:O	3:AC:134:ILE:HG12	1.92	0.68
1:CA:192:U:O4'	20:CT:103:GLY:HA2	1.93	0.68
31:DA:971:C:C2'	31:DA:972:G:H5'	2.24	0.68
1:CA:662:G:H2'	1:CA:663:A:C8	2.28	0.68
1:CA:749:C:O2'	1:CA:750:G:H5'	1.93	0.68
19:AS:63:THR:O	19:AS:66:MET:HG2	1.93	0.68
49:DX:23:GLU:CG	49:DX:24:GLY:H	2.07	0.68
31:DA:102:G:O2'	31:DA:103:A:P	2.51	0.68
1:CA:392:G:H2'	1:CA:393:A:H8	1.59	0.68
2:AB:77:ALA:HA	2:AB:80:ILE:HD11	1.76	0.68
44:BS:17:ARG:HA	44:BS:20:ARG:HG2	1.75	0.68
31:BA:2657:A:H5'	31:BA:2658:C:OP2	1.93	0.68
37:DH:158:HIS:CE1	37:DH:169:VAL:C	2.66	0.68
43:DR:116:LEU:O	43:DR:117:VAL:HB	1.93	0.68
32:DB:66:A:C5	32:DB:109:C:C5	2.81	0.68
1:CA:1116:C:H3'	1:CA:1117:G:H5''	1.75	0.68
1:CA:1225:A:H2'	1:CA:1225:A:N3	2.09	0.68
1:CA:1446:U:O2'	1:CA:1447:A:C8	2.46	0.68
37:DH:13:LYS:HA	37:DH:13:LYS:HE2	1.74	0.68
6:AF:91:VAL:HG11	18:AR:72:ARG:NH1	2.08	0.68
35:BF:39:TRP:O	35:BF:43:LYS:HG2	1.93	0.68
46:DU:28:ARG:HG2	46:DU:38:THR:OG1	1.93	0.68
46:BU:55:ARG:HA	46:BU:58:ARG:HD2	1.75	0.68
3:CC:73:PRO:O	3:CC:76:VAL:HG22	1.93	0.68
1:AA:189(B):C:H42	1:AA:189(I):G:H1	1.40	0.68
1:AA:392:G:H2'	1:AA:393:A:H8	1.58	0.68
33:DD:58:HIS:HD2	33:DD:59:LYS:O	1.76	0.68

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
39:BN:39:ARG:CD	39:BN:41:ASP:HB2	2.22	0.68
41:BP:17:LYS:CG	41:BP:17:LYS:O	2.42	0.68
1:CA:585:G:C4'	12:CL:8:ASN:HD21	1.97	0.68
39:BN:18:ALA:HB3	39:BN:26:LEU:CD2	2.23	0.68
37:BH:85:LYS:CE	37:BH:145:ALA:HB2	2.21	0.68
41:DP:38:GLN:CG	41:DP:39:LYS:H	2.05	0.68
35:BF:18:ARG:HG2	35:BF:19:GLU:N	2.01	0.68
41:DP:144:GLU:N	41:DP:145:PRO:HD3	2.07	0.68
31:DA:2657:A:H5'	31:DA:2658:C:OP2	1.93	0.68
12:CL:102:ARG:HG3	12:CL:102:ARG:NH1	2.06	0.68
3:CC:71:ALA:HA	3:CC:106:VAL:HB	1.75	0.68
47:DV:5:VAL:CG2	47:DV:36:PRO:HB2	2.23	0.68
31:BA:1719:G:H2'	31:BA:1720:U:H5'	1.74	0.68
36:DG:23:PHE:HZ	36:DG:171:ALA:HB3	1.59	0.68
31:BA:528:A:O2'	31:BA:529:A:H5'	1.93	0.68
1:CA:1289:A:H3'	1:CA:1290:G:H8	1.59	0.68
31:BA:1028:A:N6	31:BA:1125:G:H2'	2.08	0.68
42:DQ:134:ARG:HH21	51:DZ:122:ARG:HD2	1.58	0.68
31:DA:2236:C:C2'	31:DA:2237:G:H5'	2.24	0.68
27:B5:51:TYR:HD2	27:B5:52:TYR:CZ	2.10	0.68
31:BA:1568:G:P	33:BD:63:ARG:HH22	2.16	0.68
50:DY:95:LYS:HE2	50:DY:101:LYS:HA	1.75	0.68
31:BA:1341:U:OP2	31:BA:1394:U:O2'	2.10	0.68
44:BS:95:HIS:CG	44:BS:96:GLY:N	2.61	0.68
1:CA:598:U:H4'	8:CH:94:TYR:CD2	2.29	0.68
36:DG:47:LYS:HD3	36:DG:81:LYS:HD2	1.74	0.68
41:BP:144:GLU:N	41:BP:145:PRO:HD3	2.07	0.68
31:DA:1464:C:O2'	31:DA:1528:A:H8	1.72	0.68
37:BH:158:HIS:CE1	37:BH:169:VAL:C	2.66	0.68
1:AA:1073:U:H2'	1:AA:1074:G:H8	1.57	0.68
22:D0:25:ARG:HD2	22:D0:29:GLN:HE21	1.58	0.68
38:BI:88:ILE:HD11	38:BI:123:LEU:HD23	1.75	0.68
12:CL:24:VAL:HG13	12:CL:98:TYR:HE2	1.56	0.68
16:AP:53:VAL:HG12	16:AP:79:VAL:HG22	1.74	0.68
1:AA:1289:A:H3'	1:AA:1290:G:H8	1.59	0.68
7:AG:146:GLU:HA	7:AG:149:ARG:HB2	1.76	0.68
31:DA:717:G:H2'	31:DA:718:A:O4'	1.93	0.68
29:D7:35:ARG:HG3	29:D7:42:LEU:HD11	1.75	0.68
31:DA:1185:C:H5''	31:DA:1186:G:OP1	1.93	0.68
13:AM:81:LEU:HB3	13:AM:89:GLY:HA2	1.76	0.68
31:DA:27:G:N2	31:DA:512:G:H1'	2.08	0.68
33:BD:28:GLU:HB2	33:BD:29:PRO:HD3	1.74	0.68

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
50:BY:96:ILE:CG2	50:BY:99:CYS:HB3	2.22	0.68
49:DX:21:PHE:N	49:DX:21:PHE:HD1	1.90	0.68
1:AA:1442(A):G:H8	45:BT:118:ARG:NH1	1.92	0.68
2:AB:74:LYS:NZ	2:AB:76:GLN:HB2	2.08	0.68
8:CH:86:ILE:HG22	8:CH:87:SER:N	2.06	0.68
4:CD:33:MET:HE2	4:CD:37:PRO:HA	1.75	0.68
31:DA:2531:A:H2	31:DA:2658:C:O2	1.76	0.68
31:DA:1614:A:N1	48:DW:91:GLY:HA2	2.07	0.68
31:DA:196:A:O4'	41:DP:46:LYS:HE2	1.93	0.68
28:B6:11:LEU:HD23	28:B6:26:ASN:H	1.58	0.68
31:BA:2781:A:H5'	31:BA:2782:G:H5'	1.76	0.68
12:CL:6:THR:H	12:CL:9:GLN:HE21	1.40	0.68
13:AM:10:PRO:HB2	13:AM:18:ALA:HB1	1.74	0.68
1:AA:950:U:H2'	1:AA:951:G:H8	1.57	0.68
31:BA:1826:G:C4'	33:BD:242:ARG:HH21	2.04	0.68
1:AA:386:C:O2'	1:AA:387:U:H5'	1.92	0.68
34:DE:60:ASN:N	34:DE:60:ASN:ND2	2.41	0.68
24:B2:56:GLN:NE2	24:B2:56:GLN:H	1.91	0.68
27:D5:33:CYS:SG	27:D5:49:CYS:CB	2.82	0.68
33:BD:132:PRO:O	33:BD:136:ILE:HD12	1.93	0.68
4:AD:62:GLN:HA	4:AD:62:GLN:NE2	2.09	0.68
51:DZ:53:ILE:HG22	51:DZ:71:VAL:HB	1.75	0.68
30:B8:51:ALA:HA	30:B8:54:GLU:OE1	1.93	0.68
50:BY:28:LYS:HA	50:BY:38:ILE:HG22	1.76	0.68
17:AQ:70:ARG:O	17:AQ:71:PHE:CD2	2.47	0.68
17:AQ:59:ILE:HG22	17:AQ:71:PHE:HD1	1.58	0.68
1:AA:1118:C:H1'	1:AA:1179:A:C4	2.29	0.68
37:DH:157:TYR:CE1	37:DH:171:LEU:N	2.61	0.68
28:B6:46:HIS:HA	28:B6:47:THR:N	2.09	0.68
7:CG:146:GLU:HA	7:CG:149:ARG:HB2	1.75	0.68
1:AA:983:A:H2	1:AA:984:C:C6	2.12	0.68
37:DH:32:GLU:O	37:DH:33:LEU:HD23	1.93	0.68
44:DS:36:TYR:N	44:DS:36:TYR:CD1	2.54	0.68
12:CL:87:GLY:HA2	12:CL:98:TYR:HA	1.75	0.68
16:CP:53:VAL:HG12	16:CP:79:VAL:HG22	1.76	0.68
31:BA:639:U:H2'	31:BA:640:C:C6	2.29	0.68
1:AA:1386:G:C2	1:AA:1387:G:C8	2.81	0.68
3:AC:112:SER:O	3:AC:116:VAL:HG23	1.93	0.68
37:BH:13:LYS:HA	37:BH:13:LYS:HE2	1.76	0.68
31:BA:2752:C:O2	31:BA:2752:C:H2'	1.92	0.68
31:BA:2186:G:C3'	31:BA:2187:G:H5''	2.24	0.68
31:DA:2206:G:N2	31:DA:2207:G:C5'	2.51	0.68

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
39:DN:18:ALA:HB3	39:DN:26:LEU:CD2	2.21	0.68
50:BY:96:ILE:CD1	50:BY:99:CYS:SG	2.82	0.68
24:B2:47:ASN:HD22	24:B2:48:HIS:H	1.42	0.68
47:BV:82:ARG:CG	47:BV:82:ARG:NH1	2.44	0.68
31:BA:1022:G:N2	31:BA:1142(A):A:C2	2.57	0.68
1:CA:560:U:H4'	1:CA:561:U:O5'	1.91	0.68
28:B6:19:ARG:CG	28:B6:20:ASN:H	2.03	0.68
40:DO:35:VAL:HA	40:DO:62:VAL:HG12	1.75	0.68
1:AA:192:U:H2'	1:AA:193:C:C6	2.29	0.68
31:DA:2106:G:H1'	31:DA:2184:G:H22	1.59	0.68
31:BA:910:A:C5	42:BQ:13:GLN:HG3	2.27	0.68
6:AF:89:MET:HG2	6:AF:91:VAL:HG23	1.75	0.68
1:CA:271:C:H2'	1:CA:272:C:H6	1.59	0.68
31:BA:2598:A:P	33:BD:236:GLY:HA3	2.34	0.68
44:DS:14:VAL:CG1	44:DS:15:ARG:H	2.05	0.68
49:DX:24:GLY:O	49:DX:25:LYS:O	2.11	0.68
47:DV:15:GLU:O	47:DV:98:GLU:CD	2.32	0.68
49:BX:73:ARG:N	49:BX:74:PRO:CD	2.57	0.68
1:AA:598:U:H4'	8:AH:94:TYR:CD2	2.29	0.68
31:BA:1141:U:H2'	39:BN:63:THR:HG21	1.76	0.68
31:DA:626:U:N3	41:DP:105:LEU:HG	2.08	0.68
31:DA:860:U:C5	31:DA:917:A:N7	2.62	0.68
39:BN:89:LYS:O	39:BN:93:THR:HG22	1.93	0.68
1:AA:409:G:H2'	1:AA:410:G:C5'	2.24	0.68
1:AA:430:A:OP2	4:AD:8:VAL:HG23	1.92	0.68
45:DT:32:TYR:CD2	45:DT:32:TYR:N	2.60	0.68
31:BA:146:G:H5'	31:BA:146:G:C8	2.27	0.68
45:DT:3:ARG:HB2	45:DT:6:LEU:CB	2.22	0.68
28:D6:46:HIS:HA	28:D6:47:THR:N	2.08	0.68
34:BE:52:LEU:HB2	34:BE:76:ARG:HB2	1.76	0.68
31:BA:786:C:H2'	31:BA:787:U:H5'	1.76	0.68
41:DP:10:PRO:CD	41:DP:11:GLY:H	2.06	0.68
5:CE:71:LEU:O	5:CE:72:GLN:HG3	1.93	0.68
31:DA:769:G:C2'	31:DA:770:G:H5'	2.24	0.68
31:BA:2562:U:H1'	40:BO:23:ARG:HH11	1.59	0.68
31:BA:991:C:H6	31:BA:991:C:H5'	1.58	0.68
31:DA:2347:C:H2'	31:DA:2348:U:C6	2.29	0.68
47:BV:62:LEU:HD22	47:BV:98:GLU:CB	2.24	0.68
31:DA:1568:G:H21	33:DD:58:HIS:CE1	2.12	0.68
31:BA:993:G:H1'	47:BV:91:TYR:CD1	2.29	0.68
41:BP:51:PHE:HB3	41:BP:52:GLU:CG	2.23	0.68
46:DU:83:LEU:HB3	46:DU:88:ILE:HD11	1.76	0.68

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
46:DU:88:ILE:C	46:DU:90:VAL:N	2.42	0.68
31:BA:2310:A:O2'	31:BA:2311:A:H5''	1.94	0.68
31:BA:2655:G:H2'	31:BA:2655:G:N3	2.08	0.68
31:BA:1527:G:H5''	31:BA:1528:A:OP1	1.94	0.68
45:DT:19:LEU:HD13	45:DT:85:LYS:HD2	1.75	0.68
50:DY:35:TYR:CD2	50:DY:69:ALA:HB3	2.29	0.68
6:AF:17:SER:O	6:AF:21:LEU:HD22	1.94	0.68
42:DQ:141:GLN:HE22	51:DZ:89:PHE:HB3	1.59	0.68
42:DQ:140:ALA:HB1	51:DZ:99:TYR:HB2	1.76	0.68
31:DA:2652:C:O2'	31:DA:2653:U:H5'	1.93	0.68
33:DD:160:GLY:H	33:DD:197:GLY:H	1.42	0.68
31:BA:1292:U:H2'	31:BA:1293:C:H6	1.54	0.68
1:CA:460:G:O6	1:CA:470:C:H5''	1.94	0.68
31:BA:1670:C:O2	34:BE:129:HIS:HE1	1.77	0.68
4:CD:26:CYS:SG	53:CD:301:ZN:ZN	1.82	0.68
36:BG:25:TYR:CZ	36:BG:32:PRO:HD3	2.29	0.68
31:BA:1472:A:O2'	31:BA:1473:G:H5'	1.94	0.68
31:DA:848:G:N3	31:DA:933:A:H1'	2.08	0.68
31:BA:2094:G:H5'	38:BI:25:TYR:CD2	2.29	0.68
7:CG:47:CYS:O	7:CG:50:ILE:HB	1.93	0.68
43:BR:33:ARG:HG2	43:BR:115:GLU:CG	2.24	0.68
31:DA:2572:A:C8	34:DE:144:ARG:HD2	2.29	0.68
45:DT:102:ILE:HB	45:DT:110:ILE:CD1	2.24	0.68
44:DS:77:ALA:O	44:DS:80:LEU:HD12	1.94	0.68
39:DN:40:PRO:CA	46:DU:64:ARG:HH22	2.07	0.68
1:AA:373:A:H2'	1:AA:374:A:H8	1.59	0.68
33:DD:27:THR:CG2	33:DD:83:GLU:HG2	2.14	0.68
30:D8:52:LYS:N	30:D8:53:PRO:CD	2.57	0.68
50:BY:97:ARG:HH21	50:BY:98:VAL:CG2	2.07	0.68
51:DZ:151:HIS:HB3	51:DZ:170:THR:CA	2.07	0.68
47:DV:64:HIS:HB3	47:DV:96:ILE:HG12	1.76	0.68
15:CO:81:LEU:HD11	15:CO:85:LEU:HD12	1.76	0.68
34:DE:132:HIS:CG	34:DE:135:HIS:NE2	2.62	0.68
4:CD:18:LYS:HE3	4:CD:31:CYS:SG	2.34	0.68
37:BH:156:ALA:C	37:BH:158:HIS:N	2.43	0.68
33:DD:166:GLN:HE21	33:DD:166:GLN:CA	1.99	0.68
31:BA:1332:G:H5''	31:BA:1332:G:H8	1.56	0.68
48:BW:6:ILE:HA	48:BW:103:ILE:O	1.93	0.68
1:AA:1225:A:N3	1:AA:1225:A:H2'	2.07	0.68
1:AA:1446:U:O2'	1:AA:1447:A:H8	1.77	0.68
1:CA:663:A:O2'	1:CA:664:G:H5'	1.94	0.68
1:CA:1128:C:H5'	9:CI:16:ARG:HH12	1.59	0.68

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:BA:34:C:C2'	31:BA:35:G:OP1	2.42	0.68
31:BA:2205:C:O2	31:BA:2220:G:C2	2.46	0.68
43:DR:37:THR:OG1	43:DR:40:LYS:HG3	1.93	0.68
31:BA:1862:G:O2'	31:BA:1863:G:H5'	1.94	0.68
15:AO:4:THR:OG1	15:AO:7:GLU:HB2	1.94	0.68
2:AB:29:ALA:O	2:AB:32:ILE:HG22	1.93	0.68
30:B8:32:LEU:CB	30:B8:35:GLN:N	2.43	0.67
39:BN:40:PRO:HA	46:BU:64:ARG:NH2	2.08	0.67
1:AA:1442:G:C8	1:AA:1442(B):A:C2	2.82	0.67
41:BP:17:LYS:O	41:BP:19:VAL:N	2.26	0.67
39:BN:18:ALA:CB	39:BN:26:LEU:HD22	2.24	0.67
27:D5:47:PRO:O	27:D5:48:GLU:HG3	1.94	0.67
31:DA:2444:G:OP2	35:DF:68:LYS:HE2	1.94	0.67
31:BA:1779:U:H6	31:BA:1784:A:H62	1.41	0.67
40:BO:104:ARG:NH2	45:BT:33:LYS:HD2	2.08	0.67
1:AA:1090:U:H2'	1:AA:1091:U:C6	2.26	0.67
31:DA:864:G:C6	31:DA:865:C:N4	2.62	0.67
17:CQ:70:ARG:O	17:CQ:71:PHE:CD2	2.46	0.67
1:CA:17:U:H2'	1:CA:18:C:H6	1.58	0.67
28:B6:39:TYR:HB3	28:B6:49:HIS:ND1	2.09	0.67
41:BP:10:PRO:HD2	41:BP:11:GLY:H	1.57	0.67
31:DA:1472:A:C2'	31:DA:1473:G:H5'	2.24	0.67
1:AA:159:G:H2'	1:AA:161:A:OP2	1.94	0.67
11:AK:48:ILE:HG21	11:AK:63:LEU:HD13	1.76	0.67
11:AK:13:GLN:HB3	11:AK:75:TYR:O	1.93	0.67
1:AA:1162:C:H2'	1:AA:1163:C:H6	1.58	0.67
31:DA:1862:G:O2'	31:DA:1863:G:H5'	1.93	0.67
30:B8:32:LEU:HD13	30:B8:32:LEU:H	1.60	0.67
33:BD:65:ILE:HD11	33:BD:67:PHE:HE1	1.50	0.67
30:D8:32:LEU:HG	30:D8:34:TRP:HE3	1.57	0.67
31:BA:143:G:H2'	31:BA:143(A):C:C6	2.27	0.67
49:BX:77:LYS:CG	49:BX:78:LYS:HG3	2.24	0.67
6:AF:86:ARG:O	6:AF:87:ARG:HG2	1.94	0.67
31:DA:2307:G:C2	31:DA:2308:G:H5'	2.30	0.67
31:DA:2655:G:H2'	31:DA:2655:G:N3	2.09	0.67
31:BA:1879:C:C2'	31:BA:1880:C:H5''	2.23	0.67
45:BT:32:TYR:HB3	45:BT:81:PRO:CB	2.23	0.67
23:B1:46:LEU:CD1	23:B1:46:LEU:H	1.98	0.67
31:DA:482:A:H4'	50:DY:47:LYS:HZ3	1.59	0.67
31:DA:1337:G:O2'	31:DA:1338:G:H5'	1.94	0.67
23:D1:11:ARG:HB3	23:D1:12:PRO:HD3	1.75	0.67
3:AC:71:ALA:HA	3:AC:106:VAL:HB	1.75	0.67

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
28:B6:28:ARG:HA	28:B6:32:ASN:HD22	1.57	0.67
31:BA:543:C:N4	31:BA:551:G:H1	1.93	0.67
31:DA:2781:A:H8	31:DA:2781:A:H5''	1.59	0.67
35:DF:34:TRP:CZ2	41:DP:12:ALA:HB2	2.29	0.67
31:BA:196:A:O4'	41:BP:46:LYS:HE2	1.94	0.67
31:BA:2859:G:C8	31:BA:2859:G:H3'	2.29	0.67
35:BF:16:GLY:O	35:BF:17:ARG:HG3	1.93	0.67
1:CA:1106:G:H5''	3:CC:172:ARG:HG2	1.75	0.67
1:AA:35:G:H2'	1:AA:36:C:C6	2.29	0.67
39:DN:18:ALA:HB1	39:DN:21:LYS:CB	2.17	0.67
39:DN:18:ALA:CB	39:DN:26:LEU:HD22	2.22	0.67
31:DA:607:U:H3	31:DA:621:A:H2	1.42	0.67
51:DZ:151:HIS:N	51:DZ:151:HIS:CD2	2.61	0.67
50:DY:97:ARG:HH21	50:DY:98:VAL:CG2	2.05	0.67
31:DA:71:A:H5'	31:DA:71:A:H8	1.59	0.67
47:DV:96:ILE:CG2	47:DV:97:LYS:N	2.57	0.67
16:CP:20:VAL:HG21	16:CP:32:TYR:CD2	2.30	0.67
31:DA:1652:A:H5'	31:DA:1652:A:C8	2.29	0.67
1:CA:503:C:H2'	1:CA:504:C:H6	1.60	0.67
43:BR:118:GLU:HA	43:BR:118:GLU:OE1	1.93	0.67
33:BD:254:THR:N	33:BD:255:LYS:HZ1	1.92	0.67
31:BA:1332:G:H1	31:BA:1609:A:HO2'	1.40	0.67
31:BA:1722:A:O2'	31:BA:1739:U:H5'	1.93	0.67
1:AA:1116:C:H3'	1:AA:1117:G:H5''	1.76	0.67
31:BA:528:A:N1	31:BA:2042:A:H2'	2.09	0.67
31:BA:2186:G:H3'	31:BA:2187:G:H5''	1.77	0.67
7:AG:73:MET:HG2	7:AG:90:GLU:HA	1.75	0.67
1:AA:763:G:H2'	1:AA:764:C:H6	1.57	0.67
31:BA:1118:C:H5'	51:BZ:80:ARG:HH22	1.58	0.67
45:BT:78:LEU:O	45:BT:78:LEU:HD23	1.93	0.67
35:DF:126:VAL:HG21	35:DF:129:PHE:CZ	2.29	0.67
31:BA:896:A:C2	31:BA:898:C:H5''	2.29	0.67
13:CM:68:GLY:HA2	13:CM:71:ARG:HB3	1.76	0.67
27:B5:32:PRO:O	27:B5:33:CYS:HB3	1.92	0.67
28:B6:12:GLU:HB3	28:B6:23:THR:HG22	1.76	0.67
41:BP:62:LEU:CD1	41:BP:62:LEU:H	2.04	0.67
31:DA:172:C:C3'	31:DA:173:G:H5''	2.23	0.67
24:B2:41:ILE:HG21	31:BA:95:G:H21	1.59	0.67
49:BX:82:GLN:C	49:BX:85:PRO:HD2	2.15	0.67
41:BP:30:THR:CG2	41:BP:31:ALA:H	2.04	0.67
47:DV:82:ARG:HH11	47:DV:82:ARG:HG2	1.57	0.67
30:B8:16:ILE:CD1	30:B8:57:ARG:HG2	2.23	0.67

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:BA:626:U:N3	41:BP:105:LEU:HG	2.09	0.67
1:AA:539:A:H2'	1:AA:540:G:C8	2.29	0.67
4:AD:28:SER:HB3	4:AD:30:LYS:HG2	1.75	0.67
31:DA:2543:G:H2'	31:DA:2544:G:C8	2.29	0.67
1:CA:1190:G:OP1	3:CC:4:LYS:HA	1.94	0.67
31:BA:1786:A:H1'	31:BA:1938:A:N6	2.08	0.67
31:BA:2012:G:H4'	48:BW:96:ILE:CD1	2.24	0.67
1:AA:671:G:H2'	1:AA:672:U:C6	2.28	0.67
12:AL:24:VAL:HG13	12:AL:98:TYR:HE2	1.60	0.67
10:AJ:7:LYS:HB2	10:AJ:97:GLU:HB2	1.77	0.67
4:CD:189:PRO:HB2	4:CD:194:LEU:CD2	2.24	0.67
25:D3:19:GLN:HE22	25:D3:52:HIS:CE1	2.11	0.67
31:DA:1720:U:H2'	31:DA:1721:G:O4'	1.95	0.67
1:AA:1446:U:O2'	1:AA:1447:A:C8	2.47	0.67
31:DA:708:C:H5'	31:DA:709:U:OP2	1.94	0.67
31:BA:2473:U:N3	31:BA:2474:C:C6	2.62	0.67
41:BP:107:LYS:C	41:BP:109:GLY:H	1.98	0.67
31:BA:184:C:H2'	31:BA:185:U:C6	2.30	0.67
18:AR:50:ILE:CD1	18:AR:70:ILE:HG21	2.24	0.67
31:BA:1744:C:H2'	31:BA:1745:C:H5'	1.77	0.67
26:B4:25:TYR:C	26:B4:27:THR:H	1.96	0.67
43:DR:104:ARG:HD3	43:DR:109:ALA:HB3	1.77	0.67
47:BV:96:ILE:HG23	47:BV:97:LYS:N	2.08	0.67
33:BD:267:SER:O	33:BD:268:ARG:HB2	1.93	0.67
23:B1:88:LYS:O	23:B1:92:LYS:HB2	1.94	0.67
1:CA:545:C:H5''	4:CD:72:GLU:HG2	1.77	0.67
4:CD:79:PHE:CZ	4:CD:204:ILE:HD13	2.30	0.67
31:DA:2307:G:H21	31:DA:2308:G:H5'	1.56	0.67
31:DA:2658:C:H2'	31:DA:2658:C:O2	1.95	0.67
37:DH:156:ALA:C	37:DH:158:HIS:N	2.45	0.67
31:BA:1803:A:O2'	33:BD:259:THR:HG21	1.93	0.67
1:CA:972:C:H4'	10:CJ:57:LYS:HG3	1.76	0.67
34:BE:134:ILE:O	34:BE:134:ILE:HG12	1.93	0.67
31:BA:314:A:C2'	31:BA:315:G:H5'	2.24	0.67
36:DG:18:GLU:O	36:DG:22:ARG:HB2	1.93	0.67
10:CJ:65:LEU:HD12	14:CN:55:GLY:O	1.94	0.67
47:DV:83:ARG:HH11	47:DV:83:ARG:HG3	1.57	0.67
35:DF:16:GLY:O	35:DF:17:ARG:HG3	1.94	0.67
5:AE:80:ILE:HD12	5:AE:138:ALA:HB1	1.76	0.67
31:DA:896:A:C2	31:DA:898:C:H5''	2.30	0.67
46:DU:76:TYR:CZ	46:DU:80:ILE:HG13	2.29	0.67
1:AA:1106:G:H5''	3:AC:172:ARG:HG2	1.75	0.67

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:B3:11:SER:OG	25:B3:13:ILE:HG12	1.93	0.67
2:CB:21:ARG:HB3	2:CB:39:ILE:HA	1.76	0.67
43:DR:8:ARG:HA	43:DR:8:ARG:CZ	2.25	0.67
42:BQ:27:VAL:HA	42:BQ:105:GLU:OE1	1.95	0.67
39:BN:3:THR:HA	39:BN:4:TYR:CE1	2.30	0.67
1:AA:148:G:O2'	1:AA:149:A:H5'	1.94	0.67
31:DA:620:G:H4'	31:DA:621:A:H5''	1.75	0.67
50:DY:75:ILE:CD1	50:DY:76:CYS:H	2.04	0.67
31:DA:71:A:C2	49:DX:31:HIS:HE1	2.12	0.67
39:DN:3:THR:C	39:DN:4:TYR:CD1	2.67	0.67
16:CP:6:LEU:HG	16:CP:17:TYR:HB3	1.76	0.67
33:BD:108:PRO:HB3	33:BD:143:HIS:HE1	1.59	0.67
41:BP:26:GLY:HA2	41:BP:30:THR:HG21	1.76	0.67
45:DT:51:ARG:HG3	45:DT:98:LYS:HD2	1.75	0.67
6:AF:76:ALA:O	6:AF:80:ARG:HG3	1.95	0.67
33:BD:228:PRO:HD3	33:BD:235:GLY:HA3	1.76	0.67
39:BN:56:ASN:N	39:BN:125:GLY:H	1.93	0.67
34:BE:52:LEU:HB3	34:BE:75:VAL:HG23	1.77	0.67
31:DA:2208:A:H1'	31:DA:2219:G:C4	2.30	0.67
31:DA:1722:A:C2	31:DA:1740:G:H2'	2.30	0.67
31:BA:2236:C:H2'	31:BA:2237:G:H5'	1.75	0.67
1:AA:659:U:O2'	1:AA:660:G:H5'	1.94	0.67
31:DA:2364:C:H2'	31:DA:2365:G:O4'	1.94	0.67
1:AA:1494:G:N2	31:BA:1912:A:C2	2.62	0.67
46:BU:31:SER:O	46:BU:33:ARG:N	2.26	0.67
5:AE:31:LEU:HD11	5:AE:129:ILE:HA	1.75	0.67
43:DR:60:LEU:O	43:DR:64:ARG:HG3	1.94	0.67
31:BA:172:C:C3'	31:BA:173:G:H5''	2.23	0.67
16:CP:28:ARG:NH1	16:CP:28:ARG:HG2	1.96	0.67
44:BS:87:PHE:O	44:BS:88:ASP:CB	2.42	0.67
23:D1:86:SER:N	23:D1:87:PRO:CD	2.57	0.67
1:AA:1399:C:C2	1:AA:1502:A:N6	2.63	0.67
24:D2:53:LEU:CA	24:D2:56:GLN:HE22	2.07	0.67
39:BN:131:GLN:CD	39:BN:134:ARG:HB3	2.14	0.67
3:CC:182:ILE:HG12	3:CC:203:PHE:HA	1.77	0.67
1:AA:193:C:H2'	1:AA:194:C:C6	2.28	0.67
46:BU:75:ASN:HB2	46:BU:78:THR:H	1.60	0.67
1:CA:441:A:H3'	1:CA:442:C:C6	2.30	0.67
5:AE:78:HIS:CE1	5:AE:143:ARG:H	2.13	0.67
3:CC:73:PRO:HA	3:CC:76:VAL:HG13	1.77	0.67
49:DX:40:LYS:O	49:DX:42:ALA:N	2.26	0.67
43:BR:104:ARG:HD3	43:BR:109:ALA:HB3	1.76	0.67

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:CI:17:VAL:HG11	9:CI:81:ILE:HD13	1.77	0.67
15:AO:3:ILE:H	15:AO:3:ILE:HD13	1.60	0.67
27:B5:55:ARG:CD	27:B5:56:LYS:H	2.08	0.67
31:DA:1899:G:N2	31:DA:1902:C:C5	2.63	0.67
1:AA:62:U:O2'	1:AA:379:C:H1'	1.94	0.67
33:BD:30:GLU:CD	33:BD:63:ARG:HE	1.98	0.67
39:DN:30:ILE:O	39:DN:34:LEU:HD22	1.95	0.67
28:D6:15:GLU:OE2	28:D6:41:PRO:HG3	1.94	0.67
50:DY:97:ARG:HH21	50:DY:98:VAL:HG21	1.57	0.67
31:BA:71:A:H2	49:BX:31:HIS:HE1	1.42	0.67
41:BP:112:LEU:O	41:BP:128:HIS:HB2	1.95	0.67
24:D2:45:SER:HB3	24:D2:48:HIS:CB	2.24	0.67
40:DO:115:VAL:HG13	40:DO:121:VAL:HG21	1.76	0.67
31:BA:1484:G:N2	31:BA:1506:C:C2	2.62	0.67
43:BR:56:LYS:HD2	43:BR:88:ARG:H	1.60	0.67
31:BA:774:A:H2	31:BA:787:U:HO2'	1.37	0.67
36:DG:19:LEU:HG	36:DG:175:LEU:HD12	1.76	0.67
3:AC:182:ILE:HG12	3:AC:203:PHE:HA	1.77	0.67
31:DA:2094:G:H5'	38:DI:25:TYR:CD2	2.30	0.67
43:DR:56:LYS:HD2	43:DR:88:ARG:H	1.60	0.67
31:DA:184:C:H2'	31:DA:185:U:H6	1.60	0.67
31:DA:1359:A:C8	31:DA:1372:U:O4	2.47	0.67
34:DE:101:ARG:HD2	34:DE:169:ASN:ND2	2.10	0.67
31:DA:1762:A:H8	31:DA:1762:A:O5'	1.78	0.67
8:CH:13:ILE:O	8:CH:17:THR:HG23	1.95	0.67
31:BA:430:G:H5''	31:BA:431:U:OP2	1.95	0.67
31:BA:11:G:C2'	31:BA:12:U:H5'	2.25	0.67
31:BA:2415:G:O3'	41:BP:66:GLY:HA3	1.94	0.67
31:DA:2315:G:H2'	31:DA:2316:C:C6	2.30	0.67
30:D8:46:ARG:NH2	41:DP:65:ARG:NH2	2.43	0.67
34:BE:60:ASN:ND2	34:BE:60:ASN:N	2.42	0.67
31:DA:621:A:H2'	31:DA:622:G:H5'	1.77	0.67
31:BA:875:G:C4'	51:BZ:170:THR:HG21	2.23	0.67
49:BX:23:GLU:CG	49:BX:24:GLY:H	2.08	0.67
31:DA:806:C:P	41:DP:39:LYS:HG3	2.35	0.67
31:BA:620:G:H4'	31:BA:621:A:H5''	1.75	0.67
38:BI:8:PRO:O	38:BI:9:LEU:HD23	1.94	0.67
31:DA:1280:G:H2'	31:DA:1281:G:H5''	1.77	0.67
1:AA:1070:U:H2'	1:AA:1071:C:C6	2.28	0.67
31:BA:1332:G:H22	31:BA:1609:A:H2'	1.60	0.67
45:DT:129:ARG:CZ	45:DT:131:ALA:HB3	2.24	0.67
42:BQ:42:ILE:HD13	42:BQ:97:VAL:CG2	2.24	0.67

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:CL:27:LEU:O	12:CL:29:GLY:N	2.28	0.67
31:BA:2208:A:H1'	31:BA:2219:G:C4	2.29	0.67
35:BF:126:VAL:HG21	35:BF:129:PHE:CZ	2.30	0.67
8:CH:20:TYR:HD1	8:CH:65:TYR:CD2	2.13	0.67
33:BD:224:ALA:HB2	33:BD:233:HIS:HB3	1.77	0.67
1:CA:633:G:H5'	1:CA:634:C:OP2	1.95	0.67
1:AA:859:A:H2'	1:AA:860:A:O4'	1.95	0.67
2:CB:29:ALA:O	2:CB:32:ILE:HG22	1.94	0.67
18:CR:50:ILE:CD1	18:CR:70:ILE:HG21	2.24	0.67
27:B5:40:LYS:NZ	27:B5:46:CYS:O	2.27	0.67
31:DA:661:C:H4'	41:DP:16:ARG:NH1	2.09	0.67
39:BN:3:THR:C	39:BN:4:TYR:CD1	2.68	0.67
47:DV:66:ARG:HD2	47:DV:67:GLY:N	2.09	0.67
49:BX:33:LYS:CA	49:BX:35:THR:HG22	2.25	0.67
33:BD:267:SER:C	33:BD:269:PHE:N	2.47	0.67
39:BN:66:LYS:HA	39:BN:69:GLN:HB2	1.75	0.67
31:DA:285:C:C2'	31:DA:286:C:H5''	2.23	0.67
50:DY:39:VAL:HG12	50:DY:40:GLU:N	2.09	0.67
39:DN:112:LEU:O	39:DN:112:LEU:HD12	1.95	0.67
23:B1:11:ARG:HB3	23:B1:12:PRO:HD3	1.77	0.67
22:D0:29:GLN:O	22:D0:67:VAL:HG23	1.95	0.67
31:DA:1803:A:O2'	33:DD:259:THR:HG21	1.94	0.67
35:DF:65:TRP:CZ3	35:DF:75:HIS:HD2	2.13	0.67
28:B6:51:GLU:O	28:B6:52:VAL:HB	1.95	0.67
31:BA:542:C:N3	31:BA:543:C:N4	2.43	0.67
39:BN:27:ALA:HB3	39:BN:106:MET:HE2	1.77	0.67
37:BH:91:GLY:O	37:BH:92:ILE:HG13	1.95	0.67
31:DA:1429:G:H2'	31:DA:1430:C:C6	2.29	0.67
31:DA:1722:A:O2'	31:DA:1739:U:H5'	1.95	0.67
31:BA:1204:A:N1	31:BA:1241:A:C2	2.63	0.67
19:CS:63:THR:O	19:CS:66:MET:HG2	1.95	0.67
31:DA:2690:C:OP2	43:DR:14:SER:HB3	1.95	0.67
31:BA:2772:C:H2'	31:BA:2773:C:H6	1.60	0.67
20:CT:38:LYS:HA	20:CT:41:ILE:HD12	1.77	0.67
31:DA:1648:C:H2'	31:DA:1649:G:O5'	1.95	0.67
6:AF:82:ARG:HH11	6:AF:82:ARG:HA	1.60	0.67
48:DW:40:ASN:O	48:DW:41:LYS:HG2	1.95	0.67
31:DA:2233:U:H2'	31:DA:2234:G:C8	2.30	0.67
1:CA:797:C:OP1	11:CK:124:LYS:HE2	1.94	0.67
12:CL:124:LYS:HD2	12:CL:125:PRO:HD2	1.75	0.67
30:D8:13:ARG:NH2	31:DA:250:G:OP2	2.28	0.66
24:D2:37:PHE:HZ	24:D2:43:GLN:HB2	1.61	0.66

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
45:DT:35:LYS:O	45:DT:37:GLY:N	2.28	0.66
45:BT:38:ASN:C	45:BT:38:ASN:HD22	1.99	0.66
50:BY:8:LYS:NZ	50:BY:74:PRO:HD3	2.10	0.66
1:AA:1190:G:OP1	3:AC:4:LYS:HA	1.94	0.66
31:DA:1332:G:H5''	31:DA:1332:G:H8	1.60	0.66
20:AT:16:HIS:O	20:AT:19:SER:HB3	1.95	0.66
1:AA:920:U:H2'	1:AA:921:U:C6	2.30	0.66
47:BV:5:VAL:CG2	47:BV:36:PRO:HB2	2.25	0.66
31:DA:2584:U:H2'	31:DA:2585:U:H6	1.57	0.66
34:BE:167:VAL:HG22	34:BE:170:LEU:HD11	1.76	0.66
1:CA:1226:C:C4	13:CM:104:ARG:HB2	2.31	0.66
1:CA:820:U:H4'	1:CA:821:G:OP2	1.93	0.66
12:AL:75:HIS:HD2	12:AL:77:LEU:H	1.42	0.66
1:CA:425:G:C2'	1:CA:426:G:H5'	2.24	0.66
31:BA:272(J):C:H42	31:BA:363(A):A:N6	1.93	0.66
31:BA:272:G:H4'	31:BA:272(B):G:OP1	1.92	0.66
19:CS:22:LEU:O	19:CS:26:GLY:HA2	1.95	0.66
29:B7:19:ARG:HH11	29:B7:19:ARG:HG2	1.60	0.66
31:DA:2500:U:H2'	31:DA:2504:U:H5	1.58	0.66
31:BA:1693:U:H4'	31:BA:1694:C:OP2	1.93	0.66
31:DA:1225:G:OP1	47:DV:88:ARG:HB3	1.95	0.66
31:BA:1225:G:P	47:BV:88:ARG:HB3	2.35	0.66
31:BA:743:G:H2'	31:BA:744:G:H5'	1.77	0.66
50:DY:37:VAL:HG13	50:DY:69:ALA:HA	1.77	0.66
39:DN:45:ASN:HD22	39:DN:45:ASN:N	1.89	0.66
31:BA:1797:C:C2'	31:BA:1798:U:H5'	2.25	0.66
31:DA:1348:G:C2'	31:DA:1349:A:H5''	2.25	0.66
31:DA:1292:U:H2'	31:DA:1293:C:H6	1.57	0.66
31:BA:2223:G:C2'	31:BA:2224:G:H5'	2.24	0.66
32:BB:79:C:C2'	32:BB:80:U:H5'	2.25	0.66
39:BN:27:ALA:HB3	39:BN:106:MET:CE	2.25	0.66
10:CJ:63:PHE:HB3	14:CN:57:ARG:O	1.95	0.66
1:CA:659:U:C2'	1:CA:660:G:H5'	2.24	0.66
1:AA:1162:C:H2'	1:AA:1163:C:C6	2.29	0.66
27:B5:29:THR:HG21	31:BA:2815:C:H5'	1.76	0.66
31:DA:1265:A:OP1	31:DA:1265:A:H8	1.78	0.66
31:DA:1533:G:O2'	31:DA:1543:C:P	2.53	0.66
31:DA:1590:U:H2'	31:DA:1591:G:H5''	1.76	0.66
5:CE:57:LYS:O	5:CE:61:TYR:HD2	1.77	0.66
39:BN:40:PRO:CA	46:BU:64:ARG:HH22	2.08	0.66
28:D6:10:LEU:H	28:D6:10:LEU:HD22	1.59	0.66
28:D6:13:CYS:O	28:D6:21:TYR:HA	1.94	0.66

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
49:DX:57:LEU:HD12	49:DX:57:LEU:N	2.09	0.66
31:BA:2068:U:N3	31:BA:2430:A:C2	2.53	0.66
2:CB:88:ALA:HB2	2:CB:219:VAL:CG1	2.26	0.66
41:BP:16:ARG:HG3	41:BP:17:LYS:N	2.11	0.66
24:B2:49:LYS:CD	24:B2:53:LEU:HD22	2.25	0.66
15:CO:25:THR:HG21	15:CO:70:LEU:HB2	1.76	0.66
31:BA:1784:A:H4'	31:BA:1785:A:C5'	2.26	0.66
31:DA:2308:G:O6	31:DA:2310:A:H2'	1.95	0.66
36:DG:60:LEU:O	36:DG:64:THR:HG22	1.96	0.66
37:BH:158:HIS:CE1	37:BH:168:PRO:HB2	2.31	0.66
1:CA:735:C:O2'	1:CA:736:C:H5'	1.95	0.66
10:CJ:54:PHE:CE2	10:CJ:55:LYS:HD2	2.30	0.66
31:BA:1719:G:C2'	31:BA:1720:U:H5'	2.25	0.66
31:BA:1742:G:N7	31:BA:1743:C:C2	2.63	0.66
49:DX:44:GLU:HG3	49:DX:49:VAL:O	1.95	0.66
8:AH:21:LYS:O	8:AH:63:LEU:HD23	1.95	0.66
31:BA:1257:C:H4'	35:BF:83:PHE:CE2	2.30	0.66
11:CK:13:GLN:HB3	11:CK:75:TYR:O	1.96	0.66
1:CA:33:A:H2'	1:CA:34:C:C6	2.31	0.66
3:AC:73:PRO:O	3:AC:76:VAL:HG22	1.95	0.66
1:AA:344:A:O2'	1:AA:346:G:N7	2.27	0.66
32:DB:21:G:O6	32:DB:63:G:C5	2.48	0.66
4:AD:129:ASN:HD21	4:AD:144:ASP:HB3	1.61	0.66
49:DX:73:ARG:H	49:DX:74:PRO:CD	2.09	0.66
31:BA:814:C:H5	41:BP:27:HIS:NE2	1.91	0.66
31:DA:2250:G:C5	42:DQ:82:ARG:HD3	2.30	0.66
41:DP:112:LEU:H	41:DP:128:HIS:CD2	2.13	0.66
50:DY:37:VAL:O	50:DY:38:ILE:HB	1.94	0.66
31:DA:2544:G:H8	31:DA:2544:G:O5'	1.78	0.66
45:DT:32:TYR:HB3	45:DT:81:PRO:CB	2.24	0.66
2:CB:167:PRO:HG2	2:CB:192:SER:HB3	1.77	0.66
23:B1:26:ARG:HB2	23:B1:34:THR:HA	1.75	0.66
28:B6:13:CYS:HB3	28:B6:49:HIS:HB3	1.78	0.66
10:CJ:7:LYS:HB2	10:CJ:97:GLU:HB2	1.76	0.66
38:BI:75:LEU:HD11	38:BI:105:HIS:CE1	2.30	0.66
5:AE:32:VAL:HB	5:AE:58:ALA:HB1	1.78	0.66
10:AJ:65:LEU:HD12	14:AN:55:GLY:O	1.93	0.66
6:AF:91:VAL:HG12	6:AF:92:LYS:O	1.95	0.66
8:CH:21:LYS:O	8:CH:63:LEU:HD23	1.94	0.66
47:DV:2:PHE:O	47:DV:14:VAL:O	2.13	0.66
31:DA:2186:G:H3'	31:DA:2187:G:H5''	1.77	0.66
1:AA:972:C:H4'	10:AJ:57:LYS:HG3	1.77	0.66

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:CA:1479:C:O2'	1:CA:1480:G:H5'	1.95	0.66
31:DA:2598:A:P	33:DD:236:GLY:HA3	2.35	0.66
1:AA:271:C:H2'	1:AA:272:C:H6	1.61	0.66
47:BV:19:LYS:CG	47:BV:20:LEU:H	2.08	0.66
31:BA:1568:G:H21	33:BD:58:HIS:CE1	2.13	0.66
46:DU:88:ILE:HD12	46:DU:88:ILE:N	2.11	0.66
31:BA:1278:A:OP1	43:BR:36:THR:CG2	2.43	0.66
31:DA:1141:U:H2'	39:DN:63:THR:CG2	2.26	0.66
37:DH:158:HIS:CE1	37:DH:168:PRO:HB2	2.31	0.66
37:DH:157:TYR:HE1	37:DH:171:LEU:N	1.93	0.66
32:BB:66:A:N6	32:BB:108:U:H2'	2.09	0.66
31:DA:1639:U:C2'	31:DA:1640:C:H5''	2.24	0.66
17:CQ:59:ILE:HG22	17:CQ:71:PHE:HD1	1.61	0.66
1:AA:617:G:C6	1:AA:618:C:C5	2.84	0.66
34:DE:52:LEU:HB2	34:DE:76:ARG:HB2	1.76	0.66
10:CJ:7:LYS:HD3	10:CJ:71:LEU:HD13	1.76	0.66
1:AA:1184:G:H2'	1:AA:1185:G:C8	2.31	0.66
31:BA:1742:G:H5'	31:BA:1743:C:OP2	1.96	0.66
1:AA:818:G:O2'	1:AA:819:A:H5'	1.95	0.66
7:AG:16:LEU:HD13	9:AI:45:ALA:HB2	1.76	0.66
14:AN:48:ALA:HB2	14:AN:53:LEU:HD12	1.77	0.66
1:AA:626:U:H2'	1:AA:627:G:H8	1.61	0.66
29:D7:34:ARG:NH1	29:D7:39:ARG:HG3	2.11	0.66
41:DP:10:PRO:HD2	41:DP:11:GLY:H	1.59	0.66
33:BD:72:LYS:HZ2	33:BD:75:ILE:HD12	1.61	0.66
15:CO:4:THR:OG1	15:CO:7:GLU:HB2	1.95	0.66
1:CA:1416:G:H2'	1:CA:1417:G:O4'	1.95	0.66
15:CO:3:ILE:H	15:CO:3:ILE:HD13	1.59	0.66
48:BW:64:MET:O	48:BW:65:LEU:HB3	1.95	0.66
31:DA:2252:G:H2'	31:DA:2253:G:C8	2.30	0.66
27:B5:51:TYR:CD2	27:B5:52:TYR:CZ	2.83	0.66
24:D2:26:ARG:HG2	49:DX:5:TYR:O	1.94	0.66
49:BX:35:THR:O	49:BX:36:LYS:O	2.14	0.66
15:AO:87:ILE:CG2	15:AO:88:ARG:H	2.09	0.66
34:BE:132:HIS:CG	34:BE:135:HIS:NE2	2.64	0.66
32:DB:82:G:C2'	32:DB:83:G:H5'	2.26	0.66
45:BT:19:LEU:HD13	45:BT:85:LYS:HD2	1.76	0.66
1:CA:1073:U:H2'	1:CA:1074:G:H8	1.60	0.66
23:B1:10:LYS:O	23:B1:13:ILE:HG23	1.96	0.66
8:AH:102:ARG:N	8:AH:102:ARG:HE	1.92	0.66
1:CA:559:A:H4'	1:CA:560:U:H3'	1.75	0.66
33:BD:71:ASP:HB3	33:BD:103:ARG:HH22	1.61	0.66

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:1494:G:N2	31:BA:1912:A:N3	2.43	0.66
31:BA:717:G:H2'	31:BA:718:A:O4'	1.94	0.66
31:BA:1956:U:H2'	31:BA:1957:C:H5'	1.77	0.66
35:BF:89:VAL:HG12	35:BF:90:PHE:N	2.10	0.66
31:DA:960:A:H5''	31:DA:961:C:OP2	1.95	0.66
1:AA:59:A:H3'	1:AA:331:G:H22	1.61	0.66
30:D8:6:THR:CG2	31:DA:243:U:OP1	2.44	0.66
41:DP:47:ASP:HB3	41:DP:48:PRO:CA	2.25	0.66
49:DX:21:PHE:N	49:DX:21:PHE:CD1	2.62	0.66
31:BA:175:G:H8	31:BA:175:G:C5'	2.08	0.66
31:BA:251:A:H5''	41:BP:51:PHE:CZ	2.30	0.66
2:CB:74:LYS:NZ	2:CB:76:GLN:HB2	2.10	0.66
31:BA:661:C:H4'	41:BP:16:ARG:NH1	2.10	0.66
31:BA:71:A:C2	49:BX:31:HIS:HE1	2.14	0.66
49:BX:24:GLY:CA	49:BX:80:ILE:HG13	2.24	0.66
50:DY:17:SER:OG	50:DY:18:GLY:N	2.29	0.66
31:BA:624:C:C2'	31:BA:625:G:H5'	2.26	0.66
31:BA:309:G:H4'	50:BY:18:GLY:HA3	1.77	0.66
4:AD:61:LYS:HD3	4:AD:62:GLN:HE21	1.60	0.66
11:AK:127:LYS:HE2	11:AK:127:LYS:CA	2.25	0.66
31:BA:2286:A:O2'	31:BA:2286:A:C8	2.49	0.66
31:BA:1281:G:C8	31:BA:1281:G:H5'	2.25	0.66
41:DP:40:SER:O	41:DP:41:ARG:HD2	1.96	0.66
1:CA:62:U:O2'	1:CA:379:C:H1'	1.96	0.66
22:B0:26:TYR:HE2	31:BA:857:C:H1'	1.57	0.66
18:CR:43:PHE:C	18:CR:44:LEU:HD12	2.16	0.66
10:AJ:54:PHE:CE2	10:AJ:55:LYS:HD2	2.31	0.66
31:BA:1839:G:N7	31:BA:1927:A:H1'	2.10	0.66
35:DF:51:THR:HG21	35:DF:92:PRO:HD2	1.78	0.66
31:DA:786:C:H2'	31:DA:787:U:H5'	1.77	0.66
10:AJ:7:LYS:HD3	10:AJ:71:LEU:HD13	1.77	0.66
31:DA:1719:G:C2'	31:DA:1720:U:H5'	2.24	0.66
1:CA:750:G:N3	15:CO:23:GLY:HA3	2.11	0.66
5:CE:68:GLU:O	5:CE:68:GLU:HG3	1.95	0.66
31:BA:34:C:N4	31:BA:455:C:H5''	2.11	0.66
1:CA:632:A:C8	1:CA:633:G:C8	2.84	0.66
38:BI:54:GLN:HG2	38:BI:57:ARG:HH22	1.61	0.66
1:CA:41:G:H2'	1:CA:42:G:C8	2.31	0.66
31:DA:1579:A:H2'	31:DA:1580:A:C8	2.31	0.66
28:D6:42:TRP:CZ2	31:DA:642:G:O3'	2.49	0.66
45:DT:82:LEU:HD12	45:DT:82:LEU:N	2.11	0.66
31:BA:1794:U:H2'	31:BA:1795:C:H6	1.58	0.66

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:AH:58:TYR:O	8:AH:59:LEU:HD23	1.96	0.66
1:CA:1442:G:O2'	1:CA:1442(A):G:C5'	2.35	0.66
51:DZ:139:VAL:HG12	51:DZ:141:VAL:H	1.60	0.66
31:DA:71:A:C8	31:DA:71:A:H5'	2.31	0.66
47:BV:69:LYS:O	47:BV:70:ILE:HG23	1.94	0.66
47:DV:19:LYS:HG2	47:DV:96:ILE:CB	2.26	0.66
49:BX:60:ARG:HB2	49:BX:74:PRO:HD2	1.78	0.66
32:BB:48:A:H4'	44:BS:95:HIS:HD2	1.61	0.66
27:D5:55:ARG:CD	27:D5:56:LYS:H	2.08	0.66
50:BY:35:TYR:CD2	50:BY:69:ALA:HB3	2.31	0.66
50:BY:45:VAL:HG21	50:BY:61:ILE:C	2.16	0.66
1:CA:942:G:N2	9:CI:124:GLN:HE22	1.94	0.66
32:DB:28:C:H2'	32:DB:29:A:H8	1.58	0.66
38:DI:75:LEU:HD11	38:DI:105:HIS:CE1	2.29	0.66
31:DA:1037:G:H1	31:DA:1118:C:H42	1.44	0.66
31:DA:2186:G:C3'	31:DA:2187:G:H5''	2.25	0.66
1:AA:1479:C:O2'	1:AA:1480:G:H5'	1.95	0.66
31:BA:2761:G:H2'	31:BA:2762:G:H5''	1.78	0.66
1:AA:113:G:H2'	1:AA:114:U:C6	2.31	0.66
36:DG:7:LEU:HB2	36:DG:104:GLU:OE2	1.96	0.66
1:CA:826:C:H2'	1:CA:827:U:C6	2.30	0.66
31:BA:848:G:N3	31:BA:933:A:H1'	2.10	0.66
49:BX:63:LYS:HE3	49:BX:70:LEU:HD22	1.77	0.66
33:DD:106:ILE:O	33:DD:106:ILE:HD13	1.94	0.66
1:CA:785:G:H2'	1:CA:786:G:H5'	1.77	0.66
1:CA:607:A:H2'	1:CA:608:A:O4'	1.96	0.66
47:BV:61:VAL:HG12	47:BV:99:ILE:HB	1.76	0.66
28:D6:15:GLU:HG2	28:D6:18:ARG:NH1	2.11	0.66
50:DY:96:ILE:CD1	50:DY:99:CYS:SG	2.83	0.66
30:B8:46:ARG:NH2	41:BP:65:ARG:NH2	2.42	0.66
43:BR:37:THR:OG1	43:BR:40:LYS:HG3	1.95	0.66
47:BV:79:VAL:CG2	47:BV:82:ARG:HD2	2.25	0.66
47:BV:82:ARG:HG3	47:BV:82:ARG:NH1	2.08	0.66
45:BT:23:ARG:O	45:BT:25:GLY:N	2.29	0.66
1:CA:344:A:O2'	1:CA:346:G:N7	2.27	0.66
37:BH:157:TYR:HE1	37:BH:171:LEU:N	1.94	0.66
1:AA:707:C:O2'	1:AA:708:C:H5'	1.96	0.66
46:DU:75:ASN:HB2	46:DU:78:THR:H	1.61	0.66
35:DF:9:ILE:HG12	35:DF:14:PRO:C	2.17	0.66
1:CA:1184:G:H2'	1:CA:1185:G:C8	2.31	0.66
31:BA:1429:G:H2'	31:BA:1430:C:C6	2.31	0.66
31:BA:1533:G:O2'	31:BA:1543:C:P	2.54	0.66

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:AD:17:VAL:HG11	4:AD:197:PRO:HB2	1.77	0.66
1:CA:932:C:H4'	7:CG:4:ARG:NH2	2.11	0.66
30:B8:18:ALA:HB3	31:BA:651:G:H4'	1.76	0.66
2:CB:137:ARG:HA	2:CB:137:ARG:HH11	1.61	0.66
38:DI:125:GLU:OE1	38:DI:141:LYS:HG2	1.95	0.66
16:AP:22:THR:HA	16:AP:33:ILE:HG12	1.78	0.66
44:DS:17:ARG:HA	44:DS:20:ARG:HG2	1.78	0.66
31:BA:1652:A:C8	31:BA:1652:A:H5'	2.31	0.66
31:BA:691:C:O2'	31:BA:692:C:H5'	1.96	0.66
37:DH:85:LYS:CE	37:DH:145:ALA:HB2	2.26	0.66
39:DN:56:ASN:N	39:DN:125:GLY:H	1.94	0.66
1:CA:409:G:H2'	1:CA:410:G:C5'	2.25	0.66
36:DG:139:LEU:HA	36:DG:144:ILE:HG23	1.78	0.66
49:DX:82:GLN:C	49:DX:85:PRO:HD2	2.16	0.66
50:DY:28:LYS:HE3	50:DY:30:VAL:HG22	1.75	0.66
31:DA:2360:A:O2'	31:DA:2361:A:P	2.53	0.66
31:DA:1484:G:N2	31:DA:1506:C:C2	2.64	0.66
1:AA:735:C:O2'	1:AA:736:C:H5'	1.96	0.66
7:CG:150:ALA:O	11:CK:57:THR:HG21	1.95	0.66
3:CC:52:LEU:HD23	3:CC:52:LEU:H	1.61	0.66
12:AL:69:TYR:HB3	12:AL:99:HIS:CD2	2.31	0.66
32:DB:51:G:H5''	32:DB:52:A:OP2	1.95	0.66
2:AB:100:GLY:N	2:AB:176:GLU:OE2	2.28	0.66
1:AA:1497:G:H2'	1:AA:1498:U:H5'	1.77	0.66
45:DT:78:LEU:O	45:DT:78:LEU:HD23	1.96	0.66
31:DA:34:C:N4	31:DA:455:C:H5''	2.11	0.66
45:BT:82:LEU:N	45:BT:82:LEU:HD12	2.11	0.66
31:BA:2402:C:H5'	31:BA:2403:C:OP2	1.96	0.65
33:BD:35:LYS:CG	33:BD:64:ILE:N	2.59	0.65
33:BD:60:ARG:HD3	33:BD:87:ASN:OD1	1.95	0.65
31:DA:1405:U:H2'	31:DA:1406:U:C6	2.30	0.65
51:BZ:139:VAL:HG12	51:BZ:141:VAL:H	1.61	0.65
51:BZ:151:HIS:HB3	51:BZ:170:THR:CA	2.08	0.65
23:D1:94:LEU:HD22	23:D1:95:LEU:O	1.95	0.65
31:DA:819:A:C4	31:DA:1189:A:C2	2.84	0.65
33:DD:108:PRO:HD2	33:DD:111:LEU:HG	1.77	0.65
22:D0:26:TYR:HE2	31:DA:857:C:H1'	1.60	0.65
31:DA:1266:G:O5'	48:DW:15:ARG:NH2	2.28	0.65
1:AA:949:A:H1'	1:AA:1364:U:N3	2.11	0.65
31:DA:1313:U:H2'	31:DA:1610:A:C2	2.31	0.65
31:DA:1796:U:H2'	31:DA:1797:C:C6	2.31	0.65
23:D1:11:ARG:HB3	23:D1:12:PRO:CD	2.26	0.65

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
34:BE:116:VAL:CG2	34:BE:122:PHE:CD2	2.79	0.65
1:AA:632:A:C8	1:AA:633:G:C8	2.83	0.65
31:BA:1722:A:C2	31:BA:1740:G:H2'	2.32	0.65
1:AA:1226:C:C4	13:AM:104:ARG:HB2	2.30	0.65
4:AD:189:PRO:HB2	4:AD:194:LEU:CD2	2.25	0.65
1:CA:1112:C:O2	3:CC:178:LEU:HB2	1.96	0.65
31:DA:1459:G:C8	31:DA:1461:G:H1'	2.30	0.65
31:DA:34:C:C2'	31:DA:35:G:OP1	2.43	0.65
6:CF:82:ARG:HA	6:CF:82:ARG:HH11	1.62	0.65
4:CD:150:GLU:HG2	4:CD:151:LYS:H	1.62	0.65
31:BA:999:U:O2'	31:BA:1000:A:H5'	1.96	0.65
31:DA:2859:G:C8	31:DA:2859:G:H3'	2.32	0.65
5:CE:80:ILE:HD12	5:CE:138:ALA:HB1	1.77	0.65
31:BA:1582:C:O2'	31:BA:1586:A:C8	2.50	0.65
31:BA:2252:G:H2'	31:BA:2253:G:C8	2.31	0.65
3:AC:52:LEU:HD23	3:AC:52:LEU:H	1.61	0.65
31:BA:1497:U:C5'	31:BA:1498:C:C5	2.79	0.65
31:BA:911:A:C2'	42:BQ:9:TYR:OH	2.41	0.65
41:DP:48:PRO:O	41:DP:50:ARG:N	2.28	0.65
41:DP:51:PHE:O	41:DP:52:GLU:HB2	1.93	0.65
31:DA:2286:A:O2'	31:DA:2286:A:C8	2.47	0.65
2:CB:77:ALA:HA	2:CB:80:ILE:HD11	1.79	0.65
31:DA:1658:C:OP1	34:DE:132:HIS:ND1	2.29	0.65
1:CA:407:G:H5'	4:CD:3:ARG:NH1	2.11	0.65
31:DA:146:G:H2'	31:DA:147:U:O4'	1.96	0.65
33:DD:143:HIS:CD2	33:DD:144:ALA:HB2	2.31	0.65
24:B2:15:LYS:O	24:B2:16:LEU:CB	2.43	0.65
39:BN:56:ASN:H	39:BN:125:GLY:N	1.93	0.65
28:B6:16:CYS:O	28:B6:18:ARG:NH2	2.29	0.65
35:DF:184:TYR:CE2	35:DF:188:ARG:HD2	2.31	0.65
10:AJ:8:LEU:HD22	10:AJ:20:ALA:HB2	1.76	0.65
35:BF:51:THR:HG21	35:BF:92:PRO:HD2	1.78	0.65
1:CA:1270:C:H2'	1:CA:1271:G:O4'	1.97	0.65
10:CJ:39:PRO:HB3	10:CJ:70:ARG:HH12	1.61	0.65
43:BR:51:LEU:CD2	43:BR:70:LEU:HD21	2.27	0.65
1:CA:950:U:H2'	1:CA:951:G:H8	1.60	0.65
31:BA:1337:G:O2'	31:BA:1338:G:H5'	1.96	0.65
51:BZ:130:PRO:HA	51:BZ:133:ILE:HD11	1.78	0.65
41:BP:13:ASN:HD22	41:BP:13:ASN:C	1.98	0.65
31:DA:1582:C:O2'	31:DA:1586:A:C8	2.50	0.65
19:AS:22:LEU:O	19:AS:26:GLY:HA2	1.96	0.65
47:DV:25:LEU:H	47:DV:94:LEU:HD12	1.61	0.65

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
30:D8:59:LYS:HZ3	30:D8:59:LYS:HB2	1.57	0.65
31:BA:1225:G:OP1	47:BV:88:ARG:CB	2.44	0.65
31:BA:1224:C:O3'	47:BV:88:ARG:HB3	1.95	0.65
31:BA:2658:C:H3'	31:BA:2659:G:H5''	1.79	0.65
31:BA:285:C:C2'	31:BA:286:C:H5''	2.24	0.65
1:CA:63:C:N4	1:CA:104:G:H1	1.94	0.65
31:DA:1332:G:H22	31:DA:1609:A:H2'	1.62	0.65
2:AB:22:LYS:HA	2:AB:22:LYS:NZ	2.12	0.65
15:AO:62:GLN:HA	15:AO:65:ARG:NH1	2.11	0.65
31:DA:2500:U:H5''	31:DA:2501:C:OP2	1.96	0.65
1:AA:552:U:H4'	12:AL:86:ARG:HG2	1.77	0.65
2:CB:8:LYS:NZ	2:CB:217:ARG:HH11	1.93	0.65
31:BA:1038:C:H42	31:BA:1117:G:H1	1.44	0.65
1:AA:1270:C:H2'	1:AA:1271:G:O4'	1.96	0.65
4:CD:172:PRO:HB2	4:CD:187:ARG:HH22	1.61	0.65
31:DA:1116:C:H2'	31:DA:1117:G:H5'	1.79	0.65
32:DB:21:G:O2'	32:DB:22:U:H6	1.79	0.65
2:AB:69:LEU:HD22	2:AB:91:PRO:HB2	1.78	0.65
16:AP:20:VAL:HG21	16:AP:32:TYR:CD2	2.30	0.65
31:BA:2206:G:N2	31:BA:2207:G:C5'	2.51	0.65
33:DD:60:ARG:HD3	33:DD:87:ASN:OD1	1.96	0.65
31:BA:2632:A:H1'	34:BE:61:ARG:CZ	2.27	0.65
31:DA:143:G:H1'	49:DX:38:GLU:HG3	1.77	0.65
31:BA:330:A:C2	31:BA:1210:A:H2'	2.20	0.65
31:DA:309:G:O3'	50:DY:18:GLY:HA2	1.96	0.65
33:DD:118:VAL:HG22	33:DD:119:ALA:N	2.11	0.65
34:DE:132:HIS:CD2	34:DE:135:HIS:HE1	2.09	0.65
15:CO:63:ARG:NH1	15:CO:87:ILE:HD13	2.11	0.65
35:BF:20:LEU:HD22	35:BF:203:GLN:NE2	2.11	0.65
31:BA:2661:G:N7	31:BA:2662:A:C2	2.63	0.65
45:DT:83:ILE:HG13	45:DT:84:GLN:N	2.10	0.65
4:AD:33:MET:HE2	4:AD:37:PRO:HA	1.78	0.65
37:BH:156:ALA:H	37:BH:158:HIS:N	1.93	0.65
31:DA:146:G:H5'	31:DA:146:G:C8	2.29	0.65
45:BT:32:TYR:CD2	45:BT:32:TYR:N	2.64	0.65
50:BY:37:VAL:O	50:BY:38:ILE:HB	1.97	0.65
34:DE:116:VAL:CG2	34:DE:122:PHE:CD2	2.79	0.65
31:BA:1403:C:C5'	31:BA:1471:A:H1'	2.25	0.65
31:BA:1478:G:HO2'	31:BA:1558:A:H2	1.43	0.65
31:BA:807:U:C2'	31:BA:808:G:O5'	2.44	0.65
18:AR:43:PHE:C	18:AR:44:LEU:HD12	2.16	0.65
1:CA:22:G:H2'	1:CA:23:C:H6	1.61	0.65

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:AK:48:ILE:HG22	11:AK:49:GLY:H	1.61	0.65
27:D5:11:THR:HG21	31:DA:1264:G:H5'	1.78	0.65
2:AB:8:LYS:NZ	2:AB:217:ARG:HH11	1.94	0.65
35:DF:183:VAL:O	35:DF:187:VAL:HG23	1.96	0.65
1:AA:785:G:H2'	1:AA:786:G:H5'	1.79	0.65
7:AG:62:PHE:HA	7:AG:124:LEU:HD22	1.78	0.65
29:D7:19:ARG:HG2	29:D7:19:ARG:HH11	1.62	0.65
6:AF:99:ALA:HB1	18:AR:23:LYS:NZ	2.11	0.65
38:DI:131:LYS:HG2	38:DI:132:PRO:HA	1.79	0.65
39:DN:39:ARG:CD	39:DN:41:ASP:HB2	2.26	0.65
44:DS:95:HIS:CG	44:DS:96:GLY:N	2.64	0.65
31:BA:83:G:H1	31:BA:102:G:H2'	1.61	0.65
4:CD:126:ILE:HG22	4:CD:127:THR:H	1.62	0.65
2:AB:88:ALA:HB2	2:AB:219:VAL:CG1	2.26	0.65
37:DH:44:VAL:HG12	37:DH:45:VAL:N	2.06	0.65
31:BA:482:A:H4'	50:BY:47:LYS:HZ2	1.62	0.65
42:DQ:20:ALA:O	42:DQ:22:LYS:N	2.30	0.65
1:AA:878:G:H5'	8:AH:89:PRO:HG2	1.77	0.65
31:DA:1694:C:O2'	31:DA:1695:G:C4	2.50	0.65
44:DS:99:LYS:O	44:DS:101:LEU:HB2	1.96	0.65
35:BF:158:THR:HG23	35:BF:160:ASN:H	1.62	0.65
14:CN:48:ALA:HB2	14:CN:53:LEU:HD12	1.78	0.65
2:CB:100:GLY:N	2:CB:176:GLU:OE2	2.29	0.65
31:DA:2092:U:H4'	31:DA:2093:G:O5'	1.97	0.65
31:BA:1598:C:H2'	31:BA:1599:C:H6	1.61	0.65
46:DU:68:ALA:O	46:DU:71:GLN:HB3	1.95	0.65
31:BA:2206:G:C2	31:BA:2207:G:H5'	2.31	0.65
31:DA:1578:U:OP2	31:DA:1578:U:H6	1.79	0.65
39:DN:131:GLN:CD	39:DN:134:ARG:HB3	2.17	0.65
30:D8:6:THR:CG2	30:D8:63:PRO:HD3	2.26	0.65
46:DU:88:ILE:C	46:DU:90:VAL:H	1.99	0.65
15:AO:26:GLU:HA	15:AO:81:LEU:HD22	1.78	0.65
23:B1:87:PRO:CD	23:B1:88:LYS:N	2.60	0.65
31:DA:2404:C:H2'	31:DA:2405:G:H5''	1.77	0.65
31:DA:2610:C:C4'	31:DA:2611:U:OP2	2.43	0.65
24:D2:54:LYS:N	24:D2:56:GLN:NE2	2.43	0.65
41:BP:40:SER:O	41:BP:41:ARG:HD2	1.97	0.65
1:CA:1095:U:H5''	1:CA:1109:C:O2	1.97	0.65
22:B0:25:ARG:HD2	22:B0:29:GLN:HE21	1.60	0.65
31:BA:1481:U:H5'	31:BA:1482:G:OP2	1.96	0.65
1:AA:17:U:H2'	1:AA:18:C:H6	1.59	0.65
35:DF:66:PRO:O	35:DF:67:GLN:HB3	1.95	0.65

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
35:BF:160:ASN:ND2	35:BF:162:LEU:H	1.94	0.65
31:BA:1720:U:H2'	31:BA:1721:G:O4'	1.97	0.65
43:BR:55:ALA:HB2	43:BR:79:LEU:CD1	2.27	0.65
22:D0:13:GLY:O	22:D0:14:ARG:CB	2.45	0.65
1:CA:189(J):G:O2'	1:CA:189(K):U:H5'	1.95	0.65
1:AA:1128:C:O2'	1:AA:1130:A:C8	2.48	0.65
10:CJ:30:SER:HB2	10:CJ:80:LYS:HG3	1.78	0.65
9:AI:17:VAL:HG11	9:AI:81:ILE:HD13	1.79	0.65
31:BA:1042:G:H3'	31:BA:1043:C:O4'	1.97	0.65
31:BA:1688:U:H1'	31:BA:1701:A:C6	2.31	0.65
2:AB:137:ARG:HA	2:AB:137:ARG:HH11	1.61	0.65
27:B5:52:TYR:CD2	27:B5:52:TYR:N	2.62	0.65
28:B6:10:LEU:HD22	28:B6:10:LEU:H	1.62	0.65
46:BU:90:VAL:O	46:BU:92:ARG:N	2.30	0.65
24:B2:31:GLU:HG2	24:B2:37:PHE:HD1	1.62	0.65
31:BA:2000:G:OP2	43:BR:3:HIS:CE1	2.50	0.65
32:BB:74:U:C3'	32:BB:75:G:H5''	2.27	0.65
41:BP:71:VAL:HG13	41:BP:72:PRO:N	2.11	0.65
41:DP:108:LYS:HD2	41:DP:108:LYS:N	2.11	0.65
31:DA:1448:G:H1'	31:DA:1528:A:N6	2.10	0.65
45:DT:38:ASN:C	45:DT:38:ASN:HD22	1.99	0.65
31:BA:1484:G:N2	31:BA:1505:C:C5	2.63	0.65
31:BA:1348:G:C2'	31:BA:1349:A:H5''	2.25	0.65
1:CA:920:U:O4'	1:CA:1080:A:C2	2.50	0.65
33:BD:125:ILE:HG21	33:BD:137:PRO:HG2	1.79	0.65
33:DD:125:ILE:HG21	33:DD:137:PRO:HG2	1.79	0.65
36:BG:23:PHE:HZ	36:BG:171:ALA:HB3	1.61	0.65
31:BA:2106:G:H1'	31:BA:2184:G:H22	1.62	0.65
31:DA:729:G:OP2	33:DD:13:ARG:NH1	2.30	0.65
5:CE:78:HIS:CE1	5:CE:142:LEU:HD23	2.32	0.65
31:BA:1459:G:C8	31:BA:1461:G:H1'	2.32	0.65
10:AJ:3:LYS:HD2	10:AJ:77:PRO:HD3	1.79	0.65
33:DD:72:LYS:HZ2	33:DD:75:ILE:HD12	1.62	0.65
7:AG:152:ALA:O	7:AG:155:ARG:HG3	1.97	0.65
6:AF:16:GLN:CD	6:AF:16:GLN:H	2.00	0.65
26:D4:25:TYR:C	26:D4:27:THR:H	1.99	0.65
47:BV:70:ILE:O	47:BV:71:LEU:HB2	1.95	0.65
2:AB:201:ILE:HG21	2:AB:214:ILE:HG21	1.79	0.65
31:BA:2610:C:C4'	31:BA:2611:U:OP2	2.41	0.65
43:DR:4:LEU:C	43:DR:5:LYS:HD2	2.16	0.65
45:BT:83:ILE:HG13	45:BT:84:GLN:N	2.10	0.65
41:BP:112:LEU:H	41:BP:128:HIS:HD2	1.44	0.65

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:AF:19:LEU:HD23	6:AF:19:LEU:O	1.97	0.65
31:BA:2360:A:O2'	31:BA:2361:A:C5'	2.45	0.65
42:BQ:141:GLN:HE22	51:BZ:89:PHE:HB3	1.60	0.65
31:DA:1025:G:H8	31:DA:1025:G:OP1	1.80	0.65
34:BE:116:VAL:CG2	34:BE:122:PHE:CG	2.80	0.65
31:BA:1332:G:N2	31:BA:1609:A:H2'	2.12	0.65
25:D3:43:ILE:O	25:D3:47:VAL:HG23	1.97	0.65
35:DF:158:THR:HG23	35:DF:160:ASN:H	1.62	0.65
1:AA:1112:C:O2	3:AC:178:LEU:HB2	1.95	0.65
43:DR:33:ARG:HG2	43:DR:115:GLU:HG3	1.79	0.65
1:AA:189(J):G:O2'	1:AA:189(K):U:H5'	1.96	0.65
31:BA:1805:U:O2	33:BD:50:THR:HB	1.96	0.65
47:BV:2:PHE:O	47:BV:14:VAL:O	2.15	0.65
9:CI:114:TYR:HE1	10:CJ:60:ARG:O	1.78	0.65
31:BA:1899:G:N2	31:BA:1902:C:C5	2.64	0.65
2:AB:163:PHE:HD2	2:AB:185:ILE:HG13	1.62	0.65
16:AP:48:TRP:HD1	16:AP:48:TRP:H	1.44	0.65
33:BD:65:ILE:CD1	33:BD:67:PHE:CE1	2.73	0.65
28:D6:51:GLU:O	28:D6:52:VAL:CB	2.45	0.65
49:DX:12:VAL:HG22	49:DX:29:TRP:CE2	2.32	0.65
31:DA:861:A:C2	31:DA:917:A:C4	2.85	0.65
23:D1:19:GLN:HE21	31:DA:379:G:N2	1.93	0.65
39:DN:89:LYS:O	39:DN:93:THR:HG22	1.96	0.65
31:DA:2661:G:N7	31:DA:2662:A:C2	2.64	0.65
20:AT:18:GLN:O	20:AT:22:ARG:HG3	1.97	0.65
10:CJ:51:ARG:HE	10:CJ:61:GLU:HB2	1.60	0.65
2:CB:22:LYS:HZ3	2:CB:22:LYS:HA	1.61	0.65
1:CA:148:G:O2'	1:CA:149:A:H5'	1.97	0.65
15:CO:62:GLN:HA	15:CO:65:ARG:NH1	2.11	0.65
6:AF:91:VAL:HG11	18:AR:72:ARG:HH12	1.60	0.65
35:BF:8:GLN:HB3	35:BF:126:VAL:HA	1.79	0.65
9:AI:114:TYR:HE1	10:AJ:60:ARG:O	1.79	0.65
31:BA:1379:A:O2'	31:BA:1380:G:OP1	2.13	0.65
43:BR:101:ALA:O	43:BR:102:GLU:HB2	1.97	0.65
31:DA:999:U:O2'	31:DA:1000:A:H5'	1.97	0.65
36:DG:115:ARG:NH1	36:DG:136:ARG:HG3	2.12	0.65
7:AG:47:CYS:O	7:AG:50:ILE:HB	1.96	0.65
31:DA:911:A:C2'	42:DQ:9:TYR:OH	2.41	0.65
2:CB:69:LEU:HD22	2:CB:91:PRO:HB2	1.78	0.65
50:BY:29:GLU:N	50:BY:29:GLU:OE1	2.30	0.65
35:DF:32:LEU:HD11	35:DF:105:VAL:HG13	1.79	0.65
49:DX:77:LYS:CG	49:DX:78:LYS:HG3	2.26	0.65

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:CB:201:ILE:HG21	2:CB:214:ILE:HG21	1.78	0.65
47:DV:51:VAL:CG1	47:DV:52:VAL:H	2.09	0.65
31:BA:669:G:O2'	31:BA:669:G:C8	2.50	0.65
39:DN:56:ASN:H	39:DN:125:GLY:N	1.94	0.65
31:BA:2661:G:C8	31:BA:2662:A:C2	2.85	0.65
31:DA:814:C:H5	41:DP:27:HIS:NE2	1.94	0.65
15:AO:56:LEU:O	15:AO:60:VAL:HG23	1.97	0.65
1:AA:1095:U:H5''	1:AA:1109:C:O2	1.98	0.65
1:CA:949:A:H1'	1:CA:1364:U:N3	2.12	0.65
38:DI:82:ARG:HG2	38:DI:89:TYR:HD2	1.60	0.65
49:BX:41:ASN:HA	49:BX:44:GLU:HB3	1.77	0.65
17:AQ:5:VAL:HG12	17:AQ:6:LEU:N	2.11	0.65
37:BH:91:GLY:C	37:BH:92:ILE:HG13	2.18	0.65
37:DH:89:ILE:O	37:DH:90:LYS:HG2	1.96	0.65
32:BB:51:G:H5''	32:BB:52:A:OP2	1.97	0.65
31:BA:2022:U:O2'	31:BA:2617:C:H5'	1.97	0.65
1:CA:193:C:O2'	1:CA:194:C:H5'	1.97	0.65
31:DA:1165:U:H2'	31:DA:1166:C:C6	2.32	0.65
1:CA:487:A:H2'	1:CA:488:C:O4'	1.97	0.65
38:BI:125:GLU:OE1	38:BI:141:LYS:HG2	1.96	0.65
1:AA:607:A:H2'	1:AA:608:A:O4'	1.97	0.65
27:B5:46:CYS:HG	27:B5:47:PRO:HD2	1.61	0.64
31:DA:2334:G:H5'	44:DS:13:ARG:HB3	1.79	0.64
31:DA:1225:G:OP1	47:DV:88:ARG:CB	2.45	0.64
31:DA:1493:C:H4'	31:DA:1494:A:OP1	1.97	0.64
31:BA:2315:G:H2'	31:BA:2316:C:C6	2.32	0.64
30:D8:25:MET:HB2	41:DP:62:LEU:HD21	1.79	0.64
31:DA:157:U:H5'	31:DA:171:G:H22	1.62	0.64
31:BA:993:G:C5'	47:BV:75:PHE:CZ	2.81	0.64
47:DV:62:LEU:HB3	47:DV:98:GLU:HA	1.79	0.64
1:CA:386:C:O2'	1:CA:387:U:H5'	1.96	0.64
43:DR:4:LEU:O	43:DR:5:LYS:HD2	1.97	0.64
34:BE:93:VAL:H	34:BE:95:ILE:CD1	2.07	0.64
2:CB:22:LYS:HZ3	2:CB:40:HIS:HE1	1.44	0.64
31:DA:2761:G:C2'	31:DA:2762:G:H5''	2.27	0.64
32:DB:15:A:H5'	32:DB:16:G:H8	1.62	0.64
25:B3:19:GLN:HE22	25:B3:52:HIS:CE1	2.15	0.64
13:AM:68:GLY:CA	13:AM:71:ARG:HB3	2.27	0.64
9:AI:114:TYR:N	9:AI:114:TYR:CD2	2.64	0.64
3:AC:23:TYR:CG	3:AC:24:ALA:N	2.65	0.64
1:CA:650:G:O2'	1:CA:651:C:H5'	1.98	0.64
38:DI:54:GLN:HG2	38:DI:57:ARG:HH22	1.62	0.64

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:BA:2894:G:H2'	31:BA:2894:G:N3	2.12	0.64
37:DH:126:PRO:HB2	37:DH:130:ARG:NH1	2.12	0.64
41:DP:16:ARG:HG3	41:DP:17:LYS:N	2.12	0.64
41:DP:62:LEU:H	41:DP:62:LEU:CD2	2.08	0.64
49:BX:31:HIS:HD2	49:BX:33:LYS:H	1.45	0.64
23:B1:86:SER:N	23:B1:87:PRO:CD	2.59	0.64
31:DA:2000:G:OP2	43:DR:3:HIS:CE1	2.50	0.64
45:BT:61:PHE:CZ	45:BT:85:LYS:HE2	2.33	0.64
45:DT:32:TYR:HB3	45:DT:81:PRO:HB3	1.79	0.64
50:DY:45:VAL:CG1	50:DY:62:GLU:HB2	2.27	0.64
20:CT:16:HIS:O	20:CT:19:SER:HB3	1.96	0.64
31:DA:1833:U:H2'	31:DA:1834:U:C6	2.32	0.64
31:BA:2888:C:H2'	31:BA:2889:C:H5''	1.79	0.64
32:BB:86:G:H2'	32:BB:87:G:C8	2.33	0.64
25:B3:19:GLN:NE2	25:B3:52:HIS:HE1	1.94	0.64
31:DA:1042:G:H3'	31:DA:1043:C:O4'	1.97	0.64
1:CA:626:U:H2'	1:CA:627:G:H8	1.61	0.64
31:BA:1116:C:H2'	31:BA:1117:G:H5'	1.78	0.64
5:AE:144:THR:O	5:AE:148:VAL:HG23	1.97	0.64
1:CA:667:G:H4'	15:CO:51:HIS:CE1	2.32	0.64
30:B8:39:LYS:HE2	30:B8:42:ARG:HH12	1.62	0.64
4:AD:172:PRO:HB2	4:AD:187:ARG:HH22	1.62	0.64
2:AB:135:GLN:O	2:AB:139:LYS:HB2	1.98	0.64
39:BN:51:PHE:CZ	39:BN:119:ARG:HD2	2.32	0.64
1:AA:932:C:H4'	7:AG:4:ARG:NH2	2.12	0.64
1:AA:425:G:C2'	1:AA:426:G:H5'	2.27	0.64
41:DP:14:LYS:O	41:DP:15:ARG:HB2	1.96	0.64
41:DP:17:LYS:O	41:DP:17:LYS:CG	2.45	0.64
41:BP:47:ASP:HB3	41:BP:48:PRO:CA	2.25	0.64
50:DY:71:LYS:HZ3	50:DY:71:LYS:HB2	1.62	0.64
45:DT:23:ARG:O	45:DT:25:GLY:N	2.31	0.64
12:AL:47:LYS:CB	12:AL:48:PRO:HD3	2.23	0.64
23:B1:16:ASN:HB3	23:B1:46:LEU:HG	1.79	0.64
18:CR:59:SER:HB3	18:CR:62:GLU:HG3	1.80	0.64
35:BF:9:ILE:HG12	35:BF:14:PRO:C	2.17	0.64
1:CA:1117:G:H4'	9:CI:104:ARG:NH2	2.12	0.64
31:DA:536:A:H2'	31:DA:537:C:C6	2.32	0.64
35:BF:7:TYR:HD1	35:BF:8:GLN:H	1.46	0.64
49:DX:41:ASN:HA	49:DX:44:GLU:HB3	1.79	0.64
31:DA:1038:C:H42	31:DA:1117:G:H1	1.45	0.64
31:BA:536:A:H2'	31:BA:537:C:H6	1.60	0.64
35:DF:103:LYS:HA	35:DF:106:ARG:HG3	1.79	0.64

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:CG:26:PHE:CE2	7:CG:30:ILE:HD11	2.32	0.64
31:DA:2408:U:H2'	31:DA:2409:G:C8	2.33	0.64
47:DV:93:GLU:HG2	47:DV:94:LEU:N	2.13	0.64
31:DA:2632:A:H1'	34:DE:61:ARG:CZ	2.27	0.64
31:DA:1341:U:C2	49:DX:77:LYS:HE2	2.31	0.64
31:DA:71:A:H2	49:DX:31:HIS:CE1	2.15	0.64
31:BA:157:U:H5'	31:BA:171:G:H22	1.62	0.64
1:CA:674:G:H2'	1:CA:675:A:H8	1.62	0.64
39:DN:27:ALA:HB3	39:DN:106:MET:HE2	1.80	0.64
31:DA:634:C:H2'	31:DA:635:C:C6	2.33	0.64
50:DY:28:LYS:CB	50:DY:37:VAL:HB	2.27	0.64
30:B8:51:ALA:N	30:B8:53:PRO:HD2	2.13	0.64
30:B8:6:THR:CG2	30:B8:63:PRO:HD3	2.27	0.64
10:AJ:33:GLN:HB2	10:AJ:75:ILE:HD13	1.79	0.64
31:DA:92:A:H2'	31:DA:93:G:H8	1.63	0.64
27:B5:2:ALA:O	27:B5:3:LYS:HD2	1.98	0.64
1:AA:192:U:C4'	20:AT:103:GLY:HA2	2.27	0.64
32:DB:86:G:H2'	32:DB:87:G:C8	2.32	0.64
1:AA:1117:G:H4'	9:AI:104:ARG:NH2	2.13	0.64
32:DB:52:A:O2'	32:DB:53:A:C8	2.51	0.64
1:CA:991:U:O2	1:CA:993:G:H8	1.81	0.64
31:BA:323:G:H5'	35:BF:169:ASN:HD21	1.62	0.64
5:AE:78:HIS:HE1	5:AE:143:ARG:H	1.45	0.64
31:DA:2236:C:H2'	31:DA:2237:G:H5'	1.79	0.64
11:AK:59:TYR:O	11:AK:62:GLN:HB3	1.98	0.64
9:CI:114:TYR:CD2	9:CI:114:TYR:N	2.64	0.64
6:CF:99:ALA:HB1	18:CR:23:LYS:NZ	2.12	0.64
31:DA:534:U:O2'	46:DU:49:HIS:HD2	1.81	0.64
30:D8:39:LYS:HE2	30:D8:42:ARG:HH12	1.62	0.64
27:D5:50:GLY:O	27:D5:51:TYR:HD1	1.80	0.64
31:BA:2405:G:O2'	31:BA:2406:U:OP1	2.15	0.64
31:BA:1658:C:OP1	34:BE:132:HIS:ND1	2.31	0.64
1:AA:545:C:O2'	1:AA:546:G:H5'	1.97	0.64
31:DA:1486:A:N6	31:DA:1504:C:H42	1.95	0.64
39:BN:13:TRP:HZ3	39:BN:130:HIS:HE1	1.44	0.64
31:DA:1108:U:C2'	31:DA:1109:C:H5'	2.27	0.64
12:AL:6:THR:H	12:AL:9:GLN:HE21	1.45	0.64
31:DA:2562:U:H1'	40:DO:23:ARG:HH11	1.63	0.64
1:CA:942:G:H21	9:CI:124:GLN:NE2	1.95	0.64
24:D2:14:ARG:CZ	24:D2:57:ILE:HG22	2.28	0.64
1:AA:1337:G:H5''	1:AA:1338:G:OP1	1.98	0.64
35:BF:160:ASN:HD22	35:BF:162:LEU:H	1.45	0.64

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
36:DG:25:TYR:CZ	36:DG:32:PRO:HD3	2.33	0.64
31:DA:807:U:C2'	31:DA:808:G:O5'	2.46	0.64
31:DA:1430:C:H2'	31:DA:1431:U:H6	1.61	0.64
1:AA:441:A:H3'	1:AA:442:C:C6	2.33	0.64
8:CH:58:TYR:O	8:CH:59:LEU:HD23	1.97	0.64
42:DQ:27:VAL:HA	42:DQ:105:GLU:OE1	1.98	0.64
31:DA:2825:C:C2'	31:DA:2826:A:H5'	2.27	0.64
1:CA:1332:A:O5'	1:CA:1332:A:H8	1.80	0.64
20:AT:61:SER:O	20:AT:65:LYS:HG3	1.98	0.64
31:DA:2492:U:H2'	31:DA:2493:U:H6	1.61	0.64
31:DA:65:C:H2'	31:DA:66:C:C6	2.32	0.64
36:BG:39:ILE:HB	36:BG:157:ILE:HG22	1.78	0.64
30:D8:34:TRP:HD1	31:DA:2391:G:OP1	1.81	0.64
31:BA:2658:C:C5'	31:BA:2659:G:OP2	2.41	0.64
27:D5:16:ARG:NH1	27:D5:16:ARG:HG2	2.01	0.64
41:BP:112:LEU:H	41:BP:128:HIS:CD2	2.16	0.64
4:AD:79:PHE:CZ	4:AD:204:ILE:HD13	2.33	0.64
38:DI:133:HIS:ND1	38:DI:134:PRO:HD2	2.13	0.64
6:CF:19:LEU:HD23	6:CF:19:LEU:O	1.98	0.64
6:AF:23:LYS:O	6:AF:27:GLN:HG2	1.98	0.64
37:DH:35:VAL:O	37:DH:37:VAL:HG23	1.98	0.64
4:AD:146:ILE:HD12	4:AD:146:ILE:H	1.62	0.64
1:AA:627:G:H2'	1:AA:628:G:H8	1.61	0.64
8:AH:20:TYR:HD1	8:AH:65:TYR:CD2	2.16	0.64
40:BO:90:GLN:O	40:BO:91:LEU:HB2	1.95	0.64
1:CA:1172:C:H2'	1:CA:1173:G:C8	2.32	0.64
31:BA:1648:C:H2'	31:BA:1649:G:O5'	1.97	0.64
19:CS:12:ASP:HB2	19:CS:15:LEU:HD23	1.80	0.64
27:D5:4:HIS:HB3	27:D5:5:PRO:HD3	1.80	0.64
31:BA:1518:U:H2'	31:BA:1519:G:O4'	1.97	0.64
31:DA:1688:U:H1'	31:DA:1701:A:C6	2.32	0.64
1:AA:816:A:OP2	1:AA:1527:C:H5'	1.97	0.64
16:AP:3:LYS:O	16:AP:21:VAL:HA	1.98	0.64
49:DX:33:LYS:C	49:DX:35:THR:N	2.46	0.64
51:BZ:144:LEU:HD11	51:BZ:150:LEU:HD12	1.80	0.64
47:DV:38:LEU:HD22	47:DV:58:VAL:HB	1.80	0.64
33:BD:143:HIS:HD2	33:BD:144:ALA:HB2	1.63	0.64
31:DA:330:A:H2	31:DA:1210:A:C2'	2.06	0.64
31:BA:2308:G:O6	31:BA:2310:A:H2'	1.97	0.64
11:CK:127:LYS:CA	11:CK:127:LYS:HE2	2.25	0.64
4:CD:5:ILE:HG22	4:CD:5:ILE:O	1.97	0.64
6:AF:11:ASN:HB3	6:AF:14:LEU:HG	1.78	0.64

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:DA:2831:G:H5'	31:DA:2834:G:O2'	1.98	0.64
31:BA:244:A:C2	31:BA:255:A:C4	2.85	0.64
50:BY:8:LYS:HD3	50:BY:28:LYS:NZ	2.13	0.64
11:CK:111:ASP:HA	18:CR:84:LYS:HE2	1.78	0.64
31:DA:1025:G:C4	31:DA:1135:C:H1'	2.33	0.64
6:AF:5:GLU:HG3	6:AF:93:SER:OG	1.98	0.64
1:AA:922:G:C6	1:AA:923:A:C6	2.86	0.64
33:BD:127:VAL:HA	33:BD:193:VAL:HG13	1.78	0.64
23:B1:37:ILE:HD11	31:BA:2079:U:H4'	1.80	0.64
31:BA:1037:G:H1	31:BA:1118:C:H42	1.46	0.64
1:CA:425:G:H2'	1:CA:426:G:H5'	1.78	0.64
1:AA:165:C:H2'	1:AA:166:G:C8	2.33	0.64
31:DA:1512:U:O2'	31:DA:1513:C:H5'	1.98	0.64
1:AA:487:A:H2'	1:AA:488:C:O4'	1.97	0.64
1:AA:826:C:H2'	1:AA:827:U:C6	2.33	0.64
31:DA:1744:C:H2'	31:DA:1745:C:H5'	1.80	0.64
31:BA:2347:C:H2'	31:BA:2348:U:C6	2.33	0.64
41:BP:62:LEU:N	41:BP:62:LEU:HD13	2.12	0.64
4:CD:129:ASN:HD21	4:CD:144:ASP:HB3	1.63	0.64
47:DV:43:GLU:CA	47:DV:48:GLY:HA2	2.28	0.64
24:B2:37:PHE:HZ	24:B2:43:GLN:HB2	1.63	0.64
33:DD:267:SER:O	33:DD:268:ARG:HB2	1.97	0.64
47:BV:85:LYS:C	47:BV:87:HIS:H	1.99	0.64
31:BA:607:U:H3	31:BA:621:A:H2	1.42	0.64
22:D0:8:GLY:HA2	42:DQ:83:MET:HG2	1.80	0.64
30:D8:16:ILE:CD1	30:D8:57:ARG:HG2	2.24	0.64
31:DA:2310:A:O2'	31:DA:2311:A:H5''	1.98	0.64
50:BY:17:SER:OG	50:BY:18:GLY:N	2.30	0.64
37:BH:30:LYS:HZ3	37:BH:81:GLU:HA	1.62	0.64
1:CA:67:C:H2'	1:CA:68:G:H8	1.61	0.64
31:BA:1831:G:H2'	31:BA:1832:C:H6	1.62	0.64
31:BA:729:G:OP2	33:BD:13:ARG:NH1	2.31	0.64
37:DH:88:LEU:O	37:DH:89:ILE:HG23	1.97	0.64
31:DA:1742:G:N7	31:DA:1743:C:C2	2.65	0.64
2:AB:97:TRP:HZ2	2:AB:102:LEU:HD13	1.63	0.64
2:CB:97:TRP:HZ2	2:CB:102:LEU:HD13	1.63	0.64
31:BA:1298:C:H5''	31:BA:1299:G:OP2	1.98	0.64
1:CA:1237:C:H42	1:CA:1337:G:H1	1.46	0.64
14:AN:23:ARG:NH1	14:AN:30:ALA:HB2	2.13	0.64
3:CC:23:TYR:CG	3:CC:24:ALA:N	2.66	0.64
37:BH:98:LEU:HB2	37:BH:125:VAL:HG21	1.80	0.64
31:BA:971:C:H2'	31:BA:972:G:H5'	1.79	0.64

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
36:DG:13:GLU:O	36:DG:14:GLU:HB2	1.96	0.64
47:BV:46:VAL:O	47:BV:47:VAL:HB	1.96	0.64
31:DA:870:A:C2	31:DA:908:C:C2	2.86	0.64
42:DQ:8:LYS:CG	42:DQ:9:TYR:N	2.59	0.64
16:AP:6:LEU:HG	16:AP:17:TYR:HB3	1.78	0.64
51:DZ:144:LEU:HD11	51:DZ:150:LEU:HD12	1.78	0.64
46:DU:88:ILE:H	46:DU:88:ILE:HD12	1.62	0.64
45:BT:65:LYS:CE	45:BT:66:VAL:H	2.01	0.64
31:BA:1405:U:H2'	31:BA:1406:U:C6	2.32	0.64
31:BA:1784:A:H4'	31:BA:1785:A:H5''	1.80	0.64
31:BA:146:G:H2'	31:BA:147:U:O4'	1.98	0.64
48:DW:6:ILE:HA	48:DW:103:ILE:O	1.98	0.64
42:BQ:35:VAL:HG13	42:BQ:130:LYS:HB3	1.80	0.64
48:DW:59:VAL:CG1	48:DW:60:ASN:N	2.56	0.64
31:BA:1108:U:C2'	31:BA:1109:C:H5'	2.27	0.64
28:B6:45:LYS:HE3	31:BA:2370:G:O2'	1.98	0.64
31:DA:518:G:H4'	48:DW:18:ARG:CZ	2.27	0.64
33:DD:70:TRP:CH2	33:DD:150:LYS:HA	2.32	0.64
1:AA:942:G:N2	9:AI:124:GLN:HE22	1.95	0.64
10:AJ:34:VAL:CG2	10:AJ:74:ILE:HG22	2.28	0.64
7:CG:16:LEU:HD13	9:CI:45:ALA:HB2	1.77	0.64
31:BA:1173:G:H3'	31:BA:1174:A:C5'	2.28	0.64
34:DE:201:THR:HG22	34:DE:202:LYS:N	2.13	0.64
1:CA:192:U:C4'	20:CT:103:GLY:HA2	2.27	0.64
1:CA:193:C:H2'	1:CA:194:C:C6	2.33	0.64
5:AE:136:MET:O	5:AE:139:LEU:N	2.31	0.64
31:BA:1510:G:H2'	31:BA:1511:C:C6	2.33	0.64
31:DA:2327:A:H2'	31:DA:2328:A:C8	2.32	0.64
34:DE:27:LEU:HD22	45:DT:1:MET:CE	2.28	0.64
37:DH:144:VAL:O	37:DH:148:ILE:HG12	1.98	0.64
50:DY:100:ALA:O	50:DY:101:LYS:CB	2.46	0.64
49:DX:35:THR:O	49:DX:36:LYS:C	2.36	0.64
46:DU:83:LEU:C	46:DU:88:ILE:HD11	2.18	0.64
36:BG:102:PHE:HE2	36:BG:141:PHE:CE1	2.16	0.64
33:DD:182:LEU:O	33:DD:271:ILE:HD12	1.98	0.64
41:DP:85:LEU:HA	41:DP:88:LEU:HB2	1.79	0.64
31:DA:2657:A:H2	31:DA:2664:G:N2	1.95	0.64
24:D2:47:ASN:ND2	24:D2:48:HIS:N	2.45	0.64
42:DQ:20:ALA:HB2	42:DQ:99:PRO:HD2	1.78	0.64
33:DD:253:GLN:CB	33:DD:255:LYS:HZ3	2.10	0.64
35:DF:164:ARG:HG2	35:DF:164:ARG:NH1	2.13	0.64
43:BR:11:ASN:CG	43:BR:12:ARG:H	2.00	0.64

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:B0:29:GLN:O	22:B0:67:VAL:HG23	1.97	0.64
7:CG:152:ALA:O	7:CG:155:ARG:HG3	1.98	0.64
33:BD:253:GLN:CB	33:BD:255:LYS:HZ3	2.10	0.64
1:CA:1057:G:H5''	3:CC:154:SER:HB2	1.79	0.64
45:BT:106:SER:C	45:BT:107:ASP:OD1	2.36	0.64
1:AA:942:G:H21	9:AI:124:GLN:NE2	1.95	0.64
31:BA:1138:G:O2'	39:BN:105:GLY:HA3	1.97	0.64
34:DE:120:TRP:CE3	34:DE:155:LYS:HD3	2.32	0.64
7:CG:4:ARG:HB3	7:CG:5:ARG:HH11	1.62	0.64
6:CF:52:ILE:O	6:CF:53:ALA:HB3	1.98	0.64
29:B7:34:ARG:NH1	29:B7:39:ARG:HG3	2.12	0.64
31:BA:207:A:H2'	31:BA:208:C:O4'	1.98	0.64
37:BH:148:ILE:O	37:BH:151:ILE:HG12	1.98	0.64
48:BW:70:TYR:H	48:BW:70:TYR:HD2	1.46	0.64
46:DU:8:VAL:HG11	46:DU:12:ARG:CZ	2.28	0.64
2:CB:135:GLN:O	2:CB:139:LYS:HB2	1.97	0.64
1:AA:59:A:H5''	1:AA:60:A:C5'	2.28	0.63
44:DS:16:ASN:C	44:DS:17:ARG:O	2.36	0.63
31:DA:2206:G:C2	31:DA:2207:G:H5'	2.32	0.63
31:DA:631:A:O2'	41:DP:67:MET:HB3	1.98	0.63
49:BX:72:LYS:HG3	49:BX:74:PRO:CD	2.27	0.63
33:BD:161:THR:HG23	33:BD:196:VAL:HG21	1.80	0.63
34:DE:93:VAL:H	34:DE:95:ILE:CD1	2.06	0.63
1:CA:544:G:H2'	1:CA:545:C:C6	2.33	0.63
31:DA:2849:U:OP2	45:DT:95:ARG:NH1	2.31	0.63
38:DI:6:LEU:O	38:DI:15:VAL:HB	1.97	0.63
41:DP:102:ARG:O	41:DP:103:ALA:HB2	1.98	0.63
1:AA:407:G:H5'	4:AD:3:ARG:NH1	2.13	0.63
50:BY:28:LYS:CB	50:BY:37:VAL:HB	2.27	0.63
43:DR:71:GLN:HE21	43:DR:71:GLN:CA	2.12	0.63
1:CA:60:A:H4'	1:CA:61:G:O5'	1.99	0.63
31:BA:1796:U:H2'	31:BA:1797:C:C6	2.33	0.63
11:CK:59:TYR:O	11:CK:62:GLN:HB3	1.98	0.63
27:D5:2:ALA:O	27:D5:3:LYS:HD2	1.97	0.63
31:BA:2476:A:C2	31:BA:2477:C:C6	2.86	0.63
25:D3:40:THR:HG23	25:D3:43:ILE:CG1	2.28	0.63
31:DA:1047:G:H2'	31:DA:1110:G:N2	2.13	0.63
49:BX:40:LYS:O	49:BX:42:ALA:N	2.29	0.63
25:D3:19:GLN:NE2	25:D3:52:HIS:CE1	2.65	0.63
51:BZ:7:ALA:O	51:BZ:61:LEU:HD23	1.98	0.63
1:CA:624:C:H2'	1:CA:625:G:H8	1.62	0.63
31:DA:2772:C:H2'	31:DA:2773:C:C6	2.34	0.63

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:BA:1359:A:C8	31:BA:1372:U:O4	2.51	0.63
31:BA:2762:G:H8	31:BA:2762:G:H5'	1.63	0.63
31:BA:2756:U:H4'	31:BA:2757:A:OP1	1.97	0.63
1:CA:814:A:N7	1:CA:816:A:C4	2.66	0.63
51:DZ:28:MET:HE2	51:DZ:59:LEU:HD13	1.80	0.63
35:DF:181:LEU:HB3	35:DF:205:ARG:HH12	1.63	0.63
7:CG:97:GLN:O	7:CG:101:LEU:HG	1.97	0.63
48:DW:70:TYR:H	48:DW:70:TYR:HD2	1.45	0.63
47:DV:38:LEU:HG	47:DV:39:LEU:N	2.13	0.63
16:CP:48:TRP:HD1	16:CP:48:TRP:H	1.43	0.63
31:BA:942:G:O2'	31:BA:943:U:H5'	1.98	0.63
31:DA:587:C:C4'	31:DA:588:U:OP2	2.46	0.63
30:B8:6:THR:CG2	31:BA:243:U:OP1	2.46	0.63
31:DA:1766:U:H2'	31:DA:1767:C:C6	2.33	0.63
5:CE:78:HIS:CE1	5:CE:143:ARG:H	2.17	0.63
1:CA:192:U:H2'	1:CA:193:C:C6	2.32	0.63
23:B1:37:ILE:HD12	23:B1:37:ILE:O	1.98	0.63
42:DQ:30:GLY:CA	42:DQ:107:ALA:HB2	2.28	0.63
31:BA:2562:U:H1'	40:BO:23:ARG:NH1	2.14	0.63
31:BA:1372:U:H2'	31:BA:1373:A:O4'	1.98	0.63
3:AC:73:PRO:HA	3:AC:76:VAL:HG13	1.80	0.63
2:CB:213:LEU:O	2:CB:213:LEU:HD23	1.99	0.63
36:BG:7:LEU:HB2	36:BG:104:GLU:OE2	1.97	0.63
37:DH:17:VAL:HG21	37:DH:50:VAL:HG21	1.81	0.63
10:AJ:30:SER:HB2	10:AJ:80:LYS:HG3	1.79	0.63
31:DA:614:U:O2	31:DA:614:U:O5'	2.16	0.63
2:CB:163:PHE:HD2	2:CB:185:ILE:HG13	1.63	0.63
47:DV:66:ARG:NH1	47:DV:94:LEU:HD11	2.13	0.63
49:DX:73:ARG:N	49:DX:74:PRO:CD	2.60	0.63
46:DU:104:GLN:H	46:DU:104:GLN:CD	2.02	0.63
31:BA:1278:A:O3'	43:BR:34:ILE:HD11	1.98	0.63
31:BA:587:C:C4'	31:BA:588:U:OP2	2.47	0.63
31:DA:1652:A:C5'	31:DA:1652:A:H8	2.11	0.63
35:DF:3:GLU:O	35:DF:24:LEU:HG	1.98	0.63
35:BF:24:LEU:HB3	35:BF:25:PRO:CD	2.28	0.63
42:BQ:20:ALA:O	42:BQ:22:LYS:N	2.31	0.63
1:AA:544:G:H2'	1:AA:545:C:C6	2.32	0.63
43:BR:10:LEU:HB3	43:BR:17:ARG:CZ	2.27	0.63
43:BR:71:GLN:NE2	43:BR:71:GLN:HA	2.12	0.63
40:DO:104:ARG:NH2	45:DT:33:LYS:HD2	2.13	0.63
37:BH:41:MET:CE	37:BH:41:MET:HA	2.28	0.63
17:AQ:59:ILE:CG2	17:AQ:71:PHE:HB3	2.29	0.63

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
35:BF:164:ARG:HG2	35:BF:164:ARG:NH1	2.12	0.63
31:DA:479:A:H4'	31:DA:480:A:OP1	1.97	0.63
31:BA:1025:G:C4	31:BA:1135:C:H1'	2.33	0.63
33:DD:16:MET:HA	33:DD:205:VAL:HG12	1.80	0.63
47:BV:83:ARG:HH11	47:BV:83:ARG:HG3	1.63	0.63
31:DA:1173:G:H3'	31:DA:1174:A:C5'	2.28	0.63
31:BA:2392:A:H2	31:BA:2424:C:H42	1.46	0.63
31:DA:11:G:C2'	31:DA:12:U:H5'	2.27	0.63
31:DA:376:C:H42	31:DA:398:G:H1	1.45	0.63
1:CA:859:A:H2'	1:CA:860:A:O4'	1.98	0.63
20:CT:56:MET:HG2	20:CT:84:LEU:HD11	1.79	0.63
31:BA:2364:C:H2'	31:BA:2365:G:O4'	1.98	0.63
1:AA:447:G:H2'	1:AA:485:G:N2	2.14	0.63
1:AA:63:C:N4	1:AA:104:G:H1	1.94	0.63
33:DD:30:GLU:CD	33:DD:63:ARG:HE	2.02	0.63
39:DN:128:HIS:HD2	39:DN:131:GLN:HB2	1.62	0.63
31:DA:143(A):C:H2'	31:DA:143(A):C:O2	1.97	0.63
31:BA:1190:G:H5'	41:BP:35:HIS:CA	2.28	0.63
33:BD:49:ILE:O	33:BD:49:ILE:HD13	1.99	0.63
41:DP:30:THR:CG2	41:DP:31:ALA:H	2.07	0.63
35:BF:2:LYS:O	35:BF:25:PRO:HG2	1.98	0.63
45:BT:28:VAL:HG22	45:BT:46:GLU:HA	1.80	0.63
31:DA:2658:C:C5'	31:DA:2659:G:OP2	2.45	0.63
37:DH:156:ALA:H	37:DH:158:HIS:N	1.96	0.63
34:DE:116:VAL:CG2	34:DE:122:PHE:CG	2.81	0.63
46:DU:27:LEU:HD23	46:DU:27:LEU:H	1.64	0.63
23:B1:26:ARG:CG	23:B1:34:THR:HB	2.29	0.63
31:BA:2580:U:H5''	34:BE:131:ALA:H	1.63	0.63
44:BS:99:LYS:O	44:BS:101:LEU:HB2	1.97	0.63
1:CA:80:G:H1	1:CA:89:C:N4	1.96	0.63
1:AA:194:C:C2'	1:AA:195:A:H5''	2.28	0.63
31:BA:912:C:C2	31:BA:913:U:C5	2.86	0.63
31:DA:2751:G:H3'	31:DA:2752:C:H6	1.62	0.63
1:AA:624:C:H2'	1:AA:625:G:H8	1.62	0.63
7:AG:4:ARG:HB3	7:AG:5:ARG:HH11	1.63	0.63
48:DW:64:MET:O	48:DW:65:LEU:HB3	1.97	0.63
4:CD:17:VAL:HG11	4:CD:197:PRO:HB2	1.81	0.63
1:AA:1416:G:H2'	1:AA:1417:G:O4'	1.98	0.63
36:BG:13:GLU:O	36:BG:14:GLU:HB2	1.97	0.63
5:AE:33:VAL:HG11	5:AE:109:ILE:HA	1.79	0.63
31:BA:494:G:OP1	48:BW:8:ARG:NH1	2.32	0.63
1:AA:1332:A:O5'	1:AA:1332:A:H8	1.81	0.63

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
33:BD:35:LYS:CE	33:BD:65:ILE:HG22	2.29	0.63
44:DS:29:PHE:H	44:DS:89:ARG:HD2	1.59	0.63
30:D8:56:GLU:HA	30:D8:59:LYS:NZ	2.14	0.63
30:D8:13:ARG:HD2	41:DP:61:ARG:HD3	1.80	0.63
31:DA:175:G:C5'	31:DA:175:G:H8	2.11	0.63
35:DF:102:PRO:HB2	35:DF:105:VAL:HG23	1.81	0.63
31:DA:143:G:H2'	31:DA:143(A):C:C6	2.28	0.63
2:AB:141:GLU:O	2:AB:145:LEU:HB2	1.98	0.63
31:DA:1880:C:H6	31:DA:1880:C:H5'	1.63	0.63
38:DI:8:PRO:O	38:DI:9:LEU:HD23	1.99	0.63
27:B5:16:ARG:HG2	27:B5:16:ARG:NH1	2.03	0.63
31:BA:288:C:H42	31:BA:353:G:H1	1.44	0.63
42:BQ:141:GLN:HE21	51:BZ:72:ARG:N	1.97	0.63
45:BT:32:TYR:HB3	45:BT:81:PRO:HB3	1.81	0.63
31:DA:1332:G:N2	31:DA:1609:A:H2'	2.13	0.63
5:CE:32:VAL:HB	5:CE:58:ALA:HB1	1.81	0.63
34:BE:201:THR:HG22	34:BE:202:LYS:N	2.13	0.63
31:BA:867:C:C5	31:BA:868:U:C5	2.86	0.63
31:DA:2572:A:N7	34:DE:144:ARG:HD2	2.13	0.63
31:DA:598:G:H5'	41:DP:15:ARG:HD2	1.80	0.63
35:BF:183:VAL:O	35:BF:187:VAL:HG23	1.97	0.63
31:DA:2733:A:O2'	31:DA:2734:A:H5'	1.97	0.63
4:CD:141:ARG:HB3	4:CD:142:PRO:CD	2.28	0.63
34:BE:151:TYR:HD2	34:BE:154:LYS:HZ3	1.47	0.63
31:BA:2408:U:H2'	31:BA:2409:G:C8	2.34	0.63
50:DY:90:LEU:HD12	50:DY:91:GLU:HG2	1.81	0.63
6:CF:16:GLN:H	6:CF:16:GLN:CD	2.02	0.63
12:AL:90:VAL:O	12:AL:92:ASP:N	2.32	0.63
31:DA:301:G:C4	31:DA:302:C:C5	2.87	0.63
46:DU:69:CYS:HB3	46:DU:106:PHE:CZ	2.34	0.63
33:DD:101:GLU:HG3	33:DD:102:LYS:N	2.10	0.63
28:D6:16:CYS:C	28:D6:18:ARG:HE	2.01	0.63
31:DA:83:G:N2	31:DA:102:G:O2'	2.29	0.63
16:CP:6:LEU:HG	16:CP:17:TYR:CB	2.29	0.63
24:B2:45:SER:HB3	24:B2:48:HIS:HB3	1.79	0.63
49:BX:33:LYS:C	49:BX:35:THR:HG22	2.19	0.63
44:DS:33:LYS:HB3	44:DS:34:HIS:HD2	1.64	0.63
33:BD:44:ASN:HB2	33:BD:48:ARG:O	1.98	0.63
41:DP:83:VAL:CG1	41:DP:112:LEU:HD21	2.28	0.63
2:AB:167:PRO:HG2	2:AB:192:SER:HB3	1.81	0.63
18:AR:59:SER:HB3	18:AR:62:GLU:HG3	1.80	0.63
31:BA:542:C:N4	31:BA:543:C:N4	2.47	0.63

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:DA:322:A:H5'	31:DA:340:A:H1'	1.81	0.63
31:DA:2517:C:C6	31:DA:2542:A:N1	2.67	0.63
2:AB:61:LEU:CD2	2:AB:68:ILE:HD11	2.29	0.63
1:CA:1478:C:H2'	1:CA:1479:C:H6	1.64	0.63
3:CC:24:ALA:HB1	3:CC:28:GLN:O	1.99	0.63
31:DA:1518:U:H2'	31:DA:1519:G:O4'	1.99	0.63
27:D5:7:PRO:HA	31:DA:2615:U:C2	2.33	0.63
34:BE:65:GLY:C	34:BE:67:PHE:H	2.01	0.63
31:DA:1902:C:H1'	33:DD:244:ARG:HD3	1.81	0.63
46:BU:91:ASP:O	46:BU:92:ARG:O	2.17	0.63
47:BV:43:GLU:CA	47:BV:48:GLY:HA2	2.28	0.63
30:D8:51:ALA:N	30:D8:53:PRO:HD2	2.14	0.63
31:DA:2807:G:C2	31:DA:2808:U:H1'	2.34	0.63
1:CA:373:A:H2'	1:CA:374:A:H8	1.63	0.63
24:B2:45:SER:HB3	24:B2:48:HIS:CB	2.27	0.63
49:BX:83:VAL:O	49:BX:84:ALA:CB	2.46	0.63
23:B1:89:GLU:OE2	23:B1:90:ILE:N	2.27	0.63
31:DA:2405:G:O2'	31:DA:2406:U:P	2.56	0.63
2:CB:141:GLU:O	2:CB:145:LEU:HB2	1.99	0.63
31:BA:1021:A:C8	31:BA:1021:A:H3'	2.32	0.63
45:DT:24:PRO:HA	45:DT:49:VAL:HG22	1.80	0.63
37:BH:70:THR:O	37:BH:73:ALA:N	2.32	0.63
50:DY:8:LYS:NZ	50:DY:74:PRO:HD3	2.13	0.63
45:BT:35:LYS:O	45:BT:37:GLY:N	2.30	0.63
31:DA:271(E):U:H2'	31:DA:271(F):C:C6	2.34	0.63
48:BW:18:ARG:HG2	48:BW:18:ARG:HH11	1.64	0.63
34:DE:52:LEU:HB3	34:DE:75:VAL:HG23	1.80	0.63
24:D2:16:LEU:N	24:D2:18:PRO:HD2	2.13	0.63
51:BZ:63:ASP:O	51:BZ:65:GLN:N	2.31	0.63
45:DT:109:GLU:O	45:DT:112:ARG:HG3	1.99	0.63
31:BA:184:C:H2'	31:BA:185:U:H6	1.63	0.63
31:DA:1163:G:O2'	31:DA:1164:G:H5'	1.99	0.63
7:CG:62:PHE:HA	7:CG:124:LEU:HD22	1.80	0.63
27:D5:29:THR:HG21	31:DA:2815:C:H5'	1.81	0.63
11:CK:58:PRO:HA	11:CK:90:GLY:HA2	1.80	0.63
38:BI:131:LYS:HG2	38:BI:132:PRO:HA	1.81	0.63
38:DI:92:VAL:HG13	38:DI:120:ILE:HB	1.80	0.63
1:AA:262:A:C6	1:AA:263:A:C6	2.87	0.63
30:B8:35:GLN:HA	31:BA:2420:C:OP2	1.98	0.63
46:BU:104:GLN:CD	46:BU:104:GLN:H	2.01	0.63
31:BA:1493:C:H4'	31:BA:1494:A:OP1	1.99	0.63
31:DA:251:A:C5'	41:DP:51:PHE:HZ	2.11	0.63

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
50:DY:81:LYS:HG2	50:DY:96:ILE:HG23	1.81	0.63
1:CA:1277:C:H2'	1:CA:1278:U:H5'	1.80	0.63
2:AB:101:MET:HA	2:AB:108:ILE:HG13	1.81	0.63
2:AB:204:ASN:HD22	2:AB:206:ASP:H	1.46	0.63
31:BA:1652:A:C2'	31:BA:1653:G:H5'	2.29	0.63
41:DP:26:GLY:HA2	41:DP:30:THR:CG2	2.28	0.63
35:BF:3:GLU:O	35:BF:24:LEU:HG	1.99	0.63
31:BA:1528(A):A:C5	31:BA:1529:G:H8	2.17	0.63
51:DZ:39:VAL:CG2	51:DZ:44:PHE:HB2	2.29	0.63
37:BH:40:GLU:O	37:BH:41:MET:HB2	1.99	0.63
31:DA:1485:G:H5'	31:DA:1486:A:OP2	1.99	0.63
23:B1:9:GLY:O	23:B1:10:LYS:HB3	1.98	0.63
31:BA:1771:C:H1'	31:BA:1786:A:C8	2.33	0.63
23:D1:9:GLY:O	23:D1:10:LYS:HB3	1.99	0.63
1:AA:617:G:N1	1:AA:618:C:C4	2.67	0.63
31:DA:2713:A:H3'	31:DA:2714:G:H5'	1.80	0.63
45:BT:109:GLU:O	45:BT:112:ARG:HG3	1.99	0.63
2:CB:22:LYS:NZ	2:CB:40:HIS:HE1	1.97	0.63
2:AB:22:LYS:NZ	2:AB:40:HIS:HE1	1.96	0.63
37:DH:86:GLU:CB	37:DH:132:ARG:HB3	2.27	0.63
1:CA:617:G:C6	1:CA:618:C:C5	2.86	0.63
31:BA:879:G:H1	31:BA:898:C:H42	1.46	0.63
47:DV:2:PHE:CB	47:DV:42:GLY:HA2	2.27	0.63
1:AA:814:A:N7	1:AA:816:A:C4	2.67	0.63
1:CA:1337:G:H5''	1:CA:1338:G:OP1	1.99	0.63
31:BA:1488:G:C6	31:BA:1489:U:N3	2.66	0.63
1:AA:590:C:H2'	1:AA:591:U:H6	1.63	0.63
3:CC:58:GLU:H	3:CC:65:ALA:HB3	1.64	0.63
11:AK:121:PRO:HD2	11:AK:126:ARG:HG3	1.80	0.63
42:BQ:17:LEU:HD23	42:BQ:17:LEU:N	2.12	0.63
3:CC:100:ALA:O	3:CC:101:LEU:HB2	1.98	0.63
33:BD:35:LYS:CG	33:BD:64:ILE:H	2.10	0.63
33:DD:35:LYS:NZ	33:DD:64:ILE:O	2.28	0.63
28:D6:39:TYR:O	28:D6:49:HIS:CE1	2.51	0.63
16:CP:72:ARG:HH21	16:CP:73:LEU:CD2	2.08	0.63
49:BX:72:LYS:CG	49:BX:74:PRO:HD3	2.27	0.63
36:BG:64:THR:HG23	36:BG:65:GLY:N	2.14	0.63
32:DB:75:G:H5'	32:DB:75:G:C8	2.26	0.63
23:B1:19:GLN:HE21	31:BA:379:G:N2	1.93	0.63
31:BA:2733:A:O2'	31:BA:2734:A:H5'	1.99	0.63
31:DA:2661:G:C8	31:DA:2662:A:C2	2.87	0.63
24:D2:31:GLU:HG2	24:D2:37:PHE:HD1	1.63	0.63

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
24:D2:47:ASN:ND2	24:D2:48:HIS:H	1.97	0.63
31:BA:479:A:H4'	31:BA:480:A:OP1	1.98	0.63
31:DA:1484:G:N2	31:DA:1505:C:C5	2.63	0.63
30:B8:54:GLU:O	30:B8:58:ILE:HG12	1.96	0.63
23:B1:10:LYS:O	23:B1:13:ILE:CG2	2.47	0.63
43:DR:11:ASN:CG	43:DR:12:ARG:H	2.02	0.63
6:CF:5:GLU:HG3	6:CF:93:SER:OG	1.99	0.63
1:AA:635:G:C5	1:AA:636:U:C5	2.86	0.63
33:DD:127:VAL:HA	33:DD:193:VAL:HG13	1.79	0.63
31:BA:1722:A:N6	31:BA:1741:A:C2	2.66	0.63
31:DA:1204:A:N1	31:DA:1241:A:C2	2.66	0.63
1:AA:343:U:N3	1:AA:347:G:C6	2.67	0.63
38:DI:56:LYS:HA	38:DI:59:ALA:HB3	1.81	0.63
33:BD:232:PRO:HG2	33:BD:248:SER:O	1.98	0.63
31:BA:2572:A:C8	34:BE:144:ARG:HD2	2.34	0.63
37:BH:17:VAL:HG21	37:BH:50:VAL:HG21	1.81	0.63
35:BF:124:LEU:HD12	35:BF:125:LEU:N	2.14	0.63
31:BA:830:G:H4'	31:BA:831:G:OP2	1.99	0.63
31:BA:2492:U:H2'	31:BA:2493:U:H6	1.63	0.63
20:AT:56:MET:HG2	20:AT:84:LEU:HD11	1.80	0.63
1:CA:745:C:H2'	1:CA:746:A:C8	2.33	0.63
2:CB:163:PHE:HA	2:CB:185:ILE:HG12	1.81	0.62
33:BD:101:GLU:HG3	33:BD:102:LYS:N	2.12	0.62
31:DA:2292:C:C2'	31:DA:2293:C:H5'	2.28	0.62
47:DV:72:VAL:CA	47:DV:88:ARG:HH22	2.10	0.62
41:DP:50:ARG:NH2	41:DP:50:ARG:HG2	2.09	0.62
31:DA:2415:G:O3'	41:DP:66:GLY:HA3	1.98	0.62
31:DA:607:U:OP1	35:DF:102:PRO:HA	1.99	0.62
2:CB:187:LEU:HA	2:CB:201:ILE:HB	1.81	0.62
24:B2:30:ARG:NH2	49:BX:11:PRO:HG3	2.13	0.62
24:B2:44:LEU:O	24:B2:44:LEU:HD12	1.99	0.62
33:BD:158:ALA:O	33:BD:159:ALA:HB2	1.99	0.62
36:BG:139:LEU:HA	36:BG:144:ILE:HG23	1.80	0.62
31:DA:1786:A:C2	31:DA:2606:C:H1'	2.33	0.62
31:BA:1190:G:H5'	41:BP:35:HIS:HB3	1.79	0.62
1:CA:922:G:O2'	1:CA:1398:A:N1	2.30	0.62
42:DQ:52:VAL:HA	42:DQ:55:VAL:CG1	2.27	0.62
47:DV:80:GLN:OE1	47:DV:80:GLN:O	2.16	0.62
35:BF:3:GLU:HA	35:BF:24:LEU:HB3	1.80	0.62
36:DG:102:PHE:HE2	36:DG:141:PHE:CE1	2.17	0.62
1:AA:409:G:C2'	1:AA:410:G:H5'	2.28	0.62
6:CF:23:LYS:O	6:CF:27:GLN:HG2	1.98	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
42:DQ:141:GLN:HG2	51:DZ:71:VAL:O	1.98	0.62
45:BT:33:LYS:HZ2	45:BT:33:LYS:HA	1.64	0.62
1:AA:877:C:H5'	8:AH:88:LYS:CD	2.29	0.62
31:DA:1481:U:H5'	31:DA:1482:G:OP2	1.98	0.62
31:DA:1332:G:N2	31:DA:1610:A:C8	2.67	0.62
34:DE:51:PHE:CE1	34:DE:52:LEU:HD13	2.33	0.62
51:DZ:8:TYR:HB2	51:DZ:38:TYR:CZ	2.34	0.62
31:DA:1794:U:H2'	31:DA:1795:C:C6	2.33	0.62
1:AA:1128:C:H5'	9:AI:16:ARG:NH1	2.14	0.62
1:AA:32:A:H2'	1:AA:33:A:C8	2.34	0.62
45:DT:106:SER:C	45:DT:107:ASP:OD1	2.37	0.62
38:BI:56:LYS:HZ2	38:BI:57:ARG:N	1.97	0.62
1:AA:785:G:C2'	1:AA:786:G:H5'	2.29	0.62
1:AA:830:G:H2'	1:AA:831:U:H6	1.62	0.62
12:CL:90:VAL:O	12:CL:92:ASP:N	2.32	0.62
5:CE:144:THR:O	5:CE:148:VAL:HG23	1.99	0.62
31:DA:2853:C:H2'	31:DA:2854:G:H8	1.64	0.62
31:BA:1515:G:H2'	31:BA:1516:C:C6	2.34	0.62
31:DA:1406:U:H2'	31:DA:1407:C:C6	2.34	0.62
47:DV:4:ILE:O	47:DV:39:LEU:HB3	1.99	0.62
31:BA:1407:C:O2	31:BA:1407:C:H2'	1.98	0.62
44:BS:28:VAL:HG12	44:BS:29:PHE:N	2.14	0.62
15:CO:71:GLN:HG3	15:CO:78:TYR:CD2	2.35	0.62
31:DA:2801(A):A:H4'	31:DA:2802:G:H2'	1.81	0.62
43:DR:24:GLN:HE22	43:DR:36:THR:HG21	1.63	0.62
50:DY:8:LYS:HD3	50:DY:28:LYS:NZ	2.14	0.62
31:DA:2360:A:O2'	31:DA:2361:A:C5'	2.47	0.62
4:CD:162:LEU:O	4:CD:165:MET:HB2	2.00	0.62
10:CJ:33:GLN:HB2	10:CJ:75:ILE:HD13	1.80	0.62
1:AA:1096:C:H2'	1:AA:1097:C:H6	1.63	0.62
4:AD:119:GLN:O	4:AD:123:HIS:CD2	2.52	0.62
1:AA:1085:U:C6	1:AA:1094:G:N1	2.67	0.62
24:B2:14:ARG:CZ	24:B2:57:ILE:HG22	2.29	0.62
31:BA:708:C:O2	31:BA:708:C:H2'	1.99	0.62
31:DA:1378:A:H4'	31:DA:1379:A:OP1	1.98	0.62
18:AR:66:LEU:HD11	18:AR:70:ILE:HD11	1.80	0.62
31:DA:879:G:H1	31:DA:898:C:H42	1.46	0.62
1:CA:635:G:C5	1:CA:636:U:C5	2.87	0.62
1:CA:785:G:C2'	1:CA:786:G:H5'	2.28	0.62
31:DA:272(J):C:H42	31:DA:363(A):A:N6	1.96	0.62
20:AT:86:ARG:O	20:AT:90:GLN:HG3	1.99	0.62
5:CE:18:ARG:NH2	5:CE:25:ARG:HG2	2.14	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:BA:1165:U:H2'	31:BA:1166:C:C6	2.35	0.62
27:B5:36:CYS:C	27:B5:38:ALA:H	2.03	0.62
47:BV:52:VAL:O	47:BV:53:GLU:CB	2.46	0.62
1:AA:60:A:H4'	1:AA:61:G:O5'	1.99	0.62
33:DD:71:ASP:HB3	33:DD:103:ARG:HH22	1.63	0.62
39:BN:40:PRO:O	46:BU:64:ARG:NH2	2.31	0.62
42:BQ:7:MET:O	42:BQ:10:ARG:NH2	2.32	0.62
28:D6:13:CYS:HB3	28:D6:49:HIS:HB3	1.80	0.62
41:DP:62:LEU:N	41:DP:62:LEU:HD13	2.11	0.62
51:DZ:104:PHE:HB3	51:DZ:141:VAL:HG11	1.81	0.62
51:DZ:108:PRO:HA	51:DZ:142:SER:HA	1.81	0.62
51:BZ:108:PRO:HA	51:BZ:142:SER:HA	1.81	0.62
30:B8:23:VAL:HG12	30:B8:46:ARG:HH11	1.64	0.62
31:BA:2494:G:H2'	31:BA:2495:G:O5'	1.98	0.62
32:BB:7:G:C3'	32:BB:8:U:H5''	2.28	0.62
23:D1:89:GLU:OE2	23:D1:90:ILE:N	2.29	0.62
31:DA:2405:G:HO2'	31:DA:2406:U:P	2.21	0.62
5:CE:98:THR:HG22	5:CE:99:GLY:N	2.14	0.62
37:BH:43:VAL:O	37:BH:43:VAL:CG2	2.44	0.62
33:DD:158:ALA:O	33:DD:159:ALA:CB	2.47	0.62
31:BA:864:G:C6	31:BA:865:C:N4	2.68	0.62
33:BD:255:LYS:H	33:BD:255:LYS:HZ1	1.45	0.62
1:AA:1057:G:H5''	3:AC:154:SER:HB2	1.80	0.62
1:AA:370:C:H2'	1:AA:371:G:H8	1.61	0.62
36:BG:16:ARG:HH11	36:BG:31:VAL:HG11	1.64	0.62
8:AH:6:ILE:HB	8:AH:85:ARG:NH1	2.14	0.62
31:DA:1515:G:H2'	31:DA:1516:C:C6	2.34	0.62
7:CG:75:VAL:HG21	7:CG:144:MET:HB3	1.82	0.62
4:AD:60:GLU:HG2	4:AD:202:LEU:HB2	1.82	0.62
31:DA:2894:G:H2'	31:DA:2894:G:N3	2.14	0.62
31:BA:443:A:N7	35:BF:45:ARG:HG2	2.14	0.62
33:DD:58:HIS:CD2	33:DD:59:LYS:O	2.52	0.62
30:D8:54:GLU:O	30:D8:58:ILE:HG12	2.00	0.62
31:DA:2888:C:H2'	31:DA:2889:C:H5''	1.81	0.62
30:D8:39:LYS:HE2	30:D8:42:ARG:NH1	2.14	0.62
1:AA:1442(A):G:N2	45:BT:119:LYS:HA	2.14	0.62
41:BP:50:ARG:NH2	41:BP:50:ARG:HG2	2.08	0.62
32:BB:21:G:O2'	32:BB:22:U:O5'	2.18	0.62
41:BP:17:LYS:C	41:BP:19:VAL:H	2.01	0.62
31:BA:1820:U:C2	33:BD:202:LYS:HB3	2.35	0.62
44:BS:89:ARG:HE	44:BS:90:GLY:H	1.46	0.62
43:BR:97:VAL:HG22	43:BR:114:VAL:HG22	1.81	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
29:D7:5:TRP:NE1	29:D7:7:PRO:HG3	2.14	0.62
45:DT:30:VAL:HG23	45:DT:30:VAL:O	1.98	0.62
50:BY:17:SER:CA	50:BY:71:LYS:HD2	2.24	0.62
24:D2:45:SER:HB3	24:D2:48:HIS:HB3	1.81	0.62
39:BN:128:HIS:HE1	39:BN:134:ARG:HD2	1.64	0.62
31:BA:1485:G:H5'	31:BA:1486:A:OP2	1.99	0.62
11:CK:85:ARG:HA	11:CK:112:THR:OG1	1.98	0.62
17:CQ:59:ILE:CG2	17:CQ:71:PHE:HB3	2.28	0.62
1:AA:193:C:O2'	1:AA:194:C:H5'	1.98	0.62
31:DA:693:C:O2'	31:DA:694:U:H5'	1.99	0.62
13:CM:68:GLY:CA	13:CM:71:ARG:HB3	2.28	0.62
9:CI:114:TYR:HD2	9:CI:114:TYR:N	1.97	0.62
9:AI:114:TYR:N	9:AI:114:TYR:HD2	1.98	0.62
41:DP:90:ARG:HB3	41:DP:91:PHE:CD1	2.35	0.62
31:DA:2281:C:O2'	31:DA:2282:G:H5'	1.99	0.62
12:CL:31:PRO:HB2	12:CL:32:PHE:CD2	2.34	0.62
31:DA:49:A:H4'	31:DA:50:U:H5'	1.82	0.62
4:AD:141:ARG:HB3	4:AD:142:PRO:CD	2.30	0.62
30:B8:34:TRP:HD1	31:BA:2391:G:OP1	1.82	0.62
46:BU:83:LEU:C	46:BU:88:ILE:HD11	2.19	0.62
1:AA:67:C:H2'	1:AA:68:G:H8	1.62	0.62
49:DX:33:LYS:CA	49:DX:35:THR:HG22	2.30	0.62
31:BA:195:A:C8	31:BA:197:A:OP1	2.53	0.62
47:DV:1:MET:HE1	47:DV:44:LYS:H	1.65	0.62
1:CA:450:G:H5''	16:CP:41:PRO:O	2.00	0.62
31:BA:1652:A:H8	31:BA:1652:A:C5'	2.13	0.62
31:DA:1190:G:H5'	41:DP:35:HIS:HA	1.80	0.62
31:DA:637:A:H4'	31:DA:638:G:O5'	1.99	0.62
36:BG:47:LYS:HD3	36:BG:81:LYS:CD	2.29	0.62
24:B2:16:LEU:N	24:B2:18:PRO:HD2	2.14	0.62
39:BN:56:ASN:H	39:BN:125:GLY:H	1.45	0.62
31:DA:912:C:C2	31:DA:913:U:C5	2.88	0.62
23:D1:26:ARG:CG	23:D1:34:THR:HB	2.30	0.62
31:BA:548:A:O2'	31:BA:549:G:OP1	2.16	0.62
31:BA:1721:G:C2	31:BA:1739:U:OP2	2.52	0.62
1:AA:80:G:H1	1:AA:89:C:N4	1.97	0.62
31:DA:2873:A:C2	43:DR:6:SER:HB2	2.35	0.62
6:CF:91:VAL:HG11	18:CR:72:ARG:HH12	1.64	0.62
31:DA:1372:U:H2'	31:DA:1373:A:O4'	1.99	0.62
38:BI:37:VAL:HG12	38:BI:38:LEU:N	2.13	0.62
18:CR:66:LEU:HD11	18:CR:70:ILE:HD11	1.80	0.62
1:AA:745:C:H2'	1:AA:746:A:C8	2.35	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:CA:447:G:H2'	1:CA:485:G:N2	2.15	0.62
33:DD:20:ASP:OD2	33:DD:22:SER:HB3	1.99	0.62
12:AL:91:LYS:O	12:AL:91:LYS:HG3	1.99	0.62
40:BO:18:LYS:HB2	40:BO:45:GLU:HG2	1.81	0.62
32:BB:21:G:O2'	32:BB:22:U:H6	1.82	0.62
47:DV:52:VAL:O	47:DV:53:GLU:CB	2.48	0.62
31:BA:69:C:O2'	31:BA:70:G:H5'	1.99	0.62
31:BA:71:A:H2	49:BX:31:HIS:CE1	2.17	0.62
33:BD:49:ILE:C	33:BD:49:ILE:HD13	2.20	0.62
31:DA:1021:A:C8	31:DA:1021:A:H3'	2.35	0.62
12:CL:47:LYS:CB	12:CL:48:PRO:HD3	2.25	0.62
31:DA:2801(A):A:C4'	31:DA:2802:G:H2'	2.29	0.62
1:AA:509:A:O2'	1:AA:510:A:O5'	2.18	0.62
50:DY:37:VAL:HG22	50:DY:67:LEU:O	1.99	0.62
4:CD:160:GLN:O	4:CD:163:GLU:HB3	1.99	0.62
31:BA:1478:G:C2'	31:BA:1479:G:H5'	2.29	0.62
31:DA:2562:U:H1'	40:DO:23:ARG:NH1	2.14	0.62
37:BH:86:GLU:CB	37:BH:132:ARG:HB3	2.29	0.62
31:DA:2580:U:H5"	34:DE:131:ALA:H	1.64	0.62
38:DI:75:LEU:HD21	38:DI:105:HIS:ND1	2.15	0.62
10:AJ:63:PHE:HB3	14:AN:57:ARG:O	1.99	0.62
8:AH:6:ILE:N	8:AH:6:ILE:HD12	2.14	0.62
7:AG:150:ALA:HB2	11:AK:50:TYR:CZ	2.35	0.62
1:AA:243:A:H4'	1:AA:244:U:O5'	1.99	0.62
1:CA:165:C:H2'	1:CA:166:G:C8	2.35	0.62
20:CT:18:GLN:O	20:CT:22:ARG:HG3	2.00	0.62
31:DA:2567:G:H2'	31:DA:2568:C:C6	2.35	0.62
18:CR:31:LEU:HD23	18:CR:31:LEU:H	1.63	0.62
43:DR:101:ALA:O	43:DR:102:GLU:HB2	1.99	0.62
19:AS:12:ASP:HB2	19:AS:15:LEU:HD23	1.80	0.62
31:BA:2092:U:H4'	31:BA:2093:G:O5'	2.00	0.62
30:B8:56:GLU:HA	30:B8:59:LYS:NZ	2.14	0.62
33:BD:143:HIS:CD2	33:BD:144:ALA:HB2	2.35	0.62
36:BG:60:LEU:O	36:BG:64:THR:HG22	1.99	0.62
23:D1:87:PRO:CD	23:D1:88:LYS:N	2.63	0.62
31:DA:588:U:H6	31:DA:588:U:OP2	1.83	0.62
31:BA:2801(A):A:C4'	31:BA:2802:G:H2'	2.30	0.62
1:CA:509:A:O2'	1:CA:510:A:O5'	2.17	0.62
41:DP:105:LEU:HD12	41:DP:105:LEU:N	2.14	0.62
39:DN:67:LEU:C	39:DN:69:GLN:H	2.01	0.62
45:BT:100:TYR:HD2	45:BT:103:ARG:HH21	1.48	0.62
39:BN:19:GLU:HG3	39:BN:20:GLY:N	2.14	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
43:DR:10:LEU:HB3	43:DR:17:ARG:CZ	2.30	0.62
38:BI:133:HIS:ND1	38:BI:134:PRO:HD2	2.15	0.62
37:DH:40:GLU:O	37:DH:41:MET:HB2	1.99	0.62
6:AF:69:GLU:HG2	6:AF:70:ASP:H	1.65	0.62
31:DA:1963:U:H4'	31:DA:1964:G:OP1	1.99	0.62
1:AA:619:U:H2'	4:AD:135:LEU:HD21	1.82	0.62
38:BI:75:LEU:HD21	38:BI:105:HIS:ND1	2.15	0.62
1:CA:945:G:H2'	1:CA:945:G:N3	2.14	0.62
51:DZ:63:ASP:O	51:DZ:65:GLN:N	2.33	0.62
31:DA:1169:G:H1	31:DA:1180:C:N4	1.98	0.62
31:BA:2517:C:C6	31:BA:2542:A:N1	2.68	0.62
33:BD:16:MET:HA	33:BD:205:VAL:HG12	1.81	0.62
8:CH:6:ILE:HB	8:CH:85:ARG:NH1	2.14	0.62
5:AE:78:HIS:CE1	5:AE:142:LEU:HD23	2.35	0.62
48:BW:64:MET:O	48:BW:65:LEU:CB	2.47	0.62
39:BN:96:GLU:O	39:BN:100:GLU:HG3	2.00	0.62
34:DE:65:GLY:C	34:DE:67:PHE:H	2.02	0.62
41:DP:107:LYS:C	41:DP:109:GLY:H	2.02	0.62
31:BA:414:C:O2'	31:BA:415:A:H5'	1.99	0.62
47:BV:51:VAL:CG1	47:BV:52:VAL:H	2.12	0.62
1:AA:389:A:H2'	1:AA:390:C:C5'	2.30	0.62
44:DS:15:ARG:HB3	44:DS:18:ILE:HB	1.81	0.62
30:D8:12:LYS:O	41:DP:65:ARG:HB3	1.99	0.62
28:D6:34:LEU:HD22	28:D6:50:ARG:NH1	2.15	0.62
30:B8:12:LYS:O	41:BP:65:ARG:HB3	2.00	0.62
31:BA:197:A:C8	31:BA:197:A:H5'	2.33	0.62
16:CP:39:TYR:CD1	16:CP:39:TYR:C	2.70	0.62
24:B2:52:ASP:O	24:B2:56:GLN:NE2	2.33	0.62
49:BX:57:LEU:HD12	49:BX:57:LEU:N	2.15	0.62
24:B2:26:ARG:HG2	49:BX:5:TYR:O	1.98	0.62
2:AB:54:THR:HG21	2:AB:201:ILE:HD11	1.82	0.62
31:BA:2308:G:H2'	31:BA:2309:A:C8	2.34	0.62
31:DA:1784:A:H4'	31:DA:1785:A:C5'	2.30	0.62
27:D5:51:TYR:CD2	27:D5:52:TYR:CZ	2.88	0.62
27:D5:52:TYR:H	27:D5:52:TYR:HD2	1.46	0.62
1:CA:509:A:O2'	1:CA:510:A:P	2.57	0.62
36:DG:47:LYS:HD3	36:DG:81:LYS:CD	2.29	0.62
4:AD:160:GLN:O	4:AD:163:GLU:HB3	2.00	0.62
43:BR:12:ARG:HG3	43:BR:12:ARG:HH11	1.63	0.62
43:BR:116:LEU:O	43:BR:117:VAL:CB	2.48	0.62
31:DA:1831:G:H2'	31:DA:1832:C:H6	1.63	0.62
35:DF:65:TRP:O	35:DF:67:GLN:N	2.33	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:CB:22:LYS:NZ	2:CB:22:LYS:HA	2.14	0.62
49:BX:40:LYS:C	49:BX:42:ALA:H	2.03	0.62
33:BD:70:TRP:CH2	33:BD:150:LYS:HA	2.35	0.62
43:DR:55:ALA:HB2	43:DR:79:LEU:CD1	2.29	0.62
31:BA:1430:C:H2'	31:BA:1431:U:H6	1.65	0.62
1:CA:659:U:O2'	1:CA:660:G:H5'	1.98	0.62
1:AA:829:G:O2'	1:AA:830:G:H5'	2.00	0.62
1:AA:646:U:H2'	1:AA:647:C:C6	2.35	0.62
47:BV:4:ILE:O	47:BV:39:LEU:HB3	2.00	0.62
8:AH:64:LYS:O	8:AH:79:VAL:HB	2.00	0.62
31:DA:925:C:H2'	31:DA:926:A:H5''	1.81	0.62
44:DS:24:LEU:HB3	44:DS:85:VAL:HG13	1.80	0.62
41:DP:16:ARG:CD	41:DP:18:ARG:H	1.99	0.62
31:DA:2292:C:HO2'	31:DA:2293:C:H5'	1.64	0.62
32:DB:7:G:C3'	32:DB:8:U:H5''	2.30	0.62
44:DS:93:LYS:HE3	44:DS:94:TYR:N	2.14	0.62
39:DN:134:ARG:HG3	39:DN:134:ARG:O	1.99	0.62
2:CB:84:GLU:OE1	2:CB:219:VAL:HB	1.99	0.62
47:DV:46:VAL:O	47:DV:47:VAL:HB	1.98	0.62
24:B2:54:LYS:N	24:B2:56:GLN:NE2	2.48	0.62
49:BX:21:PHE:N	49:BX:21:PHE:HD1	1.98	0.62
33:DD:173:VAL:HG23	33:DD:174:ILE:N	2.14	0.62
44:BS:35:ILE:H	44:BS:53:SER:HB2	1.65	0.62
34:BE:132:HIS:CD2	34:BE:135:HIS:HE1	2.14	0.62
23:D1:19:GLN:CD	23:D1:44:PRO:HG3	2.20	0.62
45:DT:100:TYR:HD2	45:DT:103:ARG:HH21	1.45	0.62
45:BT:64:ARG:HB2	45:BT:73:GLU:HG2	1.82	0.62
1:AA:503:C:H2'	1:AA:504:C:H6	1.64	0.62
31:DA:271(L):U:H5''	31:DA:271(M):G:C4	2.34	0.62
1:CA:59:A:H3'	1:CA:331:G:H22	1.65	0.62
18:CR:52:PRO:O	18:CR:56:THR:HG23	2.00	0.62
34:DE:117:MET:CG	34:DE:117:MET:O	2.48	0.62
32:BB:66:A:C5	32:BB:109:C:C5	2.88	0.62
37:DH:30:LYS:HZ3	37:DH:81:GLU:HA	1.64	0.62
10:AJ:24:VAL:HG21	10:AJ:37:PRO:HG3	1.81	0.62
31:BA:1171:G:OP2	31:BA:1171:G:H8	1.83	0.62
3:CC:113:ALA:HB3	3:CC:114:PRO:HD3	1.82	0.62
31:DA:2599:G:OP2	33:DD:236:GLY:N	2.33	0.62
29:B7:1:MET:O	29:B7:3:ARG:HG2	1.99	0.62
7:AG:97:GLN:O	7:AG:101:LEU:HG	1.98	0.62
31:DA:2387:U:H5''	31:DA:2388:A:OP2	1.99	0.62
3:CC:34:LEU:HD23	3:CC:34:LEU:O	1.99	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:B0:68:GLU:CG	22:B0:80:HIS:HB2	2.29	0.62
31:BA:301:G:C4	31:BA:302:C:C5	2.86	0.62
31:BA:1265:A:OP1	31:BA:1265:A:H8	1.82	0.62
1:CA:113:G:H2'	1:CA:114:U:C6	2.35	0.62
14:CN:23:ARG:NH1	14:CN:30:ALA:HB2	2.15	0.62
1:AA:1287:A:C2	1:AA:1353:G:H1'	2.34	0.62
41:DP:17:LYS:C	41:DP:19:VAL:H	2.03	0.62
46:BU:64:ARG:CA	46:BU:64:ARG:CZ	2.71	0.62
32:BB:21:G:O2'	32:BB:22:U:P	2.58	0.62
42:BQ:81:VAL:C	42:BQ:82:ARG:CG	2.66	0.62
24:B2:26:ARG:CD	24:B2:29:LYS:HE2	2.29	0.62
49:BX:12:VAL:HG22	49:BX:29:TRP:CE2	2.35	0.62
26:B4:1:MET:H3	36:BG:67:LYS:HZ2	1.46	0.62
31:BA:2801(A):A:C4'	31:BA:2802:G:H5'	2.29	0.62
1:CA:343:U:N3	1:CA:347:G:C6	2.68	0.62
31:BA:92:A:H2'	31:BA:93:G:H8	1.64	0.62
48:BW:4:LYS:CB	48:BW:106:ILE:HG22	2.29	0.62
31:BA:860:U:C5	31:BA:917:A:N7	2.65	0.62
1:AA:1237:C:H42	1:AA:1337:G:H1	1.47	0.62
1:CA:627:G:H2'	1:CA:628:G:H8	1.64	0.62
1:AA:991:U:O2	1:AA:993:G:H8	1.82	0.62
1:AA:750:G:N3	15:AO:23:GLY:HA3	2.15	0.62
31:BA:536:A:H2'	31:BA:537:C:C6	2.34	0.62
31:BA:443:A:H1'	31:BA:1201:C:O4'	2.00	0.62
31:DA:830:G:H4'	31:DA:831:G:OP2	1.99	0.62
47:BV:38:LEU:HG	47:BV:39:LEU:N	2.14	0.62
1:CA:1287:A:C2	1:CA:1353:G:H1'	2.34	0.62
31:DA:2756:U:H4'	31:DA:2757:A:OP1	1.99	0.62
31:DA:1635:G:H2'	31:DA:1636:C:C6	2.34	0.62
3:AC:100:ALA:O	3:AC:101:LEU:HB2	1.99	0.62
29:D7:1:MET:O	29:D7:3:ARG:HG2	2.00	0.62
31:BA:958:U:O2'	31:BA:959:A:P	2.58	0.62
1:CA:199:G:O2'	1:CA:200:G:H5'	1.99	0.62
33:BD:58:HIS:HD2	33:BD:59:LYS:O	1.83	0.61
33:DD:24:ILE:O	33:DD:24:ILE:CG2	2.48	0.61
31:BA:2394:C:P	41:BP:63:PRO:HD2	2.39	0.61
46:DU:92:ARG:O	46:DU:93:LYS:C	2.38	0.61
33:DD:267:SER:C	33:DD:269:PHE:N	2.48	0.61
31:DA:1771:C:H1'	31:DA:1786:A:C8	2.35	0.61
31:DA:2884:U:H2'	31:DA:2885:C:H5'	1.81	0.61
31:DA:1654:A:OP1	43:DR:3:HIS:CB	2.47	0.61
44:BS:35:ILE:HG23	44:BS:35:ILE:O	2.00	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
42:BQ:22:LYS:HE2	42:BQ:22:LYS:CA	2.21	0.61
41:BP:108:LYS:N	41:BP:108:LYS:HD2	2.15	0.61
40:BO:115:VAL:HG13	40:BO:121:VAL:HG21	1.82	0.61
39:BN:78:TYR:CD1	39:BN:79:PRO:HD3	2.34	0.61
39:DN:78:TYR:CD1	39:DN:79:PRO:HD3	2.35	0.61
31:BA:2713:A:H3'	31:BA:2714:G:H5'	1.82	0.61
28:B6:34:LEU:HA	28:B6:51:GLU:OE1	1.99	0.61
23:D1:37:ILE:HD11	31:DA:2079:U:H4'	1.82	0.61
31:DA:1625:C:H2'	31:DA:1626:G:H5'	1.80	0.61
51:BZ:28:MET:CE	51:BZ:59:LEU:HD13	2.30	0.61
35:DF:80:ALA:O	35:DF:83:PHE:HB2	1.99	0.61
1:CA:194:C:C2'	1:CA:195:A:H5''	2.29	0.61
1:CA:617:G:N1	1:CA:618:C:C4	2.68	0.61
17:CQ:5:VAL:HG12	17:CQ:6:LEU:N	2.15	0.61
23:B1:37:ILE:HG21	31:BA:2080:G:OP1	2.00	0.61
6:CF:99:ALA:HB1	18:CR:23:LYS:HZ2	1.64	0.61
35:DF:57:VAL:CG1	35:DF:59:TYR:HD1	2.13	0.61
31:BA:836:G:C5	31:BA:837:C:C4	2.88	0.61
31:DA:2473:U:N3	31:DA:2474:C:C6	2.68	0.61
31:DA:1820:U:C2	33:DD:202:LYS:HB3	2.35	0.61
15:AO:25:THR:HG21	15:AO:70:LEU:HB2	1.81	0.61
11:AK:85:ARG:HA	11:AK:112:THR:OG1	1.99	0.61
42:DQ:109:VAL:HG12	42:DQ:110:THR:N	2.15	0.61
31:DA:1353:A:H5''	33:DD:38:LYS:HZ1	1.64	0.61
31:BA:2825:C:H2'	31:BA:2826:A:H5'	1.82	0.61
37:DH:98:LEU:HB2	37:DH:125:VAL:HG21	1.80	0.61
1:AA:189(C):C:C2'	1:AA:189(D):C:H5'	2.30	0.61
31:BA:1970:A:H5'	31:BA:1972:A:H1'	1.80	0.61
33:BD:35:LYS:NZ	33:BD:104:TYR:CB	2.56	0.61
50:DY:96:ILE:CG2	50:DY:99:CYS:HB3	2.30	0.61
47:BV:25:LEU:HG	47:BV:94:LEU:HD13	1.81	0.61
41:BP:27:HIS:C	41:BP:27:HIS:CD2	2.73	0.61
42:BQ:20:ALA:HB2	42:BQ:99:PRO:HD2	1.81	0.61
31:BA:1528:A:O2'	31:BA:1528(A):A:O5'	2.18	0.61
50:BY:68:HIS:HB3	50:BY:71:LYS:NZ	2.13	0.61
43:BR:10:LEU:HD22	43:BR:17:ARG:HD2	1.81	0.61
24:D2:47:ASN:C	24:D2:49:LYS:H	2.03	0.61
31:BA:2287:A:C2	31:BA:2346:A:N1	2.65	0.61
1:CA:719:C:H5	1:CA:720:C:C4	2.18	0.61
31:BA:271(F):C:H2'	31:BA:271(G):C:H6	1.65	0.61
24:B2:15:LYS:HA	24:B2:18:PRO:HD2	1.82	0.61
31:DA:548:A:O2'	31:DA:549:G:OP1	2.19	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:AC:107:GLN:O	3:AC:108:ASN:HB2	1.99	0.61
2:AB:168:THR:CG2	2:AB:192:SER:HA	2.31	0.61
31:BA:1833:U:H2'	31:BA:1834:U:C6	2.32	0.61
10:CJ:24:VAL:HG21	10:CJ:37:PRO:HG3	1.82	0.61
40:DO:4:PRO:O	40:DO:5:GLN:HB2	1.99	0.61
31:BA:107:C:C2	31:BA:108:U:C5	2.88	0.61
16:AP:70:ALA:O	16:AP:74:LEU:HD12	2.00	0.61
8:CH:6:ILE:HD12	8:CH:6:ILE:N	2.14	0.61
1:AA:41:G:H2'	1:AA:42:G:H8	1.63	0.61
35:BF:83:PHE:O	35:BF:84:VAL:CB	2.47	0.61
1:CA:826:C:H2'	1:CA:827:U:H6	1.65	0.61
31:DA:1688:U:O2	31:DA:1700:A:H5''	1.99	0.61
2:CB:101:MET:HA	2:CB:108:ILE:HG13	1.83	0.61
10:AJ:39:PRO:HB3	10:AJ:70:ARG:HH12	1.64	0.61
20:AT:38:LYS:HA	20:AT:41:ILE:HD12	1.81	0.61
7:AG:75:VAL:HG21	7:AG:144:MET:HB3	1.82	0.61
35:DF:62:ARG:HH21	35:DF:64:ILE:HA	1.64	0.61
31:BA:1418:G:OP1	31:BA:1588:C:O2'	2.18	0.61
40:BO:61:VAL:O	40:BO:61:VAL:HG13	1.99	0.61
1:AA:1355:G:H2'	1:AA:1356:G:C8	2.35	0.61
31:BA:693:C:O2'	31:BA:694:U:H5'	2.00	0.61
30:B8:25:MET:HB2	41:BP:62:LEU:HD21	1.80	0.61
32:DB:21:G:O2'	32:DB:22:U:O5'	2.17	0.61
47:DV:25:LEU:HG	47:DV:94:LEU:HD13	1.81	0.61
50:BY:100:ALA:O	50:BY:101:LYS:CB	2.47	0.61
49:DX:76:ARG:HD2	49:DX:77:LYS:HB2	1.81	0.61
32:BB:20:C:C3'	32:BB:21:G:H5''	2.29	0.61
47:DV:43:GLU:N	47:DV:48:GLY:HA2	2.15	0.61
47:DV:51:VAL:HG12	47:DV:52:VAL:N	2.15	0.61
49:BX:21:PHE:CD1	49:BX:21:PHE:N	2.68	0.61
43:BR:4:LEU:C	43:BR:5:LYS:HD2	2.21	0.61
23:B1:76:ARG:HB3	23:B1:78:LYS:HE3	1.82	0.61
39:DN:27:ALA:HB3	39:DN:106:MET:CE	2.30	0.61
35:DF:2:LYS:O	35:DF:25:PRO:HG2	1.99	0.61
39:DN:57:ALA:O	39:DN:58:ASP:C	2.38	0.61
31:BA:1448:G:H1'	31:BA:1528:A:N6	2.14	0.61
31:DA:2801(A):A:C4'	31:DA:2802:G:H5'	2.29	0.61
31:DA:2660:A:C5'	31:DA:2661:G:H21	2.13	0.61
38:BI:61:ARG:O	38:BI:133:HIS:CE1	2.52	0.61
37:BH:44:VAL:O	37:BH:46:GLU:OE2	2.18	0.61
1:AA:709:G:H2'	1:AA:710:G:H8	1.66	0.61
1:CA:1003:G:C2'	1:CA:1004:A:H4'	2.30	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
32:DB:66:A:N6	32:DB:108:U:H2'	2.12	0.61
4:CD:108:LEU:HD11	4:CD:174:LEU:HD22	1.82	0.61
31:BA:2291:U:H2'	31:BA:2292:C:C6	2.36	0.61
40:BO:4:PRO:O	40:BO:5:GLN:HB2	2.00	0.61
31:BA:543:C:C5	31:BA:547:A:N7	2.68	0.61
31:BA:2807:G:C2	31:BA:2808:U:H1'	2.34	0.61
1:AA:948:C:OP1	13:AM:107:ALA:HA	2.00	0.61
1:CA:1238:A:N6	1:CA:1299:A:N6	2.48	0.61
49:DX:40:LYS:C	49:DX:42:ALA:H	2.03	0.61
31:BA:1694:C:O2'	31:BA:1695:G:C4	2.53	0.61
1:CA:829:G:O2'	1:CA:830:G:H5'	1.99	0.61
30:B8:39:LYS:HE2	30:B8:42:ARG:NH1	2.14	0.61
34:DE:176:ILE:HG22	34:DE:179:GLU:H	1.65	0.61
31:BA:49:A:H4'	31:BA:50:U:H5'	1.82	0.61
36:BG:7:LEU:CD2	36:BG:176:LEU:HD22	2.30	0.61
1:CA:1150:U:O4	1:CA:1151:A:N6	2.34	0.61
1:CA:808:C:P	15:CO:48:LYS:HE3	2.40	0.61
49:DX:63:LYS:O	49:DX:68:ARG:HA	1.99	0.61
29:D7:48:LYS:N	29:D7:48:LYS:HD3	2.15	0.61
36:DG:111:LEU:HB2	36:DG:112:PRO:HD3	1.82	0.61
31:BA:247:G:H4'	31:BA:386:G:C5	2.34	0.61
1:AA:1172:C:H2'	1:AA:1173:G:C8	2.34	0.61
47:BV:62:LEU:HB3	47:BV:98:GLU:HA	1.81	0.61
16:AP:39:TYR:C	16:AP:39:TYR:CD1	2.73	0.61
33:DD:71:ASP:CB	33:DD:103:ARG:NH2	2.63	0.61
31:BA:2317:C:O2	31:BA:2318:G:O4'	2.19	0.61
1:AA:1442(A):G:C8	45:BT:118:ARG:NH1	2.66	0.61
31:DA:2759:G:O2'	31:DA:2760:C:H5'	2.00	0.61
16:CP:20:VAL:HG22	16:CP:21:VAL:N	2.16	0.61
24:B2:53:LEU:CA	24:B2:56:GLN:HE22	2.14	0.61
44:BS:15:ARG:HB3	44:BS:18:ILE:HB	1.82	0.61
41:BP:35:HIS:O	41:BP:36:LYS:HG3	2.00	0.61
31:BA:2660:A:C5'	31:BA:2661:G:H21	2.14	0.61
45:DT:100:TYR:HB3	45:DT:103:ARG:HE	1.66	0.61
39:BN:17:ASP:OD2	39:BN:19:GLU:HB3	2.01	0.61
41:BP:96:THR:HG22	41:BP:126:VAL:CG2	2.31	0.61
41:DP:112:LEU:H	41:DP:128:HIS:HD2	1.46	0.61
24:D2:44:LEU:O	24:D2:44:LEU:HD12	2.01	0.61
1:CA:59:A:H2'	1:CA:59:A:N3	2.15	0.61
31:BA:271(L):U:H5''	31:BA:271(M):G:C4	2.36	0.61
2:CB:61:LEU:CD2	2:CB:68:ILE:HD11	2.30	0.61
33:BD:72:LYS:NZ	33:BD:75:ILE:HD12	2.16	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:AB:213:LEU:HD23	2:AB:213:LEU:O	2.01	0.61
7:AG:26:PHE:CE2	7:AG:30:ILE:HD11	2.34	0.61
51:DZ:28:MET:CE	51:DZ:59:LEU:HD13	2.30	0.61
31:BA:1354:A:H2'	31:BA:1355:G:O4'	2.00	0.61
36:BG:111:LEU:HB2	36:BG:112:PRO:HD3	1.82	0.61
39:DN:51:PHE:CZ	39:DN:119:ARG:HD2	2.35	0.61
1:AA:594:G:H1	1:AA:645:C:H42	1.49	0.61
10:CJ:3:LYS:HD2	10:CJ:77:PRO:HD3	1.81	0.61
31:DA:2342:C:OP2	31:DA:2342:C:H6	1.84	0.61
42:DQ:17:LEU:N	42:DQ:17:LEU:HD23	2.15	0.61
1:AA:360:A:O2'	1:AA:361:G:H5'	2.00	0.61
1:AA:450:G:H5''	16:AP:41:PRO:O	2.00	0.61
31:BA:1578:U:OP2	31:BA:1578:U:H6	1.84	0.61
31:DA:197:A:H5'	31:DA:197:A:C8	2.30	0.61
41:DP:47:ASP:OD1	41:DP:49:ARG:HB2	2.01	0.61
34:BE:59:VAL:HG22	34:BE:63:LEU:HA	1.82	0.61
28:D6:20:ASN:O	28:D6:21:TYR:CG	2.53	0.61
28:D6:34:LEU:HA	28:D6:51:GLU:OE1	2.01	0.61
31:DA:1405:U:H2'	31:DA:1406:U:H6	1.63	0.61
49:DX:60:ARG:HE	49:DX:74:PRO:CG	2.13	0.61
47:BV:70:ILE:HB	47:BV:90:PRO:HB2	1.83	0.61
49:BX:83:VAL:O	49:BX:84:ALA:HB3	2.00	0.61
37:DH:70:THR:O	37:DH:73:ALA:N	2.34	0.61
35:DF:3:GLU:HA	35:DF:24:LEU:HB3	1.83	0.61
31:BA:2801(A):A:H4'	31:BA:2802:G:H2'	1.81	0.61
31:BA:2655:G:N3	31:BA:2664:G:O6	2.34	0.61
31:DA:2308:G:H2'	31:DA:2309:A:C8	2.35	0.61
45:DT:61:PHE:CE2	45:DT:76:PHE:HB2	2.36	0.61
31:DA:2801:A:O2'	31:DA:2895:U:H4'	2.00	0.61
31:DA:2655:G:N3	31:DA:2664:G:O6	2.33	0.61
38:BI:10:GLU:O	38:BI:12:LEU:HD23	2.01	0.61
31:DA:1505:C:C2'	31:DA:1506:C:O5'	2.48	0.61
39:BN:112:LEU:HD12	39:BN:112:LEU:C	2.20	0.61
31:DA:271(M):G:N7	31:DA:271(O):C:N4	2.49	0.61
1:CA:671:G:H2'	1:CA:672:U:C6	2.32	0.61
2:CB:168:THR:CG2	2:CB:192:SER:HA	2.30	0.61
39:BN:28:THR:HG22	39:BN:29:LYS:N	2.15	0.61
11:CK:48:ILE:HG22	11:CK:49:GLY:H	1.66	0.61
1:AA:817:C:H4'	1:AA:818:G:OP1	2.00	0.61
12:CL:86:ARG:HB2	12:CL:101:VAL:HG22	1.83	0.61
35:DF:8:GLN:HB3	35:DF:126:VAL:HA	1.81	0.61
4:AD:17:VAL:HG11	4:AD:197:PRO:CB	2.31	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:AF:100:ASN:O	18:AR:28:GLU:HG2	2.01	0.61
1:AA:189(D):C:H1'	1:AA:189(H):G:C2	2.36	0.61
31:DA:1865:G:N2	31:DA:1877:A:C8	2.68	0.61
1:AA:1205:U:H5''	3:AC:190:ARG:NH2	2.15	0.61
1:AA:650:G:O2'	1:AA:651:C:H5'	2.01	0.61
3:AC:58:GLU:H	3:AC:65:ALA:HB3	1.64	0.61
34:BE:16:ARG:O	34:BE:18:ASP:N	2.33	0.61
31:DA:719:C:H2'	31:DA:720:C:C6	2.35	0.61
34:BE:27:LEU:HD22	45:BT:1:MET:CE	2.31	0.61
1:AA:1264:C:H2'	1:AA:1265:G:H8	1.64	0.61
31:DA:2313:C:O2'	31:DA:2314:C:H5'	2.00	0.61
46:BU:68:ALA:O	46:BU:71:GLN:HB3	2.00	0.61
30:D8:35:GLN:HB3	30:D8:36:LYS:HG3	1.83	0.61
31:BA:102:G:H8	31:BA:102:G:C5'	2.00	0.61
31:DA:1341:U:OP2	31:DA:1394:U:O2'	2.14	0.61
24:B2:49:LYS:O	24:B2:50:ILE:C	2.39	0.61
31:BA:71:A:H3'	31:BA:71:A:OP2	2.00	0.61
36:BG:105:LYS:NZ	36:BG:105:LYS:HB2	2.14	0.61
44:DS:35:ILE:O	44:DS:35:ILE:HG23	2.00	0.61
27:D5:36:CYS:C	27:D5:38:ALA:H	2.03	0.61
31:BA:587:C:C4	41:BP:33:ARG:HG2	2.34	0.61
1:AA:1228:C:P	13:AM:108:ARG:HH22	2.23	0.61
39:BN:128:HIS:CE1	39:BN:134:ARG:HD2	2.35	0.61
31:BA:1505:C:C2'	31:BA:1506:C:O5'	2.48	0.61
23:B1:13:ILE:O	23:B1:14:VAL:HB	1.99	0.61
1:CA:1070:U:H2'	1:CA:1071:C:C6	2.29	0.61
31:BA:1797:C:H2'	31:BA:1798:U:H5'	1.83	0.61
7:CG:153:HIS:HE1	11:CK:57:THR:HG23	1.65	0.61
1:AA:1199:U:H4'	10:AJ:54:PHE:CZ	2.35	0.61
49:BX:39:ILE:O	49:BX:42:ALA:HB3	2.00	0.61
31:BA:1169:G:H1	31:BA:1180:C:N4	1.98	0.61
34:BE:170:LEU:N	34:BE:170:LEU:HD12	2.16	0.61
31:BA:2020:A:O2'	31:BA:2021:C:H5'	2.01	0.61
20:AT:71:THR:HG22	20:AT:72:LEU:HG	1.81	0.61
1:CA:1118:C:H1'	1:CA:1179:A:C5	2.36	0.61
31:BA:322:A:C5	31:BA:340:A:C2	2.89	0.61
31:BA:2243:U:H2'	31:BA:2244:U:C6	2.35	0.61
1:AA:833:U:H2'	1:AA:834:C:C6	2.36	0.61
31:BA:1614:A:N1	48:BW:91:GLY:HA2	2.16	0.61
1:CA:1264:C:H2'	1:CA:1265:G:H8	1.65	0.61
37:BH:126:PRO:HB2	37:BH:130:ARG:NH1	2.16	0.61
1:CA:646:U:H2'	1:CA:647:C:C6	2.35	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:DA:1268:A:C2	31:DA:2013:A:C4	2.89	0.61
43:DR:59:ASP:OD1	43:DR:61:HIS:HB3	1.99	0.61
1:AA:186:C:H2'	1:AA:187:C:C6	2.36	0.61
46:BU:88:ILE:C	46:BU:90:VAL:H	2.03	0.61
28:D6:39:TYR:HB3	28:D6:49:HIS:ND1	2.16	0.61
30:D8:35:GLN:HA	31:DA:2420:C:P	2.41	0.61
50:DY:99:CYS:SG	50:DY:99:CYS:O	2.58	0.61
30:B8:59:LYS:HB2	30:B8:59:LYS:HZ3	1.60	0.61
24:B2:34:GLU:O	24:B2:36:ARG:N	2.34	0.61
45:BT:55:ASN:H	45:BT:59:THR:HG22	1.64	0.61
23:D1:76:ARG:HB3	23:D1:78:LYS:HE3	1.83	0.61
31:DA:1190:G:H5'	41:DP:35:HIS:CB	2.30	0.61
4:CD:3:ARG:O	4:CD:5:ILE:HG13	2.00	0.61
31:DA:1528(A):A:C5	31:DA:1529:G:H8	2.18	0.61
6:CF:18:GLN:HA	6:CF:21:LEU:CD2	2.28	0.61
31:BA:1486:A:N6	31:BA:1504:C:H42	1.99	0.61
23:B1:11:ARG:HB3	23:B1:12:PRO:CD	2.30	0.61
33:DD:161:THR:HG23	33:DD:196:VAL:HG21	1.82	0.61
12:CL:74:GLY:O	12:CL:102:ARG:NH2	2.34	0.61
31:DA:909:A:H2'	31:DA:912:C:H5	1.66	0.61
3:CC:107:GLN:O	3:CC:108:ASN:HB2	1.99	0.61
31:DA:1742:G:H5'	31:DA:1743:C:OP2	2.01	0.61
31:DA:1625:C:C2'	31:DA:1626:G:H5'	2.30	0.61
1:CA:613:C:H42	1:CA:627:G:H1	1.47	0.61
1:AA:613:C:H42	1:AA:627:G:H1	1.48	0.61
1:AA:605:U:H2'	1:AA:606:G:C8	2.35	0.61
46:DU:8:VAL:HG12	46:DU:9:VAL:N	2.14	0.61
1:AA:1173:G:H2'	1:AA:1174:G:H8	1.65	0.61
31:BA:737:C:H2'	31:BA:738:G:O5'	2.01	0.61
31:DA:2392:A:H2	31:DA:2424:C:H42	1.48	0.61
1:CA:109:A:C6	1:CA:326:G:C6	2.88	0.61
17:AQ:13:ASP:H	17:AQ:14:LYS:NZ	1.99	0.61
39:DN:38:HIS:O	46:DU:67:ALA:HB1	2.01	0.61
31:BA:1902:C:H1'	33:BD:244:ARG:HD3	1.80	0.61
31:DA:1899:G:N2	31:DA:1902:C:N4	2.23	0.61
16:AP:6:LEU:HG	16:AP:17:TYR:CB	2.30	0.61
31:DA:2291:U:H2'	31:DA:2292:C:C6	2.35	0.61
28:D6:28:ARG:HA	28:D6:32:ASN:HD22	1.63	0.61
31:DA:2402:C:H5'	31:DA:2403:C:OP2	1.99	0.61
51:DZ:108:PRO:CA	51:DZ:142:SER:HA	2.30	0.61
49:DX:32:PRO:HG3	49:DX:72:LYS:HD2	1.83	0.61
31:BA:1341:U:C2	49:BX:77:LYS:HE2	2.35	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
15:CO:87:ILE:CG2	15:CO:88:ARG:H	2.09	0.61
34:BE:95:ILE:N	34:BE:95:ILE:HD12	2.16	0.61
43:DR:10:LEU:HD22	43:DR:17:ARG:HD2	1.82	0.61
4:AD:5:ILE:O	4:AD:5:ILE:HG22	2.00	0.61
31:DA:287:C:C2	31:DA:288:C:C6	2.89	0.61
39:BN:13:TRP:HZ3	39:BN:130:HIS:CE1	2.18	0.61
48:DW:56:ALA:O	48:DW:57:ASN:C	2.39	0.61
37:DH:43:VAL:CG1	37:DH:53:GLU:H	2.13	0.61
31:DA:669:G:C8	31:DA:669:G:O2'	2.52	0.61
1:AA:1064:G:N2	1:AA:1190:G:H2'	2.16	0.61
1:CA:1199:U:H4'	10:CJ:54:PHE:CZ	2.34	0.61
46:DU:27:LEU:HA	46:DU:30:LYS:HB2	1.82	0.61
7:CG:115:ARG:HB2	7:CG:118:VAL:HG22	1.83	0.61
31:DA:2713:A:H3'	31:DA:2714:G:C5'	2.31	0.61
51:DZ:7:ALA:O	51:DZ:61:LEU:HD23	2.00	0.61
32:BB:52:A:O2'	32:BB:53:A:C8	2.53	0.61
31:DA:1179:C:H2'	31:DA:1180:C:H5''	1.82	0.61
31:BA:1204:A:H2	31:BA:1241:A:N1	1.98	0.61
31:DA:1298:C:H5''	31:DA:1299:G:OP2	2.01	0.61
43:DR:33:ARG:HG2	43:DR:115:GLU:HG2	1.83	0.61
8:AH:13:ILE:O	8:AH:17:THR:HG23	2.01	0.61
31:DA:768:G:O2'	31:DA:1379:A:N6	2.34	0.61
1:CA:1128:C:H5'	9:CI:16:ARG:NH1	2.16	0.61
47:BV:2:PHE:CB	47:BV:42:GLY:HA2	2.31	0.61
37:DH:148:ILE:O	37:DH:151:ILE:HG12	2.00	0.61
1:AA:189(D):C:H1'	1:AA:189(H):G:N2	2.16	0.61
31:BA:1185:C:H5''	31:BA:1186:G:OP1	2.01	0.61
20:AT:46:GLU:CD	20:AT:48:LYS:HE2	2.21	0.61
31:BA:376:C:H42	31:BA:398:G:H1	1.48	0.61
31:DA:443:A:H1'	31:DA:1201:C:O4'	1.99	0.61
31:DA:1354:A:H2'	31:DA:1355:G:O4'	2.01	0.61
31:DA:945:A:O2'	31:DA:945:A:C8	2.53	0.61
31:DA:2338:G:O2'	31:DA:2339:G:H5'	2.01	0.61
10:AJ:29:ARG:HH22	10:AJ:84:GLN:HG2	1.65	0.61
31:BA:631:A:O2'	41:BP:67:MET:HB3	2.00	0.61
1:CA:1442(A):G:C3'	1:CA:1442(B):A:H5''	2.27	0.61
2:CB:185:ILE:HG22	2:CB:199:TYR:CB	2.18	0.61
36:DG:38:VAL:HG22	36:DG:93:THR:HG23	1.82	0.61
46:BU:64:ARG:NH2	46:BU:64:ARG:CA	2.53	0.61
31:DA:259:G:O2'	31:DA:621:A:O2'	2.19	0.61
2:AB:187:LEU:HA	2:AB:201:ILE:HB	1.82	0.61
37:DH:141:VAL:HG12	37:DH:142:GLY:N	2.16	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:CD:58:LEU:CD2	4:CD:62:GLN:HG2	2.30	0.61
37:BH:70:THR:O	37:BH:71:LEU:C	2.36	0.61
31:DA:2658:C:H3'	31:DA:2659:G:H5''	1.83	0.61
4:AD:12:CYS:HA	4:AD:19:LEU:HD11	1.82	0.61
4:AD:162:LEU:O	4:AD:165:MET:HB2	2.01	0.61
1:CA:707:C:O2'	1:CA:708:C:H5'	2.01	0.61
37:DH:68:THR:O	37:DH:69:ARG:C	2.39	0.61
31:BA:1786:A:C2	31:BA:2606:C:H1'	2.34	0.61
5:CE:101:ILE:CD1	5:CE:119:LEU:HD23	2.31	0.61
13:AM:61:GLU:HA	13:AM:66:LEU:HD11	1.83	0.61
31:BA:2580:U:C5'	34:BE:131:ALA:HB3	2.31	0.61
1:CA:1342:C:H1'	9:CI:124:GLN:HE22	1.65	0.61
24:D2:14:ARG:CZ	24:D2:57:ILE:CG2	2.78	0.61
17:AQ:5:VAL:CG1	17:AQ:6:LEU:H	2.14	0.61
31:DA:1042:G:N3	31:DA:1042:G:H2'	2.16	0.61
31:BA:2102:U:C4	31:BA:2103:C:N4	2.69	0.61
19:AS:10:PHE:HZ	19:AS:70:LYS:HZ3	1.47	0.61
1:AA:1418:A:H2	31:BA:1948:G:N3	1.99	0.61
31:DA:1488:G:C6	31:DA:1489:U:N3	2.69	0.61
27:B5:57:VAL:CB	27:B5:58:LEU:HD12	2.26	0.61
28:D6:12:GLU:CB	28:D6:23:THR:HA	2.30	0.61
41:DP:62:LEU:CD1	41:DP:62:LEU:H	2.01	0.61
50:DY:96:ILE:HG22	50:DY:97:ARG:N	2.16	0.61
49:DX:59:VAL:HG23	49:DX:60:ARG:H	1.66	0.61
27:D5:46:CYS:SG	27:D5:47:PRO:CG	2.89	0.61
41:DP:71:VAL:HG13	41:DP:72:PRO:N	2.15	0.61
1:CA:428:G:C4'	1:CA:429:U:O5'	2.48	0.61
39:BN:45:ASN:ND2	39:BN:45:ASN:H	1.93	0.61
37:BH:44:VAL:HG12	37:BH:45:VAL:N	2.11	0.61
45:BT:36:GLU:HB3	45:BT:38:ASN:OD1	2.01	0.61
1:CA:687:A:N3	1:CA:688:G:H1'	2.16	0.61
1:CA:1096:C:H2'	1:CA:1097:C:H6	1.65	0.61
1:CA:1189:C:O3'	3:CC:5:ILE:HD12	2.00	0.61
1:AA:22:G:H2'	1:AA:23:C:H6	1.63	0.61
1:AA:945:G:N3	1:AA:945:G:H2'	2.14	0.61
9:CI:46:ALA:HA	9:CI:78:LYS:HZ2	1.64	0.61
33:BD:71:ASP:CB	33:BD:103:ARG:NH2	2.64	0.61
36:DG:16:ARG:HH11	36:DG:31:VAL:HG11	1.66	0.61
31:BA:1766:U:H2'	31:BA:1767:C:C6	2.35	0.61
1:AA:748:C:H4'	1:AA:749:C:O5'	2.01	0.61
31:DA:139(A):G:N2	49:DX:44:GLU:OE1	2.25	0.61
33:BD:222:ARG:O	33:BD:225:ALA:HB3	2.01	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:CA:833:U:H2'	1:CA:834:C:C6	2.36	0.61
6:CF:79:LEU:O	6:CF:85:VAL:HG11	2.01	0.61
31:BA:1378:A:O2'	31:BA:1379:A:H5''	2.01	0.61
31:BA:1378:A:H4'	31:BA:1379:A:OP1	2.00	0.61
20:CT:63:ILE:HD13	20:CT:80:ARG:HB2	1.82	0.61
44:DS:24:LEU:O	44:DS:85:VAL:HG12	2.00	0.61
27:B5:7:PRO:HA	31:BA:2615:U:C2	2.35	0.61
1:CA:186:C:C2	1:CA:187:C:C5	2.89	0.61
48:DW:95:ILE:O	48:DW:95:ILE:HG13	1.99	0.61
31:BA:675:A:C8	31:BA:804:A:C6	2.87	0.61
2:CB:44:LEU:H	2:CB:44:LEU:HD12	1.66	0.61
33:BD:35:LYS:NZ	33:BD:64:ILE:O	2.27	0.60
31:DA:2807:G:H22	31:DA:2892:A:N6	1.98	0.60
30:D8:32:LEU:O	30:D8:33:ASN:CB	2.45	0.60
24:D2:32:LEU:O	24:D2:34:GLU:N	2.34	0.60
31:DA:70:G:H21	31:DA:71:A:N6	1.98	0.60
44:BS:29:PHE:H	44:BS:89:ARG:HD2	1.62	0.60
31:BA:2723:C:H5''	43:BR:2:ARG:HD2	1.82	0.60
33:DD:132:PRO:O	33:DD:136:ILE:HD12	2.01	0.60
15:AO:71:GLN:HG3	15:AO:78:TYR:CD2	2.35	0.60
1:CA:545:C:O2'	1:CA:546:G:H5'	1.99	0.60
31:DA:626:U:H3	41:DP:105:LEU:HG	1.66	0.60
4:AD:3:ARG:O	4:AD:5:ILE:HG13	2.01	0.60
38:DI:133:HIS:CB	38:DI:134:PRO:CD	2.77	0.60
24:D2:56:GLN:H	24:D2:56:GLN:NE2	1.99	0.60
31:DA:280:C:H2'	31:DA:281:G:O5'	2.01	0.60
23:D1:47:GLN:HB2	31:DA:397:G:H5''	1.82	0.60
1:AA:1073:U:H2'	1:AA:1074:G:C8	2.36	0.60
28:B6:30:THR:O	28:B6:31:PRO:C	2.36	0.60
31:BA:2287:A:N6	31:BA:2344:U:N3	2.47	0.60
28:D6:45:LYS:HE3	31:DA:2370:G:O2'	2.01	0.60
49:DX:63:LYS:HE3	49:DX:70:LEU:HD22	1.82	0.60
35:BF:119:ARG:HH11	35:BF:119:ARG:HG2	1.65	0.60
31:BA:1268:A:C2	31:BA:2013:A:C4	2.89	0.60
1:AA:105:G:H2'	1:AA:106:C:C6	2.36	0.60
36:DG:39:ILE:HB	36:DG:157:ILE:HG22	1.83	0.60
42:BQ:109:VAL:HG12	42:BQ:110:THR:N	2.15	0.60
38:DI:102:SER:HA	38:DI:107:VAL:O	2.01	0.60
31:DA:836:G:H2'	31:DA:837:C:C6	2.36	0.60
43:BR:8:ARG:CZ	43:BR:8:ARG:HA	2.30	0.60
31:DA:2875:C:H4'	45:DT:5:ALA:HB2	1.82	0.60
49:BX:35:THR:O	49:BX:36:LYS:C	2.39	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
23:B1:67:ILE:H	23:B1:67:ILE:HD12	1.64	0.60
34:BE:37:ARG:O	34:BE:45:THR:HA	2.02	0.60
45:DT:30:VAL:HG21	45:DT:83:ILE:CG1	2.28	0.60
27:B5:16:ARG:NH1	27:B5:17:ASP:OD1	2.34	0.60
31:DA:1677:A:H2'	31:DA:1678:G:C8	2.37	0.60
42:DQ:141:GLN:HE21	51:DZ:72:ARG:N	1.98	0.60
30:B8:61:LEU:N	30:B8:63:PRO:HD2	2.17	0.60
31:DA:1280:G:C3'	31:DA:1281:G:H5''	2.29	0.60
31:DA:271(R):G:O2'	31:DA:271(S):G:H5'	2.01	0.60
18:CR:62:GLU:HA	18:CR:65:ILE:CD1	2.31	0.60
31:DA:1796:U:H2'	31:DA:1797:C:H6	1.66	0.60
38:DI:81:VAL:HG11	38:DI:88:ILE:HG23	1.83	0.60
38:DI:72:LEU:HD12	38:DI:138:ILE:CG2	2.28	0.60
38:DI:52:ARG:O	38:DI:53:ALA:C	2.38	0.60
4:CD:138:TYR:CD2	4:CD:138:TYR:C	2.74	0.60
31:BA:2101:G:C6	31:BA:2102:U:C5	2.88	0.60
31:DA:1264:G:H3'	31:DA:1265:A:H5''	1.83	0.60
31:BA:848:G:H2'	31:BA:849:A:C8	2.36	0.60
31:BA:1116:C:C2'	31:BA:1117:G:H5'	2.31	0.60
31:BA:769:G:C2'	31:BA:770:G:H5'	2.31	0.60
19:CS:10:PHE:HZ	19:CS:70:LYS:HZ3	1.47	0.60
5:AE:96:PRO:HA	5:AE:117:ASP:OD2	2.00	0.60
29:D7:24:THR:HG23	29:D7:27:GLY:H	1.66	0.60
35:DF:28:ILE:O	35:DF:28:ILE:HD12	2.01	0.60
4:CD:60:GLU:HG2	4:CD:202:LEU:HB2	1.83	0.60
11:AK:58:PRO:HA	11:AK:90:GLY:HA2	1.82	0.60
31:DA:2247:A:O2'	31:DA:2248:C:H5'	2.01	0.60
48:BW:62:HIS:O	48:BW:63:ASP:C	2.39	0.60
5:CE:33:VAL:HG11	5:CE:109:ILE:HA	1.82	0.60
32:DB:20:C:C3'	32:DB:21:G:H5''	2.31	0.60
39:DN:40:PRO:O	46:DU:64:ARG:NH2	2.34	0.60
47:BV:19:LYS:CB	47:BV:96:ILE:O	2.46	0.60
41:DP:51:PHE:HB3	41:DP:52:GLU:CG	2.29	0.60
31:DA:2418:A:H2'	31:DA:2419:U:C6	2.36	0.60
50:DY:95:LYS:HD3	50:DY:100:ALA:CB	2.16	0.60
50:DY:81:LYS:HG2	50:DY:96:ILE:CG2	2.31	0.60
49:DX:34:ALA:O	49:DX:36:LYS:HE3	2.02	0.60
47:BV:93:GLU:HG2	47:BV:94:LEU:N	2.13	0.60
23:D1:92:LYS:C	23:D1:94:LEU:N	2.54	0.60
34:BE:1:MET:O	34:BE:2:LYS:C	2.39	0.60
31:BA:348:G:H2'	31:BA:349:G:C5'	2.27	0.60
42:BQ:52:VAL:HA	42:BQ:55:VAL:CG1	2.31	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:BA:2543:G:H2'	31:BA:2544:G:C8	2.35	0.60
39:DN:67:LEU:O	39:DN:69:GLN:N	2.34	0.60
31:DA:2565:A:C5'	31:DA:2566:A:OP2	2.48	0.60
1:CA:343:U:O2'	1:CA:346:G:O6	2.18	0.60
39:DN:112:LEU:C	39:DN:112:LEU:HD12	2.21	0.60
9:AI:4:TYR:HA	9:AI:88:TYR:CE1	2.35	0.60
28:B6:40:CYS:SG	28:B6:45:LYS:NZ	2.61	0.60
1:AA:475:G:H2'	1:AA:476:G:C8	2.33	0.60
31:DA:543:C:H6	31:DA:547:A:N7	1.98	0.60
28:B6:34:LEU:HD22	28:B6:50:ARG:NH1	2.15	0.60
28:B6:51:GLU:O	28:B6:52:VAL:CB	2.49	0.60
39:BN:27:ALA:CB	39:BN:106:MET:HE2	2.31	0.60
1:AA:662:G:H2'	1:AA:663:A:H8	1.65	0.60
31:DA:1670:C:O2	34:DE:129:HIS:CE1	2.53	0.60
31:DA:1721:G:C2	31:DA:1739:U:OP2	2.54	0.60
38:DI:126:TYR:O	38:DI:139:GLN:HA	2.01	0.60
12:AL:119:LYS:HB2	12:AL:120:TYR:HD1	1.66	0.60
31:BA:1300:U:O2'	31:BA:1626:G:C2	2.47	0.60
46:BU:34:LYS:HA	46:BU:34:LYS:HE2	1.83	0.60
1:CA:833:U:H2'	1:CA:834:C:H6	1.66	0.60
31:DA:1116:C:C2'	31:DA:1117:G:H5'	2.31	0.60
38:BI:35:LEU:HD23	38:BI:35:LEU:N	2.17	0.60
31:DA:325:G:O2'	31:DA:326:G:H5'	2.01	0.60
1:AA:892:A:H2'	1:AA:893:C:C6	2.36	0.60
31:BA:2853:C:H2'	31:BA:2854:G:H8	1.65	0.60
31:DA:740:U:H2'	31:DA:741:G:C8	2.36	0.60
31:DA:207:A:H2'	31:DA:208:C:O4'	2.01	0.60
16:AP:49:LEU:HD12	16:AP:50:LYS:H	1.65	0.60
33:DD:35:LYS:CE	33:DD:65:ILE:HG22	2.31	0.60
47:DV:72:VAL:HA	47:DV:88:ARG:NH1	2.17	0.60
28:D6:30:THR:O	28:D6:31:PRO:C	2.38	0.60
31:BA:2275:C:O2'	42:BQ:83:MET:HA	2.02	0.60
46:DU:91:ASP:O	46:DU:92:ARG:HB3	2.01	0.60
49:BX:77:LYS:CD	49:BX:78:LYS:HG3	2.30	0.60
50:DY:68:HIS:HB3	50:DY:71:LYS:NZ	2.16	0.60
44:DS:53:SER:OG	44:DS:54:LEU:N	2.34	0.60
41:BP:26:GLY:HA2	41:BP:30:THR:HG23	1.84	0.60
31:DA:806:C:OP2	41:DP:39:LYS:CD	2.48	0.60
35:DF:24:LEU:HB3	35:DF:25:PRO:CD	2.30	0.60
31:DA:627:A:C6	31:DA:637:A:C8	2.90	0.60
31:DA:442:G:O4'	35:DF:46:ARG:HD3	2.02	0.60
41:BP:85:LEU:HA	41:BP:88:LEU:HB2	1.83	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
38:BI:133:HIS:CB	38:BI:134:PRO:CD	2.78	0.60
4:AD:12:CYS:CA	4:AD:19:LEU:HD11	2.31	0.60
51:BZ:165:VAL:HG12	51:BZ:166:SER:OG	2.01	0.60
31:DA:1797:C:C2'	31:DA:1798:U:H5'	2.31	0.60
11:AK:111:ASP:HA	18:AR:84:LYS:HE2	1.83	0.60
4:AD:135:LEU:HB2	4:AD:138:TYR:HB2	1.82	0.60
34:BE:51:PHE:CD1	34:BE:52:LEU:HD13	2.36	0.60
31:BA:542:C:H6	31:BA:542:C:O5'	1.84	0.60
44:BS:38:GLN:CG	44:BS:47:THR:HG21	2.32	0.60
50:BY:88:LYS:O	50:BY:89:PHE:HB2	2.01	0.60
31:DA:1378:A:O2'	31:DA:1379:A:H5''	2.01	0.60
31:BA:2825:C:C2'	31:BA:2826:A:H5'	2.29	0.60
5:CE:6:PHE:HB2	5:CE:34:VAL:HG13	1.82	0.60
31:BA:2387:U:H5''	31:BA:2388:A:OP2	2.01	0.60
5:AE:18:ARG:NH2	5:AE:25:ARG:HG2	2.16	0.60
31:DA:2593:U:H2'	31:DA:2594:C:C6	2.35	0.60
13:CM:46:LYS:HG3	13:CM:47:ASP:N	2.16	0.60
11:CK:121:PRO:HD2	11:CK:126:ARG:HG3	1.82	0.60
35:BF:62:ARG:HH21	35:BF:64:ILE:HA	1.66	0.60
44:DS:28:VAL:O	44:DS:29:PHE:HB3	2.01	0.60
24:D2:32:LEU:CD2	31:DA:61:G:O2'	2.50	0.60
49:DX:77:LYS:HG2	49:DX:78:LYS:N	2.16	0.60
46:BU:50:ARG:CZ	47:BV:75:PHE:CE2	2.85	0.60
47:BV:25:LEU:H	47:BV:94:LEU:HD12	1.65	0.60
31:DA:2758:A:H2'	31:DA:2759:G:C5'	2.24	0.60
16:CP:28:ARG:NH1	16:CP:29:ASP:OD2	2.34	0.60
31:DA:1210:A:H5'	31:DA:1210:A:H8	1.62	0.60
45:DT:55:ASN:H	45:DT:59:THR:HG22	1.66	0.60
33:DD:44:ASN:HB2	33:DD:48:ARG:O	2.01	0.60
34:DE:36:ARG:HH21	34:DE:88:GLY:CA	1.99	0.60
1:CA:1228:C:P	13:CM:108:ARG:HH22	2.24	0.60
23:B1:10:LYS:CG	23:B1:11:ARG:H	2.14	0.60
50:BY:39:VAL:HG12	50:BY:40:GLU:H	1.67	0.60
31:DA:2468:G:HO2'	31:DA:2476:A:H8	1.47	0.60
1:CA:1064:G:N2	1:CA:1190:G:H2'	2.16	0.60
1:AA:328:C:O2	1:AA:328:C:C2'	2.50	0.60
46:DU:34:LYS:HE2	46:DU:34:LYS:HA	1.82	0.60
31:DA:543:C:C5	31:DA:547:A:N7	2.69	0.60
47:BV:36:PRO:CD	47:BV:60:GLU:O	2.49	0.60
49:BX:40:LYS:CG	49:BX:41:ASN:N	2.64	0.60
1:CA:948:C:OP1	13:CM:107:ALA:HA	2.02	0.60
31:DA:1722:A:N6	31:DA:1741:A:C2	2.69	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
32:BB:15:A:H1'	32:BB:110:G:C8	2.36	0.60
1:AA:652:U:O4	1:AA:752:G:O2'	2.20	0.60
50:DY:2:ARG:C	50:DY:4:LYS:H	2.05	0.60
31:DA:2590:A:H2'	31:DA:2591:C:H6	1.66	0.60
3:CC:125:GLU:HA	3:CC:191:THR:HG22	1.84	0.60
1:CA:1205:U:H5''	3:CC:190:ARG:NH2	2.16	0.60
1:CA:590:C:H2'	1:CA:591:U:H6	1.65	0.60
31:DA:1956:U:H2'	31:DA:1957:C:H5'	1.81	0.60
46:BU:104:GLN:HB2	47:BV:43:GLU:OE1	2.02	0.60
51:BZ:108:PRO:CA	51:BZ:142:SER:HA	2.32	0.60
31:BA:662:G:OP1	41:BP:18:ARG:NH1	2.35	0.60
46:DU:90:VAL:O	46:DU:92:ARG:N	2.34	0.60
1:CA:355:C:C4	1:CA:356:A:N7	2.70	0.60
15:CO:26:GLU:HA	15:CO:81:LEU:HD22	1.83	0.60
29:B7:5:TRP:NE1	29:B7:7:PRO:HG3	2.16	0.60
50:DY:37:VAL:CG2	50:DY:67:LEU:HB3	2.29	0.60
45:DT:36:GLU:HB3	45:DT:38:ASN:OD1	2.01	0.60
8:CH:88:LYS:HB3	8:CH:89:PRO:CD	2.30	0.60
9:CI:83:ARG:O	9:CI:86:VAL:HG12	2.02	0.60
1:CA:1084:G:C5	1:CA:1085:U:C4	2.89	0.60
1:AA:1084:G:C5	1:AA:1085:U:C4	2.88	0.60
50:DY:45:VAL:HG22	50:DY:62:GLU:HB2	1.83	0.60
40:DO:23:ARG:HG3	40:DO:24:VAL:N	2.17	0.60
5:CE:55:VAL:O	5:CE:58:ALA:HB3	2.01	0.60
10:AJ:49:VAL:HG11	14:AN:41:ARG:O	2.00	0.60
40:DO:3:GLN:HB2	40:DO:4:PRO:HD2	1.84	0.60
32:BB:28:C:H2'	32:BB:29:A:C8	2.35	0.60
51:BZ:8:TYR:HB2	51:BZ:38:TYR:CZ	2.36	0.60
31:DA:535:C:C2'	31:DA:536:A:H5'	2.31	0.60
31:DA:1379:A:O2'	31:DA:1380:G:OP1	2.17	0.60
3:AC:24:ALA:HB1	3:AC:28:GLN:O	2.01	0.60
1:AA:425:G:H2'	1:AA:426:G:H5'	1.83	0.60
37:DH:98:LEU:HB2	37:DH:125:VAL:CG2	2.31	0.60
10:AJ:26:ALA:HB1	10:AJ:29:ARG:HH21	1.66	0.60
35:DF:28:ILE:HG21	35:DF:116:ASP:HB2	1.82	0.60
13:CM:46:LYS:HG3	13:CM:47:ASP:H	1.67	0.60
18:AR:32:ARG:HA	18:AR:69:THR:HG21	1.83	0.60
16:CP:49:LEU:HD12	16:CP:50:LYS:H	1.66	0.60
1:CA:189(C):C:C2'	1:CA:189(D):C:H5'	2.31	0.60
33:BD:83:GLU:HB2	33:BD:92:ILE:CD1	2.32	0.60
32:DB:40:U:H1'	32:DB:45:A:H61	1.67	0.60
31:BA:2631:G:N2	34:BE:61:ARG:HH12	2.00	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
34:BE:61:ARG:N	34:BE:62:PRO:HD2	2.15	0.60
34:DE:59:VAL:HG22	34:DE:63:LEU:HA	1.83	0.60
31:DA:1657:C:H2'	31:DA:1658:C:H6	1.67	0.60
31:BA:2831:G:H5'	31:BA:2834:G:O2'	2.01	0.60
31:BA:2801:A:O2'	31:BA:2895:U:H4'	2.00	0.60
1:CA:409:G:C2'	1:CA:410:G:H5'	2.30	0.60
45:BT:100:TYR:HB3	45:BT:103:ARG:HE	1.66	0.60
45:BT:28:VAL:O	45:BT:29:ARG:CD	2.50	0.60
46:BU:27:LEU:HA	46:BU:30:LYS:HB2	1.84	0.60
45:BT:17:THR:O	45:BT:18:ASP:CB	2.50	0.60
38:BI:82:ARG:HG2	38:BI:89:TYR:HD2	1.63	0.60
1:CA:475:G:H2'	1:CA:476:G:C8	2.33	0.60
31:BA:1831:G:H2'	31:BA:1832:C:C6	2.37	0.60
31:BA:1171:G:H3'	31:BA:1173:G:O4'	2.02	0.60
1:CA:1321:C:C3'	1:CA:1322:C:H5''	2.31	0.60
31:DA:528:A:N1	31:DA:2042:A:H2'	2.17	0.60
31:BA:151:C:C2'	31:BA:152:G:H5'	2.32	0.60
35:DF:7:TYR:HD1	35:DF:8:GLN:H	1.49	0.60
46:BU:31:SER:C	46:BU:33:ARG:H	2.05	0.60
31:DA:2102:U:C4	31:DA:2103:C:N4	2.70	0.60
49:BX:63:LYS:O	49:BX:68:ARG:HA	2.01	0.60
31:BA:971:C:C2'	31:BA:972:G:H5'	2.32	0.60
10:CJ:29:ARG:HH22	10:CJ:84:GLN:HG2	1.66	0.60
31:BA:2593:U:H2'	31:BA:2594:C:C6	2.36	0.60
34:DE:108:SER:HB3	34:DE:165:VAL:HG21	1.83	0.60
31:DA:1810:A:H2'	31:DA:1811:G:H5'	1.82	0.60
31:BA:925:C:H2'	31:BA:926:A:H5''	1.84	0.60
31:DA:1418:G:OP1	31:DA:1588:C:O2'	2.20	0.60
8:AH:1:MET:H3	8:AH:1:MET:HE2	1.67	0.60
47:DV:69:LYS:O	47:DV:70:ILE:HG23	2.01	0.60
31:DA:993:G:H1'	47:DV:91:TYR:CE1	2.36	0.60
31:DA:827:U:O2'	31:DA:2068:U:C2	2.48	0.60
49:BX:88:LYS:O	49:BX:89:ILE:HB	2.02	0.60
31:DA:1652:A:C2'	31:DA:1653:G:H5'	2.31	0.60
36:DG:64:THR:HG23	36:DG:65:GLY:N	2.17	0.60
4:AD:9:CYS:SG	4:AD:22:LYS:HD2	2.42	0.60
24:D2:46:GLN:HE21	24:D2:47:ASN:N	2.00	0.60
31:DA:2564:A:OP1	31:DA:2648:C:H4'	2.01	0.60
37:BH:40:GLU:O	37:BH:41:MET:CB	2.49	0.60
31:BA:1501:C:O2'	31:BA:1502:C:H5'	2.01	0.60
50:BY:8:LYS:HD3	50:BY:28:LYS:HZ2	1.66	0.60
50:BY:39:VAL:O	50:BY:40:GLU:CD	2.40	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
23:D1:8:SER:N	23:D1:46:LEU:CD1	2.65	0.60
36:BG:19:LEU:HG	36:BG:175:LEU:HD12	1.84	0.60
1:CA:662:G:H2'	1:CA:663:A:H8	1.67	0.60
31:DA:580:C:H2'	31:DA:581:C:C6	2.37	0.60
3:AC:113:ALA:HB3	3:AC:114:PRO:HD3	1.83	0.60
31:DA:1751:C:O2'	31:DA:1752:C:H5'	2.02	0.60
31:BA:1450(A):C:N4	31:BA:1451:C:H41	1.99	0.60
37:BH:98:LEU:HB2	37:BH:125:VAL:CG2	2.31	0.60
1:AA:186:C:H2'	1:AA:187:C:H6	1.66	0.60
3:CC:66:VAL:HG11	3:CC:91:LEU:HD11	1.84	0.60
28:B6:42:TRP:CZ2	31:BA:642:G:O3'	2.54	0.60
12:AL:31:PRO:HB2	12:AL:32:PHE:CD2	2.37	0.60
33:BD:160:GLY:H	33:BD:197:GLY:H	1.50	0.60
51:DZ:19:ARG:HA	51:DZ:23:LYS:O	2.01	0.60
33:DD:176:ARG:HH11	33:DD:176:ARG:HG2	1.67	0.60
1:CA:594:G:H1	1:CA:645:C:H42	1.48	0.60
12:CL:91:LYS:HG3	12:CL:91:LYS:O	2.00	0.60
1:AA:1026:G:N3	1:AA:1026:G:H2'	2.16	0.60
1:AA:421:U:C4	3:AC:127:ARG:NH1	2.69	0.60
39:BN:74:ARG:NH2	39:BN:101:HIS:HB3	2.17	0.60
17:AQ:50:LYS:HE3	17:AQ:51:TYR:CE1	2.37	0.60
31:BA:1899:G:N2	31:BA:1902:C:N4	2.23	0.60
46:BU:91:ASP:O	46:BU:92:ARG:HB3	2.01	0.60
16:AP:17:TYR:HE1	16:AP:41:PRO:HG3	1.67	0.60
31:DA:2807:G:H3'	31:DA:2808:U:H5''	1.84	0.60
28:D6:11:LEU:CD2	28:D6:26:ASN:H	2.15	0.60
24:D2:25:VAL:C	24:D2:27:GLU:H	2.05	0.60
24:D2:32:LEU:C	24:D2:32:LEU:HD12	2.21	0.60
46:DU:83:LEU:HB3	46:DU:88:ILE:CD1	2.32	0.60
47:DV:96:ILE:HG23	47:DV:97:LYS:N	2.15	0.60
24:B2:32:LEU:O	24:B2:34:GLU:N	2.34	0.60
31:BA:2405:G:HO2'	31:BA:2406:U:P	2.25	0.60
1:AA:509:A:O2'	1:AA:510:A:P	2.59	0.60
1:AA:542:G:H5'	4:AD:41:GLY:CA	2.32	0.60
37:BH:43:VAL:CG1	37:BH:53:GLU:H	2.15	0.60
31:BA:819:A:C4	31:BA:1189:A:C2	2.90	0.60
33:DD:255:LYS:HZ1	33:DD:255:LYS:H	1.48	0.60
31:BA:2036:C:H5'	31:BA:2036:C:C6	2.30	0.60
1:CA:59:A:H5''	1:CA:60:A:C5'	2.31	0.60
31:BA:271(R):G:O2'	31:BA:271(S):G:H5'	2.01	0.60
31:DA:542:C:N4	31:DA:543:C:N4	2.49	0.60
1:AA:191:G:C4	20:AT:105:SER:HB3	2.36	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
42:BQ:30:GLY:CA	42:BQ:107:ALA:HB2	2.32	0.60
31:BA:1049:C:O2	31:BA:1049:C:H2'	2.01	0.60
1:CA:1173:G:H2'	1:CA:1174:G:H8	1.67	0.60
23:B1:21:ARG:NH1	31:BA:380:U:OP1	2.35	0.60
31:DA:1259:G:H2'	31:DA:1260:G:C8	2.36	0.60
2:CB:103:THR:HA	2:CB:180:LEU:HD11	1.84	0.60
38:BI:92:VAL:HG13	38:BI:120:ILE:HB	1.84	0.60
47:BV:35:LEU:H	47:BV:35:LEU:HD23	1.67	0.60
51:BZ:149:SER:HB2	51:BZ:172:ALA:O	2.02	0.60
36:DG:37:VAL:O	36:DG:94:LEU:HG	2.02	0.60
31:BA:2302:G:C6	31:BA:2315:G:C6	2.89	0.60
2:CB:54:THR:HG21	2:CB:201:ILE:HD11	1.83	0.60
39:DN:1:MET:HB3	47:DV:20:LEU:HD22	1.84	0.60
1:CA:389:A:H2'	1:CA:390:C:C5'	2.31	0.60
31:BA:1341:U:H2'	31:BA:1397:U:O2	2.02	0.60
1:AA:675:A:H2'	1:AA:676:A:H8	1.67	0.60
8:AH:110:ALA:O	8:AH:112:LEU:HD23	2.02	0.60
23:B1:19:GLN:CD	23:B1:44:PRO:HG3	2.22	0.60
34:DE:82:ARG:HG3	34:DE:83:ASP:N	2.17	0.60
4:CD:12:CYS:HA	4:CD:19:LEU:HD11	1.83	0.60
31:BA:1880:C:H6	31:BA:1880:C:H5'	1.65	0.60
45:DT:33:LYS:NZ	45:DT:33:LYS:H	2.00	0.60
33:DD:108:PRO:HB3	33:DD:143:HIS:HE1	1.64	0.60
31:BA:1047:G:N2	31:BA:1111:A:H62	1.98	0.60
50:BY:45:VAL:HG13	50:BY:62:GLU:CB	2.32	0.60
31:DA:542:C:H2'	31:DA:543:C:OP1	2.02	0.60
31:BA:542:C:H2'	31:BA:543:C:OP1	2.02	0.60
31:BA:2807:G:H3'	31:BA:2808:U:H5''	1.83	0.60
24:D2:16:LEU:H	24:D2:18:PRO:HD2	1.67	0.60
30:B8:43:GLN:O	30:B8:44:LYS:CD	2.50	0.60
31:DA:2243:U:H2'	31:DA:2244:U:C6	2.36	0.60
32:DB:91:C:O2'	32:DB:92:C:H5'	2.01	0.60
31:DA:1171:G:H8	31:DA:1171:G:OP2	1.85	0.60
31:BA:635:C:O2'	31:BA:639:U:OP1	2.18	0.60
31:BA:2772:C:H2'	31:BA:2773:C:C6	2.36	0.60
31:BA:1956:U:C2'	31:BA:1957:C:H5'	2.31	0.60
6:CF:75:LEU:CD2	6:CF:79:LEU:HD11	2.32	0.60
19:CS:10:PHE:HE2	19:CS:37:ARG:O	1.85	0.60
31:DA:272(J):C:C2'	31:DA:274:G:OP1	2.50	0.60
1:CA:243:A:H4'	1:CA:244:U:O5'	2.01	0.60
29:B7:48:LYS:HD3	29:B7:48:LYS:N	2.16	0.60
1:AA:1469:G:H2'	1:AA:1470:G:H8	1.67	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
42:BQ:137:TYR:HB2	51:BZ:76:LEU:HD11	1.84	0.60
47:BV:43:GLU:N	47:BV:48:GLY:HA2	2.17	0.59
33:BD:32:SER:O	33:BD:33:LEU:CB	2.33	0.59
44:DS:92:TYR:HD1	44:DS:93:LYS:H	1.47	0.59
39:BN:32:THR:O	39:BN:35:ARG:O	2.20	0.59
31:DA:2287:A:C2	31:DA:2346:A:N1	2.65	0.59
31:DA:83:G:N1	31:DA:102:G:H2'	2.17	0.59
31:BA:2496:C:OP1	42:BQ:81:VAL:HG13	2.02	0.59
49:BX:77:LYS:HG2	49:BX:78:LYS:N	2.16	0.59
1:AA:1277:C:H2'	1:AA:1278:U:H5'	1.83	0.59
31:DA:587:C:C4	41:DP:33:ARG:HG2	2.37	0.59
31:BA:624:C:H2'	31:BA:625:G:H5'	1.83	0.59
31:BA:1142(A):A:C8	31:BA:1144:G:N7	2.70	0.59
1:AA:954:G:N2	1:AA:1227:A:H62	1.94	0.59
37:BH:41:MET:HG3	37:BH:54:ARG:HA	1.84	0.59
37:BH:156:ALA:C	37:BH:158:HIS:H	2.04	0.59
31:DA:271(F):C:H2'	31:DA:271(G):C:H6	1.66	0.59
31:DA:271(Q):G:O2'	31:DA:271(R):G:P	2.60	0.59
23:D1:10:LYS:CG	23:D1:11:ARG:H	2.14	0.59
7:AG:115:ARG:HB2	7:AG:118:VAL:HG22	1.83	0.59
31:BA:2292:C:C2'	31:BA:2293:C:H5'	2.32	0.59
34:BE:76:ARG:O	34:BE:77:ILE:HG22	2.02	0.59
31:DA:774:A:C2	31:DA:787:U:O2'	2.53	0.59
31:BA:2328:A:H2'	31:BA:2329:G:C8	2.37	0.59
33:BD:71:ASP:HB3	33:BD:103:ARG:NH2	2.17	0.59
5:CE:139:LEU:HA	5:CE:142:LEU:CD1	2.32	0.59
31:DA:2825:C:H2'	31:DA:2826:A:H5'	1.83	0.59
33:BD:231:HIS:CG	33:BD:232:PRO:HD2	2.36	0.59
31:DA:720:C:O2'	31:DA:721:C:H5'	2.01	0.59
10:CJ:26:ALA:HB1	10:CJ:29:ARG:HH21	1.66	0.59
3:AC:34:LEU:HD23	3:AC:34:LEU:O	2.02	0.59
8:CH:64:LYS:O	8:CH:79:VAL:HB	2.02	0.59
2:AB:44:LEU:H	2:AB:44:LEU:HD12	1.65	0.59
31:BA:790:C:O2'	31:BA:791:C:H5'	2.02	0.59
1:AA:52:G:C2'	1:AA:53:A:H5'	2.32	0.59
33:BD:35:LYS:HE2	33:BD:65:ILE:HG22	1.84	0.59
28:D6:20:ASN:O	28:D6:21:TYR:CD1	2.55	0.59
49:BX:65:ARG:NE	49:BX:66:LEU:N	2.47	0.59
24:B2:25:VAL:HG22	24:B2:26:ARG:HH11	1.67	0.59
36:BG:38:VAL:HG22	36:BG:93:THR:HG23	1.82	0.59
37:DH:70:THR:O	37:DH:71:LEU:C	2.39	0.59
1:CA:539:A:OP2	12:CL:115:LYS:HE3	2.01	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:BA:1526:G:C6	31:BA:1527:G:C2	2.91	0.59
39:BN:58:ASP:O	39:BN:60:ILE:N	2.35	0.59
12:AL:74:GLY:O	12:AL:102:ARG:NH2	2.34	0.59
50:BY:37:VAL:HG13	50:BY:69:ALA:HA	1.84	0.59
50:BY:37:VAL:HG22	50:BY:67:LEU:O	2.02	0.59
6:CF:69:GLU:HG2	6:CF:70:ASP:H	1.66	0.59
37:DH:41:MET:HA	37:DH:41:MET:CE	2.27	0.59
31:DA:479:A:N3	31:DA:481:G:H5''	2.17	0.59
31:DA:2876:G:H4'	45:DT:3:ARG:HE	1.67	0.59
31:DA:542:C:H6	31:DA:542:C:O5'	1.84	0.59
1:AA:719:C:H5	1:AA:720:C:C4	2.20	0.59
1:CA:1423:G:H2'	1:CA:1424:C:C6	2.37	0.59
1:AA:865:A:C2	1:AA:918:A:H4'	2.37	0.59
31:BA:1179:C:H2'	31:BA:1180:C:H5''	1.84	0.59
1:AA:1320:C:O2'	19:AS:73:GLU:HG2	2.03	0.59
31:BA:2873:A:C2	43:BR:6:SER:HB2	2.35	0.59
32:BB:31:C:H4'	36:BG:29:TRP:CH2	2.38	0.59
25:B3:19:GLN:NE2	25:B3:52:HIS:CE1	2.70	0.59
31:DA:1171:G:H3'	31:DA:1173:G:O4'	2.03	0.59
2:CB:67:THR:O	2:CB:68:ILE:HD12	2.02	0.59
2:CB:102:LEU:HD12	2:CB:102:LEU:N	2.17	0.59
10:CJ:34:VAL:CG2	10:CJ:74:ILE:HG22	2.32	0.59
31:BA:2751:G:H3'	31:BA:2752:C:H6	1.68	0.59
31:BA:34:C:O2'	31:BA:35:G:OP1	2.20	0.59
6:AF:79:LEU:O	6:AF:85:VAL:HG11	2.02	0.59
38:BI:56:LYS:HA	38:BI:59:ALA:HB3	1.83	0.59
1:CA:830:G:H2'	1:CA:831:U:H6	1.66	0.59
31:BA:1688:U:O2	31:BA:1700:A:H5''	2.01	0.59
31:DA:1164:G:H2'	31:DA:1165:U:C6	2.37	0.59
4:CD:17:VAL:HG11	4:CD:197:PRO:CB	2.32	0.59
15:CO:54:ARG:HG2	15:CO:58:MET:HE1	1.84	0.59
1:CA:1355:G:H2'	1:CA:1356:G:C8	2.37	0.59
31:DA:573:G:O2'	31:DA:574:C:H3'	2.02	0.59
44:BS:85:VAL:HG23	44:BS:106:ARG:HB2	1.83	0.59
47:BV:61:VAL:O	47:BV:62:LEU:HD23	2.02	0.59
1:AA:357:G:C2'	1:AA:358:U:H5'	2.32	0.59
44:DS:89:ARG:HE	44:DS:90:GLY:H	1.48	0.59
31:DA:993:G:C5'	47:DV:75:PHE:CZ	2.85	0.59
28:D6:19:ARG:O	28:D6:20:ASN:O	2.21	0.59
4:CD:128:VAL:O	4:CD:130:GLY:N	2.35	0.59
31:BA:2494:G:C2'	31:BA:2495:G:O5'	2.50	0.59
39:DN:27:ALA:CB	39:DN:106:MET:HE2	2.33	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:BA:287:C:C2	31:BA:288:C:C6	2.90	0.59
1:CA:1085:U:C6	1:CA:1094:G:N1	2.70	0.59
31:BA:271(D):G:C6	31:BA:271(E):U:C4	2.91	0.59
31:BA:1332:G:N2	31:BA:1610:A:C8	2.70	0.59
33:DD:211:ARG:O	33:DD:215:LEU:HG	2.02	0.59
31:BA:542:C:C2'	31:BA:543:C:OP1	2.50	0.59
1:AA:1321:C:C3'	1:AA:1322:C:H5''	2.33	0.59
1:CA:1320:C:O2'	19:CS:73:GLU:HG2	2.02	0.59
31:DA:1132:A:H1'	39:DN:73:THR:HG21	1.85	0.59
31:DA:2753:A:O2'	31:DA:2754:U:O5'	2.19	0.59
31:BA:528:A:H2	31:BA:2043:C:H5'	1.66	0.59
46:BU:12:ARG:HA	46:BU:15:LYS:HG2	1.82	0.59
49:DX:40:LYS:CG	49:DX:41:ASN:N	2.66	0.59
1:CA:709:G:H2'	1:CA:710:G:H8	1.67	0.59
47:BV:38:LEU:HD22	47:BV:58:VAL:HB	1.84	0.59
36:DG:114:ILE:HB	36:DG:117:PHE:HB2	1.85	0.59
1:CA:186:C:H2'	1:CA:187:C:H6	1.66	0.59
39:DN:96:GLU:O	39:DN:100:GLU:HG3	2.02	0.59
39:DN:74:ARG:NH2	39:DN:101:HIS:HB3	2.17	0.59
1:CA:236:G:C5	1:CA:237:C:C5	2.91	0.59
1:AA:797:C:OP1	11:AK:124:LYS:HE2	2.02	0.59
4:AD:150:GLU:HG2	4:AD:151:LYS:H	1.67	0.59
33:DD:35:LYS:CG	33:DD:64:ILE:N	2.64	0.59
33:DD:35:LYS:HZ3	33:DD:104:TYR:CB	2.14	0.59
47:DV:51:VAL:HG12	47:DV:52:VAL:H	1.66	0.59
1:CA:360:A:O2'	1:CA:361:G:H5'	2.02	0.59
35:BF:203:GLN:O	35:BF:206:ILE:O	2.20	0.59
4:CD:12:CYS:CA	4:CD:19:LEU:HD11	2.32	0.59
31:DA:7:G:H1	31:DA:2896:C:H42	1.51	0.59
45:BT:33:LYS:NZ	45:BT:33:LYS:HA	2.17	0.59
1:CA:963:G:H21	10:CJ:55:LYS:CD	2.14	0.59
31:DA:90:U:H1'	31:DA:92:A:H5''	1.85	0.59
24:B2:18:PRO:O	24:B2:19:VAL:C	2.39	0.59
31:DA:1385:G:H4'	31:DA:1386:C:OP1	2.01	0.59
3:CC:104:GLN:NE2	3:CC:105:GLU:H	2.00	0.59
1:CA:1342:C:H1'	9:CI:124:GLN:NE2	2.17	0.59
33:DD:3:VAL:HG13	33:DD:17:THR:HB	1.84	0.59
32:DB:52:A:O2'	32:DB:53:A:H8	1.84	0.59
10:CJ:49:VAL:HG11	14:CN:41:ARG:O	2.01	0.59
5:CE:78:HIS:HE1	5:CE:143:ARG:H	1.50	0.59
1:AA:1238:A:N6	1:AA:1299:A:N6	2.51	0.59
1:AA:114:U:H2'	1:AA:115:G:C8	2.37	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:CA:605:U:H2'	1:CA:606:G:C8	2.37	0.59
31:DA:414:C:O2'	31:DA:415:A:H5'	2.02	0.59
46:DU:49:HIS:HA	46:DU:52:ARG:HB2	1.85	0.59
42:DQ:109:VAL:HG13	42:DQ:113:GLN:OE1	2.01	0.59
36:DG:41:GLN:HG2	36:DG:155:MET:HB3	1.84	0.59
1:AA:1325:C:H4'	21:AU:17:THR:HG21	1.85	0.59
51:BZ:12:GLY:O	51:BZ:13:GLU:HG3	2.02	0.59
17:AQ:65:ILE:H	17:AQ:65:ILE:HD12	1.66	0.59
20:CT:86:ARG:O	20:CT:90:GLN:HG3	2.03	0.59
31:BA:1259:G:H2'	31:BA:1260:G:C8	2.37	0.59
32:DB:21:G:O2'	32:DB:22:U:P	2.61	0.59
46:BU:87:GLY:HA3	47:BV:52:VAL:HG13	1.84	0.59
33:BD:35:LYS:CA	33:BD:64:ILE:HG22	2.32	0.59
50:DY:27:VAL:CB	50:DY:29:GLU:OE1	2.50	0.59
24:D2:34:GLU:O	24:D2:36:ARG:N	2.35	0.59
46:BU:47:TYR:HA	46:BU:50:ARG:NH2	2.18	0.59
39:DN:2:LYS:HD3	46:DU:95:LEU:HD21	1.83	0.59
49:BX:34:ALA:O	49:BX:36:LYS:HE3	2.02	0.59
1:CA:675:A:H2'	1:CA:676:A:H8	1.67	0.59
44:BS:16:ASN:C	44:BS:17:ARG:O	2.39	0.59
31:BA:2404:C:H2'	31:BA:2405:G:H5''	1.85	0.59
15:AO:82:ILE:HG13	15:AO:88:ARG:HG3	1.84	0.59
4:CD:33:MET:CE	4:CD:37:PRO:HA	2.32	0.59
12:CL:47:LYS:HB3	12:CL:48:PRO:CD	2.28	0.59
31:BA:676:A:H8	31:BA:2069:G:N2	1.92	0.59
38:DI:133:HIS:CG	38:DI:134:PRO:HD2	2.37	0.59
49:DX:83:VAL:O	49:DX:84:ALA:CB	2.49	0.59
49:DX:83:VAL:O	49:DX:84:ALA:HB3	2.02	0.59
31:BA:280:C:H2'	31:BA:281:G:O5'	2.03	0.59
1:AA:1493:A:O2'	31:BA:1913:A:N6	2.35	0.59
31:BA:1952:A:C6	40:BO:22:ILE:HD11	2.37	0.59
4:AD:138:TYR:CD2	4:AD:138:TYR:C	2.74	0.59
31:DA:322:A:C5	31:DA:340:A:C2	2.91	0.59
38:DI:37:VAL:HG12	38:DI:38:LEU:N	2.18	0.59
12:CL:119:LYS:HB2	12:CL:120:TYR:HD1	1.66	0.59
31:DA:708:C:H42	31:DA:723:G:H1	1.49	0.59
31:DA:1510:G:H2'	31:DA:1511:C:C6	2.37	0.59
20:AT:63:ILE:HD13	20:AT:80:ARG:HB2	1.83	0.59
1:AA:646:U:H2'	1:AA:647:C:H6	1.67	0.59
1:AA:1355:G:H2'	1:AA:1356:G:H8	1.67	0.59
5:CE:33:VAL:HG12	5:CE:34:VAL:H	1.68	0.59
37:DH:149:ARG:HA	37:DH:162:ILE:HG13	1.84	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:CT:61:SER:O	20:CT:65:LYS:HG3	2.02	0.59
42:BQ:57:HIS:CE1	42:BQ:116:GLU:HB3	2.38	0.59
1:CA:307:C:C5	1:CA:308:C:C5	2.90	0.59
33:BD:20:ASP:OD2	33:BD:22:SER:HB3	2.02	0.59
43:DR:50:HIS:CE1	43:DR:54:LEU:HD11	2.38	0.59
40:DO:90:GLN:O	40:DO:91:LEU:HB2	2.02	0.59
2:AB:185:ILE:HG22	2:AB:199:TYR:CB	2.17	0.59
47:BV:52:VAL:O	47:BV:53:GLU:HB3	2.02	0.59
33:DD:35:LYS:CA	33:DD:64:ILE:HG22	2.32	0.59
46:DU:47:TYR:HA	46:DU:50:ARG:HH22	1.67	0.59
50:DY:29:GLU:N	50:DY:29:GLU:OE1	2.36	0.59
4:AD:126:ILE:HG22	4:AD:127:THR:H	1.67	0.59
30:D8:59:LYS:CB	30:D8:59:LYS:NZ	2.53	0.59
31:DA:622:G:O2'	31:DA:623:G:H5'	2.03	0.59
31:DA:1407:C:O2	31:DA:1407:C:H2'	2.02	0.59
49:DX:60:ARG:HB2	49:DX:74:PRO:HD2	1.84	0.59
49:DX:88:LYS:O	49:DX:89:ILE:HB	2.01	0.59
45:BT:66:VAL:HA	45:BT:71:GLY:HA2	1.85	0.59
24:B2:25:VAL:C	24:B2:27:GLU:H	2.06	0.59
49:BX:32:PRO:HG3	49:BX:72:LYS:HD2	1.84	0.59
49:BX:59:VAL:HG23	49:BX:60:ARG:H	1.67	0.59
31:BA:1210:A:H8	31:BA:1210:A:H5'	1.61	0.59
36:BG:55:LYS:HG2	36:BG:58:GLN:HE21	1.68	0.59
27:D5:51:TYR:HD2	27:D5:52:TYR:CZ	2.21	0.59
31:BA:626:U:O2	41:BP:105:LEU:HG	2.02	0.59
31:DA:284:U:H2'	31:DA:285:C:H6	1.67	0.59
50:BY:35:TYR:CE2	50:BY:69:ALA:HB3	2.37	0.59
9:CI:4:TYR:HA	9:CI:88:TYR:CE1	2.37	0.59
31:DA:2036:C:C6	31:DA:2036:C:H5'	2.31	0.59
44:DS:74:ALA:HB1	44:DS:103:GLU:CB	2.33	0.59
1:CA:189(K):U:H2'	1:CA:189(L):G:C8	2.37	0.59
31:BA:529:A:H62	31:BA:2041:U:H3	1.51	0.59
31:BA:272(J):C:C2'	31:BA:274:G:OP1	2.49	0.59
31:DA:2252:G:H2'	31:DA:2253:G:H8	1.66	0.59
6:CF:100:ASN:O	18:CR:28:GLU:HG2	2.02	0.59
37:BH:127:GLU:OE1	37:BH:127:GLU:HA	2.03	0.59
20:AT:97:ALA:O	20:AT:99:LEU:N	2.33	0.59
43:BR:50:HIS:CE1	43:BR:54:LEU:HD11	2.37	0.59
1:AA:199:G:O2'	1:AA:200:G:H5'	2.01	0.59
34:DE:134:ILE:HG12	34:DE:134:ILE:O	2.01	0.59
31:BA:2884:U:H2'	31:BA:2885:C:H5'	1.84	0.59
42:DQ:139:GLU:O	42:DQ:139:GLU:HG2	2.03	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:CA:692:U:H2'	1:CA:694:A:OP2	2.02	0.59
1:AA:152:A:N6	1:AA:170:U:C2	2.70	0.59
47:DV:72:VAL:HG12	47:DV:73:SER:N	2.16	0.59
49:DX:60:ARG:HG2	49:DX:72:LYS:H	1.66	0.59
47:BV:72:VAL:HG12	47:BV:73:SER:N	2.16	0.59
47:BV:66:ARG:NH1	47:BV:94:LEU:HD11	2.17	0.59
31:DA:2759:G:C5'	31:DA:2759:G:C8	2.82	0.59
47:DV:19:LYS:CG	47:DV:20:LEU:H	2.13	0.59
31:BA:143(A):C:H2'	31:BA:143(A):C:O2	2.02	0.59
2:AB:84:GLU:OE1	2:AB:219:VAL:HB	2.02	0.59
31:BA:1654:A:OP1	43:BR:3:HIS:CB	2.48	0.59
31:DA:806:C:OP2	41:DP:39:LYS:CG	2.51	0.59
47:DV:80:GLN:C	47:DV:80:GLN:OE1	2.41	0.59
1:AA:428:G:C4'	1:AA:429:U:O5'	2.50	0.59
39:BN:128:HIS:CD2	39:BN:131:GLN:CB	2.84	0.59
39:DN:91:LEU:HA	39:DN:95:PRO:CB	2.29	0.59
31:BA:2606:C:C2'	31:BA:2607:G:H5'	2.32	0.59
43:BR:87:TYR:HE1	43:BR:117:VAL:HG12	1.67	0.59
31:BA:1047:G:H2'	31:BA:1110:G:N2	2.17	0.59
23:D1:13:ILE:O	23:D1:14:VAL:HB	2.01	0.59
1:CA:1201:A:H4'	1:CA:1202:G:O5'	2.03	0.59
31:BA:774:A:C2	31:BA:787:U:O2'	2.50	0.59
1:CA:1423:G:H2'	1:CA:1424:C:H6	1.67	0.59
1:CA:90:U:O2'	1:CA:91:C:C5	2.56	0.59
1:CA:775:G:O2'	1:CA:776:G:H5'	2.03	0.59
36:DG:19:LEU:HD13	36:DG:32:PRO:HG2	1.84	0.59
31:DA:529:A:H62	31:DA:2041:U:H3	1.51	0.59
31:BA:322:A:H5'	31:BA:340:A:H1'	1.83	0.59
35:BF:80:ALA:O	35:BF:83:PHE:HB2	2.03	0.59
10:AJ:3:LYS:HD2	10:AJ:77:PRO:CD	2.33	0.59
1:AA:826:C:H2'	1:AA:827:U:H6	1.67	0.59
35:BF:128:ALA:O	35:BF:142:TRP:NE1	2.35	0.59
1:CA:1497:G:H2'	1:CA:1498:U:H5'	1.84	0.59
5:CE:45:PHE:CD2	5:CE:47:LYS:HD2	2.38	0.59
41:BP:62:LEU:N	41:BP:62:LEU:CD2	2.50	0.59
47:BV:51:VAL:HG12	47:BV:52:VAL:N	2.17	0.59
39:DN:13:TRP:CZ3	39:DN:130:HIS:CE1	2.91	0.59
30:B8:13:ARG:HD2	41:BP:61:ARG:HD3	1.84	0.59
2:CB:204:ASN:HD22	2:CB:206:ASP:H	1.47	0.59
24:B2:32:LEU:C	24:B2:32:LEU:HD12	2.22	0.59
31:BA:1405:U:H2'	31:BA:1406:U:H6	1.66	0.59
23:D1:89:GLU:O	23:D1:93:GLU:N	2.36	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
35:BF:46:ARG:NH1	35:BF:46:ARG:HG2	2.04	0.59
36:DG:76:SER:HB3	36:DG:84:LYS:H	1.67	0.59
31:DA:2849:U:O4	45:DT:23:ARG:NH2	2.36	0.59
31:DA:8:A:H2'	31:DA:9:U:C6	2.37	0.59
41:DP:97:PRO:O	41:DP:98:GLU:CB	2.46	0.59
1:AA:537:G:H2'	1:AA:538:G:H8	1.67	0.59
49:DX:85:PRO:O	49:DX:86:GLY:C	2.40	0.59
31:DA:2476:A:N3	31:DA:2477:C:H5'	2.18	0.59
1:CA:328:C:C2'	1:CA:328:C:O2	2.50	0.59
31:BA:1396:U:C2'	31:BA:1396:U:O2	2.51	0.59
36:DG:55:LYS:HG2	36:DG:58:GLN:HE21	1.68	0.59
31:BA:543:C:H6	31:BA:547:A:N7	1.99	0.59
23:D1:37:ILE:HG21	31:DA:2080:G:OP1	2.03	0.59
36:DG:31:VAL:HG13	36:DG:32:PRO:HD2	1.83	0.59
31:DA:323:G:HO2'	31:DA:1205:U:H3	1.50	0.59
44:DS:44:LYS:O	44:DS:46:VAL:HG23	2.03	0.59
22:B0:18:ALA:HB1	31:BA:2271:G:OP1	2.03	0.59
41:BP:107:LYS:O	41:BP:109:GLY:N	2.36	0.59
49:DX:41:ASN:O	49:DX:45:THR:HG23	2.01	0.59
33:DD:72:LYS:NZ	33:DD:75:ILE:HD12	2.17	0.59
31:DA:2328:A:H2'	31:DA:2329:G:C8	2.37	0.59
46:DU:12:ARG:HA	46:DU:15:LYS:HG2	1.82	0.59
34:BE:176:ILE:HG22	34:BE:179:GLU:H	1.67	0.59
39:DN:33:LEU:HD12	39:DN:38:HIS:CE1	2.38	0.59
1:CA:186:C:H2'	1:CA:187:C:C6	2.37	0.59
35:BF:28:ILE:O	35:BF:28:ILE:HD12	2.03	0.59
35:BF:28:ILE:HG21	35:BF:116:ASP:HB2	1.83	0.59
40:DO:18:LYS:HB2	40:DO:45:GLU:HG2	1.84	0.59
51:DZ:149:SER:HB2	51:DZ:172:ALA:O	2.02	0.59
2:AB:105:PHE:O	2:AB:107:THR:N	2.36	0.59
31:DA:192:C:H2'	31:DA:193:U:H5'	1.85	0.59
1:AA:758:G:H8	1:AA:758:G:O5'	1.85	0.59
31:DA:2631:G:N2	34:DE:61:ARG:HH12	2.01	0.59
34:DE:60:ASN:N	34:DE:60:ASN:HD22	2.00	0.59
50:BY:96:ILE:CG1	50:BY:99:CYS:SG	2.91	0.59
47:BV:66:ARG:HD2	47:BV:67:GLY:CA	2.33	0.59
45:BT:91:ARG:CB	45:BT:116:ALA:HA	2.31	0.59
16:CP:21:VAL:HG23	16:CP:33:ILE:HB	1.84	0.59
31:BA:2334:G:H5'	44:BS:13:ARG:HB3	1.84	0.59
41:BP:23:PRO:O	41:BP:33:ARG:NE	2.27	0.59
23:B1:65:SER:H	23:B1:67:ILE:HD12	1.66	0.59
33:DD:43:ARG:HH11	33:DD:44:ASN:CG	2.06	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:BA:2662:A:H4'	31:BA:2663:G:O4'	2.03	0.59
31:DA:626:U:O2	41:DP:105:LEU:HG	2.01	0.59
39:BN:57:ALA:O	39:BN:58:ASP:C	2.40	0.59
41:BP:85:LEU:HD22	41:BP:85:LEU:H	1.67	0.59
31:BA:2876:G:H4'	45:BT:3:ARG:HE	1.68	0.59
31:BA:1025:G:OP1	31:BA:1025:G:H8	1.85	0.59
43:DR:12:ARG:HH11	43:DR:12:ARG:HG3	1.68	0.59
46:DU:31:SER:C	46:DU:33:ARG:H	2.06	0.59
1:AA:963:G:H21	10:AJ:55:LYS:CD	2.15	0.59
24:B2:16:LEU:H	24:B2:18:PRO:HD2	1.67	0.59
23:B1:25:LYS:O	23:B1:26:ARG:HB3	2.02	0.59
20:CT:71:THR:HG22	20:CT:72:LEU:HG	1.84	0.59
9:AI:125:TYR:HD2	9:AI:126:SER:N	2.01	0.59
32:DB:52:A:HO2'	32:DB:53:A:H8	1.47	0.59
44:BS:44:LYS:O	44:BS:46:VAL:HG23	2.03	0.59
1:AA:1301:U:H3'	1:AA:1302:U:H5''	1.84	0.59
1:AA:1372:U:OP1	9:AI:72:GLY:N	2.36	0.59
1:AA:657:G:C2	1:AA:750:G:C5	2.90	0.59
33:DD:221:VAL:HG22	33:DD:226:MET:HE2	1.84	0.59
31:BA:2753:A:O2'	31:BA:2754:U:O5'	2.20	0.59
45:BT:78:LEU:O	45:BT:79:HIS:CG	2.55	0.59
31:DA:836:G:C5	31:DA:837:C:C4	2.90	0.59
8:CH:64:LYS:HG2	8:CH:79:VAL:HG21	1.84	0.59
31:BA:534:U:O2'	46:BU:49:HIS:HD2	1.85	0.59
50:BY:2:ARG:C	50:BY:4:LYS:H	2.06	0.59
1:AA:118:U:C5	1:AA:288:A:C6	2.90	0.59
31:BA:1015:G:C2'	31:BA:1016:G:H5'	2.33	0.59
31:BA:1266:G:O5'	48:BW:15:ARG:NH2	2.34	0.59
13:AM:46:LYS:HG3	13:AM:47:ASP:H	1.68	0.59
41:BP:75:ILE:N	41:BP:75:ILE:HD13	2.18	0.59
45:BT:53:ARG:O	45:BT:53:ARG:HG2	2.02	0.59
31:DA:2880:C:H1'	43:DR:92:GLY:O	2.03	0.59
31:DA:2880:C:O2'	43:DR:90:ARG:HD3	2.03	0.59
31:BA:2690:C:OP2	43:BR:14:SER:HB3	2.03	0.59
46:BU:83:LEU:HB3	46:BU:88:ILE:HD11	1.84	0.59
33:DD:24:ILE:O	33:DD:24:ILE:HG23	2.03	0.59
44:DS:28:VAL:HG12	44:DS:29:PHE:N	2.17	0.59
41:BP:51:PHE:CB	41:BP:52:GLU:HG2	2.31	0.59
49:BX:25:LYS:CG	49:BX:26:TYR:N	2.50	0.59
31:DA:1784:A:H4'	31:DA:1785:A:H5''	1.85	0.59
31:DA:691:C:O2'	31:DA:692:C:H5'	2.03	0.59
30:D8:16:ILE:HD11	30:D8:57:ARG:CG	2.27	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:CA:509:A:HO2'	1:CA:510:A:C5'	2.16	0.59
1:CA:537:G:OP1	12:CL:113:ARG:NH2	2.36	0.59
39:BN:65:LYS:HD2	39:BN:67:LEU:HG	1.85	0.59
4:AD:18:LYS:HE3	4:AD:31:CYS:SG	2.42	0.59
39:BN:134:ARG:O	39:BN:134:ARG:HG3	2.02	0.59
1:CA:877:C:H5''	8:CH:88:LYS:CD	2.32	0.59
1:AA:1118:C:H1'	1:AA:1179:A:C5	2.38	0.59
31:DA:2476:A:C2	31:DA:2477:C:C6	2.91	0.59
31:DA:1478:G:C2'	31:DA:1479:G:H5'	2.33	0.59
1:CA:977:A:C2'	1:CA:978:A:H5'	2.33	0.59
50:DY:45:VAL:HG13	50:DY:62:GLU:CB	2.32	0.59
13:AM:15:VAL:O	13:AM:19:LEU:HD23	2.03	0.59
28:B6:15:GLU:OE2	28:B6:41:PRO:HG3	2.03	0.59
31:BA:861:A:C2	31:BA:917:A:C4	2.91	0.59
18:AR:62:GLU:HA	18:AR:65:ILE:CD1	2.33	0.59
17:AQ:5:VAL:CG1	17:AQ:6:LEU:N	2.66	0.59
31:DA:1049:C:H2'	31:DA:1049:C:O2	2.03	0.59
31:BA:598:G:H5'	41:BP:15:ARG:HD2	1.83	0.59
31:DA:151:C:C2'	31:DA:152:G:H5'	2.33	0.59
1:CA:41:G:H2'	1:CA:42:G:H8	1.68	0.59
35:DF:124:LEU:HD12	35:DF:125:LEU:N	2.17	0.59
31:BA:1163:G:O2'	31:BA:1164:G:H5'	2.02	0.59
20:CT:14:LYS:O	20:CT:18:GLN:HG3	2.03	0.59
7:AG:69:VAL:O	7:AG:138:LYS:HG3	2.03	0.59
31:DA:882:G:H1	31:DA:894:C:H42	1.49	0.59
7:CG:69:VAL:O	7:CG:138:LYS:HG3	2.03	0.59
34:BE:24:THR:HG23	34:BE:184:VAL:HG23	1.84	0.59
8:CH:110:ALA:O	8:CH:112:LEU:HD23	2.03	0.59
48:DW:86:LEU:C	48:DW:86:LEU:HD12	2.23	0.59
1:CA:473:G:H5'	16:CP:81:ARG:HG3	1.83	0.59
39:DN:23:LEU:HD13	39:DN:98:VAL:HG12	1.84	0.59
31:BA:2335:A:C8	31:BA:2337:G:C5	2.90	0.59
1:AA:1150:U:O4	1:AA:1151:A:N6	2.35	0.59
27:B5:51:TYR:HD2	27:B5:52:TYR:CE2	2.19	0.58
31:DA:662:G:OP1	41:DP:18:ARG:NH1	2.36	0.58
2:AB:163:PHE:HA	2:AB:185:ILE:HG12	1.84	0.58
46:BU:104:GLN:HB2	47:BV:43:GLU:CD	2.24	0.58
32:DB:8:U:C5'	32:DB:8:U:H6	2.15	0.58
44:DS:26:LEU:HD22	44:DS:87:PHE:CE1	2.38	0.58
39:DN:128:HIS:HE1	39:DN:134:ARG:HD2	1.68	0.58
30:D8:23:VAL:HG12	30:D8:46:ARG:HH11	1.67	0.58
31:DA:195:A:C8	31:DA:197:A:OP1	2.56	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
24:D2:26:ARG:CD	24:D2:29:LYS:HE2	2.33	0.58
49:DX:37:THR:HG23	49:DX:54:VAL:CG2	2.33	0.58
31:BA:2496:C:P	42:BQ:81:VAL:HG13	2.42	0.58
27:D5:55:ARG:HD3	27:D5:56:LYS:H	1.68	0.58
31:BA:2636:U:O2'	31:BA:2637:U:H5'	2.02	0.58
31:DA:1141:U:OP2	39:DN:63:THR:OG1	2.11	0.58
45:DT:28:VAL:HG22	45:DT:46:GLU:HA	1.85	0.58
42:BQ:141:GLN:HG3	51:BZ:72:ARG:HD3	1.83	0.58
1:AA:1095:U:H2'	1:AA:1096:C:C6	2.37	0.58
18:CR:58:LEU:HB3	18:CR:62:GLU:HB2	1.85	0.58
13:AM:66:LEU:HD12	13:AM:66:LEU:N	2.16	0.58
3:CC:43:LEU:O	3:CC:47:LEU:HB3	2.02	0.58
45:DT:17:THR:O	45:DT:18:ASP:CB	2.50	0.58
1:AA:1003:G:C2'	1:AA:1004:A:H4'	2.29	0.58
31:BA:2807:G:H22	31:BA:2892:A:N6	2.01	0.58
32:BB:30:C:H2'	32:BB:31:C:H5'	1.85	0.58
31:DA:107:C:C2	31:DA:108:U:C5	2.90	0.58
3:CC:18:TRP:HD1	14:CN:51:GLY:O	1.86	0.58
31:BA:2781:A:C8	31:BA:2781:A:H5''	2.37	0.58
1:CA:191:G:C4	20:CT:105:SER:HB3	2.37	0.58
4:CD:135:LEU:HB2	4:CD:138:TYR:HB2	1.83	0.58
1:AA:1239:A:H62	1:AA:1299:A:N6	2.01	0.58
1:CA:658:G:C4	1:CA:659:U:C5	2.91	0.58
29:D7:39:ARG:NH2	31:DA:468:G:N7	2.44	0.58
5:CE:76:ILE:HG12	5:CE:77:PRO:HD2	1.84	0.58
1:CA:1481:U:H2'	1:CA:1482:G:C8	2.38	0.58
34:DE:176:ILE:HG22	34:DE:176:ILE:O	2.02	0.58
5:AE:6:PHE:HB2	5:AE:34:VAL:HG13	1.85	0.58
31:BA:1865:G:N2	31:BA:1877:A:C8	2.71	0.58
36:BG:114:ILE:HB	36:BG:117:PHE:HB2	1.85	0.58
2:AB:24:TRP:CG	2:AB:25:ASN:N	2.70	0.58
42:BQ:43:THR:OG1	42:BQ:46:GLN:HG3	2.04	0.58
5:CE:96:PRO:HA	5:CE:117:ASP:OD2	2.02	0.58
13:CM:95:GLY:HA2	13:CM:110:ARG:HH21	1.68	0.58
3:AC:125:GLU:HA	3:AC:191:THR:HG22	1.84	0.58
37:DH:77:LYS:HA	37:DH:80:SER:HB2	1.85	0.58
31:BA:2875:C:H4'	45:BT:5:ALA:HB2	1.83	0.58
31:BA:2233:U:H2'	31:BA:2234:G:C8	2.38	0.58
31:BA:1353:A:H5''	33:BD:38:LYS:HZ1	1.68	0.58
1:CA:791:G:C6	1:CA:792:A:N7	2.71	0.58
46:DU:64:ARG:NH2	46:DU:64:ARG:CA	2.52	0.58
31:DA:2394:C:P	41:DP:63:PRO:HD2	2.43	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
24:D2:26:ARG:NE	24:D2:29:LYS:HE2	2.18	0.58
49:DX:30:VAL:HG23	49:DX:76:ARG:HA	1.84	0.58
49:DX:77:LYS:CD	49:DX:78:LYS:HG3	2.32	0.58
32:BB:21:G:O6	32:BB:63:G:C5	2.55	0.58
49:BX:85:PRO:O	49:BX:86:GLY:C	2.42	0.58
31:BA:943:U:OP2	41:BP:38:GLN:CD	2.41	0.58
23:D1:51:VAL:HG21	23:D1:67:ILE:HG23	1.84	0.58
31:DA:2636:U:O2'	31:DA:2637:U:H5'	2.03	0.58
34:DE:95:ILE:N	34:DE:95:ILE:HD12	2.18	0.58
39:BN:59:LYS:O	39:BN:60:ILE:C	2.41	0.58
4:AD:33:MET:CE	4:AD:37:PRO:HA	2.32	0.58
45:BT:33:LYS:NZ	45:BT:33:LYS:H	2.00	0.58
1:AA:1096:C:H2'	1:AA:1097:C:C6	2.38	0.58
5:AE:101:ILE:CD1	5:AE:119:LEU:HD23	2.33	0.58
31:DA:547:A:H8	31:DA:549:G:C6	2.21	0.58
34:DE:76:ARG:O	34:DE:77:ILE:HG22	2.03	0.58
44:BS:74:ALA:HB1	44:BS:103:GLU:CB	2.33	0.58
1:CA:78:G:H22	1:CA:91:C:H42	1.51	0.58
13:CM:106:ASN:O	13:CM:107:ALA:HB3	2.03	0.58
4:CD:98:GLU:HG2	4:CD:194:LEU:HD11	1.85	0.58
42:BQ:30:GLY:HA2	42:BQ:107:ALA:HB2	1.86	0.58
36:BG:15:VAL:HG22	36:BG:175:LEU:HB3	1.85	0.58
31:DA:2335:A:C8	31:DA:2337:G:N7	2.71	0.58
31:DA:34:C:H3'	31:DA:34:C:H6	1.67	0.58
31:BA:2252:G:H2'	31:BA:2253:G:H8	1.68	0.58
31:BA:768:G:O2'	31:BA:1379:A:N6	2.37	0.58
31:DA:534:U:O2'	46:DU:49:HIS:CD2	2.56	0.58
34:BE:151:TYR:HD2	34:BE:154:LYS:NZ	2.01	0.58
31:DA:2577:A:H5''	31:DA:2578:G:H5'	1.85	0.58
31:DA:2536:G:C6	31:DA:2537:U:C4	2.90	0.58
8:AH:44:PHE:CD1	8:AH:80:ILE:HG12	2.38	0.58
38:BI:102:SER:HA	38:BI:107:VAL:O	2.02	0.58
13:AM:32:GLU:OE2	13:AM:64:TRP:CH2	2.56	0.58
11:CK:105:VAL:HG23	11:CK:105:VAL:O	2.03	0.58
38:DI:94:ALA:HB1	38:DI:114:LEU:HD12	1.85	0.58
31:BA:1496:A:C8	31:BA:1498:C:N3	2.71	0.58
32:DB:48:A:H4'	44:DS:95:HIS:CD2	2.38	0.58
34:DE:34:VAL:HG22	34:DE:48:GLN:NE2	2.13	0.58
50:BY:96:ILE:HG13	50:BY:99:CYS:SG	2.43	0.58
24:D2:30:ARG:NH2	49:DX:11:PRO:HG3	2.18	0.58
44:DS:33:LYS:HB3	44:DS:34:HIS:CD2	2.38	0.58
33:BD:270:ILE:C	33:BD:271:ILE:HG13	2.23	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:BA:621:A:H2'	31:BA:622:G:H5'	1.85	0.58
31:DA:1142:U:H5''	31:DA:1142(A):A:H5''	1.85	0.58
35:DF:203:GLN:O	35:DF:206:ILE:O	2.21	0.58
34:DE:37:ARG:O	34:DE:45:THR:HA	2.03	0.58
41:BP:105:LEU:HD12	41:BP:105:LEU:N	2.18	0.58
38:DI:8:PRO:HA	38:DI:13:GLY:O	2.03	0.58
24:D2:49:LYS:HB3	24:D2:53:LEU:HD23	1.85	0.58
39:BN:47:ALA:HB2	39:BN:112:LEU:CD1	2.31	0.58
37:DH:156:ALA:C	37:DH:158:HIS:H	2.06	0.58
9:CI:18:PHE:HB3	9:CI:20:ARG:NH1	2.19	0.58
3:CC:150:LYS:HE2	3:CC:152:ILE:HD11	1.85	0.58
31:BA:2468:G:HO2'	31:BA:2476:A:H8	1.51	0.58
24:B2:14:ARG:CZ	24:B2:57:ILE:CG2	2.80	0.58
1:AA:1342:C:H1'	9:AI:124:GLN:HE22	1.69	0.58
25:B3:43:ILE:O	25:B3:47:VAL:HG23	2.03	0.58
31:BA:2887:U:H2'	31:BA:2888:C:C6	2.37	0.58
1:AA:78:G:H22	1:AA:91:C:H42	1.51	0.58
19:CS:78:ARG:HB2	19:CS:81:ARG:HH11	1.68	0.58
1:CA:370:C:H2'	1:CA:371:G:H8	1.66	0.58
20:AT:26:ASN:HB3	20:AT:71:THR:OG1	2.03	0.58
31:DA:848:G:N9	31:DA:933:A:H8	2.01	0.58
46:BU:8:VAL:HG13	46:BU:12:ARG:HG3	1.85	0.58
19:AS:63:THR:HG22	19:AS:66:MET:HE3	1.85	0.58
1:AA:189:G:C6	1:AA:189(L):G:N1	2.71	0.58
31:BA:634:C:H2'	31:BA:635:C:C6	2.39	0.58
43:BR:33:ARG:HG2	43:BR:115:GLU:HG2	1.84	0.58
6:AF:82:ARG:HB2	6:AF:85:VAL:HG23	1.85	0.58
31:BA:2572:A:N7	34:BE:144:ARG:HD2	2.18	0.58
20:AT:56:MET:CG	20:AT:88:VAL:HG21	2.33	0.58
31:BA:1164:G:H2'	31:BA:1165:U:C6	2.38	0.58
1:CA:448:A:OP2	1:CA:485:G:N2	2.33	0.58
31:BA:1866:C:H2'	31:BA:1876:A:O4'	2.02	0.58
35:BF:181:LEU:HB3	35:BF:205:ARG:HH12	1.68	0.58
12:AL:18:VAL:HG23	12:AL:19:ARG:H	1.68	0.58
31:DA:754:C:H2'	31:DA:755:C:H6	1.67	0.58
31:BA:65:C:H2'	31:BA:66:C:C6	2.39	0.58
2:CB:47:THR:HG23	2:CB:202:PRO:HG2	1.84	0.58
41:DP:92:GLU:HA	41:DP:123:LEU:HD13	1.84	0.58
31:BA:325:G:O2'	31:BA:326:G:H5'	2.03	0.58
34:DE:66:HIS:CG	34:DE:66:HIS:O	2.56	0.58
1:CA:1026:G:N3	1:CA:1026:G:H2'	2.17	0.58
34:BE:101:ARG:HD2	34:BE:169:ASN:ND2	2.18	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
45:DT:45:PHE:HE2	45:DT:63:VAL:HG22	1.67	0.58
18:AR:31:LEU:H	18:AR:31:LEU:HD23	1.67	0.58
13:AM:95:GLY:HA2	13:AM:110:ARG:HH21	1.68	0.58
31:DA:2263:C:O2'	31:DA:2264:C:H5'	2.03	0.58
33:BD:63:ARG:HH11	33:BD:63:ARG:HG3	1.68	0.58
24:D2:25:VAL:HG13	24:D2:26:ARG:CD	2.28	0.58
31:BA:607:U:OP1	35:BF:102:PRO:HA	2.03	0.58
34:DE:95:ILE:H	34:DE:95:ILE:HD12	1.68	0.58
39:DN:67:LEU:C	39:DN:69:GLN:N	2.57	0.58
31:BA:2849:U:OP2	45:BT:95:ARG:NH1	2.36	0.58
38:DI:10:GLU:O	38:DI:12:LEU:HD23	2.04	0.58
31:DA:2544:G:H1'	31:DA:2646:C:H4'	1.85	0.58
37:BH:68:THR:O	37:BH:69:ARG:C	2.42	0.58
1:CA:1074:G:C4	1:CA:1102:A:C2	2.91	0.58
1:CA:929:G:N2	1:CA:1388:C:N3	2.35	0.58
31:DA:1434:A:O2'	31:DA:1435:G:H5'	2.03	0.58
31:DA:1478:G:O2'	31:DA:1479:G:H5'	2.03	0.58
31:BA:1385:G:H4'	31:BA:1386:C:OP1	2.03	0.58
3:AC:150:LYS:HE2	3:AC:152:ILE:HD11	1.85	0.58
35:DF:63:LYS:CE	35:DF:67:GLN:HB2	2.33	0.58
18:AR:58:LEU:HB3	18:AR:62:GLU:HB2	1.85	0.58
32:DB:31:C:H4'	36:DG:29:TRP:CH2	2.38	0.58
32:BB:91:C:O2'	32:BB:92:C:H5'	2.02	0.58
37:BH:153:LYS:HB2	37:BH:154:PRO:HD3	1.85	0.58
9:CI:103:THR:HG22	9:CI:105:ASP:H	1.69	0.58
1:AA:189(K):U:H2'	1:AA:189(L):G:C8	2.38	0.58
31:DA:2101:G:C6	31:DA:2102:U:C5	2.90	0.58
10:AJ:30:SER:OG	10:AJ:81:THR:HG22	2.03	0.58
1:AA:186:C:C2	1:AA:187:C:C5	2.91	0.58
1:CA:892:A:H2'	1:CA:893:C:C6	2.39	0.58
31:BA:1810:A:H2'	31:BA:1811:G:H5'	1.85	0.58
1:AA:25:C:H2'	1:AA:26:A:C8	2.39	0.58
31:BA:2500:U:H2'	31:BA:2504:U:H5	1.68	0.58
31:DA:271(X):G:C2'	31:DA:271(Y):U:H5''	2.33	0.58
45:BT:68:TYR:O	45:BT:70:VAL:N	2.36	0.58
31:BA:1239:G:H2'	31:BA:1240:U:O4'	2.04	0.58
41:DP:75:ILE:N	41:DP:75:ILE:HD13	2.18	0.58
9:CI:97:LYS:HB3	9:CI:98:PRO:HD3	1.85	0.58
3:AC:66:VAL:HG11	3:AC:91:LEU:HD11	1.84	0.58
1:AA:808:C:P	15:AO:48:LYS:HE3	2.43	0.58
38:DI:86:THR:HG23	38:DI:122:GLU:OE2	2.03	0.58
29:B7:24:THR:HG23	29:B7:27:GLY:H	1.68	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:BA:1493:C:C4	31:BA:2206:G:O2'	2.56	0.58
31:BA:1569:A:H5'	33:BD:61:LEU:HD21	1.84	0.58
33:BD:27:THR:CG2	33:BD:83:GLU:HG2	2.17	0.58
47:DV:70:ILE:HB	47:DV:90:PRO:HB2	1.86	0.58
31:DA:2287:A:N6	31:DA:2344:U:N3	2.49	0.58
50:BY:96:ILE:H	50:BY:100:ALA:HA	1.67	0.58
31:DA:102:G:C2'	31:DA:103:A:OP2	2.50	0.58
16:CP:43:LYS:HG2	16:CP:48:TRP:CD2	2.38	0.58
36:BG:37:VAL:O	36:BG:94:LEU:HG	2.04	0.58
41:BP:71:VAL:HG12	41:BP:72:PRO:HD3	1.82	0.58
37:DH:85:LYS:NZ	37:DH:145:ALA:HA	2.18	0.58
31:BA:2657:A:H2	31:BA:2664:G:N2	1.98	0.58
1:CA:503:C:H2'	1:CA:504:C:C6	2.39	0.58
4:CD:119:GLN:O	4:CD:123:HIS:CD2	2.55	0.58
45:BT:30:VAL:HG22	45:BT:84:GLN:O	2.03	0.58
1:CA:926:G:C6	1:CA:1505:G:C6	2.91	0.58
1:AA:509:A:HO2'	1:AA:510:A:C5'	2.16	0.58
31:BA:479:A:N3	31:BA:481:G:H5''	2.18	0.58
45:DT:33:LYS:N	45:DT:33:LYS:HZ3	2.01	0.58
31:DA:2069:G:H2'	31:DA:2070:G:H5'	1.85	0.58
31:BA:271(P):C:O2'	31:BA:271(Q):G:H5'	2.04	0.58
31:BA:271(T):C:H2'	31:BA:271(T):C:O2	2.03	0.58
33:BD:8:PRO:HB3	33:BD:14:ARG:CB	2.32	0.58
28:B6:15:GLU:HG2	28:B6:18:ARG:NH1	2.18	0.58
9:CI:125:TYR:HD2	9:CI:126:SER:N	2.02	0.58
31:BA:1132:A:H1'	39:BN:73:THR:HG21	1.84	0.58
35:BF:184:TYR:CE2	35:BF:188:ARG:HD2	2.38	0.58
24:D2:15:LYS:O	24:D2:16:LEU:HB3	2.03	0.58
1:CA:78:G:H22	1:CA:91:C:N4	2.02	0.58
34:BE:120:TRP:CE3	34:BE:155:LYS:HD3	2.38	0.58
43:BR:60:LEU:O	43:BR:60:LEU:HG	2.03	0.58
1:CA:817:C:H4'	1:CA:818:G:OP1	2.02	0.58
35:DF:78:ILE:HA	35:DF:83:PHE:CD1	2.39	0.58
12:CL:40:VAL:O	12:CL:40:VAL:HG12	2.04	0.58
43:DR:38:VAL:HG12	43:DR:42:LYS:HD2	1.85	0.58
1:CA:748:C:H1'	1:CA:749:C:OP2	2.03	0.58
1:CA:271:C:H2'	1:CA:272:C:C6	2.37	0.58
31:BA:185:U:H4'	31:BA:218:A:H4'	1.85	0.58
35:BF:84:VAL:O	35:BF:85:GLY:C	2.41	0.58
1:AA:448:A:OP2	1:AA:485:G:N2	2.32	0.58
31:DA:719:C:H2'	31:DA:720:C:H6	1.68	0.58
13:AM:46:LYS:HG3	13:AM:47:ASP:N	2.17	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:AF:97:PHE:O	18:AR:31:LEU:HD23	2.04	0.58
31:DA:918:A:H5''	32:DB:98:G:O2'	2.03	0.58
11:AK:34:ASP:HB2	11:AK:35:PRO:CD	2.32	0.58
17:CQ:50:LYS:HE3	17:CQ:51:TYR:CE1	2.38	0.58
31:DA:1666:G:C2'	31:DA:1667:G:H5'	2.33	0.58
31:DA:2290:G:C2	31:DA:2343:C:O2	2.56	0.58
35:DF:128:ALA:O	35:DF:142:TRP:NE1	2.36	0.58
10:CJ:4:ILE:HG12	10:CJ:100:THR:CG2	2.33	0.58
1:CA:1316:G:H2'	1:CA:1317:C:H5''	1.85	0.58
31:BA:892:G:H2'	31:BA:893:C:O4'	2.04	0.58
31:BA:882:G:H1	31:BA:894:C:H42	1.51	0.58
31:DA:128:C:H2'	31:DA:129:C:H6	1.67	0.58
32:DB:40:U:H1'	32:DB:45:A:N6	2.19	0.58
41:DP:48:PRO:O	41:DP:51:PHE:N	2.36	0.58
31:DA:69:C:O2'	31:DA:70:G:H5'	2.04	0.58
47:BV:72:VAL:HA	47:BV:88:ARG:NH1	2.16	0.58
46:DU:92:ARG:NH2	47:DV:10:LYS:HB3	2.18	0.58
24:B2:33:MET:CG	49:BX:11:PRO:HD2	2.34	0.58
44:BS:92:TYR:HD1	44:BS:93:LYS:H	1.49	0.58
41:BP:23:PRO:CB	41:BP:33:ARG:HG3	2.24	0.58
31:BA:1777:U:C2'	31:BA:1778:U:H5'	2.33	0.58
4:CD:106:TYR:HE1	4:CD:112:VAL:O	1.87	0.58
36:DG:45:GLU:HB2	36:DG:47:LYS:HG3	1.86	0.58
27:D5:16:ARG:NH1	27:D5:17:ASP:OD1	2.37	0.58
31:DA:861:A:H2'	31:DA:862:G:O4'	2.02	0.58
4:AD:58:LEU:CD2	4:AD:62:GLN:HG2	2.33	0.58
36:BG:76:SER:HB3	36:BG:84:LYS:H	1.69	0.58
50:DY:8:LYS:HD3	50:DY:28:LYS:HZ2	1.66	0.58
51:BZ:121:HIS:ND1	51:BZ:169:GLU:OE2	2.36	0.58
31:DA:856:C:C3'	31:DA:857:C:H6	2.16	0.58
1:CA:1095:U:H2'	1:CA:1096:C:C6	2.39	0.58
31:DA:271(D):G:C6	31:DA:271(E):U:C4	2.91	0.58
31:BA:271(D):G:H1	31:BA:271(T):C:H42	1.52	0.58
34:BE:116:VAL:HG23	34:BE:122:PHE:CG	2.38	0.58
1:CA:300:A:H1'	1:CA:565:U:O2	2.04	0.58
45:BT:106:SER:O	45:BT:107:ASP:OD1	2.20	0.58
8:CH:51:VAL:HG21	8:CH:60:ARG:HG2	1.84	0.58
1:AA:1158:C:N4	1:AA:1181:G:H22	2.01	0.58
1:CA:626:U:H2'	1:CA:627:G:C8	2.38	0.58
3:AC:18:TRP:HD1	14:AN:51:GLY:O	1.86	0.58
31:DA:2781:A:H5''	31:DA:2781:A:C8	2.38	0.58
31:BA:34:C:H3'	31:BA:34:C:H6	1.68	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:CJ:30:SER:OG	10:CJ:81:THR:HG22	2.04	0.58
7:AG:153:HIS:HA	7:AG:155:ARG:NH1	2.19	0.58
31:DA:2392:A:C8	41:DP:60:MET:HG2	2.39	0.58
44:BS:24:LEU:O	44:BS:85:VAL:HG12	2.04	0.58
1:CA:1154:G:H2'	1:CA:1155:G:H8	1.67	0.58
2:CB:228:GLY:O	2:CB:230:VAL:HG13	2.03	0.58
4:CD:43:HIS:HB3	4:CD:46:LYS:HD2	1.85	0.58
51:BZ:67:LEU:N	51:BZ:67:LEU:HD12	2.19	0.58
41:BP:64:LYS:C	41:BP:66:GLY:N	2.57	0.58
47:BV:51:VAL:HG12	47:BV:52:VAL:H	1.68	0.58
33:DD:61:LEU:O	33:DD:63:ARG:NH1	2.37	0.58
33:DD:85:ASP:HB2	33:DD:92:ILE:HG13	1.85	0.58
32:DB:48:A:H2'	32:DB:49:C:C6	2.38	0.58
30:D8:25:MET:CG	41:DP:64:LYS:HB3	2.27	0.58
31:BA:102:G:C2'	31:BA:103:A:OP2	2.52	0.58
31:BA:251:A:C5'	41:BP:51:PHE:HZ	2.15	0.58
46:DU:91:ASP:OD2	46:DU:96:ALA:HB2	2.03	0.58
33:BD:44:ASN:HB3	33:BD:49:ILE:CA	2.24	0.58
31:DA:1190:G:H5'	41:DP:35:HIS:HB3	1.86	0.58
31:DA:1142(A):A:C8	31:DA:1144:G:N7	2.71	0.58
35:DF:22:ALA:CA	35:DF:26:ALA:HB2	2.34	0.58
1:CA:542:G:O2'	1:CA:543:C:H5'	2.04	0.58
23:D1:19:GLN:HG3	23:D1:44:PRO:HG3	1.85	0.58
36:BG:47:LYS:HE2	36:BG:81:LYS:HB2	1.86	0.58
30:B8:62:LEU:O	30:B8:64:TYR:N	2.36	0.58
48:DW:9:TYR:N	48:DW:102:HIS:HD2	1.97	0.58
31:DA:676:A:H8	31:DA:2069:G:N2	1.98	0.58
31:DA:2467:C:C2'	31:DA:2468:G:H5'	2.34	0.58
7:CG:153:HIS:HA	7:CG:155:ARG:NH1	2.18	0.58
31:BA:2713:A:H3'	31:BA:2714:G:C5'	2.33	0.58
1:AA:1201:A:H4'	1:AA:1202:G:O5'	2.03	0.58
1:AA:622:A:C8	1:AA:623:C:C5	2.91	0.58
18:AR:52:PRO:O	18:AR:56:THR:HG23	2.03	0.58
24:D2:15:LYS:HA	24:D2:18:PRO:HD2	1.86	0.58
42:DQ:66:ILE:O	42:DQ:66:ILE:HG13	2.04	0.58
31:DA:185:U:H4'	31:DA:218:A:H4'	1.86	0.58
31:DA:32:C:O2'	31:DA:33:U:H5'	2.03	0.58
35:DF:34:TRP:HB2	41:DP:10:PRO:O	2.04	0.58
41:DP:13:ASN:C	41:DP:13:ASN:HD22	2.05	0.58
1:AA:1418:A:C2	1:AA:1483:A:C2	2.91	0.58
31:BA:642:G:H21	31:BA:646:A:H2	1.49	0.58
31:BA:2875:C:O2'	45:BT:5:ALA:HB3	2.03	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
41:DP:75:ILE:H	41:DP:75:ILE:HD13	1.69	0.58
1:CA:522:C:H41	12:CL:53:ARG:HH22	1.51	0.58
48:BW:40:ASN:O	48:BW:41:LYS:HG2	2.04	0.58
9:AI:116:LYS:O	9:AI:118:LYS:N	2.37	0.58
8:CH:53:VAL:O	8:CH:54:ASP:HB2	2.03	0.58
38:BI:86:THR:HG23	38:BI:122:GLU:OE2	2.03	0.58
31:DA:838:C:O2'	31:DA:839:U:H5'	2.04	0.58
33:BD:176:ARG:HG2	33:BD:176:ARG:HH11	1.69	0.58
33:BD:27:THR:HG23	33:BD:28:GLU:H	1.62	0.58
39:BN:40:PRO:CA	46:BU:64:ARG:NH2	2.67	0.58
31:DA:71:A:OP2	31:DA:71:A:H3'	2.03	0.58
1:AA:1441:G:H5''	1:AA:1442:G:H5'	1.84	0.58
46:DU:104:GLN:HB2	47:DV:43:GLU:CD	2.24	0.58
4:CD:61:LYS:HD3	4:CD:62:GLN:HE21	1.67	0.58
50:BY:71:LYS:HZ3	50:BY:71:LYS:HB2	1.68	0.58
5:AE:98:THR:HG22	5:AE:99:GLY:N	2.16	0.58
42:BQ:140:ALA:CB	51:BZ:99:TYR:HB2	2.33	0.58
31:BA:1280:G:C3'	31:BA:1281:G:H5''	2.32	0.58
33:DD:197:GLY:O	33:DD:198:ASN:HB3	2.04	0.58
37:DH:40:GLU:O	37:DH:41:MET:CB	2.50	0.58
43:DR:95:THR:HA	43:DR:116:LEU:O	2.03	0.58
13:CM:61:GLU:HA	13:CM:66:LEU:HD11	1.84	0.58
1:AA:456:C:N4	1:AA:475:G:H1	2.01	0.58
31:DA:1831:G:H2'	31:DA:1832:C:C6	2.39	0.58
35:DF:160:ASN:ND2	35:DF:162:LEU:H	2.02	0.58
12:CL:62:SER:C	12:CL:64:TYR:H	2.07	0.58
37:BH:89:ILE:O	37:BH:90:LYS:CB	2.51	0.58
32:DB:30:C:H2'	32:DB:31:C:H5'	1.85	0.58
31:BA:1316:U:C2'	31:BA:1317:A:H5'	2.34	0.58
1:AA:667:G:H4'	15:AO:51:HIS:ND1	2.17	0.58
4:CD:146:ILE:HD12	4:CD:146:ILE:H	1.65	0.58
4:CD:138:TYR:C	4:CD:138:TYR:HD2	2.06	0.58
1:AA:748:C:H1'	1:AA:749:C:OP2	2.04	0.58
43:BR:33:ARG:HG2	43:BR:115:GLU:HG3	1.83	0.58
8:AH:20:TYR:HA	8:AH:65:TYR:CE2	2.39	0.58
5:CE:33:VAL:HG12	5:CE:34:VAL:N	2.18	0.58
8:CH:44:PHE:CD1	8:CH:80:ILE:HG12	2.39	0.58
31:DA:1427:A:H4'	31:DA:1428:C:O5'	2.02	0.58
19:CS:24:ALA:O	19:CS:25:LYS:HB2	2.04	0.58
12:CL:18:VAL:HG23	12:CL:19:ARG:H	1.68	0.58
4:AD:43:HIS:HB3	4:AD:46:LYS:HD2	1.85	0.58
11:CK:34:ASP:HB2	11:CK:35:PRO:CD	2.32	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:BA:1579:A:H2'	31:BA:1580:A:C8	2.38	0.58
37:DH:117:PRO:HA	37:DH:123:PHE:HE1	1.69	0.58
31:BA:614:U:O5'	31:BA:614:U:O2	2.22	0.58
27:B5:50:GLY:O	27:B5:51:TYR:HD1	1.86	0.58
28:B6:23:THR:HG21	31:BA:2419:U:H4'	1.85	0.58
46:BU:91:ASP:OD2	46:BU:96:ALA:HB2	2.02	0.58
1:AA:59:A:N3	1:AA:59:A:H2'	2.19	0.58
33:DD:80:ALA:HB2	33:DD:96:HIS:CG	2.39	0.58
39:BN:36:GLY:H	39:BN:42:TRP:HZ3	1.50	0.58
31:DA:1496:A:C8	31:DA:1577:C:O2'	2.55	0.58
39:DN:128:HIS:CD2	39:DN:131:GLN:CB	2.83	0.58
28:D6:23:THR:HG21	31:DA:2419:U:H4'	1.86	0.58
31:DA:154:G:N1	31:DA:154(A):C:N4	2.50	0.58
2:CB:189:ASP:N	2:CB:189:ASP:OD1	2.37	0.58
24:B2:46:GLN:HE21	24:B2:47:ASN:N	2.02	0.58
49:BX:37:THR:C	49:BX:38:GLU:OE1	2.41	0.58
44:DS:65:VAL:O	44:DS:67:ARG:N	2.36	0.58
35:DF:53:THR:HB	35:DF:56:GLU:OE1	2.03	0.58
2:AB:111:ARG:HH11	2:AB:111:ARG:CG	2.03	0.58
31:DA:588:U:H2'	31:DA:589:C:H6	1.69	0.58
31:BA:1141:U:H2'	39:BN:63:THR:CG2	2.34	0.58
34:DE:1:MET:O	34:DE:2:LYS:C	2.41	0.58
39:DN:17:ASP:OD2	39:DN:19:GLU:HB3	2.03	0.58
39:DN:19:GLU:HG3	39:DN:20:GLY:N	2.16	0.58
41:DP:85:LEU:H	41:DP:85:LEU:HD22	1.69	0.58
31:DA:1526:G:C6	31:DA:1527:G:C2	2.91	0.58
1:CA:1073:U:H2'	1:CA:1074:G:C8	2.39	0.58
39:BN:129:PRO:O	39:BN:130:HIS:CB	2.51	0.58
45:BT:33:LYS:NZ	45:BT:33:LYS:N	2.52	0.58
31:BA:90:U:H1'	31:BA:92:A:H5''	1.84	0.58
31:BA:2467:C:C2'	31:BA:2468:G:H5'	2.34	0.58
48:BW:12:ILE:HG23	48:BW:17:VAL:CG2	2.33	0.58
43:BR:53:HIS:CD2	43:BR:94:TYR:OH	2.51	0.58
31:DA:2762:G:H5'	31:DA:2762:G:C8	2.36	0.58
1:AA:78:G:H22	1:AA:91:C:N4	2.02	0.58
1:CA:1301:U:H3'	1:CA:1302:U:H5''	1.85	0.58
2:AB:61:LEU:HD21	2:AB:68:ILE:HD11	1.84	0.58
2:AB:21:ARG:CB	2:AB:39:ILE:HA	2.34	0.58
19:CS:63:THR:HG22	19:CS:66:MET:HE3	1.86	0.58
1:AA:271:C:H2'	1:AA:272:C:C6	2.39	0.58
6:AF:100:ASN:H	18:AR:23:LYS:HZ1	1.52	0.58
35:DF:119:ARG:HH11	35:DF:119:ARG:HG2	1.68	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
35:DF:182:ASN:O	35:DF:186:ILE:HG12	2.04	0.58
1:CA:524:G:H2'	1:CA:525:C:C6	2.39	0.58
1:AA:473:G:H5'	16:AP:81:ARG:HG3	1.85	0.58
19:CS:42:PRO:O	19:CS:43:GLU:HB3	2.04	0.58
1:AA:692:U:H2'	1:AA:694:A:OP2	2.04	0.58
1:CA:105:G:H2'	1:CA:106:C:C6	2.38	0.58
1:AA:724:G:C2	1:AA:725:G:C8	2.91	0.58
31:BA:13:A:N1	31:BA:525:U:H2'	2.19	0.58
31:DA:2302:G:C6	31:DA:2315:G:C6	2.90	0.58
34:DE:61:ARG:N	34:DE:62:PRO:HD2	2.18	0.58
50:BY:81:LYS:HG2	50:BY:96:ILE:HG23	1.86	0.58
50:DY:96:ILE:CG1	50:DY:99:CYS:SG	2.91	0.58
31:BA:154(A):C:H5	31:BA:171:G:H1	1.52	0.58
31:DA:1858:G:O2'	31:DA:1884:A:N6	2.37	0.58
46:DU:104:GLN:HB2	47:DV:43:GLU:OE1	2.03	0.58
27:D5:50:GLY:O	27:D5:51:TYR:CD1	2.57	0.58
23:D1:92:LYS:C	23:D1:94:LEU:H	2.07	0.58
39:DN:63:THR:O	39:DN:64:GLY:O	2.22	0.58
42:DQ:77:LYS:HE3	42:DQ:82:ARG:HA	1.85	0.58
35:BF:22:ALA:CA	35:BF:26:ALA:HB2	2.33	0.58
45:DT:29:ARG:HE	45:DT:84:GLN:CD	2.07	0.58
31:DA:2464:C:O2'	31:DA:2465:C:P	2.62	0.58
31:DA:477:A:H2'	31:DA:478:A:C8	2.39	0.58
31:DA:1559:G:H5'	31:DA:1559:G:N3	2.19	0.58
43:BR:95:THR:HA	43:BR:116:LEU:O	2.04	0.58
42:BQ:34:LEU:HD11	42:BQ:129:THR:CB	2.33	0.58
31:BA:1110:G:OP1	31:BA:1110:G:H4'	2.04	0.58
6:AF:60:PHE:C	6:AF:61:LEU:HD12	2.24	0.58
20:CT:23:ARG:O	20:CT:27:LYS:HB2	2.03	0.58
44:BS:74:ALA:HB1	44:BS:103:GLU:HB2	1.86	0.58
38:BI:126:TYR:O	38:BI:139:GLN:HA	2.02	0.58
36:DG:15:VAL:HG22	36:DG:175:LEU:HB3	1.85	0.58
33:DD:12:SER:HB2	33:DD:208:LYS:HB3	1.85	0.58
9:AI:48:GLU:N	9:AI:49:PRO:HD2	2.18	0.58
31:DA:1204:A:H2	31:DA:1241:A:N1	2.02	0.58
35:BF:34:TRP:HB2	41:BP:10:PRO:O	2.03	0.58
43:DR:13:HIS:HE1	43:DR:15:SER:OG	1.86	0.58
31:DA:2258:C:H4'	31:DA:2259:G:OP2	2.04	0.58
31:DA:892:G:H2'	31:DA:893:C:O4'	2.04	0.58
31:BA:884:C:O2'	31:BA:892:G:C8	2.50	0.58
1:AA:131:C:H2'	1:AA:132:C:H6	1.68	0.58
31:DA:1686:C:O2	31:DA:1686:C:H2'	2.04	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
28:B6:12:GLU:CB	28:B6:23:THR:HA	2.34	0.57
39:DN:42:TRP:CB	46:DU:64:ARG:NH1	2.58	0.57
46:BU:92:ARG:O	46:BU:93:LYS:C	2.42	0.57
39:DN:128:HIS:CE1	39:DN:134:ARG:HD2	2.38	0.57
1:AA:1256:A:H61	1:AA:1278:U:C1'	2.04	0.57
41:BP:71:VAL:CG1	41:BP:72:PRO:CD	2.70	0.57
32:DB:75:G:C5'	32:DB:75:G:H8	2.10	0.57
31:DA:2275:C:O2'	42:DQ:83:MET:HA	2.04	0.57
31:DA:634:C:H2'	31:DA:635:C:H6	1.69	0.57
31:BA:637:A:H4'	31:BA:638:G:O5'	2.04	0.57
41:BP:80:TYR:CD1	41:BP:111:ARG:HB3	2.39	0.57
38:DI:5:LEU:O	38:DI:6:LEU:HD23	2.04	0.57
43:BR:71:GLN:CA	43:BR:71:GLN:HE21	2.10	0.57
15:AO:55:GLY:HA2	15:AO:58:MET:HE3	1.85	0.57
9:AI:83:ARG:O	9:AI:86:VAL:HG12	2.03	0.57
37:DH:158:HIS:CE1	37:DH:170:ARG:N	2.72	0.57
13:CM:15:VAL:HG12	13:CM:45:VAL:HG22	1.86	0.57
31:BA:271(Q):G:O2'	31:BA:271(R):G:P	2.62	0.57
24:B2:15:LYS:O	24:B2:16:LEU:HB3	2.04	0.57
31:DA:1106:A:C2'	31:DA:1107:G:O5'	2.52	0.57
33:BD:70:TRP:HZ3	33:BD:146:GLU:OE2	1.86	0.57
1:AA:192:U:O2'	1:AA:193:C:H5'	2.03	0.57
31:BA:1174:A:OP1	31:BA:1175:U:OP1	2.22	0.57
1:AA:78:G:H1	1:AA:91:C:H42	1.52	0.57
36:DG:23:PHE:CZ	36:DG:171:ALA:HB3	2.39	0.57
1:CA:189:G:C6	1:CA:189(A):C:C4	2.92	0.57
31:BA:530:G:O4'	31:BA:530:G:N3	2.34	0.57
1:AA:626:U:H2'	1:AA:627:G:C8	2.38	0.57
1:CA:192:U:O2'	1:CA:193:C:H5'	2.04	0.57
31:BA:2599:G:OP2	33:BD:236:GLY:N	2.36	0.57
45:DT:106:SER:O	45:DT:107:ASP:OD1	2.22	0.57
3:CC:148:GLY:HA3	3:CC:172:ARG:O	2.04	0.57
1:AA:343:U:O2'	1:AA:346:G:O6	2.18	0.57
31:BA:1794:U:H2'	31:BA:1795:C:C6	2.39	0.57
9:AI:17:VAL:HG13	9:AI:63:ILE:HG13	1.86	0.57
7:CG:26:PHE:O	7:CG:30:ILE:HG12	2.03	0.57
18:CR:31:LEU:H	18:CR:31:LEU:CD2	2.16	0.57
31:DA:128:C:H2'	31:DA:129:C:O4'	2.04	0.57
35:DF:155:LEU:HD23	35:DF:186:ILE:HD13	1.85	0.57
1:CA:163:C:H2'	1:CA:164:U:C6	2.39	0.57
13:AM:75:ALA:O	13:AM:79:LYS:HG3	2.04	0.57
31:DA:2582:G:C2	31:DA:2583:G:C8	2.92	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:BA:128:C:H3'	31:BA:128:C:C6	2.39	0.57
40:BO:50:GLY:C	40:BO:52:VAL:H	2.05	0.57
27:B5:50:GLY:HA3	27:B5:56:LYS:HG2	1.85	0.57
27:B5:56:LYS:O	27:B5:57:VAL:C	2.42	0.57
39:BN:3:THR:CG2	39:BN:4:TYR:H	2.01	0.57
39:BN:1:MET:HB3	47:BV:20:LEU:HD22	1.85	0.57
16:AP:43:LYS:C	16:AP:45:THR:H	2.07	0.57
33:DD:83:GLU:HB2	33:DD:92:ILE:CD1	2.34	0.57
50:BY:81:LYS:HG2	50:BY:96:ILE:CG2	2.33	0.57
24:D2:33:MET:CG	49:DX:11:PRO:HD2	2.34	0.57
49:DX:56:THR:C	49:DX:57:LEU:HD12	2.24	0.57
15:CO:82:ILE:HG13	15:CO:88:ARG:HG3	1.86	0.57
36:DG:47:LYS:HE2	36:DG:81:LYS:HB2	1.86	0.57
31:DA:635:C:O2'	31:DA:639:U:OP1	2.21	0.57
39:BN:58:ASP:N	39:BN:58:ASP:OD1	2.37	0.57
37:BH:35:VAL:O	37:BH:37:VAL:HG23	2.03	0.57
42:BQ:141:GLN:N	51:BZ:53:ILE:HB	2.20	0.57
50:BY:8:LYS:HB2	50:BY:28:LYS:CE	2.34	0.57
31:DA:796:C:H2'	31:DA:797:C:H6	1.62	0.57
31:BA:1047:G:N3	31:BA:1111:A:N6	2.53	0.57
27:B5:2:ALA:N	31:BA:747:U:N3	2.52	0.57
4:AD:138:TYR:HD2	4:AD:138:TYR:C	2.06	0.57
3:AC:104:GLN:NE2	3:AC:105:GLU:H	2.02	0.57
5:CE:42:GLY:CA	5:CE:66:MET:HG2	2.32	0.57
47:DV:36:PRO:CD	47:DV:60:GLU:O	2.52	0.57
19:AS:78:ARG:HB2	19:AS:81:ARG:HH11	1.68	0.57
31:BA:1204:A:N1	31:BA:1241:A:N1	2.52	0.57
20:AT:23:ARG:O	20:AT:27:LYS:HB2	2.03	0.57
31:BA:1042:G:H2'	31:BA:1042:G:N3	2.18	0.57
31:DA:1866:C:H2'	31:DA:1876:A:O4'	2.04	0.57
5:CE:7:GLU:HG2	5:CE:112:LEU:HD22	1.85	0.57
31:BA:364:C:H2'	31:BA:364:C:O2	2.03	0.57
1:AA:1316:G:H2'	1:AA:1317:C:H5''	1.86	0.57
1:AA:1135:U:H4'	1:AA:1136:U:H5	1.70	0.57
31:DA:189:G:H2'	31:DA:205:G:N2	2.18	0.57
25:D3:28:LEU:HA	25:D3:33:GLN:OE1	2.03	0.57
1:CA:1135:U:H4'	1:CA:1136:U:H5	1.69	0.57
19:AS:24:ALA:O	19:AS:25:LYS:HB2	2.04	0.57
19:AS:29:ARG:HB3	19:AS:47:HIS:HA	1.86	0.57
33:DD:71:ASP:HB3	33:DD:103:ARG:NH2	2.20	0.57
39:DN:14:VAL:CA	39:DN:135:PRO:HD2	2.35	0.57
4:AD:128:VAL:O	4:AD:130:GLY:N	2.37	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
50:BY:77:PRO:O	50:BY:99:CYS:SG	2.60	0.57
49:DX:35:THR:HB	49:DX:75:ASP:OD2	2.04	0.57
22:B0:8:GLY:HA2	42:BQ:83:MET:HG2	1.84	0.57
46:DU:88:ILE:O	46:DU:90:VAL:N	2.37	0.57
49:BX:30:VAL:HG23	49:BX:76:ARG:HA	1.87	0.57
6:CF:86:ARG:O	6:CF:87:ARG:HG2	2.03	0.57
44:BS:18:ILE:HG22	44:BS:19:LYS:N	2.20	0.57
31:BA:776:G:H4'	31:BA:777:A:O5'	2.04	0.57
23:B1:87:PRO:HB2	23:B1:91:LYS:HZ2	1.68	0.57
31:DA:2494:G:H2'	31:DA:2495:G:O5'	2.04	0.57
31:DA:2469:A:O2'	42:DQ:56:ARG:HG2	2.04	0.57
4:CD:100:ARG:NH1	4:CD:137:SER:HA	2.19	0.57
36:DG:105:LYS:HB2	36:DG:105:LYS:NZ	2.20	0.57
31:BA:2849:U:O4	45:BT:23:ARG:NH2	2.37	0.57
24:D2:54:LYS:H	24:D2:56:GLN:NE2	2.02	0.57
37:BH:158:HIS:CE1	37:BH:170:ARG:N	2.72	0.57
31:DA:2069:G:C2'	31:DA:2070:G:H5'	2.34	0.57
9:AI:7:THR:O	9:AI:79:LEU:HD12	2.05	0.57
31:DA:832:G:OP1	41:DP:40:SER:HB3	2.05	0.57
31:BA:1559:G:N3	31:BA:1559:G:H5'	2.19	0.57
12:CL:38:THR:HG21	12:CL:65:GLU:OE2	2.04	0.57
42:BQ:39:PRO:HA	42:BQ:97:VAL:O	2.04	0.57
8:AH:51:VAL:HG21	8:AH:60:ARG:HG2	1.85	0.57
6:CF:91:VAL:HG12	6:CF:92:LYS:O	2.04	0.57
51:BZ:28:MET:HE2	51:BZ:59:LEU:HD13	1.86	0.57
1:CA:1372:U:OP1	9:CI:72:GLY:N	2.37	0.57
31:DA:1472:A:H2'	31:DA:1473:G:H8	1.68	0.57
6:CF:75:LEU:HD21	6:CF:79:LEU:HD11	1.85	0.57
1:AA:833:U:H2'	1:AA:834:C:H6	1.67	0.57
37:BH:144:VAL:O	37:BH:148:ILE:HG12	2.03	0.57
1:AA:287:U:O2'	1:AA:288:A:H5'	2.04	0.57
13:CM:75:ALA:O	13:CM:79:LYS:HG3	2.03	0.57
33:DD:222:ARG:O	33:DD:225:ALA:HB3	2.03	0.57
33:DD:231:HIS:CG	33:DD:232:PRO:HD2	2.40	0.57
5:CE:15:ARG:HD2	5:CE:26:PHE:CD2	2.38	0.57
1:CA:1113:C:H2'	1:CA:1114:C:C6	2.40	0.57
40:DO:61:VAL:O	40:DO:61:VAL:HG13	2.03	0.57
1:AA:163:C:H2'	1:AA:164:U:C6	2.39	0.57
30:B8:25:MET:CG	41:BP:64:LYS:HB3	2.27	0.57
16:AP:20:VAL:HG22	16:AP:21:VAL:N	2.19	0.57
16:AP:43:LYS:HG2	16:AP:48:TRP:CD2	2.39	0.57
33:DD:27:THR:O	33:DD:29:PRO:HD2	2.04	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
39:BN:43:THR:N	39:BN:48:MET:HE3	2.19	0.57
50:DY:77:PRO:O	50:DY:78:ALA:HB2	2.04	0.57
24:B2:47:ASN:C	24:B2:49:LYS:H	2.05	0.57
49:BX:82:GLN:HG3	49:BX:83:VAL:N	2.20	0.57
45:DT:56:GLY:C	45:DT:57:PHE:O	2.41	0.57
44:BS:89:ARG:CA	44:BS:89:ARG:HE	2.16	0.57
44:BS:53:SER:OG	44:BS:54:LEU:N	2.35	0.57
31:DA:348:G:H2'	31:DA:349:G:C5'	2.26	0.57
31:BA:8:A:H2'	31:BA:9:U:C6	2.39	0.57
43:DR:9:LYS:O	43:DR:10:LEU:HD23	2.05	0.57
31:DA:2660:A:H5'	31:DA:2661:G:N2	2.18	0.57
31:DA:1278:A:O3'	43:DR:34:ILE:HD11	2.03	0.57
31:DA:1531:C:H5''	31:DA:1532:C:H6	1.69	0.57
6:CF:11:ASN:O	6:CF:14:LEU:HB2	2.05	0.57
4:AD:133:VAL:HG11	4:AD:138:TYR:HD1	1.69	0.57
1:AA:620:C:C2	4:AD:135:LEU:HG	2.39	0.57
31:BA:861:A:H2'	31:BA:862:G:O4'	2.05	0.57
1:CA:456:C:N4	1:CA:475:G:H1	2.01	0.57
35:DF:184:TYR:CD2	35:DF:188:ARG:HD2	2.39	0.57
12:CL:24:VAL:HG12	12:CL:24:VAL:O	2.03	0.57
10:CJ:6:ILE:HG13	10:CJ:72:VAL:O	2.04	0.57
10:CJ:9:ARG:HH21	10:CJ:95:GLU:HG2	1.69	0.57
31:DA:2761:G:C3'	31:DA:2762:G:H5''	2.33	0.57
49:BX:41:ASN:O	49:BX:45:THR:HG23	2.03	0.57
13:AM:106:ASN:O	13:AM:107:ALA:HB3	2.04	0.57
1:CA:89:C:OP1	1:CA:90:U:C4	2.57	0.57
9:CI:10:ARG:HG2	9:CI:104:ARG:O	2.05	0.57
1:CA:1158:C:N4	1:CA:1181:G:H22	2.03	0.57
9:CI:77:ILE:O	9:CI:81:ILE:HG12	2.04	0.57
1:AA:270:A:C5	1:AA:271:C:C4	2.92	0.57
31:BA:2761:G:C2'	31:BA:2762:G:H5''	2.33	0.57
36:DG:108:ASN:O	36:DG:112:PRO:HG2	2.05	0.57
10:CJ:3:LYS:HD2	10:CJ:77:PRO:CD	2.35	0.57
3:AC:32:LEU:HD22	3:AC:59:ARG:NH1	2.19	0.57
34:BE:10:GLY:C	45:BT:8:LYS:HE3	2.24	0.57
17:AQ:76:LEU:HD12	17:AQ:77:VAL:H	1.70	0.57
1:AA:1113:C:H2'	1:AA:1114:C:C6	2.39	0.57
18:CR:32:ARG:HA	18:CR:69:THR:HG21	1.86	0.57
50:DY:83:THR:HG23	50:DY:94:LYS:HB3	1.87	0.57
31:BA:1427:A:H4'	31:BA:1428:C:O5'	2.02	0.57
39:DN:40:PRO:CA	46:DU:64:ARG:NH2	2.67	0.57
46:BU:83:LEU:CG	46:BU:88:ILE:HG12	2.35	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:330:C:H2'	1:AA:331:G:H5'	1.85	0.57
16:AP:21:VAL:HG23	16:AP:33:ILE:HB	1.86	0.57
33:BD:28:GLU:HB2	33:BD:29:PRO:CD	2.34	0.57
30:D8:14:VAL:HG13	30:D8:22:VAL:HG13	1.86	0.57
28:D6:20:ASN:OD1	28:D6:21:TYR:O	2.23	0.57
49:DX:73:ARG:O	49:DX:74:PRO:C	2.43	0.57
45:BT:65:LYS:HG3	45:BT:66:VAL:N	2.20	0.57
33:BD:108:PRO:HD2	33:BD:111:LEU:HG	1.85	0.57
10:CJ:48:THR:HA	10:CJ:62:HIS:HB3	1.85	0.57
32:BB:40:U:H1'	32:BB:45:A:H61	1.70	0.57
44:DS:31:SER:HB3	44:DS:34:HIS:H	1.70	0.57
33:BD:266:SER:O	33:BD:267:SER:CB	2.52	0.57
39:BN:63:THR:O	39:BN:64:GLY:O	2.23	0.57
31:BA:7:G:H1	31:BA:2896:C:H42	1.50	0.57
1:CA:501:C:H2'	1:CA:502:G:H8	1.69	0.57
1:CA:537:G:H2'	1:CA:538:G:H8	1.69	0.57
1:AA:687:A:N3	1:AA:688:G:H1'	2.18	0.57
41:DP:45:LEU:HD22	41:DP:46:LYS:H	1.69	0.57
50:DY:45:VAL:HG21	50:DY:61:ILE:C	2.24	0.57
31:DA:1332:G:N2	31:DA:1610:A:H8	2.02	0.57
1:CA:561:U:O2'	1:CA:562:C:OP1	2.22	0.57
1:CA:936:C:H2'	1:CA:937:A:O4'	2.05	0.57
10:AJ:6:ILE:HG13	10:AJ:72:VAL:O	2.04	0.57
1:AA:936:C:H2'	1:AA:937:A:O4'	2.05	0.57
4:AD:94:LEU:HA	4:AD:97:LEU:HB2	1.86	0.57
22:D0:14:ARG:HD2	31:DA:2279:G:O6	2.04	0.57
32:BB:52:A:O2'	32:BB:53:A:H8	1.86	0.57
2:CB:61:LEU:HD21	2:CB:68:ILE:HD11	1.85	0.57
31:DA:2199:A:C5'	31:DA:2200:C:OP2	2.52	0.57
37:DH:153:LYS:HB2	37:DH:154:PRO:HD3	1.86	0.57
31:BA:323:G:HO2'	31:BA:1205:U:H3	1.52	0.57
31:BA:2094:G:P	38:BI:22:LYS:HD3	2.45	0.57
31:BA:2859:G:C8	31:BA:2859:G:C3'	2.87	0.57
12:AL:86:ARG:HB2	12:AL:101:VAL:HG22	1.86	0.57
5:AE:33:VAL:HG12	5:AE:34:VAL:N	2.20	0.57
27:B5:11:THR:HG21	31:BA:1264:G:H5'	1.86	0.57
48:BW:86:LEU:C	48:BW:86:LEU:HD12	2.24	0.57
31:DA:13:A:N1	31:DA:525:U:H2'	2.18	0.57
9:CI:116:LYS:O	9:CI:118:LYS:N	2.36	0.57
37:DH:105:LEU:H	37:DH:105:LEU:HD22	1.69	0.57
33:BD:106:ILE:O	33:BD:106:ILE:HD13	2.05	0.57
11:AK:105:VAL:HG23	11:AK:105:VAL:O	2.05	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
51:DZ:103:ARG:HD3	51:DZ:136:PHE:CE1	2.39	0.57
17:CQ:13:ASP:H	17:CQ:14:LYS:NZ	2.01	0.57
20:AT:10:LEU:O	20:AT:12:ALA:N	2.36	0.57
1:CA:1441:G:H5''	1:CA:1442:G:H5'	1.86	0.57
47:BV:19:LYS:HG3	47:BV:20:LEU:C	2.25	0.57
1:AA:393:A:C2	1:AA:394:G:C8	2.92	0.57
31:BA:1496:A:C8	31:BA:1577:C:O2'	2.57	0.57
33:BD:80:ALA:HB2	33:BD:96:HIS:CG	2.39	0.57
33:DD:35:LYS:HE2	33:DD:65:ILE:HG22	1.87	0.57
44:DS:29:PHE:N	44:DS:89:ARG:CD	2.61	0.57
31:BA:2701:C:C3'	31:BA:2702:U:C5'	2.69	0.57
49:DX:18:TYR:O	49:DX:19:ALA:C	2.43	0.57
49:DX:33:LYS:C	49:DX:35:THR:HG22	2.24	0.57
49:DX:60:ARG:HE	49:DX:74:PRO:HG3	1.70	0.57
39:DN:2:LYS:HZ3	46:DU:94:ASN:ND2	2.03	0.57
16:CP:3:LYS:O	16:CP:21:VAL:HA	2.04	0.57
31:DA:942:G:O2'	31:DA:943:U:H5'	2.04	0.57
4:CD:31:CYS:C	4:CD:33:MET:N	2.57	0.57
31:BA:626:U:H3	41:BP:105:LEU:HG	1.68	0.57
31:DA:2850:A:H5'	31:DA:2868:A:C2	2.40	0.57
45:BT:61:PHE:CE2	45:BT:76:PHE:HB2	2.39	0.57
50:DY:35:TYR:CE2	50:DY:69:ALA:HB3	2.39	0.57
35:DF:198:ALA:O	35:DF:201:VAL:HG12	2.05	0.57
1:AA:1074:G:C4	1:AA:1102:A:C2	2.93	0.57
40:BO:107:ARG:NH1	45:BT:35:LYS:CB	2.63	0.57
6:CF:76:ALA:HB1	6:CF:80:ARG:HH21	1.68	0.57
51:BZ:124:ILE:HG13	51:BZ:125:LEU:N	2.17	0.57
18:CR:58:LEU:HD23	18:CR:62:GLU:HB3	1.85	0.57
1:AA:1065:U:C1'	1:AA:1066:C:OP2	2.52	0.57
31:DA:92:A:H2'	31:DA:93:G:C8	2.39	0.57
33:DD:77:ALA:HB2	33:DD:97:TYR:CG	2.39	0.57
31:DA:867:C:C5	31:DA:868:U:H5	2.22	0.57
35:DF:184:TYR:O	35:DF:188:ARG:HG3	2.05	0.57
28:B6:28:ARG:HA	28:B6:32:ASN:HB3	1.87	0.57
31:BA:1508:A:O2'	31:BA:1509:C:OP1	2.22	0.57
1:CA:1422:G:H5''	40:DO:48:PRO:HB3	1.87	0.57
37:DH:89:ILE:O	37:DH:90:LYS:CB	2.53	0.57
1:CA:863:U:H2'	1:CA:865:A:OP2	2.04	0.57
1:AA:343:U:H2'	1:AA:346:G:O6	2.05	0.57
36:BG:111:LEU:HA	36:BG:114:ILE:HG12	1.87	0.57
13:AM:32:GLU:OE2	13:AM:64:TRP:HH2	1.88	0.57
18:CR:81:PHE:O	18:CR:82:THR:HB	2.05	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:DA:2729:G:H2'	31:DA:2730:C:C6	2.40	0.57
6:AF:22:GLU:O	6:AF:26:ILE:HG13	2.04	0.57
13:CM:32:GLU:OE2	13:CM:64:TRP:CH2	2.58	0.57
45:BT:87:ASP:C	45:BT:87:ASP:OD1	2.42	0.57
2:CB:130:ARG:HE	2:CB:130:ARG:HA	1.68	0.57
45:DT:101:PHE:HE2	45:DT:113:LYS:HD2	1.70	0.57
33:BD:27:THR:O	33:BD:29:PRO:HD2	2.04	0.57
33:BD:30:GLU:CG	33:BD:63:ARG:NE	2.66	0.57
28:D6:26:ASN:OD1	28:D6:35:GLU:HG2	2.03	0.57
31:DA:2759:G:H8	31:DA:2759:G:C5'	2.03	0.57
24:B2:44:LEU:C	24:B2:46:GLN:H	2.08	0.57
50:DY:17:SER:CA	50:DY:71:LYS:HD2	2.30	0.57
43:BR:4:LEU:O	43:BR:5:LYS:HD2	2.05	0.57
10:AJ:48:THR:HA	10:AJ:62:HIS:HB3	1.87	0.57
27:D5:32:PRO:HD2	31:DA:2886:G:O2'	2.04	0.57
23:B1:89:GLU:O	23:B1:93:GLU:N	2.37	0.57
45:DT:61:PHE:CZ	45:DT:85:LYS:HE2	2.40	0.57
4:AD:30:LYS:C	4:AD:32:ALA:H	2.08	0.57
1:CA:343:U:H2'	1:CA:346:G:O6	2.04	0.57
9:AI:103:THR:HG22	9:AI:105:ASP:H	1.68	0.57
1:CA:1070:U:C2	1:CA:1071:C:C5	2.93	0.57
1:AA:1070:U:C2	1:AA:1071:C:C5	2.93	0.57
1:AA:1203:C:H2'	1:AA:1204:A:C8	2.40	0.57
6:CF:60:PHE:C	6:CF:61:LEU:HD12	2.24	0.57
48:BW:59:VAL:CG1	48:BW:60:ASN:N	2.64	0.57
6:AF:46:ARG:HH12	18:AR:37:VAL:HG21	1.69	0.57
31:DA:1047:G:N2	31:DA:1111:A:H62	2.01	0.57
31:DA:542:C:C2'	31:DA:543:C:OP1	2.52	0.57
4:AD:108:LEU:CD1	4:AD:174:LEU:HD13	2.35	0.57
31:BA:2327:A:H2'	31:BA:2328:A:C8	2.39	0.57
33:BD:118:VAL:CG2	33:BD:119:ALA:N	2.67	0.57
42:DQ:39:PRO:HA	42:DQ:97:VAL:O	2.04	0.57
44:DS:38:GLN:CG	44:DS:47:THR:HG21	2.34	0.57
5:CE:136:MET:O	5:CE:139:LEU:N	2.38	0.57
31:DA:708:C:O2	31:DA:708:C:H2'	2.03	0.57
18:AR:50:ILE:HD11	18:AR:70:ILE:HG21	1.85	0.57
31:DA:34:C:O2'	31:DA:35:G:OP1	2.20	0.57
1:CA:114:U:H2'	1:CA:115:G:C8	2.40	0.57
1:AA:651:C:H2'	1:AA:652:U:C6	2.40	0.57
1:CA:646:U:H2'	1:CA:647:C:H6	1.70	0.57
31:BA:32:C:O2'	31:BA:33:U:H5'	2.05	0.57
15:CO:74:ASP:OD2	15:CO:76:GLU:HB3	2.05	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:939:G:H2'	1:AA:940:C:C6	2.39	0.57
18:AR:81:PHE:O	18:AR:82:THR:HB	2.05	0.57
1:CA:1001(A):G:H2'	1:CA:1002:G:O4'	2.04	0.57
1:CA:939:G:H2'	1:CA:940:C:C6	2.40	0.57
13:CM:54:VAL:HG22	13:CM:57:ARG:HH21	1.70	0.57
38:BI:6:LEU:O	38:BI:15:VAL:HB	2.05	0.57
35:BF:57:VAL:CG1	35:BF:59:TYR:HD1	2.18	0.57
36:BG:40:ASN:HD22	36:BG:91:ARG:HB2	1.70	0.57
34:DE:24:THR:HG21	34:DE:188:VAL:HG12	1.86	0.57
35:BF:103:LYS:HA	35:BF:106:ARG:HG3	1.85	0.57
27:B5:52:TYR:HD2	27:B5:52:TYR:H	1.50	0.57
30:B8:32:LEU:HD23	30:B8:35:GLN:HA	1.87	0.57
2:AB:163:PHE:HD2	2:AB:185:ILE:CG1	2.17	0.57
47:BV:18:LEU:HD12	47:BV:98:GLU:OE1	2.05	0.57
1:AA:357:G:O2'	1:AA:358:U:H5'	2.05	0.57
41:BP:16:ARG:CD	41:BP:18:ARG:HB2	2.35	0.57
41:BP:16:ARG:NE	41:BP:18:ARG:HB2	2.19	0.57
1:CA:373:A:N3	1:CA:374:A:C8	2.73	0.57
24:B2:26:ARG:NE	24:B2:29:LYS:HE2	2.20	0.57
31:BA:588:U:OP2	31:BA:588:U:H6	1.87	0.57
31:DA:588:U:C6	31:DA:588:U:OP2	2.57	0.57
31:BA:1657:C:H5''	34:BE:133:LYS:O	2.03	0.57
31:DA:1140:C:O3'	39:DN:25:ARG:NH1	2.38	0.57
39:DN:56:ASN:H	39:DN:125:GLY:H	1.45	0.57
32:DB:94:C:C2	32:DB:95:C:C5	2.92	0.57
45:DT:28:VAL:O	45:DT:29:ARG:CD	2.53	0.57
41:DP:108:LYS:C	41:DP:110:TYR:H	2.07	0.57
39:BN:128:HIS:HD2	39:BN:131:GLN:HB2	1.64	0.57
31:DA:146:G:H8	31:DA:146:G:C5'	2.17	0.57
23:B1:16:ASN:HB3	23:B1:46:LEU:CG	2.35	0.57
37:DH:41:MET:HG3	37:DH:54:ARG:HA	1.85	0.57
13:CM:15:VAL:O	13:CM:19:LEU:HD23	2.05	0.57
31:BA:271(M):G:N7	31:BA:271(O):C:N4	2.52	0.57
31:BA:1478:G:O2'	31:BA:1479:G:H5'	2.05	0.57
22:D0:43:THR:N	31:DA:2331:G:H4'	2.16	0.57
41:DP:140:ALA:O	41:DP:141:ALA:CB	2.52	0.57
33:BD:211:ARG:O	33:BD:215:LEU:HG	2.05	0.57
19:AS:6:LYS:HG2	19:AS:7:LYS:CD	2.35	0.57
31:BA:729:G:C5	33:BD:208:LYS:HB2	2.40	0.57
10:AJ:9:ARG:HH21	10:AJ:95:GLU:HG2	1.68	0.57
31:DA:322:A:H5'	31:DA:340:A:C1'	2.34	0.57
7:CG:15:ASP:HB3	7:CG:19:GLY:N	2.20	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:AB:67:THR:O	2:AB:68:ILE:HD12	2.04	0.57
35:DF:84:VAL:O	35:DF:85:GLY:C	2.43	0.57
47:DV:2:PHE:HB3	47:DV:42:GLY:HA2	1.87	0.57
2:AB:8:LYS:HZ3	2:AB:217:ARG:HH11	1.53	0.57
48:BW:56:ALA:O	48:BW:57:ASN:C	2.42	0.57
19:AS:10:PHE:HE2	19:AS:37:ARG:O	1.87	0.57
44:BS:24:LEU:HB3	44:BS:85:VAL:HG13	1.86	0.57
3:AC:91:LEU:HB3	3:AC:99:VAL:HG21	1.87	0.57
17:AQ:3:LYS:HD2	17:AQ:60:ILE:HD11	1.85	0.57
20:CT:97:ALA:O	20:CT:99:LEU:N	2.31	0.57
17:AQ:63:ARG:HG2	17:AQ:64:PRO:HD2	1.87	0.57
50:DY:88:LYS:O	50:DY:89:PHE:HB2	2.04	0.57
50:DY:88:LYS:HZ1	50:DY:93:GLY:HA3	1.70	0.57
8:CH:77:GLU:HG3	8:CH:78:GLN:N	2.20	0.57
42:DQ:63:LYS:NZ	42:DQ:63:LYS:HB2	2.19	0.57
31:DA:2314:C:C2	31:DA:2315:G:C8	2.93	0.57
44:DS:89:ARG:CA	44:DS:89:ARG:HE	2.14	0.57
39:DN:128:HIS:O	39:DN:130:HIS:N	2.38	0.57
28:D6:19:ARG:HG3	28:D6:20:ASN:H	1.68	0.57
49:BX:60:ARG:HE	49:BX:74:PRO:CG	2.17	0.57
1:AA:713:G:N2	1:AA:714:G:C2	2.73	0.57
23:D1:64:ALA:O	23:D1:65:SER:CB	2.53	0.57
47:BV:80:GLN:OE1	47:BV:80:GLN:O	2.23	0.57
41:BP:85:LEU:HB3	41:BP:114:ILE:HD13	1.86	0.57
50:BY:14:LEU:HD11	50:BY:22:GLY:HA2	1.85	0.57
1:CA:330:C:H2'	1:CA:331:G:H5'	1.87	0.57
20:CT:89:ARG:HB2	20:CT:104:LEU:CD1	2.31	0.57
23:D1:37:ILE:HG23	23:D1:37:ILE:O	2.05	0.57
4:CD:91:SER:HA	4:CD:94:LEU:HD12	1.85	0.57
10:AJ:49:VAL:HG13	14:AN:41:ARG:HB2	1.86	0.57
9:AI:10:ARG:HG2	9:AI:104:ARG:O	2.05	0.57
36:BG:19:LEU:HD13	36:BG:32:PRO:HG2	1.87	0.57
10:CJ:49:VAL:HG22	14:CN:41:ARG:HB2	1.87	0.57
2:CB:68:ILE:HG22	2:CB:70:PHE:CE1	2.40	0.57
31:BA:340:A:H2'	31:BA:341:G:H5'	1.87	0.57
1:AA:775:G:O2'	1:AA:776:G:H5'	2.05	0.57
31:BA:2473:U:C4	31:BA:2474:C:C5	2.92	0.57
8:CH:20:TYR:HA	8:CH:65:TYR:CE2	2.40	0.57
1:CA:32:A:H2'	1:CA:33:A:C8	2.39	0.57
1:AA:338:A:O2'	1:AA:339:C:H5'	2.04	0.57
34:DE:27:LEU:HD22	45:DT:1:MET:HE2	1.86	0.57
31:DA:1353:A:H5''	33:DD:38:LYS:NZ	2.20	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:CA:1355:G:H2'	1:CA:1356:G:H8	1.69	0.57
31:DA:873:G:H1	31:DA:904:C:H42	1.52	0.57
19:AS:42:PRO:O	19:AS:43:GLU:HB3	2.04	0.57
1:CA:25:C:H2'	1:CA:26:A:C8	2.40	0.57
8:CH:28:ALA:HB3	8:CH:57:PRO:O	2.05	0.57
31:DA:531:C:H4'	31:DA:532:A:H5''	1.87	0.57
9:AI:97:LYS:HB3	9:AI:98:PRO:HD3	1.86	0.57
1:CA:1325:C:H4'	21:CU:17:THR:HG21	1.86	0.57
1:AA:1189:C:O3'	3:AC:5:ILE:HD12	2.04	0.57
39:DN:43:THR:N	39:DN:48:MET:HE3	2.19	0.57
33:DD:35:LYS:CG	33:DD:64:ILE:H	2.14	0.57
47:DV:25:LEU:N	47:DV:94:LEU:CD1	2.66	0.57
31:DA:68:G:C2'	31:DA:69:C:O5'	2.53	0.57
31:BA:175:G:H5'	31:BA:175:G:H8	1.69	0.57
16:CP:43:LYS:C	16:CP:45:THR:H	2.07	0.57
31:DA:2272:U:H5''	31:DA:2273:A:OP1	2.05	0.57
1:CA:510:A:H5''	1:CA:511:C:P	2.45	0.57
31:BA:1887:C:C3'	31:BA:1888:G:H5'	2.34	0.57
41:BP:97:PRO:HD3	41:BP:126:VAL:O	2.05	0.57
36:BG:45:GLU:HB2	36:BG:47:LYS:HG3	1.86	0.57
31:DA:2834:G:H8	31:DA:2834:G:H5''	1.68	0.57
42:DQ:141:GLN:N	51:DZ:53:ILE:HB	2.19	0.57
42:DQ:141:GLN:HG3	51:DZ:72:ARG:HD3	1.87	0.57
45:BT:33:LYS:N	45:BT:33:LYS:HZ3	2.02	0.57
9:AI:18:PHE:HB3	9:AI:20:ARG:NH1	2.20	0.57
43:BR:46:GLY:HA2	43:BR:49:ASP:HB2	1.87	0.57
31:BA:271(E):U:H2'	31:BA:271(F):C:C6	2.40	0.57
31:BA:518:G:H4'	48:BW:18:ARG:CZ	2.33	0.57
31:BA:1963:U:H4'	31:BA:1964:G:OP1	2.05	0.57
34:DE:75:VAL:O	34:DE:77:ILE:N	2.37	0.57
23:B1:26:ARG:CD	23:B1:34:THR:HB	2.35	0.57
12:AL:62:SER:C	12:AL:64:TYR:H	2.07	0.57
31:DA:2208:A:O2'	31:DA:2219:G:C8	2.56	0.57
40:DO:47:ILE:HG23	40:DO:48:PRO:HD2	1.87	0.57
31:DA:340:A:H2'	31:DA:341:G:H5'	1.87	0.57
31:DA:2753:A:C2	31:DA:2754:U:C2	2.92	0.57
5:CE:80:ILE:HD11	5:CE:91:LEU:HD23	1.87	0.57
30:B8:39:LYS:HD3	30:B8:39:LYS:C	2.25	0.57
31:DA:65:C:H2'	31:DA:66:C:H6	1.67	0.57
33:BD:197:GLY:O	33:BD:198:ASN:HB3	2.05	0.57
3:AC:34:LEU:O	3:AC:38:ARG:HG2	2.04	0.57
2:AB:36:ARG:H	2:AB:41:ILE:HD13	1.70	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:AJ:4:ILE:HG12	10:AJ:100:THR:CG2	2.35	0.57
46:BU:28:ARG:HG2	46:BU:38:THR:OG1	2.04	0.57
31:BA:1040:C:O2'	31:BA:1041:C:P	2.63	0.57
37:BH:149:ARG:HA	37:BH:162:ILE:HG13	1.87	0.57
36:DG:135:LEU:HD23	36:DG:140:ILE:HD11	1.86	0.57
33:DD:28:GLU:HB2	33:DD:29:PRO:CD	2.34	0.56
50:BY:96:ILE:HG22	50:BY:97:ARG:N	2.20	0.56
31:BA:827:U:O2'	31:BA:2068:U:C2	2.45	0.56
15:CO:17:ARG:HD3	15:CO:26:GLU:HG3	1.87	0.56
44:BS:33:LYS:HB3	44:BS:34:HIS:HD2	1.69	0.56
1:CA:922:G:H2'	1:CA:923:A:C8	2.40	0.56
31:DA:1141:U:O5'	39:DN:63:THR:HG21	2.05	0.56
4:CD:13:ARG:O	4:CD:15:GLU:N	2.38	0.56
1:AA:542:G:O2'	1:AA:543:C:H5'	2.04	0.56
40:DO:107:ARG:NH1	45:DT:35:LYS:CB	2.64	0.56
31:DA:1501:C:O2'	31:DA:1502:C:H5'	2.05	0.56
42:BQ:141:GLN:CG	51:BZ:72:ARG:HH11	2.17	0.56
31:BA:2464:C:O2'	31:BA:2465:C:P	2.63	0.56
23:B1:10:LYS:HB2	23:B1:14:VAL:CA	2.34	0.56
42:DQ:116:GLU:O	42:DQ:120:ILE:HG12	2.04	0.56
1:AA:586:C:H2'	1:AA:587:G:H5'	1.86	0.56
28:D6:46:HIS:CA	28:D6:47:THR:N	2.68	0.56
27:D5:2:ALA:N	31:DA:747:U:N3	2.53	0.56
45:BT:13:ARG:HH21	45:BT:15:VAL:HG11	1.70	0.56
31:DA:1110:G:H4'	31:DA:1110:G:OP1	2.05	0.56
45:BT:50:ILE:HA	45:BT:99:LEU:HD11	1.86	0.56
36:DG:19:LEU:HG	36:DG:175:LEU:CD1	2.34	0.56
36:BG:16:ARG:NH1	36:BG:31:VAL:HG11	2.20	0.56
1:AA:991:U:O2'	1:AA:992:U:OP2	2.20	0.56
31:BA:1472:A:H2'	31:BA:1473:G:H8	1.70	0.56
31:BA:1625:C:H2'	31:BA:1626:G:H5'	1.87	0.56
1:AA:658:G:C4	1:AA:659:U:C5	2.93	0.56
42:DQ:30:GLY:HA2	42:DQ:107:ALA:HB2	1.87	0.56
1:AA:1497:G:C2'	1:AA:1498:U:H5'	2.34	0.56
31:DA:11:G:O2'	31:DA:12:U:H5'	2.05	0.56
3:CC:34:LEU:O	3:CC:38:ARG:HG2	2.04	0.56
36:DG:40:ASN:HD22	36:DG:91:ARG:HB2	1.70	0.56
15:CO:55:GLY:HA2	15:CO:58:MET:HE3	1.87	0.56
1:AA:200:G:H1	1:AA:217:C:H42	1.51	0.56
5:AE:145:LYS:O	5:AE:149:GLU:HG2	2.05	0.56
31:DA:958:U:O2'	31:DA:959:A:P	2.62	0.56
34:BE:89:ASP:O	34:BE:90:THR:CB	2.53	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:BA:2590:A:H2'	31:BA:2591:C:H6	1.70	0.56
1:CA:1030(A):G:H1'	1:CA:1031:G:H22	1.69	0.56
41:BP:92:GLU:HA	41:BP:123:LEU:HD13	1.86	0.56
36:BG:41:GLN:HG2	36:BG:155:MET:HB3	1.87	0.56
31:DA:737:C:H2'	31:DA:738:G:O5'	2.04	0.56
45:DT:53:ARG:HG3	45:DT:53:ARG:HH11	1.70	0.56
34:BE:66:HIS:CG	34:BE:66:HIS:O	2.58	0.56
42:BQ:66:ILE:HG13	42:BQ:66:ILE:O	2.05	0.56
6:CF:22:GLU:O	6:CF:26:ILE:HG13	2.05	0.56
8:AH:26:VAL:HG22	8:AH:27:PRO:O	2.05	0.56
3:CC:127:ARG:HD2	3:CC:127:ARG:N	2.20	0.56
30:B8:30:ARG:O	30:B8:31:HIS:O	2.23	0.56
47:BV:16:PRO:O	47:BV:98:GLU:OE2	2.23	0.56
16:AP:28:ARG:NH1	16:AP:29:ASP:OD2	2.38	0.56
31:DA:1495:A:C2	31:DA:1496:A:C2	2.93	0.56
30:D8:39:LYS:HD3	30:D8:39:LYS:C	2.26	0.56
31:DA:875:G:C4'	51:DZ:170:THR:HG21	2.24	0.56
16:CP:17:TYR:HE1	16:CP:41:PRO:HG3	1.69	0.56
24:B2:47:ASN:HD22	24:B2:47:ASN:N	2.03	0.56
27:D5:57:VAL:C	27:D5:58:LEU:HG	2.25	0.56
33:BD:175:LEU:HD12	33:BD:185:VAL:HG21	1.86	0.56
1:AA:1104:G:OP1	2:AB:111:ARG:HD2	2.05	0.56
37:BH:85:LYS:NZ	37:BH:145:ALA:HA	2.19	0.56
41:DP:26:GLY:HA2	41:DP:30:THR:HG21	1.88	0.56
39:DN:28:THR:HG22	39:DN:29:LYS:N	2.20	0.56
8:CH:86:ILE:HG21	8:CH:133:LEU:HD13	1.87	0.56
41:BP:96:THR:O	41:BP:100:LEU:HB2	2.04	0.56
1:AA:430:A:O2'	1:AA:431:A:H5'	2.06	0.56
1:CA:1227:A:OP2	13:CM:111:LYS:HE2	2.05	0.56
39:DN:47:ALA:HB2	39:DN:112:LEU:CD1	2.30	0.56
31:BA:2464:C:O2'	31:BA:2465:C:C5'	2.52	0.56
1:CA:1003:G:C2	1:CA:1004:A:H1'	2.40	0.56
31:BA:547:A:H8	31:BA:549:G:C6	2.23	0.56
10:CJ:7:LYS:O	10:CJ:96:ILE:HA	2.05	0.56
39:BN:27:ALA:CB	39:BN:106:MET:CE	2.83	0.56
5:AE:42:GLY:CA	5:AE:66:MET:HG2	2.34	0.56
1:AA:192:U:H2'	1:AA:193:C:H6	1.69	0.56
35:BF:63:LYS:CE	35:BF:67:GLN:HB2	2.35	0.56
31:DA:528:A:H2	31:DA:2043:C:H5'	1.69	0.56
43:DR:56:LYS:HE3	43:DR:94:TYR:OH	2.05	0.56
1:CA:624:C:H2'	1:CA:625:G:C8	2.40	0.56
1:CA:629:G:H2'	1:CA:630:G:O4'	2.05	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
33:DD:221:VAL:HG22	33:DD:226:MET:HE3	1.87	0.56
1:CA:748:C:H4'	1:CA:749:C:O5'	2.05	0.56
31:DA:515:A:H1'	31:DA:581:C:H1'	1.86	0.56
1:AA:1407:C:H6	1:AA:1407:C:O5'	1.88	0.56
28:D6:42:TRP:HA	28:D6:42:TRP:CE3	2.40	0.56
31:BA:1510:G:O2'	31:BA:1511:C:H5'	2.04	0.56
31:BA:1512:U:O2'	31:BA:1513:C:H5'	2.05	0.56
28:B6:42:TRP:CE3	28:B6:42:TRP:HA	2.41	0.56
38:DI:110:ASP:HB2	38:DI:113:ARG:HG2	1.87	0.56
19:CS:29:ARG:HB3	19:CS:47:HIS:HA	1.88	0.56
10:CJ:47:PHE:CE2	14:CN:37:PHE:HE2	2.23	0.56
31:BA:1600:C:O2'	31:BA:1601:G:H5'	2.05	0.56
31:DA:678:C:H2'	31:DA:679:C:C6	2.40	0.56
1:CA:781:A:H2'	1:CA:782:A:H5'	1.87	0.56
27:B5:33:CYS:SG	27:B5:49:CYS:HB3	2.44	0.56
46:BU:92:ARG:NH2	47:BV:10:LYS:HB3	2.20	0.56
47:BV:19:LYS:HG2	47:BV:96:ILE:CB	2.32	0.56
2:CB:163:PHE:HD2	2:CB:185:ILE:CG1	2.19	0.56
31:DA:1568:G:H21	33:DD:58:HIS:HE1	1.51	0.56
39:BN:39:ARG:CG	39:BN:41:ASP:H	2.19	0.56
39:DN:18:ALA:HB2	39:DN:26:LEU:HD13	1.87	0.56
39:DN:30:ILE:HG23	39:DN:52:VAL:HG11	1.86	0.56
23:D1:32:LYS:HG2	31:DA:2396:G:O2'	2.04	0.56
31:DA:2286:A:H5''	31:DA:2287:A:O4'	2.05	0.56
28:D6:13:CYS:HA	28:D6:50:ARG:O	2.06	0.56
41:DP:64:LYS:C	41:DP:66:GLY:N	2.59	0.56
47:BV:72:VAL:HG13	47:BV:88:ARG:NH2	2.20	0.56
51:BZ:104:PHE:HB3	51:BZ:141:VAL:HG11	1.87	0.56
39:BN:18:ALA:HB2	39:BN:26:LEU:HD13	1.87	0.56
31:BA:68:G:C2'	31:BA:69:C:O5'	2.54	0.56
31:BA:330:A:H2	31:BA:1210:A:C2'	2.11	0.56
44:BS:19:LYS:HG2	44:BS:19:LYS:O	2.03	0.56
31:BA:2304:G:H22	31:BA:2312:U:H3	1.52	0.56
32:BB:40:U:H1'	32:BB:45:A:N6	2.21	0.56
31:BA:2405:G:O2'	31:BA:2406:U:P	2.63	0.56
34:DE:167:VAL:CG1	34:DE:189:PRO:HD3	2.35	0.56
31:DA:2723:C:H5''	43:DR:2:ARG:HD2	1.86	0.56
41:DP:23:PRO:CB	41:DP:33:ARG:HG3	2.25	0.56
42:DQ:81:VAL:C	42:DQ:82:ARG:CG	2.70	0.56
1:CA:432:A:C8	1:CA:433:C:C5	2.93	0.56
31:BA:1449:A:HO2'	31:BA:1530:C:H5	1.52	0.56
31:BA:2565:A:C5'	31:BA:2566:A:OP2	2.45	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
39:DN:65:LYS:HD2	39:DN:67:LEU:HG	1.86	0.56
39:BN:90:MET:O	39:BN:93:THR:O	2.23	0.56
41:DP:27:HIS:CD2	41:DP:27:HIS:C	2.78	0.56
45:BT:28:VAL:HB	45:BT:88:ILE:HG13	1.88	0.56
41:DP:85:LEU:HB3	41:DP:114:ILE:HD13	1.88	0.56
31:DA:2662:A:H4'	31:DA:2663:G:O4'	2.05	0.56
31:DA:1887:C:C3'	31:DA:1888:G:H5'	2.34	0.56
4:AD:65:ARG:HG3	4:AD:75:PHE:CD1	2.40	0.56
24:D2:44:LEU:C	24:D2:46:GLN:H	2.09	0.56
24:D2:48:HIS:NE2	31:DA:75:G:H4'	2.20	0.56
31:DA:1505:C:H6	31:DA:1506:C:C6	2.23	0.56
32:BB:94:C:C2	32:BB:95:C:C5	2.94	0.56
31:DA:1558:A:H4'	31:DA:1559:G:O5'	2.04	0.56
13:CM:66:LEU:HD12	13:CM:66:LEU:N	2.15	0.56
43:DR:18:LEU:O	43:DR:19:ALA:C	2.44	0.56
3:AC:43:LEU:O	3:AC:47:LEU:HB3	2.06	0.56
23:D1:16:ASN:HB3	23:D1:46:LEU:HG	1.86	0.56
28:B6:46:HIS:CA	28:B6:47:THR:N	2.68	0.56
13:AM:25:ILE:CD1	13:AM:66:LEU:HD23	2.35	0.56
50:BY:45:VAL:CG1	50:BY:62:GLU:HB2	2.32	0.56
5:AE:101:ILE:O	5:AE:120:THR:HG23	2.05	0.56
1:AA:299:G:C6	1:AA:300:A:C6	2.94	0.56
31:DA:543:C:N4	31:DA:551:G:N1	2.53	0.56
31:DA:543:C:H42	31:DA:551:G:H1	1.53	0.56
1:AA:1342:C:H1'	9:AI:124:GLN:NE2	2.20	0.56
44:DS:71:ARG:N	44:DS:101:LEU:HD21	2.20	0.56
31:BA:2208:A:O2'	31:BA:2219:G:C8	2.57	0.56
24:D2:12:GLU:C	24:D2:14:ARG:H	2.09	0.56
33:BD:118:VAL:HG22	33:BD:119:ALA:H	1.68	0.56
31:BA:1168:G:H2'	31:BA:1169:G:H5'	1.86	0.56
1:AA:90:U:O2'	1:AA:91:C:C5	2.55	0.56
34:BE:167:VAL:CG1	34:BE:189:PRO:HD3	2.36	0.56
1:CA:189(B):C:N4	1:CA:189(I):G:H1	2.02	0.56
1:CA:1157:A:H4'	1:CA:1158:C:O5'	2.05	0.56
15:AO:24:SER:O	15:AO:28:GLN:HG3	2.05	0.56
5:AE:139:LEU:HA	5:AE:142:LEU:CD1	2.35	0.56
15:CO:23:GLY:O	15:CO:27:VAL:HB	2.05	0.56
1:CA:657:G:C2	1:CA:750:G:C5	2.93	0.56
18:CR:50:ILE:HD12	18:CR:70:ILE:HG21	1.85	0.56
27:B5:29:THR:HG21	31:BA:2815:C:C5'	2.35	0.56
35:BF:78:ILE:HA	35:BF:83:PHE:CD1	2.40	0.56
49:BX:70:LEU:O	49:BX:71:GLY:C	2.43	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:CA:577:G:C2	1:CA:578:C:C5	2.93	0.56
3:CC:32:LEU:HD22	3:CC:59:ARG:NH1	2.21	0.56
36:DG:111:LEU:HA	36:DG:114:ILE:HG12	1.87	0.56
36:DG:111:LEU:O	36:DG:114:ILE:HG12	2.05	0.56
36:BG:108:ASN:O	36:BG:112:PRO:HG2	2.05	0.56
1:CA:472:A:O2'	16:CP:81:ARG:HA	2.06	0.56
38:BI:108:THR:O	38:BI:109:ILE:HG23	2.05	0.56
31:DA:128:C:H3'	31:DA:128:C:C6	2.41	0.56
23:D1:41:ARG:HH12	31:DA:189:G:P	2.27	0.56
40:DO:50:GLY:C	40:DO:52:VAL:H	2.08	0.56
31:BA:754:C:H2'	31:BA:755:C:H6	1.70	0.56
36:BG:133:LEU:HD12	36:BG:133:LEU:C	2.25	0.56
3:AC:83:ARG:O	3:AC:86:VAL:HG22	2.05	0.56
42:DQ:137:TYR:HB2	51:DZ:76:LEU:HD11	1.87	0.56
1:CA:422:C:H1'	1:CA:423:G:N2	2.21	0.56
21:AU:9:ARG:O	21:AU:13:ILE:HG13	2.05	0.56
1:AA:247:G:OP2	17:AQ:100:LYS:HG2	2.05	0.56
31:BA:2100:G:H1	31:BA:2189:U:H3	1.52	0.56
31:DA:2552:U:H2'	31:DA:2554:U:OP2	2.05	0.56
1:AA:109:A:C6	1:AA:326:G:C6	2.94	0.56
31:DA:2100:G:H1	31:DA:2189:U:H3	1.53	0.56
13:AM:54:VAL:HG22	13:AM:57:ARG:HH21	1.68	0.56
31:BA:2338:G:O2'	31:BA:2339:G:H5'	2.04	0.56
30:B8:32:LEU:CG	30:B8:34:TRP:HE3	2.18	0.56
30:B8:35:GLN:HB3	30:B8:36:LYS:HG3	1.86	0.56
47:BV:15:GLU:CB	47:BV:16:PRO:HD2	2.35	0.56
1:AA:355:C:C2	1:AA:356:A:C8	2.93	0.56
16:AP:72:ARG:HH21	16:AP:73:LEU:CD2	2.11	0.56
39:DN:2:LYS:NZ	46:DU:94:ASN:ND2	2.53	0.56
46:DU:93:LYS:HD3	46:DU:93:LYS:H	1.70	0.56
47:DV:43:GLU:H	47:DV:48:GLY:HA2	1.68	0.56
1:CA:355:C:C2	1:CA:356:A:C8	2.93	0.56
43:BR:24:GLN:HE22	43:BR:36:THR:HG21	1.68	0.56
15:CO:78:TYR:O	15:CO:82:ILE:HG22	2.05	0.56
41:DP:71:VAL:HG12	41:DP:72:PRO:HD3	1.81	0.56
31:DA:637:A:O5'	41:DP:116:GLY:HA2	2.06	0.56
31:DA:358:U:H3'	31:DA:358:U:H6	1.70	0.56
39:BN:78:TYR:HD1	39:BN:79:PRO:CG	2.18	0.56
48:DW:12:ILE:HG23	48:DW:17:VAL:CG2	2.34	0.56
31:DA:795:C:O2'	31:DA:796:C:H5'	2.06	0.56
38:DI:88:ILE:HD11	38:DI:123:LEU:CD2	2.35	0.56
28:B6:16:CYS:O	28:B6:18:ARG:NE	2.36	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:1452:C:O4'	1:AA:1456:G:C2	2.58	0.56
2:CB:168:THR:HG21	2:CB:192:SER:HA	1.87	0.56
33:DD:8:PRO:HB3	33:DD:14:ARG:CB	2.35	0.56
12:CL:66:VAL:HG11	12:CL:98:TYR:CE1	2.39	0.56
44:BS:101:LEU:HD13	44:BS:102:ALA:O	2.06	0.56
2:AB:87:ARG:NE	2:AB:233:SER:HB3	2.18	0.56
9:CI:48:GLU:N	9:CI:49:PRO:HD2	2.21	0.56
31:DA:14:A:C6	31:DA:526:A:C2	2.93	0.56
31:DA:1168:G:H2'	31:DA:1169:G:H5'	1.88	0.56
1:AA:323:U:OP1	20:AT:26:ASN:ND2	2.38	0.56
1:AA:629:G:H2'	1:AA:630:G:O4'	2.05	0.56
49:DX:39:ILE:O	49:DX:42:ALA:HB3	2.05	0.56
1:AA:1478:C:H2'	1:AA:1479:C:H6	1.70	0.56
31:BA:848:G:N9	31:BA:933:A:H8	2.02	0.56
5:CE:90:VAL:O	5:CE:91:LEU:HD13	2.05	0.56
7:AG:26:PHE:O	7:AG:30:ILE:HG12	2.06	0.56
6:CF:53:ALA:O	6:CF:54:LYS:HB2	2.04	0.56
31:BA:1264:G:H3'	31:BA:1265:A:H5''	1.87	0.56
1:AA:1312:G:N2	1:AA:1326:C:C2	2.73	0.56
2:AB:228:GLY:O	2:AB:230:VAL:HG13	2.05	0.56
48:DW:54:ALA:HB1	48:DW:107:LEU:HD22	1.87	0.56
37:BH:117:PRO:HA	37:BH:123:PHE:HE1	1.69	0.56
34:DE:89:ASP:O	34:DE:90:THR:CB	2.54	0.56
31:DA:1438:U:O2'	31:DA:1439:A:H5'	2.04	0.56
2:CB:105:PHE:O	2:CB:107:THR:N	2.38	0.56
1:AA:422:C:H1'	1:AA:423:G:N2	2.21	0.56
30:B8:35:GLN:HA	31:BA:2420:C:P	2.46	0.56
31:DA:1899:G:O2'	31:DA:1900:A:H5''	2.06	0.56
33:BD:35:LYS:NZ	33:BD:104:TYR:CD1	2.72	0.56
34:BE:60:ASN:HD22	34:BE:60:ASN:N	2.02	0.56
49:DX:37:THR:C	49:DX:38:GLU:OE1	2.44	0.56
49:DX:65:ARG:O	49:DX:66:LEU:HB2	2.05	0.56
31:BA:2496:C:OP1	42:BQ:81:VAL:CG1	2.53	0.56
47:DV:61:VAL:O	47:DV:62:LEU:HD23	2.06	0.56
15:CO:81:LEU:CD1	15:CO:85:LEU:HD12	2.36	0.56
2:AB:189:ASP:OD1	2:AB:189:ASP:N	2.37	0.56
1:CA:543:C:O2'	1:CA:544:G:H5'	2.04	0.56
38:BI:133:HIS:CG	38:BI:134:PRO:HD2	2.39	0.56
4:AD:106:TYR:HE1	4:AD:112:VAL:O	1.89	0.56
24:D2:47:ASN:HD22	24:D2:48:HIS:H	1.52	0.56
24:D2:52:ASP:O	24:D2:56:GLN:NE2	2.38	0.56
39:DN:46:VAL:O	39:DN:47:ALA:HB3	2.06	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:BA:1558:A:H4'	31:BA:1559:G:O5'	2.05	0.56
31:BA:2476:A:N3	31:BA:2477:C:H5'	2.21	0.56
6:CF:46:ARG:HH12	18:CR:37:VAL:HG21	1.70	0.56
1:AA:920:U:O4'	1:AA:1080:A:C2	2.58	0.56
44:BS:78:LEU:CD1	44:BS:103:GLU:HB3	2.35	0.56
2:AB:20:GLU:HB2	2:AB:190:THR:OG1	2.06	0.56
32:DB:37:C:C5	32:DB:38:C:C4	2.94	0.56
37:DH:91:GLY:O	37:DH:92:ILE:HG13	2.05	0.56
51:BZ:8:TYR:N	51:BZ:8:TYR:CD1	2.72	0.56
1:CA:619:U:H2'	4:CD:135:LEU:HD21	1.88	0.56
17:CQ:5:VAL:CG1	17:CQ:6:LEU:N	2.69	0.56
31:DA:1889:A:N1	31:DA:2234:G:H1'	2.21	0.56
46:BU:101:ARG:C	46:BU:102:GLU:HG2	2.25	0.56
31:DA:2853:C:H2'	31:DA:2854:G:C8	2.40	0.56
22:B0:68:GLU:HG2	22:B0:80:HIS:HB2	1.88	0.56
31:DA:1635:G:H2'	31:DA:1636:C:H6	1.69	0.56
9:AI:118:LYS:O	9:AI:119:ALA:HB3	2.06	0.56
3:CC:83:ARG:O	3:CC:86:VAL:HG22	2.06	0.56
31:BA:2845:G:O2'	31:BA:2846:G:H5'	2.06	0.56
31:BA:719:C:H2'	31:BA:720:C:C6	2.40	0.56
17:CQ:3:LYS:HD2	17:CQ:60:ILE:HD11	1.87	0.56
31:BA:1679:U:C2'	31:BA:1680:U:H5'	2.35	0.56
31:BA:1684:C:O2'	31:BA:1685:C:H5'	2.06	0.56
12:CL:21:LYS:N	12:CL:21:LYS:HD2	2.20	0.56
1:AA:30:U:H4'	1:AA:31:G:OP2	2.06	0.56
27:B5:57:VAL:C	27:B5:58:LEU:HG	2.26	0.56
33:BD:24:ILE:CG2	33:BD:24:ILE:O	2.52	0.56
33:BD:85:ASP:HB2	33:BD:92:ILE:HG13	1.88	0.56
44:DS:28:VAL:C	44:DS:89:ARG:HD2	2.24	0.56
50:DY:96:ILE:HG13	50:DY:99:CYS:SG	2.45	0.56
30:B8:23:VAL:HG11	30:B8:46:ARG:HD3	1.86	0.56
24:B2:32:LEU:CD2	31:BA:61:G:O2'	2.53	0.56
24:B2:34:GLU:O	24:B2:34:GLU:HG2	2.06	0.56
31:DA:1777:U:C2'	31:DA:1778:U:H5'	2.35	0.56
31:BA:1142(A):A:N7	31:BA:1144:G:C6	2.73	0.56
31:BA:2532:G:O2'	31:BA:2657:A:N6	2.39	0.56
41:DP:80:TYR:CD1	41:DP:111:ARG:HB3	2.40	0.56
1:AA:539:A:OP2	12:AL:115:LYS:HE3	2.06	0.56
31:DA:1505:C:H2'	31:DA:1506:C:O5'	2.05	0.56
42:BQ:141:GLN:HE21	51:BZ:71:VAL:C	2.09	0.56
31:BA:132:G:H1	31:BA:147:U:H3	1.54	0.56
22:D0:25:ARG:HD2	22:D0:29:GLN:NE2	2.21	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
43:DR:71:GLN:HA	43:DR:71:GLN:NE2	2.15	0.56
1:CA:719:C:C5	1:CA:720:C:C4	2.94	0.56
18:CR:62:GLU:HA	18:CR:65:ILE:HD11	1.88	0.56
43:DR:12:ARG:HD3	43:DR:16:HIS:ND1	2.20	0.56
31:BA:1109:C:C5	31:BA:1110:G:C5	2.92	0.56
31:DA:1047:G:N3	31:DA:1111:A:N6	2.54	0.56
1:CA:622:A:C8	1:CA:623:C:C5	2.94	0.56
18:AR:58:LEU:HD23	18:AR:62:GLU:HB3	1.86	0.56
24:D2:18:PRO:O	24:D2:19:VAL:C	2.43	0.56
35:BF:65:TRP:CH2	35:BF:75:HIS:HD2	2.24	0.56
2:CB:87:ARG:NE	2:CB:233:SER:HB3	2.20	0.56
2:AB:102:LEU:N	2:AB:102:LEU:HD12	2.21	0.56
1:CA:625:G:H2'	1:CA:626:U:H6	1.71	0.56
1:CA:991:U:O2'	1:CA:992:U:OP2	2.20	0.56
44:BS:42:ASP:C	44:BS:44:LYS:N	2.59	0.56
1:CA:1128:C:O2'	1:CA:1130:A:C8	2.49	0.56
18:AR:50:ILE:HD12	18:AR:70:ILE:HG21	1.87	0.56
5:AE:80:ILE:HD11	5:AE:91:LEU:HD23	1.87	0.56
9:CI:26:VAL:HG22	9:CI:61:ALA:HB3	1.87	0.56
2:AB:7:VAL:O	2:AB:11:LEU:HG	2.06	0.56
46:BU:49:HIS:HA	46:BU:52:ARG:HB2	1.88	0.56
1:CA:792:A:H4'	1:CA:793:U:O5'	2.05	0.56
1:CA:1312:G:N2	1:CA:1326:C:C2	2.73	0.56
1:AA:1154:G:H2'	1:AA:1155:G:H8	1.69	0.56
51:DZ:12:GLY:O	51:DZ:13:GLU:HG3	2.05	0.56
31:BA:271(X):G:C2'	31:BA:271(Y):U:H5''	2.36	0.56
10:AJ:47:PHE:CE2	14:AN:37:PHE:HE2	2.23	0.56
38:BI:94:ALA:HB1	38:BI:114:LEU:HD12	1.87	0.56
5:AE:112:LEU:N	5:AE:112:LEU:HD23	2.21	0.56
1:AA:524:G:H2'	1:AA:525:C:C6	2.40	0.56
1:AA:176:C:H2'	1:AA:177:C:C6	2.41	0.56
42:DQ:7:MET:O	42:DQ:10:ARG:NH2	2.37	0.56
32:DB:44:G:C5'	32:DB:45:A:OP1	2.44	0.56
31:DA:1495:A:H2'	31:DA:1495:A:N3	2.20	0.56
30:D8:14:VAL:CG1	30:D8:22:VAL:HG13	2.36	0.56
50:DY:79:CYS:O	50:DY:80:GLY:C	2.42	0.56
46:DU:83:LEU:HD13	46:DU:113:ALA:HB2	1.86	0.56
47:DV:64:HIS:CG	47:DV:64:HIS:O	2.57	0.56
1:CA:356:A:H2'	1:CA:357:G:O5'	2.05	0.56
16:CP:20:VAL:HG23	16:CP:34:GLU:O	2.06	0.56
24:B2:25:VAL:HG13	24:B2:26:ARG:CD	2.31	0.56
31:BA:2759:G:O2'	31:BA:2760:C:H5'	2.06	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
34:DE:111:ARG:HA	43:DR:2:ARG:HG3	1.87	0.56
31:DA:1022:G:C6	31:DA:1140:C:C4	2.94	0.56
45:BT:28:VAL:HG13	45:BT:46:GLU:HA	1.88	0.56
41:BP:102:ARG:O	41:BP:103:ALA:HB2	2.06	0.56
41:BP:96:THR:HG22	41:BP:126:VAL:HG23	1.86	0.56
4:AD:13:ARG:O	4:AD:15:GLU:N	2.38	0.56
39:BN:14:VAL:CA	39:BN:135:PRO:HD2	2.35	0.56
33:DD:158:ALA:CA	33:DD:161:THR:HG21	2.35	0.56
31:DA:2876:G:H4'	45:DT:3:ARG:HD3	1.86	0.56
31:BA:2606:C:H2'	31:BA:2607:G:H5'	1.87	0.56
18:AR:35:ARG:O	18:AR:37:VAL:N	2.38	0.56
35:DF:160:ASN:HD22	35:DF:162:LEU:H	1.54	0.56
28:B6:19:ARG:HG3	28:B6:20:ASN:H	1.71	0.56
28:B6:13:CYS:O	28:B6:21:TYR:HA	2.05	0.56
30:B8:26:LYS:HE2	30:B8:47:LYS:HG2	1.87	0.56
10:AJ:7:LYS:O	10:AJ:96:ILE:HA	2.06	0.56
1:CA:615:C:H2'	1:CA:616:G:O4'	2.06	0.56
2:CB:21:ARG:CB	2:CB:39:ILE:HA	2.36	0.56
28:D6:42:TRP:HZ2	31:DA:642:G:O3'	1.87	0.56
31:DA:642:G:H21	31:DA:646:A:H2	1.51	0.56
9:AI:26:VAL:HG22	9:AI:61:ALA:HB3	1.87	0.56
31:BA:2392:A:C8	41:BP:60:MET:HG2	2.40	0.56
17:CQ:13:ASP:H	17:CQ:14:LYS:HZ2	1.53	0.56
31:BA:2075:U:H2'	31:BA:2238:G:N2	2.20	0.56
38:BI:110:ASP:HB2	38:BI:113:ARG:HG2	1.88	0.56
31:BA:203:C:H3'	31:BA:204:A:H5''	1.88	0.56
3:CC:69:HIS:CD2	3:CC:69:HIS:N	2.74	0.56
31:BA:2342:C:H6	31:BA:2342:C:OP2	1.88	0.56
40:DO:7:TYR:HE1	40:DO:20:MET:HE3	1.70	0.56
27:B5:32:PRO:HD2	31:BA:2886:G:O2'	2.05	0.56
31:DA:661:C:O3'	41:DP:18:ARG:HA	2.06	0.56
32:DB:7:G:H5'	44:DS:29:PHE:CZ	2.40	0.56
30:D8:41:ILE:HD12	31:DA:2419:U:OP1	2.06	0.56
31:DA:175:G:H5'	31:DA:175:G:H8	1.70	0.56
31:DA:1341:U:C2'	31:DA:1397:U:O2	2.54	0.56
49:DX:31:HIS:HD2	49:DX:33:LYS:H	1.54	0.56
49:DX:72:LYS:HG3	49:DX:74:PRO:CD	2.32	0.56
46:DU:92:ARG:O	46:DU:94:ASN:N	2.39	0.56
47:DV:52:VAL:O	47:DV:53:GLU:HB3	2.06	0.56
31:DA:310:A:P	50:DY:18:GLY:HA2	2.45	0.56
31:DA:943:U:OP2	41:DP:38:GLN:CD	2.44	0.56
15:AO:78:TYR:O	15:AO:82:ILE:HG22	2.05	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
39:DN:59:LYS:O	39:DN:60:ILE:C	2.43	0.56
31:BA:2652:C:H2'	31:BA:2653:U:C5'	2.34	0.56
35:DF:46:ARG:HG2	35:DF:46:ARG:NH1	2.08	0.56
47:DV:85:LYS:C	47:DV:87:HIS:H	2.05	0.56
43:BR:9:LYS:O	43:BR:10:LEU:HD23	2.06	0.56
6:AF:11:ASN:O	6:AF:14:LEU:HB2	2.06	0.56
45:DT:33:LYS:N	45:DT:33:LYS:NZ	2.54	0.56
39:BN:30:ILE:HG23	39:BN:52:VAL:HG11	1.88	0.56
31:DA:495:G:H1'	48:DW:57:ASN:ND2	2.21	0.56
1:CA:1096:C:H2'	1:CA:1097:C:C6	2.40	0.56
31:DA:271(D):G:H1	31:DA:271(T):C:H42	1.54	0.56
31:BA:1796:U:H2'	31:BA:1797:C:H6	1.71	0.56
31:BA:1106:A:C2'	31:BA:1107:G:O5'	2.53	0.56
31:DA:1935:G:H1'	31:DA:1964:G:N2	2.20	0.56
1:AA:1203:C:OP1	14:AN:3:ARG:HD3	2.06	0.56
23:D1:26:ARG:CD	23:D1:34:THR:HB	2.35	0.56
1:CA:1452:C:O4'	1:CA:1456:G:C2	2.59	0.56
1:AA:84:U:H5	1:AA:88:A:N7	2.04	0.56
19:CS:6:LYS:HG2	19:CS:7:LYS:CD	2.34	0.56
12:AL:24:VAL:O	12:AL:24:VAL:HG12	2.04	0.56
5:CE:102:ALA:HB1	5:CE:106:PRO:CG	2.35	0.56
23:D1:23:LYS:HB2	23:D1:37:ILE:HG22	1.86	0.56
10:AJ:6:ILE:HG22	10:AJ:98:ILE:HG13	1.87	0.56
1:AA:946:A:H2'	1:AA:947:G:C8	2.41	0.56
1:CA:947:G:H2'	1:CA:948:C:C6	2.41	0.56
1:AA:1157:A:H4'	1:AA:1158:C:O5'	2.06	0.56
29:D7:16:HIS:CB	29:D7:44:PRO:HG2	2.36	0.56
31:BA:767:U:O2'	31:BA:768:G:H5'	2.05	0.56
1:CA:651:C:H2'	1:CA:652:U:C6	2.41	0.56
48:DW:44:ALA:O	48:DW:45:TYR:C	2.44	0.56
1:CA:262:A:C6	1:CA:263:A:C6	2.93	0.56
1:AA:1030(A):G:H1'	1:AA:1031:G:H22	1.70	0.56
2:CB:36:ARG:H	2:CB:41:ILE:HD13	1.69	0.56
2:AB:130:ARG:HA	2:AB:130:ARG:HE	1.69	0.56
31:BA:1439:A:C2	31:BA:1553:A:C4	2.94	0.56
31:DA:661:C:H2'	31:DA:662:G:C8	2.41	0.56
30:D8:3:LYS:HE3	31:DA:242:G:O5'	2.06	0.56
46:DU:87:GLY:HA3	47:DV:52:VAL:HG13	1.86	0.56
35:BF:53:THR:HB	35:BF:56:GLU:OE1	2.05	0.56
31:DA:1210:A:C8	31:DA:1210:A:H5'	2.39	0.56
44:BS:28:VAL:O	44:BS:29:PHE:HB3	2.06	0.56
31:BA:806:C:OP2	41:BP:39:LYS:CD	2.53	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
34:BE:92:THR:O	34:BE:93:VAL:HB	2.05	0.56
1:CA:542:G:H5'	4:CD:41:GLY:CA	2.36	0.56
4:CD:30:LYS:C	4:CD:32:ALA:H	2.09	0.56
4:CD:8:VAL:HG12	4:CD:21:LEU:HD12	1.88	0.56
31:DA:288:C:N4	31:DA:353:G:H1	2.03	0.56
51:DZ:44:PHE:CZ	51:DZ:48:PHE:HD2	2.24	0.56
30:B8:58:ILE:O	30:B8:61:LEU:HG	2.05	0.56
37:DH:41:MET:HG3	37:DH:53:GLU:O	2.06	0.56
31:BA:2880:C:O2'	43:BR:90:ARG:HD3	2.06	0.56
48:BW:5:ALA:C	48:BW:6:ILE:HG13	2.26	0.56
1:AA:615:C:H2'	1:AA:616:G:O4'	2.06	0.56
1:AA:559:A:C4'	1:AA:560:U:H3'	2.36	0.56
16:CP:23:ASP:O	16:CP:25:ARG:N	2.39	0.56
1:AA:1285:A:OP1	1:AA:1285:A:H8	1.89	0.56
1:CA:147:G:N2	1:CA:148:G:H1'	2.21	0.56
31:BA:909:A:H2'	31:BA:912:C:H5	1.71	0.56
31:DA:1112:G:H1'	31:DA:1113:U:OP1	2.06	0.56
35:DF:83:PHE:O	35:DF:84:VAL:CB	2.53	0.56
29:B7:16:HIS:CB	29:B7:44:PRO:HG2	2.34	0.56
1:CA:741:G:H2'	1:CA:742:G:O4'	2.06	0.56
3:AC:148:GLY:HA3	3:AC:172:ARG:O	2.05	0.56
18:CR:50:ILE:HD11	18:CR:70:ILE:HG21	1.87	0.56
35:BF:89:VAL:HG12	35:BF:90:PHE:H	1.69	0.56
49:BX:70:LEU:O	49:BX:71:GLY:O	2.24	0.56
10:CJ:39:PRO:HB3	10:CJ:70:ARG:NH1	2.20	0.56
1:AA:167:G:O2'	1:AA:168:G:H5'	2.05	0.56
27:D5:29:THR:HG21	31:DA:2815:C:C5'	2.35	0.56
31:DA:1515:G:H4'	31:DA:1556:C:O2'	2.04	0.56
34:BE:176:ILE:HG22	34:BE:176:ILE:O	2.05	0.56
1:AA:131:C:H2'	1:AA:132:C:C6	2.41	0.56
31:DA:2228:G:C5	31:DA:2229:C:C4	2.94	0.56
1:CA:247:G:OP2	17:CQ:100:LYS:HG2	2.06	0.56
31:DA:364:C:O2	31:DA:364:C:H2'	2.05	0.56
1:AA:1133:G:N3	1:AA:1142:G:N2	2.54	0.56
31:DA:1745(A):C:H5''	31:DA:1745(A):C:H6	1.71	0.56
31:DA:1040:C:O2'	31:DA:1041:C:P	2.63	0.56
31:DA:662:G:P	41:DP:18:ARG:HG2	2.46	0.56
31:DA:1569:A:H5'	33:DD:61:LEU:HD21	1.87	0.56
44:DS:93:LYS:C	44:DS:93:LYS:HE3	2.25	0.56
31:BA:2301:C:H2'	31:BA:2302:G:O4'	2.06	0.56
50:BY:79:CYS:O	50:BY:80:GLY:C	2.45	0.56
24:D2:26:ARG:CG	49:DX:5:TYR:O	2.54	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
51:BZ:109:ALA:O	51:BZ:144:LEU:O	2.24	0.56
15:AO:81:LEU:CD1	15:AO:85:LEU:HD12	2.35	0.56
27:D5:56:LYS:O	27:D5:57:VAL:C	2.45	0.56
15:AO:78:TYR:OH	15:AO:88:ARG:HD2	2.06	0.56
41:BP:83:VAL:CG1	41:BP:112:LEU:HD21	2.35	0.56
51:DZ:121:HIS:ND1	51:DZ:169:GLU:OE2	2.39	0.56
37:BH:41:MET:O	37:BH:42:ARG:C	2.45	0.56
30:B8:4:MET:HE2	31:BA:592:G:N3	2.21	0.56
33:DD:228:PRO:HD3	33:DD:235:GLY:CA	2.35	0.56
9:CI:7:THR:O	9:CI:79:LEU:HD12	2.06	0.56
1:CA:1097:C:H2'	1:CA:1098:C:H6	1.71	0.56
31:DA:2876:G:H4'	45:DT:3:ARG:NE	2.21	0.56
1:AA:1081:G:N2	1:AA:1082:G:H1'	2.21	0.56
28:B6:26:ASN:OD1	28:B6:35:GLU:HG2	2.04	0.56
2:AB:22:LYS:HZ3	2:AB:40:HIS:HE1	1.52	0.56
1:CA:79:G:C4'	1:CA:80:G:OP1	2.53	0.56
47:BV:83:ARG:CG	47:BV:83:ARG:NH1	2.66	0.56
1:CA:865:A:C2	1:CA:918:A:H4'	2.41	0.56
31:DA:1174:A:OP1	31:DA:1175:U:OP1	2.24	0.56
31:BA:2183:C:H2'	31:BA:2184:G:C8	2.41	0.56
7:AG:15:ASP:HB3	7:AG:19:GLY:N	2.21	0.56
1:AA:624:C:H2'	1:AA:625:G:C8	2.41	0.56
6:CF:100:ASN:H	18:CR:23:LYS:HZ2	1.54	0.56
1:AA:828:A:H2'	1:AA:829:G:O4'	2.06	0.56
29:B7:39:ARG:HD3	31:BA:458:G:O2'	2.06	0.56
1:CA:816:A:OP2	1:CA:1527:C:H5'	2.06	0.56
5:AE:33:VAL:HG12	5:AE:34:VAL:H	1.71	0.56
1:CA:745:C:H2'	1:CA:746:A:H8	1.71	0.56
1:CA:472:A:H4'	16:CP:82:GLN:HE22	1.70	0.56
33:DD:232:PRO:HG2	33:DD:248:SER:O	2.06	0.56
36:DG:106:LEU:HD12	36:DG:110:ALA:HB3	1.86	0.56
31:BA:2567:G:H2'	31:BA:2568:C:C6	2.41	0.56
31:BA:2577:A:H5''	31:BA:2578:G:H5'	1.88	0.56
3:AC:20:SER:HB2	3:AC:40:ARG:NH2	2.21	0.56
40:BO:21:CYS:HB2	40:BO:39:ILE:HD12	1.88	0.56
51:BZ:120:ILE:O	51:BZ:120:ILE:HG22	2.05	0.56
1:CA:1469:G:H2'	1:CA:1470:G:H8	1.70	0.56
31:DA:1914:C:H2'	31:DA:1915:U:O4'	2.06	0.56
31:DA:2677:G:H2'	31:DA:2678:C:C6	2.41	0.56
20:CT:46:GLU:CD	20:CT:48:LYS:HE2	2.26	0.56
1:AA:916:G:H2'	1:AA:917:G:H8	1.71	0.56
48:BW:2:GLU:OE1	48:BW:72:LYS:NZ	2.37	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:DA:953:A:O2'	31:DA:954:G:H5'	2.06	0.56
47:BV:19:LYS:CD	47:BV:20:LEU:H	2.19	0.55
31:BA:1495:A:C2	31:BA:1496:A:C2	2.94	0.55
31:BA:2313:C:O2'	31:BA:2314:C:H5'	2.06	0.55
31:DA:241:A:O4'	31:DA:243:U:C6	2.59	0.55
49:BX:74:PRO:C	49:BX:75:ASP:O	2.42	0.55
49:BX:76:ARG:HD2	49:BX:77:LYS:HB2	1.88	0.55
1:CA:1256:A:H61	1:CA:1278:U:C1'	2.05	0.55
44:BS:17:ARG:HE	44:BS:89:ARG:HH21	1.52	0.55
34:BE:111:ARG:HA	43:BR:2:ARG:HG3	1.88	0.55
29:D7:8:ASN:HD22	29:D7:9:ARG:N	2.01	0.55
23:B1:92:LYS:C	23:B1:94:LEU:N	2.59	0.55
37:DH:138:LYS:O	37:DH:142:GLY:N	2.39	0.55
31:DA:637:A:OP1	41:DP:133:SER:HB3	2.06	0.55
42:DQ:140:ALA:CB	51:DZ:99:TYR:HB2	2.35	0.55
31:DA:751:A:C5'	48:DW:90:ARG:HA	2.32	0.55
1:AA:687:A:H1'	1:AA:688:G:OP2	2.05	0.55
23:B1:13:ILE:HD13	23:B1:14:VAL:O	2.06	0.55
4:AD:119:GLN:O	4:AD:123:HIS:HD2	1.88	0.55
1:CA:1065:U:C1'	1:CA:1066:C:OP2	2.52	0.55
1:AA:333:G:O2'	1:AA:334:C:H5'	2.06	0.55
31:DA:1952:A:C6	31:DA:1953:A:C6	2.94	0.55
28:B6:39:TYR:O	28:B6:49:HIS:CE1	2.56	0.55
18:AR:59:SER:HB3	18:AR:62:GLU:CG	2.35	0.55
4:CD:94:LEU:HA	4:CD:97:LEU:HB2	1.88	0.55
34:DE:120:TRP:CD2	34:DE:155:LYS:HD3	2.41	0.55
22:D0:18:ALA:HB1	31:DA:2271:G:OP1	2.06	0.55
31:BA:18:C:OP1	46:BU:25:TRP:O	2.24	0.55
36:BG:23:PHE:CZ	36:BG:171:ALA:HB3	2.41	0.55
4:CD:138:TYR:CD2	4:CD:139:ARG:N	2.74	0.55
15:AO:23:GLY:O	15:AO:27:VAL:HB	2.06	0.55
45:DT:50:ILE:HA	45:DT:99:LEU:HD11	1.86	0.55
9:AI:28:VAL:HA	9:AI:63:ILE:O	2.07	0.55
4:AD:56:VAL:HG12	4:AD:202:LEU:HD13	1.87	0.55
36:BG:111:LEU:O	36:BG:114:ILE:HG12	2.06	0.55
31:DA:817:C:H2'	31:DA:818:G:O4'	2.07	0.55
18:CR:36:ASN:ND2	18:CR:39:VAL:HG21	2.21	0.55
37:BH:77:LYS:HA	37:BH:80:SER:HB2	1.88	0.55
31:DA:733:G:O6	31:DA:761:A:C8	2.58	0.55
32:DB:21:G:N3	32:DB:21:G:H2'	2.21	0.55
16:AP:20:VAL:HG23	16:AP:34:GLU:O	2.07	0.55
31:BA:2206:G:N3	31:BA:2206:G:H3'	2.22	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
33:DD:35:LYS:NZ	33:DD:104:TYR:CB	2.59	0.55
44:DS:26:LEU:HD22	44:DS:87:PHE:CD1	2.41	0.55
30:D8:58:ILE:O	30:D8:61:LEU:HG	2.06	0.55
49:DX:78:LYS:HD3	49:DX:78:LYS:O	2.06	0.55
23:B1:85:LEU:HD13	23:B1:87:PRO:HG3	1.88	0.55
44:BS:35:ILE:H	44:BS:53:SER:CB	2.19	0.55
37:DH:85:LYS:NZ	37:DH:133:VAL:HB	2.21	0.55
35:DF:199:TRP:CZ3	35:DF:203:GLN:HG3	2.41	0.55
8:CH:87:SER:OG	8:CH:132:GLU:HG3	2.07	0.55
31:BA:1531:C:H5'	31:BA:1532:C:H6	1.72	0.55
39:BN:67:LEU:C	39:BN:69:GLN:H	2.09	0.55
41:DP:97:PRO:HD3	41:DP:126:VAL:O	2.06	0.55
1:AA:434:U:H2'	1:AA:435:C:C6	2.42	0.55
24:D2:49:LYS:O	24:D2:50:ILE:C	2.43	0.55
31:BA:287:C:N4	31:BA:354:G:H1	2.03	0.55
45:DT:38:ASN:C	45:DT:38:ASN:ND2	2.59	0.55
31:DA:2652:C:H2'	31:DA:2653:U:C5'	2.34	0.55
50:BY:28:LYS:HB2	50:BY:38:ILE:N	2.21	0.55
18:CR:59:SER:HB3	18:CR:62:GLU:CG	2.35	0.55
50:BY:45:VAL:HG22	50:BY:62:GLU:HB2	1.89	0.55
1:AA:327:A:C4	1:AA:329:A:C8	2.94	0.55
1:CA:1203:C:OP1	14:CN:3:ARG:HD3	2.06	0.55
39:BN:75:TYR:CD1	39:BN:75:TYR:N	2.74	0.55
25:B3:40:THR:HG23	25:B3:43:ILE:CG1	2.34	0.55
31:BA:795:C:H2'	31:BA:796:C:H6	1.70	0.55
2:CB:61:LEU:HA	2:CB:64:ARG:CG	2.36	0.55
1:CA:37:U:O2'	1:CA:38:G:H5'	2.06	0.55
1:CA:1239:A:H62	1:CA:1299:A:N6	2.03	0.55
22:B0:74:ARG:HG2	32:BB:12:C:O2'	2.07	0.55
31:DA:1374:G:C6	31:DA:1375:C:C4	2.95	0.55
7:AG:73:MET:HA	7:AG:91:VAL:HG23	1.88	0.55
1:CA:709:G:O2'	1:CA:710:G:H5'	2.06	0.55
3:CC:91:LEU:HB3	3:CC:99:VAL:HG21	1.89	0.55
8:CH:26:VAL:HG22	8:CH:27:PRO:O	2.07	0.55
36:BG:123:ASN:O	36:BG:126:ASP:HB2	2.06	0.55
1:AA:792:A:H4'	1:AA:793:U:O5'	2.06	0.55
12:AL:21:LYS:HD2	12:AL:21:LYS:N	2.21	0.55
46:BU:69:CYS:HB3	46:BU:106:PHE:CZ	2.41	0.55
31:BA:2314:C:C2	31:BA:2315:G:C8	2.94	0.55
10:CJ:46:ARG:HD3	14:CN:61:TRP:CZ3	2.41	0.55
32:BB:8:U:H6	32:BB:8:U:C5'	2.17	0.55
27:D5:50:GLY:HA3	27:D5:56:LYS:HG2	1.88	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:537:G:OP1	12:AL:113:ARG:NH2	2.40	0.55
31:DA:1528:A:O2'	31:DA:1528(A):A:O5'	2.24	0.55
39:BN:128:HIS:O	39:BN:128:HIS:CD2	2.60	0.55
31:BA:1505:C:H6	31:BA:1506:C:C6	2.24	0.55
20:AT:13:LEU:CD1	20:AT:13:LEU:H	2.12	0.55
9:AI:7:THR:HB	9:AI:83:ARG:HH11	1.71	0.55
39:BN:78:TYR:H	39:BN:79:PRO:CD	2.19	0.55
1:AA:1084:G:OP1	1:AA:1086:U:C4	2.59	0.55
1:AA:719:C:O2'	18:AR:49:LYS:HB3	2.06	0.55
1:AA:79:G:C4'	1:AA:80:G:OP1	2.54	0.55
31:DA:18:C:OP1	46:DU:25:TRP:O	2.24	0.55
33:BD:3:VAL:HG13	33:BD:17:THR:HB	1.87	0.55
2:AB:68:ILE:HG22	2:AB:70:PHE:CE1	2.41	0.55
31:BA:1590:U:C2'	31:BA:1591:G:H5''	2.36	0.55
1:AA:1346:A:H5''	9:AI:120:ARG:HH12	1.71	0.55
35:BF:83:PHE:O	35:BF:84:VAL:HB	2.07	0.55
47:DV:2:PHE:CD2	47:DV:42:GLY:HA2	2.41	0.55
31:BA:1648:C:C2'	31:BA:1649:G:O5'	2.55	0.55
31:DA:1688:U:H5'	31:DA:1689:A:OP1	2.06	0.55
31:BA:825:C:H2'	31:BA:826:U:O5'	2.06	0.55
31:BA:836:G:H2'	31:BA:837:C:C6	2.42	0.55
31:DA:1956:U:C2'	31:DA:1957:C:H5'	2.36	0.55
39:DN:23:LEU:CD1	39:DN:98:VAL:HG12	2.36	0.55
8:AH:44:PHE:HB3	8:AH:80:ILE:HD11	1.89	0.55
18:AR:31:LEU:H	18:AR:31:LEU:CD2	2.19	0.55
9:CI:118:LYS:O	9:CI:119:ALA:HB3	2.06	0.55
31:BA:1635:G:H2'	31:BA:1636:C:C6	2.41	0.55
31:BA:225:A:C2'	31:BA:226:G:H5'	2.36	0.55
31:DA:661:C:H2'	31:DA:662:G:H8	1.71	0.55
46:BU:104:GLN:HB2	47:BV:43:GLU:OE2	2.07	0.55
1:AA:148:G:C2	1:AA:149:A:N7	2.74	0.55
1:AA:373:A:N3	1:AA:374:A:C8	2.75	0.55
30:D8:4:MET:SD	30:D8:61:LEU:CD1	2.90	0.55
31:BA:2632:A:H1'	34:BE:61:ARG:HH12	1.70	0.55
49:DX:24:GLY:HA3	49:DX:80:ILE:CG1	2.28	0.55
23:B1:32:LYS:HG2	31:BA:2396:G:O2'	2.07	0.55
31:BA:142:A:H8	31:BA:1408:C:H1'	1.72	0.55
31:BA:330:A:O2'	31:BA:331:A:H8	1.90	0.55
33:BD:161:THR:HG23	33:BD:196:VAL:CG2	2.36	0.55
31:DA:310:A:OP1	50:DY:18:GLY:HA2	2.06	0.55
31:BA:669:G:H5''	31:BA:669:G:C8	2.41	0.55
37:BH:85:LYS:NZ	37:BH:133:VAL:HB	2.21	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:DA:2494:G:C4	31:DA:2495:G:C8	2.94	0.55
37:BH:44:VAL:CG1	37:BH:45:VAL:H	2.11	0.55
43:DR:41:ALA:HB1	43:DR:114:VAL:CG2	2.36	0.55
1:CA:336:C:H2'	1:CA:337:C:H6	1.71	0.55
1:CA:343:U:C2'	1:CA:346:G:O6	2.55	0.55
1:AA:976:G:P	14:AN:32:SER:H	2.30	0.55
35:BF:198:ALA:O	35:BF:201:VAL:HG12	2.06	0.55
12:AL:38:THR:HG21	12:AL:65:GLU:OE2	2.05	0.55
31:DA:271(P):C:O2'	31:DA:271(Q):G:H5'	2.06	0.55
34:DE:116:VAL:HG23	34:DE:122:PHE:CG	2.41	0.55
13:CM:25:ILE:CD1	13:CM:66:LEU:HD23	2.35	0.55
38:BI:72:LEU:HD12	38:BI:138:ILE:CG2	2.34	0.55
32:DB:66:A:C6	32:DB:109:C:C6	2.95	0.55
40:BO:3:GLN:HB2	40:BO:4:PRO:HD2	1.88	0.55
31:DA:1508:A:O2'	31:DA:1509:C:OP1	2.22	0.55
31:BA:2889:C:H2'	31:BA:2891:G:H5'	1.88	0.55
32:DB:15:A:H1'	32:DB:110:G:C8	2.41	0.55
10:AJ:49:VAL:HG22	14:AN:41:ARG:HB2	1.88	0.55
32:BB:15:A:H1'	32:BB:110:G:N9	2.21	0.55
31:BA:322:A:OP2	35:BF:169:ASN:HB2	2.06	0.55
38:BI:38:LEU:N	38:BI:38:LEU:HD12	2.21	0.55
1:CA:658:G:C5	1:CA:659:U:C5	2.95	0.55
40:BO:23:ARG:HG3	40:BO:24:VAL:N	2.22	0.55
34:DE:7:VAL:HG21	45:DT:1:MET:CE	2.37	0.55
8:AH:64:LYS:HG2	8:AH:79:VAL:HG21	1.87	0.55
3:AC:127:ARG:HD2	3:AC:127:ARG:N	2.21	0.55
47:BV:35:LEU:HB2	47:BV:59:ALA:HB1	1.88	0.55
1:AA:1316:G:O3'	14:AN:18:VAL:HG22	2.07	0.55
33:BD:221:VAL:HG22	33:BD:226:MET:HE2	1.88	0.55
1:AA:1001(A):G:H2'	1:AA:1002:G:O4'	2.06	0.55
17:CQ:63:ARG:HG2	17:CQ:64:PRO:HD2	1.88	0.55
43:BR:59:ASP:OD1	43:BR:61:HIS:HB3	2.06	0.55
41:BP:90:ARG:HB3	41:BP:91:PHE:CD1	2.42	0.55
31:BA:573:G:O2'	31:BA:574:C:H3'	2.05	0.55
31:BA:1893:C:C5	31:BA:1894:C:C5	2.93	0.55
1:AA:307:C:C5	1:AA:308:C:C5	2.95	0.55
1:AA:356:A:H2'	1:AA:357:G:O5'	2.06	0.55
1:AA:386:C:H2'	1:AA:387:U:H5'	1.87	0.55
51:DZ:150:LEU:N	51:DZ:150:LEU:HD13	2.21	0.55
51:BZ:150:LEU:HA	51:BZ:151:HIS:HD2	1.72	0.55
2:CB:187:LEU:HD13	2:CB:187:LEU:O	2.07	0.55
49:BX:35:THR:HB	49:BX:75:ASP:OD2	2.06	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
44:BS:89:ARG:O	44:BS:90:GLY:O	2.25	0.55
33:BD:43:ARG:HH11	33:BD:44:ASN:CG	2.09	0.55
43:DR:2:ARG:HD2	43:DR:2:ARG:N	2.21	0.55
8:CH:86:ILE:O	8:CH:87:SER:C	2.44	0.55
34:DE:93:VAL:N	34:DE:95:ILE:HD13	2.08	0.55
1:CA:411:A:C6	1:CA:429:U:C4	2.95	0.55
26:D4:13:ARG:HA	36:DG:101:ILE:HD11	1.88	0.55
45:BT:29:ARG:HE	45:BT:84:GLN:CD	2.10	0.55
1:CA:926:G:C6	1:CA:1505:G:C5	2.94	0.55
1:AA:501:C:H2'	1:AA:502:G:H8	1.71	0.55
1:AA:410:G:H1'	1:AA:432:A:N6	2.21	0.55
1:AA:411:A:C6	1:AA:429:U:C4	2.95	0.55
31:DA:1464:C:O2'	31:DA:1528:A:H1'	2.07	0.55
6:AF:18:GLN:HA	6:AF:21:LEU:CD2	2.30	0.55
1:CA:342:C:C2'	1:CA:343:U:H5'	2.36	0.55
39:DN:91:LEU:CA	39:DN:95:PRO:HB3	2.32	0.55
15:AO:39:LEU:HD11	15:AO:56:LEU:HB2	1.88	0.55
33:BD:209:ALA:C	33:BD:210:GLY:O	2.43	0.55
1:AA:1452:C:H5'	1:AA:1456:G:C5	2.41	0.55
1:CA:84:U:H5	1:CA:88:A:N7	2.03	0.55
1:AA:1313:U:P	19:AS:6:LYS:HG3	2.47	0.55
30:D8:43:GLN:O	30:D8:44:LYS:CD	2.54	0.55
1:AA:719:C:C5	1:AA:720:C:C4	2.95	0.55
42:DQ:72:LYS:HB3	42:DQ:94:VAL:CG2	2.37	0.55
31:BA:901:A:H2'	31:BA:901:A:N3	2.20	0.55
31:DA:31:C:C4	31:DA:32:C:C5	2.95	0.55
2:CB:7:VAL:O	2:CB:11:LEU:HG	2.07	0.55
1:AA:166:G:O2'	1:AA:167:G:H5'	2.07	0.55
31:BA:1515:G:H4'	31:BA:1556:C:O2'	2.07	0.55
41:DP:107:LYS:O	41:DP:109:GLY:N	2.39	0.55
42:BQ:109:VAL:HG13	42:BQ:113:GLN:OE1	2.07	0.55
34:DE:137:HIS:HB3	34:DE:138:PRO:CD	2.36	0.55
1:AA:472:A:H4'	16:AP:82:GLN:HE22	1.70	0.55
8:CH:77:GLU:HG3	8:CH:78:GLN:H	1.69	0.55
3:CC:86:VAL:O	3:CC:90:GLU:HG2	2.07	0.55
31:BA:1439:A:C2	31:BA:1553:A:C5	2.94	0.55
51:BZ:118:GLN:O	51:BZ:120:ILE:N	2.39	0.55
9:AI:6:GLY:HA3	9:AI:84:ALA:HB2	1.88	0.55
2:AB:103:THR:HA	2:AB:180:LEU:HD11	1.87	0.55
31:DA:1600:C:O2'	31:DA:1601:G:H5'	2.07	0.55
35:BF:144:LYS:C	35:BF:146:ALA:H	2.10	0.55
51:BZ:103:ARG:HD3	51:BZ:136:PHE:CE1	2.41	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
51:BZ:95:PRO:HA	51:BZ:129:SER:HA	1.89	0.55
31:BA:2393:A:H5'	41:BP:62:LEU:HB3	1.89	0.55
49:BX:65:ARG:O	49:BX:66:LEU:HB2	2.07	0.55
49:DX:65:ARG:NH2	49:DX:66:LEU:H	2.04	0.55
41:BP:16:ARG:HG3	41:BP:17:LYS:H	1.70	0.55
1:CA:393:A:C2	1:CA:394:G:C8	2.95	0.55
35:BF:68:LYS:O	35:BF:68:LYS:HG3	2.06	0.55
31:BA:745:G:H5''	31:BA:746:A:OP2	2.06	0.55
31:BA:676:A:H2	31:BA:802:A:N6	2.03	0.55
45:BT:45:PHE:CE2	45:BT:63:VAL:HG22	2.39	0.55
41:BP:124:LYS:HG2	41:BP:143:GLY:CA	2.37	0.55
31:DA:282:A:C4	31:DA:359:A:C2	2.95	0.55
31:BA:2360:A:O2'	31:BA:2361:A:O5'	2.25	0.55
1:AA:709:G:O2'	1:AA:710:G:H5'	2.07	0.55
50:BY:8:LYS:HD2	50:BY:8:LYS:N	2.21	0.55
31:DA:271(J):C:H5'	31:DA:271(K):U:OP2	2.06	0.55
8:AH:88:LYS:HB3	8:AH:89:PRO:CD	2.32	0.55
23:D1:10:LYS:O	23:D1:13:ILE:HG23	2.05	0.55
23:D1:46:LEU:H	23:D1:46:LEU:CD1	2.06	0.55
31:BA:1952:A:C6	31:BA:1953:A:C6	2.94	0.55
7:CG:146:GLU:OE2	7:CG:149:ARG:HD2	2.07	0.55
1:AA:977:A:C2'	1:AA:978:A:H5'	2.34	0.55
1:CA:17:U:C2	1:CA:18:C:C5	2.95	0.55
23:D1:25:LYS:O	23:D1:26:ARG:HB3	2.06	0.55
38:BI:81:VAL:HG11	38:BI:88:ILE:HG23	1.88	0.55
20:AT:89:ARG:HB2	20:AT:104:LEU:CD1	2.34	0.55
1:CA:1313:U:P	19:CS:6:LYS:HG3	2.47	0.55
31:BA:1669:A:H5''	31:BA:2550:G:OP1	2.07	0.55
2:AB:61:LEU:HA	2:AB:64:ARG:CG	2.36	0.55
35:BF:155:LEU:HD23	35:BF:186:ILE:HD13	1.88	0.55
31:BA:528:A:C2	31:BA:2042:A:H2'	2.42	0.55
41:BP:10:PRO:CD	41:BP:11:GLY:N	2.70	0.55
31:BA:11:G:O2'	31:BA:12:U:H5'	2.07	0.55
31:DA:1648:C:C2'	31:DA:1649:G:O5'	2.54	0.55
27:D5:11:THR:CG2	31:DA:1264:G:H5'	2.35	0.55
38:BI:56:LYS:HZ2	38:BI:57:ARG:CA	2.20	0.55
31:DA:2859:G:C8	31:DA:2859:G:C3'	2.90	0.55
9:AI:77:ILE:O	9:AI:81:ILE:HG12	2.06	0.55
9:CI:114:TYR:HD1	10:CJ:60:ARG:HG2	1.70	0.55
31:BA:492:A:H2'	31:BA:493:G:O4'	2.06	0.55
31:DA:828:U:O2	31:DA:828:U:H3'	2.06	0.55
1:CA:167:G:O2'	1:CA:168:G:H5'	2.06	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
42:BQ:116:GLU:O	42:BQ:120:ILE:HG12	2.06	0.55
1:CA:264:U:O2'	17:CQ:64:PRO:HB2	2.06	0.55
12:CL:83:VAL:HG22	12:CL:84:LEU:N	2.22	0.55
35:DF:132:VAL:HG22	35:DF:133:ASN:N	2.22	0.55
41:DP:149:GLU:O	41:DP:149:GLU:HG3	2.07	0.55
42:BQ:139:GLU:HG2	42:BQ:139:GLU:O	2.07	0.55
7:AG:32:ARG:O	7:AG:33:ASP:CB	2.55	0.55
31:DA:671:C:H2'	31:DA:672:C:C6	2.41	0.55
27:B5:50:GLY:O	27:B5:51:TYR:CD1	2.60	0.55
46:BU:93:LYS:H	46:BU:93:LYS:HD3	1.72	0.55
31:BA:1497:U:H2'	31:BA:1497:U:O2	2.06	0.55
33:BD:61:LEU:O	33:BD:63:ARG:NH1	2.39	0.55
47:DV:72:VAL:HA	47:DV:88:ARG:NH2	2.21	0.55
31:DA:2889:C:H2'	31:DA:2891:G:H5'	1.88	0.55
28:D6:12:GLU:CB	28:D6:23:THR:HG22	2.37	0.55
31:BA:58:G:OP1	49:BX:72:LYS:HA	2.06	0.55
32:BB:48:A:H2'	32:BB:49:C:C6	2.40	0.55
1:AA:1254:C:OP1	10:AJ:45:ARG:HG2	2.06	0.55
34:BE:95:ILE:HD12	34:BE:95:ILE:H	1.71	0.55
31:BA:2836:U:C4	31:BA:2883:A:N6	2.75	0.55
39:DN:17:ASP:C	39:DN:19:GLU:H	2.10	0.55
31:DA:2304:G:H22	31:DA:2312:U:H3	1.53	0.55
41:BP:135:LEU:HD21	41:BP:144:GLU:HG3	1.88	0.55
31:DA:2532:G:O2'	31:DA:2657:A:N6	2.39	0.55
37:BH:47:GLU:C	37:BH:49:VAL:H	2.10	0.55
31:DA:751:A:H5'	48:DW:90:ARG:CA	2.32	0.55
48:DW:18:ARG:HG2	48:DW:18:ARG:HH11	1.72	0.55
4:AD:138:TYR:CD2	4:AD:139:ARG:N	2.74	0.55
1:AA:1003:G:N2	1:AA:1039:C:C2	2.75	0.55
1:CA:561:U:O2'	1:CA:562:C:P	2.65	0.55
32:DB:29:A:C2	32:DB:30:C:C2	2.94	0.55
2:CB:67:THR:HG22	2:CB:90:MET:HE1	1.89	0.55
37:DH:153:LYS:CD	37:DH:153:LYS:N	2.70	0.55
1:CA:620:C:C2	4:CD:135:LEU:HG	2.41	0.55
31:DA:272(B):G:O2'	31:DA:272(C):G:C5'	2.55	0.55
1:AA:189:G:C6	1:AA:189(A):C:C4	2.94	0.55
1:AA:1496:C:H4'	31:BA:1920:C:O2'	2.07	0.55
1:AA:552:U:O2'	1:AA:553:A:H5'	2.07	0.55
1:CA:577:G:C8	1:CA:816:A:C6	2.95	0.55
3:AC:35:GLU:CD	3:AC:59:ARG:HH22	2.09	0.55
12:AL:18:VAL:O	12:AL:19:ARG:HB3	2.07	0.55
50:DY:83:THR:CG2	50:DY:94:LYS:HB3	2.36	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
40:DO:60:ALA:HB2	40:DO:86:ILE:HA	1.89	0.55
2:CB:25:ASN:OD1	2:CB:25:ASN:C	2.45	0.55
5:CE:145:LYS:O	5:CE:149:GLU:HG2	2.06	0.55
1:AA:872:A:C4	1:AA:874:G:N7	2.75	0.55
3:AC:69:HIS:CD2	3:AC:69:HIS:N	2.74	0.55
27:B5:56:LYS:O	27:B5:57:VAL:O	2.25	0.55
41:DP:16:ARG:NE	41:DP:18:ARG:HB2	2.21	0.55
31:DA:1826:G:H2'	31:DA:1827:C:H6	1.72	0.55
47:DV:71:LEU:HD13	47:DV:72:VAL:N	2.21	0.55
1:CA:386:C:H2'	1:CA:387:U:H5'	1.89	0.55
31:DA:2223:G:H2'	31:DA:2224:G:C5'	2.34	0.55
34:BE:82:ARG:HG3	34:BE:83:ASP:N	2.22	0.55
23:B1:19:GLN:HG3	23:B1:44:PRO:HG3	1.89	0.55
1:CA:428:G:C5	1:CA:430:A:C6	2.94	0.55
4:AD:31:CYS:C	4:AD:33:MET:N	2.59	0.55
6:CF:14:LEU:HB3	6:CF:19:LEU:HB2	1.89	0.55
10:CJ:32:ALA:HB1	10:CJ:75:ILE:CG1	2.36	0.55
40:BO:107:ARG:HE	40:BO:115:VAL:HG11	1.72	0.55
23:B1:8:SER:N	23:B1:46:LEU:CD1	2.69	0.55
31:DA:271(O):C:O2'	31:DA:271(P):C:C5	2.42	0.55
31:DA:271(T):C:H2'	31:DA:271(T):C:O2	2.06	0.55
1:CA:1089:G:C6	1:CA:1090:U:C4	2.95	0.55
1:CA:977:A:C8	1:CA:1223:C:C4	2.95	0.55
31:BA:2880:C:H1'	43:BR:92:GLY:O	2.07	0.55
31:BA:271(J):C:H5'	31:BA:271(K):U:OP2	2.05	0.55
12:CL:28:LYS:CE	12:CL:33:ARG:HH12	2.20	0.55
12:CL:33:ARG:HG2	12:CL:60:LEU:HD12	1.89	0.55
1:AA:1423:G:H5'	40:BO:49:ARG:NH2	2.22	0.55
32:BB:37:C:C5	32:BB:38:C:C4	2.95	0.55
32:DB:38:C:C2	32:DB:39:A:C8	2.95	0.55
37:DH:153:LYS:HB2	37:DH:154:PRO:CD	2.37	0.55
31:DA:2748:A:N6	31:DA:2749:A:C6	2.75	0.55
31:DA:1204:A:N1	31:DA:1241:A:N1	2.55	0.55
38:DI:38:LEU:HD12	38:DI:38:LEU:N	2.21	0.55
36:DG:7:LEU:CD2	36:DG:176:LEU:HD22	2.37	0.55
31:BA:1112:G:H1'	31:BA:1113:U:OP1	2.05	0.55
9:AI:114:TYR:HD1	10:AJ:60:ARG:HG2	1.70	0.55
46:DU:8:VAL:HG13	46:DU:12:ARG:HG3	1.88	0.55
46:DU:16:LYS:O	46:DU:20:LEU:HD23	2.06	0.55
16:CP:50:LYS:HD3	16:CP:50:LYS:C	2.27	0.55
31:BA:534:U:O2'	46:BU:49:HIS:CD2	2.59	0.55
31:DA:1992:G:H5'	31:DA:1994:C:H41	1.72	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
34:DE:24:THR:HG23	34:DE:184:VAL:HG23	1.88	0.55
2:CB:142:LEU:O	2:CB:142:LEU:HD23	2.07	0.55
17:CQ:40:LYS:HD2	17:CQ:42:TYR:CZ	2.42	0.55
31:BA:643:A:H2'	31:BA:644:A:O5'	2.07	0.55
21:CU:9:ARG:O	21:CU:13:ILE:HG13	2.07	0.55
9:CI:6:GLY:HA3	9:CI:84:ALA:HB2	1.88	0.55
34:DE:16:ARG:O	34:DE:18:ASP:N	2.40	0.55
2:AB:124:SER:OG	2:AB:125:PRO:HD2	2.06	0.55
1:AA:705:U:C5	1:AA:706:A:C5	2.95	0.55
43:BR:100:LEU:HD22	43:BR:100:LEU:N	2.22	0.55
2:CB:127:ILE:HD13	2:CB:127:ILE:N	2.22	0.55
22:D0:68:GLU:CG	22:D0:80:HIS:HB2	2.36	0.55
15:AO:74:ASP:OD2	15:AO:76:GLU:HB3	2.06	0.55
47:BV:43:GLU:H	47:BV:48:GLY:HA2	1.72	0.55
31:BA:1858:G:O2'	31:BA:1884:A:N6	2.39	0.55
44:DS:19:LYS:O	44:DS:19:LYS:HG2	2.06	0.55
47:BV:71:LEU:HD13	47:BV:72:VAL:N	2.22	0.55
46:DU:91:ASP:O	46:DU:92:ARG:O	2.24	0.55
2:AB:187:LEU:HD13	2:AB:187:LEU:O	2.06	0.55
26:B4:1:MET:H3	36:BG:67:LYS:NZ	2.05	0.55
44:BS:14:VAL:CG1	44:BS:15:ARG:H	2.03	0.55
31:BA:2802:G:H3'	31:BA:2802:G:P	2.47	0.55
1:CA:541:G:H2'	1:CA:542:G:H8	1.71	0.55
26:D4:11:PRO:C	26:D4:13:ARG:H	2.11	0.55
39:BN:17:ASP:C	39:BN:19:GLU:H	2.09	0.55
41:DP:135:LEU:HD21	41:DP:144:GLU:HG3	1.89	0.55
1:AA:432:A:C8	1:AA:433:C:C5	2.94	0.55
1:AA:541:G:H2'	1:AA:542:G:H8	1.70	0.55
42:DQ:20:ALA:HA	42:DQ:98:LYS:HD3	1.89	0.55
13:AM:34:LEU:HD22	13:AM:39:ILE:O	2.07	0.55
42:DQ:140:ALA:CB	51:DZ:53:ILE:HG13	2.32	0.55
30:B8:4:MET:SD	30:B8:61:LEU:CD1	2.93	0.55
39:DN:78:TYR:HD1	39:DN:79:PRO:CG	2.20	0.55
1:AA:977:A:C8	1:AA:1223:C:C4	2.94	0.55
31:BA:2223:G:H2'	31:BA:2224:G:C5'	2.33	0.55
28:B6:11:LEU:CD1	28:B6:51:GLU:HB2	2.37	0.55
28:B6:11:LEU:CD2	28:B6:26:ASN:H	2.19	0.55
1:CA:78:G:H1	1:CA:91:C:H42	1.52	0.55
1:AA:190:U:O2	20:AT:105:SER:HB2	2.07	0.55
31:DA:530:G:N3	31:DA:530:G:O4'	2.35	0.55
36:DG:16:ARG:NH1	36:DG:31:VAL:HG11	2.21	0.55
31:BA:26:G:OP1	48:BW:80:PRO:HB3	2.07	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:CA:616:G:N2	1:CA:617:G:C8	2.75	0.55
35:BF:83:PHE:C	35:BF:84:VAL:HG23	2.27	0.55
29:D7:19:ARG:HG2	29:D7:19:ARG:NH1	2.21	0.55
1:CA:116:A:H61	1:CA:313:A:H1'	1.71	0.55
1:CA:200:G:H1	1:CA:217:C:H42	1.55	0.55
31:BA:2500:U:H5''	31:BA:2501:C:OP2	2.07	0.55
1:AA:724:G:N3	1:AA:725:G:C8	2.75	0.55
2:CB:24:TRP:CG	2:CB:25:ASN:N	2.71	0.55
31:DA:790:C:O2'	31:DA:791:C:H5'	2.06	0.55
31:DA:1239:G:H2'	31:DA:1240:U:O4'	2.06	0.55
31:DA:934:G:H2'	31:DA:935:C:C6	2.42	0.55
31:BA:566:U:H2'	31:BA:567:A:O4'	2.07	0.55
31:BA:1665:A:H4'	40:BO:67:LYS:HB2	1.88	0.55
23:D1:21:ARG:NH1	31:DA:380:U:OP1	2.40	0.55
31:BA:2258:C:H4'	31:BA:2259:G:OP2	2.06	0.55
1:CA:758:G:H8	1:CA:758:G:O5'	1.90	0.55
1:AA:357:G:C2	1:AA:358:U:C5	2.95	0.55
31:BA:1497:U:H2'	31:BA:1498:C:OP1	2.06	0.55
31:BA:1497:U:C2'	31:BA:1498:C:OP1	2.55	0.55
33:BD:83:GLU:HB2	33:BD:92:ILE:HD11	1.89	0.55
33:DD:82:ILE:HG22	33:DD:82:ILE:O	2.05	0.55
28:D6:12:GLU:HB3	28:D6:23:THR:CG2	2.37	0.55
28:D6:12:GLU:HA	28:D6:23:THR:HA	1.88	0.55
31:DA:2418:A:H2'	31:DA:2419:U:H6	1.72	0.55
51:BZ:150:LEU:C	51:BZ:151:HIS:HD2	2.10	0.55
24:B2:26:ARG:HD2	24:B2:29:LYS:HE2	1.89	0.55
47:BV:80:GLN:C	47:BV:80:GLN:OE1	2.46	0.55
31:DA:1190:G:H5'	41:DP:35:HIS:CA	2.36	0.55
31:DA:2272:U:C5'	31:DA:2273:A:OP1	2.55	0.55
4:CD:12:CYS:HA	4:CD:19:LEU:CD1	2.36	0.55
45:BT:28:VAL:HG22	45:BT:46:GLU:CA	2.36	0.55
1:AA:510:A:H5''	1:AA:511:C:P	2.47	0.55
41:DP:108:LYS:C	41:DP:110:TYR:N	2.60	0.55
1:CA:1411:C:O2'	1:CA:1412:C:H5'	2.07	0.55
1:CA:976:G:P	14:CN:32:SER:H	2.30	0.55
31:BA:1505:C:H2'	31:BA:1506:C:O5'	2.07	0.55
20:AT:14:LYS:O	20:AT:18:GLN:HG3	2.07	0.55
37:DH:41:MET:HA	37:DH:41:MET:HE3	1.88	0.55
31:BA:856:C:C6	31:BA:856:C:H5''	2.42	0.55
5:CE:101:ILE:O	5:CE:120:THR:HG23	2.07	0.55
31:DA:1339:G:N2	31:DA:1603:A:H1'	2.21	0.55
31:BA:92:A:H2'	31:BA:93:G:C8	2.41	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
18:CR:35:ARG:O	18:CR:37:VAL:N	2.37	0.55
45:BT:107:ASP:OD1	45:BT:109:GLU:HB2	2.07	0.55
31:BA:1670:C:O2	34:BE:129:HIS:CE1	2.60	0.55
10:CJ:38:ILE:HD11	10:CJ:71:LEU:HB3	1.89	0.55
1:CA:1226:C:H2'	13:CM:103:THR:OG1	2.07	0.55
10:CJ:49:VAL:HG13	14:CN:41:ARG:HB2	1.89	0.55
3:CC:116:VAL:HG21	3:CC:202:ILE:HD11	1.89	0.55
1:CA:1369:C:H2'	1:CA:1370:G:O4'	2.07	0.55
31:DA:767:U:O2'	31:DA:768:G:H5'	2.07	0.55
33:BD:72:LYS:HE3	33:BD:99:ASP:OD1	2.07	0.55
1:AA:116:A:H61	1:AA:313:A:H1'	1.70	0.55
1:CA:832:C:O2'	1:CA:833:U:P	2.64	0.55
1:AA:791:G:C6	1:AA:792:A:N7	2.76	0.55
47:BV:54:GLY:O	47:BV:56:SER:OG	2.20	0.55
38:DI:35:LEU:O	38:DI:36:ALA:HB2	2.06	0.55
31:DA:643:A:C2'	31:DA:644:A:O5'	2.55	0.55
1:CA:668:G:O2'	15:CO:46:HIS:HD2	1.89	0.55
32:DB:33:G:O2'	32:DB:34:U:H5'	2.07	0.55
31:DA:225:A:H2'	31:DA:226:G:H5'	1.89	0.55
33:BD:58:HIS:CD2	33:BD:59:LYS:O	2.60	0.54
33:DD:25:THR:O	33:DD:27:THR:HB	2.06	0.54
31:DA:2301:C:H2'	31:DA:2302:G:O4'	2.07	0.54
39:DN:129:PRO:O	39:DN:130:HIS:CB	2.55	0.54
28:D6:32:ASN:O	28:D6:33:LYS:HG2	2.07	0.54
51:BZ:151:HIS:O	51:BZ:152:ALA:O	2.25	0.54
47:DV:18:LEU:HD22	47:DV:19:LYS:CA	2.30	0.54
24:B2:48:HIS:CG	24:B2:48:HIS:O	2.60	0.54
31:BA:70:G:H21	31:BA:71:A:N6	2.04	0.54
32:BB:40:U:H3	32:BB:43:C:H5''	1.72	0.54
44:BS:33:LYS:HB3	44:BS:34:HIS:CD2	2.41	0.54
31:BA:745:G:OP1	34:BE:133:LYS:HE3	2.06	0.54
1:AA:501:C:O2'	1:AA:502:G:H5'	2.07	0.54
4:AD:12:CYS:HA	4:AD:19:LEU:CD1	2.36	0.54
4:AD:12:CYS:N	4:AD:19:LEU:HD11	2.22	0.54
51:DZ:124:ILE:HG13	51:DZ:125:LEU:N	2.21	0.54
24:D2:49:LYS:NZ	24:D2:53:LEU:HD22	2.22	0.54
31:BA:569:U:C4	31:BA:570:G:C6	2.95	0.54
1:CA:346:G:H5''	45:DT:41:ARG:NH2	2.22	0.54
40:DO:107:ARG:HE	40:DO:115:VAL:HG11	1.71	0.54
39:BN:30:ILE:O	39:BN:34:LEU:HD22	2.07	0.54
31:BA:2286:A:H5''	31:BA:2287:A:O4'	2.06	0.54
9:CI:4:TYR:CD2	9:CI:59:PHE:HE2	2.25	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:CA:949:A:N6	1:CA:1232:U:H3	2.01	0.54
20:CT:26:ASN:HB3	20:CT:71:THR:OG1	2.07	0.54
12:CL:25:PRO:C	12:CL:27:LEU:H	2.09	0.54
5:AE:102:ALA:HB1	5:AE:106:PRO:CG	2.36	0.54
31:DA:2580:U:C5'	34:DE:131:ALA:HB3	2.35	0.54
37:BH:153:LYS:CD	37:BH:153:LYS:N	2.69	0.54
7:CG:73:MET:HA	7:CG:91:VAL:HG23	1.89	0.54
27:B5:4:HIS:HB3	27:B5:5:PRO:CD	2.35	0.54
1:AA:33:A:H2'	1:AA:34:C:H6	1.71	0.54
29:D7:34:ARG:NH1	29:D7:39:ARG:CG	2.70	0.54
45:BT:78:LEU:CD2	45:BT:78:LEU:O	2.56	0.54
1:AA:1481:U:H2'	1:AA:1482:G:C8	2.42	0.54
31:DA:1001:A:H2'	31:DA:1002:G:O4'	2.06	0.54
1:AA:832:C:O2'	1:AA:833:U:P	2.64	0.54
6:CF:97:PHE:O	18:CR:31:LEU:HD23	2.07	0.54
34:DE:10:GLY:C	45:DT:8:LYS:HE3	2.27	0.54
1:AA:1152:A:H5''	10:AJ:13:HIS:CD2	2.42	0.54
25:B3:18:ASP:HB2	25:B3:49:LYS:CE	2.36	0.54
8:AH:77:GLU:HG3	8:AH:78:GLN:H	1.72	0.54
11:CK:21:ILE:HB	11:CK:84:VAL:HG12	1.88	0.54
31:BA:1416:G:O2'	31:BA:1417:C:P	2.66	0.54
4:AD:57:ARG:HH22	5:AE:107:ARG:HD3	1.72	0.54
27:B5:51:TYR:H	27:B5:54:GLY:HA3	1.71	0.54
46:DU:64:ARG:CA	46:DU:64:ARG:CZ	2.71	0.54
1:AA:377:G:OP1	16:AP:3:LYS:HD2	2.07	0.54
31:BA:1495:A:H2'	31:BA:1495:A:N3	2.22	0.54
28:D6:15:GLU:OE2	28:D6:41:PRO:CG	2.54	0.54
51:BZ:150:LEU:C	51:BZ:151:HIS:CD2	2.81	0.54
46:DU:83:LEU:CG	46:DU:88:ILE:HG12	2.38	0.54
26:B4:11:PRO:C	26:B4:13:ARG:H	2.09	0.54
43:BR:2:ARG:N	43:BR:2:ARG:HD2	2.22	0.54
42:DQ:34:LEU:HD11	42:DQ:129:THR:CB	2.36	0.54
23:D1:19:GLN:CG	23:D1:44:PRO:HG3	2.37	0.54
1:AA:436:C:H5''	4:AD:156:GLU:OE2	2.07	0.54
6:AF:19:LEU:O	6:AF:23:LYS:HG3	2.08	0.54
1:CA:341:C:O2'	1:CA:342:C:H5'	2.07	0.54
1:AA:976:G:C5'	1:AA:1358:U:O2'	2.56	0.54
45:BT:38:ASN:ND2	45:BT:38:ASN:C	2.59	0.54
31:DA:856:C:H5''	31:DA:856:C:C6	2.42	0.54
15:CO:39:LEU:HD11	15:CO:56:LEU:HB2	1.89	0.54
31:BA:856:C:C3'	31:BA:857:C:H6	2.20	0.54
31:DA:1797:C:H2'	31:DA:1798:U:H5'	1.89	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:DA:1396:U:C2'	31:DA:1396:U:O2	2.49	0.54
1:CA:327:A:C4	1:CA:329:A:C8	2.95	0.54
1:AA:561:U:O2'	1:AA:562:C:P	2.65	0.54
45:DT:13:ARG:HH21	45:DT:15:VAL:HG11	1.72	0.54
3:CC:105:GLU:HG2	3:CC:106:VAL:H	1.72	0.54
1:CA:1452:C:H5'	1:CA:1456:G:C5	2.42	0.54
1:CA:475:G:O2'	1:CA:476:G:H5'	2.07	0.54
35:DF:160:ASN:ND2	35:DF:160:ASN:C	2.60	0.54
44:DS:74:ALA:HB1	44:DS:103:GLU:HB2	1.88	0.54
10:CJ:8:LEU:HG	10:CJ:96:ILE:CG2	2.37	0.54
49:BX:41:ASN:HA	49:BX:44:GLU:CB	2.37	0.54
43:DR:67:LEU:HD13	43:DR:76:VAL:HG21	1.88	0.54
22:D0:74:ARG:HG2	32:DB:12:C:O2'	2.07	0.54
1:CA:946:A:H2'	1:CA:947:G:C8	2.41	0.54
31:BA:1717:G:C2	31:BA:1718:G:C8	2.95	0.54
36:DG:12:TYR:HA	36:DG:16:ARG:HG3	1.89	0.54
31:BA:580:C:H2'	31:BA:581:C:C6	2.42	0.54
31:BA:515:A:H1'	31:BA:581:C:H1'	1.89	0.54
31:DA:2094:G:P	38:DI:22:LYS:HD3	2.46	0.54
1:CA:1346:A:H5''	9:CI:120:ARG:HH12	1.72	0.54
31:DA:2335:A:N7	31:DA:2337:G:C5	2.76	0.54
31:BA:1050:A:C2	31:BA:2751:G:C4	2.94	0.54
35:BF:83:PHE:O	35:BF:84:VAL:HG23	2.07	0.54
38:DI:92:VAL:HG22	38:DI:92:VAL:O	2.07	0.54
15:CO:54:ARG:HG2	15:CO:58:MET:CE	2.38	0.54
1:AA:119:A:H4'	1:AA:120:A:O5'	2.07	0.54
31:BA:720:C:O2'	31:BA:721:C:H5'	2.07	0.54
1:AA:1132:C:H2'	1:AA:1133:G:O4'	2.07	0.54
12:CL:84:LEU:HD22	12:CL:85:ILE:H	1.73	0.54
31:DA:1016:G:H2'	31:DA:1017:G:H8	1.71	0.54
31:DA:1015:G:C2'	31:DA:1016:G:H5'	2.37	0.54
5:AE:15:ARG:HD2	5:AE:26:PHE:CD2	2.42	0.54
31:DA:753:C:O5'	31:DA:753:C:H6	1.90	0.54
7:AG:145:ALA:O	7:AG:147:ALA:N	2.39	0.54
1:CA:119:A:H4'	1:CA:120:A:O5'	2.05	0.54
36:DG:123:ASN:O	36:DG:126:ASP:HB2	2.07	0.54
5:AE:41:VAL:HG13	5:AE:113:ALA:HA	1.89	0.54
30:B8:35:GLN:OE1	31:BA:2421:G:OP2	2.25	0.54
47:BV:64:HIS:O	47:BV:64:HIS:CG	2.59	0.54
31:BA:2810:A:H2'	34:BE:61:ARG:HH21	1.72	0.54
30:D8:32:LEU:CB	30:D8:35:GLN:N	2.48	0.54
30:D8:39:LYS:NZ	30:D8:40:GLU:HA	2.22	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:DA:2402:C:C3'	31:DA:2403:C:H5'	2.38	0.54
31:DA:58:G:OP1	49:DX:72:LYS:HA	2.07	0.54
24:B2:49:LYS:NZ	24:B2:53:LEU:HD22	2.23	0.54
31:BA:143:G:C1'	49:BX:38:GLU:HG3	2.36	0.54
49:BX:36:LYS:O	49:BX:38:GLU:N	2.41	0.54
49:BX:60:ARG:HG2	49:BX:72:LYS:H	1.71	0.54
31:BA:330:A:HO2'	31:BA:331:A:H8	1.54	0.54
2:AB:218:ALA:O	2:AB:222:ILE:HG13	2.07	0.54
1:AA:1277:C:HO2'	1:AA:1279:A:H8	1.55	0.54
27:D5:57:VAL:CB	27:D5:58:LEU:HD12	2.29	0.54
31:BA:943:U:OP2	41:BP:38:GLN:OE1	2.25	0.54
39:DN:24:GLY:H	39:DN:27:ALA:H	1.56	0.54
31:DA:2496:C:OP1	42:DQ:81:VAL:HG13	2.06	0.54
1:CA:436:C:H5''	4:CD:156:GLU:OE2	2.07	0.54
42:BQ:23:GLY:O	42:BQ:100:GLY:CA	2.55	0.54
31:BA:2469:A:O2'	42:BQ:56:ARG:HG2	2.07	0.54
1:CA:1502:A:H5'	1:CA:1504:G:N7	2.21	0.54
50:BY:17:SER:HA	50:BY:71:LYS:CD	2.31	0.54
50:DY:28:LYS:HB2	50:DY:38:ILE:N	2.23	0.54
31:BA:243:U:C2'	31:BA:244:A:H5'	2.37	0.54
1:CA:586:C:H2'	1:CA:587:G:H5'	1.88	0.54
1:CA:52:G:C2'	1:CA:53:A:H5'	2.37	0.54
23:D1:13:ILE:HD13	23:D1:14:VAL:O	2.08	0.54
32:BB:82:G:H2'	32:BB:83:G:H5'	1.88	0.54
44:DS:78:LEU:CD1	44:DS:103:GLU:HB3	2.36	0.54
44:BS:71:ARG:N	44:BS:101:LEU:HD21	2.22	0.54
33:BD:149:PRO:O	33:BD:150:LYS:HB2	2.08	0.54
51:DZ:63:ASP:O	51:DZ:65:GLN:HG2	2.08	0.54
37:DH:91:GLY:C	37:DH:92:ILE:HG13	2.28	0.54
31:BA:528:A:C2	31:BA:2043:C:H5'	2.41	0.54
31:DA:971:C:H2'	31:DA:972:G:C5'	2.37	0.54
42:DQ:30:GLY:HA3	42:DQ:107:ALA:HB2	1.88	0.54
18:AR:76:LEU:HD23	18:AR:76:LEU:N	2.23	0.54
31:BA:196:A:H2'	31:BA:196:A:N3	2.23	0.54
35:DF:4:VAL:HG13	35:DF:17:ARG:HB3	1.89	0.54
31:BA:1744:C:C2'	31:BA:1745:C:H5'	2.37	0.54
1:AA:343:U:C2'	1:AA:346:G:O6	2.55	0.54
1:CA:828:A:H2'	1:CA:829:G:O4'	2.06	0.54
6:AF:99:ALA:HB1	18:AR:23:LYS:HZ1	1.70	0.54
31:DA:414:C:C2'	31:DA:415:A:H5'	2.37	0.54
31:DA:2590:A:H2'	31:DA:2591:C:C6	2.42	0.54
37:DH:105:LEU:HD13	37:DH:105:LEU:N	2.22	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:DA:271(A):A:H2	31:DA:272(D):G:N3	2.05	0.54
33:BD:221:VAL:HG22	33:BD:226:MET:CE	2.37	0.54
31:BA:643:A:C2'	31:BA:644:A:O5'	2.54	0.54
31:DA:1441:G:H2'	31:DA:1442:G:H8	1.71	0.54
31:DA:363(E):U:H2'	31:DA:363(F):A:O4'	2.07	0.54
31:DA:1437:C:H5''	31:DA:1437:C:H6	1.72	0.54
5:CE:113:ALA:HB3	5:CE:115:VAL:HG23	1.88	0.54
41:BP:122:PRO:HD3	25:D3:1:MET:HE3	1.89	0.54
41:DP:16:ARG:CD	41:DP:18:ARG:HB2	2.37	0.54
1:AA:373:A:C2	1:AA:374:A:C8	2.96	0.54
31:DA:2206:G:N3	31:DA:2206:G:H3'	2.23	0.54
30:D8:31:HIS:CD2	31:DA:2419:U:O4	2.61	0.54
47:BV:25:LEU:N	47:BV:94:LEU:CD1	2.69	0.54
31:DA:84:A:N6	31:DA:102:G:H1'	2.21	0.54
41:BP:16:ARG:CZ	41:BP:18:ARG:HB2	2.37	0.54
47:DV:1:MET:CE	47:DV:44:LYS:H	2.20	0.54
1:CA:377:G:OP1	16:CP:3:LYS:HD2	2.07	0.54
2:AB:189:ASP:OD1	2:AB:205:ASP:HB3	2.07	0.54
31:DA:1786:A:C1'	31:DA:1938:A:N6	2.70	0.54
41:BP:38:GLN:CG	41:BP:39:LYS:H	2.14	0.54
44:BS:31:SER:HB3	44:BS:34:HIS:H	1.73	0.54
39:DN:24:GLY:O	39:DN:28:THR:HB	2.07	0.54
31:BA:1140:C:O3'	39:BN:25:ARG:NH1	2.41	0.54
31:BA:1142:U:H5''	31:BA:1142(A):A:H5''	1.90	0.54
1:CA:434:U:H2'	1:CA:435:C:C6	2.43	0.54
42:BQ:23:GLY:HA3	42:BQ:99:PRO:O	2.07	0.54
51:DZ:48:PHE:O	51:DZ:52:SER:N	2.40	0.54
39:BN:46:VAL:O	39:BN:47:ALA:HB3	2.06	0.54
39:BN:78:TYR:CE1	39:BN:79:PRO:HB3	2.41	0.54
10:CJ:54:PHE:CZ	10:CJ:55:LYS:NZ	2.74	0.54
6:CF:61:LEU:HB3	6:CF:63:TYR:HE2	1.73	0.54
1:CA:299:G:C6	1:CA:300:A:C6	2.95	0.54
2:AB:87:ARG:HH21	2:AB:233:SER:HB3	1.72	0.54
1:AA:1423:G:C5'	40:BO:49:ARG:NH2	2.70	0.54
36:BG:31:VAL:HG13	36:BG:32:PRO:HD2	1.89	0.54
48:BW:80:PRO:O	48:BW:100:THR:HG21	2.08	0.54
38:DI:49:ALA:O	38:DI:52:ARG:HG2	2.08	0.54
31:DA:528:A:C2	31:DA:2043:C:C5'	2.91	0.54
37:BH:153:LYS:HB2	37:BH:154:PRO:CD	2.38	0.54
31:BA:1625:C:C2'	31:BA:1626:G:H5'	2.38	0.54
23:B1:23:LYS:HB2	23:B1:37:ILE:HG22	1.88	0.54
1:AA:189(B):C:N4	1:AA:189(I):G:H1	2.04	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:DA:26:G:OP1	48:DW:80:PRO:HB3	2.07	0.54
9:CI:28:VAL:HA	9:CI:63:ILE:O	2.07	0.54
31:DA:443:A:N7	35:DF:45:ARG:HG2	2.22	0.54
7:CG:69:VAL:HG13	7:CG:134:ALA:O	2.08	0.54
1:AA:472:A:O2'	16:AP:81:ARG:HA	2.07	0.54
5:AE:113:ALA:HB3	5:AE:115:VAL:HG23	1.88	0.54
18:CR:25:THR:HG22	18:CR:42:ARG:HH11	1.73	0.54
5:AE:45:PHE:CD2	5:AE:47:LYS:HD2	2.42	0.54
48:BW:37:ARG:HG2	48:BW:38:TYR:CE2	2.42	0.54
38:DI:69:LYS:HG3	38:DI:135:GLU:O	2.08	0.54
19:CS:79:THR:O	19:CS:80:TYR:CB	2.55	0.54
1:CA:1058:G:C6	1:CA:1059:C:N3	2.76	0.54
8:AH:53:VAL:O	8:AH:54:ASP:HB2	2.08	0.54
1:AA:147:G:N2	1:AA:148:G:H1'	2.22	0.54
1:AA:355:C:C4	1:AA:356:A:N7	2.75	0.54
33:DD:30:GLU:CG	33:DD:63:ARG:NE	2.69	0.54
47:DV:72:VAL:HG13	47:DV:88:ARG:NH2	2.22	0.54
31:BA:2702:U:HO2'	31:BA:2703:C:H6	1.45	0.54
41:DP:59:LEU:CA	41:DP:61:ARG:NH1	2.57	0.54
31:BA:84:A:N6	31:BA:102:G:H1'	2.22	0.54
31:BA:993:G:H1'	47:BV:91:TYR:CE1	2.43	0.54
39:DN:2:LYS:NZ	46:DU:94:ASN:HD21	2.06	0.54
44:BS:95:HIS:CD2	44:BS:96:GLY:H	2.26	0.54
27:D5:51:TYR:H	27:D5:54:GLY:HA3	1.73	0.54
33:BD:182:LEU:O	33:BD:271:ILE:HD12	2.08	0.54
2:AB:114:ARG:O	2:AB:118:LEU:HG	2.08	0.54
34:BE:93:VAL:N	34:BE:95:ILE:HD13	2.09	0.54
33:DD:49:ILE:HD13	33:DD:49:ILE:O	2.07	0.54
1:CA:433:C:O2'	1:CA:434:U:H5'	2.08	0.54
39:DN:68:GLU:HA	39:DN:86:PRO:CB	2.37	0.54
12:AL:46:LYS:HG2	12:AL:47:LYS:N	2.23	0.54
49:DX:82:GLN:HG3	49:DX:83:VAL:N	2.21	0.54
37:DH:43:VAL:HG12	37:DH:53:GLU:HB2	1.89	0.54
1:AA:438:G:O2'	1:AA:493:G:C2	2.59	0.54
39:BN:78:TYR:CD1	39:BN:79:PRO:HB3	2.42	0.54
1:CA:719:C:O2'	18:CR:49:LYS:HB3	2.07	0.54
31:BA:271(L):U:H4'	31:BA:271(M):G:N7	2.23	0.54
7:CG:150:ALA:HB2	11:CK:50:TYR:OH	2.06	0.54
24:B2:14:ARG:O	24:B2:18:PRO:CD	2.53	0.54
22:D0:51:VAL:HG21	22:D0:79:VAL:O	2.08	0.54
35:DF:88:VAL:HG11	35:DF:91:GLY:HA3	1.90	0.54
47:DV:35:LEU:HB2	47:DV:59:ALA:HB1	1.88	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
38:DI:52:ARG:CG	38:DI:53:ALA:H	2.21	0.54
16:CP:70:ALA:O	16:CP:74:LEU:HD12	2.08	0.54
5:AE:12:LEU:CD1	5:AE:31:LEU:HB2	2.38	0.54
35:BF:51:THR:CG2	35:BF:92:PRO:HD2	2.37	0.54
10:AJ:29:ARG:O	10:AJ:29:ARG:HG2	2.08	0.54
42:BQ:54:MET:HG3	42:BQ:117:ALA:HB1	1.89	0.54
1:AA:264:U:O2'	17:AQ:64:PRO:HB2	2.08	0.54
1:CA:1428:A:H2'	1:CA:1429:C:C6	2.42	0.54
1:CA:724:G:C2	1:CA:725:G:C8	2.96	0.54
31:BA:838:C:O2'	31:BA:839:U:H5'	2.06	0.54
50:BY:83:THR:HG23	50:BY:94:LYS:HB3	1.88	0.54
31:DA:2845:G:O2'	31:DA:2846:G:H5'	2.08	0.54
17:CQ:76:LEU:HD12	17:CQ:77:VAL:H	1.73	0.54
31:BA:1437:C:H5''	31:BA:1437:C:H6	1.73	0.54
39:BN:44:PRO:HD3	46:BU:60:LEU:HD21	1.90	0.54
41:BP:64:LYS:HD3	41:BP:64:LYS:O	2.08	0.54
31:DA:1900:A:N1	31:DA:1970:A:C6	2.76	0.54
33:DD:35:LYS:NZ	33:DD:104:TYR:CD1	2.73	0.54
31:DA:2317:C:O2	31:DA:2318:G:O4'	2.26	0.54
25:D3:8:LEU:HD13	25:D3:31:LEU:HA	1.89	0.54
45:BT:89:VAL:HG12	45:BT:91:ARG:HB3	1.88	0.54
39:DN:4:TYR:CD1	39:DN:4:TYR:N	2.73	0.54
47:DV:51:VAL:CG1	47:DV:52:VAL:N	2.70	0.54
45:BT:56:GLY:C	45:BT:57:PHE:O	2.44	0.54
31:BA:1657:C:H2'	31:BA:1658:C:H6	1.72	0.54
31:DA:964:C:O2'	31:DA:2273:A:H1'	2.07	0.54
31:BA:2661:G:O4'	31:BA:2661:G:P	2.65	0.54
12:CL:46:LYS:HG2	12:CL:47:LYS:N	2.23	0.54
31:BA:2564:A:OP1	31:BA:2648:C:H4'	2.08	0.54
31:BA:627:A:C6	31:BA:637:A:C8	2.95	0.54
45:DT:64:ARG:NH1	45:DT:103:ARG:HA	2.22	0.54
39:BN:17:ASP:CG	39:BN:17:ASP:O	2.45	0.54
41:BP:108:LYS:C	41:BP:110:TYR:H	2.09	0.54
41:BP:143:GLY:CA	41:BP:145:PRO:HD3	2.38	0.54
1:AA:408:A:H4'	4:AD:112:VAL:HG11	1.89	0.54
51:DZ:97:GLU:HB3	51:DZ:125:LEU:HD21	1.88	0.54
1:AA:1228:C:H5''	13:AM:108:ARG:NH2	2.22	0.54
51:BZ:48:PHE:O	51:BZ:52:SER:N	2.40	0.54
31:DA:1332:G:H1	31:DA:1609:A:HO2'	1.54	0.54
33:BD:253:GLN:HB3	33:BD:255:LYS:CE	2.38	0.54
24:B2:57:ILE:HG13	24:B2:58:ALA:C	2.28	0.54
28:B6:32:ASN:O	28:B6:33:LYS:HG2	2.08	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:BA:547:A:O2'	31:BA:548:A:OP2	2.25	0.54
1:AA:1423:G:H2'	1:AA:1424:C:C6	2.43	0.54
5:CE:12:LEU:CD1	5:CE:31:LEU:HB2	2.37	0.54
1:CA:1157:A:C4	1:CA:1181:G:N2	2.76	0.54
31:DA:848:G:C2	31:DA:933:A:H1'	2.43	0.54
15:CO:24:SER:O	15:CO:28:GLN:HG3	2.08	0.54
31:BA:2753:A:C2	31:BA:2754:U:C2	2.96	0.54
41:BP:45:LEU:HD22	41:BP:46:LYS:H	1.73	0.54
1:AA:1498:U:H1'	1:AA:1499:A:OP2	2.08	0.54
12:AL:83:VAL:HG22	12:AL:84:LEU:N	2.23	0.54
31:BA:1042:G:C5'	31:BA:1043:C:OP2	2.56	0.54
31:BA:1043:C:O2'	31:BA:1044:G:C8	2.56	0.54
31:DA:999:U:C2'	31:DA:1000:A:H5'	2.37	0.54
39:DN:51:PHE:O	39:DN:119:ARG:O	2.25	0.54
16:CP:82:GLN:HE21	16:CP:82:GLN:N	2.05	0.54
17:CQ:27:PHE:CZ	17:CQ:36:ILE:HD11	2.43	0.54
1:AA:731:G:OP1	1:AA:766:A:H1'	2.07	0.54
1:AA:930:C:O2'	1:AA:931:C:H5'	2.08	0.54
35:DF:154:VAL:HG22	35:DF:191:ARG:HB2	1.90	0.54
2:AB:166:ASP:HB3	2:AB:169:LYS:HB2	1.88	0.54
31:BA:1568:G:H21	33:BD:58:HIS:HE1	1.56	0.54
47:BV:90:PRO:CG	47:BV:91:TYR:N	2.66	0.54
41:BP:47:ASP:OD1	41:BP:49:ARG:HB2	2.07	0.54
47:DV:1:MET:CE	47:DV:44:LYS:HB2	2.22	0.54
49:BX:37:THR:HG23	49:BX:54:VAL:CG2	2.38	0.54
1:AA:679:C:O2'	1:AA:680:C:H5'	2.08	0.54
43:BR:41:ALA:HB1	43:BR:114:VAL:CG2	2.38	0.54
31:DA:586:A:H2'	41:DP:33:ARG:HH12	1.73	0.54
35:DF:68:LYS:O	35:DF:68:LYS:HG3	2.06	0.54
31:BA:442:G:O4'	35:BF:46:ARG:HD3	2.08	0.54
31:DA:2494:G:C2'	31:DA:2495:G:O5'	2.56	0.54
35:BF:199:TRP:CZ3	35:BF:203:GLN:HG3	2.43	0.54
23:D1:19:GLN:NE2	31:DA:379:G:N2	2.44	0.54
50:DY:39:VAL:O	50:DY:40:GLU:CD	2.45	0.54
31:BA:1486:A:H2'	31:BA:1487:G:H8	1.72	0.54
31:BA:1504:C:O2'	31:BA:1505:C:O5'	2.25	0.54
6:AF:52:ILE:O	6:AF:53:ALA:HB3	2.06	0.54
50:BY:37:VAL:CG2	50:BY:67:LEU:HB3	2.38	0.54
2:AB:168:THR:HG21	2:AB:192:SER:HA	1.88	0.54
42:DQ:103:MET:HB2	42:DQ:104:PHE:CD1	2.42	0.54
1:AA:741:G:H2'	1:AA:742:G:O4'	2.07	0.54
40:DO:3:GLN:CB	40:DO:4:PRO:HD2	2.38	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
36:BG:12:TYR:HA	36:BG:16:ARG:HG3	1.90	0.54
31:DA:2199:A:H3'	31:DA:2200:C:C6	2.39	0.54
31:DA:2183:C:H2'	31:DA:2184:G:C8	2.43	0.54
31:DA:513:A:C2	31:DA:514:A:C5	2.95	0.54
35:BF:84:VAL:C	35:BF:86:GLY:N	2.60	0.54
31:BA:414:C:C2'	31:BA:415:A:H5'	2.37	0.54
31:DA:2534:A:C2	31:DA:2535:G:H1'	2.43	0.54
7:CG:27:ILE:HD11	7:CG:43:PHE:CD2	2.42	0.54
32:BB:33:G:O2'	32:BB:34:U:H5'	2.08	0.54
42:DQ:43:THR:OG1	42:DQ:46:GLN:HG3	2.08	0.54
1:CA:592:G:H2'	1:CA:593:G:H8	1.73	0.54
31:BA:513:A:C2	31:BA:514:A:C5	2.96	0.54
4:CD:57:ARG:HH22	5:CE:107:ARG:HD3	1.71	0.54
7:CG:32:ARG:O	7:CG:33:ASP:HB2	2.08	0.54
1:CA:1510:U:H2'	1:CA:1511:G:C8	2.42	0.54
27:B5:54:GLY:O	27:B5:56:LYS:NZ	2.37	0.54
39:DN:32:THR:O	39:DN:35:ARG:O	2.25	0.54
47:BV:96:ILE:HG23	47:BV:97:LYS:H	1.73	0.54
33:BD:25:THR:O	33:BD:27:THR:HB	2.07	0.54
31:DA:1493:C:C4	31:DA:2206:G:O2'	2.60	0.54
39:DN:120:LEU:HD13	39:DN:121:LYS:N	2.23	0.54
30:D8:4:MET:HE2	31:DA:592:G:N3	2.23	0.54
31:DA:154(A):C:H5	31:DA:171:G:H1	1.56	0.54
31:DA:2701:C:C3'	31:DA:2702:U:C5'	2.72	0.54
47:BV:72:VAL:HA	47:BV:88:ARG:NH2	2.21	0.54
31:BA:154(A):C:H5	31:BA:171:G:N1	2.05	0.54
31:BA:175:G:H5'	31:BA:175:G:C8	2.43	0.54
45:DT:66:VAL:HA	45:DT:71:GLY:HA2	1.89	0.54
46:DU:104:GLN:HB2	47:DV:43:GLU:OE2	2.07	0.54
2:AB:98:LEU:HB2	2:AB:101:MET:HE2	1.89	0.54
2:AB:189:ASP:OD2	2:AB:205:ASP:OD1	2.25	0.54
2:AB:74:LYS:HZ2	2:AB:76:GLN:HB2	1.72	0.54
31:DA:2884:U:C2'	31:DA:2885:C:H5'	2.38	0.54
32:DB:73:A:C4	32:DB:105:A:C2	2.95	0.54
34:DE:92:THR:O	34:DE:93:VAL:HB	2.07	0.54
39:DN:58:ASP:O	39:DN:60:ILE:N	2.40	0.54
1:CA:408:A:H4'	4:CD:112:VAL:HG11	1.89	0.54
4:CD:206:PHE:HD2	4:CD:207:TYR:CD2	2.26	0.54
50:BY:16:ALA:HA	50:BY:21:LYS:HD2	1.89	0.54
4:AD:31:CYS:O	4:AD:31:CYS:SG	2.65	0.54
12:AL:47:LYS:HB3	12:AL:48:PRO:CD	2.28	0.54
1:CA:1228:C:H5"	13:CM:108:ARG:NH2	2.22	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:BA:284:U:H2'	31:BA:285:C:H6	1.72	0.54
45:BT:32:TYR:HB3	45:BT:81:PRO:HB2	1.90	0.54
37:DH:66:GLY:CA	37:DH:69:ARG:HB2	2.38	0.54
31:BA:2876:G:H4'	45:BT:3:ARG:NE	2.23	0.54
1:CA:973:G:C3'	1:CA:974:A:H5''	2.36	0.54
28:D6:46:HIS:ND1	31:DA:2371:G:O2'	2.39	0.54
50:BY:60:PHE:HA	50:BY:62:GLU:OE2	2.08	0.54
34:BE:117:MET:O	34:BE:117:MET:CG	2.55	0.54
1:CA:1003:G:N2	1:CA:1039:C:C2	2.76	0.54
4:CD:108:LEU:CD1	4:CD:174:LEU:HD13	2.37	0.54
19:AS:6:LYS:HD2	19:AS:6:LYS:H	1.72	0.54
1:CA:559:A:H4'	1:CA:560:U:C5'	2.37	0.54
35:DF:65:TRP:CH2	35:DF:75:HIS:HD2	2.26	0.54
34:BE:201:THR:HG22	34:BE:202:LYS:H	1.73	0.54
39:BN:24:GLY:H	39:BN:27:ALA:H	1.56	0.54
42:DQ:16:ARG:HB2	42:DQ:16:ARG:HH11	1.73	0.54
1:AA:1423:G:H2'	1:AA:1424:C:H6	1.73	0.54
31:DA:322:A:OP2	35:DF:169:ASN:HB2	2.08	0.54
31:BA:795:C:O2'	31:BA:796:C:H5'	2.07	0.54
31:DA:1171:G:N7	31:DA:1173:G:H1'	2.23	0.54
31:BA:1766:U:O2'	31:BA:1767:C:H5'	2.08	0.54
2:CB:102:LEU:CD1	2:CB:102:LEU:N	2.71	0.54
31:DA:1712:C:H2'	31:DA:1713:U:H6	1.73	0.54
31:DA:1042:G:C5'	31:DA:1043:C:OP2	2.56	0.54
32:BB:15:A:H5'	32:BB:16:G:H8	1.70	0.54
1:CA:664:G:H22	1:CA:741:G:H1	1.56	0.54
6:AF:75:LEU:CD2	6:AF:79:LEU:HD11	2.37	0.54
45:DT:78:LEU:O	45:DT:79:HIS:CG	2.61	0.54
5:CE:80:ILE:CG1	5:CE:91:LEU:HB2	2.37	0.54
2:CB:8:LYS:HZ3	2:CB:217:ARG:HH11	1.55	0.54
34:BE:67:PHE:C	34:BE:69:LYS:H	2.10	0.54
31:DA:1515:G:H2'	31:DA:1516:C:H6	1.72	0.54
27:B5:11:THR:CG2	31:BA:1264:G:H5'	2.37	0.54
3:AC:36:ASP:HB3	3:AC:40:ARG:HH12	1.73	0.54
2:CB:124:SER:OG	2:CB:125:PRO:HD2	2.08	0.54
32:DB:56:G:H5'	36:DG:27:ASN:ND2	2.22	0.54
15:CO:8:LYS:O	15:CO:12:ILE:HG13	2.07	0.54
31:DA:601:C:O2	31:DA:605:C:H4'	2.07	0.54
48:DW:62:HIS:O	48:DW:63:ASP:C	2.45	0.54
20:CT:10:LEU:O	20:CT:12:ALA:N	2.41	0.54
1:AA:303:A:C5	1:AA:304:U:C5	2.95	0.54
1:AA:228:A:H2'	1:AA:229:U:O4'	2.08	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:BA:2065:C:H2'	31:BA:2066:C:C6	2.43	0.54
32:DB:2:C:H2'	32:DB:3:C:H6	1.72	0.54
1:CA:1132:C:H2'	1:CA:1133:G:O4'	2.08	0.54
27:B5:57:VAL:O	27:B5:58:LEU:HG	2.08	0.54
45:DT:89:VAL:HG13	45:DT:121:ILE:HD11	1.90	0.54
1:AA:357:G:C2	1:AA:358:U:C6	2.95	0.54
50:BY:77:PRO:O	50:BY:78:ALA:HB2	2.08	0.54
24:D2:29:LYS:O	24:D2:33:MET:SD	2.66	0.54
31:DA:142:A:H8	31:DA:1408:C:H1'	1.68	0.54
47:DV:19:LYS:CD	47:DV:20:LEU:H	2.21	0.54
24:B2:26:ARG:NH1	24:B2:29:LYS:HE2	2.23	0.54
1:CA:1254:C:OP1	10:CJ:45:ARG:HG2	2.07	0.54
34:BE:111:ARG:HG3	43:BR:2:ARG:HG3	1.90	0.54
32:BB:75:G:C5'	32:BB:75:G:H8	2.18	0.54
31:BA:806:C:OP2	41:BP:39:LYS:CG	2.56	0.54
37:DH:46:GLU:O	37:DH:47:GLU:HB2	2.08	0.54
37:DH:44:VAL:O	37:DH:46:GLU:OE2	2.25	0.54
31:DA:1019:U:N3	31:DA:1142(A):A:N6	2.50	0.54
35:DF:20:LEU:HD13	35:DF:203:GLN:NE2	2.22	0.54
31:BA:1021:A:H8	31:BA:1021:A:H3'	1.70	0.54
31:BA:1142(A):A:N7	31:BA:1144:G:C5	2.76	0.54
31:BA:2544:G:H1'	31:BA:2646:C:H4'	1.90	0.54
45:BT:27:THR:HG22	45:BT:49:VAL:HG12	1.90	0.54
31:DA:2802:G:H3'	31:DA:2802:G:P	2.47	0.54
1:AA:503:C:H2'	1:AA:504:C:C6	2.43	0.54
4:AD:75:PHE:O	4:AD:78:LEU:HB2	2.08	0.54
31:BA:1987:G:H2'	31:BA:1988:C:H6	1.71	0.54
51:BZ:119:GLU:C	51:BZ:121:HIS:H	2.11	0.54
31:BA:2876:G:H4'	45:BT:3:ARG:HD3	1.89	0.54
6:AF:73:ASN:O	6:AF:76:ALA:HB3	2.08	0.54
1:AA:1048:G:OP1	14:AN:4:LYS:HB2	2.08	0.54
33:BD:206:LEU:HD22	33:BD:211:ARG:HG3	1.90	0.54
1:AA:616:G:N2	1:AA:617:G:C8	2.76	0.54
1:CA:1003:G:N3	1:CA:1004:A:H1'	2.23	0.54
1:CA:382:A:C2	1:CA:383:A:C4	2.96	0.54
22:B0:43:THR:N	31:BA:2331:G:H4'	2.22	0.54
1:AA:1003:G:C2	1:AA:1004:A:H1'	2.42	0.54
42:DQ:60:ARG:HG2	42:DQ:60:ARG:O	2.07	0.54
31:BA:1718:G:N2	31:BA:1719:G:C4	2.76	0.54
36:DG:15:VAL:HA	36:DG:175:LEU:HD13	1.90	0.54
42:BQ:72:LYS:HB3	42:BQ:94:VAL:CG2	2.38	0.54
4:CD:138:TYR:HD2	4:CD:139:ARG:N	2.06	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:BA:1227:G:H5''	46:BU:16:LYS:NZ	2.23	0.54
3:CC:35:GLU:CD	3:CC:59:ARG:HH22	2.11	0.54
31:BA:737:C:C2'	31:BA:738:G:O5'	2.56	0.54
31:DA:2875:C:O2'	45:DT:5:ALA:HB3	2.08	0.54
5:CE:45:PHE:CE2	5:CE:47:LYS:HD2	2.43	0.54
31:BA:1353:A:H5''	33:BD:38:LYS:NZ	2.22	0.54
31:DA:754:C:H2'	31:DA:755:C:C6	2.43	0.54
13:CM:32:GLU:OE2	13:CM:64:TRP:HH2	1.90	0.54
31:BA:32:C:C2'	31:BA:33:U:H5'	2.38	0.54
31:DA:225:A:C2'	31:DA:226:G:H5'	2.38	0.54
8:AH:77:GLU:HG3	8:AH:78:GLN:N	2.23	0.54
31:DA:1638:C:H5''	31:DA:2710:C:O2'	2.07	0.54
1:AA:1291:G:H4'	9:AI:38:GLN:O	2.07	0.54
35:BF:132:VAL:O	35:BF:134:GLY:N	2.41	0.54
1:CA:303:A:C5	1:CA:304:U:C5	2.96	0.54
12:AL:41:ARG:CG	12:AL:42:THR:H	2.21	0.54
31:BA:753:C:O5'	31:BA:753:C:H6	1.91	0.54
13:AM:14:ARG:CZ	13:AM:42:ALA:HA	2.38	0.54
31:BA:1453:U:OP1	43:BR:77:ARG:NH1	2.41	0.54
31:BA:466:A:N3	31:BA:683:C:H1'	2.23	0.54
7:AG:27:ILE:HD11	7:AG:43:PHE:CD2	2.43	0.54
2:CB:239:VAL:HG12	2:CB:239:VAL:O	2.08	0.54
40:BO:47:ILE:HG23	40:BO:48:PRO:HD2	1.90	0.54
1:CA:1442(B):A:N1	45:DT:118:ARG:CZ	2.70	0.54
45:DT:89:VAL:HG12	45:DT:91:ARG:HB3	1.89	0.54
41:DP:17:LYS:O	41:DP:19:VAL:N	2.33	0.54
47:BV:61:VAL:C	47:BV:62:LEU:HD23	2.27	0.54
31:BA:1493:C:N4	31:BA:2206:G:O2'	2.41	0.54
47:DV:69:LYS:CG	47:DV:70:ILE:N	2.67	0.54
28:D6:11:LEU:CD1	28:D6:51:GLU:HB2	2.38	0.54
31:BA:83:G:N1	31:BA:102:G:H2'	2.22	0.54
16:CP:43:LYS:CG	16:CP:48:TRP:CD2	2.91	0.54
31:BA:1799:G:H5'	31:BA:1819:A:H61	1.73	0.54
1:CA:1277:C:HO2'	1:CA:1279:A:H8	1.54	0.54
32:BB:6:C:C2	32:BB:116:G:N2	2.76	0.54
41:DP:30:THR:O	41:DP:33:ARG:N	2.35	0.54
39:BN:67:LEU:O	39:BN:69:GLN:N	2.41	0.54
1:CA:927:G:OP2	1:CA:1503:A:C4	2.61	0.54
4:AD:100:ARG:NH1	4:AD:137:SER:HA	2.23	0.54
4:AD:206:PHE:HD2	4:AD:207:TYR:CD2	2.26	0.54
50:DY:8:LYS:HB2	50:DY:28:LYS:CE	2.38	0.54
1:AA:1227:A:OP2	13:AM:111:LYS:HE2	2.08	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:CI:7:THR:HB	9:CI:83:ARG:HH11	1.73	0.54
31:DA:196:A:C4	31:DA:805:G:C6	2.96	0.54
31:DA:271(K):U:H2'	31:DA:271(M):G:N2	2.23	0.54
23:D1:10:LYS:HB2	23:D1:14:VAL:CA	2.37	0.54
31:BA:271(Q):G:O2'	31:BA:271(R):G:OP2	2.23	0.54
1:AA:564:C:C2'	1:AA:565:U:H5'	2.36	0.54
45:BT:106:SER:O	45:BT:107:ASP:CB	2.55	0.54
10:AJ:8:LEU:HG	10:AJ:96:ILE:CG2	2.37	0.54
31:DA:1300:U:O2'	31:DA:1626:G:C2	2.54	0.54
51:DZ:8:TYR:CD1	51:DZ:8:TYR:N	2.72	0.54
9:AI:46:ALA:HA	9:AI:78:LYS:HZ2	1.74	0.54
5:AE:90:VAL:HG23	5:AE:121:LYS:O	2.08	0.54
31:BA:1002:G:H2'	31:BA:1003:G:O5'	2.08	0.54
35:DF:123:LEU:HD12	35:DF:124:LEU:N	2.22	0.54
47:BV:2:PHE:HB3	47:BV:42:GLY:HA2	1.90	0.54
37:DH:127:GLU:OE1	37:DH:127:GLU:HA	2.08	0.54
31:DA:303:U:H2'	31:DA:304:G:H8	1.73	0.54
35:BF:123:LEU:HD12	35:BF:124:LEU:N	2.23	0.54
4:CD:56:VAL:HG12	4:CD:202:LEU:HD13	1.90	0.54
38:BI:35:LEU:O	38:BI:36:ALA:HB2	2.08	0.54
1:CA:1291:G:H4'	9:CI:38:GLN:O	2.08	0.54
4:AD:175:SER:OG	4:AD:184:LYS:HB2	2.07	0.54
2:AB:47:THR:HG23	2:AB:202:PRO:HG2	1.89	0.54
22:B0:49:LYS:O	22:B0:50:ASN:HB2	2.08	0.54
31:DA:36:G:C5	31:DA:37:C:C5	2.96	0.54
1:CA:568:G:O6	12:CL:5:PRO:HD3	2.08	0.54
1:AA:236:G:C5	1:AA:237:C:C5	2.96	0.54
36:DG:133:LEU:C	36:DG:133:LEU:HD12	2.28	0.54
40:DO:29:ASN:N	40:DO:29:ASN:HD22	2.06	0.54
39:BN:3:THR:O	39:BN:4:TYR:CD2	2.61	0.53
47:BV:1:MET:HE1	47:BV:44:LYS:H	1.74	0.53
28:D6:37:ARG:O	28:D6:48:VAL:O	2.26	0.53
50:DY:96:ILE:H	50:DY:100:ALA:HA	1.72	0.53
31:DA:2759:G:H2'	31:DA:2760:C:O5'	2.08	0.53
1:CA:356:A:C2'	1:CA:357:G:O5'	2.56	0.53
16:CP:28:ARG:HH11	16:CP:28:ARG:CG	2.01	0.53
49:BX:25:LYS:HG3	49:BX:26:TYR:CD1	2.43	0.53
26:B4:13:ARG:HA	36:BG:101:ILE:HD11	1.89	0.53
34:DE:170:LEU:HD12	34:DE:170:LEU:N	2.23	0.53
2:CB:111:ARG:O	2:CB:145:LEU:HD11	2.09	0.53
4:CD:12:CYS:N	4:CD:19:LEU:HD11	2.24	0.53
31:BA:637:A:O5'	41:BP:116:GLY:HA2	2.08	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:538:G:OP2	12:AL:115:LYS:HG3	2.08	0.53
49:DX:52:VAL:HG21	49:DX:82:GLN:HA	1.90	0.53
1:CA:1486:G:H2'	1:CA:1487:G:O4'	2.08	0.53
37:BH:41:MET:HG3	37:BH:53:GLU:O	2.07	0.53
45:BT:35:LYS:O	45:BT:38:ASN:O	2.26	0.53
48:DW:14:PRO:O	48:DW:15:ARG:C	2.47	0.53
1:AA:586:C:C2'	1:AA:587:G:H5'	2.38	0.53
1:AA:55:A:N7	1:AA:56:U:C5	2.76	0.53
31:BA:271(K):U:H3'	31:BA:271(L):U:C5'	2.37	0.53
22:D0:42:GLY:HA3	31:DA:2331:G:O4'	2.07	0.53
10:AJ:54:PHE:CZ	10:AJ:55:LYS:NZ	2.75	0.53
31:DA:1508:A:O2'	31:DA:1509:C:P	2.67	0.53
31:DA:774:A:H2	31:DA:787:U:O2'	1.90	0.53
31:BA:2584:U:H6	31:BA:2585:U:C5	2.25	0.53
1:CA:1321:C:H5'	1:CA:1322:C:C5'	2.37	0.53
31:BA:26:G:C6	31:BA:27:G:N1	2.76	0.53
40:BO:35:VAL:HA	40:BO:62:VAL:CG1	2.38	0.53
1:CA:20:U:H2'	1:CA:21:G:O4'	2.08	0.53
1:AA:658:G:C2	1:AA:749:C:N3	2.76	0.53
1:AA:657:G:N2	1:AA:750:G:C8	2.76	0.53
2:CB:17:PHE:O	2:CB:18:GLY:O	2.25	0.53
6:AF:75:LEU:HD21	6:AF:79:LEU:HD11	1.90	0.53
31:DA:2409:G:H2'	31:DA:2410:G:O4'	2.09	0.53
35:DF:57:VAL:HG13	35:DF:58:ALA:N	2.23	0.53
8:CH:44:PHE:HB3	8:CH:80:ILE:HD11	1.90	0.53
31:BA:65:C:H2'	31:BA:66:C:H6	1.72	0.53
16:AP:82:GLN:N	16:AP:82:GLN:HE21	2.06	0.53
31:DA:203:C:H3'	31:DA:204:A:H5''	1.90	0.53
19:AS:29:ARG:HD3	19:AS:48:THR:OG1	2.08	0.53
1:AA:1030(D):A:N7	1:AA:1031:G:N3	2.56	0.53
1:CA:287:U:O2'	1:CA:288:A:H5'	2.08	0.53
39:DN:44:PRO:HD3	46:DU:60:LEU:HD21	1.90	0.53
31:BA:1276:A:C2	31:BA:1277:G:C8	2.96	0.53
36:BG:118:ARG:HB2	36:BG:181:ARG:NE	2.23	0.53
22:D0:12:ASN:ND2	31:DA:2277:G:H3'	2.23	0.53
34:BE:108:SER:HB3	34:BE:165:VAL:HG21	1.89	0.53
31:DA:2484:G:C2	31:DA:2485:G:C8	2.95	0.53
4:CD:175:SER:OG	4:CD:184:LYS:HB2	2.08	0.53
31:BA:601:C:O2	31:BA:605:C:H4'	2.09	0.53
31:BA:2552:U:H2'	31:BA:2554:U:OP2	2.08	0.53
36:BG:48:GLU:O	36:BG:49:ASP:HB2	2.08	0.53
31:DA:2075:U:H2'	31:DA:2238:G:N2	2.22	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
27:B5:55:ARG:HD3	27:B5:56:LYS:H	1.72	0.53
1:AA:330:C:C2'	1:AA:331:G:H5'	2.38	0.53
1:AA:373:A:C8	1:AA:482:A:C8	2.96	0.53
44:DS:18:ILE:HG22	44:DS:19:LYS:N	2.23	0.53
28:D6:28:ARG:HA	28:D6:32:ASN:HB3	1.89	0.53
47:BV:69:LYS:HB2	47:BV:93:GLU:CD	2.28	0.53
31:DA:102:G:C8	31:DA:102:G:C5'	2.85	0.53
1:CA:373:A:C2	1:CA:374:A:C8	2.95	0.53
31:DA:1657:C:H2'	31:DA:1658:C:C6	2.43	0.53
31:DA:2636:U:H4'	34:DE:80:GLU:OE1	2.09	0.53
41:BP:97:PRO:O	41:BP:98:GLU:CB	2.51	0.53
1:AA:428:G:C5	1:AA:430:A:C6	2.96	0.53
1:AA:543:C:O2'	1:AA:544:G:H5'	2.07	0.53
38:BI:8:PRO:HA	38:BI:13:GLY:O	2.08	0.53
37:DH:41:MET:SD	37:DH:55:PRO:CD	2.94	0.53
31:DA:2476:A:H2'	31:DA:2477:C:C5'	2.38	0.53
4:AD:138:TYR:HD2	4:AD:139:ARG:N	2.05	0.53
3:CC:52:LEU:CD2	3:CC:52:LEU:H	2.22	0.53
16:AP:23:ASP:O	16:AP:25:ARG:N	2.41	0.53
33:BD:68:LYS:HB2	33:BD:70:TRP:CH2	2.43	0.53
47:DV:35:LEU:HD23	47:DV:35:LEU:H	1.72	0.53
35:BF:65:TRP:CZ3	35:BF:75:HIS:CD2	2.94	0.53
13:CM:81:LEU:HB3	13:CM:89:GLY:CA	2.37	0.53
2:AB:97:TRP:HH2	2:AB:176:GLU:CG	2.21	0.53
31:DA:186:G:H2'	31:DA:187:G:H8	1.73	0.53
1:AA:625:G:H2'	1:AA:626:U:H6	1.72	0.53
31:DA:901:A:H2'	31:DA:901:A:N3	2.23	0.53
1:AA:339:C:OP2	40:BO:97:ARG:NH1	2.42	0.53
1:AA:342:C:C2'	1:AA:343:U:H5'	2.38	0.53
5:CE:90:VAL:HG23	5:CE:121:LYS:O	2.08	0.53
1:AA:1271:G:H5'	1:AA:1314:C:H5'	1.90	0.53
38:DI:56:LYS:HZ3	38:DI:56:LYS:C	2.12	0.53
1:CA:189(D):C:H1'	1:CA:189(H):G:C2	2.43	0.53
31:BA:2884:U:C2'	31:BA:2885:C:H5'	2.38	0.53
41:BP:75:ILE:HD13	41:BP:75:ILE:H	1.72	0.53
31:DA:271(X):G:H2'	31:DA:271(Y):U:H5''	1.90	0.53
1:CA:781:A:C3'	1:CA:782:A:H5'	2.37	0.53
35:BF:132:VAL:HG22	35:BF:133:ASN:N	2.24	0.53
1:CA:995:C:H1'	14:CN:8:GLU:OE2	2.08	0.53
10:CJ:13:HIS:O	10:CJ:17:ASP:HB2	2.08	0.53
31:BA:2677:G:H2'	31:BA:2678:C:C6	2.44	0.53
3:AC:102:ASN:O	3:AC:103:VAL:HG23	2.07	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:DA:1679:U:C2'	31:DA:1680:U:H5'	2.38	0.53
31:DA:1213:A:H1'	31:DA:1238:G:N3	2.23	0.53
31:DA:1027:A:C6	31:DA:1126:A:C4	2.96	0.53
31:BA:615:G:OP1	35:BF:40:GLN:NE2	2.34	0.53
31:DA:1399:C:O2'	31:DA:1400:G:H5'	2.08	0.53
31:DA:1568:G:OP2	33:DD:63:ARG:NH2	2.41	0.53
32:DB:42:C:O2	36:DG:93:THR:N	2.40	0.53
30:D8:39:LYS:CD	30:D8:39:LYS:C	2.77	0.53
46:DU:91:ASP:O	46:DU:95:LEU:HB2	2.08	0.53
47:DV:18:LEU:HD12	47:DV:98:GLU:OE1	2.09	0.53
47:DV:47:VAL:HG21	47:DV:49:THR:HB	1.90	0.53
1:CA:392:G:H2'	1:CA:393:A:C8	2.41	0.53
49:BX:56:THR:C	49:BX:57:LEU:HD12	2.29	0.53
49:BX:72:LYS:HG3	49:BX:73:ARG:H	1.74	0.53
2:AB:77:ALA:HA	2:AB:80:ILE:CD1	2.37	0.53
45:BT:55:ASN:H	45:BT:59:THR:CG2	2.20	0.53
47:BV:82:ARG:HD3	47:BV:82:ARG:O	2.07	0.53
34:BE:2:LYS:NZ	34:BE:95:ILE:O	2.42	0.53
35:DF:24:LEU:CB	35:DF:25:PRO:HD2	2.35	0.53
39:DN:58:ASP:OD1	39:DN:58:ASP:N	2.41	0.53
35:BF:24:LEU:CB	35:BF:25:PRO:HD2	2.34	0.53
1:CA:501:C:O2'	1:CA:502:G:H5'	2.08	0.53
30:B8:16:ILE:HD11	30:B8:57:ARG:CG	2.27	0.53
39:BN:65:LYS:NZ	39:BN:66:LYS:H	2.06	0.53
39:BN:67:LEU:C	39:BN:69:GLN:N	2.61	0.53
41:DP:96:THR:HG22	41:DP:126:VAL:CG2	2.38	0.53
4:AD:79:PHE:CE1	4:AD:204:ILE:HA	2.44	0.53
31:BA:358:U:H6	31:BA:358:U:H3'	1.74	0.53
31:DA:2463:C:O2'	31:DA:2464:C:H5'	2.08	0.53
1:CA:687:A:H1'	1:CA:688:G:OP2	2.08	0.53
1:AA:490:G:O2'	1:AA:491:G:H5'	2.09	0.53
31:DA:668:G:C3'	31:DA:669:G:H5'	2.38	0.53
43:DR:116:LEU:O	43:DR:117:VAL:CB	2.55	0.53
1:CA:59:A:C5	1:CA:354:G:C6	2.96	0.53
31:DA:1338:G:O2'	31:DA:1339:G:H5'	2.09	0.53
1:AA:300:A:H1'	1:AA:565:U:O2	2.08	0.53
31:DA:867:C:C6	31:DA:868:U:C5	2.95	0.53
32:DB:66:A:C4	32:DB:109:C:C4	2.97	0.53
4:CD:109:GLY:O	4:CD:111:ALA:N	2.41	0.53
1:CA:559:A:C4'	1:CA:560:U:H3'	2.38	0.53
2:CB:20:GLU:HB2	2:CB:190:THR:OG1	2.07	0.53
31:BA:2400:G:C5	31:BA:2401:U:C5	2.96	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
49:BX:40:LYS:HG2	49:BX:41:ASN:N	2.23	0.53
31:DA:2616:C:H2'	31:DA:2617:C:H6	1.73	0.53
32:BB:32:C:C2	32:BB:51:G:N2	2.76	0.53
29:B7:19:ARG:NH1	29:B7:19:ARG:HG2	2.21	0.53
38:BI:54:GLN:HG2	38:BI:57:ARG:NH2	2.23	0.53
7:AG:150:ALA:HB2	11:AK:50:TYR:OH	2.08	0.53
31:BA:374:A:H2'	31:BA:375:C:H5'	1.89	0.53
38:DI:108:THR:O	38:DI:109:ILE:HG23	2.07	0.53
13:CM:44:ARG:HB2	13:CM:46:LYS:HG2	1.89	0.53
34:BE:11:MET:O	45:BT:8:LYS:HE2	2.07	0.53
40:BO:50:GLY:C	40:BO:52:VAL:N	2.62	0.53
48:BW:86:LEU:HD12	48:BW:87:PRO:CD	2.39	0.53
31:BA:225:A:H2'	31:BA:226:G:H5'	1.90	0.53
5:CE:41:VAL:HG13	5:CE:113:ALA:HA	1.89	0.53
7:CG:32:ARG:O	7:CG:33:ASP:CB	2.56	0.53
31:DA:2716:U:O2'	31:DA:2717:G:H5'	2.08	0.53
1:AA:840:C:H4'	1:AA:848:C:O2	2.08	0.53
3:CC:36:ASP:HB3	3:CC:40:ARG:HH12	1.72	0.53
46:BU:76:TYR:CZ	46:BU:80:ILE:HG13	2.43	0.53
25:D3:18:ASP:HB2	25:D3:49:LYS:CE	2.39	0.53
17:AQ:40:LYS:HD2	17:AQ:42:TYR:CZ	2.44	0.53
22:D0:49:LYS:O	22:D0:50:ASN:HB2	2.07	0.53
27:B5:41:PRO:O	27:B5:44:THR:OG1	2.26	0.53
47:BV:51:VAL:CG1	47:BV:52:VAL:N	2.72	0.53
1:AA:353:A:H2'	1:AA:354:G:OP2	2.07	0.53
1:AA:450:G:OP1	1:AA:452:A:OP1	2.27	0.53
33:BD:35:LYS:HE3	33:BD:64:ILE:C	2.28	0.53
26:D4:1:MET:H3	36:DG:67:LYS:HZ2	1.55	0.53
31:DA:2291:U:O2'	31:DA:2374:C:H1'	2.08	0.53
39:DN:13:TRP:CZ3	39:DN:130:HIS:HE1	2.22	0.53
31:BA:870:A:C2	31:BA:908:C:C2	2.96	0.53
42:BQ:7:MET:O	42:BQ:10:ARG:NE	2.38	0.53
31:BA:174:C:C3'	31:BA:175:G:H5''	2.38	0.53
45:DT:65:LYS:CE	45:DT:66:VAL:H	2.01	0.53
47:DV:61:VAL:C	47:DV:62:LEU:HD23	2.28	0.53
44:BS:12:PHE:CE1	44:BS:91:PRO:HG3	2.43	0.53
23:B1:19:GLN:NE2	31:BA:379:G:N2	2.42	0.53
8:CH:87:SER:HA	8:CH:93:VAL:HB	1.91	0.53
31:BA:1141:U:O5'	39:BN:63:THR:HG21	2.08	0.53
1:CA:490:G:O2'	1:CA:491:G:H5'	2.08	0.53
4:CD:62:GLN:HA	4:CD:62:GLN:HE21	1.70	0.53
43:BR:9:LYS:O	43:BR:10:LEU:HG	2.09	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:AF:53:ALA:O	6:AF:54:LYS:HB2	2.07	0.53
23:B1:62:VAL:HG22	23:B1:63:ALA:N	2.24	0.53
31:BA:562:U:C4	31:BA:2036:C:O4'	2.62	0.53
39:BN:91:LEU:HA	39:BN:95:PRO:CB	2.36	0.53
31:DA:271(K):U:H3'	31:DA:271(L):U:C5'	2.38	0.53
1:CA:735:C:H2'	1:CA:736:C:C6	2.38	0.53
13:CM:24:GLY:C	13:CM:25:ILE:HD12	2.29	0.53
46:DU:31:SER:HB3	46:DU:34:LYS:HB2	1.91	0.53
31:DA:867:C:C6	31:DA:868:U:H5	2.26	0.53
31:BA:2291:U:O2'	31:BA:2374:C:H1'	2.09	0.53
31:BA:543:C:N4	31:BA:551:G:N1	2.56	0.53
12:CL:62:SER:O	12:CL:64:TYR:N	2.42	0.53
31:BA:1742:G:N7	31:BA:1743:C:N3	2.56	0.53
1:AA:1321:C:H5'	1:AA:1322:C:C5'	2.37	0.53
37:DH:92:ILE:C	37:DH:94:TYR:H	2.10	0.53
31:DA:535:C:O2'	31:DA:536:A:H5'	2.07	0.53
31:BA:528:A:C2	31:BA:2043:C:C5'	2.92	0.53
17:CQ:5:VAL:CG1	17:CQ:6:LEU:H	2.21	0.53
1:CA:830:G:C5	1:CA:831:U:C5	2.97	0.53
1:CA:604:G:C6	1:CA:605:U:C4	2.97	0.53
20:CT:56:MET:CG	20:CT:88:VAL:HG21	2.38	0.53
20:AT:67:ALA:HB2	20:AT:77:ALA:HB2	1.90	0.53
35:DF:57:VAL:HG11	35:DF:59:TYR:HD1	1.73	0.53
17:AQ:13:ASP:H	17:AQ:14:LYS:HZ2	1.55	0.53
13:AM:44:ARG:HB2	13:AM:46:LYS:HG2	1.90	0.53
31:DA:524:U:H2'	31:DA:525:U:C6	2.43	0.53
36:DG:103:LEU:HD23	36:DG:106:LEU:HD23	1.90	0.53
3:AC:86:VAL:O	3:AC:90:GLU:HG2	2.09	0.53
31:BA:719:C:H2'	31:BA:720:C:H6	1.73	0.53
31:BA:724:U:H2'	31:BA:725:G:O4'	2.09	0.53
1:AA:1485:U:H5'	31:BA:1961:C:H5''	1.91	0.53
32:BB:35:U:O2'	32:BB:36:C:H5'	2.09	0.53
2:AB:79:ASP:C	2:AB:81:VAL:H	2.12	0.53
4:AD:131:ARG:HD3	4:AD:131:ARG:H	1.73	0.53
2:CB:221:LEU:HD13	2:CB:221:LEU:O	2.08	0.53
17:AQ:27:PHE:CZ	17:AQ:36:ILE:HD11	2.43	0.53
31:DA:2795:G:N2	31:DA:2796:U:O2'	2.41	0.53
40:BO:2:ILE:HD12	40:BO:6:THR:HG21	1.90	0.53
31:BA:2402:C:C3'	31:BA:2403:C:H5'	2.38	0.53
39:BN:4:TYR:CD1	39:BN:4:TYR:N	2.75	0.53
46:BU:88:ILE:O	46:BU:90:VAL:N	2.42	0.53
47:DV:66:ARG:HD3	47:DV:94:LEU:HG	1.91	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:DA:154:G:H2'	31:DA:154(A):C:O2	2.08	0.53
51:DZ:151:HIS:O	51:DZ:152:ALA:O	2.26	0.53
47:BV:72:VAL:HG13	47:BV:88:ARG:HH22	1.73	0.53
49:BX:78:LYS:HD3	49:BX:78:LYS:O	2.08	0.53
31:DA:1657:C:H5''	34:DE:133:LYS:O	2.09	0.53
31:DA:806:C:OP2	41:DP:39:LYS:HG3	2.09	0.53
31:DA:1142(A):A:N7	31:DA:1144:G:C6	2.76	0.53
31:DA:2496:C:P	42:DQ:81:VAL:HG13	2.48	0.53
47:DV:80:GLN:O	47:DV:81:TYR:N	2.42	0.53
1:CA:501:C:H2'	1:CA:502:G:C8	2.44	0.53
4:CD:79:PHE:CZ	4:CD:204:ILE:HA	2.44	0.53
1:CA:1392:G:N2	1:CA:1502:A:C8	2.76	0.53
1:AA:926:G:H5''	1:AA:927:G:O5'	2.09	0.53
13:CM:34:LEU:HD22	13:CM:39:ILE:O	2.09	0.53
42:DQ:25:ASP:HB2	42:DQ:102:VAL:HG23	1.89	0.53
1:CA:976:G:C5'	1:CA:1358:U:O2'	2.57	0.53
40:BO:107:ARG:HD3	40:BO:112:MET:SD	2.48	0.53
43:DR:117:VAL:HG13	43:DR:118:GLU:N	2.22	0.53
1:CA:330:C:C2'	1:CA:331:G:H5'	2.38	0.53
1:AA:1191:A:H5''	3:AC:4:LYS:HZ2	1.73	0.53
31:DA:1803:A:H4'	33:DD:259:THR:CG2	2.38	0.53
23:D1:10:LYS:O	23:D1:13:ILE:CG2	2.57	0.53
31:BA:2476:A:C5	31:BA:2477:C:C5	2.96	0.53
6:CF:46:ARG:NH1	18:CR:37:VAL:HG21	2.24	0.53
32:BB:82:G:O2'	32:BB:83:G:H5'	2.08	0.53
12:AL:62:SER:O	12:AL:64:TYR:N	2.41	0.53
10:CJ:6:ILE:HG22	10:CJ:98:ILE:HG13	1.89	0.53
13:AM:81:LEU:HB3	13:AM:89:GLY:CA	2.38	0.53
46:BU:31:SER:HB3	46:BU:34:LYS:HB2	1.90	0.53
20:CT:73:HIS:O	20:CT:74:LYS:O	2.27	0.53
31:DA:301:G:H1'	31:DA:302:C:C6	2.43	0.53
31:BA:828:U:H4'	31:BA:831:G:N1	2.24	0.53
31:BA:945:A:H5''	31:BA:946:G:OP2	2.07	0.53
40:DO:7:TYR:OH	40:DO:44:LYS:HG3	2.09	0.53
13:CM:14:ARG:CZ	13:CM:42:ALA:HA	2.38	0.53
39:BN:38:HIS:O	46:BU:67:ALA:HB1	2.08	0.53
2:AB:221:LEU:O	2:AB:221:LEU:HD13	2.07	0.53
1:AA:995:C:H1'	14:AN:8:GLU:OE2	2.08	0.53
31:BA:336:C:H2'	31:BA:337:C:H6	1.72	0.53
33:BD:25:THR:CG2	33:BD:82:ILE:N	2.70	0.53
26:D4:1:MET:N	36:DG:67:LYS:NZ	2.57	0.53
47:DV:73:SER:O	47:DV:74:LYS:HB2	2.08	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:DA:1497:U:H2'	31:DA:1498:C:OP1	2.09	0.53
4:AD:127:THR:OG1	4:AD:128:VAL:N	2.42	0.53
30:D8:23:VAL:HG11	30:D8:46:ARG:HD3	1.91	0.53
30:D8:46:ARG:NH2	41:DP:65:ARG:HH22	2.05	0.53
30:D8:34:TRP:HZ3	30:D8:41:ILE:CD1	2.21	0.53
41:BP:48:PRO:O	41:BP:51:PHE:N	2.41	0.53
31:DA:102:G:C5'	31:DA:102:G:H8	2.02	0.53
2:CB:76:GLN:O	2:CB:208:ILE:HG12	2.08	0.53
2:CB:215:LEU:O	2:CB:219:VAL:HG23	2.09	0.53
49:BX:33:LYS:O	49:BX:34:ALA:C	2.47	0.53
45:DT:55:ASN:H	45:DT:59:THR:CG2	2.21	0.53
32:BB:41:U:C4	36:BG:70:VAL:O	2.62	0.53
45:BT:58:ASN:C	45:BT:58:ASN:HD22	2.12	0.53
27:D5:31:VAL:HG22	27:D5:40:LYS:O	2.08	0.53
33:BD:173:VAL:HG23	33:BD:174:ILE:N	2.22	0.53
2:CB:114:ARG:O	2:CB:118:LEU:HG	2.09	0.53
1:CA:540:G:H2'	1:CA:541:G:O4'	2.07	0.53
36:DG:47:LYS:CG	36:DG:82:LEU:HG	2.36	0.53
45:DT:27:THR:O	45:DT:28:VAL:CG2	2.55	0.53
50:DY:37:VAL:O	50:DY:38:ILE:CB	2.56	0.53
51:DZ:56:VAL:HA	51:DZ:70:LEU:HD23	1.90	0.53
20:CT:50:GLU:HB3	20:CT:100:ILE:CD1	2.38	0.53
31:DA:271(L):U:H4'	31:DA:271(M):G:N7	2.24	0.53
1:CA:380:G:N2	1:CA:384:G:C5	2.76	0.53
1:AA:1191:A:P	3:AC:3:ASN:HD21	2.32	0.53
7:CG:149:ARG:HD3	11:CK:59:TYR:CE1	2.43	0.53
1:AA:84:U:H6	1:AA:84:U:H3'	1.74	0.53
31:DA:1952:A:C6	40:DO:22:ILE:HD11	2.43	0.53
31:BA:2580:U:C5'	34:BE:131:ALA:H	2.21	0.53
1:CA:1125:U:H3	10:CJ:5:ARG:NH1	2.07	0.53
17:AQ:5:VAL:HG12	17:AQ:6:LEU:H	1.73	0.53
37:BH:92:ILE:C	37:BH:94:TYR:H	2.11	0.53
34:BE:120:TRP:CD2	34:BE:155:LYS:HD3	2.44	0.53
1:AA:1321:C:H5''	1:AA:1322:C:H2'	1.90	0.53
32:BB:89:G:H8	32:BB:89:G:OP2	1.91	0.53
14:CN:51:GLY:C	14:CN:53:LEU:H	2.10	0.53
51:BZ:63:ASP:O	51:BZ:65:GLN:HG2	2.09	0.53
31:DA:729:G:C5	33:DD:208:LYS:HB2	2.43	0.53
1:AA:627:G:H2'	1:AA:628:G:C8	2.43	0.53
1:CA:1348:U:H4'	9:CI:120:ARG:HD2	1.91	0.53
1:AA:1348:U:H4'	9:AI:120:ARG:HD2	1.91	0.53
6:CF:82:ARG:HB2	6:CF:85:VAL:HG23	1.90	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
33:DD:72:LYS:HE3	33:DD:99:ASP:OD1	2.09	0.53
20:CT:84:LEU:O	20:CT:88:VAL:HG23	2.09	0.53
20:CT:96:GLY:O	20:CT:97:ALA:HB3	2.07	0.53
1:CA:668:G:O2'	1:CA:669:U:H5'	2.09	0.53
31:DA:1027:A:N6	31:DA:1126:A:C4	2.77	0.53
3:CC:20:SER:HB2	3:CC:40:ARG:NH2	2.23	0.53
36:DG:118:ARG:HB2	36:DG:181:ARG:NE	2.24	0.53
2:AB:142:LEU:HD23	2:AB:142:LEU:O	2.09	0.53
1:AA:1510:U:H2'	1:AA:1511:G:C8	2.44	0.53
31:BA:2795:G:N2	31:BA:2796:U:O2'	2.41	0.53
44:BS:97:ARG:HE	44:BS:98:VAL:HA	1.73	0.53
1:CA:960:U:O2	1:CA:960:U:H2'	2.07	0.53
45:DT:87:ASP:OD1	45:DT:87:ASP:C	2.46	0.53
31:BA:873:G:H1	31:BA:904:C:H42	1.56	0.53
41:DP:16:ARG:CZ	41:DP:18:ARG:HB2	2.39	0.53
16:AP:39:TYR:CE1	16:AP:41:PRO:HA	2.44	0.53
33:DD:65:ILE:CD1	33:DD:67:PHE:CE1	2.77	0.53
47:DV:72:VAL:HG13	47:DV:88:ARG:HH22	1.72	0.53
30:B8:46:ARG:NH2	41:BP:65:ARG:HH22	2.03	0.53
33:DD:270:ILE:C	33:DD:271:ILE:HG13	2.29	0.53
15:CO:87:ILE:CG2	15:CO:88:ARG:N	2.68	0.53
31:DA:1019:U:C2'	31:DA:1021:A:H2	2.22	0.53
34:DE:36:ARG:HG2	34:DE:36:ARG:HH11	1.74	0.53
34:DE:2:LYS:NZ	34:DE:95:ILE:O	2.41	0.53
1:CA:538:G:OP2	12:CL:115:LYS:HG3	2.09	0.53
45:DT:100:TYR:HD2	45:DT:103:ARG:NH2	2.07	0.53
37:BH:46:GLU:O	37:BH:47:GLU:HB2	2.08	0.53
24:D2:53:LEU:HA	24:D2:56:GLN:HE22	1.72	0.53
49:DX:85:PRO:O	49:DX:87:GLN:N	2.42	0.53
6:AF:14:LEU:HB3	6:AF:19:LEU:HB2	1.90	0.53
45:DT:40:THR:O	45:DT:41:ARG:CB	2.56	0.53
42:DQ:23:GLY:HA3	42:DQ:99:PRO:O	2.08	0.53
45:BT:31:SER:C	45:BT:32:TYR:CD2	2.82	0.53
1:AA:437:U:O2'	1:AA:438:G:H5'	2.09	0.53
1:CA:1191:A:P	3:CC:3:ASN:HD21	2.31	0.53
31:DA:271(E):U:H2'	31:DA:271(F):C:H6	1.74	0.53
13:CM:48:LEU:HD11	13:CM:53:VAL:HG22	1.91	0.53
51:DZ:165:VAL:HG12	51:DZ:166:SER:OG	2.08	0.53
1:CA:1081:G:N2	1:CA:1082:G:H1'	2.24	0.53
1:AA:20:U:H2'	1:AA:21:G:O4'	2.08	0.53
1:AA:560:U:H5'	1:AA:566:G:N2	2.24	0.53
12:AL:55:VAL:HG12	12:AL:68:ALA:O	2.08	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
28:B6:20:ASN:OD1	28:B6:21:TYR:O	2.27	0.53
39:BN:83:LYS:HE2	39:BN:85:ILE:HD11	1.90	0.53
10:CJ:6:ILE:HD11	10:CJ:72:VAL:HB	1.91	0.53
31:BA:1171:G:N7	31:BA:1173:G:H1'	2.23	0.53
4:AD:98:GLU:HG2	4:AD:194:LEU:HD11	1.89	0.53
31:DA:1303:G:H1'	31:DA:1641:A:N1	2.23	0.53
35:DF:129:PHE:CD2	35:DF:163:VAL:HG21	2.43	0.53
1:CA:1305:G:C8	1:CA:1305:G:OP2	2.62	0.53
34:DE:179:GLU:O	34:DE:180:ASN:HB2	2.07	0.53
1:AA:448:A:H62	1:AA:486:U:H3	1.56	0.53
31:DA:2473:U:C4	31:DA:2474:C:C5	2.97	0.53
31:BA:271(A):A:H2	31:BA:272(D):G:N3	2.07	0.53
42:DQ:63:LYS:HZ3	42:DQ:63:LYS:HB2	1.74	0.53
44:BS:97:ARG:C	44:BS:97:ARG:CD	2.77	0.53
1:CA:1248:A:C2'	1:CA:1249:C:H5'	2.39	0.53
5:CE:137:GLU:O	5:CE:141:GLN:HG3	2.09	0.53
42:BQ:103:MET:HB2	42:BQ:104:PHE:CD1	2.44	0.53
31:BA:1850:G:C5	31:BA:1851:U:C5	2.96	0.53
36:BG:43:LEU:CD1	36:BG:153:ARG:HD2	2.39	0.53
2:AB:158:LEU:N	2:AB:158:LEU:HD12	2.24	0.53
20:AT:8:ARG:N	20:AT:8:ARG:HD2	2.24	0.53
8:AH:36:LEU:C	8:AH:38:ILE:H	2.12	0.53
16:CP:12:LYS:O	16:CP:13:HIS:HB2	2.08	0.53
48:BW:54:ALA:HB1	48:BW:107:LEU:HD22	1.90	0.53
31:DA:1491:G:O2'	31:DA:1492:G:H5'	2.08	0.53
45:DT:68:TYR:O	45:DT:70:VAL:N	2.42	0.53
45:DT:91:ARG:CB	45:DT:116:ALA:HA	2.33	0.53
50:DY:100:ALA:O	50:DY:101:LYS:HB3	2.08	0.53
50:DY:96:ILE:HG22	50:DY:97:ARG:O	2.08	0.53
42:DQ:88:GLY:O	42:DQ:90:VAL:HG23	2.08	0.53
2:CB:51:LEU:HD23	2:CB:201:ILE:HD12	1.91	0.53
1:CA:356:A:H1'	1:CA:368:U:O2'	2.09	0.53
1:CA:355:C:N3	1:CA:356:A:N7	2.57	0.53
24:B2:26:ARG:CG	49:BX:5:TYR:O	2.56	0.53
49:BX:80:ILE:HG23	49:BX:81:VAL:N	2.24	0.53
31:BA:2822:G:O6	43:BR:4:LEU:HD13	2.09	0.53
33:BD:131:LEU:CB	33:BD:136:ILE:HD11	2.32	0.53
31:BA:2404:C:C2'	31:BA:2405:G:C5'	2.86	0.53
23:B1:64:ALA:O	23:B1:65:SER:CB	2.56	0.53
39:DN:62:VAL:O	39:DN:63:THR:O	2.27	0.53
45:BT:30:VAL:HG21	45:BT:83:ILE:CG1	2.37	0.53
50:BY:68:HIS:HB3	50:BY:71:LYS:HZ1	1.71	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
45:DT:31:SER:C	45:DT:32:TYR:CD2	2.82	0.53
1:AA:1486:G:H2'	1:AA:1487:G:O4'	2.09	0.53
1:CA:1072:G:C5	1:CA:1073:U:C4	2.97	0.53
50:BY:8:LYS:HB2	50:BY:28:LYS:HZ3	1.74	0.53
31:DA:2476:A:C5	31:DA:2477:C:C5	2.97	0.53
1:CA:1084:G:OP1	1:CA:1086:U:C4	2.61	0.53
31:DA:795:C:H2'	31:DA:796:C:H6	1.73	0.53
23:D1:10:LYS:HG3	23:D1:11:ARG:H	1.74	0.53
3:AC:105:GLU:HG2	3:AC:106:VAL:H	1.74	0.53
12:AL:33:ARG:HG2	12:AL:60:LEU:HD12	1.90	0.53
1:AA:863:U:H2'	1:AA:865:A:OP2	2.08	0.53
37:DH:90:LYS:HB2	37:DH:159:GLU:O	2.09	0.53
1:CA:763:G:C4	1:CA:764:C:C6	2.97	0.53
31:DA:579:G:H2'	31:DA:580:C:C6	2.44	0.53
3:AC:116:VAL:HG21	3:AC:202:ILE:HD11	1.90	0.53
27:D5:11:THR:HG23	31:DA:1263:U:O2'	2.09	0.53
31:BA:1533:G:O2'	31:BA:1543:C:OP1	2.26	0.53
31:BA:1001:A:H2'	31:BA:1002:G:O4'	2.08	0.53
5:CE:80:ILE:HG13	5:CE:91:LEU:HB2	1.91	0.53
34:DE:27:LEU:HD12	34:DE:181:LEU:HD13	1.90	0.53
31:BA:958:U:O2'	31:BA:959:A:OP1	2.26	0.53
47:BV:35:LEU:N	47:BV:35:LEU:HD23	2.24	0.53
1:CA:1498:U:H1'	1:CA:1499:A:OP2	2.09	0.53
31:DA:2536:G:C5	31:DA:2537:U:C5	2.96	0.53
1:CA:118:U:C5	1:CA:288:A:C6	2.97	0.53
42:BQ:63:LYS:NZ	42:BQ:63:LYS:HB2	2.24	0.53
2:CB:166:ASP:HB3	2:CB:169:LYS:HB2	1.90	0.53
34:DE:70:ALA:O	34:DE:72:VAL:N	2.42	0.53
19:AS:79:THR:O	19:AS:80:TYR:CB	2.56	0.53
3:CC:117:ALA:O	3:CC:187:ALA:HB3	2.08	0.53
30:B8:31:HIS:O	30:B8:32:LEU:C	2.46	0.53
47:BV:1:MET:CE	47:BV:44:LYS:HB2	2.24	0.53
30:D8:62:LEU:O	30:D8:64:TYR:N	2.42	0.53
31:DA:243:U:C2'	31:DA:244:A:H5'	2.39	0.53
34:BE:59:VAL:CG2	34:BE:63:LEU:HA	2.39	0.53
28:D6:10:LEU:N	28:D6:10:LEU:CD2	2.71	0.53
31:DA:154(A):C:H5	31:DA:171:G:N1	2.07	0.53
47:DV:15:GLU:CB	47:DV:16:PRO:HD2	2.35	0.53
24:B2:48:HIS:NE2	31:BA:75:G:H4'	2.22	0.53
45:DT:58:ASN:C	45:DT:58:ASN:HD22	2.13	0.53
32:BB:73:A:C4	32:BB:105:A:C2	2.97	0.53
31:DA:2606:C:C2'	31:DA:2607:G:H5'	2.39	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
37:BH:85:LYS:O	37:BH:85:LYS:HD3	2.08	0.53
31:DA:2443:C:O2'	31:DA:2444:G:H5'	2.09	0.53
31:BA:1784:A:H4'	31:BA:1785:A:O5'	2.08	0.53
39:DN:27:ALA:CB	39:DN:106:MET:CE	2.87	0.53
35:BF:1:MET:O	35:BF:2:LYS:C	2.47	0.53
31:BA:307:G:N2	31:BA:310:A:OP2	2.42	0.53
31:DA:287:C:N4	31:DA:354:G:H1	2.05	0.53
31:BA:282:A:C4	31:BA:359:A:C2	2.97	0.53
1:CA:339:C:OP2	40:DO:97:ARG:NH1	2.42	0.53
45:BT:41:ARG:NH1	45:BT:43:GLN:HA	2.23	0.53
33:DD:161:THR:HG23	33:DD:196:VAL:CG2	2.39	0.53
50:BY:7:VAL:HB	50:BY:8:LYS:HD2	1.91	0.53
20:AT:50:GLU:HB3	20:AT:100:ILE:CD1	2.39	0.53
48:DW:5:ALA:C	48:DW:6:ILE:HG13	2.28	0.53
43:BR:117:VAL:HG13	43:BR:118:GLU:N	2.23	0.53
22:D0:70:GLN:OE1	22:D0:72:ARG:HD2	2.09	0.53
13:AM:15:VAL:HG12	13:AM:45:VAL:HG22	1.91	0.53
34:BE:137:HIS:HB3	34:BE:138:PRO:CD	2.39	0.53
43:BR:56:LYS:HE3	43:BR:94:TYR:OH	2.09	0.53
31:BA:2472:G:H8	31:BA:2472:G:C5'	2.22	0.53
1:AA:946:A:H2'	1:AA:947:G:H8	1.74	0.53
32:DB:15:A:H1'	32:DB:110:G:N9	2.24	0.53
37:BH:89:ILE:O	37:BH:90:LYS:CG	2.56	0.53
31:DA:2580:U:C5'	34:DE:131:ALA:H	2.21	0.53
2:AB:67:THR:HG22	2:AB:90:MET:HE1	1.91	0.53
31:DA:1050:A:C2	31:DA:2751:G:C4	2.97	0.53
1:CA:1118:C:C1'	1:CA:1179:A:C4	2.92	0.53
7:AG:146:GLU:OE2	7:AG:149:ARG:HD2	2.09	0.53
31:DA:1533:G:O2'	31:DA:1543:C:OP1	2.27	0.53
8:AH:28:ALA:HB3	8:AH:57:PRO:O	2.08	0.53
35:DF:117:ARG:HH21	35:DF:187:VAL:HA	1.73	0.53
13:CM:79:LYS:O	13:CM:82:MET:HB3	2.08	0.53
2:AB:127:ILE:N	2:AB:127:ILE:HD13	2.24	0.53
35:DF:202:PHE:C	35:DF:204:ASN:H	2.11	0.53
32:DB:10:C:C4	32:DB:11:C:C5	2.96	0.53
32:BB:56:G:H5'	36:BG:27:ASN:ND2	2.24	0.53
31:DA:1925:C:O2'	31:DA:1926:U:H5'	2.09	0.53
3:CC:42:LEU:HD11	3:CC:46:GLU:OE2	2.08	0.53
17:CQ:31:LEU:O	17:CQ:31:LEU:HG	2.08	0.53
41:BP:149:GLU:HG3	41:BP:149:GLU:O	2.08	0.53
51:DZ:95:PRO:HA	51:DZ:129:SER:HA	1.91	0.53
32:DB:60:C:C2	32:DB:61:G:C8	2.97	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
30:B8:34:TRP:HZ3	30:B8:41:ILE:CD1	2.22	0.53
16:AP:39:TYR:HA	16:AP:48:TRP:O	2.09	0.53
47:DV:69:LYS:HB2	47:DV:93:GLU:CD	2.29	0.53
16:CP:21:VAL:HG22	16:CP:34:GLU:O	2.08	0.53
31:DA:2404:C:C2'	31:DA:2405:G:C5'	2.87	0.53
37:DH:47:GLU:C	37:DH:49:VAL:H	2.12	0.53
4:CD:4:TYR:O	4:CD:5:ILE:HB	2.09	0.53
45:DT:28:VAL:HG13	45:DT:46:GLU:HA	1.91	0.53
31:DA:2661:G:O4'	31:DA:2661:G:P	2.67	0.53
31:DA:94:C:O2	31:DA:94:C:H2'	2.08	0.53
6:AF:69:GLU:HG2	6:AF:70:ASP:N	2.23	0.53
1:CA:1086:U:H2'	1:CA:1087:G:C8	2.40	0.53
7:CG:153:HIS:CE1	11:CK:57:THR:HG23	2.43	0.53
1:AA:475:G:O2'	1:AA:476:G:H5'	2.08	0.53
1:CA:1456:G:O4'	1:CA:1456:G:OP1	2.27	0.53
40:BO:3:GLN:CB	40:BO:4:PRO:HD2	2.39	0.53
1:AA:947:G:H2'	1:AA:948:C:C6	2.44	0.53
13:AM:3:ARG:HH21	36:BG:146:TYR:HB2	1.74	0.53
36:DG:16:ARG:O	36:DG:20:ILE:HG13	2.09	0.53
26:B4:19:GLY:O	26:B4:21:VAL:N	2.42	0.53
16:CP:14:ASN:OD1	16:CP:16:HIS:CE1	2.61	0.53
31:BA:2199:A:H3'	31:BA:2200:C:C6	2.40	0.53
31:DA:1472:A:H2'	31:DA:1473:G:C8	2.44	0.53
6:CF:98:LEU:HD22	18:CR:28:GLU:HB3	1.90	0.53
1:CA:1133:G:N3	1:CA:1142:G:N2	2.57	0.53
1:CA:304:U:H2'	1:CA:305:G:C8	2.44	0.53
1:CA:1152:A:H5''	10:CJ:13:HIS:CD2	2.44	0.53
31:BA:1914:C:H2'	31:BA:1915:U:O4'	2.09	0.53
7:AG:70:LYS:HB3	7:AG:96:GLN:OE1	2.09	0.53
1:AA:836:G:C6	1:AA:851:G:C6	2.97	0.53
1:AA:778:G:H2'	1:AA:779:C:O5'	2.09	0.53
4:AD:121:VAL:O	4:AD:134:ASP:HA	2.09	0.53
15:CO:18:PHE:CE1	15:CO:21:ASP:HB2	2.44	0.53
41:DP:16:ARG:C	41:DP:16:ARG:HH11	2.10	0.52
46:DU:69:CYS:HB3	46:DU:106:PHE:CE2	2.43	0.52
1:AA:380:G:N2	1:AA:384:G:C5	2.77	0.52
33:BD:24:ILE:O	33:BD:24:ILE:HG23	2.08	0.52
33:BD:25:THR:HG21	33:BD:82:ILE:H	1.74	0.52
33:DD:65:ILE:HD11	33:DD:67:PHE:HE1	1.61	0.52
33:DD:83:GLU:HB2	33:DD:92:ILE:HD11	1.91	0.52
44:DS:89:ARG:O	44:DS:90:GLY:O	2.26	0.52
30:D8:22:VAL:HB	30:D8:53:PRO:CB	2.39	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:DA:624:C:C2'	31:DA:625:G:H5'	2.40	0.52
31:BA:154:G:N1	31:BA:154(A):C:N4	2.53	0.52
31:BA:197:A:N6	31:BA:2430:A:H2'	2.24	0.52
16:CP:22:THR:CG2	16:CP:32:TYR:HA	2.39	0.52
49:BX:60:ARG:HE	49:BX:74:PRO:HG3	1.74	0.52
10:CJ:40:LEU:HD23	10:CJ:40:LEU:H	1.74	0.52
1:CA:673:G:O3'	6:CF:87:ARG:NH2	2.42	0.52
45:BT:57:PHE:O	45:BT:59:THR:N	2.41	0.52
44:DS:30:ARG:HD2	44:DS:31:SER:O	2.09	0.52
34:BE:119:ARG:HG2	34:BE:160:TYR:CG	2.44	0.52
23:B1:75:GLU:O	23:B1:76:ARG:HD3	2.09	0.52
31:BA:1141:U:H6	39:BN:63:THR:HB	1.74	0.52
31:BA:2660:A:H5'	31:BA:2661:G:N2	2.22	0.52
42:BQ:52:VAL:O	42:BQ:56:ARG:HB2	2.09	0.52
42:DQ:22:LYS:CA	42:DQ:22:LYS:HE2	2.23	0.52
1:CA:930:C:O2'	1:CA:931:C:H5'	2.10	0.52
39:BN:128:HIS:O	39:BN:130:HIS:N	2.41	0.52
30:B8:3:LYS:HE3	31:BA:242:G:O5'	2.09	0.52
30:B8:50:LEU:O	30:B8:52:LYS:N	2.42	0.52
1:CA:586:C:C2'	1:CA:587:G:H5'	2.39	0.52
31:BA:146:G:C5'	31:BA:146:G:H8	2.16	0.52
45:BT:31:SER:CA	45:BT:32:TYR:CD2	2.92	0.52
1:CA:685:G:N2	1:CA:686:U:C4	2.78	0.52
39:DN:78:TYR:CE1	39:DN:79:PRO:HB3	2.44	0.52
23:D1:9:GLY:O	23:D1:10:LYS:HE2	2.09	0.52
33:DD:206:LEU:HD22	33:DD:211:ARG:HG3	1.92	0.52
38:BI:88:ILE:HD11	38:BI:123:LEU:CD2	2.38	0.52
31:BA:2272:U:H5''	31:BA:2273:A:OP1	2.09	0.52
1:AA:862:C:H2'	1:AA:863:U:C5'	2.38	0.52
1:AA:1226:C:H2'	13:AM:103:THR:OG1	2.10	0.52
1:CA:35:G:C6	1:CA:36:C:N4	2.76	0.52
18:CR:76:LEU:N	18:CR:76:LEU:HD23	2.24	0.52
1:CA:192:U:H2'	1:CA:193:C:H6	1.74	0.52
31:DA:32:C:C2'	31:DA:33:U:H5'	2.39	0.52
31:DA:769:G:O2'	31:DA:770:G:H5'	2.09	0.52
45:DT:106:SER:O	45:DT:107:ASP:CB	2.56	0.52
31:BA:2762:G:H2'	31:BA:2763:G:H5'	1.91	0.52
6:AF:98:LEU:HD22	18:AR:28:GLU:HB3	1.90	0.52
1:CA:667:G:H4'	15:CO:51:HIS:ND1	2.24	0.52
1:CA:167:G:C2'	1:CA:168:G:H5'	2.40	0.52
31:DA:720:C:C2'	31:DA:721:C:H5'	2.39	0.52
10:CJ:29:ARG:HG2	10:CJ:29:ARG:O	2.08	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
28:B6:42:TRP:HZ2	31:BA:642:G:O3'	1.92	0.52
8:CH:44:PHE:HD1	8:CH:80:ILE:HG12	1.74	0.52
31:DA:883:G:H1	31:DA:893:C:H41	1.55	0.52
34:BE:101:ARG:HB3	34:BE:169:ASN:HD22	1.73	0.52
12:CL:18:VAL:O	12:CL:19:ARG:HB3	2.08	0.52
19:CS:29:ARG:HD2	19:CS:30:LEU:N	2.24	0.52
36:BG:118:ARG:H	36:BG:181:ARG:NH2	2.07	0.52
33:BD:153:ALA:O	33:BD:154:LYS:HG3	2.09	0.52
43:DR:21:TYR:OH	43:DR:43:GLU:HG2	2.09	0.52
40:DO:87:ILE:HG23	40:DO:88:ASN:O	2.09	0.52
7:CG:145:ALA:O	7:CG:147:ALA:N	2.41	0.52
39:BN:104:LYS:HB2	39:BN:117:PHE:CE1	2.44	0.52
36:DG:132:ASN:OD1	36:DG:158:ALA:HA	2.09	0.52
18:AR:36:ASN:ND2	18:AR:39:VAL:HG21	2.24	0.52
31:DA:1319:G:C6	31:DA:1320:C:N4	2.77	0.52
31:DA:1902:C:H2'	31:DA:1903:G:O5'	2.09	0.52
46:BU:92:ARG:NH1	47:BV:11:GLN:O	2.42	0.52
47:BV:15:GLU:O	47:BV:98:GLU:OE2	2.27	0.52
2:CB:163:PHE:HA	2:CB:185:ILE:O	2.09	0.52
1:AA:379:C:O2'	1:AA:380:G:H5'	2.10	0.52
31:DA:2302:G:H21	36:DG:128:ARG:HB3	1.75	0.52
31:DA:1162:G:H1'	47:DV:91:TYR:OH	2.09	0.52
47:DV:90:PRO:CG	47:DV:91:TYR:N	2.69	0.52
47:DV:25:LEU:N	47:DV:94:LEU:HD13	2.24	0.52
31:DA:1497:U:H2'	31:DA:1497:U:O2	2.07	0.52
39:DN:132:ALA:O	39:DN:133:GLN:HB2	2.10	0.52
31:BA:84:A:H5''	50:BY:9:LYS:HD2	1.89	0.52
31:BA:154:G:H2'	31:BA:154(A):C:O2	2.09	0.52
2:CB:211:ILE:O	2:CB:215:LEU:HD23	2.09	0.52
16:CP:39:TYR:HA	16:CP:48:TRP:O	2.09	0.52
32:BB:7:G:H5'	44:BS:29:PHE:CZ	2.43	0.52
36:BG:135:LEU:HD23	36:BG:140:ILE:HD11	1.90	0.52
36:BG:60:LEU:C	36:BG:60:LEU:HD13	2.30	0.52
31:BA:1278:A:O3'	43:BR:34:ILE:CD1	2.57	0.52
23:B1:85:LEU:CA	23:B1:87:PRO:HD3	2.39	0.52
34:DE:111:ARG:HG3	43:DR:2:ARG:HG3	1.91	0.52
35:BF:20:LEU:HD13	35:BF:203:GLN:NE2	2.23	0.52
4:CD:65:ARG:HG3	4:CD:75:PHE:CD1	2.43	0.52
31:DA:1278:A:O3'	43:DR:34:ILE:CD1	2.58	0.52
51:DZ:52:SER:OG	51:DZ:53:ILE:N	2.41	0.52
10:CJ:32:ALA:HB1	10:CJ:75:ILE:HG13	1.91	0.52
42:BQ:140:ALA:CB	51:BZ:53:ILE:HG13	2.32	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
45:BT:31:SER:HA	45:BT:32:TYR:CD2	2.44	0.52
31:BA:2036:C:C5'	31:BA:2036:C:H6	2.17	0.52
10:AJ:32:ALA:CB	10:AJ:76:ASN:HB3	2.34	0.52
50:DY:60:PHE:HA	50:DY:62:GLU:OE2	2.09	0.52
1:CA:1203:C:H2'	1:CA:1204:A:C8	2.44	0.52
1:AA:561:U:O2'	1:AA:562:C:OP1	2.26	0.52
31:DA:2713:A:C3'	31:DA:2714:G:C5'	2.87	0.52
1:AA:17:U:C2	1:AA:18:C:C5	2.98	0.52
38:BI:71:ILE:HG13	38:BI:72:LEU:HD23	1.91	0.52
1:AA:1530:G:H2'	1:AA:1531:A:O5'	2.09	0.52
12:CL:62:SER:O	12:CL:64:TYR:HD1	1.92	0.52
31:BA:1508:A:O2'	31:BA:1509:C:P	2.66	0.52
23:B1:30:VAL:O	23:B1:30:VAL:CG1	2.56	0.52
32:DB:13:A:H2'	32:DB:70:C:O2'	2.09	0.52
36:DG:16:ARG:HH12	36:DG:31:VAL:HG21	1.73	0.52
4:AD:91:SER:HA	4:AD:94:LEU:HD12	1.91	0.52
31:DA:18:C:H2'	31:DA:19:C:C6	2.45	0.52
31:DA:1721:G:H8	31:DA:1741:A:H62	1.56	0.52
1:CA:369:C:O2	1:CA:369:C:H2'	2.09	0.52
1:CA:189:G:C6	1:CA:189(L):G:N1	2.78	0.52
31:DA:1131:G:OP1	39:DN:80:GLY:HA2	2.09	0.52
34:DE:201:THR:HG22	34:DE:202:LYS:H	1.73	0.52
35:DF:84:VAL:C	35:DF:86:GLY:N	2.58	0.52
42:DQ:35:VAL:CG1	42:DQ:130:LYS:HB3	2.38	0.52
31:BA:528:A:C8	31:BA:528:A:H3'	2.44	0.52
43:DR:44:LEU:O	43:DR:45:ARG:C	2.47	0.52
3:AC:109:PRO:HA	3:AC:115:LEU:HD12	1.91	0.52
35:BF:4:VAL:HG13	35:BF:17:ARG:HB3	1.92	0.52
31:BA:2761:G:C3'	31:BA:2762:G:H5''	2.38	0.52
31:DA:1751:C:O4'	31:DA:2860:A:C2	2.62	0.52
30:B8:39:LYS:CD	30:B8:39:LYS:C	2.77	0.52
31:DA:2410:G:C2	31:DA:2411:A:H1'	2.43	0.52
48:DW:64:MET:O	48:DW:65:LEU:CB	2.54	0.52
34:BE:67:PHE:C	34:BE:69:LYS:N	2.60	0.52
31:DA:923:C:H2'	31:DA:924:C:C6	2.44	0.52
34:BE:7:VAL:HG21	45:BT:1:MET:CE	2.39	0.52
1:CA:1516:G:H2'	1:CA:1518:A:OP2	2.10	0.52
3:AC:66:VAL:O	3:AC:66:VAL:HG12	2.09	0.52
31:BA:271(X):G:H2'	31:BA:271(Y):U:H5''	1.91	0.52
11:AK:21:ILE:HB	11:AK:84:VAL:HG12	1.90	0.52
34:DE:195:LEU:HG	34:DE:196:VAL:N	2.23	0.52
31:DA:1844:C:OP1	33:DD:257:LEU:HD23	2.09	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
37:BH:103:LEU:HD23	37:BH:115:VAL:HB	1.91	0.52
37:BH:103:LEU:HD11	37:BH:105:LEU:HD11	1.91	0.52
38:DI:21:VAL:HG21	38:DI:26:ALA:HB2	1.90	0.52
1:CA:770:C:O2'	1:CA:771:G:H5'	2.09	0.52
32:BB:60:C:C2	32:BB:61:G:C8	2.98	0.52
31:DA:465:G:H2'	31:DA:466:A:C8	2.43	0.52
46:BU:117:GLN:OE1	46:BU:117:GLN:HA	2.09	0.52
36:DG:43:LEU:CD1	36:DG:153:ARG:HD2	2.38	0.52
30:B8:35:GLN:HE21	30:B8:36:LYS:HG3	1.74	0.52
46:BU:83:LEU:HD13	46:BU:113:ALA:HB2	1.91	0.52
31:DA:174:C:C3'	31:DA:175:G:H5''	2.39	0.52
49:DX:37:THR:HG23	49:DX:54:VAL:HG21	1.91	0.52
51:BZ:145:GLU:O	51:BZ:147:GLY:N	2.43	0.52
1:AA:1442(A):G:C3'	1:AA:1442(B):A:H5''	2.27	0.52
31:DA:2758:A:C3'	31:DA:2759:G:H5''	2.39	0.52
2:CB:189:ASP:OD1	2:CB:205:ASP:HB3	2.08	0.52
16:CP:45:THR:C	16:CP:47:ASP:H	2.13	0.52
24:B2:45:SER:HA	24:B2:47:ASN:HD21	1.75	0.52
31:BA:330:A:O2'	31:BA:331:A:C8	2.63	0.52
36:BG:57:ALA:HB2	36:BG:90:LEU:HD21	1.91	0.52
33:DD:172:TYR:CD1	33:DD:186:HIS:CA	2.92	0.52
8:AH:87:SER:HA	8:AH:93:VAL:HB	1.92	0.52
31:BA:1142(A):A:C5	31:BA:1144:G:C5	2.97	0.52
34:DE:2:LYS:HB3	34:DE:95:ILE:CG2	2.39	0.52
1:CA:438:G:O2'	1:CA:493:G:C2	2.58	0.52
4:CD:204:ILE:HG21	5:CE:98:THR:O	2.09	0.52
4:CD:8:VAL:O	4:CD:10:ARG:N	2.41	0.52
32:DB:82:G:O2'	32:DB:83:G:H5'	2.08	0.52
31:BA:2850:A:OP2	31:BA:2866:U:H5	1.92	0.52
1:CA:926:G:H5''	1:CA:927:G:O5'	2.08	0.52
41:BP:98:GLU:HG3	41:BP:99:LEU:H	1.72	0.52
31:BA:329:G:H1	50:BY:19:LYS:HE3	1.75	0.52
41:DP:102:ARG:O	41:DP:103:ALA:CB	2.58	0.52
31:DA:2654:A:H1'	31:DA:2656:U:C5	2.45	0.52
4:AD:79:PHE:CZ	4:AD:204:ILE:HA	2.44	0.52
43:BR:10:LEU:HD22	43:BR:17:ARG:CD	2.40	0.52
24:D2:54:LYS:H	24:D2:56:GLN:HE21	1.58	0.52
39:DN:47:ALA:CB	39:DN:112:LEU:HD11	2.34	0.52
31:DA:196:A:H2'	31:DA:196:A:N3	2.23	0.52
6:AF:76:ALA:HB1	6:AF:80:ARG:HH21	1.74	0.52
6:AF:3:ARG:NH1	6:AF:38:GLU:OE2	2.42	0.52
31:DA:387:U:H4'	31:DA:388:G:O5'	2.10	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:CA:557:G:H2'	1:CA:558:G:C8	2.44	0.52
23:D1:30:VAL:O	23:D1:30:VAL:CG1	2.57	0.52
3:CC:7:PRO:O	3:CC:11:ARG:HG2	2.10	0.52
13:AM:92:HIS:CE1	13:AM:98:VAL:HG23	2.45	0.52
31:DA:2558:C:H2'	31:DA:2559:C:O5'	2.10	0.52
2:AB:97:TRP:HH2	2:AB:176:GLU:CD	2.13	0.52
12:AL:119:LYS:O	12:AL:120:TYR:HB2	2.08	0.52
3:CC:109:PRO:HA	3:CC:115:LEU:HD12	1.92	0.52
1:CA:661:G:C2	1:CA:662:G:C8	2.98	0.52
31:DA:1380:G:N2	31:DA:1570:A:C2	2.76	0.52
9:CI:17:VAL:HG13	9:CI:63:ILE:HG13	1.90	0.52
1:CA:710:G:H5''	6:CF:54:LYS:HE3	1.91	0.52
34:BE:67:PHE:O	34:BE:69:LYS:N	2.43	0.52
34:BE:7:VAL:HG21	45:BT:1:MET:HE3	1.92	0.52
37:DH:149:ARG:HD3	37:DH:164:TYR:HE1	1.74	0.52
33:BD:4:LYS:NZ	33:BD:20:ASP:HA	2.24	0.52
37:BH:149:ARG:HD3	37:BH:164:TYR:HE1	1.74	0.52
17:AQ:40:LYS:HD2	17:AQ:42:TYR:CE1	2.44	0.52
37:BH:105:LEU:HD22	37:BH:105:LEU:H	1.74	0.52
31:DA:641:C:O2'	31:DA:2350:C:OP1	2.18	0.52
23:B1:41:ARG:HH12	31:BA:189:G:P	2.32	0.52
1:AA:592:G:H2'	1:AA:593:G:H8	1.75	0.52
4:CD:131:ARG:HD3	4:CD:131:ARG:H	1.74	0.52
2:CB:79:ASP:C	2:CB:81:VAL:H	2.12	0.52
31:BA:521:G:H2'	31:BA:522:G:C8	2.44	0.52
5:AE:137:GLU:O	5:AE:141:GLN:HG3	2.08	0.52
31:DA:1902:C:H1'	33:DD:244:ARG:CD	2.40	0.52
32:DB:40:U:H3	32:DB:43:C:H5''	1.75	0.52
32:DB:44:G:N2	32:DB:48:A:C4	2.77	0.52
30:D8:30:ARG:O	30:D8:31:HIS:O	2.27	0.52
51:DZ:109:ALA:O	51:DZ:144:LEU:O	2.26	0.52
51:DZ:150:LEU:HA	51:DZ:151:HIS:HD2	1.75	0.52
49:DX:53:LYS:HE3	49:DX:55:ASN:ND2	2.22	0.52
31:DA:997:G:O2'	31:DA:998:C:H5'	2.10	0.52
49:BX:31:HIS:CD2	49:BX:33:LYS:H	2.27	0.52
44:DS:35:ILE:H	44:DS:53:SER:HB2	1.75	0.52
10:AJ:46:ARG:HD3	14:AN:61:TRP:CZ3	2.44	0.52
31:DA:1779:U:C2	31:DA:1783:A:N7	2.77	0.52
8:AH:86:ILE:CG2	8:AH:87:SER:H	2.02	0.52
15:CO:78:TYR:OH	15:CO:88:ARG:HD2	2.10	0.52
33:DD:49:ILE:HD13	33:DD:49:ILE:C	2.30	0.52
42:DQ:34:LEU:HB2	42:DQ:118:LEU:HD22	1.92	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:CA:437:U:O2'	1:CA:438:G:H5'	2.10	0.52
32:DB:79:C:O2'	32:DB:80:U:H5'	2.08	0.52
50:DY:8:LYS:HZ1	50:DY:73:ARG:HA	1.74	0.52
31:DA:2460:U:H2'	31:DA:2461:C:H6	1.73	0.52
31:DA:493:G:H2'	31:DA:494:G:O4'	2.10	0.52
31:DA:668:G:C5'	31:DA:669:G:OP2	2.57	0.52
10:AJ:32:ALA:HB1	10:AJ:75:ILE:CG1	2.39	0.52
1:AA:336:C:H2'	1:AA:337:C:H6	1.74	0.52
31:BA:271(H):G:O2'	31:BA:271(I):G:OP2	2.25	0.52
47:BV:36:PRO:HD3	47:BV:60:GLU:O	2.09	0.52
31:BA:2580:U:C5'	34:BE:131:ALA:CB	2.87	0.52
28:B6:19:ARG:O	28:B6:20:ASN:O	2.27	0.52
31:BA:543:C:H42	31:BA:551:G:H1	1.56	0.52
5:AE:76:ILE:HG12	5:AE:77:PRO:HD2	1.90	0.52
30:B8:26:LYS:HZ1	30:B8:47:LYS:HD3	1.75	0.52
10:AJ:94:VAL:HG12	10:AJ:95:GLU:N	2.25	0.52
32:BB:28:C:H2'	32:BB:29:A:H8	1.74	0.52
31:DA:2020:A:OP1	46:DU:26:GLY:HA3	2.09	0.52
31:DA:1742:G:N7	31:DA:1743:C:N3	2.57	0.52
31:BA:107:C:H2'	31:BA:108:U:C6	2.41	0.52
16:CP:74:LEU:O	16:CP:79:VAL:HG23	2.09	0.52
41:DP:10:PRO:CD	41:DP:11:GLY:N	2.70	0.52
45:DT:107:ASP:OD1	45:DT:109:GLU:HB2	2.09	0.52
1:CA:1477:C:H2'	1:CA:1478:C:C6	2.44	0.52
31:BA:2762:G:H2'	31:BA:2763:G:C5'	2.39	0.52
4:CD:148:VAL:HG12	4:CD:149:ALA:N	2.24	0.52
47:BV:2:PHE:CD2	47:BV:42:GLY:HA2	2.44	0.52
1:AA:590:C:H2'	1:AA:591:U:C6	2.44	0.52
20:AT:73:HIS:H	20:AT:76:ALA:HB3	1.75	0.52
31:DA:923:C:O2'	31:DA:924:C:H5'	2.10	0.52
34:BE:27:LEU:HD22	45:BT:1:MET:HE2	1.91	0.52
1:CA:189(D):C:H1'	1:CA:189(H):G:N2	2.25	0.52
38:BI:107:VAL:CG1	38:BI:108:THR:N	2.73	0.52
31:DA:1666:G:H2'	31:DA:1667:G:H5'	1.89	0.52
1:AA:721:G:H4'	1:AA:722:A:O4'	2.09	0.52
20:CT:95:ALA:O	20:CT:97:ALA:N	2.43	0.52
42:DQ:14:ARG:HG2	42:DQ:41:TRP:CH2	2.45	0.52
1:CA:1030(D):A:N7	1:CA:1031:G:N3	2.56	0.52
19:CS:29:ARG:HD3	19:CS:48:THR:OG1	2.09	0.52
31:DA:643:A:H2'	31:DA:644:A:O5'	2.09	0.52
32:DB:33:G:C2'	32:DB:34:U:H5'	2.40	0.52
31:BA:1638:C:H5"	31:BA:2710:C:O2'	2.09	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
27:D5:41:PRO:O	27:D5:44:THR:OG1	2.27	0.52
36:DG:48:GLU:O	36:DG:49:ASP:HB2	2.09	0.52
31:DA:521:G:H2'	31:DA:522:G:C8	2.44	0.52
31:DA:1665:A:H4'	40:DO:67:LYS:HB2	1.90	0.52
31:DA:724:U:H2'	31:DA:725:G:O4'	2.10	0.52
1:AA:781:A:H2'	1:AA:782:A:H5'	1.91	0.52
1:AA:1058:G:C6	1:AA:1059:C:N3	2.78	0.52
46:BU:91:ASP:C	46:BU:92:ARG:O	2.48	0.52
47:BV:47:VAL:HG21	47:BV:49:THR:HB	1.92	0.52
47:DV:70:ILE:HG13	47:DV:71:LEU:N	2.25	0.52
31:BA:2302:G:H21	36:BG:128:ARG:HB3	1.73	0.52
31:DA:2417:C:C2	31:DA:2418:A:C8	2.97	0.52
24:D2:32:LEU:O	24:D2:33:MET:C	2.47	0.52
49:DX:72:LYS:CG	49:DX:74:PRO:HD3	2.35	0.52
2:CB:84:GLU:O	2:CB:219:VAL:HG11	2.09	0.52
47:DV:18:LEU:O	47:DV:19:LYS:HB2	2.09	0.52
24:B2:30:ARG:HH21	49:BX:11:PRO:HG3	1.72	0.52
33:BD:133:LEU:HB3	33:BD:173:VAL:HG11	1.92	0.52
44:BS:66:ALA:HA	44:BS:69:VAL:CG1	2.39	0.52
1:CA:410:G:H1'	1:CA:432:A:N6	2.24	0.52
4:CD:58:LEU:HD22	4:CD:62:GLN:CG	2.37	0.52
31:DA:2648:C:H2'	31:DA:2649:U:H6	1.74	0.52
51:DZ:119:GLU:C	51:DZ:121:HIS:H	2.12	0.52
51:DZ:40:ASP:OD1	51:DZ:42:VAL:HG12	2.10	0.52
39:BN:13:TRP:CZ3	39:BN:130:HIS:CE1	2.96	0.52
31:DA:492:A:H2'	31:DA:493:G:O4'	2.09	0.52
9:AI:105:ASP:OD2	9:AI:107:ARG:HD3	2.09	0.52
9:AI:19:LEU:HB3	9:AI:59:PHE:HD2	1.74	0.52
9:CI:19:LEU:HB3	9:CI:59:PHE:HD2	1.74	0.52
1:AA:1492:A:H5'	1:AA:1493:A:OP2	2.08	0.52
1:AA:949:A:N6	1:AA:1232:U:H3	2.02	0.52
28:B6:40:CYS:SG	28:B6:45:LYS:HD3	2.49	0.52
1:CA:1076:C:C2	1:CA:1082:G:N2	2.77	0.52
48:BW:4:LYS:HE3	48:BW:6:ILE:HD11	1.92	0.52
31:DA:547:A:O2'	31:DA:548:A:OP2	2.27	0.52
1:AA:1003:G:N3	1:AA:1004:A:H1'	2.24	0.52
23:B1:25:LYS:O	23:B1:26:ARG:CB	2.56	0.52
1:CA:1378:C:N4	1:CA:1379:G:C2	2.77	0.52
12:AL:62:SER:O	12:AL:64:TYR:HD1	1.92	0.52
35:DF:160:ASN:HD22	35:DF:162:LEU:N	2.08	0.52
1:AA:1422:G:O3'	40:BO:49:ARG:NH2	2.43	0.52
2:CB:87:ARG:HH21	2:CB:233:SER:HB3	1.74	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:1157:A:C4	1:AA:1181:G:N2	2.77	0.52
31:DA:2752:C:C4	31:DA:2753:A:N7	2.77	0.52
1:CA:552:U:O2'	1:CA:553:A:H5'	2.10	0.52
3:AC:136:GLN:HG2	3:AC:140:ARG:NH2	2.24	0.52
32:BB:13:A:O2'	32:BB:15:A:O5'	2.26	0.52
2:AB:21:ARG:HB2	2:AB:38:GLY:O	2.10	0.52
46:BU:8:VAL:HG12	46:BU:9:VAL:N	2.23	0.52
31:DA:30:G:H2'	31:DA:31:C:C6	2.44	0.52
1:CA:270:A:C5	1:CA:271:C:C4	2.97	0.52
8:CH:63:LEU:N	8:CH:63:LEU:HD22	2.24	0.52
1:CA:832:C:H42	1:CA:854:G:H1	1.58	0.52
31:BA:1701:A:H2'	31:BA:1702:G:H5'	1.90	0.52
40:BO:87:ILE:HG23	40:BO:88:ASN:O	2.10	0.52
31:DA:2733:A:C2'	31:DA:2734:A:H5'	2.39	0.52
31:DA:1629:U:O2'	31:DA:1630:G:H5'	2.10	0.52
10:AJ:39:PRO:HB3	10:AJ:70:ARG:NH1	2.24	0.52
17:AQ:65:ILE:N	17:AQ:65:ILE:HD12	2.23	0.52
1:AA:939:G:C6	1:AA:940:C:N4	2.78	0.52
40:DO:2:ILE:HD12	40:DO:6:THR:HG21	1.92	0.52
38:DI:35:LEU:N	38:DI:35:LEU:HD23	2.25	0.52
35:BF:202:PHE:C	35:BF:204:ASN:H	2.13	0.52
1:AA:44:G:N2	1:AA:399:G:C4	2.77	0.52
31:BA:2870:C:C2'	31:BA:2871:C:H5'	2.40	0.52
15:AO:18:PHE:CE1	15:AO:21:ASP:HB2	2.45	0.52
22:B0:1:MET:HA	31:BA:2451:A:H4'	1.92	0.52
1:AA:783:C:C2'	1:AA:784:C:H5'	2.40	0.52
3:AC:155:GLY:O	3:AC:156:ARG:HB2	2.10	0.52
31:BA:2280:G:C2'	31:BA:2281:C:H5'	2.40	0.52
50:BY:27:VAL:CB	50:BY:29:GLU:OE1	2.56	0.52
31:DA:1497:U:C2'	31:DA:1498:C:OP1	2.58	0.52
30:D8:61:LEU:HD13	31:DA:593:G:O2'	2.10	0.52
24:D2:26:ARG:NH1	24:D2:29:LYS:HE2	2.24	0.52
49:DX:89:ILE:HA	49:DX:92:LEU:HD12	1.92	0.52
42:BQ:85:LYS:HG3	42:BQ:86:GLY:N	2.25	0.52
45:DT:65:LYS:HG3	45:DT:66:VAL:N	2.24	0.52
1:CA:585:G:O2'	12:CL:8:ASN:ND2	2.40	0.52
39:DN:2:LYS:HZ2	46:DU:94:ASN:HD21	1.56	0.52
2:AB:208:ILE:HA	2:AB:211:ILE:HD12	1.91	0.52
33:DD:266:SER:O	33:DD:267:SER:CB	2.57	0.52
27:D5:33:CYS:SG	27:D5:49:CYS:HB3	2.48	0.52
34:BE:37:ARG:HD3	34:BE:44:TYR:CZ	2.44	0.52
34:BE:3:GLY:HA3	34:BE:81:ILE:HD12	1.92	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:DA:1142(A):A:N7	31:DA:1144:G:C5	2.78	0.52
22:D0:8:GLY:HA2	42:DQ:83:MET:CG	2.39	0.52
1:CA:428:G:C6	1:CA:430:A:C6	2.97	0.52
4:CD:155:LEU:O	4:CD:159:ARG:HG2	2.09	0.52
4:CD:33:MET:C	4:CD:35:ARG:H	2.12	0.52
45:BT:28:VAL:HG22	45:BT:46:GLU:HG3	1.90	0.52
41:BP:108:LYS:C	41:BP:110:TYR:N	2.62	0.52
41:BP:95:VAL:HA	41:BP:99:LEU:HD23	1.91	0.52
41:DP:144:GLU:N	41:DP:145:PRO:CD	2.73	0.52
41:DP:96:THR:O	41:DP:100:LEU:HB2	2.10	0.52
4:AD:8:VAL:HG12	4:AD:21:LEU:HD12	1.91	0.52
31:BA:243:U:O2'	31:BA:244:A:H5'	2.10	0.52
31:DA:2464:C:O2'	31:DA:2465:C:C5'	2.58	0.52
12:AL:102:ARG:HD2	12:AL:108:ALA:O	2.09	0.52
15:AO:54:ARG:HG2	15:AO:58:MET:CE	2.40	0.52
1:CA:683:G:C6	1:CA:684:A:C5	2.97	0.52
1:AA:1097:C:H2'	1:AA:1098:C:H6	1.74	0.52
51:BZ:97:GLU:HB3	51:BZ:125:LEU:HD21	1.92	0.52
23:D1:14:VAL:O	23:D1:46:LEU:HD23	2.09	0.52
13:AM:24:GLY:C	13:AM:25:ILE:HD12	2.29	0.52
31:DA:2818:G:C2'	31:DA:2819:G:H5'	2.40	0.52
32:BB:78:A:C2	32:BB:100:A:C4	2.98	0.52
31:BA:1669:A:H5''	31:BA:1670:C:OP2	2.10	0.52
1:AA:1233:G:P	9:AI:124:GLN:HB2	2.50	0.52
31:BA:1508:A:C2'	31:BA:1509:C:OP1	2.58	0.52
24:D2:14:ARG:O	24:D2:18:PRO:CD	2.57	0.52
1:AA:1125:U:H3	10:AJ:5:ARG:NH1	2.08	0.52
22:D0:74:ARG:NH2	32:DB:13:A:OP2	2.43	0.52
32:DB:13:A:O2'	32:DB:15:A:O5'	2.28	0.52
18:CR:53:ARG:O	18:CR:55:ARG:N	2.43	0.52
31:DA:1179:C:C2'	31:DA:1180:C:H5''	2.40	0.52
1:AA:1239:A:H62	1:AA:1299:A:H62	1.57	0.52
46:BU:57:PHE:O	46:BU:58:ARG:C	2.48	0.52
1:CA:632:A:N7	1:CA:633:G:C8	2.78	0.52
31:BA:848:G:C2	31:BA:933:A:H1'	2.45	0.52
37:BH:98:LEU:HD22	37:BH:125:VAL:HG23	1.91	0.52
3:CC:35:GLU:O	3:CC:39:ILE:HG13	2.09	0.52
36:DG:111:LEU:HA	36:DG:114:ILE:CG1	2.40	0.52
48:DW:86:LEU:HD12	48:DW:87:PRO:CD	2.40	0.52
2:AB:180:LEU:O	2:AB:181:PHE:HB2	2.10	0.52
7:AG:32:ARG:O	7:AG:33:ASP:HB2	2.09	0.52
1:CA:1152:A:O2'	1:CA:1153:C:H5'	2.09	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
39:BN:33:LEU:HD12	39:BN:38:HIS:CE1	2.45	0.52
31:DA:1412:A:H2'	31:DA:1413:G:C8	2.45	0.52
48:DW:2:GLU:OE1	48:DW:72:LYS:NZ	2.40	0.52
31:DA:2693:A:H2'	31:DA:2694:G:H8	1.75	0.52
1:AA:767:A:H2'	1:AA:768:A:O4'	2.09	0.52
1:AA:1218:C:H2'	1:AA:1219:U:C6	2.44	0.52
1:CA:840:C:H4'	1:CA:848:C:O2	2.09	0.52
25:B3:2:PRO:O	25:B3:39:ASP:HB2	2.09	0.52
35:DF:144:LYS:C	35:DF:146:ALA:H	2.13	0.52
31:BA:2320:A:H2'	31:BA:2320:A:N3	2.24	0.52
31:DA:1850:G:C5	31:DA:1851:U:C5	2.97	0.52
39:BN:2:LYS:HZ3	46:BU:94:ASN:ND2	2.08	0.52
46:BU:88:ILE:HD13	46:BU:88:ILE:O	2.10	0.52
33:BD:63:ARG:NH1	33:BD:63:ARG:HG3	2.25	0.52
34:BE:57:LYS:HG3	34:BE:57:LYS:O	2.09	0.52
24:D2:33:MET:HG2	49:DX:11:PRO:HD3	1.92	0.52
49:DX:36:LYS:O	49:DX:38:GLU:N	2.43	0.52
47:BV:73:SER:O	47:BV:74:LYS:HB2	2.10	0.52
2:CB:77:ALA:HA	2:CB:80:ILE:CD1	2.39	0.52
49:BX:73:ARG:H	49:BX:74:PRO:HD3	1.75	0.52
32:BB:42:C:O2	36:BG:93:THR:N	2.41	0.52
44:BS:29:PHE:N	44:BS:89:ARG:CD	2.65	0.52
44:BS:28:VAL:C	44:BS:89:ARG:HD2	2.27	0.52
47:BV:80:GLN:O	47:BV:81:TYR:N	2.43	0.52
34:DE:167:VAL:HG11	34:DE:189:PRO:HD3	1.92	0.52
31:BA:746:A:H2'	31:BA:2612:C:H5''	1.92	0.52
31:DA:1142(A):A:C5	31:DA:1144:G:C5	2.98	0.52
34:DE:3:GLY:HA3	34:DE:81:ILE:HD12	1.92	0.52
4:CD:119:GLN:O	4:CD:123:HIS:HD2	1.92	0.52
45:DT:28:VAL:HB	45:DT:88:ILE:HG13	1.91	0.52
41:BP:99:LEU:HD12	41:BP:102:ARG:HH12	1.75	0.52
39:BN:132:ALA:O	39:BN:133:GLN:HB2	2.10	0.52
51:BZ:40:ASP:OD1	51:BZ:42:VAL:HG12	2.10	0.52
45:BT:32:TYR:CD2	45:BT:81:PRO:O	2.63	0.52
1:AA:683:G:C6	1:AA:684:A:C6	2.97	0.52
50:BY:8:LYS:HB2	50:BY:28:LYS:HE2	1.90	0.52
43:BR:12:ARG:CG	43:BR:12:ARG:HH11	2.22	0.52
42:DQ:54:MET:HG3	42:DQ:117:ALA:HB1	1.91	0.52
40:DO:35:VAL:HA	40:DO:62:VAL:CG1	2.40	0.52
1:AA:632:A:N7	1:AA:633:G:C8	2.78	0.52
51:DZ:30:ASN:HB3	51:DZ:90:VAL:HB	1.92	0.52
31:DA:2580:U:H4'	34:DE:130:GLY:CA	2.40	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:CA:1321:C:H5''	1:CA:1322:C:H2'	1.91	0.52
5:AE:55:VAL:O	5:AE:58:ALA:HB3	2.10	0.52
38:BI:37:VAL:CG1	38:BI:38:LEU:N	2.72	0.52
31:BA:2752:C:C4	31:BA:2753:A:N7	2.78	0.52
31:DA:1590:U:C2'	31:DA:1591:G:H5''	2.40	0.52
1:CA:1480:G:H2'	1:CA:1481:U:O4'	2.10	0.52
1:AA:272:C:H2'	1:AA:273:A:H8	1.75	0.52
31:BA:1533:G:C2'	31:BA:1543:C:OP1	2.57	0.52
31:DA:1155:A:O2'	31:DA:1156:A:H2'	2.09	0.52
19:CS:16:LEU:O	19:CS:20:LEU:HB2	2.10	0.52
1:AA:167:G:C2'	1:AA:168:G:H5'	2.39	0.52
31:BA:302:C:O2'	31:BA:303:U:H5'	2.10	0.52
44:BS:85:VAL:CG2	44:BS:106:ARG:HB2	2.39	0.52
20:AT:96:GLY:O	20:AT:97:ALA:HB3	2.09	0.52
1:CA:1316:G:O3'	14:CN:18:VAL:HG22	2.09	0.52
12:CL:41:ARG:CG	12:CL:42:THR:H	2.23	0.52
31:BA:1040:C:O2'	31:BA:1041:C:OP2	2.26	0.52
50:BY:83:THR:CG2	50:BY:94:LYS:HB3	2.39	0.52
31:BA:2536:G:C6	31:BA:2537:U:C4	2.98	0.52
31:BA:1992:G:H5'	31:BA:1994:C:H41	1.74	0.52
1:CA:1218:C:H2'	1:CA:1219:U:C6	2.45	0.52
31:BA:953:A:O2'	31:BA:954:G:H5'	2.08	0.52
20:CT:8:ARG:HD2	20:CT:8:ARG:N	2.24	0.52
35:BF:154:VAL:HG22	35:BF:191:ARG:HB2	1.91	0.52
31:DA:1684:C:O2'	31:DA:1685:C:H5'	2.10	0.52
33:DD:63:ARG:HG3	33:DD:63:ARG:HH11	1.75	0.52
1:CA:364:A:H2'	1:CA:365:U:O2	2.09	0.52
24:B2:49:LYS:HB3	24:B2:53:LEU:HD23	1.90	0.52
2:AB:51:LEU:HD23	2:AB:201:ILE:HD12	1.92	0.52
29:D7:5:TRP:CD1	29:D7:7:PRO:HG3	2.45	0.52
44:BS:65:VAL:O	44:BS:67:ARG:N	2.42	0.52
2:CB:111:ARG:HH11	2:CB:111:ARG:CG	2.07	0.52
34:DE:37:ARG:HD3	34:DE:44:TYR:CZ	2.44	0.52
34:DE:44:TYR:O	34:DE:45:THR:HB	2.10	0.52
1:CA:430:A:O2'	1:CA:431:A:H5'	2.09	0.52
50:BY:71:LYS:HZ2	50:BY:71:LYS:HB2	1.75	0.52
24:D2:41:ILE:O	24:D2:43:GLN:N	2.43	0.52
51:BZ:39:VAL:CG2	51:BZ:44:PHE:HB2	2.39	0.52
42:BQ:141:GLN:CG	51:BZ:72:ARG:HA	2.40	0.52
9:AI:4:TYR:CD2	9:AI:59:PHE:HE2	2.27	0.52
37:DH:54:ARG:HG2	37:DH:65:HIS:HD2	1.74	0.52
31:DA:482:A:H4'	50:DY:47:LYS:HZ2	1.72	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:DA:271(Q):G:O2'	31:DA:271(R):G:OP2	2.24	0.52
1:CA:55:A:N7	1:CA:56:U:C5	2.77	0.52
33:DD:209:ALA:C	33:DD:210:GLY:O	2.45	0.52
31:DA:1694:C:O2'	31:DA:1695:G:C5	2.63	0.52
31:BA:774:A:H2	31:BA:787:U:O2'	1.90	0.52
35:BF:160:ASN:HD22	35:BF:162:LEU:N	2.06	0.52
3:CC:6:HIS:CD2	3:CC:7:PRO:HD2	2.45	0.52
1:AA:658:G:C5	1:AA:659:U:C5	2.97	0.52
1:AA:659:U:H2'	1:AA:660:G:H5'	1.92	0.52
1:CA:1052:U:H2'	1:CA:1055:A:OP1	2.10	0.52
3:AC:52:LEU:CD2	3:AC:52:LEU:H	2.21	0.52
31:BA:971:C:H2'	31:BA:972:G:C5'	2.39	0.52
20:CT:67:ALA:O	20:CT:73:HIS:CE1	2.63	0.52
20:AT:80:ARG:O	20:AT:84:LEU:HB2	2.10	0.52
31:BA:1515:G:H2'	31:BA:1516:C:H6	1.72	0.52
3:CC:66:VAL:O	3:CC:66:VAL:HG12	2.10	0.52
34:BE:24:THR:HG21	34:BE:188:VAL:HG12	1.90	0.52
31:BA:128:C:C3'	31:BA:128:C:C6	2.93	0.52
31:BA:2590:A:H2'	31:BA:2591:C:C6	2.45	0.52
35:BF:132:VAL:C	35:BF:134:GLY:H	2.13	0.52
31:DA:466:A:N3	31:DA:683:C:H1'	2.25	0.52
1:CA:579:G:C5	1:CA:580:U:C5	2.98	0.52
31:BA:918:A:H5''	32:BB:98:G:O2'	2.10	0.52
3:AC:42:LEU:HD11	3:AC:46:GLU:OE2	2.10	0.52
1:CA:729:A:H2'	1:CA:730:G:H8	1.75	0.52
19:AS:51:VAL:HG21	19:AS:71:LEU:HB3	1.91	0.52
31:DA:38:A:H2'	31:DA:39:C:C6	2.45	0.52
25:B3:28:LEU:HA	25:B3:33:GLN:OE1	2.08	0.52
17:AQ:31:LEU:HG	17:AQ:31:LEU:O	2.09	0.52
31:DA:1633:G:H8	31:DA:1633:G:O5'	1.92	0.52
19:AS:16:LEU:O	19:AS:20:LEU:HB2	2.09	0.52
1:CA:228:A:H2'	1:CA:229:U:O4'	2.09	0.52
31:BA:1899:G:N2	31:BA:1902:C:C4	2.78	0.52
30:B8:41:ILE:HD12	31:BA:2419:U:OP1	2.10	0.52
36:DG:36:LYS:HD3	36:DG:95:ARG:CZ	2.40	0.52
46:DU:50:ARG:CZ	47:DV:75:PHE:CE2	2.92	0.52
28:D6:41:PRO:HB2	28:D6:43:CYS:H	1.75	0.52
35:DF:102:PRO:HB2	35:DF:105:VAL:CG2	2.39	0.52
49:DX:76:ARG:HD2	49:DX:77:LYS:CB	2.40	0.52
49:DX:77:LYS:HG2	49:DX:78:LYS:H	1.75	0.52
31:BA:157:U:H5'	31:BA:171:G:N2	2.25	0.52
31:DA:86:C:H4'	31:DA:104:U:H1'	1.92	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:CA:1255:G:H5'	1:CA:1256:A:OP1	2.09	0.52
31:DA:330:A:HO2'	31:DA:331:A:H8	1.56	0.52
45:DT:57:PHE:O	45:DT:59:THR:N	2.42	0.52
44:DS:58:LEU:O	44:DS:59:LYS:O	2.26	0.52
41:BP:35:HIS:O	41:BP:36:LYS:CB	2.58	0.52
31:DA:943:U:OP2	41:DP:38:GLN:OE1	2.27	0.52
15:AO:71:GLN:HA	15:AO:78:TYR:HB2	1.92	0.52
15:AO:82:ILE:HD13	15:AO:82:ILE:C	2.30	0.52
37:DH:121:ILE:HG23	37:DH:133:VAL:HG13	1.92	0.52
31:DA:2273:A:H2'	31:DA:2274:A:C8	2.44	0.52
31:DA:919:G:H5'	32:DB:81:G:H1'	1.91	0.52
1:AA:501:C:H2'	1:AA:502:G:C8	2.44	0.52
41:DP:124:LYS:HG2	41:DP:143:GLY:CA	2.40	0.52
1:AA:543:C:C2	1:AA:544:G:C8	2.98	0.52
31:DA:1527:G:C5'	31:DA:1528:A:OP1	2.58	0.52
50:DY:8:LYS:HB2	50:DY:28:LYS:HE2	1.91	0.52
51:DZ:51:ALA:O	51:DZ:52:SER:HB3	2.10	0.52
46:BU:27:LEU:CD2	46:BU:27:LEU:N	2.59	0.52
31:DA:1486:A:H2'	31:DA:1487:G:H8	1.75	0.52
31:DA:1486:A:H61	31:DA:1504:C:H42	1.57	0.52
30:B8:50:LEU:C	30:B8:52:LYS:H	2.13	0.52
10:CJ:32:ALA:CB	10:CJ:76:ASN:HB3	2.34	0.52
51:BZ:53:ILE:HG22	51:BZ:71:VAL:CB	2.39	0.52
31:DA:132:G:H1	31:DA:147:U:H3	1.57	0.52
22:B0:25:ARG:HD2	22:B0:29:GLN:NE2	2.25	0.52
31:BA:271(Q):G:OP1	38:BI:42:SER:OG	2.28	0.52
31:BA:2712:U:C5'	31:BA:2712:U:O2	2.55	0.52
1:AA:983:A:H3'	1:AA:983:A:N3	2.25	0.52
31:DA:2712:U:C5'	31:DA:2712:U:O2	2.56	0.52
6:AF:5:GLU:HB3	6:AF:62:TRP:NE1	2.25	0.52
31:DA:1106:A:H2'	31:DA:1107:G:O5'	2.10	0.52
1:AA:1077:G:C2	1:AA:1081:G:C5	2.97	0.52
1:CA:1285:A:H8	1:CA:1285:A:OP1	1.93	0.52
8:AH:123:GLU:O	8:AH:127:LEU:HB2	2.10	0.52
12:CL:28:LYS:HE3	12:CL:33:ARG:HH12	1.74	0.52
31:DA:1508:A:C2'	31:DA:1509:C:OP1	2.57	0.52
1:CA:148:G:C2	1:CA:149:A:N7	2.77	0.52
1:AA:89:C:OP1	1:AA:90:U:C4	2.63	0.52
3:AC:6:HIS:CD2	3:AC:7:PRO:HD2	2.44	0.52
1:CA:1226:C:N3	13:CM:104:ARG:HG3	2.24	0.52
1:CA:626:U:C2	1:CA:627:G:C8	2.98	0.52
1:AA:1369:C:H2'	1:AA:1370:G:O4'	2.09	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
40:BO:64:ARG:HG2	40:BO:79:PHE:CD1	2.45	0.52
1:AA:950:U:H2'	1:AA:951:G:C8	2.42	0.52
1:CA:832:C:N4	1:CA:854:G:H1	2.08	0.52
2:CB:11:LEU:HB3	2:CB:213:LEU:HD11	1.90	0.52
1:AA:232:G:H1'	1:AA:262:A:N1	2.25	0.52
31:DA:2280:G:C2'	31:DA:2281:C:H5'	2.40	0.52
31:DA:826:U:OP1	31:DA:2428:G:H3'	2.09	0.52
34:DE:67:PHE:C	34:DE:69:LYS:N	2.63	0.52
11:AK:34:ASP:HB3	11:AK:40:ILE:HD11	1.91	0.52
31:BA:883:G:H1	31:BA:893:C:H41	1.57	0.52
13:AM:82:MET:HB2	13:AM:93:ARG:NH1	2.25	0.52
19:AS:29:ARG:HD2	19:AS:30:LEU:N	2.24	0.52
37:DH:103:LEU:HD23	37:DH:115:VAL:HB	1.92	0.52
7:AG:70:LYS:HB3	7:AG:96:GLN:HB3	1.92	0.52
1:CA:1240:U:H4'	7:CG:38:LEU:HD21	1.92	0.52
1:CA:811:C:H4'	1:CA:900:A:N6	2.25	0.52
1:CA:731:G:OP1	1:CA:766:A:H1'	2.09	0.52
11:AK:73:MET:HG2	11:AK:103:LEU:HD11	1.91	0.52
31:BA:2290:G:C2	31:BA:2343:C:O2	2.63	0.52
1:CA:131:C:H2'	1:CA:132:C:H6	1.74	0.52
16:AP:8:ARG:HG2	16:AP:9:PHE:N	2.25	0.52
1:AA:1240:U:H4'	7:AG:38:LEU:HD21	1.92	0.52
31:BA:1902:C:H1'	33:BD:244:ARG:CD	2.40	0.52
30:B8:35:GLN:CG	31:BA:2420:C:OP1	2.58	0.52
32:DB:21:G:O6	32:DB:63:G:C4	2.63	0.52
1:AA:59:A:C5	1:AA:354:G:C6	2.98	0.52
39:DN:128:HIS:O	39:DN:128:HIS:CD2	2.63	0.52
30:D8:61:LEU:HD13	31:DA:593:G:C4'	2.38	0.52
24:D2:25:VAL:HG22	24:D2:26:ARG:HH11	1.74	0.52
31:DA:143:G:C1'	49:DX:38:GLU:HG3	2.39	0.52
49:DX:53:LYS:N	49:DX:80:ILE:HG22	2.24	0.52
39:DN:2:LYS:O	39:DN:3:THR:OG1	2.26	0.52
31:BA:68:G:H2'	31:BA:69:C:O5'	2.09	0.52
36:BG:103:LEU:HD23	36:BG:106:LEU:HD23	1.91	0.52
27:D5:57:VAL:O	27:D5:58:LEU:HG	2.09	0.52
31:BA:810:U:O2	41:BP:33:ARG:HD3	2.09	0.52
23:B1:65:SER:O	23:B1:66:HIS:CD2	2.63	0.52
31:BA:622:G:O2'	31:BA:623:G:H5'	2.10	0.52
37:DH:85:LYS:HZ1	37:DH:145:ALA:HA	1.75	0.52
42:DQ:81:VAL:HG12	42:DQ:82:ARG:HG2	1.90	0.52
36:DG:85:GLY:O	36:DG:87:PRO:CD	2.48	0.52
31:BA:2069:G:H2'	31:BA:2070:G:H5'	1.92	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:DA:2850:A:OP2	31:DA:2866:U:H5	1.93	0.52
4:AD:58:LEU:HD22	4:AD:62:GLN:CG	2.37	0.52
1:CA:954:G:N2	1:CA:1227:A:H62	1.95	0.52
42:DQ:141:GLN:HE21	51:DZ:71:VAL:C	2.14	0.52
31:BA:2464:C:O2'	31:BA:2465:C:H5''	2.09	0.52
45:BT:40:THR:O	45:BT:41:ARG:CB	2.58	0.52
31:DA:668:G:H3'	31:DA:669:G:H5'	1.91	0.52
31:DA:271(N):U:H4'	31:DA:271(O):C:O5'	2.09	0.52
51:DZ:166:SER:OG	51:DZ:168:GLU:N	2.42	0.52
20:CT:89:ARG:HD2	20:CT:104:LEU:HD11	1.92	0.52
37:DH:30:LYS:HB2	37:DH:79:VAL:HA	1.92	0.52
10:AJ:40:LEU:HD23	10:AJ:40:LEU:H	1.75	0.52
1:CA:173:U:C6	1:CA:197:A:C2	2.98	0.52
1:AA:1530:G:C2'	1:AA:1531:A:O5'	2.58	0.52
34:BE:128:SER:OG	34:BE:129:HIS:N	2.42	0.52
44:DS:101:LEU:HD13	44:DS:102:ALA:O	2.10	0.52
35:BF:65:TRP:O	35:BF:67:GLN:N	2.43	0.52
31:DA:1316:U:C2'	31:DA:1317:A:H5'	2.40	0.52
1:CA:1239:A:H62	1:CA:1299:A:H62	1.57	0.52
34:DE:14:ILE:HG12	34:DE:21:VAL:HG22	1.92	0.52
31:BA:322:A:H5'	31:BA:340:A:C1'	2.40	0.52
2:AB:17:PHE:O	2:AB:18:GLY:O	2.27	0.52
5:CE:80:ILE:CD1	5:CE:138:ALA:HB1	2.40	0.52
31:BA:1686:C:H2'	31:BA:1686:C:O2	2.09	0.52
29:B7:34:ARG:NH1	29:B7:39:ARG:CG	2.73	0.52
36:BG:111:LEU:HA	36:BG:114:ILE:CG1	2.40	0.52
34:BE:179:GLU:O	34:BE:180:ASN:HB2	2.10	0.52
1:AA:187:C:H2'	1:AA:188:C:H6	1.74	0.52
31:BA:2853:C:H2'	31:BA:2854:G:C8	2.43	0.52
31:BA:926:A:H8	31:BA:926:A:H5''	1.75	0.52
31:BA:1259:G:H2'	31:BA:1260:G:H8	1.75	0.52
34:DE:134:ILE:H	34:DE:134:ILE:HD13	1.75	0.52
1:CA:790:A:C6	1:CA:791:G:C6	2.98	0.52
1:AA:1113:C:H2'	1:AA:1114:C:H6	1.75	0.52
38:BI:15:VAL:CG2	38:BI:16:GLY:N	2.73	0.52
35:BF:57:VAL:HG13	35:BF:58:ALA:N	2.24	0.52
48:BW:95:ILE:O	48:BW:95:ILE:HG13	2.10	0.52
1:CA:527:G:O2'	1:CA:528:C:H5'	2.09	0.52
31:BA:363(E):U:H2'	31:BA:363(F):A:O4'	2.10	0.52
34:DE:103:ASP:OD2	34:DE:168:MET:HE1	2.10	0.52
5:CE:152:ARG:HG2	8:CH:43:GLY:O	2.10	0.52
16:AP:12:LYS:O	16:AP:13:HIS:HB2	2.10	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
43:BR:84:ALA:HB3	43:BR:85:PRO:HD3	1.92	0.52
36:DG:77:ILE:HG22	36:DG:80:PHE:H	1.75	0.52
19:CS:9:VAL:HG12	19:CS:9:VAL:O	2.10	0.52
3:CC:102:ASN:O	3:CC:103:VAL:HG23	2.09	0.52
31:BA:2001:A:H2'	31:BA:2002:G:C8	2.45	0.52
41:DP:16:ARG:O	41:DP:16:ARG:NH1	2.34	0.51
39:BN:1:MET:C	39:BN:2:LYS:HG3	2.29	0.51
1:AA:356:A:C2'	1:AA:357:G:O5'	2.57	0.51
50:BY:95:LYS:HE2	50:BY:101:LYS:N	2.25	0.51
31:DA:623:G:H2'	31:DA:624:C:C6	2.46	0.51
51:DZ:108:PRO:HG3	51:DZ:141:VAL:HG22	1.91	0.51
49:DX:60:ARG:NE	49:DX:74:PRO:CG	2.72	0.51
31:BA:1397:U:O2'	31:BA:1398:C:OP1	2.28	0.51
49:BX:73:ARG:O	49:BX:74:PRO:C	2.48	0.51
2:AB:211:ILE:O	2:AB:215:LEU:HD23	2.09	0.51
36:BG:93:THR:C	36:BG:94:LEU:HD23	2.31	0.51
41:DP:23:PRO:O	41:DP:33:ARG:NE	2.31	0.51
35:DF:1:MET:O	35:DF:2:LYS:C	2.48	0.51
4:CD:206:PHE:HD2	4:CD:207:TYR:CE2	2.28	0.51
39:DN:68:GLU:HA	39:DN:86:PRO:HB2	1.92	0.51
1:AA:433:C:O2'	1:AA:434:U:H5'	2.10	0.51
4:AD:33:MET:C	4:AD:35:ARG:H	2.12	0.51
24:D2:47:ASN:HD22	24:D2:47:ASN:N	2.08	0.51
6:CF:19:LEU:O	6:CF:23:LYS:HG3	2.09	0.51
37:BH:43:VAL:HB	37:BH:52:VAL:HA	1.92	0.51
1:CA:1191:A:H5''	3:CC:4:LYS:HZ2	1.75	0.51
1:CA:1090:U:C2	1:CA:1091:U:C5	2.99	0.51
31:DA:1478:G:O2'	31:DA:1558:A:C2	2.63	0.51
23:D1:46:LEU:N	23:D1:46:LEU:CD1	2.66	0.51
31:BA:1478:G:O2'	31:BA:1558:A:C2	2.64	0.51
1:CA:679:C:O2'	1:CA:680:C:H5'	2.09	0.51
39:BN:125:GLY:HA2	39:BN:126:PRO:O	2.11	0.51
20:AT:89:ARG:HD2	20:AT:104:LEU:HD11	1.93	0.51
35:DF:65:TRP:CZ3	35:DF:75:HIS:CD2	2.98	0.51
12:AL:25:PRO:C	12:AL:27:LEU:H	2.12	0.51
31:BA:2470:G:C6	31:BA:2471:C:C5	2.98	0.51
42:BQ:16:ARG:HH11	42:BQ:16:ARG:HB2	1.74	0.51
31:DA:2579:C:H2'	31:DA:2580:U:O4'	2.11	0.51
36:BG:19:LEU:HG	36:BG:175:LEU:CD1	2.39	0.51
5:CE:43:LEU:HD21	5:CE:132:ALA:HB1	1.93	0.51
32:BB:38:C:C2	32:BB:39:A:C8	2.98	0.51
26:D4:19:GLY:O	26:D4:21:VAL:N	2.43	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:AT:71:THR:HG22	20:AT:72:LEU:H	1.74	0.51
3:AC:130:VAL:HB	3:AC:157:ILE:HG23	1.92	0.51
12:AL:40:VAL:HG12	12:AL:40:VAL:O	2.10	0.51
1:CA:190:U:O2	20:CT:105:SER:HB2	2.09	0.51
31:BA:1472:A:H2'	31:BA:1473:G:C8	2.46	0.51
1:CA:658:G:C2	1:CA:749:C:N3	2.78	0.51
1:CA:272:C:H2'	1:CA:273:A:H8	1.74	0.51
5:AE:80:ILE:HG13	5:AE:91:LEU:HB2	1.92	0.51
31:BA:363(A):A:H2'	31:BA:363(A):A:N3	2.24	0.51
31:DA:2225:A:H1'	31:DA:2226:C:OP2	2.09	0.51
31:DA:825:C:H2'	31:DA:826:U:O5'	2.10	0.51
31:BA:1418:G:H8	31:BA:1418:G:O5'	1.92	0.51
13:AM:79:LYS:O	13:AM:82:MET:HB3	2.10	0.51
9:CI:118:LYS:NZ	9:CI:118:LYS:HB3	2.26	0.51
12:AL:41:ARG:HG2	12:AL:42:THR:H	1.75	0.51
36:DG:118:ARG:H	36:DG:181:ARG:NH2	2.07	0.51
1:CA:1490:C:O2'	1:CA:1491:G:H5'	2.10	0.51
1:CA:705:U:C5	1:CA:706:A:C5	2.98	0.51
25:D3:2:PRO:O	25:D3:39:ASP:HB2	2.10	0.51
1:AA:668:G:O2'	1:AA:669:U:H5'	2.10	0.51
1:AA:1490:C:O2'	1:AA:1491:G:H5'	2.09	0.51
31:BA:2729:G:H2'	31:BA:2730:C:C6	2.44	0.51
31:DA:460:A:C2	31:DA:470:A:C4	2.98	0.51
31:DA:566:U:H2'	31:DA:567:A:O4'	2.10	0.51
31:DA:384:U:H2'	31:DA:385:C:H6	1.75	0.51
22:D0:1:MET:HA	31:DA:2451:A:H4'	1.92	0.51
18:AR:25:THR:HG22	18:AR:42:ARG:HH11	1.75	0.51
43:DR:81:ASP:O	43:DR:85:PRO:HG2	2.10	0.51
50:DY:16:ALA:HA	50:DY:21:LYS:HD2	1.90	0.51
1:AA:173:U:O4'	1:AA:197:A:C4	2.64	0.51
1:AA:392:G:H2'	1:AA:393:A:C8	2.41	0.51
33:DD:25:THR:O	33:DD:25:THR:CG2	2.56	0.51
39:BN:40:PRO:C	46:BU:64:ARG:NH2	2.64	0.51
31:BA:2314:C:N3	31:BA:2315:G:N7	2.59	0.51
28:D6:32:ASN:OD1	28:D6:33:LYS:N	2.44	0.51
30:D8:27:THR:HA	41:DP:62:LEU:HD11	1.92	0.51
31:DA:175:G:H5'	31:DA:175:G:C8	2.45	0.51
49:DX:9:LEU:HD12	49:DX:30:VAL:C	2.30	0.51
32:BB:21:G:N3	32:BB:21:G:H2'	2.24	0.51
15:AO:17:ARG:HD3	15:AO:26:GLU:HG3	1.91	0.51
1:CA:713:G:N2	1:CA:714:G:C2	2.78	0.51
50:DY:14:LEU:HG	50:DY:15:VAL:N	2.25	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:1255:G:H5'	1:AA:1256:A:OP1	2.09	0.51
31:BA:2443:C:O2'	31:BA:2444:G:H5'	2.10	0.51
31:BA:588:U:OP2	31:BA:588:U:C6	2.63	0.51
23:D1:85:LEU:CA	23:D1:87:PRO:HD3	2.40	0.51
31:DA:744:G:H2'	31:DA:745:G:O5'	2.09	0.51
31:BA:1657:C:H2'	31:BA:1658:C:C6	2.46	0.51
31:BA:744:G:H2'	31:BA:745:G:O5'	2.09	0.51
31:DA:1021:A:H3'	31:DA:1021:A:H8	1.74	0.51
31:BA:2834:G:H8	31:BA:2834:G:H5''	1.74	0.51
39:DN:87:LEU:O	39:DN:88:GLU:C	2.48	0.51
39:BN:68:GLU:HA	39:BN:86:PRO:CB	2.39	0.51
1:CA:1391:U:H2'	1:CA:1392:G:C8	2.45	0.51
10:CJ:33:GLN:O	10:CJ:75:ILE:HG12	2.09	0.51
23:B1:10:LYS:HG3	23:B1:11:ARG:H	1.74	0.51
31:DA:475:U:C4	31:DA:481:G:O6	2.63	0.51
1:CA:1077:G:C2	1:CA:1081:G:C5	2.98	0.51
18:AR:62:GLU:HA	18:AR:65:ILE:HD11	1.91	0.51
10:CJ:94:VAL:HG12	10:CJ:95:GLU:N	2.25	0.51
1:AA:191:G:H1'	20:AT:105:SER:HA	1.92	0.51
1:CA:1530:G:H2'	1:CA:1531:A:O5'	2.10	0.51
32:DB:28:C:C2	32:DB:29:A:C8	2.98	0.51
3:AC:11:ARG:HE	3:AC:180:ALA:HB3	1.74	0.51
32:BB:29:A:C2	32:BB:30:C:C2	2.98	0.51
12:CL:119:LYS:O	12:CL:120:TYR:HB2	2.10	0.51
31:BA:2200:C:O2	31:BA:2200:C:H2'	2.10	0.51
38:DI:78:THR:O	38:DI:79:ILE:HD13	2.10	0.51
33:DD:75:ILE:HG21	33:DD:99:ASP:HB2	1.91	0.51
37:BH:97:ARG:O	37:BH:98:LEU:C	2.47	0.51
20:CT:67:ALA:HB2	20:CT:77:ALA:HB2	1.92	0.51
31:BA:828:U:O2	31:BA:828:U:H3'	2.10	0.51
44:DS:85:VAL:HG23	44:DS:106:ARG:HB2	1.91	0.51
7:AG:69:VAL:HG13	7:AG:134:ALA:O	2.10	0.51
31:BA:2504:U:H2'	31:BA:2504:U:O2	2.10	0.51
31:DA:954:G:C5	31:DA:955:C:C5	2.98	0.51
17:CQ:40:LYS:HD2	17:CQ:42:TYR:CE1	2.45	0.51
47:BV:54:GLY:O	47:BV:56:SER:N	2.42	0.51
1:AA:303:A:H2'	1:AA:304:U:O4'	2.11	0.51
31:BA:465:G:C6	31:BA:466:A:N6	2.78	0.51
31:DA:1213:A:O2'	31:DA:1214:A:H5'	2.10	0.51
11:CK:99:GLN:O	11:CK:101:SER:N	2.40	0.51
1:AA:294:U:H2'	1:AA:295:C:C6	2.45	0.51
38:DI:28:ASN:C	38:DI:32:PRO:HG2	2.31	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
51:BZ:19:ARG:NH1	51:BZ:84:GLU:O	2.43	0.51
31:BA:2247:A:O2'	31:BA:2248:C:H5'	2.09	0.51
51:DZ:74:VAL:HG22	51:DZ:86:VAL:HG13	1.91	0.51
1:AA:960:U:O2	1:AA:960:U:H2'	2.09	0.51
31:DA:300:A:H2'	31:DA:334:C:H1'	1.91	0.51
31:BA:2313:C:H2'	31:BA:2314:C:H6	1.75	0.51
34:BE:61:ARG:N	34:BE:62:PRO:CD	2.74	0.51
31:DA:2807:G:N2	31:DA:2808:U:H1'	2.25	0.51
49:DX:24:GLY:CA	49:DX:80:ILE:HG13	2.29	0.51
2:CB:208:ILE:HA	2:CB:211:ILE:HD12	1.92	0.51
46:DU:92:ARG:HH22	47:DV:10:LYS:HB3	1.74	0.51
24:B2:41:ILE:O	24:B2:43:GLN:N	2.42	0.51
49:BX:37:THR:O	49:BX:37:THR:CG2	2.58	0.51
33:BD:270:ILE:C	33:BD:270:ILE:HD12	2.31	0.51
23:D1:64:ALA:HA	23:D1:67:ILE:CG1	2.40	0.51
44:BS:58:LEU:O	44:BS:59:LYS:O	2.28	0.51
31:DA:779:U:OP1	33:DD:49:ILE:HG22	2.10	0.51
39:DN:65:LYS:NZ	39:DN:66:LYS:H	2.09	0.51
1:AA:414:A:C5	1:AA:431:A:C2	2.98	0.51
4:AD:2:GLY:O	4:AD:4:TYR:N	2.43	0.51
31:BA:477:A:H2'	31:BA:478:A:C8	2.44	0.51
1:AA:1089:G:C6	1:AA:1090:U:C4	2.98	0.51
39:DN:78:TYR:H	39:DN:79:PRO:CD	2.23	0.51
31:DA:1797:C:O2'	33:DD:259:THR:HB	2.10	0.51
27:B5:2:ALA:N	31:BA:747:U:C4	2.78	0.51
31:DA:1109:C:C5	31:DA:1110:G:C5	2.94	0.51
44:BS:36:TYR:HD1	44:BS:36:TYR:H	1.55	0.51
31:DA:547:A:C8	31:DA:549:G:C6	2.98	0.51
1:CA:81:U:C4	1:CA:83:U:C5	2.99	0.51
1:CA:564:C:C2'	1:CA:565:U:H5'	2.39	0.51
31:DA:773:U:C5'	33:DD:47:GLY:HA2	2.40	0.51
47:DV:35:LEU:HD23	47:DV:35:LEU:N	2.24	0.51
31:DA:2584:U:H6	31:DA:2585:U:C5	2.28	0.51
31:BA:1178:C:H2'	31:BA:1179:C:H6	1.74	0.51
1:CA:1215:G:C6	1:CA:1216:G:C5	2.99	0.51
31:BA:796:C:H2'	31:BA:797:C:H6	1.75	0.51
31:DA:1178:C:H2'	31:DA:1179:C:H6	1.74	0.51
2:AB:102:LEU:CD1	2:AB:102:LEU:N	2.74	0.51
1:CA:552:U:H5'	12:CL:86:ARG:HD2	1.92	0.51
31:BA:1751:C:O2'	31:BA:1752:C:H5'	2.10	0.51
34:DE:101:ARG:HD2	34:DE:169:ASN:HD22	1.74	0.51
1:CA:33:A:H2'	1:CA:34:C:H6	1.75	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:DA:455:C:N3	31:DA:473:G:H5'	2.24	0.51
31:DA:1227:G:H5''	46:DU:16:LYS:NZ	2.25	0.51
1:CA:814:A:N7	1:CA:816:A:C5	2.78	0.51
20:CT:56:MET:O	20:CT:59:ALA:HB3	2.09	0.51
1:AA:246:A:C2	1:AA:282:A:C5	2.99	0.51
31:DA:926:A:H5''	31:DA:926:A:H8	1.75	0.51
31:BA:301:G:H1'	31:BA:302:C:C6	2.45	0.51
1:AA:1483:A:H2	31:BA:1959:G:N3	2.08	0.51
1:CA:721:G:H4'	1:CA:722:A:O4'	2.10	0.51
31:BA:189:G:H2'	31:BA:205:G:N2	2.26	0.51
1:AA:1058:G:C5	1:AA:1059:C:C4	2.99	0.51
1:CA:985:C:H2'	1:CA:986:A:C8	2.46	0.51
1:AA:1248:A:C2'	1:AA:1249:C:H5'	2.40	0.51
31:DA:344:G:O2'	31:DA:345:A:H5'	2.10	0.51
42:BQ:78:PRO:O	42:BQ:79:LEU:HB2	2.10	0.51
1:CA:1492:A:H5'	1:CA:1493:A:OP2	2.09	0.51
4:AD:191:ARG:HE	4:AD:200:GLU:CD	2.14	0.51
1:CA:836:G:C6	1:CA:851:G:C6	2.99	0.51
31:BA:300:A:H2'	31:BA:334:C:H1'	1.91	0.51
26:B4:20:ASN:O	26:B4:24:THR:HA	2.10	0.51
1:AA:701:C:O2	1:AA:703:G:N1	2.43	0.51
1:CA:498:U:H2'	1:CA:498:U:O2	2.09	0.51
1:CA:882:C:O2'	1:CA:883:C:H5'	2.10	0.51
30:B8:27:THR:HA	41:BP:62:LEU:HD11	1.92	0.51
30:B8:25:MET:SD	41:BP:64:LYS:HD2	2.50	0.51
41:BP:120:ALA:O	25:D3:1:MET:CG	2.54	0.51
39:DN:39:ARG:CG	39:DN:41:ASP:H	2.19	0.51
2:AB:185:ILE:HA	2:AB:199:TYR:O	2.10	0.51
16:AP:43:LYS:CG	16:AP:48:TRP:CD2	2.93	0.51
47:DV:24:LYS:HE3	47:DV:68:LYS:HE3	1.92	0.51
39:BN:42:TRP:CB	46:BU:64:ARG:NH1	2.59	0.51
30:D8:22:VAL:HB	30:D8:53:PRO:HB3	1.90	0.51
30:D8:31:HIS:O	30:D8:32:LEU:C	2.48	0.51
49:DX:72:LYS:HG3	49:DX:73:ARG:H	1.75	0.51
31:BA:195:A:H4'	31:BA:251:A:O2'	2.09	0.51
31:BA:2494:G:C4	31:BA:2495:G:C8	2.97	0.51
1:CA:391:G:C6	1:CA:392:G:C5	2.98	0.51
32:BB:41:U:C2'	32:BB:42:C:OP1	2.57	0.51
33:DD:270:ILE:C	33:DD:270:ILE:HD12	2.31	0.51
31:BA:1021:A:C3'	31:BA:1021:A:C8	2.93	0.51
4:AD:204:ILE:HG21	5:AE:98:THR:O	2.11	0.51
40:DO:107:ARG:HD3	40:DO:112:MET:SD	2.50	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
45:DT:31:SER:CA	45:DT:32:TYR:CD2	2.94	0.51
33:DD:253:GLN:HB3	33:DD:255:LYS:CE	2.40	0.51
1:CA:379:C:O2'	1:CA:380:G:H5'	2.10	0.51
1:AA:559:A:H4'	1:AA:560:U:C5'	2.41	0.51
1:CA:1004:A:H2'	1:CA:1038:C:O2	2.10	0.51
1:AA:1456:G:O4'	1:AA:1456:G:OP1	2.28	0.51
6:AF:37:VAL:HA	6:AF:65:VAL:HG12	1.92	0.51
1:AA:134:A:N6	16:AP:25:ARG:HH12	2.02	0.51
1:CA:84:U:H3'	1:CA:84:U:H6	1.75	0.51
19:CS:6:LYS:HD2	19:CS:6:LYS:H	1.74	0.51
18:AR:53:ARG:O	18:AR:55:ARG:N	2.43	0.51
1:CA:1233:G:P	9:CI:124:GLN:HB2	2.51	0.51
35:DF:158:THR:HG23	35:DF:160:ASN:N	2.25	0.51
1:CA:80:G:N1	1:CA:89:C:N4	2.58	0.51
31:BA:1722:A:O2'	31:BA:1739:U:C5'	2.58	0.51
31:BA:1741:A:C5	31:BA:1742:G:C2	2.98	0.51
32:DB:89:G:OP2	32:DB:89:G:H8	1.91	0.51
42:DQ:104:PHE:HE1	42:DQ:125:LEU:HD11	1.75	0.51
31:DA:528:A:C2	31:DA:2043:C:H5'	2.46	0.51
1:AA:37:U:O2'	1:AA:38:G:H5'	2.09	0.51
31:DA:848:G:C4	31:DA:933:A:H8	2.29	0.51
31:DA:150:C:H2'	31:DA:151:C:C6	2.46	0.51
1:AA:950:U:H3'	13:AM:102:ARG:HH12	1.76	0.51
2:AB:29:ALA:C	2:AB:31:TYR:N	2.64	0.51
31:BA:879:G:H1	31:BA:898:C:N4	2.08	0.51
31:DA:1533:G:C2'	31:DA:1543:C:OP1	2.58	0.51
1:CA:950:U:H3'	13:CM:102:ARG:HH12	1.75	0.51
38:DI:54:GLN:HG2	38:DI:57:ARG:NH2	2.26	0.51
1:AA:853:G:H2'	1:AA:854:G:H8	1.76	0.51
31:BA:2409:G:H2'	31:BA:2410:G:O4'	2.10	0.51
1:AA:745:C:H2'	1:AA:746:A:H8	1.74	0.51
31:DA:1799:G:H5'	31:DA:1819:A:H61	1.75	0.51
20:AT:95:ALA:O	20:AT:97:ALA:N	2.44	0.51
1:CA:694:A:H2'	1:CA:695:A:O5'	2.10	0.51
34:DE:66:HIS:O	34:DE:66:HIS:CD2	2.64	0.51
37:BH:103:LEU:HD11	37:BH:105:LEU:CD1	2.40	0.51
36:BG:77:ILE:HG22	36:BG:80:PHE:H	1.75	0.51
1:AA:222:U:H2'	1:AA:223:U:C6	2.45	0.51
39:BN:23:LEU:HD13	39:BN:98:VAL:HG12	1.91	0.51
31:BA:1899:G:C2'	31:BA:1900:A:OP2	2.59	0.51
28:B6:12:GLU:HA	28:B6:23:THR:HA	1.92	0.51
1:AA:391:G:C6	1:AA:392:G:C5	2.98	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:DA:250:G:H2'	31:DA:251:A:C8	2.46	0.51
31:BA:2810:A:C2'	34:BE:61:ARG:NH2	2.73	0.51
34:BE:34:VAL:CG2	34:BE:48:GLN:HE21	2.16	0.51
49:DX:35:THR:CB	49:DX:75:ASP:OD2	2.59	0.51
39:DN:3:THR:O	39:DN:4:TYR:CD2	2.64	0.51
49:BX:74:PRO:O	49:BX:75:ASP:C	2.49	0.51
49:BX:53:LYS:N	49:BX:80:ILE:HG22	2.25	0.51
1:CA:1252:A:H2'	1:CA:1253:G:O4'	2.11	0.51
23:D1:87:PRO:HB2	23:D1:91:LYS:CE	2.40	0.51
34:DE:95:ILE:CD1	34:DE:95:ILE:H	2.23	0.51
1:CA:512:U:H2'	1:CA:513:C:H6	1.75	0.51
31:BA:2069:G:C2'	31:BA:2070:G:H5'	2.41	0.51
31:BA:310:A:OP1	50:BY:18:GLY:HA2	2.10	0.51
50:BY:14:LEU:HG	50:BY:15:VAL:N	2.26	0.51
43:DR:10:LEU:HD22	43:DR:17:ARG:CD	2.40	0.51
24:D2:45:SER:HA	24:D2:47:ASN:HD21	1.75	0.51
45:DT:35:LYS:O	45:DT:38:ASN:O	2.28	0.51
51:DZ:44:PHE:CZ	51:DZ:48:PHE:CD2	2.98	0.51
31:DA:1614:A:H61	48:DW:88:ARG:H	1.59	0.51
39:BN:13:TRP:O	39:BN:135:PRO:HG2	2.11	0.51
51:BZ:56:VAL:HA	51:BZ:70:LEU:HD23	1.92	0.51
1:AA:683:G:C6	1:AA:684:A:C5	2.98	0.51
1:CA:685:G:C2	1:CA:686:U:C4	2.99	0.51
50:BY:28:LYS:HE3	50:BY:30:VAL:CG2	2.40	0.51
1:AA:558:G:C5	1:AA:559:A:C2	2.98	0.51
6:CF:5:GLU:HB3	6:CF:62:TRP:NE1	2.26	0.51
1:AA:1004:A:H2'	1:AA:1038:C:O2	2.10	0.51
23:B1:26:ARG:HB2	23:B1:34:THR:HB	1.91	0.51
12:AL:66:VAL:HG11	12:AL:98:TYR:CE1	2.46	0.51
28:B6:32:ASN:OD1	28:B6:33:LYS:N	2.44	0.51
10:AJ:6:ILE:HD11	10:AJ:72:VAL:HB	1.91	0.51
31:BA:2272:U:H5''	31:BA:2273:A:P	2.51	0.51
37:DH:89:ILE:O	37:DH:90:LYS:CG	2.59	0.51
1:CA:1226:C:N4	13:CM:104:ARG:HD2	2.25	0.51
31:DA:1179:C:C3'	31:DA:1180:C:H5''	2.40	0.51
8:AH:6:ILE:HD12	8:AH:6:ILE:H	1.76	0.51
31:BA:707:G:C5	31:BA:708:C:C5	2.98	0.51
35:BF:7:TYR:HB3	35:BF:16:GLY:N	2.26	0.51
5:AE:90:VAL:O	5:AE:91:LEU:HD13	2.10	0.51
31:BA:1694:C:O2'	31:BA:1695:G:C5	2.64	0.51
2:AB:11:LEU:HB3	2:AB:213:LEU:HD11	1.91	0.51
1:CA:1338:G:H2'	1:CA:1339:A:O4'	2.10	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:BA:1510:G:H2'	31:BA:1511:C:H6	1.73	0.51
1:AA:1305:G:C8	1:AA:1305:G:OP2	2.63	0.51
20:AT:73:HIS:O	20:AT:74:LYS:O	2.29	0.51
1:AA:9:G:N3	1:AA:9:G:H2'	2.26	0.51
9:AI:118:LYS:NZ	9:AI:118:LYS:HB3	2.25	0.51
5:CE:112:LEU:HD23	5:CE:112:LEU:N	2.25	0.51
42:DQ:63:LYS:HG2	42:DQ:65:PHE:CE2	2.45	0.51
1:AA:874:G:H2'	1:AA:875:C:C6	2.45	0.51
10:AJ:13:HIS:O	10:AJ:17:ASP:HB2	2.10	0.51
1:CA:722:A:O3'	1:CA:723:U:C5	2.63	0.51
32:BB:33:G:C2	32:BB:50:G:C2	2.98	0.51
31:BA:2281:C:O2'	31:BA:2282:G:H5'	2.11	0.51
1:CA:811:C:O2'	1:CA:901:A:N1	2.42	0.51
4:CD:88:VAL:O	4:CD:92:VAL:HG23	2.10	0.51
3:CC:155:GLY:O	3:CC:156:ARG:HB2	2.11	0.51
30:D8:19:SER:OG	30:D8:21:LYS:HD2	2.11	0.51
6:AF:41:GLU:HB3	6:AF:43:LEU:CD1	2.40	0.51
46:BU:74:LEU:N	46:BU:74:LEU:HD12	2.26	0.51
1:CA:783:C:C2'	1:CA:784:C:H5'	2.41	0.51
39:DN:35:ARG:HB2	39:DN:42:TRP:CH2	2.46	0.51
47:BV:1:MET:CE	47:BV:44:LYS:H	2.24	0.51
1:AA:394:G:C4	1:AA:395:C:C5	2.98	0.51
1:AA:52:G:O2'	1:AA:53:A:H5'	2.11	0.51
33:DD:65:ILE:HD11	33:DD:67:PHE:CD1	2.43	0.51
41:DP:48:PRO:HG2	41:DP:49:ARG:H	1.76	0.51
31:DA:68:G:H2'	31:DA:69:C:O5'	2.10	0.51
31:BA:175:G:C5'	31:BA:175:G:C8	2.91	0.51
49:BX:65:ARG:NH2	49:BX:66:LEU:H	2.07	0.51
31:DA:86:C:O2'	31:DA:87:C:H5'	2.10	0.51
2:CB:74:LYS:HZ2	2:CB:76:GLN:HB2	1.73	0.51
1:AA:585:G:O2'	12:AL:8:ASN:ND2	2.44	0.51
1:CA:375:U:O3'	16:CP:6:LEU:HB2	2.11	0.51
36:BG:106:LEU:HD12	36:BG:110:ALA:HB3	1.92	0.51
44:BS:19:LYS:CG	44:BS:19:LYS:O	2.59	0.51
44:BS:26:LEU:HD22	44:BS:87:PHE:CE1	2.46	0.51
33:BD:186:HIS:CD2	33:BD:187:GLY:N	2.79	0.51
31:BA:588:U:H2'	31:BA:589:C:H6	1.76	0.51
2:AB:111:ARG:O	2:AB:145:LEU:HD11	2.10	0.51
23:D1:65:SER:N	23:D1:67:ILE:CD1	2.65	0.51
31:DA:776:G:H4'	31:DA:777:A:O5'	2.11	0.51
31:BA:1022:G:C6	31:BA:1140:C:C4	2.98	0.51
39:BN:62:VAL:O	39:BN:63:THR:O	2.28	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
39:DN:126:PRO:O	39:DN:127:ASP:HB2	2.11	0.51
39:DN:19:GLU:O	39:DN:59:LYS:HB3	2.09	0.51
36:DG:61:ALA:HA	36:DG:64:THR:HG22	1.92	0.51
41:BP:105:LEU:O	41:BP:106:LEU:CB	2.46	0.51
41:DP:108:LYS:O	41:DP:110:TYR:N	2.43	0.51
24:D2:49:LYS:C	24:D2:53:LEU:HB3	2.31	0.51
31:DA:287:C:C4	31:DA:288:C:C5	2.99	0.51
31:DA:288:C:O2	31:DA:288:C:H2'	2.11	0.51
31:BA:1280:G:H2'	31:BA:1281:G:C5'	2.40	0.51
33:DD:143:HIS:CD2	33:DD:144:ALA:CB	2.94	0.51
1:CA:682:G:C6	1:CA:683:G:N7	2.79	0.51
31:DA:854:G:H2'	31:DA:855:G:C8	2.45	0.51
48:DW:12:ILE:CG2	48:DW:17:VAL:CG2	2.89	0.51
1:AA:55:A:C4	1:AA:56:U:C6	2.99	0.51
31:BA:1339:G:N2	31:BA:1603:A:H1'	2.25	0.51
51:BZ:69:THR:HG22	51:BZ:90:VAL:CA	2.37	0.51
1:CA:1201:A:C1'	1:CA:1202:G:OP2	2.58	0.51
21:CU:22:ARG:N	21:CU:23:PRO:HD3	2.26	0.51
1:CA:81:U:H2'	1:CA:82:U:C5	2.46	0.51
31:BA:2272:U:C5'	31:BA:2273:A:OP1	2.58	0.51
1:AA:1379:G:C6	1:AA:1380:U:O4	2.62	0.51
14:CN:54:PRO:O	14:CN:56:VAL:HG23	2.11	0.51
31:DA:527:C:N4	31:DA:2779:U:OP2	2.43	0.51
2:CB:97:TRP:HH2	2:CB:176:GLU:CD	2.13	0.51
6:CF:89:MET:HG2	6:CF:89:MET:O	2.11	0.51
1:CA:627:G:H2'	1:CA:628:G:C8	2.45	0.51
34:DE:14:ILE:CG1	34:DE:21:VAL:HG22	2.40	0.51
1:AA:625:G:O2'	1:AA:626:U:H5'	2.11	0.51
9:CI:105:ASP:OD2	9:CI:107:ARG:HD3	2.09	0.51
31:BA:272(B):G:O2'	31:BA:272(C):G:C5'	2.58	0.51
31:BA:1688:U:H5'	31:BA:1689:A:OP1	2.11	0.51
31:BA:535:C:C2'	31:BA:536:A:H5'	2.41	0.51
34:DE:7:VAL:HG21	45:DT:1:MET:HE3	1.92	0.51
1:CA:577:G:N3	1:CA:578:C:C6	2.79	0.51
1:AA:722:A:O3'	1:AA:723:U:C5	2.64	0.51
1:AA:726:C:O2'	1:AA:727:G:H5'	2.10	0.51
11:AK:99:GLN:O	11:AK:101:SER:N	2.37	0.51
32:BB:10:C:C4	32:BB:11:C:C5	2.99	0.51
7:CG:40:ALA:O	7:CG:44:TYR:CD1	2.64	0.51
1:CA:716:A:N3	11:CK:118:GLY:HA2	2.26	0.51
27:D5:10:LYS:HE3	31:DA:1262:A:N3	2.26	0.51
31:DA:2776:A:H4'	31:DA:2778:A:OP1	2.11	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:BA:1633:G:O5'	31:BA:1633:G:H8	1.93	0.51
49:DX:8:ILE:N	49:DX:8:ILE:HD12	2.25	0.51
31:DA:947:G:H2'	31:DA:948:G:H8	1.76	0.51
11:CK:73:MET:HG2	11:CK:103:LEU:HD11	1.92	0.51
1:AA:811:C:O2'	1:AA:901:A:N1	2.43	0.51
31:BA:1899:G:O2'	31:BA:1900:A:H5''	2.10	0.51
41:BP:140:ALA:O	41:BP:141:ALA:CB	2.58	0.51
31:DA:1899:G:N2	31:DA:1902:C:C4	2.78	0.51
1:AA:51:A:C6	1:AA:353:A:C2	2.99	0.51
33:BD:35:LYS:CE	33:BD:104:TYR:CD1	2.93	0.51
31:DA:2314:C:N3	31:DA:2315:G:N7	2.59	0.51
44:DS:17:ARG:O	44:DS:19:LYS:N	2.42	0.51
34:BE:60:ASN:OD1	34:BE:62:PRO:HD2	2.10	0.51
41:BP:16:ARG:CG	41:BP:17:LYS:N	2.73	0.51
47:DV:16:PRO:O	47:DV:98:GLU:OE2	2.29	0.51
47:DV:47:VAL:HG22	47:DV:48:GLY:N	2.25	0.51
33:BD:158:ALA:CA	33:BD:161:THR:HG21	2.39	0.51
23:D1:85:LEU:HD13	23:D1:87:PRO:HG3	1.91	0.51
35:BF:46:ARG:NH1	35:BF:46:ARG:CG	2.64	0.51
31:BA:1019:U:N3	31:BA:1142(A):A:N6	2.50	0.51
47:DV:82:ARG:HD3	47:DV:82:ARG:O	2.10	0.51
36:DG:54:GLU:O	36:DG:57:ALA:HB3	2.11	0.51
39:DN:68:GLU:HG3	39:DN:88:GLU:OE1	2.11	0.51
41:DP:143:GLY:CA	41:DP:145:PRO:HD3	2.41	0.51
31:DA:1529:G:N2	31:DA:1530:C:H2'	2.26	0.51
38:DI:66:GLU:OE1	38:DI:134:PRO:HB3	2.09	0.51
50:DY:37:VAL:HG11	50:DY:72:VAL:HG21	1.93	0.51
31:DA:2646:C:H2'	31:DA:2647:U:O4'	2.11	0.51
31:DA:2031:A:N3	31:DA:2455:G:O2'	2.41	0.51
13:AM:16:ASP:HB3	13:AM:41:PRO:HB3	1.92	0.51
39:DN:45:ASN:H	39:DN:45:ASN:ND2	1.94	0.51
31:BA:2463:C:O2'	31:BA:2464:C:H5'	2.09	0.51
31:DA:484:C:C2	31:DA:485:C:C5	2.99	0.51
1:CA:1067:A:C4'	1:CA:1068:G:O5'	2.59	0.51
31:BA:1109:C:H5	31:BA:1110:G:C4	2.28	0.51
27:D5:2:ALA:N	31:DA:747:U:C4	2.78	0.51
14:CN:3:ARG:O	14:CN:7:ILE:HG23	2.09	0.51
42:BQ:60:ARG:HG2	42:BQ:60:ARG:O	2.09	0.51
6:AF:62:TRP:C	6:AF:63:TYR:HD2	2.14	0.51
22:B0:14:ARG:HD2	31:BA:2279:G:O6	2.09	0.51
8:CH:123:GLU:O	8:CH:127:LEU:HB2	2.11	0.51
36:BG:33:ARG:HB2	36:BG:162:THR:OG1	2.11	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
18:AR:58:LEU:HB3	18:AR:62:GLU:CB	2.41	0.51
24:D2:12:GLU:C	24:D2:14:ARG:N	2.64	0.51
1:CA:1160:G:H5'	2:CB:132:LYS:HE3	1.92	0.51
31:DA:1112:G:C1'	31:DA:1113:U:OP1	2.59	0.51
1:CA:191:G:N3	20:CT:103:GLY:O	2.44	0.51
1:CA:933:G:O6	7:CG:3:ARG:NH2	2.44	0.51
31:BA:708:C:H42	31:BA:723:G:H1	1.59	0.51
31:DA:1375:C:H2'	31:DA:1376:C:H6	1.74	0.51
1:CA:983:A:H3'	1:CA:983:A:N3	2.26	0.51
18:AR:66:LEU:O	18:AR:70:ILE:HG12	2.11	0.51
31:DA:879:G:H1	31:DA:898:C:N4	2.09	0.51
31:DA:1744:C:C2'	31:DA:1745:C:H5'	2.41	0.51
31:DA:828:U:H4'	31:DA:831:G:N1	2.26	0.51
31:DA:923:C:H2'	31:DA:924:C:H6	1.75	0.51
1:AA:1173:G:H2'	1:AA:1174:G:C8	2.46	0.51
31:DA:1040:C:O2'	31:DA:1041:C:OP2	2.27	0.51
32:DB:61:G:C6	32:DB:62:C:C4	2.99	0.51
31:DA:2351:G:HO2'	31:DA:2352:A:H8	1.58	0.51
31:BA:1374:G:C6	31:BA:1375:C:C4	2.99	0.51
48:DW:74:ALA:O	48:DW:75:TYR:HB3	2.10	0.51
31:BA:1027:A:C6	31:BA:1126:A:C4	2.98	0.51
36:BG:132:ASN:OD1	36:BG:158:ALA:HA	2.11	0.51
31:DA:372:G:O2'	31:DA:373:U:P	2.68	0.51
1:CA:874:G:H2'	1:CA:875:C:C6	2.44	0.51
50:BY:41:GLY:O	50:BY:42:VAL:C	2.49	0.51
38:BI:28:ASN:C	38:BI:32:PRO:HG2	2.30	0.51
27:B5:51:TYR:N	27:B5:54:GLY:HA3	2.26	0.51
30:B8:31:HIS:CD2	31:BA:2419:U:O4	2.63	0.51
1:AA:375:U:H2'	1:AA:376:G:H8	1.75	0.51
16:AP:21:VAL:HG22	16:AP:34:GLU:O	2.11	0.51
33:BD:35:LYS:HG2	33:BD:64:ILE:CG2	2.41	0.51
33:DD:35:LYS:HE3	33:DD:64:ILE:C	2.31	0.51
32:DB:41:U:C2'	32:DB:42:C:OP1	2.58	0.51
31:DA:992:C:O2'	31:DA:993:G:H5'	2.11	0.51
31:DA:1496:A:C8	31:DA:1498:C:N3	2.78	0.51
31:BA:1162:G:H1'	47:BV:91:TYR:OH	2.11	0.51
41:BP:17:LYS:C	41:BP:19:VAL:N	2.65	0.51
31:DA:994:C:O2	47:DV:10:LYS:HE2	2.11	0.51
2:AB:76:GLN:O	2:AB:208:ILE:HG12	2.11	0.51
44:DS:66:ALA:HA	44:DS:69:VAL:CG1	2.40	0.51
31:BA:1652:A:C8	31:BA:1652:A:C5'	2.92	0.51
33:DD:134:ARG:HH11	33:DD:134:ARG:HG2	1.76	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:AH:86:ILE:O	8:AH:87:SER:C	2.48	0.51
34:BE:46:ALA:HA	34:BE:82:ARG:O	2.10	0.51
31:BA:292:C:O2'	31:BA:293:U:H5'	2.11	0.51
31:DA:627:A:C5	31:DA:637:A:N7	2.78	0.51
32:DB:81:G:O6	32:DB:96:U:O2	2.29	0.51
39:BN:19:GLU:O	39:BN:59:LYS:HB3	2.11	0.51
4:AD:206:PHE:HD2	4:AD:207:TYR:CE2	2.28	0.51
31:BA:288:C:O2	31:BA:288:C:H2'	2.10	0.51
1:CA:338:A:O2'	1:CA:339:C:H5'	2.11	0.51
1:AA:1072:G:C5	1:AA:1073:U:C4	2.98	0.51
28:B6:37:ARG:O	28:B6:48:VAL:O	2.28	0.51
37:DH:54:ARG:HH11	37:DH:65:HIS:CD2	2.28	0.51
1:CA:1168:A:C6	1:CA:1169:A:C6	2.99	0.51
10:CJ:61:GLU:OE1	14:CN:58:LYS:HE2	2.11	0.51
1:CA:64:G:H4'	1:CA:65:U:H5''	1.93	0.51
43:BR:49:ASP:O	43:BR:52:ILE:HB	2.11	0.51
31:DA:1024:G:C3'	31:DA:1025:G:H5''	2.36	0.51
51:BZ:166:SER:OG	51:BZ:167:PRO:CA	2.56	0.51
6:CF:62:TRP:C	6:CF:63:TYR:HD2	2.13	0.51
4:CD:108:LEU:HD11	4:CD:174:LEU:HD13	1.93	0.51
3:CC:14:ILE:HG12	3:CC:15:THR:H	1.76	0.51
1:AA:664:G:H22	1:AA:741:G:H1	1.59	0.51
31:DA:2580:U:C5'	34:DE:131:ALA:CB	2.89	0.51
1:CA:1225:A:H1'	19:CS:78:ARG:HD3	1.92	0.51
31:DA:1722:A:N1	31:DA:1740:G:H2'	2.25	0.51
31:DA:1131:G:H21	39:DN:73:THR:CG2	2.23	0.51
1:AA:1052:U:H2'	1:AA:1055:A:OP1	2.11	0.51
31:DA:1256:G:H5'	31:DA:1257:C:OP2	2.11	0.51
5:CE:69:VAL:HG12	5:CE:71:LEU:HD23	1.93	0.51
5:AE:80:ILE:CG1	5:AE:91:LEU:HB2	2.40	0.51
49:DX:41:ASN:HA	49:DX:44:GLU:CB	2.39	0.51
43:DR:13:HIS:CE1	43:DR:15:SER:OG	2.64	0.51
7:AG:50:ILE:HD12	7:AG:61:VAL:HG11	1.93	0.51
1:AA:830:G:C5	1:AA:831:U:C5	2.98	0.51
31:BA:892:G:C5	31:BA:893:C:C5	2.98	0.51
1:CA:1113:C:H2'	1:CA:1114:C:H6	1.74	0.51
42:DQ:14:ARG:HG2	42:DQ:41:TRP:HH2	1.76	0.51
43:DR:21:TYR:CZ	43:DR:43:GLU:HG2	2.46	0.51
1:CA:726:C:O2'	1:CA:727:G:H5'	2.10	0.51
1:AA:668:G:O2'	15:AO:46:HIS:HD2	1.93	0.51
25:D3:50:VAL:O	25:D3:54:VAL:HG22	2.11	0.51
38:BI:60:GLU:HA	38:BI:63:ALA:HB3	1.92	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:CG:70:LYS:HB3	7:CG:96:GLN:HB3	1.93	0.51
32:BB:2:C:H2'	32:BB:3:C:H6	1.76	0.51
31:BA:671:C:H2'	31:BA:672:C:C6	2.46	0.51
31:DA:1468:C:O2'	31:DA:1469:A:H5'	2.10	0.51
31:BA:1891:G:C6	31:BA:1892:C:N3	2.79	0.51
48:DW:37:ARG:HG2	48:DW:38:TYR:CE2	2.45	0.51
39:BN:2:LYS:NZ	46:BU:94:ASN:ND2	2.59	0.51
46:BU:89:GLU:O	46:BU:90:VAL:O	2.29	0.51
1:AA:377:G:HO2'	1:AA:378:G:H5'	1.76	0.51
1:AA:394:G:H2'	1:AA:395:C:C6	2.39	0.51
31:DA:2317:C:C3'	31:DA:2318:G:H5'	2.40	0.51
30:D8:8:LYS:HB3	30:D8:12:LYS:HE3	1.92	0.51
30:D8:32:LEU:HD23	30:D8:35:GLN:HA	1.92	0.51
50:DY:75:ILE:HD13	50:DY:80:GLY:O	2.11	0.51
49:DX:65:ARG:HA	49:DX:65:ARG:HE	1.75	0.51
1:CA:373:A:C8	1:CA:482:A:C8	2.99	0.51
33:BD:79:VAL:HG21	33:BD:111:LEU:HD11	1.93	0.51
44:DS:53:SER:O	44:DS:56:LEU:HB3	2.10	0.51
41:BP:73:GLY:O	41:BP:74:GLU:C	2.49	0.51
23:B1:92:LYS:C	23:B1:94:LEU:H	2.14	0.51
34:BE:93:VAL:C	34:BE:95:ILE:N	2.64	0.51
31:DA:2496:C:OP1	42:DQ:81:VAL:CG1	2.59	0.51
31:DA:2784:C:H1'	34:DE:37:ARG:NH2	2.25	0.51
31:BA:9:U:C4	31:BA:2629:A:C6	2.99	0.51
41:BP:99:LEU:HD12	41:BP:102:ARG:NH1	2.25	0.51
4:AD:30:LYS:HA	4:AD:35:ARG:HD2	1.93	0.51
4:AD:8:VAL:O	4:AD:10:ARG:N	2.43	0.51
24:D2:44:LEU:O	24:D2:47:ASN:ND2	2.44	0.51
30:B8:60:LEU:C	30:B8:63:PRO:HD2	2.31	0.51
31:DA:1280:G:H2'	31:DA:1281:G:C5'	2.41	0.51
37:DH:43:VAL:HB	37:DH:52:VAL:HA	1.92	0.51
31:DA:2468:G:O2'	31:DA:2476:A:H8	1.93	0.51
31:DA:2876:G:H4'	45:DT:3:ARG:CD	2.41	0.51
1:CA:734:G:H2'	1:CA:735:C:C6	2.46	0.51
18:CR:58:LEU:HB3	18:CR:62:GLU:CB	2.40	0.51
34:DE:117:MET:HB2	34:DE:122:PHE:O	2.11	0.51
24:B2:12:GLU:C	24:B2:14:ARG:H	2.14	0.51
31:BA:1332:G:N2	31:BA:1610:A:H8	2.09	0.51
6:AF:40:VAL:HA	6:AF:62:TRP:O	2.10	0.51
6:AF:5:GLU:HB3	6:AF:62:TRP:HE1	1.76	0.51
1:CA:382:A:O2'	1:CA:383:A:H5'	2.11	0.51
1:AA:81:U:H2'	1:AA:82:U:C5	2.46	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:AU:22:ARG:N	21:AU:23:PRO:HD3	2.26	0.51
1:CA:1379:G:C6	1:CA:1380:U:O4	2.64	0.51
3:CC:11:ARG:HE	3:CC:180:ALA:HB3	1.75	0.51
37:BH:90:LYS:HB2	37:BH:159:GLU:O	2.11	0.51
31:BA:1722:A:N6	31:BA:1741:A:N1	2.58	0.51
1:CA:1530:G:C2'	1:CA:1531:A:O5'	2.59	0.51
1:AA:1378:C:N4	1:AA:1379:G:C2	2.78	0.51
37:BH:86:GLU:HB3	37:BH:132:ARG:CB	2.40	0.51
1:CA:1321:C:H3'	1:CA:1322:C:H5''	1.93	0.51
31:BA:1204:A:N1	31:BA:1241:A:H2	2.09	0.51
47:DV:83:ARG:CG	47:DV:83:ARG:NH1	2.66	0.51
31:BA:109:G:H2'	31:BA:110:G:O4'	2.11	0.51
31:BA:1592:C:H2'	31:BA:1593:G:H8	1.76	0.51
1:AA:626:U:C2	1:AA:627:G:C8	2.99	0.51
46:BU:16:LYS:O	46:BU:20:LEU:HD23	2.11	0.51
1:CA:634:C:O2'	1:CA:635:G:H5'	2.11	0.51
30:B8:39:LYS:NZ	30:B8:40:GLU:HA	2.25	0.51
1:CA:577:G:C2	1:CA:578:C:C6	2.99	0.51
31:BA:923:C:H2'	31:BA:924:C:H6	1.76	0.51
1:AA:1315:U:H2'	1:AA:1316:G:O4'	2.11	0.51
13:CM:82:MET:HB2	13:CM:93:ARG:NH1	2.26	0.51
31:BA:2280:G:H2'	31:BA:2281:C:H5'	1.93	0.51
1:CA:987:G:N2	1:CA:1219:U:C2	2.79	0.51
1:CA:1242:C:H5''	21:CU:10:ARG:HH12	1.76	0.51
1:CA:39:G:C5	1:CA:40:C:C5	2.98	0.51
15:AO:43:LEU:C	15:AO:45:VAL:N	2.64	0.51
31:DA:2439:A:H5'	31:DA:2439:A:C8	2.45	0.51
17:CQ:86:GLU:O	17:CQ:90:ILE:HG12	2.10	0.51
1:AA:353:A:C2'	1:AA:354:G:OP2	2.58	0.51
1:AA:376:G:O2'	1:AA:377:G:H5'	2.11	0.51
1:AA:61:G:H2'	1:AA:62:U:O4'	2.11	0.51
32:DB:46:A:C6	32:DB:47:C:C4	2.99	0.51
31:DA:2787:C:HO2'	31:DA:2810:A:HO2'	1.57	0.51
49:DX:33:LYS:O	49:DX:34:ALA:C	2.48	0.51
12:CL:8:ASN:ND2	17:CQ:34:LYS:HE2	2.26	0.51
49:BX:31:HIS:HD2	49:BX:33:LYS:N	2.09	0.51
27:D5:55:ARG:HD3	27:D5:56:LYS:N	2.25	0.51
31:BA:586:A:H2'	41:BP:33:ARG:HH12	1.75	0.51
8:AH:87:SER:OG	8:AH:132:GLU:HG3	2.11	0.51
41:DP:34:GLY:O	41:DP:35:HIS:CG	2.64	0.51
47:DV:79:VAL:O	47:DV:80:GLN:CB	2.46	0.51
31:BA:637:A:OP1	41:BP:133:SER:HB3	2.11	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
45:DT:28:VAL:HG22	45:DT:46:GLU:HG3	1.89	0.51
45:BT:85:LYS:O	45:BT:85:LYS:HG2	2.10	0.51
31:DA:1531:C:H3'	31:DA:1532:C:C4'	2.40	0.51
13:CM:16:ASP:HB3	13:CM:41:PRO:HB3	1.92	0.51
50:DY:66:PRO:O	50:DY:67:LEU:HB3	2.12	0.51
31:BA:1988:C:C2	31:BA:1989:G:C8	2.99	0.51
1:CA:342:C:H2'	1:CA:343:U:O4'	2.11	0.51
50:BY:8:LYS:HB2	50:BY:28:LYS:NZ	2.26	0.51
1:CA:61:G:H2'	1:CA:62:U:O4'	2.11	0.51
23:D1:16:ASN:HB3	23:D1:46:LEU:CG	2.41	0.51
6:AF:46:ARG:NH1	18:AR:37:VAL:HG21	2.24	0.51
1:AA:1076:C:C2	1:AA:1082:G:N2	2.79	0.51
31:BA:1963:U:C2'	31:BA:1963:U:O2	2.59	0.51
38:DI:130:TYR:CB	38:DI:136:VAL:HG13	2.40	0.51
4:AD:109:GLY:O	4:AD:111:ALA:N	2.43	0.51
20:CT:71:THR:HG22	20:CT:72:LEU:H	1.74	0.51
1:CA:457:C:H2'	1:CA:458:C:C6	2.38	0.51
31:BA:1005:C:O2'	39:BN:28:THR:HG21	2.11	0.51
1:AA:1226:C:N3	13:AM:104:ARG:HG3	2.26	0.51
31:BA:1712:C:H2'	31:BA:1713:U:H6	1.76	0.51
31:BA:527:C:N4	31:BA:2779:U:OP2	2.43	0.51
42:DQ:89:ASN:O	42:DQ:92:GLY:N	2.29	0.51
31:DA:26:G:C6	31:DA:27:G:N1	2.79	0.51
2:AB:29:ALA:C	2:AB:31:TYR:H	2.13	0.51
1:CA:853:G:H2'	1:CA:854:G:H8	1.75	0.51
34:BE:27:LEU:HD12	34:BE:181:LEU:HD13	1.92	0.51
35:DF:28:ILE:HA	35:DF:112:MET:HG2	1.92	0.51
31:DA:2591:C:P	33:DD:239:ARG:HG3	2.50	0.51
2:AB:25:ASN:C	2:AB:25:ASN:OD1	2.48	0.51
20:AT:12:ALA:O	20:AT:15:ARG:HB2	2.11	0.51
1:AA:874:G:C6	1:AA:875:C:C4	2.99	0.51
1:AA:1152:A:O2'	1:AA:1153:C:H5'	2.10	0.51
1:AA:781:A:C3'	1:AA:782:A:H5'	2.41	0.51
31:BA:1441:G:H2'	31:BA:1442:G:H8	1.76	0.51
44:DS:97:ARG:CD	44:DS:97:ARG:C	2.79	0.51
1:CA:1274:G:N2	1:CA:1275:A:H62	2.09	0.51
31:BA:2534:A:C2	31:BA:2535:G:H1'	2.45	0.51
14:AN:26:ARG:NH1	14:AN:47:LEU:HD21	2.26	0.51
4:CD:191:ARG:HE	4:CD:200:GLU:CD	2.13	0.51
3:AC:117:ALA:O	3:AC:187:ALA:HB3	2.10	0.51
31:BA:1213:A:O2'	31:BA:1214:A:H5'	2.11	0.51
2:AB:239:VAL:HG12	2:AB:239:VAL:O	2.10	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:DA:1763:G:OP1	31:DA:1763:G:H4'	2.11	0.51
7:AG:40:ALA:O	7:AG:44:TYR:CD1	2.64	0.51
22:D0:53:MET:HB2	22:D0:59:LEU:CD2	2.41	0.51
17:CQ:92:ARG:HG2	17:CQ:93:GLN:N	2.26	0.51
1:CA:97:G:O2'	1:CA:98:G:O5'	2.24	0.51
51:DZ:156:LYS:O	51:DZ:158:PRO:HD3	2.11	0.51
1:AA:149:A:O2'	1:AA:150:C:P	2.68	0.50
1:AA:375:U:C2	1:AA:376:G:C8	2.99	0.50
32:DB:45:A:C2	32:DB:46:A:H1'	2.47	0.50
31:DA:174:C:H2'	31:DA:175:G:H5''	1.92	0.50
51:DZ:150:LEU:C	51:DZ:151:HIS:HD2	2.14	0.50
46:DU:92:ARG:NH2	47:DV:10:LYS:CB	2.74	0.50
24:B2:32:LEU:O	24:B2:33:MET:C	2.48	0.50
49:BX:52:VAL:HG21	49:BX:82:GLN:HA	1.93	0.50
1:CA:1277:C:H2'	1:CA:1278:U:C5'	2.42	0.50
2:AB:55:PHE:HA	2:AB:58:ILE:HG12	1.93	0.50
44:DS:56:LEU:HD22	44:DS:58:LEU:HB2	1.93	0.50
31:BA:668:G:C5'	31:BA:669:G:OP2	2.60	0.50
31:BA:1190:G:C5'	41:BP:35:HIS:HA	2.41	0.50
31:BA:806:C:P	41:BP:39:LYS:HG3	2.51	0.50
31:BA:2654:A:H1'	31:BA:2656:U:C5	2.46	0.50
31:BA:2664:G:C2'	31:BA:2665:A:O5'	2.60	0.50
31:BA:478:A:C6	31:BA:480:A:C6	3.00	0.50
31:DA:2544:G:O2'	31:DA:2545:G:H5'	2.11	0.50
31:DA:1280:G:C3'	31:DA:1281:G:C5'	2.88	0.50
31:DA:494:G:H21	48:DW:57:ASN:HD21	1.58	0.50
12:CL:102:ARG:NH1	12:CL:102:ARG:CG	2.56	0.50
10:AJ:33:GLN:O	10:AJ:75:ILE:HG12	2.12	0.50
31:BA:1803:A:H4'	33:BD:259:THR:CG2	2.41	0.50
1:AA:321:A:C2	1:AA:333:G:C2	3.00	0.50
6:CF:5:GLU:HB3	6:CF:62:TRP:HE1	1.75	0.50
6:CF:37:VAL:HA	6:CF:65:VAL:HG12	1.93	0.50
31:DA:1109:C:H5	31:DA:1110:G:C4	2.28	0.50
23:D1:26:ARG:HB2	23:D1:34:THR:HB	1.93	0.50
12:AL:6:THR:OG1	12:AL:9:GLN:HG3	2.11	0.50
36:DG:33:ARG:HB2	36:DG:162:THR:OG1	2.11	0.50
1:CA:173:U:O4'	1:CA:197:A:C4	2.64	0.50
18:AR:47:THR:OG1	18:AR:49:LYS:HG3	2.11	0.50
43:BR:38:VAL:HG12	43:BR:42:LYS:HD2	1.92	0.50
31:DA:1669:A:H5''	31:DA:1670:C:OP2	2.10	0.50
13:CM:92:HIS:CE1	13:CM:98:VAL:HG23	2.45	0.50
31:DA:107:C:H2'	31:DA:108:U:C6	2.41	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
38:DI:76:THR:HG22	38:DI:139:GLN:HB3	1.93	0.50
1:CA:1238:A:N6	1:CA:1299:A:H62	2.09	0.50
12:CL:110:VAL:HG21	12:CL:120:TYR:HB3	1.93	0.50
45:DT:106:SER:HA	45:DT:110:ILE:CG1	2.41	0.50
26:B4:25:TYR:C	26:B4:27:THR:N	2.63	0.50
31:DA:2492:U:H2'	31:DA:2493:U:C6	2.45	0.50
34:DE:67:PHE:C	34:DE:69:LYS:H	2.14	0.50
45:BT:53:ARG:HH11	45:BT:53:ARG:HG3	1.75	0.50
36:BG:133:LEU:HD12	36:BG:133:LEU:O	2.11	0.50
1:CA:872:A:C4	1:CA:874:G:N7	2.78	0.50
31:BA:1357:U:H2'	31:BA:1358:G:O4'	2.12	0.50
2:CB:15:VAL:C	2:CB:16:HIS:CG	2.85	0.50
31:DA:2001:A:H2'	31:DA:2002:G:C8	2.46	0.50
31:DA:266:G:N2	31:DA:427:U:H1'	2.26	0.50
31:BA:934:G:H2'	31:BA:935:C:C6	2.46	0.50
2:AB:63:MET:HB3	2:AB:225:ALA:HB1	1.91	0.50
10:CJ:42:THR:HG23	10:CJ:68:HIS:HA	1.93	0.50
11:CK:33:THR:HA	11:CK:39:PRO:HA	1.92	0.50
1:CA:582:U:C2	1:CA:760:G:C6	2.99	0.50
41:DP:148:LEU:O	41:DP:148:LEU:HD22	2.11	0.50
2:CB:158:LEU:HD12	2:CB:158:LEU:N	2.25	0.50
39:DN:42:TRP:HA	39:DN:48:MET:CE	2.40	0.50
1:AA:66:G:C4'	1:AA:173:U:C5	2.94	0.50
16:AP:45:THR:C	16:AP:47:ASP:H	2.14	0.50
33:BD:25:THR:CB	33:BD:82:ILE:H	2.23	0.50
33:DD:83:GLU:OE1	33:DD:104:TYR:CE2	2.64	0.50
36:DG:93:THR:C	36:DG:94:LEU:HD23	2.32	0.50
39:BN:36:GLY:N	39:BN:42:TRP:HZ3	2.09	0.50
39:BN:42:TRP:HA	39:BN:48:MET:CE	2.40	0.50
39:DN:120:LEU:C	39:DN:120:LEU:CD1	2.79	0.50
31:DA:2632:A:H1'	34:DE:61:ARG:HH12	1.72	0.50
31:DA:142:A:H5''	31:DA:142(A):C:C5	2.46	0.50
24:B2:49:LYS:C	24:B2:53:LEU:HB3	2.32	0.50
49:BX:7:VAL:O	49:BX:30:VAL:HG12	2.12	0.50
23:D1:78:LYS:O	23:D1:80:LEU:HG	2.12	0.50
37:BH:121:ILE:HG23	37:BH:133:VAL:HG13	1.94	0.50
15:CO:71:GLN:HA	15:CO:78:TYR:HB2	1.93	0.50
44:BS:35:ILE:N	44:BS:53:SER:HB2	2.25	0.50
34:BE:2:LYS:HB3	34:BE:95:ILE:CG2	2.41	0.50
23:B1:19:GLN:CG	23:B1:44:PRO:HG3	2.41	0.50
1:CA:502:G:C2	1:CA:503:C:O2	2.64	0.50
4:CD:79:PHE:CE1	4:CD:204:ILE:HA	2.46	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
36:DG:98:ARG:O	36:DG:101:ILE:HG22	2.10	0.50
41:BP:135:LEU:HD11	41:BP:144:GLU:OE2	2.10	0.50
41:BP:144:GLU:N	41:BP:145:PRO:CD	2.74	0.50
41:DP:88:LEU:HD11	41:DP:95:VAL:HG21	1.92	0.50
13:CM:31:LYS:HA	13:CM:34:LEU:HD12	1.92	0.50
31:BA:353:G:H2'	31:BA:354:G:O5'	2.10	0.50
31:BA:1677:A:H2'	31:BA:1678:G:C8	2.45	0.50
45:DT:31:SER:HA	45:DT:32:TYR:CD2	2.46	0.50
45:DT:31:SER:C	45:DT:32:TYR:HD2	2.15	0.50
1:AA:1414:U:H3	1:AA:1486:G:H1	1.59	0.50
1:CA:878:G:C5'	8:CH:89:PRO:HG2	2.41	0.50
51:BZ:52:SER:OG	51:BZ:53:ILE:N	2.44	0.50
31:BA:1188:U:O2'	31:BA:1189:A:H5'	2.10	0.50
1:CA:1067:A:H4'	1:CA:1068:G:O5'	2.11	0.50
31:BA:1797:C:O2'	33:BD:259:THR:HB	2.11	0.50
39:DN:78:TYR:CD1	39:DN:79:PRO:HB3	2.46	0.50
13:CM:52:GLU:O	13:CM:56:LEU:HB2	2.11	0.50
31:DA:2065:C:H2'	31:DA:2066:C:C6	2.46	0.50
1:AA:973:G:C4	10:AJ:55:LYS:HE2	2.46	0.50
24:B2:12:GLU:O	24:B2:12:GLU:HG2	2.09	0.50
6:AF:3:ARG:HD3	6:AF:38:GLU:OE1	2.12	0.50
1:AA:1285:A:H4'	1:AA:1286:A:O5'	2.11	0.50
12:AL:28:LYS:CE	12:AL:33:ARG:HH12	2.24	0.50
43:DR:70:LEU:N	43:DR:70:LEU:HD23	2.26	0.50
38:BI:75:LEU:HD12	38:BI:76:THR:N	2.25	0.50
1:AA:1322:C:H5'	13:AM:100:GLY:HA3	1.92	0.50
31:DA:298:G:H5''	31:DA:299:A:OP1	2.11	0.50
31:DA:1317:A:H2'	31:DA:1318:C:H6	1.76	0.50
42:DQ:12:GLN:HG2	42:DQ:73:PRO:HD2	1.92	0.50
31:DA:528:A:C8	31:DA:528:A:H3'	2.47	0.50
26:D4:19:GLY:C	26:D4:21:VAL:N	2.62	0.50
2:CB:63:MET:HB3	2:CB:225:ALA:HB1	1.92	0.50
26:B4:19:GLY:C	26:B4:21:VAL:N	2.63	0.50
5:AE:80:ILE:CD1	5:AE:138:ALA:HB1	2.40	0.50
1:CA:1271:G:H5'	1:CA:1314:C:H5'	1.92	0.50
31:BA:1112:G:C1'	31:BA:1113:U:OP1	2.60	0.50
31:BA:1044:G:C2	31:BA:1112:G:O6	2.65	0.50
30:B8:39:LYS:CE	30:B8:42:ARG:HH12	2.24	0.50
31:DA:597:U:H2'	31:DA:598:G:C8	2.46	0.50
1:AA:828:A:N6	1:AA:858:G:O2'	2.41	0.50
31:BA:494:G:N2	48:BW:57:ASN:HD21	2.09	0.50
27:D5:6:VAL:HG13	27:D5:7:PRO:HD2	1.94	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:AT:56:MET:O	20:AT:59:ALA:HB3	2.11	0.50
42:DQ:109:VAL:CG1	42:DQ:110:THR:N	2.74	0.50
37:DH:97:ARG:O	37:DH:98:LEU:C	2.49	0.50
3:AC:35:GLU:O	3:AC:39:ILE:HG13	2.12	0.50
4:AD:148:VAL:HG12	4:AD:149:ALA:N	2.25	0.50
1:CA:1497:G:C2'	1:CA:1498:U:H5'	2.40	0.50
37:DH:103:LEU:HD11	37:DH:105:LEU:HD11	1.93	0.50
38:BI:5:LEU:O	38:BI:6:LEU:HD23	2.11	0.50
50:DY:87:LYS:O	50:DY:88:LYS:HB2	2.11	0.50
1:CA:1248:A:H2'	1:CA:1249:C:H5'	1.94	0.50
31:DA:1416:G:O2'	31:DA:1417:C:P	2.69	0.50
31:BA:740:U:H2'	31:BA:741:G:C8	2.46	0.50
31:BA:1009:A:OP2	39:BN:37:LYS:NZ	2.30	0.50
31:BA:576:U:H2'	31:BA:577:G:C8	2.46	0.50
7:CG:85:TYR:CD1	7:CG:154:TYR:HE1	2.29	0.50
32:DB:35:U:O2'	32:DB:36:C:H5'	2.10	0.50
43:DR:75:LEU:HD13	43:DR:75:LEU:O	2.12	0.50
1:AA:1426:C:O2'	1:AA:1427:U:H5'	2.11	0.50
1:AA:173:U:C6	1:AA:197:A:C2	2.99	0.50
32:DB:46:A:C5	32:DB:47:C:C5	2.99	0.50
31:DA:2394:C:OP1	41:DP:63:PRO:CD	2.47	0.50
28:D6:16:CYS:O	28:D6:18:ARG:NH2	2.44	0.50
50:BY:95:LYS:HE2	50:BY:101:LYS:CA	2.39	0.50
31:DA:157:U:H5'	31:DA:171:G:N2	2.25	0.50
51:DZ:145:GLU:O	51:DZ:147:GLY:N	2.45	0.50
47:BV:70:ILE:HG13	47:BV:71:LEU:N	2.26	0.50
47:BV:25:LEU:N	47:BV:94:LEU:HD13	2.25	0.50
51:BZ:150:LEU:N	51:BZ:150:LEU:HD13	2.26	0.50
51:BZ:150:LEU:CA	51:BZ:151:HIS:HD2	2.24	0.50
46:DU:92:ARG:NH2	47:DV:10:LYS:HG2	2.26	0.50
17:AQ:33:GLY:O	17:AQ:34:LYS:C	2.49	0.50
12:AL:8:ASN:ND2	17:AQ:34:LYS:HE2	2.25	0.50
24:B2:37:PHE:CD2	24:B2:37:PHE:O	2.63	0.50
26:B4:1:MET:N	36:BG:67:LYS:NZ	2.58	0.50
31:DA:745:G:OP1	34:DE:133:LYS:HE3	2.11	0.50
41:DP:71:VAL:CG1	41:DP:72:PRO:CD	2.71	0.50
31:DA:1652:A:C5'	31:DA:1652:A:C8	2.90	0.50
45:DT:27:THR:HG22	45:DT:49:VAL:HG12	1.93	0.50
31:BA:2850:A:H2'	31:BA:2851:A:O5'	2.11	0.50
1:CA:1501:C:H5''	1:CA:1502:A:OP2	2.11	0.50
1:AA:1502:A:H5'	1:AA:1504:G:N7	2.27	0.50
1:AA:1411:C:O2'	1:AA:1412:C:H5'	2.11	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
37:BH:41:MET:SD	37:BH:55:PRO:CD	2.94	0.50
37:BH:54:ARG:HG2	37:BH:65:HIS:HD2	1.75	0.50
9:CI:79:LEU:HD11	9:CI:83:ARG:CZ	2.41	0.50
23:B1:16:ASN:HB3	23:B1:46:LEU:CD1	2.42	0.50
1:AA:1090:U:C2	1:AA:1091:U:C5	2.99	0.50
13:CM:45:VAL:O	13:CM:48:LEU:HD22	2.12	0.50
31:BA:271(N):U:H4'	31:BA:271(O):C:O5'	2.10	0.50
33:BD:255:LYS:N	33:BD:255:LYS:NZ	2.58	0.50
31:BA:2713:A:C3'	31:BA:2714:G:C5'	2.89	0.50
1:CA:671:G:C4	1:CA:672:U:C5	2.99	0.50
34:DE:75:VAL:C	34:DE:77:ILE:N	2.64	0.50
10:AJ:6:ILE:HA	10:AJ:97:GLU:O	2.12	0.50
1:CA:946:A:H2'	1:CA:947:G:H8	1.76	0.50
37:DH:86:GLU:HB3	37:DH:132:ARG:CB	2.39	0.50
31:BA:1168:G:O2'	31:BA:1169:G:H5'	2.10	0.50
36:DG:18:GLU:HG2	36:DG:175:LEU:HD21	1.93	0.50
31:BA:867:C:C5	31:BA:868:U:H5	2.28	0.50
2:CB:61:LEU:O	2:CB:61:LEU:HD12	2.11	0.50
31:DA:900:A:H3'	31:DA:901:A:H8	1.76	0.50
29:D7:39:ARG:HD3	31:DA:458:G:O2'	2.11	0.50
1:AA:933:G:O6	7:AG:3:ARG:NH2	2.44	0.50
31:BA:186:G:H2'	31:BA:187:G:H8	1.76	0.50
31:BA:999:U:C2'	31:BA:1000:A:H5'	2.40	0.50
1:CA:115:G:H4'	1:CA:116:A:O5'	2.10	0.50
25:B3:50:VAL:O	25:B3:54:VAL:HG22	2.12	0.50
31:DA:1418:G:H8	31:DA:1418:G:O5'	1.94	0.50
31:DA:574:C:H1'	31:DA:2055:C:C6	2.46	0.50
8:AH:44:PHE:HD1	8:AH:80:ILE:HG12	1.75	0.50
17:AQ:3:LYS:CD	17:AQ:60:ILE:HD11	2.41	0.50
6:AF:26:ILE:O	6:AF:30:LEU:HG	2.12	0.50
37:BH:149:ARG:HD3	37:BH:164:TYR:CE1	2.46	0.50
6:CF:10:LEU:HD12	6:CF:10:LEU:N	2.26	0.50
35:BF:141:ALA:O	35:BF:144:LYS:HB3	2.12	0.50
31:DA:672:C:O2'	31:DA:673:C:H5'	2.11	0.50
1:CA:1058:G:C5	1:CA:1059:C:C4	2.99	0.50
1:AA:987:G:N2	1:AA:1219:U:C2	2.80	0.50
26:B4:23:GLU:O	26:B4:24:THR:CB	2.59	0.50
1:CA:96:U:O2'	1:CA:97:G:P	2.69	0.50
48:BW:78:GLU:OE2	48:BW:99:ARG:HD3	2.11	0.50
31:BA:2748:A:N6	31:BA:2749:A:C6	2.80	0.50
1:CA:30:U:H4'	1:CA:31:G:OP2	2.09	0.50
31:DA:1357:U:H2'	31:DA:1358:G:O4'	2.11	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
34:DE:57:LYS:O	34:DE:57:LYS:HG3	2.11	0.50
46:BU:92:ARG:HH22	47:BV:10:LYS:HB3	1.75	0.50
47:BV:18:LEU:O	47:BV:19:LYS:HB2	2.11	0.50
44:DS:95:HIS:CD2	44:DS:96:GLY:H	2.29	0.50
30:D8:35:GLN:HE21	30:D8:36:LYS:CG	2.24	0.50
31:DA:1885:A:H2'	31:DA:1886:C:O4'	2.10	0.50
4:CD:128:VAL:HA	4:CD:145:GLU:O	2.11	0.50
31:BA:662:G:P	41:BP:18:ARG:HG2	2.51	0.50
16:CP:39:TYR:CD2	16:CP:73:LEU:CD1	2.93	0.50
50:DY:14:LEU:HD11	50:DY:22:GLY:HA2	1.93	0.50
27:D5:40:LYS:NZ	27:D5:46:CYS:O	2.43	0.50
2:AB:114:ARG:HA	2:AB:117:GLU:HB2	1.92	0.50
29:B7:12:ARG:HG3	31:BA:686:G:O6	2.11	0.50
33:DD:44:ASN:HB3	33:DD:49:ILE:CA	2.27	0.50
8:CH:87:SER:CA	8:CH:93:VAL:HB	2.42	0.50
34:DE:93:VAL:C	34:DE:95:ILE:N	2.64	0.50
31:BA:2895:U:H5	31:BA:2896:C:C5	2.30	0.50
32:DB:80:U:H2'	32:DB:81:G:H21	1.76	0.50
49:DX:52:VAL:CG2	49:DX:82:GLN:HA	2.41	0.50
31:BA:280:C:H2'	31:BA:281:G:C5'	2.41	0.50
51:DZ:56:VAL:HA	51:DZ:70:LEU:CD2	2.42	0.50
1:AA:710:G:H5''	6:AF:54:LYS:HE3	1.92	0.50
9:CI:3:GLN:HB3	9:CI:20:ARG:NH1	2.26	0.50
1:CA:353:A:H2'	1:CA:354:G:OP2	2.10	0.50
1:CA:353:A:C2'	1:CA:354:G:OP2	2.59	0.50
22:B0:70:GLN:OE1	22:B0:72:ARG:HD2	2.11	0.50
23:D1:11:ARG:CB	23:D1:12:PRO:CD	2.89	0.50
13:AM:45:VAL:O	13:AM:48:LEU:HD22	2.12	0.50
1:AA:321:A:N7	1:AA:328:C:O2'	2.33	0.50
48:BW:12:ILE:CG2	48:BW:17:VAL:CG2	2.90	0.50
1:CA:1048:G:OP1	14:CN:4:LYS:HB2	2.11	0.50
1:CA:382:A:C2	1:CA:383:A:C5	2.99	0.50
19:AS:6:LYS:HD2	19:AS:6:LYS:N	2.26	0.50
12:AL:55:VAL:HG12	12:AL:69:TYR:HA	1.93	0.50
33:BD:70:TRP:CZ3	33:BD:146:GLU:OE2	2.64	0.50
31:DA:2470:G:C2	31:DA:2471:C:C6	2.99	0.50
3:CC:136:GLN:HG2	3:CC:140:ARG:NH2	2.26	0.50
14:AN:51:GLY:C	14:AN:53:LEU:H	2.14	0.50
1:AA:763:G:C4	1:AA:764:C:C6	2.99	0.50
31:BA:272(B):G:O2'	31:BA:272(C):G:H5'	2.11	0.50
35:BF:88:VAL:HG11	35:BF:91:GLY:HA3	1.92	0.50
1:AA:1477:C:H2'	1:AA:1478:C:C6	2.46	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:CH:36:LEU:C	8:CH:38:ILE:H	2.14	0.50
31:DA:1510:G:O2'	31:DA:1511:C:H5'	2.11	0.50
31:BA:494:G:H21	48:BW:57:ASN:HD21	1.58	0.50
31:DA:828:U:C5	31:DA:829:A:N6	2.79	0.50
31:DA:892:G:C5	31:DA:893:C:C5	2.99	0.50
31:DA:128:C:C6	31:DA:128:C:C3'	2.94	0.50
1:AA:723:U:H5''	1:AA:724:G:OP2	2.11	0.50
31:BA:271(A):A:C2	31:BA:272(D):G:N3	2.80	0.50
3:AC:20:SER:HB2	3:AC:40:ARG:HH22	1.75	0.50
31:DA:1321:A:H2'	31:DA:1322:A:O4'	2.11	0.50
11:AK:33:THR:HA	11:AK:39:PRO:HA	1.92	0.50
31:BA:2803:C:H2'	31:BA:2804:C:O4'	2.10	0.50
31:BA:1468:C:O2'	31:BA:1469:A:H5'	2.12	0.50
50:DY:20:TYR:CD2	50:DY:41:GLY:HA2	2.46	0.50
31:DA:1276:A:C2	31:DA:1277:G:C8	2.99	0.50
31:BA:1491:G:O2'	31:BA:1492:G:H5'	2.12	0.50
45:BT:92:GLY:HA2	45:BT:114:LEU:HB3	1.94	0.50
47:DV:70:ILE:CB	47:DV:90:PRO:HB2	2.42	0.50
50:DY:95:LYS:HE2	50:DY:101:LYS:N	2.26	0.50
44:BS:26:LEU:HD22	44:BS:87:PHE:CD1	2.46	0.50
31:BA:1278:A:O2'	31:BA:1279:G:H5'	2.10	0.50
39:BN:120:LEU:CD1	39:BN:120:LEU:C	2.80	0.50
31:DA:1786:A:H4'	31:DA:1787:A:OP2	2.10	0.50
41:BP:101:VAL:HG12	41:BP:106:LEU:HD23	1.93	0.50
1:CA:1392:G:N2	1:CA:1502:A:H8	2.10	0.50
41:DP:99:LEU:HD12	41:DP:102:ARG:HH12	1.76	0.50
6:CF:19:LEU:HD21	6:CF:59:TYR:CE2	2.46	0.50
31:DA:2564:A:C2	31:DA:2647:U:H4'	2.46	0.50
37:BH:41:MET:HA	37:BH:41:MET:HE3	1.94	0.50
1:AA:1179:A:O2'	9:AI:103:THR:HG23	2.11	0.50
20:CT:50:GLU:CB	20:CT:100:ILE:HG12	2.35	0.50
31:BA:1798:U:H5''	33:BD:259:THR:CG2	2.37	0.50
1:CA:1285:A:H4'	1:CA:1286:A:O5'	2.12	0.50
12:AL:6:THR:HG23	12:AL:9:GLN:NE2	2.19	0.50
35:DF:51:THR:OG1	35:DF:91:GLY:HA3	2.11	0.50
1:CA:323:U:OP1	20:CT:26:ASN:ND2	2.45	0.50
1:CA:457:C:H6	1:CA:457:C:O5'	1.93	0.50
18:AR:59:SER:H	18:AR:62:GLU:CD	2.15	0.50
31:BA:2807:G:N2	31:BA:2808:U:H1'	2.26	0.50
3:CC:14:ILE:HG23	3:CC:15:THR:N	2.26	0.50
1:CA:152:A:N6	1:CA:170:U:C2	2.79	0.50
32:DB:32:C:C2	32:DB:51:G:N2	2.79	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:CA:862:C:H2'	1:CA:863:U:C5'	2.40	0.50
31:DA:1169:G:N2	31:DA:1181:C:C2	2.79	0.50
31:DA:1176:G:C4'	31:DA:1177:A:OP1	2.60	0.50
1:CA:916:G:H2'	1:CA:917:G:H8	1.75	0.50
2:AB:97:TRP:CZ2	2:AB:102:LEU:HD13	2.46	0.50
2:AB:97:TRP:CH2	2:AB:176:GLU:OE2	2.65	0.50
31:DA:848:G:C4	31:DA:933:A:C8	2.99	0.50
3:AC:112:SER:HB3	3:AC:115:LEU:HD12	1.94	0.50
2:AB:32:ILE:HA	2:AB:42:ILE:HA	1.94	0.50
18:CR:66:LEU:O	18:CR:70:ILE:HG12	2.12	0.50
8:CH:63:LEU:H	8:CH:63:LEU:HD22	1.76	0.50
1:AA:552:U:C2'	1:AA:553:A:H5'	2.41	0.50
29:B7:35:ARG:HG3	29:B7:42:LEU:HD11	1.93	0.50
20:CT:80:ARG:O	20:CT:84:LEU:HB2	2.11	0.50
31:DA:1799:G:N7	33:DD:179:SER:OG	2.45	0.50
31:BA:2884:U:H2'	31:BA:2885:C:C5'	2.41	0.50
1:CA:724:G:N3	1:CA:725:G:C8	2.79	0.50
3:CC:20:SER:HB2	3:CC:40:ARG:HH22	1.77	0.50
1:AA:1484:C:O2'	31:BA:1961:C:H5'	2.10	0.50
1:AA:222:U:C2	1:AA:223:U:C5	3.00	0.50
31:DA:231:C:O2'	31:DA:232:G:H5'	2.12	0.50
48:DW:27:LYS:O	48:DW:71:VAL:HG23	2.11	0.50
31:BA:2046:G:C4	31:BA:2047:U:C5	3.00	0.50
1:AA:882:C:O2'	1:AA:883:C:H5'	2.11	0.50
1:AA:1428:A:H2'	1:AA:1429:C:C6	2.47	0.50
31:BA:2439:A:C8	31:BA:2439:A:H5'	2.47	0.50
5:AE:152:ARG:HG2	8:AH:43:GLY:O	2.12	0.50
2:AB:15:VAL:C	2:AB:16:HIS:CG	2.85	0.50
34:BE:70:ALA:O	34:BE:72:VAL:N	2.45	0.50
31:BA:2418:A:H2'	31:BA:2419:U:C6	2.46	0.50
46:BU:95:LEU:CD1	47:BV:11:GLN:HG3	2.40	0.50
42:DQ:9:TYR:CD2	42:DQ:9:TYR:C	2.85	0.50
33:DD:34:VAL:O	33:DD:34:VAL:HG13	2.12	0.50
26:D4:1:MET:H2	36:DG:67:LYS:HZ1	1.60	0.50
31:DA:195:A:H4'	31:DA:251:A:O2'	2.12	0.50
31:BA:2787:C:HO2'	31:BA:2810:A:HO2'	1.57	0.50
1:AA:1252:A:H2'	1:AA:1253:G:O4'	2.12	0.50
23:B1:65:SER:N	23:B1:67:ILE:CD1	2.59	0.50
31:BA:2637:U:O2'	31:BA:2638:G:H5'	2.11	0.50
31:BA:2784:C:H1'	34:BE:37:ARG:NH2	2.27	0.50
1:CA:540:G:C2'	1:CA:541:G:H5'	2.41	0.50
36:DG:71:THR:HG22	36:DG:72:ARG:N	2.25	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:BA:1529:G:N2	31:BA:1530:C:H2'	2.27	0.50
41:DP:99:LEU:HD12	41:DP:102:ARG:NH1	2.26	0.50
31:DA:2664:G:C2'	31:DA:2665:A:O5'	2.60	0.50
1:AA:540:G:C2'	1:AA:541:G:H5'	2.41	0.50
50:DY:8:LYS:HD2	50:DY:8:LYS:N	2.27	0.50
42:DQ:23:GLY:O	42:DQ:100:GLY:CA	2.59	0.50
30:B8:61:LEU:HD13	31:BA:593:G:C4'	2.37	0.50
1:AA:682:G:C6	1:AA:683:G:N7	2.80	0.50
6:CF:69:GLU:HG2	6:CF:70:ASP:N	2.25	0.50
10:AJ:32:ALA:H	10:AJ:78:ASN:HD21	1.60	0.50
27:D5:2:ALA:CA	31:DA:2015:A:H1'	2.36	0.50
31:BA:2476:A:H2	31:BA:2477:C:H2'	1.77	0.50
12:AL:10:LEU:HB3	17:AQ:32:TYR:CE1	2.47	0.50
18:AR:53:ARG:NH2	18:AR:60:ALA:N	2.57	0.50
28:B6:13:CYS:HA	28:B6:50:ARG:O	2.11	0.50
39:BN:75:TYR:HD1	39:BN:75:TYR:N	2.10	0.50
31:BA:547:A:C8	31:BA:549:G:C6	2.99	0.50
31:DA:2762:G:H2'	31:DA:2763:G:C5'	2.42	0.50
1:CA:945:G:C2	1:CA:946:A:C8	3.00	0.50
33:DD:126:GLN:O	33:DD:193:VAL:CG1	2.57	0.50
1:AA:661:G:C2	1:AA:662:G:C8	2.99	0.50
1:CA:775:G:C2'	1:CA:776:G:H5'	2.42	0.50
2:CB:67:THR:HG21	2:CB:155:LEU:CD2	2.41	0.50
31:DA:536:A:C2'	31:DA:537:C:O5'	2.59	0.50
31:BA:1205:U:H3'	31:BA:1206:G:H5'	1.94	0.50
3:AC:114:PRO:HG3	3:AC:185:GLY:HA3	1.94	0.50
1:CA:1478:C:H2'	1:CA:1479:C:C6	2.45	0.50
1:AA:1480:G:H2'	1:AA:1481:U:O4'	2.12	0.50
1:CA:950:U:H2'	1:CA:951:G:C8	2.44	0.50
9:AI:15:ALA:HA	9:AI:65:VAL:HA	1.94	0.50
38:BI:78:THR:O	38:BI:79:ILE:HD13	2.11	0.50
7:AG:4:ARG:HD3	7:AG:5:ARG:NH1	2.27	0.50
34:DE:27:LEU:HD22	45:DT:1:MET:HE1	1.94	0.50
31:BA:2492:U:H2'	31:BA:2493:U:C6	2.44	0.50
31:DA:2854:G:H2'	31:DA:2855:C:C6	2.47	0.50
31:DA:363(A):A:N3	31:DA:363(A):A:H2'	2.27	0.50
34:BE:181:LEU:HD11	45:BT:7:ILE:HG21	1.94	0.50
1:CA:187:C:H2'	1:CA:188:C:H6	1.77	0.50
35:BF:28:ILE:HA	35:BF:112:MET:HG2	1.92	0.50
1:CA:189(C):C:H2'	1:CA:189(D):C:H5'	1.93	0.50
31:DA:1810:A:C2'	31:DA:1811:G:H5'	2.40	0.50
31:BA:922:U:H2'	31:BA:923:C:C6	2.47	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:BA:1015:G:H2'	31:BA:1016:G:H5'	1.92	0.50
1:AA:694:A:H2'	1:AA:695:A:O5'	2.11	0.50
31:BA:754:C:H2'	31:BA:755:C:C6	2.46	0.50
32:BB:61:G:C6	32:BB:62:C:C4	2.99	0.50
1:CA:701:C:O2	1:CA:703:G:N1	2.44	0.50
8:CH:31:PHE:O	8:CH:35:ILE:HG13	2.10	0.50
9:AI:122:ALA:HB1	9:AI:123:PRO:HD2	1.92	0.50
31:DA:262:A:H2'	31:DA:263:C:O4'	2.12	0.50
1:AA:403:C:O2'	1:AA:404:U:H5'	2.12	0.50
30:D8:5:LYS:HE2	31:DA:254:G:N7	2.27	0.50
11:AK:81:ASP:CG	11:AK:106:LYS:HG2	2.32	0.50
30:B8:2:PRO:N	31:BA:591:C:O2	2.44	0.50
45:BT:101:PHE:HE2	45:BT:113:LYS:HD2	1.76	0.50
20:CT:75:ASN:HD22	20:CT:75:ASN:H	1.59	0.50
1:CA:403:C:O2'	1:CA:404:U:H5'	2.12	0.50
39:DN:35:ARG:HB2	39:DN:42:TRP:CZ3	2.46	0.50
47:BV:19:LYS:HG3	47:BV:20:LEU:CA	2.40	0.50
47:DV:89:GLN:OE1	47:DV:91:TYR:HD1	1.95	0.50
34:DE:59:VAL:CG2	34:DE:63:LEU:HA	2.42	0.50
28:D6:10:LEU:HD22	28:D6:10:LEU:N	2.25	0.50
30:D8:35:GLN:HE21	30:D8:36:LYS:HG3	1.75	0.50
24:D2:34:GLU:O	24:D2:34:GLU:HG2	2.11	0.50
41:BP:65:ARG:HB2	41:BP:65:ARG:NH1	2.26	0.50
47:DV:15:GLU:HB3	47:DV:16:PRO:CD	2.35	0.50
1:CA:394:G:H2'	1:CA:395:C:C6	2.43	0.50
33:BD:179:SER:HB2	33:BD:181:GLU:H	1.76	0.50
44:DS:35:ILE:H	44:DS:53:SER:CB	2.24	0.50
31:DA:1784:A:H4'	31:DA:1785:A:O5'	2.12	0.50
23:B1:64:ALA:HA	23:B1:67:ILE:CG1	2.41	0.50
23:D1:67:ILE:HD12	23:D1:67:ILE:H	1.76	0.50
8:AH:87:SER:CA	8:AH:93:VAL:HB	2.42	0.50
31:DA:2681:C:C5	31:DA:2725:A:N6	2.61	0.50
41:DP:26:GLY:HA2	41:DP:30:THR:HG23	1.92	0.50
1:CA:1104:G:OP1	2:CB:111:ARG:HD2	2.11	0.50
1:AA:542:G:C2	1:AA:543:C:C5	2.99	0.50
50:DY:7:VAL:HB	50:DY:8:LYS:HD2	1.92	0.50
1:CA:1074:G:N3	1:CA:1102:A:C2	2.80	0.50
1:AA:684:A:H2'	1:AA:685:G:C8	2.46	0.50
31:DA:675:A:C8	31:DA:804:A:C6	3.00	0.50
1:AA:736:C:H2'	1:AA:737:A:C8	2.46	0.50
48:DW:73:ALA:O	48:DW:106:ILE:HG12	2.12	0.50
48:DW:17:VAL:HG11	48:DW:103:ILE:HD13	1.94	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:1067:A:H1'	1:AA:1068:G:C8	2.47	0.50
13:AM:52:GLU:O	13:AM:56:LEU:HB2	2.11	0.50
1:AA:81:U:C4	1:AA:83:U:C5	3.00	0.50
31:DA:1952:A:C6	31:DA:1953:A:N1	2.80	0.50
35:BF:184:TYR:CD2	35:BF:188:ARG:HD2	2.47	0.50
10:CJ:6:ILE:HA	10:CJ:97:GLU:O	2.11	0.50
3:AC:14:ILE:HG12	3:AC:15:THR:H	1.77	0.50
31:BA:579:G:H2'	31:BA:580:C:C6	2.46	0.50
1:CA:1238:A:H62	1:CA:1299:A:H62	1.56	0.50
31:DA:1711:C:H2'	31:DA:1712:C:C6	2.47	0.50
16:AP:74:LEU:O	16:AP:79:VAL:HG23	2.11	0.50
8:CH:6:ILE:HB	8:CH:85:ARG:HH12	1.76	0.50
2:CB:21:ARG:HB2	2:CB:38:GLY:O	2.11	0.50
48:DW:70:TYR:N	48:DW:70:TYR:CD2	2.79	0.50
31:DA:374:A:H2'	31:DA:375:C:H5'	1.92	0.50
17:AQ:48:GLU:C	17:AQ:50:LYS:N	2.65	0.50
38:BI:120:ILE:HG22	38:BI:121:LYS:N	2.27	0.50
31:BA:1889:A:N1	31:BA:2234:G:H1'	2.26	0.50
9:AI:118:LYS:NZ	9:AI:118:LYS:CB	2.74	0.50
11:CK:34:ASP:HB3	11:CK:40:ILE:HD11	1.92	0.50
1:CA:782:A:H4'	1:CA:1514:C:O2'	2.12	0.50
5:AE:28:PHE:O	5:AE:47:LYS:HA	2.12	0.50
31:BA:2796:U:O2'	31:BA:2799:C:H5'	2.11	0.50
31:DA:1843:C:H2'	31:DA:1844:C:H6	1.76	0.50
1:CA:783:C:O2'	1:CA:784:C:H5'	2.11	0.50
12:CL:10:LEU:HB3	17:CQ:32:TYR:CE1	2.47	0.50
31:BA:384:U:H2'	31:BA:385:C:H6	1.77	0.50
1:AA:581:G:N2	1:AA:582:U:C4	2.80	0.50
41:DP:73:GLY:O	41:DP:74:GLU:C	2.50	0.50
15:AO:8:LYS:O	15:AO:12:ILE:HG13	2.11	0.50
1:AA:498:U:O2	1:AA:498:U:H2'	2.12	0.50
50:BY:12:THR:HG22	50:BY:12:THR:O	2.11	0.50
1:CA:1401:G:C2	1:CA:1402:C:H1'	2.47	0.50
31:BA:705:A:O2'	31:BA:706:A:H5'	2.11	0.50
20:AT:87:LYS:HE3	20:AT:91:LEU:HD11	1.92	0.50
28:B6:12:GLU:HB3	28:B6:23:THR:CG2	2.42	0.50
31:BA:997:G:O2'	31:BA:998:C:H5'	2.12	0.50
1:AA:356:A:H1'	1:AA:368:U:O2'	2.12	0.50
33:BD:27:THR:O	33:BD:28:GLU:HB2	2.12	0.50
33:DD:36:PRO:HG3	33:DD:61:LEU:HG	1.94	0.50
31:BA:1885:A:H2'	31:BA:1886:C:O4'	2.12	0.50
31:BA:2317:C:C3'	31:BA:2318:G:H5'	2.39	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:BA:661:C:O3'	41:BP:18:ARG:HA	2.12	0.50
31:BA:1210:A:C8	31:BA:1210:A:H5'	2.41	0.50
2:AB:187:LEU:HD23	2:AB:201:ILE:CG2	2.35	0.50
31:BA:2311:A:O2'	31:BA:2312:U:O4'	2.26	0.50
36:BG:64:THR:HG23	36:BG:65:GLY:H	1.76	0.50
27:D5:56:LYS:O	27:D5:57:VAL:O	2.30	0.50
34:BE:95:ILE:CD1	34:BE:95:ILE:H	2.24	0.50
31:DA:1142(A):A:C4	31:DA:1144:G:C8	3.00	0.50
47:DV:82:ARG:CG	47:DV:82:ARG:NH1	2.48	0.50
31:BA:1531:C:H3'	31:BA:1532:C:C4'	2.41	0.50
39:DN:90:MET:O	39:DN:93:THR:O	2.30	0.50
31:DA:2531:A:C2	31:DA:2658:C:O2	2.61	0.50
1:AA:538:G:C2	1:AA:539:A:C4	3.00	0.50
36:BG:47:LYS:CG	36:BG:82:LEU:HG	2.37	0.50
50:DY:37:VAL:HG23	50:DY:38:ILE:H	1.75	0.50
38:BI:12:LEU:HG	38:BI:12:LEU:O	2.12	0.50
12:AL:102:ARG:NH1	12:AL:102:ARG:CG	2.56	0.50
1:AA:1074:G:N3	1:AA:1102:A:C2	2.80	0.50
1:AA:682:G:C4	1:AA:683:G:C8	2.99	0.50
23:B1:9:GLY:O	23:B1:10:LYS:HE2	2.11	0.50
1:CA:683:G:C2	1:CA:684:A:C4	3.00	0.50
1:AA:1168:A:C6	1:AA:1169:A:C6	3.00	0.50
1:AA:254:G:O2'	1:AA:255:G:H5'	2.11	0.50
37:DH:54:ARG:CG	37:DH:65:HIS:HD2	2.25	0.50
37:DH:41:MET:CG	37:DH:54:ARG:HA	2.42	0.50
31:DA:485:C:H2'	31:DA:486:C:H6	1.77	0.50
11:CK:111:ASP:CA	18:CR:84:LYS:HG3	2.37	0.50
31:BA:2445:G:OP1	35:BF:74:ARG:NH2	2.37	0.50
31:BA:1106:A:H2'	31:BA:1107:G:O5'	2.11	0.50
31:BA:271(K):U:H2'	31:BA:271(M):G:N2	2.27	0.50
1:CA:1076:C:C2	1:CA:1082:G:C2	3.00	0.50
1:CA:1203:C:H2'	1:CA:1204:A:O4'	2.11	0.50
31:DA:2712:U:HO2'	31:DA:2712(A):A:P	2.33	0.50
1:AA:1080:A:H5'	5:AE:14:ARG:NH2	2.26	0.50
31:BA:542:C:N4	31:BA:543:C:H42	2.08	0.50
43:DR:51:LEU:HD22	43:DR:70:LEU:HD21	1.94	0.50
31:BA:1179:C:C2'	31:BA:1180:C:H5''	2.42	0.50
31:DA:1718:G:N2	31:DA:1719:G:C4	2.80	0.50
31:DA:1719:G:H2'	31:DA:1720:U:C5'	2.42	0.50
31:BA:107:C:N3	31:BA:108:U:C5	2.80	0.50
33:BD:205:VAL:HG12	33:BD:205:VAL:O	2.11	0.50
12:CL:6:THR:H	12:CL:9:GLN:NE2	2.08	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:1238:A:H62	1:AA:1299:A:H62	1.58	0.50
1:AA:658:G:H2'	1:AA:659:U:H6	1.77	0.50
45:BT:78:LEU:O	45:BT:79:HIS:ND1	2.44	0.50
33:BD:75:ILE:HG21	33:BD:99:ASP:HB2	1.94	0.50
1:CA:604:G:C5	1:CA:605:U:C5	3.00	0.50
31:DA:2859:G:O2'	31:DA:2860:A:P	2.69	0.50
20:AT:73:HIS:O	20:AT:76:ALA:HB3	2.11	0.50
31:DA:2280:G:H2'	31:DA:2281:C:H5'	1.94	0.50
22:B0:68:GLU:HG3	22:B0:80:HIS:HB2	1.94	0.50
31:BA:2689:U:P	31:BA:2719:G:H22	2.34	0.50
1:CA:1315:U:H2'	1:CA:1316:G:O4'	2.12	0.50
1:AA:724:G:H2'	1:AA:725:G:H8	1.76	0.50
1:CA:939:G:C6	1:CA:940:C:N4	2.79	0.50
50:DY:88:LYS:NZ	50:DY:93:GLY:HA3	2.26	0.50
1:CA:9:G:OP1	5:CE:122:GLU:HG3	2.11	0.50
32:BB:33:G:C2'	32:BB:34:U:H5'	2.41	0.50
1:AA:304:U:H2'	1:AA:305:G:C8	2.47	0.50
1:CA:770:C:C2'	1:CA:771:G:H5'	2.41	0.50
31:DA:2803:C:H2'	31:DA:2804:C:O4'	2.11	0.50
3:AC:188:LEU:O	3:AC:189:ALA:HB2	2.11	0.50
17:AQ:86:GLU:O	17:AQ:90:ILE:HG12	2.12	0.50
31:DA:1550:C:H2'	31:DA:1551:C:H6	1.76	0.50
31:BA:344:G:O2'	31:BA:345:A:H5'	2.11	0.50
15:CO:43:LEU:C	15:CO:45:VAL:N	2.65	0.50
2:CB:91:PRO:HG3	2:CB:154:LEU:CB	2.42	0.50
46:BU:69:CYS:HB3	46:BU:106:PHE:CE2	2.47	0.50
31:DA:1497:U:H5''	31:DA:1498:C:C5	2.45	0.50
30:D8:32:LEU:CG	30:D8:34:TRP:HE3	2.22	0.50
47:BV:70:ILE:CB	47:BV:90:PRO:HB2	2.41	0.50
49:BX:53:LYS:HE3	49:BX:55:ASN:ND2	2.22	0.50
31:DA:1771:C:C1'	31:DA:1786:A:C8	2.94	0.50
31:BA:2759:G:H2'	31:BA:2760:C:O5'	2.12	0.50
1:CA:407:G:H5'	4:CD:3:ARG:HH12	1.77	0.50
4:CD:206:PHE:CD2	4:CD:207:TYR:CE2	2.99	0.50
1:AA:512:U:H2'	1:AA:513:C:H6	1.76	0.50
1:AA:1505:G:C4'	1:AA:1506:U:H5''	2.40	0.50
24:D2:37:PHE:CD2	24:D2:37:PHE:O	2.65	0.50
24:D2:51:ARG:HD3	24:D2:51:ARG:O	2.12	0.50
31:DA:2648:C:H2'	31:DA:2649:U:C6	2.47	0.50
1:CA:342:C:O2'	1:CA:343:U:H5'	2.12	0.50
45:DT:32:TYR:CD2	45:DT:81:PRO:O	2.64	0.50
45:DT:33:LYS:NZ	45:DT:33:LYS:HA	2.26	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
45:BT:32:TYR:CB	45:BT:81:PRO:HB2	2.41	0.50
9:AI:79:LEU:HD11	9:AI:83:ARG:CZ	2.41	0.50
4:AD:155:LEU:O	4:AD:159:ARG:HG2	2.12	0.50
39:BN:78:TYR:CD1	39:BN:79:PRO:CG	2.95	0.50
31:DA:271(Q):G:OP1	38:DI:42:SER:OG	2.30	0.50
41:DP:115:LEU:HA	41:DP:134:ALA:CB	2.35	0.50
51:DZ:166:SER:OG	51:DZ:167:PRO:CA	2.57	0.50
12:AL:27:LEU:HG	12:AL:62:SER:CB	2.42	0.50
31:BA:2472:G:C8	31:BA:2472:G:H5''	2.43	0.50
1:AA:458:C:H2'	1:AA:460:G:C8	2.47	0.50
38:BI:76:THR:HG22	38:BI:139:GLN:HB3	1.94	0.50
31:BA:1173:G:H5'	31:BA:1174:A:OP2	2.12	0.50
1:AA:1215:G:C6	1:AA:1216:G:C5	2.99	0.50
31:DA:109:G:H2'	31:DA:110:G:O4'	2.12	0.50
2:CB:97:TRP:CZ2	2:CB:102:LEU:HD13	2.47	0.50
31:BA:196:A:C4	31:BA:805:G:C6	3.00	0.50
1:CA:1481:U:H2'	1:CA:1482:G:H8	1.75	0.50
4:AD:170:VAL:HG22	4:AD:171:GLY:H	1.77	0.50
1:AA:155:C:H2'	1:AA:156:G:H8	1.76	0.50
31:DA:1259:G:H2'	31:DA:1260:G:H8	1.76	0.50
31:DA:737:C:C2'	31:DA:738:G:O5'	2.60	0.50
31:BA:2846:G:H2'	31:BA:2847:U:O4'	2.12	0.50
31:BA:1438:U:O2'	31:BA:1439:A:H5'	2.12	0.50
31:BA:2578:G:H4'	31:BA:2578:G:OP2	2.12	0.50
11:CK:20:TYR:C	11:CK:21:ILE:HD12	2.32	0.50
1:CA:286:G:C5	1:CA:287:U:C5	3.00	0.50
44:DS:97:ARG:HE	44:DS:98:VAL:HA	1.75	0.50
22:D0:53:MET:HA	22:D0:58:THR:O	2.12	0.50
31:BA:817:C:H2'	31:BA:818:G:O4'	2.12	0.50
31:DA:1997:G:O2'	31:DA:1998:G:H5'	2.12	0.50
38:BI:69:LYS:HG3	38:BI:135:GLU:O	2.12	0.50
31:DA:1548:C:H2'	31:DA:1549:C:H6	1.76	0.50
2:AB:92:TYR:CE2	2:AB:151:GLY:HA3	2.47	0.50
1:CA:1310:G:N2	1:CA:1328:C:C2	2.80	0.50
27:B5:36:CYS:CB	27:B5:49:CYS:SG	3.00	0.49
30:B8:35:GLN:HE21	30:B8:36:LYS:CG	2.25	0.49
39:BN:2:LYS:HD3	46:BU:95:LEU:HD21	1.94	0.49
1:AA:355:C:N3	1:AA:356:A:N7	2.59	0.49
1:AA:380:G:C2	1:AA:384:G:C6	3.00	0.49
16:AP:39:TYR:CD2	16:AP:73:LEU:CD1	2.93	0.49
33:BD:31:LYS:O	33:BD:32:SER:C	2.50	0.49
33:DD:35:LYS:HG2	33:DD:64:ILE:CG2	2.42	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:DA:243:U:O2'	31:DA:244:A:H5'	2.12	0.49
31:BA:2631:G:C6	31:BA:2632:A:N7	2.80	0.49
51:DZ:144:LEU:HD11	51:DZ:150:LEU:CD1	2.42	0.49
51:DZ:150:LEU:C	51:DZ:151:HIS:CD2	2.85	0.49
42:BQ:77:LYS:HE3	42:BQ:82:ARG:HA	1.94	0.49
31:BA:2250:G:C4	42:BQ:82:ARG:HD3	2.47	0.49
36:BG:61:ALA:HA	36:BG:64:THR:HG22	1.93	0.49
44:DS:34:HIS:CE1	44:DS:54:LEU:CB	2.82	0.49
23:D1:65:SER:O	23:D1:66:HIS:CD2	2.65	0.49
35:BF:32:LEU:CD1	35:BF:105:VAL:HG13	2.39	0.49
31:DA:2483:C:O2	31:DA:2483:C:H2'	2.11	0.49
31:BA:1142(A):A:C4	31:BA:1144:G:C8	3.00	0.49
39:DN:17:ASP:O	39:DN:17:ASP:CG	2.51	0.49
31:BA:2531:A:C2	31:BA:2658:C:O2	2.60	0.49
1:CA:414:A:C5	1:CA:431:A:C2	3.00	0.49
1:CA:510:A:H5''	1:CA:511:C:OP2	2.12	0.49
4:CD:2:GLY:O	4:CD:4:TYR:N	2.45	0.49
4:CD:73:ARG:HG3	4:CD:77:ASN:HD21	1.76	0.49
31:BA:1527:G:C5'	31:BA:1528:A:OP1	2.60	0.49
41:DP:96:THR:HG22	41:DP:126:VAL:HG23	1.94	0.49
24:D2:45:SER:O	24:D2:48:HIS:HB3	2.12	0.49
6:AF:19:LEU:HD21	6:AF:59:TYR:CE2	2.47	0.49
42:DQ:141:GLN:CG	51:DZ:72:ARG:HA	2.42	0.49
37:BH:41:MET:CG	37:BH:54:ARG:HA	2.42	0.49
37:BH:66:GLY:CA	37:BH:69:ARG:HB2	2.40	0.49
1:CA:687:A:C2	1:CA:704:A:C6	3.00	0.49
1:AA:1118:C:C1'	1:AA:1179:A:C4	2.94	0.49
1:CA:380:G:C2	1:CA:384:G:C6	3.00	0.49
1:CA:736:C:H2'	1:CA:737:A:C8	2.47	0.49
28:B6:46:HIS:ND1	31:BA:2371:G:O2'	2.42	0.49
33:DD:70:TRP:HZ3	33:DD:146:GLU:OE2	1.95	0.49
12:AL:87:GLY:H	12:AL:99:HIS:H	1.60	0.49
31:BA:2580:U:H4'	34:BE:130:GLY:CA	2.41	0.49
31:BA:1131:G:OP1	39:BN:80:GLY:HA2	2.12	0.49
5:AE:69:VAL:HG12	5:AE:71:LEU:HD23	1.94	0.49
5:CE:51:VAL:HB	5:CE:52:PRO:CD	2.40	0.49
5:CE:51:VAL:O	5:CE:55:VAL:HG23	2.12	0.49
43:BR:44:LEU:O	43:BR:45:ARG:C	2.49	0.49
39:BN:28:THR:N	39:BN:106:MET:HE1	2.27	0.49
1:AA:191:G:N3	20:AT:103:GLY:O	2.45	0.49
1:AA:1226:C:N4	13:AM:104:ARG:HD2	2.27	0.49
3:AC:14:ILE:HG23	3:AC:15:THR:N	2.26	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:CM:91:ARG:HB2	13:CM:98:VAL:HG21	1.94	0.49
31:DA:528:A:H2	31:DA:2043:C:C5'	2.25	0.49
1:AA:1158:C:H42	1:AA:1181:G:H22	1.59	0.49
31:DA:1204:A:N1	31:DA:1241:A:H2	2.10	0.49
14:AN:54:PRO:O	14:AN:56:VAL:HG23	2.11	0.49
1:CA:192:U:H4'	20:CT:103:GLY:HA2	1.92	0.49
31:BA:1303:G:H1'	31:BA:1641:A:N1	2.27	0.49
3:CC:114:PRO:HG3	3:CC:185:GLY:HA3	1.94	0.49
45:DT:106:SER:HA	45:DT:110:ILE:HG12	1.93	0.49
31:BA:2762:G:C2'	31:BA:2763:G:H5'	2.42	0.49
31:BA:374:A:C2	31:BA:401:A:C4	3.00	0.49
5:CE:28:PHE:O	5:CE:47:LYS:HA	2.11	0.49
1:CA:473:G:C2	1:CA:474:G:C8	3.00	0.49
31:BA:128:C:H2'	31:BA:129:C:O4'	2.12	0.49
31:DA:188:G:H2'	31:DA:189:G:H5'	1.93	0.49
9:CI:118:LYS:CB	9:CI:118:LYS:NZ	2.75	0.49
32:DB:33:G:N2	32:DB:50:G:C4	2.81	0.49
1:CA:1058:G:C6	1:CA:1059:C:C4	3.00	0.49
50:DY:41:GLY:O	50:DY:42:VAL:C	2.49	0.49
3:AC:189:ALA:HB3	3:AC:196:LEU:HB2	1.94	0.49
31:BA:2563:U:H4'	40:BO:28:SER:HA	1.93	0.49
40:DO:9:GLU:O	40:DO:83:ALA:HA	2.12	0.49
1:AA:97:G:O2'	1:AA:98:G:O5'	2.28	0.49
42:DQ:78:PRO:O	42:DQ:79:LEU:HB2	2.12	0.49
30:D8:2:PRO:N	31:DA:591:C:O2	2.45	0.49
1:AA:63:C:O2'	1:AA:380:G:H4'	2.11	0.49
1:AA:395:C:O2	1:AA:395:C:H2'	2.12	0.49
33:BD:83:GLU:OE1	33:BD:104:TYR:CE2	2.65	0.49
33:BD:24:ILE:HD11	33:BD:84:TYR:N	2.27	0.49
31:DA:2293:C:H2'	31:DA:2294:C:O4'	2.12	0.49
31:DA:1495:A:H2'	31:DA:1496:A:N3	2.27	0.49
31:DA:2887:U:H2'	31:DA:2888:C:H6	1.77	0.49
42:DQ:85:LYS:HG3	42:DQ:86:GLY:N	2.27	0.49
49:BX:82:GLN:HB3	49:BX:85:PRO:CG	2.37	0.49
33:DD:118:VAL:HG22	33:DD:119:ALA:H	1.75	0.49
33:DD:186:HIS:CD2	33:DD:187:GLY:N	2.80	0.49
15:AO:36:ILE:HD12	15:AO:63:ARG:HE	1.77	0.49
1:AA:427:U:C4	1:AA:428:G:C6	3.00	0.49
31:BA:1678:G:H21	31:BA:1989:G:N2	2.06	0.49
39:BN:131:GLN:OE1	39:BN:134:ARG:HB3	2.12	0.49
30:B8:22:VAL:HB	30:B8:53:PRO:CB	2.42	0.49
1:CA:102:G:C6	1:CA:103:C:C4	3.00	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
23:B1:11:ARG:CB	23:B1:12:PRO:CD	2.90	0.49
1:CA:683:G:C6	1:CA:684:A:C6	3.00	0.49
31:DA:482:A:H5''	31:DA:483:A:OP1	2.13	0.49
1:AA:445:G:N3	1:AA:446:G:C8	2.80	0.49
1:AA:973:G:C3'	1:AA:974:A:H5''	2.38	0.49
14:AN:3:ARG:O	14:AN:7:ILE:HG23	2.12	0.49
6:CF:61:LEU:HD23	6:CF:63:TYR:OH	2.11	0.49
6:CF:61:LEU:HB3	6:CF:63:TYR:CE2	2.47	0.49
6:AF:61:LEU:HB3	6:AF:63:TYR:HE2	1.77	0.49
33:DD:206:LEU:HD22	33:DD:211:ARG:CG	2.42	0.49
34:BE:75:VAL:O	34:BE:77:ILE:N	2.45	0.49
1:AA:1338:G:H2'	1:AA:1339:A:O4'	2.12	0.49
35:BF:9:ILE:HG12	35:BF:14:PRO:HA	1.94	0.49
31:BA:1722:A:N1	31:BA:1740:G:H2'	2.27	0.49
13:AM:91:ARG:HB2	13:AM:98:VAL:CG2	2.42	0.49
1:CA:19:C:O2'	1:CA:20:U:H5'	2.12	0.49
2:CB:97:TRP:HH2	2:CB:176:GLU:CG	2.24	0.49
31:DA:1711:C:H2'	31:DA:1712:C:H6	1.77	0.49
38:DI:37:VAL:CG1	38:DI:38:LEU:N	2.75	0.49
1:AA:625:G:H4'	16:AP:16:HIS:CD2	2.47	0.49
1:CA:1352:C:H42	1:CA:1370:G:H1	1.60	0.49
31:DA:272(B):G:O2'	31:DA:272(C):G:H5'	2.12	0.49
1:CA:1290:G:N3	1:CA:1290:G:H2'	2.27	0.49
9:CI:61:ALA:HB1	9:CI:63:ILE:HD11	1.94	0.49
2:CB:32:ILE:HA	2:CB:42:ILE:HA	1.93	0.49
31:DA:2689:U:P	31:DA:2719:G:H22	2.35	0.49
38:DI:78:THR:OG1	38:DI:141:LYS:HB2	2.12	0.49
45:DT:78:LEU:CD2	45:DT:78:LEU:O	2.60	0.49
31:BA:945:A:H5''	31:BA:946:G:P	2.52	0.49
20:AT:56:MET:HG3	20:AT:88:VAL:HG21	1.94	0.49
1:AA:189(C):C:H2'	1:AA:189(D):C:H5'	1.92	0.49
16:AP:50:LYS:HD3	16:AP:50:LYS:C	2.32	0.49
1:CA:791:G:C5	1:CA:792:A:N7	2.80	0.49
9:AI:112:LYS:HA	9:AI:119:ALA:HB2	1.93	0.49
1:CA:105:G:H2'	1:CA:106:C:H6	1.76	0.49
31:BA:524:U:H2'	31:BA:525:U:C6	2.47	0.49
1:CA:781:A:C2'	1:CA:782:A:H5'	2.42	0.49
5:AE:7:GLU:HG2	5:AE:112:LEU:HD22	1.94	0.49
31:DA:671:C:O2'	31:DA:672:C:H5'	2.12	0.49
32:DB:33:G:C2	32:DB:50:G:C2	3.00	0.49
1:CA:119:A:N7	1:CA:288:A:C2	2.80	0.49
42:BQ:63:LYS:HG2	42:BQ:65:PHE:CE2	2.47	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:669:U:O2'	1:AA:670:G:H5'	2.13	0.49
7:CG:70:LYS:HB3	7:CG:96:GLN:OE1	2.12	0.49
4:AD:73:ARG:HG3	4:AD:77:ASN:HD21	1.78	0.49
35:BF:29:ASN:O	35:BF:30:PRO:C	2.50	0.49
1:AA:477:A:O2'	1:AA:479:C:H5'	2.12	0.49
39:DN:104:LYS:HB2	39:DN:117:PHE:CE1	2.47	0.49
1:CA:533:A:C4'	1:CA:534:U:OP1	2.59	0.49
1:AA:1207:G:H2'	1:AA:1208:C:C6	2.47	0.49
11:AK:15:ALA:HA	11:AK:77:MET:HA	1.94	0.49
9:CI:15:ALA:HA	9:CI:65:VAL:HA	1.93	0.49
1:CA:532:A:H61	3:CC:193:TYR:HB3	1.76	0.49
1:CA:767:A:H2'	1:CA:768:A:O4'	2.12	0.49
38:DI:31:LEU:HD22	38:DI:31:LEU:N	2.27	0.49
47:DV:32:THR:HG22	47:DV:33:VAL:H	1.78	0.49
6:AF:96:PRO:HB3	18:AR:30:ASP:OD2	2.11	0.49
20:CT:87:LYS:HE3	20:CT:91:LEU:HD11	1.92	0.49
2:AB:163:PHE:HA	2:AB:185:ILE:O	2.12	0.49
44:DS:17:ARG:HE	44:DS:89:ARG:HH21	1.59	0.49
31:BA:102:G:C8	31:BA:102:G:C5'	2.85	0.49
47:BV:25:LEU:C	47:BV:27:ALA:H	2.14	0.49
41:BP:16:ARG:HH11	41:BP:16:ARG:C	2.15	0.49
39:DN:1:MET:C	39:DN:2:LYS:HG3	2.32	0.49
31:BA:1397:U:O2'	31:BA:1398:C:P	2.71	0.49
44:BS:93:LYS:HE3	44:BS:94:TYR:N	2.27	0.49
37:BH:83:TYR:HA	37:BH:135:GLY:O	2.12	0.49
31:BA:1464:C:O2'	31:BA:1528:A:H1'	2.12	0.49
31:BA:2733:A:C2'	31:BA:2734:A:H5'	2.43	0.49
45:BT:27:THR:O	45:BT:28:VAL:CG2	2.54	0.49
4:AD:36:ARG:HB3	4:AD:38:TYR:CE2	2.47	0.49
6:AF:44:GLY:HA2	6:AF:59:TYR:CZ	2.47	0.49
48:DW:88:ARG:HB2	48:DW:92:ARG:HB3	1.94	0.49
41:BP:146:VAL:HG22	41:BP:147:LEU:N	2.15	0.49
45:BT:31:SER:C	45:BT:32:TYR:HD2	2.14	0.49
1:CA:684:A:H2'	1:CA:685:G:C8	2.47	0.49
12:CL:102:ARG:HD2	12:CL:108:ALA:O	2.12	0.49
31:DA:856:C:H3'	31:DA:857:C:C6	2.47	0.49
31:DA:271(H):G:O2'	31:DA:271(I):G:OP2	2.25	0.49
18:CR:59:SER:H	18:CR:62:GLU:CD	2.14	0.49
31:BA:1024:G:C3'	31:BA:1025:G:H5''	2.36	0.49
32:BB:66:A:C6	32:BB:109:C:C6	3.00	0.49
1:AA:671:G:C4	1:AA:672:U:C5	3.00	0.49
1:CA:1077:G:C2	1:CA:1081:G:C6	3.00	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:564:C:H2'	1:AA:565:U:H5'	1.94	0.49
35:DF:65:TRP:CZ3	35:DF:72:ARG:HB3	2.47	0.49
31:BA:2889:C:C2'	31:BA:2891:G:H5'	2.42	0.49
33:BD:70:TRP:CD1	33:BD:70:TRP:C	2.85	0.49
46:BU:25:TRP:CD1	46:BU:26:GLY:N	2.79	0.49
13:CM:81:LEU:HD11	13:CM:88:ARG:HH12	1.78	0.49
31:BA:795:C:H2'	31:BA:796:C:C6	2.46	0.49
31:DA:1741:A:C5	31:DA:1742:G:C2	2.99	0.49
42:DQ:72:LYS:HB3	42:DQ:94:VAL:HG22	1.94	0.49
39:DN:75:TYR:N	39:DN:75:TYR:CD1	2.80	0.49
34:DE:13:ARG:NH2	45:DT:77:PRO:HG3	2.28	0.49
33:BD:126:GLN:O	33:BD:193:VAL:CG1	2.60	0.49
31:DA:29:U:H2'	31:DA:30:G:C8	2.48	0.49
8:AH:63:LEU:N	8:AH:63:LEU:HD22	2.27	0.49
12:AL:84:LEU:HD22	12:AL:85:ILE:H	1.77	0.49
31:DA:945:A:C6	31:DA:2448:A:C4	3.00	0.49
1:CA:590:C:H2'	1:CA:591:U:C6	2.47	0.49
1:CA:1513:A:H2'	1:CA:1514:C:C6	2.47	0.49
31:DA:1439:A:C2	31:DA:1553:A:C4	3.00	0.49
1:CA:232:G:H1'	1:CA:262:A:N1	2.26	0.49
25:B3:17:LYS:O	25:B3:20:LYS:N	2.45	0.49
1:CA:724:G:H2'	1:CA:725:G:H8	1.78	0.49
25:D3:49:LYS:HE2	31:DA:850:C:O3'	2.13	0.49
15:CO:18:PHE:O	15:CO:19:PRO:C	2.51	0.49
1:CA:131:C:H2'	1:CA:132:C:C6	2.47	0.49
1:CA:874:G:C6	1:CA:875:C:C4	3.01	0.49
31:DA:1322:A:C5	31:DA:1323:U:C5	3.00	0.49
48:DW:26:GLY:H	48:DW:71:VAL:HB	1.77	0.49
31:BA:445:C:OP1	46:BU:2:PRO:HA	2.11	0.49
1:AA:642:A:C5	8:AH:115:SER:HA	2.46	0.49
51:DZ:127:LYS:HB3	51:DZ:162:GLU:HG3	1.94	0.49
31:BA:1456:G:C2'	31:BA:1457:A:H5'	2.42	0.49
9:AI:40:LEU:HD11	9:AI:70:LYS:HG3	1.95	0.49
1:AA:439:A:C4	1:AA:496:A:C2	3.01	0.49
1:CA:1460:A:H2'	1:CA:1461:G:O4'	2.11	0.49
31:BA:641:C:O2'	31:BA:2350:C:OP1	2.21	0.49
3:CC:188:LEU:O	3:CC:189:ALA:HB2	2.12	0.49
31:DA:1748:G:O2'	31:DA:1749:A:H5'	2.12	0.49
1:CA:1207:G:H2'	1:CA:1208:C:C6	2.47	0.49
36:BG:107:LEU:HD11	36:BG:178:PHE:CE1	2.47	0.49
5:AE:87:SER:HB3	5:AE:125:SER:O	2.12	0.49
11:CK:81:ASP:CG	11:CK:106:LYS:HG2	2.33	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
17:AQ:24:GLU:HA	17:AQ:39:SER:HB3	1.95	0.49
2:CB:92:TYR:CE2	2:CB:151:GLY:HA3	2.47	0.49
28:B6:12:GLU:CB	28:B6:23:THR:HG22	2.41	0.49
39:DN:36:GLY:H	39:DN:42:TRP:HZ3	1.59	0.49
33:BD:31:LYS:O	33:BD:35:LYS:O	2.29	0.49
33:DD:83:GLU:OE1	33:DD:104:TYR:HE2	1.94	0.49
44:DS:28:VAL:O	44:DS:29:PHE:CB	2.60	0.49
47:BV:66:ARG:CD	47:BV:67:GLY:N	2.74	0.49
47:BV:24:LYS:HE3	47:BV:68:LYS:HE3	1.94	0.49
46:BU:50:ARG:CZ	47:BV:75:PHE:CD2	2.94	0.49
45:BT:89:VAL:HG13	45:BT:121:ILE:HD11	1.94	0.49
42:BQ:88:GLY:O	42:BQ:90:VAL:HG23	2.12	0.49
31:BA:94:C:O2	31:BA:94:C:H2'	2.11	0.49
49:BX:37:THR:HG23	49:BX:54:VAL:HG21	1.95	0.49
49:BX:77:LYS:HG2	49:BX:78:LYS:H	1.76	0.49
49:BX:52:VAL:CG2	49:BX:82:GLN:HA	2.42	0.49
1:AA:675:A:H2'	1:AA:676:A:C8	2.47	0.49
2:AB:84:GLU:O	2:AB:219:VAL:HG11	2.11	0.49
33:DD:175:LEU:HD12	33:DD:185:VAL:HG21	1.93	0.49
31:DA:2884:U:H2'	31:DA:2885:C:C5'	2.43	0.49
43:DR:3:HIS:O	43:DR:4:LEU:CB	2.60	0.49
36:DG:76:SER:CB	36:DG:84:LYS:H	2.26	0.49
39:DN:65:LYS:HD3	39:DN:67:LEU:H	1.77	0.49
31:DA:1279:G:H5'	43:DR:34:ILE:HD11	1.94	0.49
31:BA:482:A:H5''	31:BA:483:A:OP1	2.12	0.49
45:BT:33:LYS:NZ	45:BT:33:LYS:CA	2.76	0.49
1:CA:1067:A:H1'	1:CA:1068:G:C8	2.47	0.49
1:CA:52:G:O2'	1:CA:53:A:H5'	2.13	0.49
31:DA:1331:A:O2'	31:DA:1332:G:H8	1.95	0.49
24:B2:14:ARG:CD	24:B2:57:ILE:HB	2.43	0.49
31:BA:1935:G:H1'	31:BA:1964:G:N2	2.28	0.49
2:CB:188:ALA:HB1	2:CB:192:SER:CB	2.39	0.49
34:BE:77:ILE:HG21	34:BE:79:ARG:HH21	1.77	0.49
31:BA:2818:G:C2'	31:BA:2819:G:H5'	2.41	0.49
1:AA:457:C:H6	1:AA:457:C:O5'	1.95	0.49
33:BD:12:SER:HB2	33:BD:208:LYS:HB3	1.93	0.49
31:BA:1176:G:C4'	31:BA:1177:A:OP1	2.60	0.49
1:AA:1225:A:H1'	19:AS:78:ARG:HD3	1.94	0.49
1:AA:1423:G:H5'	40:BO:49:ARG:HH22	1.76	0.49
31:BA:18:C:O2'	31:BA:19:C:H5'	2.11	0.49
36:BG:16:ARG:HH12	36:BG:31:VAL:HG21	1.76	0.49
31:DA:528:A:C2'	31:DA:529:A:H5'	2.42	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
37:DH:153:LYS:HG2	37:DH:154:PRO:N	2.27	0.49
50:BY:87:LYS:O	50:BY:88:LYS:HB2	2.12	0.49
10:AJ:61:GLU:OE1	14:AN:58:LYS:HE2	2.12	0.49
3:CC:73:PRO:HA	3:CC:76:VAL:CG1	2.41	0.49
35:DF:31:HIS:NE2	35:DF:35:GLU:OE1	2.45	0.49
31:BA:1599:C:H2'	31:BA:1599:C:O2	2.12	0.49
10:AJ:80:LYS:HZ3	10:AJ:80:LYS:HB2	1.77	0.49
37:DH:98:LEU:HD22	37:DH:125:VAL:HG23	1.95	0.49
38:BI:92:VAL:O	38:BI:92:VAL:HG22	2.11	0.49
10:CJ:4:ILE:HG12	10:CJ:100:THR:HG22	1.93	0.49
1:AA:1189:C:OP1	3:AC:5:ILE:HG21	2.11	0.49
10:AJ:4:ILE:HG12	10:AJ:100:THR:HG22	1.94	0.49
31:DA:934:G:H2'	31:DA:935:C:H6	1.76	0.49
31:BA:671:C:O2'	31:BA:672:C:H5'	2.12	0.49
31:BA:384:U:O2'	31:BA:385:C:H5'	2.12	0.49
12:CL:89:ARG:HA	12:CL:97:ARG:HA	1.95	0.49
23:D1:40:ARG:NH2	31:DA:2082:A:H5'	2.27	0.49
1:CA:1260:C:H4'	1:CA:1284:C:H5'	1.94	0.49
1:CA:642:A:C5	8:CH:115:SER:HA	2.47	0.49
49:BX:18:TYR:O	49:BX:19:ALA:C	2.50	0.49
38:BI:31:LEU:N	38:BI:31:LEU:HD22	2.27	0.49
17:CQ:65:ILE:H	17:CQ:65:ILE:HD12	1.77	0.49
31:BA:1404:C:H2'	31:BA:1404:C:O2	2.11	0.49
1:AA:1433:A:C6	1:AA:1468:A:C4	3.01	0.49
26:D4:20:ASN:O	26:D4:24:THR:HA	2.12	0.49
31:BA:1902:C:H2'	31:BA:1903:G:O5'	2.13	0.49
1:AA:66:G:O4'	1:AA:173:U:C4	2.66	0.49
33:DD:31:LYS:O	33:DD:35:LYS:O	2.31	0.49
41:DP:51:PHE:CB	41:DP:52:GLU:HG2	2.39	0.49
41:DP:65:ARG:HB2	41:DP:65:ARG:NH1	2.27	0.49
51:BZ:144:LEU:HD11	51:BZ:150:LEU:CD1	2.43	0.49
47:DV:1:MET:HE1	47:DV:44:LYS:N	2.27	0.49
31:BA:2307:G:OP1	31:BA:2307:G:H4'	2.13	0.49
31:BA:2758:A:C3'	31:BA:2759:G:H5''	2.41	0.49
31:DA:686:G:N2	31:DA:788:A:H61	2.11	0.49
27:D5:36:CYS:C	27:D5:38:ALA:N	2.66	0.49
31:BA:389:G:H1	41:BP:71:VAL:HG12	1.77	0.49
31:DA:1141:U:H4'	31:DA:1142(A):A:O4'	2.13	0.49
36:DG:60:LEU:HD13	36:DG:60:LEU:C	2.32	0.49
39:BN:45:ASN:N	39:BN:45:ASN:HD22	1.88	0.49
41:DP:95:VAL:HA	41:DP:99:LEU:HD23	1.93	0.49
1:AA:540:G:O2'	1:AA:541:G:H5'	2.12	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:AD:78:LEU:O	4:AD:81:GLU:HB3	2.12	0.49
42:DQ:141:GLN:CG	51:DZ:72:ARG:HH11	2.21	0.49
1:AA:685:G:N2	1:AA:686:U:C4	2.81	0.49
23:B1:10:LYS:CG	23:B1:11:ARG:N	2.75	0.49
33:DD:198:ASN:ND2	33:DD:198:ASN:O	2.45	0.49
1:CA:1189:C:OP1	3:CC:5:ILE:HG21	2.12	0.49
1:AA:1067:A:H4'	1:AA:1068:G:O5'	2.13	0.49
1:AA:1203:C:H2'	1:AA:1204:A:O4'	2.13	0.49
1:CA:1201:A:H5'	1:CA:1203:C:OP2	2.13	0.49
28:B6:39:TYR:HD2	28:B6:49:HIS:CE1	2.31	0.49
12:CL:55:VAL:HG12	12:CL:69:TYR:HA	1.94	0.49
40:DO:65:THR:CG2	40:DO:69:ILE:HD11	2.41	0.49
51:DZ:67:LEU:N	51:DZ:67:LEU:HD12	2.28	0.49
1:AA:865:A:H2	1:AA:918:A:H4'	1.76	0.49
32:DB:31:C:O2'	32:DB:32:C:H5'	2.13	0.49
36:DG:29:TRP:C	36:DG:31:VAL:N	2.64	0.49
32:BB:86:G:H1	32:BB:91:C:N4	2.10	0.49
13:CM:91:ARG:HB2	13:CM:98:VAL:CG2	2.43	0.49
31:DA:1205:U:H3'	31:DA:1206:G:H5'	1.94	0.49
35:BF:129:PHE:CD2	35:BF:163:VAL:HG21	2.48	0.49
1:AA:115:G:H4'	1:AA:116:A:O5'	2.11	0.49
1:CA:606:G:H5''	1:CA:607:A:H5'	1.95	0.49
31:DA:2427:C:H5''	31:DA:2428:G:OP1	2.13	0.49
31:BA:375:C:H2'	31:BA:376:C:C6	2.47	0.49
42:BQ:109:VAL:CG1	42:BQ:110:THR:N	2.75	0.49
44:BS:83:LYS:CE	44:BS:105:ALA:HB2	2.42	0.49
48:DW:86:LEU:HD12	48:DW:87:PRO:N	2.28	0.49
31:DA:128:C:H2'	31:DA:129:C:C6	2.46	0.49
31:DA:2846:G:H2'	31:DA:2847:U:O4'	2.12	0.49
1:AA:1248:A:H2'	1:AA:1249:C:H5'	1.94	0.49
31:BA:1027:A:N6	31:BA:1126:A:C4	2.81	0.49
31:BA:775:G:C4	31:BA:794:G:C8	3.00	0.49
40:BO:29:ASN:N	40:BO:29:ASN:HD22	2.11	0.49
33:BD:80:ALA:HB2	33:BD:96:HIS:CD2	2.48	0.49
33:DD:25:THR:CG2	33:DD:82:ILE:N	2.74	0.49
39:DN:16:ILE:HD11	39:DN:26:LEU:HD11	1.94	0.49
30:D8:25:MET:HG3	41:DP:64:LYS:CB	2.31	0.49
51:BZ:108:PRO:O	51:BZ:109:ALA:C	2.51	0.49
31:BA:154:G:H1	31:BA:172:C:H42	0.66	0.49
42:DQ:88:GLY:O	42:DQ:90:VAL:N	2.45	0.49
2:CB:189:ASP:OD2	2:CB:205:ASP:OD1	2.30	0.49
16:CP:48:TRP:CD1	16:CP:48:TRP:N	2.72	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:CA:375:U:OP1	16:CP:69:THR:HG21	2.12	0.49
24:B2:49:LYS:HD3	31:BA:76:C:H5''	1.94	0.49
25:B3:8:LEU:HD13	25:B3:31:LEU:HA	1.95	0.49
31:BA:814:C:N4	41:BP:27:HIS:NE2	2.61	0.49
31:DA:1659:U:C4	31:DA:1660:C:C5	3.01	0.49
31:DA:810:U:O2	41:DP:33:ARG:HD3	2.12	0.49
31:DA:1005:C:H2'	31:DA:1006:C:C6	2.48	0.49
31:DA:1022:G:C5	31:DA:1140:C:N4	2.81	0.49
31:DA:2250:G:C4	42:DQ:82:ARG:HD3	2.48	0.49
36:DG:82:LEU:C	36:DG:83:ARG:HG3	2.32	0.49
36:DG:71:THR:HB	36:DG:89:GLY:CA	2.43	0.49
23:D1:19:GLN:OE1	23:D1:44:PRO:HB3	2.12	0.49
31:BA:2564:A:C6	31:BA:2565:A:C6	3.01	0.49
45:BT:28:VAL:HG11	45:BT:46:GLU:OE1	2.12	0.49
1:AA:430:A:C2'	1:AA:431:A:H5'	2.43	0.49
48:BW:92:ARG:HH11	48:BW:92:ARG:CG	2.14	0.49
31:DA:1449:A:HO2'	31:DA:1530:C:H5	1.59	0.49
35:BF:164:ARG:CG	35:BF:164:ARG:HH11	2.18	0.49
1:CA:51:A:C6	1:CA:353:A:C2	3.01	0.49
18:CR:47:THR:OG1	18:CR:49:LYS:HG3	2.13	0.49
31:DA:775:G:C4	31:DA:794:G:C8	3.01	0.49
31:DA:1338:G:N3	31:DA:1393:A:H2	2.11	0.49
31:BA:1109:C:C5	31:BA:1110:G:C4	3.01	0.49
1:CA:253:U:H2'	1:CA:254:G:H8	1.77	0.49
6:CF:40:VAL:HA	6:CF:62:TRP:O	2.12	0.49
23:B1:47:GLN:HB2	31:BA:397:G:H5''	1.92	0.49
35:DF:89:VAL:CG1	35:DF:90:PHE:N	2.70	0.49
31:BA:2579:C:H2'	31:BA:2580:U:O4'	2.12	0.49
9:AI:104:ARG:O	9:AI:104:ARG:HG2	2.13	0.49
31:DA:2199:A:H5''	31:DA:2200:C:OP2	2.12	0.49
12:CL:6:THR:OG1	12:CL:9:GLN:HG3	2.13	0.49
9:CI:63:ILE:HD12	9:CI:63:ILE:N	2.27	0.49
38:DI:78:THR:HA	38:DI:141:LYS:O	2.13	0.49
1:CA:166:G:O2'	1:CA:167:G:H5'	2.13	0.49
31:DA:1799:G:H4'	31:DA:1800:C:O5'	2.11	0.49
37:BH:127:GLU:HB3	37:BH:128:PRO:HD2	1.94	0.49
31:DA:1810:A:H2'	31:DA:1811:G:C5'	2.43	0.49
4:AD:150:GLU:H	4:AD:150:GLU:CD	2.15	0.49
1:CA:309:G:H2'	1:CA:310:G:H8	1.77	0.49
9:AI:113:LYS:H	9:AI:119:ALA:HA	1.78	0.49
38:BI:15:VAL:HG22	38:BI:16:GLY:N	2.27	0.49
2:CB:24:TRP:CH2	2:CB:26:PRO:HA	2.48	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:CA:723:U:H5''	1:CA:724:G:OP2	2.13	0.49
31:DA:2074:U:H2'	31:DA:2075:U:C6	2.47	0.49
1:AA:986:A:H2'	1:AA:987:G:O4'	2.13	0.49
1:CA:874:G:H2'	1:CA:875:C:H6	1.78	0.49
31:BA:1213:A:H1'	31:BA:1238:G:N3	2.27	0.49
1:AA:1206:G:O4'	3:AC:194:GLY:HA2	2.13	0.49
31:BA:2484:G:C2	31:BA:2485:G:C8	3.01	0.49
1:CA:1015:A:N6	1:CA:1016:A:C6	2.81	0.49
1:CA:778:G:H2'	1:CA:779:C:O5'	2.12	0.49
31:BA:1745(A):C:H6	31:BA:1745(A):C:H5''	1.77	0.49
1:AA:716:A:N3	11:AK:118:GLY:HA2	2.26	0.49
6:CF:41:GLU:HB3	6:CF:43:LEU:CD1	2.42	0.49
27:B5:50:GLY:HA3	27:B5:56:LYS:CG	2.43	0.49
31:DA:1493:C:N4	31:DA:2206:G:O2'	2.46	0.49
41:DP:61:ARG:H	41:DP:61:ARG:HD2	1.77	0.49
34:DE:60:ASN:OD1	34:DE:62:PRO:HD2	2.12	0.49
31:BA:86:C:H4'	31:BA:104:U:H1'	1.95	0.49
4:CD:127:THR:OG1	4:CD:128:VAL:N	2.44	0.49
36:BG:144:ILE:HD11	36:BG:148:MET:HG2	1.93	0.49
33:BD:133:LEU:HD22	33:BD:165:ILE:CD1	2.43	0.49
8:AH:86:ILE:HG21	8:AH:133:LEU:HD13	1.94	0.49
31:DA:691:C:H4'	33:DD:43:ARG:HG2	1.95	0.49
35:BF:22:ALA:C	35:BF:26:ALA:HB2	2.32	0.49
4:CD:31:CYS:SG	4:CD:31:CYS:O	2.70	0.49
45:BT:28:VAL:HG13	45:BT:46:GLU:HB2	1.94	0.49
1:AA:542:G:H2'	1:AA:543:C:H6	1.77	0.49
24:D2:48:HIS:CG	24:D2:48:HIS:O	2.65	0.49
50:DY:8:LYS:HB2	50:DY:28:LYS:HZ3	1.78	0.49
39:BN:130:HIS:O	39:BN:130:HIS:CG	2.65	0.49
30:B8:51:ALA:C	30:B8:53:PRO:HD2	2.33	0.49
1:AA:929:G:N2	1:AA:1388:C:N3	2.39	0.49
33:DD:254:THR:H	33:DD:255:LYS:HZ1	1.60	0.49
1:AA:437:U:H2'	1:AA:438:G:C8	2.47	0.49
39:BN:78:TYR:N	39:BN:79:PRO:HD3	2.27	0.49
31:BA:2476:A:C2	31:BA:2477:C:H2'	2.47	0.49
31:BA:919:G:H5'	32:BB:81:G:H1'	1.95	0.49
34:DE:51:PHE:CD1	34:DE:52:LEU:HD13	2.48	0.49
10:CJ:16:LEU:O	10:CJ:16:LEU:HD13	2.13	0.49
1:CA:150:C:N4	1:CA:170:U:C4	2.80	0.49
1:CA:149:A:O2'	1:CA:150:C:P	2.71	0.49
32:DB:86:G:H1	32:DB:91:C:N4	2.11	0.49
42:DQ:68:ILE:HD13	42:DQ:103:MET:HB3	1.95	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:BA:1179:C:C3'	31:BA:1180:C:H5''	2.42	0.49
1:AA:1322:C:H6	1:AA:1322:C:OP1	1.96	0.49
34:DE:128:SER:OG	34:DE:129:HIS:N	2.45	0.49
31:DA:2043:C:C2	31:DA:2044:C:C5	3.01	0.49
31:DA:2688:U:H1'	31:DA:2721:A:N6	2.28	0.49
16:AP:57:ARG:CZ	16:AP:79:VAL:O	2.61	0.49
1:AA:624:C:H4'	16:AP:11:SER:H	1.77	0.49
4:CD:133:VAL:HG11	4:CD:138:TYR:HD1	1.72	0.49
31:BA:597:U:H2'	31:BA:598:G:C8	2.47	0.49
31:BA:634:C:H2'	31:BA:635:C:H6	1.76	0.49
35:DF:7:TYR:HB3	35:DF:16:GLY:N	2.27	0.49
31:BA:185:U:H2'	31:BA:186:G:H8	1.78	0.49
2:CB:21:ARG:HG3	2:CB:21:ARG:O	2.12	0.49
8:AH:63:LEU:H	8:AH:63:LEU:HD22	1.77	0.49
1:AA:349:A:O2'	1:AA:350:G:H5'	2.12	0.49
1:AA:604:G:C6	1:AA:605:U:C4	3.01	0.49
20:CT:73:HIS:H	20:CT:76:ALA:HB3	1.76	0.49
31:DA:839:U:H2'	31:DA:840:C:C6	2.47	0.49
35:BF:57:VAL:HG11	35:BF:59:TYR:HD1	1.77	0.49
5:AE:41:VAL:CG1	5:AE:113:ALA:HA	2.43	0.49
51:BZ:19:ARG:HA	51:BZ:23:LYS:O	2.12	0.49
31:BA:372:G:O2'	31:BA:373:U:P	2.71	0.49
31:BA:192:C:H2'	31:BA:193:U:H5'	1.95	0.49
8:CH:1:MET:CE	8:CH:1:MET:H3	2.25	0.49
11:AK:65:ALA:O	11:AK:68:ALA:HB3	2.12	0.49
24:B2:55:ARG:NH1	31:BA:72:U:OP1	2.46	0.49
1:CA:1389:C:H2'	1:CA:1390:U:O4'	2.13	0.49
31:DA:2032:G:H21	34:DE:146:THR:HG23	1.78	0.49
31:BA:1763:G:H4'	31:BA:1763:G:OP1	2.13	0.49
44:DS:61:ASN:ND2	44:DS:64:GLU:OE2	2.46	0.49
45:BT:90:GLN:HG2	45:BT:120:ARG:NH1	2.28	0.49
42:BQ:25:ASP:HB2	42:BQ:102:VAL:HG23	1.93	0.49
31:BA:1157:G:C2'	31:BA:1158:C:H5'	2.42	0.49
1:AA:1274:G:N2	1:AA:1275:A:H62	2.11	0.49
13:CM:112:GLY:O	13:CM:113:PRO:HG2	2.12	0.49
27:B5:51:TYR:HB2	27:B5:54:GLY:CA	2.43	0.49
46:BU:92:ARG:CB	47:BV:11:GLN:NE2	2.71	0.49
33:BD:83:GLU:OE1	33:BD:104:TYR:HE2	1.96	0.49
31:DA:2313:C:H2'	31:DA:2314:C:H6	1.77	0.49
47:DV:66:ARG:NH1	47:DV:94:LEU:CD1	2.76	0.49
31:BA:2314:C:O2'	31:BA:2315:G:H5'	2.13	0.49
30:D8:50:LEU:C	30:D8:52:LYS:H	2.15	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:DA:2887:U:O2'	31:DA:2888:C:H5'	2.13	0.49
30:D8:35:GLN:CB	31:DA:2420:C:OP1	2.60	0.49
31:DA:175:G:C5'	31:DA:175:G:C8	2.94	0.49
41:BP:48:PRO:HG2	41:BP:49:ARG:H	1.76	0.49
36:BG:137:GLU:OE2	36:BG:139:LEU:HD11	2.13	0.49
32:BB:48:A:H4'	44:BS:95:HIS:CD2	2.43	0.49
33:DD:175:LEU:O	33:DD:182:LEU:HD22	2.13	0.49
34:DE:132:HIS:ND1	34:DE:132:HIS:O	2.46	0.49
31:DA:861:A:N3	32:DB:79:C:O2'	2.39	0.49
39:BN:68:GLU:HG3	39:BN:88:GLU:OE1	2.12	0.49
41:DP:135:LEU:HD11	41:DP:144:GLU:OE2	2.12	0.49
1:AA:540:G:H2'	1:AA:541:G:O4'	2.12	0.49
50:DY:28:LYS:HE3	50:DY:30:VAL:CG2	2.42	0.49
31:BA:288:C:N4	31:BA:353:G:H1	2.08	0.49
51:DZ:121:HIS:HD2	51:DZ:123:ASP:O	1.94	0.49
31:BA:241:A:O4'	31:BA:243:U:C6	2.66	0.49
31:DA:494:G:N2	48:DW:57:ASN:HD21	2.11	0.49
50:BY:37:VAL:O	50:BY:38:ILE:CB	2.59	0.49
31:DA:669:G:C8	31:DA:669:G:H5''	2.48	0.49
31:DA:2476:A:C2	31:DA:2477:C:H2'	2.48	0.49
35:BF:178:PRO:HG2	35:BF:179:GLU:OE1	2.12	0.49
31:BA:1771:C:O2'	31:BA:1786:A:C8	2.46	0.49
10:AJ:78:ASN:O	10:AJ:82:ILE:HG12	2.13	0.49
1:AA:1064:G:H5'	1:AA:1066:C:H1'	1.94	0.49
1:AA:1067:A:C4'	1:AA:1068:G:O5'	2.61	0.49
31:DA:1479:G:C6	31:DA:1480:G:C5	3.00	0.49
39:DN:78:TYR:CD1	39:DN:79:PRO:CG	2.95	0.49
1:CA:445:G:N3	1:CA:446:G:C8	2.80	0.49
51:BZ:166:SER:OG	51:BZ:168:GLU:N	2.44	0.49
31:DA:1639:U:H4'	31:DA:2699:C:H4'	1.93	0.49
31:BA:1952:A:C6	31:BA:1953:A:N1	2.81	0.49
1:AA:15:G:C4	1:AA:16:A:C8	3.01	0.49
1:AA:15:G:H2'	1:AA:16:A:H8	1.77	0.49
43:DR:100:LEU:H	43:DR:100:LEU:CD2	2.21	0.49
31:BA:2557:G:C2'	31:BA:2558:C:H5'	2.43	0.49
1:CA:613:C:N4	1:CA:627:G:H1	2.11	0.49
8:CH:6:ILE:H	8:CH:6:ILE:HD12	1.76	0.49
1:CA:1352:C:O2	1:CA:1371:G:C2	2.66	0.49
43:DR:8:ARG:HA	43:DR:8:ARG:NE	2.28	0.49
31:BA:11:G:H2'	31:BA:12:U:H5'	1.94	0.49
1:CA:32:A:C2	1:CA:33:A:C4	3.01	0.49
4:CD:170:VAL:HG22	4:CD:171:GLY:H	1.77	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
38:BI:78:THR:OG1	38:BI:141:LYS:HB2	2.12	0.49
1:CA:1103:C:H5''	2:CB:98:LEU:HD13	1.94	0.49
45:DT:47:GLY:HA3	45:DT:63:VAL:HG23	1.95	0.49
45:BT:68:TYR:CD1	45:BT:68:TYR:N	2.81	0.49
17:AQ:74:LEU:HD12	17:AQ:75:ARG:HG2	1.95	0.49
31:DA:2796:U:O2'	31:DA:2799:C:H5'	2.13	0.49
31:BA:521:G:H2'	31:BA:522:G:H8	1.78	0.49
31:DA:372:G:HO2'	31:DA:373:U:P	2.35	0.49
15:AO:43:LEU:O	15:AO:45:VAL:N	2.46	0.49
1:AA:96:U:O2'	1:AA:97:G:P	2.71	0.49
31:BA:38:A:H2'	31:BA:39:C:C6	2.48	0.49
31:DA:1891:G:C6	31:DA:1892:C:N3	2.80	0.49
40:DO:77:ILE:CD1	45:DT:74:ARG:HG2	2.43	0.49
38:BI:124:GLY:H	38:BI:142:VAL:HG23	1.77	0.49
31:DA:928:G:H8	31:DA:928:G:O5'	1.96	0.49
1:AA:518:C:H2'	1:AA:530:G:C2	2.48	0.49
14:CN:26:ARG:NH1	14:CN:47:LEU:HD21	2.28	0.49
40:BO:7:TYR:OH	40:BO:44:LYS:HG3	2.12	0.49
31:DA:1245:G:OP1	41:DP:16:ARG:HG2	2.13	0.49
39:DN:36:GLY:N	39:DN:42:TRP:HZ3	2.11	0.49
1:AA:309:G:H2'	1:AA:310:G:H8	1.77	0.49
33:BD:25:THR:HB	33:BD:82:ILE:H	1.78	0.49
33:DD:35:LYS:CE	33:DD:104:TYR:CD1	2.96	0.49
33:DD:59:LYS:HG3	33:DD:60:ARG:N	2.27	0.49
31:DA:2298:A:N6	31:DA:2318:G:C8	2.81	0.49
34:BE:34:VAL:HG22	34:BE:48:GLN:NE2	2.21	0.49
31:DA:2400:G:C5	31:DA:2401:U:C5	3.01	0.49
49:DX:25:LYS:CG	49:DX:26:TYR:N	2.51	0.49
49:DX:57:LEU:CD1	49:DX:57:LEU:N	2.76	0.49
51:BZ:108:PRO:HG3	51:BZ:141:VAL:HG22	1.95	0.49
49:DX:65:ARG:HA	49:DX:65:ARG:NE	2.28	0.49
45:BT:65:LYS:HG3	45:BT:66:VAL:H	1.78	0.49
1:CA:451:A:C6	1:CA:481:G:C5	3.01	0.49
41:BP:34:GLY:O	41:BP:35:HIS:CG	2.64	0.49
34:BE:39:PRO:HD3	34:BE:45:THR:OG1	2.13	0.49
31:BA:1022:G:O2'	31:BA:1023:U:OP2	2.31	0.49
4:CD:75:PHE:O	4:CD:78:LEU:HB2	2.13	0.49
32:DB:82:G:H2'	32:DB:83:G:H5'	1.93	0.49
1:AA:414:A:H2'	1:AA:415:A:O4'	2.13	0.49
1:AA:428:G:C6	1:AA:430:A:C6	3.00	0.49
4:AD:4:TYR:O	4:AD:5:ILE:HB	2.13	0.49
43:BR:9:LYS:C	43:BR:10:LEU:HG	2.33	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
38:DI:133:HIS:ND1	38:DI:134:PRO:CD	2.76	0.49
31:DA:1504:C:O2'	31:DA:1505:C:O5'	2.30	0.49
15:AO:54:ARG:HG2	15:AO:58:MET:HE1	1.95	0.49
31:DA:485:C:H2'	31:DA:486:C:C6	2.48	0.49
31:BA:1771:C:C1'	31:BA:1786:A:C8	2.95	0.49
34:BE:134:ILE:H	34:BE:134:ILE:HD13	1.78	0.49
6:CF:3:ARG:NH1	6:CF:38:GLU:OE2	2.46	0.49
1:CA:1434:A:H61	1:CA:1467:G:H1'	1.77	0.49
7:AG:79:ARG:HE	7:AG:84:ASN:HD21	1.55	0.49
35:DF:9:ILE:HG12	35:DF:14:PRO:HA	1.94	0.49
3:AC:7:PRO:O	3:AC:11:ARG:HG2	2.12	0.49
36:BG:16:ARG:O	36:BG:20:ILE:HG13	2.13	0.49
5:CE:129:ILE:O	5:CE:132:ALA:HB3	2.12	0.49
31:DA:1173:G:H5'	31:DA:1174:A:OP2	2.12	0.49
2:CB:97:TRP:CH2	2:CB:176:GLU:OE2	2.66	0.49
43:DR:49:ASP:O	43:DR:52:ILE:HB	2.13	0.49
31:DA:1044:G:C2	31:DA:1112:G:O6	2.66	0.49
31:DA:2752:C:C2'	31:DA:2752:C:O2	2.59	0.49
31:BA:1205:U:C3'	31:BA:1206:G:H5'	2.43	0.49
35:BF:34:TRP:CE2	41:BP:12:ALA:HB2	2.47	0.49
31:BA:900:A:H3'	31:BA:901:A:H8	1.77	0.49
1:CA:659:U:H2'	1:CA:660:G:H5'	1.93	0.49
1:AA:933:G:C2	1:AA:1385:G:C2	3.01	0.49
31:DA:1592:C:H2'	31:DA:1593:G:H8	1.78	0.49
1:AA:270:A:C6	1:AA:271:C:N3	2.81	0.49
38:BI:56:LYS:NZ	38:BI:57:ARG:CA	2.75	0.49
49:BX:63:LYS:HZ1	49:BX:70:LEU:HD21	1.78	0.49
7:CG:4:ARG:HD3	7:CG:5:ARG:NH1	2.27	0.49
43:BR:67:LEU:HD13	43:BR:76:VAL:HG21	1.94	0.49
9:AI:63:ILE:N	9:AI:63:ILE:HD12	2.27	0.49
47:BV:2:PHE:O	47:BV:3:ALA:HB3	2.13	0.49
1:AA:590:C:O2'	1:AA:591:U:H5'	2.13	0.49
31:BA:2689:U:H5''	31:BA:2690:C:H5'	1.94	0.49
1:CA:979:C:H3'	1:CA:980:C:H5''	1.95	0.49
31:DA:951:C:O2'	31:DA:952:G:H5'	2.12	0.49
31:DA:2350:C:H2'	31:DA:2351:G:O4'	2.13	0.49
36:BG:178:PHE:O	36:BG:180:PHE:CD1	2.66	0.49
1:AA:39:G:C5	1:AA:40:C:C5	3.01	0.49
1:AA:567:G:H2'	1:AA:568:G:O4'	2.11	0.49
31:DA:1895:C:C2	31:DA:1896:G:C8	3.01	0.49
1:CA:176:C:H2'	1:CA:177:C:C6	2.48	0.49
1:AA:1391:U:H2'	1:AA:1392:G:C8	2.48	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
16:CP:64:ALA:O	16:CP:65:GLN:C	2.51	0.49
1:CA:278:G:O4'	1:CA:282:A:H1'	2.13	0.49
31:BA:2483:C:H2'	31:BA:2483:C:O2	2.11	0.49
9:CI:99:LEU:HD12	9:CI:101:PHE:CE1	2.48	0.49
31:DA:41:C:H2'	31:DA:42:G:O4'	2.13	0.49
31:BA:928:G:H8	31:BA:928:G:O5'	1.96	0.49
31:BA:792:G:C3'	31:BA:793:A:H5'	2.43	0.49
1:AA:1250:A:N6	1:AA:1251:A:C6	2.81	0.49
1:AA:520:A:C2	1:AA:536:C:O2	2.66	0.49
28:B6:10:LEU:CD2	28:B6:10:LEU:N	2.75	0.49
30:B8:25:MET:HG3	41:BP:64:LYS:CB	2.29	0.49
2:AB:91:PRO:HG3	2:AB:154:LEU:CB	2.43	0.49
39:BN:2:LYS:O	39:BN:3:THR:OG1	2.24	0.49
46:BU:92:ARG:NH2	47:BV:10:LYS:HG2	2.27	0.49
1:AA:64:G:H4'	1:AA:65:U:H5''	1.93	0.49
33:DD:33:LEU:O	33:DD:35:LYS:N	2.46	0.49
32:DB:7:G:H4'	44:DS:29:PHE:CD1	2.48	0.49
31:DA:84:A:H5''	50:DY:9:LYS:HD2	1.94	0.49
1:CA:357:G:C2	1:CA:358:U:C6	3.01	0.49
16:CP:43:LYS:HG3	16:CP:48:TRP:CE3	2.48	0.49
36:BG:71:THR:HG22	36:BG:72:ARG:N	2.28	0.49
33:DD:131:LEU:HB2	33:DD:136:ILE:CD1	2.37	0.49
31:BA:813:U:H2'	31:BA:814:C:C6	2.48	0.49
23:B1:66:HIS:C	23:B1:68:PRO:HD2	2.32	0.49
23:B1:78:LYS:O	23:B1:80:LEU:HG	2.13	0.49
23:D1:94:LEU:HD22	23:D1:95:LEU:N	2.27	0.49
34:DE:111:ARG:HH12	43:DR:2:ARG:HH21	1.60	0.49
31:DA:1142:U:H5''	31:DA:1142(A):A:C5'	2.43	0.49
39:BN:65:LYS:C	39:BN:66:LYS:HG2	2.32	0.49
36:BG:131:TYR:HB3	36:BG:159:VAL:HG13	1.95	0.49
1:CA:927:G:OP2	1:CA:1503:A:C5	2.65	0.49
1:CA:1414:U:H3	1:CA:1486:G:H1	1.61	0.49
1:AA:1227:A:H2'	1:AA:1228:C:O5'	2.13	0.49
40:DO:107:ARG:HH22	45:DT:35:LYS:HD2	1.77	0.49
37:BH:43:VAL:HG12	37:BH:53:GLU:HB2	1.95	0.49
31:DA:1505:C:C6	31:DA:1506:C:C6	3.01	0.49
23:B1:10:LYS:HG3	23:B1:11:ARG:N	2.27	0.49
31:BA:1280:G:C3'	31:BA:1281:G:C5'	2.90	0.49
1:AA:253:U:H2'	1:AA:254:G:H8	1.77	0.49
37:DH:41:MET:O	37:DH:42:ARG:C	2.49	0.49
39:BN:77:GLY:O	39:BN:78:TYR:HB3	2.13	0.49
31:DA:271(Q):G:N3	31:DA:271(R):G:C8	2.81	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:DA:863:A:C2'	31:DA:864:G:H5'	2.42	0.49
50:DY:45:VAL:HG22	50:DY:62:GLU:CB	2.42	0.49
31:DA:1963:U:C2'	31:DA:1963:U:O2	2.60	0.49
1:CA:16:A:N3	1:CA:17:U:C6	2.81	0.49
48:BW:17:VAL:HG11	48:BW:103:ILE:HD13	1.94	0.49
1:AA:382:A:C2	1:AA:383:A:C4	3.01	0.49
1:CA:1057:G:C5	1:CA:1204:A:C2	3.01	0.49
45:BT:106:SER:HA	45:BT:110:ILE:CG1	2.42	0.49
1:CA:458:C:H2'	1:CA:460:G:C8	2.48	0.49
1:AA:946:A:N3	1:AA:1333:A:H2	2.11	0.49
34:BE:170:LEU:N	34:BE:170:LEU:CD1	2.75	0.49
31:DA:2020:A:O2'	31:DA:2021:C:H5'	2.13	0.49
44:DS:42:ASP:C	44:DS:44:LYS:N	2.58	0.49
1:CA:1160:G:H2'	1:CA:1160:G:N3	2.28	0.49
31:BA:340:A:C2'	31:BA:341:G:H5'	2.43	0.49
35:DF:192:LEU:HD13	35:DF:194:MET:HE3	1.95	0.49
31:BA:1380:G:N2	31:BA:1570:A:C2	2.80	0.49
27:D5:4:HIS:HB3	27:D5:5:PRO:CD	2.40	0.49
31:BA:50:U:H5''	31:BA:50:U:H6	1.78	0.49
31:BA:2854:G:H2'	31:BA:2855:C:C6	2.47	0.49
37:DH:149:ARG:HD3	37:DH:164:TYR:CE1	2.47	0.49
31:DA:2537:U:H2'	31:DA:2538:C:C6	2.48	0.49
17:AQ:40:LYS:HG2	17:AQ:41:LYS:N	2.27	0.49
1:CA:986:A:H2'	1:CA:987:G:O4'	2.13	0.49
2:CB:14:GLY:O	2:CB:15:VAL:HG13	2.13	0.49
11:AK:18:ARG:HB3	11:AK:33:THR:OG1	2.13	0.49
34:BE:26:ILE:HD12	34:BE:196:VAL:HG21	1.93	0.49
1:CA:518:C:H2'	1:CA:530:G:C2	2.48	0.49
3:CC:94:LEU:HD12	3:CC:95:THR:N	2.28	0.49
34:DE:200:GLU:N	34:DE:200:GLU:OE2	2.44	0.49
3:CC:138:VAL:HG22	3:CC:151:VAL:HG23	1.94	0.49
31:BA:41:C:H2'	31:BA:42:G:O4'	2.13	0.49
2:CB:178:ARG:HH21	8:CH:68:ARG:HH22	1.61	0.49
3:AC:53:ALA:O	3:AC:54:ARG:HB2	2.13	0.49
1:CA:477:A:O2'	1:CA:479:C:H5'	2.13	0.49
31:BA:1324:G:C4	31:BA:1328:G:O6	2.66	0.49
31:BA:212:G:O2'	31:BA:213:A:H5'	2.13	0.49
18:CR:79:LEU:HD23	18:CR:80:PRO:HD2	1.95	0.49
51:DZ:118:GLN:O	51:DZ:120:ILE:N	2.45	0.49
23:B1:40:ARG:NH2	31:BA:2082:A:H5'	2.28	0.49
46:DU:117:GLN:OE1	46:DU:117:GLN:HA	2.12	0.49
27:B5:55:ARG:HD3	27:B5:56:LYS:N	2.27	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
46:BU:92:ARG:NH2	47:BV:10:LYS:CB	2.76	0.48
47:BV:15:GLU:HB3	47:BV:16:PRO:CD	2.34	0.48
33:DD:27:THR:O	33:DD:28:GLU:HB2	2.13	0.48
39:BN:41:ASP:O	39:BN:42:TRP:C	2.51	0.48
42:BQ:9:TYR:C	42:BQ:9:TYR:CD2	2.86	0.48
30:D8:7:HIS:HD2	41:DP:50:ARG:HD3	1.78	0.48
34:BE:61:ARG:H	34:BE:62:PRO:HD2	1.76	0.48
30:D8:39:LYS:CE	30:D8:42:ARG:HH12	2.24	0.48
50:DY:98:VAL:O	50:DY:99:CYS:CB	2.61	0.48
31:BA:661:C:H2'	31:BA:662:G:C8	2.48	0.48
24:B2:29:LYS:O	24:B2:33:MET:SD	2.71	0.48
49:BX:57:LEU:O	49:BX:76:ARG:N	2.46	0.48
1:AA:1277:C:H2'	1:AA:1278:U:C5'	2.43	0.48
23:D1:67:ILE:N	23:D1:68:PRO:CD	2.76	0.48
31:DA:2822:G:O6	43:DR:4:LEU:HD13	2.12	0.48
35:BF:1:MET:O	35:BF:2:LYS:O	2.31	0.48
36:DG:57:ALA:HB2	36:DG:90:LEU:HD21	1.95	0.48
31:BA:2646:C:H2'	31:BA:2647:U:O4'	2.13	0.48
31:DA:2850:A:C2	31:DA:2851:A:C4	3.01	0.48
45:DT:52:ILE:O	45:DT:98:LYS:HE3	2.13	0.48
1:AA:504:C:H1'	1:AA:510:A:C4	2.47	0.48
4:AD:206:PHE:CD2	4:AD:207:TYR:CE2	3.01	0.48
1:AA:688:G:H2'	1:AA:689:C:C6	2.42	0.48
28:B6:29:ASN:O	28:B6:30:THR:C	2.48	0.48
50:BY:37:VAL:HG23	50:BY:38:ILE:N	2.27	0.48
31:DA:668:G:H5'	31:DA:669:G:OP2	2.13	0.48
1:CA:973:G:C4	10:CJ:55:LYS:HE2	2.48	0.48
31:BA:2476:A:H2'	31:BA:2477:C:C5'	2.40	0.48
1:CA:16:A:C2	1:CA:17:U:C6	3.01	0.48
31:BA:2698:U:H2'	31:BA:2699:C:C6	2.48	0.48
1:AA:1201:A:H5'	1:AA:1203:C:OP2	2.13	0.48
1:CA:298:A:H5''	1:CA:299:G:OP2	2.12	0.48
10:CJ:38:ILE:HG12	10:CJ:71:LEU:O	2.13	0.48
1:AA:635:G:C4	1:AA:636:U:C6	3.00	0.48
1:CA:1322:C:H6	1:CA:1322:C:OP1	1.96	0.48
31:DA:19:C:H2'	31:DA:20:C:H6	1.78	0.48
40:BO:35:VAL:HG13	40:BO:65:THR:HG22	1.95	0.48
31:DA:2040:C:H2'	31:DA:2041:U:O4'	2.12	0.48
2:AB:97:TRP:HH2	2:AB:176:GLU:HG3	1.77	0.48
40:DO:64:ARG:HG2	40:DO:79:PHE:CD1	2.48	0.48
31:BA:108:U:O2	31:BA:109:G:C8	2.66	0.48
31:DA:2687:U:C4	31:DA:2688:U:C5	3.01	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
33:BD:16:MET:HB2	33:BD:207:GLY:CA	2.43	0.48
50:BY:88:LYS:NZ	50:BY:93:GLY:HA3	2.27	0.48
35:DF:83:PHE:O	35:DF:84:VAL:HB	2.13	0.48
2:CB:35:GLU:HA	2:CB:39:ILE:O	2.13	0.48
31:DA:1591:G:C5'	31:DA:1591:G:H8	2.26	0.48
31:DA:2102:U:C6	31:DA:2187:G:O6	2.66	0.48
31:BA:1699:G:H4'	31:BA:1700:A:OP2	2.12	0.48
31:DA:1000:A:C6	31:DA:1001:A:C6	3.00	0.48
31:BA:535:C:O2'	31:BA:536:A:H5'	2.13	0.48
31:DA:303:U:H2'	31:DA:304:G:C8	2.48	0.48
1:CA:165:C:H2'	1:CA:166:G:H8	1.78	0.48
47:BV:40:LEU:CD1	47:BV:40:LEU:C	2.81	0.48
49:DX:70:LEU:O	49:DX:71:GLY:C	2.50	0.48
31:DA:721:C:H2'	31:DA:722:A:C8	2.48	0.48
9:CI:112:LYS:HA	9:CI:119:ALA:HB2	1.94	0.48
34:DE:10:GLY:HA3	45:DT:8:LYS:HE3	1.95	0.48
1:AA:916:G:H2'	1:AA:917:G:C8	2.48	0.48
36:BG:43:LEU:HD12	36:BG:153:ARG:HD2	1.95	0.48
36:DG:43:LEU:HD12	36:DG:153:ARG:HD2	1.94	0.48
1:AA:985:C:H2'	1:AA:986:A:C8	2.48	0.48
1:AA:642:A:C4	8:AH:114:THR:O	2.65	0.48
31:DA:1853:A:N1	31:DA:2087:G:H1'	2.28	0.48
31:DA:792:G:C3'	31:DA:793:A:H5'	2.43	0.48
7:AG:85:TYR:CD1	7:AG:154:TYR:HE1	2.30	0.48
51:DZ:175:VAL:HB	51:DZ:176:PRO:CD	2.43	0.48
31:BA:470:A:C2	31:BA:471:A:C4	3.01	0.48
11:CK:24:SER:HB3	11:CK:27:ASN:O	2.13	0.48
31:BA:2352:A:C2'	31:BA:2353:G:H5'	2.43	0.48
1:AA:142:G:H2'	1:AA:143:A:H8	1.78	0.48
33:DD:153:ALA:O	33:DD:154:LYS:HG3	2.13	0.48
31:DA:2320:A:N3	31:DA:2320:A:H2'	2.27	0.48
18:CR:22:VAL:O	18:CR:22:VAL:HG12	2.13	0.48
20:AT:75:ASN:HD22	20:AT:75:ASN:H	1.59	0.48
1:AA:1516:G:H2'	1:AA:1518:A:OP2	2.12	0.48
1:AA:451:A:C6	1:AA:481:G:C5	3.01	0.48
33:DD:25:THR:HG21	33:DD:82:ILE:H	1.76	0.48
36:DG:94:LEU:HB2	36:DG:99:MET:HA	1.94	0.48
30:D8:4:MET:CE	31:DA:592:G:N3	2.76	0.48
28:D6:12:GLU:CA	28:D6:23:THR:HA	2.43	0.48
22:B0:8:GLY:HA2	42:BQ:83:MET:CG	2.43	0.48
24:B2:51:ARG:HD3	24:B2:51:ARG:O	2.13	0.48
36:BG:57:ALA:CB	36:BG:90:LEU:HD21	2.43	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
33:DD:172:TYR:HD1	33:DD:185:VAL:C	2.17	0.48
31:DA:2404:C:C2'	31:DA:2405:G:H5''	2.43	0.48
31:BA:744:G:C2'	31:BA:745:G:O5'	2.62	0.48
34:BE:132:HIS:CG	34:BE:135:HIS:CE1	3.01	0.48
31:DA:2850:A:H2'	31:DA:2851:A:O5'	2.13	0.48
31:DA:2864:G:H2'	31:DA:2865:U:O4'	2.13	0.48
31:BA:2864:G:H2'	31:BA:2865:U:O4'	2.12	0.48
1:CA:1505:G:C4'	1:CA:1506:U:H5''	2.42	0.48
48:BW:88:ARG:HB2	48:BW:92:ARG:HB3	1.94	0.48
31:BA:2681:C:C5	31:BA:2725:A:N6	2.66	0.48
39:BN:131:GLN:NE2	39:BN:134:ARG:CA	2.74	0.48
1:AA:685:G:C2	1:AA:686:U:C4	3.02	0.48
31:BA:855:G:C6	31:BA:856:C:C4	3.01	0.48
31:DA:1478:G:O2'	31:DA:1558:A:H2	1.95	0.48
31:BA:2839:G:H5'	43:BR:46:GLY:HA3	1.94	0.48
1:CA:267:C:OP1	17:CQ:67:LYS:HD2	2.13	0.48
6:AF:61:LEU:HD23	6:AF:63:TYR:OH	2.12	0.48
34:BE:56:PRO:O	34:BE:58:ARG:N	2.46	0.48
28:B6:26:ASN:HD22	28:B6:32:ASN:HD21	1.60	0.48
24:D2:57:ILE:HG13	24:D2:58:ALA:C	2.33	0.48
1:AA:948:C:C5	13:AM:106:ASN:ND2	2.81	0.48
31:DA:1722:A:N6	31:DA:1741:A:N1	2.61	0.48
31:DA:2557:G:C2'	31:DA:2558:C:H5'	2.43	0.48
19:AS:36:ARG:HD2	19:AS:52:TYR:O	2.13	0.48
31:DA:1301:A:C8	31:DA:1303:G:C8	3.01	0.48
2:AB:59:GLU:C	2:AB:61:LEU:H	2.17	0.48
19:CS:36:ARG:HD2	19:CS:52:TYR:O	2.13	0.48
41:BP:14:LYS:O	41:BP:15:ARG:CB	2.60	0.48
3:CC:112:SER:HB3	3:CC:115:LEU:HD12	1.95	0.48
1:AA:1298:C:C6	7:AG:114:ARG:CZ	2.97	0.48
1:CA:664:G:P	18:CR:64:ARG:HH21	2.36	0.48
1:AA:1290:G:N3	1:AA:1290:G:H2'	2.27	0.48
31:BA:848:G:C4	31:BA:933:A:H8	2.31	0.48
9:AI:61:ALA:HB1	9:AI:63:ILE:HD11	1.93	0.48
1:CA:1173:G:H2'	1:CA:1174:G:C8	2.47	0.48
19:CS:35:SER:C	19:CS:37:ARG:H	2.16	0.48
31:DA:375:C:H2'	31:DA:376:C:C6	2.48	0.48
31:DA:376:C:N4	31:DA:398:G:H1	2.09	0.48
38:DI:120:ILE:HG22	38:DI:121:LYS:N	2.27	0.48
31:BA:2335:A:C8	31:BA:2337:G:N7	2.82	0.48
31:DA:271(A):A:C2	31:DA:272(D):G:N3	2.80	0.48
25:B3:17:LYS:HE2	31:BA:969:U:OP1	2.14	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
34:DE:26:ILE:HD12	34:DE:196:VAL:HG21	1.93	0.48
45:BT:90:GLN:NE2	45:BT:124:ASP:OD2	2.46	0.48
4:AD:92:VAL:HG12	4:AD:96:LEU:CD2	2.42	0.48
38:DI:117:GLU:HG3	38:DI:118:LYS:H	1.78	0.48
9:CI:40:LEU:HD11	9:CI:70:LYS:CG	2.44	0.48
31:BA:765:G:H2'	31:BA:766:C:C6	2.48	0.48
31:DA:1296:G:O2'	31:DA:1297:C:H5'	2.13	0.48
47:BV:96:ILE:HG22	47:BV:97:LYS:N	2.27	0.48
33:BD:25:THR:CG2	33:BD:25:THR:O	2.59	0.48
31:DA:2303:G:N2	31:DA:2314:C:C6	2.81	0.48
31:DA:1578:U:O2	31:DA:1578:U:H2'	2.13	0.48
31:DA:67:U:C2'	31:DA:68:G:H5'	2.43	0.48
49:BX:60:ARG:NE	49:BX:74:PRO:CG	2.77	0.48
33:BD:89:SER:HB2	33:BD:159:ALA:HB2	1.94	0.48
10:CJ:48:THR:HA	10:CJ:62:HIS:CB	2.43	0.48
50:DY:71:LYS:HB2	50:DY:71:LYS:HZ2	1.75	0.48
36:BG:90:LEU:HD12	36:BG:90:LEU:H	1.78	0.48
31:BA:814:C:H5	41:BP:27:HIS:CD2	2.31	0.48
27:D5:54:GLY:O	27:D5:56:LYS:NZ	2.43	0.48
33:BD:165:ILE:HD13	33:BD:175:LEU:HD21	1.94	0.48
34:DE:111:ARG:HD3	34:DE:160:TYR:CE1	2.48	0.48
34:BE:44:TYR:O	34:BE:45:THR:HB	2.13	0.48
31:DA:1030:G:OP2	42:DQ:128:LYS:HE2	2.12	0.48
4:CD:19:LEU:HD13	4:CD:21:LEU:HD21	1.94	0.48
31:BA:1529:G:C2	31:BA:1530:C:H5''	2.48	0.48
45:DT:22:PHE:CE1	45:DT:52:ILE:HD11	2.48	0.48
31:BA:2850:A:H5'	31:BA:2868:A:C2	2.48	0.48
45:BT:49:VAL:O	45:BT:49:VAL:HG22	2.13	0.48
38:DI:15:VAL:C	38:DI:17:GLN:H	2.17	0.48
37:BH:70:THR:HG22	37:BH:71:LEU:N	2.29	0.48
36:BG:82:LEU:C	36:BG:83:ARG:HG3	2.33	0.48
1:CA:1227:A:H2'	1:CA:1228:C:O5'	2.13	0.48
31:DA:280:C:C2'	31:DA:281:G:O5'	2.61	0.48
31:DA:353:G:H2'	31:DA:354:G:O5'	2.12	0.48
31:DA:336:C:H2'	31:DA:337:C:H6	1.78	0.48
6:CF:44:GLY:HA2	6:CF:59:TYR:CZ	2.48	0.48
31:DA:2360:A:O2'	31:DA:2361:A:O5'	2.31	0.48
30:B8:14:VAL:HG13	30:B8:22:VAL:HG13	1.95	0.48
40:BO:107:ARG:HH22	45:BT:35:LYS:HD2	1.76	0.48
45:BT:36:GLU:C	45:BT:38:ASN:H	2.16	0.48
1:CA:682:G:C4	1:CA:683:G:C8	3.01	0.48
31:DA:856:C:C4'	31:DA:857:C:OP1	2.54	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:458:C:H2'	1:AA:460:G:H8	1.78	0.48
13:AM:91:ARG:HB2	13:AM:98:VAL:HG21	1.93	0.48
31:DA:341:G:H2'	31:DA:342:G:O5'	2.14	0.48
2:AB:97:TRP:CH2	2:AB:176:GLU:HG3	2.48	0.48
31:DA:729:G:O5'	33:DD:208:LYS:NZ	2.44	0.48
1:AA:1352:C:O2	1:AA:1371:G:C2	2.65	0.48
15:AO:23:GLY:O	15:AO:24:SER:HB3	2.12	0.48
2:CB:29:ALA:C	2:CB:31:TYR:H	2.16	0.48
31:DA:2504:U:H2'	31:DA:2504:U:O2	2.12	0.48
35:BF:51:THR:OG1	35:BF:91:GLY:HA3	2.13	0.48
1:AA:165:C:H2'	1:AA:166:G:H8	1.77	0.48
33:DD:4:LYS:NZ	33:DD:20:ASP:HA	2.29	0.48
1:CA:9:G:N3	1:CA:9:G:H2'	2.27	0.48
6:CF:10:LEU:HD21	6:CF:26:ILE:HD11	1.94	0.48
11:CK:21:ILE:HB	11:CK:84:VAL:HA	1.95	0.48
31:DA:465:G:C6	31:DA:466:A:N6	2.80	0.48
4:AD:88:VAL:O	4:AD:92:VAL:HG23	2.12	0.48
1:AA:1015:A:N6	1:AA:1016:A:C6	2.81	0.48
1:CA:1137:C:H4'	1:CA:1138:G:C2	2.49	0.48
4:CD:117:ALA:O	4:CD:120:LEU:HB2	2.13	0.48
4:CD:121:VAL:O	4:CD:134:ASP:HA	2.13	0.48
31:BA:2703:C:H2'	31:BA:2704:C:H6	1.78	0.48
30:D8:38:GLY:C	30:D8:40:GLU:H	2.16	0.48
31:DA:2393:A:H5'	41:DP:62:LEU:HB3	1.95	0.48
15:AO:26:GLU:OE2	15:AO:77:ARG:NH1	2.47	0.48
24:B2:30:ARG:H	24:B2:30:ARG:HD2	1.77	0.48
49:BX:89:ILE:HA	49:BX:92:LEU:HD12	1.95	0.48
31:DA:329:G:H1	50:DY:19:LYS:HE3	1.77	0.48
2:AB:215:LEU:O	2:AB:219:VAL:HG23	2.12	0.48
43:BR:34:ILE:HD12	43:BR:34:ILE:HA	1.54	0.48
23:D1:73:LEU:O	23:D1:76:ARG:HG2	2.13	0.48
37:BH:85:LYS:HZ1	37:BH:145:ALA:HA	1.77	0.48
31:DA:389:G:C2	41:DP:71:VAL:HG12	2.49	0.48
34:BE:132:HIS:O	34:BE:132:HIS:ND1	2.45	0.48
31:DA:1141:U:H6	39:DN:63:THR:HB	1.77	0.48
39:DN:24:GLY:CA	39:DN:27:ALA:HB3	2.40	0.48
31:DA:1188:U:H2'	31:DA:1189:A:C5'	2.35	0.48
31:DA:2637:U:O2'	31:DA:2638:G:H5'	2.13	0.48
31:DA:813:U:H2'	31:DA:814:C:C6	2.48	0.48
45:DT:28:VAL:HG22	45:DT:46:GLU:CA	2.43	0.48
12:AL:46:LYS:HG2	12:AL:47:LYS:H	1.78	0.48
49:DX:84:ALA:O	49:DX:86:GLY:N	2.47	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:BA:354:G:H2'	31:BA:355:G:H8	1.78	0.48
51:DZ:54:HIS:HE1	51:DZ:123:ASP:CG	2.15	0.48
1:CA:1072:G:C4	1:CA:1073:U:C5	3.01	0.48
1:CA:930:C:C4	1:CA:931:C:C5	3.01	0.48
31:BA:1486:A:H61	31:BA:1504:C:H42	1.60	0.48
1:AA:491:G:C2	1:AA:492:G:C4	3.02	0.48
31:BA:855:G:C6	31:BA:856:C:N4	2.81	0.48
10:AJ:33:GLN:H	10:AJ:75:ILE:HD11	1.78	0.48
23:D1:16:ASN:HB3	23:D1:46:LEU:CD1	2.43	0.48
23:D1:9:GLY:O	23:D1:10:LYS:CB	2.60	0.48
13:AM:48:LEU:HD11	13:AM:53:VAL:HG22	1.95	0.48
1:CA:920:U:H2'	1:CA:921:U:H6	1.75	0.48
33:DD:68:LYS:HB2	33:DD:70:TRP:CH2	2.48	0.48
1:AA:1076:C:C2	1:AA:1082:G:C2	3.01	0.48
23:B1:26:ARG:HB2	23:B1:34:THR:CA	2.44	0.48
2:AB:28:PHE:HD1	2:AB:190:THR:HG22	1.78	0.48
9:CI:104:ARG:O	9:CI:104:ARG:HG2	2.12	0.48
1:AA:192:U:H4'	20:AT:103:GLY:HA2	1.94	0.48
1:AA:664:G:N2	1:AA:741:G:H1	2.11	0.48
40:BO:65:THR:CG2	40:BO:69:ILE:HD11	2.42	0.48
1:CA:1298:C:C6	7:CG:114:ARG:CZ	2.96	0.48
2:AB:67:THR:HG21	2:AB:155:LEU:CD2	2.42	0.48
2:AB:21:ARG:HG3	2:AB:21:ARG:O	2.12	0.48
1:CA:1106:G:H4'	3:CC:171:GLY:O	2.13	0.48
28:D6:42:TRP:HA	28:D6:42:TRP:HE3	1.78	0.48
10:AJ:50:ILE:HA	10:AJ:60:ARG:HB2	1.95	0.48
31:DA:2567:G:H2'	31:DA:2568:C:H6	1.77	0.48
31:DA:922:U:H2'	31:DA:923:C:C6	2.47	0.48
1:AA:930:C:C4	1:AA:931:C:C5	3.01	0.48
31:DA:466:A:H2'	31:DA:467:G:H5'	1.94	0.48
31:BA:2350:C:H2'	31:BA:2351:G:O4'	2.13	0.48
31:BA:1321:A:H2'	31:BA:1322:A:O4'	2.13	0.48
36:DG:107:LEU:HD11	36:DG:178:PHE:CE1	2.48	0.48
1:CA:1250:A:N6	1:CA:1251:A:C6	2.82	0.48
51:BZ:112:ARG:C	51:BZ:114:GLY:H	2.15	0.48
47:BV:32:THR:HG22	47:BV:33:VAL:H	1.77	0.48
44:BS:51:ALA:HB3	44:BS:73:LEU:HG	1.94	0.48
36:BG:165:THR:OG1	36:BG:168:GLU:HG3	2.13	0.48
31:BA:231:C:O2'	31:BA:232:G:H5'	2.14	0.48
31:DA:1404:C:O2	31:DA:1404:C:H2'	2.13	0.48
19:AS:44:MET:HA	19:AS:44:MET:CE	2.44	0.48
31:BA:659:C:H6	31:BA:659:C:H5''	1.78	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:CS:44:MET:CE	19:CS:44:MET:HA	2.43	0.48
1:AA:522:C:H41	12:AL:53:ARG:HH22	1.60	0.48
3:AC:94:LEU:HD12	3:AC:95:THR:N	2.28	0.48
31:DA:80:G:N2	31:DA:81:G:H1'	2.28	0.48
41:BP:62:LEU:CD2	41:BP:62:LEU:H	1.94	0.48
1:AA:375:U:O3'	16:AP:6:LEU:HB2	2.13	0.48
33:DD:25:THR:CB	33:DD:82:ILE:H	2.26	0.48
33:DD:24:ILE:HD11	33:DD:84:TYR:N	2.28	0.48
50:DY:81:LYS:HG2	50:DY:97:ARG:H	1.79	0.48
49:DX:59:VAL:O	49:DX:60:ARG:O	2.31	0.48
49:DX:73:ARG:H	49:DX:74:PRO:HD3	1.76	0.48
31:DA:996:A:O2'	46:DU:92:ARG:HG3	2.14	0.48
16:CP:34:GLU:OE2	16:CP:55:ARG:HD3	2.14	0.48
27:D5:51:TYR:N	27:D5:54:GLY:HA3	2.29	0.48
15:CO:82:ILE:C	15:CO:82:ILE:HD13	2.33	0.48
37:DH:85:LYS:HE3	37:DH:133:VAL:CB	2.38	0.48
36:DG:81:LYS:O	36:DG:82:LEU:O	2.31	0.48
41:DP:125:VAL:O	41:DP:145:PRO:HD2	2.14	0.48
50:DY:8:LYS:HE3	50:DY:72:VAL:HG23	1.95	0.48
45:DT:32:TYR:CB	45:DT:81:PRO:HB2	2.43	0.48
13:AM:31:LYS:HA	13:AM:34:LEU:HD12	1.94	0.48
50:BY:37:VAL:HG23	50:BY:38:ILE:H	1.78	0.48
6:CF:73:ASN:O	6:CF:76:ALA:HB3	2.14	0.48
1:AA:491:G:C4	1:AA:492:G:C8	3.01	0.48
31:BA:2789:C:OP1	31:BA:2789:C:C4'	2.55	0.48
33:BD:228:PRO:HD3	33:BD:235:GLY:CA	2.42	0.48
3:AC:68:VAL:HG12	3:AC:70:VAL:HG23	1.96	0.48
1:AA:322:C:OP2	1:AA:328:C:N4	2.47	0.48
39:BN:126:PRO:O	39:BN:127:ASP:HB2	2.14	0.48
1:AA:617:G:N1	1:AA:618:C:C5	2.82	0.48
33:BD:77:ALA:HB2	33:BD:97:TYR:CG	2.47	0.48
31:DA:1833:U:O2'	31:DA:1969:A:N1	2.39	0.48
2:AB:168:THR:HG23	2:AB:192:SER:HA	1.96	0.48
19:CS:6:LYS:HD2	19:CS:6:LYS:N	2.27	0.48
1:CA:1123:A:O2'	10:CJ:38:ILE:HG22	2.14	0.48
31:DA:2762:G:H2'	31:DA:2763:G:H5'	1.96	0.48
34:BE:201:THR:HG22	34:BE:203:LYS:N	2.24	0.48
35:BF:158:THR:HG23	35:BF:160:ASN:N	2.26	0.48
31:BA:1169:G:N2	31:BA:1181:C:C2	2.81	0.48
31:DA:342:G:C2'	31:DA:343:C:H5'	2.42	0.48
31:DA:1722:A:O2'	31:DA:1739:U:C5'	2.61	0.48
31:DA:1741:A:N7	31:DA:1742:G:C2	2.82	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:CA:1158:C:H42	1:CA:1181:G:H22	1.60	0.48
1:AA:47:C:H5''	1:AA:365:U:C6	2.49	0.48
9:AI:53:VAL:CB	9:AI:92:TYR:HE2	2.26	0.48
1:CA:1179:A:O2'	9:CI:103:THR:HG23	2.13	0.48
31:BA:2040:C:H2'	31:BA:2041:U:O4'	2.14	0.48
31:BA:528:A:H8	31:BA:528:A:H3'	1.77	0.48
37:DH:13:LYS:CE	37:DH:13:LYS:HA	2.39	0.48
1:AA:950:U:H6	13:AM:102:ARG:NH1	2.11	0.48
31:BA:1751:C:O4'	31:BA:2860:A:C2	2.67	0.48
1:AA:1106:G:H4'	3:AC:171:GLY:O	2.13	0.48
33:BD:224:ALA:O	33:BD:225:ALA:CB	2.62	0.48
1:AA:341:C:O2'	1:AA:342:C:H5'	2.13	0.48
1:AA:552:U:H5'	12:AL:86:ARG:HD2	1.95	0.48
38:DI:99:GLU:HG3	38:DI:103:ARG:CZ	2.44	0.48
29:D7:24:THR:HG23	29:D7:27:GLY:N	2.29	0.48
31:BA:1016:G:H2'	31:BA:1017:G:H8	1.78	0.48
31:DA:128:C:O2'	31:DA:129:C:P	2.71	0.48
5:CE:7:GLU:HB2	5:CE:35:GLY:O	2.13	0.48
34:DE:11:MET:HB3	34:DE:24:THR:HA	1.96	0.48
40:DO:50:GLY:C	40:DO:52:VAL:N	2.65	0.48
1:AA:790:A:C6	1:AA:791:G:C6	3.02	0.48
1:CA:303:A:H2'	1:CA:304:U:O4'	2.14	0.48
1:CA:580:U:O2'	15:CO:57:LEU:HD13	2.13	0.48
31:DA:1547:C:H2'	31:DA:1548:C:C6	2.49	0.48
1:CA:1310:G:OP1	13:CM:77:ASN:HB3	2.14	0.48
1:AA:1250:A:H61	1:AA:1354:C:H1'	1.78	0.48
9:CI:40:LEU:HD11	9:CI:70:LYS:HG3	1.94	0.48
38:BI:21:VAL:HG21	38:BI:26:ALA:HB2	1.95	0.48
51:DZ:112:ARG:C	51:DZ:114:GLY:H	2.16	0.48
1:AA:1156:G:H8	1:AA:1156:G:O5'	1.97	0.48
14:CN:44:LEU:C	14:CN:44:LEU:HD12	2.34	0.48
30:B8:27:THR:HA	41:BP:62:LEU:CD1	2.43	0.48
47:DV:73:SER:OG	47:DV:75:PHE:CE1	2.57	0.48
31:BA:2314:C:N3	31:BA:2315:G:C8	2.82	0.48
28:D6:51:GLU:O	28:D6:52:VAL:HG23	2.14	0.48
31:DA:2399:G:H2'	31:DA:2400:G:O4'	2.14	0.48
31:BA:173:G:C6	31:BA:174:C:C4	3.01	0.48
46:DU:104:GLN:O	46:DU:108:GLU:HG3	2.12	0.48
24:B2:54:LYS:H	24:B2:56:GLN:NE2	2.10	0.48
36:BG:54:GLU:O	36:BG:57:ALA:HB3	2.13	0.48
36:BG:94:LEU:HB2	36:BG:99:MET:HA	1.96	0.48
44:BS:26:LEU:O	44:BS:88:ASP:HB3	2.13	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
32:BB:75:G:C8	32:BB:75:G:H5'	2.34	0.48
39:BN:120:LEU:HD13	39:BN:121:LYS:N	2.29	0.48
27:D5:32:PRO:O	27:D5:33:CYS:CB	2.58	0.48
41:BP:23:PRO:C	41:BP:33:ARG:HE	2.13	0.48
23:B1:94:LEU:HD22	23:B1:95:LEU:N	2.28	0.48
31:DA:1658:C:H2'	31:DA:1659:U:C6	2.49	0.48
34:DE:132:HIS:CG	34:DE:135:HIS:CE1	2.98	0.48
1:CA:431:A:H2'	1:CA:432:A:O4'	2.14	0.48
1:CA:504:C:H1'	1:CA:510:A:C4	2.48	0.48
4:CD:30:LYS:HA	4:CD:35:ARG:HD2	1.95	0.48
36:DG:144:ILE:HD11	36:DG:148:MET:HG2	1.94	0.48
39:DN:67:LEU:HD22	39:DN:88:GLU:OE2	2.13	0.48
45:BT:22:PHE:CE2	45:BT:85:LYS:HE3	2.48	0.48
41:BP:111:ARG:HA	41:BP:128:HIS:CD2	2.48	0.48
4:AD:74:GLN:O	4:AD:78:LEU:HG	2.14	0.48
24:D2:46:GLN:NE2	24:D2:47:ASN:N	2.61	0.48
36:DG:131:TYR:HB3	36:DG:159:VAL:HG13	1.96	0.48
37:BH:54:ARG:CG	37:BH:65:HIS:HD2	2.27	0.48
50:BY:37:VAL:HG11	50:BY:72:VAL:HG21	1.96	0.48
20:AT:50:GLU:CB	20:AT:100:ILE:HG12	2.34	0.48
1:CA:63:C:O2'	1:CA:380:G:H4'	2.13	0.48
10:AJ:32:ALA:HB1	10:AJ:75:ILE:HG13	1.94	0.48
48:BW:18:ARG:HG2	48:BW:18:ARG:NH1	2.29	0.48
6:CF:3:ARG:HB3	6:CF:93:SER:HB2	1.95	0.48
10:AJ:74:ILE:HD13	10:AJ:74:ILE:H	1.77	0.48
39:BN:28:THR:CG2	39:BN:29:LYS:N	2.77	0.48
1:AA:184:G:H2'	1:AA:185:A:H8	1.78	0.48
31:BA:1719:G:H2'	31:BA:1720:U:C5'	2.43	0.48
36:DG:11:TYR:CZ	36:DG:16:ARG:HD3	2.48	0.48
31:BA:2020:A:OP1	46:BU:26:GLY:HA3	2.12	0.48
36:BG:29:TRP:C	36:BG:31:VAL:N	2.66	0.48
31:BA:1318:C:H2'	31:BA:1318:C:O2	2.14	0.48
8:CH:6:ILE:H	8:CH:6:ILE:CD1	2.27	0.48
7:CG:50:ILE:HD12	7:CG:61:VAL:HG11	1.94	0.48
31:BA:34:C:H2'	31:BA:35:G:OP1	2.13	0.48
5:AE:129:ILE:O	5:AE:132:ALA:HB3	2.12	0.48
38:DI:56:LYS:NZ	38:DI:57:ARG:CA	2.77	0.48
39:BN:51:PHE:O	39:BN:119:ARG:O	2.31	0.48
34:BE:179:GLU:HB3	34:BE:181:LEU:HD22	1.95	0.48
31:DA:945:A:O3'	31:DA:946:G:H4'	2.14	0.48
31:BA:923:C:H2'	31:BA:924:C:C6	2.48	0.48
27:B5:10:LYS:HE3	31:BA:1262:A:N3	2.29	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:BA:893:C:H2'	31:BA:894:C:O5'	2.13	0.48
31:DA:128:C:H6	31:DA:128:C:H5''	1.79	0.48
17:AQ:7:THR:HA	17:AQ:57:VAL:O	2.14	0.48
17:CQ:74:LEU:HD12	17:CQ:75:ARG:HG2	1.96	0.48
31:DA:750:A:C4	31:DA:753:C:H1'	2.49	0.48
5:CE:110:LEU:O	5:CE:115:VAL:HG23	2.13	0.48
2:AB:14:GLY:O	2:AB:15:VAL:HG13	2.12	0.48
45:DT:90:GLN:NE2	45:DT:124:ASP:OD2	2.46	0.48
12:AL:89:ARG:HA	12:AL:97:ARG:HA	1.95	0.48
31:DA:1157:G:C2'	31:DA:1158:C:H5'	2.42	0.48
11:AK:41:THR:CG2	11:AK:42:TRP:N	2.76	0.48
31:DA:523:C:H4'	31:DA:540:C:O2	2.14	0.48
31:DA:256:A:C2	31:DA:257:A:C4	3.02	0.48
1:AA:579:G:C5	1:AA:580:U:C5	3.01	0.48
31:DA:2027:G:C5	31:DA:2028:U:C5	3.01	0.48
1:AA:1311:G:N2	1:AA:1327:C:C2	2.81	0.48
43:BR:28:LEU:HD22	43:BR:28:LEU:O	2.14	0.48
1:CA:44:G:N2	1:CA:399:G:C4	2.81	0.48
1:CA:1404:C:H2'	1:CA:1405:G:C8	2.49	0.48
1:CA:1311:G:N2	1:CA:1327:C:C2	2.81	0.48
41:DP:16:ARG:HG3	41:DP:17:LYS:H	1.78	0.48
41:DP:16:ARG:CG	41:DP:17:LYS:N	2.75	0.48
39:DN:40:PRO:C	46:DU:64:ARG:NH2	2.67	0.48
31:BA:994:C:O2	47:BV:10:LYS:HE2	2.13	0.48
1:AA:352:C:O2'	1:AA:354:G:OP1	2.25	0.48
1:AA:356:A:H2'	1:AA:357:G:H8	1.78	0.48
31:BA:1497:U:C2'	31:BA:1497:U:O2	2.62	0.48
31:BA:1568:G:OP2	33:BD:63:ARG:NH2	2.46	0.48
31:DA:2314:C:N3	31:DA:2315:G:C8	2.82	0.48
31:DA:2314:C:O2'	31:DA:2315:G:H5'	2.14	0.48
28:D6:37:ARG:HB3	31:DA:2344:U:O2'	2.13	0.48
50:BY:100:ALA:O	50:BY:101:LYS:HB3	2.12	0.48
31:DA:620:G:H8	31:DA:622:G:O6	1.97	0.48
24:D2:26:ARG:HD2	24:D2:29:LYS:HE2	1.96	0.48
49:DX:29:TRP:CE3	49:DX:74:PRO:HB2	2.49	0.48
31:BA:2495:G:H5''	42:BQ:81:VAL:HG22	1.96	0.48
1:CA:376:G:O2'	1:CA:377:G:H5'	2.12	0.48
16:CP:4:ILE:HD12	16:CP:4:ILE:N	2.29	0.48
31:BA:1406:U:H2'	31:BA:1407:C:C6	2.48	0.48
23:B1:85:LEU:C	23:B1:87:PRO:CD	2.78	0.48
31:DA:2273:A:C2'	31:DA:2274:A:H5'	2.44	0.48
31:BA:1019:U:C2'	31:BA:1021:A:H2	2.26	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:CA:438:G:OP1	4:CD:125:HIS:HE1	1.95	0.48
1:CA:542:G:H2'	1:CA:543:C:H6	1.77	0.48
4:CD:74:GLN:O	4:CD:78:LEU:HG	2.14	0.48
31:BA:627:A:C5	31:BA:637:A:N7	2.82	0.48
31:DA:2629:A:N3	31:DA:2629:A:H2'	2.29	0.48
41:BP:85:LEU:HB3	41:BP:114:ILE:CD1	2.43	0.48
1:AA:429:U:H4'	1:AA:430:A:O5'	2.13	0.48
31:DA:1677:A:H2'	31:DA:1678:G:H8	1.78	0.48
31:DA:286:C:O2'	31:DA:287:C:H5'	2.13	0.48
30:B8:4:MET:O	30:B8:62:LEU:HD12	2.13	0.48
51:BZ:54:HIS:HE1	51:BZ:123:ASP:CG	2.17	0.48
1:AA:1074:G:C2	1:AA:1102:A:C2	3.02	0.48
31:BA:1486:A:H2'	31:BA:1487:G:C8	2.48	0.48
1:AA:102:G:C6	1:AA:103:C:C4	3.02	0.48
33:DD:159:ALA:N	33:DD:161:THR:CG2	2.72	0.48
31:DA:1332:G:N1	31:DA:1609:A:O2'	2.46	0.48
31:BA:1047:G:H21	31:BA:1111:A:N6	2.02	0.48
1:CA:321:A:C2	1:CA:333:G:C2	3.02	0.48
1:CA:134:A:N6	16:CP:25:ARG:HH12	2.03	0.48
1:AA:1434:A:H61	1:AA:1467:G:H1'	1.78	0.48
31:BA:2558:C:H2'	31:BA:2559:C:O5'	2.14	0.48
1:AA:631:G:H5''	1:AA:632:A:OP1	2.13	0.48
31:BA:1721:G:H8	31:BA:1741:A:H62	1.60	0.48
32:BB:89:G:C6	32:BB:90:A:N6	2.82	0.48
31:DA:2200:C:H2'	31:DA:2200:C:O2	2.14	0.48
1:CA:612:C:O2	1:CA:629:G:N2	2.47	0.48
5:AE:51:VAL:O	5:AE:55:VAL:HG23	2.14	0.48
8:AH:6:ILE:HB	8:AH:85:ARG:HH12	1.78	0.48
32:BB:14:U:O2	32:BB:14:U:O4'	2.27	0.48
16:CP:68:ASP:C	16:CP:70:ALA:H	2.17	0.48
34:DE:101:ARG:HB3	34:DE:169:ASN:HD22	1.79	0.48
34:DE:179:GLU:HB3	34:DE:181:LEU:CD2	2.44	0.48
39:DN:119:ARG:HH11	39:DN:119:ARG:CG	2.27	0.48
31:DA:945:A:H5''	31:DA:946:G:OP2	2.13	0.48
31:DA:1850:G:C6	31:DA:1851:U:C4	3.01	0.48
48:DW:75:TYR:CZ	48:DW:104:THR:HG21	2.48	0.48
38:BI:29:TYR:C	38:BI:32:PRO:HD2	2.34	0.48
11:AK:77:MET:SD	11:AK:80:VAL:HG12	2.54	0.48
18:CR:85:LEU:HD12	18:CR:86:VAL:H	1.79	0.48
1:AA:895:G:H2'	1:AA:896:C:C6	2.48	0.48
31:BA:1925:C:O2'	31:BA:1926:U:H5'	2.14	0.48
48:BW:10:VAL:O	48:BW:11:ARG:CB	2.61	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:CS:50:ALA:HA	19:CS:58:VAL:O	2.12	0.48
8:AH:41:ARG:O	8:AH:41:ARG:HG2	2.12	0.48
14:AN:44:LEU:C	14:AN:44:LEU:HD12	2.33	0.48
29:B7:10:ARG:O	29:B7:14:LYS:HB2	2.13	0.48
31:BA:996:A:O2'	46:BU:92:ARG:HG3	2.13	0.48
39:BN:35:ARG:HB2	39:BN:42:TRP:CH2	2.49	0.48
41:BP:57:THR:HB	41:BP:59:LEU:N	2.28	0.48
46:DU:87:GLY:O	46:DU:88:ILE:HG23	2.13	0.48
47:DV:64:HIS:HB2	47:DV:95:LEU:O	2.14	0.48
31:BA:1820:U:H3'	31:BA:1821:A:H5'	1.96	0.48
36:BG:36:LYS:HD3	36:BG:95:ARG:CZ	2.44	0.48
36:BG:71:THR:HB	36:BG:89:GLY:CA	2.43	0.48
31:DA:639:U:H2'	31:DA:640:C:H6	1.78	0.48
31:BA:1528:A:O2'	31:BA:1528(A):A:P	2.71	0.48
31:BA:637:A:P	41:BP:116:GLY:HA2	2.52	0.48
41:BP:100:LEU:HD23	41:BP:112:LEU:HD11	1.94	0.48
1:AA:410:G:H1'	1:AA:432:A:H61	1.77	0.48
1:CA:1228:C:H2'	1:CA:1229:A:C8	2.49	0.48
38:DI:62:LYS:HE2	38:DI:134:PRO:CG	2.43	0.48
31:BA:287:C:C4	31:BA:288:C:C5	3.01	0.48
37:BH:54:ARG:HH11	37:BH:65:HIS:CD2	2.32	0.48
39:BN:129:PRO:O	39:BN:130:HIS:HB2	2.12	0.48
39:BN:13:TRP:CZ3	39:BN:130:HIS:HE1	2.26	0.48
31:DA:2460:U:C2	31:DA:2461:C:C6	3.02	0.48
33:DD:246:PRO:HB2	33:DD:255:LYS:HG3	1.96	0.48
31:DA:271(Q):G:N2	31:DA:271(R):G:C4	2.82	0.48
31:DA:1796:U:H4'	33:DD:256:GLY:N	2.28	0.48
6:CF:63:TYR:O	6:CF:65:VAL:HG13	2.14	0.48
23:D1:25:LYS:O	23:D1:26:ARG:CB	2.61	0.48
31:DA:1717:G:C2	31:DA:1718:G:C8	3.01	0.48
1:CA:21:G:H2'	1:CA:22:G:C8	2.48	0.48
31:BA:527:C:O2	31:BA:527:C:O4'	2.28	0.48
1:AA:364:A:H2'	1:AA:365:U:O2	2.14	0.48
16:AP:53:VAL:O	16:AP:57:ARG:CG	2.60	0.48
35:DF:83:PHE:O	35:DF:84:VAL:HG23	2.12	0.48
1:CA:184:G:H2'	1:CA:185:A:H8	1.78	0.48
31:BA:2056:G:N2	31:BA:2057:A:C1'	2.77	0.48
31:DA:707:G:C5	31:DA:708:C:C5	3.01	0.48
5:AE:82:VAL:HG21	5:AE:138:ALA:HA	1.94	0.48
49:DX:40:LYS:HG2	49:DX:41:ASN:N	2.29	0.48
1:CA:603:U:O2'	1:CA:604:G:H5'	2.14	0.48
34:DE:179:GLU:HB3	34:DE:181:LEU:HD22	1.96	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:CT:73:HIS:O	20:CT:74:LYS:C	2.52	0.48
1:AA:189(C):C:H2'	1:AA:189(D):C:O4'	2.14	0.48
34:BE:179:GLU:HB3	34:BE:181:LEU:CD2	2.44	0.48
31:BA:2593:U:H2'	31:BA:2594:C:H6	1.79	0.48
1:AA:1317:C:N4	14:AN:19:ARG:HH21	2.11	0.48
6:AF:30:LEU:O	6:AF:35:ALA:HB3	2.13	0.48
31:BA:465:G:H2'	31:BA:466:A:C8	2.48	0.48
2:AB:142:LEU:O	2:AB:146:GLN:HB2	2.14	0.48
36:DG:43:LEU:HD22	36:DG:43:LEU:N	2.29	0.48
1:AA:1058:G:C6	1:AA:1059:C:C4	3.01	0.48
31:BA:1666:G:C2'	31:BA:1667:G:H5'	2.44	0.48
31:DA:384:U:O2'	31:DA:385:C:H5'	2.14	0.48
31:BA:1366:A:H2'	31:BA:1367:A:O5'	2.14	0.48
51:BZ:156:LYS:O	51:BZ:158:PRO:HD3	2.14	0.48
3:AC:61:ALA:O	3:AC:62:ASP:HB2	2.13	0.48
1:AA:1137:C:H4'	1:AA:1138:G:C2	2.49	0.48
38:DI:60:GLU:HA	38:DI:63:ALA:HB3	1.96	0.48
5:AE:27:ARG:HB2	5:AE:27:ARG:HE	1.50	0.48
43:BR:75:LEU:C	43:BR:75:LEU:HD13	2.34	0.48
33:BD:115:GLN:HG2	33:BD:116:GLN:O	2.13	0.48
45:DT:118:ARG:HA	45:DT:121:ILE:HB	1.95	0.48
31:DA:1902:C:OP1	33:DD:242:ARG:HD3	2.13	0.48
1:AA:60:A:H8	1:AA:60:A:P	2.37	0.48
16:AP:22:THR:CG2	16:AP:32:TYR:HA	2.39	0.48
31:DA:2299:G:N1	31:DA:2318:G:C8	2.82	0.48
31:DA:1225:G:OP1	47:DV:88:ARG:HD2	2.14	0.48
39:DN:128:HIS:O	39:DN:129:PRO:C	2.52	0.48
49:DX:25:LYS:HG3	49:DX:26:TYR:CD1	2.49	0.48
47:DV:19:LYS:HG3	47:DV:20:LEU:C	2.30	0.48
49:BX:29:TRP:CE3	49:BX:74:PRO:HB2	2.49	0.48
1:CA:675:A:H2'	1:CA:676:A:C8	2.47	0.48
1:AA:674:G:O2'	1:AA:675:A:H5'	2.14	0.48
50:DY:17:SER:HA	50:DY:71:LYS:CD	2.36	0.48
36:BG:64:THR:CG2	36:BG:65:GLY:N	2.77	0.48
10:AJ:48:THR:HA	10:AJ:62:HIS:CB	2.44	0.48
23:B1:44:PRO:HA	31:BA:2231:C:OP1	2.13	0.48
2:CB:114:ARG:HH11	2:CB:118:LEU:HD21	1.79	0.48
31:DA:2307:G:H4'	31:DA:2307:G:OP1	2.14	0.48
31:DA:637:A:OP1	41:DP:133:SER:CB	2.62	0.48
12:CL:46:LYS:HG2	12:CL:47:LYS:H	1.77	0.48
39:DN:65:LYS:C	39:DN:66:LYS:HG2	2.32	0.48
1:AA:431:A:H2'	1:AA:432:A:O4'	2.14	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:BA:353:G:C2'	31:BA:354:G:O5'	2.61	0.48
1:CA:1074:G:C2	1:CA:1102:A:C2	3.02	0.48
1:CA:929:G:H1	1:CA:1388:C:N4	1.99	0.48
30:B8:22:VAL:HB	30:B8:53:PRO:HB3	1.95	0.48
51:BZ:56:VAL:HA	51:BZ:70:LEU:CD2	2.44	0.48
31:BA:2286:A:O2'	31:BA:2286:A:H8	1.96	0.48
12:AL:38:THR:CG2	12:AL:39:VAL:N	2.76	0.48
10:CJ:54:PHE:HZ	10:CJ:55:LYS:HZ2	1.54	0.48
42:BQ:34:LEU:CD1	42:BQ:129:THR:HB	2.41	0.48
27:B5:2:ALA:CA	31:BA:2015:A:H1'	2.37	0.48
31:DA:1109:C:H5	31:DA:1110:G:C8	2.32	0.48
1:CA:55:A:C4	1:CA:56:U:C6	3.02	0.48
10:AJ:16:LEU:O	10:AJ:16:LEU:HD13	2.13	0.48
10:AJ:37:PRO:HA	10:AJ:72:VAL:HG22	1.95	0.48
1:CA:948:C:C5	13:CM:106:ASN:ND2	2.81	0.48
51:DZ:9:TYR:CE2	51:DZ:61:LEU:HD22	2.49	0.48
1:AA:1321:C:H3'	1:AA:1322:C:H5''	1.95	0.48
3:CC:130:VAL:HB	3:CC:157:ILE:HG23	1.94	0.48
34:BE:13:ARG:HA	34:BE:21:VAL:O	2.14	0.48
31:BA:1649:G:C6	31:BA:2009:G:C6	3.02	0.48
1:AA:577:G:C8	1:AA:816:A:C6	3.02	0.48
31:DA:1510:G:H2'	31:DA:1511:C:H6	1.78	0.48
20:CT:84:LEU:HD13	20:CT:84:LEU:C	2.34	0.48
31:BA:828:U:C5	31:BA:829:A:N6	2.81	0.48
1:CA:155:C:H2'	1:CA:156:G:H8	1.77	0.48
34:DE:65:GLY:C	34:DE:67:PHE:N	2.68	0.48
34:BE:27:LEU:HD22	45:BT:1:MET:HE1	1.95	0.48
1:AA:1264:C:H2'	1:AA:1265:G:C8	2.47	0.48
38:DI:107:VAL:CG1	38:DI:108:THR:N	2.76	0.48
1:CA:782:A:O3'	1:CA:1515:C:H4'	2.13	0.48
31:DA:521:G:H2'	31:DA:522:G:H8	1.78	0.48
31:DA:947:G:H2'	31:DA:948:G:C8	2.49	0.48
31:BA:934:G:H2'	31:BA:935:C:H6	1.77	0.48
1:AA:402:G:C6	1:AA:403:C:C4	3.02	0.48
2:CB:178:ARG:NH2	8:CH:68:ARG:HH22	2.12	0.48
9:AI:11:LYS:HG2	9:AI:11:LYS:O	2.14	0.48
16:CP:8:ARG:HG2	16:CP:9:PHE:N	2.29	0.48
31:BA:678:C:H2'	31:BA:679:C:C6	2.49	0.48
1:CA:1418:A:C2	1:CA:1483:A:C2	3.01	0.48
23:D1:48:LYS:HD3	23:D1:48:LYS:HA	1.52	0.48
18:AR:22:VAL:HG12	18:AR:22:VAL:O	2.13	0.48
19:AS:9:VAL:HG12	19:AS:9:VAL:O	2.14	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:AB:238:LEU:O	2:AB:240:GLN:N	2.47	0.48
10:CJ:90:LEU:N	10:CJ:91:PRO:HD3	2.29	0.48
30:D8:56:GLU:HA	30:D8:59:LYS:HZ1	1.78	0.48
51:DZ:108:PRO:O	51:DZ:109:ALA:C	2.52	0.48
45:BT:118:ARG:O	45:BT:119:LYS:C	2.51	0.48
31:BA:250:G:H2'	31:BA:251:A:C8	2.49	0.48
41:BP:61:ARG:H	41:BP:61:ARG:HD2	1.79	0.48
31:DA:456:C:C5	49:DX:66:LEU:CD2	2.97	0.48
39:DN:1:MET:HG2	39:DN:2:LYS:N	2.29	0.48
36:BG:101:ILE:HG12	36:BG:105:LYS:HE3	1.95	0.48
23:D1:65:SER:H	23:D1:67:ILE:HD12	1.72	0.48
37:BH:83:TYR:HB2	37:BH:84:SER:H	1.51	0.48
34:BE:93:VAL:C	34:BE:95:ILE:H	2.18	0.48
35:DF:1:MET:O	35:DF:2:LYS:O	2.32	0.48
1:CA:437:U:H2'	1:CA:438:G:C8	2.49	0.48
1:CA:540:G:O2'	1:CA:541:G:H5'	2.14	0.48
4:CD:9:CYS:HA	4:CD:12:CYS:CB	2.37	0.48
42:BQ:20:ALA:HA	42:BQ:98:LYS:HD3	1.95	0.48
31:DA:2850:A:H5'	31:DA:2868:A:H2	1.77	0.48
31:DA:2895:U:H5	31:DA:2896:C:C5	2.31	0.48
24:D2:31:GLU:CG	24:D2:37:PHE:HD1	2.27	0.48
24:D2:49:LYS:HD3	31:DA:76:C:H5''	1.94	0.48
31:DA:286:C:H42	31:DA:355:G:H1	1.62	0.48
31:DA:2360:A:O2'	31:DA:2361:A:H5''	2.13	0.48
31:DA:2360:A:O2'	31:DA:2361:A:OP2	2.32	0.48
31:DA:2836:U:C4	31:DA:2883:A:N6	2.81	0.48
31:BA:2360:A:O2'	31:BA:2361:A:H5''	2.13	0.48
30:B8:4:MET:CE	31:BA:592:G:N3	2.77	0.48
10:CJ:78:ASN:O	10:CJ:82:ILE:HG12	2.13	0.48
51:BZ:42:VAL:HG13	51:BZ:43:GLU:H	1.79	0.48
51:BZ:51:ALA:O	51:BZ:52:SER:HB3	2.14	0.48
31:DA:479:A:HO2'	31:DA:481:G:H8	1.62	0.48
1:AA:491:G:H2'	1:AA:492:G:H8	1.77	0.48
20:CT:100:ILE:O	20:CT:102:GLY:N	2.47	0.48
12:AL:38:THR:HG23	12:AL:39:VAL:N	2.29	0.48
31:DA:271(H):G:O6	31:DA:271(Q):G:O6	2.32	0.48
1:AA:1493:A:C2'	31:BA:1913:A:N1	2.70	0.48
31:DA:562:U:C4	31:DA:2036:C:O4'	2.67	0.48
41:BP:115:LEU:HA	41:BP:134:ALA:CB	2.37	0.48
31:BA:1313:U:C2'	31:BA:1610:A:C2	2.94	0.48
31:DA:1291:C:H2'	31:DA:1292:U:C6	2.49	0.48
1:CA:333:G:O2'	1:CA:334:C:H5'	2.14	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:CA:66:G:C4'	1:CA:173:U:C5	2.97	0.48
35:BF:160:ASN:ND2	35:BF:162:LEU:N	2.61	0.48
31:DA:2243:U:C2'	31:DA:2244:U:H5'	2.43	0.48
1:AA:1221:G:OP1	1:AA:1321:C:N3	2.47	0.48
37:DH:89:ILE:O	37:DH:90:LYS:HB2	2.13	0.48
1:CA:865:A:H2	1:CA:918:A:H4'	1.79	0.48
5:CE:31:LEU:HD22	5:CE:43:LEU:HD11	1.96	0.48
37:BH:153:LYS:HG2	37:BH:154:PRO:N	2.29	0.48
16:AP:14:ASN:OD1	16:AP:16:HIS:CE1	2.66	0.48
13:AM:68:GLY:N	13:AM:71:ARG:HB3	2.28	0.48
1:AA:933:G:N2	1:AA:1385:G:C4	2.82	0.48
2:CB:29:ALA:C	2:CB:31:TYR:N	2.66	0.48
1:AA:270:A:C6	1:AA:271:C:C4	3.02	0.48
31:BA:1043:C:C6	31:BA:1043:C:OP2	2.66	0.48
11:AK:50:TYR:HE1	11:AK:59:TYR:HD2	1.62	0.48
26:D4:25:TYR:C	26:D4:27:THR:N	2.66	0.48
10:AJ:50:ILE:HD13	10:AJ:60:ARG:HD3	1.96	0.48
41:DP:14:LYS:O	41:DP:15:ARG:CB	2.61	0.48
19:AS:35:SER:C	19:AS:37:ARG:H	2.17	0.48
31:BA:303:U:H2'	31:BA:304:G:H8	1.79	0.48
31:DA:836:G:C5	31:DA:837:C:C5	3.02	0.48
31:DA:836:G:H2'	31:DA:837:C:H6	1.78	0.48
1:CA:189(C):C:H2'	1:CA:189(D):C:O4'	2.13	0.48
4:AD:43:HIS:O	4:AD:45:GLN:N	2.46	0.48
1:AA:472:A:C4'	16:AP:82:GLN:HE22	2.27	0.48
31:BA:2591:C:P	33:BD:239:ARG:HG3	2.54	0.48
31:BA:720:C:C2'	31:BA:721:C:H5'	2.44	0.48
42:BQ:104:PHE:HE1	42:BQ:125:LEU:HD11	1.79	0.48
39:BN:104:LYS:HB2	39:BN:117:PHE:CD1	2.49	0.48
31:DA:2352:A:C4	31:DA:2366:A:C2	3.02	0.48
31:BA:951:C:O2'	31:BA:952:G:H5'	2.14	0.48
31:DA:265:A:H1'	31:DA:266:G:O4'	2.14	0.48
31:DA:1323:U:H2'	31:DA:1324:G:H5'	1.95	0.48
26:D4:23:GLU:O	26:D4:24:THR:CB	2.61	0.48
1:AA:461:A:C5	1:AA:471:G:C6	3.02	0.48
18:AR:79:LEU:HD23	18:AR:80:PRO:HD2	1.96	0.48
9:CI:21:PRO:HA	9:CI:58:ARG:O	2.14	0.48
43:BR:113:LEU:HD12	43:BR:113:LEU:C	2.33	0.48
1:AA:1260:C:H4'	1:AA:1284:C:H5'	1.94	0.48
27:B5:32:PRO:O	27:B5:33:CYS:CB	2.58	0.47
31:BA:1902:C:H4'	33:BD:244:ARG:HA	1.96	0.47
41:BP:141:ALA:CB	25:D3:1:MET:SD	2.80	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
41:DP:17:LYS:HG3	41:DP:19:VAL:CG2	2.42	0.47
33:BD:25:THR:HG21	33:BD:82:ILE:N	2.29	0.47
33:DD:59:LYS:HG3	33:DD:60:ARG:H	1.79	0.47
44:DS:89:ARG:HE	44:DS:90:GLY:N	2.10	0.47
31:DA:833:U:H5''	41:DP:48:PRO:HB3	1.94	0.47
34:DE:59:VAL:O	34:DE:59:VAL:HG22	2.14	0.47
50:DY:95:LYS:HE2	50:DY:101:LYS:CA	2.43	0.47
16:CP:27:LYS:O	16:CP:30:GLY:N	2.47	0.47
49:BX:21:PHE:CE1	49:BX:26:TYR:CG	3.01	0.47
2:AB:219:VAL:HA	2:AB:222:ILE:HD12	1.95	0.47
31:DA:1783:A:C2	31:DA:2587:A:C5	3.01	0.47
31:BA:2759:G:C8	31:BA:2759:G:C5'	2.89	0.47
27:D5:50:GLY:HA3	27:D5:56:LYS:CG	2.43	0.47
31:BA:668:G:C3'	31:BA:669:G:H5'	2.44	0.47
23:B1:51:VAL:HG21	23:B1:67:ILE:HG23	1.96	0.47
37:BH:137:ASP:HB3	37:BH:140:LYS:CB	2.44	0.47
31:DA:745:G:H5''	31:DA:746:A:OP2	2.13	0.47
15:CO:82:ILE:CD1	15:CO:88:ARG:HG3	2.43	0.47
47:DV:79:VAL:HG23	47:DV:82:ARG:CD	2.44	0.47
1:CA:432:A:N7	1:CA:433:C:C4	2.82	0.47
1:CA:542:G:C2	1:CA:543:C:C5	3.01	0.47
31:DA:445:C:OP1	46:DU:2:PRO:HA	2.13	0.47
39:BN:87:LEU:O	39:BN:88:GLU:C	2.52	0.47
38:DI:12:LEU:O	38:DI:12:LEU:HG	2.14	0.47
1:AA:511:C:C2	1:AA:512:U:C5	3.01	0.47
36:BG:86:MET:HB2	36:BG:87:PRO:HD2	1.96	0.47
1:CA:1228:C:H2'	1:CA:1229:A:H8	1.78	0.47
31:DA:95:G:N2	31:DA:96:G:H1'	2.29	0.47
1:CA:1074:G:C2	1:CA:1075:C:C2	3.02	0.47
30:B8:4:MET:O	30:B8:62:LEU:CD1	2.62	0.47
37:BH:158:HIS:CD2	37:BH:170:ARG:O	2.66	0.47
48:DW:55:ALA:O	48:DW:56:ALA:O	2.32	0.47
1:AA:687:A:C2	1:AA:704:A:C6	3.02	0.47
33:DD:79:VAL:HG12	33:DD:79:VAL:O	2.13	0.47
1:CA:1066:C:C5'	1:CA:1067:A:OP2	2.61	0.47
31:BA:1047:G:N2	31:BA:1111:A:N6	2.61	0.47
23:D1:10:LYS:CG	23:D1:11:ARG:N	2.76	0.47
31:BA:1952:A:C6	40:BO:22:ILE:CD1	2.96	0.47
1:AA:21:G:H2'	1:AA:22:G:C8	2.49	0.47
31:DA:909:A:C4	31:DA:912:C:C5	3.02	0.47
31:DA:1109:C:C5	31:DA:1110:G:C4	3.02	0.47
1:AA:921:U:H2'	1:AA:922:G:O4'	2.14	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
34:DE:52:LEU:HA	34:DE:53:PRO:HD3	1.60	0.47
1:AA:1123:A:O2'	10:AJ:38:ILE:HG22	2.15	0.47
10:AJ:38:ILE:HD11	10:AJ:71:LEU:HB3	1.94	0.47
1:AA:634:C:O2'	1:AA:635:G:H5'	2.13	0.47
31:BA:1177:A:H5'	31:BA:1178:C:C6	2.49	0.47
22:B0:51:VAL:HG21	22:B0:79:VAL:O	2.14	0.47
51:BZ:9:TYR:CE2	51:BZ:61:LEU:HD22	2.49	0.47
1:CA:693:G:O2'	7:CG:82:GLY:HA3	2.13	0.47
4:AD:146:ILE:N	4:AD:146:ILE:CD1	2.75	0.47
22:D0:16:SER:HB3	31:DA:2262:U:OP2	2.14	0.47
31:DA:185:U:H2'	31:DA:186:G:C8	2.49	0.47
31:BA:2199:A:C5'	31:BA:2200:C:OP2	2.61	0.47
1:CA:1387:G:N3	1:CA:1387:G:H2'	2.29	0.47
1:AA:1368:G:H2'	1:AA:1369:C:H5'	1.96	0.47
49:DX:39:ILE:HG12	49:DX:40:LYS:N	2.29	0.47
47:DV:2:PHE:CB	47:DV:42:GLY:CA	2.92	0.47
4:CD:150:GLU:HG2	4:CD:151:LYS:N	2.29	0.47
31:DA:2225:A:C1'	31:DA:2226:C:OP2	2.62	0.47
1:AA:606:G:H5''	1:AA:607:A:H5'	1.96	0.47
31:DA:272(J):C:H2'	31:DA:274:G:OP1	2.14	0.47
28:B6:42:TRP:HA	28:B6:42:TRP:HE3	1.78	0.47
9:CI:113:LYS:H	9:CI:119:ALA:HA	1.79	0.47
20:CT:94:ALA:O	20:CT:95:ALA:HB3	2.14	0.47
40:DO:7:TYR:CE1	40:DO:20:MET:HB2	2.49	0.47
5:AE:110:LEU:O	5:AE:115:VAL:HG23	2.13	0.47
3:CC:189:ALA:HB3	3:CC:196:LEU:HB2	1.96	0.47
1:AA:881:G:P	12:AL:12:ARG:HH22	2.37	0.47
40:DO:26:LYS:HE3	40:DO:37:ASP:CG	2.34	0.47
44:DS:83:LYS:CE	44:DS:105:ALA:HB2	2.44	0.47
31:BA:296:C:H2'	31:BA:297:C:H6	1.78	0.47
31:DA:2016:U:H2'	31:DA:2017:U:C6	2.48	0.47
6:AF:24:GLU:HG2	6:AF:28:ARG:CZ	2.44	0.47
31:DA:1287:A:C5	31:DA:1288:U:C4	3.02	0.47
31:DA:1198:U:C2	31:DA:1199:U:C5	3.02	0.47
1:AA:1310:G:N2	1:AA:1328:C:C2	2.82	0.47
5:CE:27:ARG:HE	5:CE:27:ARG:HB2	1.51	0.47
1:CA:1156:G:H8	1:CA:1156:G:O5'	1.97	0.47
37:BH:99:VAL:HG12	37:BH:99:VAL:O	2.12	0.47
1:AA:1242:C:H5''	21:AU:10:ARG:HH12	1.79	0.47
31:BA:1973:G:C4	31:BA:1974:C:C5	3.02	0.47
46:DU:50:ARG:HG2	46:DU:53:ARG:NH2	2.28	0.47
34:DE:59:VAL:C	34:DE:60:ASN:ND2	2.68	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
34:DE:48:GLN:HE22	34:DE:64:LYS:HE2	1.79	0.47
49:DX:54:VAL:C	49:DX:55:ASN:HD22	2.17	0.47
42:BQ:88:GLY:O	42:BQ:90:VAL:N	2.46	0.47
30:B8:7:HIS:HD2	41:BP:50:ARG:HD3	1.78	0.47
32:BB:21:G:O6	32:BB:63:G:C4	2.67	0.47
49:BX:35:THR:CB	49:BX:75:ASP:OD2	2.61	0.47
34:BE:119:ARG:HG2	34:BE:160:TYR:CD1	2.49	0.47
33:BD:267:SER:O	33:BD:269:PHE:N	2.46	0.47
29:B7:5:TRP:CD1	29:B7:7:PRO:HG3	2.49	0.47
37:BH:141:VAL:CG1	37:BH:142:GLY:N	2.76	0.47
31:DA:2821:A:H2'	31:DA:2822:G:C8	2.49	0.47
31:BA:1784:A:C4'	31:BA:1785:A:H5''	2.44	0.47
42:DQ:34:LEU:CD1	42:DQ:129:THR:HB	2.42	0.47
1:CA:502:G:C6	1:CA:503:C:N3	2.82	0.47
1:CA:511:C:C2	1:CA:512:U:C5	3.01	0.47
1:CA:543:C:C2	1:CA:544:G:C8	3.02	0.47
36:DG:90:LEU:H	36:DG:90:LEU:HD12	1.79	0.47
31:DA:814:C:H5	41:DP:27:HIS:CD2	2.32	0.47
1:CA:1504:G:OP1	1:CA:1507:A:H4'	2.14	0.47
1:AA:408:A:C2	1:AA:409:G:N9	2.82	0.47
24:D2:45:SER:HA	24:D2:47:ASN:ND2	2.29	0.47
31:DA:287:C:N3	31:DA:288:C:C6	2.82	0.47
31:BA:287:C:C2'	31:BA:288:C:O5'	2.62	0.47
6:AF:14:LEU:HD22	6:AF:18:GLN:NE2	2.30	0.47
23:B1:9:GLY:O	23:B1:10:LYS:CB	2.61	0.47
1:AA:1191:A:H5''	3:AC:4:LYS:NZ	2.28	0.47
1:AA:1201:A:C1'	1:AA:1202:G:OP2	2.57	0.47
1:AA:382:A:O2'	1:AA:383:A:H5'	2.14	0.47
45:BT:106:SER:HA	45:BT:110:ILE:HG12	1.96	0.47
1:CA:460:G:C6	1:CA:470:C:H5''	2.49	0.47
31:BA:729:G:N7	33:BD:208:LYS:HB2	2.30	0.47
43:DR:67:LEU:O	43:DR:70:LEU:O	2.32	0.47
31:BA:2584:U:C6	31:BA:2585:U:C6	3.02	0.47
4:AD:94:LEU:O	4:AD:98:GLU:N	2.45	0.47
31:DA:528:A:C2	31:DA:2042:A:H2'	2.48	0.47
31:BA:530:G:C5	31:BA:2022:U:H5''	2.49	0.47
1:CA:1298:C:H4'	1:CA:1299:A:O4'	2.14	0.47
8:AH:6:ILE:N	8:AH:6:ILE:CD1	2.77	0.47
32:BB:13:A:H2'	32:BB:70:C:O2'	2.14	0.47
31:DA:1599:C:H2'	31:DA:1599:C:O2	2.13	0.47
1:CA:159:G:C4	1:CA:161:A:OP2	2.66	0.47
1:CA:663:A:C2'	1:CA:664:G:H5'	2.44	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:CA:658:G:H2'	1:CA:659:U:H6	1.78	0.47
31:BA:2859:G:O2'	31:BA:2860:A:P	2.72	0.47
31:DA:34:C:H2'	31:DA:35:G:OP1	2.14	0.47
1:CA:950:U:H6	13:CM:102:ARG:NH1	2.11	0.47
20:CT:73:HIS:O	20:CT:76:ALA:HB3	2.14	0.47
34:DE:67:PHE:O	34:DE:69:LYS:N	2.47	0.47
37:BH:127:GLU:HG2	37:BH:130:ARG:NH2	2.28	0.47
1:CA:1154:G:H2'	1:CA:1155:G:C8	2.48	0.47
31:DA:272(D):G:H1	31:DA:364:C:H42	1.62	0.47
35:DF:132:VAL:O	35:DF:134:GLY:N	2.47	0.47
38:DI:29:TYR:C	38:DI:32:PRO:HD2	2.34	0.47
38:BI:29:TYR:O	38:BI:32:PRO:HD2	2.14	0.47
11:AK:106:LYS:HG3	11:AK:106:LYS:O	2.12	0.47
31:DA:1550:C:O2'	31:DA:1551:C:H5'	2.14	0.47
1:AA:1310:G:OP1	13:AM:77:ASN:HB3	2.14	0.47
1:AA:1460:A:H2'	1:AA:1461:G:O4'	2.13	0.47
2:CB:238:LEU:O	2:CB:240:GLN:N	2.48	0.47
48:DW:78:GLU:OE2	48:DW:99:ARG:HD3	2.14	0.47
31:BA:2228:G:C5	31:BA:2229:C:C4	3.02	0.47
11:CK:125:PHE:CD1	11:CK:125:PHE:N	2.82	0.47
29:B7:36:GLN:HG2	29:B7:36:GLN:O	2.14	0.47
6:AF:78:GLU:O	6:AF:81:ILE:HG13	2.14	0.47
28:B6:10:LEU:HD22	28:B6:10:LEU:N	2.28	0.47
33:BD:27:THR:HG22	33:BD:28:GLU:H	1.73	0.47
33:BD:35:LYS:HE3	33:BD:63:ARG:C	2.34	0.47
51:DZ:150:LEU:CA	51:DZ:151:HIS:HD2	2.27	0.47
31:DA:68:G:H2'	31:DA:69:C:C6	2.49	0.47
31:DA:2703:C:H2'	31:DA:2704:C:H6	1.78	0.47
47:BV:23:GLU:O	47:BV:24:LYS:C	2.53	0.47
47:BV:69:LYS:O	47:BV:70:ILE:CG2	2.60	0.47
49:BX:65:ARG:HA	49:BX:65:ARG:NE	2.29	0.47
2:CB:219:VAL:HA	2:CB:222:ILE:HD12	1.96	0.47
41:BP:17:LYS:HG3	41:BP:19:VAL:CG2	2.38	0.47
31:BA:142(A):C:O2'	31:BA:143:G:H5'	2.13	0.47
24:B2:23:LYS:HB2	49:BX:5:TYR:CE1	2.49	0.47
41:BP:21:ARG:O	41:BP:23:PRO:HD3	2.14	0.47
1:CA:427:U:OP1	4:CD:13:ARG:NH2	2.47	0.47
42:BQ:20:ALA:C	42:BQ:22:LYS:H	2.17	0.47
31:DA:2865:U:C4	31:DA:2866:U:C4	3.02	0.47
45:DT:85:LYS:HG2	45:DT:85:LYS:O	2.14	0.47
31:DA:1278:A:O2'	31:DA:1279:G:H5'	2.14	0.47
31:BA:2681:C:O2	31:BA:2681:C:H2'	2.15	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:DA:1988:C:H2'	31:DA:1989:G:O4'	2.14	0.47
42:DQ:20:ALA:C	42:DQ:22:LYS:H	2.17	0.47
1:CA:685:G:O2'	1:CA:686:U:C5'	2.53	0.47
31:BA:2876:G:H4'	45:BT:3:ARG:CD	2.44	0.47
7:AG:115:ARG:O	7:AG:119:ARG:HG3	2.14	0.47
31:DA:1839:G:N3	31:DA:1839:G:H2'	2.28	0.47
33:DD:149:PRO:O	33:DD:150:LYS:HB2	2.13	0.47
1:AA:19:C:O2'	1:AA:20:U:H5'	2.14	0.47
2:CB:168:THR:HG23	2:CB:192:SER:HA	1.96	0.47
1:CA:564:C:H2'	1:CA:565:U:H5'	1.96	0.47
34:BE:75:VAL:C	34:BE:77:ILE:N	2.68	0.47
1:AA:370:C:C2	1:AA:371:G:C8	3.02	0.47
19:CS:40:ILE:HB	19:CS:67:VAL:O	2.14	0.47
2:AB:19:HIS:CG	2:AB:20:GLU:H	2.31	0.47
33:DD:125:ILE:O	33:DD:125:ILE:CG2	2.57	0.47
31:BA:1175:U:H4'	31:BA:1176:G:H2'	1.96	0.47
13:AM:91:ARG:HD3	19:AS:81:ARG:HH21	1.78	0.47
31:DA:1177:A:H5'	31:DA:1178:C:C6	2.49	0.47
5:CE:78:HIS:HE1	5:CE:142:LEU:HA	1.79	0.47
22:D0:55:ARG:HG3	31:DA:2365:G:OP1	2.13	0.47
5:AE:43:LEU:HD21	5:AE:132:ALA:HB1	1.96	0.47
1:CA:631:G:H5''	1:CA:632:A:OP1	2.14	0.47
3:AC:73:PRO:HA	3:AC:76:VAL:CG1	2.44	0.47
1:AA:830:G:H2'	1:AA:831:U:O4'	2.14	0.47
1:AA:832:C:H42	1:AA:854:G:H1	1.62	0.47
31:DA:2853:C:O2'	31:DA:2854:G:H5'	2.14	0.47
31:DA:1820:U:H3'	31:DA:1821:A:H5'	1.95	0.47
38:DI:99:GLU:O	38:DI:102:SER:HB3	2.15	0.47
8:CH:64:LYS:CG	8:CH:79:VAL:HG21	2.44	0.47
1:CA:892:A:C6	1:CA:893:C:C4	3.02	0.47
19:AS:4:SER:O	19:AS:5:LEU:HB2	2.14	0.47
2:AB:41:ILE:HD12	2:AB:41:ILE:N	2.29	0.47
31:BA:750:A:C4	31:BA:753:C:H1'	2.48	0.47
34:DE:70:ALA:O	34:DE:72:VAL:C	2.52	0.47
9:AI:40:LEU:HD11	9:AI:70:LYS:CG	2.44	0.47
31:BA:265:A:H1'	31:BA:266:G:O4'	2.13	0.47
1:CA:520:A:C2	1:CA:536:C:O2	2.67	0.47
44:BS:61:ASN:ND2	44:BS:64:GLU:OE2	2.48	0.47
42:DQ:106:VAL:HG21	42:DQ:114:ALA:HB1	1.96	0.47
8:CH:37:ARG:O	8:CH:37:ARG:HG2	2.14	0.47
22:B0:12:ASN:ND2	31:BA:2277:G:H3'	2.28	0.47
31:BA:1970:A:H5''	31:BA:1971:A:OP1	2.13	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
47:BV:1:MET:HE3	47:BV:44:LYS:CB	2.24	0.47
1:AA:358:U:H2'	1:AA:359:U:C6	2.49	0.47
47:DV:23:GLU:O	47:DV:24:LYS:C	2.52	0.47
47:DV:25:LEU:C	47:DV:27:ALA:H	2.17	0.47
34:BE:48:GLN:HE22	34:BE:64:LYS:HE2	1.79	0.47
31:DA:2286:A:O2'	31:DA:2286:A:H8	1.96	0.47
31:BA:1245:G:OP1	41:BP:16:ARG:HG2	2.15	0.47
31:DA:996:A:C2	31:DA:997:G:C8	3.02	0.47
44:BS:28:VAL:O	44:BS:29:PHE:CB	2.62	0.47
44:BS:91:PRO:O	44:BS:93:LYS:N	2.47	0.47
33:BD:130:ALA:C	33:BD:131:LEU:HD12	2.34	0.47
37:DH:83:TYR:N	37:DH:83:TYR:CD1	2.81	0.47
31:DA:1021:A:H2'	31:DA:1023:U:H5'	1.96	0.47
31:DA:1021:A:N6	31:DA:1141:U:H3	2.07	0.47
2:CB:114:ARG:HA	2:CB:117:GLU:HB2	1.95	0.47
31:BA:2629:A:N3	31:BA:2629:A:H2'	2.29	0.47
1:CA:430:A:C2'	1:CA:431:A:H5'	2.45	0.47
13:CM:3:ARG:NH2	36:DG:139:LEU:HD13	2.10	0.47
45:BT:64:ARG:NH1	45:BT:103:ARG:HA	2.29	0.47
37:BH:46:GLU:O	37:BH:47:GLU:CB	2.62	0.47
4:AD:62:GLN:HE21	4:AD:62:GLN:HA	1.77	0.47
31:DA:1464:C:C2'	31:DA:1528:A:H8	2.27	0.47
31:DA:280:C:H2'	31:DA:281:G:C5'	2.45	0.47
50:DY:66:PRO:O	50:DY:67:LEU:CB	2.62	0.47
1:CA:1486:G:H2'	1:CA:1487:G:C1'	2.45	0.47
51:DZ:99:TYR:HB3	51:DZ:123:ASP:OD1	2.15	0.47
30:B8:62:LEU:N	30:B8:63:PRO:HD2	2.30	0.47
30:B8:61:LEU:HD13	31:BA:593:G:O2'	2.14	0.47
37:BH:20:ALA:HB1	37:BH:21:PRO:CD	2.36	0.47
8:AH:83:ILE:HG23	8:AH:83:ILE:O	2.13	0.47
31:DA:271(J):C:C3'	31:DA:271(K):U:H5''	2.43	0.47
39:DN:77:GLY:O	39:DN:78:TYR:HB3	2.13	0.47
31:DA:794:G:H2'	31:DA:795:C:C6	2.49	0.47
1:AA:55:A:C8	1:AA:56:U:H5	2.32	0.47
31:BA:271(H):G:O6	31:BA:271(Q):G:O6	2.32	0.47
1:CA:15:G:C4	1:CA:16:A:C8	3.01	0.47
38:DI:88:ILE:CG2	38:DI:89:TYR:N	2.78	0.47
1:AA:556:C:O2'	1:AA:557:G:H5'	2.15	0.47
6:CF:3:ARG:HD3	6:CF:38:GLU:OE1	2.14	0.47
28:B6:16:CYS:O	28:B6:17:LYS:CB	2.59	0.47
3:AC:106:VAL:HG12	3:AC:108:ASN:H	1.80	0.47
2:CB:19:HIS:CG	2:CB:20:GLU:H	2.31	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:CB:28:PHE:HD1	2:CB:190:THR:HG22	1.80	0.47
31:BA:1668:A:H4'	31:BA:1669:A:O5'	2.14	0.47
12:CL:55:VAL:HG12	12:CL:68:ALA:O	2.13	0.47
31:BA:1741:A:N7	31:BA:1742:G:C2	2.82	0.47
1:AA:865:A:H5'	1:AA:1078:U:O4	2.14	0.47
31:DA:2023:G:H4'	31:DA:2617:C:O3'	2.15	0.47
42:BQ:30:GLY:HA3	42:BQ:107:ALA:HB2	1.97	0.47
31:BA:1711:C:H2'	31:BA:1712:C:H6	1.80	0.47
36:BG:16:ARG:HH11	36:BG:31:VAL:HG21	1.77	0.47
46:DU:25:TRP:CD1	46:DU:26:GLY:N	2.82	0.47
43:DR:55:ALA:HA	43:DR:80:PHE:CZ	2.49	0.47
1:AA:499:A:H4'	1:AA:500:G:H5'	1.97	0.47
34:DE:13:ARG:HA	34:DE:21:VAL:O	2.14	0.47
42:BQ:72:LYS:HB3	42:BQ:94:VAL:HG23	1.96	0.47
1:AA:1238:A:N6	1:AA:1299:A:H62	2.11	0.47
34:BE:14:ILE:HG12	34:BE:21:VAL:HG22	1.96	0.47
31:BA:150:C:H2'	31:BA:151:C:C6	2.50	0.47
31:DA:27:G:C2	31:DA:512:G:N3	2.83	0.47
13:CM:68:GLY:N	13:CM:71:ARG:HB3	2.29	0.47
31:DA:705:A:O2'	31:DA:706:A:H5'	2.15	0.47
31:DA:708:C:N4	31:DA:723:G:H1	2.12	0.47
31:BA:185:U:H2'	31:BA:186:G:C8	2.50	0.47
7:AG:153:HIS:HE1	11:AK:57:THR:HG23	1.78	0.47
35:BF:117:ARG:HH21	35:BF:187:VAL:HA	1.79	0.47
33:BD:223:GLY:HA3	33:BD:231:HIS:CE1	2.49	0.47
31:DA:945:A:H5''	31:DA:946:G:P	2.55	0.47
12:CL:41:ARG:HG2	12:CL:42:THR:H	1.80	0.47
48:BW:86:LEU:HD12	48:BW:87:PRO:HD2	1.96	0.47
31:BA:721:C:H2'	31:BA:722:A:H8	1.80	0.47
40:DO:6:THR:HG22	40:DO:7:TYR:N	2.29	0.47
31:BA:1629:U:O2'	31:BA:1630:G:H5'	2.14	0.47
23:D1:21:ARG:C	23:D1:21:ARG:HD3	2.35	0.47
31:DA:466:A:C2'	31:DA:467:G:H5'	2.45	0.47
1:AA:642:A:N7	8:AH:115:SER:HA	2.30	0.47
1:AA:568:G:O6	12:AL:5:PRO:HD3	2.15	0.47
18:AR:74:ARG:HG3	18:AR:79:LEU:HB3	1.96	0.47
33:BD:121:PRO:HB3	33:BD:135:PHE:CD1	2.49	0.47
11:AK:24:SER:HB3	11:AK:27:ASN:O	2.15	0.47
9:AI:21:PRO:HA	9:AI:58:ARG:O	2.14	0.47
31:BA:2027:G:C5	31:BA:2028:U:C5	3.03	0.47
44:BS:32:LEU:O	44:BS:62:LYS:HE2	2.15	0.47
37:BH:152:ARG:HD2	37:BH:152:ARG:HA	1.74	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:1343:G:H2'	1:AA:1344:C:C6	2.48	0.47
31:DA:930:U:O4'	31:DA:930:U:O2	2.30	0.47
1:AA:533:A:C4'	1:AA:534:U:OP1	2.62	0.47
7:AG:29:LYS:O	7:AG:105:VAL:HG11	2.14	0.47
2:AB:71:VAL:HB	2:AB:164:VAL:HG22	1.95	0.47
48:BW:66:GLU:O	48:BW:68:ARG:N	2.48	0.47
39:BN:1:MET:HG2	39:BN:2:LYS:N	2.28	0.47
33:DD:92:ILE:HD13	33:DD:104:TYR:CE2	2.49	0.47
31:BA:2314:C:O2	31:BA:2314:C:H2'	2.14	0.47
39:DN:131:GLN:OE1	39:DN:134:ARG:HB3	2.13	0.47
31:DA:2400:G:N3	31:DA:2400:G:H2'	2.29	0.47
30:D8:27:THR:HA	41:DP:62:LEU:CD1	2.44	0.47
30:B8:23:VAL:HG13	30:B8:46:ARG:HB3	1.97	0.47
36:BG:63:ILE:HD13	36:BG:141:PHE:CE2	2.50	0.47
32:BB:41:U:O4	36:BG:70:VAL:O	2.32	0.47
44:BS:86:ALA:O	44:BS:87:PHE:O	2.33	0.47
31:BA:389:G:C2	41:BP:71:VAL:HG12	2.48	0.47
33:BD:44:ASN:N	33:BD:44:ASN:OD1	2.48	0.47
23:B1:67:ILE:O	23:B1:70:VAL:HB	2.14	0.47
23:B1:87:PRO:HB2	23:B1:91:LYS:CE	2.45	0.47
31:DA:744:G:C2'	31:DA:745:G:O5'	2.62	0.47
31:DA:2406:U:C4	41:DP:72:PRO:HD2	2.49	0.47
41:DP:32:THR:O	41:DP:36:LYS:HB2	2.14	0.47
35:BF:102:PRO:HB2	35:BF:105:VAL:HG23	1.96	0.47
31:BA:1779:U:C2	31:BA:1783:A:N7	2.83	0.47
37:DH:85:LYS:O	37:DH:85:LYS:HD3	2.14	0.47
35:DF:18:ARG:CG	35:DF:19:GLU:H	2.10	0.47
1:CA:410:G:H1'	1:CA:432:A:H61	1.79	0.47
1:CA:491:G:C2	1:CA:492:G:C4	3.02	0.47
42:BQ:23:GLY:O	42:BQ:99:PRO:O	2.31	0.47
31:BA:309:G:O3'	50:BY:18:GLY:HA2	2.14	0.47
1:AA:410:G:OP2	4:AD:25:ARG:HG3	2.15	0.47
1:AA:1410:G:O2'	1:AA:1411:C:H5'	2.14	0.47
31:DA:2464:C:O2'	31:DA:2465:C:H5''	2.14	0.47
51:BZ:121:HIS:HD2	51:BZ:123:ASP:O	1.97	0.47
23:B1:14:VAL:O	23:B1:46:LEU:HD23	2.14	0.47
9:AI:3:GLN:HB3	9:AI:20:ARG:NH1	2.28	0.47
1:CA:1064:G:C1'	1:CA:1065:U:OP2	2.62	0.47
23:D1:10:LYS:HG3	23:D1:11:ARG:N	2.29	0.47
31:BA:1479:G:C6	31:BA:1480:G:C5	3.02	0.47
38:DI:71:ILE:HG13	38:DI:72:LEU:HD23	1.97	0.47
1:AA:23:C:OP2	1:AA:561:U:N3	2.47	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:AF:61:LEU:HB3	6:AF:63:TYR:CE2	2.50	0.47
1:AA:1077:G:C2	1:AA:1081:G:C6	3.03	0.47
45:BT:108:ARG:HG3	45:BT:109:GLU:N	2.28	0.47
12:AL:28:LYS:HE3	12:AL:33:ARG:HH12	1.78	0.47
12:CL:87:GLY:H	12:CL:99:HIS:H	1.62	0.47
10:CJ:37:PRO:HA	10:CJ:72:VAL:HG22	1.95	0.47
33:BD:34:VAL:O	33:BD:34:VAL:HG13	2.15	0.47
34:BE:167:VAL:HG11	34:BE:189:PRO:HD3	1.97	0.47
31:BA:913:U:H4'	31:BA:914:C:OP1	2.15	0.47
34:DE:201:THR:HG22	34:DE:203:LYS:N	2.26	0.47
8:CH:6:ILE:C	8:CH:8:ASP:N	2.68	0.47
31:DA:536:A:H2'	31:DA:537:C:O5'	2.14	0.47
8:AH:6:ILE:CD1	8:AH:6:ILE:H	2.26	0.47
31:BA:298:G:H5''	31:BA:299:A:OP1	2.15	0.47
1:AA:1298:C:C5	7:AG:114:ARG:CZ	2.97	0.47
1:CA:763:G:C5	1:CA:764:C:C5	3.02	0.47
2:AB:35:GLU:HA	2:AB:39:ILE:O	2.15	0.47
5:AE:57:LYS:O	5:AE:61:TYR:CD2	2.63	0.47
1:CA:658:G:N3	1:CA:659:U:C6	2.83	0.47
1:CA:658:G:C5	1:CA:659:U:H5	2.32	0.47
1:AA:342:C:H2'	1:AA:343:U:O4'	2.14	0.47
1:AA:1481:U:H2'	1:AA:1482:G:H8	1.79	0.47
31:DA:412:A:N7	31:DA:2411:A:H2	2.13	0.47
31:DA:1689:A:H62	31:DA:1698:A:H2	1.62	0.47
1:AA:832:C:N4	1:AA:854:G:H1	2.12	0.47
12:AL:90:VAL:O	12:AL:90:VAL:HG12	2.14	0.47
34:BE:65:GLY:O	34:BE:67:PHE:N	2.47	0.47
20:AT:41:ILE:HG13	20:AT:41:ILE:H	1.49	0.47
29:D7:47:ARG:C	29:D7:48:LYS:HD3	2.35	0.47
31:DA:721:C:H2'	31:DA:722:A:H8	1.80	0.47
43:BR:13:HIS:HE1	43:BR:15:SER:OG	1.97	0.47
31:DA:892:G:N3	31:DA:892:G:H3'	2.30	0.47
38:BI:107:VAL:HG12	38:BI:108:THR:N	2.29	0.47
31:DA:958:U:O2'	31:DA:959:A:OP1	2.32	0.47
6:CF:22:GLU:OE1	6:CF:84:ASN:HB2	2.14	0.47
36:BG:153:ARG:NH1	36:BG:153:ARG:HB3	2.29	0.47
1:CA:579:G:H2'	1:CA:580:U:H6	1.80	0.47
50:DY:20:TYR:CD1	50:DY:20:TYR:N	2.81	0.47
17:CQ:65:ILE:HD12	17:CQ:65:ILE:N	2.29	0.47
1:CA:520:A:H2	1:CA:536:C:O2	1.98	0.47
31:BA:1748:G:O2'	31:BA:1749:A:H5'	2.15	0.47
18:AR:85:LEU:HD12	18:AR:86:VAL:H	1.79	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
38:BI:117:GLU:HG3	38:BI:118:LYS:H	1.80	0.47
19:CS:51:VAL:HG21	19:CS:71:LEU:HB3	1.95	0.47
22:B0:84:LEU:H	22:B0:84:LEU:HD12	1.79	0.47
47:BV:45:THR:HG22	47:BV:45:THR:O	2.14	0.47
1:CA:222:U:H2'	1:CA:223:U:C6	2.48	0.47
31:BA:1252:G:C2	31:BA:1253:A:C2	3.03	0.47
27:B5:51:TYR:CD2	27:B5:52:TYR:OH	2.67	0.47
32:DB:21:G:O2'	32:DB:22:U:C5'	2.63	0.47
46:BU:83:LEU:HB3	46:BU:88:ILE:CD1	2.44	0.47
31:BA:1497:U:H3	31:BA:1578:U:P	2.37	0.47
31:DA:2314:C:H2'	31:DA:2314:C:O2	2.14	0.47
31:DA:993:G:N3	47:DV:91:TYR:CE1	2.83	0.47
30:D8:61:LEU:N	30:D8:63:PRO:HD2	2.29	0.47
31:DA:142:A:O2'	31:DA:1407:C:H2'	2.15	0.47
2:CB:218:ALA:O	2:CB:222:ILE:HG13	2.14	0.47
46:DU:92:ARG:CB	47:DV:11:GLN:NE2	2.73	0.47
33:DD:118:VAL:CG2	33:DD:119:ALA:N	2.77	0.47
33:DD:133:LEU:HD22	33:DD:165:ILE:CD1	2.45	0.47
23:B1:70:VAL:O	23:B1:73:LEU:HB2	2.15	0.47
41:DP:35:HIS:O	41:DP:36:LYS:CG	2.62	0.47
31:DA:2274:A:C5	31:DA:2276:G:C8	3.01	0.47
39:DN:125:GLY:HA2	39:DN:126:PRO:O	2.14	0.47
36:DG:102:PHE:CE2	36:DG:141:PHE:CE1	3.01	0.47
31:BA:286:C:O2'	31:BA:287:C:H5'	2.13	0.47
31:BA:570:G:H2'	31:BA:2030:A:C5	2.50	0.47
42:DQ:20:ALA:HA	42:DQ:98:LYS:HB3	1.96	0.47
10:CJ:33:GLN:H	10:CJ:75:ILE:HD11	1.78	0.47
42:BQ:140:ALA:HA	51:BZ:99:TYR:HD2	1.71	0.47
45:BT:31:SER:OG	45:BT:43:GLN:HB3	2.14	0.47
1:AA:683:G:C2	1:AA:684:A:C4	3.03	0.47
31:DA:2012:G:O3'	48:DW:96:ILE:HG12	2.14	0.47
31:BA:271(E):U:H2'	31:BA:271(F):C:H6	1.78	0.47
50:BY:45:VAL:CG1	50:BY:62:GLU:OE2	2.62	0.47
1:AA:17:U:H1'	1:AA:1080:A:H1'	1.96	0.47
32:BB:80:U:H2'	32:BB:81:G:H21	1.79	0.47
1:CA:66:G:C2	1:CA:67:C:C6	3.03	0.47
12:CL:70:ILE:N	12:CL:70:ILE:HD12	2.30	0.47
31:DA:315:G:H2'	31:DA:316:C:C6	2.49	0.47
1:AA:1226:C:OP1	13:AM:91:ARG:NH1	2.48	0.47
1:AA:80:G:N1	1:AA:89:C:N4	2.60	0.47
22:D0:20:ARG:NE	31:DA:2271:G:H5''	2.29	0.47
43:BR:55:ALA:CB	43:BR:79:LEU:HD13	2.40	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
42:DQ:72:LYS:HA	42:DQ:73:PRO:HD3	1.79	0.47
1:CA:189(A):C:O2'	1:CA:189(B):C:H5'	2.14	0.47
31:DA:2200:C:H5'	31:DA:2201:C:OP2	2.13	0.47
43:DR:52:ILE:HG21	43:DR:94:TYR:CD1	2.50	0.47
31:DA:1043:C:OP2	31:DA:1043:C:C6	2.67	0.47
3:AC:138:VAL:HG22	3:AC:151:VAL:HG23	1.96	0.47
31:BA:528:A:H2	31:BA:2043:C:C5'	2.27	0.47
46:BU:8:VAL:HG22	46:BU:11:ARG:HH21	1.80	0.47
1:CA:664:G:N2	1:CA:741:G:H1	2.11	0.47
31:BA:2102:U:C6	31:BA:2187:G:O6	2.67	0.47
31:BA:2473:U:C2	31:BA:2474:C:C6	3.03	0.47
33:BD:224:ALA:O	33:BD:225:ALA:HB2	2.14	0.47
31:BA:1002:G:C2'	31:BA:1003:G:O5'	2.63	0.47
1:CA:448:A:H62	1:CA:486:U:H3	1.63	0.47
1:AA:892:A:C6	1:AA:893:C:C4	3.02	0.47
1:AA:1469:G:H2'	1:AA:1470:G:C8	2.48	0.47
4:AD:148:VAL:HG12	4:AD:152:SER:HB2	1.96	0.47
1:AA:758:G:H2'	1:AA:759:A:OP2	2.15	0.47
31:DA:893:C:H2'	31:DA:894:C:O5'	2.14	0.47
1:CA:1317:C:N4	14:CN:19:ARG:HH21	2.12	0.47
34:DE:10:GLY:CA	45:DT:8:LYS:HE3	2.45	0.47
5:CE:41:VAL:CG1	5:CE:113:ALA:HA	2.45	0.47
31:BA:466:A:H2'	31:BA:467:G:H5'	1.97	0.47
31:DA:2074:U:O2'	31:DA:2075:U:H5'	2.14	0.47
1:AA:1513:A:H2'	1:AA:1514:C:C6	2.49	0.47
1:CA:839:U:OP2	1:CA:840:C:H5	1.97	0.47
31:DA:1282:U:H2'	31:DA:1283:G:O4'	2.14	0.47
10:AJ:90:LEU:N	10:AJ:91:PRO:HD3	2.29	0.47
31:DA:292:C:O2'	31:DA:293:U:H5'	2.15	0.47
35:BF:96:ASP:OD1	35:BF:96:ASP:C	2.52	0.47
1:CA:495:A:H4'	1:CA:496:A:OP1	2.14	0.47
31:BA:2639:A:C2'	31:BA:2640:G:H5'	2.44	0.47
43:BR:21:TYR:CZ	43:BR:43:GLU:HG2	2.49	0.47
27:B5:55:ARG:HD2	27:B5:56:LYS:H	1.79	0.47
25:D3:1:MET:O	25:D3:3:ARG:HG3	2.15	0.47
31:DA:1902:C:C2'	31:DA:1903:G:O5'	2.62	0.47
39:DN:42:TRP:CB	46:DU:64:ARG:HH11	1.98	0.47
46:BU:87:GLY:O	46:BU:88:ILE:HG23	2.15	0.47
33:BD:61:LEU:HA	33:BD:61:LEU:HD13	1.74	0.47
26:D4:1:MET:CB	32:DB:43:C:H5'	2.44	0.47
31:DA:2314:C:O2	31:DA:2315:G:C8	2.67	0.47
32:DB:44:G:H1'	32:DB:47:C:H42	1.80	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:DA:1497:U:O2	31:DA:1497:U:C2'	2.63	0.47
31:BA:2302:G:H21	36:BG:128:ARG:CB	2.27	0.47
31:DA:827:U:O2	31:DA:2246:G:H4'	2.14	0.47
31:DA:2787:C:O2	34:DE:61:ARG:NH1	2.48	0.47
31:DA:2287:A:C5	31:DA:2289:G:C5	3.03	0.47
41:DP:62:LEU:CD1	41:DP:62:LEU:N	2.75	0.47
31:DA:154:G:C2	31:DA:173:G:C2	3.02	0.47
24:D2:33:MET:N	24:D2:33:MET:SD	2.88	0.47
47:BV:89:GLN:OE1	47:BV:91:TYR:HD1	1.97	0.47
41:BP:48:PRO:HG2	41:BP:49:ARG:N	2.30	0.47
2:CB:55:PHE:HA	2:CB:58:ILE:HG12	1.96	0.47
1:AA:585:G:C4'	12:AL:8:ASN:ND2	2.67	0.47
1:CA:376:G:O3'	16:CP:5:ARG:HD2	2.14	0.47
16:CP:39:TYR:CE1	16:CP:41:PRO:HA	2.49	0.47
1:CA:357:G:C2	1:CA:358:U:C5	3.03	0.47
1:CA:450:G:OP1	1:CA:452:A:OP1	2.31	0.47
31:BA:142:A:N6	31:BA:1596:A:H5'	2.30	0.47
24:B2:43:GLN:O	24:B2:46:GLN:HB2	2.15	0.47
31:BA:142:A:H5''	31:BA:142(A):C:C5	2.49	0.47
50:DY:68:HIS:HB3	50:DY:71:LYS:HZ1	1.80	0.47
44:BS:89:ARG:HE	44:BS:90:GLY:N	2.11	0.47
44:BS:13:ARG:HH11	44:BS:13:ARG:HG3	1.78	0.47
23:D1:75:GLU:O	23:D1:76:ARG:HD3	2.15	0.47
37:BH:83:TYR:CD1	37:BH:83:TYR:N	2.83	0.47
37:BH:138:LYS:O	37:BH:139:GLN:C	2.50	0.47
34:DE:167:VAL:CG2	34:DE:170:LEU:HD11	2.43	0.47
37:DH:46:GLU:O	37:DH:47:GLU:CB	2.63	0.47
37:DH:84:SER:O	37:DH:133:VAL:O	2.33	0.47
37:DH:137:ASP:HB3	37:DH:140:LYS:CB	2.44	0.47
1:CA:411:A:C4	1:CA:413:G:O4'	2.67	0.47
1:CA:432:A:C8	1:CA:433:C:C6	3.03	0.47
1:CA:509:A:H4'	1:CA:510:A:OP1	2.15	0.47
4:CD:36:ARG:HB3	4:CD:38:TYR:CE2	2.50	0.47
36:DG:63:ILE:HD13	36:DG:141:PHE:CE2	2.50	0.47
41:DP:101:VAL:HG12	41:DP:106:LEU:HD23	1.96	0.47
32:DB:93:G:H2'	32:DB:94:C:C6	2.50	0.47
31:BA:2648:C:H2'	31:BA:2649:U:H6	1.80	0.47
31:BA:2564:A:C6	31:BA:2565:A:N1	2.83	0.47
39:DN:66:LYS:CA	39:DN:69:GLN:HB2	2.44	0.47
31:DA:2658:C:C2'	31:DA:2658:C:O2	2.62	0.47
4:AD:3:ARG:CD	4:AD:5:ILE:HD11	2.44	0.47
1:AA:1503:A:O2'	1:AA:1504:G:C5'	2.62	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
24:D2:54:LYS:N	24:D2:56:GLN:HE21	2.13	0.47
1:CA:1410:G:O2'	1:CA:1411:C:H5'	2.15	0.47
31:BA:1988:C:H2'	31:BA:1989:G:O4'	2.14	0.47
31:DA:2563:U:H4'	40:DO:28:SER:HA	1.97	0.47
51:BZ:119:GLU:O	51:BZ:121:HIS:N	2.48	0.47
31:DA:478:A:C6	31:DA:480:A:C6	3.03	0.47
1:CA:1191:A:H5''	3:CC:4:LYS:NZ	2.29	0.47
3:CC:3:ASN:N	3:CC:3:ASN:OD1	2.48	0.47
31:DA:271(T):C:C2	31:DA:271(U):G:C8	3.02	0.47
34:DE:116:VAL:O	34:DE:117:MET:HB3	2.14	0.47
1:CA:977:A:H8	1:CA:1223:C:N3	2.13	0.47
1:CA:963:G:H21	10:CJ:55:LYS:CE	2.28	0.47
31:DA:795:C:H2'	31:DA:796:C:C6	2.49	0.47
42:BQ:35:VAL:CG1	42:BQ:130:LYS:HB3	2.43	0.47
31:DA:92:A:C2'	31:DA:93:G:H5'	2.45	0.47
11:CK:50:TYR:HE1	11:CK:59:TYR:HD2	1.62	0.47
1:AA:977:A:H8	1:AA:1223:C:N3	2.12	0.47
31:BA:2468:G:O2'	31:BA:2476:A:H8	1.96	0.47
3:CC:68:VAL:HG12	3:CC:70:VAL:HG23	1.95	0.47
31:DA:913:U:H4'	31:DA:914:C:OP1	2.15	0.47
12:AL:6:THR:H	12:AL:9:GLN:NE2	2.11	0.47
31:BA:2293:C:H2'	31:BA:2294:C:O4'	2.15	0.47
1:CA:559:A:H4'	1:CA:560:U:O5'	2.14	0.47
1:CA:560:U:H5'	1:CA:566:G:N2	2.29	0.47
34:BE:6:GLY:HA2	34:BE:51:PHE:CZ	2.50	0.47
1:CA:458:C:H2'	1:CA:460:G:H8	1.79	0.47
31:BA:2470:G:C2	31:BA:2471:C:C6	3.02	0.47
31:BA:2472:G:C8	31:BA:2472:G:C5'	2.97	0.47
31:BA:543:C:HO2'	31:BA:543:C:H6	1.62	0.47
12:CL:27:LEU:HG	12:CL:62:SER:CB	2.45	0.47
33:BD:11:PRO:O	33:BD:12:SER:C	2.53	0.47
23:D1:37:ILE:HD12	23:D1:37:ILE:O	2.15	0.47
33:DD:15:PHE:O	33:DD:205:VAL:HG11	2.15	0.47
32:BB:87:G:H3'	32:BB:88:C:C5'	2.42	0.47
31:DA:1668:A:H4'	31:DA:1669:A:O5'	2.14	0.47
43:BR:55:ALA:HA	43:BR:80:PHE:CZ	2.49	0.47
1:CA:885:G:O2'	1:CA:914:A:N1	2.44	0.47
3:AC:16:ARG:HA	3:AC:16:ARG:HH11	1.80	0.47
31:DA:528:A:H8	31:DA:528:A:H3'	1.79	0.47
1:CA:1298:C:C5	7:CG:114:ARG:CZ	2.98	0.47
16:AP:53:VAL:CG1	16:AP:79:VAL:HG22	2.44	0.47
12:AL:40:VAL:HG11	12:AL:77:LEU:O	2.14	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:BA:1591:G:H8	31:BA:1591:G:C5'	2.27	0.47
3:AC:29:TYR:OH	14:AN:54:PRO:HD2	2.14	0.47
1:AA:628:G:O2'	1:AA:629:G:H5'	2.14	0.47
1:CA:191:G:H1'	20:CT:105:SER:HA	1.95	0.47
1:CA:1368:G:H2'	1:CA:1369:C:H5'	1.96	0.47
1:AA:1298:C:H4'	1:AA:1299:A:O4'	2.14	0.47
27:B5:8:LYS:HD2	31:BA:2056:G:O2'	2.15	0.47
1:AA:805:C:H2'	1:AA:806:C:H6	1.79	0.47
31:DA:972:G:OP2	31:DA:974:G:H5''	2.14	0.47
31:DA:26:G:H1'	31:DA:515:A:H61	1.79	0.47
31:BA:2103:C:O2	31:BA:2187:G:N1	2.47	0.47
43:DR:60:LEU:O	43:DR:60:LEU:HG	2.14	0.47
38:BI:56:LYS:NZ	38:BI:57:ARG:HA	2.29	0.47
1:CA:830:G:H2'	1:CA:831:U:O4'	2.14	0.47
31:BA:1586:A:C2	31:BA:1587:A:C5	3.02	0.47
43:BR:67:LEU:O	43:BR:70:LEU:O	2.33	0.47
2:AB:217:ARG:HA	2:AB:220:ASP:HB2	1.96	0.47
10:AJ:58:ASP:O	10:AJ:59:SER:C	2.52	0.47
31:BA:2747:G:C2	31:BA:2756:U:C5	3.02	0.47
20:AT:73:HIS:O	20:AT:74:LYS:C	2.53	0.47
31:DA:2388:A:C2'	31:DA:2389:G:H5'	2.44	0.47
42:BQ:14:ARG:HG2	42:BQ:41:TRP:HH2	1.80	0.47
1:AA:1418:A:H1'	31:BA:1959:G:O4'	2.13	0.47
48:DW:83:LYS:HD2	48:DW:95:ILE:HD12	1.95	0.47
13:CM:44:ARG:CB	13:CM:46:LYS:HG2	2.45	0.47
1:CA:594:G:H1	1:CA:645:C:N4	2.13	0.47
31:DA:2578:G:H4'	31:DA:2578:G:OP2	2.15	0.47
11:CK:34:ASP:HB2	11:CK:35:PRO:HD2	1.97	0.47
1:AA:979:C:H3'	1:AA:980:C:H5''	1.95	0.47
3:CC:126:ARG:O	3:CC:127:ARG:HB2	2.15	0.47
31:DA:2228:G:C6	31:DA:2229:C:C4	3.03	0.47
31:BA:1635:G:H2'	31:BA:1636:C:H6	1.79	0.47
31:BA:572:A:H2'	31:BA:573:G:O4'	2.14	0.47
43:BR:100:LEU:HD22	43:BR:100:LEU:H	1.79	0.47
31:DA:643:A:O2'	31:DA:644:A:H5'	2.14	0.47
1:CA:669:U:O2'	1:CA:670:G:H5'	2.15	0.47
1:CA:286:G:C6	1:CA:287:U:C4	3.03	0.47
18:CR:25:THR:HG22	18:CR:42:ARG:NH1	2.30	0.47
5:AE:45:PHE:CE2	5:AE:47:LYS:HD2	2.49	0.47
2:AB:79:ASP:O	2:AB:81:VAL:N	2.48	0.47
42:BQ:68:ILE:HD13	42:BQ:103:MET:HB3	1.97	0.47
31:DA:1925:C:C2'	31:DA:1926:U:H5'	2.44	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
50:BY:20:TYR:CD2	50:BY:41:GLY:HA2	2.50	0.47
43:DR:75:LEU:HD13	43:DR:75:LEU:C	2.35	0.47
1:AA:520:A:H2	1:AA:536:C:O2	1.98	0.47
34:BE:195:LEU:HG	34:BE:196:VAL:N	2.28	0.47
31:DA:1252:G:C2	31:DA:1253:A:C2	3.02	0.47
1:CA:640:A:O2'	1:CA:641:U:H5'	2.15	0.47
9:CI:43:ALA:HA	9:CI:74:ILE:HD13	1.96	0.47
3:CC:207:VAL:HG12	3:CC:207:VAL:O	2.14	0.47
42:DQ:131:ILE:HG22	42:DQ:132:VAL:N	2.30	0.47
3:CC:61:ALA:O	3:CC:62:ASP:HB2	2.13	0.47
1:CA:224:C:H2'	1:CA:225:C:C6	2.49	0.47
50:BY:52:SER:C	50:BY:54:LYS:H	2.17	0.47
1:AA:729:A:H2'	1:AA:730:G:H8	1.80	0.47
7:CG:29:LYS:O	7:CG:105:VAL:HG11	2.15	0.47
31:BA:1465:G:C2'	31:BA:1466:G:O5'	2.63	0.47
6:CF:78:GLU:O	6:CF:81:ILE:HG13	2.14	0.47
1:CA:1272:G:C6	1:CA:1273:G:C5	3.03	0.47
33:DD:121:PRO:HB3	33:DD:135:PHE:CD1	2.50	0.47
50:DY:54:LYS:O	50:DY:55:TYR:O	2.32	0.47
2:AB:116:GLU:HA	2:AB:119:GLU:HB2	1.97	0.47
31:BA:1411:C:O2'	31:BA:1412:A:H5'	2.15	0.47
1:AA:1330:U:C5'	1:AA:1331:G:O5'	2.63	0.47
30:B8:35:GLN:CB	31:BA:2420:C:OP1	2.62	0.47
31:DA:911:A:O4'	31:DA:2264:C:H4'	2.15	0.47
1:AA:393:A:O2'	1:AA:394:G:H5'	2.14	0.47
33:DD:35:LYS:HE3	33:DD:63:ARG:C	2.35	0.47
32:DB:41:U:C4	36:DG:70:VAL:O	2.68	0.47
36:DG:35:GLU:OE2	36:DG:160:VAL:HB	2.15	0.47
30:D8:61:LEU:HB3	31:DA:593:G:H4'	1.97	0.47
41:DP:48:PRO:HG2	41:DP:49:ARG:N	2.30	0.47
30:D8:39:LYS:HD3	30:D8:40:GLU:N	2.30	0.47
24:D2:26:ARG:HG3	24:D2:29:LYS:NZ	2.30	0.47
31:BA:456:C:C5	49:BX:66:LEU:CD2	2.98	0.47
2:CB:204:ASN:HB3	2:CB:210:SER:HB3	1.97	0.47
17:CQ:33:GLY:O	17:CQ:34:LYS:C	2.53	0.47
49:BX:23:GLU:OE1	49:BX:23:GLU:HA	2.15	0.47
6:AF:9:VAL:HB	6:AF:87:ARG:HB2	1.96	0.47
32:BB:46:A:C6	32:BB:47:C:C4	3.03	0.47
23:D1:85:LEU:C	23:D1:87:PRO:CD	2.78	0.47
31:DA:389:G:H1	41:DP:71:VAL:HG12	1.80	0.47
1:CA:410:G:OP2	4:CD:25:ARG:HG3	2.15	0.47
31:DA:637:A:P	41:DP:116:GLY:HA2	2.54	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:BA:2565:A:H5''	31:BA:2566:A:P	2.53	0.47
41:BP:112:LEU:CD2	41:BP:113:LYS:N	2.78	0.47
41:BP:85:LEU:HD13	41:BP:114:ILE:HD11	1.97	0.47
41:DP:111:ARG:HA	41:DP:128:HIS:CD2	2.50	0.47
1:AA:432:A:N7	1:AA:433:C:C4	2.83	0.47
36:BG:45:GLU:HB2	36:BG:47:LYS:CD	2.44	0.47
24:D2:53:LEU:C	24:D2:56:GLN:HE22	2.17	0.47
1:CA:340:U:H2'	1:CA:341:C:O4'	2.15	0.47
45:DT:32:TYR:CD2	45:DT:81:PRO:HB2	2.48	0.47
45:DT:36:GLU:C	45:DT:38:ASN:H	2.17	0.47
31:DA:2831:G:O2'	31:DA:2883:A:H2'	2.15	0.47
42:DQ:141:GLN:HB3	51:DZ:70:LEU:HD13	1.95	0.47
1:CA:586:C:O2'	1:CA:878:G:H4'	2.14	0.47
48:DW:55:ALA:O	48:DW:58:ALA:HB3	2.15	0.47
15:AO:55:GLY:O	15:AO:56:LEU:C	2.52	0.47
31:BA:2287:A:C2	31:BA:2346:A:C2	3.02	0.47
31:DA:854:G:H2'	31:DA:855:G:H8	1.80	0.47
39:BN:78:TYR:CD1	39:BN:79:PRO:CD	2.81	0.47
39:DN:78:TYR:N	39:DN:79:PRO:HD3	2.30	0.47
1:AA:55:A:C4	1:AA:56:U:C5	3.02	0.47
23:D1:8:SER:HB3	31:DA:1364:G:OP1	2.14	0.47
31:DA:518:G:H2'	31:DA:519:U:C6	2.50	0.47
24:B2:14:ARG:HD3	24:B2:57:ILE:HB	1.97	0.47
39:BN:56:ASN:N	39:BN:125:GLY:HA3	2.22	0.47
4:AD:108:LEU:HD11	4:AD:174:LEU:HD13	1.96	0.47
35:DF:160:ASN:ND2	35:DF:162:LEU:N	2.63	0.47
32:DB:110:G:C6	32:DB:111:G:C5	3.03	0.47
33:DD:205:VAL:O	33:DD:205:VAL:HG12	2.15	0.47
42:DQ:38:GLU:HB3	42:DQ:39:PRO:HD2	1.97	0.47
31:DA:1766:U:O2'	31:DA:1767:C:H5'	2.15	0.47
1:AA:79:G:H4'	1:AA:80:G:OP1	2.15	0.47
31:BA:18:C:H2'	31:BA:19:C:C6	2.49	0.47
31:BA:18:C:O2'	31:BA:554:U:OP1	2.32	0.47
37:BH:153:LYS:HE2	37:BH:154:PRO:O	2.15	0.47
31:DA:1168:G:O2'	31:DA:1169:G:H5'	2.15	0.47
1:CA:628:G:O2'	1:CA:629:G:H5'	2.14	0.47
3:AC:131:ARG:NH1	5:AE:50:GLU:HG2	2.30	0.47
31:BA:485:C:H2'	31:BA:486:C:H6	1.80	0.47
31:DA:1359:A:N7	31:DA:1372:U:C4	2.82	0.47
35:BF:31:HIS:O	35:BF:34:TRP:HB3	2.15	0.47
1:AA:775:G:C2'	1:AA:776:G:H5'	2.44	0.47
31:BA:881:G:N2	31:BA:896:A:H62	2.13	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
37:DH:127:GLU:HB3	37:DH:128:PRO:HD2	1.96	0.47
30:B8:38:GLY:C	30:B8:40:GLU:H	2.18	0.47
31:BA:118:A:C8	31:BA:119:A:C8	3.03	0.47
31:DA:374:A:C2	31:DA:401:A:C4	3.03	0.47
1:AA:1361:G:H2'	1:AA:1362:C:O4'	2.15	0.47
1:AA:1483:A:H1'	31:BA:1948:G:H1'	1.96	0.47
1:AA:892:A:C5	1:AA:893:C:C4	3.03	0.47
51:DZ:19:ARG:NH1	51:DZ:84:GLU:O	2.48	0.47
2:CB:180:LEU:O	2:CB:181:PHE:HB2	2.15	0.47
1:AA:758:G:H4'	1:AA:880:C:H4'	1.97	0.47
48:BW:86:LEU:HD12	48:BW:87:PRO:N	2.30	0.47
37:DH:103:LEU:CD2	37:DH:115:VAL:HB	2.44	0.47
11:CK:21:ILE:HD13	11:CK:82:VAL:HG13	1.95	0.47
17:CQ:29:HIS:HB2	17:CQ:36:ILE:HD13	1.96	0.47
20:CT:12:ALA:O	20:CT:15:ARG:HB2	2.15	0.47
35:BF:132:VAL:C	35:BF:134:GLY:N	2.68	0.47
25:D3:18:ASP:HB2	25:D3:49:LYS:HE3	1.96	0.47
1:AA:783:C:O2'	1:AA:784:C:H5'	2.15	0.47
39:BN:23:LEU:CD1	39:BN:98:VAL:HG12	2.45	0.47
1:CA:1330:U:C5'	1:CA:1331:G:O5'	2.63	0.47
31:BA:1548:C:H2'	31:BA:1549:C:H6	1.78	0.47
39:DN:5:VAL:HA	39:DN:6:PRO:HD3	1.54	0.47
31:BA:1282:U:H2'	31:BA:1283:G:O4'	2.14	0.47
31:DA:2741:A:H2'	31:DA:2742:C:O4'	2.14	0.47
31:BA:2225:A:H1'	31:BA:2226:C:OP2	2.14	0.47
34:BE:174:ASP:OD2	34:BE:175:VAL:N	2.46	0.47
6:AF:2:ARG:HD2	6:AF:4:TYR:OH	2.15	0.47
34:DE:149:ARG:HH11	34:DE:149:ARG:HG3	1.79	0.47
22:D0:31:VAL:HG21	22:D0:61:ALA:HB2	1.96	0.47
41:DP:16:ARG:HD3	41:DP:16:ARG:C	2.34	0.47
1:AA:376:G:H5''	16:AP:5:ARG:HB2	1.96	0.47
31:BA:1816:G:H8	33:BD:62:TYR:CZ	2.33	0.47
31:DA:2394:C:C3'	31:DA:2395:C:H5'	2.45	0.47
30:D8:31:HIS:O	30:D8:33:ASN:N	2.48	0.47
47:BV:66:ARG:NH1	47:BV:94:LEU:CD1	2.78	0.47
31:BA:1799:G:H4'	31:BA:1800:C:O5'	2.15	0.47
1:CA:674:G:O2'	1:CA:675:A:H5'	2.15	0.47
23:D1:94:LEU:CD2	23:D1:95:LEU:N	2.78	0.47
42:DQ:52:VAL:O	42:DQ:56:ARG:HB2	2.15	0.47
39:DN:58:ASP:HB2	39:DN:59:LYS:H	1.61	0.47
1:CA:542:G:P	4:CD:10:ARG:HH21	2.38	0.47
45:DT:100:TYR:CD2	45:DT:103:ARG:NH2	2.78	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:413:G:N2	1:AA:428:G:H1'	2.30	0.47
49:DX:50:LYS:O	49:DX:82:GLN:N	2.47	0.47
1:AA:250:A:H1'	1:AA:251:G:OP2	2.15	0.47
45:DT:41:ARG:NH1	45:DT:43:GLN:HA	2.30	0.47
51:DZ:53:ILE:H	51:DZ:53:ILE:HG12	1.52	0.47
31:DA:1502:C:O2'	31:DA:1503:U:H5'	2.15	0.47
1:CA:1072:G:C6	1:CA:1073:U:O4	2.68	0.47
51:BZ:5:LEU:HD23	51:BZ:5:LEU:HA	1.65	0.47
31:DA:2476:A:H2	31:DA:2477:C:H2'	1.80	0.47
1:AA:734:G:H2'	1:AA:735:C:C6	2.50	0.47
31:BA:1109:C:H5	31:BA:1110:G:C8	2.32	0.47
31:DA:1962:C:O3'	31:DA:1963:U:H3'	2.15	0.47
11:CK:57:THR:HG22	11:CK:59:TYR:H	1.80	0.47
33:BD:255:LYS:O	33:BD:255:LYS:HD2	2.15	0.47
24:B2:15:LYS:O	24:B2:15:LYS:HG2	2.14	0.47
39:BN:56:ASN:CA	39:BN:125:GLY:H	2.27	0.47
1:CA:1202:G:H2'	1:CA:1203:C:O4'	2.15	0.47
6:AF:3:ARG:HB3	6:AF:93:SER:HB2	1.97	0.47
31:DA:912:C:N3	31:DA:913:U:C4	2.83	0.47
31:DA:543:C:HO2'	31:DA:543:C:H6	1.63	0.47
34:DE:52:LEU:O	34:DE:75:VAL:N	2.47	0.47
34:DE:77:ILE:HG21	34:DE:79:ARG:HH21	1.79	0.47
47:BV:5:VAL:HG22	47:BV:6:LYS:N	2.30	0.47
28:B6:28:ARG:CA	28:B6:32:ASN:HB3	2.44	0.47
24:D2:14:ARG:CD	24:D2:57:ILE:HB	2.45	0.47
13:AM:3:ARG:HA	13:AM:9:ILE:HG13	1.97	0.47
31:DA:2616:C:H2'	31:DA:2617:C:C6	2.50	0.47
13:CM:91:ARG:HD3	19:CS:81:ARG:HH21	1.79	0.47
2:AB:61:LEU:O	2:AB:61:LEU:HD12	2.14	0.47
50:BY:88:LYS:HZ1	50:BY:93:GLY:HA3	1.79	0.47
42:BQ:134:ARG:O	42:BQ:136:ALA:N	2.42	0.47
1:AA:159:G:C4	1:AA:161:A:OP2	2.67	0.47
31:BA:1338:G:N3	31:BA:1393:A:H2	2.12	0.47
10:CJ:50:ILE:HA	10:CJ:60:ARG:HB2	1.97	0.47
31:DA:1002:G:H2'	31:DA:1003:G:O5'	2.15	0.47
20:CT:56:MET:HG3	20:CT:88:VAL:HG11	1.96	0.47
31:DA:2815:C:H2'	31:DA:2816:C:H6	1.80	0.47
44:DS:24:LEU:HB3	44:DS:85:VAL:CG1	2.44	0.47
36:DG:114:ILE:O	36:DG:114:ILE:HG22	2.15	0.47
34:BE:10:GLY:CA	45:BT:8:LYS:HE3	2.45	0.47
38:DI:114:LEU:HA	38:DI:114:LEU:HD23	1.70	0.47
31:DA:470:A:C2	31:DA:471:A:C4	3.03	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:CA:1206:G:C6	1:CA:1207:G:C6	3.03	0.47
31:BA:1157:G:C4	31:BA:1158:C:C5	3.03	0.47
1:AA:515:G:H2'	1:AA:516:U:O4'	2.15	0.47
31:BA:1322:A:C5	31:BA:1323:U:C5	3.03	0.47
48:BW:74:ALA:O	48:BW:75:TYR:HB3	2.15	0.47
1:CA:245:C:O2	1:CA:283:C:N3	2.47	0.47
22:B0:53:MET:HB2	22:B0:59:LEU:CD2	2.45	0.47
31:DA:1272:A:OP2	31:DA:1647:G:OP1	2.33	0.47
38:BI:99:GLU:HG3	38:BI:103:ARG:CZ	2.45	0.47
13:AM:112:GLY:O	13:AM:113:PRO:HG2	2.14	0.47
42:DQ:87:LYS:CA	42:DQ:87:LYS:HE3	2.44	0.47
31:BA:2319:G:OP2	31:BA:2319:G:H4'	2.15	0.47
2:CB:116:GLU:HA	2:CB:119:GLU:HB2	1.97	0.47
6:CF:24:GLU:HG2	6:CF:28:ARG:CZ	2.45	0.47
31:BA:1705:G:C6	31:BA:1706:U:C4	3.03	0.47
1:CA:142:G:H2'	1:CA:143:A:H8	1.79	0.47
38:DI:124:GLY:H	38:DI:142:VAL:HG23	1.80	0.47
33:BD:35:LYS:HG2	33:BD:64:ILE:CA	2.45	0.47
31:DA:2317:C:O2	31:DA:2317:C:C2'	2.60	0.47
31:DA:2302:G:H21	36:DG:128:ARG:CB	2.28	0.47
42:BQ:9:TYR:C	42:BQ:10:ARG:HG3	2.35	0.47
50:BY:81:LYS:HG2	50:BY:97:ARG:H	1.79	0.47
31:DA:2759:G:C2'	31:DA:2760:C:O5'	2.62	0.47
31:DA:996:A:O4'	46:DU:92:ARG:NH2	2.46	0.47
46:DU:92:ARG:NH1	47:DV:11:GLN:O	2.47	0.47
49:BX:59:VAL:HG23	49:BX:60:ARG:N	2.30	0.47
6:CF:9:VAL:HB	6:CF:87:ARG:HB2	1.96	0.47
31:BA:2722:G:H2'	31:BA:2723:C:C6	2.50	0.47
31:DA:1771:C:O2'	31:DA:1786:A:C8	2.47	0.47
31:BA:814:C:H5''	47:BV:86:GLY:HA3	1.97	0.47
27:D5:51:TYR:HB3	27:D5:52:TYR:CD2	2.49	0.47
29:B7:8:ASN:HD21	29:B7:11:LYS:N	2.00	0.47
15:CO:87:ILE:O	15:CO:88:ARG:HB2	2.15	0.47
31:DA:1190:G:C5'	41:DP:35:HIS:HA	2.44	0.47
39:DN:28:THR:N	39:DN:106:MET:HE1	2.30	0.47
1:CA:538:G:C2	1:CA:539:A:C4	3.03	0.47
31:DA:2311:A:O2'	31:DA:2312:U:O4'	2.27	0.47
41:DP:85:LEU:HB3	41:DP:114:ILE:CD1	2.45	0.47
1:AA:537:G:H2'	1:AA:538:G:C8	2.49	0.47
27:B5:16:ARG:NH2	31:BA:517:C:OP1	2.48	0.47
1:AA:965:A:C2	1:AA:969:A:C2	3.03	0.47
31:DA:2462:U:H2'	31:DA:2463:C:O4'	2.15	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:1074:G:O2'	1:AA:1101:A:N1	2.35	0.47
31:BA:2287:A:C4	31:BA:2289:G:C8	3.03	0.47
1:CA:688:G:H2'	1:CA:689:C:C6	2.45	0.47
1:AA:277:C:P	17:AQ:68:ARG:HH12	2.37	0.47
31:BA:2789:C:H2'	31:BA:2790:A:OP2	2.15	0.47
1:AA:735:C:H2'	1:AA:736:C:C6	2.41	0.47
1:AA:586:C:O2'	1:AA:878:G:H4'	2.15	0.47
11:AK:29:ILE:HB	11:AK:44:SER:HB2	1.97	0.47
41:DP:138:LEU:C	41:DP:140:ALA:N	2.67	0.47
10:AJ:54:PHE:HZ	10:AJ:55:LYS:HZ2	1.54	0.47
1:CA:15:G:H2'	1:CA:16:A:H8	1.79	0.47
24:D2:15:LYS:O	24:D2:16:LEU:HB2	2.15	0.47
31:DA:530:G:C5	31:DA:2022:U:H5''	2.50	0.47
31:DA:1669:A:H5''	31:DA:2550:G:OP1	2.15	0.47
31:DA:1669:A:OP2	31:DA:1670:C:OP2	2.33	0.47
32:BB:31:C:O2'	32:BB:32:C:H5'	2.14	0.47
1:CA:1322:C:H5'	13:CM:100:GLY:HA3	1.96	0.47
1:AA:38:G:N1	1:AA:397:A:C2	2.83	0.47
34:DE:201:THR:CG2	34:DE:203:LYS:H	2.26	0.47
31:DA:1712:C:H2'	31:DA:1713:U:C6	2.49	0.47
10:CJ:74:ILE:H	10:CJ:74:ILE:HD13	1.80	0.47
12:CL:110:VAL:CG2	12:CL:120:TYR:HB3	2.45	0.47
1:CA:657:G:N2	1:CA:750:G:C8	2.83	0.47
4:CD:149:ALA:O	4:CD:150:GLU:C	2.53	0.47
7:AG:22:LEU:HG	7:AG:62:PHE:HE2	1.80	0.47
31:BA:1701:A:C2'	31:BA:1702:G:H5'	2.45	0.47
37:DH:126:PRO:HB2	37:DH:130:ARG:HH12	1.80	0.47
31:BA:1517:G:O2'	31:BA:1518:U:H5'	2.15	0.47
20:AT:84:LEU:O	20:AT:88:VAL:HG23	2.15	0.47
31:DA:1514:U:C2'	31:DA:1515:G:H5'	2.45	0.47
42:BQ:14:ARG:HG2	42:BQ:41:TRP:CH2	2.50	0.47
31:DA:2593:U:H2'	31:DA:2594:C:H6	1.78	0.47
1:CA:292:G:H1	1:CA:308:C:H42	1.61	0.47
3:AC:92:ALA:HB2	3:AC:99:VAL:HG22	1.97	0.47
33:DD:223:GLY:HA3	33:DD:231:HIS:CE1	2.49	0.47
6:CF:30:LEU:O	6:CF:35:ALA:HB3	2.14	0.47
17:CQ:7:THR:HA	17:CQ:57:VAL:O	2.15	0.47
22:D0:68:GLU:HG2	22:D0:80:HIS:HB2	1.97	0.47
22:B0:1:MET:CB	31:BA:2602:A:H62	2.28	0.47
31:DA:460:A:C2	31:DA:470:A:C5	3.03	0.47
1:CA:581:G:N2	1:CA:582:U:C4	2.83	0.47
51:DZ:120:ILE:O	51:DZ:120:ILE:HG22	2.15	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:1016:A:H2'	1:AA:1017:G:O4'	2.15	0.47
51:DZ:111:VAL:HG13	51:DZ:112:ARG:N	2.30	0.47
31:DA:1198:U:H2'	31:DA:1199:U:C6	2.50	0.47
31:BA:533:G:H5'	46:BU:24:TYR:CE2	2.50	0.47
31:DA:500:G:N2	31:DA:502:A:H3'	2.30	0.47
1:AA:655:A:C2	1:AA:656:C:C2	3.03	0.47
1:AA:1389:C:H2'	1:AA:1390:U:O4'	2.14	0.47
45:BT:34:VAL:HG13	45:BT:39:ARG:HA	1.97	0.47
17:CQ:4:LYS:HB3	17:CQ:61:GLU:OE2	2.14	0.47
31:BA:930:U:O4'	31:BA:930:U:O2	2.31	0.47
1:CA:461:A:C5	1:CA:471:G:C6	3.02	0.47
1:CA:294:U:H2'	1:CA:295:C:C6	2.49	0.47
1:AA:92:C:H2'	1:AA:93:G:H8	1.81	0.47
8:AH:37:ARG:O	8:AH:37:ARG:HG2	2.15	0.47
31:BA:2897:U:O2	31:BA:2897:U:H2'	2.14	0.47
1:CA:1319:A:H61	1:CA:1361:G:H21	1.63	0.47
31:DA:1782:C:H2'	31:DA:2608:G:O2'	2.15	0.47
31:DA:2061:G:H5''	31:DA:2503:A:C2	2.50	0.47
31:BA:1827:C:C2'	31:BA:1828:G:H5'	2.45	0.46
46:BU:104:GLN:O	46:BU:108:GLU:HG3	2.15	0.46
30:D8:23:VAL:CG1	30:D8:46:ARG:HB3	2.45	0.46
34:DE:61:ARG:N	34:DE:62:PRO:CD	2.78	0.46
49:DX:21:PHE:CE1	49:DX:26:TYR:CG	3.03	0.46
1:CA:376:G:H5''	16:CP:5:ARG:HB2	1.96	0.46
39:BN:16:ILE:HD11	39:BN:26:LEU:HD11	1.97	0.46
31:BA:1799:G:N7	33:BD:179:SER:OG	2.42	0.46
44:BS:89:ARG:CA	44:BS:89:ARG:NE	2.76	0.46
37:BH:138:LYS:C	37:BH:140:LYS:N	2.66	0.46
37:DH:138:LYS:O	37:DH:139:GLN:C	2.53	0.46
31:DA:1022:G:C5	31:DA:1140:C:C4	3.03	0.46
31:DA:1022:G:C6	31:DA:1141:U:C5	3.03	0.46
31:BA:1141:U:C6	39:BN:63:THR:HB	2.50	0.46
31:BA:2661:G:C8	31:BA:2662:A:N3	2.84	0.46
1:CA:437:U:H4'	4:CD:125:HIS:HE2	1.80	0.46
23:D1:44:PRO:HA	31:DA:2231:C:OP1	2.15	0.46
39:BN:65:LYS:HD3	39:BN:67:LEU:H	1.80	0.46
38:DI:9:LEU:HB2	38:DI:12:LEU:O	2.15	0.46
31:DA:1678:G:H21	31:DA:1989:G:N2	2.05	0.46
31:DA:353:G:C2'	31:DA:354:G:O5'	2.63	0.46
31:DA:570:G:H2'	31:DA:2030:A:C5	2.50	0.46
1:AA:1486:G:H2'	1:AA:1487:G:C1'	2.45	0.46
1:AA:1072:G:C4	1:AA:1073:U:C5	3.03	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:CA:684:A:C6	1:CA:685:G:C6	3.03	0.46
1:AA:1086:U:O2'	1:AA:1087:G:H5'	2.15	0.46
31:DA:2698:U:H2'	31:DA:2699:C:C6	2.51	0.46
31:BA:271(J):C:C3'	31:BA:271(K):U:H5''	2.44	0.46
28:B6:15:GLU:OE2	28:B6:41:PRO:CG	2.63	0.46
32:DB:65:C:N4	32:DB:109:C:H2'	2.25	0.46
38:BI:81:VAL:HG11	38:BI:88:ILE:HD12	1.97	0.46
45:BT:106:SER:O	45:BT:107:ASP:CG	2.54	0.46
12:AL:28:LYS:O	12:AL:29:GLY:C	2.53	0.46
31:BA:1833:U:O2'	31:BA:1969:A:N1	2.38	0.46
31:BA:1131:G:H21	39:BN:73:THR:CG2	2.28	0.46
1:AA:460:G:C6	1:AA:470:C:H5''	2.49	0.46
31:BA:1741:A:N7	31:BA:1742:G:N1	2.63	0.46
32:DB:87:G:O5'	32:DB:88:C:OP2	2.33	0.46
36:BG:11:TYR:CZ	36:BG:16:ARG:HD3	2.51	0.46
36:BG:15:VAL:HA	36:BG:175:LEU:HD13	1.96	0.46
1:CA:1226:C:OP1	13:CM:91:ARG:NH1	2.48	0.46
31:DA:340:A:C2'	31:DA:341:G:H5'	2.44	0.46
37:BH:153:LYS:CB	37:BH:154:PRO:CD	2.93	0.46
12:AL:110:VAL:HG21	12:AL:120:TYR:HB3	1.97	0.46
43:DR:46:GLY:HA2	43:DR:49:ASP:HB2	1.97	0.46
1:AA:625:G:C4	1:AA:626:U:C5	3.04	0.46
8:AH:6:ILE:C	8:AH:8:ASP:N	2.68	0.46
1:AA:1352:C:H42	1:AA:1370:G:H1	1.63	0.46
1:AA:659:U:O2	1:AA:659:U:H2'	2.14	0.46
46:BU:8:VAL:HG22	46:BU:11:ARG:NH2	2.30	0.46
1:AA:814:A:N7	1:AA:816:A:C5	2.83	0.46
31:DA:921:G:C6	31:DA:922:U:C4	3.03	0.46
49:DX:63:LYS:HZ1	49:DX:70:LEU:HD21	1.80	0.46
5:CE:6:PHE:HD2	5:CE:36:ASP:HB3	1.80	0.46
31:BA:921:G:C6	31:BA:922:U:C4	3.03	0.46
29:B7:47:ARG:HA	29:B7:48:LYS:HD3	1.97	0.46
44:BS:83:LYS:HE2	44:BS:105:ALA:HB2	1.96	0.46
48:DW:86:LEU:HD12	48:DW:87:PRO:HD2	1.96	0.46
8:AH:80:ILE:HG22	8:AH:80:ILE:O	2.15	0.46
17:AQ:63:ARG:HG2	17:AQ:64:PRO:CD	2.45	0.46
37:BH:164:TYR:O	37:BH:165:ALA:HB2	2.16	0.46
36:DG:106:LEU:O	36:DG:110:ALA:HB3	2.15	0.46
34:BE:66:HIS:O	34:BE:66:HIS:CD2	2.67	0.46
17:CQ:57:VAL:HG12	17:CQ:75:ARG:O	2.15	0.46
1:AA:872:A:C5	1:AA:874:G:C8	3.03	0.46
1:CA:286:G:C5	1:CA:287:U:C4	3.02	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:CA:567:G:H2'	1:CA:568:G:O4'	2.14	0.46
31:DA:2694:G:C6	31:DA:2695:C:C4	3.03	0.46
1:CA:31:G:H5'	1:CA:306:G:N2	2.30	0.46
1:CA:1206:G:O4'	3:CC:194:GLY:HA2	2.15	0.46
1:CA:642:A:C4	8:CH:114:THR:O	2.69	0.46
38:BI:49:ALA:O	38:BI:52:ARG:HG2	2.15	0.46
31:DA:1705:G:C6	31:DA:1706:U:C4	3.03	0.46
31:BA:1844:C:OP1	33:BD:257:LEU:HD23	2.15	0.46
1:CA:1187:G:C6	1:CA:1188:A:C6	3.03	0.46
3:CC:53:ALA:O	3:CC:54:ARG:HB2	2.14	0.46
31:DA:2575:C:O2'	34:DE:140:SER:HB2	2.14	0.46
44:DS:32:LEU:O	44:DS:62:LYS:HE2	2.14	0.46
40:BO:12:ASP:C	40:BO:99:PHE:HE2	2.19	0.46
42:DQ:69:PHE:CD1	42:DQ:70:PRO:HD2	2.50	0.46
40:BO:106:LEU:HA	40:BO:106:LEU:HD23	1.67	0.46
31:BA:256:A:C2	31:BA:257:A:C4	3.03	0.46
27:B5:36:CYS:C	27:B5:38:ALA:N	2.65	0.46
39:BN:2:LYS:NZ	46:BU:94:ASN:HD21	2.13	0.46
47:BV:16:PRO:C	47:BV:98:GLU:OE2	2.53	0.46
33:DD:27:THR:HG22	33:DD:28:GLU:H	1.79	0.46
36:DG:36:LYS:HG2	36:DG:38:VAL:HG23	1.97	0.46
47:DV:73:SER:HG	47:DV:75:PHE:HE1	1.48	0.46
39:DN:131:GLN:NE2	39:DN:134:ARG:CA	2.78	0.46
39:DN:16:ILE:O	39:DN:54:VAL:HA	2.15	0.46
31:DA:2631:G:C6	31:DA:2632:A:N7	2.84	0.46
31:DA:2810:A:H2'	34:DE:61:ARG:HH21	1.78	0.46
31:DA:631:A:H61	31:DA:2402:C:N4	2.13	0.46
50:BY:98:VAL:O	50:BY:99:CYS:CB	2.63	0.46
41:BP:17:LYS:O	41:BP:19:VAL:HG23	2.15	0.46
31:DA:994:C:O2'	31:DA:996:A:OP1	2.23	0.46
36:BG:98:ARG:O	36:BG:101:ILE:HG22	2.14	0.46
29:D7:8:ASN:ND2	29:D7:10:ARG:N	2.63	0.46
44:BS:67:ARG:H	44:BS:69:VAL:CG1	2.25	0.46
31:DA:1005:C:O2'	39:DN:28:THR:HG21	2.15	0.46
34:DE:36:ARG:NH1	34:DE:85:ASN:ND2	2.63	0.46
1:CA:414:A:H2'	1:CA:415:A:O4'	2.14	0.46
1:CA:429:U:H4'	1:CA:430:A:O5'	2.14	0.46
38:DI:15:VAL:CG2	38:DI:16:GLY:N	2.78	0.46
1:AA:407:G:H5'	4:AD:3:ARG:HH12	1.81	0.46
1:CA:338:A:C2'	1:CA:339:C:H5'	2.46	0.46
42:DQ:23:GLY:O	42:DQ:99:PRO:O	2.34	0.46
48:DW:9:TYR:N	48:DW:102:HIS:CD2	2.76	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:102:G:C4	1:AA:103:C:C6	3.04	0.46
1:AA:438:G:OP1	4:AD:125:HIS:HE1	1.98	0.46
43:BR:12:ARG:HD3	43:BR:16:HIS:ND1	2.30	0.46
43:DR:116:LEU:HA	43:DR:116:LEU:HD23	1.58	0.46
31:DA:1608:A:H1'	31:DA:1610:A:OP2	2.15	0.46
23:D1:11:ARG:HA	23:D1:11:ARG:HD2	1.54	0.46
31:DA:1386:C:H2'	31:DA:1387:C:C6	2.49	0.46
3:CC:47:LEU:HD23	3:CC:52:LEU:HD13	1.97	0.46
1:AA:1452:C:H5'	1:AA:1456:G:N9	2.29	0.46
31:BA:547:A:H2'	31:BA:547:A:N3	2.31	0.46
31:BA:773:U:C5'	33:BD:47:GLY:HA2	2.45	0.46
39:BN:24:GLY:O	39:BN:28:THR:HB	2.14	0.46
1:CA:946:A:N3	1:CA:1333:A:H2	2.13	0.46
31:DA:18:C:O2'	31:DA:19:C:H5'	2.15	0.46
31:BA:27:G:C2	31:BA:512:G:N3	2.84	0.46
31:BA:1317:A:C5	31:BA:1318:C:C5	3.03	0.46
20:AT:71:THR:CG2	20:AT:72:LEU:N	2.73	0.46
2:CB:59:GLU:C	2:CB:61:LEU:H	2.18	0.46
38:DI:105:HIS:N	38:DI:105:HIS:CD2	2.84	0.46
9:CI:53:VAL:CB	9:CI:92:TYR:HE2	2.27	0.46
9:AI:78:LYS:HB2	9:AI:78:LYS:HZ2	1.81	0.46
31:DA:272(B):G:C2'	31:DA:272(C):G:O5'	2.63	0.46
1:AA:658:G:N3	1:AA:659:U:C6	2.84	0.46
13:AM:78:ILE:HA	13:AM:81:LEU:HD12	1.98	0.46
31:DA:693:C:H2'	31:DA:694:U:H6	1.80	0.46
31:BA:449:A:H2'	31:BA:450:G:O5'	2.15	0.46
44:DS:85:VAL:CG2	44:DS:106:ARG:HB2	2.45	0.46
1:AA:105:G:H2'	1:AA:106:C:H6	1.76	0.46
1:AA:106:C:H2'	1:AA:107:G:H8	1.80	0.46
31:BA:1810:A:H2'	31:BA:1811:G:C5'	2.46	0.46
4:CD:43:HIS:O	4:CD:45:GLN:N	2.48	0.46
38:BI:15:VAL:C	38:BI:17:GLN:H	2.18	0.46
31:BA:721:C:C2	31:BA:722:A:C8	3.03	0.46
2:CB:41:ILE:N	2:CB:41:ILE:HD12	2.30	0.46
36:DG:123:ASN:ND2	36:DG:126:ASP:OD1	2.48	0.46
15:AO:18:PHE:O	15:AO:19:PRO:C	2.53	0.46
40:DO:26:LYS:HB2	40:DO:30:ALA:CB	2.45	0.46
50:DY:52:SER:C	50:DY:54:LYS:H	2.19	0.46
31:DA:2639:A:C2'	31:DA:2640:G:H5'	2.46	0.46
31:DA:2010:G:H5''	48:DW:42:ARG:HB2	1.98	0.46
31:DA:1453:U:OP1	43:DR:77:ARG:NH1	2.48	0.46
31:DA:2498:C:O2'	31:DA:2499:C:H5'	2.16	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:CI:122:ALA:HB1	9:CI:123:PRO:HD2	1.96	0.46
31:DA:2897:U:H2'	31:DA:2897:U:O2	2.14	0.46
34:BE:200:GLU:N	34:BE:200:GLU:OE2	2.45	0.46
31:BA:346:A:N3	31:BA:346:A:H2'	2.30	0.46
51:BZ:175:VAL:HB	51:BZ:176:PRO:CD	2.46	0.46
31:BA:2460:U:H2'	31:BA:2461:C:H6	1.80	0.46
30:B8:35:GLN:HE21	30:B8:35:GLN:HB3	1.56	0.46
46:BU:88:ILE:CA	46:BU:90:VAL:HG23	2.45	0.46
46:BU:92:ARG:HD2	47:BV:11:GLN:HG3	1.93	0.46
1:AA:354:G:C2	1:AA:355:C:C5	3.03	0.46
16:AP:55:ARG:HE	16:AP:55:ARG:HA	1.81	0.46
33:DD:28:GLU:CB	33:DD:29:PRO:HD3	2.45	0.46
47:DV:91:TYR:C	47:DV:91:TYR:CD2	2.89	0.46
30:D8:50:LEU:C	30:D8:53:PRO:HD2	2.36	0.46
31:DA:140:G:O4'	31:DA:141:A:H2	1.98	0.46
47:BV:22:VAL:O	47:BV:23:GLU:CB	2.44	0.46
47:BV:66:ARG:HD3	47:BV:94:LEU:HG	1.98	0.46
47:BV:66:ARG:HD2	47:BV:67:GLY:C	2.35	0.46
31:BA:174:C:H2'	31:BA:175:G:H5''	1.97	0.46
32:BB:46:A:C5	32:BB:47:C:C5	3.03	0.46
8:AH:113:SER:H	8:AH:134:ILE:HG12	1.81	0.46
41:DP:35:HIS:O	41:DP:36:LYS:CB	2.63	0.46
44:BS:59:LYS:NZ	44:BS:68:GLN:NE2	2.63	0.46
35:DF:22:ALA:HA	35:DF:26:ALA:HB2	1.97	0.46
1:CA:512:U:C2	1:CA:513:C:C5	3.03	0.46
1:CA:537:G:H2'	1:CA:538:G:C8	2.50	0.46
1:CA:408:A:H5'	4:CD:116:GLN:HB2	1.98	0.46
31:BA:2564:A:C2	31:BA:2647:U:H4'	2.51	0.46
45:BT:98:LYS:HB3	45:BT:100:TYR:CE1	2.51	0.46
36:BG:81:LYS:O	36:BG:82:LEU:O	2.33	0.46
31:DA:2521:C:H42	31:DA:2544:G:H1	1.63	0.46
1:CA:337:C:H2'	1:CA:338:A:C8	2.51	0.46
40:DO:115:VAL:CG1	40:DO:121:VAL:HG21	2.43	0.46
41:BP:147:LEU:HB2	41:BP:148:LEU:H	1.43	0.46
1:AA:683:G:C2	1:AA:708:C:N3	2.83	0.46
9:AI:102:LEU:O	9:AI:103:THR:OG1	2.29	0.46
42:BQ:18:LYS:O	42:BQ:19:GLY:C	2.54	0.46
1:AA:1080:A:H5'	5:AE:14:ARG:HH21	1.78	0.46
31:DA:1834:U:H2'	31:DA:1834:U:O2	2.14	0.46
2:AB:188:ALA:HB1	2:AB:192:SER:CB	2.42	0.46
39:BN:83:LYS:HE2	39:BN:85:ILE:CD1	2.46	0.46
1:CA:1147:C:C5	1:CA:1148:U:C4	3.04	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:DA:314:A:H2'	31:DA:315:G:H5'	1.96	0.46
31:DA:2470:G:C6	31:DA:2471:C:C5	3.02	0.46
1:AA:664:G:P	18:AR:64:ARG:HH21	2.38	0.46
31:BA:2688:U:H1'	31:BA:2721:A:N6	2.30	0.46
3:CC:119:ARG:HE	3:CC:140:ARG:NE	2.14	0.46
31:DA:1318:C:O2	31:DA:1318:C:H2'	2.14	0.46
31:DA:1173:G:H5'	31:DA:1174:A:P	2.56	0.46
31:BA:912:C:N3	31:BA:913:U:C4	2.83	0.46
1:AA:1158:C:H42	1:AA:1181:G:H1	1.63	0.46
1:CA:625:G:O2'	1:CA:626:U:H5'	2.15	0.46
12:CL:40:VAL:HG11	12:CL:77:LEU:O	2.16	0.46
41:BP:8:PRO:O	41:BP:9:ASN:C	2.54	0.46
31:DA:150:C:H2'	31:DA:151:C:H6	1.80	0.46
15:CO:23:GLY:O	15:CO:24:SER:HB3	2.16	0.46
31:DA:1380:G:N2	31:DA:1570:A:H2	2.13	0.46
31:BA:2473:U:O2	31:BA:2473:U:H2'	2.15	0.46
1:AA:116:A:OP2	1:AA:116:A:C8	2.68	0.46
31:BA:1543:C:C6	31:BA:1543:C:OP2	2.68	0.46
30:B8:39:LYS:HD3	30:B8:40:GLU:N	2.30	0.46
25:D3:46:ASN:ND2	31:DA:851:U:H5'	2.31	0.46
31:DA:924:C:H2'	31:DA:925:C:C6	2.50	0.46
31:BA:958:U:OP2	42:BQ:14:ARG:NH1	2.48	0.46
31:BA:733:G:O6	31:BA:761:A:C8	2.69	0.46
50:DY:2:ARG:C	50:DY:4:LYS:N	2.68	0.46
51:DZ:77:ASP:HB2	51:DZ:84:GLU:HG2	1.97	0.46
44:BS:106:ARG:CZ	44:BS:107:GLU:O	2.63	0.46
31:BA:892:G:H3'	31:BA:892:G:N3	2.30	0.46
2:CB:124:SER:O	2:CB:127:ILE:HG12	2.15	0.46
32:DB:2:C:H2'	32:DB:3:C:C6	2.50	0.46
4:AD:117:ALA:O	4:AD:120:LEU:HB2	2.15	0.46
1:CA:1014:A:H2	1:CA:1219:U:O2	1.98	0.46
31:BA:705:A:C2'	31:BA:706:A:H5'	2.45	0.46
31:DA:1893:C:C5	31:DA:1894:C:C5	3.03	0.46
31:BA:784:A:C5	33:BD:229:VAL:HG21	2.51	0.46
6:CF:2:ARG:HD2	6:CF:4:TYR:OH	2.16	0.46
31:DA:1235:G:C6	31:DA:1236:G:N1	2.83	0.46
9:AI:99:LEU:HD12	9:AI:101:PHE:CE1	2.50	0.46
31:DA:449:A:H2'	31:DA:450:G:O5'	2.15	0.46
7:AG:13:GLN:O	7:AG:24:THR:HG21	2.15	0.46
31:DA:1910:G:O2'	31:DA:1911:U:H5'	2.15	0.46
31:BA:123:G:H2'	31:BA:124:G:O4'	2.16	0.46
37:BH:16:SER:O	37:BH:26:VAL:HA	2.15	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
46:BU:114:LYS:H	46:BU:114:LYS:HG2	1.62	0.46
31:DA:123:G:H2'	31:DA:124:G:O4'	2.14	0.46
27:B5:51:TYR:HB2	27:B5:54:GLY:HA3	1.98	0.46
27:B5:51:TYR:HB3	27:B5:52:TYR:CD2	2.51	0.46
30:B8:35:GLN:HG2	31:BA:2420:C:OP1	2.15	0.46
32:DB:6:C:H2'	32:DB:7:G:O4'	2.16	0.46
31:BA:2631:G:N2	34:BE:61:ARG:NH1	2.62	0.46
31:DA:2287:A:C2	31:DA:2346:A:C2	3.04	0.46
47:BV:71:LEU:HD22	47:BV:71:LEU:C	2.36	0.46
1:AA:1442:G:O2'	1:AA:1442(A):G:C5'	2.41	0.46
1:CA:50:A:N6	1:CA:361:G:H4'	2.30	0.46
31:BA:142:A:C8	31:BA:1595:G:N2	2.69	0.46
2:AB:96:ARG:O	2:AB:98:LEU:N	2.48	0.46
33:DD:165:ILE:HD13	33:DD:175:LEU:HD21	1.97	0.46
33:DD:133:LEU:HB3	33:DD:173:VAL:HG11	1.96	0.46
31:BA:389:G:N1	41:BP:71:VAL:HG12	2.31	0.46
31:BA:668:G:H5'	31:BA:669:G:OP2	2.15	0.46
37:DH:137:ASP:HB3	37:DH:140:LYS:HB3	1.97	0.46
31:DA:1005:C:C2	31:DA:1143:A:C5	3.03	0.46
31:DA:2495:G:H5''	42:DQ:81:VAL:HG22	1.97	0.46
2:CB:114:ARG:HD2	2:CB:141:GLU:OE1	2.15	0.46
35:BF:22:ALA:HB1	35:BF:26:ALA:CB	2.45	0.46
1:CA:413:G:N2	1:CA:428:G:H1'	2.30	0.46
4:CD:3:ARG:CD	4:CD:5:ILE:HD11	2.46	0.46
31:BA:2850:A:C2'	31:BA:2851:A:O5'	2.64	0.46
31:BA:310:A:C8	31:BA:312:G:C6	3.03	0.46
31:DA:1531:C:H3'	31:DA:1532:C:H5'	1.97	0.46
1:CA:965:A:C2	1:CA:969:A:C2	3.04	0.46
31:DA:358:U:C6	31:DA:358:U:H3'	2.50	0.46
50:DY:8:LYS:HB2	50:DY:28:LYS:NZ	2.31	0.46
31:DA:2565:A:H5''	31:DA:2566:A:P	2.55	0.46
45:DT:32:TYR:HB3	45:DT:81:PRO:HB2	1.93	0.46
37:BH:158:HIS:CE1	37:BH:169:VAL:N	2.84	0.46
31:BA:1505:C:C6	31:BA:1506:C:C6	3.02	0.46
15:AO:39:LEU:HD12	15:AO:56:LEU:CB	2.41	0.46
50:BY:8:LYS:CD	50:BY:28:LYS:HZ3	2.29	0.46
50:BY:8:LYS:HZ1	50:BY:73:ARG:HA	1.80	0.46
31:BA:2876:G:C5'	45:BT:2:ASN:O	2.63	0.46
1:AA:437:U:C5	1:AA:438:G:N7	2.83	0.46
51:BZ:126:VAL:HG12	51:BZ:163:LEU:HA	1.97	0.46
1:CA:1064:G:H5'	1:CA:1066:C:H1'	1.97	0.46
31:DA:271(D):G:H2'	31:DA:271(E):U:O4'	2.15	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:CA:737:A:C4	1:CA:738:C:C5	3.03	0.46
31:DA:1478:G:HO2'	31:DA:1479:G:H5'	1.81	0.46
31:DA:1480:G:C2	31:DA:1481:U:O2	2.68	0.46
34:BE:116:VAL:O	34:BE:117:MET:HB3	2.14	0.46
33:BD:254:THR:H	33:BD:255:LYS:HZ1	1.63	0.46
32:DB:66:A:O4'	32:DB:109:C:N4	2.48	0.46
31:DA:1833:U:C2	31:DA:1834:U:C6	3.03	0.46
35:BF:184:TYR:O	35:BF:188:ARG:HG3	2.15	0.46
1:AA:945:G:C2	1:AA:946:A:C8	3.04	0.46
31:BA:2273:A:C2'	31:BA:2274:A:H5'	2.45	0.46
38:DI:52:ARG:HG3	38:DI:53:ALA:N	2.26	0.46
31:DA:1741:A:N7	31:DA:1742:G:N1	2.64	0.46
1:CA:916:G:H2'	1:CA:917:G:C8	2.51	0.46
1:AA:1159:U:C5	1:AA:1182:G:N3	2.83	0.46
37:DH:153:LYS:CB	37:DH:154:PRO:CD	2.93	0.46
31:DA:185:U:H2'	31:DA:186:G:H8	1.80	0.46
1:CA:933:G:C2	1:CA:1385:G:C2	3.03	0.46
1:AA:189:G:O2'	1:AA:189(A):C:H5'	2.15	0.46
31:DA:768:G:C6	31:DA:769:G:C5	3.03	0.46
41:BP:107:LYS:C	41:BP:109:GLY:N	2.67	0.46
25:B3:13:ILE:HD12	31:BA:989:G:N7	2.29	0.46
31:BA:272(J):C:H2'	31:BA:274:G:OP1	2.14	0.46
31:BA:848:G:C4	31:BA:933:A:C8	3.02	0.46
10:CJ:50:ILE:HD13	10:CJ:60:ARG:HD3	1.96	0.46
1:AA:484:G:H4'	1:AA:485:G:OP1	2.15	0.46
31:BA:2853:C:O2'	31:BA:2854:G:H5'	2.16	0.46
31:BA:2855:C:H2'	31:BA:2856:C:C6	2.50	0.46
1:CA:236:G:C6	1:CA:237:C:C4	3.03	0.46
1:CA:472:A:C4'	16:CP:82:GLN:HE22	2.27	0.46
34:BE:101:ARG:HB3	34:BE:169:ASN:ND2	2.30	0.46
1:AA:9:G:C6	1:AA:26:A:N6	2.83	0.46
1:CA:1521:G:H2'	1:CA:1522:U:C6	2.50	0.46
17:CQ:60:ILE:HB	17:CQ:74:LEU:HD23	1.97	0.46
31:DA:671:C:H5'	31:DA:671:C:H6	1.80	0.46
17:CQ:40:LYS:HG2	17:CQ:41:LYS:N	2.30	0.46
1:AA:1521:G:H2'	1:AA:1522:U:C6	2.50	0.46
45:DT:90:GLN:HG2	45:DT:120:ARG:NH1	2.29	0.46
1:CA:515:G:C6	1:CA:516:U:N3	2.82	0.46
5:CE:87:SER:HB3	5:CE:125:SER:O	2.16	0.46
19:AS:50:ALA:HA	19:AS:58:VAL:O	2.15	0.46
31:BA:1550:C:H2'	31:BA:1551:C:H6	1.81	0.46
6:CF:96:PRO:HB3	18:CR:30:ASP:OD2	2.15	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:AI:43:ALA:HA	9:AI:74:ILE:HD13	1.97	0.46
31:BA:1782:C:H2'	31:BA:2608:G:O2'	2.14	0.46
22:D0:36:ILE:HG23	31:DA:2354:G:O2'	2.15	0.46
31:DA:2038:G:H2'	31:DA:2039:C:O4'	2.15	0.46
31:DA:606:U:H4'	31:DA:658:C:H4'	1.97	0.46
42:DQ:58:PHE:HD1	42:DQ:58:PHE:O	1.99	0.46
2:AB:157:ARG:O	2:AB:159:PRO:HD3	2.15	0.46
1:AA:1350:A:OP1	9:AI:121:ARG:HG3	2.16	0.46
36:DG:165:THR:OG1	36:DG:168:GLU:HG3	2.16	0.46
41:DP:17:LYS:NZ	41:DP:17:LYS:HB2	2.30	0.46
46:DU:69:CYS:HB3	46:DU:106:PHE:HZ	1.79	0.46
33:DD:36:PRO:HA	33:DD:62:TYR:O	2.15	0.46
44:DS:12:PHE:CE1	44:DS:91:PRO:HG3	2.51	0.46
31:DA:2810:A:C2'	34:DE:61:ARG:NH2	2.76	0.46
30:D8:35:GLN:CG	31:DA:2420:C:OP1	2.63	0.46
31:DA:1384:A:H1'	31:DA:1405:U:O4'	2.15	0.46
36:BG:35:GLU:OE2	36:BG:160:VAL:HB	2.16	0.46
31:BA:1279:G:H5'	43:BR:34:ILE:HD11	1.98	0.46
31:BA:942:G:C2'	31:BA:943:U:H5'	2.45	0.46
37:BH:85:LYS:HE3	37:BH:133:VAL:CB	2.41	0.46
47:BV:82:ARG:HD3	47:BV:82:ARG:C	2.36	0.46
34:DE:39:PRO:HD3	34:DE:45:THR:OG1	2.15	0.46
1:CA:437:U:O3'	4:CD:125:HIS:NE2	2.47	0.46
31:BA:1531:C:H5'	31:BA:1532:C:OP2	2.16	0.46
45:BT:28:VAL:HG13	45:BT:46:GLU:CA	2.45	0.46
41:BP:108:LYS:O	41:BP:110:TYR:N	2.48	0.46
31:BA:310:A:C8	31:BA:312:G:C5	3.04	0.46
1:AA:509:A:H4'	1:AA:510:A:OP1	2.16	0.46
4:AD:19:LEU:HD13	4:AD:21:LEU:HD21	1.98	0.46
1:CA:339:C:H2'	1:CA:340:U:C6	2.50	0.46
45:DT:33:LYS:O	45:DT:40:THR:O	2.34	0.46
51:DZ:5:LEU:HA	51:DZ:5:LEU:HD23	1.67	0.46
31:DA:1486:A:H2'	31:DA:1487:G:C8	2.50	0.46
41:BP:148:LEU:O	41:BP:148:LEU:HD22	2.15	0.46
1:AA:437:U:O3'	4:AD:125:HIS:NE2	2.48	0.46
31:DA:2789:C:H2'	31:DA:2790:A:OP2	2.16	0.46
31:BA:1478:G:O2'	31:BA:1558:A:H2	1.97	0.46
5:AE:101:ILE:H	5:AE:101:ILE:HD13	1.79	0.46
1:AA:963:G:H21	10:AJ:55:LYS:CE	2.29	0.46
31:DA:1047:G:H21	31:DA:1111:A:N6	2.04	0.46
37:DH:30:LYS:HG2	37:DH:79:VAL:O	2.14	0.46
18:AR:53:ARG:C	18:AR:55:ARG:N	2.69	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
44:DS:74:ALA:HB2	44:DS:101:LEU:HD11	1.97	0.46
10:CJ:8:LEU:HB3	10:CJ:16:LEU:HD21	1.97	0.46
1:AA:1147:C:C5	1:AA:1148:U:C4	3.04	0.46
3:CC:180:ALA:HB1	3:CC:182:ILE:CG1	2.43	0.46
31:BA:2273:A:H2'	31:BA:2274:A:C8	2.50	0.46
37:BH:89:ILE:O	37:BH:90:LYS:HB2	2.14	0.46
1:CA:169:C:C5	1:CA:170:U:C5	3.04	0.46
31:BA:1173:G:H5'	31:BA:1174:A:P	2.56	0.46
22:B0:16:SER:HB3	31:BA:2262:U:OP2	2.16	0.46
36:BG:11:TYR:HA	36:BG:15:VAL:HB	1.98	0.46
36:BG:171:ALA:O	36:BG:175:LEU:HG	2.15	0.46
8:AH:24:THR:HG22	8:AH:25:ASP:N	2.30	0.46
31:DA:1131:G:OP2	31:DA:2515:C:H4'	2.15	0.46
31:DA:2641:G:OP1	39:DN:75:TYR:HD2	1.98	0.46
12:AL:75:HIS:HD2	12:AL:77:LEU:N	2.12	0.46
34:DE:21:VAL:CG2	34:DE:21:VAL:O	2.63	0.46
3:AC:119:ARG:HE	3:AC:140:ARG:NE	2.13	0.46
32:BB:110:G:C6	32:BB:111:G:C5	3.04	0.46
12:CL:75:HIS:HD2	12:CL:77:LEU:N	2.11	0.46
16:CP:53:VAL:O	16:CP:57:ARG:CG	2.61	0.46
31:DA:150:C:H42	31:DA:176:G:H1	1.62	0.46
13:AM:83:ASP:CG	13:AM:84:ILE:H	2.18	0.46
31:DA:513:A:N1	31:DA:514:A:C5	2.84	0.46
35:DF:34:TRP:CE2	41:DP:12:ALA:HB2	2.50	0.46
1:AA:340:U:H2'	1:AA:341:C:O4'	2.14	0.46
1:CA:1478:C:O2'	1:CA:1479:C:H5'	2.15	0.46
31:DA:1582:C:HO2'	31:DA:1586:A:H8	1.50	0.46
46:DU:15:LYS:HG3	46:DU:16:LYS:N	2.31	0.46
3:CC:92:ALA:HB2	3:CC:99:VAL:HG22	1.98	0.46
34:BE:10:GLY:HA3	45:BT:8:LYS:HE3	1.97	0.46
31:BA:128:C:H2'	31:BA:129:C:H6	1.80	0.46
2:CB:142:LEU:O	2:CB:146:GLN:HB2	2.15	0.46
25:B3:18:ASP:HB2	25:B3:49:LYS:HE3	1.97	0.46
31:DA:2352:A:C2'	31:DA:2353:G:H5'	2.45	0.46
2:CB:79:ASP:O	2:CB:81:VAL:N	2.49	0.46
31:BA:2870:C:H2'	31:BA:2871:C:H5'	1.97	0.46
31:DA:2828:C:H2'	31:DA:2829:C:H6	1.81	0.46
1:CA:57:G:H2'	1:CA:58:C:O4'	2.15	0.46
31:DA:1642:G:O2'	31:DA:1643:G:H5'	2.14	0.46
36:BG:163:ALA:O	36:BG:164:GLU:HG2	2.16	0.46
47:DV:45:THR:O	47:DV:45:THR:HG22	2.14	0.46
40:DO:108:GLU:HG2	40:DO:108:GLU:H	1.43	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
40:DO:10:VAL:HG21	40:DO:16:ALA:O	2.15	0.46
31:BA:614(A):U:H4'	31:BA:614(B):G:H5''	1.98	0.46
38:DI:93:THR:HG22	38:DI:119:PRO:HB3	1.96	0.46
24:D2:55:ARG:NH1	31:DA:72:U:OP1	2.48	0.46
27:B5:55:ARG:CD	27:B5:56:LYS:N	2.78	0.46
31:DA:1826:G:C4	31:DA:1827:C:C6	3.04	0.46
47:BV:49:THR:HA	47:BV:50:PRO:HD3	1.79	0.46
30:D8:13:ARG:O	30:D8:14:VAL:HG23	2.15	0.46
30:D8:51:ALA:C	30:D8:53:PRO:HD2	2.36	0.46
30:D8:62:LEU:N	30:D8:63:PRO:HD2	2.31	0.46
41:DP:63:PRO:C	41:DP:65:ARG:N	2.69	0.46
31:DA:2889:C:C2'	31:DA:2891:G:H5'	2.44	0.46
28:D6:29:ASN:O	28:D6:30:THR:C	2.52	0.46
1:CA:675:A:C4	1:CA:676:A:C8	3.04	0.46
31:DA:329:G:H4'	31:DA:330:A:OP2	2.16	0.46
31:BA:1279:G:H4'	43:BR:31:HIS:CD2	2.50	0.46
33:DD:130:ALA:C	33:DD:131:LEU:HD12	2.36	0.46
27:D5:55:ARG:CD	27:D5:56:LYS:N	2.79	0.46
31:BA:464:U:C2	31:BA:788:A:C6	3.03	0.46
15:CO:36:ILE:HD12	15:CO:63:ARG:HE	1.80	0.46
15:CO:75:PRO:O	15:CO:78:TYR:HB3	2.16	0.46
44:BS:56:LEU:HD22	44:BS:58:LEU:HB2	1.97	0.46
31:BA:9:U:O2'	31:BA:10:G:P	2.74	0.46
42:BQ:20:ALA:CB	42:BQ:99:PRO:HG2	2.45	0.46
45:DT:49:VAL:O	45:DT:49:VAL:HG22	2.15	0.46
1:AA:411:A:OP1	4:AD:30:LYS:NZ	2.45	0.46
1:AA:545:C:H5''	4:AD:72:GLU:CG	2.44	0.46
42:DQ:140:ALA:HA	51:DZ:99:TYR:HD2	1.75	0.46
37:BH:37:VAL:HG13	37:BH:68:THR:HG21	1.98	0.46
31:BA:2462:U:H2'	31:BA:2463:C:O4'	2.15	0.46
23:B1:11:ARG:HG2	23:B1:61:ARG:O	2.16	0.46
1:AA:255:G:O6	1:AA:266:G:O6	2.33	0.46
17:AQ:59:ILE:HD13	17:AQ:73:VAL:HA	1.97	0.46
33:DD:255:LYS:NZ	33:DD:255:LYS:N	2.60	0.46
1:CA:1097:C:C1'	1:CA:1170:A:H1'	2.38	0.46
42:DQ:54:MET:O	42:DQ:57:HIS:N	2.49	0.46
31:DA:2789:C:C2'	31:DA:2790:A:OP2	2.64	0.46
1:CA:734:G:C6	1:CA:735:C:C4	3.03	0.46
32:BB:107:G:C2'	32:BB:108:U:H5'	2.46	0.46
13:AM:60:VAL:HG12	13:AM:66:LEU:HD21	1.98	0.46
1:CA:17:U:H1'	1:CA:1080:A:H1'	1.98	0.46
51:BZ:30:ASN:HB3	51:BZ:90:VAL:HB	1.98	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:DA:547:A:N3	31:DA:547:A:H2'	2.31	0.46
4:AD:173:TRP:CD1	4:AD:174:LEU:HG	2.51	0.46
18:AR:56:THR:OG1	18:AR:58:LEU:HD13	2.16	0.46
43:BR:42:LYS:O	43:BR:45:ARG:HD3	2.16	0.46
3:CC:11:ARG:O	3:CC:14:ILE:O	2.34	0.46
35:BF:9:ILE:HG12	35:BF:14:PRO:CA	2.46	0.46
47:DV:36:PRO:HD3	47:DV:60:GLU:O	2.15	0.46
31:DA:990:A:OP2	31:DA:991:C:OP2	2.33	0.46
1:CA:1221:G:OP1	1:CA:1321:C:N3	2.49	0.46
12:AL:110:VAL:CG2	12:AL:120:TYR:HB3	2.46	0.46
2:CB:100:GLY:O	2:CB:104:ASN:N	2.48	0.46
12:CL:6:THR:HG23	12:CL:9:GLN:NE2	2.27	0.46
1:AA:658:G:C5	1:AA:659:U:H5	2.34	0.46
31:DA:2781:A:C5'	31:DA:2781:A:H8	2.28	0.46
31:DA:1473:G:H2'	31:DA:1474:C:H6	1.79	0.46
31:DA:1450(A):C:N4	31:DA:1451:C:N4	2.62	0.46
31:BA:639:U:H2'	31:BA:640:C:H6	1.80	0.46
43:BR:104:ARG:HD2	43:BR:111:LEU:HD11	1.98	0.46
34:DE:101:ARG:HB3	34:DE:169:ASN:ND2	2.31	0.46
1:AA:1478:C:H2'	1:AA:1479:C:C6	2.51	0.46
2:CB:217:ARG:HA	2:CB:220:ASP:HB2	1.98	0.46
31:BA:1451:C:N3	31:BA:1459:G:O6	2.49	0.46
37:DH:127:GLU:HG2	37:DH:130:ARG:NH2	2.30	0.46
1:AA:577:G:C2	1:AA:578:C:C5	3.04	0.46
37:DH:118:PRO:HG3	37:DH:144:VAL:HG21	1.98	0.46
31:DA:614:U:O2	31:DA:614:U:O4'	2.33	0.46
31:DA:2392:A:H8	41:DP:60:MET:HG2	1.80	0.46
1:AA:1418:A:N3	31:BA:1959:G:H1'	2.31	0.46
20:AT:94:ALA:O	20:AT:95:ALA:HB3	2.14	0.46
48:BW:14:PRO:O	48:BW:15:ARG:C	2.53	0.46
2:AB:24:TRP:CH2	2:AB:26:PRO:HA	2.50	0.46
1:CA:1113:C:O5'	1:CA:1113:C:H6	1.98	0.46
31:DA:760:G:H2'	31:DA:761:A:O4'	2.15	0.46
11:CK:21:ILE:CB	11:CK:84:VAL:HG12	2.45	0.46
36:BG:43:LEU:N	36:BG:43:LEU:HD22	2.31	0.46
31:DA:1843:C:H2'	31:DA:1844:C:C6	2.51	0.46
31:DA:459:U:O2'	31:DA:460:A:H5'	2.15	0.46
31:DA:384:U:H2'	31:DA:385:C:C6	2.50	0.46
43:DR:84:ALA:N	43:DR:85:PRO:CD	2.79	0.46
31:BA:1356:G:C6	31:BA:1357:U:C4	3.04	0.46
1:CA:402:G:C6	1:CA:403:C:C4	3.03	0.46
8:CH:1:MET:HE2	8:CH:1:MET:H3	1.80	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:DA:2828:C:H2'	31:DA:2829:C:C6	2.51	0.46
1:AA:1245:A:N1	1:AA:1293:G:C6	2.84	0.46
31:BA:1287:A:C5	31:BA:1288:U:C4	3.04	0.46
31:BA:606:U:H4'	31:BA:658:C:H4'	1.97	0.46
1:CA:881:G:P	12:CL:12:ARG:HH22	2.38	0.46
26:B4:14:ILE:HA	36:BG:5:VAL:HG13	1.98	0.46
1:CA:868:C:H2'	1:CA:869:G:O4'	2.16	0.46
5:AE:118:ILE:HG23	5:AE:118:ILE:O	2.16	0.46
43:DR:28:LEU:HD22	43:DR:28:LEU:O	2.15	0.46
36:DG:146:TYR:HA	36:DG:149:VAL:HG22	1.98	0.46
34:DE:173:VAL:HG12	34:DE:174:ASP:H	1.79	0.46
20:CT:79:ARG:HA	20:CT:82:SER:OG	2.16	0.46
25:D3:1:MET:HB2	25:D3:38:GLU:OE2	2.16	0.46
39:BN:2:LYS:HZ2	46:BU:94:ASN:HD21	1.64	0.46
2:CB:185:ILE:HA	2:CB:199:TYR:O	2.14	0.46
1:AA:482:A:N3	1:AA:482:A:H2'	2.30	0.46
33:BD:35:LYS:HZ2	33:BD:64:ILE:C	2.14	0.46
33:DD:27:THR:HG23	33:DD:28:GLU:H	1.69	0.46
31:DA:2298:A:H2'	31:DA:2299:G:O4'	2.16	0.46
31:BA:2787:C:O2	34:BE:61:ARG:NH1	2.49	0.46
31:BA:2810:A:C4	34:BE:61:ARG:NH2	2.83	0.46
34:BE:59:VAL:HG22	34:BE:59:VAL:O	2.16	0.46
28:D6:35:GLU:HG3	28:D6:35:GLU:O	2.16	0.46
30:B8:23:VAL:CG1	30:B8:46:ARG:HB3	2.45	0.46
30:B8:56:GLU:HA	30:B8:59:LYS:HZ1	1.81	0.46
47:DV:40:LEU:CD1	47:DV:40:LEU:C	2.83	0.46
49:BX:23:GLU:CG	49:BX:24:GLY:N	2.77	0.46
25:B3:31:LEU:HD23	25:B3:31:LEU:HA	1.86	0.46
31:DA:587:C:H5	41:DP:33:ARG:HH11	1.64	0.46
31:BA:620:G:H8	31:BA:622:G:O6	1.98	0.46
1:CA:437:U:C5	1:CA:438:G:N7	2.84	0.46
36:DG:45:GLU:HB2	36:DG:47:LYS:CD	2.45	0.46
31:DA:2308:G:C2	31:DA:2309:A:C6	3.03	0.46
36:DG:88:ILE:CG2	36:DG:89:GLY:N	2.78	0.46
32:DB:78:A:C2	32:DB:100:A:C4	3.03	0.46
45:DT:30:VAL:HG22	45:DT:84:GLN:O	2.16	0.46
50:BY:14:LEU:HD12	50:BY:15:VAL:H	1.80	0.46
50:BY:14:LEU:HG	50:BY:15:VAL:O	2.16	0.46
50:DY:37:VAL:HG23	50:DY:38:ILE:N	2.31	0.46
31:DA:146:G:O2'	31:DA:147:U:H5'	2.16	0.46
41:DP:45:LEU:HD22	41:DP:46:LYS:N	2.31	0.46
1:CA:60:A:P	1:CA:60:A:H8	2.39	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:BA:1030:G:OP2	42:BQ:128:LYS:HE2	2.15	0.46
31:BA:271(N):U:C6	31:BA:271(N):U:OP1	2.69	0.46
31:BA:92:A:C2'	31:BA:93:G:H5'	2.45	0.46
33:BD:246:PRO:HB2	33:BD:255:LYS:HG3	1.97	0.46
14:AN:3:ARG:CZ	14:AN:3:ARG:HB3	2.46	0.46
23:D1:26:ARG:HB2	23:D1:34:THR:CA	2.44	0.46
4:AD:108:LEU:HD12	4:AD:174:LEU:HD13	1.96	0.46
28:B6:26:ASN:ND2	28:B6:32:ASN:ND2	2.64	0.46
28:B6:51:GLU:O	28:B6:52:VAL:HG23	2.15	0.46
40:DO:35:VAL:HG13	40:DO:65:THR:HG22	1.98	0.46
44:BS:74:ALA:HB2	44:BS:101:LEU:HD11	1.97	0.46
47:DV:5:VAL:HG22	47:DV:6:LYS:N	2.31	0.46
18:CR:53:ARG:C	18:CR:55:ARG:N	2.69	0.46
35:DF:9:ILE:HG12	35:DF:14:PRO:CA	2.46	0.46
31:BA:1711:C:H2'	31:BA:1712:C:C6	2.50	0.46
31:DA:1175:U:H4'	31:DA:1176:G:H2'	1.97	0.46
31:DA:107:C:N3	31:DA:108:U:C5	2.84	0.46
1:CA:1160:G:N2	1:CA:1161:C:C6	2.83	0.46
1:AA:499:A:C4'	1:AA:500:G:OP1	2.63	0.46
31:DA:1257:C:H4'	35:DF:83:PHE:CD2	2.50	0.46
31:DA:780:G:C2	31:DA:782:A:C2	3.04	0.46
34:BE:21:VAL:CG2	34:BE:21:VAL:O	2.63	0.46
31:DA:448:U:C4	31:DA:583:G:H1'	2.51	0.46
1:AA:950:U:C6	13:AM:102:ARG:NH1	2.84	0.46
31:BA:2753:A:O2'	31:BA:2754:U:P	2.74	0.46
31:DA:2500:U:H2'	31:DA:2504:U:C5	2.44	0.46
34:DE:181:LEU:HD11	45:DT:7:ILE:HG21	1.98	0.46
20:CT:53:LEU:HA	20:CT:56:MET:HB2	1.98	0.46
5:AE:6:PHE:HD2	5:AE:36:ASP:HB3	1.81	0.46
34:BE:65:GLY:C	34:BE:67:PHE:N	2.66	0.46
1:AA:262:A:N6	1:AA:263:A:N6	2.64	0.46
31:BA:1488:G:C6	31:BA:1489:U:C2	3.03	0.46
1:CA:484:G:H4'	1:CA:485:G:OP1	2.14	0.46
1:AA:242:C:H2'	1:AA:243:A:H5'	1.97	0.46
31:DA:574:C:N3	34:DE:145:LYS:HE2	2.31	0.46
34:BE:10:GLY:HA3	45:BT:8:LYS:HZ1	1.80	0.46
19:CS:4:SER:O	19:CS:5:LEU:HB2	2.15	0.46
1:CA:938:A:H8	1:CA:938:A:O5'	1.98	0.46
27:D5:41:PRO:HG2	27:D5:44:THR:OG1	2.15	0.46
1:AA:1014:A:C2	19:AS:34:TRP:CE2	3.04	0.46
32:BB:10:C:O2'	32:BB:11:C:H5'	2.15	0.46
31:BA:1375:C:H2'	31:BA:1376:C:H6	1.80	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:DA:231:C:C2'	31:DA:232:G:H5'	2.46	0.46
3:AC:188:LEU:O	3:AC:189:ALA:CB	2.63	0.46
38:BI:69:LYS:O	38:BI:69:LYS:HG2	2.15	0.46
1:CA:997:U:H2'	1:CA:998:G:C8	2.51	0.46
39:BN:15:LEU:O	39:BN:136:GLU:HA	2.16	0.46
31:BA:2774:C:H2'	31:BA:2775:A:O4'	2.16	0.46
31:BA:2412:A:H2'	31:BA:2413:G:O4'	2.15	0.46
31:DA:1456:G:C2'	31:DA:1457:A:H5'	2.45	0.46
1:AA:1401:G:C2	1:AA:1402:C:H1'	2.51	0.46
10:AJ:14:LYS:HE3	10:AJ:14:LYS:HB2	1.77	0.46
31:BA:236:C:H2'	31:BA:237:C:C6	2.51	0.46
3:AC:207:VAL:HG12	3:AC:207:VAL:O	2.15	0.46
8:AH:31:PHE:O	8:AH:35:ILE:HG13	2.16	0.46
1:AA:316:G:OP2	1:AA:351:G:O2'	2.33	0.46
1:CA:92:C:H2'	1:CA:93:G:H8	1.80	0.46
30:B8:31:HIS:O	30:B8:33:ASN:N	2.49	0.46
1:AA:310:G:OP2	16:AP:27:LYS:NZ	2.44	0.46
44:DS:29:PHE:H	44:DS:89:ARG:CD	2.26	0.46
42:BQ:8:LYS:CD	42:BQ:9:TYR:H	2.27	0.46
4:AD:128:VAL:HA	4:AD:145:GLU:O	2.15	0.46
30:D8:50:LEU:O	30:D8:52:LYS:N	2.45	0.46
30:D8:59:LYS:HD3	41:DP:50:ARG:HB3	1.98	0.46
31:DA:197:A:N6	31:DA:2430:A:H2'	2.31	0.46
31:DA:250:G:C6	31:DA:251:A:C6	3.04	0.46
31:DA:2287:A:O2'	31:DA:2288:A:H3'	2.16	0.46
24:D2:32:LEU:HD23	31:DA:61:G:HO2'	1.81	0.46
47:BV:90:PRO:HG2	47:BV:91:TYR:N	2.22	0.46
1:AA:1442:G:HO2'	1:AA:1442(A):G:H5''	1.71	0.46
31:BA:456:C:C5	49:BX:66:LEU:HD22	2.50	0.46
24:B2:45:SER:HA	24:B2:47:ASN:ND2	2.30	0.46
1:CA:1277:C:H6	1:CA:1277:C:H3'	1.81	0.46
36:BG:130:ASN:HB3	36:BG:160:VAL:HA	1.98	0.46
1:AA:1277:C:H3'	1:AA:1277:C:H6	1.80	0.46
23:B1:65:SER:OG	23:B1:66:HIS:HD2	1.97	0.46
37:BH:84:SER:O	37:BH:133:VAL:O	2.34	0.46
31:DA:2722:G:O2'	43:DR:5:LYS:HB2	2.16	0.46
31:DA:2821:A:H2'	31:DA:2822:G:H8	1.80	0.46
31:DA:2724:C:OP2	43:DR:2:ARG:CZ	2.63	0.46
15:AO:36:ILE:CD1	15:AO:63:ARG:HE	2.28	0.46
37:DH:83:TYR:HB2	37:DH:84:SER:H	1.51	0.46
2:CB:144:ARG:HG3	2:CB:145:LEU:N	2.31	0.46
31:BA:2663:G:C5	31:BA:2664:G:C5	3.04	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
36:DG:42:GLY:O	36:DG:44:GLY:N	2.49	0.46
36:DG:137:GLU:OE2	36:DG:139:LEU:HD11	2.16	0.46
31:BA:2733:A:H2'	31:BA:2734:A:O4'	2.15	0.46
39:BN:68:GLU:HA	39:BN:86:PRO:HB2	1.97	0.46
31:DA:814:C:H5''	47:DV:86:GLY:HA3	1.97	0.46
41:BP:88:LEU:HD11	41:BP:95:VAL:HG21	1.96	0.46
38:BI:133:HIS:ND1	38:BI:134:PRO:CD	2.77	0.46
43:DR:34:ILE:HD12	43:DR:34:ILE:HA	1.67	0.46
50:DY:28:LYS:HB2	50:DY:37:VAL:C	2.36	0.46
1:AA:1228:C:H2'	1:AA:1229:A:H8	1.80	0.46
30:B8:50:LEU:C	30:B8:53:PRO:HD2	2.36	0.46
1:CA:102:G:C4	1:CA:103:C:C6	3.03	0.46
9:CI:79:LEU:HD13	9:CI:79:LEU:C	2.36	0.46
31:BA:2287:A:C5	31:BA:2289:G:C5	3.04	0.46
1:AA:737:A:C4	1:AA:738:C:C5	3.04	0.46
39:BN:78:TYR:N	39:BN:79:PRO:CD	2.79	0.46
32:BB:65:C:N4	32:BB:109:C:H2'	2.26	0.46
31:BA:271(H):G:C6	31:BA:271(Q):G:N1	2.84	0.46
24:B2:57:ILE:O	24:B2:57:ILE:HG23	2.15	0.46
31:BA:1639:U:H4'	31:BA:2699:C:H4'	1.98	0.46
1:AA:1202:G:H2'	1:AA:1203:C:O4'	2.15	0.46
1:CA:671:G:C5	1:CA:672:U:C5	3.04	0.46
19:AS:40:ILE:HB	19:AS:67:VAL:O	2.15	0.46
12:AL:27:LEU:HD22	12:AL:27:LEU:N	2.31	0.46
30:D8:26:LYS:HE2	30:D8:47:LYS:HG2	1.97	0.46
23:D1:38:SER:CB	31:DA:2080:G:H4'	2.46	0.46
18:CR:53:ARG:NH2	18:CR:60:ALA:N	2.59	0.46
51:DZ:61:LEU:HB2	51:DZ:65:GLN:CB	2.44	0.46
51:DZ:61:LEU:HD12	51:DZ:67:LEU:HD13	1.98	0.46
1:AA:663:A:C2'	1:AA:664:G:H5'	2.45	0.46
31:DA:1722:A:H2	31:DA:1740:G:H2'	1.79	0.46
31:DA:2558:C:C2'	31:DA:2559:C:O5'	2.64	0.46
31:BA:867:C:C6	31:BA:868:U:C5	3.03	0.46
31:DA:2094:G:O2'	31:DA:2095:C:H5'	2.16	0.46
1:CA:625:G:C4	1:CA:626:U:C5	3.03	0.46
14:AN:53:LEU:HB3	14:AN:56:VAL:HG21	1.98	0.46
31:BA:1301:A:C8	31:BA:1303:G:C8	3.03	0.46
1:AA:750:G:C2	1:AA:751:U:C6	3.04	0.46
1:CA:635:G:C4	1:CA:636:U:C6	3.03	0.46
27:B5:29:THR:O	27:B5:30:LEU:HD23	2.15	0.46
5:CE:91:LEU:HA	5:CE:91:LEU:HD12	1.73	0.46
1:CA:950:U:C6	13:CM:102:ARG:NH1	2.84	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:DA:1586:A:C2	31:DA:1587:A:C5	3.03	0.46
38:DI:56:LYS:HZ2	38:DI:57:ARG:CA	2.29	0.46
48:BW:70:TYR:N	48:BW:70:TYR:CD2	2.80	0.46
1:AA:130:A:N3	1:AA:263:A:O2'	2.42	0.46
20:AT:56:MET:HG3	20:AT:88:VAL:HG11	1.98	0.46
33:DD:4:LYS:HB2	33:DD:18:VAL:HG12	1.98	0.46
31:BA:2826:A:C2'	31:BA:2827:C:O5'	2.64	0.46
31:BA:923:C:O2'	31:BA:924:C:H5'	2.15	0.46
42:BQ:43:THR:HB	42:BQ:45:GLN:HG2	1.96	0.46
5:CE:15:ARG:CD	5:CE:26:PHE:CD2	2.99	0.46
5:AE:111:GLU:HB3	5:AE:112:LEU:HD23	1.97	0.46
1:AA:874:G:H2'	1:AA:875:C:H6	1.79	0.46
10:AJ:42:THR:HG23	10:AJ:68:HIS:HA	1.98	0.46
31:BA:1437:C:H6	31:BA:1437:C:C5'	2.28	0.46
31:BA:336:C:H2'	31:BA:337:C:C6	2.50	0.46
11:AK:21:ILE:HD13	11:AK:82:VAL:HG13	1.98	0.46
31:BA:2870:C:H2'	31:BA:2871:C:O4'	2.16	0.46
31:BA:952:G:C6	31:BA:953:A:N7	2.84	0.46
43:BR:84:ALA:N	43:BR:85:PRO:CD	2.78	0.46
4:CD:88:VAL:HG13	5:CE:97:GLY:HA3	1.98	0.46
31:BA:1157:G:H2'	31:BA:1158:C:H5'	1.98	0.46
2:CB:178:ARG:HH22	2:CB:196:LEU:C	2.19	0.46
18:CR:73:ALA:HB3	18:CR:79:LEU:HD12	1.97	0.46
36:DG:178:PHE:O	36:DG:180:PHE:CD1	2.68	0.46
1:AA:579:G:C6	1:AA:580:U:C4	3.04	0.46
40:DO:10:VAL:CG2	40:DO:16:ALA:O	2.64	0.46
1:CA:1426:C:O2'	1:CA:1427:U:H5'	2.16	0.46
35:DF:153:SER:OG	35:DF:190:GLU:HG3	2.16	0.46
50:DY:32:PRO:C	50:DY:34:LYS:H	2.18	0.46
1:CA:1194:U:H2'	1:CA:1195:C:C6	2.51	0.46
32:DB:25:A:H2'	32:DB:26:A:O4'	2.16	0.46
4:CD:24:GLU:O	4:CD:27:TYR:HB2	2.15	0.46
1:AA:527:G:O2'	1:AA:528:C:H5'	2.16	0.46
31:DA:1948:G:C2'	31:DA:1949:G:H5'	2.46	0.46
31:DA:498:G:O2'	31:DA:499:U:H5'	2.14	0.46
43:BR:18:LEU:O	43:BR:19:ALA:C	2.54	0.46
33:BD:28:GLU:CB	33:BD:29:PRO:HD3	2.45	0.46
33:BD:65:ILE:HD11	33:BD:67:PHE:CD1	2.43	0.46
44:DS:89:ARG:O	44:DS:92:TYR:CB	2.58	0.46
30:D8:6:THR:HB	30:D8:63:PRO:CG	2.34	0.46
28:D6:51:GLU:O	28:D6:52:VAL:CG2	2.64	0.46
31:DA:67:U:O2'	31:DA:68:G:H5'	2.16	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
49:DX:31:HIS:HD2	49:DX:33:LYS:N	2.13	0.46
49:DX:57:LEU:O	49:DX:76:ARG:N	2.49	0.46
49:DX:89:ILE:O	49:DX:89:ILE:CG2	2.64	0.46
31:DA:2702:U:O2'	31:DA:2703:C:C6	2.69	0.46
47:BV:75:PHE:CD1	47:BV:89:GLN:HB3	2.49	0.46
47:BV:24:LYS:HA	47:BV:94:LEU:HD12	1.98	0.46
32:BB:21:G:O2'	32:BB:22:U:C5'	2.64	0.46
47:DV:49:THR:HA	47:DV:50:PRO:HD3	1.79	0.46
1:CA:386:C:H2'	1:CA:387:U:C5'	2.46	0.46
15:CO:26:GLU:OE2	15:CO:77:ARG:NH1	2.49	0.46
31:DA:310:A:OP1	50:DY:17:SER:O	2.33	0.46
31:DA:309:G:O3'	50:DY:18:GLY:CA	2.64	0.46
23:B1:67:ILE:N	23:B1:68:PRO:CD	2.72	0.46
23:B1:83:GLU:C	23:B1:85:LEU:H	2.19	0.46
31:DA:2404:C:O3'	41:DP:77:ARG:NH2	2.49	0.46
34:DE:119:ARG:HG2	34:DE:160:TYR:CG	2.50	0.46
37:DH:83:TYR:HA	37:DH:135:GLY:O	2.15	0.46
31:DA:1141:U:C6	39:DN:63:THR:HB	2.51	0.46
31:DA:2272:U:H5''	31:DA:2273:A:P	2.55	0.46
42:DQ:83:MET:O	42:DQ:83:MET:CG	2.62	0.46
31:BA:2835:A:C5	31:BA:2879:C:C5	3.04	0.46
31:BA:1142(A):A:C8	31:BA:1144:G:C5	3.04	0.46
42:BQ:56:ARG:HA	42:BQ:56:ARG:HD2	1.61	0.46
41:DP:101:VAL:HB	41:DP:106:LEU:HB3	1.96	0.46
27:D5:16:ARG:NH2	31:DA:517:C:OP1	2.49	0.46
37:BH:45:VAL:O	37:BH:45:VAL:HG12	2.15	0.46
45:DT:31:SER:OG	45:DT:43:GLN:HB3	2.16	0.46
31:DA:1614:A:N6	48:DW:88:ARG:H	2.13	0.46
39:BN:128:HIS:O	39:BN:129:PRO:C	2.54	0.46
1:AA:1074:G:C2	1:AA:1075:C:C2	3.03	0.46
31:DA:481:G:C4	31:DA:507:A:C2	3.03	0.46
1:AA:961:U:C4	1:AA:962:C:C4	3.04	0.46
31:BA:2476:A:N1	31:BA:2477:C:C6	2.84	0.46
1:CA:322:C:OP2	1:CA:328:C:N4	2.49	0.46
28:B6:16:CYS:C	28:B6:18:ARG:NE	2.66	0.46
1:AA:920:U:H2'	1:AA:921:U:H6	1.79	0.46
31:DA:1831:G:C4	31:DA:1832:C:C5	3.04	0.46
18:AR:45:SER:CB	18:AR:51:LEU:HD21	2.43	0.46
49:BX:39:ILE:HG12	49:BX:40:LYS:N	2.30	0.46
2:AB:178:ARG:HH21	8:AH:68:ARG:HH22	1.63	0.46
47:DV:5:VAL:HG21	47:DV:36:PRO:HG2	1.96	0.46
36:DG:171:ALA:O	36:DG:175:LEU:HG	2.15	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:DA:1205:U:C3'	31:DA:1206:G:H5'	2.46	0.46
31:BA:2616:C:H2'	31:BA:2617:C:H6	1.81	0.46
2:CB:61:LEU:CA	2:CB:64:ARG:HG2	2.44	0.46
43:DR:53:HIS:CD2	43:DR:94:TYR:OH	2.60	0.46
33:DD:11:PRO:O	33:DD:12:SER:C	2.54	0.46
42:BQ:12:GLN:HG2	42:BQ:73:PRO:HD2	1.96	0.46
23:B1:38:SER:CB	31:BA:2080:G:H4'	2.46	0.46
31:DA:1458:C:H4'	31:DA:1459:G:C4	2.51	0.46
1:AA:189(A):C:O2'	1:AA:189(B):C:H5'	2.16	0.46
35:DF:31:HIS:O	35:DF:34:TRP:HB3	2.16	0.46
45:BT:16:ARG:HD3	45:BT:16:ARG:HA	1.67	0.46
18:CR:66:LEU:CD1	18:CR:70:ILE:HD11	2.45	0.46
35:DF:123:LEU:HD12	35:DF:124:LEU:H	1.81	0.46
7:AG:26:PHE:CD1	7:AG:62:PHE:HE1	2.34	0.46
40:BO:87:ILE:HD13	40:BO:87:ILE:HA	1.49	0.46
31:BA:53:A:H61	31:BA:117:G:C2'	2.29	0.46
1:AA:1287:A:C6	1:AA:1288:A:C6	3.04	0.46
1:AA:1287:A:H2	1:AA:1353:G:N3	2.14	0.46
31:BA:376:C:N4	31:BA:398:G:H1	2.13	0.46
44:BS:106:ARG:HB3	44:BS:106:ARG:HE	1.28	0.46
13:AM:44:ARG:CB	13:AM:46:LYS:HG2	2.46	0.46
1:CA:9:G:H2'	1:CA:10:A:C8	2.50	0.46
31:BA:721:C:H2'	31:BA:722:A:C8	2.51	0.46
31:DA:672:C:H2'	31:DA:673:C:C6	2.50	0.46
1:AA:872:A:C2	1:AA:874:G:C6	3.04	0.46
1:CA:758:G:H2'	1:CA:759:A:OP2	2.16	0.46
31:DA:1015:G:H2'	31:DA:1016:G:H5'	1.98	0.46
31:BA:725:G:C6	31:BA:726:G:N1	2.83	0.46
31:BA:1925:C:C2'	31:BA:1926:U:H5'	2.45	0.46
22:B0:53:MET:HA	22:B0:58:THR:O	2.15	0.46
25:D3:17:LYS:HE2	31:DA:969:U:OP1	2.16	0.46
31:DA:2046:G:C4	31:DA:2047:U:C5	3.03	0.46
31:DA:105:C:H2'	31:DA:106:C:C6	2.51	0.46
46:DU:14:HIS:CD2	46:DU:32:PHE:CB	2.99	0.46
31:BA:500:G:N2	31:BA:502:A:H3'	2.31	0.46
51:BZ:127:LYS:HB3	51:BZ:162:GLU:HG3	1.97	0.46
31:BA:80:G:N2	31:BA:81:G:H1'	2.31	0.46
43:DR:65:LEU:HA	43:DR:65:LEU:HD12	1.76	0.46
49:BX:3:THR:HA	49:BX:6:ASP:OD2	2.16	0.46
31:BA:2740:A:C6	31:BA:2764:A:C8	3.04	0.46
32:DB:45:A:C2	32:DB:46:A:C1'	2.99	0.46
31:BA:2298:A:H2'	31:BA:2299:G:O4'	2.16	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
34:BE:59:VAL:C	34:BE:60:ASN:ND2	2.69	0.46
28:D6:20:ASN:OD1	28:D6:21:TYR:N	2.50	0.46
30:D8:35:GLN:OE1	31:DA:2421:G:OP2	2.34	0.46
30:D8:39:LYS:HZ3	30:D8:40:GLU:HA	1.80	0.46
16:CP:55:ARG:HE	16:CP:55:ARG:HA	1.80	0.46
24:B2:53:LEU:HA	24:B2:56:GLN:HE22	1.80	0.46
49:BX:89:ILE:O	49:BX:89:ILE:CG2	2.63	0.46
31:DA:309:G:O2'	31:DA:329:G:C8	2.68	0.46
44:DS:59:LYS:NZ	44:DS:68:GLN:NE2	2.64	0.46
44:DS:65:VAL:O	44:DS:69:VAL:HG12	2.16	0.46
31:BA:2404:C:C2'	31:BA:2405:G:H5'	2.41	0.46
34:DE:110:GLY:O	43:DR:2:ARG:HB3	2.15	0.46
34:DE:111:ARG:HD2	34:DE:160:TYR:CD1	2.51	0.46
31:DA:1191:G:OP1	41:DP:35:HIS:ND1	2.49	0.46
37:DH:46:GLU:HG3	37:DH:51:ARG:HB3	1.97	0.46
31:BA:1655:A:H3'	31:BA:1656:C:C6	2.51	0.46
31:DA:1006:C:H1'	39:DN:106:MET:HB3	1.97	0.46
31:BA:1142(A):A:C8	31:BA:1142(A):A:H5'	2.51	0.46
35:BF:20:LEU:O	35:BF:23:ASP:HB2	2.16	0.46
1:CA:427:U:C4	1:CA:428:G:C6	3.04	0.46
1:CA:502:G:C2	1:CA:503:C:C2	3.04	0.46
31:DA:445:C:O2'	31:DA:446:G:H5'	2.16	0.46
31:BA:1528(A):A:C8	31:BA:1529:G:C8	3.04	0.46
31:DA:9:U:O2'	31:DA:10:G:P	2.74	0.46
31:DA:354:G:H2'	31:DA:355:G:H8	1.81	0.46
1:AA:1228:C:H2'	1:AA:1229:A:C8	2.51	0.46
42:BQ:141:GLN:HG2	51:BZ:72:ARG:HA	1.98	0.46
51:BZ:44:PHE:CZ	51:BZ:48:PHE:HD2	2.34	0.46
48:DW:8:ARG:HA	48:DW:102:HIS:CD2	2.50	0.46
9:AI:79:LEU:HD13	9:AI:79:LEU:C	2.36	0.46
31:BA:2789:C:C2'	31:BA:2790:A:OP2	2.64	0.46
31:BA:2792:G:N3	31:BA:2792:G:H2'	2.30	0.46
1:CA:254:G:O2'	1:CA:255:G:H5'	2.16	0.46
7:CG:115:ARG:O	7:CG:119:ARG:HG3	2.16	0.46
1:AA:382:A:C2	1:AA:383:A:C5	3.04	0.46
1:AA:559:A:C8	1:AA:561:U:C5	3.03	0.46
12:AL:27:LEU:O	12:AL:28:LYS:C	2.53	0.46
12:AL:60:LEU:HA	12:AL:60:LEU:HD13	1.82	0.46
2:AB:178:ARG:HH22	2:AB:196:LEU:C	2.19	0.46
13:CM:78:ILE:HA	13:CM:81:LEU:HD12	1.98	0.46
14:CN:51:GLY:C	14:CN:53:LEU:N	2.70	0.46
1:CA:1300:G:O2'	1:CA:1301:U:OP2	2.32	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
37:DH:153:LYS:HE2	37:DH:154:PRO:O	2.15	0.46
1:CA:992:U:C1'	1:CA:993:G:OP2	2.63	0.46
34:DE:21:VAL:HG23	34:DE:23:VAL:HG13	1.98	0.46
12:CL:75:HIS:CD2	12:CL:77:LEU:H	2.27	0.46
2:CB:17:PHE:H	2:CB:17:PHE:HD2	1.64	0.46
1:CA:827:U:H5''	1:CA:828:A:OP2	2.16	0.46
5:CE:82:VAL:HG21	5:CE:138:ALA:HA	1.98	0.46
31:BA:768:G:C6	31:BA:769:G:C5	3.04	0.46
22:B0:56:ASP:OD2	31:BA:2364:C:H4'	2.15	0.46
31:BA:945:A:O3'	31:BA:946:G:H4'	2.16	0.46
29:B7:24:THR:HG23	29:B7:27:GLY:N	2.32	0.46
1:CA:979:C:OP1	1:CA:1222:G:O6	2.34	0.46
1:AA:691:G:H2'	1:AA:692:U:C6	2.51	0.46
37:DH:103:LEU:HD11	37:DH:105:LEU:CD1	2.46	0.46
1:AA:938:A:O5'	1:AA:938:A:H8	1.99	0.46
34:DE:9:VAL:HG22	34:DE:25:VAL:HB	1.98	0.46
1:AA:1154:G:H2'	1:AA:1155:G:C8	2.49	0.46
31:DA:955:C:C2'	31:DA:955:C:O2	2.63	0.46
34:DE:70:ALA:C	34:DE:72:VAL:N	2.70	0.46
1:AA:778:G:C2'	1:AA:779:C:O5'	2.64	0.46
11:AK:20:TYR:C	11:AK:21:ILE:HD12	2.36	0.46
35:DF:141:ALA:O	35:DF:144:LYS:HB3	2.16	0.46
11:CK:106:LYS:O	11:CK:106:LYS:HG3	2.17	0.46
1:CA:92:C:H2'	1:CA:93:G:C8	2.51	0.46
1:CA:1245:A:N1	1:CA:1293:G:C6	2.84	0.46
11:CK:65:ALA:O	11:CK:68:ALA:HB3	2.16	0.46
31:DA:1623:G:O2'	31:DA:1624:G:H5'	2.16	0.46
31:DA:628:G:C6	31:DA:629:G:C6	3.04	0.46
39:DN:83:LYS:HE2	39:DN:85:ILE:HD11	1.98	0.46
31:BA:2063:C:C5	31:BA:2064:C:C5	3.04	0.46
11:AK:125:PHE:N	11:AK:125:PHE:CD1	2.83	0.46
18:CR:78:LEU:H	18:CR:78:LEU:HG	1.48	0.46
1:CA:718:G:H5'	11:CK:117:ASN:HB2	1.98	0.46
31:DA:1207:C:H2'	31:DA:1208:C:C6	2.51	0.46
31:DA:2256:G:H2'	31:DA:2257:U:H6	1.81	0.46
1:CA:1442:G:C5	1:CA:1442(B):A:N1	2.84	0.45
1:CA:1442(B):A:C2	45:DT:118:ARG:CZ	2.99	0.45
41:DP:17:LYS:C	41:DP:19:VAL:N	2.67	0.45
2:AB:91:PRO:HG3	2:AB:154:LEU:HB2	1.98	0.45
31:DA:869:G:H2'	31:DA:870:A:O4'	2.16	0.45
31:DA:993:G:N3	47:DV:91:TYR:HE1	2.15	0.45
39:BN:36:GLY:N	39:BN:42:TRP:CZ3	2.83	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
39:DN:13:TRP:O	39:DN:135:PRO:HG2	2.16	0.45
41:DP:57:THR:O	41:DP:58:THR:CB	2.64	0.45
28:D6:26:ASN:HD22	28:D6:32:ASN:HD21	1.63	0.45
30:D8:30:ARG:HB3	31:DA:2393:A:OP2	2.16	0.45
41:DP:64:LYS:O	41:DP:64:LYS:HD3	2.16	0.45
24:D2:30:ARG:HH21	49:DX:11:PRO:HG3	1.79	0.45
49:DX:88:LYS:HD2	49:DX:88:LYS:N	2.30	0.45
31:BA:171:G:H2'	31:BA:172:C:C1'	2.44	0.45
41:BP:16:ARG:CZ	41:BP:16:ARG:HB2	2.46	0.45
39:DN:2:LYS:HD3	46:DU:95:LEU:CD2	2.46	0.45
46:DU:88:ILE:CA	46:DU:90:VAL:HG23	2.46	0.45
16:CP:39:TYR:CD1	16:CP:40:ASP:N	2.85	0.45
49:BX:24:GLY:HA3	49:BX:80:ILE:CG1	2.30	0.45
2:AB:101:MET:HG2	2:AB:108:ILE:HG21	1.98	0.45
32:BB:44:G:H1'	32:BB:47:C:H42	1.80	0.45
36:BG:63:ILE:HD12	36:BG:63:ILE:O	2.16	0.45
26:B4:5:ILE:O	36:BG:67:LYS:HG2	2.16	0.45
31:BA:2406:U:C4	41:BP:72:PRO:HD2	2.51	0.45
23:B1:94:LEU:CD2	23:B1:95:LEU:N	2.79	0.45
41:DP:39:LYS:HA	41:DP:39:LYS:HD3	1.74	0.45
31:BA:623:G:H2'	31:BA:624:C:C6	2.51	0.45
15:AO:82:ILE:CD1	15:AO:88:ARG:HG3	2.46	0.45
31:DA:1142(A):A:C8	31:DA:1144:G:C5	3.04	0.45
35:DF:20:LEU:HD13	35:DF:203:GLN:CD	2.36	0.45
31:DA:2494:G:C5	31:DA:2495:G:N7	2.84	0.45
34:DE:36:ARG:HG2	34:DE:36:ARG:NH1	2.31	0.45
4:CD:4:TYR:C	4:CD:4:TYR:CD1	2.88	0.45
31:BA:1464:C:C2'	31:BA:1528:A:H8	2.29	0.45
41:BP:110:TYR:O	41:BP:111:ARG:C	2.55	0.45
36:BG:45:GLU:HB2	36:BG:47:LYS:CG	2.46	0.45
31:DA:284:U:H2'	31:DA:285:C:C6	2.49	0.45
10:CJ:32:ALA:H	10:CJ:78:ASN:HD21	1.64	0.45
1:AA:929:G:H1	1:AA:1388:C:N4	2.00	0.45
9:AI:3:GLN:O	9:AI:4:TYR:HD1	1.97	0.45
18:CR:51:LEU:HB2	18:CR:56:THR:HG22	1.98	0.45
3:AC:3:ASN:N	3:AC:3:ASN:OD1	2.49	0.45
31:BA:863:A:C2'	31:BA:864:G:H5'	2.46	0.45
42:BQ:19:GLY:C	42:BQ:21:THR:H	2.19	0.45
50:DY:45:VAL:CG2	50:DY:62:GLU:HB2	2.45	0.45
17:CQ:68:ARG:HG3	17:CQ:68:ARG:O	2.16	0.45
24:B2:18:PRO:C	24:B2:20:GLU:N	2.69	0.45
1:CA:1080:A:H5''	1:CA:1081:G:OP2	2.16	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
38:DI:83:ALA:HB2	38:DI:88:ILE:HD13	1.98	0.45
38:BI:130:TYR:CB	38:BI:136:VAL:HG13	2.40	0.45
31:BA:2399:G:H2'	31:BA:2400:G:O4'	2.16	0.45
32:DB:89:G:C6	32:DB:90:A:N6	2.84	0.45
36:DG:16:ARG:N	36:DG:17:PRO:HD2	2.32	0.45
34:DE:130:GLY:O	34:DE:131:ALA:O	2.34	0.45
2:CB:97:TRP:HH2	2:CB:176:GLU:HG3	1.81	0.45
31:DA:2749:A:H4'	37:DH:62:LYS:HB3	1.96	0.45
3:CC:134:ILE:HG22	3:CC:168:ALA:HB3	1.98	0.45
1:CA:933:G:N2	1:CA:1385:G:C4	2.84	0.45
1:AA:1060:C:H4'	10:AJ:51:ARG:HB3	1.98	0.45
31:BA:902:C:O2'	31:BA:903:C:H5'	2.16	0.45
45:DT:106:SER:O	45:DT:107:ASP:CG	2.55	0.45
1:AA:763:G:C5	1:AA:764:C:C5	3.04	0.45
5:AE:11:ILE:HB	5:AE:31:LEU:HB3	1.97	0.45
31:BA:1256:G:H5'	31:BA:1257:C:OP2	2.16	0.45
31:DA:455:C:N3	31:DA:472:A:H2'	2.31	0.45
31:DA:1701:A:H2'	31:DA:1702:G:H5'	1.98	0.45
34:DE:27:LEU:HD12	34:DE:181:LEU:CD1	2.45	0.45
6:CF:52:ILE:O	6:CF:53:ALA:CB	2.63	0.45
1:CA:744:C:O2'	1:CA:745:C:H5'	2.16	0.45
1:CA:155:C:H2'	1:CA:156:G:C8	2.51	0.45
1:CA:156:G:C6	1:CA:166:G:N1	2.85	0.45
1:AA:1319:A:H61	1:AA:1361:G:H21	1.63	0.45
35:DF:57:VAL:HG12	35:DF:59:TYR:H	1.81	0.45
31:DA:572:A:H2'	31:DA:573:G:O4'	2.16	0.45
6:AF:10:LEU:HA	6:AF:84:ASN:O	2.16	0.45
25:B3:17:LYS:HA	25:B3:17:LYS:HD3	1.57	0.45
1:AA:236:G:C6	1:AA:237:C:C4	3.03	0.45
2:AB:158:LEU:H	2:AB:158:LEU:HD12	1.79	0.45
4:CD:131:ARG:HD3	4:CD:131:ARG:N	2.31	0.45
1:CA:715:A:H2'	1:CA:716:A:C8	2.51	0.45
50:DY:44:ILE:HG13	50:DY:44:ILE:H	1.50	0.45
1:CA:779:C:O2'	11:CK:120:ARG:HD3	2.16	0.45
31:BA:1324:G:C2	31:BA:1328:G:N1	2.85	0.45
31:BA:460:A:H2'	31:BA:461:C:O4'	2.16	0.45
31:DA:968:G:H2'	31:DA:969:U:C6	2.51	0.45
31:BA:1368:G:C2	31:BA:1369:G:C8	3.05	0.45
1:AA:1472:U:O2'	1:AA:1473:A:H5'	2.15	0.45
14:AN:12:ARG:C	14:AN:14:PRO:HD3	2.36	0.45
20:AT:64:ASP:OD2	20:AT:81:LYS:NZ	2.44	0.45
31:DA:577:G:C6	31:DA:578:A:C6	3.04	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:DA:2052:G:O4'	34:DE:142:GLY:HA3	2.16	0.45
26:D4:14:ILE:HA	36:DG:5:VAL:HG13	1.97	0.45
1:AA:1187:G:C6	1:AA:1188:A:C6	3.05	0.45
1:AA:450:G:N7	1:AA:481:G:C6	2.84	0.45
47:DV:24:LYS:HA	47:DV:94:LEU:HD12	1.97	0.45
30:D8:61:LEU:CD1	31:DA:593:G:O2'	2.63	0.45
31:DA:2631:G:N2	34:DE:61:ARG:NH1	2.63	0.45
45:BT:118:ARG:HA	45:BT:121:ILE:HB	1.98	0.45
46:DU:92:ARG:O	46:DU:95:LEU:N	2.49	0.45
24:B2:34:GLU:O	24:B2:34:GLU:CG	2.63	0.45
47:BV:86:GLY:O	47:BV:87:HIS:CD2	2.70	0.45
27:D5:40:LYS:NZ	27:D5:46:CYS:HB3	2.31	0.45
31:BA:943:U:O2'	31:BA:944:G:H5'	2.16	0.45
41:DP:21:ARG:O	41:DP:23:PRO:HD3	2.17	0.45
4:AD:4:TYR:C	4:AD:4:TYR:CD1	2.87	0.45
1:AA:926:G:C6	1:AA:1505:G:C6	3.04	0.45
24:D2:41:ILE:HG12	31:DA:94(A):G:N2	2.32	0.45
24:D2:44:LEU:HD13	24:D2:44:LEU:HA	1.48	0.45
45:DT:80:SER:HB3	45:DT:81:PRO:HD3	1.98	0.45
42:DQ:20:ALA:CB	42:DQ:99:PRO:HG2	2.46	0.45
39:BN:128:HIS:CE1	39:BN:134:ARG:CD	3.00	0.45
2:AB:172:ILE:H	2:AB:172:ILE:CD1	2.12	0.45
1:AA:684:A:C6	1:AA:685:G:C6	3.04	0.45
17:AQ:67:LYS:CA	17:AQ:70:ARG:HH12	2.24	0.45
31:DA:1266:G:O2'	31:DA:2012:G:O6	2.26	0.45
1:CA:250:A:H1'	1:CA:251:G:OP2	2.17	0.45
1:CA:961:U:C4	1:CA:962:C:C4	3.04	0.45
48:BW:9:TYR:N	48:BW:102:HIS:HD2	2.00	0.45
31:BA:2699:C:H2'	31:BA:2700:C:O4'	2.16	0.45
38:BI:71:ILE:HG13	38:BI:72:LEU:CD2	2.45	0.45
3:CC:106:VAL:HG12	3:CC:108:ASN:H	1.81	0.45
35:DF:160:ASN:ND2	35:DF:162:LEU:HB2	2.27	0.45
12:CL:27:LEU:O	12:CL:28:LYS:C	2.55	0.45
31:BA:2809:A:C2	31:BA:2892:A:N3	2.84	0.45
2:AB:28:PHE:HD2	2:AB:194:PRO:HD3	1.80	0.45
1:CA:79:G:H4'	1:CA:80:G:OP1	2.16	0.45
32:DB:13:A:O2'	32:DB:14:U:H3'	2.16	0.45
51:DZ:30:ASN:OD1	51:DZ:33:LEU:HB3	2.17	0.45
36:BG:11:TYR:HD2	36:BG:12:TYR:CD1	2.35	0.45
5:CE:12:LEU:C	5:CE:12:LEU:HD22	2.36	0.45
1:AA:992:U:C1'	1:AA:993:G:OP2	2.63	0.45
31:BA:341:G:H2'	31:BA:342:G:O5'	2.16	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:BA:528:A:C2'	31:BA:529:A:H5'	2.46	0.45
31:DA:1473:G:H2'	31:DA:1474:C:C6	2.50	0.45
45:BT:16:ARG:H	45:BT:79:HIS:CD2	2.34	0.45
1:CA:854:G:OP2	1:CA:871:U:C5	2.69	0.45
4:CD:150:GLU:H	4:CD:150:GLU:CD	2.20	0.45
38:BI:78:THR:HA	38:BI:141:LYS:O	2.16	0.45
37:DH:95:ARG:HA	37:DH:128:PRO:O	2.17	0.45
7:CG:22:LEU:HG	7:CG:62:PHE:HE2	1.81	0.45
20:CT:64:ASP:OD2	20:CT:81:LYS:NZ	2.46	0.45
20:AT:67:ALA:O	20:AT:73:HIS:CE1	2.70	0.45
2:CB:96:ARG:O	2:CB:98:LEU:N	2.50	0.45
31:DA:2590:A:O2'	31:DA:2591:C:H5'	2.15	0.45
1:CA:691:G:H2'	1:CA:692:U:C6	2.51	0.45
1:AA:807:A:H2'	1:AA:808:C:C6	2.51	0.45
1:AA:938:A:C6	1:AA:939:G:C5	3.04	0.45
31:DA:958:U:OP2	42:DQ:14:ARG:NH1	2.49	0.45
1:AA:31:G:H5'	1:AA:306:G:N2	2.31	0.45
31:BA:574:C:H1'	31:BA:2055:C:C6	2.52	0.45
31:DA:1665:A:H1'	40:DO:1:MET:HG2	1.98	0.45
11:AK:81:ASP:OD2	11:AK:106:LYS:HG2	2.16	0.45
1:AA:715:A:H2'	1:AA:716:A:C8	2.51	0.45
4:AD:88:VAL:HG13	5:AE:97:GLY:HA3	1.98	0.45
18:AR:86:VAL:O	18:AR:87:ARG:HB3	2.16	0.45
1:CA:439:A:C4	1:CA:496:A:C2	3.04	0.45
31:DA:1945:G:H2'	31:DA:1946:U:C6	2.52	0.45
31:DA:105:C:H2'	31:DA:106:C:H6	1.80	0.45
1:CA:1350:A:OP1	9:CI:121:ARG:HG3	2.16	0.45
31:BA:30:G:H2'	31:BA:31:C:C6	2.51	0.45
45:DT:92:GLY:HA2	45:DT:114:LEU:HB3	1.97	0.45
51:DZ:10:ARG:HH21	51:DZ:26:GLY:H	1.63	0.45
48:DW:66:GLU:O	48:DW:68:ARG:N	2.49	0.45
31:DA:1916:A:H2'	31:DA:1917:U:O4'	2.17	0.45
19:CS:49:ILE:H	19:CS:49:ILE:HD12	1.81	0.45
11:CK:15:ALA:HA	11:CK:77:MET:HA	1.97	0.45
23:D1:59:THR:HG22	23:D1:60:PHE:N	2.30	0.45
30:B8:31:HIS:HB3	31:BA:2420:C:H41	1.81	0.45
44:DS:26:LEU:O	44:DS:88:ASP:HB3	2.16	0.45
44:DS:86:ALA:O	44:DS:87:PHE:O	2.35	0.45
44:DS:90:GLY:C	44:DS:92:TYR:H	2.19	0.45
39:BN:41:ASP:O	39:BN:42:TRP:O	2.34	0.45
31:DA:2391:G:O6	31:DA:2425:A:H8	1.99	0.45
50:DY:96:ILE:HB	50:DY:99:CYS:C	2.37	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:DA:142:A:N6	31:DA:1596:A:H5'	2.32	0.45
49:DX:80:ILE:HG23	49:DX:81:VAL:N	2.30	0.45
31:BA:1225:G:OP1	47:BV:88:ARG:HD2	2.16	0.45
51:BZ:151:HIS:HA	51:BZ:171:ILE:HG23	1.98	0.45
42:BQ:81:VAL:HG12	42:BQ:82:ARG:HG2	1.95	0.45
1:CA:451:A:C5	1:CA:481:G:C6	3.04	0.45
24:B2:33:MET:SD	24:B2:33:MET:N	2.89	0.45
24:B2:31:GLU:CG	24:B2:37:PHE:HD1	2.27	0.45
49:BX:33:LYS:C	49:BX:35:THR:H	2.16	0.45
36:BG:60:LEU:O	36:BG:63:ILE:HG13	2.17	0.45
44:BS:16:ASN:ND2	44:BS:92:TYR:CZ	2.84	0.45
1:AA:1278:U:O4	10:AJ:99:LYS:HE3	2.17	0.45
29:D7:8:ASN:HD21	29:D7:11:LYS:N	2.09	0.45
27:D5:51:TYR:HB2	27:D5:54:GLY:CA	2.46	0.45
23:B1:91:LYS:O	23:B1:92:LYS:HD2	2.16	0.45
23:D1:73:LEU:HB3	23:D1:90:ILE:HG23	1.97	0.45
35:BF:24:LEU:O	35:BF:25:PRO:C	2.54	0.45
41:DP:81:GLN:OE1	41:DP:105:LEU:HB3	2.17	0.45
1:CA:1503:A:O2'	1:CA:1504:G:C5'	2.63	0.45
1:AA:502:G:C6	1:AA:503:C:N3	2.84	0.45
36:BG:76:SER:CB	36:BG:84:LYS:H	2.28	0.45
31:BA:1878:G:C2'	31:BA:1879:C:H5'	2.46	0.45
30:B8:61:LEU:CD1	31:BA:593:G:O2'	2.64	0.45
48:DW:55:ALA:O	48:DW:56:ALA:C	2.54	0.45
33:DD:158:ALA:N	33:DD:161:THR:CG2	2.73	0.45
50:BY:65:ALA:HA	50:BY:66:PRO:HD2	1.55	0.45
37:DH:43:VAL:HG12	37:DH:53:GLU:H	1.81	0.45
31:DA:477:A:O2'	31:DA:478:A:H5'	2.17	0.45
34:DE:152:LYS:HG2	39:DN:78:TYR:CD2	2.51	0.45
31:DA:1392:A:N6	31:DA:1393:A:N6	2.64	0.45
31:BA:1434:A:O2'	31:BA:1435:G:H5'	2.15	0.45
1:AA:1057:G:C5	1:AA:1204:A:C2	3.04	0.45
31:BA:1291:C:H2'	31:BA:1292:U:C6	2.51	0.45
31:BA:1330:C:O2'	31:BA:1331:A:H5'	2.17	0.45
31:BA:1602:U:H3'	31:BA:1603:A:H5'	1.97	0.45
31:BA:751:A:C5'	48:BW:90:ARG:HA	2.43	0.45
1:CA:457:C:O2'	1:CA:458:C:H5'	2.17	0.45
31:BA:1831:G:C4	31:BA:1832:C:C5	3.05	0.45
31:BA:1832:C:N4	31:BA:1833:U:C4	2.85	0.45
18:AR:65:ILE:H	18:AR:65:ILE:HG13	1.38	0.45
31:BA:2788:C:O2'	31:BA:2809:A:N3	2.44	0.45
33:BD:118:VAL:CG2	33:BD:119:ALA:H	2.26	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
18:CR:53:ARG:C	18:CR:55:ARG:H	2.20	0.45
2:CB:233:SER:HB2	2:CB:234:PRO:HD2	1.98	0.45
31:DA:18:C:H2'	31:DA:19:C:H6	1.80	0.45
46:DU:57:PHE:O	46:DU:58:ARG:C	2.54	0.45
1:CA:1158:C:H42	1:CA:1181:G:H1	1.65	0.45
32:DB:38:C:H2'	32:DB:39:A:H8	1.82	0.45
10:AJ:63:PHE:CZ	14:AN:45:ARG:HG3	2.43	0.45
1:CA:625:G:N3	1:CA:626:U:C6	2.84	0.45
32:BB:13:A:O2'	32:BB:14:U:H3'	2.16	0.45
1:CA:982:U:C2	1:CA:983:A:N6	2.85	0.45
46:BU:55:ARG:O	46:BU:56:ASP:C	2.55	0.45
31:BA:448:U:H3'	31:BA:449:A:H5'	1.98	0.45
31:BA:1689:A:H62	31:BA:1698:A:H2	1.64	0.45
27:D5:8:LYS:HD2	31:DA:2056:G:O2'	2.16	0.45
1:AA:833:U:O2	1:AA:854:G:C2	2.69	0.45
31:BA:2392:A:H8	41:BP:60:MET:HG2	1.80	0.45
27:D5:7:PRO:HA	31:DA:2615:U:N1	2.32	0.45
3:CC:58:GLU:H	3:CC:65:ALA:CB	2.27	0.45
1:CA:1287:A:C6	1:CA:1288:A:C6	3.04	0.45
1:CA:808:C:OP1	15:CO:48:LYS:HE3	2.16	0.45
29:D7:47:ARG:HA	29:D7:48:LYS:HD3	1.97	0.45
1:CA:1205:U:H5''	3:CC:190:ARG:HH21	1.81	0.45
44:BS:105:ALA:C	44:BS:107:GLU:H	2.20	0.45
1:CA:694:A:C2'	1:CA:695:A:O5'	2.64	0.45
31:BA:1810:A:C2'	31:BA:1811:G:H5'	2.45	0.45
45:BT:68:TYR:C	45:BT:70:VAL:H	2.19	0.45
11:AK:34:ASP:HB2	11:AK:35:PRO:HD2	1.97	0.45
1:CA:1316:G:H1	19:CS:5:LEU:CD2	2.30	0.45
12:CL:42:THR:HA	12:CL:53:ARG:O	2.16	0.45
1:CA:1030(A):G:O2'	1:CA:1030(C):G:N7	2.47	0.45
31:DA:736:C:H42	31:DA:760:G:H1	1.65	0.45
1:AA:303:A:C4	1:AA:304:U:C6	3.05	0.45
2:AB:158:LEU:H	2:AB:158:LEU:CD1	2.30	0.45
4:AD:117:ALA:O	4:AD:121:VAL:HG23	2.15	0.45
36:DG:153:ARG:NH1	36:DG:153:ARG:HB3	2.31	0.45
1:AA:781:A:C2'	1:AA:782:A:H5'	2.45	0.45
1:AA:782:A:O3'	1:AA:1515:C:H4'	2.16	0.45
31:DA:948:G:O2'	31:DA:949:C:H5'	2.16	0.45
31:DA:1356:G:C6	31:DA:1357:U:C4	3.04	0.45
38:DI:117:GLU:HG3	38:DI:118:LYS:N	2.31	0.45
1:CA:1250:A:H61	1:CA:1354:C:H1'	1.80	0.45
18:AR:73:ALA:HB3	18:AR:79:LEU:HD12	1.98	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:CA:1350:A:H8	1:CA:1350:A:O5'	1.99	0.45
1:AA:283:C:H2'	1:AA:284:G:O4'	2.17	0.45
31:BA:1272:A:OP2	31:BA:1647:G:OP1	2.34	0.45
5:CE:131:ILE:O	5:CE:134:ALA:HB3	2.17	0.45
22:B0:82:ARG:HA	22:B0:83:PRO:HD2	1.79	0.45
31:DA:2670:A:C2	31:DA:2671:A:C4	3.04	0.45
31:DA:2863:C:H6	31:DA:2863:C:H5''	1.80	0.45
38:DI:73:GLU:O	38:DI:73:GLU:HG3	2.16	0.45
1:AA:1012:U:H6	1:AA:1012:U:O5'	1.98	0.45
31:DA:2323:G:H2'	31:DA:2324:C:O4'	2.17	0.45
25:D3:22:ALA:O	25:D3:26:LEU:HG	2.16	0.45
1:AA:1272:G:C6	1:AA:1273:G:C5	3.04	0.45
31:DA:688:U:H5'	31:DA:1780:A:C2	2.52	0.45
27:B5:40:LYS:NZ	27:B5:46:CYS:HB3	2.30	0.45
41:DP:16:ARG:CZ	41:DP:16:ARG:HB2	2.46	0.45
1:AA:386:C:H2'	1:AA:387:U:C5'	2.46	0.45
31:BA:2298:A:N6	31:BA:2318:G:C8	2.84	0.45
39:DN:129:PRO:O	39:DN:130:HIS:HB2	2.16	0.45
30:D8:23:VAL:HG13	30:D8:46:ARG:HB3	1.97	0.45
47:BV:73:SER:HG	47:BV:75:PHE:HE1	1.48	0.45
31:BA:833:U:H5''	41:BP:48:PRO:HB3	1.97	0.45
39:DN:3:THR:HA	39:DN:4:TYR:CD1	2.51	0.45
47:DV:4:ILE:HD12	47:DV:40:LEU:HG	1.98	0.45
32:BB:40:U:N3	32:BB:43:C:H5''	2.31	0.45
31:DA:2606:C:H2'	31:DA:2607:G:H5'	1.98	0.45
41:BP:77:ARG:HE	41:BP:77:ARG:HB3	1.64	0.45
8:CH:94:TYR:HD1	8:CH:132:GLU:HA	1.81	0.45
36:DG:139:LEU:C	36:DG:141:PHE:H	2.19	0.45
31:BA:1531:C:H3'	31:BA:1532:C:H5'	1.96	0.45
31:BA:626:U:H5''	31:BA:627:A:H5'	1.98	0.45
45:BT:100:TYR:HD2	45:BT:103:ARG:NH2	2.11	0.45
1:CA:1392:G:C2'	1:CA:1393:U:H5'	2.46	0.45
38:BI:66:GLU:OE1	38:BI:134:PRO:HB3	2.17	0.45
31:DA:1529:G:C2	31:DA:1530:C:H5''	2.51	0.45
31:DA:281:G:N2	31:DA:358:U:H5	2.14	0.45
50:DY:28:LYS:HB2	50:DY:37:VAL:CB	2.44	0.45
1:CA:1072:G:C6	1:CA:1073:U:C4	3.04	0.45
30:B8:4:MET:HE1	31:BA:593:G:H1'	1.98	0.45
28:B6:37:ARG:HB3	31:BA:2344:U:O2'	2.17	0.45
20:AT:13:LEU:HD12	20:AT:13:LEU:N	2.18	0.45
50:BY:28:LYS:HB2	50:BY:37:VAL:CB	2.44	0.45
9:CI:18:PHE:HB3	9:CI:20:ARG:HH11	1.81	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:DA:271(N):U:C6	31:DA:271(N):U:OP1	2.69	0.45
10:AJ:33:GLN:HB2	10:AJ:75:ILE:CD1	2.46	0.45
31:DA:2699:C:H2'	31:DA:2700:C:O4'	2.15	0.45
31:BA:271(D):G:C5	31:BA:271(E):U:C5	3.04	0.45
31:BA:271(M):G:H4'	38:BI:53:ALA:HB1	1.98	0.45
50:BY:45:VAL:HG13	50:BY:62:GLU:OE2	2.16	0.45
1:CA:255:G:O6	1:CA:266:G:O6	2.34	0.45
31:DA:1047:G:N2	31:DA:1111:A:N6	2.64	0.45
1:CA:55:A:C8	1:CA:56:U:H5	2.33	0.45
22:B0:42:GLY:HA3	31:BA:2331:G:O4'	2.16	0.45
4:AD:108:LEU:HB3	4:AD:110:PHE:HE1	1.81	0.45
3:AC:111:LEU:HD21	3:AC:145:GLY:O	2.16	0.45
34:BE:130:GLY:O	34:BE:131:ALA:O	2.33	0.45
30:D8:26:LYS:HB2	30:D8:44:LYS:HG3	1.97	0.45
18:AR:62:GLU:O	18:AR:65:ILE:HD12	2.16	0.45
4:CD:94:LEU:O	4:CD:98:GLU:N	2.48	0.45
36:DG:11:TYR:HD2	36:DG:12:TYR:CD1	2.33	0.45
1:CA:370:C:C2	1:CA:371:G:C8	3.05	0.45
2:CB:223:ILE:C	2:CB:225:ALA:H	2.20	0.45
2:CB:59:GLU:O	2:CB:63:MET:HG2	2.17	0.45
1:AA:1160:G:N3	1:AA:1160:G:H2'	2.30	0.45
43:DR:55:ALA:CB	43:DR:79:LEU:HD13	2.44	0.45
4:AD:49:ARG:HA	4:AD:49:ARG:NE	2.28	0.45
10:CJ:63:PHE:CZ	14:CN:45:ARG:HG3	2.45	0.45
31:BA:2056:G:N2	31:BA:2057:A:N9	2.65	0.45
31:DA:510:C:H2'	31:DA:511:U:O4'	2.17	0.45
7:AG:153:HIS:CE1	11:AK:57:THR:HG23	2.51	0.45
11:AK:57:THR:HG22	11:AK:59:TYR:H	1.81	0.45
39:BN:119:ARG:CG	39:BN:119:ARG:HH11	2.28	0.45
1:AA:155:C:H2'	1:AA:156:G:C8	2.51	0.45
1:AA:156:G:C6	1:AA:166:G:N1	2.85	0.45
31:BA:1511:C:H2'	31:BA:1512:U:O5'	2.17	0.45
47:BV:39:LEU:O	47:BV:39:LEU:HD12	2.15	0.45
47:BV:40:LEU:HD12	47:BV:40:LEU:C	2.37	0.45
31:BA:693:C:H2'	31:BA:694:U:H6	1.81	0.45
1:AA:106:C:O2'	1:AA:107:G:H5'	2.15	0.45
31:DA:1588:C:O2	31:DA:1588:C:H2'	2.16	0.45
31:BA:1016:G:C2'	31:BA:1017:G:O5'	2.65	0.45
1:CA:106:C:C2	1:CA:107:G:C8	3.05	0.45
6:AF:10:LEU:HD12	6:AF:10:LEU:N	2.32	0.45
38:BI:114:LEU:HD23	38:BI:114:LEU:HA	1.68	0.45
31:DA:733:G:H8	31:DA:733:G:O5'	1.98	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
36:BG:123:ASN:ND2	36:BG:126:ASP:OD1	2.49	0.45
22:D0:68:GLU:HG3	22:D0:80:HIS:HB2	1.97	0.45
51:BZ:77:ASP:HB2	51:BZ:84:GLU:HG2	1.97	0.45
3:CC:159:GLY:HA2	3:CC:193:TYR:CD1	2.52	0.45
31:DA:1894:C:H2'	31:DA:1895:C:H6	1.81	0.45
4:CD:117:ALA:O	4:CD:121:VAL:HG23	2.17	0.45
31:BA:231:C:C2'	31:BA:232:G:H5'	2.46	0.45
38:BI:1:MET:O	38:BI:20:ASP:HA	2.17	0.45
43:BR:21:TYR:CE2	43:BR:43:GLU:HG2	2.51	0.45
31:BA:1446:C:H2'	31:BA:1447:G:H8	1.82	0.45
1:CA:1343:G:H2'	1:CA:1344:C:C6	2.52	0.45
1:CA:1344:C:O2'	1:CA:1345:U:H5'	2.17	0.45
46:DU:21:ALA:HA	46:DU:24:TYR:CE1	2.52	0.45
31:BA:1011:G:C4	31:BA:1013:C:C6	3.04	0.45
35:BF:153:SER:OG	35:BF:190:GLU:HG3	2.16	0.45
8:CH:90:GLY:O	8:CH:91:ARG:HB2	2.14	0.45
31:BA:1812:A:O2'	33:BD:45:ASN:HB2	2.16	0.45
31:DA:2870:C:H2'	31:DA:2871:C:O4'	2.17	0.45
19:AS:49:ILE:HD12	19:AS:49:ILE:H	1.82	0.45
23:B1:48:LYS:HA	23:B1:48:LYS:HD3	1.45	0.45
31:DA:1475:G:C8	31:DA:1475:G:H5''	2.52	0.45
39:BN:5:VAL:HA	39:BN:6:PRO:HD3	1.51	0.45
4:CD:6:GLY:O	4:CD:7:PRO:C	2.55	0.45
44:DS:51:ALA:HB3	44:DS:73:LEU:HG	1.98	0.45
30:B8:32:LEU:HD23	30:B8:35:GLN:CA	2.46	0.45
31:DA:1826:G:C5	31:DA:1827:C:C5	3.05	0.45
33:BD:35:LYS:HG2	33:BD:64:ILE:HG23	1.98	0.45
31:BA:2314:C:O2	31:BA:2315:G:C8	2.70	0.45
31:DA:2287:A:C4	31:DA:2289:G:C8	3.04	0.45
31:DA:2415:G:C4'	41:DP:67:MET:H	2.11	0.45
31:BA:86:C:O2'	31:BA:87:C:H5'	2.16	0.45
31:DA:142:A:H8	31:DA:1595:G:N2	2.12	0.45
49:DX:23:GLU:CG	49:DX:24:GLY:N	2.77	0.45
31:BA:827:U:O2	31:BA:2246:G:H4'	2.16	0.45
41:BP:51:PHE:HB3	41:BP:52:GLU:CD	2.35	0.45
2:CB:219:VAL:O	2:CB:222:ILE:HB	2.17	0.45
47:DV:63:GLY:O	47:DV:64:HIS:HB3	2.16	0.45
24:B2:46:GLN:NE2	24:B2:47:ASN:N	2.65	0.45
31:BA:94:C:C5'	31:BA:94(A):G:OP2	2.62	0.45
36:BG:139:LEU:C	36:BG:141:PHE:H	2.20	0.45
8:AH:87:SER:CB	8:AH:93:VAL:H	2.30	0.45
15:AO:67:LEU:CD2	15:AO:78:TYR:HE1	2.26	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:CA:408:A:C2	1:CA:409:G:N9	2.85	0.45
1:CA:411:A:OP1	4:CD:30:LYS:NZ	2.44	0.45
36:DG:45:GLU:HB2	36:DG:47:LYS:CG	2.46	0.45
36:DG:101:ILE:HG12	36:DG:105:LYS:HE3	1.97	0.45
36:DG:57:ALA:CB	36:DG:90:LEU:HD21	2.46	0.45
31:BA:1529:G:N3	31:BA:1530:C:H5''	2.32	0.45
12:CL:47:LYS:CB	12:CL:48:PRO:CD	2.92	0.45
31:BA:2648:C:H2'	31:BA:2649:U:C6	2.51	0.45
50:DY:28:LYS:HD2	50:DY:37:VAL:CG1	2.47	0.45
31:BA:286:C:H42	31:BA:355:G:H1	1.64	0.45
40:DO:104:ARG:O	40:DO:107:ARG:HB3	2.16	0.45
1:AA:1413:A:C2	1:AA:1414:U:C2	3.04	0.45
33:DD:109:ASP:N	33:DD:196:VAL:O	2.50	0.45
50:BY:7:VAL:HB	50:BY:8:LYS:CE	2.47	0.45
33:DD:253:GLN:CB	33:DD:255:LYS:NZ	2.73	0.45
13:CM:56:LEU:O	13:CM:60:VAL:HG23	2.16	0.45
38:DI:81:VAL:HG11	38:DI:88:ILE:CG2	2.46	0.45
4:CD:173:TRP:CD1	4:CD:174:LEU:HG	2.51	0.45
18:AR:53:ARG:C	18:AR:55:ARG:H	2.20	0.45
12:CL:25:PRO:O	12:CL:27:LEU:HD22	2.16	0.45
9:CI:45:ALA:O	9:CI:78:LYS:HE3	2.17	0.45
51:DZ:27:VAL:CG2	51:DZ:36:LYS:HA	2.42	0.45
1:AA:1320:C:H2'	1:AA:1321:C:O4'	2.17	0.45
9:AI:48:GLU:N	9:AI:49:PRO:CD	2.79	0.45
31:DA:1037:G:H1	31:DA:1118:C:N4	2.11	0.45
22:B0:74:ARG:NH2	32:BB:13:A:OP2	2.50	0.45
31:DA:1805:U:H2'	31:DA:1806:C:H6	1.81	0.45
1:AA:189:G:O6	1:AA:189(L):G:C6	2.69	0.45
5:AE:31:LEU:HD22	5:AE:43:LEU:HD11	1.98	0.45
13:CM:83:ASP:CG	13:CM:84:ILE:H	2.18	0.45
35:BF:83:PHE:O	35:BF:84:VAL:CG2	2.65	0.45
31:DA:2410:G:H2'	31:DA:2411:A:O4'	2.17	0.45
1:AA:1306:A:H1'	1:AA:1332:A:C2	2.52	0.45
3:CC:59:ARG:HE	3:CC:64:VAL:HG13	1.82	0.45
34:BE:181:LEU:HD11	45:BT:7:ILE:CG2	2.46	0.45
31:DA:1809:A:C6	31:DA:1810:A:C6	3.05	0.45
1:AA:117:G:H8	1:AA:117:G:O5'	1.99	0.45
1:AA:473:G:C2	1:AA:474:G:C8	3.04	0.45
1:CA:938:A:C6	1:CA:939:G:C5	3.05	0.45
50:DY:87:LYS:HG3	50:DY:88:LYS:N	2.32	0.45
5:AE:7:GLU:HB2	5:AE:35:GLY:O	2.16	0.45
1:AA:1030(A):G:O2'	1:AA:1030(C):G:N7	2.47	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:13:U:C5	1:AA:916:G:O6	2.69	0.45
31:DA:952:G:C6	31:DA:966:G:C6	3.05	0.45
31:DA:671:C:H2'	31:DA:672:C:H6	1.80	0.45
4:CD:92:VAL:HG12	4:CD:96:LEU:CD2	2.46	0.45
31:BA:2863:C:H5''	31:BA:2863:C:H6	1.82	0.45
2:AB:15:VAL:HG23	2:AB:16:HIS:CE1	2.52	0.45
1:AA:582:U:C2	1:AA:760:G:C6	3.04	0.45
42:DQ:78:PRO:C	42:DQ:79:LEU:HG	2.36	0.45
1:AA:495:A:H4'	1:AA:496:A:OP1	2.17	0.45
40:BO:7:TYR:CZ	40:BO:44:LYS:HG3	2.52	0.45
31:DA:1157:G:C4	31:DA:1158:C:C5	3.05	0.45
14:AN:44:LEU:HD12	14:AN:44:LEU:O	2.16	0.45
22:B0:84:LEU:N	22:B0:84:LEU:HD12	2.30	0.45
1:CA:640:A:C2'	1:CA:641:U:H5'	2.47	0.45
1:AA:92:C:H2'	1:AA:93:G:C8	2.52	0.45
1:CA:1293:G:O2'	1:CA:1294:G:P	2.74	0.45
31:BA:21:A:O2'	31:BA:22:C:H5'	2.17	0.45
31:BA:2670:A:C2	31:BA:2671:A:C4	3.04	0.45
1:CA:316:G:OP2	1:CA:351:G:O2'	2.34	0.45
31:DA:2740:A:C6	31:DA:2764:A:C8	3.04	0.45
1:AA:1404:C:H2'	1:AA:1405:G:C8	2.51	0.45
33:DD:46:GLN:HG3	33:DD:46:GLN:H	1.35	0.45
7:CG:13:GLN:O	7:CG:24:THR:HG21	2.16	0.45
39:DN:40:PRO:HB3	46:DU:68:ALA:HB2	1.99	0.45
46:DU:109:LEU:HA	46:DU:109:LEU:HD23	1.71	0.45
31:BA:1497:U:H5''	31:BA:1498:C:C5	2.51	0.45
36:BG:128:ARG:O	36:BG:129:GLY:O	2.34	0.45
30:D8:13:ARG:HB3	41:DP:63:PRO:HB3	1.98	0.45
50:BY:96:ILE:HG22	50:BY:97:ARG:O	2.17	0.45
31:DA:1885:A:C8	31:DA:1885:A:H5'	2.41	0.45
30:B8:12:LYS:NZ	31:BA:249:C:O2	2.36	0.45
1:CA:585:G:C4'	12:CL:8:ASN:ND2	2.70	0.45
46:DU:91:ASP:OD2	46:DU:96:ALA:N	2.50	0.45
1:CA:482:A:N3	1:CA:482:A:H2'	2.32	0.45
31:BA:2308:G:C2	31:BA:2309:A:C6	3.04	0.45
8:AH:93:VAL:HG12	8:AH:93:VAL:O	2.14	0.45
37:BH:138:LYS:O	37:BH:140:LYS:N	2.50	0.45
35:BF:21:ALA:C	35:BF:23:ASP:H	2.18	0.45
1:CA:491:G:H2'	1:CA:492:G:H8	1.81	0.45
4:CD:78:LEU:O	4:CD:81:GLU:HB3	2.15	0.45
36:DG:101:ILE:HG23	36:DG:102:PHE:N	2.32	0.45
45:DT:28:VAL:HG13	45:DT:46:GLU:HB2	1.97	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:BA:2865:U:C4	31:BA:2866:U:C4	3.04	0.45
31:BA:2850:A:OP2	31:BA:2866:U:C5	2.70	0.45
1:AA:411:A:C4	1:AA:413:G:O4'	2.69	0.45
31:DA:286:C:N4	31:DA:355:G:H1	2.15	0.45
31:BA:280:C:C2'	31:BA:281:G:O5'	2.62	0.45
38:BI:9:LEU:HB2	38:BI:12:LEU:O	2.16	0.45
51:DZ:53:ILE:HG22	51:DZ:71:VAL:CB	2.43	0.45
30:B8:61:LEU:HA	30:B8:61:LEU:HD23	1.82	0.45
30:B8:61:LEU:HB3	31:BA:593:G:H4'	1.99	0.45
1:AA:1072:G:C6	1:AA:1073:U:O4	2.70	0.45
50:BY:28:LYS:HB2	50:BY:37:VAL:C	2.36	0.45
1:CA:241:C:H2'	1:CA:241:C:O2	2.17	0.45
1:AA:734:G:C6	1:AA:735:C:C4	3.04	0.45
31:BA:2605:U:H2'	31:BA:2606:C:C6	2.52	0.45
18:CR:56:THR:OG1	18:CR:58:LEU:HD13	2.16	0.45
31:DA:1602:U:H3'	31:DA:1603:A:H5'	1.99	0.45
31:BA:271(D):G:H2'	31:BA:271(E):U:O4'	2.17	0.45
51:DZ:165:VAL:HG12	51:DZ:166:SER:HG	1.81	0.45
24:B2:12:GLU:C	24:B2:14:ARG:N	2.69	0.45
38:DI:81:VAL:HG11	38:DI:88:ILE:HD12	1.98	0.45
33:DD:70:TRP:CD1	33:DD:70:TRP:C	2.89	0.45
31:BA:1386:C:OP2	31:BA:1396:U:H5	2.00	0.45
1:AA:1286:A:H2	21:AU:22:ARG:HH22	1.64	0.45
31:BA:1833:U:C2	31:BA:1834:U:C6	3.04	0.45
1:AA:1434:A:H2'	1:AA:1435:G:O4'	2.16	0.45
23:D1:37:ILE:HD13	23:D1:37:ILE:HA	1.73	0.45
2:AB:87:ARG:NH2	2:AB:233:SER:HB3	2.32	0.45
24:D2:14:ARG:NE	24:D2:57:ILE:HB	2.31	0.45
2:AB:178:ARG:NH2	8:AH:68:ARG:HH22	2.14	0.45
3:CC:6:HIS:NE2	3:CC:184:TYR:HE2	2.14	0.45
1:CA:805:C:H2'	1:CA:806:C:H6	1.81	0.45
32:BB:87:G:O5'	32:BB:88:C:OP2	2.35	0.45
1:CA:37:U:H2'	1:CA:38:G:O4'	2.17	0.45
43:DR:56:LYS:HD2	43:DR:88:ARG:N	2.29	0.45
31:BA:485:C:H2'	31:BA:486:C:C6	2.52	0.45
31:BA:2270:G:C2'	31:BA:2271:G:H5'	2.46	0.45
16:CP:68:ASP:C	16:CP:70:ALA:N	2.70	0.45
36:BG:115:ARG:HH12	36:BG:136:ARG:HG3	1.78	0.45
31:BA:1049:C:O2	31:BA:1050:A:C8	2.69	0.45
45:DT:50:ILE:HA	45:DT:99:LEU:CD1	2.47	0.45
31:BA:1359:A:N7	31:BA:1372:U:C4	2.83	0.45
45:BT:16:ARG:H	45:BT:79:HIS:HD2	1.65	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:CA:828:A:N6	1:CA:858:G:O2'	2.39	0.45
31:DA:1709:U:H2'	31:DA:1710:C:C6	2.51	0.45
1:AA:831:U:O2'	1:AA:832:C:H5'	2.17	0.45
20:CT:56:MET:HG3	20:CT:88:VAL:HG21	1.98	0.45
20:AT:53:LEU:HA	20:AT:56:MET:HB2	1.99	0.45
1:AA:744:C:O2'	1:AA:745:C:H5'	2.16	0.45
31:BA:836:G:C5	31:BA:837:C:C5	3.05	0.45
31:DA:884:C:O2'	31:DA:892:G:C8	2.50	0.45
1:AA:9:G:OP1	5:AE:122:GLU:HG3	2.17	0.45
31:BA:2504:U:O2	31:BA:2504:U:C2'	2.63	0.45
1:CA:522:C:H41	12:CL:53:ARG:NH2	2.13	0.45
6:AF:10:LEU:HD21	6:AF:26:ILE:HD11	1.98	0.45
5:AE:7:GLU:HB3	5:AE:112:LEU:HD13	1.98	0.45
35:DF:132:VAL:C	35:DF:134:GLY:H	2.20	0.45
31:BA:643:A:O2'	31:BA:644:A:H5'	2.16	0.45
31:DA:1437:C:C5'	31:DA:1437:C:H6	2.30	0.45
42:DQ:43:THR:HB	42:DQ:45:GLN:HG2	1.99	0.45
22:D0:1:MET:CB	31:DA:2602:A:H62	2.29	0.45
6:AF:96:PRO:HB3	18:AR:30:ASP:CG	2.37	0.45
1:CA:823:G:H21	8:CH:1:MET:HE3	1.81	0.45
31:BA:460:A:C2	31:BA:470:A:C5	3.05	0.45
4:AD:92:VAL:HG12	4:AD:96:LEU:HD21	1.99	0.45
38:BI:96:ASP:O	38:BI:99:GLU:HB3	2.16	0.45
25:D3:17:LYS:O	25:D3:20:LYS:N	2.49	0.45
31:DA:236:C:H2'	31:DA:237:C:C6	2.51	0.45
1:CA:994:A:N6	1:CA:1046:A:H2	2.15	0.45
37:DH:16:SER:O	37:DH:26:VAL:HA	2.17	0.45
31:DA:1769:G:C5	31:DA:1984:G:C6	3.05	0.45
35:DF:108:LYS:HD3	35:DF:108:LYS:HA	1.78	0.45
31:DA:1545:A:H2'	31:DA:1546:C:O4'	2.16	0.45
21:CU:2:GLY:C	21:CU:4:GLY:H	2.20	0.45
35:BF:33:LEU:HA	35:BF:33:LEU:HD12	1.78	0.45
1:AA:1366:C:OP1	9:AI:117:HIS:CE1	2.70	0.45
30:B8:29:LYS:O	30:B8:31:HIS:N	2.49	0.45
16:AP:27:LYS:H	16:AP:27:LYS:HG2	1.60	0.45
16:AP:45:THR:O	16:AP:47:ASP:N	2.50	0.45
33:BD:96:HIS:CE1	33:BD:102:LYS:HE2	2.52	0.45
33:DD:25:THR:HB	33:DD:82:ILE:H	1.81	0.45
44:DS:19:LYS:CG	44:DS:19:LYS:O	2.63	0.45
46:BU:69:CYS:C	46:BU:71:GLN:N	2.70	0.45
28:D6:15:GLU:HB3	28:D6:18:ARG:CG	2.43	0.45
50:DY:77:PRO:O	50:DY:78:ALA:CB	2.63	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
51:BZ:106:GLY:HA3	51:BZ:141:VAL:O	2.16	0.45
30:B8:8:LYS:HB3	30:B8:12:LYS:HE3	1.99	0.45
45:DT:65:LYS:HG3	45:DT:66:VAL:H	1.81	0.45
47:DV:40:LEU:HD12	47:DV:40:LEU:O	2.17	0.45
1:CA:357:G:O2'	1:CA:358:U:H5'	2.16	0.45
1:CA:358:U:H2'	1:CA:359:U:C6	2.51	0.45
1:CA:1254:C:H2'	1:CA:1255:G:C8	2.51	0.45
1:CA:676:A:H2'	1:CA:677:U:C6	2.52	0.45
1:AA:1254:C:H2'	1:AA:1255:G:C8	2.52	0.45
33:BD:175:LEU:O	33:BD:182:LEU:HD22	2.17	0.45
37:BH:137:ASP:HB3	37:BH:140:LYS:HB3	1.97	0.45
15:CO:36:ILE:CD1	15:CO:63:ARG:HE	2.29	0.45
34:BE:47:VAL:CG2	34:BE:84:PHE:O	2.57	0.45
39:DN:56:ASN:CA	39:DN:125:GLY:H	2.29	0.45
45:BT:47:GLY:HA3	45:BT:63:VAL:HG23	1.98	0.45
31:DA:9:U:C4	31:DA:2629:A:C6	3.04	0.45
1:AA:502:G:C2	1:AA:503:C:O2	2.70	0.45
1:AA:541:G:H2'	1:AA:542:G:C8	2.50	0.45
51:DZ:42:VAL:HG13	51:DZ:43:GLU:H	1.81	0.45
42:DQ:141:GLN:C	51:DZ:70:LEU:HD13	2.37	0.45
23:B1:16:ASN:CB	23:B1:46:LEU:HG	2.46	0.45
12:CL:102:ARG:HG2	12:CL:102:ARG:HH11	1.77	0.45
22:D0:26:TYR:O	22:D0:29:GLN:HB2	2.17	0.45
37:DH:158:HIS:CD2	37:DH:170:ARG:O	2.70	0.45
6:AF:72:VAL:HG13	6:AF:73:ASN:N	2.31	0.45
31:DA:2792:G:N3	31:DA:2792:G:H2'	2.31	0.45
1:AA:1493:A:H2'	31:BA:1913:A:C2	2.48	0.45
37:BH:30:LYS:HB2	37:BH:79:VAL:HA	1.98	0.45
12:CL:38:THR:CG2	12:CL:39:VAL:N	2.80	0.45
24:B2:14:ARG:NE	24:B2:57:ILE:HB	2.31	0.45
1:CA:17:U:O2'	1:CA:1079:G:H1'	2.17	0.45
1:CA:1047:G:C2'	1:CA:1048:G:H5'	2.47	0.45
14:CN:3:ARG:CZ	14:CN:3:ARG:HB3	2.46	0.45
35:DF:51:THR:CG2	35:DF:92:PRO:HD2	2.46	0.45
7:CG:79:ARG:HE	7:CG:84:ASN:HD21	1.56	0.45
31:BA:1006:C:C2	31:BA:1138:G:N2	2.85	0.45
31:BA:1178:C:H2'	31:BA:1179:C:C6	2.50	0.45
31:DA:1131:G:H21	39:DN:73:THR:HG21	1.82	0.45
1:CA:624:C:H4'	16:CP:11:SER:H	1.81	0.45
5:CE:139:LEU:CA	5:CE:142:LEU:HD12	2.41	0.45
1:AA:625:G:N3	1:AA:626:U:C6	2.85	0.45
23:B1:37:ILE:HD13	23:B1:37:ILE:HA	1.69	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:BA:2752:C:C2'	31:BA:2752:C:O2	2.60	0.45
1:CA:270:A:C6	1:CA:271:C:N3	2.84	0.45
31:DA:706:A:C2	31:DA:707:G:H1'	2.52	0.45
43:DR:104:ARG:HD2	43:DR:111:LEU:HD11	1.97	0.45
31:DA:1889:A:H2'	31:DA:1890:A:O4'	2.17	0.45
31:DA:1543:C:C6	31:DA:1543:C:OP2	2.70	0.45
8:AH:23:SER:HA	8:AH:63:LEU:CD2	2.47	0.45
31:BA:1257:C:H4'	35:BF:83:PHE:CD2	2.51	0.45
38:DI:79:ILE:HA	38:DI:80:PRO:HD3	1.70	0.45
31:DA:34:C:C3'	31:DA:34:C:C6	2.99	0.45
38:BI:79:ILE:HA	38:BI:80:PRO:HD3	1.66	0.45
1:AA:834:C:H2'	1:AA:835:U:C6	2.52	0.45
31:BA:2410:G:C2	31:BA:2411:A:H1'	2.52	0.45
31:DA:52:A:O2'	31:DA:53:A:H5'	2.16	0.45
51:BZ:76:LEU:HA	51:BZ:76:LEU:HD23	1.63	0.45
1:AA:117:G:C2'	1:AA:118:U:H5'	2.47	0.45
45:DT:45:PHE:CE2	45:DT:63:VAL:HG22	2.50	0.45
40:BO:14:THR:CG2	40:BO:52:VAL:HG21	2.47	0.45
1:AA:979:C:OP1	1:AA:1222:G:O6	2.34	0.45
34:DE:24:THR:OG1	34:DE:188:VAL:HG11	2.17	0.45
22:D0:27:GLU:HG3	22:D0:68:GLU:HA	1.99	0.45
1:AA:727:G:C6	1:AA:731:G:C6	3.04	0.45
1:AA:227:G:O2'	1:AA:228:A:H5'	2.16	0.45
1:CA:727:G:C6	1:CA:731:G:C6	3.05	0.45
15:AO:8:LYS:HG2	15:AO:12:ILE:HD11	1.99	0.45
3:CC:188:LEU:O	3:CC:189:ALA:CB	2.64	0.45
14:CN:44:LEU:HD12	14:CN:44:LEU:O	2.17	0.45
1:CA:1361:G:H2'	1:CA:1362:C:O4'	2.16	0.45
34:DE:8:LYS:HG2	34:DE:192:ASN:HD22	1.81	0.45
13:AM:17:VAL:O	13:AM:20:THR:HB	2.17	0.45
31:BA:1294:U:O2'	43:BR:23:ASN:ND2	2.46	0.45
1:CA:740:U:H4'	15:CO:42:HIS:CD2	2.51	0.45
31:DA:2024:G:H2'	31:DA:2025:C:H6	1.81	0.45
31:DA:296:C:H2'	31:DA:297:C:H6	1.81	0.45
34:DE:87:GLU:HG3	34:DE:87:GLU:O	2.17	0.45
8:AH:29:SER:HB3	8:AH:32:LYS:HD2	1.99	0.45
1:CA:135:C:H2'	1:CA:136:C:H5'	1.98	0.45
39:DN:41:ASP:O	39:DN:42:TRP:C	2.56	0.45
1:AA:66:G:C2	1:AA:67:C:C6	3.05	0.45
16:AP:43:LYS:HG3	16:AP:48:TRP:CE3	2.51	0.45
33:DD:80:ALA:HB2	33:DD:96:HIS:CD2	2.51	0.45
36:DG:35:GLU:HG2	36:DG:35:GLU:O	2.17	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
36:BG:128:ARG:O	36:BG:129:GLY:C	2.55	0.45
39:DN:34:LEU:O	39:DN:49:GLY:HA3	2.16	0.45
30:D8:60:LEU:C	30:D8:63:PRO:HD2	2.36	0.45
31:DA:2808:U:H2'	31:DA:2809:A:H5'	1.98	0.45
28:D6:16:CYS:O	28:D6:17:LYS:CB	2.54	0.45
24:D2:34:GLU:O	24:D2:36:ARG:HB2	2.17	0.45
31:DA:1462:C:H4'	31:DA:2703:C:H5'	1.99	0.45
39:DN:3:THR:CA	39:DN:4:TYR:CD1	2.99	0.45
31:BA:68:G:H2'	31:BA:69:C:C6	2.52	0.45
24:B2:29:LYS:HZ2	49:BX:9:LEU:HA	1.82	0.45
44:BS:13:ARG:O	44:BS:14:VAL:HB	2.17	0.45
44:BS:93:LYS:HE3	44:BS:93:LYS:C	2.37	0.45
31:BA:814:C:C5	41:BP:27:HIS:CE1	3.05	0.45
31:BA:810:U:O2'	41:BP:33:ARG:CZ	2.65	0.45
8:AH:94:TYR:HD1	8:AH:132:GLU:HA	1.82	0.45
31:DA:742:G:H2'	31:DA:743:G:C8	2.51	0.45
31:DA:1653:G:H4'	31:DA:1654:A:O5'	2.17	0.45
31:DA:806:C:O2	31:DA:2444:G:O2'	2.35	0.45
44:BS:67:ARG:N	44:BS:69:VAL:HG12	2.28	0.45
15:AO:67:LEU:HD22	15:AO:78:TYR:CE1	2.44	0.45
13:CM:3:ARG:HA	13:CM:9:ILE:HG13	1.99	0.45
39:DN:86:PRO:O	39:DN:89:LYS:HB2	2.16	0.45
39:BN:68:GLU:HA	39:BN:86:PRO:HB3	1.97	0.45
31:DA:1531:C:C3'	31:DA:1532:C:H5'	2.46	0.45
23:B1:11:ARG:CG	23:B1:61:ARG:O	2.65	0.45
50:BY:8:LYS:CB	50:BY:28:LYS:HZ3	2.29	0.45
50:BY:7:VAL:HB	50:BY:8:LYS:CD	2.46	0.45
22:D0:25:ARG:HA	22:D0:29:GLN:HE22	1.81	0.45
1:AA:276:G:O3'	17:AQ:68:ARG:NH1	2.41	0.45
35:BF:177:ALA:HB1	35:BF:178:PRO:HD2	1.99	0.45
1:CA:1060:C:H4'	10:CJ:51:ARG:HB3	1.99	0.45
1:CA:1091:U:O2	1:CA:1093:A:C8	2.70	0.45
22:B0:70:GLN:O	22:B0:77:ARG:HA	2.16	0.45
10:CJ:54:PHE:CZ	10:CJ:55:LYS:HD2	2.52	0.45
1:CA:1004:A:N7	1:CA:1036:G:O6	2.50	0.45
1:CA:565:U:C6	1:CA:566:G:C8	3.05	0.45
21:AU:12:LYS:HB3	21:AU:22:ARG:HD2	1.98	0.45
1:AA:457:C:C2	1:AA:458:C:C5	3.05	0.45
31:BA:542:C:C5'	31:BA:542:C:H6	2.30	0.45
8:CH:24:THR:HG22	8:CH:25:ASP:N	2.32	0.45
2:AB:87:ARG:HE	2:AB:233:SER:CB	2.26	0.45
1:CA:78:G:H1	1:CA:91:C:N4	2.14	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:BA:314:A:H2'	31:BA:315:G:H5'	1.99	0.45
39:DN:82:LEU:HD12	39:DN:82:LEU:N	2.24	0.45
36:BG:146:TYR:HA	36:BG:149:VAL:HG22	1.98	0.45
5:CE:11:ILE:HB	5:CE:31:LEU:HB3	1.98	0.45
31:DA:2517:C:N1	31:DA:2542:A:N1	2.65	0.45
31:DA:1317:A:C5	31:DA:1318:C:C5	3.05	0.45
1:AA:37:U:H2'	1:AA:38:G:O4'	2.17	0.45
38:DI:75:LEU:HD12	38:DI:76:THR:N	2.32	0.45
7:AG:16:LEU:CD1	9:AI:42:ARG:HA	2.47	0.45
31:BA:1591:G:C6	31:BA:1592:C:C4	3.05	0.45
44:BS:42:ASP:O	44:BS:43:GLU:HB2	2.17	0.45
6:AF:89:MET:HG2	6:AF:89:MET:O	2.16	0.45
1:AA:763:G:N3	1:AA:764:C:C6	2.85	0.45
1:AA:114:U:H2'	1:AA:115:G:H8	1.82	0.45
51:DZ:28:MET:HG3	51:DZ:35:ARG:HB2	1.99	0.45
31:BA:945:A:O2'	31:BA:945:A:C8	2.53	0.45
8:AH:64:LYS:CG	8:AH:79:VAL:HG21	2.47	0.45
50:DY:84:ARG:HB3	50:DY:85:VAL:H	1.65	0.45
1:AA:779:C:H2'	1:AA:780:A:O4'	2.16	0.45
42:BQ:78:PRO:C	42:BQ:79:LEU:HG	2.34	0.45
2:CB:194:PRO:O	2:CB:195:ASP:C	2.55	0.45
18:CR:74:ARG:HG3	18:CR:79:LEU:HB3	1.98	0.45
42:DQ:132:VAL:HG11	51:DZ:81:ARG:HD2	1.99	0.45
31:BA:1465:G:H2'	31:BA:1466:G:O5'	2.16	0.45
31:DA:2256:G:H2'	31:DA:2257:U:C6	2.52	0.45
11:CK:77:MET:SD	11:CK:80:VAL:HG12	2.57	0.45
31:DA:688:U:H5'	31:DA:1780:A:N1	2.32	0.45
31:DA:2869:G:H2'	31:DA:2870:C:O4'	2.17	0.45
31:BA:748:G:C8	48:BW:89:ALA:HB1	2.51	0.45
31:BA:365:C:H2'	31:BA:366:C:O4'	2.17	0.45
49:DX:47:PHE:O	49:DX:48:LYS:C	2.55	0.45
1:AA:57:G:H2'	1:AA:58:C:O4'	2.16	0.45
50:DY:50:ARG:HB3	50:DY:51:VAL:H	1.67	0.45
40:DO:75:SER:OG	40:DO:76:ALA:N	2.49	0.45
31:DA:2505:G:H2'	31:DA:2576:G:O6	2.16	0.45
45:DT:34:VAL:HG13	45:DT:39:ARG:HA	1.99	0.45
31:DA:2441:C:O2	31:DA:2441:C:H2'	2.16	0.45
1:AA:997:U:H2'	1:AA:998:G:C8	2.52	0.45
31:BA:1980:G:O2'	31:BA:1982:C:OP2	2.24	0.45
46:BU:91:ASP:O	46:BU:95:LEU:HB2	2.17	0.45
47:BV:47:VAL:HG22	47:BV:48:GLY:N	2.32	0.45
1:AA:451:A:C5	1:AA:481:G:C6	3.04	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
16:AP:27:LYS:O	16:AP:30:GLY:N	2.49	0.45
16:AP:34:GLU:OE2	16:AP:55:ARG:HD3	2.17	0.45
16:AP:39:TYR:CD1	16:AP:40:ASP:N	2.85	0.45
28:D6:19:ARG:HE	28:D6:19:ARG:HB3	1.45	0.45
30:D8:32:LEU:HB2	30:D8:35:GLN:N	2.26	0.45
30:D8:32:LEU:HB3	30:D8:34:TRP:HB3	1.98	0.45
47:BV:66:ARG:HG2	47:BV:66:ARG:HH11	1.81	0.45
1:CA:374:A:C2	1:CA:375:U:C2	3.04	0.45
31:BA:1341:U:C2'	31:BA:1397:U:O2	2.64	0.45
49:BX:54:VAL:C	49:BX:55:ASN:HD22	2.19	0.45
49:BX:77:LYS:CG	49:BX:78:LYS:H	2.30	0.45
33:DD:133:LEU:O	33:DD:134:ARG:C	2.56	0.45
23:B1:87:PRO:CG	23:B1:88:LYS:N	2.80	0.45
2:AB:114:ARG:HH11	2:AB:118:LEU:HD21	1.81	0.45
23:B1:19:GLN:OE1	23:B1:44:PRO:HB3	2.16	0.45
31:DA:1006:C:C2	31:DA:1138:G:N2	2.84	0.45
34:DE:1:MET:CB	34:DE:83:ASP:O	2.61	0.45
1:CA:491:G:C4	1:CA:492:G:C8	3.05	0.45
1:CA:492:G:C5	1:CA:493:G:N7	2.85	0.45
31:DA:861:A:C2	31:DA:917:A:N3	2.85	0.45
43:DR:9:LYS:C	43:DR:10:LEU:HG	2.37	0.45
31:DA:2657:A:C2	31:DA:2664:G:N2	2.72	0.45
4:AD:74:GLN:HE22	4:AD:137:SER:HB3	1.81	0.45
36:BG:85:GLY:O	36:BG:87:PRO:CD	2.56	0.45
31:DA:1528(A):A:C8	31:DA:1529:G:C8	3.05	0.45
31:DA:2876:G:C5'	45:DT:2:ASN:O	2.65	0.45
1:CA:971:G:H1'	1:CA:1365:G:O2'	2.17	0.45
31:DA:1330:C:O2'	31:DA:1331:A:H5'	2.16	0.45
23:D1:16:ASN:C	23:D1:16:ASN:ND2	2.70	0.45
28:D6:45:LYS:HB3	31:DA:2371:G:H4'	1.99	0.45
7:CG:153:HIS:HA	7:CG:155:ARG:HH12	1.82	0.45
28:B6:41:PRO:HB2	28:B6:43:CYS:H	1.81	0.45
19:AS:7:LYS:N	19:AS:7:LYS:HD3	2.32	0.45
34:DE:6:GLY:HA2	34:DE:51:PHE:CZ	2.52	0.45
1:AA:370:C:N3	1:AA:371:G:C5	2.85	0.45
1:AA:184:G:N2	1:AA:194:C:C2	2.85	0.45
32:DB:87:G:H3'	32:DB:88:C:C5'	2.42	0.45
1:AA:1308:U:H2'	1:AA:1309:G:C8	2.52	0.45
36:BG:18:GLU:HG2	36:BG:175:LEU:HD21	1.98	0.45
3:CC:29:TYR:OH	14:CN:54:PRO:HD2	2.16	0.45
2:CB:67:THR:HG22	2:CB:90:MET:CE	2.47	0.45
9:AI:46:ALA:O	9:AI:49:PRO:HD2	2.16	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
35:DF:83:PHE:C	35:DF:84:VAL:HG23	2.37	0.45
1:AA:613:C:N4	1:AA:627:G:H1	2.11	0.45
4:CD:146:ILE:N	4:CD:146:ILE:CD1	2.75	0.45
1:CA:1347:G:C6	9:CI:107:ARG:NH2	2.85	0.45
4:CD:49:ARG:NE	4:CD:49:ARG:HA	2.28	0.45
13:AM:69:GLU:HB3	13:AM:72:ALA:HB3	1.98	0.45
31:DA:1359:A:N7	31:DA:1372:U:O4	2.50	0.45
31:DA:900:A:C5'	31:DA:901:A:OP2	2.65	0.45
31:DA:1451:C:N3	31:DA:1459:G:O6	2.50	0.45
31:DA:514:A:H1'	31:DA:581:C:O2'	2.16	0.45
1:AA:1387:G:H2'	1:AA:1387:G:N3	2.31	0.45
5:CE:75:THR:OG1	5:CE:76:ILE:N	2.49	0.45
31:DA:707:G:C6	31:DA:708:C:C4	3.05	0.45
31:DA:2826:A:C2'	31:DA:2827:C:O5'	2.64	0.45
1:AA:827:U:H5''	1:AA:828:A:OP2	2.17	0.45
6:CF:50:TYR:HE2	6:CF:52:ILE:HG12	1.80	0.45
6:CF:52:ILE:HG22	6:CF:52:ILE:O	2.17	0.45
31:BA:2826:A:H2'	31:BA:2827:C:O5'	2.17	0.45
31:DA:192:C:C2'	31:DA:193:U:H5'	2.47	0.45
31:BA:892:G:N7	31:BA:893:C:C4	2.85	0.45
1:AA:1316:G:H1	19:AS:5:LEU:CD2	2.30	0.45
9:CI:118:LYS:HB3	9:CI:118:LYS:HZ3	1.80	0.45
17:CQ:3:LYS:CD	17:CQ:60:ILE:HD11	2.45	0.45
31:BA:2074:U:O2'	31:BA:2075:U:H5'	2.17	0.45
46:BU:59:ARG:O	46:BU:60:LEU:C	2.55	0.45
18:AR:25:THR:HG22	18:AR:42:ARG:NH1	2.32	0.45
6:CF:96:PRO:HB3	18:CR:30:ASP:CG	2.37	0.45
22:D0:36:ILE:HG12	22:D0:37:LEU:N	2.31	0.45
36:BG:51:ARG:HD3	36:BG:53:LEU:HD21	1.98	0.45
40:BO:60:ALA:HB2	40:BO:86:ILE:HA	1.99	0.45
31:BA:1475:G:H5''	31:BA:1475:G:C8	2.52	0.45
35:BF:140:LEU:CD2	35:BF:170:LEU:HD11	2.45	0.45
39:DN:7:LYS:H	39:DN:7:LYS:HG3	1.56	0.45
10:CJ:14:LYS:HE3	10:CJ:14:LYS:HB2	1.79	0.45
1:AA:369:C:H2'	1:AA:369:C:O2	2.15	0.45
31:DA:2077:A:H1'	31:DA:2435:A:O4'	2.17	0.45
1:CA:1442:G:H8	1:CA:1442:G:H2'	1.63	0.45
46:BU:91:ASP:OD2	46:BU:96:ALA:N	2.49	0.45
42:DQ:8:LYS:CD	42:DQ:9:TYR:H	2.30	0.45
1:AA:376:G:C4	1:AA:389:A:C2	3.05	0.45
44:DS:91:PRO:O	44:DS:93:LYS:N	2.50	0.45
31:BA:2702:U:OP1	31:BA:2702:U:O4'	2.35	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
39:BN:35:ARG:HB2	39:BN:42:TRP:CZ3	2.52	0.45
31:DA:2808:U:H2'	31:DA:2809:A:C5'	2.47	0.45
49:DX:18:TYR:HA	49:DX:21:PHE:CE1	2.52	0.45
49:DX:59:VAL:CG2	49:DX:60:ARG:H	2.23	0.45
24:D2:29:LYS:HZ2	49:DX:9:LEU:HA	1.82	0.45
24:B2:54:LYS:H	24:B2:56:GLN:HE21	1.65	0.45
49:BX:59:VAL:O	49:BX:60:ARG:O	2.35	0.45
1:CA:1277:C:C2'	1:CA:1278:U:H5'	2.47	0.45
1:AA:713:G:H2'	1:AA:714:G:C8	2.52	0.45
2:AB:114:ARG:HD2	2:AB:141:GLU:OE1	2.17	0.45
33:DD:44:ASN:OD1	33:DD:44:ASN:N	2.49	0.45
31:BA:1531:C:C3'	31:BA:1532:C:H5'	2.46	0.45
31:BA:626:U:H5''	31:BA:627:A:C5'	2.47	0.45
41:BP:101:VAL:HB	41:BP:106:LEU:HB3	1.99	0.45
31:DA:2849:U:P	45:DT:95:ARG:HH12	2.41	0.45
43:BR:9:LYS:O	43:BR:10:LEU:CG	2.65	0.45
31:DA:1529:G:N3	31:DA:1530:C:H5''	2.32	0.45
45:BT:32:TYR:HD2	45:BT:81:PRO:O	2.00	0.45
1:AA:1097:C:C1'	1:AA:1170:A:H1'	2.37	0.45
8:CH:83:ILE:O	8:CH:83:ILE:HG23	2.16	0.45
9:CI:4:TYR:HD2	9:CI:59:PHE:HE2	1.65	0.45
31:BA:1786:A:H4'	31:BA:1787:A:OP2	2.17	0.45
31:BA:856:C:H3'	31:BA:857:C:C6	2.51	0.45
18:CR:62:GLU:HA	18:CR:65:ILE:HD12	1.99	0.45
5:CE:118:ILE:O	5:CE:118:ILE:HG23	2.17	0.45
1:AA:1086:U:H2'	1:AA:1087:G:C8	2.41	0.45
23:D1:62:VAL:HG22	23:D1:63:ALA:N	2.32	0.45
13:AM:56:LEU:O	13:AM:60:VAL:HG23	2.16	0.45
11:AK:111:ASP:CA	18:AR:84:LYS:HG3	2.41	0.45
1:AA:961:U:OP2	1:AA:1223:C:H4'	2.17	0.45
24:B2:15:LYS:CA	24:B2:18:PRO:HD2	2.46	0.45
33:DD:70:TRP:CZ3	33:DD:146:GLU:OE2	2.70	0.45
1:AA:923:A:O2'	1:AA:924:C:H5'	2.17	0.45
31:BA:861:A:N3	32:BB:79:C:O2'	2.41	0.45
28:B6:11:LEU:HD11	28:B6:26:ASN:ND2	2.32	0.45
31:BA:2889:C:H2'	31:BA:2891:G:C5'	2.47	0.45
1:CA:90:U:H6	1:CA:90:U:H3'	1.82	0.45
31:BA:964:C:O2'	31:BA:2273:A:H1'	2.16	0.45
1:AA:78:G:H1	1:AA:91:C:N4	2.15	0.45
36:DG:16:ARG:HH11	36:DG:31:VAL:HG21	1.79	0.45
2:CB:87:ARG:HE	2:CB:233:SER:CB	2.27	0.45
31:DA:528:A:C2	31:DA:2043:C:C4'	2.97	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:AH:51:VAL:HB	8:AH:52:ASP:H	1.68	0.45
31:BA:2517:C:N1	31:BA:2542:A:N1	2.65	0.45
1:CA:552:U:H4'	12:CL:86:ARG:CG	2.43	0.45
9:AI:45:ALA:O	9:AI:78:LYS:HE3	2.18	0.45
33:BD:193:VAL:HG13	33:BD:193:VAL:O	2.17	0.45
31:BA:342:G:C2'	31:BA:343:C:H5'	2.47	0.45
42:BQ:31:ASP:O	42:BQ:133:ARG:O	2.35	0.45
1:CA:617:G:N1	1:CA:618:C:C5	2.85	0.45
41:BP:7:ARG:HB3	41:BP:8:PRO:HD3	1.99	0.45
31:BA:2094:G:O2'	31:BA:2095:C:H5'	2.17	0.45
34:BE:13:ARG:NH2	45:BT:77:PRO:HG3	2.33	0.45
7:CG:46:ALA:O	7:CG:50:ILE:HG12	2.16	0.45
31:DA:2232:U:O2'	31:DA:2233:U:H5'	2.17	0.45
31:DA:1751:C:C2'	31:DA:1752:C:H5'	2.46	0.45
31:BA:1114:G:H2'	31:BA:1115:G:H5'	1.99	0.45
39:BN:119:ARG:HH11	39:BN:119:ARG:HG3	1.82	0.45
1:CA:681:C:N3	1:CA:710:G:C2	2.85	0.45
1:AA:448:A:H2'	1:AA:449:C:C6	2.51	0.45
1:AA:262:A:H2'	1:AA:263:A:C8	2.52	0.45
35:BF:123:LEU:HD12	35:BF:124:LEU:H	1.81	0.45
1:CA:1287:A:H2	1:CA:1353:G:N3	2.15	0.45
1:CA:1264:C:H2'	1:CA:1265:G:C8	2.49	0.45
1:AA:1483:A:C2	31:BA:1959:G:N3	2.85	0.45
43:BR:8:ARG:NE	43:BR:8:ARG:HA	2.32	0.45
1:CA:769:G:H4'	1:CA:1513:A:H4'	1.99	0.45
17:AQ:100:LYS:HA	17:AQ:100:LYS:HD3	1.82	0.45
31:DA:752:A:H4'	31:DA:753:C:O5'	2.17	0.45
36:BG:153:ARG:CZ	36:BG:153:ARG:HB3	2.47	0.45
1:AA:784:C:H4'	31:BA:1837:C:OP1	2.16	0.45
1:AA:1014:A:H2	1:AA:1219:U:O2	2.00	0.45
31:DA:1324:G:C2	31:DA:1328:G:N1	2.85	0.45
50:DY:43:ASN:O	50:DY:44:ILE:O	2.35	0.45
48:DW:24:ILE:O	48:DW:27:LYS:HG3	2.16	0.45
11:AK:80:VAL:HG23	11:AK:80:VAL:O	2.15	0.45
31:DA:2082:A:H2'	31:DA:2083:G:O4'	2.15	0.45
1:CA:779:C:H2'	1:CA:780:A:O4'	2.17	0.45
31:DA:1892:C:H6	31:DA:1892:C:O5'	2.00	0.45
31:DA:2086:U:H2'	31:DA:2087:G:C8	2.51	0.45
19:CS:58:VAL:HG23	19:CS:58:VAL:O	2.17	0.45
1:AA:1344:C:O2'	1:AA:1345:U:H5'	2.16	0.45
31:DA:1642:G:C2'	31:DA:1643:G:H5'	2.47	0.45
1:AA:367:U:O2	1:AA:369:C:C6	2.69	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
40:DO:103:ALA:O	40:DO:106:LEU:HB2	2.17	0.45
31:BA:1296:G:O2'	31:BA:1297:C:H5'	2.16	0.45
16:CP:75:ARG:C	16:CP:77:ALA:H	2.20	0.45
27:B5:25:LEU:HD12	48:BW:19:LEU:HB3	1.99	0.45
19:CS:69:HIS:CB	19:CS:74:PHE:HE2	2.30	0.45
49:BX:8:ILE:HD12	49:BX:8:ILE:N	2.32	0.45
31:DA:2438:U:H5''	31:DA:2600:A:OP1	2.16	0.45
40:DO:12:ASP:C	40:DO:99:PHE:HE2	2.20	0.45
33:BD:244:ARG:HA	33:BD:245:PRO:HA	1.68	0.44
41:BP:64:LYS:C	41:BP:64:LYS:HD3	2.37	0.44
32:DB:6:C:C2	32:DB:116:G:N2	2.85	0.44
31:DA:1578:U:C6	31:DA:1578:U:OP2	2.67	0.44
30:D8:61:LEU:HA	30:D8:61:LEU:HD23	1.75	0.44
30:D8:62:LEU:HB3	31:DA:242:G:H5'	1.99	0.44
50:DY:97:ARG:O	50:DY:98:VAL:O	2.35	0.44
31:DA:142(A):C:O2'	31:DA:143:G:H5'	2.18	0.44
39:BN:53:VAL:HG12	39:BN:54:VAL:N	2.33	0.44
26:B4:12:ALA:O	36:BG:101:ILE:HD11	2.16	0.44
10:AJ:44:VAL:HG11	10:AJ:46:ARG:NE	2.32	0.44
33:BD:134:ARG:HH11	33:BD:134:ARG:HG2	1.82	0.44
41:DP:77:ARG:HE	41:DP:77:ARG:HB3	1.65	0.44
31:DA:1654:A:C1'	31:DA:2823:A:H5'	2.47	0.44
31:DA:1012:U:C5	39:DN:28:THR:HG21	2.52	0.44
35:DF:24:LEU:O	35:DF:25:PRO:C	2.55	0.44
8:CH:93:VAL:HG12	8:CH:93:VAL:O	2.16	0.44
39:DN:56:ASN:N	39:DN:125:GLY:HA3	2.23	0.44
23:D1:18:ILE:N	23:D1:18:ILE:HD12	2.32	0.44
31:DA:7:G:H1	31:DA:2896:C:N4	2.15	0.44
31:DA:2661:G:C8	31:DA:2662:A:N3	2.85	0.44
1:AA:407:G:C2	1:AA:436:C:N3	2.85	0.44
31:DA:1279:G:H4'	43:DR:31:HIS:CD2	2.52	0.44
24:D2:47:ASN:C	24:D2:49:LYS:N	2.69	0.44
50:DY:65:ALA:HA	50:DY:66:PRO:HD2	1.49	0.44
31:DA:2646:C:H6	31:DA:2646:C:O5'	2.00	0.44
31:BA:832:G:H21	41:BP:53:GLY:HA3	1.83	0.44
51:DZ:5:LEU:HD21	51:DZ:43:GLU:HB3	1.99	0.44
31:DA:1503:U:C2'	31:DA:1504:C:O5'	2.65	0.44
1:CA:876:G:H2'	1:CA:877:C:C6	2.51	0.44
20:CT:13:LEU:HD12	20:CT:13:LEU:N	2.18	0.44
31:DA:196:A:C4	31:DA:805:G:O6	2.71	0.44
31:DA:2467:C:O2'	31:DA:2468:G:H5'	2.18	0.44
8:AH:89:PRO:HA	8:AH:92:ARG:NH1	2.32	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:1066:C:C5'	1:AA:1067:A:OP2	2.60	0.44
43:DR:12:ARG:HH11	43:DR:12:ARG:CG	2.30	0.44
12:CL:38:THR:HG22	12:CL:57:LYS:O	2.17	0.44
18:AR:84:LYS:HD3	18:AR:84:LYS:HA	1.80	0.44
31:DA:518:G:H4'	48:DW:18:ARG:HH12	1.75	0.44
1:AA:1037:C:H2'	1:AA:1038:C:O4'	2.17	0.44
47:BV:5:VAL:HG23	47:BV:36:PRO:HB2	2.00	0.44
28:B6:20:ASN:OD1	28:B6:21:TYR:N	2.50	0.44
31:BA:542:C:C5'	31:BA:542:C:C6	3.00	0.44
32:DB:14:U:O2	32:DB:14:U:O4'	2.30	0.44
9:CI:46:ALA:O	9:CI:49:PRO:HD2	2.17	0.44
13:CM:106:ASN:O	13:CM:107:ALA:CB	2.65	0.44
1:AA:1322:C:P	19:AS:78:ARG:HH22	2.41	0.44
36:BG:16:ARG:N	36:BG:17:PRO:HD2	2.31	0.44
31:DA:1176:G:C1'	31:DA:1177:A:OP1	2.65	0.44
9:CI:53:VAL:HG12	9:CI:95:LYS:HG2	1.99	0.44
31:DA:1374:G:C5	31:DA:1375:C:C4	3.05	0.44
1:AA:747:C:C5	1:AA:748:C:N3	2.85	0.44
5:AE:139:LEU:CA	5:AE:142:LEU:HD12	2.43	0.44
34:BE:14:ILE:CG1	34:BE:21:VAL:HG22	2.47	0.44
45:DT:108:ARG:HG3	45:DT:109:GLU:N	2.31	0.44
35:BF:7:TYR:CD1	35:BF:8:GLN:N	2.85	0.44
1:AA:35:G:C6	1:AA:36:C:N4	2.85	0.44
41:DP:13:ASN:O	41:DP:15:ARG:N	2.50	0.44
1:CA:577:G:H1'	1:CA:816:A:C4	2.52	0.44
29:B7:1:MET:O	29:B7:2:LYS:C	2.55	0.44
31:BA:736:C:O2'	31:BA:737:C:H5'	2.17	0.44
31:BA:374:A:C8	31:BA:375:C:C5	3.06	0.44
44:BS:24:LEU:HB3	44:BS:85:VAL:CG1	2.47	0.44
1:CA:1496:C:H2'	1:CA:1497:G:O4'	2.17	0.44
31:BA:2335:A:N7	31:BA:2337:G:C5	2.84	0.44
1:AA:807:A:C6	1:AA:808:C:C4	3.05	0.44
34:DE:10:GLY:HA3	45:DT:8:LYS:HZ1	1.81	0.44
6:CF:26:ILE:O	6:CF:30:LEU:HG	2.16	0.44
31:DA:1439:A:C2	31:DA:1553:A:C5	3.05	0.44
31:DA:2228:G:H2'	31:DA:2229:C:C6	2.52	0.44
1:AA:872:A:C4	1:AA:874:G:C8	3.04	0.44
35:DF:202:PHE:C	35:DF:204:ASN:N	2.70	0.44
1:CA:579:G:C4	1:CA:580:U:C5	3.05	0.44
1:CA:579:G:C6	1:CA:580:U:C4	3.04	0.44
9:AI:36:TYR:CE1	9:AI:70:LYS:NZ	2.85	0.44
1:CA:1016:A:H2'	1:CA:1017:G:O4'	2.16	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:1015:A:C6	1:AA:1016:A:C5	3.05	0.44
40:DO:10:VAL:O	40:DO:10:VAL:HG23	2.17	0.44
31:DA:236:C:H2'	31:DA:237:C:H6	1.81	0.44
42:DQ:19:GLY:C	42:DQ:21:THR:H	2.21	0.44
8:CH:29:SER:HB3	8:CH:32:LYS:HD2	1.98	0.44
31:BA:523:C:H4'	31:BA:540:C:O2	2.17	0.44
1:AA:1517:G:H1'	31:BA:1919:A:O3'	2.17	0.44
31:BA:2498:C:O2'	31:BA:2499:C:H5'	2.17	0.44
1:AA:868:C:H2'	1:AA:869:G:O4'	2.17	0.44
31:BA:2881:C:H2'	31:BA:2882:A:O4'	2.17	0.44
31:BA:2263:C:O2'	31:BA:2264:C:H5'	2.17	0.44
27:B5:13:LYS:O	27:B5:14:ALA:C	2.55	0.44
48:DW:13:SER:HB3	48:DW:16:LYS:HD3	1.99	0.44
31:DA:2319:G:H4'	31:DA:2319:G:OP2	2.16	0.44
17:AQ:19:VAL:HG23	17:AQ:44:ALA:HB3	1.99	0.44
31:BA:14:A:C6	31:BA:526:A:C2	3.04	0.44
41:BP:138:LEU:C	41:BP:140:ALA:N	2.70	0.44
33:BD:35:LYS:HZ3	33:BD:104:TYR:CB	2.23	0.44
31:BA:2315:G:H2'	31:BA:2316:C:H6	1.78	0.44
31:BA:2299:G:N1	31:BA:2318:G:C8	2.85	0.44
31:DA:2889:C:H2'	31:DA:2891:G:C5'	2.48	0.44
28:D6:39:TYR:HD2	28:D6:49:HIS:CE1	2.36	0.44
30:D8:37:SER:HB2	30:D8:39:LYS:H	1.81	0.44
31:DA:174:C:C2'	31:DA:175:G:H5''	2.47	0.44
31:DA:2702:U:OP1	31:DA:2702:U:O4'	2.35	0.44
47:BV:69:LYS:CB	47:BV:93:GLU:OE2	2.61	0.44
42:DQ:86:GLY:C	42:DQ:88:GLY:N	2.69	0.44
39:DN:1:MET:CB	47:DV:20:LEU:HD22	2.46	0.44
1:CA:375:U:H2'	1:CA:376:G:H8	1.81	0.44
1:CA:46:G:HO2'	1:CA:365:U:H1'	1.81	0.44
16:CP:45:THR:O	16:CP:47:ASP:N	2.49	0.44
49:BX:59:VAL:CG2	49:BX:60:ARG:H	2.24	0.44
1:CA:1256:A:O3'	1:CA:1257:U:H4'	2.17	0.44
1:AA:675:A:C4	1:AA:676:A:C8	3.05	0.44
36:BG:89:GLY:O	36:BG:90:LEU:C	2.55	0.44
44:BS:90:GLY:C	44:BS:92:TYR:H	2.20	0.44
44:DS:35:ILE:N	44:DS:53:SER:HB2	2.32	0.44
43:BR:34:ILE:HG22	43:BR:114:VAL:HB	2.00	0.44
10:AJ:62:HIS:CE1	14:AN:61:TRP:CH2	3.05	0.44
27:D5:48:GLU:C	27:D5:50:GLY:H	2.21	0.44
31:BA:389:G:H1	41:BP:71:VAL:H	1.65	0.44
8:AH:103:VAL:CG2	8:AH:110:ALA:HB2	2.48	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
44:BS:57:LYS:HG2	44:BS:58:LEU:H	1.81	0.44
8:CH:113:SER:H	8:CH:134:ILE:HG12	1.80	0.44
1:CA:407:G:C2	1:CA:436:C:N3	2.86	0.44
36:DG:86:MET:HB2	36:DG:87:PRO:HD2	1.98	0.44
23:D1:17:SER:C	23:D1:18:ILE:HD12	2.37	0.44
43:DR:10:LEU:HB3	43:DR:17:ARG:CD	2.47	0.44
1:AA:410:G:C2	1:AA:429:U:C2	3.04	0.44
43:DR:34:ILE:HG22	43:DR:114:VAL:HB	1.98	0.44
24:D2:53:LEU:HA	24:D2:56:GLN:NE2	2.32	0.44
50:DY:8:LYS:CD	50:DY:28:LYS:HZ3	2.30	0.44
31:DA:336:C:H5'	50:DY:7:VAL:CG1	2.48	0.44
6:CF:20:ALA:O	6:CF:23:LYS:HB2	2.17	0.44
45:DT:33:LYS:HA	45:DT:33:LYS:HZ2	1.81	0.44
31:DA:1500:G:C6	31:DA:1501:C:N4	2.86	0.44
30:B8:61:LEU:C	30:B8:63:PRO:HD2	2.37	0.44
8:CH:89:PRO:HA	8:CH:92:ARG:NH1	2.32	0.44
1:AA:1072:G:C6	1:AA:1073:U:C4	3.05	0.44
31:BA:1503:U:C2'	31:BA:1504:C:O5'	2.65	0.44
1:AA:685:G:O2'	1:AA:686:U:C5'	2.54	0.44
31:BA:2286:A:H8	31:BA:2286:A:HO2'	1.57	0.44
1:CA:686:U:O2'	1:CA:687:A:OP2	2.32	0.44
20:AT:100:ILE:O	20:AT:102:GLY:N	2.50	0.44
1:AA:1064:G:C1'	1:AA:1065:U:OP2	2.63	0.44
51:BZ:166:SER:CB	51:BZ:167:PRO:CA	2.96	0.44
37:BH:30:LYS:HZ2	37:BH:81:GLU:HA	1.76	0.44
7:CG:111:ARG:HB3	7:CG:113:GLU:HG2	2.00	0.44
1:AA:559:A:H4'	1:AA:560:U:O5'	2.16	0.44
6:CF:5:GLU:O	6:CF:7:ASN:ND2	2.51	0.44
1:CA:1037:C:H2'	1:CA:1038:C:O4'	2.17	0.44
31:BA:1962:C:O3'	31:BA:1963:U:H3'	2.17	0.44
32:BB:79:C:O2'	32:BB:80:U:H5'	2.17	0.44
31:DA:1696:G:C6	31:DA:1697:G:C5	3.06	0.44
35:DF:89:VAL:O	35:DF:91:GLY:N	2.49	0.44
12:AL:60:LEU:HD21	12:AL:66:VAL:HG22	1.99	0.44
12:AL:70:ILE:HD12	12:AL:70:ILE:N	2.33	0.44
31:BA:2400:G:N3	31:BA:2400:G:H2'	2.31	0.44
2:AB:174:VAL:O	2:AB:178:ARG:HB2	2.17	0.44
47:DV:5:VAL:HG23	47:DV:36:PRO:HB2	1.96	0.44
1:AA:1422:G:HO2'	1:AA:1423:G:H5'	1.78	0.44
31:DA:1178:C:H2'	31:DA:1179:C:C6	2.52	0.44
31:BA:909:A:C4	31:BA:912:C:C5	3.06	0.44
31:BA:108:U:C2	31:BA:109:G:C8	3.05	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:CA:1159:U:C5	1:CA:1182:G:N3	2.85	0.44
31:DA:184:C:C2	31:DA:185:U:C5	3.05	0.44
5:AE:78:HIS:HE1	5:AE:142:LEU:HA	1.81	0.44
31:DA:1450(A):C:H6	31:DA:1450(A):C:O5'	2.00	0.44
42:DQ:134:ARG:HB3	42:DQ:135:ASP:H	1.54	0.44
1:CA:1477:C:H2'	1:CA:1478:C:H6	1.81	0.44
31:BA:1458:C:H4'	31:BA:1459:G:C4	2.52	0.44
31:DA:2056:G:N2	31:DA:2057:A:C1'	2.81	0.44
1:CA:577:G:H1'	1:CA:816:A:N3	2.32	0.44
31:BA:2053:G:H5'	34:BE:144:ARG:O	2.16	0.44
31:DA:51:G:N3	31:DA:119:A:C2	2.85	0.44
31:DA:1819:A:H4'	31:DA:1820:U:O5'	2.17	0.44
31:BA:1588:C:O2	31:BA:1588:C:H2'	2.17	0.44
1:CA:590:C:O2'	1:CA:591:U:H5'	2.17	0.44
8:AH:1:MET:CE	8:AH:1:MET:H3	2.29	0.44
31:BA:513:A:N1	31:BA:514:A:C5	2.85	0.44
32:DB:59:A:H2'	32:DB:60:C:O4'	2.18	0.44
35:BF:152:GLU:OE1	35:BF:191:ARG:HD2	2.17	0.44
1:CA:836:G:C6	1:CA:851:G:C5	3.05	0.44
1:AA:811:C:H4'	1:AA:900:A:N6	2.31	0.44
50:DY:41:GLY:O	50:DY:43:ASN:OD1	2.36	0.44
9:CI:99:LEU:O	9:CI:100:GLY:C	2.55	0.44
31:BA:2352:A:C4	31:BA:2366:A:C2	3.05	0.44
31:DA:256:A:O2'	31:DA:257:A:H5'	2.16	0.44
31:BA:2639:A:H2'	31:BA:2640:G:H5'	1.98	0.44
1:AA:1293:G:O2'	1:AA:1294:G:P	2.75	0.44
42:BQ:58:PHE:O	42:BQ:59:ARG:C	2.56	0.44
31:BA:1916:A:H2'	31:BA:1917:U:O4'	2.16	0.44
2:CB:71:VAL:HB	2:CB:164:VAL:HG22	2.00	0.44
31:DA:1269:A:H2'	31:DA:1270:C:C6	2.52	0.44
31:BA:947:G:H2'	31:BA:948:G:H8	1.82	0.44
1:AA:994:A:N6	1:AA:1046:A:H2	2.15	0.44
31:BA:319:C:O2'	31:BA:320:A:H5'	2.17	0.44
1:CA:1011:G:N2	1:CA:1019:C:C2	2.85	0.44
2:CB:149:LEU:HD22	2:CB:152:PHE:HB3	2.00	0.44
2:AB:134:GLU:O	2:AB:138:LEU:HD12	2.17	0.44
22:D0:84:LEU:H	22:D0:84:LEU:HD12	1.82	0.44
47:BV:12:TYR:CD2	47:BV:12:TYR:N	2.84	0.44
38:BI:73:GLU:O	38:BI:73:GLU:HG3	2.18	0.44
31:DA:2881:C:H2'	31:DA:2882:A:O4'	2.16	0.44
50:BY:32:PRO:C	50:BY:34:LYS:H	2.19	0.44
50:BY:44:ILE:HG13	50:BY:44:ILE:H	1.47	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
27:B5:52:TYR:O	27:B5:53:ALA:C	2.55	0.44
47:BV:47:VAL:CG2	47:BV:49:THR:HB	2.48	0.44
31:BA:1495:A:H2'	31:BA:1496:A:N3	2.33	0.44
33:BD:33:LEU:O	33:BD:35:LYS:N	2.51	0.44
31:DA:2316:C:H2'	31:DA:2317:C:C6	2.39	0.44
39:DN:53:VAL:HG12	39:DN:54:VAL:N	2.32	0.44
30:D8:59:LYS:CD	41:DP:50:ARG:HB3	2.48	0.44
50:BY:97:ARG:O	50:BY:98:VAL:O	2.35	0.44
31:BA:173:G:C5	31:BA:174:C:C5	3.06	0.44
42:DQ:76:LYS:H	42:DQ:88:GLY:HA2	1.82	0.44
24:B2:47:ASN:C	24:B2:49:LYS:N	2.71	0.44
24:B2:53:LEU:C	24:B2:56:GLN:HE22	2.21	0.44
10:CJ:44:VAL:HG11	10:CJ:46:ARG:NE	2.32	0.44
1:CA:1278:U:O4	10:CJ:99:LYS:HE3	2.18	0.44
31:BA:2308:G:C2	31:BA:2309:A:N6	2.86	0.44
44:BS:89:ARG:O	44:BS:92:TYR:CB	2.57	0.44
31:BA:806:C:O2	31:BA:2444:G:O2'	2.34	0.44
41:BP:24:GLY:HA3	41:BP:33:ARG:NH2	2.25	0.44
1:AA:598:U:H2'	1:AA:599:C:C6	2.52	0.44
43:DR:2:ARG:CD	43:DR:2:ARG:N	2.78	0.44
41:DP:21:ARG:HG2	41:DP:21:ARG:O	2.17	0.44
31:DA:777:A:N3	31:DA:778:G:C8	2.85	0.44
34:DE:46:ALA:HA	34:DE:82:ARG:O	2.17	0.44
1:CA:410:G:C2	1:CA:429:U:C2	3.05	0.44
32:DB:78:A:H2'	32:DB:79:C:O4'	2.18	0.44
31:DA:1226:A:OP1	47:DV:85:LYS:NZ	2.45	0.44
38:DI:10:GLU:C	38:DI:12:LEU:H	2.21	0.44
41:DP:100:LEU:HA	41:DP:100:LEU:HD12	1.60	0.44
1:AA:410:G:O5'	1:AA:410:G:H8	2.01	0.44
31:DA:1464:C:C2	31:DA:1465:G:C8	3.06	0.44
31:DA:327:G:C2	31:DA:336:C:C2	3.05	0.44
38:BI:13:GLY:O	38:BI:14:ASP:C	2.54	0.44
30:B8:4:MET:HE1	31:BA:593:G:C1'	2.47	0.44
31:DA:2463:C:C2'	31:DA:2464:C:C5'	2.89	0.44
39:BN:78:TYR:CD1	39:BN:79:PRO:CB	3.00	0.44
22:B0:75:LEU:HD23	22:B0:75:LEU:HA	1.65	0.44
1:AA:876:G:H2'	1:AA:877:C:C6	2.52	0.44
1:AA:971:G:H1'	1:AA:1365:G:O2'	2.18	0.44
23:D1:11:ARG:HG2	23:D1:61:ARG:O	2.18	0.44
31:BA:271(Q):G:N3	31:BA:271(R):G:C8	2.86	0.44
17:CQ:67:LYS:CA	17:CQ:70:ARG:HH12	2.24	0.44
37:DH:20:ALA:HB3	37:DH:23:ARG:HG3	1.98	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
51:BZ:30:ASN:OD1	51:BZ:33:LEU:HB3	2.18	0.44
1:CA:321:A:N7	1:CA:328:C:O2'	2.37	0.44
33:DD:211:ARG:HA	33:DD:214:TRP:CD2	2.53	0.44
31:DA:2472:G:H5''	31:DA:2472:G:C8	2.45	0.44
1:AA:397:A:N3	1:AA:397:A:H5''	2.32	0.44
33:BD:17:THR:HG23	33:BD:205:VAL:HB	2.00	0.44
31:BA:1037:G:H1	31:BA:1118:C:N4	2.13	0.44
43:DR:111:LEU:HD23	43:DR:111:LEU:HA	1.65	0.44
31:DA:2689:U:H5''	31:DA:2690:C:H5'	1.99	0.44
46:DU:102:GLU:HG3	47:DV:2:PHE:CZ	2.53	0.44
1:CA:833:U:O2	1:CA:854:G:C2	2.70	0.44
1:AA:1271:G:H5'	1:AA:1314:C:C5'	2.47	0.44
31:BA:536:A:C2'	31:BA:537:C:O5'	2.64	0.44
31:BA:493:G:H2'	31:BA:494:G:O4'	2.17	0.44
31:BA:825:C:C2'	31:BA:826:U:O5'	2.66	0.44
31:DA:2855:C:H2'	31:DA:2856:C:C6	2.52	0.44
1:CA:448:A:N7	1:CA:486:U:O4	2.50	0.44
31:DA:2473:U:O2	31:DA:2473:U:H2'	2.16	0.44
42:DQ:109:VAL:HG12	42:DQ:113:GLN:HB2	1.99	0.44
1:AA:189(C):C:H2'	1:AA:189(D):C:C5'	2.48	0.44
1:AA:1205:U:H5''	3:AC:190:ARG:HH21	1.80	0.44
1:AA:1418:A:C2	31:BA:1948:G:N3	2.83	0.44
11:CK:122:LYS:O	11:CK:126:ARG:HB2	2.17	0.44
4:AD:149:ALA:O	4:AD:150:GLU:C	2.54	0.44
31:BA:1261:C:C2'	31:BA:1262:A:O5'	2.65	0.44
48:DW:86:LEU:HA	48:DW:87:PRO:HD3	1.78	0.44
1:CA:792:A:C2	1:CA:794:A:C2	3.05	0.44
1:CA:892:A:C5	1:CA:893:C:C4	3.05	0.44
1:CA:1154:G:N3	1:CA:1155:G:C8	2.84	0.44
1:CA:163:C:H2'	1:CA:164:U:H6	1.81	0.44
31:BA:364:C:C2'	31:BA:364:C:O2	2.65	0.44
9:CI:113:LYS:O	9:CI:116:LYS:HB2	2.17	0.44
2:AB:36:ARG:HB2	2:AB:41:ILE:HD13	1.99	0.44
17:CQ:63:ARG:HG2	17:CQ:64:PRO:CD	2.46	0.44
32:BB:33:G:N2	32:BB:50:G:C4	2.86	0.44
44:DS:97:ARG:O	44:DS:98:VAL:HG23	2.17	0.44
1:CA:1015:A:C6	1:CA:1016:A:C5	3.06	0.44
1:CA:222:U:C2	1:CA:223:U:C5	3.06	0.44
6:CF:24:GLU:O	6:CF:28:ARG:HD2	2.17	0.44
1:CA:1362:C:C2'	1:CA:1363:C:H5''	2.48	0.44
31:BA:1269:A:H2'	31:BA:1270:C:C6	2.52	0.44
7:AG:78:ARG:HB3	7:AG:87:VAL:HG23	1.99	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:DA:1011:G:C4	31:DA:1013:C:C6	3.06	0.44
38:DI:1:MET:O	38:DI:20:ASP:HA	2.17	0.44
31:DA:1446:C:H2'	31:DA:1447:G:H8	1.83	0.44
31:DA:1366:A:H2'	31:DA:1367:A:O5'	2.17	0.44
31:DA:1644:C:O2	31:DA:1644:C:H2'	2.16	0.44
31:DA:552:G:C6	31:DA:553:G:C5	3.05	0.44
31:DA:1520:G:H3'	31:DA:1523:U:H6	1.83	0.44
31:DA:275:G:O4'	31:DA:275:G:OP1	2.35	0.44
31:DA:659:C:H5''	31:DA:659:C:H6	1.82	0.44
31:BA:994:C:O2'	31:BA:996:A:OP1	2.24	0.44
1:AA:353:A:H5'	1:AA:353:A:C8	2.44	0.44
16:AP:39:TYR:HD2	16:AP:73:LEU:HD11	1.78	0.44
33:DD:58:HIS:CD2	33:DD:59:LYS:N	2.85	0.44
36:DG:128:ARG:O	36:DG:129:GLY:C	2.54	0.44
31:DA:1495:A:C4	31:DA:1496:A:C2	3.05	0.44
39:DN:130:HIS:CG	39:DN:130:HIS:O	2.70	0.44
30:D8:61:LEU:C	30:D8:63:PRO:HD2	2.38	0.44
31:DA:171:G:H2'	31:DA:172:C:C1'	2.46	0.44
31:DA:69:C:H2'	31:DA:70:G:C8	2.53	0.44
49:DX:18:TYR:O	49:DX:20:GLY:N	2.50	0.44
47:BV:72:VAL:CG1	47:BV:88:ARG:HH22	2.30	0.44
47:DV:15:GLU:O	47:DV:98:GLU:OE2	2.34	0.44
16:CP:27:LYS:O	16:CP:28:ARG:C	2.55	0.44
39:BN:16:ILE:O	39:BN:54:VAL:HA	2.17	0.44
31:BA:140:G:O4'	31:BA:141:A:H2	2.00	0.44
49:BX:77:LYS:CG	49:BX:78:LYS:N	2.79	0.44
36:BG:88:ILE:CG2	36:BG:89:GLY:N	2.79	0.44
31:BA:2758:A:C2'	31:BA:2759:G:C5'	2.85	0.44
33:BD:172:TYR:HD1	33:BD:185:VAL:C	2.20	0.44
31:BA:2636:U:H4'	34:BE:80:GLU:OE1	2.17	0.44
15:AO:63:ARG:HG3	15:AO:67:LEU:HD12	2.00	0.44
35:BF:22:ALA:HA	35:BF:26:ALA:HB2	1.99	0.44
45:DT:98:LYS:HB3	45:DT:100:TYR:CE1	2.52	0.44
45:BT:28:VAL:HG22	45:BT:47:GLY:N	2.33	0.44
1:AA:432:A:C8	1:AA:433:C:C6	3.05	0.44
1:AA:542:G:OP1	4:AD:10:ARG:NH2	2.48	0.44
1:AA:544:G:C4	1:AA:545:C:C5	3.04	0.44
36:BG:44:GLY:O	36:BG:45:GLU:HB3	2.17	0.44
6:AF:14:LEU:HA	6:AF:14:LEU:HD23	1.68	0.44
31:DA:569:U:C4	31:DA:570:G:C6	3.06	0.44
1:AA:492:G:C5	1:AA:493:G:N7	2.86	0.44
1:CA:1086:U:O2'	1:CA:1087:G:H5'	2.17	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:BA:854:G:H2'	31:BA:855:G:C8	2.53	0.44
31:BA:863:A:OP1	42:BQ:21:THR:HB	2.18	0.44
42:BQ:37:LEU:HD12	42:BQ:129:THR:CA	2.48	0.44
27:B5:2:ALA:HB3	31:BA:747:U:C6	2.52	0.44
31:DA:1107:G:H2'	31:DA:1108:U:O4'	2.17	0.44
31:BA:2580:U:H5''	34:BE:131:ALA:CB	2.47	0.44
42:BQ:38:GLU:HB3	42:BQ:39:PRO:HD2	1.98	0.44
33:BD:10:THR:O	33:BD:11:PRO:O	2.35	0.44
3:CC:15:THR:HG22	3:CC:16:ARG:NH1	2.33	0.44
31:DA:2584:U:O2	31:DA:2584:U:O4'	2.36	0.44
7:CG:16:LEU:CD1	9:CI:42:ARG:HA	2.48	0.44
37:BH:92:ILE:HD12	37:BH:92:ILE:N	2.33	0.44
31:DA:1170:G:OP2	31:DA:1170:G:H8	2.00	0.44
14:CN:29:ARG:NH2	14:CN:41:ARG:HH12	2.15	0.44
37:DH:92:ILE:HD12	37:DH:92:ILE:N	2.32	0.44
16:AP:14:ASN:N	16:AP:15:PRO:HD3	2.32	0.44
1:AA:1368:G:C2'	1:AA:1369:C:H5'	2.47	0.44
16:CP:57:ARG:CZ	16:CP:79:VAL:O	2.65	0.44
31:DA:1581:G:H5'	31:DA:1582:C:OP2	2.17	0.44
35:DF:157:VAL:HB	35:DF:194:MET:HB3	1.99	0.44
7:AG:26:PHE:CG	7:AG:62:PHE:CE1	3.05	0.44
1:CA:577:G:H2'	1:CA:578:C:H6	1.81	0.44
34:BE:144:ARG:HB3	34:BE:145:LYS:H	1.44	0.44
31:DA:828:U:O2	31:DA:828:U:C3'	2.65	0.44
31:DA:892:G:N3	31:DA:893:C:H5''	2.33	0.44
1:AA:163:C:H2'	1:AA:164:U:H6	1.81	0.44
1:CA:9:G:C6	1:CA:26:A:N6	2.85	0.44
8:CH:28:ALA:CB	8:CH:57:PRO:O	2.66	0.44
1:CA:1312:G:H1	1:CA:1325:C:H42	1.66	0.44
31:DA:2694:G:C5	31:DA:2695:C:C5	3.05	0.44
42:DQ:78:PRO:O	42:DQ:79:LEU:CB	2.65	0.44
1:CA:779:C:O2'	1:CA:780:A:H5'	2.18	0.44
31:BA:460:A:C2	31:BA:470:A:C4	3.06	0.44
1:AA:580:U:O2'	15:AO:57:LEU:HD13	2.18	0.44
11:CK:125:PHE:H	11:CK:125:PHE:HD1	1.66	0.44
31:BA:1412:A:H2'	31:BA:1413:G:C8	2.52	0.44
31:BA:1547:C:H2'	31:BA:1548:C:C6	2.52	0.44
14:AN:12:ARG:C	14:AN:14:PRO:CD	2.86	0.44
22:D0:84:LEU:N	22:D0:84:LEU:HD12	2.33	0.44
7:AG:88:PRO:HG3	7:AG:148:ASN:O	2.17	0.44
31:BA:531:C:H4'	31:BA:532:A:H5''	2.00	0.44
27:D5:20:ARG:HG2	27:D5:23:HIS:CD2	2.52	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:640:A:O2'	1:AA:641:U:H5'	2.18	0.44
31:BA:1545:A:H2'	31:BA:1546:C:O4'	2.18	0.44
31:BA:2582:G:C2	31:BA:2583:G:C8	3.04	0.44
31:DA:2005:A:H5''	31:DA:2006:C:OP2	2.18	0.44
31:BA:2052:G:O4'	34:BE:142:GLY:HA3	2.18	0.44
31:DA:649:G:H2'	31:DA:650:C:C6	2.52	0.44
34:BE:87:GLU:O	34:BE:87:GLU:HG3	2.17	0.44
1:AA:68:G:N2	1:AA:69:G:C4	2.86	0.44
31:BA:1578:U:O2	31:BA:1578:U:H2'	2.16	0.44
33:BD:59:LYS:HG3	33:BD:60:ARG:N	2.31	0.44
31:DA:2294:C:OP1	44:DS:92:TYR:HE1	1.99	0.44
34:BE:63:LEU:O	34:BE:64:LYS:C	2.53	0.44
51:DZ:146:ILE:HA	51:DZ:174:VAL:HG12	2.00	0.44
49:DX:55:ASN:HD22	49:DX:55:ASN:N	2.15	0.44
49:DX:77:LYS:CG	49:DX:78:LYS:H	2.30	0.44
30:B8:56:GLU:HA	30:B8:59:LYS:HZ2	1.81	0.44
1:CA:355:C:H5'	1:CA:389:A:OP2	2.18	0.44
49:BX:76:ARG:HD2	49:BX:77:LYS:CB	2.47	0.44
36:BG:110:ALA:HA	36:BG:140:ILE:O	2.18	0.44
36:BG:148:MET:HG3	36:BG:148:MET:O	2.18	0.44
36:BG:36:LYS:HG2	36:BG:38:VAL:HG23	2.00	0.44
31:BA:2723:C:H4'	43:BR:2:ARG:O	2.16	0.44
31:BA:691:C:H4'	33:BD:43:ARG:HG2	1.99	0.44
23:D1:91:LYS:O	23:D1:92:LYS:HD2	2.18	0.44
29:B7:8:ASN:HD22	29:B7:9:ARG:N	2.14	0.44
44:BS:34:HIS:N	44:BS:34:HIS:CD2	2.86	0.44
31:BA:1656:C:O2'	31:BA:1657:C:H5'	2.18	0.44
35:DF:20:LEU:O	35:DF:23:ASP:HB2	2.18	0.44
35:BF:20:LEU:HD13	35:BF:203:GLN:CD	2.37	0.44
35:BF:22:ALA:HB1	35:BF:26:ALA:HB1	1.98	0.44
4:CD:79:PHE:CD2	4:CD:79:PHE:C	2.89	0.44
36:DG:81:LYS:O	36:DG:83:ARG:HG3	2.17	0.44
31:BA:2480:C:N4	31:BA:2481:G:C6	2.86	0.44
31:DA:2308:G:C2	31:DA:2309:A:N6	2.86	0.44
31:BA:1448:G:N3	31:BA:1528(A):A:H2	2.15	0.44
45:DT:61:PHE:CZ	45:DT:76:PHE:HB2	2.52	0.44
45:DT:19:LEU:HD22	45:DT:85:LYS:HB2	2.00	0.44
45:BT:26:ASP:OD2	45:BT:26:ASP:O	2.35	0.44
41:BP:102:ARG:O	41:BP:103:ALA:CB	2.66	0.44
41:DP:83:VAL:HG12	41:DP:112:LEU:HD21	1.98	0.44
33:DD:166:GLN:CA	33:DD:166:GLN:NE2	2.69	0.44
50:BY:39:VAL:CG1	50:BY:40:GLU:H	2.26	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
39:BN:78:TYR:HD1	39:BN:79:PRO:N	2.16	0.44
32:BB:66:A:C4	32:BB:109:C:C4	3.05	0.44
1:AA:962:C:H42	1:AA:974:A:H61	1.65	0.44
45:BT:13:ARG:HH21	45:BT:15:VAL:CG1	2.30	0.44
1:CA:1077:G:C6	1:CA:1081:G:O6	2.71	0.44
6:AF:62:TRP:CE2	18:AR:35:ARG:NH2	2.86	0.44
31:DA:551:G:O2'	31:DA:1220:A:N3	2.44	0.44
28:B6:36:LEU:HD13	28:B6:50:ARG:NH1	2.32	0.44
1:CA:499:A:H4'	1:CA:500:G:H5'	1.98	0.44
10:AJ:8:LEU:HB3	10:AJ:16:LEU:HD21	1.99	0.44
10:AJ:6:ILE:HG22	10:AJ:98:ILE:CG1	2.47	0.44
38:BI:105:HIS:N	38:BI:105:HIS:CD2	2.85	0.44
38:BI:75:LEU:HD12	38:BI:76:THR:H	1.82	0.44
37:BH:89:ILE:CD1	37:BH:129:THR:HB	2.42	0.44
1:CA:150:C:N4	1:CA:170:U:N3	2.65	0.44
3:AC:11:ARG:O	3:AC:14:ILE:O	2.35	0.44
3:AC:15:THR:HG22	3:AC:16:ARG:HH12	1.83	0.44
31:BA:2517:C:C4	31:BA:2542:A:C6	3.06	0.44
12:CL:76:ASN:C	12:CL:77:LEU:HD23	2.37	0.44
13:AM:68:GLY:O	13:AM:69:GLU:HB2	2.18	0.44
1:CA:763:G:C4	1:CA:764:C:C5	3.06	0.44
31:BA:1242:A:N1	41:BP:8:PRO:HG3	2.32	0.44
13:AM:81:LEU:HD11	13:AM:88:ARG:HH12	1.82	0.44
31:BA:34:C:C3'	31:BA:34:C:C6	3.00	0.44
10:CJ:58:ASP:O	10:CJ:59:SER:C	2.55	0.44
1:CA:448:A:H2'	1:CA:449:C:C6	2.52	0.44
3:AC:58:GLU:H	3:AC:65:ALA:CB	2.27	0.44
38:DI:96:ASP:O	38:DI:99:GLU:HB3	2.17	0.44
50:BY:2:ARG:C	50:BY:4:LYS:N	2.69	0.44
1:AA:119:A:N7	1:AA:288:A:C2	2.85	0.44
31:DA:892:G:N7	31:DA:893:C:C4	2.86	0.44
31:DA:873:G:H1	31:DA:904:C:N4	2.14	0.44
31:DA:904:C:H2'	31:DA:904:C:O2	2.18	0.44
3:AC:5:ILE:HD13	3:AC:5:ILE:O	2.17	0.44
6:CF:10:LEU:HA	6:CF:84:ASN:O	2.17	0.44
1:AA:836:G:C6	1:AA:851:G:C5	3.06	0.44
1:AA:782:A:H4'	1:AA:1514:C:O2'	2.17	0.44
1:CA:872:A:C2	1:CA:874:G:C6	3.06	0.44
40:BO:7:TYR:CE1	40:BO:20:MET:HB2	2.52	0.44
1:CA:399:G:H2'	1:CA:400:C:C6	2.53	0.44
1:CA:225:C:H2'	1:CA:226:G:H8	1.83	0.44
1:AA:1350:A:C5	1:AA:1351:U:C4	3.05	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:BA:236:C:H2'	31:BA:237:C:H6	1.82	0.44
31:DA:1623:G:C2	31:DA:1624:G:C8	3.06	0.44
31:BA:1368:G:O2'	31:BA:1369:G:H5'	2.18	0.44
31:BA:1011:G:C5	31:BA:1013:C:C5	3.06	0.44
31:DA:2626:C:O2'	31:DA:2627:G:H5'	2.18	0.44
31:BA:2010:G:H5''	48:BW:42:ARG:HB2	1.99	0.44
40:BO:26:LYS:HE3	40:BO:37:ASP:CG	2.38	0.44
31:BA:1942:C:C4	31:BA:1943:U:C4	3.05	0.44
49:BX:47:PHE:O	49:BX:48:LYS:C	2.55	0.44
31:BA:425:G:C2	31:BA:426:C:C6	3.05	0.44
1:CA:788:U:H2'	1:CA:789:U:O4'	2.18	0.44
35:DF:140:LEU:HA	35:DF:140:LEU:HD13	1.65	0.44
31:BA:1857:G:H2'	31:BA:1858:G:C1'	2.46	0.44
31:DA:2333:A:C2'	31:DA:2334:G:OP2	2.66	0.44
39:DN:53:VAL:HA	39:DN:121:LYS:O	2.18	0.44
30:D8:4:MET:O	30:D8:62:LEU:HD12	2.17	0.44
30:D8:29:LYS:O	30:D8:32:LEU:N	2.51	0.44
31:DA:173:G:C6	31:DA:174:C:C4	3.05	0.44
31:DA:996:A:OP2	46:DU:92:ARG:CZ	2.66	0.44
1:CA:375:U:C2	1:CA:376:G:C8	3.06	0.44
49:BX:25:LYS:HG3	49:BX:26:TYR:HD1	1.81	0.44
36:BG:71:THR:HB	36:BG:89:GLY:HA3	1.98	0.44
44:BS:13:ARG:CG	44:BS:13:ARG:HH11	2.29	0.44
44:BS:88:ASP:CG	44:BS:89:ARG:N	2.71	0.44
44:DS:66:ALA:O	44:DS:67:ARG:HB2	2.17	0.44
31:BA:1999:C:H5''	31:BA:2723:C:O2'	2.18	0.44
31:BA:669:G:H5''	31:BA:669:G:N9	2.32	0.44
34:BE:36:ARG:NH1	34:BE:85:ASN:ND2	2.66	0.44
31:DA:1022:G:O2'	31:DA:1023:U:OP2	2.28	0.44
4:CD:78:LEU:O	4:CD:79:PHE:C	2.56	0.44
31:DA:2312:U:O3'	36:DG:71:THR:HG21	2.17	0.44
36:DG:64:THR:CG2	36:DG:65:GLY:N	2.79	0.44
31:DA:2850:A:C2'	31:DA:2851:A:O5'	2.66	0.44
45:DT:29:ARG:CB	45:DT:85:LYS:CA	2.93	0.44
1:AA:510:A:H5''	1:AA:511:C:OP2	2.18	0.44
38:BI:62:LYS:HE2	38:BI:134:PRO:CG	2.47	0.44
31:DA:1528:A:O2'	31:DA:1528(A):A:C8	2.64	0.44
13:CM:108:ARG:NE	13:CM:114:ARG:HG2	2.32	0.44
50:DY:28:LYS:CD	50:DY:37:VAL:HG12	2.48	0.44
50:DY:7:VAL:HB	50:DY:8:LYS:CD	2.47	0.44
6:AF:20:ALA:O	6:AF:23:LYS:HB2	2.17	0.44
31:BA:146:G:C5'	31:BA:146:G:C8	2.97	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
17:AQ:66:SER:O	17:AQ:67:LYS:C	2.54	0.44
9:CI:3:GLN:O	9:CI:4:TYR:HD1	2.00	0.44
34:DE:116:VAL:HG22	34:DE:122:PHE:HB2	1.99	0.44
1:CA:962:C:H42	1:CA:974:A:H61	1.65	0.44
1:CA:443:C:C2	1:CA:444:C:C5	3.05	0.44
31:BA:1107:G:H2'	31:BA:1108:U:O4'	2.18	0.44
31:BA:1349:A:H5'	31:BA:1349:A:N3	2.32	0.44
1:AA:973:G:N3	10:AJ:55:LYS:HE2	2.33	0.44
31:BA:1839:G:H2'	31:BA:1839:G:N3	2.32	0.44
31:DA:1882:C:O2	31:DA:1882:C:C2'	2.61	0.44
32:BB:78:A:H2'	32:BB:79:C:O4'	2.17	0.44
31:DA:1832:C:N4	31:DA:1833:U:C4	2.86	0.44
31:DA:1952:A:C6	40:DO:22:ILE:CD1	3.01	0.44
31:DA:773:U:H5'	33:DD:47:GLY:HA2	1.99	0.44
2:AB:170:GLU:O	2:AB:174:VAL:HG23	2.18	0.44
2:AB:19:HIS:O	2:AB:20:GLU:O	2.35	0.44
31:DA:2472:G:C5'	31:DA:2472:G:H8	2.28	0.44
1:AA:90:U:H5''	1:AA:91:C:H5'	1.99	0.44
31:BA:1712:C:H2'	31:BA:1713:U:C6	2.52	0.44
3:AC:15:THR:HG22	3:AC:16:ARG:NH1	2.33	0.44
31:BA:26:G:H1'	31:BA:515:A:H61	1.82	0.44
37:BH:154:PRO:O	37:BH:155:SER:C	2.56	0.44
31:DA:2199:A:OP2	31:DA:2200:C:H5	2.01	0.44
31:DA:2839:G:H5'	43:DR:46:GLY:HA3	1.99	0.44
3:AC:134:ILE:HG22	3:AC:168:ALA:HB3	1.99	0.44
51:BZ:28:MET:HG2	51:BZ:37:VAL:HG21	1.99	0.44
1:CA:1368:G:C2'	1:CA:1369:C:H5'	2.48	0.44
1:CA:271:C:C2	1:CA:272:C:C5	3.05	0.44
31:DA:705:A:C2'	31:DA:706:A:H5'	2.47	0.44
31:DA:1591:G:C6	31:DA:1592:C:C4	3.05	0.44
1:AA:342:C:O2'	1:AA:343:U:H5'	2.18	0.44
1:CA:832:C:N4	1:CA:855:G:C6	2.86	0.44
31:BA:847:U:C4	31:BA:933:A:N6	2.86	0.44
7:AG:46:ALA:O	7:AG:50:ILE:HG12	2.17	0.44
31:BA:452:G:C2	31:BA:458:G:C5	3.06	0.44
35:DF:110:LEU:HD21	35:DF:181:LEU:CD2	2.47	0.44
36:BG:114:ILE:O	36:BG:114:ILE:HG22	2.16	0.44
35:BF:119:ARG:HG2	35:BF:119:ARG:O	2.17	0.44
1:AA:120:A:C6	1:AA:122:G:C2	3.05	0.44
7:CG:104:LEU:HD22	7:CG:134:ALA:HB1	1.99	0.44
31:BA:2500:U:H2'	31:BA:2504:U:C5	2.52	0.44
15:CO:8:LYS:HG2	15:CO:12:ILE:HD11	2.00	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
35:BF:132:VAL:HG22	35:BF:133:ASN:H	1.83	0.44
31:BA:188:G:H2'	31:BA:189:G:H5'	1.99	0.44
11:AK:69:ALA:O	11:AK:73:MET:HG3	2.18	0.44
31:DA:1416:G:O2'	31:DA:1417:C:OP2	2.36	0.44
1:CA:642:A:N7	8:CH:115:SER:HA	2.32	0.44
1:CA:224:C:C2	1:CA:225:C:C5	3.06	0.44
31:DA:2608:G:H5''	31:DA:2609:U:OP2	2.17	0.44
9:AI:99:LEU:O	9:AI:100:GLY:C	2.56	0.44
19:AS:58:VAL:HG23	19:AS:58:VAL:O	2.17	0.44
25:D3:17:LYS:HA	25:D3:17:LYS:HD3	1.55	0.44
45:DT:92:GLY:O	45:DT:94:ALA:N	2.51	0.44
1:AA:245:C:O2	1:AA:283:C:N3	2.50	0.44
31:DA:1475:G:H5''	31:DA:1475:G:H8	1.83	0.44
1:AA:224:C:H2'	1:AA:225:C:C6	2.53	0.44
42:DQ:18:LYS:O	42:DQ:19:GLY:C	2.55	0.44
34:DE:56:PRO:O	34:DE:58:ARG:N	2.50	0.44
31:BA:36:G:C5	31:BA:37:C:C5	3.05	0.44
42:BQ:106:VAL:HG21	42:BQ:114:ALA:HB1	1.98	0.44
19:CS:27:GLU:HB3	19:CS:28:LYS:H	1.61	0.44
31:DA:2377:A:O2'	31:DA:2378:A:H5'	2.18	0.44
31:DA:711:G:H2'	31:DA:712:G:O4'	2.17	0.44
31:BA:2877:G:O2'	31:BA:2878:U:H5'	2.18	0.44
31:DA:239:U:H2'	31:DA:239:U:O2	2.17	0.44
42:BQ:87:LYS:CA	42:BQ:87:LYS:HE3	2.46	0.44
1:CA:1012:U:H6	1:CA:1012:U:O5'	2.00	0.44
31:BA:405:U:H2'	31:BA:405:U:O2	2.16	0.44
31:BA:1902:C:C2'	31:BA:1903:G:O5'	2.65	0.44
1:AA:169:C:C5	1:AA:170:U:C5	3.06	0.44
16:AP:20:VAL:HG22	16:AP:32:TYR:HB2	1.98	0.44
16:AP:4:ILE:N	16:AP:4:ILE:HD12	2.32	0.44
31:DA:2315:G:C6	31:DA:2316:C:N4	2.86	0.44
44:DS:17:ARG:O	44:DS:18:ILE:HB	2.17	0.44
31:BA:869:G:H2'	31:BA:870:A:O4'	2.17	0.44
50:BY:77:PRO:O	50:BY:78:ALA:CB	2.66	0.44
50:DY:75:ILE:CD1	50:DY:76:CYS:N	2.73	0.44
31:DA:142:A:C5'	31:DA:142(A):C:OP2	2.61	0.44
31:BA:154:G:C2	31:BA:173:G:C2	3.06	0.44
41:BP:16:ARG:HD3	41:BP:16:ARG:C	2.37	0.44
41:BP:17:LYS:NZ	41:BP:17:LYS:HB2	2.32	0.44
41:BP:18:ARG:HE	41:BP:18:ARG:HB3	1.72	0.44
49:BX:53:LYS:H	49:BX:80:ILE:HG22	1.83	0.44
15:CO:17:ARG:NH1	15:CO:17:ARG:CG	2.60	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:CJ:44:VAL:HG12	10:CJ:45:ARG:N	2.33	0.44
1:CA:674:G:H2'	1:CA:675:A:C8	2.49	0.44
36:BG:102:PHE:CE2	36:BG:141:PHE:CE1	3.01	0.44
36:BG:35:GLU:O	36:BG:35:GLU:HG2	2.17	0.44
35:DF:53:THR:HG22	35:DF:56:GLU:H	1.82	0.44
41:BP:30:THR:O	41:BP:33:ARG:N	2.41	0.44
23:B1:86:SER:C	23:B1:89:GLU:OE2	2.56	0.44
23:D1:67:ILE:H	23:D1:67:ILE:CD1	2.30	0.44
23:D1:51:VAL:CG2	23:D1:67:ILE:HG23	2.47	0.44
29:B7:5:TRP:O	29:B7:7:PRO:HD3	2.17	0.44
34:DE:111:ARG:HB2	34:DE:160:TYR:O	2.18	0.44
34:DE:170:LEU:CD1	34:DE:170:LEU:N	2.81	0.44
39:DN:28:THR:CG2	39:DN:29:LYS:N	2.80	0.44
34:DE:28:ALA:HB3	34:DE:93:VAL:CG2	2.48	0.44
1:CA:541:G:H2'	1:CA:542:G:C8	2.51	0.44
31:DA:2305:A:H2'	31:DA:2306:C:O4'	2.16	0.44
36:DG:63:ILE:HD12	36:DG:63:ILE:O	2.16	0.44
31:DA:638:G:H2'	31:DA:639:U:C6	2.53	0.44
39:DN:66:LYS:HB3	39:DN:70:LYS:HB3	1.99	0.44
41:DP:80:TYR:CE1	41:DP:111:ARG:HB3	2.53	0.44
1:AA:408:A:H5'	4:AD:116:GLN:HB2	1.99	0.44
4:AD:65:ARG:HD2	4:AD:72:GLU:HA	2.00	0.44
31:DA:336:C:H2'	31:DA:337:C:C6	2.52	0.44
45:DT:32:TYR:HD2	45:DT:81:PRO:O	2.01	0.44
31:BA:2360:A:O2'	31:BA:2361:A:O4'	2.33	0.44
46:BU:29:SER:O	46:BU:30:LYS:HD3	2.18	0.44
42:BQ:141:GLN:HB3	51:BZ:70:LEU:HD13	1.99	0.44
9:AI:105:ASP:CG	9:AI:107:ARG:HD3	2.38	0.44
1:AA:1091:U:O2	1:AA:1093:A:C8	2.71	0.44
31:BA:1786:A:C1'	31:BA:1938:A:N6	2.80	0.44
5:CE:101:ILE:H	5:CE:101:ILE:HD13	1.82	0.44
43:BR:116:LEU:HA	43:BR:116:LEU:HD23	1.67	0.44
13:CM:60:VAL:HG12	13:CM:66:LEU:HD21	2.00	0.44
51:BZ:166:SER:CB	51:BZ:167:PRO:HA	2.48	0.44
48:BW:9:TYR:N	48:BW:102:HIS:CD2	2.79	0.44
31:BA:1480:G:C2	31:BA:1481:U:O2	2.71	0.44
1:AA:328:C:H4'	1:AA:329:A:H5'	1.99	0.44
7:CG:113:GLU:HB3	7:CG:118:VAL:HG23	1.99	0.44
31:DA:1109:C:H5	31:DA:1110:G:N7	2.16	0.44
32:BB:81:G:O6	32:BB:96:U:O2	2.36	0.44
38:BI:88:ILE:CG2	38:BI:89:TYR:N	2.80	0.44
49:BX:40:LYS:C	49:BX:42:ALA:N	2.70	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:CA:774:G:C2'	1:CA:775:G:H5'	2.47	0.44
4:AD:146:ILE:H	4:AD:146:ILE:CD1	2.30	0.44
2:CB:97:TRP:CH2	2:CB:176:GLU:HG3	2.53	0.44
1:CA:625:G:H4'	16:CP:16:HIS:CD2	2.52	0.44
1:AA:624:C:O3'	16:AP:10:GLY:HA2	2.18	0.44
1:CA:763:G:N3	1:CA:764:C:C6	2.86	0.44
13:CM:68:GLY:O	13:CM:69:GLU:HB2	2.18	0.44
31:DA:455:C:HO2'	31:DA:472:A:H2	1.66	0.44
35:DF:6:VAL:O	35:DF:124:LEU:CD1	2.66	0.44
8:CH:39:LEU:HB3	8:CH:45:ILE:HG12	2.00	0.44
1:AA:577:G:H1'	1:AA:816:A:C4	2.53	0.44
1:CA:577:G:C4	1:CA:578:C:C5	3.05	0.44
31:DA:374:A:C2'	31:DA:375:C:H5'	2.48	0.44
20:CT:55:ILE:O	20:CT:56:MET:C	2.55	0.44
31:DA:1517:G:O2'	31:DA:1518:U:H5'	2.18	0.44
27:D5:43:HIS:HD2	31:DA:2815:C:O2'	2.01	0.44
31:DA:1799:G:H5'	31:DA:1819:A:N6	2.33	0.44
1:AA:594:G:H1	1:AA:645:C:N4	2.13	0.44
31:BA:2388:A:C2'	31:BA:2389:G:H5'	2.47	0.44
35:BF:110:LEU:HD21	35:BF:181:LEU:CD2	2.48	0.44
1:CA:980:C:O2	14:CN:19:ARG:HA	2.17	0.44
17:AQ:4:LYS:HB3	17:AQ:61:GLU:OE2	2.18	0.44
3:AC:33:LEU:HD23	14:AN:37:PHE:O	2.17	0.44
51:BZ:135:GLU:O	51:BZ:136:PHE:HB3	2.18	0.44
38:DI:69:LYS:HG2	38:DI:69:LYS:O	2.17	0.44
37:BH:103:LEU:CD2	37:BH:115:VAL:HB	2.46	0.44
31:BA:2863:C:OP1	45:BT:93:ARG:NH1	2.51	0.44
31:BA:2082:A:H2'	31:BA:2083:G:O4'	2.17	0.44
43:BR:75:LEU:O	43:BR:75:LEU:HD13	2.17	0.44
31:DA:1288:U:C2	31:DA:1327:C:C2	3.06	0.44
1:AA:1350:A:H8	1:AA:1350:A:O5'	2.01	0.44
7:AG:87:VAL:HA	7:AG:88:PRO:HD3	1.91	0.44
4:AD:24:GLU:O	4:AD:27:TYR:HB2	2.17	0.44
36:DG:51:ARG:HD3	36:DG:53:LEU:HD21	2.00	0.44
1:CA:1465:C:H2'	1:CA:1466:C:O4'	2.17	0.44
1:AA:1210:C:H4'	1:AA:1214:C:C4	2.53	0.44
31:DA:1368:G:C2	31:DA:1369:G:C8	3.06	0.44
31:BA:1235:G:C6	31:BA:1236:G:N1	2.86	0.44
47:DV:12:TYR:N	47:DV:12:TYR:CD2	2.85	0.44
39:BN:3:THR:CA	39:BN:4:TYR:CD1	3.00	0.44
47:BV:15:GLU:OE2	47:BV:16:PRO:HD2	2.18	0.44
31:DA:869:G:C4	31:DA:870:A:C8	3.06	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:DA:870:A:OP1	42:DQ:7:MET:HE2	2.18	0.44
2:CB:91:PRO:HG3	2:CB:154:LEU:HB2	2.00	0.44
1:AA:150:C:N4	1:AA:170:U:C4	2.86	0.44
1:AA:355:C:H5'	1:AA:389:A:OP2	2.18	0.44
47:DV:69:LYS:CB	47:DV:93:GLU:OE2	2.60	0.44
30:D8:4:MET:HB2	31:DA:592:G:O2'	2.17	0.44
31:DA:2811:G:OP1	34:DE:60:ASN:CB	2.66	0.44
30:D8:31:HIS:HB3	31:DA:2420:C:H41	1.83	0.44
50:BY:75:ILE:CD1	50:BY:76:CYS:N	2.71	0.44
51:DZ:151:HIS:HB2	51:DZ:152:ALA:H	1.52	0.44
47:BV:90:PRO:CD	47:BV:91:TYR:H	2.31	0.44
24:B2:29:LYS:C	24:B2:33:MET:SD	2.96	0.44
15:CO:81:LEU:HD11	15:CO:85:LEU:CD1	2.47	0.44
1:CA:713:G:H2'	1:CA:714:G:C8	2.53	0.44
2:AB:98:LEU:HB2	2:AB:101:MET:CE	2.48	0.44
31:BA:2305:A:H2'	31:BA:2306:C:O4'	2.18	0.44
29:D7:5:TRP:CZ3	31:DA:464:U:H4'	2.52	0.44
26:D4:12:ALA:O	36:DG:101:ILE:HD11	2.18	0.44
45:BT:28:VAL:HG21	45:BT:46:GLU:CG	2.42	0.44
31:BA:286:C:N4	31:BA:355:G:H1	2.16	0.44
31:DA:675:A:C6	31:DA:676:A:C6	3.05	0.44
31:DA:676:A:H2	31:DA:802:A:N6	2.09	0.44
11:CK:85:ARG:HG2	11:CK:112:THR:HA	1.99	0.44
50:BY:28:LYS:HD2	50:BY:37:VAL:CG1	2.48	0.44
50:BY:66:PRO:O	50:BY:67:LEU:HB3	2.18	0.44
31:DA:855:G:C6	31:DA:856:C:N4	2.85	0.44
1:AA:1347:G:C6	9:AI:107:ARG:NH2	2.86	0.44
43:DR:87:TYR:CE1	43:DR:117:VAL:HG12	2.43	0.44
31:BA:2012:G:O3'	48:BW:96:ILE:HG12	2.18	0.44
18:CR:44:LEU:HA	18:CR:49:LYS:O	2.18	0.44
31:DA:864:G:C6	31:DA:865:C:C4	3.05	0.44
31:DA:1313:U:H3'	31:DA:1314:C:H5'	2.00	0.44
31:DA:1603:A:H2'	31:DA:1604:C:O4'	2.18	0.44
31:BA:1109:C:H5	31:BA:1110:G:N7	2.14	0.44
10:AJ:54:PHE:CZ	10:AJ:55:LYS:HD2	2.52	0.44
24:B2:12:GLU:C	24:B2:12:GLU:CD	2.76	0.44
1:AA:557:G:H2'	1:AA:558:G:C8	2.53	0.44
43:BR:56:LYS:CD	43:BR:88:ARG:H	2.29	0.44
1:CA:55:A:C4	1:CA:56:U:C5	3.06	0.44
21:CU:12:LYS:HB3	21:CU:22:ARG:HD2	1.99	0.44
1:CA:1452:C:H5'	1:CA:1456:G:N9	2.30	0.44
34:DE:73:GLU:CG	34:DE:74:PRO:HD2	2.42	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
23:B1:26:ARG:CB	23:B1:34:THR:HB	2.48	0.44
35:BF:70:THR:HB	35:BF:72:ARG:H	1.82	0.44
31:DA:342:G:O2'	31:DA:343:C:H5'	2.18	0.44
1:AA:397:A:N7	1:AA:548:G:C8	2.86	0.44
31:DA:2839:G:H5'	43:DR:46:GLY:CA	2.47	0.44
1:AA:1054:C:C2'	1:AA:1055:A:H5''	2.48	0.44
23:B1:56:GLN:HG3	23:B1:57:GLU:HG2	1.99	0.44
29:D7:39:ARG:NH1	31:DA:469:G:C6	2.85	0.44
31:DA:769:G:H2'	31:DA:770:G:H5'	1.98	0.44
31:BA:1695:G:H2'	31:BA:1696:G:C4'	2.47	0.44
31:BA:1450(A):C:O5'	31:BA:1450(A):C:H6	2.01	0.44
31:DA:596:G:C6	31:DA:597:U:C4	3.06	0.44
31:DA:1509(B):A:O2'	31:DA:1510:G:H5'	2.17	0.44
31:BA:412:A:N7	31:BA:2411:A:H2	2.15	0.44
4:AD:141:ARG:HB3	4:AD:142:PRO:HD2	2.00	0.44
31:BA:303:U:H2'	31:BA:304:G:C8	2.53	0.44
33:BD:197:GLY:O	33:BD:198:ASN:CB	2.65	0.44
33:BD:4:LYS:HZ1	33:BD:20:ASP:HA	1.82	0.44
31:BA:893:C:C2'	31:BA:894:C:O5'	2.65	0.44
1:AA:12:U:H4'	1:AA:526:C:O2'	2.17	0.44
2:AB:124:SER:O	2:AB:127:ILE:HG12	2.18	0.44
46:BU:60:LEU:HA	46:BU:60:LEU:HD23	1.73	0.44
32:BB:50:G:O5'	32:BB:50:G:H8	2.01	0.44
42:DQ:46:GLN:HE22	42:DQ:126:PRO:HG3	1.83	0.44
1:AA:1218:C:H2'	1:AA:1219:U:C5	2.53	0.44
1:AA:1240:U:P	7:AG:116:ALA:HB2	2.58	0.44
51:BZ:19:ARG:HG3	51:BZ:19:ARG:H	1.53	0.44
31:BA:672:C:O2'	31:BA:673:C:H5'	2.18	0.44
1:CA:1401:G:H2'	1:CA:1402:C:O4'	2.18	0.44
1:CA:1319:A:N6	1:CA:1361:G:H21	2.16	0.44
31:BA:1843:C:H2'	31:BA:1844:C:H6	1.82	0.44
31:DA:936:C:H2'	31:DA:937:U:C6	2.53	0.44
23:B1:48:LYS:HA	23:B1:48:LYS:CE	2.41	0.44
40:DO:11:ALA:HB1	40:DO:99:PHE:O	2.17	0.44
51:BZ:22:GLY:O	51:BZ:41:LEU:HB2	2.18	0.44
1:AA:1011:G:N2	1:AA:1019:C:C2	2.86	0.44
19:AS:69:HIS:CB	19:AS:74:PHE:HE2	2.30	0.44
31:DA:665:C:H2'	31:DA:666:G:H8	1.83	0.44
1:CA:1006:C:H42	1:CA:1024:G:H21	1.65	0.44
1:AA:788:U:H2'	1:AA:789:U:O4'	2.18	0.44
2:AB:132:LYS:O	2:AB:136:VAL:HG23	2.18	0.44
34:DE:49:LEU:N	34:DE:49:LEU:HD22	2.33	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:BA:1467:C:H4'	31:BA:1467:C:OP1	2.18	0.44
7:AG:94:ARG:H	7:AG:94:ARG:HG3	1.61	0.44
1:AA:27:G:O2'	1:AA:28:G:H5'	2.17	0.44
33:BD:244:ARG:CG	33:BD:245:PRO:HD3	2.44	0.44
32:DB:21:G:C5	32:DB:63:G:C2	3.06	0.44
31:DA:2300:G:N2	31:DA:2317:C:C2	2.85	0.44
39:DN:31:ALA:O	39:DN:34:LEU:N	2.51	0.44
51:DZ:104:PHE:HA	51:DZ:139:VAL:HB	2.00	0.44
47:BV:91:TYR:C	47:BV:91:TYR:CD2	2.91	0.44
31:DA:1010:A:N3	31:DA:1153:C:H1'	2.33	0.44
46:DU:92:ARG:HD2	47:DV:11:GLN:HG3	1.94	0.44
1:CA:376:G:C4	1:CA:389:A:C2	3.05	0.44
24:B2:25:VAL:HG22	24:B2:26:ARG:NH1	2.31	0.44
24:B2:34:GLU:O	24:B2:36:ARG:HB2	2.17	0.44
31:BA:142:A:H8	31:BA:1595:G:N2	2.07	0.44
1:AA:676:A:H2'	1:AA:677:U:C6	2.53	0.44
31:BA:2722:G:O2'	43:BR:5:LYS:HB2	2.17	0.44
10:AJ:62:HIS:O	10:AJ:62:HIS:HD2	2.00	0.44
29:D7:5:TRP:O	31:DA:1612:C:H4'	2.18	0.44
41:BP:21:ARG:HG2	41:BP:21:ARG:O	2.17	0.44
31:BA:778:G:C5	31:BA:779:U:C4	3.06	0.44
23:D1:87:PRO:CB	23:D1:91:LYS:NZ	2.76	0.44
31:DA:389:G:N1	41:DP:71:VAL:HG12	2.33	0.44
34:BE:95:ILE:CD1	34:BE:95:ILE:N	2.80	0.44
35:DF:23:ASP:O	35:DF:24:LEU:HD22	2.18	0.44
31:BA:2831:G:O2'	31:BA:2883:A:H2'	2.18	0.44
39:DN:17:ASP:OD2	39:DN:56:ASN:HB2	2.18	0.44
31:BA:9:U:O4	31:BA:2629:A:C6	2.71	0.44
1:CA:509:A:C2'	1:CA:510:A:C8	2.87	0.44
31:DA:442:G:C6	31:DA:444:C:N4	2.86	0.44
45:BT:51:ARG:HD3	45:BT:62:THR:HG23	2.00	0.44
31:DA:7:G:C2'	31:DA:8:A:O4'	2.65	0.44
1:CA:1399:C:H4'	1:CA:1400:C:H5''	2.00	0.44
39:BN:45:ASN:N	39:BN:45:ASN:ND2	2.59	0.44
4:AD:79:PHE:CD1	4:AD:207:TYR:CD1	3.06	0.44
43:BR:9:LYS:O	43:BR:10:LEU:CD2	2.66	0.44
31:DA:1448:G:N3	31:DA:1528(A):A:H2	2.14	0.44
31:DA:357:A:C2	31:DA:358:U:N3	2.86	0.44
31:BA:356:G:O2'	31:BA:357:A:H5'	2.18	0.44
41:BP:146:VAL:HG13	41:BP:147:LEU:N	2.32	0.44
31:BA:2464:C:O2'	31:BA:2465:C:H6	2.01	0.44
36:BG:125:PHE:CB	36:BG:166:ASP:HB2	2.48	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:DA:2070:G:C2	31:DA:2442:C:C2	3.06	0.44
1:CA:1097:C:O2	1:CA:1169:A:H2	2.01	0.44
1:AA:491:G:H2'	1:AA:492:G:O4'	2.18	0.44
23:D1:16:ASN:HB3	23:D1:46:LEU:HD11	2.00	0.44
28:D6:44:ARG:O	28:D6:45:LYS:CG	2.57	0.44
7:AG:111:ARG:HB3	7:AG:113:GLU:HG2	2.00	0.44
7:AG:111:ARG:CZ	7:AG:122:HIS:HB3	2.47	0.44
6:CF:62:TRP:CE2	18:CR:35:ARG:NH2	2.86	0.44
6:AF:63:TYR:O	6:AF:65:VAL:HG13	2.17	0.44
1:AA:1079:G:H2'	1:AA:1080:A:C8	2.53	0.44
31:DA:1833:U:O2	31:DA:1969:A:H2	2.01	0.44
34:DE:52:LEU:O	34:DE:74:PRO:HA	2.17	0.44
30:B8:26:LYS:HB2	30:B8:44:LYS:HG3	1.99	0.44
10:AJ:38:ILE:HG12	10:AJ:71:LEU:O	2.17	0.44
31:DA:2584:U:C6	31:DA:2585:U:C6	3.05	0.44
1:AA:90:U:H3'	1:AA:90:U:H6	1.83	0.44
36:DG:11:TYR:HA	36:DG:15:VAL:HB	1.99	0.44
31:DA:2580:U:H5''	34:DE:131:ALA:CB	2.47	0.44
31:BA:26:G:C6	31:BA:27:G:C6	3.06	0.44
1:CA:20:U:H4'	1:CA:572:A:C6	2.53	0.44
1:AA:1159:U:C5	1:AA:1182:G:C4	3.06	0.44
33:BD:15:PHE:O	33:BD:205:VAL:HG11	2.18	0.44
31:DA:1049:C:O2	31:DA:1050:A:C8	2.71	0.44
1:AA:1054:C:OP1	1:AA:1197:G:OP2	2.35	0.44
31:BA:484:C:C2	31:BA:485:C:C5	3.06	0.44
51:BZ:28:MET:HG3	51:BZ:35:ARG:HB2	1.99	0.44
42:BQ:133:ARG:O	42:BQ:134:ARG:CB	2.66	0.44
31:BA:900:A:C5'	31:BA:901:A:OP2	2.66	0.44
31:DA:706:A:H2'	31:DA:707:G:O4'	2.18	0.44
46:DU:101:ARG:C	46:DU:102:GLU:HG2	2.38	0.44
1:AA:273:A:O2'	1:AA:274:A:H5'	2.18	0.44
31:DA:2859:G:H2'	31:DA:2860:A:C8	2.53	0.44
31:BA:1115:G:H2'	31:BA:1116:C:O4'	2.17	0.44
1:AA:604:G:C5	1:AA:605:U:C5	3.06	0.44
1:CA:1306:A:H1'	1:CA:1332:A:C2	2.53	0.44
19:CS:15:LEU:HD21	19:CS:35:SER:HB3	2.00	0.44
22:B0:55:ARG:HG3	31:BA:2365:G:OP1	2.18	0.44
1:AA:448:A:N7	1:AA:486:U:O4	2.51	0.44
31:DA:2733:A:H2'	31:DA:2734:A:O4'	2.18	0.44
31:BA:732:C:O2'	31:BA:733:G:H5'	2.18	0.44
31:DA:740:U:H2'	31:DA:741:G:H8	1.80	0.44
1:CA:590:C:C2	1:CA:591:U:C5	3.05	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
17:CQ:48:GLU:C	17:CQ:50:LYS:N	2.71	0.44
1:AA:694:A:C2'	1:AA:695:A:O5'	2.66	0.44
3:CC:33:LEU:HD23	14:CN:37:PHE:O	2.17	0.44
7:AG:27:ILE:HD11	7:AG:43:PHE:CG	2.53	0.44
31:BA:1850:G:C6	31:BA:1851:U:C4	3.06	0.44
43:DR:21:TYR:CE2	43:DR:43:GLU:HG2	2.53	0.44
48:BW:83:LYS:HD2	48:BW:95:ILE:HD12	2.00	0.44
32:BB:10:C:C2'	32:BB:11:C:H5'	2.48	0.44
22:D0:53:MET:HB2	22:D0:59:LEU:HD23	2.00	0.44
2:AB:223:ILE:C	2:AB:225:ALA:H	2.21	0.44
34:BE:70:ALA:O	34:BE:72:VAL:C	2.56	0.44
1:CA:778:G:C2'	1:CA:779:C:O5'	2.66	0.44
36:DG:120:LEU:HB2	36:DG:179:PRO:O	2.18	0.44
51:BZ:111:VAL:HG13	51:BZ:112:ARG:N	2.32	0.44
31:DA:1901:A:N3	31:DA:1901:A:H2'	2.33	0.44
15:CO:61:GLY:O	15:CO:64:ARG:HB3	2.18	0.44
31:DA:1151:G:H5''	46:DU:81:HIS:CE1	2.53	0.44
1:CA:27:G:O2'	1:CA:28:G:H5'	2.18	0.44
8:AH:90:GLY:O	8:AH:91:ARG:HB2	2.18	0.44
1:CA:127:G:C2	1:CA:128:G:C8	3.06	0.44
43:BR:65:LEU:HD12	43:BR:65:LEU:HA	1.71	0.44
15:AO:64:ARG:HG3	15:AO:64:ARG:HH11	1.83	0.44
22:D0:45:PHE:CE2	22:D0:69:PHE:HE2	2.36	0.44
48:BW:27:LYS:O	48:BW:71:VAL:HG23	2.18	0.44
39:DN:36:GLY:N	39:DN:42:TRP:CZ3	2.86	0.43
31:BA:1495:A:C4	31:BA:1496:A:C2	3.06	0.43
31:DA:2315:G:H2'	31:DA:2316:C:H6	1.79	0.43
44:DS:87:PHE:CG	44:DS:88:ASP:N	2.86	0.43
46:DU:50:ARG:CZ	47:DV:75:PHE:CD2	3.00	0.43
39:DN:34:LEU:HD21	39:DN:120:LEU:HD23	1.99	0.43
31:DA:2788:C:O2'	31:DA:2809:A:N3	2.41	0.43
28:D6:9:LEU:HD13	28:D6:9:LEU:C	2.37	0.43
31:DA:2419:U:H2'	31:DA:2420:C:C6	2.53	0.43
31:DA:173:G:C5	31:DA:174:C:C5	3.06	0.43
49:DX:59:VAL:HG23	49:DX:60:ARG:N	2.30	0.43
46:BU:50:ARG:HG2	46:BU:53:ARG:NH2	2.33	0.43
31:BA:993:G:OP1	47:BV:75:PHE:CE2	2.71	0.43
47:DV:50:PRO:O	47:DV:51:VAL:HB	2.17	0.43
16:CP:43:LYS:C	16:CP:45:THR:N	2.71	0.43
24:B2:44:LEU:O	24:B2:47:ASN:ND2	2.51	0.43
32:BB:6:C:H2'	32:BB:7:G:O4'	2.18	0.43
36:BG:143:GLU:H	36:BG:143:GLU:HG2	1.53	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
44:BS:26:LEU:HD12	44:BS:39:ILE:HD11	1.99	0.43
34:BE:111:ARG:HH12	43:BR:2:ARG:HH21	1.64	0.43
33:DD:134:ARG:NH1	33:DD:134:ARG:HG2	2.32	0.43
29:D7:5:TRP:O	29:D7:7:PRO:HD3	2.17	0.43
41:BP:39:LYS:HA	41:BP:39:LYS:HD3	1.85	0.43
32:DB:73:A:H5'	32:DB:74:U:OP2	2.18	0.43
31:BA:777:A:C2	31:BA:778:G:C8	3.06	0.43
31:DA:389:G:H1	41:DP:71:VAL:H	1.64	0.43
44:BS:30:ARG:HD2	44:BS:31:SER:O	2.17	0.43
31:DA:690:G:H2'	31:DA:691:C:C6	2.53	0.43
31:DA:2274:A:C6	31:DA:2276:G:C8	3.06	0.43
31:BA:9:U:N3	31:BA:2629:A:N6	2.66	0.43
1:CA:409:G:C2'	1:CA:410:G:C5'	2.95	0.43
1:CA:542:G:OP1	4:CD:10:ARG:NH2	2.49	0.43
31:DA:444:C:H4'	35:DF:49:ALA:HB2	2.00	0.43
31:BA:2070:G:H2'	31:BA:2071:A:O4'	2.18	0.43
45:DT:28:VAL:CG2	45:DT:88:ILE:HG13	2.48	0.43
41:BP:112:LEU:HD23	41:BP:113:LYS:N	2.33	0.43
6:CF:15:ASP:O	6:CF:19:LEU:HB3	2.18	0.43
31:DA:146:G:C5'	31:DA:146:G:C8	2.98	0.43
31:BA:1504:C:O2'	31:BA:1505:C:C5'	2.65	0.43
33:DD:197:GLY:O	33:DD:198:ASN:CB	2.66	0.43
31:DA:2070:G:H2'	31:DA:2071:A:O4'	2.18	0.43
37:DH:158:HIS:NE2	37:DH:169:VAL:O	2.51	0.43
43:DR:117:VAL:CG1	43:DR:118:GLU:N	2.81	0.43
1:CA:1063:C:C5	1:CA:1064:G:C4	3.05	0.43
31:DA:271(S):G:C5	31:DA:271(T):C:C5	3.05	0.43
22:B0:77:ARG:NH2	31:BA:857:C:H5'	2.33	0.43
1:CA:961:U:OP2	1:CA:1223:C:H4'	2.18	0.43
27:B5:2:ALA:HA	31:BA:2015:A:C1'	2.40	0.43
31:BA:2476:A:C6	31:BA:2477:C:C6	3.04	0.43
1:CA:328:C:H4'	1:CA:329:A:H5'	2.00	0.43
38:BI:68:LEU:O	38:BI:71:ILE:HG12	2.19	0.43
31:DA:542:C:C5'	31:DA:542:C:C6	3.01	0.43
35:DF:70:THR:HB	35:DF:72:ARG:H	1.83	0.43
31:BA:1669:A:C8	40:BO:5:GLN:HG3	2.53	0.43
18:AR:61:LYS:O	18:AR:65:ILE:HG13	2.18	0.43
31:BA:1006:C:H1'	39:BN:106:MET:HB3	2.00	0.43
37:DH:87:LEU:N	37:DH:131:VAL:O	2.36	0.43
1:CA:1308:U:H2'	1:CA:1309:G:C8	2.53	0.43
2:AB:61:LEU:CA	2:AB:64:ARG:HG2	2.45	0.43
1:AA:612:C:O2	1:AA:629:G:N2	2.51	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:991:U:O2'	1:AA:992:U:P	2.76	0.43
34:BE:21:VAL:HG23	34:BE:23:VAL:HG13	2.00	0.43
40:BO:63:VAL:HG23	40:BO:64:ARG:HB2	1.99	0.43
37:DH:13:LYS:O	37:DH:15:VAL:N	2.51	0.43
45:DT:50:ILE:HD11	45:DT:102:ILE:HD11	1.99	0.43
31:BA:455:C:N3	31:BA:472:A:H2'	2.32	0.43
13:CM:69:GLU:HB3	13:CM:72:ALA:HB3	2.00	0.43
31:DA:881:G:N2	31:DA:896:A:H62	2.16	0.43
8:CH:23:SER:HA	8:CH:63:LEU:CD2	2.48	0.43
1:CA:834:C:H2'	1:CA:835:U:C6	2.53	0.43
1:CA:853:G:C4	1:CA:854:G:C8	3.06	0.43
10:AJ:58:ASP:O	10:AJ:60:ARG:N	2.52	0.43
31:DA:1699:G:H4'	31:DA:1700:A:OP2	2.18	0.43
1:AA:854:G:OP2	1:AA:871:U:C5	2.71	0.43
4:CD:141:ARG:HB3	4:CD:142:PRO:HD2	2.00	0.43
5:CE:146:ALA:O	5:CE:148:VAL:N	2.51	0.43
1:AA:243:A:C2	1:AA:246:A:C8	3.06	0.43
11:AK:85:ARG:HG2	11:AK:112:THR:HA	1.98	0.43
20:AT:46:GLU:CG	20:AT:48:LYS:HE2	2.48	0.43
31:DA:1488:G:C6	31:DA:1489:U:C2	3.06	0.43
1:AA:117:G:O2'	1:AA:118:U:H5'	2.18	0.43
1:AA:1113:C:H6	1:AA:1113:C:O5'	2.01	0.43
45:DT:53:ARG:CG	45:DT:53:ARG:HH11	2.31	0.43
31:BA:2100:G:O6	31:BA:2189:U:O4	2.36	0.43
1:AA:11:G:C6	1:AA:12:U:C4	3.06	0.43
31:BA:2065:C:H2'	31:BA:2066:C:H6	1.82	0.43
44:BS:97:ARG:O	44:BS:98:VAL:HG23	2.18	0.43
15:AO:20:GLY:O	15:AO:21:ASP:HB3	2.18	0.43
22:B0:2:ALA:H	31:BA:2602:A:N6	2.16	0.43
43:DR:84:ALA:HB3	43:DR:85:PRO:HD3	1.98	0.43
1:CA:39:G:C6	1:CA:40:C:C5	3.06	0.43
18:CR:73:ALA:CB	18:CR:79:LEU:HD12	2.48	0.43
48:BW:26:GLY:H	48:BW:71:VAL:HB	1.82	0.43
46:DU:112:ARG:O	46:DU:115:ALA:HB3	2.18	0.43
5:CE:127:ASN:O	5:CE:128:PRO:C	2.56	0.43
1:AA:665:A:C5	1:AA:733:A:C5	3.05	0.43
1:AA:718:G:H5'	11:AK:117:ASN:HB2	2.00	0.43
31:DA:1836:C:O2'	31:DA:1837:C:H5'	2.18	0.43
31:BA:1399:C:O2'	31:BA:1400:G:H5'	2.18	0.43
31:DA:1294:U:O2'	43:DR:23:ASN:ND2	2.50	0.43
31:BA:2086:U:H2'	31:BA:2087:G:C8	2.53	0.43
46:BU:66:ASN:HD21	46:BU:70:ARG:HH21	1.66	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:DA:765:G:C2	31:DA:766:C:C2	3.06	0.43
1:CA:319:G:C2	1:CA:320:C:C2	3.06	0.43
31:DA:212:G:O2'	31:DA:213:A:H5'	2.18	0.43
31:BA:2376:A:O2'	44:BS:108:GLY:HA2	2.17	0.43
28:B6:12:GLU:CA	28:B6:23:THR:HA	2.47	0.43
32:DB:21:G:C6	32:DB:63:G:C6	3.06	0.43
45:DT:118:ARG:O	45:DT:119:LYS:C	2.55	0.43
33:BD:58:HIS:CD2	33:BD:59:LYS:N	2.86	0.43
44:DS:88:ASP:CG	44:DS:89:ARG:N	2.68	0.43
28:D6:25:LYS:O	31:DA:2286:A:C2	2.65	0.43
49:DX:21:PHE:HD1	49:DX:21:PHE:H	1.62	0.43
31:DA:1884:A:C3'	31:DA:1885:A:H5''	2.47	0.43
41:BP:63:PRO:C	41:BP:65:ARG:N	2.69	0.43
31:DA:996:A:H4'	46:DU:92:ARG:CD	2.45	0.43
47:DV:47:VAL:CG2	47:DV:49:THR:HB	2.47	0.43
16:CP:55:ARG:O	16:CP:58:TYR:N	2.51	0.43
31:BA:67:U:O2'	31:BA:68:G:H5'	2.18	0.43
31:BA:2312:U:O3'	36:BG:71:THR:HG21	2.18	0.43
44:BS:13:ARG:HB2	44:BS:14:VAL:H	1.63	0.43
44:DS:67:ARG:N	44:DS:69:VAL:HG12	2.30	0.43
43:BR:37:THR:HG1	43:BR:40:LYS:HG3	1.82	0.43
33:BD:133:LEU:O	33:BD:134:ARG:C	2.55	0.43
31:BA:587:C:H5	41:BP:33:ARG:HH11	1.65	0.43
32:DB:75:G:N3	51:DZ:85:HIS:CE1	2.86	0.43
2:AB:144:ARG:HG3	2:AB:145:LEU:N	2.33	0.43
23:D1:64:ALA:HA	23:D1:67:ILE:HG13	1.98	0.43
23:D1:86:SER:C	23:D1:89:GLU:OE2	2.57	0.43
34:BE:197:ILE:HD11	34:BE:199:ARG:HH21	1.79	0.43
34:BE:2:LYS:O	34:BE:199:ARG:HA	2.18	0.43
31:DA:1021:A:C3'	31:DA:1021:A:C8	2.95	0.43
35:DF:22:ALA:HB1	35:DF:26:ALA:CB	2.48	0.43
1:CA:544:G:C4	1:CA:545:C:C5	3.05	0.43
31:DA:2306:C:OP2	31:DA:2307:G:C8	2.72	0.43
32:DB:100:A:N3	32:DB:100:A:H2'	2.33	0.43
39:DN:68:GLU:HA	39:DN:86:PRO:HB3	2.00	0.43
1:AA:509:A:O2'	1:AA:510:A:C5'	2.66	0.43
1:AA:513:C:O2	1:AA:513:C:H2'	2.18	0.43
36:BG:73:ALA:HB3	36:BG:85:GLY:O	2.18	0.43
31:DA:1531:C:H5'	31:DA:1532:C:OP2	2.18	0.43
4:CD:165:MET:O	4:CD:166:LYS:C	2.56	0.43
42:DQ:101:ARG:HG3	42:DQ:102:VAL:N	2.32	0.43
31:DA:1485:G:H1'	31:DA:1505:C:N4	2.34	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
30:B8:4:MET:HB2	31:BA:592:G:O2'	2.18	0.43
31:DA:855:G:C6	31:DA:856:C:C4	3.06	0.43
31:DA:475:U:C5	31:DA:481:G:O6	2.71	0.43
1:AA:735:C:H5'	18:AR:71:LYS:HD3	2.00	0.43
31:BA:1796:U:H4'	33:BD:256:GLY:N	2.33	0.43
1:AA:1063:C:C5	1:AA:1064:G:C4	3.06	0.43
43:BR:117:VAL:CG1	43:BR:118:GLU:N	2.80	0.43
51:BZ:165:VAL:HG12	51:BZ:166:SER:HG	1.83	0.43
31:DA:90:U:O2'	31:DA:92:A:C5'	2.66	0.43
31:DA:2036:C:H6	31:DA:2036:C:C5'	2.20	0.43
1:AA:1047:G:C2'	1:AA:1048:G:H5'	2.48	0.43
3:CC:43:LEU:O	3:CC:47:LEU:HD23	2.17	0.43
43:BR:56:LYS:HE3	43:BR:94:TYR:CZ	2.52	0.43
37:DH:28:GLY:C	37:DH:30:LYS:H	2.22	0.43
31:DA:1695:G:H2'	31:DA:1696:G:C4'	2.48	0.43
1:AA:1285:A:C4'	1:AA:1286:A:O5'	2.67	0.43
2:AB:178:ARG:HG3	8:AH:72:PRO:HA	2.00	0.43
10:AJ:5:ARG:O	10:AJ:98:ILE:HA	2.18	0.43
3:CC:15:THR:HG22	3:CC:16:ARG:HH12	1.83	0.43
33:BD:145:VAL:HG12	33:BD:146:GLU:O	2.17	0.43
1:AA:1281:U:H5'	1:AA:1282:C:H5	1.83	0.43
31:BA:1721:G:N2	31:BA:1739:U:OP2	2.52	0.43
1:CA:862:C:O2'	1:CA:863:U:H5'	2.18	0.43
1:CA:369:C:N3	1:CA:370:C:C5	2.86	0.43
31:DA:910:A:C6	42:DQ:13:GLN:HG3	2.52	0.43
31:DA:526:A:N3	31:DA:2044:C:H1'	2.33	0.43
31:BA:2023:G:H4'	31:BA:2617:C:O3'	2.17	0.43
25:D3:13:ILE:HD12	31:DA:989:G:N7	2.33	0.43
31:DA:527:C:O4'	31:DA:527:C:O2	2.35	0.43
8:AH:11:THR:HA	8:AH:14:ARG:NH1	2.34	0.43
1:AA:658:G:C1'	15:AO:22:THR:HB	2.48	0.43
31:DA:452:G:N3	31:DA:457:A:H2	2.16	0.43
18:AR:66:LEU:CD1	18:AR:70:ILE:HD11	2.46	0.43
7:CG:26:PHE:CD1	7:CG:62:PHE:HE1	2.35	0.43
31:DA:1509(A):A:C5	31:DA:1509(B):A:N7	2.86	0.43
31:BA:1489:U:H2'	31:BA:1490:A:OP2	2.17	0.43
31:BA:1866:C:O2	31:BA:1876:A:H1'	2.18	0.43
22:B0:27:GLU:HG3	22:B0:68:GLU:HA	1.99	0.43
31:DA:1636:C:H2'	31:DA:1637:A:C8	2.52	0.43
33:DD:179:SER:HB2	33:DD:181:GLU:H	1.83	0.43
31:BA:374:A:C2'	31:BA:375:C:H5'	2.47	0.43
27:B5:6:VAL:HG13	27:B5:7:PRO:HD2	2.00	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
23:B1:21:ARG:HD3	23:B1:21:ARG:C	2.38	0.43
29:B7:47:ARG:C	29:B7:48:LYS:HD3	2.38	0.43
31:DA:2054:A:H5''	31:DA:2055:C:O5'	2.18	0.43
31:BA:559:G:H22	46:BU:49:HIS:CD2	2.36	0.43
31:DA:128:C:H4'	31:DA:129:C:OP1	2.18	0.43
1:AA:731:G:H5'	1:AA:766:A:H4'	2.01	0.43
44:BS:97:ARG:C	44:BS:97:ARG:NE	2.71	0.43
50:BY:20:TYR:CD1	50:BY:20:TYR:N	2.85	0.43
15:AO:43:LEU:C	15:AO:45:VAL:H	2.22	0.43
1:AA:518:C:O2'	1:AA:530:G:N2	2.52	0.43
6:AF:24:GLU:O	6:AF:28:ARG:HD2	2.18	0.43
40:DO:106:LEU:HD23	40:DO:106:LEU:HA	1.57	0.43
50:BY:32:PRO:C	50:BY:34:LYS:N	2.72	0.43
31:DA:338:G:H2'	31:DA:339:U:H6	1.83	0.43
30:B8:5:LYS:HE2	31:BA:254:G:N7	2.32	0.43
38:DI:68:LEU:C	38:DI:70:GLU:H	2.20	0.43
26:D4:28:LYS:CB	36:DG:113:ARG:HH22	2.30	0.43
25:B3:1:MET:O	25:B3:3:ARG:HG3	2.17	0.43
8:AH:39:LEU:HB3	8:AH:45:ILE:HG12	2.00	0.43
34:BE:4:ILE:HD13	34:BE:28:ALA:HB1	1.99	0.43
11:CK:83:ILE:HA	11:CK:109:VAL:O	2.18	0.43
40:BO:9:GLU:O	40:BO:83:ALA:HA	2.17	0.43
31:BA:2418:A:H2'	31:BA:2419:U:H6	1.83	0.43
42:DQ:8:LYS:HB3	42:DQ:10:ARG:HD3	2.00	0.43
16:AP:27:LYS:O	16:AP:28:ARG:C	2.56	0.43
31:BA:1494:A:N3	31:BA:1494:A:C2'	2.81	0.43
33:BD:92:ILE:HD13	33:BD:104:TYR:CE2	2.53	0.43
33:BD:82:ILE:HG22	33:BD:82:ILE:O	2.17	0.43
28:D6:11:LEU:HD11	28:D6:26:ASN:ND2	2.32	0.43
49:DX:59:VAL:HG22	49:DX:74:PRO:O	2.18	0.43
31:BA:2250:G:C6	42:BQ:82:ARG:HD3	2.53	0.43
47:DV:39:LEU:O	47:DV:39:LEU:HD12	2.18	0.43
24:B2:33:MET:HG2	49:BX:11:PRO:HD3	1.97	0.43
49:BX:85:PRO:O	49:BX:87:GLN:N	2.51	0.43
10:CJ:62:HIS:O	10:CJ:62:HIS:HD2	2.00	0.43
45:BT:57:PHE:O	45:BT:58:ASN:C	2.56	0.43
31:DA:2196:C:O2'	31:DA:2197:U:H5'	2.18	0.43
1:AA:1256:A:O3'	1:AA:1257:U:H4'	2.19	0.43
44:BS:53:SER:O	44:BS:56:LEU:HB3	2.18	0.43
31:BA:742:G:H2'	31:BA:743:G:C8	2.54	0.43
35:DF:22:ALA:C	35:DF:26:ALA:HB2	2.38	0.43
34:DE:47:VAL:CG2	34:DE:84:PHE:O	2.60	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:BA:2732:G:H3'	31:BA:2733:A:C5'	2.48	0.43
39:BN:69:GLN:HE21	39:BN:69:GLN:HB3	1.56	0.43
31:DA:2849:U:H4'	31:DA:2868:A:C2	2.54	0.43
38:DI:15:VAL:HG22	38:DI:16:GLY:N	2.33	0.43
50:BY:15:VAL:HG12	50:BY:16:ALA:N	2.33	0.43
36:BG:86:MET:O	36:BG:87:PRO:C	2.56	0.43
1:CA:953:G:H5'	1:CA:965:A:H61	1.83	0.43
24:D2:41:ILE:CG2	31:DA:95:G:H21	2.27	0.43
31:BA:287:C:N3	31:BA:288:C:C6	2.86	0.43
31:BA:287:C:H2'	31:BA:288:C:O4'	2.18	0.43
31:BA:832:G:OP1	41:BP:40:SER:HB3	2.17	0.43
42:DQ:141:GLN:HE22	51:DZ:89:PHE:CB	2.28	0.43
39:DN:94:HIS:HA	39:DN:95:PRO:HD2	1.86	0.43
23:B1:16:ASN:HB3	23:B1:46:LEU:HD11	2.01	0.43
11:CK:23:ALA:HB3	11:CK:85:ARG:O	2.18	0.43
37:DH:158:HIS:CE1	37:DH:169:VAL:N	2.86	0.43
20:CT:50:GLU:HB3	20:CT:100:ILE:HD13	2.00	0.43
31:DA:271(D):G:C5	31:DA:271(E):U:C5	3.07	0.43
28:D6:45:LYS:HD3	28:D6:45:LYS:HA	1.80	0.43
12:CL:38:THR:HG23	12:CL:39:VAL:N	2.34	0.43
27:D5:2:ALA:HA	31:DA:2015:A:C1'	2.39	0.43
24:B2:15:LYS:O	24:B2:16:LEU:HB2	2.19	0.43
39:BN:56:ASN:HA	39:BN:125:GLY:H	1.83	0.43
1:AA:22:G:H4'	1:AA:885:G:C8	2.53	0.43
45:DT:129:ARG:CZ	45:DT:131:ALA:CB	2.96	0.43
3:CC:111:LEU:HD21	3:CC:145:GLY:O	2.18	0.43
34:DE:52:LEU:O	34:DE:74:PRO:CA	2.67	0.43
2:AB:194:PRO:O	2:AB:196:LEU:N	2.52	0.43
1:CA:90:U:H5''	1:CA:91:C:H5'	1.99	0.43
31:BA:315:G:H2'	31:BA:316:C:C6	2.52	0.43
31:BA:1176:G:C1'	31:BA:1177:A:OP1	2.66	0.43
31:DA:2270:G:C2'	31:DA:2271:G:H5'	2.48	0.43
25:D3:11:SER:HB3	31:DA:988:A:P	2.58	0.43
1:CA:1158:C:H3'	1:CA:1158:C:O2	2.19	0.43
1:CA:982:U:H4'	1:CA:983:A:O5'	2.19	0.43
1:CA:273:A:O2'	1:CA:274:A:H5'	2.17	0.43
31:BA:455:C:N3	31:BA:473:G:H5'	2.32	0.43
47:DV:2:PHE:O	47:DV:3:ALA:HB3	2.18	0.43
7:AG:153:HIS:HA	7:AG:155:ARG:HH12	1.83	0.43
7:CG:26:PHE:CG	7:CG:62:PHE:CE1	3.06	0.43
8:CH:36:LEU:HD12	8:CH:59:LEU:HD12	2.00	0.43
31:DA:824:A:C2'	31:DA:825:C:H5'	2.48	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:1319:A:N6	1:AA:1361:G:H21	2.16	0.43
31:BA:415:A:H2'	31:BA:416:C:H6	1.83	0.43
1:CA:242:C:H2'	1:CA:243:A:H5'	1.99	0.43
42:BQ:57:HIS:O	42:BQ:57:HIS:CG	2.71	0.43
1:AA:758:G:H5''	1:AA:880:C:H1'	2.00	0.43
13:AM:29:ARG:HA	13:AM:32:GLU:HB3	2.01	0.43
37:DH:116:GLU:HG2	37:DH:117:PRO:N	2.32	0.43
1:AA:980:C:O2	14:AN:19:ARG:HA	2.18	0.43
51:DZ:76:LEU:HA	51:DZ:76:LEU:HD23	1.62	0.43
31:DA:2189:U:H2'	31:DA:2190:G:O4'	2.18	0.43
31:DA:1553:A:C6	31:DA:1555:G:H1'	2.54	0.43
32:DB:10:C:O2'	32:DB:11:C:H5'	2.17	0.43
31:DA:1411:C:O2'	31:DA:1412:A:H5'	2.17	0.43
31:DA:319:C:O2'	31:DA:320:A:H5'	2.18	0.43
2:CB:158:LEU:H	2:CB:158:LEU:HD12	1.81	0.43
31:DA:1356:G:C5	31:DA:1357:U:C4	3.07	0.43
34:BE:71:GLY:O	34:BE:72:VAL:HB	2.18	0.43
31:BA:1444:G:N2	31:BA:1548:C:C2	2.86	0.43
31:DA:533:G:H5'	46:DU:24:TYR:CE2	2.53	0.43
51:BZ:45:ASP:O	51:BZ:46:LYS:C	2.57	0.43
29:D7:29:LYS:O	29:D7:30:VAL:C	2.54	0.43
31:BA:2037:G:C6	31:BA:2038:G:C6	3.06	0.43
3:AC:159:GLY:HA2	3:AC:193:TYR:CD1	2.53	0.43
31:BA:489:G:H2'	31:BA:491:G:O4'	2.17	0.43
48:DW:10:VAL:O	48:DW:11:ARG:CB	2.67	0.43
31:DA:2774:C:H2'	31:DA:2775:A:O4'	2.19	0.43
1:CA:1407:C:H6	1:CA:1407:C:O5'	2.00	0.43
30:B8:30:ARG:HB3	31:BA:2393:A:OP2	2.19	0.43
39:BN:3:THR:HA	39:BN:4:TYR:CD1	2.53	0.43
2:CB:153:ARG:O	2:CB:154:LEU:C	2.56	0.43
2:CB:162:ILE:O	2:CB:185:ILE:HG12	2.19	0.43
1:AA:292:G:H1	1:AA:308:C:H42	1.66	0.43
33:BD:30:GLU:CD	33:BD:63:ARG:NE	2.69	0.43
33:DD:80:ALA:HB3	33:DD:94:LEU:HD13	2.00	0.43
51:DZ:106:GLY:HA3	51:DZ:141:VAL:O	2.18	0.43
49:DX:37:THR:CG2	49:DX:37:THR:O	2.65	0.43
1:CA:47:C:H5''	1:CA:365:U:C6	2.53	0.43
31:BA:1384:A:H1'	31:BA:1405:U:O4'	2.19	0.43
31:BA:1408:C:C2	31:BA:1595:G:N2	2.87	0.43
31:BA:69:C:H2'	31:BA:70:G:C8	2.53	0.43
49:BX:88:LYS:HD2	49:BX:88:LYS:N	2.33	0.43
2:AB:204:ASN:HD21	2:AB:207:ALA:H	1.67	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
36:BG:57:ALA:O	36:BG:60:LEU:HB3	2.18	0.43
34:BE:111:ARG:HD2	34:BE:160:TYR:CD1	2.53	0.43
43:BR:2:ARG:N	43:BR:2:ARG:CD	2.80	0.43
31:BA:2724:C:OP2	43:BR:2:ARG:CZ	2.66	0.43
34:BE:110:GLY:O	43:BR:2:ARG:HB3	2.18	0.43
27:D5:31:VAL:O	27:D5:39:MET:HA	2.17	0.43
23:B1:73:LEU:O	23:B1:76:ARG:HG2	2.18	0.43
31:BA:620:G:C4'	31:BA:621:A:H5''	2.47	0.43
31:BA:442:G:C6	31:BA:444:C:N4	2.86	0.43
15:AO:78:TYR:O	15:AO:79:ARG:C	2.56	0.43
35:DF:18:ARG:NH1	35:DF:199:TRP:HZ3	2.16	0.43
42:DQ:37:LEU:HD12	42:DQ:129:THR:CA	2.48	0.43
31:BA:2663:G:C6	31:BA:2664:G:C4	3.06	0.43
4:CD:116:GLN:NE2	4:CD:157:LEU:HD21	2.34	0.43
4:CD:65:ARG:HD2	4:CD:72:GLU:HA	2.00	0.43
31:DA:1248:G:OP1	46:DU:2:PRO:HD2	2.18	0.43
32:DB:79:C:H2'	32:DB:80:U:O4'	2.18	0.43
31:BA:2649:U:H2'	31:BA:2650:U:C6	2.54	0.43
41:BP:81:GLN:HE21	41:BP:81:GLN:HB2	1.55	0.43
31:BA:2850:A:H5'	31:BA:2868:A:H2	1.84	0.43
4:AD:14:ARG:HB2	4:AD:40:PRO:HD2	2.00	0.43
31:DA:1528:A:O2'	31:DA:1528(A):A:P	2.76	0.43
24:D2:47:ASN:O	24:D2:49:LYS:N	2.51	0.43
24:D2:54:LYS:N	24:D2:56:GLN:HE22	2.14	0.43
6:CF:23:LYS:HB3	6:CF:23:LYS:HE2	1.78	0.43
41:DP:146:VAL:CG2	41:DP:147:LEU:H	2.15	0.43
31:DA:271(H):G:C6	31:DA:271(Q):G:N1	2.86	0.43
31:BA:271(S):G:C5	31:BA:271(T):C:C5	3.07	0.43
31:BA:1882:C:H3'	31:BA:1883:G:H8	1.84	0.43
34:BE:116:VAL:HG22	34:BE:122:PHE:HB2	1.99	0.43
46:DU:29:SER:C	46:DU:30:LYS:HD3	2.38	0.43
1:CA:1079:G:H2'	1:CA:1080:A:C8	2.53	0.43
1:AA:1048:G:P	14:AN:4:LYS:HB2	2.58	0.43
1:AA:558:G:H5''	1:AA:559:A:P	2.58	0.43
36:DG:56:ALA:HA	36:DG:59:GLU:OE1	2.18	0.43
32:DB:66:A:C6	32:DB:109:C:C5	3.06	0.43
38:BI:83:ALA:HB2	38:BI:88:ILE:HD13	2.01	0.43
34:BE:53:PRO:O	34:BE:55:ASN:OD1	2.36	0.43
1:CA:457:C:C2	1:CA:458:C:C5	3.06	0.43
40:DO:66:LYS:H	40:DO:82:ASN:HD21	1.62	0.43
1:CA:1127:G:C2'	1:CA:1147:C:H42	2.31	0.43
44:BS:74:ALA:CB	44:BS:103:GLU:HB2	2.48	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:B0:41:ARG:H	22:B0:41:ARG:CD	2.21	0.43
24:D2:12:GLU:C	24:D2:12:GLU:CD	2.77	0.43
43:BR:38:VAL:HB	43:BR:39:PRO:HD3	2.00	0.43
31:BA:1005:C:H2'	31:BA:1006:C:C6	2.53	0.43
33:DD:125:ILE:CD1	33:DD:137:PRO:HD3	2.48	0.43
37:DH:131:VAL:CG1	37:DH:132:ARG:N	2.82	0.43
31:DA:2472:G:C5'	31:DA:2472:G:C8	3.02	0.43
1:AA:1308:U:H2'	1:AA:1309:G:H8	1.83	0.43
31:BA:1711:C:O2'	31:BA:1712:C:H5'	2.18	0.43
31:DA:2271:G:H8	31:DA:2271:G:O5'	2.02	0.43
31:DA:2557:G:H2'	31:DA:2558:C:C6	2.54	0.43
20:AT:26:ASN:HA	20:AT:29:LYS:HG2	2.01	0.43
40:DO:63:VAL:HG23	40:DO:64:ARG:HB2	1.99	0.43
1:AA:363:A:OP2	12:AL:34:ARG:HB3	2.18	0.43
1:CA:184:G:N2	1:CA:194:C:C2	2.87	0.43
1:CA:1386:G:N3	1:CA:1387:G:C8	2.85	0.43
31:BA:2243:U:C2'	31:BA:2244:U:H5'	2.48	0.43
31:DA:28:A:C2	31:DA:513:A:C8	3.07	0.43
43:DR:103:ARG:NH1	48:DW:40:ASN:ND2	2.67	0.43
31:BA:449:A:H2'	31:BA:450:G:C5'	2.49	0.43
31:DA:2859:G:HO2'	31:DA:2860:A:P	2.41	0.43
19:CS:20:LEU:O	19:CS:23:ASN:HB3	2.18	0.43
1:AA:854:G:H3'	1:AA:871:U:O4	2.18	0.43
31:BA:972:G:OP2	31:BA:974:G:H5''	2.18	0.43
31:DA:53:A:H61	31:DA:117:G:C2'	2.31	0.43
31:BA:836:G:C6	31:BA:837:C:C4	3.07	0.43
1:CA:1150:U:C5	1:CA:1151:A:N7	2.85	0.43
37:BH:126:PRO:HB2	37:BH:130:ARG:HH12	1.82	0.43
8:AH:1:MET:O	8:AH:2:LEU:O	2.35	0.43
3:AC:126:ARG:O	3:AC:127:ARG:HB2	2.18	0.43
1:CA:124:G:H1	1:CA:237:C:H42	1.66	0.43
1:CA:981:U:O5'	1:CA:981:U:H6	2.01	0.43
17:AQ:3:LYS:O	17:AQ:4:LYS:C	2.57	0.43
34:BE:89:ASP:O	34:BE:90:THR:OG1	2.34	0.43
31:BA:2590:A:O2'	31:BA:2591:C:H5'	2.17	0.43
31:DA:672:C:H2'	31:DA:673:C:H6	1.83	0.43
4:AD:131:ARG:N	4:AD:131:ARG:HD3	2.31	0.43
4:CD:96:LEU:HD22	4:CD:96:LEU:H	1.83	0.43
34:BE:70:ALA:C	34:BE:72:VAL:N	2.72	0.43
38:BI:124:GLY:N	38:BI:142:VAL:HG23	2.34	0.43
1:AA:1250:A:C6	1:AA:1251:A:C6	3.05	0.43
31:BA:930:U:H4'	31:BA:931:G:O5'	2.18	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
15:AO:61:GLY:O	15:AO:64:ARG:HB3	2.18	0.43
31:BA:711:G:H2'	31:BA:712:G:O4'	2.17	0.43
1:CA:349:A:O2'	1:CA:350:G:H5'	2.19	0.43
36:BG:120:LEU:HB2	36:BG:179:PRO:O	2.18	0.43
31:BA:2693:A:H2'	31:BA:2694:G:H8	1.84	0.43
51:BZ:146:ILE:HA	51:BZ:174:VAL:HG12	2.01	0.43
14:CN:12:ARG:C	14:CN:14:PRO:HD3	2.38	0.43
40:DO:17:ARG:HA	40:DO:17:ARG:HD3	1.70	0.43
50:DY:12:THR:HG22	50:DY:12:THR:O	2.17	0.43
35:DF:96:ASP:OD1	35:DF:96:ASP:C	2.56	0.43
51:BZ:24:LEU:HA	51:BZ:25:PRO:HD2	1.80	0.43
27:B5:48:GLU:C	27:B5:50:GLY:H	2.19	0.43
1:AA:197:A:N6	1:AA:221:C:H5'	2.34	0.43
1:AA:308:C:H2'	1:AA:309:G:H8	1.83	0.43
33:DD:63:ARG:HG3	33:DD:63:ARG:NH1	2.33	0.43
39:BN:40:PRO:HB3	46:BU:68:ALA:HB2	2.00	0.43
50:BY:96:ILE:HB	50:BY:99:CYS:C	2.38	0.43
24:D2:34:GLU:CG	24:D2:34:GLU:O	2.66	0.43
49:DX:33:LYS:C	49:DX:35:THR:H	2.20	0.43
31:DA:1856:G:C2'	31:DA:1857:G:H5'	2.48	0.43
42:BQ:85:LYS:HG3	42:BQ:86:GLY:H	1.83	0.43
2:CB:74:LYS:O	2:CB:78:GLN:HG3	2.18	0.43
39:DN:3:THR:CG2	39:DN:4:TYR:N	2.71	0.43
1:CA:1277:C:O2'	1:CA:1279:A:H1'	2.18	0.43
33:DD:266:SER:C	33:DD:267:SER:O	2.52	0.43
31:BA:806:C:OP2	41:BP:39:LYS:HG3	2.17	0.43
31:BA:690:G:H2'	31:BA:691:C:C6	2.53	0.43
23:B1:73:LEU:HB3	23:B1:90:ILE:HG23	2.00	0.43
15:CO:63:ARG:HG3	15:CO:67:LEU:HD12	2.00	0.43
31:DA:1651:G:C3'	31:DA:1652:A:H5''	2.48	0.43
15:AO:75:PRO:O	15:AO:78:TYR:HB3	2.18	0.43
31:BA:745:G:P	34:BE:133:LYS:HE3	2.58	0.43
1:CA:427:U:P	4:CD:13:ARG:HH22	2.41	0.43
1:CA:491:G:H2'	1:CA:492:G:O4'	2.18	0.43
4:CD:13:ARG:HD2	4:CD:38:TYR:O	2.19	0.43
31:BA:1531:C:C3'	31:BA:1532:C:C5'	2.94	0.43
31:DA:2850:A:OP2	31:DA:2866:U:C5	2.71	0.43
45:DT:22:PHE:CE2	45:DT:85:LYS:HE3	2.53	0.43
41:DP:110:TYR:O	41:DP:111:ARG:C	2.56	0.43
41:DP:114:ILE:O	41:DP:114:ILE:HG13	2.18	0.43
4:AD:79:PHE:C	4:AD:79:PHE:CD2	2.92	0.43
36:BG:81:LYS:O	36:BG:83:ARG:HG3	2.18	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:BA:356:G:C2	31:BA:357:A:C4	3.06	0.43
31:BA:357:A:C2	31:BA:358:U:N3	2.85	0.43
6:CF:15:ASP:O	6:CF:19:LEU:CB	2.67	0.43
1:AA:953:G:H5'	1:AA:965:A:H61	1.84	0.43
1:CA:1074:G:O2'	1:CA:1101:A:N1	2.36	0.43
37:BH:158:HIS:NE2	37:BH:169:VAL:O	2.52	0.43
51:BZ:44:PHE:CE2	51:BZ:86:VAL:HG11	2.53	0.43
9:AI:4:TYR:HD2	9:AI:59:PHE:HE2	1.67	0.43
31:DA:2476:A:C2'	31:DA:2477:C:H5''	2.46	0.43
31:DA:1802:A:N1	31:DA:1822:G:H1'	2.34	0.43
17:CQ:59:ILE:HD13	17:CQ:73:VAL:HA	2.00	0.43
27:B5:2:ALA:HB3	31:BA:747:U:N1	2.33	0.43
31:DA:1348:G:C6	31:DA:1349:A:N1	2.87	0.43
1:AA:923:A:H5''	5:AE:21:ALA:HB2	2.00	0.43
30:D8:26:LYS:HZ1	30:D8:47:LYS:CD	2.24	0.43
1:AA:457:C:H2'	1:AA:458:C:C6	2.38	0.43
24:D2:14:ARG:HD3	24:D2:57:ILE:HB	2.00	0.43
2:AB:28:PHE:CD1	2:AB:190:THR:HA	2.52	0.43
1:AA:946:A:C2	1:AA:1236:A:C2	3.06	0.43
34:BE:201:THR:CG2	34:BE:203:LYS:H	2.23	0.43
31:BA:1719:G:C6	31:BA:1720:U:C4	3.07	0.43
31:DA:2517:C:C4	31:DA:2542:A:C6	3.07	0.43
31:BA:108:U:H2'	31:BA:109:G:H8	1.83	0.43
38:DI:22:LYS:O	38:DI:23:PRO:C	2.55	0.43
2:AB:67:THR:HG22	2:AB:90:MET:CE	2.48	0.43
50:BY:87:LYS:HG3	50:BY:88:LYS:N	2.33	0.43
9:CI:105:ASP:CG	9:CI:107:ARG:HD3	2.39	0.43
1:AA:1371:G:C6	1:AA:1372:U:C4	3.07	0.43
46:BU:8:VAL:CG1	46:BU:12:ARG:HG3	2.48	0.43
41:BP:8:PRO:O	41:BP:10:PRO:HD3	2.18	0.43
1:AA:1407:C:O2	31:BA:1912:A:H2	2.01	0.43
9:CI:26:VAL:HA	9:CI:61:ALA:O	2.18	0.43
31:DA:1649:G:C6	31:DA:2009:G:C6	3.07	0.43
35:DF:117:ARG:HD3	35:DF:117:ARG:HA	1.82	0.43
31:BA:1805:U:H2'	31:BA:1806:C:H6	1.83	0.43
9:CI:114:TYR:CD1	10:CJ:60:ARG:HG2	2.51	0.43
31:BA:50:U:H5''	31:BA:50:U:C6	2.53	0.43
35:BF:117:ARG:HD3	35:BF:117:ARG:HA	1.78	0.43
33:BD:231:HIS:CD2	33:BD:232:PRO:HD2	2.53	0.43
20:AT:73:HIS:HB3	20:AT:74:LYS:H	1.53	0.43
19:AS:15:LEU:HD21	19:AS:35:SER:HB3	2.00	0.43
31:DA:1489:U:H2'	31:DA:1490:A:OP2	2.17	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:AC:87:LEU:O	3:AC:91:LEU:HG	2.19	0.43
9:AI:118:LYS:HB3	9:AI:118:LYS:HZ3	1.83	0.43
1:CA:106:C:H2'	1:CA:107:G:H8	1.84	0.43
34:DE:104:VAL:HG11	34:DE:188:VAL:HG23	2.00	0.43
34:DE:11:MET:O	45:DT:8:LYS:HE2	2.18	0.43
34:DE:89:ASP:O	34:DE:90:THR:OG1	2.32	0.43
31:DA:1438:U:C2'	31:DA:1439:A:H5'	2.49	0.43
14:AN:36:PHE:HD1	14:AN:37:PHE:CD2	2.37	0.43
40:DO:7:TYR:CZ	40:DO:44:LYS:HG3	2.53	0.43
31:BA:1416:G:O2'	31:BA:1417:C:OP2	2.36	0.43
1:CA:227:G:O2'	1:CA:228:A:H5'	2.18	0.43
1:CA:1243:C:OP2	21:CU:10:ARG:CZ	2.66	0.43
2:CB:158:LEU:CD1	2:CB:158:LEU:H	2.31	0.43
31:BA:784:A:C6	33:BD:229:VAL:HG11	2.54	0.43
1:AA:143:A:N1	1:AA:220:G:O6	2.51	0.43
1:CA:143:A:N1	1:CA:220:G:O6	2.52	0.43
31:DA:2037:G:C6	31:DA:2038:G:C6	3.06	0.43
1:CA:994:A:H62	1:CA:1046:A:H2	1.65	0.43
26:D4:29:PRO:C	26:D4:31:ILE:H	2.21	0.43
8:AH:116:LYS:O	8:AH:119:LEU:HD21	2.18	0.43
31:DA:614(A):U:H4'	31:DA:614(B):G:H5''	2.00	0.43
1:AA:1006:C:H42	1:AA:1024:G:H21	1.66	0.43
31:DA:21:A:O2'	31:DA:22:C:H5'	2.19	0.43
1:AA:135:C:H2'	1:AA:136:C:H5'	2.00	0.43
7:CG:94:ARG:H	7:CG:94:ARG:HG3	1.59	0.43
31:BA:631:A:H61	31:BA:2402:C:N4	2.17	0.43
46:DU:69:CYS:HG	46:DU:79:PHE:HD1	1.62	0.43
39:BN:2:LYS:HE2	46:BU:95:LEU:HD21	2.01	0.43
47:BV:63:GLY:O	47:BV:64:HIS:HB3	2.19	0.43
33:BD:24:ILE:HA	33:BD:82:ILE:HG22	2.00	0.43
31:BA:1816:G:C8	33:BD:62:TYR:CZ	3.06	0.43
33:DD:62:TYR:HA	33:DD:87:ASN:HD21	1.83	0.43
47:DV:66:ARG:HD2	47:DV:67:GLY:CA	2.47	0.43
47:DV:66:ARG:HD2	47:DV:67:GLY:C	2.39	0.43
47:DV:72:VAL:CG1	47:DV:88:ARG:HH22	2.32	0.43
50:DY:27:VAL:CG1	50:DY:29:GLU:OE1	2.66	0.43
31:DA:260:G:O4'	31:DA:621:A:H1'	2.19	0.43
30:B8:13:ARG:HB3	41:BP:63:PRO:HB3	1.99	0.43
31:DA:456:C:C5	49:DX:66:LEU:HD22	2.53	0.43
47:DV:47:VAL:CG1	47:DV:48:GLY:H	2.10	0.43
1:CA:356:A:H2'	1:CA:357:G:H8	1.83	0.43
31:BA:67:U:C2'	31:BA:68:G:H5'	2.49	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
49:BX:9:LEU:HD12	49:BX:30:VAL:C	2.38	0.43
49:BX:55:ASN:HD22	49:BX:55:ASN:N	2.16	0.43
1:AA:673:G:O3'	6:AF:87:ARG:NH2	2.52	0.43
44:BS:88:ASP:O	44:BS:92:TYR:CD2	2.71	0.43
35:DF:53:THR:HG23	35:DF:55:GLY:H	1.76	0.43
33:DD:267:SER:O	33:DD:269:PHE:N	2.51	0.43
27:D5:56:LYS:HE3	27:D5:59:GLU:OE1	2.19	0.43
41:BP:32:THR:O	41:BP:36:LYS:HB2	2.19	0.43
31:BA:778:G:C5	31:BA:779:U:C5	3.05	0.43
23:D1:70:VAL:O	23:D1:73:LEU:HB2	2.19	0.43
31:DA:1191:G:H2'	31:DA:1192:G:O4'	2.19	0.43
31:DA:585:G:H2'	31:DA:1251:C:H42	1.84	0.43
44:BS:34:HIS:CE1	44:BS:54:LEU:CB	2.86	0.43
34:DE:36:ARG:HG2	34:DE:85:ASN:HD21	1.83	0.43
42:DQ:121:ALA:O	42:DQ:124:LYS:N	2.46	0.43
34:DE:93:VAL:C	34:DE:95:ILE:H	2.20	0.43
39:DN:58:ASP:OD1	39:DN:124:ALA:HB1	2.19	0.43
31:BA:2663:G:C6	31:BA:2664:G:C5	3.06	0.43
36:DG:60:LEU:O	36:DG:63:ILE:HG13	2.18	0.43
31:DA:627:A:H62	41:DP:84:ASN:HD21	1.67	0.43
41:DP:105:LEU:O	41:DP:106:LEU:CB	2.46	0.43
1:CA:1502:A:H2	1:CA:1505:G:C2	2.36	0.43
41:BP:100:LEU:CD2	41:BP:112:LEU:HD11	2.49	0.43
1:AA:512:U:C2	1:AA:513:C:C5	3.07	0.43
1:AA:542:G:P	4:AD:10:ARG:HH21	2.41	0.43
10:CJ:33:GLN:HB2	10:CJ:75:ILE:CD1	2.46	0.43
31:BA:2463:C:C2'	31:BA:2464:C:C5'	2.88	0.43
1:AA:709:G:H2'	1:AA:710:G:C8	2.51	0.43
17:AQ:45:HIS:O	17:AQ:73:VAL:HG23	2.17	0.43
1:AA:491:G:H2'	1:AA:492:G:C8	2.53	0.43
31:DA:2475:C:H42	31:DA:2529:G:H22	1.67	0.43
22:B0:25:ARG:HA	22:B0:29:GLN:HE22	1.84	0.43
39:DN:78:TYR:N	39:DN:79:PRO:CD	2.82	0.43
46:DU:27:LEU:HB2	46:DU:31:SER:HB3	1.99	0.43
7:CG:113:GLU:CB	7:CG:119:ARG:HG2	2.40	0.43
1:AA:561:U:HO2'	1:AA:562:C:P	2.38	0.43
38:BI:68:LEU:C	38:BI:70:GLU:H	2.20	0.43
31:DA:542:C:N4	31:DA:543:C:H42	2.14	0.43
1:CA:558:G:C5	1:CA:559:A:C2	3.07	0.43
34:BE:29:GLY:H	34:BE:51:PHE:HE2	1.66	0.43
1:CA:66:G:O4'	1:CA:173:U:C4	2.71	0.43
44:DS:102:ALA:HB3	44:DS:103:GLU:HG2	2.01	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
18:AR:51:LEU:HB2	18:AR:56:THR:HG22	2.00	0.43
12:CL:27:LEU:N	12:CL:27:LEU:HD22	2.33	0.43
31:DA:2762:G:C2'	31:DA:2763:G:H5'	2.49	0.43
1:AA:1125:U:O3'	1:AA:1126:U:C6	2.72	0.43
35:BF:65:TRP:CZ3	35:BF:72:ARG:HB3	2.54	0.43
5:CE:12:LEU:O	5:CE:13:ILE:HD12	2.19	0.43
1:CA:13:U:C5	1:CA:916:G:O6	2.71	0.43
19:AS:36:ARG:HH12	19:AS:75:ALA:CB	2.25	0.43
1:AA:363:A:O2'	1:AA:364:A:H5'	2.19	0.43
31:BA:2781:A:C5'	31:BA:2781:A:H8	2.27	0.43
31:DA:2748:A:C6	31:DA:2749:A:C5	3.07	0.43
1:CA:991:U:O2'	1:CA:992:U:P	2.77	0.43
8:AH:6:ILE:O	8:AH:8:ASP:N	2.52	0.43
31:DA:1359:A:H8	31:DA:1372:U:O4	1.98	0.43
27:B5:4:HIS:O	31:BA:2056:G:N2	2.52	0.43
23:D1:56:GLN:HG3	23:D1:57:GLU:HG2	2.00	0.43
1:AA:774:G:N2	1:AA:806:C:C2	2.87	0.43
5:AE:127:ASN:O	5:AE:128:PRO:C	2.57	0.43
5:AE:12:LEU:HD22	5:AE:12:LEU:C	2.39	0.43
31:BA:1696:G:C6	31:BA:1697:G:C5	3.07	0.43
31:BA:64:A:O3'	49:BX:68:ARG:O	2.37	0.43
1:AA:1496:C:H2'	1:AA:1497:G:O4'	2.18	0.43
31:BA:1700:A:H2'	31:BA:1701:A:H5'	2.00	0.43
38:DI:56:LYS:NZ	38:DI:57:ARG:HA	2.33	0.43
29:B7:35:ARG:HD3	31:BA:54:G:O2'	2.18	0.43
31:BA:53:A:C8	31:BA:54:G:C8	3.07	0.43
20:AT:76:ALA:O	20:AT:77:ALA:C	2.55	0.43
3:AC:59:ARG:HE	3:AC:64:VAL:HG13	1.83	0.43
13:AM:12:ASN:OD1	13:AM:46:LYS:HE2	2.18	0.43
16:AP:81:ARG:C	16:AP:82:GLN:HE21	2.22	0.43
31:DA:1686:C:C2'	31:DA:1687:G:H5'	2.48	0.43
50:DY:83:THR:HG22	50:DY:84:ARG:O	2.19	0.43
31:DA:955:C:H2'	31:DA:955:C:O2	2.18	0.43
17:AQ:29:HIS:HB2	17:AQ:36:ILE:HD13	1.99	0.43
45:DT:68:TYR:C	45:DT:70:VAL:H	2.22	0.43
31:BA:2869:G:H2'	31:BA:2870:C:O4'	2.19	0.43
31:DA:460:A:H2'	31:DA:461:C:O4'	2.18	0.43
31:BA:2749:A:H4'	37:BH:62:LYS:HB3	2.01	0.43
7:AG:37:ASN:HD21	9:AI:40:LEU:CD2	2.31	0.43
1:AA:1392:G:C2'	1:AA:1393:U:H5'	2.48	0.43
1:AA:521:G:O2'	1:AA:522:C:H5'	2.18	0.43
43:BR:21:TYR:OH	43:BR:43:GLU:HG2	2.18	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
50:BY:54:LYS:O	50:BY:55:TYR:O	2.36	0.43
1:AA:57:G:C6	1:AA:58:C:N3	2.87	0.43
31:DA:697:C:C2	31:DA:698:C:C5	3.06	0.43
50:BY:50:ARG:HB3	50:BY:51:VAL:H	1.65	0.43
31:BA:628:G:C6	31:BA:629:G:C6	3.06	0.43
13:AM:115:LYS:O	13:AM:116:THR:C	2.57	0.43
40:BO:116:SER:OG	40:BO:117:LEU:N	2.52	0.43
33:BD:94:LEU:HA	33:BD:94:LEU:HD23	1.74	0.43
1:CA:1433:A:C6	1:CA:1468:A:C4	3.05	0.43
2:CB:157:ARG:O	2:CB:159:PRO:HD3	2.18	0.43
31:DA:2376:A:O2'	44:DS:108:GLY:HA2	2.18	0.43
31:DA:1773:A:N7	31:DA:1829:A:H1'	2.34	0.43
34:BE:31:CYS:HA	34:BE:32:PRO:HD3	1.81	0.43
20:CT:93:GLU:O	20:CT:93:GLU:HG2	2.18	0.43
17:CQ:52:LYS:HB3	17:CQ:52:LYS:HE3	1.84	0.43
46:DU:22:LYS:HD3	46:DU:22:LYS:HA	1.57	0.43
31:BA:980:A:C6	31:BA:981:A:N1	2.86	0.43
16:AP:1:MET:HG2	16:AP:2:VAL:O	2.18	0.43
14:CN:25:VAL:HG23	14:CN:38:GLY:O	2.18	0.43
1:CA:233:C:H2'	1:CA:234:C:H6	1.83	0.43
36:DG:163:ALA:O	36:DG:164:GLU:HG2	2.18	0.43
41:DP:16:ARG:O	41:DP:18:ARG:N	2.52	0.43
1:AA:148:G:H2'	1:AA:149:A:H8	1.84	0.43
16:AP:43:LYS:C	16:AP:45:THR:N	2.72	0.43
33:BD:36:PRO:HA	33:BD:62:TYR:O	2.18	0.43
31:DA:1568:G:H5'	33:DD:60:ARG:HA	2.00	0.43
33:DD:24:ILE:HA	33:DD:82:ILE:HG22	2.00	0.43
34:DE:61:ARG:H	34:DE:62:PRO:HD2	1.82	0.43
31:DA:607:U:N3	31:DA:621:A:C2	2.74	0.43
31:DA:71:A:C5	31:DA:73:A:N1	2.87	0.43
31:DA:2702:U:O2'	31:DA:2703:C:C5	2.60	0.43
47:BV:90:PRO:CD	47:BV:91:TYR:N	2.82	0.43
32:BB:21:G:C5	32:BB:63:G:C2	3.07	0.43
32:BB:21:G:O2'	32:BB:22:U:O4'	2.34	0.43
46:DU:88:ILE:HA	46:DU:90:VAL:HG23	2.01	0.43
24:B2:26:ARG:HG3	24:B2:29:LYS:NZ	2.34	0.43
31:BA:95:G:N2	31:BA:96:G:H1'	2.33	0.43
10:CJ:62:HIS:CE1	14:CN:61:TRP:CH2	3.07	0.43
2:AB:54:THR:O	2:AB:58:ILE:HG12	2.19	0.43
29:D7:10:ARG:O	29:D7:14:LYS:HB2	2.18	0.43
27:D5:51:TYR:HB2	27:D5:54:GLY:HA3	2.00	0.43
31:BA:2404:C:C2'	31:BA:2405:G:H5''	2.48	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:DA:742:G:H2'	31:DA:743:G:H8	1.84	0.43
41:DP:21:ARG:O	41:DP:21:ARG:CG	2.66	0.43
36:DG:57:ALA:O	36:DG:60:LEU:HB3	2.19	0.43
36:DG:71:THR:HB	36:DG:89:GLY:HA3	1.98	0.43
45:BT:22:PHE:CE1	45:BT:52:ILE:HD11	2.53	0.43
41:BP:125:VAL:O	41:BP:145:PRO:HD2	2.18	0.43
1:CA:955:U:O2'	1:CA:956:U:H5'	2.18	0.43
24:D2:41:ILE:HG21	31:DA:95:G:N2	2.28	0.43
49:DX:82:GLN:HB3	49:DX:85:PRO:CG	2.38	0.43
42:DQ:20:ALA:C	42:DQ:22:LYS:N	2.72	0.43
13:AM:40:ASN:HA	13:AM:41:PRO:HD3	1.81	0.43
31:BA:2360:A:O2'	31:BA:2361:A:OP2	2.36	0.43
31:DA:1501:C:H2'	31:DA:1502:C:H6	1.84	0.43
6:AF:50:TYR:HE2	6:AF:52:ILE:HG12	1.83	0.43
23:B1:11:ARG:HD2	23:B1:11:ARG:HA	1.55	0.43
17:AQ:59:ILE:HG22	17:AQ:71:PHE:CD1	2.47	0.43
51:BZ:125:LEU:HD23	51:BZ:126:VAL:N	2.34	0.43
1:CA:1190:G:OP1	3:CC:5:ILE:N	2.50	0.43
22:B0:26:TYR:O	22:B0:29:GLN:HB2	2.19	0.43
37:BH:31:GLY:O	37:BH:79:VAL:HG11	2.18	0.43
50:BY:45:VAL:HG22	50:BY:62:GLU:CB	2.47	0.43
17:CQ:70:ARG:C	17:CQ:71:PHE:CD2	2.92	0.43
31:DA:1927:A:C2	31:DA:1928:A:C4	3.07	0.43
31:BA:2467:C:O2'	31:BA:2468:G:H5'	2.18	0.43
31:BA:1291:C:H2'	31:BA:1292:U:H6	1.84	0.43
31:BA:518:G:H4'	48:BW:18:ARG:HH12	1.81	0.43
1:AA:564:C:H5'	12:AL:10:LEU:HD12	2.01	0.43
45:DT:13:ARG:NE	45:DT:13:ARG:HA	2.34	0.43
32:BB:79:C:H2'	32:BB:80:U:O4'	2.19	0.43
1:CA:299:G:C6	1:CA:300:A:N1	2.87	0.43
47:BV:5:VAL:HG21	47:BV:36:PRO:HG2	2.00	0.43
44:DS:102:ALA:CB	44:DS:103:GLU:HG2	2.49	0.43
22:B0:41:ARG:HB2	31:BA:2330:G:H1'	1.99	0.43
40:DO:47:ILE:HA	40:DO:47:ILE:HD12	1.64	0.43
24:D2:57:ILE:HG23	24:D2:57:ILE:O	2.19	0.43
2:AB:171:ALA:HA	2:AB:174:VAL:CG2	2.48	0.43
3:CC:16:ARG:HH11	3:CC:16:ARG:HA	1.83	0.43
1:CA:1116:C:C4	1:CA:1117:G:C8	3.06	0.43
1:AA:125:U:O3'	1:AA:633:G:N2	2.52	0.43
51:DZ:29:TYR:HA	51:DZ:33:LEU:O	2.19	0.43
1:CA:1322:C:P	19:CS:78:ARG:HH22	2.41	0.43
1:AA:1160:G:N2	1:AA:1161:C:C6	2.86	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:DA:1042:G:H5'	31:DA:1043:C:OP2	2.19	0.43
31:DA:2753:A:O2'	31:DA:2754:U:P	2.76	0.43
16:AP:68:ASP:C	16:AP:70:ALA:H	2.21	0.43
50:BY:88:LYS:O	50:BY:89:PHE:CB	2.67	0.43
42:BQ:72:LYS:HA	42:BQ:73:PRO:HD3	1.83	0.43
1:AA:1299:A:C5	1:AA:1301:U:O2	2.72	0.43
37:BH:13:LYS:HA	37:BH:13:LYS:CE	2.42	0.43
31:DA:1114:G:H2'	31:DA:1115:G:H5'	2.00	0.43
31:BA:1112:G:O2'	31:BA:1113:U:H5''	2.18	0.43
8:CH:36:LEU:HA	8:CH:39:LEU:HD23	2.00	0.43
31:BA:1509(A):A:C5	31:BA:1509(B):A:N7	2.87	0.43
31:DA:2329:G:H2'	31:DA:2330:G:C8	2.54	0.43
31:BA:826:U:H2'	31:BA:828:U:O4'	2.19	0.43
31:DA:272(J):C:O2'	31:DA:274:G:OP1	2.37	0.43
39:DN:119:ARG:HG3	39:DN:119:ARG:NH1	2.34	0.43
1:CA:895:G:H2'	1:CA:896:C:C6	2.53	0.43
3:AC:35:GLU:HA	3:AC:38:ARG:HG2	2.01	0.43
37:DH:103:LEU:HG	37:DH:104:GLU:N	2.34	0.43
31:DA:954:G:C4	31:DA:955:C:C6	3.06	0.43
31:BA:839:U:H2'	31:BA:840:C:C6	2.54	0.43
7:CG:27:ILE:HD11	7:CG:43:PHE:CG	2.53	0.43
31:DA:1410:G:H2'	31:DA:1411:C:H6	1.83	0.43
31:BA:1994:C:O2'	31:BA:1995:U:H5'	2.19	0.43
11:AK:69:ALA:HB1	11:AK:103:LEU:HD23	1.99	0.43
31:DA:2450:A:C2	31:DA:2451:A:C4	3.07	0.43
38:DI:29:TYR:O	38:DI:32:PRO:HD2	2.18	0.43
4:CD:92:VAL:HG12	4:CD:96:LEU:HD21	2.01	0.43
32:BB:2:C:H2'	32:BB:3:C:C6	2.52	0.43
25:B3:1:MET:HB2	25:B3:38:GLU:OE2	2.18	0.43
9:CI:11:LYS:O	9:CI:11:LYS:HG2	2.19	0.43
40:BO:118:ALA:HA	40:BO:119:PRO:HD2	1.82	0.43
1:AA:770:C:O2'	1:AA:771:G:H5'	2.18	0.43
48:BW:13:SER:HB3	48:BW:16:LYS:HD3	2.01	0.43
31:DA:2820:A:H2'	31:DA:2820:A:N3	2.34	0.43
8:AH:33:GLU:O	8:AH:34:GLU:C	2.57	0.43
12:CL:104:VAL:HG12	12:CL:105:TYR:CD2	2.53	0.43
29:B7:29:LYS:O	29:B7:30:VAL:C	2.57	0.43
1:CA:1442(B):A:HO2'	1:CA:1443:G:H8	1.65	0.43
46:DU:69:CYS:C	46:DU:71:GLN:N	2.72	0.43
39:BN:1:MET:O	39:BN:2:LYS:HG3	2.19	0.43
1:AA:352:C:H4'	1:AA:354:G:OP1	2.18	0.43
47:DV:66:ARG:HG2	47:DV:66:ARG:HH11	1.83	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
30:D8:56:GLU:HA	30:D8:59:LYS:HZ2	1.84	0.43
31:DA:2811:G:OP1	34:DE:60:ASN:HB3	2.18	0.43
28:D6:12:GLU:HB3	28:D6:23:THR:CB	2.48	0.43
30:D8:29:LYS:O	30:D8:31:HIS:N	2.52	0.43
24:D2:29:LYS:C	24:D2:33:MET:SD	2.97	0.43
31:DA:1406:U:H2'	31:DA:1407:C:H6	1.83	0.43
31:DA:1857:G:H2'	31:DA:1858:G:C1'	2.47	0.43
31:DA:996:A:N3	31:DA:997:G:C8	2.87	0.43
46:DU:89:GLU:O	46:DU:90:VAL:O	2.37	0.43
1:CA:393:A:O2'	1:CA:394:G:H5'	2.18	0.43
1:CA:394:G:C4	1:CA:395:C:C5	3.06	0.43
36:BG:36:LYS:O	36:BG:160:VAL:HG23	2.18	0.43
44:BS:18:ILE:HG22	44:BS:19:LYS:H	1.84	0.43
34:BE:111:ARG:HD3	34:BE:160:TYR:CE1	2.53	0.43
27:D5:52:TYR:O	27:D5:53:ALA:C	2.57	0.43
15:CO:67:LEU:HD22	15:CO:78:TYR:CE1	2.46	0.43
34:BE:37:ARG:HD2	34:BE:80:GLU:OE2	2.19	0.43
15:AO:87:ILE:O	15:AO:88:ARG:HB2	2.17	0.43
41:BP:100:LEU:HD12	41:BP:100:LEU:HA	1.69	0.43
41:BP:96:THR:HB	41:BP:97:PRO:HD2	2.01	0.43
38:DI:5:LEU:HD23	38:DI:5:LEU:HA	1.74	0.43
38:DI:5:LEU:HD11	38:DI:19:VAL:HG11	1.99	0.43
41:DP:100:LEU:CD2	41:DP:112:LEU:HD11	2.49	0.43
31:BA:286:C:N4	31:BA:356:G:O6	2.51	0.43
31:DA:2564:A:C6	31:DA:2565:A:C6	3.07	0.43
13:AM:108:ARG:NE	13:AM:114:ARG:HG2	2.33	0.43
51:BZ:119:GLU:C	51:BZ:121:HIS:N	2.72	0.43
33:DD:161:THR:O	33:DD:196:VAL:HG23	2.19	0.43
1:CA:685:G:C2	1:CA:686:U:C5	3.07	0.43
8:AH:10:LEU:HD23	8:AH:10:LEU:H	1.83	0.43
1:AA:438:G:H4'	4:AD:123:HIS:ND1	2.34	0.43
39:BN:78:TYR:H	39:BN:79:PRO:HD3	1.83	0.43
1:CA:353:A:H5'	1:CA:353:A:C8	2.46	0.43
1:AA:1364:U:O2'	1:AA:1365:G:H5'	2.19	0.43
31:DA:1339:G:H21	31:DA:1603:A:H1'	1.83	0.43
23:D1:16:ASN:CB	23:D1:46:LEU:HG	2.48	0.43
38:BI:53:ALA:C	38:BI:55:ALA:H	2.21	0.43
17:CQ:59:ILE:HG21	17:CQ:71:PHE:HB3	1.99	0.43
33:DD:77:ALA:CB	33:DD:97:TYR:HA	2.48	0.43
19:CS:7:LYS:N	19:CS:7:LYS:HD3	2.33	0.43
31:DA:773:U:H2'	31:DA:774:A:H5'	2.01	0.43
31:BA:2557:G:H2'	31:BA:2558:C:C6	2.53	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:CI:48:GLU:N	9:CI:49:PRO:CD	2.82	0.43
51:DZ:69:THR:HG22	51:DZ:90:VAL:CA	2.43	0.43
36:DG:19:LEU:HD22	36:DG:23:PHE:CE1	2.54	0.43
3:AC:6:HIS:NE2	3:AC:184:TYR:HE2	2.17	0.43
31:BA:511:U:H5''	31:BA:512:G:OP2	2.19	0.43
31:BA:867:C:C6	31:BA:868:U:H5	2.36	0.43
32:DB:39:A:H2'	32:DB:39:A:N3	2.33	0.43
31:BA:1206:G:C6	31:BA:1207:C:C4	3.07	0.43
1:CA:982:U:H5''	14:CN:6:LEU:CD1	2.49	0.43
31:DA:28:A:O2'	31:DA:583:G:H5'	2.19	0.43
1:CA:270:A:C6	1:CA:271:C:C4	3.07	0.43
31:BA:34:C:C6	31:BA:34:C:H3'	2.51	0.43
1:AA:763:G:C4	1:AA:764:C:C5	3.06	0.43
47:DV:2:PHE:HB3	47:DV:3:ALA:H	1.46	0.43
35:BF:81:PRO:CB	35:BF:89:VAL:HG23	2.48	0.43
29:B7:39:ARG:NH1	31:BA:469:G:C6	2.87	0.43
48:BW:55:ALA:O	48:BW:56:ALA:O	2.37	0.43
50:DY:91:GLU:HB3	50:DY:92:ASN:H	1.58	0.43
33:BD:248:SER:C	33:BD:250:TRP:N	2.72	0.43
1:CA:309:G:O2'	1:CA:310:G:H5'	2.19	0.43
5:CE:14:ARG:O	5:CE:28:PHE:HA	2.19	0.43
31:DA:893:C:C2'	31:DA:894:C:O5'	2.67	0.43
31:DA:2536:G:C5	31:DA:2537:U:C4	3.06	0.43
6:AF:97:PHE:HD2	18:AR:31:LEU:HD21	1.84	0.43
1:CA:758:G:H4'	1:CA:880:C:H4'	2.01	0.43
18:CR:25:THR:O	18:CR:25:THR:HG22	2.19	0.43
31:DA:1027:A:N7	31:DA:1126:A:C2	2.87	0.43
37:BH:103:LEU:HG	37:BH:104:GLU:N	2.34	0.43
35:BF:202:PHE:C	35:BF:204:ASN:N	2.72	0.43
31:BA:1836:C:O2'	31:BA:1837:C:H5'	2.18	0.43
1:CA:1014:A:C2	19:CS:34:TRP:CE2	3.07	0.43
31:BA:1356:G:C5	31:BA:1357:U:C5	3.07	0.43
31:BA:2352:A:H2'	31:BA:2353:G:H5'	2.00	0.43
44:DS:84:GLN:NE2	44:DS:105:ALA:HB1	2.34	0.43
48:DW:66:GLU:O	48:DW:69:LEU:HG	2.19	0.43
31:DA:237:C:C2'	31:DA:238:C:H5'	2.49	0.43
1:CA:994:A:N6	1:CA:1046:A:C2	2.87	0.43
31:BA:1475:G:H5'	31:BA:1476:C:OP2	2.19	0.43
2:AB:149:LEU:HD22	2:AB:152:PHE:HB3	2.01	0.43
31:DA:784:A:C5	33:DD:229:VAL:HG21	2.53	0.43
31:BA:664:C:H4'	31:BA:941:A:OP1	2.19	0.43
31:BA:498:G:O2'	31:BA:499:U:H5'	2.19	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:CH:97:VAL:HA	8:CH:100:ILE:HG13	2.00	0.43
11:AK:95:ILE:CG2	11:AK:108:ILE:HD13	2.48	0.43
2:CB:134:GLU:O	2:CB:138:LEU:HD12	2.19	0.43
31:BA:1826:G:H2'	31:BA:1827:C:H6	1.84	0.43
31:BA:996:A:H4'	46:BU:92:ARG:CD	2.49	0.43
1:AA:50:A:N6	1:AA:361:G:H4'	2.33	0.43
33:BD:85:ASP:OD1	33:BD:86:PRO:HD2	2.19	0.43
44:DS:16:ASN:ND2	44:DS:92:TYR:CZ	2.87	0.43
23:D1:27:GLU:OE2	23:D1:32:LYS:CB	2.60	0.43
50:BY:75:ILE:HD13	50:BY:80:GLY:O	2.19	0.43
31:DA:608:A:C4	31:DA:621:A:C6	3.07	0.43
51:DZ:117:LEU:HA	51:DZ:174:VAL:HA	2.01	0.43
46:BU:47:TYR:HA	46:BU:50:ARG:HH22	1.84	0.43
31:DA:1856:G:H2'	31:DA:1857:G:H5'	2.01	0.43
4:CD:126:ILE:HG22	4:CD:127:THR:N	2.31	0.43
31:DA:456:C:C5	49:DX:66:LEU:HD21	2.54	0.43
1:CA:452:A:O2'	1:CA:453:A:H8	2.02	0.43
31:BA:2306:C:OP2	31:BA:2307:G:C8	2.72	0.43
31:DA:1012:U:O4	39:DN:25:ARG:HA	2.19	0.43
31:DA:2482:G:C2	31:DA:2483:C:H1'	2.53	0.43
42:DQ:56:ARG:HD2	42:DQ:56:ARG:HA	1.60	0.43
4:CD:106:TYR:CE1	4:CD:112:VAL:O	2.70	0.43
38:DI:14:ASP:O	38:DI:17:GLN:HB3	2.19	0.43
43:DR:9:LYS:O	43:DR:10:LEU:HG	2.19	0.43
1:AA:538:G:N2	1:AA:539:A:C4	2.87	0.43
31:DA:1530:C:HO2'	31:DA:1531:C:H6	1.65	0.43
51:BZ:5:LEU:HD21	51:BZ:43:GLU:HB3	2.00	0.43
31:BA:1502:C:O2'	31:BA:1503:U:H5'	2.19	0.43
20:AT:50:GLU:HB3	20:AT:100:ILE:HD13	2.01	0.43
31:DA:271(M):G:C5	31:DA:271(O):C:C4	3.07	0.43
1:CA:51:A:H4'	1:CA:52:G:C5'	2.49	0.43
1:CA:735:C:H5'	18:CR:71:LYS:HD3	2.01	0.43
18:CR:45:SER:CB	18:CR:51:LEU:HD21	2.44	0.43
31:DA:2642:G:H5''	39:DN:78:TYR:CE1	2.54	0.43
22:D0:75:LEU:HD23	22:D0:75:LEU:HA	1.67	0.43
1:AA:558:G:C4	1:AA:559:A:C2	3.07	0.43
20:CT:89:ARG:HD2	20:CT:104:LEU:HD21	2.01	0.43
34:BE:73:GLU:CG	34:BE:74:PRO:HD2	2.43	0.43
31:BA:2580:U:H5'	34:BE:131:ALA:CB	2.42	0.43
10:CJ:5:ARG:O	10:CJ:98:ILE:HA	2.19	0.43
31:BA:729:G:O5'	33:BD:208:LYS:NZ	2.48	0.43
2:AB:194:PRO:O	2:AB:195:ASP:C	2.57	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:945:G:N1	1:AA:1337:G:C2	2.87	0.43
18:CR:53:ARG:HH21	18:CR:60:ALA:H	1.66	0.43
1:AA:666:G:C2	1:AA:741:G:C4	3.06	0.43
32:DB:31:C:C2'	32:DB:32:C:H5'	2.49	0.43
32:DB:57:A:C4	36:DG:29:TRP:HB2	2.54	0.43
32:BB:86:G:O5'	32:BB:86:G:H8	2.02	0.43
36:BG:19:LEU:HD22	36:BG:23:PHE:CE1	2.54	0.43
1:CA:1320:C:H2'	1:CA:1321:C:O4'	2.18	0.43
31:DA:19:C:H2'	31:DA:20:C:C6	2.54	0.43
31:DA:1719:G:C6	31:DA:1720:U:C4	3.07	0.43
1:AA:818:G:HO2'	1:AA:820:U:H6	1.64	0.43
1:CA:552:U:C2'	1:CA:553:A:H5'	2.49	0.43
1:AA:1053:G:C3'	1:AA:1054:C:H5'	2.49	0.43
1:AA:627:G:O2'	1:AA:628:G:H5'	2.18	0.43
8:AH:11:THR:HG22	8:AH:15:ASN:ND2	2.34	0.43
31:BA:298:G:H8	31:BA:298:G:O5'	2.01	0.43
31:BA:707:G:C6	31:BA:708:C:C4	3.06	0.43
31:BA:2243:U:H2'	31:BA:2244:U:H6	1.81	0.43
2:AB:18:GLY:HA2	2:AB:42:ILE:HG22	2.01	0.43
31:BA:2859:G:H2'	31:BA:2860:A:C8	2.54	0.43
13:CM:83:ASP:OD1	19:CS:66:MET:HE1	2.19	0.43
1:AA:348:G:N2	1:AA:349:A:C4	2.87	0.43
9:AI:114:TYR:CD1	10:AJ:60:ARG:HG2	2.52	0.43
38:DI:56:LYS:NZ	38:DI:57:ARG:N	2.66	0.43
31:BA:945:A:C6	31:BA:2448:A:C4	3.07	0.43
31:DA:118:A:C8	31:DA:119:A:C8	3.07	0.43
31:DA:921:G:H4'	31:DA:2269:A:C5	2.54	0.43
1:CA:116:A:OP2	1:CA:116:A:C8	2.72	0.43
31:DA:2747:G:C2	31:DA:2756:U:C5	3.06	0.43
29:D7:1:MET:O	29:D7:2:LYS:C	2.57	0.43
8:CH:80:ILE:HG22	8:CH:80:ILE:O	2.17	0.43
31:DA:271(X):G:C3'	31:DA:271(Y):U:H5''	2.49	0.43
1:AA:723:U:OP1	1:AA:723:U:H6	2.02	0.43
31:BA:128:C:O2'	31:BA:129:C:P	2.77	0.43
31:BA:2189:U:H2'	31:BA:2190:G:O4'	2.18	0.43
5:AE:112:LEU:H	5:AE:112:LEU:HD23	1.83	0.43
1:AA:791:G:C5	1:AA:792:A:N7	2.87	0.43
31:BA:1893:C:C5	31:BA:1894:C:C4	3.07	0.43
31:BA:1893:C:C6	31:BA:1894:C:C5	3.07	0.43
35:DF:132:VAL:C	35:DF:134:GLY:N	2.72	0.43
1:CA:303:A:C4	1:CA:304:U:C6	3.07	0.43
34:DE:71:GLY:O	34:DE:72:VAL:HB	2.18	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:769:G:H4'	1:AA:1513:A:H4'	2.00	0.43
15:AO:18:PHE:CD1	15:AO:18:PHE:O	2.72	0.43
31:BA:671:C:H2'	31:BA:672:C:H6	1.83	0.43
2:CB:15:VAL:HG23	2:CB:16:HIS:CE1	2.53	0.43
9:CI:65:VAL:HG21	9:CI:73:GLN:HB3	2.01	0.43
1:AA:1015:A:C6	1:AA:1016:A:C6	3.07	0.43
1:AA:1243:C:OP2	21:AU:10:ARG:CZ	2.67	0.43
25:D3:21:ALA:O	25:D3:24:LYS:N	2.51	0.43
38:BI:117:GLU:HG3	38:BI:118:LYS:N	2.32	0.43
50:DY:32:PRO:C	50:DY:34:LYS:N	2.72	0.43
31:DA:665:C:O2'	31:DA:666:G:H5'	2.19	0.43
31:DA:2540:C:H2'	31:DA:2541:A:O4'	2.19	0.43
32:BB:25:A:H2'	32:BB:26:A:O4'	2.18	0.43
1:AA:100:C:H2'	1:AA:101:A:O4'	2.19	0.43
46:DU:39:LEU:HD23	46:DU:39:LEU:HA	1.77	0.43
20:AT:58:LYS:O	20:AT:62:LEU:HB2	2.18	0.43
42:BQ:132:VAL:HG11	51:BZ:81:ARG:HD2	2.01	0.43
2:CB:106:LYS:O	2:CB:110:GLN:HG3	2.19	0.43
31:BA:688:U:H5'	31:BA:1780:A:N1	2.34	0.43
31:DA:1563:G:H2'	31:DA:1564:C:H6	1.84	0.43
33:DD:37:LEU:N	33:DD:37:LEU:HD23	2.34	0.43
1:CA:137:C:H2'	1:CA:137:C:O2	2.18	0.43
46:DU:74:LEU:N	46:DU:74:LEU:HD12	2.33	0.43
31:DA:602:G:OP2	31:DA:602:G:H8	2.02	0.43
8:CH:41:ARG:O	8:CH:41:ARG:HG2	2.18	0.43
35:BF:50:SER:HB2	35:BF:94:PRO:HD3	2.00	0.43
27:B5:55:ARG:HD3	27:B5:55:ARG:HA	1.46	0.43
28:B6:9:LEU:C	28:B6:9:LEU:HD13	2.39	0.43
39:BN:1:MET:CB	47:BV:20:LEU:HD22	2.47	0.43
28:D6:28:ARG:CA	28:D6:32:ASN:HB3	2.49	0.43
51:DZ:151:HIS:N	51:DZ:151:HIS:HD2	2.09	0.43
50:DY:96:ILE:CG2	50:DY:97:ARG:N	2.81	0.43
24:D2:23:LYS:HB2	49:DX:5:TYR:CE1	2.54	0.43
31:BA:154:G:O5'	31:BA:154:G:H8	2.02	0.43
31:DA:1153:C:OP1	46:DU:93:LYS:NZ	2.52	0.43
47:DV:15:GLU:OE2	47:DV:16:PRO:HD2	2.19	0.43
16:CP:43:LYS:CG	16:CP:48:TRP:CE3	3.02	0.43
26:B4:5:ILE:C	36:BG:67:LYS:HG2	2.39	0.43
36:BG:64:THR:CG2	36:BG:65:GLY:H	2.32	0.43
1:AA:1253:G:H2'	1:AA:1254:C:O4'	2.19	0.43
31:DA:1784:A:C4'	31:DA:1785:A:H5''	2.47	0.43
29:D7:5:TRP:CH2	31:DA:686:G:N7	2.87	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
29:D7:12:ARG:HG3	31:DA:686:G:O6	2.19	0.43
41:BP:35:HIS:O	41:BP:36:LYS:CG	2.65	0.43
41:DP:39:LYS:HG2	41:DP:39:LYS:HZ2	1.61	0.43
44:BS:54:LEU:HD22	44:BS:58:LEU:O	2.18	0.43
34:DE:36:ARG:HH11	34:DE:85:ASN:HD21	1.67	0.43
41:BP:106:LEU:HD12	41:BP:106:LEU:HA	1.80	0.43
39:BN:86:PRO:O	39:BN:89:LYS:HB2	2.19	0.43
45:DT:29:ARG:HD2	45:DT:29:ARG:HA	1.88	0.43
4:AD:79:PHE:CD1	4:AD:207:TYR:HD1	2.37	0.43
24:D2:45:SER:CB	24:D2:48:HIS:HB3	2.49	0.43
31:BA:282:A:C8	31:BA:284:U:C4	3.07	0.43
6:CF:14:LEU:HD22	6:CF:18:GLN:NE2	2.34	0.43
31:DA:2465:C:C2'	31:DA:2466:C:H5'	2.49	0.43
20:CT:13:LEU:CD1	20:CT:13:LEU:H	2.14	0.43
33:DD:158:ALA:O	33:DD:159:ALA:HB2	2.17	0.43
33:DD:79:VAL:HG21	33:DD:111:LEU:HD11	2.00	0.43
1:AA:1095:U:P	1:AA:1108:G:H1	2.42	0.43
6:CF:72:VAL:HG13	6:CF:73:ASN:N	2.33	0.43
1:CA:1095:U:P	1:CA:1108:G:H1	2.42	0.43
31:DA:271(F):C:O5'	31:DA:271(F):C:H6	1.99	0.43
1:AA:1084:G:OP1	1:AA:1086:U:C2	2.72	0.43
1:AA:55:A:N7	1:AA:56:U:H5	2.17	0.43
31:BA:1478:G:H2'	31:BA:1479:G:H5'	2.00	0.43
7:AG:113:GLU:CB	7:AG:119:ARG:HG2	2.40	0.43
31:DA:2711:A:OP1	31:DA:2712(A):A:OP1	2.37	0.43
28:B6:16:CYS:HB2	28:B6:18:ARG:NH2	2.33	0.43
1:CA:1037:C:C4	1:CA:1038:C:C4	3.07	0.43
1:CA:110:C:O2'	16:CP:25:ARG:O	2.34	0.43
23:D1:26:ARG:CB	23:D1:34:THR:HB	2.49	0.43
32:DB:107:G:C2'	32:DB:108:U:H5'	2.49	0.43
4:CD:108:LEU:O	4:CD:110:PHE:CD1	2.72	0.43
20:CT:26:ASN:HD22	20:CT:27:LYS:N	2.16	0.43
18:AR:44:LEU:HA	18:AR:49:LYS:O	2.18	0.43
8:CH:24:THR:HG22	8:CH:25:ASP:H	1.84	0.43
31:BA:2808:U:H2'	31:BA:2809:A:C5'	2.49	0.43
2:AB:233:SER:HB2	2:AB:234:PRO:HD2	1.99	0.43
13:AM:106:ASN:O	13:AM:107:ALA:CB	2.65	0.43
1:AA:635:G:H2'	1:AA:636:U:H6	1.84	0.43
31:BA:1717:G:C4	31:BA:1718:G:C8	3.07	0.43
1:AA:1116:C:C4	1:AA:1117:G:C8	3.07	0.43
36:DG:15:VAL:HG13	36:DG:175:LEU:CD1	2.49	0.43
1:CA:1308:U:H2'	1:CA:1309:G:H8	1.84	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:CA:1159:U:C5	1:CA:1182:G:C4	3.07	0.43
34:DE:203:LYS:CD	34:DE:203:LYS:O	2.64	0.43
31:BA:780:G:C2	31:BA:782:A:C2	3.07	0.43
31:DA:1598:C:H2'	31:DA:1599:C:C6	2.46	0.43
31:DA:1373:A:N6	31:DA:1374:G:C2	2.87	0.43
1:CA:1054:C:C2'	1:CA:1055:A:H5''	2.49	0.43
42:DQ:74:TYR:O	42:DQ:89:ASN:N	2.52	0.43
31:DA:28:A:C5	31:DA:29:U:C5	3.06	0.43
2:AB:29:ALA:O	2:AB:31:TYR:N	2.52	0.43
22:D0:55:ARG:HE	22:D0:55:ARG:HB3	1.38	0.43
46:BU:31:SER:C	46:BU:33:ARG:N	2.72	0.43
27:B5:43:HIS:CD2	31:BA:2815:C:O2'	2.71	0.43
31:DA:1589:C:H2'	31:DA:1590:U:H6	1.84	0.43
1:CA:825:G:C6	1:CA:826:C:C4	3.07	0.43
31:BA:1000:A:C6	31:BA:1001:A:C6	3.07	0.43
31:DA:2092:U:H5	31:DA:2226:C:OP1	2.02	0.43
31:BA:769:G:O2'	31:BA:770:G:H5'	2.17	0.43
10:AJ:80:LYS:NZ	10:AJ:80:LYS:HB2	2.34	0.43
31:BA:2392:A:O4'	31:BA:2392:A:N3	2.51	0.43
47:BV:4:ILE:HD12	47:BV:40:LEU:HG	2.00	0.43
42:BQ:46:GLN:HE22	42:BQ:126:PRO:HG3	1.83	0.43
9:AI:112:LYS:HG2	9:AI:119:ALA:H	1.83	0.43
9:AI:113:LYS:O	9:AI:116:LYS:HB2	2.19	0.43
40:DO:14:THR:CG2	40:DO:52:VAL:HG21	2.49	0.43
48:DW:107:LEU:HD13	48:DW:107:LEU:N	2.34	0.43
31:BA:1665:A:C4'	40:BO:67:LYS:HB2	2.49	0.43
40:DO:29:ASN:ND2	40:DO:29:ASN:N	2.66	0.43
1:CA:987:G:N2	1:CA:1219:U:N3	2.67	0.43
11:CK:18:ARG:HB3	11:CK:33:THR:OG1	2.19	0.43
42:BQ:121:ALA:O	42:BQ:124:LYS:N	2.48	0.43
1:CA:283:C:H2'	1:CA:284:G:O4'	2.18	0.43
31:DA:237:C:O2'	31:DA:238:C:H5'	2.19	0.43
1:AA:225:C:H2'	1:AA:226:G:H8	1.83	0.43
31:DA:765:G:H2'	31:DA:766:C:C6	2.53	0.43
14:CN:12:ARG:C	14:CN:14:PRO:CD	2.87	0.43
51:DZ:126:VAL:HG12	51:DZ:163:LEU:HA	2.00	0.43
31:DA:610:G:H2'	31:DA:611:C:C6	2.54	0.43
31:BA:2776:A:H4'	31:BA:2778:A:OP1	2.19	0.43
17:AQ:92:ARG:HG2	17:AQ:93:GLN:N	2.33	0.43
31:BA:1662:C:O2'	31:BA:1663:C:H5'	2.18	0.43
1:CA:1121:U:H6	1:CA:1121:U:O5'	2.02	0.43
31:BA:975:C:O2	31:BA:975:C:H2'	2.19	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:DA:405:U:O2	31:DA:405:U:H2'	2.18	0.43
1:AA:1121:U:H6	1:AA:1121:U:O5'	2.02	0.43
39:BN:108:PRO:O	39:BN:113:GLY:HA3	2.19	0.43
28:B6:9:LEU:C	28:B6:9:LEU:HD22	2.32	0.42
46:BU:88:ILE:O	46:BU:88:ILE:CD1	2.67	0.42
47:BV:15:GLU:O	47:BV:98:GLU:OE1	2.35	0.42
1:AA:392:G:C4	1:AA:393:A:C8	3.07	0.42
36:DG:128:ARG:O	36:DG:129:GLY:O	2.37	0.42
31:DA:2809:A:C2	31:DA:2892:A:N3	2.87	0.42
31:DA:620:G:H4'	31:DA:621:A:C5'	2.47	0.42
49:DX:60:ARG:HG2	49:DX:72:LYS:N	2.34	0.42
31:DA:2703:C:H2'	31:DA:2704:C:C6	2.53	0.42
30:B8:23:VAL:CG1	30:B8:46:ARG:HD3	2.48	0.42
1:CA:357:G:C2'	1:CA:358:U:H5'	2.49	0.42
24:B2:54:LYS:N	24:B2:56:GLN:HE21	2.15	0.42
26:B4:1:MET:CB	32:BB:43:C:H5'	2.48	0.42
23:B1:64:ALA:HA	23:B1:67:ILE:HG13	1.99	0.42
23:D1:79:GLY:O	23:D1:80:LEU:HD23	2.18	0.42
29:B7:5:TRP:CZ3	31:BA:464:U:H4'	2.54	0.42
23:B1:18:ILE:N	23:B1:18:ILE:HD12	2.33	0.42
31:BA:744:G:OP1	34:BE:132:HIS:HB3	2.19	0.42
39:DN:63:THR:HB	39:DN:64:GLY:H	1.58	0.42
31:BA:7:G:H1	31:BA:2896:C:N4	2.15	0.42
35:BF:18:ARG:NH1	35:BF:199:TRP:HZ3	2.17	0.42
1:CA:539:A:OP1	12:CL:114:LYS:HE2	2.19	0.42
31:DA:2309:A:N3	31:DA:2310:A:H2	2.17	0.42
31:BA:1530:C:HO2'	31:BA:1531:C:H6	1.66	0.42
31:BA:2544:G:O2'	31:BA:2545:G:H5'	2.19	0.42
39:BN:66:LYS:HB3	39:BN:70:LYS:HB3	2.01	0.42
45:DT:28:VAL:HG11	45:DT:46:GLU:OE1	2.19	0.42
31:DA:2663:G:C5	31:DA:2664:G:C5	3.07	0.42
1:AA:407:G:O2'	4:AD:116:GLN:CG	2.68	0.42
31:DA:1987:G:H2'	31:DA:1988:C:H6	1.84	0.42
31:DA:357:A:C2	31:DA:358:U:O2	2.72	0.42
31:BA:477:A:O2'	31:BA:478:A:H5'	2.19	0.42
39:BN:34:LEU:O	39:BN:49:GLY:HA3	2.19	0.42
37:BH:157:TYR:CD1	37:BH:171:LEU:N	2.86	0.42
31:DA:2461:C:H2'	31:DA:2462:U:C6	2.54	0.42
51:BZ:53:ILE:HG21	51:BZ:71:VAL:HB	1.98	0.42
1:AA:103:C:OP2	20:AT:14:LYS:HD3	2.19	0.42
36:DG:125:PHE:CB	36:DG:166:ASP:HB2	2.49	0.42
31:BA:1771:C:C1'	31:BA:1786:A:H8	2.32	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:DA:1803:A:HO2'	33:DD:259:THR:HG21	1.81	0.42
31:BA:1557:C:H5''	31:BA:1558:A:OP2	2.19	0.42
38:DI:71:ILE:HG13	38:DI:72:LEU:CD2	2.49	0.42
28:B6:15:GLU:HB3	28:B6:18:ARG:CG	2.45	0.42
31:DA:247:G:H4'	31:DA:386:G:C6	2.54	0.42
45:BT:50:ILE:HD11	45:BT:102:ILE:HD11	2.01	0.42
36:DG:33:ARG:HD3	36:DG:162:THR:HG21	2.01	0.42
36:BG:33:ARG:HD3	36:BG:162:THR:HG21	2.01	0.42
2:CB:19:HIS:O	2:CB:20:GLU:O	2.36	0.42
28:B6:32:ASN:O	28:B6:33:LYS:CB	2.67	0.42
18:AR:62:GLU:HA	18:AR:65:ILE:HD12	2.00	0.42
12:CL:28:LYS:O	12:CL:29:GLY:C	2.57	0.42
44:BS:102:ALA:HB3	44:BS:103:GLU:HG2	2.01	0.42
1:AA:1127:G:C2'	1:AA:1147:C:H42	2.32	0.42
31:BA:1177:A:H5'	31:BA:1178:C:O4'	2.19	0.42
31:DA:2471:C:C3'	31:DA:2472:G:H5''	2.45	0.42
32:BB:91:C:HO2'	32:BB:92:C:H5'	1.83	0.42
1:AA:1423:G:H5''	40:BO:49:ARG:HH21	1.83	0.42
31:BA:19:C:H2'	31:BA:20:C:H6	1.84	0.42
44:DS:42:ASP:O	44:DS:43:GLU:HB2	2.18	0.42
1:AA:363:A:OP2	12:AL:61:THR:HG21	2.18	0.42
1:CA:1298:C:H4'	1:CA:1299:A:C4	2.54	0.42
1:CA:1299:A:C5	1:CA:1301:U:O2	2.72	0.42
31:DA:1711:C:O2'	31:DA:1712:C:H5'	2.18	0.42
1:CA:191:G:N2	20:CT:103:GLY:O	2.52	0.42
31:BA:910:A:C6	42:BQ:13:GLN:HG3	2.54	0.42
38:BI:22:LYS:O	38:BI:23:PRO:C	2.58	0.42
23:B1:37:ILE:HG23	23:B1:37:ILE:O	2.14	0.42
31:BA:150:C:H42	31:BA:176:G:H1	1.67	0.42
35:BF:89:VAL:O	35:BF:91:GLY:N	2.50	0.42
7:AG:26:PHE:CG	7:AG:62:PHE:HE1	2.37	0.42
31:BA:536:A:H2'	31:BA:537:C:O5'	2.19	0.42
1:AA:577:G:N3	1:AA:578:C:C6	2.87	0.42
31:DA:1510:G:C2	31:DA:1511:C:C2	3.06	0.42
36:DG:13:GLU:HG3	36:DG:13:GLU:O	2.19	0.42
31:BA:452:G:N3	31:BA:457:A:H2	2.17	0.42
31:BA:824:A:C2'	31:BA:825:C:H5'	2.48	0.42
31:BA:958:U:C2'	31:BA:959:A:OP1	2.67	0.42
31:DA:1820:U:H3'	31:DA:1821:A:C5'	2.49	0.42
31:BA:733:G:H8	31:BA:733:G:O5'	2.02	0.42
35:DF:119:ARG:HG2	35:DF:119:ARG:O	2.18	0.42
50:DY:2:ARG:O	50:DY:4:LYS:N	2.52	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:DA:2591:C:H2'	31:DA:2592:G:C8	2.54	0.42
43:DR:50:HIS:O	43:DR:54:LEU:HD13	2.18	0.42
31:BA:892:G:N3	31:BA:893:C:H5''	2.34	0.42
36:DG:110:ALA:HA	36:DG:140:ILE:O	2.19	0.42
31:DA:1638:C:H4'	31:DA:2710:C:O2	2.19	0.42
46:DU:59:ARG:O	46:DU:60:LEU:C	2.57	0.42
15:CO:18:PHE:O	15:CO:18:PHE:CD1	2.72	0.42
31:BA:2536:G:C5	31:BA:2537:U:C5	3.07	0.42
31:DA:2085:C:H2'	31:DA:2086:U:O4'	2.20	0.42
1:CA:1250:A:C6	1:CA:1251:A:C6	3.07	0.42
31:DA:2027:G:C6	31:DA:2028:U:C4	3.07	0.42
18:CR:86:VAL:O	18:CR:87:ARG:HB3	2.17	0.42
31:BA:266:G:N2	31:BA:427:U:H1'	2.34	0.42
25:D3:24:LYS:HD3	31:DA:931:G:O2'	2.20	0.42
31:BA:256:A:O2'	31:BA:257:A:H5'	2.19	0.42
1:CA:515:G:H2'	1:CA:516:U:O4'	2.19	0.42
1:AA:1293:G:HO2'	1:AA:1294:G:P	2.42	0.42
1:AA:224:C:C2	1:AA:225:C:C5	3.07	0.42
31:BA:2741:A:H2'	31:BA:2742:C:O4'	2.18	0.42
31:BA:2017:U:H5''	31:BA:2018:G:P	2.58	0.42
3:CC:142:MET:HE3	3:CC:146:ALA:O	2.19	0.42
31:DA:2738:A:C2	31:DA:2739:U:H1'	2.54	0.42
1:CA:1210:C:H4'	1:CA:1214:C:C4	2.53	0.42
6:AF:33:TYR:O	6:AF:34:GLY:C	2.57	0.42
13:CM:17:VAL:O	13:CM:20:THR:HB	2.19	0.42
46:BU:22:LYS:HD3	46:BU:22:LYS:HA	1.58	0.42
1:CA:754:C:H3'	1:CA:754:C:O2	2.18	0.42
7:CG:18:TYR:CD2	7:CG:59:LEU:HD13	2.54	0.42
27:B5:56:LYS:HE3	27:B5:59:GLU:OE1	2.20	0.42
46:BU:88:ILE:HA	46:BU:90:VAL:HG23	2.00	0.42
1:AA:309:G:O2'	1:AA:310:G:H5'	2.18	0.42
31:BA:1495:A:C5'	31:BA:1496:A:OP2	2.67	0.42
31:BA:1495:A:H5''	31:BA:1496:A:OP2	2.18	0.42
51:DZ:145:GLU:HG3	51:DZ:146:ILE:H	1.84	0.42
51:DZ:151:HIS:O	51:DZ:152:ALA:C	2.57	0.42
31:DA:1397:U:O2'	31:DA:1398:C:P	2.77	0.42
42:BQ:76:LYS:H	42:BQ:88:GLY:HA2	1.84	0.42
42:BQ:86:GLY:C	42:BQ:88:GLY:N	2.73	0.42
31:BA:2494:G:C5	31:BA:2495:G:N7	2.87	0.42
42:BQ:83:MET:CG	42:BQ:83:MET:O	2.62	0.42
16:CP:58:TYR:O	16:CP:61:SER:N	2.53	0.42
31:DA:306:U:H2'	31:DA:307:G:O4'	2.19	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
43:BR:3:HIS:O	43:BR:4:LEU:CB	2.67	0.42
31:BA:2758:A:C3'	31:BA:2759:G:C5'	2.97	0.42
27:D5:40:LYS:HZ3	27:D5:46:CYS:C	2.22	0.42
31:BA:1190:G:C5'	41:BP:35:HIS:CB	2.94	0.42
29:B7:5:TRP:O	31:BA:1612:C:H4'	2.19	0.42
31:DA:810:U:O2'	41:DP:33:ARG:CZ	2.67	0.42
31:BA:292:C:C2	31:BA:349:G:C2	3.07	0.42
39:DN:57:ALA:O	39:DN:59:LYS:HB2	2.19	0.42
31:DA:1880:C:C6	31:DA:1880:C:C5'	2.95	0.42
1:CA:509:A:O2'	1:CA:510:A:C5'	2.67	0.42
36:DG:64:THR:HG23	36:DG:65:GLY:H	1.84	0.42
31:DA:639:U:C2	31:DA:640:C:C5	3.07	0.42
32:DB:93:G:OP1	51:DZ:79:ARG:NH1	2.53	0.42
45:BT:22:PHE:CE2	45:BT:85:LYS:NZ	2.86	0.42
45:BT:28:VAL:HG13	45:BT:46:GLU:CB	2.49	0.42
45:BT:30:VAL:O	45:BT:30:VAL:CG2	2.61	0.42
31:DA:2801(A):A:O4'	31:DA:2802:G:H2'	2.19	0.42
31:DA:2661:G:O2'	31:DA:2662:A:OP1	2.33	0.42
42:DQ:140:ALA:C	51:DZ:53:ILE:HB	2.40	0.42
37:BH:41:MET:SD	37:BH:54:ARG:HA	2.58	0.42
30:B8:14:VAL:CG1	30:B8:22:VAL:HG13	2.50	0.42
30:B8:4:MET:CE	31:BA:593:G:O4'	2.67	0.42
51:BZ:99:TYR:HB3	51:BZ:123:ASP:OD1	2.18	0.42
37:DH:41:MET:SD	37:DH:54:ARG:HA	2.59	0.42
1:CA:1097:C:O2'	1:CA:1098:C:H5'	2.19	0.42
18:CR:65:ILE:HG13	18:CR:65:ILE:H	1.36	0.42
31:BA:271(T):C:C2	31:BA:271(U):G:C8	3.07	0.42
13:AM:66:LEU:H	13:AM:66:LEU:CD1	2.23	0.42
34:BE:134:ILE:HB	34:BE:137:HIS:HB2	2.02	0.42
1:AA:982:U:H4'	1:AA:983:A:O5'	2.19	0.42
31:BA:1386:C:H2'	31:BA:1387:C:C6	2.54	0.42
1:AA:1452:C:C5'	1:AA:1456:G:C4	2.97	0.42
1:CA:671:G:C4	1:CA:672:U:C6	3.07	0.42
34:DE:52:LEU:HA	34:DE:52:LEU:HD12	1.48	0.42
34:DE:75:VAL:O	34:DE:77:ILE:CA	2.67	0.42
1:CA:69:G:C2	1:CA:70:G:N7	2.86	0.42
20:CT:26:ASN:HA	20:CT:29:LYS:HG2	2.01	0.42
31:BA:1834:U:H2'	31:BA:1834:U:O2	2.19	0.42
30:B8:43:GLN:C	30:B8:44:LYS:HD2	2.40	0.42
1:AA:1126:U:C2'	1:AA:1127:G:O5'	2.66	0.42
35:BF:160:ASN:ND2	35:BF:162:LEU:HB2	2.29	0.42
32:DB:69:G:C5	32:DB:70:C:C5	3.07	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:CA:1117:G:H4'	9:CI:104:ARG:NH1	2.34	0.42
33:DD:16:MET:HB2	33:DD:207:GLY:CA	2.43	0.42
1:AA:862:C:O2'	1:AA:863:U:H5'	2.18	0.42
6:AF:67:MET:CB	6:AF:68:PRO:HD2	2.46	0.42
32:DB:27:C:C4	32:DB:28:C:C5	3.07	0.42
32:DB:27:C:C5	32:DB:28:C:C5	3.07	0.42
1:CA:35:G:H2'	1:CA:36:C:H6	1.79	0.42
1:CA:1281:U:H5'	1:CA:1282:C:H5	1.84	0.42
31:BA:511:U:C5	31:BA:512:G:C5	3.07	0.42
31:DA:1429:G:H2'	31:DA:1430:C:H6	1.82	0.42
5:CE:12:LEU:HD22	5:CE:13:ILE:N	2.34	0.42
31:BA:2779:U:O2	31:BA:2779:U:O4'	2.33	0.42
43:DR:56:LYS:HE3	43:DR:94:TYR:CZ	2.53	0.42
8:CH:7:ALA:HB2	8:CH:85:ARG:HD2	2.01	0.42
1:AA:1053:G:H3'	1:AA:1054:C:H5'	2.00	0.42
8:AH:8:ASP:O	8:AH:11:THR:N	2.52	0.42
1:CA:1053:G:H3'	1:CA:1054:C:H5'	2.00	0.42
1:CA:1053:G:C3'	1:CA:1054:C:H5'	2.49	0.42
1:CA:635:G:H2'	1:CA:636:U:H6	1.84	0.42
31:BA:847:U:H5	31:BA:933:A:H62	1.62	0.42
31:BA:1582:C:O2'	31:BA:1586:A:H8	1.99	0.42
31:DA:1115:G:H2'	31:DA:1116:C:O4'	2.18	0.42
38:DI:56:LYS:HZ2	38:DI:57:ARG:N	2.17	0.42
7:CG:26:PHE:HB2	7:CG:62:PHE:HZ	1.85	0.42
20:AT:79:ARG:HA	20:AT:82:SER:OG	2.19	0.42
1:CA:807:A:H2'	1:CA:808:C:C6	2.54	0.42
44:BS:105:ALA:C	44:BS:107:GLU:N	2.72	0.42
1:AA:286:G:C5	1:AA:287:U:C5	3.07	0.42
16:CP:81:ARG:C	16:CP:82:GLN:HE21	2.22	0.42
1:AA:1150:U:C5	1:AA:1151:A:N7	2.87	0.42
34:DE:9:VAL:CG2	34:DE:10:GLY:N	2.82	0.42
40:DO:6:THR:CG2	40:DO:7:TYR:N	2.82	0.42
32:DB:50:G:OP1	44:DS:63:THR:HG23	2.19	0.42
31:DA:1016:G:C2'	31:DA:1017:G:O5'	2.67	0.42
1:CA:304:U:C2	1:CA:305:G:N7	2.87	0.42
35:DF:200:GLU:O	35:DF:204:ASN:HB2	2.19	0.42
1:CA:1218:C:H2'	1:CA:1219:U:C5	2.54	0.42
1:CA:985:C:H6	1:CA:985:C:O5'	2.02	0.42
22:D0:2:ALA:H	31:DA:2602:A:N6	2.16	0.42
1:CA:872:A:C5	1:CA:874:G:C8	3.07	0.42
8:CH:1:MET:O	8:CH:2:LEU:O	2.37	0.42
9:CI:55:ALA:CB	9:CI:58:ARG:HD2	2.49	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:BA:610:G:H2'	31:BA:611:C:C6	2.54	0.42
33:BD:94:LEU:HD22	33:BD:95:LEU:N	2.34	0.42
46:DU:66:ASN:HD21	46:DU:70:ARG:HH21	1.68	0.42
40:BO:77:ILE:CD1	45:BT:74:ARG:HG2	2.49	0.42
42:DQ:31:ASP:O	42:DQ:133:ARG:O	2.36	0.42
4:AD:153:ARG:HG2	4:AD:181:MET:SD	2.59	0.42
51:DZ:45:ASP:O	51:DZ:46:LYS:C	2.58	0.42
31:BA:105:C:H2'	31:BA:106:C:H6	1.84	0.42
8:CH:116:LYS:O	8:CH:119:LEU:HD21	2.19	0.42
7:CG:87:VAL:HA	7:CG:88:PRO:HD3	1.90	0.42
31:DA:2412:A:H2'	31:DA:2413:G:O4'	2.19	0.42
31:DA:764:A:O4'	33:DD:213:ARG:HG3	2.19	0.42
30:B8:19:SER:OG	30:B8:21:LYS:HD2	2.19	0.42
27:B5:32:PRO:O	27:B5:38:ALA:O	2.36	0.42
27:B5:40:LYS:HZ3	27:B5:46:CYS:C	2.17	0.42
27:B5:47:PRO:C	27:B5:48:GLU:OE2	2.58	0.42
31:DA:1825:A:H2'	31:DA:1826:G:C8	2.54	0.42
31:DA:1971:A:H2'	31:DA:1972:A:OP1	2.19	0.42
42:DQ:9:TYR:C	42:DQ:10:ARG:HG3	2.39	0.42
33:DD:35:LYS:HG2	33:DD:64:ILE:HG23	2.00	0.42
36:DG:130:ASN:HB3	36:DG:160:VAL:HA	2.01	0.42
39:DN:30:ILE:CD1	39:DN:99:LEU:HD11	2.49	0.42
30:D8:4:MET:HE1	31:DA:593:G:C1'	2.49	0.42
30:D8:4:MET:HE1	31:DA:593:G:H1'	2.01	0.42
31:DA:71:A:C2	49:DX:31:HIS:CE1	2.97	0.42
30:B8:7:HIS:CD2	41:BP:50:ARG:HD3	2.54	0.42
47:DV:1:MET:SD	47:DV:46:VAL:HB	2.59	0.42
47:DV:50:PRO:C	47:DV:51:VAL:HG23	2.39	0.42
45:BT:65:LYS:CG	45:BT:66:VAL:N	2.82	0.42
44:BS:13:ARG:H	44:BS:13:ARG:HG2	1.47	0.42
44:BS:17:ARG:O	44:BS:18:ILE:HB	2.20	0.42
33:DD:182:LEU:HA	33:DD:182:LEU:HD22	1.66	0.42
31:DA:464:U:C2	31:DA:788:A:C6	3.08	0.42
23:D1:87:PRO:CG	23:D1:88:LYS:N	2.82	0.42
8:AH:86:ILE:HG12	8:AH:135:CYS:HA	2.00	0.42
47:BV:79:VAL:O	47:BV:80:GLN:CB	2.42	0.42
31:BA:1783:A:C2	31:BA:2587:A:C5	3.07	0.42
35:DF:2:LYS:HB3	35:DF:2:LYS:HE2	1.80	0.42
34:DE:95:ILE:CD1	34:DE:95:ILE:N	2.82	0.42
4:CD:79:PHE:CD1	4:CD:207:TYR:CD1	3.08	0.42
4:AD:3:ARG:HD3	4:AD:5:ILE:HD11	1.99	0.42
31:DA:2649:U:H2'	31:DA:2650:U:C6	2.54	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
45:DT:33:LYS:HD3	45:DT:33:LYS:HA	1.57	0.42
51:DZ:39:VAL:HG23	51:DZ:40:ASP:N	2.34	0.42
46:BU:29:SER:C	46:BU:30:LYS:HD3	2.39	0.42
50:BY:8:LYS:HE3	50:BY:72:VAL:HG23	1.94	0.42
1:CA:1107:C:C4	1:CA:1108:G:C8	3.08	0.42
1:CA:1068:G:N7	1:CA:1094:G:C8	2.87	0.42
18:CR:61:LYS:O	18:CR:65:ILE:HG13	2.19	0.42
1:CA:973:G:N3	10:CJ:55:LYS:HE2	2.35	0.42
37:BH:30:LYS:HG2	37:BH:79:VAL:O	2.19	0.42
1:AA:600:C:N3	1:AA:639:G:C2	2.87	0.42
1:AA:617:G:C6	1:AA:618:C:C4	3.07	0.42
34:BE:50:GLY:HA3	34:BE:74:PRO:HG3	2.00	0.42
12:CL:33:ARG:CG	12:CL:60:LEU:HD12	2.49	0.42
31:BA:2208:A:H1'	31:BA:2219:G:C6	2.54	0.42
24:D2:15:LYS:HG2	24:D2:15:LYS:O	2.20	0.42
35:BF:13:SER:HA	35:BF:14:PRO:HD3	1.79	0.42
31:DA:2584:U:O5'	31:DA:2584:U:O2	2.35	0.42
31:DA:1318:C:H42	31:DA:1334:G:H1	1.67	0.42
8:AH:8:ASP:O	8:AH:9:MET:C	2.56	0.42
31:BA:323:G:H1'	31:BA:1205:U:O2	2.19	0.42
13:AM:71:ARG:O	13:AM:71:ARG:HG3	2.19	0.42
16:CP:53:VAL:CG1	16:CP:79:VAL:HG22	2.48	0.42
43:DR:42:LYS:O	43:DR:45:ARG:HD3	2.19	0.42
7:AG:149:ARG:O	7:AG:149:ARG:HG2	2.20	0.42
31:DA:1185:C:H5''	31:DA:1186:G:P	2.59	0.42
8:AH:58:TYR:CD1	8:AH:58:TYR:N	2.87	0.42
31:BA:2762:G:H5'	31:BA:2762:G:C8	2.48	0.42
9:AI:114:TYR:CD2	9:AI:114:TYR:O	2.72	0.42
1:AA:603:U:O2'	1:AA:604:G:H5'	2.19	0.42
35:BF:117:ARG:HG2	35:BF:192:LEU:HB2	2.01	0.42
3:CC:35:GLU:HA	3:CC:38:ARG:HG2	2.00	0.42
35:DF:116:ASP:OD1	35:DF:119:ARG:NH2	2.52	0.42
4:AD:150:GLU:HG2	4:AD:151:LYS:N	2.32	0.42
1:AA:286:G:C6	1:AA:287:U:C4	3.07	0.42
45:BT:67:SER:N	45:BT:70:VAL:O	2.53	0.42
45:DT:53:ARG:HG2	45:DT:53:ARG:O	2.12	0.42
31:DA:2100:G:O6	31:DA:2189:U:O4	2.37	0.42
36:DG:133:LEU:HD12	36:DG:133:LEU:O	2.18	0.42
31:BA:205:G:O2'	31:BA:206:U:OP2	2.38	0.42
36:DG:48:GLU:O	36:DG:49:ASP:CB	2.67	0.42
51:BZ:77:ASP:CG	51:BZ:77:ASP:O	2.58	0.42
1:AA:1206:G:C6	1:AA:1207:G:C6	3.07	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:518:C:H2'	1:AA:530:G:N3	2.35	0.42
31:BA:459:U:O2'	31:BA:460:A:H5'	2.19	0.42
9:CI:36:TYR:CE1	9:CI:70:LYS:NZ	2.87	0.42
16:CP:8:ARG:HG2	16:CP:9:PHE:H	1.84	0.42
11:CK:125:PHE:HD1	11:CK:125:PHE:N	2.17	0.42
31:BA:1705:G:C5	31:BA:1706:U:C4	3.07	0.42
1:CA:1362:C:O2'	1:CA:1363:C:H5''	2.19	0.42
22:D0:24:LYS:HG3	22:D0:36:ILE:HD11	2.00	0.42
7:CG:78:ARG:HB3	7:CG:87:VAL:HG23	2.00	0.42
11:CK:95:ILE:CG2	11:CK:108:ILE:HD13	2.49	0.42
31:BA:2570:G:H2'	31:BA:2571:C:O4'	2.19	0.42
31:DA:2018:G:H2'	31:DA:2019:A:C8	2.54	0.42
1:CA:189(F):U:C4	17:CQ:72:ARG:NH2	2.87	0.42
41:DP:7:ARG:HD2	41:DP:7:ARG:HA	1.76	0.42
2:CB:193:ASP:O	2:CB:193:ASP:OD2	2.36	0.42
46:BU:61:TRP:O	46:BU:62:ILE:C	2.56	0.42
31:BA:1319:G:C6	31:BA:1320:C:N4	2.87	0.42
35:BF:108:LYS:HD3	35:BF:108:LYS:HA	1.79	0.42
1:CA:1442:G:N7	1:CA:1442(B):A:C2	2.87	0.42
31:DA:1246:A:P	41:DP:18:ARG:HD3	2.58	0.42
31:DA:1899:G:C2'	31:DA:1900:A:OP2	2.67	0.42
1:AA:173:U:H5''	1:AA:197:A:O4'	2.18	0.42
1:AA:374:A:C2	1:AA:375:U:C2	3.07	0.42
1:AA:69:G:C2	1:AA:70:G:N7	2.87	0.42
33:DD:60:ARG:HG3	33:DD:86:PRO:HB2	2.01	0.42
44:DS:13:ARG:HH11	44:DS:13:ARG:HG3	1.84	0.42
31:DA:1161:C:H1'	47:DV:8:GLY:O	2.19	0.42
30:D8:62:LEU:CD1	31:DA:242:G:H5''	2.42	0.42
41:DP:51:PHE:HB3	41:DP:52:GLU:CD	2.38	0.42
28:D6:18:ARG:HB2	28:D6:19:ARG:H	1.43	0.42
30:D8:35:GLN:HB3	30:D8:36:LYS:H	1.36	0.42
35:DF:32:LEU:CD1	35:DF:105:VAL:HG13	2.48	0.42
50:DY:75:ILE:HD13	50:DY:79:CYS:O	2.19	0.42
47:BV:67:GLY:O	47:BV:69:LYS:N	2.52	0.42
31:DA:1857:G:O5'	31:DA:1857:G:H8	2.02	0.42
1:CA:450:G:N7	1:CA:481:G:C6	2.87	0.42
33:BD:143:HIS:CD2	33:BD:144:ALA:CB	3.02	0.42
33:BD:161:THR:O	33:BD:196:VAL:HG23	2.18	0.42
44:BS:17:ARG:HE	44:BS:89:ARG:NH2	2.16	0.42
31:BA:2759:G:C2'	31:BA:2760:C:O5'	2.67	0.42
31:BA:588:U:O4	31:BA:670:A:H1'	2.20	0.42
41:BP:21:ARG:CG	41:BP:21:ARG:O	2.67	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
37:BH:138:LYS:O	37:BH:142:GLY:N	2.53	0.42
31:DA:2406:U:O4	41:DP:70:GLN:HB3	2.20	0.42
34:DE:4:ILE:HD13	34:DE:28:ALA:HB1	2.01	0.42
34:DE:47:VAL:O	34:DE:80:GLU:HA	2.20	0.42
31:BA:1880:C:C5'	31:BA:1880:C:C6	2.92	0.42
31:BA:1987:G:H2'	31:BA:1988:C:C6	2.53	0.42
31:DA:570:G:H2'	31:DA:2030:A:C6	2.54	0.42
35:DF:177:ALA:HB1	35:DF:178:PRO:HD2	2.02	0.42
40:BO:115:VAL:CG1	40:BO:121:VAL:HG21	2.47	0.42
31:BA:1503:U:O2'	31:BA:1504:C:H5'	2.18	0.42
1:AA:708:C:O2'	1:AA:709:G:H5'	2.20	0.42
31:DA:196:A:C5	31:DA:805:G:C6	3.08	0.42
41:DP:146:VAL:HG22	41:DP:147:LEU:N	2.19	0.42
1:CA:1067:A:N3	1:CA:1068:G:H1'	2.35	0.42
18:CR:62:GLU:O	18:CR:65:ILE:HD12	2.18	0.42
1:AA:335:C:O2'	1:AA:336:C:H5'	2.19	0.42
13:CM:25:ILE:N	13:CM:25:ILE:HD12	2.35	0.42
31:DA:1337:G:H2'	31:DA:1338:G:H8	1.83	0.42
33:BD:211:ARG:HA	33:BD:214:TRP:CD2	2.55	0.42
31:DA:1291:C:H2'	31:DA:1292:U:H6	1.83	0.42
48:BW:5:ALA:O	48:BW:6:ILE:HG13	2.19	0.42
1:AA:20:U:H4'	1:AA:572:A:C6	2.54	0.42
6:CF:39:LYS:HB3	6:CF:62:TRP:HZ3	1.83	0.42
1:AA:1077:G:C6	1:AA:1081:G:O6	2.72	0.42
1:CA:383:A:OP1	1:CA:454:C:O2'	2.30	0.42
1:AA:134:A:H61	16:AP:25:ARG:NH1	2.06	0.42
8:AH:120:THR:HG23	8:AH:123:GLU:CD	2.39	0.42
1:AA:1004:A:N7	1:AA:1036:G:O6	2.52	0.42
4:AD:109:GLY:O	4:AD:110:PHE:C	2.57	0.42
28:B6:51:GLU:O	28:B6:52:VAL:CG2	2.68	0.42
5:CE:50:GLU:OE2	5:CE:51:VAL:HG23	2.18	0.42
24:D2:18:PRO:O	24:D2:22:GLU:HB2	2.20	0.42
2:AB:19:HIS:O	2:AB:20:GLU:C	2.58	0.42
36:DG:18:GLU:HG3	36:DG:18:GLU:O	2.19	0.42
1:CA:189:G:C6	1:CA:189(A):C:N4	2.87	0.42
1:CA:11:G:C6	1:CA:12:U:C4	3.08	0.42
2:AB:100:GLY:HA2	2:AB:176:GLU:OE1	2.20	0.42
51:BZ:9:TYR:OH	51:BZ:61:LEU:HD13	2.19	0.42
2:CB:97:TRP:O	2:CB:97:TRP:CE3	2.72	0.42
1:AA:1158:C:O2	1:AA:1158:C:H3'	2.19	0.42
16:CP:14:ASN:N	16:CP:15:PRO:HD3	2.35	0.42
4:CD:146:ILE:H	4:CD:146:ILE:CD1	2.32	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
32:BB:69:G:C5	32:BB:70:C:C5	3.08	0.42
1:CA:1386:G:C2	1:CA:1387:G:N7	2.87	0.42
3:CC:113:ALA:C	3:CC:115:LEU:N	2.72	0.42
1:AA:1298:C:C6	7:AG:114:ARG:NH1	2.87	0.42
41:DP:8:PRO:O	41:DP:9:ASN:C	2.58	0.42
2:AB:17:PHE:H	2:AB:17:PHE:HD2	1.66	0.42
27:B5:43:HIS:HD2	31:BA:2815:C:O2'	2.02	0.42
2:CB:8:LYS:HA	2:CB:11:LEU:HD12	2.01	0.42
9:AI:26:VAL:HA	9:AI:61:ALA:O	2.20	0.42
1:AA:577:G:H2'	1:AA:578:C:H6	1.85	0.42
20:AT:55:ILE:O	20:AT:56:MET:C	2.57	0.42
1:AA:1362:C:C2'	1:AA:1363:C:H5''	2.49	0.42
27:B5:11:THR:HG23	31:BA:1263:U:O2'	2.19	0.42
34:BE:11:MET:HB3	34:BE:24:THR:HA	2.00	0.42
1:AA:1317:C:H41	14:AN:19:ARG:HH21	1.67	0.42
2:CB:36:ARG:HB2	2:CB:41:ILE:HD13	2.00	0.42
31:BA:2567:G:H2'	31:BA:2568:C:H6	1.83	0.42
31:BA:466:A:C2'	31:BA:467:G:H5'	2.49	0.42
36:BG:48:GLU:O	36:BG:49:ASP:CB	2.66	0.42
31:DA:2796:U:O4'	31:DA:2796:U:O2	2.37	0.42
11:AK:21:ILE:HB	11:AK:84:VAL:HA	2.00	0.42
31:DA:2352:A:H2'	31:DA:2353:G:H5'	2.01	0.42
1:AA:985:C:H6	1:AA:985:C:O5'	2.02	0.42
31:DA:1324:G:C4	31:DA:1328:G:O6	2.72	0.42
45:BT:93:ARG:O	45:BT:94:ALA:O	2.36	0.42
11:CK:81:ASP:OD1	11:CK:106:LYS:HG2	2.20	0.42
1:CA:780:A:C2	1:CA:803:G:N1	2.87	0.42
1:AA:515:G:H1	1:AA:536:C:H42	1.67	0.42
31:DA:930:U:H4'	31:DA:931:G:O5'	2.18	0.42
51:BZ:117:LEU:HA	51:BZ:174:VAL:HA	2.02	0.42
31:BA:262:A:H2'	31:BA:263:C:O4'	2.19	0.42
31:BA:28:A:C5	31:BA:29:U:C5	3.07	0.42
26:B4:28:LYS:CB	36:BG:113:ARG:HH22	2.33	0.42
2:CB:53:ARG:NH2	2:CB:198:ASP:O	2.53	0.42
1:AA:754:C:H3'	1:AA:754:C:O2	2.20	0.42
33:DD:45:ASN:OD1	33:DD:45:ASN:C	2.58	0.42
31:BA:1996:C:H4'	31:BA:1997:G:OP1	2.19	0.42
2:AB:162:ILE:O	2:AB:185:ILE:HG12	2.19	0.42
1:AA:374:A:C6	1:AA:375:U:C4	3.08	0.42
1:AA:376:G:O3'	16:AP:5:ARG:HD2	2.19	0.42
31:BA:1496:A:N7	31:BA:1498:C:N3	2.67	0.42
31:BA:1856:G:H2'	31:BA:1857:G:H5'	2.02	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:BA:1884:A:C3'	31:BA:1885:A:H5''	2.48	0.42
31:DA:1494:A:N3	31:DA:1494:A:C2'	2.83	0.42
30:D8:35:GLN:HB3	30:D8:35:GLN:HE21	1.54	0.42
50:DY:97:ARG:O	50:DY:98:VAL:C	2.58	0.42
31:BA:992:C:O2'	31:BA:993:G:H5'	2.19	0.42
31:BA:2394:C:C3'	31:BA:2395:C:H5'	2.48	0.42
1:CA:452:A:C2	1:CA:453:A:C4	3.07	0.42
49:BX:55:ASN:HB2	49:BX:78:LYS:HD3	1.97	0.42
49:BX:60:ARG:HB2	49:BX:73:ARG:N	2.35	0.42
31:BA:1210:A:C8	31:BA:1210:A:C4'	3.03	0.42
31:BA:778:G:C6	31:BA:779:U:C4	3.07	0.42
23:D1:66:HIS:C	23:D1:68:PRO:HD2	2.39	0.42
31:DA:746:A:H2'	31:DA:2612:C:H5''	2.00	0.42
44:BS:67:ARG:C	44:BS:69:VAL:N	2.72	0.42
34:BE:81:ILE:O	34:BE:82:ARG:O	2.38	0.42
35:DF:21:ALA:C	35:DF:23:ASP:H	2.23	0.42
39:DN:56:ASN:HA	39:DN:125:GLY:H	1.85	0.42
1:CA:501:C:H1'	1:CA:549:C:H1'	2.02	0.42
31:BA:1464:C:O2'	31:BA:1528:A:C8	2.49	0.42
31:BA:2849:U:H4'	31:BA:2868:A:C2	2.55	0.42
31:BA:2850:A:C2	31:BA:2851:A:C4	3.07	0.42
31:DA:354:G:H8	31:DA:354:G:O5'	2.02	0.42
31:BA:357:A:C2	31:BA:358:U:O2	2.72	0.42
31:DA:2358:G:C5	31:DA:2359:C:C5	3.07	0.42
31:BA:475:U:C4	31:BA:481:G:O6	2.71	0.42
1:AA:689:C:C2	1:AA:690:G:C8	3.08	0.42
28:B6:30:THR:HB	31:BA:2286:A:OP1	2.19	0.42
33:DD:198:ASN:HD22	33:DD:198:ASN:C	2.22	0.42
9:AI:82:ALA:HB1	9:AI:96:LEU:HD13	2.00	0.42
1:CA:1084:G:OP1	1:CA:1086:U:C2	2.72	0.42
31:DA:2445:G:OP1	35:DF:74:ARG:NH2	2.42	0.42
46:DU:29:SER:O	46:DU:30:LYS:HD3	2.20	0.42
6:CF:60:PHE:O	6:CF:61:LEU:HD12	2.19	0.42
12:CL:55:VAL:HA	12:CL:70:ILE:HD13	2.01	0.42
12:CL:60:LEU:HD21	12:CL:66:VAL:HG22	2.00	0.42
24:D2:18:PRO:C	24:D2:20:GLU:N	2.70	0.42
24:D2:15:LYS:CA	24:D2:18:PRO:HD2	2.49	0.42
31:DA:1181:C:H2'	31:DA:1182:A:C8	2.55	0.42
1:CA:20:U:O2	1:CA:916:G:C2	2.73	0.42
14:CN:53:LEU:HB3	14:CN:56:VAL:HG21	2.00	0.42
39:BN:82:LEU:N	39:BN:82:LEU:HD12	2.24	0.42
39:DN:75:TYR:HD1	39:DN:75:TYR:N	2.17	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:BA:858:U:O2	31:BA:2268:A:H2'	2.20	0.42
31:BA:596:G:C6	31:BA:597:U:C4	3.07	0.42
17:CQ:24:GLU:HA	17:CQ:39:SER:HB3	2.01	0.42
13:AM:83:ASP:OD1	19:AS:66:MET:HE1	2.20	0.42
29:D7:34:ARG:NH1	29:D7:39:ARG:CB	2.82	0.42
1:AA:762:C:C2	1:AA:763:G:C8	3.08	0.42
6:AF:8:ILE:HD11	6:AF:79:LEU:HD13	2.02	0.42
46:DU:102:GLU:OE2	47:DV:2:PHE:CE1	2.72	0.42
5:CE:135:THR:O	5:CE:138:ALA:HB3	2.19	0.42
1:AA:857:C:H2'	1:AA:858:G:O4'	2.20	0.42
31:DA:302:C:O2'	31:DA:303:U:H5'	2.19	0.42
27:D5:29:THR:O	27:D5:30:LEU:HD23	2.19	0.42
31:DA:49:A:H5''	31:DA:51:G:O4'	2.18	0.42
34:DE:65:GLY:O	34:DE:67:PHE:N	2.48	0.42
31:BA:1864:U:C3'	31:BA:1865:G:H5''	2.49	0.42
42:DQ:108:GLY:C	42:DQ:109:VAL:HG23	2.40	0.42
2:CB:98:LEU:HB2	2:CB:101:MET:HE2	2.00	0.42
6:AF:94:GLN:HE21	18:AR:32:ARG:HH21	1.66	0.42
17:AQ:48:GLU:O	17:AQ:50:LYS:N	2.53	0.42
38:DI:94:ALA:CB	38:DI:114:LEU:HD12	2.49	0.42
1:AA:472:A:O2'	16:AP:82:GLN:NE2	2.52	0.42
1:AA:163:C:C2	1:AA:164:U:C5	3.07	0.42
1:CA:1469:G:H2'	1:CA:1470:G:C8	2.52	0.42
31:BA:2259:G:C8	31:BA:2427:C:C4	3.07	0.42
5:AE:15:ARG:CD	5:AE:26:PHE:CD2	3.02	0.42
1:AA:839:U:OP2	1:AA:840:C:H5	2.01	0.42
40:DO:87:ILE:HD13	40:DO:87:ILE:HA	1.52	0.42
32:BB:59:A:H2'	32:BB:60:C:O4'	2.20	0.42
35:BF:200:GLU:O	35:BF:204:ASN:HB2	2.18	0.42
31:DA:2063:C:O2	31:DA:2450:A:N1	2.52	0.42
48:DW:36:LEU:O	48:DW:37:ARG:C	2.58	0.42
44:DS:97:ARG:C	44:DS:97:ARG:NE	2.73	0.42
1:CA:1017:G:O5'	1:CA:1017:G:H8	2.01	0.42
18:AR:73:ALA:CB	18:AR:79:LEU:HD12	2.49	0.42
31:BA:2228:G:H2'	31:BA:2229:C:C6	2.54	0.42
38:DI:124:GLY:N	38:DI:142:VAL:HG23	2.34	0.42
31:BA:2608:G:H5''	31:BA:2609:U:OP2	2.20	0.42
26:B4:29:PRO:C	26:B4:31:ILE:H	2.22	0.42
51:DZ:128:VAL:HG23	51:DZ:160:GLY:O	2.20	0.42
51:DZ:24:LEU:HA	51:DZ:25:PRO:HD2	1.81	0.42
31:BA:1910:G:O2'	31:BA:1911:U:H5'	2.19	0.42
1:CA:1366:C:OP1	9:CI:117:HIS:CE1	2.72	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:DA:664:C:H4'	31:DA:941:A:OP1	2.20	0.42
21:AU:2:GLY:C	21:AU:4:GLY:H	2.21	0.42
22:B0:45:PHE:CE2	22:B0:69:PHE:HE2	2.37	0.42
31:BA:1217:C:H2'	31:BA:1218:C:O5'	2.19	0.42
44:BS:81:GLY:O	44:BS:82:ILE:C	2.58	0.42
31:BA:1881:C:O2	31:BA:1881:C:H2'	2.20	0.42
19:AS:19:VAL:O	19:AS:19:VAL:HG12	2.19	0.42
50:BY:31:LEU:HD13	50:BY:31:LEU:HA	1.59	0.42
27:D5:25:LEU:HD12	48:DW:19:LEU:HB3	2.02	0.42
15:AO:5:LYS:O	15:AO:9:GLN:HG2	2.20	0.42
51:BZ:6:LYS:HE3	51:BZ:6:LYS:HB2	1.78	0.42
7:AG:137:LYS:HB3	7:AG:137:LYS:HE2	1.86	0.42
48:BW:98:LYS:H	48:BW:98:LYS:HG2	1.70	0.42
40:BO:17:ARG:HD3	40:BO:17:ARG:HA	1.68	0.42
31:DA:681:G:H2'	31:DA:682:G:O4'	2.20	0.42
3:CC:120:VAL:O	3:CC:121:ALA:C	2.58	0.42
31:DA:2433:A:H5''	31:DA:2434:A:OP1	2.20	0.42
1:CA:1442(A):G:C3'	1:CA:1442(B):A:C5'	2.88	0.42
46:BU:92:ARG:HD3	46:BU:94:ASN:HB3	2.02	0.42
47:BV:50:PRO:O	47:BV:51:VAL:HB	2.18	0.42
47:BV:64:HIS:HB2	47:BV:95:LEU:O	2.20	0.42
33:DD:28:GLU:CB	33:DD:29:PRO:CD	2.98	0.42
33:DD:61:LEU:HD13	33:DD:61:LEU:HA	1.76	0.42
33:DD:85:ASP:OD2	33:DD:88:ARG:NH1	2.49	0.42
31:BA:1856:G:C2'	31:BA:1857:G:H5'	2.50	0.42
32:DB:40:U:N3	32:DB:43:C:H5''	2.34	0.42
41:DP:58:THR:O	41:DP:58:THR:HG22	2.19	0.42
31:DA:2810:A:H2'	34:DE:61:ARG:CZ	2.49	0.42
30:D8:29:LYS:O	30:D8:29:LYS:CG	2.66	0.42
51:DZ:151:HIS:HA	51:DZ:171:ILE:HG23	2.01	0.42
24:D2:35:LEU:H	24:D2:35:LEU:HD23	1.83	0.42
31:DA:57:C:H2'	31:DA:58:G:O4'	2.20	0.42
49:DX:74:PRO:C	49:DX:75:ASP:O	2.57	0.42
47:BV:90:PRO:O	47:BV:91:TYR:CB	2.67	0.42
51:BZ:144:LEU:N	51:BZ:144:LEU:HD22	2.35	0.42
1:AA:1441:G:H5''	1:AA:1442:G:C5'	2.49	0.42
1:CA:1253:G:H2'	1:CA:1254:C:O4'	2.20	0.42
44:BS:17:ARG:NE	44:BS:89:ARG:NH2	2.67	0.42
23:D1:67:ILE:O	23:D1:70:VAL:HB	2.19	0.42
15:CO:63:ARG:CG	15:CO:67:LEU:HD12	2.50	0.42
31:DA:584:C:N4	31:DA:585:G:C6	2.87	0.42
1:CA:411:A:O2'	1:CA:413:G:H5'	2.20	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:CA:545:C:HO2'	1:CA:546:G:H5'	1.82	0.42
1:CA:438:G:H4'	4:CD:123:HIS:ND1	2.34	0.42
4:CD:3:ARG:HD3	4:CD:5:ILE:HD11	2.01	0.42
36:DG:44:GLY:O	36:DG:45:GLU:HB3	2.19	0.42
1:AA:511:C:O2	1:AA:512:U:C6	2.72	0.42
1:AA:427:U:OP1	4:AD:13:ARG:NH2	2.52	0.42
5:AE:99:GLY:C	5:AE:116:THR:O	2.58	0.42
31:DA:1531:C:C3'	31:DA:1532:C:C5'	2.94	0.42
38:BI:10:GLU:C	38:BI:12:LEU:H	2.22	0.42
51:BZ:44:PHE:CZ	51:BZ:48:PHE:CD2	3.07	0.42
51:BZ:74:VAL:HG22	51:BZ:86:VAL:HG13	2.01	0.42
31:DA:857:C:O2	31:DA:857:C:H2'	2.19	0.42
17:AQ:45:HIS:HB3	17:AQ:72:ARG:HG2	2.01	0.42
48:DW:4:LYS:HE3	48:DW:6:ILE:HD11	2.02	0.42
51:BZ:27:VAL:HG13	51:BZ:29:TYR:HD2	1.85	0.42
1:AA:556:C:C2'	1:AA:557:G:H5'	2.49	0.42
1:AA:1452:C:H4'	1:AA:1456:G:O5'	2.20	0.42
6:AF:39:LYS:HB3	6:AF:62:TRP:HZ3	1.84	0.42
1:AA:1003:G:H2'	1:AA:1004:A:O4'	2.19	0.42
31:DA:1695:G:H1'	33:DD:8:PRO:O	2.20	0.42
2:CB:22:LYS:HZ3	2:CB:40:HIS:CE1	2.31	0.42
2:AB:171:ALA:HA	2:AB:174:VAL:HG23	2.01	0.42
47:DV:35:LEU:HA	47:DV:60:GLU:O	2.20	0.42
37:BH:90:LYS:O	37:BH:94:TYR:CD2	2.73	0.42
32:DB:88:C:H2'	32:DB:89:G:C8	2.55	0.42
1:CA:12:U:H4'	1:CA:526:C:O2'	2.20	0.42
2:CB:100:GLY:HA2	2:CB:176:GLU:OE1	2.19	0.42
19:CS:36:ARG:HH12	19:CS:75:ALA:CB	2.27	0.42
1:AA:1054:C:P	1:AA:1197:G:OP2	2.78	0.42
1:CA:1347:G:C8	9:CI:107:ARG:HB3	2.54	0.42
31:BA:299:A:C5	31:BA:322:A:C2	3.08	0.42
1:CA:1385:G:C6	1:CA:1386:G:N7	2.88	0.42
1:CA:658:G:C1'	15:CO:22:THR:HB	2.49	0.42
31:DA:452:G:C2	31:DA:458:G:C5	3.08	0.42
1:AA:951:G:C6	1:AA:1231:G:C6	3.07	0.42
5:CE:70:PRO:O	5:CE:71:LEU:O	2.37	0.42
5:AE:12:LEU:O	5:AE:13:ILE:HD12	2.19	0.42
2:CB:18:GLY:HA2	2:CB:42:ILE:HG22	2.01	0.42
8:CH:21:LYS:O	8:CH:22:GLU:C	2.56	0.42
8:AH:28:ALA:HA	8:AH:59:LEU:HG	2.01	0.42
1:CA:857:C:H2'	1:CA:858:G:O4'	2.19	0.42
7:AG:26:PHE:HB2	7:AG:62:PHE:HZ	1.83	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:DA:1000:A:N6	31:DA:1155:A:C8	2.88	0.42
8:CH:58:TYR:N	8:CH:58:TYR:CD1	2.88	0.42
1:AA:577:G:C2	1:AA:578:C:C6	3.08	0.42
1:AA:832:C:N4	1:AA:855:G:C6	2.88	0.42
1:AA:827:U:C4	1:AA:870:U:N3	2.87	0.42
1:CA:577:G:C1'	1:CA:816:A:C4	3.02	0.42
31:DA:2853:C:H6	31:DA:2853:C:O5'	2.03	0.42
31:DA:825:C:C2'	31:DA:826:U:O5'	2.67	0.42
31:DA:50:U:H5''	31:DA:50:U:H6	1.83	0.42
31:BA:302:C:H2'	31:BA:303:U:O5'	2.20	0.42
2:CB:98:LEU:H	2:CB:101:MET:HE3	1.85	0.42
31:DA:64:A:O3'	49:DX:68:ARG:O	2.37	0.42
31:BA:1948:G:C2'	31:BA:1949:G:H5'	2.50	0.42
35:BF:116:ASP:OD1	35:BF:119:ARG:NH2	2.52	0.42
31:DA:836:G:C6	31:DA:837:C:C4	3.08	0.42
35:BF:110:LEU:HD21	35:BF:181:LEU:HD23	2.02	0.42
17:AQ:60:ILE:HB	17:AQ:74:LEU:HD23	2.01	0.42
38:BI:110:ASP:C	38:BI:112:LYS:H	2.23	0.42
1:CA:117:G:O2'	1:CA:118:U:H5'	2.20	0.42
36:BG:118:ARG:HB2	36:BG:181:ARG:CZ	2.50	0.42
15:CO:20:GLY:O	15:CO:21:ASP:HB3	2.19	0.42
1:CA:883:C:O2'	1:CA:884:U:H5'	2.20	0.42
1:CA:1328:C:H2'	1:CA:1329:A:O4'	2.20	0.42
31:BA:2225:A:C1'	31:BA:2226:C:OP2	2.68	0.42
39:BN:5:VAL:HG22	39:BN:6:PRO:HD2	2.01	0.42
1:AA:994:A:N6	1:AA:1046:A:C2	2.87	0.42
1:AA:994:A:H62	1:AA:1046:A:H2	1.66	0.42
1:CA:1006:C:N3	1:CA:1023:G:O6	2.53	0.42
1:AA:770:C:C2'	1:AA:771:G:H5'	2.49	0.42
31:DA:417:C:H1'	31:DA:2407:G:N2	2.35	0.42
13:CM:94:ARG:O	13:CM:96:LEU:HG	2.20	0.42
31:DA:1814:G:H2'	31:DA:1815:A:C8	2.54	0.42
11:CK:41:THR:CG2	11:CK:42:TRP:N	2.83	0.42
7:AG:49:ILE:HG22	7:AG:49:ILE:O	2.19	0.42
33:BD:37:LEU:HD23	33:BD:37:LEU:N	2.34	0.42
31:BA:2196:C:O2'	31:BA:2197:U:H5'	2.19	0.42
13:CM:115:LYS:O	13:CM:116:THR:C	2.58	0.42
41:BP:62:LEU:HD23	41:BP:62:LEU:O	2.20	0.42
39:DN:41:ASP:O	39:DN:42:TRP:O	2.37	0.42
42:DQ:7:MET:O	42:DQ:10:ARG:NE	2.48	0.42
31:BA:1568:G:H5'	33:BD:60:ARG:HA	2.01	0.42
33:DD:31:LYS:O	33:DD:32:SER:C	2.56	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
41:DP:48:PRO:CG	41:DP:49:ARG:N	2.83	0.42
28:D6:26:ASN:ND2	28:D6:32:ASN:ND2	2.68	0.42
30:D8:36:LYS:O	30:D8:37:SER:O	2.36	0.42
50:BY:75:ILE:HD13	50:BY:79:CYS:O	2.20	0.42
51:BZ:104:PHE:HA	51:BZ:139:VAL:HB	2.02	0.42
49:BX:65:ARG:HE	49:BX:65:ARG:HA	1.83	0.42
31:DA:104:U:H6	31:DA:104:U:O5'	2.02	0.42
46:DU:91:ASP:C	46:DU:92:ARG:O	2.57	0.42
1:CA:49:U:C2	1:CA:361:G:N2	2.88	0.42
1:CA:373:A:C4	1:CA:374:A:C8	3.08	0.42
31:BA:142:A:C5'	31:BA:142(A):C:OP2	2.64	0.42
24:B2:41:ILE:HG12	31:BA:94(A):G:N2	2.35	0.42
32:BB:44:G:N2	32:BB:48:A:C4	2.88	0.42
32:BB:45:A:C2	32:BB:46:A:H1'	2.55	0.42
36:BG:60:LEU:HD22	36:BG:63:ILE:CG1	2.49	0.42
44:BS:18:ILE:CG2	44:BS:19:LYS:N	2.82	0.42
44:DS:54:LEU:HD22	44:DS:58:LEU:O	2.19	0.42
31:DA:686:G:H21	31:DA:788:A:H61	1.66	0.42
31:BA:669:G:H8	31:BA:669:G:O2'	1.92	0.42
23:B1:89:GLU:N	23:B1:89:GLU:OE2	2.52	0.42
23:D1:89:GLU:O	23:D1:90:ILE:C	2.57	0.42
8:AH:101:PRO:HG2	8:AH:133:LEU:HD11	2.02	0.42
15:CO:67:LEU:CD2	15:CO:78:TYR:HE1	2.29	0.42
44:BS:35:ILE:HG21	44:BS:66:ALA:HB2	2.01	0.42
1:CA:922:G:N3	1:CA:1398:A:H2	2.17	0.42
31:DA:778:G:C5	31:DA:779:U:C5	3.08	0.42
37:DH:138:LYS:C	37:DH:140:LYS:N	2.72	0.42
31:DA:1142(A):A:N9	31:DA:1144:G:N7	2.67	0.42
31:DA:2250:G:C6	42:DQ:82:ARG:HD3	2.54	0.42
31:DA:2469:A:C5	31:DA:2482:G:C8	3.08	0.42
36:DG:60:LEU:HD22	36:DG:63:ILE:CG1	2.49	0.42
31:BA:2070:G:C2	31:BA:2442:C:C2	3.08	0.42
39:BN:67:LEU:HD22	39:BN:88:GLU:OE2	2.19	0.42
1:CA:1392:G:O2'	1:CA:1393:U:H5'	2.19	0.42
50:BY:14:LEU:CG	50:BY:15:VAL:N	2.82	0.42
41:DP:100:LEU:HD23	41:DP:112:LEU:HD11	2.02	0.42
36:BG:47:LYS:HG3	36:BG:82:LEU:CD1	2.50	0.42
38:DI:62:LYS:HE2	38:DI:134:PRO:HG3	2.02	0.42
31:DA:287:C:H2'	31:DA:288:C:O4'	2.20	0.42
31:DA:359:A:H2'	31:DA:360:G:O4'	2.20	0.42
50:DY:8:LYS:CD	50:DY:28:LYS:NZ	2.80	0.42
31:DA:2564:A:C6	31:DA:2565:A:N1	2.88	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:CA:340:U:O2'	1:CA:341:C:H5'	2.20	0.42
30:B8:62:LEU:HB3	31:BA:242:G:H5'	2.01	0.42
1:CA:102:G:C6	1:CA:103:C:N4	2.87	0.42
31:DA:483:A:H3'	31:DA:484:C:C6	2.55	0.42
18:CR:44:LEU:O	18:CR:45:SER:C	2.58	0.42
31:BA:2839:G:C2	31:BA:2880:C:N3	2.88	0.42
22:D0:72:ARG:O	22:D0:75:LEU:HB2	2.20	0.42
28:B6:44:ARG:O	28:B6:45:LYS:CG	2.58	0.42
13:AM:25:ILE:HD12	13:AM:25:ILE:N	2.34	0.42
31:DA:1386:C:OP2	31:DA:1396:U:H5	2.03	0.42
1:AA:1049:U:OP1	14:AN:3:ARG:NH1	2.52	0.42
48:BW:17:VAL:O	48:BW:18:ARG:C	2.57	0.42
1:AA:1452:C:H4'	1:AA:1456:G:N3	2.34	0.42
4:CD:109:GLY:O	4:CD:110:PHE:C	2.57	0.42
32:BB:79:C:H2'	32:BB:80:U:H5'	1.98	0.42
1:CA:1452:C:H4'	1:CA:1456:G:N3	2.35	0.42
34:BE:52:LEU:HA	34:BE:52:LEU:HD12	1.37	0.42
10:CJ:95:GLU:C	10:CJ:96:ILE:HD13	2.40	0.42
31:BA:2584:U:O2	31:BA:2584:U:O5'	2.37	0.42
1:CA:1116:C:N4	1:CA:1117:G:N7	2.68	0.42
31:BA:18:C:H2'	31:BA:19:C:H6	1.84	0.42
37:BH:153:LYS:CG	37:BH:154:PRO:N	2.82	0.42
1:CA:189:G:O2'	1:CA:189(A):C:H5'	2.19	0.42
1:AA:38:G:H22	1:AA:397:A:H5''	1.85	0.42
8:AH:24:THR:HG22	8:AH:25:ASP:H	1.83	0.42
1:CA:38:G:N1	1:CA:397:A:C2	2.88	0.42
31:DA:1049:C:H1'	31:DA:1113:U:O2'	2.19	0.42
42:BQ:72:LYS:HB3	42:BQ:94:VAL:HG22	2.01	0.42
31:BA:1299:G:H5''	31:BA:1300:U:OP1	2.20	0.42
1:CA:617:G:C6	1:CA:618:C:C4	3.08	0.42
41:BP:7:ARG:O	41:BP:10:PRO:HD3	2.18	0.42
1:AA:1385:G:C6	1:AA:1386:G:N7	2.87	0.42
13:CM:71:ARG:HG3	13:CM:71:ARG:O	2.18	0.42
5:AE:128:PRO:O	5:AE:129:ILE:C	2.57	0.42
1:AA:349:A:C2'	1:AA:350:G:H5'	2.50	0.42
1:AA:832:C:O2'	1:AA:833:U:O5'	2.33	0.42
31:DA:2473:U:C2	31:DA:2474:C:C6	3.08	0.42
38:DI:107:VAL:HG12	38:DI:108:THR:N	2.34	0.42
3:CC:87:LEU:O	3:CC:91:LEU:HG	2.20	0.42
1:CA:521:G:O2'	1:CA:522:C:H5'	2.20	0.42
17:AQ:74:LEU:HA	17:AQ:74:LEU:HD22	1.89	0.42
13:CM:29:ARG:HD3	13:CM:64:TRP:CZ3	2.55	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:AB:129:GLU:HB3	2:AB:130:ARG:H	1.69	0.42
35:DF:132:VAL:CG2	35:DF:133:ASN:N	2.83	0.42
36:DG:153:ARG:HB3	36:DG:153:ARG:CZ	2.49	0.42
41:DP:148:LEU:HD13	41:DP:148:LEU:N	2.35	0.42
8:CH:73:ASP:OD2	8:CH:75:ARG:HG3	2.19	0.42
44:DS:83:LYS:HE2	44:DS:105:ALA:HB2	2.00	0.42
35:DF:107:LYS:O	35:DF:108:LYS:C	2.57	0.42
31:BA:319:C:C2	31:BA:333:G:N2	2.87	0.42
15:CO:64:ARG:HH11	15:CO:64:ARG:HG3	1.84	0.42
31:BA:28:A:C4	31:BA:29:U:C6	3.07	0.42
22:D0:82:ARG:HA	22:D0:83:PRO:HD2	1.78	0.42
31:DA:1615:C:C6	31:DA:1617:C:C5	3.08	0.42
31:BA:2048:G:C5	31:BA:2049:G:C8	3.08	0.42
31:BA:1619:G:H2'	31:BA:1619:G:N3	2.35	0.42
49:DX:28:PHE:CD1	49:DX:28:PHE:N	2.88	0.42
12:AL:20:LYS:H	12:AL:20:LYS:HD3	1.85	0.42
31:DA:1942:C:C4	31:DA:1943:U:C4	3.07	0.42
31:BA:1497:U:P	31:BA:1497:U:O4'	2.78	0.42
33:BD:25:THR:O	33:BD:26:LYS:C	2.59	0.42
33:BD:35:LYS:CE	33:BD:64:ILE:C	2.88	0.42
33:DD:25:THR:HG21	33:DD:82:ILE:N	2.33	0.42
47:DV:69:LYS:O	47:DV:70:ILE:CG2	2.65	0.42
47:DV:75:PHE:CD1	47:DV:89:GLN:HB3	2.50	0.42
31:DA:1497:U:H3	31:DA:1578:U:P	2.42	0.42
4:AD:126:ILE:HG22	4:AD:127:THR:N	2.35	0.42
49:DX:57:LEU:HD13	49:DX:77:LYS:HB2	2.00	0.42
41:BP:56:SER:O	41:BP:57:THR:C	2.58	0.42
31:BA:661:C:H2'	31:BA:662:G:H8	1.83	0.42
15:AO:32:LEU:O	15:AO:33:THR:C	2.58	0.42
49:BX:59:VAL:HG22	49:BX:74:PRO:O	2.20	0.42
2:AB:51:LEU:HD22	2:AB:55:PHE:CE2	2.55	0.42
32:BB:40:U:H3'	32:BB:41:U:H5''	2.01	0.42
36:BG:67:LYS:H	36:BG:67:LYS:CD	2.20	0.42
1:AA:1277:C:O2'	1:AA:1279:A:H1'	2.19	0.42
27:D5:33:CYS:HB2	27:D5:40:LYS:HE3	2.00	0.42
31:BA:777:A:N3	31:BA:778:G:C8	2.87	0.42
23:B1:89:GLU:O	23:B1:90:ILE:C	2.57	0.42
23:B1:86:SER:HA	23:B1:89:GLU:OE1	2.19	0.42
31:DA:2274:A:O5'	31:DA:2275:C:OP2	2.36	0.42
31:BA:1022:G:C6	31:BA:1141:U:C5	3.07	0.42
31:BA:2801(A):A:C3'	31:BA:2802:G:H5'	2.50	0.42
35:BF:2:LYS:HE2	35:BF:2:LYS:HB3	1.81	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:DA:639:U:O2'	31:DA:640:C:H5'	2.20	0.42
31:BA:329:G:OP2	50:BY:71:LYS:HE3	2.20	0.42
31:DA:2660:A:H3'	31:DA:2660:A:N3	2.35	0.42
1:AA:407:G:O2'	4:AD:116:GLN:CB	2.68	0.42
1:CA:335:C:O2'	1:CA:336:C:H5'	2.19	0.42
48:DW:92:ARG:O	48:DW:93:ALA:HB3	2.20	0.42
17:AQ:68:ARG:O	17:AQ:68:ARG:HG3	2.20	0.42
9:AI:18:PHE:HB3	9:AI:20:ARG:HH11	1.82	0.42
37:DH:43:VAL:CG2	37:DH:43:VAL:O	2.57	0.42
43:BR:12:ARG:CG	43:BR:12:ARG:NH1	2.80	0.42
31:BA:857:C:O2	31:BA:857:C:H2'	2.18	0.42
11:CK:29:ILE:HB	11:CK:44:SER:HB2	1.98	0.42
34:DE:116:VAL:CG2	34:DE:122:PHE:HB2	2.49	0.42
3:AC:43:LEU:O	3:AC:47:LEU:HD23	2.20	0.42
31:DA:1392:A:C6	31:DA:1393:A:C6	3.08	0.42
1:AA:977:A:C8	1:AA:1223:C:N3	2.88	0.42
1:AA:982:U:C2	1:AA:983:A:N6	2.88	0.42
38:DI:82:ARG:HG2	38:DI:89:TYR:CE2	2.55	0.42
1:CA:68:G:N2	1:CA:69:G:C4	2.87	0.42
1:AA:458:C:H3'	1:AA:460:G:H8	1.85	0.42
5:AE:75:THR:OG1	5:AE:76:ILE:N	2.50	0.42
10:CJ:5:ARG:HA	10:CJ:73:ASP:OD1	2.20	0.42
14:AN:29:ARG:NH2	14:AN:41:ARG:HH12	2.18	0.42
31:DA:1767:C:O2'	31:DA:1768:U:H5'	2.19	0.42
31:BA:1429:G:H2'	31:BA:1430:C:H6	1.84	0.42
31:DA:272(B):G:H2'	31:DA:272(C):G:O5'	2.20	0.42
1:CA:666:G:C2	1:CA:741:G:C4	3.08	0.42
35:DF:7:TYR:CD1	35:DF:8:GLN:N	2.88	0.42
31:DA:706:A:OP1	33:DD:7:LYS:HE3	2.20	0.42
5:AE:135:THR:O	5:AE:138:ALA:HB3	2.19	0.42
5:AE:91:LEU:HD12	5:AE:91:LEU:HA	1.76	0.42
31:BA:1586:A:C2	31:BA:1587:A:N7	2.88	0.42
38:DI:56:LYS:HZ2	38:DI:57:ARG:HB2	1.85	0.42
31:DA:559:G:H22	46:DU:49:HIS:CD2	2.37	0.42
36:BG:39:ILE:O	36:BG:39:ILE:HG13	2.19	0.42
31:BA:830:G:H1'	31:BA:2448:A:N1	2.35	0.42
25:B3:46:ASN:ND2	31:BA:851:U:H5'	2.35	0.42
1:CA:894:G:C6	1:CA:895:G:C5	3.07	0.42
34:DE:134:ILE:HB	34:DE:137:HIS:HB2	2.02	0.42
8:CH:103:VAL:CG2	8:CH:110:ALA:HB2	2.49	0.42
43:BR:103:ARG:HH11	48:BW:40:ASN:ND2	2.17	0.42
31:DA:838:C:C2'	31:DA:839:U:H5'	2.49	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
45:DT:53:ARG:CG	45:DT:53:ARG:NH1	2.81	0.42
1:AA:1152:A:OP1	10:AJ:68:HIS:CD2	2.73	0.42
11:CK:21:ILE:HD12	11:CK:21:ILE:N	2.34	0.42
1:CA:117:G:H8	1:CA:117:G:O5'	2.03	0.42
31:BA:873:G:H1	31:BA:904:C:N4	2.18	0.42
31:DA:39:C:H2'	31:DA:40:C:C6	2.54	0.42
31:DA:319:C:C2	31:DA:333:G:N2	2.87	0.42
11:CK:69:ALA:O	11:CK:73:MET:HG3	2.19	0.42
11:CK:81:ASP:OD2	11:CK:106:LYS:HG2	2.20	0.42
9:CI:99:LEU:HD12	9:CI:101:PHE:CZ	2.55	0.42
1:AA:515:G:C6	1:AA:516:U:N3	2.87	0.42
2:CB:194:PRO:O	2:CB:196:LEU:N	2.52	0.42
1:AA:1328:C:H2'	1:AA:1329:A:O4'	2.20	0.42
31:DA:2870:C:C2'	31:DA:2871:C:H5'	2.50	0.42
19:CS:69:HIS:HB2	19:CS:74:PHE:HE2	1.85	0.42
34:DE:55:ASN:HA	34:DE:56:PRO:HD3	1.84	0.42
31:BA:2038:G:H2'	31:BA:2039:C:O4'	2.20	0.42
1:CA:348:G:N2	1:CA:349:A:C4	2.88	0.42
40:DO:21:CYS:HB2	40:DO:39:ILE:HD12	2.02	0.42
12:CL:93:LEU:O	12:CL:94:PRO:C	2.57	0.42
37:DH:64:LEU:O	37:DH:67:LEU:HB3	2.19	0.42
31:DA:2596:U:C2'	31:DA:2597:G:H5'	2.50	0.42
4:AD:132:ARG:HG3	4:AD:132:ARG:H	1.61	0.42
35:DF:33:LEU:HD12	35:DF:33:LEU:HA	1.85	0.42
20:CT:24:LEU:C	20:CT:24:LEU:HD13	2.40	0.42
31:BA:1345:C:O2'	31:BA:1346:G:H5'	2.20	0.42
1:CA:1441:G:H5''	1:CA:1442:G:C5'	2.48	0.42
31:BA:996:A:OP2	46:BU:92:ARG:CZ	2.67	0.42
1:AA:68:G:C2	1:AA:69:G:C4	3.08	0.42
33:BD:35:LYS:HE3	33:BD:65:ILE:HG22	2.02	0.42
33:DD:101:GLU:OE1	33:DD:103:ARG:HD3	2.19	0.42
47:DV:71:LEU:C	47:DV:71:LEU:HD22	2.40	0.42
31:BA:2317:C:O2	31:BA:2317:C:C2'	2.58	0.42
28:D6:16:CYS:O	28:D6:18:ARG:NE	2.51	0.42
28:D6:30:THR:HB	31:DA:2286:A:OP1	2.20	0.42
30:D8:30:ARG:NH2	41:DP:62:LEU:HB2	2.35	0.42
31:DA:1857:G:C2'	31:DA:1885:A:H61	2.33	0.42
41:BP:57:THR:O	41:BP:58:THR:CB	2.67	0.42
2:CB:204:ASN:HD21	2:CB:207:ALA:H	1.66	0.42
31:BA:1340:U:H4'	31:BA:1341:U:OP2	2.18	0.42
31:DA:330:A:O2'	31:DA:331:A:H8	2.03	0.42
31:DA:2197:U:C6	31:DA:2224:G:C6	3.08	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
41:BP:71:VAL:O	41:BP:73:GLY:N	2.53	0.42
23:B1:73:LEU:O	23:B1:74:VAL:C	2.57	0.42
23:B1:79:GLY:O	23:B1:80:LEU:HD23	2.19	0.42
8:AH:112:LEU:HA	8:AH:134:ILE:H	1.84	0.42
8:AH:134:ILE:O	8:AH:135:CYS:HB3	2.20	0.42
31:BA:2895:U:C5	31:BA:2896:C:C5	3.08	0.42
1:CA:407:G:O2'	4:CD:116:GLN:CG	2.68	0.42
31:DA:2310:A:H5'	31:DA:2310:A:N3	2.35	0.42
45:BT:29:ARG:CB	45:BT:85:LYS:CA	2.94	0.42
41:DP:111:ARG:HG3	41:DP:128:HIS:CG	2.55	0.42
41:DP:98:GLU:HG3	41:DP:99:LEU:H	1.81	0.42
1:AA:1502:A:H2	1:AA:1505:G:C2	2.38	0.42
1:CA:953:G:O6	1:CA:1228:C:N4	2.53	0.42
31:BA:1880:C:C6	31:BA:1880:C:H5'	2.51	0.42
31:BA:281:G:N2	31:BA:358:U:H5	2.17	0.42
31:BA:571:A:C8	31:BA:2030:A:N6	2.87	0.42
31:BA:482:A:H5'	50:BY:47:LYS:HD3	2.01	0.42
45:DT:33:LYS:NZ	45:DT:33:LYS:CA	2.83	0.42
30:B8:6:THR:HB	30:B8:63:PRO:CG	2.36	0.42
51:BZ:39:VAL:HG23	51:BZ:40:ASP:N	2.33	0.42
17:AQ:70:ARG:C	17:AQ:71:PHE:CD2	2.93	0.42
31:BA:856:C:H2'	31:BA:856:C:O2	2.20	0.42
1:AA:1068:G:OP2	1:AA:1094:G:H5'	2.20	0.42
43:DR:16:HIS:O	43:DR:19:ALA:HB3	2.20	0.42
1:AA:982:U:H5''	14:AN:6:LEU:CD1	2.49	0.42
24:B2:18:PRO:O	24:B2:20:GLU:N	2.53	0.42
31:BA:1313:U:H2'	31:BA:1610:A:N1	2.34	0.42
28:B6:16:CYS:O	28:B6:18:ARG:CZ	2.68	0.42
31:BA:860:U:O4'	31:BA:860:U:O2	2.38	0.42
31:BA:861:A:C2	31:BA:917:A:N3	2.88	0.42
1:CA:1286:A:H2	21:CU:22:ARG:HH22	1.67	0.42
45:BT:50:ILE:HA	45:BT:99:LEU:CD1	2.50	0.42
34:DE:50:GLY:HA3	34:DE:74:PRO:HG3	2.02	0.42
35:DF:63:LYS:NZ	35:DF:67:GLN:HB2	2.35	0.42
35:DF:162:LEU:HD12	35:DF:162:LEU:HA	1.78	0.42
5:AE:72:GLN:O	5:AE:75:THR:HG22	2.20	0.42
33:DD:193:VAL:HG13	33:DD:193:VAL:O	2.18	0.42
31:DA:1028:A:H61	31:DA:1125:G:H2'	1.84	0.42
31:DA:17:G:C6	31:DA:18:C:N4	2.87	0.42
20:AT:29:LYS:O	20:AT:33:ILE:HG12	2.20	0.42
1:CA:815:A:C2	1:CA:1529:G:C4	3.08	0.42
1:CA:1298:C:H2'	7:CG:114:ARG:HH12	1.85	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
37:DH:153:LYS:CG	37:DH:154:PRO:N	2.82	0.42
42:BQ:134:ARG:NH2	51:BZ:122:ARG:HD2	2.31	0.42
1:AA:1298:C:H4'	1:AA:1299:A:C4	2.55	0.42
25:B3:11:SER:HB3	31:BA:988:A:P	2.60	0.42
31:BA:274:G:N7	31:BA:363:G:C6	2.88	0.42
27:B5:42:PRO:HB2	31:BA:2815:C:O2'	2.20	0.42
1:AA:338:A:C2'	1:AA:339:C:H5'	2.48	0.42
1:AA:339:C:H2'	1:AA:340:U:C6	2.55	0.42
31:BA:1533:G:HO2'	31:BA:1543:C:P	2.38	0.42
4:CD:148:VAL:HG12	4:CD:152:SER:HB2	2.00	0.42
2:CB:8:LYS:HZ2	2:CB:217:ARG:HH11	1.65	0.42
31:BA:1042:G:H5'	31:BA:1043:C:OP2	2.19	0.42
10:AJ:50:ILE:HA	10:AJ:60:ARG:CB	2.50	0.42
4:AD:171:GLY:HA2	4:AD:172:PRO:HD3	1.76	0.42
31:DA:2826:A:H2'	31:DA:2827:C:O5'	2.19	0.42
46:DU:8:VAL:O	46:DU:9:VAL:C	2.58	0.42
31:DA:1865:G:H2'	31:DA:1876:A:N7	2.35	0.42
31:BA:701:G:N2	31:BA:732:C:C2	2.88	0.42
31:DA:892:G:H2'	31:DA:893:C:C5'	2.50	0.42
1:CA:793:U:O2	1:CA:1516:G:H4'	2.20	0.42
1:CA:1518:A:H5''	1:CA:1519:A:OP2	2.20	0.42
1:CA:980:C:H5'	1:CA:981:U:C5	2.55	0.42
1:CA:105:G:C6	1:CA:106:C:C4	3.08	0.42
31:DA:738:G:C6	31:DA:739:G:C2	3.07	0.42
31:BA:2190:G:H2'	31:BA:2191:G:H5'	2.02	0.42
22:D0:1:MET:O	22:D0:2:ALA:HB3	2.20	0.42
44:DS:97:ARG:O	44:DS:97:ARG:NE	2.53	0.42
11:AK:38:ASN:HA	11:AK:39:PRO:HD3	1.89	0.42
38:BI:1:MET:HB2	38:BI:21:VAL:O	2.20	0.42
1:AA:1137:C:H6	1:AA:1137:C:H3'	1.85	0.42
31:DA:2526:G:H5'	31:DA:2742:C:O2'	2.20	0.42
1:AA:654:G:C2'	1:AA:655:A:H5'	2.50	0.42
31:BA:846:C:C4	31:BA:930:U:C4	3.08	0.42
31:DA:1705:G:C5	31:DA:1706:U:C4	3.08	0.42
11:AK:125:PHE:H	11:AK:125:PHE:HD1	1.67	0.42
11:AK:125:PHE:N	11:AK:125:PHE:HD1	2.18	0.42
31:DA:1470:G:N2	31:DA:1523:U:C4	2.87	0.42
1:CA:1464:G:O2'	1:CA:1465:C:H5'	2.19	0.42
35:BF:107:LYS:O	35:BF:108:LYS:C	2.57	0.42
1:CA:1366:C:H2'	1:CA:1367:C:C6	2.55	0.42
1:AA:1194:U:H2'	1:AA:1195:C:C6	2.55	0.42
31:DA:977:G:C6	31:DA:987:G:C6	3.08	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
33:DD:124:PRO:HG2	33:DD:129:ASN:ND2	2.35	0.42
31:BA:1922:G:H2'	31:BA:1923:U:O4'	2.20	0.42
14:AN:25:VAL:HG23	14:AN:38:GLY:O	2.19	0.42
31:BA:2793:G:O2'	31:BA:2794:C:OP2	2.32	0.42
31:BA:1121:C:H2'	31:BA:1122:G:O5'	2.20	0.42
17:AQ:18:THR:HG23	17:AQ:69:LYS:HE3	2.02	0.42
39:BN:7:LYS:H	39:BN:7:LYS:HG3	1.60	0.42
5:AE:140:ARG:HB2	5:AE:140:ARG:HE	1.68	0.42
14:CN:24:CYS:HB3	14:CN:27:CYS:O	2.20	0.42
2:AB:153:ARG:O	2:AB:154:LEU:C	2.58	0.42
2:AB:163:PHE:CD2	2:AB:185:ILE:HG13	2.48	0.42
2:CB:153:ARG:HB2	2:CB:154:LEU:H	1.60	0.42
44:DS:90:GLY:C	44:DS:92:TYR:N	2.74	0.42
47:DV:90:PRO:O	47:DV:91:TYR:CB	2.68	0.42
34:DE:63:LEU:O	34:DE:64:LYS:C	2.58	0.42
31:DA:2402:C:C2'	31:DA:2403:C:H5'	2.50	0.42
46:DU:92:ARG:HD3	46:DU:94:ASN:HB3	2.01	0.42
47:DV:38:LEU:CG	47:DV:39:LEU:N	2.81	0.42
16:CP:20:VAL:HG22	16:CP:21:VAL:H	1.85	0.42
16:CP:20:VAL:CG2	16:CP:21:VAL:N	2.82	0.42
24:B2:44:LEU:C	24:B2:46:GLN:N	2.73	0.42
34:BE:119:ARG:HG2	34:BE:160:TYR:HB2	2.01	0.42
1:AA:597:G:C8	1:AA:598:U:C5	3.08	0.42
31:BA:686:G:N2	31:BA:788:A:H61	2.18	0.42
34:DE:111:ARG:CD	34:DE:160:TYR:CE1	3.03	0.42
31:DA:1005:C:O2	31:DA:1143:A:C6	2.73	0.42
31:DA:2275:C:C5'	31:DA:2275:C:H6	2.33	0.42
34:DE:82:ARG:O	34:DE:84:PHE:N	2.52	0.42
1:CA:411:A:C5	1:CA:429:U:C4	3.08	0.42
42:BQ:20:ALA:C	42:BQ:22:LYS:N	2.73	0.42
31:DA:2664:G:H2'	31:DA:2665:A:O5'	2.20	0.42
1:AA:411:A:O2'	1:AA:413:G:H5'	2.20	0.42
31:DA:1465:G:C2'	31:DA:1466:G:O5'	2.68	0.42
24:D2:56:GLN:CD	24:D2:56:GLN:H	2.24	0.42
31:DA:287:C:C2'	31:DA:288:C:O5'	2.68	0.42
31:BA:280:C:H2'	31:BA:281:G:H5'	2.01	0.42
42:DQ:20:ALA:HB2	42:DQ:99:PRO:CD	2.46	0.42
31:DA:2652:C:C2'	31:DA:2653:U:C5'	2.87	0.42
9:CI:82:ALA:HB1	9:CI:96:LEU:HD13	2.01	0.42
31:BA:1485:G:H1'	31:BA:1505:C:N4	2.35	0.42
1:AA:253:U:H2'	1:AA:254:G:C8	2.54	0.42
1:AA:437:U:H4'	4:AD:125:HIS:HE2	1.83	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
28:B6:27:LYS:HD2	31:BA:2285:C:C5	2.55	0.42
31:DA:271(E):U:C2	31:DA:271(F):C:C5	3.08	0.42
1:AA:1065:U:O2'	1:AA:1066:C:OP2	2.35	0.42
1:AA:1084:G:OP1	1:AA:1086:U:N3	2.53	0.42
31:BA:271(P):C:O5'	38:BI:45:LYS:HE3	2.20	0.42
1:AA:618:C:H3'	1:AA:619:U:H5''	2.01	0.42
45:DT:13:ARG:HH21	45:DT:15:VAL:CG1	2.33	0.42
34:BE:78:LEU:H	34:BE:78:LEU:HG	1.48	0.42
31:BA:685:A:C5	31:BA:774:A:C2	3.08	0.42
1:AA:1126:U:H2'	1:AA:1127:G:O5'	2.20	0.42
10:AJ:5:ARG:HA	10:AJ:73:ASP:OD1	2.20	0.42
43:BR:44:LEU:CD2	43:BR:48:VAL:HG23	2.49	0.42
1:AA:1281:U:H3'	1:AA:1282:C:H6	1.84	0.42
36:DG:25:TYR:CE2	36:DG:32:PRO:HD3	2.55	0.42
36:BG:25:TYR:CE2	36:BG:32:PRO:HD3	2.54	0.42
13:CM:97:PRO:O	13:CM:98:VAL:HA	2.19	0.42
31:DA:322:A:H4'	31:DA:323:G:OP2	2.20	0.42
8:AH:25:ASP:OD2	8:AH:60:ARG:NE	2.52	0.42
2:CB:132:LYS:O	2:CB:136:VAL:HG23	2.20	0.42
32:DB:37:C:C6	32:DB:38:C:C5	3.08	0.42
42:BQ:89:ASN:N	42:BQ:89:ASN:ND2	2.65	0.42
31:DA:2205:C:C2	31:DA:2220:G:N1	2.88	0.42
1:AA:774:G:C2'	1:AA:775:G:H5'	2.49	0.42
1:CA:749:C:H6	1:CA:749:C:O5'	2.02	0.42
45:DT:108:ARG:HB2	45:DT:111:ARG:CZ	2.50	0.42
1:CA:1128:C:N3	1:CA:1139:G:C6	2.87	0.42
5:AE:31:LEU:HA	5:AE:31:LEU:HD23	1.84	0.42
43:DR:103:ARG:HH11	48:DW:40:ASN:ND2	2.18	0.42
8:AH:28:ALA:CB	8:AH:57:PRO:O	2.68	0.42
8:AH:58:TYR:HD1	8:AH:58:TYR:N	2.18	0.42
1:CA:1271:G:H5'	1:CA:1314:C:C5'	2.49	0.42
1:CA:951:G:C6	1:CA:1231:G:C6	3.08	0.42
35:DF:6:VAL:O	35:DF:124:LEU:HD12	2.20	0.42
31:BA:1570:A:H2'	31:BA:1571:A:C8	2.55	0.42
8:CH:45:ILE:HG22	8:CH:62:TYR:O	2.20	0.42
40:BO:87:ILE:HG23	40:BO:88:ASN:N	2.35	0.42
10:AJ:81:THR:O	10:AJ:85:LEU:HG	2.19	0.42
20:AT:63:ILE:HG22	20:AT:77:ALA:HB1	2.01	0.42
17:AQ:14:LYS:HZ2	17:AQ:14:LYS:N	2.17	0.42
1:AA:106:C:C2	1:AA:107:G:C8	3.08	0.42
1:CA:244:U:C6	1:CA:894:G:N2	2.88	0.42
33:BD:4:LYS:HB2	33:BD:18:VAL:HG12	2.01	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:CG:69:VAL:HG22	7:CG:134:ALA:O	2.20	0.42
1:AA:808:C:OP1	15:AO:48:LYS:HE3	2.19	0.42
34:DE:10:GLY:HA3	45:DT:8:LYS:CE	2.50	0.42
31:DA:1553:A:N6	31:DA:1555:G:H1'	2.35	0.42
1:AA:177:C:O2'	1:AA:178:C:H5'	2.20	0.42
31:BA:2074:U:H2'	31:BA:2075:U:C6	2.54	0.42
31:DA:364:C:O2	31:DA:364:C:C2'	2.66	0.42
35:DF:152:GLU:OE1	35:DF:191:ARG:HD2	2.20	0.42
44:BS:97:ARG:HE	44:BS:98:VAL:CA	2.32	0.42
45:DT:67:SER:N	45:DT:70:VAL:O	2.52	0.42
1:CA:579:G:H2'	1:CA:580:U:C6	2.55	0.42
32:BB:1:U:C6	32:BB:2:C:C5	3.07	0.42
31:BA:2046:G:H2'	31:BA:2047:U:H6	1.84	0.42
15:CO:43:LEU:O	15:CO:45:VAL:N	2.53	0.42
1:CA:1015:A:C6	1:CA:1016:A:C6	3.08	0.42
8:CH:68:ARG:HG2	8:CH:69:ARG:H	1.85	0.42
31:BA:533:G:H5'	46:BU:24:TYR:CD2	2.55	0.42
31:DA:1909:C:O2'	31:DA:1910:G:H5'	2.20	0.42
1:CA:997:U:H2'	1:CA:998:G:H8	1.85	0.42
1:CA:996:A:H2'	1:CA:997:U:O4'	2.20	0.42
1:AA:1366:C:H2'	1:AA:1367:C:C6	2.54	0.42
50:BY:43:ASN:O	50:BY:44:ILE:O	2.37	0.42
41:BP:5:ASP:HB3	41:BP:6:LEU:H	1.58	0.42
31:BA:2323:G:H2'	31:BA:2324:C:O4'	2.20	0.42
31:DA:365:C:H2'	31:DA:366:C:O4'	2.19	0.42
1:CA:757:U:H5''	1:CA:822:C:O2	2.20	0.42
31:BA:2077:A:H1'	31:BA:2435:A:O4'	2.20	0.42
3:AC:165:THR:O	3:AC:165:THR:HG23	2.19	0.42
9:AI:50:LEU:HD23	9:AI:50:LEU:HA	1.85	0.42
31:BA:2766:G:N3	31:BA:2766:G:H2'	2.34	0.42
3:CC:165:THR:O	3:CC:165:THR:HG23	2.20	0.42
31:DA:1217:C:H2'	31:DA:1218:C:O5'	2.20	0.42
46:BU:92:ARG:HB2	47:BV:11:GLN:CD	2.40	0.41
16:AP:48:TRP:N	16:AP:48:TRP:CD1	2.74	0.41
33:DD:80:ALA:O	33:DD:81:ALA:HB2	2.20	0.41
31:BA:1886:C:O5'	31:BA:1886:C:H6	2.03	0.41
41:DP:61:ARG:H	41:DP:61:ARG:CD	2.32	0.41
31:DA:2399:G:C4	31:DA:2400:G:C8	3.07	0.41
24:D2:25:VAL:C	24:D2:27:GLU:N	2.73	0.41
31:DA:1340:U:H4'	31:DA:1341:U:OP2	2.19	0.41
49:DX:74:PRO:O	49:DX:75:ASP:C	2.58	0.41
31:BA:1161:C:O2'	47:BV:8:GLY:HA2	2.20	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
45:BT:115:ARG:HB3	45:BT:116:ALA:H	1.65	0.41
31:DA:103:A:C2'	31:DA:104:U:H5'	2.50	0.41
2:AB:204:ASN:HB3	2:AB:210:SER:HB3	2.02	0.41
2:AB:74:LYS:O	2:AB:78:GLN:HG3	2.19	0.41
36:BG:55:LYS:NZ	36:BG:148:MET:HG3	2.35	0.41
36:BG:56:ALA:HA	36:BG:59:GLU:OE1	2.19	0.41
34:BE:111:ARG:HB2	34:BE:160:TYR:O	2.19	0.41
33:DD:119:ALA:CB	33:DD:130:ALA:HB3	2.50	0.41
27:D5:40:LYS:HZ3	27:D5:46:CYS:CA	2.33	0.41
33:BD:267:SER:HA	33:BD:270:ILE:CG1	2.42	0.41
34:DE:119:ARG:HG2	34:DE:160:TYR:HB2	2.02	0.41
23:B1:17:SER:C	23:B1:18:ILE:HD12	2.40	0.41
35:BF:24:LEU:O	35:BF:26:ALA:N	2.53	0.41
31:BA:2660:A:H2'	31:BA:2661:G:O5'	2.19	0.41
1:CA:509:A:O2'	1:CA:510:A:O4'	2.36	0.41
4:CD:18:LYS:HE3	4:CD:31:CYS:CB	2.50	0.41
4:CD:74:GLN:HE22	4:CD:137:SER:HB3	1.83	0.41
26:D4:13:ARG:HA	36:DG:101:ILE:CD1	2.50	0.41
39:DN:65:LYS:O	39:DN:69:GLN:CB	2.68	0.41
38:DI:13:GLY:O	38:DI:14:ASP:C	2.59	0.41
48:BW:92:ARG:O	48:BW:93:ALA:HB3	2.20	0.41
6:CF:12:PRO:HB3	6:CF:58:GLY:N	2.35	0.41
31:BA:2031:A:N3	31:BA:2455:G:O2'	2.46	0.41
1:CA:1413:A:C2	1:CA:1414:U:C2	3.07	0.41
1:AA:954:G:C2	1:AA:955:U:C2	3.08	0.41
42:DQ:141:GLN:HG2	51:DZ:72:ARG:HA	2.00	0.41
1:AA:255:G:H5'	17:AQ:16:GLN:O	2.20	0.41
35:DF:164:ARG:NH1	35:DF:164:ARG:CG	2.79	0.41
1:CA:1189:C:OP1	10:CJ:51:ARG:NH2	2.53	0.41
39:DN:78:TYR:HD1	39:DN:79:PRO:N	2.17	0.41
1:CA:971:G:OP1	1:CA:972:C:H5''	2.20	0.41
31:BA:1108:U:H2'	31:BA:1109:C:C5'	2.43	0.41
28:B6:45:LYS:HA	28:B6:45:LYS:HD3	1.87	0.41
31:BA:271(T):C:O2	31:BA:271(T):C:C2'	2.65	0.41
38:BI:53:ALA:O	38:BI:55:ALA:N	2.53	0.41
7:CG:111:ARG:CZ	7:CG:122:HIS:HB3	2.49	0.41
1:AA:299:G:C6	1:AA:300:A:N1	2.88	0.41
43:BR:56:LYS:HD2	43:BR:88:ARG:N	2.31	0.41
1:CA:1434:A:H2'	1:CA:1435:G:O4'	2.19	0.41
33:BD:10:THR:HG23	33:BD:13:ARG:HB3	2.01	0.41
35:BF:63:LYS:NZ	35:BF:67:GLN:HB2	2.35	0.41
13:AM:97:PRO:O	13:AM:98:VAL:HA	2.20	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
36:DG:11:TYR:O	36:DG:16:ARG:HG2	2.20	0.41
1:CA:1215:G:C5	1:CA:1216:G:N7	2.88	0.41
31:BA:1767:C:O2'	31:BA:1768:U:H5'	2.20	0.41
31:DA:1299:G:H5''	31:DA:1300:U:OP1	2.20	0.41
31:BA:108:U:O2'	31:BA:109:G:H5'	2.20	0.41
33:DD:10:THR:O	33:DD:11:PRO:O	2.37	0.41
1:CA:1220:G:O3'	19:CS:36:ARG:HD3	2.20	0.41
1:AA:1052:U:O4	1:AA:1200:C:C2	2.74	0.41
31:BA:960:A:C5'	31:BA:961:C:OP2	2.65	0.41
42:BQ:89:ASN:O	42:BQ:92:GLY:N	2.34	0.41
1:AA:1298:C:H2'	7:AG:114:ARG:HH12	1.85	0.41
1:CA:1371:G:C6	1:CA:1372:U:C4	3.08	0.41
31:DA:2335:A:O2'	31:DA:2336:A:C5'	2.68	0.41
31:BA:1028:A:H61	31:BA:1125:G:H2'	1.83	0.41
31:DA:511:U:H5''	31:DA:512:G:OP2	2.20	0.41
3:AC:52:LEU:HD23	3:AC:52:LEU:N	2.32	0.41
31:BA:1459:G:H5''	31:BA:1460:A:P	2.60	0.41
46:BU:102:GLU:OE2	47:BV:2:PHE:CE1	2.73	0.41
30:B8:37:SER:HB2	30:B8:39:LYS:H	1.84	0.41
31:DA:1511:C:H2'	31:DA:1512:U:O5'	2.20	0.41
4:CD:17:VAL:HG11	4:CD:197:PRO:CG	2.49	0.41
35:BF:192:LEU:HD13	35:BF:194:MET:HE3	2.02	0.41
20:AT:56:MET:HG2	20:AT:84:LEU:CD1	2.47	0.41
31:DA:2259:G:C8	31:DA:2427:C:C4	3.08	0.41
31:BA:736:C:H42	31:BA:760:G:H1	1.68	0.41
1:CA:308:C:H2'	1:CA:309:G:H8	1.84	0.41
31:BA:614:U:O2	31:BA:614:U:O4'	2.34	0.41
31:DA:954:G:C6	31:DA:955:C:C5	3.08	0.41
31:BA:1894:C:H2'	31:BA:1895:C:H6	1.84	0.41
1:CA:723:U:OP1	1:CA:723:U:H6	2.03	0.41
31:DA:1322:A:C6	31:DA:1323:U:C4	3.07	0.41
31:BA:384:U:H2'	31:BA:385:C:C6	2.53	0.41
1:CA:246:A:C2	1:CA:282:A:C5	3.08	0.41
2:CB:178:ARG:HA	2:CB:178:ARG:HD3	1.71	0.41
31:DA:792:G:H3'	31:DA:793:A:H5'	2.02	0.41
18:AR:79:LEU:HD23	18:AR:80:PRO:CD	2.50	0.41
31:DA:2511:U:O4	31:DA:2575:C:N3	2.53	0.41
31:DA:1234:U:H2'	31:DA:1235:G:O4'	2.19	0.41
31:DA:1840:G:C6	31:DA:1841:U:C4	3.08	0.41
31:BA:1997:G:O2'	31:BA:1998:G:H5'	2.18	0.41
1:AA:1465:C:H2'	1:AA:1466:C:O4'	2.19	0.41
15:CO:9:GLN:O	15:CO:10:LYS:C	2.58	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:DA:2877:G:O2'	31:DA:2878:U:H5'	2.20	0.41
38:BI:145:VAL:HG12	38:BI:146:ALA:N	2.35	0.41
50:BY:84:ARG:HB3	50:BY:85:VAL:H	1.64	0.41
35:DF:60:SER:OG	35:DF:61:GLY:N	2.53	0.41
2:CB:171:ALA:HA	2:CB:174:VAL:HG23	2.02	0.41
1:CA:665:A:C5	1:CA:733:A:C5	3.08	0.41
4:CD:153:ARG:HG2	4:CD:181:MET:SD	2.60	0.41
19:CS:19:VAL:O	19:CS:19:VAL:HG12	2.18	0.41
46:BU:39:LEU:HA	46:BU:39:LEU:HD23	1.74	0.41
40:BO:10:VAL:HG23	40:BO:10:VAL:O	2.20	0.41
31:BA:2540:C:H2'	31:BA:2541:A:O4'	2.20	0.41
4:CD:208:SER:O	4:CD:209:ARG:C	2.57	0.41
35:BF:60:SER:OG	35:BF:61:GLY:N	2.53	0.41
30:B8:29:LYS:CG	30:B8:29:LYS:O	2.68	0.41
33:BD:35:LYS:CA	33:BD:64:ILE:CG2	2.97	0.41
33:BD:80:ALA:O	33:BD:81:ALA:HB2	2.20	0.41
33:DD:31:LYS:NZ	33:DD:31:LYS:HA	2.35	0.41
47:DV:25:LEU:CG	47:DV:94:LEU:HD13	2.47	0.41
39:DN:128:HIS:O	39:DN:130:HIS:HB3	2.19	0.41
51:BZ:151:HIS:ND1	51:BZ:170:THR:HG22	2.35	0.41
49:BX:50:LYS:O	49:BX:82:GLN:N	2.50	0.41
45:DT:57:PHE:O	45:DT:58:ASN:C	2.59	0.41
36:BG:60:LEU:O	36:BG:60:LEU:HD13	2.20	0.41
32:DB:75:G:C5'	32:DB:75:G:C8	2.96	0.41
47:BV:82:ARG:NH1	47:BV:82:ARG:HG2	2.22	0.41
31:BA:394:A:C6	31:BA:395:U:C4	3.08	0.41
4:CD:13:ARG:O	4:CD:14:ARG:C	2.59	0.41
4:CD:19:LEU:HD13	4:CD:21:LEU:HD11	2.01	0.41
5:CE:99:GLY:C	5:CE:116:THR:O	2.58	0.41
31:DA:814:C:N4	41:DP:27:HIS:NE2	2.67	0.41
1:AA:503:C:OP2	12:AL:116:SER:OG	2.33	0.41
4:AD:65:ARG:HA	4:AD:75:PHE:CE1	2.54	0.41
1:AA:953:G:O6	1:AA:1228:C:N4	2.53	0.41
1:AA:1229:A:OP2	13:AM:114:ARG:HD3	2.20	0.41
31:DA:1504:C:O2'	31:DA:1505:C:C5'	2.69	0.41
45:BT:35:LYS:O	45:BT:38:ASN:N	2.54	0.41
9:AI:86:VAL:HB	9:AI:96:LEU:HD22	2.01	0.41
1:CA:64:G:H3'	1:CA:64:G:OP1	2.19	0.41
18:CR:43:PHE:O	18:CR:44:LEU:HD12	2.20	0.41
1:CA:949:A:OP1	13:CM:101:GLN:HB3	2.19	0.41
1:CA:266:G:H5'	1:CA:266:G:C8	2.55	0.41
5:AE:101:ILE:CD1	5:AE:119:LEU:HA	2.40	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:BA:1839:G:C8	31:BA:1927:A:C1'	2.96	0.41
1:AA:1452:C:OP1	1:AA:1456:G:C6	2.74	0.41
31:DA:1047:G:H2'	31:DA:1110:G:C2	2.55	0.41
1:AA:81:U:C4	1:AA:88:A:N6	2.88	0.41
4:AD:108:LEU:O	4:AD:110:PHE:CD1	2.73	0.41
45:BT:106:SER:O	45:BT:107:ASP:HB3	2.20	0.41
28:B6:26:ASN:ND2	28:B6:32:ASN:HD21	2.17	0.41
1:AA:457:C:O2'	1:AA:458:C:H5'	2.19	0.41
23:D1:37:ILE:HG23	31:DA:2080:G:O5'	2.20	0.41
30:B8:26:LYS:HE2	30:B8:47:LYS:CG	2.50	0.41
1:CA:78:G:N2	1:CA:91:C:H42	2.16	0.41
51:DZ:27:VAL:HG13	51:DZ:29:TYR:HD2	1.85	0.41
35:BF:66:PRO:O	35:BF:67:GLN:CB	2.62	0.41
42:BQ:29:PHE:CD1	42:BQ:29:PHE:N	2.87	0.41
32:BB:88:C:H2'	32:BB:89:G:C8	2.55	0.41
31:DA:299:A:C5	31:DA:322:A:C2	3.08	0.41
31:DA:1718:G:O2'	31:DA:1719:G:H5'	2.20	0.41
31:DA:528:A:N1	31:DA:2043:C:O5'	2.53	0.41
19:AS:75:ALA:HA	19:AS:76:PRO:HD2	1.95	0.41
2:CB:97:TRP:CZ3	2:CB:173:ALA:HA	2.54	0.41
16:AP:68:ASP:C	16:AP:70:ALA:N	2.73	0.41
8:CH:6:ILE:O	8:CH:8:ASP:N	2.53	0.41
34:DE:21:VAL:HG23	34:DE:21:VAL:O	2.19	0.41
31:DA:902:C:O2'	31:DA:903:C:H5'	2.20	0.41
27:B5:4:HIS:CB	27:B5:5:PRO:HD3	2.46	0.41
6:AF:91:VAL:CG1	18:AR:72:ARG:HH12	2.30	0.41
1:AA:1386:G:N3	1:AA:1387:G:C8	2.87	0.41
5:AE:12:LEU:HD22	5:AE:13:ILE:N	2.35	0.41
31:BA:272(J):C:O2'	31:BA:274:G:OP1	2.36	0.41
31:BA:448:U:C4	31:BA:583:G:H1'	2.55	0.41
38:BI:57:ARG:C	38:BI:59:ALA:H	2.23	0.41
2:AB:8:LYS:HA	2:AB:11:LEU:HD12	2.02	0.41
31:BA:1380:G:N2	31:BA:1570:A:H2	2.18	0.41
1:CA:814:A:C8	1:CA:816:A:C8	3.08	0.41
27:D5:43:HIS:CD2	31:DA:2815:C:O2'	2.73	0.41
1:AA:262:A:C6	1:AA:263:A:N6	2.88	0.41
20:AT:82:SER:O	20:AT:86:ARG:CB	2.68	0.41
1:CA:448:A:C2	1:CA:449:C:C4	3.08	0.41
1:AA:1287:A:N6	1:AA:1288:A:N6	2.68	0.41
2:CB:101:MET:HG2	2:CB:108:ILE:HG21	2.01	0.41
1:CA:189(C):C:H2'	1:CA:189(D):C:C5'	2.49	0.41
31:BA:790:C:H6	31:BA:790:C:H2'	1.65	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
43:BR:103:ARG:NH1	48:BW:40:ASN:ND2	2.69	0.41
1:AA:692:U:O2'	1:AA:694:A:N7	2.44	0.41
31:DA:958:U:C2'	31:DA:959:A:OP1	2.68	0.41
31:BA:190:A:P	31:BA:205:G:H22	2.42	0.41
31:BA:954:G:C5	31:BA:955:C:C5	3.08	0.41
42:BQ:78:PRO:O	42:BQ:79:LEU:CB	2.64	0.41
31:DA:948:G:C6	31:DA:949:C:C4	3.08	0.41
15:AO:12:ILE:HG12	15:AO:31:LEU:HD11	2.01	0.41
34:DE:146:THR:HA	34:DE:147:PRO:C	2.40	0.41
31:DA:1157:G:H2'	31:DA:1158:C:H5'	2.01	0.41
31:DA:1288:U:H4'	31:DA:1289:C:OP2	2.21	0.41
31:DA:1288:U:C2	31:DA:1327:C:O2	2.72	0.41
50:BY:54:LYS:HG2	50:BY:55:TYR:CD2	2.55	0.41
40:BO:26:LYS:HB2	40:BO:30:ALA:CB	2.50	0.41
35:DF:140:LEU:CD2	35:DF:170:LEU:HD11	2.49	0.41
7:CG:88:PRO:HG3	7:CG:148:ASN:O	2.20	0.41
33:DD:123:ALA:HA	33:DD:124:PRO:HD2	1.93	0.41
46:DU:61:TRP:O	46:DU:62:ILE:C	2.56	0.41
1:AA:740:U:H4'	15:AO:42:HIS:CD2	2.54	0.41
2:CB:75:LYS:O	2:CB:75:LYS:HD3	2.20	0.41
28:B6:24:GLU:HA	28:B6:24:GLU:OE1	2.20	0.41
1:AA:1373:G:O5'	1:AA:1373:G:H8	2.02	0.41
40:BO:122:LEU:HD23	40:BO:122:LEU:HA	1.76	0.41
38:BI:44:LEU:HA	38:BI:44:LEU:HD23	1.61	0.41
1:CA:112:G:N3	1:CA:112:G:H2'	2.36	0.41
34:BE:9:VAL:HG22	34:BE:25:VAL:HB	2.02	0.41
27:B5:31:VAL:HB	27:B5:32:PRO:HD2	2.01	0.41
33:BD:28:GLU:CB	33:BD:29:PRO:CD	2.96	0.41
33:DD:96:HIS:CE1	33:DD:102:LYS:HE2	2.55	0.41
26:D4:2:LYS:H	36:DG:67:LYS:HZ1	1.68	0.41
41:DP:57:THR:HB	41:DP:59:LEU:N	2.36	0.41
31:DA:2808:U:C2'	31:DA:2809:A:H5'	2.50	0.41
41:DP:64:LYS:HD3	41:DP:64:LYS:C	2.41	0.41
31:DA:260:G:N2	31:DA:261:G:H1'	2.35	0.41
31:DA:620:G:C4'	31:DA:621:A:H5''	2.46	0.41
25:D3:31:LEU:HA	25:D3:31:LEU:HD23	1.89	0.41
24:D2:30:ARG:H	24:D2:30:ARG:HD2	1.85	0.41
49:DX:58:HIS:O	49:DX:59:VAL:HG13	2.20	0.41
46:DU:92:ARG:HB2	47:DV:11:GLN:CD	2.40	0.41
24:B2:40:SER:O	24:B2:41:ILE:C	2.58	0.41
24:B2:56:GLN:H	24:B2:56:GLN:CD	2.23	0.41
15:CO:32:LEU:O	15:CO:33:THR:C	2.58	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:674:G:H2'	1:AA:675:A:C8	2.44	0.41
2:AB:219:VAL:O	2:AB:222:ILE:HB	2.21	0.41
26:B4:13:ARG:HA	36:BG:101:ILE:CD1	2.51	0.41
31:BA:1653:G:H4'	31:BA:1654:A:O5'	2.20	0.41
33:DD:119:ALA:HB2	33:DD:130:ALA:HB3	2.02	0.41
31:BA:620:G:H4'	31:BA:621:A:C5'	2.45	0.41
31:BA:1142(A):A:N9	31:BA:1144:G:N7	2.68	0.41
36:DG:47:LYS:HG3	36:DG:82:LEU:CD1	2.50	0.41
32:DB:96:U:H2'	32:DB:97:G:C8	2.56	0.41
47:DV:86:GLY:O	47:DV:87:HIS:CD2	2.72	0.41
31:BA:2849:U:P	45:BT:95:ARG:HH12	2.42	0.41
38:DI:5:LEU:C	38:DI:6:LEU:HD23	2.40	0.41
41:DP:112:LEU:CD2	41:DP:113:LYS:N	2.83	0.41
1:CA:954:G:C2	1:CA:955:U:C2	3.08	0.41
31:DA:358:U:C6	31:DA:358:U:C3'	3.02	0.41
31:DA:2645:G:H3'	31:DA:2646:C:C5'	2.50	0.41
37:BH:40:GLU:O	37:BH:41:MET:CG	2.68	0.41
42:BQ:140:ALA:C	51:BZ:53:ILE:HB	2.41	0.41
9:CI:86:VAL:HB	9:CI:96:LEU:HD22	2.02	0.41
4:AD:165:MET:O	4:AD:166:LYS:C	2.58	0.41
31:DA:856:C:C3'	31:DA:857:C:C6	2.99	0.41
31:DA:479:A:C2	31:DA:480:A:C5	3.07	0.41
11:CK:111:ASP:HA	18:CR:84:LYS:CG	2.38	0.41
31:DA:271(Q):G:O2'	31:DA:271(R):G:H8	2.03	0.41
1:CA:719:C:N4	18:CR:71:LYS:HE2	2.35	0.41
43:BR:117:VAL:O	43:BR:118:GLU:CB	2.57	0.41
1:AA:671:G:C5	1:AA:672:U:C5	3.08	0.41
1:AA:949:A:OP1	13:AM:101:GLN:HB3	2.20	0.41
31:DA:1313:U:H2'	31:DA:1610:A:N1	2.36	0.41
28:B6:46:HIS:ND1	28:B6:46:HIS:O	2.53	0.41
31:BA:271(Q):G:O2'	31:BA:271(R):G:H8	2.03	0.41
12:CL:58:VAL:O	12:CL:65:GLU:HA	2.20	0.41
51:BZ:29:TYR:HA	51:BZ:33:LEU:O	2.20	0.41
31:BA:518:G:H2'	31:BA:519:U:C6	2.55	0.41
1:AA:565:U:C6	1:AA:566:G:C8	3.08	0.41
6:AF:5:GLU:O	6:AF:7:ASN:ND2	2.53	0.41
1:AA:1313:U:OP2	19:AS:6:LYS:HB3	2.20	0.41
34:BE:52:LEU:HB3	34:BE:75:VAL:CG2	2.48	0.41
34:BE:55:ASN:HA	34:BE:56:PRO:HD3	1.81	0.41
12:AL:55:VAL:HA	12:AL:70:ILE:HD13	2.02	0.41
39:BN:75:TYR:CE2	39:BN:83:LYS:NZ	2.85	0.41
31:BA:551:G:O2'	31:BA:1220:A:N3	2.42	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
49:BX:40:LYS:HG2	49:BX:41:ASN:H	1.84	0.41
31:BA:2887:U:O2'	31:BA:2888:C:H5'	2.20	0.41
31:DA:1669:A:C8	40:DO:5:GLN:HG3	2.55	0.41
2:CB:87:ARG:NH2	2:CB:233:SER:HB3	2.34	0.41
31:DA:323:G:H1'	31:DA:1205:U:O2	2.20	0.41
31:DA:1721:G:N1	31:DA:1739:U:OP2	2.53	0.41
31:DA:108:U:H2'	31:DA:109:G:H8	1.84	0.41
31:DA:1112:G:O2'	31:DA:1113:U:H5''	2.20	0.41
1:CA:624:C:O3'	16:CP:10:GLY:HA2	2.20	0.41
5:AE:50:GLU:OE2	5:AE:51:VAL:HG23	2.19	0.41
31:BA:960:A:H5''	31:BA:961:C:P	2.61	0.41
8:AH:7:ALA:HB2	8:AH:85:ARG:HD2	2.03	0.41
32:BB:110:G:N1	32:BB:111:G:C5	2.88	0.41
1:CA:1054:C:OP1	1:CA:1197:G:OP2	2.38	0.41
1:CA:159:G:O2'	1:CA:160:A:C8	2.61	0.41
31:DA:1459:G:H5''	31:DA:1460:A:P	2.60	0.41
35:BF:7:TYR:HD2	35:BF:16:GLY:HA3	1.86	0.41
1:AA:1478:C:O2'	1:AA:1479:C:H5'	2.20	0.41
49:BX:68:ARG:HG3	49:BX:69:TYR:CD1	2.55	0.41
1:CA:604:G:C6	1:CA:605:U:N3	2.88	0.41
31:BA:1686:C:C4	31:BA:1687:G:C5	3.08	0.41
39:BN:119:ARG:HG3	39:BN:119:ARG:NH1	2.35	0.41
31:DA:619:G:O6	35:DF:103:LYS:HE2	2.19	0.41
8:CH:58:TYR:HD1	8:CH:58:TYR:N	2.18	0.41
31:BA:828:U:C3'	31:BA:828:U:O2	2.68	0.41
1:CA:1287:A:N6	1:CA:1288:A:N6	2.68	0.41
4:CD:59:ARG:O	4:CD:60:GLU:C	2.56	0.41
8:CH:44:PHE:HA	8:CH:79:VAL:CG1	2.50	0.41
1:AA:200:G:N2	1:AA:218:C:C2	2.89	0.41
45:BT:53:ARG:NH1	45:BT:53:ARG:CG	2.82	0.41
13:CM:82:MET:HG2	13:CM:82:MET:O	2.20	0.41
33:DD:248:SER:O	33:DD:250:TRP:N	2.54	0.41
13:CM:29:ARG:HA	13:CM:32:GLU:HB3	2.01	0.41
50:DY:88:LYS:NZ	50:DY:93:GLY:CA	2.84	0.41
31:BA:2191:G:H2'	31:BA:2192:G:O5'	2.20	0.41
48:BW:1:MET:HG3	48:BW:2:GLU:N	2.35	0.41
7:CG:37:ASN:HD21	9:CI:40:LEU:CD2	2.32	0.41
51:BZ:110:GLY:H	51:BZ:111:VAL:HG12	1.86	0.41
31:DA:2026:C:H2'	31:DA:2027:G:O5'	2.20	0.41
31:DA:2046:G:H2'	31:DA:2047:U:H6	1.84	0.41
1:CA:1349:A:C2	1:CA:1350:A:H1'	2.54	0.41
1:CA:1350:A:C5	1:CA:1351:U:C4	3.08	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
42:BQ:58:PHE:O	42:BQ:58:PHE:HD1	2.03	0.41
19:AS:69:HIS:HB2	19:AS:74:PHE:HE2	1.84	0.41
1:AA:1005:A:H5''	1:AA:1006:C:OP2	2.20	0.41
2:CB:171:ALA:HA	2:CB:174:VAL:CG2	2.50	0.41
35:DF:114:VAL:O	35:DF:115:ALA:C	2.57	0.41
1:CA:100:C:H2'	1:CA:101:A:O4'	2.20	0.41
37:DH:152:ARG:HA	37:DH:152:ARG:HD2	1.75	0.41
50:DY:31:LEU:HA	50:DY:31:LEU:HD13	1.58	0.41
2:AB:193:ASP:OD2	2:AB:193:ASP:O	2.37	0.41
4:AD:196:LEU:N	4:AD:196:LEU:HD12	2.35	0.41
31:DA:1221(A):C:C2	31:DA:1229:G:C2	3.08	0.41
27:B5:47:PRO:C	27:B5:48:GLU:CG	2.88	0.41
31:DA:911:A:C5	42:DQ:9:TYR:CE2	3.09	0.41
33:DD:92:ILE:HD13	33:DD:104:TYR:CD2	2.55	0.41
30:D8:27:THR:HG22	41:DP:62:LEU:HD13	2.02	0.41
30:D8:25:MET:SD	41:DP:64:LYS:HD2	2.61	0.41
51:BZ:145:GLU:C	51:BZ:147:GLY:H	2.24	0.41
31:BA:154:G:N1	31:BA:172:C:N4	2.31	0.41
43:BR:30:THR:HG22	43:BR:31:HIS:ND1	2.36	0.41
31:DA:2224:G:OP1	33:DD:268:ARG:NH1	2.53	0.41
27:D5:40:LYS:HZ3	27:D5:46:CYS:HB3	1.85	0.41
23:D1:83:GLU:C	23:D1:85:LEU:H	2.23	0.41
37:DH:71:LEU:HD12	37:DH:71:LEU:HA	1.70	0.41
31:BA:1655:A:H3'	31:BA:1656:C:H6	1.85	0.41
31:BA:1141:U:H4'	31:BA:1142(A):A:O4'	2.20	0.41
31:BA:2801(A):A:O4'	31:BA:2802:G:H2'	2.19	0.41
4:CD:206:PHE:CD2	4:CD:207:TYR:CD2	3.08	0.41
31:DA:444:C:C2'	31:DA:445:C:O5'	2.69	0.41
31:BA:2646:C:H6	31:BA:2646:C:O5'	2.02	0.41
1:AA:509:A:O5'	1:AA:509:A:H8	2.02	0.41
4:AD:19:LEU:HD13	4:AD:21:LEU:HD11	2.02	0.41
4:AD:14:ARG:HD3	4:AD:39:PRO:HB3	2.02	0.41
31:DA:1279:G:H5'	43:DR:34:ILE:CD1	2.51	0.41
31:BA:479:A:C2	31:BA:480:A:C5	3.07	0.41
42:DQ:23:GLY:HA2	42:DQ:101:ARG:HB2	2.02	0.41
13:AM:34:LEU:HD13	13:AM:41:PRO:CG	2.35	0.41
37:BH:158:HIS:NE2	37:BH:169:VAL:C	2.73	0.41
31:BA:2287:A:O2'	31:BA:2288:A:H3'	2.20	0.41
4:AD:161:ASN:O	4:AD:165:MET:HG2	2.21	0.41
23:B1:62:VAL:HG22	23:B1:63:ALA:H	1.84	0.41
17:AQ:67:LYS:O	17:AQ:68:ARG:HB3	2.21	0.41
37:DH:170:ARG:H	37:DH:170:ARG:HD2	1.85	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:734:G:C2	1:AA:735:C:C2	3.08	0.41
1:CA:1068:G:OP2	1:CA:1094:G:H5'	2.21	0.41
31:BA:370:G:H5''	31:BA:423:A:C6	2.54	0.41
31:DA:271(P):C:O5'	38:DI:45:LYS:HE3	2.19	0.41
51:BZ:73:GLN:HG2	51:BZ:87:ASP:CG	2.39	0.41
37:BH:28:GLY:C	37:BH:30:LYS:H	2.22	0.41
40:BO:22:ILE:HD13	40:BO:22:ILE:HA	1.48	0.41
27:D5:2:ALA:N	31:DA:747:U:C2	2.88	0.41
31:BA:1332:G:N1	31:BA:1609:A:O2'	2.45	0.41
1:CA:1003:G:H2'	1:CA:1004:A:O4'	2.19	0.41
1:CA:1285:A:C4'	1:CA:1286:A:O5'	2.69	0.41
35:DF:81:PRO:CB	35:DF:89:VAL:HG23	2.50	0.41
31:BA:2580:U:H4'	34:BE:130:GLY:HA3	2.02	0.41
31:DA:2208:A:H1'	31:DA:2219:G:C6	2.56	0.41
1:CA:946:A:C2	1:CA:1236:A:C2	3.09	0.41
42:DQ:16:ARG:NH1	42:DQ:16:ARG:HB2	2.36	0.41
42:DQ:97:VAL:HG11	42:DQ:103:MET:HE1	2.02	0.41
31:BA:1170:G:N2	31:BA:1180:C:C2	2.89	0.41
31:BA:17:G:H4'	46:BU:25:TRP:CZ2	2.54	0.41
34:DE:129:HIS:O	34:DE:130:GLY:C	2.59	0.41
22:B0:16:SER:OG	31:BA:2261:C:H3'	2.20	0.41
1:CA:1226:C:H42	13:CM:104:ARG:HD2	1.85	0.41
1:CA:367:U:O2	1:CA:369:C:C6	2.73	0.41
42:DQ:12:GLN:O	42:DQ:13:GLN:O	2.37	0.41
31:DA:1181:C:H2'	31:DA:1182:A:H8	1.85	0.41
2:CB:67:THR:C	2:CB:68:ILE:HD12	2.40	0.41
1:AA:1158:C:N4	1:AA:1160:G:C6	2.88	0.41
31:BA:2271:G:H8	31:BA:2271:G:O5'	2.03	0.41
1:CA:1347:G:H22	1:CA:1374:A:P	2.43	0.41
1:CA:1347:G:N2	1:CA:1373:G:H2'	2.35	0.41
31:BA:2199:A:OP2	31:BA:2200:C:H5	2.03	0.41
1:AA:749:C:H2'	1:AA:750:G:H8	1.85	0.41
31:BA:2078:C:O2'	31:BA:2079:U:H5'	2.20	0.41
34:BE:21:VAL:HG23	34:BE:21:VAL:O	2.21	0.41
38:BI:37:VAL:CG1	38:BI:38:LEU:H	2.33	0.41
37:BH:13:LYS:O	37:BH:15:VAL:N	2.54	0.41
31:BA:196:A:C4	31:BA:805:G:O6	2.73	0.41
45:DT:16:ARG:H	45:DT:79:HIS:CD2	2.39	0.41
20:AT:84:LEU:HD13	20:AT:84:LEU:C	2.41	0.41
31:DA:826:U:H2'	31:DA:828:U:O4'	2.19	0.41
1:AA:1362:C:O2'	1:AA:1363:C:H5''	2.19	0.41
36:DG:39:ILE:HD12	36:DG:40:ASN:N	2.34	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:CA:1498:U:C1'	1:CA:1499:A:OP2	2.69	0.41
31:BA:1895:C:C2	31:BA:1896:G:C8	3.08	0.41
1:CA:568:G:N3	1:CA:574:A:H2	2.18	0.41
32:DB:59:A:H2'	32:DB:60:C:H6	1.84	0.41
31:DA:2063:C:C5	31:DA:2064:C:C5	3.08	0.41
1:AA:1429:C:H2'	1:AA:1430:C:C6	2.56	0.41
49:BX:16:LYS:O	49:BX:19:ALA:HB3	2.21	0.41
1:AA:39:G:C6	1:AA:40:C:C5	3.09	0.41
51:BZ:156:LYS:O	51:BZ:158:PRO:CD	2.69	0.41
31:BA:2460:U:C2	31:BA:2461:C:C6	3.07	0.41
31:DA:2037:G:O2'	31:DA:2038:G:H5'	2.19	0.41
34:DE:182:LEU:HD12	34:DE:183:LEU:N	2.35	0.41
1:AA:996:A:H2'	1:AA:997:U:O4'	2.20	0.41
31:DA:1446:C:H2'	31:DA:1447:G:C8	2.56	0.41
47:DV:54:GLY:O	47:DV:56:SER:N	2.52	0.41
48:DW:48:ALA:O	48:DW:49:LYS:C	2.58	0.41
1:AA:1376:U:O2'	1:AA:1377:A:H5'	2.21	0.41
31:DA:979:G:H3'	31:DA:980:A:H5''	2.02	0.41
31:DA:332:A:C2	31:DA:335:C:C5	3.08	0.41
5:CE:88:LYS:HB3	5:CE:123:LEU:HB2	2.01	0.41
31:DA:1756:G:H4'	31:DA:1758:G:O4'	2.19	0.41
31:BA:2626:C:O2'	31:BA:2627:G:H5'	2.20	0.41
20:CT:58:LYS:O	20:CT:62:LEU:HB2	2.21	0.41
12:AL:126:LYS:HG3	12:AL:128:ALA:H	1.86	0.41
51:DZ:6:LYS:HB2	51:DZ:6:LYS:HE3	1.78	0.41
31:DA:1467:C:H4'	31:DA:1467:C:OP1	2.21	0.41
27:B5:31:VAL:O	27:B5:39:MET:HA	2.20	0.41
31:BA:1902:C:OP1	33:BD:242:ARG:HD3	2.21	0.41
31:BA:2420:C:O5'	31:BA:2420:C:H6	2.04	0.41
1:AA:146:G:N2	1:AA:147:G:H1'	2.35	0.41
1:AA:66:G:C4'	1:AA:173:U:C4	3.03	0.41
1:AA:197:A:N6	1:AA:221:C:H4'	2.35	0.41
33:DD:25:THR:O	33:DD:27:THR:CB	2.68	0.41
33:DD:35:LYS:HG2	33:DD:64:ILE:CA	2.49	0.41
26:D4:1:MET:H2	36:DG:67:LYS:NZ	2.17	0.41
28:D6:9:LEU:HD13	28:D6:11:LEU:CD2	2.50	0.41
31:BA:2395:C:H2'	31:BA:2396:G:O4'	2.20	0.41
2:CB:204:ASN:HD22	2:CB:205:ASP:N	2.19	0.41
31:BA:1246:A:P	41:BP:18:ARG:HD3	2.60	0.41
47:DV:19:LYS:HG3	47:DV:20:LEU:CA	2.48	0.41
15:AO:81:LEU:HD11	15:AO:85:LEU:CD1	2.46	0.41
24:B2:37:PHE:O	24:B2:37:PHE:HD2	2.04	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
49:BX:57:LEU:N	49:BX:57:LEU:CD1	2.81	0.41
31:BA:2310:A:H5'	31:BA:2310:A:N3	2.35	0.41
33:BD:131:LEU:HB2	33:BD:136:ILE:CD1	2.38	0.41
31:DA:2680:C:H2'	31:DA:2681:C:O2	2.20	0.41
44:BS:66:ALA:HA	44:BS:69:VAL:HG12	2.01	0.41
35:DF:24:LEU:O	35:DF:26:ALA:N	2.54	0.41
31:BA:1022:G:C5	31:BA:1140:C:C4	3.09	0.41
31:DA:1878:G:C2'	31:DA:1879:C:H5'	2.50	0.41
1:CA:513:C:H2'	1:CA:513:C:O2	2.20	0.41
41:BP:81:GLN:HG2	41:BP:106:LEU:HD12	2.01	0.41
45:DT:29:ARG:HG2	45:DT:86:ILE:H	1.86	0.41
45:BT:24:PRO:HA	45:BT:49:VAL:O	2.21	0.41
50:BY:16:ALA:HA	50:BY:21:LYS:CD	2.50	0.41
37:BH:71:LEU:HD12	37:BH:71:LEU:HA	1.68	0.41
4:AD:13:ARG:HD2	4:AD:38:TYR:O	2.20	0.41
1:AA:1501:C:H5''	1:AA:1502:A:OP2	2.20	0.41
13:CM:40:ASN:HA	13:CM:41:PRO:HD3	1.82	0.41
24:D2:47:ASN:HA	24:D2:51:ARG:HB3	2.02	0.41
50:DY:37:VAL:HG11	50:DY:72:VAL:CG2	2.50	0.41
50:DY:37:VAL:N	50:DY:67:LEU:O	2.48	0.41
1:CA:1072:G:C5	1:CA:1073:U:C5	3.09	0.41
45:BT:38:ASN:ND2	45:BT:40:THR:H	2.18	0.41
37:BH:20:ALA:HB3	37:BH:23:ARG:HG3	2.03	0.41
31:DA:675:A:N6	31:DA:676:A:N6	2.68	0.41
50:BY:28:LYS:CD	50:BY:37:VAL:HG12	2.50	0.41
17:AQ:59:ILE:HG21	17:AQ:71:PHE:HB3	1.99	0.41
31:DA:2468:G:H5''	42:DQ:120:ILE:HD12	2.02	0.41
31:BA:370:G:H3'	31:BA:423:A:C5	2.54	0.41
31:DA:271(F):C:H2'	31:DA:271(G):C:C6	2.53	0.41
15:CO:56:LEU:HA	15:CO:59:MET:HE2	2.01	0.41
22:B0:73:GLY:C	22:B0:75:LEU:N	2.71	0.41
1:CA:977:A:C8	1:CA:1223:C:N3	2.89	0.41
43:BR:87:TYR:CE1	43:BR:117:VAL:HG12	2.52	0.41
22:D0:70:GLN:O	22:D0:77:ARG:HA	2.20	0.41
31:BA:1791:A:H3'	31:BA:1792:G:H8	1.86	0.41
31:BA:2371:G:C6	31:BA:2372:G:N7	2.88	0.41
38:BI:53:ALA:C	38:BI:55:ALA:N	2.74	0.41
31:BA:90:U:O2'	31:BA:92:A:C5'	2.69	0.41
1:AA:16:A:C2	1:AA:17:U:C6	3.09	0.41
32:BB:82:G:H2'	32:BB:83:G:C5'	2.51	0.41
32:BB:81:G:C5'	32:BB:82:G:OP2	2.68	0.41
31:BA:751:A:H5'	48:BW:90:ARG:CA	2.45	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
34:BE:53:PRO:HB2	34:BE:54:GLN:H	1.58	0.41
2:CB:19:HIS:O	2:CB:20:GLU:C	2.59	0.41
12:AL:33:ARG:CG	12:AL:60:LEU:HD12	2.49	0.41
34:BE:129:HIS:O	34:BE:130:GLY:C	2.57	0.41
31:BA:548:A:HO2'	31:BA:549:G:P	2.44	0.41
1:CA:1125:U:H2'	1:CA:1126:U:OP2	2.20	0.41
1:AA:179:A:H2'	1:AA:180:U:C6	2.56	0.41
2:AB:20:GLU:CG	2:AB:191:ASP:HB2	2.44	0.41
1:AA:1125:U:H2'	1:AA:1126:U:OP2	2.20	0.41
42:DQ:16:ARG:NH1	42:DQ:16:ARG:CB	2.83	0.41
31:BA:1170:G:OP2	31:BA:1170:G:H8	2.04	0.41
31:DA:2471:C:O2	31:DA:2471:C:H2'	2.19	0.41
1:CA:774:G:N2	1:CA:806:C:C2	2.88	0.41
1:CA:1281:U:H3'	1:CA:1282:C:H6	1.84	0.41
36:BG:18:GLU:HG3	36:BG:18:GLU:O	2.19	0.41
31:DA:1170:G:N2	31:DA:1180:C:C2	2.88	0.41
1:CA:12:U:H3	1:CA:22:G:H1	1.66	0.41
2:AB:97:TRP:CH2	2:AB:176:GLU:CD	2.94	0.41
1:CA:1298:C:C6	7:CG:114:ARG:NH1	2.89	0.41
6:CF:89:MET:SD	18:CR:76:LEU:HD21	2.60	0.41
8:AH:13:ILE:HG22	8:AH:14:ARG:N	2.36	0.41
1:CA:659:U:O2	1:CA:659:U:H2'	2.19	0.41
1:CA:747:C:C5	1:CA:748:C:N3	2.89	0.41
31:DA:581:C:H2'	31:DA:582:G:H8	1.84	0.41
1:AA:1386:G:C2	1:AA:1387:G:N7	2.87	0.41
3:AC:113:ALA:C	3:AC:115:LEU:N	2.72	0.41
31:BA:1049:C:O2	31:BA:1050:A:N7	2.53	0.41
5:CE:68:GLU:O	5:CE:70:PRO:HD3	2.21	0.41
31:BA:473:G:C2'	31:BA:474:G:O5'	2.68	0.41
31:BA:449:A:OP1	35:BF:84:VAL:O	2.39	0.41
1:AA:1477:C:H2'	1:AA:1478:C:H6	1.84	0.41
1:CA:831:U:O2'	1:CA:832:C:H5'	2.21	0.41
31:BA:1805:U:O2'	31:BA:1806:C:H5'	2.21	0.41
31:BA:118:A:H3'	31:BA:119:A:C5'	2.51	0.41
31:BA:49:A:H5''	31:BA:51:G:O4'	2.20	0.41
46:DU:8:VAL:CG1	46:DU:12:ARG:HG3	2.49	0.41
35:DF:110:LEU:HD21	35:DF:181:LEU:HD23	2.01	0.41
20:CT:69:GLY:O	20:CT:73:HIS:NE2	2.53	0.41
11:CK:61:ALA:CB	11:CK:90:GLY:O	2.69	0.41
35:DF:57:VAL:CG1	35:DF:59:TYR:CD1	2.99	0.41
25:B3:46:ASN:O	25:B3:50:VAL:HG22	2.20	0.41
43:BR:13:HIS:O	43:BR:14:SER:C	2.59	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:BA:892:G:C8	31:BA:893:C:C4	3.09	0.41
14:CN:36:PHE:HD1	14:CN:37:PHE:CD2	2.39	0.41
31:DA:1553:A:C5	31:DA:1555:G:C4	3.09	0.41
38:BI:111:PRO:HG2	38:BI:112:LYS:HG3	2.00	0.41
40:DO:60:ALA:CB	40:DO:86:ILE:HA	2.49	0.41
1:CA:1429:C:H2'	1:CA:1430:C:C6	2.55	0.41
31:BA:2796:U:O2	31:BA:2796:U:O4'	2.38	0.41
44:BS:97:ARG:O	44:BS:97:ARG:NE	2.54	0.41
31:DA:1410:G:C5	31:DA:1411:C:C5	3.08	0.41
31:DA:1356:G:C5	31:DA:1357:U:C5	3.07	0.41
15:CO:43:LEU:C	15:CO:45:VAL:H	2.24	0.41
1:CA:1137:C:H6	1:CA:1137:C:H3'	1.85	0.41
40:DO:26:LYS:HB2	40:DO:30:ALA:HB2	2.02	0.41
31:BA:257:A:C8	31:BA:258:G:C8	3.08	0.41
31:DA:2863:C:OP1	45:DT:93:ARG:NH1	2.53	0.41
31:BA:1467:C:C4'	31:BA:1467:C:OP1	2.68	0.41
31:DA:1836:C:H2'	31:DA:1837:C:H6	1.85	0.41
46:DU:39:LEU:O	46:DU:40:PHE:C	2.58	0.41
25:D3:7:LYS:O	25:D3:9:VAL:HG13	2.20	0.41
17:CQ:19:VAL:HG23	17:CQ:44:ALA:HB3	2.03	0.41
4:AD:102:ASP:HB2	4:AD:118:ARG:HG3	2.01	0.41
34:BE:182:LEU:HD12	34:BE:183:LEU:N	2.35	0.41
41:DP:86:LYS:HB3	41:DP:117:GLU:O	2.20	0.41
1:AA:981:U:H6	1:AA:981:U:O5'	2.02	0.41
17:AQ:43:LEU:N	17:AQ:43:LEU:HD23	2.36	0.41
23:D1:69:LYS:HB2	23:D1:69:LYS:NZ	2.36	0.41
38:BI:101:LEU:HD12	38:BI:101:LEU:O	2.20	0.41
33:BD:76:PRO:O	33:BD:98:VAL:HG22	2.21	0.41
33:DD:162:SER:HB3	33:DD:195:ALA:HB1	2.02	0.41
31:BA:1520:G:H3'	31:BA:1523:U:H6	1.86	0.41
30:B8:31:HIS:CB	31:BA:2420:C:H41	2.33	0.41
46:DU:106:PHE:O	46:DU:109:LEU:HB2	2.21	0.41
47:BV:1:MET:HE1	47:BV:44:LYS:N	2.34	0.41
1:AA:49:U:C2	1:AA:361:G:N2	2.89	0.41
32:DB:42:C:O2	36:DG:92:VAL:HA	2.20	0.41
50:BY:81:LYS:HG2	50:BY:96:ILE:HG22	2.02	0.41
31:BA:993:G:C5'	47:BV:75:PHE:CE2	2.94	0.41
30:B8:59:LYS:CB	30:B8:59:LYS:HZ3	2.25	0.41
41:BP:17:LYS:CG	41:BP:19:VAL:HG23	2.42	0.41
47:DV:18:LEU:HD13	47:DV:18:LEU:C	2.41	0.41
50:DY:14:LEU:HD12	50:DY:15:VAL:H	1.85	0.41
1:AA:1277:C:C2'	1:AA:1278:U:H5'	2.50	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:BA:607:U:N3	31:BA:621:A:C2	2.77	0.41
31:BA:608:A:C4	31:BA:621:A:C6	3.09	0.41
34:BE:47:VAL:O	34:BE:80:GLU:HA	2.20	0.41
31:DA:1142(A):A:C8	31:DA:1142(A):A:H5'	2.55	0.41
1:CA:598:U:H2'	1:CA:599:C:C6	2.55	0.41
1:CA:509:A:C2	1:CA:510:A:N1	2.89	0.41
36:DG:47:LYS:HD3	36:DG:81:LYS:HD3	2.02	0.41
45:BT:22:PHE:HE2	45:BT:85:LYS:HE3	1.84	0.41
41:DP:112:LEU:HD23	41:DP:113:LYS:N	2.36	0.41
31:DA:2657:A:C2	31:DA:2658:C:C5	3.09	0.41
4:AD:30:LYS:C	4:AD:32:ALA:N	2.74	0.41
4:AD:9:CYS:HA	4:AD:12:CYS:CB	2.38	0.41
1:AA:1504:G:OP1	1:AA:1507:A:H4'	2.20	0.41
43:BR:10:LEU:HB3	43:BR:17:ARG:CD	2.47	0.41
1:CA:1228:C:C5'	13:CM:108:ARG:HH22	2.34	0.41
6:CF:15:ASP:OD1	6:CF:18:GLN:N	2.51	0.41
1:AA:1228:C:C5'	13:AM:108:ARG:HH22	2.33	0.41
37:BH:170:ARG:H	37:BH:170:ARG:HD2	1.85	0.41
15:AO:56:LEU:HA	15:AO:59:MET:HE2	2.01	0.41
31:DA:804:A:H5''	31:DA:805:G:OP1	2.21	0.41
1:AA:189(F):U:C4	17:AQ:72:ARG:NH2	2.88	0.41
31:BA:2791:C:H4'	31:BA:2792:G:O5'	2.18	0.41
1:CA:1065:U:C2'	1:CA:1066:C:OP2	2.69	0.41
31:DA:2512:C:H4'	34:DE:122:PHE:CE2	2.55	0.41
39:DN:78:TYR:CD1	39:DN:79:PRO:CB	3.03	0.41
43:BR:49:ASP:OD1	43:BR:95:THR:HB	2.21	0.41
27:B5:2:ALA:N	31:BA:747:U:C2	2.88	0.41
41:DP:120:ALA:HB3	41:DP:138:LEU:HB3	1.99	0.41
7:AG:113:GLU:HB3	7:AG:118:VAL:HG23	2.02	0.41
1:AA:329:A:C2	1:AA:332:G:C4	3.09	0.41
33:DD:145:VAL:HG12	33:DD:146:GLU:O	2.21	0.41
3:CC:52:LEU:HD23	3:CC:52:LEU:N	2.33	0.41
1:AA:559:A:H4'	1:AA:560:U:C3'	2.45	0.41
31:DA:1833:U:C4	31:DA:1834:U:C5	3.09	0.41
31:BA:2471:C:C3'	31:BA:2472:G:H5''	2.43	0.41
31:BA:773:U:H2'	31:BA:774:A:H5'	2.02	0.41
2:AB:19:HIS:CG	2:AB:20:GLU:N	2.89	0.41
1:AA:1126:U:O4	1:AA:1127:G:C2	2.74	0.41
31:BA:1721:G:N1	31:BA:1739:U:OP2	2.53	0.41
32:BB:91:C:OP1	42:BQ:16:ARG:HG3	2.21	0.41
1:AA:1215:G:C5	1:AA:1216:G:N7	2.89	0.41
36:BG:23:PHE:HZ	36:BG:171:ALA:CB	2.32	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:BA:530:G:C6	31:BA:2022:U:H5''	2.56	0.41
1:CA:819:A:N7	1:CA:1529:G:C2	2.88	0.41
16:CP:14:ASN:OD1	16:CP:16:HIS:HE1	2.00	0.41
3:AC:134:ILE:HG23	3:AC:151:VAL:CG1	2.51	0.41
1:AA:1128:C:N3	1:AA:1139:G:C6	2.88	0.41
17:CQ:23:VAL:O	17:CQ:39:SER:HB2	2.19	0.41
42:DQ:29:PHE:CD1	42:DQ:29:PHE:N	2.89	0.41
31:BA:1050:A:N1	31:BA:2751:G:C5	2.88	0.41
5:CE:72:GLN:O	5:CE:75:THR:HG22	2.21	0.41
31:BA:1359:A:H2'	31:BA:1360:A:H5'	2.03	0.41
31:DA:1533:G:HO2'	31:DA:1543:C:P	2.36	0.41
15:CO:3:ILE:H	15:CO:3:ILE:CD1	2.31	0.41
6:CF:79:LEU:HB2	6:CF:88:VAL:HG21	2.01	0.41
31:BA:1581:G:H5'	31:BA:1582:C:OP2	2.21	0.41
9:CI:114:TYR:CD2	9:CI:114:TYR:O	2.73	0.41
7:CG:26:PHE:CG	7:CG:62:PHE:HE1	2.39	0.41
31:BA:1510:G:C6	31:BA:1511:C:C4	3.08	0.41
31:BA:452:G:C4	31:BA:458:G:C6	3.09	0.41
41:DP:107:LYS:C	41:DP:109:GLY:N	2.70	0.41
31:BA:1864:U:H3'	31:BA:1865:G:H5''	2.01	0.41
25:D3:46:ASN:HD21	31:DA:851:U:H5'	1.85	0.41
31:DA:1629:U:H2'	31:DA:1630:G:C8	2.55	0.41
50:BY:2:ARG:O	50:BY:4:LYS:N	2.53	0.41
37:DH:117:PRO:HA	37:DH:123:PHE:CE1	2.54	0.41
31:BA:128:C:H5''	31:BA:128:C:H6	1.85	0.41
5:CE:15:ARG:CZ	5:CE:26:PHE:CE2	3.04	0.41
35:BF:57:VAL:CG1	35:BF:58:ALA:N	2.81	0.41
40:DO:86:ILE:HG22	40:DO:94:ARG:HD3	2.03	0.41
47:BV:56:SER:O	47:BV:57:VAL:HB	2.21	0.41
1:AA:783:C:H2'	1:AA:784:C:H5'	2.02	0.41
31:DA:2693:A:H2'	31:DA:2694:G:C8	2.53	0.41
1:CA:1217:C:H2'	1:CA:1218:C:O4'	2.20	0.41
4:CD:96:LEU:HD22	4:CD:96:LEU:N	2.36	0.41
31:BA:1892:C:O5'	31:BA:1892:C:H6	2.02	0.41
31:BA:2483:C:N3	42:BQ:124:LYS:NZ	2.68	0.41
34:DE:102:VAL:HG12	34:DE:200:GLU:HA	2.02	0.41
16:CP:7:ALA:O	16:CP:9:PHE:CD2	2.73	0.41
50:DY:54:LYS:HG2	50:DY:55:TYR:CD2	2.56	0.41
19:AS:58:VAL:HA	19:AS:59:PRO:HD2	1.96	0.41
31:DA:1207:C:H2'	31:DA:1208:C:H6	1.84	0.41
31:BA:1853:A:N1	31:BA:2087:G:H1'	2.36	0.41
1:CA:319:G:N2	1:CA:320:C:H1'	2.35	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:BA:688:U:H5'	31:BA:1780:A:C2	2.55	0.41
17:CQ:45:HIS:HB3	17:CQ:72:ARG:HG2	2.03	0.41
3:AC:89:GLU:O	3:AC:93:LYS:HB2	2.21	0.41
31:BA:1642:G:C2'	31:BA:1643:G:H5'	2.50	0.41
22:B0:24:LYS:HG3	22:B0:36:ILE:HD11	2.02	0.41
3:AC:120:VAL:HG12	3:AC:198:VAL:HG21	2.02	0.41
38:BI:93:THR:HG22	38:BI:119:PRO:HB3	2.01	0.41
31:BA:2437:U:H2'	31:BA:2438:U:C6	2.55	0.41
31:BA:2726:U:O4'	31:BA:2726:U:O2	2.38	0.41
31:DA:1774:C:O5'	31:DA:1774:C:H6	2.02	0.41
1:CA:162:A:H8	1:CA:162:A:O5'	2.04	0.41
31:BA:1934:C:H5''	31:BA:1934:C:H6	1.86	0.41
38:DI:44:LEU:HA	38:DI:44:LEU:HD23	1.56	0.41
2:AB:75:LYS:HD3	2:AB:75:LYS:O	2.21	0.41
46:BU:109:LEU:HA	46:BU:109:LEU:HD23	1.79	0.41
31:BA:877:U:C2'	31:BA:878:A:H5''	2.51	0.41
16:AP:64:ALA:O	16:AP:65:GLN:C	2.58	0.41
7:CG:31:MET:SD	7:CG:34:GLY:HA2	2.61	0.41
31:BA:1826:G:C5	31:BA:1827:C:C5	3.09	0.41
31:BA:996:A:OP2	46:BU:92:ARG:NH2	2.54	0.41
16:AP:45:THR:C	16:AP:47:ASP:N	2.74	0.41
33:BD:25:THR:O	33:BD:27:THR:CB	2.69	0.41
47:DV:73:SER:O	47:DV:74:LYS:CB	2.69	0.41
39:DN:131:GLN:CD	39:DN:134:ARG:CB	2.87	0.41
28:D6:12:GLU:OE1	28:D6:23:THR:HG22	2.21	0.41
31:DA:2420:C:O5'	31:DA:2420:C:H6	2.03	0.41
31:DA:624:C:H2'	31:DA:625:G:H5'	2.03	0.41
47:BV:69:LYS:CB	47:BV:93:GLU:CD	2.89	0.41
51:BZ:151:HIS:HB2	51:BZ:152:ALA:H	1.52	0.41
31:BA:174:C:H3'	31:BA:175:G:H5''	2.01	0.41
31:DA:103:A:H2'	31:DA:104:U:H5'	2.03	0.41
1:CA:47:C:O2	1:CA:49:U:C5	2.74	0.41
24:B2:35:LEU:HD23	24:B2:35:LEU:H	1.84	0.41
2:AB:98:LEU:H	2:AB:101:MET:HE3	1.85	0.41
32:BB:45:A:H1'	36:BG:95:ARG:NH2	2.36	0.41
44:BS:90:GLY:C	44:BS:92:TYR:N	2.73	0.41
2:AB:114:ARG:HD3	2:AB:114:ARG:O	2.20	0.41
31:DA:942:G:C2'	31:DA:943:U:H5'	2.51	0.41
31:BA:259:G:N2	31:BA:621:A:C8	2.71	0.41
34:BE:82:ARG:O	34:BE:84:PHE:N	2.54	0.41
1:CA:407:G:O2'	4:CD:116:GLN:CB	2.68	0.41
1:CA:436:C:O2'	1:CA:437:U:P	2.79	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:BA:637:A:OP1	41:BP:133:SER:CB	2.68	0.41
47:DV:85:LYS:C	47:DV:87:HIS:N	2.67	0.41
45:BT:28:VAL:CG1	45:BT:46:GLU:HB2	2.51	0.41
39:BN:17:ASP:O	39:BN:19:GLU:N	2.54	0.41
39:BN:57:ALA:O	39:BN:59:LYS:HB2	2.20	0.41
41:BP:103:ALA:O	41:BP:104:GLY:C	2.59	0.41
1:AA:502:G:C2	1:AA:503:C:C2	3.08	0.41
41:DP:96:THR:HB	41:DP:97:PRO:HD2	2.03	0.41
4:AD:12:CYS:SG	4:AD:19:LEU:O	2.79	0.41
4:AD:206:PHE:CD2	4:AD:207:TYR:CD2	3.09	0.41
31:BA:2681:C:O2	31:BA:2681:C:C2'	2.66	0.41
49:DX:83:VAL:O	49:DX:83:VAL:HG23	2.20	0.41
50:DY:37:VAL:C	50:DY:66:PRO:O	2.59	0.41
50:DY:7:VAL:HB	50:DY:8:LYS:CE	2.50	0.41
6:CF:11:ASN:HA	6:CF:12:PRO:HD2	1.93	0.41
31:DA:2832:U:C2	31:DA:2834:G:C2	3.09	0.41
39:DN:45:ASN:ND2	39:DN:45:ASN:N	2.60	0.41
31:BA:2359:C:N4	31:BA:2360:A:C6	2.88	0.41
1:AA:102:G:C6	1:AA:103:C:N4	2.89	0.41
37:DH:65:HIS:CE1	37:DH:69:ARG:HD3	2.56	0.41
31:DA:480:A:H3'	31:DA:481:G:H5''	2.03	0.41
11:CK:111:ASP:CA	18:CR:84:LYS:HE2	2.49	0.41
42:DQ:57:HIS:O	42:DQ:57:HIS:CG	2.74	0.41
1:CA:1191:A:OP1	3:CC:3:ASN:ND2	2.53	0.41
1:CA:63:C:H5'	1:CA:64:G:OP2	2.21	0.41
22:B0:73:GLY:C	22:B0:75:LEU:H	2.24	0.41
5:CE:101:ILE:HD13	5:CE:118:ILE:O	2.21	0.41
1:AA:1068:G:N7	1:AA:1094:G:C8	2.89	0.41
31:DA:1434:A:H2'	31:DA:1435:G:C8	2.56	0.41
1:CA:1364:U:O2'	1:CA:1365:G:H5'	2.20	0.41
13:AM:19:LEU:O	13:AM:22:ILE:HG13	2.20	0.41
51:DZ:166:SER:CB	51:DZ:167:PRO:HA	2.50	0.41
24:B2:15:LYS:HA	24:B2:18:PRO:CD	2.50	0.41
14:AN:3:ARG:HB3	14:AN:3:ARG:NH1	2.35	0.41
1:AA:1077:G:N2	1:AA:1081:G:C5	2.89	0.41
4:AD:108:LEU:HB3	4:AD:110:PHE:CE1	2.56	0.41
34:BE:52:LEU:O	34:BE:75:VAL:N	2.51	0.41
18:AR:44:LEU:O	18:AR:45:SER:C	2.59	0.41
40:DO:65:THR:HA	40:DO:82:ASN:HD22	1.86	0.41
44:BS:99:LYS:O	44:BS:101:LEU:N	2.53	0.41
31:BA:2274:A:C5	31:BA:2276:G:C8	3.08	0.41
1:CA:146:G:N2	1:CA:147:G:H1'	2.36	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
36:BG:15:VAL:HG13	36:BG:175:LEU:CD1	2.50	0.41
31:DA:1177:A:H5'	31:DA:1178:C:O4'	2.20	0.41
31:BA:108:U:H2'	31:BA:109:G:C8	2.56	0.41
31:BA:2517:C:C5	31:BA:2542:A:C2	3.09	0.41
31:DA:1241:A:O4'	31:DA:1241:A:N3	2.54	0.41
46:BU:10:ARG:O	46:BU:11:ARG:C	2.59	0.41
5:CE:57:LYS:O	5:CE:61:TYR:CD2	2.65	0.41
45:DT:16:ARG:HD3	45:DT:16:ARG:HA	1.64	0.41
9:AI:28:VAL:HG13	9:AI:65:VAL:HG12	2.03	0.41
31:BA:1686:C:C2'	31:BA:1687:G:H5'	2.50	0.41
10:CJ:58:ASP:O	10:CJ:60:ARG:N	2.53	0.41
1:AA:577:G:C1'	1:AA:816:A:C4	3.04	0.41
31:DA:1223:G:N1	31:DA:1227:G:C6	2.89	0.41
20:AT:82:SER:O	20:AT:86:ARG:HD2	2.21	0.41
39:DN:119:ARG:HH11	39:DN:119:ARG:HG3	1.85	0.41
1:AA:892:A:H2'	1:AA:893:C:H6	1.83	0.41
1:AA:1312:G:H1	1:AA:1325:C:H42	1.68	0.41
31:BA:1260:G:C6	31:BA:1261:C:C4	3.08	0.41
31:DA:204:A:O3'	31:DA:205:G:H4'	2.20	0.41
17:AQ:57:VAL:HG12	17:AQ:75:ARG:O	2.21	0.41
31:BA:1039:G:H2'	31:BA:1040:C:H5'	2.03	0.41
19:CS:29:ARG:O	19:CS:31:ILE:HG22	2.21	0.41
37:BH:116:GLU:HG2	37:BH:117:PRO:N	2.34	0.41
37:BH:117:PRO:CA	37:BH:123:PHE:HE1	2.33	0.41
32:DB:1:U:C6	32:DB:2:C:C5	3.09	0.41
1:AA:987:G:N2	1:AA:1219:U:N3	2.68	0.41
31:BA:1157:G:N3	31:BA:1158:C:C6	2.89	0.41
48:DW:69:LEU:O	48:DW:69:LEU:HD12	2.20	0.41
33:BD:45:ASN:C	33:BD:45:ASN:OD1	2.59	0.41
31:BA:1475:G:H5''	31:BA:1475:G:H8	1.85	0.41
31:DA:1644:C:C2'	31:DA:1645:G:H5'	2.50	0.41
42:BQ:69:PHE:CD1	42:BQ:70:PRO:HD2	2.55	0.41
31:BA:2032:G:H21	34:BE:146:THR:HG23	1.86	0.41
40:DO:116:SER:OG	40:DO:117:LEU:N	2.52	0.41
31:BA:756:C:N4	31:BA:757:U:C4	2.89	0.41
39:DN:15:LEU:O	39:DN:136:GLU:HA	2.21	0.41
40:DO:49:ARG:HD3	40:DO:49:ARG:HA	1.99	0.41
1:AA:1258:G:H2'	1:AA:1259:C:C6	2.55	0.41
35:DF:29:ASN:O	35:DF:30:PRO:C	2.58	0.41
22:D0:46:LYS:O	22:D0:78:TYR:HA	2.21	0.41
27:B5:31:VAL:HG22	27:B5:40:LYS:O	2.20	0.41
33:BD:62:TYR:CE1	33:BD:64:ILE:HA	2.56	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
33:DD:35:LYS:CA	33:DD:64:ILE:CG2	2.98	0.41
44:DS:26:LEU:HD12	44:DS:39:ILE:HD11	2.01	0.41
51:BZ:151:HIS:O	51:BZ:152:ALA:C	2.58	0.41
4:CD:105:VAL:CG2	4:CD:126:ILE:HG21	2.50	0.41
30:B8:59:LYS:CD	41:BP:50:ARG:HB3	2.51	0.41
16:CP:45:THR:HG23	16:CP:46:PRO:HD2	2.03	0.41
24:B2:32:LEU:HD13	24:B2:32:LEU:HA	1.87	0.41
31:BA:142:A:O2'	31:BA:1407:C:H2'	2.19	0.41
1:CA:674:G:P	6:CF:87:ARG:HH22	2.44	0.41
1:CA:676:A:C2	1:CA:677:U:C4	3.09	0.41
36:BG:60:LEU:HA	36:BG:63:ILE:HG12	2.03	0.41
10:AJ:44:VAL:HG12	10:AJ:45:ARG:N	2.35	0.41
23:B1:85:LEU:HA	23:B1:85:LEU:HD22	1.69	0.41
23:D1:86:SER:HA	23:D1:89:GLU:OE1	2.21	0.41
29:B7:5:TRP:CZ3	31:BA:464:U:C4'	3.04	0.41
15:CO:82:ILE:CG1	15:CO:88:ARG:HG3	2.49	0.41
42:DQ:81:VAL:O	42:DQ:82:ARG:NH1	2.54	0.41
31:BA:1022:G:C5	31:BA:1140:C:N4	2.89	0.41
34:DE:37:ARG:HD2	34:DE:80:GLU:OE2	2.21	0.41
31:DA:1880:C:C6	31:DA:1880:C:H5'	2.50	0.41
4:CD:74:GLN:HA	4:CD:77:ASN:HD22	1.86	0.41
36:DG:60:LEU:HD13	36:DG:60:LEU:O	2.21	0.41
45:DT:98:LYS:HD3	45:DT:98:LYS:N	2.36	0.41
31:DA:2801(A):A:C3'	31:DA:2802:G:H5'	2.49	0.41
41:BP:85:LEU:CD2	41:BP:85:LEU:H	2.31	0.41
31:BA:306:U:H2'	31:BA:307:G:O4'	2.20	0.41
1:AA:501:C:H1'	1:AA:549:C:H1'	2.02	0.41
31:DA:1528(A):A:H2'	31:DA:1529:G:O4'	2.21	0.41
24:D2:37:PHE:CZ	24:D2:43:GLN:HB2	2.49	0.41
31:DA:2360:A:O2'	31:DA:2361:A:O4'	2.29	0.41
31:DA:491:G:H2'	31:DA:492:A:C8	2.56	0.41
31:BA:1500:G:C6	31:BA:1501:C:N4	2.88	0.41
4:AD:163:GLU:O	4:AD:165:MET:N	2.53	0.41
33:DD:109:ASP:HB2	33:DD:197:GLY:HA2	2.03	0.41
31:DA:271(E):U:H3	31:DA:271(S):G:H1	1.68	0.41
22:B0:73:GLY:O	22:B0:75:LEU:N	2.54	0.41
48:DW:12:ILE:CG2	48:DW:17:VAL:HG21	2.51	0.41
31:DA:1434:A:N6	31:DA:1558:A:N6	2.59	0.41
31:DA:1803:A:O3'	33:DD:259:THR:HG23	2.21	0.41
5:AE:92:LYS:O	5:AE:119:LEU:N	2.51	0.41
1:AA:963:G:N3	10:AJ:55:LYS:NZ	2.50	0.41
1:AA:977:A:H1'	1:AA:982:U:O4	2.21	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:7:G:C6	1:AA:298:A:C2	3.09	0.41
31:DA:386:G:H3'	31:DA:388:G:N2	2.36	0.41
38:BI:67:ARG:O	38:BI:68:LEU:HB2	2.20	0.41
1:CA:562:C:H4'	1:CA:563:A:O5'	2.20	0.41
35:DF:65:TRP:CZ3	35:DF:73:ALA:O	2.74	0.41
12:AL:62:SER:C	12:AL:64:TYR:N	2.74	0.41
1:AA:458:C:C2	1:AA:460:G:C8	3.09	0.41
5:CE:51:VAL:CB	5:CE:52:PRO:HD3	2.45	0.41
1:AA:78:G:N2	1:AA:91:C:H42	2.16	0.41
1:CA:370:C:N3	1:CA:371:G:C5	2.89	0.41
31:DA:108:U:C2	31:DA:109:G:C8	3.09	0.41
31:DA:1043:C:O2'	31:DA:1044:G:C8	2.56	0.41
3:AC:153:VAL:HB	3:AC:166:GLU:HB3	2.02	0.41
31:BA:1207:C:H2'	31:BA:1208:C:C6	2.56	0.41
31:BA:2200:C:H5'	31:BA:2201:C:OP2	2.21	0.41
6:AF:89:MET:SD	18:AR:76:LEU:HD21	2.61	0.41
31:BA:2187:G:N7	31:BA:2188:C:C2	2.89	0.41
1:CA:827:U:C4	1:CA:870:U:N3	2.89	0.41
31:DA:34:C:H3'	31:DA:34:C:C6	2.50	0.41
10:CJ:50:ILE:HA	10:CJ:60:ARG:CB	2.51	0.41
5:AE:146:ALA:O	5:AE:148:VAL:N	2.54	0.41
14:AN:21:TYR:OH	14:AN:23:ARG:NH2	2.54	0.41
31:BA:117:G:C6	31:BA:119:A:C6	3.09	0.41
48:BW:55:ALA:O	48:BW:56:ALA:C	2.58	0.41
20:AT:36:LEU:HD12	20:AT:55:ILE:HG23	2.03	0.41
44:DS:106:ARG:HE	44:DS:106:ARG:HB3	1.29	0.41
1:CA:114:U:H2'	1:CA:115:G:H8	1.85	0.41
4:CD:56:VAL:HG12	4:CD:202:LEU:CD1	2.51	0.41
11:AK:61:ALA:HB1	11:AK:90:GLY:O	2.21	0.41
13:AM:44:ARG:HB2	13:AM:46:LYS:CG	2.51	0.41
1:AA:9:G:H2'	1:AA:10:A:C8	2.56	0.41
25:B3:49:LYS:HE2	31:BA:850:C:O3'	2.21	0.41
31:BA:840:C:H6	31:BA:840:C:O5'	2.04	0.41
31:BA:513:A:C2	31:BA:514:A:C4	3.08	0.41
4:CD:57:ARG:NH2	5:CE:107:ARG:HD3	2.35	0.41
1:AA:1217:C:H2'	1:AA:1218:C:O4'	2.21	0.41
16:AP:7:ALA:O	16:AP:9:PHE:CD2	2.74	0.41
43:BR:81:ASP:O	43:BR:85:PRO:HG2	2.21	0.41
31:DA:1261:C:C2'	31:DA:1262:A:O5'	2.69	0.41
31:BA:1323:U:H2'	31:BA:1324:G:H5'	2.03	0.41
20:AT:75:ASN:ND2	20:AT:75:ASN:H	2.19	0.41
31:DA:937:U:H2'	31:DA:938:G:O4'	2.20	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:640:A:C2'	1:AA:641:U:H5'	2.50	0.41
15:CO:5:LYS:O	15:CO:9:GLN:HG2	2.21	0.41
31:BA:1520:G:H5''	31:BA:1523:U:OP2	2.21	0.41
8:CH:33:GLU:O	8:CH:34:GLU:C	2.59	0.41
2:AB:53:ARG:O	2:AB:56:ARG:HB2	2.21	0.41
31:DA:700:G:H2'	31:DA:701:G:O4'	2.21	0.41
1:AA:319:G:N2	1:AA:320:C:H1'	2.36	0.41
17:AQ:52:LYS:HB3	17:AQ:52:LYS:HE3	1.85	0.41
31:DA:1881:C:H2'	31:DA:1881:C:O2	2.20	0.41
31:BA:1155:A:O2'	31:BA:1156:A:H2'	2.19	0.41
27:B5:57:VAL:C	27:B5:58:LEU:CG	2.89	0.41
30:B8:30:ARG:NH2	41:BP:62:LEU:HB2	2.36	0.41
31:DA:1902:C:H4'	33:DD:244:ARG:HA	2.01	0.41
46:BU:92:ARG:CZ	47:BV:11:GLN:H	2.34	0.41
47:BV:1:MET:SD	47:BV:46:VAL:HB	2.61	0.41
47:BV:47:VAL:CG1	47:BV:48:GLY:N	2.74	0.41
39:BN:3:THR:O	39:BN:4:TYR:CG	2.73	0.41
1:AA:375:U:C4	1:AA:376:G:N7	2.89	0.41
1:AA:450:G:OP1	1:AA:452:A:P	2.79	0.41
1:AA:51:A:H4'	1:AA:52:G:C5'	2.50	0.41
1:AA:63:C:H5'	1:AA:64:G:OP2	2.21	0.41
16:AP:43:LYS:CG	16:AP:48:TRP:CE3	3.04	0.41
33:DD:33:LEU:O	33:DD:35:LYS:O	2.37	0.41
31:BA:1885:A:C8	31:BA:1885:A:H5'	2.41	0.41
44:DS:18:ILE:HD12	44:DS:18:ILE:HA	1.69	0.41
32:DB:40:U:H3'	32:DB:41:U:H5''	2.03	0.41
31:BA:2703:C:H2'	31:BA:2704:C:C6	2.54	0.41
31:BA:2303:G:N2	31:BA:2314:C:C6	2.89	0.41
39:DN:131:GLN:HG2	39:DN:134:ARG:N	2.28	0.41
34:BE:63:LEU:HA	34:BE:63:LEU:HD23	1.81	0.41
50:BY:81:LYS:HE2	50:BY:97:ARG:HG2	2.03	0.41
31:DA:154:G:O5'	31:DA:154:G:H8	2.03	0.41
31:DA:621:A:C2'	31:DA:622:G:H5'	2.49	0.41
50:DY:98:VAL:O	50:DY:99:CYS:HB3	2.20	0.41
24:D2:25:VAL:O	24:D2:27:GLU:N	2.50	0.41
49:DX:23:GLU:OE1	49:DX:23:GLU:HA	2.20	0.41
24:D2:32:LEU:CD1	24:D2:35:LEU:HA	2.51	0.41
49:DX:60:ARG:HB2	49:DX:73:ARG:N	2.36	0.41
30:B8:59:LYS:HD3	41:BP:50:ARG:HB3	2.02	0.41
31:DA:83:G:O3'	31:DA:84:A:H8	2.04	0.41
2:CB:187:LEU:HA	2:CB:201:ILE:O	2.21	0.41
46:DU:93:LYS:CD	46:DU:93:LYS:H	2.34	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:CA:376:G:OP1	16:CP:5:ARG:HB2	2.21	0.41
1:CA:376:G:N3	1:CA:389:A:C2	2.88	0.41
16:CP:43:LYS:O	16:CP:45:THR:N	2.54	0.41
24:B2:47:ASN:HA	24:B2:51:ARG:HB3	2.03	0.41
31:BA:61:G:H1	31:BA:94:C:H42	1.69	0.41
24:B2:47:ASN:O	24:B2:49:LYS:N	2.54	0.41
31:BA:143(A):C:C2'	31:BA:143(A):C:O2	2.67	0.41
49:BX:87:GLN:HB2	49:BX:88:LYS:HD2	2.03	0.41
31:BA:1820:U:H4'	31:BA:1821:A:OP2	2.21	0.41
31:BA:1819:A:H4'	31:BA:1820:U:O5'	2.20	0.41
15:CO:25:THR:O	15:CO:26:GLU:C	2.59	0.41
1:CA:1255:G:N2	1:CA:1259:C:O2	2.54	0.41
1:CA:1280:A:O4'	10:CJ:41:PRO:HG3	2.20	0.41
50:DY:14:LEU:CG	50:DY:15:VAL:N	2.83	0.41
2:AB:55:PHE:CE1	2:AB:218:ALA:HA	2.44	0.41
32:BB:7:G:H4'	44:BS:29:PHE:CD1	2.56	0.41
36:BG:67:LYS:HA	36:BG:68:PRO:HD2	1.90	0.41
32:BB:6:C:HO2'	44:BS:29:PHE:HE1	1.69	0.41
44:DS:35:ILE:HG21	44:DS:66:ALA:HB2	2.03	0.41
44:DS:54:LEU:HD22	44:DS:57:LYS:O	2.21	0.41
44:DS:58:LEU:HD21	44:DS:68:GLN:HB3	2.03	0.41
32:BB:73:A:H5'	32:BB:74:U:OP2	2.21	0.41
33:DD:133:LEU:HA	33:DD:136:ILE:HD13	2.02	0.41
31:DA:1786:A:C4	31:DA:1938:A:C6	3.08	0.41
27:D5:32:PRO:O	27:D5:38:ALA:O	2.39	0.41
23:B1:67:ILE:CD1	23:B1:67:ILE:H	2.23	0.41
23:B1:64:ALA:C	23:B1:67:ILE:HD11	2.41	0.41
31:BA:778:G:C4	31:BA:779:U:C6	3.09	0.41
31:DA:2681:C:C6	31:DA:2724:C:N4	2.89	0.41
31:BA:260:G:O4'	31:BA:621:A:H1'	2.20	0.41
44:BS:54:LEU:HA	44:BS:57:LYS:O	2.20	0.41
31:DA:778:G:C5	31:DA:779:U:C4	3.09	0.41
15:AO:82:ILE:CG1	15:AO:88:ARG:HG3	2.48	0.41
37:DH:85:LYS:HZ2	37:DH:133:VAL:HB	1.86	0.41
31:BA:1142:U:H5''	31:BA:1142(A):A:C5'	2.49	0.41
31:DA:2480:C:N4	31:DA:2481:G:C6	2.89	0.41
34:DE:81:ILE:O	34:DE:82:ARG:O	2.38	0.41
39:DN:125:GLY:HA3	39:DN:126:PRO:HA	1.80	0.41
1:CA:511:C:O2	1:CA:512:U:C6	2.74	0.41
1:CA:545:C:H5''	4:CD:72:GLU:CG	2.47	0.41
36:DG:86:MET:O	36:DG:87:PRO:C	2.58	0.41
36:DG:89:GLY:O	36:DG:90:LEU:C	2.58	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
39:BN:66:LYS:CA	39:BN:69:GLN:HB2	2.48	0.41
41:BP:112:LEU:HD23	41:BP:113:LYS:H	1.85	0.41
4:AD:13:ARG:O	4:AD:14:ARG:C	2.59	0.41
43:DR:24:GLN:HE22	43:DR:36:THR:CG2	2.33	0.41
31:BA:354:G:H8	31:BA:354:G:O5'	2.03	0.41
50:BY:47:LYS:HE3	50:BY:47:LYS:HB3	1.60	0.41
6:AF:18:GLN:H	6:AF:18:GLN:HG3	1.64	0.41
4:CD:163:GLU:O	4:CD:165:MET:N	2.53	0.41
37:BH:65:HIS:CE1	37:BH:69:ARG:HD3	2.55	0.41
1:CA:929:G:C6	1:CA:930:C:N4	2.89	0.41
39:BN:131:GLN:HG2	39:BN:133:GLN:H	1.86	0.41
51:BZ:48:PHE:O	51:BZ:49:ARG:C	2.57	0.41
1:AA:682:G:N1	1:AA:683:G:C5	2.89	0.41
28:B6:25:LYS:O	31:BA:2286:A:C2	2.64	0.41
23:B1:16:ASN:ND2	23:B1:16:ASN:C	2.74	0.41
33:DD:89:SER:HB2	33:DD:159:ALA:HB2	2.02	0.41
1:CA:683:G:C2	1:CA:708:C:N3	2.89	0.41
50:DY:46:LYS:HG3	50:DY:47:LYS:H	1.86	0.41
31:DA:2476:A:N1	31:DA:2477:C:C6	2.88	0.41
31:BA:2642:G:H5''	39:BN:78:TYR:CE1	2.56	0.41
31:DA:271(G):C:C2	31:DA:271(H):G:N7	2.88	0.41
1:AA:878:G:C5'	8:AH:89:PRO:HG2	2.46	0.41
1:AA:1065:U:C2'	1:AA:1066:C:OP2	2.68	0.41
31:BA:2839:G:C5	31:BA:2840:C:C4	3.09	0.41
13:CM:19:LEU:O	13:CM:22:ILE:HG13	2.20	0.41
42:BQ:37:LEU:HD11	42:BQ:130:LYS:HB2	2.02	0.41
31:BA:1045:A:C4'	31:BA:1047:G:O4'	2.68	0.41
28:B6:40:CYS:SG	28:B6:45:LYS:CD	3.08	0.41
31:BA:271(M):G:C5	31:BA:271(O):C:C4	3.08	0.41
50:BY:61:ILE:HG22	50:BY:61:ILE:O	2.20	0.41
34:BE:116:VAL:HG11	34:BE:138:PRO:HB3	2.02	0.41
1:AA:327:A:C5	1:AA:329:A:C5	3.09	0.41
51:DZ:166:SER:CB	51:DZ:167:PRO:CA	2.98	0.41
31:DA:1387:C:C2	31:DA:1388:G:C8	3.08	0.41
1:CA:17:U:C1'	1:CA:1080:A:H1'	2.51	0.41
1:CA:1077:G:N2	1:CA:1081:G:C5	2.88	0.41
1:AA:1203:C:H2'	1:AA:1204:A:H8	1.84	0.41
38:DI:88:ILE:HG22	38:DI:89:TYR:N	2.36	0.41
1:AA:381:C:H2'	1:AA:382:A:O4'	2.20	0.41
4:AD:139:ARG:HE	4:AD:139:ARG:HB3	1.57	0.41
31:DA:2713:A:C3'	31:DA:2714:G:H5'	2.49	0.41
1:AA:922:G:H4'	5:AE:20:GLN:HA	2.03	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
37:DH:33:LEU:HD11	37:DH:136:ILE:O	2.21	0.41
4:CD:108:LEU:HB3	4:CD:110:PHE:HE1	1.84	0.41
32:BB:96:U:H2'	32:BB:97:G:C8	2.56	0.41
31:DA:542:C:H6	31:DA:542:C:C5'	2.34	0.41
45:BT:108:ARG:CG	45:BT:109:GLU:N	2.84	0.41
34:BE:52:LEU:O	34:BE:74:PRO:CA	2.69	0.41
28:B6:19:ARG:NH1	31:BA:2401:U:OP1	2.54	0.41
31:BA:2399:G:C4	31:BA:2400:G:C8	3.09	0.41
44:DS:99:LYS:O	44:DS:101:LEU:N	2.54	0.41
44:DS:74:ALA:CB	44:DS:103:GLU:HB2	2.51	0.41
1:CA:499:A:C4'	1:CA:500:G:OP1	2.59	0.41
1:CA:1126:U:C2'	1:CA:1127:G:O5'	2.69	0.41
1:CA:1125:U:O3'	1:CA:1126:U:C6	2.73	0.41
8:CH:25:ASP:OD2	8:CH:60:ARG:NE	2.53	0.41
10:AJ:27:ALA:CB	10:AJ:34:VAL:HG21	2.50	0.41
10:AJ:34:VAL:HG13	10:AJ:73:ASP:O	2.21	0.41
34:BE:203:LYS:CD	34:BE:203:LYS:O	2.63	0.41
3:CC:11:ARG:O	3:CC:12:LEU:C	2.59	0.41
1:CA:1117:G:O5'	9:CI:104:ARG:NH1	2.54	0.41
9:CI:42:ARG:HH22	9:CI:75:ASP:CG	2.25	0.41
1:AA:191:G:N2	20:AT:103:GLY:O	2.54	0.41
1:CA:151:A:H2'	1:CA:152:A:O4'	2.20	0.41
31:BA:1181:C:H2'	31:BA:1182:A:C8	2.56	0.41
4:AD:90:GLY:O	4:AD:94:LEU:HD12	2.21	0.41
31:DA:2580:U:H4'	34:DE:130:GLY:HA3	2.02	0.41
42:DQ:72:LYS:O	42:DQ:94:VAL:N	2.44	0.41
1:AA:1220:G:O3'	19:AS:36:ARG:HD3	2.20	0.41
1:CA:1158:C:O2	1:CA:1158:C:C2'	2.68	0.41
31:DA:2838:G:C6	31:DA:2839:G:C5	3.08	0.41
9:AI:53:VAL:HG12	9:AI:95:LYS:HG2	2.02	0.41
12:AL:76:ASN:CG	12:AL:76:ASN:O	2.59	0.41
14:AN:51:GLY:C	14:AN:53:LEU:N	2.73	0.41
31:DA:847:U:C4	31:DA:933:A:N6	2.88	0.41
31:DA:1359:A:H2'	31:DA:1360:A:H5'	2.03	0.41
1:AA:750:G:N3	1:AA:751:U:C6	2.89	0.41
1:AA:189:G:C6	1:AA:189(A):C:N4	2.88	0.41
31:BA:639:U:C2	31:BA:640:C:C5	3.08	0.41
31:DA:1570:A:H2'	31:DA:1571:A:C8	2.56	0.41
31:BA:218:A:H2'	31:BA:219:G:O4'	2.21	0.41
43:BR:111:LEU:HD23	43:BR:111:LEU:HA	1.68	0.41
31:DA:1709:U:O2'	31:DA:2859:G:H1'	2.21	0.41
1:AA:552:U:H4'	12:AL:86:ARG:CG	2.49	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:1271:G:OP1	1:AA:1314:C:H4'	2.20	0.41
35:DF:117:ARG:HG2	35:DF:192:LEU:HB2	2.02	0.41
38:DI:131:LYS:CG	38:DI:132:PRO:HA	2.49	0.41
9:AI:17:VAL:HG22	9:AI:63:ILE:CG1	2.51	0.41
5:AE:144:THR:OG1	5:AE:146:ALA:HB3	2.21	0.41
31:DA:414:C:H2'	31:DA:415:A:C8	2.56	0.41
8:CH:39:LEU:HB2	8:CH:45:ILE:HD11	2.03	0.41
19:CS:12:ASP:O	19:CS:16:LEU:HD13	2.19	0.41
31:BA:1470:G:C6	31:BA:1519:G:N7	2.89	0.41
31:BA:1509(B):A:H2'	31:BA:1510:G:O4'	2.21	0.41
6:CF:50:TYR:CE2	6:CF:52:ILE:HG12	2.56	0.41
37:BH:118:PRO:HG3	37:BH:144:VAL:HG21	2.03	0.41
31:BA:495:G:H1'	48:BW:57:ASN:ND2	2.36	0.41
31:BA:826:U:OP1	31:BA:2428:G:H3'	2.20	0.41
31:BA:824:A:O2'	31:BA:825:C:H5'	2.21	0.41
31:DA:118:A:N3	31:DA:178:G:H1'	2.35	0.41
31:DA:2428:G:H5''	31:DA:2429:G:O5'	2.20	0.41
25:D3:45:GLY:HA3	31:DA:851:U:O2'	2.21	0.41
31:BA:302:C:C2'	31:BA:303:U:O5'	2.69	0.41
34:BE:27:LEU:HD12	34:BE:181:LEU:CD1	2.51	0.41
37:BH:95:ARG:HA	37:BH:128:PRO:O	2.20	0.41
31:BA:760:G:H2'	31:BA:761:A:O4'	2.20	0.41
1:CA:109:A:H2'	1:CA:326:G:N2	2.35	0.41
48:DW:83:LYS:C	48:DW:84:ARG:HD3	2.41	0.41
1:AA:105:G:C6	1:AA:106:C:C4	3.09	0.41
29:D7:21:ARG:O	29:D7:27:GLY:HA3	2.21	0.41
11:AK:61:ALA:CB	11:AK:90:GLY:O	2.69	0.41
31:BA:2855:C:H2'	31:BA:2856:C:H6	1.86	0.41
33:BD:109:ASP:HB2	33:BD:197:GLY:HA2	2.02	0.41
51:DZ:77:ASP:O	51:DZ:77:ASP:CG	2.58	0.41
31:BA:646:A:H2'	31:BA:647:G:O4'	2.21	0.41
1:AA:286:G:C5	1:AA:287:U:C4	3.08	0.41
5:CE:111:GLU:HB3	5:CE:112:LEU:HD23	2.03	0.41
31:DA:205:G:O2'	31:DA:206:U:OP2	2.38	0.41
5:CE:7:GLU:HB3	5:CE:112:LEU:HD13	2.03	0.41
33:DD:231:HIS:CD2	33:DD:232:PRO:HD2	2.56	0.41
51:DZ:135:GLU:O	51:DZ:136:PHE:HB3	2.20	0.41
1:CA:781:A:O2'	1:CA:1522:U:O2	2.38	0.41
31:BA:1901:A:H2'	31:BA:1901:A:N3	2.35	0.41
1:AA:12:U:H2'	1:AA:13:U:H5''	2.03	0.41
25:B3:17:LYS:O	25:B3:18:ASP:C	2.59	0.41
1:AA:124:G:H1	1:AA:237:C:H42	1.68	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
46:DU:60:LEU:HD23	46:DU:60:LEU:HA	1.79	0.41
36:DG:118:ARG:HB2	36:DG:181:ARG:CZ	2.51	0.41
1:AA:779:C:O2'	1:AA:780:A:H5'	2.21	0.41
1:AA:779:C:O2'	11:AK:120:ARG:HD3	2.21	0.41
2:CB:79:ASP:C	2:CB:81:VAL:N	2.74	0.41
31:BA:1666:G:H2'	31:BA:1667:G:H5'	2.01	0.41
1:CA:579:G:C4	1:CA:580:U:C6	3.08	0.41
19:AS:20:LEU:O	19:AS:23:ASN:HB3	2.21	0.41
16:AP:8:ARG:HG2	16:AP:9:PHE:H	1.83	0.41
45:BT:92:GLY:O	45:BT:94:ALA:N	2.48	0.41
45:BT:120:ARG:HA	45:BT:123:GLN:HG2	2.02	0.41
16:CP:8:ARG:O	16:CP:9:PHE:CD2	2.74	0.41
31:BA:1410:G:C5	31:BA:1411:C:C5	3.09	0.41
31:BA:2226:C:H2'	31:BA:2227:A:O5'	2.21	0.41
42:DQ:69:PHE:CG	42:DQ:70:PRO:HD2	2.56	0.41
43:DR:77:ARG:HH11	43:DR:77:ARG:HG3	1.86	0.41
31:DA:1011:G:C5	31:DA:1013:C:C5	3.09	0.41
46:BU:66:ASN:ND2	46:BU:70:ARG:HE	2.19	0.41
31:BA:979:G:H3'	31:BA:980:A:H5''	2.03	0.41
31:BA:663:G:C6	31:BA:664:C:C4	3.09	0.41
46:DU:17:ILE:HG23	46:DU:39:LEU:HD12	2.02	0.41
1:AA:1464:G:O2'	1:AA:1465:C:H5'	2.21	0.41
1:AA:319:G:C2	1:AA:320:C:C2	3.08	0.41
31:DA:2265:U:C4	31:DA:2266:A:C6	3.09	0.41
31:DA:311:A:C6	31:DA:328:U:C4	3.09	0.41
31:DA:756:C:N4	31:DA:757:U:C4	2.88	0.41
8:AH:97:VAL:HA	8:AH:100:ILE:HG13	2.02	0.41
34:BE:49:LEU:HD22	34:BE:49:LEU:N	2.36	0.41
43:BR:74:LYS:HD2	43:BR:74:LYS:HA	1.70	0.41
2:AB:95:GLN:HG3	2:AB:147:LYS:O	2.20	0.41
31:BA:1010:A:N3	31:BA:1153:C:H1'	2.35	0.41
12:CL:111:LYS:O	12:CL:112:ASP:HB2	2.21	0.41
31:DA:1051:G:O2'	31:DA:1052:C:H5''	2.20	0.41
35:DF:50:SER:HB2	35:DF:94:PRO:HD3	2.03	0.41
7:AG:136:LYS:O	7:AG:140:ASP:HB2	2.21	0.41
20:CT:36:LEU:O	20:CT:37:SER:C	2.58	0.41
31:DA:182:A:H2'	31:DA:183:C:O4'	2.20	0.41
1:AA:405:U:H3'	1:AA:406:G:H5'	2.02	0.41
7:CG:140:ASP:HA	7:CG:143:ARG:NH1	2.35	0.41
31:BA:2256:G:H2'	31:BA:2257:U:H6	1.86	0.41
31:DA:1122:G:N3	31:DA:1122:G:H2'	2.36	0.41
31:BA:1838:C:H6	31:BA:1838:C:H2'	1.73	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:DA:2793:G:O2'	31:DA:2794:C:OP2	2.32	0.41
17:CQ:18:THR:HG23	17:CQ:69:LYS:HE3	2.03	0.41
1:AA:1092:A:C2	1:AA:1183:A:C2	3.09	0.41
31:BA:1972:A:H2'	31:BA:1973:G:H8	1.86	0.41
46:BU:92:ARG:O	46:BU:94:ASN:N	2.53	0.41
1:AA:64:G:OP1	1:AA:64:G:H3'	2.21	0.41
33:BD:36:PRO:HG3	33:BD:61:LEU:HG	2.03	0.41
36:DG:129:GLY:C	36:DG:130:ASN:CG	2.79	0.41
31:BA:2316:C:C2	31:BA:2317:C:C6	3.08	0.41
31:BA:103:A:C2'	31:BA:104:U:H5'	2.51	0.41
51:DZ:145:GLU:C	51:DZ:147:GLY:N	2.73	0.41
50:DY:81:LYS:HD3	50:DY:97:ARG:O	2.21	0.41
1:AA:1442:G:C5	1:AA:1442(B):A:N1	2.89	0.41
30:B8:8:LYS:O	30:B8:12:LYS:HG3	2.21	0.41
46:DU:88:ILE:O	46:DU:89:GLU:C	2.59	0.41
47:DV:62:LEU:CB	47:DV:98:GLU:HA	2.50	0.41
31:BA:57:C:H2'	31:BA:58:G:O4'	2.21	0.41
49:BX:82:GLN:CG	49:BX:83:VAL:N	2.83	0.41
49:BX:89:ILE:N	49:BX:89:ILE:HD12	2.35	0.41
31:BA:1819:A:H5''	33:BD:158:ALA:CB	2.51	0.41
33:BD:159:ALA:N	33:BD:161:THR:CG2	2.65	0.41
1:CA:1258:G:H2'	1:CA:1259:C:C6	2.57	0.41
31:DA:1210:A:C8	31:DA:1210:A:C4'	3.04	0.41
31:DA:1786:A:H1'	31:DA:1938:A:H62	1.82	0.41
31:DA:1771:C:C1'	31:DA:1786:A:H8	2.31	0.41
31:DA:2885:C:N3	31:DA:2886:G:H1'	2.36	0.41
33:BD:133:LEU:HA	33:BD:136:ILE:HD13	2.02	0.41
33:BD:266:SER:C	33:BD:267:SER:O	2.59	0.41
31:BA:586:A:C2	31:BA:1254:A:C2	3.09	0.41
31:DA:745:G:P	34:DE:133:LYS:HE3	2.61	0.41
31:DA:777:A:C2	31:DA:778:G:C4	3.09	0.41
37:DH:121:ILE:CG2	37:DH:133:VAL:HG13	2.50	0.41
31:BA:394:A:C5	31:BA:395:U:C4	3.09	0.41
31:DA:1007:C:H5'	39:DN:106:MET:O	2.21	0.41
39:BN:63:THR:HB	39:BN:64:GLY:H	1.58	0.41
34:DE:82:ARG:HA	34:DE:82:ARG:HD3	1.89	0.41
35:BF:23:ASP:O	35:BF:24:LEU:HD22	2.21	0.41
1:CA:411:A:C5	1:CA:429:U:C5	3.09	0.41
45:DT:28:VAL:HG13	45:DT:46:GLU:CA	2.50	0.41
45:BT:27:THR:OG1	45:BT:28:VAL:N	2.54	0.41
41:DP:85:LEU:HD13	41:DP:114:ILE:HD11	2.03	0.41
1:AA:411:A:C5	1:AA:429:U:C4	3.08	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:CM:108:ARG:CZ	13:CM:114:ARG:HG2	2.51	0.41
31:BA:355:G:C2	31:BA:356:G:C8	3.09	0.41
6:AF:15:ASP:OD1	6:AF:18:GLN:N	2.52	0.41
6:AF:15:ASP:O	6:AF:19:LEU:HB3	2.21	0.41
1:AA:1228:C:H5''	13:AM:108:ARG:HH22	1.86	0.41
1:AA:953:G:C6	1:AA:1229:A:C6	3.09	0.41
40:BO:104:ARG:O	40:BO:107:ARG:HB3	2.20	0.41
31:DA:2476:A:C6	31:DA:2477:C:C6	3.07	0.41
31:DA:2791:C:H4'	31:DA:2792:G:O5'	2.20	0.41
31:DA:1024:G:O5'	31:DA:1024:G:H8	2.04	0.41
22:D0:73:GLY:C	22:D0:75:LEU:N	2.74	0.41
22:D0:72:ARG:NH2	22:D0:75:LEU:HD12	2.36	0.41
32:BB:66:A:O4'	32:BB:109:C:N4	2.54	0.41
11:CK:50:TYR:HE1	11:CK:59:TYR:CD2	2.39	0.41
31:DA:1839:G:C8	31:DA:1927:A:C1'	2.94	0.41
37:DH:20:ALA:HB1	37:DH:21:PRO:CD	2.43	0.41
14:CN:3:ARG:NH1	14:CN:3:ARG:HB3	2.35	0.41
28:B6:16:CYS:HB2	28:B6:18:ARG:HH21	1.85	0.41
20:AT:89:ARG:HD2	20:AT:104:LEU:HD21	2.03	0.41
40:DO:22:ILE:HA	40:DO:22:ILE:HD13	1.47	0.41
43:DR:100:LEU:HD22	43:DR:112:ALA:HA	2.03	0.41
31:DA:2078:C:C4	31:DA:2079:U:C4	3.09	0.41
10:AJ:95:GLU:C	10:AJ:96:ILE:HD13	2.41	0.41
1:AA:945:G:C6	1:AA:1337:G:C2	3.09	0.41
31:BA:1718:G:O2'	31:BA:1719:G:H5'	2.21	0.41
34:BE:167:VAL:CG2	34:BE:170:LEU:HD11	2.50	0.41
1:CA:1308:U:OP1	13:CM:98:VAL:N	2.54	0.41
31:DA:323:G:O2'	31:DA:1205:U:N3	2.43	0.41
1:CA:1158:C:N4	1:CA:1160:G:C6	2.89	0.41
6:CF:91:VAL:CG1	18:CR:72:ARG:NH1	2.81	0.41
16:CP:15:PRO:O	16:CP:16:HIS:ND1	2.54	0.41
8:CH:11:THR:HG22	8:CH:15:ASN:ND2	2.36	0.41
1:CA:991:U:O2	1:CA:993:G:C8	2.69	0.41
31:DA:510:C:H3'	31:DA:510:C:OP1	2.21	0.41
31:DA:513:A:C2	31:DA:514:A:C4	3.09	0.41
1:AA:951:G:C5	1:AA:952:U:C5	3.09	0.41
31:BA:990:A:OP2	31:BA:991:C:OP2	2.38	0.41
12:AL:84:LEU:HB3	12:AL:101:VAL:HB	2.03	0.41
4:CD:172:PRO:O	4:CD:187:ARG:NH1	2.52	0.41
35:DF:125:LEU:HA	35:DF:194:MET:O	2.21	0.41
47:BV:2:PHE:CB	47:BV:42:GLY:CA	2.97	0.41
43:BR:101:ALA:O	43:BR:102:GLU:CB	2.66	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:425:G:O2'	1:AA:426:G:H5'	2.21	0.41
40:BO:88:ASN:O	40:BO:91:LEU:N	2.50	0.41
1:AA:834:C:C2	1:AA:853:G:C2	3.08	0.41
29:B7:34:ARG:HD3	29:B7:42:LEU:HA	2.02	0.41
31:BA:51:G:N3	31:BA:119:A:C2	2.89	0.41
31:DA:11:G:H2'	31:DA:12:U:H5'	1.99	0.41
31:DA:274:G:N7	31:DA:363:G:C6	2.88	0.41
13:CM:44:ARG:HB2	13:CM:46:LYS:CG	2.50	0.41
42:BQ:54:MET:O	42:BQ:57:HIS:N	2.54	0.41
31:DA:952:G:C6	31:DA:953:A:N7	2.89	0.41
2:CB:24:TRP:CZ3	2:CB:26:PRO:HA	2.56	0.41
32:DB:50:G:O5'	32:DB:50:G:H8	2.04	0.41
25:B3:14:GLY:HA2	31:BA:969:U:O3'	2.21	0.41
31:DA:1679:U:C3'	31:DA:1680:U:H5'	2.51	0.41
36:BG:152:LEU:O	36:BG:153:ARG:HB2	2.21	0.41
31:DA:1665:A:C4'	40:DO:67:LYS:HB2	2.51	0.41
40:DO:1:MET:N	40:DO:67:LYS:HB3	2.36	0.41
1:CA:229:U:C2'	1:CA:230:G:H5'	2.51	0.41
1:CA:731:G:H5'	1:CA:766:A:H4'	2.02	0.41
31:DA:319:C:H2'	31:DA:320:A:O4'	2.21	0.41
31:DA:1034:G:H2'	31:DA:1035:U:O4'	2.21	0.41
1:CA:1261:A:H5'	1:CA:1284:C:OP1	2.21	0.41
31:DA:1845:G:O2'	31:DA:1846:G:H5'	2.21	0.41
1:AA:1017:G:O5'	1:AA:1017:G:H8	2.03	0.41
1:CA:1245:A:H2'	1:CA:1246:C:C6	2.57	0.41
11:CK:15:ALA:HA	11:CK:76:GLY:O	2.21	0.41
11:CK:80:VAL:O	11:CK:80:VAL:HG23	2.21	0.41
1:AA:1409:C:H5'	31:BA:1916:A:N1	2.36	0.41
31:DA:666:G:O2'	31:DA:667:U:H5'	2.21	0.41
1:CA:1005:A:H5''	1:CA:1006:C:OP2	2.21	0.41
13:CM:94:ARG:HB3	13:CM:96:LEU:HD12	2.02	0.41
31:DA:701:G:N2	31:DA:732:C:C2	2.88	0.41
31:DA:2088:G:C6	31:DA:2089:U:C4	3.09	0.41
31:DA:1421:G:C2	31:DA:1422:G:C8	3.09	0.41
1:AA:1296:C:C5	1:AA:1297:C:C5	3.09	0.41
13:AM:23:TYR:HB3	13:AM:67:GLU:HB2	2.03	0.41
40:DO:71:ARG:HE	40:DO:105:GLU:CD	2.23	0.41
10:CJ:35:SER:O	10:CJ:36:GLY:O	2.38	0.41
21:CU:25:LYS:HG2	21:CU:26:LYS:N	2.36	0.41
31:DA:394:A:C6	31:DA:395:U:C4	3.08	0.41
32:BB:71:C:C2	32:BB:72:G:C8	3.09	0.41
31:BA:1221(A):C:C2	31:BA:1229:G:C2	3.08	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:B3:59:VAL:O	25:B3:59:VAL:HG12	2.21	0.41
40:DO:25:LEU:HD23	40:DO:25:LEU:HA	1.92	0.41
31:BA:2088:G:C5	31:BA:2089:U:C4	3.09	0.41
43:BR:91:GLN:HE21	43:BR:91:GLN:HB2	1.65	0.41
40:BO:25:LEU:HD23	40:BO:25:LEU:HA	1.88	0.41
30:B8:29:LYS:O	30:B8:30:ARG:C	2.59	0.40
1:AA:66:G:C6	1:AA:67:C:C4	3.09	0.40
33:DD:33:LEU:C	33:DD:35:LYS:O	2.60	0.40
26:D4:5:ILE:C	36:DG:67:LYS:HG2	2.41	0.40
47:DV:72:VAL:O	47:DV:73:SER:OG	2.40	0.40
28:D6:48:VAL:O	28:D6:49:HIS:O	2.39	0.40
31:DA:2417:C:N3	31:DA:2418:A:N7	2.69	0.40
49:DX:77:LYS:HD3	49:DX:78:LYS:HG3	2.02	0.40
41:BP:16:ARG:HD3	41:BP:18:ARG:HB2	2.03	0.40
47:DV:40:LEU:HD12	47:DV:40:LEU:C	2.41	0.40
47:DV:47:VAL:HG22	47:DV:48:GLY:H	1.85	0.40
49:BX:77:LYS:HD3	49:BX:78:LYS:HG3	2.01	0.40
31:DA:310:A:C8	31:DA:312:G:C5	3.09	0.40
36:BG:101:ILE:HG23	36:BG:102:PHE:N	2.36	0.40
31:BA:2305:A:H1'	36:BG:135:LEU:O	2.21	0.40
44:BS:89:ARG:NE	44:BS:90:GLY:H	2.17	0.40
44:DS:57:LYS:HG2	44:DS:58:LEU:H	1.86	0.40
31:BA:2406:U:O4	41:BP:70:GLN:HB3	2.21	0.40
31:BA:779:U:OP1	33:BD:49:ILE:HG22	2.21	0.40
23:D1:89:GLU:OE2	23:D1:89:GLU:N	2.52	0.40
37:BH:121:ILE:CG2	37:BH:133:VAL:HG13	2.51	0.40
34:DE:119:ARG:HG2	34:DE:160:TYR:CD1	2.56	0.40
27:D5:16:ARG:NH1	27:D5:16:ARG:CG	2.72	0.40
32:DB:95:C:H2'	32:DB:96:U:C6	2.56	0.40
31:BA:2564:A:C5	31:BA:2565:A:C6	3.08	0.40
41:BP:124:LYS:HG2	41:BP:143:GLY:HA3	2.03	0.40
43:DR:9:LYS:O	43:DR:10:LEU:CD2	2.69	0.40
41:DP:85:LEU:CD2	41:DP:85:LEU:H	2.33	0.40
31:DA:2660:A:H2'	31:DA:2661:G:O5'	2.21	0.40
31:DA:2656:U:N3	31:DA:2665:A:C2	2.70	0.40
4:AD:36:ARG:HB3	4:AD:38:TYR:CZ	2.57	0.40
31:DA:1465:G:H2'	31:DA:1466:G:O5'	2.21	0.40
1:CA:1229:A:OP2	13:CM:114:ARG:HD3	2.21	0.40
24:D2:40:SER:O	24:D2:41:ILE:C	2.60	0.40
6:CF:18:GLN:HG3	6:CF:18:GLN:H	1.66	0.40
1:CA:339:C:O2'	1:CA:340:U:H5'	2.21	0.40
31:DA:1503:U:O2'	31:DA:1504:C:H5'	2.20	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
39:BN:31:ALA:O	39:BN:34:LEU:N	2.54	0.40
45:BT:33:LYS:HA	45:BT:33:LYS:HD3	1.66	0.40
45:BT:33:LYS:O	45:BT:40:THR:O	2.39	0.40
6:AF:69:GLU:CD	6:AF:69:GLU:H	2.24	0.40
35:BF:178:PRO:HB2	35:BF:201:VAL:CG1	2.40	0.40
31:BA:1983:C:H4'	31:BA:2606:C:O3'	2.21	0.40
31:BA:855:G:C5	31:BA:856:C:C4	3.09	0.40
1:AA:1067:A:O3'	1:AA:1094:G:OP1	2.40	0.40
1:AA:671:G:C4	1:AA:672:U:C6	3.09	0.40
31:DA:1336:A:H2'	31:DA:1337:G:C8	2.57	0.40
31:DA:90:U:O2'	31:DA:92:A:H5''	2.21	0.40
17:CQ:67:LYS:O	17:CQ:68:ARG:HB3	2.21	0.40
1:CA:16:A:N1	1:CA:919:A:H2	2.19	0.40
31:BA:1313:U:H3'	31:BA:1314:C:H5'	2.03	0.40
31:BA:1608:A:H1'	31:BA:1610:A:OP2	2.21	0.40
1:AA:616:G:C2	1:AA:617:G:N7	2.89	0.40
1:CA:1049:U:OP1	14:CN:3:ARG:NH1	2.54	0.40
1:AA:298:A:H5''	1:AA:299:G:OP2	2.21	0.40
6:AF:3:ARG:HG3	6:AF:3:ARG:HH11	1.87	0.40
1:AA:922:G:H1'	5:AE:19:MET:HB2	2.03	0.40
4:CD:108:LEU:HD12	4:CD:174:LEU:HD13	2.04	0.40
37:DH:31:GLY:O	37:DH:79:VAL:HG11	2.20	0.40
23:B1:34:THR:HG23	31:BA:388:G:P	2.61	0.40
45:BT:129:ARG:CZ	45:BT:131:ALA:CB	2.97	0.40
12:CL:69:TYR:HD2	12:CL:99:HIS:CD2	2.40	0.40
10:CJ:6:ILE:HG22	10:CJ:98:ILE:CG1	2.50	0.40
10:CJ:94:VAL:CG1	10:CJ:95:GLU:N	2.84	0.40
31:BA:773:U:H5'	33:BD:47:GLY:HA2	2.03	0.40
10:AJ:94:VAL:CG1	10:AJ:95:GLU:N	2.84	0.40
43:BR:38:VAL:N	43:BR:39:PRO:CD	2.84	0.40
31:BA:2584:U:H6	31:BA:2585:U:C6	2.36	0.40
35:BF:162:LEU:HD12	35:BF:162:LEU:HA	1.82	0.40
33:DD:17:THR:HG23	33:DD:205:VAL:HB	2.03	0.40
1:AA:1117:G:O5'	9:AI:104:ARG:NH1	2.54	0.40
31:BA:2679:A:H2'	31:BA:2680:C:O4'	2.21	0.40
37:DH:89:ILE:HB	37:DH:90:LYS:H	1.41	0.40
40:DO:4:PRO:O	40:DO:5:GLN:CB	2.67	0.40
42:DQ:72:LYS:HB3	42:DQ:94:VAL:HG23	2.01	0.40
32:BB:38:C:H2'	32:BB:39:A:H8	1.86	0.40
37:DH:94:TYR:CD1	37:DH:107:VAL:HA	2.56	0.40
8:CH:8:ASP:O	8:CH:11:THR:N	2.53	0.40
1:AA:658:G:H1'	15:AO:22:THR:HB	2.03	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
46:BU:15:LYS:HG3	46:BU:16:LYS:N	2.35	0.40
23:B1:37:ILE:HG13	31:BA:2079:U:O3'	2.21	0.40
29:D7:34:ARG:HD3	29:D7:42:LEU:HA	2.03	0.40
31:BA:1359:A:N7	31:BA:1372:U:O4	2.54	0.40
45:BT:78:LEU:C	45:BT:79:HIS:ND1	2.74	0.40
5:AE:13:ILE:HA	5:AE:29:GLY:O	2.21	0.40
9:CI:28:VAL:HG22	9:CI:63:ILE:HB	2.02	0.40
31:DA:1593:G:H2'	31:DA:1594:G:C8	2.56	0.40
1:AA:341:C:O2	1:AA:349:A:C2	2.74	0.40
10:CJ:80:LYS:HB2	10:CJ:80:LYS:NZ	2.35	0.40
1:AA:425:G:N2	1:AA:426:G:H1'	2.36	0.40
1:AA:577:G:C4	1:AA:578:C:C5	3.09	0.40
31:DA:117:G:C6	31:DA:119:A:C6	3.09	0.40
40:BO:61:VAL:O	40:BO:61:VAL:CG1	2.69	0.40
1:AA:1356:G:H2'	1:AA:1357:A:C8	2.56	0.40
31:DA:208:C:H2'	31:DA:209:C:C6	2.56	0.40
7:AG:104:LEU:HD22	7:AG:134:ALA:HB1	2.02	0.40
31:DA:817:C:O2'	31:DA:839:U:H5''	2.21	0.40
1:CA:106:C:O2'	1:CA:107:G:H5'	2.20	0.40
1:AA:132:C:O2'	1:AA:133:U:H5'	2.21	0.40
19:AS:48:THR:HG22	19:AS:61:TYR:HA	2.02	0.40
31:DA:873:G:N2	31:DA:905:U:C2	2.89	0.40
32:BB:59:A:H2'	32:BB:60:C:H6	1.85	0.40
51:DZ:156:LYS:O	51:DZ:158:PRO:CD	2.69	0.40
11:AK:81:ASP:OD1	11:AK:106:LYS:HG2	2.21	0.40
1:AA:579:G:C4	1:AA:580:U:C5	3.09	0.40
19:CS:58:VAL:HA	19:CS:59:PRO:HD2	1.96	0.40
48:BW:75:TYR:CZ	48:BW:104:THR:HG21	2.55	0.40
31:BA:947:G:H2'	31:BA:948:G:C8	2.56	0.40
38:DI:67:ARG:O	38:DI:68:LEU:HB2	2.21	0.40
31:DA:22:C:H2'	31:DA:23:G:O5'	2.21	0.40
9:CI:11:LYS:O	9:CI:12:GLU:HB2	2.21	0.40
21:AU:25:LYS:HG2	21:AU:26:LYS:N	2.37	0.40
31:DA:2048:G:C5	31:DA:2049:G:C8	3.09	0.40
46:BU:110:VAL:O	46:BU:111:GLU:C	2.60	0.40
41:BP:131:SER:O	41:BP:132:LYS:C	2.59	0.40
5:CE:147:ASP:HA	5:CE:150:ARG:HB3	2.03	0.40
25:B3:21:ALA:O	25:B3:24:LYS:N	2.54	0.40
31:DA:1922:G:H2'	31:DA:1923:U:O4'	2.21	0.40
12:CL:44:THR:HA	12:CL:45:PRO:HD3	1.93	0.40
31:BA:985:C:H2'	31:BA:986:C:H6	1.86	0.40
31:BA:897:C:O2'	31:BA:899:A:N7	2.49	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:BA:2828:C:H2'	31:BA:2829:C:H6	1.86	0.40
7:AG:45:ASP:HB3	7:AG:117:ALA:CB	2.51	0.40
31:DA:1972:A:H2'	31:DA:1973:G:H8	1.85	0.40
31:BA:996:A:C2	31:BA:997:G:C8	3.09	0.40
2:CB:163:PHE:CD2	2:CB:185:ILE:HG13	2.49	0.40
1:AA:67:C:O2	1:AA:171:A:H2	2.04	0.40
36:DG:36:LYS:O	36:DG:160:VAL:HG23	2.21	0.40
31:BA:2702:U:O2'	31:BA:2703:C:C5	2.69	0.40
39:DN:128:HIS:CE1	39:DN:134:ARG:CD	3.02	0.40
4:AD:126:ILE:H	4:AD:126:ILE:HG12	1.75	0.40
31:DA:2395:C:H2'	31:DA:2396:G:O4'	2.21	0.40
34:BE:57:LYS:C	34:BE:59:VAL:H	2.25	0.40
28:D6:36:LEU:HD13	28:D6:50:ARG:NH1	2.35	0.40
50:BY:79:CYS:SG	50:BY:80:GLY:N	2.95	0.40
51:DZ:145:GLU:C	51:DZ:147:GLY:H	2.24	0.40
49:DX:7:VAL:HG12	49:DX:30:VAL:HG12	2.02	0.40
51:BZ:145:GLU:C	51:BZ:147:GLY:N	2.73	0.40
31:BA:250:G:C6	31:BA:251:A:C6	3.10	0.40
41:BP:58:THR:O	41:BP:58:THR:HG22	2.21	0.40
2:CB:51:LEU:HD22	2:CB:55:PHE:CE2	2.57	0.40
46:DU:95:LEU:HD13	47:DV:4:ILE:HG23	2.03	0.40
1:CA:356:A:H1'	1:CA:368:U:HO2'	1.86	0.40
16:CP:45:THR:C	16:CP:47:ASP:N	2.74	0.40
33:BD:89:SER:OG	33:BD:158:ALA:O	2.27	0.40
31:DA:307:G:N2	31:DA:310:A:OP2	2.54	0.40
2:AB:215:LEU:HD13	2:AB:215:LEU:HA	1.96	0.40
31:BA:2306:C:OP2	31:BA:2307:G:H8	2.04	0.40
36:BG:60:LEU:HD12	36:BG:68:PRO:HD3	2.02	0.40
36:BG:94:LEU:N	36:BG:94:LEU:HD23	2.35	0.40
41:DP:23:PRO:C	41:DP:33:ARG:HE	2.18	0.40
34:BE:132:HIS:O	34:BE:132:HIS:CG	2.73	0.40
31:DA:2483:C:N3	42:DQ:124:LYS:NZ	2.69	0.40
31:BA:1019:U:OP1	31:BA:1035:U:O2'	2.31	0.40
1:CA:407:G:H4'	4:CD:116:GLN:HA	2.02	0.40
1:CA:410:G:H8	1:CA:410:G:O5'	2.04	0.40
4:CD:61:LYS:HA	4:CD:203:VAL:HG22	2.03	0.40
42:BQ:52:VAL:O	42:BQ:53:ALA:C	2.59	0.40
31:DA:860:U:C2'	31:DA:861:A:O5'	2.69	0.40
45:DT:27:THR:OG1	45:DT:28:VAL:N	2.54	0.40
31:DA:2801(A):A:O3'	31:DA:2802:G:C3'	2.63	0.40
31:BA:310:A:P	50:BY:18:GLY:HA2	2.61	0.40
1:AA:509:A:O2'	1:AA:510:A:O4'	2.39	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:409:G:C2'	1:AA:410:G:C5'	2.93	0.40
1:AA:541:G:C4	1:AA:542:G:C8	3.09	0.40
4:AD:116:GLN:NE2	4:AD:157:LEU:HD21	2.35	0.40
50:DY:39:VAL:HG12	50:DY:40:GLU:H	1.82	0.40
6:AF:23:LYS:HB3	6:AF:23:LYS:HE2	1.86	0.40
1:CA:336:C:H2'	1:CA:337:C:C6	2.54	0.40
1:AA:1075:C:OP1	2:AB:179:LYS:HD3	2.20	0.40
23:B1:10:LYS:HB2	23:B1:14:VAL:C	2.41	0.40
31:BA:2525:G:C2	31:BA:2539:C:C2	3.09	0.40
35:BF:178:PRO:HB3	35:BF:198:ALA:CB	2.51	0.40
31:BA:271(E):U:C2	31:BA:271(F):C:C5	3.10	0.40
33:BD:246:PRO:HG2	33:BD:255:LYS:HG2	2.04	0.40
4:AD:135:LEU:O	4:AD:136:PRO:C	2.59	0.40
1:AA:1037:C:C4	1:AA:1038:C:C4	3.10	0.40
34:BE:52:LEU:O	34:BE:74:PRO:HA	2.21	0.40
31:BA:1831:G:C5	31:BA:1832:C:C5	3.09	0.40
1:CA:1126:U:O4	1:CA:1127:G:C2	2.74	0.40
32:DB:15:A:H2'	32:DB:16:G:OP1	2.21	0.40
32:DB:91:C:OP1	42:DQ:16:ARG:HG3	2.21	0.40
31:DA:530:G:C6	31:DA:2022:U:H5''	2.57	0.40
13:CM:88:ARG:HG3	13:CM:98:VAL:HB	2.04	0.40
31:DA:1625:C:N4	31:DA:1626:G:C2	2.88	0.40
1:AA:993:G:N3	1:AA:993:G:H2'	2.36	0.40
1:AA:658:G:C2	1:AA:659:U:C6	3.09	0.40
46:BU:11:ARG:HH11	46:BU:11:ARG:HD3	1.74	0.40
31:DA:1450(A):C:C4	31:DA:1451:C:N4	2.88	0.40
48:DW:80:PRO:O	48:DW:100:THR:HG21	2.21	0.40
41:DP:8:PRO:O	41:DP:10:PRO:HD3	2.21	0.40
2:AB:42:ILE:CG1	2:AB:43:ASP:N	2.84	0.40
31:DA:727:A:C2	33:DD:9:TYR:CD2	3.09	0.40
31:DA:1589:C:H2'	31:DA:1590:U:C6	2.57	0.40
31:BA:769:G:H2'	31:BA:770:G:H5'	2.02	0.40
1:AA:830:G:C4	1:AA:831:U:C6	3.09	0.40
33:BD:248:SER:O	33:BD:250:TRP:N	2.55	0.40
1:AA:278:G:O4'	1:AA:282:A:H1'	2.21	0.40
31:BA:700:G:H2'	31:BA:701:G:O4'	2.21	0.40
31:BA:2232:U:O2'	31:BA:2233:U:H5'	2.21	0.40
9:CI:97:LYS:CB	9:CI:98:PRO:HD3	2.51	0.40
1:CA:1317:C:H41	14:CN:19:ARG:HH21	1.69	0.40
9:AI:112:LYS:HG2	9:AI:119:ALA:N	2.37	0.40
31:DA:188:G:C2'	31:DA:189:G:H5'	2.51	0.40
17:AQ:57:VAL:HG12	17:AQ:76:LEU:HA	2.02	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
35:BF:57:VAL:CG1	35:BF:59:TYR:CD1	3.02	0.40
43:BR:59:ASP:OD1	43:BR:61:HIS:CB	2.69	0.40
31:BA:327:G:C2	31:BA:336:C:C2	3.10	0.40
1:AA:781:A:O2'	1:AA:1522:U:O2	2.38	0.40
1:CA:1240:U:P	7:CG:116:ALA:HB2	2.61	0.40
11:CK:101:SER:OG	11:CK:102:GLY:N	2.53	0.40
38:DI:24:GLY:O	38:DI:28:ASN:HB2	2.22	0.40
31:BA:1027:A:C2	31:BA:2488:A:H5'	2.57	0.40
31:BA:1356:G:C5	31:BA:1357:U:C4	3.08	0.40
31:BA:792:G:H3'	31:BA:793:A:H5'	2.03	0.40
9:AI:11:LYS:O	9:AI:12:GLU:HB2	2.21	0.40
42:DQ:33:GLY:O	42:DQ:132:VAL:HG23	2.22	0.40
50:DY:55:TYR:HA	50:DY:56:PRO:HD2	1.86	0.40
31:DA:2639:A:H2'	31:DA:2640:G:H5'	2.03	0.40
31:BA:1445(A):C:C2	31:BA:1446:C:C5	3.09	0.40
2:CB:112:VAL:HG22	2:CB:149:LEU:HD13	2.04	0.40
31:DA:1812:A:O2'	33:DD:45:ASN:HB2	2.21	0.40
27:D5:25:LEU:CD1	48:DW:19:LEU:HB3	2.52	0.40
47:DV:54:GLY:O	47:DV:56:SER:OG	2.36	0.40
42:BQ:69:PHE:CG	42:BQ:70:PRO:HD2	2.56	0.40
31:DA:877:U:C2'	31:DA:878:A:H5''	2.51	0.40
31:BA:24:G:H2'	31:BA:25:U:O4'	2.21	0.40
31:BA:2684:U:H1'	40:BO:70:LYS:HD2	2.03	0.40
49:DX:3:THR:HA	49:DX:6:ASP:OD2	2.20	0.40
1:CA:1296:C:C5	1:CA:1297:C:C5	3.09	0.40
31:BA:2527:C:O2'	31:BA:2528:U:H5'	2.21	0.40
1:CA:314:C:O2'	1:CA:315:A:H5'	2.21	0.40
13:AM:94:ARG:O	13:AM:96:LEU:HG	2.21	0.40
1:CA:417:C:O2'	1:CA:418:C:H5'	2.21	0.40
15:CO:11:VAL:HG21	15:CO:34:LEU:HD22	2.02	0.40
30:B8:29:LYS:O	30:B8:32:LEU:N	2.54	0.40
30:B8:32:LEU:HB3	30:B8:34:TRP:HB3	2.04	0.40
30:B8:32:LEU:CG	30:B8:35:GLN:H	2.29	0.40
47:DV:69:LYS:CB	47:DV:93:GLU:CD	2.90	0.40
31:DA:2889:C:H2'	31:DA:2889:C:O2	2.21	0.40
28:D6:19:ARG:NH1	31:DA:2401:U:OP1	2.54	0.40
23:B1:27:GLU:OE2	23:B1:32:LYS:CB	2.63	0.40
31:DA:1152:C:O2'	31:DA:1153:C:H5'	2.21	0.40
49:BX:83:VAL:O	49:BX:83:VAL:HG23	2.22	0.40
31:BA:1799:G:H5'	31:BA:1819:A:N6	2.34	0.40
31:BA:1799:G:H3'	31:BA:1799:G:P	2.62	0.40
2:AB:203:GLY:O	2:AB:204:ASN:C	2.60	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:BA:1651:G:OP1	43:BR:40:LYS:HG3	2.21	0.40
34:BE:119:ARG:CG	34:BE:160:TYR:HB2	2.51	0.40
43:BR:36:THR:HB	43:BR:37:THR:H	1.69	0.40
31:DA:1785:A:O2'	31:DA:1786:A:H2'	2.21	0.40
31:BA:2404:C:O3'	41:BP:77:ARG:NH2	2.54	0.40
23:B1:67:ILE:N	23:B1:67:ILE:HD12	2.34	0.40
23:D1:91:LYS:C	23:D1:94:LEU:HB2	2.42	0.40
31:DA:2722:G:H2'	31:DA:2723:C:C6	2.56	0.40
31:DA:2723:C:H4'	43:DR:2:ARG:O	2.21	0.40
8:CH:86:ILE:HG12	8:CH:135:CYS:HA	2.03	0.40
35:BF:2:LYS:O	35:BF:25:PRO:CG	2.67	0.40
31:BA:2653:U:C2'	31:BA:2654:A:OP1	2.69	0.40
4:CD:31:CYS:O	4:CD:32:ALA:HB3	2.21	0.40
4:CD:65:ARG:HA	4:CD:75:PHE:CE1	2.57	0.40
36:DG:148:MET:HG3	36:DG:148:MET:O	2.21	0.40
32:DB:81:G:C5'	32:DB:82:G:OP2	2.69	0.40
12:CL:46:LYS:CG	12:CL:47:LYS:H	2.34	0.40
1:AA:542:G:C2	1:AA:543:C:C4	3.10	0.40
4:AD:203:VAL:O	4:AD:204:ILE:C	2.60	0.40
1:AA:1394:A:C5	1:AA:1501:C:H4'	2.56	0.40
31:DA:356:G:O2'	31:DA:357:A:H5'	2.21	0.40
6:AF:15:ASP:O	6:AF:19:LEU:CB	2.69	0.40
31:DA:571:A:H5'	31:DA:2030:A:N6	2.16	0.40
1:AA:955:U:O2'	1:AA:956:U:H5'	2.22	0.40
1:AA:965:A:C2	1:AA:969:A:N1	2.90	0.40
40:BO:107:ARG:HH22	45:BT:35:LYS:CD	2.35	0.40
31:BA:1485:G:N2	31:BA:1505:C:C6	2.89	0.40
4:AD:163:GLU:C	4:AD:165:MET:N	2.75	0.40
23:B1:8:SER:HB3	31:BA:1364:G:OP1	2.21	0.40
6:CF:69:GLU:H	6:CF:69:GLU:CD	2.24	0.40
12:AL:38:THR:CG2	12:AL:39:VAL:H	2.34	0.40
1:AA:738:C:C2	1:AA:739:C:C5	3.09	0.40
31:DA:2789:C:OP1	31:DA:2789:C:C4'	2.56	0.40
43:DR:12:ARG:HD3	43:DR:16:HIS:CG	2.56	0.40
1:CA:600:C:N3	1:CA:639:G:C2	2.88	0.40
1:CA:277:C:P	17:CQ:68:ARG:HH12	2.43	0.40
31:DA:2712:U:O2'	31:DA:2712(A):A:P	2.79	0.40
6:AF:62:TRP:O	6:AF:62:TRP:CE3	2.74	0.40
1:CA:81:U:C4	1:CA:88:A:N6	2.89	0.40
1:CA:1452:C:H4'	1:CA:1456:G:O5'	2.20	0.40
3:AC:106:VAL:C	3:AC:108:ASN:H	2.25	0.40
2:CB:19:HIS:CG	2:CB:20:GLU:N	2.88	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
30:D8:26:LYS:HE2	30:D8:47:LYS:HB3	2.02	0.40
1:AA:179:A:H2'	1:AA:180:U:H6	1.85	0.40
9:CI:78:LYS:HB2	9:CI:78:LYS:NZ	2.35	0.40
42:DQ:66:ILE:HG22	42:DQ:104:PHE:HD2	1.86	0.40
31:DA:530:G:O6	31:DA:2023:G:OP1	2.40	0.40
32:DB:30:C:H2'	32:DB:31:C:C5'	2.51	0.40
32:BB:57:A:C4	36:BG:29:TRP:HB2	2.57	0.40
31:DA:1719:G:O6	31:DA:1720:U:C4	2.75	0.40
31:DA:2517:C:C5	31:DA:2542:A:C2	3.10	0.40
31:DA:2559:C:H2'	31:DA:2560:C:H6	1.86	0.40
20:AT:26:ASN:CB	20:AT:71:THR:OG1	2.68	0.40
8:CH:4:ASP:OD2	8:CH:85:ARG:NH1	2.54	0.40
31:BA:707:G:C4	31:BA:708:C:C6	3.09	0.40
31:BA:1431:U:H2'	31:BA:1432:C:C6	2.57	0.40
1:CA:616:G:C2	1:CA:617:G:N7	2.89	0.40
31:BA:528:A:C2	31:BA:2043:C:C4'	3.01	0.40
31:DA:1373:A:C6	31:DA:1374:G:C4	3.08	0.40
27:B5:4:HIS:CD2	31:BA:2056:G:H1	2.39	0.40
31:DA:26:G:C6	31:DA:27:G:C6	3.09	0.40
31:BA:879:G:C2'	31:BA:880:G:H5'	2.51	0.40
43:DR:13:HIS:O	43:DR:14:SER:C	2.60	0.40
1:CA:1416:G:N2	1:CA:1485:U:H1'	2.37	0.40
45:DT:82:LEU:CD1	45:DT:82:LEU:N	2.81	0.40
1:CA:605:U:H2'	1:CA:606:G:O4'	2.21	0.40
10:CJ:81:THR:O	10:CJ:85:LEU:HG	2.22	0.40
7:AG:150:ALA:O	11:AK:57:THR:HG21	2.21	0.40
11:AK:50:TYR:HE1	11:AK:59:TYR:CD2	2.39	0.40
1:AA:126:G:OP1	1:AA:605:U:O2'	2.38	0.40
36:BG:39:ILE:HA	36:BG:157:ILE:HA	2.03	0.40
27:D5:4:HIS:O	31:DA:2056:G:N2	2.54	0.40
34:DE:176:ILE:HB	34:DE:181:LEU:HB2	2.03	0.40
20:CT:81:LYS:O	20:CT:84:LEU:N	2.55	0.40
20:AT:69:GLY:O	20:AT:73:HIS:NE2	2.54	0.40
31:DA:2259:G:C2	31:DA:2282:G:C6	3.09	0.40
31:BA:1865:G:H2'	31:BA:1876:A:N7	2.37	0.40
31:BA:414:C:O2	31:BA:1864:U:O2'	2.39	0.40
44:DS:106:ARG:CZ	44:DS:107:GLU:O	2.69	0.40
31:DA:208:C:H2'	31:DA:209:C:H6	1.87	0.40
1:CA:1498:U:C2'	1:CA:1499:A:OP2	2.70	0.40
31:BA:1016:G:H2'	31:BA:1017:G:O5'	2.20	0.40
31:DA:892:G:C8	31:DA:893:C:C4	3.09	0.40
31:BA:613:G:C2	31:BA:614:U:C6	3.09	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:132:C:C2	1:AA:133:U:C6	3.09	0.40
17:AQ:63:ARG:HG2	17:AQ:64:PRO:N	2.35	0.40
1:AA:109:A:H4'	1:AA:110:C:OP2	2.21	0.40
1:AA:1154:G:N3	1:AA:1155:G:C8	2.89	0.40
31:DA:790:C:H6	31:DA:790:C:H2'	1.64	0.40
19:CS:79:THR:O	19:CS:80:TYR:HB3	2.20	0.40
40:BO:47:ILE:HD12	40:BO:47:ILE:HA	1.62	0.40
11:AK:21:ILE:CB	11:AK:84:VAL:HG12	2.50	0.40
31:BA:2730:C:H4'	34:BE:168:MET:O	2.21	0.40
31:DA:1323:U:C2'	31:DA:1324:G:H5'	2.51	0.40
1:CA:177:C:O2'	1:CA:178:C:H5'	2.22	0.40
36:DG:178:PHE:HA	36:DG:179:PRO:HD2	1.86	0.40
45:DT:120:ARG:HA	45:DT:123:GLN:HG2	2.02	0.40
50:BY:52:SER:O	50:BY:54:LYS:N	2.55	0.40
31:DA:449:A:H2'	31:DA:450:G:C5'	2.51	0.40
34:DE:173:VAL:N	34:DE:183:LEU:O	2.53	0.40
31:DA:576:U:H2'	31:DA:577:G:C8	2.56	0.40
42:BQ:70:PRO:HA	42:BQ:95:ALA:HB2	2.03	0.40
31:DA:183:C:H1'	31:DA:433:C:H1'	2.03	0.40
31:BA:1623:G:C2	31:BA:1624:G:C8	3.09	0.40
25:D3:4:LEU:O	25:D3:36:VAL:HA	2.22	0.40
7:AG:18:TYR:CD2	7:AG:59:LEU:HD13	2.55	0.40
31:DA:557:U:H2'	31:DA:558:G:H8	1.86	0.40
4:AD:103:ASN:OD1	4:AD:114:ARG:NH2	2.48	0.40
11:AK:83:ILE:HA	11:AK:109:VAL:O	2.21	0.40
31:DA:1286:A:OP1	43:DR:105:ARG:HD2	2.22	0.40
33:BD:5:LYS:HD2	33:BD:5:LYS:N	2.37	0.40
11:AK:122:LYS:HB3	11:AK:122:LYS:HE2	1.59	0.40
31:DA:2507:C:C2	31:DA:2508:G:C8	3.10	0.40
1:AA:815:A:C2	1:AA:1529:G:C4	3.10	0.40
3:AC:142:MET:HE3	3:AC:146:ALA:O	2.21	0.40
27:B5:40:LYS:HZ3	27:B5:46:CYS:HB3	1.87	0.40
1:AA:380:G:N2	1:AA:384:G:C6	2.90	0.40
1:AA:452:A:O2'	1:AA:453:A:H8	2.05	0.40
31:BA:869:G:C4	31:BA:870:A:C8	3.08	0.40
31:BA:911:A:C5	42:BQ:9:TYR:CE2	3.09	0.40
30:D8:34:TRP:HH2	30:D8:38:GLY:N	2.20	0.40
41:BP:48:PRO:CG	41:BP:49:ARG:N	2.83	0.40
2:CB:54:THR:O	2:CB:58:ILE:HG12	2.21	0.40
41:BP:16:ARG:O	41:BP:16:ARG:NH1	2.48	0.40
1:CA:355:C:N3	1:CA:356:A:C8	2.89	0.40
1:CA:360:A:C2'	1:CA:361:G:H5'	2.52	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
49:BX:31:HIS:O	49:BX:32:PRO:C	2.60	0.40
49:BX:37:THR:O	49:BX:37:THR:HG22	2.20	0.40
2:AB:204:ASN:HD22	2:AB:205:ASP:N	2.19	0.40
44:BS:17:ARG:NE	44:BS:89:ARG:HH21	2.17	0.40
31:BA:2821:A:H2'	31:BA:2822:G:C8	2.57	0.40
31:DA:1783:A:N1	31:DA:2587:A:C4	2.90	0.40
31:DA:1983:C:H4'	31:DA:2606:C:O3'	2.20	0.40
8:AH:86:ILE:HB	8:AH:133:LEU:HD22	2.03	0.40
31:DA:777:A:C2	31:DA:778:G:C8	3.09	0.40
31:BA:444:C:H4'	35:BF:49:ALA:HB2	2.03	0.40
31:DA:964:C:H2'	31:DA:965:C:H6	1.86	0.40
2:CB:144:ARG:HG3	2:CB:145:LEU:H	1.85	0.40
31:DA:626:U:H5''	31:DA:627:A:H5'	2.03	0.40
45:BT:100:TYR:O	45:BT:103:ARG:HG3	2.21	0.40
45:BT:52:ILE:O	45:BT:98:LYS:HE3	2.20	0.40
50:BY:16:ALA:O	50:BY:17:SER:O	2.39	0.40
4:AD:61:LYS:HA	4:AD:203:VAL:HG22	2.04	0.40
4:AD:78:LEU:O	4:AD:79:PHE:C	2.59	0.40
31:DA:282:A:C8	31:DA:284:U:C4	3.10	0.40
45:DT:38:ASN:ND2	45:DT:40:THR:H	2.20	0.40
37:BH:43:VAL:HG12	37:BH:53:GLU:H	1.86	0.40
31:DA:2464:C:O2'	31:DA:2465:C:H6	2.04	0.40
50:BY:8:LYS:CD	50:BY:28:LYS:NZ	2.79	0.40
1:AA:1169:A:C2'	1:AA:1170:A:C8	2.95	0.40
1:AA:1067:A:N3	1:AA:1068:G:H1'	2.36	0.40
1:AA:1084:G:OP1	1:AA:1086:U:C5	2.74	0.40
42:BQ:34:LEU:HB2	42:BQ:118:LEU:HD22	2.03	0.40
31:DA:1798:U:C5'	33:DD:259:THR:HG22	2.41	0.40
28:B6:45:LYS:HB3	31:BA:2371:G:H4'	2.04	0.40
31:BA:271(N):U:C5	31:BA:271(N):U:OP1	2.74	0.40
17:CQ:66:SER:O	17:CQ:67:LYS:C	2.59	0.40
1:AA:327:A:C5	1:AA:329:A:N7	2.90	0.40
31:BA:1331:A:O2'	31:BA:1332:G:H8	2.05	0.40
23:D1:26:ARG:CB	23:D1:34:THR:HA	2.48	0.40
1:CA:173:U:C2	1:CA:197:A:N1	2.89	0.40
12:AL:27:LEU:C	12:AL:29:GLY:N	2.75	0.40
12:CL:28:LYS:HE2	12:CL:33:ARG:HH12	1.86	0.40
31:BA:2808:U:C4	31:BA:2809:A:N7	2.89	0.40
31:BA:2888:C:C2'	31:BA:2889:C:H5''	2.50	0.40
3:CC:6:HIS:HE2	3:CC:184:TYR:HE2	1.69	0.40
37:BH:91:GLY:C	37:BH:92:ILE:CG1	2.86	0.40
4:CD:189:PRO:CB	4:CD:194:LEU:HD21	2.44	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:1308:U:OP1	13:AM:98:VAL:N	2.54	0.40
1:CA:774:G:H2'	1:CA:775:G:H5'	2.03	0.40
31:DA:1668:A:C5	31:DA:1674:G:C5	3.09	0.40
5:CE:13:ILE:HA	5:CE:29:GLY:O	2.22	0.40
2:AB:97:TRP:CE3	2:AB:97:TRP:O	2.75	0.40
50:BY:89:PHE:O	50:BY:90:LEU:HB3	2.21	0.40
44:BS:42:ASP:O	44:BS:44:LYS:N	2.53	0.40
31:BA:2199:A:N3	31:BA:2199:A:H2'	2.37	0.40
1:CA:764:C:H2'	1:CA:764:C:O2	2.20	0.40
31:DA:2335:A:C8	31:DA:2337:G:C6	3.10	0.40
1:CA:749:C:H2'	1:CA:750:G:H8	1.86	0.40
1:AA:189(J):G:C2'	1:AA:189(K):U:H5'	2.51	0.40
31:DA:458:G:O2'	31:DA:469:G:O6	2.28	0.40
31:BA:1359:A:H8	31:BA:1372:U:O4	2.02	0.40
31:DA:705:A:H1'	33:DD:9:TYR:CE1	2.57	0.40
33:BD:222:ARG:HD2	33:BD:222:ARG:HH11	1.75	0.40
13:CM:84:ILE:HG12	19:CS:66:MET:HE3	2.04	0.40
31:DA:2251:G:C6	31:DA:2252:G:C5	3.09	0.40
38:BI:56:LYS:C	38:BI:56:LYS:NZ	2.75	0.40
31:DA:1582:C:O2'	31:DA:1586:A:H8	1.97	0.40
4:CD:171:GLY:HA2	4:CD:172:PRO:HD3	1.78	0.40
31:BA:1599:C:C2'	31:BA:1599:C:O2	2.68	0.40
31:BA:1450(A):C:N4	31:BA:1451:C:N4	2.69	0.40
31:DA:2826:A:C5	31:DA:2827:C:C5	3.08	0.40
31:BA:2348:U:C2'	31:BA:2349:G:H5'	2.52	0.40
1:AA:1319:A:OP1	19:AS:10:PHE:CD1	2.75	0.40
31:DA:921:G:C5	31:DA:922:U:C4	3.10	0.40
31:DA:1864:U:C3'	31:DA:1865:G:H5''	2.52	0.40
31:DA:721:C:C2	31:DA:722:A:C8	3.09	0.40
31:DA:945:A:C6	31:DA:2448:A:C5	3.09	0.40
36:DG:39:ILE:HA	36:DG:157:ILE:HA	2.03	0.40
31:DA:1808:U:H2'	31:DA:1809:A:O4'	2.21	0.40
31:BA:924:C:H2'	31:BA:925:C:C6	2.56	0.40
9:CI:112:LYS:C	9:CI:112:LYS:HD3	2.41	0.40
31:BA:1040:C:HO2'	31:BA:1041:C:P	2.38	0.40
2:AB:142:LEU:C	2:AB:142:LEU:HD23	2.42	0.40
8:AH:36:LEU:C	8:AH:38:ILE:N	2.75	0.40
45:DT:68:TYR:N	45:DT:68:TYR:CD1	2.89	0.40
31:DA:1410:G:H2'	31:DA:1411:C:C6	2.57	0.40
31:DA:1412:A:H2'	31:DA:1413:G:O4'	2.22	0.40
1:CA:133:U:H1'	1:CA:230:G:N2	2.37	0.40
18:AR:25:THR:O	18:AR:25:THR:HG22	2.21	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:BA:1027:A:N7	31:BA:1126:A:C2	2.89	0.40
31:DA:1416:G:OP2	31:DA:1416:G:H4'	2.22	0.40
40:BO:7:TYR:HE1	40:BO:20:MET:HE3	1.87	0.40
1:AA:1392:G:O2'	1:AA:1393:U:H5'	2.20	0.40
8:CH:69:ARG:HD3	8:CH:75:ARG:O	2.21	0.40
31:DA:2441:C:O2	31:DA:2441:C:C2'	2.68	0.40
7:AG:140:ASP:HA	7:AG:143:ARG:NH1	2.36	0.40
10:AJ:35:SER:O	10:AJ:36:GLY:O	2.40	0.40
31:BA:1644:C:O2	31:BA:1644:C:H2'	2.21	0.40
31:BA:1900:A:N1	31:BA:1970:A:C6	2.90	0.40
31:BA:2402:C:C2'	31:BA:2403:C:H5'	2.51	0.40
31:DA:1970:A:H5''	31:DA:1971:A:OP1	2.22	0.40
36:DG:35:GLU:O	36:DG:36:LYS:HB2	2.20	0.40
39:DN:131:GLN:HG2	39:DN:133:GLN:H	1.86	0.40
31:DA:69:C:H2'	31:DA:70:G:H8	1.87	0.40
31:BA:993:G:N3	47:BV:91:TYR:CE1	2.90	0.40
42:DQ:85:LYS:HG3	42:DQ:86:GLY:H	1.87	0.40
2:CB:55:PHE:CE1	2:CB:218:ALA:HA	2.45	0.40
46:DU:91:ASP:OD2	46:DU:96:ALA:CB	2.69	0.40
24:B2:32:LEU:CD1	24:B2:35:LEU:HA	2.52	0.40
1:AA:677:U:C4	1:AA:678:U:C4	3.09	0.40
36:BG:134:GLY:HA2	36:BG:156:ASP:HA	2.04	0.40
33:DD:165:ILE:HD13	33:DD:175:LEU:CD2	2.51	0.40
34:BE:82:ARG:HD3	34:BE:82:ARG:HA	1.92	0.40
34:BE:1:MET:CB	34:BE:83:ASP:O	2.67	0.40
8:CH:134:ILE:O	8:CH:135:CYS:HB3	2.22	0.40
34:DE:36:ARG:NH1	34:DE:85:ASN:HD21	2.19	0.40
4:CD:33:MET:C	4:CD:35:ARG:N	2.75	0.40
4:CD:79:PHE:CD1	4:CD:207:TYR:HD1	2.39	0.40
42:BQ:20:ALA:HB2	42:BQ:99:PRO:CD	2.48	0.40
31:DA:2312:U:H4'	36:DG:71:THR:HG21	2.03	0.40
31:DA:626:U:H5''	31:DA:627:A:C5'	2.51	0.40
31:BA:1525:G:H2'	31:BA:1526:G:C8	2.57	0.40
31:BA:627:A:H62	41:BP:84:ASN:HD21	1.70	0.40
45:DT:22:PHE:CE2	45:DT:85:LYS:NZ	2.90	0.40
45:DT:24:PRO:HA	45:DT:49:VAL:O	2.21	0.40
31:DA:2801(A):A:H4'	31:DA:2802:G:C2'	2.49	0.40
31:DA:2663:G:C6	31:DA:2664:G:C5	3.10	0.40
1:AA:1399:C:H4'	1:AA:1400:C:H5''	2.04	0.40
31:DA:356:G:C2	31:DA:357:A:C4	3.10	0.40
31:DA:286:C:N4	31:DA:356:G:O6	2.55	0.40
31:DA:2563:U:O2	31:DA:2565:A:H8	2.04	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:DA:2645:G:H3'	31:DA:2646:C:H5'	2.03	0.40
31:DA:1500:G:C5	31:DA:1501:C:C4	3.10	0.40
31:DA:1503:U:H2'	31:DA:1504:C:O5'	2.22	0.40
31:DA:489:G:H2'	31:DA:491:G:O4'	2.21	0.40
1:CA:707:C:OP1	11:CK:85:ARG:NH1	2.54	0.40
37:DH:37:VAL:HG13	37:DH:68:THR:HG21	2.03	0.40
37:DH:158:HIS:NE2	37:DH:169:VAL:C	2.74	0.40
1:AA:437:U:H2'	1:AA:438:G:H8	1.86	0.40
8:CH:10:LEU:HD23	8:CH:10:LEU:H	1.85	0.40
31:DA:370:G:H3'	31:DA:423:A:C5	2.56	0.40
31:BA:1803:A:O3'	33:BD:259:THR:HG23	2.21	0.40
31:BA:271(F):C:H6	31:BA:271(F):C:O5'	2.05	0.40
31:BA:271(P):C:P	38:BI:45:LYS:NZ	2.95	0.40
27:D5:2:ALA:HB3	31:DA:747:U:C6	2.55	0.40
38:DI:81:VAL:HG12	38:DI:82:ARG:O	2.22	0.40
31:BA:1566:A:OP1	33:BD:211:ARG:NH1	2.55	0.40
48:BW:12:ILE:CG2	48:BW:17:VAL:HG22	2.51	0.40
31:DA:2712:U:H1'	31:DA:2712(A):A:H8	1.83	0.40
31:DA:1045:A:C4'	31:DA:1047:G:O4'	2.70	0.40
1:AA:1080:A:H5''	1:AA:1081:G:OP2	2.21	0.40
40:DO:22:ILE:HG22	40:DO:23:ARG:N	2.35	0.40
1:CA:458:C:H3'	1:CA:460:G:H8	1.86	0.40
12:AL:25:PRO:O	12:AL:27:LEU:HD22	2.22	0.40
8:CH:51:VAL:CG1	8:CH:60:ARG:HG3	2.46	0.40
31:BA:2329:G:H2'	31:BA:2330:G:C8	2.57	0.40
1:CA:146:G:N3	1:CA:146:G:H2'	2.36	0.40
32:DB:86:G:O5'	32:DB:86:G:H8	2.04	0.40
42:BQ:28:ALA:C	42:BQ:29:PHE:CD1	2.95	0.40
32:DB:29:A:C2	32:DB:30:C:O2	2.74	0.40
31:DA:17:G:H4'	46:DU:25:TRP:CZ2	2.56	0.40
32:BB:37:C:C6	32:BB:38:C:C5	3.09	0.40
25:B3:52:HIS:ND1	25:B3:53:LEU:HG	2.37	0.40
1:AA:397:A:N6	1:AA:548:G:C5	2.89	0.40
31:DA:108:U:H2'	31:DA:109:G:C8	2.56	0.40
2:AB:97:TRP:CZ3	2:AB:173:ALA:HA	2.54	0.40
1:CA:1160:G:C2	1:CA:1161:C:C6	3.09	0.40
6:CF:91:VAL:CG1	18:CR:72:ARG:HH12	2.33	0.40
2:AB:67:THR:C	2:AB:68:ILE:HD12	2.42	0.40
31:DA:1049:C:O2	31:DA:1050:A:N7	2.55	0.40
1:CA:627:G:O2'	1:CA:628:G:H5'	2.21	0.40
5:CE:142:LEU:O	5:CE:143:ARG:NE	2.55	0.40
5:AE:51:VAL:HB	5:AE:52:PRO:CD	2.45	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:B0:20:ARG:NE	31:BA:2271:G:H5''	2.36	0.40
1:CA:195:A:C6	1:CA:196:A:N1	2.90	0.40
31:BA:2236:C:H2'	31:BA:2237:G:C5'	2.46	0.40
31:BA:150:C:H2'	31:BA:151:C:H6	1.86	0.40
31:BA:151:C:H2'	31:BA:152:G:H5'	2.04	0.40
1:AA:32:A:C2	1:AA:33:A:C4	3.09	0.40
1:CA:658:G:C2	1:CA:659:U:C6	3.09	0.40
41:DP:6:LEU:HG	41:DP:8:PRO:O	2.22	0.40
4:AD:17:VAL:HG11	4:AD:197:PRO:CG	2.51	0.40
30:B8:40:GLU:CD	30:B8:40:GLU:O	2.59	0.40
31:DA:1227:G:O2'	31:DA:1228:G:H5'	2.21	0.40
20:CT:63:ILE:HG22	20:CT:77:ALA:HB1	2.02	0.40
31:DA:1517:G:C6	31:DA:1518:U:N3	2.90	0.40
44:DS:24:LEU:HA	44:DS:24:LEU:HD13	1.93	0.40
49:DX:68:ARG:HG3	49:DX:69:TYR:CD1	2.56	0.40
31:DA:1864:U:H3'	31:DA:1865:G:H5''	2.04	0.40
20:AT:46:GLU:HG2	20:AT:48:LYS:HE2	2.02	0.40
42:BQ:108:GLY:C	42:BQ:109:VAL:HG23	2.42	0.40
34:BE:10:GLY:HA3	45:BT:8:LYS:CE	2.51	0.40
31:BA:1889:A:H2'	31:BA:1890:A:O4'	2.21	0.40
1:CA:105:G:C6	1:CA:106:C:N4	2.89	0.40
31:BA:272(D):G:H1	31:BA:364:C:H42	1.69	0.40
31:DA:2228:G:C5	31:DA:2229:C:C5	3.09	0.40
17:CQ:63:ARG:HG2	17:CQ:64:PRO:N	2.37	0.40
18:AR:36:ASN:HD22	18:AR:39:VAL:HG21	1.86	0.40
31:DA:466:A:C3'	31:DA:467:G:H5'	2.52	0.40
36:DG:152:LEU:O	36:DG:153:ARG:HB2	2.21	0.40
17:AQ:90:ILE:O	17:AQ:91:ARG:C	2.60	0.40
31:BA:784:A:H5'	31:BA:785:G:OP1	2.22	0.40
31:BA:784:A:C8	31:BA:792:G:C5	3.09	0.40
1:AA:894:G:C6	1:AA:895:G:C5	3.09	0.40
51:BZ:157:LEU:HA	51:BZ:158:PRO:HD2	1.84	0.40
34:DE:149:ARG:NH1	34:DE:149:ARG:HG3	2.36	0.40
34:DE:173:VAL:HG12	34:DE:174:ASP:N	2.37	0.40
31:BA:2085:C:H2'	31:BA:2086:U:O4'	2.22	0.40
31:BA:2694:G:C6	31:BA:2695:C:C4	3.10	0.40
2:AB:112:VAL:HG22	2:AB:149:LEU:HD13	2.04	0.40
31:DA:1942:C:OP2	31:DA:1943:U:O2'	2.36	0.40
31:BA:1808:U:H2'	31:BA:1809:A:O4'	2.20	0.40
31:DA:2525:G:C2	31:DA:2539:C:C2	3.09	0.40
1:CA:259:G:H2'	1:CA:260:G:O4'	2.21	0.40
31:BA:2674:G:H2'	31:BA:2675:A:O4'	2.21	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:BA:1659:U:C4	31:BA:1660:C:C5	3.09	0.40
31:BA:2603:G:C5	31:BA:2604:U:C5	3.10	0.40
1:AA:233:C:C4	1:AA:234:C:C5	3.09	0.40
31:DA:1655:A:H3'	31:DA:1656:C:C6	2.57	0.40
33:DD:5:LYS:N	33:DD:5:LYS:HD2	2.37	0.40
46:DU:114:LYS:H	46:DU:114:LYS:HG2	1.63	0.40
34:BE:8:LYS:HG2	34:BE:192:ASN:HD22	1.86	0.40
44:DS:81:GLY:O	44:DS:82:ILE:C	2.59	0.40

There are no symmetry-related clashes.

## 5.3 Torsion angles

### 5.3.1 Protein backbone ⓘ

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
2	AB	233/256 (91%)	155 (66%)	61 (26%)	17 (7%)	2	8
2	CB	233/256 (91%)	155 (66%)	60 (26%)	18 (8%)	1	7
3	AC	205/239 (86%)	148 (72%)	46 (22%)	11 (5%)	3	17
3	CC	205/239 (86%)	148 (72%)	45 (22%)	12 (6%)	2	14
4	AD	206/209 (99%)	129 (63%)	57 (28%)	20 (10%)	1	4
4	CD	206/209 (99%)	131 (64%)	55 (27%)	20 (10%)	1	4
5	AE	149/162 (92%)	103 (69%)	36 (24%)	10 (7%)	2	10
5	CE	149/162 (92%)	104 (70%)	36 (24%)	9 (6%)	2	14
6	AF	99/101 (98%)	78 (79%)	16 (16%)	5 (5%)	3	18
6	CF	99/101 (98%)	78 (79%)	16 (16%)	5 (5%)	3	18
7	AG	153/156 (98%)	123 (80%)	28 (18%)	2 (1%)	18	62
7	CG	153/156 (98%)	124 (81%)	27 (18%)	2 (1%)	18	62
8	AH	136/138 (99%)	98 (72%)	25 (18%)	13 (10%)	1	4
8	CH	136/138 (99%)	97 (71%)	27 (20%)	12 (9%)	1	5

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
9	AI	123/128 (96%)	89 (72%)	26 (21%)	8 (6%)	2	11
9	CI	123/128 (96%)	91 (74%)	24 (20%)	8 (6%)	2	11
10	AJ	97/105 (92%)	78 (80%)	15 (16%)	4 (4%)	4	24
10	CJ	97/105 (92%)	78 (80%)	14 (14%)	5 (5%)	3	18
11	AK	117/129 (91%)	92 (79%)	23 (20%)	2 (2%)	14	54
11	CK	117/129 (91%)	90 (77%)	25 (21%)	2 (2%)	14	54
12	AL	123/135 (91%)	85 (69%)	25 (20%)	13 (11%)	1	3
12	CL	123/135 (91%)	82 (67%)	27 (22%)	14 (11%)	1	3
13	AM	107/126 (85%)	80 (75%)	21 (20%)	6 (6%)	3	16
13	CM	107/126 (85%)	81 (76%)	19 (18%)	7 (6%)	2	11
14	AN	58/61 (95%)	49 (84%)	8 (14%)	1 (2%)	14	54
14	CN	58/61 (95%)	49 (84%)	8 (14%)	1 (2%)	14	54
15	AO	86/89 (97%)	65 (76%)	14 (16%)	7 (8%)	1	7
15	CO	86/89 (97%)	64 (74%)	16 (19%)	6 (7%)	2	9
16	AP	82/88 (93%)	51 (62%)	18 (22%)	13 (16%)	0	1
16	CP	82/88 (93%)	52 (63%)	18 (22%)	12 (15%)	0	1
17	AQ	98/105 (93%)	79 (81%)	11 (11%)	8 (8%)	1	6
17	CQ	98/105 (93%)	78 (80%)	13 (13%)	7 (7%)	2	9
18	AR	68/88 (77%)	49 (72%)	14 (21%)	5 (7%)	2	8
18	CR	68/88 (77%)	46 (68%)	16 (24%)	6 (9%)	1	5
19	AS	77/93 (83%)	59 (77%)	11 (14%)	7 (9%)	1	5
19	CS	77/93 (83%)	59 (77%)	11 (14%)	7 (9%)	1	5
20	AT	97/106 (92%)	70 (72%)	18 (19%)	9 (9%)	1	5
20	CT	97/106 (92%)	68 (70%)	20 (21%)	9 (9%)	1	5
21	AU	23/27 (85%)	17 (74%)	5 (22%)	1 (4%)	4	23
21	CU	23/27 (85%)	17 (74%)	4 (17%)	2 (9%)	1	5
22	B0	83/85 (98%)	69 (83%)	10 (12%)	4 (5%)	4	20
22	D0	83/85 (98%)	68 (82%)	11 (13%)	4 (5%)	4	20
23	B1	87/98 (89%)	47 (54%)	24 (28%)	16 (18%)	0	1
23	D1	87/98 (89%)	46 (53%)	24 (28%)	17 (20%)	0	0
24	B2	49/72 (68%)	23 (47%)	14 (29%)	12 (24%)	0	0

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
24	D2	49/72 (68%)	22 (45%)	15 (31%)	12 (24%)	0	0
25	B3	58/60 (97%)	50 (86%)	8 (14%)	0	100	100
25	D3	58/60 (97%)	48 (83%)	10 (17%)	0	100	100
26	B4	30/71 (42%)	4 (13%)	14 (47%)	12 (40%)	0	0
26	D4	30/71 (42%)	3 (10%)	15 (50%)	12 (40%)	0	0
27	B5	57/60 (95%)	43 (75%)	4 (7%)	10 (18%)	0	1
27	D5	57/60 (95%)	42 (74%)	6 (10%)	9 (16%)	0	1
28	B6	41/54 (76%)	21 (51%)	6 (15%)	14 (34%)	0	0
28	D6	41/54 (76%)	21 (51%)	7 (17%)	13 (32%)	0	0
29	B7	47/49 (96%)	43 (92%)	4 (8%)	0	100	100
29	D7	47/49 (96%)	42 (89%)	5 (11%)	0	100	100
30	B8	62/65 (95%)	41 (66%)	12 (19%)	9 (14%)	0	1
30	D8	62/65 (95%)	42 (68%)	12 (19%)	8 (13%)	0	2
33	BD	270/276 (98%)	211 (78%)	44 (16%)	15 (6%)	3	16
33	DD	270/276 (98%)	208 (77%)	46 (17%)	16 (6%)	2	14
34	BE	203/206 (98%)	147 (72%)	31 (15%)	25 (12%)	1	2
34	DE	203/206 (98%)	144 (71%)	37 (18%)	22 (11%)	1	3
35	BF	206/210 (98%)	158 (77%)	34 (16%)	14 (7%)	2	10
35	DF	206/210 (98%)	154 (75%)	36 (18%)	16 (8%)	1	7
36	BG	177/182 (97%)	125 (71%)	35 (20%)	17 (10%)	1	4
36	DG	177/182 (97%)	126 (71%)	34 (19%)	17 (10%)	1	4
37	BH	158/180 (88%)	102 (65%)	31 (20%)	25 (16%)	0	1
37	DH	158/180 (88%)	101 (64%)	31 (20%)	26 (16%)	0	1
38	BI	144/148 (97%)	98 (68%)	30 (21%)	16 (11%)	1	3
38	DI	144/148 (97%)	99 (69%)	33 (23%)	12 (8%)	1	6
39	BN	137/140 (98%)	89 (65%)	28 (20%)	20 (15%)	0	1
39	DN	137/140 (98%)	92 (67%)	25 (18%)	20 (15%)	0	1
40	BO	120/122 (98%)	109 (91%)	9 (8%)	2 (2%)	14	54
40	DO	120/122 (98%)	107 (89%)	10 (8%)	3 (2%)	9	40
41	BP	144/150 (96%)	71 (49%)	33 (23%)	40 (28%)	0	0
41	DP	144/150 (96%)	70 (49%)	33 (23%)	41 (28%)	0	0

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
42	BQ	134/141 (95%)	97 (72%)	21 (16%)	16 (12%)	1	2
42	DQ	134/141 (95%)	92 (69%)	25 (19%)	17 (13%)	0	2
43	BR	115/118 (98%)	86 (75%)	22 (19%)	7 (6%)	2	14
43	DR	115/118 (98%)	85 (74%)	23 (20%)	7 (6%)	2	14
44	BS	97/112 (87%)	45 (46%)	22 (23%)	30 (31%)	0	0
44	DS	97/112 (87%)	44 (45%)	22 (23%)	31 (32%)	0	0
45	BT	130/146 (89%)	91 (70%)	21 (16%)	18 (14%)	0	2
45	DT	130/146 (89%)	91 (70%)	21 (16%)	18 (14%)	0	2
46	BU	115/118 (98%)	89 (77%)	18 (16%)	8 (7%)	2	9
46	DU	115/118 (98%)	86 (75%)	21 (18%)	8 (7%)	2	9
47	BV	97/101 (96%)	54 (56%)	18 (19%)	25 (26%)	0	0
47	DV	97/101 (96%)	53 (55%)	19 (20%)	25 (26%)	0	0
48	BW	111/113 (98%)	85 (77%)	17 (15%)	9 (8%)	1	7
48	DW	111/113 (98%)	83 (75%)	19 (17%)	9 (8%)	1	7
49	BX	91/96 (95%)	47 (52%)	23 (25%)	21 (23%)	0	0
49	DX	91/96 (95%)	48 (53%)	23 (25%)	20 (22%)	0	0
50	BY	99/110 (90%)	47 (48%)	22 (22%)	30 (30%)	0	0
50	DY	99/110 (90%)	44 (44%)	25 (25%)	30 (30%)	0	0
51	BZ	175/206 (85%)	123 (70%)	32 (18%)	20 (11%)	1	3
51	DZ	175/206 (85%)	121 (69%)	36 (21%)	18 (10%)	1	4
All	All	11148/12060 (92%)	7786 (70%)	2170 (20%)	1192 (11%)	1	3

All (1192) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	AB	18	GLY
2	AB	20	GLU
2	AB	106	LYS
2	AB	165	VAL
2	AB	195	ASP
3	AC	47	LEU
3	AC	101	LEU
3	AC	189	ALA
4	AD	3	ARG
4	AD	13	ARG

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Mol	Chain	Res	Type
4	AD	14	ARG
4	AD	129	ASN
4	AD	163	GLU
5	AE	71	LEU
6	AF	39	LYS
6	AF	40	VAL
7	AG	7	ALA
7	AG	33	ASP
8	AH	2	LEU
8	AH	91	ARG
9	AI	23	ASN
9	AI	117	HIS
10	AJ	59	SER
12	AL	28	LYS
12	AL	47	LYS
12	AL	91	LYS
13	AM	83	ASP
14	AN	16	PHE
16	AP	11	SER
16	AP	28	ARG
19	AS	27	GLU
19	AS	28	LYS
19	AS	80	TYR
20	AT	9	ASN
20	AT	11	SER
20	AT	74	LYS
20	AT	96	GLY
22	B0	14	ARG
23	B1	10	LYS
23	B1	11	ARG
23	B1	14	VAL
23	B1	27	GLU
23	B1	48	LYS
23	B1	49	VAL
23	B1	65	SER
23	B1	79	GLY
23	B1	94	LEU
24	B2	16	LEU
24	B2	35	LEU
24	B2	52	ASP
26	B4	6	HIS
26	B4	7	PRO

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Mol	Chain	Res	Type
26	B4	9	LEU
26	B4	10	VAL
26	B4	11	PRO
26	B4	16	CYS
26	B4	24	THR
26	B4	25	TYR
26	B4	29	PRO
27	B5	4	HIS
27	B5	47	PRO
27	B5	49	CYS
27	B5	57	VAL
28	B6	20	ASN
28	B6	23	THR
28	B6	31	PRO
28	B6	33	LYS
28	B6	44	ARG
28	B6	52	VAL
30	B8	32	LEU
30	B8	35	GLN
30	B8	37	SER
30	B8	64	TYR
33	BD	11	PRO
33	BD	12	SER
33	BD	26	LYS
33	BD	28	GLU
33	BD	33	LEU
33	BD	34	VAL
33	BD	159	ALA
33	BD	196	VAL
33	BD	225	ALA
33	BD	241	PRO
34	BE	2	LYS
34	BE	54	GLN
34	BE	77	ILE
34	BE	82	ARG
34	BE	90	THR
34	BE	93	VAL
34	BE	118	LYS
34	BE	131	ALA
34	BE	173	VAL
35	BF	2	LYS
35	BF	89	VAL

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Mol	Chain	Res	Type
36	BG	14	GLU
36	BG	47	LYS
36	BG	81	LYS
36	BG	82	LEU
36	BG	86	MET
36	BG	87	PRO
36	BG	163	ALA
37	BH	21	PRO
37	BH	41	MET
37	BH	47	GLU
37	BH	71	LEU
37	BH	84	SER
37	BH	89	ILE
37	BH	90	LYS
37	BH	92	ILE
37	BH	126	PRO
37	BH	138	LYS
37	BH	153	LYS
37	BH	154	PRO
37	BH	157	TYR
37	BH	165	ALA
37	BH	170	ARG
38	BI	68	LEU
38	BI	133	HIS
38	BI	145	VAL
39	BN	59	LYS
39	BN	63	THR
39	BN	64	GLY
39	BN	74	ARG
39	BN	78	TYR
39	BN	79	PRO
39	BN	130	HIS
39	BN	135	PRO
41	BP	11	GLY
41	BP	14	LYS
41	BP	15	ARG
41	BP	31	ALA
41	BP	34	GLY
41	BP	42	SER
41	BP	47	ASP
41	BP	49	ARG
41	BP	52	GLU

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Mol	Chain	Res	Type
41	BP	56	SER
41	BP	57	THR
41	BP	58	THR
41	BP	65	ARG
41	BP	98	GLU
41	BP	103	ALA
41	BP	106	LEU
41	BP	107	LYS
41	BP	141	ALA
41	BP	147	LEU
42	BQ	8	LYS
42	BQ	13	GLN
42	BQ	21	THR
42	BQ	30	GLY
42	BQ	62	GLY
42	BQ	83	MET
42	BQ	134	ARG
42	BQ	136	ALA
43	BR	4	LEU
43	BR	45	ARG
43	BR	117	VAL
44	BS	13	ARG
44	BS	23	ARG
44	BS	35	ILE
44	BS	57	LYS
44	BS	58	LEU
44	BS	59	LYS
44	BS	66	ALA
44	BS	67	ARG
44	BS	87	PHE
44	BS	88	ASP
44	BS	89	ARG
44	BS	90	GLY
44	BS	92	TYR
44	BS	98	VAL
44	BS	102	ALA
45	BT	13	ARG
45	BT	18	ASP
45	BT	24	PRO
45	BT	26	ASP
45	BT	28	VAL
45	BT	36	GLU

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Mol	Chain	Res	Type
45	BT	58	ASN
45	BT	80	SER
45	BT	83	ILE
45	BT	94	ALA
45	BT	107	ASP
45	BT	129	ARG
46	BU	9	VAL
46	BU	32	PHE
46	BU	90	VAL
46	BU	91	ASP
47	BV	2	PHE
47	BV	23	GLU
47	BV	44	LYS
47	BV	47	VAL
47	BV	51	VAL
47	BV	52	VAL
47	BV	53	GLU
47	BV	54	GLY
47	BV	68	LYS
47	BV	69	LYS
47	BV	70	ILE
47	BV	71	LEU
47	BV	72	VAL
47	BV	86	GLY
47	BV	90	PRO
48	BW	56	ALA
49	BX	25	LYS
49	BX	34	ALA
49	BX	37	THR
49	BX	60	ARG
49	BX	73	ARG
49	BX	77	LYS
49	BX	84	ALA
49	BX	88	LYS
49	BX	89	ILE
50	BY	3	VAL
50	BY	17	SER
50	BY	27	VAL
50	BY	30	VAL
50	BY	38	ILE
50	BY	42	VAL
50	BY	44	ILE

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Mol	Chain	Res	Type
50	BY	56	PRO
50	BY	57	GLN
50	BY	62	GLU
50	BY	66	PRO
50	BY	77	PRO
50	BY	78	ALA
50	BY	90	LEU
50	BY	98	VAL
50	BY	99	CYS
50	BY	101	LYS
51	BZ	65	GLN
51	BZ	112	ARG
51	BZ	119	GLU
51	BZ	142	SER
51	BZ	152	ALA
2	CB	18	GLY
2	CB	20	GLU
2	CB	165	VAL
2	CB	195	ASP
3	CC	47	LEU
3	CC	101	LEU
3	CC	189	ALA
4	CD	3	ARG
4	CD	13	ARG
4	CD	14	ARG
4	CD	40	PRO
4	CD	110	PHE
4	CD	129	ASN
4	CD	163	GLU
5	CE	71	LEU
6	CF	39	LYS
6	CF	40	VAL
7	CG	7	ALA
7	CG	33	ASP
8	CH	2	LEU
8	CH	91	ARG
9	CI	23	ASN
9	CI	117	HIS
10	CJ	59	SER
12	CL	28	LYS
12	CL	47	LYS
12	CL	91	LYS

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Mol	Chain	Res	Type
13	CM	83	ASP
14	CN	16	PHE
16	CP	28	ARG
19	CS	27	GLU
19	CS	28	LYS
19	CS	80	TYR
20	CT	9	ASN
20	CT	11	SER
20	CT	74	LYS
20	CT	96	GLY
22	D0	5	LYS
22	D0	14	ARG
23	D1	10	LYS
23	D1	11	ARG
23	D1	14	VAL
23	D1	27	GLU
23	D1	48	LYS
23	D1	49	VAL
23	D1	65	SER
23	D1	79	GLY
23	D1	94	LEU
24	D2	16	LEU
24	D2	35	LEU
24	D2	52	ASP
26	D4	6	HIS
26	D4	7	PRO
26	D4	9	LEU
26	D4	10	VAL
26	D4	11	PRO
26	D4	16	CYS
26	D4	24	THR
26	D4	25	TYR
26	D4	29	PRO
27	D5	4	HIS
27	D5	47	PRO
27	D5	49	CYS
27	D5	57	VAL
28	D6	15	GLU
28	D6	17	LYS
28	D6	20	ASN
28	D6	23	THR
28	D6	31	PRO

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Mol	Chain	Res	Type
28	D6	33	LYS
28	D6	44	ARG
28	D6	49	HIS
28	D6	52	VAL
30	D8	32	LEU
30	D8	35	GLN
30	D8	37	SER
33	DD	11	PRO
33	DD	12	SER
33	DD	26	LYS
33	DD	28	GLU
33	DD	33	LEU
33	DD	34	VAL
33	DD	159	ALA
33	DD	196	VAL
33	DD	225	ALA
33	DD	241	PRO
34	DE	54	GLN
34	DE	77	ILE
34	DE	82	ARG
34	DE	90	THR
34	DE	93	VAL
34	DE	118	LYS
34	DE	131	ALA
34	DE	173	VAL
35	DF	2	LYS
35	DF	7	TYR
35	DF	66	PRO
35	DF	89	VAL
36	DG	14	GLU
36	DG	47	LYS
36	DG	49	ASP
36	DG	81	LYS
36	DG	82	LEU
36	DG	86	MET
36	DG	87	PRO
36	DG	153	ARG
36	DG	163	ALA
37	DH	21	PRO
37	DH	41	MET
37	DH	47	GLU
37	DH	84	SER

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Mol	Chain	Res	Type
37	DH	89	ILE
37	DH	90	LYS
37	DH	92	ILE
37	DH	126	PRO
37	DH	138	LYS
37	DH	153	LYS
37	DH	154	PRO
37	DH	165	ALA
37	DH	170	ARG
38	DI	68	LEU
38	DI	133	HIS
38	DI	145	VAL
39	DN	59	LYS
39	DN	63	THR
39	DN	64	GLY
39	DN	74	ARG
39	DN	78	TYR
39	DN	79	PRO
39	DN	130	HIS
41	DP	11	GLY
41	DP	14	LYS
41	DP	15	ARG
41	DP	17	LYS
41	DP	31	ALA
41	DP	34	GLY
41	DP	42	SER
41	DP	47	ASP
41	DP	49	ARG
41	DP	52	GLU
41	DP	56	SER
41	DP	57	THR
41	DP	58	THR
41	DP	65	ARG
41	DP	98	GLU
41	DP	103	ALA
41	DP	104	GLY
41	DP	106	LEU
41	DP	107	LYS
41	DP	141	ALA
41	DP	147	LEU
42	DQ	8	LYS
42	DQ	13	GLN

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Mol	Chain	Res	Type
42	DQ	21	THR
42	DQ	25	ASP
42	DQ	30	GLY
42	DQ	62	GLY
42	DQ	83	MET
42	DQ	134	ARG
42	DQ	136	ALA
43	DR	4	LEU
43	DR	45	ARG
43	DR	117	VAL
44	DS	17	ARG
44	DS	35	ILE
44	DS	53	SER
44	DS	57	LYS
44	DS	58	LEU
44	DS	59	LYS
44	DS	66	ALA
44	DS	67	ARG
44	DS	87	PHE
44	DS	88	ASP
44	DS	89	ARG
44	DS	90	GLY
44	DS	92	TYR
44	DS	102	ALA
45	DT	13	ARG
45	DT	18	ASP
45	DT	24	PRO
45	DT	26	ASP
45	DT	28	VAL
45	DT	36	GLU
45	DT	57	PHE
45	DT	58	ASN
45	DT	80	SER
45	DT	83	ILE
45	DT	107	ASP
45	DT	129	ARG
46	DU	9	VAL
46	DU	32	PHE
46	DU	90	VAL
46	DU	91	ASP
47	DV	2	PHE
47	DV	23	GLU

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Mol	Chain	Res	Type
47	DV	44	LYS
47	DV	47	VAL
47	DV	51	VAL
47	DV	53	GLU
47	DV	54	GLY
47	DV	68	LYS
47	DV	70	ILE
47	DV	71	LEU
47	DV	72	VAL
47	DV	86	GLY
47	DV	90	PRO
48	DW	56	ALA
49	DX	25	LYS
49	DX	34	ALA
49	DX	36	LYS
49	DX	37	THR
49	DX	60	ARG
49	DX	73	ARG
49	DX	77	LYS
49	DX	84	ALA
49	DX	88	LYS
49	DX	89	ILE
50	DY	3	VAL
50	DY	17	SER
50	DY	27	VAL
50	DY	30	VAL
50	DY	38	ILE
50	DY	42	VAL
50	DY	44	ILE
50	DY	47	LYS
50	DY	56	PRO
50	DY	57	GLN
50	DY	62	GLU
50	DY	66	PRO
50	DY	77	PRO
50	DY	78	ALA
50	DY	90	LEU
50	DY	98	VAL
50	DY	99	CYS
50	DY	101	LYS
51	DZ	65	GLN
51	DZ	112	ARG

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Mol	Chain	Res	Type
51	DZ	119	GLU
51	DZ	142	SER
51	DZ	152	ALA
2	AB	15	VAL
2	AB	97	TRP
2	AB	239	VAL
3	AC	4	LYS
3	AC	20	SER
3	AC	156	ARG
4	AD	4	TYR
4	AD	5	ILE
4	AD	17	VAL
4	AD	40	PRO
4	AD	44	GLY
4	AD	47	ARG
4	AD	56	VAL
4	AD	110	PHE
5	AE	72	GLN
5	AE	146	ALA
6	AF	34	GLY
6	AF	96	PRO
8	AH	87	SER
8	AH	133	LEU
9	AI	100	GLY
9	AI	107	ARG
10	AJ	36	GLY
11	AK	106	LYS
12	AL	18	VAL
12	AL	64	TYR
12	AL	92	ASP
12	AL	115	LYS
13	AM	100	GLY
15	AO	16	ALA
15	AO	40	SER
16	AP	24	ALA
16	AP	63	GLY
17	AQ	3	LYS
17	AQ	34	LYS
17	AQ	49	GLU
17	AQ	61	GLU
18	AR	54	ARG
19	AS	10	PHE

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Mol	Chain	Res	Type
20	AT	76	ALA
20	AT	101	GLY
21	AU	25	LYS
22	B0	5	LYS
23	B1	15	ALA
23	B1	81	LYS
24	B2	32	LEU
24	B2	42	GLY
24	B2	49	LYS
26	B4	20	ASN
26	B4	30	GLU
27	B5	48	GLU
28	B6	17	LYS
28	B6	49	HIS
28	B6	51	GLU
30	B8	31	HIS
34	BE	53	PRO
34	BE	71	GLY
34	BE	88	GLY
34	BE	89	ASP
34	BE	130	GLY
35	BF	7	TYR
35	BF	66	PRO
35	BF	133	ASN
36	BG	49	ASP
36	BG	90	LEU
36	BG	96	ARG
36	BG	129	GLY
36	BG	153	ARG
37	BH	14	GLY
37	BH	93	GLY
37	BH	158	HIS
37	BH	159	GLU
38	BI	7	GLU
38	BI	78	THR
38	BI	120	ILE
39	BN	3	THR
39	BN	19	GLU
39	BN	42	TRP
39	BN	60	ILE
39	BN	133	GLN
40	BO	5	GLN

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Mol	Chain	Res	Type
41	BP	17	LYS
41	BP	18	ARG
41	BP	36	LYS
41	BP	104	GLY
42	BQ	15	GLY
42	BQ	25	ASP
42	BQ	90	VAL
43	BR	88	ARG
43	BR	107	ASP
44	BS	14	VAL
44	BS	17	ARG
44	BS	29	PHE
44	BS	31	SER
44	BS	53	SER
44	BS	93	LYS
44	BS	96	GLY
44	BS	100	ALA
45	BT	31	SER
45	BT	35	LYS
45	BT	57	PHE
45	BT	115	ARG
46	BU	25	TRP
46	BU	88	ILE
46	BU	89	GLU
46	BU	92	ARG
47	BV	41	GLY
47	BV	50	PRO
47	BV	73	SER
47	BV	91	TYR
48	BW	58	ALA
48	BW	67	ASP
49	BX	24	GLY
49	BX	36	LYS
49	BX	59	VAL
49	BX	81	VAL
49	BX	86	GLY
50	BY	7	VAL
50	BY	47	LYS
50	BY	55	TYR
51	BZ	64	GLY
51	BZ	120	ILE
2	CB	15	VAL

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Mol	Chain	Res	Type
2	CB	97	TRP
2	CB	106	LYS
2	CB	239	VAL
3	CC	4	LYS
3	CC	20	SER
3	CC	156	ARG
4	CD	4	TYR
4	CD	5	ILE
4	CD	17	VAL
4	CD	44	GLY
4	CD	47	ARG
4	CD	56	VAL
5	CE	72	GLN
5	CE	146	ALA
6	CF	34	GLY
6	CF	53	ALA
6	CF	96	PRO
8	CH	54	ASP
8	CH	87	SER
8	CH	133	LEU
9	CI	100	GLY
9	CI	107	ARG
10	CJ	36	GLY
11	CK	106	LYS
12	CL	64	TYR
12	CL	89	ARG
12	CL	92	ASP
12	CL	115	LYS
13	CM	100	GLY
15	CO	16	ALA
16	CP	11	SER
16	CP	24	ALA
16	CP	63	GLY
17	CQ	3	LYS
17	CQ	34	LYS
17	CQ	49	GLU
17	CQ	61	GLU
18	CR	20	ALA
18	CR	36	ASN
18	CR	54	ARG
19	CS	10	PHE
20	CT	101	GLY

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Mol	Chain	Res	Type
21	CU	25	LYS
23	D1	15	ALA
23	D1	81	LYS
24	D2	32	LEU
24	D2	33	MET
24	D2	42	GLY
26	D4	20	ASN
27	D5	48	GLU
28	D6	51	GLU
30	D8	30	ARG
30	D8	31	HIS
30	D8	64	TYR
34	DE	2	LYS
34	DE	53	PRO
34	DE	71	GLY
34	DE	88	GLY
34	DE	89	ASP
34	DE	130	GLY
35	DF	86	GLY
36	DG	90	LEU
36	DG	96	ARG
36	DG	129	GLY
37	DH	71	LEU
37	DH	93	GLY
37	DH	157	TYR
37	DH	158	HIS
37	DH	159	GLU
38	DI	7	GLU
38	DI	78	THR
38	DI	120	ILE
39	DN	3	THR
39	DN	42	TRP
39	DN	57	ALA
39	DN	60	ILE
39	DN	68	GLU
39	DN	133	GLN
39	DN	135	PRO
40	DO	5	GLN
41	DP	18	ARG
41	DP	36	LYS
42	DQ	15	GLY
42	DQ	90	VAL

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Mol	Chain	Res	Type
43	DR	88	ARG
43	DR	107	ASP
44	DS	13	ARG
44	DS	14	VAL
44	DS	23	ARG
44	DS	29	PHE
44	DS	31	SER
44	DS	93	LYS
44	DS	96	GLY
44	DS	98	VAL
44	DS	100	ALA
45	DT	31	SER
45	DT	35	LYS
45	DT	94	ALA
45	DT	115	ARG
46	DU	25	TRP
46	DU	88	ILE
46	DU	89	GLU
46	DU	92	ARG
47	DV	41	GLY
47	DV	50	PRO
47	DV	52	VAL
47	DV	69	LYS
47	DV	91	TYR
48	DW	63	ASP
48	DW	67	ASP
49	DX	24	GLY
49	DX	40	LYS
49	DX	59	VAL
49	DX	81	VAL
49	DX	86	GLY
50	DY	7	VAL
50	DY	55	TYR
51	DZ	64	GLY
51	DZ	80	ARG
2	AB	24	TRP
2	AB	80	ILE
2	AB	204	ASN
2	AB	240	GLN
3	AC	15	THR
3	AC	108	ASN
4	AD	45	GLN

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Mol	Chain	Res	Type
5	AE	128	PRO
5	AE	129	ILE
5	AE	153	LYS
6	AF	53	ALA
8	AH	54	ASP
8	AH	68	ARG
10	AJ	23	ILE
11	AK	100	ALA
12	AL	89	ARG
13	AM	105	THR
13	AM	106	ASN
13	AM	107	ALA
15	AO	44	LYS
16	AP	17	TYR
17	AQ	78	GLU
18	AR	20	ALA
18	AR	45	SER
19	AS	29	ARG
19	AS	30	LEU
20	AT	73	HIS
22	B0	83	PRO
23	B1	87	PRO
24	B2	33	MET
24	B2	40	SER
24	B2	48	HIS
26	B4	8	LYS
27	B5	50	GLY
28	B6	15	GLU
28	B6	28	ARG
28	B6	29	ASN
28	B6	45	LYS
30	B8	30	ARG
33	BD	3	VAL
34	BE	17	ASP
35	BF	11	VAL
35	BF	14	PRO
35	BF	86	GLY
37	BH	85	LYS
38	BI	86	THR
38	BI	130	TYR
38	BI	134	PRO
39	BN	57	ALA

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Mol	Chain	Res	Type
39	BN	58	ASP
39	BN	68	GLU
40	BO	91	LEU
41	BP	8	PRO
41	BP	39	LYS
41	BP	74	GLU
41	BP	111	ARG
42	BQ	60	ARG
43	BR	106	GLY
44	BS	94	TYR
48	BW	63	ASP
49	BX	40	LYS
49	BX	69	TYR
49	BX	71	GLY
49	BX	82	GLN
50	BY	48	ALA
51	BZ	7	ALA
51	BZ	78	LYS
51	BZ	80	ARG
51	BZ	101	PRO
51	BZ	151	HIS
51	BZ	166	SER
2	CB	24	TRP
2	CB	80	ILE
2	CB	204	ASN
2	CB	240	GLN
3	CC	15	THR
3	CC	108	ASN
4	CD	45	GLN
5	CE	128	PRO
5	CE	153	LYS
8	CH	37	ARG
10	CJ	23	ILE
11	CK	100	ALA
12	CL	18	VAL
13	CM	105	THR
13	CM	106	ASN
13	CM	107	ALA
15	CO	40	SER
16	CP	69	THR
17	CQ	74	LEU
17	CQ	78	GLU

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Mol	Chain	Res	Type
18	CR	41	LYS
18	CR	45	SER
19	CS	29	ARG
19	CS	30	LEU
20	CT	76	ALA
22	D0	83	PRO
23	D1	83	GLU
23	D1	87	PRO
24	D2	40	SER
24	D2	49	LYS
24	D2	59	ARG
26	D4	8	LYS
26	D4	30	GLU
27	D5	50	GLY
28	D6	28	ARG
28	D6	29	ASN
33	DD	242	ARG
33	DD	266	SER
34	DE	17	ASP
34	DE	76	ARG
35	DF	11	VAL
35	DF	14	PRO
35	DF	25	PRO
35	DF	102	PRO
35	DF	133	ASN
37	DH	14	GLY
37	DH	81	GLU
37	DH	85	LYS
38	DI	11	ASN
38	DI	86	THR
38	DI	130	TYR
38	DI	134	PRO
39	DN	19	GLU
39	DN	58	ASP
40	DO	91	LEU
41	DP	39	LYS
41	DP	74	GLU
41	DP	108	LYS
41	DP	111	ARG
42	DQ	60	ARG
43	DR	106	GLY
47	DV	73	SER

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Mol	Chain	Res	Type
48	DW	45	TYR
48	DW	58	ALA
49	DX	41	ASN
49	DX	69	TYR
50	DY	39	VAL
50	DY	48	ALA
50	DY	100	ALA
51	DZ	7	ALA
51	DZ	78	LYS
51	DZ	101	PRO
51	DZ	151	HIS
51	DZ	166	SER
51	DZ	168	GLU
2	AB	130	ARG
2	AB	216	SER
3	AC	154	SER
4	AD	9	CYS
4	AD	10	ARG
4	AD	28	SER
5	AE	118	ILE
5	AE	140	ARG
8	AH	33	GLU
8	AH	37	ARG
8	AH	132	GLU
9	AI	24	GLY
9	AI	95	LYS
9	AI	97	LYS
12	AL	63	GLY
15	AO	76	GLU
16	AP	44	THR
16	AP	46	PRO
16	AP	64	ALA
16	AP	78	GLY
17	AQ	74	LEU
18	AR	36	ASN
18	AR	41	LYS
20	AT	97	ALA
22	B0	9	SER
23	B1	26	ARG
23	B1	28	GLY
23	B1	83	GLU
24	B2	45	SER

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Mol	Chain	Res	Type
27	B5	32	PRO
27	B5	33	CYS
30	B8	43	GLN
33	BD	99	ASP
33	BD	146	GLU
33	BD	242	ARG
34	BE	57	LYS
34	BE	63	LEU
34	BE	66	HIS
34	BE	68	ALA
35	BF	9	ILE
35	BF	25	PRO
35	BF	84	VAL
35	BF	102	PRO
37	BH	70	THR
37	BH	76	VAL
37	BH	81	GLU
37	BH	117	PRO
38	BI	11	ASN
39	BN	77	GLY
41	BP	9	ASN
41	BP	40	SER
41	BP	108	LYS
41	BP	110	TYR
42	BQ	89	ASN
42	BQ	135	ASP
44	BS	24	LEU
44	BS	82	ILE
44	BS	107	GLU
45	BT	41	ARG
45	BT	69	GLY
48	BW	6	ILE
48	BW	45	TYR
48	BW	57	ASN
48	BW	65	LEU
49	BX	41	ASN
50	BY	11	ASP
50	BY	31	LEU
50	BY	37	VAL
50	BY	39	VAL
50	BY	81	LYS
50	BY	100	ALA

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Mol	Chain	Res	Type
51	BZ	6	LYS
51	BZ	47	VAL
51	BZ	111	VAL
51	BZ	168	GLU
2	CB	130	ARG
2	CB	216	SER
3	CC	154	SER
4	CD	7	PRO
4	CD	9	CYS
4	CD	28	SER
4	CD	73	ARG
5	CE	140	ARG
8	CH	33	GLU
8	CH	68	ARG
9	CI	24	GLY
9	CI	95	LYS
9	CI	97	LYS
12	CL	63	GLY
16	CP	17	TYR
16	CP	44	THR
16	CP	78	GLY
20	CT	73	HIS
20	CT	97	ALA
21	CU	3	LYS
22	D0	9	SER
23	D1	26	ARG
23	D1	28	GLY
24	D2	45	SER
24	D2	48	HIS
24	D2	58	ALA
27	D5	33	CYS
28	D6	45	LYS
30	D8	51	ALA
33	DD	3	VAL
33	DD	156	ALA
34	DE	66	HIS
35	DF	9	ILE
35	DF	20	LEU
35	DF	84	VAL
35	DF	168	ARG
36	DG	30	GLU
36	DG	140	ILE

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Mol	Chain	Res	Type
37	DH	76	VAL
37	DH	117	PRO
38	DI	15	VAL
39	DN	77	GLY
41	DP	8	PRO
41	DP	9	ASN
41	DP	109	GLY
41	DP	110	TYR
42	DQ	20	ALA
42	DQ	51	ARG
42	DQ	89	ASN
42	DQ	135	ASP
43	DR	116	LEU
44	DS	24	LEU
44	DS	82	ILE
44	DS	94	TYR
45	DT	41	ARG
47	DV	24	LYS
48	DW	6	ILE
48	DW	57	ASN
48	DW	75	TYR
49	DX	82	GLN
50	DY	11	ASP
50	DY	37	VAL
50	DY	81	LYS
51	DZ	111	VAL
2	AB	60	ASP
2	AB	194	PRO
2	AB	224	GLN
3	AC	60	ALA
4	AD	7	PRO
4	AD	73	ARG
5	AE	85	GLY
5	AE	136	MET
8	AH	7	ALA
12	AL	19	ARG
12	AL	22	SER
15	AO	19	PRO
15	AO	65	ARG
16	AP	16	HIS
16	AP	67	THR
16	AP	69	THR

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Mol	Chain	Res	Type
17	AQ	30	PRO
23	B1	64	ALA
24	B2	51	ARG
24	B2	58	ALA
27	B5	37	LYS
27	B5	56	LYS
33	BD	156	ALA
34	BE	58	ARG
34	BE	60	ASN
34	BE	72	VAL
34	BE	76	ARG
34	BE	132	HIS
35	BF	10	PRO
36	BG	43	LEU
36	BG	115	ARG
36	BG	117	PHE
36	BG	128	ARG
36	BG	140	ILE
37	BH	44	VAL
38	BI	8	PRO
38	BI	39	ALA
39	BN	52	VAL
41	BP	38	GLN
41	BP	71	VAL
41	BP	109	GLY
43	BR	116	LEU
47	BV	28	GLU
47	BV	39	LEU
47	BV	55	ALA
49	BX	68	ARG
50	BY	67	LEU
2	CB	84	GLU
2	CB	194	PRO
3	CC	60	ALA
3	CC	100	ALA
4	CD	10	ARG
5	CE	118	ILE
5	CE	129	ILE
12	CL	19	ARG
12	CL	22	SER
12	CL	51	ALA
13	CM	12	ASN

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Mol	Chain	Res	Type
15	CO	44	LYS
15	CO	65	ARG
15	CO	76	GLU
16	CP	46	PRO
16	CP	67	THR
18	CR	82	THR
27	D5	32	PRO
27	D5	37	LYS
33	DD	146	GLU
33	DD	272	ALA
34	DE	58	ARG
34	DE	68	ALA
34	DE	72	VAL
35	DF	10	PRO
36	DG	43	LEU
36	DG	115	ARG
36	DG	117	PHE
37	DH	13	LYS
37	DH	44	VAL
37	DH	70	THR
38	DI	8	PRO
39	DN	52	VAL
39	DN	80	GLY
39	DN	129	PRO
40	DO	107	ARG
41	DP	38	GLN
41	DP	40	SER
41	DP	67	MET
42	DQ	11	LYS
44	DS	43	GLU
44	DS	107	GLU
47	DV	27	ALA
47	DV	28	GLU
49	DX	68	ARG
50	DY	9	LYS
50	DY	31	LEU
51	DZ	47	VAL
51	DZ	120	ILE
8	AH	83	ILE
12	AL	125	PRO
17	AQ	4	LYS
19	AS	5	LEU

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Mol	Chain	Res	Type
30	B8	51	ALA
35	BF	20	LEU
38	BI	15	VAL
38	BI	30	LEU
38	BI	53	ALA
38	BI	85	GLU
39	BN	80	GLY
39	BN	129	PRO
41	BP	64	LYS
42	BQ	11	LYS
42	BQ	51	ARG
44	BS	28	VAL
47	BV	3	ALA
47	BV	36	PRO
50	BY	80	GLY
51	BZ	177	PRO
2	CB	60	ASP
2	CB	224	GLN
4	CD	171	GLY
8	CH	132	GLU
12	CL	125	PRO
15	CO	19	PRO
16	CP	16	HIS
19	CS	5	LEU
23	D1	38	SER
23	D1	82	LEU
34	DE	63	LEU
35	DF	85	GLY
41	DP	71	VAL
41	DP	90	ARG
47	DV	36	PRO
48	DW	65	LEU
51	DZ	177	PRO
30	B8	38	GLY
41	BP	63	PRO
48	BW	59	VAL
49	BX	74	PRO
51	BZ	158	PRO
5	CE	85	GLY
8	CH	83	ILE
8	CH	86	ILE
9	CI	123	PRO

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Mol	Chain	Res	Type
17	CQ	30	PRO
41	DP	26	GLY
44	DS	28	VAL
3	AC	207	VAL
8	AH	86	ILE
9	AI	123	PRO
15	AO	29	VAL
41	BP	10	PRO
41	BP	144	GLU
50	BY	61	ILE
51	BZ	146	ILE
3	CC	207	VAL
44	DS	85	VAL
50	DY	80	GLY
10	AJ	91	PRO
12	AL	29	GLY
13	AM	6	GLY
20	AT	98	PRO
34	BE	75	VAL
41	BP	26	GLY
12	CL	29	GLY
20	CT	98	PRO
30	D8	38	GLY
34	DE	75	VAL
41	DP	10	PRO
41	DP	144	GLU
50	DY	61	ILE
51	DZ	158	PRO
4	AD	171	GLY
8	AH	51	VAL
16	AP	51	VAL
28	B6	41	PRO
47	BV	79	VAL
8	CH	51	VAL
10	CJ	39	PRO
10	CJ	91	PRO
13	CM	6	GLY
16	CP	51	VAL
41	DP	63	PRO
44	DS	45	GLY
45	DT	69	GLY
47	DV	48	GLY

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Mol	Chain	Res	Type
49	DX	74	PRO
44	BS	45	GLY
44	BS	85	VAL
47	DV	79	VAL
41	BP	48	PRO
41	DP	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	
2	AB	202/220 (92%)	170 (84%)	32 (16%)	4	18
2	CB	202/220 (92%)	168 (83%)	34 (17%)	3	15
3	AC	160/188 (85%)	153 (96%)	7 (4%)	39	82
3	CC	160/188 (85%)	153 (96%)	7 (4%)	39	82
4	AD	180/181 (99%)	156 (87%)	24 (13%)	6	25
4	CD	180/181 (99%)	156 (87%)	24 (13%)	6	25
5	AE	115/123 (94%)	95 (83%)	20 (17%)	3	14
5	CE	115/123 (94%)	95 (83%)	20 (17%)	3	14
6	AF	90/90 (100%)	79 (88%)	11 (12%)	7	29
6	CF	90/90 (100%)	78 (87%)	12 (13%)	6	25
7	AG	126/127 (99%)	122 (97%)	4 (3%)	51	89
7	CG	126/127 (99%)	122 (97%)	4 (3%)	51	89
8	AH	119/119 (100%)	106 (89%)	13 (11%)	9	35
8	CH	119/119 (100%)	106 (89%)	13 (11%)	9	35
9	AI	98/99 (99%)	90 (92%)	8 (8%)	17	52
9	CI	98/99 (99%)	90 (92%)	8 (8%)	17	52
10	AJ	88/92 (96%)	78 (89%)	10 (11%)	8	33
10	CJ	88/92 (96%)	78 (89%)	10 (11%)	8	33
11	AK	90/99 (91%)	82 (91%)	8 (9%)	14	48
11	CK	90/99 (91%)	83 (92%)	7 (8%)	18	55

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
12	AL	104/111 (94%)	92 (88%)	12 (12%)	8	32
12	CL	104/111 (94%)	91 (88%)	13 (12%)	7	28
13	AM	93/101 (92%)	87 (94%)	6 (6%)	24	65
13	CM	93/101 (92%)	87 (94%)	6 (6%)	24	65
14	AN	49/50 (98%)	45 (92%)	4 (8%)	17	52
14	CN	49/50 (98%)	45 (92%)	4 (8%)	17	52
15	AO	79/80 (99%)	68 (86%)	11 (14%)	5	23
15	CO	79/80 (99%)	68 (86%)	11 (14%)	5	23
16	AP	72/74 (97%)	58 (81%)	14 (19%)	2	11
16	CP	72/74 (97%)	59 (82%)	13 (18%)	2	13
17	AQ	94/97 (97%)	82 (87%)	12 (13%)	6	27
17	CQ	94/97 (97%)	82 (87%)	12 (13%)	6	27
18	AR	61/77 (79%)	55 (90%)	6 (10%)	12	41
18	CR	61/77 (79%)	55 (90%)	6 (10%)	12	41
19	AS	69/80 (86%)	62 (90%)	7 (10%)	11	39
19	CS	69/80 (86%)	62 (90%)	7 (10%)	11	39
20	AT	76/82 (93%)	68 (90%)	8 (10%)	10	37
20	CT	76/82 (93%)	68 (90%)	8 (10%)	10	37
21	AU	19/22 (86%)	19 (100%)	0	100	100
21	CU	19/22 (86%)	19 (100%)	0	100	100
22	B0	61/67 (91%)	53 (87%)	8 (13%)	6	25
22	D0	61/67 (91%)	53 (87%)	8 (13%)	6	25
23	B1	73/83 (88%)	53 (73%)	20 (27%)	0	3
23	D1	73/83 (88%)	55 (75%)	18 (25%)	1	4
24	B2	46/67 (69%)	33 (72%)	13 (28%)	0	3
24	D2	46/67 (69%)	33 (72%)	13 (28%)	0	3
25	B3	51/52 (98%)	45 (88%)	6 (12%)	8	30
25	D3	51/52 (98%)	44 (86%)	7 (14%)	5	24
27	B5	51/52 (98%)	40 (78%)	11 (22%)	1	8
27	D5	51/52 (98%)	38 (74%)	13 (26%)	1	4
28	B6	43/52 (83%)	27 (63%)	16 (37%)	0	1

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
28	D6	43/52 (83%)	28 (65%)	15 (35%)	0	1
29	B7	41/42 (98%)	33 (80%)	8 (20%)	2	11
29	D7	41/42 (98%)	32 (78%)	9 (22%)	1	7
30	B8	53/55 (96%)	40 (76%)	13 (24%)	1	5
30	D8	53/55 (96%)	41 (77%)	12 (23%)	1	6
33	BD	213/218 (98%)	166 (78%)	47 (22%)	1	7
33	DD	213/218 (98%)	165 (78%)	48 (22%)	1	7
34	BE	165/166 (99%)	122 (74%)	43 (26%)	1	4
34	DE	165/166 (99%)	122 (74%)	43 (26%)	1	4
35	BF	165/166 (99%)	134 (81%)	31 (19%)	2	12
35	DF	165/166 (99%)	137 (83%)	28 (17%)	3	15
36	BG	155/156 (99%)	134 (86%)	21 (14%)	6	24
36	DG	155/156 (99%)	134 (86%)	21 (14%)	6	24
37	BH	132/148 (89%)	105 (80%)	27 (20%)	2	9
37	DH	132/148 (89%)	105 (80%)	27 (20%)	2	9
38	BI	122/124 (98%)	104 (85%)	18 (15%)	4	21
38	DI	122/124 (98%)	104 (85%)	18 (15%)	4	21
39	BN	117/119 (98%)	79 (68%)	38 (32%)	0	2
39	DN	117/119 (98%)	79 (68%)	38 (32%)	0	2
40	BO	100/100 (100%)	81 (81%)	19 (19%)	2	12
40	DO	100/100 (100%)	81 (81%)	19 (19%)	2	12
41	BP	112/116 (97%)	72 (64%)	40 (36%)	0	1
41	DP	112/116 (97%)	72 (64%)	40 (36%)	0	1
42	BQ	106/111 (96%)	86 (81%)	20 (19%)	2	12
42	DQ	106/111 (96%)	85 (80%)	21 (20%)	2	11
43	BR	100/101 (99%)	81 (81%)	19 (19%)	2	12
43	DR	100/101 (99%)	80 (80%)	20 (20%)	2	10
44	BS	77/88 (88%)	53 (69%)	24 (31%)	0	2
44	DS	77/88 (88%)	54 (70%)	23 (30%)	0	2
45	BT	116/127 (91%)	81 (70%)	35 (30%)	0	2
45	DT	116/127 (91%)	81 (70%)	35 (30%)	0	2

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
46	BU	92/94 (98%)	79 (86%)	13 (14%)	5	23
46	DU	92/94 (98%)	79 (86%)	13 (14%)	5	23
47	BV	82/82 (100%)	53 (65%)	29 (35%)	0	1
47	DV	82/82 (100%)	53 (65%)	29 (35%)	0	1
48	BW	91/92 (99%)	70 (77%)	21 (23%)	1	6
48	DW	91/92 (99%)	71 (78%)	20 (22%)	1	7
49	BX	74/78 (95%)	54 (73%)	20 (27%)	1	3
49	DX	74/78 (95%)	53 (72%)	21 (28%)	0	3
50	BY	84/91 (92%)	60 (71%)	24 (29%)	0	3
50	DY	84/91 (92%)	61 (73%)	23 (27%)	0	3
51	BZ	155/179 (87%)	130 (84%)	25 (16%)	3	17
51	DZ	155/179 (87%)	130 (84%)	25 (16%)	3	17
All	All	9322/9876 (94%)	7670 (82%)	1652 (18%)	3	14

All (1652) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	AB	9	GLU
2	AB	10	LEU
2	AB	15	VAL
2	AB	17	PHE
2	AB	22	LYS
2	AB	24	TRP
2	AB	36	ARG
2	AB	42	ILE
2	AB	69	LEU
2	AB	80	ILE
2	AB	90	MET
2	AB	107	THR
2	AB	111	ARG
2	AB	121	LEU
2	AB	127	ILE
2	AB	130	ARG
2	AB	137	ARG
2	AB	145	LEU
2	AB	146	GLN
2	AB	154	LEU
2	AB	165	VAL

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Mol	Chain	Res	Type
2	AB	178	ARG
2	AB	185	ILE
2	AB	187	LEU
2	AB	189	ASP
2	AB	193	ASP
2	AB	195	ASP
2	AB	196	LEU
2	AB	198	ASP
2	AB	204	ASN
2	AB	205	ASP
2	AB	221	LEU
3	AC	5	ILE
3	AC	12	LEU
3	AC	27	LYS
3	AC	62	ASP
3	AC	104	GLN
3	AC	127	ARG
3	AC	131	ARG
4	AD	3	ARG
4	AD	8	VAL
4	AD	11	LEU
4	AD	12	CYS
4	AD	15	GLU
4	AD	19	LEU
4	AD	25	ARG
4	AD	33	MET
4	AD	45	GLN
4	AD	58	LEU
4	AD	59	ARG
4	AD	64	LEU
4	AD	76	ARG
4	AD	92	VAL
4	AD	118	ARG
4	AD	119	GLN
4	AD	121	VAL
4	AD	122	ARG
4	AD	131	ARG
4	AD	132	ARG
4	AD	135	LEU
4	AD	138	TYR
4	AD	158	ILE
4	AD	196	LEU

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Mol	Chain	Res	Type
5	AE	12	LEU
5	AE	13	ILE
5	AE	18	ARG
5	AE	20	GLN
5	AE	25	ARG
5	AE	27	ARG
5	AE	41	VAL
5	AE	50	GLU
5	AE	55	VAL
5	AE	76	ILE
5	AE	79	GLU
5	AE	87	SER
5	AE	90	VAL
5	AE	91	LEU
5	AE	101	ILE
5	AE	112	LEU
5	AE	115	VAL
5	AE	116	THR
5	AE	120	THR
5	AE	143	ARG
6	AF	18	GLN
6	AF	21	LEU
6	AF	25	ILE
6	AF	45	LEU
6	AF	46	ARG
6	AF	55	ASP
6	AF	63	TYR
6	AF	70	ASP
6	AF	83	ASP
6	AF	94	GLN
6	AF	98	LEU
7	AG	12	LEU
7	AG	36	LYS
7	AG	79	ARG
7	AG	156	TRP
8	AH	1	MET
8	AH	10	LEU
8	AH	25	ASP
8	AH	29	SER
8	AH	41	ARG
8	AH	45	ILE
8	AH	52	ASP

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Mol	Chain	Res	Type
8	AH	91	ARG
8	AH	93	VAL
8	AH	95	VAL
8	AH	102	ARG
8	AH	114	THR
8	AH	127	LEU
9	AI	10	ARG
9	AI	95	LYS
9	AI	99	LEU
9	AI	113	LYS
9	AI	114	TYR
9	AI	121	ARG
9	AI	125	TYR
9	AI	128	ARG
10	AJ	22	LYS
10	AJ	40	LEU
10	AJ	45	ARG
10	AJ	47	PHE
10	AJ	57	LYS
10	AJ	62	HIS
10	AJ	63	PHE
10	AJ	74	ILE
10	AJ	80	LYS
10	AJ	96	ILE
11	AK	24	SER
11	AK	29	ILE
11	AK	47	VAL
11	AK	92	GLU
11	AK	95	ILE
11	AK	114	VAL
11	AK	117	ASN
11	AK	127	LYS
12	AL	20	LYS
12	AL	41	ARG
12	AL	42	THR
12	AL	55	VAL
12	AL	62	SER
12	AL	81	SER
12	AL	84	LEU
12	AL	89	ARG
12	AL	92	ASP
12	AL	99	HIS

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Mol	Chain	Res	Type
12	AL	102	ARG
12	AL	119	LYS
13	AM	47	ASP
13	AM	64	TRP
13	AM	66	LEU
13	AM	70	LEU
13	AM	86	CYS
13	AM	93	ARG
14	AN	18	VAL
14	AN	33	VAL
14	AN	42	ILE
14	AN	44	LEU
15	AO	3	ILE
15	AO	17	ARG
15	AO	24	SER
15	AO	26	GLU
15	AO	31	LEU
15	AO	41	GLU
15	AO	42	HIS
15	AO	47	LYS
15	AO	57	LEU
15	AO	65	ARG
15	AO	82	ILE
16	AP	1	MET
16	AP	2	VAL
16	AP	6	LEU
16	AP	8	ARG
16	AP	27	LYS
16	AP	28	ARG
16	AP	39	TYR
16	AP	48	TRP
16	AP	55	ARG
16	AP	62	VAL
16	AP	65	GLN
16	AP	67	THR
16	AP	69	THR
16	AP	82	GLN
17	AQ	11	VAL
17	AQ	14	LYS
17	AQ	26	GLN
17	AQ	38	ARG
17	AQ	43	LEU

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Mol	Chain	Res	Type
17	AQ	52	LYS
17	AQ	57	VAL
17	AQ	60	ILE
17	AQ	63	ARG
17	AQ	68	ARG
17	AQ	74	LEU
17	AQ	89	LEU
18	AR	31	LEU
18	AR	32	ARG
18	AR	65	ILE
18	AR	76	LEU
18	AR	78	LEU
18	AR	79	LEU
19	AS	5	LEU
19	AS	6	LYS
19	AS	7	LYS
19	AS	22	LEU
19	AS	44	MET
19	AS	49	ILE
19	AS	79	THR
20	AT	8	ARG
20	AT	26	ASN
20	AT	41	ILE
20	AT	56	MET
20	AT	62	LEU
20	AT	71	THR
20	AT	74	LYS
20	AT	93	GLU
22	B0	31	VAL
22	B0	36	ILE
22	B0	41	ARG
22	B0	55	ARG
22	B0	72	ARG
22	B0	77	ARG
22	B0	79	VAL
22	B0	84	LEU
23	B1	11	ARG
23	B1	13	ILE
23	B1	14	VAL
23	B1	16	ASN
23	B1	21	ARG
23	B1	26	ARG

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Mol	Chain	Res	Type
23	B1	34	THR
23	B1	35	THR
23	B1	37	ILE
23	B1	46	LEU
23	B1	47	GLN
23	B1	48	LYS
23	B1	49	VAL
23	B1	53	VAL
23	B1	65	SER
23	B1	67	ILE
23	B1	69	LYS
23	B1	74	VAL
23	B1	85	LEU
23	B1	89	GLU
24	B2	12	GLU
24	B2	14	ARG
24	B2	17	SER
24	B2	26	ARG
24	B2	30	ARG
24	B2	31	GLU
24	B2	32	LEU
24	B2	33	MET
24	B2	35	LEU
24	B2	36	ARG
24	B2	44	LEU
24	B2	46	GLN
24	B2	47	ASN
25	B3	8	LEU
25	B3	18	ASP
25	B3	40	THR
25	B3	54	VAL
25	B3	56	VAL
25	B3	58	VAL
27	B5	4	HIS
27	B5	11	THR
27	B5	15	ARG
27	B5	26	THR
27	B5	29	THR
27	B5	44	THR
27	B5	49	CYS
27	B5	55	ARG
27	B5	56	LYS

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Mol	Chain	Res	Type
27	B5	57	VAL
27	B5	58	LEU
28	B6	9	LEU
28	B6	10	LEU
28	B6	12	GLU
28	B6	14	THR
28	B6	18	ARG
28	B6	19	ARG
28	B6	27	LYS
28	B6	30	THR
28	B6	33	LYS
28	B6	34	LEU
28	B6	35	GLU
28	B6	37	ARG
28	B6	41	PRO
28	B6	42	TRP
28	B6	46	HIS
28	B6	48	VAL
29	B7	1	MET
29	B7	4	THR
29	B7	8	ASN
29	B7	9	ARG
29	B7	32	LYS
29	B7	34	ARG
29	B7	43	THR
29	B7	48	LYS
30	B8	6	THR
30	B8	16	ILE
30	B8	21	LYS
30	B8	32	LEU
30	B8	36	LYS
30	B8	37	SER
30	B8	39	LYS
30	B8	41	ILE
30	B8	44	LYS
30	B8	47	LYS
30	B8	49	VAL
30	B8	58	ILE
30	B8	62	LEU
33	BD	5	LYS
33	BD	10	THR
33	BD	13	ARG

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Mol	Chain	Res	Type
33	BD	14	ARG
33	BD	20	ASP
33	BD	24	ILE
33	BD	26	LYS
33	BD	27	THR
33	BD	37	LEU
33	BD	43	ARG
33	BD	46	GLN
33	BD	48	ARG
33	BD	49	ILE
33	BD	61	LEU
33	BD	65	ILE
33	BD	71	ASP
33	BD	72	LYS
33	BD	73	VAL
33	BD	82	ILE
33	BD	88	ARG
33	BD	89	SER
33	BD	94	LEU
33	BD	101	GLU
33	BD	103	ARG
33	BD	106	ILE
33	BD	111	LEU
33	BD	117	VAL
33	BD	147	LEU
33	BD	155	LEU
33	BD	157	ARG
33	BD	161	THR
33	BD	166	GLN
33	BD	176	ARG
33	BD	182	LEU
33	BD	192	THR
33	BD	198	ASN
33	BD	211	ARG
33	BD	212	SER
33	BD	217	ARG
33	BD	221	VAL
33	BD	229	VAL
33	BD	242	ARG
33	BD	255	LYS
33	BD	257	LEU
33	BD	259	THR

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Mol	Chain	Res	Type
33	BD	260	ARG
33	BD	271	ILE
34	BE	1	MET
34	BE	2	LYS
34	BE	9	VAL
34	BE	12	THR
34	BE	21	VAL
34	BE	24	THR
34	BE	33	VAL
34	BE	34	VAL
34	BE	36	ARG
34	BE	37	ARG
34	BE	47	VAL
34	BE	52	LEU
34	BE	60	ASN
34	BE	63	LEU
34	BE	66	HIS
34	BE	67	PHE
34	BE	69	LYS
34	BE	75	VAL
34	BE	76	ARG
34	BE	77	ILE
34	BE	82	ARG
34	BE	91	VAL
34	BE	93	VAL
34	BE	111	ARG
34	BE	116	VAL
34	BE	119	ARG
34	BE	133	LYS
34	BE	134	ILE
34	BE	140	SER
34	BE	144	ARG
34	BE	154	LYS
34	BE	160	TYR
34	BE	163	GLU
34	BE	167	VAL
34	BE	168	MET
34	BE	169	ASN
34	BE	175	VAL
34	BE	181	LEU
34	BE	185	LYS
34	BE	195	LEU

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Mol	Chain	Res	Type
34	BE	197	ILE
34	BE	202	LYS
34	BE	203	LYS
35	BF	7	TYR
35	BF	15	SER
35	BF	20	LEU
35	BF	23	ASP
35	BF	33	LEU
35	BF	38	ARG
35	BF	46	ARG
35	BF	50	SER
35	BF	52	LYS
35	BF	53	THR
35	BF	56	GLU
35	BF	66	PRO
35	BF	67	GLN
35	BF	74	ARG
35	BF	78	ILE
35	BF	83	PHE
35	BF	88	VAL
35	BF	102	PRO
35	BF	106	ARG
35	BF	112	MET
35	BF	140	LEU
35	BF	160	ASN
35	BF	162	LEU
35	BF	164	ARG
35	BF	165	ARG
35	BF	168	ARG
35	BF	192	LEU
35	BF	194	MET
35	BF	204	ASN
35	BF	205	ARG
35	BF	206	ILE
36	BG	7	LEU
36	BG	22	ARG
36	BG	28	VAL
36	BG	34	LEU
36	BG	35	GLU
36	BG	39	ILE
36	BG	45	GLU
36	BG	49	ASP

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Mol	Chain	Res	Type
36	BG	63	ILE
36	BG	67	LYS
36	BG	80	PHE
36	BG	94	LEU
36	BG	97	ASP
36	BG	123	ASN
36	BG	130	ASN
36	BG	143	GLU
36	BG	148	MET
36	BG	155	MET
36	BG	156	ASP
36	BG	161	THR
36	BG	166	ASP
37	BH	13	LYS
37	BH	23	ARG
37	BH	27	LYS
37	BH	34	GLU
37	BH	41	MET
37	BH	46	GLU
37	BH	53	GLU
37	BH	65	HIS
37	BH	71	LEU
37	BH	83	TYR
37	BH	85	LYS
37	BH	89	ILE
37	BH	92	ILE
37	BH	103	LEU
37	BH	105	LEU
37	BH	122	THR
37	BH	134	SER
37	BH	136	ILE
37	BH	137	ASP
37	BH	141	VAL
37	BH	143	GLN
37	BH	149	ARG
37	BH	152	ARG
37	BH	153	LYS
37	BH	157	TYR
37	BH	162	ILE
37	BH	170	ARG
38	BI	1	MET
38	BI	9	LEU

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Mol	Chain	Res	Type
38	BI	15	VAL
38	BI	20	ASP
38	BI	22	LYS
38	BI	35	LEU
38	BI	42	SER
38	BI	51	ILE
38	BI	56	LYS
38	BI	58	LEU
38	BI	88	ILE
38	BI	92	VAL
38	BI	101	LEU
38	BI	122	GLU
38	BI	134	PRO
38	BI	138	ILE
38	BI	142	VAL
38	BI	144	VAL
39	BN	2	LYS
39	BN	5	VAL
39	BN	8	GLN
39	BN	9	VAL
39	BN	14	VAL
39	BN	16	ILE
39	BN	19	GLU
39	BN	28	THR
39	BN	33	LEU
39	BN	34	LEU
39	BN	35	ARG
39	BN	37	LYS
39	BN	39	ARG
39	BN	43	THR
39	BN	45	ASN
39	BN	48	MET
39	BN	55	VAL
39	BN	58	ASP
39	BN	60	ILE
39	BN	63	THR
39	BN	65	LYS
39	BN	69	GLN
39	BN	70	LYS
39	BN	75	TYR
39	BN	78	TYR
39	BN	79	PRO

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Mol	Chain	Res	Type
39	BN	82	LEU
39	BN	85	ILE
39	BN	87	LEU
39	BN	94	HIS
39	BN	99	LEU
39	BN	112	LEU
39	BN	115	ARG
39	BN	119	ARG
39	BN	120	LEU
39	BN	130	HIS
39	BN	134	ARG
39	BN	138	LEU
40	BO	3	GLN
40	BO	8	LEU
40	BO	21	CYS
40	BO	22	ILE
40	BO	24	VAL
40	BO	28	SER
40	BO	29	ASN
40	BO	35	VAL
40	BO	42	SER
40	BO	47	ILE
40	BO	58	VAL
40	BO	65	THR
40	BO	87	ILE
40	BO	88	ASN
40	BO	89	ASN
40	BO	91	LEU
40	BO	96	THR
40	BO	98	VAL
40	BO	108	GLU
41	BP	13	ASN
41	BP	16	ARG
41	BP	18	ARG
41	BP	19	VAL
41	BP	21	ARG
41	BP	32	THR
41	BP	33	ARG
41	BP	39	LYS
41	BP	40	SER
41	BP	45	LEU
41	BP	47	ASP

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Mol	Chain	Res	Type
41	BP	57	THR
41	BP	59	LEU
41	BP	60	MET
41	BP	61	ARG
41	BP	62	LEU
41	BP	64	LYS
41	BP	67	MET
41	BP	75	ILE
41	BP	77	ARG
41	BP	79	ARG
41	BP	81	GLN
41	BP	83	VAL
41	BP	84	ASN
41	BP	85	LEU
41	BP	98	GLU
41	BP	100	LEU
41	BP	101	VAL
41	BP	102	ARG
41	BP	105	LEU
41	BP	107	LYS
41	BP	108	LYS
41	BP	110	TYR
41	BP	111	ARG
41	BP	112	LEU
41	BP	114	ILE
41	BP	115	LEU
41	BP	135	LEU
41	BP	144	GLU
41	BP	148	LEU
42	BQ	7	MET
42	BQ	9	TYR
42	BQ	14	ARG
42	BQ	22	LYS
42	BQ	27	VAL
42	BQ	38	GLU
42	BQ	45	GLN
42	BQ	52	VAL
42	BQ	54	MET
42	BQ	55	VAL
42	BQ	63	LYS
42	BQ	82	ARG
42	BQ	87	LYS

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Mol	Chain	Res	Type
42	BQ	89	ASN
42	BQ	91	GLU
42	BQ	103	MET
42	BQ	110	THR
42	BQ	115	MET
42	BQ	132	VAL
42	BQ	141	GLN
43	BR	2	ARG
43	BR	5	LYS
43	BR	18	LEU
43	BR	28	LEU
43	BR	36	THR
43	BR	44	LEU
43	BR	56	LYS
43	BR	60	LEU
43	BR	63	ARG
43	BR	65	LEU
43	BR	66	VAL
43	BR	67	LEU
43	BR	71	GLN
43	BR	79	LEU
43	BR	95	THR
43	BR	99	LYS
43	BR	103	ARG
43	BR	104	ARG
43	BR	118	GLU
44	BS	11	LYS
44	BS	13	ARG
44	BS	14	VAL
44	BS	17	ARG
44	BS	18	ILE
44	BS	20	ARG
44	BS	30	ARG
44	BS	35	ILE
44	BS	36	TYR
44	BS	38	GLN
44	BS	44	LYS
44	BS	50	SER
44	BS	54	LEU
44	BS	71	ARG
44	BS	73	LEU
44	BS	80	LEU

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Mol	Chain	Res	Type
44	BS	83	LYS
44	BS	85	VAL
44	BS	89	ARG
44	BS	92	TYR
44	BS	93	LYS
44	BS	97	ARG
44	BS	101	LEU
44	BS	106	ARG
45	BT	3	ARG
45	BT	11	GLU
45	BT	15	VAL
45	BT	16	ARG
45	BT	17	THR
45	BT	24	PRO
45	BT	29	ARG
45	BT	32	TYR
45	BT	33	LYS
45	BT	38	ASN
45	BT	40	THR
45	BT	41	ARG
45	BT	49	VAL
45	BT	51	ARG
45	BT	53	ARG
45	BT	58	ASN
45	BT	59	THR
45	BT	62	THR
45	BT	63	VAL
45	BT	64	ARG
45	BT	65	LYS
45	BT	74	ARG
45	BT	77	PRO
45	BT	87	ASP
45	BT	88	ILE
45	BT	90	GLN
45	BT	96	ARG
45	BT	99	LEU
45	BT	103	ARG
45	BT	108	ARG
45	BT	111	ARG
45	BT	112	ARG
45	BT	115	ARG
45	BT	121	ILE

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
45	BT	128	GLU
46	BU	20	LEU
46	BU	27	LEU
46	BU	33	ARG
46	BU	55	ARG
46	BU	64	ARG
46	BU	66	ASN
46	BU	74	LEU
46	BU	78	THR
46	BU	83	LEU
46	BU	88	ILE
46	BU	89	GLU
46	BU	93	LYS
46	BU	102	GLU
47	BV	1	MET
47	BV	2	PHE
47	BV	12	TYR
47	BV	13	ARG
47	BV	14	VAL
47	BV	18	LEU
47	BV	19	LYS
47	BV	20	LEU
47	BV	21	ARG
47	BV	23	GLU
47	BV	28	GLU
47	BV	32	THR
47	BV	35	LEU
47	BV	37	VAL
47	BV	40	LEU
47	BV	56	SER
47	BV	62	LEU
47	BV	66	ARG
47	BV	71	LEU
47	BV	78	LYS
47	BV	80	GLN
47	BV	82	ARG
47	BV	83	ARG
47	BV	88	ARG
47	BV	89	GLN
47	BV	92	THR
47	BV	93	GLU
47	BV	98	GLU

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Mol	Chain	Res	Type
47	BV	100	ARG
48	BW	1	MET
48	BW	6	ILE
48	BW	11	ARG
48	BW	16	LYS
48	BW	19	LEU
48	BW	20	VAL
48	BW	23	LEU
48	BW	33	ARG
48	BW	51	LEU
48	BW	52	GLU
48	BW	59	VAL
48	BW	60	ASN
48	BW	64	MET
48	BW	65	LEU
48	BW	70	TYR
48	BW	71	VAL
48	BW	72	LYS
48	BW	86	LEU
48	BW	103	ILE
48	BW	106	ILE
48	BW	107	LEU
49	BX	15	GLU
49	BX	21	PHE
49	BX	25	LYS
49	BX	27	THR
49	BX	30	VAL
49	BX	33	LYS
49	BX	35	THR
49	BX	36	LYS
49	BX	38	GLU
49	BX	39	ILE
49	BX	43	VAL
49	BX	45	THR
49	BX	49	VAL
49	BX	57	LEU
49	BX	60	ARG
49	BX	65	ARG
49	BX	66	LEU
49	BX	76	ARG
49	BX	78	LYS
49	BX	81	VAL

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Mol	Chain	Res	Type
50	BY	2	ARG
50	BY	6	HIS
50	BY	7	VAL
50	BY	8	LYS
50	BY	9	LYS
50	BY	23	ARG
50	BY	28	LYS
50	BY	29	GLU
50	BY	38	ILE
50	BY	44	ILE
50	BY	47	LYS
50	BY	49	VAL
50	BY	55	TYR
50	BY	60	PHE
50	BY	70	SER
50	BY	71	LYS
50	BY	76	CYS
50	BY	81	LYS
50	BY	85	VAL
50	BY	86	ARG
50	BY	89	PHE
50	BY	90	LEU
50	BY	97	ARG
50	BY	99	CYS
51	BZ	5	LEU
51	BZ	6	LYS
51	BZ	8	TYR
51	BZ	19	ARG
51	BZ	27	VAL
51	BZ	31	ARG
51	BZ	37	VAL
51	BZ	41	LEU
51	BZ	53	ILE
51	BZ	73	GLN
51	BZ	79	ARG
51	BZ	81	ARG
51	BZ	86	VAL
51	BZ	87	ASP
51	BZ	93	ASP
51	BZ	97	GLU
51	BZ	117	LEU
51	BZ	121	HIS

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Mol	Chain	Res	Type
51	BZ	124	ILE
51	BZ	125	LEU
51	BZ	140	ASP
51	BZ	148	ASP
51	BZ	150	LEU
51	BZ	151	HIS
51	BZ	166	SER
2	CB	9	GLU
2	CB	10	LEU
2	CB	12	GLU
2	CB	15	VAL
2	CB	17	PHE
2	CB	22	LYS
2	CB	24	TRP
2	CB	25	ASN
2	CB	36	ARG
2	CB	42	ILE
2	CB	69	LEU
2	CB	80	ILE
2	CB	90	MET
2	CB	107	THR
2	CB	111	ARG
2	CB	121	LEU
2	CB	127	ILE
2	CB	130	ARG
2	CB	137	ARG
2	CB	145	LEU
2	CB	146	GLN
2	CB	154	LEU
2	CB	165	VAL
2	CB	178	ARG
2	CB	185	ILE
2	CB	187	LEU
2	CB	189	ASP
2	CB	193	ASP
2	CB	195	ASP
2	CB	196	LEU
2	CB	198	ASP
2	CB	204	ASN
2	CB	205	ASP
2	CB	221	LEU
3	CC	5	ILE

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Mol	Chain	Res	Type
3	CC	12	LEU
3	CC	27	LYS
3	CC	62	ASP
3	CC	104	GLN
3	CC	127	ARG
3	CC	131	ARG
4	CD	3	ARG
4	CD	8	VAL
4	CD	11	LEU
4	CD	12	CYS
4	CD	15	GLU
4	CD	19	LEU
4	CD	25	ARG
4	CD	33	MET
4	CD	45	GLN
4	CD	58	LEU
4	CD	59	ARG
4	CD	64	LEU
4	CD	76	ARG
4	CD	92	VAL
4	CD	118	ARG
4	CD	119	GLN
4	CD	121	VAL
4	CD	122	ARG
4	CD	131	ARG
4	CD	132	ARG
4	CD	135	LEU
4	CD	138	TYR
4	CD	158	ILE
4	CD	196	LEU
5	CE	12	LEU
5	CE	13	ILE
5	CE	18	ARG
5	CE	20	GLN
5	CE	25	ARG
5	CE	27	ARG
5	CE	41	VAL
5	CE	50	GLU
5	CE	55	VAL
5	CE	76	ILE
5	CE	79	GLU
5	CE	87	SER

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Mol	Chain	Res	Type
5	CE	90	VAL
5	CE	91	LEU
5	CE	101	ILE
5	CE	112	LEU
5	CE	115	VAL
5	CE	116	THR
5	CE	120	THR
5	CE	143	ARG
6	CF	18	GLN
6	CF	21	LEU
6	CF	25	ILE
6	CF	45	LEU
6	CF	46	ARG
6	CF	55	ASP
6	CF	63	TYR
6	CF	70	ASP
6	CF	83	ASP
6	CF	93	SER
6	CF	94	GLN
6	CF	98	LEU
7	CG	12	LEU
7	CG	36	LYS
7	CG	79	ARG
7	CG	156	TRP
8	CH	1	MET
8	CH	10	LEU
8	CH	25	ASP
8	CH	29	SER
8	CH	41	ARG
8	CH	45	ILE
8	CH	52	ASP
8	CH	91	ARG
8	CH	93	VAL
8	CH	95	VAL
8	CH	102	ARG
8	CH	114	THR
8	CH	127	LEU
9	CI	10	ARG
9	CI	95	LYS
9	CI	99	LEU
9	CI	113	LYS
9	CI	114	TYR

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Mol	Chain	Res	Type
9	CI	121	ARG
9	CI	125	TYR
9	CI	128	ARG
10	CJ	22	LYS
10	CJ	40	LEU
10	CJ	45	ARG
10	CJ	47	PHE
10	CJ	57	LYS
10	CJ	62	HIS
10	CJ	63	PHE
10	CJ	74	ILE
10	CJ	80	LYS
10	CJ	96	ILE
11	CK	24	SER
11	CK	29	ILE
11	CK	47	VAL
11	CK	92	GLU
11	CK	95	ILE
11	CK	114	VAL
11	CK	127	LYS
12	CL	20	LYS
12	CL	41	ARG
12	CL	42	THR
12	CL	55	VAL
12	CL	62	SER
12	CL	81	SER
12	CL	84	LEU
12	CL	89	ARG
12	CL	92	ASP
12	CL	99	HIS
12	CL	102	ARG
12	CL	113	ARG
12	CL	119	LYS
13	CM	47	ASP
13	CM	64	TRP
13	CM	66	LEU
13	CM	70	LEU
13	CM	86	CYS
13	CM	93	ARG
14	CN	18	VAL
14	CN	33	VAL
14	CN	42	ILE

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Mol	Chain	Res	Type
14	CN	44	LEU
15	CO	3	ILE
15	CO	17	ARG
15	CO	24	SER
15	CO	26	GLU
15	CO	31	LEU
15	CO	41	GLU
15	CO	42	HIS
15	CO	47	LYS
15	CO	57	LEU
15	CO	65	ARG
15	CO	82	ILE
16	CP	1	MET
16	CP	2	VAL
16	CP	6	LEU
16	CP	27	LYS
16	CP	28	ARG
16	CP	39	TYR
16	CP	48	TRP
16	CP	55	ARG
16	CP	62	VAL
16	CP	65	GLN
16	CP	67	THR
16	CP	69	THR
16	CP	82	GLN
17	CQ	11	VAL
17	CQ	14	LYS
17	CQ	26	GLN
17	CQ	38	ARG
17	CQ	43	LEU
17	CQ	52	LYS
17	CQ	57	VAL
17	CQ	60	ILE
17	CQ	63	ARG
17	CQ	68	ARG
17	CQ	74	LEU
17	CQ	89	LEU
18	CR	31	LEU
18	CR	32	ARG
18	CR	65	ILE
18	CR	76	LEU
18	CR	78	LEU

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Mol	Chain	Res	Type
18	CR	79	LEU
19	CS	5	LEU
19	CS	6	LYS
19	CS	7	LYS
19	CS	22	LEU
19	CS	44	MET
19	CS	49	ILE
19	CS	79	THR
20	CT	8	ARG
20	CT	14	LYS
20	CT	26	ASN
20	CT	41	ILE
20	CT	56	MET
20	CT	71	THR
20	CT	74	LYS
20	CT	93	GLU
22	D0	31	VAL
22	D0	36	ILE
22	D0	41	ARG
22	D0	55	ARG
22	D0	72	ARG
22	D0	77	ARG
22	D0	79	VAL
22	D0	84	LEU
23	D1	11	ARG
23	D1	13	ILE
23	D1	14	VAL
23	D1	16	ASN
23	D1	21	ARG
23	D1	25	LYS
23	D1	26	ARG
23	D1	34	THR
23	D1	37	ILE
23	D1	46	LEU
23	D1	48	LYS
23	D1	49	VAL
23	D1	53	VAL
23	D1	67	ILE
23	D1	69	LYS
23	D1	74	VAL
23	D1	85	LEU
23	D1	89	GLU

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Mol	Chain	Res	Type
24	D2	12	GLU
24	D2	14	ARG
24	D2	17	SER
24	D2	26	ARG
24	D2	30	ARG
24	D2	31	GLU
24	D2	32	LEU
24	D2	33	MET
24	D2	35	LEU
24	D2	36	ARG
24	D2	44	LEU
24	D2	46	GLN
24	D2	47	ASN
25	D3	8	LEU
25	D3	18	ASP
25	D3	31	LEU
25	D3	35	ARG
25	D3	40	THR
25	D3	54	VAL
25	D3	56	VAL
27	D5	3	LYS
27	D5	4	HIS
27	D5	11	THR
27	D5	15	ARG
27	D5	25	LEU
27	D5	26	THR
27	D5	29	THR
27	D5	44	THR
27	D5	49	CYS
27	D5	55	ARG
27	D5	56	LYS
27	D5	57	VAL
27	D5	58	LEU
28	D6	9	LEU
28	D6	10	LEU
28	D6	12	GLU
28	D6	14	THR
28	D6	18	ARG
28	D6	19	ARG
28	D6	27	LYS
28	D6	30	THR
28	D6	34	LEU

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Mol	Chain	Res	Type
28	D6	35	GLU
28	D6	37	ARG
28	D6	41	PRO
28	D6	42	TRP
28	D6	46	HIS
28	D6	48	VAL
29	D7	1	MET
29	D7	4	THR
29	D7	8	ASN
29	D7	9	ARG
29	D7	10	ARG
29	D7	32	LYS
29	D7	34	ARG
29	D7	43	THR
29	D7	48	LYS
30	D8	6	THR
30	D8	16	ILE
30	D8	21	LYS
30	D8	32	LEU
30	D8	36	LYS
30	D8	37	SER
30	D8	39	LYS
30	D8	41	ILE
30	D8	44	LYS
30	D8	47	LYS
30	D8	49	VAL
30	D8	58	ILE
33	DD	5	LYS
33	DD	10	THR
33	DD	14	ARG
33	DD	20	ASP
33	DD	24	ILE
33	DD	26	LYS
33	DD	27	THR
33	DD	37	LEU
33	DD	43	ARG
33	DD	46	GLN
33	DD	48	ARG
33	DD	49	ILE
33	DD	61	LEU
33	DD	64	ILE
33	DD	65	ILE

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Mol	Chain	Res	Type
33	DD	71	ASP
33	DD	72	LYS
33	DD	73	VAL
33	DD	82	ILE
33	DD	88	ARG
33	DD	89	SER
33	DD	94	LEU
33	DD	101	GLU
33	DD	103	ARG
33	DD	106	ILE
33	DD	111	LEU
33	DD	116	GLN
33	DD	117	VAL
33	DD	147	LEU
33	DD	155	LEU
33	DD	157	ARG
33	DD	161	THR
33	DD	166	GLN
33	DD	176	ARG
33	DD	182	LEU
33	DD	192	THR
33	DD	198	ASN
33	DD	211	ARG
33	DD	212	SER
33	DD	217	ARG
33	DD	221	VAL
33	DD	229	VAL
33	DD	242	ARG
33	DD	255	LYS
33	DD	257	LEU
33	DD	259	THR
33	DD	260	ARG
33	DD	271	ILE
34	DE	1	MET
34	DE	2	LYS
34	DE	9	VAL
34	DE	12	THR
34	DE	21	VAL
34	DE	24	THR
34	DE	33	VAL
34	DE	36	ARG
34	DE	37	ARG

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Mol	Chain	Res	Type
34	DE	47	VAL
34	DE	52	LEU
34	DE	60	ASN
34	DE	63	LEU
34	DE	64	LYS
34	DE	66	HIS
34	DE	67	PHE
34	DE	69	LYS
34	DE	75	VAL
34	DE	76	ARG
34	DE	77	ILE
34	DE	82	ARG
34	DE	89	ASP
34	DE	93	VAL
34	DE	111	ARG
34	DE	116	VAL
34	DE	117	MET
34	DE	118	LYS
34	DE	119	ARG
34	DE	133	LYS
34	DE	134	ILE
34	DE	140	SER
34	DE	144	ARG
34	DE	154	LYS
34	DE	163	GLU
34	DE	167	VAL
34	DE	169	ASN
34	DE	175	VAL
34	DE	181	LEU
34	DE	185	LYS
34	DE	195	LEU
34	DE	197	ILE
34	DE	202	LYS
34	DE	203	LYS
35	DF	7	TYR
35	DF	20	LEU
35	DF	23	ASP
35	DF	33	LEU
35	DF	38	ARG
35	DF	46	ARG
35	DF	50	SER
35	DF	52	LYS

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Mol	Chain	Res	Type
35	DF	53	THR
35	DF	56	GLU
35	DF	67	GLN
35	DF	74	ARG
35	DF	78	ILE
35	DF	83	PHE
35	DF	88	VAL
35	DF	106	ARG
35	DF	112	MET
35	DF	140	LEU
35	DF	160	ASN
35	DF	162	LEU
35	DF	164	ARG
35	DF	165	ARG
35	DF	168	ARG
35	DF	192	LEU
35	DF	194	MET
35	DF	204	ASN
35	DF	205	ARG
35	DF	206	ILE
36	DG	7	LEU
36	DG	22	ARG
36	DG	28	VAL
36	DG	34	LEU
36	DG	35	GLU
36	DG	39	ILE
36	DG	45	GLU
36	DG	49	ASP
36	DG	63	ILE
36	DG	67	LYS
36	DG	80	PHE
36	DG	94	LEU
36	DG	97	ASP
36	DG	123	ASN
36	DG	130	ASN
36	DG	143	GLU
36	DG	148	MET
36	DG	155	MET
36	DG	156	ASP
36	DG	161	THR
36	DG	166	ASP
37	DH	13	LYS

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Mol	Chain	Res	Type
37	DH	23	ARG
37	DH	34	GLU
37	DH	41	MET
37	DH	46	GLU
37	DH	53	GLU
37	DH	65	HIS
37	DH	71	LEU
37	DH	83	TYR
37	DH	84	SER
37	DH	85	LYS
37	DH	89	ILE
37	DH	92	ILE
37	DH	103	LEU
37	DH	105	LEU
37	DH	122	THR
37	DH	134	SER
37	DH	136	ILE
37	DH	137	ASP
37	DH	141	VAL
37	DH	143	GLN
37	DH	149	ARG
37	DH	152	ARG
37	DH	153	LYS
37	DH	157	TYR
37	DH	159	GLU
37	DH	170	ARG
38	DI	1	MET
38	DI	7	GLU
38	DI	9	LEU
38	DI	15	VAL
38	DI	20	ASP
38	DI	22	LYS
38	DI	35	LEU
38	DI	42	SER
38	DI	51	ILE
38	DI	56	LYS
38	DI	58	LEU
38	DI	88	ILE
38	DI	92	VAL
38	DI	101	LEU
38	DI	122	GLU
38	DI	138	ILE

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Mol	Chain	Res	Type
38	DI	142	VAL
38	DI	144	VAL
39	DN	2	LYS
39	DN	5	VAL
39	DN	8	GLN
39	DN	9	VAL
39	DN	14	VAL
39	DN	16	ILE
39	DN	19	GLU
39	DN	28	THR
39	DN	33	LEU
39	DN	34	LEU
39	DN	35	ARG
39	DN	37	LYS
39	DN	39	ARG
39	DN	43	THR
39	DN	45	ASN
39	DN	48	MET
39	DN	55	VAL
39	DN	58	ASP
39	DN	60	ILE
39	DN	63	THR
39	DN	65	LYS
39	DN	66	LYS
39	DN	69	GLN
39	DN	70	LYS
39	DN	75	TYR
39	DN	78	TYR
39	DN	79	PRO
39	DN	82	LEU
39	DN	85	ILE
39	DN	87	LEU
39	DN	94	HIS
39	DN	99	LEU
39	DN	112	LEU
39	DN	119	ARG
39	DN	120	LEU
39	DN	130	HIS
39	DN	134	ARG
39	DN	138	LEU
40	DO	3	GLN
40	DO	8	LEU

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Mol	Chain	Res	Type
40	DO	21	CYS
40	DO	22	ILE
40	DO	24	VAL
40	DO	28	SER
40	DO	29	ASN
40	DO	35	VAL
40	DO	42	SER
40	DO	47	ILE
40	DO	58	VAL
40	DO	65	THR
40	DO	87	ILE
40	DO	88	ASN
40	DO	89	ASN
40	DO	91	LEU
40	DO	96	THR
40	DO	98	VAL
40	DO	108	GLU
41	DP	13	ASN
41	DP	16	ARG
41	DP	18	ARG
41	DP	19	VAL
41	DP	21	ARG
41	DP	32	THR
41	DP	33	ARG
41	DP	39	LYS
41	DP	40	SER
41	DP	45	LEU
41	DP	47	ASP
41	DP	57	THR
41	DP	59	LEU
41	DP	60	MET
41	DP	61	ARG
41	DP	62	LEU
41	DP	64	LYS
41	DP	67	MET
41	DP	75	ILE
41	DP	77	ARG
41	DP	79	ARG
41	DP	81	GLN
41	DP	83	VAL
41	DP	84	ASN
41	DP	85	LEU

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Mol	Chain	Res	Type
41	DP	98	GLU
41	DP	100	LEU
41	DP	101	VAL
41	DP	102	ARG
41	DP	105	LEU
41	DP	107	LYS
41	DP	108	LYS
41	DP	110	TYR
41	DP	111	ARG
41	DP	112	LEU
41	DP	114	ILE
41	DP	115	LEU
41	DP	135	LEU
41	DP	144	GLU
41	DP	148	LEU
42	DQ	7	MET
42	DQ	9	TYR
42	DQ	14	ARG
42	DQ	22	LYS
42	DQ	27	VAL
42	DQ	38	GLU
42	DQ	45	GLN
42	DQ	52	VAL
42	DQ	54	MET
42	DQ	55	VAL
42	DQ	63	LYS
42	DQ	82	ARG
42	DQ	87	LYS
42	DQ	89	ASN
42	DQ	91	GLU
42	DQ	103	MET
42	DQ	106	VAL
42	DQ	110	THR
42	DQ	115	MET
42	DQ	132	VAL
42	DQ	141	GLN
43	DR	2	ARG
43	DR	5	LYS
43	DR	18	LEU
43	DR	28	LEU
43	DR	36	THR
43	DR	44	LEU

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Mol	Chain	Res	Type
43	DR	56	LYS
43	DR	60	LEU
43	DR	63	ARG
43	DR	65	LEU
43	DR	66	VAL
43	DR	67	LEU
43	DR	70	LEU
43	DR	71	GLN
43	DR	79	LEU
43	DR	95	THR
43	DR	99	LYS
43	DR	103	ARG
43	DR	104	ARG
43	DR	118	GLU
44	DS	11	LYS
44	DS	13	ARG
44	DS	17	ARG
44	DS	18	ILE
44	DS	20	ARG
44	DS	30	ARG
44	DS	35	ILE
44	DS	36	TYR
44	DS	38	GLN
44	DS	44	LYS
44	DS	50	SER
44	DS	54	LEU
44	DS	71	ARG
44	DS	73	LEU
44	DS	80	LEU
44	DS	83	LYS
44	DS	85	VAL
44	DS	89	ARG
44	DS	92	TYR
44	DS	93	LYS
44	DS	97	ARG
44	DS	101	LEU
44	DS	106	ARG
45	DT	3	ARG
45	DT	11	GLU
45	DT	15	VAL
45	DT	16	ARG
45	DT	17	THR

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Mol	Chain	Res	Type
45	DT	24	PRO
45	DT	29	ARG
45	DT	32	TYR
45	DT	33	LYS
45	DT	38	ASN
45	DT	41	ARG
45	DT	49	VAL
45	DT	51	ARG
45	DT	53	ARG
45	DT	58	ASN
45	DT	59	THR
45	DT	62	THR
45	DT	63	VAL
45	DT	64	ARG
45	DT	65	LYS
45	DT	74	ARG
45	DT	77	PRO
45	DT	82	LEU
45	DT	87	ASP
45	DT	88	ILE
45	DT	90	GLN
45	DT	96	ARG
45	DT	99	LEU
45	DT	103	ARG
45	DT	108	ARG
45	DT	111	ARG
45	DT	112	ARG
45	DT	115	ARG
45	DT	121	ILE
45	DT	128	GLU
46	DU	20	LEU
46	DU	27	LEU
46	DU	33	ARG
46	DU	55	ARG
46	DU	64	ARG
46	DU	66	ASN
46	DU	74	LEU
46	DU	78	THR
46	DU	83	LEU
46	DU	88	ILE
46	DU	89	GLU
46	DU	93	LYS

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Mol	Chain	Res	Type
46	DU	102	GLU
47	DV	1	MET
47	DV	2	PHE
47	DV	12	TYR
47	DV	13	ARG
47	DV	14	VAL
47	DV	18	LEU
47	DV	19	LYS
47	DV	20	LEU
47	DV	21	ARG
47	DV	23	GLU
47	DV	28	GLU
47	DV	32	THR
47	DV	35	LEU
47	DV	37	VAL
47	DV	40	LEU
47	DV	56	SER
47	DV	62	LEU
47	DV	66	ARG
47	DV	71	LEU
47	DV	78	LYS
47	DV	80	GLN
47	DV	82	ARG
47	DV	83	ARG
47	DV	88	ARG
47	DV	89	GLN
47	DV	92	THR
47	DV	93	GLU
47	DV	98	GLU
47	DV	100	ARG
48	DW	1	MET
48	DW	6	ILE
48	DW	11	ARG
48	DW	16	LYS
48	DW	19	LEU
48	DW	20	VAL
48	DW	23	LEU
48	DW	33	ARG
48	DW	51	LEU
48	DW	52	GLU
48	DW	60	ASN
48	DW	64	MET

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Mol	Chain	Res	Type
48	DW	65	LEU
48	DW	70	TYR
48	DW	71	VAL
48	DW	72	LYS
48	DW	86	LEU
48	DW	103	ILE
48	DW	106	ILE
48	DW	107	LEU
49	DX	15	GLU
49	DX	21	PHE
49	DX	25	LYS
49	DX	27	THR
49	DX	30	VAL
49	DX	33	LYS
49	DX	35	THR
49	DX	36	LYS
49	DX	38	GLU
49	DX	39	ILE
49	DX	43	VAL
49	DX	45	THR
49	DX	49	VAL
49	DX	56	THR
49	DX	57	LEU
49	DX	60	ARG
49	DX	65	ARG
49	DX	66	LEU
49	DX	76	ARG
49	DX	78	LYS
49	DX	81	VAL
50	DY	2	ARG
50	DY	6	HIS
50	DY	7	VAL
50	DY	8	LYS
50	DY	9	LYS
50	DY	23	ARG
50	DY	28	LYS
50	DY	29	GLU
50	DY	38	ILE
50	DY	44	ILE
50	DY	47	LYS
50	DY	55	TYR
50	DY	60	PHE

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Mol	Chain	Res	Type
50	DY	70	SER
50	DY	71	LYS
50	DY	76	CYS
50	DY	81	LYS
50	DY	85	VAL
50	DY	86	ARG
50	DY	89	PHE
50	DY	90	LEU
50	DY	97	ARG
50	DY	99	CYS
51	DZ	5	LEU
51	DZ	6	LYS
51	DZ	19	ARG
51	DZ	27	VAL
51	DZ	31	ARG
51	DZ	37	VAL
51	DZ	41	LEU
51	DZ	53	ILE
51	DZ	71	VAL
51	DZ	73	GLN
51	DZ	79	ARG
51	DZ	81	ARG
51	DZ	86	VAL
51	DZ	87	ASP
51	DZ	93	ASP
51	DZ	97	GLU
51	DZ	117	LEU
51	DZ	121	HIS
51	DZ	124	ILE
51	DZ	125	LEU
51	DZ	140	ASP
51	DZ	148	ASP
51	DZ	150	LEU
51	DZ	151	HIS
51	DZ	166	SER

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (277) such sidechains are listed below:

Mol	Chain	Res	Type
2	AB	40	HIS
2	AB	135	GLN
2	AB	146	GLN

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Mol	Chain	Res	Type
2	AB	204	ASN
3	AC	28	GLN
3	AC	69	HIS
3	AC	104	GLN
3	AC	107	GLN
3	AC	170	GLN
4	AD	62	GLN
4	AD	74	GLN
4	AD	77	ASN
4	AD	123	HIS
4	AD	129	ASN
5	AE	20	GLN
5	AE	78	HIS
6	AF	7	ASN
6	AF	18	GLN
6	AF	27	GLN
6	AF	32	ASN
6	AF	73	ASN
6	AF	94	GLN
6	AF	100	ASN
7	AG	13	GLN
7	AG	37	ASN
7	AG	84	ASN
7	AG	86	GLN
7	AG	106	GLN
9	AI	117	HIS
9	AI	124	GLN
10	AJ	68	HIS
10	AJ	78	ASN
11	AK	38	ASN
11	AK	117	ASN
12	AL	8	ASN
12	AL	9	GLN
12	AL	49	ASN
12	AL	75	HIS
15	AO	46	HIS
16	AP	76	GLN
16	AP	82	GLN
17	AQ	16	GLN
20	AT	16	HIS
20	AT	26	ASN
20	AT	75	ASN

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Mol	Chain	Res	Type
22	B0	29	GLN
23	B1	16	ASN
23	B1	19	GLN
23	B1	66	HIS
24	B2	46	GLN
24	B2	47	ASN
24	B2	56	GLN
25	B3	19	GLN
25	B3	46	ASN
25	B3	52	HIS
27	B5	4	HIS
27	B5	43	HIS
28	B6	32	ASN
28	B6	49	HIS
29	B7	8	ASN
29	B7	36	GLN
30	B8	35	GLN
33	BD	58	HIS
33	BD	126	GLN
33	BD	143	HIS
33	BD	164	GLN
33	BD	166	GLN
33	BD	186	HIS
33	BD	198	ASN
34	BE	48	GLN
34	BE	54	GLN
34	BE	66	HIS
34	BE	85	ASN
34	BE	129	HIS
34	BE	132	HIS
34	BE	169	ASN
34	BE	192	ASN
35	BF	69	HIS
35	BF	75	HIS
35	BF	160	ASN
35	BF	169	ASN
35	BF	203	GLN
36	BG	40	ASN
36	BG	41	GLN
36	BG	123	ASN
37	BH	65	HIS
37	BH	143	GLN

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Mol	Chain	Res	Type
37	BH	147	ASN
37	BH	158	HIS
38	BI	104	GLN
39	BN	45	ASN
39	BN	56	ASN
39	BN	69	GLN
39	BN	128	HIS
39	BN	130	HIS
40	BO	29	ASN
40	BO	82	ASN
41	BP	13	ASN
41	BP	128	HIS
42	BQ	12	GLN
42	BQ	141	GLN
43	BR	13	HIS
43	BR	16	HIS
43	BR	23	ASN
43	BR	24	GLN
43	BR	50	HIS
43	BR	53	HIS
43	BR	71	GLN
43	BR	91	GLN
44	BS	34	HIS
44	BS	61	ASN
44	BS	68	GLN
44	BS	95	HIS
45	BT	38	ASN
45	BT	90	GLN
46	BU	14	HIS
46	BU	49	HIS
46	BU	66	ASN
46	BU	72	HIS
46	BU	75	ASN
46	BU	94	ASN
47	BV	11	GLN
47	BV	87	HIS
47	BV	89	GLN
48	BW	34	ASN
48	BW	40	ASN
48	BW	57	ASN
48	BW	61	ASN
48	BW	62	HIS

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Mol	Chain	Res	Type
48	BW	102	HIS
48	BW	111	HIS
49	BX	31	HIS
49	BX	55	ASN
49	BX	87	GLN
51	BZ	30	ASN
51	BZ	54	HIS
51	BZ	151	HIS
2	CB	40	HIS
2	CB	135	GLN
2	CB	146	GLN
2	CB	204	ASN
3	CC	28	GLN
3	CC	69	HIS
3	CC	104	GLN
3	CC	107	GLN
3	CC	170	GLN
4	CD	45	GLN
4	CD	62	GLN
4	CD	74	GLN
4	CD	77	ASN
4	CD	123	HIS
4	CD	129	ASN
5	CE	20	GLN
5	CE	78	HIS
6	CF	7	ASN
6	CF	18	GLN
6	CF	27	GLN
6	CF	64	GLN
6	CF	73	ASN
6	CF	94	GLN
6	CF	100	ASN
7	CG	13	GLN
7	CG	37	ASN
7	CG	84	ASN
7	CG	106	GLN
9	CI	117	HIS
9	CI	124	GLN
10	CJ	68	HIS
10	CJ	78	ASN
11	CK	38	ASN
11	CK	117	ASN

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Mol	Chain	Res	Type
12	CL	8	ASN
12	CL	9	GLN
12	CL	49	ASN
12	CL	75	HIS
15	CO	46	HIS
16	CP	76	GLN
16	CP	82	GLN
17	CQ	16	GLN
20	CT	16	HIS
20	CT	26	ASN
20	CT	75	ASN
22	D0	29	GLN
23	D1	16	ASN
23	D1	19	GLN
23	D1	66	HIS
24	D2	46	GLN
24	D2	47	ASN
24	D2	56	GLN
25	D3	19	GLN
25	D3	46	ASN
25	D3	52	HIS
27	D5	4	HIS
27	D5	43	HIS
28	D6	32	ASN
28	D6	49	HIS
29	D7	8	ASN
29	D7	36	GLN
30	D8	35	GLN
33	DD	58	HIS
33	DD	126	GLN
33	DD	143	HIS
33	DD	164	GLN
33	DD	166	GLN
33	DD	186	HIS
33	DD	198	ASN
34	DE	48	GLN
34	DE	54	GLN
34	DE	60	ASN
34	DE	66	HIS
34	DE	85	ASN
34	DE	129	HIS
34	DE	132	HIS

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Mol	Chain	Res	Type
34	DE	169	ASN
34	DE	192	ASN
35	DF	67	GLN
35	DF	69	HIS
35	DF	75	HIS
35	DF	160	ASN
35	DF	169	ASN
35	DF	203	GLN
36	DG	40	ASN
36	DG	41	GLN
36	DG	58	GLN
36	DG	123	ASN
37	DH	65	HIS
37	DH	143	GLN
37	DH	147	ASN
37	DH	158	HIS
38	DI	104	GLN
39	DN	45	ASN
39	DN	56	ASN
39	DN	69	GLN
39	DN	94	HIS
39	DN	128	HIS
39	DN	130	HIS
40	DO	3	GLN
40	DO	29	ASN
40	DO	82	ASN
41	DP	13	ASN
41	DP	128	HIS
42	DQ	12	GLN
42	DQ	89	ASN
42	DQ	141	GLN
43	DR	13	HIS
43	DR	16	HIS
43	DR	23	ASN
43	DR	24	GLN
43	DR	50	HIS
43	DR	53	HIS
43	DR	71	GLN
43	DR	91	GLN
44	DS	34	HIS
44	DS	61	ASN
44	DS	68	GLN

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Mol	Chain	Res	Type
45	DT	38	ASN
45	DT	90	GLN
46	DU	14	HIS
46	DU	49	HIS
46	DU	66	ASN
46	DU	72	HIS
46	DU	75	ASN
46	DU	94	ASN
47	DV	11	GLN
47	DV	87	HIS
48	DW	34	ASN
48	DW	40	ASN
48	DW	57	ASN
48	DW	61	ASN
48	DW	62	HIS
48	DW	102	HIS
49	DX	31	HIS
49	DX	55	ASN
49	DX	87	GLN
51	DZ	30	ASN
51	DZ	54	HIS
51	DZ	151	HIS

### 5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	AA	1503/1522 (98%)	280 (18%)	31 (2%)
1	CA	1503/1522 (98%)	283 (18%)	31 (2%)
31	BA	2723/2787 (97%)	712 (26%)	70 (2%)
31	DA	2723/2787 (97%)	706 (25%)	69 (2%)
32	BB	118/122 (96%)	34 (28%)	1 (0%)
32	DB	118/122 (96%)	35 (29%)	1 (0%)
All	All	8688/8862 (98%)	2050 (23%)	203 (2%)

All (2050) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	AA	9	G
1	AA	31	G
1	AA	32	A
1	AA	39	G

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Mol	Chain	Res	Type
1	AA	41	G
1	AA	47	C
1	AA	48	C
1	AA	50	A
1	AA	51	A
1	AA	59	A
1	AA	61	G
1	AA	63	C
1	AA	77	G
1	AA	80	G
1	AA	81	U
1	AA	90	U
1	AA	91	C
1	AA	97	G
1	AA	98	G
1	AA	101	A
1	AA	115	G
1	AA	116	A
1	AA	119	A
1	AA	120	A
1	AA	121	C
1	AA	131	C
1	AA	138	G
1	AA	144	G
1	AA	147	G
1	AA	150	C
1	AA	163	C
1	AA	171	A
1	AA	172	A
1	AA	173	U
1	AA	181	G
1	AA	182	U
1	AA	189(H)	G
1	AA	195	A
1	AA	197	A
1	AA	202	U
1	AA	203	U
1	AA	216	G
1	AA	220	G
1	AA	231	G
1	AA	243	A
1	AA	244	U

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Mol	Chain	Res	Type
1	AA	247	G
1	AA	251	G
1	AA	266	G
1	AA	267	C
1	AA	279	A
1	AA	281	G
1	AA	289	G
1	AA	298	A
1	AA	301	G
1	AA	321	A
1	AA	328	C
1	AA	330	C
1	AA	332	G
1	AA	343	U
1	AA	344	A
1	AA	345	C
1	AA	352	C
1	AA	353	A
1	AA	354	G
1	AA	357	G
1	AA	365	U
1	AA	367	U
1	AA	369	C
1	AA	372	C
1	AA	373	A
1	AA	384	G
1	AA	390	C
1	AA	397	A
1	AA	398	C
1	AA	406	G
1	AA	409	G
1	AA	412	A
1	AA	413	G
1	AA	414	A
1	AA	415	A
1	AA	421	U
1	AA	422	C
1	AA	424	G
1	AA	428	G
1	AA	429	U
1	AA	430	A
1	AA	435	C

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Mol	Chain	Res	Type
1	AA	437	U
1	AA	439	A
1	AA	442	C
1	AA	448	A
1	AA	452	A
1	AA	461	A
1	AA	470	C
1	AA	472	A
1	AA	483	C
1	AA	484	G
1	AA	485	G
1	AA	496	A
1	AA	498	U
1	AA	500	G
1	AA	505	G
1	AA	509	A
1	AA	510	A
1	AA	511	C
1	AA	513	C
1	AA	518	C
1	AA	527	G
1	AA	531	U
1	AA	532	A
1	AA	533	A
1	AA	534	U
1	AA	537	G
1	AA	547	A
1	AA	558	G
1	AA	559	A
1	AA	560	U
1	AA	561	U
1	AA	562	C
1	AA	572	A
1	AA	573	A
1	AA	576	G
1	AA	588	G
1	AA	607	A
1	AA	616	G
1	AA	623	C
1	AA	630	G
1	AA	632	A
1	AA	633	G

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Mol	Chain	Res	Type
1	AA	653	A
1	AA	655	A
1	AA	665	A
1	AA	671	G
1	AA	687	A
1	AA	688	G
1	AA	731	G
1	AA	733	A
1	AA	748	C
1	AA	749	C
1	AA	753	A
1	AA	754	C
1	AA	755	G
1	AA	760	G
1	AA	776	G
1	AA	777	A
1	AA	786	G
1	AA	793	U
1	AA	794	A
1	AA	816	A
1	AA	817	C
1	AA	818	G
1	AA	828	A
1	AA	833	U
1	AA	839	U
1	AA	840	C
1	AA	841	U
1	AA	848	C
1	AA	859	A
1	AA	870	U
1	AA	902	G
1	AA	914	A
1	AA	919	A
1	AA	926	G
1	AA	927	G
1	AA	934	C
1	AA	935	A
1	AA	960	U
1	AA	961	U
1	AA	967	C
1	AA	968	A
1	AA	969	A

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Mol	Chain	Res	Type
1	AA	971	G
1	AA	972	C
1	AA	974	A
1	AA	975	A
1	AA	976	G
1	AA	977	A
1	AA	978	A
1	AA	980	C
1	AA	983	A
1	AA	991	U
1	AA	992	U
1	AA	993	G
1	AA	1005	A
1	AA	1026	G
1	AA	1054	C
1	AA	1064	G
1	AA	1065	U
1	AA	1066	C
1	AA	1067	A
1	AA	1068	G
1	AA	1081	G
1	AA	1094	G
1	AA	1095	U
1	AA	1101	A
1	AA	1117	G
1	AA	1118	C
1	AA	1124	G
1	AA	1125	U
1	AA	1126	U
1	AA	1127	G
1	AA	1129	C
1	AA	1131	G
1	AA	1134	G
1	AA	1136	U
1	AA	1137	C
1	AA	1138	G
1	AA	1139	G
1	AA	1146	A
1	AA	1149	C
1	AA	1152	A
1	AA	1159	U
1	AA	1160	G

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Mol	Chain	Res	Type
1	AA	1193	G
1	AA	1196	U
1	AA	1197	G
1	AA	1202	G
1	AA	1212	U
1	AA	1213	A
1	AA	1225	A
1	AA	1227	A
1	AA	1238	A
1	AA	1249	C
1	AA	1255	G
1	AA	1256	A
1	AA	1257	U
1	AA	1273	G
1	AA	1280	A
1	AA	1281	U
1	AA	1282	C
1	AA	1286	A
1	AA	1287	A
1	AA	1290	G
1	AA	1294	G
1	AA	1296	C
1	AA	1300	G
1	AA	1301	U
1	AA	1302	U
1	AA	1305	G
1	AA	1317	C
1	AA	1320	C
1	AA	1322	C
1	AA	1323	G
1	AA	1331	G
1	AA	1334	G
1	AA	1336	C
1	AA	1338	G
1	AA	1346	A
1	AA	1347	G
1	AA	1363	C
1	AA	1364	U
1	AA	1370	G
1	AA	1382	C
1	AA	1388	C
1	AA	1397	C

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Mol	Chain	Res	Type
1	AA	1419	G
1	AA	1442	G
1	AA	1442(A)	G
1	AA	1442(B)	A
1	AA	1443	G
1	AA	1447	A
1	AA	1452	C
1	AA	1456	G
1	AA	1487	G
1	AA	1492	A
1	AA	1493	A
1	AA	1494	G
1	AA	1497	G
1	AA	1499	A
1	AA	1500	A
1	AA	1504	G
1	AA	1505	G
1	AA	1506	U
1	AA	1517	G
1	AA	1519	A
1	AA	1520	G
1	AA	1529	G
1	AA	1530	G
1	AA	1531	A
31	BA	10	G
31	BA	15	G
31	BA	23	G
31	BA	33	U
31	BA	34	C
31	BA	35	G
31	BA	36	G
31	BA	45	C
31	BA	49	A
31	BA	50	U
31	BA	51	G
31	BA	55	G
31	BA	61	G
31	BA	63	U
31	BA	64	A
31	BA	69	C
31	BA	71	A
31	BA	72	U

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Mol	Chain	Res	Type
31	BA	74	A
31	BA	75	G
31	BA	84	A
31	BA	90	U
31	BA	92	A
31	BA	94	C
31	BA	94(A)	G
31	BA	95	G
31	BA	100	G
31	BA	102	G
31	BA	103	A
31	BA	117	G
31	BA	118	A
31	BA	119	A
31	BA	120	U
31	BA	129	C
31	BA	131	G
31	BA	137	C
31	BA	139(A)	G
31	BA	141	A
31	BA	142	A
31	BA	142(A)	C
31	BA	146	G
31	BA	154(A)	C
31	BA	157	U
31	BA	158	U
31	BA	171	G
31	BA	173	G
31	BA	174	C
31	BA	175	G
31	BA	181	A
31	BA	196	A
31	BA	197	A
31	BA	199	A
31	BA	204	A
31	BA	205	G
31	BA	215	G
31	BA	216	A
31	BA	222	A
31	BA	225	A
31	BA	228	A
31	BA	229	A

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Mol	Chain	Res	Type
31	BA	233	A
31	BA	248	G
31	BA	249	C
31	BA	252	G
31	BA	266	G
31	BA	271(I)	G
31	BA	271(J)	C
31	BA	271(K)	U
31	BA	271(L)	U
31	BA	271(M)	G
31	BA	271(N)	U
31	BA	271(O)	C
31	BA	271(R)	G
31	BA	271(U)	G
31	BA	272(B)	G
31	BA	272(G)	C
31	BA	272(H)	C
31	BA	272(J)	C
31	BA	274	G
31	BA	275	G
31	BA	279	C
31	BA	281	G
31	BA	286	C
31	BA	287	C
31	BA	311	A
31	BA	329	G
31	BA	330	A
31	BA	332	A
31	BA	349	G
31	BA	351	G
31	BA	352	G
31	BA	353	G
31	BA	362	U
31	BA	363(B)	G
31	BA	363(F)	A
31	BA	370	G
31	BA	372	G
31	BA	386	G
31	BA	405	U
31	BA	406	G
31	BA	411	G
31	BA	412	A

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Mol	Chain	Res	Type
31	BA	415	A
31	BA	418	G
31	BA	428	A
31	BA	444	C
31	BA	448	U
31	BA	450	G
31	BA	455	C
31	BA	470	A
31	BA	471	A
31	BA	472	A
31	BA	473	G
31	BA	474	G
31	BA	475	U
31	BA	481	G
31	BA	505	A
31	BA	508	G
31	BA	509	C
31	BA	518	G
31	BA	530	G
31	BA	531	C
31	BA	532	A
31	BA	533	G
31	BA	537	C
31	BA	542	C
31	BA	543	C
31	BA	547	A
31	BA	548	A
31	BA	549	G
31	BA	563	G
31	BA	571	A
31	BA	573	G
31	BA	574	C
31	BA	575	A
31	BA	584	C
31	BA	586	A
31	BA	588	U
31	BA	592	G
31	BA	603	A
31	BA	607	U
31	BA	610	G
31	BA	614	U
31	BA	614(A)	U

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Mol	Chain	Res	Type
31	BA	614(B)	G
31	BA	615	G
31	BA	619	G
31	BA	621	A
31	BA	622	G
31	BA	626	U
31	BA	627	A
31	BA	637	A
31	BA	644	A
31	BA	645	C
31	BA	646	A
31	BA	647	G
31	BA	651	G
31	BA	652	C
31	BA	656	G
31	BA	657	U
31	BA	669	G
31	BA	670	A
31	BA	671	C
31	BA	686	G
31	BA	707	G
31	BA	708	C
31	BA	717	G
31	BA	730	C
31	BA	744	G
31	BA	745	G
31	BA	752	A
31	BA	753	C
31	BA	762	U
31	BA	765	G
31	BA	775	G
31	BA	776	G
31	BA	779	U
31	BA	782	A
31	BA	784	A
31	BA	785	G
31	BA	787	U
31	BA	790	C
31	BA	791	C
31	BA	792	G
31	BA	802	A
31	BA	805	G

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Mol	Chain	Res	Type
31	BA	807	U
31	BA	808	G
31	BA	810	U
31	BA	812	C
31	BA	819	A
31	BA	826	U
31	BA	827	U
31	BA	830	G
31	BA	832	G
31	BA	856	C
31	BA	857	C
31	BA	859	G
31	BA	861	A
31	BA	865	C
31	BA	866	A
31	BA	872	A
31	BA	878	A
31	BA	883	G
31	BA	884	C
31	BA	892	G
31	BA	894	C
31	BA	896	A
31	BA	897	C
31	BA	898	C
31	BA	899	A
31	BA	901	A
31	BA	902	C
31	BA	907	U
31	BA	910	A
31	BA	913	U
31	BA	917	A
31	BA	919	G
31	BA	926	A
31	BA	932	G
31	BA	934	G
31	BA	938	G
31	BA	941	A
31	BA	945	A
31	BA	946	G
31	BA	958	U
31	BA	959	A
31	BA	961	C

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Mol	Chain	Res	Type
31	BA	974	G
31	BA	975	C
31	BA	975(A)	G
31	BA	983	A
31	BA	991	C
31	BA	994	C
31	BA	996	A
31	BA	1011	G
31	BA	1012	U
31	BA	1013	C
31	BA	1016	G
31	BA	1017	G
31	BA	1020	A
31	BA	1022	G
31	BA	1023	U
31	BA	1025	G
31	BA	1026	U
31	BA	1033	U
31	BA	1038	C
31	BA	1041	C
31	BA	1042	G
31	BA	1043	C
31	BA	1044	G
31	BA	1045	A
31	BA	1047	G
31	BA	1048	A
31	BA	1050	A
31	BA	1051	G
31	BA	1052	C
31	BA	1053	C
31	BA	1106	A
31	BA	1107	G
31	BA	1110	G
31	BA	1112	G
31	BA	1113	U
31	BA	1114	G
31	BA	1115	G
31	BA	1122	G
31	BA	1130	U
31	BA	1135	C
31	BA	1136	G
31	BA	1139	G

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Mol	Chain	Res	Type
31	BA	1142	U
31	BA	1155	A
31	BA	1156	A
31	BA	1158	C
31	BA	1169	G
31	BA	1171	G
31	BA	1173	G
31	BA	1174	A
31	BA	1175	U
31	BA	1176	G
31	BA	1177	A
31	BA	1178	C
31	BA	1180	C
31	BA	1195	G
31	BA	1204	A
31	BA	1206	G
31	BA	1210	A
31	BA	1211	U
31	BA	1220	A
31	BA	1221	C
31	BA	1241	A
31	BA	1250	G
31	BA	1251	C
31	BA	1253	A
31	BA	1255	U
31	BA	1256	G
31	BA	1265	A
31	BA	1271	G
31	BA	1272	A
31	BA	1273	U
31	BA	1280	G
31	BA	1281	G
31	BA	1287	A
31	BA	1298	C
31	BA	1300	U
31	BA	1301	A
31	BA	1305	C
31	BA	1310	G
31	BA	1314	C
31	BA	1317	A
31	BA	1318	C
31	BA	1319	G

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Mol	Chain	Res	Type
31	BA	1329	U
31	BA	1332	G
31	BA	1345	C
31	BA	1347	G
31	BA	1349	A
31	BA	1358	G
31	BA	1359	A
31	BA	1360	A
31	BA	1365	A
31	BA	1367	A
31	BA	1368	G
31	BA	1370	C
31	BA	1379	A
31	BA	1380	G
31	BA	1384	A
31	BA	1385	G
31	BA	1386	C
31	BA	1395	A
31	BA	1398	C
31	BA	1407	C
31	BA	1416	G
31	BA	1417	C
31	BA	1420	U
31	BA	1421	G
31	BA	1427	A
31	BA	1428	C
31	BA	1437	C
31	BA	1445	A
31	BA	1449	A
31	BA	1450	G
31	BA	1455	G
31	BA	1458	C
31	BA	1459	G
31	BA	1460	A
31	BA	1461	G
31	BA	1466	G
31	BA	1467	C
31	BA	1471	A
31	BA	1472	A
31	BA	1473	G
31	BA	1474	C
31	BA	1475	G

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Mol	Chain	Res	Type
31	BA	1478	G
31	BA	1480	G
31	BA	1481	U
31	BA	1482	G
31	BA	1490	A
31	BA	1493	C
31	BA	1494	A
31	BA	1495	A
31	BA	1497	U
31	BA	1498	C
31	BA	1505	C
31	BA	1506	C
31	BA	1508	A
31	BA	1509	C
31	BA	1509(A)	A
31	BA	1512	U
31	BA	1520	G
31	BA	1526	G
31	BA	1528	A
31	BA	1528(A)	A
31	BA	1529	G
31	BA	1530	C
31	BA	1531	C
31	BA	1532	C
31	BA	1533	G
31	BA	1543	C
31	BA	1545	A
31	BA	1558	A
31	BA	1559	G
31	BA	1566	A
31	BA	1569	A
31	BA	1578	U
31	BA	1580	A
31	BA	1581	G
31	BA	1584	C
31	BA	1586	A
31	BA	1588	C
31	BA	1591	G
31	BA	1597	A
31	BA	1598	C
31	BA	1603	A
31	BA	1608	A

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Mol	Chain	Res	Type
31	BA	1609	A
31	BA	1610	A
31	BA	1617	C
31	BA	1618	A
31	BA	1625	C
31	BA	1631(A)	A
31	BA	1635	G
31	BA	1640	C
31	BA	1648	C
31	BA	1649	G
31	BA	1653	G
31	BA	1654	A
31	BA	1655	A
31	BA	1669	A
31	BA	1674	G
31	BA	1675	C
31	BA	1676	A
31	BA	1680	U
31	BA	1681	G
31	BA	1687	G
31	BA	1694	C
31	BA	1695	G
31	BA	1696	G
31	BA	1697	G
31	BA	1698	A
31	BA	1700	A
31	BA	1703	G
31	BA	1721	G
31	BA	1722	A
31	BA	1739	U
31	BA	1741	A
31	BA	1742	G
31	BA	1744	C
31	BA	1745	C
31	BA	1746	G
31	BA	1750	G
31	BA	1754	C
31	BA	1756	G
31	BA	1758	G
31	BA	1763	G
31	BA	1764	G
31	BA	1773	A

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Mol	Chain	Res	Type
31	BA	1780	A
31	BA	1781	C
31	BA	1782	C
31	BA	1787	A
31	BA	1791	A
31	BA	1798	U
31	BA	1799	G
31	BA	1800	C
31	BA	1801	G
31	BA	1812	A
31	BA	1816	G
31	BA	1820	U
31	BA	1829	A
31	BA	1835	G
31	BA	1836	C
31	BA	1838	C
31	BA	1839	G
31	BA	1847	A
31	BA	1858	G
31	BA	1865	G
31	BA	1866	C
31	BA	1877	A
31	BA	1878	G
31	BA	1880	C
31	BA	1881	C
31	BA	1882	C
31	BA	1885	A
31	BA	1888	G
31	BA	1889	A
31	BA	1896	G
31	BA	1900	A
31	BA	1902	C
31	BA	1903	G
31	BA	1905	C
31	BA	1906	G
31	BA	1913	A
31	BA	1914	C
31	BA	1918	A
31	BA	1927	A
31	BA	1929	G
31	BA	1930	G
31	BA	1934	C

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Mol	Chain	Res	Type
31	BA	1935	G
31	BA	1936	A
31	BA	1937	A
31	BA	1938	A
31	BA	1955	U
31	BA	1961	C
31	BA	1963	U
31	BA	1964	G
31	BA	1965	C
31	BA	1967	C
31	BA	1969	A
31	BA	1970	A
31	BA	1971	A
31	BA	1972	A
31	BA	1982	C
31	BA	1983	C
31	BA	1991	U
31	BA	1992	G
31	BA	1993	U
31	BA	1997	G
31	BA	2018	G
31	BA	2023	G
31	BA	2031	A
31	BA	2033	A
31	BA	2036	C
31	BA	2039	C
31	BA	2043	C
31	BA	2055	C
31	BA	2056	G
31	BA	2060	A
31	BA	2061	G
31	BA	2062	A
31	BA	2069	G
31	BA	2071	A
31	BA	2099	U
31	BA	2100	G
31	BA	2103	C
31	BA	2104	G
31	BA	2187	G
31	BA	2190	G
31	BA	2191	G
31	BA	2192	G

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Mol	Chain	Res	Type
31	BA	2198	A
31	BA	2199	A
31	BA	2200	C
31	BA	2203	U
31	BA	2206	G
31	BA	2207	G
31	BA	2208	A
31	BA	2218	U
31	BA	2219	G
31	BA	2225	A
31	BA	2226	C
31	BA	2227	A
31	BA	2238	G
31	BA	2239	G
31	BA	2245	U
31	BA	2246	G
31	BA	2268	A
31	BA	2272	U
31	BA	2273	A
31	BA	2275	C
31	BA	2280	G
31	BA	2283	C
31	BA	2287	A
31	BA	2288	A
31	BA	2289	G
31	BA	2303	G
31	BA	2304	G
31	BA	2305	A
31	BA	2307	G
31	BA	2308	G
31	BA	2309	A
31	BA	2311	A
31	BA	2316	C
31	BA	2318	G
31	BA	2319	G
31	BA	2320	A
31	BA	2321	G
31	BA	2325	G
31	BA	2334	G
31	BA	2336	A
31	BA	2340	G
31	BA	2342	C

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Mol	Chain	Res	Type
31	BA	2345	G
31	BA	2346	A
31	BA	2347	C
31	BA	2350	C
31	BA	2353	G
31	BA	2360	A
31	BA	2361	A
31	BA	2376	A
31	BA	2383	G
31	BA	2385	C
31	BA	2387	U
31	BA	2388	A
31	BA	2393	A
31	BA	2395	C
31	BA	2402	C
31	BA	2403	C
31	BA	2405	G
31	BA	2406	U
31	BA	2420	C
31	BA	2422	A
31	BA	2423	U
31	BA	2425	A
31	BA	2429	G
31	BA	2430	A
31	BA	2435	A
31	BA	2439	A
31	BA	2440	C
31	BA	2441	C
31	BA	2447	G
31	BA	2448	A
31	BA	2464	C
31	BA	2465	C
31	BA	2468	G
31	BA	2469	A
31	BA	2470	G
31	BA	2472	G
31	BA	2473	U
31	BA	2476	A
31	BA	2478	A
31	BA	2482	G
31	BA	2483	C
31	BA	2484	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
31	BA	2487	G
31	BA	2494	G
31	BA	2495	G
31	BA	2497	A
31	BA	2500	U
31	BA	2502	G
31	BA	2504	U
31	BA	2505	G
31	BA	2518	A
31	BA	2520	C
31	BA	2524	G
31	BA	2529	G
31	BA	2533	A
31	BA	2535	G
31	BA	2542	A
31	BA	2543	G
31	BA	2550	G
31	BA	2554	U
31	BA	2558	C
31	BA	2559	C
31	BA	2566	A
31	BA	2567	G
31	BA	2569	G
31	BA	2578	G
31	BA	2582	G
31	BA	2585	U
31	BA	2586	C
31	BA	2601	C
31	BA	2602	A
31	BA	2608	G
31	BA	2609	U
31	BA	2610	C
31	BA	2611	U
31	BA	2612	C
31	BA	2615	U
31	BA	2620	C
31	BA	2629	A
31	BA	2630	G
31	BA	2636	U
31	BA	2637	U
31	BA	2646	C
31	BA	2654	A

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Mol	Chain	Res	Type
31	BA	2655	G
31	BA	2658	C
31	BA	2659	G
31	BA	2660	A
31	BA	2661	G
31	BA	2662	A
31	BA	2663	G
31	BA	2670	A
31	BA	2673	G
31	BA	2679	A
31	BA	2682	U
31	BA	2690	C
31	BA	2702	U
31	BA	2703	C
31	BA	2712	U
31	BA	2712(A)	A
31	BA	2713	A
31	BA	2718	G
31	BA	2726	U
31	BA	2733	A
31	BA	2752	C
31	BA	2753	A
31	BA	2754	U
31	BA	2755	C
31	BA	2757	A
31	BA	2758	A
31	BA	2759	G
31	BA	2762	G
31	BA	2764	A
31	BA	2765	A
31	BA	2766	G
31	BA	2778	A
31	BA	2779	U
31	BA	2781	A
31	BA	2789	C
31	BA	2790	A
31	BA	2791	C
31	BA	2792	G
31	BA	2793	G
31	BA	2794	C
31	BA	2795	G
31	BA	2801(A)	A

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Mol	Chain	Res	Type
31	BA	2802	G
31	BA	2803	C
31	BA	2804	C
31	BA	2808	U
31	BA	2818	G
31	BA	2820	A
31	BA	2821	A
31	BA	2827	C
31	BA	2833	G
31	BA	2834	G
31	BA	2835	A
31	BA	2850	A
31	BA	2851	A
31	BA	2860	A
31	BA	2863	C
31	BA	2872	G
31	BA	2880	C
31	BA	2889	C
31	BA	2892	A
31	BA	2894	G
31	BA	2895	U
31	BA	2897	U
32	BB	8	U
32	BB	9	G
32	BB	12	C
32	BB	13	A
32	BB	15	A
32	BB	16	G
32	BB	22	U
32	BB	24	G
32	BB	27	C
32	BB	28	C
32	BB	29	A
32	BB	40	U
32	BB	42	C
32	BB	43	C
32	BB	45	A
32	BB	51	G
32	BB	52	A
32	BB	53	A
32	BB	54	G
32	BB	73	A

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Mol	Chain	Res	Type
32	BB	75	G
32	BB	80	U
32	BB	85	G
32	BB	87	G
32	BB	88	C
32	BB	89	G
32	BB	90	A
32	BB	91	C
32	BB	106	G
32	BB	108	U
32	BB	109	C
32	BB	110	G
32	BB	116	G
32	BB	117	G
1	CA	9	G
1	CA	31	G
1	CA	32	A
1	CA	39	G
1	CA	41	G
1	CA	47	C
1	CA	48	C
1	CA	50	A
1	CA	51	A
1	CA	59	A
1	CA	61	G
1	CA	63	C
1	CA	77	G
1	CA	80	G
1	CA	81	U
1	CA	88	A
1	CA	90	U
1	CA	91	C
1	CA	97	G
1	CA	98	G
1	CA	101	A
1	CA	115	G
1	CA	116	A
1	CA	119	A
1	CA	120	A
1	CA	121	C
1	CA	131	C
1	CA	138	G

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Mol	Chain	Res	Type
1	CA	144	G
1	CA	147	G
1	CA	150	C
1	CA	158	G
1	CA	163	C
1	CA	171	A
1	CA	172	A
1	CA	173	U
1	CA	181	G
1	CA	182	U
1	CA	189(H)	G
1	CA	195	A
1	CA	197	A
1	CA	202	U
1	CA	203	U
1	CA	216	G
1	CA	220	G
1	CA	231	G
1	CA	243	A
1	CA	244	U
1	CA	247	G
1	CA	251	G
1	CA	266	G
1	CA	267	C
1	CA	279	A
1	CA	281	G
1	CA	289	G
1	CA	298	A
1	CA	301	G
1	CA	321	A
1	CA	328	C
1	CA	330	C
1	CA	332	G
1	CA	343	U
1	CA	344	A
1	CA	345	C
1	CA	352	C
1	CA	353	A
1	CA	354	G
1	CA	357	G
1	CA	365	U
1	CA	367	U

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Mol	Chain	Res	Type
1	CA	369	C
1	CA	372	C
1	CA	373	A
1	CA	384	G
1	CA	390	C
1	CA	397	A
1	CA	398	C
1	CA	406	G
1	CA	409	G
1	CA	412	A
1	CA	413	G
1	CA	414	A
1	CA	415	A
1	CA	421	U
1	CA	422	C
1	CA	424	G
1	CA	428	G
1	CA	429	U
1	CA	430	A
1	CA	435	C
1	CA	437	U
1	CA	439	A
1	CA	442	C
1	CA	448	A
1	CA	452	A
1	CA	461	A
1	CA	470	C
1	CA	472	A
1	CA	483	C
1	CA	484	G
1	CA	485	G
1	CA	496	A
1	CA	498	U
1	CA	500	G
1	CA	505	G
1	CA	509	A
1	CA	510	A
1	CA	511	C
1	CA	513	C
1	CA	518	C
1	CA	527	G
1	CA	531	U

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Mol	Chain	Res	Type
1	CA	532	A
1	CA	533	A
1	CA	534	U
1	CA	547	A
1	CA	558	G
1	CA	559	A
1	CA	560	U
1	CA	561	U
1	CA	562	C
1	CA	572	A
1	CA	573	A
1	CA	576	G
1	CA	588	G
1	CA	616	G
1	CA	623	C
1	CA	630	G
1	CA	632	A
1	CA	633	G
1	CA	653	A
1	CA	655	A
1	CA	665	A
1	CA	671	G
1	CA	687	A
1	CA	688	G
1	CA	731	G
1	CA	733	A
1	CA	748	C
1	CA	749	C
1	CA	753	A
1	CA	754	C
1	CA	755	G
1	CA	760	G
1	CA	776	G
1	CA	777	A
1	CA	786	G
1	CA	792	A
1	CA	793	U
1	CA	794	A
1	CA	810	C
1	CA	816	A
1	CA	817	C
1	CA	818	G

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Mol	Chain	Res	Type
1	CA	828	A
1	CA	833	U
1	CA	836	G
1	CA	839	U
1	CA	840	C
1	CA	841	U
1	CA	848	C
1	CA	859	A
1	CA	870	U
1	CA	902	G
1	CA	914	A
1	CA	919	A
1	CA	926	G
1	CA	927	G
1	CA	934	C
1	CA	935	A
1	CA	960	U
1	CA	961	U
1	CA	967	C
1	CA	968	A
1	CA	969	A
1	CA	971	G
1	CA	972	C
1	CA	974	A
1	CA	975	A
1	CA	976	G
1	CA	977	A
1	CA	978	A
1	CA	980	C
1	CA	983	A
1	CA	991	U
1	CA	992	U
1	CA	993	G
1	CA	1005	A
1	CA	1026	G
1	CA	1054	C
1	CA	1064	G
1	CA	1065	U
1	CA	1066	C
1	CA	1067	A
1	CA	1068	G
1	CA	1081	G

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Mol	Chain	Res	Type
1	CA	1094	G
1	CA	1095	U
1	CA	1101	A
1	CA	1117	G
1	CA	1118	C
1	CA	1124	G
1	CA	1125	U
1	CA	1126	U
1	CA	1127	G
1	CA	1129	C
1	CA	1131	G
1	CA	1136	U
1	CA	1137	C
1	CA	1138	G
1	CA	1139	G
1	CA	1146	A
1	CA	1149	C
1	CA	1152	A
1	CA	1159	U
1	CA	1160	G
1	CA	1193	G
1	CA	1195	C
1	CA	1196	U
1	CA	1197	G
1	CA	1202	G
1	CA	1212	U
1	CA	1213	A
1	CA	1225	A
1	CA	1227	A
1	CA	1238	A
1	CA	1249	C
1	CA	1255	G
1	CA	1256	A
1	CA	1257	U
1	CA	1273	G
1	CA	1280	A
1	CA	1281	U
1	CA	1282	C
1	CA	1286	A
1	CA	1287	A
1	CA	1290	G
1	CA	1294	G

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Mol	Chain	Res	Type
1	CA	1296	C
1	CA	1300	G
1	CA	1301	U
1	CA	1302	U
1	CA	1305	G
1	CA	1317	C
1	CA	1320	C
1	CA	1322	C
1	CA	1323	G
1	CA	1331	G
1	CA	1334	G
1	CA	1338	G
1	CA	1346	A
1	CA	1347	G
1	CA	1363	C
1	CA	1364	U
1	CA	1370	G
1	CA	1382	C
1	CA	1388	C
1	CA	1397	C
1	CA	1400	C
1	CA	1419	G
1	CA	1442	G
1	CA	1442(A)	G
1	CA	1442(B)	A
1	CA	1443	G
1	CA	1447	A
1	CA	1452	C
1	CA	1456	G
1	CA	1487	G
1	CA	1492	A
1	CA	1493	A
1	CA	1494	G
1	CA	1497	G
1	CA	1499	A
1	CA	1500	A
1	CA	1504	G
1	CA	1505	G
1	CA	1506	U
1	CA	1517	G
1	CA	1519	A
1	CA	1520	G

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Mol	Chain	Res	Type
1	CA	1529	G
1	CA	1530	G
1	CA	1531	A
31	DA	10	G
31	DA	23	G
31	DA	33	U
31	DA	34	C
31	DA	35	G
31	DA	36	G
31	DA	45	C
31	DA	49	A
31	DA	50	U
31	DA	51	G
31	DA	55	G
31	DA	61	G
31	DA	64	A
31	DA	69	C
31	DA	71	A
31	DA	72	U
31	DA	74	A
31	DA	75	G
31	DA	84	A
31	DA	90	U
31	DA	92	A
31	DA	94	C
31	DA	94(A)	G
31	DA	95	G
31	DA	100	G
31	DA	102	G
31	DA	103	A
31	DA	117	G
31	DA	118	A
31	DA	120	U
31	DA	129	C
31	DA	131	G
31	DA	137	C
31	DA	139(A)	G
31	DA	141	A
31	DA	142	A
31	DA	142(A)	C
31	DA	146	G
31	DA	154(A)	C

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Mol	Chain	Res	Type
31	DA	157	U
31	DA	158	U
31	DA	171	G
31	DA	173	G
31	DA	174	C
31	DA	175	G
31	DA	181	A
31	DA	196	A
31	DA	197	A
31	DA	199	A
31	DA	204	A
31	DA	205	G
31	DA	215	G
31	DA	216	A
31	DA	222	A
31	DA	225	A
31	DA	228	A
31	DA	229	A
31	DA	233	A
31	DA	248	G
31	DA	249	C
31	DA	252	G
31	DA	266	G
31	DA	271(I)	G
31	DA	271(J)	C
31	DA	271(K)	U
31	DA	271(L)	U
31	DA	271(M)	G
31	DA	271(N)	U
31	DA	271(O)	C
31	DA	271(R)	G
31	DA	271(U)	G
31	DA	272(B)	G
31	DA	272(G)	C
31	DA	272(H)	C
31	DA	272(J)	C
31	DA	274	G
31	DA	275	G
31	DA	279	C
31	DA	281	G
31	DA	286	C
31	DA	287	C

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Mol	Chain	Res	Type
31	DA	311	A
31	DA	329	G
31	DA	330	A
31	DA	332	A
31	DA	349	G
31	DA	351	G
31	DA	352	G
31	DA	353	G
31	DA	362	U
31	DA	363(B)	G
31	DA	363(F)	A
31	DA	370	G
31	DA	372	G
31	DA	386	G
31	DA	405	U
31	DA	406	G
31	DA	411	G
31	DA	412	A
31	DA	415	A
31	DA	418	G
31	DA	428	A
31	DA	444	C
31	DA	448	U
31	DA	450	G
31	DA	455	C
31	DA	470	A
31	DA	471	A
31	DA	472	A
31	DA	473	G
31	DA	475	U
31	DA	481	G
31	DA	505	A
31	DA	508	G
31	DA	509	C
31	DA	518	G
31	DA	530	G
31	DA	531	C
31	DA	532	A
31	DA	533	G
31	DA	536	A
31	DA	537	C
31	DA	542	C

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Mol	Chain	Res	Type
31	DA	543	C
31	DA	547	A
31	DA	548	A
31	DA	549	G
31	DA	563	G
31	DA	571	A
31	DA	573	G
31	DA	574	C
31	DA	575	A
31	DA	584	C
31	DA	586	A
31	DA	588	U
31	DA	592	G
31	DA	603	A
31	DA	607	U
31	DA	610	G
31	DA	614	U
31	DA	614(A)	U
31	DA	614(B)	G
31	DA	615	G
31	DA	619	G
31	DA	621	A
31	DA	622	G
31	DA	626	U
31	DA	627	A
31	DA	637	A
31	DA	644	A
31	DA	645	C
31	DA	646	A
31	DA	647	G
31	DA	651	G
31	DA	652	C
31	DA	656	G
31	DA	657	U
31	DA	669	G
31	DA	670	A
31	DA	671	C
31	DA	686	G
31	DA	707	G
31	DA	708	C
31	DA	717	G
31	DA	730	C

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Mol	Chain	Res	Type
31	DA	744	G
31	DA	745	G
31	DA	746	A
31	DA	752	A
31	DA	753	C
31	DA	765	G
31	DA	775	G
31	DA	776	G
31	DA	779	U
31	DA	782	A
31	DA	784	A
31	DA	785	G
31	DA	787	U
31	DA	790	C
31	DA	791	C
31	DA	792	G
31	DA	805	G
31	DA	807	U
31	DA	808	G
31	DA	812	C
31	DA	819	A
31	DA	826	U
31	DA	827	U
31	DA	830	G
31	DA	832	G
31	DA	856	C
31	DA	857	C
31	DA	859	G
31	DA	861	A
31	DA	865	C
31	DA	866	A
31	DA	872	A
31	DA	878	A
31	DA	883	G
31	DA	884	C
31	DA	892	G
31	DA	894	C
31	DA	896	A
31	DA	897	C
31	DA	898	C
31	DA	899	A
31	DA	901	A

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Mol	Chain	Res	Type
31	DA	902	C
31	DA	907	U
31	DA	910	A
31	DA	913	U
31	DA	917	A
31	DA	919	G
31	DA	926	A
31	DA	932	G
31	DA	938	G
31	DA	941	A
31	DA	945	A
31	DA	946	G
31	DA	958	U
31	DA	959	A
31	DA	961	C
31	DA	974	G
31	DA	975	C
31	DA	975(A)	G
31	DA	983	A
31	DA	991	C
31	DA	996	A
31	DA	1011	G
31	DA	1012	U
31	DA	1013	C
31	DA	1016	G
31	DA	1017	G
31	DA	1020	A
31	DA	1022	G
31	DA	1023	U
31	DA	1025	G
31	DA	1026	U
31	DA	1033	U
31	DA	1038	C
31	DA	1041	C
31	DA	1042	G
31	DA	1043	C
31	DA	1044	G
31	DA	1045	A
31	DA	1047	G
31	DA	1048	A
31	DA	1050	A
31	DA	1051	G

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Mol	Chain	Res	Type
31	DA	1052	C
31	DA	1053	C
31	DA	1106	A
31	DA	1107	G
31	DA	1110	G
31	DA	1112	G
31	DA	1113	U
31	DA	1114	G
31	DA	1115	G
31	DA	1122	G
31	DA	1130	U
31	DA	1135	C
31	DA	1136	G
31	DA	1139	G
31	DA	1142	U
31	DA	1155	A
31	DA	1156	A
31	DA	1158	C
31	DA	1169	G
31	DA	1171	G
31	DA	1173	G
31	DA	1174	A
31	DA	1175	U
31	DA	1176	G
31	DA	1177	A
31	DA	1178	C
31	DA	1180	C
31	DA	1195	G
31	DA	1204	A
31	DA	1206	G
31	DA	1210	A
31	DA	1211	U
31	DA	1220	A
31	DA	1221	C
31	DA	1236	G
31	DA	1241	A
31	DA	1250	G
31	DA	1251	C
31	DA	1253	A
31	DA	1255	U
31	DA	1256	G
31	DA	1265	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
31	DA	1271	G
31	DA	1272	A
31	DA	1273	U
31	DA	1280	G
31	DA	1281	G
31	DA	1287	A
31	DA	1298	C
31	DA	1300	U
31	DA	1301	A
31	DA	1305	C
31	DA	1310	G
31	DA	1314	C
31	DA	1317	A
31	DA	1318	C
31	DA	1319	G
31	DA	1329	U
31	DA	1332	G
31	DA	1345	C
31	DA	1347	G
31	DA	1349	A
31	DA	1359	A
31	DA	1360	A
31	DA	1365	A
31	DA	1367	A
31	DA	1368	G
31	DA	1370	C
31	DA	1378	A
31	DA	1379	A
31	DA	1380	G
31	DA	1384	A
31	DA	1385	G
31	DA	1386	C
31	DA	1395	A
31	DA	1397	U
31	DA	1398	C
31	DA	1407	C
31	DA	1416	G
31	DA	1417	C
31	DA	1420	U
31	DA	1421	G
31	DA	1428	C
31	DA	1437	C

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Mol	Chain	Res	Type
31	DA	1445	A
31	DA	1449	A
31	DA	1450	G
31	DA	1455	G
31	DA	1458	C
31	DA	1459	G
31	DA	1460	A
31	DA	1461	G
31	DA	1466	G
31	DA	1467	C
31	DA	1471	A
31	DA	1472	A
31	DA	1473	G
31	DA	1474	C
31	DA	1475	G
31	DA	1478	G
31	DA	1480	G
31	DA	1481	U
31	DA	1482	G
31	DA	1490	A
31	DA	1493	C
31	DA	1494	A
31	DA	1495	A
31	DA	1497	U
31	DA	1498	C
31	DA	1505	C
31	DA	1506	C
31	DA	1508	A
31	DA	1509	C
31	DA	1509(A)	A
31	DA	1512	U
31	DA	1520	G
31	DA	1526	G
31	DA	1528	A
31	DA	1528(A)	A
31	DA	1529	G
31	DA	1530	C
31	DA	1531	C
31	DA	1532	C
31	DA	1533	G
31	DA	1543	C
31	DA	1545	A

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Mol	Chain	Res	Type
31	DA	1558	A
31	DA	1559	G
31	DA	1566	A
31	DA	1569	A
31	DA	1578	U
31	DA	1580	A
31	DA	1581	G
31	DA	1584	C
31	DA	1586	A
31	DA	1588	C
31	DA	1591	G
31	DA	1597	A
31	DA	1598	C
31	DA	1603	A
31	DA	1608	A
31	DA	1609	A
31	DA	1610	A
31	DA	1617	C
31	DA	1618	A
31	DA	1625	C
31	DA	1631(A)	A
31	DA	1635	G
31	DA	1640	C
31	DA	1648	C
31	DA	1649	G
31	DA	1653	G
31	DA	1654	A
31	DA	1669	A
31	DA	1674	G
31	DA	1675	C
31	DA	1676	A
31	DA	1680	U
31	DA	1681	G
31	DA	1687	G
31	DA	1694	C
31	DA	1695	G
31	DA	1696	G
31	DA	1697	G
31	DA	1698	A
31	DA	1700	A
31	DA	1703	G
31	DA	1721	G

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Mol	Chain	Res	Type
31	DA	1722	A
31	DA	1739	U
31	DA	1741	A
31	DA	1742	G
31	DA	1744	C
31	DA	1745	C
31	DA	1746	G
31	DA	1750	G
31	DA	1752	C
31	DA	1753	G
31	DA	1754	C
31	DA	1756	G
31	DA	1758	G
31	DA	1763	G
31	DA	1764	G
31	DA	1773	A
31	DA	1780	A
31	DA	1781	C
31	DA	1782	C
31	DA	1787	A
31	DA	1791	A
31	DA	1798	U
31	DA	1799	G
31	DA	1800	C
31	DA	1801	G
31	DA	1812	A
31	DA	1816	G
31	DA	1820	U
31	DA	1829	A
31	DA	1835	G
31	DA	1836	C
31	DA	1838	C
31	DA	1839	G
31	DA	1847	A
31	DA	1858	G
31	DA	1865	G
31	DA	1866	C
31	DA	1877	A
31	DA	1878	G
31	DA	1880	C
31	DA	1881	C
31	DA	1882	C

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Mol	Chain	Res	Type
31	DA	1885	A
31	DA	1888	G
31	DA	1889	A
31	DA	1896	G
31	DA	1900	A
31	DA	1903	G
31	DA	1905	C
31	DA	1906	G
31	DA	1913	A
31	DA	1914	C
31	DA	1918	A
31	DA	1927	A
31	DA	1929	G
31	DA	1930	G
31	DA	1934	C
31	DA	1935	G
31	DA	1936	A
31	DA	1937	A
31	DA	1938	A
31	DA	1955	U
31	DA	1963	U
31	DA	1964	G
31	DA	1965	C
31	DA	1967	C
31	DA	1969	A
31	DA	1970	A
31	DA	1971	A
31	DA	1972	A
31	DA	1982	C
31	DA	1983	C
31	DA	1991	U
31	DA	1992	G
31	DA	1993	U
31	DA	1997	G
31	DA	2018	G
31	DA	2023	G
31	DA	2031	A
31	DA	2032	G
31	DA	2033	A
31	DA	2036	C
31	DA	2039	C
31	DA	2043	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
31	DA	2055	C
31	DA	2056	G
31	DA	2060	A
31	DA	2061	G
31	DA	2062	A
31	DA	2069	G
31	DA	2071	A
31	DA	2099	U
31	DA	2100	G
31	DA	2103	C
31	DA	2104	G
31	DA	2187	G
31	DA	2190	G
31	DA	2191	G
31	DA	2192	G
31	DA	2198	A
31	DA	2199	A
31	DA	2200	C
31	DA	2203	U
31	DA	2206	G
31	DA	2207	G
31	DA	2208	A
31	DA	2218	U
31	DA	2219	G
31	DA	2225	A
31	DA	2226	C
31	DA	2227	A
31	DA	2238	G
31	DA	2239	G
31	DA	2245	U
31	DA	2246	G
31	DA	2268	A
31	DA	2272	U
31	DA	2273	A
31	DA	2274	A
31	DA	2275	C
31	DA	2280	G
31	DA	2283	C
31	DA	2287	A
31	DA	2288	A
31	DA	2289	G
31	DA	2303	G

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Mol	Chain	Res	Type
31	DA	2304	G
31	DA	2305	A
31	DA	2307	G
31	DA	2308	G
31	DA	2309	A
31	DA	2311	A
31	DA	2316	C
31	DA	2319	G
31	DA	2320	A
31	DA	2321	G
31	DA	2325	G
31	DA	2334	G
31	DA	2336	A
31	DA	2340	G
31	DA	2342	C
31	DA	2345	G
31	DA	2346	A
31	DA	2347	C
31	DA	2350	C
31	DA	2353	G
31	DA	2360	A
31	DA	2361	A
31	DA	2376	A
31	DA	2383	G
31	DA	2385	C
31	DA	2387	U
31	DA	2388	A
31	DA	2393	A
31	DA	2395	C
31	DA	2402	C
31	DA	2403	C
31	DA	2405	G
31	DA	2406	U
31	DA	2411	A
31	DA	2422	A
31	DA	2423	U
31	DA	2425	A
31	DA	2429	G
31	DA	2430	A
31	DA	2434	A
31	DA	2435	A
31	DA	2439	A

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Mol	Chain	Res	Type
31	DA	2440	C
31	DA	2441	C
31	DA	2447	G
31	DA	2448	A
31	DA	2464	C
31	DA	2465	C
31	DA	2468	G
31	DA	2469	A
31	DA	2470	G
31	DA	2472	G
31	DA	2473	U
31	DA	2476	A
31	DA	2478	A
31	DA	2482	G
31	DA	2483	C
31	DA	2484	G
31	DA	2487	G
31	DA	2494	G
31	DA	2495	G
31	DA	2497	A
31	DA	2500	U
31	DA	2502	G
31	DA	2504	U
31	DA	2505	G
31	DA	2518	A
31	DA	2520	C
31	DA	2524	G
31	DA	2529	G
31	DA	2533	A
31	DA	2535	G
31	DA	2542	A
31	DA	2543	G
31	DA	2550	G
31	DA	2554	U
31	DA	2559	C
31	DA	2566	A
31	DA	2567	G
31	DA	2569	G
31	DA	2578	G
31	DA	2585	U
31	DA	2586	C
31	DA	2601	C

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Mol	Chain	Res	Type
31	DA	2602	A
31	DA	2608	G
31	DA	2609	U
31	DA	2610	C
31	DA	2611	U
31	DA	2612	C
31	DA	2613	U
31	DA	2615	U
31	DA	2620	C
31	DA	2629	A
31	DA	2630	G
31	DA	2636	U
31	DA	2637	U
31	DA	2646	C
31	DA	2654	A
31	DA	2655	G
31	DA	2658	C
31	DA	2659	G
31	DA	2660	A
31	DA	2661	G
31	DA	2662	A
31	DA	2663	G
31	DA	2670	A
31	DA	2673	G
31	DA	2682	U
31	DA	2690	C
31	DA	2702	U
31	DA	2703	C
31	DA	2712	U
31	DA	2712(A)	A
31	DA	2713	A
31	DA	2726	U
31	DA	2733	A
31	DA	2752	C
31	DA	2753	A
31	DA	2754	U
31	DA	2757	A
31	DA	2758	A
31	DA	2759	G
31	DA	2762	G
31	DA	2764	A
31	DA	2765	A

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Mol	Chain	Res	Type
31	DA	2766	G
31	DA	2778	A
31	DA	2779	U
31	DA	2781	A
31	DA	2789	C
31	DA	2790	A
31	DA	2791	C
31	DA	2792	G
31	DA	2793	G
31	DA	2794	C
31	DA	2795	G
31	DA	2801(A)	A
31	DA	2802	G
31	DA	2803	C
31	DA	2804	C
31	DA	2808	U
31	DA	2818	G
31	DA	2820	A
31	DA	2821	A
31	DA	2824	C
31	DA	2827	C
31	DA	2833	G
31	DA	2834	G
31	DA	2835	A
31	DA	2846	G
31	DA	2850	A
31	DA	2851	A
31	DA	2859	G
31	DA	2860	A
31	DA	2863	C
31	DA	2872	G
31	DA	2880	C
31	DA	2889	C
31	DA	2892	A
31	DA	2894	G
31	DA	2895	U
31	DA	2897	U
32	DB	8	U
32	DB	9	G
32	DB	12	C
32	DB	13	A
32	DB	15	A

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Mol	Chain	Res	Type
32	DB	16	G
32	DB	22	U
32	DB	24	G
32	DB	27	C
32	DB	28	C
32	DB	29	A
32	DB	40	U
32	DB	42	C
32	DB	43	C
32	DB	45	A
32	DB	51	G
32	DB	52	A
32	DB	53	A
32	DB	54	G
32	DB	73	A
32	DB	75	G
32	DB	76	G
32	DB	80	U
32	DB	85	G
32	DB	87	G
32	DB	88	C
32	DB	89	G
32	DB	90	A
32	DB	91	C
32	DB	106	G
32	DB	108	U
32	DB	109	C
32	DB	110	G
32	DB	116	G
32	DB	117	G

All (203) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	AA	30	U
1	AA	60	A
1	AA	79	G
1	AA	115	G
1	AA	119	A
1	AA	243	A
1	AA	250	A
1	AA	266	G

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Mol	Chain	Res	Type
1	AA	327	A
1	AA	366	C
1	AA	428	G
1	AA	429	U
1	AA	484	G
1	AA	509	A
1	AA	533	A
1	AA	560	U
1	AA	687	A
1	AA	748	C
1	AA	793	U
1	AA	913	A
1	AA	991	U
1	AA	992	U
1	AA	1064	G
1	AA	1065	U
1	AA	1067	A
1	AA	1201	A
1	AA	1285	A
1	AA	1452	C
1	AA	1493	A
1	AA	1498	U
1	AA	1504	G
31	BA	34	C
31	BA	49	A
31	BA	50	U
31	BA	71	A
31	BA	102	G
31	BA	128	C
31	BA	146	G
31	BA	249	C
31	BA	272	G
31	BA	272(J)	C
31	BA	472	A
31	BA	474	G
31	BA	542	C
31	BA	587	C
31	BA	651	G
31	BA	669	G
31	BA	685	A
31	BA	746	A
31	BA	752	A

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Mol	Chain	Res	Type
31	BA	774	A
31	BA	790	C
31	BA	827	U
31	BA	856	C
31	BA	859	G
31	BA	945	A
31	BA	958	U
31	BA	1022	G
31	BA	1112	G
31	BA	1142(A)	A
31	BA	1155	A
31	BA	1176	G
31	BA	1210	A
31	BA	1250	G
31	BA	1300	U
31	BA	1332	G
31	BA	1378	A
31	BA	1379	A
31	BA	1397	U
31	BA	1427	A
31	BA	1494	A
31	BA	1508	A
31	BA	1533	G
31	BA	1544	A
31	BA	1558	A
31	BA	1559	G
31	BA	1608	A
31	BA	1652	A
31	BA	1653	G
31	BA	1694	C
31	BA	1697	G
31	BA	1740	G
31	BA	1799	G
31	BA	1819	A
31	BA	1934	C
31	BA	1970	A
31	BA	1992	G
31	BA	2225	A
31	BA	2272	U
31	BA	2319	G
31	BA	2405	G
31	BA	2439	A

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Mol	Chain	Res	Type
31	BA	2610	C
31	BA	2662	A
31	BA	2689	U
31	BA	2712	U
31	BA	2726	U
31	BA	2778	A
31	BA	2791	C
31	BA	2796	U
31	BA	2859	G
32	BB	44	G
1	CA	30	U
1	CA	60	A
1	CA	79	G
1	CA	115	G
1	CA	119	A
1	CA	243	A
1	CA	250	A
1	CA	266	G
1	CA	327	A
1	CA	366	C
1	CA	428	G
1	CA	429	U
1	CA	484	G
1	CA	509	A
1	CA	533	A
1	CA	560	U
1	CA	687	A
1	CA	748	C
1	CA	793	U
1	CA	913	A
1	CA	991	U
1	CA	992	U
1	CA	1064	G
1	CA	1065	U
1	CA	1067	A
1	CA	1201	A
1	CA	1285	A
1	CA	1452	C
1	CA	1493	A
1	CA	1498	U
1	CA	1504	G
31	DA	34	C

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Mol	Chain	Res	Type
31	DA	49	A
31	DA	50	U
31	DA	71	A
31	DA	102	G
31	DA	128	C
31	DA	146	G
31	DA	249	C
31	DA	272	G
31	DA	272(J)	C
31	DA	472	A
31	DA	474	G
31	DA	542	C
31	DA	587	C
31	DA	651	G
31	DA	669	G
31	DA	685	A
31	DA	746	A
31	DA	752	A
31	DA	774	A
31	DA	790	C
31	DA	827	U
31	DA	856	C
31	DA	859	G
31	DA	945	A
31	DA	958	U
31	DA	960	A
31	DA	1022	G
31	DA	1112	G
31	DA	1142(A)	A
31	DA	1155	A
31	DA	1176	G
31	DA	1210	A
31	DA	1250	G
31	DA	1300	U
31	DA	1332	G
31	DA	1378	A
31	DA	1379	A
31	DA	1397	U
31	DA	1427	A
31	DA	1494	A
31	DA	1508	A
31	DA	1533	G

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Mol	Chain	Res	Type
31	DA	1544	A
31	DA	1558	A
31	DA	1559	G
31	DA	1608	A
31	DA	1652	A
31	DA	1653	G
31	DA	1694	C
31	DA	1697	G
31	DA	1740	G
31	DA	1799	G
31	DA	1819	A
31	DA	1934	C
31	DA	1970	A
31	DA	1992	G
31	DA	2225	A
31	DA	2405	G
31	DA	2439	A
31	DA	2610	C
31	DA	2662	A
31	DA	2689	U
31	DA	2712	U
31	DA	2726	U
31	DA	2778	A
31	DA	2791	C
31	DA	2796	U
31	DA	2859	G
32	DB	44	G

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

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

## 5.5 Carbohydrates ⓘ

There are no carbohydrates in this entry.

## 5.6 Ligand geometry ⓘ

Of 853 ligands modelled in this entry, 851 are monoatomic - leaving 2 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	$\# Z  > 2$
55	CLM	BA	3370	54	20,20,20	1.80	1 (5%)	27,27,27	1.13	2 (7%)
55	CLM	DA	3334	54	20,20,20	1.80	1 (5%)	27,27,27	1.13	2 (7%)

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
55	CLM	BA	3370	54	-	0/22/22/22	0/1/1/1
55	CLM	DA	3334	54	-	0/22/22/22	0/1/1/1

All (2) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
55	DA	3334	CLM	C9-N9	-7.20	1.34	1.46
55	BA	3370	CLM	C9-N9	-7.17	1.34	1.46

All (4) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
55	DA	3334	CLM	O9A-N9-C9	2.71	119.99	114.58
55	BA	3370	CLM	O9A-N9-C9	2.71	119.98	114.58
55	BA	3370	CLM	C1-C2-N2	2.13	120.01	115.49
55	DA	3334	CLM	C1-C2-N2	2.13	120.01	115.49

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

## 5.7 Other polymers ⓘ

There are no such residues in this entry.

## 5.8 Polymer linkage issues

The following chains have linkage breaks:

Mol	Chain	Number of breaks
13	CM	3
13	AM	3
47	DV	1
36	DG	1
36	BG	1
9	AI	1
9	CI	1
47	BV	1
28	D6	1
28	B6	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	CM	69:GLU	C	70:LEU	N	5.35
1	AM	69:GLU	C	70:LEU	N	5.34
1	BG	112:PRO	C	113:ARG	N	4.53
1	DG	112:PRO	C	113:ARG	N	4.53
1	CM	112:GLY	C	113:PRO	N	4.49
1	AM	112:GLY	C	113:PRO	N	4.47
1	AM	97:PRO	C	98:VAL	N	4.46
1	CM	97:PRO	C	98:VAL	N	4.46
1	B6	46:HIS	C	47:THR	N	3.72
1	D6	46:HIS	C	47:THR	N	3.68
1	AI	53:VAL	C	54:ASP	N	3.17
1	BV	80:GLN	C	81:TYR	N	3.15
1	CI	53:VAL	C	54:ASP	N	3.14
1	DV	80:GLN	C	81:TYR	N	3.07

## 6 Fit of model and data ⓘ

### 6.1 Protein, DNA and RNA chains ⓘ

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

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
1	AA	1504/1522 (98%)	0.79	222 (14%) 3 1	42, 106, 199, 201	0
1	CA	1504/1522 (98%)	0.63	189 (12%) 4 1	46, 105, 198, 201	0
2	AB	235/256 (91%)	0.35	13 (5%) 24 5	83, 146, 188, 195	0
2	CB	235/256 (91%)	0.56	22 (9%) 9 2	84, 149, 187, 196	0
3	AC	207/239 (86%)	0.61	22 (10%) 7 2	97, 158, 187, 194	0
3	CC	207/239 (86%)	0.70	25 (12%) 5 1	98, 160, 187, 194	0
4	AD	208/209 (99%)	0.13	2 (0%) 79 22	72, 112, 165, 186	0
4	CD	208/209 (99%)	0.05	2 (0%) 79 22	70, 111, 164, 185	0
5	AE	151/162 (93%)	0.13	3 (1%) 62 12	59, 97, 151, 194	0
5	CE	151/162 (93%)	0.19	1 (0%) 84 28	64, 98, 153, 194	0
6	AF	101/101 (100%)	0.04	0 100 100	66, 111, 160, 183	0
6	CF	101/101 (100%)	0.05	1 (0%) 79 22	67, 113, 160, 188	0
7	AG	155/156 (99%)	0.92	31 (20%) 2 1	124, 172, 192, 197	0
7	CG	155/156 (99%)	1.08	30 (19%) 2 1	125, 172, 192, 198	0
8	AH	138/138 (100%)	-0.06	1 (0%) 84 28	67, 102, 147, 162	0
8	CH	138/138 (100%)	-0.01	0 100 100	66, 102, 147, 163	0
9	AI	127/128 (99%)	1.42	31 (24%) 1 1	125, 179, 196, 199	0
9	CI	127/128 (99%)	1.74	42 (33%) 1 0	126, 180, 197, 199	0
10	AJ	99/105 (94%)	1.76	36 (36%) 1 0	122, 175, 196, 198	0
10	CJ	99/105 (94%)	1.87	37 (37%) 1 0	121, 176, 197, 199	0
11	AK	119/129 (92%)	0.30	7 (5%) 22 5	63, 105, 164, 188	0
11	CK	119/129 (92%)	0.34	6 (5%) 28 6	65, 104, 168, 191	0
12	AL	125/135 (92%)	0.09	4 (3%) 45 9	57, 89, 154, 198	0
12	CL	125/135 (92%)	0.27	5 (4%) 36 7	55, 89, 158, 198	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
13	AM	115/126 (91%)	1.40	34 (29%) 1 0	136, 190, 198, 200	0
13	CM	115/126 (91%)	1.45	36 (31%) 1 0	136, 188, 197, 199	0
14	AN	60/61 (98%)	1.05	7 (11%) 5 2	113, 167, 193, 196	0
14	CN	60/61 (98%)	0.73	6 (10%) 8 2	112, 168, 191, 196	0
15	AO	88/89 (98%)	0.02	1 (1%) 77 21	59, 91, 149, 155	0
15	CO	88/89 (98%)	0.02	0 100 100	63, 92, 150, 157	0
16	AP	84/88 (95%)	0.51	6 (7%) 16 4	77, 101, 161, 188	0
16	CP	84/88 (95%)	0.30	1 (1%) 75 20	78, 100, 154, 186	0
17	AQ	100/105 (95%)	-0.06	1 (1%) 79 22	62, 93, 138, 158	0
17	CQ	100/105 (95%)	0.04	2 (2%) 62 12	59, 92, 140, 157	0
18	AR	70/88 (79%)	0.28	2 (2%) 49 9	73, 98, 167, 197	0
18	CR	70/88 (79%)	0.80	5 (7%) 16 4	74, 100, 167, 196	0
19	AS	79/93 (84%)	2.00	31 (39%) 1 0	142, 191, 198, 199	0
19	CS	79/93 (84%)	1.88	28 (35%) 1 0	142, 190, 198, 199	0
20	AT	99/106 (93%)	0.03	1 (1%) 79 22	73, 110, 157, 186	0
20	CT	99/106 (93%)	0.26	5 (5%) 27 6	74, 108, 156, 189	0
21	AU	25/27 (92%)	2.78	15 (60%) 0 0	138, 175, 193, 196	0
21	CU	25/27 (92%)	2.53	16 (64%) 0 0	135, 172, 193, 195	0
22	B0	85/85 (100%)	0.48	8 (9%) 9 2	34, 59, 182, 197	0
22	D0	85/85 (100%)	0.31	8 (9%) 9 2	40, 64, 178, 197	0
23	B1	89/98 (90%)	0.12	1 (1%) 77 21	37, 64, 141, 187	0
23	D1	89/98 (90%)	0.06	0 100 100	40, 66, 142, 191	0
24	B2	51/72 (70%)	0.48	3 (5%) 22 5	49, 87, 184, 193	0
24	D2	51/72 (70%)	0.29	4 (7%) 13 3	50, 91, 183, 195	0
25	B3	60/60 (100%)	-0.06	1 (1%) 67 15	36, 56, 132, 180	0
25	D3	60/60 (100%)	0.15	2 (3%) 44 8	42, 61, 138, 178	0
26	B4	32/71 (45%)	-0.08	0 100 100	109, 156, 186, 191	0
26	D4	32/71 (45%)	0.03	0 100 100	112, 161, 188, 195	0
27	B5	59/60 (98%)	0.25	4 (6%) 17 4	25, 47, 180, 195	0
27	D5	59/60 (98%)	0.10	4 (6%) 17 4	28, 50, 184, 195	0
28	B6	45/54 (83%)	0.34	2 (4%) 33 7	36, 70, 133, 185	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2			OWAB(Å <sup>2</sup> )	Q<0.9
28	D6	45/54 (83%)	0.53	2 (4%)	33	7	42, 74, 138, 184	0
29	B7	49/49 (100%)	0.14	1 (2%)	62	12	26, 33, 117, 170	0
29	D7	49/49 (100%)	0.19	1 (2%)	62	12	27, 37, 118, 170	0
30	B8	64/65 (98%)	0.12	0	100	100	34, 57, 138, 181	0
30	D8	64/65 (98%)	0.03	0	100	100	38, 59, 139, 183	0
31	BA	2725/2787 (97%)	0.02	53 (1%)	64	13	26, 46, 145, 201	0
31	DA	2725/2787 (97%)	-0.09	86 (3%)	45	9	27, 51, 149, 201	0
32	BB	119/122 (97%)	0.21	4 (3%)	43	8	39, 91, 140, 185	0
32	DB	119/122 (97%)	0.46	12 (10%)	7	2	48, 95, 154, 190	0
33	BD	272/276 (98%)	-0.18	1 (0%)	90	41	27, 47, 100, 177	0
33	DD	272/276 (98%)	-0.18	0	100	100	29, 50, 104, 181	0
34	BE	205/206 (99%)	0.01	3 (1%)	70	16	25, 52, 145, 189	0
34	DE	205/206 (99%)	-0.10	3 (1%)	70	16	29, 56, 142, 189	0
35	BF	208/210 (99%)	0.17	9 (4%)	34	7	24, 58, 180, 197	0
35	DF	208/210 (99%)	0.19	8 (3%)	38	7	27, 63, 178, 197	0
36	BG	181/182 (99%)	0.70	22 (12%)	5	1	87, 145, 189, 199	0
36	DG	181/182 (99%)	1.19	38 (20%)	1	1	91, 153, 193, 199	0
37	BH	160/180 (88%)	0.15	3 (1%)	64	13	62, 102, 150, 193	0
37	DH	160/180 (88%)	0.60	10 (6%)	19	5	70, 110, 157, 195	0
38	BI	146/148 (98%)	0.19	6 (4%)	35	7	52, 143, 185, 195	0
38	DI	146/148 (98%)	1.71	50 (34%)	1	0	56, 156, 188, 198	0
39	BN	139/140 (99%)	-0.02	2 (1%)	72	18	32, 60, 140, 187	0
39	DN	139/140 (99%)	-0.16	2 (1%)	72	18	38, 65, 142, 188	0
40	BO	122/122 (100%)	-0.27	0	100	100	32, 52, 105, 141	0
40	DO	122/122 (100%)	-0.39	0	100	100	35, 55, 111, 146	0
41	BP	146/150 (97%)	0.29	3 (2%)	60	12	22, 79, 148, 199	0
41	DP	146/150 (97%)	0.17	5 (3%)	43	8	27, 81, 150, 198	0
42	BQ	136/141 (96%)	0.18	4 (2%)	49	9	39, 64, 150, 189	0
42	DQ	136/141 (96%)	0.22	7 (5%)	27	6	43, 69, 149, 190	0
43	BR	117/118 (99%)	-0.17	0	100	100	28, 44, 113, 143	0
43	DR	117/118 (99%)	-0.11	2 (1%)	67	15	30, 49, 115, 144	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
44	BS	99/112 (88%)	0.20	1 (1%) 79 22	53, 98, 141, 178	0
44	DS	99/112 (88%)	0.56	7 (7%) 16 4	63, 103, 146, 180	0
45	BT	132/146 (90%)	0.10	3 (2%) 57 12	42, 73, 157, 191	0
45	DT	132/146 (90%)	0.02	5 (3%) 38 7	46, 77, 159, 194	0
46	BU	117/118 (99%)	0.05	2 (1%) 67 15	23, 50, 114, 190	0
46	DU	117/118 (99%)	-0.01	1 (0%) 81 24	32, 56, 119, 193	0
47	BV	101/101 (100%)	0.30	4 (3%) 36 7	32, 91, 171, 194	0
47	DV	101/101 (100%)	0.33	4 (3%) 36 7	35, 97, 169, 195	0
48	BW	113/113 (100%)	-0.27	0 100 100	28, 40, 101, 168	0
48	DW	113/113 (100%)	-0.23	1 (0%) 81 24	31, 43, 106, 175	0
49	BX	93/96 (96%)	0.14	2 (2%) 59 12	36, 65, 142, 184	0
49	DX	93/96 (96%)	-0.05	0 100 100	42, 69, 147, 185	0
50	BY	101/110 (91%)	0.48	9 (8%) 10 3	39, 91, 191, 199	0
50	DY	101/110 (91%)	0.44	11 (10%) 6 2	40, 96, 191, 199	0
51	BZ	177/206 (85%)	0.02	1 (0%) 86 32	56, 100, 150, 175	0
51	DZ	177/206 (85%)	0.14	3 (1%) 67 15	63, 103, 153, 179	0
All	All	20064/20922 (95%)	0.30	1357 (6%) 17 4	22, 84, 190, 201	0

All (1357) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
31	DA	652	C	15.4
35	BF	208	GLY	14.2
1	AA	88	A	13.7
1	AA	1026	G	12.7
31	DA	2802	G	12.4
35	BF	207	GLY	11.3
1	AA	89	C	11.0
42	BQ	140	ALA	10.8
38	DI	100	ALA	10.6
31	BA	652	C	10.3
1	AA	1138	G	10.1
51	DZ	113	ALA	10.1
42	DQ	140	ALA	10.0
1	CA	82	U	10.0
1	CA	1149	C	10.0

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Mol	Chain	Res	Type	RSRZ
22	B0	4	LYS	9.9
1	CA	1036	G	9.6
1	AA	1025	U	9.5
1	AA	1223	C	9.3
1	CA	1026	G	9.2
31	BA	897	C	9.2
1	CA	84	U	9.2
1	CA	1025	U	9.1
22	B0	6	GLY	9.0
1	CA	1024	G	8.8
1	CA	1001	A	8.7
1	AA	1224	G	8.7
35	DF	208	GLY	8.5
31	BA	1174	A	8.5
10	CJ	10	GLY	8.4
31	BA	2104	G	8.4
42	DQ	141	GLN	8.4
1	AA	950	U	8.4
38	DI	81	VAL	8.4
17	CQ	101	ARG	8.2
38	DI	146	ALA	8.2
19	CS	25	LYS	8.1
1	AA	1002	G	8.0
31	DA	2104	G	8.0
1	AA	1006	C	8.0
31	DA	280	C	8.0
7	CG	5	ARG	7.9
1	CA	1223	C	7.8
42	BQ	141	GLN	7.8
2	CB	7	VAL	7.8
1	AA	1243	C	7.8
1	CA	83	U	7.7
1	AA	1036	G	7.7
1	CA	1034	G	7.6
31	DA	1052	C	7.6
31	DA	897	C	7.6
27	B5	59	GLU	7.5
46	BU	118	GLY	7.5
38	DI	121	LYS	7.5
31	DA	271(L)	U	7.5
45	BT	39	ARG	7.4
1	CA	1023	G	7.4

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Mol	Chain	Res	Type	RSRZ
1	CA	1286	A	7.4
1	AA	84	U	7.4
31	BA	2189	U	7.4
31	BA	2802	G	7.4
1	AA	1222	G	7.3
22	B0	5	LYS	7.3
38	DI	89	TYR	7.3
1	CA	1235	U	7.3
36	DG	35	GLU	7.3
1	AA	1030(B)	C	7.2
22	B0	3	HIS	7.2
35	DF	12	LEU	7.2
1	AA	1005	A	7.1
1	AA	90	U	7.1
31	BA	2105	C	7.0
12	CL	129	ALA	6.8
7	CG	78	ARG	6.8
1	CA	1150	U	6.8
9	AI	81	ILE	6.7
10	AJ	70	ARG	6.7
1	AA	1139	G	6.7
19	CS	81	ARG	6.7
1	CA	1033	G	6.7
1	AA	949	A	6.6
46	DU	118	GLY	6.6
38	DI	119	PRO	6.6
1	CA	1027	C	6.5
1	AA	1286	A	6.5
9	CI	3	GLN	6.5
7	CG	79	ARG	6.5
35	BF	12	LEU	6.4
1	CA	345	C	6.4
9	CI	125	TYR	6.4
36	DG	41	GLN	6.4
1	AA	1137	C	6.4
22	D0	1	MET	6.4
1	CA	344	A	6.3
9	CI	127	LYS	6.3
1	CA	1214	C	6.3
13	CM	69	GLU	6.3
1	AA	1447	A	6.3
1	CA	1035	A	6.3

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Mol	Chain	Res	Type	RSRZ
1	CA	1030(B)	C	6.2
10	AJ	5	ARG	6.2
19	CS	80	TYR	6.2
7	CG	4	ARG	6.2
38	DI	97	ILE	6.2
1	CA	1032	G	6.2
31	BA	2106	G	6.2
18	CR	88	LYS	6.2
21	AU	22	ARG	6.1
1	AA	1119	C	6.1
13	AM	97	PRO	6.1
1	AA	1001(A)	G	6.1
9	CI	126	SER	6.1
47	DV	68	LYS	6.1
41	BP	149	GLU	6.0
1	AA	1000	U	6.0
21	AU	18	TYR	6.0
31	DA	2189	U	6.0
36	BG	88	ILE	5.9
1	AA	984	C	5.9
10	AJ	71	LEU	5.8
1	AA	961	U	5.8
1	AA	979	C	5.8
31	DA	2105	C	5.8
1	AA	1029	C	5.8
7	CG	80	VAL	5.8
31	DA	2801(A)	A	5.7
1	AA	1140	C	5.7
9	CI	20	ARG	5.7
10	AJ	38	ILE	5.7
31	DA	1174	A	5.7
1	CA	1240	U	5.7
31	DA	2803	C	5.7
1	AA	985	C	5.6
29	B7	49	ARG	5.6
1	AA	1027	C	5.6
31	DA	2103	C	5.6
36	BG	43	LEU	5.6
5	AE	155	GLU	5.6
1	CA	961	U	5.6
1	AA	65	U	5.6
21	CU	9	ARG	5.6

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Mol	Chain	Res	Type	RSRZ
1	AA	1028	C	5.6
31	BA	2101	G	5.6
1	AA	64	G	5.6
1	AA	1003	G	5.6
31	DA	279	C	5.5
21	AU	17	THR	5.5
38	DI	58	LEU	5.5
1	CA	1236	A	5.5
1	AA	1233	G	5.5
1	CA	1129	C	5.5
10	CJ	70	ARG	5.5
21	AU	5	ASP	5.5
1	AA	1050	G	5.5
14	AN	2	ALA	5.5
36	DG	182	LYS	5.4
1	AA	1001	A	5.4
31	BA	2796	U	5.4
31	DA	271(K)	U	5.4
19	AS	56	GLN	5.4
38	DI	118	LYS	5.3
39	DN	1	MET	5.3
1	AA	1129	C	5.3
1	AA	1024	G	5.3
1	CA	1148	U	5.3
38	DI	61	ARG	5.3
10	AJ	39	PRO	5.3
1	AA	82	U	5.3
1	CA	1224	G	5.3
31	DA	2796	U	5.3
9	CI	62	TYR	5.2
1	AA	81	U	5.2
1	CA	1124	G	5.2
19	CS	27	GLU	5.2
1	AA	1030(A)	G	5.1
7	AG	5	ARG	5.1
13	CM	63	THR	5.1
13	AM	69	GLU	5.1
47	BV	46	VAL	5.1
19	AS	29	ARG	5.1
31	BA	1053	C	5.1
1	CA	1092	A	5.1
1	AA	983	A	5.1

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Mol	Chain	Res	Type	RSRZ
10	AJ	21	GLN	5.1
19	CS	10	PHE	5.1
2	CB	132	LYS	5.1
38	DI	120	ILE	5.1
27	D5	59	GLU	5.0
31	DA	1531	C	5.0
35	DF	207	GLY	5.0
25	D3	60	GLU	5.0
1	CA	1031	G	5.0
31	DA	281	G	5.0
36	BG	87	PRO	5.0
1	CA	1249	C	5.0
9	AI	2	GLU	5.0
1	AA	951	G	5.0
36	DG	155	MET	5.0
21	CU	10	ARG	5.0
1	CA	1006	C	4.9
10	CJ	16	LEU	4.9
1	CA	1005	A	4.9
31	BA	2103	C	4.9
10	CJ	40	LEU	4.9
10	AJ	25	GLU	4.9
2	AB	7	VAL	4.9
18	AR	88	LYS	4.9
22	B0	1	MET	4.9
1	AA	982	U	4.9
10	CJ	71	LEU	4.9
10	AJ	37	PRO	4.8
7	AG	99	LEU	4.8
9	CI	17	VAL	4.8
31	DA	2792	G	4.8
9	CI	85	LEU	4.8
22	D0	2	ALA	4.8
1	CA	89	C	4.8
13	CM	84	ILE	4.8
19	AS	49	ILE	4.8
19	CS	76	PRO	4.8
1	AA	1125	U	4.8
34	DE	54	GLN	4.7
7	CG	3	ARG	4.7
31	DA	1114	G	4.7
10	AJ	10	GLY	4.7

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Mol	Chain	Res	Type	RSRZ
1	CA	1004	A	4.7
9	CI	124	GLN	4.7
31	DA	2799	C	4.7
50	DY	2	ARG	4.7
1	AA	1030(C)	G	4.7
13	AM	3	ARG	4.7
31	DA	2101	G	4.7
22	D0	4	LYS	4.7
9	CI	128	ARG	4.6
31	DA	1913	A	4.6
1	AA	1037	C	4.6
13	CM	5	ALA	4.6
1	AA	994	A	4.6
1	AA	1031	G	4.6
1	AA	79	G	4.6
31	DA	2790	A	4.6
32	BB	88	C	4.6
35	DF	11	VAL	4.6
38	DI	145	VAL	4.6
1	CA	88	A	4.6
1	AA	80	G	4.6
38	DI	101	LEU	4.6
19	CS	71	LEU	4.5
3	AC	107	GLN	4.5
50	DY	50	ARG	4.5
1	CA	1030(C)	G	4.5
36	DG	88	ILE	4.5
19	AS	33	THR	4.5
34	DE	204	ALA	4.5
1	CA	1447	A	4.5
1	CA	984	C	4.5
47	BV	68	LYS	4.5
38	DI	69	LYS	4.5
2	CB	232	PRO	4.5
37	DH	97	ARG	4.5
1	AA	1141	C	4.5
10	AJ	20	ALA	4.4
1	AA	91	C	4.4
1	AA	1266	G	4.4
19	CS	75	ALA	4.4
31	BA	275	G	4.4
31	DA	2894	G	4.4

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
1	AA	1051	C	4.4
9	CI	92	TYR	4.4
13	CM	6	GLY	4.4
42	DQ	24	GLY	4.4
10	CJ	9	ARG	4.4
1	CA	1128	C	4.4
38	DI	82	ARG	4.4
27	B5	58	LEU	4.4
1	CA	1003	G	4.4
1	AA	1030	C	4.4
9	AI	101	PHE	4.4
22	B0	2	ALA	4.4
19	AS	32	LYS	4.4
1	AA	947	G	4.4
19	AS	57	HIS	4.4
27	D5	60	VAL	4.4
1	CA	218	C	4.3
9	CI	65	VAL	4.3
22	B0	85	ALA	4.3
1	CA	1037	C	4.3
1	CA	1022	G	4.3
13	AM	105	THR	4.3
19	AS	40	ILE	4.3
10	CJ	99	LYS	4.3
1	CA	959	A	4.3
13	AM	102	ARG	4.3
48	DW	113	LYS	4.3
1	CA	1028	C	4.3
31	BA	2402	C	4.3
31	DA	2106	G	4.2
1	AA	83	U	4.2
7	CG	112	PRO	4.2
13	AM	4	ILE	4.2
31	DA	2804	C	4.2
1	CA	199	G	4.2
1	AA	218	C	4.2
38	DI	143	SER	4.2
1	AA	980	C	4.2
31	DA	157	U	4.2
1	AA	1023	G	4.2
1	CA	1140	C	4.2
7	AG	78	ARG	4.2

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Mol	Chain	Res	Type	RSRZ
31	DA	2100	G	4.2
1	CA	1183	A	4.2
38	BI	70	GLU	4.2
1	CA	1001(A)	G	4.2
31	DA	11	G	4.2
31	BA	2801	A	4.1
31	BA	2102	U	4.1
38	DI	111	PRO	4.1
31	BA	1531	C	4.1
38	DI	91	SER	4.1
1	CA	1030(A)	G	4.1
13	AM	65	LYS	4.1
10	CJ	22	LYS	4.1
11	CK	129	SER	4.1
38	DI	87	LYS	4.1
1	AA	946	A	4.1
1	AA	1257	U	4.1
38	DI	107	VAL	4.1
1	AA	1267	C	4.1
1	CA	1234	C	4.1
31	DA	2795	G	4.1
38	DI	68	LEU	4.1
1	CA	983	A	4.1
14	AN	19	ARG	4.1
1	CA	1205	U	4.1
13	AM	62	ASN	4.1
36	DG	136	ARG	4.1
9	AI	96	LEU	4.1
9	AI	84	ALA	4.1
10	CJ	20	ALA	4.1
10	AJ	85	LEU	4.0
1	CA	428	G	4.0
1	CA	963	G	4.0
41	BP	150	ALA	4.0
14	CN	61	TRP	4.0
1	AA	999	C	4.0
1	CA	1096	C	4.0
5	CE	154	GLY	4.0
7	CG	2	ALA	4.0
19	AS	59	PRO	4.0
21	CU	5	ASP	4.0
9	CI	21	PRO	4.0

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Mol	Chain	Res	Type	RSRZ
1	AA	1260	C	4.0
21	CU	11	GLY	4.0
14	AN	18	VAL	4.0
19	CS	52	TYR	4.0
8	AH	116	LYS	4.0
1	AA	1033	G	4.0
31	DA	2102	U	4.0
1	AA	1035	A	4.0
14	CN	2	ALA	4.0
10	AJ	36	GLY	4.0
1	AA	1300	G	3.9
3	CC	79	ARG	3.9
12	AL	129	ALA	3.9
38	DI	66	GLU	3.9
10	CJ	72	VAL	3.9
11	CK	128	ALA	3.9
13	AM	104	ARG	3.9
19	CS	26	GLY	3.9
1	AA	1241	G	3.9
31	DA	2793	G	3.9
1	AA	381	C	3.9
1	AA	1234	C	3.9
21	AU	24	ARG	3.9
35	BF	133	ASN	3.9
2	CB	231	GLU	3.9
19	AS	53	ASN	3.9
42	BQ	24	GLY	3.9
31	BA	1052	C	3.8
38	DI	117	GLU	3.8
36	DG	172	LEU	3.8
16	AP	12	LYS	3.8
13	CM	57	ARG	3.8
31	DA	1048	A	3.8
1	CA	1021	G	3.8
38	DI	109	ILE	3.8
31	DA	1043	C	3.8
10	CJ	17	ASP	3.8
13	AM	29	ARG	3.8
13	CM	42	ALA	3.8
13	CM	64	TRP	3.8
1	CA	1126	U	3.8
1	CA	1029	C	3.8

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Mol	Chain	Res	Type	RSRZ
19	AS	30	LEU	3.8
27	D5	58	LEU	3.8
31	BA	884	C	3.8
3	AC	69	HIS	3.8
9	AI	128	ARG	3.8
13	CM	62	ASN	3.8
14	AN	8	GLU	3.8
1	CA	958	A	3.8
3	CC	190	ARG	3.8
24	B2	62	THR	3.8
3	CC	155	GLY	3.8
31	DA	2791	C	3.8
45	DT	39	ARG	3.8
36	DG	157	ILE	3.8
1	AA	1368	G	3.7
31	DA	271(M)	G	3.7
1	CA	962	C	3.7
1	CA	1280	A	3.7
19	AS	81	ARG	3.7
1	CA	1222	G	3.7
31	BA	2795	G	3.7
9	CI	84	ALA	3.7
13	AM	58	GLU	3.7
38	DI	122	GLU	3.7
1	AA	630	G	3.7
13	CM	8	GLU	3.7
7	AG	102	ARG	3.7
13	AM	8	GLU	3.7
15	AO	88	ARG	3.7
36	DG	152	LEU	3.7
31	DA	2893	G	3.7
36	DG	142	PRO	3.7
1	CA	427	U	3.7
3	CC	44	GLU	3.7
1	AA	1231	G	3.7
14	AN	16	PHE	3.7
38	DI	86	THR	3.7
1	AA	1294	G	3.7
1	CA	1160	G	3.7
19	AS	51	VAL	3.7
13	CM	32	GLU	3.7
19	AS	50	ALA	3.7

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
1	AA	1209	C	3.7
1	CA	1038	C	3.7
9	CI	15	ALA	3.6
1	AA	1149	C	3.6
1	AA	1034	G	3.6
2	CB	137	ARG	3.6
2	CB	14	GLY	3.6
7	AG	100	ALA	3.6
1	CA	1492	A	3.6
21	CU	25	LYS	3.6
9	AI	90	PRO	3.6
1	AA	952	U	3.6
1	AA	1240	U	3.6
21	AU	3	LYS	3.6
1	CA	1131	G	3.6
1	CA	1139	G	3.6
50	DY	86	ARG	3.6
9	AI	9	ARG	3.6
1	CA	1068	G	3.6
1	CA	1127	G	3.6
38	DI	73	GLU	3.6
7	CG	82	GLY	3.6
1	AA	96	U	3.6
19	AS	27	GLU	3.6
1	AA	962	C	3.6
1	CA	1007	C	3.6
7	AG	30	ILE	3.6
13	CM	7	VAL	3.5
21	AU	21	TYR	3.5
3	AC	192	THR	3.5
21	AU	4	GLY	3.5
10	AJ	23	ILE	3.5
3	AC	54	ARG	3.5
13	AM	103	THR	3.5
19	AS	69	HIS	3.5
1	AA	841	U	3.5
10	CJ	39	PRO	3.5
10	AJ	72	VAL	3.5
1	AA	93	G	3.5
1	AA	1295	G	3.5
38	DI	128	LEU	3.5
9	AI	88	TYR	3.5

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
1	CA	1186	G	3.5
1	AA	1235	U	3.5
1	CA	1442(A)	G	3.5
36	BG	152	LEU	3.5
3	CC	53	ALA	3.5
47	BV	45	THR	3.5
37	DH	96	ALA	3.5
1	AA	1236	A	3.5
2	AB	232	PRO	3.5
31	BA	1494	A	3.5
1	CA	1221	G	3.5
14	AN	14	PRO	3.5
1	AA	1362	C	3.5
1	AA	1041	A	3.5
47	DV	28	GLU	3.4
1	CA	1041	A	3.4
35	BF	14	PRO	3.4
1	AA	1220	G	3.4
31	DA	352	G	3.4
7	CG	83	ALA	3.4
9	CI	111	ARG	3.4
1	AA	958	A	3.4
13	AM	63	THR	3.4
21	CU	8	THR	3.4
38	DI	57	ARG	3.4
49	BX	91	ALA	3.4
10	CJ	8	LEU	3.4
1	CA	1002	G	3.4
31	DA	883	G	3.4
7	AG	79	ARG	3.4
1	CA	950	U	3.4
31	DA	1494	A	3.4
19	AS	71	LEU	3.4
31	DA	1113	U	3.4
1	AA	1044	A	3.4
31	DA	1046	A	3.4
10	CJ	55	LYS	3.4
1	AA	1174	G	3.4
1	AA	1206	G	3.4
31	BA	271(L)	U	3.4
1	AA	1280	A	3.4
19	AS	5	LEU	3.4

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Mol	Chain	Res	Type	RSRZ
1	CA	931	C	3.4
24	D2	48	HIS	3.4
31	BA	2799	C	3.4
31	DA	884	C	3.4
9	CI	5	TYR	3.4
38	DI	84	GLY	3.4
1	CA	1040	U	3.4
31	BA	352	G	3.4
10	CJ	28	ARG	3.4
13	AM	32	GLU	3.4
7	AG	76	ARG	3.4
50	DY	51	VAL	3.4
1	AA	532	A	3.4
1	AA	977	A	3.4
1	AA	1030(D)	A	3.4
36	DG	133	LEU	3.4
7	CG	99	LEU	3.4
31	DA	879	G	3.4
1	AA	1335	C	3.3
13	CM	43	THR	3.3
39	BN	1	MET	3.3
19	AS	58	VAL	3.3
10	CJ	68	HIS	3.3
13	CM	60	VAL	3.3
1	AA	1244	C	3.3
1	CA	932	C	3.3
41	DP	150	ALA	3.3
9	CI	88	TYR	3.3
1	AA	933	G	3.3
36	DG	43	LEU	3.3
10	CJ	89	ASP	3.3
28	D6	42	TRP	3.3
1	CA	324	G	3.3
42	BQ	139	GLU	3.3
9	CI	96	LEU	3.3
1	AA	1297	C	3.3
7	AG	101	LEU	3.3
14	CN	60	SER	3.3
31	BA	883	G	3.3
27	B5	60	VAL	3.3
1	AA	217	C	3.3
1	CA	1030	C	3.3

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
1	CA	1389	C	3.3
1	AA	1046	A	3.3
2	AB	134	GLU	3.2
31	BA	2794	C	3.2
31	BA	363(F)	A	3.2
31	DA	2310	A	3.2
21	CU	2	GLY	3.2
36	DG	118	ARG	3.2
1	AA	1360	A	3.2
13	AM	96	LEU	3.2
13	CM	102	ARG	3.2
19	AS	25	LYS	3.2
50	BY	28	LYS	3.2
9	CI	18	PHE	3.2
1	CA	1182	G	3.2
10	CJ	26	ALA	3.2
1	AA	1336	C	3.2
10	CJ	27	ALA	3.2
21	AU	12	LYS	3.2
1	AA	1020	U	3.2
1	AA	1132	C	3.2
1	CA	1242	C	3.2
31	DA	271(J)	C	3.2
1	CA	220	G	3.2
7	AG	134	ALA	3.2
3	AC	104	GLN	3.2
1	AA	1043	C	3.2
1	AA	959	A	3.2
51	DZ	112	ARG	3.2
50	DY	61	ILE	3.2
38	DI	54	GLN	3.2
13	AM	7	VAL	3.2
38	DI	62	LYS	3.2
1	AA	1232	U	3.2
3	CC	160	ALA	3.2
1	AA	1363	C	3.2
1	AA	1369	C	3.2
1	CA	1030(D)	A	3.1
36	DG	94	LEU	3.1
3	CC	189	ALA	3.1
13	CM	65	LYS	3.1
1	CA	1287	A	3.1

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Mol	Chain	Res	Type	RSRZ
31	BA	2801(A)	A	3.1
1	CA	1000	U	3.1
12	AL	128	ALA	3.1
9	AI	126	SER	3.1
1	AA	1265	G	3.1
31	BA	508	G	3.1
13	CM	51	ALA	3.1
36	DG	36	LYS	3.1
1	AA	945	G	3.1
38	DI	144	VAL	3.1
1	AA	989	C	3.1
1	CA	930	C	3.1
9	CI	81	ILE	3.1
19	AS	68	GLY	3.1
1	AA	1252	A	3.1
1	AA	220	G	3.1
10	AJ	24	VAL	3.1
45	BT	2	ASN	3.1
1	AA	1007	C	3.1
7	CG	32	ARG	3.1
46	BU	117	GLN	3.1
7	AG	103	TRP	3.1
38	DI	70	GLU	3.1
1	AA	97	G	3.1
9	AI	99	LEU	3.1
1	CA	1093	A	3.1
1	AA	1311	G	3.1
13	CM	29	ARG	3.1
1	AA	1008	C	3.1
9	CI	70	LYS	3.1
21	AU	25	LYS	3.1
9	AI	80	GLY	3.0
34	BE	54	GLN	3.0
10	AJ	4	ILE	3.0
10	AJ	22	LYS	3.0
47	DV	45	THR	3.0
1	CA	973	G	3.0
7	CG	110	GLN	3.0
13	CM	36	LYS	3.0
2	AB	101	MET	3.0
21	CU	14	TRP	3.0
31	DA	271(N)	U	3.0

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Mol	Chain	Res	Type	RSRZ
1	AA	1116	C	3.0
1	AA	1208	C	3.0
1	AA	1355	G	3.0
1	AA	1370	G	3.0
4	AD	3	ARG	3.0
1	AA	1201	A	3.0
1	AA	1332	A	3.0
13	AM	59	TYR	3.0
9	AI	85	LEU	3.0
13	CM	59	TYR	3.0
28	B6	42	TRP	3.0
13	CM	16	ASP	3.0
31	BA	1917	U	3.0
21	AU	7	ARG	3.0
31	BA	2188	C	3.0
19	AS	48	THR	3.0
24	D2	35	LEU	3.0
1	CA	1393	U	3.0
13	CM	39	ILE	3.0
27	D5	53	ALA	3.0
38	DI	76	THR	3.0
1	CA	1141	C	3.0
1	AA	1032	G	3.0
9	CI	2	GLU	3.0
19	AS	55	LYS	3.0
10	CJ	18	ALA	3.0
21	CU	12	LYS	3.0
19	CS	24	ALA	3.0
2	CB	217	ARG	3.0
36	DG	135	LEU	3.0
1	AA	1207	G	3.0
31	DA	2805	G	3.0
10	CJ	5	ARG	3.0
7	CG	81	GLY	3.0
38	DI	126	TYR	3.0
36	BG	135	LEU	3.0
1	AA	963	G	3.0
1	AA	1310	G	3.0
3	AC	193	TYR	3.0
10	AJ	17	ASP	3.0
3	AC	2	GLY	3.0
13	AM	64	TRP	3.0

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Mol	Chain	Res	Type	RSRZ
38	BI	73	GLU	3.0
44	DS	54	LEU	2.9
1	CA	1130	A	2.9
1	CA	1261	A	2.9
9	AI	8	GLY	2.9
10	AJ	7	LYS	2.9
36	BG	39	ILE	2.9
21	CU	22	ARG	2.9
31	BA	1046	A	2.9
11	CK	11	LYS	2.9
25	B3	1	MET	2.9
11	CK	89	ALA	2.9
13	CM	104	ARG	2.9
7	AG	156	TRP	2.9
1	AA	971	G	2.9
37	DH	46	GLU	2.9
1	AA	1237	C	2.9
1	CA	1097	C	2.9
7	AG	29	LYS	2.9
36	BG	75	LYS	2.9
37	BH	46	GLU	2.9
19	CS	79	THR	2.9
1	CA	1369	C	2.9
21	CU	21	TYR	2.9
21	AU	23	PRO	2.9
1	CA	1257	U	2.9
38	BI	90	GLY	2.9
50	BY	59	GLY	2.9
7	CG	114	ARG	2.9
13	AM	2	ALA	2.9
35	BF	24	LEU	2.9
35	DF	24	LEU	2.9
1	AA	1148	U	2.9
1	CA	1049	U	2.9
14	CN	35	ARG	2.9
1	AA	1261	A	2.9
31	BA	1532	C	2.9
31	DA	1532	C	2.9
1	CA	1353	G	2.9
31	BA	1509	C	2.9
7	CG	6	ARG	2.9
20	CT	83	ARG	2.9

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Mol	Chain	Res	Type	RSRZ
37	DH	42	ARG	2.9
19	CS	21	GLU	2.9
34	DE	205	ALA	2.9
1	AA	1021	G	2.8
1	CA	974	A	2.8
9	CI	22	GLY	2.8
3	CC	191	THR	2.8
3	CC	104	GLN	2.8
33	BD	26	LYS	2.8
1	AA	71	C	2.8
31	DA	363(F)	A	2.8
9	AI	92	TYR	2.8
1	AA	1333	A	2.8
1	CA	1225	A	2.8
1	CA	1275	A	2.8
35	DF	133	ASN	2.8
32	DB	3	C	2.8
3	AC	56	ASP	2.8
3	AC	184	TYR	2.8
9	CI	19	LEU	2.8
44	DS	37	ALA	2.8
36	BG	118	ARG	2.8
1	AA	1186	G	2.8
1	CA	985	C	2.8
1	CA	1296	C	2.8
11	AK	19	ALA	2.8
36	DG	34	LEU	2.8
3	CC	80	GLY	2.8
38	DI	90	GLY	2.8
1	AA	77	G	2.8
32	DB	88	C	2.8
17	CQ	100	LYS	2.8
13	AM	91	ARG	2.8
44	DS	48	LEU	2.8
31	DA	2794	C	2.8
11	AK	12	ARG	2.8
10	CJ	38	ILE	2.8
44	DS	36	TYR	2.8
10	AJ	40	LEU	2.8
22	D0	85	ALA	2.8
1	AA	92	C	2.8
16	CP	48	TRP	2.8

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Mol	Chain	Res	Type	RSRZ
32	DB	62	C	2.8
38	DI	88	ILE	2.8
10	AJ	35	SER	2.8
10	CJ	45	ARG	2.8
31	DA	1108	U	2.8
9	AI	12	GLU	2.8
38	DI	74	ASN	2.8
31	BA	882	G	2.8
31	DA	1112	G	2.8
38	DI	132	PRO	2.8
2	CB	241	GLU	2.8
9	AI	104	ARG	2.8
1	AA	1120	G	2.8
1	CA	1295	G	2.8
10	AJ	62	HIS	2.8
21	AU	19	GLY	2.8
31	DA	1051	G	2.8
38	BI	65	ALA	2.8
50	BY	2	ARG	2.8
1	CA	960	U	2.7
13	CM	108	ARG	2.7
1	AA	1218	C	2.7
36	DG	80	PHE	2.7
10	AJ	16	LEU	2.7
24	B2	61	LEU	2.7
7	AG	80	VAL	2.7
13	AM	61	GLU	2.7
2	AB	133	LYS	2.7
31	DA	362	U	2.7
42	DQ	23	GLY	2.7
14	AN	17	LYS	2.7
10	AJ	8	LEU	2.7
1	CA	1387	G	2.7
1	AA	1136	U	2.7
9	AI	111	ARG	2.7
10	CJ	23	ILE	2.7
13	CM	38	GLY	2.7
31	BA	878	A	2.7
1	AA	1217	C	2.7
1	CA	933	G	2.7
1	CA	1050	G	2.7
36	BG	136	ARG	2.7

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Mol	Chain	Res	Type	RSRZ
10	AJ	6	ILE	2.7
34	BE	76	ARG	2.7
45	DT	115	ARG	2.7
1	AA	1004	A	2.7
10	CJ	67	THR	2.7
10	CJ	69	ASN	2.7
50	DY	59	GLY	2.7
9	AI	51	ARG	2.7
50	DY	52	SER	2.7
24	B2	48	HIS	2.7
1	CA	947	G	2.7
3	AC	105	GLU	2.7
19	CS	12	ASP	2.7
44	DS	33	LYS	2.7
13	CM	55	ARG	2.7
32	DB	114	C	2.7
1	AA	1302	U	2.7
1	CA	956	U	2.7
2	CB	15	VAL	2.7
1	CA	1042	G	2.7
10	AJ	41	PRO	2.7
35	DF	10	PRO	2.7
2	CB	51	LEU	2.7
32	DB	60	C	2.7
2	CB	36	ARG	2.7
1	AA	345	C	2.7
1	CA	1115	C	2.7
31	DA	1547	C	2.7
1	CA	1278	U	2.7
31	BA	1108	U	2.7
35	BF	11	VAL	2.7
1	CA	144	G	2.7
3	AC	16	ARG	2.7
1	AA	383	A	2.7
3	CC	77	ILE	2.7
32	BB	90	A	2.7
1	AA	219	C	2.6
1	AA	417	C	2.6
50	BY	49	VAL	2.6
1	CA	1233	G	2.6
13	AM	57	ARG	2.6
37	BH	116	GLU	2.6

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Mol	Chain	Res	Type	RSRZ
2	AB	213	LEU	2.6
9	AI	87	GLN	2.6
1	AA	223	U	2.6
1	CA	957	U	2.6
2	AB	231	GLU	2.6
36	DG	158	ALA	2.6
1	AA	78	G	2.6
36	DG	137	GLU	2.6
1	AA	201	C	2.6
9	CI	64	THR	2.6
31	BA	2803	C	2.6
3	AC	68	VAL	2.6
3	AC	181	ASN	2.6
7	AG	74	GLU	2.6
20	CT	101	GLY	2.6
1	AA	941	G	2.6
31	BA	2793	G	2.6
31	DA	1533	G	2.6
23	B1	93	GLU	2.6
1	CA	532	A	2.6
31	DA	1497	U	2.6
1	CA	1158	C	2.6
50	BY	102	CYS	2.6
38	DI	123	LEU	2.6
1	AA	1353	G	2.6
9	CI	4	TYR	2.6
1	AA	1115	C	2.6
1	CA	417	C	2.6
13	AM	25	ILE	2.6
19	CS	77	THR	2.6
3	CC	159	GLY	2.6
3	AC	101	LEU	2.6
9	AI	107	ARG	2.6
16	AP	11	SER	2.6
16	AP	42	ARG	2.6
19	CS	28	LYS	2.6
22	D0	7	LEU	2.6
1	AA	1274	G	2.6
1	CA	1185	G	2.6
5	AE	154	GLY	2.6
9	CI	50	LEU	2.6
32	DB	59	A	2.6

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Mol	Chain	Res	Type	RSRZ
1	CA	352	C	2.6
1	CA	1336	C	2.6
9	CI	53	VAL	2.6
36	DG	171	ALA	2.6
38	DI	124	GLY	2.6
2	CB	133	LYS	2.6
3	AC	72	LYS	2.6
1	AA	70	G	2.6
7	CG	156	TRP	2.6
11	CK	90	GLY	2.6
41	DP	144	GLU	2.6
10	AJ	69	ASN	2.6
13	AM	66	LEU	2.6
13	AM	100	GLY	2.6
19	AS	28	LYS	2.6
28	B6	17	LYS	2.6
44	DS	49	VAL	2.6
9	CI	60	ASP	2.6
21	CU	18	TYR	2.6
31	DA	275	G	2.6
7	CG	33	ASP	2.6
45	DT	2	ASN	2.6
1	CA	1243	C	2.6
2	CB	19	HIS	2.6
13	AM	98	VAL	2.6
19	CS	9	VAL	2.6
31	BA	1914	C	2.6
38	DI	125	GLU	2.6
31	DA	2186	G	2.6
13	AM	107	ALA	2.6
1	CA	1352	C	2.6
10	AJ	19	SER	2.6
10	CJ	34	VAL	2.6
10	CJ	41	PRO	2.6
38	DI	135	GLU	2.6
51	BZ	113	ALA	2.6
2	AB	187	LEU	2.6
9	AI	47	LEU	2.6
31	DA	1044	G	2.5
1	AA	382	A	2.5
1	CA	970	C	2.5
10	CJ	19	SER	2.5

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Mol	Chain	Res	Type	RSRZ
32	DB	5	C	2.5
36	BG	35	GLU	2.5
1	CA	200	G	2.5
32	BB	89	G	2.5
1	AA	1296	C	2.5
7	AG	12	LEU	2.5
11	AK	81	ASP	2.5
36	DG	159	VAL	2.5
1	CA	1020	U	2.5
7	CG	34	GLY	2.5
13	CM	35	GLU	2.5
1	CA	1202	G	2.5
31	BA	2310	A	2.5
31	DA	2801	A	2.5
32	DB	115	G	2.5
31	DA	1049	C	2.5
32	DB	4	C	2.5
13	CM	107	ALA	2.5
1	CA	1232	U	2.5
10	CJ	66	ARG	2.5
37	DH	94	TYR	2.5
7	AG	37	ASN	2.5
22	D0	6	GLY	2.5
19	CS	11	VAL	2.5
36	DG	8	LYS	2.5
36	DG	16	ARG	2.5
36	BG	86	MET	2.5
3	CC	76	VAL	2.5
18	AR	31	LEU	2.5
1	CA	66	G	2.5
1	CA	1207	G	2.5
22	B0	7	LEU	2.5
31	DA	271(I)	G	2.5
31	DA	1115	G	2.5
31	DA	1499	C	2.5
2	CB	11	LEU	2.5
7	CG	104	LEU	2.5
1	CA	1187	G	2.5
1	AA	1384	C	2.5
1	CA	1244	C	2.5
10	CJ	3	LYS	2.5
36	DG	69	ALA	2.5

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
1	AA	1159	U	2.5
36	DG	176	LEU	2.5
19	AS	26	GLY	2.5
10	AJ	9	ARG	2.5
16	AP	13	HIS	2.5
1	CA	353	A	2.5
19	CS	53	ASN	2.5
1	AA	1210	C	2.5
9	CI	69	GLY	2.5
11	AK	98	LEU	2.5
31	BA	1048	A	2.5
31	DA	2660	A	2.5
13	CM	25	ILE	2.5
19	AS	54	GLY	2.5
36	DG	48	GLU	2.5
1	CA	1285	A	2.5
1	AA	1221	G	2.5
36	DG	131	TYR	2.5
50	BY	51	VAL	2.5
19	AS	43	GLU	2.4
3	AC	106	VAL	2.4
13	CM	106	ASN	2.4
18	CR	19	LYS	2.4
21	AU	2	GLY	2.4
1	AA	199	G	2.4
3	AC	147	LYS	2.4
1	CA	1159	U	2.4
19	CS	59	PRO	2.4
19	CS	13	ASP	2.4
1	AA	1350	A	2.4
11	AK	11	LYS	2.4
19	AS	36	ARG	2.4
21	CU	24	ARG	2.4
31	DA	2402	C	2.4
42	DQ	139	GLU	2.4
36	DG	39	ILE	2.4
44	DS	56	LEU	2.4
1	AA	1121	U	2.4
1	AA	1038	C	2.4
1	CA	1386	G	2.4
31	BA	1107	G	2.4
20	CT	99	LEU	2.4

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Mol	Chain	Res	Type	RSRZ
31	DA	1445(A)	C	2.4
38	BI	61	ARG	2.4
50	BY	48	ALA	2.4
19	CS	45	VAL	2.4
31	DA	2629	A	2.4
1	CA	1086	U	2.4
19	CS	68	GLY	2.4
1	AA	1293	G	2.4
1	CA	1241	G	2.4
3	AC	103	VAL	2.4
31	DA	1509	C	2.4
36	DG	72	ARG	2.4
50	DY	48	ALA	2.4
39	BN	68	GLU	2.4
10	AJ	73	ASP	2.4
13	CM	85	GLY	2.4
1	AA	957	U	2.4
1	AA	1446	U	2.4
13	AM	60	VAL	2.4
1	CA	1066	C	2.4
3	CC	196	LEU	2.4
3	CC	102	ASN	2.4
9	AI	21	PRO	2.4
12	CL	128	ALA	2.4
47	DV	46	VAL	2.4
1	AA	1361	G	2.4
1	CA	198	G	2.4
31	DA	361	G	2.4
32	BB	87	G	2.4
32	DB	6	C	2.4
19	AS	38	SER	2.4
3	AC	207	VAL	2.4
27	B5	2	ALA	2.4
18	CR	46	GLU	2.4
36	BG	182	LYS	2.4
10	AJ	86	MET	2.4
1	CA	65	U	2.4
1	AA	195	A	2.4
1	AA	1245	A	2.4
9	AI	30	GLY	2.4
13	CM	100	GLY	2.4
10	CJ	15	THR	2.4

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Mol	Chain	Res	Type	RSRZ
1	AA	456	C	2.4
9	AI	110	GLU	2.4
2	CB	240	GLN	2.4
31	DA	508	G	2.4
9	AI	56	LEU	2.4
37	DH	159	GLU	2.4
39	DN	129	PRO	2.4
4	CD	3	ARG	2.3
36	BG	146	TYR	2.3
1	AA	1131	G	2.3
1	CA	929	G	2.3
1	CA	1156	G	2.3
1	AA	1364	U	2.3
1	CA	1091	U	2.3
10	CJ	43	ARG	2.3
31	BA	2660	A	2.3
7	AG	31	MET	2.3
1	CA	1065	U	2.3
13	CM	54	VAL	2.3
7	AG	104	LEU	2.3
1	AA	1128	C	2.3
1	AA	1359	C	2.3
31	DA	1053	C	2.3
1	AA	1182	G	2.3
1	AA	1331	G	2.3
7	AG	36	LYS	2.3
21	CU	26	LYS	2.3
2	CB	187	LEU	2.3
3	CC	124	ILE	2.3
16	AP	19	ILE	2.3
9	CI	10	ARG	2.3
43	DR	33	ARG	2.3
13	AM	51	ALA	2.3
1	CA	1368	G	2.3
1	AA	1040	U	2.3
13	AM	30	ALA	2.3
41	DP	91	PHE	2.3
1	CA	1146	A	2.3
2	CB	13	ALA	2.3
1	CA	217	C	2.3
34	BE	61	ARG	2.3
7	AG	35	LYS	2.3

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Mol	Chain	Res	Type	RSRZ
37	DH	52	VAL	2.3
41	DP	149	GLU	2.3
1	AA	1216	G	2.3
1	CA	426	G	2.3
10	CJ	87	THR	2.3
36	DG	91	ARG	2.3
10	CJ	29	ARG	2.3
7	CG	35	LYS	2.3
1	CA	1390	U	2.3
47	BV	55	ALA	2.3
36	BG	83	ARG	2.3
32	DB	26	A	2.3
1	AA	63	C	2.3
2	AB	11	LEU	2.3
19	CS	40	ILE	2.3
1	AA	1175	G	2.3
9	AI	3	GLN	2.3
7	AG	41	ARG	2.3
31	BA	1916	A	2.3
7	AG	71	PRO	2.3
7	AG	85	TYR	2.3
10	CJ	98	ILE	2.3
20	CT	86	ARG	2.3
32	DB	118	G	2.3
35	DF	25	PRO	2.3
37	DH	53	GLU	2.3
1	CA	1013	G	2.3
38	DI	93	THR	2.3
37	DH	158	HIS	2.3
38	DI	65	ALA	2.3
13	AM	67	GLU	2.3
18	CR	83	GLU	2.3
24	D2	43	GLN	2.3
1	AA	1389	C	2.3
1	CA	972	C	2.3
42	DQ	21	THR	2.3
1	CA	1370	G	2.2
37	BH	42	ARG	2.2
1	CA	1394	A	2.2
3	AC	102	ASN	2.2
36	BG	50	ALA	2.2
1	AA	1048	G	2.2

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Mol	Chain	Res	Type	RSRZ
1	AA	1215	G	2.2
1	CA	1385	G	2.2
31	DA	226	G	2.2
38	DI	60	GLU	2.2
4	AD	42	GLN	2.2
45	DT	1	MET	2.2
19	CS	29	ARG	2.2
1	AA	324	G	2.2
1	CA	346	G	2.2
36	DG	96	ARG	2.2
44	BS	54	LEU	2.2
31	DA	229	A	2.2
1	AA	202	U	2.2
9	AI	10	ARG	2.2
19	CS	43	GLU	2.2
3	AC	183	ASP	2.2
9	CI	109	VAL	2.2
7	CG	84	ASN	2.2
42	DQ	100	GLY	2.2
31	BA	2100	G	2.2
36	BG	139	LEU	2.2
38	DI	112	LYS	2.2
1	CA	949	A	2.2
1	CA	1227	A	2.2
37	DH	128	PRO	2.2
9	CI	95	LYS	2.2
41	BP	144	GLU	2.2
1	AA	369	C	2.2
1	AA	1270	C	2.2
20	AT	9	ASN	2.2
12	CL	127	GLU	2.2
19	CS	78	ARG	2.2
1	AA	1356	G	2.2
1	CA	978	A	2.2
31	DA	1106	A	2.2
7	CG	16	LEU	2.2
9	AI	102	LEU	2.2
3	CC	50	ALA	2.2
9	CI	47	LEU	2.2
1	CA	1392	G	2.2
20	CT	106	ALA	2.2
9	CI	78	LYS	2.2

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Mol	Chain	Res	Type	RSRZ
11	CK	12	ARG	2.2
19	CS	36	ARG	2.2
21	CU	3	LYS	2.2
36	BG	72	ARG	2.2
11	AK	129	SER	2.2
13	CM	50	GLU	2.2
36	BG	89	GLY	2.2
10	AJ	45	ARG	2.2
9	CI	30	GLY	2.2
31	DA	1107	G	2.2
10	AJ	26	ALA	2.2
50	DY	98	VAL	2.2
7	CG	37	ASN	2.2
35	BF	25	PRO	2.2
3	AC	53	ALA	2.2
41	DP	110	TYR	2.2
31	BA	157	U	2.2
31	DA	2833	G	2.2
36	DG	138	GLN	2.2
2	CB	214	ILE	2.2
13	AM	24	GLY	2.2
1	AA	455	C	2.2
9	CI	90	PRO	2.2
31	BA	2477	C	2.2
10	AJ	18	ALA	2.2
12	CL	111	LYS	2.2
29	D7	48	LYS	2.2
2	AB	144	ARG	2.2
36	DG	156	ASP	2.2
1	AA	976	G	2.2
1	AA	1271	G	2.2
1	CA	1206	G	2.2
1	AA	610	G	2.1
1	CA	1305	G	2.1
3	CC	194	GLY	2.1
6	CF	101	ALA	2.1
31	BA	1533	G	2.1
2	AB	16	HIS	2.1
9	AI	124	GLN	2.1
24	D2	41	ILE	2.1
3	CC	156	ARG	2.1
50	BY	50	ARG	2.1

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Mol	Chain	Res	Type	RSRZ
1	AA	418	C	2.1
1	AA	1018	C	2.1
1	AA	1326	C	2.1
1	CA	1039	C	2.1
1	CA	1209	C	2.1
38	DI	94	ALA	2.1
10	AJ	98	ILE	2.1
31	BA	271(K)	U	2.1
1	AA	1312	G	2.1
7	AG	26	PHE	2.1
19	AS	61	TYR	2.1
21	CU	23	PRO	2.1
9	CI	63	ILE	2.1
7	AG	106	GLN	2.1
36	DG	26	GLN	2.1
7	CG	154	TYR	2.1
49	BX	26	TYR	2.1
1	CA	994	A	2.1
1	CA	326	G	2.1
12	CL	114	LYS	2.1
7	CG	96	GLN	2.1
36	DG	134	GLY	2.1
12	AL	113	ARG	2.1
50	DY	79	CYS	2.1
1	AA	454	C	2.1
31	DA	878	A	2.1
31	DA	896	A	2.1
1	AA	988	G	2.1
1	CA	80	G	2.1
1	CA	540	G	2.1
2	CB	134	GLU	2.1
31	BA	11	G	2.1
31	DA	880	G	2.1
38	DI	64	GLU	2.1
1	AA	1322	C	2.1
2	CB	10	LEU	2.1
3	CC	72	LYS	2.1
13	CM	56	LEU	2.1
22	D0	5	LYS	2.1
25	D3	1	MET	2.1
7	AG	11	GLN	2.1
51	DZ	114	GLY	2.1

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Mol	Chain	Res	Type	RSRZ
1	CA	189(G)	G	2.1
7	AG	77	SER	2.1
17	AQ	69	LYS	2.1
2	AB	137	ARG	2.1
4	CD	7	PRO	2.1
5	AE	18	ARG	2.1
1	CA	952	U	2.1
28	D6	44	ARG	2.1
3	CC	192	THR	2.1
22	D0	9	SER	2.1
7	CG	22	LEU	2.1
36	DG	160	VAL	2.1
1	AA	1171	G	2.1
1	CA	953	G	2.1
9	CI	16	ARG	2.1
10	CJ	54	PHE	2.1
1	AA	924	C	2.1
1	AA	1219	U	2.1
1	CA	841	U	2.1
3	CC	193	TYR	2.1
36	BG	42	GLY	2.1
16	AP	76	GLN	2.1
38	BI	89	TYR	2.1
1	CA	1008	C	2.1
1	CA	1019	C	2.1
1	CA	1388	C	2.1
2	CB	165	VAL	2.1
7	CG	27	ILE	2.1
7	CG	113	GLU	2.1
21	AU	8	THR	2.1
1	AA	197	A	2.1
50	DY	28	LYS	2.1
3	CC	71	ALA	2.1
14	CN	59	ALA	2.1
1	CA	1347	G	2.1
7	AG	82	GLY	2.1
1	AA	1264	C	2.1
12	AL	114	LYS	2.1
19	AS	75	ALA	2.0
1	AA	98	G	2.0
1	CA	924	C	2.0
2	AB	19	HIS	2.0

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Mol	Chain	Res	Type	RSRZ
10	AJ	27	ALA	2.0
50	BY	63	LYS	2.0
45	BT	115	ARG	2.0
1	CA	1239	A	2.0
45	DT	92	GLY	2.0
7	AG	32	ARG	2.0
1	CA	1144	G	2.0
1	AA	514	C	2.0
1	AA	940	C	2.0
1	AA	1327	C	2.0
3	CC	195	VAL	2.0
31	BA	2894	G	2.0
9	AI	112	LYS	2.0
9	CI	73	GLN	2.0
13	AM	101	GLN	2.0
19	AS	82	GLY	2.0
31	DA	895	U	2.0
35	BF	134	GLY	2.0
18	CR	66	LEU	2.0
36	BG	137	GLU	2.0
9	CI	66	ARG	2.0
1	AA	1173	G	2.0
1	CA	1087	G	2.0
3	CC	65	ALA	2.0
11	AK	94	ALA	2.0
14	CN	8	GLU	2.0
36	BG	2	PRO	2.0
36	BG	34	LEU	2.0
31	DA	2892	A	2.0
43	DR	115	GLU	2.0
36	DG	95	ARG	2.0
1	AA	426	G	2.0
1	AA	1242	C	2.0
1	CA	470	C	2.0
31	BA	271(M)	G	2.0
13	CM	66	LEU	2.0
2	CB	81	VAL	2.0
7	AG	81	GLY	2.0
31	DA	330	A	2.0
7	CG	119	ARG	2.0

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

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

## 6.3 Carbohydrates ⓘ

There are no carbohydrates in this entry.

## 6.4 Ligands ⓘ

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	RSR	LLDF	B-factors(Å <sup>2</sup> )	Q<0.9
52	MG	BA	3035	1/1	0.26	-	18,18,18,18	0
52	MG	DA	3179	1/1	0.22	-	29,29,29,29	0
52	MG	BA	3161	1/1	0.19	-	32,32,32,32	0
52	MG	BA	3092	1/1	0.40	-	19,19,19,19	0
52	MG	DA	3071	1/1	0.41	-	31,31,31,31	0
52	MG	DA	3154	1/1	0.41	-	51,51,51,51	0
52	MG	DA	3302	1/1	0.26	-	39,39,39,39	0
52	MG	BA	3310	1/1	0.42	-	31,31,31,31	0
52	MG	DA	3109	1/1	0.26	-	48,48,48,48	0
52	MG	BA	3008	1/1	0.43	-	27,27,27,27	0
52	MG	BA	3362	1/1	0.33	-	50,50,50,50	0
52	MG	CA	1638	1/1	1.12	-	64,64,64,64	0
52	MG	DR	201	1/1	0.23	-	34,34,34,34	0
52	MG	AA	1642	1/1	0.29	-	46,46,46,46	0
52	MG	BA	3071	1/1	0.31	-	22,22,22,22	0
52	MG	DA	3159	1/1	0.18	-	40,40,40,40	0
52	MG	AA	1627	1/1	0.18	-	60,60,60,60	0
52	MG	BA	3047	1/1	0.45	-	22,22,22,22	0
52	MG	BA	3297	1/1	0.24	-	31,31,31,31	0
52	MG	DA	3261	1/1	0.12	-	51,51,51,51	0
52	MG	BF	301	1/1	0.34	-	43,43,43,43	0
52	MG	DA	3178	1/1	0.36	-	30,30,30,30	0
52	MG	DA	3041	1/1	0.31	-	29,29,29,29	0
52	MG	AA	1613	1/1	0.21	-	62,62,62,62	0
52	MG	DA	3259	1/1	0.47	-	79,79,79,79	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
52	MG	DA	3254	1/1	0.13	-	46,46,46,46	0
52	MG	BA	3201	1/1	0.57	-	31,31,31,31	0
52	MG	DA	3026	1/1	0.25	-	55,55,55,55	0
52	MG	DA	3043	1/1	0.24	-	49,49,49,49	0
52	MG	CA	1607	1/1	0.34	-	46,46,46,46	0
52	MG	DA	3230	1/1	0.24	-	25,25,25,25	0
52	MG	BA	3080	1/1	0.57	-	14,14,14,14	0
52	MG	BA	3065	1/1	0.22	-	28,28,28,28	0
52	MG	DA	3079	1/1	0.18	-	36,36,36,36	0
52	MG	DA	3152	1/1	0.32	-	36,36,36,36	0
52	MG	BA	3207	1/1	0.59	-	32,32,32,32	0
52	MG	BA	3075	1/1	0.42	-	38,38,38,38	0
52	MG	BA	3107	1/1	0.20	-	7,7,7,7	0
52	MG	DA	3146	1/1	0.27	-	37,37,37,37	0
52	MG	DA	3207	1/1	0.40	-	54,54,54,54	0
52	MG	AA	1602	1/1	0.47	-	32,32,32,32	0
52	MG	BA	3231	1/1	0.07	-	26,26,26,26	0
52	MG	DA	3250	1/1	0.28	-	56,56,56,56	0
52	MG	BA	3135	1/1	0.20	-	30,30,30,30	0
52	MG	DA	3033	1/1	0.20	-	31,31,31,31	0
52	MG	BA	3284	1/1	0.28	-	39,39,39,39	0
52	MG	BA	3247	1/1	0.52	-	35,35,35,35	0
52	MG	AA	1649	1/1	0.25	-	76,76,76,76	0
52	MG	DA	3095	1/1	0.23	-	47,47,47,47	0
52	MG	BA	3143	1/1	0.57	-	29,29,29,29	0
52	MG	DA	3051	1/1	0.46	-	29,29,29,29	0
52	MG	BA	3175	1/1	0.61	-	43,43,43,43	0
52	MG	BA	3093	1/1	0.81	-	50,50,50,50	0
52	MG	BA	3227	1/1	0.54	-	22,22,22,22	0
52	MG	CA	1625	1/1	0.49	-	59,59,59,59	0
52	MG	DA	3028	1/1	0.20	-	34,34,34,34	0
52	MG	BA	3234	1/1	0.16	-	16,16,16,16	0
52	MG	DA	3224	1/1	0.47	-	41,41,41,41	0
52	MG	BA	3013	1/1	0.35	-	7,7,7,7	0
52	MG	DA	3173	1/1	0.67	-	57,57,57,57	0
52	MG	CA	1620	1/1	0.25	-	45,45,45,45	0
52	MG	BA	3334	1/1	0.30	-	39,39,39,39	0
52	MG	BA	3313	1/1	0.60	-	56,56,56,56	0
52	MG	AA	1635	1/1	0.12	-	53,53,53,53	0
52	MG	DA	3307	1/1	0.17	-	42,42,42,42	0
52	MG	DA	3223	1/1	0.59	-	37,37,37,37	0
52	MG	BA	3286	1/1	0.41	-	44,44,44,44	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
52	MG	BA	3344	1/1	0.09	-	56,56,56,56	0
52	MG	BA	3321	1/1	0.22	-	33,33,33,33	0
52	MG	DA	3185	1/1	0.42	-	49,49,49,49	0
52	MG	CA	1606	1/1	0.72	-	52,52,52,52	0
52	MG	BA	3271	1/1	0.12	-	53,53,53,53	0
52	MG	BA	3034	1/1	0.15	-	45,45,45,45	0
52	MG	DA	3331	1/1	0.12	-	67,67,67,67	0
52	MG	BA	3356	1/1	0.09	-	60,60,60,60	0
52	MG	DA	3321	1/1	0.03	-	41,41,41,41	0
52	MG	DA	3227	1/1	0.22	-	47,47,47,47	0
52	MG	DA	3161	1/1	0.12	-	44,44,44,44	0
52	MG	DA	3017	1/1	0.40	-	37,37,37,37	0
52	MG	DA	3038	1/1	0.48	-	25,25,25,25	0
52	MG	BA	3109	1/1	0.65	-	40,40,40,40	0
52	MG	DA	3272	1/1	0.41	-	47,47,47,47	0
52	MG	DA	3119	1/1	0.36	-	36,36,36,36	0
52	MG	AA	1640	1/1	0.34	-	60,60,60,60	0
52	MG	DA	3064	1/1	0.47	-	44,44,44,44	0
52	MG	BA	3263	1/1	0.17	-	29,29,29,29	0
52	MG	BA	3350	1/1	0.30	-	54,54,54,54	0
52	MG	BA	3260	1/1	0.20	-	13,13,13,13	0
52	MG	BA	3085	1/1	0.18	-	9,9,9,9	0
52	MG	DA	3100	1/1	0.44	-	35,35,35,35	0
52	MG	BA	3129	1/1	0.12	-	33,33,33,33	0
52	MG	DA	3050	1/1	0.26	-	33,33,33,33	0
52	MG	BA	3153	1/1	0.35	-	34,34,34,34	0
52	MG	DA	3015	1/1	0.35	-	52,52,52,52	0
52	MG	DA	3193	1/1	0.62	-	40,40,40,40	0
52	MG	DA	3024	1/1	0.36	-	47,47,47,47	0
52	MG	DA	3140	1/1	0.43	-	42,42,42,42	0
52	MG	BA	3059	1/1	0.32	-	25,25,25,25	0
52	MG	BA	3078	1/1	0.37	-	22,22,22,22	0
52	MG	DA	3311	1/1	0.20	-	29,29,29,29	0
52	MG	DA	3172	1/1	0.31	-	48,48,48,48	0
52	MG	BA	3241	1/1	0.15	-	44,44,44,44	0
52	MG	AA	1603	1/1	0.30	-	43,43,43,43	0
52	MG	BA	3269	1/1	0.31	-	34,34,34,34	0
52	MG	BA	3272	1/1	0.40	-	36,36,36,36	0
52	MG	BA	3216	1/1	0.47	-	35,35,35,35	0
52	MG	BA	3197	1/1	0.17	-	27,27,27,27	0
52	MG	CA	1633	1/1	0.73	-	50,50,50,50	0
52	MG	DA	3134	1/1	0.48	-	28,28,28,28	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
52	MG	BA	3259	1/1	0.34	-	40,40,40,40	0
53	ZN	AD	301	1/1	0.28	-	109,109,109,109	0
52	MG	DA	3032	1/1	0.35	-	31,31,31,31	0
52	MG	BA	3322	1/1	0.37	-	41,41,41,41	0
52	MG	BA	3299	1/1	0.24	-	37,37,37,37	0
52	MG	BA	3124	1/1	0.40	-	39,39,39,39	0
52	MG	B1	101	1/1	0.31	-	25,25,25,25	0
52	MG	CA	1636	1/1	0.19	-	77,77,77,77	0
52	MG	DA	3052	1/1	0.45	-	36,36,36,36	0
52	MG	DA	3221	1/1	0.61	-	43,43,43,43	0
52	MG	BA	3248	1/1	0.27	-	33,33,33,33	0
52	MG	DA	3325	1/1	0.48	-	46,46,46,46	0
52	MG	DA	3257	1/1	0.34	-	46,46,46,46	0
52	MG	BA	3292	1/1	0.10	-	41,41,41,41	0
52	MG	BA	3254	1/1	0.60	-	34,34,34,34	0
52	MG	DA	3099	1/1	0.56	-	34,34,34,34	0
52	MG	BA	3012	1/1	0.42	-	38,38,38,38	0
52	MG	BA	3094	1/1	0.52	-	30,30,30,30	0
52	MG	DA	3294	1/1	0.11	-	46,46,46,46	0
52	MG	DA	3241	1/1	0.10	-	54,54,54,54	0
52	MG	DA	3029	1/1	0.19	-	43,43,43,43	0
52	MG	AA	1614	1/1	0.33	-	47,47,47,47	0
52	MG	BA	3166	1/1	0.16	-	27,27,27,27	0
52	MG	DA	3200	1/1	0.17	-	37,37,37,37	0
52	MG	DA	3105	1/1	0.15	-	39,39,39,39	0
52	MG	BA	3343	1/1	0.52	-	40,40,40,40	0
52	MG	CA	1604	1/1	0.31	-	67,67,67,67	0
52	MG	DA	3164	1/1	0.51	-	41,41,41,41	0
52	MG	BA	3083	1/1	0.47	-	34,34,34,34	0
52	MG	DA	3277	1/1	0.11	-	38,38,38,38	0
52	MG	BA	3206	1/1	0.47	-	29,29,29,29	0
52	MG	BA	3183	1/1	0.34	-	43,43,43,43	0
52	MG	BA	3270	1/1	0.40	-	26,26,26,26	0
52	MG	BA	3130	1/1	0.10	-	36,36,36,36	0
52	MG	BA	3188	1/1	0.48	-	36,36,36,36	0
52	MG	BA	3200	1/1	0.28	-	12,12,12,12	0
52	MG	BA	3112	1/1	0.19	-	14,14,14,14	0
52	MG	DA	3126	1/1	0.13	-	36,36,36,36	0
52	MG	AA	1634	1/1	0.58	-	51,51,51,51	0
52	MG	DA	3208	1/1	0.43	-	34,34,34,34	0
52	MG	DA	3005	1/1	0.15	-	49,49,49,49	0
52	MG	AA	1650	1/1	0.42	-	49,49,49,49	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
52	MG	BA	3328	1/1	0.30	-	27,27,27,27	0
52	MG	CA	1605	1/1	0.29	-	68,68,68,68	0
52	MG	BA	3222	1/1	0.49	-	20,20,20,20	0
52	MG	DA	3106	1/1	0.74	-	53,53,53,53	0
52	MG	DA	3236	1/1	0.56	-	71,71,71,71	0
52	MG	BA	3139	1/1	0.59	-	30,30,30,30	0
52	MG	BA	3171	1/1	0.66	-	35,35,35,35	0
52	MG	DA	3235	1/1	0.19	-	48,48,48,48	0
52	MG	BA	3298	1/1	0.35	-	41,41,41,41	0
52	MG	BA	3224	1/1	0.28	-	27,27,27,27	0
52	MG	BA	3230	1/1	0.63	-	37,37,37,37	0
52	MG	DA	3131	1/1	0.24	-	55,55,55,55	0
52	MG	DA	3318	1/1	0.27	-	43,43,43,43	0
52	MG	BA	3054	1/1	0.27	-	48,48,48,48	0
52	MG	BA	3274	1/1	0.43	-	33,33,33,33	0
52	MG	CA	1629	1/1	0.15	-	57,57,57,57	0
52	MG	BA	3021	1/1	0.38	-	19,19,19,19	0
52	MG	DA	3267	1/1	0.35	-	46,46,46,46	0
52	MG	BA	3062	1/1	0.15	-	30,30,30,30	0
52	MG	BA	3255	1/1	0.39	-	54,54,54,54	0
52	MG	DA	3084	1/1	0.31	-	31,31,31,31	0
52	MG	DA	3034	1/1	0.32	-	38,38,38,38	0
52	MG	BA	3063	1/1	0.42	-	45,45,45,45	0
52	MG	CA	1617	1/1	0.48	-	48,48,48,48	0
52	MG	BA	3023	1/1	0.27	-	13,13,13,13	0
52	MG	AA	1612	1/1	0.51	-	56,56,56,56	0
52	MG	CA	1624	1/1	0.32	-	50,50,50,50	0
52	MG	DA	3175	1/1	0.40	-	51,51,51,51	0
52	MG	BA	3150	1/1	0.37	-	40,40,40,40	0
52	MG	BA	3038	1/1	0.40	-	17,17,17,17	0
52	MG	DA	3136	1/1	0.26	-	48,48,48,48	0
52	MG	BA	3186	1/1	0.37	-	38,38,38,38	0
52	MG	BA	3363	1/1	0.16	-	54,54,54,54	0
52	MG	AA	1625	1/1	0.51	-	40,40,40,40	0
52	MG	BA	3302	1/1	0.62	-	31,31,31,31	0
52	MG	DA	3165	1/1	0.23	-	38,38,38,38	0
52	MG	DA	3220	1/1	0.15	-	40,40,40,40	0
52	MG	DA	3118	1/1	0.28	-	43,43,43,43	0
52	MG	DA	3123	1/1	0.17	-	38,38,38,38	0
52	MG	DA	3097	1/1	0.29	-	30,30,30,30	0
52	MG	BA	3184	1/1	0.48	-	40,40,40,40	0
52	MG	DD	301	1/1	0.25	-	32,32,32,32	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
52	MG	DA	3271	1/1	0.47	-	56,56,56,56	0
52	MG	DA	3268	1/1	0.69	-	63,63,63,63	0
52	MG	DA	3124	1/1	0.23	-	49,49,49,49	0
52	MG	DA	3187	1/1	0.51	-	44,44,44,44	0
52	MG	DA	3039	1/1	0.49	-	48,48,48,48	0
52	MG	DA	3169	1/1	0.44	-	45,45,45,45	0
52	MG	BA	3156	1/1	0.44	-	12,12,12,12	0
52	MG	BA	3014	1/1	0.51	-	30,30,30,30	0
52	MG	DA	3170	1/1	0.12	-	42,42,42,42	0
52	MG	DA	3248	1/1	0.29	-	33,33,33,33	0
52	MG	DA	3222	1/1	0.43	-	41,41,41,41	0
52	MG	BB	204	1/1	0.32	-	41,41,41,41	0
52	MG	BB	201	1/1	0.45	-	35,35,35,35	0
52	MG	DA	3107	1/1	0.35	-	15,15,15,15	0
52	MG	BA	3266	1/1	0.37	-	37,37,37,37	0
52	MG	DA	3056	1/1	0.31	-	24,24,24,24	0
52	MG	CA	1609	1/1	0.27	-	41,41,41,41	0
55	CLM	DA	3334	20/20	0.48	-	90,90,90,90	0
52	MG	DA	3094	1/1	0.61	-	38,38,38,38	0
52	MG	DA	3255	1/1	0.36	-	49,49,49,49	0
52	MG	DA	3195	1/1	0.37	-	36,36,36,36	0
52	MG	AA	1645	1/1	0.43	-	61,61,61,61	0
52	MG	AA	1610	1/1	0.14	-	33,33,33,33	0
52	MG	CA	1621	1/1	0.40	-	50,50,50,50	0
52	MG	BA	3228	1/1	0.35	-	27,27,27,27	0
52	MG	DA	3157	1/1	0.27	-	48,48,48,48	0
52	MG	BA	3339	1/1	0.25	-	31,31,31,31	0
52	MG	BA	3076	1/1	0.22	-	21,21,21,21	0
52	MG	BR	201	1/1	0.33	-	7,7,7,7	0
52	MG	BA	3268	1/1	0.46	-	38,38,38,38	0
52	MG	BA	3007	1/1	0.58	-	40,40,40,40	0
52	MG	BA	3240	1/1	0.30	-	50,50,50,50	0
52	MG	BA	3332	1/1	0.41	-	35,35,35,35	0
52	MG	DA	3054	1/1	0.23	-	55,55,55,55	0
52	MG	CA	1641	1/1	0.20	-	45,45,45,45	0
52	MG	BA	3049	1/1	0.49	-	23,23,23,23	0
52	MG	DA	3081	1/1	0.47	-	24,24,24,24	0
52	MG	DA	3226	1/1	0.48	-	55,55,55,55	0
52	MG	DA	3319	1/1	0.51	-	55,55,55,55	0
52	MG	BA	3327	1/1	0.23	-	48,48,48,48	0
52	MG	BA	3117	1/1	0.29	-	50,50,50,50	0
52	MG	BA	3073	1/1	0.24	-	7,7,7,7	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
52	MG	DA	3150	1/1	0.44	-	32,32,32,32	0
52	MG	DA	3289	1/1	0.28	-	53,53,53,53	0
52	MG	BE	301	1/1	0.42	-	16,16,16,16	0
52	MG	DA	3203	1/1	0.29	-	38,38,38,38	0
52	MG	BA	3290	1/1	0.26	-	40,40,40,40	0
52	MG	BA	3025	1/1	0.18	-	29,29,29,29	0
52	MG	DA	3031	1/1	0.17	-	51,51,51,51	0
54	K	BA	3369	1/1	0.15	-	41,41,41,41	0
52	MG	BA	3265	1/1	0.24	-	43,43,43,43	0
52	MG	BA	3176	1/1	0.37	-	58,58,58,58	0
52	MG	CA	1603	1/1	0.34	-	32,32,32,32	0
53	ZN	CN	101	1/1	0.17	-	136,136,136,136	0
52	MG	DA	3201	1/1	0.20	-	43,43,43,43	0
52	MG	BA	3304	1/1	0.45	-	49,49,49,49	0
52	MG	DA	3088	1/1	0.34	-	40,40,40,40	0
52	MG	AA	1626	1/1	0.33	-	46,46,46,46	0
52	MG	DA	3021	1/1	0.25	-	38,38,38,38	0
52	MG	BA	3040	1/1	0.50	-	37,37,37,37	0
52	MG	BA	3341	1/1	0.70	-	66,66,66,66	0
52	MG	BA	3134	1/1	0.26	-	36,36,36,36	0
52	MG	DA	3142	1/1	0.50	-	32,32,32,32	0
52	MG	DA	3177	1/1	0.31	-	37,37,37,37	0
52	MG	BA	3333	1/1	0.36	-	50,50,50,50	0
52	MG	BA	3177	1/1	0.72	-	67,67,67,67	0
52	MG	BA	3288	1/1	0.36	-	46,46,46,46	0
52	MG	BA	3122	1/1	0.47	-	37,37,37,37	0
52	MG	BA	3314	1/1	0.40	-	41,41,41,41	0
52	MG	DA	3045	1/1	0.31	-	30,30,30,30	0
52	MG	DA	3083	1/1	0.36	-	37,37,37,37	0
52	MG	BA	3368	1/1	0.07	-	60,60,60,60	0
52	MG	BA	3084	1/1	0.27	-	5,5,5,5	0
52	MG	CA	1653	1/1	0.12	-	47,47,47,47	0
52	MG	DE	301	1/1	0.34	-	31,31,31,31	0
52	MG	DA	3121	1/1	0.20	-	49,49,49,49	0
52	MG	CA	1650	1/1	0.32	-	45,45,45,45	0
52	MG	DA	3171	1/1	0.33	-	26,26,26,26	0
52	MG	DA	3320	1/1	0.24	-	31,31,31,31	0
52	MG	CA	1616	1/1	0.40	-	45,45,45,45	0
52	MG	BA	3039	1/1	0.66	-	37,37,37,37	0
52	MG	BA	3337	1/1	0.41	-	32,32,32,32	0
52	MG	DA	3234	1/1	0.64	-	60,60,60,60	0
52	MG	DA	3314	1/1	0.15	-	40,40,40,40	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
52	MG	DA	3077	1/1	0.25	-	38,38,38,38	0
52	MG	DA	3149	1/1	0.52	-	54,54,54,54	0
52	MG	BA	3145	1/1	0.47	-	33,33,33,33	0
52	MG	BA	3277	1/1	0.22	-	10,10,10,10	0
52	MG	BX	101	1/1	0.21	-	21,21,21,21	0
52	MG	AA	1615	1/1	0.18	-	35,35,35,35	0
52	MG	DA	3278	1/1	0.40	-	54,54,54,54	0
52	MG	DA	3066	1/1	0.40	-	29,29,29,29	0
52	MG	BA	3276	1/1	0.33	-	35,35,35,35	0
52	MG	BA	3068	1/1	0.54	-	35,35,35,35	0
52	MG	BA	3100	1/1	0.30	-	23,23,23,23	0
52	MG	DA	3037	1/1	0.63	-	33,33,33,33	0
52	MG	DQ	201	1/1	0.25	-	42,42,42,42	0
52	MG	BA	3163	1/1	0.48	-	53,53,53,53	0
52	MG	BA	3203	1/1	0.12	-	47,47,47,47	0
52	MG	DA	3306	1/1	0.42	-	54,54,54,54	0
52	MG	BA	3125	1/1	0.43	-	18,18,18,18	0
52	MG	AA	1633	1/1	0.11	-	42,42,42,42	0
52	MG	CA	1615	1/1	0.29	-	64,64,64,64	0
52	MG	BA	3366	1/1	0.12	-	52,52,52,52	0
52	MG	BA	3148	1/1	0.36	-	23,23,23,23	0
52	MG	BA	3018	1/1	0.25	-	27,27,27,27	0
52	MG	DA	3304	1/1	0.75	-	63,63,63,63	0
52	MG	DA	3160	1/1	0.52	-	51,51,51,51	0
52	MG	AA	1631	1/1	0.57	-	52,52,52,52	0
52	MG	BA	3296	1/1	0.08	-	36,36,36,36	0
52	MG	DA	3291	1/1	0.20	-	36,36,36,36	0
52	MG	BA	3189	1/1	0.17	-	46,46,46,46	0
52	MG	BA	3194	1/1	0.43	-	30,30,30,30	0
52	MG	DA	3147	1/1	0.28	-	43,43,43,43	0
52	MG	DA	3198	1/1	0.28	-	37,37,37,37	0
52	MG	BA	3223	1/1	0.40	-	25,25,25,25	0
52	MG	BA	3121	1/1	0.24	-	34,34,34,34	0
52	MG	DA	3003	1/1	0.61	-	39,39,39,39	0
52	MG	DA	3158	1/1	0.27	-	33,33,33,33	0
52	MG	DA	3087	1/1	0.10	-	24,24,24,24	0
52	MG	DA	3089	1/1	0.53	-	31,31,31,31	0
52	MG	DA	3264	1/1	0.18	-	58,58,58,58	0
52	MG	BA	3319	1/1	0.33	-	46,46,46,46	0
52	MG	BA	3055	1/1	0.28	-	19,19,19,19	0
52	MG	BA	3174	1/1	0.35	-	29,29,29,29	0
52	MG	CA	1634	1/1	0.12	-	47,47,47,47	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
52	MG	BA	3236	1/1	0.19	-	31,31,31,31	0
52	MG	BA	3090	1/1	0.32	-	14,14,14,14	0
52	MG	CA	1608	1/1	0.28	-	68,68,68,68	0
52	MG	BB	202	1/1	0.26	-	27,27,27,27	0
52	MG	DA	3213	1/1	0.36	-	26,26,26,26	0
52	MG	DA	3035	1/1	0.39	-	31,31,31,31	0
52	MG	BA	3046	1/1	0.32	-	24,24,24,24	0
52	MG	CA	1647	1/1	0.29	-	49,49,49,49	0
52	MG	BA	3002	1/1	0.43	-	23,23,23,23	0
52	MG	BA	3285	1/1	0.36	-	35,35,35,35	0
52	MG	DA	3174	1/1	0.26	-	54,54,54,54	0
52	MG	BA	3133	1/1	0.26	-	25,25,25,25	0
52	MG	DA	3167	1/1	0.16	-	63,63,63,63	0
52	MG	BA	3213	1/1	0.40	-	17,17,17,17	0
52	MG	BA	3089	1/1	0.30	-	15,15,15,15	0
52	MG	DA	3117	1/1	0.12	-	54,54,54,54	0
52	MG	CA	1637	1/1	0.32	-	65,65,65,65	0
52	MG	CA	1630	1/1	0.55	-	66,66,66,66	0
52	MG	BA	3136	1/1	0.45	-	22,22,22,22	0
52	MG	BA	3020	1/1	0.24	-	8,8,8,8	0
52	MG	BA	3106	1/1	0.42	-	37,37,37,37	0
52	MG	BA	3205	1/1	0.45	-	34,34,34,34	0
52	MG	CA	1613	1/1	0.30	-	58,58,58,58	0
52	MG	DA	3327	1/1	0.13	-	41,41,41,41	0
52	MG	BA	3167	1/1	0.37	-	51,51,51,51	0
52	MG	AA	1652	1/1	0.67	-	44,44,44,44	0
52	MG	BA	3245	1/1	0.42	-	52,52,52,52	0
52	MG	AA	1606	1/1	0.47	-	86,86,86,86	0
52	MG	DA	3093	1/1	0.46	-	44,44,44,44	0
52	MG	BQ	201	1/1	0.16	-	18,18,18,18	0
52	MG	BA	3338	1/1	0.44	-	50,50,50,50	0
52	MG	BA	3170	1/1	0.62	-	36,36,36,36	0
52	MG	BA	3053	1/1	0.37	-	6,6,6,6	0
52	MG	DA	3009	1/1	0.37	-	47,47,47,47	0
52	MG	BA	3060	1/1	0.31	-	31,31,31,31	0
52	MG	DA	3078	1/1	0.38	-	31,31,31,31	0
52	MG	DA	3316	1/1	0.17	-	62,62,62,62	0
52	MG	AA	1620	1/1	0.54	-	52,52,52,52	0
52	MG	BA	3010	1/1	0.34	-	37,37,37,37	0
52	MG	AA	1629	1/1	0.36	-	49,49,49,49	0
52	MG	AA	1623	1/1	0.40	-	31,31,31,31	0
52	MG	DA	3013	1/1	0.38	-	10,10,10,10	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
52	MG	BA	3202	1/1	0.55	-	35,35,35,35	0
52	MG	BA	3099	1/1	0.27	-	34,34,34,34	0
52	MG	CA	1645	1/1	0.33	-	45,45,45,45	0
52	MG	DA	3197	1/1	0.42	-	46,46,46,46	0
52	MG	BA	3155	1/1	0.26	-	39,39,39,39	0
52	MG	BA	3187	1/1	0.51	-	33,33,33,33	0
52	MG	BA	3232	1/1	0.26	-	27,27,27,27	0
52	MG	DA	3329	1/1	0.23	-	51,51,51,51	0
52	MG	DA	3058	1/1	0.28	-	42,42,42,42	0
52	MG	BA	3114	1/1	0.39	-	21,21,21,21	0
52	MG	DA	3232	1/1	0.63	-	63,63,63,63	0
52	MG	BA	3235	1/1	0.49	-	38,38,38,38	0
52	MG	DA	3030	1/1	0.19	-	37,37,37,37	0
52	MG	DA	3273	1/1	0.26	-	39,39,39,39	0
52	MG	DA	3180	1/1	0.32	-	38,38,38,38	0
52	MG	DA	3135	1/1	0.60	-	39,39,39,39	0
52	MG	DA	3151	1/1	0.32	-	40,40,40,40	0
52	MG	DA	3153	1/1	0.65	-	73,73,73,73	0
52	MG	DA	3010	1/1	0.34	-	35,35,35,35	0
52	MG	BA	3120	1/1	0.33	-	25,25,25,25	0
52	MG	AA	1630	1/1	0.47	-	49,49,49,49	0
52	MG	BA	3131	1/1	0.45	-	45,45,45,45	0
52	MG	BA	3123	1/1	0.30	-	40,40,40,40	0
55	CLM	BA	3370	20/20	0.45	-	90,90,90,90	0
52	MG	BA	3316	1/1	0.33	-	41,41,41,41	0
52	MG	DA	3067	1/1	0.18	-	35,35,35,35	0
52	MG	DA	3004	1/1	0.19	-	19,19,19,19	0
52	MG	DA	3129	1/1	0.25	-	36,36,36,36	0
52	MG	DA	3309	1/1	0.18	-	66,66,66,66	0
52	MG	CA	1631	1/1	0.09	-	71,71,71,71	0
52	MG	DA	3310	1/1	0.35	-	56,56,56,56	0
52	MG	BA	3357	1/1	0.31	-	44,44,44,44	0
52	MG	BA	3354	1/1	0.28	-	40,40,40,40	0
52	MG	DA	3322	1/1	0.34	-	45,45,45,45	0
52	MG	BA	3031	1/1	0.20	-	39,39,39,39	0
52	MG	DA	3023	1/1	0.40	-	27,27,27,27	0
52	MG	DA	3317	1/1	0.06	-	48,48,48,48	0
52	MG	BA	3198	1/1	0.76	-	62,62,62,62	0
52	MG	DA	3096	1/1	0.46	-	61,61,61,61	0
52	MG	BA	3158	1/1	0.31	-	9,9,9,9	0
52	MG	BA	3221	1/1	0.21	-	31,31,31,31	0
52	MG	BA	3104	1/1	0.10	-	22,22,22,22	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
52	MG	BA	3138	1/1	0.33	-	4,4,4,4	0
52	MG	DA	3275	1/1	0.52	-	51,51,51,51	0
52	MG	CA	1626	1/1	0.47	-	68,68,68,68	0
52	MG	BA	3033	1/1	0.23	-	18,18,18,18	0
52	MG	DA	3252	1/1	0.31	-	57,57,57,57	0
52	MG	DA	3176	1/1	0.19	-	66,66,66,66	0
52	MG	BA	3315	1/1	0.23	-	43,43,43,43	0
52	MG	BA	3067	1/1	0.47	-	28,28,28,28	0
52	MG	BA	3242	1/1	0.27	-	33,33,33,33	0
52	MG	BA	3128	1/1	0.79	-	45,45,45,45	0
52	MG	BA	3293	1/1	0.28	-	47,47,47,47	0
52	MG	BA	3336	1/1	0.32	-	49,49,49,49	0
52	MG	DA	3212	1/1	0.20	-	33,33,33,33	0
52	MG	BP	202	1/1	0.18	-	0,0,0,0	0
52	MG	DA	3138	1/1	0.32	-	31,31,31,31	0
52	MG	DA	3205	1/1	0.64	-	39,39,39,39	0
52	MG	DA	3266	1/1	0.52	-	45,45,45,45	0
52	MG	AA	1617	1/1	0.42	-	57,57,57,57	0
52	MG	BB	203	1/1	0.09	-	55,55,55,55	0
52	MG	DA	3237	1/1	0.17	-	57,57,57,57	0
52	MG	BA	3325	1/1	0.52	-	53,53,53,53	0
52	MG	DA	3076	1/1	0.19	-	23,23,23,23	0
52	MG	BA	3048	1/1	0.45	-	22,22,22,22	0
52	MG	DA	3258	1/1	0.12	-	38,38,38,38	0
52	MG	BA	3022	1/1	0.27	-	37,37,37,37	0
52	MG	DA	3016	1/1	0.55	-	29,29,29,29	0
52	MG	AA	1601	1/1	0.17	-	50,50,50,50	0
52	MG	BA	3165	1/1	0.16	-	26,26,26,26	0
52	MG	BA	3360	1/1	0.43	-	48,48,48,48	0
52	MG	BA	3098	1/1	0.26	-	59,59,59,59	0
52	MG	BA	3303	1/1	0.14	-	37,37,37,37	0
52	MG	BA	3103	1/1	0.28	-	27,27,27,27	0
52	MG	DA	3279	1/1	0.46	-	44,44,44,44	0
52	MG	B5	102	1/1	0.47	-	44,44,44,44	0
52	MG	AA	1643	1/1	0.91	-	66,66,66,66	0
52	MG	DA	3068	1/1	0.31	-	57,57,57,57	0
52	MG	BA	3041	1/1	0.41	-	24,24,24,24	0
52	MG	DA	3293	1/1	0.65	-	54,54,54,54	0
52	MG	BA	3211	1/1	0.22	-	30,30,30,30	0
52	MG	DA	3324	1/1	0.23	-	38,38,38,38	0
52	MG	DA	3062	1/1	0.14	-	24,24,24,24	0
52	MG	DA	3168	1/1	0.47	-	32,32,32,32	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
52	MG	DA	3002	1/1	0.40	-	22,22,22,22	0
52	MG	DA	3286	1/1	0.26	-	43,43,43,43	0
52	MG	BA	3137	1/1	0.26	-	34,34,34,34	0
52	MG	BA	3209	1/1	0.32	-	36,36,36,36	0
52	MG	BA	3239	1/1	0.15	-	32,32,32,32	0
52	MG	DA	3270	1/1	0.39	-	55,55,55,55	0
52	MG	AA	1656	1/1	0.12	-	62,62,62,62	0
52	MG	CA	1622	1/1	0.37	-	46,46,46,46	0
52	MG	DU	201	1/1	0.38	-	60,60,60,60	0
52	MG	BA	3017	1/1	0.40	-	27,27,27,27	0
52	MG	BA	3179	1/1	0.39	-	25,25,25,25	0
52	MG	BU	201	1/1	0.30	-	25,25,25,25	0
52	MG	DA	3122	1/1	0.56	-	40,40,40,40	0
52	MG	DA	3244	1/1	0.41	-	36,36,36,36	0
52	MG	BA	3172	1/1	0.47	-	18,18,18,18	0
52	MG	BA	3030	1/1	0.23	-	17,17,17,17	0
52	MG	DA	3253	1/1	0.42	-	32,32,32,32	0
52	MG	DA	3049	1/1	0.48	-	42,42,42,42	0
52	MG	BA	3275	1/1	0.36	-	29,29,29,29	0
52	MG	BA	3210	1/1	0.38	-	29,29,29,29	0
52	MG	DA	3085	1/1	0.15	-	19,19,19,19	0
52	MG	BA	3015	1/1	0.31	-	29,29,29,29	0
52	MG	DA	3025	1/1	0.38	-	46,46,46,46	0
52	MG	CA	1628	1/1	0.52	-	50,50,50,50	0
52	MG	BA	3283	1/1	0.30	-	50,50,50,50	0
52	MG	BA	3115	1/1	0.41	-	34,34,34,34	0
52	MG	DA	3022	1/1	0.21	-	38,38,38,38	0
52	MG	DA	3116	1/1	0.22	-	45,45,45,45	0
52	MG	BA	3324	1/1	0.37	-	53,53,53,53	0
52	MG	DA	3181	1/1	0.63	-	29,29,29,29	0
52	MG	DA	3285	1/1	0.19	-	33,33,33,33	0
52	MG	DA	3074	1/1	0.57	-	54,54,54,54	0
52	MG	AA	1622	1/1	0.43	-	40,40,40,40	0
52	MG	BA	3095	1/1	0.39	-	38,38,38,38	0
52	MG	DA	3111	1/1	0.55	-	39,39,39,39	0
52	MG	BA	3079	1/1	0.21	-	36,36,36,36	0
52	MG	BA	3061	1/1	0.33	-	35,35,35,35	0
52	MG	AA	1647	1/1	0.27	-	46,46,46,46	0
52	MG	BA	3358	1/1	0.46	-	59,59,59,59	0
52	MG	CA	1601	1/1	0.17	-	61,61,61,61	0
52	MG	DA	3162	1/1	0.47	-	50,50,50,50	0
52	MG	DA	3263	1/1	0.25	-	65,65,65,65	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
52	MG	BA	3361	1/1	0.22	-	52,52,52,52	0
52	MG	DA	3300	1/1	0.40	-	54,54,54,54	0
52	MG	AA	1641	1/1	0.23	-	64,64,64,64	0
52	MG	AA	1611	1/1	0.16	-	72,72,72,72	0
52	MG	BA	3300	1/1	0.35	-	45,45,45,45	0
52	MG	BA	3346	1/1	0.10	-	63,63,63,63	0
52	MG	BA	3147	1/1	0.41	-	28,28,28,28	0
52	MG	BA	3243	1/1	0.24	-	30,30,30,30	0
52	MG	DA	3137	1/1	0.10	-	69,69,69,69	0
52	MG	BA	3335	1/1	0.39	-	57,57,57,57	0
52	MG	DA	3073	1/1	0.25	-	27,27,27,27	0
52	MG	DA	3148	1/1	0.25	-	51,51,51,51	0
52	MG	DA	3115	1/1	0.22	-	47,47,47,47	0
52	MG	BA	3088	1/1	0.30	-	33,33,33,33	0
52	MG	DA	3229	1/1	0.53	-	36,36,36,36	0
52	MG	DA	3328	1/1	0.45	-	61,61,61,61	0
52	MG	DA	3182	1/1	0.42	-	41,41,41,41	0
52	MG	DA	3042	1/1	0.18	-	29,29,29,29	0
52	MG	BA	3306	1/1	0.47	-	35,35,35,35	0
52	MG	BA	3119	1/1	0.33	-	34,34,34,34	0
52	MG	AA	1607	1/1	0.57	-	47,47,47,47	0
52	MG	BA	3051	1/1	0.45	-	19,19,19,19	0
52	MG	BA	3237	1/1	0.45	-	42,42,42,42	0
52	MG	DA	3144	1/1	0.51	-	43,43,43,43	0
52	MG	DB	203	1/1	0.07	-	73,73,73,73	0
52	MG	DA	3128	1/1	0.17	-	29,29,29,29	0
52	MG	DA	3057	1/1	0.27	-	32,32,32,32	0
52	MG	BA	3149	1/1	0.14	-	8,8,8,8	0
52	MG	BA	3151	1/1	0.36	-	47,47,47,47	0
52	MG	DA	3299	1/1	0.20	-	41,41,41,41	0
52	MG	BA	3152	1/1	0.11	-	49,49,49,49	0
52	MG	AA	1637	1/1	0.52	-	51,51,51,51	0
52	MG	DA	3007	1/1	0.40	-	48,48,48,48	0
52	MG	BA	3320	1/1	0.93	-	52,52,52,52	0
52	MG	DA	3027	1/1	0.54	-	36,36,36,36	0
52	MG	BA	3261	1/1	0.21	-	27,27,27,27	0
52	MG	DA	3196	1/1	0.35	-	33,33,33,33	0
52	MG	DA	3276	1/1	0.72	-	44,44,44,44	0
52	MG	CA	1640	1/1	0.10	-	53,53,53,53	0
52	MG	BA	3208	1/1	0.23	-	17,17,17,17	0
52	MG	BA	3052	1/1	0.48	-	23,23,23,23	0
52	MG	DA	3284	1/1	0.57	-	49,49,49,49	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
52	MG	BA	3036	1/1	0.35	-	8,8,8,8	0
52	MG	DA	3090	1/1	0.28	-	33,33,33,33	0
52	MG	AA	1609	1/1	0.39	-	52,52,52,52	0
52	MG	BA	3144	1/1	0.55	-	29,29,29,29	0
52	MG	DA	3092	1/1	0.65	-	47,47,47,47	0
52	MG	AA	1651	1/1	0.32	-	45,45,45,45	0
52	MG	DA	3245	1/1	0.17	-	65,65,65,65	0
52	MG	BA	3057	1/1	0.22	-	37,37,37,37	0
52	MG	CA	1652	1/1	0.14	-	61,61,61,61	0
52	MG	BA	3256	1/1	0.12	-	24,24,24,24	0
52	MG	DA	3133	1/1	0.10	-	55,55,55,55	0
52	MG	BA	3004	1/1	0.28	-	14,14,14,14	0
52	MG	CA	1643	1/1	0.24	-	42,42,42,42	0
52	MG	BA	3101	1/1	0.29	-	24,24,24,24	0
52	MG	DA	3113	1/1	0.09	-	59,59,59,59	0
52	MG	CA	1627	1/1	0.71	-	81,81,81,81	0
52	MG	DA	3125	1/1	0.15	-	33,33,33,33	0
52	MG	BA	3160	1/1	0.45	-	41,41,41,41	0
52	MG	BA	3126	1/1	0.21	-	29,29,29,29	0
52	MG	DA	3011	1/1	0.43	-	27,27,27,27	0
52	MG	CA	1614	1/1	0.57	-	57,57,57,57	0
52	MG	AA	1654	1/1	0.67	-	64,64,64,64	0
52	MG	BD	301	1/1	0.30	-	25,25,25,25	0
52	MG	DA	3166	1/1	0.56	-	64,64,64,64	0
52	MG	DA	3036	1/1	0.37	-	12,12,12,12	0
52	MG	BA	3181	1/1	0.14	-	32,32,32,32	0
52	MG	DA	3215	1/1	0.28	-	27,27,27,27	0
52	MG	BA	3045	1/1	0.34	-	14,14,14,14	0
52	MG	BA	3340	1/1	0.18	-	39,39,39,39	0
52	MG	BA	3294	1/1	0.44	-	40,40,40,40	0
52	MG	BA	3351	1/1	0.29	-	48,48,48,48	0
52	MG	DA	3296	1/1	0.22	-	45,45,45,45	0
52	MG	DX	101	1/1	0.25	-	45,45,45,45	0
52	MG	DA	3001	1/1	0.32	-	45,45,45,45	0
52	MG	DA	3141	1/1	0.48	-	35,35,35,35	0
52	MG	DA	3184	1/1	0.24	-	32,32,32,32	0
52	MG	BA	3146	1/1	0.29	-	33,33,33,33	0
52	MG	DB	202	1/1	0.34	-	60,60,60,60	0
52	MG	AA	1632	1/1	0.55	-	51,51,51,51	0
52	MG	BA	3162	1/1	0.31	-	45,45,45,45	0
52	MG	BA	3178	1/1	0.21	-	32,32,32,32	0
52	MG	CA	1644	1/1	0.16	-	43,43,43,43	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
52	MG	DA	3061	1/1	0.37	-	34,34,34,34	0
52	MG	BA	3220	1/1	0.55	-	22,22,22,22	0
52	MG	CA	1642	1/1	1.13	-	71,71,71,71	0
52	MG	DA	3075	1/1	0.41	-	38,38,38,38	0
52	MG	D1	101	1/1	0.36	-	47,47,47,47	0
52	MG	BA	3087	1/1	0.18	-	10,10,10,10	0
52	MG	BA	3364	1/1	0.25	-	64,64,64,64	0
52	MG	DA	3190	1/1	0.29	-	43,43,43,43	0
52	MG	DA	3323	1/1	0.61	-	62,62,62,62	0
52	MG	BA	3110	1/1	0.43	-	27,27,27,27	0
52	MG	DA	3238	1/1	0.13	-	36,36,36,36	0
52	MG	BA	3097	1/1	0.27	-	32,32,32,32	0
52	MG	DA	3108	1/1	0.32	-	39,39,39,39	0
52	MG	AA	1618	1/1	0.15	-	53,53,53,53	0
52	MG	BA	3196	1/1	0.33	-	26,26,26,26	0
52	MG	DA	3101	1/1	0.24	-	34,34,34,34	0
52	MG	BA	3287	1/1	0.27	-	27,27,27,27	0
52	MG	BA	3001	1/1	0.30	-	36,36,36,36	0
52	MG	BA	3116	1/1	0.09	-	41,41,41,41	0
52	MG	BA	3301	1/1	0.58	-	36,36,36,36	0
52	MG	CA	1646	1/1	0.68	-	58,58,58,58	0
52	MG	BA	3352	1/1	0.21	-	51,51,51,51	0
52	MG	BA	3190	1/1	0.46	-	36,36,36,36	0
52	MG	DA	3018	1/1	0.25	-	29,29,29,29	0
52	MG	BP	201	1/1	0.45	-	35,35,35,35	0
52	MG	BA	3142	1/1	0.33	-	26,26,26,26	0
52	MG	DA	3211	1/1	0.74	-	50,50,50,50	0
52	MG	BA	3066	1/1	0.41	-	34,34,34,34	0
52	MG	DA	3155	1/1	0.20	-	41,41,41,41	0
52	MG	CA	1618	1/1	0.45	-	58,58,58,58	0
52	MG	AA	1624	1/1	0.42	-	59,59,59,59	0
52	MG	BA	3127	1/1	0.34	-	44,44,44,44	0
52	MG	BA	3019	1/1	0.50	-	13,13,13,13	0
52	MG	DA	3217	1/1	0.10	-	36,36,36,36	0
52	MG	DA	3243	1/1	0.39	-	56,56,56,56	0
52	MG	CA	1619	1/1	0.45	-	40,40,40,40	0
52	MG	DA	3020	1/1	0.51	-	33,33,33,33	0
52	MG	BA	3305	1/1	0.24	-	54,54,54,54	0
52	MG	DA	3189	1/1	0.13	-	42,42,42,42	0
52	MG	BA	3044	1/1	0.24	-	9,9,9,9	0
52	MG	DA	3283	1/1	0.60	-	52,52,52,52	0
52	MG	BA	3262	1/1	0.14	-	30,30,30,30	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
52	MG	DA	3297	1/1	0.47	-	55,55,55,55	0
52	MG	DA	3112	1/1	0.38	-	28,28,28,28	0
52	MG	CA	1611	1/1	0.57	-	76,76,76,76	0
52	MG	DA	3251	1/1	0.22	-	72,72,72,72	0
52	MG	AA	1653	1/1	0.32	-	46,46,46,46	0
52	MG	BA	3043	1/1	0.16	-	32,32,32,32	0
52	MG	DA	3044	1/1	0.31	-	35,35,35,35	0
52	MG	DA	3216	1/1	0.43	-	45,45,45,45	0
52	MG	DA	3080	1/1	0.69	-	30,30,30,30	0
52	MG	BA	3091	1/1	0.20	-	14,14,14,14	0
52	MG	DA	3256	1/1	0.18	-	46,46,46,46	0
52	MG	BA	3264	1/1	0.23	-	11,11,11,11	0
52	MG	BA	3359	1/1	0.78	-	39,39,39,39	0
52	MG	BA	3367	1/1	0.07	-	47,47,47,47	0
52	MG	DA	3326	1/1	0.13	-	49,49,49,49	0
52	MG	BA	3217	1/1	0.34	-	34,34,34,34	0
52	MG	BA	3096	1/1	0.35	-	16,16,16,16	0
52	MG	DA	3104	1/1	0.40	-	41,41,41,41	0
52	MG	DA	3110	1/1	0.19	-	50,50,50,50	0
52	MG	BA	3317	1/1	0.29	-	53,53,53,53	0
52	MG	BA	3312	1/1	0.12	-	41,41,41,41	0
52	MG	DA	3239	1/1	0.69	-	41,41,41,41	0
52	MG	BA	3154	1/1	0.33	-	77,77,77,77	0
52	MG	BA	3329	1/1	0.21	-	49,49,49,49	0
52	MG	BA	3323	1/1	0.51	-	42,42,42,42	0
52	MG	BA	3331	1/1	0.45	-	37,37,37,37	0
52	MG	AA	1646	1/1	0.11	-	48,48,48,48	0
52	MG	DA	3127	1/1	0.17	-	33,33,33,33	0
52	MG	BA	3212	1/1	0.36	-	30,30,30,30	0
52	MG	DA	3313	1/1	0.60	-	48,48,48,48	0
52	MG	DA	3265	1/1	0.14	-	38,38,38,38	0
52	MG	AA	1608	1/1	0.41	-	70,70,70,70	0
52	MG	BA	3215	1/1	0.21	-	10,10,10,10	0
52	MG	BA	3289	1/1	0.23	-	44,44,44,44	0
52	MG	DA	3040	1/1	0.86	-	58,58,58,58	0
52	MG	DA	3209	1/1	0.25	-	51,51,51,51	0
52	MG	DA	3091	1/1	0.36	-	11,11,11,11	0
52	MG	CA	1635	1/1	0.69	-	73,73,73,73	0
52	MG	AA	1621	1/1	0.46	-	37,37,37,37	0
52	MG	BA	3258	1/1	0.17	-	21,21,21,21	0
52	MG	BA	3037	1/1	0.40	-	1,1,1,1	0
52	MG	BA	3204	1/1	0.17	-	36,36,36,36	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
52	MG	DA	3047	1/1	0.45	-	33,33,33,33	0
52	MG	DA	3231	1/1	0.50	-	54,54,54,54	0
52	MG	DA	3012	1/1	0.41	-	26,26,26,26	0
52	MG	BA	3082	1/1	0.23	-	6,6,6,6	0
52	MG	BA	3218	1/1	0.27	-	30,30,30,30	0
52	MG	DA	3114	1/1	0.18	-	46,46,46,46	0
52	MG	BA	3225	1/1	0.51	-	32,32,32,32	0
52	MG	BA	3191	1/1	0.37	-	19,19,19,19	0
52	MG	BQ	202	1/1	0.30	-	37,37,37,37	0
52	MG	DA	3262	1/1	0.58	-	60,60,60,60	0
52	MG	BA	3345	1/1	0.21	-	43,43,43,43	0
52	MG	DA	3301	1/1	0.18	-	15,15,15,15	0
52	MG	BA	3009	1/1	0.49	-	38,38,38,38	0
52	MG	BA	3185	1/1	0.20	-	45,45,45,45	0
52	MG	DA	3246	1/1	0.11	-	43,43,43,43	0
53	ZN	CD	301	1/1	0.27	-	107,107,107,107	0
52	MG	BA	3157	1/1	0.30	-	13,13,13,13	0
52	MG	BA	3026	1/1	0.24	-	45,45,45,45	0
52	MG	BA	3249	1/1	0.34	-	54,54,54,54	0
52	MG	BA	3280	1/1	0.33	-	41,41,41,41	0
52	MG	D5	101	1/1	0.40	-	30,30,30,30	0
52	MG	DA	3303	1/1	0.19	-	43,43,43,43	0
52	MG	DA	3188	1/1	0.58	-	43,43,43,43	0
52	MG	AA	1655	1/1	0.19	-	45,45,45,45	0
52	MG	DA	3308	1/1	0.13	-	43,43,43,43	0
52	MG	AA	1619	1/1	0.27	-	44,44,44,44	0
52	MG	DA	3274	1/1	0.40	-	71,71,71,71	0
52	MG	DA	3218	1/1	0.26	-	24,24,24,24	0
52	MG	BA	3349	1/1	0.73	-	65,65,65,65	0
52	MG	DA	3281	1/1	0.63	-	63,63,63,63	0
52	MG	DA	3019	1/1	0.54	-	25,25,25,25	0
52	MG	DA	3130	1/1	0.17	-	53,53,53,53	0
52	MG	BA	3281	1/1	0.23	-	41,41,41,41	0
52	MG	BA	3077	1/1	0.25	-	20,20,20,20	0
52	MG	BA	3250	1/1	0.52	-	48,48,48,48	0
52	MG	BB	207	1/1	0.20	-	58,58,58,58	0
52	MG	DA	3006	1/1	0.49	-	38,38,38,38	0
52	MG	BA	3192	1/1	0.27	-	17,17,17,17	0
52	MG	DA	3312	1/1	0.51	-	45,45,45,45	0
52	MG	CA	1632	1/1	0.17	-	56,56,56,56	0
52	MG	CA	1623	1/1	0.13	-	50,50,50,50	0
52	MG	BA	3233	1/1	0.22	-	20,20,20,20	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
52	MG	BA	3159	1/1	0.61	-	52,52,52,52	0
52	MG	DA	3288	1/1	0.18	-	42,42,42,42	0
52	MG	BA	3058	1/1	0.23	-	30,30,30,30	0
52	MG	AA	1639	1/1	0.35	-	48,48,48,48	0
52	MG	BA	3273	1/1	0.10	-	3,3,3,3	0
52	MG	BA	3102	1/1	0.35	-	38,38,38,38	0
52	MG	BA	3011	1/1	0.38	-	17,17,17,17	0
52	MG	BA	3141	1/1	0.14	-	47,47,47,47	0
52	MG	CA	1602	1/1	0.41	-	40,40,40,40	0
52	MG	BA	3028	1/1	0.41	-	24,24,24,24	0
52	MG	DA	3086	1/1	0.17	-	34,34,34,34	0
52	MG	BA	3219	1/1	0.52	-	24,24,24,24	0
52	MG	DA	3214	1/1	0.35	-	39,39,39,39	0
52	MG	BA	3140	1/1	0.44	-	44,44,44,44	0
52	MG	DA	3103	1/1	0.46	-	33,33,33,33	0
52	MG	BA	3278	1/1	0.15	-	31,31,31,31	0
52	MG	CA	1612	1/1	0.30	-	48,48,48,48	0
52	MG	DF	301	1/1	0.33	-	53,53,53,53	0
52	MG	DA	3240	1/1	0.08	-	40,40,40,40	0
52	MG	DA	3070	1/1	0.22	-	35,35,35,35	0
52	MG	BA	3309	1/1	0.50	-	49,49,49,49	0
52	MG	BA	3291	1/1	0.13	-	54,54,54,54	0
52	MG	DA	3072	1/1	0.80	-	71,71,71,71	0
52	MG	BA	3257	1/1	0.17	-	35,35,35,35	0
52	MG	DB	201	1/1	0.35	-	57,57,57,57	0
52	MG	BA	3342	1/1	1.21	-	69,69,69,69	0
52	MG	BA	3074	1/1	0.49	-	48,48,48,48	0
52	MG	BA	3365	1/1	0.27	-	43,43,43,43	0
52	MG	DA	3192	1/1	0.58	-	36,36,36,36	0
52	MG	DA	3048	1/1	0.37	-	30,30,30,30	0
52	MG	BA	3164	1/1	0.28	-	33,33,33,33	0
52	MG	DA	3008	1/1	0.36	-	33,33,33,33	0
52	MG	BA	3326	1/1	0.32	-	40,40,40,40	0
52	MG	BA	3307	1/1	0.25	-	38,38,38,38	0
52	MG	DA	3202	1/1	0.46	-	46,46,46,46	0
52	MG	DB	204	1/1	0.39	-	37,37,37,37	0
52	MG	BA	3111	1/1	0.49	-	41,41,41,41	0
52	MG	BA	3253	1/1	0.22	-	17,17,17,17	0
52	MG	BA	3081	1/1	0.35	-	7,7,7,7	0
52	MG	BA	3318	1/1	0.34	-	34,34,34,34	0
52	MG	BA	3003	1/1	0.68	-	44,44,44,44	0
52	MG	AA	1628	1/1	0.60	-	70,70,70,70	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
52	MG	BA	3193	1/1	0.42	-	46,46,46,46	0
52	MG	DA	3204	1/1	0.19	-	42,42,42,42	0
52	MG	DA	3098	1/1	0.44	-	34,34,34,34	0
52	MG	DA	3156	1/1	0.32	-	51,51,51,51	0
52	MG	BA	3050	1/1	0.27	-	21,21,21,21	0
52	MG	BA	3016	1/1	0.29	-	11,11,11,11	0
52	MG	CA	1639	1/1	0.51	-	50,50,50,50	0
52	MG	BA	3027	1/1	0.44	-	25,25,25,25	0
52	MG	BA	3282	1/1	0.50	-	46,46,46,46	0
52	MG	BA	3006	1/1	0.55	-	33,33,33,33	0
52	MG	BA	3108	1/1	0.16	-	31,31,31,31	0
52	MG	DA	3060	1/1	0.29	-	46,46,46,46	0
52	MG	DA	3269	1/1	0.14	-	61,61,61,61	0
52	MG	AA	1604	1/1	0.29	-	62,62,62,62	0
52	MG	DA	3210	1/1	0.20	-	46,46,46,46	0
52	MG	DA	3191	1/1	0.35	-	38,38,38,38	0
52	MG	DA	3219	1/1	0.29	-	25,25,25,25	0
52	MG	BA	3311	1/1	0.13	-	38,38,38,38	0
52	MG	DA	3242	1/1	0.19	-	35,35,35,35	0
52	MG	BA	3199	1/1	0.38	-	42,42,42,42	0
52	MG	DA	3332	1/1	0.14	-	69,69,69,69	0
52	MG	AA	1644	1/1	0.31	-	68,68,68,68	0
52	MG	BA	3173	1/1	0.22	-	50,50,50,50	0
52	MG	DA	3282	1/1	0.19	-	61,61,61,61	0
52	MG	DA	3249	1/1	0.17	-	48,48,48,48	0
52	MG	DA	3059	1/1	0.39	-	24,24,24,24	0
52	MG	DA	3295	1/1	0.55	-	73,73,73,73	0
52	MG	DA	3194	1/1	0.24	-	22,22,22,22	0
54	K	DA	3333	1/1	0.30	-	62,62,62,62	0
52	MG	BA	3214	1/1	0.20	-	23,23,23,23	0
53	ZN	AN	101	1/1	0.17	-	144,144,144,144	0
52	MG	BA	3347	1/1	0.37	-	47,47,47,47	0
52	MG	DP	201	1/1	0.12	-	19,19,19,19	0
52	MG	BA	3330	1/1	0.47	-	48,48,48,48	0
52	MG	DA	3082	1/1	0.38	-	44,44,44,44	0
52	MG	DA	3225	1/1	0.17	-	37,37,37,37	0
52	MG	BA	3005	1/1	0.30	-	26,26,26,26	0
52	MG	BA	3042	1/1	0.24	-	7,7,7,7	0
52	MG	BA	3169	1/1	0.31	-	33,33,33,33	0
52	MG	DA	3183	1/1	0.38	-	35,35,35,35	0
52	MG	DA	3315	1/1	0.19	-	43,43,43,43	0
52	MG	BA	3229	1/1	0.34	-	26,26,26,26	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
52	MG	DA	3305	1/1	0.84	-	46,46,46,46	0
52	MG	BA	3238	1/1	0.67	-	43,43,43,43	0
52	MG	DA	3292	1/1	0.23	-	52,52,52,52	0
52	MG	DA	3199	1/1	0.49	-	43,43,43,43	0
52	MG	BA	3105	1/1	0.45	-	19,19,19,19	0
52	MG	CA	1648	1/1	0.74	-	53,53,53,53	0
52	MG	BA	3069	1/1	0.21	-	26,26,26,26	0
52	MG	BA	3308	1/1	0.30	-	45,45,45,45	0
52	MG	DA	3102	1/1	0.47	-	24,24,24,24	0
52	MG	BA	3295	1/1	0.21	-	35,35,35,35	0
52	MG	BA	3072	1/1	0.49	-	41,41,41,41	0
52	MG	DA	3228	1/1	0.17	-	38,38,38,38	0
52	MG	BA	3032	1/1	0.31	-	15,15,15,15	0
52	MG	BA	3024	1/1	0.29	-	20,20,20,20	0
52	MG	DA	3065	1/1	0.15	-	30,30,30,30	0
52	MG	BA	3353	1/1	0.10	-	31,31,31,31	0
52	MG	DA	3163	1/1	0.57	-	30,30,30,30	0
52	MG	BA	3070	1/1	0.28	-	24,24,24,24	0
52	MG	AA	1616	1/1	0.06	-	57,57,57,57	0
52	MG	AA	1605	1/1	0.34	-	71,71,71,71	0
52	MG	BA	3132	1/1	0.20	-	15,15,15,15	0
52	MG	DA	3290	1/1	0.35	-	55,55,55,55	0
52	MG	CA	1649	1/1	0.34	-	55,55,55,55	0
52	MG	DA	3287	1/1	1.01	-	61,61,61,61	0
52	MG	DA	3206	1/1	0.44	-	45,45,45,45	0
52	MG	DA	3055	1/1	0.39	-	34,34,34,34	0
52	MG	BA	3029	1/1	0.28	-	25,25,25,25	0
52	MG	DA	3139	1/1	0.68	-	43,43,43,43	0
52	MG	BA	3348	1/1	0.15	-	34,34,34,34	0
52	MG	BA	3279	1/1	0.26	-	39,39,39,39	0
52	MG	DA	3260	1/1	0.34	-	34,34,34,34	0
52	MG	CA	1651	1/1	0.59	-	51,51,51,51	0
52	MG	DA	3053	1/1	0.42	-	21,21,21,21	0
52	MG	DA	3132	1/1	0.74	-	53,53,53,53	0
52	MG	BA	3267	1/1	0.20	-	41,41,41,41	0
52	MG	DA	3014	1/1	0.31	-	71,71,71,71	0
52	MG	B5	101	1/1	0.34	-	28,28,28,28	0
52	MG	BA	3226	1/1	0.15	-	14,14,14,14	0
52	MG	DA	3247	1/1	0.14	-	37,37,37,37	0
52	MG	BA	3180	1/1	0.54	-	46,46,46,46	0
52	MG	DA	3145	1/1	0.47	-	40,40,40,40	0
52	MG	DA	3298	1/1	0.57	-	59,59,59,59	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
52	MG	BA	3064	1/1	0.44	-	41,41,41,41	0
52	MG	DA	3330	1/1	0.20	-	53,53,53,53	0
52	MG	DA	3046	1/1	0.37	-	34,34,34,34	0
52	MG	DA	3233	1/1	0.49	-	51,51,51,51	0
52	MG	BA	3252	1/1	0.19	-	50,50,50,50	0
52	MG	DA	3186	1/1	0.22	-	42,42,42,42	0
52	MG	DA	3120	1/1	0.19	-	36,36,36,36	0
52	MG	BA	3251	1/1	0.15	-	40,40,40,40	0
52	MG	BB	205	1/1	0.17	-	59,59,59,59	0
52	MG	DA	3069	1/1	0.22	-	63,63,63,63	0
52	MG	BA	3086	1/1	0.32	-	27,27,27,27	0
52	MG	BA	3168	1/1	0.36	-	21,21,21,21	0
52	MG	CA	1610	1/1	0.24	-	66,66,66,66	0
52	MG	BA	3118	1/1	0.20	-	38,38,38,38	0
52	MG	BA	3246	1/1	0.29	-	40,40,40,40	0
52	MG	BA	3355	1/1	0.60	-	51,51,51,51	0
52	MG	AA	1638	1/1	0.44	-	69,69,69,69	0
52	MG	BA	3113	1/1	0.19	-	26,26,26,26	0
52	MG	DA	3063	1/1	0.29	-	38,38,38,38	0
52	MG	BR	202	1/1	0.55	-	31,31,31,31	0
52	MG	BA	3182	1/1	0.43	-	37,37,37,37	0
52	MG	DA	3143	1/1	0.23	-	40,40,40,40	0
52	MG	BA	3195	1/1	0.33	-	49,49,49,49	0
52	MG	BA	3244	1/1	0.26	-	50,50,50,50	0
52	MG	AA	1648	1/1	1.16	-	80,80,80,80	0
52	MG	DA	3280	1/1	0.38	-	70,70,70,70	0
52	MG	AA	1636	1/1	0.43	-	47,47,47,47	0
52	MG	BB	206	1/1	0.65	-	48,48,48,48	0
52	MG	BA	3056	1/1	0.13	-	20,20,20,20	0
52	MG	D5	102	1/1	0.46	-	58,58,58,58	0

## 6.5 Other polymers ⓘ

There are no such residues in this entry.