



Full wwPDB X-ray Structure Validation Report ⓘ

Jun 16, 2014 – 07:14 PM BST

PDB ID : 4V6C
Title : Crystal structure of the E. coli 70S ribosome in an intermediate state of ratcheting
Authors : Zhang, W.; Dunkle, J.A.; Cate, J.H.D.
Deposited on : 2009-06-27
Resolution : 3.19 Å(reported)

This is a full wwPDB validation report for a publicly released PDB entry.
We welcome your comments at validation@mail.wwpdb.org
A user guide is available at <http://wwpdb.org/ValidationPDFNotes.html>

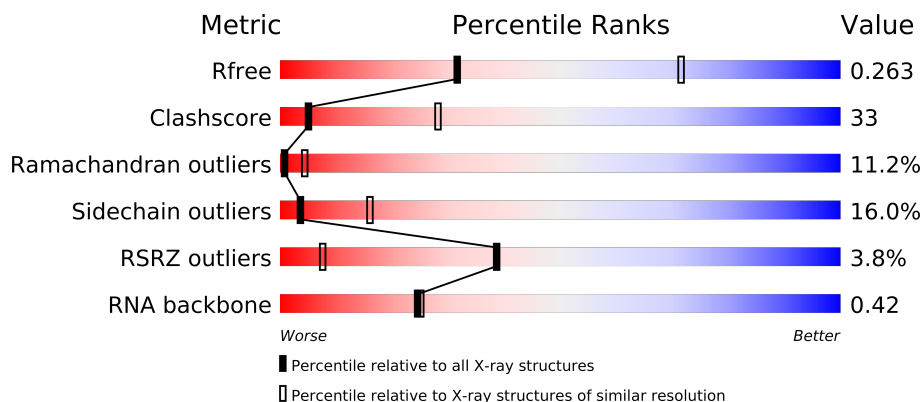
The following versions of software and data (see [references](#)) were used in the production of this report:

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 3.19 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	1824 (3.30-3.10)
Clashscore	79885	1078 (3.26-3.14)
Ramachandran outliers	78287	1059 (3.26-3.14)
Sidechain outliers	78261	1058 (3.26-3.14)
RSRZ outliers	66119	1825 (3.30-3.10)
RNA backbone	1838	1002 (3.72-2.68)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments on the lower bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria. 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	AB	241	
1	CB	241	
2	AC	233	
2	CC	233	
3	AD	206	
3	CD	206	
4	AE	167	
4	CE	167	
5	AF	135	
5	CF	135	
6	AG	179	
6	CG	179	

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Mol	Chain	Length	Quality of chain
7	AH	130	
7	CH	130	
8	AI	130	
8	CI	130	
9	AJ	103	
9	CJ	103	
10	AK	129	
10	CK	129	
11	AL	124	
11	CL	124	
12	AM	118	
12	CM	118	
13	AN	101	
13	CN	101	
14	AO	89	
14	CO	89	
15	AP	82	
15	CP	82	
16	AQ	84	
16	CQ	84	
17	AR	75	
17	CR	75	
18	AS	92	
18	CS	92	
19	AT	87	
19	CT	87	
20	AU	71	
20	CU	71	
21	AA	1533	
22	BA	2903	
22	DA	2903	
23	BB	118	
24	BC	273	
24	DC	273	
25	BD	209	
25	DD	209	
26	BE	201	
26	DE	201	
27	BF	179	
27	DF	179	
28	BG	177	
28	DG	177	

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Mol	Chain	Length	Quality of chain
29	BH	149	
29	DH	149	
30	BI	142	
30	DI	142	
31	BJ	142	
31	DJ	142	
32	BK	123	
32	DK	123	
33	BL	144	
33	DL	144	
34	BM	136	
34	DM	136	
35	BN	127	
35	DN	127	
36	BO	117	
36	DO	117	
37	BP	115	
37	DP	115	
38	BQ	118	
38	DQ	118	
39	BR	103	
39	DR	103	
40	BS	110	
40	DS	110	
41	BT	100	
41	DT	100	
42	BU	104	
42	DU	104	
43	BV	94	
43	DV	94	
44	BW	85	
44	DW	85	
45	BX	78	
45	DX	78	
46	BY	63	
46	DY	63	
47	BZ	59	
47	DZ	59	
48	B0	57	
48	D0	57	
49	B1	55	
49	D1	55	

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Mol	Chain	Length	Quality of chain
50	B2	46	
50	D2	46	
51	B3	65	
51	D3	65	
52	B4	38	
52	D4	38	
53	CA	1530	
54	DB	117	

The following table lists non-polymeric compounds that are outliers for geometric or electron-density-fit criteria:

Mol	Type	Chain	Res	Geometry	Electron density
55	MG	AA	1609	-	X
55	MG	AA	1611	-	X
55	MG	AA	1615	-	X
55	MG	AA	1619	-	X
55	MG	AA	1622	-	X
55	MG	AA	1626	-	X
55	MG	AA	1627	-	X
55	MG	AA	1628	-	X
55	MG	AA	1636	-	X
55	MG	AA	1641	-	X
55	MG	BA	3011	-	X
55	MG	BA	3014	-	X
55	MG	BA	3015	-	X
55	MG	BA	3020	-	X
55	MG	BA	3026	-	X
55	MG	BA	3028	-	X
55	MG	BA	3035	-	X
55	MG	BA	3037	-	X
55	MG	BA	3038	-	X
55	MG	BA	3040	-	X
55	MG	BA	3045	-	X
55	MG	BA	3049	-	X
55	MG	BA	3056	-	X
55	MG	BA	3057	-	X
55	MG	BA	3058	-	X
55	MG	BA	3060	-	X
55	MG	BA	3061	-	X
55	MG	BA	3062	-	X
55	MG	BA	3071	-	X

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Mol	Type	Chain	Res	Geometry	Electron density
55	MG	BA	3072	-	X
55	MG	BA	3077	-	X
55	MG	BA	3084	-	X
55	MG	BA	3088	-	X
55	MG	BA	3092	-	X
55	MG	BA	3103	-	X
55	MG	BA	3105	-	X
55	MG	BA	3109	-	X
55	MG	BA	3110	-	X
55	MG	BA	3117	-	X
55	MG	BA	3120	-	X
55	MG	BA	3125	-	X
55	MG	BA	3127	-	X
55	MG	BA	3132	-	X
55	MG	BA	3134	-	X
55	MG	BA	3136	-	X
55	MG	BA	3137	-	X
55	MG	BB	201	-	X
55	MG	CA	1603	-	X
55	MG	CA	1610	-	X
55	MG	CA	1612	-	X
55	MG	CA	1614	-	X
55	MG	CA	1615	-	X
55	MG	CA	1619	-	X
55	MG	CA	1620	-	X
55	MG	CA	1624	-	X
55	MG	CA	1625	-	X
55	MG	CA	1626	-	X
55	MG	CA	1627	-	X
55	MG	CA	1628	-	X
55	MG	DA	3002	-	X
55	MG	DA	3005	-	X
55	MG	DA	3007	-	X
55	MG	DA	3013	-	X
55	MG	DA	3015	-	X
55	MG	DA	3020	-	X
55	MG	DA	3021	-	X
55	MG	DA	3022	-	X
55	MG	DA	3027	-	X
55	MG	DA	3029	-	X
55	MG	DA	3039	-	X
55	MG	DA	3042	-	X

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Mol	Type	Chain	Res	Geometry	Electron density
55	MG	DA	3058	-	X
55	MG	DA	3059	-	X
55	MG	DA	3060	-	X
55	MG	DA	3061	-	X
55	MG	DA	3063	-	X
55	MG	DA	3064	-	X
55	MG	DA	3065	-	X
55	MG	DA	3070	-	X
55	MG	DA	3075	-	X
55	MG	DA	3079	-	X
55	MG	DA	3098	-	X
55	MG	DA	3101	-	X
55	MG	DA	3109	-	X
55	MG	DA	3110	-	X
55	MG	DA	3115	-	X
55	MG	DA	3116	-	X
55	MG	DA	3127	-	X
55	MG	DA	3129	-	X
55	MG	DA	3131	-	X
55	MG	DA	3132	-	X
55	MG	DA	3134	-	X
55	MG	DJ	201	-	X

2 Entry composition

There are 57 unique types of molecules in this entry. The entry contains 284450 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 protein called 30S ribosomal protein S2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	AB	218	Total	C	N	O	S	0	0	0
			1704	1081	305	311	7			
1	CB	218	Total	C	N	O	S	0	0	0
			1704	1081	305	311	7			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	AC	206	Total	C	N	O	S	0	0	0
			1624	1028	305	288	3			
2	CC	206	Total	C	N	O	S	0	0	0
			1624	1028	305	288	3			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	AD	205	Total	C	N	O	S	0	0	0
			1643	1026	315	298	4			
3	CD	205	Total	C	N	O	S	0	0	0
			1643	1026	315	298	4			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	AE	150	Total	C	N	O	S	0	0	0
			1105	687	211	201	6			
4	CE	150	Total	C	N	O	S	0	0	0
			1105	687	211	201	6			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	AF	100	Total	C	N	O	S	0	0	0
			817	515	148	148	6			
5	CF	100	Total	C	N	O	S	0	0	0
			817	515	148	148	6			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
6	AG	151	Total	C	N	O	S	0	0	0
			1181	735	227	215	4			
6	CG	150	Total	C	N	O	S	0	0	0
			1174	730	226	214	4			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
7	AH	129	Total	C	N	O	S	0	0	0
			979	616	173	184	6			
7	CH	129	Total	C	N	O	S	0	0	0
			979	616	173	184	6			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
8	AI	127	Total	C	N	O	S	0	0	0
			1022	634	206	179	3			
8	CI	127	Total	C	N	O	S	0	0	0
			1022	634	206	179	3			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
9	AJ	98	Total	C	N	O	S	0	0	0
			786	493	150	142	1			
9	CJ	98	Total	C	N	O	S	0	0	0
			786	493	150	142	1			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	AK	117	Total	C	N	O	S	0	0	0
			877	540	174	160	3			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	CK	117	Total	C	N	O	S	0	0	0
			877	540	174	160	3			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
11	AL	123	Total	C	N	O	S	0	0	0
			955	590	196	165	4			
11	CL	123	Total	C	N	O	S	0	0	0
			955	590	196	165	4			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
12	AM	114	Total	C	N	O	S	0	0	0
			883	546	178	156	3			
12	CM	113	Total	C	N	O	S	0	0	0
			876	541	177	155	3			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
13	AN	96	Total	C	N	O	S	0	0	0
			774	483	160	128	3			
13	CN	95	Total	C	N	O	S	0	0	0
			769	480	159	127	3			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
14	AO	88	Total	C	N	O	S	0	0	0
			714	439	144	130	1			
14	CO	88	Total	C	N	O	S	0	0	0
			714	439	144	130	1			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
15	AP	82	Total	C	N	O	S	0	0	0
			649	406	128	114	1			
15	CP	80	Total	C	N	O	S	0	0	0
			638	400	126	111	1			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
16	AQ	80	Total	C	N	O	S	0	0	0
			648	411	121	113	3			
16	CQ	80	Total	C	N	O	S	0	0	0
			648	411	121	113	3			

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

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
17	AR	55	Total	C	N	O	0	0	0
			455	288	86	81			
17	CR	55	Total	C	N	O	0	0	0
			455	288	86	81			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
18	AS	79	Total	C	N	O	S	0	0	0
			637	408	120	107	2			
18	CS	79	Total	C	N	O	S	0	0	0
			637	408	120	107	2			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
19	AT	85	Total	C	N	O	S	0	0	0
			665	411	137	114	3			
19	CT	85	Total	C	N	O	S	0	0	0
			665	411	137	114	3			

- Molecule 20 is a protein called 30S ribosomal protein S21.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
20	AU	51	Total	C	N	O	S	0	0	0
			425	265	86	73	1			
20	CU	51	Total	C	N	O	S	0	0	0
			425	265	86	73	1			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
21	AA	1533	Total	C	N	O	P	0	0	0
			32895	14671	6036	10655	1533			

- Molecule 22 is a RNA chain called 23S rRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	BA	2854	Total	C	N	O	P	0	0	0
			61274	27334	11279	19807	2854			
22	DA	2841	Total	C	N	O	P	0	0	0
			60995	27210	11229	19715	2841			

- Molecule 23 is a RNA chain called 5S rRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	BB	118	Total	C	N	O	P	0	0	0
			2529	1126	464	821	118			

- Molecule 24 is a protein called 50S ribosomal protein L2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
24	BC	271	Total	C	N	O	S	0	0	0
			2082	1288	423	364	7			
24	DC	271	Total	C	N	O	S	0	0	0
			2082	1288	423	364	7			

- Molecule 25 is a protein called 50S ribosomal protein L3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
25	BD	209	Total	C	N	O	S	0	0	0
			1565	979	288	294	4			
25	DD	209	Total	C	N	O	S	0	0	0
			1565	979	288	294	4			

- Molecule 26 is a protein called 50S ribosomal protein L4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
26	BE	201	Total	C	N	O	S	0	0	0
			1552	974	283	290	5			
26	DE	201	Total	C	N	O	S	0	0	0
			1552	974	283	290	5			

- Molecule 27 is a protein called 50S ribosomal protein L5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
27	BF	177	Total	C	N	O	S	0	0	0
			1410	899	249	256	6			
27	DF	178	Total	C	N	O	S	0	0	0
			1420	905	251	258	6			

- Molecule 28 is a protein called 50S ribosomal protein L6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
28	BG	176	Total	C	N	O	S	0	0	0
			1323	832	243	246	2			
28	DG	176	Total	C	N	O	S	0	0	0
			1323	832	243	246	2			

- Molecule 29 is a protein called 50S ribosomal protein L9.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
29	BH	149	Total	C	N	O	S	0	0	0
			1111	699	197	214	1			
29	DH	149	Total	C	N	O	S	0	0	0
			1111	699	197	214	1			

- Molecule 30 is a protein called 50S ribosomal protein L11.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
30	BI	141	Total	C	N	O	S	0	0	0
			1032	651	179	196	6			
30	DI	141	Total	C	N	O	S	0	0	0
			1032	651	179	196	6			

- Molecule 31 is a protein called 50S ribosomal protein L13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
31	BJ	142	Total	C	N	O	S	0	0	0
			1129	714	212	199	4			
31	DJ	142	Total	C	N	O	S	0	0	0
			1129	714	212	199	4			

- Molecule 32 is a protein called 50S ribosomal protein L14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
32	BK	122	Total	C	N	O	S	0	0	0
			938	587	180	165	6			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
32	DK	122	Total	C	N	O	S	0	0	0
			938	587	180	165	6			

- Molecule 33 is a protein called 50S ribosomal protein L15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
33	BL	143	Total	C	N	O	S	0	0	0
			1045	649	206	189	1			
33	DL	143	Total	C	N	O	S	0	0	0
			1045	649	206	189	1			

- Molecule 34 is a protein called 50S ribosomal protein L16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
34	BM	136	Total	C	N	O	S	0	0	0
			1074	686	205	177	6			
34	DM	136	Total	C	N	O	S	0	0	0
			1074	686	205	177	6			

- Molecule 35 is a protein called 50S ribosomal protein L17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
35	BN	120	Total	C	N	O	S	0	0	0
			960	593	196	166	5			
35	DN	120	Total	C	N	O	S	0	0	0
			960	593	196	166	5			

- Molecule 36 is a protein called 50S ribosomal protein L18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
36	BO	116	Total	C	N	O	0	0	0
			892	552	178	162			
36	DO	116	Total	C	N	O	0	0	0
			892	552	178	162			

- Molecule 37 is a protein called 50S ribosomal protein L19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
37	BP	114	Total	C	N	O	S	0	0	0
			917	574	179	163	1			
37	DP	114	Total	C	N	O	S	0	0	0
			917	574	179	163	1			

- Molecule 38 is a protein called 50S ribosomal protein L20.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
38	BQ	117	Total	C	N	O	0	0	0
			947	604	192	151			
38	DQ	117	Total	C	N	O	0	0	0
			947	604	192	151			

- Molecule 39 is a protein called 50S ribosomal protein L21.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
39	BR	103	Total	C	N	O	S	0	0	0
			816	516	153	145	2			
39	DR	103	Total	C	N	O	S	0	0	0
			816	516	153	145	2			

- Molecule 40 is a protein called 50S ribosomal protein L22.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
40	BS	110	Total	C	N	O	S	0	0	0
			857	532	166	156	3			
40	DS	110	Total	C	N	O	S	0	0	0
			857	532	166	156	3			

- Molecule 41 is a protein called 50S ribosomal protein L23.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
41	BT	93	Total	C	N	O	S	0	0	0
			738	466	139	131	2			
41	DT	93	Total	C	N	O	S	0	0	0
			738	466	139	131	2			

- Molecule 42 is a protein called 50S ribosomal protein L24.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
42	BU	102	Total	C	N	O	0	0	0
			779	492	146	141			
42	DU	102	Total	C	N	O	0	0	0
			779	492	146	141			

- Molecule 43 is a protein called 50S ribosomal protein L25.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
43	BV	94	Total	C	N	O	S	0	0	0
			753	479	137	134	3			
43	DV	94	Total	C	N	O	S	0	0	0
			753	479	137	134	3			

- Molecule 44 is a protein called 50S ribosomal protein L27.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
44	BW	79	Total	C	N	O	S	0	0	0
			596	367	120	108	1			
44	DW	79	Total	C	N	O	S	0	0	0
			596	367	120	108	1			

- Molecule 45 is a protein called 50S ribosomal protein L28.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
45	BX	77	Total	C	N	O	S	0	0	0
			625	388	129	106	2			
45	DX	77	Total	C	N	O	S	0	0	0
			625	388	129	106	2			

- Molecule 46 is a protein called 50S ribosomal protein L29.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
46	BY	63	Total	C	N	O	S	0	0	0
			509	313	99	95	2			
46	DY	63	Total	C	N	O	S	0	0	0
			509	313	99	95	2			

- Molecule 47 is a protein called 50S ribosomal protein L30.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
47	BZ	58	Total	C	N	O	S	0	0	0
			449	281	87	79	2			
47	DZ	58	Total	C	N	O	S	0	0	0
			449	281	87	79	2			

- Molecule 48 is a protein called 50S ribosomal protein L32.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
48	B0	56	Total	C	N	O	S	0	0	0
			444	269	94	80	1			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
48	D0	56	Total	C	N	O	S	0	0	0
			444	269	94	80	1			

- Molecule 49 is a protein called 50S ribosomal protein L33.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
49	B1	50	Total	C	N	O		0	0	0
			409	263	75	71				
49	D1	50	Total	C	N	O		0	0	0
			409	263	75	71				

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
50	B2	46	Total	C	N	O	S	0	0	0
			377	228	90	57	2			
50	D2	46	Total	C	N	O	S	0	0	0
			377	228	90	57	2			

- Molecule 51 is a protein called 50S ribosomal protein L35.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
51	B3	64	Total	C	N	O	S	0	0	0
			504	323	105	74	2			
51	D3	64	Total	C	N	O	S	0	0	0
			504	323	105	74	2			

- Molecule 52 is a protein called 50S ribosomal protein L36.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
52	B4	38	Total	C	N	O	S	0	0	0
			302	185	65	48	4			
52	D4	38	Total	C	N	O	S	0	0	0
			302	185	65	48	4			

- Molecule 53 is a RNA chain called 16S rRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
53	CA	1530	Total	C	N	O	P	0	0	0
			32831	14642	6024	10635	1530			

- Molecule 54 is a RNA chain called 5S rRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
54	DB	117	Total	C	N	O	P	0	0	0
			2507	1116	459	815	117			

- Molecule 55 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
55	BB	4	Total	Mg	0	0
			4	4		
55	BA	137	Total	Mg	0	0
			137	137		
55	CA	42	Total	Mg	0	0
			42	42		
55	DJ	1	Total	Mg	0	0
			1	1		
55	AA	43	Total	Mg	0	0
			43	43		
55	DA	135	Total	Mg	0	0
			135	135		
55	DB	1	Total	Mg	0	0
			1	1		

- Molecule 56 is ZINC ION (three-letter code: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
56	B4	1	Total	Zn	0	0
			1	1		
56	D4	1	Total	Zn	0	0
			1	1		

- Molecule 57 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
57	AE	1	Total	O	0	0
			1	1		
57	AL	3	Total	O	0	0
			3	3		
57	AN	6	Total	O	0	0
			6	6		
57	AT	2	Total	O	0	0
			2	2		
57	AU	1	Total	O	0	0
			1	1		

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
57	AA	195	Total 195	O 195	0	0
57	BA	610	Total 610	O 610	0	0
57	BB	20	Total 20	O 20	0	0
57	BC	10	Total 10	O 10	0	0
57	BD	2	Total 2	O 2	0	0
57	BL	4	Total 4	O 4	0	0
57	BN	3	Total 3	O 3	0	0
57	BQ	1	Total 1	O 1	0	0
57	BT	2	Total 2	O 2	0	0
57	B0	1	Total 1	O 1	0	0
57	B2	1	Total 1	O 1	0	0
57	B3	3	Total 3	O 3	0	0
57	B4	3	Total 3	O 3	0	0
57	CE	5	Total 5	O 5	0	0
57	CI	1	Total 1	O 1	0	0
57	CL	1	Total 1	O 1	0	0
57	CN	3	Total 3	O 3	0	0
57	CT	3	Total 3	O 3	0	0
57	CU	2	Total 2	O 2	0	0
57	CA	192	Total 192	O 192	0	0
57	DA	599	Total 599	O 599	0	0

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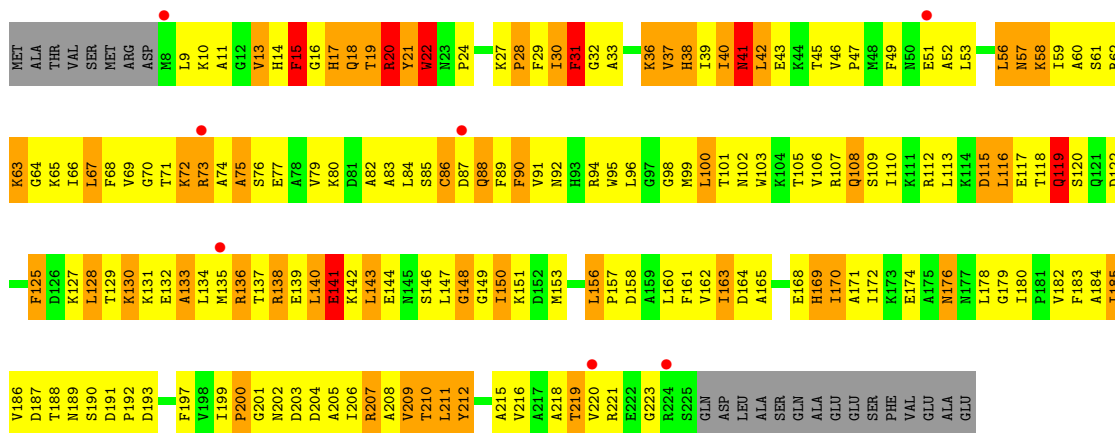
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
57	DB	4	Total 4	O 4	0	0
57	DC	13	Total 13	O 13	0	0
57	DD	4	Total 4	O 4	0	0
57	DE	3	Total 3	O 3	0	0
57	DJ	3	Total 3	O 3	0	0
57	DL	5	Total 5	O 5	0	0
57	DN	2	Total 2	O 2	0	0
57	DT	2	Total 2	O 2	0	0
57	DU	1	Total 1	O 1	0	0
57	DV	1	Total 1	O 1	0	0
57	D2	1	Total 1	O 1	0	0
57	D3	1	Total 1	O 1	0	0
57	D4	4	Total 4	O 4	0	0

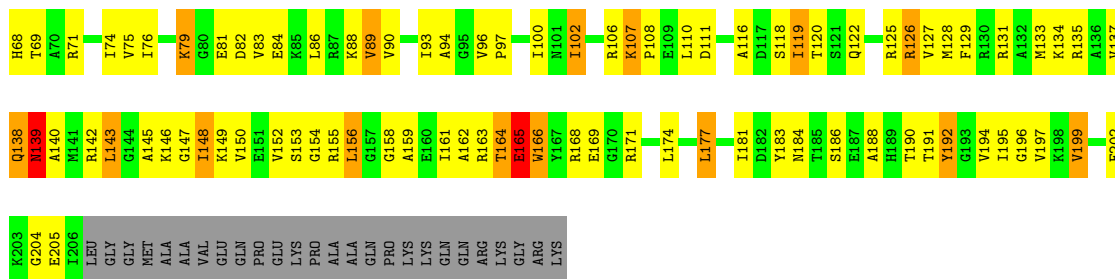
3 Residue-property plots

These plots are drawn for all protein, RNA and DNA chains in the entry. The first graphic for a chain summarises the proportions of errors displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. A red dot above a residue indicates a poor fit to the electron density ($RSRZ > 2$). Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

• Molecule 1: 30S ribosomal protein S2

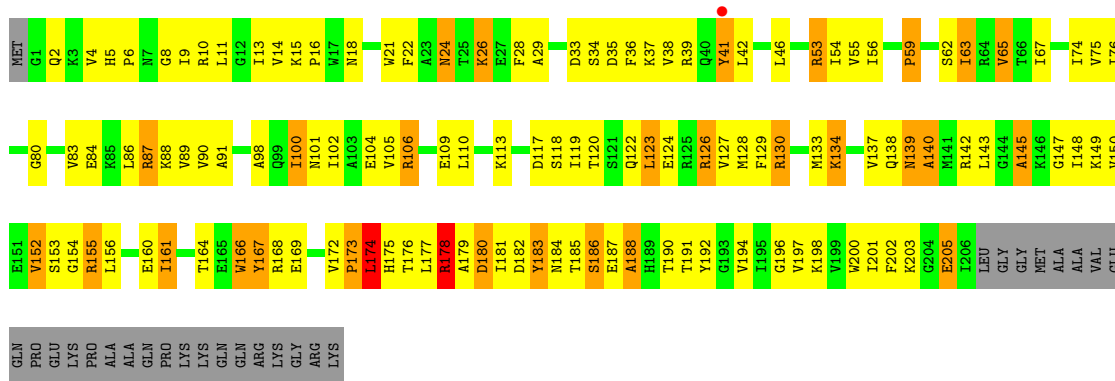
Chain AB: 





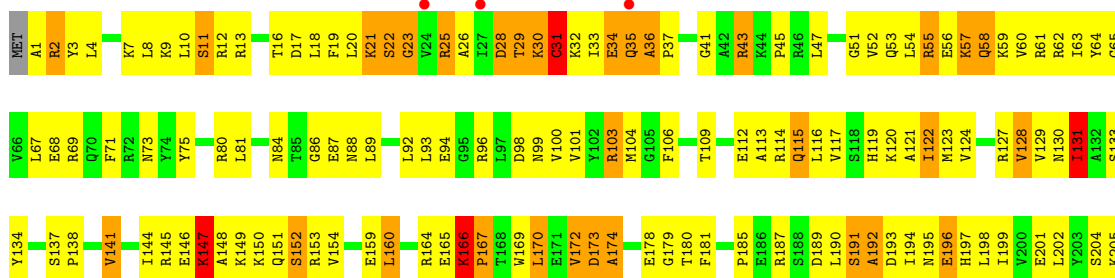
- Molecule 2: 30S ribosomal protein S3

Chain CC:



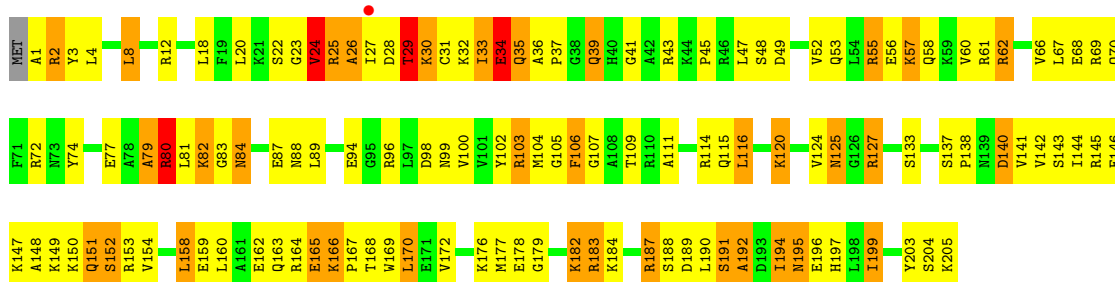
- Molecule 3: 30S ribosomal protein S4

Chain AD:



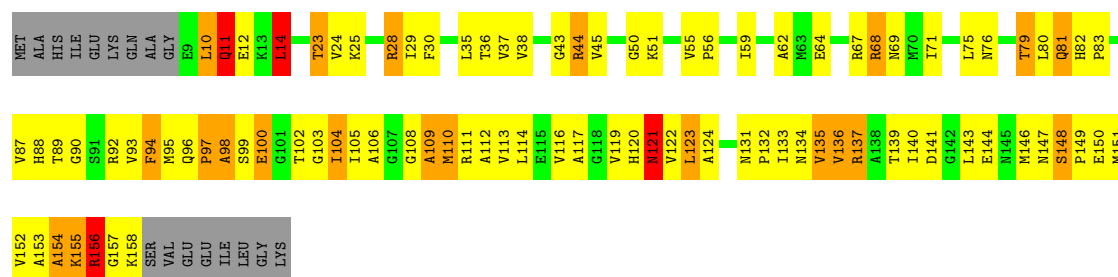
- Molecule 3: 30S ribosomal protein S4

Chain CD:



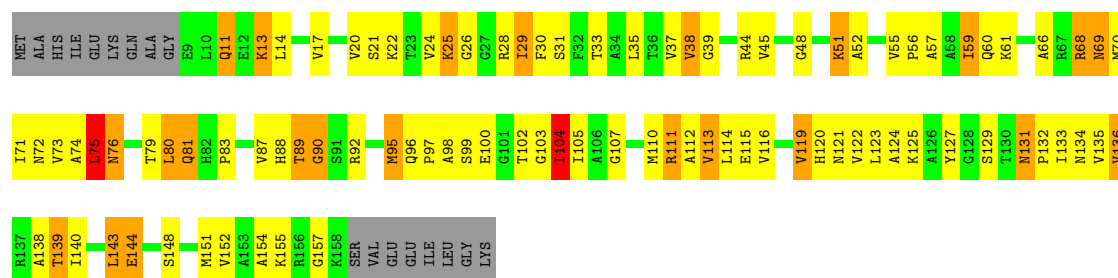
- Molecule 4: 30S ribosomal protein S5

Chain AE:



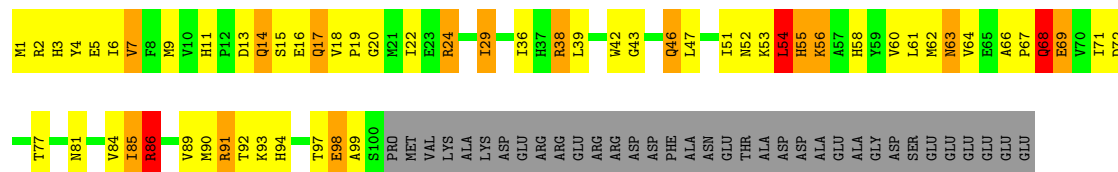
- Molecule 4: 30S ribosomal protein S5

Chain CE:



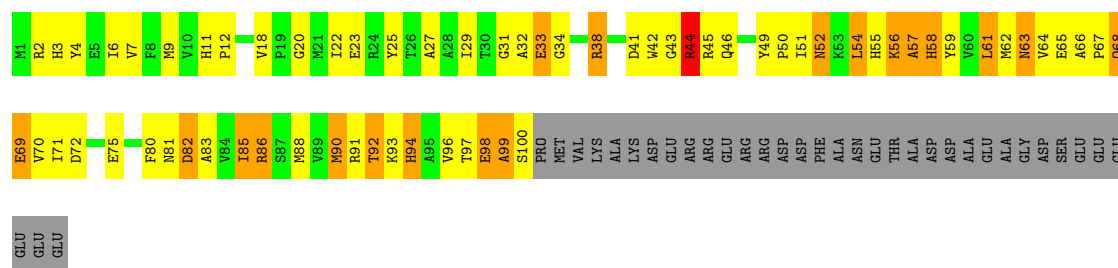
- Molecule 5: 30S ribosomal protein S6

Chain AF:



- Molecule 5: 30S ribosomal protein S6

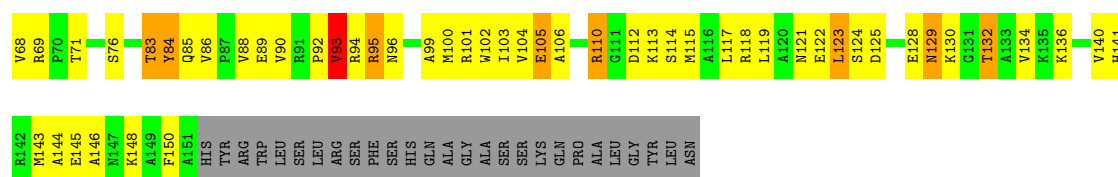
Chain CF:



- Molecule 6: 30S ribosomal protein S7

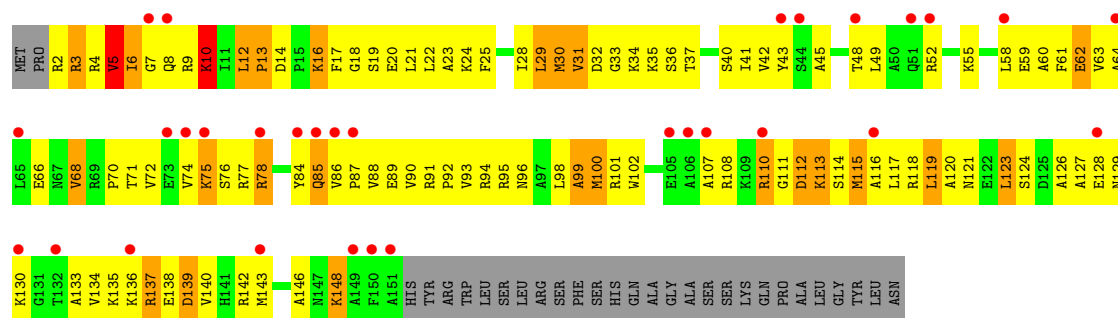
Chain AG:





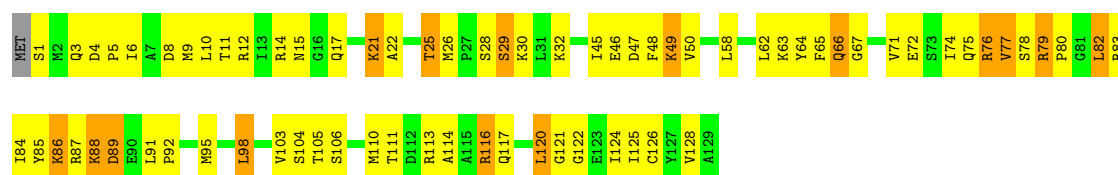
• Molecule 6: 30S ribosomal protein S7

Chain CG:



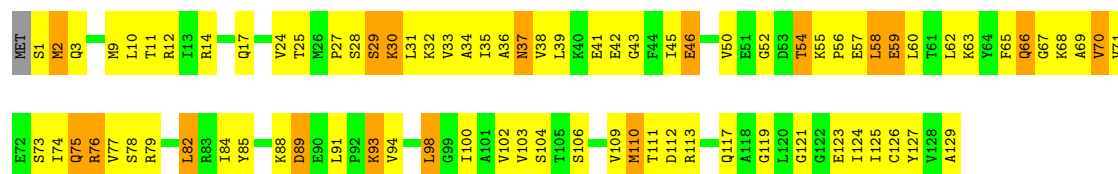
• Molecule 7: 30S ribosomal protein S8

Chain AH:



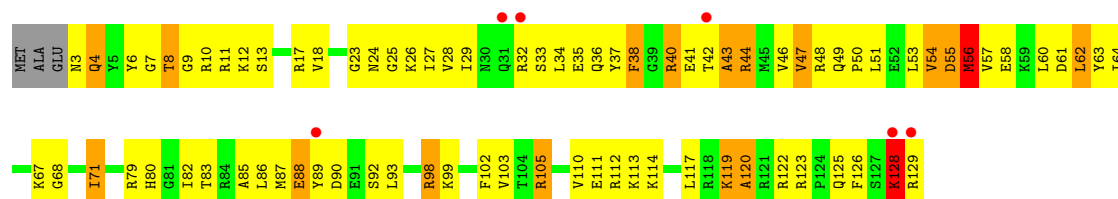
• Molecule 7: 30S ribosomal protein S8

Chain CH:



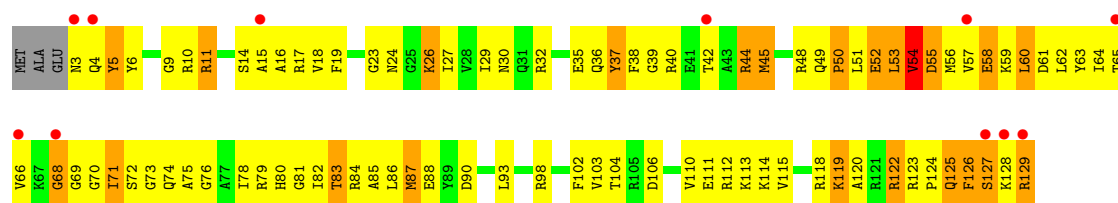
• Molecule 8: 30S ribosomal protein S9

Chain AI:



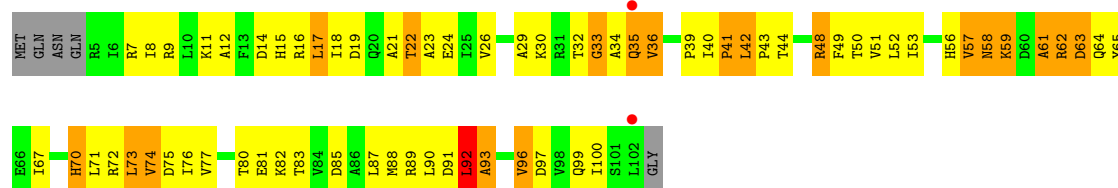
• Molecule 8: 30S ribosomal protein S9

Chain CI:



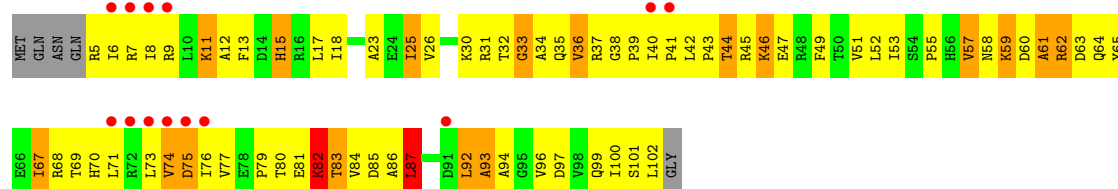
• Molecule 9: 30S ribosomal protein S10

Chain AJ:



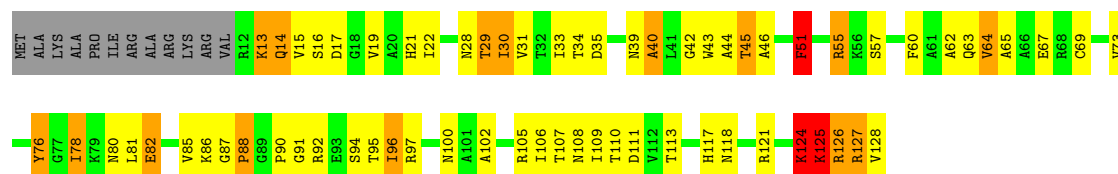
• Molecule 9: 30S ribosomal protein S10

Chain CJ:



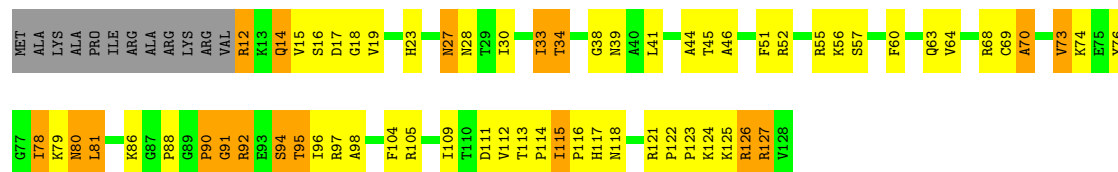
• Molecule 10: 30S ribosomal protein S11

Chain AK:



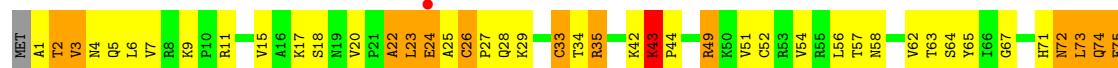
• Molecule 10: 30S ribosomal protein S11

Chain CK:



• Molecule 11: 30S ribosomal protein S12

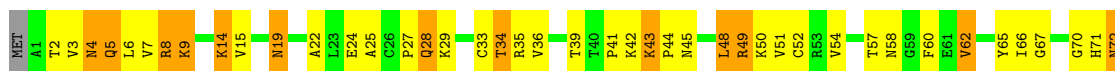
Chain AL:





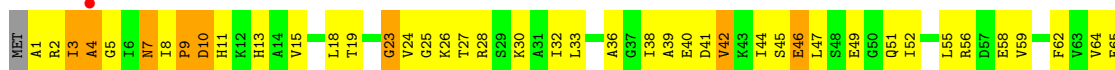
- Molecule 11: 30S ribosomal protein S12

Chain CL:



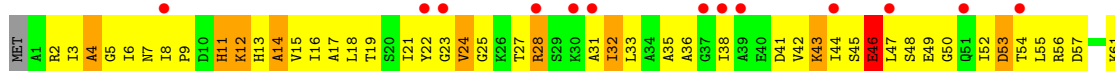
- Molecule 12: 30S ribosomal protein S13

Chain AM:



- Molecule 12: 30S ribosomal protein S13

Chain CM:



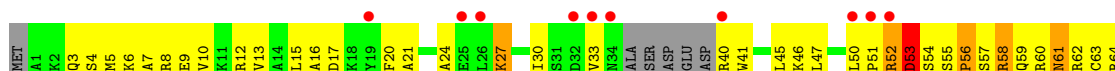
- Molecule 13: 30S ribosomal protein S14

Chain AN:



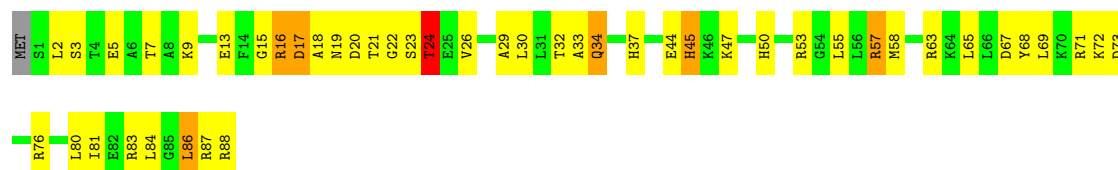
- Molecule 13: 30S ribosomal protein S14

Chain CN:



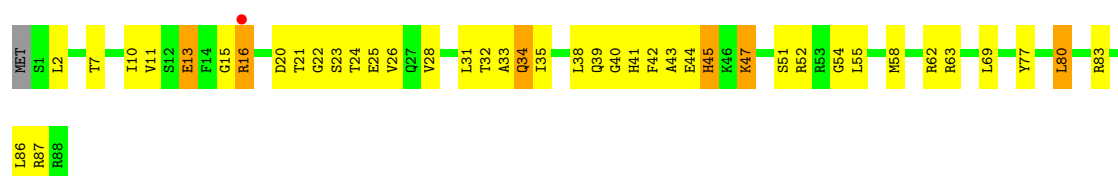
- Molecule 14: 30S ribosomal protein S15

Chain AO:



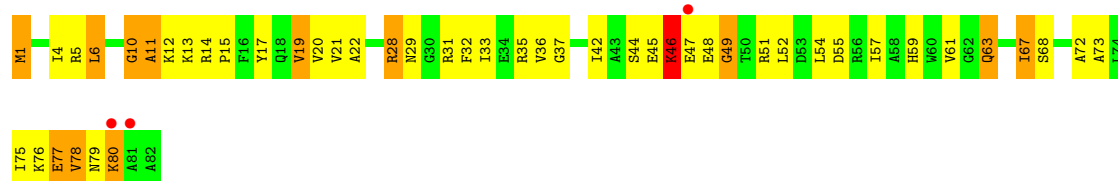
- Molecule 14: 30S ribosomal protein S15

Chain CO:



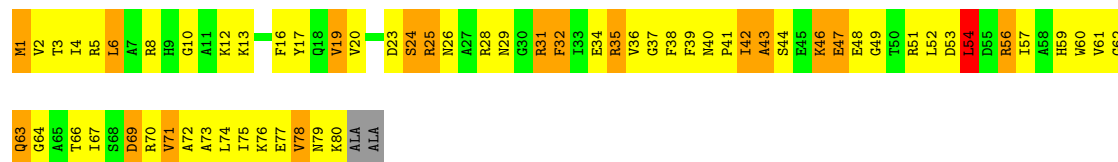
- Molecule 15: 30S ribosomal protein S16

Chain AP:



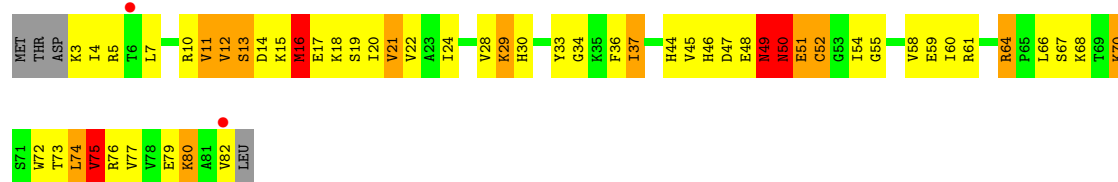
- Molecule 15: 30S ribosomal protein S16

Chain CP:



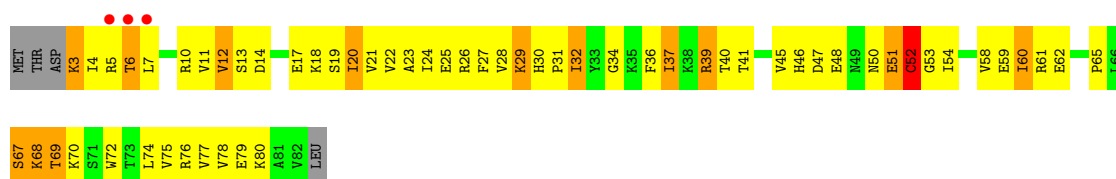
- Molecule 16: 30S ribosomal protein S17

Chain AQ:



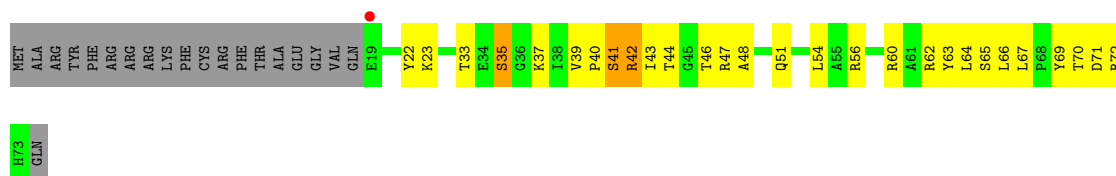
- Molecule 16: 30S ribosomal protein S17

Chain CQ:



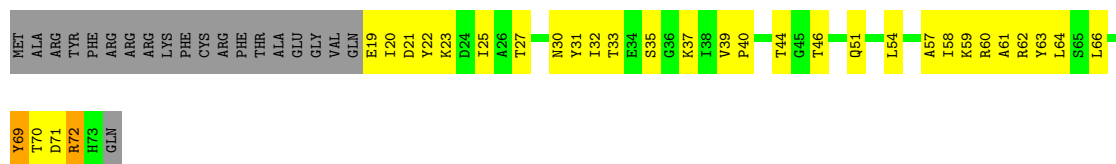
- Molecule 17: 30S ribosomal protein S18

Chain AR:



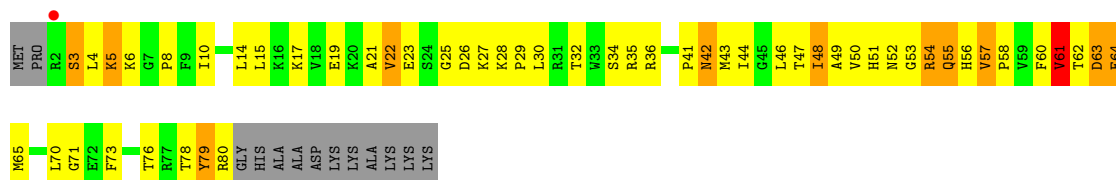
- Molecule 17: 30S ribosomal protein S18

Chain CR:



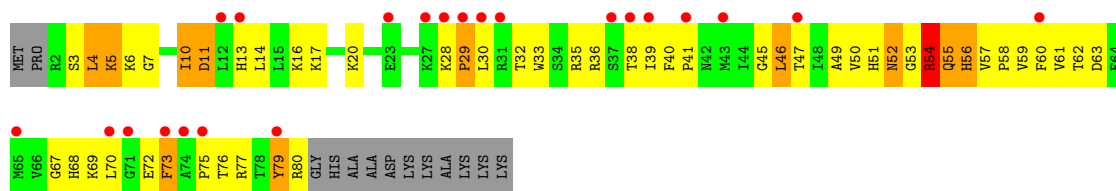
- Molecule 18: 30S ribosomal protein S19

Chain AS:



- Molecule 18: 30S ribosomal protein S19

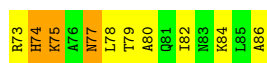
Chain CS:



- Molecule 19: 30S ribosomal protein S20

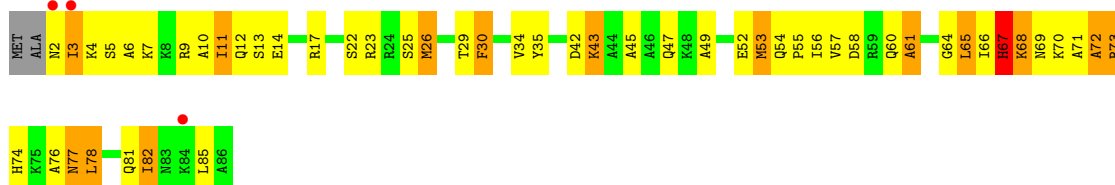
Chain AT:





- Molecule 19: 30S ribosomal protein S20

Chain CT:



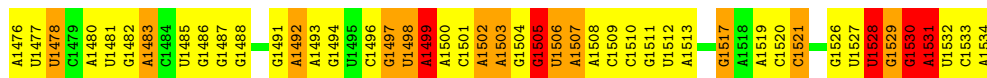
- Molecule 20: 30S ribosomal protein S21

Chain AU:

- Molecule 20: 30S ribosomal protein S21

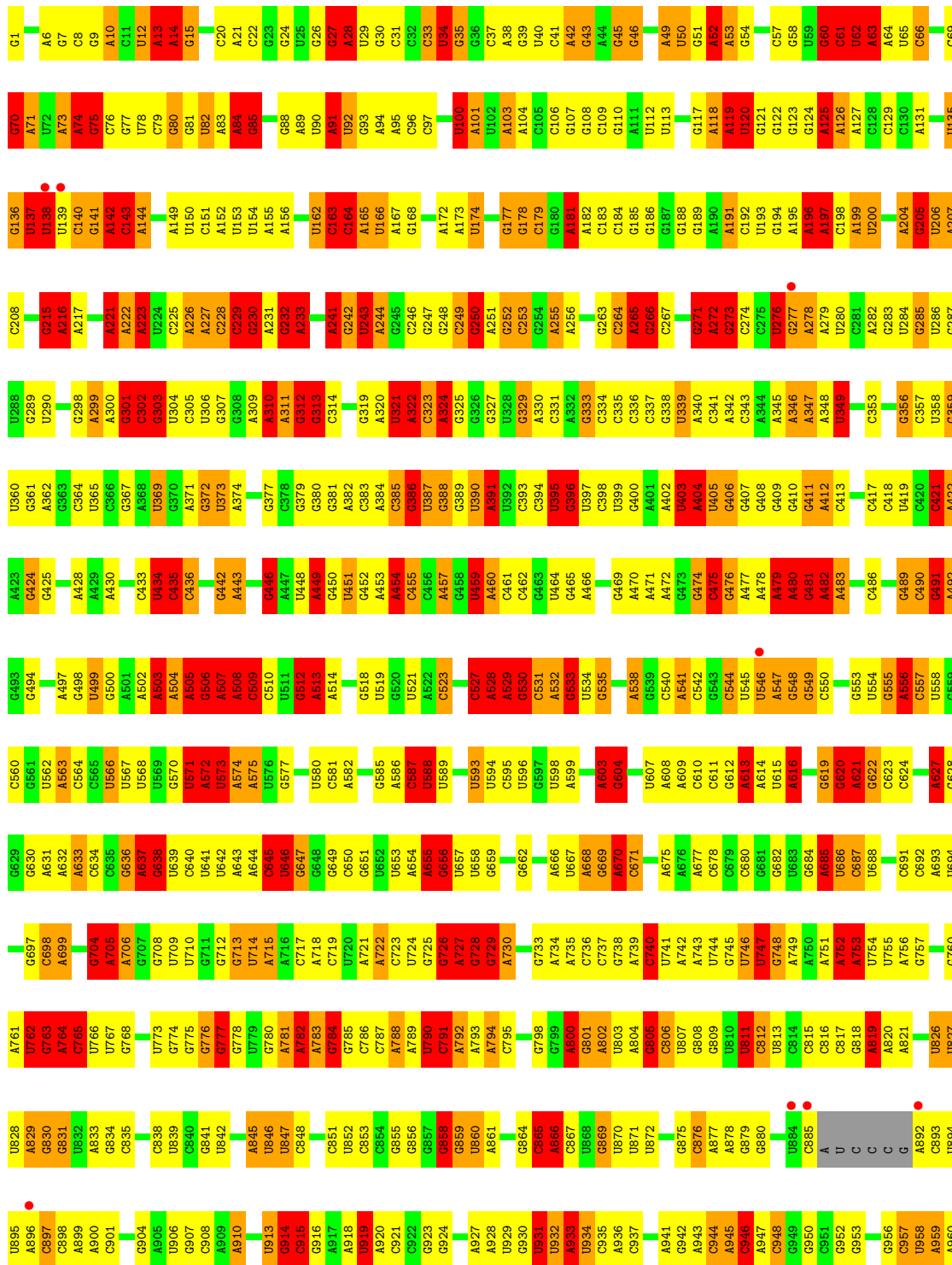
Chain CU:

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C1412	G1338	G1276	C1210	C1137	C1064	G1064	G1065	C996	G928	U855	G775	A706	A622	C556	A487	G351
A1413	A1339	G1277	U1211	G1138	G1066	U987	U987	A996	G929	C856	A777	C708	C623	A559	C488	C352
U1414	G1278	G1279	U1212	G1139	U1067	C998	C998	C999	C930	C857		G713	G633	A560	C490	A353
G1415	G1342	A1280	A1213	C1140	A1067	C999	C999	C999	C931	G858	A781	G714	G634	U561	G491	G354
G1416	G1343	A1281	U1214	C1141	G1068	A1000	A1000	A1001	C932	G859	A782	G715	A635	U562	C492	C355
G1417	C1344	C1281	G1215	G1142	G1069	G1001	G1001	G1002	C933	G860	C783	A716	A635	A563	A493	A356
A1418	U1345	C1282	G1216	G1143	U1070	G1002	G1002	G1003	C934	G861				C564	G494	G357
G1423	G1346	U1283	C1217	A1144	G1071	G1003	G1003	A1004	A936	U870	U788	U717	U641	U565	A495	U358
U1424	G1347	C1284	C1218	A1145	C1071	G1004	G1004	A1005	A937	U871	U789	A718	A642	U566	A496	G359
U1425	A1348	A1286	C1219	G1072	G1072	A1006	A1006	A1007	C940	U872	A790	C720	U643	C567	G497	A363
G1426	A1350	A1287	G1220	U1078	U1078	G1006	G1006	U1008	G941	U873	A791	G721	G645	C568	A498	A364
C1427	U1351	A1288	G1221	G1079	G1079	U1007	U1007	U1008	G942	A874	A792	G722	G645	C569	A499	A365
A1428	C1352	A1289	C1222	A1080	A1081	U1008	U1008	U1008	G942	U875	A793	G723	U652	C570	A500	U366
A1429	G1353	U1290	C1223	U1081	A1081	U1008	U1008	U1008	G942	U876	A794	G724	U653	U571	C501	A366
A1430	U1354	U1291	U1224	A1157	A1082	A1012	A1012	A1013	G945	C876	C795	G725	U654	A572	A502	U367
A1431	G1355	G1292	A1225	C1158	U1083	G1013	G1013	G1014	A946	G877	C796	G726	U655	A573	C503	U368
G1432	G1356	C1293	C1226	U1159	U1084	A1014	A1014	A1015	A947	A878	C797	G727	U656	A574	C504	U369
A1433	A1357	G1294	U1227	U1160	U1085	G1016	G1016	G1017	C948	C879	U798	G728	U657	C507	C370	C370
A1434	U1358	U1295	C1228	C1161	U1086	A1017	A1017	A1018	A949	C880	U801	A728	U658	C508	U369	C371
G1435	C1365	C1296	C1229	C1162	G1087	U1017	U1017	U1018	U950	C881	A802	A729	U659	A509	C372	A372
U1436	G1361	G1297	C1230	A1163	G1088	G1018	G1018	G1019	G953	C882	A803	C731	U660	C510	C443	A374
G1437	A1362	U1298	G1231	G1164	U1091	A1021	A1021	A1022	G954	C883	U804	C732	U661	C511	G444	U375
A1438	A1363	A1299	U1232	U1165	A1092	A1022	A1022	A1023	U955	C884	C805	G733	U662	C512	G445	G376
G1439	U1364	G1300	G1233	G1166	A1093	U1023	U1023	U1024	U956	C885	C806	G734	U663	C513	G450	A382
U1440	G1365	U1301	C1234	A1167	G1094	G1024	G1024	G1025	U957	A889	G809	C735	U664	C514	A451	A383
A1441	C1366	C1302	U1235	U1168	U1095	G1026	G1026	G1027	U958	G890	C810	C736	U665	U516	A452	G384
G1442	G1367	C1303	A1236	A1169	U1096	G1028	G1028	G1029	A959	U891	C811	C737	U666	G517	A453	G384
C1443	U1370	G1304	C1237	A1170	C1097	U1029	U1029	U1030	U960	A892	G812	C738	U667	C518	G454	C385
A1446	U1371	A1305	A1238	A1171	C1098	U1030	U1030	U1031	U961	C893	U813	C739	U672	C519	C386	C386
A1447	U1372	A1306	A1239	C1172	A1101	U1031	U1031	U1032	U962	G894	A814	C740	U673	A520	U387	U387
C1448	G1373	U1307	U1240	U1173	A1102	G1032	G1032	G1033	G966	G895	A815	C741	U674	A521	A459	G388
C1449	G1379	U1308	G1242	G1174	C1103	G1033	G1033	G1034	C967	C896	C817	A747	U675	A522	A460	A389
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G1455	G1187	C1249	C1250	G1188	C1114	G1039	G1039	G1040	G973	A908	C826	C753	U681	A534	U467	C396
A1456	A1318	A1250	A1251	G1189	U1115	U1040	U1040	U1041	A974	A909	U827	C754	U682	U535	A468	A397
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G1458	U1321	A1252	G1253	A1192	A1117	G1042	G1042	G1043	G976	C910	U829	C756	U684	C537	C470	G399
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A1465	U1326	G1258	G1258	A1196	U1122	C1051	C1051	C1052	U981	G917	U834	U763	U689	U542	U476	U407
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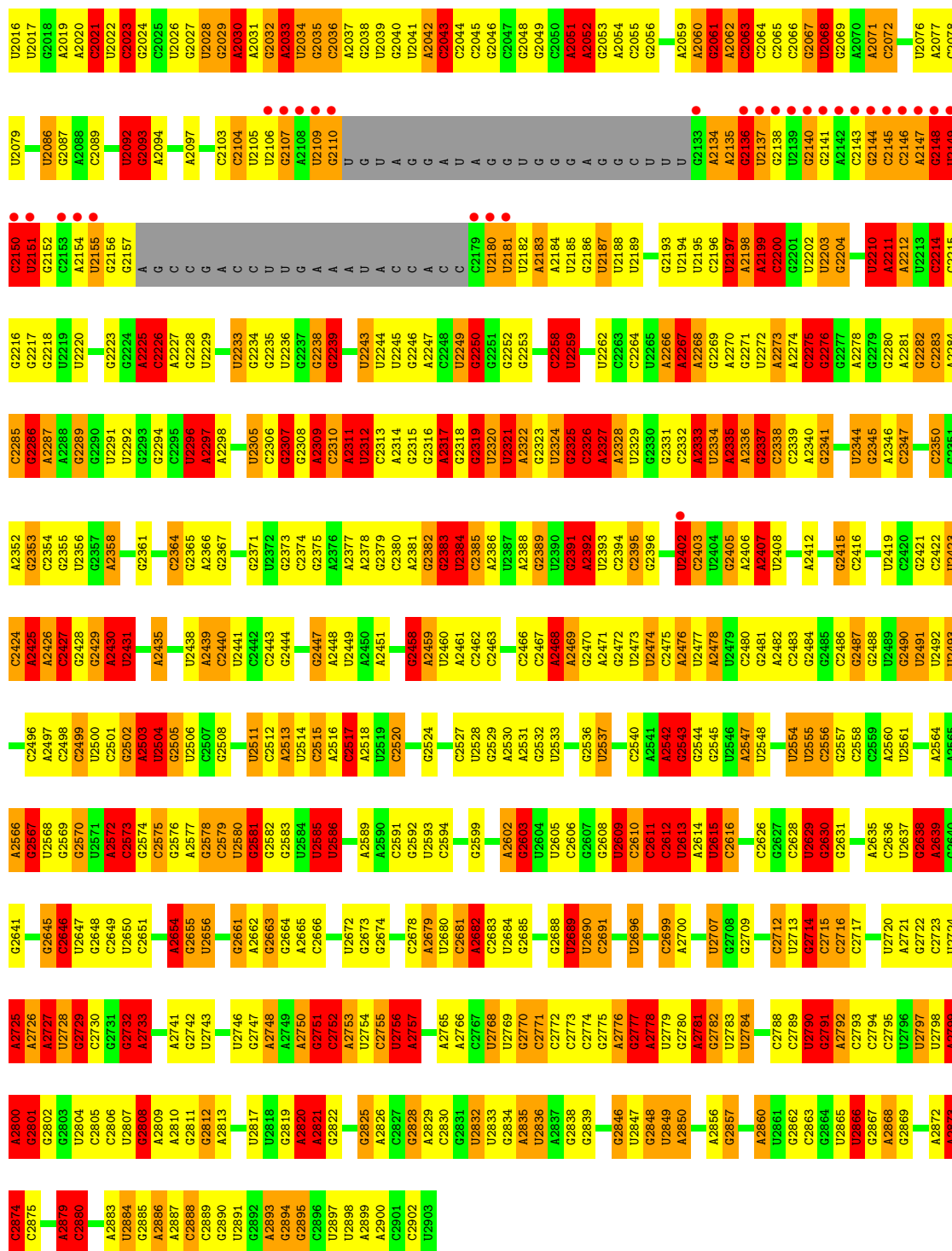


• Molecule 22: 23S rRNA

Chain BA:



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C1944	C1945	C1946	C1797	C1798	C1799	C1726	C1646	C1578	C1497	A1432	C1364	G1300	U1231	C1164	U1094	G1030	U963
C1947	C1948	C1949	C1798	C1799	C1800	C1727	C1647	C1579	C1498	A1433	A1365	A1301	G1235	A1165	A1095	U1033	C968
C1948	C1949	C1950	C1799	C1800	C1801	C1728	C1648	C1580	C1499	A1434	A1366	A1302	G1236	A1166	A1096	U1034	A972
C1949	C1950	C1951	C1800	C1801	C1802	C1729	C1649	C1581	C1500	A1435	A1367	A1303	G1237	C1167	U1097	G1035	A973
C1950	C1951	C1952	C1801	C1802	C1803	C1730	C1650	C1582	A1502	A1436	A1368	A1304	G1238	G1168	A1098	U1036	A974
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G1030	G966	C902	C838	G774	G708	U641	U580	A514	A453	G388	G327	A262	A199	U139	G78
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G1033	U969	A905	A844	G777	G711	G644	G585	U519	C461	A391	A330	A265	U202	C142	G81
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G1036	A972	A911	U847	G780	U714	G647	A587	C523	U459	U395	G333	G271	G205	C145	A84
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C1045		A916	C851	G786	U720	U653	U593	G530	G466	A401	U339	G277	G212	C151	U91
A1046	A917	A917	U852	C787	U720	A654	U594	G531	G467	U403	A340	A278	A152	C152	U92
G1047	C853	A918	C853	A788	A721	A655	C595	G532	G468	U403	C341	A279	U153	G153	G93
A1048	G854	U919	C854	A789	U724	G656	U596	A532	G469	A404	A342	U280	U154	U154	A94
A1049	C855	A920	C855	U790	G725	U657	G597	G533	G470	U405	C343	C281	A216	A155	A95
A1050	C856	C921	C856	C791	G726	U658	U598	U534	A471	G406	A344	A217	A156	C96	C96
G1051	G857	G922	C857	A792	A727	G659	A599	U534	A472	G407	A345	A218	A157	C157	C97
G1052	C923	C923	C858	A793	G728	G660	G600	G536	G473	G408	A346	U284	C228	U158	G98
A1053	G924	G924	C859	A794	G729	A661	C901	G537	G474	G409	A347	U286	A221	G159	U99
A1054	A925	A925	U860	C795	A730	G662	A602	A538	C475	G410	A348	U287	A222	A180	U100
G1055	G926	G926	A861	C796	C731	G663	A603	G539	G476	G411	U349	U288	A223	A161	A101
G1056	A927	A927	C862	C797	C732	G664	G604	C540	A477	A412	C350	G289	U224	U182	U102
A1057	C927	A928	A863	G798	G733	U665	G606	A541	A478	C413	C351	U290	C225	C163	A103
U1058	U929	U929	C864	U799	A734	A666	U606	G542	A479	C414	A352	A226	A226	C164	A104
G1059	G930	G930	C865	A800	A735	U667	U607	G543	A480	A415	C353	U293	A227	C165	A105
U1060	U931	U931	C866	A801	C736	A668	A608	C544	G481	U416	A354	G294	C228	U166	C106
G997	U932	U932	C867	A802	G737	G669	A609	U545	A482	C417	U355	G295	G229	A167	G107
C998	A933	A933	U868	U803	G738	A670	C610	U546	A483	C418	C356	U296	G230	G168	G108
U999	U934	U934	C869	A804	A739	C671	C611	A547	C484	U419	C357	G297	A231	G169	C109
A1000	C935	C935	U870	G805	C740	C672	G612	G548	C485	U420	U358	G298	A232	U170	G110
A1001	A936	A936	U871	C806	U741	C673	A613	G549	C486	A421	C357	A299	A233	U171	A111
G1002	C937	C937	U872	U807	A742	G674	A614	C550	C487	A422	C357	A300	U234	A172	U112
U1003	C937	C937	C873	U807	A743	A675	G615	G551	C488	A423	C361	G301	U235	A173	U113
A1004	A941	A941	C874	U810	U744	A676	A616	U552	G489	G424	C362	G302	U236	U174	U114
G1068	G942	G942	G875	U811	G745	A677	G617	G553	C490	G425	C364	G303	C237	G175	C115
A1069	A943	A943	C876	C812	U746	C678	G618	U554	G491	U426	U365	G304	C238	A176	C116
A1070	C944	C944	A877	U813	U747	C679	G619	G555	A492	U427	C366	C305	C239	G177	G117
G1071	A945	A945	A878	C814	G748	C679	G620	C493	A493	A428	C367	U306	C240	G178	A118
C1072	A946	A946	G	C815	A749	A676	A621	U558	G494	A429	A368	G307	A241	C179	A119
A1073	A947	A947	G	C816	G750	A685	G622	C495	A495	A430	U369	G308	G242	G180	U120
G1074	C948	C948	G	C817	A751	U686	C623	U562	G496	U434	C370	A309	U243	A181	G121
C1075	G949	G949	G	C818	A752	C687	C624	A563	A497	C435	A371	A310	A244	A182	G122
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A1077	C951	C951	U	A820	U754	A626	G626	C565	U499	C373	C373	G312	C246	C184	G124
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G1079	G953	G953	A	G822	U756	G628	G629	U567	A501	G438	C375	C314	G248	G186	A126
A1080	C954	C954	U	G822	G757	G695	G629	U568	A502	G376	C376	G315	C249	G187	A127
U1081	U955	U955	C	U827	U762	C698	G630	U569	A503	G442	C377	C316	G250	G188	G128
U1082	A1020	A1020	C	U828	A631	C698	A631	G570	A504	A443	C378	G317	A251	G189	C129
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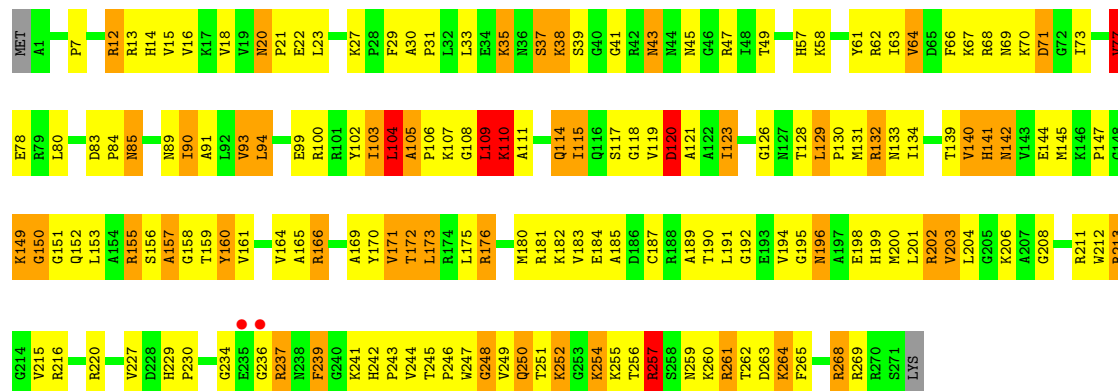
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G2018	U1951	C1878	A1809	A1744	A1678	C1611	G1546	U1481	U1415	C1350	A1285		G1087
A2019	U1961	G1879	A1810	A1745	A1679	C1612		U1482	C1416	C1351	A1286	C1153	A1088
A2020	A1952	U1880	G1811	A1746	U1680	G1613	A1549	G1483	C1417	U1352	A1287	C1154	A1089
G2021	A1953	C1881	U1812	U1747	G1681	A1614	A1550		C1418	C1353	G1288	A1155	A1090
U2022	G1954	U1884	G1813		G1682	C1615	A1551	C1489	A1419	A1354	C1289	A1156	G1091
G2023	U1955	G1885	A1814	U1751	U1683	A1616	A1552	A1490	A1420	G1355	C1290	G1157	G1092
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A2027	A1960	G1889	A1818	G1755	A1689	G1620	C1556	A1494	G1425	A1359	U1234	C1161	U1097
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C2042	C1974	U1907	C1832	U1769	G1703	U1636	A1572	A1508	A1439	G1311	G1248	C1178	G1110
G2043	G1975	U1908	C1833	U1770	C1706	A1637	G1573	A1509	U1440	U1312	U1249	C1179	A1111
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C1983	U1915	C1920	U1838	A1777	A1717	A1650	A1586	U1520	A1453	G1327	A1260	G1190	
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A2058	G1928	U1928	U1848	A1786	U1722	G1663	C1595	G1530	G1462	U1394	A1269	G1202	A1134
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A2060	U1930	G1930	U1855	U1789	G1724	C1665	A1597	A1532	U1466	A1336	A1271	A1204	G1136
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U1995	A1932		G1862	U1796	C1732	G1667	U1599	C1534	U1468	U1401	U1273	G1206	G1138
C1996	G1935	U1935	U1865	U1797	G1730	A1668	A1598	G1535	U1469	U1402	A1274	G1207	G1139
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A1998	U1938	U1939	G1867	C1799	U1732	A1670	U1599	C1537	A1471	G1404	G1277	U1209	U1141
C2000	C1939	U1940	C1868	U1798	G1734	A1671	A1602	C1538	A1470	A1342	G1277	G1210	A1142
G2001	A1941	C1941	C1870	C1800	U1736	G1670	A1603	G1539	U1474	U1405	G1278	C1211	A1143
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G2010	U1944	U1944	C1874	C1804	G1740	A1674	C1607	C1541	A1477	U1412	U1282	G1215	A1147
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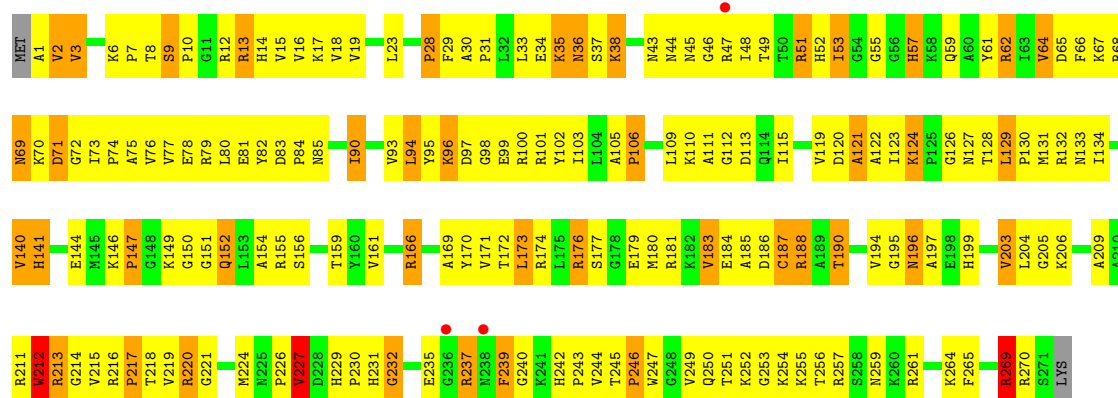
• Molecule 24: 50S ribosomal protein L2

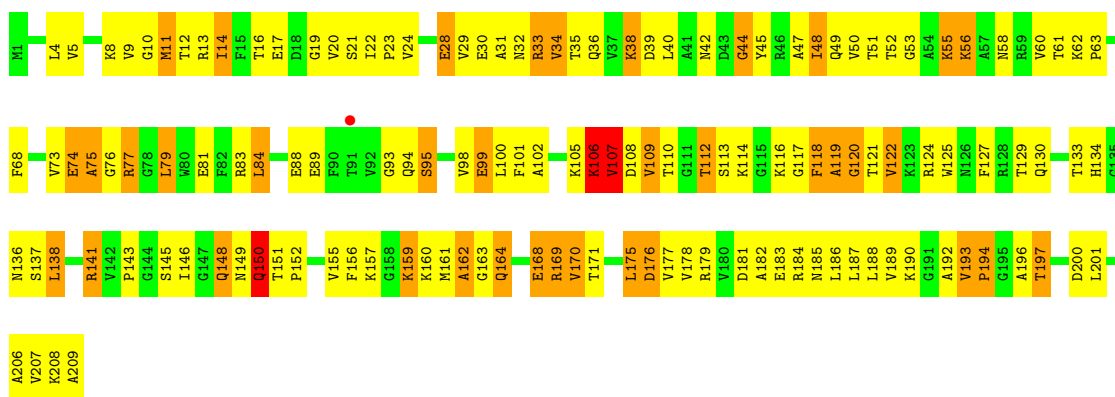
Chain BC:



• Molecule 24: 50S ribosomal protein L2

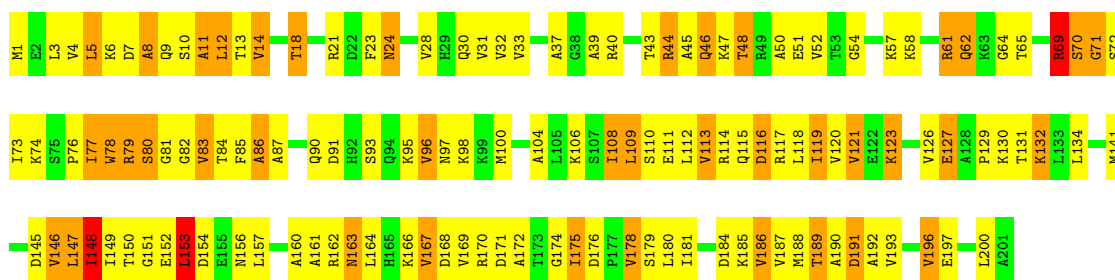
Chain DC:





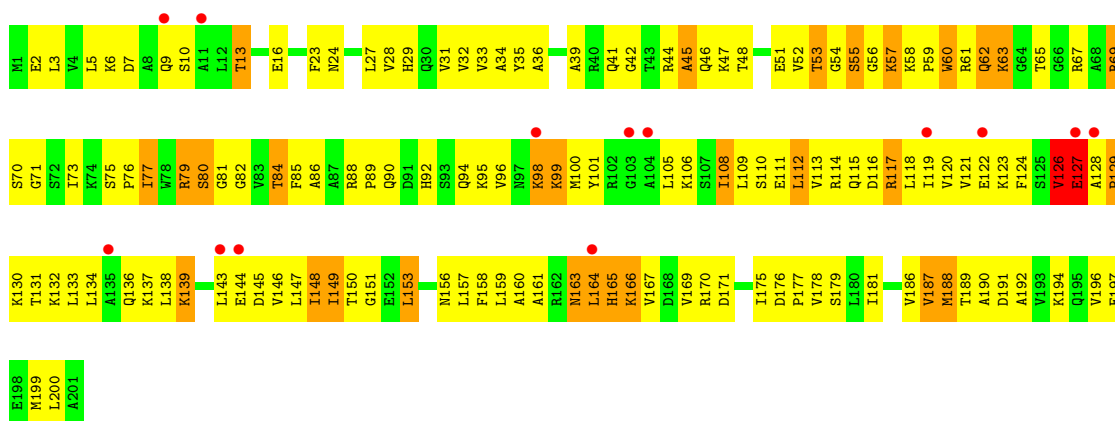
• Molecule 26: 50S ribosomal protein L4

Chain BE:



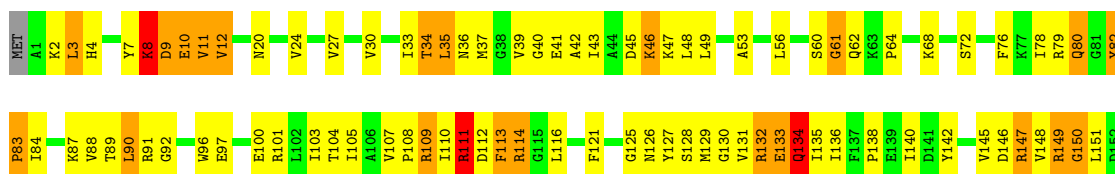
• Molecule 26: 50S ribosomal protein L4

Chain DE:



• Molecule 27: 50S ribosomal protein L5

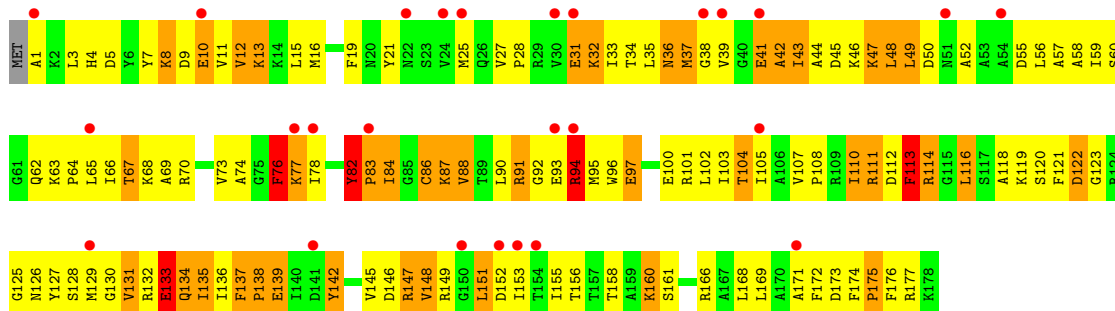
Chain BF:





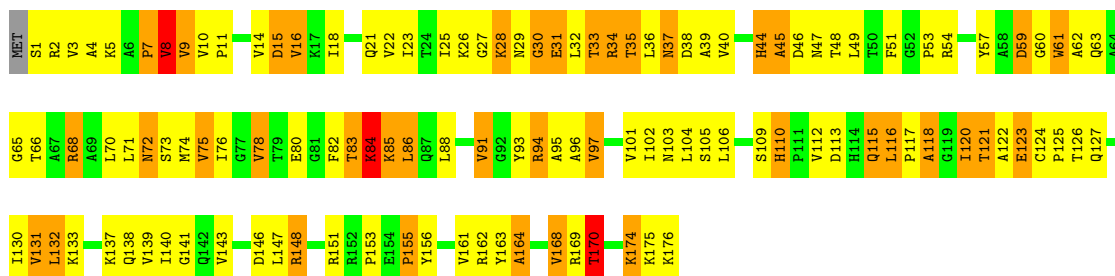
• Molecule 27: 50S ribosomal protein L5

Chain DF:



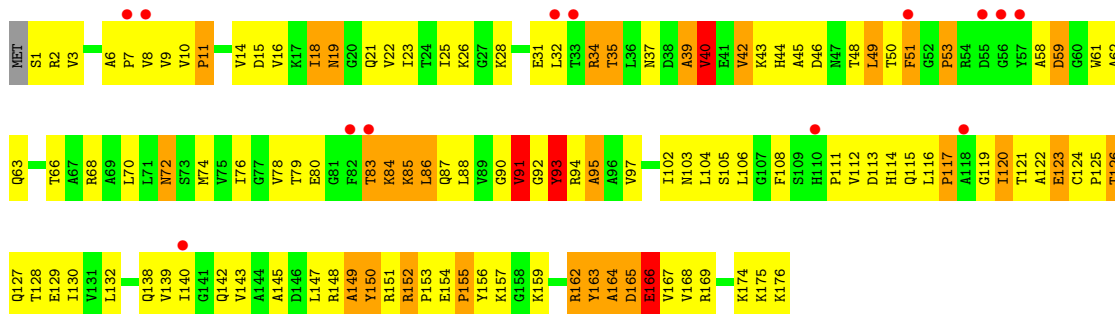
• Molecule 28: 50S ribosomal protein L6

Chain BG:



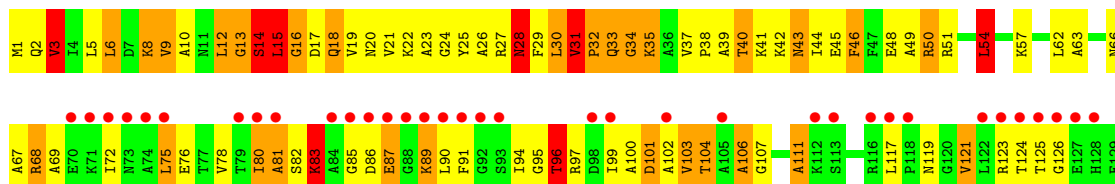
• Molecule 28: 50S ribosomal protein L6

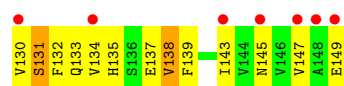
Chain DG:



• Molecule 29: 50S ribosomal protein L9

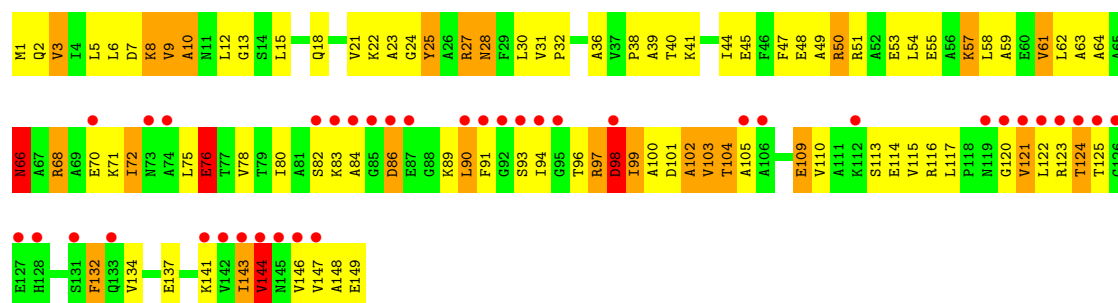
Chain BH:





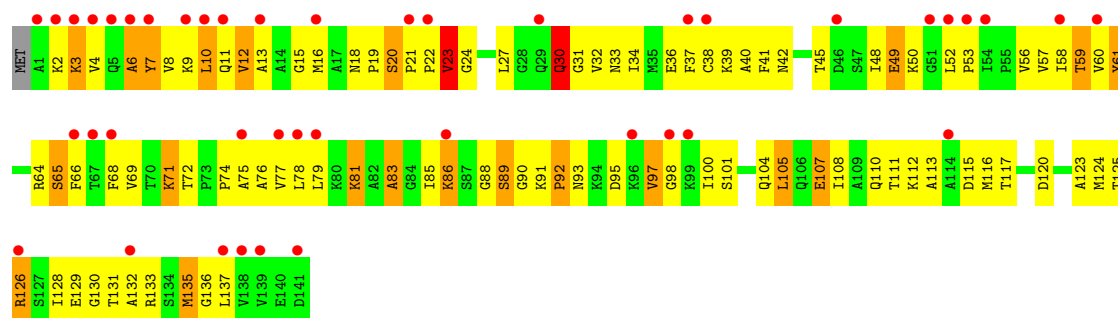
- Molecule 29: 50S ribosomal protein L9

Chain DH:



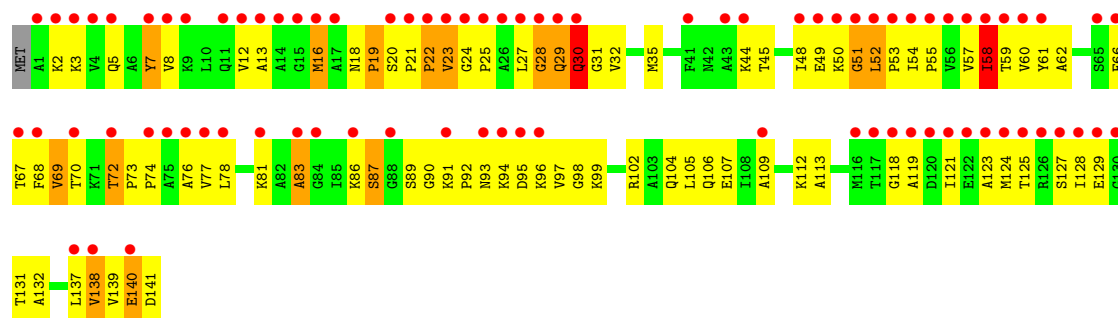
- Molecule 30: 50S ribosomal protein L11

Chain BI:



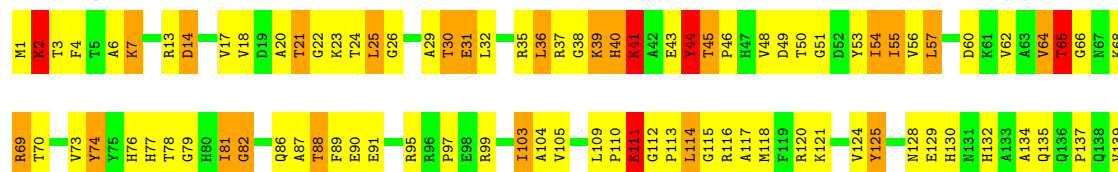
- Molecule 30: 50S ribosomal protein L11

Chain DI:



- Molecule 31: 50S ribosomal protein L13

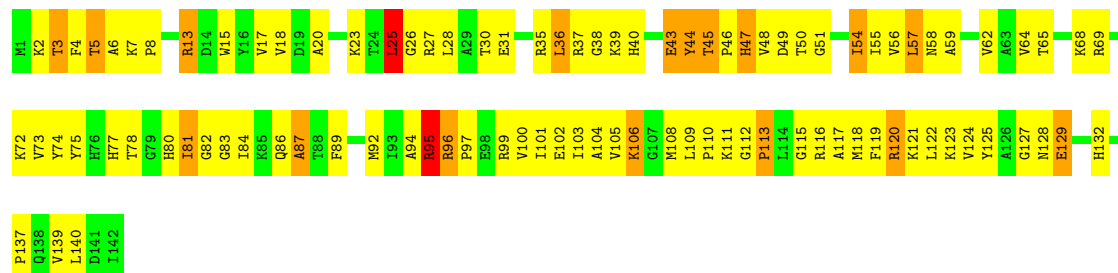
Chain BJ:





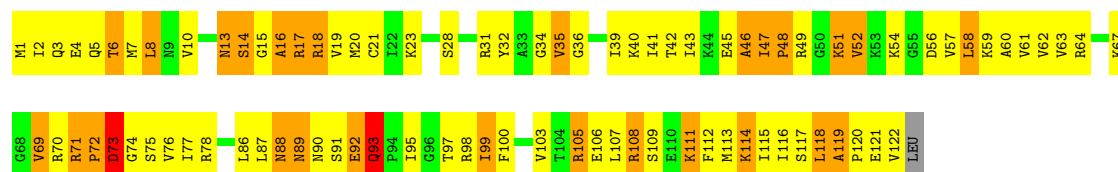
- Molecule 31: 50S ribosomal protein L13

Chain DJ:



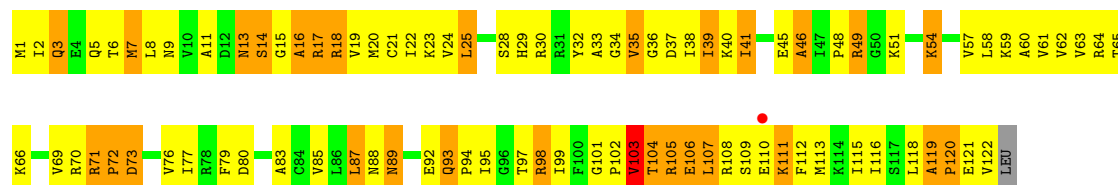
- Molecule 32: 50S ribosomal protein L14

Chain BK:



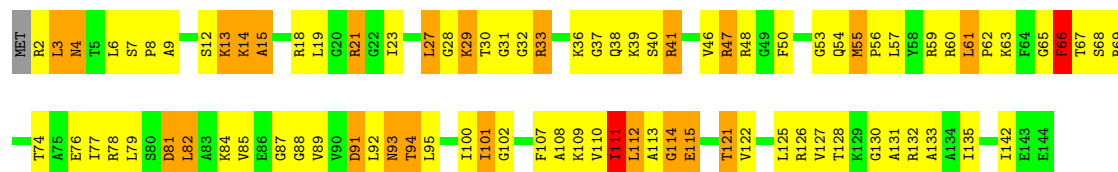
- Molecule 32: 50S ribosomal protein L14

Chain DK:



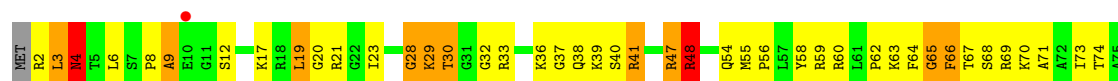
- Molecule 33: 50S ribosomal protein L15

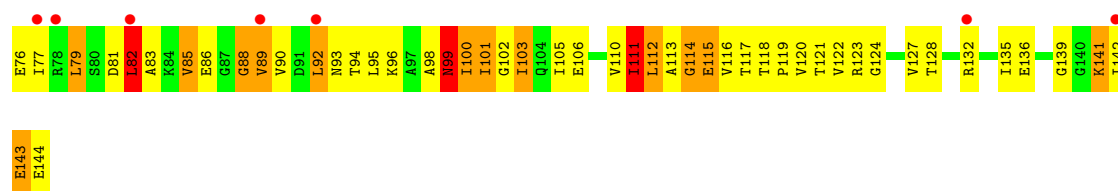
Chain BL:



- Molecule 33: 50S ribosomal protein L15

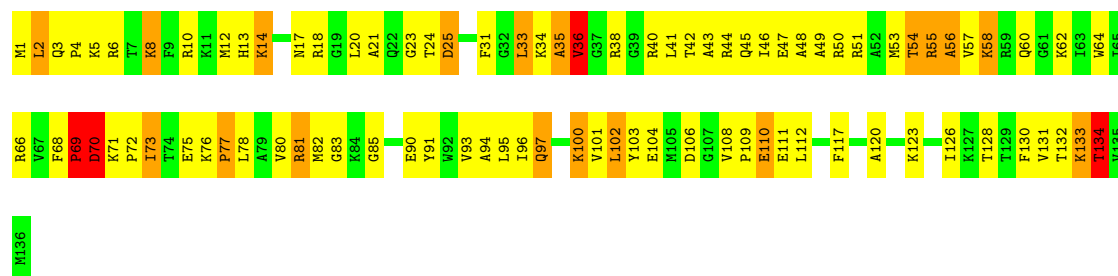
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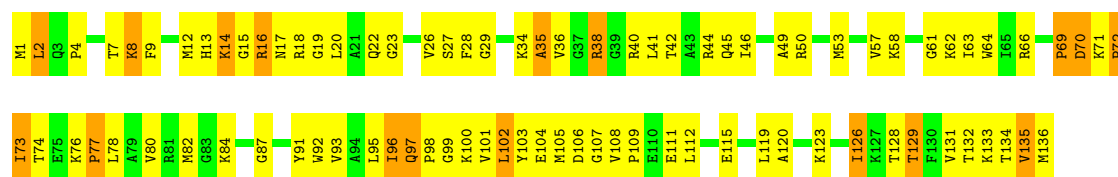
- Molecule 34: 50S ribosomal protein L16

Chain BM:



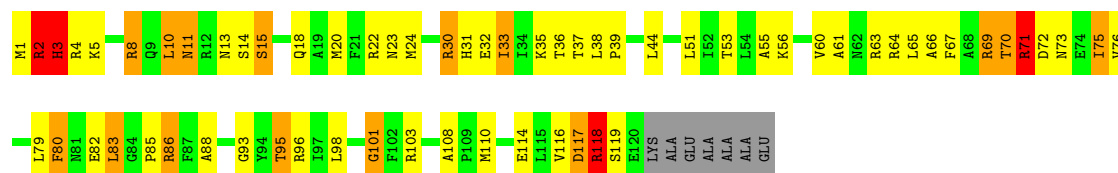
- Molecule 34: 50S ribosomal protein L16

Chain DM:



- Molecule 35: 50S ribosomal protein L17

Chain BN:



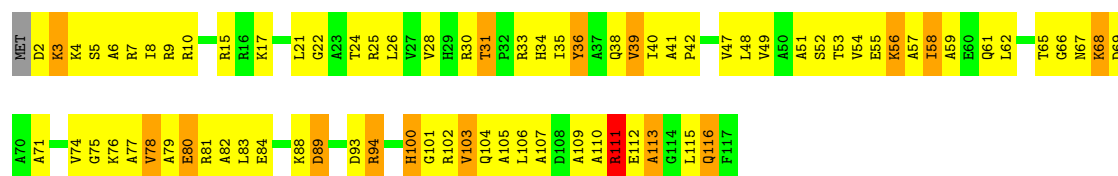
- Molecule 35: 50S ribosomal protein L17

Chain DN:



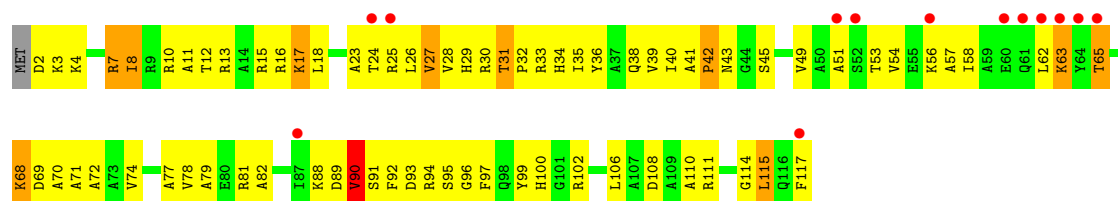
- Molecule 36: 50S ribosomal protein L18

Chain BO: 



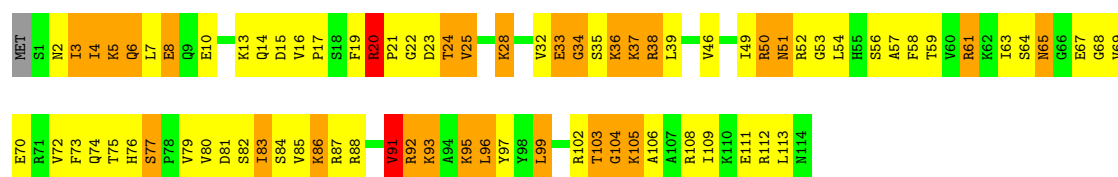
- Molecule 36: 50S ribosomal protein L18

Chain DO: 



- Molecule 37: 50S ribosomal protein L19

Chain BP: 



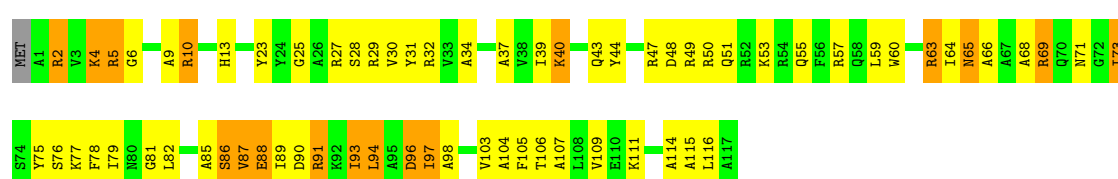
- Molecule 37: 50S ribosomal protein L19

Chain DP: 



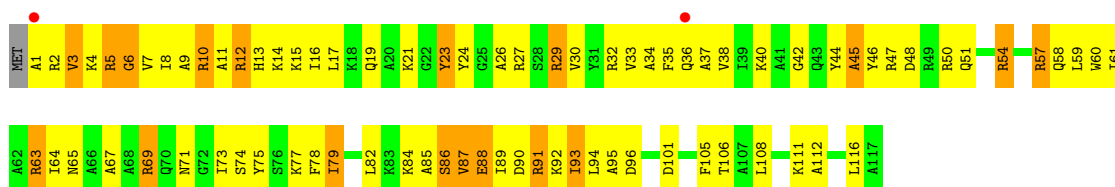
- Molecule 38: 50S ribosomal protein L20

Chain BQ: 



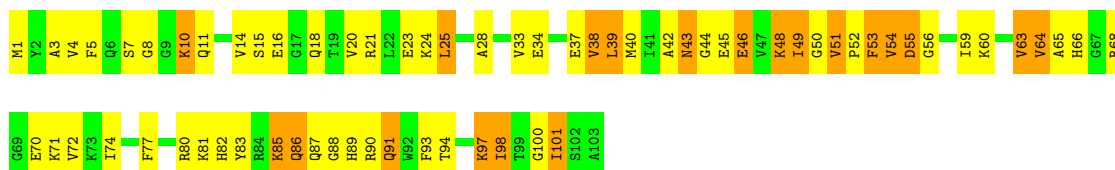
- Molecule 38: 50S ribosomal protein L20

Chain DQ: 



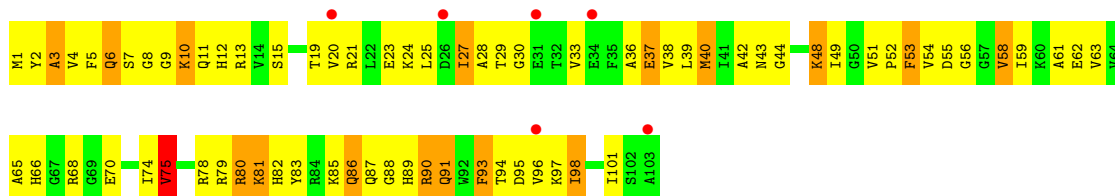
• Molecule 39: 50S ribosomal protein L21

Chain BR:



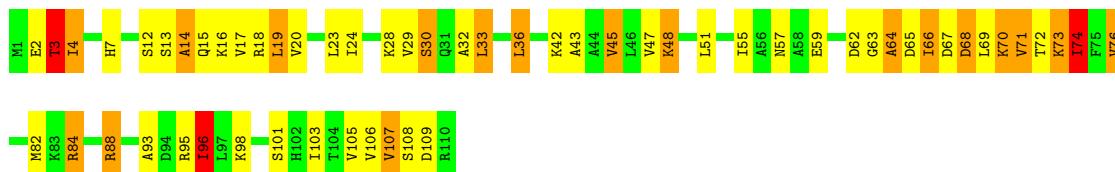
• Molecule 39: 50S ribosomal protein L21

Chain DR:



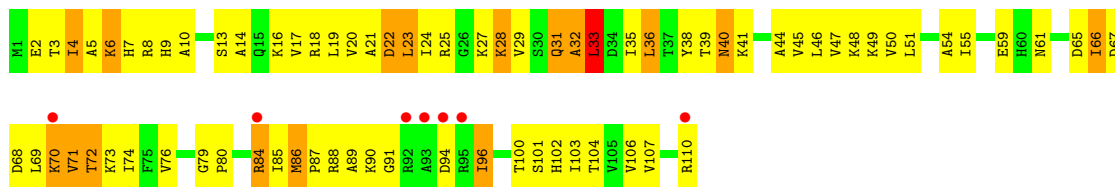
• Molecule 40: 50S ribosomal protein L22

Chain BS:



• Molecule 40: 50S ribosomal protein L22

Chain DS:



• Molecule 41: 50S ribosomal protein L23

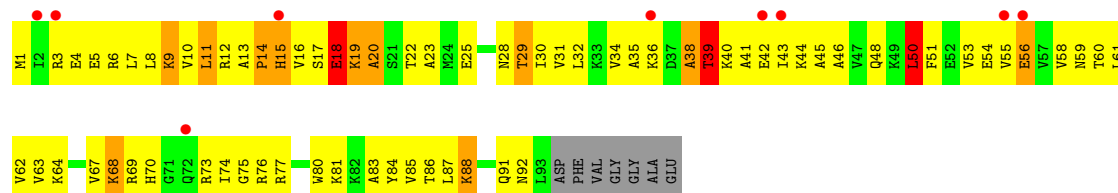
Chain BT:





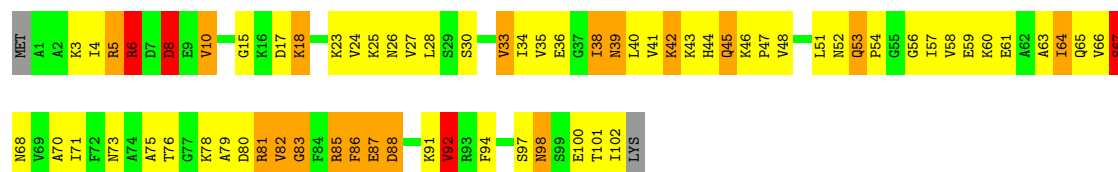
• Molecule 41: 50S ribosomal protein L23

Chain DT:



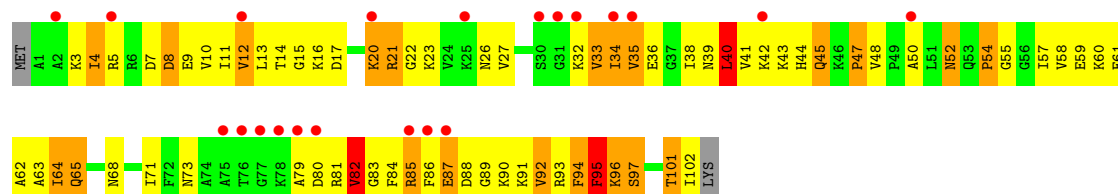
• Molecule 42: 50S ribosomal protein L24

Chain BU:



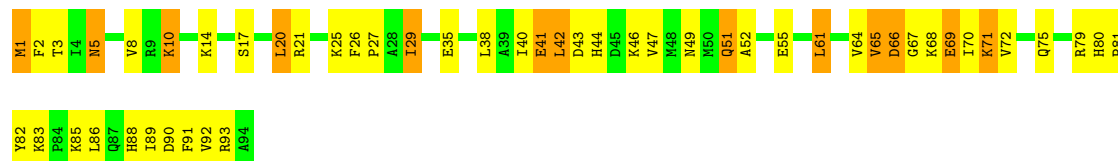
• Molecule 42: 50S ribosomal protein L24

Chain DU:



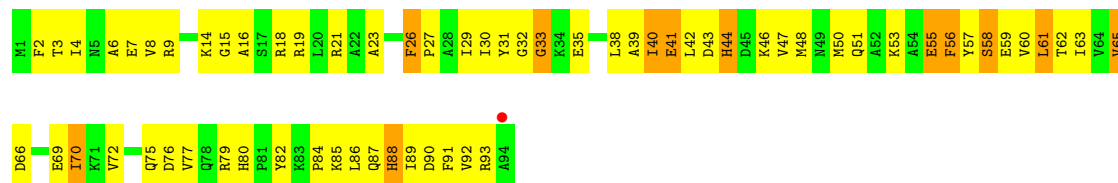
• Molecule 43: 50S ribosomal protein L25

Chain BV:



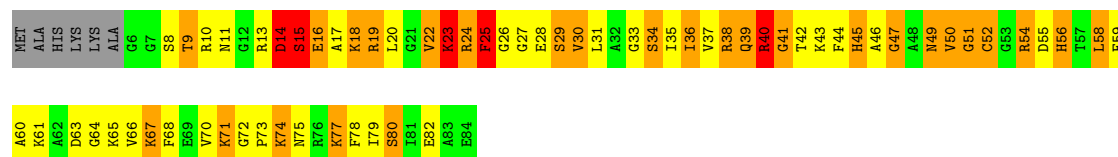
• Molecule 43: 50S ribosomal protein L25

Chain DV:



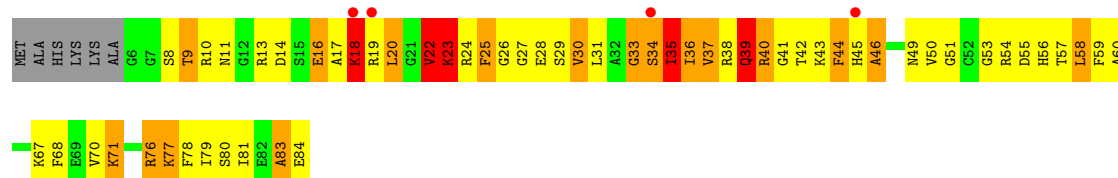
• Molecule 44: 50S ribosomal protein L27

Chain BW:



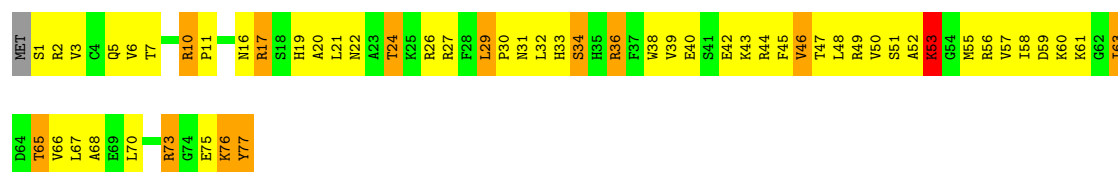
- Molecule 44: 50S ribosomal protein L27

Chain DW: 



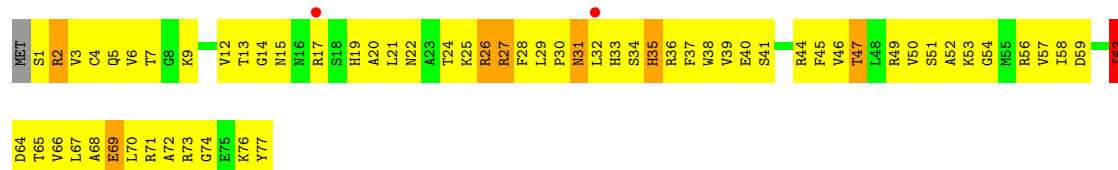
- Molecule 45: 50S ribosomal protein L28

Chain BX:



- Molecule 45: 50S ribosomal protein L28

Chain DX:



- Molecule 46: 50S ribosomal protein L29

Chain BY:



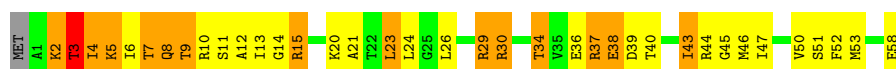
- Molecule 46: 50S ribosomal protein L29

Chain DY: 



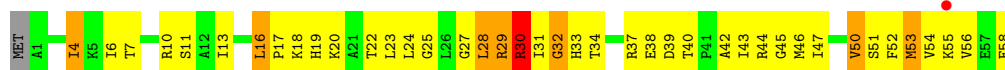
- Molecule 47: 50S ribosomal protein L30

Chain BZ: 



- Molecule 47: 50S ribosomal protein L30

Chain DZ:



- Molecule 48: 50S ribosomal protein L32

Chain B0:



- Molecule 48: 50S ribosomal protein L32

Chain D0:



- Molecule 49: 50S ribosomal protein L33

Chain B1:



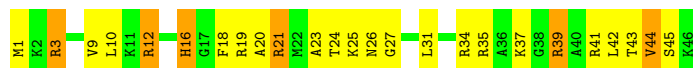
- Molecule 49: 50S ribosomal protein L33

Chain D1:



- Molecule 50: 50S ribosomal protein L34

Chain B2:



- Molecule 50: 50S ribosomal protein L34

Chain D2:



- Molecule 51: 50S ribosomal protein L35

Chain B3:



- Molecule 51: 50S ribosomal protein L35

Chain D3:



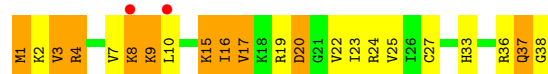
- Molecule 52: 50S ribosomal protein L36

Chain B4:



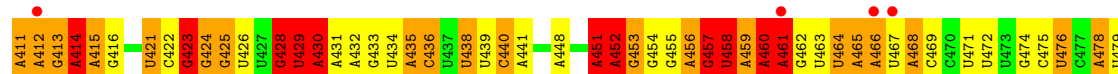
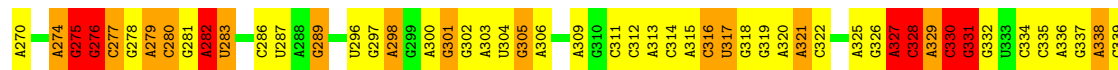
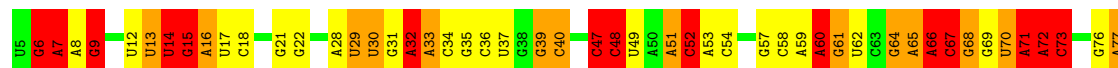
- Molecule 52: 50S ribosomal protein L36

Chain D4:



- Molecule 53: 16S rRNA

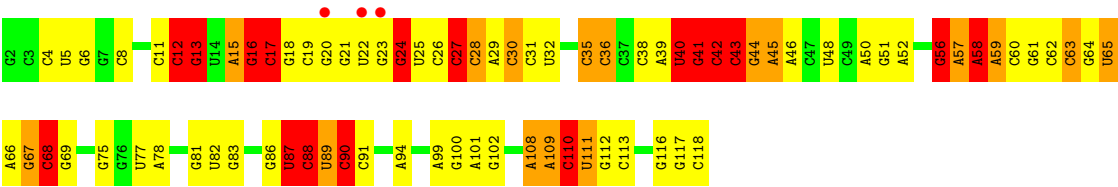
Chain CA:



A1500	A1501	A1502	A1503	A1504	A1505	A1506	A1507	A1508	A1509	C1510	G1511	G1512	G1513	G1514	G1515	G1516	G1517	G1518	G1519	C1520	C1521	G1525	G1526	U1527	U1528	G1529	G1530	A1531	C1532	C1533	C1534	C1535	C1536	C1537	C1538	U1391	G1392	U1393	A1394	G1465	G1466	G1467	A1468	U1471	U1472	G1473	A1476	U1477	U1478	U1479	A1480	U1481	G1482	A1483	G1484	U1485	G1486	G1487	G1488	G1489	U1490	G1491	A1492	A1493	G1494	U1495	C1496	G1497	U1498	A1499	C1366	C1367	A1368	C1369	G1370	G1371	U1372	G1373	A1374	A1375	U1376	A1377	G1378	G1379	U1380	U1381	C1382	C1383	C1384	G1385	G1386	G1387	C1388	U1391	G1392	U1393	A1394	G1465	G1466	G1467	A1468	U1471	U1472	G1473	A1476	U1477	U1478	U1479	A1480	U1481	G1482	A1483	G1484	U1485	G1486	G1487	G1488	G1489	U1490	G1491	A1492	A1493	G1494	U1495	C1496	G1497	U1498	A1499	C1303	G1305	U1308	G1310	G1311	G1312	U1313	C1314	U1315	G1316	C1317	U1318	A1319	C1320	C1321	C1322	G1323	A1324	U1325	C1326	C1327	C1328	C1329	U1330	C1331	A1332	A1333	G1334	C1335	U1336	C1337	C1338	C1339	A1340	U1341	C1342	G1343	C1344	U1345	A1346	G1347	U1348	A1349	U1350	U1351	C1352	G1356	A1357	U1358	C1359	A1360	G1361	A1362	U1363	U1364	C1365	A1239	U1240	G1241	C1243	A1244	C1245	U1246	U1247	A1248	C1249	A1250	A1251	A1252	U1253	C1254	G1255	A1256	C1257	G1258	U1259	C1260	C1261	C1262	C1263	U1264	C1265	C1266	G1267	C1268	G1269	C1270	C1271	G1272	A1273	A1274	G1275	C1276	C1277	C1278	C1279	G1280	C1281	U1282	U1283	C1284	U1285	A1286	U1287	A1288	A1289	U1290	C1291	U1292	C1293	G1294	U1295	C1296	G1297	U1298	A1299	U1300	U1301	C1302	G1175	A1176	G1177	C1178	A1179	G1181	U1182	U1183	G1184	U1185	G1186	U1190	A1191	C1192	G1193	A1196	U1197	U1198	U1199	C1200	A1201	G1202	C1203	A1204	C1205	G1206	G1207	C1208	C1209	G1210	U1211	C1212	U1213	C1214	G1215	A1216	C1217	C1218	A1219	C1220	G1221	C1222	C1223	U1224	A1225	C1226	A1227	C1228	U1229	C1230	G1231	U1232	A1233	U1234	C1235	A1236	U1237	A1238	G1103	G1104	A1105	G1106	U1107	C1108	C1113	C1114	A1117	U1118	G1124	U1125	U1126	G1127	C1128	G1129	A1130	G1131	C1132	G1133	G1134	U1135	C1136	C1137	G1138	C1139	G1140	C1141	G1142	G1143	G1144	A1145	A1146	C1147	U1148	C1149	A1150	G1151	A1152	C1153	G1154	A1155	G1156	U1157	C1158	U1159	G1160	C1161	A1167	U1168	A1169	U1170	A1171	C1172	U1173	G1174	G1039	A1043	G1044	A1046	G1047	U1049	C1050	C1051	G1052	G1053	C1054	A1055	U1056	G1057	G1058	C1059	U1060	G1061	U1062	C1063	G1064	U1065	C1066	A1067	G1068	U1069	U1070	C1071	G1072	U1073	C1074	U1075	U1076	U1077	U1078	G1079	A1080	A1081	U1085	U1086	G1088	C1089	U1090	U1091	C1092	A1093	G1094	U1095	C1096	U1097	C1098	G1099	A1100	A1101	A1102	A936	C937	C938	C939	C940	C941	C942	C943	C944	C945	C946	C947	C948	C949	C950	C951	C952	C953	C954	C955	C956	C957	C958	C959	C960	C961	C962	C963	C964	C965	C966	C967	C968	C969	C970	C971	C972	C973	C974	C975	C976	C977	C978	C979	C980	C981	C982	C983	C984	C985	C986	C987	C988	C989	C990	C991	C992	C993	C994	C995	C996	C997	C998	C999	C1000	C1001	C1002	C1003	C1004	C1005	C1006	C1007	C1008	C1009	C1010	C1011	C1012	C1013	C1014	C1015	C1016	C1017	C1018	C1019	C1020	C1021	C1022	C1023	C1024	C1025	C1026	C1027	C1028	C1029	C1030	C1031	C1032	C1033	C1034	C1035	C1036	C1037	C1038	U828	G829	A831	U834	U835	C840	C841	U842	U843	U844	A845	G846	G847	C848	G849	U855	G858	G859	A860	G861	C862	A865	C866	U870	U871	A872	C873	C874	C875	C876	C877	C878	C879	C880	C881	C882	C883	U884	G885	G886	G887	G888	A889	C890	U891	U892	C893	C894	C895	C896	C897	C898	C899	C900	C901	A908	U762	G763	C764	G765	A766	G767	U768	G769	C770	U771	C772	C773	C774	C775	C776	C777	C778	A781	U782	G785	G786	C787	C788	C789	C790	C791	U792	C793	A794	C795	C796	U797	C798	C799	G800	U801	C802	C803	C804	C805	C806	C807	C808	C809	C810	C811	C812	U813	A814	G815	G816	C817	C818	U819	U820	A821	C822	C823	C824	C825	C826	U827	U697	C698	C699	C700	A701	G702	C703	U704	G705	C706	U707	C708	U709	G710	A711	C712	G713	C714	A715	U716	A717	C718	C719	C720	U652	U653	C654	A655	C658	U659	C660	C661	C662	C663	C664	C665	C666	C667	C668	U672	A673	C674	A675	C676	U677	C678	C679	G682	G683	U684	G685	U686	A607	C608	A609	U610	C611	C612	C613	C614	A615	A616	A617	A618	A619	A620	A621	A622	A623	A624	A625	A626	A627	A628	A629	A630	A631	A632	A633	A634	A635	A636	A637	A638	A639	A640	A641	A642	A643	A644	A645	A646	A647	A648	A649	A650	A651	A652	A653	A654	A655	A656	A657	A658	A659	A660	A661	A662	A663	A664	A665	A666	A667	A668	A669	A670	A671	A672	A673	A674	A675	A676	A677	A678	A679	A680	A681	A682	A683	A684	A685	A686	A687	A688	A689	A690	A691	A692	A693	A694	A695	A696	A697	A698	A699	A700	A701	A702	A703	A704	A705	A706	A707	A708	A709	A710	A711	A712	A713	A714	A715	A716	A717	A718	A719	A720	A721	A722	A723	A724	A725	A726	A727	A728	A729	A730	A731	A732	A733	A734	A735	A736	A737	A738	A739	A740	A741	A742	A743	A744	A745	A746	A747	A748	A749	A750	A751	A752	A753	A754	A755	A756	A757	A758	A759	A760	A761	A762	A763	A764	A765	A766	A767	A768	A769	A770	A771	A772	A773	A774	A775	A776	A777	A778	A779	A780	A781	A782	A783	A784	A785	A786	A787	A788	A789	A790	A791	A792	A793	A794	A795	A796	A797	A798	A799	A800	A801	A802	A803	A804	A805	A806	A807	A808	A809	A810	A811	A812	A813	A814	A815	A816	A817	A818	A819	A820	A821	A822	A823	A824	A825	A826	A827	A828	A829	A830	A831	A832	A833	A834	A835	A836	A837	A838	A839	A840	A841	A842	A843	A844	A845	A846	A847	A848	A849	A850	A851	A852	A853	A854	A855	A856	A857	A858	A859	A860	A861	A862	A863	A864	A865	A866	A867	A868	A869	A870	A871	A872	A873	A874	A875	A876	A877	A878	A879	A880	A881	A882	A883	A884	A885	A886	A887	A888	A889	A890	A891	A892	A893	A894	A895	A896	A897	A898	A899	A900	A901	A902	A903	A904	A905	A906	A907	A908	A909	A910	A911	A912	A913	A914	A915	A916	A917	A918	A919	A920	A921	A922	A923	A924	A925	A926	A927	A928	A929	A930	A931	A932	A933	A934	A935	A936	A937	A938	A939	A940	A941	A942	A943	A944	A945	A946	A947	A948	A949	A950	A951	A952	A953	A954	A955	A956	A957	A958	A959	A960	A961	A962	A963	A964	A965	A966	A967	A968	A969	A970	A971	A972	A973	A974	A975	A976	A977	A978	A979	A980	A981	A982	A983	A984	A985	A986	A987	A988	A989	A990	A991	A992	A993	A994	A995	A996	A997	A998	A999	A1000	A1001	A1002	A1003	A1004	A1005	A1006	A1007	A1008	A1009	A1010	A1011	A1012	A1013	A1014	A1015	A1016	A1017	A1018	A1019	A1020	A1021	A1022	A1023	A1024	A1025	A1026	A1027	A1028	A1029	A1030	A1031	A1032	A1033	A1034	A1035	A1036	A1037	A1038	U526	U527	U528	U529	U530	U531	U532	U533	U534	U535	U536	U537	U538	U539	U540	U541	U542	U543	U544	U545	U546	U547	U548	U549	U550	U551	U552	U553	U554	U555	U556	U557	U558	U559	U560	U561	U562	U563	U564	U565	U566	U567	U568	U569	U570	U571	U572	U573	U574	U575	U576	U577	U578	U579	U580	U581	U582	U583	U584	U585	U586	U587	U588	U589	U590	U591	U592	U593	U594	U595	U596	U597	U598	U599	U600	U601	U602	U603	U604	U605	U606	U607	U608	U609	U610	U611	U612	U613	U614	U615	U616	U617	U618	U619	U620	U621	U622	U623	U624	U625	U626	U627	U628	U629	U630	U631	U632	U633	U634	U635	U636	U637	U638	U639	U640	U641	U642	U643	U644	U645	U646	U647	U648	U649	U650	U651	U652	U653	U654	U655	U656	U657	U658	U659	U660	U661	U662	U663	U664	U665	U666	U667	U668	U669	U670	U671	U672	U673	U674	U675	U676	U677	U678	U679	U680	U681	U682	U683	U684	U685	U686	U687	U688	U689	U690	U691	U692	U693	U694	U695	U696	U697	U698	U699	U700	U701	U702	U703	U704	U705	U706	U707	U708	U709	U710	U711	U712	U713	U714	U715	U716	U717	U718	U719	U720	U721	U722	U723	U724	U725	U726	U727	U728	U729	U730	U731	U732	U733	U734	U735	U736	U737	U738	U739	U740	U741	U742	U743	U744	U745	U746	U747	U748	U749	U750	U751	U752	U753	U754	U755	U756	U757	U758	U759	U760	U761	U762	U763	U764	U765	U766	U767	U768	U769	U770	U771	U772	U773	U774	U775	U776	U777	U778	U779	U780	U781	U782	U783	U784	U785	U786	U787	U788	U789	U790	U791	U792	U793	U794	U795	U796	U797	U798	U799	U800	U801	U802	U803	U804	U805	U806	U807	U808	U809	U810	U811	U812	U813	U814	U815	U816	U817	U818	U81
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● Molecule 54: 5S rRNA

Chain DB: 



4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α , β , γ	211.89Å 434.93Å 622.92Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	39.88 – 3.19 39.88 – 3.19	Depositor EDS
% Data completeness (in resolution range)	95.8 (39.88-3.19) 95.8 (39.88-3.19)	Depositor EDS
R_{merge}	0.17	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.53 (at 3.18Å)	Xtriage
Refinement program	PHENIX (phenix.refine)	Depositor
R, R_{free}	0.195 , 0.252 0.211 , 0.263	Depositor DCC
R_{free} test set	18197 reflections (2.05%)	DCC
Wilson B-factor (Å ²)	63.6	Xtriage
Anisotropy	0.258	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.24 , 40.6	EDS
Estimated twinning fraction	No twinning to report.	Xtriage
L-test for twinning	$\langle L \rangle = 0.48$, $\langle L^2 \rangle = 0.30$	Xtriage
Outliers	0 of 904292 reflections	Xtriage
F_o, F_c correlation	0.92	EDS
Total number of atoms	284450	wwPDB-VP
Average B, all atoms (Å ²)	98.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.53% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities 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: ZN, MG

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\# Z > 5$	RMSZ	$\# Z > 5$
1	AB	0.30	0/1735	0.52	0/2338
1	CB	0.27	0/1735	0.49	0/2338
2	AC	0.30	0/1651	0.53	1/2225 (0.0%)
2	CC	0.25	0/1651	0.45	0/2225
3	AD	0.31	0/1665	0.52	0/2227
3	CD	0.39	0/1665	0.60	0/2227
4	AE	0.36	0/1118	0.63	1/1504 (0.1%)
4	CE	0.34	0/1118	0.54	0/1504
5	AF	0.32	0/835	0.49	0/1128
5	CF	0.28	0/835	0.50	0/1128
6	AG	0.27	0/1195	0.48	0/1602
6	CG	0.25	0/1187	0.46	0/1591
7	AH	0.33	0/989	0.55	0/1326
7	CH	0.28	0/989	0.50	0/1326
8	AI	0.27	0/1034	0.49	0/1375
8	CI	0.24	0/1034	0.43	0/1375
9	AJ	0.29	0/796	0.53	0/1077
9	CJ	0.24	0/796	0.48	0/1077
10	AK	0.31	0/893	0.56	0/1205
10	CK	0.29	0/893	0.50	0/1205
11	AL	0.39	0/969	0.69	0/1300
11	CL	0.32	0/969	0.57	0/1300
12	AM	0.26	0/892	0.49	0/1193
12	CM	0.20	0/884	0.41	0/1181
13	AN	0.30	0/785	0.54	0/1043
13	CN	0.22	0/780	0.39	0/1036
14	AO	0.30	0/722	0.49	0/964
14	CO	0.26	0/722	0.45	0/964
15	AP	0.30	0/659	0.50	0/884
15	CP	0.30	0/648	0.51	0/870
16	AQ	0.39	0/657	0.59	0/881
16	CQ	0.31	0/657	0.51	0/881

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
17	AR	0.30	0/462	0.50	0/621
17	CR	0.30	0/462	0.47	0/621
18	AS	0.28	0/652	0.49	0/877
18	CS	0.21	0/652	0.43	0/877
19	AT	0.35	0/671	0.56	0/888
19	CT	0.27	0/671	0.50	0/888
20	AU	0.39	0/430	0.54	0/570
20	CU	0.39	0/430	0.63	0/570
21	AA	0.55	1/36834 (0.0%)	1.38	581/57462 (1.0%)
22	BA	0.78	12/68626 (0.0%)	1.59	1420/107056 (1.3%)
22	DA	0.50	0/68314	1.35	1136/106569 (1.1%)
23	BB	0.71	0/2828	1.50	45/4410 (1.0%)
24	BC	0.44	0/2121	0.70	1/2852 (0.0%)
24	DC	0.31	0/2121	0.53	0/2852
25	BD	0.53	0/1586	0.76	1/2134 (0.0%)
25	DD	0.30	0/1586	0.56	0/2134
26	BE	0.43	0/1571	0.64	0/2113
26	DE	0.26	0/1571	0.47	0/2113
27	BF	0.33	0/1434	0.54	0/1926
27	DF	0.23	0/1444	0.47	0/1937
28	BG	0.40	0/1343	0.64	0/1816
28	DG	0.24	0/1343	0.48	0/1816
29	BH	0.31	0/1122	0.50	0/1515
29	DH	0.28	0/1122	0.50	0/1515
30	BI	0.23	0/1046	0.47	0/1410
30	DI	0.21	0/1046	0.43	0/1410
31	BJ	0.57	0/1152	0.80	1/1551 (0.1%)
31	DJ	0.28	0/1152	0.55	1/1551 (0.1%)
32	BK	0.51	0/947	0.77	0/1268
32	DK	0.33	0/947	0.56	0/1268
33	BL	0.43	0/1054	0.75	0/1403
33	DL	0.27	0/1054	0.52	0/1403
34	BM	0.50	0/1093	0.70	0/1460
34	DM	0.27	0/1093	0.46	0/1460
35	BN	0.47	0/973	0.70	0/1301
35	DN	0.28	0/973	0.50	0/1301
36	BO	0.42	0/902	0.63	0/1209
36	DO	0.22	0/902	0.42	0/1209
37	BP	0.50	0/929	0.73	0/1242
37	DP	0.30	0/929	0.50	0/1242
38	BQ	0.57	0/960	0.73	0/1278
38	DQ	0.29	0/960	0.46	0/1278
39	BR	0.60	1/829 (0.1%)	0.75	0/1107

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
39	DR	0.28	0/829	0.49	0/1107
40	BS	0.53	0/864	0.72	0/1156
40	DS	0.29	0/864	0.52	0/1156
41	BT	0.46	0/744	0.74	0/994
41	DT	0.24	0/744	0.48	0/994
42	BU	0.44	0/787	0.70	0/1051
42	DU	0.25	0/787	0.47	0/1051
43	BV	0.42	0/766	0.58	0/1025
43	DV	0.25	0/766	0.43	0/1025
44	BW	0.56	0/603	0.87	0/797
44	DW	0.26	0/603	0.48	0/797
45	BX	0.42	0/635	0.70	1/848 (0.1%)
45	DX	0.27	0/635	0.55	0/848
46	BY	0.35	0/510	0.65	0/677
46	DY	0.22	0/510	0.45	0/677
47	BZ	0.51	0/453	0.77	0/605
47	DZ	0.26	0/453	0.49	0/605
48	B0	0.45	0/450	0.71	0/599
48	D0	0.28	0/450	0.51	0/599
49	B1	0.40	0/416	0.63	0/554
49	D1	0.27	0/416	0.46	0/554
50	B2	0.46	0/380	0.73	0/498
50	D2	0.28	0/380	0.50	0/498
51	B3	0.45	0/513	0.69	0/676
51	D3	0.27	0/513	0.51	0/676
52	B4	0.55	0/303	0.78	0/397
52	D4	0.27	0/303	0.49	0/397
53	CA	0.50	0/36762	1.32	542/57350 (0.9%)
54	DB	0.44	0/2803	1.26	34/4371 (0.8%)
All	All	0.55	14/306737 (0.0%)	1.26	3765/458565 (0.8%)

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
25	BD	0	1
32	BK	0	1
35	BN	0	1
51	B3	0	1
All	All	0	4

All (14) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
22	BA	1142	A	N9-C4	-10.15	1.31	1.37
22	BA	2451	A	C8-N7	8.00	1.37	1.31
22	BA	2447	G	N9-C4	7.71	1.44	1.38
22	BA	984	A	N9-C4	-6.87	1.33	1.37
22	BA	1142	A	C8-N7	6.70	1.36	1.31
22	BA	339	U	C2-N3	6.25	1.42	1.37
22	BA	633	A	C6-N6	6.20	1.39	1.33
22	BA	2733	A	C6-N6	5.76	1.38	1.33
22	BA	630	G	N3-C4	5.63	1.39	1.35
21	AA	452	A	N9-C4	-5.40	1.34	1.37
22	BA	1060	U	C2-N3	5.32	1.41	1.37
39	BR	86	GLN	CB-CG	5.17	1.66	1.52
22	BA	2860	A	C6-N6	5.08	1.38	1.33
22	BA	782	A	N9-C4	-5.04	1.34	1.37

All (3765) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	2447	G	C6-N1-C2	-18.49	114.00	125.10
22	BA	919	U	N1-C2-O2	18.00	135.40	122.80
22	BA	919	U	C2-N1-C1'	16.54	137.55	117.70
22	BA	302	C	N1-C1'-C2'	-16.46	92.60	114.00
22	BA	805	G	P-O3'-C3'	15.12	137.85	119.70
22	BA	2447	G	N3-C4-C5	-15.08	121.06	128.60
22	BA	2451	A	C5-N7-C8	-14.99	96.41	103.90
21	AA	119	A	P-O3'-C3'	14.89	137.57	119.70
22	BA	919	U	N3-C2-O2	-14.72	111.89	122.20
22	BA	961	C	P-O3'-C3'	14.58	137.20	119.70
22	DA	2283	C	N1-C1'-C2'	-14.08	95.70	114.00
22	BA	919	U	C5-C6-N1	14.07	129.74	122.70
22	BA	1330	C	N1-C1'-C2'	-13.86	95.98	114.00
22	BA	1997	C	N1-C1'-C2'	-13.84	96.01	114.00
22	BA	2447	G	C5-C6-N1	13.77	118.38	111.50
22	BA	995	C	O4'-C1'-N1	-13.67	97.26	108.20
53	CA	14	U	N1-C1'-C2'	-13.65	96.25	114.00
54	DB	68	C	N1-C1'-C2'	-13.60	96.32	114.00
53	CA	328	C	P-O3'-C3'	13.58	135.99	119.70
53	CA	891	U	N1-C1'-C2'	-13.48	96.48	114.00
23	BB	88	C	O4'-C1'-N1	-13.48	97.42	108.20
22	DA	76	C	N1-C1'-C2'	-13.38	96.61	114.00
22	BA	2609	U	O4'-C1'-N1	13.27	118.82	108.20
22	DA	740	C	N1-C1'-C2'	-13.26	96.76	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	2860	A	N1-C6-N6	13.22	126.53	118.60
53	CA	132	C	N1-C1'-C2'	-13.15	96.90	114.00
22	BA	1023	U	N1-C1'-C2'	-13.10	96.98	114.00
22	DA	1782	U	P-O3'-C3'	-13.05	104.04	119.70
22	BA	229	C	N1-C1'-C2'	-13.05	97.04	114.00
22	DA	2023	C	N1-C1'-C2'	-12.99	97.11	114.00
53	CA	1086	U	N1-C1'-C2'	-12.95	97.16	114.00
22	BA	204	A	P-O3'-C3'	12.87	135.14	119.70
22	DA	1023	U	N1-C1'-C2'	-12.71	97.48	114.00
22	BA	2283	C	N1-C1'-C2'	-12.70	97.49	114.00
22	BA	2645	G	P-O3'-C3'	12.67	134.90	119.70
53	CA	1283	U	N1-C1'-C2'	-12.67	97.53	114.00
21	AA	52	C	N1-C1'-C2'	-12.66	97.54	114.00
22	BA	481	G	P-O3'-C3'	12.62	134.85	119.70
22	BA	531	C	O4'-C1'-N1	-12.61	98.11	108.20
22	BA	92	U	N1-C1'-C2'	-12.60	97.62	114.00
22	BA	2447	G	P-O3'-C3'	12.55	134.76	119.70
22	DA	1681	G	P-O3'-C3'	12.53	134.74	119.70
54	DB	17	C	O4'-C1'-N1	12.51	118.21	108.20
22	DA	1997	C	N1-C1'-C2'	-12.48	97.78	114.00
22	BA	630	G	C2-N3-C4	-12.46	105.67	111.90
22	BA	2800	A	P-O3'-C3'	12.42	134.61	119.70
22	BA	531	C	P-O3'-C3'	12.38	134.56	119.70
22	BA	1130	U	P-O3'-C3'	12.36	134.53	119.70
22	DA	2615	U	N1-C1'-C2'	-12.29	98.03	114.00
22	BA	790	U	N1-C1'-C2'	-12.25	98.08	114.00
22	BA	1021	A	P-O3'-C3'	-12.25	105.00	119.70
22	BA	957	C	P-O3'-C3'	12.23	134.38	119.70
22	BA	2425	A	P-O3'-C3'	12.22	134.37	119.70
21	AA	1202	U	N1-C1'-C2'	-12.22	98.12	114.00
22	BA	1615	C	O4'-C1'-N1	12.22	117.97	108.20
22	BA	633	A	N1-C6-N6	12.14	125.88	118.60
22	BA	2848	G	P-O3'-C3'	12.13	134.25	119.70
22	DA	335	C	N1-C1'-C2'	-12.12	98.25	114.00
22	BA	2857	G	C2-N3-C4	-12.09	105.85	111.90
22	DA	2586	U	N1-C1'-C2'	-12.07	98.31	114.00
22	BA	1635	A	P-O3'-C3'	-12.03	105.26	119.70
54	DB	110	C	N1-C1'-C2'	-12.01	98.38	114.00
22	DA	61	C	N1-C1'-C2'	-11.99	98.42	114.00
22	DA	961	C	P-O3'-C3'	11.98	134.08	119.70
22	BA	2347	C	N1-C1'-C2'	-11.97	98.44	114.00
53	CA	512	U	N1-C1'-C2'	-11.97	98.44	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	DA	1611	C	N1-C1'-C2'	-11.97	98.44	114.00
22	BA	227	A	P-O3'-C3'	11.95	134.04	119.70
21	AA	972	C	N1-C1'-C2'	-11.94	98.47	114.00
53	CA	1202	U	N1-C1'-C2'	-11.92	98.50	114.00
53	CA	1383	C	N1-C1'-C2'	-11.92	98.50	114.00
22	DA	765	C	N1-C1'-C2'	-11.87	98.57	114.00
22	BA	627	A	P-O3'-C3'	11.86	133.94	119.70
53	CA	132	C	O4'-C1'-N1	11.84	117.67	108.20
22	DA	991	C	N1-C1'-C2'	-11.82	98.64	114.00
21	AA	512	U	N1-C1'-C2'	-11.81	98.64	114.00
22	BA	1142	A	N3-C4-N9	-11.80	117.96	127.40
22	DA	1267	U	N1-C1'-C2'	-11.80	98.66	114.00
22	BA	2835	A	P-O3'-C3'	11.78	133.84	119.70
22	BA	1461	C	N1-C1'-C2'	-11.78	98.69	114.00
22	DA	1060	U	C5-C4-O4	-11.78	118.83	125.90
22	BA	2752	C	N1-C1'-C2'	-11.77	98.70	114.00
22	BA	2573	C	N1-C1'-C2'	-11.75	98.72	114.00
22	DA	2440	C	N1-C1'-C2'	-11.74	98.74	114.00
22	BA	2023	C	N1-C1'-C2'	-11.72	98.77	114.00
22	BA	2068	U	N1-C1'-C2'	-11.71	98.77	114.00
22	BA	2517	C	O4'-C1'-N1	11.70	117.56	108.20
22	DA	2504	U	N1-C1'-C2'	-11.70	98.79	114.00
21	AA	169	C	O4'-C1'-N1	11.68	117.55	108.20
54	DB	68	C	O4'-C1'-N1	11.67	117.53	108.20
21	AA	66	A	P-O3'-C3'	-11.66	105.71	119.70
22	BA	1993	U	N1-C1'-C2'	-11.65	98.86	114.00
21	AA	1303	C	N1-C1'-C2'	-11.64	98.87	114.00
54	DB	90	C	N1-C1'-C2'	-11.61	98.90	114.00
22	BA	221	A	P-O3'-C3'	11.61	133.64	119.70
22	BA	858	G	P-O3'-C3'	11.60	133.62	119.70
22	BA	1615	C	P-O3'-C3'	11.60	133.62	119.70
22	BA	2035	G	P-O3'-C3'	11.58	133.60	119.70
22	BA	2451	A	N7-C8-N9	11.57	119.58	113.80
22	BA	2517	C	P-O3'-C3'	11.56	133.57	119.70
53	CA	330	C	N1-C1'-C2'	-11.55	98.98	114.00
53	CA	352	C	N1-C1'-C2'	-11.53	99.01	114.00
22	BA	1142	A	C5-N7-C8	-11.53	98.14	103.90
22	DA	2498	C	N1-C1'-C2'	-11.50	99.05	114.00
22	BA	61	C	N1-C1'-C2'	-11.49	99.06	114.00
22	BA	783	A	P-O3'-C3'	-11.45	105.97	119.70
22	DA	1536	C	P-O3'-C3'	11.44	133.43	119.70
22	BA	704	G	P-O3'-C3'	11.39	133.37	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	DA	946	C	N1-C1'-C2'	-11.36	99.23	114.00
22	BA	1603	A	P-O3'-C3'	-11.35	106.08	119.70
22	BA	2691	C	N1-C1'-C2'	-11.34	99.26	114.00
22	DA	2063	C	N1-C1'-C2'	-11.34	99.27	114.00
22	BA	1815	A	P-O3'-C3'	11.33	133.29	119.70
53	CA	1396	A	P-O3'-C3'	11.32	133.29	119.70
22	DA	1967	C	N1-C1'-C2'	-11.31	99.30	114.00
21	AA	422	C	P-O3'-C3'	11.28	133.23	119.70
53	CA	109	A	P-O3'-C3'	11.28	133.24	119.70
22	DA	2402	U	N1-C1'-C2'	-11.28	99.34	114.00
22	DA	1049	C	N1-C1'-C2'	-11.28	99.34	114.00
21	AA	1224	U	P-O3'-C3'	11.26	133.21	119.70
22	BA	1112	G	P-O3'-C3'	-11.26	106.19	119.70
21	AA	1141	C	N1-C1'-C2'	-11.25	99.37	114.00
53	CA	245	U	N1-C1'-C2'	-11.25	99.37	114.00
22	BA	143	C	N1-C1'-C2'	-11.25	99.37	114.00
22	BA	1324	G	O4'-C1'-N9	11.24	117.20	108.20
21	AA	7	A	P-O3'-C3'	11.24	133.19	119.70
22	BA	2611	C	N1-C1'-C2'	-11.24	99.39	114.00
22	DA	2880	C	N1-C1'-C2'	-11.24	99.39	114.00
22	BA	2051	A	P-O3'-C3'	11.24	133.18	119.70
22	BA	1151	A	P-O3'-C3'	-11.23	106.22	119.70
22	DA	1119	U	O4'-C1'-N1	11.23	117.18	108.20
22	DA	1289	C	N1-C1'-C2'	-11.23	99.40	114.00
21	AA	267	C	N1-C1'-C2'	-11.22	99.42	114.00
21	AA	87	C	N1-C1'-C2'	-11.22	99.42	114.00
22	BA	728	G	P-O3'-C3'	11.21	133.15	119.70
22	BA	2210	U	P-O3'-C3'	11.20	133.14	119.70
53	CA	344	A	P-O3'-C3'	11.19	133.13	119.70
21	AA	501	C	N1-C1'-C2'	-11.18	99.47	114.00
22	BA	373	U	N1-C1'-C2'	-11.17	99.48	114.00
22	DA	2611	C	N1-C1'-C2'	-11.17	99.48	114.00
22	BA	2893	A	P-O3'-C3'	11.16	133.10	119.70
22	DA	1249	U	N1-C1'-C2'	-11.16	99.49	114.00
22	DA	860	U	N1-C1'-C2'	-11.16	99.49	114.00
22	DA	2267	A	N1-C6-N6	11.15	125.29	118.60
22	BA	2681	C	O4'-C1'-N1	11.12	117.10	108.20
22	DA	2499	C	N1-C1'-C2'	-11.12	99.54	114.00
21	AA	1336	C	P-O3'-C3'	11.12	133.04	119.70
53	CA	1345	U	O4'-C1'-N1	11.12	117.09	108.20
53	CA	992	U	P-O3'-C3'	11.04	132.95	119.70
53	CA	428	G	P-O3'-C3'	11.02	132.93	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	2646	C	N1-C1'-C2'	-11.01	99.69	114.00
22	DA	128	C	N1-C1'-C2'	-10.99	99.71	114.00
22	DA	1386	C	N1-C1'-C2'	-10.99	99.71	114.00
22	DA	859	G	P-O3'-C3'	10.99	132.89	119.70
22	DA	1918	A	P-O3'-C3'	10.98	132.88	119.70
22	BA	435	C	N1-C1'-C2'	-10.98	99.72	114.00
22	BA	1247	A	P-O3'-C3'	10.97	132.87	119.70
22	BA	1931	U	N1-C1'-C2'	-10.96	99.75	114.00
53	CA	248	C	N1-C1'-C2'	-10.96	99.75	114.00
22	BA	784	G	P-O3'-C3'	10.95	132.84	119.70
22	BA	2504	U	N1-C1'-C2'	-10.93	99.80	114.00
22	BA	1142	A	N3-C4-C5	10.92	134.44	126.80
22	DA	1476	U	O4'-C1'-N1	10.92	116.93	108.20
22	BA	630	G	N9-C4-C5	-10.89	101.04	105.40
22	BA	301	G	P-O3'-C3'	10.89	132.77	119.70
21	AA	1528	U	P-O3'-C3'	10.89	132.77	119.70
22	BA	403	U	P-O3'-C3'	10.88	132.75	119.70
22	DA	2214	C	N1-C1'-C2'	-10.87	99.87	114.00
22	DA	2616	C	N1-C1'-C2'	-10.86	99.88	114.00
22	DA	1782	U	N1-C1'-C2'	-10.86	99.89	114.00
22	BA	1499	C	N1-C1'-C2'	-10.84	99.91	114.00
22	DA	2492	U	N1-C1'-C2'	-10.84	99.91	114.00
22	BA	1378	A	P-O3'-C3'	10.83	132.70	119.70
22	BA	811	U	O4'-C1'-N1	10.82	116.86	108.20
22	BA	633	A	C4-C5-C6	10.81	122.41	117.00
22	BA	1967	C	N1-C1'-C2'	-10.81	99.94	114.00
22	DA	2499	C	P-O3'-C3'	-10.79	106.75	119.70
22	BA	2808	G	P-O3'-C3'	10.78	132.64	119.70
22	BA	1013	C	N1-C1'-C2'	-10.77	99.99	114.00
22	BA	1941	C	N1-C1'-C2'	-10.77	99.99	114.00
53	CA	936	C	N1-C1'-C2'	-10.76	100.01	114.00
22	DA	86	G	P-O3'-C3'	-10.76	106.79	119.70
21	AA	753	A	P-O3'-C3'	10.76	132.61	119.70
22	DA	2458	G	P-O3'-C3'	10.75	132.60	119.70
22	DA	726	G	P-O3'-C3'	10.74	132.59	119.70
22	BA	1060	U	C5-C4-O4	-10.73	119.46	125.90
54	DB	17	C	N1-C1'-C2'	-10.73	100.04	114.00
22	BA	1653	G	P-O3'-C3'	10.73	132.58	119.70
22	DA	2068	U	N1-C1'-C2'	-10.72	100.06	114.00
22	BA	2879	A	P-O3'-C3'	10.71	132.55	119.70
22	BA	1082	U	O4'-C1'-N1	10.69	116.75	108.20
22	BA	1647	U	O4'-C1'-N1	10.69	116.75	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	AA	547	A	P-O3'-C3'	10.66	132.50	119.70
22	BA	1758	U	P-O3'-C3'	10.65	132.48	119.70
22	BA	919	U	C6-N1-C1'	-10.65	106.30	121.20
22	BA	404	A	P-O3'-C3'	10.64	132.47	119.70
22	BA	512	G	O4'-C1'-N9	10.63	116.70	108.20
53	CA	1449	C	N1-C1'-C2'	-10.63	100.18	114.00
21	AA	1283	U	N1-C1'-C2'	-10.62	100.19	114.00
21	AA	960	U	P-O3'-C3'	10.62	132.44	119.70
22	BA	2490	G	P-O3'-C3'	10.60	132.42	119.70
22	BA	1288	G	P-O3'-C3'	10.59	132.40	119.70
22	BA	61	C	P-O3'-C3'	-10.58	107.00	119.70
22	BA	2756	U	P-O3'-C3'	10.58	132.40	119.70
22	BA	2613	U	O4'-C1'-N1	10.57	116.66	108.20
22	DA	2403	C	N1-C1'-C2'	-10.57	100.27	114.00
22	DA	60	G	P-O3'-C3'	10.56	132.37	119.70
22	BA	687	C	N1-C1'-C2'	-10.55	100.29	114.00
22	BA	1185	G	P-O3'-C3'	-10.54	107.05	119.70
22	BA	1675	C	N1-C1'-C2'	-10.53	100.31	114.00
22	DA	243	U	N1-C1'-C2'	-10.51	100.34	114.00
22	DA	2226	C	N1-C1'-C2'	-10.50	100.35	114.00
22	BA	2333	A	P-O3'-C3'	10.50	132.30	119.70
53	CA	73	C	N1-C1'-C2'	-10.49	100.36	114.00
21	AA	1228	C	N1-C1'-C2'	-10.47	100.38	114.00
21	AA	175	C	N1-C1'-C2'	-10.44	100.43	114.00
22	BA	1009	A	P-O3'-C3'	-10.44	107.17	119.70
22	DA	234	U	N1-C1'-C2'	-10.44	100.43	114.00
22	BA	790	U	P-O3'-C3'	-10.43	107.19	119.70
22	BA	449	A	P-O3'-C3'	-10.42	107.20	119.70
21	AA	1140	C	O4'-C1'-N1	10.42	116.53	108.20
22	BA	2424	C	N1-C1'-C2'	-10.42	100.46	114.00
53	CA	66	A	P-O3'-C3'	-10.41	107.20	119.70
22	BA	390	U	P-O3'-C3'	10.40	132.18	119.70
22	DA	2458	G	O4'-C1'-N9	10.40	116.52	108.20
22	BA	1971	U	N1-C1'-C2'	-10.38	100.50	114.00
23	BB	90	C	N1-C1'-C2'	-10.38	100.51	114.00
22	DA	1667	G	P-O3'-C3'	10.38	132.15	119.70
22	DA	1675	C	N1-C1'-C2'	-10.38	100.51	114.00
22	DA	2752	C	N1-C1'-C2'	-10.38	100.51	114.00
21	AA	1064	G	P-O3'-C3'	10.38	132.15	119.70
22	BA	243	U	N1-C1'-C2'	-10.37	100.51	114.00
22	BA	119	A	P-O3'-C3'	10.37	132.14	119.70
22	BA	2451	A	C8-N9-C4	-10.37	101.65	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	1033	U	O4'-C1'-N1	10.36	116.49	108.20
22	BA	1332	G	P-O3'-C3'	10.36	132.13	119.70
22	DA	1816	C	N1-C1'-C2'	-10.36	100.54	114.00
22	DA	1963	U	N1-C1'-C2'	-10.35	100.54	114.00
21	AA	1348	U	N1-C1'-C2'	-10.32	100.58	114.00
53	CA	1528	U	P-O3'-C3'	10.32	132.09	119.70
22	BA	2424	C	P-O3'-C3'	-10.31	107.33	119.70
22	BA	1272	A	P-O3'-C3'	10.31	132.07	119.70
22	BA	2575	C	C2-N3-C4	-10.30	114.75	119.90
22	DA	1612	C	N1-C1'-C2'	-10.30	100.61	114.00
21	AA	1053	G	P-O3'-C3'	10.30	132.06	119.70
22	DA	2875	C	N1-C1'-C2'	-10.30	100.61	114.00
22	DA	2520	C	N1-C1'-C2'	-10.27	100.65	114.00
53	CA	316	C	N1-C1'-C2'	-10.26	100.66	114.00
21	AA	889	A	P-O3'-C3'	10.25	132.00	119.70
22	DA	1838	C	O4'-C1'-N1	10.25	116.40	108.20
22	DA	206	U	N1-C1'-C2'	-10.25	100.68	114.00
22	DA	2874	C	N1-C1'-C2'	-10.23	100.70	114.00
22	BA	2511	U	C2-N3-C4	-10.23	120.86	127.00
22	BA	2712	C	P-O3'-C3'	10.22	131.96	119.70
53	CA	1147	C	N1-C1'-C2'	-10.22	100.71	114.00
22	DA	2023	C	O4'-C1'-N1	10.19	116.35	108.20
21	AA	1224	U	O4'-C1'-N1	10.18	116.35	108.20
22	DA	1498	C	N1-C1'-C2'	-10.18	100.76	114.00
22	DA	1552	A	O4'-C1'-N9	10.17	116.34	108.20
22	DA	2348	U	N1-C1'-C2'	-10.17	100.78	114.00
22	BA	1008	A	P-O3'-C3'	10.17	131.91	119.70
22	BA	503	A	P-O3'-C3'	10.15	131.88	119.70
53	CA	183	C	O4'-C1'-N1	10.15	116.32	108.20
22	DA	807	U	O4'-C1'-N1	10.15	116.32	108.20
22	DA	1956	U	N1-C1'-C2'	-10.15	100.80	114.00
22	BA	740	C	N1-C1'-C2'	-10.14	100.81	114.00
21	AA	1196	A	P-O3'-C3'	10.12	131.85	119.70
22	DA	224	U	N1-C1'-C2'	-10.12	100.85	114.00
22	DA	2267	A	C5-C6-N6	-10.11	115.61	123.70
22	DA	164	C	N1-C1'-C2'	-10.11	100.86	114.00
22	BA	1019	U	C2-N3-C4	-10.10	120.94	127.00
22	BA	2225	A	P-O3'-C3'	10.09	131.80	119.70
22	DA	2497	A	P-O3'-C3'	10.09	131.80	119.70
22	BA	451	U	O4'-C1'-N1	10.08	116.26	108.20
53	CA	962	C	N1-C1'-C2'	-10.08	100.90	114.00
53	CA	169	C	O4'-C1'-N1	10.07	116.26	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	DA	2586	U	P-O3'-C3'	-10.07	107.61	119.70
21	AA	575	G	P-O3'-C3'	10.06	131.77	119.70
23	BB	57	A	P-O3'-C3'	-10.06	107.63	119.70
21	AA	1095	U	N1-C1'-C2'	-10.05	100.93	114.00
22	DA	2691	C	N1-C1'-C2'	-10.05	100.93	114.00
22	BA	2542	A	P-O3'-C3'	10.05	131.76	119.70
53	CA	252	U	N1-C1'-C2'	-10.05	100.94	114.00
22	BA	1045	C	P-O3'-C3'	10.05	131.75	119.70
21	AA	13	U	P-O3'-C3'	10.02	131.72	119.70
22	BA	1965	C	N1-C1'-C2'	-10.02	100.98	114.00
21	AA	641	U	P-O3'-C3'	10.01	131.72	119.70
22	BA	1126	A	P-O3'-C3'	10.01	131.72	119.70
22	BA	1962	C	P-O3'-C3'	10.01	131.71	119.70
53	CA	961	U	N1-C1'-C2'	-10.01	100.99	114.00
21	AA	1399	C	P-O3'-C3'	10.01	131.71	119.70
22	DA	1417	C	N1-C1'-C2'	-10.00	101.00	112.00
21	AA	642	A	P-O3'-C3'	-10.00	107.70	119.70
22	DA	576	U	N1-C1'-C2'	-9.99	101.01	112.00
22	BA	2497	A	P-O3'-C3'	9.99	131.69	119.70
22	BA	1901	A	P-O3'-C3'	-9.97	107.73	119.70
21	AA	1125	U	P-O3'-C3'	9.96	131.65	119.70
22	DA	763	G	P-O3'-C3'	-9.96	107.75	119.70
53	CA	792	A	P-O3'-C3'	9.95	131.64	119.70
22	BA	1954	G	P-O3'-C3'	9.95	131.63	119.70
21	AA	110	C	N1-C1'-C2'	-9.94	101.07	112.00
22	BA	1706	C	O4'-C1'-N1	9.93	116.15	108.20
53	CA	721	G	P-O3'-C3'	9.93	131.62	119.70
53	CA	501	C	N1-C1'-C2'	-9.93	101.08	112.00
22	BA	2423	U	P-O3'-C3'	9.92	131.61	119.70
22	DA	1941	C	N1-C1'-C2'	-9.91	101.09	112.00
22	BA	2447	G	N3-C4-N9	9.91	131.95	126.00
22	BA	914	G	P-O3'-C3'	-9.91	107.81	119.70
22	BA	2458	G	P-O3'-C3'	9.90	131.58	119.70
22	BA	92	U	P-O3'-C3'	-9.90	107.82	119.70
22	BA	249	C	N1-C1'-C2'	9.89	126.86	114.00
53	CA	559	A	P-O3'-C3'	9.89	131.57	119.70
23	BB	16	G	P-O3'-C3'	-9.89	107.83	119.70
21	AA	1190	G	P-O3'-C3'	9.88	131.56	119.70
22	BA	2866	U	O4'-C1'-N1	9.88	116.11	108.20
53	CA	753	A	P-O3'-C3'	9.87	131.55	119.70
21	AA	1320	C	N1-C1'-C2'	-9.87	101.14	112.00
53	CA	240	G	P-O3'-C3'	-9.87	107.86	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	783	A	C5-N7-C8	-9.84	98.98	103.90
22	DA	1982	U	N1-C1'-C2'	-9.84	101.18	112.00
22	BA	2266	A	P-O3'-C3'	9.83	131.49	119.70
54	DB	27	C	N1-C1'-C2'	-9.83	101.19	112.00
22	DA	916	G	P-O3'-C3'	-9.80	107.94	119.70
22	BA	1012	U	O4'-C1'-N1	9.79	116.03	108.20
22	BA	1142	A	C4-C5-C6	-9.77	112.11	117.00
22	BA	2382	G	P-O3'-C3'	9.77	131.42	119.70
22	BA	1859	U	N1-C1'-C2'	-9.77	101.26	112.00
22	BA	2860	A	C4-C5-C6	9.76	121.88	117.00
22	BA	241	A	P-O3'-C3'	9.75	131.40	119.70
53	CA	1141	C	N1-C1'-C2'	-9.75	101.28	112.00
22	DA	1013	C	N1-C1'-C2'	-9.74	101.28	112.00
22	BA	299	A	C5-N7-C8	-9.74	99.03	103.90
22	DA	2225	A	P-O3'-C3'	9.73	131.38	119.70
53	CA	73	C	O4'-C1'-N1	9.73	115.98	108.20
53	CA	564	C	N1-C1'-C2'	-9.73	101.30	112.00
21	AA	111	G	P-O3'-C3'	-9.73	108.03	119.70
22	BA	783	A	N9-C1'-C2'	-9.72	101.31	112.00
54	DB	88	C	P-O3'-C3'	9.71	131.35	119.70
22	BA	1965	C	P-O3'-C3'	-9.70	108.06	119.70
21	AA	500	G	P-O3'-C3'	-9.69	108.07	119.70
23	BB	40	U	O4'-C1'-N1	9.69	115.95	108.20
22	BA	2447	G	C2-N3-C4	9.68	116.74	111.90
22	BA	752	A	N1-C6-N6	9.66	124.40	118.60
22	BA	1210	G	P-O3'-C3'	9.66	131.29	119.70
22	DA	1815	A	P-O3'-C3'	9.66	131.29	119.70
22	BA	865	C	P-O3'-C3'	9.65	131.28	119.70
22	BA	961	C	O4'-C1'-N1	9.65	115.92	108.20
22	BA	2449	U	O4'-C1'-N1	-9.64	100.49	108.20
22	BA	1626	A	P-O3'-C3'	9.63	131.26	119.70
22	DA	2429	G	P-O3'-C3'	-9.63	108.14	119.70
22	BA	783	A	N1-C6-N6	9.63	124.38	118.60
22	BA	1427	A	P-O3'-C3'	9.62	131.24	119.70
22	DA	672	C	N1-C1'-C2'	-9.62	101.42	112.00
22	DA	2447	G	C6-N1-C2	-9.62	119.33	125.10
22	BA	621	A	P-O3'-C3'	-9.61	108.17	119.70
22	DA	2347	C	N1-C1'-C2'	-9.59	101.45	112.00
21	AA	1167	A	P-O3'-C3'	9.57	131.19	119.70
22	DA	1207	C	N1-C1'-C2'	-9.56	101.48	112.00
22	BA	637	A	P-O3'-C3'	9.56	131.17	119.70
22	DA	2581	G	P-O3'-C3'	9.56	131.17	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	633	A	C5-C6-N1	-9.55	112.92	117.70
53	CA	486	U	P-O3'-C3'	-9.54	108.25	119.70
53	CA	962	C	O4'-C1'-N1	9.54	115.83	108.20
22	DA	444	C	N1-C1'-C2'	-9.53	101.52	112.00
22	BA	1394	U	O4'-C1'-N1	-9.52	100.58	108.20
21	AA	373	A	P-O3'-C3'	-9.52	108.28	119.70
22	DA	2645	G	P-O3'-C3'	9.52	131.12	119.70
22	BA	2498	C	N1-C1'-C2'	-9.52	101.53	112.00
21	AA	352	C	N1-C1'-C2'	-9.51	101.53	112.00
22	DA	2338	C	O4'-C1'-N1	9.51	115.81	108.20
53	CA	348	G	P-O3'-C3'	-9.51	108.29	119.70
22	BA	812	C	N1-C1'-C2'	-9.50	101.55	112.00
53	CA	1051	C	N1-C1'-C2'	-9.48	101.57	112.00
21	AA	173	U	O4'-C1'-N1	9.47	115.78	108.20
22	BA	164	C	N1-C1'-C2'	-9.47	101.58	112.00
53	CA	110	C	P-O3'-C3'	-9.47	108.33	119.70
21	AA	330	C	N1-C1'-C2'	-9.47	101.58	112.00
22	DA	527	C	P-O3'-C3'	9.47	131.06	119.70
22	BA	2214	C	N1-C1'-C2'	-9.46	101.60	112.00
22	DA	1996	C	P-O3'-C3'	9.45	131.04	119.70
53	CA	575	G	P-O3'-C3'	9.45	131.04	119.70
22	BA	1728	C	O4'-C1'-N1	9.45	115.76	108.20
22	BA	1266	G	P-O3'-C3'	9.44	131.03	119.70
21	AA	1282	C	N1-C1'-C2'	-9.44	101.62	112.00
22	DA	222	A	P-O3'-C3'	9.43	131.02	119.70
22	BA	1780	A	P-O3'-C3'	9.43	131.01	119.70
21	AA	934	C	O4'-C1'-N1	9.42	115.74	108.20
22	DA	1655	A	P-O3'-C3'	-9.42	108.40	119.70
21	AA	1452	C	P-O3'-C3'	9.42	131.00	119.70
22	BA	178	G	P-O3'-C3'	-9.41	108.40	119.70
22	DA	2149	U	O4'-C1'-N1	9.41	115.73	108.20
22	BA	2573	C	P-O3'-C3'	-9.41	108.41	119.70
22	DA	2310	C	N1-C1'-C2'	-9.41	101.65	112.00
22	DA	217	A	P-O3'-C3'	-9.41	108.41	119.70
22	DA	2267	A	C6-C5-N7	-9.41	125.71	132.30
21	AA	351	G	O4'-C1'-N9	9.40	115.72	108.20
21	AA	961	U	N1-C1'-C2'	-9.40	101.66	112.00
22	BA	1558	C	P-O3'-C3'	9.40	130.98	119.70
22	BA	1499	C	O4'-C1'-N1	9.38	115.70	108.20
22	DA	531	C	P-O3'-C3'	9.38	130.96	119.70
21	AA	451	A	P-O3'-C3'	9.37	130.95	119.70
22	DA	807	U	N1-C1'-C2'	-9.37	101.69	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	AA	1398	A	P-O3'-C3'	-9.36	108.47	119.70
22	BA	506	G	P-O3'-C3'	9.36	130.93	119.70
53	CA	520	A	P-O3'-C3'	-9.35	108.48	119.70
22	BA	1786	A	O4'-C1'-N9	9.34	115.67	108.20
22	BA	2776	A	P-O3'-C3'	9.34	130.91	119.70
22	DA	1556	C	N1-C1'-C2'	-9.34	101.73	112.00
21	AA	480	U	O4'-C1'-N1	9.34	115.67	108.20
22	BA	2030	A	P-O3'-C3'	9.33	130.90	119.70
53	CA	531	U	O4'-C1'-N1	9.33	115.66	108.20
22	BA	1555	G	P-O3'-C3'	-9.32	108.51	119.70
22	BA	1819	A	P-O3'-C3'	9.32	130.88	119.70
22	DA	933	A	P-O3'-C3'	-9.32	108.52	119.70
22	BA	1716	U	N1-C1'-C2'	-9.31	101.76	112.00
21	AA	85	U	P-O3'-C3'	9.31	130.87	119.70
22	DA	1648	U	N1-C1'-C2'	-9.31	101.76	112.00
22	BA	2319	G	P-O3'-C3'	9.30	130.87	119.70
23	BB	52	A	P-O3'-C3'	9.31	130.87	119.70
22	BA	2258	C	P-O3'-C3'	9.30	130.86	119.70
22	DA	2612	C	N1-C1'-C2'	-9.30	101.77	112.00
21	AA	1068	G	P-O3'-C3'	-9.29	108.55	119.70
22	BA	249	C	P-O3'-C3'	9.27	130.83	119.70
53	CA	577	G	P-O3'-C3'	-9.27	108.57	119.70
22	BA	646	U	N1-C1'-C2'	-9.27	101.80	112.00
22	BA	2689	U	P-O3'-C3'	9.27	130.82	119.70
22	BA	250	G	P-O3'-C3'	-9.25	108.60	119.70
22	DA	622	G	P-O3'-C3'	-9.25	108.60	119.70
22	BA	783	A	C4-C5-N7	9.25	115.33	110.70
21	AA	1157	A	P-O3'-C3'	9.25	130.80	119.70
22	BA	84	A	P-O3'-C3'	9.24	130.79	119.70
23	BB	12	C	P-O3'-C3'	9.24	130.78	119.70
53	CA	1200	C	P-O3'-C3'	9.23	130.78	119.70
22	BA	313	G	P-O3'-C3'	-9.23	108.63	119.70
53	CA	536	C	P-O3'-C3'	-9.23	108.63	119.70
22	DA	2689	U	O4'-C1'-N1	9.22	115.58	108.20
21	AA	173	U	P-O3'-C3'	9.22	130.76	119.70
21	AA	91	U	C5-C4-O4	-9.21	120.37	125.90
22	BA	2200	C	P-O3'-C3'	-9.21	108.64	119.70
53	CA	32	A	P-O3'-C3'	-9.21	108.64	119.70
53	CA	701	U	P-O3'-C3'	9.20	130.74	119.70
53	CA	816	A	P-O3'-C3'	-9.20	108.66	119.70
21	AA	169	C	C5-C4-N4	9.19	126.63	120.20
22	DA	2848	G	P-O3'-C3'	9.19	130.73	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	CA	547	A	P-O3'-C3'	9.17	130.71	119.70
21	AA	1087	G	P-O3'-C3'	-9.16	108.70	119.70
22	BA	2385	C	N1-C1'-C2'	-9.16	101.92	112.00
22	BA	811	U	P-O3'-C3'	9.16	130.69	119.70
53	CA	481	G	P-O3'-C3'	9.15	130.68	119.70
22	DA	915	C	N1-C1'-C2'	-9.15	101.93	112.00
22	DA	2249	U	P-O3'-C3'	9.15	130.68	119.70
22	BA	1942	C	P-O3'-C3'	-9.12	108.75	119.70
22	DA	1158	C	N1-C1'-C2'	-9.12	101.96	112.00
22	BA	49	A	P-O3'-C3'	9.12	130.65	119.70
22	BA	2727	A	P-O3'-C3'	-9.12	108.76	119.70
22	DA	2450	A	P-O3'-C3'	-9.12	108.76	119.70
22	BA	14	A	P-O3'-C3'	-9.12	108.76	119.70
22	BA	2581	G	P-O3'-C3'	9.11	130.63	119.70
22	BA	386	G	P-O3'-C3'	9.11	130.63	119.70
22	BA	2312	U	P-O3'-C3'	-9.11	108.77	119.70
22	BA	2239	G	P-O3'-C3'	-9.10	108.78	119.70
22	BA	2613	U	P-O3'-C3'	9.10	130.62	119.70
22	DA	1683	U	N1-C1'-C2'	-9.10	101.99	112.00
22	DA	2490	G	P-O3'-C3'	9.08	130.60	119.70
22	DA	777	G	P-O3'-C3'	-9.08	108.81	119.70
21	AA	969	A	P-O3'-C3'	-9.08	108.81	119.70
21	AA	1201	A	P-O3'-C3'	9.07	130.58	119.70
22	BA	475	C	N1-C1'-C2'	-9.07	102.03	112.00
53	CA	1381	U	N1-C1'-C2'	-9.06	102.03	112.00
22	BA	1178	C	O4'-C1'-N1	9.05	115.44	108.20
22	BA	2503	A	P-O3'-C3'	9.05	130.57	119.70
22	DA	867	C	N1-C1'-C2'	-9.05	102.04	112.00
22	DA	2493	U	P-O3'-C3'	-9.05	108.84	119.70
22	BA	1522	A	P-O3'-C3'	9.04	130.55	119.70
22	DA	1291	C	O4'-C1'-N1	9.04	115.44	108.20
22	BA	995	C	P-O3'-C3'	9.04	130.54	119.70
22	BA	2043	C	O4'-C1'-N1	-9.03	100.98	108.20
22	BA	2732	G	P-O3'-C3'	9.03	130.53	119.70
22	DA	2566	A	P-O3'-C3'	9.03	130.53	119.70
22	BA	669	G	P-O3'-C3'	9.02	130.53	119.70
22	BA	2609	U	P-O3'-C3'	9.02	130.52	119.70
22	BA	2200	C	N1-C1'-C2'	-9.02	102.08	112.00
21	AA	1322	C	P-O3'-C3'	9.01	130.51	119.70
53	CA	89	U	N1-C1'-C2'	-9.01	102.09	112.00
22	BA	1602	U	O4'-C1'-N1	9.01	115.40	108.20
22	BA	1033	U	P-O3'-C3'	8.99	130.49	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	DA	444	C	O4'-C1'-N1	8.99	115.39	108.20
22	DA	2712	C	O4'-C1'-N1	8.99	115.39	108.20
23	BB	25	U	P-O3'-C3'	-8.98	108.93	119.70
22	BA	620	G	P-O3'-C3'	8.96	130.46	119.70
22	BA	1654	A	P-O3'-C3'	-8.97	108.94	119.70
21	AA	115	G	P-O3'-C3'	8.96	130.45	119.70
53	CA	509	A	P-O3'-C3'	-8.96	108.95	119.70
53	CA	1068	G	P-O3'-C3'	-8.94	108.97	119.70
22	DA	407	G	P-O3'-C3'	-8.95	108.97	119.70
22	DA	1291	C	N1-C1'-C2'	-8.94	102.16	112.00
22	BA	1300	G	P-O3'-C3'	8.93	130.41	119.70
22	BA	2756	U	N1-C1'-C2'	8.92	125.60	114.00
22	BA	1417	C	N1-C1'-C2'	-8.92	102.19	112.00
22	BA	1865	U	N1-C1'-C2'	8.92	125.59	114.00
22	BA	685	A	P-O3'-C3'	8.92	130.40	119.70
22	DA	1072	C	O4'-C1'-N1	8.91	115.33	108.20
22	BA	339	U	C2-N3-C4	-8.91	121.66	127.00
22	BA	1058	U	O4'-C1'-N1	8.91	115.33	108.20
23	BB	42	C	P-O3'-C3'	-8.91	109.01	119.70
22	BA	1498	C	N1-C1'-C2'	-8.89	102.22	112.00
22	BA	1022	G	P-O3'-C3'	8.89	130.37	119.70
22	BA	2238	G	P-O3'-C3'	8.89	130.37	119.70
53	CA	643	C	N1-C1'-C2'	-8.89	102.22	112.00
22	DA	589	U	N1-C1'-C2'	-8.89	102.22	112.00
21	AA	536	C	N1-C1'-C2'	-8.89	102.22	112.00
53	CA	239	U	P-O3'-C3'	-8.88	109.04	119.70
22	DA	1305	C	O4'-C1'-N1	8.88	115.30	108.20
22	BA	2226	C	N1-C1'-C2'	-8.88	102.23	112.00
23	BB	108	A	P-O3'-C3'	8.87	130.35	119.70
22	DA	437	U	N1-C1'-C2'	-8.88	102.24	112.00
22	DA	302	C	N1-C1'-C2'	-8.87	102.25	112.00
22	BA	434	U	P-O3'-C3'	8.87	130.34	119.70
22	BA	1144	A	P-O3'-C3'	-8.86	109.06	119.70
22	BA	984	A	C2-N3-C4	-8.86	106.17	110.60
22	DA	806	C	N1-C1'-C2'	-8.86	102.26	112.00
21	AA	388	G	P-O3'-C3'	8.85	130.32	119.70
21	AA	51	A	P-O3'-C3'	8.85	130.32	119.70
22	DA	957	C	P-O3'-C3'	8.84	130.31	119.70
22	DA	2334	U	N1-C1'-C2'	8.84	125.49	114.00
53	CA	388	G	P-O3'-C3'	8.84	130.30	119.70
22	DA	1539	U	N1-C1'-C2'	-8.83	102.28	112.00
22	BA	2615	U	P-O3'-C3'	-8.83	109.11	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	CA	1228	C	N1-C1'-C2'	-8.83	102.29	112.00
22	DA	15	G	P-O3'-C3'	-8.83	109.11	119.70
21	AA	184	G	P-O3'-C3'	-8.83	109.11	119.70
22	DA	1682	G	P-O3'-C3'	-8.82	109.11	119.70
22	BA	271	G	P-O3'-C3'	8.81	130.28	119.70
53	CA	1224	U	P-O3'-C3'	8.81	130.27	119.70
53	CA	936	C	O4'-C1'-N1	8.81	115.25	108.20
22	BA	1045	C	O4'-C1'-N1	8.80	115.24	108.20
22	BA	984	A	N1-C6-N6	8.79	123.87	118.60
22	BA	919	U	C2-N3-C4	8.78	132.27	127.00
22	DA	1972	G	P-O3'-C3'	-8.78	109.17	119.70
22	DA	829	A	P-O3'-C3'	8.77	130.23	119.70
21	AA	1184	G	P-O3'-C3'	-8.77	109.17	119.70
22	BA	1997	C	O4'-C1'-N1	8.77	115.22	108.20
21	AA	1345	U	O4'-C1'-N1	8.77	115.22	108.20
22	BA	1648	U	P-O3'-C3'	-8.76	109.19	119.70
53	CA	513	C	N1-C1'-C2'	-8.76	102.37	112.00
22	BA	1963	U	P-O3'-C3'	-8.76	109.19	119.70
22	BA	1013	C	P-O3'-C3'	-8.75	109.20	119.70
22	DA	481	G	O4'-C1'-N9	8.75	115.20	108.20
22	DA	1779	U	O4'-C1'-N1	8.75	115.20	108.20
53	CA	60	A	P-O3'-C3'	8.75	130.20	119.70
21	AA	1302	C	N1-C1'-C2'	-8.75	102.38	112.00
22	BA	1654	A	N9-C1'-C2'	-8.74	102.38	112.00
22	DA	1207	C	P-O3'-C3'	-8.74	109.21	119.70
22	BA	2725	A	P-O3'-C3'	8.73	130.18	119.70
22	DA	747	U	N1-C1'-C2'	-8.73	102.39	112.00
22	BA	1707	G	P-O3'-C3'	-8.73	109.22	119.70
22	BA	752	A	P-O3'-C3'	8.72	130.17	119.70
22	BA	2239	G	P-O5'-C5'	-8.72	106.94	120.90
53	CA	1348	U	N1-C1'-C2'	-8.72	102.41	112.00
22	BA	1141	U	P-O3'-C3'	8.72	130.16	119.70
22	DA	91	A	P-O3'-C3'	8.72	130.16	119.70
22	BA	1964	G	P-O3'-C3'	8.71	130.16	119.70
22	BA	2520	C	P-O3'-C3'	-8.71	109.24	119.70
22	DA	2283	C	P-O3'-C3'	-8.71	109.25	119.70
21	AA	1380	U	O4'-C1'-N1	8.71	115.17	108.20
22	BA	474	G	P-O3'-C3'	8.71	130.15	119.70
22	BA	2447	G	C5-C6-O6	-8.71	123.38	128.60
23	BB	66	A	P-O3'-C3'	8.71	130.15	119.70
22	DA	162	U	P-O3'-C3'	8.71	130.15	119.70
22	BA	1398	C	N1-C1'-C2'	-8.70	102.43	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	1560	G	P-O3'-C3'	-8.69	109.27	119.70
22	BA	645	C	P-O3'-C3'	8.68	130.12	119.70
22	BA	1675	C	P-O3'-C3'	-8.68	109.28	119.70
22	DA	1980	G	P-O3'-C3'	8.68	130.12	119.70
53	CA	1398	A	P-O3'-C3'	-8.67	109.30	119.70
22	BA	215	G	P-O3'-C3'	8.66	130.10	119.70
22	BA	2447	G	O4'-C1'-N9	8.66	115.13	108.20
21	AA	812	G	P-O3'-C3'	8.65	130.09	119.70
22	BA	1759	A	P-O3'-C3'	-8.65	109.32	119.70
53	CA	1452	C	P-O3'-C3'	8.64	130.07	119.70
53	CA	733	G	P-O3'-C3'	8.63	130.06	119.70
53	CA	173	U	O4'-C1'-N1	8.63	115.10	108.20
21	AA	1168	U	O4'-C1'-N1	8.62	115.09	108.20
22	BA	60	G	P-O3'-C3'	8.62	130.04	119.70
21	AA	1394	A	P-O3'-C3'	8.62	130.04	119.70
53	CA	874	G	P-O3'-C3'	-8.61	109.37	119.70
22	BA	166	U	P-O3'-C3'	-8.60	109.38	119.70
22	BA	2791	G	P-O3'-C3'	-8.60	109.38	119.70
22	DA	2629	U	P-O3'-C3'	8.60	130.02	119.70
53	CA	122	G	P-O3'-C3'	-8.60	109.38	119.70
22	DA	1565	C	P-O3'-C3'	8.60	130.02	119.70
22	DA	271	G	P-O3'-C3'	8.60	130.02	119.70
22	BA	1379	U	N1-C1'-C2'	-8.59	102.55	112.00
21	AA	512	U	P-O3'-C3'	-8.59	109.39	119.70
21	AA	968	A	P-O3'-C3'	8.59	130.01	119.70
22	DA	224	U	P-O3'-C3'	-8.58	109.40	119.70
22	BA	2733	A	N1-C6-N6	8.58	123.75	118.60
22	BA	2874	C	N1-C1'-C2'	-8.58	102.56	112.00
53	CA	374	A	P-O3'-C3'	-8.57	109.41	119.70
21	AA	913	A	P-O3'-C3'	8.57	129.99	119.70
22	BA	103	A	P-O3'-C3'	-8.57	109.41	119.70
21	AA	991	U	P-O3'-C3'	8.57	129.98	119.70
22	DA	2428	G	P-O3'-C3'	-8.57	109.42	119.70
22	BA	2451	A	C4-C5-C6	-8.56	112.72	117.00
22	BA	299	A	N7-C8-N9	8.56	118.08	113.80
21	AA	531	U	P-O3'-C3'	8.56	129.97	119.70
22	DA	589	U	O4'-C1'-N1	8.55	115.04	108.20
22	BA	858	G	C6-N1-C2	-8.55	119.97	125.10
21	AA	94	G	P-O3'-C3'	8.54	129.95	119.70
22	DA	2267	A	N3-C4-N9	8.54	134.23	127.40
22	BA	1249	U	N1-C1'-C2'	-8.54	102.61	112.00
22	BA	1848	A	P-O3'-C3'	-8.54	109.46	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	AA	109	A	P-O3'-C3'	8.53	129.94	119.70
22	DA	1965	C	N1-C1'-C2'	-8.53	102.62	112.00
22	BA	34	U	P-O3'-C3'	8.53	129.93	119.70
22	BA	196	A	P-O3'-C3'	8.52	129.92	119.70
22	BA	2296	U	P-O3'-C3'	8.51	129.91	119.70
22	DA	1954	G	P-O3'-C3'	8.51	129.91	119.70
21	AA	821	G	P-O3'-C3'	-8.51	109.49	119.70
22	DA	2061	G	P-O3'-C3'	8.51	129.91	119.70
22	BA	1996	C	P-O3'-C3'	8.50	129.90	119.70
54	DB	87	U	P-O3'-C3'	8.49	129.89	119.70
53	CA	1201	A	P-O3'-C3'	8.49	129.89	119.70
22	DA	1607	C	O4'-C1'-N1	-8.49	101.41	108.20
22	BA	527	C	P-O3'-C3'	8.48	129.88	119.70
22	BA	1324	G	P-O3'-C3'	8.48	129.88	119.70
53	CA	1297	G	P-O3'-C3'	8.48	129.87	119.70
22	BA	1732	C	P-O3'-C3'	8.47	129.87	119.70
22	DA	229	C	N1-C1'-C2'	-8.44	102.72	112.00
53	CA	1401	G	P-O3'-C3'	-8.43	109.58	119.70
21	AA	1046	A	O4'-C1'-N9	8.43	114.94	108.20
22	BA	1142	A	C2-N3-C4	-8.43	106.39	110.60
22	BA	1980	G	P-O3'-C3'	8.43	129.81	119.70
22	BA	2312	U	N1-C1'-C2'	-8.43	102.73	112.00
22	BA	310	A	P-O3'-C3'	8.42	129.81	119.70
22	BA	858	G	O4'-C1'-N9	8.40	114.92	108.20
22	DA	2603	G	P-O3'-C3'	-8.39	109.63	119.70
22	DA	2348	U	O4'-C1'-N1	8.38	114.91	108.20
53	CA	428	G	O4'-C1'-N9	8.38	114.90	108.20
53	CA	995	C	N1-C1'-C2'	-8.37	102.79	112.00
22	DA	2034	U	P-O3'-C3'	-8.37	109.66	119.70
22	BA	531	C	N1-C1'-C2'	8.37	124.88	114.00
22	DA	1047	G	P-O3'-C3'	8.36	129.74	119.70
21	AA	344	A	P-O3'-C3'	8.36	129.73	119.70
22	BA	299	A	C8-N9-C4	-8.36	102.46	105.80
22	BA	2259	U	N1-C1'-C2'	-8.36	102.81	112.00
22	DA	2143	C	P-O3'-C3'	8.36	129.73	119.70
21	AA	974	A	P-O3'-C3'	8.35	129.72	119.70
22	DA	1942	C	N1-C1'-C2'	-8.35	102.81	112.00
53	CA	87	C	N1-C1'-C2'	-8.35	102.82	112.00
21	AA	122	G	P-O3'-C3'	-8.35	109.69	119.70
53	CA	110	C	N1-C1'-C2'	-8.35	102.82	112.00
22	BA	2729	G	P-O3'-C3'	-8.34	109.69	119.70
22	BA	915	C	N1-C1'-C2'	-8.34	102.83	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	AA	279	A	P-O3'-C3'	8.33	129.70	119.70
22	DA	1345	C	N1-C1'-C2'	-8.33	102.84	112.00
22	BA	2021	C	P-O3'-C3'	8.33	129.69	119.70
21	AA	1507	A	P-O3'-C3'	-8.33	109.71	119.70
21	AA	891	U	N1-C1'-C2'	-8.32	102.85	112.00
21	AA	998	C	O4'-C1'-N1	8.31	114.85	108.20
22	BA	1348	C	C5-C4-N4	-8.31	114.38	120.20
22	BA	2321	U	N1-C1'-C2'	-8.31	102.86	112.00
22	BA	633	A	C6-C5-N7	-8.31	126.48	132.30
22	BA	1329	U	P-O3'-C3'	8.31	129.67	119.70
53	CA	564	C	P-O3'-C3'	-8.30	109.74	119.70
53	CA	1380	U	P-O3'-C3'	8.30	129.66	119.70
22	BA	2645	G	O4'-C1'-N9	8.30	114.84	108.20
53	CA	1528	U	O4'-C1'-N1	8.30	114.84	108.20
22	DA	2874	C	P-O3'-C3'	-8.29	109.75	119.70
22	BA	2860	A	C6-C5-N7	-8.29	126.50	132.30
22	BA	858	G	N3-C4-C5	-8.29	124.45	128.60
22	DA	2314	A	P-O3'-C3'	-8.29	109.75	119.70
21	AA	1332	A	P-O3'-C3'	-8.28	109.76	119.70
22	BA	2307	G	P-O3'-C3'	8.28	129.64	119.70
21	AA	1159	U	P-O3'-C3'	8.28	129.63	119.70
22	BA	2060	A	P-O3'-C3'	8.28	129.63	119.70
22	DA	1780	A	P-O3'-C3'	8.28	129.63	119.70
21	AA	966	G	P-O3'-C3'	-8.27	109.77	119.70
22	BA	860	U	N1-C1'-C2'	-8.27	102.90	112.00
22	BA	1698	A	P-O3'-C3'	8.27	129.62	119.70
53	CA	1395	C	N1-C1'-C2'	-8.27	102.91	112.00
22	BA	2289	G	P-O3'-C3'	-8.26	109.78	119.70
22	DA	2259	U	N1-C1'-C2'	-8.26	102.91	112.00
22	BA	1865	U	C2-N3-C4	-8.26	122.05	127.00
21	AA	369	G	P-O3'-C3'	-8.25	109.80	119.70
22	BA	2425	A	O4'-C1'-N9	8.24	114.79	108.20
22	BA	858	G	N9-C4-C5	8.23	108.69	105.40
21	AA	517	G	P-O3'-C3'	8.23	129.58	119.70
22	DA	302	C	O4'-C1'-N1	8.23	114.79	108.20
53	CA	1161	C	N1-C1'-C2'	-8.22	102.95	112.00
22	DA	2752	C	O4'-C1'-N1	8.22	114.78	108.20
21	AA	566	G	P-O3'-C3'	8.22	129.56	119.70
21	AA	1498	U	P-O3'-C3'	8.22	129.57	119.70
23	BB	44	G	P-O3'-C3'	8.21	129.56	119.70
22	BA	1022	G	N9-C4-C5	8.21	108.69	105.40
21	AA	1181	G	P-O3'-C3'	8.21	129.55	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	2603	G	P-O3'-C3'	-8.21	109.85	119.70
53	CA	566	G	P-O3'-C3'	8.21	129.55	119.70
22	BA	442	G	P-O3'-C3'	8.21	129.55	119.70
22	BA	74	A	P-O3'-C3'	8.20	129.54	119.70
22	BA	790	U	O4'-C1'-N1	8.20	114.76	108.20
53	CA	575	G	C4-N9-C1'	-8.20	115.84	126.50
22	DA	2656	U	N1-C1'-C2'	-8.20	102.98	112.00
22	BA	1265	A	P-O3'-C3'	8.20	129.54	119.70
23	BB	67	G	P-O3'-C3'	-8.20	109.87	119.70
53	CA	537	G	P-O3'-C3'	-8.20	109.86	119.70
22	DA	424	G	P-O3'-C3'	-8.19	109.87	119.70
22	DA	1060	U	N3-C4-O4	8.18	125.13	119.40
21	AA	704	A	P-O3'-C3'	-8.18	109.89	119.70
22	BA	266	G	P-O3'-C3'	-8.17	109.90	119.70
21	AA	816	A	P-O3'-C3'	-8.16	109.91	119.70
21	AA	792	A	O4'-C1'-N9	8.16	114.73	108.20
22	BA	2836	U	N1-C1'-C2'	-8.16	103.03	112.00
22	DA	1931	U	P-O3'-C3'	-8.15	109.92	119.70
22	BA	2857	G	N9-C4-C5	-8.15	102.14	105.40
22	BA	1142	A	C8-N9-C1'	8.14	142.36	127.70
21	AA	1432	G	P-O3'-C3'	8.14	129.46	119.70
21	AA	169	C	N3-C4-N4	-8.13	112.31	118.00
21	AA	266	G	P-O3'-C3'	8.13	129.46	119.70
22	BA	800	A	C6-N1-C2	8.13	123.48	118.60
21	AA	870	U	P-O3'-C3'	8.12	129.45	119.70
22	DA	2149	U	N1-C1'-C2'	-8.12	103.07	112.00
22	DA	2334	U	P-O3'-C3'	8.12	129.44	119.70
22	BA	588	U	N1-C1'-C2'	-8.11	103.08	112.00
22	BA	2605	U	C5-C4-O4	8.11	130.77	125.90
53	CA	1383	C	P-O3'-C3'	-8.11	109.97	119.70
21	AA	934	C	P-O3'-C3'	8.10	129.42	119.70
22	DA	2406	A	P-O3'-C3'	8.10	129.42	119.70
22	BA	571	U	O4'-C1'-N1	8.10	114.68	108.20
22	BA	573	U	P-O3'-C3'	8.09	129.41	119.70
23	BB	87	U	O4'-C1'-N1	8.09	114.67	108.20
22	BA	919	U	C6-N1-C2	-8.08	116.15	121.00
22	BA	2654	A	P-O3'-C3'	8.08	129.40	119.70
53	CA	1215	G	P-O3'-C3'	-8.08	110.00	119.70
22	DA	1034	G	P-O3'-C3'	-8.08	110.00	119.70
21	AA	1401	G	P-O3'-C3'	-8.07	110.02	119.70
22	BA	2682	A	P-O3'-C3'	-8.07	110.02	119.70
22	DA	2668	G	P-O3'-C3'	-8.07	110.02	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	443	A	P-O5'-C5'	-8.06	108.01	120.90
22	DA	672	C	P-O3'-C3'	-8.06	110.03	119.70
22	DA	1265	A	P-O3'-C3'	8.06	129.37	119.70
53	CA	1053	G	P-O3'-C3'	8.05	129.36	119.70
22	BA	1682	G	P-O3'-C3'	-8.04	110.06	119.70
22	BA	906	U	O4'-C1'-N1	8.04	114.63	108.20
22	BA	2866	U	P-O3'-C3'	8.03	129.34	119.70
53	CA	931	C	O4'-C1'-N1	8.03	114.62	108.20
21	AA	275	G	P-O3'-C3'	-8.02	110.07	119.70
22	BA	858	G	C8-N9-C4	-8.02	103.19	106.40
22	BA	1693	U	P-O3'-C3'	8.02	129.32	119.70
22	DA	2447	G	P-O3'-C3'	8.02	129.32	119.70
21	AA	73	C	N1-C1'-C2'	-8.02	103.18	112.00
22	BA	630	G	C6-C5-N7	-8.01	125.59	130.40
53	CA	451	A	P-O3'-C3'	8.01	129.31	119.70
22	DA	1556	C	O4'-C1'-N1	8.01	114.61	108.20
53	CA	460	A	P-O3'-C3'	-8.00	110.09	119.70
21	AA	1228	C	P-O3'-C3'	-8.00	110.10	119.70
22	BA	662	G	P-O3'-C3'	-8.00	110.10	119.70
22	DA	1962	C	P-O3'-C3'	8.00	129.29	119.70
22	DA	421	C	P-O3'-C3'	7.99	129.29	119.70
22	BA	752	A	C5-N7-C8	-7.99	99.91	103.90
22	BA	91	A	P-O3'-C3'	7.99	129.28	119.70
21	AA	595	A	P-O3'-C3'	7.98	129.28	119.70
21	AA	1183	U	N1-C1'-C2'	-7.98	103.22	112.00
22	DA	575	A	P-O3'-C3'	-7.98	110.12	119.70
22	BA	1963	U	N1-C1'-C2'	-7.98	103.22	112.00
22	DA	2267	A	N9-C4-C5	-7.98	102.61	105.80
22	DA	53	A	P-O3'-C3'	-7.97	110.14	119.70
21	AA	752	G	P-O3'-C3'	7.97	129.26	119.70
21	AA	1200	C	P-O3'-C3'	7.97	129.26	119.70
53	CA	1326	U	O4'-C1'-N1	7.97	114.57	108.20
22	BA	2572	A	P-O3'-C3'	7.96	129.26	119.70
23	BB	40	U	P-O3'-C3'	7.96	129.25	119.70
22	DA	250	G	P-O3'-C3'	-7.96	110.15	119.70
22	DA	1758	U	N1-C1'-C2'	7.96	124.35	114.00
23	BB	15	A	P-O5'-C5'	-7.95	108.17	120.90
53	CA	1502	A	P-O3'-C3'	7.95	129.24	119.70
53	CA	239	U	N1-C1'-C2'	-7.95	103.26	112.00
21	AA	245	U	N1-C1'-C2'	-7.95	103.26	112.00
22	BA	2629	U	P-O3'-C3'	7.95	129.24	119.70
22	DA	2267	A	C4-N9-C1'	7.95	140.60	126.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	DA	1141	U	P-O3'-C3'	7.94	129.23	119.70
22	BA	1859	U	P-O3'-C3'	-7.94	110.17	119.70
22	DA	1019	U	O4'-C1'-N1	7.94	114.55	108.20
22	BA	764	A	O4'-C1'-N9	7.93	114.54	108.20
22	DA	1136	G	P-O3'-C3'	-7.92	110.19	119.70
22	DA	1554	U	P-O3'-C3'	7.92	129.21	119.70
22	BA	1499	C	P-O3'-C3'	-7.92	110.20	119.70
21	AA	559	A	P-O3'-C3'	7.91	129.20	119.70
21	AA	1161	C	N1-C1'-C2'	-7.91	103.30	112.00
21	AA	1380	U	P-O3'-C3'	7.91	129.19	119.70
22	BA	377	G	P-O3'-C3'	-7.91	110.21	119.70
21	AA	547	A	O4'-C1'-N9	7.90	114.52	108.20
22	BA	1326	U	N1-C1'-C2'	-7.90	103.31	112.00
53	CA	29	U	O4'-C1'-N1	7.90	114.52	108.20
21	AA	559	A	O4'-C1'-N9	7.90	114.52	108.20
22	BA	1734	G	P-O3'-C3'	-7.90	110.22	119.70
22	DA	739	A	P-O3'-C3'	7.90	129.18	119.70
22	DA	2238	G	P-O3'-C3'	7.89	129.17	119.70
21	AA	85	U	N1-C1'-C2'	7.89	124.26	114.00
53	CA	1308	U	O4'-C1'-N1	7.89	114.51	108.20
53	CA	369	G	P-O3'-C3'	-7.89	110.23	119.70
22	DA	1636	U	N1-C1'-C2'	-7.89	103.32	112.00
22	BA	2326	C	P-O3'-C3'	7.88	129.16	119.70
53	CA	95	C	N1-C1'-C2'	-7.88	103.33	112.00
22	BA	1856	U	O4'-C1'-N1	7.88	114.51	108.20
21	AA	91	U	C2-N1-C1'	7.88	127.15	117.70
22	DA	2585	U	P-O3'-C3'	7.87	129.15	119.70
53	CA	429	U	P-O3'-C3'	7.87	129.15	119.70
21	AA	1345	U	P-O3'-C3'	7.87	129.14	119.70
22	BA	1240	U	O4'-C1'-N1	-7.87	101.90	108.20
22	BA	100	U	P-O3'-C3'	7.87	129.14	119.70
22	DA	2447	G	C5-C6-N1	7.86	115.43	111.50
22	DA	2043	C	O4'-C1'-N1	-7.85	101.92	108.20
22	BA	454	A	P-O3'-C3'	7.85	129.12	119.70
53	CA	802	A	P-O3'-C3'	7.85	129.12	119.70
22	BA	1034	G	P-O3'-C3'	-7.85	110.28	119.70
21	AA	511	C	P-O3'-C3'	7.84	129.11	119.70
21	AA	306	A	P-O3'-C3'	-7.84	110.29	119.70
22	BA	163	C	O4'-C1'-N1	7.84	114.47	108.20
54	DB	56	G	P-O3'-C3'	7.84	129.10	119.70
22	DA	2267	A	C8-N9-C1'	-7.83	113.60	127.70
22	DA	411	G	P-O3'-C3'	7.83	129.10	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	DA	2267	A	N9-C1'-C2'	-7.83	103.38	112.00
22	BA	1416	G	P-O3'-C3'	7.83	129.10	119.70
53	CA	884	U	P-O3'-C3'	7.83	129.09	119.70
53	CA	1498	U	P-O3'-C3'	7.83	129.09	119.70
53	CA	238	A	P-O3'-C3'	7.82	129.09	119.70
22	DA	231	A	P-O3'-C3'	-7.82	110.32	119.70
22	DA	2024	G	P-O3'-C3'	-7.82	110.31	119.70
22	BA	2391	G	O4'-C1'-N9	7.82	114.46	108.20
22	DA	122	G	P-O3'-C3'	-7.82	110.32	119.70
22	BA	2575	C	O4'-C1'-N1	7.81	114.45	108.20
22	BA	1565	C	P-O3'-C3'	7.81	129.07	119.70
21	AA	47	C	P-O3'-C3'	7.80	129.06	119.70
22	DA	451	U	O4'-C1'-N1	7.80	114.44	108.20
22	DA	754	U	N1-C1'-C2'	-7.80	103.42	112.00
22	BA	2575	C	C5-C4-N4	-7.79	114.74	120.20
22	BA	1681	G	P-O3'-C3'	7.79	129.05	119.70
22	BA	2801	G	P-O5'-C5'	-7.79	108.43	120.90
21	AA	1055	A	P-O3'-C3'	-7.79	110.36	119.70
22	DA	2493	U	N1-C1'-C2'	-7.78	103.44	112.00
22	BA	200	U	P-O5'-C5'	-7.78	108.46	120.90
21	AA	268	U	N1-C1'-C2'	-7.78	103.45	112.00
22	BA	913	U	P-O3'-C3'	7.78	129.03	119.70
22	BA	2199	A	P-O3'-C3'	-7.78	110.37	119.70
22	DA	2403	C	O4'-C1'-N1	7.78	114.42	108.20
22	BA	2197	U	P-O3'-C3'	7.77	129.03	119.70
21	AA	1433	A	P-O3'-C3'	-7.77	110.37	119.70
53	CA	1381	U	P-O3'-C3'	-7.77	110.37	119.70
22	BA	200	U	N1-C1'-C2'	-7.77	103.45	112.00
22	DA	861	A	P-O3'-C3'	-7.77	110.38	119.70
53	CA	275	G	P-O3'-C3'	-7.77	110.38	119.70
21	AA	724	G	P-O3'-C3'	-7.76	110.39	119.70
53	CA	1152	A	P-O3'-C3'	-7.76	110.39	119.70
22	BA	1370	C	P-O3'-C3'	7.76	129.01	119.70
22	DA	2850	A	P-O3'-C3'	-7.75	110.39	119.70
22	BA	233	A	P-O3'-C3'	-7.75	110.40	119.70
22	BA	1311	G	P-O3'-C3'	7.75	129.00	119.70
22	BA	752	A	C4-C5-N7	7.75	114.58	110.70
22	BA	2149	U	N1-C1'-C2'	-7.75	103.48	112.00
22	DA	669	G	P-O3'-C3'	7.75	129.00	119.70
21	AA	686	U	P-O3'-C3'	7.74	128.99	119.70
22	DA	1008	A	P-O3'-C3'	7.74	128.99	119.70
22	BA	2501	C	N1-C1'-C2'	7.74	124.06	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	CA	547	A	O4'-C1'-N9	7.74	114.39	108.20
53	CA	1055	A	P-O3'-C3'	-7.74	110.41	119.70
21	AA	577	G	P-O3'-C3'	-7.74	110.42	119.70
21	AA	411	A	P-O3'-C3'	7.74	128.98	119.70
21	AA	90	C	N1-C1'-C2'	-7.73	103.49	112.00
22	DA	510	C	N1-C1'-C2'	-7.73	103.50	112.00
22	BA	1606	C	P-O3'-C3'	7.73	128.97	119.70
22	BA	422	A	P-O3'-C3'	-7.72	110.43	119.70
53	CA	253	A	P-O3'-C3'	-7.72	110.43	119.70
22	DA	1013	C	P-O3'-C3'	-7.72	110.43	119.70
22	BA	2250	G	O4'-C1'-N9	-7.72	102.03	108.20
22	DA	1739	A	P-O3'-C3'	-7.72	110.44	119.70
21	AA	815	A	P-O3'-C3'	7.71	128.96	119.70
21	AA	60	A	P-O3'-C3'	7.71	128.95	119.70
53	CA	70	U	O4'-C1'-N1	7.71	114.37	108.20
22	DA	2727	A	P-O3'-C3'	-7.71	110.45	119.70
21	AA	175	C	P-O3'-C3'	-7.71	110.45	119.70
22	BA	653	U	P-O3'-C3'	7.71	128.95	119.70
22	BA	2589	A	C5-C6-N6	7.71	129.86	123.70
22	BA	2656	U	N1-C1'-C2'	-7.71	103.52	112.00
22	DA	1931	U	N1-C1'-C2'	-7.71	103.52	112.00
22	BA	2383	G	P-O3'-C3'	-7.71	110.45	119.70
22	DA	2210	U	P-O3'-C3'	7.70	128.94	119.70
22	BA	204	A	O4'-C1'-N9	7.70	114.36	108.20
22	BA	1379	U	P-O3'-C3'	-7.70	110.46	119.70
22	BA	2052	A	N9-C1'-C2'	-7.70	103.53	112.00
53	CA	495	A	P-O3'-C3'	7.70	128.94	119.70
53	CA	962	C	P-O3'-C3'	-7.70	110.47	119.70
22	BA	1956	U	N1-C1'-C2'	-7.69	103.54	112.00
22	DA	1427	A	P-O3'-C3'	7.69	128.93	119.70
22	BA	794	A	P-O3'-C3'	-7.69	110.47	119.70
22	BA	2033	A	C5-C6-N1	-7.69	113.86	117.70
22	DA	1971	U	N1-C1'-C2'	-7.68	103.55	112.00
22	DA	386	G	P-O3'-C3'	7.68	128.92	119.70
21	AA	1094	G	P-O3'-C3'	7.67	128.91	119.70
53	CA	1499	A	P-O3'-C3'	-7.67	110.49	119.70
22	DA	2757	A	P-O3'-C3'	-7.67	110.49	119.70
22	DA	1606	C	P-O3'-C3'	7.67	128.91	119.70
53	CA	372	C	O4'-C1'-N1	7.67	114.34	108.20
53	CA	331	G	P-O3'-C3'	-7.67	110.50	119.70
22	DA	2312	U	P-O3'-C3'	-7.67	110.50	119.70
22	DA	1613	G	P-O3'-C3'	-7.66	110.50	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	2715	C	P-O3'-C3'	-7.66	110.51	119.70
22	DA	1430	G	P-O3'-C3'	-7.66	110.51	119.70
22	BA	671	C	N1-C1'-C2'	-7.66	103.58	112.00
53	CA	184	G	P-O3'-C3'	-7.65	110.52	119.70
22	DA	958	U	N1-C1'-C2'	-7.65	103.59	112.00
53	CA	1397	C	N1-C1'-C2'	-7.64	103.59	112.00
21	AA	316	C	N1-C1'-C2'	-7.64	103.59	112.00
21	AA	1066	C	P-O3'-C3'	-7.64	110.53	119.70
22	DA	196	A	P-O3'-C3'	7.64	128.87	119.70
22	DA	1522	A	P-O3'-C3'	7.64	128.87	119.70
21	AA	485	U	P-O3'-C3'	7.64	128.87	119.70
21	AA	1168	U	P-O3'-C3'	7.63	128.86	119.70
53	CA	448	A	O4'-C1'-N9	7.63	114.31	108.20
22	BA	1286	A	P-O3'-C3'	7.63	128.86	119.70
22	BA	1288	G	O4'-C1'-N9	7.63	114.31	108.20
21	AA	984	C	N1-C1'-C2'	-7.63	103.61	112.00
22	DA	2251	G	P-O3'-C3'	-7.63	110.55	119.70
22	DA	752	A	O4'-C1'-N9	7.62	114.30	108.20
21	AA	1213	A	P-O3'-C3'	7.62	128.84	119.70
22	BA	858	G	N1-C6-O6	-7.62	115.33	119.90
22	BA	2755	C	O4'-C1'-N1	-7.62	102.10	108.20
21	AA	95	C	P-O3'-C3'	-7.62	110.56	119.70
22	BA	2504	U	P-O3'-C3'	-7.62	110.56	119.70
53	CA	248	C	O4'-C1'-N1	7.62	114.30	108.20
21	AA	1324	A	P-O3'-C3'	-7.61	110.56	119.70
22	BA	137	U	O4'-C1'-N1	-7.61	102.11	108.20
22	BA	1828	G	P-O3'-C3'	7.61	128.83	119.70
53	CA	52	C	N1-C1'-C2'	-7.61	103.63	112.00
22	DA	2544	G	P-O3'-C3'	-7.61	110.57	119.70
21	AA	366	A	P-O3'-C3'	7.60	128.82	119.70
22	BA	1816	C	N1-C1'-C2'	-7.59	103.65	112.00
22	DA	1615	C	P-O3'-C3'	7.59	128.81	119.70
22	DA	2879	A	P-O3'-C3'	7.59	128.81	119.70
21	AA	214	C	N1-C1'-C2'	-7.58	103.66	112.00
22	BA	996	A	P-O3'-C3'	-7.58	110.60	119.70
22	BA	1348	C	C6-N1-C2	7.58	123.33	120.30
22	BA	2092	U	P-O3'-C3'	7.58	128.80	119.70
53	CA	1282	C	N1-C1'-C2'	-7.58	103.66	112.00
21	AA	1349	A	P-O3'-C3'	-7.58	110.61	119.70
22	BA	1020	A	P-O3'-C3'	7.57	128.79	119.70
21	AA	1229	A	P-O3'-C3'	-7.57	110.62	119.70
22	DA	1838	C	P-O3'-C3'	7.57	128.78	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	AA	1461	G	C5-C6-O6	7.57	133.14	128.60
22	DA	2572	A	P-O3'-C3'	7.57	128.78	119.70
22	BA	1060	U	N3-C4-O4	7.56	124.69	119.40
22	DA	1255	U	N1-C1'-C2'	-7.55	103.69	112.00
22	DA	1993	U	N1-C1'-C2'	-7.55	103.69	112.00
21	AA	1502	A	P-O3'-C3'	7.55	128.76	119.70
21	AA	91	U	N1-C1'-C2'	-7.55	103.69	112.00
53	CA	508	U	P-O3'-C3'	7.55	128.76	119.70
22	DA	1290	C	N1-C1'-C2'	-7.55	103.70	112.00
21	AA	857	C	O4'-C1'-N1	7.55	114.24	108.20
22	DA	913	U	P-O3'-C3'	7.54	128.75	119.70
22	BA	1273	U	P-O5'-C5'	-7.54	108.83	120.90
22	BA	1971	U	P-O3'-C3'	-7.54	110.65	119.70
22	BA	2832	U	P-O3'-C3'	7.54	128.75	119.70
21	AA	430	A	P-O3'-C3'	-7.54	110.65	119.70
22	DA	2860	A	N1-C6-N6	7.54	123.12	118.60
22	BA	1493	C	P-O3'-C3'	7.54	128.74	119.70
22	DA	991	C	P-O3'-C3'	-7.54	110.66	119.70
53	CA	643	C	P-O3'-C3'	-7.54	110.66	119.70
53	CA	995	C	P-O3'-C3'	-7.53	110.66	119.70
53	CA	1283	U	P-O3'-C3'	-7.53	110.66	119.70
22	BA	858	G	C4-C5-N7	-7.53	107.79	110.80
22	BA	2499	C	N1-C2-O2	-7.53	114.38	118.90
22	BA	162	U	P-O3'-C3'	7.52	128.73	119.70
22	DA	1636	U	P-O3'-C3'	-7.52	110.68	119.70
22	BA	2566	A	P-O3'-C3'	7.51	128.72	119.70
22	BA	1398	C	P-O3'-C3'	-7.51	110.69	119.70
22	BA	2346	A	P-O3'-C3'	7.51	128.72	119.70
53	CA	94	G	P-O3'-C3'	7.51	128.72	119.70
22	BA	791	C	O4'-C1'-N1	7.50	114.20	108.20
21	AA	78	A	C6-N1-C2	-7.50	114.10	118.60
22	BA	630	G	C4-C5-N7	7.50	113.80	110.80
21	AA	1124	G	P-O3'-C3'	7.50	128.70	119.70
22	BA	164	C	P-O3'-C3'	-7.50	110.70	119.70
22	BA	395	U	N1-C1'-C2'	7.50	123.75	114.00
21	AA	717	U	N1-C1'-C2'	7.50	123.75	114.00
22	BA	2556	C	O4'-C1'-N1	7.50	114.20	108.20
22	BA	2800	A	O3'-P-O5'	-7.50	89.76	104.00
22	DA	1560	G	P-O3'-C3'	-7.49	110.71	119.70
22	BA	512	G	P-O3'-C3'	7.49	128.69	119.70
53	CA	974	A	P-O3'-C3'	7.49	128.69	119.70
22	DA	2147	A	P-O3'-C3'	-7.49	110.71	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	2045	C	P-O3'-C3'	-7.49	110.72	119.70
53	CA	1507	A	P-O3'-C3'	-7.49	110.72	119.70
53	CA	1161	C	P-O3'-C3'	-7.48	110.72	119.70
22	DA	2402	U	P-O3'-C3'	-7.48	110.72	119.70
22	DA	1475	G	P-O3'-C3'	7.48	128.68	119.70
22	BA	2319	G	O4'-C1'-N9	7.48	114.18	108.20
22	DA	831	G	P-O3'-C3'	-7.47	110.73	119.70
22	BA	1943	U	P-O3'-C3'	7.47	128.66	119.70
22	DA	1275	A	P-O3'-C3'	7.47	128.66	119.70
22	BA	2511	U	N3-C4-C5	7.46	119.08	114.60
22	BA	2226	C	P-O5'-C5'	-7.45	108.97	120.90
22	DA	116	C	O4'-C1'-N1	7.45	114.16	108.20
22	DA	2286	G	P-O3'-C3'	7.45	128.64	119.70
22	DA	1919	A	P-O3'-C3'	-7.45	110.76	119.70
22	DA	1020	A	P-O3'-C3'	7.45	128.64	119.70
21	AA	794	A	P-O3'-C3'	-7.45	110.76	119.70
21	AA	282	A	P-O3'-C3'	-7.44	110.77	119.70
22	BA	391	A	P-O3'-C3'	-7.44	110.77	119.70
21	AA	1258	G	P-O3'-C3'	-7.44	110.77	119.70
22	DA	846	U	O4'-C1'-N1	7.43	114.15	108.20
21	AA	654	G	P-O3'-C3'	-7.43	110.78	119.70
54	DB	40	U	P-O3'-C3'	7.43	128.61	119.70
22	DA	2282	G	P-O3'-C3'	7.42	128.61	119.70
22	BA	858	G	C5-C6-N1	7.42	115.21	111.50
22	BA	396	G	P-O3'-C3'	-7.42	110.80	119.70
22	DA	807	U	P-O3'-C3'	-7.41	110.81	119.70
53	CA	1383	C	O4'-C1'-N1	7.41	114.13	108.20
21	AA	960	U	N1-C1'-C2'	7.41	123.63	114.00
53	CA	595	A	P-O3'-C3'	7.41	128.59	119.70
22	BA	974	G	C5-N7-C8	-7.41	100.60	104.30
22	BA	70	G	P-O3'-C3'	7.40	128.58	119.70
22	DA	1398	C	P-O3'-C3'	-7.39	110.83	119.70
22	BA	1019	U	N1-C2-O2	-7.39	117.63	122.80
22	DA	533	G	P-O3'-C3'	-7.39	110.83	119.70
22	DA	1915	U	N1-C1'-C2'	-7.39	103.87	112.00
22	DA	1817	G	P-O3'-C3'	-7.39	110.83	119.70
54	DB	90	C	P-O3'-C3'	-7.39	110.83	119.70
53	CA	828	U	O4'-C1'-N1	7.38	114.11	108.20
21	AA	1362	A	P-O3'-C3'	7.38	128.56	119.70
22	DA	2667	C	N1-C1'-C2'	-7.38	103.88	112.00
22	BA	1034	G	P-O5'-C5'	-7.38	109.09	120.90
22	BA	2194	U	P-O3'-C3'	-7.38	110.85	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	677	A	C5-C6-N6	-7.37	117.80	123.70
53	CA	641	U	P-O3'-C3'	7.37	128.55	119.70
22	DA	2267	A	C4-C5-C6	7.37	120.68	117.00
22	BA	826	U	C5-C4-O4	-7.36	121.48	125.90
21	AA	81	A	P-O3'-C3'	7.36	128.53	119.70
22	BA	783	A	C2-N3-C4	-7.36	106.92	110.60
22	BA	1602	U	P-O3'-C3'	7.36	128.53	119.70
53	CA	1399	C	P-O3'-C3'	7.36	128.53	119.70
22	DA	530	G	P-O3'-C3'	-7.36	110.87	119.70
22	BA	2391	G	P-O3'-C3'	7.35	128.52	119.70
21	AA	686	U	O4'-C1'-N1	7.35	114.08	108.20
22	BA	2033	A	C6-N1-C2	7.35	123.01	118.60
53	CA	486	U	N1-C1'-C2'	-7.35	103.92	112.00
22	DA	2620	C	O4'-C1'-N1	-7.35	102.32	108.20
22	DA	2728	U	O4'-C1'-N1	7.35	114.08	108.20
22	BA	1634	A	P-O3'-C3'	7.35	128.51	119.70
21	AA	935	A	N9-C1'-C2'	-7.34	103.92	112.00
21	AA	1224	U	C2-N3-C4	-7.34	122.59	127.00
53	CA	575	G	C8-N9-C1'	7.34	136.54	127.00
22	DA	865	C	P-O3'-C3'	7.34	128.51	119.70
22	BA	142	A	P-O3'-C3'	-7.34	110.89	119.70
22	BA	1784	A	P-O3'-C3'	7.34	128.50	119.70
53	CA	381	C	P-O3'-C3'	7.34	128.50	119.70
53	CA	116	A	P-O3'-C3'	-7.33	110.90	119.70
53	CA	210	C	P-O3'-C3'	7.33	128.50	119.70
22	BA	482	A	P-O3'-C3'	-7.33	110.90	119.70
22	DA	784	G	O4'-C1'-N9	7.33	114.07	108.20
22	DA	143	C	N1-C1'-C2'	-7.33	103.94	112.00
22	BA	645	C	N1-C1'-C2'	7.33	123.52	114.00
53	CA	47	C	P-O3'-C3'	7.32	128.49	119.70
22	DA	1511	G	P-O3'-C3'	-7.32	110.91	119.70
22	DA	1460	U	P-O3'-C3'	7.32	128.48	119.70
22	DA	790	U	O4'-C1'-N1	7.32	114.05	108.20
21	AA	1278	G	P-O3'-C3'	7.32	128.48	119.70
22	DA	1272	A	P-O3'-C3'	7.32	128.48	119.70
22	BA	739	A	P-O3'-C3'	7.31	128.47	119.70
22	DA	1304	A	P-O3'-C3'	-7.31	110.93	119.70
22	BA	2860	A	C5-C6-N1	-7.31	114.05	117.70
53	CA	497	G	P-O3'-C3'	-7.31	110.93	119.70
22	BA	783	A	C6-C5-N7	-7.31	127.19	132.30
22	DA	445	C	N1-C1'-C2'	-7.31	103.96	112.00
22	BA	2321	U	P-O3'-C3'	-7.30	110.93	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	302	C	O4'-C1'-N1	7.30	114.04	108.20
53	CA	1285	A	P-O3'-C3'	7.30	128.46	119.70
53	CA	1282	C	P-O3'-C3'	-7.30	110.94	119.70
22	BA	205	G	O4'-C1'-N9	7.29	114.04	108.20
22	DA	1079	C	N1-C1'-C2'	-7.29	103.98	112.00
22	BA	528	A	P-O3'-C3'	-7.29	110.95	119.70
22	BA	1619	G	P-O3'-C3'	-7.29	110.95	119.70
22	BA	1865	U	P-O3'-C3'	7.29	128.44	119.70
23	BB	24	G	P-O3'-C3'	7.29	128.44	119.70
21	AA	438	U	O4'-C1'-N1	7.28	114.03	108.20
53	CA	84	U	O4'-C1'-N1	7.28	114.03	108.20
22	BA	2638	G	P-O3'-C3'	7.28	128.44	119.70
21	AA	717	U	P-O3'-C3'	7.27	128.43	119.70
21	AA	452	A	P-O3'-C3'	-7.27	110.97	119.70
22	BA	1568	G	P-O3'-C3'	-7.27	110.97	119.70
22	DA	334	C	O4'-C1'-N1	7.27	114.02	108.20
21	AA	429	U	P-O3'-C3'	7.27	128.42	119.70
21	AA	701	U	P-O3'-C3'	7.26	128.42	119.70
22	BA	1289	C	P-O3'-C3'	-7.26	110.98	119.70
22	DA	687	C	N1-C1'-C2'	-7.26	104.01	112.00
22	BA	1779	U	C5-C6-N1	-7.26	119.07	122.70
22	BA	2681	C	P-O3'-C3'	7.26	128.41	119.70
22	DA	2638	G	P-O3'-C3'	7.26	128.41	119.70
22	BA	1758	U	N1-C1'-C2'	7.26	123.44	114.00
22	DA	2408	U	N1-C1'-C2'	-7.26	104.02	112.00
21	AA	78	A	C5-C6-N6	-7.25	117.90	123.70
21	AA	534	U	P-O3'-C3'	-7.25	110.99	119.70
22	DA	2267	A	C6-N1-C2	-7.25	114.25	118.60
22	BA	1417	C	P-O3'-C3'	-7.25	111.00	119.70
53	CA	9	G	P-O3'-C3'	-7.25	111.00	119.70
53	CA	794	A	P-O3'-C3'	-7.25	111.00	119.70
22	BA	1289	C	P-O5'-C5'	-7.24	109.31	120.90
22	BA	1072	C	N1-C1'-C2'	-7.24	104.04	112.00
21	AA	1440	U	O4'-C1'-N1	7.22	113.98	108.20
54	DB	24	G	P-O3'-C3'	7.22	128.37	119.70
22	BA	1693	U	N1-C1'-C2'	7.22	123.38	114.00
21	AA	175	C	O4'-C1'-N1	7.21	113.97	108.20
53	CA	131	A	P-O3'-C3'	-7.21	111.05	119.70
22	BA	385	C	O4'-C1'-N1	-7.20	102.44	108.20
22	BA	1231	U	N1-C2-O2	-7.20	117.76	122.80
22	DA	963	U	N1-C1'-C2'	-7.20	104.08	112.00
22	BA	1838	C	P-O3'-C3'	7.20	128.34	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	2250	G	C5-N7-C8	-7.19	100.70	104.30
21	AA	252	U	N1-C1'-C2'	-7.19	104.09	112.00
22	DA	1716	U	N1-C1'-C2'	-7.19	104.09	112.00
53	CA	81	A	O4'-C1'-N9	7.18	113.95	108.20
22	DA	976	G	P-O3'-C3'	-7.18	111.08	119.70
53	CA	429	U	O4'-C1'-N1	7.18	113.94	108.20
22	BA	542	C	O4'-C1'-N1	7.17	113.94	108.20
22	BA	2857	G	C6-C5-N7	-7.17	126.10	130.40
21	AA	467	U	O4'-C1'-N1	7.17	113.94	108.20
53	CA	652	U	P-O3'-C3'	7.17	128.30	119.70
21	AA	194	C	O4'-C1'-N1	7.17	113.93	108.20
22	BA	2459	A	P-O3'-C3'	-7.17	111.10	119.70
22	BA	1011	G	P-O3'-C3'	7.17	128.30	119.70
53	CA	755	G	P-O3'-C3'	-7.16	111.11	119.70
21	AA	1101	A	P-O3'-C3'	7.16	128.29	119.70
53	CA	251	G	P-O3'-C3'	7.15	128.28	119.70
22	BA	746	U	N1-C1'-C2'	7.15	123.30	114.00
21	AA	1323	G	P-O3'-C3'	-7.15	111.12	119.70
21	AA	1145	A	P-O3'-C3'	7.15	128.28	119.70
22	BA	303	G	P-O3'-C3'	-7.15	111.12	119.70
53	CA	30	U	O4'-C1'-N1	7.15	113.92	108.20
22	BA	1048	A	P-O3'-C3'	-7.14	111.13	119.70
22	BA	2451	A	C5-C6-N1	7.14	121.27	117.70
53	CA	13	U	P-O3'-C3'	7.14	128.27	119.70
22	DA	232	G	P-O3'-C3'	7.14	128.27	119.70
22	DA	404	A	P-O3'-C3'	7.13	128.26	119.70
22	DA	2725	A	P-O3'-C3'	7.13	128.26	119.70
22	DA	335	C	O4'-C1'-N1	7.12	113.90	108.20
22	DA	1092	C	O4'-C1'-N1	7.12	113.90	108.20
21	AA	331	G	P-O3'-C3'	-7.12	111.16	119.70
22	BA	1936	A	P-O3'-C3'	7.12	128.24	119.70
22	BA	406	G	P-O3'-C3'	-7.11	111.16	119.70
53	CA	218	U	O4'-C1'-N1	7.11	113.89	108.20
23	BB	67	G	P-O5'-C5'	-7.11	109.52	120.90
22	DA	121	G	P-O3'-C3'	-7.11	111.17	119.70
22	DA	867	C	O4'-C1'-N1	7.11	113.89	108.20
53	CA	792	A	O4'-C1'-N9	7.11	113.89	108.20
22	BA	33	C	P-O3'-C3'	7.11	128.23	119.70
22	BA	974	G	N7-C8-N9	7.11	116.65	113.10
53	CA	534	U	N1-C1'-C2'	-7.11	104.18	112.00
53	CA	889	A	P-O3'-C3'	7.10	128.22	119.70
22	BA	2498	C	P-O3'-C3'	-7.10	111.18	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	DA	353	C	P-O3'-C3'	7.10	128.22	119.70
21	AA	9	G	P-O3'-C3'	-7.10	111.18	119.70
22	BA	2325	G	P-O3'-C3'	-7.10	111.18	119.70
22	DA	2683	C	N1-C1'-C2'	-7.10	104.19	112.00
22	DA	370	G	P-O3'-C3'	7.10	128.22	119.70
21	AA	70	U	P-O3'-C3'	7.09	128.21	119.70
22	BA	1941	C	P-O3'-C3'	-7.09	111.19	119.70
22	DA	1558	C	P-O3'-C3'	7.09	128.20	119.70
22	DA	2382	G	P-O3'-C3'	7.09	128.20	119.70
53	CA	247	G	P-O3'-C3'	-7.08	111.20	119.70
22	BA	2036	C	N1-C1'-C2'	-7.08	104.21	112.00
21	AA	1297	G	P-O3'-C3'	7.08	128.19	119.70
22	BA	984	A	N9-C1'-C2'	-7.08	104.22	112.00
22	BA	1524	G	P-O3'-C3'	-7.08	111.21	119.70
22	BA	2682	A	P-O5'-C5'	-7.07	109.58	120.90
53	CA	1064	G	P-O3'-C3'	7.07	128.19	119.70
53	CA	70	U	P-O3'-C3'	7.07	128.18	119.70
22	DA	442	G	P-O3'-C3'	7.07	128.18	119.70
22	DA	2333	A	P-O3'-C3'	7.07	128.18	119.70
22	BA	613	A	P-O3'-C3'	7.07	128.18	119.70
53	CA	686	U	O4'-C1'-N1	7.07	113.85	108.20
22	DA	1967	C	P-O3'-C3'	-7.06	111.22	119.70
22	BA	1110	G	P-O3'-C3'	7.06	128.17	119.70
22	BA	1250	G	P-O3'-C3'	7.06	128.17	119.70
22	BA	2451	A	C4-C5-N7	7.06	114.23	110.70
21	AA	688	G	N9-C1'-C2'	-7.06	104.24	112.00
22	BA	1142	A	C4-N9-C1'	-7.06	113.60	126.30
22	BA	727	A	P-O3'-C3'	-7.05	111.23	119.70
22	BA	2072	C	P-O3'-C3'	-7.05	111.24	119.70
21	AA	122	G	N9-C1'-C2'	-7.05	104.24	112.00
21	AA	722	G	P-O3'-C3'	-7.05	111.24	119.70
22	BA	2016	U	O4'-C1'-N1	-7.05	102.56	108.20
22	DA	2836	U	N1-C1'-C2'	-7.05	104.24	112.00
21	AA	1303	C	O4'-C1'-N1	7.05	113.84	108.20
22	BA	2431	U	N1-C1'-C2'	-7.05	104.25	112.00
22	DA	527	C	N1-C1'-C2'	7.05	123.16	114.00
53	CA	132	C	P-O3'-C3'	-7.05	111.24	119.70
21	AA	121	U	N1-C1'-C2'	-7.05	104.25	112.00
22	BA	2797	U	P-O3'-C3'	7.05	128.16	119.70
53	CA	517	G	P-O3'-C3'	7.05	128.16	119.70
22	DA	1867	G	P-O3'-C3'	-7.05	111.25	119.70
22	DA	1991	U	O4'-C1'-N1	-7.05	102.56	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	CA	276	G	P-O3'-C3'	-7.04	111.25	119.70
22	DA	1535	A	P-O3'-C3'	7.04	128.15	119.70
22	BA	2469	A	P-O3'-C3'	-7.04	111.25	119.70
53	CA	366	A	P-O3'-C3'	7.04	128.15	119.70
22	DA	1816	C	O4'-C1'-N1	7.04	113.83	108.20
22	BA	2093	G	N9-C1'-C2'	-7.04	104.26	112.00
53	CA	519	C	N1-C1'-C2'	-7.03	104.27	112.00
22	BA	1782	U	N1-C1'-C2'	-7.03	104.27	112.00
53	CA	704	A	P-O3'-C3'	-7.03	111.27	119.70
21	AA	1127	G	P-O3'-C3'	-7.02	111.27	119.70
22	BA	1667	G	P-O3'-C3'	7.02	128.13	119.70
22	BA	2150	C	O4'-C1'-N1	7.02	113.82	108.20
22	DA	627	A	P-O3'-C3'	7.02	128.13	119.70
21	AA	1225	A	P-O5'-C5'	-7.02	109.67	120.90
22	BA	2894	G	P-O3'-C3'	-7.01	111.29	119.70
53	CA	575	G	N3-C4-N9	-7.01	121.80	126.00
22	DA	1025	G	P-O3'-C3'	7.01	128.11	119.70
21	AA	1239	A	P-O3'-C3'	7.01	128.11	119.70
53	CA	107	G	P-O3'-C3'	-7.01	111.29	119.70
21	AA	1452	C	N1-C1'-C2'	7.00	123.11	114.00
21	AA	519	C	N1-C1'-C2'	-7.00	104.30	112.00
21	AA	169	C	C2-N1-C1'	-7.00	111.10	118.80
21	AA	173	U	N1-C1'-C2'	7.00	123.10	114.00
21	AA	641	U	N1-C1'-C2'	7.00	123.10	114.00
22	DA	1236	G	P-O3'-C3'	7.00	128.10	119.70
53	CA	821	G	P-O3'-C3'	-7.00	111.31	119.70
22	DA	1314	C	N1-C2-O2	6.99	123.09	118.90
21	AA	247	G	N9-C1'-C2'	-6.99	104.31	112.00
53	CA	239	U	C5-C6-N1	6.99	126.19	122.70
22	DA	806	C	P-O3'-C3'	-6.99	111.31	119.70
21	AA	389	A	P-O3'-C3'	-6.99	111.32	119.70
22	DA	2259	U	P-O3'-C3'	-6.99	111.32	119.70
21	AA	1319	A	P-O3'-C3'	6.98	128.08	119.70
22	BA	752	A	C5-C6-N6	-6.97	118.12	123.70
53	CA	1440	U	P-O3'-C3'	6.97	128.07	119.70
53	CA	421	U	O4'-C1'-N1	6.97	113.78	108.20
22	DA	2408	U	O4'-C1'-N1	6.97	113.78	108.20
21	AA	519	C	P-O3'-C3'	-6.97	111.34	119.70
22	BA	421	C	P-O3'-C3'	6.96	128.05	119.70
53	CA	209	U	P-O3'-C3'	6.96	128.05	119.70
22	DA	973	A	P-O3'-C3'	6.96	128.05	119.70
22	DA	2036	C	N1-C1'-C2'	-6.96	104.34	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	AA	793	U	O4'-C1'-N1	6.96	113.77	108.20
53	CA	500	G	P-O3'-C3'	-6.96	111.35	119.70
22	DA	1822	C	O4'-C1'-N1	6.96	113.76	108.20
22	DA	1456	G	P-O3'-C3'	-6.95	111.36	119.70
53	CA	1455	G	P-O3'-C3'	-6.95	111.36	119.70
22	BA	956	G	N9-C1'-C2'	-6.94	104.36	112.00
53	CA	982	U	P-O3'-C3'	6.94	128.03	119.70
22	BA	752	A	O4'-C1'-N9	6.94	113.75	108.20
53	CA	90	C	N1-C1'-C2'	-6.94	104.37	112.00
21	AA	1413	A	P-O3'-C3'	-6.93	111.38	119.70
22	BA	1876	A	C4-C5-C6	-6.93	113.53	117.00
22	BA	2282	G	P-O3'-C3'	6.93	128.02	119.70
21	AA	14	U	N1-C1'-C2'	-6.92	104.38	112.00
21	AA	243	A	P-O3'-C3'	6.92	128.01	119.70
22	BA	2860	A	N9-C4-C5	-6.92	103.03	105.80
22	BA	752	A	C6-C5-N7	-6.92	127.46	132.30
22	DA	989	G	P-O3'-C3'	6.92	128.00	119.70
21	AA	32	A	P-O3'-C3'	-6.92	111.40	119.70
21	AA	246	A	P-O3'-C3'	6.91	128.00	119.70
21	AA	372	C	P-O3'-C3'	6.91	127.99	119.70
22	BA	2757	A	P-O3'-C3'	-6.91	111.41	119.70
21	AA	1066	C	N1-C1'-C2'	-6.91	104.40	112.00
22	DA	397	U	P-O3'-C3'	-6.91	111.42	119.70
22	BA	2880	C	P-O3'-C3'	-6.90	111.42	119.70
22	DA	958	U	P-O3'-C3'	-6.90	111.42	119.70
21	AA	1169	A	P-O3'-C3'	-6.90	111.42	119.70
53	CA	870	U	P-O3'-C3'	6.90	127.98	119.70
22	BA	1236	G	P-O3'-C3'	6.90	127.98	119.70
22	BA	1458	U	P-O3'-C3'	6.90	127.98	119.70
22	DA	1477	A	P-O3'-C3'	-6.90	111.42	119.70
21	AA	1283	U	P-O3'-C3'	-6.89	111.43	119.70
53	CA	282	A	P-O3'-C3'	-6.89	111.43	119.70
53	CA	1160	G	N9-C1'-C2'	-6.89	104.42	112.00
53	CA	1299	A	P-O3'-C3'	-6.89	111.43	119.70
22	BA	931	U	P-O3'-C3'	6.89	127.97	119.70
53	CA	1031	C	P-O3'-C3'	6.89	127.97	119.70
22	BA	2033	A	C5-C6-N6	6.89	129.21	123.70
53	CA	717	U	N1-C1'-C2'	6.89	122.96	114.00
22	DA	1213	A	P-O3'-C3'	-6.89	111.44	119.70
22	DA	1654	A	C3'-C2'-C1'	6.89	107.01	101.50
22	BA	2689	U	N1-C1'-C2'	6.88	122.95	114.00
22	DA	1568	G	P-O3'-C3'	-6.88	111.44	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	AA	1451	U	P-O3'-C3'	6.88	127.95	119.70
21	AA	536	C	P-O3'-C3'	-6.87	111.45	119.70
22	BA	2570	G	P-O3'-C3'	-6.87	111.45	119.70
22	BA	753	A	P-O3'-C3'	-6.87	111.45	119.70
53	CA	87	C	O4'-C1'-N1	6.87	113.70	108.20
21	AA	215	C	N1-C1'-C2'	-6.87	104.44	112.00
22	DA	396	G	N9-C1'-C2'	-6.87	104.44	112.00
21	AA	813	U	P-O5'-C5'	-6.87	109.92	120.90
22	BA	1019	U	C5-C4-O4	-6.87	121.78	125.90
22	BA	1783	A	P-O3'-C3'	-6.86	111.47	119.70
22	DA	2386	A	P-O3'-C3'	-6.86	111.47	119.70
53	CA	1151	A	P-O3'-C3'	6.86	127.93	119.70
22	BA	129	C	P-O3'-C3'	-6.86	111.47	119.70
22	DA	2385	C	N1-C1'-C2'	-6.86	104.45	112.00
22	BA	2402	U	O4'-C1'-N1	6.86	113.69	108.20
22	DA	1110	G	P-O3'-C3'	6.86	127.93	119.70
21	AA	813	U	P-O3'-C3'	-6.86	111.47	119.70
22	BA	958	U	P-O5'-C5'	-6.86	109.93	120.90
22	DA	2836	U	P-O3'-C3'	-6.86	111.47	119.70
22	BA	1135	C	O4'-C1'-N1	-6.85	102.72	108.20
22	BA	2447	G	N1-C2-N3	6.85	128.01	123.90
22	BA	528	A	C8-N9-C4	-6.85	103.06	105.80
22	DA	2021	C	P-O3'-C3'	6.85	127.92	119.70
22	DA	1274	A	N9-C1'-C2'	-6.85	104.47	112.00
22	DA	1970	A	P-O3'-C3'	6.85	127.92	119.70
53	CA	67	C	O4'-C1'-N1	6.84	113.68	108.20
53	CA	596	A	P-O3'-C3'	-6.84	111.49	119.70
21	AA	91	U	C3'-C2'-C1'	6.84	106.97	101.50
21	AA	1214	C	O4'-C1'-N1	-6.84	102.73	108.20
22	BA	1538	G	P-O3'-C3'	-6.83	111.50	119.70
22	BA	2801	G	P-O3'-C3'	-6.83	111.50	119.70
22	BA	2606	C	C6-N1-C2	6.83	123.03	120.30
21	AA	1094	G	O4'-C1'-N9	6.82	113.66	108.20
22	BA	85	G	P-O3'-C3'	-6.82	111.51	119.70
22	BA	2820	A	O3'-P-O5'	-6.82	91.04	104.00
22	BA	35	G	P-O5'-C5'	-6.82	109.99	120.90
22	BA	339	U	N1-C2-N3	6.82	118.99	114.90
53	CA	1211	U	P-O3'-C3'	6.82	127.88	119.70
22	DA	1023	U	P-O3'-C3'	-6.82	111.52	119.70
21	AA	386	C	O4'-C1'-N1	6.82	113.65	108.20
22	BA	2580	U	P-O3'-C3'	6.82	127.88	119.70
22	DA	2611	C	P-O3'-C3'	-6.82	111.52	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	1019	U	N1-C2-N3	6.81	118.99	114.90
22	BA	1990	C	N1-C1'-C2'	-6.81	104.50	112.00
22	DA	573	U	O4'-C1'-N1	6.81	113.65	108.20
22	DA	2683	C	P-O3'-C3'	-6.81	111.53	119.70
53	CA	381	C	N1-C1'-C2'	6.81	122.85	114.00
53	CA	86	G	P-O3'-C3'	6.81	127.87	119.70
22	BA	628	G	P-O3'-C3'	-6.80	111.53	119.70
23	BB	87	U	P-O3'-C3'	6.80	127.87	119.70
22	DA	73	A	P-O3'-C3'	-6.80	111.53	119.70
22	BA	866	A	P-O3'-C3'	-6.80	111.54	119.70
22	BA	1654	A	C3'-C2'-C1'	6.80	106.94	101.50
21	AA	267	C	C3'-C2'-C1'	6.80	106.94	101.50
22	BA	459	U	N1-C1'-C2'	-6.80	104.52	112.00
22	DA	1126	A	P-O3'-C3'	6.80	127.86	119.70
21	AA	1362	A	O4'-C1'-N9	6.79	113.64	108.20
22	DA	1700	A	C3'-C2'-C1'	6.79	106.94	101.50
22	DA	1717	A	P-O3'-C3'	-6.79	111.55	119.70
22	BA	75	G	P-O3'-C3'	-6.79	111.55	119.70
22	BA	1385	A	P-O3'-C3'	6.79	127.85	119.70
22	BA	199	A	P-O3'-C3'	6.79	127.85	119.70
22	DA	2391	G	P-O3'-C3'	6.79	127.84	119.70
22	DA	1274	A	P-O3'-C3'	-6.79	111.56	119.70
22	BA	1733	G	N9-C1'-C2'	-6.78	104.54	112.00
22	DA	1759	A	P-O3'-C3'	-6.78	111.56	119.70
53	CA	643	C	O4'-C1'-N1	6.78	113.62	108.20
22	BA	2567	G	P-O3'-C3'	-6.78	111.57	119.70
21	AA	14	U	P-O3'-C3'	-6.78	111.57	119.70
22	DA	492	A	P-O3'-C3'	-6.78	111.57	119.70
22	DA	671	C	N1-C1'-C2'	-6.77	104.55	112.00
21	AA	718	A	P-O3'-C3'	-6.77	111.58	119.70
22	BA	995	C	N1-C1'-C2'	6.77	122.80	114.00
22	BA	1816	C	P-O3'-C3'	-6.77	111.58	119.70
22	DA	945	A	P-O3'-C3'	6.77	127.82	119.70
22	DA	2023	C	P-O3'-C3'	-6.77	111.58	119.70
53	CA	421	U	P-O3'-C3'	6.76	127.82	119.70
22	DA	2656	U	P-O3'-C3'	-6.76	111.59	119.70
22	BA	2250	G	C4-C5-N7	6.76	113.50	110.80
22	DA	784	G	P-O3'-C3'	6.76	127.81	119.70
53	CA	9	G	N9-C1'-C2'	-6.75	104.57	112.00
22	DA	2199	A	P-O3'-C3'	-6.75	111.60	119.70
22	BA	2630	G	P-O3'-C3'	-6.75	111.60	119.70
53	CA	992	U	N1-C1'-C2'	6.75	122.78	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	AA	965	U	P-O3'-C3'	6.75	127.79	119.70
22	BA	2586	U	C5-C4-O4	-6.74	121.85	125.90
22	DA	2575	C	C5-C4-N4	-6.74	115.48	120.20
21	AA	733	G	O4'-C1'-N9	6.74	113.59	108.20
22	BA	1062	G	C3'-C2'-C1'	6.74	106.89	101.50
53	CA	89	U	C5-C4-O4	-6.74	121.86	125.90
22	DA	637	A	P-O3'-C3'	6.73	127.78	119.70
21	AA	14	U	P-O5'-C5'	-6.73	110.13	120.90
21	AA	90	C	O4'-C1'-N1	6.73	113.58	108.20
22	DA	1733	G	P-O3'-C3'	-6.73	111.63	119.70
22	DA	1027	A	P-O3'-C3'	-6.72	111.63	119.70
21	AA	1064	G	O4'-C1'-N9	6.72	113.57	108.20
22	BA	138	U	N1-C1'-C2'	-6.72	104.61	112.00
22	DA	1515	A	O4'-C1'-N9	6.71	113.57	108.20
53	CA	513	C	C3'-C2'-C1'	6.71	106.87	101.50
22	DA	2338	C	N1-C1'-C2'	-6.71	104.62	112.00
21	AA	971	G	O4'-C1'-N9	6.71	113.57	108.20
53	CA	734	G	P-O3'-C3'	-6.71	111.65	119.70
21	AA	891	U	P-O5'-C5'	-6.71	110.17	120.90
53	CA	116	A	N9-C1'-C2'	-6.71	104.62	112.00
22	DA	1333	G	P-O3'-C3'	-6.71	111.65	119.70
21	AA	1152	A	P-O3'-C3'	-6.70	111.66	119.70
22	BA	630	G	N1-C2-N2	-6.70	110.17	116.20
22	BA	787	C	N1-C2-O2	-6.70	114.88	118.90
21	AA	1530	G	N9-C1'-C2'	-6.70	104.64	112.00
22	BA	835	C	O4'-C1'-N1	6.70	113.56	108.20
53	CA	72	A	P-O3'-C3'	-6.69	111.67	119.70
22	DA	335	C	P-O3'-C3'	-6.69	111.67	119.70
22	DA	2447	G	O4'-C1'-N9	6.69	113.55	108.20
22	BA	2797	U	N1-C1'-C2'	6.69	122.70	114.00
53	CA	173	U	P-O3'-C3'	6.69	127.73	119.70
22	DA	2543	G	P-O3'-C3'	-6.69	111.67	119.70
53	CA	115	G	P-O3'-C3'	6.69	127.73	119.70
22	DA	2716	C	O4'-C1'-N1	6.68	113.55	108.20
21	AA	436	C	O4'-C1'-N1	6.68	113.55	108.20
22	DA	1619	G	N9-C1'-C2'	-6.68	104.65	112.00
53	CA	812	G	P-O3'-C3'	6.68	127.72	119.70
22	DA	2250	G	O4'-C1'-N9	-6.68	102.86	108.20
21	AA	96	U	O4'-C1'-N1	6.68	113.54	108.20
21	AA	1261	A	N1-C6-N6	6.68	122.61	118.60
22	BA	671	C	O4'-C1'-N1	6.67	113.54	108.20
22	BA	646	U	O4'-C1'-N1	6.67	113.54	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	1717	A	P-O3'-C3'	-6.67	111.69	119.70
21	AA	1381	U	N1-C1'-C2'	-6.67	104.67	112.00
21	AA	213	G	C3'-C2'-C1'	6.67	106.83	101.50
21	AA	520	A	P-O3'-C3'	-6.67	111.70	119.70
54	DB	68	C	P-O3'-C3'	-6.67	111.70	119.70
22	DA	633	A	N1-C6-N6	6.67	122.60	118.60
22	BA	2286	G	N3-C4-C5	6.66	131.93	128.60
23	BB	53	A	N9-C1'-C2'	-6.66	104.67	112.00
21	AA	96	U	N1-C1'-C2'	-6.66	104.68	112.00
22	DA	459	U	N1-C1'-C2'	-6.66	104.68	112.00
22	DA	945	A	O4'-C1'-N9	6.66	113.53	108.20
22	DA	2451	A	C5-N7-C8	-6.65	100.57	103.90
22	DA	811	U	P-O3'-C3'	6.65	127.68	119.70
22	DA	805	G	P-O3'-C3'	6.65	127.68	119.70
22	BA	571	U	P-O3'-C3'	6.65	127.68	119.70
22	BA	1026	G	P-O3'-C3'	-6.65	111.72	119.70
22	DA	1784	A	P-O3'-C3'	6.65	127.68	119.70
21	AA	1399	C	O4'-C1'-N1	6.65	113.52	108.20
23	BB	14	U	P-O3'-C3'	6.65	127.68	119.70
22	BA	1647	U	P-O3'-C3'	6.64	127.67	119.70
22	DA	1290	C	O4'-C1'-N1	6.64	113.52	108.20
53	CA	1157	A	P-O3'-C3'	6.64	127.67	119.70
22	DA	1653	G	P-O3'-C3'	6.64	127.67	119.70
54	DB	40	U	N1-C1'-C2'	6.64	122.64	114.00
22	BA	587	C	N1-C1'-C2'	6.64	122.63	114.00
23	BB	42	C	N1-C1'-C2'	-6.64	104.69	112.00
22	DA	2272	U	C5-C4-O4	-6.64	121.92	125.90
21	AA	1129	C	N1-C1'-C2'	6.64	122.63	114.00
22	BA	2857	G	N1-C2-N2	-6.64	110.23	116.20
22	DA	1330	C	N1-C1'-C2'	-6.63	104.71	112.00
22	BA	1918	A	P-O3'-C3'	6.63	127.66	119.70
22	DA	1268	A	C3'-C2'-C1'	6.62	106.80	101.50
22	DA	2438	U	O4'-C1'-N1	6.62	113.50	108.20
21	AA	1365	G	P-O3'-C3'	-6.62	111.75	119.70
22	BA	783	A	N7-C8-N9	6.62	117.11	113.80
22	BA	1320	C	P-O3'-C3'	6.62	127.64	119.70
22	DA	1312	U	P-O3'-C3'	6.62	127.65	119.70
22	BA	2849	U	P-O5'-C5'	-6.62	110.31	120.90
22	BA	812	C	P-O3'-C3'	-6.61	111.76	119.70
22	BA	630	G	C8-N9-C4	6.61	109.04	106.40
22	BA	1322	A	P-O3'-C3'	6.61	127.63	119.70
22	DA	1405	U	O4'-C1'-N1	6.61	113.48	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	CA	1191	A	P-O3'-C3'	-6.60	111.78	119.70
22	DA	510	C	P-O3'-C3'	-6.60	111.78	119.70
21	AA	486	U	N1-C1'-C2'	-6.60	104.74	112.00
53	CA	885	G	P-O3'-C3'	-6.60	111.78	119.70
22	BA	2809	A	P-O3'-C3'	-6.60	111.78	119.70
21	AA	534	U	N1-C1'-C2'	-6.60	104.74	112.00
22	BA	800	A	C5-C6-N6	6.60	128.98	123.70
22	DA	2498	C	P-O3'-C3'	-6.60	111.78	119.70
22	BA	1319	C	C6-N1-C2	6.59	122.94	120.30
22	DA	1320	C	P-O3'-C3'	6.59	127.61	119.70
21	AA	1318	A	P-O3'-C3'	6.59	127.61	119.70
22	DA	754	U	P-O3'-C3'	-6.59	111.79	119.70
22	BA	489	G	P-O3'-C3'	6.59	127.61	119.70
22	DA	990	A	P-O3'-C3'	-6.59	111.79	119.70
21	AA	1337	G	P-O3'-C3'	-6.59	111.79	119.70
22	BA	990	A	P-O3'-C3'	-6.59	111.80	119.70
22	DA	1493	C	N1-C1'-C2'	6.59	122.56	114.00
21	AA	1085	U	P-O3'-C3'	6.59	127.61	119.70
22	BA	1212	G	P-O3'-C3'	6.59	127.60	119.70
22	DA	1478	G	P-O3'-C3'	-6.58	111.80	119.70
21	AA	1348	U	P-O3'-C3'	-6.58	111.80	119.70
21	AA	74	A	P-O3'-C3'	-6.58	111.80	119.70
53	CA	531	U	P-O3'-C3'	6.58	127.60	119.70
22	BA	2286	G	P-O3'-C3'	6.58	127.59	119.70
21	AA	1398	A	N9-C1'-C2'	-6.58	104.77	112.00
22	BA	120	U	P-O5'-C5'	-6.58	110.38	120.90
22	DA	2868	A	P-O3'-C3'	-6.58	111.81	119.70
21	AA	1202	U	C3'-C2'-C1'	6.57	106.76	101.50
22	BA	1273	U	P-O3'-C3'	-6.57	111.81	119.70
53	CA	1449	C	O4'-C1'-N1	6.57	113.46	108.20
22	DA	1615	C	N1-C1'-C2'	6.57	122.55	114.00
53	CA	414	A	P-O3'-C3'	-6.57	111.81	119.70
21	AA	330	C	P-O3'-C3'	-6.57	111.82	119.70
22	BA	2006	C	O4'-C1'-N1	-6.57	102.94	108.20
53	CA	213	G	P-O3'-C3'	-6.57	111.82	119.70
22	DA	1963	U	P-O3'-C3'	-6.56	111.82	119.70
22	DA	1498	C	P-O3'-C3'	-6.56	111.83	119.70
53	CA	81	A	P-O3'-C3'	6.56	127.57	119.70
53	CA	705	G	P-O3'-C3'	-6.56	111.83	119.70
22	DA	1455	G	P-O3'-C3'	-6.56	111.83	119.70
22	BA	2210	U	N1-C1'-C2'	6.56	122.52	114.00
22	BA	2371	G	N3-C2-N2	-6.56	115.31	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	DA	1114	C	O4'-C1'-N1	6.55	113.44	108.20
22	DA	1799	G	P-O3'-C3'	6.55	127.56	119.70
22	DA	206	U	P-O3'-C3'	-6.55	111.84	119.70
53	CA	686	U	N1-C1'-C2'	6.55	122.51	114.00
22	DA	1839	G	P-O3'-C3'	-6.54	111.85	119.70
23	BB	13	G	N9-C1'-C2'	-6.54	104.80	112.00
22	DA	1758	U	P-O3'-C3'	6.54	127.55	119.70
22	DA	1916	A	P-O3'-C3'	-6.54	111.85	119.70
22	DA	503	A	P-O3'-C3'	6.54	127.55	119.70
22	BA	229	C	C3'-C2'-C1'	6.54	106.73	101.50
22	BA	866	A	N9-C1'-C2'	-6.54	104.81	112.00
22	BA	800	A	N3-C4-N9	-6.53	122.17	127.40
21	AA	89	U	O4'-C1'-N1	6.53	113.43	108.20
22	BA	1326	U	P-O3'-C3'	-6.53	111.86	119.70
22	DA	1654	A	N9-C1'-C2'	-6.53	104.81	112.00
22	DA	1993	U	P-O3'-C3'	-6.52	111.87	119.70
22	BA	555	G	P-O3'-C3'	6.52	127.53	119.70
22	BA	2752	C	P-O3'-C3'	-6.52	111.87	119.70
22	DA	2800	A	C3'-C2'-C1'	6.52	106.72	101.50
22	BA	1180	U	N1-C1'-C2'	6.52	122.47	114.00
22	BA	2733	A	N9-C1'-C2'	-6.52	104.83	112.00
53	CA	1225	A	P-O3'-C3'	6.52	127.52	119.70
22	DA	374	A	C3'-C2'-C1'	6.52	106.72	101.50
22	BA	1022	G	N3-C4-N9	-6.52	122.09	126.00
22	BA	2501	C	C2-N1-C1'	-6.51	111.63	118.80
53	CA	1284	C	P-O3'-C3'	6.51	127.52	119.70
22	DA	1417	C	P-O3'-C3'	-6.51	111.88	119.70
22	DA	1818	U	P-O3'-C3'	6.51	127.52	119.70
22	BA	528	A	N7-C8-N9	6.51	117.06	113.80
22	BA	1452	G	C5-N7-C8	-6.51	101.05	104.30
22	BA	2820	A	P-O3'-C3'	6.51	127.51	119.70
53	CA	914	A	C3'-C2'-C1'	6.51	106.71	101.50
22	BA	2860	A	C8-N9-C1'	-6.51	115.98	127.70
22	DA	1108	U	O4'-C1'-N1	6.51	113.41	108.20
21	AA	935	A	P-O3'-C3'	-6.51	111.89	119.70
22	BA	2733	A	C4-C5-C6	6.51	120.25	117.00
21	AA	721	G	P-O3'-C3'	6.51	127.51	119.70
22	BA	860	U	C3'-C2'-C1'	6.51	106.71	101.50
22	DA	2873	A	O4'-C1'-N9	6.51	113.41	108.20
22	BA	2335	A	C3'-C2'-C1'	6.50	106.70	101.50
22	BA	505	A	P-O3'-C3'	-6.50	111.90	119.70
22	DA	777	G	N9-C1'-C2'	-6.50	104.85	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	AA	479	U	O4'-C1'-N1	6.50	113.40	108.20
22	BA	1476	U	N1-C1'-C2'	-6.50	104.85	112.00
22	BA	2836	U	P-O3'-C3'	-6.50	111.90	119.70
21	AA	1161	C	P-O3'-C3'	-6.50	111.90	119.70
53	CA	452	A	C5-N7-C8	-6.49	100.65	103.90
22	BA	1135	C	N1-C1'-C2'	-6.49	104.86	112.00
22	DA	2582	G	P-O3'-C3'	-6.49	111.91	119.70
22	BA	1213	A	P-O5'-C5'	-6.49	110.52	120.90
22	DA	2310	C	O4'-C1'-N1	6.49	113.39	108.20
22	BA	616	A	P-O3'-C3'	-6.49	111.92	119.70
53	CA	276	G	C3'-C2'-C1'	6.49	106.69	101.50
22	DA	244	A	C3'-C2'-C1'	6.49	106.69	101.50
22	DA	1468	U	O4'-C1'-N1	6.49	113.39	108.20
22	BA	2067	G	P-O3'-C3'	6.48	127.48	119.70
22	DA	2313	C	N1-C1'-C2'	-6.48	104.87	112.00
21	AA	116	A	N9-C1'-C2'	-6.48	104.87	112.00
22	BA	1733	G	P-O3'-C3'	-6.48	111.92	119.70
22	BA	2211	A	P-O3'-C3'	6.48	127.48	119.70
53	CA	1349	A	P-O3'-C3'	-6.48	111.92	119.70
22	BA	1201	U	P-O5'-C5'	-6.48	110.53	120.90
53	CA	1142	G	P-O3'-C3'	-6.48	111.92	119.70
21	AA	733	G	P-O3'-C3'	6.48	127.47	119.70
22	BA	2555	U	O4'-C1'-N1	6.48	113.38	108.20
23	BB	109	A	P-O3'-C3'	-6.48	111.93	119.70
53	CA	913	A	P-O3'-C3'	6.48	127.47	119.70
22	DA	476	G	P-O3'-C3'	-6.48	111.93	119.70
22	BA	1386	C	P-O3'-C3'	-6.48	111.93	119.70
22	DA	14	A	C3'-C2'-C1'	6.48	106.68	101.50
21	AA	438	U	P-O3'-C3'	6.47	127.47	119.70
22	BA	1385	A	C6-N1-C2	6.47	122.48	118.60
21	AA	884	U	O4'-C1'-N1	6.47	113.38	108.20
22	BA	1929	G	P-O3'-C3'	6.47	127.47	119.70
21	AA	247	G	P-O3'-C3'	-6.47	111.94	119.70
22	DA	1733	G	N9-C1'-C2'	-6.47	104.88	112.00
22	BA	265	A	P-O3'-C3'	6.47	127.46	119.70
22	BA	1476	U	O4'-C1'-N1	6.47	113.37	108.20
54	DB	41	G	P-O3'-C3'	-6.46	111.94	119.70
53	CA	1397	C	P-O3'-C3'	-6.46	111.95	119.70
22	DA	2302	U	O4'-C1'-N1	6.46	113.37	108.20
22	BA	2426	A	P-O3'-C3'	6.46	127.45	119.70
22	BA	906	U	P-O5'-C5'	-6.45	110.57	120.90
53	CA	1087	G	P-O3'-C3'	-6.45	111.95	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	DA	2052	A	P-O3'-C3'	-6.45	111.95	119.70
53	CA	1216	A	P-O3'-C3'	-6.45	111.96	119.70
22	DA	1275	A	O4'-C1'-N9	6.45	113.36	108.20
22	BA	2610	C	O4'-C1'-N1	6.45	113.36	108.20
22	BA	1478	G	N3-C4-N9	-6.45	122.13	126.00
22	DA	318	C	O4'-C1'-N1	6.44	113.36	108.20
22	DA	1415	U	P-O3'-C3'	6.44	127.43	119.70
22	DA	2092	U	P-O3'-C3'	6.44	127.43	119.70
22	BA	2324	U	P-O3'-C3'	6.44	127.43	119.70
21	AA	914	A	C3'-C2'-C1'	6.44	106.65	101.50
53	CA	717	U	P-O3'-C3'	6.44	127.43	119.70
22	DA	1082	U	O4'-C1'-N1	6.44	113.35	108.20
22	DA	1159	U	O4'-C1'-N1	6.44	113.35	108.20
21	AA	250	A	P-O3'-C3'	6.44	127.43	119.70
22	BA	1732	C	N1-C1'-C2'	6.44	122.37	114.00
22	BA	2768	U	P-O3'-C3'	-6.44	111.98	119.70
54	DB	58	A	C3'-C2'-C1'	6.44	106.65	101.50
22	BA	729	G	P-O3'-C3'	-6.43	111.98	119.70
53	CA	15	G	P-O3'-C3'	-6.43	111.98	119.70
22	BA	396	G	N9-C1'-C2'	-6.43	104.93	112.00
22	BA	1303	G	P-O3'-C3'	-6.43	111.98	119.70
53	CA	122	G	N9-C1'-C2'	-6.43	104.93	112.00
53	CA	654	G	C3'-C2'-C1'	6.43	106.64	101.50
21	AA	403	C	P-O3'-C3'	-6.43	111.99	119.70
23	BB	97	C	O4'-C1'-N1	-6.43	103.06	108.20
22	DA	947	A	C3'-C2'-C1'	6.42	106.64	101.50
22	DA	2776	A	P-O3'-C3'	6.42	127.41	119.70
22	BA	27	G	P-O3'-C3'	6.42	127.40	119.70
53	CA	501	C	O4'-C1'-N1	6.42	113.33	108.20
22	DA	49	A	P-O3'-C3'	6.42	127.40	119.70
22	DA	2036	C	C3'-C2'-C1'	6.42	106.63	101.50
22	BA	126	A	P-O5'-C5'	-6.41	110.64	120.90
22	BA	1129	A	C3'-C2'-C1'	6.41	106.63	101.50
22	BA	1201	U	O4'-C1'-N1	-6.41	103.07	108.20
22	DA	483	A	P-O3'-C3'	-6.41	112.00	119.70
22	DA	1603	A	P-O3'-C3'	-6.41	112.00	119.70
22	BA	197	A	P-O3'-C3'	-6.41	112.01	119.70
22	BA	762	U	P-O3'-C3'	6.41	127.39	119.70
22	BA	119	A	O3'-P-O5'	6.41	116.18	104.00
22	DA	2609	U	N1-C1'-C2'	6.41	122.33	114.00
21	AA	509	A	P-O3'-C3'	-6.41	112.01	119.70
22	DA	234	U	P-O3'-C3'	-6.41	112.01	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	DA	671	C	C2-N1-C1'	6.41	125.85	118.80
22	DA	1683	U	P-O3'-C3'	-6.40	112.02	119.70
21	AA	274	A	O4'-C1'-N9	6.40	113.32	108.20
22	BA	2086	U	O4'-C1'-N1	6.40	113.32	108.20
22	BA	2344	U	P-O3'-C3'	6.40	127.38	119.70
22	DA	1400	U	C3'-C2'-C1'	6.40	106.62	101.50
22	BA	2575	C	N3-C4-C5	6.40	124.46	121.90
22	DA	1135	C	N1-C1'-C2'	-6.40	104.96	112.00
22	DA	1351	C	O4'-C1'-N1	6.40	113.32	108.20
22	DA	2712	C	P-O3'-C3'	6.40	127.38	119.70
22	DA	389	G	P-O3'-C3'	-6.40	112.02	119.70
21	AA	1483	A	N1-C6-N6	6.39	122.44	118.60
22	BA	2857	G	N1-C2-N3	6.39	127.73	123.90
53	CA	1226	C	P-O3'-C3'	6.39	127.37	119.70
22	BA	1476	U	C3'-C2'-C1'	6.39	106.61	101.50
22	BA	1809	A	P-O3'-C3'	-6.39	112.04	119.70
22	DA	2503	A	P-O3'-C3'	6.39	127.36	119.70
21	AA	994	A	P-O3'-C3'	-6.38	112.04	119.70
22	BA	788	A	P-O3'-C3'	6.38	127.36	119.70
22	DA	1386	C	O4'-C1'-N1	6.38	113.31	108.20
22	BA	603	A	P-O3'-C3'	6.38	127.36	119.70
22	DA	615	U	N1-C1'-C2'	6.38	122.30	114.00
22	DA	677	A	N1-C6-N6	6.38	122.43	118.60
22	DA	2612	C	P-O3'-C3'	-6.38	112.04	119.70
22	BA	698	C	C6-N1-C2	6.38	122.85	120.30
22	BA	1060	U	N1-C1'-C2'	6.38	122.30	114.00
22	BA	1615	C	O3'-P-O5'	-6.38	91.87	104.00
53	CA	803	G	C3'-C2'-C1'	6.38	106.61	101.50
53	CA	811	C	P-O3'-C3'	6.38	127.36	119.70
22	DA	1942	C	P-O3'-C3'	-6.38	112.04	119.70
21	AA	549	C	N1-C1'-C2'	-6.38	104.98	112.00
23	BB	90	C	P-O3'-C3'	-6.38	112.05	119.70
22	BA	1142	A	C4-C5-N7	6.38	113.89	110.70
22	BA	2880	C	N1-C1'-C2'	-6.38	104.99	112.00
22	DA	1499	C	O4'-C1'-N1	6.38	113.30	108.20
21	AA	414	A	P-O3'-C3'	-6.37	112.05	119.70
22	BA	1060	U	P-O3'-C3'	6.37	127.35	119.70
22	BA	2776	A	N1-C6-N6	6.37	122.42	118.60
22	BA	2857	G	C4-C5-N7	6.37	113.35	110.80
22	DA	1439	A	O4'-C1'-N9	6.37	113.30	108.20
22	DA	2615	U	P-O3'-C3'	-6.37	112.05	119.70
22	BA	1876	A	N1-C6-N6	-6.37	114.78	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	DA	373	U	N1-C1'-C2'	-6.37	104.99	112.00
22	DA	164	C	P-O3'-C3'	-6.37	112.06	119.70
53	CA	1160	G	P-O3'-C3'	-6.37	112.06	119.70
21	AA	95	C	N1-C1'-C2'	-6.36	105.00	112.00
22	BA	1872	A	C3'-C2'-C1'	6.36	106.59	101.50
22	BA	2639	A	P-O5'-C5'	-6.36	110.73	120.90
22	BA	1397	U	O4'-C1'-N1	6.36	113.28	108.20
54	DB	88	C	N1-C1'-C2'	6.36	122.26	114.00
22	BA	680	C	N1-C2-O2	-6.36	115.09	118.90
22	BA	459	U	C3'-C2'-C1'	6.35	106.58	101.50
22	DA	436	C	O4'-C1'-N1	6.35	113.28	108.20
21	AA	327	A	P-O3'-C3'	6.35	127.32	119.70
22	DA	2492	U	C3'-C2'-C1'	6.35	106.58	101.50
22	DA	588	U	O4'-C1'-N1	-6.35	103.12	108.20
22	BA	2440	C	C3'-C2'-C1'	6.35	106.58	101.50
53	CA	1160	G	C3'-C2'-C1'	6.35	106.58	101.50
22	DA	207	A	P-O3'-C3'	-6.35	112.08	119.70
53	CA	130	A	P-O3'-C3'	6.35	127.31	119.70
21	AA	508	U	P-O3'-C3'	6.34	127.31	119.70
22	BA	1276	A	P-O3'-C3'	-6.34	112.09	119.70
53	CA	1196	A	P-O3'-C3'	6.34	127.31	119.70
22	BA	163	C	N1-C1'-C2'	-6.34	105.02	112.00
21	AA	686	U	N1-C1'-C2'	6.34	122.24	114.00
53	CA	575	G	N3-C4-C5	6.34	131.77	128.60
22	DA	1497	U	P-O3'-C3'	6.34	127.31	119.70
21	AA	1282	C	C3'-C2'-C1'	6.34	106.57	101.50
53	CA	1140	C	N1-C1'-C2'	-6.34	105.03	112.00
21	AA	961	U	P-O3'-C3'	-6.33	112.10	119.70
53	CA	95	C	P-O3'-C3'	-6.33	112.10	119.70
22	BA	506	G	O4'-C1'-N9	6.33	113.27	108.20
22	BA	1695	G	P-O3'-C3'	-6.33	112.10	119.70
53	CA	91	U	O4'-C1'-N1	6.33	113.27	108.20
22	DA	1993	U	C3'-C2'-C1'	6.33	106.57	101.50
22	DA	1996	C	O4'-C1'-N1	6.33	113.27	108.20
22	DA	2873	A	P-O3'-C3'	6.33	127.30	119.70
53	CA	267	C	P-O3'-C3'	6.33	127.30	119.70
53	CA	430	A	P-O3'-C3'	-6.33	112.11	119.70
22	DA	765	C	C3'-C2'-C1'	6.33	106.56	101.50
22	DA	2276	G	P-O3'-C3'	-6.33	112.11	119.70
21	AA	67	C	O4'-C1'-N1	6.33	113.26	108.20
22	BA	2407	A	P-O3'-C3'	-6.33	112.11	119.70
22	DA	2275	C	N1-C1'-C2'	6.33	122.22	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	CA	511	C	O4'-C1'-N1	6.32	113.26	108.20
53	CA	1184	G	P-O3'-C3'	-6.32	112.11	119.70
21	AA	215	C	C3'-C2'-C1'	6.32	106.56	101.50
21	AA	1451	U	N1-C1'-C2'	6.32	122.22	114.00
22	BA	1164	C	C6-N1-C2	6.32	122.83	120.30
22	BA	535	G	C5-C6-O6	6.32	132.39	128.60
22	BA	2537	U	P-O5'-C5'	-6.32	110.79	120.90
22	DA	1556	C	P-O3'-C3'	-6.31	112.12	119.70
22	BA	1779	U	P-O5'-C5'	-6.31	110.80	120.90
21	AA	1287	A	C3'-C2'-C1'	6.31	106.55	101.50
22	BA	2440	C	N1-C1'-C2'	-6.31	105.06	112.00
21	AA	1224	U	N1-C1'-C2'	6.31	122.20	114.00
22	BA	946	C	N1-C1'-C2'	-6.31	105.06	112.00
53	CA	1167	A	P-O3'-C3'	6.31	127.27	119.70
22	BA	321	U	O4'-C1'-N1	6.30	113.24	108.20
22	DA	1113	U	O4'-C1'-N1	6.30	113.24	108.20
21	AA	486	U	P-O5'-C5'	-6.30	110.82	120.90
21	AA	210	C	P-O3'-C3'	6.30	127.26	119.70
21	AA	1202	U	O4'-C1'-N1	6.30	113.24	108.20
22	BA	62	U	P-O3'-C3'	6.30	127.26	119.70
22	BA	1700	A	P-O3'-C3'	-6.30	112.14	119.70
22	DA	2498	C	O4'-C1'-N1	6.30	113.24	108.20
22	DA	2832	U	O4'-C1'-N1	6.30	113.24	108.20
53	CA	129	A	P-O3'-C3'	6.29	127.25	119.70
22	BA	121	G	P-O3'-C3'	-6.29	112.15	119.70
22	BA	1490	A	P-O3'-C3'	6.29	127.25	119.70
22	BA	2488	G	P-O5'-C5'	-6.29	110.83	120.90
22	BA	630	G	P-O3'-C3'	6.29	127.25	119.70
22	DA	805	G	O4'-C1'-N9	6.29	113.23	108.20
22	BA	1340	U	P-O3'-C3'	6.29	127.25	119.70
22	DA	774	G	P-O3'-C3'	6.29	127.25	119.70
22	DA	1378	A	P-O3'-C3'	6.29	127.25	119.70
22	DA	1388	G	P-O3'-C3'	-6.29	112.15	119.70
22	DA	2347	C	P-O3'-C3'	-6.29	112.16	119.70
22	DA	1992	G	P-O3'-C3'	6.28	127.24	119.70
22	DA	2403	C	P-O3'-C3'	-6.28	112.16	119.70
21	AA	91	U	C6-N1-C1'	-6.28	112.41	121.20
53	CA	965	U	P-O3'-C3'	6.28	127.24	119.70
22	DA	1982	U	P-O3'-C3'	-6.28	112.16	119.70
22	BA	802	A	P-O3'-C3'	-6.28	112.17	119.70
53	CA	1066	C	N1-C1'-C2'	-6.28	105.09	112.00
22	BA	577	G	OP2-P-O3'	6.28	119.01	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	2543	G	P-O5'-C5'	-6.28	110.86	120.90
21	AA	971	G	C4-N9-C1'	-6.28	118.34	126.50
22	BA	740	C	P-O3'-C3'	-6.28	112.17	119.70
53	CA	392	C	O4'-C1'-N1	6.28	113.22	108.20
22	BA	73	A	P-O5'-C5'	-6.27	110.86	120.90
21	AA	567	G	C3'-C2'-C1'	6.27	106.52	101.50
22	BA	562	U	C2-N3-C4	6.27	130.76	127.00
53	CA	1430	A	C6-N1-C2	6.27	122.36	118.60
21	AA	972	C	P-O3'-C3'	-6.27	112.18	119.70
53	CA	210	C	N1-C1'-C2'	6.27	122.15	114.00
22	DA	445	C	O4'-C1'-N1	6.27	113.22	108.20
22	DA	1158	C	C3'-C2'-C1'	6.27	106.52	101.50
22	DA	1256	G	P-O3'-C3'	-6.27	112.18	119.70
22	DA	2384	U	N1-C1'-C2'	6.27	122.15	114.00
22	DA	1400	U	N1-C1'-C2'	-6.26	105.11	112.00
21	AA	24	U	O4'-C1'-N1	6.26	113.21	108.20
22	DA	2714	G	P-O3'-C3'	-6.26	112.19	119.70
22	DA	1063	G	P-O3'-C3'	-6.26	112.19	119.70
21	AA	1303	C	P-O3'-C3'	-6.26	112.19	119.70
21	AA	1447	A	P-O3'-C3'	6.26	127.21	119.70
22	BA	1674	G	P-O3'-C3'	6.26	127.21	119.70
22	BA	1714	U	O4'-C1'-N1	-6.25	103.20	108.20
22	DA	1818	U	O4'-C1'-N1	6.25	113.20	108.20
21	AA	414	A	C3'-C2'-C1'	6.25	106.50	101.50
21	AA	452	A	C5-N7-C8	-6.25	100.77	103.90
21	AA	1068	G	N9-C1'-C2'	-6.25	105.12	112.00
22	BA	2267	A	C3'-C2'-C1'	6.25	106.50	101.50
22	DA	475	C	N1-C1'-C2'	-6.25	105.12	112.00
53	CA	486	U	P-O5'-C5'	-6.25	110.90	120.90
22	DA	1076	C	O4'-C1'-N1	6.25	113.20	108.20
22	BA	1274	A	P-O3'-C3'	6.25	127.20	119.70
22	DA	964	C	O4'-C1'-N1	6.25	113.20	108.20
22	DA	1327	A	C3'-C2'-C1'	6.25	106.50	101.50
22	DA	2148	G	P-O3'-C3'	-6.25	112.20	119.70
22	BA	1327	A	N1-C6-N6	6.25	122.35	118.60
22	DA	1738	G	P-O3'-C3'	6.25	127.19	119.70
53	CA	82	G	C3'-C2'-C1'	6.25	106.50	101.50
22	DA	303	G	C3'-C2'-C1'	6.24	106.49	101.50
22	DA	603	A	P-O3'-C3'	6.24	127.19	119.70
22	DA	762	U	P-O3'-C3'	6.24	127.19	119.70
22	DA	2880	C	C3'-C2'-C1'	6.24	106.49	101.50
22	BA	2250	G	N7-C8-N9	6.24	116.22	113.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	DA	2609	U	P-O3'-C3'	6.24	127.18	119.70
22	DA	2756	U	P-O3'-C3'	6.24	127.18	119.70
53	CA	30	U	P-O3'-C3'	6.24	127.18	119.70
53	CA	83	C	O4'-C1'-N1	6.24	113.19	108.20
53	CA	1395	C	P-O3'-C3'	-6.24	112.22	119.70
22	DA	788	A	P-O3'-C3'	6.24	127.18	119.70
22	DA	1971	U	P-O3'-C3'	-6.24	112.22	119.70
21	AA	935	A	C3'-C2'-C1'	6.23	106.49	101.50
21	AA	1453	G	P-O3'-C3'	-6.23	112.22	119.70
22	BA	636	G	P-O3'-C3'	6.23	127.18	119.70
22	BA	2520	C	N1-C1'-C2'	-6.23	105.14	112.00
53	CA	389	A	P-O3'-C3'	-6.23	112.22	119.70
22	DA	727	A	C3'-C2'-C1'	6.23	106.48	101.50
22	DA	2857	G	C2-N3-C4	-6.23	108.78	111.90
22	BA	633	A	C4-N9-C1'	6.23	137.51	126.30
22	DA	321	U	O4'-C1'-N1	6.23	113.18	108.20
21	AA	422	C	N1-C1'-C2'	6.22	122.09	114.00
22	DA	1314	C	N3-C2-O2	-6.22	117.54	121.90
22	BA	988	A	P-O3'-C3'	6.22	127.17	119.70
22	DA	1255	U	O4'-C1'-N1	6.22	113.18	108.20
22	DA	648	G	P-O3'-C3'	-6.22	112.23	119.70
22	BA	763	G	C3'-C2'-C1'	6.22	106.48	101.50
22	DA	670	A	O4'-C1'-N9	-6.22	103.22	108.20
21	AA	129	A	P-O3'-C3'	6.22	127.16	119.70
53	CA	119	A	P-O3'-C3'	6.22	127.16	119.70
22	DA	142	A	C3'-C2'-C1'	6.22	106.47	101.50
22	BA	1288	G	P-O5'-C5'	6.22	130.84	120.90
22	BA	1942	C	N1-C1'-C2'	-6.22	105.16	112.00
53	CA	170	U	O4'-C1'-N1	6.22	113.17	108.20
54	DB	27	C	C3'-C2'-C1'	6.22	106.47	101.50
22	BA	2505	G	P-O3'-C3'	6.21	127.16	119.70
21	AA	1446	A	P-O3'-C3'	6.21	127.16	119.70
22	BA	509	C	C6-N1-C2	-6.21	117.81	120.30
22	BA	1796	U	N1-C1'-C2'	-6.21	105.17	112.00
53	CA	1485	U	O4'-C1'-N1	6.21	113.17	108.20
22	BA	1204	A	P-O3'-C3'	6.21	127.15	119.70
23	BB	25	U	N1-C1'-C2'	-6.21	105.17	112.00
53	CA	978	A	P-O3'-C3'	-6.21	112.25	119.70
21	AA	199	A	C3'-C2'-C1'	6.21	106.46	101.50
53	CA	1147	C	P-O3'-C3'	-6.21	112.25	119.70
22	DA	2570	G	C5-C6-O6	6.20	132.32	128.60
21	AA	72	A	P-O3'-C3'	-6.20	112.26	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	2750	A	P-O3'-C3'	6.20	127.14	119.70
22	DA	1060	U	N1-C1'-C2'	6.20	122.06	114.00
21	AA	169	C	C6-N1-C1'	6.20	128.24	120.80
22	BA	369	U	N1-C1'-C2'	6.20	122.06	114.00
22	BA	2338	C	N1-C2-O2	-6.20	115.18	118.90
22	BA	2873	A	O4'-C1'-N9	6.20	113.16	108.20
21	AA	368	U	C3'-C2'-C1'	6.20	106.46	101.50
22	DA	1112	G	C3'-C2'-C1'	6.20	106.46	101.50
22	BA	1858	A	C3'-C2'-C1'	6.20	106.46	101.50
22	DA	1803	A	C3'-C2'-C1'	6.20	106.46	101.50
22	BA	482	A	N1-C6-N6	6.20	122.32	118.60
22	BA	1350	C	P-O3'-C3'	-6.20	112.27	119.70
22	DA	1919	A	N9-C1'-C2'	-6.20	105.19	112.00
21	AA	884	U	P-O3'-C3'	6.19	127.13	119.70
21	AA	1241	G	P-O3'-C3'	-6.19	112.27	119.70
22	BA	1525	A	C6-N1-C2	6.19	122.31	118.60
22	BA	2656	U	P-O3'-C3'	-6.19	112.27	119.70
22	DA	1901	A	C3'-C2'-C1'	6.19	106.45	101.50
53	CA	914	A	P-O3'-C3'	-6.19	112.27	119.70
22	BA	2424	C	O4'-C1'-N1	6.19	113.15	108.20
22	DA	1091	G	C3'-C2'-C1'	6.19	106.45	101.50
22	BA	1818	U	O4'-C1'-N1	6.19	113.15	108.20
22	DA	1865	U	N1-C1'-C2'	6.19	122.04	114.00
22	BA	177	G	O4'-C1'-N9	6.18	113.15	108.20
53	CA	14	U	C3'-C2'-C1'	6.18	106.45	101.50
22	DA	774	G	C4-N9-C1'	-6.18	118.46	126.50
53	CA	567	G	C3'-C2'-C1'	6.18	106.45	101.50
22	DA	670	A	P-O3'-C3'	6.18	127.12	119.70
21	AA	1395	C	N1-C1'-C2'	-6.18	105.20	112.00
22	BA	1633	G	P-O3'-C3'	6.18	127.12	119.70
53	CA	353	A	C3'-C2'-C1'	6.18	106.44	101.50
22	DA	150	U	O4'-C1'-N1	6.18	113.14	108.20
22	BA	974	G	C4-C5-N7	6.18	113.27	110.80
22	BA	1498	C	P-O3'-C3'	-6.18	112.29	119.70
53	CA	884	U	O4'-C1'-N1	6.18	113.14	108.20
53	CA	1229	A	C3'-C2'-C1'	6.18	106.44	101.50
22	DA	1458	U	P-O3'-C3'	6.18	127.11	119.70
22	DA	481	G	P-O3'-C3'	6.17	127.11	119.70
22	DA	1145	C	O4'-C1'-N1	6.17	113.14	108.20
22	BA	475	C	C3'-C2'-C1'	6.17	106.44	101.50
22	DA	2851	A	C3'-C2'-C1'	6.17	106.44	101.50
22	BA	1782	U	P-O3'-C3'	-6.17	112.30	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	DA	35	G	C3'-C2'-C1'	6.17	106.44	101.50
22	DA	704	G	P-O3'-C3'	6.17	127.11	119.70
22	DA	1965	C	P-O3'-C3'	-6.17	112.30	119.70
22	BA	800	A	P-O3'-C3'	6.17	127.10	119.70
53	CA	373	A	N9-C1'-C2'	-6.17	105.22	112.00
22	DA	216	A	P-O3'-C3'	-6.17	112.30	119.70
22	BA	1157	G	C3'-C2'-C1'	6.17	106.43	101.50
22	BA	529	A	P-O3'-C3'	6.16	127.10	119.70
22	BA	2585	U	O4'-C1'-N1	6.16	113.13	108.20
22	BA	2828	G	P-O3'-C3'	-6.16	112.30	119.70
22	BA	2888	C	P-O3'-C3'	-6.16	112.30	119.70
21	AA	816	A	C3'-C2'-C1'	6.16	106.43	101.50
22	BA	2035	G	O4'-C1'-N9	6.16	113.13	108.20
22	DA	2875	C	P-O3'-C3'	-6.16	112.31	119.70
22	BA	638	G	P-O3'-C3'	-6.16	112.31	119.70
22	DA	2216	G	C3'-C2'-C1'	6.16	106.43	101.50
22	DA	2440	C	C3'-C2'-C1'	6.16	106.43	101.50
54	DB	17	C	C3'-C2'-C1'	6.16	106.43	101.50
22	BA	984	A	N3-C4-C5	6.16	131.11	126.80
22	DA	740	C	C3'-C2'-C1'	6.16	106.43	101.50
21	AA	497	G	C3'-C2'-C1'	6.16	106.42	101.50
53	CA	328	C	O4'-C1'-N1	-6.16	103.28	108.20
22	DA	1206	G	P-O3'-C3'	-6.16	112.31	119.70
22	DA	2447	G	C5-C6-O6	-6.16	124.91	128.60
21	AA	365	U	C5-C6-N1	-6.15	119.62	122.70
22	BA	1459	G	P-O3'-C3'	-6.15	112.32	119.70
22	BA	2034	U	P-O3'-C3'	-6.15	112.32	119.70
22	BA	746	U	P-O3'-C3'	6.15	127.08	119.70
22	BA	865	C	N1-C2-O2	-6.15	115.21	118.90
22	BA	1182	G	P-O3'-C3'	-6.15	112.32	119.70
22	BA	2860	A	C4-N9-C1'	6.15	137.37	126.30
22	DA	265	A	O4'-C1'-N9	6.15	113.12	108.20
22	BA	1238	G	N9-C1'-C2'	-6.14	105.24	112.00
22	DA	1602	U	P-O3'-C3'	6.14	127.07	119.70
21	AA	1095	U	P-O3'-C3'	-6.14	112.33	119.70
21	AA	891	U	P-O3'-C3'	-6.14	112.33	119.70
53	CA	403	C	P-O3'-C3'	-6.14	112.33	119.70
22	BA	2493	U	P-O3'-C3'	-6.14	112.33	119.70
22	DA	373	U	O4'-C1'-N1	6.14	113.11	108.20
22	BA	508	A	P-O3'-C3'	-6.13	112.34	119.70
22	BA	2021	C	O3'-P-O5'	-6.13	92.35	104.00
22	BA	2089	C	P-O3'-C3'	-6.13	112.34	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	AA	452	A	C4-C5-C6	-6.13	113.93	117.00
22	BA	390	U	N1-C1'-C2'	6.13	121.97	114.00
22	BA	2033	A	O4'-C1'-N9	6.13	113.10	108.20
22	DA	963	U	O4'-C1'-N1	6.13	113.10	108.20
53	CA	48	C	O4'-C1'-N1	6.13	113.10	108.20
22	DA	1649	G	C3'-C2'-C1'	6.13	106.40	101.50
22	BA	633	A	C8-N9-C1'	-6.12	116.68	127.70
53	CA	1198	G	C3'-C2'-C1'	6.12	106.40	101.50
22	DA	227	A	P-O3'-C3'	6.12	127.05	119.70
22	BA	786	C	C6-N1-C2	6.12	122.75	120.30
22	BA	633	A	P-O3'-C3'	6.12	127.04	119.70
22	DA	445	C	C3'-C2'-C1'	6.12	106.40	101.50
22	DA	2136	G	C3'-C2'-C1'	6.12	106.40	101.50
21	AA	480	U	C2-N3-C4	-6.12	123.33	127.00
22	BA	829	A	P-O3'-C3'	6.12	127.04	119.70
22	DA	1451	C	P-O3'-C3'	6.12	127.04	119.70
22	BA	1288	G	O5'-P-OP2	-6.12	100.19	105.70
53	CA	960	U	P-O3'-C3'	6.12	127.04	119.70
22	DA	1900	A	P-O3'-C3'	6.12	127.04	119.70
22	DA	2094	A	C3'-C2'-C1'	6.11	106.39	101.50
21	AA	1288	A	P-O3'-C3'	-6.11	112.37	119.70
22	BA	2691	C	P-O5'-C5'	-6.11	111.12	120.90
53	CA	891	U	C3'-C2'-C1'	6.11	106.39	101.50
22	DA	2498	C	C3'-C2'-C1'	6.11	106.39	101.50
53	CA	734	G	C3'-C2'-C1'	6.11	106.39	101.50
22	DA	76	C	O4'-C1'-N1	6.11	113.09	108.20
21	AA	1102	A	P-O3'-C3'	-6.11	112.37	119.70
22	BA	763	G	P-O3'-C3'	-6.10	112.38	119.70
22	BA	509	C	C2-N1-C1'	6.10	125.51	118.80
22	BA	1180	U	C5-C4-O4	-6.10	122.24	125.90
53	CA	73	C	P-O3'-C3'	-6.10	112.38	119.70
22	DA	1866	A	P-O3'-C3'	-6.10	112.38	119.70
22	DA	1693	U	N1-C1'-C2'	6.10	121.93	114.00
22	DA	2458	G	C4-N9-C1'	6.10	134.43	126.50
22	BA	1159	U	O4'-C1'-N1	6.10	113.08	108.20
22	DA	1274	A	C3'-C2'-C1'	6.10	106.38	101.50
21	AA	1158	C	N1-C1'-C2'	-6.09	105.30	112.00
22	DA	2657	A	C3'-C2'-C1'	6.09	106.38	101.50
22	DA	397	U	N1-C1'-C2'	-6.09	105.30	112.00
22	BA	1510	G	P-O3'-C3'	-6.09	112.39	119.70
22	DA	1717	A	C3'-C2'-C1'	6.09	106.37	101.50
22	DA	2348	U	C3'-C2'-C1'	6.09	106.37	101.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	633	A	O4'-C1'-N9	-6.09	103.33	108.20
22	BA	2524	G	P-O3'-C3'	-6.09	112.39	119.70
22	BA	944	C	O4'-C1'-N1	6.09	113.07	108.20
21	AA	1141	C	O4'-C1'-N1	6.09	113.07	108.20
22	BA	2791	G	N9-C1'-C2'	-6.09	105.30	112.00
22	BA	2579	C	P-O3'-C3'	-6.08	112.40	119.70
53	CA	383	A	C3'-C2'-C1'	6.08	106.37	101.50
22	DA	324	A	P-O3'-C3'	-6.08	112.40	119.70
22	DA	1674	G	P-O3'-C3'	6.08	127.00	119.70
22	DA	2667	C	P-O3'-C3'	-6.08	112.40	119.70
22	BA	1798	U	C5-C4-O4	6.08	129.55	125.90
22	DA	1303	G	P-O3'-C3'	-6.08	112.41	119.70
22	DA	2143	C	O4'-C1'-N1	6.08	113.06	108.20
53	CA	1145	A	P-O3'-C3'	6.08	126.99	119.70
22	BA	302	C	C3'-C2'-C1'	6.08	106.36	101.50
22	BA	479	A	P-O3'-C3'	6.08	126.99	119.70
22	BA	2044	C	O4'-C1'-N1	-6.08	103.34	108.20
22	DA	2756	U	N1-C1'-C2'	6.08	121.90	114.00
21	AA	652	U	P-O3'-C3'	6.07	126.99	119.70
22	BA	1282	U	P-O5'-C5'	-6.07	111.19	120.90
22	BA	2880	C	P-O5'-C5'	-6.07	111.19	120.90
22	DA	1012	U	O4'-C1'-N1	6.07	113.06	108.20
22	BA	765	C	N1-C1'-C2'	-6.07	105.32	112.00
22	BA	1866	A	P-O3'-C3'	-6.07	112.42	119.70
22	DA	1021	A	C3'-C2'-C1'	6.07	106.36	101.50
22	BA	1784	A	C8-N9-C4	6.06	108.22	105.80
21	AA	1256	A	P-O3'-C3'	6.06	126.97	119.70
21	AA	1296	C	O4'-C1'-N1	6.06	113.05	108.20
22	DA	860	U	P-O3'-C3'	-6.06	112.43	119.70
22	DA	2226	C	C3'-C2'-C1'	6.06	106.35	101.50
22	BA	2297	A	N9-C1'-C2'	-6.06	105.34	112.00
53	CA	1505	G	C3'-C2'-C1'	6.06	106.35	101.50
21	AA	1381	U	C3'-C2'-C1'	6.06	106.34	101.50
53	CA	520	A	C3'-C2'-C1'	6.06	106.34	101.50
22	DA	482	A	P-O3'-C3'	-6.06	112.43	119.70
22	BA	1428	C	P-O3'-C3'	6.05	126.97	119.70
22	BA	2848	G	O4'-C1'-N9	6.05	113.04	108.20
22	DA	412	A	C3'-C2'-C1'	6.05	106.34	101.50
22	DA	1206	G	C3'-C2'-C1'	6.05	106.34	101.50
22	DA	2699	C	O4'-C1'-N1	6.05	113.04	108.20
22	BA	573	U	O4'-C1'-N1	6.05	113.04	108.20
22	DA	628	G	C3'-C2'-C1'	6.05	106.34	101.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	AA	198	G	C3'-C2'-C1'	6.05	106.34	101.50
21	AA	813	U	N1-C1'-C2'	-6.05	105.35	112.00
22	BA	226	A	P-O3'-C3'	6.05	126.95	119.70
22	BA	961	C	O3'-P-O5'	-6.05	92.51	104.00
22	BA	1648	U	N1-C1'-C2'	-6.05	105.35	112.00
22	BA	2547	A	P-O5'-C5'	-6.05	111.23	120.90
53	CA	1507	A	N9-C1'-C2'	-6.05	105.35	112.00
22	DA	1929	G	P-O3'-C3'	6.05	126.95	119.70
21	AA	78	A	C5-C6-N1	6.04	120.72	117.70
22	BA	446	G	P-O3'-C3'	6.04	126.95	119.70
22	BA	747	U	C3'-C2'-C1'	6.04	106.33	101.50
22	BA	2148	G	C3'-C2'-C1'	6.04	106.33	101.50
22	BA	2285	C	P-O5'-C5'	-6.04	111.23	120.90
22	DA	576	U	C3'-C2'-C1'	6.04	106.33	101.50
22	DA	774	G	C8-N9-C1'	6.04	134.86	127.00
22	DA	961	C	N1-C1'-C2'	6.04	121.85	114.00
21	AA	110	C	C3'-C2'-C1'	6.04	106.33	101.50
21	AA	688	G	P-O3'-C3'	-6.04	112.45	119.70
22	BA	1768	C	P-O5'-C5'	-6.04	111.24	120.90
53	CA	704	A	C3'-C2'-C1'	6.04	106.33	101.50
22	DA	1803	A	P-O3'-C3'	-6.04	112.45	119.70
22	DA	2682	A	P-O3'-C3'	-6.04	112.45	119.70
22	DA	1675	C	C3'-C2'-C1'	6.04	106.33	101.50
21	AA	467	U	N1-C1'-C2'	-6.04	105.36	112.00
22	DA	1396	U	P-O3'-C3'	6.03	126.94	119.70
21	AA	1125	U	O4'-C1'-N1	6.03	113.02	108.20
53	CA	1530	G	P-O3'-C3'	-6.03	112.46	119.70
22	DA	604	G	P-O3'-C3'	-6.03	112.46	119.70
22	DA	1802	A	P-O3'-C3'	-6.03	112.46	119.70
22	BA	805	G	P-O5'-C5'	-6.03	111.25	120.90
53	CA	199	A	C3'-C2'-C1'	6.03	106.32	101.50
21	AA	1140	C	N1-C1'-C2'	-6.03	105.37	112.00
23	BB	13	G	P-O3'-C3'	-6.03	112.47	119.70
53	CA	1365	G	C3'-C2'-C1'	6.03	106.32	101.50
22	DA	1291	C	C3'-C2'-C1'	6.03	106.32	101.50
54	DB	42	C	P-O3'-C3'	-6.02	112.47	119.70
22	DA	2093	G	N9-C1'-C2'	-6.02	105.38	112.00
21	AA	275	G	C8-N9-C4	-6.02	103.99	106.40
21	AA	486	U	P-O3'-C3'	-6.02	112.48	119.70
22	BA	1816	C	C3'-C2'-C1'	6.02	106.32	101.50
22	BA	1932	A	P-O3'-C3'	-6.02	112.48	119.70
21	AA	1085	U	N1-C1'-C2'	6.01	121.82	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	DA	729	G	P-O3'-C3'	-6.01	112.48	119.70
53	CA	1287	A	C3'-C2'-C1'	6.01	106.31	101.50
22	BA	752	A	C1'-O4'-C4'	-6.01	105.09	109.90
22	BA	2344	U	N1-C1'-C2'	6.01	121.81	114.00
22	DA	1049	C	P-O3'-C3'	-6.01	112.49	119.70
22	BA	1696	G	N9-C1'-C2'	-6.01	105.39	112.00
22	BA	2347	C	C3'-C2'-C1'	6.01	106.31	101.50
21	AA	596	A	C3'-C2'-C1'	6.01	106.31	101.50
22	BA	2468	A	P-O3'-C3'	6.01	126.91	119.70
53	CA	1127	G	C3'-C2'-C1'	6.01	106.31	101.50
22	BA	1610	A	O4'-C1'-N9	-6.00	103.40	108.20
22	BA	2151	U	O4'-C1'-N1	6.00	113.00	108.20
22	BA	174	U	P-O3'-C3'	-6.00	112.50	119.70
22	DA	1821	A	P-O3'-C3'	-6.00	112.50	119.70
22	DA	2520	C	P-O3'-C3'	-6.00	112.50	119.70
22	BA	630	G	N1-C2-N3	6.00	127.50	123.90
22	BA	1112	G	N9-C1'-C2'	-6.00	105.40	112.00
22	BA	1931	U	C3'-C2'-C1'	6.00	106.30	101.50
53	CA	438	U	O4'-C1'-N1	6.00	113.00	108.20
22	DA	1113	U	N1-C1'-C2'	-6.00	105.40	112.00
22	DA	2837	A	P-O3'-C3'	-6.00	112.50	119.70
22	BA	1499	C	C3'-C2'-C1'	6.00	106.30	101.50
21	AA	97	G	C3'-C2'-C1'	6.00	106.30	101.50
22	BA	196	A	O4'-C1'-N9	6.00	113.00	108.20
53	CA	1202	U	C3'-C2'-C1'	6.00	106.30	101.50
22	BA	272	A	C6-N1-C2	-6.00	115.00	118.60
22	BA	914	G	N9-C1'-C2'	-6.00	105.40	112.00
22	DA	1802	A	C3'-C2'-C1'	6.00	106.30	101.50
22	DA	1857	G	P-O3'-C3'	6.00	126.90	119.70
22	BA	273	G	C3'-C2'-C1'	5.99	106.29	101.50
22	DA	1554	U	O4'-C1'-N1	5.99	113.00	108.20
22	BA	373	U	P-O3'-C3'	-5.99	112.51	119.70
22	BA	2149	U	C3'-C2'-C1'	5.99	106.29	101.50
22	DA	1286	A	P-O3'-C3'	5.99	126.89	119.70
22	BA	162	U	O4'-C1'-N1	5.99	112.99	108.20
22	BA	860	U	P-O3'-C3'	-5.99	112.51	119.70
22	DA	1326	U	N1-C1'-C2'	-5.99	105.41	112.00
22	DA	2063	C	C3'-C2'-C1'	5.99	106.29	101.50
21	AA	1241	G	C3'-C2'-C1'	5.99	106.29	101.50
22	BA	630	G	N9-C1'-C2'	-5.99	105.41	112.00
53	CA	316	C	P-O3'-C3'	-5.99	112.52	119.70
22	DA	1558	C	N1-C1'-C2'	5.99	121.78	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
54	DB	43	C	O4'-C1'-N1	5.99	112.99	108.20
23	BB	45	A	P-O3'-C3'	-5.99	112.52	119.70
22	DA	239	C	O4'-C1'-N1	5.99	112.99	108.20
22	DA	959	A	P-O3'-C3'	-5.99	112.52	119.70
22	DA	1778	U	O4'-C1'-N1	5.99	112.99	108.20
22	DA	2457	U	O4'-C1'-N1	5.98	112.99	108.20
22	BA	1785	A	C5-N7-C8	-5.98	100.91	103.90
22	DA	1722	A	P-O3'-C3'	-5.98	112.52	119.70
22	DA	2403	C	C3'-C2'-C1'	5.98	106.29	101.50
22	DA	783	A	C3'-C2'-C1'	5.98	106.28	101.50
22	DA	1313	U	C3'-C2'-C1'	5.98	106.28	101.50
22	BA	2846	G	P-O5'-C5'	-5.98	111.33	120.90
22	DA	1247	A	O4'-C1'-N9	5.98	112.98	108.20
22	DA	2214	C	C3'-C2'-C1'	5.98	106.28	101.50
22	DA	61	C	C3'-C2'-C1'	5.97	106.28	101.50
22	BA	2435	A	C5-C6-N1	-5.97	114.71	117.70
22	DA	103	A	C3'-C2'-C1'	5.97	106.28	101.50
22	DA	1088	A	C5-C6-N1	-5.97	114.71	117.70
22	BA	388	G	C3'-C2'-C1'	5.97	106.28	101.50
22	BA	919	U	O4'-C1'-N1	-5.97	103.42	108.20
22	DA	2501	C	N1-C1'-C2'	5.97	121.76	114.00
22	DA	2307	G	P-O3'-C3'	5.97	126.86	119.70
21	AA	1303	C	C3'-C2'-C1'	5.97	106.27	101.50
22	DA	229	C	P-O3'-C3'	-5.97	112.54	119.70
22	BA	435	C	C3'-C2'-C1'	5.96	106.27	101.50
22	BA	2424	C	C5-C4-N4	5.96	124.38	120.20
22	BA	2777	G	O4'-C1'-N9	-5.96	103.43	108.20
53	CA	577	G	C3'-C2'-C1'	5.96	106.27	101.50
21	AA	131	A	P-O3'-C3'	-5.96	112.55	119.70
21	AA	245	U	P-O3'-C3'	-5.96	112.55	119.70
22	BA	2615	U	C3'-C2'-C1'	5.96	106.27	101.50
22	DA	223	A	C3'-C2'-C1'	5.96	106.26	101.50
22	DA	2682	A	C3'-C2'-C1'	5.96	106.27	101.50
22	BA	507	A	P-O3'-C3'	-5.96	112.55	119.70
22	DA	1429	G	P-O3'-C3'	-5.96	112.55	119.70
22	DA	2616	C	P-O3'-C3'	-5.96	112.55	119.70
22	DA	605	G	C3'-C2'-C1'	5.95	106.26	101.50
53	CA	248	C	P-O3'-C3'	-5.95	112.56	119.70
22	DA	391	A	C3'-C2'-C1'	5.95	106.26	101.50
22	DA	2060	A	P-O3'-C3'	5.95	126.84	119.70
22	DA	2604	U	O4'-C1'-N1	5.95	112.96	108.20
22	BA	835	C	N1-C1'-C2'	-5.95	105.45	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	2573	C	C3'-C2'-C1'	5.95	106.26	101.50
22	BA	566	U	P-O5'-C5'	-5.95	111.38	120.90
22	BA	1885	A	P-O3'-C3'	-5.95	112.56	119.70
22	BA	2589	A	C6-N1-C2	5.95	122.17	118.60
53	CA	71	A	C3'-C2'-C1'	5.95	106.26	101.50
22	DA	915	C	C3'-C2'-C1'	5.95	106.26	101.50
22	DA	976	G	C3'-C2'-C1'	5.95	106.26	101.50
22	DA	1314	C	C3'-C2'-C1'	5.95	106.26	101.50
21	AA	973	G	P-O3'-C3'	5.94	126.83	119.70
53	CA	316	C	C3'-C2'-C1'	5.94	106.25	101.50
53	CA	414	A	C3'-C2'-C1'	5.94	106.25	101.50
53	CA	719	C	O4'-C1'-N1	5.94	112.95	108.20
21	AA	87	C	C3'-C2'-C1'	5.94	106.25	101.50
22	BA	322	A	P-O5'-C5'	-5.94	111.40	120.90
21	AA	1323	G	C3'-C2'-C1'	5.94	106.25	101.50
53	CA	213	G	N9-C1'-C2'	-5.94	105.47	112.00
22	DA	746	U	N1-C1'-C2'	5.93	121.72	114.00
21	AA	74	A	N9-C1'-C2'	-5.93	105.47	112.00
21	AA	501	C	C3'-C2'-C1'	5.93	106.25	101.50
22	BA	1168	G	O4'-C1'-N9	-5.93	103.45	108.20
22	DA	1856	U	O4'-C1'-N1	5.93	112.95	108.20
22	DA	2024	G	N9-C1'-C2'	-5.93	105.47	112.00
22	DA	1669	A	C3'-C2'-C1'	5.93	106.25	101.50
22	BA	1023	U	C3'-C2'-C1'	5.93	106.24	101.50
22	BA	1184	U	P-O3'-C3'	5.93	126.81	119.70
21	AA	976	G	C3'-C2'-C1'	5.93	106.24	101.50
22	BA	499	U	O4'-C1'-N1	-5.93	103.46	108.20
22	DA	230	G	C3'-C2'-C1'	5.93	106.24	101.50
22	BA	1238	G	P-O3'-C3'	-5.92	112.59	119.70
22	DA	1249	U	O4'-C1'-N1	5.92	112.94	108.20
22	BA	462	C	C6-N1-C2	5.92	122.67	120.30
21	AA	1141	C	C3'-C2'-C1'	5.92	106.24	101.50
22	DA	1649	G	N9-C1'-C2'	-5.92	105.49	112.00
21	AA	108	G	O4'-C1'-N9	5.92	112.94	108.20
53	CA	1141	C	P-O3'-C3'	-5.92	112.59	119.70
21	AA	1283	U	C3'-C2'-C1'	5.92	106.23	101.50
53	CA	239	U	O4'-C1'-N1	-5.92	103.47	108.20
53	CA	1184	G	C3'-C2'-C1'	5.92	106.23	101.50
21	AA	734	G	P-O3'-C3'	-5.92	112.60	119.70
22	BA	2250	G	C6-C5-N7	-5.92	126.85	130.40
22	DA	1089	A	P-O3'-C3'	5.92	126.80	119.70
21	AA	1123	U	O4'-C1'-N1	5.92	112.93	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	826	U	C2-N3-C4	-5.91	123.45	127.00
22	BA	2635	A	P-O5'-C5'	-5.91	111.44	120.90
53	CA	501	C	C3'-C2'-C1'	5.91	106.23	101.50
22	DA	946	C	P-O3'-C3'	-5.91	112.61	119.70
22	DA	2459	A	C3'-C2'-C1'	5.91	106.23	101.50
22	BA	687	C	C3'-C2'-C1'	5.91	106.23	101.50
22	BA	1157	G	O5'-P-OP2	-5.91	100.38	105.70
22	DA	437	U	O4'-C1'-N1	5.91	112.93	108.20
22	DA	1157	G	C3'-C2'-C1'	5.91	106.23	101.50
21	AA	78	A	N3-C4-N9	5.91	132.13	127.40
21	AA	1160	G	N9-C1'-C2'	-5.91	105.50	112.00
22	BA	2879	A	O4'-C1'-N9	5.91	112.93	108.20
53	CA	364	A	P-O3'-C3'	5.91	126.79	119.70
22	BA	2028	U	N1-C2-N3	-5.91	111.36	114.90
21	AA	1197	A	P-O3'-C3'	-5.91	112.61	119.70
22	DA	2226	C	P-O3'-C3'	-5.91	112.61	119.70
21	AA	519	C	C3'-C2'-C1'	5.90	106.22	101.50
22	BA	752	A	N9-C1'-C2'	5.90	121.67	114.00
22	DA	749	A	P-O3'-C3'	-5.90	112.62	119.70
22	DA	1511	G	C3'-C2'-C1'	5.90	106.22	101.50
22	DA	2859	G	P-O3'-C3'	5.90	126.78	119.70
53	CA	73	C	C3'-C2'-C1'	5.90	106.22	101.50
54	DB	110	C	P-O3'-C3'	-5.90	112.62	119.70
53	CA	452	A	C3'-C2'-C1'	5.90	106.22	101.50
53	CA	1448	C	O4'-C1'-N1	5.90	112.92	108.20
21	AA	1320	C	C3'-C2'-C1'	5.89	106.22	101.50
22	BA	783	A	N9-C4-C5	-5.89	103.44	105.80
22	BA	1326	U	O4'-C1'-N1	5.89	112.92	108.20
22	BA	1340	U	O4'-C1'-N1	5.89	112.92	108.20
53	CA	347	G	P-O3'-C3'	-5.89	112.63	119.70
53	CA	939	G	O4'-C1'-N9	5.89	112.92	108.20
22	DA	395	U	N1-C1'-C2'	5.89	121.66	114.00
22	DA	2289	G	C3'-C2'-C1'	5.89	106.22	101.50
22	BA	1329	U	N1-C1'-C2'	5.89	121.66	114.00
22	DA	705	A	N9-C1'-C2'	-5.89	105.52	112.00
21	AA	97	G	P-O3'-C3'	-5.89	112.63	119.70
22	BA	491	G	C3'-C2'-C1'	5.89	106.21	101.50
22	BA	752	A	N7-C8-N9	5.89	116.75	113.80
22	BA	962	G	P-O3'-C3'	-5.89	112.63	119.70
21	AA	468	A	C3'-C2'-C1'	5.89	106.21	101.50
22	DA	1787	A	P-O3'-C3'	-5.89	112.63	119.70
53	CA	1226	C	N1-C1'-C2'	5.89	121.65	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	DA	491	G	C3'-C2'-C1'	5.89	106.21	101.50
21	AA	344	A	O4'-C1'-N9	5.88	112.91	108.20
22	BA	35	G	C3'-C2'-C1'	5.88	106.20	101.50
22	DA	1437	C	O4'-C1'-N1	5.88	112.91	108.20
22	DA	2216	G	P-O3'-C3'	-5.88	112.64	119.70
22	DA	1276	A	P-O3'-C3'	-5.88	112.64	119.70
22	DA	2324	U	P-O3'-C3'	5.88	126.76	119.70
22	BA	2589	A	C5-C6-N1	-5.88	114.76	117.70
53	CA	182	A	C5-C6-N6	5.88	128.40	123.70
22	BA	1429	G	C3'-C2'-C1'	5.88	106.20	101.50
22	BA	1461	C	C3'-C2'-C1'	5.88	106.20	101.50
22	DA	273	G	C3'-C2'-C1'	5.88	106.20	101.50
22	DA	390	U	N1-C1'-C2'	5.88	121.64	114.00
22	DA	1345	C	O4'-C1'-N1	5.88	112.90	108.20
21	AA	387	U	O4'-C1'-N1	5.88	112.90	108.20
53	CA	480	U	O4'-C1'-N1	5.88	112.90	108.20
22	DA	672	C	C6-N1-C2	-5.87	117.95	120.30
22	DA	1600	C	O4'-C1'-N1	-5.87	103.50	108.20
22	BA	765	C	P-O3'-C3'	-5.87	112.65	119.70
22	BA	1806	C	P-O3'-C3'	-5.87	112.65	119.70
22	BA	2322	A	P-O3'-C3'	-5.87	112.66	119.70
22	BA	996	A	O5'-P-OP2	-5.87	100.42	105.70
22	BA	1171	G	P-O3'-C3'	5.87	126.74	119.70
22	DA	391	A	N9-C1'-C2'	-5.87	105.55	112.00
22	DA	1010	A	C3'-C2'-C1'	5.87	106.19	101.50
22	DA	2860	A	C4-C5-C6	5.87	119.93	117.00
22	BA	1734	G	C3'-C2'-C1'	5.87	106.19	101.50
22	BA	1311	G	N3-C4-C5	5.87	131.53	128.60
53	CA	1202	U	O4'-C1'-N1	5.87	112.89	108.20
22	DA	163	C	N1-C1'-C2'	-5.87	105.55	112.00
22	DA	1304	A	C3'-C2'-C1'	5.87	106.19	101.50
22	DA	2214	C	P-O3'-C3'	-5.87	112.66	119.70
53	CA	368	U	N1-C1'-C2'	-5.86	105.55	112.00
22	DA	1024	G	C3'-C2'-C1'	5.86	106.19	101.50
21	AA	198	G	P-O3'-C3'	-5.86	112.67	119.70
53	CA	534	U	P-O3'-C3'	-5.86	112.67	119.70
53	CA	697	U	O4'-C1'-N1	5.86	112.89	108.20
22	DA	1945	G	C3'-C2'-C1'	5.86	106.19	101.50
22	DA	2387	U	N1-C1'-C2'	-5.86	105.55	112.00
22	BA	143	C	C3'-C2'-C1'	5.86	106.19	101.50
22	BA	1330	C	C3'-C2'-C1'	5.86	106.19	101.50
22	BA	1478	G	C5-C6-O6	5.86	132.11	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	2860	A	N3-C4-N9	5.86	132.09	127.40
22	BA	680	C	O4'-C1'-N1	-5.86	103.52	108.20
22	BA	1884	G	O4'-C1'-N9	5.86	112.88	108.20
22	DA	1113	U	P-O3'-C3'	-5.86	112.67	119.70
22	BA	1993	U	C3'-C2'-C1'	5.85	106.18	101.50
22	DA	105	C	O4'-C1'-N1	5.85	112.88	108.20
22	DA	1512	C	O4'-C1'-N1	5.85	112.88	108.20
54	DB	12	C	O4'-C1'-N1	-5.85	103.52	108.20
22	DA	1399	C	P-O3'-C3'	-5.85	112.68	119.70
21	AA	316	C	C3'-C2'-C1'	5.85	106.18	101.50
22	BA	671	C	P-O5'-C5'	-5.85	111.54	120.90
22	BA	782	A	P-O3'-C3'	5.85	126.72	119.70
22	DA	2447	G	N3-C4-C5	-5.85	125.67	128.60
22	BA	670	A	O4'-C1'-N9	-5.85	103.52	108.20
21	AA	1362	A	C6-N1-C2	-5.85	115.09	118.60
22	BA	726	G	P-O3'-C3'	5.85	126.72	119.70
22	DA	443	A	C3'-C2'-C1'	5.85	106.18	101.50
22	DA	1480	C	O4'-C1'-N1	5.85	112.88	108.20
53	CA	224	U	O4'-C1'-N1	5.84	112.88	108.20
53	CA	643	C	C3'-C2'-C1'	5.84	106.18	101.50
53	CA	934	C	P-O3'-C3'	5.84	126.71	119.70
22	DA	687	C	C3'-C2'-C1'	5.84	106.18	101.50
22	DA	2520	C	C3'-C2'-C1'	5.84	106.17	101.50
22	BA	763	G	N7-C8-N9	5.84	116.02	113.10
24	BC	109	LEU	CA-CB-CG	5.84	128.74	115.30
53	CA	276	G	N9-C1'-C2'	-5.84	105.57	112.00
53	CA	519	C	C3'-C2'-C1'	5.84	106.17	101.50
21	AA	170	U	O4'-C1'-N1	5.84	112.87	108.20
53	CA	765	G	N9-C1'-C2'	-5.84	105.58	112.00
22	DA	1648	U	P-O3'-C3'	-5.84	112.69	119.70
22	DA	2895	G	P-O3'-C3'	-5.84	112.69	119.70
22	BA	1733	G	C3'-C2'-C1'	5.84	106.17	101.50
53	CA	815	A	P-O3'-C3'	5.84	126.70	119.70
22	DA	1539	U	C3'-C2'-C1'	5.84	106.17	101.50
22	DA	1838	C	N1-C1'-C2'	5.84	121.59	114.00
22	BA	2451	A	C8-N9-C1'	5.83	138.20	127.70
22	DA	1267	U	O4'-C1'-N1	5.83	112.87	108.20
21	AA	351	G	C1'-O4'-C4'	-5.83	105.24	109.90
22	BA	1128	G	O4'-C1'-N9	5.83	112.86	108.20
21	AA	1169	A	C3'-C2'-C1'	5.83	106.16	101.50
22	BA	677	A	C6-N1-C2	-5.83	115.10	118.60
22	BA	1125	G	C2-N3-C4	-5.83	108.98	111.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	1865	U	N1-C2-N3	5.83	118.40	114.90
53	CA	169	C	C5-C4-N4	5.83	124.28	120.20
22	DA	754	U	C3'-C2'-C1'	5.83	106.16	101.50
22	DA	1695	G	C3'-C2'-C1'	5.83	106.16	101.50
22	DA	2034	U	N1-C1'-C2'	-5.83	105.59	112.00
22	BA	523	C	N1-C1'-C2'	-5.83	105.59	112.00
22	BA	1229	C	N1-C2-O2	-5.83	115.40	118.90
22	BA	324	A	N9-C1'-C2'	-5.83	105.59	112.00
53	CA	1319	A	P-O3'-C3'	5.83	126.69	119.70
53	CA	1366	C	O4'-C1'-N1	5.83	112.86	108.20
22	DA	2348	U	P-O3'-C3'	-5.83	112.71	119.70
22	BA	24	G	P-O3'-C3'	5.82	126.69	119.70
53	CA	497	G	C3'-C2'-C1'	5.82	106.16	101.50
22	DA	2313	C	P-O3'-C3'	-5.82	112.71	119.70
22	BA	2419	U	N1-C1'-C2'	-5.82	105.60	112.00
22	BA	2499	C	N3-C2-O2	5.82	125.97	121.90
22	BA	2821	A	N9-C1'-C2'	-5.82	105.60	112.00
22	DA	424	G	N9-C1'-C2'	-5.82	105.60	112.00
53	CA	210	C	C2-N1-C1'	5.82	125.20	118.80
21	AA	699	C	O4'-C1'-N1	5.82	112.85	108.20
22	DA	1346	G	C3'-C2'-C1'	5.82	106.15	101.50
22	DA	2276	G	C3'-C2'-C1'	5.82	106.15	101.50
22	BA	1716	U	C3'-C2'-C1'	5.81	106.15	101.50
22	BA	243	U	C3'-C2'-C1'	5.81	106.15	101.50
21	AA	1191	A	C3'-C2'-C1'	5.81	106.15	101.50
22	DA	1267	U	P-O3'-C3'	-5.81	112.73	119.70
53	CA	555	U	P-O3'-C3'	-5.81	112.73	119.70
22	DA	1144	A	P-O3'-C3'	-5.81	112.73	119.70
21	AA	252	U	P-O3'-C3'	-5.80	112.73	119.70
22	BA	763	G	C4-N9-C1'	5.80	134.05	126.50
22	BA	2817	U	P-O5'-C5'	-5.80	111.61	120.90
53	CA	1142	G	C3'-C2'-C1'	5.80	106.14	101.50
22	DA	1439	A	C4-C5-C6	5.80	119.90	117.00
22	DA	2267	A	C4-C5-N7	5.80	113.60	110.70
21	AA	966	G	P-O5'-C5'	-5.80	111.61	120.90
22	BA	379	G	C5-C6-O6	-5.80	125.12	128.60
22	BA	2451	A	N9-C4-C5	5.80	108.12	105.80
22	BA	671	C	C3'-C2'-C1'	5.80	106.14	101.50
22	BA	2239	G	O5'-P-OP2	-5.80	100.48	105.70
22	DA	2289	G	P-O3'-C3'	-5.80	112.74	119.70
22	DA	2875	C	O4'-C1'-N1	5.80	112.84	108.20
22	DA	1865	U	C2-N3-C4	-5.79	123.52	127.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	AA	1372	U	O4'-C1'-N1	5.79	112.83	108.20
22	BA	2364	C	C6-N1-C2	5.79	122.62	120.30
53	CA	1033	G	C3'-C2'-C1'	5.79	106.14	101.50
22	DA	638	G	C3'-C2'-C1'	5.79	106.14	101.50
22	DA	1734	G	C3'-C2'-C1'	5.79	106.14	101.50
21	AA	466	A	P-O3'-C3'	5.79	126.65	119.70
22	BA	729	G	P-O5'-C5'	-5.79	111.63	120.90
21	AA	131	A	C3'-C2'-C1'	5.79	106.13	101.50
22	DA	1478	G	N9-C1'-C2'	-5.79	105.63	112.00
22	DA	2800	A	N9-C1'-C2'	-5.79	105.63	112.00
21	AA	453	G	P-O3'-C3'	-5.79	112.75	119.70
22	BA	1839	G	P-O5'-C5'	-5.79	111.64	120.90
22	BA	1966	A	P-O5'-C5'	-5.79	111.64	120.90
22	DA	335	C	C3'-C2'-C1'	5.79	106.13	101.50
22	DA	449	A	C3'-C2'-C1'	5.79	106.13	101.50
22	BA	385	C	P-O3'-C3'	5.79	126.64	119.70
22	DA	575	A	C3'-C2'-C1'	5.79	106.13	101.50
22	DA	2136	G	P-O3'-C3'	-5.79	112.76	119.70
21	AA	315	A	P-O3'-C3'	5.79	126.64	119.70
21	AA	495	A	P-O3'-C3'	5.79	126.64	119.70
22	BA	848	C	C6-N1-C2	5.79	122.61	120.30
22	BA	2063	C	N1-C1'-C2'	-5.79	105.64	112.00
22	DA	2439	A	P-O3'-C3'	5.79	126.64	119.70
22	BA	687	C	P-O3'-C3'	-5.78	112.76	119.70
22	DA	1866	A	C3'-C2'-C1'	5.78	106.13	101.50
21	AA	48	C	O4'-C1'-N1	5.78	112.83	108.20
22	BA	1524	G	N9-C1'-C2'	-5.78	105.64	112.00
22	BA	2778	A	P-O3'-C3'	5.78	126.64	119.70
22	BA	962	G	N3-C4-N9	-5.78	122.53	126.00
22	BA	1314	C	O4'-C1'-N1	-5.78	103.58	108.20
22	DA	861	A	C3'-C2'-C1'	5.78	106.12	101.50
22	BA	2385	C	P-O3'-C3'	-5.78	112.77	119.70
22	DA	1326	U	O4'-C1'-N1	5.78	112.82	108.20
21	AA	982	U	P-O3'-C3'	5.78	126.63	119.70
21	AA	1286	U	N1-C1'-C2'	5.78	121.51	114.00
22	BA	1537	G	C3'-C2'-C1'	5.78	106.12	101.50
22	DA	36	G	P-O3'-C3'	-5.78	112.77	119.70
22	DA	2753	A	C3'-C2'-C1'	5.78	106.12	101.50
21	AA	468	A	P-O3'-C3'	-5.77	112.77	119.70
21	AA	500	G	N9-C1'-C2'	-5.77	105.65	112.00
22	BA	1328	A	P-O3'-C3'	5.77	126.63	119.70
22	BA	1886	U	C2-N1-C1'	5.77	124.63	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	CA	250	A	P-O3'-C3'	5.77	126.63	119.70
22	DA	2023	C	C3'-C2'-C1'	5.77	106.12	101.50
22	DA	2615	U	C3'-C2'-C1'	5.77	106.12	101.50
22	BA	2830	C	P-O5'-C5'	-5.77	111.67	120.90
53	CA	653	U	O4'-C1'-N1	5.77	112.82	108.20
21	AA	984	C	P-O3'-C3'	-5.77	112.78	119.70
22	BA	2311	A	P-O5'-C5'	-5.77	111.67	120.90
53	CA	14	U	P-O3'-C3'	-5.77	112.78	119.70
53	CA	198	G	N9-C1'-C2'	-5.77	105.66	112.00
22	DA	52	A	C3'-C2'-C1'	5.77	106.12	101.50
22	BA	1287	A	C3'-C2'-C1'	5.77	106.11	101.50
22	BA	2849	U	O4'-C1'-N1	-5.77	103.59	108.20
22	DA	1491	G	C3'-C2'-C1'	5.77	106.11	101.50
53	CA	247	G	C3'-C2'-C1'	5.77	106.11	101.50
22	DA	685	A	P-O3'-C3'	5.77	126.62	119.70
22	BA	1761	C	O4'-C1'-N1	-5.76	103.59	108.20
22	BA	2712	C	N1-C1'-C2'	5.76	121.49	114.00
53	CA	1381	U	C3'-C2'-C1'	5.76	106.11	101.50
22	DA	1612	C	C3'-C2'-C1'	5.76	106.11	101.50
22	DA	2847	U	P-O3'-C3'	5.76	126.62	119.70
22	BA	1564	C	N1-C1'-C2'	5.76	121.49	114.00
22	DA	1144	A	C3'-C2'-C1'	5.76	106.11	101.50
22	BA	491	G	P-O3'-C3'	-5.76	112.79	119.70
22	BA	2030	A	O4'-C1'-N9	5.76	112.81	108.20
22	DA	990	A	C3'-C2'-C1'	5.76	106.11	101.50
22	DA	2504	U	C3'-C2'-C1'	5.76	106.11	101.50
21	AA	801	U	P-O3'-C3'	-5.76	112.79	119.70
22	BA	2766	A	O4'-C1'-N9	-5.76	103.59	108.20
53	CA	1146	A	C3'-C2'-C1'	5.76	106.11	101.50
22	BA	479	A	O4'-C1'-N9	5.76	112.81	108.20
53	CA	458	U	N1-C1'-C2'	5.76	121.48	114.00
22	DA	1247	A	P-O3'-C3'	5.76	126.61	119.70
22	DA	1458	U	O4'-C1'-N1	5.76	112.81	108.20
22	DA	2567	G	C3'-C2'-C1'	5.76	106.11	101.50
22	BA	2325	G	C3'-C2'-C1'	5.75	106.10	101.50
53	CA	15	G	C3'-C2'-C1'	5.75	106.10	101.50
22	DA	1569	A	P-O3'-C3'	-5.75	112.79	119.70
22	BA	28	A	P-O5'-C5'	-5.75	111.69	120.90
22	BA	933	A	C3'-C2'-C1'	5.75	106.10	101.50
22	DA	2868	A	C3'-C2'-C1'	5.75	106.10	101.50
22	BA	230	G	P-O3'-C3'	-5.75	112.80	119.70
22	BA	865	C	O4'-C1'-N1	5.75	112.80	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	973	A	P-O3'-C3'	5.75	126.60	119.70
22	DA	1635	A	P-O5'-C5'	-5.75	111.70	120.90
22	DA	1839	G	C3'-C2'-C1'	5.75	106.10	101.50
22	BA	1885	A	C3'-C2'-C1'	5.75	106.10	101.50
22	DA	1477	A	C3'-C2'-C1'	5.75	106.10	101.50
22	DA	2239	G	P-O3'-C3'	-5.75	112.80	119.70
22	BA	1326	U	C3'-C2'-C1'	5.75	106.10	101.50
22	DA	2215	C	P-O3'-C3'	-5.75	112.80	119.70
21	AA	268	U	C3'-C2'-C1'	5.75	106.10	101.50
21	AA	501	C	P-O3'-C3'	-5.75	112.81	119.70
22	BA	1169	A	C6-N1-C2	-5.75	115.15	118.60
53	CA	133	U	O4'-C1'-N1	5.75	112.80	108.20
21	AA	184	G	C3'-C2'-C1'	5.74	106.09	101.50
22	BA	12	U	C2-N1-C1'	5.74	124.59	117.70
22	BA	729	G	C3'-C2'-C1'	5.74	106.09	101.50
22	DA	1674	G	C4-N9-C1'	5.74	133.97	126.50
22	BA	1402	U	C5-C4-O4	5.74	129.34	125.90
22	DA	802	A	C3'-C2'-C1'	5.74	106.09	101.50
21	AA	817	C	P-O3'-C3'	5.74	126.59	119.70
22	BA	1130	U	N1-C2-O2	5.74	126.82	122.80
21	AA	1530	G	C3'-C2'-C1'	5.74	106.09	101.50
22	DA	604	G	C3'-C2'-C1'	5.74	106.09	101.50
22	BA	1963	U	C3'-C2'-C1'	5.73	106.09	101.50
22	DA	73	A	C3'-C2'-C1'	5.73	106.09	101.50
22	DA	1785	A	P-O3'-C3'	-5.73	112.82	119.70
21	AA	497	G	P-O3'-C3'	-5.73	112.82	119.70
53	CA	327	A	P-O3'-C3'	5.73	126.58	119.70
22	DA	1491	G	P-O3'-C3'	-5.73	112.82	119.70
22	DA	2874	C	C3'-C2'-C1'	5.73	106.08	101.50
21	AA	793	U	P-O3'-C3'	-5.73	112.82	119.70
22	BA	486	C	P-O3'-C3'	-5.73	112.82	119.70
22	DA	1333	G	C3'-C2'-C1'	5.73	106.08	101.50
22	DA	2350	C	O4'-C1'-N1	5.73	112.78	108.20
22	DA	2542	A	P-O3'-C3'	5.73	126.58	119.70
22	BA	1494	A	C3'-C2'-C1'	5.73	106.08	101.50
22	DA	459	U	C3'-C2'-C1'	5.73	106.08	101.50
22	BA	125	A	O3'-P-O5'	-5.73	93.12	104.00
22	DA	2581	G	O4'-C1'-N9	5.72	112.78	108.20
21	AA	955	U	C5-C4-O4	5.72	129.33	125.90
21	AA	174	A	C3'-C2'-C1'	5.72	106.08	101.50
53	CA	885	G	N9-C1'-C2'	-5.72	105.71	112.00
22	DA	546	U	O4'-C1'-N1	5.72	112.78	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	DA	617	G	C3'-C2'-C1'	5.72	106.08	101.50
22	DA	2612	C	O4'-C1'-N1	5.72	112.78	108.20
22	BA	2513	A	N1-C6-N6	-5.72	115.17	118.60
22	BA	1583	A	P-O3'-C3'	5.72	126.56	119.70
21	AA	175	C	C3'-C2'-C1'	5.71	106.07	101.50
22	BA	1022	G	C4-C5-N7	-5.71	108.51	110.80
22	DA	1207	C	O4'-C1'-N1	5.71	112.77	108.20
53	CA	936	C	P-O3'-C3'	-5.71	112.84	119.70
21	AA	1087	G	C3'-C2'-C1'	5.71	106.07	101.50
22	BA	1343	G	C3'-C2'-C1'	5.71	106.07	101.50
53	CA	132	C	C3'-C2'-C1'	5.71	106.07	101.50
21	AA	81	A	C5-C6-N6	5.71	128.27	123.70
53	CA	347	G	C3'-C2'-C1'	5.71	106.07	101.50
22	BA	312	G	C3'-C2'-C1'	5.71	106.06	101.50
22	BA	573	U	OP1-P-O3'	5.71	117.75	105.20
22	BA	800	A	C5-C6-N1	-5.71	114.85	117.70
22	BA	2392	A	P-O3'-C3'	-5.71	112.85	119.70
22	DA	1399	C	N1-C1'-C2'	-5.71	105.72	112.00
22	DA	1602	U	N1-C1'-C2'	5.71	121.42	114.00
22	BA	633	A	N9-C4-C5	-5.71	103.52	105.80
22	BA	2511	U	P-O3'-C3'	-5.71	112.85	119.70
53	CA	1349	A	C3'-C2'-C1'	5.71	106.06	101.50
22	DA	143	C	C3'-C2'-C1'	5.71	106.06	101.50
22	BA	1343	G	P-O3'-C3'	-5.70	112.86	119.70
22	BA	1946	U	P-O5'-C5'	-5.70	111.78	120.90
22	BA	655	A	P-O3'-C3'	5.70	126.54	119.70
22	BA	1932	A	P-O5'-C5'	-5.70	111.78	120.90
22	DA	1060	U	O4'-C1'-N1	-5.70	103.64	108.20
21	AA	88	U	C5-C4-O4	5.70	129.32	125.90
21	AA	1031	C	P-O3'-C3'	5.70	126.54	119.70
21	AA	1324	A	C3'-C2'-C1'	5.70	106.06	101.50
22	BA	191	A	P-O3'-C3'	5.70	126.54	119.70
22	BA	1090	A	O4'-C1'-N9	5.70	112.76	108.20
22	BA	1919	A	N9-C1'-C2'	-5.70	105.73	112.00
22	BA	2136	G	C3'-C2'-C1'	5.70	106.06	101.50
23	BB	14	U	N1-C1'-C2'	5.70	121.41	114.00
53	CA	90	C	C3'-C2'-C1'	5.70	106.06	101.50
22	DA	1456	G	C3'-C2'-C1'	5.70	106.06	101.50
22	DA	2419	U	O4'-C1'-N1	5.70	112.76	108.20
21	AA	1046	A	C3'-C2'-C1'	5.70	106.06	101.50
22	BA	985	C	P-O3'-C3'	-5.70	112.86	119.70
22	BA	1135	C	C3'-C2'-C1'	5.70	106.06	101.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
54	DB	16	G	C3'-C2'-C1'	5.70	106.06	101.50
22	BA	480	A	C3'-C2'-C1'	5.69	106.06	101.50
22	DA	1388	G	C3'-C2'-C1'	5.69	106.05	101.50
22	DA	2875	C	C3'-C2'-C1'	5.69	106.05	101.50
22	DA	460	A	P-O3'-C3'	-5.69	112.87	119.70
21	AA	718	A	N9-C1'-C2'	-5.69	105.74	112.00
22	BA	919	U	C4-C5-C6	-5.69	116.29	119.70
22	BA	958	U	C3'-C2'-C1'	5.69	106.05	101.50
22	BA	958	U	N1-C1'-C2'	-5.69	105.74	112.00
22	BA	1941	C	C3'-C2'-C1'	5.69	106.05	101.50
22	BA	2422	C	O4'-C1'-N1	-5.69	103.65	108.20
22	BA	2451	A	O4'-C1'-N9	5.69	112.75	108.20
22	DA	1626	A	P-O3'-C3'	5.69	126.53	119.70
22	BA	572	A	C3'-C2'-C1'	5.69	106.05	101.50
22	BA	1786	A	P-O3'-C3'	5.69	126.52	119.70
53	CA	998	C	O4'-C1'-N1	5.68	112.75	108.20
22	DA	128	C	P-O3'-C3'	-5.68	112.88	119.70
22	BA	1356	G	P-O5'-C5'	-5.68	111.81	120.90
22	BA	2812	G	P-O3'-C3'	-5.68	112.88	119.70
53	CA	52	C	P-O3'-C3'	-5.68	112.88	119.70
22	DA	1455	G	C3'-C2'-C1'	5.68	106.05	101.50
22	DA	2575	C	C2-N3-C4	-5.68	117.06	119.90
22	BA	181	A	P-O3'-C3'	-5.68	112.88	119.70
53	CA	1323	G	P-O3'-C3'	5.68	126.52	119.70
53	CA	1364	U	N1-C1'-C2'	5.68	121.39	114.00
22	DA	505	A	P-O3'-C3'	-5.68	112.89	119.70
21	AA	885	G	C3'-C2'-C1'	5.68	106.04	101.50
22	DA	1489	C	O4'-C1'-N1	5.68	112.74	108.20
22	BA	528	A	C5-N7-C8	-5.68	101.06	103.90
22	BA	2325	G	N9-C4-C5	5.68	107.67	105.40
22	DA	1127	A	P-O3'-C3'	-5.68	112.89	119.70
21	AA	536	C	C3'-C2'-C1'	5.67	106.04	101.50
22	BA	1000	A	P-O5'-C5'	-5.67	111.82	120.90
22	DA	1696	G	P-O3'-C3'	-5.67	112.89	119.70
22	DA	638	G	P-O3'-C3'	-5.67	112.89	119.70
22	BA	391	A	N9-C1'-C2'	-5.67	105.76	112.00
22	BA	763	G	C8-N9-C4	-5.67	104.13	106.40
53	CA	248	C	C3'-C2'-C1'	5.67	106.04	101.50
22	BA	243	U	P-O3'-C3'	-5.67	112.90	119.70
22	BA	914	G	C6-C5-N7	-5.67	127.00	130.40
22	DA	622	G	C3'-C2'-C1'	5.67	106.04	101.50
21	AA	1365	G	C3'-C2'-C1'	5.67	106.03	101.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	DA	1941	C	C3'-C2'-C1'	5.67	106.03	101.50
22	DA	2409	G	C3'-C2'-C1'	5.67	106.03	101.50
22	DA	2895	G	C3'-C2'-C1'	5.67	106.03	101.50
21	AA	423	G	C3'-C2'-C1'	5.67	106.03	101.50
53	CA	973	G	C3'-C2'-C1'	5.67	106.03	101.50
22	DA	1009	A	C3'-C2'-C1'	5.67	106.03	101.50
22	BA	37	C	C6-N1-C2	5.67	122.57	120.30
22	BA	2427	C	P-O5'-C5'	-5.66	111.84	120.90
22	BA	1508	A	P-O3'-C3'	5.66	126.49	119.70
21	AA	1091	U	O4'-C1'-N1	5.66	112.73	108.20
22	DA	476	G	C3'-C2'-C1'	5.66	106.03	101.50
22	DA	832	U	O4'-C1'-N1	5.66	112.73	108.20
22	BA	52	A	P-O3'-C3'	-5.66	112.91	119.70
22	BA	1472	C	P-O3'-C3'	-5.66	112.91	119.70
22	DA	2044	C	P-O3'-C3'	-5.66	112.91	119.70
22	DA	2093	G	C3'-C2'-C1'	5.66	106.02	101.50
22	BA	454	A	O3'-P-O5'	-5.65	93.26	104.00
22	BA	753	A	P-O5'-C5'	-5.65	111.85	120.90
22	BA	1967	C	P-O3'-C3'	-5.65	112.92	119.70
22	BA	1323	C	O4'-C1'-N1	-5.65	103.68	108.20
22	BA	2259	U	P-O5'-C5'	-5.65	111.86	120.90
22	BA	2540	C	P-O5'-C5'	-5.65	111.86	120.90
22	DA	313	G	C3'-C2'-C1'	5.65	106.02	101.50
21	AA	52	C	C3'-C2'-C1'	5.65	106.02	101.50
22	DA	2777	G	C3'-C2'-C1'	5.65	106.02	101.50
21	AA	346	G	P-O3'-C3'	-5.65	112.92	119.70
22	BA	252	G	O4'-C1'-N9	-5.65	103.68	108.20
53	CA	174	A	C3'-C2'-C1'	5.65	106.02	101.50
22	DA	1510	G	C3'-C2'-C1'	5.65	106.02	101.50
22	DA	1956	U	C3'-C2'-C1'	5.65	106.02	101.50
22	DA	2781	A	C3'-C2'-C1'	5.65	106.02	101.50
53	CA	1490	U	O4'-C1'-N1	5.65	112.72	108.20
22	BA	1971	U	O4'-C1'-N1	5.64	112.72	108.20
53	CA	509	A	C3'-C2'-C1'	5.64	106.02	101.50
22	DA	566	U	O4'-C1'-N1	5.64	112.72	108.20
22	BA	2276	G	P-O3'-C3'	-5.64	112.93	119.70
22	DA	1010	A	P-O3'-C3'	-5.64	112.93	119.70
22	DA	1739	A	C3'-C2'-C1'	5.64	106.01	101.50
21	AA	1499	A	P-O5'-C5'	-5.64	111.88	120.90
53	CA	252	U	C3'-C2'-C1'	5.64	106.01	101.50
22	DA	1428	C	O4'-C1'-N1	5.64	112.71	108.20
53	CA	1202	U	P-O3'-C3'	-5.64	112.94	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	CA	1303	C	C2-N1-C1'	5.64	125.00	118.80
21	AA	81	A	C6-N1-C2	5.64	121.98	118.60
21	AA	1152	A	C3'-C2'-C1'	5.64	106.01	101.50
54	DB	68	C	C3'-C2'-C1'	5.64	106.01	101.50
22	BA	490	C	P-O5'-C5'	-5.63	111.89	120.90
22	DA	1074	G	P-O3'-C3'	5.63	126.46	119.70
22	DA	2668	G	C3'-C2'-C1'	5.63	106.01	101.50
22	BA	528	A	O4'-C1'-N9	-5.63	103.69	108.20
22	BA	1838	C	N1-C1'-C2'	5.63	121.32	114.00
22	BA	1971	U	O3'-P-O5'	-5.63	93.30	104.00
22	DA	492	A	C3'-C2'-C1'	5.63	106.01	101.50
22	DA	1079	C	C3'-C2'-C1'	5.63	106.01	101.50
53	CA	475	C	P-O3'-C3'	-5.63	112.94	119.70
53	CA	577	G	N9-C1'-C2'	-5.63	105.81	112.00
22	DA	1997	C	P-O3'-C3'	-5.63	112.94	119.70
22	BA	2515	C	O5'-P-OP2	-5.63	100.63	105.70
22	DA	406	G	P-O3'-C3'	-5.63	112.94	119.70
22	DA	1063	G	C3'-C2'-C1'	5.63	106.00	101.50
21	AA	1062	U	O4'-C1'-N1	-5.63	103.70	108.20
53	CA	440	C	O4'-C1'-N1	5.63	112.70	108.20
53	CA	131	A	C6-N1-C2	5.63	121.98	118.60
22	DA	65	U	O4'-C1'-N1	5.63	112.70	108.20
22	BA	588	U	C3'-C2'-C1'	5.62	106.00	101.50
22	DA	505	A	C3'-C2'-C1'	5.62	106.00	101.50
22	DA	2033	A	C5-C6-N6	5.62	128.20	123.70
21	AA	14	U	C3'-C2'-C1'	5.62	106.00	101.50
21	AA	369	G	C3'-C2'-C1'	5.62	106.00	101.50
22	BA	1013	C	C3'-C2'-C1'	5.62	106.00	101.50
53	CA	1183	U	N1-C1'-C2'	-5.62	105.82	112.00
25	BD	10	GLY	N-CA-C	5.62	127.15	113.10
53	CA	436	C	O4'-C1'-N1	-5.62	103.70	108.20
53	CA	512	U	P-O3'-C3'	-5.62	112.96	119.70
22	DA	860	U	C3'-C2'-C1'	5.62	106.00	101.50
22	DA	2468	A	P-O3'-C3'	5.62	126.44	119.70
53	CA	1449	C	C3'-C2'-C1'	5.62	105.99	101.50
22	DA	620	G	P-O3'-C3'	5.62	126.44	119.70
53	CA	968	A	P-O3'-C3'	-5.61	112.97	119.70
53	CA	984	C	O4'-C1'-N1	5.61	112.69	108.20
53	CA	1454	G	C3'-C2'-C1'	5.61	105.99	101.50
22	BA	2610	C	P-O3'-C3'	-5.61	112.97	119.70
53	CA	282	A	C3'-C2'-C1'	5.61	105.99	101.50
53	CA	1073	U	O4'-C1'-N1	5.61	112.69	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	DA	2585	U	N1-C1'-C2'	5.61	121.29	114.00
22	BA	1452	G	N7-C8-N9	5.61	115.90	113.10
22	DA	2493	U	C3'-C2'-C1'	5.61	105.99	101.50
22	BA	1136	G	P-O5'-C5'	-5.61	111.93	120.90
53	CA	686	U	P-O3'-C3'	5.61	126.43	119.70
21	AA	1095	U	C3'-C2'-C1'	5.60	105.98	101.50
22	BA	1348	C	N3-C4-C5	5.60	124.14	121.90
22	BA	2681	C	C6-N1-C2	5.60	122.54	120.30
53	CA	480	U	C2-N3-C4	-5.60	123.64	127.00
53	CA	1367	C	O4'-C1'-N1	5.60	112.68	108.20
22	DA	621	A	C3'-C2'-C1'	5.60	105.98	101.50
21	AA	1228	C	C3'-C2'-C1'	5.60	105.98	101.50
22	DA	1060	U	N3-C2-O2	5.60	126.12	122.20
22	DA	1734	G	P-O3'-C3'	-5.60	112.98	119.70
22	DA	2681	C	P-O3'-C3'	5.60	126.42	119.70
21	AA	509	A	C3'-C2'-C1'	5.60	105.98	101.50
21	AA	1499	A	O5'-P-OP2	-5.60	100.66	105.70
22	BA	2267	A	P-O5'-C5'	-5.60	111.95	120.90
22	DA	1257	C	N1-C2-O2	5.60	122.26	118.90
22	BA	2324	U	N1-C1'-C2'	5.59	121.27	114.00
53	CA	6	G	P-O3'-C3'	-5.59	112.99	119.70
22	DA	407	G	C3'-C2'-C1'	5.59	105.97	101.50
22	DA	2298	A	C3'-C2'-C1'	5.59	105.98	101.50
22	BA	1802	A	N1-C6-N6	5.59	121.96	118.60
22	BA	2699	C	P-O3'-C3'	-5.59	112.99	119.70
22	DA	1078	U	P-O3'-C3'	5.59	126.41	119.70
22	BA	2709	G	P-O3'-C3'	-5.59	112.99	119.70
53	CA	182	A	C6-N1-C2	5.59	121.95	118.60
22	DA	946	C	C3'-C2'-C1'	5.59	105.97	101.50
22	DA	1942	C	C3'-C2'-C1'	5.59	105.97	101.50
22	DA	1060	U	C6-N1-C1'	-5.59	113.38	121.20
22	DA	1674	G	C8-N9-C1'	-5.59	119.73	127.00
22	DA	2199	A	C3'-C2'-C1'	5.59	105.97	101.50
22	BA	100	U	N1-C1'-C2'	5.59	121.26	114.00
53	CA	688	G	P-O3'-C3'	-5.59	113.00	119.70
53	CA	960	U	O4'-C1'-N1	5.59	112.67	108.20
22	DA	2069	G	P-O3'-C3'	-5.59	113.00	119.70
53	CA	72	A	C3'-C2'-C1'	5.58	105.97	101.50
22	DA	324	A	C3'-C2'-C1'	5.58	105.97	101.50
22	DA	1699	G	C3'-C2'-C1'	-5.58	97.03	101.50
22	BA	509	C	N3-C2-O2	-5.58	117.99	121.90
22	BA	1959	G	P-O5'-C5'	-5.58	111.97	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	DA	2310	C	C3'-C2'-C1'	5.58	105.97	101.50
22	DA	396	G	C3'-C2'-C1'	5.58	105.97	101.50
21	AA	453	G	C3'-C2'-C1'	5.58	105.96	101.50
21	AA	1433	A	C3'-C2'-C1'	5.58	105.96	101.50
22	BA	2029	G	P-O3'-C3'	-5.58	113.00	119.70
22	DA	995	C	P-O3'-C3'	5.58	126.39	119.70
22	BA	741	U	P-O5'-C5'	-5.58	111.98	120.90
22	DA	437	U	C3'-C2'-C1'	5.58	105.96	101.50
22	DA	1785	A	C3'-C2'-C1'	5.58	105.96	101.50
21	AA	1331	G	P-O3'-C3'	5.58	126.39	119.70
22	BA	2511	U	C5-C4-O4	-5.58	122.55	125.90
22	DA	959	A	C3'-C2'-C1'	5.58	105.96	101.50
22	DA	2799	A	P-O3'-C3'	5.58	126.39	119.70
53	CA	1094	G	P-O3'-C3'	5.57	126.39	119.70
22	DA	2052	A	N9-C1'-C2'	-5.57	105.87	112.00
22	DA	1049	C	O4'-C1'-N1	5.57	112.66	108.20
53	CA	89	U	C3'-C2'-C1'	5.57	105.96	101.50
53	CA	1449	C	P-O3'-C3'	-5.57	113.02	119.70
22	DA	1267	U	C3'-C2'-C1'	5.57	105.96	101.50
31	DJ	25	LEU	CA-CB-CG	5.57	128.11	115.30
21	AA	1322	C	N1-C1'-C2'	5.57	121.24	114.00
22	DA	60	G	C8-N9-C1'	5.57	134.24	127.00
21	AA	351	G	C4-N9-C1'	5.57	133.74	126.50
22	BA	1130	U	N1-C1'-C2'	5.57	121.24	114.00
22	BA	1142	A	C6-N1-C2	5.57	121.94	118.60
53	CA	1317	C	O4'-C1'-N1	5.57	112.65	108.20
22	DA	1636	U	C3'-C2'-C1'	5.57	105.95	101.50
54	DB	110	C	C3'-C2'-C1'	5.57	105.95	101.50
53	CA	382	A	C3'-C2'-C1'	5.57	105.95	101.50
22	DA	827	U	P-O3'-C3'	5.57	126.38	119.70
22	DA	1142	A	C5-N7-C8	-5.57	101.12	103.90
22	DA	2188	U	O4'-C1'-N1	5.57	112.65	108.20
54	DB	13	G	C3'-C2'-C1'	5.57	105.95	101.50
21	AA	13	U	O4'-C1'-N1	5.56	112.65	108.20
22	BA	1249	U	C3'-C2'-C1'	5.56	105.95	101.50
22	BA	2781	A	C3'-C2'-C1'	5.56	105.95	101.50
22	DA	616	A	C3'-C2'-C1'	5.56	105.95	101.50
22	BA	1812	U	O4'-C1'-N1	5.56	112.65	108.20
22	BA	1980	G	O4'-C1'-N9	5.56	112.65	108.20
21	AA	5	U	P-O3'-C3'	5.56	126.37	119.70
21	AA	214	C	C3'-C2'-C1'	5.56	105.95	101.50
22	BA	587	C	P-O3'-C3'	5.56	126.37	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	1264	A	P-O3'-C3'	5.56	126.37	119.70
22	BA	2714	G	P-O5'-C5'	-5.56	112.00	120.90
53	CA	6	G	C3'-C2'-C1'	5.56	105.95	101.50
22	DA	1981	A	P-O5'-C5'	-5.56	112.01	120.90
22	BA	266	G	C8-N9-C4	-5.56	104.18	106.40
22	DA	2616	C	C3'-C2'-C1'	5.56	105.94	101.50
22	BA	800	A	N3-C4-C5	5.55	130.69	126.80
22	BA	1636	U	C2-N3-C4	5.55	130.33	127.00
22	BA	2068	U	C3'-C2'-C1'	5.55	105.94	101.50
21	AA	1469	C	O4'-C1'-N1	-5.55	103.76	108.20
45	BX	70	LEU	CA-CB-CG	5.55	128.07	115.30
22	DA	782	A	P-O3'-C3'	5.55	126.36	119.70
22	DA	957	C	O4'-C1'-N1	5.55	112.64	108.20
22	DA	2275	C	P-O3'-C3'	5.55	126.36	119.70
22	BA	777	G	N9-C1'-C2'	-5.55	105.89	112.00
22	BA	914	G	N1-C6-O6	5.55	123.23	119.90
22	BA	974	G	C8-N9-C4	-5.55	104.18	106.40
22	BA	1941	C	O4'-C1'-N1	-5.55	103.76	108.20
22	BA	1971	U	C3'-C2'-C1'	5.55	105.94	101.50
22	DA	1204	A	P-O3'-C3'	5.55	126.36	119.70
22	DA	1839	G	N9-C1'-C2'	-5.55	105.89	112.00
21	AA	233	C	O4'-C1'-N1	5.55	112.64	108.20
53	CA	1329	A	C6-N1-C2	5.55	121.93	118.60
22	DA	162	U	O4'-C1'-N1	5.55	112.64	108.20
22	DA	984	A	P-O3'-C3'	5.55	126.36	119.70
22	DA	2297	A	P-O3'-C3'	-5.55	113.04	119.70
22	BA	142	A	N1-C6-N6	5.55	121.93	118.60
22	DA	1694	C	O4'-C1'-N1	5.54	112.64	108.20
22	DA	2504	U	P-O3'-C3'	-5.54	113.05	119.70
22	BA	2469	A	N9-C1'-C2'	-5.54	105.90	112.00
53	CA	388	G	O3'-P-O5'	-5.54	93.47	104.00
21	AA	1288	A	C3'-C2'-C1'	5.54	105.93	101.50
22	BA	2447	G	C8-N9-C4	-5.54	104.18	106.40
53	CA	397	A	P-O5'-C5'	-5.54	112.03	120.90
53	CA	1395	C	C3'-C2'-C1'	5.54	105.93	101.50
22	BA	972	A	P-O3'-C3'	5.54	126.35	119.70
22	BA	2902	C	O4'-C1'-N1	5.54	112.63	108.20
22	BA	2327	A	C3'-C2'-C1'	5.54	105.93	101.50
22	DA	234	U	C3'-C2'-C1'	5.54	105.93	101.50
22	BA	1919	A	C3'-C2'-C1'	5.54	105.93	101.50
22	BA	1695	G	P-O5'-C5'	-5.53	112.05	120.90
53	CA	1348	U	C3'-C2'-C1'	5.53	105.93	101.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	DA	389	G	C3'-C2'-C1'	5.53	105.92	101.50
21	AA	316	C	P-O3'-C3'	-5.53	113.06	119.70
21	AA	512	U	C3'-C2'-C1'	5.53	105.92	101.50
22	BA	324	A	C3'-C2'-C1'	5.53	105.92	101.50
22	BA	987	C	O4'-C1'-N1	5.53	112.62	108.20
22	BA	1796	U	C5-C4-O4	-5.53	122.58	125.90
53	CA	1086	U	C3'-C2'-C1'	5.53	105.92	101.50
53	CA	1448	C	P-O3'-C3'	-5.53	113.06	119.70
53	CA	1453	G	C3'-C2'-C1'	5.53	105.92	101.50
21	AA	1161	C	O4'-C1'-N1	5.53	112.62	108.20
22	BA	790	U	C3'-C2'-C1'	5.53	105.92	101.50
22	BA	1706	C	P-O3'-C3'	5.53	126.33	119.70
22	DA	483	A	C3'-C2'-C1'	5.53	105.92	101.50
22	DA	687	C	P-O3'-C3'	-5.53	113.07	119.70
22	BA	846	U	P-O3'-C3'	5.53	126.33	119.70
53	CA	1140	C	P-O3'-C3'	-5.53	113.07	119.70
22	DA	1722	A	C3'-C2'-C1'	5.53	105.92	101.50
22	DA	241	A	P-O3'-C3'	5.52	126.33	119.70
22	BA	2380	C	P-O5'-C5'	-5.52	112.06	120.90
22	BA	2799	A	N1-C6-N6	5.52	121.91	118.60
53	CA	88	U	O4'-C1'-N1	5.52	112.62	108.20
22	BA	678	C	O4'-C1'-N1	-5.52	103.78	108.20
22	BA	1027	A	O4'-C1'-N9	-5.52	103.78	108.20
22	DA	656	G	C3'-C2'-C1'	5.52	105.92	101.50
23	BB	53	A	P-O3'-C3'	-5.52	113.08	119.70
53	CA	389	A	C3'-C2'-C1'	5.52	105.92	101.50
53	CA	596	A	C3'-C2'-C1'	5.52	105.92	101.50
22	DA	775	G	N3-C4-N9	-5.52	122.69	126.00
21	AA	1184	G	N9-C1'-C2'	-5.52	105.93	112.00
22	BA	962	G	P-O5'-C5'	-5.52	112.07	120.90
21	AA	1521	C	O4'-C1'-N1	-5.52	103.79	108.20
22	BA	142	A	C3'-C2'-C1'	5.52	105.91	101.50
22	BA	1686	C	N1-C2-O2	-5.52	115.59	118.90
22	BA	1948	G	P-O3'-C3'	-5.52	113.08	119.70
22	BA	2332	C	C5-C6-N1	-5.52	118.24	121.00
22	BA	14	A	P-O5'-C5'	-5.51	112.08	120.90
22	BA	2311	A	P-O3'-C3'	5.51	126.32	119.70
22	BA	2337	G	C8-N9-C4	-5.51	104.19	106.40
53	CA	1147	C	C3'-C2'-C1'	5.51	105.91	101.50
22	DA	231	A	C3'-C2'-C1'	5.51	105.91	101.50
22	DA	1960	A	C6-N1-C2	5.51	121.91	118.60
21	AA	794	A	C3'-C2'-C1'	5.51	105.91	101.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	CA	1530	G	C3'-C2'-C1'	5.51	105.91	101.50
22	DA	2830	C	O4'-C1'-N1	5.51	112.61	108.20
21	AA	1158	C	C3'-C2'-C1'	5.51	105.91	101.50
22	BA	680	C	N3-C2-O2	5.51	125.76	121.90
22	DA	2386	A	C3'-C2'-C1'	5.51	105.91	101.50
22	BA	1494	A	P-O5'-C5'	-5.51	112.09	120.90
22	BA	2238	G	O4'-C1'-N9	5.51	112.61	108.20
22	DA	1755	A	P-O3'-C3'	5.51	126.31	119.70
22	BA	1778	U	C2-N3-C4	-5.51	123.70	127.00
22	BA	2052	A	P-O5'-C5'	-5.51	112.09	120.90
53	CA	936	C	C3'-C2'-C1'	5.51	105.90	101.50
53	CA	1213	A	P-O3'-C3'	5.50	126.31	119.70
22	DA	60	G	C4-N9-C1'	-5.50	119.34	126.50
22	DA	1026	G	C3'-C2'-C1'	5.50	105.90	101.50
21	AA	792	A	P-O3'-C3'	5.50	126.30	119.70
22	BA	2520	C	N3-C4-C5	-5.50	119.70	121.90
21	AA	247	G	N3-C2-N2	-5.50	116.05	119.90
22	BA	677	A	C5-C6-N1	5.50	120.45	117.70
22	BA	2383	G	C3'-C2'-C1'	5.50	105.90	101.50
22	DA	1451	C	O4'-C1'-N1	5.50	112.60	108.20
21	AA	1349	A	C3'-C2'-C1'	5.50	105.90	101.50
22	BA	1385	A	C5-C6-N1	-5.50	114.95	117.70
53	CA	870	U	N1-C1'-C2'	5.50	121.15	114.00
53	CA	1209	C	O4'-C1'-N1	5.50	112.60	108.20
22	BA	593	U	O4'-C1'-N1	5.50	112.60	108.20
22	BA	984	A	N9-C4-C5	-5.50	103.60	105.80
22	BA	1919	A	P-O3'-C3'	-5.50	113.11	119.70
53	CA	962	C	C3'-C2'-C1'	5.50	105.90	101.50
53	CA	1383	C	C3'-C2'-C1'	5.50	105.90	101.50
22	BA	1089	A	P-O3'-C3'	5.49	126.29	119.70
53	CA	1161	C	O4'-C1'-N1	5.49	112.59	108.20
21	AA	1528	U	O4'-C1'-N1	5.49	112.59	108.20
22	DA	916	G	C3'-C2'-C1'	5.49	105.89	101.50
22	DA	2259	U	C3'-C2'-C1'	5.49	105.89	101.50
22	BA	1280	G	P-O5'-C5'	-5.49	112.11	120.90
22	BA	1497	U	P-O3'-C3'	5.49	126.29	119.70
21	AA	267	C	O4'-C1'-N1	5.49	112.59	108.20
53	CA	91	U	C3'-C2'-C1'	5.49	105.89	101.50
53	CA	1102	A	P-O3'-C3'	-5.49	113.11	119.70
22	DA	2021	C	N1-C1'-C2'	5.49	121.13	114.00
22	BA	530	G	P-O3'-C3'	-5.49	113.12	119.70
22	BA	2048	G	P-O3'-C3'	5.49	126.28	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	DA	947	A	P-O3'-C3'	-5.49	113.12	119.70
21	AA	810	C	O4'-C1'-N1	5.49	112.59	108.20
22	BA	399	U	P-O3'-C3'	5.49	126.28	119.70
22	BA	2505	G	O5'-P-OP2	-5.49	100.76	105.70
22	BA	2611	C	P-O3'-C3'	-5.49	113.12	119.70
22	BA	1565	C	N1-C1'-C2'	5.48	121.13	114.00
53	CA	688	G	N9-C1'-C2'	-5.48	105.97	112.00
53	CA	536	C	N1-C1'-C2'	-5.48	105.97	112.00
22	DA	390	U	O4'-C1'-N1	5.48	112.58	108.20
22	DA	397	U	C3'-C2'-C1'	5.48	105.89	101.50
54	DB	118	C	O4'-C1'-N1	5.48	112.59	108.20
22	DA	1492	G	C3'-C2'-C1'	5.48	105.88	101.50
22	DA	1916	A	C3'-C2'-C1'	5.48	105.88	101.50
22	BA	2707	U	P-O3'-C3'	5.48	126.28	119.70
21	AA	430	A	C3'-C2'-C1'	5.48	105.88	101.50
22	BA	1967	C	OP1-P-OP2	5.48	127.82	119.60
22	DA	271	G	C8-N9-C1'	5.48	134.12	127.00
22	BA	1007	C	N1-C1'-C2'	-5.48	105.98	112.00
22	BA	2005	A	P-O3'-C3'	5.48	126.27	119.70
53	CA	1191	A	C3'-C2'-C1'	5.48	105.88	101.50
22	BA	1447	C	N1-C2-O2	-5.47	115.61	118.90
23	BB	30	C	P-O3'-C3'	-5.47	113.13	119.70
53	CA	1364	U	P-O3'-C3'	5.47	126.27	119.70
22	DA	1291	C	P-O3'-C3'	-5.47	113.13	119.70
22	DA	2068	U	C3'-C2'-C1'	5.47	105.88	101.50
21	AA	734	G	C3'-C2'-C1'	5.47	105.88	101.50
22	BA	691	C	C6-N1-C2	5.47	122.49	120.30
53	CA	374	A	C3'-C2'-C1'	5.47	105.88	101.50
22	DA	1325	U	P-O3'-C3'	5.47	126.27	119.70
22	DA	2611	C	C3'-C2'-C1'	5.47	105.88	101.50
22	DA	2753	A	P-O3'-C3'	-5.47	113.13	119.70
22	DA	2850	A	C3'-C2'-C1'	5.47	105.88	101.50
22	BA	454	A	C8-N9-C4	5.47	107.99	105.80
22	BA	1357	C	P-O3'-C3'	-5.47	113.14	119.70
22	BA	2423	U	N1-C1'-C2'	5.47	121.11	114.00
22	DA	729	G	N9-C4-C5	5.47	107.59	105.40
21	AA	373	A	C3'-C2'-C1'	5.47	105.87	101.50
22	DA	2833	U	O4'-C1'-N1	5.47	112.57	108.20
22	BA	1402	U	C2-N3-C4	5.46	130.28	127.00
22	BA	1947	C	N1-C2-O2	-5.46	115.62	118.90
22	BA	2751	G	O4'-C1'-N9	5.46	112.57	108.20
22	BA	2770	G	N9-C4-C5	-5.46	103.21	105.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	DA	1429	G	C3'-C2'-C1'	5.46	105.87	101.50
22	DA	1936	A	P-O3'-C3'	5.46	126.26	119.70
22	BA	398	C	P-O5'-C5'	-5.46	112.16	120.90
22	BA	567	U	P-O3'-C3'	-5.46	113.15	119.70
22	DA	1207	C	C3'-C2'-C1'	5.46	105.87	101.50
21	AA	73	C	P-O3'-C3'	-5.46	113.15	119.70
22	DA	475	C	C3'-C2'-C1'	5.46	105.87	101.50
22	DA	2198	A	P-O3'-C3'	5.46	126.25	119.70
22	BA	944	C	C6-N1-C2	5.46	122.48	120.30
22	DA	1961	C	O4'-C1'-N1	5.46	112.57	108.20
21	AA	1454	G	C3'-C2'-C1'	5.45	105.86	101.50
22	BA	996	A	C3'-C2'-C1'	5.45	105.86	101.50
53	CA	372	C	N1-C1'-C2'	5.45	121.09	114.00
22	DA	1682	G	C3'-C2'-C1'	5.45	105.86	101.50
22	BA	482	A	C3'-C2'-C1'	5.45	105.86	101.50
21	AA	152	A	O4'-C1'-N9	5.45	112.56	108.20
53	CA	64	G	P-O3'-C3'	5.45	126.24	119.70
22	DA	1832	C	O4'-C1'-N1	5.45	112.56	108.20
22	BA	1617	C	O4'-C1'-N1	5.45	112.56	108.20
22	DA	2387	U	P-O3'-C3'	-5.45	113.16	119.70
22	DA	2683	C	C3'-C2'-C1'	5.45	105.86	101.50
53	CA	89	U	C2-N3-C4	-5.45	123.73	127.00
21	AA	654	G	C3'-C2'-C1'	5.45	105.86	101.50
22	BA	412	A	C3'-C2'-C1'	5.45	105.86	101.50
22	BA	1866	A	C3'-C2'-C1'	5.45	105.86	101.50
22	DA	444	C	P-O3'-C3'	-5.45	113.16	119.70
53	CA	245	U	P-O3'-C3'	-5.44	113.17	119.70
22	DA	1489	C	P-O3'-C3'	5.44	126.23	119.70
21	AA	549	C	C3'-C2'-C1'	5.44	105.85	101.50
22	BA	1145	C	P-O3'-C3'	-5.44	113.17	119.70
22	BA	2447	G	C4-C5-N7	-5.44	108.62	110.80
53	CA	1394	A	P-O3'-C3'	5.44	126.23	119.70
22	DA	421	C	N1-C1'-C2'	5.44	121.07	114.00
21	AA	1285	A	P-O3'-C3'	5.44	126.22	119.70
22	BA	449	A	P-O5'-C5'	-5.44	112.20	120.90
22	BA	1956	U	P-O5'-C5'	-5.44	112.20	120.90
22	BA	2283	C	N1-C2-O2	-5.44	115.64	118.90
22	DA	1942	C	O4'-C1'-N1	5.44	112.55	108.20
21	AA	1138	G	P-O3'-C3'	-5.44	113.18	119.70
22	BA	2033	A	N9-C4-C5	5.44	107.97	105.80
53	CA	885	G	C3'-C2'-C1'	5.44	105.85	101.50
22	DA	406	G	C3'-C2'-C1'	5.44	105.85	101.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	AA	718	A	C3'-C2'-C1'	5.43	105.85	101.50
22	BA	1666	G	O4'-C1'-N9	5.43	112.55	108.20
22	BA	2626	C	C6-N1-C2	5.43	122.47	120.30
53	CA	374	A	N9-C1'-C2'	-5.43	106.03	112.00
53	CA	67	C	N1-C1'-C2'	-5.43	106.03	112.00
53	CA	1242	G	C3'-C2'-C1'	5.43	105.84	101.50
21	AA	549	C	P-O3'-C3'	-5.43	113.19	119.70
22	BA	1273	U	N1-C1'-C2'	-5.43	106.03	112.00
22	BA	2714	G	N9-C1'-C2'	-5.43	106.03	112.00
22	DA	730	A	P-O3'-C3'	-5.43	113.19	119.70
22	DA	1997	C	C3'-C2'-C1'	5.43	105.84	101.50
22	DA	2387	U	C3'-C2'-C1'	5.43	105.84	101.50
22	BA	232	G	P-O3'-C3'	5.43	126.21	119.70
53	CA	194	C	O4'-C1'-N1	-5.43	103.86	108.20
22	DA	207	A	C3'-C2'-C1'	5.43	105.84	101.50
22	DA	230	G	P-O3'-C3'	-5.43	113.19	119.70
22	DA	2135	A	C3'-C2'-C1'	5.43	105.84	101.50
22	BA	1611	C	P-O3'-C3'	-5.42	113.19	119.70
21	AA	644	U	O4'-C1'-N1	5.42	112.54	108.20
22	DA	1034	G	C3'-C2'-C1'	5.42	105.84	101.50
22	BA	1206	G	P-O3'-C3'	-5.42	113.19	119.70
22	BA	1638	C	P-O5'-C5'	-5.42	112.23	120.90
22	DA	1654	A	P-O3'-C3'	-5.42	113.19	119.70
22	BA	1491	G	C3'-C2'-C1'	5.42	105.84	101.50
21	AA	755	G	C3'-C2'-C1'	5.42	105.83	101.50
22	BA	15	G	P-O3'-C3'	5.42	126.20	119.70
22	DA	1915	U	C3'-C2'-C1'	5.42	105.83	101.50
22	BA	2220	U	O4'-C1'-N1	5.42	112.53	108.20
53	CA	563	A	C3'-C2'-C1'	5.42	105.83	101.50
22	DA	1919	A	C3'-C2'-C1'	5.42	105.83	101.50
53	CA	1066	C	C3'-C2'-C1'	5.42	105.83	101.50
22	DA	271	G	C4-N9-C1'	-5.42	119.46	126.50
22	DA	2866	U	P-O3'-C3'	5.42	126.20	119.70
21	AA	801	U	O4'-C1'-N1	5.41	112.53	108.20
22	BA	727	A	C3'-C2'-C1'	5.41	105.83	101.50
22	BA	1396	U	O4'-C1'-N1	5.41	112.53	108.20
22	DA	1555	G	C3'-C2'-C1'	5.41	105.83	101.50
22	DA	2407	A	C3'-C2'-C1'	5.41	105.83	101.50
2	AC	204	GLY	N-CA-C	5.41	126.63	113.10
22	BA	739	A	C8-N9-C4	5.41	107.97	105.80
22	BA	2427	C	C3'-C2'-C1'	5.41	105.83	101.50
22	DA	1034	G	N9-C1'-C2'	-5.41	106.05	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	DA	2356	U	O4'-C1'-N1	5.41	112.53	108.20
21	AA	267	C	P-O5'-C5'	-5.41	112.24	120.90
22	BA	656	G	P-O5'-C5'	-5.41	112.24	120.90
22	BA	1459	G	C3'-C2'-C1'	5.41	105.83	101.50
22	BA	1524	G	P-O5'-C5'	-5.41	112.24	120.90
22	DA	1498	C	C3'-C2'-C1'	5.41	105.83	101.50
22	BA	1088	A	C5-C6-N1	-5.41	115.00	117.70
22	BA	1817	G	N3-C2-N2	-5.41	116.11	119.90
22	DA	1439	A	C4-N9-C1'	5.41	136.03	126.30
22	BA	2325	G	C8-N9-C4	-5.41	104.24	106.40
22	BA	1696	G	P-O3'-C3'	-5.41	113.21	119.70
53	CA	1401	G	N9-C1'-C2'	-5.41	106.05	112.00
22	DA	562	U	C5-C4-O4	5.41	129.14	125.90
22	BA	1026	G	C3'-C2'-C1'	5.40	105.82	101.50
22	BA	2850	A	P-O3'-C3'	-5.40	113.22	119.70
53	CA	423	G	C3'-C2'-C1'	5.40	105.82	101.50
53	CA	352	C	C3'-C2'-C1'	5.40	105.82	101.50
53	CA	978	A	C3'-C2'-C1'	5.40	105.82	101.50
22	DA	571	U	P-O3'-C3'	5.40	126.18	119.70
22	BA	984	A	C8-N9-C4	5.40	107.96	105.80
22	BA	1301	A	P-O5'-C5'	-5.40	112.26	120.90
53	CA	1282	C	C3'-C2'-C1'	5.40	105.82	101.50
22	BA	12	U	N3-C2-O2	-5.40	118.42	122.20
21	AA	1531	A	P-O3'-C3'	-5.40	113.22	119.70
22	BA	1025	G	P-O3'-C3'	5.40	126.18	119.70
22	BA	2770	G	C2-N3-C4	-5.39	109.20	111.90
23	BB	92	C	C6-N1-C2	5.39	122.46	120.30
53	CA	276	G	O4'-C1'-N9	5.39	112.52	108.20
22	DA	1537	G	C3'-C2'-C1'	5.39	105.81	101.50
22	DA	2289	G	N9-C1'-C2'	-5.39	106.07	112.00
22	BA	1525	A	C5-C6-N1	-5.39	115.00	117.70
22	DA	2752	C	C3'-C2'-C1'	5.39	105.81	101.50
21	AA	596	A	P-O5'-C5'	-5.39	112.28	120.90
22	BA	2309	A	C3'-C2'-C1'	5.39	105.81	101.50
23	BB	75	G	P-O5'-C5'	-5.39	112.28	120.90
53	CA	275	G	C3'-C2'-C1'	5.39	105.81	101.50
22	BA	2384	U	O4'-C1'-N1	-5.39	103.89	108.20
22	DA	2215	C	N1-C1'-C2'	-5.39	106.07	112.00
22	DA	562	U	C2-N3-C4	5.39	130.23	127.00
22	DA	1439	A	C6-C5-N7	-5.39	128.53	132.30
22	DA	1683	U	C3'-C2'-C1'	5.39	105.81	101.50
21	AA	1381	U	P-O5'-C5'	-5.38	112.28	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	985	C	P-O5'-C5'	-5.38	112.28	120.90
53	CA	752	G	P-O3'-C3'	5.38	126.16	119.70
53	CA	1212	U	N1-C1'-C2'	5.38	121.00	114.00
22	DA	164	C	C3'-C2'-C1'	5.38	105.81	101.50
22	DA	1406	U	O4'-C1'-N1	5.38	112.51	108.20
22	BA	1783	A	N1-C6-N6	5.38	121.83	118.60
22	DA	1555	G	P-O3'-C3'	-5.38	113.24	119.70
22	BA	562	U	C5-C4-O4	5.38	129.13	125.90
22	BA	612	G	P-O3'-C3'	5.38	126.16	119.70
22	BA	1287	A	P-O3'-C3'	-5.38	113.24	119.70
22	BA	2223	G	O4'-C1'-N9	5.38	112.51	108.20
22	DA	2567	G	P-O3'-C3'	-5.38	113.24	119.70
21	AA	1320	C	P-O3'-C3'	-5.38	113.24	119.70
22	BA	500	G	C2-N3-C4	-5.38	109.21	111.90
22	BA	1839	G	C3'-C2'-C1'	5.38	105.80	101.50
22	BA	2752	C	C3'-C2'-C1'	5.38	105.80	101.50
21	AA	1461	G	N1-C6-O6	-5.38	116.67	119.90
21	AA	1279	G	C8-N9-C4	-5.38	104.25	106.40
22	BA	2589	A	N1-C6-N6	-5.38	115.38	118.60
53	CA	755	G	C3'-C2'-C1'	5.38	105.80	101.50
21	AA	755	G	N9-C1'-C2'	-5.37	106.09	112.00
22	DA	991	C	C3'-C2'-C1'	5.37	105.80	101.50
22	DA	2506	U	P-O3'-C3'	-5.37	113.25	119.70
22	BA	557	C	P-O5'-C5'	-5.37	112.31	120.90
22	BA	1606	C	O4'-C1'-N1	-5.37	103.90	108.20
22	BA	2341	G	C5-C6-O6	5.37	131.82	128.60
22	BA	13	A	P-O3'-C3'	5.37	126.14	119.70
53	CA	512	U	C3'-C2'-C1'	5.37	105.79	101.50
53	CA	1161	C	C3'-C2'-C1'	5.37	105.80	101.50
22	BA	2808	G	O5'-P-OP2	-5.37	100.87	105.70
22	BA	1115	G	P-O3'-C3'	5.37	126.14	119.70
53	CA	485	U	O4'-C1'-N1	-5.37	103.91	108.20
53	CA	1450	U	O4'-C1'-N1	5.37	112.49	108.20
21	AA	857	C	P-O3'-C3'	-5.36	113.26	119.70
22	BA	1340	U	O3'-P-O5'	-5.36	93.81	104.00
53	CA	253	A	C3'-C2'-C1'	5.36	105.79	101.50
53	CA	977	A	P-O3'-C3'	-5.36	113.26	119.70
22	DA	2266	A	P-O3'-C3'	5.36	126.14	119.70
22	BA	1829	A	N9-C1'-C2'	-5.36	106.10	112.00
22	BA	1956	U	P-O3'-C3'	-5.36	113.27	119.70
53	CA	353	A	O4'-C1'-N9	5.36	112.49	108.20
22	DA	1526	C	O4'-C1'-N1	5.36	112.49	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	135	U	O4'-C1'-N1	-5.36	103.91	108.20
21	AA	534	U	C3'-C2'-C1'	5.36	105.79	101.50
22	BA	1348	C	O4'-C1'-N1	-5.36	103.91	108.20
22	BA	2860	A	C5-C6-N6	-5.36	119.41	123.70
21	AA	487	A	C3'-C2'-C1'	5.36	105.78	101.50
21	AA	1453	G	C3'-C2'-C1'	5.36	105.78	101.50
22	BA	2605	U	C2-N3-C4	5.36	130.21	127.00
53	CA	945	G	C5-C6-O6	-5.36	125.39	128.60
22	DA	763	G	N9-C1'-C2'	-5.36	106.11	112.00
22	DA	1478	G	C3'-C2'-C1'	5.36	105.78	101.50
21	AA	306	A	N9-C1'-C2'	-5.35	106.11	112.00
53	CA	1065	U	O4'-C1'-N1	5.35	112.48	108.20
22	DA	1023	U	C3'-C2'-C1'	5.35	105.78	101.50
22	BA	333	G	P-O3'-C3'	-5.35	113.28	119.70
53	CA	511	C	N1-C1'-C2'	5.35	120.96	114.00
22	DA	2239	G	C3'-C2'-C1'	5.35	105.78	101.50
22	DA	2337	G	C3'-C2'-C1'	5.35	105.78	101.50
53	CA	1278	G	P-O3'-C3'	5.35	126.12	119.70
22	DA	2757	A	N9-C1'-C2'	-5.35	106.11	112.00
22	BA	2395	C	P-O3'-C3'	-5.35	113.28	119.70
22	DA	919	U	C2-N1-C1'	5.35	124.12	117.70
22	DA	1417	C	C3'-C2'-C1'	5.35	105.78	101.50
22	DA	1867	G	C3'-C2'-C1'	5.35	105.78	101.50
22	DA	2450	A	C3'-C2'-C1'	5.35	105.78	101.50
22	BA	1706	C	C6-N1-C2	5.35	122.44	120.30
22	BA	1714	U	C3'-C2'-C1'	5.35	105.78	101.50
22	BA	2733	A	C5-C6-N1	-5.35	115.03	117.70
53	CA	135	C	O4'-C1'-N1	5.35	112.48	108.20
22	DA	424	G	C3'-C2'-C1'	5.35	105.78	101.50
21	AA	885	G	N9-C1'-C2'	-5.34	106.12	112.00
21	AA	1055	A	P-O5'-C5'	-5.34	112.35	120.90
22	BA	443	A	P-O3'-C3'	-5.34	113.29	119.70
22	BA	1127	A	C3'-C2'-C1'	5.34	105.78	101.50
22	BA	2297	A	P-O3'-C3'	-5.34	113.29	119.70
22	BA	2430	A	O4'-C1'-N9	5.34	112.48	108.20
22	DA	1144	A	N9-C1'-C2'	-5.34	106.12	112.00
22	DA	2459	A	N9-C1'-C2'	-5.34	106.12	112.00
22	BA	1555	G	C3'-C2'-C1'	5.34	105.77	101.50
53	CA	1228	C	P-O3'-C3'	-5.34	113.29	119.70
22	DA	460	A	C3'-C2'-C1'	5.34	105.77	101.50
21	AA	885	G	P-O3'-C3'	-5.34	113.30	119.70
22	DA	1046	A	P-O3'-C3'	5.34	126.11	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	AA	1337	G	C3'-C2'-C1'	5.34	105.77	101.50
22	BA	633	A	N3-C4-N9	5.34	131.67	127.40
22	DA	672	C	C3'-C2'-C1'	5.34	105.77	101.50
22	DA	1136	G	N9-C1'-C2'	-5.34	106.13	112.00
53	CA	389	A	N9-C1'-C2'	-5.33	106.13	112.00
22	BA	1340	U	C4'-C3'-C2'	5.33	107.93	102.60
22	BA	1884	G	P-O3'-C3'	5.33	126.10	119.70
53	CA	1336	C	P-O3'-C3'	5.33	126.10	119.70
22	DA	321	U	P-O3'-C3'	5.33	126.10	119.70
22	DA	1693	U	P-O3'-C3'	5.33	126.10	119.70
22	DA	1821	A	C3'-C2'-C1'	5.33	105.77	101.50
22	DA	2267	A	N1-C2-N3	5.33	131.97	129.30
21	AA	247	G	N3-C4-N9	-5.33	122.80	126.00
22	BA	1254	A	C3'-C2'-C1'	5.33	105.77	101.50
22	DA	437	U	P-O3'-C3'	-5.33	113.30	119.70
22	DA	527	C	C2-N1-C1'	5.33	124.67	118.80
22	DA	648	G	C3'-C2'-C1'	5.33	105.76	101.50
22	DA	1396	U	O4'-C1'-N1	5.33	112.46	108.20
22	DA	2069	G	N9-C1'-C2'	-5.33	106.14	112.00
21	AA	511	C	N1-C1'-C2'	5.33	120.93	114.00
21	AA	1348	U	C3'-C2'-C1'	5.33	105.76	101.50
22	BA	1493	C	O4'-C1'-N1	5.33	112.46	108.20
22	BA	2286	G	C5-N7-C8	-5.33	101.64	104.30
22	DA	75	G	C3'-C2'-C1'	5.33	105.76	101.50
22	DA	286	U	O4'-C1'-N1	5.33	112.46	108.20
22	DA	1313	U	N3-C2-O2	-5.33	118.47	122.20
21	AA	772	U	P-O3'-C3'	-5.33	113.31	119.70
22	BA	178	G	N9-C1'-C2'	-5.33	106.14	112.00
22	BA	216	A	N9-C1'-C2'	-5.33	106.14	112.00
22	BA	509	C	N1-C2-O2	5.33	122.10	118.90
53	CA	184	G	C3'-C2'-C1'	5.33	105.76	101.50
21	AA	1225	A	C5-C6-N6	5.32	127.96	123.70
22	BA	1821	A	C6-N1-C2	5.32	121.79	118.60
22	BA	2820	A	N1-C6-N6	5.32	121.79	118.60
22	DA	2603	G	N9-C1'-C2'	-5.32	106.14	112.00
22	BA	339	U	C2-N1-C1'	5.32	124.09	117.70
22	BA	349	U	O4'-C1'-N1	-5.32	103.94	108.20
22	BA	753	A	C3'-C2'-C1'	5.32	105.76	101.50
22	BA	1967	C	C3'-C2'-C1'	5.32	105.76	101.50
22	BA	2250	G	N1-C6-O6	5.32	123.09	119.90
53	CA	87	C	C3'-C2'-C1'	5.32	105.76	101.50
22	BA	740	C	C3'-C2'-C1'	5.32	105.75	101.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	1169	A	C5-C6-N6	-5.32	119.44	123.70
22	DA	919	U	N1-C2-O2	5.32	126.52	122.80
21	AA	499	A	P-O3'-C3'	5.32	126.08	119.70
22	BA	616	A	N9-C1'-C2'	-5.32	106.15	112.00
22	BA	1311	G	N3-C4-N9	-5.32	122.81	126.00
22	BA	1398	C	C3'-C2'-C1'	5.32	105.75	101.50
22	BA	1416	G	C8-N9-C1'	5.32	133.91	127.00
22	DA	273	G	P-O3'-C3'	-5.32	113.32	119.70
22	DA	2338	C	P-O3'-C3'	-5.32	113.32	119.70
53	CA	32	A	C3'-C2'-C1'	5.31	105.75	101.50
21	AA	183	C	O4'-C1'-N1	5.31	112.45	108.20
53	CA	452	A	C4-C5-C6	-5.31	114.34	117.00
22	DA	2511	U	C5-C4-O4	-5.31	122.71	125.90
22	BA	1168	G	N3-C4-N9	5.31	129.19	126.00
22	BA	1634	A	C4'-C3'-C2'	5.31	107.91	102.60
22	BA	253	C	C6-N1-C2	5.31	122.42	120.30
22	BA	406	G	N9-C1'-C2'	-5.31	106.16	112.00
22	BA	729	G	N9-C4-C5	5.31	107.52	105.40
22	DA	53	A	N9-C1'-C2'	-5.31	106.16	112.00
22	BA	1779	U	C5-C4-O4	5.31	129.09	125.90
22	DA	1399	C	C3'-C2'-C1'	5.31	105.75	101.50
21	AA	971	G	C8-N9-C1'	5.31	133.90	127.00
53	CA	534	U	C3'-C2'-C1'	5.31	105.75	101.50
22	DA	2137	U	P-O3'-C3'	-5.31	113.33	119.70
21	AA	1320	C	O4'-C1'-N1	5.30	112.44	108.20
22	BA	1386	C	N1-C1'-C2'	-5.30	106.17	112.00
22	DA	434	U	N1-C1'-C2'	5.30	120.89	114.00
22	BA	1943	U	C4'-C3'-C2'	5.30	107.90	102.60
53	CA	373	A	P-O3'-C3'	-5.30	113.34	119.70
22	DA	153	U	O4'-C1'-N1	5.30	112.44	108.20
22	DA	217	A	C3'-C2'-C1'	5.30	105.74	101.50
22	DA	1276	A	C3'-C2'-C1'	5.30	105.74	101.50
22	BA	1070	A	P-O3'-C3'	5.30	126.06	119.70
22	BA	2042	A	P-O3'-C3'	5.30	126.06	119.70
22	DA	615	U	P-O3'-C3'	5.30	126.06	119.70
22	BA	2691	C	P-O3'-C3'	-5.30	113.34	119.70
53	CA	512	U	O4'-C1'-N1	5.30	112.44	108.20
22	BA	829	A	C8-N9-C4	5.30	107.92	105.80
23	BB	97	C	C6-N1-C2	5.30	122.42	120.30
53	CA	1087	G	C3'-C2'-C1'	5.30	105.74	101.50
22	DA	963	U	C3'-C2'-C1'	5.30	105.74	101.50
22	BA	1313	U	P-O3'-C3'	-5.29	113.34	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	1865	U	N1-C2-O2	-5.29	119.09	122.80
22	BA	2629	U	N1-C1'-C2'	5.29	120.88	114.00
53	CA	90	C	P-O3'-C3'	-5.29	113.35	119.70
53	CA	972	C	O4'-C1'-N1	5.29	112.44	108.20
22	DA	446	G	P-O3'-C3'	5.29	126.05	119.70
21	AA	1281	C	O4'-C1'-N1	5.29	112.43	108.20
22	BA	1165	A	C6-N1-C2	5.29	121.78	118.60
22	BA	2756	U	C4'-C3'-C2'	5.29	107.89	102.60
22	DA	2511	U	C2-N3-C4	-5.29	123.83	127.00
22	DA	2517	C	N1-C1'-C2'	5.29	120.88	114.00
53	CA	722	G	C3'-C2'-C1'	5.29	105.73	101.50
22	BA	2615	U	N1-C1'-C2'	-5.29	106.18	112.00
22	BA	2321	U	O4'-C1'-N1	-5.29	103.97	108.20
53	CA	198	G	C3'-C2'-C1'	5.29	105.73	101.50
22	DA	617	G	P-O3'-C3'	-5.29	113.36	119.70
22	DA	401	A	O4'-C1'-N9	5.29	112.43	108.20
22	DA	1648	U	C3'-C2'-C1'	5.29	105.73	101.50
21	AA	1050	G	C3'-C2'-C1'	5.28	105.73	101.50
21	AA	1454	G	P-O3'-C3'	-5.28	113.36	119.70
53	CA	411	A	P-O3'-C3'	5.28	126.04	119.70
53	CA	460	A	C3'-C2'-C1'	5.28	105.73	101.50
22	DA	28	A	P-O3'-C3'	5.28	126.04	119.70
22	DA	221	A	P-O3'-C3'	5.28	126.04	119.70
21	AA	1345	U	N1-C1'-C2'	5.28	120.87	114.00
4	AE	14	LEU	CA-CB-CG	5.28	127.45	115.30
21	AA	1395	C	C3'-C2'-C1'	5.28	105.72	101.50
22	BA	2611	C	C3'-C2'-C1'	5.28	105.72	101.50
53	CA	652	U	N1-C1'-C2'	5.28	120.87	114.00
21	AA	982	U	N1-C1'-C2'	5.28	120.86	114.00
23	BB	95	U	C5-C4-O4	-5.28	122.73	125.90
22	DA	100	U	O4'-C1'-N1	5.28	112.42	108.20
21	AA	1282	C	P-O3'-C3'	-5.28	113.37	119.70
22	BA	1129	A	P-O3'-C3'	-5.28	113.37	119.70
22	BA	1280	G	N3-C4-N9	-5.28	122.83	126.00
53	CA	945	G	C6-N1-C2	-5.28	121.93	125.10
22	DA	500	G	C2-N3-C4	-5.28	109.26	111.90
22	BA	2431	U	P-O3'-C3'	-5.28	113.37	119.70
22	BA	1073	A	C3'-C2'-C1'	5.27	105.72	101.50
22	DA	2259	U	O4'-C1'-N1	5.27	112.42	108.20
21	AA	817	C	N1-C1'-C2'	5.27	120.85	114.00
22	BA	1666	G	N3-C4-N9	-5.27	122.84	126.00
22	DA	1289	C	P-O3'-C3'	-5.27	113.37	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	DA	1617	C	O4'-C1'-N1	5.27	112.42	108.20
22	BA	137	U	P-O3'-C3'	5.27	126.02	119.70
22	BA	865	C	N3-C2-O2	5.27	125.59	121.90
23	BB	12	C	N1-C1'-C2'	5.27	120.85	114.00
21	AA	411	A	O4'-C1'-N9	5.27	112.41	108.20
21	AA	509	A	P-O5'-C5'	-5.27	112.47	120.90
21	AA	945	G	C5-C6-O6	-5.27	125.44	128.60
22	BA	933	A	P-O3'-C3'	-5.27	113.38	119.70
22	BA	1635	A	N9-C1'-C2'	-5.27	106.21	112.00
22	BA	1966	A	P-O3'-C3'	5.27	126.02	119.70
53	CA	1490	U	C5-C4-O4	5.27	129.06	125.90
22	DA	1569	A	C3'-C2'-C1'	5.27	105.71	101.50
22	DA	2647	U	O4'-C1'-N1	5.27	112.41	108.20
21	AA	282	A	P-O5'-C5'	-5.27	112.47	120.90
22	DA	128	C	C3'-C2'-C1'	5.27	105.71	101.50
21	AA	487	A	P-O3'-C3'	-5.26	113.38	119.70
21	AA	723	U	P-O3'-C3'	-5.26	113.38	119.70
21	AA	1161	C	C3'-C2'-C1'	5.26	105.71	101.50
22	BA	1009	A	C3'-C2'-C1'	5.26	105.71	101.50
22	BA	1412	U	O4'-C1'-N1	5.26	112.41	108.20
53	CA	977	A	C3'-C2'-C1'	5.26	105.71	101.50
53	CA	1345	U	P-O3'-C3'	5.26	126.02	119.70
22	DA	2500	U	O4'-C1'-N1	5.26	112.41	108.20
22	BA	395	U	P-O3'-C3'	5.26	126.02	119.70
53	CA	765	G	C4-N9-C1'	5.26	133.34	126.50
22	DA	811	U	O4'-C1'-N1	5.26	112.41	108.20
21	AA	116	A	C3'-C2'-C1'	5.26	105.71	101.50
21	AA	1258	G	C3'-C2'-C1'	5.26	105.71	101.50
22	BA	144	A	C5-C6-N6	-5.26	119.49	123.70
22	BA	276	U	O4'-C1'-N1	5.26	112.41	108.20
22	BA	2679	A	O5'-P-OP2	-5.26	100.96	105.70
53	CA	356	A	O4'-C1'-N9	5.26	112.41	108.20
53	CA	935	A	P-O3'-C3'	-5.26	113.39	119.70
22	DA	273	G	N9-C1'-C2'	-5.26	106.21	112.00
22	DA	2575	C	N3-C4-N4	5.26	121.68	118.00
22	DA	2727	A	C3'-C2'-C1'	5.26	105.71	101.50
21	AA	91	U	N3-C4-O4	5.26	123.08	119.40
22	BA	324	A	P-O3'-C3'	-5.26	113.39	119.70
22	DA	1779	U	P-O3'-C3'	5.26	126.01	119.70
21	AA	61	G	C3'-C2'-C1'	5.26	105.71	101.50
22	BA	73	A	N9-C1'-C2'	-5.26	106.22	112.00
53	CA	245	U	C3'-C2'-C1'	5.26	105.71	101.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	AA	331	G	C3'-C2'-C1'	5.25	105.70	101.50
22	BA	915	C	C6-N1-C2	-5.25	118.20	120.30
22	BA	1512	C	P-O3'-C3'	-5.25	113.39	119.70
53	CA	1283	U	O4'-C1'-N1	5.25	112.40	108.20
22	DA	1300	G	P-O3'-C3'	5.25	126.01	119.70
21	AA	816	A	N9-C1'-C2'	-5.25	106.22	112.00
22	BA	2458	G	O3'-P-O5'	-5.25	94.02	104.00
53	CA	331	G	C3'-C2'-C1'	5.25	105.70	101.50
22	DA	224	U	C3'-C2'-C1'	5.25	105.70	101.50
22	BA	2283	C	C3'-C2'-C1'	5.25	105.70	101.50
22	BA	2696	U	O5'-P-OP2	-5.25	100.97	105.70
22	DA	2347	C	C3'-C2'-C1'	5.25	105.70	101.50
21	AA	245	U	C3'-C2'-C1'	5.25	105.70	101.50
22	BA	1965	C	P-O5'-C5'	-5.25	112.50	120.90
22	BA	723	C	O4'-C1'-N1	5.25	112.40	108.20
21	AA	1304	G	P-O3'-C3'	-5.25	113.41	119.70
22	BA	984	A	C4-C5-N7	5.25	113.32	110.70
22	BA	1035	U	N1-C2-O2	-5.25	119.13	122.80
22	BA	1615	C	N1-C2-O2	-5.25	115.75	118.90
22	DA	143	C	P-O3'-C3'	-5.25	113.40	119.70
22	DA	1707	G	P-O3'-C3'	-5.25	113.40	119.70
21	AA	812	G	O3'-P-O5'	-5.24	94.04	104.00
21	AA	874	G	P-O5'-C5'	-5.24	112.51	120.90
22	BA	677	A	N1-C6-N6	5.24	121.75	118.60
22	BA	1024	G	C3'-C2'-C1'	5.24	105.69	101.50
22	DA	1314	C	C2-N1-C1'	5.24	124.57	118.80
22	BA	1478	G	C8-N9-C1'	5.24	133.81	127.00
22	BA	1888	G	P-O3'-C3'	5.24	125.99	119.70
53	CA	644	U	O4'-C1'-N1	5.24	112.39	108.20
21	AA	1046	A	P-O3'-C3'	-5.24	113.41	119.70
22	BA	530	G	C4-N9-C1'	5.24	133.31	126.50
22	BA	2136	G	P-O3'-C3'	-5.24	113.41	119.70
22	DA	587	C	P-O3'-C3'	5.24	125.99	119.70
22	DA	656	G	P-O3'-C3'	-5.24	113.41	119.70
21	AA	266	G	O3'-P-O5'	5.24	113.95	104.00
22	BA	2656	U	C3'-C2'-C1'	5.24	105.69	101.50
53	CA	704	A	N9-C1'-C2'	-5.24	106.24	112.00
53	CA	1366	C	C3'-C2'-C1'	5.24	105.69	101.50
22	DA	407	G	O4'-C1'-N9	5.24	112.39	108.20
22	DA	611	C	O4'-C1'-N1	5.24	112.39	108.20
22	DA	222	A	O4'-C1'-N9	5.24	112.39	108.20
22	DA	2685	G	P-O3'-C3'	-5.24	113.42	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	787	C	N3-C2-O2	5.24	125.56	121.90
22	BA	1759	A	C3'-C2'-C1'	5.24	105.69	101.50
22	BA	2309	A	P-O3'-C3'	-5.24	113.42	119.70
53	CA	331	G	N9-C1'-C2'	-5.24	106.24	112.00
22	DA	313	G	P-O3'-C3'	-5.24	113.42	119.70
22	BA	313	G	P-O5'-C5'	-5.23	112.53	120.90
53	CA	722	G	P-O3'-C3'	-5.23	113.42	119.70
53	CA	982	U	N1-C1'-C2'	5.23	120.80	114.00
53	CA	1410	A	C6-N1-C2	5.23	121.74	118.60
22	DA	2519	U	O4'-C1'-N1	-5.23	104.02	108.20
21	AA	121	U	C3'-C2'-C1'	5.23	105.68	101.50
21	AA	575	G	C4-N9-C1'	-5.23	119.70	126.50
22	BA	604	G	P-O3'-C3'	-5.23	113.42	119.70
22	DA	100	U	P-O3'-C3'	5.23	125.98	119.70
22	BA	1498	C	C3'-C2'-C1'	5.23	105.68	101.50
22	BA	699	A	N1-C6-N6	5.23	121.74	118.60
22	DA	427	U	O4'-C1'-N1	5.23	112.38	108.20
22	BA	61	C	P-O5'-C5'	-5.23	112.54	120.90
22	BA	1615	C	C2-N1-C1'	-5.23	113.05	118.80
22	DA	946	C	O4'-C1'-N1	5.23	112.38	108.20
22	DA	1136	G	C3'-C2'-C1'	5.23	105.68	101.50
22	DA	482	A	N9-C1'-C2'	-5.22	106.25	112.00
22	DA	510	C	C3'-C2'-C1'	5.22	105.68	101.50
22	DA	2832	U	P-O3'-C3'	5.22	125.97	119.70
22	BA	124	G	P-O3'-C3'	5.22	125.97	119.70
22	DA	962	G	C3'-C2'-C1'	5.22	105.68	101.50
21	AA	563	A	C3'-C2'-C1'	5.22	105.68	101.50
22	BA	776	G	O4'-C1'-N9	-5.22	104.03	108.20
22	DA	53	A	C3'-C2'-C1'	5.22	105.68	101.50
22	DA	749	A	C3'-C2'-C1'	5.22	105.67	101.50
22	DA	1329	U	N1-C1'-C2'	5.22	120.78	114.00
21	AA	1151	A	P-O3'-C3'	5.22	125.96	119.70
22	BA	556	A	P-O3'-C3'	-5.22	113.44	119.70
22	BA	705	A	N9-C1'-C2'	-5.22	106.26	112.00
22	BA	1872	A	P-O3'-C3'	-5.22	113.44	119.70
22	DA	806	C	C3'-C2'-C1'	5.22	105.67	101.50
21	AA	955	U	C2-N3-C4	5.21	130.13	127.00
22	BA	2447	G	N3-C2-N2	-5.21	116.25	119.90
22	DA	121	G	C3'-C2'-C1'	5.21	105.67	101.50
22	DA	1324	G	O4'-C1'-N9	5.21	112.37	108.20
22	DA	1430	G	C3'-C2'-C1'	5.21	105.67	101.50
23	BB	30	C	O4'-C1'-N1	-5.21	104.03	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	CA	695	A	P-O3'-C3'	5.21	125.96	119.70
22	BA	200	U	P-O3'-C3'	-5.21	113.45	119.70
22	BA	533	G	C3'-C2'-C1'	5.21	105.67	101.50
22	BA	667	U	P-O3'-C3'	5.21	125.95	119.70
22	BA	177	G	P-O3'-C3'	5.21	125.95	119.70
22	BA	507	A	C5-N7-C8	-5.21	101.30	103.90
22	BA	412	A	N9-C1'-C2'	-5.21	106.27	112.00
22	DA	1647	U	O4'-C1'-N1	5.21	112.37	108.20
22	DA	2596	U	O4'-C1'-N1	5.21	112.37	108.20
22	DA	2837	A	C3'-C2'-C1'	5.21	105.67	101.50
21	AA	1286	U	P-O3'-C3'	5.21	125.95	119.70
22	BA	1235	G	P-O3'-C3'	5.21	125.95	119.70
22	BA	2000	C	C6-N1-C2	5.21	122.38	120.30
23	BB	13	G	C3'-C2'-C1'	5.21	105.67	101.50
22	BA	199	A	O4'-C1'-N9	5.20	112.36	108.20
22	BA	2415	G	C6-C5-N7	-5.20	127.28	130.40
22	DA	804	A	O4'-C1'-N9	5.20	112.36	108.20
22	DA	2401	U	P-O3'-C3'	5.20	125.94	119.70
22	DA	422	A	C3'-C2'-C1'	5.20	105.66	101.50
21	AA	1200	C	N1-C1'-C2'	5.20	120.76	114.00
22	BA	507	A	C3'-C2'-C1'	5.20	105.66	101.50
22	BA	1799	G	C4-N9-C1'	-5.20	119.74	126.50
53	CA	199	A	P-O3'-C3'	-5.20	113.46	119.70
53	CA	131	A	C3'-C2'-C1'	5.20	105.66	101.50
53	CA	428	G	C4-N9-C1'	-5.20	119.74	126.50
53	CA	457	G	P-O3'-C3'	5.20	125.94	119.70
22	DA	2267	A	N3-C4-C5	-5.20	123.16	126.80
22	DA	1647	U	P-O3'-C3'	5.20	125.94	119.70
22	BA	73	A	C3'-C2'-C1'	5.20	105.66	101.50
22	BA	223	A	P-O3'-C3'	-5.20	113.47	119.70
22	DA	303	G	P-O3'-C3'	-5.20	113.47	119.70
22	DA	2033	A	N7-C8-N9	-5.20	111.20	113.80
22	BA	1808	A	P-O3'-C3'	5.19	125.93	119.70
22	BA	1945	G	C3'-C2'-C1'	5.19	105.66	101.50
22	DA	1048	A	C3'-C2'-C1'	5.19	105.66	101.50
22	DA	1993	U	O4'-C1'-N1	5.19	112.36	108.20
22	BA	950	G	P-O3'-C3'	-5.19	113.47	119.70
22	BA	2790	U	O4'-C1'-N1	5.19	112.35	108.20
21	AA	1307	U	O4'-C1'-N1	-5.19	104.05	108.20
53	CA	963	G	O4'-C1'-N9	5.19	112.35	108.20
22	DA	1340	U	P-O3'-C3'	5.19	125.93	119.70
21	AA	244	U	P-O5'-C5'	-5.19	112.60	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	1538	G	C3'-C2'-C1'	5.19	105.65	101.50
21	AA	1191	A	P-O3'-C3'	-5.19	113.48	119.70
22	BA	1956	U	C3'-C2'-C1'	5.19	105.65	101.50
53	CA	487	A	N1-C6-N6	5.19	121.71	118.60
21	AA	882	C	O4'-C1'-N1	5.18	112.35	108.20
22	BA	2589	A	N3-C4-N9	-5.18	123.25	127.40
53	CA	766	A	O4'-C1'-N9	5.18	112.35	108.20
21	AA	70	U	N1-C1'-C2'	5.18	120.74	114.00
21	AA	931	C	O4'-C1'-N1	5.18	112.35	108.20
21	AA	984	C	C3'-C2'-C1'	5.18	105.65	101.50
22	DA	1635	A	C3'-C2'-C1'	5.18	105.65	101.50
22	DA	2148	G	C3'-C2'-C1'	5.18	105.65	101.50
21	AA	722	G	C3'-C2'-C1'	5.18	105.64	101.50
22	BA	637	A	O4'-C1'-N9	5.18	112.34	108.20
53	CA	405	U	C5-C4-O4	5.18	129.01	125.90
53	CA	1158	C	C3'-C2'-C1'	5.18	105.64	101.50
21	AA	7	A	O4'-C1'-N9	5.18	112.34	108.20
22	BA	1249	U	P-O5'-C5'	-5.18	112.61	120.90
22	BA	1467	U	C2-N3-C4	5.18	130.11	127.00
22	BA	1695	G	C3'-C2'-C1'	5.18	105.64	101.50
53	CA	821	G	C3'-C2'-C1'	5.18	105.64	101.50
22	DA	531	C	N1-C1'-C2'	5.18	120.73	114.00
22	DA	705	A	P-O3'-C3'	-5.18	113.48	119.70
22	BA	2077	A	C5-N7-C8	5.18	106.49	103.90
53	CA	1362	A	P-O3'-C3'	5.18	125.91	119.70
22	BA	373	U	C3'-C2'-C1'	5.18	105.64	101.50
22	BA	781	A	P-O3'-C3'	5.18	125.91	119.70
22	DA	2409	G	P-O3'-C3'	-5.18	113.49	119.70
22	DA	2667	C	C3'-C2'-C1'	5.18	105.64	101.50
22	BA	783	A	C5-C6-N6	-5.17	119.56	123.70
22	BA	1451	C	P-O3'-C3'	5.17	125.91	119.70
22	BA	2880	C	C3'-C2'-C1'	5.17	105.64	101.50
22	DA	967	U	O4'-C1'-N1	5.17	112.34	108.20
22	DA	1817	G	C3'-C2'-C1'	5.17	105.64	101.50
21	AA	1138	G	C3'-C2'-C1'	5.17	105.64	101.50
22	BA	206	U	C3'-C2'-C1'	5.17	105.64	101.50
22	BA	904	G	P-O3'-C3'	-5.17	113.49	119.70
22	DA	1713	A	P-O3'-C3'	5.17	125.91	119.70
22	DA	1982	U	C5-C6-N1	5.17	125.29	122.70
22	BA	2289	G	N9-C1'-C2'	-5.17	106.31	112.00
21	AA	1129	C	P-O3'-C3'	5.17	125.91	119.70
22	DA	677	A	C5-C6-N6	-5.17	119.56	123.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	DA	2427	C	C3'-C2'-C1'	5.17	105.64	101.50
21	AA	994	A	C3'-C2'-C1'	5.17	105.64	101.50
53	CA	1296	C	P-O3'-C3'	5.17	125.90	119.70
53	CA	705	G	C3'-C2'-C1'	5.17	105.63	101.50
22	DA	1304	A	O4'-C1'-N9	5.17	112.33	108.20
22	BA	2830	C	P-O3'-C3'	-5.17	113.50	119.70
53	CA	12	U	O4'-C1'-N1	5.17	112.33	108.20
22	DA	1329	U	P-O3'-C3'	5.17	125.90	119.70
22	DA	1810	A	C3'-C2'-C1'	5.17	105.63	101.50
22	DA	2149	U	C3'-C2'-C1'	5.17	105.63	101.50
22	DA	1733	G	C3'-C2'-C1'	5.16	105.63	101.50
22	DA	2401	U	O4'-C1'-N1	5.16	112.33	108.20
22	BA	197	A	N9-C1'-C2'	-5.16	106.32	112.00
53	CA	52	C	C3'-C2'-C1'	5.16	105.63	101.50
22	DA	229	C	O4'-C1'-N1	5.16	112.33	108.20
22	BA	993	G	P-O3'-C3'	-5.16	113.51	119.70
23	BB	45	A	C3'-C2'-C1'	5.16	105.63	101.50
22	DA	1666	G	O4'-C1'-N9	5.16	112.33	108.20
22	BA	1817	G	N9-C4-C5	5.16	107.46	105.40
53	CA	536	C	O4'-C1'-N1	-5.16	104.07	108.20
53	CA	1050	G	C3'-C2'-C1'	5.16	105.63	101.50
22	DA	800	A	P-O3'-C3'	5.16	125.89	119.70
22	DA	2063	C	P-O3'-C3'	-5.16	113.51	119.70
53	CA	381	C	C2-N1-C1'	5.16	124.47	118.80
22	DA	774	G	N3-C4-N9	-5.16	122.91	126.00
22	DA	2298	A	P-O3'-C3'	-5.16	113.51	119.70
22	DA	2451	A	C4-C5-C6	-5.16	114.42	117.00
21	AA	334	C	C6-N1-C2	5.16	122.36	120.30
21	AA	892	A	O5'-P-OP2	-5.16	101.06	105.70
21	AA	1478	U	C5-C4-O4	-5.16	122.81	125.90
22	BA	229	C	P-O3'-C3'	-5.16	113.51	119.70
21	AA	51	A	C3'-C2'-C1'	5.15	105.62	101.50
22	DA	1655	A	C3'-C2'-C1'	5.15	105.62	101.50
22	DA	2689	U	N1-C1'-C2'	5.15	120.70	114.00
22	BA	2770	G	C6-C5-N7	-5.15	127.31	130.40
21	AA	352	C	C3'-C2'-C1'	5.15	105.62	101.50
22	BA	1757	A	P-O3'-C3'	5.15	125.88	119.70
22	DA	1060	U	C2-N1-C1'	5.15	123.88	117.70
22	DA	2210	U	O3'-P-O5'	5.15	113.79	104.00
21	AA	828	U	O4'-C1'-N1	5.15	112.32	108.20
22	BA	2547	A	P-O3'-C3'	5.15	125.88	119.70
53	CA	806	C	N1-C2-O2	-5.15	115.81	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	CA	430	A	N9-C1'-C2'	-5.15	106.34	112.00
22	DA	1447	C	O4'-C1'-N1	5.15	112.32	108.20
22	BA	2501	C	N3-C4-C5	5.15	123.96	121.90
22	DA	913	U	O4'-C1'-N1	5.15	112.32	108.20
21	AA	131	A	N1-C6-N6	-5.14	115.51	118.60
22	BA	1706	C	C2-N1-C1'	-5.14	113.14	118.80
22	BA	507	A	C4-C5-C6	-5.14	114.43	117.00
53	CA	1299	A	C3'-C2'-C1'	5.14	105.61	101.50
22	DA	1915	U	P-O3'-C3'	-5.14	113.53	119.70
22	BA	628	G	N9-C1'-C2'	-5.14	106.34	112.00
22	BA	1611	C	P-O5'-C5'	-5.14	112.68	120.90
22	DA	36	G	C3'-C2'-C1'	5.14	105.61	101.50
22	DA	867	C	C3'-C2'-C1'	5.14	105.61	101.50
22	DA	2683	C	O4'-C1'-N1	5.14	112.31	108.20
22	BA	491	G	N9-C1'-C2'	-5.14	106.35	112.00
22	BA	2353	G	P-O5'-C5'	-5.14	112.68	120.90
22	BA	2612	C	C6-N1-C2	5.14	122.36	120.30
23	BB	2	G	C6-C5-N7	-5.14	127.32	130.40
22	DA	2458	G	C8-N9-C1'	-5.14	120.32	127.00
22	DA	2656	U	C3'-C2'-C1'	5.14	105.61	101.50
21	AA	452	A	C3'-C2'-C1'	5.14	105.61	101.50
53	CA	7	A	P-O3'-C3'	5.14	125.86	119.70
22	DA	1725	U	O4'-C1'-N1	5.14	112.31	108.20
21	AA	452	A	N3-C4-N9	-5.13	123.29	127.40
22	BA	831	G	P-O5'-C5'	-5.13	112.68	120.90
22	DA	1981	A	P-O3'-C3'	-5.13	113.54	119.70
22	DA	2215	C	O4'-C1'-N1	5.13	112.31	108.20
22	BA	179	C	O4'-C1'-N1	5.13	112.31	108.20
22	DA	1303	G	C3'-C2'-C1'	5.13	105.60	101.50
22	DA	1346	G	P-O3'-C3'	-5.13	113.54	119.70
22	BA	454	A	OP2-P-O3'	5.13	116.48	105.20
22	BA	1	G	P-O3'-C3'	-5.12	113.55	119.70
22	DA	2640	G	P-O3'-C3'	-5.12	113.55	119.70
21	AA	755	G	P-O3'-C3'	-5.12	113.55	119.70
21	AA	1498	U	O4'-C1'-N1	5.12	112.30	108.20
22	BA	230	G	C3'-C2'-C1'	5.12	105.60	101.50
22	BA	752	A	N9-C4-C5	-5.12	103.75	105.80
22	BA	1785	A	N7-C8-N9	5.12	116.36	113.80
22	BA	1798	U	P-O3'-C3'	-5.12	113.55	119.70
22	BA	2009	A	C6-N1-C2	5.12	121.67	118.60
21	AA	467	U	P-O3'-C3'	-5.12	113.55	119.70
22	BA	1969	A	P-O5'-C5'	-5.12	112.70	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	BB	25	U	C3'-C2'-C1'	5.12	105.60	101.50
21	AA	303	A	C6-N1-C2	5.12	121.67	118.60
53	CA	1051	C	C3'-C2'-C1'	5.12	105.60	101.50
22	DA	1181	U	O4'-C1'-N1	5.12	112.30	108.20
53	CA	1283	U	C3'-C2'-C1'	5.12	105.59	101.50
22	BA	1996	C	OP1-P-O3'	5.12	116.46	105.20
22	BA	585	G	C5-C6-O6	-5.12	125.53	128.60
22	BA	1537	G	P-O3'-C3'	-5.12	113.56	119.70
21	AA	1396	A	P-O3'-C3'	5.11	125.84	119.70
22	BA	144	A	N1-C6-N6	5.11	121.67	118.60
22	BA	2286	G	N3-C4-N9	-5.11	122.93	126.00
53	CA	247	G	N9-C1'-C2'	-5.11	106.38	112.00
22	DA	13	A	P-O3'-C3'	5.11	125.84	119.70
22	BA	2689	U	C2-N1-C1'	-5.11	111.57	117.70
22	DA	2314	A	C3'-C2'-C1'	5.11	105.59	101.50
21	AA	794	A	N9-C1'-C2'	-5.11	106.38	112.00
22	BA	798	G	P-O5'-C5'	-5.11	112.73	120.90
22	BA	2578	G	O4'-C1'-N9	5.11	112.29	108.20
53	CA	1102	A	N9-C1'-C2'	-5.11	106.38	112.00
22	DA	606	U	O4'-C1'-N1	5.11	112.29	108.20
22	BA	604	G	N9-C1'-C2'	-5.11	106.38	112.00
22	BA	858	G	P-O5'-C5'	-5.11	112.73	120.90
22	BA	1468	U	O4'-C1'-N1	5.11	112.28	108.20
23	BB	48	U	P-O5'-C5'	-5.11	112.73	120.90
53	CA	575	G	C6-C5-N7	5.11	133.46	130.40
22	DA	163	C	C3'-C2'-C1'	5.11	105.58	101.50
22	DA	1313	U	C5-C4-O4	5.11	128.96	125.90
22	DA	1634	A	P-O3'-C3'	5.11	125.83	119.70
54	DB	113	C	O4'-C1'-N1	5.10	112.28	108.20
22	BA	471	A	C8-N9-C4	5.10	107.84	105.80
22	BA	2071	A	O3'-P-O5'	-5.10	94.30	104.00
22	BA	2317	A	P-O3'-C3'	-5.10	113.58	119.70
22	BA	2790	U	P-O3'-C3'	5.10	125.82	119.70
22	DA	1635	A	P-O3'-C3'	-5.10	113.58	119.70
22	DA	2425	A	P-O3'-C3'	5.10	125.82	119.70
22	BA	726	G	N3-C4-N9	-5.10	122.94	126.00
22	BA	2645	G	C4-N9-C1'	5.10	133.13	126.50
22	DA	2335	A	C3'-C2'-C1'	5.10	105.58	101.50
22	BA	206	U	N1-C1'-C2'	-5.10	106.39	112.00
22	BA	2501	C	P-O3'-C3'	5.10	125.82	119.70
22	DA	119	A	P-O3'-C3'	5.10	125.82	119.70
22	DA	1931	U	C3'-C2'-C1'	5.10	105.58	101.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	AA	82	G	P-O3'-C3'	5.10	125.82	119.70
21	AA	1461	G	N1-C2-N2	-5.10	111.61	116.20
22	BA	356	G	C5-C6-O6	5.10	131.66	128.60
22	BA	52	A	C3'-C2'-C1'	5.09	105.58	101.50
23	BB	42	C	C3'-C2'-C1'	5.09	105.58	101.50
53	CA	511	C	C2-N1-C1'	-5.09	113.19	118.80
22	BA	1694	C	P-O3'-C3'	5.09	125.81	119.70
22	BA	2258	C	C4'-C3'-C2'	5.09	107.69	102.60
22	DA	2272	U	O4'-C1'-N1	-5.09	104.13	108.20
22	BA	1635	A	C3'-C2'-C1'	5.09	105.57	101.50
22	DA	301	G	O4'-C1'-N9	5.09	112.27	108.20
22	DA	482	A	C3'-C2'-C1'	5.09	105.57	101.50
22	BA	272	A	P-O3'-C3'	-5.09	113.59	119.70
22	BA	1554	U	C4'-C3'-C2'	5.09	107.69	102.60
53	CA	461	A	P-O3'-C3'	5.09	125.81	119.70
53	CA	1158	C	P-O3'-C3'	-5.09	113.59	119.70
22	DA	397	U	O4'-C1'-N1	5.09	112.27	108.20
22	DA	763	G	C3'-C2'-C1'	5.09	105.57	101.50
22	DA	2339	C	O4'-C1'-N1	5.09	112.27	108.20
22	DA	2405	G	P-O3'-C3'	5.09	125.81	119.70
21	AA	72	A	C3'-C2'-C1'	5.09	105.57	101.50
21	AA	78	A	P-O3'-C3'	5.09	125.81	119.70
22	BA	763	G	C6-C5-N7	-5.09	127.35	130.40
22	BA	1838	C	C2-N1-C1'	-5.09	113.20	118.80
53	CA	874	G	C3'-C2'-C1'	5.09	105.57	101.50
22	BA	538	A	P-O3'-C3'	-5.09	113.59	119.70
22	BA	643	A	P-O3'-C3'	5.09	125.80	119.70
22	BA	2181	U	O4'-C1'-N1	-5.09	104.13	108.20
53	CA	537	G	C3'-C2'-C1'	5.08	105.57	101.50
21	AA	972	C	C3'-C2'-C1'	5.08	105.57	101.50
22	BA	1666	G	C8-N9-C1'	5.08	133.61	127.00
22	DA	233	A	C3'-C2'-C1'	5.08	105.57	101.50
22	DA	480	A	C3'-C2'-C1'	5.08	105.57	101.50
22	DA	790	U	P-O3'-C3'	-5.08	113.60	119.70
22	DA	1556	C	C3'-C2'-C1'	5.08	105.57	101.50
22	DA	1699	G	N9-C1'-C2'	5.08	120.61	114.00
21	AA	81	A	O4'-C1'-N9	5.08	112.27	108.20
21	AA	1531	A	C3'-C2'-C1'	5.08	105.56	101.50
22	BA	1111	A	P-O3'-C3'	5.08	125.80	119.70
53	CA	330	C	C3'-C2'-C1'	5.08	105.56	101.50
53	CA	1315	U	O4'-C1'-N1	5.08	112.27	108.20
22	DA	85	G	C3'-C2'-C1'	5.08	105.57	101.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	DA	1013	C	C3'-C2'-C1'	5.08	105.56	101.50
22	DA	1808	A	P-O3'-C3'	5.08	125.80	119.70
21	AA	214	C	P-O3'-C3'	-5.08	113.61	119.70
22	BA	199	A	C1'-O4'-C4'	-5.08	105.84	109.90
22	DA	1135	C	C3'-C2'-C1'	5.08	105.56	101.50
22	BA	752	A	P-O5'-C5'	-5.08	112.78	120.90
22	BA	1021	A	C4'-C3'-C2'	5.08	107.68	102.60
22	BA	2371	G	N3-C4-N9	-5.08	122.95	126.00
22	BA	2782	G	N1-C6-O6	5.08	122.95	119.90
21	AA	1505	G	C3'-C2'-C1'	5.08	105.56	101.50
22	BA	1379	U	C3'-C2'-C1'	5.08	105.56	101.50
53	CA	615	G	O4'-C1'-N9	5.08	112.26	108.20
21	AA	754	C	C3'-C2'-C1'	5.08	105.56	101.50
22	BA	984	A	C5-C6-N6	-5.08	119.64	123.70
22	BA	1767	G	N9-C4-C5	5.08	107.43	105.40
54	DB	27	C	O4'-C1'-N1	5.08	112.26	108.20
21	AA	874	G	C3'-C2'-C1'	5.07	105.56	101.50
22	BA	2052	A	P-O3'-C3'	-5.07	113.61	119.70
22	BA	2727	A	C3'-C2'-C1'	5.07	105.56	101.50
53	CA	500	G	C3'-C2'-C1'	5.07	105.56	101.50
22	DA	422	A	P-O3'-C3'	-5.07	113.61	119.70
22	DA	491	G	P-O3'-C3'	-5.07	113.61	119.70
22	DA	1565	C	N1-C1'-C2'	5.07	120.59	114.00
22	DA	2777	G	P-O3'-C3'	-5.07	113.61	119.70
22	BA	1144	A	P-O5'-C5'	-5.07	112.79	120.90
22	BA	1289	C	C3'-C2'-C1'	5.07	105.56	101.50
53	CA	1129	C	P-O3'-C3'	5.07	125.78	119.70
21	AA	1224	U	P-O5'-C5'	5.07	129.01	120.90
22	DA	775	G	N9-C4-C5	5.07	107.43	105.40
53	CA	642	A	C3'-C2'-C1'	5.07	105.55	101.50
21	AA	915	A	P-O3'-C3'	-5.07	113.62	119.70
22	BA	92	U	C3'-C2'-C1'	5.07	105.55	101.50
53	CA	49	U	O4'-C1'-N1	5.07	112.25	108.20
22	DA	61	C	O4'-C1'-N1	5.07	112.25	108.20
22	DA	2691	C	C3'-C2'-C1'	5.07	105.55	101.50
53	CA	110	C	C3'-C2'-C1'	5.06	105.55	101.50
22	DA	1611	C	O4'-C1'-N1	5.06	112.25	108.20
22	BA	948	C	P-O5'-C5'	-5.06	112.80	120.90
22	BA	2849	U	P-O3'-C3'	5.06	125.77	119.70
22	BA	802	A	C3'-C2'-C1'	5.06	105.55	101.50
22	BA	1239	G	O3'-P-O5'	-5.06	94.39	104.00
22	BA	1707	G	C3'-C2'-C1'	5.06	105.55	101.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	DA	311	A	P-O3'-C3'	5.06	125.77	119.70
22	DA	777	G	C3'-C2'-C1'	5.06	105.55	101.50
22	DA	1981	A	C3'-C2'-C1'	5.06	105.55	101.50
54	DB	41	G	C3'-C2'-C1'	5.06	105.55	101.50
21	AA	110	C	P-O3'-C3'	-5.06	113.63	119.70
22	BA	1142	A	N7-C8-N9	5.06	116.33	113.80
22	BA	1682	G	C3'-C2'-C1'	5.06	105.55	101.50
22	BA	2733	A	C6-C5-N7	-5.06	128.76	132.30
22	BA	2781	A	N9-C1'-C2'	-5.06	106.44	112.00
22	BA	2801	G	C3'-C2'-C1'	5.06	105.55	101.50
53	CA	806	C	O4'-C1'-N1	5.06	112.25	108.20
22	BA	1491	G	P-O3'-C3'	-5.06	113.63	119.70
21	AA	1066	C	C3'-C2'-C1'	5.05	105.54	101.50
22	BA	621	A	N9-C1'-C2'	-5.05	106.44	112.00
53	CA	1128	C	O4'-C1'-N1	5.05	112.24	108.20
22	DA	475	C	P-O5'-C5'	-5.05	112.81	120.90
22	DA	1914	C	O4'-C1'-N1	5.05	112.24	108.20
22	DA	2144	G	C3'-C2'-C1'	5.05	105.54	101.50
54	DB	16	G	P-O3'-C3'	-5.05	113.63	119.70
22	DA	369	U	O4'-C1'-N1	5.05	112.24	108.20
22	DA	572	A	P-O3'-C3'	-5.05	113.64	119.70
22	BA	69	C	C6-N1-C2	5.05	122.32	120.30
22	BA	2249	U	C4'-C3'-C2'	5.05	107.65	102.60
22	BA	2579	C	OP1-P-O3'	5.05	116.31	105.20
22	DA	2668	G	O4'-C1'-N9	5.05	112.24	108.20
21	AA	642	A	N9-C1'-C2'	-5.05	106.44	112.00
21	AA	1397	C	O4'-C1'-N1	5.05	112.24	108.20
22	BA	66	C	O4'-C1'-N1	5.05	112.24	108.20
22	BA	946	C	C3'-C2'-C1'	5.05	105.54	101.50
22	BA	2312	U	P-O5'-C5'	-5.05	112.82	120.90
22	DA	1888	G	O4'-C1'-N9	5.05	112.24	108.20
22	BA	1272	A	O4'-C1'-N9	5.05	112.24	108.20
22	BA	434	U	N1-C1'-C2'	5.05	120.56	114.00
22	DA	2841	C	O4'-C1'-N1	5.05	112.24	108.20
21	AA	330	C	C3'-C2'-C1'	5.04	105.54	101.50
22	BA	125	A	P-O3'-C3'	5.04	125.75	119.70
22	BA	1275	A	P-O3'-C3'	5.04	125.75	119.70
22	BA	1858	A	P-O3'-C3'	-5.04	113.65	119.70
21	AA	52	C	P-O3'-C3'	-5.04	113.65	119.70
21	AA	305	G	P-O3'-C3'	5.04	125.75	119.70
21	AA	452	A	N3-C4-C5	5.04	130.33	126.80
22	BA	765	C	C3'-C2'-C1'	5.04	105.53	101.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	2714	G	P-O3'-C3'	-5.04	113.65	119.70
22	BA	2784	U	P-O5'-C5'	-5.04	112.83	120.90
53	CA	1051	C	P-O3'-C3'	-5.04	113.65	119.70
22	DA	1439	A	C8-N9-C1'	-5.04	118.62	127.70
22	DA	1649	G	P-O3'-C3'	-5.04	113.65	119.70
22	BA	1866	A	N9-C1'-C2'	-5.04	106.45	112.00
22	BA	2447	G	C5-N7-C8	5.04	106.82	104.30
22	DA	246	C	C6-N1-C2	5.04	122.32	120.30
22	DA	1937	A	P-O3'-C3'	5.04	125.75	119.70
21	AA	393	A	C6-N1-C2	5.04	121.62	118.60
21	AA	496	A	C3'-C2'-C1'	5.04	105.53	101.50
22	BA	2061	G	C5-C6-O6	-5.04	125.58	128.60
22	BA	63	A	P-O3'-C3'	-5.04	113.65	119.70
53	CA	80	A	C6-N1-C2	-5.04	115.58	118.60
22	BA	968	C	P-O3'-C3'	-5.04	113.66	119.70
22	BA	974	G	N9-C1'-C2'	5.04	120.55	114.00
22	BA	1168	G	C8-N9-C1'	-5.04	120.45	127.00
22	BA	1510	G	C3'-C2'-C1'	5.04	105.53	101.50
22	DA	2036	C	N1-C2-O2	5.04	121.92	118.90
21	AA	1055	A	N9-C1'-C2'	-5.04	106.46	112.00
22	BA	1281	G	O3'-P-O5'	-5.04	94.43	104.00
22	DA	75	G	P-O3'-C3'	-5.04	113.66	119.70
22	DA	1809	A	C3'-C2'-C1'	5.04	105.53	101.50
22	DA	1810	A	P-O3'-C3'	-5.04	113.66	119.70
22	DA	2836	U	C3'-C2'-C1'	5.04	105.53	101.50
22	BA	1036	G	P-O5'-C5'	-5.03	112.85	120.90
22	BA	1303	G	C3'-C2'-C1'	5.03	105.53	101.50
22	BA	1795	C	O5'-P-OP2	-5.03	101.17	105.70
53	CA	1212	U	P-O3'-C3'	5.03	125.74	119.70
21	AA	32	A	C3'-C2'-C1'	5.03	105.53	101.50
22	BA	1182	G	C3'-C2'-C1'	5.03	105.53	101.50
22	BA	2832	U	O3'-P-O5'	-5.03	94.44	104.00
22	DA	2297	A	C3'-C2'-C1'	5.03	105.52	101.50
21	AA	974	A	O4'-C1'-N9	5.03	112.22	108.20
22	BA	382	A	P-O3'-C3'	-5.03	113.67	119.70
22	BA	1169	A	C5-C6-N1	5.03	120.22	117.70
31	BJ	82	GLY	N-CA-C	-5.03	100.53	113.10
21	AA	47	C	O3'-P-O5'	5.03	113.55	104.00
22	BA	513	A	C3'-C2'-C1'	5.03	105.52	101.50
22	BA	2791	G	O5'-P-OP1	-5.03	101.18	105.70
22	DA	1386	C	C3'-C2'-C1'	5.03	105.52	101.50
22	DA	2195	U	O4'-C1'-N1	5.03	112.22	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	DA	2308	G	P-O3'-C3'	5.03	125.73	119.70
22	BA	529	A	N7-C8-N9	-5.03	111.29	113.80
22	BA	1069	A	O4'-C1'-N9	5.03	112.22	108.20
22	BA	1199	U	O4'-C1'-N1	-5.03	104.18	108.20
22	BA	2487	G	P-O3'-C3'	5.03	125.73	119.70
22	BA	1568	G	C3'-C2'-C1'	5.02	105.52	101.50
22	DA	1821	A	N9-C1'-C2'	-5.02	106.47	112.00
22	BA	607	U	O4'-C1'-N1	5.02	112.22	108.20
21	AA	965	U	N1-C1'-C2'	5.02	120.53	114.00
22	BA	705	A	C3'-C2'-C1'	5.02	105.52	101.50
22	BA	2275	C	N1-C1'-C2'	5.02	120.53	114.00
21	AA	1364	U	O4'-C1'-N1	5.02	112.21	108.20
22	BA	2483	C	C6-N1-C2	5.02	122.31	120.30
22	DA	2619	C	P-O3'-C3'	-5.02	113.68	119.70
21	AA	88	U	N1-C1'-C2'	5.02	120.52	114.00
22	BA	530	G	C3'-C2'-C1'	5.02	105.51	101.50
22	BA	819	A	N9-C4-C5	-5.02	103.79	105.80
23	BB	57	A	C3'-C2'-C1'	5.02	105.51	101.50
22	DA	1816	C	P-O3'-C3'	-5.01	113.68	119.70
54	DB	90	C	C3'-C2'-C1'	5.01	105.51	101.50
22	BA	446	G	C2-N3-C4	-5.01	109.39	111.90
53	CA	174	A	P-O3'-C3'	-5.01	113.68	119.70
22	DA	969	G	N3-C4-N9	-5.01	122.99	126.00
22	BA	1011	G	C4-N9-C1'	-5.01	119.98	126.50
22	BA	1985	C	C5-C6-N1	-5.01	118.49	121.00
22	DA	103	A	P-O3'-C3'	-5.01	113.69	119.70
22	BA	1429	G	N9-C1'-C2'	-5.01	106.49	112.00
22	BA	1431	A	P-O5'-C5'	-5.01	112.88	120.90
53	CA	536	C	C3'-C2'-C1'	5.01	105.51	101.50
22	BA	1926	U	P-O3'-C3'	-5.01	113.69	119.70
22	DA	2622	U	O4'-C1'-N1	5.01	112.21	108.20
22	BA	1822	C	P-O3'-C3'	-5.01	113.69	119.70
53	CA	1051	C	O4'-C1'-N1	5.01	112.20	108.20
22	DA	271	G	N3-C4-N9	-5.01	123.00	126.00
22	DA	2582	G	C3'-C2'-C1'	5.01	105.50	101.50
21	AA	1454	G	N9-C1'-C2'	-5.00	106.49	112.00
22	DA	2077	A	C5-N7-C8	5.00	106.40	103.90
22	BA	975	A	P-O5'-C5'	-5.00	112.90	120.90
22	BA	1048	A	C3'-C2'-C1'	5.00	105.50	101.50
22	BA	2894	G	C3'-C2'-C1'	5.00	105.50	101.50
22	DA	249	C	P-O3'-C3'	5.00	125.70	119.70
22	BA	1818	U	P-O3'-C3'	5.00	125.70	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	CA	513	C	O4'-C1'-N1	5.00	112.20	108.20
53	CA	1380	U	O4'-C1'-N1	5.00	112.20	108.20
22	DA	1956	U	O4'-C1'-N1	5.00	112.20	108.20

There are no chirality outliers.

All (4) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
51	B3	29	ARG	Peptide
25	BD	9	VAL	Peptide
32	BK	15	GLY	Peptide
35	BN	101	GLY	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	AB	1704	0	1732	221	0
1	CB	1704	0	1732	174	0
2	AC	1624	0	1699	112	0
2	CC	1624	0	1699	143	0
3	AD	1643	0	1710	151	0
3	CD	1643	0	1710	152	0
4	AE	1105	0	1148	132	0
4	CE	1105	0	1148	99	0
5	AF	817	0	808	73	0
5	CF	817	0	808	66	0
6	AG	1181	0	1240	87	0
6	CG	1174	0	1230	136	0
7	AH	979	0	1034	74	0
7	CH	979	0	1034	88	0
8	AI	1022	0	1070	83	0
8	CI	1022	0	1070	98	0
9	AJ	786	0	828	74	0
9	CJ	786	0	828	97	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
10	AK	877	0	887	89	0
10	CK	877	0	887	78	0
11	AL	955	0	1019	89	0
11	CL	955	0	1019	89	0
12	AM	883	0	944	74	0
12	CM	876	0	937	107	0
13	AN	774	0	827	76	0
13	CN	769	0	822	82	0
14	AO	714	0	737	54	0
14	CO	714	0	737	36	0
15	AP	649	0	666	52	0
15	CP	638	0	656	67	0
16	AQ	648	0	691	75	0
16	CQ	648	0	691	61	0
17	AR	455	0	478	25	0
17	CR	455	0	478	35	0
18	AS	637	0	665	52	0
18	CS	637	0	665	75	0
19	AT	665	0	714	72	0
19	CT	665	0	714	52	0
20	AU	425	0	449	88	0
20	CU	425	0	449	80	0
21	AA	32895	0	16553	1203	0
22	BA	61274	0	30819	1932	0
22	DA	60995	0	30679	3174	0
23	BB	2529	0	1281	63	0
24	BC	2082	0	2157	213	0
24	DC	2082	0	2157	210	0
25	BD	1565	0	1616	186	0
25	DD	1565	0	1616	179	0
26	BE	1552	0	1619	127	0
26	DE	1552	0	1619	172	0
27	BF	1410	0	1447	124	0
27	DF	1420	0	1460	170	0
28	BG	1323	0	1374	169	0
28	DG	1323	0	1374	137	0
29	BH	1111	0	1148	107	0
29	DH	1111	0	1148	102	0
30	BI	1032	0	1088	108	0
30	DI	1032	0	1088	77	0
31	BJ	1129	0	1162	154	0
31	DJ	1129	0	1162	141	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
32	BK	938	0	1012	99	0
32	DK	938	0	1012	111	0
33	BL	1045	0	1117	117	0
33	DL	1045	0	1117	115	0
34	BM	1074	0	1157	102	0
34	DM	1074	0	1157	96	0
35	BN	960	0	1000	82	0
35	DN	960	0	1000	122	0
36	BO	892	0	923	74	0
36	DO	892	0	923	75	0
37	BP	917	0	965	131	0
37	DP	917	0	965	112	0
38	BQ	947	0	1022	124	0
38	DQ	947	0	1022	131	0
39	BR	816	0	839	91	0
39	DR	816	0	839	91	0
40	BS	857	0	922	67	0
40	DS	857	0	922	76	0
41	BT	738	0	807	117	0
41	DT	738	0	807	98	0
42	BU	779	0	834	57	0
42	DU	779	0	834	89	0
43	BV	753	0	780	45	0
43	DV	753	0	780	64	0
44	BW	596	0	610	187	0
44	DW	596	0	610	111	0
45	BX	625	0	655	61	0
45	DX	625	0	655	63	0
46	BY	509	0	543	55	0
46	DY	509	0	543	58	0
47	BZ	449	0	491	39	0
47	DZ	449	0	491	43	0
48	B0	444	0	461	22	0
48	D0	444	0	461	53	0
49	B1	409	0	440	44	0
49	D1	409	0	440	31	0
50	B2	377	0	418	29	0
50	D2	377	0	418	41	0
51	B3	504	0	574	41	0
51	D3	504	0	574	58	0
52	B4	302	0	340	32	0
52	D4	302	0	340	29	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
53	CA	32831	0	16521	1452	0
54	DB	2507	0	1270	121	0
55	AA	43	0	0	0	0
55	BA	137	0	0	0	0
55	BB	4	0	0	0	0
55	CA	42	0	0	0	0
55	DA	135	0	0	0	0
55	DB	1	0	0	0	0
55	DJ	1	0	0	0	0
56	B4	1	0	0	0	0
56	D4	1	0	0	0	0
57	AA	195	0	0	2	0
57	AE	1	0	0	0	0
57	AL	3	0	0	0	0
57	AN	6	0	0	0	0
57	AT	2	0	0	0	0
57	AU	1	0	0	0	0
57	B0	1	0	0	0	0
57	B2	1	0	0	0	0
57	B3	3	0	0	0	0
57	B4	3	0	0	0	0
57	BA	610	0	0	24	0
57	BB	20	0	0	1	0
57	BC	10	0	0	0	0
57	BD	2	0	0	1	0
57	BL	4	0	0	1	0
57	BN	3	0	0	0	0
57	BQ	1	0	0	0	0
57	BT	2	0	0	1	0
57	CA	192	0	0	8	0
57	CE	5	0	0	0	0
57	CI	1	0	0	0	0
57	CL	1	0	0	0	0
57	CN	3	0	0	0	0
57	CT	3	0	0	0	0
57	CU	2	0	0	0	0
57	D2	1	0	0	1	0
57	D3	1	0	0	0	0
57	D4	4	0	0	0	0
57	DA	599	0	0	9	0
57	DB	4	0	0	0	0
57	DC	13	0	0	1	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
57	DD	4	0	0	0	0
57	DE	3	0	0	0	0
57	DJ	3	0	0	0	0
57	DL	5	0	0	0	0
57	DN	2	0	0	2	0
57	DT	2	0	0	1	0
57	DU	1	0	0	0	0
57	DV	1	0	0	0	0
All	All	284450	0	190838	15808	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 33.

All (15808) close contacts within the same asymmetric unit are listed below.

Atom-1	Atom-2	Distance(Å)	Clash(Å)
38:BQ:63:ARG:NH1	38:BQ:96:ASP:HA	1.49	1.26
22:DA:1439:A:C2	22:DA:1552:A:C6	2.32	1.17
22:DA:1439:A:N1	22:DA:1552:A:C5	2.12	1.17
27:BF:35:LEU:HB3	27:BF:153:ILE:HG22	1.19	1.16
33:BL:93:ASN:HD22	33:BL:94:THR:N	1.44	1.16
54:DB:58:A:H2'	54:DB:59:A:C8	1.80	1.16
22:DA:197:A:H62	22:DA:2430:A:H2'	1.02	1.15
21:AA:338:A:N1	21:AA:351:G:O6	1.78	1.15
25:BD:106:LYS:HB3	25:BD:206:ALA:HB3	1.29	1.14
3:CD:2:ARG:NH2	3:CD:114:ARG:HD3	1.60	1.14
44:DW:40:ARG:HG2	44:DW:40:ARG:HH11	1.01	1.14
11:AL:49:ARG:HH11	11:AL:49:ARG:HG2	1.11	1.14
19:AT:43:LYS:HB3	19:AT:86:ALA:HB1	1.30	1.14
7:AH:1:SER:HB2	21:AA:877:G:H21	1.10	1.14
39:BR:49:ILE:HD12	39:BR:52:PRO:HA	1.30	1.13
40:BS:73:LYS:HE3	40:BS:74:ILE:H	1.13	1.13
8:AI:98:ARG:HG2	8:AI:103:VAL:HG21	1.26	1.13
14:AO:63:ARG:HG2	14:AO:87:ARG:HH12	1.00	1.12
38:BQ:69:ARG:HB2	38:BQ:69:ARG:HH21	1.05	1.12
25:BD:99:GLU:HG3	25:BD:100:LEU:H	1.14	1.11
54:DB:112:G:H21	36:DO:45:SER:HA	1.09	1.11
5:AF:16:GLU:HG2	3:CD:191:SER:HB2	1.22	1.11
22:DA:1024:G:H3'	22:DA:1025:G:H5''	1.24	1.11
29:BH:31:VAL:HB	29:BH:32:PRO:HD2	1.31	1.11
31:BJ:6:ALA:HB3	31:BJ:45:THR:HG21	1.28	1.09
53:CA:1213:A:O2'	53:CA:1214:C:H5'	1.53	1.08
20:CU:24:LYS:HG3	20:CU:25:ALA:H	1.18	1.08

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:2135:A:H3'	22:DA:2136:G:H5''	1.33	1.08
37:BP:50:ARG:HB3	37:BP:57:ALA:H	1.18	1.08
21:AA:975:A:H4'	21:AA:976:G:H5'	1.26	1.08
22:BA:855:G:N2	44:BW:23:LYS:HG2	1.68	1.08
31:BJ:44:TYR:HB2	38:BQ:63:ARG:HB3	1.32	1.07
38:DQ:87:VAL:HG21	39:DR:52:PRO:HD3	1.36	1.07
37:BP:4:ILE:HG22	37:BP:5:LYS:H	1.16	1.07
5:AF:3:HIS:H	5:AF:92:THR:HG23	1.20	1.07
54:DB:58:A:H2'	54:DB:59:A:H8	1.02	1.06
50:B2:3:ARG:HH21	50:B2:3:ARG:HG2	1.20	1.06
22:DA:1537:G:H2'	22:DA:1538:G:H4'	1.35	1.06
31:BJ:81:ILE:HG23	31:BJ:82:GLY:H	1.19	1.06
30:BI:79:LEU:HA	30:BI:83:ALA:HB3	1.34	1.06
22:DA:604:G:O2'	22:DA:605:G:H5'	1.56	1.05
22:BA:855:G:H21	44:BW:23:LYS:CG	1.69	1.05
33:BL:27:LEU:H	33:BL:27:LEU:HD12	1.15	1.05
21:AA:174:A:O2'	21:AA:175:C:H5'	1.57	1.05
22:DA:2051:A:H4'	22:DA:2052:A:OP1	1.50	1.05
37:BP:50:ARG:HD3	37:BP:56:SER:HB3	1.34	1.05
8:AI:17:ARG:HH22	21:AA:1129:C:H5''	0.94	1.04
38:BQ:63:ARG:HH12	38:BQ:96:ASP:CA	1.70	1.04
37:BP:50:ARG:CB	37:BP:57:ALA:H	1.70	1.04
20:AU:9:GLU:HG3	20:AU:10:PRO:HD3	1.32	1.04
11:CL:43:LYS:HB3	11:CL:44:PRO:HD2	1.06	1.04
22:DA:1915:U:H2'	22:DA:1916:A:C8	1.91	1.04
38:BQ:63:ARG:HH12	38:BQ:96:ASP:HA	0.98	1.04
28:BG:84:LYS:HG3	28:BG:132:LEU:N	1.71	1.04
45:DX:53:LYS:HA	45:DX:56:ARG:HB3	1.39	1.03
6:CG:91:ARG:HG2	6:CG:92:PRO:HD2	1.34	1.03
22:DA:1313:U:H2'	22:DA:1313:U:O2	1.58	1.03
22:DA:668:A:H2'	22:DA:670:A:H62	1.19	1.03
22:BA:636:G:C5	33:BL:111:ILE:HD11	1.93	1.03
32:BK:111:LYS:H	32:BK:111:LYS:HE2	1.22	1.03
3:CD:25:ARG:NH1	3:CD:30:LYS:HG2	1.73	1.03
11:CL:43:LYS:HB3	11:CL:44:PRO:CD	1.87	1.02
53:CA:1054:C:O2'	53:CA:1055:A:H5''	1.59	1.02
44:BW:24:ARG:HD2	44:BW:25:PHE:N	1.74	1.02
16:AQ:16:MET:HB2	16:AQ:19:SER:HB3	1.42	1.02
19:CT:73:ARG:HG2	19:CT:73:ARG:HH11	1.24	1.02
12:CM:25:GLY:H	53:CA:1329:A:H5''	1.20	1.02
22:DA:1662:U:H2'	22:DA:1663:G:H5''	1.42	1.02
24:BC:246:PRO:HG2	24:BC:247:TRP:CZ3	1.95	1.02

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
52:B4:36:ARG:HG2	52:B4:37:GLN:H	1.25	1.02
11:AL:33:CYS:HA	11:AL:54:VAL:HA	1.39	1.02
53:CA:373:A:O2'	53:CA:374:A:H5'	1.59	1.02
3:AD:145:ARG:HH11	3:AD:147:LYS:HE3	1.23	1.02
16:AQ:45:VAL:HG21	16:AQ:60:ILE:HD13	1.40	1.01
31:BJ:21:THR:HG22	31:BJ:22:GLY:N	1.69	1.01
22:BA:762:U:H4'	22:BA:763:G:O5'	1.57	1.01
3:CD:61:ARG:HH21	3:CD:67:LEU:HA	1.21	1.01
8:AI:17:ARG:NH2	21:AA:1129:C:H5''	1.76	1.01
16:CQ:46:HIS:HE2	16:CQ:48:GLU:HG2	1.24	1.01
19:AT:27:MET:HE1	19:AT:57:VAL:HG22	1.40	1.01
21:AA:1238:A:H5'	21:AA:1336:C:H41	1.21	1.01
22:DA:207:A:H2'	22:DA:208:C:H6	1.25	1.01
32:DK:70:ARG:HB3	32:DK:76:VAL:HG22	1.42	1.01
3:CD:77:GLU:HG3	3:CD:81:LEU:HD11	1.38	1.00
9:CJ:84:VAL:HG23	9:CJ:85:ASP:H	1.25	1.00
22:DA:647:G:H2'	22:DA:648:G:H8	1.23	1.00
22:BA:855:G:H21	44:BW:23:LYS:HG2	0.86	1.00
20:CU:16:ARG:HG3	20:CU:19:LYS:HG2	1.40	1.00
44:BW:39:GLN:HG2	44:BW:41:GLY:H	1.26	1.00
4:AE:152:VAL:HB	4:AE:155:LYS:HZ2	1.26	1.00
22:DA:33:C:O2'	22:DA:34:U:H5'	1.60	1.00
38:DQ:61:ILE:HD11	38:DQ:92:LYS:HD3	1.40	1.00
33:BL:109:LYS:HG2	33:BL:126:ARG:HB3	1.44	1.00
6:CG:22:LEU:HA	6:CG:25:PHE:HB3	1.43	1.00
10:CK:74:LYS:HA	10:CK:78:ILE:HD11	1.43	1.00
22:DA:616:A:H2'	22:DA:617:G:H8	1.27	1.00
32:DK:71:ARG:HB3	32:DK:72:PRO:HD3	1.44	1.00
10:AK:22:ILE:HD13	10:AK:95:THR:HG21	1.43	1.00
44:DW:37:VAL:HG12	44:DW:55:ASP:HB2	1.44	1.00
36:BO:31:THR:HG22	36:BO:34:HIS:H	1.22	1.00
6:CG:74:VAL:HG13	6:CG:140:VAL:HG13	1.42	1.00
28:BG:84:LYS:HG3	28:BG:132:LEU:H	1.24	0.99
21:AA:204:G:H3'	21:AA:205:A:H5''	1.44	0.99
3:CD:2:ARG:HH21	3:CD:114:ARG:HD3	0.85	0.99
53:CA:1159:U:H5	53:CA:1182:G:HO2'	1.09	0.99
5:CF:86:ARG:NH1	17:CR:63:TYR:HB3	1.76	0.99
3:AD:109:THR:HG23	3:AD:112:GLU:H	1.27	0.99
5:AF:6:ILE:HG12	5:AF:89:VAL:HG23	1.44	0.99
34:BM:35:ALA:O	34:BM:36:VAL:HB	1.61	0.99
37:DP:91:VAL:HG22	37:DP:109:ILE:HG21	1.43	0.99
9:AJ:53:ILE:HG22	9:AJ:61:ALA:HB1	1.44	0.99

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:BD:91:THR:O	25:BD:93:GLY:N	1.95	0.98
9:CJ:15:HIS:HA	9:CJ:18:ILE:HG22	1.45	0.98
25:BD:114:LYS:HE3	25:BD:114:LYS:N	1.79	0.98
11:AL:33:CYS:HB3	11:AL:54:VAL:HG22	1.43	0.98
33:BL:74:THR:HG22	33:BL:107:PHE:HB2	1.41	0.98
41:DT:39:THR:HG21	41:DT:42:GLU:HB2	1.41	0.98
21:AA:182:A:C6	21:AA:194:C:N4	2.29	0.98
22:DA:1716:U:O2'	22:DA:1717:A:H8	1.46	0.98
22:BA:1084:A:H2'	22:BA:1085:A:H8	1.26	0.98
35:DN:22:ARG:HG3	35:DN:70:THR:HA	1.45	0.98
12:CM:95:PRO:HD3	12:CM:108:ARG:HG2	1.44	0.98
21:AA:1138:G:N3	21:AA:1138:G:H2'	1.79	0.98
53:CA:32:A:H2'	53:CA:33:A:C8	1.97	0.98
22:DA:1784:A:H4'	22:DA:1785:A:O5'	1.59	0.98
16:AQ:18:LYS:HA	16:AQ:47:ASP:HB2	1.44	0.98
22:BA:1287:A:H5'	35:BN:103:ARG:HD2	1.46	0.98
53:CA:664:G:H22	53:CA:741:G:H1	1.06	0.97
22:DA:1021:A:O2'	22:DA:1022:G:H4'	1.64	0.97
3:CD:2:ARG:HH21	3:CD:114:ARG:CD	1.78	0.97
22:BA:1079:C:N4	22:BA:1088:A:H2	1.62	0.97
8:CI:51:LEU:HG	8:CI:86:LEU:HD22	1.44	0.97
22:DA:2092:U:H4'	22:DA:2093:G:H5''	1.44	0.97
10:AK:126:ARG:HB2	20:AU:33:ARG:NH1	1.79	0.97
53:CA:764:C:H2'	53:CA:765:G:H5'	1.46	0.97
44:DW:27:GLY:HA2	44:DW:31:LEU:HD11	1.46	0.97
25:BD:16:THR:HG23	25:BD:18:ASP:OD1	1.64	0.97
22:DA:2216:G:HO2'	22:DA:2217:G:H8	1.05	0.97
41:BT:39:THR:HB	41:BT:42:GLU:HB2	1.42	0.97
21:AA:721:G:H4'	21:AA:722:G:O5'	1.63	0.97
53:CA:1422:G:H5''	32:DK:48:PRO:HB3	1.47	0.96
47:BZ:29:ARG:HH21	47:BZ:29:ARG:HG3	1.26	0.96
22:BA:1060:U:H4'	22:BA:1061:U:H5'	1.47	0.96
52:D4:16:ILE:HG12	52:D4:25:VAL:HG22	1.47	0.96
21:AA:94:G:H4'	21:AA:95:C:C5'	1.95	0.96
35:DN:37:THR:HG22	35:DN:39:PRO:HD2	1.44	0.96
22:BA:1084:A:H2'	22:BA:1085:A:C8	2.00	0.96
1:AB:108:GLN:H	1:AB:108:GLN:HE21	0.97	0.96
20:CU:35:GLU:HG3	20:CU:36:PHE:H	1.30	0.96
2:AC:166:TRP:H	2:AC:166:TRP:HE3	1.12	0.96
22:DA:2304:G:H22	22:DA:2312:U:H3	1.12	0.96
22:BA:1073:A:H3'	22:BA:1074:G:H5''	1.47	0.95
44:BW:28:GLU:HB3	44:BW:31:LEU:HD21	1.44	0.95

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:2408:U:O2'	22:DA:2409:G:H8	1.48	0.95
21:AA:96:U:HO2'	21:AA:97:G:H8	1.13	0.95
25:DD:8:LYS:HB2	25:DD:201:LEU:HD11	1.48	0.95
25:BD:13:ARG:HH12	37:BP:74:GLN:HE21	1.00	0.95
1:AB:9:LEU:HD12	1:AB:42:LEU:HD13	1.43	0.95
53:CA:198:G:O2'	53:CA:199:A:H8	1.48	0.95
44:BW:23:LYS:O	44:BW:66:VAL:HB	1.65	0.95
38:BQ:4:LYS:HG3	38:BQ:5:ARG:H	1.31	0.95
37:DP:20:ARG:HG2	37:DP:112:ARG:HH12	1.29	0.95
22:BA:1179:G:C5	22:BA:1180:U:H1'	2.02	0.95
22:BA:2355:G:H4'	44:BW:20:LEU:HD13	1.47	0.95
3:CD:109:THR:HG22	3:CD:111:ALA:H	1.31	0.95
29:BH:31:VAL:HB	29:BH:32:PRO:CD	1.97	0.95
21:AA:1021:A:H2'	21:AA:1022:A:H5''	1.48	0.95
22:BA:232:G:H4'	22:BA:233:A:OP1	1.66	0.95
22:BA:1738:G:HO2'	22:BA:1739:A:H8	1.12	0.94
1:AB:89:PHE:HB3	1:AB:149:GLY:HA2	1.47	0.94
33:DL:47:ARG:HG2	33:DL:47:ARG:HH21	1.32	0.94
22:DA:1026:G:O2'	22:DA:1027:A:H5'	1.68	0.94
30:BI:15:GLY:HA2	30:BI:50:LYS:HB3	1.47	0.94
22:BA:2728:U:O2'	22:BA:2729:G:H5''	1.67	0.94
22:DA:2313:C:HO2'	22:DA:2314:A:H8	0.94	0.94
53:CA:519:C:O2'	53:CA:520:A:H5'	1.67	0.94
44:BW:17:ALA:HA	44:BW:35:ILE:HG23	1.49	0.94
44:BW:37:VAL:HG12	44:BW:38:ARG:H	1.33	0.94
31:BJ:77:HIS:HD2	31:BJ:79:GLY:H	0.99	0.94
22:BA:1179:G:H3'	22:BA:1180:U:H4'	1.48	0.94
22:DA:1060:U:H4'	22:DA:1061:U:O5'	1.67	0.94
22:DA:1857:G:H1'	22:DA:1884:G:H22	1.33	0.94
13:AN:40:ARG:HH12	13:AN:44:VAL:HG11	1.33	0.94
27:DF:137:PHE:HB2	27:DF:138:PRO:HD2	1.50	0.94
22:BA:1073:A:C3'	22:BA:1074:G:H5''	1.98	0.94
32:DK:111:LYS:HE3	32:DK:111:LYS:H	1.33	0.94
53:CA:1228:C:HO2'	53:CA:1229:A:H8	0.94	0.94
46:BY:47:ARG:HH21	46:BY:47:ARG:HG3	1.33	0.94
22:BA:1063:G:H2'	22:BA:1064:C:O4'	1.68	0.93
16:CQ:30:HIS:HE1	16:CQ:32:ILE:HG13	1.32	0.93
22:DA:1508:A:H4'	22:DA:1509:A:OP1	1.67	0.93
28:DG:93:TYR:HD2	28:DG:93:TYR:H	1.15	0.93
23:BB:90:C:H6	23:BB:90:C:H5''	1.28	0.93
22:DA:2023:C:HO2'	22:DA:2024:G:H8	0.97	0.93
26:DE:130:LYS:HB3	26:DE:133:LEU:HB3	1.50	0.93

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:1387:A:O2'	22:DA:1388:G:H8	1.51	0.93
22:DA:1290:C:O2'	22:DA:1291:C:H6	1.50	0.93
34:DM:27:SER:H	34:DM:66:ARG:NH2	1.65	0.93
22:DA:197:A:N6	22:DA:2430:A:H2'	1.82	0.93
1:AB:163:ILE:HG23	1:AB:164:ASP:H	1.30	0.93
22:BA:1784:A:H4'	22:BA:1785:A:O5'	1.64	0.93
22:DA:2748:A:H1'	28:DG:66:THR:HG22	1.51	0.93
53:CA:1124:G:H4'	53:CA:1125:U:OP1	1.66	0.93
53:CA:330:C:HO2'	53:CA:331:G:H8	0.99	0.93
22:DA:616:A:H2'	22:DA:617:G:C8	2.04	0.93
25:DD:119:ALA:HB3	25:DD:163:GLY:H	1.34	0.93
11:CL:43:LYS:CB	11:CL:44:PRO:HD2	1.98	0.92
8:AI:23:GLY:H	8:AI:60:LEU:HA	1.31	0.92
2:AC:76:ILE:HA	2:AC:83:VAL:HG23	1.49	0.92
5:CF:92:THR:HG22	5:CF:94:HIS:H	1.35	0.92
11:CL:19:ASN:H	11:CL:19:ASN:HD22	1.15	0.92
22:DA:1807:G:H2'	22:DA:1808:A:H5'	1.47	0.92
21:AA:747:A:H5'	21:AA:748:G:OP2	1.69	0.92
21:AA:213:G:O2'	21:AA:214:C:H5'	1.69	0.92
35:BN:24:MET:HG2	35:BN:44:LEU:HD22	1.50	0.92
22:DA:1439:A:C2	22:DA:1552:A:C5	2.53	0.92
24:DC:144:GLU:HA	24:DC:151:GLY:HA2	1.51	0.92
22:DA:1931:U:H2'	22:DA:1932:A:H8	1.33	0.92
27:BF:104:THR:HG22	27:BF:105:ILE:HG23	1.48	0.92
22:BA:2269:G:H4'	44:BW:18:LYS:HE2	1.51	0.92
43:BV:80:HIS:HD2	43:BV:83:LYS:H	1.09	0.92
6:CG:88:VAL:HG22	6:CG:89:GLU:H	1.33	0.92
30:BI:23:VAL:HB	30:BI:27:LEU:HB3	1.49	0.92
22:BA:2136:G:H2'	22:BA:2137:U:H5	1.34	0.92
24:BC:68:ARG:HD3	24:BC:103:ILE:HD11	1.50	0.92
22:DA:2800:A:O2'	22:DA:2801:G:H4'	1.69	0.92
21:AA:1007:U:H2'	21:AA:1008:U:H5''	1.52	0.92
14:AO:63:ARG:HG2	14:AO:87:ARG:NH1	1.84	0.92
38:BQ:69:ARG:CB	38:BQ:69:ARG:HH21	1.82	0.92
28:BG:104:LEU:HB2	28:BG:112:VAL:CG2	2.00	0.92
22:BA:1458:U:H4'	22:BA:1459:G:O5'	1.66	0.92
22:DA:491:G:H2'	22:DA:492:A:H8	1.30	0.92
1:CB:74:ALA:HB1	1:CB:206:ILE:HD11	1.50	0.92
14:AO:63:ARG:HD3	14:AO:87:ARG:HH22	1.33	0.91
24:DC:144:GLU:HB3	24:DC:187:CYS:HB2	1.51	0.91
53:CA:279:A:H5''	53:CA:280:C:H3'	1.52	0.91
53:CA:519:C:H2'	53:CA:520:A:C8	2.06	0.91

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:1458:U:O3'	22:DA:1459:G:H4'	1.70	0.91
17:CR:72:ARG:H	17:CR:72:ARG:HE	1.15	0.91
22:BA:1073:A:H2'	22:BA:1074:G:H5''	1.53	0.91
21:AA:94:G:H4'	21:AA:95:C:H5''	1.51	0.91
22:BA:869:G:H4'	34:BM:8:LYS:HE2	1.51	0.91
10:CK:27:ASN:HD22	10:CK:27:ASN:N	1.65	0.91
22:BA:636:G:C6	33:BL:111:ILE:HD11	2.04	0.91
41:BT:50:LEU:HD12	41:BT:50:LEU:H	1.35	0.91
22:DA:2324:U:H5'	22:DA:2325:G:H5''	1.51	0.91
39:DR:39:LEU:HA	39:DR:49:ILE:HG21	1.50	0.91
53:CA:1183:U:H3'	53:CA:1184:G:H5''	1.53	0.91
11:AL:27:PRO:HB2	11:AL:28:GLN:OE1	1.68	0.91
22:BA:2358:A:H61	33:BL:54:GLN:HE22	1.19	0.91
22:DA:1537:G:C2'	22:DA:1538:G:H4'	2.01	0.91
22:BA:1090:A:O2'	22:BA:1091:G:H5'	1.70	0.91
10:AK:88:PRO:HD3	20:AU:28:LEU:HD13	1.53	0.91
28:BG:120:ILE:HD11	28:BG:132:LEU:HB2	1.51	0.91
25:BD:13:ARG:HH12	37:BP:74:GLN:NE2	1.67	0.91
7:CH:103:VAL:HG12	7:CH:124:ILE:HA	1.50	0.91
22:DA:1476:U:HO2'	22:DA:1477:A:H8	1.07	0.91
21:AA:6:G:HO2'	21:AA:7:A:H8	0.93	0.91
22:DA:1079:C:H41	22:DA:1088:A:H5''	1.34	0.91
22:DA:2728:U:O2'	22:DA:2729:G:H8	1.52	0.91
39:BR:51:VAL:HB	39:BR:52:PRO:CD	2.01	0.90
3:CD:143:SER:HB3	3:CD:178:GLU:HG3	1.50	0.90
21:AA:60:A:H4'	21:AA:61:G:O5'	1.69	0.90
22:DA:2149:U:O2'	22:DA:2150:C:H6	1.53	0.90
46:DY:20:ASN:HD22	46:DY:50:VAL:HG22	1.34	0.90
22:DA:217:A:H2'	22:DA:218:A:C8	2.06	0.90
20:AU:52:VAL:HG13	20:AU:53:LYS:H	1.36	0.90
28:BG:22:VAL:HG22	28:BG:36:LEU:HD11	1.53	0.90
22:DA:2385:C:O2'	22:DA:2386:A:H8	1.54	0.90
22:BA:272:A:HO2'	22:BA:273:G:H8	0.91	0.90
35:DN:28:LEU:HD21	35:DN:115:LEU:HD21	1.53	0.90
22:DA:2875:C:HO2'	22:DA:2876:G:H8	0.94	0.90
22:BA:2336:A:N6	44:BW:40:ARG:HD2	1.86	0.90
31:BJ:77:HIS:CD2	31:BJ:79:GLY:H	1.88	0.90
41:DT:29:THR:HB	41:DT:87:LEU:H	1.34	0.90
7:AH:17:GLN:HE21	7:AH:71:VAL:HG23	1.36	0.90
22:DA:1166:G:H22	22:DA:1184:U:H1'	1.36	0.90
22:BA:529:A:H4'	22:BA:530:G:OP1	1.70	0.90
22:BA:2352:A:N1	44:BW:30:VAL:HG11	1.85	0.90

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:BA:1085:A:H3'	22:BA:1086:A:H2	1.37	0.90
22:BA:1179:G:C6	22:BA:1180:U:H1'	2.07	0.90
22:DA:216:A:O2'	22:DA:217:A:H8	1.55	0.90
22:BA:1022:G:N2	22:BA:1142:A:N1	2.19	0.90
7:CH:11:THR:HG22	7:CH:14:ARG:HH12	1.36	0.90
38:BQ:69:ARG:HB2	38:BQ:69:ARG:NH2	1.86	0.90
22:DA:1654:A:HO2'	22:DA:1655:A:H8	1.20	0.90
21:AA:274:A:O2'	21:AA:275:G:C8	2.24	0.90
31:BJ:111:LYS:HD3	31:BJ:112:GLY:H	1.34	0.90
21:AA:842:U:H3'	21:AA:843:U:H5''	1.51	0.90
26:DE:47:LYS:HB3	26:DE:51:GLU:HB2	1.53	0.90
22:DA:83:A:H61	22:DA:101:A:H5'	1.37	0.90
46:BY:56:LEU:O	46:BY:57:LEU:HB3	1.71	0.90
53:CA:82:G:O2'	53:CA:83:C:H4'	1.71	0.90
22:BA:915:C:H6	22:BA:915:C:H5''	1.34	0.90
44:DW:28:GLU:H	44:DW:31:LEU:HD21	1.34	0.89
53:CA:982:U:H4'	53:CA:983:A:O5'	1.72	0.89
32:BK:18:ARG:HG3	32:BK:18:ARG:HH11	1.37	0.89
22:DA:1731:G:O2'	22:DA:1732:C:H5''	1.72	0.89
22:DA:2757:A:N1	28:DG:66:THR:HG21	1.86	0.89
21:AA:121:U:H5''	21:AA:121:U:H6	1.36	0.89
32:DK:38:ILE:HG12	32:DK:61:VAL:HG12	1.54	0.89
4:CE:104:ILE:H	4:CE:122:VAL:H	1.20	0.89
40:BS:73:LYS:HE3	40:BS:74:ILE:N	1.87	0.89
22:BA:2725:A:O2'	22:BA:2726:A:H2'	1.72	0.89
22:DA:996:A:H4'	38:DQ:91:ARG:HD2	1.52	0.89
38:DQ:91:ARG:NH1	39:DR:10:LYS:HB3	1.88	0.89
4:CE:35:LEU:HD11	4:CE:136:VAL:HG11	1.55	0.89
7:CH:76:ARG:HD3	7:CH:77:VAL:H	1.35	0.89
22:BA:856:G:H1'	44:BW:23:LYS:HB3	1.54	0.89
31:DJ:44:TYR:HB2	38:DQ:63:ARG:CZ	2.02	0.89
53:CA:245:U:O2'	53:CA:246:A:H5'	1.73	0.89
4:AE:80:LEU:HD23	4:AE:122:VAL:HG11	1.54	0.89
53:CA:374:A:H5''	53:CA:452:A:N1	1.88	0.89
32:DK:13:ASN:HD21	32:DK:97:THR:H	1.20	0.89
22:BA:2197:U:O2'	22:BA:2198:A:H2'	1.72	0.89
25:BD:5:VAL:H	25:BD:32:ASN:HD21	1.21	0.89
22:DA:2385:C:HO2'	22:DA:2386:A:H8	0.98	0.89
53:CA:1182:G:H4'	53:CA:1183:U:H5'	1.55	0.89
22:BA:545:U:H2'	22:BA:546:U:H4'	1.54	0.89
6:AG:76:SER:HA	6:AG:85:GLN:HB2	1.54	0.89
22:DA:395:U:HO2'	22:DA:396:G:H8	1.20	0.89

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:BA:784:G:C6	24:BC:227:VAL:HG11	2.08	0.89
22:DA:1387:A:H5'	22:DA:1469:A:H1'	1.53	0.89
35:DN:62:ASN:O	35:DN:63:ARG:HB2	1.71	0.89
22:DA:2060:A:H2'	26:DE:63:LYS:HZ2	1.37	0.89
26:BE:146:VAL:HG23	26:BE:167:VAL:HG23	1.54	0.89
44:DW:39:GLN:HE22	44:DW:58:LEU:HD23	1.36	0.88
29:BH:32:PRO:HB3	45:BX:38:TRP:HB3	1.55	0.88
37:BP:50:ARG:HG2	37:BP:57:ALA:N	1.88	0.88
8:AI:40:ARG:HA	8:AI:44:ARG:HB3	1.53	0.88
12:CM:33:LEU:HB3	12:CM:38:ILE:HB	1.54	0.88
4:AE:155:LYS:HD2	4:AE:156:ARG:H	1.39	0.88
22:DA:2215:C:HO2'	22:DA:2216:G:H8	0.93	0.88
25:DD:184:ARG:HH22	37:DP:6:GLN:HE21	1.21	0.88
22:BA:2267:A:H5''	22:BA:2268:A:H5'	1.54	0.88
53:CA:1382:C:O2'	53:CA:1383:C:H5'	1.72	0.88
30:DI:91:LYS:HB3	30:DI:94:LYS:HB2	1.56	0.88
22:DA:1915:U:H2'	22:DA:1916:A:H8	1.37	0.88
22:BA:265:A:H4'	22:BA:266:G:OP1	1.72	0.88
22:BA:1509:A:H1'	22:BA:1510:G:H5'	1.56	0.88
28:DG:124:CYS:HB3	28:DG:130:ILE:HA	1.55	0.88
22:DA:1935:G:H1'	22:DA:1964:G:N2	1.88	0.88
21:AA:1125:U:O2'	21:AA:1126:U:H2'	1.73	0.88
22:DA:2503:A:H4'	22:DA:2504:U:OP1	1.74	0.88
34:DM:42:THR:HG22	34:DM:44:ARG:H	1.37	0.88
53:CA:1268:G:H21	53:CA:1327:C:H1'	1.37	0.88
9:AJ:57:VAL:HG22	9:AJ:58:ASN:H	1.37	0.88
3:CD:30:LYS:HD3	3:CD:30:LYS:N	1.89	0.88
37:BP:63:ILE:HA	37:BP:68:GLY:HA2	1.55	0.88
22:DA:1474:U:H2'	22:DA:1475:G:H5'	1.55	0.88
44:BW:23:LYS:HG3	44:BW:24:ARG:O	1.75	0.88
4:AE:81:GLN:HG2	4:AE:149:PRO:HG3	1.54	0.88
32:DK:61:VAL:HG11	32:DK:112:PHE:HE2	1.37	0.88
34:DM:19:GLY:H	34:DM:38:ARG:HH21	1.16	0.88
22:BA:728:G:HO2'	22:BA:730:A:H8	0.92	0.88
22:BA:1993:U:H4'	25:BD:133:THR:HG21	1.55	0.88
22:BA:855:G:N3	44:BW:23:LYS:HD3	1.89	0.87
43:BV:44:HIS:HE1	43:BV:86:LEU:H	1.22	0.87
34:DM:36:VAL:HG22	43:DV:82:TYR:HB2	1.54	0.87
53:CA:1391:U:H2'	53:CA:1392:G:C8	2.09	0.87
6:AG:12:LEU:H	6:AG:12:LEU:HD22	1.38	0.87
1:AB:40:ILE:HD13	1:AB:201:GLY:HA2	1.56	0.87
2:AC:156:LEU:H	2:AC:156:LEU:HD12	1.38	0.87

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:AI:28:VAL:HB	8:AI:63:TYR:HD2	1.39	0.87
3:AD:191:SER:HA	3:AD:194:ILE:HD11	1.53	0.87
52:B4:9:LYS:H	52:B4:9:LYS:HD3	1.38	0.87
53:CA:1144:G:H21	53:CA:1146:A:H62	1.22	0.87
35:BN:96:ARG:HH22	35:BN:116:VAL:HG23	1.40	0.87
22:DA:647:G:H2'	22:DA:648:G:C8	2.09	0.87
22:DA:802:A:H2'	22:DA:803:U:C6	2.09	0.87
1:CB:114:LYS:HA	1:CB:117:GLU:HG2	1.53	0.87
7:CH:76:ARG:HD3	7:CH:77:VAL:N	1.90	0.87
52:B4:9:LYS:H	52:B4:9:LYS:CD	1.86	0.87
22:DA:2837:A:H2'	22:DA:2838:G:C8	2.08	0.87
7:AH:1:SER:HB2	21:AA:877:G:N2	1.88	0.87
24:BC:251:THR:HG22	24:BC:252:LYS:H	1.40	0.87
25:BD:172:VAL:O	25:BD:173:GLN:HB2	1.74	0.87
44:DW:40:ARG:NH1	44:DW:40:ARG:HG2	1.82	0.87
22:DA:2199:A:H2'	22:DA:2200:C:H6	1.40	0.87
22:BA:1779:U:H5	22:BA:1784:A:N7	1.72	0.87
33:DL:124:GLY:H	33:DL:143:GLU:HG3	1.39	0.87
21:AA:1398:A:H8	21:AA:1398:A:H5''	1.40	0.87
53:CA:496:A:N3	53:CA:496:A:H2'	1.89	0.87
44:DW:23:LYS:HD2	44:DW:24:ARG:N	1.89	0.87
28:DG:1:SER:HB2	28:DG:61:TRP:HB3	1.57	0.87
4:CE:29:ILE:HG23	4:CE:30:PHE:H	1.40	0.87
1:AB:66:ILE:HB	1:AB:88:GLN:HB3	1.54	0.87
22:BA:1073:A:H3'	22:BA:1074:G:C5'	2.05	0.86
24:DC:146:LYS:HB2	24:DC:149:LYS:HB2	1.57	0.86
25:DD:105:LYS:HA	25:DD:177:VAL:HG22	1.56	0.86
3:CD:25:ARG:HH12	3:CD:30:LYS:HG2	1.32	0.86
22:BA:1085:A:H3'	22:BA:1086:A:C2	2.10	0.86
53:CA:120:A:C3'	53:CA:121:U:H5''	2.04	0.86
6:AG:26:VAL:HG12	6:AG:42:VAL:HG21	1.55	0.86
22:BA:789:A:OP1	22:BA:790:U:H5	1.57	0.86
22:BA:1062:G:H2'	22:BA:1063:G:C8	2.10	0.86
41:BT:59:ASN:O	41:BT:83:ALA:O	1.93	0.86
4:CE:29:ILE:HG23	4:CE:30:PHE:N	1.90	0.86
37:BP:24:THR:HG22	37:BP:87:ARG:H	1.41	0.86
6:CG:134:VAL:HB	6:CG:137:ARG:HH21	1.37	0.86
50:D2:34:ARG:HB3	50:D2:42:LEU:HD11	1.57	0.86
44:DW:17:ALA:O	44:DW:18:LYS:HB3	1.75	0.86
21:AA:202:G:H21	21:AA:466:A:H61	1.24	0.86
54:DB:42:C:H2'	54:DB:43:C:C6	2.11	0.86
46:BY:57:LEU:HA	46:BY:60:LYS:HB3	1.55	0.86

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
34:BM:132:THR:HG22	34:BM:133:LYS:H	1.40	0.86
2:AC:155:ARG:HH21	21:AA:1055:A:H1'	1.39	0.86
31:BJ:21:THR:HG22	31:BJ:22:GLY:H	1.32	0.86
22:DA:528:A:O2'	22:DA:529:A:H5''	1.73	0.86
21:AA:496:A:H2'	21:AA:496:A:N3	1.89	0.86
44:DW:13:ARG:HG3	44:DW:14:ASP:H	1.36	0.86
22:DA:915:C:O2'	22:DA:916:G:H5'	1.75	0.86
37:DP:88:ARG:HE	37:DP:112:ARG:HH21	1.23	0.86
22:DA:1429:G:O2'	22:DA:1430:G:H8	1.56	0.86
32:BK:71:ARG:HB2	32:BK:72:PRO:HD3	1.58	0.86
29:DH:90:LEU:HB2	29:DH:123:ARG:HB3	1.56	0.86
22:DA:1345:C:HO2'	22:DA:1346:G:H8	0.86	0.86
14:CO:45:HIS:HB3	53:CA:668:G:O2'	1.76	0.86
10:CK:44:ALA:HB3	10:CK:69:CYS:HB2	1.56	0.86
32:BK:112:PHE:O	32:BK:115:ILE:HG22	1.76	0.86
33:BL:81:ASP:O	33:BL:82:LEU:HB3	1.74	0.86
22:DA:508:A:H62	40:DS:9:HIS:CE1	1.93	0.86
35:BN:73:ASN:HA	35:BN:76:VAL:HG12	1.57	0.86
6:CG:28:ILE:HG21	6:CG:100:MET:HG3	1.57	0.86
50:B2:24:THR:HG23	50:B2:27:GLY:H	1.38	0.86
22:DA:2093:G:HO2'	22:DA:2094:A:H8	0.91	0.86
22:DA:491:G:H2'	22:DA:492:A:C8	2.10	0.86
53:CA:1241:G:H2'	53:CA:1242:G:H8	1.38	0.86
53:CA:1299:A:N3	53:CA:1299:A:H2'	1.88	0.86
53:CA:1349:A:H2'	53:CA:1350:A:C8	2.11	0.86
7:AH:105:THR:HG21	7:AH:120:LEU:HD13	1.56	0.86
22:DA:1639:C:H2'	22:DA:1640:A:H5''	1.57	0.86
22:DA:232:G:H4'	22:DA:233:A:OP1	1.74	0.85
53:CA:67:C:OP1	53:CA:199:A:H5''	1.76	0.85
5:CF:92:THR:O	5:CF:93:LYS:HG2	1.75	0.85
24:BC:165:ALA:HB3	24:BC:172:THR:HG23	1.58	0.85
22:DA:443:A:H61	26:DE:36:ALA:HB1	1.40	0.85
29:BH:89:LYS:HG2	29:BH:90:LEU:H	1.39	0.85
11:AL:49:ARG:NH1	11:AL:49:ARG:HG2	1.87	0.85
22:BA:856:G:H21	44:BW:19:ARG:HH22	1.22	0.85
4:AE:155:LYS:HA	4:AE:158:LYS:NZ	1.91	0.85
33:DL:96:LYS:HD3	33:DL:103:ILE:HA	1.57	0.85
22:DA:17:G:H4'	38:DQ:24:TYR:HE1	1.41	0.85
37:DP:63:ILE:HA	37:DP:68:GLY:HA2	1.58	0.85
22:DA:207:A:H2'	22:DA:208:C:C6	2.12	0.85
22:DA:2439:A:H4'	22:DA:2440:C:O5'	1.73	0.85
21:AA:374:A:H5''	21:AA:452:A:N1	1.91	0.85

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
53:CA:990:C:H2'	53:CA:991:U:O4'	1.75	0.85
21:AA:560:A:H5'	21:AA:566:G:N2	1.91	0.85
14:CO:63:ARG:HH22	22:DA:715:A:H5'	1.41	0.85
27:BF:68:LYS:HD2	27:BF:68:LYS:H	1.41	0.85
28:BG:96:ALA:HB3	28:BG:103:ASN:HB3	1.58	0.85
22:BA:2136:G:H2'	22:BA:2137:U:C5	2.12	0.85
42:DU:92:VAL:HB	42:DU:101:THR:HG21	1.59	0.85
22:DA:1669:A:H2'	22:DA:1669:A:N3	1.89	0.85
22:DA:634:C:H2'	22:DA:635:C:C6	2.12	0.85
39:BR:4:VAL:HG23	39:BR:39:LEU:HG	1.56	0.85
53:CA:495:A:H4'	53:CA:496:A:O5'	1.74	0.85
53:CA:120:A:H3'	53:CA:121:U:H5''	1.57	0.85
22:DA:2190:G:H5'	22:DA:2191:A:OP2	1.77	0.85
32:BK:21:CYS:HB2	32:BK:39:ILE:HD11	1.59	0.85
44:BW:51:GLY:HA3	44:BW:59:PHE:CE2	2.11	0.85
50:B2:3:ARG:HG2	50:B2:3:ARG:NH2	1.89	0.85
22:DA:1391:U:H4'	41:DT:19:LYS:NZ	1.90	0.85
22:BA:2680:U:P	25:BD:114:LYS:HE2	2.16	0.85
22:DA:2149:U:O2'	22:DA:2150:C:C6	2.27	0.85
44:DW:9:THR:HG23	44:DW:10:ARG:HG3	1.57	0.85
21:AA:366:A:O2'	21:AA:394:G:N2	2.08	0.85
22:DA:2868:A:H2'	22:DA:2869:G:C8	2.11	0.85
22:DA:834:G:H1'	22:DA:2358:A:N3	1.91	0.85
2:CC:190:THR:HG22	2:CC:191:THR:H	1.39	0.85
22:BA:1011:G:O2'	22:BA:1013:C:H5''	1.76	0.85
21:AA:511:C:O2'	21:AA:512:U:H5''	1.77	0.85
29:DH:72:ILE:HD11	29:DH:141:LYS:H	1.41	0.85
21:AA:1239:A:H62	21:AA:1299:A:N6	1.73	0.85
21:AA:563:A:H2'	21:AA:563:A:N3	1.89	0.85
24:BC:12:ARG:HH11	24:BC:12:ARG:CG	1.90	0.85
44:DW:27:GLY:CA	44:DW:31:LEU:HD11	2.06	0.85
31:BJ:111:LYS:HD3	31:BJ:112:GLY:N	1.90	0.85
1:AB:218:ALA:HA	1:AB:221:ARG:HH21	1.41	0.85
53:CA:72:A:O2'	53:CA:73:C:H5'	1.77	0.85
22:BA:1970:A:H4'	22:BA:1971:U:O5'	1.75	0.85
22:BA:2214:C:H6	22:BA:2214:C:H5'	1.39	0.85
22:BA:1073:A:C2'	22:BA:1074:G:H5''	2.06	0.84
8:CI:17:ARG:HB2	8:CI:65:THR:HB	1.57	0.84
5:AF:97:THR:O	5:AF:98:GLU:HG2	1.76	0.84
22:DA:1012:U:O4	31:DJ:30:THR:HG21	1.77	0.84
22:BA:2585:U:O2'	22:BA:2586:U:H5'	1.75	0.84
1:CB:99:MET:HA	1:CB:106:VAL:HG21	1.59	0.84

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:1492:G:H3'	22:DA:1493:C:C5'	2.06	0.84
39:DR:27:ILE:HG22	39:DR:28:ALA:H	1.42	0.84
3:AD:204:SER:HB2	21:AA:8:A:H62	1.42	0.84
6:AG:61:PHE:CE1	6:AG:65:LEU:HD22	2.11	0.84
38:BQ:65:ASN:ND2	38:BQ:69:ARG:HH22	1.75	0.84
22:DA:297:G:H5''	42:DU:84:PHE:HB2	1.60	0.84
21:AA:566:G:H4'	21:AA:567:G:OP1	1.74	0.84
21:AA:1287:A:H2'	21:AA:1288:A:C8	2.12	0.84
21:AA:654:G:H2'	21:AA:655:A:H8	1.42	0.84
22:BA:243:U:OP1	51:B3:5:THR:HG21	1.76	0.84
33:BL:93:ASN:HD22	33:BL:94:THR:H	1.24	0.84
33:BL:93:ASN:ND2	33:BL:94:THR:N	2.25	0.84
28:BG:7:PRO:O	28:BG:8:VAL:HB	1.76	0.84
22:BA:1110:G:HO2'	22:BA:1111:A:H8	1.23	0.84
22:DA:589:U:O2'	22:DA:590:A:H8	1.58	0.84
10:CK:70:ALA:HA	10:CK:73:VAL:HG22	1.60	0.84
10:AK:87:GLY:H	10:AK:113:THR:HG22	1.43	0.84
1:CB:103:TRP:HA	1:CB:106:VAL:HB	1.56	0.84
6:AG:114:SER:HB3	6:AG:117:LEU:HG	1.59	0.84
9:CJ:64:GLN:HB2	13:CN:98:ALA:HB3	1.57	0.84
27:BF:129:MET:HG3	27:BF:153:ILE:HD11	1.57	0.84
22:DA:2135:A:H2'	22:DA:2136:G:O4'	1.77	0.84
53:CA:1493:A:H3'	22:DA:1913:A:N6	1.92	0.84
22:DA:1391:U:H4'	41:DT:19:LYS:HZ1	1.42	0.84
4:CE:103:GLY:O	4:CE:104:ILE:HG22	1.78	0.84
21:AA:1277:C:HO2'	21:AA:1279:G:H8	0.85	0.84
22:BA:1056:G:H5''	22:BA:1057:A:H5'	1.58	0.84
22:DA:2214:C:O2'	22:DA:2215:C:H5'	1.76	0.84
21:AA:1279:G:N3	21:AA:1279:G:H2'	1.89	0.84
25:BD:120:GLY:HA2	25:BD:162:ALA:CB	2.07	0.84
22:DA:1307:A:H62	22:DA:1606:C:H6	1.26	0.84
54:DB:58:A:C2'	54:DB:59:A:H8	1.90	0.84
20:CU:24:LYS:CG	20:CU:25:ALA:H	1.90	0.84
44:BW:24:ARG:HB2	44:BW:65:LYS:HD3	1.60	0.84
22:BA:459:U:O2'	22:BA:460:A:H5'	1.77	0.84
22:BA:74:A:H4'	22:BA:75:G:O5'	1.76	0.84
21:AA:666:G:H5'	21:AA:726:C:H1'	1.58	0.84
27:BF:132:ARG:O	27:BF:133:GLU:HB3	1.76	0.84
22:DA:729:G:N3	22:DA:729:G:H2'	1.91	0.84
30:DI:45:THR:HG23	30:DI:54:ILE:HD13	1.60	0.84
12:CM:25:GLY:N	53:CA:1329:A:H5''	1.92	0.84
22:BA:1286:A:H4'	22:BA:1287:A:OP1	1.77	0.84

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:BA:619:G:H5''	22:BA:620:G:OP2	1.77	0.84
13:AN:60:ARG:O	13:AN:61:ASN:HB2	1.76	0.84
48:D0:12:ARG:HG3	48:D0:15:ARG:HH11	1.42	0.84
23:BB:90:C:C6	23:BB:90:C:H5''	2.12	0.83
1:CB:146:SER:HB2	1:CB:147:LEU:HD12	1.58	0.83
36:DO:115:LEU:H	36:DO:115:LEU:HD13	1.40	0.83
3:AD:43:ARG:O	3:AD:45:PRO:HD3	1.78	0.83
22:BA:1590:A:H2'	22:BA:1591:A:C8	2.12	0.83
22:DA:142:A:H2'	22:DA:143:C:C6	2.12	0.83
24:DC:122:ALA:HB3	24:DC:127:ASN:ND2	1.93	0.83
26:BE:119:ILE:HD11	26:BE:187:VAL:HG22	1.59	0.83
22:DA:2056:G:N2	48:D0:1:ALA:N	2.26	0.83
38:BQ:10:ARG:NH1	38:BQ:10:ARG:HB2	1.93	0.83
31:BJ:6:ALA:CB	31:BJ:45:THR:HG21	2.08	0.83
25:BD:99:GLU:HG3	25:BD:100:LEU:N	1.93	0.83
24:DC:147:PRO:HD3	24:DC:184:GLU:HG3	1.60	0.83
11:CL:2:THR:HB	11:CL:5:GLN:HB2	1.59	0.83
54:DB:112:G:N2	36:DO:45:SER:HA	1.90	0.83
27:DF:74:ALA:HB3	27:DF:78:ILE:HB	1.59	0.83
53:CA:94:G:H4'	53:CA:95:C:OP1	1.79	0.83
27:DF:49:LEU:H	27:DF:49:LEU:HD22	1.42	0.83
22:DA:573:U:H4'	22:DA:574:A:OP1	1.78	0.83
2:CC:109:GLU:HG2	2:CC:139:ASN:HB2	1.59	0.83
7:CH:68:LYS:HD3	7:CH:69:ALA:H	1.42	0.83
22:DA:1274:A:O2'	22:DA:1275:A:H5''	1.78	0.83
9:CJ:57:VAL:HG22	9:CJ:58:ASN:H	1.44	0.83
22:DA:2060:A:H2'	26:DE:63:LYS:NZ	1.94	0.83
32:BK:70:ARG:HD3	32:BK:76:VAL:HG22	1.61	0.83
37:BP:4:ILE:HG22	37:BP:5:LYS:N	1.94	0.83
21:AA:182:A:N6	21:AA:194:C:N4	2.27	0.83
22:DA:1141:U:H4'	22:DA:1142:A:O5'	1.78	0.83
22:DA:1126:A:H4'	22:DA:1127:A:O5'	1.79	0.83
22:DA:1326:U:O2'	22:DA:1327:A:H8	1.62	0.83
22:BA:84:A:H62	22:BA:101:A:H2	1.25	0.83
2:CC:18:ASN:HA	2:CC:55:VAL:HG12	1.60	0.83
22:DA:686:U:O4	50:D2:12:ARG:HG3	1.78	0.83
21:AA:495:A:H4'	21:AA:496:A:O5'	1.79	0.83
47:DZ:16:LEU:H	47:DZ:16:LEU:HD22	1.43	0.83
22:DA:2636:C:H2'	22:DA:2637:U:H6	1.44	0.83
53:CA:113:G:H21	53:CA:353:A:H8	1.24	0.83
22:DA:2136:G:H2'	22:DA:2137:U:C6	2.14	0.83
41:BT:30:ILE:HG23	41:BT:85:VAL:HB	1.61	0.83

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:475:C:H2'	22:DA:476:G:C8	2.14	0.83
22:DA:271:G:O2'	22:DA:272:A:H5''	1.78	0.83
26:DE:148:ILE:HD13	26:DE:187:VAL:HG21	1.61	0.83
21:AA:982:U:H4'	21:AA:983:A:O5'	1.78	0.83
29:BH:94:ILE:HG21	29:BH:99:ILE:HG12	1.61	0.83
22:DA:1645:G:OP1	22:DA:1646:C:H5'	1.78	0.83
22:BA:335:C:H5''	42:BU:81:ARG:HD3	1.58	0.83
22:DA:593:U:H2'	22:DA:594:U:C6	2.14	0.83
22:DA:1069:A:O2'	22:DA:1070:A:H5'	1.78	0.83
22:DA:1166:G:N2	22:DA:1184:U:H1'	1.93	0.83
21:AA:243:A:H4'	21:AA:244:U:H5''	1.60	0.83
21:AA:116:A:H2'	21:AA:117:G:H8	1.43	0.83
22:DA:1438:U:H2'	22:DA:1439:A:O4'	1.79	0.82
25:BD:174:SER:O	25:BD:175:LEU:HB2	1.78	0.82
5:AF:16:GLU:CG	3:CD:191:SER:HB2	2.08	0.82
22:BA:923:G:N3	44:BW:23:LYS:HE2	1.94	0.82
28:BG:83:THR:HA	28:BG:84:LYS:NZ	1.93	0.82
25:DD:141:ARG:HH11	25:DD:141:ARG:HB3	1.43	0.82
22:DA:2838:G:H1'	35:DN:45:ARG:HH22	1.43	0.82
22:DA:915:C:H2'	22:DA:916:G:C8	2.14	0.82
15:CP:8:ARG:HB3	15:CP:28:ARG:NH1	1.94	0.82
6:AG:110:ARG:NH1	6:AG:122:GLU:HG2	1.94	0.82
22:DA:2415:G:H4'	33:DL:66:PHE:HB2	1.60	0.82
22:DA:1076:C:O2	30:DI:92:PRO:HG2	1.80	0.82
22:DA:575:A:O2'	22:DA:576:U:H5'	1.79	0.82
3:AD:172:VAL:HG22	3:AD:173:ASP:H	1.42	0.82
31:DJ:20:ALA:HA	31:DJ:23:LYS:HG3	1.62	0.82
1:CB:47:PRO:HA	1:CB:50:ASN:HB2	1.61	0.82
1:CB:162:VAL:HG13	1:CB:184:ALA:HB2	1.61	0.82
48:B0:39:ARG:HB2	48:B0:39:ARG:HH11	1.43	0.82
31:BJ:44:TYR:CD2	38:BQ:63:ARG:HG2	2.13	0.82
1:AB:42:LEU:HG	1:AB:43:GLU:HG3	1.60	0.82
1:CB:206:ILE:HA	1:CB:209:VAL:HG22	1.61	0.82
27:DF:39:VAL:HA	27:DF:49:LEU:HG	1.62	0.82
7:CH:28:SER:HA	7:CH:58:LEU:HD12	1.61	0.82
22:DA:975:A:HO2'	22:DA:976:G:H8	1.28	0.82
22:DA:96:C:H4'	46:DY:41:HIS:CD2	2.14	0.82
21:AA:198:G:N2	21:AA:220:G:H1'	1.94	0.82
22:BA:1929:G:H4'	22:BA:1930:G:OP1	1.77	0.82
23:BB:7:G:O2'	36:BO:38:GLN:NE2	2.13	0.82
22:DA:1469:A:H2'	22:DA:1470:A:C8	2.14	0.82
22:DA:143:C:H2'	22:DA:144:A:C8	2.13	0.82

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
41:DT:44:LYS:O	41:DT:48:GLN:HG2	1.79	0.82
39:BR:42:ALA:HA	39:BR:46:GLU:HB2	1.61	0.82
24:BC:16:VAL:H	24:BC:203:VAL:HG12	1.42	0.82
6:AG:69:ARG:HG3	6:AG:95:ARG:HG2	1.62	0.82
53:CA:6:G:N3	53:CA:6:G:H2'	1.93	0.82
24:BC:166:ARG:HG3	24:BC:166:ARG:O	1.78	0.82
40:DS:8:ARG:O	40:DS:9:HIS:HB2	1.77	0.82
22:DA:2346:A:H3'	22:DA:2347:C:H5''	1.62	0.82
6:CG:4:ARG:HD2	6:CG:5:VAL:H	1.42	0.82
22:BA:571:U:H4'	22:BA:572:A:OP1	1.77	0.82
20:AU:45:LYS:HA	20:AU:45:LYS:HE3	1.62	0.82
22:DA:1032:A:H1'	52:D4:23:ILE:HD13	1.60	0.82
44:DW:40:ARG:CG	44:DW:40:ARG:HH11	1.86	0.82
21:AA:1319:A:H4'	21:AA:1320:C:OP1	1.80	0.82
22:DA:249:C:H5''	22:DA:2394:C:O2'	1.80	0.81
53:CA:335:C:H2'	53:CA:336:A:C8	2.13	0.81
43:BV:80:HIS:HD2	43:BV:83:LYS:N	1.78	0.81
10:CK:27:ASN:HD22	10:CK:27:ASN:H	1.26	0.81
6:CG:110:ARG:HG3	6:CG:111:GLY:H	1.45	0.81
22:BA:2813:A:H2	22:BA:2887:A:N6	1.77	0.81
14:AO:69:LEU:HD21	14:AO:76:ARG:HB2	1.62	0.81
22:DA:1534:U:H6	22:DA:1538:G:N1	1.78	0.81
19:CT:73:ARG:CG	19:CT:73:ARG:HH11	1.93	0.81
1:AB:108:GLN:HE21	1:AB:108:GLN:N	1.77	0.81
27:DF:43:ILE:HG23	27:DF:44:ALA:H	1.45	0.81
3:AD:36:ALA:HA	3:AD:41:GLY:HA3	1.62	0.81
22:BA:491:G:H2'	22:BA:492:A:C8	2.14	0.81
20:AU:48:LYS:HA	20:AU:51:ALA:HB3	1.61	0.81
22:BA:62:U:H4'	22:BA:63:A:OP1	1.80	0.81
51:B3:31:ILE:HD11	51:B3:34:LYS:HD2	1.63	0.81
26:DE:170:ARG:HH22	26:DE:176:ASP:HB2	1.45	0.81
22:BA:2352:A:C2	44:BW:30:VAL:HG11	2.15	0.81
1:CB:79:VAL:HA	1:CB:213:LEU:HD21	1.63	0.81
21:AA:1157:A:H1'	21:AA:1181:G:N2	1.95	0.81
29:DH:3:VAL:HG12	29:DH:38:PRO:HA	1.63	0.81
31:DJ:99:ARG:HA	31:DJ:102:GLU:HB3	1.60	0.81
16:CQ:46:HIS:NE2	16:CQ:48:GLU:HG2	1.96	0.81
22:DA:1056:G:H1'	22:DA:1103:A:H61	1.44	0.81
22:DA:1731:G:H4'	22:DA:1732:C:OP1	1.80	0.81
25:BD:9:VAL:HG22	25:BD:26:VAL:HB	1.61	0.81
53:CA:1245:C:H2'	53:CA:1246:A:H8	1.44	0.81
22:DA:1565:C:O2'	22:DA:1566:A:H2'	1.81	0.81

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:AA:473:U:H2'	21:AA:474:G:H8	1.46	0.81
21:AA:98:A:H2'	21:AA:99:C:H6	1.45	0.81
22:DA:729:G:O2'	22:DA:1775:U:H1'	1.81	0.81
22:DA:2358:A:H61	33:DL:54:GLN:HE22	1.25	0.81
25:BD:186:LEU:HD11	37:BP:3:ILE:HD11	1.63	0.81
22:DA:302:C:HO2'	22:DA:303:G:H8	0.81	0.81
22:DA:2056:G:H21	48:D0:1:ALA:H3	1.27	0.81
30:DI:104:GLN:HA	30:DI:107:GLU:HB2	1.62	0.81
48:B0:9:ARG:HH21	48:B0:9:ARG:HG3	1.44	0.81
22:DA:1913:A:H4'	22:DA:1914:C:OP1	1.78	0.81
41:BT:32:LEU:H	41:BT:83:ALA:HB3	1.44	0.81
10:CK:126:ARG:HB2	20:CU:33:ARG:HD2	1.61	0.81
21:AA:109:A:H2'	21:AA:326:G:N2	1.96	0.81
11:CL:113:ARG:HB3	11:CL:118:VAL:HB	1.61	0.81
22:DA:919:U:H2'	22:DA:920:A:C8	2.16	0.81
22:DA:2631:G:H2'	22:DA:2632:A:H5''	1.61	0.81
22:DA:1364:G:C5	45:DX:1:SER:HB2	2.16	0.81
53:CA:721:G:H4'	53:CA:722:G:O5'	1.80	0.81
22:DA:959:A:H2'	22:DA:960:A:C8	2.16	0.81
14:AO:63:ARG:CG	14:AO:87:ARG:HH12	1.91	0.81
24:BC:230:PRO:HD2	24:BC:246:PRO:HA	1.63	0.81
7:CH:11:THR:HG22	7:CH:14:ARG:NH1	1.94	0.81
50:D2:31:LEU:HA	50:D2:34:ARG:HB2	1.63	0.81
16:CQ:4:ILE:HG22	16:CQ:5:ARG:H	1.46	0.81
36:BO:31:THR:CG2	36:BO:34:HIS:H	1.94	0.80
21:AA:204:G:H3'	21:AA:205:A:C5'	2.11	0.80
5:CF:86:ARG:HH11	17:CR:63:TYR:HB3	1.46	0.80
22:DA:2215:C:O2'	22:DA:2216:G:H8	1.62	0.80
22:DA:1799:G:N2	22:DA:1818:U:O2'	2.14	0.80
22:DA:704:G:H2'	22:DA:726:G:H22	1.44	0.80
39:BR:39:LEU:N	39:BR:39:LEU:HD23	1.95	0.80
53:CA:1278:G:H4'	53:CA:1279:G:O5'	1.81	0.80
9:CJ:15:HIS:CE1	9:CJ:68:ARG:HD3	2.16	0.80
25:BD:13:ARG:NH1	37:BP:74:GLN:HE21	1.77	0.80
42:DU:54:PRO:HG2	42:DU:55:GLY:H	1.45	0.80
27:BF:129:MET:HG3	27:BF:153:ILE:CD1	2.11	0.80
21:AA:214:C:HO2'	21:AA:215:C:H6	1.24	0.80
22:DA:1430:G:H2'	22:DA:1431:A:H8	1.45	0.80
11:CL:3:VAL:HG23	11:CL:4:ASN:H	1.46	0.80
7:CH:54:THR:O	7:CH:56:PRO:HD3	1.80	0.80
20:AU:13:VAL:HG13	20:AU:15:LEU:HG	1.61	0.80
22:DA:2199:A:H2'	22:DA:2200:C:C6	2.16	0.80

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
34:DM:27:SER:H	34:DM:66:ARG:HH22	1.29	0.80
41:DT:29:THR:H	41:DT:87:LEU:HB2	1.45	0.80
22:DA:1204:A:H4'	22:DA:1205:A:O5'	1.80	0.80
22:DA:302:C:O2'	22:DA:303:G:H8	1.63	0.80
21:AA:116:A:H2'	21:AA:117:G:C8	2.17	0.80
28:BG:73:SER:HA	28:BG:76:ILE:CG2	2.11	0.80
53:CA:1378:C:H3'	53:CA:1379:G:H5''	1.64	0.80
8:CI:71:ILE:HD12	8:CI:72:SER:H	1.46	0.80
21:AA:338:A:N1	21:AA:351:G:C6	2.49	0.80
28:BG:88:LEU:HD11	28:BG:95:ALA:HB2	1.62	0.80
27:DF:91:ARG:HH21	27:DF:91:ARG:HB3	1.46	0.80
53:CA:1300:G:H22	53:CA:1334:G:H2'	1.46	0.80
41:DT:60:THR:HG22	41:DT:83:ALA:HA	1.62	0.80
12:CM:104:ASN:HB3	53:CA:948:C:H5''	1.62	0.80
12:CM:64:VAL:HG12	12:CM:65:GLU:H	1.44	0.80
22:DA:2384:U:H5''	22:DA:2386:A:OP1	1.80	0.80
4:AE:100:GLU:HB3	4:AE:121:ASN:HA	1.61	0.80
25:DD:137:SER:HB3	25:DD:138:LEU:HD22	1.64	0.80
22:BA:752:A:H62	22:BA:2609:U:H3	1.29	0.80
1:AB:137:THR:HA	1:AB:140:LEU:HD13	1.64	0.80
21:AA:198:G:HO2'	21:AA:199:A:H8	1.29	0.80
22:DA:2311:A:H4'	22:DA:2312:U:OP2	1.81	0.80
35:BN:71:ARG:CG	35:BN:71:ARG:HH21	1.95	0.80
31:BJ:88:THR:HG22	31:BJ:91:GLU:HG3	1.63	0.80
29:DH:48:GLU:HG2	29:DH:51:ARG:HH21	1.45	0.80
34:BM:2:LEU:HD23	34:BM:69:PRO:HD2	1.61	0.80
22:DA:449:A:O2'	22:DA:450:G:H5'	1.82	0.80
37:BP:77:SER:OG	37:BP:79:VAL:HG13	1.81	0.80
22:DA:2311:A:H5'	22:DA:2312:U:C6	2.16	0.80
22:DA:2657:A:H2'	22:DA:2658:C:C6	2.17	0.80
25:BD:120:GLY:HA2	25:BD:162:ALA:HB1	1.63	0.80
27:BF:134:GLN:H	27:BF:134:GLN:NE2	1.80	0.80
28:DG:120:ILE:HG13	28:DG:140:ILE:HG22	1.63	0.80
13:AN:19:TYR:O	13:AN:22:LYS:HB3	1.81	0.80
25:BD:53:GLY:HA3	25:BD:77:ARG:H	1.46	0.80
49:D1:7:LYS:HD3	51:D3:33:THR:HG21	1.64	0.80
53:CA:33:A:H2'	53:CA:34:C:H6	1.47	0.80
53:CA:79:G:H2'	53:CA:80:A:H8	1.46	0.80
18:CS:40:PHE:HB3	18:CS:41:PRO:HD2	1.63	0.80
11:CL:110:LYS:HB2	53:CA:538:G:H5''	1.62	0.80
22:DA:2725:A:O2'	22:DA:2726:A:H2'	1.82	0.80
22:DA:1245:G:H4'	26:DE:33:VAL:HG11	1.64	0.80

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
51:B3:22:LYS:HA	51:B3:47:ALA:O	1.81	0.80
53:CA:1493:A:H8	22:DA:1913:A:H61	1.29	0.80
22:DA:445:C:O2'	22:DA:446:G:O4'	1.99	0.80
22:BA:1141:U:H4'	22:BA:1142:A:O5'	1.82	0.80
22:DA:674:G:O2'	26:DE:69:ARG:HG2	1.81	0.80
43:DV:61:LEU:HD23	43:DV:61:LEU:H	1.47	0.80
7:AH:103:VAL:HG12	7:AH:124:ILE:HG22	1.64	0.80
41:DT:14:PRO:O	41:DT:15:HIS:HB2	1.80	0.80
28:BG:86:LEU:N	28:BG:86:LEU:HD12	1.97	0.79
4:AE:152:VAL:HB	4:AE:155:LYS:NZ	1.96	0.79
32:BK:113:MET:O	32:BK:116:ILE:HG13	1.82	0.79
27:DF:41:GLU:HG2	27:DF:42:ALA:H	1.47	0.79
3:AD:61:ARG:NH1	3:AD:68:GLU:HG2	1.96	0.79
53:CA:1157:A:H4'	53:CA:1158:C:O5'	1.82	0.79
29:DH:80:ILE:HB	29:DH:101:ASP:CB	2.11	0.79
22:DA:2776:A:H4'	22:DA:2777:G:O5'	1.81	0.79
33:BL:110:VAL:O	33:BL:111:ILE:HB	1.82	0.79
22:BA:1069:A:O2'	22:BA:1070:A:H5''	1.82	0.79
21:AA:94:G:H4'	21:AA:95:C:O5'	1.80	0.79
24:DC:131:MET:HG2	24:DC:134:ILE:HD11	1.64	0.79
53:CA:983:A:O2'	53:CA:984:C:H5'	1.81	0.79
22:DA:1965:C:H5'	22:DA:1966:A:H5''	1.64	0.79
25:BD:118:PHE:HD2	25:BD:119:ALA:H	1.30	0.79
22:DA:2056:G:N2	48:D0:1:ALA:H1	1.80	0.79
22:DA:704:G:H1'	22:DA:727:A:N6	1.97	0.79
34:DM:7:THR:HG22	34:DM:9:PHE:H	1.47	0.79
7:AH:15:ASN:HD21	21:AA:875:U:H1'	1.47	0.79
10:CK:64:VAL:O	10:CK:68:ARG:HB2	1.82	0.79
22:DA:1280:G:H2'	22:DA:1281:G:H5'	1.63	0.79
22:DA:477:A:H2'	22:DA:478:A:H8	1.47	0.79
22:BA:1870:C:H4'	22:BA:1871:A:OP1	1.79	0.79
53:CA:1011:C:H2'	53:CA:1012:A:H8	1.45	0.79
20:CU:24:LYS:HG3	20:CU:25:ALA:N	1.98	0.79
6:CG:92:PRO:HA	6:CG:95:ARG:HB2	1.64	0.79
22:DA:2720:U:H5''	37:DP:52:ARG:NH2	1.97	0.79
22:BA:704:G:O2'	22:BA:726:G:N2	2.14	0.79
1:AB:148:GLY:HA2	1:AB:151:LYS:HB3	1.64	0.79
22:DA:2585:U:O2'	22:DA:2586:U:H5'	1.81	0.79
22:BA:2352:A:C6	44:BW:30:VAL:HG11	2.17	0.79
22:DA:1809:A:H2'	22:DA:1810:A:C8	2.17	0.79
22:DA:754:U:H2'	22:DA:755:U:C6	2.17	0.79
41:BT:44:LYS:HG3	41:BT:55:VAL:HG11	1.63	0.79

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
32:DK:13:ASN:H	32:DK:13:ASN:HD22	1.31	0.79
22:DA:2847:U:H2'	22:DA:2848:G:H5'	1.64	0.79
37:DP:28:LYS:HB2	37:DP:28:LYS:HZ2	1.47	0.79
40:DS:73:LYS:HB2	40:DS:106:VAL:HB	1.62	0.79
22:DA:286:U:H2'	22:DA:287:G:C8	2.18	0.79
37:BP:25:VAL:HG11	37:BP:46:VAL:HG23	1.64	0.79
30:BI:53:PRO:HD2	30:BI:77:VAL:HG21	1.64	0.79
26:BE:110:SER:O	26:BE:113:VAL:HG12	1.82	0.79
22:DA:2389:G:H5''	22:DA:2390:U:H5'	1.64	0.79
8:CI:23:GLY:H	8:CI:60:LEU:HA	1.47	0.79
22:DA:1326:U:HO2'	22:DA:1327:A:H8	0.82	0.79
22:DA:49:A:H4'	22:DA:50:U:O5'	1.83	0.79
21:AA:1277:C:O2'	21:AA:1279:G:H8	1.66	0.79
18:AS:6:LYS:HE2	18:AS:6:LYS:HA	1.65	0.79
22:DA:502:A:H5'	22:DA:503:A:OP2	1.82	0.79
29:BH:90:LEU:HB2	29:BH:123:ARG:HB3	1.62	0.79
26:DE:128:ALA:HB1	26:DE:129:PRO:HD2	1.64	0.79
22:BA:100:U:H4'	22:BA:101:A:O5'	1.82	0.79
34:BM:64:TRP:CZ3	34:BM:106:ASP:HB2	2.18	0.79
5:AF:29:ILE:HG12	5:AF:64:VAL:HG11	1.65	0.79
31:BJ:43:GLU:O	31:BJ:45:THR:HG22	1.82	0.79
38:BQ:63:ARG:NH1	38:BQ:96:ASP:CA	2.37	0.79
22:DA:1439:A:N7	22:DA:1440:U:C1'	2.46	0.79
53:CA:764:C:C2'	53:CA:765:G:H5'	2.13	0.79
27:DF:76:PHE:H	27:DF:76:PHE:HD2	1.28	0.79
53:CA:1135:U:H5'	53:CA:1136:C:OP2	1.83	0.79
38:DQ:24:TYR:O	38:DQ:27:ARG:HB3	1.83	0.79
22:DA:1870:C:H5''	22:DA:1871:A:H2	1.46	0.79
22:DA:2716:C:O2'	22:DA:2717:C:H5'	1.83	0.79
25:DD:114:LYS:HB2	25:DD:116:LYS:HE3	1.65	0.79
49:B1:47:ILE:H	49:B1:47:ILE:HD12	1.48	0.79
31:DJ:18:VAL:HG13	31:DJ:56:VAL:HA	1.65	0.79
11:AL:43:LYS:HB2	11:AL:44:PRO:CD	2.12	0.79
19:CT:22:SER:O	19:CT:26:MET:HB2	1.82	0.79
3:CD:34:GLU:O	3:CD:36:ALA:N	2.16	0.78
22:DA:2291:U:H2'	22:DA:2292:U:C6	2.19	0.78
11:CL:49:ARG:HH12	53:CA:523:A:H61	1.30	0.78
31:DJ:17:VAL:HG23	31:DJ:137:PRO:HB2	1.65	0.78
21:AA:531:U:H4'	21:AA:532:A:O5'	1.83	0.78
22:BA:250:G:H2'	22:BA:251:A:C8	2.18	0.78
22:DA:740:C:H5'	22:DA:1784:A:H3'	1.65	0.78
7:CH:11:THR:HG21	53:CA:876:C:H1'	1.64	0.78

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
27:BF:134:GLN:HE21	27:BF:134:GLN:H	1.29	0.78
24:BC:29:PHE:CE2	24:BC:31:PRO:HG2	2.18	0.78
40:BS:96:ILE:HG13	40:BS:96:ILE:O	1.82	0.78
10:AK:22:ILE:HD11	10:AK:85:VAL:HG13	1.65	0.78
13:AN:40:ARG:HH22	13:AN:44:VAL:HG21	1.48	0.78
50:D2:19:ARG:HB3	50:D2:19:ARG:HH21	1.48	0.78
50:D2:5:PHE:HZ	50:D2:12:ARG:HH11	1.30	0.78
32:DK:69:VAL:HG11	32:DK:106:GLU:HG2	1.64	0.78
31:BJ:2:LYS:HD3	31:BJ:2:LYS:N	1.97	0.78
44:BW:28:GLU:OE2	44:BW:28:GLU:HA	1.83	0.78
37:BP:4:ILE:O	37:BP:6:GLN:N	2.16	0.78
53:CA:792:A:O2'	53:CA:794:A:N7	2.15	0.78
54:DB:42:C:H41	27:DF:87:LYS:HZ3	1.29	0.78
16:CQ:30:HIS:CE1	16:CQ:32:ILE:HG13	2.18	0.78
22:DA:1309:G:H4'	50:D2:7:PRO:HB2	1.66	0.78
26:DE:122:GLU:HA	26:DE:190:ALA:HB2	1.66	0.78
22:DA:1993:U:H2'	22:DA:1994:C:C6	2.18	0.78
30:BI:100:ILE:HG22	30:BI:101:SER:H	1.47	0.78
24:DC:62:ARG:HG2	24:DC:62:ARG:HH21	1.49	0.78
22:DA:1586:A:H2'	22:DA:1587:G:H8	1.48	0.78
22:DA:2093:G:O2'	22:DA:2094:A:H8	1.66	0.78
20:CU:39:LYS:N	20:CU:40:PRO:HD2	1.98	0.78
22:DA:2310:C:H42	27:DF:76:PHE:HE1	1.32	0.78
22:DA:1062:G:O4'	22:DA:1088:A:N7	2.17	0.78
22:DA:320:A:H4'	22:DA:322:A:N7	1.98	0.78
22:DA:2356:U:H4'	44:DW:16:GLU:HG3	1.66	0.78
30:BI:33:ASN:HB3	30:BI:36:GLU:HB2	1.66	0.78
1:CB:150:ILE:HD11	1:CB:153:MET:HE1	1.65	0.78
49:B1:24:LYS:HE2	49:B1:52:LYS:HB2	1.64	0.78
6:CG:71:THR:HG23	6:CG:72:VAL:HG23	1.63	0.78
24:BC:77:VAL:HA	24:BC:93:VAL:HA	1.66	0.78
45:BX:5:GLN:NE2	45:BX:49:ARG:H	1.79	0.78
4:AE:155:LYS:HA	4:AE:158:LYS:HZ3	1.46	0.78
42:DU:92:VAL:HB	42:DU:101:THR:CG2	2.14	0.78
13:AN:22:LYS:HG3	13:AN:23:ARG:H	1.47	0.78
37:BP:105:LYS:HA	37:BP:108:ARG:HH21	1.48	0.78
22:BA:1188:U:H2'	22:BA:1189:A:H5'	1.65	0.78
22:BA:197:A:N6	22:BA:2430:A:H2'	1.99	0.78
21:AA:1468:A:C2'	21:AA:1469:C:H5''	2.14	0.78
53:CA:32:A:H2'	53:CA:33:A:H8	1.46	0.78
11:AL:62:VAL:HG21	11:AL:94:TYR:CE2	2.19	0.78
31:BJ:88:THR:HG22	31:BJ:91:GLU:CG	2.13	0.78

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:BA:1188:U:C2'	22:BA:1189:A:H5'	2.13	0.78
47:BZ:40:THR:HG22	47:BZ:43:ILE:HG23	1.64	0.78
31:BJ:77:HIS:HD2	31:BJ:79:GLY:N	1.80	0.78
4:AE:105:ILE:HD11	4:AE:123:LEU:HD23	1.65	0.78
22:DA:286:U:H2'	22:DA:287:G:H8	1.48	0.78
22:DA:2662:A:H2'	22:DA:2663:G:O4'	1.83	0.78
22:DA:873:C:H4'	34:DM:64:TRP:NE1	1.97	0.78
2:CC:166:TRP:O	2:CC:167:TYR:HB2	1.82	0.78
22:DA:633:A:H8	22:DA:633:A:O5'	1.66	0.78
42:DU:14:THR:HB	42:DU:68:ASN:HB3	1.66	0.78
17:AR:22:TYR:CZ	17:AR:23:LYS:HE3	2.19	0.78
31:BJ:44:TYR:CD1	38:BQ:59:LEU:HD11	2.19	0.78
16:CQ:17:GLU:HG3	53:CA:254:G:H21	1.49	0.78
20:CU:39:LYS:H	20:CU:40:PRO:HD2	1.47	0.78
22:DA:1799:G:H4'	22:DA:1800:C:O5'	1.83	0.78
28:DG:86:LEU:HA	28:DG:163:TYR:HB3	1.65	0.78
22:DA:1870:C:H5''	22:DA:1871:A:C2	2.17	0.78
22:BA:959:A:H62	34:BM:82:MET:HE3	1.48	0.78
22:BA:2757:A:N1	28:BG:66:THR:HG21	1.98	0.78
28:BG:60:GLY:O	28:BG:61:TRP:HB2	1.84	0.78
41:DT:50:LEU:HD23	41:DT:51:PHE:H	1.49	0.78
45:BX:46:VAL:HG21	45:BX:67:LEU:HD11	1.64	0.78
21:AA:841:C:C2	21:AA:843:U:H5'	2.19	0.78
18:CS:35:ARG:NH2	53:CA:1221:G:H4'	1.99	0.78
22:DA:2056:G:H21	48:D0:1:ALA:N	1.81	0.78
22:DA:279:A:N6	22:DA:361:G:H1'	1.99	0.78
21:AA:642:A:H2'	21:AA:643:C:H6	1.48	0.78
3:CD:66:VAL:HG22	3:CD:96:ARG:NH1	1.98	0.78
22:BA:479:A:O2'	22:BA:481:G:H5'	1.83	0.78
53:CA:1005:A:C5	53:CA:1006:G:H1'	2.18	0.78
39:BR:16:GLU:HA	39:BR:98:ILE:HG22	1.66	0.78
22:DA:2287:A:O2'	22:DA:2288:A:H3'	1.83	0.77
22:DA:2286:G:H4'	22:DA:2287:A:O4'	1.84	0.77
5:AF:91:ARG:HG3	5:AF:92:THR:H	1.49	0.77
8:CI:75:ALA:HA	8:CI:78:ILE:HD12	1.65	0.77
15:CP:44:SER:H	15:CP:46:LYS:NZ	1.80	0.77
30:BI:3:LYS:HD2	30:BI:4:VAL:HG23	1.66	0.77
53:CA:239:U:C5'	53:CA:239:U:H6	1.95	0.77
22:DA:2135:A:H8	22:DA:2135:A:OP2	1.68	0.77
44:BW:46:ALA:HB3	44:BW:79:ILE:O	1.85	0.77
41:BT:43:ILE:O	41:BT:47:VAL:HG23	1.85	0.77
25:DD:124:ARG:HD3	25:DD:125:TRP:CD1	2.20	0.77

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:2287:A:HO2'	22:DA:2288:A:H3'	1.48	0.77
20:AU:10:PRO:O	20:AU:11:PHE:HB3	1.83	0.77
31:BJ:64:VAL:O	31:BJ:65:THR:HB	1.84	0.77
22:DA:2714:G:O2'	22:DA:2715:C:H5'	1.83	0.77
47:DZ:23:LEU:HD12	47:DZ:28:LEU:HD21	1.64	0.77
53:CA:456:A:H2'	53:CA:457:G:C8	2.19	0.77
53:CA:1067:A:H1'	53:CA:1068:G:C8	2.18	0.77
22:DA:2666:C:H2'	22:DA:2667:C:H5'	1.63	0.77
22:DA:61:C:O2'	22:DA:62:U:H5'	1.84	0.77
43:BV:10:LYS:H	43:BV:10:LYS:HD3	1.47	0.77
45:DX:31:ASN:ND2	45:DX:31:ASN:H	1.82	0.77
24:DC:159:THR:O	24:DC:194:VAL:HG12	1.83	0.77
26:DE:149:ILE:O	26:DE:188:MET:HA	1.84	0.77
22:DA:1024:G:H3'	22:DA:1025:G:C5'	2.10	0.77
9:CJ:9:ARG:HH22	53:CA:1279:G:H5''	1.47	0.77
32:DK:60:ALA:HA	32:DK:87:LEU:HD23	1.64	0.77
22:DA:2060:A:H62	26:DE:69:ARG:HH12	1.30	0.77
22:BA:1590:A:H2'	22:BA:1591:A:H8	1.50	0.77
24:BC:14:HIS:O	24:BC:203:VAL:HG11	1.84	0.77
53:CA:456:A:H2'	53:CA:457:G:H8	1.49	0.77
31:BJ:13:ARG:O	31:BJ:14:ASP:HB2	1.83	0.77
51:D3:41:ARG:HG3	51:D3:41:ARG:HH21	1.48	0.77
53:CA:1118:U:H1'	53:CA:1179:A:C4	2.18	0.77
28:DG:48:THR:O	28:DG:49:LEU:HB2	1.84	0.77
43:DV:77:VAL:HA	43:DV:89:ILE:HG22	1.67	0.77
2:CC:36:PHE:HE1	13:CN:91:GLU:HB3	1.50	0.77
44:DW:18:LYS:HD3	44:DW:19:ARG:N	1.98	0.77
20:AU:35:GLU:O	20:AU:36:PHE:HB2	1.85	0.77
22:DA:1676:A:C2	22:DA:1993:U:H5'	2.19	0.77
30:BI:104:GLN:O	30:BI:105:LEU:HB2	1.84	0.77
22:BA:858:G:N2	22:BA:2269:G:OP2	2.18	0.77
37:DP:88:ARG:HH11	37:DP:112:ARG:NH2	1.82	0.77
53:CA:1278:G:H4'	53:CA:1279:G:C5'	2.14	0.77
35:DN:35:LYS:HZ2	35:DN:112:TYR:HE1	1.29	0.77
38:BQ:48:ASP:HA	38:BQ:51:GLN:HB2	1.67	0.77
7:AH:6:ILE:HB	7:AH:76:ARG:HH12	1.47	0.77
27:DF:64:PRO:HA	27:DF:88:VAL:HG22	1.65	0.77
22:DA:2104:C:O2	22:DA:2105:U:H5	1.66	0.77
20:AU:16:ARG:NH1	20:AU:19:LYS:HG3	1.99	0.77
27:BF:129:MET:CG	27:BF:153:ILE:HD11	2.15	0.77
28:BG:8:VAL:HG11	28:BG:49:LEU:HB2	1.64	0.77
25:BD:53:GLY:HA3	25:BD:77:ARG:HB2	1.65	0.77

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:AD:68:GLU:HG3	21:AA:545:C:H5'	1.64	0.77
5:CF:54:LEU:HD12	5:CF:56:LYS:O	1.84	0.77
53:CA:702:A:H8	53:CA:702:A:OP1	1.65	0.77
24:DC:15:VAL:HG22	24:DC:205:GLY:HA3	1.67	0.77
22:BA:1799:G:H4'	22:BA:1800:C:O5'	1.83	0.77
27:DF:28:PRO:HB2	27:DF:168:LEU:HD21	1.66	0.77
21:AA:213:G:H2'	21:AA:214:C:C6	2.20	0.77
22:BA:620:G:H4'	22:BA:621:A:O5'	1.84	0.77
22:BA:2484:G:OP1	34:BM:44:ARG:HD3	1.85	0.77
53:CA:1011:C:H2'	53:CA:1012:A:C8	2.19	0.77
21:AA:1468:A:C3'	21:AA:1469:C:H5''	2.15	0.77
25:DD:14:ILE:HG13	37:DP:11:GLN:HE22	1.50	0.77
44:DW:49:ASN:ND2	44:DW:81:ILE:HG23	1.99	0.77
22:BA:2309:A:O2'	22:BA:2310:C:H5'	1.84	0.77
6:CG:45:ALA:HB1	6:CG:120:ALA:HB2	1.66	0.77
9:CJ:47:GLU:HB2	9:CJ:67:ILE:HG13	1.67	0.77
33:DL:17:LYS:NZ	33:DL:19:LEU:HD22	2.00	0.77
22:DA:1866:A:H2'	22:DA:1867:G:C8	2.18	0.77
44:BW:51:GLY:HA3	44:BW:59:PHE:CZ	2.20	0.77
22:DA:1808:A:O3'	22:DA:1809:A:H8	1.68	0.77
22:DA:1011:G:O2'	22:DA:1013:C:H5''	1.85	0.77
28:BG:8:VAL:HG12	28:BG:49:LEU:H	1.50	0.77
11:CL:49:ARG:HH22	53:CA:522:C:H41	1.31	0.77
28:BG:3:VAL:O	28:BG:68:ARG:HG3	1.84	0.77
2:CC:142:ARG:HG2	2:CC:143:LEU:HD12	1.65	0.77
53:CA:268:U:H2'	53:CA:269:C:C6	2.19	0.77
1:AB:69:VAL:HB	1:AB:162:VAL:HG12	1.67	0.77
43:DV:63:ILE:O	43:DV:70:ILE:HD11	1.85	0.77
31:DJ:35:ARG:HG2	31:DJ:40:HIS:CD2	2.19	0.77
2:AC:134:LYS:HE3	2:AC:138:GLN:NE2	1.99	0.77
9:CJ:40:ILE:HG22	9:CJ:42:LEU:HD12	1.67	0.77
22:DA:482:A:N6	22:DA:506:G:C4	2.52	0.77
22:DA:915:C:H2'	22:DA:916:G:H8	1.49	0.77
22:DA:976:G:H2'	22:DA:977:G:H8	1.50	0.77
22:DA:1611:C:HO2'	22:DA:1612:C:H6	1.33	0.77
33:DL:79:LEU:HA	33:DL:82:LEU:HD11	1.65	0.77
28:DG:112:VAL:HG12	28:DG:114:HIS:H	1.50	0.77
3:AD:130:ASN:HB3	21:AA:619:U:H3	1.48	0.77
28:BG:104:LEU:HB2	28:BG:112:VAL:HG21	1.65	0.76
22:DA:1341:G:H3'	22:DA:1397:U:O2	1.85	0.76
22:BA:221:A:H1'	22:BA:233:A:H1'	1.66	0.76
4:AE:98:ALA:HB1	21:AA:6:G:O6	1.85	0.76

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
53:CA:1322:C:O2'	53:CA:1323:G:H5'	1.84	0.76
22:BA:2093:G:O2'	22:BA:2094:A:H5'	1.85	0.76
37:BP:67:GLU:HA	37:BP:67:GLU:OE1	1.84	0.76
37:DP:67:GLU:CD	37:DP:68:GLY:H	1.87	0.76
32:BK:21:CYS:HA	32:BK:41:ILE:HD12	1.65	0.76
22:DA:975:A:O2'	22:DA:976:G:H8	1.68	0.76
42:DU:14:THR:HG23	42:DU:15:GLY:H	1.50	0.76
53:CA:563:A:N3	53:CA:563:A:H2'	1.98	0.76
22:BA:1499:C:H2'	22:BA:1500:G:H8	1.50	0.76
53:CA:484:G:H4'	53:CA:485:U:O5'	1.85	0.76
18:AS:28:LYS:HB3	18:AS:29:PRO:HD2	1.65	0.76
53:CA:1054:C:HO2'	53:CA:1055:A:H5''	1.49	0.76
41:BT:87:LEU:HB2	41:BT:91:GLN:HG2	1.68	0.76
35:DN:38:LEU:HB3	35:DN:39:PRO:HD3	1.65	0.76
39:BR:60:LYS:H	39:BR:100:GLY:HA3	1.49	0.76
3:CD:84:ASN:HB3	3:CD:87:GLU:HG3	1.68	0.76
30:DI:57:VAL:HG12	30:DI:58:ILE:H	1.48	0.76
21:AA:753:A:H4'	21:AA:754:C:O5'	1.86	0.76
54:DB:42:C:H41	27:DF:87:LYS:NZ	1.81	0.76
32:DK:61:VAL:HG11	32:DK:112:PHE:CE2	2.21	0.76
22:DA:480:A:H3'	22:DA:481:G:C5'	2.16	0.76
22:DA:2143:C:H5'	22:DA:2144:G:OP2	1.86	0.76
22:DA:2875:C:O2'	22:DA:2876:G:H8	1.67	0.76
53:CA:977:A:O2'	53:CA:978:A:H5''	1.85	0.76
37:BP:85:VAL:HG13	37:BP:86:LYS:H	1.50	0.76
16:AQ:46:HIS:HA	16:AQ:70:LYS:HE3	1.66	0.76
22:DA:1447:C:H2'	22:DA:1448:G:C8	2.19	0.76
37:BP:28:LYS:HB2	37:BP:82:SER:HB3	1.65	0.76
47:BZ:12:ALA:HA	47:BZ:15:ARG:HD3	1.65	0.76
7:AH:12:ARG:HH11	7:AH:26:MET:HB2	1.49	0.76
9:AJ:36:VAL:HG22	9:AJ:76:ILE:HG23	1.65	0.76
3:CD:58:GLN:O	3:CD:62:ARG:HG2	1.85	0.76
22:DA:1097:U:H2'	22:DA:1098:A:O4'	1.86	0.76
22:BA:2092:U:H4'	22:BA:2093:G:O5'	1.85	0.76
22:DA:671:C:O2'	22:DA:672:C:H5'	1.86	0.76
21:AA:1468:A:H2'	21:AA:1469:C:H5''	1.67	0.76
22:DA:637:A:H4'	22:DA:638:G:O5'	1.82	0.76
53:CA:1293:C:H2'	53:CA:1294:G:C8	2.19	0.76
15:AP:67:ILE:CG2	15:AP:72:ALA:HB2	2.15	0.76
41:DT:3:ARG:HD2	41:DT:42:GLU:HG2	1.67	0.76
53:CA:1299:A:C8	53:CA:1301:U:H1'	2.20	0.76
22:DA:118:A:N3	22:DA:178:G:H1'	2.00	0.76

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:AU:3:ILE:HA	20:AU:19:LYS:NZ	2.01	0.76
53:CA:704:A:H2'	53:CA:705:G:C8	2.20	0.76
22:BA:1734:G:H2'	22:BA:1735:A:H8	1.50	0.76
30:BI:7:TYR:HB3	30:BI:58:ILE:H	1.50	0.76
26:DE:166:LYS:HA	26:DE:166:LYS:HE2	1.67	0.76
13:AN:40:ARG:NH1	13:AN:44:VAL:HG11	1.99	0.76
22:DA:216:A:O2'	22:DA:217:A:C8	2.31	0.76
12:CM:12:LYS:HE3	12:CM:12:LYS:HA	1.67	0.76
53:CA:1452:C:H4'	53:CA:1453:G:O5'	1.86	0.76
32:BK:63:VAL:HG22	32:BK:107:LEU:HD21	1.65	0.76
22:DA:100:U:H1'	22:DA:101:A:C5	2.20	0.76
50:D2:19:ARG:HB3	50:D2:19:ARG:NH2	2.01	0.76
22:DA:859:G:O2'	22:DA:860:U:OP2	2.02	0.76
53:CA:1101:A:H4'	53:CA:1102:A:O5'	1.85	0.76
25:BD:61:THR:OG1	25:BD:63:PRO:HD2	1.86	0.76
22:BA:930:G:H1'	47:BZ:24:LEU:HD21	1.68	0.76
30:DI:74:PRO:HB2	30:DI:77:VAL:HG22	1.67	0.76
6:CG:64:ALA:HB2	6:CG:126:ALA:HB1	1.67	0.76
53:CA:383:A:H2'	53:CA:384:G:O4'	1.86	0.76
39:DR:1:MET:HG3	39:DR:101:ILE:HD12	1.68	0.76
3:AD:10:LEU:HD22	3:AD:62:ARG:HG3	1.68	0.76
38:DQ:87:VAL:HG11	39:DR:52:PRO:HG3	1.68	0.76
16:CQ:46:HIS:HB2	16:CQ:70:LYS:HE3	1.66	0.76
10:AK:126:ARG:HB2	20:AU:33:ARG:HH12	1.49	0.76
22:DA:1430:G:H2'	22:DA:1431:A:C8	2.20	0.76
26:BE:5:LEU:HD12	26:BE:10:SER:HB3	1.66	0.76
36:BO:49:VAL:HG21	36:BO:82:ALA:HA	1.68	0.76
31:BJ:4:PHE:O	31:BJ:44:TYR:CE1	2.39	0.76
22:DA:1534:U:H6	22:DA:1538:G:H1	1.32	0.76
22:DA:1345:C:OP2	22:DA:1345:C:H3'	1.86	0.76
28:DG:88:LEU:HD13	28:DG:93:TYR:HB3	1.68	0.76
2:CC:140:ALA:O	2:CC:145:ALA:HB3	1.86	0.76
22:BA:1746:A:H2'	22:BA:1747:U:C6	2.21	0.76
22:DA:2752:C:H2'	22:DA:2753:A:C8	2.21	0.76
22:BA:2503:A:H4'	22:BA:2504:U:OP1	1.85	0.76
8:CI:118:ARG:NH2	8:CI:122:ARG:HE	1.84	0.76
54:DB:24:G:H1'	54:DB:27:C:N4	2.02	0.76
53:CA:1493:A:H3'	22:DA:1913:A:H62	1.51	0.75
53:CA:429:U:H1'	53:CA:430:A:H5''	1.68	0.75
9:CJ:40:ILE:HG12	53:CA:1125:U:C5	2.21	0.75
21:AA:96:U:O2'	21:AA:97:G:H8	1.67	0.75
6:CG:118:ARG:HH22	53:CA:1239:A:H3'	1.49	0.75

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:140:C:H5'	22:DA:141:G:N2	2.01	0.75
22:DA:2752:C:H2'	22:DA:2753:A:H8	1.49	0.75
53:CA:1064:G:O2'	53:CA:1190:G:N2	2.19	0.75
22:DA:1734:G:H2'	22:DA:1735:A:H8	1.52	0.75
1:CB:59:ILE:HA	1:CB:62:ARG:HD3	1.67	0.75
22:BA:2637:U:C2'	22:BA:2638:G:H5'	2.16	0.75
54:DB:56:G:H4'	54:DB:57:A:O5'	1.85	0.75
31:BJ:81:ILE:HG23	31:BJ:82:GLY:N	1.99	0.75
26:BE:149:ILE:HD11	26:BE:172:ALA:HA	1.67	0.75
29:BH:49:ALA:HB3	29:BH:50:ARG:NH2	2.02	0.75
25:DD:106:LYS:HB3	25:DD:206:ALA:HB3	1.68	0.75
22:BA:509:C:H5''	22:BA:509:C:H6	1.49	0.75
22:BA:1079:C:N4	22:BA:1088:A:C2	2.53	0.75
22:DA:206:U:HO2'	22:DA:207:A:H8	1.32	0.75
4:AE:149:PRO:O	4:AE:152:VAL:HG22	1.86	0.75
22:DA:1931:U:H2'	22:DA:1932:A:C8	2.21	0.75
30:DI:55:PRO:HG2	30:DI:70:THR:HG23	1.66	0.75
53:CA:335:C:H2'	53:CA:336:A:H8	1.51	0.75
28:BG:59:ASP:HB2	28:BG:63:GLN:HG2	1.67	0.75
22:DA:1324:G:H1'	22:DA:1616:A:N6	2.01	0.75
38:DQ:10:ARG:HA	38:DQ:13:HIS:HB2	1.67	0.75
21:AA:1227:A:N3	21:AA:1227:A:H2'	2.01	0.75
22:BA:1494:A:H2'	22:BA:1495:A:C8	2.21	0.75
14:AO:63:ARG:HD3	14:AO:87:ARG:NH2	2.00	0.75
8:AI:6:TYR:HE2	8:AI:17:ARG:HB2	1.52	0.75
3:AD:145:ARG:NH1	3:AD:147:LYS:HE3	2.01	0.75
22:BA:1057:A:C8	22:BA:1086:A:C8	2.74	0.75
52:D4:19:ARG:O	52:D4:20:ASP:HB2	1.85	0.75
53:CA:120:A:C2'	53:CA:121:U:H5''	2.15	0.75
22:DA:794:A:H2'	22:DA:795:C:C6	2.21	0.75
53:CA:17:U:H2'	53:CA:18:C:C6	2.21	0.75
22:BA:994:C:H3'	38:BQ:53:LYS:HE2	1.68	0.75
39:DR:9:GLY:H	39:DR:10:LYS:HD2	1.51	0.75
6:CG:59:GLU:OE2	6:CG:63:VAL:HG23	1.85	0.75
10:AK:124:LYS:CE	20:AU:33:ARG:HH21	1.99	0.75
54:DB:42:C:O2'	54:DB:43:C:H5'	1.86	0.75
22:DA:1069:A:H4'	22:DA:1070:A:O5'	1.86	0.75
22:BA:826:U:O2'	33:BL:53:GLY:HA3	1.87	0.75
22:DA:395:U:O2'	22:DA:396:G:H8	1.70	0.75
21:AA:548:G:H2'	21:AA:549:C:C6	2.22	0.75
34:BM:64:TRP:HZ3	34:BM:106:ASP:HB2	1.52	0.75
22:BA:1964:G:H4'	22:BA:1965:C:OP2	1.86	0.75

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
24:DC:128:THR:HG22	24:DC:188:ARG:HB3	1.66	0.75
36:DO:53:THR:HB	36:DO:65:THR:HG22	1.67	0.75
53:CA:366:A:O2'	53:CA:394:G:N2	2.20	0.75
22:BA:228:C:H4'	22:BA:229:C:H5''	1.67	0.75
22:BA:1161:C:H1'	39:BR:8:GLY:O	1.87	0.75
25:BD:106:LYS:HB3	25:BD:206:ALA:CB	2.14	0.75
28:BG:120:ILE:HD13	28:BG:121:THR:N	2.01	0.75
7:AH:17:GLN:NE2	7:AH:71:VAL:HG23	2.01	0.75
31:BJ:65:THR:HG22	31:BJ:68:LYS:HE3	1.69	0.75
22:BA:84:A:H4'	22:BA:85:G:O5'	1.85	0.75
25:DD:114:LYS:HD2	25:DD:116:LYS:NZ	2.02	0.75
22:DA:244:A:H2'	22:DA:245:G:O4'	1.87	0.75
6:CG:117:LEU:HA	6:CG:121:ASN:HB2	1.67	0.75
9:AJ:80:THR:HB	9:AJ:83:THR:HG22	1.68	0.75
38:BQ:97:ILE:HD11	38:BQ:105:PHE:CA	2.17	0.75
21:AA:795:C:H5''	21:AA:796:C:OP2	1.86	0.75
22:BA:312:G:O2'	22:BA:313:G:H5'	1.87	0.75
12:AM:106:ARG:HH21	12:AM:112:ARG:HB3	1.52	0.75
39:BR:49:ILE:O	39:BR:49:ILE:HG13	1.84	0.75
41:DT:20:ALA:HB1	41:DT:31:VAL:HG21	1.68	0.75
18:AS:43:MET:O	18:AS:61:VAL:HG21	1.85	0.75
8:AI:83:THR:HG21	8:AI:102:PHE:HB3	1.69	0.75
2:AC:118:SER:O	2:AC:122:GLN:HG2	1.86	0.75
2:CC:63:ILE:HG12	2:CC:65:VAL:HG23	1.69	0.75
54:DB:12:C:H4'	54:DB:13:G:OP1	1.84	0.75
40:DS:6:LYS:NZ	40:DS:104:THR:HG23	2.02	0.75
22:BA:1020:A:H4'	22:BA:1021:A:O5'	1.86	0.75
4:CE:76:ASN:O	4:CE:79:THR:HG22	1.86	0.75
52:B4:9:LYS:C	52:B4:10:LEU:HD23	2.06	0.75
21:AA:654:G:H2'	21:AA:655:A:C8	2.22	0.75
53:CA:1450:U:H4'	53:CA:1451:U:C5	2.22	0.75
33:DL:64:PHE:HD2	51:D3:24:LYS:HG2	1.49	0.75
10:AK:14:GLN:HA	10:AK:76:TYR:O	1.86	0.75
22:DA:373:U:HO2'	22:DA:374:A:H8	1.34	0.75
37:BP:50:ARG:CG	37:BP:57:ALA:H	1.99	0.75
22:BA:2269:G:O2'	44:BW:18:LYS:HG2	1.86	0.75
5:AF:3:HIS:N	5:AF:92:THR:HG23	1.98	0.75
15:CP:52:LEU:HD21	15:CP:75:ILE:HG12	1.68	0.75
21:AA:466:A:HO2'	21:AA:467:U:H5	1.34	0.75
8:CI:35:GLU:HA	8:CI:39:GLY:HA3	1.67	0.75
4:CE:132:PRO:O	4:CE:136:VAL:HG12	1.86	0.75
4:AE:120:HIS:C	4:AE:121:ASN:HD22	1.91	0.75

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
53:CA:1169:A:H2'	53:CA:1170:A:C8	2.22	0.75
19:CT:67:HIS:HB3	19:CT:68:LYS:HD2	1.69	0.75
53:CA:547:A:H4'	53:CA:548:G:O5'	1.87	0.75
37:DP:50:ARG:HB3	37:DP:56:SER:HB3	1.67	0.75
13:CN:70:HIS:HB2	53:CA:976:G:OP1	1.87	0.74
34:BM:132:THR:HG22	34:BM:133:LYS:N	2.02	0.74
21:AA:1239:A:H62	21:AA:1299:A:H62	1.34	0.74
6:AG:61:PHE:HE1	6:AG:65:LEU:HD22	1.52	0.74
24:BC:129:LEU:HD23	24:BC:130:PRO:HD2	1.68	0.74
5:AF:11:HIS:CD2	5:AF:13:ASP:H	2.05	0.74
47:DZ:4:ILE:HD12	47:DZ:58:GLU:HA	1.67	0.74
22:BA:760:G:H2'	22:BA:761:A:H5'	1.68	0.74
22:DA:782:A:N7	24:DC:219:VAL:HG21	2.01	0.74
46:BY:39:GLN:HB2	46:BY:41:HIS:CD2	2.22	0.74
44:BW:37:VAL:HG12	44:BW:38:ARG:N	2.02	0.74
10:CK:74:LYS:HD2	10:CK:104:PHE:HE1	1.52	0.74
53:CA:197:A:C6	53:CA:221:C:H4'	2.23	0.74
1:AB:22:TRP:O	1:AB:22:TRP:CG	2.39	0.74
47:DZ:18:LYS:O	47:DZ:22:THR:HG23	1.86	0.74
53:CA:209:U:H5''	53:CA:210:C:OP2	1.87	0.74
4:CE:44:ARG:HG2	4:CE:72:ASN:HA	1.69	0.74
25:BD:97:SER:C	25:BD:99:GLU:HG2	2.06	0.74
12:CM:27:THR:HG21	53:CA:1328:C:H5''	1.69	0.74
9:CJ:35:GLN:HG2	9:CJ:76:ILE:HG23	1.67	0.74
38:DQ:57:ARG:NH1	38:DQ:92:LYS:HE2	2.02	0.74
22:DA:2324:U:H5'	22:DA:2325:G:C5'	2.17	0.74
21:AA:842:U:H3'	21:AA:843:U:C5'	2.17	0.74
53:CA:79:G:H2'	53:CA:80:A:C8	2.22	0.74
53:CA:367:U:C6	53:CA:394:G:N2	2.55	0.74
39:BR:59:ILE:HG12	39:BR:101:ILE:HD13	1.69	0.74
21:AA:92:U:H2'	21:AA:93:U:C6	2.23	0.74
21:AA:17:U:H2'	21:AA:18:C:C6	2.21	0.74
22:DA:765:C:H2'	22:DA:766:U:C6	2.22	0.74
43:BV:80:HIS:CD2	43:BV:83:LYS:H	1.99	0.74
22:BA:1082:U:H5'	30:BI:117:THR:O	1.88	0.74
34:DM:41:LEU:HD23	34:DM:46:ILE:HG22	1.69	0.74
22:DA:1492:G:H3'	22:DA:1493:C:H5'	1.69	0.74
2:CC:18:ASN:HD21	2:CC:53:ARG:NH1	1.85	0.74
21:AA:110:C:H2'	21:AA:111:G:C8	2.21	0.74
28:DG:112:VAL:HG13	28:DG:150:TYR:HE1	1.51	0.74
7:CH:1:SER:HB3	7:CH:3:GLN:HG3	1.69	0.74
45:DX:63:ILE:HD12	45:DX:64:ASP:H	1.52	0.74

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
29:DH:115:VAL:HG12	29:DH:132:PHE:HB2	1.69	0.74
22:BA:1062:G:O2'	22:BA:1063:G:O4'	2.05	0.74
1:AB:163:ILE:O	1:AB:185:ILE:HG12	1.87	0.74
30:BI:78:LEU:HD13	30:BI:108:ILE:HG23	1.69	0.74
22:BA:194:G:N7	57:BA:3766:HOH:O	2.18	0.74
30:BI:115:ASP:O	30:BI:116:MET:HG2	1.86	0.74
22:DA:1135:C:N4	22:DA:1139:G:C6	2.55	0.74
51:D3:32:LEU:HA	51:D3:35:LYS:HG3	1.68	0.74
24:DC:147:PRO:HA	24:DC:187:CYS:HB3	1.69	0.74
22:BA:1022:G:N2	22:BA:1142:A:C2	2.51	0.74
42:DU:3:LYS:HG2	42:DU:84:PHE:HZ	1.51	0.74
53:CA:982:U:H1'	53:CA:983:A:N7	2.02	0.74
21:AA:1299:A:N3	21:AA:1299:A:H2'	2.02	0.74
22:DA:279:A:H61	22:DA:361:G:H1'	1.52	0.74
21:AA:109:A:H2'	21:AA:326:G:H21	1.49	0.74
22:DA:960:A:H2'	22:DA:962:G:H5'	1.69	0.74
53:CA:66:A:H2'	53:CA:66:A:N3	2.01	0.74
22:DA:1490:A:H5'	22:DA:1490:A:N3	2.02	0.74
21:AA:206:C:H2'	21:AA:207:C:O4'	1.88	0.74
2:CC:59:PRO:HG2	2:CC:62:SER:HB3	1.70	0.74
15:AP:59:HIS:CE1	15:AP:63:GLN:HE22	2.06	0.74
35:BN:79:LEU:O	35:BN:80:PHE:HB2	1.86	0.74
25:BD:107:VAL:H	25:BD:206:ALA:H	1.33	0.74
5:AF:3:HIS:H	5:AF:92:THR:CG2	1.99	0.74
30:BI:79:LEU:HD13	30:BI:135:MET:SD	2.28	0.74
22:DA:995:C:O2	31:DJ:3:THR:HG23	1.87	0.74
22:DA:1069:A:N6	22:DA:1073:A:H5''	2.02	0.74
53:CA:78:A:H2'	53:CA:79:G:C8	2.23	0.74
22:DA:973:A:H1'	22:DA:1188:U:C6	2.23	0.74
39:BR:1:MET:HG3	39:BR:1:MET:O	1.88	0.74
24:BC:16:VAL:HB	24:BC:203:VAL:HB	1.68	0.74
25:DD:125:TRP:CG	25:DD:160:LYS:HB3	2.21	0.74
33:DL:79:LEU:HB3	33:DL:114:GLY:H	1.51	0.74
15:AP:67:ILE:HG21	15:AP:72:ALA:HB2	1.68	0.74
1:CB:49:PHE:HA	1:CB:52:ALA:HB3	1.70	0.74
22:DA:762:U:H4'	22:DA:763:G:O5'	1.88	0.74
53:CA:1071:C:H2'	53:CA:1072:G:C8	2.22	0.74
22:BA:276:U:O2'	22:BA:278:A:N7	2.20	0.74
34:DM:72:PRO:O	34:DM:73:ILE:HB	1.86	0.74
22:BA:2790:U:H4'	22:BA:2791:G:OP1	1.88	0.74
1:AB:127:LYS:HG3	1:AB:128:LEU:H	1.52	0.74
52:B4:3:VAL:O	52:B4:4:ARG:O	2.04	0.74

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:1439:A:N1	22:DA:1552:A:N7	2.34	0.74
1:AB:185:ILE:HA	1:AB:199:ILE:HB	1.68	0.74
33:DL:79:LEU:HB2	33:DL:113:ALA:H	1.52	0.74
40:BS:18:ARG:HG2	40:BS:76:VAL:HG13	1.70	0.74
10:AK:39:ASN:O	21:AA:684:U:H1'	1.88	0.74
22:DA:1847:A:O2'	22:DA:1848:A:C8	2.39	0.74
22:DA:2468:A:O2'	22:DA:2469:A:H8	1.70	0.74
31:BJ:17:VAL:HG23	31:BJ:137:PRO:HB2	1.70	0.74
22:DA:460:A:H2'	22:DA:461:C:O4'	1.87	0.74
22:BA:1026:G:O2'	22:BA:1027:A:H5'	1.87	0.74
32:DK:35:VAL:HG23	32:DK:36:GLY:H	1.50	0.74
39:BR:21:ARG:NH2	39:BR:93:PHE:CE1	2.55	0.74
31:BJ:3:THR:HB	31:BJ:44:TYR:OH	1.88	0.74
21:AA:974:A:H4'	21:AA:975:A:H5'	1.69	0.74
44:BW:19:ARG:NH1	44:BW:22:VAL:HG11	2.03	0.74
22:BA:1110:G:O2'	22:BA:1111:A:H8	1.70	0.74
30:BI:126:ARG:HA	30:BI:129:GLU:HB2	1.69	0.74
6:CG:14:ASP:HB3	6:CG:18:GLY:H	1.53	0.74
53:CA:33:A:H2'	53:CA:34:C:C6	2.22	0.74
21:AA:32:A:H2'	21:AA:33:A:C8	2.22	0.74
53:CA:511:C:O2'	53:CA:512:U:H5''	1.88	0.74
53:CA:1154:G:H2'	53:CA:1155:A:H8	1.53	0.74
22:DA:1237:A:C2	22:DA:1238:G:H1'	2.22	0.74
19:AT:6:ALA:HB1	19:AT:9:ARG:HB2	1.70	0.74
13:CN:76:PHE:HE2	13:CN:92:ILE:HG21	1.51	0.74
15:AP:10:GLY:HA3	15:AP:15:PRO:HA	1.70	0.74
20:AU:9:GLU:CG	20:AU:10:PRO:HD3	2.13	0.73
53:CA:93:U:O5'	53:CA:93:U:H6	1.70	0.73
22:BA:789:A:OP1	22:BA:790:U:C5	2.41	0.73
6:CG:137:ARG:CZ	6:CG:138:GLU:HG2	2.17	0.73
22:DA:873:C:H4'	34:DM:64:TRP:HE1	1.53	0.73
22:BA:714:U:H5'	22:BA:715:A:OP2	1.89	0.73
26:DE:6:LYS:HB2	26:DE:121:VAL:HG12	1.69	0.73
2:CC:13:ILE:HG22	2:CC:14:VAL:HG23	1.70	0.73
22:BA:588:U:H2'	22:BA:589:U:C6	2.22	0.73
26:BE:151:GLY:HA2	26:BE:192:ALA:HB2	1.70	0.73
21:AA:176:C:H2'	21:AA:177:G:N3	2.03	0.73
11:CL:19:ASN:H	11:CL:19:ASN:ND2	1.86	0.73
22:DA:335:C:HO2'	22:DA:336:C:H6	1.34	0.73
22:DA:921:C:C2'	22:DA:922:C:H5'	2.18	0.73
28:BG:10:VAL:HG23	28:BG:10:VAL:O	1.87	0.73
25:DD:114:LYS:HD2	25:DD:116:LYS:HZ2	1.52	0.73

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
28:DG:16:VAL:HG11	28:DG:44:HIS:CD2	2.23	0.73
27:BF:72:SER:HB2	27:BF:80:GLN:HB2	1.70	0.73
3:CD:116:LEU:HD21	3:CD:153:ARG:HD3	1.70	0.73
1:AB:71:THR:HG22	1:AB:72:LYS:H	1.53	0.73
25:DD:36:GLN:HG3	25:DD:38:LYS:HZ1	1.52	0.73
4:AE:153:ALA:HA	4:AE:156:ARG:HB2	1.68	0.73
22:DA:445:C:H2'	22:DA:446:G:C8	2.23	0.73
53:CA:1391:U:H2'	53:CA:1392:G:H8	1.54	0.73
22:DA:922:C:H1'	44:DW:22:VAL:HG21	1.69	0.73
53:CA:536:C:OP1	57:CA:1882:HOH:O	2.05	0.73
18:AS:3:SER:O	18:AS:5:LYS:HG3	1.89	0.73
4:AE:14:LEU:HB2	4:AE:36:THR:HG22	1.69	0.73
22:BA:2148:G:H2'	22:BA:2149:U:O4'	1.89	0.73
9:AJ:51:VAL:HB	13:AN:80:ARG:HB2	1.71	0.73
44:BW:23:LYS:HD2	44:BW:24:ARG:N	2.03	0.73
22:DA:1310:G:H2'	22:DA:1311:G:O4'	1.88	0.73
22:DA:1079:C:H41	22:DA:1088:A:C5'	2.01	0.73
13:AN:44:VAL:HG23	13:AN:45:LEU:H	1.54	0.73
22:DA:329:G:O6	42:DU:16:LYS:HB2	1.88	0.73
22:DA:675:A:OP1	26:DE:60:TRP:HZ2	1.71	0.73
22:BA:704:G:HO2'	22:BA:726:G:H22	1.36	0.73
6:CG:24:LYS:O	6:CG:28:ILE:HG12	1.88	0.73
25:DD:107:VAL:H	25:DD:206:ALA:H	1.36	0.73
22:BA:760:G:C2'	22:BA:761:A:H5'	2.18	0.73
1:AB:46:VAL:HB	1:AB:47:PRO:HD3	1.70	0.73
47:DZ:40:THR:H	47:DZ:43:ILE:HD11	1.53	0.73
30:DI:113:ALA:HB1	30:DI:124:MET:SD	2.29	0.73
26:BE:196:VAL:HG13	26:BE:200:LEU:HD23	1.68	0.73
28:DG:162:ARG:H	28:DG:162:ARG:HD2	1.53	0.73
44:BW:39:GLN:HG3	44:BW:42:THR:N	2.04	0.73
22:BA:869:G:O2'	34:BM:8:LYS:HD3	1.89	0.73
26:BE:161:ALA:HA	26:BE:164:LEU:HB2	1.70	0.73
26:BE:146:VAL:HG23	26:BE:167:VAL:CG2	2.18	0.73
6:CG:78:ARG:HA	6:CG:84:TYR:HB2	1.70	0.73
3:AD:34:GLU:O	3:AD:37:PRO:HD3	1.89	0.73
21:AA:1225:A:H2'	21:AA:1226:C:C5	2.23	0.73
22:BA:404:A:O2'	22:BA:405:U:OP2	2.06	0.73
27:BF:35:LEU:HB3	27:BF:153:ILE:CG2	2.12	0.73
28:BG:83:THR:HA	28:BG:84:LYS:HZ1	1.52	0.73
15:CP:74:LEU:O	15:CP:78:VAL:HG23	1.88	0.73
10:AK:86:LYS:HE3	21:AA:707:U:OP1	1.88	0.73
22:DA:1327:A:H2'	22:DA:1328:A:C8	2.24	0.73

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
53:CA:330:C:O2'	53:CA:331:G:H8	1.69	0.73
42:DU:95:PHE:H	42:DU:95:PHE:HD1	1.37	0.73
22:BA:915:C:H5''	22:BA:915:C:C6	2.21	0.73
33:DL:92:LEU:HD22	33:DL:124:GLY:HA3	1.69	0.73
27:BF:134:GLN:HG2	27:BF:135:ILE:N	2.03	0.73
22:DA:1676:A:H2	22:DA:1993:U:H5'	1.52	0.73
4:AE:14:LEU:O	4:AE:14:LEU:HD13	1.89	0.73
21:AA:1063:C:H2'	21:AA:1064:G:C8	2.23	0.73
2:CC:9:ILE:HD12	13:CN:97:LYS:HD3	1.71	0.73
44:BW:9:THR:OG1	44:BW:10:ARG:N	2.21	0.73
29:DH:93:SER:HB3	29:DH:121:VAL:HG21	1.70	0.73
45:BX:34:SER:HA	45:BX:49:ARG:HA	1.71	0.73
8:CI:51:LEU:HB2	8:CI:56:MET:SD	2.29	0.73
22:BA:527:C:H4'	22:BA:528:A:O5'	1.88	0.73
22:DA:320:A:H2'	26:DE:131:THR:OG1	1.89	0.73
22:BA:1993:U:H4'	25:BD:133:THR:CG2	2.18	0.73
22:DA:528:A:C2	22:DA:2042:A:H2'	2.23	0.73
14:AO:50:HIS:CE1	21:AA:667:G:H4'	2.24	0.73
22:BA:2353:G:H1'	44:BW:30:VAL:HG13	1.70	0.73
31:BJ:21:THR:CG2	31:BJ:22:GLY:N	2.45	0.73
20:CU:35:GLU:CG	20:CU:36:PHE:H	2.01	0.73
53:CA:1323:G:H2'	53:CA:1324:A:H8	1.52	0.73
27:BF:40:GLY:CA	27:BF:84:ILE:HD11	2.18	0.73
22:DA:95:A:H4'	46:DY:38:GLN:O	1.88	0.73
53:CA:1068:G:O2'	53:CA:1069:C:H5'	1.88	0.73
53:CA:513:C:O2'	53:CA:514:C:O4'	2.06	0.73
22:DA:1739:A:H2'	22:DA:1740:G:C8	2.23	0.73
9:AJ:14:ASP:HB3	9:AJ:17:LEU:HB3	1.69	0.73
22:DA:2387:U:H1'	44:DW:38:ARG:HH12	1.54	0.73
19:AT:79:THR:O	19:AT:82:ILE:HG13	1.88	0.73
22:DA:2311:A:H5'	22:DA:2312:U:C5	2.24	0.73
22:DA:1070:A:H5'	22:DA:1071:G:H5''	1.70	0.73
21:AA:914:A:H2'	21:AA:915:A:H8	1.53	0.73
9:AJ:42:LEU:HB3	9:AJ:43:PRO:HD2	1.70	0.73
22:BA:1558:C:H4'	22:BA:1559:U:O5'	1.88	0.73
22:BA:1090:A:O2'	22:BA:1091:G:C5'	2.37	0.73
7:CH:54:THR:HG23	7:CH:55:LYS:H	1.54	0.73
22:DA:1734:G:H2'	22:DA:1735:A:C8	2.22	0.73
22:BA:1813:G:N3	24:BC:49:THR:HG21	2.03	0.73
53:CA:1264:U:H2'	53:CA:1265:C:C6	2.24	0.73
51:D3:15:LYS:NZ	51:D3:19:GLY:HA2	2.04	0.73
31:BJ:117:ALA:HA	31:BJ:120:ARG:NH2	2.03	0.73

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:BA:1682:G:H2'	22:BA:1683:U:C6	2.24	0.73
1:AB:131:LYS:O	1:AB:135:MET:HB2	1.89	0.73
12:CM:102:LYS:HA	53:CA:1226:C:H41	1.54	0.73
22:BA:2199:A:H5''	22:BA:2199:A:C8	2.24	0.73
22:BA:2680:U:OP2	25:BD:114:LYS:HE2	1.89	0.72
21:AA:274:A:O2'	21:AA:275:G:H8	1.72	0.72
35:BN:70:THR:HB	35:BN:75:ILE:HD11	1.70	0.72
22:BA:1494:A:H2'	22:BA:1495:A:H8	1.54	0.72
22:BA:1714:U:H2'	22:BA:1714:U:O2	1.88	0.72
22:DA:2880:C:H1'	35:DN:93:GLY:H	1.54	0.72
28:BG:115:GLN:H	28:BG:115:GLN:CD	1.92	0.72
19:AT:82:ILE:O	19:AT:86:ALA:HB3	1.89	0.72
22:DA:668:A:H2'	22:DA:670:A:N6	2.01	0.72
53:CA:1182:G:C4'	53:CA:1183:U:H5'	2.18	0.72
8:CI:56:MET:HG3	8:CI:57:VAL:HG23	1.70	0.72
22:DA:2225:A:H5'	22:DA:2226:C:H5'	1.71	0.72
22:DA:2304:G:N2	22:DA:2312:U:H3	1.88	0.72
34:DM:19:GLY:H	34:DM:38:ARG:NH2	1.86	0.72
25:DD:141:ARG:HB3	25:DD:141:ARG:NH1	2.04	0.72
13:CN:40:ARG:NH1	18:CS:6:LYS:HB2	2.04	0.72
22:DA:2837:A:H2'	22:DA:2838:G:H8	1.54	0.72
30:BI:33:ASN:HD22	30:BI:64:ARG:NH2	1.85	0.72
53:CA:1218:C:H2'	53:CA:1219:A:C8	2.24	0.72
53:CA:251:G:H4'	53:CA:252:U:C5'	2.19	0.72
22:BA:1238:G:O2'	22:BA:1239:G:H5'	1.88	0.72
22:BA:794:A:H2'	22:BA:795:C:C6	2.23	0.72
37:BP:50:ARG:CD	37:BP:56:SER:HB3	2.14	0.72
44:BW:18:LYS:HA	44:BW:36:ILE:HG13	1.70	0.72
44:BW:30:VAL:HA	44:BW:60:ALA:HB3	1.71	0.72
10:CK:81:LEU:HD11	10:CK:104:PHE:CD2	2.24	0.72
21:AA:98:A:H2'	21:AA:99:C:C6	2.24	0.72
35:BN:96:ARG:NH2	35:BN:116:VAL:HG23	2.04	0.72
22:DA:1156:A:H8	22:DA:1156:A:OP1	1.72	0.72
45:DX:31:ASN:HD22	45:DX:31:ASN:H	1.37	0.72
22:BA:2791:G:H8	22:BA:2791:G:H5''	1.54	0.72
24:BC:244:VAL:HG12	24:BC:250:GLN:HA	1.70	0.72
37:BP:61:ARG:HG2	37:BP:70:GLU:HG2	1.71	0.72
29:BH:117:LEU:HD11	29:BH:130:VAL:HG11	1.72	0.72
53:CA:205:A:C5	53:CA:206:C:N4	2.58	0.72
22:BA:1309:G:OP1	50:B2:9:VAL:HG12	1.89	0.72
33:DL:23:ILE:HG13	39:DR:82:HIS:CE1	2.23	0.72
6:AG:3:ARG:HG3	6:AG:4:ARG:H	1.53	0.72

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:BA:1348:C:H2'	22:BA:1349:C:H5'	1.71	0.72
38:BQ:91:ARG:NH1	39:BR:10:LYS:HB3	2.04	0.72
11:AL:33:CYS:H	11:AL:54:VAL:HG13	1.54	0.72
22:BA:528:A:C2	22:BA:2043:C:H4'	2.24	0.72
1:CB:114:LYS:CA	1:CB:117:GLU:HG2	2.19	0.72
21:AA:1279:G:H1'	21:AA:1282:C:N4	2.04	0.72
20:AU:16:ARG:HH11	20:AU:19:LYS:HG3	1.55	0.72
22:DA:374:A:H2'	22:DA:375:G:C8	2.25	0.72
5:CF:4:TYR:O	5:CF:63:ASN:HA	1.88	0.72
22:DA:665:U:H2'	22:DA:666:A:H8	1.54	0.72
22:DA:533:G:H2'	22:DA:534:U:C6	2.24	0.72
22:BA:2327:A:H2'	22:BA:2328:A:C8	2.23	0.72
14:AO:57:ARG:HB3	14:AO:57:ARG:HH11	1.53	0.72
22:DA:1387:A:HO2'	22:DA:1388:G:H8	0.75	0.72
6:CG:142:ARG:O	6:CG:146:ALA:HB3	1.88	0.72
41:BT:48:GLN:HE21	41:BT:48:GLN:HA	1.55	0.72
41:BT:29:THR:HA	41:BT:86:THR:HA	1.71	0.72
22:DA:1965:C:H3'	22:DA:1966:A:C5'	2.19	0.72
21:AA:451:A:H4'	21:AA:452:A:O5'	1.90	0.72
21:AA:1239:A:H4'	21:AA:1240:U:C5'	2.20	0.72
53:CA:337:G:H2'	53:CA:338:A:C8	2.24	0.72
22:DA:27:G:H1'	22:DA:513:A:N6	2.04	0.72
22:DA:1268:A:H2'	22:DA:1269:A:C8	2.25	0.72
53:CA:110:C:H2'	53:CA:111:G:C8	2.25	0.72
21:AA:519:C:H2'	21:AA:520:A:C8	2.25	0.72
53:CA:1383:C:O2'	53:CA:1384:C:H5'	1.89	0.72
35:BN:33:ILE:HD11	35:BN:118:ARG:NH2	2.04	0.72
26:DE:108:ILE:HD11	26:DE:181:ILE:HB	1.71	0.72
1:CB:185:ILE:HG22	1:CB:199:ILE:HG13	1.70	0.72
1:CB:44:LYS:O	1:CB:48:MET:HG3	1.89	0.72
12:CM:102:LYS:HA	53:CA:1226:C:C5	2.24	0.72
21:AA:47:C:H4'	21:AA:48:C:O5'	1.88	0.72
7:CH:39:LEU:HB2	7:CH:45:ILE:HD11	1.71	0.72
22:BA:2021:C:P	48:B0:8:THR:HG21	2.29	0.72
22:BA:2032:G:H4'	57:BA:3484:HOH:O	1.89	0.72
2:CC:76:ILE:HD11	2:CC:102:ILE:HD11	1.72	0.72
22:DA:310:A:HO2'	22:DA:311:A:H8	1.37	0.72
9:AJ:39:PRO:HD2	21:AA:1123:U:H4'	1.71	0.72
1:AB:187:ASP:HB2	1:AB:203:ASP:HB3	1.72	0.72
35:BN:31:HIS:O	35:BN:33:ILE:HD12	1.88	0.72
22:DA:17:G:H4'	38:DQ:24:TYR:CE1	2.23	0.72
47:DZ:16:LEU:CD2	47:DZ:16:LEU:H	2.03	0.72

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:95:A:H1'	46:DY:40:SER:HB2	1.70	0.72
22:DA:1799:G:H8	24:DC:179:GLU:OE1	1.72	0.72
1:AB:71:THR:O	1:AB:72:LYS:HG2	1.89	0.72
15:CP:16:PHE:CE2	15:CP:40:ASN:HB2	2.25	0.72
22:DA:1754:A:OP1	37:DP:93:LYS:HE3	1.90	0.72
4:CE:55:VAL:O	4:CE:59:ILE:HG22	1.89	0.72
31:BJ:44:TYR:C	31:BJ:44:TYR:HD1	1.93	0.72
22:DA:249:C:H4'	22:DA:250:G:O5'	1.90	0.72
21:AA:1336:C:O2'	21:AA:1337:G:OP2	2.07	0.72
4:AE:155:LYS:HD2	4:AE:156:ARG:N	2.05	0.72
22:DA:806:C:H2'	22:DA:807:U:H6	1.55	0.72
9:AJ:57:VAL:HG22	9:AJ:58:ASN:N	2.05	0.72
53:CA:1129:C:H1'	53:CA:1146:A:H61	1.55	0.72
25:DD:124:ARG:HD3	25:DD:125:TRP:NE1	2.04	0.72
43:BV:10:LYS:H	43:BV:10:LYS:CD	1.97	0.72
29:BH:8:LYS:O	29:BH:9:VAL:HB	1.89	0.72
17:AR:66:LEU:O	17:AR:67:LEU:HD23	1.90	0.72
21:AA:484:G:H4'	21:AA:485:U:O5'	1.89	0.72
22:BA:1469:A:H2'	22:BA:1470:A:C8	2.25	0.72
6:CG:76:SER:HA	6:CG:85:GLN:HA	1.71	0.72
22:DA:483:A:H2'	22:DA:484:C:H6	1.55	0.72
29:DH:1:MET:HB3	29:DH:21:VAL:O	1.90	0.72
53:CA:753:A:H4'	53:CA:754:C:O5'	1.89	0.72
10:CK:55:ARG:H	10:CK:55:ARG:HD2	1.54	0.72
22:BA:2820:A:H3'	22:BA:2820:A:H8	1.53	0.72
29:DH:97:ARG:O	29:DH:98:ASP:HB2	1.88	0.72
47:BZ:29:ARG:HH21	47:BZ:29:ARG:CG	2.02	0.72
1:CB:209:VAL:O	1:CB:213:LEU:HB2	1.90	0.72
21:AA:243:A:H4'	21:AA:244:U:C5'	2.20	0.72
8:AI:119:LYS:HG3	8:AI:122:ARG:HB3	1.72	0.72
22:DA:2466:C:OP1	52:D4:4:ARG:HB3	1.89	0.72
22:DA:1723:G:H2'	22:DA:1724:G:H8	1.55	0.72
53:CA:51:A:H4'	53:CA:52:C:H5'	1.71	0.72
36:DO:11:ALA:HB2	36:DO:96:GLY:N	2.04	0.72
22:DA:1783:A:H5'	22:DA:2608:G:H4'	1.72	0.72
33:BL:100:ILE:HD12	33:BL:101:ILE:HD13	1.70	0.72
1:AB:89:PHE:HB3	1:AB:149:GLY:CA	2.19	0.72
30:DI:51:GLY:O	30:DI:52:LEU:HB2	1.90	0.72
1:CB:163:ILE:HG23	1:CB:185:ILE:HD11	1.70	0.72
22:DA:1739:A:H2'	22:DA:1740:G:H8	1.54	0.72
28:DG:126:THR:HG22	28:DG:127:GLN:H	1.54	0.72
25:DD:34:VAL:HG12	25:DD:48:ILE:HD11	1.72	0.72

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
44:BW:40:ARG:HD3	44:BW:45:HIS:CE1	2.25	0.71
28:BG:84:LYS:CG	28:BG:132:LEU:H	2.00	0.71
10:AK:126:ARG:CB	20:AU:33:ARG:HH12	2.03	0.71
52:D4:7:VAL:HG13	52:D4:8:LYS:H	1.55	0.71
7:CH:52:GLY:HA3	7:CH:56:PRO:HA	1.71	0.71
21:AA:390:U:H2'	21:AA:391:G:C8	2.25	0.71
51:B3:26:ALA:O	51:B3:27:ASN:HB2	1.89	0.71
29:DH:109:GLU:OE2	29:DH:109:GLU:HA	1.90	0.71
22:DA:2618:G:H21	25:DD:155:VAL:HG21	1.55	0.71
22:DA:1399:C:O2'	22:DA:1400:U:H5'	1.88	0.71
22:DA:616:A:C2'	22:DA:617:G:H8	2.02	0.71
29:DH:24:GLY:O	29:DH:28:ASN:HB2	1.89	0.71
22:DA:587:C:H1'	22:DA:671:C:H5'	1.72	0.71
21:AA:1361:G:H2'	21:AA:1362:A:H5'	1.72	0.71
22:DA:727:A:H2'	22:DA:728:G:C8	2.25	0.71
29:BH:68:ARG:NH2	29:BH:72:ILE:HG21	2.05	0.71
22:DA:2807:U:H3'	22:DA:2808:G:H5''	1.71	0.71
16:CQ:3:LYS:NZ	16:CQ:6:THR:HG21	2.05	0.71
10:CK:23:HIS:HB3	10:CK:30:ILE:HB	1.72	0.71
53:CA:575:G:H4'	53:CA:576:C:O5'	1.91	0.71
19:CT:2:ASN:N	19:CT:7:LYS:HZ3	1.88	0.71
6:AG:39:GLU:HB2	6:AG:43:TYR:HE2	1.54	0.71
1:AB:76:SER:HB2	1:AB:92:ASN:HB2	1.72	0.71
29:BH:31:VAL:CB	29:BH:32:PRO:HD2	2.15	0.71
22:DA:2517:C:O2'	22:DA:2518:A:H3'	1.90	0.71
22:DA:313:G:H2'	22:DA:314:C:C6	2.25	0.71
4:CE:98:ALA:HB2	4:CE:123:LEU:HG	1.73	0.71
22:DA:1364:G:H1'	22:DA:1368:G:N2	2.06	0.71
22:DA:1568:G:H21	24:DC:57:HIS:CE1	2.09	0.71
19:CT:23:ARG:HB3	19:CT:60:GLN:NE2	2.04	0.71
6:CG:101:ARG:NH2	53:CA:940:C:H5'	2.05	0.71
22:BA:289:G:H2'	22:BA:290:U:O4'	1.90	0.71
28:BG:140:ILE:HD12	28:BG:141:GLY:N	2.05	0.71
22:DA:720:U:H2'	22:DA:721:A:C8	2.25	0.71
22:BA:1585:C:H2'	22:BA:1586:A:O4'	1.90	0.71
22:BA:2353:G:H1'	44:BW:30:VAL:CG1	2.21	0.71
44:BW:31:LEU:N	44:BW:31:LEU:HD23	2.04	0.71
44:BW:67:LYS:O	44:BW:68:PHE:HB2	1.90	0.71
32:BK:111:LYS:HE2	32:BK:111:LYS:N	2.01	0.71
35:DN:12:ARG:HG3	35:DN:13:ASN:H	1.53	0.71
12:CM:13:HIS:HB3	12:CM:16:ILE:HB	1.71	0.71
11:CL:109:ARG:HB2	11:CL:118:VAL:HG21	1.72	0.71

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
30:BI:33:ASN:HD22	30:BI:64:ARG:HH22	1.36	0.71
25:DD:125:TRP:CD1	25:DD:160:LYS:HB3	2.25	0.71
28:DG:106:LEU:HB2	28:DG:108:PHE:HE1	1.54	0.71
26:BE:76:PRO:HA	26:BE:82:GLY:HA3	1.72	0.71
22:BA:2204:G:O5'	24:BC:149:LYS:HE3	1.90	0.71
21:AA:143:A:H5'	21:AA:144:G:H5'	1.71	0.71
22:DA:1695:G:H8	24:DC:7:PRO:O	1.74	0.71
22:DA:1439:A:N1	22:DA:1552:A:C4	2.58	0.71
21:AA:1021:A:C2'	21:AA:1022:A:H5''	2.19	0.71
22:DA:2023:C:O2'	22:DA:2024:G:H8	1.73	0.71
12:CM:12:LYS:HB3	12:CM:17:ALA:HB2	1.72	0.71
22:DA:1429:G:HO2'	22:DA:1430:G:H8	0.76	0.71
22:DA:241:A:H4'	22:DA:242:G:OP1	1.90	0.71
22:DA:374:A:H2'	22:DA:375:G:H8	1.54	0.71
21:AA:429:U:H1'	21:AA:430:A:H5''	1.72	0.71
21:AA:734:G:H2'	21:AA:735:C:C6	2.25	0.71
57:BA:3241:HOH:O	26:BE:81:GLY:HA2	1.90	0.71
24:BC:140:VAL:CG1	24:BC:189:ALA:HB1	2.21	0.71
11:CL:91:GLY:O	11:CL:93:ARG:HG3	1.91	0.71
27:BF:34:THR:HG23	27:BF:89:THR:HG23	1.72	0.71
29:BH:96:THR:O	29:BH:97:ARG:HG3	1.90	0.71
40:BS:72:THR:HG21	40:BS:108:SER:OG	1.91	0.71
22:DA:822:G:O6	22:DA:943:A:H2	1.73	0.71
22:DA:196:A:H61	22:DA:831:G:H21	1.38	0.71
29:BH:18:GLN:HE21	29:BH:18:GLN:HA	1.56	0.71
33:BL:19:LEU:HB2	33:BL:27:LEU:HD22	1.71	0.71
10:AK:124:LYS:NZ	20:AU:33:ARG:HH21	1.88	0.71
42:DU:82:VAL:H	42:DU:96:LYS:HZ2	1.39	0.71
22:DA:1491:G:O2'	22:DA:1492:G:H5'	1.90	0.71
22:DA:142:A:O2'	22:DA:143:C:H5'	1.91	0.71
11:CL:5:GLN:HG3	11:CL:9:LYS:NZ	2.05	0.71
21:AA:569:C:H5''	21:AA:570:G:OP1	1.90	0.71
1:AB:101:THR:HG22	1:AB:174:GLU:OE1	1.90	0.71
22:DA:1742:U:H2'	22:DA:1743:G:C8	2.26	0.71
4:AE:106:ALA:HB2	4:AE:124:ALA:HB3	1.73	0.71
43:BV:72:VAL:HG12	43:BV:93:ARG:HA	1.73	0.71
22:DA:104:A:H2'	22:DA:105:C:O4'	1.89	0.71
25:BD:99:GLU:CG	25:BD:100:LEU:H	1.97	0.71
1:AB:163:ILE:HG23	1:AB:164:ASP:N	2.03	0.71
22:BA:2134:A:HO2'	22:BA:2135:A:H8	1.39	0.71
22:DA:83:A:N6	22:DA:101:A:H5'	2.04	0.71
21:AA:1125:U:O2'	21:AA:1126:U:O5'	2.08	0.71

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
34:BM:43:ALA:HA	34:BM:46:ILE:HG13	1.73	0.71
22:DA:373:U:O2'	22:DA:374:A:H8	1.73	0.71
22:BA:729:G:N3	22:BA:729:G:H2'	2.06	0.71
42:DU:83:GLY:O	42:DU:93:ARG:HA	1.90	0.71
1:CB:130:LYS:HA	1:CB:133:ALA:HB3	1.70	0.71
29:DH:84:ALA:H	29:DH:148:ALA:HA	1.56	0.71
53:CA:183:C:O2'	53:CA:184:G:H5'	1.90	0.71
22:DA:2214:C:H2'	22:DA:2215:C:C6	2.25	0.71
53:CA:82:G:C2'	53:CA:83:C:H4'	2.21	0.71
53:CA:1323:G:H2'	53:CA:1324:A:C8	2.26	0.71
3:AD:99:ASN:O	3:AD:103:ARG:HB2	1.91	0.71
21:AA:86:G:C2	21:AA:87:C:N4	2.59	0.71
22:BA:2328:A:H2'	22:BA:2329:U:C6	2.25	0.71
11:AL:24:GLU:HB2	11:AL:26:CYS:SG	2.31	0.71
1:CB:10:LYS:HA	1:CB:10:LYS:HE3	1.71	0.71
8:AI:129:ARG:HH22	21:AA:967:C:H1'	1.55	0.71
25:BD:101:PHE:HE2	25:BD:203:VAL:HG22	1.55	0.71
22:DA:2135:A:C3'	22:DA:2136:G:H5''	2.16	0.71
44:BW:23:LYS:HD2	44:BW:24:ARG:H	1.53	0.71
22:BA:1070:A:C2	30:BI:9:LYS:HG2	2.26	0.71
22:BA:1083:U:O2	22:BA:1086:A:N6	2.23	0.71
42:DU:3:LYS:HG2	42:DU:84:PHE:CZ	2.26	0.71
24:BC:12:ARG:HH11	24:BC:12:ARG:HG3	1.56	0.71
35:DN:5:LYS:HG2	35:DN:6:SER:H	1.56	0.71
39:BR:15:SER:O	39:BR:18:GLN:HB3	1.91	0.71
22:DA:874:G:H5'	22:DA:875:G:OP2	1.90	0.71
53:CA:677:U:H3	53:CA:713:G:H22	1.39	0.71
53:CA:274:A:O2'	53:CA:275:G:H8	1.73	0.71
53:CA:1285:A:H4'	53:CA:1286:U:OP1	1.90	0.71
21:AA:461:A:N3	21:AA:461:A:H3'	2.05	0.71
54:DB:16:G:O2'	54:DB:17:C:H5'	1.90	0.71
44:BW:19:ARG:HA	44:BW:34:SER:HA	1.72	0.71
22:DA:2305:U:H4'	27:DF:132:ARG:HG2	1.73	0.71
32:DK:87:LEU:HD12	32:DK:92:GLU:HA	1.73	0.71
28:DG:90:GLY:HA2	28:DG:159:LYS:HE3	1.72	0.71
22:DA:1476:U:O2'	22:DA:1477:A:H5'	1.91	0.71
22:BA:780:G:H21	22:BA:783:A:H62	1.39	0.71
21:AA:111:G:O6	21:AA:330:C:N4	2.24	0.71
12:CM:64:VAL:HG12	12:CM:65:GLU:HG3	1.73	0.71
53:CA:1102:A:H2'	53:CA:1103:C:H6	1.56	0.71
29:BH:67:ALA:HA	29:BH:138:VAL:HB	1.73	0.71
22:DA:876:C:H3'	22:DA:877:A:H8	1.55	0.71

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:AI:9:GLY:HA2	8:AI:80:HIS:HD2	1.55	0.71
27:DF:104:THR:HG22	27:DF:105:ILE:HG13	1.73	0.71
53:CA:1038:C:H2'	53:CA:1039:G:C8	2.26	0.71
39:DR:89:HIS:NE2	39:DR:91:GLN:HB2	2.05	0.71
38:BQ:63:ARG:HD2	38:BQ:64:ILE:N	2.06	0.70
25:BD:90:PHE:HB2	25:BD:92:VAL:HG23	1.72	0.70
4:AE:37:VAL:HG11	4:AE:113:VAL:HA	1.73	0.70
22:BA:272:A:O2'	22:BA:273:G:H8	1.69	0.70
22:DA:142:A:H2'	22:DA:143:C:C5	2.26	0.70
22:DA:753:A:O2'	22:DA:754:U:H5'	1.91	0.70
5:CF:18:VAL:O	5:CF:22:ILE:HG12	1.90	0.70
14:AO:18:ALA:O	14:AO:19:ASN:HB2	1.90	0.70
15:CP:1:MET:HB2	53:CA:135:C:O2	1.90	0.70
22:BA:947:A:HO2'	22:BA:984:A:H2	1.35	0.70
33:BL:94:THR:HG22	33:BL:95:LEU:H	1.57	0.70
31:DJ:44:TYR:O	31:DJ:45:THR:HB	1.90	0.70
5:CF:3:HIS:ND1	5:CF:92:THR:HG23	2.05	0.70
1:CB:110:ILE:HD13	1:CB:151:LYS:HA	1.71	0.70
45:DX:30:PRO:HG2	45:DX:32:LEU:HD21	1.73	0.70
21:AA:1324:A:H2'	21:AA:1325:C:C6	2.25	0.70
2:CC:110:LEU:HD21	2:CC:203:LYS:HD2	1.73	0.70
22:DA:84:A:H4'	22:DA:85:G:O5'	1.89	0.70
11:CL:82:ARG:HG2	11:CL:82:ARG:HH11	1.56	0.70
9:AJ:35:GLN:HG2	9:AJ:77:VAL:HB	1.73	0.70
46:BY:32:ALA:HB2	46:BY:37:LEU:HD12	1.74	0.70
42:DU:45:GLN:HE21	42:DU:45:GLN:HA	1.55	0.70
6:CG:118:ARG:HH12	53:CA:1239:A:H5''	1.55	0.70
12:CM:13:HIS:HB2	12:CM:43:LYS:HE2	1.72	0.70
21:AA:1157:A:H1'	21:AA:1181:G:C2	2.26	0.70
31:DJ:75:TYR:CD1	31:DJ:84:ILE:HD11	2.26	0.70
53:CA:560:A:H4'	53:CA:561:U:H5''	1.73	0.70
1:AB:212:TYR:O	1:AB:216:VAL:HG23	1.90	0.70
6:AG:121:ASN:O	6:AG:125:ASP:HB2	1.92	0.70
25:DD:53:GLY:HA3	25:DD:77:ARG:HG3	1.73	0.70
21:AA:662:U:H2'	21:AA:663:A:C8	2.25	0.70
22:BA:191:A:H2'	22:BA:192:C:C6	2.26	0.70
22:BA:2615:U:C2	48:B0:3:GLN:HA	2.27	0.70
27:DF:12:VAL:HA	27:DF:15:LEU:HB2	1.73	0.70
3:CD:109:THR:HG22	3:CD:111:ALA:N	2.03	0.70
22:DA:1024:G:C3'	22:DA:1025:G:H5''	2.11	0.70
21:AA:109:A:N6	21:AA:324:G:H1'	2.07	0.70
22:DA:1993:U:H2'	22:DA:1994:C:H6	1.56	0.70

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:1490:A:C8	24:DC:73:ILE:HD12	2.26	0.70
22:BA:947:A:O2'	22:BA:984:A:H2	1.73	0.70
51:D3:22:LYS:H	51:D3:48:MET:HB3	1.56	0.70
12:AM:10:ASP:CG	12:AM:11:HIS:N	2.45	0.70
22:DA:1751:U:H2'	22:DA:1752:C:C6	2.27	0.70
33:BL:29:LYS:HG2	33:BL:30:THR:HG23	1.74	0.70
24:BC:123:ILE:HG12	24:BC:123:ILE:O	1.89	0.70
14:CO:47:LYS:HD2	14:CO:47:LYS:H	1.57	0.70
22:DA:2420:C:OP1	51:D3:33:THR:HB	1.91	0.70
37:BP:50:ARG:HB3	37:BP:57:ALA:N	2.00	0.70
22:DA:1080:A:H2'	22:DA:1081:U:C6	2.26	0.70
53:CA:252:U:H2'	53:CA:253:A:C8	2.26	0.70
12:CM:78:ARG:HH21	12:CM:79:LEU:HD23	1.55	0.70
53:CA:802:A:H2'	53:CA:803:G:H5'	1.73	0.70
47:DZ:30:ARG:NH2	47:DZ:33:HIS:HB2	2.07	0.70
2:AC:56:ILE:HG12	2:AC:65:VAL:HG22	1.71	0.70
3:AD:131:ILE:HG21	21:AA:620:C:C2	2.27	0.70
3:CD:32:LYS:HB3	3:CD:35:GLN:OE1	1.91	0.70
22:DA:740:C:O2'	22:DA:741:U:H5'	1.92	0.70
53:CA:90:C:O2'	53:CA:91:U:H5'	1.91	0.70
22:DA:118:A:OP2	22:DA:119:A:H3'	1.92	0.70
21:AA:1319:A:H2'	21:AA:1323:G:N7	2.07	0.70
9:AJ:14:ASP:HB2	9:AJ:17:LEU:HD22	1.74	0.70
24:BC:141:HIS:HD2	24:BC:192:GLY:O	1.74	0.70
22:BA:2334:U:H4'	22:BA:2335:A:OP2	1.92	0.70
11:CL:79:ILE:HD12	11:CL:96:THR:HG21	1.72	0.70
33:BL:95:LEU:HD13	33:BL:100:ILE:HD11	1.72	0.70
32:DK:71:ARG:HB3	32:DK:72:PRO:CD	2.20	0.70
41:BT:38:ALA:HB1	41:BT:43:ILE:HG22	1.72	0.70
22:DA:1062:G:C8	22:DA:1088:A:C8	2.80	0.70
22:DA:1056:G:H1'	22:DA:1103:A:N6	2.07	0.70
1:AB:86:CYS:HB2	1:AB:88:GLN:HG3	1.73	0.70
22:DA:464:U:H1'	22:DA:686:U:H5	1.56	0.70
22:BA:491:G:H2'	22:BA:492:A:H8	1.56	0.70
22:DA:1565:C:H3'	24:DC:17:LYS:HE2	1.73	0.70
33:DL:17:LYS:HZ3	33:DL:19:LEU:HD22	1.57	0.70
22:BA:2868:A:H2'	22:BA:2869:G:C8	2.27	0.70
40:DS:14:ALA:O	40:DS:18:ARG:HB2	1.91	0.70
29:DH:41:LYS:HA	29:DH:44:ILE:HG12	1.73	0.70
22:DA:2298:A:H2'	22:DA:2299:U:C6	2.26	0.70
31:BJ:99:ARG:O	31:BJ:103:ILE:HG23	1.91	0.70
21:AA:299:G:H2'	21:AA:300:A:C8	2.26	0.70

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:AD:195:ASN:O	3:AD:196:GLU:HG3	1.92	0.70
24:DC:181:ARG:HG3	24:DC:265:PHE:O	1.92	0.70
22:BA:1416:G:HO2'	22:BA:1417:C:H6	1.37	0.70
22:DA:45:G:H5'	22:DA:46:G:OP1	1.92	0.70
25:DD:10:GLY:O	25:DD:11:MET:HB2	1.92	0.70
22:BA:137:U:H5''	22:BA:140:C:C5	2.27	0.70
22:BA:1045:C:C5'	22:BA:1046:A:H5'	2.22	0.70
5:AF:92:THR:O	5:AF:93:LYS:HG2	1.91	0.70
5:AF:71:ILE:HD11	5:AF:89:VAL:HG21	1.72	0.70
22:DA:477:A:H2'	22:DA:478:A:C8	2.27	0.70
4:CE:103:GLY:HA3	4:CE:121:ASN:HA	1.74	0.70
22:BA:1871:A:O2'	22:BA:1872:A:C8	2.44	0.70
22:DA:1611:C:O2'	22:DA:1612:C:H6	1.73	0.70
25:DD:107:VAL:HG13	25:DD:109:VAL:HG23	1.74	0.70
39:BR:3:ALA:HB3	39:BR:59:ILE:HD11	1.72	0.70
22:DA:339:U:H2'	22:DA:340:A:C8	2.27	0.70
46:DY:2:LYS:HD2	46:DY:4:LYS:HE3	1.72	0.70
32:DK:2:ILE:HG22	32:DK:3:GLN:N	2.04	0.70
11:AL:3:VAL:O	11:AL:7:VAL:HG23	1.90	0.70
44:DW:19:ARG:HA	44:DW:34:SER:HA	1.74	0.70
22:BA:1060:U:O4'	22:BA:1062:G:H5''	1.91	0.70
34:DM:42:THR:HG22	34:DM:44:ARG:N	2.06	0.70
8:AI:28:VAL:HB	8:AI:63:TYR:CD2	2.26	0.70
27:DF:49:LEU:HA	27:DF:52:ALA:HB3	1.71	0.70
1:CB:184:ALA:O	1:CB:199:ILE:HG12	1.91	0.70
3:AD:33:ILE:O	3:AD:34:GLU:HB3	1.90	0.70
22:DA:1817:G:O2'	22:DA:1818:U:H5'	1.90	0.70
28:BG:30:GLY:HA3	28:BG:78:VAL:HG12	1.74	0.70
13:CN:87:ALA:HB2	13:CN:92:ILE:HD12	1.73	0.70
11:CL:80:LEU:HB3	11:CL:97:VAL:HG22	1.74	0.70
15:AP:73:ALA:O	15:AP:77:GLU:HB2	1.92	0.70
9:CJ:26:VAL:O	9:CJ:30:LYS:HB3	1.91	0.70
8:CI:11:ARG:HD3	8:CI:106:ASP:OD1	1.92	0.70
37:BP:85:VAL:HG13	37:BP:86:LYS:N	2.06	0.70
24:DC:106:PRO:HB3	24:DC:141:HIS:CE1	2.27	0.70
1:AB:133:ALA:O	1:AB:137:THR:HG23	1.91	0.70
22:DA:1324:G:O2'	22:DA:1616:A:C6	2.43	0.70
28:DG:103:ASN:HD22	28:DG:111:PRO:HB2	1.57	0.70
38:BQ:97:ILE:HD11	38:BQ:105:PHE:HA	1.73	0.70
24:BC:257:ARG:HG3	24:BC:269:ARG:HH12	1.56	0.70
22:DA:1709:U:H2'	22:DA:1710:G:C8	2.27	0.70
21:AA:731:G:OP1	21:AA:766:A:H1'	1.92	0.70

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AB:146:SER:O	1:AB:147:LEU:HD23	1.91	0.70
36:BO:40:ILE:HG12	36:BO:47:VAL:HG12	1.72	0.70
22:BA:996:A:H4'	38:BQ:91:ARG:HG2	1.74	0.69
22:DA:1662:U:C2'	22:DA:1663:G:H5''	2.21	0.69
53:CA:1151:A:H2'	53:CA:1152:A:H8	1.57	0.69
41:DT:87:LEU:HD23	41:DT:88:LYS:N	2.07	0.69
31:BJ:110:PRO:HB2	31:BJ:111:LYS:HG3	1.74	0.69
29:DH:68:ARG:CD	29:DH:71:LYS:HD3	2.21	0.69
22:DA:436:C:O2'	22:DA:437:U:H5'	1.92	0.69
7:CH:10:LEU:HD22	7:CH:74:ILE:HD11	1.73	0.69
22:BA:1996:C:H4'	22:BA:1997:C:OP1	1.92	0.69
16:CQ:18:LYS:HD3	16:CQ:48:GLU:OE2	1.92	0.69
20:AU:39:LYS:H	20:AU:40:PRO:HD2	1.57	0.69
24:BC:108:GLY:O	24:BC:109:LEU:HD22	1.92	0.69
53:CA:960:U:H4'	53:CA:961:U:C5'	2.22	0.69
35:DN:98:LEU:HD21	48:D0:53:VAL:HG11	1.74	0.69
22:BA:1654:A:H1'	25:BD:118:PHE:CD1	2.27	0.69
18:AS:51:HIS:CD2	18:AS:53:GLY:H	2.09	0.69
22:BA:2321:U:H6	22:BA:2321:U:H5''	1.56	0.69
11:CL:34:THR:HG22	11:CL:35:ARG:HG2	1.74	0.69
22:BA:1152:C:O2'	22:BA:1153:C:H5'	1.92	0.69
22:DA:2389:G:C5'	22:DA:2390:U:H5'	2.21	0.69
44:BW:23:LYS:CE	44:BW:24:ARG:HG3	2.22	0.69
44:BW:18:LYS:HA	44:BW:36:ILE:CG1	2.21	0.69
22:DA:2210:U:H4'	22:DA:2211:A:O5'	1.91	0.69
22:DA:2216:G:O2'	22:DA:2217:G:H8	1.74	0.69
24:BC:109:LEU:HD23	24:BC:110:LYS:H	1.56	0.69
3:CD:176:LYS:HG3	3:CD:178:GLU:HB2	1.73	0.69
46:BY:5:GLU:O	46:BY:8:GLU:HB2	1.92	0.69
22:DA:2261:C:C2	22:DA:2280:G:N2	2.61	0.69
22:DA:2636:C:H2'	22:DA:2637:U:C6	2.27	0.69
21:AA:1324:A:H2'	21:AA:1325:C:H6	1.55	0.69
30:BI:74:PRO:O	30:BI:77:VAL:HG22	1.93	0.69
11:AL:23:LEU:HG	11:AL:24:GLU:H	1.58	0.69
22:DA:526:A:N6	22:DA:2626:C:H4'	2.07	0.69
22:DA:1264:A:H5'	48:D0:7:PRO:HG2	1.74	0.69
22:DA:810:U:O4	33:DL:30:THR:HG22	1.92	0.69
41:BT:9:LYS:HG3	41:BT:9:LYS:O	1.92	0.69
24:DC:224:MET:SD	24:DC:229:HIS:HB2	2.33	0.69
18:CS:54:ARG:HG2	18:CS:55:GLN:H	1.56	0.69
22:BA:163:C:OP1	22:BA:163:C:H6	1.73	0.69
54:DB:67:G:O2'	54:DB:68:C:H6	1.75	0.69

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
30:BI:89:SER:HB3	30:BI:92:PRO:HG3	1.72	0.69
52:B4:36:ARG:HG2	52:B4:37:GLN:N	2.02	0.69
11:AL:28:GLN:HB2	11:AL:81:ILE:O	1.93	0.69
22:DA:2060:A:H62	26:DE:69:ARG:NH1	1.89	0.69
22:DA:127:A:N7	50:D2:46:LYS:HE3	2.08	0.69
24:DC:122:ALA:HB3	24:DC:127:ASN:HD22	1.56	0.69
27:DF:42:ALA:HB2	27:DF:49:LEU:HD21	1.74	0.69
21:AA:794:A:H2'	21:AA:795:C:C6	2.27	0.69
1:CB:133:ALA:HA	1:CB:137:THR:HG21	1.74	0.69
11:AL:72:ASN:ND2	11:AL:73:LEU:H	1.90	0.69
32:DK:64:ARG:HD2	32:DK:102:PRO:O	1.92	0.69
22:BA:1076:C:H2'	22:BA:1077:A:H8	1.57	0.69
33:BL:76:GLU:C	33:BL:77:ILE:HD12	2.12	0.69
22:DA:2135:A:H3'	22:DA:2136:G:C5'	2.18	0.69
31:BJ:81:ILE:CG2	31:BJ:82:GLY:H	1.94	0.69
30:BI:98:GLY:HA3	30:BI:137:LEU:HD23	1.75	0.69
3:CD:61:ARG:NH2	3:CD:67:LEU:HA	2.03	0.69
36:BO:31:THR:HG22	36:BO:34:HIS:N	2.02	0.69
53:CA:1254:A:H2'	53:CA:1255:G:C8	2.28	0.69
9:CJ:11:LYS:HB3	9:CJ:71:LEU:HD13	1.74	0.69
38:BQ:4:LYS:HG3	38:BQ:5:ARG:N	2.05	0.69
53:CA:960:U:O2'	53:CA:1223:C:H4'	1.92	0.69
52:B4:10:LEU:HD12	52:B4:33:HIS:CD2	2.28	0.69
53:CA:1129:C:O2'	53:CA:1130:A:C8	2.45	0.69
22:DA:15:G:OP1	48:D0:20:ALA:HB2	1.92	0.69
53:CA:500:G:O2'	53:CA:501:C:H5'	1.92	0.69
25:DD:11:MET:HE1	25:DD:192:ALA:HA	1.73	0.69
6:AG:1:PRO:HB2	21:AA:1379:G:O6	1.93	0.69
2:AC:128:MET:HB3	2:AC:131:ARG:HG3	1.73	0.69
24:DC:16:VAL:H	24:DC:203:VAL:HG12	1.57	0.69
19:CT:30:PHE:HE2	19:CT:52:GLU:HG2	1.56	0.69
22:BA:1695:G:C8	24:BC:7:PRO:HG2	2.27	0.69
39:BR:51:VAL:HB	39:BR:52:PRO:HD3	1.75	0.69
54:DB:65:U:H3'	54:DB:108:A:N6	2.07	0.69
16:AQ:22:VAL:HG21	16:AQ:60:ILE:HD11	1.74	0.69
53:CA:256:U:H2'	53:CA:257:G:O4'	1.93	0.69
9:CJ:44:THR:HG22	9:CJ:45:ARG:H	1.58	0.69
22:DA:1809:A:C2	22:DA:1810:A:C4	2.80	0.69
2:AC:155:ARG:NH2	21:AA:1055:A:H1'	2.07	0.69
6:CG:100:MET:CE	6:CG:100:MET:H	2.05	0.69
22:BA:1655:A:H3'	22:BA:1656:C:C6	2.28	0.69
27:DF:47:LYS:HA	27:DF:50:ASP:HB3	1.75	0.69

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:DJ:23:LYS:HB3	31:DJ:28:LEU:HD13	1.75	0.69
53:CA:536:C:H2'	53:CA:537:G:H8	1.57	0.69
35:DN:2:ARG:HD2	35:DN:5:LYS:HB3	1.75	0.69
22:DA:1722:A:N6	22:DA:1738:G:H1'	2.08	0.69
22:DA:1695:G:C8	24:DC:7:PRO:HB2	2.27	0.69
22:BA:142:A:H2'	22:BA:143:C:C6	2.26	0.69
22:BA:1667:G:O2'	22:BA:1991:U:O4	2.10	0.69
18:CS:45:GLY:H	18:CS:61:VAL:HB	1.58	0.69
35:DN:71:ARG:HB2	35:DN:71:ARG:HH21	1.56	0.69
25:BD:45:TYR:CD1	25:BD:45:TYR:N	2.61	0.69
22:BA:2557:G:H2'	22:BA:2558:C:C6	2.28	0.69
22:DA:1441:G:H2'	22:DA:1442:U:C6	2.27	0.69
19:AT:66:ILE:HD11	19:AT:70:LYS:HE3	1.73	0.69
21:AA:466:A:O2'	21:AA:467:U:H5	1.73	0.69
35:DN:73:ASN:HA	35:DN:76:VAL:HG22	1.75	0.69
22:DA:125:A:H4'	22:DA:126:A:OP2	1.91	0.69
34:BM:132:THR:CG2	34:BM:133:LYS:H	2.06	0.69
22:DA:1364:G:N7	45:DX:1:SER:HB2	2.07	0.69
38:BQ:97:ILE:HD11	38:BQ:105:PHE:N	2.07	0.69
22:DA:2468:A:O2'	22:DA:2469:A:C8	2.45	0.69
24:BC:141:HIS:HB2	24:BC:190:THR:HB	1.75	0.69
22:DA:2271:G:H2'	22:DA:2272:U:H6	1.57	0.69
33:BL:14:LYS:HG3	33:BL:15:ALA:N	2.07	0.69
34:BM:66:ARG:HG3	34:BM:101:VAL:HG13	1.73	0.69
21:AA:1520:C:H2'	21:AA:1521:C:C6	2.27	0.69
21:AA:352:C:H6	21:AA:352:C:H5''	1.58	0.69
28:DG:148:ARG:HB2	28:DG:152:ARG:NH2	2.08	0.69
3:AD:84:ASN:HB3	3:AD:87:GLU:HG2	1.75	0.69
31:BJ:44:TYR:CD1	31:BJ:44:TYR:O	2.45	0.69
22:DA:857:G:H1'	44:DW:19:ARG:NE	2.08	0.69
22:DA:1024:G:H2'	22:DA:1025:G:C8	2.27	0.69
44:BW:29:SER:HA	44:BW:63:ASP:HB3	1.73	0.69
22:DA:1341:G:O2'	22:DA:1398:C:H5'	1.91	0.69
22:DA:454:A:H4'	22:DA:455:C:OP2	1.92	0.69
10:AK:87:GLY:H	10:AK:113:THR:CG2	2.06	0.69
53:CA:960:U:H5'	53:CA:961:U:H5''	1.75	0.69
34:DM:36:VAL:HG13	43:DV:82:TYR:CD1	2.27	0.69
53:CA:1146:A:O2'	53:CA:1147:C:H5'	1.92	0.69
21:AA:511:C:HO2'	21:AA:512:U:H5''	1.58	0.69
21:AA:1240:U:H3'	21:AA:1241:G:H5'	1.73	0.69
22:DA:747:U:H2'	22:DA:2613:U:O4	1.93	0.69
38:BQ:10:ARG:HH11	38:BQ:10:ARG:HB2	1.56	0.69

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:AA:1469:C:H5'	21:AA:1469:C:H6	1.57	0.69
22:DA:1608:A:C8	22:DA:1611:C:N4	2.61	0.69
22:DA:638:G:H2'	22:DA:639:U:C6	2.27	0.69
22:DA:2753:A:H2'	22:DA:2754:U:C6	2.28	0.69
1:AB:49:PHE:CG	1:AB:212:TYR:OH	2.45	0.69
1:AB:13:VAL:CG2	1:AB:207:ARG:HH22	2.06	0.69
12:AM:18:LEU:O	12:AM:24:VAL:HG21	1.93	0.69
22:BA:1113:U:H2'	22:BA:1114:C:H6	1.58	0.69
22:DA:2638:G:H1'	22:DA:2778:A:N6	2.08	0.69
20:CU:8:ASN:ND2	20:CU:9:GLU:H	1.90	0.69
22:BA:1313:U:O2	22:BA:1313:U:H2'	1.92	0.69
13:CN:96:LYS:HD2	13:CN:96:LYS:H	1.58	0.69
53:CA:695:A:H2'	53:CA:696:A:C8	2.27	0.69
22:DA:1300:G:H5''	22:DA:1301:A:H5'	1.74	0.69
22:DA:1698:A:H4'	22:DA:1699:G:O5'	1.92	0.69
22:DA:1779:U:H5	22:DA:1784:A:N7	1.90	0.69
53:CA:1249:C:H2'	53:CA:1250:A:H5''	1.74	0.69
22:DA:2210:U:H4'	22:DA:2211:A:C5'	2.22	0.69
35:DN:37:THR:HB	35:DN:40:LYS:HB2	1.75	0.69
22:DA:2307:G:H1'	22:DA:2308:G:C5	2.27	0.69
22:DA:1654:A:O2'	22:DA:1655:A:H8	1.75	0.69
41:DT:58:VAL:HG23	41:DT:85:VAL:HA	1.75	0.69
22:DA:138:U:H2'	22:DA:140:C:H1'	1.75	0.69
21:AA:1181:G:C2	21:AA:1182:G:N2	2.61	0.69
22:DA:1605:C:H4'	22:DA:1610:A:C6	2.27	0.69
1:CB:101:THR:O	53:CA:1074:G:H4'	1.93	0.69
22:DA:510:C:H2'	22:DA:511:U:C6	2.28	0.69
23:BB:15:A:O2'	23:BB:16:G:H5'	1.92	0.69
22:DA:1519:G:H5'	22:DA:1520:U:OP2	1.93	0.69
1:AB:141:GLU:HA	1:AB:144:GLU:HB2	1.74	0.69
53:CA:173:U:H5''	53:CA:174:A:OP2	1.92	0.69
53:CA:211:G:H2'	53:CA:211:G:N3	2.08	0.69
53:CA:464:U:C4	53:CA:466:A:H4'	2.28	0.69
1:CB:19:THR:HG22	1:CB:37:VAL:HG23	1.74	0.69
22:BA:1688:U:H1'	22:BA:1701:A:C6	2.28	0.69
21:AA:613:C:H2'	21:AA:614:C:H6	1.56	0.69
8:AI:32:ARG:HG2	8:AI:36:GLN:HB3	1.73	0.69
22:DA:1439:A:N7	22:DA:1440:U:H1'	2.08	0.69
22:DA:2269:G:O3'	44:DW:18:LYS:HE2	1.93	0.69
22:BA:1060:U:H4'	22:BA:1061:U:C5'	2.23	0.69
16:AQ:18:LYS:HA	16:AQ:47:ASP:CB	2.21	0.69
21:AA:214:C:O2'	21:AA:215:C:H6	1.74	0.69

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:2683:C:O2'	22:DA:2684:U:H5'	1.93	0.69
22:DA:674:G:H4'	26:DE:69:ARG:HB3	1.75	0.69
22:DA:919:U:H2'	22:DA:920:A:H8	1.58	0.69
22:DA:729:G:C2'	22:DA:729:G:N3	2.56	0.69
22:DA:989:G:H4'	22:DA:990:A:OP1	1.92	0.69
14:AO:73:ASP:CG	14:AO:76:ARG:HG3	2.14	0.69
1:CB:125:PHE:HD1	1:CB:137:THR:HG22	1.58	0.69
51:D3:23:HIS:O	51:D3:46:LYS:HB2	1.93	0.69
53:CA:1347:G:N2	53:CA:1373:G:H2'	2.08	0.69
36:BO:111:ARG:O	36:BO:113:ALA:N	2.25	0.69
21:AA:1399:C:H4'	21:AA:1400:C:O5'	1.93	0.69
21:AA:1236:A:H4'	21:AA:1304:G:H4'	1.75	0.69
5:CF:86:ARG:HD3	17:CR:63:TYR:O	1.93	0.68
10:AK:126:ARG:CA	20:AU:33:ARG:HH12	2.05	0.68
20:CU:36:PHE:HD1	20:CU:40:PRO:HB3	1.57	0.68
22:DA:1283:G:H22	22:DA:1286:A:H5'	1.57	0.68
22:DA:2746:U:H1'	28:DG:138:GLN:HE21	1.58	0.68
10:CK:27:ASN:ND2	10:CK:27:ASN:N	2.37	0.68
22:DA:802:A:H2'	22:DA:803:U:H6	1.56	0.68
22:DA:2848:G:O2'	22:DA:2849:U:C6	2.46	0.68
32:BK:70:ARG:HD3	32:BK:76:VAL:CG2	2.22	0.68
21:AA:1151:A:O2'	21:AA:1152:A:H5''	1.93	0.68
34:DM:61:GLY:HA2	34:DM:107:GLY:HA3	1.75	0.68
2:CC:129:PHE:CE1	2:CC:156:LEU:HB3	2.29	0.68
50:B2:34:ARG:NH1	50:B2:39:ARG:HG2	2.07	0.68
13:CN:47:LEU:O	13:CN:50:LEU:HG	1.93	0.68
2:CC:119:ILE:O	2:CC:123:LEU:HB2	1.93	0.68
22:BA:1085:A:H2'	22:BA:1086:A:N3	2.08	0.68
24:BC:104:LEU:O	24:BC:105:ALA:HB2	1.91	0.68
22:DA:312:G:H5'	22:DA:331:C:O2'	1.93	0.68
22:DA:861:A:H2'	22:DA:862:G:H8	1.58	0.68
32:BK:71:ARG:HG3	32:BK:106:GLU:OE2	1.93	0.68
27:BF:134:GLN:HG2	27:BF:135:ILE:H	1.56	0.68
31:DJ:64:VAL:HG22	31:DJ:68:LYS:HE2	1.75	0.68
8:AI:71:ILE:HD11	21:AA:1248:A:H2	1.58	0.68
53:CA:811:C:H4'	53:CA:900:A:N6	2.07	0.68
22:DA:538:A:H5''	31:DJ:7:LYS:NZ	2.08	0.68
40:BS:2:GLU:O	40:BS:107:VAL:O	2.10	0.68
21:AA:701:U:O2	21:AA:701:U:H2'	1.92	0.68
21:AA:1505:G:H5''	57:AA:1801:HOH:O	1.92	0.68
53:CA:486:U:O2	53:CA:486:U:H2'	1.92	0.68
36:DO:23:ALA:O	36:DO:42:PRO:HG3	1.92	0.68

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:BD:106:LYS:H	25:BD:106:LYS:HD2	1.58	0.68
22:DA:206:U:O2'	22:DA:207:A:H5'	1.93	0.68
22:DA:2519:U:C6	22:DA:2542:A:N6	2.61	0.68
53:CA:519:C:O2'	53:CA:520:A:C5'	2.41	0.68
22:DA:1515:A:H5'	22:DA:1557:C:H5'	1.75	0.68
25:BD:5:VAL:N	25:BD:32:ASN:HD21	1.92	0.68
22:DA:674:G:H2'	22:DA:804:A:H61	1.59	0.68
8:AI:40:ARG:CA	8:AI:44:ARG:HB3	2.22	0.68
53:CA:536:C:H2'	53:CA:537:G:C8	2.29	0.68
22:DA:754:U:H2'	22:DA:755:U:H6	1.57	0.68
22:DA:1051:G:H5'	22:DA:2752:C:H1'	1.75	0.68
32:DK:19:VAL:HG12	32:DK:41:ILE:HG12	1.74	0.68
22:BA:962:G:H21	22:BA:2250:G:H1	1.40	0.68
15:AP:22:ALA:HA	15:AP:33:ILE:HG13	1.75	0.68
43:BV:80:HIS:CD2	43:BV:82:TYR:H	2.11	0.68
22:DA:739:A:H4'	22:DA:740:C:OP1	1.92	0.68
32:DK:60:ALA:HA	32:DK:87:LEU:CD2	2.23	0.68
22:DA:1330:C:HO2'	22:DA:1331:G:H8	1.41	0.68
53:CA:1268:G:N2	53:CA:1327:C:H1'	2.07	0.68
22:DA:921:C:H2'	22:DA:922:C:H5'	1.74	0.68
27:DF:147:ARG:HD3	27:DF:149:ARG:HH22	1.58	0.68
37:BP:25:VAL:CG1	37:BP:46:VAL:HG23	2.24	0.68
30:BI:7:TYR:HA	30:BI:58:ILE:HB	1.75	0.68
22:BA:2103:C:H2'	22:BA:2104:C:H5'	1.76	0.68
22:DA:568:U:H2'	22:DA:570:G:OP2	1.94	0.68
4:AE:133:ILE:H	4:AE:133:ILE:HD12	1.58	0.68
15:AP:19:VAL:HG13	15:AP:37:GLY:C	2.14	0.68
13:CN:46:LYS:HE3	18:CS:10:ILE:HB	1.75	0.68
22:DA:777:G:N7	22:DA:793:A:H2	1.92	0.68
53:CA:451:A:H4'	53:CA:452:A:O5'	1.93	0.68
27:DF:136:ILE:O	27:DF:137:PHE:O	2.12	0.68
30:BI:20:SER:HB3	30:BI:21:PRO:HD3	1.75	0.68
18:CS:35:ARG:HA	18:CS:70:LEU:HB2	1.76	0.68
53:CA:1239:A:H1'	53:CA:1241:G:C4	2.29	0.68
35:BN:71:ARG:HH21	35:BN:71:ARG:HG3	1.57	0.68
35:BN:75:ILE:HG13	35:BN:76:VAL:N	2.09	0.68
22:DA:945:A:H5'	22:DA:946:C:OP2	1.94	0.68
3:CD:62:ARG:HE	3:CD:62:ARG:HA	1.57	0.68
22:DA:84:A:C4	22:DA:103:A:N6	2.61	0.68
21:AA:279:A:H5''	21:AA:281:G:O4'	1.93	0.68
19:AT:8:LYS:HA	19:AT:11:ILE:HG23	1.75	0.68
22:DA:558:U:OP1	31:DJ:113:PRO:HD2	1.94	0.68

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:AA:251:G:H4'	21:AA:252:U:O5'	1.93	0.68
27:BF:35:LEU:HD13	27:BF:56:LEU:HD22	1.75	0.68
53:CA:413:G:N2	53:CA:428:G:O2'	2.27	0.68
31:DJ:106:LYS:HB2	31:DJ:119:PHE:HE2	1.57	0.68
53:CA:961:U:OP1	53:CA:961:U:H3'	1.94	0.68
22:DA:848:C:H2'	22:DA:849:A:H8	1.59	0.68
22:DA:533:G:H21	38:DQ:44:TYR:HD1	1.38	0.68
53:CA:1284:C:H5''	53:CA:1285:A:OP2	1.94	0.68
47:DZ:30:ARG:HH21	47:DZ:33:HIS:HB2	1.58	0.68
22:DA:1827:U:O4'	22:DA:1970:A:O2'	2.11	0.68
40:DS:31:GLN:O	40:DS:35:ILE:HG12	1.94	0.68
54:DB:86:G:H2'	54:DB:87:U:H5''	1.76	0.68
6:AG:2:ARG:HA	21:AA:1380:U:C5	2.29	0.68
45:DX:58:ILE:HA	45:DX:66:VAL:HG21	1.75	0.68
12:AM:26:LYS:O	12:AM:30:LYS:HG3	1.94	0.68
21:AA:688:G:H8	21:AA:688:G:H5''	1.59	0.68
21:AA:423:G:H2'	21:AA:423:G:N3	2.09	0.68
22:DA:1112:G:H2'	22:DA:1113:U:C6	2.29	0.68
22:BA:320:A:H4'	22:BA:322:A:N7	2.09	0.68
4:AE:156:ARG:O	4:AE:158:LYS:N	2.27	0.68
13:AN:40:ARG:HH12	13:AN:44:VAL:CG1	2.06	0.68
1:CB:89:PHE:HE2	1:CB:152:ASP:HB2	1.58	0.68
53:CA:91:U:O2'	53:CA:92:U:O4'	2.11	0.68
4:AE:120:HIS:O	4:AE:121:ASN:HB3	1.93	0.68
34:DM:42:THR:HB	34:DM:45:GLN:HG3	1.74	0.68
22:DA:2850:A:O2'	22:DA:2851:A:H5'	1.93	0.68
22:DA:2851:A:H2'	22:DA:2852:G:C8	2.29	0.68
1:CB:96:LEU:H	1:CB:99:MET:HE3	1.58	0.68
22:DA:1422:G:H4'	22:DA:1493:C:OP1	1.93	0.68
22:BA:1871:A:C8	22:BA:1872:A:C6	2.82	0.68
22:BA:1818:U:OP2	24:BC:155:ARG:NH1	2.27	0.68
22:BA:632:A:O2'	22:BA:633:A:H5'	1.94	0.68
53:CA:998:C:H2'	53:CA:999:C:H6	1.58	0.68
29:BH:2:GLN:O	29:BH:3:VAL:HG22	1.94	0.68
22:BA:1931:U:O2'	22:BA:1932:A:H5'	1.93	0.68
40:DS:20:VAL:HG23	40:DS:23:LEU:HD12	1.76	0.68
27:BF:114:ARG:H	27:BF:114:ARG:HD2	1.59	0.68
22:DA:1439:A:C6	22:DA:1552:A:N7	2.62	0.68
28:BG:84:LYS:O	28:BG:85:LYS:HB2	1.93	0.68
9:AJ:53:ILE:CG2	9:AJ:61:ALA:HB1	2.19	0.68
53:CA:1250:A:H2'	53:CA:1251:A:O4'	1.93	0.68
20:CU:39:LYS:N	20:CU:40:PRO:CD	2.57	0.68

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:1929:G:H4'	22:DA:1930:G:OP1	1.94	0.68
41:DT:29:THR:HB	41:DT:87:LEU:N	2.08	0.68
1:AB:17:HIS:CD2	1:AB:202:ASN:HD21	2.12	0.68
49:B1:33:LEU:N	49:B1:51:ALA:HB3	2.09	0.68
5:AF:86:ARG:NH1	17:AR:63:TYR:HB3	2.09	0.68
22:DA:1989:G:H2'	22:DA:1990:C:H5'	1.76	0.68
5:AF:46:GLN:HE22	5:AF:55:HIS:HB2	1.58	0.68
27:BF:153:ILE:HD12	27:BF:153:ILE:O	1.94	0.68
21:AA:975:A:H4'	21:AA:976:G:C5'	2.17	0.68
53:CA:373:A:H2'	53:CA:374:A:H8	1.59	0.68
42:DU:17:ASP:HB2	42:DU:38:ILE:HA	1.74	0.68
22:BA:572:A:C2	22:BA:2033:A:C2	2.81	0.68
13:AN:22:LYS:HG3	13:AN:23:ARG:N	2.09	0.68
4:CE:13:LYS:HA	4:CE:13:LYS:HE2	1.75	0.68
21:AA:701:U:O2'	21:AA:702:A:OP2	2.11	0.68
22:BA:1539:U:H2'	22:BA:1540:G:H8	1.58	0.68
21:AA:1411:C:C2'	21:AA:1412:C:H5'	2.24	0.68
26:BE:95:LYS:O	26:BE:96:VAL:HB	1.92	0.68
21:AA:1066:C:H6	21:AA:1066:C:H5''	1.58	0.68
41:DT:1:MET:HG2	41:DT:4:GLU:HA	1.74	0.68
21:AA:815:A:H4'	21:AA:817:C:C4	2.29	0.68
38:BQ:85:ALA:O	38:BQ:86:SER:C	2.31	0.68
22:DA:2136:G:H2'	22:DA:2137:U:C5	2.29	0.68
22:DA:456:C:O2'	41:DT:73:ARG:HG3	1.93	0.68
25:DD:118:PHE:CD1	25:DD:119:ALA:N	2.62	0.68
32:BK:18:ARG:CG	32:BK:18:ARG:HH11	2.06	0.68
22:DA:687:C:H2'	22:DA:688:U:C6	2.28	0.68
1:CB:164:ASP:OD2	1:CB:203:ASP:HB2	1.94	0.68
2:AC:119:ILE:HD11	2:AC:133:MET:HA	1.76	0.68
22:DA:1738:G:O2'	22:DA:1739:A:H8	1.77	0.68
24:DC:183:VAL:HG13	24:DC:185:ALA:H	1.59	0.68
3:AD:21:LYS:HD3	3:AD:21:LYS:O	1.93	0.68
22:DA:2738:A:H2	22:DA:2766:A:H61	1.41	0.68
22:BA:2068:U:H5''	22:BA:2068:U:H6	1.59	0.68
38:BQ:13:HIS:HD2	38:BQ:31:TYR:CE1	2.11	0.68
26:BE:112:LEU:HD13	26:BE:186:VAL:HG11	1.76	0.68
54:DB:11:C:H5'	44:DW:71:LYS:HD3	1.74	0.67
9:CJ:84:VAL:HG23	9:CJ:85:ASP:N	2.05	0.67
9:CJ:15:HIS:HE1	9:CJ:68:ARG:HD3	1.59	0.67
31:BJ:111:LYS:CD	31:BJ:112:GLY:N	2.57	0.67
53:CA:15:G:H2'	53:CA:16:A:C8	2.29	0.67
7:AH:6:ILE:HB	7:AH:76:ARG:NH1	2.09	0.67

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:BJ:56:VAL:O	31:BJ:124:VAL:O	2.12	0.67
2:CC:10:ARG:HD3	2:CC:177:LEU:HA	1.75	0.67
15:AP:79:ASN:O	15:AP:80:LYS:HB2	1.94	0.67
29:DH:32:PRO:HA	45:DX:38:TRP:HD1	1.59	0.67
34:BM:72:PRO:O	34:BM:91:TYR:O	2.11	0.67
22:BA:2573:C:H2'	57:BA:3719:HOH:O	1.94	0.67
2:AC:21:TRP:HB3	2:AC:58:ARG:H	1.60	0.67
24:DC:67:LYS:HB3	24:DC:150:GLY:HA2	1.76	0.67
22:DA:2562:U:H1'	32:DK:23:LYS:HE2	1.76	0.67
25:BD:169:ARG:O	25:BD:170:VAL:HG13	1.93	0.67
22:BA:1434:A:OP1	22:BA:1434:A:H4'	1.94	0.67
31:DJ:5:THR:HA	31:DJ:44:TYR:CD2	2.29	0.67
53:CA:520:A:H2'	53:CA:521:G:O4'	1.94	0.67
22:DA:481:G:O2'	22:DA:507:A:N6	2.25	0.67
22:DA:1965:C:H2'	22:DA:1966:A:C8	2.28	0.67
4:CE:22:LYS:H	4:CE:29:ILE:HG22	1.60	0.67
42:DU:47:PRO:HB3	42:DU:54:PRO:CG	2.24	0.67
21:AA:1338:G:H2'	21:AA:1339:A:C8	2.28	0.67
46:DY:18:LEU:O	46:DY:22:LEU:HD13	1.93	0.67
1:AB:45:THR:HG23	1:AB:200:PRO:HG2	1.77	0.67
22:DA:1381:G:H2'	22:DA:1382:G:H5''	1.75	0.67
29:DH:78:VAL:HB	29:DH:144:VAL:HA	1.76	0.67
54:DB:88:C:OP2	54:DB:88:C:H3'	1.95	0.67
36:BO:41:ALA:HB2	36:BO:48:LEU:HD21	1.76	0.67
22:DA:600:G:H5''	26:DE:27:LEU:HD22	1.75	0.67
36:BO:33:ARG:HG2	36:BO:34:HIS:ND1	2.10	0.67
22:BA:571:U:C5	22:BA:575:A:C6	2.82	0.67
31:DJ:73:VAL:HG23	31:DJ:74:TYR:H	1.57	0.67
2:AC:154:GLY:O	2:AC:195:ILE:HG12	1.95	0.67
3:CD:66:VAL:HG22	3:CD:96:ARG:HH11	1.56	0.67
21:AA:143:A:N3	21:AA:143:A:H2'	2.10	0.67
24:DC:14:HIS:O	24:DC:203:VAL:HG11	1.94	0.67
22:BA:962:G:N2	22:BA:2250:G:H1	1.92	0.67
38:BQ:13:HIS:HD2	38:BQ:31:TYR:CD1	2.12	0.67
4:CE:48:GLY:HA3	4:CE:66:ALA:HB2	1.76	0.67
8:CI:24:ASN:O	8:CI:61:ASP:HA	1.95	0.67
22:BA:1941:C:H2'	22:BA:1942:C:C6	2.29	0.67
38:DQ:78:PHE:CE1	38:DQ:82:LEU:HD11	2.30	0.67
31:BJ:73:VAL:HG23	31:BJ:74:TYR:H	1.58	0.67
39:DR:48:LYS:H	39:DR:48:LYS:HD2	1.57	0.67
31:DJ:110:PRO:HG2	31:DJ:111:LYS:HG2	1.76	0.67
22:BA:409:G:O2'	22:BA:410:G:H5'	1.94	0.67

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
29:BH:21:VAL:HG21	29:BH:25:TYR:HD2	1.59	0.67
22:DA:185:G:H2'	22:DA:186:G:C8	2.29	0.67
22:BA:1343:G:H2'	22:BA:1344:U:C6	2.29	0.67
34:BM:35:ALA:O	34:BM:128:THR:HA	1.94	0.67
21:AA:182:A:N3	21:AA:184:G:C8	2.62	0.67
22:BA:470:A:H61	41:BT:72:GLN:HE22	1.42	0.67
7:CH:68:LYS:HD3	7:CH:69:ALA:N	2.10	0.67
13:CN:8:ARG:HB2	53:CA:1217:C:OP1	1.95	0.67
22:BA:2820:A:H3'	22:BA:2820:A:C8	2.29	0.67
5:CF:18:VAL:HG21	5:CF:58:HIS:CD2	2.29	0.67
34:BM:73:ILE:HG21	34:BM:91:TYR:CZ	2.30	0.67
9:CJ:37:ARG:HB3	9:CJ:74:VAL:O	1.94	0.67
34:BM:17:ASN:O	34:BM:38:ARG:HD3	1.94	0.67
33:BL:95:LEU:HB3	33:BL:100:ILE:HD11	1.76	0.67
25:BD:97:SER:O	25:BD:99:GLU:HG2	1.95	0.67
20:AU:36:PHE:HA	20:AU:39:LYS:HE2	1.75	0.67
20:CU:37:TYR:O	20:CU:38:GLU:HG2	1.93	0.67
47:DZ:16:LEU:HD23	47:DZ:19:HIS:CD2	2.29	0.67
46:DY:28:LEU:HG	46:DY:42:LEU:HD22	1.76	0.67
53:CA:1449:C:O2'	53:CA:1450:U:H5'	1.94	0.67
22:DA:783:A:H2	22:DA:1778:U:H4'	1.57	0.67
4:CE:14:LEU:HD22	4:CE:59:ILE:HD13	1.76	0.67
6:AG:39:GLU:HB2	6:AG:43:TYR:CE2	2.29	0.67
22:BA:1417:C:H2'	22:BA:1418:G:C8	2.30	0.67
53:CA:694:A:H3'	53:CA:695:A:H5''	1.77	0.67
22:BA:1378:A:O2'	22:BA:1379:U:O5'	2.12	0.67
2:AC:139:ASN:HA	2:AC:142:ARG:HB2	1.77	0.67
25:BD:107:VAL:HG13	25:BD:203:VAL:HG23	1.76	0.67
8:CI:18:VAL:HG11	8:CI:82:ILE:HA	1.76	0.67
7:AH:17:GLN:HE21	7:AH:71:VAL:CG2	2.06	0.67
53:CA:1134:G:C6	53:CA:1135:U:H1'	2.28	0.67
1:CB:46:VAL:HG13	1:CB:47:PRO:HD3	1.75	0.67
53:CA:239:U:H5''	53:CA:239:U:H6	1.59	0.67
22:BA:1076:C:H2'	22:BA:1077:A:C8	2.29	0.67
53:CA:1347:G:H22	53:CA:1373:G:H2'	1.59	0.67
22:BA:815:C:OP1	39:BR:85:LYS:HE2	1.95	0.67
53:CA:460:A:O2'	53:CA:462:G:H5'	1.94	0.67
40:BS:82:MET:HB2	40:BS:98:LYS:HB2	1.77	0.67
30:DI:106:GLN:HA	30:DI:109:ALA:HB3	1.75	0.67
21:AA:1447:A:H5'	21:AA:1448:C:H5	1.58	0.67
22:DA:2699:C:H2'	22:DA:2700:A:C8	2.29	0.67
19:AT:27:MET:CE	19:AT:57:VAL:HG22	2.22	0.67

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
53:CA:1160:G:O2'	53:CA:1161:C:H5'	1.95	0.67
21:AA:181:A:H5''	21:AA:182:A:OP1	1.95	0.67
42:DU:35:VAL:HG12	42:DU:36:GLU:H	1.60	0.67
53:CA:81:A:C2	53:CA:89:U:O4	2.47	0.67
32:DK:13:ASN:H	32:DK:13:ASN:ND2	1.92	0.67
1:AB:32:GLY:HA3	1:AB:39:ILE:HG12	1.74	0.67
22:BA:1654:A:H2'	22:BA:1655:A:H8	1.59	0.67
22:DA:574:A:H4'	22:DA:575:A:H5'	1.74	0.67
3:CD:96:ARG:O	3:CD:100:VAL:HG23	1.95	0.67
54:DB:5:U:H2'	54:DB:6:G:C8	2.30	0.67
22:BA:2636:C:H2'	22:BA:2637:U:C6	2.29	0.67
46:DY:1:MET:H3	46:DY:1:MET:HE2	1.60	0.67
22:DA:2015:A:C5	48:D0:2:VAL:HG11	2.28	0.67
32:BK:17:ARG:HG3	32:BK:47:ILE:HD13	1.77	0.67
21:AA:891:U:O2'	21:AA:892:A:H5'	1.95	0.67
22:BA:655:A:O2'	22:BA:656:G:C8	2.48	0.67
22:BA:1936:A:H2	22:BA:1943:U:C5	2.12	0.67
31:BJ:44:TYR:O	31:BJ:45:THR:HB	1.92	0.67
22:DA:1555:G:O2'	22:DA:1556:C:H5'	1.94	0.67
33:BL:101:ILE:HG22	33:BL:102:GLY:N	2.10	0.67
44:BW:39:GLN:HG3	44:BW:42:THR:H	1.60	0.67
22:BA:1062:G:C8	22:BA:1088:A:C8	2.83	0.67
8:CI:49:GLN:N	8:CI:50:PRO:HD2	2.10	0.67
53:CA:219:U:H2'	53:CA:220:G:H8	1.60	0.67
22:DA:1476:U:O2'	22:DA:1477:A:C5'	2.43	0.67
21:AA:275:G:H2'	21:AA:276:G:H8	1.60	0.67
22:DA:303:G:H2'	22:DA:304:U:C6	2.30	0.67
44:DW:23:LYS:HD2	44:DW:24:ARG:H	1.57	0.67
22:DA:664:G:H4'	22:DA:941:A:OP1	1.93	0.67
21:AA:978:A:HO2'	21:AA:1322:C:H5	1.42	0.67
22:DA:1309:G:OP1	50:D2:9:VAL:HG12	1.95	0.67
3:AD:117:VAL:N	3:AD:122:ILE:HD11	2.09	0.67
13:CN:9:GLU:HA	13:CN:12:ARG:HD2	1.77	0.67
22:DA:2271:G:O2'	22:DA:2272:U:H5'	1.95	0.67
22:BA:358:U:H2'	22:BA:359:G:O4'	1.95	0.67
22:BA:1252:G:N3	38:BQ:32:ARG:HG2	2.10	0.67
22:DA:2:G:C6	22:DA:3:U:C4	2.83	0.67
26:DE:73:ILE:O	26:DE:73:ILE:HG13	1.95	0.67
21:AA:1167:A:C8	21:AA:1169:A:N6	2.63	0.67
48:D0:4:GLN:HG2	48:D0:4:GLN:O	1.94	0.67
22:DA:465:G:H4'	50:D2:16:HIS:HD2	1.60	0.67
32:DK:118:LEU:C	32:DK:120:PRO:HD2	2.14	0.67

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
39:BR:39:LEU:HA	39:BR:49:ILE:HG21	1.76	0.67
21:AA:465:A:H2'	21:AA:466:A:O4'	1.95	0.67
53:CA:1160:G:C6	53:CA:1181:G:O6	2.47	0.67
22:DA:2313:C:O2'	22:DA:2314:A:H5'	1.92	0.67
22:DA:2682:A:H61	22:DA:2728:U:H1'	1.60	0.67
4:AE:79:THR:HB	4:AE:121:ASN:ND2	2.09	0.67
1:AB:20:ARG:HH12	1:AB:38:HIS:CE1	2.13	0.67
1:AB:40:ILE:O	1:AB:41:ASN:HB2	1.94	0.67
22:BA:2214:C:C6	22:BA:2214:C:H5'	2.28	0.67
46:DY:28:LEU:HD11	46:DY:43:LEU:HD13	1.77	0.67
7:AH:9:MET:HE1	7:AH:32:LYS:HA	1.76	0.67
6:AG:52:ARG:HH12	6:AG:121:ASN:HD21	1.43	0.67
21:AA:555:U:H2'	21:AA:556:C:C6	2.30	0.67
24:DC:93:VAL:CG1	24:DC:101:ARG:H	2.08	0.67
22:DA:2773:C:H2'	22:DA:2774:C:H6	1.59	0.67
21:AA:596:A:H2'	21:AA:597:G:H8	1.60	0.67
22:BA:1707:G:H2'	22:BA:1708:C:C6	2.30	0.67
22:DA:2396:G:C2	22:DA:2421:G:C2	2.83	0.67
39:DR:39:LEU:O	39:DR:40:MET:HB2	1.94	0.67
32:DK:76:VAL:HB	37:DP:72:VAL:CG2	2.25	0.67
38:DQ:60:TRP:O	38:DQ:63:ARG:HG2	1.94	0.67
22:DA:1056:G:N2	22:DA:1102:C:H5	1.93	0.67
46:BY:47:ARG:HH21	46:BY:47:ARG:CG	2.07	0.67
34:DM:66:ARG:CZ	34:DM:101:VAL:HG11	2.25	0.67
53:CA:77:A:H2'	53:CA:78:A:C8	2.30	0.67
53:CA:533:A:C2	53:CA:536:C:C5	2.83	0.67
7:AH:12:ARG:NH1	7:AH:26:MET:HB2	2.09	0.67
1:CB:125:PHE:CD1	1:CB:137:THR:HG22	2.30	0.67
43:DV:59:GLU:HG2	43:DV:60:VAL:H	1.60	0.67
13:AN:15:LEU:HD23	13:AN:18:LYS:HD2	1.77	0.67
22:DA:1901:A:OP2	24:DC:252:LYS:HE3	1.95	0.67
9:AJ:91:ASP:O	9:AJ:92:LEU:O	2.12	0.67
50:B2:43:THR:O	50:B2:44:VAL:HB	1.94	0.67
26:BE:108:ILE:HD11	26:BE:180:LEU:HB3	1.76	0.67
53:CA:1503:A:C8	53:CA:1531:A:H1'	2.29	0.67
31:BJ:44:TYR:C	31:BJ:44:TYR:CD1	2.66	0.66
39:BR:49:ILE:HG22	39:BR:54:VAL:HG12	1.77	0.66
44:BW:28:GLU:O	44:BW:30:VAL:N	2.27	0.66
17:AR:56:ARG:O	17:AR:60:ARG:HB2	1.95	0.66
6:CG:91:ARG:CG	6:CG:92:PRO:HD2	2.19	0.66
19:AT:29:THR:HA	19:AT:32:LYS:HG2	1.78	0.66
22:DA:225:C:H2'	22:DA:226:A:O4'	1.94	0.66

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:1807:G:C2'	22:DA:1808:A:H5'	2.24	0.66
22:DA:2800:A:C4	22:DA:2801:G:H1'	2.29	0.66
6:CG:107:ALA:O	6:CG:118:ARG:HB3	1.95	0.66
53:CA:113:G:N2	53:CA:353:A:H8	1.90	0.66
11:CL:49:ARG:HH12	53:CA:523:A:N6	1.93	0.66
28:DG:115:GLN:HG2	28:DG:116:LEU:N	2.10	0.66
53:CA:559:A:H4'	53:CA:560:A:O5'	1.94	0.66
22:BA:2502:G:H5'	22:BA:2503:A:H5''	1.77	0.66
22:BA:2199:A:H5'	22:BA:2200:C:H5	1.60	0.66
24:BC:242:HIS:O	24:BC:244:VAL:HG13	1.95	0.66
12:AM:10:ASP:CG	12:AM:11:HIS:H	1.96	0.66
21:AA:1261:A:N1	21:AA:1274:A:C2	2.63	0.66
33:DL:142:ILE:HG22	33:DL:144:GLU:H	1.60	0.66
53:CA:992:U:H1'	53:CA:993:G:N2	2.10	0.66
22:DA:565:C:H2'	22:DA:566:U:O4'	1.95	0.66
22:DA:718:A:H5'	22:DA:719:C:OP2	1.95	0.66
53:CA:913:A:H4'	53:CA:914:A:O5'	1.94	0.66
22:DA:1812:U:H2'	22:DA:1813:G:C8	2.30	0.66
18:CS:49:ALA:HB1	18:CS:56:HIS:HB3	1.75	0.66
53:CA:109:A:C8	53:CA:327:A:O4'	2.49	0.66
53:CA:1269:A:H2	53:CA:1312:G:H21	1.42	0.66
22:DA:1494:A:H2'	22:DA:1495:A:C8	2.30	0.66
38:BQ:86:SER:HB2	39:BR:50:GLY:O	1.94	0.66
53:CA:995:C:H42	53:CA:1046:A:H1'	1.61	0.66
22:BA:2356:U:H4'	44:BW:16:GLU:HG3	1.76	0.66
39:DR:4:VAL:HG22	39:DR:40:MET:HB3	1.77	0.66
5:AF:38:ARG:HG3	5:AF:39:LEU:N	2.09	0.66
22:BA:1059:G:H5''	22:BA:1060:U:H3'	1.76	0.66
21:AA:198:G:H2'	21:AA:199:A:C8	2.30	0.66
41:BT:39:THR:HG22	41:BT:41:ALA:HB3	1.75	0.66
21:AA:1003:G:N2	21:AA:1005:A:H5'	2.11	0.66
21:AA:1299:A:O2'	21:AA:1300:G:H4'	1.95	0.66
11:CL:49:ARG:NH2	53:CA:522:C:H41	1.93	0.66
34:BM:2:LEU:HD23	34:BM:69:PRO:CD	2.25	0.66
22:DA:2229:U:H2'	22:DA:2230:G:H8	1.58	0.66
22:DA:298:G:H2'	22:DA:339:U:O4	1.95	0.66
32:DK:1:MET:HB2	32:DK:32:TYR:HB3	1.76	0.66
44:BW:72:GLY:N	44:BW:73:PRO:HD2	2.10	0.66
31:BJ:73:VAL:HG23	31:BJ:74:TYR:N	2.10	0.66
22:BA:2276:G:OP2	34:BM:83:GLY:O	2.12	0.66
53:CA:266:G:O2'	53:CA:267:C:H3'	1.95	0.66
34:BM:13:HIS:O	34:BM:14:LYS:HB2	1.95	0.66

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:1258:U:H2'	22:DA:1259:G:C8	2.31	0.66
22:BA:2810:A:H2'	22:BA:2811:G:O4'	1.94	0.66
40:DS:70:LYS:H	40:DS:70:LYS:HE3	1.59	0.66
22:BA:2364:C:C2'	22:BA:2365:G:H5'	2.25	0.66
22:DA:1916:A:H2'	22:DA:1917:U:C6	2.30	0.66
28:BG:112:VAL:HG23	28:BG:113:ASP:H	1.61	0.66
41:BT:18:GLU:HA	41:BT:18:GLU:OE2	1.95	0.66
1:AB:89:PHE:CZ	1:AB:153:MET:HB2	2.29	0.66
13:AN:48:GLN:NE2	13:AN:48:GLN:HA	2.09	0.66
6:CG:68:VAL:HG22	6:CG:134:VAL:HG12	1.76	0.66
40:DS:4:ILE:HG22	40:DS:106:VAL:HG13	1.75	0.66
21:AA:1151:A:HO2'	21:AA:1152:A:H8	1.41	0.66
22:DA:846:U:O2'	22:DA:847:U:H5''	1.95	0.66
32:BK:57:VAL:C	32:BK:58:LEU:HD23	2.15	0.66
53:CA:1033:G:O2'	53:CA:1034:G:O4'	2.13	0.66
21:AA:1038:C:H2'	21:AA:1039:G:C8	2.31	0.66
33:DL:100:ILE:O	33:DL:101:ILE:HB	1.94	0.66
20:CU:19:LYS:N	20:CU:19:LYS:HZ3	1.93	0.66
2:CC:192:TYR:HE2	53:CA:532:A:C8	2.14	0.66
22:BA:1057:A:N7	22:BA:1086:A:H2'	2.09	0.66
21:AA:215:C:O2'	21:AA:216:U:O4'	2.13	0.66
18:CS:40:PHE:CB	18:CS:41:PRO:HD2	2.25	0.66
4:AE:80:LEU:HD23	4:AE:122:VAL:CG1	2.25	0.66
53:CA:1241:G:H2'	53:CA:1242:G:C8	2.28	0.66
22:BA:1829:A:N3	24:BC:14:HIS:HE1	1.92	0.66
43:DV:70:ILE:HD13	43:DV:70:ILE:N	2.10	0.66
10:AK:39:ASN:HA	21:AA:683:G:H21	1.60	0.66
21:AA:1520:C:H2'	21:AA:1521:C:H6	1.58	0.66
53:CA:464:U:O4	53:CA:466:A:H4'	1.94	0.66
21:AA:1303:C:O2'	21:AA:1304:G:H5'	1.95	0.66
2:AC:143:LEU:HD22	2:AC:143:LEU:H	1.61	0.66
22:DA:2036:C:H2'	22:DA:2037:A:C8	2.30	0.66
22:DA:347:A:H2'	22:DA:348:A:H8	1.60	0.66
42:BU:25:LYS:O	42:BU:26:ASN:HB3	1.95	0.66
26:BE:3:LEU:O	26:BE:11:ALA:HA	1.95	0.66
22:DA:1635:A:H5'	22:DA:1635:A:H8	1.60	0.66
22:BA:2086:U:H2'	22:BA:2087:G:C8	2.30	0.66
16:CQ:61:ARG:HG2	16:CQ:75:VAL:HG11	1.77	0.66
22:BA:2336:A:H61	44:BW:40:ARG:HB3	1.61	0.66
22:DA:655:A:O2'	22:DA:656:G:C8	2.48	0.66
26:DE:130:LYS:H	26:DE:160:ALA:HB2	1.60	0.66
52:B4:9:LYS:O	52:B4:10:LEU:HD23	1.94	0.66

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:118:A:C8	22:DA:119:A:C8	2.84	0.66
22:DA:590:A:H2'	22:DA:591:U:H6	1.61	0.66
22:DA:686:U:C6	22:DA:788:A:N1	2.64	0.66
53:CA:51:A:H4'	53:CA:52:C:C5'	2.26	0.66
3:AD:196:GLU:HA	3:AD:199:ILE:HG22	1.76	0.66
16:CQ:13:SER:O	16:CQ:20:ILE:HB	1.95	0.66
22:DA:452:G:OP1	26:DE:53:THR:HG23	1.96	0.66
7:AH:77:VAL:HG23	7:AH:126:CYS:HA	1.77	0.66
22:BA:381:G:OP1	45:BX:17:ARG:HD3	1.94	0.66
53:CA:920:U:H2'	53:CA:921:U:C6	2.29	0.66
42:BU:82:VAL:O	42:BU:94:PHE:O	2.14	0.66
25:BD:69:ALA:HA	25:BD:73:VAL:HG13	1.76	0.66
21:AA:903:G:C5	21:AA:904:U:C5	2.83	0.66
31:BJ:4:PHE:O	31:BJ:44:TYR:HE1	1.77	0.66
54:DB:57:A:O2'	54:DB:58:A:H8	1.76	0.66
4:AE:153:ALA:CA	4:AE:156:ARG:HB2	2.25	0.66
25:BD:12:THR:HG22	25:BD:13:ARG:N	2.10	0.66
22:BA:2726:A:O2'	22:BA:2727:A:H5'	1.95	0.66
53:CA:1228:C:O2'	53:CA:1229:A:H8	1.73	0.66
53:CA:243:A:H4'	53:CA:244:U:H5'	1.75	0.66
1:AB:202:ASN:ND2	1:AB:205:ALA:HB2	2.10	0.66
35:BN:32:GLU:OE1	35:BN:118:ARG:HA	1.96	0.66
7:AH:88:LYS:HG3	7:AH:89:ASP:H	1.59	0.66
27:BF:45:ASP:HB2	27:BF:48:LEU:HB2	1.78	0.66
22:DA:140:C:H5'	22:DA:141:G:H21	1.60	0.66
47:DZ:16:LEU:N	47:DZ:16:LEU:HD22	2.11	0.66
21:AA:243:A:C2	21:AA:245:U:H2'	2.31	0.66
22:DA:973:A:H5'	22:DA:974:G:OP2	1.95	0.66
22:DA:1815:A:H1'	22:DA:1817:G:N7	2.11	0.66
22:DA:705:A:N6	22:DA:726:G:H1'	2.11	0.66
22:DA:781:A:H5''	22:DA:782:A:OP1	1.96	0.66
22:BA:2104:C:H2'	22:BA:2105:U:O4'	1.96	0.66
22:BA:2573:C:OP1	57:BA:3720:HOH:O	2.14	0.66
53:CA:1530:G:O2'	53:CA:1531:A:C8	2.48	0.66
7:AH:104:SER:HB2	7:AH:125:ILE:HD11	1.76	0.66
21:AA:1251:A:H2'	21:AA:1252:A:C8	2.31	0.66
38:BQ:63:ARG:HH12	38:BQ:96:ASP:CB	2.07	0.66
22:DA:503:A:H4'	22:DA:504:A:O5'	1.96	0.66
24:BC:131:MET:HA	24:BC:134:ILE:HD12	1.76	0.66
22:BA:2886:A:N3	22:BA:2887:A:H1'	2.11	0.66
53:CA:1024:G:H2'	53:CA:1025:U:O4'	1.95	0.66
53:CA:269:C:H2'	53:CA:270:A:C8	2.31	0.66

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:AH:9:MET:HE2	7:AH:32:LYS:HG2	1.76	0.66
19:CT:60:GLN:HB3	19:CT:65:LEU:HD12	1.77	0.66
29:BH:5:LEU:HD13	29:BH:13:GLY:HA2	1.77	0.66
5:AF:55:HIS:O	5:AF:56:LYS:HB2	1.96	0.66
19:CT:9:ARG:HD3	19:CT:12:GLN:NE2	2.10	0.66
42:DU:58:VAL:HG12	42:DU:60:LYS:H	1.59	0.66
21:AA:76:G:H2'	21:AA:76:G:N3	2.11	0.66
33:BL:47:ARG:HG3	33:BL:50:PHE:HB2	1.77	0.66
33:BL:55:MET:HE3	33:BL:55:MET:HA	1.76	0.66
49:D1:51:ALA:O	49:D1:52:LYS:HB2	1.94	0.66
22:DA:647:G:O2'	22:DA:648:G:H5'	1.95	0.66
21:AA:205:A:H4'	21:AA:205:A:OP1	1.96	0.66
25:BD:89:GLU:HG3	25:BD:94:GLN:OE1	1.95	0.66
41:BT:32:LEU:HD23	41:BT:83:ALA:CB	2.26	0.66
22:DA:1287:A:H5'	35:DN:103:ARG:HD2	1.77	0.66
22:DA:2145:C:H3'	22:DA:2147:A:OP2	1.95	0.66
22:BA:726:G:O2'	22:BA:727:A:P	2.53	0.66
28:DG:83:THR:C	28:DG:84:LYS:HD3	2.15	0.66
25:DD:122:VAL:HA	25:DD:127:PHE:H	1.60	0.66
16:AQ:67:SER:OG	16:AQ:70:LYS:HB3	1.95	0.66
31:DJ:25:LEU:HD12	31:DJ:64:VAL:HA	1.76	0.66
1:CB:127:LYS:HE3	1:CB:132:GLU:HG3	1.76	0.66
22:DA:1709:U:H2'	22:DA:1710:G:H8	1.59	0.66
22:BA:2654:A:H4'	22:BA:2655:G:OP1	1.95	0.66
1:CB:105:THR:O	1:CB:108:GLN:HG2	1.95	0.66
53:CA:181:A:HO2'	53:CA:182:A:H2	1.44	0.66
4:AE:23:THR:HA	4:AE:28:ARG:HA	1.77	0.66
34:DM:8:LYS:HA	34:DM:8:LYS:HE3	1.77	0.66
22:DA:1535:A:H2'	22:DA:1535:A:N3	2.10	0.66
22:BA:1780:A:OP1	57:BA:3698:HOH:O	2.12	0.66
44:BW:23:LYS:NZ	44:BW:24:ARG:HG3	2.11	0.66
53:CA:412:A:H4'	53:CA:413:G:OP1	1.94	0.66
10:CK:78:ILE:HD13	10:CK:78:ILE:H	1.61	0.66
22:DA:1717:A:H2'	22:DA:1718:G:O4'	1.96	0.66
22:DA:2311:A:H3'	22:DA:2312:U:H6	1.61	0.66
25:DD:9:VAL:O	37:DP:4:ILE:HD11	1.95	0.66
12:CM:13:HIS:HB3	12:CM:16:ILE:HD13	1.78	0.66
1:AB:22:TRP:HA	1:AB:188:THR:O	1.95	0.66
22:DA:589:U:HO2'	22:DA:590:A:H8	0.76	0.66
22:DA:141:G:H3'	22:DA:142:A:O4'	1.94	0.66
7:AH:76:ARG:NE	7:AH:78:SER:O	2.29	0.66
22:BA:509:C:C5'	22:BA:509:C:H6	2.08	0.66

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:849:A:H2'	22:DA:850:U:C6	2.31	0.66
53:CA:1071:C:H2'	53:CA:1072:G:H8	1.60	0.66
21:AA:686:U:O2'	21:AA:687:A:C8	2.47	0.66
22:BA:2296:U:H4'	22:BA:2297:A:OP1	1.95	0.66
22:DA:1480:C:H2'	22:DA:1481:U:O4'	1.95	0.66
12:AM:105:ALA:O	12:AM:109:LYS:HB2	1.96	0.66
22:DA:1590:A:H2'	22:DA:1591:A:C8	2.31	0.66
25:BD:186:LEU:HD11	37:BP:3:ILE:CD1	2.24	0.66
22:BA:1063:G:OP1	30:BI:76:ALA:HB3	1.96	0.66
22:DA:1062:G:HO2'	22:DA:1063:G:H8	1.44	0.66
26:DE:133:LEU:O	26:DE:137:LYS:HB2	1.94	0.66
35:DN:33:ILE:HG23	35:DN:114:GLU:HB2	1.77	0.66
9:CJ:52:LEU:HD23	9:CJ:62:ARG:HG2	1.78	0.66
22:DA:923:G:H1'	44:DW:23:LYS:NZ	2.10	0.66
21:AA:480:U:H5''	21:AA:481:G:OP2	1.96	0.66
24:DC:141:HIS:HB2	24:DC:190:THR:O	1.96	0.66
22:DA:2654:A:H4'	22:DA:2655:G:OP1	1.95	0.66
5:CF:11:HIS:CD2	5:CF:54:LEU:HD21	2.31	0.66
30:BI:42:ASN:HA	30:BI:45:THR:HB	1.78	0.66
1:CB:56:LEU:HD22	1:CB:59:ILE:HD11	1.78	0.66
31:BJ:55:ILE:HD11	31:BJ:57:LEU:HD22	1.78	0.66
41:DT:6:ARG:O	41:DT:9:LYS:HD2	1.95	0.66
22:DA:2515:C:OP1	31:DJ:81:ILE:HG22	1.95	0.66
22:DA:91:A:HO2'	22:DA:92:U:H6	1.42	0.66
21:AA:1441:A:H62	21:AA:1461:G:H21	1.42	0.66
22:DA:878:A:H4'	22:DA:898:C:H42	1.59	0.66
3:AD:100:VAL:O	3:AD:100:VAL:HG12	1.96	0.66
14:AO:72:LYS:HA	14:AO:72:LYS:HE2	1.78	0.66
31:BJ:44:TYR:HA	38:BQ:59:LEU:HD21	1.77	0.65
22:DA:1127:A:O2'	22:DA:1128:G:H5'	1.96	0.65
21:AA:843:U:H2'	21:AA:844:G:H5'	1.79	0.65
21:AA:1143:G:H2'	21:AA:1144:G:H8	1.62	0.65
48:B0:9:ARG:CG	48:B0:9:ARG:HH21	2.07	0.65
22:DA:627:A:O2'	22:DA:628:G:C8	2.49	0.65
22:BA:2502:G:H5'	22:BA:2503:A:C5'	2.26	0.65
39:DR:82:HIS:O	39:DR:82:HIS:CG	2.48	0.65
29:BH:41:LYS:HA	29:BH:44:ILE:HG12	1.77	0.65
32:BK:36:GLY:HA2	32:BK:62:VAL:O	1.96	0.65
25:DD:29:VAL:HB	25:DD:98:VAL:CG1	2.25	0.65
53:CA:738:C:H2'	53:CA:739:C:H6	1.59	0.65
12:CM:82:LEU:HD21	18:CS:60:PHE:HB3	1.76	0.65
22:BA:2733:A:O5'	22:BA:2733:A:H8	1.78	0.65

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:2860:A:H8	22:DA:2860:A:O5'	1.79	0.65
33:BL:78:ARG:HB3	33:BL:113:ALA:HB3	1.78	0.65
53:CA:84:U:O2'	53:CA:85:U:H5'	1.95	0.65
21:AA:270:A:H2'	21:AA:271:C:C6	2.31	0.65
51:B3:44:ARG:N	51:B3:45:PRO:HD2	2.10	0.65
22:DA:2093:G:O6	22:DA:2225:A:C8	2.49	0.65
27:DF:147:ARG:HG2	27:DF:149:ARG:HH12	1.62	0.65
22:DA:686:U:OP2	57:DA:3703:HOH:O	2.14	0.65
22:DA:594:U:H2'	22:DA:595:C:C6	2.31	0.65
3:AD:1:ALA:HB2	21:AA:404:G:N7	2.10	0.65
1:AB:53:LEU:HA	1:AB:56:LEU:HB3	1.77	0.65
22:DA:183:C:H2'	22:DA:184:C:H5'	1.77	0.65
21:AA:486:U:O2'	21:AA:487:A:H5'	1.97	0.65
22:BA:7:G:H2'	22:BA:8:C:C6	2.32	0.65
22:DA:1453:A:H4'	22:DA:1454:C:OP2	1.96	0.65
12:AM:2:ARG:O	12:AM:3:ILE:HG12	1.96	0.65
53:CA:151:A:H2'	53:CA:152:A:O4'	1.96	0.65
2:AC:34:SER:O	2:AC:38:VAL:HG13	1.96	0.65
22:BA:1428:C:N4	22:BA:1570:A:OP2	2.29	0.65
38:BQ:65:ASN:HD21	38:BQ:69:ARG:HH22	1.43	0.65
8:CI:58:GLU:HG3	8:CI:59:LYS:H	1.60	0.65
25:DD:117:GLY:HA2	25:DD:164:GLN:OE1	1.96	0.65
35:DN:67:PHE:HE2	35:DN:73:ASN:HD21	1.43	0.65
50:D2:45:SER:C	50:D2:46:LYS:HD2	2.16	0.65
21:AA:982:U:H4'	21:AA:983:A:C5'	2.26	0.65
37:BP:80:VAL:HG12	37:BP:81:ASP:N	2.08	0.65
31:BJ:18:VAL:HG22	31:BJ:140:LEU:CD1	2.26	0.65
5:CF:42:TRP:HE1	5:CF:61:LEU:HD23	1.61	0.65
22:DA:876:C:H3'	22:DA:877:A:C8	2.31	0.65
22:DA:422:A:H2'	22:DA:423:A:C8	2.31	0.65
7:AH:21:LYS:HE2	7:AH:21:LYS:HA	1.79	0.65
38:DQ:50:ARG:N	38:DQ:50:ARG:HD2	2.10	0.65
36:DO:17:LYS:HE3	36:DO:17:LYS:O	1.95	0.65
22:DA:740:C:C5'	22:DA:1784:A:H3'	2.26	0.65
1:AB:165:ALA:HB2	1:AB:186:VAL:HG12	1.77	0.65
26:DE:60:TRP:CZ2	26:DE:71:GLY:HA2	2.32	0.65
22:BA:243:U:O2'	22:BA:244:A:H5'	1.95	0.65
27:BF:39:VAL:CG1	27:BF:49:LEU:HD13	2.26	0.65
1:CB:160:LEU:HB2	1:CB:182:VAL:HG12	1.78	0.65
21:AA:109:A:H61	21:AA:324:G:H1'	1.58	0.65
22:BA:819:A:OP2	22:BA:1187:G:N2	2.21	0.65
28:BG:63:GLN:OE1	28:BG:63:GLN:HA	1.96	0.65

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
29:DH:132:PHE:CZ	29:DH:134:VAL:HB	2.30	0.65
53:CA:459:A:O2'	53:CA:460:A:H5'	1.96	0.65
24:DC:75:ALA:HB2	24:DC:95:TYR:CD1	2.31	0.65
42:DU:10:VAL:HG12	42:DU:71:ILE:HA	1.78	0.65
11:AL:34:THR:HG22	11:AL:35:ARG:NE	2.12	0.65
22:BA:2146:C:H4'	22:BA:2147:A:O5'	1.96	0.65
27:BF:9:ASP:O	27:BF:10:GLU:HB2	1.96	0.65
32:BK:61:VAL:HG22	32:BK:87:LEU:HD11	1.76	0.65
22:BA:1178:C:H2'	22:BA:1179:G:N7	2.12	0.65
21:AA:1007:U:C2'	21:AA:1008:U:H5''	2.26	0.65
22:BA:1655:A:H3'	22:BA:1656:C:H6	1.61	0.65
51:B3:53:ASP:HA	51:B3:56:LEU:HD23	1.77	0.65
22:DA:1490:A:H8	24:DC:73:ILE:HD12	1.61	0.65
29:DH:93:SER:CB	29:DH:121:VAL:HG21	2.27	0.65
53:CA:247:G:O6	53:CA:278:G:C6	2.49	0.65
2:CC:76:ILE:HA	2:CC:83:VAL:HG13	1.79	0.65
24:BC:140:VAL:HG11	24:BC:189:ALA:HB1	1.78	0.65
12:AM:10:ASP:OD1	12:AM:44:ILE:HD13	1.97	0.65
22:DA:45:G:H5'	22:DA:46:G:H5'	1.77	0.65
36:BO:67:ASN:O	36:BO:69:ASP:N	2.29	0.65
16:CQ:25:GLU:HG2	16:CQ:40:THR:HG22	1.77	0.65
8:CI:10:ARG:HG3	8:CI:14:SER:O	1.97	0.65
24:DC:77:VAL:HG23	24:DC:111:ALA:HA	1.79	0.65
8:AI:51:LEU:HB3	8:AI:56:MET:HG2	1.77	0.65
10:AK:19:VAL:HG22	10:AK:82:GLU:HG2	1.79	0.65
21:AA:1414:U:H2'	21:AA:1415:G:C8	2.32	0.65
53:CA:143:A:H2'	53:CA:143:A:N3	2.11	0.65
22:DA:1951:U:H2'	22:DA:1953:A:OP2	1.97	0.65
25:BD:104:VAL:O	25:BD:177:VAL:HG21	1.97	0.65
33:BL:27:LEU:CD1	33:BL:27:LEU:H	1.98	0.65
22:DA:1714:U:H3'	22:DA:1715:G:C5'	2.27	0.65
1:CB:114:LYS:HE3	1:CB:151:LYS:HB2	1.77	0.65
22:DA:1965:C:C5'	22:DA:1966:A:H5''	2.26	0.65
53:CA:1326:U:H2'	53:CA:1327:C:C6	2.31	0.65
5:AF:98:GLU:HG3	5:AF:99:ALA:N	2.11	0.65
36:DO:30:ARG:HA	36:DO:35:ILE:HD13	1.77	0.65
52:D4:3:VAL:O	52:D4:4:ARG:HB2	1.95	0.65
21:AA:1151:A:O2'	21:AA:1152:A:H8	1.80	0.65
29:BH:82:SER:O	29:BH:83:LYS:HB2	1.97	0.65
26:DE:119:ILE:HG13	26:DE:119:ILE:O	1.96	0.65
2:AC:196:GLY:H	21:AA:1057:G:H4'	1.61	0.65
22:DA:617:G:O2'	22:DA:618:G:O4'	2.12	0.65

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:BA:2728:U:O2'	22:BA:2729:G:C5'	2.43	0.65
22:DA:1091:G:O2'	22:DA:1092:C:O4'	2.14	0.65
22:DA:2720:U:H5''	37:DP:52:ARG:HH21	1.60	0.65
22:DA:79:C:H2'	22:DA:80:G:O4'	1.96	0.65
27:BF:68:LYS:HD2	27:BF:68:LYS:N	2.10	0.65
39:DR:27:ILE:HG22	39:DR:28:ALA:N	2.12	0.65
34:BM:40:ARG:HB2	34:BM:93:VAL:CG2	2.26	0.65
2:CC:36:PHE:CE1	13:CN:91:GLU:HB3	2.31	0.65
1:AB:209:VAL:HG23	1:AB:210:THR:H	1.62	0.65
5:CF:43:GLY:HA2	5:CF:58:HIS:CE1	2.32	0.65
50:D2:15:SER:O	50:D2:16:HIS:ND1	2.30	0.65
53:CA:142:G:C2	53:CA:143:A:H1'	2.32	0.65
53:CA:708:C:H2'	53:CA:709:U:H6	1.61	0.65
22:BA:907:G:C2'	22:BA:908:C:H5'	2.27	0.65
22:DA:370:G:N1	22:DA:424:G:C5	2.65	0.65
26:DE:111:GLU:HA	26:DE:114:ARG:HE	1.60	0.65
25:DD:51:THR:CG2	25:DD:76:GLY:HA3	2.26	0.65
22:BA:2062:A:O2'	22:BA:2063:C:H5'	1.97	0.65
4:CE:24:VAL:HG23	4:CE:26:GLY:H	1.62	0.65
37:BP:50:ARG:HD3	37:BP:56:SER:CB	2.19	0.65
22:DA:1373:A:H2'	22:DA:1374:G:O4'	1.97	0.65
22:DA:1071:G:N7	22:DA:1089:A:C5	2.65	0.65
21:AA:345:C:H3'	37:BP:33:GLU:OE1	1.96	0.65
22:DA:275:C:H2'	22:DA:276:U:O4'	1.97	0.65
24:DC:72:GLY:O	24:DC:73:ILE:HD13	1.97	0.65
22:DA:1265:A:H4'	22:DA:1266:G:O5'	1.94	0.65
40:DS:86:MET:CE	40:DS:87:PRO:HD2	2.26	0.65
26:BE:47:LYS:HB3	26:BE:51:GLU:HG3	1.77	0.65
24:BC:259:ASN:O	24:BC:260:LYS:HB2	1.95	0.65
38:DQ:16:ILE:HG23	38:DQ:38:VAL:HG21	1.78	0.65
22:DA:170:U:H2'	22:DA:171:U:H6	1.62	0.65
33:BL:61:LEU:O	51:B3:12:ARG:HD3	1.95	0.65
3:AD:64:TYR:CD1	3:AD:93:LEU:HD13	2.32	0.65
22:DA:1554:U:H5''	22:DA:1555:G:OP2	1.96	0.65
22:DA:604:G:HO2'	22:DA:605:G:H5'	1.60	0.65
32:BK:111:LYS:H	32:BK:111:LYS:CE	2.05	0.65
22:DA:784:G:O2'	22:DA:785:G:H8	1.79	0.65
53:CA:960:U:C5'	53:CA:961:U:H5''	2.27	0.65
8:CI:6:TYR:CE1	53:CA:1147:C:H4'	2.31	0.65
7:AH:91:LEU:HD23	7:AH:92:PRO:HD2	1.79	0.65
45:DX:31:ASN:HD22	45:DX:31:ASN:N	1.95	0.65
38:DQ:101:ASP:HB2	39:DR:2:TYR:OH	1.95	0.65

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
24:DC:128:THR:CG2	24:DC:188:ARG:HB3	2.27	0.65
53:CA:501:C:H1'	53:CA:549:C:H1'	1.79	0.65
1:AB:79:VAL:O	1:AB:83:ALA:HB3	1.97	0.65
38:DQ:34:ALA:O	38:DQ:38:VAL:HG23	1.97	0.65
29:BH:38:PRO:HB2	29:BH:40:THR:HG23	1.77	0.65
3:AD:167:PRO:HB2	3:AD:170:LEU:HD11	1.78	0.65
22:BA:2714:G:P	57:BA:3555:HOH:O	2.55	0.65
40:BS:63:GLY:O	40:BS:64:ALA:HB3	1.97	0.65
22:BA:2052:A:O4'	25:BD:147:GLY:HA3	1.97	0.65
25:BD:182:ALA:O	25:BD:184:ARG:N	2.30	0.65
22:DA:67:U:H2'	22:DA:68:G:H8	1.62	0.65
42:BU:73:ASN:ND2	42:BU:76:THR:HG23	2.12	0.65
21:AA:258:G:N2	21:AA:259:G:H1'	2.12	0.65
44:DW:39:GLN:HG2	44:DW:42:THR:HB	1.78	0.65
54:DB:15:A:OP1	54:DB:108:A:H5'	1.98	0.65
20:CU:19:LYS:N	20:CU:19:LYS:NZ	2.45	0.65
41:BT:29:THR:HB	41:BT:86:THR:HG22	1.79	0.65
34:DM:17:ASN:OD1	34:DM:95:LEU:HB3	1.97	0.65
53:CA:1147:C:HO2'	53:CA:1148:U:H6	1.43	0.65
22:BA:2813:A:C2	22:BA:2887:A:N6	2.64	0.65
22:DA:513:A:H2'	22:DA:514:A:C8	2.32	0.65
11:CL:29:LYS:O	11:CL:80:LEU:HD12	1.97	0.65
53:CA:1078:U:C5	53:CA:1079:G:C5	2.85	0.65
2:CC:39:ARG:HG2	2:CC:54:ILE:HD13	1.79	0.65
31:DJ:37:ARG:HG3	31:DJ:118:MET:SD	2.36	0.65
42:BU:52:ASN:C	42:BU:54:PRO:HD2	2.18	0.65
39:BR:90:ARG:O	39:BR:91:GLN:HB3	1.96	0.65
36:BO:3:LYS:HG3	36:BO:4:LYS:H	1.62	0.65
3:CD:8:LEU:HD23	53:CA:429:U:H3'	1.78	0.64
41:BT:11:LEU:HG	41:BT:46:ALA:HB1	1.80	0.64
22:DA:1906:G:H8	22:DA:1929:G:H2'	1.62	0.64
18:CS:36:ARG:HD3	53:CA:1318:A:O2'	1.97	0.64
35:DN:63:ARG:O	35:DN:67:PHE:HB2	1.97	0.64
32:BK:76:VAL:HB	37:BP:72:VAL:HG22	1.79	0.64
6:CG:4:ARG:NH2	6:CG:6:ILE:HB	2.12	0.64
10:CK:51:PHE:O	10:CK:52:ARG:HD2	1.97	0.64
45:DX:63:ILE:CD1	45:DX:64:ASP:H	2.09	0.64
22:BA:1416:G:O2'	22:BA:1417:C:H6	1.80	0.64
22:BA:1248:G:OP2	26:BE:44:ARG:NH1	2.30	0.64
3:AD:16:THR:HG22	3:AD:17:ASP:H	1.62	0.64
22:BA:1945:G:H2'	22:BA:1946:U:C6	2.31	0.64
2:AC:57:GLU:HG2	2:AC:64:ARG:HB3	1.79	0.64

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
52:B4:37:GLN:O	52:B4:37:GLN:HG2	1.97	0.64
10:CK:127:ARG:HB3	53:CA:796:C:OP1	1.98	0.64
22:DA:1071:G:O6	22:DA:1091:G:N7	2.30	0.64
22:BA:528:A:H5''	31:BJ:116:ARG:HH22	1.62	0.64
22:DA:674:G:O3'	26:DE:60:TRP:HH2	1.80	0.64
53:CA:239:U:C6	53:CA:239:U:C5'	2.78	0.64
22:DA:1866:A:H2'	22:DA:1867:G:H8	1.60	0.64
16:AQ:46:HIS:HB2	16:AQ:66:LEU:HD12	1.78	0.64
22:DA:27:G:H1'	22:DA:513:A:H61	1.60	0.64
24:BC:180:MET:HG3	24:BC:268:ARG:NH1	2.12	0.64
53:CA:1031:C:H5'	53:CA:1032:G:H5''	1.78	0.64
22:DA:1635:A:O2'	22:DA:1636:U:H5'	1.96	0.64
22:DA:870:U:H2'	22:DA:871:U:H5'	1.79	0.64
19:AT:75:LYS:HD2	21:AA:186:C:O4'	1.96	0.64
21:AA:426:U:H2'	21:AA:427:U:C6	2.32	0.64
33:BL:101:ILE:CG2	33:BL:102:GLY:N	2.61	0.64
10:CK:111:ASP:H	20:CU:3:ILE:N	1.95	0.64
22:BA:1059:G:C6	22:BA:1060:U:N3	2.64	0.64
20:AU:10:PRO:HB3	2:CC:74:ILE:HD12	1.79	0.64
22:DA:1055:G:N3	22:DA:1055:G:H2'	2.11	0.64
22:DA:1328:A:H3'	22:DA:1330:C:H41	1.62	0.64
34:DM:35:ALA:HB3	34:DM:99:GLY:H	1.61	0.64
10:CK:27:ASN:ND2	10:CK:27:ASN:H	1.95	0.64
21:AA:61:G:H2'	21:AA:62:U:C6	2.32	0.64
41:DT:29:THR:H	41:DT:87:LEU:CB	2.11	0.64
22:DA:1962:C:H4'	22:DA:1963:U:OP1	1.98	0.64
22:DA:1639:C:C2'	22:DA:1640:A:H5''	2.25	0.64
22:DA:1518:C:H2'	22:DA:1519:G:O4'	1.96	0.64
3:AD:23:GLY:HA3	21:AA:409:U:OP1	1.97	0.64
22:BA:357:C:H2'	22:BA:358:U:C6	2.32	0.64
22:BA:27:G:O2'	22:BA:28:A:P	2.55	0.64
53:CA:68:G:H5'	53:CA:171:A:O2'	1.97	0.64
21:AA:1094:G:HO2'	21:AA:1095:U:P	2.19	0.64
38:BQ:68:ALA:HB1	38:BQ:73:ILE:HG23	1.78	0.64
31:BJ:130:HIS:HD2	31:BJ:132:HIS:H	1.43	0.64
22:DA:1313:U:C2'	22:DA:1313:U:O2	2.43	0.64
8:CI:35:GLU:HA	8:CI:39:GLY:CA	2.26	0.64
26:DE:130:LYS:CB	26:DE:133:LEU:HB3	2.26	0.64
34:DM:34:LYS:HB2	34:DM:131:VAL:CG2	2.27	0.64
22:BA:1510:G:H2'	22:BA:1511:G:H8	1.62	0.64
9:AJ:57:VAL:O	9:AJ:58:ASN:HB2	1.96	0.64
22:DA:1474:U:C2'	22:DA:1475:G:H5'	2.28	0.64

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AB:20:ARG:HA	1:AB:20:ARG:NH1	2.12	0.64
7:AH:88:LYS:HG3	7:AH:89:ASP:N	2.13	0.64
19:CT:26:MET:HE3	19:CT:56:ILE:HD13	1.78	0.64
46:DY:1:MET:HG2	46:DY:4:LYS:HZ1	1.62	0.64
32:DK:99:ILE:HD12	32:DK:118:LEU:HB2	1.78	0.64
22:DA:1157:G:O2'	22:DA:1158:C:H5'	1.97	0.64
22:BA:1476:U:OP2	22:BA:1476:U:H6	1.80	0.64
22:BA:1669:A:N3	22:BA:1669:A:H2'	2.11	0.64
12:AM:27:THR:HG21	21:AA:1328:C:H5''	1.77	0.64
16:AQ:37:ILE:H	16:AQ:37:ILE:HD12	1.63	0.64
22:DA:1387:A:N6	22:DA:1401:G:C6	2.66	0.64
19:AT:25:SER:O	19:AT:28:ARG:HG3	1.98	0.64
38:DQ:60:TRP:O	38:DQ:64:ILE:HG12	1.97	0.64
9:CJ:15:HIS:HA	9:CJ:18:ILE:CG2	2.26	0.64
37:BP:77:SER:HG	37:BP:79:VAL:HG13	1.59	0.64
22:DA:1062:G:C8	22:DA:1088:A:H8	2.14	0.64
41:DT:28:ASN:HB2	41:DT:87:LEU:HB3	1.78	0.64
37:BP:85:VAL:O	37:BP:86:LYS:HB2	1.98	0.64
24:DC:127:ASN:O	24:DC:190:THR:HA	1.98	0.64
24:BC:16:VAL:H	24:BC:203:VAL:CG1	2.11	0.64
22:DA:2230:G:H2'	22:DA:2231:U:C6	2.32	0.64
22:DA:1708:C:H2'	22:DA:1709:U:H6	1.63	0.64
24:DC:166:ARG:HB2	24:DC:171:VAL:HG22	1.80	0.64
2:AC:21:TRP:CD1	2:AC:58:ARG:HG2	2.32	0.64
22:DA:1635:A:H2'	22:DA:1636:U:H6	1.62	0.64
36:DO:13:ARG:O	36:DO:17:LYS:HB2	1.97	0.64
28:DG:10:VAL:HB	28:DG:14:VAL:HG21	1.79	0.64
3:CD:148:ALA:O	3:CD:151:GLN:HB2	1.97	0.64
22:DA:1178:C:H2'	22:DA:1179:G:O4'	1.98	0.64
4:CE:148:SER:H	4:CE:151:MET:HE3	1.63	0.64
38:BQ:91:ARG:CZ	39:BR:11:GLN:H	2.10	0.64
44:BW:50:VAL:O	44:BW:52:CYS:N	2.26	0.64
8:AI:6:TYR:CG	8:AI:7:GLY:N	2.65	0.64
10:AK:96:ILE:HG13	10:AK:97:ARG:N	2.13	0.64
53:CA:765:G:C8	53:CA:812:G:C2	2.86	0.64
22:DA:1071:G:N7	22:DA:1089:A:C6	2.66	0.64
53:CA:1299:A:O2'	53:CA:1300:G:H4'	1.98	0.64
22:DA:1965:C:H3'	22:DA:1966:A:H5''	1.80	0.64
22:DA:2726:A:O2'	22:DA:2727:A:H5'	1.97	0.64
21:AA:86:G:N2	21:AA:87:C:N4	2.45	0.64
53:CA:820:U:H4'	53:CA:821:G:OP2	1.97	0.64
24:DC:94:LEU:HA	24:DC:100:ARG:HG2	1.80	0.64

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:AA:1218:C:H2'	21:AA:1219:A:C8	2.33	0.64
22:BA:1859:U:H2'	22:BA:1860:G:H8	1.62	0.64
25:DD:149:ASN:O	25:DD:151:THR:N	2.30	0.64
33:DL:20:GLY:HA2	33:DL:28:GLY:HA2	1.78	0.64
39:BR:51:VAL:HB	39:BR:52:PRO:HD2	1.80	0.64
53:CA:1048:G:H21	53:CA:1214:C:H5	1.44	0.64
37:BP:50:ARG:CB	37:BP:57:ALA:N	2.54	0.64
44:BW:30:VAL:O	44:BW:30:VAL:HG22	1.97	0.64
22:DA:1312:U:H4'	22:DA:1313:U:O5'	1.98	0.64
32:DK:18:ARG:HB2	32:DK:45:GLU:HB2	1.78	0.64
22:DA:2056:G:C2	22:DA:2057:G:C8	2.86	0.64
28:DG:163:TYR:N	28:DG:163:TYR:HD2	1.95	0.64
24:DC:28:PRO:HB3	24:DC:62:ARG:HH22	1.62	0.64
51:D3:41:ARG:CG	51:D3:41:ARG:HH21	2.10	0.64
22:BA:2310:C:H2'	27:BF:76:PHE:HE1	1.63	0.64
21:AA:792:A:H4'	21:AA:793:U:O5'	1.98	0.64
53:CA:752:G:H1'	53:CA:754:C:H41	1.63	0.64
25:DD:33:ARG:HH21	25:DD:51:THR:HG22	1.63	0.64
22:DA:2275:C:O2'	34:DM:84:LYS:HA	1.97	0.64
26:DE:79:ARG:HG2	26:DE:80:SER:H	1.61	0.64
1:AB:99:MET:HA	1:AB:106:VAL:HG21	1.78	0.64
21:AA:1046:A:O2'	21:AA:1047:G:C5'	2.45	0.64
6:CG:10:LYS:N	6:CG:10:LYS:HE3	2.13	0.64
8:AI:117:LEU:HD23	8:AI:123:ARG:HD3	1.80	0.64
43:DV:30:ILE:HB	43:DV:38:LEU:HB3	1.79	0.64
37:BP:50:ARG:CG	37:BP:57:ALA:N	2.56	0.64
2:CC:190:THR:HG22	2:CC:191:THR:N	2.12	0.64
19:AT:68:LYS:HB2	19:AT:68:LYS:NZ	2.12	0.64
41:BT:40:LYS:CA	41:BT:43:ILE:HG23	2.27	0.64
22:BA:1779:U:C5	22:BA:1784:A:N7	2.61	0.64
31:BJ:111:LYS:CD	31:BJ:112:GLY:H	2.07	0.64
53:CA:1201:A:H1'	53:CA:1202:U:OP2	1.98	0.64
37:BP:67:GLU:HG3	37:BP:68:GLY:H	1.63	0.64
43:DV:80:HIS:HD2	43:DV:82:TYR:H	1.43	0.64
53:CA:1348:U:HO2'	53:CA:1349:A:H8	1.46	0.64
22:DA:13:A:O2'	22:DA:15:G:N7	2.31	0.64
5:AF:36:ILE:HG22	5:AF:64:VAL:HG22	1.80	0.64
22:DA:2716:C:H2'	22:DA:2717:C:H6	1.62	0.64
25:DD:112:THR:HG22	25:DD:113:SER:N	2.13	0.64
37:DP:56:SER:O	37:DP:75:THR:HG22	1.98	0.64
53:CA:802:A:C2'	53:CA:803:G:H5'	2.27	0.64
33:DL:117:THR:HG22	33:DL:118:THR:H	1.63	0.64

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
53:CA:87:C:O2'	53:CA:88:U:H4'	1.98	0.64
22:BA:2017:U:H4'	48:B0:4:GLN:O	1.98	0.64
22:BA:1414:C:C4	22:BA:1415:U:H5	2.16	0.64
41:BT:61:LEU:C	41:BT:61:LEU:HD12	2.18	0.64
4:CE:38:VAL:HG12	4:CE:39:GLY:N	2.13	0.64
19:CT:74:HIS:O	19:CT:78:LEU:HB2	1.97	0.64
22:DA:2422:C:H2'	22:DA:2423:U:H5''	1.79	0.64
54:DB:41:G:O6	27:DF:68:LYS:HD3	1.97	0.64
49:D1:8:ILE:HD11	49:D1:52:LYS:HE3	1.79	0.64
44:BW:39:GLN:C	44:BW:41:GLY:N	2.47	0.64
9:CJ:8:ILE:HG22	9:CJ:100:ILE:HG12	1.79	0.64
22:DA:2313:C:O2'	22:DA:2314:A:H8	1.73	0.64
22:DA:379:G:C6	22:DA:396:G:O6	2.51	0.64
52:B4:9:LYS:N	52:B4:9:LYS:CD	2.60	0.64
22:DA:855:G:H21	44:DW:23:LYS:HZ2	1.46	0.64
22:DA:128:C:H6	22:DA:128:C:H5''	1.62	0.64
32:BK:71:ARG:CB	32:BK:72:PRO:HD3	2.26	0.64
21:AA:49:U:O4	21:AA:365:U:H5	1.80	0.64
26:DE:5:LEU:HA	26:DE:120:VAL:HG13	1.80	0.64
31:BJ:13:ARG:O	31:BJ:14:ASP:CB	2.45	0.64
37:DP:50:ARG:HA	37:DP:57:ALA:O	1.98	0.64
22:DA:1489:C:H4'	22:DA:1490:A:OP1	1.98	0.64
3:CD:144:ILE:HD12	3:CD:177:MET:HB3	1.80	0.64
53:CA:84:U:N3	53:CA:87:C:H1'	2.12	0.64
36:BO:2:ASP:HB3	36:BO:5:SER:HB2	1.80	0.64
53:CA:154:U:H2'	53:CA:155:A:H5'	1.79	0.64
22:BA:284:U:H2'	22:BA:285:G:H8	1.63	0.64
27:BF:35:LEU:HD12	27:BF:88:VAL:HB	1.78	0.64
21:AA:197:A:O2'	21:AA:198:G:C8	2.50	0.64
22:DA:1345:C:O2'	22:DA:1346:G:H8	1.69	0.64
31:DJ:13:ARG:HG2	31:DJ:51:GLY:O	1.98	0.64
41:DT:43:ILE:HG21	41:DT:58:VAL:HG11	1.80	0.64
42:DU:81:ARG:HD2	42:DU:81:ARG:N	2.13	0.64
32:BK:18:ARG:H	32:BK:45:GLU:HB2	1.63	0.64
22:DA:2714:G:H2'	22:DA:2715:C:C6	2.33	0.64
20:AU:3:ILE:HA	20:AU:19:LYS:HZ1	1.62	0.64
21:AA:16:A:O2'	21:AA:17:U:H5'	1.98	0.64
25:DD:38:LYS:HB3	25:DD:38:LYS:HZ3	1.62	0.64
9:AJ:14:ASP:CB	9:AJ:17:LEU:HB3	2.27	0.64
36:BO:88:LYS:O	36:BO:89:ASP:HB2	1.98	0.64
22:BA:2286:G:O6	49:B1:22:THR:HG21	1.97	0.64
24:BC:20:ASN:HD21	24:BC:22:GLU:HG2	1.63	0.64

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:2001:C:H4'	22:DA:2689:U:H2'	1.79	0.64
53:CA:654:G:H2'	53:CA:655:A:C8	2.33	0.64
33:BL:40:SER:O	33:BL:41:ARG:HB2	1.97	0.64
21:AA:1285:A:H5'	21:AA:1286:U:C4	2.33	0.64
22:DA:2893:A:H4'	22:DA:2894:G:O5'	1.97	0.64
22:DA:1555:G:N2	22:DA:1556:C:C2	2.66	0.63
22:DA:2147:A:OP1	22:DA:2147:A:H4'	1.98	0.63
53:CA:1316:G:N2	53:CA:1318:A:H3'	2.12	0.63
53:CA:1144:G:N2	53:CA:1146:A:H62	1.96	0.63
14:CO:38:LEU:HD12	14:CO:41:HIS:HB3	1.79	0.63
3:AD:68:GLU:CG	21:AA:545:C:H5'	2.28	0.63
53:CA:1190:G:O2'	53:CA:1191:A:P	2.54	0.63
24:BC:250:GLN:N	24:BC:250:GLN:HE21	1.96	0.63
1:CB:20:ARG:HH21	1:CB:38:HIS:CD2	2.16	0.63
45:BX:65:THR:O	45:BX:68:ALA:HB3	1.97	0.63
41:DT:5:GLU:HA	41:DT:8:LEU:HD12	1.80	0.63
26:DE:105:LEU:HD12	26:DE:200:LEU:HD11	1.80	0.63
22:DA:607:U:O4	22:DA:619:G:H2'	1.98	0.63
53:CA:47:C:O2'	53:CA:48:C:H5'	1.98	0.63
33:BL:27:LEU:N	33:BL:27:LEU:HD12	1.98	0.63
3:CD:32:LYS:HE3	53:CA:413:G:N1	2.13	0.63
37:DP:59:THR:OG1	37:DP:72:VAL:HG12	1.98	0.63
53:CA:664:G:N2	53:CA:741:G:H1	1.89	0.63
41:BT:32:LEU:HD23	41:BT:83:ALA:HB3	1.81	0.63
52:D4:7:VAL:HG13	52:D4:8:LYS:N	2.13	0.63
22:DA:1655:A:H2'	22:DA:1656:C:C6	2.33	0.63
22:DA:216:A:HO2'	22:DA:217:A:H8	0.73	0.63
7:CH:11:THR:HG21	53:CA:876:C:C1'	2.28	0.63
9:CJ:51:VAL:HB	13:CN:80:ARG:HB2	1.80	0.63
53:CA:1095:U:H2'	53:CA:1096:C:C6	2.33	0.63
22:BA:1495:A:H2'	22:BA:1496:A:C8	2.34	0.63
22:DA:370:G:C6	22:DA:424:G:N7	2.66	0.63
29:BH:76:GLU:HG2	29:BH:106:ALA:HB2	1.80	0.63
22:DA:1343:G:H2'	22:DA:1344:U:C5	2.32	0.63
22:BA:1289:C:H2'	22:BA:1290:C:H6	1.62	0.63
1:AB:119:GLN:C	1:AB:119:GLN:HE21	2.01	0.63
22:BA:2602:A:H4'	22:BA:2603:G:OP2	1.97	0.63
22:DA:2492:U:O2'	22:DA:2493:U:H5'	1.98	0.63
2:CC:120:THR:O	2:CC:120:THR:HG22	1.98	0.63
22:DA:284:U:H2'	22:DA:285:G:H8	1.62	0.63
42:BU:6:ARG:O	42:BU:24:VAL:HB	1.98	0.63
11:AL:74:GLN:HG3	11:AL:75:GLU:HG2	1.80	0.63

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
42:BU:85:ARG:HA	42:BU:91:LYS:O	1.97	0.63
31:DJ:57:LEU:HD11	31:DJ:129:GLU:H	1.64	0.63
19:AT:17:ARG:HG2	21:AA:322:C:O2'	1.99	0.63
22:DA:2285:C:H2'	22:DA:2286:G:H5''	1.81	0.63
45:BX:67:LEU:HD13	45:BX:77:TYR:CE1	2.33	0.63
6:CG:16:LYS:HE2	8:CI:45:MET:SD	2.39	0.63
8:CI:78:ILE:O	8:CI:82:ILE:HG13	1.99	0.63
20:AU:40:PRO:HA	20:AU:43:GLU:HB2	1.79	0.63
20:CU:39:LYS:H	20:CU:40:PRO:CD	2.11	0.63
22:DA:310:A:O2'	22:DA:311:A:H8	1.81	0.63
22:DA:2060:A:O2'	57:DA:3510:HOH:O	2.15	0.63
22:DA:528:A:C2	22:DA:2043:C:O5'	2.52	0.63
32:BK:19:VAL:HG23	32:BK:43:ILE:HA	1.80	0.63
26:BE:149:ILE:O	26:BE:188:MET:HA	1.98	0.63
53:CA:6:G:C2'	53:CA:6:G:N3	2.61	0.63
47:DZ:23:LEU:HD21	47:DZ:53:MET:HE1	1.81	0.63
53:CA:252:U:H6	53:CA:252:U:H5'	1.64	0.63
35:BN:1:MET:O	35:BN:2:ARG:HB2	1.98	0.63
22:DA:1812:U:H2'	22:DA:1813:G:H8	1.64	0.63
22:BA:1289:C:H2'	22:BA:1290:C:C6	2.33	0.63
22:BA:2478:A:H5'	52:B4:32:LYS:HD3	1.80	0.63
47:DZ:20:LYS:O	47:DZ:24:LEU:HD13	1.98	0.63
22:DA:1919:A:O2'	22:DA:1920:C:H5'	1.99	0.63
6:AG:53:SER:C	6:AG:55:LYS:H	2.01	0.63
40:BS:73:LYS:HB3	40:BS:106:VAL:HB	1.80	0.63
22:BA:1738:G:O2'	22:BA:1739:A:H8	1.81	0.63
53:CA:1229:A:O2'	53:CA:1230:C:O4'	2.12	0.63
22:DA:1130:U:O2'	22:DA:1131:G:H8	1.80	0.63
21:AA:121:U:H5''	21:AA:121:U:C6	2.27	0.63
21:AA:501:C:H1'	21:AA:549:C:H1'	1.79	0.63
54:DB:24:G:H1'	54:DB:27:C:H42	1.63	0.63
22:BA:1935:G:H1	22:BA:1962:C:H2'	1.64	0.63
29:DH:84:ALA:HA	29:DH:89:LYS:O	1.96	0.63
32:DK:2:ILE:HB	32:DK:33:ALA:HB3	1.79	0.63
22:DA:1635:A:H5'	22:DA:1635:A:C8	2.34	0.63
21:AA:903:G:H2'	21:AA:904:U:H6	1.61	0.63
57:BA:3662:HOH:O	25:BD:140:HIS:CE1	2.52	0.63
37:BP:83:ILE:HD13	37:BP:83:ILE:C	2.18	0.63
38:DQ:4:LYS:NZ	38:DQ:6:GLY:HA3	2.12	0.63
26:BE:83:VAL:HG12	26:BE:83:VAL:O	1.97	0.63
54:DB:67:G:HO2'	54:DB:68:C:H6	1.46	0.63
22:BA:1338:G:O2'	22:BA:1339:G:H5'	1.99	0.63

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:CU:38:GLU:HA	20:CU:41:THR:OG1	1.99	0.63
53:CA:1200:C:O2'	53:CA:1201:A:OP2	2.15	0.63
13:CN:62:ARG:HE	13:CN:69:PRO:HA	1.63	0.63
21:AA:374:A:H5''	21:AA:452:A:C2	2.32	0.63
21:AA:115:G:H4'	21:AA:116:A:O5'	1.98	0.63
22:BA:1187:G:H5''	39:BR:83:TYR:CE2	2.33	0.63
22:DA:1210:G:H5''	22:DA:1211:C:H3'	1.81	0.63
2:CC:10:ARG:HH21	2:CC:181:ILE:HB	1.64	0.63
22:DA:1826:G:C6	22:DA:1827:U:C4	2.86	0.63
22:DA:1827:U:H2'	22:DA:1828:G:O4'	1.98	0.63
2:AC:10:ARG:O	2:AC:13:ILE:O	2.16	0.63
8:AI:110:VAL:HG21	21:AA:1370:G:O5'	1.98	0.63
22:BA:2491:U:H5''	22:BA:2570:G:H5''	1.81	0.63
21:AA:946:A:H2'	21:AA:947:G:C8	2.34	0.63
3:AD:31:CYS:O	3:AD:32:LYS:HB2	1.97	0.63
21:AA:1127:G:O2'	21:AA:1128:C:H5'	1.97	0.63
53:CA:652:U:HO2'	53:CA:653:U:P	2.21	0.63
2:AC:137:VAL:HA	2:AC:148:ILE:HD13	1.79	0.63
22:DA:1439:A:H2	22:DA:1552:A:C6	2.06	0.63
22:DA:656:G:H2'	22:DA:657:U:C6	2.34	0.63
53:CA:1151:A:C6	53:CA:1152:A:N6	2.67	0.63
22:DA:1744:A:H3'	22:DA:1745:A:H8	1.63	0.63
22:DA:784:G:HO2'	22:DA:785:G:H8	1.46	0.63
27:DF:65:LEU:HD23	27:DF:65:LEU:H	1.64	0.63
27:DF:74:ALA:HB1	27:DF:76:PHE:CD2	2.33	0.63
22:DA:1062:G:C4	22:DA:1063:G:C8	2.86	0.63
1:CB:89:PHE:HB3	1:CB:149:GLY:O	1.98	0.63
32:DK:13:ASN:N	32:DK:13:ASN:HD22	1.92	0.63
22:DA:53:A:O2'	22:DA:54:G:H5'	1.98	0.63
21:AA:1278:G:O5'	21:AA:1279:G:H5'	1.98	0.63
22:DA:1816:C:H2'	24:DC:61:TYR:CZ	2.34	0.63
29:BH:130:VAL:HG23	29:BH:131:SER:H	1.64	0.63
24:BC:20:ASN:HD22	24:BC:20:ASN:C	2.02	0.63
49:B1:49:LYS:HG2	49:B1:50:GLU:H	1.64	0.63
5:AF:20:GLY:O	5:AF:24:ARG:HD3	1.98	0.63
22:BA:215:G:H4'	22:BA:216:A:OP1	1.98	0.63
11:CL:87:LYS:HG2	11:CL:87:LYS:O	1.99	0.63
53:CA:313:A:H2'	53:CA:314:C:C6	2.34	0.63
21:AA:70:U:O2'	21:AA:71:A:C8	2.51	0.63
22:DA:2742:G:OP1	52:D4:36:ARG:HD3	1.98	0.63
53:CA:977:A:H8	53:CA:1223:C:N3	1.97	0.63
22:DA:2234:G:C5	22:DA:2235:G:C8	2.86	0.63

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
32:BK:116:ILE:HD12	32:BK:117:SER:N	2.13	0.63
22:DA:1299:G:H22	22:DA:1640:A:H5'	1.64	0.63
21:AA:1063:C:H2'	21:AA:1064:G:H8	1.61	0.63
3:AD:60:VAL:O	3:AD:63:ILE:HG22	1.98	0.63
49:B1:22:THR:OG1	49:B1:23:THR:N	2.32	0.63
22:BA:2443:C:O2'	22:BA:2444:G:H5'	1.99	0.63
14:CO:16:ARG:HB2	14:CO:23:SER:HB2	1.81	0.63
40:DS:71:VAL:O	40:DS:71:VAL:HG13	1.98	0.63
53:CA:1052:U:H5''	53:CA:1053:G:OP2	1.98	0.63
31:BJ:43:GLU:O	31:BJ:44:TYR:C	2.37	0.63
22:DA:2429:G:H3'	22:DA:2429:G:OP2	1.99	0.63
22:DA:649:G:H2'	22:DA:650:C:C6	2.34	0.63
9:CJ:9:ARG:HH12	53:CA:1279:G:H5'	1.64	0.63
22:DA:2748:A:H1'	28:DG:66:THR:CG2	2.24	0.63
22:DA:2822:G:H2'	22:DA:2823:A:H5''	1.81	0.63
22:DA:2728:U:HO2'	22:DA:2729:G:H8	0.71	0.63
22:DA:71:A:H3'	22:DA:71:A:OP2	1.99	0.63
22:DA:861:A:H2'	22:DA:862:G:C8	2.34	0.63
22:DA:859:G:N2	22:DA:916:G:H2'	2.14	0.63
27:DF:147:ARG:O	27:DF:148:VAL:HG22	1.99	0.63
22:DA:574:A:H4'	22:DA:575:A:C5'	2.29	0.63
2:AC:190:THR:HG21	2:AC:195:ILE:HG13	1.80	0.63
43:BV:10:LYS:N	43:BV:10:LYS:HD3	2.13	0.63
26:DE:149:ILE:HG23	26:DE:188:MET:CA	2.28	0.63
53:CA:704:A:H2'	53:CA:705:G:H8	1.61	0.63
22:BA:2555:U:C5	22:BA:2556:C:C2	2.86	0.63
22:DA:185:G:H2'	22:DA:186:G:H8	1.63	0.63
22:DA:91:A:O2'	22:DA:92:U:H6	1.81	0.63
40:BS:59:GLU:HA	40:BS:64:ALA:CB	2.28	0.63
21:AA:1094:G:O2'	21:AA:1095:U:OP2	2.16	0.63
49:B1:7:LYS:HA	49:B1:23:THR:HG22	1.80	0.63
22:BA:1354:A:H2'	22:BA:1355:G:O4'	1.99	0.63
22:DA:2184:A:H2'	22:DA:2185:U:O4'	1.99	0.63
6:CG:2:ARG:HD3	53:CA:932:C:H5''	1.79	0.63
16:AQ:80:LYS:HB2	16:AQ:80:LYS:HZ3	1.64	0.63
30:BI:71:LYS:HG2	30:BI:72:THR:H	1.63	0.63
22:BA:2180:U:H2'	22:BA:2181:U:C5	2.34	0.63
36:BO:105:ALA:O	36:BO:106:LEU:HB3	1.98	0.63
39:DR:97:LYS:O	39:DR:97:LYS:HG2	1.99	0.63
22:DA:2331:G:H1'	44:DW:40:ARG:HB3	1.80	0.63
37:BP:50:ARG:HB2	37:BP:56:SER:HA	1.79	0.63
22:DA:624:C:O2'	22:DA:657:U:H5''	1.98	0.63

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:1716:U:O2'	22:DA:1717:A:H5'	1.99	0.63
52:D4:16:ILE:CG1	52:D4:25:VAL:HG22	2.24	0.63
41:DT:29:THR:N	41:DT:87:LEU:HB2	2.13	0.63
35:BN:70:THR:CB	35:BN:75:ILE:HD11	2.28	0.63
44:DW:8:SER:O	44:DW:9:THR:HB	1.99	0.63
32:BK:76:VAL:HB	37:BP:72:VAL:CG2	2.29	0.63
31:DJ:74:TYR:OH	31:DJ:100:VAL:HG13	1.98	0.63
34:BM:1:MET:O	34:BM:2:LEU:HB2	1.98	0.63
22:BA:1872:A:H2'	22:BA:1873:G:O4'	1.98	0.63
25:DD:133:THR:HG23	25:DD:134:HIS:N	2.14	0.63
15:CP:44:SER:H	15:CP:46:LYS:HZ2	1.47	0.63
22:BA:1682:G:C8	22:BA:1757:A:C2	2.86	0.63
12:CM:102:LYS:HA	53:CA:1226:C:H5	1.63	0.63
1:CB:9:LEU:HG	1:CB:10:LYS:H	1.64	0.63
22:DA:526:A:C6	22:DA:2626:C:H4'	2.33	0.63
22:DA:347:A:H2'	22:DA:348:A:C8	2.34	0.63
22:BA:1450:G:C6	22:BA:1451:C:N4	2.67	0.63
24:DC:79:ARG:HD3	24:DC:81:GLU:OE1	1.99	0.63
19:CT:34:VAL:HG21	19:CT:53:MET:HG2	1.80	0.63
31:BJ:25:LEU:HB2	31:BJ:62:VAL:CG2	2.28	0.63
28:DG:72:ASN:O	28:DG:76:ILE:HG12	1.99	0.63
29:DH:59:ALA:HA	29:DH:63:ALA:HB3	1.80	0.63
22:BA:2339:C:H2'	22:BA:2340:A:C8	2.33	0.63
22:DA:1967:C:H6	22:DA:1967:C:H5"	1.63	0.63
45:BX:52:ALA:O	45:BX:53:LYS:CB	2.46	0.63
38:BQ:91:ARG:NH2	38:BQ:93:ILE:HD13	2.13	0.62
22:DA:247:G:C5	22:DA:249:C:H1'	2.34	0.62
22:DA:246:C:H2'	22:DA:247:G:H5'	1.81	0.62
5:AF:16:GLU:HG2	3:CD:191:SER:CB	2.13	0.62
26:DE:24:ASN:HB3	26:DE:27:LEU:HB3	1.79	0.62
9:CJ:5:ARG:HH21	9:CJ:77:VAL:HG13	1.64	0.62
27:DF:32:LYS:HB3	27:DF:156:THR:HB	1.80	0.62
22:DA:478:A:N6	22:DA:480:A:C6	2.67	0.62
21:AA:1123:U:H5"	21:AA:1124:G:OP2	1.99	0.62
33:DL:123:ARG:HA	33:DL:143:GLU:HB3	1.81	0.62
21:AA:1240:U:H3'	21:AA:1241:G:C5'	2.28	0.62
22:BA:2887:A:H2'	22:BA:2887:A:N3	2.13	0.62
53:CA:1090:U:H2'	53:CA:1091:U:H6	1.64	0.62
11:CL:97:VAL:O	11:CL:97:VAL:HG23	1.98	0.62
21:AA:250:A:H4'	21:AA:251:G:O5'	1.99	0.62
46:DY:19:LEU:HA	46:DY:22:LEU:HB2	1.80	0.62
32:DK:101:GLY:O	32:DK:120:PRO:HB3	1.99	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:AI:34:LEU:HD11	8:AI:47:VAL:HG21	1.80	0.62
9:AJ:26:VAL:O	9:AJ:30:LYS:HG2	1.98	0.62
22:DA:2902:C:H2'	22:DA:2903:U:O4'	1.99	0.62
22:BA:747:U:C5	22:BA:2613:U:C5	2.87	0.62
35:BN:38:LEU:HB3	35:BN:39:PRO:HD3	1.81	0.62
22:BA:1528:A:H2'	22:BA:1529:G:O4'	1.99	0.62
15:AP:57:ILE:O	15:AP:61:VAL:HG23	1.99	0.62
54:DB:110:C:O2'	54:DB:111:U:H5'	1.98	0.62
53:CA:994:A:N6	53:CA:1216:A:H5'	2.14	0.62
20:CU:16:ARG:CG	20:CU:19:LYS:HG2	2.21	0.62
22:BA:924:G:H4'	44:BW:24:ARG:HH21	1.65	0.62
22:DA:1311:G:H21	22:DA:1603:A:H62	1.44	0.62
22:DA:1714:U:H3'	22:DA:1715:G:H5'	1.80	0.62
22:DA:739:A:HO2'	22:DA:740:C:H5	1.43	0.62
53:CA:663:A:O2'	53:CA:664:G:H5'	1.99	0.62
20:AU:36:PHE:HD1	20:AU:39:LYS:HB3	1.63	0.62
22:DA:1125:G:H4'	52:D4:37:GLN:NE2	2.15	0.62
22:DA:2657:A:H2'	22:DA:2658:C:H6	1.63	0.62
53:CA:1365:G:O2'	53:CA:1366:C:H5'	1.98	0.62
18:CS:77:ARG:NH1	53:CA:1225:A:H4'	2.14	0.62
21:AA:374:A:OP1	21:AA:452:A:N1	2.32	0.62
27:BF:40:GLY:HA2	27:BF:84:ILE:HD11	1.80	0.62
21:AA:499:A:O2'	21:AA:500:G:C8	2.50	0.62
24:DC:173:LEU:HD22	24:DC:181:ARG:O	1.99	0.62
22:DA:1181:U:H2'	22:DA:1182:G:H8	1.64	0.62
53:CA:423:G:H2'	53:CA:424:G:O4'	1.98	0.62
16:AQ:29:LYS:HB2	16:AQ:36:PHE:CE1	2.34	0.62
37:DP:25:VAL:HA	37:DP:85:VAL:HA	1.81	0.62
22:BA:364:C:H2'	22:BA:365:U:C6	2.34	0.62
3:CD:89:LEU:HD23	3:CD:199:ILE:HD11	1.81	0.62
12:AM:78:ARG:O	12:AM:82:LEU:HG	1.97	0.62
22:BA:2689:U:H4'	22:BA:2690:U:OP2	1.98	0.62
17:CR:72:ARG:H	17:CR:72:ARG:NE	1.92	0.62
16:AQ:18:LYS:CA	16:AQ:47:ASP:HB2	2.23	0.62
22:DA:1277:G:H5'	35:DN:20:MET:HE3	1.79	0.62
41:BT:39:THR:O	41:BT:40:LYS:HB2	1.99	0.62
52:D4:36:ARG:HG2	52:D4:37:GLN:N	2.14	0.62
22:DA:2746:U:H1'	28:DG:138:GLN:HG3	1.81	0.62
22:BA:2134:A:O2'	22:BA:2135:A:H5''	2.00	0.62
35:DN:72:ASP:O	35:DN:76:VAL:HG13	1.99	0.62
28:DG:164:ALA:O	28:DG:165:ASP:HB2	1.99	0.62
28:DG:85:LYS:HG3	28:DG:163:TYR:HB2	1.79	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:BJ:55:ILE:O	31:BJ:55:ILE:HG13	1.98	0.62
14:AO:50:HIS:ND1	21:AA:667:G:H4'	2.14	0.62
24:BC:255:LYS:O	24:BC:257:ARG:N	2.29	0.62
53:CA:801:U:H2'	53:CA:802:A:C8	2.34	0.62
53:CA:313:A:H2'	53:CA:314:C:H6	1.64	0.62
21:AA:189:A:H2'	21:AA:190:A:C8	2.34	0.62
53:CA:613:C:H2'	53:CA:614:C:C6	2.34	0.62
33:DL:73:ILE:O	33:DL:105:ILE:HG23	1.99	0.62
22:DA:7:G:H2'	22:DA:8:C:O4'	2.00	0.62
10:AK:42:GLY:HA3	10:AK:73:VAL:HG12	1.80	0.62
33:DL:62:PRO:O	51:D3:12:ARG:HB3	1.99	0.62
22:BA:743:A:O3'	57:BA:3661:HOH:O	2.15	0.62
22:BA:838:C:H2'	22:BA:839:U:H6	1.64	0.62
35:BN:18:GLN:HE21	35:BN:22:ARG:NH1	1.97	0.62
32:BK:98:ARG:HA	32:BK:118:LEU:HD23	1.79	0.62
28:DG:167:VAL:HG23	28:DG:168:VAL:H	1.64	0.62
54:DB:17:C:H2'	54:DB:18:G:H8	1.61	0.62
44:BW:24:ARG:HD3	44:BW:65:LYS:CD	2.28	0.62
44:BW:67:LYS:HB3	44:BW:80:SER:H	1.65	0.62
22:DA:620:G:H4'	22:DA:621:A:O5'	1.99	0.62
21:AA:198:G:C2'	21:AA:199:A:H8	2.10	0.62
23:BB:49:C:OP1	36:BO:102:ARG:HG3	2.00	0.62
22:DA:1317:G:C2	22:DA:1336:A:C2	2.88	0.62
22:DA:78:U:O2'	22:DA:79:C:H5'	2.00	0.62
22:DA:308:G:C6	22:DA:309:A:C6	2.87	0.62
6:CG:118:ARG:NH2	53:CA:1239:A:H3'	2.14	0.62
35:DN:35:LYS:HG2	35:DN:112:TYR:CE1	2.33	0.62
28:DG:44:HIS:HA	28:DG:49:LEU:HA	1.81	0.62
37:DP:50:ARG:HB3	37:DP:57:ALA:N	2.14	0.62
31:BJ:32:LEU:HD22	31:BJ:54:ILE:HG12	1.82	0.62
21:AA:1101:A:H4'	21:AA:1102:A:O5'	1.98	0.62
22:DA:1751:U:H2'	22:DA:1752:C:H6	1.63	0.62
22:DA:2689:U:H4'	22:DA:2690:U:OP2	1.97	0.62
16:AQ:51:GLU:HG2	16:AQ:52:CYS:SG	2.40	0.62
21:AA:56:U:H2'	21:AA:57:G:C8	2.33	0.62
23:BB:45:A:H2'	23:BB:46:A:H8	1.64	0.62
22:BA:1398:C:H2'	22:BA:1399:C:C6	2.34	0.62
22:DA:1796:U:H2'	22:DA:1797:G:C8	2.33	0.62
46:BY:18:LEU:O	46:BY:22:LEU:HB2	1.98	0.62
2:CC:34:SER:O	2:CC:38:VAL:HG13	2.00	0.62
28:BG:15:ASP:CG	28:BG:16:VAL:N	2.53	0.62
22:BA:1330:C:O2'	22:BA:1331:G:H5'	1.99	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:AA:714:G:H2'	21:AA:715:A:C8	2.33	0.62
22:DA:2603:G:H4'	22:DA:2603:G:OP2	1.99	0.62
5:CF:27:ALA:O	5:CF:31:GLY:HA3	1.98	0.62
36:BO:51:ALA:HB3	36:BO:78:VAL:HG13	1.82	0.62
3:CD:33:ILE:O	3:CD:35:GLN:HG2	1.98	0.62
6:CG:22:LEU:HA	6:CG:25:PHE:CB	2.25	0.62
53:CA:1183:U:O2'	53:CA:1184:G:OP1	2.16	0.62
53:CA:977:A:H2'	53:CA:1224:U:O4	1.98	0.62
13:CN:60:ARG:HG2	13:CN:61:ASN:H	1.65	0.62
1:AB:86:CYS:H	1:AB:88:GLN:NE2	1.97	0.62
53:CA:1013:G:H22	53:CA:1015:G:H3'	1.63	0.62
22:DA:1676:A:H2'	22:DA:1677:A:O4'	1.99	0.62
22:BA:403:U:O2'	22:BA:404:A:OP2	2.16	0.62
41:BT:61:LEU:HA	57:BT:201:HOH:O	1.98	0.62
22:BA:2492:U:O2'	22:BA:2493:U:H5'	1.98	0.62
12:CM:111:PRO:HG2	12:CM:113:LYS:HG3	1.81	0.62
53:CA:608:A:H2'	53:CA:609:A:O4'	1.99	0.62
22:BA:1171:G:C6	22:BA:1172:C:C4	2.88	0.62
22:DA:1412:U:H2'	22:DA:1413:A:O4'	2.00	0.62
22:DA:609:A:H2'	22:DA:610:C:O4'	1.99	0.62
22:BA:2857:G:N2	22:BA:2860:A:OP2	2.31	0.62
33:DL:110:VAL:HB	33:DL:127:VAL:HA	1.81	0.62
12:CM:21:ILE:HB	12:CM:24:VAL:HG23	1.82	0.62
25:BD:35:THR:OG1	25:BD:49:GLN:HG2	2.00	0.62
42:DU:44:HIS:HD2	42:DU:57:ILE:HG21	1.62	0.62
44:BW:40:ARG:HH11	44:BW:45:HIS:CE1	2.17	0.62
53:CA:452:A:H2'	53:CA:453:G:O4'	2.00	0.62
38:DQ:59:LEU:O	38:DQ:63:ARG:HD3	1.99	0.62
10:AK:91:GLY:HA2	10:AK:94:SER:HB3	1.81	0.62
22:DA:1079:C:N3	22:DA:1088:A:H2	1.98	0.62
28:DG:93:TYR:CD2	28:DG:93:TYR:N	2.64	0.62
26:DE:126:VAL:HG21	26:DE:134:LEU:HD13	1.82	0.62
26:DE:131:THR:HG22	26:DE:161:ALA:H	1.63	0.62
53:CA:1239:A:H62	53:CA:1299:A:N6	1.97	0.62
2:AC:156:LEU:N	2:AC:156:LEU:HD12	2.11	0.62
22:DA:2666:C:H2'	22:DA:2667:C:C5'	2.30	0.62
53:CA:1450:U:H4'	53:CA:1451:U:H5	1.62	0.62
53:CA:1102:A:H2'	53:CA:1103:C:C6	2.34	0.62
22:BA:2199:A:H3'	22:BA:2200:C:H6	1.64	0.62
11:CL:80:LEU:HD23	11:CL:97:VAL:HG21	1.81	0.62
22:BA:142:A:H8	22:BA:142:A:H5''	1.64	0.62
2:CC:118:SER:O	2:CC:122:GLN:HG2	1.98	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:BA:2291:U:H2'	22:BA:2292:U:C6	2.34	0.62
18:AS:4:LEU:HD12	18:AS:4:LEU:H	1.64	0.62
22:DA:411:G:H4'	22:DA:412:A:OP1	1.99	0.62
27:DF:33:ILE:HB	27:DF:90:LEU:HB2	1.81	0.62
4:AE:55:VAL:N	4:AE:56:PRO:HD2	2.14	0.62
30:DI:50:LYS:HE2	30:DI:50:LYS:HA	1.82	0.62
22:BA:1157:G:H2'	22:BA:1158:C:C6	2.33	0.62
3:CD:2:ARG:CZ	3:CD:114:ARG:HD3	2.27	0.62
22:BA:2720:U:OP1	37:BP:52:ARG:NH2	2.32	0.62
22:BA:2336:A:N6	44:BW:40:ARG:HB3	2.14	0.62
22:DA:1534:U:C6	22:DA:1538:G:N1	2.66	0.62
21:AA:172:A:C5	21:AA:174:A:N7	2.68	0.62
41:DT:19:LYS:HE2	41:DT:23:ALA:HB3	1.82	0.62
19:CT:73:ARG:CG	19:CT:73:ARG:NH1	2.58	0.62
41:BT:29:THR:HB	41:BT:86:THR:CG2	2.29	0.62
1:AB:42:LEU:HG	1:AB:43:GLU:N	2.15	0.62
22:DA:77:G:N2	22:DA:110:G:H1'	2.15	0.62
53:CA:1144:G:H21	53:CA:1146:A:N6	1.96	0.62
6:CG:9:ARG:HD3	6:CG:24:LYS:HZ1	1.63	0.62
22:DA:443:A:N6	26:DE:36:ALA:HB1	2.14	0.62
22:DA:973:A:H1'	22:DA:1188:U:C5	2.34	0.62
24:BC:151:GLY:C	24:BC:152:GLN:HG3	2.20	0.62
29:BH:49:ALA:HB3	29:BH:50:ARG:HH22	1.64	0.62
22:BA:2203:U:H5''	22:BA:2204:G:OP1	2.00	0.62
21:AA:1303:C:H2'	21:AA:1304:G:C8	2.34	0.62
22:DA:9:G:H1	22:DA:2629:U:H2'	1.64	0.62
22:BA:90:U:H2'	22:BA:91:A:C8	2.35	0.62
53:CA:286:C:H2'	53:CA:287:U:O4'	1.98	0.62
11:AL:64:SER:OG	11:AL:96:THR:HG23	1.99	0.62
14:CO:31:LEU:O	14:CO:35:ILE:HG13	2.00	0.62
45:BX:58:ILE:HG13	45:BX:66:VAL:HG21	1.82	0.62
53:CA:994:A:O2'	53:CA:995:C:H6	1.82	0.62
37:DP:88:ARG:NE	37:DP:112:ARG:HH21	1.94	0.62
22:BA:2680:U:OP1	25:BD:114:LYS:HE2	1.99	0.62
41:BT:48:GLN:HB2	41:BT:49:LYS:HE3	1.82	0.62
22:DA:233:A:O2'	22:DA:234:U:O5'	2.13	0.62
53:CA:198:G:O2'	53:CA:199:A:C5'	2.47	0.62
22:DA:1054:A:C4	22:DA:1055:G:H1'	2.34	0.62
53:CA:15:G:H2'	53:CA:16:A:H8	1.64	0.62
37:DP:50:ARG:HA	37:DP:57:ALA:H	1.65	0.62
53:CA:752:G:H1'	53:CA:754:C:N4	2.14	0.62
22:DA:1695:G:H2'	22:DA:1696:G:O4'	1.99	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:AL:23:LEU:CB	11:AL:58:ASN:HD22	2.13	0.62
35:DN:71:ARG:HB2	35:DN:71:ARG:NH2	2.14	0.62
22:DA:538:A:H5''	31:DJ:7:LYS:HZ3	1.62	0.62
40:BS:24:ILE:HD12	40:BS:32:ALA:HA	1.82	0.62
22:DA:324:A:C2	22:DA:325:G:H1'	2.34	0.62
9:AJ:48:ARG:NH2	13:AN:100:TRP:CD2	2.68	0.62
2:AC:52:SER:HB2	2:AC:111:ASP:OD2	2.00	0.62
3:CD:195:ASN:HB3	3:CD:197:HIS:CD2	2.34	0.62
13:AN:51:PRO:O	13:AN:52:ARG:HB2	1.99	0.62
53:CA:1113:C:H2'	53:CA:1114:C:H6	1.65	0.62
22:BA:996:A:O3'	38:BQ:91:ARG:HG2	1.99	0.62
33:BL:77:ILE:HG12	33:BL:95:LEU:HD13	1.81	0.62
22:DA:833:A:H2'	22:DA:834:G:C8	2.34	0.62
16:AQ:45:VAL:HG21	16:AQ:60:ILE:CD1	2.22	0.62
22:DA:481:G:O2'	22:DA:482:A:OP2	2.17	0.62
42:DU:90:LYS:HE2	42:DU:92:VAL:HG12	1.81	0.62
22:DA:396:G:O2'	22:DA:397:U:C6	2.51	0.62
26:DE:112:LEU:HD11	26:DE:186:VAL:HG11	1.81	0.62
22:BA:2496:C:OP1	34:BM:82:MET:HB2	2.00	0.62
53:CA:1067:A:H4'	53:CA:1068:G:O5'	2.00	0.62
53:CA:701:U:H4'	53:CA:702:A:H5''	1.81	0.62
22:DA:848:C:H2'	22:DA:849:A:C8	2.34	0.62
10:AK:39:ASN:HA	21:AA:683:G:N2	2.14	0.62
53:CA:569:C:H5''	53:CA:570:G:OP1	2.00	0.62
3:AD:129:VAL:HG13	3:AD:131:ILE:HD12	1.80	0.62
32:DK:1:MET:HA	32:DK:33:ALA:O	2.00	0.62
21:AA:1343:G:H2'	21:AA:1344:C:C6	2.34	0.62
33:BL:40:SER:O	33:BL:41:ARG:CB	2.48	0.62
21:AA:1305:G:N2	21:AA:1331:G:H2'	2.15	0.62
22:DA:37:C:H1'	26:DE:45:ALA:HB2	1.81	0.62
25:BD:191:GLY:O	25:BD:192:ALA:HB3	1.99	0.62
53:CA:491:G:O2'	53:CA:492:C:H5'	2.00	0.62
22:BA:2630:G:H2'	22:BA:2631:G:H8	1.65	0.62
25:BD:107:VAL:O	25:BD:174:SER:O	2.18	0.62
44:DW:44:PHE:HE2	44:DW:76:ARG:HE	1.47	0.62
16:AQ:18:LYS:C	16:AQ:47:ASP:OD2	2.37	0.62
16:AQ:20:ILE:N	16:AQ:47:ASP:OD1	2.32	0.62
22:DA:996:A:C4'	38:DQ:91:ARG:HD2	2.28	0.62
6:CG:136:LYS:O	6:CG:140:VAL:HG23	2.00	0.62
25:BD:94:GLN:O	25:BD:95:SER:HB2	1.99	0.62
22:DA:2216:G:C2'	22:DA:2217:G:H8	2.12	0.62
22:DA:1090:A:H3'	22:DA:1091:G:H5''	1.81	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
30:DI:76:ALA:HB2	30:DI:131:THR:HB	1.82	0.62
22:DA:2798:U:H5'	22:DA:2800:A:C5	2.35	0.62
53:CA:597:G:H2'	53:CA:598:U:H5'	1.81	0.62
22:DA:1204:A:H4'	22:DA:1205:A:C5'	2.30	0.62
42:DU:81:ARG:H	42:DU:81:ARG:HD2	1.64	0.62
12:CM:12:LYS:H	12:CM:44:ILE:HG13	1.65	0.62
53:CA:120:A:H3'	53:CA:121:U:C5'	2.29	0.62
22:DA:126:A:O5'	50:D2:19:ARG:HG3	1.99	0.62
22:DA:865:C:H5''	22:DA:866:A:OP1	1.99	0.62
32:DK:80:ASP:HB2	37:DP:67:GLU:OE1	2.00	0.62
32:DK:7:MET:CE	32:DK:7:MET:HA	2.29	0.62
22:BA:459:U:HO2'	22:BA:460:A:H5'	1.64	0.62
22:DA:686:U:H6	22:DA:788:A:N1	1.97	0.62
22:BA:1499:C:O2'	22:BA:1500:G:H5'	1.98	0.62
37:BP:80:VAL:O	37:BP:81:ASP:HB3	1.99	0.62
2:CC:137:VAL:O	2:CC:140:ALA:HB3	1.99	0.62
9:AJ:71:LEU:O	9:AJ:72:ARG:HD3	2.00	0.62
22:DA:828:U:H4'	22:DA:831:G:N1	2.15	0.62
22:BA:1936:A:C2	22:BA:1943:U:C5	2.88	0.62
53:CA:166:U:H2'	53:CA:167:A:H5'	1.81	0.62
10:AK:60:PHE:O	10:AK:63:GLN:HB3	1.99	0.62
7:CH:91:LEU:HB3	7:CH:112:ASP:OD2	1.99	0.62
22:DA:179:C:H2'	22:DA:180:G:O4'	2.00	0.62
52:D4:9:LYS:HD3	52:D4:9:LYS:O	2.00	0.62
22:BA:1794:A:H2'	22:BA:1795:C:H6	1.65	0.62
34:BM:57:VAL:HA	34:BM:112:LEU:HD21	1.81	0.62
11:CL:84:GLY:H	11:CL:94:TYR:HA	1.64	0.62
33:BL:94:THR:HG22	33:BL:95:LEU:N	2.15	0.61
37:BP:50:ARG:CD	37:BP:51:ASN:H	2.13	0.61
21:AA:198:G:H2'	21:AA:199:A:H8	1.65	0.61
28:BG:88:LEU:HD22	28:BG:161:VAL:HG22	1.80	0.61
22:DA:372:G:C8	45:DX:56:ARG:HG2	2.35	0.61
37:DP:109:ILE:O	37:DP:110:LYS:HG3	2.00	0.61
47:BZ:29:ARG:HG3	47:BZ:29:ARG:NH2	2.06	0.61
22:BA:1179:G:OP2	22:BA:1180:U:H5''	2.00	0.61
25:DD:119:ALA:HB3	25:DD:163:GLY:N	2.11	0.61
16:AQ:44:HIS:HE1	21:AA:276:G:O3'	1.82	0.61
22:DA:797:G:OP1	26:DE:57:LYS:HG2	2.00	0.61
52:B4:9:LYS:N	52:B4:9:LYS:HD3	2.11	0.61
39:BR:1:MET:HA	39:BR:42:ALA:O	2.00	0.61
25:DD:159:LYS:HE2	25:DD:160:LYS:H	1.65	0.61
26:BE:189:THR:OG1	26:BE:191:ASP:HB3	2.00	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
23:BB:14:U:OP2	23:BB:70:C:O2'	2.17	0.61
21:AA:1094:G:O2'	21:AA:1095:U:P	2.58	0.61
31:BJ:25:LEU:HB2	31:BJ:62:VAL:HG21	1.82	0.61
35:DN:56:LYS:HA	35:DN:84:GLY:HA2	1.81	0.61
3:CD:137:SER:O	3:CD:140:ASP:HB2	2.00	0.61
22:BA:1641:A:H5''	22:BA:1642:G:OP2	1.99	0.61
22:BA:919:U:H2'	22:BA:920:A:O4'	2.00	0.61
26:DE:164:LEU:HD12	26:DE:167:VAL:HG12	1.82	0.61
22:DA:151:C:H2'	22:DA:152:A:C8	2.35	0.61
22:BA:1023:U:H5'	22:BA:1023:U:H6	1.63	0.61
45:DX:19:HIS:C	45:DX:21:LEU:H	2.03	0.61
10:AK:87:GLY:N	10:AK:113:THR:HG22	2.14	0.61
54:DB:42:C:H4'	27:DF:63:LYS:HB3	1.81	0.61
53:CA:81:A:H2	53:CA:89:U:O4	1.83	0.61
4:CE:131:ASN:HD22	4:CE:132:PRO:HD2	1.64	0.61
8:AI:40:ARG:O	8:AI:44:ARG:HD3	2.00	0.61
1:AB:19:THR:HB	1:AB:37:VAL:HB	1.81	0.61
8:CI:6:TYR:HE2	8:CI:17:ARG:HA	1.64	0.61
34:DM:62:LYS:HG2	34:DM:64:TRP:CZ2	2.35	0.61
22:DA:627:A:O2'	22:DA:628:G:O5'	2.17	0.61
22:DA:532:A:N1	22:DA:2020:A:H1'	2.15	0.61
2:AC:21:TRP:CG	2:AC:58:ARG:HG2	2.35	0.61
33:DL:141:LYS:HD2	33:DL:142:ILE:N	2.14	0.61
39:DR:62:GLU:HB3	39:DR:97:LYS:HB3	1.82	0.61
25:BD:38:LYS:O	25:BD:46:ARG:HA	2.00	0.61
15:CP:48:GLU:HG3	15:CP:51:ARG:HH21	1.64	0.61
22:BA:802:A:H2'	22:BA:803:U:C6	2.34	0.61
35:BN:98:LEU:HD22	48:B0:42:ILE:HD11	1.81	0.61
4:CE:154:ALA:HB1	7:CH:65:PHE:HE2	1.65	0.61
29:DH:83:LYS:HG3	29:DH:149:GLU:HB2	1.82	0.61
29:DH:49:ALA:O	29:DH:53:GLU:HB2	2.00	0.61
22:DA:2348:U:O2'	22:DA:2349:G:O4'	2.18	0.61
53:CA:748:G:H2'	53:CA:749:A:H8	1.65	0.61
54:DB:50:A:C2	54:DB:51:G:H1'	2.35	0.61
4:CE:152:VAL:HG21	7:CH:98:LEU:HD22	1.82	0.61
22:DA:5:A:C2	22:DA:2899:A:C2	2.89	0.61
36:DO:26:LEU:HD23	36:DO:92:PHE:CE1	2.36	0.61
22:DA:1437:C:H2'	22:DA:1438:U:C6	2.35	0.61
22:BA:2331:G:O2'	22:BA:2336:A:N1	2.31	0.61
44:BW:30:VAL:HG23	44:BW:59:PHE:HD1	1.66	0.61
15:CP:78:VAL:C	15:CP:80:LYS:H	2.04	0.61
19:AT:28:ARG:O	19:AT:32:LYS:HG2	2.00	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
53:CA:1151:A:H2'	53:CA:1152:A:C8	2.35	0.61
22:BA:1082:U:N3	22:BA:1086:A:C5	2.69	0.61
22:DA:226:A:H2'	22:DA:227:A:H8	1.65	0.61
53:CA:198:G:O6	53:CA:220:G:C4	2.53	0.61
4:AE:110:MET:H	4:AE:113:VAL:HG13	1.64	0.61
4:AE:80:LEU:HD12	4:AE:146:MET:CE	2.30	0.61
32:DK:13:ASN:HD21	32:DK:97:THR:N	1.93	0.61
21:AA:452:A:H2'	21:AA:453:G:O4'	1.99	0.61
14:CO:63:ARG:HH22	22:DA:715:A:C5'	2.11	0.61
22:BA:2886:A:C2	22:BA:2887:A:H1'	2.35	0.61
22:DA:2750:A:O2'	22:DA:2752:C:N4	2.32	0.61
38:BQ:13:HIS:CD2	38:BQ:31:TYR:CD1	2.88	0.61
22:BA:1794:A:H2'	22:BA:1795:C:C6	2.35	0.61
18:AS:50:VAL:HG21	18:AS:70:LEU:HB3	1.81	0.61
22:BA:1644:C:C2'	22:BA:1645:G:H5'	2.30	0.61
22:BA:777:G:H2'	22:BA:778:G:H8	1.65	0.61
32:BK:59:LYS:HG3	32:BK:89:ASN:HD22	1.65	0.61
22:BA:603:A:H4'	22:BA:604:G:O5'	1.99	0.61
22:BA:1609:A:O2'	22:BA:1610:A:H5''	1.99	0.61
22:BA:1062:G:OP1	22:BA:1070:A:H4'	1.99	0.61
53:CA:371:A:O2'	53:CA:372:C:H5'	1.99	0.61
8:CI:48:ARG:HH21	8:CI:57:VAL:HG21	1.65	0.61
34:DM:17:ASN:HB3	34:DM:38:ARG:NH2	2.15	0.61
6:CG:68:VAL:O	6:CG:70:PRO:HD3	2.00	0.61
34:BM:133:LYS:O	34:BM:134:THR:HB	2.00	0.61
6:CG:30:MET:O	6:CG:31:VAL:HB	1.99	0.61
21:AA:724:G:O2'	21:AA:725:G:H5'	2.01	0.61
22:DA:464:U:H1'	22:DA:686:U:C5	2.34	0.61
11:AL:43:LYS:HB2	11:AL:44:PRO:HD3	1.83	0.61
25:DD:106:LYS:HB3	25:DD:206:ALA:CB	2.30	0.61
7:CH:1:SER:C	7:CH:3:GLN:H	2.03	0.61
22:BA:277:G:H4'	22:BA:278:A:N7	2.15	0.61
2:CC:110:LEU:O	2:CC:110:LEU:HD23	2.01	0.61
22:DA:1737:G:C6	22:DA:1738:G:N1	2.69	0.61
22:DA:196:A:N6	22:DA:831:G:H21	1.98	0.61
11:AL:7:VAL:HG13	16:AQ:30:HIS:CD2	2.35	0.61
24:DC:16:VAL:N	24:DC:203:VAL:HG12	2.16	0.61
12:AM:19:THR:HA	12:AM:24:VAL:HG23	1.83	0.61
21:AA:1338:G:H2'	21:AA:1339:A:H8	1.63	0.61
22:BA:1759:A:H2'	22:BA:1760:C:C6	2.35	0.61
53:CA:846:G:O2'	53:CA:847:G:H5'	2.01	0.61
43:BV:5:ASN:ND2	43:BV:5:ASN:H	1.97	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:1680:U:H2'	22:DA:1681:G:O4'	1.99	0.61
44:DW:18:LYS:HD3	44:DW:19:ARG:H	1.63	0.61
11:AL:49:ARG:CG	11:AL:49:ARG:HH11	1.99	0.61
22:BA:2267:A:H5''	22:BA:2268:A:C5'	2.27	0.61
44:BW:29:SER:N	44:BW:63:ASP:HB3	2.16	0.61
53:CA:1258:G:O2'	53:CA:1259:C:H5'	2.01	0.61
22:BA:2134:A:O2'	22:BA:2135:A:H8	1.83	0.61
4:AE:135:VAL:O	4:AE:139:THR:HG23	2.01	0.61
22:DA:125:A:OP2	50:D2:19:ARG:NH2	2.34	0.61
22:DA:1669:A:C2'	22:DA:1669:A:N3	2.61	0.61
31:BJ:13:ARG:HD3	31:BJ:51:GLY:O	2.01	0.61
28:DG:8:VAL:HB	28:DG:49:LEU:HB3	1.83	0.61
53:CA:1264:U:H2'	53:CA:1265:C:H6	1.65	0.61
22:BA:587:C:OP2	33:BL:21:ARG:NH1	2.33	0.61
25:DD:33:ARG:NH2	25:DD:51:THR:HG22	2.16	0.61
22:DA:1008:A:H4'	22:DA:1009:A:OP1	2.00	0.61
22:BA:1257:C:H5'	26:BE:78:TRP:CZ3	2.35	0.61
53:CA:1336:C:H1'	53:CA:1337:G:C2	2.34	0.61
36:BO:76:LYS:O	36:BO:80:GLU:HG2	2.00	0.61
21:AA:895:G:H2'	21:AA:896:C:C6	2.36	0.61
22:DA:612:G:C2	22:DA:614:A:H1'	2.34	0.61
22:DA:999:U:O2'	22:DA:1000:A:H5'	2.00	0.61
15:CP:73:ALA:HA	15:CP:76:LYS:HB2	1.82	0.61
22:DA:1647:U:H5''	22:DA:1648:U:OP1	1.99	0.61
3:AD:96:ARG:HB3	3:AD:98:ASP:OD1	2.00	0.61
37:BP:37:LYS:HD3	37:BP:37:LYS:H	1.65	0.61
22:BA:675:A:OP1	26:BE:58:LYS:HE2	2.01	0.61
22:DA:2426:A:H3'	22:DA:2427:C:H5'	1.82	0.61
38:BQ:63:ARG:HH22	38:BQ:96:ASP:HB3	1.65	0.61
22:BA:2364:C:H2'	22:BA:2365:G:H5'	1.83	0.61
22:DA:1912:A:H62	22:DA:1917:U:H3	1.49	0.61
28:BG:84:LYS:HD2	28:BG:133:LYS:HG2	1.83	0.61
16:AQ:20:ILE:H	16:AQ:47:ASP:CG	2.03	0.61
19:CT:73:ARG:HH12	53:CA:263:A:P	2.23	0.61
6:CG:74:VAL:HG11	6:CG:143:MET:HB2	1.83	0.61
9:CJ:38:GLY:O	9:CJ:40:ILE:HD12	2.00	0.61
41:BT:38:ALA:HB1	41:BT:43:ILE:CG2	2.29	0.61
20:CU:36:PHE:CD2	20:CU:39:LYS:HE2	2.35	0.61
27:DF:35:LEU:HD11	27:DF:153:ILE:HG23	1.82	0.61
6:CG:88:VAL:HG22	6:CG:89:GLU:N	2.12	0.61
7:CH:75:GLN:O	7:CH:126:CYS:HB2	2.00	0.61
11:CL:5:GLN:HG3	11:CL:9:LYS:HZ1	1.65	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
41:DT:13:ALA:O	41:DT:32:LEU:HB2	2.00	0.61
20:AU:16:ARG:HH11	20:AU:19:LYS:CG	2.13	0.61
21:AA:91:U:H2'	21:AA:92:U:C1'	2.30	0.61
40:DS:84:ARG:HB3	40:DS:96:ILE:HG23	1.82	0.61
36:DO:23:ALA:HB1	36:DO:90:VAL:HG12	1.82	0.61
2:AC:143:LEU:N	2:AC:143:LEU:HD22	2.15	0.61
22:BA:1252:G:C2	38:BQ:32:ARG:HG2	2.35	0.61
24:DC:43:ASN:ND2	24:DC:44:ASN:H	1.99	0.61
8:AI:51:LEU:HB3	8:AI:56:MET:CG	2.30	0.61
4:CE:107:GLY:O	4:CE:111:ARG:HB2	2.00	0.61
22:DA:1996:C:H4'	22:DA:1997:C:OP1	2.00	0.61
11:CL:119:LYS:HE3	53:CA:36:C:OP1	2.01	0.61
22:DA:2677:G:H2'	22:DA:2678:C:H6	1.65	0.61
53:CA:934:C:H4'	53:CA:935:A:OP1	1.99	0.61
22:BA:1885:A:H2'	22:BA:1886:U:C6	2.35	0.61
18:CS:46:LEU:H	18:CS:46:LEU:HD23	1.64	0.61
6:CG:12:LEU:HD22	6:CG:13:PRO:O	2.01	0.61
37:BP:57:ALA:HB1	37:BP:73:PHE:O	2.00	0.61
28:BG:86:LEU:HD11	28:BG:132:LEU:HD21	1.82	0.61
10:AK:85:VAL:HG11	10:AK:92:ARG:HG3	1.83	0.61
20:CU:33:ARG:NH1	20:CU:34:ARG:HD3	2.16	0.61
24:DC:184:GLU:HB2	24:DC:187:CYS:SG	2.40	0.61
22:DA:2729:G:H5''	25:DD:190:LYS:NZ	2.16	0.61
22:DA:674:G:H5''	26:DE:71:GLY:H	1.65	0.61
53:CA:1304:G:H1'	53:CA:1333:A:N6	2.16	0.61
32:BK:43:ILE:HG21	32:BK:46:ALA:HB2	1.83	0.61
28:BG:8:VAL:O	28:BG:9:VAL:HG12	2.01	0.61
31:BJ:88:THR:HG22	31:BJ:91:GLU:CB	2.31	0.61
34:BM:46:ILE:HD12	34:BM:47:GLU:N	2.16	0.61
35:DN:5:LYS:O	57:DN:202:HOH:O	2.16	0.61
22:DA:2229:U:H2'	22:DA:2230:G:C8	2.36	0.61
22:DA:637:A:OP2	33:DL:112:LEU:HD22	2.00	0.61
21:AA:89:U:O2'	21:AA:90:C:H5''	2.00	0.61
28:BG:115:GLN:CD	28:BG:115:GLN:N	2.53	0.61
53:CA:205:A:C6	53:CA:206:C:N4	2.69	0.61
14:AO:57:ARG:HB3	14:AO:57:ARG:NH1	2.16	0.61
22:DA:1742:U:H2'	22:DA:1743:G:H8	1.63	0.61
22:DA:2015:A:C4	48:D0:2:VAL:HG11	2.36	0.61
24:DC:66:PHE:HB3	24:DC:150:GLY:O	2.01	0.61
53:CA:992:U:O2'	53:CA:993:G:OP2	2.17	0.61
22:DA:1797:G:O3'	24:DC:255:LYS:O	2.18	0.61
22:BA:1644:C:H2'	22:BA:1645:G:H5'	1.81	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
32:BK:121:GLU:HG2	32:BK:122:VAL:HG23	1.81	0.61
18:AS:14:LEU:HD13	18:AS:32:THR:HG21	1.83	0.61
5:CF:90:MET:CE	17:CR:60:ARG:HD3	2.30	0.61
33:DL:9:ALA:HB3	33:DL:12:SER:HB3	1.82	0.61
42:BU:43:LYS:O	42:BU:57:ILE:HA	2.01	0.61
25:BD:98:VAL:O	25:BD:99:GLU:C	2.38	0.61
22:DA:602:A:H1'	22:DA:656:G:N2	2.16	0.61
22:DA:657:U:H2'	22:DA:658:U:C6	2.36	0.61
25:BD:34:VAL:HG22	25:BD:94:GLN:H	1.65	0.61
35:DN:103:ARG:HD3	35:DN:110:MET:SD	2.40	0.61
22:DA:309:A:H1'	22:DA:329:G:C4	2.36	0.61
53:CA:973:G:O2'	53:CA:974:A:H5'	2.00	0.61
4:AE:100:GLU:HB2	4:AE:103:GLY:HA2	1.81	0.61
22:BA:545:U:H2'	22:BA:546:U:C4'	2.28	0.61
22:DA:53:A:H2'	22:DA:54:G:O4'	2.01	0.61
28:BG:8:VAL:CG1	28:BG:9:VAL:N	2.63	0.61
22:DA:1417:C:H2'	22:DA:1418:G:C8	2.36	0.61
24:BC:77:VAL:O	24:BC:77:VAL:HG22	2.00	0.61
18:CS:33:TRP:HB2	53:CA:1014:A:C2	2.36	0.61
22:BA:659:G:H4'	26:BE:95:LYS:HD3	1.82	0.61
39:DR:87:GLN:HG2	39:DR:88:GLY:H	1.65	0.61
31:DJ:57:LEU:HG	31:DJ:128:ASN:H	1.66	0.61
53:CA:1051:C:O2'	53:CA:1052:U:O4'	2.19	0.61
18:AS:17:LYS:HB3	18:AS:30:LEU:HD23	1.83	0.61
10:CK:94:SER:O	10:CK:97:ARG:HB2	2.00	0.61
22:BA:1717:A:H2'	22:BA:1718:G:O4'	2.01	0.61
54:DB:81:G:C5	54:DB:82:U:C5	2.89	0.61
24:DC:120:ASP:CG	24:DC:121:ALA:H	2.04	0.61
22:DA:708:G:N2	22:DA:724:U:H1'	2.16	0.61
49:B1:27:ARG:O	49:B1:30:PRO:HD3	2.01	0.61
22:BA:1229:C:H2'	22:BA:1230:A:C8	2.36	0.61
9:AJ:81:GLU:O	9:AJ:85:ASP:HB2	2.01	0.61
22:DA:1833:C:C4	22:DA:1834:U:C4	2.88	0.61
39:DR:70:GLU:H	39:DR:70:GLU:CD	2.04	0.61
53:CA:1042:A:H2'	53:CA:1043:G:O4'	2.00	0.61
29:DH:116:ARG:O	29:DH:117:LEU:HG	1.99	0.61
12:CM:69:ARG:HA	12:CM:72:ILE:HG22	1.82	0.61
31:BJ:43:GLU:O	31:BJ:45:THR:N	2.33	0.61
44:BW:28:GLU:CA	44:BW:28:GLU:OE2	2.48	0.61
22:DA:1912:A:N6	22:DA:1917:U:H3	1.99	0.61
22:DA:1342:A:C4	22:DA:1345:C:N4	2.69	0.61
54:DB:90:C:H6	54:DB:90:C:H5"	1.66	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:CD:149:LYS:HZ3	3:CD:176:LYS:HD2	1.65	0.61
46:BY:9:LYS:HB3	46:BY:12:GLU:HB2	1.82	0.61
53:CA:90:C:H2'	53:CA:91:U:C5	2.36	0.61
18:CS:50:VAL:HG11	18:CS:70:LEU:HB3	1.82	0.61
4:AE:97:PRO:HA	4:AE:122:VAL:HG12	1.83	0.61
53:CA:1130:A:C5	53:CA:1146:A:C6	2.88	0.61
22:DA:915:C:HO2'	22:DA:916:G:H5'	1.63	0.61
28:DG:163:TYR:N	28:DG:163:TYR:CD2	2.67	0.61
22:DA:1308:A:H2'	22:DA:1309:G:O4'	2.01	0.61
15:CP:44:SER:H	15:CP:46:LYS:HZ1	1.49	0.61
22:DA:1607:C:H4'	22:DA:1608:A:C8	2.36	0.61
22:BA:2328:A:H2'	22:BA:2329:U:H6	1.66	0.61
1:CB:9:LEU:HD12	1:CB:11:ALA:C	2.21	0.61
22:BA:141:G:N1	41:BT:2:ILE:HG23	2.16	0.61
41:BT:2:ILE:HG13	41:BT:3:ARG:CZ	2.30	0.61
21:AA:1441:A:N6	21:AA:1461:G:H21	1.99	0.61
22:BA:1570:A:H2'	22:BA:1571:A:C8	2.36	0.61
38:DQ:8:ILE:O	38:DQ:8:ILE:HG12	2.01	0.61
29:DH:83:LYS:HE2	29:DH:149:GLU:HB3	1.82	0.61
25:DD:4:LEU:HD12	25:DD:32:ASN:OD1	2.00	0.61
53:CA:1430:A:H2'	53:CA:1431:A:O4'	2.00	0.61
42:DU:26:ASN:OD1	42:DU:34:ILE:HD12	2.00	0.61
53:CA:476:U:C6	53:CA:476:U:OP2	2.54	0.61
3:AD:106:PHE:CG	3:AD:144:ILE:HD11	2.34	0.61
13:AN:40:ARG:NH2	13:AN:44:VAL:HG21	2.15	0.61
22:DA:1808:A:C3'	22:DA:1809:A:H8	2.14	0.61
22:DA:478:A:C6	22:DA:480:A:C5	2.89	0.61
53:CA:245:U:H6	53:CA:245:U:H5''	1.66	0.61
1:AB:218:ALA:HA	1:AB:221:ARG:NH2	2.14	0.61
24:BC:165:ALA:HB3	24:BC:172:THR:CG2	2.29	0.61
28:BG:11:PRO:O	28:BG:14:VAL:HG22	2.01	0.61
22:DA:705:A:H2'	22:DA:706:A:C8	2.36	0.61
22:BA:1871:A:H8	22:BA:1872:A:C6	2.17	0.61
49:B1:24:LYS:HE2	49:B1:52:LYS:CB	2.31	0.61
22:BA:819:A:C4	22:BA:1189:A:C2	2.88	0.61
22:BA:309:A:N3	22:BA:329:G:O2'	2.34	0.61
54:DB:6:G:H4'	54:DB:28:C:H4'	1.83	0.61
53:CA:1072:G:H2'	53:CA:1073:U:C6	2.36	0.61
53:CA:801:U:H2'	53:CA:802:A:H8	1.66	0.61
22:DA:1792:G:H5''	24:DC:203:VAL:HG22	1.83	0.61
32:DK:11:ALA:O	32:DK:99:ILE:HG23	2.01	0.61
37:BP:37:LYS:HD3	37:BP:37:LYS:N	2.16	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:AD:55:ARG:HH12	3:AD:58:GLN:HG2	1.66	0.61
11:AL:113:ARG:HB3	11:AL:118:VAL:HB	1.82	0.61
11:CL:33:CYS:HB3	11:CL:77:SER:O	1.99	0.61
38:BQ:91:ARG:HD3	39:BR:11:GLN:CG	2.31	0.60
44:DW:39:GLN:O	44:DW:56:HIS:HB3	2.01	0.60
44:BW:13:ARG:O	44:BW:14:ASP:C	2.39	0.60
22:DA:1915:U:O2'	22:DA:1916:A:H5'	2.00	0.60
11:AL:52:CYS:O	11:AL:54:VAL:HG23	2.00	0.60
22:DA:492:A:O2'	22:DA:493:G:H5'	2.00	0.60
45:DX:29:LEU:HB2	45:DX:30:PRO:CD	2.31	0.60
22:DA:527:C:O2'	22:DA:528:A:C8	2.54	0.60
22:DA:589:U:O2'	22:DA:590:A:H5'	2.01	0.60
1:CB:69:VAL:HB	1:CB:162:VAL:HB	1.83	0.60
22:DA:1799:G:C8	24:DC:179:GLU:OE1	2.52	0.60
22:DA:726:G:O2'	22:DA:727:A:OP2	2.17	0.60
22:DA:2714:G:H2'	22:DA:2715:C:H6	1.66	0.60
22:BA:278:A:C2	22:BA:362:A:C8	2.89	0.60
19:CT:4:LYS:HB3	19:CT:6:ALA:H	1.66	0.60
11:AL:1:ALA:HB3	11:AL:5:GLN:OE1	2.01	0.60
26:BE:46:GLN:HG3	26:BE:86:ALA:HA	1.82	0.60
1:AB:115:ASP:O	1:AB:119:GLN:HB3	2.01	0.60
1:AB:119:GLN:HA	1:AB:122:ASP:HB2	1.83	0.60
22:DA:2898:U:H2'	22:DA:2899:A:C8	2.36	0.60
14:AO:29:ALA:HA	14:AO:84:LEU:HD21	1.81	0.60
19:AT:77:ASN:HD22	19:AT:78:LEU:N	1.98	0.60
12:AM:45:SER:O	12:AM:46:GLU:HB2	2.00	0.60
22:BA:2547:A:H2'	22:BA:2548:U:C6	2.36	0.60
37:BP:51:ASN:O	37:BP:52:ARG:HG2	2.02	0.60
22:DA:1312:U:O2'	22:DA:1314:C:N4	2.35	0.60
24:BC:247:TRP:O	24:BC:249:VAL:HG23	2.00	0.60
9:CJ:5:ARG:HG2	9:CJ:79:PRO:HG3	1.83	0.60
38:DQ:89:ILE:HG22	38:DQ:91:ARG:H	1.66	0.60
22:DA:1078:U:H4'	22:DA:1079:C:C5'	2.30	0.60
53:CA:644:U:H2'	53:CA:645:G:H8	1.66	0.60
25:DD:137:SER:C	25:DD:138:LEU:HD22	2.22	0.60
24:BC:144:GLU:HA	24:BC:151:GLY:HA2	1.81	0.60
53:CA:1167:A:N7	53:CA:1169:A:N6	2.48	0.60
21:AA:1064:G:N2	21:AA:1190:G:O2'	2.34	0.60
21:AA:596:A:N6	21:AA:645:G:C6	2.69	0.60
21:AA:1038:C:H2'	21:AA:1039:G:H8	1.65	0.60
24:BC:259:ASN:C	24:BC:261:ARG:H	2.04	0.60
22:BA:364:C:H2'	22:BA:365:U:H6	1.66	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:2426:A:H3'	22:DA:2427:C:C5'	2.31	0.60
22:BA:1537:G:H5''	22:BA:1537:G:N3	2.16	0.60
25:DD:208:LYS:O	25:DD:209:ALA:CB	2.49	0.60
36:DO:8:ILE:HD12	36:DO:8:ILE:H	1.66	0.60
22:DA:2303:G:H5'	27:DF:121:PHE:CE1	2.37	0.60
22:BA:304:U:H2'	22:BA:305:C:C6	2.36	0.60
21:AA:574:A:H5''	21:AA:575:G:OP2	2.01	0.60
4:CE:52:ALA:HB2	4:CE:61:LYS:HE3	1.83	0.60
33:BL:77:ILE:HD13	33:BL:108:ALA:HB1	1.83	0.60
39:BR:49:ILE:CG2	39:BR:54:VAL:HG12	2.32	0.60
19:AT:53:MET:O	19:AT:56:ILE:HG22	2.01	0.60
4:AE:149:PRO:HA	4:AE:152:VAL:HG13	1.83	0.60
52:D4:36:ARG:HG2	52:D4:37:GLN:H	1.67	0.60
30:BI:15:GLY:CA	30:BI:50:LYS:HB3	2.28	0.60
53:CA:82:G:C5	53:CA:89:U:C5	2.89	0.60
20:AU:13:VAL:HG13	20:AU:15:LEU:CG	2.31	0.60
10:CK:60:PHE:O	10:CK:64:VAL:HG13	2.01	0.60
51:D3:28:LEU:HA	51:D3:32:LEU:HD21	1.82	0.60
31:BJ:124:VAL:HG23	31:BJ:125:TYR:H	1.65	0.60
22:DA:422:A:O2'	22:DA:423:A:H5'	2.01	0.60
22:BA:1414:C:C4	22:BA:1415:U:C5	2.89	0.60
22:DA:30:G:OP1	38:DQ:4:LYS:HG3	2.01	0.60
22:BA:372:G:H5''	45:BX:60:LYS:HE3	1.84	0.60
21:AA:246:A:H4'	21:AA:247:G:OP1	2.01	0.60
29:DH:5:LEU:O	29:DH:6:LEU:HD12	2.01	0.60
22:BA:927:A:H2'	22:BA:928:A:C8	2.36	0.60
22:DA:956:G:H1'	34:DM:82:MET:HE1	1.83	0.60
22:BA:682:G:H5'	50:B2:26:ASN:OD1	2.01	0.60
27:BF:24:VAL:O	27:BF:27:VAL:HG12	2.01	0.60
47:BZ:2:LYS:HE2	47:BZ:2:LYS:O	2.01	0.60
26:BE:7:ASP:O	26:BE:9:GLN:N	2.34	0.60
44:BW:41:GLY:O	44:BW:42:THR:C	2.39	0.60
16:CQ:18:LYS:HA	16:CQ:50:ASN:OD1	2.00	0.60
22:DA:1716:U:HO2'	22:DA:1717:A:H8	0.69	0.60
22:DA:2226:C:H2'	22:DA:2227:A:C8	2.36	0.60
53:CA:644:U:H2'	53:CA:645:G:C8	2.35	0.60
22:DA:1207:C:H2'	22:DA:1208:C:C6	2.36	0.60
22:DA:1935:G:H1	22:DA:1962:C:H2'	1.67	0.60
22:BA:571:U:C5	22:BA:575:A:C5	2.89	0.60
37:DP:105:LYS:HA	37:DP:108:ARG:NE	2.16	0.60
28:BG:32:LEU:O	28:BG:33:THR:HG23	2.00	0.60
4:CE:55:VAL:N	4:CE:56:PRO:HD2	2.17	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
18:CS:52:ASN:HD21	18:CS:55:GLN:N	1.99	0.60
22:BA:321:U:HO2'	22:BA:340:A:HO2'	1.49	0.60
41:DT:9:LYS:HG3	46:DY:21:LEU:HD13	1.82	0.60
40:BS:59:GLU:HA	40:BS:64:ALA:HB2	1.82	0.60
53:CA:652:U:O2'	53:CA:653:U:O5'	2.20	0.60
22:BA:742:A:H2'	22:BA:743:A:C8	2.36	0.60
40:BS:71:VAL:HG22	40:BS:71:VAL:O	2.02	0.60
22:DA:158:U:H1'	22:DA:169:G:N2	2.17	0.60
21:AA:1016:A:C8	21:AA:1017:U:H1'	2.36	0.60
42:BU:38:ILE:HG22	42:BU:39:ASN:N	2.15	0.60
24:BC:43:ASN:HB3	24:BC:45:ASN:H	1.65	0.60
41:BT:4:GLU:OE1	41:BT:6:ARG:HG3	2.01	0.60
1:AB:77:GLU:HB2	1:AB:80:LYS:HE2	1.83	0.60
21:AA:536:C:H2'	21:AA:537:G:C8	2.36	0.60
22:BA:1560:G:H2'	22:BA:1561:C:H6	1.67	0.60
38:BQ:63:ARG:CZ	38:BQ:96:ASP:HA	2.26	0.60
45:BX:76:LYS:HG3	45:BX:77:TYR:H	1.66	0.60
2:CC:191:THR:O	53:CA:1206:G:H4'	2.01	0.60
31:DJ:45:THR:H	31:DJ:46:PRO:HD3	1.66	0.60
38:DQ:57:ARG:C	38:DQ:59:LEU:H	2.04	0.60
22:DA:2093:G:C2	22:DA:2094:A:C5	2.90	0.60
1:AB:9:LEU:HD23	1:AB:11:ALA:N	2.17	0.60
21:AA:1004:A:H2'	21:AA:1005:A:O4'	2.01	0.60
40:DS:6:LYS:HZ2	40:DS:104:THR:HG23	1.64	0.60
22:DA:2728:U:O2'	22:DA:2729:G:C8	2.36	0.60
53:CA:1365:G:H2'	53:CA:1366:C:C6	2.36	0.60
53:CA:1242:G:O2'	53:CA:1243:C:O5'	2.18	0.60
21:AA:1142:G:C2	21:AA:1143:G:H1'	2.36	0.60
22:DA:923:G:H1'	44:DW:23:LYS:HZ2	1.65	0.60
53:CA:1348:U:O2'	53:CA:1349:A:H5'	2.01	0.60
21:AA:511:C:H2'	21:AA:534:U:O2	2.02	0.60
24:BC:12:ARG:HG2	24:BC:12:ARG:HH11	1.65	0.60
26:BE:119:ILE:HD13	26:BE:187:VAL:HA	1.84	0.60
37:BP:105:LYS:HA	37:BP:108:ARG:NH2	2.17	0.60
53:CA:1003:G:N2	53:CA:1005:A:H5''	2.16	0.60
15:CP:46:LYS:H	15:CP:46:LYS:NZ	2.00	0.60
20:AU:19:LYS:HE2	20:AU:19:LYS:N	2.16	0.60
22:BA:1967:C:O2'	22:BA:1968:G:H5'	2.00	0.60
31:DJ:25:LEU:HD22	31:DJ:26:GLY:N	2.17	0.60
24:DC:166:ARG:CB	24:DC:171:VAL:HG22	2.32	0.60
22:DA:390:U:O2'	22:DA:391:A:C8	2.53	0.60
28:DG:15:ASP:HB3	28:DG:26:LYS:H	1.67	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
42:BU:97:SER:O	42:BU:98:ASN:HB3	2.00	0.60
22:BA:2472:G:H2'	22:BA:2475:C:H42	1.65	0.60
11:AL:85:ARG:CZ	11:AL:87:LYS:HB3	2.32	0.60
26:DE:110:SER:O	26:DE:113:VAL:HG12	2.01	0.60
32:DK:54:LYS:H	32:DK:54:LYS:HD2	1.66	0.60
4:AE:11:GLN:HA	4:AE:11:GLN:HE21	1.66	0.60
22:DA:26:G:H1'	22:DA:515:A:H61	1.67	0.60
47:BZ:36:GLU:C	47:BZ:37:ARG:HD2	2.21	0.60
33:BL:77:ILE:CD1	33:BL:108:ALA:HB1	2.31	0.60
33:BL:91:ASP:HB2	33:BL:94:THR:HB	1.83	0.60
25:BD:104:VAL:HG13	25:BD:106:LYS:HD2	1.84	0.60
22:DA:2328:A:H2'	22:DA:2329:U:C6	2.36	0.60
38:BQ:88:GLU:C	38:BQ:88:GLU:OE1	2.39	0.60
21:AA:204:G:H1'	21:AA:465:A:C2	2.37	0.60
9:CJ:70:HIS:CE1	53:CA:1151:A:O3'	2.54	0.60
20:CU:35:GLU:HG3	20:CU:36:PHE:N	2.10	0.60
33:DL:47:ARG:HG2	33:DL:47:ARG:NH2	2.06	0.60
22:DA:1059:G:N1	22:DA:1088:A:C2	2.70	0.60
24:BC:91:ALA:HB3	24:BC:103:ILE:HG22	1.84	0.60
22:DA:1204:A:N1	22:DA:1241:A:N1	2.50	0.60
53:CA:14:U:H2'	53:CA:16:A:OP2	2.02	0.60
22:DA:991:C:O5'	22:DA:991:C:H6	1.85	0.60
21:AA:978:A:OP2	21:AA:1362:A:N7	2.35	0.60
11:CL:109:ARG:NH1	53:CA:537:G:H5"	2.16	0.60
31:BJ:88:THR:CG2	31:BJ:90:GLU:HG3	2.32	0.60
22:DA:354:A:H2'	22:DA:355:U:O4'	2.01	0.60
24:BC:77:VAL:HG22	24:BC:111:ALA:HA	1.81	0.60
47:BZ:40:THR:CG2	47:BZ:43:ILE:HG23	2.29	0.60
28:DG:162:ARG:HB2	28:DG:166:GLU:HB3	1.83	0.60
24:BC:250:GLN:NE2	24:BC:250:GLN:H	2.00	0.60
1:CB:9:LEU:HD23	1:CB:9:LEU:H	1.66	0.60
8:AI:32:ARG:HG2	8:AI:36:GLN:CB	2.32	0.60
29:DH:32:PRO:HA	45:DX:38:TRP:CD1	2.37	0.60
21:AA:486:U:H2'	21:AA:487:A:C8	2.37	0.60
46:BY:17:GLU:HG3	46:BY:18:LEU:N	2.14	0.60
22:DA:164:C:O2'	22:DA:165:A:H5'	2.02	0.60
28:BG:93:TYR:O	28:BG:105:SER:O	2.20	0.60
7:CH:93:LYS:N	7:CH:93:LYS:HD3	2.17	0.60
2:CC:126:ARG:HE	2:CC:126:ARG:HA	1.67	0.60
22:DA:677:A:O2'	22:DA:2071:A:H5'	2.02	0.60
43:DV:9:ARG:HG2	43:DV:39:ALA:O	2.02	0.60
29:BH:24:GLY:O	29:BH:28:ASN:HB2	2.01	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:AA:1533:C:H3'	21:AA:1534:A:H5''	1.82	0.60
22:BA:893:C:H2'	22:BA:894:U:O4'	2.01	0.60
29:BH:32:PRO:O	29:BH:33:GLN:HB2	2.02	0.60
21:AA:1138:G:O2'	21:AA:1139:G:H4'	2.02	0.60
53:CA:1206:G:C6	53:CA:1207:G:C5	2.90	0.60
16:AQ:12:VAL:HG13	16:AQ:13:SER:N	2.17	0.60
4:AE:148:SER:O	4:AE:152:VAL:HG13	2.02	0.60
22:DA:447:A:H5'	22:DA:449:A:C5	2.36	0.60
22:DA:2212:A:C8	22:DA:2214:C:N4	2.70	0.60
22:BA:1784:A:H4'	22:BA:1785:A:C5'	2.32	0.60
30:BI:10:LEU:HD13	30:BI:27:LEU:HA	1.84	0.60
22:DA:2142:A:C3'	22:DA:2143:C:H4'	2.31	0.60
53:CA:90:C:H2'	53:CA:91:U:C6	2.37	0.60
22:DA:2234:G:C6	22:DA:2235:G:N7	2.70	0.60
37:BP:33:GLU:HB3	37:BP:36:LYS:H	1.67	0.60
11:CL:2:THR:HG22	11:CL:4:ASN:H	1.67	0.60
22:DA:1255:U:H5'	22:DA:2502:G:H22	1.66	0.60
49:B1:33:LEU:H	49:B1:51:ALA:HB3	1.64	0.60
22:BA:2747:G:O2'	28:BG:66:THR:HG22	2.02	0.60
13:CN:52:ARG:HA	13:CN:52:ARG:NE	2.17	0.60
22:BA:136:G:H2'	22:BA:137:U:C5	2.36	0.60
22:BA:2319:G:O2'	22:BA:2320:U:H5	1.85	0.60
8:AI:71:ILE:HD11	21:AA:1248:A:C2	2.37	0.60
50:B2:43:THR:O	50:B2:44:VAL:CB	2.50	0.60
42:DU:58:VAL:HG13	42:DU:60:LYS:HG2	1.82	0.60
34:BM:108:VAL:HG13	34:BM:112:LEU:HB3	1.82	0.60
48:B0:42:ILE:HD12	48:B0:48:TYR:HB2	1.84	0.60
7:CH:38:VAL:O	7:CH:41:GLU:HB2	2.01	0.60
4:AE:64:GLU:HG2	4:AE:68:ARG:NH2	2.16	0.60
12:AM:36:ALA:HB3	12:AM:38:ILE:HG12	1.82	0.60
21:AA:77:A:H2'	21:AA:78:A:N7	2.16	0.60
27:DF:139:GLU:HB3	27:DF:142:TYR:HB3	1.84	0.60
22:DA:2721:A:H2'	22:DA:2722:G:O4'	2.02	0.60
27:BF:47:LYS:NZ	27:BF:47:LYS:HB3	2.16	0.60
24:BC:117:SER:HB2	24:BC:128:THR:HB	1.84	0.60
6:CG:42:VAL:O	6:CG:43:TYR:HB2	2.01	0.60
22:DA:247:G:H4'	22:DA:386:G:C5	2.37	0.60
22:BA:2134:A:N6	22:BA:2157:G:C5	2.70	0.60
42:DU:95:PHE:O	42:DU:97:SER:N	2.34	0.60
53:CA:1348:U:H2'	53:CA:1349:A:H8	1.66	0.60
53:CA:113:G:H1'	53:CA:354:G:H5'	1.82	0.60
30:DI:104:GLN:HA	30:DI:107:GLU:CB	2.31	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:CL:98:ARG:HD3	11:CL:103:CYS:SG	2.42	0.60
28:BG:72:ASN:O	28:BG:76:ILE:HG22	2.01	0.60
51:B3:56:LEU:H	51:B3:56:LEU:HD22	1.67	0.60
21:AA:642:A:H2'	21:AA:643:C:C6	2.34	0.60
22:BA:588:U:H1'	26:BE:85:PHE:CD1	2.37	0.60
35:BN:3:HIS:O	35:BN:4:ARG:HB2	2.01	0.60
22:DA:2267:A:N6	22:DA:2271:G:C6	2.70	0.60
24:DC:93:VAL:HG12	24:DC:101:ARG:H	1.66	0.60
26:BE:108:ILE:HB	33:BL:2:ARG:HH22	1.66	0.60
22:BA:1668:A:H4'	22:BA:1669:A:O5'	2.01	0.60
38:DQ:4:LYS:HE3	38:DQ:7:VAL:HG13	1.84	0.60
22:BA:2492:U:H2'	22:BA:2493:U:H6	1.67	0.60
22:DA:1358:G:H2'	22:DA:1372:U:O4	2.02	0.60
8:AI:38:PHE:HA	8:AI:41:GLU:OE1	2.02	0.60
22:DA:64:A:H2'	22:DA:65:U:O4'	2.02	0.60
1:CB:141:GLU:HG2	1:CB:145:ASN:HD21	1.67	0.60
22:DA:1956:U:O2'	22:DA:1957:C:H5'	2.01	0.60
22:BA:692:C:H5''	24:BC:38:LYS:HB2	1.83	0.60
12:AM:15:VAL:HA	12:AM:33:LEU:CD1	2.32	0.60
22:DA:2758:A:H2'	22:DA:2759:G:H5'	1.83	0.60
53:CA:60:A:H4'	53:CA:61:G:O5'	2.00	0.60
51:B3:54:LEU:O	51:B3:58:ILE:HG13	2.02	0.60
21:AA:1084:G:C5	21:AA:1085:U:C4	2.90	0.60
22:BA:1437:C:H2'	22:BA:1438:U:C6	2.37	0.60
44:BW:39:GLN:HG3	44:BW:42:THR:HB	1.83	0.60
22:BA:1062:G:C8	22:BA:1088:A:H8	2.20	0.60
22:DA:1998:A:H4'	22:DA:2724:U:O2'	2.02	0.60
53:CA:481:G:H4'	53:CA:482:A:OP1	2.02	0.60
4:AE:152:VAL:CB	4:AE:155:LYS:HZ2	2.10	0.60
41:BT:51:PHE:O	41:BT:52:GLU:HG2	2.02	0.60
20:CU:38:GLU:N	20:CU:40:PRO:HD2	2.17	0.60
1:AB:9:LEU:HD23	1:AB:11:ALA:H	1.67	0.60
22:DA:1126:A:H4'	22:DA:1127:A:C5'	2.32	0.60
22:DA:303:G:O2'	22:DA:304:U:O4'	2.19	0.60
53:CA:1304:G:H1'	53:CA:1333:A:H61	1.66	0.60
39:BR:97:LYS:O	39:BR:98:ILE:HB	2.01	0.60
9:AJ:41:PRO:O	9:AJ:42:LEU:HB2	2.00	0.60
22:BA:1820:U:OP1	24:BC:176:ARG:HG2	2.02	0.60
11:CL:45:ASN:HA	53:CA:529:G:O6	2.01	0.60
6:AG:88:VAL:HG22	6:AG:89:GLU:N	2.17	0.60
22:DA:2550:G:C2	22:DA:2559:C:O2	2.55	0.60
24:DC:38:LYS:HE2	24:DC:55:GLY:H	1.67	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:2392:A:C8	22:DA:2429:G:C2	2.89	0.60
53:CA:996:A:H2'	53:CA:997:U:C6	2.37	0.60
38:DQ:91:ARG:NH2	38:DQ:93:ILE:HD13	2.17	0.60
22:BA:1286:A:O2'	22:BA:1288:G:OP2	2.19	0.60
22:DA:1079:C:O2'	22:DA:1080:A:O4'	2.14	0.60
26:DE:126:VAL:HG22	26:DE:127:GLU:OE2	2.02	0.60
2:AC:46:LEU:HB3	2:AC:49:ALA:HB3	1.83	0.60
34:BM:8:LYS:HD2	34:BM:8:LYS:N	2.13	0.60
4:AE:105:ILE:HG13	4:AE:123:LEU:HA	1.83	0.60
6:AG:23:ALA:O	6:AG:26:VAL:HG22	2.02	0.60
9:CJ:64:GLN:CB	13:CN:98:ALA:HB3	2.30	0.60
22:BA:481:G:C4	22:BA:507:A:C2	2.90	0.60
9:AJ:51:VAL:O	9:AJ:62:ARG:HA	2.02	0.60
24:DC:52:HIS:HA	24:DC:216:ARG:HB2	1.83	0.60
22:DA:1989:G:C2'	22:DA:1990:C:H5'	2.32	0.60
22:DA:1635:A:H2'	22:DA:1636:U:C6	2.37	0.60
22:BA:1853:A:N1	22:BA:2087:G:H1'	2.17	0.60
38:DQ:46:TYR:CZ	38:DQ:50:ARG:NH1	2.70	0.60
23:BB:45:A:H2'	23:BB:46:A:C8	2.37	0.60
29:DH:27:ARG:NH1	45:DX:59:ASP:HA	2.17	0.60
22:BA:2407:A:H2'	22:BA:2408:U:C6	2.37	0.60
53:CA:859:G:H2'	53:CA:860:A:C8	2.37	0.60
22:BA:119:A:H4'	22:BA:120:U:O5'	2.02	0.60
36:BO:7:ARG:HH11	36:BO:7:ARG:HG2	1.67	0.60
22:DA:2602:A:H3'	22:DA:2602:A:OP1	2.02	0.60
41:BT:73:ARG:CZ	41:BT:73:ARG:HB3	2.30	0.60
22:BA:693:A:O2'	22:BA:694:U:H5'	2.02	0.60
22:BA:2313:C:H5''	27:BF:87:LYS:HD3	1.84	0.59
28:BG:112:VAL:HG23	28:BG:113:ASP:N	2.16	0.59
28:BG:85:LYS:HG2	28:BG:131:VAL:HG12	1.84	0.59
22:DA:1338:G:H4'	41:DT:18:GLU:OE2	2.02	0.59
21:AA:202:G:N2	21:AA:466:A:H61	1.97	0.59
20:AU:33:ARG:HE	20:AU:34:ARG:HG3	1.66	0.59
41:BT:50:LEU:H	41:BT:50:LEU:CD1	2.13	0.59
53:CA:517:G:H5'	53:CA:519:C:C2	2.37	0.59
22:BA:751:A:H5''	22:BA:752:A:OP1	2.02	0.59
22:BA:480:A:H2	22:BA:499:U:O2	1.85	0.59
26:DE:149:ILE:HG23	26:DE:188:MET:N	2.16	0.59
44:DW:67:LYS:HB3	44:DW:80:SER:HB2	1.83	0.59
53:CA:269:C:H2'	53:CA:270:A:H8	1.67	0.59
18:AS:46:LEU:H	18:AS:61:VAL:CG2	2.14	0.59
5:AF:11:HIS:HD2	5:AF:13:ASP:H	1.50	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:DJ:59:ALA:O	31:DJ:62:VAL:HG12	2.02	0.59
1:CB:101:THR:O	1:CB:102:ASN:HB2	2.01	0.59
40:BS:107:VAL:HG12	40:BS:107:VAL:O	2.01	0.59
22:BA:1936:A:H2	22:BA:1943:U:C4	2.19	0.59
43:DV:30:ILE:HG12	43:DV:91:PHE:HB2	1.84	0.59
26:DE:196:VAL:HG13	26:DE:200:LEU:HD23	1.84	0.59
13:AN:86:ALA:O	13:AN:91:GLU:HB2	2.02	0.59
31:DJ:94:ALA:O	31:DJ:95:ARG:HB3	2.03	0.59
47:DZ:7:THR:O	47:DZ:54:VAL:HA	2.02	0.59
22:DA:1673:G:H2'	22:DA:1674:G:H5'	1.84	0.59
38:DQ:90:ASP:O	38:DQ:94:LEU:HB2	2.02	0.59
22:BA:979:A:H2'	22:BA:982:C:H42	1.66	0.59
33:DL:56:PRO:O	33:DL:60:ARG:HG3	2.02	0.59
22:BA:2650:U:O2'	22:BA:2651:C:H5'	2.03	0.59
54:DB:116:G:H2'	54:DB:117:G:H8	1.66	0.59
22:DA:2353:G:H1'	44:DW:30:VAL:HG13	1.84	0.59
31:BJ:44:TYR:HD1	31:BJ:44:TYR:O	1.85	0.59
22:BA:923:G:N3	44:BW:23:LYS:CE	2.62	0.59
44:BW:17:ALA:O	44:BW:18:LYS:HB3	2.02	0.59
3:CD:28:ASP:O	3:CD:29:THR:O	2.20	0.59
53:CA:734:G:H2'	53:CA:735:C:C6	2.38	0.59
21:AA:182:A:C2	21:AA:184:G:C8	2.90	0.59
53:CA:794:A:H2'	53:CA:795:C:C6	2.37	0.59
22:DA:1078:U:H4'	22:DA:1079:C:H5''	1.83	0.59
22:DA:1056:G:C1'	22:DA:1103:A:H61	2.14	0.59
53:CA:1365:G:O2'	53:CA:1366:C:C5'	2.50	0.59
1:AB:66:ILE:HB	1:AB:88:GLN:CB	2.31	0.59
32:BK:21:CYS:CB	32:BK:39:ILE:HD11	2.29	0.59
22:BA:1927:A:H2'	22:BA:1928:A:C8	2.37	0.59
53:CA:567:G:H1'	57:CA:1819:HOH:O	2.02	0.59
54:DB:27:C:H2'	54:DB:28:C:C6	2.37	0.59
21:AA:81:A:O2'	21:AA:89:U:O2	2.20	0.59
22:BA:588:U:H2'	22:BA:589:U:H6	1.67	0.59
35:DN:90:ARG:NH2	35:DN:116:VAL:HG11	2.17	0.59
53:CA:998:C:H2'	53:CA:999:C:C6	2.37	0.59
25:BD:182:ALA:C	25:BD:184:ARG:N	2.53	0.59
22:DA:1157:G:H2'	22:DA:1158:C:C6	2.36	0.59
22:BA:2476:A:C2'	22:BA:2477:U:H5'	2.32	0.59
41:BT:70:HIS:HB2	41:BT:73:ARG:O	2.02	0.59
53:CA:157:U:O2'	53:CA:158:G:H5'	2.01	0.59
22:BA:1169:A:C2	22:BA:1181:U:O2	2.55	0.59
53:CA:1361:G:H2'	53:CA:1362:A:H5'	1.84	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:BA:2325:G:C6	22:BA:2326:C:N4	2.71	0.59
6:AG:24:LYS:O	6:AG:28:ILE:HG12	2.02	0.59
22:DA:749:A:C2	22:DA:750:A:C8	2.90	0.59
21:AA:1356:G:H2'	21:AA:1357:A:C8	2.37	0.59
9:AJ:21:ALA:HA	9:AJ:24:GLU:HG3	1.83	0.59
22:DA:1439:A:N7	22:DA:1440:U:N1	2.50	0.59
22:DA:1438:U:C4	22:DA:1552:A:N1	2.69	0.59
16:AQ:18:LYS:HE3	21:AA:255:G:H4'	1.84	0.59
9:CJ:12:ALA:HB3	9:CJ:18:ILE:HB	1.84	0.59
25:BD:114:LYS:CE	25:BD:114:LYS:N	2.61	0.59
22:DA:1273:U:H4'	22:DA:1275:A:P	2.41	0.59
22:DA:2756:U:H4'	22:DA:2757:A:O5'	2.02	0.59
21:AA:115:G:H1'	21:AA:116:A:N7	2.16	0.59
19:CT:22:SER:HB3	53:CA:1458:G:O2'	2.02	0.59
22:DA:2653:U:C4	22:DA:2654:A:C6	2.90	0.59
15:AP:5:ARG:HA	15:AP:68:SER:OG	2.01	0.59
39:DR:3:ALA:HB2	39:DR:101:ILE:HD13	1.85	0.59
21:AA:1064:G:O2'	21:AA:1190:G:N2	2.35	0.59
53:CA:249:U:H5'	53:CA:250:A:OP2	2.02	0.59
53:CA:754:C:H2'	53:CA:754:C:O2	2.01	0.59
31:BJ:74:TYR:HB2	31:BJ:87:ALA:O	2.03	0.59
22:DA:1813:G:N3	24:DC:49:THR:HB	2.17	0.59
26:BE:44:ARG:HG3	26:BE:44:ARG:NH2	2.18	0.59
15:CP:35:ARG:HH12	15:CP:38:PHE:HB3	1.67	0.59
53:CA:1172:C:O2'	53:CA:1173:U:H5'	2.02	0.59
22:BA:2628:C:O2'	22:BA:2781:A:H2'	2.03	0.59
22:BA:1150:C:H2'	22:BA:1151:A:O5'	2.01	0.59
21:AA:600:A:H2'	21:AA:601:G:H8	1.67	0.59
22:DA:2707:U:H2'	22:DA:2708:G:C8	2.37	0.59
44:BW:29:SER:O	44:BW:30:VAL:HB	2.02	0.59
6:CG:19:SER:HB3	6:CG:22:LEU:HB3	1.85	0.59
20:AU:39:LYS:N	20:AU:40:PRO:HD2	2.16	0.59
22:BA:1338:G:O2'	41:BT:18:GLU:HG2	2.01	0.59
41:BT:32:LEU:N	41:BT:32:LEU:HD23	2.17	0.59
22:DA:1060:U:H1'	22:DA:1062:G:OP2	2.02	0.59
13:AN:42:ASN:C	13:AN:44:VAL:H	2.04	0.59
45:DX:30:PRO:HG2	45:DX:32:LEU:CD2	2.32	0.59
26:DE:61:ARG:HE	26:DE:65:THR:HB	1.66	0.59
53:CA:1297:G:C8	53:CA:1297:G:OP2	2.54	0.59
3:AD:29:THR:C	3:AD:30:LYS:HD3	2.23	0.59
8:CI:118:ARG:HG3	8:CI:124:PRO:HG3	1.84	0.59
37:DP:56:SER:HB2	37:DP:75:THR:HG21	1.83	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
44:BW:9:THR:HG23	44:BW:10:ARG:HD3	1.83	0.59
37:BP:61:ARG:HG2	37:BP:70:GLU:CG	2.32	0.59
6:AG:4:ARG:NE	6:AG:4:ARG:HA	2.17	0.59
53:CA:174:A:O2'	53:CA:175:C:H5'	2.01	0.59
21:AA:1414:U:H2'	21:AA:1415:G:H8	1.66	0.59
22:DA:1956:U:O2	22:DA:1985:C:H4'	2.03	0.59
53:CA:345:C:H4'	53:CA:346:G:H5''	1.83	0.59
15:CP:67:ILE:HG12	15:CP:72:ALA:HB2	1.84	0.59
53:CA:369:G:OP2	53:CA:388:G:N2	2.33	0.59
23:BB:40:U:O2'	23:BB:43:C:H5	1.86	0.59
21:AA:969:A:O2'	21:AA:970:C:H5'	2.02	0.59
53:CA:844:G:O2'	53:CA:845:A:H5''	2.03	0.59
10:CK:14:GLN:HA	10:CK:76:TYR:O	2.02	0.59
33:BL:130:GLY:O	33:BL:133:ALA:HB3	2.02	0.59
22:DA:1906:G:C8	22:DA:1929:G:H2'	2.37	0.59
22:DA:491:G:O2'	22:DA:492:A:H5'	2.02	0.59
46:DY:57:LEU:HD13	46:DY:60:LYS:HE3	1.83	0.59
22:DA:304:U:H2'	22:DA:305:C:C6	2.37	0.59
22:DA:920:A:H2'	22:DA:921:C:C6	2.38	0.59
8:CI:71:ILE:CD1	8:CI:72:SER:H	2.13	0.59
34:BM:40:ARG:HB2	34:BM:93:VAL:HG21	1.84	0.59
10:AK:110:THR:HG22	20:AU:4:LYS:CB	2.32	0.59
22:BA:1731:G:O2'	22:BA:1732:C:H3'	2.03	0.59
21:AA:87:C:H2'	21:AA:88:U:H6	1.67	0.59
22:DA:1237:A:O2'	22:DA:1238:G:H4'	2.03	0.59
11:AL:23:LEU:HB2	11:AL:58:ASN:ND2	2.17	0.59
12:CM:78:ARG:NH2	12:CM:79:LEU:HD23	2.17	0.59
32:DK:39:ILE:HD11	32:DK:62:VAL:HG23	1.83	0.59
29:DH:31:VAL:HB	29:DH:32:PRO:HD3	1.83	0.59
33:DL:93:ASN:CG	33:DL:94:THR:H	2.05	0.59
39:DR:87:GLN:HG2	39:DR:88:GLY:N	2.17	0.59
22:DA:172:A:H2'	22:DA:173:A:C8	2.37	0.59
22:BA:1560:G:H2'	22:BA:1561:C:C6	2.36	0.59
45:DX:39:VAL:O	45:DX:40:GLU:HB2	2.01	0.59
21:AA:922:G:H2'	21:AA:923:A:C8	2.37	0.59
22:BA:373:U:O2'	22:BA:374:A:H5'	2.02	0.59
23:BB:30:C:H2'	23:BB:31:C:H5'	1.84	0.59
26:BE:175:ILE:HG23	26:BE:175:ILE:O	2.00	0.59
22:DA:1440:U:O2'	22:DA:1441:G:H5'	2.03	0.59
28:BG:163:TYR:O	28:BG:164:ALA:HB2	2.03	0.59
19:AT:26:MET:HB3	21:AA:1458:G:H5'	1.85	0.59
22:BA:1082:U:N3	22:BA:1086:A:C6	2.70	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
41:BT:28:ASN:HA	41:BT:91:GLN:NE2	2.18	0.59
22:BA:271:G:HO2'	22:BA:272:A:C5'	2.16	0.59
22:DA:2235:G:H2'	22:DA:2236:U:H6	1.66	0.59
22:DA:2838:G:H1'	35:DN:45:ARG:NH2	2.14	0.59
22:DA:2612:C:H5''	22:DA:2613:U:OP1	2.02	0.59
20:AU:38:GLU:HB2	21:AA:1526:G:P	2.42	0.59
36:DO:30:ARG:HH12	36:DO:102:ARG:HB2	1.66	0.59
21:AA:1314:C:O2'	21:AA:1315:U:H5'	2.03	0.59
9:AJ:52:LEU:HD23	9:AJ:62:ARG:HG2	1.84	0.59
12:CM:102:LYS:HZ1	53:CA:952:U:H5	1.49	0.59
32:DK:39:ILE:HD11	32:DK:62:VAL:CG2	2.32	0.59
22:DA:1494:A:H2'	22:DA:1495:A:H8	1.66	0.59
22:DA:1413:A:H2'	22:DA:1414:C:C6	2.38	0.59
22:DA:642:U:O2	22:DA:644:A:H5''	2.02	0.59
22:DA:724:U:H2'	22:DA:725:G:O4'	2.03	0.59
22:BA:2476:A:H2'	22:BA:2477:U:H5'	1.85	0.59
21:AA:968:A:H4'	21:AA:969:A:OP2	2.01	0.59
16:AQ:7:LEU:HD23	16:AQ:24:ILE:CD1	2.32	0.59
22:BA:42:A:C3'	22:BA:43:G:H5''	2.32	0.59
18:CS:79:TYR:O	18:CS:80:ARG:HB2	2.02	0.59
6:CG:135:LYS:O	6:CG:139:ASP:HB2	2.02	0.59
2:CC:113:LYS:HG3	2:CC:184:ASN:ND2	2.18	0.59
24:DC:124:LYS:NZ	24:DC:124:LYS:HB3	2.18	0.59
3:AD:166:LYS:NZ	3:AD:166:LYS:HB3	2.18	0.59
29:BH:26:ALA:HA	29:BH:30:LEU:HB2	1.82	0.59
53:CA:373:A:C8	53:CA:373:A:H5'	2.38	0.59
37:DP:91:VAL:HG11	37:DP:96:LEU:HD11	1.85	0.59
22:DA:2312:U:H2'	22:DA:2313:C:C6	2.37	0.59
22:DA:70:G:H5'	22:DA:112:U:O2	2.02	0.59
4:CE:136:VAL:O	4:CE:140:ILE:HG13	2.03	0.59
26:BE:119:ILE:CD1	26:BE:187:VAL:HA	2.32	0.59
12:AM:106:ARG:HH21	12:AM:112:ARG:CB	2.15	0.59
13:CN:8:ARG:HD2	13:CN:12:ARG:CZ	2.33	0.59
53:CA:821:G:H2'	53:CA:822:U:C6	2.38	0.59
22:DA:828:U:H2'	22:DA:829:A:C8	2.37	0.59
12:CM:77:LYS:HA	12:CM:80:MET:HE2	1.83	0.59
25:DD:89:GLU:HG2	25:DD:94:GLN:NE2	2.17	0.59
33:DL:127:VAL:HG13	33:DL:132:ARG:HB2	1.83	0.59
22:BA:196:A:H2'	22:BA:805:G:O6	2.02	0.59
41:DT:67:VAL:HB	41:DT:76:ARG:HG3	1.84	0.59
53:CA:388:G:O2'	53:CA:389:A:P	2.60	0.59
13:CN:66:THR:HG23	13:CN:82:LYS:HE3	1.84	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
53:CA:1520:C:H2'	53:CA:1521:C:C6	2.37	0.59
11:CL:65:TYR:HB3	11:CL:95:HIS:HD2	1.67	0.59
31:BJ:31:GLU:HG3	31:BJ:142:ILE:HG21	1.85	0.59
10:CK:117:HIS:ND1	53:CA:675:A:H1'	2.16	0.59
49:D1:25:ASN:HB3	49:D1:28:THR:OG1	2.03	0.59
22:DA:2286:G:H4'	22:DA:2287:A:C1'	2.33	0.59
29:BH:31:VAL:O	29:BH:32:PRO:C	2.41	0.59
45:BX:34:SER:CA	45:BX:49:ARG:HA	2.32	0.59
37:BP:50:ARG:HG2	37:BP:57:ALA:H	1.60	0.59
19:AT:29:THR:O	19:AT:33:LYS:HE2	2.03	0.59
22:DA:1081:U:H4'	30:DI:123:ALA:HA	1.84	0.59
5:CF:2:ARG:NH2	5:CF:91:ARG:HB2	2.18	0.59
25:DD:12:THR:HG22	25:DD:13:ARG:O	2.03	0.59
21:AA:275:G:O2'	21:AA:276:G:H5'	2.01	0.59
53:CA:79:G:N1	53:CA:80:A:N6	2.51	0.59
22:DA:2867:G:C2'	22:DA:2867:G:N3	2.64	0.59
28:DG:84:LYS:O	28:DG:85:LYS:HB3	2.03	0.59
25:DD:106:LYS:O	25:DD:107:VAL:HB	2.01	0.59
10:AK:35:ASP:OD2	10:AK:39:ASN:HB2	2.03	0.59
22:BA:2780:G:OP2	31:BJ:120:ARG:HD3	2.02	0.59
12:CM:102:LYS:HA	53:CA:1226:C:N4	2.17	0.59
5:AF:46:GLN:NE2	5:AF:55:HIS:HB2	2.17	0.59
21:AA:903:G:C4	21:AA:904:U:C5	2.91	0.59
19:AT:73:ARG:NH2	21:AA:261:U:OP2	2.36	0.59
22:DA:2677:G:H2'	22:DA:2678:C:C6	2.36	0.59
22:BA:303:G:H2'	22:BA:304:U:H6	1.68	0.59
22:DA:414:C:H5''	22:DA:1879:C:O2'	2.03	0.59
21:AA:382:A:H2'	21:AA:383:A:C8	2.37	0.59
5:CF:68:GLN:O	5:CF:71:ILE:HG22	2.02	0.59
8:CI:30:ASN:O	8:CI:32:ARG:HG2	2.02	0.59
21:AA:397:A:N7	21:AA:547:A:O2'	2.35	0.59
22:BA:2211:A:OP2	22:BA:2211:A:H4'	2.01	0.59
13:AN:25:GLU:HG2	13:AN:26:LEU:HD12	1.85	0.59
22:DA:365:U:H2'	22:DA:366:C:O4'	2.01	0.59
22:BA:2641:G:OP1	31:BJ:76:HIS:HE1	1.86	0.59
46:BY:26:PHE:HD1	46:BY:27:ASN:HD22	1.51	0.59
14:CO:2:LEU:HD13	14:CO:34:GLN:HG2	1.84	0.59
46:BY:42:LEU:O	46:BY:43:LEU:C	2.41	0.59
22:DA:2336:A:N7	44:DW:40:ARG:NH2	2.51	0.59
21:AA:1129:C:H2'	21:AA:1139:G:N7	2.17	0.59
16:CQ:70:LYS:HD3	53:CA:254:G:H5''	1.85	0.59
10:AK:22:ILE:CD1	10:AK:95:THR:HG21	2.26	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:BD:113:SER:C	25:BD:114:LYS:HE3	2.23	0.59
22:DA:1130:U:O2'	22:DA:1131:G:C8	2.55	0.59
31:BJ:65:THR:HG23	31:BJ:66:GLY:N	2.16	0.59
22:DA:1432:G:O2'	22:DA:1433:A:H5'	2.03	0.59
7:AH:88:LYS:HA	7:AH:91:LEU:HD12	1.85	0.59
22:BA:1011:G:H4'	22:BA:1012:U:OP1	2.02	0.59
22:DA:1422:G:HO2'	22:DA:1492:G:HO2'	1.49	0.59
53:CA:1245:C:H2'	53:CA:1246:A:C8	2.34	0.59
25:DD:113:SER:HB2	25:DD:168:GLU:OE1	2.02	0.59
30:BI:105:LEU:HA	30:BI:108:ILE:HB	1.84	0.59
5:CF:11:HIS:NE2	5:CF:54:LEU:HD21	2.18	0.59
18:AS:46:LEU:H	18:AS:61:VAL:HG23	1.68	0.59
32:DK:21:CYS:HA	32:DK:41:ILE:HD12	1.85	0.59
40:DS:66:ILE:H	40:DS:66:ILE:HD13	1.67	0.59
25:BD:169:ARG:C	25:BD:170:VAL:HG13	2.23	0.59
22:BA:1936:A:C2	22:BA:1943:U:H5	2.21	0.59
20:AU:24:LYS:HG2	20:AU:25:ALA:H	1.67	0.59
53:CA:1176:A:H2'	53:CA:1177:G:O4'	2.02	0.59
43:BV:21:ARG:HA	43:BV:25:LYS:O	2.03	0.59
27:BF:129:MET:SD	27:BF:153:ILE:HD11	2.42	0.59
22:DA:2394:C:H41	51:D3:30:HIS:CE1	2.21	0.59
22:DA:2332:C:H4'	44:DW:40:ARG:CZ	2.33	0.59
38:DQ:87:VAL:HG12	38:DQ:88:GLU:H	1.67	0.59
53:CA:1160:G:O2'	53:CA:1161:C:C5'	2.51	0.59
34:DM:34:LYS:HB3	34:DM:129:THR:HG22	1.85	0.59
22:BA:2134:A:C6	22:BA:2135:A:C6	2.91	0.59
24:BC:89:ASN:O	24:BC:90:ILE:HD13	2.03	0.59
41:DT:29:THR:CB	41:DT:86:THR:H	2.16	0.59
31:DJ:74:TYR:CE2	31:DJ:103:ILE:HD11	2.38	0.59
33:DL:81:ASP:O	33:DL:83:ALA:N	2.35	0.59
31:BJ:17:VAL:CG2	31:BJ:137:PRO:HB2	2.33	0.59
30:BI:120:ASP:HB3	30:BI:123:ALA:HB3	1.83	0.59
22:BA:946:C:O2'	22:BA:947:A:H5'	2.03	0.59
46:DY:4:LYS:H	46:DY:4:LYS:HD3	1.67	0.59
18:CS:54:ARG:NH1	53:CA:958:A:H62	2.01	0.59
22:BA:2556:C:H2'	22:BA:2557:G:H5'	1.84	0.59
21:AA:1167:A:C8	21:AA:1169:A:C6	2.91	0.59
12:AM:5:GLY:HA3	12:AM:65:GLU:HG3	1.84	0.59
22:BA:2051:A:OP2	22:BA:2051:A:H8	1.86	0.59
27:DF:103:ILE:HA	27:DF:107:VAL:HG21	1.84	0.59
28:BG:82:PHE:CE2	28:BG:137:LYS:HB2	2.38	0.59
21:AA:1499:A:O2'	21:AA:1500:A:H5'	2.03	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:1352:U:C5	22:DA:1377:G:C6	2.91	0.59
21:AA:1233:G:H2'	21:AA:1234:C:C6	2.38	0.59
11:CL:50:LYS:HD2	11:CL:50:LYS:N	2.18	0.59
48:D0:30:ASP:OD1	48:D0:47:TYR:HB3	2.03	0.59
31:BJ:4:PHE:N	31:BJ:44:TYR:OH	2.36	0.58
3:CD:2:ARG:NH2	3:CD:114:ARG:HH11	2.01	0.58
54:DB:12:C:H5''	54:DB:15:A:H62	1.67	0.58
44:BW:24:ARG:C	44:BW:24:ARG:HD2	2.23	0.58
44:BW:24:ARG:HD3	44:BW:65:LYS:CE	2.33	0.58
44:BW:39:GLN:O	44:BW:40:ARG:C	2.41	0.58
53:CA:372:C:O2'	53:CA:373:A:P	2.61	0.58
15:CP:70:ARG:O	15:CP:74:LEU:HG	2.03	0.58
4:AE:158:LYS:HE2	7:AH:63:LYS:HZ1	1.67	0.58
10:CK:74:LYS:HD2	10:CK:104:PHE:CE1	2.36	0.58
36:BO:33:ARG:HG2	36:BO:34:HIS:CE1	2.38	0.58
22:BA:1287:A:OP2	35:BN:103:ARG:HG3	2.03	0.58
22:DA:222:A:N6	22:DA:232:G:H1'	2.18	0.58
22:DA:1476:U:O2'	22:DA:1477:A:O5'	2.22	0.58
31:BJ:111:LYS:HE2	31:BJ:115:GLY:H	1.68	0.58
4:CE:131:ASN:O	4:CE:135:VAL:HG23	2.04	0.58
22:BA:725:G:C6	22:BA:726:G:N1	2.71	0.58
27:BF:133:GLU:H	27:BF:150:GLY:CA	2.14	0.58
27:DF:48:LEU:HD23	27:DF:48:LEU:H	1.66	0.58
22:DA:972:A:H3'	22:DA:973:A:H5''	1.85	0.58
11:CL:106:VAL:HG23	11:CL:116:TYR:HB3	1.83	0.58
22:BA:1871:A:H8	22:BA:1872:A:C5	2.20	0.58
25:DD:38:LYS:HB3	25:DD:38:LYS:NZ	2.17	0.58
53:CA:251:G:H4'	53:CA:252:U:H5'	1.85	0.58
22:BA:811:U:O2'	22:BA:1250:G:H2'	2.03	0.58
5:CF:90:MET:HE1	17:CR:60:ARG:HD3	1.85	0.58
14:AO:84:LEU:HB3	14:AO:86:LEU:HD22	1.84	0.58
21:AA:1466:C:H2'	21:AA:1467:C:O4'	2.02	0.58
22:BA:900:A:H2'	22:BA:901:C:O4'	2.03	0.58
53:CA:357:G:H8	53:CA:357:G:OP2	1.85	0.58
22:DA:160:A:N6	22:DA:167:A:H1'	2.18	0.58
21:AA:1049:U:H1'	21:AA:1201:A:N7	2.17	0.58
26:BE:18:THR:HG22	26:BE:106:LYS:HE3	1.84	0.58
22:BA:2243:U:H2'	22:BA:2244:U:C6	2.38	0.58
3:AD:80:ARG:HH21	3:AD:81:LEU:HD21	1.67	0.58
3:AD:146:GLU:HB3	3:AD:147:LYS:NZ	2.18	0.58
1:AB:108:GLN:H	1:AB:108:GLN:NE2	1.83	0.58
27:DF:129:MET:HG3	27:DF:153:ILE:HD12	1.84	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
27:DF:91:ARG:NH2	27:DF:91:ARG:HB3	2.17	0.58
22:DA:1068:G:C8	22:DA:1069:A:N7	2.72	0.58
24:DC:144:GLU:HG3	24:DC:151:GLY:N	2.18	0.58
22:DA:2798:U:H5'	22:DA:2800:A:N7	2.18	0.58
26:DE:128:ALA:HB1	26:DE:129:PRO:CD	2.31	0.58
22:DA:396:G:OP2	45:DX:9:LYS:NZ	2.33	0.58
27:BF:134:GLN:HG3	27:BF:140:ILE:HG12	1.84	0.58
27:BF:37:MET:HE3	27:BF:151:LEU:HB3	1.84	0.58
28:BG:30:GLY:O	28:BG:32:LEU:N	2.36	0.58
21:AA:34:C:H2'	21:AA:35:G:H8	1.68	0.58
22:BA:1867:G:C2'	22:BA:1868:C:H5'	2.33	0.58
37:DP:50:ARG:CA	37:DP:57:ALA:H	2.16	0.58
53:CA:204:G:H2'	53:CA:205:A:O4'	2.02	0.58
22:DA:2271:G:H2'	22:DA:2272:U:C6	2.38	0.58
54:DB:50:A:OP1	36:DO:68:LYS:HB2	2.02	0.58
47:BZ:37:ARG:HD2	47:BZ:37:ARG:N	2.17	0.58
28:BG:54:ARG:HG3	28:BG:57:TYR:HD1	1.68	0.58
22:DA:357:C:H2'	22:DA:358:U:H6	1.68	0.58
22:BA:2531:A:P	28:BG:174:LYS:HG3	2.42	0.58
22:BA:914:G:C8	22:BA:914:G:H5''	2.39	0.58
21:AA:991:U:H4'	21:AA:992:U:OP1	2.02	0.58
54:DB:17:C:O2'	54:DB:18:G:H5'	2.03	0.58
45:BX:34:SER:HA	45:BX:48:LEU:O	2.02	0.58
25:BD:92:VAL:O	25:BD:93:GLY:C	2.40	0.58
9:CJ:45:ARG:NH2	53:CA:1279:G:H2'	2.18	0.58
22:DA:1142:A:C8	22:DA:1144:A:N7	2.71	0.58
53:CA:1287:A:O2'	53:CA:1288:A:O4'	2.22	0.58
22:DA:1373:A:H4'	22:DA:2212:A:H1'	1.85	0.58
41:BT:34:VAL:O	41:BT:34:VAL:HG23	2.02	0.58
27:BF:39:VAL:HG11	27:BF:49:LEU:HD13	1.84	0.58
22:DA:576:U:H2'	22:DA:577:G:C8	2.39	0.58
28:DG:94:ARG:CZ	28:DG:105:SER:HB2	2.33	0.58
22:DA:628:G:C6	22:DA:636:G:C2	2.91	0.58
53:CA:501:C:H2'	53:CA:502:A:C8	2.38	0.58
37:DP:50:ARG:HB3	37:DP:57:ALA:H	1.67	0.58
10:AK:39:ASN:O	10:AK:40:ALA:HB3	2.04	0.58
51:D3:15:LYS:HZ2	51:D3:19:GLY:HA2	1.67	0.58
22:BA:1713:A:H4'	22:BA:1714:U:OP1	2.02	0.58
21:AA:734:G:H2'	21:AA:735:C:H6	1.68	0.58
29:BH:97:ARG:HG2	29:BH:111:ALA:HB1	1.85	0.58
22:DA:84:A:C5	22:DA:103:A:N6	2.71	0.58
21:AA:613:C:H2'	21:AA:614:C:C6	2.38	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:AC:142:ARG:HB3	2:AC:143:LEU:HD13	1.86	0.58
3:AD:16:THR:HG22	3:AD:17:ASP:N	2.17	0.58
37:DP:44:GLY:HA3	37:DP:60:VAL:HG12	1.84	0.58
32:BK:59:LYS:HE2	32:BK:89:ASN:O	2.03	0.58
47:BZ:26:LEU:O	47:BZ:37:ARG:NH1	2.36	0.58
22:BA:1534:U:H5'	22:BA:1535:A:OP1	2.04	0.58
22:BA:2581:G:H4'	22:BA:2582:G:C8	2.37	0.58
10:AK:43:TRP:HZ3	10:AK:45:THR:HG23	1.68	0.58
40:BS:42:LYS:O	40:BS:42:LYS:HD3	2.03	0.58
21:AA:580:C:H2'	21:AA:581:G:O4'	2.04	0.58
15:CP:77:GLU:C	15:CP:79:ASN:H	2.06	0.58
31:BJ:53:TYR:CE1	31:BJ:121:LYS:HG2	2.37	0.58
22:DA:200:U:O4	22:DA:248:G:C2	2.56	0.58
22:DA:1682:G:H2'	22:DA:1683:U:C5	2.39	0.58
12:AM:94:LEU:HB3	12:AM:95:PRO:HD2	1.85	0.58
22:BA:1254:A:H5''	22:BA:1255:U:H5''	1.85	0.58
38:BQ:91:ARG:NE	39:BR:11:GLN:HB2	2.17	0.58
53:CA:994:A:HO2'	53:CA:995:C:H6	1.48	0.58
44:BW:35:ILE:O	44:BW:37:VAL:N	2.36	0.58
53:CA:430:A:O2'	53:CA:431:A:H5'	2.03	0.58
19:CT:73:ARG:HG2	19:CT:73:ARG:NH1	2.06	0.58
53:CA:373:A:H5'	53:CA:373:A:H8	1.68	0.58
10:AK:22:ILE:HG22	10:AK:31:VAL:HG13	1.84	0.58
41:BT:27:SER:O	41:BT:28:ASN:OD1	2.21	0.58
22:DA:2542:A:H4'	22:DA:2543:G:C5'	2.33	0.58
22:BA:2728:U:HO2'	22:BA:2729:G:H8	1.46	0.58
2:AC:76:ILE:C	2:AC:82:ASP:HB2	2.24	0.58
22:DA:311:A:O2'	22:DA:332:A:H5'	2.03	0.58
4:AE:100:GLU:HB2	4:AE:103:GLY:CA	2.33	0.58
22:BA:705:A:N6	22:BA:726:G:H1'	2.19	0.58
53:CA:1129:C:HO2'	53:CA:1130:A:H8	1.46	0.58
27:DF:48:LEU:HG	27:DF:49:LEU:HD22	1.86	0.58
21:AA:978:A:OP2	21:AA:1362:A:N6	2.34	0.58
28:BG:73:SER:HA	28:BG:76:ILE:HG22	1.85	0.58
22:BA:959:A:H62	34:BM:82:MET:CE	2.16	0.58
22:BA:506:G:H4'	22:BA:507:A:H5'	1.84	0.58
53:CA:238:A:H2'	53:CA:239:U:H5''	1.84	0.58
6:CG:112:ASP:HB3	6:CG:117:LEU:HB3	1.85	0.58
12:AM:113:LYS:H	12:AM:114:PRO:CD	2.16	0.58
44:BW:8:SER:O	44:BW:9:THR:HG22	2.04	0.58
2:AC:54:ILE:HD12	2:AC:54:ILE:C	2.24	0.58
22:BA:960:A:H5''	22:BA:961:C:OP2	2.03	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:BA:962:G:OP1	57:BA:3360:HOH:O	2.17	0.58
22:DA:2038:G:H2'	22:DA:2039:U:O4'	2.03	0.58
25:DD:110:THR:OG1	25:DD:171:THR:HG22	2.03	0.58
31:BJ:40:HIS:H	31:BJ:40:HIS:CD2	2.22	0.58
26:DE:117:ARG:NH2	33:DL:2:ARG:HB3	2.18	0.58
22:DA:2197:U:O2'	22:DA:2198:A:C8	2.53	0.58
22:DA:545:U:C2	22:DA:547:A:H5''	2.38	0.58
23:BB:57:A:O2'	23:BB:58:A:H5'	2.03	0.58
5:CF:9:MET:HE1	17:CR:64:LEU:O	2.03	0.58
4:AE:59:ILE:O	4:AE:62:ALA:HB3	2.04	0.58
12:AM:88:LEU:HD23	12:AM:91:ARG:HH21	1.68	0.58
22:DA:2283:C:C5	22:DA:2389:G:C4	2.91	0.58
39:BR:5:PHE:HA	39:BR:39:LEU:HD21	1.84	0.58
38:BQ:111:LYS:CE	39:BR:50:GLY:HA2	2.33	0.58
22:BA:1079:C:C4	22:BA:1088:A:H2	2.21	0.58
4:AE:81:GLN:HG2	4:AE:149:PRO:CG	2.32	0.58
32:DK:111:LYS:HG2	32:DK:112:PHE:CD1	2.37	0.58
53:CA:82:G:H2'	53:CA:83:C:H4'	1.86	0.58
35:DN:67:PHE:HE2	35:DN:73:ASN:ND2	2.02	0.58
22:DA:800:A:H4'	22:DA:801:G:O5'	2.02	0.58
21:AA:1352:C:H2'	21:AA:1353:G:C8	2.38	0.58
27:DF:43:ILE:HG12	27:DF:77:LYS:HD3	1.85	0.58
22:DA:2418:A:OP1	51:D3:44:ARG:HD3	2.04	0.58
22:BA:2466:C:OP1	52:B4:4:ARG:HB2	2.03	0.58
26:DE:6:LYS:HE3	26:DE:7:ASP:OD2	2.03	0.58
22:DA:1721:G:H1'	22:DA:1739:A:N6	2.18	0.58
22:BA:1813:G:N3	24:BC:49:THR:CG2	2.66	0.58
12:CM:94:LEU:HD21	53:CA:1226:C:H5''	1.86	0.58
22:DA:666:A:H5''	33:DL:48:ARG:HG2	1.84	0.58
22:BA:983:A:C6	22:BA:984:A:C2	2.92	0.58
22:DA:1827:U:C4'	22:DA:1970:A:O2'	2.51	0.58
29:DH:78:VAL:HG22	29:DH:100:ALA:HA	1.86	0.58
21:AA:267:C:O2'	21:AA:268:U:H5'	2.02	0.58
22:BA:1475:G:O2'	22:BA:1476:U:P	2.62	0.58
22:BA:1476:U:C6	22:BA:1476:U:OP2	2.57	0.58
22:BA:283:G:C6	22:BA:284:U:N3	2.71	0.58
22:DA:607:U:H5	22:DA:619:G:C4	2.21	0.58
21:AA:579:A:H2'	21:AA:580:C:C6	2.39	0.58
26:BE:72:SER:C	26:BE:74:LYS:H	2.07	0.58
53:CA:1305:G:H22	53:CA:1331:G:H2'	1.68	0.58
32:DK:40:LYS:NZ	32:DK:89:ASN:HD21	2.01	0.58
22:BA:182:A:H2'	22:BA:183:C:C6	2.38	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:BA:38:A:N3	26:BE:43:THR:HB	2.19	0.58
22:BA:1245:G:OP1	33:BL:13:LYS:HE3	2.02	0.58
26:BE:1:MET:HG3	26:BE:14:VAL:HG23	1.85	0.58
22:DA:1820:U:OP1	24:DC:176:ARG:HB3	2.03	0.58
26:DE:136:GLN:HA	26:DE:139:LYS:HG2	1.85	0.58
22:BA:2233:U:H2'	22:BA:2234:G:C8	2.38	0.58
4:CE:155:LYS:HB3	7:CH:70:VAL:HG23	1.85	0.58
32:DK:77:ILE:HG23	37:DP:71:ARG:HD2	1.86	0.58
22:BA:2897:U:H2'	22:BA:2898:U:C6	2.39	0.58
22:DA:1378:A:H2'	22:DA:1380:G:N7	2.18	0.58
27:BF:46:LYS:H	27:BF:46:LYS:HD2	1.68	0.58
9:CJ:25:ILE:O	9:CJ:25:ILE:HG22	2.04	0.58
33:BL:94:THR:CG2	33:BL:95:LEU:N	2.66	0.58
19:AT:43:LYS:NZ	19:AT:86:ALA:HA	2.19	0.58
36:BO:31:THR:HG23	36:BO:33:ARG:H	1.67	0.58
9:CJ:45:ARG:HH21	53:CA:1279:G:H2'	1.68	0.58
41:BT:39:THR:O	41:BT:39:THR:HG22	2.02	0.58
22:DA:1062:G:O2'	22:DA:1063:G:H8	1.87	0.58
3:CD:176:LYS:HE2	3:CD:178:GLU:CD	2.23	0.58
52:B4:33:HIS:O	52:B4:35:GLN:HG3	2.02	0.58
22:DA:176:A:H3'	22:DA:177:G:N2	2.19	0.58
21:AA:1239:A:H4'	21:AA:1240:U:H5'	1.84	0.58
28:DG:85:LYS:O	28:DG:86:LEU:HG	2.03	0.58
37:BP:21:PRO:HD3	37:BP:49:ILE:HD12	1.85	0.58
22:BA:2013:A:OP1	40:BS:96:ILE:HA	2.04	0.58
1:AB:67:LEU:HB3	1:AB:160:LEU:CD1	2.34	0.58
22:DA:1237:A:N3	22:DA:1238:G:H1'	2.19	0.58
13:CN:52:ARG:HG3	53:CA:1219:A:OP1	2.03	0.58
22:DA:41:C:H2'	22:DA:42:A:C8	2.39	0.58
22:DA:1830:C:H5'	24:DC:14:HIS:CE1	2.38	0.58
24:DC:13:ARG:HG2	24:DC:14:HIS:CD2	2.39	0.58
22:DA:1521:G:C6	22:DA:1522:A:N6	2.72	0.58
21:AA:702:A:C4	22:BA:1847:A:H2	2.22	0.58
26:BE:44:ARG:HG3	26:BE:44:ARG:HH21	1.68	0.58
21:AA:821:G:H4'	57:AA:1740:HOH:O	2.04	0.58
22:BA:2474:U:H5''	22:BA:2475:C:OP2	2.03	0.58
46:BY:26:PHE:HD1	46:BY:27:ASN:ND2	2.02	0.58
16:CQ:47:ASP:HB3	16:CQ:74:LEU:HB3	1.85	0.58
47:DZ:10:ARG:HD2	47:DZ:52:PHE:O	2.03	0.58
2:CC:176:THR:HG22	2:CC:178:ARG:HG3	1.85	0.58
22:BA:2741:A:H2'	22:BA:2742:G:O4'	2.03	0.58
21:AA:148:G:N3	21:AA:1446:A:H2	2.01	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:AA:975:A:C4'	21:AA:976:G:H5'	2.18	0.58
44:BW:37:VAL:CG1	44:BW:38:ARG:H	2.11	0.58
21:AA:199:A:O2'	21:AA:200:G:O4'	2.18	0.58
21:AA:198:G:H22	21:AA:220:G:H1'	1.68	0.58
38:DQ:91:ARG:HG3	39:DR:11:GLN:CD	2.23	0.58
10:CK:70:ALA:HB1	10:CK:104:PHE:CZ	2.37	0.58
22:DA:738:G:H2'	22:DA:739:A:C8	2.38	0.58
22:DA:2093:G:C6	22:DA:2225:A:C8	2.92	0.58
22:DA:1281:G:H2'	22:DA:1282:U:O4'	2.04	0.58
4:AE:123:LEU:HD22	21:AA:7:A:C8	2.38	0.58
22:BA:1139:G:O2'	22:BA:1140:C:H5'	2.03	0.58
21:AA:274:A:H4'	21:AA:275:G:O5'	2.03	0.58
32:DK:17:ARG:CG	32:DK:18:ARG:H	2.16	0.58
27:BF:37:MET:HE2	27:BF:149:ARG:HG2	1.86	0.58
27:DF:39:VAL:HG22	27:DF:49:LEU:HG	1.85	0.58
22:BA:2683:C:O2	32:BK:70:ARG:NH2	2.33	0.58
53:CA:1013:G:N2	53:CA:1015:G:H3'	2.18	0.58
31:DJ:35:ARG:HH12	31:DJ:140:LEU:HD21	1.69	0.58
53:CA:1170:A:H2'	53:CA:1171:A:O4'	2.04	0.58
24:DC:71:ASP:O	24:DC:73:ILE:HG12	2.03	0.58
4:CE:14:LEU:HD13	4:CE:59:ILE:HD12	1.85	0.58
21:AA:1261:A:H61	21:AA:1274:A:C2'	2.17	0.58
25:BD:66:GLY:O	25:BD:69:ALA:HB3	2.04	0.58
21:AA:486:U:H2'	21:AA:487:A:H8	1.69	0.58
21:AA:715:A:H2'	21:AA:716:A:C8	2.39	0.58
22:BA:1716:U:O2'	22:BA:1717:A:H5'	2.03	0.58
3:AD:13:ARG:HG2	3:AD:55:ARG:HH21	1.68	0.58
21:AA:1097:C:H2'	21:AA:1098:C:C6	2.38	0.58
22:BA:1182:G:H2'	22:BA:1183:U:O4'	2.02	0.58
25:DD:68:PHE:HB3	25:DD:73:VAL:HA	1.84	0.58
9:AJ:59:LYS:HG2	21:AA:972:C:H4'	1.86	0.58
22:BA:556:A:H5''	22:BA:557:C:OP2	2.04	0.58
6:CG:124:SER:O	6:CG:128:GLU:HG2	2.03	0.58
29:DH:102:ALA:C	29:DH:104:THR:H	2.07	0.58
23:BB:66:A:H4'	23:BB:67:G:OP1	2.04	0.58
41:BT:68:LYS:HE2	41:BT:77:ARG:NE	2.18	0.58
22:BA:2438:U:O2'	22:BA:2439:A:H5''	2.04	0.58
53:CA:1215:G:H2'	53:CA:1216:A:H8	1.69	0.58
3:CD:32:LYS:HE3	53:CA:413:G:C6	2.38	0.58
31:DJ:44:TYR:HD1	38:DQ:63:ARG:NH2	2.02	0.58
22:DA:785:G:O2'	22:DA:1779:U:H5''	2.03	0.58
53:CA:764:C:C4	53:CA:812:G:O6	2.56	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
53:CA:975:A:O2'	53:CA:1358:U:H1'	2.03	0.58
21:AA:373:A:H2'	21:AA:374:A:H8	1.69	0.58
25:BD:118:PHE:O	25:BD:120:GLY:N	2.33	0.58
3:AD:173:ASP:O	3:AD:174:ALA:HB2	2.03	0.58
51:B3:31:ILE:CD1	51:B3:34:LYS:HD2	2.33	0.58
22:DA:2631:G:C2'	22:DA:2632:A:H5''	2.32	0.58
51:B3:21:PHE:O	51:B3:22:LYS:HG2	2.04	0.58
22:DA:752:A:O2'	22:DA:753:A:OP2	2.21	0.58
53:CA:1293:C:H2'	53:CA:1294:G:H8	1.66	0.58
22:DA:459:U:O2'	22:DA:460:A:H5'	2.04	0.58
53:CA:1038:C:H2'	53:CA:1039:G:H8	1.68	0.58
22:DA:2014:A:H5'	40:DS:94:ASP:OD2	2.04	0.58
24:DC:99:GLU:HG2	24:DC:100:ARG:N	2.19	0.58
22:BA:1857:G:O2'	22:BA:1858:A:P	2.60	0.58
21:AA:328:C:O2	21:AA:328:C:H2'	2.02	0.58
25:BD:140:HIS:CD2	25:BD:140:HIS:N	2.71	0.58
21:AA:830:G:H2'	21:AA:831:A:C8	2.39	0.58
12:CM:86:ARG:NH1	12:CM:90:HIS:HD2	2.01	0.58
28:DG:18:ILE:HD12	28:DG:42:VAL:HG13	1.84	0.58
1:CB:26:MET:HE2	1:CB:29:PHE:HD2	1.69	0.58
5:CF:98:GLU:O	5:CF:99:ALA:HB3	2.04	0.58
31:DJ:116:ARG:HG3	31:DJ:120:ARG:HH22	1.68	0.58
22:BA:995:C:O2'	22:BA:996:A:P	2.62	0.58
22:BA:1059:G:C6	22:BA:1080:A:C6	2.92	0.58
22:DA:740:C:C5	22:DA:1981:A:C2	2.92	0.58
1:AB:163:ILE:CG2	1:AB:164:ASP:H	2.11	0.58
4:AE:136:VAL:O	4:AE:136:VAL:HG22	2.02	0.58
42:DU:3:LYS:HD3	42:DU:82:VAL:HG21	1.86	0.58
46:BY:7:ARG:H	46:BY:60:LYS:NZ	2.02	0.58
53:CA:978:A:O2'	53:CA:979:C:H5'	2.03	0.58
22:DA:675:A:OP1	26:DE:60:TRP:CZ2	2.56	0.58
53:CA:1242:G:C2	53:CA:1243:C:H1'	2.38	0.58
1:AB:202:ASN:HD21	1:AB:205:ALA:HB2	1.68	0.58
2:AC:156:LEU:CD1	2:AC:156:LEU:H	2.12	0.58
25:BD:108:ASP:OD2	25:BD:173:GLN:HA	2.04	0.58
21:AA:372:C:H4'	21:AA:373:A:OP1	2.03	0.58
14:AO:23:SER:HA	21:AA:751:U:H4'	1.85	0.58
28:BG:9:VAL:O	28:BG:11:PRO:HD3	2.03	0.58
27:BF:134:GLN:HE21	27:BF:134:GLN:N	2.01	0.58
27:BF:134:GLN:HE22	27:BF:150:GLY:H	1.51	0.58
28:BG:61:TRP:O	28:BG:65:GLY:N	2.34	0.58
53:CA:1169:A:H2'	53:CA:1170:A:H8	1.68	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:AD:57:LYS:HB2	3:AD:199:ILE:HG13	1.85	0.58
22:DA:45:G:C5'	22:DA:46:G:H5'	2.34	0.58
22:DA:1700:A:H2'	22:DA:1701:A:O4'	2.04	0.58
21:AA:486:U:H5''	21:AA:486:U:C6	2.39	0.58
22:DA:223:A:N6	22:DA:422:A:C6	2.72	0.58
3:AD:60:VAL:HA	3:AD:63:ILE:HG22	1.85	0.58
22:DA:150:U:H2'	22:DA:151:C:C6	2.38	0.58
22:DA:2259:U:O4'	22:DA:2427:C:H2'	2.03	0.58
22:BA:533:G:H2'	22:BA:534:U:C6	2.39	0.58
6:AG:71:THR:O	6:AG:90:VAL:HG12	2.04	0.58
53:CA:615:G:H2'	53:CA:616:G:H8	1.69	0.58
18:AS:55:GLN:CD	18:AS:56:HIS:H	2.06	0.58
22:BA:2770:G:H5''	22:BA:2771:C:OP2	2.04	0.58
43:DV:55:GLU:O	43:DV:57:TYR:N	2.37	0.58
39:DR:33:VAL:HG23	39:DR:61:ALA:HB3	1.86	0.58
32:BK:5:GLN:O	32:BK:6:THR:HB	2.03	0.58
22:DA:2339:C:H2'	22:DA:2340:A:C8	2.38	0.58
24:DC:8:THR:O	24:DC:9:SER:HB3	2.03	0.58
25:BD:121:THR:HB	25:BD:127:PHE:CD1	2.39	0.58
22:DA:2582:G:O2'	22:DA:2583:G:H5'	2.03	0.58
22:DA:832:U:P	33:DL:38:GLN:H	2.27	0.58
22:DA:2320:U:H1'	22:DA:2333:A:H62	1.69	0.58
44:DW:18:LYS:H	44:DW:36:ILE:HG12	1.68	0.58
40:BS:4:ILE:CG2	40:BS:106:VAL:HG22	2.34	0.58
53:CA:1213:A:O2'	53:CA:1214:C:C5'	2.42	0.58
44:BW:16:GLU:OE2	44:BW:16:GLU:HA	2.04	0.58
4:AE:76:ASN:HB3	4:AE:81:GLN:HG3	1.84	0.58
22:DA:794:A:H2'	22:DA:795:C:H6	1.67	0.58
21:AA:1281:C:O2'	21:AA:1282:C:H5'	2.03	0.58
22:BA:2886:A:H2'	22:BA:2887:A:O4'	2.03	0.58
51:B3:15:LYS:HE2	51:B3:19:GLY:HA2	1.85	0.58
22:BA:509:C:H5''	22:BA:509:C:C6	2.36	0.58
36:DO:62:LEU:HD11	36:DO:65:THR:HG23	1.86	0.58
22:DA:1139:G:O2'	22:DA:1140:C:H5'	2.04	0.58
22:DA:2021:C:H2'	22:DA:2021:C:O2	2.04	0.58
22:BA:633:A:C8	22:BA:633:A:C3'	2.86	0.58
6:CG:10:LYS:H	6:CG:10:LYS:HE3	1.69	0.58
31:DJ:58:ASN:OD1	31:DJ:127:GLY:HA2	2.04	0.58
22:DA:37:C:H2'	22:DA:38:A:O4'	2.03	0.58
22:BA:2648:G:H2'	22:BA:2649:C:C6	2.39	0.58
24:DC:9:SER:O	24:DC:12:ARG:HB2	2.04	0.58
22:DA:699:A:H2'	22:DA:700:G:O4'	2.04	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
38:DQ:26:ALA:O	38:DQ:30:VAL:HB	2.04	0.58
20:CU:15:LEU:HD12	20:CU:15:LEU:O	2.03	0.58
11:AL:88:ASP:CB	21:AA:523:A:H61	2.16	0.58
22:BA:1373:A:O5'	22:BA:1373:A:H8	1.87	0.58
40:BS:74:ILE:HD13	40:BS:105:VAL:HG22	1.86	0.57
31:DJ:4:PHE:HB3	38:DQ:63:ARG:HH22	1.68	0.57
22:DA:1273:U:H4'	22:DA:1275:A:OP1	2.04	0.57
20:CU:35:GLU:O	20:CU:36:PHE:CD2	2.57	0.57
22:DA:1327:A:H2'	22:DA:1328:A:H8	1.68	0.57
35:DN:33:ILE:HA	35:DN:114:GLU:HB2	1.86	0.57
26:BE:164:LEU:HB3	26:BE:167:VAL:HG12	1.85	0.57
22:DA:2077:A:C5	22:DA:2078:C:C5	2.92	0.57
22:DA:2076:U:H5''	22:DA:2238:G:H22	1.69	0.57
22:BA:460:A:OP1	50:B2:41:ARG:NH1	2.35	0.57
24:BC:16:VAL:N	24:BC:203:VAL:CG1	2.66	0.57
13:CN:76:PHE:CE2	13:CN:92:ILE:HG21	2.37	0.57
22:DA:511:U:H5''	22:DA:1235:G:H4'	1.85	0.57
16:CQ:3:LYS:HZ3	16:CQ:6:THR:HG21	1.66	0.57
53:CA:140:U:O2	53:CA:183:C:N4	2.37	0.57
18:CS:52:ASN:ND2	18:CS:54:ARG:HG2	2.19	0.57
22:BA:1847:A:H2'	22:BA:1847:A:N3	2.19	0.57
15:AP:22:ALA:HB2	15:AP:32:PHE:HA	1.85	0.57
15:AP:51:ARG:O	15:AP:52:LEU:HD12	2.04	0.57
38:BQ:13:HIS:CD2	38:BQ:31:TYR:CG	2.92	0.57
22:DA:2461:A:H1'	22:DA:2492:U:H3	1.68	0.57
19:AT:14:GLU:HA	19:AT:17:ARG:HB2	1.86	0.57
22:BA:2180:U:H2'	22:BA:2181:U:H5	1.68	0.57
21:AA:1305:G:H22	21:AA:1331:G:H2'	1.69	0.57
35:DN:56:LYS:HD3	35:DN:88:ALA:HA	1.86	0.57
5:CF:68:GLN:HG2	5:CF:69:GLU:H	1.68	0.57
22:DA:1819:A:H4'	22:DA:1820:U:H5'	1.86	0.57
22:BA:627:A:C6	22:BA:637:A:C8	2.92	0.57
22:DA:2182:U:H2'	22:DA:2183:A:C8	2.39	0.57
43:DV:44:HIS:NE2	43:DV:85:LYS:HB2	2.19	0.57
22:DA:2619:C:OP1	25:DD:157:LYS:HE2	2.04	0.57
22:BA:1028:A:N6	22:BA:1125:G:H2'	2.19	0.57
22:DA:2886:A:N7	48:D0:39:ARG:NE	2.52	0.57
6:AG:37:THR:O	6:AG:41:ILE:HG13	2.04	0.57
5:AF:47:LEU:HD13	5:AF:51:ILE:HG22	1.85	0.57
8:CI:90:ASP:HB3	8:CI:93:LEU:HD23	1.86	0.57
53:CA:328:C:H2'	53:CA:328:C:O2	2.03	0.57
21:AA:633:G:H2'	21:AA:634:C:H6	1.69	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:1552:A:N3	22:DA:1552:A:H2'	2.18	0.57
49:D1:5:ARG:NH2	49:D1:23:THR:HB	2.19	0.57
21:AA:174:A:HO2'	21:AA:175:C:H5'	1.64	0.57
28:BG:162:ARG:NH1	28:BG:168:VAL:HG21	2.19	0.57
4:AE:152:VAL:CB	4:AE:155:LYS:NZ	2.67	0.57
22:BA:1082:U:H2'	22:BA:1083:U:O2	2.04	0.57
22:BA:1340:U:C5	22:BA:1603:A:C8	2.93	0.57
41:BT:11:LEU:HD11	41:BT:47:VAL:HG22	1.85	0.57
22:DA:1087:G:N2	22:DA:1103:A:H1'	2.20	0.57
30:DI:118:GLY:O	30:DI:123:ALA:HB3	2.04	0.57
22:DA:1328:A:H2'	22:DA:1330:C:C4	2.39	0.57
34:DM:38:ARG:O	34:DM:126:ILE:HG21	2.04	0.57
34:DM:96:ILE:HD13	34:DM:102:LEU:HD11	1.85	0.57
24:DC:144:GLU:HG3	24:DC:151:GLY:CA	2.34	0.57
22:BA:1461:C:O2'	22:BA:1462:C:H5'	2.04	0.57
7:CH:78:SER:HB2	7:CH:124:ILE:O	2.04	0.57
53:CA:960:U:O2'	53:CA:1223:C:H5''	2.04	0.57
21:AA:1398:A:H5''	21:AA:1398:A:C8	2.30	0.57
53:CA:496:A:C2'	53:CA:496:A:N3	2.66	0.57
24:BC:16:VAL:N	24:BC:203:VAL:HG12	2.18	0.57
3:AD:25:ARG:NH1	3:AD:30:LYS:HE3	2.19	0.57
28:DG:43:LYS:O	28:DG:49:LEU:HD12	2.04	0.57
32:BK:63:VAL:CG1	32:BK:103:VAL:HG12	2.34	0.57
22:BA:733:G:C8	22:BA:761:A:N6	2.72	0.57
40:BS:13:SER:O	40:BS:14:ALA:CB	2.52	0.57
2:CC:14:VAL:HG12	2:CC:14:VAL:O	2.04	0.57
4:CE:14:LEU:HD22	4:CE:59:ILE:CD1	2.34	0.57
29:BH:12:LEU:HB2	29:BH:19:VAL:HG11	1.86	0.57
22:BA:2320:U:H4'	22:BA:2321:U:H5''	1.86	0.57
40:DS:28:LYS:HA	40:DS:70:LYS:HA	1.85	0.57
22:DA:607:U:H5	22:DA:619:G:C5	2.22	0.57
31:DJ:127:GLY:O	31:DJ:129:GLU:HG3	2.04	0.57
3:AD:98:ASP:HB3	3:AD:114:ARG:HG2	1.86	0.57
21:AA:1365:G:H2'	21:AA:1366:C:C6	2.39	0.57
22:BA:2383:G:O2'	22:BA:2384:U:H5'	2.04	0.57
8:CI:19:PHE:O	8:CI:63:TYR:HB3	2.04	0.57
25:DD:178:VAL:HG12	25:DD:179:ARG:HG3	1.85	0.57
29:BH:147:VAL:HG12	29:BH:149:GLU:HG3	1.85	0.57
22:DA:467:G:H4'	22:DA:796:C:O2'	2.04	0.57
38:DQ:69:ARG:HH21	38:DQ:69:ARG:HB2	1.68	0.57
12:AM:28:ARG:O	12:AM:32:ILE:HG12	2.04	0.57
24:DC:51:ARG:O	24:DC:53:ILE:HG22	2.04	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:BJ:43:GLU:O	31:BJ:45:THR:CG2	2.52	0.57
22:DA:832:U:OP1	33:DL:39:LYS:N	2.35	0.57
53:CA:995:C:N4	53:CA:1046:A:H1'	2.19	0.57
44:BW:37:VAL:HG22	44:BW:55:ASP:O	2.04	0.57
44:BW:40:ARG:HD3	44:BW:45:HIS:HE1	1.68	0.57
33:BL:18:ARG:O	33:BL:19:LEU:HB3	2.05	0.57
15:CP:5:ARG:HA	15:CP:71:VAL:HG11	1.85	0.57
35:DN:19:ALA:HA	35:DN:22:ARG:HB3	1.86	0.57
35:BN:108:ALA:O	35:BN:110:MET:HG2	2.03	0.57
54:DB:44:G:H5''	27:DF:91:ARG:CZ	2.34	0.57
22:DA:1078:U:H4'	22:DA:1079:C:O5'	2.03	0.57
22:DA:1288:G:C8	22:DA:1327:A:N6	2.72	0.57
5:CF:3:HIS:HD2	5:CF:65:GLU:HG2	1.69	0.57
53:CA:1202:U:O2'	53:CA:1203:C:H5'	2.04	0.57
32:DK:97:THR:O	32:DK:98:ARG:HB2	2.02	0.57
9:AJ:57:VAL:CG2	9:AJ:58:ASN:H	2.13	0.57
53:CA:1134:G:C5	53:CA:1135:U:H1'	2.39	0.57
22:DA:176:A:H3'	22:DA:177:G:H21	1.69	0.57
44:DW:13:ARG:HG3	44:DW:14:ASP:N	2.15	0.57
22:DA:1666:G:O3'	32:DK:6:THR:HG23	2.05	0.57
32:BK:39:ILE:HG22	32:BK:60:ALA:O	2.03	0.57
31:DJ:30:THR:HG23	31:DJ:31:GLU:N	2.19	0.57
27:DF:66:ILE:HG13	27:DF:83:PRO:HB3	1.87	0.57
22:DA:279:A:N6	22:DA:361:G:O2'	2.38	0.57
26:DE:108:ILE:O	26:DE:112:LEU:HB2	2.04	0.57
26:DE:147:LEU:O	26:DE:148:ILE:HB	2.03	0.57
22:DA:704:G:C2'	22:DA:726:G:H22	2.15	0.57
22:DA:1416:G:C4	22:DA:1417:C:C5	2.93	0.57
53:CA:457:G:H2'	53:CA:457:G:N3	2.18	0.57
22:DA:849:A:H2'	22:DA:850:U:H6	1.69	0.57
22:DA:1846:G:H5''	22:DA:1847:A:OP2	2.04	0.57
33:BL:30:THR:O	33:BL:33:ARG:HG2	2.03	0.57
36:DO:24:THR:HG22	36:DO:41:ALA:HA	1.86	0.57
22:BA:1539:U:C2	22:BA:1540:G:C8	2.92	0.57
53:CA:327:A:O2'	53:CA:329:A:H5''	2.04	0.57
21:AA:1015:G:H1'	21:AA:1218:C:O2'	2.04	0.57
25:BD:190:LYS:O	25:BD:191:GLY:O	2.21	0.57
11:AL:85:ARG:NH2	11:AL:87:LYS:HD2	2.19	0.57
21:AA:920:U:H2'	21:AA:921:U:C6	2.39	0.57
18:AS:54:ARG:HH21	18:AS:55:GLN:HB3	1.69	0.57
38:DQ:15:LYS:HD2	38:DQ:19:GLN:HE21	1.69	0.57
17:CR:21:ASP:HB3	17:CR:23:LYS:HG2	1.84	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
17:AR:48:ALA:HB2	21:AA:834:U:OP1	2.04	0.57
22:BA:2425:A:H5'	22:BA:2427:C:O4'	2.05	0.57
22:DA:836:G:C6	22:DA:837:C:C4	2.92	0.57
53:CA:623:C:H6	53:CA:623:C:O5'	1.87	0.57
44:BW:54:ARG:HH11	44:BW:54:ARG:HB2	1.68	0.57
53:CA:130:A:O2'	53:CA:131:A:O5'	2.21	0.57
22:DA:1071:G:O2'	22:DA:1072:C:H5'	2.05	0.57
23:BB:89:U:H4'	23:BB:89:U:OP2	2.05	0.57
22:DA:1325:U:H4'	22:DA:1326:U:OP1	2.04	0.57
22:DA:333:G:O2'	22:DA:334:C:H5'	2.03	0.57
13:CN:33:VAL:HG22	13:CN:40:ARG:HH21	1.68	0.57
1:AB:86:CYS:SG	1:AB:221:ARG:HB2	2.44	0.57
25:BD:118:PHE:HD2	25:BD:119:ALA:N	2.01	0.57
25:BD:118:PHE:CD2	25:BD:119:ALA:N	2.72	0.57
21:AA:243:A:C2	21:AA:245:U:C2	2.92	0.57
46:DY:39:GLN:O	46:DY:42:LEU:HB2	2.05	0.57
46:DY:28:LEU:HD23	46:DY:42:LEU:HD13	1.86	0.57
22:DA:1566:A:C2	24:DC:212:TRP:HB2	2.39	0.57
22:BA:1866:A:H2'	22:BA:1867:G:O4'	2.04	0.57
34:BM:76:LYS:O	34:BM:77:PRO:O	2.22	0.57
53:CA:239:U:OP1	53:CA:239:U:H4'	2.05	0.57
1:AB:161:PHE:HA	1:AB:183:PHE:O	2.04	0.57
21:AA:1062:U:H2'	21:AA:1063:C:C6	2.38	0.57
9:AJ:19:ASP:HA	9:AJ:22:THR:HB	1.87	0.57
53:CA:900:A:H2'	53:CA:901:A:C8	2.39	0.57
24:DC:169:ALA:O	24:DC:185:ALA:HB3	2.05	0.57
22:BA:655:A:H4'	22:BA:656:G:OP1	2.03	0.57
33:BL:59:ARG:HA	51:B3:12:ARG:NH2	2.20	0.57
21:AA:1306:A:N6	21:AA:1331:G:H1'	2.19	0.57
29:DH:27:ARG:HH21	29:DH:27:ARG:HB2	1.68	0.57
6:AG:49:LEU:HD12	6:AG:60:ALA:HB1	1.87	0.57
24:DC:29:PHE:CE2	24:DC:31:PRO:HG2	2.40	0.57
21:AA:767:A:H2'	21:AA:768:A:O4'	2.04	0.57
3:AD:160:LEU:H	3:AD:160:LEU:HD13	1.69	0.57
38:BQ:91:ARG:HB3	38:BQ:93:ILE:HG22	1.86	0.57
22:DA:1441:G:H2'	22:DA:1442:U:H6	1.67	0.57
33:BL:101:ILE:HG22	33:BL:102:GLY:H	1.69	0.57
21:AA:338:A:C2	21:AA:351:G:O6	2.56	0.57
5:AF:38:ARG:HH11	5:AF:38:ARG:HG2	1.70	0.57
6:CG:14:ASP:HB3	6:CG:19:SER:H	1.69	0.57
22:BA:1105:U:H2'	22:BA:1106:G:H8	1.69	0.57
22:DA:227:A:H61	22:DA:410:G:H1'	1.69	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
30:BI:48:ILE:HG13	30:BI:49:GLU:H	1.68	0.57
34:DM:126:ILE:O	34:DM:128:THR:HG23	2.04	0.57
32:BK:18:ARG:NH1	32:BK:18:ARG:HG3	2.11	0.57
22:DA:2235:G:H2'	22:DA:2236:U:C6	2.40	0.57
48:D0:37:HIS:CG	48:D0:43:THR:HG22	2.40	0.57
22:BA:1454:C:H41	35:BN:73:ASN:HD21	1.52	0.57
22:DA:960:A:C2'	22:DA:962:G:H5'	2.33	0.57
22:DA:873:C:H4'	34:DM:64:TRP:CD1	2.39	0.57
28:DG:8:VAL:HA	28:DG:68:ARG:HH21	1.70	0.57
53:CA:1087:G:H2'	53:CA:1088:G:H8	1.70	0.57
22:BA:312:G:H2'	22:BA:313:G:H8	1.70	0.57
12:AM:106:ARG:HH11	12:AM:106:ARG:HA	1.69	0.57
7:CH:3:GLN:HA	53:CA:587:G:H4'	1.85	0.57
22:DA:1267:U:O2'	22:DA:1268:A:H5'	2.04	0.57
27:DF:7:TYR:O	27:DF:8:LYS:HG3	2.04	0.57
22:BA:136:G:C6	22:BA:142:A:N6	2.72	0.57
54:DB:8:C:O2'	36:DO:40:ILE:HD13	2.05	0.57
53:CA:461:A:N3	53:CA:461:A:H2'	2.19	0.57
2:AC:38:VAL:O	2:AC:42:LEU:HB2	2.05	0.57
21:AA:536:C:H2'	21:AA:537:G:H8	1.69	0.57
53:CA:814:A:H5'	53:CA:1511:G:H4'	1.85	0.57
5:AF:81:ASN:HB3	5:AF:84:VAL:HG12	1.85	0.57
22:BA:1132:U:H3'	22:BA:1133:A:H5''	1.85	0.57
14:CO:54:GLY:O	14:CO:58:MET:HG3	2.04	0.57
33:BL:114:GLY:C	33:BL:115:GLU:HG3	2.23	0.57
8:CI:110:VAL:HG21	53:CA:1370:G:H5''	1.86	0.57
10:AK:33:ILE:HG12	10:AK:69:CYS:SG	2.45	0.57
53:CA:745:G:H2'	53:CA:746:A:C8	2.40	0.57
22:BA:670:A:H4'	22:BA:671:C:O5'	2.05	0.57
53:CA:1394:A:N6	53:CA:1501:C:H5'	2.19	0.57
27:DF:160:LYS:HD3	27:DF:161:SER:N	2.20	0.57
12:CM:36:ALA:HB2	12:CM:55:LEU:HD21	1.85	0.57
2:CC:148:ILE:HD13	2:CC:201:ILE:HG12	1.87	0.57
22:DA:1437:C:C2	22:DA:1438:U:C5	2.92	0.57
44:BW:37:VAL:HG13	44:BW:55:ASP:C	2.25	0.57
10:AK:87:GLY:O	10:AK:92:ARG:HD2	2.05	0.57
10:AK:91:GLY:O	10:AK:95:THR:HB	2.04	0.57
22:DA:739:A:O2'	22:DA:740:C:C5	2.56	0.57
22:DA:226:A:H2'	22:DA:227:A:C8	2.38	0.57
22:DA:674:G:O3'	26:DE:60:TRP:CH2	2.57	0.57
22:DA:117:G:N1	22:DA:119:A:N6	2.52	0.57
30:DI:74:PRO:O	30:DI:78:LEU:HG	2.05	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
26:DE:147:LEU:HB3	26:DE:186:VAL:HG23	1.86	0.57
24:BC:203:VAL:O	24:BC:204:LEU:HB2	2.04	0.57
30:BI:53:PRO:O	30:BI:74:PRO:HD2	2.04	0.57
24:BC:29:PHE:CZ	24:BC:31:PRO:HG2	2.39	0.57
21:AA:642:A:C5	21:AA:643:C:C5	2.93	0.57
25:DD:159:LYS:HE2	25:DD:160:LYS:N	2.19	0.57
53:CA:567:G:N2	57:CA:1818:HOH:O	2.34	0.57
7:AH:25:THR:O	7:AH:26:MET:HB3	2.04	0.57
22:BA:1747:U:H2'	22:BA:1748:C:C6	2.39	0.57
32:DK:21:CYS:SG	32:DK:39:ILE:CG2	2.93	0.57
22:BA:1992:G:N2	22:BA:1996:C:O2'	2.38	0.57
22:DA:1700:A:O2'	22:DA:1701:A:H5'	2.04	0.57
40:DS:55:ILE:HG23	40:DS:66:ILE:HG21	1.84	0.57
2:AC:107:LYS:HB2	2:AC:107:LYS:NZ	2.19	0.57
22:BA:27:G:H1'	22:BA:513:A:N6	2.19	0.57
12:CM:81:ASP:HB3	12:CM:82:LEU:HD12	1.87	0.57
22:DA:75:G:H4'	46:DY:48:ARG:NH2	2.20	0.57
2:AC:6:PRO:HG2	2:AC:183:TYR:CG	2.40	0.57
53:CA:160:A:H2'	53:CA:161:A:O4'	2.04	0.57
13:CN:66:THR:CG2	13:CN:82:LYS:HE3	2.34	0.57
1:CB:29:PHE:O	1:CB:40:ILE:HG23	2.04	0.57
10:AK:28:ASN:OD1	10:AK:46:ALA:HB3	2.04	0.57
29:BH:62:LEU:HD12	29:BH:63:ALA:N	2.19	0.57
22:DA:1176:U:H2'	22:DA:1177:G:C8	2.38	0.57
21:AA:771:G:H2'	21:AA:772:U:C6	2.39	0.57
2:CC:161:ILE:H	2:CC:161:ILE:HD13	1.69	0.57
37:DP:86:LYS:HA	37:DP:86:LYS:HZ2	1.70	0.57
21:AA:1257:A:H4'	21:AA:1258:G:OP2	2.03	0.57
26:DE:153:LEU:HB2	26:DE:171:ASP:HB3	1.87	0.57
22:BA:1693:U:O2'	24:BC:13:ARG:NH2	2.37	0.57
22:BA:1154:G:OP2	38:BQ:57:ARG:NH1	2.37	0.57
38:BQ:91:ARG:HD3	39:BR:11:GLN:HG3	1.86	0.57
44:DW:18:LYS:HD3	44:DW:19:ARG:HG2	1.85	0.57
37:BP:3:ILE:HD13	37:BP:3:ILE:O	2.04	0.57
3:CD:25:ARG:HD2	53:CA:410:G:OP1	2.05	0.57
6:CG:59:GLU:HG3	6:CG:60:ALA:N	2.19	0.57
10:AK:22:ILE:HG13	10:AK:22:ILE:O	2.05	0.57
3:AD:109:THR:HG23	3:AD:112:GLU:N	2.09	0.57
21:AA:183:C:O2'	21:AA:184:G:H5'	2.05	0.57
54:DB:43:C:O2'	54:DB:45:A:N7	2.29	0.57
1:AB:9:LEU:CD1	1:AB:42:LEU:HD13	2.26	0.57
22:BA:1140:C:P	31:BJ:68:LYS:HZ3	2.27	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:BA:704:G:O2'	22:BA:705:A:OP2	2.21	0.57
28:DG:1:SER:C	28:DG:3:VAL:H	2.07	0.57
22:BA:790:U:O2'	22:BA:791:C:O5'	2.22	0.57
6:CG:9:ARG:HD3	6:CG:24:LYS:NZ	2.20	0.57
22:DA:142:A:O2'	22:DA:143:C:C5'	2.52	0.57
22:DA:272:A:C2	22:DA:273:G:C6	2.93	0.57
7:CH:57:GLU:HG3	7:CH:58:LEU:H	1.68	0.57
21:AA:1323:G:H2'	21:AA:1324:A:C8	2.39	0.57
21:AA:35:G:H2'	21:AA:36:C:C6	2.39	0.57
11:AL:114:SER:HB3	21:AA:502:A:OP1	2.05	0.57
22:BA:475:C:C4	22:BA:481:G:O6	2.58	0.57
22:BA:1799:G:N2	22:BA:1818:U:O2'	2.37	0.57
22:DA:1608:A:C5	22:DA:1611:C:C4	2.93	0.57
22:BA:1733:G:O2'	22:BA:1734:G:H8	1.87	0.57
53:CA:1446:A:H2'	53:CA:1447:A:C5'	2.34	0.57
22:DA:1794:A:H1'	22:DA:1900:A:C2	2.40	0.57
22:DA:538:A:O2'	31:DJ:8:PRO:HG3	2.05	0.57
21:AA:688:G:H5''	21:AA:688:G:C8	2.39	0.57
21:AA:75:G:C5	21:AA:76:G:C8	2.93	0.57
22:DA:878:A:H4'	22:DA:898:C:N4	2.18	0.57
53:CA:170:U:O2'	53:CA:171:A:H5'	2.04	0.57
22:DA:370:G:C6	22:DA:424:G:C5	2.93	0.57
2:AC:6:PRO:HG2	2:AC:183:TYR:CD2	2.39	0.57
16:AQ:80:LYS:HB2	16:AQ:80:LYS:NZ	2.20	0.57
36:BO:75:GLY:HA3	36:BO:106:LEU:HA	1.86	0.57
22:BA:2682:A:C8	25:BD:11:MET:CG	2.87	0.57
21:AA:600:A:H2'	21:AA:601:G:C8	2.40	0.57
27:DF:107:VAL:N	27:DF:108:PRO:CD	2.68	0.57
22:DA:2508:G:C2	22:DA:2582:G:C6	2.93	0.57
26:DE:150:THR:O	26:DE:192:ALA:HB2	2.05	0.57
40:BS:51:LEU:O	40:BS:55:ILE:HG13	2.05	0.57
53:CA:729:A:H2'	53:CA:730:G:O4'	2.04	0.57
22:BA:2801:G:O2'	22:BA:2802:G:H5'	2.05	0.57
22:DA:1438:U:O4	22:DA:1552:A:N1	2.37	0.57
33:BL:85:VAL:CG2	33:BL:94:THR:HG23	2.34	0.57
54:DB:17:C:O2'	54:DB:18:G:C5'	2.53	0.57
21:AA:173:U:C2	21:AA:197:A:N1	2.73	0.57
22:DA:2214:C:H2'	22:DA:2215:C:H6	1.66	0.57
13:AN:30:ILE:HG23	13:AN:44:VAL:HG12	1.86	0.57
27:DF:101:ARG:HH11	27:DF:138:PRO:HB3	1.69	0.57
22:DA:301:G:C6	22:DA:302:C:N4	2.73	0.57
53:CA:974:A:HO2'	53:CA:975:A:P	2.28	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:CN:81:ILE:HD13	53:CA:1202:U:O2	2.04	0.57
21:AA:1142:G:H2'	21:AA:1143:G:O4'	2.04	0.57
3:AD:189:ASP:O	3:AD:190:LEU:HB3	2.04	0.57
27:BF:134:GLN:CG	27:BF:135:ILE:H	2.13	0.57
11:CL:2:THR:HB	11:CL:5:GLN:H	1.70	0.57
22:BA:301:G:OP2	42:BU:81:ARG:NH1	2.37	0.57
22:BA:64:A:H2'	22:BA:65:U:C6	2.39	0.57
22:DA:706:A:H2'	22:DA:707:G:O4'	2.05	0.57
28:DG:112:VAL:HG13	28:DG:150:TYR:CE1	2.38	0.57
3:CD:58:GLN:HA	3:CD:58:GLN:OE1	2.05	0.57
12:CM:78:ARG:HH21	12:CM:79:LEU:CD2	2.18	0.57
53:CA:810:C:H2'	53:CA:811:C:H5'	1.86	0.57
22:DA:2425:A:H4'	22:DA:2426:A:O5'	2.05	0.57
22:DA:1673:G:C2'	22:DA:1674:G:H5'	2.35	0.57
28:BG:54:ARG:HG3	28:BG:57:TYR:CD1	2.39	0.57
21:AA:147:G:H2'	21:AA:148:G:C8	2.38	0.57
6:AG:119:LEU:CD2	6:AG:123:LEU:HD23	2.35	0.57
44:DW:51:GLY:HA3	44:DW:59:PHE:HB3	1.87	0.57
25:BD:151:THR:HG22	25:BD:152:PRO:N	2.19	0.57
53:CA:1477:U:H2'	53:CA:1478:U:C6	2.40	0.57
22:DA:1196:C:H1'	22:DA:1226:A:C4	2.40	0.57
22:DA:742:A:H2'	22:DA:743:A:C8	2.40	0.57
45:BX:16:ASN:HB2	45:BX:24:THR:OG1	2.04	0.57
28:BG:23:ILE:HD12	28:BG:23:ILE:H	1.70	0.57
22:BA:2354:C:C4'	44:BW:31:LEU:HD22	2.34	0.57
22:BA:855:G:N3	44:BW:23:LYS:CD	2.67	0.57
44:BW:37:VAL:HG13	44:BW:56:HIS:HB2	1.87	0.57
2:CC:192:TYR:CE2	53:CA:532:A:C8	2.93	0.57
53:CA:1181:G:O2'	53:CA:1182:G:O4'	2.21	0.57
53:CA:765:G:C5	53:CA:812:G:C5	2.93	0.57
41:BT:8:LEU:HD13	41:BT:46:ALA:HA	1.87	0.57
25:DD:12:THR:OG1	37:DP:4:ILE:HG23	2.05	0.57
1:AB:14:HIS:O	1:AB:14:HIS:CG	2.58	0.57
22:DA:191:A:H2'	22:DA:192:C:C6	2.40	0.57
35:BN:71:ARG:NH2	35:BN:71:ARG:HG3	2.18	0.57
35:BN:73:ASN:HA	35:BN:76:VAL:CG1	2.30	0.57
39:BR:46:GLU:O	39:BR:46:GLU:OE1	2.23	0.57
3:AD:68:GLU:HB2	21:AA:546:A:P	2.45	0.57
7:AH:29:SER:HB3	7:AH:32:LYS:HG3	1.86	0.57
3:AD:62:ARG:HA	3:AD:62:ARG:NE	2.20	0.57
22:DA:373:U:O2'	22:DA:374:A:C8	2.50	0.57
21:AA:1247:U:O2'	21:AA:1248:A:H5'	2.04	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
17:AR:69:TYR:CD1	21:AA:674:G:H4'	2.40	0.57
8:CI:27:ILE:HD13	8:CI:62:LEU:HB3	1.86	0.57
7:AH:104:SER:O	7:AH:122:GLY:HA3	2.05	0.57
26:BE:46:GLN:CG	26:BE:87:ALA:H	2.17	0.57
6:AG:20:GLU:O	6:AG:24:LYS:HG3	2.04	0.57
22:BA:434:U:H4'	22:BA:435:C:OP1	2.05	0.57
22:BA:2898:U:O2	31:BJ:134:ALA:HB1	2.05	0.57
21:AA:986:U:H2'	21:AA:987:G:O4'	2.05	0.57
43:BV:38:LEU:HD23	43:BV:40:ILE:HD11	1.87	0.57
13:AN:5:MET:SD	13:AN:8:ARG:NH1	2.78	0.57
22:DA:2506:U:H5	22:DA:2576:G:O6	1.87	0.57
3:CD:2:ARG:NH2	3:CD:114:ARG:CD	2.50	0.57
37:BP:50:ARG:O	37:BP:51:ASN:HB2	2.05	0.57
22:DA:1338:G:O2'	41:DT:18:GLU:HG3	2.05	0.57
24:BC:246:PRO:HG2	24:BC:247:TRP:CE3	2.38	0.57
41:BT:44:LYS:O	41:BT:48:GLN:HG2	2.04	0.57
22:DA:234:U:O2'	22:DA:235:U:H5'	2.05	0.57
22:BA:1179:G:H3'	22:BA:1180:U:C4'	2.29	0.57
25:DD:117:GLY:O	25:DD:119:ALA:N	2.37	0.57
21:AA:1002:G:H2'	21:AA:1003:G:O4'	2.04	0.57
7:CH:106:SER:HA	53:CA:642:A:C8	2.39	0.57
22:DA:2141:G:H2'	22:DA:2142:A:C8	2.40	0.57
22:BA:784:G:O6	24:BC:227:VAL:HG11	2.04	0.57
41:DT:45:ALA:HA	41:DT:48:GLN:CG	2.35	0.57
11:CL:67:GLY:O	11:CL:98:ARG:HG3	2.05	0.57
22:DA:755:U:O2'	22:DA:756:A:H5'	2.05	0.57
53:CA:209:U:H2'	53:CA:209:U:O2	2.03	0.57
22:BA:1025:G:H4'	22:BA:1026:G:OP2	2.04	0.57
22:DA:532:A:H4'	22:DA:533:G:C8	2.40	0.57
21:AA:390:U:H2'	21:AA:391:G:H8	1.66	0.57
22:BA:2250:G:O5'	22:BA:2250:G:H8	1.88	0.57
5:AF:85:ILE:O	5:AF:86:ARG:C	2.43	0.57
33:DL:73:ILE:O	33:DL:105:ILE:HA	2.04	0.57
53:CA:346:G:H2'	53:CA:346:G:N3	2.18	0.57
22:BA:540:C:O2'	22:BA:541:A:H5'	2.04	0.57
22:BA:1275:A:H4'	22:BA:1276:A:OP1	2.03	0.57
37:BP:112:ARG:C	37:BP:113:LEU:HD23	2.24	0.57
5:AF:52:ASN:O	5:AF:53:LYS:HB3	2.05	0.57
21:AA:1409:C:H2'	21:AA:1410:A:H8	1.69	0.57
15:CP:4:ILE:HD12	15:CP:4:ILE:N	2.20	0.57
49:D1:34:GLU:HG3	49:D1:49:LYS:HB2	1.87	0.57
7:CH:79:ARG:HB2	53:CA:878:A:OP1	2.04	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
35:BN:65:LEU:HD11	35:BN:69:ARG:NH2	2.19	0.57
53:CA:996:A:N1	53:CA:1046:A:H5'	2.20	0.56
5:AF:93:LYS:O	5:AF:94:HIS:HB2	2.05	0.56
26:DE:29:HIS:HA	26:DE:32:VAL:HG22	1.87	0.56
16:AQ:60:ILE:HG22	16:AQ:72:TRP:HE3	1.69	0.56
9:CJ:84:VAL:CG2	9:CJ:85:ASP:H	2.08	0.56
41:DT:39:THR:HG21	41:DT:42:GLU:CB	2.24	0.56
28:BG:22:VAL:HG22	28:BG:36:LEU:CD1	2.32	0.56
42:DU:35:VAL:HB	42:DU:38:ILE:HD13	1.87	0.56
9:CJ:52:LEU:HB2	13:CN:80:ARG:HE	1.70	0.56
4:CE:22:LYS:HD2	53:CA:1081:A:H5'	1.87	0.56
37:DP:92:ARG:HG2	37:DP:92:ARG:O	2.04	0.56
22:DA:1721:G:H1'	22:DA:1739:A:H61	1.70	0.56
29:BH:131:SER:HB2	29:BH:139:PHE:HD2	1.69	0.56
15:CP:16:PHE:CD2	15:CP:40:ASN:HB2	2.39	0.56
4:CE:13:LYS:HD3	4:CE:14:LEU:N	2.20	0.56
24:BC:156:SER:O	24:BC:159:THR:HG23	2.04	0.56
22:DA:1113:U:HO2'	22:DA:1114:C:H6	1.50	0.56
53:CA:458:U:H2'	53:CA:459:A:C8	2.39	0.56
21:AA:1447:A:H5'	21:AA:1448:C:C5	2.38	0.56
29:BH:27:ARG:NH1	29:BH:38:PRO:HG3	2.20	0.56
22:BA:83:A:OP1	42:BU:91:LYS:HE3	2.05	0.56
29:DH:62:LEU:C	29:DH:64:ALA:H	2.08	0.56
42:DU:26:ASN:O	42:DU:34:ILE:HB	2.05	0.56
24:DC:211:ARG:C	24:DC:213:ARG:H	2.07	0.56
2:AC:177:LEU:HD22	21:AA:1112:C:C4	2.40	0.56
12:CM:106:ARG:HH21	12:CM:112:ARG:CZ	2.17	0.56
27:DF:16:MET:HA	27:DF:21:TYR:HB2	1.86	0.56
31:BJ:44:TYR:O	31:BJ:45:THR:CB	2.53	0.56
22:DA:834:G:H1'	22:DA:2358:A:C2	2.39	0.56
22:DA:2331:G:N1	22:DA:2385:C:C4	2.73	0.56
39:BR:48:LYS:HD2	39:BR:48:LYS:H	1.70	0.56
6:CG:63:VAL:HG11	6:CG:127:ALA:HB2	1.87	0.56
25:DD:19:GLY:O	32:DK:72:PRO:HB2	2.05	0.56
13:AN:83:VAL:HG12	13:AN:84:ARG:N	2.19	0.56
8:CI:44:ARG:O	8:CI:48:ARG:HG2	2.05	0.56
52:D4:7:VAL:CG1	52:D4:8:LYS:H	2.18	0.56
22:BA:2728:U:O2'	22:BA:2729:G:H8	1.87	0.56
1:CB:74:ALA:CB	1:CB:206:ILE:HD11	2.32	0.56
41:DT:43:ILE:CG2	41:DT:58:VAL:HG11	2.36	0.56
22:DA:329:G:OP1	22:DA:329:G:H3'	2.05	0.56
32:DK:6:THR:O	32:DK:8:LEU:HD12	2.05	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:CL:3:VAL:HG23	11:CL:4:ASN:N	2.16	0.56
27:DF:42:ALA:CB	27:DF:49:LEU:HD21	2.35	0.56
53:CA:113:G:H2'	53:CA:114:U:H6	1.70	0.56
22:DA:962:G:H3'	22:DA:962:G:OP1	2.05	0.56
22:DA:1815:A:H4'	22:DA:1816:C:OP1	2.05	0.56
28:BG:73:SER:HA	28:BG:76:ILE:HG21	1.87	0.56
51:B3:21:PHE:HB2	51:B3:49:VAL:CG1	2.35	0.56
41:DT:62:VAL:HG12	41:DT:63:VAL:N	2.20	0.56
22:BA:748:G:OP2	40:BS:88:ARG:HG3	2.06	0.56
31:DJ:65:THR:O	31:DJ:68:LYS:NZ	2.38	0.56
53:CA:714:G:H2'	53:CA:715:A:C8	2.40	0.56
29:DH:41:LYS:H	29:DH:44:ILE:HG23	1.70	0.56
9:CJ:30:LYS:CG	9:CJ:36:VAL:HG22	2.35	0.56
40:DS:32:ALA:O	40:DS:33:LEU:HB2	2.05	0.56
42:BU:86:PHE:CE1	42:BU:101:THR:HG21	2.40	0.56
22:DA:7:G:HO2'	31:DJ:15:TRP:HZ2	1.52	0.56
28:DG:167:VAL:HG23	28:DG:168:VAL:N	2.20	0.56
22:BA:1229:C:H2'	22:BA:1230:A:H8	1.70	0.56
53:CA:162:A:H2'	53:CA:163:C:O4'	2.04	0.56
53:CA:892:A:C5	53:CA:893:C:C5	2.93	0.56
3:CD:125:ASN:HB2	3:CD:141:VAL:H	1.70	0.56
9:AJ:8:ILE:HG12	9:AJ:100:ILE:HG22	1.86	0.56
21:AA:68:G:H5'	21:AA:171:A:O2'	2.05	0.56
26:BE:152:GLU:O	26:BE:153:LEU:HG	2.05	0.56
24:BC:171:VAL:O	24:BC:182:LYS:HA	2.06	0.56
18:AS:52:ASN:O	18:AS:76:THR:HG22	2.06	0.56
4:AE:29:ILE:HD12	4:AE:30:PHE:N	2.19	0.56
28:DG:19:ASN:HD22	28:DG:19:ASN:N	2.03	0.56
4:CE:105:ILE:O	4:CE:105:ILE:HG22	2.04	0.56
22:DA:12:U:O2	22:DA:12:U:H2'	2.05	0.56
1:CB:212:TYR:CD2	1:CB:215:ALA:HB3	2.40	0.56
33:BL:68:SER:O	33:BL:69:ARG:HB2	2.05	0.56
53:CA:1416:G:N2	53:CA:1485:U:H1'	2.20	0.56
22:DA:1439:A:N6	22:DA:1552:A:C8	2.73	0.56
39:BR:39:LEU:HA	39:BR:49:ILE:CG2	2.35	0.56
39:BR:39:LEU:CD2	39:BR:39:LEU:N	2.68	0.56
44:BW:24:ARG:O	44:BW:25:PHE:HB2	2.05	0.56
33:DL:47:ARG:CG	33:DL:47:ARG:HH21	2.13	0.56
32:DK:87:LEU:HA	32:DK:95:ILE:H	1.71	0.56
2:AC:76:ILE:HA	2:AC:83:VAL:CG2	2.29	0.56
22:BA:1019:U:C4	22:BA:1020:A:N6	2.74	0.56
1:CB:90:PHE:CE2	1:CB:149:GLY:HA3	2.40	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
53:CA:1202:U:H2'	53:CA:1203:C:H6	1.70	0.56
22:BA:2225:A:H4'	22:BA:2226:C:O5'	2.05	0.56
21:AA:372:C:H2'	21:AA:387:U:O4	2.06	0.56
22:DA:1013:C:O2'	22:DA:1014:A:H5'	2.06	0.56
22:BA:242:G:C8	51:B3:4:LYS:HG2	2.40	0.56
25:BD:120:GLY:HA2	25:BD:162:ALA:HB2	1.84	0.56
24:DC:106:PRO:HB3	24:DC:141:HIS:HE1	1.69	0.56
22:BA:65:U:H2'	22:BA:66:C:H6	1.70	0.56
22:DA:1415:U:O3'	22:DA:1416:G:H4'	2.05	0.56
30:BI:3:LYS:CD	30:BI:4:VAL:HG23	2.35	0.56
28:DG:106:LEU:HB2	28:DG:108:PHE:CE1	2.37	0.56
53:CA:1448:C:O2'	53:CA:1449:C:C6	2.58	0.56
2:AC:119:ILE:HA	2:AC:122:GLN:HG3	1.86	0.56
4:CE:68:ARG:O	4:CE:69:ASN:C	2.43	0.56
24:BC:250:GLN:NE2	24:BC:250:GLN:N	2.53	0.56
22:DA:28:A:C6	22:DA:513:A:C8	2.93	0.56
40:DS:70:LYS:HD2	40:DS:110:ARG:O	2.06	0.56
29:BH:44:ILE:O	29:BH:48:GLU:HB2	2.05	0.56
19:AT:75:LYS:HG3	21:AA:186:C:H4'	1.88	0.56
22:DA:1181:U:H2'	22:DA:1182:G:C8	2.39	0.56
22:DA:2250:G:OP1	22:DA:2275:C:H2'	2.06	0.56
22:BA:2014:A:H2'	22:BA:2015:A:C8	2.40	0.56
11:AL:82:ARG:HH11	11:AL:82:ARG:HG2	1.69	0.56
53:CA:748:G:H2'	53:CA:749:A:C8	2.40	0.56
4:AE:67:ARG:HB2	4:AE:68:ARG:HE	1.70	0.56
23:BB:24:G:N7	23:BB:56:G:H2'	2.19	0.56
6:CG:128:GLU:HG3	6:CG:130:LYS:H	1.71	0.56
21:AA:1365:G:O2'	21:AA:1366:C:H5'	2.04	0.56
4:AE:29:ILE:HD12	4:AE:30:PHE:H	1.69	0.56
53:CA:1533:C:H2'	53:CA:1534:A:H5''	1.87	0.56
22:BA:1564:C:O2'	22:BA:1565:C:H5'	2.05	0.56
22:DA:2591:C:OP1	24:DC:237:ARG:HD2	2.05	0.56
24:BC:170:TYR:CD2	24:BC:184:GLU:HA	2.39	0.56
22:DA:187:G:C2	22:DA:210:C:C2	2.93	0.56
6:CG:148:LYS:HD3	6:CG:148:LYS:O	2.05	0.56
28:BG:109:SER:O	28:BG:110:HIS:HB3	2.04	0.56
26:BE:117:ARG:HA	26:BE:185:LYS:HD3	1.87	0.56
51:D3:33:THR:HG23	51:D3:34:LYS:N	2.20	0.56
54:DB:12:C:H5''	54:DB:15:A:N6	2.19	0.56
44:BW:39:GLN:HE21	44:BW:43:LYS:N	2.03	0.56
16:AQ:13:SER:O	16:AQ:20:ILE:HD11	2.05	0.56
53:CA:451:A:H61	53:CA:481:G:H5'	1.70	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:AK:85:VAL:CG1	10:AK:92:ARG:HG3	2.35	0.56
17:CR:62:ARG:HB3	17:CR:69:TYR:CE1	2.40	0.56
9:AJ:53:ILE:HG22	9:AJ:61:ALA:CB	2.27	0.56
22:DA:1275:A:O2'	22:DA:1276:A:O4'	2.22	0.56
22:DA:2149:U:HO2'	22:DA:2150:C:H6	0.72	0.56
25:DD:105:LYS:HA	25:DD:177:VAL:CG2	2.30	0.56
50:D2:22:MET:HG2	50:D2:22:MET:O	2.04	0.56
22:DA:1619:G:O2'	22:DA:1620:G:H5'	2.05	0.56
22:BA:1735:A:H2'	22:BA:1736:U:C6	2.39	0.56
31:BJ:17:VAL:HG13	31:BJ:55:ILE:CG1	2.36	0.56
28:DG:95:ALA:HB3	28:DG:127:GLN:HA	1.86	0.56
15:AP:28:ARG:NH2	21:AA:390:U:H4'	2.20	0.56
11:AL:73:LEU:HD11	11:AL:79:ILE:HG21	1.87	0.56
53:CA:211:G:C2'	53:CA:211:G:N3	2.67	0.56
5:AF:86:ARG:CZ	17:AR:63:TYR:HB3	2.36	0.56
30:DI:109:ALA:HB1	30:DI:125:THR:HA	1.87	0.56
21:AA:487:A:H2'	21:AA:488:C:O4'	2.06	0.56
16:CQ:25:GLU:HA	16:CQ:39:ARG:O	2.05	0.56
25:DD:55:LYS:HB3	25:DD:75:ALA:HB1	1.86	0.56
31:BJ:26:GLY:HA2	31:BJ:29:ALA:HB3	1.87	0.56
13:AN:50:LEU:O	13:AN:52:ARG:N	2.39	0.56
14:CO:7:THR:O	14:CO:11:VAL:HG23	2.05	0.56
19:AT:55:PRO:O	19:AT:59:ARG:HB3	2.04	0.56
27:DF:36:ASN:O	27:DF:37:MET:HB3	2.05	0.56
29:BH:78:VAL:HG11	29:BH:145:ASN:HB3	1.87	0.56
22:DA:929:U:H1'	47:DZ:25:GLY:O	2.05	0.56
25:DD:39:ASP:CG	25:DD:40:LEU:H	2.09	0.56
3:CD:187:ARG:C	3:CD:189:ASP:H	2.08	0.56
15:CP:71:VAL:O	15:CP:74:LEU:HB2	2.05	0.56
6:CG:14:ASP:HB3	6:CG:18:GLY:N	2.21	0.56
20:CU:41:THR:O	20:CU:45:LYS:HB2	2.06	0.56
22:DA:2314:A:H2'	22:DA:2315:G:H8	1.69	0.56
53:CA:198:G:O6	53:CA:220:G:C5	2.58	0.56
22:BA:2813:A:H2	22:BA:2887:A:H62	1.51	0.56
26:DE:170:ARG:NH2	26:DE:176:ASP:HB2	2.19	0.56
22:DA:2726:A:HO2'	22:DA:2727:A:C5'	2.18	0.56
53:CA:239:U:C6	53:CA:239:U:H5'	2.41	0.56
22:BA:1818:U:H2'	24:BC:152:GLN:O	2.04	0.56
22:DA:1866:A:O2'	22:DA:1867:G:H5'	2.04	0.56
11:CL:79:ILE:HD12	11:CL:96:THR:CG2	2.34	0.56
3:AD:196:GLU:C	3:AD:198:LEU:H	2.09	0.56
22:BA:1313:U:C2'	22:BA:1313:U:O2	2.50	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:1833:C:H2'	22:DA:1834:U:H6	1.70	0.56
27:DF:58:ALA:HB1	27:DF:139:GLU:HG2	1.87	0.56
22:BA:699:A:H1'	22:BA:1634:A:H2'	1.86	0.56
22:DA:1638:C:H4'	22:DA:2710:C:O2	2.06	0.56
21:AA:582:C:C2	21:AA:583:A:C8	2.93	0.56
11:CL:27:PRO:HB2	11:CL:28:GLN:OE1	2.06	0.56
28:DG:149:ALA:O	28:DG:151:ARG:N	2.38	0.56
22:BA:71:A:OP2	22:BA:71:A:H3'	2.06	0.56
25:DD:181:ASP:C	25:DD:183:GLU:H	2.09	0.56
22:DA:2415:G:C6	22:DA:2416:C:C4	2.93	0.56
19:AT:67:HIS:HB3	19:AT:68:LYS:NZ	2.21	0.56
31:DJ:6:ALA:HB3	31:DJ:45:THR:HB	1.87	0.56
17:CR:58:ILE:O	17:CR:62:ARG:HG3	2.06	0.56
22:DA:784:G:C6	24:DC:227:VAL:HG11	2.40	0.56
41:BT:38:ALA:HB3	41:BT:81:LYS:HE2	1.88	0.56
22:DA:1280:G:C2'	22:DA:1281:G:H5'	2.34	0.56
22:DA:1809:A:C2'	22:DA:1810:A:C8	2.87	0.56
22:BA:915:C:H6	22:BA:915:C:C5'	2.15	0.56
52:B4:9:LYS:H	52:B4:9:LYS:CE	2.18	0.56
22:DA:634:C:H2'	22:DA:635:C:H6	1.65	0.56
21:AA:983:A:O2'	21:AA:984:C:H5'	2.06	0.56
28:DG:84:LYS:HB3	28:DG:132:LEU:O	2.04	0.56
37:DP:28:LYS:NZ	37:DP:82:SER:HB2	2.20	0.56
49:B1:8:ILE:HG22	49:B1:9:LYS:N	2.20	0.56
53:CA:268:U:H2'	53:CA:269:C:H6	1.68	0.56
32:BK:107:LEU:C	32:BK:109:SER:H	2.07	0.56
53:CA:1102:A:O2'	53:CA:1103:C:H5'	2.05	0.56
35:BN:55:ALA:HA	35:BN:80:PHE:CE1	2.41	0.56
38:DQ:40:LYS:HD2	38:DQ:44:TYR:CE2	2.41	0.56
3:AD:53:GLN:HE21	3:AD:202:LEU:HA	1.70	0.56
22:BA:2557:G:H2'	22:BA:2558:C:H6	1.69	0.56
21:AA:1066:C:H5''	21:AA:1066:C:C6	2.40	0.56
8:CI:61:ASP:O	8:CI:62:LEU:HD22	2.06	0.56
22:BA:513:A:O2'	22:BA:514:A:H5'	2.06	0.56
22:DA:465:G:C4'	50:D2:16:HIS:HD2	2.18	0.56
25:BD:182:ALA:C	25:BD:184:ARG:H	2.08	0.56
6:CG:2:ARG:HB2	53:CA:1380:U:O4	2.05	0.56
2:CC:122:GLN:HB2	2:CC:127:VAL:HG21	1.88	0.56
12:CM:68:LEU:HD22	12:CM:69:ARG:HH11	1.70	0.56
22:BA:1537:G:H2'	22:BA:1538:G:O4'	2.05	0.56
22:BA:2210:U:H4'	22:BA:2211:A:O5'	2.05	0.56
21:AA:830:G:H2'	21:AA:831:A:H8	1.70	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:CN:20:PHE:HA	13:CN:24:ALA:HB2	1.85	0.56
28:DG:78:VAL:HG23	28:DG:79:THR:HG23	1.88	0.56
22:DA:2810:A:H2'	22:DA:2811:G:O4'	2.06	0.56
46:DY:31:GLN:C	46:DY:33:ALA:H	2.07	0.56
22:DA:982:C:H5''	22:DA:983:A:OP1	2.05	0.56
29:BH:14:SER:OG	29:BH:17:ASP:HB2	2.06	0.56
29:DH:66:ASN:HD22	29:DH:137:GLU:HB3	1.71	0.56
21:AA:1052:U:C5'	21:AA:1053:G:OP2	2.54	0.56
15:AP:48:GLU:HG3	15:AP:49:GLY:N	2.20	0.56
8:AI:6:TYR:CE2	8:AI:17:ARG:HB2	2.36	0.56
53:CA:1409:C:H2'	53:CA:1410:A:C8	2.41	0.56
22:DA:1311:G:H1'	22:DA:1313:U:O4	2.06	0.56
16:AQ:14:ASP:O	16:AQ:16:MET:SD	2.64	0.56
19:AT:27:MET:O	19:AT:31:ILE:HG13	2.06	0.56
10:CK:74:LYS:O	10:CK:74:LYS:HG2	2.06	0.56
22:DA:2210:U:H4'	22:DA:2211:A:H5'	1.85	0.56
30:BI:23:VAL:HG23	30:BI:24:GLY:H	1.71	0.56
35:DN:98:LEU:O	35:DN:112:TYR:HB2	2.06	0.56
22:BA:62:U:C4'	22:BA:63:A:OP1	2.53	0.56
28:DG:115:GLN:HG2	28:DG:116:LEU:H	1.70	0.56
53:CA:1091:U:O2	53:CA:1093:A:H8	1.87	0.56
36:DO:30:ARG:HG2	36:DO:31:THR:N	2.20	0.56
22:DA:765:C:H2'	22:DA:766:U:H6	1.67	0.56
22:DA:1710:G:H4'	22:DA:2858:C:O2	2.06	0.56
22:DA:2461:A:H1'	22:DA:2492:U:N3	2.21	0.56
21:AA:57:G:H2'	21:AA:58:C:C6	2.41	0.56
28:BG:54:ARG:C	28:BG:54:ARG:HD3	2.26	0.56
22:BA:1256:G:C2'	26:BE:77:ILE:HD11	2.36	0.56
40:BS:20:VAL:HA	40:BS:23:LEU:HD12	1.87	0.56
21:AA:191:G:H2'	21:AA:192:A:H8	1.71	0.56
22:BA:454:A:H4'	22:BA:455:C:OP2	2.05	0.56
22:BA:646:U:H3'	22:BA:647:G:H5''	1.88	0.56
17:CR:44:THR:OG1	17:CR:46:THR:HG22	2.05	0.56
26:DE:98:LYS:O	26:DE:99:LYS:HB2	2.06	0.56
49:D1:5:ARG:HD2	49:D1:25:ASN:HB2	1.88	0.56
22:BA:2730:C:O3'	25:BD:174:SER:HB3	2.06	0.56
44:BW:40:ARG:H	44:BW:56:HIS:HB3	1.71	0.56
16:AQ:11:VAL:HG12	16:AQ:12:VAL:HG12	1.87	0.56
10:CK:74:LYS:HG3	10:CK:78:ILE:HG12	1.88	0.56
9:CJ:9:ARG:HH22	53:CA:1279:G:C5'	2.16	0.56
20:CU:38:GLU:HG3	53:CA:1526:G:OP1	2.06	0.56
10:CK:126:ARG:N	20:CU:33:ARG:HE	2.02	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:1062:G:H2'	22:DA:1070:A:OP1	2.05	0.56
22:DA:1082:U:N3	22:DA:1086:A:C5	2.73	0.56
34:DM:26:VAL:HG21	34:DM:132:THR:O	2.06	0.56
22:DA:2823:A:C5	22:DA:2824:C:C5	2.93	0.56
4:AE:134:ASN:O	4:AE:137:ARG:HB3	2.05	0.56
22:DA:322:A:H3'	26:DE:163:ASN:ND2	2.21	0.56
46:BY:9:LYS:HA	46:BY:9:LYS:NZ	2.20	0.56
22:DA:379:G:C6	22:DA:396:G:C6	2.94	0.56
38:DQ:27:ARG:HA	38:DQ:33:VAL:CG1	2.35	0.56
22:DA:287:G:O2'	22:DA:288:U:H5'	2.06	0.56
22:DA:2716:C:H2'	22:DA:2717:C:C6	2.41	0.56
53:CA:1005:A:C4	53:CA:1006:G:H1'	2.40	0.56
22:BA:312:G:H2'	22:BA:313:G:C8	2.41	0.56
31:BJ:18:VAL:HG23	31:BJ:54:ILE:HD13	1.88	0.56
22:BA:2820:A:C8	22:BA:2820:A:C3'	2.88	0.56
53:CA:821:G:H2'	53:CA:822:U:H6	1.71	0.56
22:DA:1693:U:H4'	22:DA:1694:C:OP2	2.06	0.56
11:AL:23:LEU:HB3	11:AL:58:ASN:HD22	1.69	0.56
22:DA:1252:G:H5''	57:DA:3287:HOH:O	2.05	0.56
22:DA:2512:C:H2'	22:DA:2513:A:O4'	2.06	0.56
35:BN:38:LEU:O	35:BN:38:LEU:HD12	2.05	0.56
32:BK:99:ILE:HG22	32:BK:119:ALA:HA	1.86	0.56
54:DB:75:G:H1	54:DB:102:G:H22	1.54	0.56
37:DP:86:LYS:HA	37:DP:86:LYS:NZ	2.20	0.56
26:BE:150:THR:HG21	26:BE:153:LEU:HA	1.88	0.56
39:BR:25:LEU:H	39:BR:94:THR:CG2	2.19	0.56
53:CA:719:C:H3'	53:CA:720:C:C6	2.41	0.56
22:DA:2622:U:O2'	22:DA:2825:G:N7	2.38	0.56
26:DE:88:ARG:HB3	26:DE:89:PRO:HD2	1.88	0.56
53:CA:1387:G:H2'	53:CA:1388:C:C6	2.41	0.56
41:BT:64:LYS:HA	41:BT:79:ASP:OD1	2.05	0.56
53:CA:408:A:C2	53:CA:435:A:C2	2.94	0.56
21:AA:1442:G:H2'	21:AA:1443:C:H6	1.70	0.56
33:BL:77:ILE:HG12	33:BL:95:LEU:CD1	2.35	0.56
22:BA:2366:A:C2	22:BA:2367:G:H1'	2.41	0.56
5:AF:42:TRP:CZ2	5:AF:61:LEU:HD22	2.41	0.56
24:BC:245:THR:OG1	24:BC:249:VAL:HB	2.05	0.56
24:BC:230:PRO:CD	24:BC:246:PRO:HA	2.35	0.56
31:DJ:43:GLU:O	31:DJ:45:THR:HG22	2.05	0.56
21:AA:182:A:N6	21:AA:194:C:C4	2.74	0.56
35:BN:103:ARG:HB2	35:BN:110:MET:HE3	1.88	0.56
22:DA:2214:C:O2'	22:DA:2215:C:C5'	2.50	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
41:BT:24:MET:HG3	41:BT:29:THR:HG23	1.87	0.56
27:DF:31:GLU:C	27:DF:95:MET:HE1	2.26	0.56
22:DA:2025:C:H2'	22:DA:2026:U:C6	2.41	0.56
22:DA:491:G:C4	22:DA:492:A:C8	2.94	0.56
53:CA:1261:A:N7	53:CA:1274:A:H2	2.04	0.56
53:CA:984:C:O2'	53:CA:985:C:C6	2.53	0.56
18:CS:35:ARG:HH21	18:CS:51:HIS:HD2	1.53	0.56
22:DA:466:A:H2	22:DA:795:C:O2	1.89	0.56
28:BG:44:HIS:HA	28:BG:49:LEU:HD23	1.87	0.56
3:AD:28:ASP:OD1	3:AD:33:ILE:HG12	2.04	0.56
7:AH:15:ASN:ND2	21:AA:875:U:H1'	2.19	0.56
2:CC:175:HIS:CE1	53:CA:1108:G:H5''	2.40	0.56
21:AA:790:A:H2'	21:AA:791:G:C8	2.40	0.56
21:AA:92:U:O2'	21:AA:93:U:H5'	2.05	0.56
1:AB:68:PHE:CD2	1:AB:83:ALA:HB1	2.41	0.56
18:CS:13:HIS:CD2	53:CA:1014:A:H4'	2.41	0.56
22:BA:2204:G:H4'	24:BC:149:LYS:HG3	1.87	0.56
3:AD:196:GLU:HA	3:AD:199:ILE:CG2	2.36	0.56
21:AA:1152:A:H2'	21:AA:1153:G:H8	1.70	0.56
21:AA:1394:A:C5	21:AA:1501:C:H4'	2.41	0.56
53:CA:1380:U:H4'	53:CA:1381:U:OP1	2.04	0.56
22:BA:2339:C:H2'	22:BA:2340:A:H8	1.69	0.56
13:AN:51:PRO:O	13:AN:52:ARG:CB	2.54	0.56
22:BA:675:A:H4'	26:BE:62:GLN:NE2	2.20	0.56
22:BA:2801:G:H2'	22:BA:2802:G:H8	1.70	0.56
26:BE:153:LEU:HD12	26:BE:153:LEU:C	2.26	0.56
14:CO:24:THR:HG21	14:CO:69:LEU:HB2	1.88	0.56
30:DI:28:GLY:O	30:DI:30:GLN:HG3	2.05	0.56
36:DO:70:ALA:O	36:DO:74:VAL:HG23	2.06	0.56
53:CA:1008:U:C4	53:CA:1022:A:C2	2.94	0.56
3:CD:43:ARG:O	3:CD:45:PRO:HD3	2.06	0.56
22:BA:310:A:HO2'	22:BA:311:A:H5''	1.70	0.56
53:CA:1017:U:OP2	53:CA:1017:U:H6	1.89	0.56
43:BV:65:VAL:O	43:BV:65:VAL:CG2	2.53	0.56
54:DB:100:G:H2'	54:DB:101:A:O4'	2.06	0.56
26:BE:24:ASN:O	26:BE:28:VAL:HG12	2.05	0.56
44:BW:24:ARG:CD	44:BW:25:PHE:N	2.61	0.56
39:DR:4:VAL:HG23	39:DR:39:LEU:HG	1.88	0.56
22:BA:1062:G:C2'	22:BA:1063:G:C8	2.88	0.56
22:BA:1078:U:H4'	22:BA:1079:C:H6	1.71	0.56
45:DX:51:SER:OG	45:DX:54:GLY:HA3	2.06	0.56
16:AQ:11:VAL:HG12	16:AQ:12:VAL:N	2.20	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:AE:153:ALA:HA	4:AE:156:ARG:CB	2.34	0.56
41:BT:50:LEU:O	41:BT:51:PHE:HB2	2.06	0.56
22:DA:1059:G:N3	30:DI:131:THR:HG22	2.20	0.56
25:DD:118:PHE:CG	25:DD:119:ALA:N	2.74	0.56
41:DT:40:LYS:HA	41:DT:43:ILE:HG22	1.88	0.56
1:CB:81:ASP:CG	1:CB:82:ALA:H	2.10	0.56
4:AE:80:LEU:HD12	4:AE:146:MET:HE1	1.88	0.56
22:DA:468:G:H5''	26:DE:55:SER:CB	2.35	0.56
22:DA:1430:G:O2'	22:DA:1431:A:H5'	2.06	0.56
14:CO:38:LEU:HD12	14:CO:41:HIS:CB	2.36	0.56
21:AA:481:G:O2'	21:AA:482:A:C8	2.59	0.56
53:CA:989:U:C2'	53:CA:990:C:H5'	2.36	0.56
22:DA:1014:A:O2'	22:DA:1015:U:H5'	2.06	0.56
21:AA:473:U:H2'	21:AA:474:G:C8	2.34	0.56
49:B1:8:ILE:HG23	49:B1:51:ALA:HA	1.88	0.56
22:BA:1731:G:C4	22:BA:1733:G:N7	2.74	0.56
54:DB:4:C:H2'	54:DB:5:U:H6	1.71	0.56
22:DA:1722:A:H61	22:DA:1738:G:H1'	1.71	0.56
22:DA:513:A:H2'	22:DA:514:A:H8	1.68	0.56
22:DA:1300:G:H4'	22:DA:1301:A:O5'	2.04	0.56
31:DJ:111:LYS:HB2	31:DJ:115:GLY:N	2.21	0.56
32:BK:47:ILE:HG13	32:BK:48:PRO:HD2	1.88	0.56
21:AA:1261:A:C2	21:AA:1275:A:C6	2.93	0.56
21:AA:1039:G:O2'	21:AA:1040:U:H5'	2.06	0.56
22:BA:907:G:O2'	22:BA:908:C:H5'	2.06	0.56
22:BA:2109:U:C4	22:BA:2181:U:O4	2.59	0.56
21:AA:1016:A:H3'	21:AA:1017:U:O4'	2.05	0.56
22:DA:515:A:H1'	22:DA:581:C:H1'	1.87	0.56
17:CR:22:TYR:HA	17:CR:57:ALA:HB1	1.86	0.56
53:CA:1511:G:C5	53:CA:1512:U:C5	2.93	0.56
16:AQ:58:VAL:HG23	16:AQ:77:VAL:HG22	1.87	0.56
6:CG:37:THR:HB	53:CA:1240:U:O2'	2.05	0.56
1:AB:172:ILE:HG23	1:AB:182:VAL:HG11	1.88	0.56
21:AA:918:A:H2'	21:AA:919:A:C8	2.40	0.56
42:BU:15:GLY:O	42:BU:17:ASP:N	2.35	0.56
4:AE:45:VAL:HG22	4:AE:117:ALA:HA	1.88	0.56
53:CA:840:C:N3	53:CA:842:U:H4'	2.21	0.56
38:BQ:86:SER:O	38:BQ:88:GLU:N	2.38	0.55
39:BR:51:VAL:CB	39:BR:52:PRO:CD	2.81	0.55
22:BA:923:G:H4'	44:BW:25:PHE:CE1	2.41	0.55
22:DA:622:G:H2'	22:DA:623:C:C6	2.41	0.55
22:DA:1400:U:O2'	22:DA:1401:G:O4'	2.18	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
16:AQ:10:ARG:O	16:AQ:22:VAL:HG13	2.06	0.55
38:DQ:65:ASN:HA	38:DQ:75:TYR:HB2	1.89	0.55
2:CC:22:PHE:CD2	9:CJ:97:ASP:HB2	2.41	0.55
35:DN:16:HIS:O	35:DN:20:MET:N	2.40	0.55
53:CA:198:G:O2'	53:CA:199:A:O5'	2.24	0.55
22:DA:1079:C:N4	22:DA:1088:A:N3	2.54	0.55
53:CA:1356:G:H2'	53:CA:1357:A:C8	2.41	0.55
9:CJ:52:LEU:HD21	9:CJ:59:LYS:HA	1.88	0.55
4:CE:103:GLY:HA3	4:CE:120:HIS:O	2.07	0.55
27:DF:46:LYS:HD3	27:DF:50:ASP:HB2	1.87	0.55
1:AB:148:GLY:O	1:AB:151:LYS:HG2	2.06	0.55
1:CB:150:ILE:HD11	1:CB:153:MET:CE	2.34	0.55
21:AA:913:A:H4'	21:AA:914:A:O5'	2.06	0.55
21:AA:413:G:N2	21:AA:428:G:O2'	2.39	0.55
22:DA:98:G:O2'	22:DA:103:A:C8	2.59	0.55
40:DS:66:ILE:N	40:DS:66:ILE:HD13	2.20	0.55
24:BC:261:ARG:HG2	24:BC:261:ARG:O	2.05	0.55
22:BA:2602:A:H4'	22:BA:2603:G:H5'	1.88	0.55
2:AC:10:ARG:NH2	2:AC:181:ILE:HG13	2.21	0.55
22:BA:396:G:H2'	22:BA:397:U:C6	2.41	0.55
9:CJ:7:ARG:NH1	9:CJ:102:LEU:HG	2.21	0.55
1:AB:132:GLU:HG3	1:AB:132:GLU:O	2.04	0.55
35:BN:23:ASN:HD22	35:BN:23:ASN:N	2.03	0.55
25:DD:17:GLU:H	25:DD:17:GLU:CD	2.09	0.55
53:CA:203:G:H8	53:CA:203:G:O5'	1.88	0.55
22:BA:2543:G:H2'	22:BA:2544:G:C8	2.41	0.55
12:CM:57:ASP:O	12:CM:61:LYS:HG3	2.06	0.55
25:BD:70:LYS:O	25:BD:71:ALA:HB3	2.05	0.55
31:DJ:36:LEU:HD21	31:DJ:122:LEU:HD13	1.88	0.55
38:BQ:93:ILE:HG23	38:BQ:94:LEU:N	2.20	0.55
22:DA:2336:A:N7	44:DW:40:ARG:CZ	2.69	0.55
28:BG:132:LEU:HD23	28:BG:132:LEU:N	2.21	0.55
45:DX:52:ALA:O	45:DX:53:LYS:HB3	2.05	0.55
21:AA:707:U:H2'	21:AA:708:C:C6	2.41	0.55
22:DA:1275:A:H2'	22:DA:1275:A:N3	2.22	0.55
35:DN:114:GLU:HG3	35:DN:118:ARG:HD3	1.87	0.55
22:BA:558:U:H5''	31:BJ:111:LYS:HE3	1.88	0.55
42:DU:95:PHE:CD1	42:DU:95:PHE:N	2.74	0.55
53:CA:1316:G:H22	53:CA:1318:A:H3'	1.72	0.55
53:CA:960:U:C5	53:CA:1225:A:H1'	2.41	0.55
22:BA:2197:U:OP1	3:CD:150:LYS:HE3	2.06	0.55
22:DA:466:A:P	50:D2:34:ARG:HH21	2.30	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:117:G:C6	22:DA:119:A:C6	2.95	0.55
22:DA:527:C:N3	22:DA:2779:U:H2'	2.21	0.55
6:CG:100:MET:HE3	6:CG:100:MET:H	1.72	0.55
53:CA:989:U:H2'	53:CA:990:C:H5'	1.88	0.55
27:BF:134:GLN:HE22	27:BF:149:ARG:HB3	1.71	0.55
22:DA:273:G:H2'	22:DA:274:C:C6	2.41	0.55
6:CG:4:ARG:HG3	6:CG:5:VAL:N	2.21	0.55
28:DG:117:PRO:HD2	28:DG:120:ILE:CG2	2.36	0.55
53:CA:1036:A:C2'	53:CA:1037:C:H5'	2.36	0.55
30:BI:104:GLN:O	30:BI:105:LEU:CB	2.54	0.55
16:AQ:46:HIS:HB2	16:AQ:66:LEU:CD1	2.35	0.55
22:BA:1734:G:O2'	22:BA:1735:A:O4'	2.24	0.55
8:AI:46:VAL:HA	8:AI:49:GLN:HG3	1.88	0.55
1:AB:72:LYS:HZ2	1:AB:204:ASP:HB3	1.71	0.55
51:D3:15:LYS:HZ1	51:D3:19:GLY:HA2	1.71	0.55
21:AA:428:G:H1'	21:AA:430:A:N7	2.21	0.55
22:DA:1688:U:O2	22:DA:1700:A:H5'	2.06	0.55
15:AP:20:VAL:HG21	15:AP:32:PHE:CG	2.42	0.55
43:DV:56:PHE:C	43:DV:58:SER:H	2.09	0.55
22:DA:1258:U:H2'	22:DA:1259:G:H8	1.70	0.55
22:DA:2036:C:H2'	22:DA:2037:A:H8	1.71	0.55
22:DA:223:A:C6	22:DA:422:A:C5	2.94	0.55
26:DE:105:LEU:HB3	26:DE:200:LEU:HD11	1.88	0.55
22:DA:642:U:H2'	22:DA:644:A:OP2	2.06	0.55
22:DA:644:A:O2'	22:DA:645:C:H5'	2.05	0.55
22:BA:434:U:HO2'	22:BA:436:C:H5	1.55	0.55
31:DJ:117:ALA:HA	31:DJ:120:ARG:HD2	1.86	0.55
45:BX:30:PRO:O	45:BX:32:LEU:HD12	2.05	0.55
22:BA:595:C:H2'	22:BA:596:U:C6	2.42	0.55
23:BB:88:C:H6	23:BB:88:C:H5'	1.71	0.55
22:DA:56:A:C2	22:DA:115:C:C2	2.93	0.55
22:BA:1515:A:H2'	22:BA:1516:G:O4'	2.05	0.55
22:BA:974:G:H8	22:BA:990:A:H62	1.53	0.55
18:AS:21:ALA:O	18:AS:22:VAL:HG23	2.06	0.55
1:CB:66:ILE:H	1:CB:88:GLN:HB3	1.71	0.55
21:AA:901:A:N7	21:AA:902:G:H1'	2.21	0.55
22:DA:1469:A:H2'	22:DA:1470:A:H8	1.68	0.55
16:AQ:13:SER:O	16:AQ:16:MET:SD	2.65	0.55
3:AD:109:THR:HG21	21:AA:408:A:P	2.46	0.55
20:CU:31:VAL:O	20:CU:33:ARG:N	2.39	0.55
53:CA:960:U:H4'	53:CA:961:U:H5''	1.87	0.55
22:DA:120:U:C2	22:DA:149:A:C6	2.94	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:AA:481:G:O2'	21:AA:482:A:H8	1.89	0.55
28:BG:10:VAL:HB	28:BG:14:VAL:HG21	1.86	0.55
22:BA:1873:G:O2'	22:BA:1874:C:H5'	2.06	0.55
11:AL:43:LYS:HZ2	11:AL:44:PRO:HD2	1.71	0.55
53:CA:562:U:H4'	53:CA:563:A:O5'	2.05	0.55
53:CA:705:G:H2'	53:CA:706:A:C8	2.42	0.55
19:AT:4:LYS:C	19:AT:4:LYS:HE2	2.27	0.55
11:AL:23:LEU:O	11:AL:25:ALA:N	2.38	0.55
18:CS:54:ARG:CG	18:CS:55:GLN:H	2.19	0.55
22:BA:2554:U:C4	22:BA:2555:U:O4	2.60	0.55
22:BA:633:A:C8	22:BA:633:A:H3'	2.41	0.55
53:CA:181:A:H1'	53:CA:182:A:C2	2.41	0.55
22:DA:1171:G:N2	22:DA:1179:G:H1'	2.22	0.55
29:DH:50:ARG:HG3	29:DH:54:LEU:HG	1.88	0.55
22:BA:637:A:H4'	22:BA:638:G:O5'	2.06	0.55
26:BE:129:PRO:HG3	26:BE:156:ASN:OD1	2.06	0.55
53:CA:106:C:O2	53:CA:379:C:H4'	2.05	0.55
3:CD:60:VAL:HG22	3:CD:194:ILE:HG21	1.86	0.55
22:BA:2071:A:H2'	22:BA:2072:C:C6	2.42	0.55
31:DJ:3:THR:CG2	38:DQ:60:TRP:HE1	2.20	0.55
8:CI:40:ARG:H	8:CI:44:ARG:HD3	1.71	0.55
22:DA:503:A:C6	22:DA:506:G:C6	2.94	0.55
22:DA:506:G:H4'	22:DA:507:A:H5'	1.88	0.55
40:DS:8:ARG:HA	40:DS:102:HIS:ND1	2.22	0.55
7:CH:106:SER:HA	53:CA:642:A:N7	2.22	0.55
22:DA:100:U:H1'	22:DA:101:A:N7	2.22	0.55
22:DA:1206:G:C2	22:DA:1207:C:C2	2.95	0.55
22:BA:1509:A:N3	22:BA:1510:G:C8	2.75	0.55
43:DV:80:HIS:CD2	43:DV:82:TYR:H	2.22	0.55
53:CA:1145:A:O2'	53:CA:1146:A:H5''	2.05	0.55
22:DA:118:A:OP1	50:D2:22:MET:SD	2.64	0.55
6:CG:30:MET:HE1	6:CG:33:GLY:HA2	1.87	0.55
3:AD:204:SER:HB2	21:AA:8:A:N6	2.18	0.55
21:AA:502:A:H2'	21:AA:503:C:O4'	2.06	0.55
37:BP:21:PRO:HA	37:BP:46:VAL:HG12	1.88	0.55
22:BA:197:A:H62	22:BA:2430:A:H2'	1.71	0.55
20:AU:18:PHE:O	20:AU:21:SER:HB3	2.07	0.55
31:DJ:35:ARG:NH1	31:DJ:140:LEU:HD11	2.21	0.55
53:CA:483:C:H2'	53:CA:484:G:C8	2.41	0.55
22:DA:637:A:N6	22:DA:652:U:H4'	2.21	0.55
5:CF:42:TRP:HB2	5:CF:59:TYR:HB2	1.87	0.55
53:CA:1253:G:N1	53:CA:1285:A:N6	2.54	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:AA:1151:A:O2'	21:AA:1152:A:C5'	2.54	0.55
30:DI:109:ALA:HB1	30:DI:125:THR:HG22	1.86	0.55
22:BA:28:A:H2'	22:BA:29:U:H6	1.71	0.55
22:DA:565:C:H4'	22:DA:1253:A:N6	2.21	0.55
22:DA:1590:A:H2'	22:DA:1591:A:H8	1.71	0.55
21:AA:269:C:H2'	21:AA:270:A:C8	2.42	0.55
22:DA:173:A:H2'	22:DA:174:U:H6	1.71	0.55
3:CD:137:SER:HB2	3:CD:138:PRO:HD2	1.87	0.55
25:DD:73:VAL:O	25:DD:74:GLU:HB2	2.05	0.55
25:DD:40:LEU:HA	25:DD:44:GLY:HA2	1.88	0.55
22:DA:518:G:H2'	22:DA:519:U:C6	2.40	0.55
30:DI:12:VAL:HG12	30:DI:13:ALA:N	2.21	0.55
22:BA:54:G:O2'	50:B2:35:ARG:HD3	2.06	0.55
22:DA:1461:C:H2'	22:DA:1462:C:C6	2.40	0.55
42:BU:41:VAL:O	42:BU:59:GLU:HA	2.06	0.55
6:AG:25:PHE:CE1	6:AG:104:VAL:HG23	2.41	0.55
26:DE:34:ALA:HB1	26:DE:94:GLN:HB2	1.88	0.55
22:DA:2706:A:N6	57:DA:3665:HOH:O	2.38	0.55
22:DA:1552:A:O2'	22:DA:1553:A:H5'	2.07	0.55
11:AL:49:ARG:CG	11:AL:49:ARG:NH1	2.65	0.55
38:BQ:111:LYS:HE2	39:BR:50:GLY:HA2	1.89	0.55
39:BR:48:LYS:HD2	39:BR:48:LYS:O	2.07	0.55
44:BW:18:LYS:HE3	44:BW:19:ARG:CG	2.36	0.55
16:AQ:14:ASP:O	16:AQ:16:MET:HG2	2.06	0.55
22:BA:1288:G:C4	22:BA:1327:A:C2	2.94	0.55
22:DA:2311:A:H1'	27:DF:78:ILE:HD11	1.89	0.55
10:CK:27:ASN:HA	10:CK:57:SER:HB3	1.88	0.55
45:DX:4:CYS:HA	45:DX:32:LEU:HD11	1.89	0.55
21:AA:1141:C:O2'	21:AA:1142:G:O5'	2.24	0.55
3:AD:191:SER:OG	3:AD:192:ALA:N	2.37	0.55
22:DA:128:C:H2'	22:DA:129:C:C6	2.42	0.55
22:DA:279:A:C2	22:DA:362:A:H4'	2.41	0.55
25:DD:137:SER:CB	25:DD:138:LEU:HD22	2.36	0.55
7:AH:106:SER:HA	21:AA:642:A:N7	2.22	0.55
53:CA:1026:G:H1	53:CA:1036:A:N6	2.04	0.55
54:DB:27:C:O2'	54:DB:28:C:H5'	2.05	0.55
51:D3:3:ILE:HG21	51:D3:62:PRO:HG2	1.87	0.55
22:BA:1026:G:H2'	22:BA:1027:A:C8	2.41	0.55
2:CC:83:VAL:HA	2:CC:86:LEU:HD12	1.89	0.55
6:CG:101:ARG:HH22	53:CA:940:C:H5'	1.70	0.55
27:DF:8:LYS:HB2	27:DF:8:LYS:NZ	2.20	0.55
2:AC:55:VAL:O	2:AC:65:VAL:HA	2.07	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
15:AP:77:GLU:C	15:AP:79:ASN:H	2.08	0.55
1:AB:117:GLU:HA	1:AB:120:SER:HB2	1.88	0.55
22:DA:1301:A:C8	22:DA:1303:G:C8	2.95	0.55
23:BB:12:C:C5	44:BW:72:GLY:HA3	2.41	0.55
1:CB:35:ASN:O	1:CB:36:LYS:HD2	2.07	0.55
38:DQ:6:GLY:C	38:DQ:8:ILE:H	2.09	0.55
42:DU:33:VAL:O	42:DU:34:ILE:HG13	2.06	0.55
29:DH:5:LEU:HD11	29:DH:13:GLY:HA3	1.87	0.55
43:DV:29:ILE:HG22	43:DV:39:ALA:HA	1.87	0.55
12:AM:86:ARG:HH22	12:AM:97:ARG:HA	1.70	0.55
8:CI:5:TYR:HD2	8:CI:5:TYR:N	2.05	0.55
24:BC:185:ALA:C	24:BC:187:CYS:H	2.08	0.55
22:DA:2825:G:H3'	22:DA:2826:A:H8	1.72	0.55
22:BA:310:A:O2'	22:BA:311:A:H5''	2.06	0.55
3:AD:151:GLN:H	3:AD:154:VAL:CG1	2.18	0.55
21:AA:764:C:O2'	21:AA:765:G:H5'	2.07	0.55
5:CF:80:PHE:CE2	24:DC:123:ILE:HG21	2.42	0.55
10:AK:108:ASN:HB3	20:AU:6:ARG:HG2	1.88	0.55
39:DR:36:ALA:HA	39:DR:58:VAL:HA	1.89	0.55
22:BA:1315:C:O2'	22:BA:1316:U:H5'	2.06	0.55
53:CA:672:U:H2'	53:CA:673:A:C8	2.41	0.55
25:DD:56:LYS:HB3	25:DD:56:LYS:NZ	2.21	0.55
33:DL:65:GLY:O	33:DL:66:PHE:HB2	2.07	0.55
22:DA:602:A:H4'	22:DA:604:G:O3'	2.05	0.55
21:AA:198:G:O2'	21:AA:199:A:H8	1.89	0.55
22:DA:1388:G:O2'	22:DA:1389:G:H5'	2.06	0.55
8:CI:39:GLY:O	8:CI:40:ARG:HB2	2.07	0.55
22:BA:1197:G:H2'	22:BA:1198:U:C6	2.42	0.55
1:CB:74:ALA:HB1	1:CB:206:ILE:CD1	2.31	0.55
22:DA:2873:A:H4'	57:DN:201:HOH:O	2.06	0.55
31:BJ:65:THR:HG22	31:BJ:68:LYS:CE	2.36	0.55
22:BA:1506:U:H2'	22:BA:1507:C:C6	2.41	0.55
4:CE:21:SER:OG	4:CE:28:ARG:HG3	2.07	0.55
34:BM:46:ILE:C	34:BM:46:ILE:HD12	2.27	0.55
27:DF:28:PRO:CB	27:DF:168:LEU:HD21	2.36	0.55
53:CA:1070:U:H2'	53:CA:1071:C:H6	1.71	0.55
46:DY:1:MET:N	46:DY:1:MET:HE2	2.22	0.55
21:AA:686:U:O2'	21:AA:687:A:H8	1.86	0.55
16:CQ:61:ARG:HG2	16:CQ:75:VAL:CG1	2.35	0.55
32:BK:61:VAL:CG2	32:BK:87:LEU:HD11	2.37	0.55
26:BE:48:THR:H	26:BE:51:GLU:CG	2.19	0.55
26:BE:48:THR:HG22	26:BE:86:ALA:HB3	1.89	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:BA:1858:A:H2'	22:BA:1859:U:C6	2.42	0.55
23:BB:66:A:H61	23:BB:107:G:H2'	1.72	0.55
39:BR:24:LYS:HA	39:BR:94:THR:HG23	1.87	0.55
22:DA:769:U:HO2'	22:DA:1379:U:H6	1.54	0.55
53:CA:968:A:C4	53:CA:1062:U:H4'	2.41	0.55
22:DA:2264:C:H41	44:DW:11:ASN:ND2	2.04	0.55
53:CA:487:A:H2'	53:CA:488:C:O4'	2.07	0.55
40:DS:44:ALA:O	40:DS:48:LYS:HB2	2.07	0.55
8:CI:128:LYS:O	8:CI:129:ARG:HB2	2.06	0.55
19:CT:57:VAL:HG12	19:CT:71:ALA:HB2	1.88	0.55
21:AA:197:A:H4'	21:AA:198:G:O5'	2.05	0.55
8:CI:51:LEU:C	8:CI:53:LEU:H	2.10	0.55
41:BT:32:LEU:O	41:BT:34:VAL:HG13	2.07	0.55
22:DA:230:G:O2'	22:DA:231:A:H5'	2.07	0.55
34:DM:27:SER:N	34:DM:66:ARG:HH22	2.00	0.55
24:BC:104:LEU:O	24:BC:105:ALA:CB	2.53	0.55
40:DS:17:VAL:HG11	40:DS:103:ILE:HG13	1.89	0.55
4:AE:109:ALA:O	4:AE:110:MET:HG2	2.07	0.55
20:AU:52:VAL:HG13	20:AU:53:LYS:N	2.15	0.55
22:DA:2875:C:O2'	22:DA:2876:G:C8	2.50	0.55
22:DA:308:G:N1	22:DA:309:A:C2	2.74	0.55
53:CA:1296:C:O2'	53:CA:1302:C:C4	2.60	0.55
44:DW:22:VAL:O	44:DW:23:LYS:HG3	2.07	0.55
29:DH:90:LEU:CB	29:DH:123:ARG:HB3	2.33	0.55
37:BP:33:GLU:OE2	37:BP:38:ARG:NH1	2.39	0.55
22:BA:2887:A:H5'	22:BA:2888:C:OP2	2.06	0.55
22:BA:959:A:N6	34:BM:82:MET:HE3	2.19	0.55
30:DI:57:VAL:HG21	30:DI:69:VAL:H	1.70	0.55
22:DA:627:A:O2'	22:DA:628:G:P	2.65	0.55
22:BA:1585:C:C2'	22:BA:1586:A:H5'	2.37	0.55
1:AB:95:TRP:HZ3	1:AB:98:GLY:H	1.53	0.55
40:DS:14:ALA:HB1	40:DS:18:ARG:NH2	2.22	0.55
22:DA:2627:G:N3	22:DA:2781:A:H2	2.04	0.55
22:DA:2638:G:O2'	22:DA:2639:A:C8	2.60	0.55
53:CA:696:A:H2'	53:CA:697:U:H6	1.72	0.55
53:CA:654:G:H2'	53:CA:655:A:H8	1.71	0.55
13:CN:55:SER:C	13:CN:57:SER:H	2.10	0.55
53:CA:1513:A:H2'	53:CA:1514:G:C8	2.41	0.55
34:DM:103:TYR:O	34:DM:104:GLU:HG3	2.07	0.55
22:BA:568:U:OP1	33:BL:36:LYS:HE3	2.07	0.55
22:BA:1032:A:H1'	52:B4:23:ILE:HD13	1.87	0.55
12:CM:32:ILE:O	12:CM:32:ILE:HD13	2.06	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:1954:G:O2'	22:DA:1955:U:P	2.64	0.55
30:DI:132:ALA:HA	30:DI:137:LEU:HD12	1.89	0.55
11:CL:72:ASN:HD22	11:CL:72:ASN:H	1.55	0.55
22:DA:2136:G:O6	22:DA:2156:G:C2	2.60	0.55
11:CL:42:LYS:HG2	11:CL:43:LYS:N	2.21	0.55
28:BG:97:VAL:HG22	28:BG:102:ILE:HG12	1.89	0.55
15:CP:78:VAL:O	15:CP:78:VAL:HG12	2.06	0.55
31:DJ:51:GLY:C	31:DJ:121:LYS:HE3	2.27	0.55
8:CI:49:GLN:N	8:CI:50:PRO:CD	2.70	0.55
10:CK:126:ARG:O	20:CU:33:ARG:NH2	2.40	0.55
22:DA:1060:U:C4'	22:DA:1061:U:H2'	2.37	0.55
23:BB:90:C:H6	23:BB:90:C:C5'	2.09	0.55
26:DE:134:LEU:HA	26:DE:137:LYS:HB2	1.89	0.55
21:AA:210:C:H4'	21:AA:211:G:N2	2.22	0.55
21:AA:1006:G:H2'	21:AA:1007:U:O4'	2.06	0.55
22:DA:505:A:O2'	22:DA:506:G:H5'	2.07	0.55
22:DA:302:C:O2'	22:DA:303:G:C8	2.48	0.55
26:BE:131:THR:HG22	26:BE:160:ALA:HA	1.88	0.55
21:AA:1143:G:H2'	21:AA:1144:G:C8	2.41	0.55
7:CH:28:SER:HB3	7:CH:56:PRO:HB2	1.89	0.55
22:DA:947:A:O2'	22:DA:948:C:O4'	2.24	0.55
22:DA:704:G:H1'	22:DA:727:A:H61	1.67	0.55
21:AA:548:G:H2'	21:AA:549:C:H6	1.71	0.55
22:DA:1616:A:H8	22:DA:1616:A:OP1	1.90	0.55
36:DO:71:ALA:CB	36:DO:102:ARG:HB3	2.37	0.55
4:CE:68:ARG:O	4:CE:70:MET:HG2	2.06	0.55
22:BA:277:G:H4'	22:BA:278:A:C8	2.42	0.55
40:BS:13:SER:O	40:BS:14:ALA:HB2	2.07	0.55
40:BS:17:VAL:HG12	40:BS:76:VAL:HG11	1.88	0.55
31:BJ:54:ILE:HD11	31:BJ:56:VAL:HG22	1.88	0.55
1:AB:56:LEU:HB2	1:AB:183:PHE:CE1	2.42	0.55
6:AG:3:ARG:HG3	6:AG:4:ARG:N	2.22	0.55
24:BC:158:GLY:H	24:BC:194:VAL:HG13	1.70	0.55
29:BH:95:GLY:C	29:BH:97:ARG:H	2.09	0.55
22:DA:196:A:H61	22:DA:831:G:N2	2.03	0.55
33:BL:14:LYS:HG3	33:BL:15:ALA:H	1.72	0.55
22:BA:580:U:O3'	38:BQ:30:VAL:CG1	2.55	0.55
53:CA:920:U:H2'	53:CA:921:U:H6	1.71	0.55
53:CA:86:G:H1'	53:CA:87:C:O5'	2.06	0.55
13:AN:50:LEU:HB3	13:AN:51:PRO:HD2	1.87	0.55
37:BP:37:LYS:HG2	37:BP:37:LYS:O	2.07	0.55
22:BA:1856:U:H3	22:BA:1886:U:H3	1.55	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:BA:639:U:H2'	22:BA:640:C:C6	2.42	0.55
37:BP:113:LEU:O	37:BP:113:LEU:HG	2.06	0.55
7:AH:74:ILE:O	7:AH:74:ILE:HG23	2.06	0.55
4:CE:125:LYS:HG3	53:CA:9:G:OP2	2.06	0.55
21:AA:1103:C:H2'	21:AA:1104:G:O4'	2.07	0.55
22:DA:1539:U:O2'	22:DA:1540:G:O4'	2.15	0.55
22:BA:2405:G:H1'	22:BA:2412:A:N6	2.22	0.55
22:DA:851:C:H2'	22:DA:852:U:C6	2.41	0.55
21:AA:769:G:H4'	21:AA:1513:A:H4'	1.88	0.55
22:DA:858:G:C4	22:DA:2268:A:C2	2.95	0.55
38:BQ:85:ALA:O	38:BQ:87:VAL:O	2.25	0.55
37:BP:51:ASN:C	37:BP:52:ARG:HG2	2.28	0.55
44:BW:28:GLU:OE2	44:BW:29:SER:N	2.39	0.55
41:BT:40:LYS:O	41:BT:44:LYS:N	2.39	0.55
10:CK:124:LYS:O	20:CU:34:ARG:HB2	2.07	0.55
21:AA:1022:A:H2'	21:AA:1023:U:O4'	2.07	0.55
11:AL:81:ILE:HD11	11:AL:94:TYR:CG	2.42	0.55
35:DN:31:HIS:O	35:DN:33:ILE:HG13	2.06	0.55
1:AB:221:ARG:CZ	1:AB:221:ARG:HB3	2.37	0.55
21:AA:346:G:N3	21:AA:346:G:H2'	2.21	0.55
7:AH:87:ARG:O	7:AH:121:GLY:HA3	2.07	0.55
21:AA:1239:A:H1'	21:AA:1241:G:C5	2.42	0.55
22:DA:748:G:O5'	40:DS:89:ALA:HB2	2.07	0.55
31:DJ:20:ALA:HA	31:DJ:23:LYS:CG	2.35	0.55
21:AA:1323:G:H4'	21:AA:1362:A:C2	2.42	0.55
22:DA:1364:G:H1'	22:DA:1368:G:H22	1.71	0.55
22:BA:1913:A:H4'	22:BA:1913:A:OP1	2.06	0.55
32:DK:104:THR:C	32:DK:106:GLU:H	2.10	0.55
51:D3:35:LYS:HB2	51:D3:40:LYS:HD3	1.88	0.55
53:CA:183:C:O2'	53:CA:184:G:C5'	2.55	0.55
6:AG:52:ARG:HH12	6:AG:121:ASN:ND2	2.05	0.55
41:BT:2:ILE:HG13	41:BT:3:ARG:NH2	2.22	0.55
22:BA:1045:C:H5''	22:BA:1046:A:H5'	1.89	0.55
53:CA:461:A:P	53:CA:462:G:OP2	2.65	0.55
22:DA:2339:C:H2'	22:DA:2340:A:H8	1.71	0.55
28:DG:28:LYS:H	28:DG:79:THR:HG22	1.72	0.55
45:BX:50:VAL:HG12	45:BX:51:SER:O	2.06	0.55
31:DJ:86:GLN:O	31:DJ:87:ALA:HB2	2.07	0.55
7:CH:24:VAL:HG22	7:CH:25:THR:H	1.72	0.55
44:DW:46:ALA:HA	44:DW:50:VAL:HG12	1.88	0.55
22:DA:1574:C:H2'	22:DA:1575:C:O4'	2.07	0.55
15:AP:31:ARG:HH21	21:AA:230:G:H5''	1.72	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:AA:953:G:C2	21:AA:954:G:H1'	2.41	0.55
41:BT:56:GLU:HG2	41:BT:57:VAL:HG12	1.89	0.55
8:CI:29:ILE:HA	8:CI:64:ILE:O	2.07	0.55
9:AJ:11:LYS:HG3	9:AJ:97:ASP:HB3	1.89	0.55
21:AA:1453:G:N2	21:AA:1454:G:C8	2.75	0.55
27:BF:128:SER:OG	27:BF:154:THR:HB	2.07	0.55
22:DA:2386:A:O2'	22:DA:2387:U:C6	2.59	0.55
45:BX:39:VAL:HG22	45:BX:44:ARG:O	2.07	0.55
5:AF:42:TRP:HZ2	5:AF:61:LEU:HD22	1.72	0.55
32:DK:87:LEU:HB2	32:DK:92:GLU:O	2.06	0.55
5:CF:91:ARG:O	5:CF:93:LYS:HE3	2.07	0.55
30:BI:19:PRO:HG2	30:BI:23:VAL:CG2	2.37	0.55
22:BA:2134:A:N6	22:BA:2135:A:N6	2.55	0.55
11:AL:29:LYS:O	11:AL:81:ILE:HG22	2.07	0.55
26:DE:131:THR:HG22	26:DE:161:ALA:N	2.21	0.55
22:DA:322:A:H3'	26:DE:163:ASN:HD21	1.72	0.55
53:CA:961:U:C4	53:CA:983:A:C6	2.95	0.55
22:DA:2847:U:C2'	22:DA:2848:G:H5'	2.35	0.55
22:DA:671:C:O2'	22:DA:672:C:C5'	2.55	0.55
21:AA:107:G:H2'	21:AA:108:G:H5'	1.88	0.55
13:AN:20:PHE:C	13:AN:22:LYS:H	2.10	0.55
2:AC:153:SER:HB2	2:AC:164:THR:HG22	1.89	0.55
30:BI:58:ILE:O	30:BI:60:VAL:HG23	2.06	0.55
22:BA:1962:C:O2'	22:BA:1964:G:OP2	2.25	0.55
1:AB:212:TYR:HA	1:AB:215:ALA:HB3	1.89	0.55
9:AJ:18:ILE:HD13	9:AJ:72:ARG:HG2	1.88	0.55
43:BV:75:GLN:HB2	43:BV:92:VAL:HG23	1.88	0.55
22:DA:1828:G:O2'	22:DA:1829:A:H5'	2.07	0.55
9:CJ:37:ARG:HG2	9:CJ:75:ASP:HB3	1.88	0.55
22:BA:581:C:OP1	38:BQ:32:ARG:HB2	2.07	0.55
27:BF:10:GLU:O	27:BF:11:VAL:HB	2.07	0.55
40:BS:59:GLU:HA	40:BS:64:ALA:HA	1.87	0.55
22:BA:364:C:O2'	22:BA:365:U:H5'	2.06	0.55
22:DA:7:G:H4'	31:DJ:15:TRP:CH2	2.41	0.55
45:DX:39:VAL:HG22	45:DX:44:ARG:O	2.06	0.55
6:CG:148:LYS:NZ	6:CG:148:LYS:HB2	2.22	0.55
8:CI:123:ARG:HB3	53:CA:1343:G:H4'	1.89	0.55
22:DA:2788:C:H2'	22:DA:2789:C:C6	2.41	0.55
22:BA:1199:U:H2'	22:BA:1200:C:C6	2.43	0.55
38:DQ:67:ALA:O	38:DQ:105:PHE:HE1	1.89	0.55
15:AP:44:SER:O	15:AP:46:LYS:HG3	2.07	0.55
1:AB:105:THR:HG22	1:AB:105:THR:O	2.07	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:950:G:C6	22:DA:951:C:C4	2.94	0.55
22:DA:1773:A:H2'	22:DA:1774:C:O4'	2.07	0.55
22:BA:2732:G:OP2	22:BA:2732:G:H8	1.90	0.55
24:BC:94:LEU:HB2	24:BC:100:ARG:HD3	1.89	0.55
22:BA:686:U:O4	50:B2:12:ARG:NH2	2.40	0.55
22:DA:2284:A:OP1	49:D1:5:ARG:HG3	2.06	0.54
22:DA:2285:C:H5	49:D1:5:ARG:NH2	2.04	0.54
22:DA:1534:U:H2'	22:DA:1536:C:O2	2.07	0.54
21:AA:198:G:O2'	21:AA:199:A:H5'	2.07	0.54
22:DA:1914:C:O2'	22:DA:1915:U:O4'	2.25	0.54
22:DA:1385:A:H4'	22:DA:1386:C:OP1	2.07	0.54
9:CJ:81:GLU:HG2	9:CJ:85:ASP:HB3	1.89	0.54
41:BT:39:THR:O	41:BT:41:ALA:N	2.38	0.54
22:DA:1059:G:H1	22:DA:1088:A:H2	1.55	0.54
21:AA:209:U:H5'	21:AA:210:C:OP2	2.07	0.54
4:AE:104:ILE:HD11	4:AE:114:LEU:HB3	1.89	0.54
1:CB:80:LYS:HD3	1:CB:90:PHE:CZ	2.42	0.54
53:CA:78:A:C6	53:CA:79:G:C6	2.96	0.54
18:CS:77:ARG:HH21	53:CA:1222:G:H5'	1.72	0.54
1:AB:20:ARG:CZ	1:AB:20:ARG:HA	2.37	0.54
1:CB:185:ILE:HA	1:CB:199:ILE:HG13	1.89	0.54
22:DA:945:A:C8	22:DA:2448:A:C2	2.95	0.54
22:BA:573:U:H4'	22:BA:574:A:OP1	2.06	0.54
22:DA:960:A:C8	22:DA:962:G:C8	2.95	0.54
35:DN:2:ARG:HG2	35:DN:5:LYS:HD3	1.88	0.54
22:BA:1735:A:C2	22:BA:1736:U:C2	2.95	0.54
37:DP:50:ARG:CB	37:DP:57:ALA:H	2.20	0.54
19:AT:5:SER:OG	19:AT:6:ALA:N	2.38	0.54
28:DG:162:ARG:HG3	28:DG:166:GLU:HG3	1.88	0.54
53:CA:252:U:H2'	53:CA:253:A:H8	1.68	0.54
53:CA:818:G:C3'	53:CA:819:A:H5''	2.37	0.54
24:BC:139:THR:O	24:BC:161:VAL:O	2.25	0.54
22:BA:729:G:C4	22:BA:1775:U:O2	2.60	0.54
3:AD:131:ILE:HG21	21:AA:620:C:N3	2.21	0.54
22:DA:1830:C:H4'	24:DC:14:HIS:HE1	1.71	0.54
22:DA:2266:A:H4'	22:DA:2267:A:O5'	2.07	0.54
36:DO:18:LEU:HD13	36:DO:25:ARG:HD2	1.89	0.54
21:AA:1441:A:H62	21:AA:1461:G:N2	2.04	0.54
22:DA:370:G:H8	22:DA:370:G:OP2	1.91	0.54
38:DQ:4:LYS:HZ2	38:DQ:6:GLY:HA3	1.73	0.54
25:BD:191:GLY:O	25:BD:192:ALA:CB	2.56	0.54
25:DD:4:LEU:HD23	25:DD:101:PHE:CE1	2.42	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:AU:24:LYS:CG	20:AU:25:ALA:H	2.20	0.54
28:BG:82:PHE:CZ	28:BG:137:LYS:HB2	2.42	0.54
10:AK:107:THR:HG22	10:AK:108:ASN:ND2	2.21	0.54
21:AA:736:C:H2'	21:AA:737:C:C6	2.42	0.54
22:DA:1511:G:O2'	22:DA:1512:C:O4'	2.25	0.54
6:AG:146:ALA:C	6:AG:148:LYS:H	2.10	0.54
21:AA:1114:C:H2'	21:AA:1115:U:O4'	2.07	0.54
53:CA:1467:C:H2'	53:CA:1468:A:C8	2.42	0.54
21:AA:129:A:O2'	21:AA:130:A:H5''	2.07	0.54
53:CA:834:U:H2'	53:CA:835:U:H6	1.72	0.54
39:DR:21:ARG:HB2	39:DR:93:PHE:HD1	1.72	0.54
27:BF:128:SER:HA	27:BF:154:THR:HA	1.89	0.54
54:DB:13:G:H5''	54:DB:13:G:H8	1.72	0.54
44:BW:19:ARG:NH1	44:BW:22:VAL:CG1	2.71	0.54
53:CA:1409:C:H2'	53:CA:1410:A:H8	1.71	0.54
31:DJ:44:TYR:HB2	38:DQ:63:ARG:NH1	2.22	0.54
41:BT:29:THR:CA	41:BT:86:THR:HA	2.38	0.54
22:DA:1090:A:C3'	22:DA:1091:G:H5''	2.38	0.54
27:DF:137:PHE:CB	27:DF:138:PRO:HD2	2.29	0.54
22:DA:508:A:H3'	22:DA:509:C:H5'	1.89	0.54
22:DA:508:A:N6	40:DS:9:HIS:CE1	2.72	0.54
22:DA:2143:C:H3'	22:DA:2144:G:C8	2.42	0.54
46:DY:17:GLU:HG3	46:DY:53:VAL:HG11	1.89	0.54
22:DA:1206:G:H2'	22:DA:1207:C:C6	2.41	0.54
42:DU:20:LYS:HD2	42:DU:38:ILE:HD11	1.89	0.54
53:CA:78:A:H2'	53:CA:79:G:H8	1.71	0.54
53:CA:1200:C:HO2'	53:CA:1201:A:P	2.30	0.54
22:DA:574:A:C2	22:DA:2032:G:O2'	2.60	0.54
22:DA:2344:U:H4'	22:DA:2345:G:OP1	2.07	0.54
31:BJ:88:THR:HG23	31:BJ:90:GLU:HG3	1.88	0.54
21:AA:500:G:H2'	21:AA:501:C:C6	2.43	0.54
40:BS:88:ARG:CG	40:BS:88:ARG:HH21	2.20	0.54
30:BI:64:ARG:HG3	30:BI:65:SER:N	2.22	0.54
25:DD:120:GLY:O	25:DD:124:ARG:HB2	2.07	0.54
53:CA:1095:U:H2'	53:CA:1096:C:H6	1.72	0.54
22:BA:1734:G:C2'	22:BA:1735:A:H8	2.19	0.54
30:BI:126:ARG:HA	30:BI:129:GLU:CB	2.36	0.54
15:AP:12:LYS:O	15:AP:13:LYS:HB2	2.08	0.54
24:BC:159:THR:O	24:BC:194:VAL:HG12	2.05	0.54
53:CA:183:C:HO2'	53:CA:184:G:C5'	2.21	0.54
22:DA:1708:C:H2'	22:DA:1709:U:C6	2.42	0.54
21:AA:702:A:N9	22:BA:1847:A:H2	2.06	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:BA:2103:C:C2'	22:BA:2104:C:H5'	2.37	0.54
22:BA:633:A:H8	22:BA:633:A:O5'	1.88	0.54
33:BL:55:MET:HA	33:BL:55:MET:CE	2.37	0.54
25:DD:29:VAL:HB	25:DD:98:VAL:HG12	1.87	0.54
22:BA:1569:A:N6	22:BA:1570:A:C6	2.75	0.54
22:BA:2860:A:H8	22:BA:2860:A:O5'	1.89	0.54
22:DA:412:A:N7	22:DA:2412:A:H1'	2.23	0.54
47:BZ:3:THR:HA	47:BZ:37:ARG:O	2.07	0.54
22:BA:38:A:O2'	26:BE:43:THR:HA	2.06	0.54
43:BV:38:LEU:CD2	43:BV:40:ILE:HD11	2.37	0.54
13:CN:20:PHE:CA	13:CN:24:ALA:HB2	2.38	0.54
43:BV:65:VAL:O	43:BV:66:ASP:OD1	2.26	0.54
21:AA:1197:A:O2'	21:AA:1198:G:H5'	2.07	0.54
53:CA:441:A:C2	53:CA:497:G:C6	2.95	0.54
21:AA:588:G:C2	21:AA:589:U:C2	2.96	0.54
21:AA:593:U:O2'	21:AA:594:U:H5'	2.07	0.54
49:B1:16:THR:HB	49:B1:41:VAL:HG21	1.88	0.54
28:BG:51:PHE:CD2	28:BG:51:PHE:N	2.75	0.54
31:DJ:123:LYS:HG2	31:DJ:132:HIS:NE2	2.22	0.54
44:BW:49:ASN:ND2	44:BW:49:ASN:C	2.61	0.54
39:DR:39:LEU:HD23	39:DR:39:LEU:H	1.71	0.54
22:DA:444:C:HO2'	22:DA:445:C:P	2.30	0.54
6:CG:74:VAL:CG1	6:CG:143:MET:HB2	2.38	0.54
8:CI:44:ARG:HH21	8:CI:48:ARG:NH1	2.05	0.54
22:DA:2458:G:H2'	22:DA:2490:G:H1	1.72	0.54
22:DA:1055:G:C3'	22:DA:1056:G:H5'	2.37	0.54
5:CF:92:THR:HG22	5:CF:94:HIS:N	2.16	0.54
22:BA:2135:A:O2'	22:BA:2136:G:H8	1.91	0.54
53:CA:642:A:O2'	53:CA:643:C:C6	2.58	0.54
6:CG:70:PRO:HB3	6:CG:98:LEU:HD12	1.89	0.54
13:AN:60:ARG:O	13:AN:61:ASN:CB	2.54	0.54
22:DA:671:C:HO2'	22:DA:672:C:H6	1.49	0.54
22:DA:2665:A:H2'	22:DA:2666:C:O2	2.07	0.54
53:CA:1446:A:H2'	53:CA:1447:A:H5''	1.89	0.54
53:CA:1455:G:H2'	53:CA:1456:A:C8	2.41	0.54
32:BK:63:VAL:HG22	32:BK:107:LEU:CD2	2.35	0.54
22:DA:402:A:H2'	22:DA:403:U:O4'	2.07	0.54
51:D3:32:LEU:HD23	51:D3:35:LYS:HE2	1.89	0.54
40:BS:14:ALA:O	40:BS:18:ARG:HG3	2.07	0.54
2:CC:180:ASP:OD2	2:CC:203:LYS:HB2	2.06	0.54
7:CH:36:ALA:HA	7:CH:39:LEU:HD12	1.90	0.54
22:DA:831:G:H5''	33:DL:37:GLY:HA2	1.89	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
17:AR:62:ARG:HD3	17:AR:69:TYR:CD2	2.42	0.54
32:DK:118:LEU:O	32:DK:120:PRO:HD2	2.07	0.54
12:AM:7:ASN:HD22	12:AM:8:ILE:N	2.05	0.54
12:CM:18:LEU:H	12:CM:18:LEU:HD12	1.71	0.54
22:DA:1574:C:H6	22:DA:1574:C:O5'	1.90	0.54
34:DM:108:VAL:HG21	34:DM:112:LEU:HB3	1.88	0.54
22:DA:1982:U:H6	22:DA:1982:U:C5'	2.20	0.54
50:D2:11:LYS:NZ	57:D2:101:HOH:O	2.39	0.54
16:AQ:48:GLU:OE1	16:AQ:48:GLU:HA	2.07	0.54
1:CB:122:ASP:HB3	1:CB:124:THR:HG22	1.90	0.54
22:DA:2332:C:H5''	44:DW:76:ARG:NH1	2.23	0.54
15:CP:52:LEU:CD2	15:CP:75:ILE:HG12	2.35	0.54
4:AE:149:PRO:HG2	4:AE:150:GLU:H	1.73	0.54
4:AE:148:SER:HB2	4:AE:151:MET:HB2	1.90	0.54
4:AE:153:ALA:O	4:AE:154:ALA:C	2.45	0.54
4:AE:158:LYS:HE2	7:AH:63:LYS:NZ	2.22	0.54
31:DJ:45:THR:HG23	31:DJ:45:THR:O	2.07	0.54
37:DP:91:VAL:HG11	37:DP:96:LEU:HD21	1.89	0.54
53:CA:1151:A:N6	53:CA:1152:A:N6	2.55	0.54
22:DA:2093:G:O2'	22:DA:2094:A:O5'	2.25	0.54
27:DF:91:ARG:HA	27:DF:95:MET:SD	2.47	0.54
32:DK:111:LYS:N	32:DK:111:LYS:HE3	2.14	0.54
25:DD:119:ALA:CB	25:DD:163:GLY:H	2.14	0.54
30:BI:24:GLY:O	30:BI:27:LEU:HG	2.07	0.54
21:AA:1005:A:C2	21:AA:1006:G:H1'	2.42	0.54
22:DA:480:A:H3'	22:DA:481:G:H5'	1.89	0.54
4:AE:100:GLU:HB2	4:AE:103:GLY:N	2.23	0.54
26:DE:62:GLN:O	26:DE:65:THR:HG22	2.08	0.54
35:DN:45:ARG:HG2	35:DN:95:THR:HG21	1.90	0.54
24:BC:251:THR:CG2	24:BC:252:LYS:H	2.13	0.54
37:BP:111:GLU:CD	37:BP:111:GLU:N	2.60	0.54
22:DA:866:A:O2'	22:DA:867:C:C6	2.59	0.54
22:BA:65:U:H2'	22:BA:66:C:C6	2.42	0.54
51:B3:30:HIS:O	51:B3:31:ILE:C	2.46	0.54
21:AA:1160:G:O6	21:AA:1181:G:C6	2.60	0.54
53:CA:1004:A:C4	53:CA:1026:G:N7	2.76	0.54
15:CP:43:ALA:HB1	15:CP:46:LYS:HZ1	1.72	0.54
15:CP:44:SER:HB2	15:CP:46:LYS:CG	2.36	0.54
22:DA:2667:C:H2'	22:DA:2668:G:C8	2.42	0.54
30:BI:60:VAL:HG22	30:BI:66:PHE:HB2	1.90	0.54
5:CF:38:ARG:HG3	5:CF:63:ASN:HB2	1.90	0.54
21:AA:429:U:C1'	21:AA:430:A:H5''	2.37	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:AA:570:G:H2'	21:AA:571:U:C6	2.41	0.54
11:CL:82:ARG:HG2	11:CL:82:ARG:NH1	2.23	0.54
53:CA:486:U:O2	53:CA:486:U:C2'	2.56	0.54
22:BA:1343:G:H2'	22:BA:1344:U:H6	1.71	0.54
12:AM:7:ASN:HD22	12:AM:8:ILE:H	1.54	0.54
22:BA:2109:U:O4	22:BA:2110:G:C5	2.61	0.54
53:CA:166:U:OP2	53:CA:166:U:H6	1.89	0.54
22:DA:642:U:H4'	22:DA:2349:G:O2'	2.06	0.54
26:BE:58:LYS:HG3	26:BE:71:GLY:HA2	1.88	0.54
21:AA:601:G:H2'	21:AA:602:A:C8	2.42	0.54
22:BA:800:A:H4'	22:BA:801:G:O5'	2.08	0.54
53:CA:1439:G:C2	53:CA:1463:U:O2	2.60	0.54
22:BA:2793:C:H2'	22:BA:2794:C:H6	1.71	0.54
24:BC:208:GLY:HA2	24:BC:211:ARG:HB2	1.89	0.54
22:DA:2635:A:H5'	25:DD:79:LEU:HB2	1.89	0.54
22:DA:2283:C:O2'	22:DA:2284:A:H5'	2.08	0.54
22:DA:834:G:H5'	51:D3:56:LEU:HD11	1.90	0.54
22:DA:2386:A:H2	44:DW:38:ARG:HG2	1.71	0.54
22:BA:2352:A:H5''	22:BA:2353:G:OP2	2.07	0.54
16:AQ:12:VAL:HG13	16:AQ:16:MET:HE2	1.90	0.54
19:AT:67:HIS:HB3	19:AT:68:LYS:HZ2	1.73	0.54
35:DN:34:ILE:HD12	35:DN:44:LEU:HD21	1.90	0.54
10:AK:121:ARG:NH2	20:AU:35:GLU:HG3	2.22	0.54
41:BT:54:GLU:O	41:BT:55:VAL:HB	2.06	0.54
22:DA:1057:A:C8	22:DA:1086:A:H2'	2.42	0.54
22:DA:2683:C:H4'	25:DD:13:ARG:NH2	2.23	0.54
22:BA:272:A:O2'	22:BA:273:G:O5'	2.26	0.54
53:CA:79:G:N2	53:CA:91:U:C2	2.76	0.54
22:DA:2836:U:O2'	22:DA:2837:A:O5'	2.24	0.54
22:DA:2882:A:H4'	35:DN:97:ILE:HG12	1.90	0.54
22:DA:685:A:H5'	22:DA:686:U:OP1	2.07	0.54
22:DA:1759:A:H2'	22:DA:1760:C:C6	2.42	0.54
33:DL:112:LEU:O	33:DL:112:LEU:HD23	2.08	0.54
1:AB:138:ARG:HG3	1:AB:139:GLU:N	2.23	0.54
46:DY:19:LEU:HG	46:DY:22:LEU:HD22	1.90	0.54
38:DQ:78:PHE:CZ	38:DQ:82:LEU:HD11	2.43	0.54
53:CA:737:C:H2'	53:CA:738:C:C6	2.42	0.54
40:BS:63:GLY:O	40:BS:64:ALA:CB	2.56	0.54
19:AT:17:ARG:CG	21:AA:322:C:O2'	2.56	0.54
11:CL:33:CYS:HA	11:CL:54:VAL:HA	1.89	0.54
54:DB:26:C:H1'	54:DB:117:G:H1'	1.88	0.54
5:CF:9:MET:HB2	5:CF:85:ILE:HG13	1.89	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
39:BR:66:HIS:ND1	39:BR:94:THR:HG22	2.23	0.54
22:DA:1936:A:H2	22:DA:1943:U:O4	1.91	0.54
22:DA:1774:C:O2	24:DC:10:PRO:HB2	2.07	0.54
34:DM:57:VAL:HA	34:DM:112:LEU:HD11	1.90	0.54
17:AR:40:PRO:HB2	17:AR:42:ARG:HG2	1.88	0.54
17:AR:46:THR:HG21	17:AR:51:GLN:OE1	2.07	0.54
22:BA:2752:C:H2'	22:BA:2753:A:C8	2.41	0.54
7:CH:33:VAL:C	7:CH:35:ILE:H	2.10	0.54
33:DL:88:GLY:O	33:DL:89:VAL:HG12	2.07	0.54
35:DN:54:LEU:HD11	35:DN:66:ALA:HB2	1.88	0.54
53:CA:908:A:H2'	53:CA:909:A:C8	2.43	0.54
15:CP:57:ILE:O	15:CP:61:VAL:HG23	2.08	0.54
8:AI:10:ARG:HD2	21:AA:1118:U:OP1	2.08	0.54
36:DO:79:ALA:HB1	36:DO:114:GLY:HA3	1.89	0.54
26:BE:169:VAL:O	26:BE:170:ARG:HD2	2.08	0.54
8:AI:88:GLU:HG3	8:AI:89:TYR:H	1.72	0.54
22:BA:1958:C:C2'	22:BA:1959:G:H5'	2.37	0.54
18:CS:62:THR:HG22	18:CS:63:ASP:H	1.71	0.54
20:CU:53:LYS:HB2	20:CU:53:LYS:NZ	2.22	0.54
22:DA:653:U:H4'	22:DA:653:U:OP1	2.08	0.54
22:BA:1615:C:H2'	22:BA:1617:C:C6	2.42	0.54
44:BW:39:GLN:HG2	44:BW:41:GLY:N	2.09	0.54
53:CA:1408:A:N1	53:CA:1494:G:C6	2.75	0.54
22:DA:1338:G:C2'	22:DA:1339:G:H5'	2.36	0.54
19:AT:33:LYS:HE2	19:AT:33:LYS:N	2.22	0.54
9:CJ:80:THR:O	9:CJ:84:VAL:HG22	2.08	0.54
8:CI:59:LYS:HG2	8:CI:60:LEU:HG	1.88	0.54
22:BA:528:A:C2	22:BA:2042:A:H2'	2.42	0.54
42:DU:35:VAL:HG12	42:DU:36:GLU:N	2.22	0.54
32:BK:18:ARG:N	32:BK:45:GLU:HB2	2.23	0.54
52:B4:7:VAL:HG23	52:B4:8:LYS:H	1.72	0.54
22:DA:2882:A:C5'	35:DN:96:ARG:HD3	2.37	0.54
22:DA:867:C:HO2'	22:DA:868:U:C5'	2.20	0.54
32:BK:72:PRO:O	32:BK:74:GLY:N	2.35	0.54
2:CC:109:GLU:HG3	2:CC:139:ASN:O	2.08	0.54
22:BA:1268:A:C2	22:BA:2013:A:C4	2.95	0.54
22:DA:1417:C:H4'	22:DA:1587:G:H21	1.71	0.54
7:AH:79:ARG:HB2	7:AH:80:PRO:HD2	1.89	0.54
53:CA:499:A:H1'	53:CA:500:G:C8	2.43	0.54
22:BA:94:A:H2'	22:BA:95:A:C8	2.43	0.54
21:AA:80:A:C2	21:AA:81:A:H1'	2.42	0.54
31:BJ:17:VAL:HG13	31:BJ:55:ILE:HG13	1.88	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:CD:153:ARG:HG2	3:CD:154:VAL:N	2.23	0.54
1:CB:9:LEU:HB2	1:CB:11:ALA:H	1.72	0.54
1:AB:139:GLU:O	1:AB:143:LEU:HD23	2.07	0.54
40:DS:24:ILE:HG21	40:DS:36:LEU:HD21	1.89	0.54
26:BE:108:ILE:HD13	26:BE:109:LEU:N	2.23	0.54
21:AA:1251:A:H2'	21:AA:1252:A:H8	1.70	0.54
37:BP:83:ILE:HD13	37:BP:84:SER:N	2.23	0.54
22:BA:804:A:H5''	22:BA:805:G:OP1	2.07	0.54
1:AB:80:LYS:HG3	1:AB:90:PHE:CE1	2.43	0.54
53:CA:389:A:H2'	53:CA:390:U:O4'	2.07	0.54
21:AA:1234:C:O2'	21:AA:1235:U:H5'	2.07	0.54
21:AA:579:A:H2'	21:AA:580:C:H6	1.72	0.54
21:AA:1409:C:O2'	21:AA:1410:A:H5'	2.07	0.54
16:AQ:58:VAL:HG22	16:AQ:59:GLU:N	2.22	0.54
22:BA:395:U:O2'	22:BA:396:G:C8	2.60	0.54
26:DE:34:ALA:HA	26:DE:94:GLN:HG3	1.90	0.54
22:DA:413:C:H4'	22:DA:1880:U:H4'	1.89	0.54
8:AI:54:VAL:O	8:AI:55:ASP:O	2.25	0.54
22:BA:2591:C:H2'	22:BA:2592:G:C8	2.42	0.54
22:BA:1477:A:H2'	22:BA:1478:G:O4'	2.08	0.54
53:CA:552:U:H2'	53:CA:553:A:H8	1.72	0.54
22:DA:816:C:H2'	22:DA:817:C:H6	1.72	0.54
22:BA:767:U:O2'	22:BA:768:G:H5'	2.08	0.54
22:BA:2899:A:H2'	22:BA:2900:A:C8	2.43	0.54
21:AA:1435:G:H2'	21:AA:1436:U:C6	2.42	0.54
10:AK:57:SER:O	10:AK:90:PRO:HG3	2.08	0.54
29:DH:125:THR:HG22	29:DH:146:VAL:HG11	1.89	0.54
22:DA:249:C:O2	22:DA:249:C:H2'	2.06	0.54
54:DB:108:A:HO2'	54:DB:109:A:P	2.30	0.54
20:CU:3:ILE:HG21	20:CU:18:PHE:HB3	1.90	0.54
44:BW:29:SER:CA	44:BW:63:ASP:HB3	2.36	0.54
45:DX:53:LYS:HA	45:DX:56:ARG:CB	2.25	0.54
22:DA:1329:U:HO2'	22:DA:1330:C:P	2.30	0.54
4:AE:93:VAL:HG21	4:AE:139:THR:HG22	1.90	0.54
22:DA:110:G:N2	22:DA:111:A:H1'	2.22	0.54
22:DA:303:G:C2	22:DA:304:U:C2	2.96	0.54
8:CI:9:GLY:HA3	8:CI:16:ALA:HB3	1.89	0.54
22:DA:2077:A:OP1	22:DA:2238:G:N1	2.40	0.54
22:DA:273:G:H2'	22:DA:274:C:H6	1.71	0.54
1:CB:164:ASP:CG	1:CB:203:ASP:HB2	2.27	0.54
22:DA:61:C:N3	22:DA:94:A:C2	2.76	0.54
5:CF:12:PRO:HD3	5:CF:57:ALA:HA	1.90	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
43:DV:4:ILE:HB	43:DV:63:ILE:HG13	1.89	0.54
22:DA:1609:A:O2'	22:DA:1610:A:H5''	2.07	0.54
22:DA:1447:C:H2'	22:DA:1448:G:H8	1.66	0.54
53:CA:511:C:O2'	53:CA:512:U:C5'	2.55	0.54
29:DH:84:ALA:N	29:DH:148:ALA:HA	2.22	0.54
11:CL:97:VAL:O	11:CL:97:VAL:CG2	2.55	0.54
3:AD:131:ILE:HG12	21:AA:620:C:C6	2.42	0.54
22:BA:136:G:O6	22:BA:142:A:N6	2.41	0.54
22:DA:183:C:C2'	22:DA:184:C:H5'	2.37	0.54
2:CC:187:GLU:O	2:CC:188:ALA:HB2	2.08	0.54
25:BD:140:HIS:HE1	57:BD:302:HOH:O	1.90	0.54
53:CA:1394:A:C5	53:CA:1501:C:H4'	2.42	0.54
43:BV:40:ILE:HG22	43:BV:41:GLU:N	2.22	0.54
22:DA:1404:C:O2'	22:DA:1405:U:H5'	2.08	0.54
36:BO:59:ALA:HA	36:BO:62:LEU:HD12	1.90	0.54
22:BA:1278:C:H2'	22:BA:1279:G:H8	1.72	0.54
15:CP:6:LEU:HB2	15:CP:17:TYR:HB3	1.89	0.54
51:D3:61:LEU:HB2	51:D3:64:ALA:HB3	1.89	0.54
22:BA:39:G:H2'	22:BA:40:U:C6	2.41	0.54
22:BA:2402:U:H2'	22:BA:2403:C:OP2	2.08	0.54
22:BA:2311:A:H1'	27:BF:78:ILE:HD13	1.90	0.54
40:DS:39:THR:O	40:DS:40:ASN:HB3	2.08	0.54
54:DB:38:C:H4'	36:DO:100:HIS:NE2	2.22	0.54
26:BE:132:LYS:NZ	26:BE:132:LYS:HB3	2.22	0.54
22:BA:153:U:O2'	22:BA:154:U:H5'	2.07	0.54
24:DC:2:VAL:O	24:DC:3:VAL:HB	2.08	0.54
21:AA:539:A:H2'	21:AA:540:G:C8	2.43	0.54
2:CC:155:ARG:HD3	53:CA:1055:A:O2'	2.08	0.54
37:DP:87:ARG:HG2	37:DP:88:ARG:H	1.71	0.54
22:DA:2732:G:H5''	22:DA:2733:A:O4'	2.08	0.54
22:DA:1808:A:H3'	22:DA:1809:A:C8	2.43	0.54
22:DA:1435:G:C2	22:DA:1558:C:N4	2.75	0.54
9:CJ:59:LYS:HG2	53:CA:972:C:H4'	1.90	0.54
22:BA:547:A:C8	22:BA:548:G:N3	2.76	0.54
25:BD:133:THR:HG23	25:BD:134:HIS:CD2	2.43	0.54
27:DF:52:ALA:HA	27:DF:55:ASP:HB2	1.89	0.54
42:DU:14:THR:HB	42:DU:68:ASN:CB	2.36	0.54
22:BA:475:C:O2'	22:BA:476:G:H5'	2.08	0.54
22:DA:401:A:H2'	22:DA:402:A:C8	2.43	0.54
21:AA:85:U:O5'	21:AA:86:G:N2	2.40	0.54
10:AK:30:ILE:HD11	21:AA:706:A:O2'	2.08	0.54
30:BI:123:ALA:C	30:BI:125:THR:H	2.10	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
29:BH:67:ALA:C	29:BH:69:ALA:H	2.10	0.54
2:CC:84:GLU:HA	2:CC:87:ARG:HB2	1.89	0.54
22:BA:1385:A:H1'	22:BA:1386:C:C6	2.43	0.54
24:BC:140:VAL:HA	24:BC:190:THR:O	2.07	0.54
12:AM:10:ASP:OD1	12:AM:11:HIS:N	2.25	0.54
4:CE:148:SER:H	4:CE:151:MET:CE	2.21	0.54
22:BA:285:G:H2'	22:BA:285:G:N3	2.22	0.54
22:DA:64:A:O2'	41:DT:69:ARG:HG2	2.07	0.54
23:BB:57:A:H2'	23:BB:58:A:C8	2.43	0.54
20:CU:14:ALA:O	20:CU:15:LEU:O	2.26	0.54
44:DW:51:GLY:HA2	44:DW:59:PHE:HD2	1.73	0.54
19:AT:54:GLN:N	19:AT:55:PRO:HD2	2.23	0.54
21:AA:1452:C:H5'	21:AA:1453:G:C5	2.43	0.54
8:AI:24:ASN:H	8:AI:61:ASP:HB2	1.72	0.54
22:BA:2037:A:H2'	22:BA:2038:G:C8	2.43	0.54
21:AA:994:A:C5	21:AA:1216:A:H4'	2.43	0.54
22:DA:2011:U:H2'	22:DA:2012:G:O4'	2.08	0.54
11:AL:57:THR:HG21	21:AA:363:A:OP1	2.07	0.54
21:AA:188:C:O2	21:AA:188:C:H2'	2.07	0.54
44:DW:70:VAL:O	44:DW:70:VAL:HG22	2.07	0.54
32:DK:25:LEU:HD23	32:DK:25:LEU:H	1.71	0.54
4:AE:89:THR:HG22	4:AE:90:GLY:N	2.23	0.54
22:DA:1439:A:H1'	22:DA:1553:A:N6	2.23	0.54
33:BL:93:ASN:ND2	33:BL:94:THR:H	1.95	0.54
54:DB:58:A:C2'	54:DB:59:A:C8	2.73	0.54
49:D1:24:LYS:HD2	49:D1:33:LEU:HD22	1.90	0.54
3:CD:2:ARG:HE	3:CD:114:ARG:CD	2.20	0.54
39:DR:49:ILE:HB	39:DR:51:VAL:O	2.08	0.54
5:AF:91:ARG:CG	5:AF:92:THR:H	2.18	0.54
28:BG:86:LEU:N	28:BG:86:LEU:CD1	2.69	0.54
22:DA:1338:G:H2'	22:DA:1339:G:H5'	1.90	0.54
22:DA:668:A:C5	22:DA:670:A:N7	2.75	0.54
15:CP:52:LEU:O	15:CP:53:ASP:HB2	2.08	0.54
8:CI:51:LEU:HG	8:CI:86:LEU:CD2	2.27	0.54
52:D4:22:VAL:O	52:D4:24:ARG:HG3	2.08	0.54
27:DF:111:ARG:HG3	27:DF:135:ILE:HG12	1.90	0.54
2:AC:76:ILE:HD11	2:AC:102:ILE:HG12	1.90	0.54
22:BA:871:U:H2'	22:BA:872:U:C6	2.42	0.54
46:DY:17:GLU:HG2	46:DY:50:VAL:HG13	1.90	0.54
53:CA:1322:C:H2'	53:CA:1322:C:O2	2.06	0.54
3:AD:94:GLU:HG2	3:AD:185:PRO:HG3	1.88	0.54
50:D2:46:LYS:N	50:D2:46:LYS:HD2	2.23	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
53:CA:71:A:C2	53:CA:72:A:C8	2.95	0.54
28:BG:10:VAL:O	28:BG:10:VAL:CG2	2.56	0.54
22:DA:590:A:H2'	22:DA:591:U:C6	2.39	0.54
22:BA:1654:A:O2'	25:BD:118:PHE:CG	2.54	0.54
22:BA:469:G:O6	50:B2:37:LYS:HE2	2.07	0.54
27:BF:134:GLN:O	27:BF:135:ILE:HB	2.07	0.54
22:DA:1817:G:H4'	24:DC:85:ASN:O	2.08	0.54
42:DU:54:PRO:HG2	42:DU:55:GLY:N	2.21	0.54
31:BJ:88:THR:HG22	31:BJ:91:GLU:HB2	1.88	0.54
22:DA:2652:C:C4	22:DA:2653:U:C4	2.95	0.54
39:BR:21:ARG:NH2	39:BR:93:PHE:CD1	2.76	0.54
40:DS:33:LEU:HA	40:DS:36:LEU:HD23	1.88	0.54
24:DC:95:TYR:C	24:DC:97:ASP:H	2.08	0.54
25:DD:89:GLU:HG2	25:DD:94:GLN:HE22	1.72	0.54
38:DQ:4:LYS:HE3	38:DQ:7:VAL:HG22	1.90	0.54
10:AK:42:GLY:HA3	10:AK:73:VAL:CG1	2.37	0.54
3:CD:195:ASN:HB3	3:CD:197:HIS:NE2	2.23	0.54
34:BM:109:PRO:O	34:BM:110:GLU:C	2.46	0.54
41:DT:67:VAL:O	41:DT:68:LYS:HG3	2.07	0.54
22:BA:2531:A:H5'	28:BG:156:TYR:CE2	2.43	0.54
22:DA:1682:G:C2	22:DA:1757:A:O4'	2.61	0.54
31:BJ:38:GLY:O	31:BJ:40:HIS:N	2.41	0.54
1:CB:26:MET:HE2	1:CB:29:PHE:CD2	2.43	0.54
22:DA:836:G:C6	22:DA:837:C:N3	2.76	0.54
53:CA:1062:U:H2'	53:CA:1063:C:C6	2.42	0.54
27:BF:30:VAL:HG13	27:BF:30:VAL:O	2.08	0.54
22:BA:2026:U:H2'	22:BA:2027:G:O4'	2.08	0.54
53:CA:631:C:H3'	53:CA:632:U:H5'	1.89	0.54
22:BA:2599:G:N7	24:BC:234:GLY:HA2	2.22	0.54
49:B1:42:VAL:C	49:B1:43:ARG:HE	2.10	0.54
27:BF:116:LEU:O	27:BF:176:PHE:HA	2.08	0.54
12:CM:28:ARG:HD2	12:CM:28:ARG:O	2.07	0.54
1:CB:104:LYS:H	1:CB:104:LYS:HD2	1.73	0.54
22:BA:14:A:H8	22:BA:14:A:O5'	1.91	0.54
30:DI:86:LYS:O	30:DI:87:SER:HB2	2.08	0.54
22:BA:876:C:H2'	22:BA:877:A:O4'	2.08	0.54
33:BL:125:LEU:N	33:BL:125:LEU:HD23	2.23	0.54
27:BF:153:ILE:HD12	27:BF:153:ILE:C	2.28	0.54
44:DW:31:LEU:C	44:DW:33:GLY:H	2.10	0.54
44:DW:33:GLY:O	44:DW:34:SER:CB	2.55	0.54
53:CA:1409:C:H5'	22:DA:1916:A:N1	2.22	0.54
22:DA:1386:C:O2'	22:DA:1387:A:H8	1.90	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:CC:191:THR:HB	2:CC:192:TYR:CE1	2.43	0.54
15:CP:5:ARG:NH1	15:CP:24:SER:HA	2.23	0.54
22:DA:33:C:H2'	22:DA:446:G:N2	2.22	0.54
27:DF:59:ILE:HG23	27:DF:137:PHE:HE1	1.73	0.54
22:DA:1330:C:O2'	22:DA:1331:G:H8	1.90	0.54
8:AI:60:LEU:H	8:AI:60:LEU:HD23	1.73	0.54
53:CA:1363:A:C5	53:CA:1365:G:C6	2.96	0.54
22:DA:397:U:OP1	45:DX:30:PRO:HA	2.07	0.54
22:DA:49:A:C6	22:DA:177:G:C6	2.96	0.54
53:CA:1349:A:H2'	53:CA:1350:A:H8	1.70	0.54
21:AA:652:U:HO2'	21:AA:653:U:P	2.30	0.54
41:DT:48:GLN:HA	41:DT:48:GLN:HE21	1.73	0.54
21:AA:978:A:O2'	21:AA:1322:C:H5	1.90	0.54
31:DJ:73:VAL:HB	31:DJ:75:TYR:CE2	2.43	0.54
21:AA:107:G:C2'	21:AA:108:G:H5'	2.38	0.54
11:CL:98:ARG:HB2	11:CL:116:TYR:HA	1.88	0.54
34:BM:43:ALA:HA	34:BM:46:ILE:CG1	2.37	0.54
22:BA:1734:G:H2'	22:BA:1735:A:C8	2.38	0.54
21:AA:1228:C:H2'	21:AA:1229:A:C8	2.43	0.54
22:BA:729:G:C4	22:BA:1775:U:C2	2.96	0.54
53:CA:183:C:H2'	53:CA:183:C:O2	2.05	0.54
12:AM:24:VAL:O	12:AM:24:VAL:HG23	2.06	0.54
9:AJ:44:THR:HG23	9:AJ:70:HIS:HA	1.90	0.54
24:DC:171:VAL:N	24:DC:185:ALA:HB2	2.22	0.54
38:DQ:42:GLY:HA3	39:DR:75:VAL:HG21	1.89	0.54
22:BA:894:U:H2'	22:BA:895:U:C6	2.43	0.54
22:DA:547:A:H8	22:DA:548:G:H5'	1.73	0.54
53:CA:745:G:H2'	53:CA:746:A:H8	1.73	0.54
9:AJ:7:ARG:O	9:AJ:100:ILE:HA	2.08	0.54
27:BF:110:ILE:O	27:BF:111:ARG:C	2.46	0.54
22:BA:721:A:H2'	22:BA:722:A:C8	2.43	0.54
22:BA:708:G:N2	22:BA:724:U:H1'	2.23	0.54
19:CT:14:GLU:HA	19:CT:17:ARG:HB2	1.89	0.54
18:CS:28:LYS:O	18:CS:30:LEU:HD12	2.08	0.54
22:DA:1649:G:H2'	22:DA:1650:A:H8	1.71	0.54
22:BA:2515:C:O2'	22:BA:2516:A:H5'	2.08	0.54
34:DM:15:GLY:O	34:DM:16:ARG:HB3	2.08	0.54
22:DA:2058:A:N6	22:DA:2059:A:N6	2.56	0.54
18:AS:10:ILE:HD11	18:AS:15:LEU:HB2	1.90	0.54
54:DB:59:A:H2'	54:DB:60:C:O4'	2.08	0.53
44:DW:44:PHE:HB3	44:DW:78:PHE:CD1	2.43	0.53
44:BW:16:GLU:O	44:BW:17:ALA:HB3	2.08	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:648:G:HO2'	22:DA:649:G:H8	1.50	0.53
38:DQ:60:TRP:CZ2	38:DQ:93:ILE:HB	2.43	0.53
53:CA:1250:A:N3	53:CA:1287:A:N6	2.56	0.53
10:AK:124:LYS:O	20:AU:33:ARG:NE	2.41	0.53
20:CU:35:GLU:HA	20:CU:35:GLU:OE2	2.08	0.53
20:CU:36:PHE:CD1	20:CU:40:PRO:HB3	2.41	0.53
22:DA:232:G:O2'	22:DA:233:A:H5''	2.08	0.53
22:DA:2458:G:H5''	22:DA:2459:A:OP1	2.07	0.53
34:BM:8:LYS:N	34:BM:8:LYS:CD	2.70	0.53
21:AA:842:U:H2'	21:AA:844:G:P	2.48	0.53
1:AB:20:ARG:O	1:AB:22:TRP:N	2.40	0.53
53:CA:121:U:H3'	53:CA:121:U:OP1	2.07	0.53
21:AA:1055:A:C5	21:AA:1206:G:C2	2.96	0.53
6:CG:33:GLY:HA3	53:CA:1350:A:H2	1.72	0.53
25:DD:47:ALA:HB2	25:DD:83:ARG:HD2	1.89	0.53
22:BA:1926:U:H2'	22:BA:1928:A:N7	2.23	0.53
22:DA:632:A:H5''	33:DL:68:SER:OG	2.08	0.53
53:CA:557:G:C6	53:CA:558:G:N1	2.76	0.53
53:CA:1449:C:O2'	53:CA:1450:U:C5'	2.56	0.53
21:AA:206:C:C2	21:AA:207:C:H1'	2.43	0.53
1:AB:101:THR:HG21	21:AA:1101:A:H61	1.74	0.53
1:CB:9:LEU:O	1:CB:10:LYS:CB	2.56	0.53
3:AD:57:LYS:HG2	3:AD:202:LEU:CD2	2.38	0.53
32:DK:19:VAL:HG12	32:DK:41:ILE:CG1	2.37	0.53
22:BA:1434:A:H2'	22:BA:1435:G:H8	1.73	0.53
22:DA:992:C:H4'	39:DR:74:ILE:HD13	1.90	0.53
4:CE:39:GLY:HA2	4:CE:45:VAL:HA	1.90	0.53
22:DA:1215:G:H5''	38:DQ:7:VAL:CG1	2.38	0.53
22:BA:747:U:H2'	22:BA:2613:U:O4	2.08	0.53
22:DA:1681:G:O2'	22:DA:1762:A:C2'	2.56	0.53
11:AL:115:LYS:O	11:AL:116:TYR:HB2	2.09	0.53
22:BA:1150:C:C2'	22:BA:1151:A:O5'	2.56	0.53
13:AN:5:MET:HA	13:AN:8:ARG:HD2	1.89	0.53
21:AA:901:A:C5	21:AA:902:G:H1'	2.43	0.53
40:DS:80:PRO:HD2	40:DS:100:THR:OG1	2.07	0.53
22:BA:1266:G:N7	40:BS:16:LYS:HE3	2.23	0.53
22:DA:980:A:C4	22:DA:1136:G:O4'	2.61	0.53
22:DA:786:C:H4'	22:DA:1780:A:N7	2.23	0.53
22:BA:2393:U:H5'	33:BL:60:ARG:O	2.08	0.53
17:CR:35:SER:HA	17:CR:71:ASP:OD1	2.09	0.53
22:DA:1355:G:C2	22:DA:1356:G:C8	2.96	0.53
37:BP:92:ARG:O	37:BP:92:ARG:CG	2.55	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
33:BL:62:PRO:HG2	51:B3:24:LYS:HB3	1.90	0.53
33:BL:66:PHE:C	33:BL:66:PHE:CD1	2.81	0.53
22:DA:1440:U:H2'	22:DA:1441:G:H8	1.74	0.53
33:BL:77:ILE:O	33:BL:110:VAL:O	2.26	0.53
54:DB:57:A:O2'	54:DB:58:A:C8	2.51	0.53
38:BQ:65:ASN:ND2	38:BQ:69:ARG:NH2	2.52	0.53
17:CR:72:ARG:HA	20:CU:4:LYS:HE3	1.90	0.53
22:DA:605:G:H1'	22:DA:657:U:O2'	2.07	0.53
21:AA:198:G:C4	21:AA:199:A:N7	2.76	0.53
21:AA:181:A:N6	21:AA:195:A:OP2	2.42	0.53
22:DA:740:C:H5'	22:DA:1784:A:C3'	2.37	0.53
41:BT:29:THR:N	41:BT:91:GLN:HE22	2.06	0.53
24:BC:109:LEU:CD2	24:BC:110:LYS:H	2.21	0.53
7:CH:75:GLN:HA	7:CH:75:GLN:OE1	2.08	0.53
4:CE:80:LEU:O	4:CE:80:LEU:HD13	2.08	0.53
5:AF:98:GLU:HG3	5:AF:99:ALA:H	1.73	0.53
7:CH:17:GLN:HE21	7:CH:71:VAL:HG23	1.73	0.53
46:DY:28:LEU:HD22	46:DY:28:LEU:O	2.09	0.53
21:AA:1157:A:C5	21:AA:1180:A:C6	2.97	0.53
22:DA:754:U:O2'	22:DA:755:U:H5'	2.06	0.53
2:CC:10:ARG:O	2:CC:13:ILE:O	2.26	0.53
22:BA:2149:U:HO2'	22:BA:2150:C:C4'	2.21	0.53
21:AA:914:A:H2'	21:AA:915:A:C8	2.38	0.53
22:BA:945:A:H5'	22:BA:946:C:OP2	2.08	0.53
22:DA:1688:U:C4	22:DA:1698:A:C2	2.96	0.53
45:DX:58:ILE:HG12	45:DX:66:VAL:HG11	1.91	0.53
42:BU:25:LYS:HG2	42:BU:36:GLU:HB3	1.89	0.53
8:CI:14:SER:HA	8:CI:68:GLY:O	2.09	0.53
22:BA:1414:C:C5	22:BA:1415:U:H5	2.26	0.53
12:CM:68:LEU:HD22	12:CM:69:ARG:NH1	2.22	0.53
28:BG:93:TYR:O	28:BG:94:ARG:O	2.25	0.53
22:BA:2210:U:H4'	22:BA:2211:A:C5'	2.39	0.53
1:CB:26:MET:HE1	1:CB:192:PRO:HB3	1.89	0.53
22:DA:2581:G:H5''	22:DA:2582:G:OP1	2.09	0.53
9:AJ:7:ARG:HD2	9:AJ:73:LEU:HD11	1.90	0.53
53:CA:1009:U:H2'	53:CA:1010:U:C6	2.43	0.53
53:CA:781:A:H2	53:CA:1514:G:H4'	1.73	0.53
6:AG:145:GLU:HA	6:AG:148:LYS:HD2	1.90	0.53
8:AI:90:ASP:OD2	8:AI:93:LEU:HG	2.07	0.53
6:CG:32:ASP:HB2	6:CG:34:LYS:HD3	1.89	0.53
22:DA:417:C:H2'	22:DA:418:C:H6	1.73	0.53
30:DI:21:PRO:N	30:DI:22:PRO:HD2	2.23	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:BA:52:A:O2'	22:BA:53:A:H5'	2.08	0.53
6:AG:14:ASP:HB3	6:AG:18:GLY:H	1.72	0.53
33:DL:33:ARG:HD3	33:DL:40:SER:HA	1.89	0.53
21:AA:13:U:O2'	21:AA:14:U:H5'	2.08	0.53
24:DC:65:ASP:OD2	24:DC:68:ARG:HG2	2.09	0.53
22:DA:2262:U:H5''	44:DW:38:ARG:NH2	2.22	0.53
54:DB:11:C:H2'	54:DB:15:A:N6	2.23	0.53
44:BW:77:LYS:O	44:BW:78:PHE:HB2	2.07	0.53
22:BA:1088:A:N3	22:BA:1088:A:O4'	2.41	0.53
53:CA:1408:A:C2	53:CA:1492:A:N6	2.77	0.53
22:BA:765:C:H2'	22:BA:766:U:C6	2.43	0.53
21:AA:194:C:O2'	21:AA:195:A:H5'	2.08	0.53
22:DA:2408:U:HO2'	22:DA:2409:G:H8	0.67	0.53
22:DA:2542:A:H4'	22:DA:2543:G:H5'	1.89	0.53
28:DG:62:ALA:O	28:DG:66:THR:HG23	2.09	0.53
53:CA:1319:A:C6	53:CA:1323:G:C4	2.96	0.53
22:DA:395:U:O2'	22:DA:396:G:O5'	2.26	0.53
9:AJ:56:HIS:HD2	9:AJ:57:VAL:HG12	1.72	0.53
33:DL:124:GLY:H	33:DL:143:GLU:CG	2.18	0.53
6:AG:94:ARG:O	6:AG:95:ARG:C	2.47	0.53
37:BP:25:VAL:HG11	37:BP:46:VAL:CG2	2.38	0.53
24:DC:62:ARG:HH21	24:DC:62:ARG:CG	2.20	0.53
2:CC:175:HIS:ND1	53:CA:1108:G:H5''	2.23	0.53
36:DO:58:ILE:O	36:DO:62:LEU:HB2	2.08	0.53
53:CA:1073:U:H2'	53:CA:1074:G:H8	1.73	0.53
31:BJ:124:VAL:O	31:BJ:125:TYR:HB2	2.08	0.53
35:DN:90:ARG:HH21	35:DN:116:VAL:HG11	1.72	0.53
22:BA:1653:G:H3'	35:BN:2:ARG:HG3	1.91	0.53
21:AA:1381:U:H2'	21:AA:1382:C:C6	2.43	0.53
22:BA:324:A:N6	22:BA:338:G:H2'	2.24	0.53
22:BA:659:G:H21	26:BE:30:GLN:HE22	1.55	0.53
22:BA:907:G:H2'	22:BA:908:C:H5'	1.90	0.53
22:DA:76:C:OP1	46:DY:48:ARG:HG2	2.08	0.53
22:BA:777:G:H2'	22:BA:778:G:C8	2.42	0.53
46:BY:40:SER:C	46:BY:42:LEU:N	2.62	0.53
21:AA:858:G:C2'	21:AA:859:G:H5'	2.39	0.53
25:BD:148:GLN:OE1	25:BD:152:PRO:HG2	2.08	0.53
22:DA:2506:U:C5	22:DA:2576:G:O6	2.61	0.53
53:CA:1480:A:H2'	53:CA:1481:U:O4'	2.08	0.53
21:AA:191:G:H2'	21:AA:192:A:C8	2.44	0.53
22:DA:1936:A:H2'	22:DA:1945:G:O6	2.08	0.53
18:CS:28:LYS:HB3	18:CS:29:PRO:HD2	1.91	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:315:G:H2'	22:DA:316:C:O4'	2.09	0.53
42:DU:11:ILE:HG21	42:DU:79:ALA:HB2	1.90	0.53
22:DA:2365:G:OP1	44:DW:54:ARG:HG3	2.08	0.53
22:BA:1915:U:C4	22:BA:1916:A:C6	2.96	0.53
22:DA:293:U:H5''	22:DA:294:A:OP2	2.08	0.53
2:AC:116:ALA:HB1	2:AC:186:SER:HB2	1.91	0.53
17:CR:31:TYR:CG	17:CR:54:LEU:HD21	2.44	0.53
22:BA:1190:G:OP1	33:BL:32:GLY:HA2	2.07	0.53
21:AA:958:A:C6	21:AA:959:A:N1	2.77	0.53
53:CA:104:G:C2	53:CA:105:G:C8	2.97	0.53
22:BA:2467:C:O2	34:BM:123:LYS:HE2	2.08	0.53
31:BJ:3:THR:HG21	38:BQ:60:TRP:HE1	1.73	0.53
22:DA:1439:A:H2	22:DA:1552:A:N1	2.05	0.53
3:CD:111:ALA:O	3:CD:114:ARG:HB3	2.08	0.53
45:BX:77:TYR:O	45:BX:77:TYR:CG	2.61	0.53
22:DA:655:A:H4'	22:DA:656:G:O5'	2.08	0.53
6:CG:91:ARG:HG2	6:CG:92:PRO:CD	2.24	0.53
22:DA:1399:C:H2'	22:DA:1400:U:C6	2.43	0.53
5:AF:2:ARG:HH21	5:AF:68:GLN:NE2	2.05	0.53
22:BA:1083:U:H2'	22:BA:1084:A:O5'	2.08	0.53
21:AA:722:G:H5''	21:AA:722:G:N3	2.24	0.53
52:D4:19:ARG:O	52:D4:20:ASP:CB	2.54	0.53
54:DB:44:G:H5''	27:DF:91:ARG:NE	2.24	0.53
22:DA:2741:A:H2'	22:DA:2742:G:O4'	2.09	0.53
22:DA:112:U:H5'	46:DY:58:ASN:HD21	1.73	0.53
22:DA:806:C:H2'	22:DA:807:U:C6	2.39	0.53
53:CA:1299:A:C2'	53:CA:1299:A:N3	2.69	0.53
25:DD:30:GLU:HG2	25:DD:185:ASN:ND2	2.23	0.53
22:DA:1775:U:H2'	22:DA:1776:G:O5'	2.07	0.53
38:BQ:10:ARG:CZ	38:BQ:10:ARG:HB2	2.38	0.53
27:DF:147:ARG:H	27:DF:147:ARG:HD2	1.74	0.53
22:DA:975:A:C2'	22:DA:976:G:H8	2.22	0.53
29:DH:80:ILE:HB	29:DH:101:ASP:HB3	1.88	0.53
10:AK:111:ASP:CB	20:AU:19:LYS:HD2	2.39	0.53
28:DG:112:VAL:CG1	28:DG:114:HIS:HB3	2.38	0.53
53:CA:1154:G:H2'	53:CA:1155:A:C8	2.38	0.53
26:BE:151:GLY:CA	26:BE:192:ALA:HB2	2.38	0.53
22:DA:1738:G:HO2'	22:DA:1739:A:H8	1.44	0.53
27:DF:11:VAL:HG12	27:DF:12:VAL:N	2.23	0.53
31:BJ:97:PRO:C	31:BJ:99:ARG:N	2.62	0.53
24:DC:173:LEU:H	24:DC:173:LEU:HD22	1.73	0.53
32:DK:41:ILE:HG22	32:DK:58:LEU:O	2.09	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
18:CS:52:ASN:C	18:CS:52:ASN:HD22	2.11	0.53
6:CG:35:LYS:HB3	53:CA:1373:G:H5''	1.90	0.53
22:DA:109:C:H4'	22:DA:348:A:H4'	1.91	0.53
42:BU:82:VAL:O	42:BU:83:GLY:O	2.27	0.53
22:BA:1427:A:H4'	22:BA:1428:C:O5'	2.09	0.53
29:BH:101:ASP:O	29:BH:104:THR:HB	2.07	0.53
22:BA:2716:C:O2'	22:BA:2717:C:H5'	2.08	0.53
34:DM:76:LYS:O	34:DM:77:PRO:O	2.26	0.53
22:BA:215:G:H4'	22:BA:216:A:H4'	1.91	0.53
53:CA:613:C:H2'	53:CA:614:C:H6	1.74	0.53
22:BA:919:U:H6	22:BA:919:U:C4'	2.20	0.53
22:DA:2074:U:O2'	22:DA:2075:U:H5'	2.08	0.53
6:AG:92:PRO:O	6:AG:93:VAL:HG13	2.08	0.53
22:DA:1545:A:H2'	22:DA:1546:G:O4'	2.09	0.53
7:AH:95:MET:HB2	7:AH:98:LEU:O	2.09	0.53
53:CA:564:C:H2'	53:CA:565:U:C6	2.43	0.53
22:BA:851:C:H2'	22:BA:852:U:C6	2.43	0.53
22:DA:553:G:H2'	22:DA:554:U:O4'	2.08	0.53
53:CA:1018:G:H2'	53:CA:1019:A:O4'	2.07	0.53
43:DV:14:LYS:HG3	43:DV:18:ARG:HD2	1.89	0.53
5:CF:6:ILE:HD12	5:CF:6:ILE:H	1.73	0.53
43:BV:61:LEU:O	43:BV:71:LYS:HA	2.08	0.53
4:AE:51:LYS:HE3	21:AA:1080:A:OP1	2.08	0.53
47:BZ:7:THR:HG23	47:BZ:34:THR:OG1	2.08	0.53
38:BQ:91:ARG:CZ	38:BQ:93:ILE:HG21	2.38	0.53
21:AA:587:G:N2	21:AA:755:G:C5	2.76	0.53
44:BW:24:ARG:HD3	44:BW:65:LYS:HE2	1.90	0.53
22:DA:1338:G:H4'	41:DT:18:GLU:CD	2.28	0.53
3:CD:29:THR:C	3:CD:30:LYS:HZ2	2.12	0.53
24:BC:247:TRP:O	24:BC:249:VAL:N	2.41	0.53
9:CJ:6:ILE:HG23	9:CJ:100:ILE:HG23	1.90	0.53
20:CU:39:LYS:O	20:CU:43:GLU:HB2	2.07	0.53
22:BA:740:C:H5'	22:BA:1784:A:H3'	1.89	0.53
21:AA:213:G:O2'	21:AA:214:C:C5'	2.51	0.53
21:AA:214:C:O2'	21:AA:215:C:H5'	2.09	0.53
21:AA:563:A:H1'	21:AA:566:G:O2'	2.08	0.53
29:DH:80:ILE:HB	29:DH:101:ASP:HB2	1.90	0.53
5:CF:11:HIS:HD2	5:CF:12:PRO:HD2	1.74	0.53
28:DG:112:VAL:HG12	28:DG:114:HIS:HB3	1.90	0.53
22:BA:1493:C:H5''	22:BA:1494:A:OP2	2.08	0.53
22:DA:243:U:HO2'	22:DA:244:A:H8	1.56	0.53
53:CA:337:G:H2'	53:CA:338:A:H8	1.74	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
29:DH:94:ILE:HB	29:DH:98:ASP:HB2	1.91	0.53
53:CA:818:G:O2'	53:CA:819:A:H5''	2.08	0.53
15:CP:1:MET:HE2	15:CP:2:VAL:N	2.24	0.53
22:BA:141:G:H5'	22:BA:142:A:C8	2.43	0.53
6:CG:35:LYS:O	8:CI:42:THR:HG21	2.08	0.53
6:AG:2:ARG:HB3	21:AA:933:G:OP2	2.07	0.53
21:AA:1088:G:H21	21:AA:1167:A:H62	1.55	0.53
25:DD:33:ARG:H	25:DD:33:ARG:HD2	1.72	0.53
42:BU:85:ARG:HG3	42:BU:86:PHE:O	2.09	0.53
6:CG:77:ARG:NH1	53:CA:1381:U:C4	2.77	0.53
32:BK:98:ARG:O	32:BK:99:ILE:HD12	2.09	0.53
21:AA:56:U:H2'	21:AA:57:G:H8	1.73	0.53
29:DH:57:LYS:HD2	29:DH:57:LYS:O	2.08	0.53
21:AA:1234:C:C2'	21:AA:1235:U:H5'	2.38	0.53
53:CA:892:A:O2'	53:CA:1415:G:H4'	2.07	0.53
14:CO:69:LEU:O	14:CO:69:LEU:HD22	2.09	0.53
22:DA:1355:G:O2'	22:DA:1356:G:H5'	2.07	0.53
22:BA:2005:A:OP1	57:BA:3386:HOH:O	2.19	0.53
53:CA:348:G:H2'	53:CA:349:A:H8	1.73	0.53
38:BQ:104:ALA:O	38:BQ:107:ALA:HB3	2.08	0.53
22:BA:1016:G:H2'	22:BA:1017:G:O5'	2.09	0.53
24:DC:244:VAL:HB	24:DC:249:VAL:H	1.74	0.53
29:BH:6:LEU:O	29:BH:15:LEU:HA	2.09	0.53
26:BE:145:ASP:HA	26:BE:166:LYS:O	2.09	0.53
22:BA:1324:G:H1'	22:BA:1616:A:N6	2.22	0.53
22:DA:249:C:C5'	22:DA:2394:C:O2'	2.54	0.53
44:DW:43:LYS:HB3	44:DW:79:ILE:HD11	1.90	0.53
28:BG:84:LYS:HB3	28:BG:132:LEU:O	2.09	0.53
53:CA:129:A:O2'	53:CA:130:A:C8	2.62	0.53
53:CA:1152:A:H2'	53:CA:1153:G:C8	2.44	0.53
53:CA:197:A:H4'	53:CA:198:G:O5'	2.09	0.53
22:DA:1084:A:H2'	22:DA:1085:A:H5'	1.91	0.53
22:BA:1778:U:H2'	22:BA:1784:A:N6	2.24	0.53
22:DA:70:G:O2'	22:DA:71:A:C5'	2.57	0.53
22:DA:2842:G:H2'	22:DA:2843:G:O4'	2.08	0.53
22:DA:310:A:C2	22:DA:330:A:C4	2.96	0.53
46:BY:9:LYS:HB3	46:BY:12:GLU:HG3	1.91	0.53
22:DA:804:A:H2'	22:DA:806:C:C4	2.43	0.53
22:DA:855:G:N3	44:DW:23:LYS:HE3	2.23	0.53
44:DW:16:GLU:OE2	44:DW:16:GLU:HA	2.09	0.53
21:AA:450:G:N7	21:AA:481:G:O6	2.42	0.53
11:CL:2:THR:HG22	11:CL:4:ASN:N	2.23	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:271:G:O2'	22:DA:272:A:C5'	2.54	0.53
6:CG:110:ARG:HG3	6:CG:111:GLY:N	2.22	0.53
21:AA:327:A:O2'	21:AA:329:A:H5''	2.08	0.53
35:DN:2:ARG:CD	35:DN:5:LYS:HB3	2.38	0.53
22:DA:2668:G:O2'	22:DA:2669:G:O4'	2.25	0.53
36:DO:31:THR:HG23	36:DO:34:HIS:C	2.28	0.53
2:CC:175:HIS:HD1	53:CA:1108:G:H5''	1.74	0.53
22:DA:1754:A:C6	22:DA:1755:A:C6	2.96	0.53
22:DA:828:U:C5	22:DA:829:A:N6	2.76	0.53
1:CB:130:LYS:HD3	1:CB:133:ALA:HB3	1.90	0.53
22:BA:811:U:H2'	33:BL:21:ARG:HD3	1.90	0.53
3:AD:131:ILE:HD13	3:AD:134:TYR:HB2	1.91	0.53
22:DA:1263:U:O2'	48:D0:7:PRO:HD2	2.09	0.53
40:DS:32:ALA:HA	40:DS:35:ILE:HD11	1.90	0.53
22:DA:2037:A:C6	22:DA:2038:G:C6	2.97	0.53
18:CS:59:VAL:HB	18:CS:73:PHE:HD2	1.72	0.53
8:AI:56:MET:SD	8:AI:57:VAL:N	2.82	0.53
21:AA:257:G:H2'	21:AA:258:G:H8	1.73	0.53
2:CC:185:THR:O	2:CC:186:SER:HB2	2.09	0.53
40:DS:71:VAL:HG23	40:DS:107:VAL:HB	1.90	0.53
22:BA:919:U:C3'	22:BA:919:U:C6	2.91	0.53
4:CE:154:ALA:HB1	7:CH:65:PHE:CE2	2.43	0.53
53:CA:747:A:H2'	53:CA:748:G:O4'	2.09	0.53
40:BS:42:LYS:O	40:BS:45:VAL:HG13	2.08	0.53
22:BA:540:C:C2'	22:BA:541:A:H5'	2.39	0.53
22:DA:1512:C:C4	22:DA:1513:U:C4	2.97	0.53
53:CA:604:G:H2'	53:CA:605:U:O4'	2.08	0.53
17:CR:19:GLU:CD	17:CR:20:ILE:H	2.12	0.53
34:DM:49:ALA:O	34:DM:120:ALA:HB1	2.09	0.53
22:DA:263:G:H4'	22:DA:430:A:O4'	2.08	0.53
48:B0:54:ILE:O	48:B0:54:ILE:HG22	2.08	0.53
2:CC:24:ASN:O	2:CC:28:PHE:HB2	2.08	0.53
22:BA:503:A:H4'	22:BA:504:A:O5'	2.09	0.53
22:BA:494:G:N2	40:BS:57:ASN:HD21	2.07	0.53
40:BS:70:LYS:N	40:BS:70:LYS:HD2	2.23	0.53
22:DA:604:G:C2	22:DA:605:G:C5	2.97	0.53
28:BG:148:ARG:HA	28:BG:161:VAL:CG1	2.39	0.53
21:AA:1238:A:H5'	21:AA:1336:C:N4	2.06	0.53
21:AA:182:A:H1'	21:AA:183:C:C6	2.44	0.53
53:CA:32:A:C2'	53:CA:33:A:H8	2.18	0.53
8:CI:59:LYS:HE3	8:CI:60:LEU:HG	1.90	0.53
22:DA:2544:G:H5'	22:DA:2645:G:N7	2.23	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
26:DE:126:VAL:HG11	26:DE:134:LEU:HD22	1.88	0.53
1:CB:76:SER:O	1:CB:79:VAL:HG12	2.09	0.53
22:DA:2142:A:H2'	22:DA:2144:G:P	2.49	0.53
26:DE:129:PRO:HD3	26:DE:156:ASN:OD1	2.09	0.53
22:DA:125:A:H5''	50:D2:19:ARG:HB2	1.91	0.53
22:DA:2440:C:H2'	22:DA:2441:U:O4'	2.09	0.53
22:DA:2191:A:H3'	22:DA:2192:U:H6	1.73	0.53
27:BF:42:ALA:HA	27:BF:45:ASP:O	2.09	0.53
7:CH:17:GLN:OE1	7:CH:62:LEU:HB3	2.08	0.53
22:DA:1802:A:P	22:DA:1815:A:H61	2.32	0.53
8:CI:38:PHE:CE2	8:CI:71:ILE:HG22	2.44	0.53
32:BK:107:LEU:O	32:BK:109:SER:N	2.39	0.53
3:CD:144:ILE:HD11	3:CD:154:VAL:HG21	1.90	0.53
52:D4:3:VAL:O	52:D4:4:ARG:CB	2.56	0.53
24:BC:257:ARG:NE	24:BC:269:ARG:HH22	2.07	0.53
22:BA:587:C:H42	33:BL:33:ARG:HD3	1.74	0.53
2:AC:110:LEU:HD21	2:AC:143:LEU:HD23	1.91	0.53
25:DD:33:ARG:HB3	25:DD:95:SER:OG	2.09	0.53
25:DD:51:THR:HG21	25:DD:75:ALA:O	2.08	0.53
22:DA:154:U:H2'	22:DA:155:A:O4'	2.09	0.53
22:DA:2493:U:H2'	22:DA:2494:G:H5''	1.90	0.53
8:CI:5:TYR:CD2	8:CI:5:TYR:N	2.76	0.53
22:BA:2801:G:H2'	22:BA:2802:G:C8	2.44	0.53
21:AA:953:G:H2'	21:AA:954:G:O4'	2.09	0.53
8:AI:12:LYS:H	8:AI:105:ARG:HH12	1.55	0.53
22:DA:106:C:HO2'	22:DA:294:A:HO2'	1.56	0.53
22:BA:2661:G:O2'	22:BA:2662:A:H5'	2.08	0.53
22:DA:811:U:H5''	22:DA:812:C:OP2	2.08	0.53
21:AA:508:U:H4'	21:AA:509:A:OP1	2.08	0.53
31:DJ:55:ILE:HG13	31:DJ:55:ILE:O	2.08	0.53
39:DR:98:ILE:HG22	39:DR:98:ILE:O	2.08	0.53
32:BK:91:SER:O	32:BK:92:GLU:C	2.46	0.53
30:DI:83:ALA:HB2	30:DI:99:LYS:O	2.09	0.53
31:BJ:45:THR:H	31:BJ:46:PRO:HD3	1.74	0.53
25:BD:107:VAL:HG13	25:BD:203:VAL:CG2	2.38	0.53
54:DB:18:G:C2	54:DB:67:G:O6	2.62	0.53
44:BW:17:ALA:CA	44:BW:35:ILE:HG23	2.30	0.53
21:AA:172:A:C6	21:AA:174:A:C8	2.97	0.53
3:CD:25:ARG:HH12	3:CD:30:LYS:CG	2.15	0.53
31:DJ:44:TYR:O	31:DJ:45:THR:CB	2.56	0.53
31:DJ:4:PHE:O	31:DJ:44:TYR:CZ	2.62	0.53
6:CG:59:GLU:HG3	6:CG:60:ALA:H	1.72	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:2226:C:H2'	22:DA:2227:A:H8	1.74	0.53
20:AU:33:ARG:NE	20:AU:34:ARG:HG3	2.24	0.53
41:BT:26:LYS:O	41:BT:27:SER:HB2	2.07	0.53
22:DA:1331:G:C4	22:DA:1333:G:N7	2.77	0.53
21:AA:213:G:H2'	21:AA:214:C:H6	1.68	0.53
9:CJ:57:VAL:HG23	53:CA:972:C:O2'	2.09	0.53
22:DA:1965:C:H2'	22:DA:1966:A:H8	1.71	0.53
27:BF:39:VAL:HG13	27:BF:84:ILE:HD12	1.90	0.53
30:DI:48:ILE:HG13	30:DI:49:GLU:N	2.24	0.53
13:AN:9:GLU:OE1	13:AN:60:ARG:HB3	2.09	0.53
6:CG:4:ARG:CG	6:CG:5:VAL:N	2.71	0.53
21:AA:109:A:H4'	21:AA:110:C:OP2	2.07	0.53
22:DA:1675:C:O2'	22:DA:1676:A:H5'	2.09	0.53
22:BA:481:G:O2'	22:BA:507:A:N1	2.33	0.53
4:CE:127:TYR:CE2	53:CA:560:A:C5	2.97	0.53
36:DO:62:LEU:HD11	36:DO:65:THR:N	2.24	0.53
53:CA:1217:C:H2'	53:CA:1218:C:H6	1.73	0.53
51:B3:26:ALA:O	51:B3:27:ASN:CB	2.55	0.53
8:AI:9:GLY:CA	8:AI:80:HIS:HD2	2.20	0.53
21:AA:280:C:H4'	21:AA:281:G:OP2	2.09	0.53
22:DA:2699:C:H2'	22:DA:2700:A:H8	1.74	0.53
22:BA:1569:A:C6	22:BA:1570:A:C6	2.97	0.53
22:BA:1415:U:O2	22:BA:1415:U:H2'	2.09	0.53
22:DA:1597:A:O3'	22:DA:1598:A:H8	1.92	0.53
22:DA:391:A:O2'	22:DA:392:U:H5'	2.09	0.53
47:DZ:6:ILE:O	47:DZ:34:THR:HA	2.09	0.53
22:DA:1670:C:C5	22:DA:1671:U:C4	2.97	0.53
22:BA:2564:A:OP1	22:BA:2648:G:H4'	2.09	0.53
22:BA:1535:A:O2'	22:BA:1536:C:OP1	2.27	0.53
22:BA:668:A:H2'	22:BA:670:A:H62	1.74	0.53
22:BA:2405:G:H1'	22:BA:2412:A:H61	1.74	0.53
7:CH:24:VAL:HG22	7:CH:25:THR:N	2.24	0.53
22:BA:897:C:H5''	22:BA:898:C:OP2	2.09	0.53
22:DA:1376:C:H5''	57:DA:3407:HOH:O	2.08	0.53
37:BP:104:GLY:O	37:BP:106:ALA:N	2.41	0.53
25:DD:108:ASP:OD1	25:DD:207:VAL:HG23	2.08	0.53
14:AO:16:ARG:O	14:AO:17:ASP:HB3	2.09	0.53
37:BP:96:LEU:HB3	37:BP:99:LEU:HD22	1.90	0.53
7:CH:82:LEU:HD21	16:CQ:34:GLY:O	2.09	0.53
36:DO:56:LYS:HD3	36:DO:56:LYS:O	2.09	0.53
53:CA:1236:A:H2'	53:CA:1237:C:C6	2.44	0.53
22:BA:995:C:O2'	22:BA:996:A:OP2	2.27	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:1437:C:H2'	22:DA:1438:U:H6	1.73	0.53
22:DA:2333:A:C2	22:DA:2335:A:N6	2.77	0.53
44:BW:46:ALA:HB3	44:BW:79:ILE:C	2.29	0.53
25:BD:186:LEU:O	25:BD:187:LEU:HB2	2.08	0.53
28:BG:104:LEU:HB2	28:BG:112:VAL:HG22	1.87	0.53
19:CT:73:ARG:NH1	53:CA:263:A:OP1	2.42	0.53
16:CQ:65:PRO:HD2	53:CA:130:A:N7	2.24	0.53
22:DA:649:G:H2'	22:DA:650:C:H6	1.73	0.53
4:AE:152:VAL:O	4:AE:156:ARG:HB2	2.08	0.53
8:CI:48:ARG:C	8:CI:50:PRO:HD2	2.29	0.53
10:AK:121:ARG:CZ	20:AU:35:GLU:HG3	2.38	0.53
10:AK:126:ARG:C	20:AU:33:ARG:HH12	2.12	0.53
20:CU:33:ARG:HH12	20:CU:34:ARG:HD3	1.74	0.53
22:DA:1069:A:O2'	22:DA:1071:G:H5''	2.09	0.53
35:DN:103:ARG:HB2	35:DN:110:MET:CG	2.38	0.53
40:DS:47:VAL:O	40:DS:50:VAL:HB	2.09	0.53
53:CA:79:G:N3	53:CA:80:A:N7	2.57	0.53
4:CE:79:THR:HA	4:CE:121:ASN:OD1	2.08	0.53
22:DA:55:G:C2	22:DA:116:C:C2	2.96	0.53
22:DA:54:G:H2'	22:DA:55:G:O4'	2.07	0.53
30:DI:52:LEU:HD12	30:DI:53:PRO:HD2	1.91	0.53
12:CM:64:VAL:HG12	12:CM:65:GLU:N	2.18	0.53
22:DA:2350:C:H5	51:D3:41:ARG:NH1	2.07	0.53
51:D3:18:LYS:HG3	51:D3:19:GLY:N	2.24	0.53
43:BV:72:VAL:HG21	43:BV:91:PHE:HB3	1.91	0.53
24:DC:140:VAL:HG22	24:DC:161:VAL:O	2.09	0.53
7:AH:75:GLN:O	7:AH:126:CYS:HB2	2.08	0.53
36:BO:68:LYS:O	36:BO:71:ALA:HB3	2.08	0.53
10:CK:41:LEU:HD22	10:CK:76:TYR:CE2	2.44	0.53
25:BD:121:THR:O	25:BD:122:VAL:HG23	2.08	0.53
53:CA:1394:A:H2'	53:CA:1501:C:O2'	2.09	0.53
28:DG:70:LEU:O	28:DG:74:MET:HB2	2.08	0.53
22:BA:455:C:N3	22:BA:472:A:H2'	2.23	0.53
5:CF:6:ILE:HD12	5:CF:6:ILE:N	2.24	0.53
22:BA:1071:G:C8	22:BA:1089:A:N6	2.77	0.53
8:AI:3:ASN:O	8:AI:4:GLN:HG2	2.08	0.53
12:AM:84:CYS:HA	18:AS:73:PHE:HD2	1.73	0.53
22:BA:2884:U:H2'	22:BA:2885:G:C8	2.44	0.53
48:D0:26:SER:O	48:D0:27:LEU:HD13	2.08	0.53
9:CJ:53:ILE:HG12	53:CA:1060:U:H5'	1.90	0.53
22:DA:2031:A:C6	22:DA:2498:C:H1'	2.44	0.53
22:DA:1197:G:H5'	22:DA:1227:G:O2'	2.09	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:BA:1897:G:H2'	22:BA:1898:U:O4'	2.09	0.53
26:BE:61:ARG:NH1	26:BE:64:GLY:HA3	2.23	0.53
22:DA:615:U:O4	26:DE:39:ALA:HB2	2.08	0.53
13:CN:53:ASP:HA	13:CN:58:ARG:HD3	1.91	0.53
44:DW:33:GLY:O	44:DW:34:SER:HB2	2.09	0.53
22:BA:923:G:H21	44:BW:23:LYS:NZ	2.07	0.53
43:BV:80:HIS:ND1	43:BV:81:PRO:HD2	2.24	0.53
22:BA:1085:A:C3'	22:BA:1086:A:C2	2.88	0.53
35:DN:20:MET:C	35:DN:22:ARG:H	2.10	0.53
53:CA:198:G:O2'	53:CA:199:A:H5'	2.08	0.53
4:AE:132:PRO:HA	4:AE:135:VAL:HG13	1.91	0.53
22:DA:2142:A:H2'	22:DA:2143:C:H4'	1.91	0.53
46:DY:57:LEU:O	46:DY:60:LYS:HB3	2.09	0.53
22:DA:1183:U:H2'	22:DA:1184:U:C6	2.44	0.53
53:CA:974:A:O2'	53:CA:975:A:P	2.66	0.53
18:CS:38:THR:HA	18:CS:69:LYS:HA	1.90	0.53
53:CA:246:A:C4	53:CA:282:A:N6	2.77	0.53
6:CG:113:LYS:HA	53:CA:1298:U:H5	1.74	0.53
12:CM:13:HIS:NE2	12:CM:41:ASP:HA	2.23	0.53
37:DP:62:LYS:O	37:DP:63:ILE:HB	2.09	0.53
22:DA:714:U:H2'	22:DA:716:A:OP2	2.08	0.53
22:DA:2850:A:OP2	22:DA:2866:U:N3	2.36	0.53
22:BA:2585:U:O2'	22:BA:2586:U:C5'	2.51	0.53
6:AG:110:ARG:HD3	6:AG:112:ASP:OD1	2.09	0.53
22:DA:976:G:H2'	22:DA:977:G:C8	2.37	0.53
21:AA:330:C:O2'	21:AA:331:G:H5'	2.08	0.53
45:DX:1:SER:O	45:DX:3:VAL:N	2.42	0.53
28:DG:84:LYS:HB2	28:DG:132:LEU:H	1.74	0.53
49:B1:8:ILE:CG2	49:B1:9:LYS:N	2.72	0.53
22:DA:632:A:H4'	33:DL:68:SER:HA	1.91	0.53
10:AK:109:ILE:HB	20:AU:5:VAL:CG2	2.39	0.53
10:AK:111:ASP:HB2	20:AU:19:LYS:HD2	1.90	0.53
53:CA:566:G:H4'	53:CA:567:G:OP1	2.08	0.53
1:CB:58:LYS:O	1:CB:62:ARG:HG3	2.09	0.53
30:BI:126:ARG:HA	30:BI:129:GLU:CG	2.39	0.53
22:DA:28:A:H2'	22:DA:29:U:O4'	2.09	0.53
1:CB:132:GLU:O	1:CB:137:THR:HG23	2.08	0.53
8:AI:9:GLY:HA2	8:AI:80:HIS:CD2	2.39	0.53
11:AL:73:LEU:HD11	11:AL:79:ILE:CG2	2.39	0.53
53:CA:692:U:H1'	53:CA:695:A:N7	2.24	0.53
21:AA:1261:A:C2	21:AA:1274:A:C2	2.97	0.53
33:DL:90:VAL:HG13	33:DL:95:LEU:HD21	1.91	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
53:CA:919:A:O2'	53:CA:920:U:H5'	2.09	0.53
21:AA:269:C:H2'	21:AA:270:A:H8	1.73	0.53
22:BA:2714:G:H8	22:BA:2714:G:O5'	1.91	0.53
42:BU:53:GLN:N	42:BU:54:PRO:CD	2.72	0.53
22:BA:838:C:H2'	22:BA:839:U:C6	2.44	0.53
22:BA:1157:G:H2'	22:BA:1158:C:H6	1.74	0.53
22:DA:708:G:H2'	22:DA:709:U:H6	1.74	0.53
22:BA:892:A:H2'	22:BA:893:C:H6	1.74	0.53
48:D0:32:THR:HG21	48:D0:47:TYR:CE2	2.44	0.53
22:BA:2244:U:O2'	22:BA:2245:U:H5'	2.09	0.53
5:AF:47:LEU:CD1	5:AF:51:ILE:HG22	2.39	0.53
21:AA:1453:G:H2'	21:AA:1453:G:N3	2.24	0.53
33:BL:65:GLY:O	33:BL:66:PHE:HB3	2.08	0.53
34:BM:117:PHE:HD2	34:BM:130:PHE:CE1	2.26	0.53
2:AC:41:TYR:OH	2:AC:89:VAL:HG21	2.09	0.53
22:DA:1478:G:C6	22:DA:1514:G:C2	2.97	0.53
37:DP:32:VAL:HA	37:DP:37:LYS:HA	1.90	0.53
13:AN:90:GLY:O	13:AN:92:ILE:N	2.41	0.53
27:DF:113:PHE:O	27:DF:114:ARG:CB	2.57	0.53
22:DA:2068:U:H5''	22:DA:2068:U:H6	1.74	0.53
21:AA:1349:A:O2'	21:AA:1350:A:H5'	2.09	0.53
4:AE:87:VAL:HG12	4:AE:92:ARG:HA	1.91	0.53
22:DA:1552:A:C2'	22:DA:1552:A:N3	2.71	0.52
44:BW:40:ARG:HG2	44:BW:52:CYS:SG	2.48	0.52
23:BB:28:C:OP1	36:BO:31:THR:HG21	2.09	0.52
34:BM:126:ILE:O	34:BM:128:THR:HG23	2.09	0.52
25:BD:91:THR:C	25:BD:93:GLY:N	2.61	0.52
22:DA:784:G:C2	24:DC:227:VAL:HG21	2.44	0.52
35:BN:103:ARG:HD3	35:BN:110:MET:HE3	1.91	0.52
27:DF:131:VAL:C	27:DF:133:GLU:H	2.13	0.52
22:DA:2567:G:H2'	22:DA:2568:U:C6	2.44	0.52
22:DA:1071:G:O4'	22:DA:1088:A:O2'	2.27	0.52
13:AN:48:GLN:HE21	13:AN:48:GLN:HA	1.73	0.52
4:AE:109:ALA:C	4:AE:111:ARG:H	2.12	0.52
22:DA:320:A:H5''	22:DA:321:U:OP1	2.09	0.52
46:BY:57:LEU:CA	46:BY:60:LYS:HB3	2.33	0.52
18:CS:68:HIS:HB3	18:CS:72:GLU:HG3	1.90	0.52
18:CS:36:ARG:O	18:CS:69:LYS:HD2	2.07	0.52
24:BC:252:LYS:HZ3	24:BC:252:LYS:HB2	1.75	0.52
6:CG:94:ARG:HB3	6:CG:98:LEU:HG	1.91	0.52
21:AA:346:G:P	37:BP:33:GLU:OE2	2.67	0.52
2:AC:158:GLY:HA2	2:AC:192:TYR:CE1	2.44	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
37:BP:105:LYS:CA	37:BP:108:ARG:HH21	2.21	0.52
22:DA:1613:G:C6	22:DA:1619:G:O6	2.63	0.52
3:CD:84:ASN:HD22	3:CD:84:ASN:C	2.12	0.52
26:BE:5:LEU:CD1	26:BE:10:SER:HB3	2.36	0.52
22:BA:1962:C:H4'	22:BA:1963:U:OP1	2.08	0.52
21:AA:791:G:C6	21:AA:792:A:N7	2.77	0.52
53:CA:1074:G:H2'	53:CA:1075:U:H6	1.72	0.52
53:CA:511:C:HO2'	53:CA:512:U:H6	1.57	0.52
22:BA:31:C:H4'	22:BA:1238:G:H4'	1.91	0.52
21:AA:428:G:C1'	21:AA:430:A:C8	2.92	0.52
39:DR:90:ARG:O	39:DR:91:GLN:HB3	2.10	0.52
1:AB:143:LEU:H	1:AB:143:LEU:HD23	1.73	0.52
33:DL:90:VAL:HB	33:DL:122:VAL:HA	1.91	0.52
22:DA:2571:U:C4	22:DA:2574:G:C8	2.97	0.52
22:DA:1343:G:H2'	22:DA:1344:U:H5	1.74	0.52
11:CL:62:VAL:HG21	11:CL:94:TYR:CE2	2.44	0.52
11:CL:81:ILE:HD11	11:CL:94:TYR:HB2	1.91	0.52
5:CF:67:PRO:O	5:CF:69:GLU:N	2.42	0.52
8:CI:5:TYR:O	8:CI:19:PHE:HA	2.10	0.52
6:AG:49:LEU:CD2	6:AG:124:SER:HB2	2.38	0.52
2:CC:148:ILE:HD12	2:CC:149:LYS:H	1.74	0.52
53:CA:1533:C:C2'	53:CA:1534:A:H5''	2.38	0.52
22:DA:518:G:H2'	22:DA:519:U:H6	1.74	0.52
6:AG:145:GLU:CA	6:AG:148:LYS:HB2	2.39	0.52
26:BE:145:ASP:HB3	26:BE:184:ASP:HB2	1.91	0.52
22:DA:2889:C:N4	22:DA:2890:G:C6	2.77	0.52
37:DP:54:LEU:HA	37:DP:76:HIS:CD2	2.43	0.52
22:DA:457:A:N1	22:DA:470:A:H5''	2.23	0.52
32:BK:51:LYS:O	32:BK:51:LYS:HD2	2.09	0.52
22:DA:2337:G:N3	22:DA:2337:G:H2'	2.23	0.52
21:AA:1130:A:H8	21:AA:1130:A:H5''	1.74	0.52
22:BA:2097:A:C2	22:BA:2193:G:C2	2.97	0.52
44:BW:23:LYS:CG	44:BW:24:ARG:N	2.69	0.52
37:BP:3:ILE:HD13	37:BP:3:ILE:C	2.30	0.52
22:DA:1393:A:N6	41:DT:19:LYS:HB2	2.24	0.52
22:BA:1340:U:H4'	22:BA:1341:G:OP2	2.09	0.52
34:DM:40:ARG:HB2	34:DM:93:VAL:HG21	1.90	0.52
21:AA:1004:A:C2	21:AA:1005:A:H1'	2.44	0.52
53:CA:642:A:O2'	53:CA:643:C:H6	1.92	0.52
4:AE:120:HIS:O	4:AE:121:ASN:CB	2.57	0.52
53:CA:1147:C:O2'	53:CA:1148:U:H6	1.91	0.52
22:BA:1013:C:H2'	22:BA:1014:A:H8	1.74	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:AA:1239:A:N6	21:AA:1299:A:H62	2.04	0.52
1:CB:100:LEU:O	1:CB:103:TRP:HE3	1.92	0.52
2:AC:153:SER:O	2:AC:195:ILE:HG23	2.09	0.52
33:DL:79:LEU:CA	33:DL:82:LEU:HD11	2.34	0.52
18:AS:28:LYS:HB3	18:AS:29:PRO:CD	2.38	0.52
1:CB:60:ALA:C	1:CB:62:ARG:H	2.11	0.52
38:DQ:13:HIS:O	38:DQ:17:LEU:HB2	2.09	0.52
22:DA:483:A:H2'	22:DA:484:C:C6	2.41	0.52
22:DA:85:G:OP2	42:DU:27:VAL:HG11	2.09	0.52
1:CB:128:LEU:HD22	1:CB:132:GLU:HG2	1.91	0.52
32:DK:19:VAL:CG1	32:DK:41:ILE:HG12	2.37	0.52
53:CA:811:C:H4'	53:CA:900:A:H61	1.72	0.52
22:BA:1936:A:H2	22:BA:1943:U:O4	1.90	0.52
22:BA:26:G:H1'	22:BA:514:A:N6	2.24	0.52
22:DA:90:U:H3'	22:DA:91:A:H5''	1.92	0.52
12:AM:3:ILE:HA	12:AM:56:ARG:HG3	1.91	0.52
22:DA:1168:G:C2	22:DA:1182:G:C2	2.97	0.52
3:AD:65:GLY:HA3	3:AD:114:ARG:HH22	1.73	0.52
47:DZ:51:SER:HA	47:DZ:54:VAL:HG22	1.90	0.52
54:DB:116:G:H4'	36:DO:54:VAL:HG22	1.92	0.52
10:AK:44:ALA:HB3	10:AK:69:CYS:HB2	1.91	0.52
22:BA:1565:C:HO2'	22:BA:1566:A:P	2.31	0.52
12:CM:18:LEU:HD22	12:CM:32:ILE:HG21	1.92	0.52
11:AL:11:ARG:HB3	21:AA:562:U:H1'	1.91	0.52
22:BA:2019:A:H2'	22:BA:2020:A:O5'	2.09	0.52
22:BA:1452:G:H2'	22:BA:1457:U:O4	2.10	0.52
21:AA:672:U:H2'	21:AA:673:A:C8	2.44	0.52
22:DA:2107:G:H2'	22:DA:2108:A:C8	2.45	0.52
34:DM:119:LEU:HD23	34:DM:119:LEU:O	2.09	0.52
47:DZ:37:ARG:HA	47:DZ:37:ARG:NE	2.24	0.52
21:AA:338:A:C6	21:AA:351:G:O6	2.60	0.52
38:BQ:86:SER:O	38:BQ:87:VAL:C	2.48	0.52
38:BQ:86:SER:O	38:BQ:88:GLU:HB2	2.09	0.52
22:BA:1059:G:C8	22:BA:1060:U:H2'	2.44	0.52
22:BA:1079:C:C4	22:BA:1080:A:N7	2.77	0.52
31:DJ:45:THR:C	31:DJ:47:HIS:N	2.62	0.52
21:AA:184:G:H2'	21:AA:185:U:C6	2.45	0.52
10:AK:124:LYS:HE2	10:AK:124:LYS:C	2.30	0.52
20:AU:33:ARG:HE	20:AU:34:ARG:CG	2.22	0.52
22:DA:2216:G:H2'	22:DA:2217:G:H8	1.73	0.52
1:AB:149:GLY:O	1:AB:153:MET:HE3	2.10	0.52
28:DG:88:LEU:HG	28:DG:128:THR:O	2.09	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
34:DM:35:ALA:HB3	34:DM:99:GLY:N	2.23	0.52
22:DA:1655:A:H4'	25:DD:118:PHE:CD1	2.44	0.52
22:DA:2798:U:O4'	22:DA:2800:A:N6	2.42	0.52
53:CA:80:A:H3'	53:CA:81:A:H4'	1.91	0.52
53:CA:1239:A:H62	53:CA:1299:A:H61	1.56	0.52
3:AD:191:SER:O	3:AD:192:ALA:HB2	2.09	0.52
22:DA:1245:G:OP1	33:DL:8:PRO:HG3	2.09	0.52
22:DA:2651:C:O2'	22:DA:2652:C:H5'	2.09	0.52
2:CC:80:GLY:O	2:CC:83:VAL:HG22	2.09	0.52
53:CA:802:A:H2'	53:CA:803:G:C5'	2.38	0.52
24:DC:44:ASN:C	24:DC:46:GLY:H	2.11	0.52
53:CA:109:A:H8	53:CA:327:A:O4'	1.90	0.52
22:DA:90:U:OP2	22:DA:91:A:H3'	2.09	0.52
22:BA:7:G:H2'	22:BA:8:C:H6	1.72	0.52
42:BU:73:ASN:ND2	42:BU:75:ALA:HB3	2.23	0.52
25:DD:149:ASN:O	25:DD:152:PRO:HD2	2.09	0.52
24:BC:20:ASN:HD22	24:BC:21:PRO:N	2.07	0.52
16:AQ:79:GLU:C	16:AQ:80:LYS:HD3	2.29	0.52
36:BO:75:GLY:HA2	36:BO:106:LEU:HD12	1.92	0.52
21:AA:57:G:H2'	21:AA:58:C:O4'	2.09	0.52
22:DA:708:G:H2'	22:DA:709:U:C6	2.44	0.52
22:DA:581:C:P	38:DQ:32:ARG:HE	2.32	0.52
4:AE:24:VAL:HA	21:AA:922:G:H4'	1.91	0.52
46:BY:45:GLN:O	46:BY:46:VAL:HB	2.10	0.52
21:AA:1097:C:H2'	21:AA:1098:C:H6	1.74	0.52
22:DA:2619:C:H5'	25:DD:157:LYS:HA	1.92	0.52
22:DA:836:G:C5	22:DA:837:C:C4	2.98	0.52
21:AA:68:G:C5	21:AA:69:G:H1'	2.44	0.52
28:DG:74:MET:O	28:DG:78:VAL:HG13	2.10	0.52
36:BO:57:ALA:C	36:BO:59:ALA:H	2.13	0.52
22:DA:2529:G:H4'	28:DG:174:LYS:HD3	1.91	0.52
16:CQ:23:ALA:C	16:CQ:24:ILE:HD12	2.30	0.52
1:AB:27:LYS:HB3	1:AB:28:PRO:HD3	1.90	0.52
38:BQ:39:ILE:O	38:BQ:43:GLN:HG3	2.09	0.52
21:AA:1293:C:H2'	21:AA:1294:G:H8	1.74	0.52
27:DF:118:ALA:HB2	27:DF:176:PHE:HB3	1.90	0.52
7:CH:46:GLU:H	7:CH:63:LYS:HG3	1.75	0.52
22:DA:2623:G:H21	48:D0:18:HIS:CE1	2.28	0.52
30:BI:86:LYS:HD2	30:BI:86:LYS:H	1.74	0.52
53:CA:1314:C:H2'	53:CA:1315:U:O4'	2.09	0.52
22:DA:73:A:H8	22:DA:73:A:O5'	1.92	0.52
32:DK:63:VAL:HG21	32:DK:85:VAL:HG23	1.91	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
32:DK:108:ARG:HA	32:DK:116:ILE:HD13	1.90	0.52
32:DK:108:ARG:HB2	32:DK:116:ILE:HD13	1.90	0.52
22:DA:250:G:H2'	22:DA:251:A:C8	2.44	0.52
44:BW:49:ASN:ND2	44:BW:50:VAL:N	2.58	0.52
22:DA:36:G:C6	22:DA:445:C:N4	2.78	0.52
23:BB:49:C:OP1	36:BO:101:GLY:HA3	2.08	0.52
53:CA:1160:G:O6	53:CA:1181:G:C6	2.62	0.52
53:CA:765:G:C4	53:CA:812:G:C6	2.97	0.52
22:DA:1087:G:C5	22:DA:1089:A:C2	2.97	0.52
53:CA:642:A:O2'	53:CA:643:C:C5'	2.58	0.52
1:AB:86:CYS:HG	1:AB:88:GLN:CD	2.12	0.52
22:DA:2852:G:H2'	22:DA:2853:C:O4'	2.09	0.52
22:BA:460:A:P	50:B2:41:ARG:HH12	2.31	0.52
34:BM:69:PRO:HA	34:BM:94:ALA:HB2	1.90	0.52
53:CA:1072:G:C6	53:CA:1073:U:C4	2.98	0.52
9:AJ:52:LEU:HD23	9:AJ:62:ARG:CG	2.40	0.52
22:BA:402:A:H2'	22:BA:403:U:H5'	1.92	0.52
22:BA:2199:A:H3'	22:BA:2200:C:C6	2.43	0.52
22:DA:511:U:C5'	22:DA:1235:G:H4'	2.39	0.52
46:DY:23:ARG:O	46:DY:27:ASN:HB2	2.08	0.52
16:CQ:13:SER:HB3	16:CQ:21:VAL:HB	1.91	0.52
22:DA:1008:A:H5''	31:DJ:37:ARG:HH22	1.73	0.52
22:BA:2602:A:H5''	22:BA:2603:G:C5'	2.39	0.52
49:B1:49:LYS:O	49:B1:50:GLU:HB3	2.09	0.52
22:BA:839:U:H1'	22:BA:1191:G:H1'	1.91	0.52
46:BY:40:SER:O	46:BY:42:LEU:N	2.42	0.52
22:BA:914:G:H8	22:BA:914:G:H5''	1.73	0.52
25:BD:151:THR:O	25:BD:152:PRO:C	2.44	0.52
2:AC:177:LEU:HD22	21:AA:1112:C:N4	2.23	0.52
21:AA:1349:A:H2'	21:AA:1350:A:C8	2.45	0.52
32:BK:51:LYS:HE3	32:BK:52:VAL:HG12	1.92	0.52
22:DA:2072:C:C2'	22:DA:2073:C:H5'	2.39	0.52
11:CL:89:LEU:HB3	11:CL:92:VAL:HG21	1.91	0.52
21:AA:1417:G:C6	21:AA:1482:G:C6	2.98	0.52
22:DA:1525:A:H2'	22:DA:1526:C:O4'	2.09	0.52
21:AA:393:A:H5'	21:AA:483:C:O2'	2.09	0.52
49:B1:29:LYS:HD2	49:B1:31:GLU:OE1	2.09	0.52
22:DA:661:A:H2'	22:DA:662:G:O4'	2.10	0.52
30:BI:107:GLU:O	30:BI:111:THR:HG23	2.10	0.52
41:DT:10:VAL:HG23	41:DT:11:LEU:H	1.74	0.52
22:DA:1465:G:H2'	22:DA:1466:U:H6	1.73	0.52
49:B1:3:GLY:C	49:B1:5:ARG:H	2.12	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
53:CA:665:A:H2'	53:CA:725:G:N2	2.24	0.52
22:BA:1568:G:H4'	24:BC:58:LYS:HG2	1.91	0.52
1:CB:112:ARG:O	1:CB:112:ARG:HG3	2.09	0.52
21:AA:908:A:C2	21:AA:909:A:C4	2.97	0.52
44:DW:25:PHE:O	44:DW:27:GLY:N	2.42	0.52
44:DW:28:GLU:H	44:DW:31:LEU:CD2	2.17	0.52
44:BW:39:GLN:O	44:BW:41:GLY:N	2.42	0.52
22:DA:604:G:C6	22:DA:625:G:C6	2.98	0.52
38:DQ:60:TRP:CH2	38:DQ:93:ILE:HB	2.44	0.52
21:AA:224:U:H2'	21:AA:225:C:H6	1.74	0.52
22:DA:1127:A:N7	22:DA:2488:G:O2'	2.40	0.52
22:DA:1059:G:C5	22:DA:1060:U:C2	2.98	0.52
26:DE:130:LYS:HG3	26:DE:133:LEU:HD13	1.92	0.52
5:CF:92:THR:HG22	5:CF:93:LYS:N	2.25	0.52
22:BA:1138:G:H5''	22:BA:1139:G:OP2	2.08	0.52
38:DQ:27:ARG:HA	38:DQ:33:VAL:HG12	1.91	0.52
38:BQ:114:ALA:C	38:BQ:116:LEU:H	2.13	0.52
11:CL:2:THR:CB	11:CL:5:GLN:HB2	2.35	0.52
1:CB:48:MET:O	1:CB:199:ILE:HG22	2.10	0.52
28:BG:33:THR:HA	28:BG:34:ARG:HH11	1.75	0.52
53:CA:457:G:OP2	53:CA:457:G:C8	2.62	0.52
30:BI:105:LEU:HD23	30:BI:108:ILE:HG21	1.91	0.52
15:AP:5:ARG:HD2	21:AA:376:G:H4'	1.92	0.52
29:BH:137:GLU:HG3	29:BH:138:VAL:N	2.25	0.52
1:CB:128:LEU:HB3	1:CB:131:LYS:HB3	1.91	0.52
8:AI:128:LYS:HD2	8:AI:129:ARG:H	1.74	0.52
14:CO:47:LYS:N	14:CO:47:LYS:HD2	2.24	0.52
21:AA:299:G:O2'	21:AA:300:A:H5'	2.09	0.52
36:DO:89:ASP:O	36:DO:90:VAL:HG13	2.09	0.52
42:DU:58:VAL:CG1	42:DU:60:LYS:HG2	2.39	0.52
22:BA:2297:A:O5'	22:BA:2297:A:H8	1.93	0.52
22:DA:1833:C:C4	22:DA:1834:U:C5	2.97	0.52
21:AA:1531:A:O2'	21:AA:1532:U:H5'	2.08	0.52
54:DB:75:G:H1	54:DB:102:G:N2	2.07	0.52
54:DB:75:G:H1'	43:DV:29:ILE:HG12	1.92	0.52
53:CA:356:A:H2'	53:CA:357:G:O4'	2.10	0.52
31:BJ:38:GLY:C	31:BJ:40:HIS:H	2.13	0.52
21:AA:582:C:H2'	21:AA:583:A:H8	1.74	0.52
22:DA:1649:G:C6	22:DA:2009:A:C6	2.97	0.52
17:CR:19:GLU:CD	17:CR:20:ILE:N	2.63	0.52
4:CE:89:THR:OG1	4:CE:90:GLY:N	2.39	0.52
22:DA:818:G:N7	22:DA:1187:G:C6	2.77	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:745:G:H5''	22:DA:746:U:OP2	2.10	0.52
7:AH:50:VAL:O	7:AH:50:VAL:HG13	2.10	0.52
53:CA:926:G:H3'	53:CA:1505:G:H21	1.75	0.52
22:DA:2262:U:H4'	22:DA:2328:A:C2	2.44	0.52
22:DA:2329:U:H6	22:DA:2329:U:O5'	1.93	0.52
44:DW:44:PHE:HE2	44:DW:76:ARG:NE	2.07	0.52
39:BR:49:ILE:HB	39:BR:51:VAL:O	2.09	0.52
44:BW:35:ILE:HG12	44:BW:35:ILE:O	2.09	0.52
19:AT:68:LYS:HD2	21:AA:132:C:H5''	1.91	0.52
21:AA:1336:C:HO2'	21:AA:1337:G:P	2.32	0.52
53:CA:32:A:C2	53:CA:33:A:C5	2.98	0.52
41:BT:30:ILE:HG12	41:BT:32:LEU:HD22	1.91	0.52
27:DF:32:LYS:HD2	27:DF:156:THR:HG21	1.92	0.52
27:DF:34:THR:O	27:DF:35:LEU:HB2	2.09	0.52
22:DA:2746:U:C1'	28:DG:138:GLN:HG3	2.38	0.52
22:DA:2800:A:C2'	22:DA:2801:G:H4'	2.39	0.52
13:CN:33:VAL:HG22	13:CN:40:ARG:NH2	2.25	0.52
18:CS:40:PHE:HB3	18:CS:41:PRO:CD	2.35	0.52
22:DA:2837:A:N6	22:DA:2882:A:N6	2.58	0.52
22:DA:49:A:N6	22:DA:177:G:C5	2.78	0.52
22:DA:528:A:H2	22:DA:2042:A:H2'	1.72	0.52
14:CO:38:LEU:O	14:CO:41:HIS:HB3	2.09	0.52
22:BA:1911:U:H2'	22:BA:1918:A:N1	2.25	0.52
37:BP:28:LYS:HB3	37:BP:39:LEU:HD23	1.91	0.52
53:CA:65:A:H4'	53:CA:66:A:O5'	2.10	0.52
21:AA:1225:A:H2'	21:AA:1226:C:C6	2.44	0.52
53:CA:1074:G:H2'	53:CA:1075:U:C6	2.44	0.52
22:DA:1847:A:O2'	22:DA:1848:A:H8	1.91	0.52
39:DR:68:ARG:CZ	39:DR:90:ARG:HG2	2.40	0.52
24:DC:166:ARG:HG3	24:DC:166:ARG:O	2.09	0.52
32:BK:10:VAL:HB	32:BK:16:ALA:HB1	1.92	0.52
50:B2:18:PHE:HA	50:B2:43:THR:HG21	1.92	0.52
33:DL:94:THR:O	33:DL:98:ALA:N	2.43	0.52
21:AA:1046:A:O2'	21:AA:1047:G:H5'	2.10	0.52
22:BA:2109:U:N3	22:BA:2181:U:C4	2.78	0.52
22:BA:919:U:H3'	22:BA:919:U:C6	2.45	0.52
22:DA:2447:G:N7	22:DA:2500:U:H2'	2.24	0.52
21:AA:1355:G:O2'	21:AA:1356:G:H5'	2.09	0.52
11:CL:65:TYR:HB3	11:CL:95:HIS:CD2	2.45	0.52
22:DA:1821:A:H5'	24:DC:156:SER:OG	2.10	0.52
22:DA:1945:G:H2'	22:DA:1946:U:C6	2.44	0.52
43:BV:70:ILE:O	43:BV:71:LYS:CB	2.57	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:AA:150:U:H2'	21:AA:151:A:H8	1.73	0.52
25:BD:149:ASN:CG	25:BD:150:GLN:H	2.13	0.52
19:CT:81:GLN:NE2	53:CA:258:G:H5'	2.25	0.52
21:AA:1511:G:C5	21:AA:1512:U:C5	2.98	0.52
22:DA:813:U:C2	22:DA:1195:G:N2	2.78	0.52
42:DU:85:ARG:HE	42:DU:85:ARG:HA	1.74	0.52
53:CA:137:U:O2	53:CA:227:G:C2	2.63	0.52
53:CA:325:A:N6	53:CA:326:G:C6	2.78	0.52
38:DQ:87:VAL:HG11	39:DR:52:PRO:CG	2.38	0.52
41:BT:32:LEU:O	41:BT:83:ALA:HB2	2.09	0.52
22:DA:1810:A:H3'	22:DA:1811:G:H8	1.75	0.52
22:DA:1808:A:N7	45:DX:27:ARG:NH1	2.57	0.52
31:BJ:64:VAL:O	31:BJ:65:THR:CB	2.55	0.52
53:CA:1202:U:H2'	53:CA:1203:C:C6	2.45	0.52
35:DN:73:ASN:CA	35:DN:76:VAL:HG22	2.39	0.52
26:BE:160:ALA:O	26:BE:161:ALA:HB3	2.08	0.52
25:DD:184:ARG:HH22	37:DP:6:GLN:NE2	1.99	0.52
35:DN:100:CYS:O	48:D0:41:HIS:HD2	1.93	0.52
21:AA:373:A:O2'	21:AA:374:A:H5'	2.10	0.52
27:BF:146:ASP:O	27:BF:147:ARG:HB2	2.10	0.52
27:BF:45:ASP:CB	27:BF:48:LEU:HB2	2.39	0.52
26:BE:119:ILE:O	26:BE:119:ILE:HG12	2.09	0.52
11:CL:6:LEU:HA	11:CL:9:LYS:O	2.10	0.52
22:DA:1255:U:HO2'	22:DA:1256:G:P	2.33	0.52
26:DE:108:ILE:HD13	26:DE:108:ILE:O	2.10	0.52
7:CH:28:SER:HB2	7:CH:57:GLU:O	2.09	0.52
31:DJ:74:TYR:HE2	31:DJ:103:ILE:HD11	1.73	0.52
42:DU:47:PRO:HB3	42:DU:54:PRO:HG3	1.91	0.52
51:B3:14:LYS:O	51:B3:21:PHE:O	2.27	0.52
53:CA:1001:C:H2'	53:CA:1002:G:O4'	2.08	0.52
13:CN:85:GLU:O	13:CN:89:ARG:HD3	2.09	0.52
30:BI:78:LEU:HD23	30:BI:81:LYS:HE3	1.90	0.52
22:DA:1608:A:C5	22:DA:1611:C:N4	2.77	0.52
3:CD:55:ARG:HH11	3:CD:55:ARG:HA	1.74	0.52
15:AP:5:ARG:HB2	21:AA:376:G:H5''	1.90	0.52
38:DQ:10:ARG:O	38:DQ:14:LYS:HB2	2.10	0.52
21:AA:1225:A:N3	21:AA:1225:A:C2'	2.73	0.52
18:AS:44:ILE:HA	18:AS:61:VAL:HB	1.91	0.52
22:DA:460:A:OP2	50:D2:41:ARG:NH1	2.41	0.52
22:BA:1813:G:H21	24:BC:49:THR:HG22	1.73	0.52
53:CA:951:G:H2'	53:CA:952:U:H6	1.74	0.52
22:DA:512:G:OP2	22:DA:1235:G:H5'	2.08	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:BA:1386:C:H2'	22:BA:1387:A:C8	2.44	0.52
29:DH:41:LYS:HA	29:DH:44:ILE:CG1	2.38	0.52
22:BA:322:A:H1'	22:BA:339:U:O2	2.10	0.52
26:DE:79:ARG:O	26:DE:80:SER:C	2.48	0.52
8:AI:123:ARG:HB3	21:AA:1343:G:O3'	2.10	0.52
2:CC:185:THR:HG22	2:CC:186:SER:H	1.73	0.52
53:CA:1053:G:O6	53:CA:1199:U:H2'	2.10	0.52
21:AA:1528:U:O2'	21:AA:1530:G:H5''	2.09	0.52
22:BA:892:A:H2'	22:BA:893:C:C6	2.44	0.52
21:AA:1195:C:H2'	21:AA:1197:A:H5'	1.92	0.52
53:CA:440:C:C2'	53:CA:441:A:H5'	2.40	0.52
22:BA:697:G:H2'	22:BA:698:C:C6	2.44	0.52
53:CA:425:G:H2'	53:CA:426:U:O4'	2.10	0.52
22:BA:2239:G:H5'	24:BC:248:GLY:HA3	1.91	0.52
25:DD:21:SER:O	25:DD:23:PRO:HD3	2.09	0.52
10:AK:51:PHE:HB2	10:AK:55:ARG:HB3	1.92	0.52
40:BS:68:ASP:O	40:BS:109:ASP:HB3	2.09	0.52
11:AL:65:TYR:HE1	11:AL:67:GLY:HA2	1.75	0.52
22:BA:1210:G:P	22:BA:1212:G:H5'	2.50	0.52
30:BI:75:ALA:HB3	30:BI:131:THR:HG21	1.91	0.52
9:AJ:93:ALA:O	9:AJ:96:VAL:HG23	2.10	0.52
34:BM:68:PHE:C	34:BM:68:PHE:CD2	2.83	0.52
29:BH:43:ASN:HD22	29:BH:43:ASN:N	2.08	0.52
23:BB:116:G:H4'	36:BO:54:VAL:O	2.09	0.52
7:AH:3:GLN:NE2	21:AA:586:C:O2'	2.43	0.52
11:CL:42:LYS:HG2	11:CL:43:LYS:H	1.74	0.52
22:DA:1345:C:O2'	22:DA:1346:G:O5'	2.28	0.52
53:CA:1151:A:C4	53:CA:1152:A:N7	2.78	0.52
22:DA:1275:A:C4	35:DN:16:HIS:HD2	2.28	0.52
22:DA:1031:G:O2'	52:D4:7:VAL:HG12	2.09	0.52
35:DN:38:LEU:HB3	35:DN:39:PRO:CD	2.37	0.52
4:CE:95:MET:HE1	4:CE:114:LEU:HD21	1.92	0.52
21:AA:1140:C:HO2'	21:AA:1141:C:H6	1.56	0.52
24:BC:12:ARG:CG	24:BC:12:ARG:NH1	2.61	0.52
21:AA:653:U:O2'	21:AA:654:G:H5'	2.10	0.52
36:DO:82:ALA:HB3	36:DO:115:LEU:HD11	1.90	0.52
22:DA:672:C:O2'	26:DE:77:ILE:HD11	2.10	0.52
50:D2:12:ARG:HG2	50:D2:12:ARG:O	2.09	0.52
21:AA:243:A:H2	21:AA:245:U:H2'	1.73	0.52
24:BC:15:VAL:HA	24:BC:203:VAL:CG1	2.40	0.52
51:D3:44:ARG:N	51:D3:45:PRO:HD2	2.25	0.52
3:AD:117:VAL:HG12	3:AD:130:ASN:O	2.10	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
38:DQ:10:ARG:HB2	38:DQ:10:ARG:CZ	2.40	0.52
22:BA:31:C:O3'	22:BA:1238:G:H5'	2.10	0.52
22:BA:2262:U:H4'	22:BA:2328:A:H2	1.75	0.52
22:BA:1586:A:C8	22:BA:1587:G:C8	2.98	0.52
8:AI:129:ARG:HH22	21:AA:967:C:C1'	2.22	0.52
31:BJ:97:PRO:C	31:BJ:99:ARG:H	2.12	0.52
22:BA:1998:A:OP2	25:BD:141:ARG:NH2	2.42	0.52
22:BA:2557:G:C6	22:BA:2558:C:N4	2.78	0.52
22:DA:1048:A:N3	22:DA:1049:C:N3	2.58	0.52
22:DA:184:C:H2'	22:DA:185:G:C8	2.44	0.52
33:DL:117:THR:HG22	33:DL:118:THR:N	2.23	0.52
22:DA:156:A:H2'	22:DA:157:C:O4'	2.09	0.52
6:CG:10:LYS:O	6:CG:10:LYS:HD2	2.10	0.52
19:AT:34:VAL:HG12	19:AT:38:ILE:HD11	1.90	0.52
25:DD:49:GLN:NE2	25:DD:79:LEU:HB3	2.24	0.52
21:AA:957:U:O2	21:AA:959:A:C8	2.63	0.52
22:BA:178:G:O2'	22:BA:179:C:H5'	2.09	0.52
6:AG:129:ASN:HA	6:AG:134:VAL:HG11	1.92	0.52
43:DV:27:PRO:O	43:DV:88:HIS:HA	2.09	0.52
22:DA:2477:U:O4	52:D4:10:LEU:HD22	2.10	0.52
32:BK:8:LEU:HD23	32:BK:8:LEU:N	2.25	0.52
22:BA:1116:G:H2'	22:BA:1117:C:O5'	2.09	0.52
22:BA:417:C:H2'	22:BA:418:C:H6	1.74	0.52
42:BU:5:ARG:O	42:BU:8:ASP:HB2	2.10	0.52
22:DA:2615:U:C2	48:D0:3:GLN:HA	2.45	0.52
1:AB:36:LYS:HA	1:AB:36:LYS:HE3	1.91	0.52
22:BA:859:G:H8	22:BA:859:G:OP2	1.92	0.52
33:BL:87:GLY:O	33:BL:89:VAL:N	2.42	0.52
31:BJ:39:LYS:HA	31:BJ:43:GLU:HG3	1.92	0.52
39:BR:49:ILE:HD12	39:BR:52:PRO:CA	2.21	0.52
44:BW:18:LYS:N	44:BW:36:ILE:HG12	2.25	0.52
22:BA:765:C:H2'	22:BA:766:U:H6	1.75	0.52
4:AE:147:ASN:O	4:AE:149:PRO:HD3	2.10	0.52
21:AA:202:G:H21	21:AA:466:A:N6	2.00	0.52
10:CK:126:ARG:NH2	53:CA:796:C:O3'	2.32	0.52
54:DB:44:G:H3'	27:DF:91:ARG:HE	1.74	0.52
27:DF:76:PHE:CD2	27:DF:76:PHE:N	2.70	0.52
22:DA:1057:A:N3	22:DA:1082:U:C2	2.78	0.52
32:DK:92:GLU:O	32:DK:93:GLN:O	2.28	0.52
22:DA:1328:A:H2'	22:DA:1330:C:N4	2.24	0.52
41:DT:28:ASN:HB3	41:DT:91:GLN:HE22	1.75	0.52
42:DU:92:VAL:CB	42:DU:101:THR:HG21	2.38	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
53:CA:1242:G:HO2'	53:CA:1243:C:C4'	2.22	0.52
12:CM:11:HIS:CE1	12:CM:43:LYS:HD2	2.45	0.52
22:BA:1510:G:H2'	22:BA:1511:G:C8	2.44	0.52
34:DM:42:THR:HB	34:DM:45:GLN:CG	2.39	0.52
22:DA:2816:G:O3'	35:DN:99:LYS:HE3	2.10	0.52
4:CE:28:ARG:HG2	4:CE:29:ILE:N	2.25	0.52
22:DA:2260:C:H2'	22:DA:2261:C:H6	1.75	0.52
22:BA:1654:A:H4'	25:BD:118:PHE:CZ	2.45	0.52
48:D0:12:ARG:HG3	48:D0:15:ARG:NH1	2.19	0.52
26:BE:119:ILE:HD13	26:BE:119:ILE:H	1.75	0.52
22:DA:2718:G:O3'	37:DP:95:LYS:HG3	2.10	0.52
53:CA:1004:A:H2'	53:CA:1005:A:O4'	2.10	0.52
22:BA:1799:G:C5	24:BC:175:LEU:HD23	2.44	0.52
22:DA:636:G:H5'	22:DA:639:U:OP1	2.10	0.52
1:CB:161:PHE:HA	1:CB:183:PHE:O	2.09	0.52
22:DA:241:A:H1'	22:DA:243:U:C5	2.45	0.52
3:CD:115:GLN:NE2	3:CD:153:ARG:NH2	2.58	0.52
5:CF:42:TRP:HB2	5:CF:59:TYR:CB	2.40	0.52
22:DA:513:A:C2	22:DA:514:A:C5	2.97	0.52
22:BA:2556:C:C2'	22:BA:2557:G:H5'	2.39	0.52
22:DA:1494:A:H3'	22:DA:1494:A:OP2	2.10	0.52
53:CA:1031:C:H5'	53:CA:1032:G:C5'	2.40	0.52
40:BS:59:GLU:HA	40:BS:64:ALA:CA	2.40	0.52
36:BO:3:LYS:CG	36:BO:4:LYS:H	2.23	0.52
22:DA:1157:G:H2'	22:DA:1158:C:C5	2.45	0.52
38:DQ:4:LYS:CE	38:DQ:7:VAL:H	2.22	0.52
14:CO:23:SER:O	14:CO:26:VAL:HB	2.10	0.52
25:BD:35:THR:CG2	25:BD:51:THR:HG22	2.39	0.52
42:DU:44:HIS:CD2	42:DU:57:ILE:HG21	2.42	0.52
25:DD:4:LEU:HB3	25:DD:32:ASN:HD21	1.75	0.52
31:DJ:94:ALA:O	31:DJ:95:ARG:CB	2.57	0.52
53:CA:844:G:OP2	53:CA:844:G:H3'	2.10	0.52
22:DA:2619:C:H4'	25:DD:156:PHE:O	2.10	0.52
3:CD:120:LYS:HD2	53:CA:439:U:H4'	1.92	0.52
5:CF:81:ASN:O	5:CF:83:ALA:N	2.42	0.52
29:BH:125:THR:HG23	29:BH:126:GLY:H	1.75	0.52
45:DX:69:GLU:HA	45:DX:72:ALA:HB3	1.91	0.52
22:DA:1248:G:H2'	38:DQ:1:ALA:O	2.09	0.52
53:CA:1471:U:O2'	53:CA:1472:U:H5'	2.10	0.52
25:BD:33:ARG:NH2	25:BD:74:GLU:O	2.42	0.52
41:DT:34:VAL:O	41:DT:35:ALA:HB3	2.09	0.52
31:DJ:2:LYS:NZ	31:DJ:2:LYS:HB2	2.25	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:AD:69:ARG:HE	3:AD:69:ARG:HA	1.74	0.52
38:DQ:79:ILE:C	38:DQ:79:ILE:HD13	2.29	0.52
21:AA:999:C:H2'	21:AA:1000:A:C8	2.45	0.52
53:CA:122:G:O2'	53:CA:123:U:H5'	2.10	0.52
12:CM:3:ILE:O	12:CM:4:ALA:HB2	2.10	0.52
42:BU:64:ILE:O	42:BU:64:ILE:HG23	2.10	0.52
6:AG:101:ARG:O	6:AG:105:GLU:HB3	2.10	0.52
20:CU:19:LYS:HB3	20:CU:24:LYS:HB2	1.92	0.52
22:BA:1064:C:H5'	30:BI:88:GLY:HA3	1.91	0.52
21:AA:198:G:O2'	21:AA:199:A:C5'	2.58	0.52
3:CD:77:GLU:HG3	3:CD:81:LEU:CD1	2.24	0.52
43:BV:80:HIS:CG	43:BV:81:PRO:HD2	2.44	0.52
37:DP:91:VAL:HG21	37:DP:96:LEU:HD21	1.92	0.52
53:CA:1124:G:O2'	53:CA:1125:U:C5	2.63	0.52
9:CJ:45:ARG:O	9:CJ:46:LYS:C	2.47	0.52
21:AA:182:A:C5	21:AA:194:C:N4	2.75	0.52
27:DF:92:GLY:O	27:DF:95:MET:HB3	2.09	0.52
13:AN:42:ASN:O	13:AN:44:VAL:N	2.43	0.52
22:DA:2144:G:O2'	22:DA:2147:A:OP2	2.20	0.52
42:DU:20:LYS:HD2	42:DU:38:ILE:CD1	2.40	0.52
22:DA:1731:G:C4'	22:DA:1732:C:OP1	2.56	0.52
26:DE:61:ARG:HD2	26:DE:61:ARG:O	2.10	0.52
6:CG:8:GLN:CD	6:CG:9:ARG:H	2.13	0.52
32:DK:16:ALA:HB3	32:DK:46:ALA:N	2.25	0.52
1:CB:103:TRP:O	1:CB:107:ARG:HG2	2.10	0.52
27:BF:151:LEU:C	27:BF:151:LEU:HD12	2.30	0.52
22:DA:585:G:C2'	22:DA:1254:A:H61	2.23	0.52
22:DA:946:C:O2'	22:DA:947:A:H5'	2.09	0.52
21:AA:978:A:H5'	21:AA:1224:U:O4	2.10	0.52
22:DA:1816:C:O2'	22:DA:1817:G:P	2.68	0.52
22:BA:2061:G:H5''	22:BA:2503:A:C2	2.45	0.52
37:DP:51:ASN:H	37:DP:56:SER:HB3	1.75	0.52
22:BA:96:C:H4'	46:BY:41:HIS:ND1	2.24	0.52
53:CA:513:C:H2'	53:CA:514:C:C6	2.45	0.52
22:BA:729:G:C6	24:BC:206:LYS:HB2	2.45	0.52
5:CF:43:GLY:O	5:CF:44:ARG:C	2.49	0.52
21:AA:1380:U:H5'	21:AA:1381:U:OP1	2.09	0.52
22:BA:2051:A:H4'	22:BA:2052:A:OP1	2.08	0.52
31:BJ:130:HIS:CD2	31:BJ:132:HIS:H	2.26	0.52
43:DV:40:ILE:HD13	43:DV:40:ILE:N	2.25	0.52
22:DA:1797:G:H4'	24:DC:254:LYS:O	2.09	0.52
36:BO:74:VAL:O	36:BO:78:VAL:HG22	2.10	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:AL:82:ARG:HG2	11:AL:82:ARG:NH1	2.24	0.52
7:CH:65:PHE:O	7:CH:67:GLY:N	2.38	0.52
22:BA:693:A:H2'	22:BA:694:U:O4'	2.10	0.52
47:DZ:32:GLY:C	47:DZ:34:THR:H	2.14	0.52
22:DA:1878:G:H2'	22:DA:1879:C:O4'	2.10	0.52
43:BV:25:LYS:HD3	43:BV:43:ASP:HA	1.91	0.52
22:BA:638:G:H2'	22:BA:639:U:C6	2.44	0.52
24:DC:30:ALA:HB3	24:DC:31:PRO:HD3	1.91	0.52
27:DF:19:PHE:HB3	27:DF:21:TYR:CE2	2.45	0.52
16:AQ:74:LEU:HD13	16:AQ:74:LEU:C	2.31	0.52
22:DA:1936:A:H2	22:DA:1943:U:C4	2.28	0.52
22:DA:1531:C:H2'	22:DA:1532:A:O4'	2.10	0.52
24:BC:94:LEU:HD13	24:BC:100:ARG:HH11	1.74	0.52
22:BA:875:G:C2'	22:BA:876:C:H5'	2.40	0.52
21:AA:13:U:C4	21:AA:916:U:O4	2.63	0.52
34:DM:1:MET:O	34:DM:2:LEU:O	2.28	0.52
14:CO:25:GLU:HG2	14:CO:80:LEU:HG	1.92	0.52
53:CA:189:A:H3'	53:CA:190:A:C8	2.45	0.52
53:CA:861:G:C5	53:CA:862:C:C5	2.97	0.52
3:AD:119:HIS:O	3:AD:120:LYS:C	2.47	0.52
39:BR:45:GLU:HA	39:BR:45:GLU:OE2	2.10	0.52
14:CO:83:ARG:O	14:CO:83:ARG:HG2	2.10	0.52
39:DR:6:GLN:HA	39:DR:6:GLN:HE21	1.75	0.52
33:BL:4:ASN:N	33:BL:4:ASN:HD22	2.08	0.52
36:BO:24:THR:HG22	36:BO:42:PRO:HD3	1.91	0.52
39:BR:39:LEU:HD23	39:BR:39:LEU:H	1.74	0.51
22:BA:2365:G:H2'	22:BA:2366:A:C8	2.45	0.51
28:BG:86:LEU:CD1	28:BG:132:LEU:HD21	2.39	0.51
3:CD:24:VAL:HG23	3:CD:25:ARG:HB2	1.93	0.51
22:BA:1106:G:C2	22:BA:1107:G:C8	2.99	0.51
47:BZ:29:ARG:CG	47:BZ:29:ARG:NH2	2.67	0.51
20:CU:36:PHE:HB3	20:CU:40:PRO:HD3	1.91	0.51
22:BA:1092:C:H2'	22:BA:1093:G:O4'	2.10	0.51
22:BA:1021:A:H61	22:BA:1142:A:N6	2.08	0.51
22:DA:1205:A:H5''	22:DA:1206:G:N7	2.25	0.51
18:CS:35:ARG:NH1	18:CS:76:THR:HG22	2.25	0.51
22:BA:704:G:O2'	22:BA:705:A:P	2.68	0.51
22:DA:686:U:C4	50:D2:12:ARG:HG3	2.42	0.51
53:CA:113:G:C1'	53:CA:354:G:H5'	2.39	0.51
24:BC:129:LEU:HB3	24:BC:134:ILE:HD11	1.91	0.51
13:CN:89:ARG:HG3	13:CN:91:GLU:HG3	1.92	0.51
22:DA:2104:C:O2	22:DA:2105:U:C5	2.57	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:1867:G:O6	22:DA:1875:G:N2	2.43	0.51
22:DA:1867:G:O2'	22:DA:1868:C:O4'	2.24	0.51
10:AK:76:TYR:N	10:AK:76:TYR:CD1	2.79	0.51
22:DA:1269:A:H2'	22:DA:1270:C:C6	2.46	0.51
18:AS:51:HIS:HD2	18:AS:53:GLY:H	1.55	0.51
53:CA:460:A:HO2'	53:CA:462:G:H5'	1.75	0.51
22:BA:2276:G:P	34:BM:83:GLY:O	2.68	0.51
22:DA:1259:G:H2'	22:DA:1260:A:O4'	2.10	0.51
22:DA:90:U:C4	22:DA:91:A:C5	2.98	0.51
43:DV:40:ILE:HD13	43:DV:40:ILE:H	1.75	0.51
53:CA:652:U:O2'	53:CA:653:U:P	2.66	0.51
46:BY:23:ARG:O	46:BY:24:GLU:C	2.49	0.51
36:DO:7:ARG:NH2	36:DO:29:HIS:HD2	2.09	0.51
22:BA:302:C:O2'	22:BA:303:G:C5'	2.58	0.51
22:DA:1351:C:H4'	22:DA:1572:A:O4'	2.10	0.51
22:DA:2886:A:H62	48:D0:39:ARG:HD3	1.75	0.51
53:CA:1513:A:H2'	53:CA:1514:G:H8	1.73	0.51
50:B2:12:ARG:NH2	50:B2:12:ARG:HB2	2.25	0.51
34:DM:112:LEU:O	34:DM:112:LEU:HD13	2.10	0.51
22:DA:1980:G:O2'	22:DA:1982:U:OP2	2.21	0.51
22:BA:1016:G:C2'	22:BA:1017:G:O5'	2.59	0.51
22:DA:819:A:OP2	22:DA:1187:G:N2	2.44	0.51
53:CA:711:G:O2'	53:CA:712:A:H5'	2.10	0.51
22:DA:1349:C:H2'	22:DA:1350:C:C5	2.45	0.51
22:BA:483:A:O2'	42:BU:56:GLY:HA2	2.09	0.51
22:BA:1206:G:H2'	22:BA:1207:C:C6	2.44	0.51
21:AA:692:U:O2	21:AA:694:A:C8	2.63	0.51
22:DA:927:A:H2'	22:DA:928:A:C8	2.45	0.51
25:BD:4:LEU:HD23	25:BD:29:VAL:HG11	1.90	0.51
22:DA:1998:A:H2'	22:DA:1999:C:C6	2.45	0.51
39:DR:10:LYS:N	39:DR:10:LYS:HD2	2.25	0.51
53:CA:1183:U:C3'	53:CA:1184:G:H5''	2.34	0.51
53:CA:763:G:H2'	53:CA:764:C:H6	1.75	0.51
20:CU:35:GLU:CG	20:CU:36:PHE:N	2.72	0.51
53:CA:89:U:O2'	53:CA:90:C:O4'	2.20	0.51
1:AB:187:ASP:HB2	1:AB:203:ASP:CB	2.39	0.51
2:AC:192:TYR:HB3	21:AA:532:A:N7	2.25	0.51
49:B1:33:LEU:H	49:B1:51:ALA:CB	2.23	0.51
53:CA:557:G:C6	53:CA:558:G:C2	2.98	0.51
3:CD:62:ARG:CA	3:CD:62:ARG:HE	2.23	0.51
24:DC:128:THR:C	24:DC:129:LEU:HD23	2.29	0.51
15:AP:10:GLY:O	15:AP:11:ALA:HB2	2.10	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:BA:1402:U:H2'	22:BA:1403:A:O5'	2.10	0.51
6:CG:75:LYS:HG3	6:CG:76:SER:N	2.25	0.51
24:BC:268:ARG:HB3	24:BC:268:ARG:HH11	1.74	0.51
40:BS:66:ILE:HA	40:BS:69:LEU:HD22	1.90	0.51
29:DH:68:ARG:CG	29:DH:71:LYS:HD3	2.39	0.51
22:BA:1997:C:O2'	22:BA:1998:A:H5'	2.11	0.51
53:CA:174:A:H2'	53:CA:175:C:H6	1.75	0.51
53:CA:216:U:H2'	53:CA:217:C:C6	2.44	0.51
24:DC:94:LEU:HD13	24:DC:100:ARG:HD3	1.92	0.51
42:BU:91:LYS:O	42:BU:92:VAL:HB	2.10	0.51
37:DP:24:THR:HA	37:DP:44:GLY:O	2.09	0.51
27:BF:46:LYS:H	27:BF:46:LYS:CD	2.23	0.51
22:BA:2773:C:OP1	25:BD:171:THR:CG2	2.58	0.51
22:DA:2581:G:H2'	22:DA:2610:C:N4	2.25	0.51
6:AG:49:LEU:CD1	6:AG:60:ALA:HB1	2.40	0.51
12:CM:106:ARG:HA	12:CM:110:GLY:O	2.10	0.51
27:DF:60:SER:C	27:DF:62:GLN:H	2.13	0.51
22:BA:2516:A:O2'	22:BA:2517:C:H5'	2.10	0.51
53:CA:1405:G:H1'	53:CA:1518:A:O2'	2.10	0.51
1:AB:61:SER:C	1:AB:63:LYS:H	2.13	0.51
22:DA:736:C:O5'	22:DA:736:C:H6	1.93	0.51
38:DQ:77:LYS:CE	38:DQ:116:LEU:HD11	2.40	0.51
30:DI:61:TYR:HE2	30:DI:67:THR:H	1.56	0.51
21:AA:1405:G:O4'	21:AA:1519:A:H4'	2.10	0.51
27:DF:169:LEU:HB3	27:DF:174:PHE:HB2	1.92	0.51
22:BA:2378:A:N7	22:BA:2379:G:H1'	2.25	0.51
33:BL:93:ASN:O	33:BL:95:LEU:N	2.42	0.51
54:DB:19:C:H2'	54:DB:20:G:H8	1.73	0.51
38:DQ:87:VAL:HG12	38:DQ:88:GLU:N	2.24	0.51
22:BA:1078:U:H4'	22:BA:1079:C:C6	2.45	0.51
22:BA:1079:C:C4	22:BA:1088:A:C2	2.98	0.51
16:AQ:45:VAL:HG13	16:AQ:72:TRP:O	2.10	0.51
6:CG:74:VAL:HG13	6:CG:140:VAL:CG1	2.29	0.51
7:CH:85:TYR:CD1	53:CA:598:U:H4'	2.45	0.51
1:CB:80:LYS:HB3	1:CB:90:PHE:CE2	2.45	0.51
1:AB:15:PHE:HD1	1:AB:16:GLY:N	2.09	0.51
22:DA:1429:G:O2'	22:DA:1430:G:C8	2.44	0.51
22:DA:274:C:H2'	22:DA:275:C:O4'	2.10	0.51
1:CB:160:LEU:HD22	1:CB:175:ALA:HB2	1.91	0.51
3:AD:37:PRO:HD2	3:AD:41:GLY:CA	2.41	0.51
40:BS:96:ILE:CG1	40:BS:96:ILE:O	2.56	0.51
30:BI:33:ASN:HB3	30:BI:36:GLU:CB	2.38	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
33:DL:79:LEU:HD22	33:DL:115:GLU:O	2.10	0.51
47:BZ:52:PHE:CE2	47:BZ:53:MET:HG2	2.45	0.51
53:CA:1190:G:HO2'	53:CA:1191:A:P	2.33	0.51
25:DD:107:VAL:CG1	25:DD:109:VAL:HG23	2.39	0.51
21:AA:1227:A:HO2'	21:AA:1228:C:P	2.32	0.51
22:BA:195:A:N7	57:BA:3766:HOH:O	2.33	0.51
21:AA:32:A:H2'	21:AA:33:A:H8	1.68	0.51
1:AB:71:THR:HG22	1:AB:72:LYS:N	2.21	0.51
29:DH:120:GLY:O	29:DH:121:VAL:HB	2.10	0.51
22:BA:1653:G:H1	35:BN:11:ASN:ND2	2.08	0.51
19:CT:3:ILE:O	19:CT:4:LYS:HG2	2.09	0.51
22:DA:2015:A:C6	48:D0:2:VAL:HG11	2.45	0.51
22:DA:2267:A:N6	22:DA:2271:G:O6	2.44	0.51
15:AP:54:LEU:HD12	15:AP:54:LEU:H	1.75	0.51
21:AA:251:G:N1	21:AA:266:G:O6	2.43	0.51
22:DA:1048:A:N6	22:DA:1111:A:C4	2.78	0.51
22:BA:827:U:H2'	22:BA:2068:U:C2	2.45	0.51
22:BA:1941:C:H5'	22:BA:1941:C:H6	1.74	0.51
21:AA:1261:A:N3	21:AA:1275:A:C6	2.79	0.51
39:BR:68:ARG:HH11	39:BR:90:ARG:HH11	1.57	0.51
22:BA:817:C:O2'	22:BA:839:U:H5''	2.10	0.51
22:BA:2682:A:C8	25:BD:11:MET:HG3	2.44	0.51
7:CH:93:LYS:H	7:CH:93:LYS:HD3	1.74	0.51
10:CK:117:HIS:CD2	53:CA:718:A:C5	2.99	0.51
16:CQ:58:VAL:HB	16:CQ:74:LEU:HD11	1.91	0.51
9:AJ:7:ARG:HD3	9:AJ:75:ASP:OD1	2.10	0.51
3:AD:151:GLN:H	3:AD:154:VAL:HG13	1.74	0.51
22:BA:1814:G:H2'	22:BA:1815:A:C8	2.45	0.51
22:BA:2395:C:H2'	22:BA:2396:G:O4'	2.11	0.51
1:CB:169:HIS:HD2	1:CB:173:LYS:NZ	2.09	0.51
22:BA:1485:U:C2	22:BA:1505:A:C2	2.99	0.51
32:DK:28:SER:O	32:DK:29:HIS:CB	2.59	0.51
22:BA:2512:C:H2'	22:BA:2513:A:O4'	2.10	0.51
13:AN:56:PRO:HA	13:AN:59:GLN:HE22	1.75	0.51
26:DE:16:GLU:O	26:DE:16:GLU:HG3	2.10	0.51
7:CH:89:ASP:N	7:CH:89:ASP:OD1	2.44	0.51
22:BA:2822:G:P	25:BD:115:GLY:HA3	2.50	0.51
38:BQ:63:ARG:HH22	38:BQ:96:ASP:CB	2.23	0.51
44:BW:50:VAL:HB	44:BW:61:LYS:NZ	2.25	0.51
28:BG:95:ALA:HB2	28:BG:104:LEU:HD23	1.92	0.51
3:CD:26:ALA:HA	3:CD:31:CYS:SG	2.50	0.51
19:AT:27:MET:HE1	19:AT:57:VAL:CG2	2.27	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
32:DK:76:VAL:HB	37:DP:72:VAL:HG22	1.91	0.51
9:CJ:44:THR:OG1	9:CJ:70:HIS:CE1	2.64	0.51
22:DA:1277:G:H5'	35:DN:20:MET:CE	2.40	0.51
22:DA:2209:G:C5	22:DA:2210:U:C4	2.99	0.51
54:DB:42:C:H5	27:DF:65:LEU:HD13	1.74	0.51
22:DA:1207:C:H2'	22:DA:1208:C:H6	1.75	0.51
22:DA:396:G:O2'	22:DA:397:U:C5'	2.58	0.51
25:DD:28:GLU:OE2	25:DD:30:GLU:HG3	2.11	0.51
53:CA:97:G:C6	53:CA:98:A:H1'	2.45	0.51
27:BF:131:VAL:HG22	27:BF:151:LEU:H	1.75	0.51
27:BF:40:GLY:C	27:BF:84:ILE:HD11	2.31	0.51
27:DF:45:ASP:C	27:DF:47:LYS:H	2.12	0.51
6:AG:69:ARG:HG3	6:AG:95:ARG:CG	2.36	0.51
21:AA:1160:G:O2'	21:AA:1161:C:O5'	2.27	0.51
22:BA:1867:G:O2'	22:BA:1868:C:H5'	2.10	0.51
53:CA:1026:G:H22	53:CA:1036:A:H61	1.58	0.51
20:AU:4:LYS:O	20:AU:4:LYS:HD2	2.10	0.51
1:CB:52:ALA:O	1:CB:56:LEU:HB2	2.11	0.51
24:DC:119:VAL:HG13	24:DC:133:ASN:HD21	1.75	0.51
45:DX:67:LEU:O	45:DX:77:TYR:OH	2.28	0.51
1:AB:72:LYS:O	1:AB:74:ALA:N	2.41	0.51
4:AE:14:LEU:CB	4:AE:36:THR:HG22	2.38	0.51
29:BH:18:GLN:HE21	29:BH:18:GLN:CA	2.21	0.51
8:AI:128:LYS:CD	8:AI:129:ARG:H	2.24	0.51
18:CS:11:ASP:H	18:CS:14:LEU:HD21	1.75	0.51
21:AA:1411:C:H2'	21:AA:1412:C:H5'	1.92	0.51
53:CA:461:A:O5'	53:CA:462:G:OP2	2.27	0.51
53:CA:914:A:H2'	53:CA:915:A:H8	1.75	0.51
31:BJ:132:HIS:HB3	31:BJ:135:GLN:HG2	1.93	0.51
26:DE:79:ARG:CG	26:DE:80:SER:H	2.22	0.51
21:AA:1293:C:H2'	21:AA:1294:G:C8	2.46	0.51
3:CD:72:ARG:HA	3:CD:203:TYR:HE1	1.75	0.51
21:AA:664:G:H22	21:AA:741:G:H1	1.56	0.51
29:BH:75:LEU:HD22	29:BH:143:ILE:HG12	1.92	0.51
10:AK:80:ASN:HB3	10:AK:105:ARG:HB3	1.92	0.51
14:AO:9:LYS:NZ	14:AO:9:LYS:HB3	2.25	0.51
22:BA:81:G:C2	22:BA:106:C:C2	2.99	0.51
22:DA:1925:C:H3'	22:DA:1925:C:H6	1.75	0.51
3:CD:69:ARG:HG3	3:CD:69:ARG:HH11	1.75	0.51
44:BW:18:LYS:HG3	44:BW:19:ARG:N	2.26	0.51
24:BC:247:TRP:C	24:BC:249:VAL:H	2.14	0.51
19:AT:68:LYS:HB3	19:AT:69:ASN:OD1	2.11	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:442:G:C6	22:DA:444:C:N4	2.79	0.51
22:BA:1337:G:O2'	22:BA:1338:G:H5'	2.10	0.51
41:BT:40:LYS:N	41:BT:43:ILE:HG23	2.24	0.51
54:DB:40:U:O2'	54:DB:45:A:N6	2.43	0.51
25:BD:12:THR:CG2	25:BD:13:ARG:N	2.73	0.51
22:DA:1287:A:OP1	35:DN:103:ARG:HG3	2.11	0.51
34:DM:41:LEU:HD11	34:DM:126:ILE:HD11	1.91	0.51
4:CE:95:MET:HB3	4:CE:124:ALA:HB2	1.91	0.51
33:DL:92:LEU:CD2	33:DL:124:GLY:HA3	2.41	0.51
1:AB:66:ILE:HG13	1:AB:220:VAL:HG11	1.92	0.51
37:BP:24:THR:CG2	37:BP:86:LYS:HB2	2.41	0.51
21:AA:1287:A:C2'	21:AA:1288:A:C8	2.89	0.51
22:DA:272:A:O2'	22:DA:273:G:C8	2.61	0.51
20:AU:48:LYS:HE2	21:AA:723:U:H5'	1.93	0.51
22:BA:754:U:H2'	22:BA:755:U:C6	2.45	0.51
30:BI:100:ILE:HG22	30:BI:101:SER:N	2.23	0.51
53:CA:1098:C:H2'	53:CA:1099:G:O4'	2.10	0.51
29:BH:45:GLU:O	29:BH:49:ALA:N	2.39	0.51
22:DA:373:U:O2	22:DA:374:A:C8	2.63	0.51
22:BA:96:C:O2'	22:BA:97:C:H5'	2.11	0.51
18:CS:13:HIS:O	18:CS:17:LYS:HG2	2.10	0.51
21:AA:519:C:O2'	21:AA:520:A:H5'	2.09	0.51
6:CG:75:LYS:CE	6:CG:76:SER:H	2.24	0.51
25:DD:34:VAL:CG1	25:DD:48:ILE:HD11	2.39	0.51
22:BA:137:U:O2'	22:BA:138:U:P	2.68	0.51
32:DK:2:ILE:HD11	32:DK:65:THR:HG22	1.92	0.51
22:DA:2626:C:O2'	22:DA:2627:G:H5'	2.09	0.51
26:DE:105:LEU:HD23	26:DE:177:PRO:HG3	1.92	0.51
41:BT:5:GLU:OE1	46:BY:18:LEU:HD11	2.11	0.51
36:DO:26:LEU:HD23	36:DO:92:PHE:HE1	1.73	0.51
22:DA:612:G:N2	22:DA:614:A:O2'	2.43	0.51
12:CM:69:ARG:HA	12:CM:72:ILE:CG2	2.41	0.51
22:BA:1185:G:H5''	22:BA:1186:G:OP2	2.10	0.51
12:CM:36:ALA:HB3	12:CM:55:LEU:HD11	1.93	0.51
21:AA:1258:G:O2'	21:AA:1259:C:H5'	2.11	0.51
46:BY:2:LYS:HG3	46:BY:52:ARG:HD3	1.92	0.51
49:B1:10:LEU:O	49:B1:19:PHE:HB2	2.11	0.51
24:BC:181:ARG:NH2	24:BC:265:PHE:HB3	2.25	0.51
2:CC:29:ALA:HB1	13:CN:64:ARG:NH1	2.26	0.51
42:BU:44:HIS:O	42:BU:45:GLN:C	2.49	0.51
53:CA:392:C:H2'	53:CA:393:A:H8	1.76	0.51
38:DQ:71:ASN:HD21	38:DQ:106:THR:HG23	1.74	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:BJ:95:ARG:O	31:BJ:95:ARG:HG3	2.10	0.51
29:DH:12:LEU:HD12	29:DH:12:LEU:O	2.10	0.51
40:DS:49:LYS:HB3	40:DS:49:LYS:NZ	2.25	0.51
22:BA:1360:G:P	57:BA:3623:HOH:O	2.68	0.51
22:DA:1439:A:H3'	22:DA:1439:A:C8	2.46	0.51
21:AA:587:G:C2	21:AA:755:G:C5	2.99	0.51
22:BA:923:G:H4'	44:BW:25:PHE:CZ	2.44	0.51
30:BI:89:SER:OG	30:BI:135:MET:HA	2.11	0.51
22:DA:1338:G:H5''	41:DT:17:SER:HB3	1.92	0.51
22:DA:1395:A:H4'	22:DA:1397:U:C5	2.45	0.51
41:DT:39:THR:CG2	41:DT:42:GLU:HB2	2.28	0.51
41:DT:38:ALA:HB1	41:DT:81:LYS:NZ	2.26	0.51
10:AK:124:LYS:HE2	20:AU:33:ARG:HH21	1.73	0.51
41:BT:40:LYS:HA	41:BT:43:ILE:HG23	1.91	0.51
22:DA:2314:A:C2	22:DA:2315:G:C5	2.99	0.51
1:AB:9:LEU:HB2	1:AB:42:LEU:HD13	1.92	0.51
34:DM:19:GLY:N	34:DM:38:ARG:NH2	2.57	0.51
22:DA:82:U:H5''	22:DA:296:U:H5''	1.92	0.51
22:DA:804:A:H2'	22:DA:806:C:N4	2.25	0.51
27:BF:134:GLN:NE2	27:BF:150:GLY:H	2.09	0.51
22:DA:2056:G:H2'	22:DA:2056:G:N3	2.25	0.51
22:DA:1255:U:O2'	22:DA:1256:G:OP1	2.25	0.51
24:DC:179:GLU:HA	24:DC:269:ARG:O	2.11	0.51
28:BG:29:ASN:CG	28:BG:30:GLY:N	2.63	0.51
22:DA:1587:G:N2	22:DA:1588:G:H1'	2.26	0.51
22:DA:2654:A:N6	22:DA:2667:C:N4	2.58	0.51
28:DG:8:VAL:HG11	28:DG:49:LEU:HD23	1.92	0.51
28:DG:104:LEU:HG	28:DG:112:VAL:HG21	1.92	0.51
22:BA:137:U:OP2	22:BA:137:U:C5	2.63	0.51
22:BA:632:A:H2'	22:BA:633:A:C8	2.46	0.51
22:BA:580:U:O3'	38:BQ:30:VAL:HG13	2.10	0.51
27:BF:7:TYR:O	27:BF:10:GLU:O	2.29	0.51
53:CA:682:G:H2'	53:CA:683:G:H8	1.76	0.51
21:AA:1253:G:N1	21:AA:1285:A:N6	2.58	0.51
14:CO:16:ARG:HB2	14:CO:23:SER:CB	2.39	0.51
22:BA:2210:U:C2	22:BA:2212:A:N7	2.79	0.51
10:AK:43:TRP:CZ3	10:AK:45:THR:HG23	2.46	0.51
26:BE:54:GLY:HA3	26:BE:74:LYS:HE2	1.92	0.51
31:DJ:116:ARG:HG3	31:DJ:120:ARG:NH2	2.25	0.51
22:BA:645:C:O2'	22:BA:646:U:H5''	2.10	0.51
45:BX:32:LEU:O	45:BX:33:HIS:CD2	2.64	0.51
45:BX:32:LEU:O	45:BX:33:HIS:CG	2.64	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:BA:686:U:O4	50:B2:12:ARG:HB2	2.11	0.51
17:AR:44:THR:OG1	17:AR:46:THR:HG22	2.11	0.51
21:AA:1183:U:H3'	21:AA:1184:G:H5''	1.93	0.51
50:D2:1:MET:HG3	50:D2:2:LYS:N	2.26	0.51
24:BC:239:PHE:O	24:BC:241:LYS:HG2	2.11	0.51
22:DA:2537:U:H2'	22:DA:2538:C:C6	2.44	0.51
28:BG:126:THR:HG22	28:BG:127:GLN:H	1.75	0.51
36:DO:108:ASP:C	36:DO:110:ALA:H	2.13	0.51
37:DP:64:SER:O	37:DP:66:GLY:N	2.43	0.51
24:BC:199:HIS:O	24:BC:202:ARG:HG3	2.10	0.51
19:CT:54:GLN:N	19:CT:55:PRO:HD2	2.26	0.51
26:BE:73:ILE:HG12	26:BE:73:ILE:O	2.11	0.51
47:BZ:5:LYS:H	47:BZ:5:LYS:HD2	1.76	0.51
49:D1:47:ILE:N	49:D1:47:ILE:HD12	2.26	0.51
21:AA:804:U:H5''	21:AA:805:C:OP2	2.10	0.51
22:BA:1692:U:H2'	22:BA:1694:C:C5	2.44	0.51
21:AA:1171:A:C2	21:AA:1172:C:C2	2.99	0.51
11:CL:71:HIS:ND1	11:CL:73:LEU:N	2.58	0.51
22:DA:2286:G:O6	49:D1:22:THR:HG21	2.11	0.51
39:BR:54:VAL:O	39:BR:55:ASP:C	2.48	0.51
20:CU:24:LYS:CG	20:CU:25:ALA:N	2.60	0.51
22:DA:2135:A:C8	22:DA:2135:A:OP2	2.57	0.51
22:DA:2136:G:C2'	22:DA:2137:U:C6	2.91	0.51
5:AF:91:ARG:HG3	5:AF:92:THR:N	2.21	0.51
20:AU:10:PRO:O	20:AU:11:PHE:CB	2.55	0.51
20:AU:8:ASN:N	20:AU:8:ASN:HD22	2.09	0.51
22:DA:1394:U:H4'	22:DA:1603:A:H4'	1.92	0.51
4:AE:155:LYS:HA	4:AE:158:LYS:HZ2	1.70	0.51
38:DQ:57:ARG:O	38:DQ:61:ILE:HD13	2.11	0.51
6:CG:59:GLU:HB2	6:CG:62:GLU:HB2	1.91	0.51
17:CR:63:TYR:CE2	53:CA:734:G:N2	2.78	0.51
34:BM:126:ILE:O	34:BM:126:ILE:HD12	2.11	0.51
37:DP:88:ARG:NH1	37:DP:112:ARG:NH2	2.56	0.51
22:DA:1062:G:OP1	22:DA:1070:A:H4'	2.11	0.51
22:DA:1334:G:H2'	22:DA:1335:C:O4'	2.10	0.51
1:AB:165:ALA:CB	1:AB:186:VAL:HG12	2.41	0.51
22:DA:70:G:O2'	22:DA:71:A:H5'	2.10	0.51
22:DA:1203:U:N3	22:DA:1204:A:N6	2.59	0.51
13:CN:33:VAL:HB	53:CA:1272:G:H5'	1.93	0.51
25:DD:184:ARG:NH2	37:DP:6:GLN:HE21	1.99	0.51
21:AA:1055:A:C6	21:AA:1206:G:C5	2.99	0.51
27:DF:41:GLU:O	27:DF:43:ILE:N	2.44	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:663:G:O6	22:DA:664:G:C6	2.63	0.51
22:DA:1815:A:H1'	22:DA:1817:G:C8	2.46	0.51
22:BA:973:A:O4'	22:BA:1188:U:C6	2.63	0.51
22:DA:639:U:H2'	22:DA:640:C:C6	2.45	0.51
10:AK:13:LYS:O	10:AK:14:GLN:HB3	2.09	0.51
3:CD:144:ILE:CD1	3:CD:154:VAL:HG21	2.41	0.51
22:DA:1738:G:O2'	22:DA:1739:A:C8	2.55	0.51
3:AD:129:VAL:HG13	3:AD:131:ILE:CD1	2.39	0.51
22:BA:1695:G:H2'	22:BA:1696:G:O4'	2.11	0.51
41:DT:4:GLU:HG3	41:DT:6:ARG:NH2	2.26	0.51
27:BF:4:HIS:O	27:BF:7:TYR:HB3	2.11	0.51
3:CD:148:ALA:HB1	3:CD:151:GLN:NE2	2.26	0.51
43:DV:30:ILE:HD12	43:DV:38:LEU:HD23	1.93	0.51
22:BA:216:A:H2'	22:BA:217:A:H8	1.75	0.51
31:BJ:40:HIS:H	31:BJ:40:HIS:HD2	1.58	0.51
27:BF:46:LYS:HD2	27:BF:46:LYS:N	2.25	0.51
5:AF:81:ASN:HB3	5:AF:84:VAL:CG1	2.41	0.51
26:DE:158:PHE:HA	26:DE:169:VAL:HG11	1.93	0.51
6:CG:41:ILE:HG21	6:CG:115:MET:HE2	1.92	0.51
3:AD:151:GLN:O	3:AD:152:SER:C	2.49	0.51
41:DT:34:VAL:O	41:DT:34:VAL:HG12	2.10	0.51
49:D1:46:VAL:HG22	49:D1:47:ILE:H	1.75	0.51
22:BA:2678:C:H2'	22:BA:2679:A:O4'	2.11	0.51
22:BA:2873:A:H5''	22:BA:2874:C:OP2	2.10	0.51
22:BA:1411:U:C4	22:BA:1412:U:C4	2.99	0.51
8:CI:70:GLY:O	8:CI:73:GLY:N	2.42	0.51
53:CA:223:A:C6	53:CA:224:U:C4	2.99	0.51
42:DU:7:ASP:O	42:DU:8:ASP:HB2	2.10	0.51
21:AA:1428:A:H2'	21:AA:1429:A:O4'	2.11	0.51
30:BI:135:MET:HG2	30:BI:137:LEU:HG	1.92	0.51
22:DA:1342:A:C5	22:DA:1345:C:N4	2.79	0.51
16:AQ:14:ASP:HA	16:AQ:20:ILE:HD11	1.92	0.51
7:AH:45:ILE:HA	7:AH:63:LYS:HG3	1.93	0.51
36:BO:31:THR:HG22	36:BO:34:HIS:O	2.10	0.51
53:CA:1251:A:H2	53:CA:1369:C:O2	1.94	0.51
22:DA:2645:G:H4'	22:DA:2732:G:H2'	1.91	0.51
1:AB:186:VAL:N	1:AB:199:ILE:O	2.39	0.51
24:DC:146:LYS:HB2	24:DC:149:LYS:CB	2.36	0.51
22:DA:2681:C:H4'	22:DA:2682:A:O5'	2.10	0.51
22:BA:1019:U:O4	22:BA:1020:A:N6	2.44	0.51
22:DA:323:C:H2'	26:DE:163:ASN:CG	2.31	0.51
26:DE:69:ARG:O	26:DE:70:SER:HB3	2.10	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
37:BP:85:VAL:CG1	37:BP:86:LYS:H	2.23	0.51
50:D2:19:ARG:HH21	50:D2:19:ARG:CB	2.21	0.51
22:DA:590:A:C5	22:DA:591:U:C5	2.99	0.51
11:CL:7:VAL:O	11:CL:8:ARG:HB2	2.09	0.51
31:DJ:73:VAL:HG23	31:DJ:74:TYR:N	2.26	0.51
22:DA:1814:G:N1	22:DA:1815:A:N6	2.58	0.51
22:DA:1993:U:H4'	25:DD:133:THR:CG2	2.40	0.51
53:CA:1026:G:N2	53:CA:1036:A:H61	2.09	0.51
51:D3:41:ARG:NH2	51:D3:41:ARG:CG	2.73	0.51
22:DA:374:A:C6	22:DA:401:A:C8	2.99	0.51
22:DA:1737:G:C5	22:DA:1738:G:C6	2.99	0.51
53:CA:940:C:H2'	53:CA:941:G:O4'	2.10	0.51
22:DA:108:G:H2'	22:DA:109:C:C6	2.46	0.51
36:BO:4:LYS:O	36:BO:8:ILE:HG13	2.11	0.51
22:BA:1859:U:H2'	22:BA:1860:G:C8	2.43	0.51
22:BA:284:U:H2'	22:BA:285:G:C8	2.44	0.51
22:DA:1000:A:N1	22:DA:1001:A:C2	2.79	0.51
53:CA:936:C:H2'	53:CA:937:A:H8	1.75	0.51
22:DA:2688:G:H1'	22:DA:2721:A:H61	1.75	0.51
22:BA:181:A:H1'	22:BA:435:C:H5'	1.92	0.51
43:DV:44:HIS:CD2	43:DV:85:LYS:HB2	2.46	0.51
27:DF:36:ASN:O	27:DF:37:MET:CB	2.59	0.51
13:CN:13:VAL:HA	13:CN:59:GLN:NE2	2.26	0.51
22:DA:1941:C:H2'	22:DA:1942:C:C6	2.45	0.51
12:CM:28:ARG:HA	12:CM:31:ALA:HB3	1.92	0.51
7:AH:28:SER:HB2	7:AH:58:LEU:HB2	1.92	0.51
14:CO:40:GLY:O	14:CO:43:ALA:HB3	2.11	0.51
37:BP:8:GLU:HB3	37:BP:54:LEU:HD22	1.93	0.51
37:BP:64:SER:O	37:BP:65:ASN:C	2.48	0.51
17:AR:70:THR:OG1	17:AR:72:ARG:HG2	2.11	0.51
2:AC:150:VAL:HG12	2:AC:199:VAL:HB	1.93	0.51
22:BA:384:A:H2'	22:BA:385:C:H5'	1.93	0.51
22:BA:78:U:H2'	22:BA:79:C:C6	2.45	0.51
28:DG:139:VAL:HA	28:DG:142:GLN:HB3	1.92	0.51
22:DA:1652:A:H3'	22:DA:1653:G:C8	2.46	0.51
22:BA:1405:U:H2'	22:BA:1406:U:C6	2.46	0.51
53:CA:1400:C:H4'	53:CA:1401:G:OP2	2.11	0.51
4:AE:152:VAL:O	4:AE:155:LYS:HD2	2.10	0.51
53:CA:733:G:O2'	53:CA:734:G:H5'	2.11	0.51
35:DN:12:ARG:HA	35:DN:12:ARG:NE	2.26	0.51
22:DA:1021:A:C2'	22:DA:1022:G:H4'	2.40	0.51
53:CA:93:U:H2'	53:CA:95:C:H5	1.75	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
53:CA:974:A:O2'	53:CA:975:A:OP2	2.29	0.51
53:CA:1296:C:C5	53:CA:1297:G:N2	2.79	0.51
22:BA:1510:G:O2'	22:BA:1511:G:H5'	2.11	0.51
53:CA:1129:C:O2'	53:CA:1130:A:H8	1.89	0.51
53:CA:988:G:H2'	53:CA:989:U:O4'	2.11	0.51
21:AA:1282:C:H2'	21:AA:1283:U:C6	2.46	0.51
27:BF:84:ILE:HG13	27:BF:84:ILE:O	2.10	0.51
3:AD:173:ASP:O	3:AD:174:ALA:CB	2.59	0.51
18:AS:35:ARG:NH1	21:AA:1320:C:N3	2.59	0.51
18:AS:36:ARG:HG2	21:AA:1320:C:H41	1.76	0.51
31:DJ:84:ILE:HG23	31:DJ:84:ILE:O	2.11	0.51
11:AL:43:LYS:NZ	11:AL:44:PRO:HD2	2.26	0.51
26:DE:149:ILE:O	26:DE:149:ILE:HG12	2.11	0.51
22:DA:636:G:H3'	33:DL:128:THR:HG21	1.92	0.51
47:DZ:40:THR:N	47:DZ:43:ILE:HD11	2.25	0.51
22:BA:1819:A:OP1	24:BC:159:THR:HG21	2.10	0.51
22:DA:2628:C:O2'	22:DA:2781:A:H2'	2.11	0.51
22:DA:1049:C:HO2'	22:DA:1050:A:C5'	2.23	0.51
22:BA:1378:A:O2'	22:BA:1379:U:H3'	2.09	0.51
22:BA:1707:G:H2'	22:BA:1708:C:H6	1.75	0.51
22:DA:2035:G:H5''	22:DA:2036:C:H5	1.76	0.51
26:BE:44:ARG:CG	26:BE:44:ARG:HH21	2.24	0.51
2:CC:120:THR:CG2	2:CC:120:THR:O	2.58	0.51
45:DX:19:HIS:O	45:DX:20:ALA:HB3	2.11	0.51
22:DA:64:A:H8	22:DA:64:A:O5'	1.94	0.51
22:BA:2210:U:H4'	22:BA:2211:A:H5'	1.92	0.51
26:DE:115:GLN:O	26:DE:117:ARG:N	2.44	0.51
22:DA:2582:G:H2'	22:DA:2582:G:N3	2.26	0.51
37:BP:92:ARG:O	37:BP:93:LYS:HB2	2.11	0.51
9:AJ:67:ILE:HG13	13:AN:95:LEU:HD13	1.92	0.51
28:DG:22:VAL:HG12	28:DG:23:ILE:H	1.76	0.51
21:AA:1477:U:H2'	21:AA:1478:U:C6	2.45	0.51
35:DN:78:LYS:O	35:DN:82:GLU:HB3	2.10	0.51
21:AA:1136:C:H5''	21:AA:1137:C:OP2	2.11	0.51
32:DK:57:VAL:HG13	32:DK:57:VAL:O	2.10	0.51
39:DR:78:ARG:HB3	39:DR:83:TYR:CD1	2.45	0.51
14:CO:21:THR:HG21	53:CA:658:C:H1'	1.93	0.51
32:DK:14:SER:OG	32:DK:51:LYS:N	2.43	0.51
27:BF:129:MET:HG3	27:BF:153:ILE:HD12	1.93	0.51
22:DA:834:G:H2'	22:DA:835:C:O4'	2.10	0.51
44:BW:17:ALA:O	44:BW:18:LYS:CB	2.59	0.51
22:DA:1998:A:H2'	22:DA:1999:C:H6	1.75	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:DJ:45:THR:OG1	31:DJ:48:VAL:HB	2.10	0.51
43:BV:80:HIS:CD2	43:BV:83:LYS:N	2.67	0.51
41:BT:34:VAL:HG21	41:BT:43:ILE:HD12	1.92	0.51
35:DN:37:THR:HG22	35:DN:39:PRO:CD	2.29	0.51
22:DA:2305:U:H4'	27:DF:132:ARG:CG	2.41	0.51
22:BA:2134:A:O2'	22:BA:2135:A:C8	2.58	0.51
7:CH:102:VAL:HG23	7:CH:125:ILE:HD12	1.93	0.51
53:CA:962:C:N4	53:CA:974:A:H61	2.08	0.51
13:CN:68:ARG:NH1	13:CN:80:ARG:HH12	2.09	0.51
4:AE:121:ASN:N	4:AE:121:ASN:HD22	2.08	0.51
35:DN:55:ALA:HA	35:DN:80:PHE:CE1	2.45	0.51
25:DD:28:GLU:HA	25:DD:185:ASN:O	2.11	0.51
21:AA:1143:G:O2'	21:AA:1144:G:H5'	2.11	0.51
27:BF:41:GLU:HB2	27:BF:48:LEU:HD23	1.93	0.51
22:DA:2292:U:H2'	22:DA:2293:G:C8	2.46	0.51
20:AU:38:GLU:HB2	21:AA:1526:G:OP2	2.11	0.51
3:AD:68:GLU:HG3	21:AA:545:C:C5'	2.37	0.51
22:BA:2756:U:H4'	22:BA:2757:A:O5'	2.11	0.51
22:DA:2712:C:C2	22:DA:2715:C:OP1	2.64	0.51
30:BI:32:VAL:HG13	30:BI:66:PHE:CE2	2.46	0.51
37:DP:50:ARG:CB	37:DP:56:SER:HB3	2.39	0.51
21:AA:91:U:H2'	21:AA:92:U:H1'	1.93	0.51
22:BA:1585:C:O5'	22:BA:1585:C:H6	1.92	0.51
1:CB:128:LEU:O	1:CB:129:THR:C	2.50	0.51
27:DF:5:ASP:C	27:DF:7:TYR:H	2.13	0.51
36:DO:24:THR:OG1	36:DO:90:VAL:HG11	2.11	0.51
12:AM:4:ALA:HB2	12:AM:59:VAL:HG13	1.93	0.51
24:DC:77:VAL:CG2	24:DC:111:ALA:HA	2.41	0.51
31:BJ:25:LEU:HD22	31:BJ:25:LEU:C	2.31	0.51
7:CH:37:ASN:O	7:CH:41:GLU:HG2	2.11	0.51
22:DA:749:A:C4	22:DA:750:A:C8	2.98	0.51
21:AA:383:A:C5	21:AA:384:G:H1'	2.46	0.51
22:BA:2210:U:O2	22:BA:2212:A:C8	2.64	0.51
22:DA:2786:U:O2'	22:DA:2787:C:H5'	2.10	0.51
22:BA:2019:A:C2'	22:BA:2020:A:O5'	2.59	0.51
49:B1:3:GLY:O	49:B1:5:ARG:N	2.43	0.51
22:BA:1443:U:H2'	22:BA:1444:G:C8	2.46	0.51
22:DA:236:C:H2'	22:DA:237:C:H6	1.75	0.51
38:BQ:6:GLY:HA2	38:BQ:9:ALA:HB3	1.93	0.51
35:BN:93:GLY:C	35:BN:95:THR:H	2.14	0.51
22:BA:2228:G:H2'	22:BA:2229:U:C6	2.46	0.51
21:AA:1211:U:H1'	21:AA:1213:A:C2	2.46	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
26:BE:12:LEU:O	26:BE:13:THR:HB	2.10	0.51
4:AE:12:GLU:HB2	4:AE:38:VAL:HG12	1.92	0.51
49:D1:10:LEU:HD23	49:D1:20:TYR:HD2	1.75	0.51
8:CI:83:THR:HG21	8:CI:102:PHE:HB3	1.91	0.51
22:BA:512:G:N7	57:BA:3776:HOH:O	2.34	0.51
44:DW:37:VAL:C	44:DW:39:GLN:H	2.14	0.50
3:CD:191:SER:O	3:CD:192:ALA:HB2	2.11	0.50
44:BW:19:ARG:CZ	44:BW:22:VAL:HB	2.41	0.50
39:DR:49:ILE:HG22	39:DR:54:VAL:H	1.75	0.50
22:BA:1060:U:C4'	22:BA:1061:U:H5'	2.30	0.50
22:DA:605:G:H2'	22:DA:606:U:C6	2.46	0.50
16:AQ:12:VAL:CB	16:AQ:21:VAL:HG22	2.40	0.50
25:BD:114:LYS:NZ	25:BD:116:LYS:HE2	2.25	0.50
41:BT:29:THR:CG2	41:BT:86:THR:HG22	2.41	0.50
41:BT:48:GLN:CB	41:BT:49:LYS:HE3	2.41	0.50
53:CA:790:A:N6	53:CA:791:G:C6	2.78	0.50
4:AE:79:THR:OG1	4:AE:80:LEU:N	2.44	0.50
53:CA:1239:A:O2'	53:CA:1241:G:C5	2.61	0.50
22:DA:860:U:HO2'	22:DA:861:A:C5'	2.24	0.50
22:DA:2866:U:H4'	22:DA:2867:G:O5'	2.11	0.50
27:BF:134:GLN:CG	27:BF:135:ILE:N	2.70	0.50
1:CB:147:LEU:N	1:CB:147:LEU:HD12	2.26	0.50
22:DA:673:C:H5''	26:DE:75:SER:HB2	1.93	0.50
29:DH:2:GLN:O	29:DH:3:VAL:O	2.29	0.50
22:DA:1803:A:H2'	22:DA:1804:C:O4'	2.11	0.50
31:BJ:88:THR:CG2	31:BJ:91:GLU:HG3	2.38	0.50
22:DA:1417:C:O2'	22:DA:1418:G:H5'	2.11	0.50
47:BZ:43:ILE:O	47:BZ:43:ILE:HD12	2.11	0.50
22:DA:60:G:HO2'	22:DA:61:C:P	2.34	0.50
53:CA:1453:G:H2'	53:CA:1453:G:N3	2.24	0.50
2:CC:175:HIS:NE2	53:CA:1190:G:H5'	2.25	0.50
28:DG:162:ARG:HB2	28:DG:166:GLU:CB	2.41	0.50
2:CC:84:GLU:C	2:CC:86:LEU:H	2.13	0.50
22:BA:1385:A:O2'	22:BA:1396:U:O2	2.28	0.50
53:CA:818:G:C2'	53:CA:819:A:H5''	2.41	0.50
53:CA:140:U:H2'	53:CA:141:G:O4'	2.10	0.50
22:DA:338:G:H2'	22:DA:339:U:H5'	1.93	0.50
11:AL:72:ASN:OD1	11:AL:104:SER:HB3	2.11	0.50
53:CA:696:A:H8	53:CA:696:A:O5'	1.93	0.50
22:BA:337:C:H2'	22:BA:338:G:O4'	2.11	0.50
29:DH:143:ILE:O	29:DH:144:VAL:HG13	2.10	0.50
22:DA:1901:A:H4'	22:DA:1901:A:OP2	2.10	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
53:CA:1029:U:H1'	53:CA:1033:G:O6	2.10	0.50
21:AA:267:C:H2'	21:AA:268:U:C5	2.46	0.50
36:BO:2:ASP:OD1	36:BO:3:LYS:HG2	2.11	0.50
49:B1:34:GLU:HG2	49:B1:49:LYS:HG3	1.92	0.50
25:BD:51:THR:HG21	25:BD:68:PHE:HE2	1.76	0.50
26:DE:46:GLN:HB3	26:DE:86:ALA:HB1	1.93	0.50
25:BD:48:ILE:HG23	25:BD:84:LEU:HD21	1.93	0.50
22:DA:2688:G:H1'	22:DA:2721:A:N6	2.25	0.50
14:CO:69:LEU:CD1	14:CO:77:TYR:HA	2.41	0.50
42:BU:17:ASP:O	42:BU:18:LYS:C	2.49	0.50
22:DA:1539:U:H2'	22:DA:1540:G:C8	2.46	0.50
32:BK:51:LYS:HG3	32:BK:95:ILE:CG1	2.40	0.50
11:CL:86:VAL:C	11:CL:88:ASP:H	2.13	0.50
21:AA:740:U:O2'	21:AA:741:G:H5'	2.11	0.50
9:AJ:65:TYR:CB	13:AN:95:LEU:HD11	2.41	0.50
22:BA:2520:C:C6	22:BA:2567:G:H1'	2.46	0.50
22:BA:1720:U:H2'	22:BA:1721:G:O4'	2.11	0.50
32:BK:34:GLY:O	32:BK:35:VAL:C	2.49	0.50
19:AT:2:ASN:O	19:AT:3:ILE:C	2.49	0.50
22:DA:2578:G:H4'	22:DA:2578:G:OP2	2.10	0.50
22:BA:2154:A:H2'	22:BA:2155:U:O4'	2.11	0.50
22:DA:195:A:C6	22:DA:198:C:C5	2.99	0.50
53:CA:132:C:O2'	53:CA:133:U:H5'	2.11	0.50
22:DA:2641:G:H5''	31:DJ:78:THR:HB	1.92	0.50
54:DB:68:C:O2'	54:DB:69:G:O5'	2.18	0.50
20:CU:25:ALA:O	20:CU:29:ALA:N	2.42	0.50
38:DQ:64:ILE:HD12	38:DQ:95:ALA:CB	2.41	0.50
17:CR:59:LYS:HD3	53:CA:735:C:H5'	1.93	0.50
17:CR:63:TYR:CE2	17:CR:69:TYR:OH	2.64	0.50
10:AK:125:LYS:O	20:AU:33:ARG:NH1	2.45	0.50
22:DA:2407:A:O2'	22:DA:2408:U:H5'	2.12	0.50
53:CA:197:A:O2'	53:CA:198:G:C8	2.65	0.50
11:AL:94:TYR:CD2	11:AL:94:TYR:N	2.78	0.50
22:DA:2150:C:H2'	22:DA:2151:U:O4'	2.11	0.50
22:DA:111:A:C2	22:DA:112:U:C2	2.99	0.50
22:DA:112:U:C5	22:DA:113:U:C4	2.99	0.50
48:D0:37:HIS:HB2	48:D0:41:HIS:HE1	1.76	0.50
50:B2:24:THR:HG23	50:B2:27:GLY:N	2.18	0.50
7:AH:88:LYS:O	7:AH:91:LEU:HB2	2.10	0.50
7:AH:106:SER:HA	21:AA:642:A:C5	2.46	0.50
22:DA:2667:C:O2'	22:DA:2668:G:O4'	2.27	0.50
22:BA:1499:C:O2'	22:BA:1500:G:C5'	2.60	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
30:BI:6:ALA:HB3	30:BI:60:VAL:H	1.77	0.50
53:CA:502:A:H2'	53:CA:503:C:O4'	2.10	0.50
9:AJ:41:PRO:HA	9:AJ:72:ARG:HH11	1.76	0.50
22:BA:794:A:H2'	22:BA:795:C:H6	1.74	0.50
22:BA:1348:C:H2'	22:BA:1349:C:C5'	2.41	0.50
21:AA:415:A:H2'	21:AA:416:G:O4'	2.11	0.50
24:BC:161:VAL:HG11	24:BC:173:LEU:HG	1.94	0.50
11:AL:3:VAL:HG23	11:AL:4:ASN:H	1.76	0.50
22:DA:1970:A:H1'	22:DA:1972:G:C8	2.47	0.50
21:AA:1303:C:O2'	21:AA:1304:G:C5'	2.58	0.50
21:AA:701:U:O2'	21:AA:702:A:P	2.70	0.50
36:DO:25:ARG:HB3	36:DO:93:ASP:HB2	1.93	0.50
40:DS:36:LEU:C	40:DS:38:TYR:N	2.65	0.50
40:DS:66:ILE:HA	40:DS:69:LEU:HD13	1.93	0.50
26:DE:23:PHE:HB2	26:DE:114:ARG:HH22	1.76	0.50
25:BD:182:ALA:C	25:BD:183:GLU:HG3	2.31	0.50
22:DA:1168:G:C6	22:DA:1182:G:C6	2.99	0.50
53:CA:607:A:C2	53:CA:608:A:C4	2.99	0.50
6:CG:17:PHE:HB2	6:CG:43:TYR:OH	2.11	0.50
22:DA:1878:G:H2'	22:DA:1879:C:H6	1.76	0.50
12:AM:90:HIS:HA	12:AM:108:ARG:NH2	2.26	0.50
3:CD:104:MET:SD	3:CD:179:GLY:HA3	2.51	0.50
30:DI:98:GLY:HA3	30:DI:137:LEU:HA	1.94	0.50
33:DL:40:SER:O	33:DL:41:ARG:O	2.29	0.50
32:DK:28:SER:O	32:DK:29:HIS:HB3	2.11	0.50
22:BA:1097:U:H3'	22:BA:1098:A:H4'	1.92	0.50
30:DI:16:MET:SD	30:DI:19:PRO:HG2	2.51	0.50
12:AM:39:ALA:HB3	12:AM:42:VAL:HG13	1.93	0.50
32:DK:34:GLY:H	32:DK:37:ASP:HB2	1.74	0.50
30:DI:112:LYS:HZ3	30:DI:128:ILE:HD12	1.76	0.50
22:BA:400:G:O6	45:BX:56:ARG:NH1	2.44	0.50
22:BA:1000:A:H62	22:BA:1154:G:H2'	1.76	0.50
44:DW:17:ALA:HB1	44:DW:36:ILE:HA	1.92	0.50
19:AT:79:THR:O	19:AT:80:ALA:C	2.50	0.50
29:BH:32:PRO:HB3	45:BX:38:TRP:CB	2.36	0.50
53:CA:995:C:N3	53:CA:1046:A:O2'	2.37	0.50
37:BP:4:ILE:HA	37:BP:7:LEU:HB2	1.93	0.50
4:AE:152:VAL:HG12	4:AE:155:LYS:HZ1	1.75	0.50
41:BT:28:ASN:HA	41:BT:91:GLN:CD	2.31	0.50
22:DA:2458:G:H8	22:DA:2459:A:H62	1.59	0.50
22:DA:1062:G:N3	22:DA:1063:G:C8	2.79	0.50
34:DM:19:GLY:N	34:DM:38:ARG:HH21	1.97	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:2748:A:C2	22:DA:2757:A:C5	2.99	0.50
22:DA:1654:A:N3	22:DA:1655:A:C8	2.80	0.50
46:DY:60:LYS:HG2	46:DY:60:LYS:O	2.12	0.50
16:AQ:15:LYS:HE2	21:AA:274:A:H5'	1.92	0.50
53:CA:1129:C:C1'	53:CA:1146:A:H61	2.23	0.50
35:BN:33:ILE:N	35:BN:33:ILE:HD12	2.25	0.50
6:CG:28:ILE:HG21	6:CG:100:MET:CG	2.37	0.50
37:BP:72:VAL:HG23	37:BP:72:VAL:O	2.10	0.50
21:AA:548:G:H5''	21:AA:548:G:H8	1.76	0.50
24:DC:130:PRO:N	24:DC:188:ARG:HG3	2.25	0.50
53:CA:512:U:O2'	53:CA:513:C:C6	2.61	0.50
15:AP:12:LYS:HG2	15:AP:13:LYS:HG2	1.94	0.50
15:CP:41:PRO:O	15:CP:42:ILE:HD13	2.11	0.50
24:BC:254:LYS:O	24:BC:255:LYS:HB2	2.11	0.50
1:CB:9:LEU:HD12	1:CB:12:GLY:N	2.26	0.50
22:BA:2322:A:N6	22:BA:2333:A:N6	2.59	0.50
18:CS:57:VAL:HG21	18:CS:75:PRO:HD2	1.93	0.50
17:AR:63:TYR:CD1	17:AR:69:TYR:OH	2.63	0.50
22:DA:566:U:OP1	33:DL:29:LYS:HD2	2.12	0.50
22:DA:422:A:H2'	22:DA:423:A:H8	1.75	0.50
38:DQ:42:GLY:O	38:DQ:45:ALA:HB3	2.10	0.50
40:BS:24:ILE:HG22	40:BS:71:VAL:HG21	1.94	0.50
22:DA:2678:C:H2'	22:DA:2679:A:O4'	2.11	0.50
21:AA:575:G:C6	21:AA:821:G:N7	2.80	0.50
21:AA:1356:G:H2'	21:AA:1357:A:H8	1.75	0.50
22:BA:2391:G:O6	22:BA:2425:A:H8	1.94	0.50
37:BP:92:ARG:HB2	37:BP:92:ARG:HH11	1.75	0.50
21:AA:1348:U:H2'	21:AA:1349:A:H8	1.76	0.50
21:AA:1350:A:C6	21:AA:1351:U:N3	2.79	0.50
53:CA:132:C:O2'	53:CA:133:U:C5'	2.59	0.50
22:BA:712:G:C2	22:BA:713:G:H1'	2.46	0.50
2:AC:8:GLY:HA2	2:AC:11:LEU:HG	1.93	0.50
22:BA:845:A:N3	22:BA:845:A:H3'	2.26	0.50
21:AA:1054:C:O2	21:AA:1054:C:O4'	2.29	0.50
22:DA:2402:U:O2'	22:DA:2403:C:P	2.69	0.50
1:CB:54:ALA:HA	1:CB:57:ASN:HB3	1.92	0.50
6:AG:106:ALA:HB1	6:AG:132:THR:HB	1.94	0.50
34:BM:49:ALA:HB1	34:BM:120:ALA:HB1	1.93	0.50
22:BA:346:A:C2	22:BA:347:A:H1'	2.46	0.50
33:BL:91:ASP:H	33:BL:94:THR:HG21	1.77	0.50
25:BD:101:PHE:CD1	25:BD:101:PHE:N	2.80	0.50
25:BD:101:PHE:HD1	25:BD:101:PHE:N	2.09	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:2262:U:H4'	22:DA:2328:A:H2	1.76	0.50
38:BQ:78:PHE:CZ	38:BQ:82:LEU:HD11	2.46	0.50
44:BW:23:LYS:CD	44:BW:24:ARG:N	2.72	0.50
22:DA:603:A:H4'	22:DA:604:G:C4'	2.41	0.50
22:DA:2313:C:O2'	22:DA:2314:A:C5'	2.59	0.50
54:DB:42:C:C6	27:DF:65:LEU:HD22	2.46	0.50
27:DF:35:LEU:HA	27:DF:152:ASP:O	2.11	0.50
22:BA:221:A:H4'	22:BA:222:A:O5'	2.12	0.50
22:DA:2568:U:H2'	22:DA:2569:G:O4'	2.12	0.50
53:CA:330:C:O2'	53:CA:331:G:C8	2.54	0.50
2:AC:75:VAL:O	2:AC:82:ASP:HB3	2.11	0.50
22:DA:2800:A:H2'	22:DA:2801:G:O4'	2.11	0.50
22:DA:478:A:C6	22:DA:480:A:C6	3.00	0.50
22:DA:475:C:H4'	22:DA:509:C:O2'	2.10	0.50
1:CB:209:VAL:HG23	1:CB:210:THR:N	2.26	0.50
1:AB:17:HIS:CD2	1:AB:202:ASN:ND2	2.80	0.50
22:DA:2234:G:C6	22:DA:2235:G:C5	2.99	0.50
53:CA:14:U:O2	53:CA:16:A:C8	2.64	0.50
35:BN:73:ASN:ND2	35:BN:76:VAL:HG11	2.27	0.50
22:BA:1014:A:H2'	22:BA:1015:U:C6	2.46	0.50
27:BF:131:VAL:CG2	27:BF:151:LEU:H	2.24	0.50
22:DA:571:U:C5	22:DA:575:A:C6	2.98	0.50
7:CH:17:GLN:NE2	7:CH:71:VAL:HG23	2.26	0.50
26:DE:148:ILE:HA	26:DE:187:VAL:HB	1.93	0.50
21:AA:113:G:C5	21:AA:114:U:C5	2.99	0.50
7:CH:9:MET:SD	7:CH:32:LYS:HG3	2.51	0.50
43:DV:42:LEU:HD13	43:DV:47:VAL:HG21	1.92	0.50
30:BI:56:VAL:HG23	30:BI:69:VAL:O	2.10	0.50
22:BA:2637:U:H2'	22:BA:2638:G:H5'	1.91	0.50
21:AA:92:U:H2'	21:AA:93:U:H6	1.71	0.50
29:DH:94:ILE:HG21	29:DH:98:ASP:OD1	2.11	0.50
1:CB:127:LYS:HE2	1:CB:136:ARG:NH2	2.26	0.50
24:DC:264:LYS:HG3	24:DC:265:PHE:CD2	2.47	0.50
1:CB:19:THR:OG1	1:CB:20:ARG:N	2.43	0.50
21:AA:1411:C:O2'	21:AA:1412:C:H5'	2.11	0.50
31:DJ:80:HIS:HB3	31:DJ:81:ILE:HG13	1.94	0.50
53:CA:1029:U:H4'	53:CA:1032:G:H1	1.76	0.50
53:CA:738:C:C2	53:CA:739:C:C5	3.00	0.50
10:CK:38:GLY:HA3	53:CA:708:C:H4'	1.93	0.50
21:AA:1530:G:O2'	21:AA:1531:A:C8	2.65	0.50
12:AM:40:GLU:HG3	12:AM:41:ASP:N	2.26	0.50
53:CA:369:G:O2'	53:CA:370:C:H5'	2.11	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:CK:117:HIS:O	10:CK:118:ASN:HB2	2.12	0.50
53:CA:1331:G:HO2'	53:CA:1332:A:H8	1.60	0.50
16:CQ:22:VAL:HG21	16:CQ:58:VAL:HG21	1.93	0.50
53:CA:1484:C:H2'	53:CA:1485:U:O4'	2.12	0.50
22:DA:1525:A:C6	22:DA:1526:C:C2	2.99	0.50
22:DA:1465:G:H2'	22:DA:1466:U:C6	2.47	0.50
22:BA:1115:G:HO2'	22:BA:1116:G:P	2.34	0.50
53:CA:190:A:O5'	53:CA:190:A:H8	1.95	0.50
16:AQ:49:ASN:O	16:AQ:50:ASN:C	2.48	0.50
22:BA:2140:G:C2	22:BA:2141:G:C4	2.99	0.50
54:DB:30:C:H2'	54:DB:31:C:H5'	1.93	0.50
2:CC:100:ILE:HD12	2:CC:101:ASN:N	2.25	0.50
22:BA:2138:G:H2'	22:BA:2138:G:N3	2.25	0.50
8:AI:11:ARG:NH2	21:AA:1347:G:O6	2.44	0.50
23:BB:94:A:C5	23:BB:95:U:C5	2.99	0.50
22:DA:779:U:OP1	24:DC:48:ILE:HG13	2.12	0.50
22:DA:1439:A:C8	22:DA:1440:U:O4'	2.64	0.50
11:AL:89:LEU:HB3	11:AL:92:VAL:CG2	2.42	0.50
19:AT:43:LYS:HD3	19:AT:86:ALA:O	2.11	0.50
39:DR:37:GLU:HB2	39:DR:53:PHE:CG	2.47	0.50
22:BA:1249:U:H2'	33:BL:18:ARG:NH2	2.26	0.50
28:BG:162:ARG:CZ	28:BG:168:VAL:HG21	2.41	0.50
22:DA:1345:C:H3'	22:DA:1345:C:P	2.51	0.50
15:CP:75:ILE:HA	15:CP:78:VAL:HG23	1.93	0.50
31:DJ:43:GLU:O	31:DJ:45:THR:N	2.45	0.50
21:AA:201:G:H2'	21:AA:202:G:O4'	2.11	0.50
41:BT:54:GLU:OE1	41:BT:88:LYS:HG3	2.11	0.50
35:DN:7:GLY:O	35:DN:8:ARG:HB2	2.11	0.50
22:DA:2305:U:O2'	27:DF:132:ARG:HA	2.12	0.50
34:DM:40:ARG:HB2	34:DM:93:VAL:CG2	2.41	0.50
21:AA:748:G:H2'	21:AA:749:A:H8	1.76	0.50
24:DC:131:MET:HA	24:DC:134:ILE:HG12	1.94	0.50
4:AE:83:PRO:HB3	4:AE:96:GLN:NE2	2.27	0.50
1:AB:18:GLN:O	1:AB:37:VAL:HG23	2.12	0.50
7:AH:105:THR:HG22	7:AH:121:GLY:O	2.11	0.50
22:DA:1667:G:OP1	32:DK:6:THR:HA	2.11	0.50
21:AA:725:G:H2'	21:AA:726:C:H6	1.76	0.50
21:AA:983:A:H2	21:AA:1222:G:H22	1.60	0.50
51:B3:31:ILE:C	51:B3:31:ILE:HD12	2.32	0.50
42:DU:52:ASN:CG	42:DU:54:PRO:HD3	2.31	0.50
51:B3:49:VAL:HG23	51:B3:53:ASP:HB2	1.94	0.50
28:BG:61:TRP:O	28:BG:62:ALA:C	2.48	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
41:DT:50:LEU:HD23	41:DT:51:PHE:N	2.22	0.50
53:CA:1091:U:O2	53:CA:1093:A:C8	2.63	0.50
22:BA:2638:G:O2'	22:BA:2775:G:N2	2.45	0.50
21:AA:684:U:H3	21:AA:706:A:H61	1.59	0.50
22:DA:1238:G:O2'	22:DA:1239:G:H5'	2.12	0.50
26:BE:189:THR:O	26:BE:192:ALA:N	2.33	0.50
8:AI:113:LYS:HG2	8:AI:114:LYS:N	2.26	0.50
1:CB:127:LYS:HE2	1:CB:136:ARG:HH21	1.77	0.50
28:DG:152:ARG:HD2	28:DG:153:PRO:HD2	1.93	0.50
15:AP:20:VAL:CG2	15:AP:32:PHE:HB2	2.41	0.50
22:BA:1932:A:H2'	22:BA:1933:G:O4'	2.11	0.50
41:DT:9:LYS:O	41:DT:9:LYS:HG2	2.11	0.50
8:CI:26:LYS:O	8:CI:62:LEU:HB2	2.11	0.50
26:DE:106:LYS:HG3	26:DE:200:LEU:HD12	1.94	0.50
29:DH:61:VAL:HG13	29:DH:62:LEU:HG	1.94	0.50
43:DV:9:ARG:HD3	43:DV:39:ALA:HB1	1.92	0.50
41:BT:73:ARG:NH2	41:BT:74:ILE:H	2.08	0.50
27:DF:103:ILE:O	27:DF:103:ILE:HG22	2.11	0.50
24:DC:8:THR:O	24:DC:9:SER:CB	2.59	0.50
3:CD:104:MET:O	3:CD:104:MET:HG2	2.12	0.50
28:DG:28:LYS:HG3	28:DG:79:THR:HG22	1.94	0.50
15:AP:48:GLU:CG	15:AP:49:GLY:N	2.75	0.50
22:DA:1943:U:O4'	22:DA:1943:U:O2	2.27	0.50
4:CE:157:GLY:HA3	7:CH:63:LYS:HE3	1.94	0.50
22:DA:1040:A:H2'	22:DA:1041:G:O4'	2.12	0.50
16:CQ:29:LYS:HE2	16:CQ:36:PHE:CZ	2.46	0.50
35:BN:85:PRO:HA	35:BN:88:ALA:HB2	1.93	0.50
22:BA:1728:C:O2'	22:BA:1729:U:C6	2.65	0.50
21:AA:51:A:H4'	21:AA:52:C:C5'	2.41	0.50
22:BA:225:C:H2'	22:BA:226:A:O4'	2.11	0.50
22:BA:1224:U:H4'	39:BR:88:GLY:O	2.10	0.50
22:DA:1455:G:HO2'	22:DA:1456:G:H8	1.60	0.50
23:BB:53:A:O2'	23:BB:54:G:H5'	2.11	0.50
22:BA:2246:G:H2'	22:BA:2247:A:C8	2.46	0.50
22:DA:599:A:N3	22:DA:659:G:C2	2.79	0.50
4:CE:17:VAL:HA	4:CE:33:THR:O	2.10	0.50
22:DA:2372:U:H1'	49:D1:45:HIS:CE1	2.47	0.50
44:DW:77:LYS:O	44:DW:78:PHE:HB2	2.11	0.50
22:BA:1065:U:O4	22:BA:1074:G:N3	2.44	0.50
45:DX:52:ALA:C	45:DX:54:GLY:H	2.15	0.50
22:DA:1340:U:C4	22:DA:1603:A:C8	3.00	0.50
22:DA:455:C:N3	22:DA:473:G:H5'	2.27	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
34:BM:36:VAL:HG22	43:BV:82:TYR:CD1	2.46	0.50
37:DP:22:GLY:HA3	37:DP:91:VAL:CG2	2.41	0.50
22:DA:1056:G:H3'	22:DA:1056:G:OP2	2.12	0.50
22:DA:1331:G:C4	22:DA:1333:G:C8	3.00	0.50
21:AA:1006:G:H2'	21:AA:1007:U:C6	2.46	0.50
4:AE:96:GLN:OE1	21:AA:7:A:N6	2.45	0.50
22:DA:77:G:H2'	22:DA:78:U:O4'	2.12	0.50
21:AA:844:G:H2'	21:AA:844:G:N3	2.25	0.50
26:DE:132:LYS:HG2	26:DE:132:LYS:O	2.12	0.50
53:CA:82:G:C6	53:CA:89:U:C5	3.00	0.50
45:DX:29:LEU:HB2	45:DX:30:PRO:HD2	1.93	0.50
53:CA:1297:G:H5'	53:CA:1299:A:N7	2.27	0.50
8:CI:16:ALA:HA	8:CI:65:THR:O	2.11	0.50
21:AA:345:C:O2'	32:BK:116:ILE:HD13	2.11	0.50
21:AA:373:A:C2	21:AA:374:A:C8	2.99	0.50
32:DK:17:ARG:HD3	32:DK:18:ARG:HG3	1.93	0.50
6:CG:4:ARG:HD2	6:CG:5:VAL:N	2.21	0.50
30:DI:58:ILE:HG23	30:DI:66:PHE:CD2	2.46	0.50
37:BP:39:LEU:HD21	37:BP:81:ASP:OD2	2.10	0.50
53:CA:65:A:C5	53:CA:200:G:O2'	2.65	0.50
22:BA:95:A:O2'	46:BY:41:HIS:CD2	2.65	0.50
22:DA:850:U:O2'	47:DZ:22:THR:HG22	2.11	0.50
29:BH:68:ARG:HH21	29:BH:72:ILE:HG21	1.76	0.50
22:BA:2262:U:H4'	22:BA:2328:A:C2	2.47	0.50
2:AC:35:ASP:C	2:AC:37:LYS:H	2.14	0.50
22:DA:2298:A:H5'	22:DA:2322:A:O2'	2.11	0.50
18:CS:52:ASN:HD21	18:CS:54:ARG:HG2	1.76	0.50
22:DA:1698:A:H1'	22:DA:1700:A:OP2	2.12	0.50
9:AJ:44:THR:OG1	21:AA:1151:A:H5''	2.11	0.50
22:BA:327:G:N2	22:BA:336:C:C2	2.79	0.50
25:DD:149:ASN:OD1	25:DD:150:GLN:N	2.45	0.50
30:BI:72:THR:HB	30:BI:112:LYS:NZ	2.26	0.50
22:DA:1833:C:C2	22:DA:1834:U:C6	2.99	0.50
31:DJ:95:ARG:O	31:DJ:96:ARG:C	2.49	0.50
22:DA:364:C:H2'	22:DA:365:U:O4'	2.12	0.50
29:BH:81:ALA:HB2	29:BH:147:VAL:HG23	1.92	0.50
53:CA:728:A:H2'	53:CA:729:A:C8	2.46	0.50
22:BA:1265:A:O4'	22:BA:1267:U:C6	2.64	0.50
23:BB:33:G:O2'	23:BB:34:A:H5'	2.12	0.50
53:CA:636:U:H2'	53:CA:637:C:C6	2.47	0.50
21:AA:1025:U:H5''	21:AA:1026:G:H5'	1.93	0.50
10:CK:28:ASN:OD1	10:CK:46:ALA:HB3	2.11	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:CL:58:ASN:OD1	11:CL:60:PHE:HD1	1.95	0.50
22:BA:2458:G:O2'	22:BA:2460:U:O4	2.29	0.50
27:BF:127:TYR:CE2	27:BF:129:MET:HG2	2.47	0.50
44:DW:27:GLY:HA3	44:DW:31:LEU:HD11	1.91	0.50
14:AO:63:ARG:CD	14:AO:87:ARG:HH22	2.15	0.50
53:CA:1211:U:O2'	53:CA:1213:A:C2	2.63	0.50
44:BW:22:VAL:HG13	44:BW:25:PHE:CE2	2.47	0.50
3:CD:29:THR:C	3:CD:30:LYS:HD3	2.30	0.50
37:DP:22:GLY:HA3	37:DP:91:VAL:HG21	1.94	0.50
22:BA:1103:A:H2'	22:BA:1104:C:H5'	1.93	0.50
41:BT:40:LYS:H	41:BT:43:ILE:CG2	2.25	0.50
22:DA:228:C:H5'	22:DA:229:C:H5	1.77	0.50
13:AN:40:ARG:HH12	13:AN:44:VAL:HG21	1.77	0.50
53:CA:953:G:C6	53:CA:1229:A:N6	2.79	0.50
22:DA:1809:A:H2'	22:DA:1810:A:H8	1.71	0.50
4:AE:105:ILE:HD12	21:AA:7:A:H3'	1.94	0.50
42:DU:16:LYS:HD2	42:DU:17:ASP:OD1	2.12	0.50
53:CA:961:U:O2'	53:CA:962:C:O4'	2.30	0.50
18:CS:38:THR:OG1	18:CS:67:GLY:HA2	2.12	0.50
4:CE:79:THR:HA	4:CE:121:ASN:CG	2.32	0.50
7:CH:17:GLN:NE2	7:CH:69:ALA:HB1	2.26	0.50
46:DY:25:GLN:O	46:DY:29:ARG:HD3	2.11	0.50
11:CL:70:GLY:C	11:CL:98:ARG:HH22	2.15	0.50
34:BM:40:ARG:HB2	34:BM:93:VAL:HG22	1.93	0.50
34:BM:42:THR:O	34:BM:44:ARG:N	2.45	0.50
28:DG:120:ILE:O	28:DG:120:ILE:HG23	2.11	0.50
21:AA:1517:G:N3	22:BA:1919:A:O2'	2.45	0.50
22:BA:959:A:N6	34:BM:82:MET:CE	2.75	0.50
53:CA:1026:G:H22	53:CA:1036:A:N6	2.10	0.50
53:CA:17:U:H2'	53:CA:18:C:H6	1.73	0.50
37:DP:49:ILE:O	37:DP:50:ARG:O	2.30	0.50
29:BH:8:LYS:O	29:BH:13:GLY:HA3	2.10	0.50
24:BC:159:THR:O	24:BC:160:TYR:HB3	2.12	0.50
24:DC:221:GLY:O	24:DC:224:MET:HG2	2.12	0.50
22:DA:224:U:H5	22:DA:420:C:H4'	1.75	0.50
22:BA:744:U:H2'	22:BA:745:G:O4'	2.12	0.50
14:AO:84:LEU:HB3	14:AO:86:LEU:CD2	2.42	0.50
53:CA:344:A:H5"	53:CA:345:C:C5	2.46	0.50
16:AQ:76:ARG:HG2	16:AQ:77:VAL:H	1.76	0.50
22:BA:395:U:O2'	22:BA:396:G:N7	2.42	0.50
22:BA:2038:G:H2'	22:BA:2039:U:O4'	2.12	0.50
30:DI:20:SER:OG	30:DI:25:PRO:HG2	2.11	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
23:BB:34:A:O2'	23:BB:35:C:H5'	2.11	0.50
22:BA:2804:U:H2'	22:BA:2805:C:H6	1.77	0.50
6:AG:136:LYS:O	6:AG:140:VAL:HG23	2.12	0.50
28:DG:58:ALA:O	28:DG:59:ASP:C	2.50	0.50
24:DC:245:THR:C	24:DC:247:TRP:H	2.14	0.50
32:BK:1:MET:HG3	32:BK:67:LYS:HG3	1.94	0.50
20:CU:28:LEU:O	20:CU:28:LEU:HD23	2.12	0.50
5:CF:32:ALA:O	5:CF:33:GLU:HB2	2.11	0.50
33:DL:3:LEU:O	33:DL:4:ASN:C	2.49	0.50
22:DA:1555:G:C2	22:DA:1556:C:C2	3.00	0.50
54:DB:58:A:O2'	54:DB:59:A:C5'	2.60	0.50
38:DQ:64:ILE:HD12	38:DQ:95:ALA:HB3	1.94	0.50
5:AF:2:ARG:HH21	5:AF:68:GLN:HE21	1.60	0.50
37:DP:22:GLY:H	37:DP:46:VAL:HB	1.77	0.50
22:BA:1392:A:H61	41:BT:18:GLU:CD	2.15	0.50
41:BT:19:LYS:O	41:BT:20:ALA:C	2.49	0.50
22:DA:1056:G:H1'	22:DA:1103:A:C6	2.47	0.50
22:DA:1085:A:H2'	22:DA:1086:A:N3	2.26	0.50
26:DE:130:LYS:O	26:DE:134:LEU:HB3	2.11	0.50
22:DA:1317:G:N2	22:DA:1336:A:N3	2.60	0.50
40:DS:9:HIS:H	40:DS:102:HIS:CE1	2.30	0.50
37:DP:1:SER:HB3	37:DP:4:ILE:HB	1.92	0.50
22:BA:558:U:P	31:BJ:113:PRO:HB2	2.52	0.50
53:CA:977:A:H4'	53:CA:981:U:O2	2.11	0.50
34:DM:36:VAL:HG13	43:DV:82:TYR:HD1	1.72	0.50
52:B4:7:VAL:HG23	52:B4:8:LYS:N	2.26	0.50
14:CO:38:LEU:HD11	53:CA:740:U:H4'	1.93	0.50
53:CA:1348:U:O2'	53:CA:1349:A:C5'	2.60	0.50
22:DA:972:A:C6	22:DA:973:A:C6	3.00	0.50
6:AG:68:VAL:HG21	6:AG:103:ILE:CG1	2.42	0.50
28:DG:120:ILE:O	28:DG:120:ILE:HD13	2.12	0.50
22:DA:2726:A:O2'	22:DA:2727:A:C5'	2.59	0.50
22:DA:2655:G:H1'	22:DA:2656:U:H5	1.76	0.50
30:BI:58:ILE:HG22	30:BI:60:VAL:HG23	1.92	0.50
47:DZ:4:ILE:CG2	47:DZ:56:VAL:HG13	2.41	0.50
22:DA:1722:A:C6	22:DA:1739:A:C8	2.99	0.50
8:AI:111:GLU:HG2	8:AI:120:ALA:HB1	1.94	0.50
53:CA:1284:C:P	53:CA:1285:A:H3'	2.52	0.50
21:AA:1394:A:H2'	21:AA:1501:C:O2'	2.11	0.50
22:BA:320:A:O2'	22:BA:322:A:H8	1.95	0.50
38:BQ:68:ALA:HB1	38:BQ:73:ILE:CG2	2.41	0.50
43:DV:6:ALA:HB3	43:DV:65:VAL:HB	1.93	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:AA:882:C:O2'	21:AA:883:C:H5'	2.12	0.50
22:BA:2649:C:H2'	22:BA:2650:U:C6	2.47	0.50
53:CA:158:G:C5	53:CA:164:G:C6	3.00	0.50
41:BT:67:VAL:HG23	41:BT:68:LYS:N	2.26	0.50
22:BA:1256:G:O2'	26:BE:77:ILE:HD11	2.11	0.50
53:CA:632:U:H3'	53:CA:633:G:H5'	1.93	0.50
22:BA:2151:U:N3	22:BA:2152:G:C5	2.80	0.50
33:DL:119:PRO:HB3	33:DL:139:GLY:O	2.11	0.50
29:DH:9:VAL:CG1	29:DH:10:ALA:N	2.75	0.50
22:DA:2557:G:H2'	22:DA:2558:C:C6	2.46	0.50
10:CK:63:GLN:HB2	10:CK:98:ALA:HB2	1.94	0.50
22:BA:2862:G:H2'	22:BA:2863:C:C6	2.47	0.50
53:CA:828:U:H2'	53:CA:829:G:O5'	2.12	0.50
11:CL:52:CYS:HB3	11:CL:66:ILE:HD11	1.94	0.50
22:DA:1361:G:C2'	22:DA:1362:C:H5'	2.41	0.50
21:AA:1508:A:H2'	21:AA:1509:C:C6	2.46	0.50
47:BZ:13:ILE:HG22	47:BZ:14:GLY:N	2.25	0.50
38:BQ:27:ARG:HH11	38:BQ:27:ARG:HG3	1.75	0.50
24:BC:119:VAL:HG23	24:BC:120:ASP:H	1.76	0.50
22:BA:879:G:H2'	22:BA:880:G:C8	2.47	0.50
22:DA:1439:A:C3'	22:DA:1439:A:C8	2.93	0.50
54:DB:13:G:N2	54:DB:16:G:C4	2.79	0.50
54:DB:18:G:C2	54:DB:67:G:C6	3.00	0.50
54:DB:19:C:H2'	54:DB:20:G:C8	2.47	0.50
20:CU:20:ARG:NH1	20:CU:24:LYS:HG2	2.27	0.50
22:BA:2365:G:O2'	22:BA:2366:A:C8	2.60	0.50
28:BG:148:ARG:HD2	28:BG:163:TYR:CE2	2.47	0.50
8:CI:55:ASP:O	8:CI:59:LYS:HE2	2.11	0.50
30:BI:21:PRO:HB2	30:BI:22:PRO:HD3	1.94	0.50
21:AA:1005:A:H2'	21:AA:1006:G:O4'	2.12	0.50
22:DA:321:U:O4'	26:DE:159:LEU:HG	2.12	0.50
53:CA:1272:G:H2'	53:CA:1273:C:H5'	1.93	0.50
53:CA:1242:G:H4'	53:CA:1304:G:OP1	2.12	0.50
12:CM:13:HIS:CD2	12:CM:14:ALA:H	2.30	0.50
22:DA:1475:G:N3	22:DA:1475:G:H2'	2.26	0.50
1:AB:20:ARG:O	1:AB:22:TRP:HB3	2.12	0.50
30:DI:52:LEU:O	30:DI:54:ILE:HD12	2.12	0.50
1:CB:184:ALA:HB3	1:CB:195:VAL:HG21	1.94	0.50
22:DA:727:A:C2'	22:DA:728:G:C8	2.94	0.50
28:BG:33:THR:C	28:BG:34:ARG:HD3	2.33	0.50
25:DD:138:LEU:N	25:DD:138:LEU:HD13	2.26	0.50
1:AB:134:LEU:HA	1:AB:137:THR:OG1	2.11	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
28:DG:86:LEU:HD12	28:DG:132:LEU:HD11	1.94	0.50
22:DA:2725:A:C4	22:DA:2727:A:C8	3.00	0.50
21:AA:874:G:O2'	21:AA:875:U:H5'	2.11	0.50
28:DG:103:ASN:HA	28:DG:112:VAL:HB	1.94	0.50
30:DI:57:VAL:O	30:DI:58:ILE:HG13	2.12	0.50
53:CA:1086:U:H6	53:CA:1086:U:C5'	2.25	0.50
53:CA:501:C:H2'	53:CA:502:A:H8	1.76	0.50
15:AP:59:HIS:CE1	15:AP:63:GLN:NE2	2.76	0.50
22:DA:1722:A:N6	22:DA:1739:A:C8	2.80	0.50
22:DA:28:A:C2	22:DA:29:U:H1'	2.47	0.50
22:DA:511:U:H4'	22:DA:1235:G:H4'	1.93	0.50
2:CC:67:ILE:H	2:CC:102:ILE:HA	1.77	0.50
22:BA:2722:G:H4'	35:BN:4:ARG:HB2	1.93	0.50
8:AI:113:LYS:HG3	8:AI:119:LYS:HA	1.93	0.50
22:BA:2615:U:H2'	22:BA:2616:C:H6	1.76	0.50
22:BA:320:A:C2	26:BE:163:ASN:HB3	2.47	0.50
53:CA:1079:G:C6	53:CA:1080:A:N6	2.79	0.50
2:AC:5:HIS:HD2	2:AC:7:ASN:H	1.60	0.50
45:BX:58:ILE:HD11	45:BX:66:VAL:HG11	1.94	0.50
22:BA:372:G:O4'	45:BX:60:LYS:HE3	2.11	0.50
12:AM:40:GLU:HG3	12:AM:41:ASP:H	1.77	0.50
22:DA:750:A:H5''	22:DA:751:A:OP2	2.11	0.50
22:BA:2581:G:H4'	22:BA:2582:G:N7	2.27	0.50
38:DQ:69:ARG:NH2	38:DQ:74:SER:HB2	2.27	0.50
24:DC:53:ILE:HA	24:DC:214:GLY:O	2.11	0.50
22:DA:2591:C:P	24:DC:237:ARG:HD2	2.52	0.50
22:BA:595:C:H2'	22:BA:596:U:H6	1.75	0.50
21:AA:1071:C:H2'	21:AA:1072:G:C8	2.47	0.50
36:BO:57:ALA:O	36:BO:59:ALA:N	2.44	0.50
48:B0:53:VAL:O	48:B0:54:ILE:O	2.30	0.50
22:DA:1197:G:H2'	22:DA:1198:U:C6	2.47	0.50
11:CL:89:LEU:HB3	11:CL:92:VAL:CG2	2.42	0.50
33:BL:4:ASN:HD22	33:BL:4:ASN:H	1.59	0.50
22:BA:2804:U:H2'	22:BA:2805:C:C6	2.47	0.50
13:CN:4:SER:O	13:CN:7:ALA:HB3	2.12	0.50
38:DQ:9:ALA:O	38:DQ:12:ARG:HG2	2.11	0.50
53:CA:629:A:H2'	53:CA:630:A:O4'	2.12	0.50
27:DF:3:LEU:HG	27:DF:100:GLU:CD	2.32	0.50
22:DA:2734:A:C8	22:DA:2735:G:C8	3.00	0.50
21:AA:960:U:O2'	21:AA:1223:C:H5'	2.12	0.50
22:BA:1322:A:H2'	22:BA:1323:C:H5'	1.94	0.50
23:BB:109:A:H2'	23:BB:110:C:C6	2.47	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
53:CA:855:U:H5	53:CA:871:U:O4	1.94	0.50
40:DS:68:ASP:OD1	40:DS:68:ASP:N	2.45	0.50
44:BW:58:LEU:HD13	44:BW:58:LEU:N	2.25	0.50
12:AM:92:ARG:HB3	12:AM:92:ARG:CZ	2.42	0.50
2:AC:79:LYS:HE3	2:AC:79:LYS:HA	1.94	0.50
22:DA:2154:A:H2'	22:DA:2155:U:H6	1.77	0.50
27:BF:53:ALA:O	27:BF:64:PRO:HG2	2.11	0.50
53:CA:1507:A:H2'	53:CA:1508:A:C8	2.47	0.50
53:CA:415:A:H3'	53:CA:416:G:H8	1.76	0.50
42:DU:9:GLU:OE1	42:DU:23:LYS:HA	2.12	0.50
39:DR:23:GLU:O	39:DR:25:LEU:HD22	2.11	0.50
22:DA:1439:A:N1	22:DA:1552:A:C8	2.80	0.49
44:DW:40:ARG:NH1	44:DW:40:ARG:CG	2.56	0.49
39:DR:49:ILE:HG22	39:DR:54:VAL:N	2.27	0.49
25:DD:16:THR:HG22	25:DD:20:VAL:H	1.76	0.49
20:CU:33:ARG:CZ	20:CU:34:ARG:HD3	2.42	0.49
22:DA:1056:G:H1'	22:DA:1103:A:N1	2.27	0.49
22:DA:1131:G:N7	22:DA:2025:C:H4'	2.27	0.49
22:DA:1810:A:H2'	22:DA:1811:G:O4'	2.11	0.49
21:AA:215:C:H2'	21:AA:216:U:C6	2.47	0.49
42:DU:43:LYS:HG2	42:DU:45:GLN:HG2	1.93	0.49
42:DU:73:ASN:HB3	42:DU:95:PHE:HE2	1.76	0.49
4:CE:98:ALA:O	4:CE:121:ASN:HB2	2.12	0.49
22:BA:2197:U:O2'	22:BA:2198:A:C2'	2.52	0.49
53:CA:1298:U:H4'	53:CA:1299:A:O5'	2.11	0.49
6:AG:38:ALA:O	6:AG:42:VAL:HG23	2.11	0.49
21:AA:373:A:N3	21:AA:374:A:C8	2.79	0.49
32:BK:19:VAL:HG22	32:BK:41:ILE:HG13	1.93	0.49
21:AA:1277:C:H2'	21:AA:1278:G:H5''	1.94	0.49
22:DA:672:C:H5'	22:DA:672:C:H6	1.77	0.49
15:CP:29:ASN:O	53:CA:309:A:H5''	2.11	0.49
28:DG:85:LYS:HD3	28:DG:164:ALA:HB3	1.94	0.49
21:AA:501:C:O2'	21:AA:502:A:H5'	2.12	0.49
32:DK:107:LEU:C	32:DK:109:SER:H	2.15	0.49
27:DF:28:PRO:HB2	27:DF:168:LEU:CD2	2.38	0.49
53:CA:1086:U:O2'	53:CA:1087:G:H5'	2.12	0.49
22:BA:1494:A:C2	22:BA:1495:A:C4	2.99	0.49
18:AS:41:PRO:O	18:AS:44:ILE:HG13	2.12	0.49
8:AI:49:GLN:N	8:AI:50:PRO:HD2	2.27	0.49
19:CT:23:ARG:HB3	19:CT:60:GLN:HE22	1.76	0.49
35:BN:79:LEU:O	35:BN:80:PHE:CB	2.59	0.49
53:CA:1265:C:C4	53:CA:1266:G:N7	2.80	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
33:BL:29:LYS:O	33:BL:31:GLY:N	2.41	0.49
31:BJ:97:PRO:O	31:BJ:99:ARG:N	2.45	0.49
22:DA:340:A:H2'	22:DA:341:C:O4'	2.11	0.49
53:CA:998:C:C6	53:CA:999:C:H5	2.30	0.49
31:DJ:111:LYS:HB2	31:DJ:115:GLY:H	1.76	0.49
22:DA:170:U:H2'	22:DA:171:U:C6	2.43	0.49
22:BA:1857:G:N2	22:BA:1884:G:O2'	2.45	0.49
21:AA:996:A:C2	21:AA:1046:A:H5'	2.47	0.49
22:BA:2602:A:H5''	22:BA:2603:G:H5''	1.94	0.49
45:DX:20:ALA:O	45:DX:21:LEU:HB2	2.12	0.49
54:DB:32:U:C2	54:DB:51:G:N2	2.79	0.49
22:DA:612:G:N2	22:DA:614:A:HO2'	2.09	0.49
22:BA:2648:G:H2'	22:BA:2649:C:H6	1.76	0.49
40:BS:29:VAL:HG12	40:BS:30:SER:N	2.27	0.49
33:DL:21:ARG:NH2	33:DL:21:ARG:HB3	2.26	0.49
32:BK:14:SER:OG	32:BK:86:LEU:HD12	2.12	0.49
23:BB:51:G:H2'	23:BB:52:A:C8	2.47	0.49
39:DR:66:HIS:CD2	39:DR:94:THR:HG22	2.47	0.49
21:AA:469:C:H2'	21:AA:470:C:C6	2.47	0.49
22:DA:1973:G:C6	22:DA:1974:C:C4	3.00	0.49
21:AA:157:U:O2'	21:AA:158:G:H5'	2.12	0.49
28:DG:37:ASN:HD22	28:DG:40:VAL:CG2	2.24	0.49
22:DA:2648:G:H2'	22:DA:2649:C:O4'	2.12	0.49
40:BS:33:LEU:HD12	40:BS:48:LYS:HD3	1.93	0.49
31:DJ:104:ALA:O	31:DJ:108:MET:HG3	2.12	0.49
15:AP:78:VAL:O	15:AP:78:VAL:HG22	2.11	0.49
22:BA:2272:U:H5''	22:BA:2273:A:OP1	2.12	0.49
51:B3:60:CYS:O	51:B3:61:LEU:HD23	2.12	0.49
33:BL:77:ILE:N	33:BL:77:ILE:HD12	2.26	0.49
25:BD:4:LEU:HD13	25:BD:100:LEU:HD23	1.95	0.49
54:DB:111:U:H2'	54:DB:112:G:C8	2.47	0.49
22:DA:2093:G:C6	22:DA:2225:A:N7	2.80	0.49
22:DA:1126:A:H8	22:DA:1126:A:OP1	1.95	0.49
4:AE:114:LEU:HG	4:AE:119:VAL:CG2	2.42	0.49
22:DA:78:U:C2'	22:DA:79:C:H5'	2.43	0.49
1:CB:80:LYS:O	1:CB:84:LEU:N	2.37	0.49
22:DA:1205:A:H5''	22:DA:1206:G:C8	2.47	0.49
4:CE:113:VAL:CG2	4:CE:136:VAL:HG23	2.42	0.49
4:CE:135:VAL:O	4:CE:138:ALA:HB3	2.13	0.49
22:DA:468:G:H5''	26:DE:55:SER:HB2	1.94	0.49
44:DW:23:LYS:HD2	44:DW:24:ARG:HB2	1.94	0.49
29:DH:90:LEU:HB3	29:DH:123:ARG:HD2	1.95	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
27:DF:134:GLN:HG3	27:DF:149:ARG:O	2.12	0.49
22:DA:2637:U:H5'	25:DD:45:TYR:CE1	2.48	0.49
53:CA:113:G:H2'	53:CA:114:U:C6	2.46	0.49
22:BA:63:A:O2'	22:BA:64:A:H5'	2.12	0.49
31:DJ:99:ARG:O	31:DJ:103:ILE:HG23	2.13	0.49
34:BM:1:MET:O	34:BM:2:LEU:CB	2.59	0.49
34:BM:41:LEU:HA	34:BM:45:GLN:OE1	2.12	0.49
21:AA:1492:A:N1	22:BA:1913:A:C4	2.80	0.49
35:BN:61:ALA:O	35:BN:64:ARG:HB2	2.11	0.49
22:BA:405:U:C3'	22:BA:406:G:H5'	2.41	0.49
22:BA:1805:A:N3	24:BC:49:THR:HG23	2.27	0.49
22:BA:1385:A:H4'	22:BA:1386:C:OP1	2.12	0.49
27:DF:11:VAL:HG22	27:DF:171:ALA:HA	1.94	0.49
46:DY:4:LYS:HB2	46:DY:4:LYS:NZ	2.26	0.49
20:CU:9:GLU:HB3	20:CU:10:PRO:CD	2.42	0.49
22:BA:357:C:H2'	22:BA:358:U:H6	1.75	0.49
22:BA:26:G:H1'	22:BA:514:A:H61	1.78	0.49
22:DA:870:U:C2'	22:DA:871:U:H5'	2.42	0.49
22:BA:1858:A:H8	22:BA:1858:A:OP2	1.94	0.49
22:DA:2574:G:O2'	25:DD:148:GLN:HB2	2.12	0.49
43:DV:30:ILE:HG13	43:DV:40:ILE:HD11	1.94	0.49
21:AA:1305:G:H21	21:AA:1332:A:H2	1.60	0.49
26:BE:78:TRP:O	26:BE:79:ARG:O	2.30	0.49
8:AI:88:GLU:HG3	8:AI:89:TYR:N	2.27	0.49
33:BL:62:PRO:HB2	51:B3:29:ARG:NH2	2.27	0.49
21:AA:957:U:O2	21:AA:959:A:H8	1.94	0.49
22:DA:2529:G:H4'	28:DG:174:LYS:CD	2.41	0.49
53:CA:227:G:H2'	53:CA:228:A:O4'	2.12	0.49
1:AB:59:ILE:HD12	1:AB:60:ALA:N	2.27	0.49
21:AA:51:A:H4'	21:AA:52:C:O5'	2.12	0.49
23:BB:52:A:H4'	23:BB:53:A:OP1	2.11	0.49
22:DA:2813:A:H2'	22:DA:2814:A:C8	2.46	0.49
22:DA:2379:G:H2'	22:DA:2380:C:H6	1.77	0.49
22:DA:2829:A:H2'	22:DA:2830:C:H5'	1.93	0.49
24:DC:239:PHE:HD1	24:DC:240:GLY:H	1.60	0.49
8:CI:115:VAL:HG21	9:CJ:61:ALA:O	2.11	0.49
8:CI:114:LYS:HD2	8:CI:120:ALA:O	2.12	0.49
1:AB:168:GLU:HB3	1:AB:171:ALA:HB3	1.94	0.49
22:BA:613:A:C8	22:BA:616:A:N1	2.80	0.49
22:DA:2429:G:C8	33:DL:55:MET:HE3	2.47	0.49
25:BD:103:ASP:CG	25:BD:104:VAL:N	2.65	0.49
22:DA:2331:G:C1'	44:DW:40:ARG:HB3	2.41	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
45:BX:38:TRP:HB2	45:BX:45:PHE:HE2	1.78	0.49
10:CK:90:PRO:O	10:CK:91:GLY:C	2.51	0.49
22:BA:923:G:H1'	44:BW:23:LYS:HE2	1.94	0.49
21:AA:174:A:C2'	21:AA:175:C:H5'	2.39	0.49
3:AD:146:GLU:HB3	3:AD:147:LYS:HZ2	1.76	0.49
31:BJ:20:ALA:O	31:BJ:21:THR:O	2.30	0.49
37:DP:48:ALA:HB3	37:DP:59:THR:OG1	2.11	0.49
22:DA:1716:U:C4	22:DA:1745:A:N6	2.80	0.49
53:CA:812:G:H2'	53:CA:812:G:N3	2.27	0.49
22:DA:2216:G:H2'	22:DA:2217:G:C8	2.47	0.49
22:DA:1075:C:HO2'	22:DA:1076:C:H6	1.59	0.49
26:DE:134:LEU:HA	26:DE:137:LYS:CB	2.43	0.49
24:BC:103:ILE:O	24:BC:104:LEU:O	2.29	0.49
53:CA:280:C:H4'	53:CA:281:G:OP2	2.13	0.49
22:BA:544:C:N3	22:BA:548:G:OP1	2.45	0.49
35:DN:75:ILE:HD12	35:DN:79:LEU:HD12	1.93	0.49
53:CA:1300:G:N2	53:CA:1334:G:H2'	2.22	0.49
22:DA:1964:G:H4'	22:DA:1965:C:OP2	2.12	0.49
21:AA:1055:A:N6	21:AA:1206:G:C5	2.81	0.49
21:AA:559:A:H4'	21:AA:560:A:O5'	2.12	0.49
6:AG:112:ASP:O	6:AG:113:LYS:HD3	2.11	0.49
22:BA:573:U:O2'	22:BA:574:A:H3'	2.11	0.49
21:AA:36:C:H2'	21:AA:37:U:O4'	2.12	0.49
21:AA:1469:C:C5'	21:AA:1469:C:H6	2.22	0.49
24:BC:145:MET:HB2	24:BC:152:GLN:NE2	2.27	0.49
22:BA:276:U:O2'	22:BA:277:G:O5'	2.30	0.49
29:BH:66:ASN:C	29:BH:68:ARG:H	2.14	0.49
11:AL:23:LEU:CB	11:AL:58:ASN:ND2	2.74	0.49
27:DF:11:VAL:O	27:DF:12:VAL:HB	2.12	0.49
22:BA:141:G:H3'	22:BA:142:A:C5'	2.42	0.49
23:BB:12:C:H4'	23:BB:13:G:OP1	2.12	0.49
33:BL:78:ARG:HB3	33:BL:113:ALA:CB	2.41	0.49
26:DE:79:ARG:HG2	26:DE:80:SER:N	2.28	0.49
22:DA:2492:U:H2'	22:DA:2493:U:C6	2.47	0.49
2:CC:120:THR:HG23	2:CC:187:GLU:O	2.12	0.49
22:DA:2425:A:H1'	22:DA:2427:C:C5	2.47	0.49
21:AA:821:G:H2'	21:AA:822:U:C6	2.48	0.49
11:CL:41:PRO:HG2	11:CL:45:ASN:O	2.11	0.49
20:AU:24:LYS:HG2	20:AU:25:ALA:N	2.27	0.49
31:BJ:49:ASP:OD1	31:BJ:121:LYS:HE2	2.13	0.49
22:BA:2773:C:H2'	22:BA:2774:C:H6	1.77	0.49
22:BA:852:U:H2'	22:BA:853:C:C6	2.47	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:BA:2662:A:H2'	22:BA:2663:G:O4'	2.11	0.49
27:DF:113:PHE:CE2	27:DF:116:LEU:HD22	2.47	0.49
3:CD:203:TYR:C	3:CD:205:LYS:H	2.14	0.49
23:BB:54:G:H2'	23:BB:55:U:H6	1.76	0.49
22:BA:1322:A:C2'	22:BA:1323:C:H5'	2.42	0.49
22:DA:1232:G:H2'	22:DA:1233:C:H6	1.77	0.49
3:CD:165:GLU:O	3:CD:166:LYS:HB3	2.11	0.49
50:B2:21:ARG:HG2	50:B2:31:LEU:HG	1.93	0.49
39:DR:43:ASN:ND2	39:DR:44:GLY:H	2.10	0.49
21:AA:1316:G:N2	21:AA:1318:A:H3'	2.27	0.49
48:D0:29:VAL:HG21	48:D0:34:GLY:HA2	1.94	0.49
53:CA:579:A:H2'	53:CA:580:C:C6	2.46	0.49
16:CQ:12:VAL:HG22	16:CQ:12:VAL:O	2.12	0.49
22:DA:815:C:P	39:DR:85:LYS:HE2	2.52	0.49
22:DA:2414:G:H2'	22:DA:2415:G:H5'	1.94	0.49
22:DA:246:C:C2'	22:DA:247:G:H5'	2.42	0.49
37:BP:50:ARG:HD2	37:BP:51:ASN:N	2.27	0.49
9:CJ:15:HIS:CE1	9:CJ:70:HIS:CD2	3.01	0.49
22:BA:1057:A:C8	22:BA:1086:A:H8	2.29	0.49
25:BD:16:THR:O	25:BD:19:GLY:N	2.44	0.49
20:CU:37:TYR:HD1	53:CA:1525:G:OP1	1.94	0.49
22:DA:1070:A:C5	22:DA:1097:U:H4'	2.47	0.49
25:DD:118:PHE:CE1	25:DD:119:ALA:O	2.65	0.49
30:BI:27:LEU:HD12	30:BI:27:LEU:C	2.33	0.49
22:BA:1462:C:H2'	22:BA:1463:C:H6	1.77	0.49
40:DS:47:VAL:HG12	40:DS:103:ILE:HG12	1.94	0.49
4:AE:114:LEU:O	4:AE:119:VAL:HG22	2.12	0.49
22:DA:332:A:C5	22:DA:335:C:N4	2.81	0.49
46:BY:5:GLU:O	46:BY:6:LEU:C	2.51	0.49
22:DA:379:G:C6	22:DA:380:G:C5	2.99	0.49
52:B4:10:LEU:HD12	52:B4:33:HIS:HD2	1.75	0.49
29:BH:90:LEU:HD22	29:BH:123:ARG:HA	1.94	0.49
32:BK:21:CYS:SG	32:BK:39:ILE:HD11	2.51	0.49
40:BS:88:ARG:NH2	40:BS:88:ARG:CG	2.75	0.49
51:D3:41:ARG:HG2	51:D3:44:ARG:NH2	2.28	0.49
1:AB:67:LEU:O	1:AB:160:LEU:HD12	2.12	0.49
53:CA:149:A:C2	53:CA:150:U:C2	3.00	0.49
22:BA:402:A:C2'	22:BA:403:U:H5'	2.43	0.49
44:BW:8:SER:O	44:BW:9:THR:CB	2.60	0.49
9:AJ:18:ILE:HG23	9:AJ:19:ASP:N	2.25	0.49
5:CF:38:ARG:HH11	5:CF:63:ASN:ND2	2.09	0.49
29:DH:94:ILE:HG13	29:DH:98:ASP:CB	2.42	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
53:CA:134:G:H2'	53:CA:135:C:O4'	2.13	0.49
25:DD:10:GLY:O	25:DD:11:MET:CB	2.61	0.49
2:CC:129:PHE:CZ	2:CC:156:LEU:HB3	2.47	0.49
22:BA:1943:U:H4'	22:BA:1944:U:O5'	2.12	0.49
21:AA:1261:A:H61	21:AA:1274:A:H2'	1.76	0.49
26:BE:48:THR:O	26:BE:52:VAL:HG23	2.12	0.49
24:BC:259:ASN:C	24:BC:261:ARG:N	2.65	0.49
42:BU:48:VAL:O	42:BU:53:GLN:HB3	2.12	0.49
22:DA:1179:G:N2	22:DA:1180:U:C2	2.81	0.49
34:BM:31:PHE:CZ	34:BM:110:GLU:HG2	2.47	0.49
22:DA:159:G:O2'	22:DA:160:A:H5''	2.12	0.49
22:BA:2383:G:H2'	22:BA:2384:U:C6	2.47	0.49
53:CA:730:G:H5''	53:CA:731:G:OP2	2.12	0.49
53:CA:1476:A:H2'	53:CA:1477:U:O4'	2.11	0.49
27:DF:37:MET:N	27:DF:151:LEU:HB3	2.27	0.49
29:BH:14:SER:O	29:BH:16:GLY:N	2.46	0.49
22:BA:2394:C:OP2	51:B3:29:ARG:HD3	2.13	0.49
22:DA:1529:G:H2'	22:DA:1530:G:O4'	2.13	0.49
22:BA:503:A:H5'	22:BA:505:A:OP1	2.11	0.49
22:BA:859:G:C8	22:BA:859:G:OP2	2.64	0.49
45:DX:69:GLU:O	45:DX:71:ARG:N	2.46	0.49
34:DM:69:PRO:O	34:DM:70:ASP:HB3	2.11	0.49
22:DA:927:A:C6	22:DA:928:A:C6	3.01	0.49
1:CB:169:HIS:CD2	1:CB:173:LYS:NZ	2.80	0.49
22:BA:1224:U:C4	22:BA:1225:G:C6	3.00	0.49
34:DM:74:THR:HB	34:DM:87:GLY:O	2.12	0.49
22:DA:2373:G:C6	22:DA:2374:C:C4	2.99	0.49
5:AF:18:VAL:HG11	5:AF:58:HIS:CD2	2.46	0.49
15:AP:14:ARG:HH12	21:AA:617:G:H21	1.60	0.49
53:CA:1486:G:H2'	53:CA:1487:G:O4'	2.12	0.49
2:AC:174:LEU:O	2:AC:174:LEU:HD12	2.11	0.49
21:AA:4:U:H2'	21:AA:4:U:O2	2.13	0.49
11:CL:14:LYS:C	11:CL:14:LYS:HE3	2.33	0.49
3:CD:3:TYR:O	3:CD:4:LEU:HB2	2.12	0.49
22:BA:1334:G:C2'	22:BA:1335:C:H5'	2.41	0.49
22:DA:2152:G:N3	22:DA:2152:G:H2'	2.27	0.49
44:BW:35:ILE:O	44:BW:37:VAL:HG23	2.12	0.49
5:AF:38:ARG:HG2	5:AF:38:ARG:NH1	2.26	0.49
28:BG:116:LEU:HD21	28:BG:122:ALA:HB3	1.94	0.49
28:BG:88:LEU:HD11	28:BG:95:ALA:CB	2.38	0.49
31:DJ:44:TYR:CD2	31:DJ:44:TYR:C	2.85	0.49
21:AA:408:A:C2	21:AA:435:A:C2	3.00	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:AD:112:GLU:HG3	3:AD:153:ARG:HD3	1.93	0.49
37:DP:87:ARG:NH1	37:DP:111:GLU:HG3	2.27	0.49
22:DA:1716:U:O2'	22:DA:1717:A:C5'	2.59	0.49
10:CK:125:LYS:O	10:CK:126:ARG:O	2.30	0.49
22:DA:2516:A:C4	22:DA:2569:G:N2	2.81	0.49
27:DF:59:ILE:HD13	27:DF:137:PHE:HZ	1.77	0.49
22:BA:545:U:O4'	22:BA:545:U:O2	2.26	0.49
1:AB:32:GLY:HA3	1:AB:39:ILE:HB	1.94	0.49
37:BP:24:THR:HG22	37:BP:87:ARG:N	2.20	0.49
53:CA:1348:U:C2'	53:CA:1349:A:H8	2.26	0.49
22:DA:1491:G:C6	22:DA:1500:G:C2	3.00	0.49
11:CL:5:GLN:HG3	11:CL:9:LYS:HZ3	1.77	0.49
48:B0:9:ARG:CG	48:B0:9:ARG:NH2	2.71	0.49
22:DA:730:A:H2'	22:DA:731:C:H6	1.78	0.49
41:DT:63:VAL:HG21	41:DT:80:TRP:CE2	2.47	0.49
3:AD:1:ALA:CB	21:AA:404:G:N7	2.74	0.49
22:DA:1866:A:C4	22:DA:1876:A:N6	2.80	0.49
43:DV:26:PHE:CD2	43:DV:42:LEU:HB2	2.48	0.49
22:DA:1608:A:C4	22:DA:1611:C:N4	2.81	0.49
29:BH:12:LEU:HD12	29:BH:19:VAL:HG11	1.94	0.49
53:CA:575:G:C6	53:CA:821:G:N7	2.81	0.49
40:BS:66:ILE:HD13	40:BS:67:ASP:N	2.27	0.49
53:CA:1284:C:H5''	53:CA:1285:A:H5''	1.94	0.49
22:DA:876:C:H2'	22:DA:877:A:OP1	2.13	0.49
51:D3:22:LYS:H	51:D3:48:MET:CB	2.24	0.49
24:DC:140:VAL:CG2	24:DC:161:VAL:HB	2.43	0.49
29:DH:68:ARG:HD3	29:DH:71:LYS:HB2	1.94	0.49
18:CS:10:ILE:HG22	18:CS:14:LEU:HD21	1.95	0.49
24:DC:44:ASN:C	24:DC:46:GLY:N	2.65	0.49
3:AD:63:ILE:HG23	3:AD:64:TYR:CD1	2.47	0.49
36:BO:3:LYS:HG3	36:BO:4:LYS:N	2.27	0.49
25:DD:148:GLN:OE1	25:DD:152:PRO:HG2	2.12	0.49
19:AT:34:VAL:HG11	19:AT:78:LEU:HD22	1.94	0.49
23:BB:40:U:O2'	23:BB:43:C:C5	2.63	0.49
53:CA:892:A:C6	53:CA:893:C:C4	3.01	0.49
1:CB:212:TYR:HD2	1:CB:212:TYR:O	1.96	0.49
21:AA:1453:G:H2'	21:AA:1454:G:O4'	2.12	0.49
24:BC:236:GLY:O	24:BC:237:ARG:HB2	2.13	0.49
26:DE:151:GLY:HA3	26:DE:191:ASP:OD1	2.12	0.49
36:DO:77:ALA:O	36:DO:81:ARG:HG3	2.13	0.49
21:AA:497:G:O2'	21:AA:498:A:H5'	2.12	0.49
22:DA:1451:C:H1'	22:DA:1452:G:N7	2.27	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:CT:42:ASP:HB3	19:CT:45:ALA:HB3	1.95	0.49
36:BO:79:ALA:HA	36:BO:115:LEU:HD13	1.93	0.49
13:CN:27:LYS:HD2	13:CN:27:LYS:C	2.33	0.49
36:BO:36:TYR:CD2	36:BO:36:TYR:N	2.81	0.49
53:CA:1440:U:OP2	53:CA:1440:U:H6	1.94	0.49
22:DA:2520:C:H2'	22:DA:2521:C:H6	1.78	0.49
22:DA:1439:A:H3'	22:DA:1439:A:H8	1.75	0.49
22:DA:2283:C:N4	22:DA:2389:G:C6	2.81	0.49
53:CA:995:C:HO2'	53:CA:996:A:P	2.34	0.49
30:BI:90:GLY:O	30:BI:92:PRO:HD3	2.12	0.49
16:AQ:55:GLY:HA3	16:AQ:82:VAL:HG11	1.95	0.49
4:AE:149:PRO:CA	4:AE:152:VAL:HG13	2.43	0.49
31:DJ:44:TYR:CD1	38:DQ:63:ARG:NH2	2.79	0.49
22:DA:1142:A:C4	22:DA:1144:A:C8	3.01	0.49
8:CI:74:GLN:HE22	53:CA:1249:C:H4'	1.77	0.49
22:DA:226:A:C2	22:DA:230:G:O6	2.65	0.49
22:DA:1073:A:OP2	22:DA:1073:A:H4'	2.12	0.49
22:DA:1507:C:H3'	22:DA:1508:A:O4'	2.12	0.49
22:BA:869:G:H2'	22:BA:870:U:O4'	2.12	0.49
22:BA:271:G:C4	22:BA:272:A:N7	2.80	0.49
22:DA:301:G:O2'	22:DA:302:C:O5'	2.31	0.49
4:CE:103:GLY:O	4:CE:104:ILE:CG2	2.57	0.49
22:BA:1509:A:O2'	22:BA:1510:G:P	2.71	0.49
22:DA:866:A:O2'	22:DA:867:C:H6	1.96	0.49
35:BN:72:ASP:OD1	35:BN:75:ILE:HG23	2.13	0.49
6:AG:110:ARG:HH12	6:AG:122:GLU:HG2	1.76	0.49
27:BF:131:VAL:HG21	27:BF:151:LEU:HG	1.95	0.49
22:DA:991:C:C4	22:DA:1185:G:C6	3.00	0.49
34:BM:71:LYS:HD3	34:BM:95:LEU:CD1	2.42	0.49
35:DN:1:MET:O	35:DN:2:ARG:CB	2.60	0.49
25:DD:125:TRP:CE3	25:DD:160:LYS:HD3	2.47	0.49
20:AU:3:ILE:CA	20:AU:19:LYS:HZ1	2.26	0.49
1:AB:67:LEU:HB3	1:AB:160:LEU:HD12	1.93	0.49
54:DB:27:C:O2'	54:DB:28:C:C5'	2.61	0.49
22:BA:1820:U:C2	24:BC:200:MET:HB2	2.46	0.49
41:BT:2:ILE:HB	41:BT:3:ARG:NH1	2.27	0.49
46:DY:4:LYS:HZ3	46:DY:4:LYS:HB2	1.77	0.49
22:BA:1688:U:H5''	22:BA:1689:A:OP1	2.12	0.49
22:DA:185:G:C6	22:DA:212:G:C2	3.01	0.49
22:BA:2714:G:H2'	22:BA:2715:C:H6	1.76	0.49
21:AA:1046:A:O2'	21:AA:1047:G:O5'	2.31	0.49
37:BP:17:PRO:HG3	37:BP:83:ILE:O	2.13	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:1215:G:H5''	38:DQ:7:VAL:HG11	1.95	0.49
16:AQ:51:GLU:O	16:AQ:52:CYS:O	2.30	0.49
22:DA:2348:U:H2'	22:DA:2349:G:H8	1.77	0.49
22:DA:1425:G:H8	22:DA:1425:G:O5'	1.95	0.49
47:DZ:6:ILE:HD12	47:DZ:47:ILE:HD11	1.93	0.49
48:D0:28:SER:HB3	48:D0:39:ARG:NE	2.27	0.49
22:DA:1544:A:C6	22:DA:1545:A:C6	3.01	0.49
7:CH:46:GLU:N	7:CH:63:LYS:HG3	2.28	0.49
22:DA:1228:G:H2'	22:DA:1229:C:C6	2.48	0.49
36:DO:51:ALA:HB3	36:DO:78:VAL:CG2	2.42	0.49
22:BA:12:U:H2'	22:BA:13:A:O5'	2.13	0.49
21:AA:1371:G:H5''	21:AA:1372:U:OP2	2.11	0.49
3:CD:70:GLN:HG2	3:CD:74:TYR:CE2	2.47	0.49
29:DH:7:ASP:O	29:DH:15:LEU:HA	2.13	0.49
23:BB:2:G:C2	23:BB:119:A:N3	2.80	0.49
45:BX:20:ALA:O	45:BX:21:LEU:HB2	2.12	0.49
22:DA:2138:G:OP2	22:DA:2138:G:H8	1.94	0.49
25:BD:8:LYS:HB2	25:BD:201:LEU:HD22	1.95	0.49
2:AC:25:THR:HG23	13:AN:75:LYS:HD3	1.93	0.49
53:CA:881:G:C6	53:CA:882:C:C4	3.01	0.49
38:BQ:94:LEU:C	38:BQ:96:ASP:H	2.16	0.49
33:BL:85:VAL:HG22	33:BL:94:THR:HG23	1.95	0.49
25:BD:101:PHE:HE2	25:BD:203:VAL:CG2	2.24	0.49
53:CA:994:A:N3	53:CA:995:C:C6	2.81	0.49
21:AA:433:G:C2'	21:AA:434:U:H5'	2.42	0.49
37:DP:88:ARG:HH11	37:DP:112:ARG:CZ	2.26	0.49
22:BA:1339:G:N2	22:BA:1603:A:H1'	2.27	0.49
41:BT:39:THR:CG2	41:BT:39:THR:O	2.61	0.49
20:CU:33:ARG:HH22	20:CU:34:ARG:HH11	1.60	0.49
26:DE:126:VAL:HG13	26:DE:127:GLU:N	2.27	0.49
34:DM:23:GLY:O	34:DM:101:VAL:HG12	2.13	0.49
11:CL:19:ASN:N	11:CL:19:ASN:HD22	1.96	0.49
7:CH:75:GLN:O	7:CH:126:CYS:CB	2.60	0.49
22:DA:319:G:C6	22:DA:333:G:N1	2.81	0.49
42:DU:94:PHE:O	42:DU:95:PHE:C	2.50	0.49
53:CA:961:U:H5	53:CA:1223:C:H1'	1.78	0.49
53:CA:1130:A:C6	53:CA:1131:G:N7	2.81	0.49
14:AO:23:SER:O	14:AO:24:THR:C	2.50	0.49
2:CC:53:ARG:HB2	2:CC:53:ARG:HH11	1.77	0.49
21:AA:981:U:C2	21:AA:982:U:C5	3.01	0.49
12:CM:103:THR:HG22	12:CM:104:ASN:N	2.28	0.49
24:DC:62:ARG:HD3	24:DC:83:ASP:CG	2.33	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
53:CA:686:U:O2'	53:CA:687:A:C8	2.59	0.49
36:DO:62:LEU:CD1	36:DO:65:THR:HG23	2.42	0.49
22:BA:229:C:C2'	22:BA:230:G:O5'	2.61	0.49
53:CA:502:A:H4'	53:CA:550:G:H4'	1.94	0.49
21:AA:89:U:O2'	21:AA:90:C:C5'	2.60	0.49
9:AJ:18:ILE:CG2	9:AJ:19:ASP:N	2.75	0.49
5:CF:62:MET:O	5:CF:63:ASN:HB2	2.12	0.49
22:DA:2:G:C5	22:DA:3:U:C4	3.00	0.49
22:DA:90:U:H3'	22:DA:91:A:C5'	2.42	0.49
26:BE:46:GLN:HG2	26:BE:87:ALA:H	1.77	0.49
22:BA:1474:U:C2'	22:BA:1475:G:H5'	2.43	0.49
22:BA:282:A:H2'	22:BA:283:G:C8	2.48	0.49
22:BA:2582:G:O2'	22:BA:2583:G:H5'	2.13	0.49
22:BA:182:A:H2'	22:BA:183:C:H6	1.77	0.49
16:CQ:47:ASP:HB3	16:CQ:74:LEU:CB	2.42	0.49
24:BC:169:ALA:O	24:BC:185:ALA:HB3	2.12	0.49
25:DD:182:ALA:N	25:DD:183:GLU:OE1	2.46	0.49
21:AA:1452:C:H4'	21:AA:1453:G:C4	2.48	0.49
22:BA:1406:U:O2'	22:BA:1407:G:O5'	2.31	0.49
22:DA:2578:G:H21	25:DD:130:GLN:NE2	2.10	0.49
39:DR:24:LYS:HA	39:DR:94:THR:HG23	1.95	0.49
53:CA:518:C:H2'	53:CA:530:G:N7	2.28	0.49
22:BA:649:G:H2'	22:BA:650:C:C6	2.48	0.49
22:BA:2264:C:H41	44:BW:11:ASN:ND2	2.10	0.49
21:AA:82:G:N2	21:AA:84:U:N3	2.60	0.49
22:BA:942:G:H2'	22:BA:943:A:H5'	1.95	0.49
21:AA:961:U:O5'	21:AA:961:U:H6	1.96	0.49
8:CI:126:PHE:O	8:CI:126:PHE:CG	2.66	0.49
26:BE:97:ASN:HB2	26:BE:100:MET:HG3	1.93	0.49
38:BQ:25:GLY:O	38:BQ:29:ARG:HG3	2.12	0.49
53:CA:320:A:C2	53:CA:334:C:C2	3.01	0.49
16:CQ:11:VAL:HG12	16:CQ:54:ILE:HA	1.94	0.49
22:DA:2414:G:C2'	22:DA:2415:G:H5'	2.43	0.49
22:DA:2430:A:H5'	22:DA:2431:U:OP2	2.12	0.49
40:BS:4:ILE:HG22	40:BS:106:VAL:HG13	1.95	0.49
45:BX:39:VAL:HG13	45:BX:46:VAL:HG22	1.94	0.49
20:CU:24:LYS:HZ2	20:CU:25:ALA:N	2.10	0.49
50:B2:3:ARG:HH21	50:B2:3:ARG:CG	2.05	0.49
21:AA:198:G:N1	21:AA:220:G:C4	2.80	0.49
7:AH:45:ILE:HG22	7:AH:62:LEU:HD13	1.95	0.49
22:DA:998:C:OP2	38:DQ:57:ARG:NH2	2.45	0.49
22:BA:1083:U:C5	22:BA:1085:A:OP2	2.66	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:2199:A:O2'	22:DA:2200:C:H5'	2.13	0.49
22:DA:2544:G:H2'	22:DA:2545:G:C8	2.47	0.49
4:AE:136:VAL:O	4:AE:137:ARG:HB2	2.13	0.49
22:DA:2143:C:H5''	22:DA:2144:G:N7	2.27	0.49
22:DA:1183:U:H2'	22:DA:1184:U:H6	1.76	0.49
22:BA:528:A:C2'	22:BA:529:A:H5''	2.43	0.49
22:BA:1022:G:O6	31:BJ:68:LYS:CE	2.61	0.49
22:DA:323:C:C4	22:DA:333:G:N7	2.80	0.49
22:DA:333:G:O2'	22:DA:334:C:C5'	2.60	0.49
53:CA:82:G:N7	53:CA:89:U:C4	2.81	0.49
35:DN:62:ASN:O	35:DN:63:ARG:CB	2.52	0.49
22:DA:802:A:O2'	22:DA:803:U:H5'	2.12	0.49
48:D0:38:LEU:HB2	48:D0:41:HIS:CE1	2.48	0.49
4:CE:20:VAL:HB	53:CA:16:A:O2'	2.13	0.49
6:CG:100:MET:HE2	6:CG:100:MET:H	1.76	0.49
14:AO:26:VAL:HG12	14:AO:30:LEU:HD11	1.94	0.49
22:DA:972:A:N1	22:DA:973:A:N6	2.61	0.49
21:AA:872:A:C2	21:AA:874:G:C6	3.01	0.49
24:BC:29:PHE:CZ	24:BC:31:PRO:CG	2.96	0.49
28:DG:104:LEU:H	28:DG:112:VAL:HG23	1.78	0.49
30:BI:32:VAL:HG22	30:BI:66:PHE:CG	2.47	0.49
33:DL:64:PHE:HD2	51:D3:24:LYS:CG	2.21	0.49
46:BY:32:ALA:CB	46:BY:37:LEU:HD12	2.41	0.49
27:DF:27:VAL:O	27:DF:27:VAL:HG23	2.13	0.49
22:BA:1434:A:H2'	22:BA:1435:G:C8	2.47	0.49
24:DC:251:THR:HG22	24:DC:252:LYS:N	2.26	0.49
22:BA:2492:U:H2'	22:BA:2493:U:C6	2.47	0.49
21:AA:819:A:N7	21:AA:1529:G:C2	2.81	0.49
5:CF:67:PRO:O	5:CF:68:GLN:C	2.51	0.49
46:BY:45:GLN:O	46:BY:46:VAL:CB	2.60	0.49
12:AM:89:ARG:CB	12:AM:96:VAL:HG22	2.43	0.49
21:AA:1442:G:H2'	21:AA:1443:C:C6	2.47	0.49
22:DA:1461:C:H2'	22:DA:1462:C:H6	1.76	0.49
22:DA:2264:C:C2	22:DA:2277:G:N2	2.81	0.49
37:DP:32:VAL:HG13	37:DP:32:VAL:O	2.13	0.49
11:CL:86:VAL:HG11	11:CL:89:LEU:HD23	1.95	0.49
23:BB:34:A:H2'	23:BB:35:C:OP2	2.11	0.49
22:DA:969:G:H2'	22:DA:970:U:C6	2.48	0.49
22:BA:709:U:H2'	22:BA:710:U:C6	2.47	0.49
14:CO:52:ARG:O	14:CO:55:LEU:HB3	2.13	0.49
22:BA:2672:U:C2'	22:BA:2673:G:O5'	2.61	0.49
53:CA:39:G:H2'	53:CA:40:C:H6	1.78	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:AA:677:U:H3	21:AA:713:G:H22	1.59	0.49
49:D1:18:HIS:HD1	49:D1:48:TYR:HH	1.58	0.49
1:CB:156:LEU:HD23	1:CB:156:LEU:H	1.78	0.49
54:DB:110:C:HO2'	54:DB:111:U:H5'	1.75	0.49
37:BP:50:ARG:CD	37:BP:51:ASN:N	2.75	0.49
28:BG:155:PRO:O	28:BG:170:THR:HA	2.13	0.49
28:BG:148:ARG:HA	28:BG:161:VAL:HG11	1.95	0.49
16:AQ:45:VAL:HG22	16:AQ:72:TRP:HB2	1.94	0.49
11:AL:33:CYS:N	11:AL:54:VAL:HG13	2.26	0.49
53:CA:1150:A:H1'	53:CA:1280:A:N6	2.27	0.49
22:DA:1021:A:HO2'	22:DA:1022:G:P	2.35	0.49
10:AK:124:LYS:O	20:AU:33:ARG:CZ	2.60	0.49
22:BA:1179:G:N7	22:BA:1180:U:H1'	2.28	0.49
22:DA:1655:A:H2'	22:DA:1656:C:H6	1.73	0.49
1:CB:208:ALA:O	1:CB:211:LEU:HB3	2.13	0.49
22:BA:1022:G:O6	31:BJ:68:LYS:HE2	2.12	0.49
4:CE:11:GLN:HB3	4:CE:116:VAL:HB	1.95	0.49
22:DA:120:U:O4	22:DA:177:G:C8	2.66	0.49
22:DA:52:A:O2'	22:DA:53:A:H5'	2.12	0.49
22:DA:2867:G:O2'	22:DA:2867:G:N3	2.44	0.49
1:CB:99:MET:O	1:CB:103:TRP:HB3	2.13	0.49
22:BA:243:U:OP1	51:B3:5:THR:CG2	2.56	0.49
27:BF:134:GLN:NE2	27:BF:148:VAL:O	2.46	0.49
48:B0:39:ARG:HB2	48:B0:39:ARG:NH1	2.22	0.49
22:DA:973:A:OP1	22:DA:973:A:H8	1.95	0.49
31:BJ:70:THR:HA	31:BJ:90:GLU:HG2	1.95	0.49
21:AA:1491:G:H5'	21:AA:1492:A:OP1	2.13	0.49
21:AA:532:A:H4'	21:AA:533:A:OP2	2.12	0.49
22:DA:1587:G:H21	22:DA:1588:G:H1'	1.77	0.49
22:BA:2748:A:O3'	28:BG:3:VAL:HG11	2.13	0.49
22:DA:1760:C:OP1	22:DA:2712:C:H5	1.96	0.49
22:BA:1731:G:C2	22:BA:1733:G:C5	3.00	0.49
53:CA:384:G:H2'	53:CA:385:C:C6	2.48	0.49
3:AD:3:TYR:O	3:AD:4:LEU:HB2	2.13	0.49
53:CA:397:A:H5'	53:CA:398:U:OP1	2.13	0.49
22:DA:2846:G:OP1	37:DP:51:ASN:HB2	2.12	0.49
31:DJ:25:LEU:C	31:DJ:27:ARG:H	2.15	0.49
21:AA:428:G:O4'	21:AA:430:A:C8	2.65	0.49
24:BC:257:ARG:NE	24:BC:269:ARG:NH2	2.60	0.49
22:DA:85:G:O2'	22:DA:86:G:H5''	2.12	0.49
1:CB:137:THR:O	1:CB:140:LEU:HB3	2.13	0.49
22:DA:1048:A:C2	22:DA:1049:C:N3	2.80	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
42:BU:48:VAL:O	42:BU:48:VAL:HG13	2.13	0.49
22:BA:1945:G:H2'	22:BA:1946:U:H6	1.74	0.49
22:DA:284:U:H2'	22:DA:285:G:C8	2.46	0.49
16:AQ:28:VAL:O	16:AQ:36:PHE:HA	2.12	0.49
22:BA:1023:U:H6	22:BA:1023:U:C5'	2.24	0.49
14:CO:20:ASP:HB2	53:CA:750:C:O2'	2.13	0.49
53:CA:1337:G:H5''	53:CA:1338:G:OP1	2.12	0.49
22:DA:1833:C:C2	22:DA:1834:U:C5	3.01	0.49
54:DB:26:C:H1'	54:DB:117:G:C1'	2.43	0.49
22:BA:181:A:H2'	22:BA:182:A:C8	2.48	0.49
34:DM:136:MET:HE1	43:DV:57:TYR:HD2	1.78	0.49
6:AG:34:LYS:HB3	6:AG:37:THR:HG23	1.93	0.49
21:AA:994:A:O2'	21:AA:995:C:H5'	2.13	0.49
22:BA:1266:G:OP1	48:B0:15:ARG:NE	2.45	0.49
22:DA:1478:G:O6	22:DA:1514:G:C2	2.65	0.49
22:BA:1411:U:H2'	22:BA:1412:U:O4'	2.13	0.49
22:BA:1334:G:C6	22:BA:1335:C:C4	3.01	0.49
12:CM:87:GLY:O	12:CM:91:ARG:HD2	2.12	0.49
1:CB:14:HIS:CG	1:CB:14:HIS:O	2.65	0.49
40:DS:22:ASP:HA	40:DS:25:ARG:HH12	1.77	0.49
26:BE:37:ALA:C	26:BE:39:ALA:H	2.15	0.49
15:CP:36:VAL:O	15:CP:36:VAL:HG13	2.11	0.49
24:BC:18:VAL:O	24:BC:18:VAL:HG22	2.13	0.49
31:BJ:45:THR:HG23	31:BJ:45:THR:O	2.13	0.49
22:DA:2414:G:N2	33:DL:66:PHE:CZ	2.72	0.49
25:BD:98:VAL:O	25:BD:100:LEU:N	2.46	0.49
22:BA:923:G:H5'	44:BW:25:PHE:CZ	2.48	0.49
53:CA:1408:A:N1	53:CA:1494:G:C5	2.80	0.49
16:AQ:12:VAL:HB	16:AQ:21:VAL:HG22	1.94	0.49
53:CA:1150:A:N6	53:CA:1151:A:N6	2.60	0.49
20:CU:34:ARG:O	20:CU:35:GLU:O	2.31	0.49
33:DL:47:ARG:CG	33:DL:47:ARG:NH2	2.72	0.49
22:DA:1055:G:H2'	22:DA:1056:G:H5'	1.94	0.49
22:DA:1075:C:O2'	22:DA:1076:C:H6	1.95	0.49
22:DA:1327:A:O2'	22:DA:1328:A:O4'	2.17	0.49
21:AA:61:G:O2'	21:AA:62:U:H5'	2.12	0.49
20:AU:49:ALA:O	20:AU:52:VAL:HG12	2.13	0.49
35:DN:31:HIS:O	35:DN:33:ILE:N	2.46	0.49
18:CS:35:ARG:HH21	18:CS:51:HIS:CD2	2.31	0.49
22:DA:468:G:H4'	26:DE:57:LYS:HG2	1.94	0.49
21:AA:1124:G:H2'	21:AA:1145:A:N6	2.28	0.49
22:BA:1676:A:C2	22:BA:1993:U:H5'	2.48	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AB:14:HIS:HB2	1:AB:208:ALA:HB2	1.95	0.49
52:B4:30:GLU:HB3	52:B4:33:HIS:ND1	2.28	0.49
22:DA:2836:U:HO2'	22:DA:2837:A:P	2.36	0.49
6:CG:134:VAL:HB	6:CG:137:ARG:NH2	2.18	0.49
22:DA:53:A:C2	50:D2:35:ARG:NH1	2.81	0.49
22:DA:2850:A:N7	22:DA:2868:A:O2'	2.45	0.49
6:AG:68:VAL:HB	6:AG:99:ALA:HB1	1.95	0.49
3:AD:9:LYS:O	3:AD:12:ARG:HB2	2.13	0.49
11:AL:114:SER:CB	21:AA:502:A:OP1	2.61	0.49
28:DG:7:PRO:O	28:DG:8:VAL:HB	2.13	0.49
15:AP:67:ILE:HG23	15:AP:68:SER:O	2.12	0.49
53:CA:397:A:N7	53:CA:547:A:O2'	2.44	0.49
21:AA:90:C:O2'	21:AA:91:U:C5	2.64	0.49
53:CA:1072:G:C5	53:CA:1073:U:C4	3.00	0.49
22:DA:510:C:O2'	22:DA:511:U:H5'	2.13	0.49
53:CA:755:G:O2'	53:CA:756:C:H5'	2.12	0.49
16:CQ:3:LYS:HZ2	16:CQ:6:THR:HG21	1.73	0.49
29:DH:147:VAL:O	29:DH:148:ALA:HB3	2.13	0.49
53:CA:801:U:O2'	53:CA:802:A:H5'	2.13	0.49
22:BA:141:G:C5'	22:BA:142:A:C8	2.96	0.49
22:DA:1300:G:H5'	22:DA:1301:A:C2	2.48	0.49
36:DO:88:LYS:O	36:DO:89:ASP:HB3	2.13	0.49
29:BH:3:VAL:HA	29:BH:37:VAL:O	2.13	0.49
24:DC:75:ALA:HB1	24:DC:93:VAL:HG22	1.94	0.49
42:BU:100:GLU:O	42:BU:101:THR:HB	2.12	0.49
36:BO:75:GLY:HA3	36:BO:109:ALA:HB3	1.95	0.49
53:CA:1336:C:H1'	53:CA:1337:G:N1	2.28	0.49
26:BE:57:LYS:HG3	26:BE:58:LYS:N	2.28	0.49
22:BA:303:G:H2'	22:BA:304:U:C6	2.48	0.49
22:BA:1534:U:H5'	22:BA:1535:A:P	2.52	0.49
53:CA:321:A:O2'	53:CA:322:C:H5'	2.13	0.49
13:CN:16:ALA:HA	13:CN:20:PHE:CD1	2.48	0.49
39:BR:66:HIS:CE1	39:BR:94:THR:CG2	2.96	0.49
21:AA:811:C:H4'	21:AA:900:A:N6	2.27	0.49
22:DA:1573:G:H2'	22:DA:1574:C:H5'	1.94	0.49
21:AA:1454:G:H2'	21:AA:1455:G:H8	1.77	0.49
53:CA:632:U:O2	53:CA:632:U:H2'	2.11	0.49
22:BA:1071:G:H1'	22:BA:1089:A:C8	2.48	0.49
22:DA:470:A:C2	22:DA:471:A:C4	3.00	0.49
22:DA:1248:G:O2'	38:DQ:2:ARG:HA	2.13	0.49
22:BA:151:C:H5'	22:BA:1360:G:OP1	2.13	0.49
22:BA:1003:G:N2	22:BA:1004:U:C2	2.81	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AB:58:LYS:HZ1	1:AB:62:ARG:HG3	1.78	0.49
7:CH:121:GLY:HA3	53:CA:599:C:O3'	2.13	0.49
22:DA:1823:G:H5''	57:DC:310:HOH:O	2.11	0.49
22:BA:593:U:H2'	22:BA:594:U:C6	2.48	0.49
2:CC:26:LYS:HA	2:CC:26:LYS:HE3	1.93	0.49
22:DA:2331:G:N1	22:DA:2385:C:N4	2.60	0.48
44:DW:20:LEU:HD12	44:DW:20:LEU:N	2.27	0.48
44:BW:40:ARG:HB2	44:BW:56:HIS:ND1	2.28	0.48
3:CD:29:THR:O	3:CD:31:CYS:N	2.41	0.48
22:BA:764:A:H3'	22:BA:765:C:H5'	1.95	0.48
9:CJ:33:GLY:O	9:CJ:35:GLN:N	2.46	0.48
17:CR:59:LYS:O	17:CR:63:TYR:CD1	2.66	0.48
35:DN:16:HIS:C	35:DN:18:GLN:H	2.16	0.48
8:CI:35:GLU:CA	8:CI:39:GLY:HA3	2.40	0.48
8:CI:49:GLN:HA	8:CI:52:GLU:HG2	1.94	0.48
22:DA:2210:U:C4'	22:DA:2211:A:H5'	2.43	0.48
34:DM:19:GLY:O	34:DM:20:LEU:HB2	2.12	0.48
30:BI:16:MET:O	30:BI:19:PRO:HD3	2.12	0.48
22:DA:300:A:H2'	22:DA:301:G:H5'	1.94	0.48
26:DE:57:LYS:NZ	26:DE:58:LYS:N	2.61	0.48
22:DA:2244:U:H2'	22:DA:2245:U:O4'	2.13	0.48
22:DA:799:G:C6	22:DA:800:A:C6	3.01	0.48
48:D0:38:LEU:O	48:D0:41:HIS:ND1	2.46	0.48
22:DA:1014:A:C2	22:DA:1149:G:C2	3.01	0.48
22:DA:590:A:C6	22:DA:591:U:C4	3.01	0.48
22:BA:1654:A:O2'	25:BD:118:PHE:CD2	2.65	0.48
22:BA:622:G:H2'	22:BA:623:C:H6	1.78	0.48
25:DD:45:TYR:HE2	25:DD:47:ALA:HB3	1.78	0.48
26:DE:178:VAL:HG13	26:DE:179:SER:N	2.27	0.48
21:AA:108:G:H2'	21:AA:109:A:OP1	2.13	0.48
22:DA:1364:G:C8	45:DX:1:SER:HB2	2.47	0.48
22:DA:726:G:O2'	22:DA:727:A:P	2.70	0.48
37:DP:30:TRP:HD1	37:DP:39:LEU:HD12	1.78	0.48
31:DJ:56:VAL:HG11	31:DJ:101:ILE:HG21	1.94	0.48
22:DA:2666:C:O2	22:DA:2666:C:O4'	2.31	0.48
22:BA:508:A:H4'	22:BA:509:C:OP2	2.12	0.48
22:BA:2791:G:C8	22:BA:2791:G:H5''	2.42	0.48
1:AB:49:PHE:CB	1:AB:212:TYR:OH	2.61	0.48
22:BA:2202:U:H5''	22:BA:2203:U:OP1	2.12	0.48
22:DA:86:G:C2	22:DA:87:U:C4	3.00	0.48
22:BA:1250:G:OP2	33:BL:21:ARG:NH2	2.46	0.48
29:DH:68:ARG:HD3	29:DH:71:LYS:HD3	1.94	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
18:CS:54:ARG:HG2	18:CS:55:GLN:N	2.27	0.48
31:DJ:110:PRO:CG	31:DJ:111:LYS:HG2	2.41	0.48
24:DC:93:VAL:HG12	24:DC:101:ARG:N	2.28	0.48
53:CA:936:C:H2'	53:CA:937:A:C8	2.48	0.48
42:DU:34:ILE:HG12	42:DU:62:ALA:O	2.13	0.48
3:AD:55:ARG:HA	3:AD:55:ARG:HH11	1.77	0.48
6:AG:89:GLU:N	6:AG:89:GLU:CD	2.67	0.48
29:BH:80:ILE:HG23	29:BH:147:VAL:HG21	1.95	0.48
13:CN:13:VAL:HG22	13:CN:59:GLN:OE1	2.13	0.48
29:BH:16:GLY:C	29:BH:51:ARG:HH21	2.16	0.48
26:BE:111:GLU:HG2	26:BE:114:ARG:NH1	2.27	0.48
21:AA:900:A:H2'	21:AA:901:A:O4'	2.13	0.48
7:AH:14:ARG:HE	7:AH:74:ILE:HG23	1.78	0.48
6:AG:145:GLU:HA	6:AG:148:LYS:HB2	1.94	0.48
22:DA:416:U:H2'	22:DA:417:C:C6	2.47	0.48
6:AG:14:ASP:OD1	6:AG:17:PHE:HB2	2.12	0.48
22:DA:2889:C:C4	22:DA:2890:G:C6	3.01	0.48
9:AJ:49:PHE:HE1	9:AJ:67:ILE:HG13	1.78	0.48
22:DA:2403:C:O2'	22:DA:2404:U:C5'	2.61	0.48
22:DA:1361:G:C5	22:DA:1362:C:C5	3.01	0.48
45:BX:73:ARG:HG2	45:BX:75:GLU:HG3	1.95	0.48
22:BA:1635:A:C6	22:BA:1636:U:C2	3.01	0.48
9:CJ:49:PHE:CE2	13:CN:73:LEU:HD13	2.48	0.48
53:CA:202:G:HO2'	53:CA:468:A:H8	1.57	0.48
54:DB:21:G:H2'	54:DB:22:U:O4'	2.12	0.48
21:AA:827:U:C4	21:AA:870:U:C2	3.01	0.48
26:DE:144:GLU:O	26:DE:145:ASP:C	2.52	0.48
33:BL:9:ALA:HB3	33:BL:12:SER:HB2	1.95	0.48
21:AA:1269:A:H2	21:AA:1312:G:N3	2.10	0.48
30:DI:96:LYS:HE2	30:DI:138:VAL:HG11	1.95	0.48
2:CC:6:PRO:HG2	2:CC:183:TYR:CD2	2.48	0.48
22:BA:994:C:O2'	39:BR:10:LYS:NZ	2.46	0.48
3:CD:2:ARG:NH2	3:CD:114:ARG:NH1	2.61	0.48
37:BP:52:ARG:O	37:BP:53:GLY:C	2.50	0.48
22:BA:858:G:N3	22:BA:2268:A:H2'	2.29	0.48
44:BW:23:LYS:HE3	44:BW:24:ARG:HG3	1.92	0.48
22:BA:1061:U:C5	30:BI:9:LYS:HG3	2.48	0.48
22:DA:620:G:O2'	22:DA:622:G:N7	2.45	0.48
20:AU:8:ASN:O	20:AU:11:PHE:HE2	1.96	0.48
28:BG:120:ILE:HD11	28:BG:132:LEU:CB	2.33	0.48
16:CQ:19:SER:HB3	16:CQ:70:LYS:NZ	2.27	0.48
32:DK:70:ARG:HB3	32:DK:76:VAL:CG2	2.30	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
38:DQ:91:ARG:CZ	39:DR:11:GLN:H	2.26	0.48
53:CA:1127:G:O2'	53:CA:1128:C:H5'	2.12	0.48
53:CA:218:U:H2'	53:CA:219:U:O4'	2.13	0.48
21:AA:212:G:H2'	21:AA:213:G:H8	1.78	0.48
22:DA:2800:A:H2'	22:DA:2801:G:C4'	2.43	0.48
41:DT:29:THR:HA	41:DT:87:LEU:HB2	1.95	0.48
22:DA:83:A:P	42:DU:91:LYS:HZ2	2.35	0.48
53:CA:977:A:H8	53:CA:1223:C:C4	2.31	0.48
22:BA:544:C:H3'	22:BA:545:U:O2	2.13	0.48
35:DN:42:LYS:HA	35:DN:45:ARG:HD3	1.95	0.48
22:DA:528:A:H2	22:DA:2043:C:O5'	1.94	0.48
22:DA:1667:G:OP1	32:DK:7:MET:N	2.34	0.48
20:AU:46:ARG:C	20:AU:48:LYS:H	2.16	0.48
42:DU:47:PRO:HB3	42:DU:54:PRO:HG2	1.95	0.48
53:CA:1378:C:H3'	53:CA:1379:G:C5'	2.39	0.48
43:DV:61:LEU:O	43:DV:72:VAL:HG22	2.13	0.48
3:AD:1:ALA:O	3:AD:67:LEU:HD11	2.13	0.48
39:DR:2:TYR:CD2	39:DR:42:ALA:HB2	2.48	0.48
2:CC:63:ILE:HG12	2:CC:65:VAL:CG2	2.40	0.48
6:AG:4:ARG:HA	6:AG:4:ARG:HE	1.77	0.48
35:BN:2:ARG:HA	35:BN:5:LYS:HD2	1.95	0.48
21:AA:967:C:H6	21:AA:967:C:O5'	1.96	0.48
22:DA:2638:G:H2'	22:DA:2775:G:H22	1.77	0.48
53:CA:216:U:H4'	53:CA:464:U:H4'	1.94	0.48
22:DA:91:A:H1'	22:DA:92:U:C6	2.48	0.48
22:BA:1474:U:H2'	22:BA:1475:G:H5'	1.95	0.48
21:AA:1218:C:H2'	21:AA:1219:A:H8	1.75	0.48
12:AM:45:SER:O	12:AM:46:GLU:CB	2.60	0.48
22:BA:304:U:H2'	22:BA:305:C:H6	1.78	0.48
41:DT:76:ARG:HG2	41:DT:77:ARG:N	2.28	0.48
36:BO:6:ALA:O	36:BO:10:ARG:HB2	2.12	0.48
47:DZ:51:SER:HA	47:DZ:54:VAL:CG2	2.43	0.48
22:BA:434:U:O2'	22:BA:436:C:H5	1.96	0.48
6:CG:41:ILE:HG21	6:CG:115:MET:CE	2.43	0.48
53:CA:1463:U:H2'	53:CA:1464:U:C6	2.47	0.48
34:BM:50:ARG:HA	34:BM:53:MET:HE3	1.95	0.48
53:CA:1441:A:C2	53:CA:1442:G:H1'	2.48	0.48
43:DV:31:TYR:O	43:DV:92:VAL:HA	2.13	0.48
22:BA:1577:C:H2'	22:BA:1578:U:O4'	2.13	0.48
22:BA:207:A:H2'	22:BA:208:C:O4'	2.13	0.48
24:DC:259:ASN:C	24:DC:261:ARG:H	2.16	0.48
22:BA:2076:U:O2	22:BA:2076:U:O4'	2.31	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
49:B1:35:LEU:O	49:B1:35:LEU:HD23	2.13	0.48
21:AA:340:U:H2'	21:AA:341:C:C6	2.48	0.48
22:BA:2078:C:O2'	22:BA:2079:U:H5'	2.13	0.48
7:CH:94:VAL:HG21	7:CH:127:TYR:HB3	1.95	0.48
22:DA:678:C:H2'	22:DA:679:C:O4'	2.13	0.48
3:CD:105:GLY:HA3	3:CD:158:LEU:HD23	1.95	0.48
43:BV:51:GLN:HE22	43:BV:79:ARG:HH12	1.61	0.48
22:BA:1319:C:O2'	22:BA:1320:C:H5'	2.13	0.48
53:CA:717:U:N3	53:CA:734:G:N7	2.60	0.48
35:DN:22:ARG:O	35:DN:22:ARG:HG2	2.13	0.48
8:CI:56:MET:O	8:CI:58:GLU:HG2	2.13	0.48
22:DA:410:G:C6	22:DA:2407:A:N6	2.80	0.48
22:DA:2024:G:O2'	22:DA:2025:C:H5'	2.12	0.48
22:DA:481:G:HO2'	22:DA:507:A:N6	2.10	0.48
22:DA:188:G:H2'	22:DA:189:G:H5'	1.95	0.48
35:BN:73:ASN:HD22	35:BN:76:VAL:CG1	2.26	0.48
22:DA:2848:G:O2'	22:DA:2849:U:P	2.72	0.48
22:DA:589:U:O2'	22:DA:590:A:C8	2.47	0.48
1:CB:46:VAL:HG13	1:CB:47:PRO:CD	2.42	0.48
1:AB:103:TRP:CH2	1:AB:107:ARG:HD3	2.49	0.48
25:BD:54:ALA:N	25:BD:76:GLY:HA2	2.28	0.48
22:DA:2680:U:OP2	25:DD:114:LYS:HD3	2.12	0.48
22:BA:313:G:O2'	22:BA:314:C:H5'	2.14	0.48
8:AI:83:THR:HG21	8:AI:102:PHE:CB	2.40	0.48
10:AK:30:ILE:HG13	10:AK:30:ILE:O	2.12	0.48
24:BC:106:PRO:HA	24:BC:141:HIS:CE1	2.49	0.48
11:CL:82:ARG:HB2	11:CL:97:VAL:HG12	1.96	0.48
51:D3:22:LYS:HG2	51:D3:46:LYS:HD3	1.95	0.48
22:DA:1830:C:C4'	24:DC:14:HIS:HE1	2.26	0.48
41:DT:4:GLU:HG3	41:DT:6:ARG:HH21	1.78	0.48
24:DC:99:GLU:HG2	24:DC:100:ARG:H	1.78	0.48
21:AA:1261:A:C6	21:AA:1274:A:N3	2.81	0.48
33:DL:135:ILE:HG23	33:DL:136:GLU:N	2.28	0.48
21:AA:1306:A:H2'	21:AA:1307:U:H5'	1.95	0.48
24:DC:124:LYS:HZ2	24:DC:124:LYS:HB3	1.78	0.48
5:CF:99:ALA:O	5:CF:100:SER:HB2	2.12	0.48
11:CL:72:ASN:HD21	11:CL:104:SER:H	1.60	0.48
34:DM:57:VAL:HG12	34:DM:112:LEU:CD1	2.43	0.48
8:AI:89:TYR:HB2	8:AI:93:LEU:HD21	1.95	0.48
15:CP:17:TYR:CD1	15:CP:39:PHE:HD2	2.31	0.48
27:BF:113:PHE:HE1	27:BF:116:LEU:HD22	1.78	0.48
22:DA:453:A:H4'	22:DA:472:A:H62	1.77	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:2478:A:N7	22:DA:2529:G:C6	2.81	0.48
22:BA:2874:C:H2'	22:BA:2875:C:C6	2.48	0.48
22:DA:2400:G:H2'	22:DA:2401:U:O4'	2.13	0.48
43:DV:75:GLN:HG3	43:DV:92:VAL:CG1	2.43	0.48
1:AB:179:GLY:O	1:AB:180:ILE:HD13	2.13	0.48
26:DE:48:THR:O	26:DE:52:VAL:HG23	2.13	0.48
17:CR:32:ILE:HA	17:CR:39:VAL:HG23	1.95	0.48
27:BF:161:SER:HB2	27:BF:163:GLU:HB3	1.93	0.48
3:CD:170:LEU:HA	3:CD:182:LYS:HB2	1.94	0.48
14:AO:44:GLU:O	14:AO:45:HIS:HB2	2.12	0.48
22:DA:669:G:H2'	22:DA:669:G:N3	2.27	0.48
15:CP:54:LEU:H	15:CP:54:LEU:HD23	1.77	0.48
33:BL:132:ARG:HG3	33:BL:142:ILE:HD12	1.94	0.48
17:AR:33:THR:CG2	17:AR:37:LYS:HB2	2.42	0.48
26:DE:31:VAL:HG11	26:DE:100:MET:O	2.13	0.48
22:DA:2282:G:O2'	22:DA:2283:C:OP2	2.31	0.48
45:BX:39:VAL:HG21	45:BX:42:GLU:HB2	1.96	0.48
53:CA:1213:A:C8	53:CA:1215:G:C5	3.02	0.48
53:CA:255:G:O2'	53:CA:256:U:H5'	2.13	0.48
31:DJ:45:THR:HG21	31:DJ:50:THR:HG23	1.95	0.48
17:CR:59:LYS:O	17:CR:63:TYR:HD1	1.96	0.48
5:AF:71:ILE:HG23	5:AF:72:ASP:N	2.28	0.48
22:DA:740:C:C5	22:DA:1981:A:N1	2.82	0.48
22:DA:2212:A:N7	22:DA:2214:C:N4	2.62	0.48
53:CA:219:U:H2'	53:CA:220:G:C8	2.44	0.48
22:BA:1179:G:C2	22:BA:1180:U:O2'	2.66	0.48
27:DF:101:ARG:HH11	27:DF:138:PRO:CB	2.26	0.48
4:AE:93:VAL:HG13	4:AE:94:PHE:N	2.29	0.48
22:DA:323:C:H6	26:DE:165:HIS:CE1	2.31	0.48
53:CA:1319:A:N6	53:CA:1323:G:N3	2.61	0.48
21:AA:121:U:C5'	21:AA:121:U:H6	2.19	0.48
4:AE:103:GLY:HA2	4:AE:121:ASN:HA	1.96	0.48
26:DE:55:SER:OG	26:DE:56:GLY:N	2.47	0.48
22:BA:728:G:O2'	22:BA:730:A:H8	1.75	0.48
21:AA:1055:A:N6	21:AA:1206:G:C6	2.82	0.48
21:AA:1277:C:O2'	21:AA:1279:G:C8	2.51	0.48
22:DA:974:G:H1'	22:DA:975:A:C8	2.48	0.48
22:DA:2345:G:H4'	22:DA:2346:A:O5'	2.14	0.48
22:BA:1865:U:O2'	22:BA:1866:A:H5''	2.13	0.48
22:DA:1568:G:N3	24:DC:57:HIS:HE1	2.12	0.48
24:DC:62:ARG:N	24:DC:62:ARG:HD2	2.28	0.48
15:CP:46:LYS:HE2	15:CP:47:GLU:N	2.29	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
43:DV:2:PHE:CD1	43:DV:50:MET:HE3	2.49	0.48
2:AC:129:PHE:O	2:AC:133:MET:HG3	2.13	0.48
51:D3:15:LYS:HG2	51:D3:16:THR:H	1.79	0.48
51:D3:18:LYS:CD	51:D3:19:GLY:H	2.25	0.48
22:BA:1820:U:H4'	22:BA:1821:A:OP2	2.13	0.48
8:CI:106:ASP:N	8:CI:106:ASP:OD1	2.47	0.48
15:AP:52:LEU:O	15:AP:54:LEU:HD12	2.13	0.48
22:BA:1539:U:H2'	22:BA:1540:G:C8	2.44	0.48
31:DJ:111:LYS:HB2	31:DJ:115:GLY:CA	2.44	0.48
29:BH:101:ASP:C	29:BH:104:THR:HB	2.33	0.48
22:DA:2185:U:H2'	22:DA:2186:G:C8	2.48	0.48
22:BA:2612:C:H5''	22:BA:2613:U:OP1	2.13	0.48
42:BU:42:LYS:HD3	42:BU:42:LYS:N	2.27	0.48
14:AO:80:LEU:HD11	14:AO:84:LEU:HD22	1.96	0.48
53:CA:631:C:H5''	53:CA:632:U:O4'	2.13	0.48
53:CA:1504:G:H3'	53:CA:1505:G:H5'	1.96	0.48
53:CA:861:G:H2'	53:CA:862:C:H6	1.77	0.48
22:DA:659:G:H4'	26:DE:95:LYS:HD3	1.96	0.48
1:AB:157:PRO:O	1:AB:180:ILE:HD12	2.14	0.48
22:BA:1698:A:H4'	22:BA:1699:G:O5'	2.12	0.48
22:DA:1862:G:C2	22:DA:1881:C:C2	3.01	0.48
21:AA:659:U:H2'	21:AA:660:C:H6	1.78	0.48
22:DA:2366:A:H2'	22:DA:2367:G:O4'	2.13	0.48
22:BA:286:U:H2'	22:BA:287:G:O4'	2.12	0.48
22:BA:2064:C:H2'	22:BA:2065:C:C6	2.48	0.48
52:B4:25:VAL:O	52:B4:26:ILE:HD13	2.13	0.48
22:DA:1831:G:C6	22:DA:1832:C:C4	3.00	0.48
33:BL:3:LEU:HD23	33:BL:3:LEU:HA	1.62	0.48
21:AA:443:C:O2'	21:AA:444:G:H5'	2.14	0.48
38:BQ:34:ALA:O	38:BQ:37:ALA:HB3	2.13	0.48
22:DA:2287:A:N7	22:DA:2289:G:C8	2.81	0.48
39:DR:49:ILE:HD13	39:DR:53:PHE:H	1.79	0.48
28:BG:163:TYR:O	28:BG:164:ALA:CB	2.61	0.48
28:BG:83:THR:HA	28:BG:84:LYS:CE	2.43	0.48
22:DA:1387:A:O2'	22:DA:1388:G:P	2.71	0.48
22:DA:206:U:H2'	22:DA:207:A:H8	1.77	0.48
10:AK:22:ILE:CD1	10:AK:85:VAL:HG13	2.42	0.48
22:DA:2209:G:C2	22:DA:2216:G:C2	3.01	0.48
22:BA:1179:G:N1	22:BA:1180:U:O2'	2.47	0.48
22:DA:2488:G:H2'	22:DA:2489:U:O4'	2.14	0.48
22:DA:2563:U:H1'	22:DA:2566:A:N6	2.29	0.48
22:DA:2563:U:H2'	22:DA:2565:A:OP2	2.13	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:1060:U:H4'	22:DA:1061:U:C5'	2.43	0.48
53:CA:953:G:C6	53:CA:954:G:C6	3.01	0.48
34:DM:34:LYS:HE2	34:DM:99:GLY:HA2	1.96	0.48
22:DA:1930:G:O2'	22:DA:1931:U:P	2.71	0.48
30:BI:19:PRO:HG2	30:BI:23:VAL:HG22	1.96	0.48
22:DA:2682:A:O2'	22:DA:2683:C:C5'	2.61	0.48
22:DA:2143:C:C2	22:DA:2148:G:N1	2.79	0.48
1:CB:89:PHE:CE2	1:CB:152:ASP:HB2	2.45	0.48
4:CE:131:ASN:HD22	4:CE:132:PRO:CD	2.25	0.48
1:AB:19:THR:HG23	1:AB:20:ARG:H	1.78	0.48
1:AB:22:TRP:CZ3	1:AB:24:PRO:HA	2.49	0.48
22:DA:571:U:C4	22:DA:2030:A:C6	3.02	0.48
22:DA:361:G:HO2'	22:DA:362:A:P	2.37	0.48
22:DA:95:A:H2'	22:DA:96:C:C5'	2.43	0.48
6:AG:68:VAL:HG12	6:AG:102:TRP:HE3	1.79	0.48
21:AA:1323:G:H4'	21:AA:1362:A:N3	2.28	0.48
21:AA:1173:U:H2'	21:AA:1174:G:C8	2.48	0.48
53:CA:533:A:O2'	53:CA:535:A:OP2	2.25	0.48
11:CL:98:ARG:HA	11:CL:103:CYS:SG	2.53	0.48
22:BA:752:A:N6	22:BA:2609:U:H3	2.05	0.48
31:BJ:88:THR:HG23	31:BJ:91:GLU:H	1.78	0.48
34:BM:77:PRO:HD2	34:BM:80:VAL:HG11	1.96	0.48
38:BQ:51:GLN:HE21	38:BQ:55:GLN:HE21	1.60	0.48
47:BZ:15:ARG:O	47:BZ:20:LYS:HE2	2.13	0.48
53:CA:1087:G:H2'	53:CA:1088:G:C8	2.48	0.48
24:DC:130:PRO:HG2	24:DC:133:ASN:ND2	2.28	0.48
18:AS:47:THR:O	18:AS:48:ILE:C	2.52	0.48
21:AA:17:U:H2'	21:AA:18:C:H6	1.76	0.48
1:AB:53:LEU:CA	1:AB:56:LEU:HB3	2.41	0.48
22:BA:404:A:C8	22:BA:406:G:C6	3.02	0.48
53:CA:570:G:H1'	53:CA:820:U:N3	2.27	0.48
22:BA:1417:C:H2'	22:BA:1418:G:H8	1.78	0.48
22:DA:2858:C:H2'	22:DA:2859:G:O4'	2.13	0.48
22:BA:2318:G:C6	22:BA:2319:G:N1	2.81	0.48
22:DA:1264:A:H1'	22:DA:2015:A:H61	1.79	0.48
22:BA:1075:C:C4	22:BA:1076:C:N4	2.81	0.48
33:BL:14:LYS:CG	33:BL:15:ALA:N	2.75	0.48
22:DA:1112:G:O2'	22:DA:1113:U:C5'	2.62	0.48
38:DQ:82:LEU:HD23	38:DQ:112:ALA:HB2	1.95	0.48
9:CJ:37:ARG:CG	9:CJ:75:ASP:HB3	2.43	0.48
2:AC:107:LYS:HZ2	2:AC:107:LYS:HB2	1.78	0.48
21:AA:1261:A:N1	21:AA:1274:A:N3	2.60	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:30:G:C6	22:DA:31:C:N3	2.82	0.48
22:BA:2860:A:C3'	22:BA:2860:A:C8	2.96	0.48
24:BC:70:LYS:HD2	24:BC:99:GLU:OE1	2.13	0.48
22:DA:2353:G:H1'	44:DW:30:VAL:CG1	2.43	0.48
26:DE:139:LYS:NZ	26:DE:139:LYS:HB2	2.29	0.48
53:CA:1481:U:H2'	53:CA:1482:G:C8	2.48	0.48
34:DM:57:VAL:O	34:DM:58:LYS:HB2	2.14	0.48
13:AN:2:LYS:HE2	21:AA:1216:A:OP1	2.13	0.48
22:BA:1568:G:H4'	24:BC:58:LYS:CG	2.44	0.48
1:AB:60:ALA:HB3	1:AB:223:GLY:HA3	1.96	0.48
23:BB:109:A:O2'	23:BB:110:C:H5'	2.13	0.48
22:DA:1229:C:H2'	22:DA:1230:A:C8	2.47	0.48
21:AA:1316:G:H5''	21:AA:1317:C:OP2	2.14	0.48
22:DA:2079:U:O2'	45:DX:22:ASN:ND2	2.46	0.48
3:AD:11:SER:HA	3:AD:18:LEU:HD12	1.95	0.48
30:BI:61:TYR:CD2	30:BI:61:TYR:N	2.81	0.48
22:BA:103:A:H2'	22:BA:104:A:H8	1.79	0.48
22:DA:1838:C:C6	22:DA:1899:A:C6	3.02	0.48
31:BJ:128:ASN:O	31:BJ:128:ASN:CG	2.52	0.48
5:AF:67:PRO:C	5:AF:69:GLU:H	2.16	0.48
22:DA:2421:G:N7	51:D3:30:HIS:HD2	2.12	0.48
22:BA:2336:A:H62	44:BW:40:ARG:HD2	1.74	0.48
44:BW:47:GLY:H	44:BW:80:SER:HB3	1.78	0.48
25:DD:16:THR:HG23	25:DD:19:GLY:H	1.79	0.48
20:CU:33:ARG:NH2	20:CU:34:ARG:HD3	2.29	0.48
21:AA:1003:G:C6	21:AA:1036:A:N6	2.82	0.48
22:BA:1091:G:O2'	22:BA:1092:C:C6	2.65	0.48
28:BG:35:THR:C	28:BG:36:LEU:HD22	2.33	0.48
21:AA:1288:A:H1'	21:AA:1352:C:O2'	2.14	0.48
27:BF:134:GLN:C	27:BF:136:ILE:H	2.17	0.48
27:DF:41:GLU:HG2	27:DF:42:ALA:N	2.24	0.48
27:DF:46:LYS:HD3	27:DF:46:LYS:O	2.14	0.48
22:DA:991:C:OP2	22:DA:1186:G:OP2	2.32	0.48
22:DA:2345:G:H4'	22:DA:2346:A:H5''	1.95	0.48
3:AD:35:GLN:O	3:AD:36:ALA:HB2	2.13	0.48
11:AL:119:LYS:HE3	21:AA:36:C:OP1	2.13	0.48
10:CK:51:PHE:C	10:CK:52:ARG:HD2	2.33	0.48
35:DN:5:LYS:O	35:DN:6:SER:HB2	2.13	0.48
53:CA:1094:G:O2'	53:CA:1095:U:OP2	2.27	0.48
22:DA:60:G:O2'	22:DA:61:C:P	2.71	0.48
22:DA:627:A:O2'	22:DA:628:G:H8	1.95	0.48
22:DA:1738:G:O2'	22:DA:1739:A:P	2.71	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:28:A:C6	22:DA:29:U:C2	3.02	0.48
22:DA:1264:A:C6	22:DA:1265:A:N6	2.81	0.48
22:DA:91:A:O2'	22:DA:92:U:H5''	2.13	0.48
22:DA:223:A:C5	22:DA:422:A:N7	2.81	0.48
21:AA:259:G:H2'	21:AA:260:G:C8	2.49	0.48
37:BP:19:PHE:O	37:BP:20:ARG:HB3	2.13	0.48
2:AC:6:PRO:O	2:AC:10:ARG:HG2	2.14	0.48
11:CL:75:GLU:C	11:CL:77:SER:H	2.17	0.48
12:AM:76:ILE:O	12:AM:79:LEU:HB2	2.14	0.48
35:BN:69:ARG:H	35:BN:69:ARG:HG2	1.33	0.48
13:CN:20:PHE:HE1	13:CN:54:SER:HB2	1.78	0.48
53:CA:781:A:H2'	53:CA:782:A:H5'	1.96	0.48
14:AO:15:GLY:C	14:AO:17:ASP:H	2.16	0.48
32:BK:51:LYS:HG3	32:BK:95:ILE:HG12	1.96	0.48
28:BG:124:CYS:HB3	28:BG:126:THR:O	2.13	0.48
22:BA:2140:G:H2'	22:BA:2141:G:C8	2.48	0.48
16:CQ:29:LYS:HB2	16:CQ:36:PHE:CE1	2.49	0.48
22:DA:659:G:H2'	22:DA:660:C:C6	2.48	0.48
12:CM:91:ARG:HD3	12:CM:91:ARG:O	2.13	0.48
24:BC:67:LYS:HG2	24:BC:150:GLY:HA2	1.94	0.48
21:AA:1391:U:H2'	21:AA:1392:G:C8	2.49	0.48
53:CA:815:A:C2	53:CA:1529:G:C4	3.02	0.48
22:BA:1839:G:H2'	22:BA:1840:G:H8	1.79	0.48
21:AA:1034:G:H2'	21:AA:1035:A:C8	2.48	0.48
31:BJ:69:ARG:O	31:BJ:89:PHE:HB3	2.13	0.48
4:AE:44:ARG:HA	4:AE:71:ILE:O	2.14	0.48
22:BA:1425:G:H2'	22:BA:1426:G:C8	2.49	0.48
7:CH:12:ARG:HH12	7:CH:27:PRO:HD2	1.78	0.48
24:DC:177:SER:O	24:DC:270:ARG:HG3	2.14	0.48
22:BA:1009:A:O5'	22:BA:1009:A:H8	1.96	0.48
22:DA:247:G:H4'	22:DA:386:G:C4	2.49	0.48
22:DA:1536:C:C2	22:DA:1536:C:OP2	2.66	0.48
22:DA:1400:U:HO2'	22:DA:1401:G:C1'	2.25	0.48
12:CM:15:VAL:O	12:CM:19:THR:HG23	2.14	0.48
22:BA:763:G:O2'	22:BA:764:A:H3'	2.13	0.48
10:AK:86:LYS:HA	10:AK:113:THR:HG22	1.94	0.48
22:BA:1106:G:N2	22:BA:1107:G:H1'	2.29	0.48
10:AK:125:LYS:C	20:AU:33:ARG:NH2	2.66	0.48
22:DA:1098:A:H2'	22:DA:1099:G:O4'	2.13	0.48
25:DD:141:ARG:HH11	25:DD:141:ARG:CB	2.20	0.48
18:CS:50:VAL:CG1	18:CS:70:LEU:HB3	2.44	0.48
32:BK:18:ARG:HB2	32:BK:45:GLU:HB2	1.95	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:CE:132:PRO:O	4:CE:134:ASN:N	2.47	0.48
53:CA:1242:G:HO2'	53:CA:1243:C:C5'	2.24	0.48
1:AB:40:ILE:HG21	1:AB:201:GLY:H	1.78	0.48
35:BN:33:ILE:HG12	35:BN:118:ARG:CZ	2.44	0.48
22:DA:2815:C:H2'	22:DA:2816:G:C8	2.49	0.48
35:DN:47:VAL:C	35:DN:50:PRO:HD2	2.33	0.48
21:AA:1055:A:C6	21:AA:1206:G:C4	3.01	0.48
22:DA:17:G:C6	22:DA:524:G:C6	3.01	0.48
27:BF:133:GLU:H	27:BF:150:GLY:HA3	1.78	0.48
42:BU:27:VAL:HG22	42:BU:28:LEU:N	2.28	0.48
2:CC:18:ASN:ND2	2:CC:53:ARG:NH1	2.59	0.48
54:DB:83:G:OP1	47:DZ:16:LEU:HD21	2.13	0.48
6:AG:96:ASN:O	6:AG:100:MET:HG3	2.13	0.48
28:DG:120:ILE:CG1	28:DG:140:ILE:HG22	2.39	0.48
21:AA:502:A:H2'	21:AA:503:C:C6	2.48	0.48
18:AS:6:LYS:CE	18:AS:6:LYS:HA	2.41	0.48
37:DP:95:LYS:HE3	37:DP:95:LYS:HA	1.96	0.48
51:D3:41:ARG:HG2	51:D3:44:ARG:HH22	1.79	0.48
33:DL:17:LYS:HZ1	33:DL:19:LEU:HD22	1.74	0.48
30:DI:32:VAL:HG22	30:DI:58:ILE:HG21	1.95	0.48
22:DA:243:U:O2'	22:DA:244:A:H5'	2.14	0.48
22:BA:194:G:C5	57:BA:3766:HOH:O	2.64	0.48
22:DA:1139:G:O3'	31:DJ:26:GLY:HA3	2.14	0.48
22:BA:405:U:H3'	22:BA:406:G:H5'	1.94	0.48
35:DN:93:GLY:O	35:DN:116:VAL:HG21	2.13	0.48
22:DA:27:G:HO2'	22:DA:28:A:H8	1.61	0.48
4:CE:59:ILE:HG13	4:CE:59:ILE:O	2.12	0.48
12:CM:75:SER:C	12:CM:77:LYS:H	2.16	0.48
11:AL:2:THR:HG22	11:AL:4:ASN:H	1.79	0.48
22:DA:184:C:H2'	22:DA:185:G:H8	1.77	0.48
21:AA:1262:C:N4	21:AA:1274:A:C2	2.82	0.48
21:AA:268:U:O2'	21:AA:269:C:O4'	2.29	0.48
53:CA:152:A:N6	53:CA:170:U:C2	2.82	0.48
24:BC:170:TYR:HD2	24:BC:183:VAL:C	2.17	0.48
27:DF:56:LEU:O	27:DF:60:SER:HB3	2.14	0.48
16:AQ:58:VAL:HG21	16:AQ:74:LEU:HD23	1.96	0.48
24:BC:78:GLU:OE1	24:BC:100:ARG:NE	2.46	0.48
21:AA:594:U:H2'	21:AA:595:A:O4'	2.13	0.48
31:DJ:123:LYS:N	31:DJ:123:LYS:HD2	2.28	0.48
7:CH:30:LYS:O	7:CH:33:VAL:HB	2.13	0.48
36:BO:59:ALA:HA	36:BO:62:LEU:CD1	2.43	0.48
22:BA:1071:G:C5	22:BA:1089:A:C6	3.01	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:BA:2377:A:O2'	22:BA:2378:A:H5'	2.13	0.48
22:BA:2375:G:N2	22:BA:2378:A:OP2	2.44	0.48
21:AA:1136:C:H4'	21:AA:1137:C:OP1	2.13	0.48
40:BS:36:LEU:HD23	40:BS:48:LYS:HA	1.96	0.48
31:DJ:105:VAL:HA	31:DJ:108:MET:HG3	1.94	0.48
5:AF:18:VAL:O	5:AF:22:ILE:HD12	2.14	0.48
17:CR:32:ILE:HD12	17:CR:33:THR:O	2.14	0.48
2:CC:91:ALA:HB2	2:CC:98:ALA:HB3	1.95	0.48
29:BH:54:LEU:N	29:BH:57:LYS:HB3	2.29	0.48
22:BA:2028:U:H2'	22:BA:2029:G:O4'	2.14	0.48
34:BM:21:ALA:HA	34:BM:97:GLN:HG2	1.96	0.48
30:DI:5:GLN:OE1	30:DI:59:THR:HG21	2.13	0.48
2:CC:46:LEU:HD22	2:CC:75:VAL:HG22	1.95	0.48
2:AC:125:ARG:O	2:AC:126:ARG:CB	2.61	0.48
37:DP:13:LYS:H	37:DP:13:LYS:HD2	1.78	0.48
22:DA:1886:U:H6	22:DA:1886:U:O5'	1.96	0.48
53:CA:1496:C:H2'	53:CA:1497:G:O4'	2.13	0.48
8:AI:68:GLY:HA2	21:AA:1250:A:O3'	2.14	0.48
38:BQ:69:ARG:CG	38:BQ:69:ARG:HH21	2.25	0.48
3:CD:187:ARG:CZ	3:CD:191:SER:OG	2.61	0.48
22:DA:647:G:C5	22:DA:648:G:N7	2.82	0.48
22:DA:1713:A:H4'	22:DA:1714:U:OP1	2.12	0.48
22:DA:1277:G:O2'	35:DN:24:MET:HB2	2.14	0.48
41:BT:29:THR:CB	41:BT:86:THR:HG22	2.41	0.48
22:DA:1027:A:N6	22:DA:1126:A:H1'	2.29	0.48
22:DA:2489:U:C4	22:DA:2490:G:C6	3.02	0.48
22:DA:1290:C:C2	22:DA:1291:C:C5	3.01	0.48
4:AE:110:MET:HB3	4:AE:139:THR:HG21	1.94	0.48
22:DA:2729:G:H5'	25:DD:190:LYS:HZ3	1.78	0.48
22:DA:100:U:OP1	22:DA:100:U:C6	2.66	0.48
22:DA:2815:C:H2'	22:DA:2816:G:O4'	2.14	0.48
37:BP:85:VAL:O	37:BP:86:LYS:CB	2.61	0.48
35:BN:70:THR:O	35:BN:71:ARG:C	2.51	0.48
22:DA:2867:G:N3	22:DA:2867:G:H2'	2.29	0.48
38:BQ:81:GLY:HA2	38:BQ:116:LEU:HD13	1.96	0.48
21:AA:1239:A:H1'	21:AA:1241:G:C4	2.49	0.48
22:DA:975:A:H2'	22:DA:976:G:C8	2.49	0.48
28:BG:75:VAL:HG12	28:BG:76:ILE:N	2.29	0.48
34:BM:43:ALA:O	34:BM:46:ILE:HG13	2.14	0.48
22:DA:2725:A:C4	22:DA:2727:A:N7	2.81	0.48
21:AA:500:G:C6	21:AA:546:A:C2	3.01	0.48
22:BA:1870:C:H3'	22:BA:1871:A:C2	2.48	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
42:DU:14:THR:HG23	42:DU:15:GLY:N	2.25	0.48
28:BG:66:THR:O	28:BG:70:LEU:HG	2.14	0.48
28:DG:104:LEU:HB3	28:DG:106:LEU:HD21	1.95	0.48
3:AD:117:VAL:CA	3:AD:122:ILE:HD11	2.43	0.48
22:BA:1730:C:H1'	22:BA:1731:G:C2	2.48	0.48
22:DA:1737:G:H5'	22:DA:1738:G:OP2	2.13	0.48
53:CA:247:G:C6	53:CA:278:G:C2	3.02	0.48
22:DA:2638:G:H1'	22:DA:2778:A:H61	1.76	0.48
53:CA:696:A:H2'	53:CA:697:U:C6	2.49	0.48
1:CB:17:HIS:CG	1:CB:18:GLN:N	2.80	0.48
22:DA:2766:A:N3	22:DA:2766:A:H2'	2.28	0.48
24:DC:70:LYS:HD3	24:DC:101:ARG:HH12	1.77	0.48
24:DC:93:VAL:HG13	24:DC:94:LEU:N	2.28	0.48
22:DA:2039:U:H2'	22:DA:2040:G:C8	2.49	0.48
47:DZ:17:PRO:HA	47:DZ:20:LYS:HD3	1.95	0.48
6:CG:3:ARG:HD3	53:CA:933:G:P	2.53	0.48
53:CA:1238:A:OP1	53:CA:1336:C:H5	1.97	0.48
24:DC:120:ASP:CG	24:DC:121:ALA:N	2.67	0.48
21:AA:1202:U:H2'	21:AA:1203:C:C6	2.49	0.48
26:BE:72:SER:C	26:BE:74:LYS:N	2.67	0.48
12:CM:106:ARG:HG3	53:CA:947:G:P	2.54	0.48
53:CA:672:U:O2'	53:CA:673:A:H5'	2.14	0.48
22:DA:852:U:H2'	22:DA:853:C:C6	2.49	0.48
14:AO:16:ARG:O	14:AO:17:ASP:CB	2.61	0.48
22:DA:2450:A:O2'	22:DA:2451:A:H5'	2.13	0.48
38:BQ:40:LYS:HG2	38:BQ:44:TYR:CE1	2.49	0.48
35:DN:82:GLU:C	35:DN:85:PRO:HD2	2.33	0.48
22:BA:1444:G:C4	22:BA:1445:G:C8	3.02	0.48
8:CI:76:GLY:O	8:CI:79:ARG:HB3	2.13	0.48
22:DA:1838:C:N4	22:DA:1899:A:O4'	2.47	0.48
22:BA:1567:G:H2'	24:BC:84:PRO:HG3	1.96	0.48
22:BA:386:G:H4'	22:BA:387:U:OP2	2.14	0.48
22:DA:1746:A:H2'	22:DA:1747:U:C6	2.49	0.48
2:CC:104:GLU:HG2	2:CC:105:VAL:N	2.29	0.48
15:AP:1:MET:HB3	21:AA:135:C:O2	2.14	0.48
31:DJ:77:HIS:HA	31:DJ:83:GLY:O	2.14	0.48
27:BF:97:GLU:O	27:BF:101:ARG:HG2	2.14	0.48
27:BF:109:ARG:HH11	27:BF:138:PRO:HG3	1.79	0.48
38:BQ:63:ARG:HH12	38:BQ:96:ASP:HB2	1.78	0.48
25:BD:106:LYS:O	25:BD:175:LEU:O	2.32	0.48
39:BR:38:VAL:HG22	39:BR:54:VAL:HG13	1.95	0.48
44:BW:16:GLU:OE2	44:BW:16:GLU:CA	2.60	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:AA:198:G:C2'	21:AA:199:A:C8	2.94	0.48
21:AA:1138:G:N3	21:AA:1138:G:C2'	2.63	0.48
28:BG:117:PRO:O	28:BG:118:ALA:O	2.32	0.48
28:BG:85:LYS:HA	28:BG:130:ILE:O	2.14	0.48
53:CA:429:U:H1'	53:CA:430:A:C5'	2.42	0.48
3:AD:147:LYS:H	3:AD:147:LYS:HE2	1.78	0.48
22:DA:33:C:H2'	22:DA:446:G:H22	1.79	0.48
53:CA:1160:G:O6	53:CA:1181:G:O6	2.32	0.48
41:DT:39:THR:OG1	41:DT:42:GLU:HG3	2.13	0.48
22:BA:1107:G:H2'	22:BA:1108:U:C6	2.49	0.48
22:BA:1285:A:C2	22:BA:1328:A:H5''	2.49	0.48
22:DA:2093:G:N3	22:DA:2094:A:C8	2.81	0.48
22:DA:2314:A:H2'	22:DA:2315:G:C8	2.49	0.48
22:BA:2729:G:H8	22:BA:2729:G:H5''	1.79	0.48
22:DA:1076:C:O2'	22:DA:1077:A:C8	2.65	0.48
22:BA:740:C:H5'	22:BA:1784:A:C3'	2.44	0.48
22:DA:1516:G:O2'	22:DA:1517:G:H5'	2.14	0.48
22:DA:310:A:O2'	22:DA:311:A:C8	2.61	0.48
32:BK:18:ARG:HB2	32:BK:45:GLU:CG	2.44	0.48
53:CA:120:A:C3'	53:CA:121:U:C5'	2.86	0.48
34:BM:62:LYS:HD3	34:BM:64:TRP:CZ2	2.48	0.48
22:DA:1308:A:N6	22:DA:1309:G:C2	2.82	0.48
22:DA:1867:G:O2'	22:DA:1868:C:H5'	2.14	0.48
43:DV:26:PHE:CE2	43:DV:42:LEU:HD12	2.49	0.48
53:CA:705:G:H2'	53:CA:706:A:H8	1.77	0.48
21:AA:790:A:C6	21:AA:791:G:C6	3.02	0.48
22:DA:2361:G:OP1	51:D3:25:HIS:HA	2.13	0.48
7:CH:1:SER:C	7:CH:3:GLN:N	2.67	0.48
31:DJ:64:VAL:HG13	31:DJ:65:THR:N	2.29	0.48
1:AB:127:LYS:HG3	1:AB:128:LEU:N	2.24	0.48
15:CP:16:PHE:HE2	15:CP:40:ASN:HB2	1.75	0.48
24:BC:268:ARG:HH11	24:BC:268:ARG:CB	2.27	0.48
12:AM:1:ALA:O	12:AM:9:PRO:HD2	2.14	0.48
22:DA:1969:A:H2'	22:DA:1972:G:H21	1.79	0.48
44:BW:72:GLY:N	44:BW:73:PRO:CD	2.75	0.48
2:CC:154:GLY:O	2:CC:156:LEU:N	2.46	0.48
40:DS:36:LEU:C	40:DS:38:TYR:H	2.17	0.48
16:CQ:59:GLU:O	16:CQ:75:VAL:HG22	2.14	0.48
22:DA:1179:G:C2	22:DA:1180:U:C2	3.01	0.48
22:BA:817:C:H2'	22:BA:818:G:O4'	2.14	0.48
2:CC:38:VAL:HG21	2:CC:56:ILE:HD11	1.96	0.48
18:AS:14:LEU:HB2	18:AS:32:THR:HG21	1.96	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:AD:101:VAL:HG13	3:AD:106:PHE:HB2	1.96	0.48
46:BY:42:LEU:O	46:BY:45:GLN:O	2.32	0.48
28:BG:174:LYS:HE2	28:BG:176:LYS:OXT	2.14	0.48
34:DM:57:VAL:HG12	34:DM:112:LEU:HD13	1.95	0.48
53:CA:908:A:H2'	53:CA:909:A:H8	1.79	0.48
22:DA:1356:G:C6	22:DA:1376:C:N3	2.82	0.48
22:DA:2450:A:OP1	22:DA:2497:A:H2'	2.13	0.48
53:CA:123:U:OP1	53:CA:311:C:O2'	2.29	0.48
28:DG:39:ALA:O	28:DG:40:VAL:HG13	2.14	0.48
22:DA:1230:A:H2'	22:DA:1231:U:C6	2.48	0.48
2:CC:5:HIS:NE2	2:CC:183:TYR:HE2	2.12	0.48
34:BM:54:THR:O	34:BM:56:ALA:N	2.47	0.48
21:AA:979:C:C5	21:AA:980:C:C6	3.01	0.48
22:BA:1906:G:H2'	22:BA:1907:G:O5'	2.13	0.48
22:BA:2030:A:C2	22:BA:2499:C:H5''	2.49	0.48
22:BA:2879:A:H4'	22:BA:2880:C:OP1	2.13	0.48
34:DM:133:LYS:NZ	34:DM:133:LYS:HB3	2.29	0.48
53:CA:872:A:C4	53:CA:874:G:N7	2.82	0.48
12:CM:2:ARG:HA	12:CM:7:ASN:O	2.13	0.48
30:BI:12:VAL:HG23	30:BI:13:ALA:H	1.78	0.48
25:BD:97:SER:CA	25:BD:99:GLU:HG2	2.44	0.48
22:BA:1059:G:O2'	30:BI:128:ILE:HD13	2.13	0.48
30:BI:85:ILE:HD13	30:BI:88:GLY:HA2	1.96	0.48
53:CA:264:C:H2'	53:CA:265:G:O4'	2.14	0.48
35:DN:34:ILE:HB	35:DN:113:ILE:HG23	1.96	0.48
22:DA:2216:G:C2'	22:DA:2217:G:C8	2.94	0.48
22:BA:1339:G:H21	22:BA:1603:A:H1'	1.78	0.48
20:CU:35:GLU:OE1	20:CU:37:TYR:CD1	2.67	0.48
54:DB:40:U:H1'	54:DB:45:A:N6	2.29	0.48
22:BA:222:A:N6	22:BA:232:G:H1'	2.29	0.48
22:DA:2566:A:O2'	22:DA:2567:G:OP2	2.30	0.48
22:DA:1056:G:N2	22:DA:1102:C:C5	2.80	0.48
28:DG:91:VAL:N	28:DG:93:TYR:CD2	2.82	0.48
22:DA:1926:U:H1'	22:DA:1929:G:C6	2.49	0.48
53:CA:94:G:O2'	53:CA:95:C:H5'	2.14	0.48
9:CJ:57:VAL:HG22	9:CJ:58:ASN:N	2.22	0.48
4:CE:103:GLY:HA3	4:CE:121:ASN:CA	2.43	0.48
4:AE:100:GLU:HB3	4:AE:121:ASN:CA	2.38	0.48
21:AA:1142:G:H3'	21:AA:1143:G:H8	1.79	0.48
24:BC:251:THR:HG22	24:BC:252:LYS:N	2.20	0.48
53:CA:71:A:C6	53:CA:100:G:C5	3.01	0.48
21:AA:751:U:H2'	21:AA:752:G:O4'	2.14	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
30:DI:49:GLU:HG3	30:DI:54:ILE:HD11	1.95	0.48
13:AN:61:ASN:HA	13:AN:61:ASN:HD22	1.51	0.48
22:DA:574:A:C8	22:DA:2055:C:H5''	2.49	0.48
22:DA:571:U:C4	22:DA:575:A:C5	3.02	0.48
22:DA:95:A:H2'	22:DA:96:C:O4'	2.14	0.48
34:BM:64:TRP:CH2	34:BM:106:ASP:HB2	2.48	0.48
53:CA:1179:A:H2'	53:CA:1180:A:O4'	2.14	0.48
20:AU:21:SER:C	20:AU:22:CYS:SG	2.92	0.48
1:AB:67:LEU:HD13	1:AB:160:LEU:CD1	2.44	0.48
22:BA:1965:C:H2'	22:BA:1966:A:C8	2.49	0.48
21:AA:795:C:C5'	21:AA:796:C:OP2	2.60	0.48
53:CA:549:C:H2'	53:CA:550:G:O4'	2.14	0.48
4:CE:44:ARG:NH2	4:CE:70:MET:HB2	2.28	0.48
22:BA:1682:G:C8	22:BA:1757:A:N3	2.82	0.48
53:CA:250:A:H1'	53:CA:252:U:C4	2.49	0.48
5:CF:61:LEU:HD13	5:CF:62:MET:H	1.79	0.48
22:DA:2808:G:HO2'	22:DA:2809:A:H8	1.56	0.48
53:CA:1375:A:H2'	53:CA:1376:U:C6	2.49	0.48
29:BH:96:THR:HG23	29:BH:96:THR:O	2.14	0.48
22:BA:2868:A:H2'	22:BA:2869:G:H8	1.76	0.48
32:DK:21:CYS:SG	32:DK:39:ILE:HG22	2.54	0.48
54:DB:86:G:C2'	54:DB:87:U:H5''	2.43	0.48
24:DC:43:ASN:CG	24:DC:44:ASN:H	2.17	0.48
21:AA:1461:G:H2'	21:AA:1462:C:H6	1.79	0.48
22:DA:68:G:N2	22:DA:74:A:OP2	2.46	0.48
29:DH:61:VAL:HG13	29:DH:62:LEU:N	2.29	0.48
22:BA:2470:G:O2'	22:BA:2471:A:H5'	2.14	0.48
22:BA:1438:U:O2'	22:BA:1439:A:H5'	2.14	0.48
21:AA:601:G:H2'	21:AA:602:A:H8	1.78	0.48
4:AE:24:VAL:O	4:AE:25:LYS:C	2.51	0.48
22:DA:200:U:C4	22:DA:248:G:C2	3.02	0.48
22:BA:1184:U:H2'	22:BA:1185:G:O5'	2.14	0.48
2:CC:149:LYS:O	2:CC:200:TRP:HE3	1.96	0.48
21:AA:191:G:C4	21:AA:192:A:C8	3.01	0.48
45:BX:50:VAL:CG1	45:BX:51:SER:N	2.76	0.48
45:BX:32:LEU:HA	45:BX:51:SER:HA	1.96	0.48
22:DA:1982:U:O2'	22:DA:1983:G:H5'	2.14	0.48
17:AR:41:SER:C	17:AR:43:ILE:H	2.17	0.48
14:AO:9:LYS:O	14:AO:13:GLU:HG3	2.13	0.48
22:BA:1728:C:O2'	22:BA:1729:U:C5	2.67	0.48
38:DQ:12:ARG:H	38:DQ:12:ARG:HD2	1.79	0.48
36:BO:79:ALA:HB2	36:BO:110:ALA:HA	1.95	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
33:BL:127:VAL:HG23	33:BL:131:ALA:HB3	1.95	0.48
2:AC:125:ARG:O	2:AC:126:ARG:HB3	2.14	0.48
21:AA:476:U:O2'	21:AA:477:C:H5'	2.14	0.48
23:BB:37:C:C5	23:BB:38:C:C4	3.02	0.48
22:BA:1581:G:C6	22:BA:1582:C:C4	3.02	0.48
49:D1:8:ILE:HD12	49:D1:52:LYS:HG3	1.95	0.47
44:DW:18:LYS:H	44:DW:36:ILE:CG1	2.26	0.47
11:AL:89:LEU:HB3	11:AL:92:VAL:HG21	1.96	0.47
45:BX:5:GLN:HE21	45:BX:49:ARG:HB3	1.79	0.47
20:CU:19:LYS:C	20:CU:21:SER:H	2.17	0.47
53:CA:1408:A:C6	53:CA:1494:G:C6	3.03	0.47
22:DA:1398:C:HO2'	22:DA:1399:C:H6	1.61	0.47
31:DJ:106:LYS:HB2	31:DJ:119:PHE:CE2	2.45	0.47
31:DJ:3:THR:HG21	38:DQ:60:TRP:HE1	1.79	0.47
6:CG:22:LEU:C	6:CG:22:LEU:HD23	2.34	0.47
21:AA:464:U:N3	21:AA:466:A:H5'	2.29	0.47
8:CI:45:MET:HB3	8:CI:49:GLN:HG3	1.96	0.47
22:DA:2543:G:H5'	22:DA:2543:G:H8	1.79	0.47
22:DA:2544:G:H2'	22:DA:2545:G:H8	1.78	0.47
24:BC:80:LEU:HD13	24:BC:109:LEU:HG	1.96	0.47
22:DA:2142:A:H3'	22:DA:2143:C:H4'	1.96	0.47
46:DY:20:ASN:ND2	46:DY:50:VAL:HG22	2.14	0.47
41:DT:55:VAL:HG23	41:DT:86:THR:O	2.14	0.47
18:CS:38:THR:HG1	18:CS:40:PHE:HD1	1.62	0.47
22:BA:726:G:O2'	22:BA:727:A:OP2	2.32	0.47
53:CA:927:G:C2	53:CA:1391:U:O2	2.66	0.47
34:BM:47:GLU:O	34:BM:48:ALA:C	2.53	0.47
19:CT:26:MET:CE	19:CT:56:ILE:HD13	2.42	0.47
22:BA:329:G:O4'	22:BA:477:A:H1'	2.14	0.47
15:AP:11:ALA:O	15:AP:12:LYS:C	2.52	0.47
28:BG:139:VAL:C	28:BG:141:GLY:N	2.62	0.47
22:BA:729:G:H2'	22:BA:1775:U:H1'	1.96	0.47
22:BA:587:C:N3	33:BL:33:ARG:NH2	2.58	0.47
5:AF:86:ARG:HD2	17:AR:63:TYR:O	2.14	0.47
13:AN:15:LEU:N	13:AN:18:LYS:HE2	2.29	0.47
21:AA:1261:A:C2	21:AA:1275:A:C5	3.02	0.47
22:DA:1261:C:H2'	22:DA:1262:A:H5''	1.95	0.47
21:AA:259:G:H2'	21:AA:260:G:H8	1.78	0.47
53:CA:1079:G:H2'	53:CA:1080:A:C8	2.48	0.47
21:AA:1253:G:C6	21:AA:1285:A:N6	2.82	0.47
36:BO:75:GLY:HA2	36:BO:106:LEU:CD1	2.43	0.47
25:BD:189:VAL:O	25:BD:191:GLY:N	2.39	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
33:DL:9:ALA:HB3	33:DL:12:SER:CB	2.44	0.47
22:DA:2352:A:C6	44:DW:30:VAL:HG11	2.49	0.47
22:BA:2742:G:C2'	22:BA:2743:U:H5'	2.44	0.47
22:BA:2742:G:O2'	22:BA:2743:U:H5'	2.14	0.47
5:AF:47:LEU:HD22	17:AR:65:SER:HB3	1.96	0.47
21:AA:771:G:H2'	21:AA:772:U:H6	1.79	0.47
21:AA:1256:A:H1'	21:AA:1258:G:C5	2.48	0.47
21:AA:764:C:C2'	21:AA:765:G:H5'	2.44	0.47
22:DA:1379:U:H2'	22:DA:1379:U:O2	2.14	0.47
1:AB:105:THR:HG21	21:AA:1072:G:N2	2.29	0.47
8:AI:90:ASP:CG	8:AI:92:SER:HB3	2.34	0.47
37:BP:92:ARG:O	37:BP:92:ARG:HG3	2.13	0.47
24:DC:68:ARG:HD3	24:DC:103:ILE:HD13	1.96	0.47
22:DA:2578:G:H21	25:DD:130:GLN:HE22	1.62	0.47
35:BN:82:GLU:O	35:BN:85:PRO:HG2	2.14	0.47
39:DR:8:GLY:HA3	39:DR:23:GLU:HG2	1.96	0.47
22:DA:2316:G:H2'	22:DA:2317:A:H8	1.79	0.47
22:BA:453:A:H5''	57:BA:3242:HOH:O	2.13	0.47
53:CA:168:G:C2'	53:CA:169:C:H5'	2.44	0.47
1:CB:176:ASN:C	1:CB:178:LEU:H	2.18	0.47
16:CQ:68:LYS:HG2	16:CQ:69:THR:HG23	1.96	0.47
22:BA:1783:A:H5'	22:BA:2608:G:H4'	1.96	0.47
22:DA:377:G:C6	22:DA:378:C:N3	2.82	0.47
22:DA:1765:U:O2'	22:DA:1766:G:H5'	2.14	0.47
22:DA:2531:A:C4	22:DA:2532:G:C8	3.02	0.47
7:AH:3:GLN:HA	21:AA:587:G:H4'	1.94	0.47
39:BR:48:LYS:CD	39:BR:48:LYS:H	2.27	0.47
54:DB:17:C:H2'	54:DB:18:G:C8	2.47	0.47
22:BA:2386:A:C2	44:BW:38:ARG:HD2	2.49	0.47
44:BW:23:LYS:HZ1	44:BW:24:ARG:HG3	1.78	0.47
39:DR:37:GLU:HB2	39:DR:53:PHE:CD2	2.48	0.47
22:DA:1533:C:C2'	22:DA:1534:U:H5'	2.43	0.47
3:CD:81:LEU:O	3:CD:83:GLY:N	2.47	0.47
22:DA:648:G:O2'	22:DA:649:G:H8	1.96	0.47
9:CJ:40:ILE:HG21	53:CA:1125:U:C5	2.50	0.47
22:DA:1713:A:H1'	22:DA:1716:U:H5'	1.96	0.47
29:DH:24:GLY:O	29:DH:25:TYR:C	2.52	0.47
22:DA:1420:A:N3	22:DA:2211:A:N7	2.61	0.47
41:BT:11:LEU:HD23	41:BT:11:LEU:N	2.28	0.47
22:DA:230:G:C2	22:DA:231:A:N7	2.82	0.47
22:DA:1055:G:H3'	22:DA:1056:G:H5'	1.95	0.47
25:DD:118:PHE:O	25:DD:119:ALA:HB3	2.14	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:AE:82:HIS:HB2	4:AE:83:PRO:HD2	1.95	0.47
4:AE:83:PRO:HB3	4:AE:96:GLN:HE21	1.78	0.47
22:DA:216:A:O2'	22:DA:217:A:O5'	2.33	0.47
22:BA:1021:A:H61	22:BA:1142:A:H61	1.61	0.47
31:BJ:64:VAL:CG1	31:BJ:65:THR:N	2.78	0.47
42:DU:86:PHE:HB2	42:DU:92:VAL:HG22	1.96	0.47
13:CN:30:ILE:O	13:CN:45:LEU:HD11	2.13	0.47
14:AO:23:SER:HB3	14:AO:26:VAL:HG23	1.96	0.47
28:BG:8:VAL:CG1	28:BG:49:LEU:H	2.23	0.47
3:AD:172:VAL:HG22	3:AD:173:ASP:N	2.21	0.47
22:DA:971:G:O6	22:DA:972:A:C2	2.67	0.47
25:BD:9:VAL:HG22	25:BD:10:GLY:H	1.80	0.47
11:CL:109:ARG:CB	11:CL:118:VAL:HG21	2.43	0.47
19:CT:25:SER:O	19:CT:26:MET:C	2.51	0.47
24:DC:82:TYR:O	24:DC:84:PRO:HD3	2.14	0.47
1:CB:150:ILE:HD11	1:CB:153:MET:SD	2.54	0.47
22:BA:1188:U:O2'	22:BA:1189:A:H5'	2.13	0.47
30:BI:56:VAL:HG22	30:BI:57:VAL:N	2.29	0.47
10:AK:76:TYR:HD1	10:AK:76:TYR:N	2.11	0.47
1:AB:49:PHE:CD1	1:AB:49:PHE:C	2.88	0.47
53:CA:206:C:O5'	53:CA:207:C:OP2	2.32	0.47
21:AA:430:A:H2'	21:AA:431:A:H8	1.79	0.47
24:BC:141:HIS:CE1	24:BC:194:VAL:HA	2.50	0.47
53:CA:276:G:O2'	53:CA:277:C:C5'	2.62	0.47
53:CA:276:G:O2'	53:CA:277:C:O4'	2.30	0.47
53:CA:802:A:O2'	53:CA:803:G:H5'	2.13	0.47
11:AL:2:THR:HG21	21:AA:880:C:OP2	2.15	0.47
39:DR:48:LYS:H	39:DR:48:LYS:CD	2.19	0.47
53:CA:992:U:H1'	53:CA:993:G:C2	2.49	0.47
16:CQ:59:GLU:HG3	16:CQ:75:VAL:HG22	1.96	0.47
24:BC:259:ASN:ND2	24:BC:262:THR:OG1	2.47	0.47
22:DA:1918:A:H4'	22:DA:1919:A:OP1	2.13	0.47
37:BP:19:PHE:HE1	37:BP:58:PHE:CD2	2.32	0.47
22:BA:747:U:C4	22:BA:2613:U:C5	3.02	0.47
25:BD:189:VAL:C	25:BD:191:GLY:H	2.17	0.47
22:DA:2447:G:C8	22:DA:2500:U:H2'	2.49	0.47
21:AA:818:G:HO2'	21:AA:820:U:H6	1.57	0.47
21:AA:819:A:H4'	21:AA:820:U:OP2	2.15	0.47
14:AO:53:ARG:NH1	21:AA:579:A:O2'	2.47	0.47
12:AM:84:CYS:HB3	18:AS:73:PHE:HE2	1.79	0.47
12:AM:84:CYS:HA	18:AS:73:PHE:CD2	2.48	0.47
22:DA:2402:U:H6	22:DA:2402:U:H5'	1.79	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:CH:121:GLY:C	53:CA:599:C:H4'	2.34	0.47
34:BM:4:PRO:HG3	34:BM:70:ASP:HA	1.96	0.47
4:CE:73:VAL:HG12	4:CE:74:ALA:O	2.14	0.47
53:CA:352:C:H5''	53:CA:352:C:H6	1.79	0.47
3:CD:145:ARG:HG3	3:CD:146:GLU:N	2.29	0.47
53:CA:304:U:H2'	53:CA:305:G:C8	2.50	0.47
21:AA:491:G:C6	21:AA:492:C:C4	3.02	0.47
33:BL:23:ILE:HG12	39:BR:82:HIS:CE1	2.49	0.47
22:BA:1593:A:H2'	22:BA:1594:U:O4'	2.13	0.47
24:BC:71:ASP:OD1	24:BC:118:GLY:HA2	2.14	0.47
22:BA:88:G:C2	22:BA:89:A:C8	3.03	0.47
42:DU:42:LYS:HB2	42:DU:42:LYS:NZ	2.30	0.47
22:BA:2023:C:O2	22:BA:2023:C:H2'	2.09	0.47
44:BW:14:ASP:OD2	44:BW:16:GLU:OE1	2.32	0.47
22:BA:1059:G:C2	22:BA:1080:A:N3	2.83	0.47
53:CA:1408:A:C2	53:CA:1494:G:C4	3.01	0.47
16:CQ:67:SER:OG	16:CQ:70:LYS:HB2	2.14	0.47
19:AT:27:MET:HG3	19:AT:28:ARG:N	2.28	0.47
19:AT:33:LYS:HD3	19:AT:33:LYS:HA	1.64	0.47
9:CJ:80:THR:HB	9:CJ:82:LYS:NZ	2.29	0.47
41:BT:28:ASN:C	41:BT:91:GLN:HE22	2.16	0.47
1:AB:42:LEU:CG	1:AB:43:GLU:HG3	2.37	0.47
22:DA:1083:U:H1'	22:DA:1086:A:C2	2.49	0.47
22:DA:1291:C:O2'	22:DA:1292:G:O4'	2.27	0.47
21:AA:208:U:H3	21:AA:212:G:N2	2.12	0.47
46:DY:57:LEU:O	46:DY:57:LEU:HD13	2.15	0.47
21:AA:843:U:H3	1:CB:114:LYS:HB3	1.77	0.47
46:BY:7:ARG:HA	46:BY:60:LYS:HZ3	1.79	0.47
53:CA:1297:G:O2'	53:CA:1298:U:OP2	2.27	0.47
12:CM:16:ILE:H	12:CM:16:ILE:HD12	1.79	0.47
6:CG:78:ARG:HH21	53:CA:1382:C:H4'	1.79	0.47
1:AB:15:PHE:O	1:AB:40:ILE:HG12	2.13	0.47
53:CA:1138:G:N2	53:CA:1140:C:C4	2.82	0.47
22:DA:2234:G:C6	22:DA:2235:G:C8	3.03	0.47
22:DA:1640:A:H3'	22:DA:1641:A:H8	1.78	0.47
22:DA:1491:G:O6	22:DA:1500:G:C2	2.67	0.47
6:AG:113:LYS:HB2	6:AG:117:LEU:HD12	1.96	0.47
37:DP:105:LYS:HA	37:DP:108:ARG:CZ	2.45	0.47
28:BG:25:ILE:HD13	28:BG:75:VAL:HG23	1.96	0.47
40:BS:88:ARG:HH21	40:BS:88:ARG:HG3	1.79	0.47
22:BA:476:G:H4'	22:BA:502:A:N1	2.29	0.47
22:BA:478:A:C6	22:BA:480:A:C6	3.02	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
30:BI:126:ARG:HA	30:BI:129:GLU:CD	2.35	0.47
25:DD:36:GLN:HE21	25:DD:38:LYS:HZ1	1.61	0.47
22:DA:1737:G:N7	22:DA:1738:G:C6	2.82	0.47
22:DA:45:G:N2	22:DA:434:U:C2	2.83	0.47
32:DK:2:ILE:CG2	32:DK:3:GLN:N	2.76	0.47
22:DA:437:U:O2'	22:DA:438:G:O4'	2.31	0.47
22:DA:42:A:C2	22:DA:438:G:C2	3.02	0.47
20:CU:8:ASN:CG	20:CU:9:GLU:H	2.16	0.47
22:DA:1522:A:H1'	22:DA:1524:G:C4	2.49	0.47
33:DL:98:ALA:O	33:DL:100:ILE:HG22	2.15	0.47
22:DA:389:G:C8	22:DA:2413:G:H4'	2.50	0.47
22:DA:152:A:C2	22:DA:175:G:C2	3.02	0.47
22:BA:1885:A:O2'	22:BA:1886:U:H5'	2.14	0.47
21:AA:78:A:N6	21:AA:79:G:C6	2.82	0.47
21:AA:1201:A:H1'	21:AA:1202:U:OP2	2.15	0.47
53:CA:1478:U:H2'	53:CA:1479:C:C6	2.49	0.47
5:AF:52:ASN:O	5:AF:53:LYS:CB	2.63	0.47
3:CD:102:TYR:C	3:CD:104:MET:H	2.17	0.47
13:CN:16:ALA:HB2	13:CN:59:GLN:HE22	1.78	0.47
34:DM:28:PHE:HB2	34:DM:104:GLU:OE1	2.14	0.47
35:DN:51:LEU:HA	35:DN:54:LEU:CD2	2.45	0.47
18:CS:29:PRO:HA	18:CS:47:THR:HB	1.96	0.47
37:BP:91:VAL:O	37:BP:92:ARG:HG2	2.15	0.47
22:DA:1973:G:C6	22:DA:1974:C:N4	2.83	0.47
22:BA:2800:A:C2	22:BA:2895:G:H1'	2.50	0.47
21:AA:471:U:H2'	21:AA:472:U:O4'	2.13	0.47
53:CA:22:G:H4'	53:CA:885:G:C8	2.49	0.47
21:AA:1012:A:C6	21:AA:1013:G:C6	3.01	0.47
7:CH:111:THR:HG22	7:CH:113:ARG:H	1.79	0.47
30:BI:91:LYS:O	30:BI:97:VAL:HG21	2.14	0.47
53:CA:767:A:H2'	53:CA:768:A:C8	2.49	0.47
8:CI:125:GLN:NE2	8:CI:125:GLN:H	2.12	0.47
22:DA:1295:C:H1'	35:DN:23:ASN:HD21	1.79	0.47
22:DA:1593:A:C5	22:DA:1594:U:C4	3.02	0.47
22:BA:1522:A:H1'	22:BA:1524:G:C5	2.49	0.47
22:BA:994:C:O3'	22:BA:995:C:H3'	2.15	0.47
31:BJ:45:THR:N	31:BJ:46:PRO:HD3	2.29	0.47
22:DA:1439:A:C2	22:DA:1552:A:N6	2.80	0.47
44:BW:41:GLY:HA2	44:BW:44:PHE:CE2	2.49	0.47
12:CM:97:ARG:CZ	53:CA:1308:U:H5	2.26	0.47
41:BT:25:GLU:HA	41:BT:28:ASN:O	2.14	0.47
52:D4:7:VAL:CG1	52:D4:8:LYS:N	2.77	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
27:DF:35:LEU:O	27:DF:87:LYS:HA	2.14	0.47
21:AA:211:G:C2	21:AA:212:G:H1'	2.49	0.47
4:AE:108:GLY:O	4:AE:109:ALA:HB3	2.15	0.47
22:DA:2142:A:C2'	22:DA:2143:C:H4'	2.44	0.47
41:DT:55:VAL:HG21	41:DT:85:VAL:O	2.15	0.47
22:DA:101:A:O2'	22:DA:102:U:P	2.73	0.47
53:CA:91:U:HO2'	53:CA:92:U:H6	1.62	0.47
53:CA:1202:U:O2'	53:CA:1203:C:C5'	2.62	0.47
15:CP:8:ARG:O	15:CP:29:ASN:ND2	2.43	0.47
6:AG:68:VAL:HG21	6:AG:103:ILE:HG13	1.94	0.47
22:DA:2345:G:H4'	22:DA:2346:A:C5'	2.44	0.47
42:DU:54:PRO:CG	42:DU:55:GLY:H	2.22	0.47
28:BG:34:ARG:HD3	28:BG:34:ARG:N	2.30	0.47
22:BA:754:U:H2'	22:BA:755:U:H6	1.78	0.47
1:AB:67:LEU:HD13	1:AB:160:LEU:HD13	1.96	0.47
31:DJ:35:ARG:HH11	31:DJ:140:LEU:HD11	1.79	0.47
8:CI:118:ARG:HH21	8:CI:122:ARG:HE	1.62	0.47
54:DB:27:C:H2'	54:DB:28:C:H6	1.78	0.47
47:DZ:4:ILE:CD1	47:DZ:58:GLU:HA	2.41	0.47
45:DX:76:LYS:HG3	45:DX:77:TYR:N	2.30	0.47
3:AD:71:PHE:CZ	3:AD:199:ILE:HD11	2.49	0.47
29:DH:68:ARG:CD	29:DH:71:LYS:HB2	2.44	0.47
22:DA:1826:G:C5	22:DA:1827:U:C4	3.03	0.47
36:DO:41:ALA:O	36:DO:43:ASN:N	2.44	0.47
22:DA:426:C:C2'	22:DA:427:U:H5'	2.44	0.47
22:BA:1858:A:C8	22:BA:1858:A:OP2	2.68	0.47
49:B1:7:LYS:HG3	49:B1:23:THR:HG22	1.97	0.47
6:CG:2:ARG:HG2	6:CG:3:ARG:N	2.28	0.47
40:BS:24:ILE:CG2	40:BS:71:VAL:HG11	2.44	0.47
36:DO:26:LEU:HA	36:DO:38:GLN:O	2.14	0.47
21:AA:895:G:H2'	21:AA:896:C:H6	1.77	0.47
12:AM:86:ARG:NH2	12:AM:97:ARG:HA	2.28	0.47
23:BB:56:G:H5''	23:BB:57:A:OP1	2.14	0.47
32:BK:4:GLU:O	32:BK:5:GLN:HB2	2.15	0.47
53:CA:328:C:C2'	53:CA:328:C:O2	2.62	0.47
9:AJ:74:VAL:HG12	9:AJ:75:ASP:N	2.30	0.47
9:AJ:8:ILE:HA	9:AJ:99:GLN:O	2.14	0.47
45:BX:50:VAL:HG12	45:BX:51:SER:N	2.28	0.47
53:CA:909:A:H2'	53:CA:910:C:O4'	2.14	0.47
22:DA:1649:G:H2'	22:DA:1650:A:C8	2.49	0.47
22:BA:1097:U:O2'	30:BI:8:VAL:HG12	2.14	0.47
21:AA:82:G:N2	21:AA:84:U:H3	2.11	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:CB:91:VAL:HG11	1:CB:95:TRP:HD1	1.78	0.47
22:DA:2188:U:H2'	22:DA:2189:U:C6	2.49	0.47
53:CA:545:C:C2'	53:CA:546:A:H5'	2.43	0.47
25:BD:109:VAL:HG11	25:BD:193:VAL:HB	1.95	0.47
43:DV:16:ALA:HA	43:DV:19:ARG:CZ	2.44	0.47
22:DA:382:A:H2'	22:DA:383:C:H5''	1.96	0.47
22:BA:2188:U:H2'	22:BA:2189:U:H6	1.79	0.47
22:DA:2283:C:N4	22:DA:2389:G:C5	2.83	0.47
10:CK:111:ASP:N	20:CU:3:ILE:N	2.61	0.47
44:BW:23:LYS:HE3	44:BW:24:ARG:O	2.14	0.47
39:DR:39:LEU:HB2	39:DR:49:ILE:CD1	2.45	0.47
22:DA:605:G:H2'	22:DA:606:U:H6	1.79	0.47
31:DJ:43:GLU:O	31:DJ:44:TYR:C	2.53	0.47
53:CA:1278:G:H4'	53:CA:1279:G:H5'	1.95	0.47
53:CA:1278:G:O2'	53:CA:1279:G:C2	2.65	0.47
22:DA:1785:A:H2'	22:DA:1787:A:N7	2.29	0.47
22:DA:1142:A:C8	22:DA:1144:A:C5	3.02	0.47
10:AK:127:ARG:HG2	21:AA:1506:U:O2	2.14	0.47
20:AU:33:ARG:HD3	20:AU:34:ARG:HG3	1.95	0.47
41:BT:32:LEU:N	41:BT:83:ALA:HB3	2.21	0.47
22:DA:231:A:O2'	22:DA:232:G:H5'	2.15	0.47
22:DA:2755:C:O3'	22:DA:2756:U:H6	1.96	0.47
22:DA:1927:A:H2'	22:DA:1928:A:C8	2.50	0.47
53:CA:279:A:H4'	53:CA:280:C:O5'	2.15	0.47
22:DA:2148:G:O2'	22:DA:2149:U:C6	2.68	0.47
12:CM:16:ILE:HD12	12:CM:16:ILE:N	2.29	0.47
50:D2:34:ARG:HB3	50:D2:42:LEU:CD1	2.38	0.47
32:DK:7:MET:HA	32:DK:7:MET:HE3	1.95	0.47
28:BG:8:VAL:HG12	28:BG:9:VAL:N	2.29	0.47
26:DE:112:LEU:HD12	26:DE:118:LEU:HD13	1.97	0.47
31:DJ:23:LYS:CB	31:DJ:28:LEU:HD13	2.44	0.47
35:DN:1:MET:O	35:DN:2:ARG:HB2	2.14	0.47
22:DA:632:A:H2'	22:DA:633:A:C8	2.49	0.47
22:DA:1637:A:H5'	22:DA:1760:C:O2'	2.14	0.47
44:DW:49:ASN:HB2	44:DW:60:ALA:HA	1.96	0.47
7:AH:9:MET:HG3	7:AH:26:MET:CE	2.44	0.47
30:BI:40:ALA:HB3	30:BI:68:PHE:CE1	2.50	0.47
31:DJ:25:LEU:HB2	31:DJ:62:VAL:HG21	1.96	0.47
1:AB:49:PHE:CD1	1:AB:53:LEU:HD23	2.49	0.47
51:D3:18:LYS:HD2	51:D3:19:GLY:H	1.79	0.47
53:CA:754:C:C2'	53:CA:754:C:O2	2.61	0.47
22:DA:1723:G:C4	22:DA:1724:G:C8	3.02	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:BA:1585:C:O2'	22:BA:1586:A:H5'	2.13	0.47
4:AE:106:ALA:CB	4:AE:124:ALA:HB3	2.43	0.47
41:BT:7:LEU:C	41:BT:9:LYS:H	2.18	0.47
44:BW:74:LYS:O	44:BW:75:ASN:C	2.52	0.47
22:DA:1519:G:N1	22:DA:1520:U:C2	2.82	0.47
38:DQ:82:LEU:O	38:DQ:85:ALA:HB3	2.14	0.47
53:CA:108:G:H5'	53:CA:109:A:H5''	1.96	0.47
2:CC:54:ILE:O	2:CC:54:ILE:HG23	2.13	0.47
22:BA:1946:U:H2'	22:BA:1947:C:H6	1.78	0.47
24:BC:20:ASN:C	24:BC:20:ASN:ND2	2.66	0.47
53:CA:611:C:C5	53:CA:612:C:C5	3.02	0.47
32:BK:118:LEU:O	32:BK:119:ALA:O	2.32	0.47
22:BA:1398:C:H2'	22:BA:1399:C:H6	1.79	0.47
53:CA:369:G:H2'	53:CA:370:C:C6	2.49	0.47
25:DD:110:THR:HA	25:DD:171:THR:HA	1.97	0.47
52:B4:15:LYS:O	52:B4:16:ILE:O	2.32	0.47
41:BT:68:LYS:HG2	41:BT:69:ARG:H	1.79	0.47
21:AA:858:G:O2'	21:AA:859:G:H5'	2.14	0.47
43:DV:44:HIS:CE1	43:DV:85:LYS:HD3	2.49	0.47
21:AA:1451:U:O2	21:AA:1451:U:H2'	2.15	0.47
22:BA:152:A:H2'	22:BA:153:U:C6	2.50	0.47
30:DI:22:PRO:HB2	30:DI:23:VAL:H	1.57	0.47
22:DA:1455:G:N7	35:DN:64:ARG:NH1	2.62	0.47
21:AA:340:U:O2'	21:AA:341:C:H5'	2.14	0.47
21:AA:135:C:H2'	21:AA:136:C:H5'	1.96	0.47
21:AA:475:C:H2'	21:AA:476:U:H6	1.78	0.47
35:BN:83:LEU:HD11	35:BN:86:ARG:NH2	2.30	0.47
45:DX:36:ARG:HG2	45:DX:47:THR:HB	1.96	0.47
22:DA:2100:G:C6	22:DA:2101:A:C6	3.02	0.47
22:BA:1483:G:C2	22:BA:1484:U:C2	3.03	0.47
22:BA:61:C:H6	22:BA:61:C:O5'	1.97	0.47
27:DF:122:ASP:HB3	27:DF:126:ASN:ND2	2.29	0.47
2:AC:71:ARG:O	2:AC:74:ILE:HG22	2.14	0.47
22:BA:1042:G:C2'	22:BA:1043:C:H5'	2.45	0.47
13:AN:53:ASP:HA	13:AN:58:ARG:HH11	1.79	0.47
22:DA:569:U:H5''	22:DA:821:A:C2	2.50	0.47
3:CD:190:LEU:O	3:CD:190:LEU:HD23	2.14	0.47
24:DC:19:VAL:O	24:DC:19:VAL:HG12	2.15	0.47
11:CL:78:VAL:HG23	11:CL:101:LEU:HD12	1.96	0.47
22:BA:1154:G:OP1	38:BQ:57:ARG:HD3	2.15	0.47
33:BL:95:LEU:HD22	33:BL:100:ILE:HG12	1.96	0.47
5:AF:90:MET:HB3	17:AR:60:ARG:HH21	1.80	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:657:U:H2'	22:DA:658:U:H6	1.76	0.47
22:DA:1914:C:H2'	22:DA:1915:U:C6	2.50	0.47
28:BG:148:ARG:HG3	28:BG:161:VAL:HG12	1.96	0.47
19:CT:66:ILE:HD12	19:CT:70:LYS:HB3	1.96	0.47
31:DJ:44:TYR:CD1	38:DQ:59:LEU:HD11	2.49	0.47
21:AA:181:A:C2	21:AA:182:A:N6	2.82	0.47
8:CI:49:GLN:O	8:CI:52:GLU:HG2	2.14	0.47
41:BT:14:PRO:HA	41:BT:32:LEU:HB3	1.97	0.47
22:BA:1179:G:C6	22:BA:1180:U:O2'	2.63	0.47
22:DA:1062:G:H22	22:DA:1077:A:H2	1.63	0.47
22:DA:475:C:O2	22:DA:479:A:N6	2.42	0.47
26:DE:47:LYS:CB	26:DE:51:GLU:HB2	2.37	0.47
22:DA:1208:C:N3	22:DA:1209:U:C5	2.82	0.47
46:BY:7:ARG:N	46:BY:60:LYS:NZ	2.63	0.47
22:DA:2234:G:C4	22:DA:2235:G:C8	3.03	0.47
22:BA:2707:U:O2	35:BN:71:ARG:NH1	2.47	0.47
6:CG:33:GLY:HA3	53:CA:1350:A:C2	2.49	0.47
21:AA:1221:G:H2'	21:AA:1222:G:H8	1.79	0.47
39:BR:42:ALA:CA	39:BR:46:GLU:HB2	2.39	0.47
51:B3:31:ILE:CG1	51:B3:34:LYS:HD2	2.45	0.47
21:AA:1157:A:H4'	21:AA:1158:C:H5''	1.97	0.47
49:B1:13:SER:HB3	49:B1:47:ILE:O	2.15	0.47
22:DA:1588:G:H2'	22:DA:1589:U:C6	2.50	0.47
27:DF:64:PRO:HA	27:DF:88:VAL:CG2	2.39	0.47
53:CA:702:A:C8	53:CA:702:A:OP1	2.56	0.47
22:DA:1611:C:O2'	22:DA:1612:C:C6	2.60	0.47
22:BA:2636:C:H2'	22:BA:2637:U:H6	1.74	0.47
22:DA:1237:A:H2	22:DA:1238:G:H1'	1.78	0.47
13:CN:8:ARG:NH1	13:CN:12:ARG:HH22	2.12	0.47
13:CN:52:ARG:HA	13:CN:52:ARG:CZ	2.44	0.47
53:CA:350:G:C6	53:CA:351:G:C6	3.03	0.47
22:DA:712:G:C2	22:DA:720:U:O2	2.68	0.47
22:BA:1587:G:C2	22:BA:1588:G:C8	3.02	0.47
22:DA:1264:A:H2'	22:DA:2014:A:N6	2.29	0.47
22:DA:223:A:C6	22:DA:422:A:N7	2.82	0.47
22:DA:2250:G:O5'	22:DA:2250:G:C8	2.68	0.47
41:DT:8:LEU:HD22	41:DT:46:ALA:HA	1.96	0.47
26:DE:196:VAL:HA	26:DE:199:MET:HB3	1.97	0.47
29:DH:62:LEU:C	29:DH:64:ALA:N	2.68	0.47
37:DP:44:GLY:HA3	37:DP:60:VAL:CG1	2.44	0.47
40:BS:24:ILE:HG23	40:BS:71:VAL:HG11	1.95	0.47
21:AA:1332:A:N3	21:AA:1332:A:H5''	2.30	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:2425:A:O2'	22:DA:2426:A:OP2	2.24	0.47
22:DA:956:G:C1'	34:DM:82:MET:HE1	2.44	0.47
32:DK:22:ILE:HD11	32:DK:40:LYS:HG3	1.96	0.47
29:DH:104:THR:O	29:DH:104:THR:HG23	2.14	0.47
16:AQ:75:VAL:HB	16:AQ:76:ARG:H	1.48	0.47
21:AA:1113:C:H2'	21:AA:1114:C:C6	2.49	0.47
7:CH:33:VAL:O	7:CH:35:ILE:N	2.47	0.47
27:BF:107:VAL:N	27:BF:108:PRO:CD	2.77	0.47
22:DA:1649:G:O6	22:DA:2009:A:N6	2.47	0.47
40:DS:79:GLY:HA3	40:DS:100:THR:OG1	2.14	0.47
2:AC:17:TRP:CD1	13:AN:90:GLY:HA2	2.50	0.47
22:BA:417:C:H2'	22:BA:418:C:C6	2.50	0.47
21:AA:1136:C:O2	21:AA:1136:C:H3'	2.15	0.47
36:DO:51:ALA:HB3	36:DO:78:VAL:HG22	1.96	0.47
16:CQ:11:VAL:CG1	16:CQ:54:ILE:HA	2.45	0.47
22:BA:279:A:H2'	22:BA:280:U:O4'	2.14	0.47
22:DA:1108:U:H2'	22:DA:1109:C:O4'	2.14	0.47
1:CB:27:LYS:N	1:CB:28:PRO:CD	2.77	0.47
37:DP:9:GLN:HA	37:DP:12:MET:HG3	1.96	0.47
21:AA:303:A:H2'	21:AA:304:U:O4'	2.15	0.47
12:AM:49:GLU:O	12:AM:52:ILE:HG22	2.15	0.47
35:BN:53:THR:HA	35:BN:56:LYS:HG3	1.96	0.47
15:CP:26:ASN:OD1	15:CP:31:ARG:HB3	2.14	0.47
31:BJ:2:LYS:H	31:BJ:2:LYS:HD3	1.77	0.47
22:DA:2429:G:OP2	22:DA:2430:A:OP2	2.32	0.47
22:DA:2415:G:H2'	22:DA:2416:C:H6	1.80	0.47
25:BD:11:MET:SD	25:BD:100:LEU:HD11	2.55	0.47
25:BD:100:LEU:HD23	25:BD:101:PHE:HE1	1.80	0.47
38:BQ:78:PHE:HE2	38:BQ:109:VAL:HA	1.80	0.47
39:BR:49:ILE:CG1	39:BR:49:ILE:O	2.58	0.47
53:CA:1046:A:O2'	53:CA:1047:G:H5'	2.14	0.47
44:BW:24:ARG:HD2	44:BW:25:PHE:CA	2.45	0.47
22:BA:856:G:N2	44:BW:19:ARG:HH22	2.01	0.47
39:DR:5:PHE:HB3	39:DR:59:ILE:HD12	1.97	0.47
26:DE:28:VAL:O	26:DE:32:VAL:HG13	2.14	0.47
28:BG:102:ILE:HG21	28:BG:130:ILE:HD13	1.96	0.47
2:CC:190:THR:CG2	2:CC:191:THR:H	2.19	0.47
31:DJ:43:GLU:CG	31:DJ:43:GLU:O	2.63	0.47
22:DA:33:C:O2'	22:DA:34:U:C5'	2.49	0.47
21:AA:466:A:H4'	21:AA:467:U:OP2	2.15	0.47
37:DP:113:LEU:HD23	37:DP:113:LEU:C	2.35	0.47
53:CA:1255:G:N1	53:CA:1279:G:N7	2.62	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:CC:22:PHE:CE2	9:CJ:97:ASP:HB2	2.50	0.47
9:CJ:42:LEU:HD23	53:CA:1280:A:H5'	1.97	0.47
21:AA:184:G:H2'	21:AA:185:U:C5	2.50	0.47
22:BA:1327:A:OP2	57:BA:3617:HOH:O	2.20	0.47
53:CA:795:C:H5''	53:CA:796:C:OP2	2.15	0.47
54:DB:40:U:O2	54:DB:43:C:H2'	2.14	0.47
22:DA:1103:A:H8	22:DA:1103:A:O5'	1.97	0.47
22:DA:1059:G:C2	22:DA:1080:A:C2	3.03	0.47
26:DE:134:LEU:O	26:DE:138:LEU:HG	2.14	0.47
34:DM:27:SER:N	34:DM:66:ARG:NH2	2.48	0.47
21:AA:212:G:C2	21:AA:213:G:N7	2.83	0.47
21:AA:214:C:O2'	21:AA:215:C:C6	2.54	0.47
1:CB:209:VAL:CG2	1:CB:210:THR:N	2.77	0.47
22:DA:475:C:C2'	22:DA:476:G:C8	2.93	0.47
7:CH:78:SER:CB	7:CH:124:ILE:O	2.62	0.47
4:AE:131:ASN:HA	4:AE:132:PRO:HD2	1.75	0.47
26:DE:129:PRO:HG3	26:DE:159:LEU:HD23	1.96	0.47
18:CS:39:ILE:HG12	18:CS:68:HIS:O	2.14	0.47
22:DA:380:G:O3'	45:DX:15:ASN:HB2	2.15	0.47
1:AB:14:HIS:O	1:AB:14:HIS:CD2	2.68	0.47
22:DA:188:G:C2'	22:DA:189:G:H5'	2.44	0.47
4:CE:29:ILE:CG2	4:CE:30:PHE:N	2.63	0.47
53:CA:119:A:H4'	53:CA:120:A:O5'	2.15	0.47
22:DA:55:G:N2	22:DA:116:C:C2	2.83	0.47
22:BA:1013:C:H2'	22:BA:1014:A:C8	2.50	0.47
22:DA:1003:G:O2'	22:DA:1010:A:N1	2.35	0.47
22:DA:584:C:P	38:DQ:5:ARG:HD3	2.55	0.47
37:BP:59:THR:OG1	37:BP:72:VAL:HG12	2.14	0.47
21:AA:982:U:H4'	21:AA:983:A:H5'	1.97	0.47
1:CB:172:ILE:HG23	1:CB:182:VAL:HG21	1.96	0.47
22:DA:95:A:HO2'	46:DY:39:GLN:HA	1.79	0.47
6:CG:6:ILE:HG13	6:CG:7:GLY:N	2.27	0.47
37:DP:107:ALA:O	37:DP:108:ARG:C	2.53	0.47
22:DA:1802:A:O2'	22:DA:1803:A:H5'	2.15	0.47
28:DG:84:LYS:O	28:DG:85:LYS:CB	2.62	0.47
41:DT:15:HIS:CE1	41:DT:80:TRP:CH2	3.02	0.47
25:DD:113:SER:HB3	25:DD:168:GLU:H	1.78	0.47
25:DD:116:LYS:HA	35:DN:1:MET:HE1	1.96	0.47
21:AA:531:U:C4'	21:AA:532:A:O5'	2.60	0.47
22:DA:1567:G:H5''	24:DC:84:PRO:HB3	1.97	0.47
24:BC:77:VAL:O	24:BC:77:VAL:CG2	2.63	0.47
28:BG:1:SER:HB3	28:BG:5:LYS:NZ	2.29	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
53:CA:1067:A:O2'	53:CA:1094:G:H3'	2.14	0.47
20:AU:18:PHE:C	20:AU:19:LYS:HE2	2.35	0.47
1:AB:67:LEU:HD22	1:AB:69:VAL:HG23	1.96	0.47
22:DA:1607:C:N4	22:DA:1622:G:N7	2.62	0.47
53:CA:300:A:H2'	53:CA:301:G:O4'	2.15	0.47
53:CA:484:G:C4'	53:CA:485:U:O5'	2.61	0.47
53:CA:558:G:O5'	53:CA:559:A:H3'	2.13	0.47
30:BI:60:VAL:HG22	30:BI:66:PHE:CB	2.45	0.47
32:BK:63:VAL:CG2	32:BK:107:LEU:HD21	2.39	0.47
53:CA:1087:G:C6	53:CA:1099:G:C2	3.03	0.47
1:CB:56:LEU:HD23	1:CB:183:PHE:CE1	2.49	0.47
2:CC:175:HIS:CE1	53:CA:1190:G:H5'	2.50	0.47
21:AA:792:A:O2'	21:AA:794:A:N7	2.33	0.47
53:CA:247:G:C6	53:CA:278:G:N1	2.82	0.47
7:CH:39:LEU:HB2	7:CH:45:ILE:CD1	2.44	0.47
22:DA:711:G:C2	22:DA:721:A:C2	3.02	0.47
53:CA:276:G:C2	53:CA:277:C:C2	3.03	0.47
5:CF:43:GLY:HA2	5:CF:58:HIS:HE1	1.79	0.47
46:DY:49:ASP:O	46:DY:52:ARG:HB2	2.15	0.47
22:BA:1996:C:OP1	32:BK:31:ARG:NE	2.47	0.47
22:DA:1521:G:C6	22:DA:1522:A:C6	3.01	0.47
22:DA:1522:A:H1'	22:DA:1524:G:C5	2.50	0.47
3:AD:22:SER:O	3:AD:23:GLY:C	2.53	0.47
53:CA:1531:A:H8	53:CA:1531:A:O5'	1.98	0.47
34:BM:13:HIS:O	34:BM:14:LYS:CB	2.60	0.47
22:DA:63:A:N6	22:DA:91:A:N6	2.62	0.47
10:AK:21:HIS:CD2	10:AK:34:THR:HG21	2.49	0.47
22:DA:172:A:H2'	22:DA:173:A:H8	1.79	0.47
36:BO:2:ASP:O	36:BO:3:LYS:HB3	2.15	0.47
24:DC:79:ARG:C	24:DC:80:LEU:HD12	2.35	0.47
29:DH:58:LEU:O	29:DH:61:VAL:HG12	2.15	0.47
31:BJ:25:LEU:HB2	31:BJ:62:VAL:HG22	1.97	0.47
22:DA:8:C:C2'	22:DA:9:G:H5'	2.45	0.47
22:DA:1413:A:C6	22:DA:1414:C:N4	2.83	0.47
22:DA:1681:G:O2'	22:DA:1762:A:H2'	2.15	0.47
21:AA:895:G:C6	21:AA:896:C:C4	3.03	0.47
22:BA:304:U:C2	22:BA:305:C:C5	3.02	0.47
42:BU:97:SER:O	42:BU:98:ASN:CB	2.63	0.47
22:BA:2473:U:H5''	22:BA:2474:U:OP2	2.14	0.47
3:AD:166:LYS:HB3	3:AD:166:LYS:HZ2	1.80	0.47
22:BA:182:A:C6	22:BA:183:C:C4	3.03	0.47
53:CA:1416:G:C2'	53:CA:1417:G:H5'	2.45	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
53:CA:1514:G:H2'	53:CA:1515:G:H8	1.80	0.47
22:BA:464:U:C6	22:BA:788:A:C2	3.03	0.47
39:DR:21:ARG:HB2	39:DR:93:PHE:CD1	2.49	0.47
22:DA:1982:U:H6	22:DA:1982:U:O5'	1.98	0.47
22:BA:2752:C:H2'	22:BA:2753:A:H8	1.80	0.47
4:AE:88:HIS:HE1	21:AA:1078:U:O4'	1.97	0.47
27:BF:107:VAL:HG11	27:BF:175:PRO:HG2	1.96	0.47
22:BA:2517:C:H2'	22:BA:2542:A:N7	2.29	0.47
21:AA:1130:A:H5''	21:AA:1130:A:C8	2.50	0.47
22:DA:2624:G:C2	22:DA:2625:G:H1'	2.50	0.47
53:CA:137:U:H1'	53:CA:227:G:N2	2.29	0.47
22:BA:81:G:N2	22:BA:106:C:C2	2.83	0.47
35:DN:83:LEU:O	35:DN:87:PHE:HB2	2.15	0.47
23:BB:94:A:C5	23:BB:95:U:C4	3.03	0.47
22:DA:599:A:C2	22:DA:659:G:C2	3.02	0.47
22:BA:2805:C:C4	22:BA:2806:C:C4	3.02	0.47
1:AB:168:GLU:O	1:AB:169:HIS:C	2.52	0.47
34:BM:53:MET:O	34:BM:56:ALA:HB3	2.15	0.47
34:BM:55:ARG:O	34:BM:56:ALA:HB2	2.15	0.47
28:DG:34:ARG:O	28:DG:35:THR:HG23	2.15	0.47
27:BF:33:ILE:O	27:BF:90:LEU:HB2	2.15	0.47
22:BA:1824:G:O2'	22:BA:1825:U:H5'	2.14	0.47
35:DN:92:GLY:H	35:DN:94:TYR:HE1	1.57	0.47
21:AA:1058:G:C5	21:AA:1059:C:C5	3.03	0.47
22:BA:1408:G:C6	22:BA:1409:U:C4	3.02	0.47
35:BN:8:ARG:HB3	35:BN:10:LEU:HD22	1.97	0.47
1:CB:216:VAL:O	1:CB:220:VAL:HG23	2.14	0.47
21:AA:272:C:H2'	21:AA:273:U:H6	1.80	0.47
21:AA:357:G:H1'	21:AA:368:U:O2	2.14	0.47
42:DU:32:LYS:HE2	42:DU:65:GLN:OE1	2.14	0.47
17:AR:35:SER:HA	17:AR:71:ASP:HB3	1.96	0.47
8:AI:18:VAL:HG11	8:AI:82:ILE:HG12	1.97	0.47
33:BL:37:GLY:HA3	57:BL:204:HOH:O	2.14	0.47
53:CA:471:U:H2'	53:CA:472:U:C6	2.48	0.47
35:BN:36:THR:HG23	35:BN:37:THR:O	2.15	0.47
22:BA:2186:G:C6	22:BA:2187:U:C2	3.03	0.47
22:BA:2280:G:C2	22:BA:2281:A:C8	3.03	0.47
22:DA:2415:G:C2	22:DA:2416:C:C2	3.03	0.47
39:BR:49:ILE:HG21	39:BR:53:PHE:H	1.80	0.47
21:AA:198:G:C6	21:AA:220:G:C2	3.03	0.47
24:BC:229:HIS:CD2	24:BC:246:PRO:HB3	2.49	0.47
24:BC:246:PRO:HG2	24:BC:247:TRP:CH2	2.46	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:BJ:21:THR:C	31:BJ:23:LYS:H	2.18	0.47
37:DP:19:PHE:O	37:DP:20:ARG:HB3	2.14	0.47
37:DP:87:ARG:NH2	37:DP:110:LYS:O	2.48	0.47
22:DA:1142:A:N9	22:DA:1144:A:N7	2.63	0.47
41:BT:39:THR:CB	41:BT:42:GLU:HB2	2.30	0.47
20:CU:35:GLU:O	20:CU:36:PHE:HD2	1.96	0.47
13:AN:46:LYS:C	13:AN:48:GLN:H	2.17	0.47
32:DK:92:GLU:O	32:DK:93:GLN:C	2.52	0.47
24:DC:147:PRO:CD	24:DC:184:GLU:HG3	2.38	0.47
21:AA:1002:G:C5	21:AA:1003:G:C8	3.03	0.47
53:CA:643:C:O2'	53:CA:644:U:H5'	2.15	0.47
22:DA:312:G:C2'	22:DA:313:G:H5'	2.45	0.47
53:CA:1239:A:N6	53:CA:1299:A:N6	2.62	0.47
12:CM:11:HIS:O	12:CM:12:LYS:HG2	2.15	0.47
53:CA:15:G:H5'	53:CA:1396:A:O2'	2.14	0.47
22:DA:2056:G:N2	22:DA:2057:G:C8	2.83	0.47
22:DA:672:C:O2'	22:DA:673:C:H5'	2.14	0.47
21:AA:872:A:C4	21:AA:874:G:N7	2.83	0.47
22:BA:1872:A:C2'	22:BA:1873:G:O4'	2.63	0.47
37:DP:28:LYS:HZ3	37:DP:82:SER:HB2	1.80	0.47
31:DJ:56:VAL:CG2	31:DJ:124:VAL:HG23	2.45	0.47
22:DA:1568:G:N2	24:DC:57:HIS:CE1	2.82	0.47
15:CP:44:SER:HB2	15:CP:46:LYS:HG3	1.97	0.47
22:DA:2667:C:H2'	22:DA:2668:G:H8	1.80	0.47
2:AC:138:GLN:C	2:AC:140:ALA:H	2.19	0.47
54:DB:4:C:H2'	54:DB:5:U:C6	2.49	0.47
2:CC:2:GLN:NE2	53:CA:1191:A:OP1	2.48	0.47
39:BR:3:ALA:HA	39:BR:40:MET:O	2.15	0.47
22:DA:1268:A:O2'	22:DA:1269:A:O4'	2.26	0.47
24:BC:173:LEU:O	24:BC:180:MET:HA	2.15	0.47
11:AL:23:LEU:C	11:AL:25:ALA:H	2.18	0.47
8:AI:8:THR:HG22	8:AI:9:GLY:N	2.29	0.47
1:AB:143:LEU:HA	1:AB:146:SER:OG	2.13	0.47
22:BA:2298:A:C2	22:BA:2321:U:N3	2.83	0.47
2:AC:21:TRP:CZ3	2:AC:23:ALA:HB3	2.50	0.47
22:BA:359:G:H3'	22:BA:360:U:H6	1.80	0.47
8:AI:56:MET:CE	8:AI:57:VAL:H	2.27	0.47
24:BC:259:ASN:O	24:BC:261:ARG:N	2.41	0.47
36:BO:88:LYS:O	36:BO:89:ASP:CB	2.62	0.47
2:AC:13:ILE:HD13	2:AC:13:ILE:N	2.30	0.47
22:BA:118:A:C8	22:BA:119:A:C8	3.02	0.47
31:BJ:37:ARG:HA	31:BJ:118:MET:CE	2.45	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:BJ:41:LYS:N	38:BQ:66:ALA:HB1	2.30	0.47
2:CC:178:ARG:O	2:CC:205:GLU:O	2.33	0.47
21:AA:1451:U:O5'	21:AA:1452:C:H5	1.98	0.47
22:DA:1510:G:N2	22:DA:1511:G:C4	2.82	0.47
21:AA:1113:C:H2'	21:AA:1114:C:H6	1.80	0.47
21:AA:593:U:H2'	21:AA:594:U:H6	1.80	0.47
14:AO:16:ARG:HD3	14:AO:20:ASP:OD2	2.15	0.47
22:BA:418:C:H2'	22:BA:419:U:O4'	2.13	0.47
21:AA:999:C:H2'	21:AA:1000:A:H8	1.80	0.47
21:AA:739:C:C4	21:AA:740:U:C5	3.03	0.47
24:BC:195:GLY:O	24:BC:196:ASN:HB3	2.15	0.47
38:DQ:9:ALA:C	38:DQ:11:ALA:N	2.68	0.47
53:CA:1442:G:H2'	53:CA:1443:C:C6	2.49	0.47
28:DG:154:GLU:O	28:DG:156:TYR:N	2.48	0.47
35:BN:83:LEU:HA	35:BN:83:LEU:HD12	1.53	0.47
22:DA:2620:C:O4'	25:DD:161:MET:HG3	2.14	0.47
6:CG:49:LEU:HG	6:CG:123:LEU:HB3	1.97	0.47
24:BC:61:TYR:HD2	24:BC:85:ASN:ND2	2.13	0.47
45:DX:37:PHE:O	45:DX:45:PHE:HA	2.13	0.47
53:CA:178:C:C4	53:CA:179:A:N7	2.83	0.47
22:DA:2193:G:H2'	22:DA:2194:U:C6	2.50	0.47
26:BE:154:ASP:C	26:BE:154:ASP:OD2	2.52	0.47
21:AA:854:U:H3'	21:AA:871:U:O4	2.14	0.47
22:BA:773:U:O2'	24:BC:47:ARG:HD3	2.15	0.47
2:CC:41:TYR:HE1	2:CC:89:VAL:HG12	1.78	0.47
36:BO:94:ARG:HG3	36:BO:94:ARG:H	1.41	0.47
25:DD:187:LEU:O	25:DD:188:LEU:HD23	2.15	0.47
34:DM:13:HIS:O	34:DM:14:LYS:HB2	2.15	0.47
53:CA:1231:G:C5	53:CA:1232:U:C5	3.03	0.47
22:DA:1627:G:N2	22:DA:1628:G:C8	2.83	0.47
22:BA:2354:C:H4'	44:BW:31:LEU:HD22	1.96	0.47
5:AF:38:ARG:HB3	5:AF:63:ASN:HB2	1.96	0.47
22:DA:1915:U:C2'	22:DA:1916:A:H8	2.18	0.47
22:DA:995:C:H1'	38:DQ:60:TRP:HZ2	1.80	0.47
6:CG:59:GLU:C	6:CG:61:PHE:H	2.16	0.47
25:BD:34:VAL:HG23	25:BD:34:VAL:O	2.15	0.47
22:DA:784:G:O2'	22:DA:785:G:H5''	2.14	0.47
22:DA:227:A:O2'	22:DA:228:C:O5'	2.32	0.47
34:DM:17:ASN:HB3	34:DM:38:ARG:HH22	1.79	0.47
22:DA:2747:G:O6	22:DA:2755:C:H5''	2.15	0.47
8:AI:23:GLY:N	8:AI:60:LEU:HA	2.14	0.47
31:BJ:64:VAL:HG13	31:BJ:65:THR:O	2.15	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:83:A:C6	22:DA:101:A:OP1	2.68	0.47
46:BY:56:LEU:O	46:BY:57:LEU:CB	2.48	0.47
18:CS:36:ARG:HG3	53:CA:1320:C:N4	2.29	0.47
48:D0:53:VAL:O	48:D0:54:ILE:O	2.32	0.47
22:DA:2815:C:H2'	22:DA:2816:G:H8	1.79	0.47
22:DA:17:G:H2'	22:DA:18:U:C6	2.49	0.47
22:DA:1667:G:P	32:DK:6:THR:HA	2.55	0.47
32:DK:7:MET:HG3	32:DK:17:ARG:HH12	1.80	0.47
1:CB:103:TRP:HA	1:CB:106:VAL:H	1.80	0.47
21:AA:1432:G:O2'	21:AA:1433:A:OP2	2.24	0.47
5:CF:12:PRO:CG	5:CF:54:LEU:HD11	2.45	0.47
38:DQ:10:ARG:HB2	38:DQ:10:ARG:NH1	2.29	0.47
22:DA:2360:G:H5''	22:DA:2361:G:OP2	2.15	0.47
7:CH:3:GLN:CA	53:CA:587:G:H4'	2.45	0.47
22:BA:1812:U:H2'	22:BA:1813:G:C8	2.50	0.47
51:D3:18:LYS:CG	51:D3:19:GLY:N	2.78	0.47
12:CM:102:LYS:CA	53:CA:1226:C:H5	2.27	0.47
22:DA:532:A:N1	22:DA:2020:A:O2'	2.38	0.47
21:AA:517:G:O2'	21:AA:530:G:H4'	2.15	0.47
29:BH:9:VAL:HG12	29:BH:12:LEU:HG	1.95	0.47
1:CB:133:ALA:HA	1:CB:137:THR:CG2	2.45	0.47
21:AA:662:U:H2'	21:AA:663:A:H8	1.77	0.47
53:CA:811:C:C4'	53:CA:900:A:H61	2.28	0.47
22:BA:514:A:H1'	22:BA:581:C:O2'	2.15	0.47
21:AA:596:A:C6	21:AA:645:G:C2	3.03	0.47
22:BA:2714:G:H2'	22:BA:2715:C:C6	2.50	0.47
37:DP:45:VAL:O	37:DP:60:VAL:HA	2.14	0.47
22:BA:1759:A:C8	22:BA:2696:U:H1'	2.50	0.47
5:CF:88:MET:HG2	5:CF:90:MET:SD	2.55	0.47
46:BY:40:SER:C	46:BY:42:LEU:H	2.17	0.47
29:DH:75:LEU:O	29:DH:76:GLU:HB2	2.14	0.47
39:DR:19:THR:HG22	39:DR:20:VAL:N	2.29	0.47
22:BA:975:A:H1'	22:BA:990:A:C2	2.50	0.47
50:B2:42:LEU:H	50:B2:42:LEU:HD22	1.80	0.47
53:CA:769:G:O2'	53:CA:770:C:H5'	2.14	0.47
11:CL:72:ASN:ND2	11:CL:104:SER:H	2.13	0.47
33:BL:92:LEU:HA	33:BL:125:LEU:HD21	1.95	0.47
36:DO:49:VAL:HG11	36:DO:81:ARG:HB3	1.97	0.47
22:DA:678:C:H2'	22:DA:679:C:C6	2.50	0.47
54:DB:94:A:OP1	43:DV:19:ARG:CD	2.63	0.47
22:DA:132:G:N2	22:DA:148:U:C2	2.83	0.47
46:BY:61:ALA:C	46:BY:63:ALA:H	2.19	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:CT:11:ILE:C	19:CT:13:SER:H	2.18	0.47
40:BS:3:THR:HB	40:BS:62:ASP:OD2	2.15	0.47
21:AA:316:C:C2	21:AA:317:U:C5	3.02	0.47
22:DA:2674:G:H2'	22:DA:2675:A:C8	2.50	0.47
22:BA:598:U:H2'	22:BA:599:A:C8	2.50	0.47
22:DA:1910:G:C2	22:DA:1921:G:C2	3.02	0.47
22:DA:2029:G:C2	22:DA:2033:A:N7	2.83	0.47
8:CI:112:ARG:HG3	8:CI:112:ARG:O	2.14	0.47
22:DA:1385:A:C2	22:DA:1386:C:N3	2.82	0.47
19:AT:26:MET:CE	19:AT:56:ILE:HD11	2.45	0.47
21:AA:204:G:C1'	21:AA:465:A:C2	2.98	0.47
37:DP:16:VAL:HG13	37:DP:19:PHE:HE2	1.80	0.47
21:AA:182:A:H1'	21:AA:183:C:H6	1.79	0.47
22:DA:2093:G:O2'	22:DA:2094:A:C5'	2.63	0.47
22:DA:1420:A:C4	22:DA:2211:A:N7	2.83	0.47
22:BA:1392:A:H62	41:BT:19:LYS:HD2	1.80	0.47
21:AA:71:A:C5	21:AA:100:G:C5	3.03	0.47
22:DA:1079:C:C4	22:DA:1088:A:C2	3.03	0.47
27:DF:135:ILE:O	27:DF:137:PHE:N	2.45	0.47
21:AA:62:U:H5''	21:AA:385:C:O2	2.15	0.47
1:CB:80:LYS:O	1:CB:81:ASP:C	2.54	0.47
53:CA:80:A:C6	53:CA:81:A:O2'	2.67	0.47
4:CE:110:MET:HG2	4:CE:139:THR:HG21	1.97	0.47
12:CM:12:LYS:CE	12:CM:12:LYS:HA	2.42	0.47
22:BA:727:A:H2'	22:BA:728:G:C8	2.50	0.47
22:DA:2234:G:C5	22:DA:2235:G:N7	2.83	0.47
1:AB:66:ILE:CG1	1:AB:220:VAL:HG11	2.45	0.47
1:CB:103:TRP:CA	1:CB:106:VAL:HB	2.35	0.47
30:DI:52:LEU:HD11	30:DI:78:LEU:CD2	2.45	0.47
51:B3:31:ILE:O	51:B3:35:LYS:HE3	2.15	0.47
13:AN:20:PHE:HA	13:AN:24:ALA:CB	2.45	0.47
41:DT:62:VAL:HG12	41:DT:63:VAL:H	1.78	0.47
21:AA:1433:A:H2'	21:AA:1434:A:C8	2.50	0.47
53:CA:1004:A:H2'	53:CA:1005:A:H8	1.80	0.47
53:CA:702:A:H5'	53:CA:703:G:N7	2.29	0.47
22:DA:1867:G:C2	22:DA:1868:C:C2	3.03	0.47
28:DG:94:ARG:NH1	28:DG:105:SER:HB2	2.30	0.47
32:BK:63:VAL:HG11	32:BK:103:VAL:HG12	1.96	0.47
53:CA:1084:G:OP1	53:CA:1086:U:C6	2.68	0.47
22:BA:2500:U:O2	22:BA:2504:U:C4	2.67	0.47
21:AA:791:G:C5	21:AA:792:A:N7	2.83	0.47
31:BJ:124:VAL:HG23	31:BJ:125:TYR:N	2.29	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AB:209:VAL:O	1:AB:211:LEU:N	2.48	0.47
1:AB:49:PHE:HB2	1:AB:53:LEU:CD2	2.45	0.47
22:BA:2021:C:OP1	48:B0:8:THR:HG21	2.15	0.47
22:DA:2808:G:O2'	22:DA:2809:A:C8	2.67	0.47
22:BA:1797:G:O3'	24:BC:255:LYS:O	2.33	0.47
22:BA:2322:A:N6	22:BA:2333:A:H62	2.13	0.47
34:BM:101:VAL:HG13	34:BM:101:VAL:O	2.15	0.47
21:AA:702:A:C4	22:BA:1847:A:C2	3.03	0.47
40:DS:55:ILE:O	40:DS:59:GLU:HG2	2.15	0.47
22:DA:1813:G:C2	24:DC:49:THR:HB	2.49	0.47
42:BU:3:LYS:HD3	42:BU:82:VAL:HB	1.96	0.47
22:DA:90:U:C4	22:DA:91:A:C6	3.03	0.47
27:BF:7:TYR:O	27:BF:12:VAL:HG12	2.15	0.47
22:DA:1008:A:OP1	22:DA:1008:A:H8	1.97	0.47
22:BA:1668:A:O2'	22:BA:1674:G:N7	2.38	0.47
22:DA:1171:G:C2	22:DA:1179:G:N3	2.83	0.47
21:AA:1219:A:H2'	21:AA:1220:G:C8	2.50	0.47
22:DA:1343:G:C5	22:DA:1597:A:N6	2.83	0.47
22:DA:2898:U:H2'	22:DA:2899:A:H8	1.76	0.47
22:BA:1437:C:H2'	22:BA:1438:U:H6	1.80	0.47
38:DQ:26:ALA:HB1	38:DQ:30:VAL:CG2	2.45	0.47
53:CA:892:A:H2'	53:CA:893:C:H6	1.80	0.47
6:CG:41:ILE:HD13	6:CG:115:MET:HB3	1.97	0.47
22:DA:416:U:C4	22:DA:417:C:C4	3.03	0.47
34:DM:49:ALA:HB2	34:DM:123:LYS:HB2	1.95	0.47
53:CA:1507:A:H8	53:CA:1507:A:H5''	1.80	0.47
53:CA:54:C:N4	53:CA:352:C:H2'	2.29	0.47
42:DU:64:ILE:O	42:DU:64:ILE:HG23	2.14	0.47
2:AC:81:GLU:O	2:AC:84:GLU:HB3	2.14	0.47
8:CI:37:TYR:HD1	53:CA:1248:A:O2'	1.98	0.47
43:BV:49:ASN:O	43:BV:52:ALA:HB3	2.15	0.47
24:DC:110:LYS:HB3	24:DC:113:ASP:OD1	2.15	0.47
53:CA:57:G:H2'	53:CA:58:C:C6	2.50	0.47
22:BA:1956:U:O2'	22:BA:1957:C:H5'	2.15	0.47
21:AA:1416:G:C2	21:AA:1485:U:O2	2.68	0.47
22:BA:80:G:C2	22:BA:107:G:C2	3.03	0.47
33:DL:63:LYS:C	33:DL:65:GLY:H	2.19	0.46
44:BW:22:VAL:O	44:BW:25:PHE:HD2	1.98	0.46
22:BA:923:G:N3	44:BW:23:LYS:NZ	2.64	0.46
22:BA:1060:U:H5''	22:BA:1061:U:OP1	2.15	0.46
22:BA:1073:A:C3'	22:BA:1074:G:C5'	2.74	0.46
30:BI:79:LEU:HD11	30:BI:132:ALA:HA	1.96	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:2052:A:OP1	25:DD:146:ILE:HG12	2.15	0.46
3:CD:29:THR:HG22	3:CD:30:LYS:HD3	1.97	0.46
2:CC:191:THR:HB	2:CC:192:TYR:CD1	2.50	0.46
16:CQ:17:GLU:O	16:CQ:18:LYS:HB2	2.15	0.46
22:DA:206:U:O2'	22:DA:207:A:H8	1.94	0.46
22:DA:1059:G:C6	22:DA:1080:A:N1	2.83	0.46
23:BB:89:U:H3'	23:BB:90:C:C5'	2.45	0.46
22:DA:475:C:H2'	22:DA:476:G:N7	2.30	0.46
22:DA:2147:A:N3	22:DA:2147:A:H5''	2.30	0.46
53:CA:1221:G:C2	53:CA:1222:G:H1'	2.50	0.46
22:BA:783:A:C8	22:BA:784:G:H4'	2.49	0.46
53:CA:1268:G:H21	53:CA:1327:C:C1'	2.19	0.46
35:BN:116:VAL:O	35:BN:117:ASP:CB	2.63	0.46
48:D0:38:LEU:N	48:D0:41:HIS:CE1	2.83	0.46
22:DA:563:A:C4	22:DA:2018:G:C2	3.03	0.46
28:BG:25:ILE:HD11	28:BG:71:LEU:HD12	1.97	0.46
28:BG:72:ASN:HD22	28:BG:72:ASN:C	2.17	0.46
2:AC:164:THR:O	2:AC:165:GLU:C	2.54	0.46
47:DZ:28:LEU:HD23	47:DZ:28:LEU:N	2.30	0.46
22:DA:2654:A:N6	22:DA:2667:C:H41	2.13	0.46
43:DV:77:VAL:HG23	43:DV:89:ILE:CG2	2.44	0.46
10:AK:109:ILE:HG22	10:AK:110:THR:N	2.30	0.46
22:DA:1612:C:C2'	22:DA:1613:G:O5'	2.63	0.46
22:DA:374:A:N6	22:DA:401:A:C8	2.83	0.46
13:CN:5:MET:O	13:CN:9:GLU:HG3	2.15	0.46
22:BA:2820:A:OP1	35:BN:2:ARG:NH2	2.48	0.46
6:CG:101:ARG:NH2	53:CA:1375:A:O2'	2.47	0.46
11:AL:7:VAL:HG13	16:AQ:30:HIS:HD2	1.79	0.46
22:DA:139:U:H3	41:DT:1:MET:HA	1.80	0.46
22:DA:2053:G:H5'	25:DD:150:GLN:H	1.80	0.46
43:DV:7:GLU:O	43:DV:40:ILE:HG22	2.16	0.46
6:AG:53:SER:C	6:AG:55:LYS:N	2.69	0.46
2:AC:10:ARG:HH21	2:AC:181:ILE:HG13	1.80	0.46
26:DE:45:ALA:O	26:DE:46:GLN:HB2	2.15	0.46
14:CO:69:LEU:HD11	14:CO:77:TYR:HA	1.96	0.46
9:CJ:101:SER:O	9:CJ:102:LEU:HB2	2.14	0.46
25:BD:70:LYS:O	25:BD:71:ALA:CB	2.63	0.46
12:CM:18:LEU:N	12:CM:18:LEU:HD12	2.30	0.46
1:AB:59:ILE:C	1:AB:59:ILE:HD12	2.35	0.46
13:AN:56:PRO:HA	13:AN:59:GLN:NE2	2.30	0.46
3:CD:70:GLN:HE22	3:CD:133:SER:HB3	1.80	0.46
22:DA:1690:A:H2'	22:DA:1691:C:O4'	2.15	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
43:DV:3:THR:HA	43:DV:62:THR:O	2.15	0.46
22:DA:2351:G:O6	51:D3:42:HIS:HE1	1.98	0.46
22:DA:419:U:H5''	57:DA:3234:HOH:O	2.13	0.46
22:BA:2305:U:H2'	22:BA:2306:C:O4'	2.14	0.46
23:BB:98:G:H1	43:BV:14:LYS:HB3	1.80	0.46
2:CC:21:TRP:CZ3	13:CN:93:PRO:HG2	2.51	0.46
22:BA:1848:A:H2'	22:BA:1849:G:C8	2.50	0.46
15:AP:6:LEU:HG	15:AP:17:TYR:HB3	1.96	0.46
22:BA:1491:G:O2'	22:BA:1492:G:H5'	2.16	0.46
33:BL:7:SER:HB2	33:BL:8:PRO:HD2	1.97	0.46
22:BA:792:A:C4'	22:BA:793:A:H5'	2.45	0.46
42:BU:34:ILE:HG12	42:BU:63:ALA:HA	1.96	0.46
25:BD:2:ILE:CD1	25:BD:96:ILE:HD13	2.45	0.46
15:CP:32:PHE:CD1	15:CP:32:PHE:C	2.89	0.46
33:BL:91:ASP:CB	33:BL:94:THR:HB	2.45	0.46
39:BR:48:LYS:HD2	39:BR:48:LYS:N	2.30	0.46
20:CU:16:ARG:NE	20:CU:16:ARG:HA	2.26	0.46
22:BA:923:G:H21	44:BW:23:LYS:HZ3	1.63	0.46
3:CD:8:LEU:HD13	3:CD:8:LEU:HA	1.83	0.46
31:DJ:44:TYR:HB2	38:DQ:63:ARG:NH2	2.29	0.46
53:CA:1183:U:H6	53:CA:1183:U:H2'	1.32	0.46
21:AA:407:U:H2'	21:AA:408:A:H8	1.80	0.46
12:CM:95:PRO:HG3	12:CM:99:GLN:CD	2.36	0.46
22:DA:1420:A:C8	22:DA:2211:A:N6	2.82	0.46
22:DA:2216:G:O2'	22:DA:2217:G:C8	2.54	0.46
41:BT:39:THR:HB	41:BT:42:GLU:H	1.78	0.46
21:AA:100:G:O6	21:AA:101:A:C6	2.69	0.46
22:DA:1062:G:C4	22:DA:1063:G:N7	2.83	0.46
22:DA:1062:G:H8	22:DA:1070:A:OP2	1.98	0.46
22:DA:2756:U:H1'	22:DA:2757:A:H5''	1.97	0.46
22:DA:1204:A:O4'	22:DA:1206:G:N7	2.48	0.46
42:DU:91:LYS:O	42:DU:92:VAL:HG22	2.14	0.46
53:CA:962:C:H2'	53:CA:963:G:H8	1.79	0.46
4:CE:104:ILE:HA	4:CE:122:VAL:HB	1.96	0.46
53:CA:282:A:H2'	53:CA:283:U:C6	2.50	0.46
22:DA:804:A:H5''	22:DA:805:G:OP1	2.15	0.46
12:CM:16:ILE:HG23	53:CA:1302:C:H5''	1.97	0.46
1:AB:32:GLY:HA3	1:AB:39:ILE:CB	2.44	0.46
8:CI:17:ARG:HB2	8:CI:65:THR:CB	2.40	0.46
22:DA:2849:U:OP1	37:DP:92:ARG:NH1	2.48	0.46
21:AA:511:C:O2'	21:AA:512:U:C5'	2.58	0.46
1:CB:103:TRP:HB2	1:CB:106:VAL:HB	1.96	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:BA:197:A:H62	22:BA:2430:A:C2'	2.28	0.46
22:BA:1735:A:H2'	22:BA:1736:U:H6	1.77	0.46
53:CA:1102:A:H5''	53:CA:1102:A:C8	2.50	0.46
54:DB:28:C:OP1	36:DO:31:THR:HG21	2.16	0.46
22:DA:240:C:H3'	22:DA:241:A:H5''	1.96	0.46
22:DA:459:U:H2'	22:DA:460:A:H8	1.79	0.46
30:BI:126:ARG:CA	30:BI:129:GLU:HB2	2.43	0.46
19:CT:4:LYS:HE3	19:CT:5:SER:H	1.80	0.46
1:AB:174:GLU:O	1:AB:178:LEU:HB2	2.14	0.46
22:BA:580:U:H2'	22:BA:581:C:H6	1.80	0.46
36:BO:67:ASN:O	36:BO:67:ASN:CG	2.53	0.46
26:BE:48:THR:C	26:BE:50:ALA:N	2.68	0.46
25:DD:148:GLN:HG2	25:DD:149:ASN:H	1.78	0.46
12:CM:68:LEU:O	12:CM:72:ILE:HG22	2.14	0.46
21:AA:1528:U:H4'	21:AA:1529:G:H5'	1.96	0.46
22:DA:2707:U:H2'	22:DA:2708:G:H8	1.80	0.46
17:CR:21:ASP:HB3	17:CR:23:LYS:CG	2.46	0.46
53:CA:1417:G:N2	53:CA:1484:C:C4	2.83	0.46
53:CA:672:U:H2'	53:CA:673:A:H8	1.79	0.46
22:BA:2572:A:N7	25:BD:150:GLN:HB3	2.30	0.46
25:BD:150:GLN:HG3	25:BD:150:GLN:O	2.14	0.46
22:DA:2734:A:H2'	22:DA:2735:G:H5'	1.97	0.46
53:CA:580:C:H2'	53:CA:581:G:O4'	2.15	0.46
36:DO:51:ALA:HB2	36:DO:81:ARG:HD2	1.97	0.46
53:CA:320:A:O2'	53:CA:1435:G:H1'	2.15	0.46
9:AJ:33:GLY:O	9:AJ:34:ALA:HB2	2.16	0.46
6:AG:30:MET:HE3	6:AG:33:GLY:HA2	1.97	0.46
22:BA:566:U:O2'	22:BA:809:G:OP2	2.26	0.46
21:AA:460:A:O3'	21:AA:462:G:OP2	2.32	0.46
50:D2:23:ALA:O	50:D2:24:THR:HB	2.13	0.46
48:B0:33:SER:OG	48:B0:35:GLU:HB2	2.14	0.46
25:DD:99:GLU:HG3	25:DD:100:LEU:N	2.30	0.46
8:CI:111:GLU:CD	53:CA:1186:G:H4'	2.35	0.46
53:CA:1105:A:H2'	53:CA:1106:G:H8	1.80	0.46
2:CC:168:ARG:NH1	53:CA:1106:G:O2'	2.47	0.46
22:BA:1639:C:O2'	22:BA:2699:C:H4'	2.14	0.46
34:BM:78:LEU:HD23	34:BM:78:LEU:C	2.35	0.46
32:BK:42:THR:HG23	32:BK:42:THR:O	2.15	0.46
24:DC:196:ASN:O	24:DC:197:ALA:HB3	2.14	0.46
22:BA:918:A:H4'	23:BB:97:C:O2	2.14	0.46
30:BI:18:ASN:ND2	30:BI:38:CYS:HB3	2.29	0.46
21:AA:22:G:C5	21:AA:23:C:C5	3.03	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:BA:2468:A:O2'	22:BA:2469:A:P	2.73	0.46
22:BA:1153:C:H2'	22:BA:1154:G:O4'	2.15	0.46
22:DA:2262:U:H1'	22:DA:2328:A:H1'	1.98	0.46
22:BA:2352:A:C2	44:BW:30:VAL:CG1	2.95	0.46
22:BA:2365:G:C2'	22:BA:2366:A:C8	2.99	0.46
44:BW:18:LYS:HE3	44:BW:19:ARG:HG3	1.96	0.46
22:DA:1385:A:O2'	22:DA:1386:C:C6	2.64	0.46
31:DJ:45:THR:C	31:DJ:47:HIS:H	2.18	0.46
10:AK:22:ILE:HD11	10:AK:85:VAL:HG22	1.97	0.46
21:AA:224:U:O2'	21:AA:225:C:H5'	2.15	0.46
41:BT:23:ALA:C	41:BT:25:GLU:H	2.18	0.46
22:BA:1600:C:OP1	41:BT:81:LYS:NZ	2.48	0.46
22:DA:2543:G:H2'	22:DA:2544:G:C8	2.49	0.46
27:DF:111:ARG:H	27:DF:111:ARG:NE	2.14	0.46
32:DK:87:LEU:HD12	32:DK:92:GLU:CA	2.44	0.46
22:DA:503:A:N3	22:DA:505:A:H2'	2.31	0.46
53:CA:642:A:O2'	53:CA:643:C:H5'	2.15	0.46
22:DA:1166:G:C2	22:DA:1184:U:O2	2.69	0.46
46:BY:8:GLU:O	46:BY:12:GLU:HB2	2.15	0.46
53:CA:1319:A:N6	53:CA:1323:G:C2	2.84	0.46
4:CE:76:ASN:HA	4:CE:76:ASN:HD22	1.59	0.46
1:AB:40:ILE:HG21	1:AB:201:GLY:HA2	1.97	0.46
1:AB:32:GLY:HA3	1:AB:39:ILE:CG1	2.42	0.46
3:AD:169:TRP:CE3	3:AD:185:PRO:HB3	2.50	0.46
22:DA:193:U:O3'	22:DA:803:U:H4'	2.15	0.46
35:DN:97:ILE:HD11	35:DN:99:LYS:NZ	2.28	0.46
21:AA:345:C:C3'	37:BP:33:GLU:OE1	2.63	0.46
6:CG:9:ARG:HH22	53:CA:1346:A:N6	2.14	0.46
22:DA:1491:G:C2	22:DA:1492:G:C8	3.03	0.46
26:DE:109:LEU:O	26:DE:112:LEU:HB3	2.16	0.46
22:BA:1911:U:O2'	22:BA:1912:A:H5'	2.16	0.46
30:BI:105:LEU:HA	30:BI:108:ILE:HD12	1.97	0.46
3:AD:116:LEU:HB3	3:AD:122:ILE:CD1	2.44	0.46
53:CA:1446:A:H2'	53:CA:1447:A:H5'	1.97	0.46
34:DM:72:PRO:O	34:DM:73:ILE:CB	2.60	0.46
53:CA:951:G:H2'	53:CA:952:U:C6	2.50	0.46
13:CN:8:ARG:HD2	13:CN:12:ARG:NH2	2.30	0.46
24:BC:263:ASP:O	24:BC:264:LYS:C	2.53	0.46
1:CB:132:GLU:C	1:CB:134:LEU:H	2.19	0.46
2:AC:39:ARG:CZ	2:AC:54:ILE:HD11	2.45	0.46
22:BA:1416:G:O2'	22:BA:1417:C:C5'	2.64	0.46
22:BA:2555:U:C5	22:BA:2556:C:N1	2.84	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
34:BM:66:ARG:HD3	34:BM:104:GLU:OE1	2.16	0.46
1:CB:20:ARG:HG3	53:CA:831:A:OP1	2.15	0.46
22:DA:568:U:O2	22:DA:570:G:H8	1.98	0.46
38:DQ:111:LYS:HE3	39:DR:48:LYS:HD3	1.98	0.46
21:AA:597:G:C2	21:AA:644:U:C2	3.04	0.46
22:DA:1633:G:C5	22:DA:1635:A:C5	3.04	0.46
53:CA:85:U:O2	53:CA:85:U:O4'	2.34	0.46
12:AM:3:ILE:O	12:AM:5:GLY:N	2.48	0.46
12:AM:2:ARG:HA	12:AM:7:ASN:O	2.15	0.46
27:BF:7:TYR:O	27:BF:11:VAL:HB	2.15	0.46
29:BH:100:ALA:O	29:BH:102:ALA:N	2.49	0.46
26:DE:111:GLU:HB2	26:DE:114:ARG:HH21	1.80	0.46
36:BO:105:ALA:O	36:BO:107:ALA:N	2.48	0.46
45:BX:52:ALA:HA	45:BX:55:MET:HB2	1.97	0.46
22:BA:1157:G:O2'	22:BA:1158:C:H5'	2.15	0.46
21:AA:1533:C:H3'	21:AA:1534:A:C5'	2.45	0.46
1:CB:142:LYS:HA	1:CB:145:ASN:OD1	2.15	0.46
53:CA:344:A:H5''	53:CA:345:C:H5	1.80	0.46
53:CA:345:C:H5'	53:CA:346:G:C5	2.50	0.46
6:CG:115:MET:HB2	53:CA:1240:U:OP1	2.14	0.46
22:BA:2037:A:H2'	22:BA:2038:G:H8	1.80	0.46
22:DA:1653:G:O6	35:DN:10:LEU:O	2.34	0.46
53:CA:1399:C:O2	53:CA:1401:G:C5	2.68	0.46
22:DA:377:G:C6	22:DA:378:C:C4	3.03	0.46
7:AH:66:GLN:HB3	7:AH:67:GLY:H	1.54	0.46
22:DA:942:G:H4'	22:DA:1190:G:H5'	1.97	0.46
26:DE:76:PRO:HA	26:DE:82:GLY:O	2.16	0.46
3:CD:18:LEU:HB2	3:CD:20:LEU:HG	1.96	0.46
11:AL:78:VAL:O	11:AL:101:LEU:HB3	2.15	0.46
42:DU:80:ASP:OD1	42:DU:80:ASP:N	2.47	0.46
22:DA:597:G:H2'	22:DA:598:U:O4'	2.15	0.46
43:DV:43:ASP:HB3	43:DV:46:LYS:HB2	1.97	0.46
25:BD:106:LYS:N	25:BD:106:LYS:HD2	2.29	0.46
11:AL:49:ARG:HG2	11:AL:89:LEU:HD21	1.98	0.46
20:CU:3:ILE:O	20:CU:4:LYS:O	2.33	0.46
39:DR:49:ILE:CG2	39:DR:54:VAL:H	2.28	0.46
22:DA:621:A:O2'	22:DA:622:G:O5'	2.34	0.46
16:AQ:11:VAL:HB	16:AQ:55:GLY:H	1.80	0.46
19:AT:27:MET:SD	19:AT:66:ILE:HD13	2.55	0.46
35:DN:70:THR:O	35:DN:70:THR:HG22	2.16	0.46
10:AK:124:LYS:NZ	20:AU:33:ARG:NH2	2.62	0.46
22:DA:2304:G:H21	27:DF:152:ASP:HB3	1.80	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:1130:U:HO2'	22:DA:1131:G:H8	1.54	0.46
22:DA:476:G:O2'	22:DA:477:A:H3'	2.16	0.46
40:DS:8:ARG:HB3	40:DS:102:HIS:CE1	2.51	0.46
4:AE:93:VAL:HG11	4:AE:139:THR:HG22	1.98	0.46
22:DA:2683:C:H2'	22:DA:2684:U:H6	1.80	0.46
22:DA:327:G:H2'	22:DA:328:U:O4'	2.15	0.46
42:DU:84:PHE:HA	42:DU:92:VAL:O	2.15	0.46
42:DU:86:PHE:CG	42:DU:87:GLU:N	2.83	0.46
22:DA:83:A:OP1	42:DU:91:LYS:HD2	2.15	0.46
18:CS:4:LEU:HB3	18:CS:5:LYS:H	1.52	0.46
22:DA:396:G:O2'	22:DA:397:U:H5'	2.16	0.46
22:BA:782:A:H4'	22:BA:783:A:O5'	2.15	0.46
1:AB:40:ILE:HG21	1:AB:201:GLY:CA	2.45	0.46
21:AA:1322:C:O2'	21:AA:1323:G:P	2.73	0.46
21:AA:1162:C:H2'	21:AA:1163:A:O4'	2.15	0.46
11:CL:109:ARG:O	11:CL:110:LYS:HD2	2.16	0.46
22:DA:959:A:H4'	22:DA:959:A:OP2	2.15	0.46
22:BA:1864:U:C2'	22:BA:1865:U:H5'	2.46	0.46
37:DP:28:LYS:HB3	37:DP:39:LEU:HD23	1.98	0.46
47:BZ:46:MET:O	47:BZ:50:VAL:HG22	2.15	0.46
22:DA:633:A:H5''	33:DL:70:LYS:HD3	1.98	0.46
22:BA:478:A:N6	22:BA:502:A:H62	2.14	0.46
22:DA:2714:G:O2'	22:DA:2715:C:C5'	2.60	0.46
53:CA:1446:A:C2'	53:CA:1447:A:H5''	2.46	0.46
22:DA:2753:A:O2'	22:DA:2754:U:H5'	2.15	0.46
29:BH:46:PHE:O	29:BH:50:ARG:NH2	2.42	0.46
22:DA:243:U:O2'	22:DA:244:A:H8	1.98	0.46
2:CC:63:ILE:O	2:CC:63:ILE:HG23	2.15	0.46
22:DA:2845:U:H2'	22:DA:2846:G:O4'	2.15	0.46
2:CC:15:LYS:HG3	2:CC:16:PRO:HD2	1.97	0.46
1:AB:13:VAL:HG22	1:AB:207:ARG:HH22	1.77	0.46
32:BK:78:ARG:NH1	37:BP:70:GLU:OE2	2.48	0.46
5:CF:59:TYR:HE2	17:CR:66:LEU:HD21	1.80	0.46
21:AA:518:C:H4'	21:AA:519:C:H5''	1.97	0.46
24:BC:159:THR:HG1	24:BC:194:VAL:HG11	1.81	0.46
22:DA:874:G:C2	22:DA:904:G:C2	3.03	0.46
33:BL:21:ARG:HA	33:BL:21:ARG:HD3	1.32	0.46
53:CA:810:C:C2'	53:CA:811:C:H5'	2.45	0.46
22:DA:1631:G:H1'	22:DA:1635:A:H61	1.80	0.46
26:DE:53:THR:OG1	26:DE:54:GLY:N	2.48	0.46
4:CE:38:VAL:HG12	4:CE:39:GLY:H	1.80	0.46
36:BO:88:LYS:HE2	36:BO:116:GLN:NE2	2.31	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
52:D4:9:LYS:HD3	52:D4:9:LYS:C	2.36	0.46
12:AM:13:HIS:CE1	12:AM:41:ASP:HB2	2.51	0.46
36:BO:7:ARG:HG2	36:BO:7:ARG:NH1	2.28	0.46
21:AA:1233:G:H2'	21:AA:1234:C:H6	1.78	0.46
12:AM:28:ARG:NH2	12:AM:62:PHE:HB2	2.30	0.46
17:AR:42:ARG:HG3	17:AR:43:ILE:HG12	1.95	0.46
22:DA:2624:G:H1'	48:D0:18:HIS:CE1	2.50	0.46
1:AB:63:LYS:HD3	1:AB:63:LYS:C	2.36	0.46
22:BA:2079:U:O2'	45:BX:22:ASN:ND2	2.47	0.46
22:DA:1594:U:H2'	22:DA:1595:C:O4'	2.15	0.46
24:DC:33:LEU:O	24:DC:34:GLU:HB3	2.14	0.46
22:BA:449:A:H4'	38:BQ:2:ARG:NH1	2.31	0.46
18:AS:79:TYR:O	18:AS:80:ARG:HB3	2.16	0.46
53:CA:688:G:C4	53:CA:700:G:C2	3.03	0.46
22:BA:985:C:H6	22:BA:985:C:O5'	1.99	0.46
3:CD:127:ARG:HG2	3:CD:127:ARG:HH11	1.80	0.46
22:DA:1582:C:H2'	22:DA:1585:C:H42	1.80	0.46
22:BA:1419:A:C5	22:BA:1421:G:C4	3.04	0.46
22:BA:348:A:H2'	22:BA:349:U:O4'	2.16	0.46
22:DA:2285:C:OP2	49:D1:5:ARG:HD3	2.15	0.46
22:DA:2392:A:OP1	51:D3:30:HIS:ND1	2.48	0.46
22:DA:2394:C:OP1	33:DL:63:LYS:HG2	2.16	0.46
40:BS:73:LYS:CE	40:BS:73:LYS:HA	2.39	0.46
38:BQ:75:TYR:CE2	38:BQ:79:ILE:HG13	2.51	0.46
44:BW:37:VAL:CG2	44:BW:55:ASP:O	2.63	0.46
22:BA:1073:A:H8	22:BA:1073:A:P	2.39	0.46
28:BG:96:ALA:O	28:BG:97:VAL:HB	2.16	0.46
53:CA:372:C:H4'	53:CA:373:A:H5'	1.97	0.46
21:AA:131:A:O2'	21:AA:132:C:O4'	2.33	0.46
13:AN:78:LEU:HB2	13:AN:83:VAL:HG23	1.97	0.46
22:DA:740:C:O2'	22:DA:741:U:C5'	2.62	0.46
8:CI:40:ARG:HG3	8:CI:44:ARG:NH1	2.31	0.46
8:CI:58:GLU:HG3	8:CI:59:LYS:N	2.26	0.46
22:BA:1179:G:C5	22:BA:1180:U:C1'	2.88	0.46
22:DA:2658:C:H5''	28:DG:157:LYS:CD	2.45	0.46
22:DA:2658:C:H5''	28:DG:157:LYS:HD3	1.98	0.46
37:DP:4:ILE:O	37:DP:4:ILE:HG22	2.14	0.46
41:DT:30:ILE:O	41:DT:85:VAL:HG23	2.16	0.46
22:DA:300:A:C5	22:DA:334:C:H4'	2.51	0.46
42:DU:73:ASN:CB	42:DU:95:PHE:HE2	2.28	0.46
42:DU:81:ARG:HB2	42:DU:96:LYS:HD2	1.96	0.46
18:CS:35:ARG:NH2	18:CS:53:GLY:H	2.13	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:DD:185:ASN:O	25:DD:186:LEU:HD12	2.16	0.46
53:CA:1148:U:H2'	53:CA:1149:C:O4'	2.15	0.46
50:B2:24:THR:O	50:B2:25:LYS:C	2.54	0.46
21:AA:46:G:C6	21:AA:366:A:C2	3.03	0.46
21:AA:652:U:H1'	21:AA:653:U:C5	2.51	0.46
26:DE:147:LEU:HB2	26:DE:186:VAL:HA	1.98	0.46
22:DA:990:A:O2'	22:DA:991:C:H5''	2.15	0.46
37:BP:21:PRO:HA	37:BP:46:VAL:CG1	2.45	0.46
49:B1:9:LYS:N	49:B1:9:LYS:HD3	2.30	0.46
22:BA:197:A:C2	22:BA:198:C:H1'	2.50	0.46
22:DA:2533:U:H4'	22:DA:2664:G:H4'	1.97	0.46
53:CA:705:G:O2'	53:CA:706:A:H5'	2.15	0.46
53:CA:499:A:C6	53:CA:547:A:C8	3.03	0.46
13:CN:76:PHE:CE2	13:CN:95:LEU:HD22	2.51	0.46
1:AB:183:PHE:CD2	1:AB:183:PHE:N	2.83	0.46
22:DA:27:G:N2	22:DA:512:G:H2'	2.31	0.46
9:CJ:30:LYS:HG2	9:CJ:36:VAL:HG22	1.96	0.46
29:DH:68:ARG:HG2	29:DH:71:LYS:HD3	1.97	0.46
22:DA:2015:A:H5''	22:DA:2016:U:OP2	2.15	0.46
54:DB:8:C:H5'	36:DO:27:VAL:HG11	1.96	0.46
19:AT:8:LYS:HA	19:AT:11:ILE:CG2	2.43	0.46
21:AA:264:C:H2'	21:AA:265:G:O4'	2.15	0.46
40:DS:29:VAL:HG23	40:DS:69:LEU:O	2.15	0.46
22:DA:579:G:C2	22:DA:1262:A:C5	3.04	0.46
22:BA:1946:U:H2'	22:BA:1947:C:C6	2.51	0.46
22:DA:1179:G:H2'	22:DA:1180:U:C6	2.50	0.46
29:DH:54:LEU:HA	29:DH:57:LYS:CG	2.46	0.46
22:DA:2550:G:O6	22:DA:2551:C:N4	2.49	0.46
36:BO:7:ARG:HA	36:BO:10:ARG:NH2	2.30	0.46
23:BB:24:G:C6	23:BB:56:G:C2	3.04	0.46
22:BA:183:C:H1'	22:BA:433:C:H1'	1.98	0.46
39:DR:19:THR:HA	39:DR:96:VAL:O	2.15	0.46
26:DE:153:LEU:HD22	26:DE:158:PHE:HD2	1.80	0.46
17:CR:37:LYS:HB3	53:CA:719:C:O2'	2.14	0.46
37:BP:92:ARG:HH11	37:BP:92:ARG:CB	2.27	0.46
21:AA:1348:U:O2'	21:AA:1349:A:C5'	2.63	0.46
22:DA:2615:U:O2'	22:DA:2616:C:H5'	2.15	0.46
37:DP:5:LYS:HE2	37:DP:9:GLN:NE2	2.30	0.46
53:CA:177:G:H2'	53:CA:178:C:H5'	1.98	0.46
22:DA:2254:C:O2'	22:DA:2255:G:H5'	2.16	0.46
40:BS:19:LEU:O	48:B0:21:LEU:HD12	2.15	0.46
33:DL:71:ALA:HA	33:DL:74:THR:HB	1.98	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
53:CA:1339:A:H2'	53:CA:1340:A:O4'	2.16	0.46
22:BA:1095:A:H2'	22:BA:1096:A:C8	2.50	0.46
45:DX:65:THR:O	45:DX:68:ALA:HB3	2.16	0.46
22:BA:2040:G:H2'	22:BA:2041:U:O4'	2.13	0.46
22:BA:1394:U:P	57:BA:3414:HOH:O	2.74	0.46
1:CB:31:PHE:HB2	1:CB:41:ASN:HB2	1.98	0.46
14:AO:34:GLN:HA	14:AO:34:GLN:OE1	2.16	0.46
40:DS:2:GLU:OE2	40:DS:2:GLU:HA	2.16	0.46
22:DA:2473:U:OP2	22:DA:2473:U:H6	1.97	0.46
39:BR:74:ILE:N	39:BR:74:ILE:HD12	2.31	0.46
25:BD:101:PHE:CE2	25:BD:203:VAL:HG22	2.42	0.46
44:BW:51:GLY:O	44:BW:52:CYS:O	2.33	0.46
22:BA:1062:G:N9	22:BA:1088:A:N7	2.63	0.46
53:CA:1410:A:H2'	53:CA:1411:C:C6	2.51	0.46
6:CG:92:PRO:CA	6:CG:95:ARG:HB2	2.41	0.46
22:DA:206:U:C2'	22:DA:207:A:H8	2.29	0.46
9:CJ:5:ARG:C	9:CJ:6:ILE:HD12	2.36	0.46
9:AJ:53:ILE:HG13	13:AN:84:ARG:CZ	2.46	0.46
9:CJ:15:HIS:CE1	9:CJ:70:HIS:HD2	2.32	0.46
52:D4:16:ILE:HA	52:D4:24:ARG:O	2.16	0.46
10:CK:125:LYS:C	20:CU:33:ARG:HE	2.19	0.46
27:DF:94:ARG:HA	27:DF:97:GLU:OE2	2.15	0.46
22:DA:2540:C:H2'	22:DA:2541:A:O4'	2.16	0.46
34:DM:17:ASN:O	34:DM:18:ARG:HG2	2.16	0.46
53:CA:977:A:N3	53:CA:977:A:H5''	2.31	0.46
12:CM:11:HIS:HA	12:CM:44:ILE:HB	1.98	0.46
22:DA:1965:C:H5''	22:DA:1965:C:H6	1.80	0.46
52:B4:7:VAL:HG13	52:B4:38:GLY:HA2	1.97	0.46
22:DA:855:G:O2'	44:DW:23:LYS:HD3	2.16	0.46
53:CA:120:A:H2'	53:CA:121:U:H5''	1.96	0.46
22:DA:574:A:H2	22:DA:2032:G:O2'	1.97	0.46
22:DA:1188:U:O2'	22:DA:1189:A:H5'	2.15	0.46
20:AU:38:GLU:OE2	20:AU:41:THR:HG21	2.16	0.46
3:AD:37:PRO:HD2	3:AD:41:GLY:HA2	1.97	0.46
13:AN:20:PHE:O	13:AN:21:ALA:HB3	2.16	0.46
25:BD:53:GLY:O	25:BD:54:ALA:HB2	2.15	0.46
3:AD:61:ARG:HH21	3:AD:67:LEU:HD23	1.80	0.46
22:BA:1869:G:N2	22:BA:1873:G:C6	2.83	0.46
1:AB:148:GLY:HA2	1:AB:151:LYS:CB	2.42	0.46
31:DJ:56:VAL:CG2	31:DJ:124:VAL:HA	2.46	0.46
31:DJ:17:VAL:HG23	31:DJ:137:PRO:CB	2.41	0.46
32:DK:104:THR:O	32:DK:106:GLU:N	2.48	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:BA:2748:A:C2	22:BA:2757:A:C4	3.04	0.46
51:D3:41:ARG:HD2	51:D3:41:ARG:O	2.16	0.46
5:CF:56:LYS:O	5:CF:57:ALA:HB2	2.15	0.46
53:CA:1084:G:H5'	53:CA:1102:A:OP2	2.15	0.46
54:DB:27:C:O2'	54:DB:28:C:O4'	2.31	0.46
46:BY:39:GLN:HB2	46:BY:41:HIS:HD2	1.75	0.46
35:BN:60:VAL:O	35:BN:61:ALA:C	2.53	0.46
5:CF:41:ASP:O	5:CF:42:TRP:C	2.53	0.46
24:BC:142:ASN:O	24:BC:142:ASN:CG	2.54	0.46
24:DC:52:HIS:HB3	24:DC:216:ARG:O	2.16	0.46
18:CS:45:GLY:N	18:CS:61:VAL:HB	2.28	0.46
25:BD:45:TYR:HD1	25:BD:45:TYR:N	2.12	0.46
1:CB:35:ASN:O	1:CB:37:VAL:HG12	2.15	0.46
31:BJ:73:VAL:CG2	31:BJ:74:TYR:N	2.79	0.46
22:BA:359:G:H3'	22:BA:360:U:C6	2.51	0.46
22:BA:27:G:O2'	22:BA:28:A:OP2	2.32	0.46
32:DK:119:ALA:N	32:DK:120:PRO:HD2	2.30	0.46
22:DA:1252:G:C2	22:DA:1253:A:C2	3.04	0.46
22:BA:1857:G:O2'	22:BA:1858:A:OP2	2.30	0.46
3:CD:137:SER:CB	3:CD:138:PRO:HD2	2.45	0.46
7:CH:65:PHE:CD2	7:CH:66:GLN:HG2	2.51	0.46
37:BP:37:LYS:CD	37:BP:37:LYS:N	2.79	0.46
42:DU:34:ILE:HG12	42:DU:63:ALA:HA	1.97	0.46
41:DT:69:ARG:O	41:DT:74:ILE:HD12	2.14	0.46
22:DA:160:A:N1	22:DA:161:A:C2	2.84	0.46
22:BA:2311:A:H1'	27:BF:78:ILE:CD1	2.45	0.46
22:DA:1356:G:N2	22:DA:1357:C:H1'	2.30	0.46
1:AB:60:ALA:CB	1:AB:223:GLY:HA3	2.44	0.46
53:CA:392:C:H2'	53:CA:393:A:C8	2.50	0.46
36:DO:39:VAL:HB	36:DO:49:VAL:H	1.80	0.46
24:BC:85:ASN:OD1	24:BC:85:ASN:N	2.48	0.46
22:BA:538:A:H4'	31:BJ:7:LYS:HB3	1.97	0.46
22:BA:1357:C:H2'	22:BA:1358:G:O4'	2.15	0.46
25:DD:61:THR:HB	25:DD:63:PRO:HD2	1.96	0.46
51:D3:57:VAL:O	51:D3:60:CYS:HB2	2.16	0.46
16:CQ:60:ILE:HG12	16:CQ:60:ILE:O	2.16	0.46
22:DA:1706:C:O2'	22:DA:1707:G:OP1	2.31	0.46
43:BV:17:SER:O	43:BV:20:LEU:HB2	2.15	0.46
37:DP:102:ARG:O	37:DP:103:THR:CB	2.63	0.46
11:CL:24:GLU:O	11:CL:25:ALA:HB3	2.15	0.46
8:CI:15:ALA:O	8:CI:66:VAL:HG23	2.16	0.46
8:CI:87:MET:SD	8:CI:87:MET:N	2.89	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
42:BU:10:VAL:HB	42:BU:70:ALA:O	2.16	0.46
48:D0:55:ALA:HB3	48:D0:56:LYS:NZ	2.31	0.46
41:DT:53:VAL:HG21	41:DT:92:ASN:HD22	1.80	0.46
22:BA:1243:C:H2'	22:BA:1244:A:O4'	2.16	0.46
28:BG:46:ASP:OD1	28:BG:47:ASN:N	2.37	0.46
26:BE:193:VAL:O	26:BE:197:GLU:HB2	2.15	0.46
22:BA:996:A:O2'	38:BQ:91:ARG:HG3	2.16	0.46
22:BA:996:A:C4'	38:BQ:91:ARG:HG2	2.44	0.46
22:DA:246:C:O2'	22:DA:385:C:H4'	2.16	0.46
7:AH:1:SER:C	7:AH:3:GLN:N	2.68	0.46
44:BW:14:ASP:O	44:BW:15:SER:HB2	2.14	0.46
25:BD:157:LYS:HD2	31:BJ:79:GLY:O	2.16	0.46
30:BI:79:LEU:HD22	30:BI:137:LEU:CD1	2.46	0.46
22:DA:1661:G:C5	22:DA:1662:U:C5	3.04	0.46
3:CD:79:ALA:O	3:CD:80:ARG:O	2.33	0.46
10:AK:124:LYS:HZ3	10:AK:127:ARG:NE	2.14	0.46
37:BP:79:VAL:HG23	37:BP:79:VAL:O	2.15	0.46
22:DA:230:G:O2'	22:DA:231:A:C5'	2.64	0.46
22:DA:1125:G:C6	22:DA:1126:A:N6	2.84	0.46
27:DF:110:ILE:HD13	27:DF:110:ILE:H	1.80	0.46
22:DA:1808:A:H3'	22:DA:1809:A:H8	1.75	0.46
11:AL:62:VAL:HG21	11:AL:94:TYR:HE2	1.74	0.46
22:DA:1435:G:N2	22:DA:1558:C:N4	2.62	0.46
35:DN:28:LEU:HD23	35:DN:29:VAL:N	2.31	0.46
42:DU:90:LYS:HB2	42:DU:92:VAL:HG13	1.98	0.46
53:CA:90:C:C2'	53:CA:91:U:C6	2.99	0.46
53:CA:1271:A:H2'	53:CA:1272:G:C8	2.51	0.46
53:CA:1365:G:C2	53:CA:1366:C:C2	3.03	0.46
32:BK:18:ARG:HD2	32:BK:18:ARG:HA	1.78	0.46
22:BA:2195:U:O2'	22:BA:2196:C:H5'	2.16	0.46
35:DN:99:LYS:O	48:D0:41:HIS:HB2	2.15	0.46
50:D2:31:LEU:CA	50:D2:34:ARG:HB2	2.39	0.46
21:AA:453:G:H2'	21:AA:454:G:H8	1.81	0.46
22:DA:2868:A:O2'	22:DA:2869:G:O4'	2.34	0.46
22:BA:1654:A:H2'	22:BA:1655:A:C8	2.45	0.46
25:BD:117:GLY:C	25:BD:118:PHE:CG	2.89	0.46
22:DA:271:G:C6	22:DA:272:A:N6	2.84	0.46
6:CG:4:ARG:CD	6:CG:5:VAL:H	2.20	0.46
20:AU:48:LYS:C	20:AU:51:ALA:H	2.19	0.46
21:AA:1160:G:O6	21:AA:1181:G:C5	2.69	0.46
34:BM:42:THR:O	34:BM:43:ALA:HB3	2.15	0.46
25:DD:112:THR:HG22	25:DD:113:SER:H	1.79	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
47:BZ:43:ILE:O	47:BZ:47:ILE:HG13	2.15	0.46
53:CA:559:A:H4'	53:CA:560:A:C5'	2.45	0.46
30:BI:56:VAL:HG11	30:BI:68:PHE:HD2	1.80	0.46
22:BA:2637:U:C3'	22:BA:2638:G:H5'	2.45	0.46
22:BA:1935:G:H1'	22:BA:1964:G:N2	2.31	0.46
1:AB:49:PHE:HB2	1:AB:53:LEU:HD23	1.98	0.46
39:DR:81:LYS:O	39:DR:82:HIS:C	2.54	0.46
15:CP:1:MET:HG3	15:CP:1:MET:O	2.14	0.46
22:BA:811:U:HO2'	22:BA:1250:G:H2'	1.80	0.46
29:BH:21:VAL:HG21	29:BH:25:TYR:CD2	2.47	0.46
22:DA:845:A:N1	22:DA:932:U:O2	2.48	0.46
21:AA:1040:U:H2'	21:AA:1041:G:C8	2.50	0.46
14:AO:68:TYR:CZ	14:AO:72:LYS:HG3	2.50	0.46
38:DQ:46:TYR:HD1	39:DR:74:ILE:HG23	1.80	0.46
22:BA:2145:C:H3'	22:BA:2146:C:H5''	1.97	0.46
22:DA:156:A:H2'	22:DA:157:C:H6	1.81	0.46
22:DA:67:U:H2'	22:DA:68:G:C8	2.47	0.46
22:DA:1007:C:OP1	31:DJ:39:LYS:HE3	2.16	0.46
33:DL:58:TYR:O	51:D3:12:ARG:CZ	2.63	0.46
22:DA:388:G:H8	22:DA:388:G:H2'	1.68	0.46
15:CP:38:PHE:CE2	15:CP:51:ARG:HB3	2.50	0.46
22:BA:2475:C:C2'	22:BA:2476:A:H5'	2.45	0.46
22:DA:1570:A:H2'	22:DA:1571:A:C8	2.51	0.46
53:CA:389:A:O2'	53:CA:390:U:H5'	2.16	0.46
22:BA:42:A:H3'	22:BA:43:G:H5''	1.96	0.46
22:DA:2554:U:H2'	22:DA:2555:U:C6	2.50	0.46
53:CA:814:A:H2'	53:CA:816:A:H5''	1.98	0.46
2:CC:148:ILE:HD12	2:CC:149:LYS:N	2.30	0.46
53:CA:834:U:H2'	53:CA:835:U:C6	2.49	0.46
13:AN:4:SER:HB3	21:AA:1216:A:OP1	2.16	0.46
22:DA:416:U:H2'	22:DA:417:C:O4'	2.16	0.46
22:DA:2771:C:H5''	25:DD:207:VAL:HG11	1.98	0.46
22:BA:1071:G:N7	22:BA:1089:A:N6	2.64	0.46
5:CF:81:ASN:O	5:CF:82:ASP:C	2.54	0.46
22:BA:2874:C:H2'	22:BA:2875:C:H6	1.81	0.46
16:CQ:29:LYS:HE2	16:CQ:36:PHE:CE1	2.50	0.46
38:DQ:9:ALA:C	38:DQ:11:ALA:H	2.18	0.46
22:DA:1451:C:H4'	22:DA:1452:G:O5'	2.16	0.46
37:DP:102:ARG:HD2	37:DP:106:ALA:O	2.16	0.46
22:BA:2838:G:H2'	22:BA:2839:G:O4'	2.16	0.46
39:BR:43:ASN:HB3	39:BR:44:GLY:H	1.40	0.46
53:CA:1262:C:H2'	53:CA:1263:C:H5'	1.96	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:AA:1486:G:H2'	21:AA:1487:G:O4'	2.16	0.46
53:CA:649:A:H2'	53:CA:650:G:O4'	2.16	0.46
22:BA:1579:A:O2'	22:BA:1580:A:H5'	2.15	0.46
12:CM:47:LEU:HD23	12:CM:48:SER:N	2.31	0.46
18:AS:19:GLU:HA	18:AS:19:GLU:OE2	2.15	0.46
22:BA:2819:G:H5''	57:BA:3810:HOH:O	2.15	0.46
21:AA:781:A:C5	21:AA:802:A:C2	3.03	0.46
33:BL:93:ASN:HD22	33:BL:94:THR:CA	2.23	0.46
44:DW:18:LYS:CD	44:DW:19:ARG:HG2	2.46	0.46
22:DA:2331:G:O2'	44:DW:40:ARG:HB3	2.15	0.46
5:AF:91:ARG:HG2	5:AF:93:LYS:HD3	1.97	0.46
28:BG:97:VAL:HA	28:BG:102:ILE:HA	1.96	0.46
53:CA:373:A:N3	53:CA:374:A:C8	2.84	0.46
31:DJ:45:THR:H	31:DJ:46:PRO:CD	2.27	0.46
37:DP:16:VAL:HA	37:DP:17:PRO:HD3	1.54	0.46
37:DP:20:ARG:HD2	37:DP:21:PRO:HD2	1.96	0.46
25:BD:90:PHE:C	25:BD:92:VAL:N	2.69	0.46
25:BD:90:PHE:N	25:BD:90:PHE:CD1	2.83	0.46
53:CA:1255:G:H21	53:CA:1258:G:N2	2.14	0.46
35:DN:24:MET:HG2	35:DN:44:LEU:HD22	1.98	0.46
22:DA:1285:A:N6	22:DA:1329:U:C5	2.84	0.46
22:DA:1290:C:O2'	22:DA:1291:C:C6	2.40	0.46
1:AB:186:VAL:HG23	1:AB:186:VAL:O	2.16	0.46
22:DA:1808:A:O3'	22:DA:1809:A:C8	2.59	0.46
22:DA:478:A:N1	22:DA:480:A:C4	2.84	0.46
22:DA:482:A:N6	22:DA:506:G:N3	2.64	0.46
7:CH:124:ILE:HG22	7:CH:125:ILE:N	2.31	0.46
35:DN:28:LEU:C	35:DN:28:LEU:HD23	2.36	0.46
22:DA:1204:A:C4	22:DA:1206:G:C6	3.04	0.46
22:DA:319:G:C6	22:DA:333:G:C6	3.04	0.46
6:CG:118:ARG:HH22	53:CA:1239:A:C3'	2.26	0.46
8:CI:6:TYR:CE2	8:CI:17:ARG:HA	2.49	0.46
32:DK:8:LEU:HD12	32:DK:8:LEU:N	2.30	0.46
22:DA:1492:G:H3'	22:DA:1493:C:H5''	1.95	0.46
26:BE:148:ILE:HA	26:BE:187:VAL:HB	1.97	0.46
2:CC:18:ASN:HD21	2:CC:53:ARG:CZ	2.28	0.46
22:DA:2344:U:HO2'	22:DA:2345:G:C5'	2.28	0.46
22:DA:704:G:H2'	22:DA:726:G:N2	2.22	0.46
12:CM:23:GLY:HA3	12:CM:64:VAL:HG13	1.96	0.46
34:BM:40:ARG:HD3	34:BM:93:VAL:HG21	1.97	0.46
25:DD:114:LYS:HD2	25:DD:116:LYS:CE	2.45	0.46
25:DD:114:LYS:CD	25:DD:116:LYS:NZ	2.77	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
53:CA:238:A:H2'	53:CA:239:U:O4'	2.16	0.46
9:AJ:29:ALA:HB1	9:AJ:36:VAL:HG21	1.97	0.46
53:CA:704:A:O2'	53:CA:705:G:C5'	2.64	0.46
53:CA:1101:A:H1'	53:CA:1102:A:O4'	2.15	0.46
6:CG:112:ASP:HB3	6:CG:117:LEU:CB	2.45	0.46
5:AF:11:HIS:CD2	5:AF:13:ASP:HB2	2.51	0.46
47:DZ:4:ILE:HG21	47:DZ:56:VAL:HG13	1.98	0.46
22:DA:1845:G:C6	22:DA:1846:G:C5	3.04	0.46
9:CJ:63:ASP:OD2	13:CN:84:ARG:NH1	2.49	0.46
22:BA:1682:G:H2'	22:BA:1683:U:C5	2.51	0.46
40:BS:66:ILE:HA	40:BS:69:LEU:CD2	2.45	0.46
22:BA:2321:U:H3'	22:BA:2322:A:C5'	2.46	0.46
24:DC:220:ARG:HB2	24:DC:220:ARG:HE	1.52	0.46
24:DC:52:HIS:NE2	24:DC:218:THR:HG23	2.31	0.46
22:DA:1113:U:O2'	22:DA:1114:C:H6	1.98	0.46
33:DL:142:ILE:CG2	33:DL:144:GLU:H	2.29	0.46
53:CA:1032:G:N2	53:CA:1033:G:C5	2.84	0.46
22:DA:2039:U:H2'	22:DA:2040:G:H8	1.81	0.46
21:AA:487:A:H2'	21:AA:488:C:C6	2.51	0.46
8:AI:25:GLY:H	8:AI:58:GLU:HA	1.81	0.46
22:DA:870:U:H2'	22:DA:871:U:C5'	2.45	0.46
53:CA:47:C:H4'	53:CA:48:C:O5'	2.16	0.46
22:DA:8:C:O2'	22:DA:9:G:H5'	2.16	0.46
22:BA:302:C:O2'	22:BA:303:G:H5'	2.15	0.46
53:CA:859:G:H2'	53:CA:860:A:H8	1.78	0.46
23:BB:43:C:O2	27:BF:91:ARG:NH2	2.49	0.46
27:DF:102:LEU:HB3	27:DF:103:ILE:HD12	1.98	0.46
12:AM:89:ARG:HB3	12:AM:96:VAL:HG22	1.97	0.46
22:DA:1819:A:OP1	24:DC:154:ALA:HA	2.16	0.46
40:BS:29:VAL:HG22	40:BS:51:LEU:HD11	1.98	0.46
24:DC:211:ARG:O	24:DC:213:ARG:N	2.49	0.46
22:DA:1954:G:O2'	22:DA:1955:U:OP2	2.34	0.46
22:BA:1278:C:H2'	22:BA:1279:G:C8	2.49	0.46
48:B0:53:VAL:O	48:B0:54:ILE:C	2.53	0.46
49:B1:29:LYS:HB3	49:B1:29:LYS:NZ	2.31	0.46
4:CE:33:THR:O	4:CE:33:THR:HG23	2.16	0.46
28:DG:59:ASP:O	28:DG:63:GLN:HB2	2.16	0.46
53:CA:1057:G:H2'	53:CA:1058:G:O4'	2.15	0.46
3:CD:106:PHE:CD1	3:CD:158:LEU:HD21	2.50	0.46
22:BA:446:G:OP1	38:BQ:2:ARG:HD2	2.15	0.46
6:AG:115:MET:HA	6:AG:118:ARG:HD3	1.98	0.46
21:AA:248:C:H4'	21:AA:283:U:O2'	2.15	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:BA:2579:C:OP1	57:BA:3547:HOH:O	2.20	0.46
21:AA:934:C:H5'	21:AA:935:A:OP1	2.15	0.46
22:BA:2865:U:C4	22:BA:2866:U:C4	3.03	0.46
24:BC:33:LEU:HD23	24:BC:62:ARG:HD3	1.98	0.46
22:BA:77:G:N2	22:BA:110:G:H1'	2.31	0.46
22:BA:70:G:H2'	22:BA:113:U:O2'	2.16	0.46
53:CA:759:A:H2'	53:CA:760:G:H5'	1.98	0.46
22:BA:885:C:H6	22:BA:885:C:O5'	1.98	0.46
46:DY:11:VAL:HG12	46:DY:11:VAL:O	2.16	0.46
15:CP:12:LYS:HG2	15:CP:13:LYS:HG2	1.97	0.46
22:DA:121:G:C4	22:DA:131:A:C6	3.03	0.46
44:DW:20:LEU:HD11	44:DW:35:ILE:HG13	1.96	0.46
39:BR:39:LEU:O	39:BR:49:ILE:HG23	2.14	0.46
40:BS:73:LYS:HD2	40:BS:73:LYS:HA	1.54	0.46
22:BA:1065:U:H5	22:BA:1074:G:N2	2.13	0.46
22:DA:656:G:O2'	22:DA:657:U:H5'	2.15	0.46
53:CA:1258:G:H2'	53:CA:1259:C:C6	2.51	0.46
41:BT:24:MET:O	41:BT:28:ASN:O	2.34	0.46
22:DA:221:A:H5''	22:DA:222:A:OP1	2.16	0.46
53:CA:197:A:N6	53:CA:221:C:H4'	2.31	0.46
22:DA:1078:U:H5''	22:DA:1079:C:OP1	2.16	0.46
30:DI:90:GLY:O	30:DI:92:PRO:HD3	2.16	0.46
34:DM:41:LEU:HD13	34:DM:96:ILE:HG12	1.98	0.46
1:AB:165:ALA:HB3	1:AB:190:SER:HB3	1.98	0.46
22:BA:2428:G:H5''	22:BA:2429:G:OP1	2.16	0.46
1:CB:114:LYS:HA	1:CB:117:GLU:CG	2.35	0.46
18:CS:69:LYS:O	18:CS:72:GLU:HB2	2.16	0.46
6:CG:113:LYS:HA	53:CA:1298:U:C5	2.51	0.46
22:DA:2882:A:H5''	35:DN:96:ARG:HD3	1.97	0.46
21:AA:1398:A:H8	21:AA:1398:A:C5'	2.21	0.46
22:DA:118:A:H1'	22:DA:178:G:O4'	2.15	0.46
21:AA:1055:A:H8	21:AA:1055:A:O5'	1.98	0.46
22:DA:2043:C:C2	22:DA:2044:C:C5	3.03	0.46
32:BK:113:MET:C	32:BK:115:ILE:N	2.69	0.46
29:BH:89:LYS:HG2	29:BH:90:LEU:N	2.19	0.46
21:AA:116:A:H8	21:AA:116:A:O5'	1.98	0.46
1:CB:163:ILE:HG22	1:CB:164:ASP:N	2.31	0.46
22:DA:705:A:H2'	22:DA:706:A:H8	1.78	0.46
22:DA:752:A:C6	22:DA:1781:U:H1'	2.51	0.46
3:AD:3:TYR:HB2	3:AD:62:ARG:NH2	2.31	0.46
36:DO:57:ALA:C	36:DO:58:ILE:HD12	2.36	0.46
53:CA:510:A:H5''	53:CA:511:C:P	2.55	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:AA:1062:U:O5'	21:AA:1062:U:H6	1.98	0.46
53:CA:1285:A:C4'	53:CA:1286:U:OP1	2.63	0.46
3:AD:53:GLN:HG3	3:AD:198:LEU:O	2.16	0.46
23:BB:13:G:O2'	23:BB:14:U:H5''	2.16	0.46
21:AA:1152:A:O2'	21:AA:1153:G:H5'	2.15	0.46
21:AA:250:A:O4'	21:AA:252:U:C6	2.68	0.46
22:DA:186:G:N2	22:DA:211:C:C2	2.84	0.46
31:DJ:81:ILE:HB	31:DJ:82:GLY:H	1.48	0.46
33:DL:93:ASN:CG	33:DL:94:THR:N	2.68	0.46
21:AA:903:G:H2'	21:AA:904:U:C6	2.48	0.46
26:BE:48:THR:H	26:BE:51:GLU:HG2	1.81	0.46
29:BH:76:GLU:HB3	29:BH:103:VAL:HG12	1.96	0.46
22:DA:238:C:H2'	22:DA:239:C:O4'	2.15	0.46
25:BD:46:ARG:HG3	25:BD:84:LEU:HB2	1.97	0.46
22:BA:627:A:C5	22:BA:637:A:C8	3.04	0.46
3:CD:102:TYR:C	3:CD:104:MET:N	2.69	0.46
22:DA:1945:G:H2'	22:DA:1946:U:H6	1.81	0.46
22:BA:2415:G:H4'	33:BL:66:PHE:HB2	1.96	0.46
21:AA:507:C:H3'	21:AA:508:U:H5''	1.97	0.46
6:AG:105:GLU:HG2	6:AG:105:GLU:O	2.16	0.46
23:BB:35:C:H2'	23:BB:36:C:O4'	2.16	0.46
34:BM:21:ALA:CB	34:BM:100:LYS:N	2.79	0.46
53:CA:21:G:H2'	53:CA:22:G:C8	2.51	0.46
21:AA:782:A:H2'	21:AA:783:C:O4'	2.16	0.46
22:DA:122:G:N2	22:DA:123:G:H1'	2.31	0.46
5:CF:45:ARG:HG2	5:CF:46:GLN:H	1.81	0.46
22:BA:1282:U:H2'	22:BA:1283:G:O4'	2.16	0.46
22:DA:910:A:H62	34:DM:12:MET:HA	1.81	0.46
45:BX:63:ILE:HG13	45:BX:63:ILE:H	1.41	0.46
22:BA:342:A:C6	22:BA:343:C:C5	3.04	0.46
45:DX:24:THR:O	45:DX:25:LYS:C	2.55	0.46
38:BQ:93:ILE:CG2	38:BQ:94:LEU:N	2.79	0.46
22:DA:1551:A:H2'	22:DA:1552:A:O4'	2.16	0.46
22:DA:2415:G:H2'	22:DA:2416:C:C6	2.50	0.46
44:DW:37:VAL:CG1	44:DW:55:ASP:HB2	2.31	0.46
38:BQ:65:ASN:CG	38:BQ:75:TYR:HB2	2.37	0.46
22:BA:2353:G:O2'	44:BW:31:LEU:CD2	2.64	0.46
22:DA:1345:C:H5''	22:DA:1396:U:O4	2.16	0.46
6:CG:14:ASP:CB	6:CG:19:SER:H	2.29	0.46
22:BA:1085:A:H1'	22:BA:1105:U:H1'	1.98	0.46
22:DA:740:C:C6	22:DA:1981:A:C2	3.04	0.46
53:CA:666:G:C4	53:CA:741:G:C2	3.03	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:CI:51:LEU:HD11	8:CI:82:ILE:HG22	1.98	0.46
53:CA:577:G:C6	53:CA:812:G:N2	2.84	0.46
41:BT:32:LEU:CD2	41:BT:32:LEU:N	2.79	0.46
21:AA:71:A:O2'	21:AA:72:A:H5''	2.15	0.46
22:DA:2307:G:H1'	22:DA:2308:G:N7	2.31	0.46
22:DA:2458:G:O2'	22:DA:2460:U:C5	2.69	0.46
22:DA:1070:A:H61	30:DI:8:VAL:HG12	1.81	0.46
22:DA:2756:U:C1'	22:DA:2757:A:H5''	2.46	0.46
24:DC:144:GLU:HG2	24:DC:146:LYS:O	2.15	0.46
30:BI:24:GLY:O	30:BI:34:ILE:HD12	2.16	0.46
22:BA:826:U:OP1	22:BA:2428:G:H3'	2.16	0.46
22:DA:2683:C:H5''	37:DP:55:HIS:HB3	1.97	0.46
22:DA:1204:A:O4'	22:DA:1206:G:C5	2.69	0.46
22:DA:301:G:C2	22:DA:317:G:C4	3.04	0.46
53:CA:1144:G:H5''	53:CA:1145:A:OP2	2.15	0.46
35:DN:97:ILE:HG13	35:DN:98:LEU:N	2.31	0.46
22:DA:126:A:H2'	50:D2:46:LYS:CE	2.46	0.46
22:DA:117:G:C2	22:DA:119:A:N6	2.84	0.46
14:CO:41:HIS:O	14:CO:44:GLU:O	2.34	0.46
53:CA:1345:U:H5''	53:CA:1346:A:OP1	2.15	0.46
36:DO:111:ARG:HA	36:DO:115:LEU:O	2.16	0.46
22:DA:135:U:H2'	22:DA:136:G:C8	2.50	0.46
21:AA:977:A:H1'	21:AA:982:U:O4	2.16	0.46
22:DA:975:A:O2'	22:DA:976:G:C5'	2.64	0.46
31:DJ:103:ILE:HD12	31:DJ:103:ILE:O	2.16	0.46
22:DA:1565:C:HO2'	22:DA:1566:A:P	2.39	0.46
26:DE:5:LEU:HD12	26:DE:10:SER:HB2	1.98	0.46
22:DA:371:A:N3	22:DA:373:U:O4	2.48	0.46
22:BA:760:G:H2'	22:BA:761:A:C5'	2.43	0.46
30:BI:123:ALA:HA	30:BI:126:ARG:CZ	2.46	0.46
1:CB:115:ASP:O	1:CB:119:GLN:HB2	2.16	0.46
18:CS:52:ASN:HD22	18:CS:54:ARG:H	1.63	0.46
22:BA:1695:G:H8	24:BC:7:PRO:O	1.99	0.46
3:AD:84:ASN:HB3	3:AD:87:GLU:CG	2.44	0.46
21:AA:612:C:O2'	21:AA:613:C:H5'	2.16	0.46
21:AA:701:U:C2'	21:AA:701:U:O2	2.60	0.46
15:AP:20:VAL:HG21	15:AP:32:PHE:HB2	1.97	0.46
22:BA:340:A:H2'	22:BA:341:C:O4'	2.16	0.46
32:BK:16:ALA:O	32:BK:17:ARG:HB2	2.16	0.46
33:DL:122:VAL:O	33:DL:122:VAL:HG23	2.16	0.46
21:AA:903:G:C4	21:AA:904:U:C6	3.04	0.46
53:CA:181:A:O2'	53:CA:182:A:H2	1.95	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:AA:267:C:H2'	21:AA:268:U:C6	2.51	0.46
53:CA:155:A:C6	53:CA:156:C:C4	3.04	0.46
22:BA:2856:A:N6	22:BA:2857:G:C6	2.84	0.46
22:DA:1359:A:C2	22:DA:1360:G:H1'	2.51	0.46
2:CC:126:ARG:HE	2:CC:126:ARG:CA	2.28	0.46
21:AA:1202:U:O2'	21:AA:1203:C:H5'	2.16	0.46
31:BJ:37:ARG:HG3	31:BJ:118:MET:HE1	1.98	0.46
22:BA:2544:G:O2'	22:BA:2545:G:H5'	2.16	0.46
6:AG:146:ALA:C	6:AG:148:LYS:N	2.69	0.46
22:BA:898:C:H2'	22:BA:899:A:H5'	1.98	0.46
35:DN:9:GLN:C	35:DN:10:LEU:O	2.53	0.46
29:DH:8:LYS:C	29:DH:8:LYS:HD2	2.36	0.46
23:BB:2:G:C6	23:BB:119:A:C2	3.04	0.46
22:DA:1109:C:N4	22:DA:1110:G:N1	2.64	0.46
18:AS:79:TYR:CZ	18:AS:80:ARG:HB2	2.51	0.46
22:DA:2443:C:H2'	22:DA:2444:G:O4'	2.16	0.46
8:AI:29:ILE:HA	8:AI:64:ILE:O	2.15	0.46
40:DS:19:LEU:HG	48:D0:21:LEU:HG	1.98	0.46
21:AA:774:G:C4	21:AA:775:G:C8	3.04	0.46
53:CA:922:G:H2'	53:CA:923:A:C8	2.51	0.46
6:CG:86:VAL:HA	6:CG:87:PRO:HD2	1.74	0.46
22:DA:2157:G:OP2	22:DA:2157:G:N2	2.49	0.46
21:AA:355:C:C4	21:AA:356:A:N7	2.83	0.46
22:DA:1441:G:C2	22:DA:1551:A:C2	3.04	0.45
22:BA:636:G:H3'	33:BL:128:THR:HG21	1.98	0.45
22:DA:2269:G:O2'	44:DW:18:LYS:HG2	2.16	0.45
22:DA:2335:A:O2'	22:DA:2336:A:H2'	2.16	0.45
10:CK:91:GLY:C	10:CK:95:THR:HG22	2.36	0.45
44:BW:24:ARG:HD3	44:BW:65:LYS:HG2	1.98	0.45
22:DA:655:A:O2'	22:DA:656:G:N7	2.48	0.45
28:BG:168:VAL:O	28:BG:170:THR:HG23	2.16	0.45
41:DT:18:GLU:HA	41:DT:22:THR:HG21	1.97	0.45
41:DT:18:GLU:O	41:DT:20:ALA:N	2.49	0.45
22:DA:1341:G:C2	41:DT:84:TYR:CE2	3.04	0.45
19:AT:68:LYS:HB2	19:AT:68:LYS:HZ2	1.79	0.45
22:DA:2092:U:C6	22:DA:2225:A:O2'	2.67	0.45
41:BT:29:THR:HA	41:BT:86:THR:CA	2.44	0.45
27:DF:1:ALA:HA	27:DF:97:GLU:HB3	1.98	0.45
22:DA:228:C:H5'	22:DA:229:C:C5	2.51	0.45
22:BA:264:C:O2'	22:BA:265:A:H3'	2.16	0.45
22:DA:1083:U:H1'	22:DA:1086:A:N1	2.30	0.45
22:DA:1072:C:O2'	22:DA:1093:G:O6	2.24	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:1837:C:O2	22:DA:1927:A:H2	1.98	0.45
7:CH:102:VAL:HG22	7:CH:126:CYS:SG	2.56	0.45
4:AE:113:VAL:HB	4:AE:140:ILE:HD11	1.97	0.45
46:DY:53:VAL:O	46:DY:57:LEU:HB2	2.16	0.45
22:DA:301:G:C6	22:DA:317:G:C6	3.04	0.45
22:DA:305:C:C2	22:DA:313:G:C2	3.04	0.45
22:BA:2226:C:O5'	22:BA:2226:C:H6	2.00	0.45
12:CM:11:HIS:N	12:CM:44:ILE:HD12	2.31	0.45
3:AD:185:PRO:HB2	3:AD:190:LEU:HD23	1.97	0.45
22:DA:1775:U:C2'	22:DA:1776:G:O5'	2.64	0.45
22:DA:2030:A:N3	22:DA:2499:C:H5''	2.31	0.45
22:DA:975:A:C5	22:DA:990:A:N7	2.84	0.45
22:DA:2345:G:C6	22:DA:2347:C:N4	2.83	0.45
45:DX:1:SER:O	45:DX:2:ARG:C	2.54	0.45
11:AL:43:LYS:HB2	11:AL:43:LYS:NZ	2.31	0.45
32:DK:104:THR:C	32:DK:106:GLU:N	2.69	0.45
22:BA:497:A:H2'	22:BA:498:G:O4'	2.15	0.45
53:CA:238:A:H2'	53:CA:239:U:C5'	2.46	0.45
1:AB:69:VAL:HG23	1:AB:160:LEU:HD11	1.98	0.45
33:DL:79:LEU:HD23	33:DL:82:LEU:CD1	2.45	0.45
22:DA:636:G:O5'	33:DL:128:THR:HG23	2.16	0.45
6:CG:64:ALA:HB2	6:CG:126:ALA:CB	2.43	0.45
53:CA:247:G:O6	53:CA:278:G:N1	2.49	0.45
22:DA:484:C:N4	22:DA:497:A:C2	2.84	0.45
22:BA:1416:G:O2'	22:BA:1417:C:C6	2.57	0.45
22:BA:2319:G:O2'	22:BA:2320:U:C5	2.65	0.45
22:BA:336:C:C2'	22:BA:337:C:H5'	2.46	0.45
22:BA:659:G:H21	26:BE:30:GLN:NE2	2.13	0.45
32:DK:119:ALA:O	32:DK:120:PRO:C	2.55	0.45
33:DL:120:VAL:HG12	33:DL:121:THR:N	2.31	0.45
53:CA:86:G:O2'	53:CA:87:C:P	2.73	0.45
26:DE:119:ILE:HD13	26:DE:143:LEU:HD21	1.98	0.45
22:DA:2629:U:H5''	22:DA:2630:G:OP1	2.16	0.45
3:CD:195:ASN:O	3:CD:197:HIS:N	2.50	0.45
45:DX:19:HIS:C	45:DX:21:LEU:N	2.68	0.45
15:CP:48:GLU:CD	15:CP:51:ARG:HB2	2.36	0.45
21:AA:77:A:H8	21:AA:77:A:OP2	1.98	0.45
27:DF:58:ALA:HB1	27:DF:139:GLU:CG	2.46	0.45
22:BA:117:G:C6	22:BA:119:A:N6	2.84	0.45
2:CC:148:ILE:CD1	2:CC:201:ILE:HG12	2.45	0.45
7:AH:74:ILE:HD12	7:AH:128:VAL:HG22	1.98	0.45
6:AG:14:ASP:HA	6:AG:15:PRO:HD2	1.79	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:1925:C:C6	22:DA:1925:C:H3'	2.51	0.45
22:BA:2567:G:H2'	22:BA:2568:U:C6	2.52	0.45
22:BA:1322:A:O3'	40:BS:84:ARG:NH1	2.49	0.45
33:BL:131:ALA:O	33:BL:135:ILE:HD12	2.16	0.45
21:AA:475:C:H2'	21:AA:476:U:C6	2.51	0.45
53:CA:1231:G:C4	53:CA:1232:U:C6	3.04	0.45
22:DA:2359:C:H4'	51:D3:53:ASP:OD2	2.16	0.45
21:AA:1430:A:C2	21:AA:1471:U:C2	3.04	0.45
27:BF:82:TYR:HD2	27:BF:83:PRO:HD2	1.80	0.45
22:DA:2660:A:C2	22:DA:2661:G:C5	3.04	0.45
22:BA:391:A:C2	22:BA:411:G:C5	3.03	0.45
39:BR:64:VAL:HG12	39:BR:64:VAL:O	2.16	0.45
53:CA:1406:U:H2'	53:CA:1407:C:H5'	1.96	0.45
9:CJ:92:LEU:O	9:CJ:94:ALA:N	2.49	0.45
53:CA:506:G:C6	53:CA:507:C:C4	3.04	0.45
36:BO:58:ILE:HD11	36:BO:81:ARG:NH2	2.31	0.45
31:BJ:44:TYR:HD2	38:BQ:63:ARG:HG2	1.71	0.45
22:DA:1438:U:C4	22:DA:1555:G:N1	2.85	0.45
22:DA:197:A:N3	22:DA:197:A:H2'	2.29	0.45
33:DL:66:PHE:CG	33:DL:67:THR:N	2.84	0.45
53:CA:996:A:H2'	53:CA:997:U:H6	1.80	0.45
44:BW:23:LYS:CD	44:BW:24:ARG:H	2.27	0.45
39:DR:49:ILE:HD12	39:DR:51:VAL:O	2.17	0.45
22:DA:1663:G:C6	22:DA:1992:G:N7	2.84	0.45
53:CA:1184:G:C2	53:CA:1185:G:C8	3.04	0.45
22:DA:2195:U:H2'	22:DA:2196:C:H6	1.82	0.45
22:DA:2227:A:H5''	22:DA:2228:G:OP2	2.16	0.45
41:BT:45:ALA:O	41:BT:48:GLN:HB2	2.17	0.45
22:DA:228:C:C5'	22:DA:229:C:C5	3.00	0.45
53:CA:220:G:O2'	53:CA:221:C:H5'	2.16	0.45
22:DA:1085:A:H3'	22:DA:1086:A:C2	2.52	0.45
22:DA:1099:G:H5''	22:DA:1100:C:OP2	2.15	0.45
30:DI:127:SER:O	30:DI:131:THR:HG23	2.15	0.45
27:DF:135:ILE:N	27:DF:135:ILE:HD12	2.32	0.45
32:DK:61:VAL:HG13	32:DK:87:LEU:CD2	2.46	0.45
22:DA:2756:U:O2'	22:DA:2757:A:H5'	2.16	0.45
45:DX:26:ARG:HG3	45:DX:27:ARG:N	2.30	0.45
21:AA:212:G:N2	21:AA:213:G:C5	2.84	0.45
24:BC:90:ILE:HA	24:BC:104:LEU:O	2.16	0.45
4:AE:105:ILE:O	4:AE:105:ILE:HG13	2.16	0.45
3:CD:176:LYS:CG	3:CD:178:GLU:HB2	2.43	0.45
22:BA:271:G:C6	22:BA:272:A:N6	2.85	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
35:DN:31:HIS:C	35:DN:33:ILE:H	2.18	0.45
42:DU:22:GLY:HA3	42:DU:36:GLU:HB3	1.98	0.45
53:CA:977:A:HO2'	53:CA:978:A:H5''	1.79	0.45
53:CA:983:A:O2'	53:CA:984:C:C5'	2.59	0.45
4:CE:79:THR:HG23	4:CE:81:GLN:H	1.81	0.45
35:DN:62:ASN:N	35:DN:62:ASN:OD1	2.49	0.45
1:AB:30:ILE:HG23	1:AB:31:PHE:N	2.31	0.45
3:AD:191:SER:O	3:AD:192:ALA:CB	2.64	0.45
32:BK:108:ARG:HH21	37:BP:34:GLY:HA3	1.81	0.45
6:CG:29:LEU:O	6:CG:30:MET:O	2.33	0.45
22:BA:242:G:N7	51:B3:4:LYS:HG2	2.31	0.45
22:DA:975:A:O2'	22:DA:976:G:H5'	2.17	0.45
6:AG:96:ASN:N	6:AG:96:ASN:OD1	2.49	0.45
20:AU:38:GLU:HG3	20:AU:41:THR:HG21	1.97	0.45
3:AD:34:GLU:O	3:AD:36:ALA:N	2.49	0.45
21:AA:1160:G:N2	21:AA:1161:C:C2	2.85	0.45
25:BD:9:VAL:CG2	25:BD:26:VAL:HB	2.42	0.45
34:BM:71:LYS:HD3	34:BM:95:LEU:HD13	1.98	0.45
26:DE:5:LEU:HD13	26:DE:122:GLU:HB2	1.98	0.45
31:DJ:38:GLY:C	31:DJ:40:HIS:H	2.19	0.45
26:BE:5:LEU:HD23	26:BE:120:VAL:HG13	1.98	0.45
22:BA:313:G:H2'	22:BA:314:C:C6	2.52	0.45
18:AS:48:ILE:O	18:AS:48:ILE:HD12	2.16	0.45
22:DA:1845:G:C5	22:DA:1846:G:N7	2.85	0.45
19:AT:9:ARG:HD2	19:AT:12:GLN:NE2	2.31	0.45
3:CD:144:ILE:HD12	3:CD:177:MET:SD	2.56	0.45
22:DA:2879:A:HO2'	22:DA:2880:C:P	2.39	0.45
35:BN:2:ARG:O	35:BN:3:HIS:C	2.55	0.45
21:AA:428:G:H1'	21:AA:430:A:C8	2.51	0.45
24:BC:106:PRO:CA	24:BC:141:HIS:CE1	2.99	0.45
22:DA:568:U:C2'	22:DA:570:G:OP2	2.64	0.45
22:DA:1112:G:O2'	22:DA:1113:U:H5'	2.16	0.45
38:DQ:46:TYR:HD1	39:DR:74:ILE:CG2	2.30	0.45
19:AT:73:ARG:NH1	21:AA:263:A:OP1	2.44	0.45
21:AA:1342:C:H2'	21:AA:1343:G:H8	1.81	0.45
22:DA:30:G:H2'	22:DA:31:C:O4'	2.16	0.45
49:B1:34:GLU:CG	49:B1:49:LYS:HG3	2.46	0.45
22:BA:2109:U:H2'	22:BA:2110:G:H5'	1.98	0.45
29:DH:62:LEU:HD12	29:DH:63:ALA:N	2.31	0.45
22:BA:1157:G:N2	22:BA:1158:C:C2	2.84	0.45
25:DD:5:VAL:H	25:DD:32:ASN:ND2	2.14	0.45
19:AT:38:ILE:C	19:AT:40:ALA:H	2.19	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:AE:10:LEU:HG	4:AE:11:GLN:N	2.31	0.45
6:AG:88:VAL:CG2	6:AG:89:GLU:N	2.80	0.45
13:AN:91:GLU:O	13:AN:93:PRO:HD3	2.16	0.45
22:BA:2564:A:C2	22:BA:2647:U:H4'	2.52	0.45
22:BA:2531:A:OP2	28:BG:174:LYS:HG3	2.16	0.45
22:DA:983:A:C6	22:DA:984:A:C2	3.04	0.45
1:AB:172:ILE:HG22	1:AB:176:ASN:OD1	2.15	0.45
49:B1:16:THR:HB	49:B1:41:VAL:CG2	2.45	0.45
22:DA:2594:C:C4	22:DA:2595:G:N7	2.84	0.45
32:BK:14:SER:O	32:BK:52:VAL:HG13	2.16	0.45
11:CL:51:VAL:HG12	11:CL:52:CYS:N	2.31	0.45
36:BO:26:LEU:HD13	36:BO:39:VAL:HG23	1.98	0.45
2:CC:153:SER:O	53:CA:1057:G:H5''	2.16	0.45
5:AF:66:ALA:HB1	5:AF:67:PRO:HD2	1.98	0.45
2:CC:42:LEU:HD12	2:CC:46:LEU:HD12	1.97	0.45
21:AA:979:C:OP2	21:AA:980:C:H5	1.99	0.45
42:DU:40:LEU:HA	42:DU:61:GLU:HA	1.98	0.45
22:DA:1190:G:OP1	33:DL:32:GLY:HA2	2.16	0.45
14:AO:2:LEU:O	14:AO:3:SER:C	2.55	0.45
22:BA:820:A:H2'	22:BA:821:A:O4'	2.17	0.45
34:BM:102:LEU:HB3	34:BM:103:TYR:CD1	2.52	0.45
22:BA:563:A:C2	22:BA:564:C:C2	3.04	0.45
22:BA:1754:A:C6	22:BA:1755:A:C6	3.04	0.45
49:D1:16:THR:CG2	49:D1:42:VAL:HG23	2.46	0.45
28:DG:97:VAL:HG11	28:DG:123:GLU:HA	1.99	0.45
25:DD:169:ARG:O	25:DD:170:VAL:O	2.34	0.45
51:B3:7:ARG:HD2	51:B3:7:ARG:HA	1.37	0.45
32:BK:114:LYS:HE2	32:BK:114:LYS:HA	1.98	0.45
53:CA:404:G:C6	53:CA:405:U:C4	3.05	0.45
7:AH:46:GLU:O	7:AH:47:ASP:HB3	2.16	0.45
38:BQ:91:ARG:HE	39:BR:11:GLN:HB2	1.79	0.45
22:DA:1437:C:N3	22:DA:1438:U:C5	2.84	0.45
33:BL:91:ASP:H	33:BL:94:THR:CG2	2.30	0.45
37:BP:50:ARG:HG2	37:BP:57:ALA:CA	2.47	0.45
22:BA:2364:C:H2'	22:BA:2365:G:C5'	2.45	0.45
22:DA:2052:A:N7	25:DD:146:ILE:HD11	2.32	0.45
41:DT:18:GLU:HB2	41:DT:19:LYS:H	1.52	0.45
15:CP:78:VAL:O	15:CP:80:LYS:N	2.48	0.45
35:DN:14:SER:C	35:DN:16:HIS:H	2.20	0.45
22:DA:2095:A:H5'	22:DA:2096:C:OP2	2.16	0.45
10:CK:124:LYS:O	20:CU:33:ARG:NE	2.49	0.45
22:DA:1079:C:N4	22:DA:1088:A:C2	2.84	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:AA:748:G:H2'	21:AA:749:A:C8	2.51	0.45
21:AA:214:C:H2'	21:AA:215:C:C5	2.51	0.45
7:CH:85:TYR:CD2	7:CH:123:GLU:HB2	2.51	0.45
22:DA:1206:G:C6	22:DA:1207:C:C4	3.03	0.45
53:CA:977:A:C8	53:CA:1223:C:N3	2.81	0.45
53:CA:960:U:C4	53:CA:1225:A:H1'	2.51	0.45
22:BA:2092:U:N3	22:BA:2225:A:O2'	2.49	0.45
45:DX:6:VAL:HG22	45:DX:7:THR:HG23	1.98	0.45
22:DA:529:A:H4'	22:DA:530:G:OP1	2.15	0.45
22:DA:1430:G:O2'	22:DA:1431:A:C5'	2.65	0.45
33:DL:103:ILE:HD12	33:DL:103:ILE:N	2.31	0.45
22:DA:2868:A:H2'	22:DA:2869:G:H8	1.69	0.45
22:DA:1016:G:C2	22:DA:1147:A:C2	3.04	0.45
31:DJ:30:THR:CG2	31:DJ:31:GLU:N	2.80	0.45
27:BF:134:GLN:O	27:BF:136:ILE:N	2.39	0.45
22:DA:747:U:H6	22:DA:747:U:H5''	1.80	0.45
22:DA:671:C:H2'	22:DA:671:C:H6	1.36	0.45
11:CL:106:VAL:CG2	11:CL:116:TYR:HB3	2.46	0.45
13:AN:22:LYS:CG	13:AN:23:ARG:N	2.76	0.45
22:BA:1867:G:H2'	22:BA:1868:C:H5'	1.97	0.45
11:AL:43:LYS:HG3	21:AA:1492:A:OP1	2.16	0.45
22:BA:1268:A:H2'	22:BA:1269:A:O4'	2.16	0.45
24:DC:28:PRO:HB3	24:DC:62:ARG:NH2	2.29	0.45
28:BG:1:SER:O	28:BG:3:VAL:HG12	2.15	0.45
53:CA:1004:A:H2'	53:CA:1005:A:C8	2.51	0.45
27:DF:28:PRO:HA	27:DF:158:THR:OG1	2.17	0.45
22:BA:1496:A:H2'	22:BA:1498:C:C4	2.50	0.45
21:AA:206:C:H2'	21:AA:207:C:C4'	2.46	0.45
35:BN:55:ALA:HB1	35:BN:80:PHE:N	2.31	0.45
22:DA:1845:G:C4	22:DA:1846:G:C8	3.05	0.45
19:AT:4:LYS:O	19:AT:5:SER:C	2.54	0.45
15:AP:10:GLY:O	21:AA:624:C:H4'	2.16	0.45
22:DA:533:G:N2	38:DQ:44:TYR:CD1	2.78	0.45
2:AC:35:ASP:O	2:AC:37:LYS:N	2.46	0.45
11:AL:2:THR:HB	11:AL:5:GLN:H	1.82	0.45
22:DA:1112:G:H2'	22:DA:1113:U:C5	2.52	0.45
22:BA:324:A:H61	22:BA:338:G:H2'	1.82	0.45
22:DA:845:A:N3	22:DA:847:U:H1'	2.31	0.45
29:BH:100:ALA:O	29:BH:101:ASP:C	2.55	0.45
22:DA:370:G:C8	22:DA:370:G:OP2	2.69	0.45
25:DD:94:GLN:HG2	25:DD:94:GLN:O	2.16	0.45
53:CA:312:C:H2'	53:CA:313:A:O4'	2.16	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:2185:U:H2'	22:DA:2186:G:H8	1.82	0.45
21:AA:1503:A:C8	21:AA:1531:A:H1'	2.51	0.45
21:AA:821:G:H2'	21:AA:822:U:H6	1.81	0.45
12:AM:86:ARG:HA	12:AM:96:VAL:HG13	1.97	0.45
22:DA:1819:A:O4'	22:DA:1821:A:C5	2.68	0.45
21:AA:829:G:C6	21:AA:858:G:C2	3.05	0.45
22:DA:2619:C:H5'	25:DD:157:LYS:HG2	1.98	0.45
5:AF:47:LEU:HB3	17:AR:65:SER:OG	2.16	0.45
53:CA:814:A:H2'	53:CA:816:A:C5'	2.46	0.45
3:CD:104:MET:SD	3:CD:142:VAL:HG13	2.56	0.45
22:DA:851:C:O4'	47:DZ:46:MET:HG2	2.16	0.45
34:DM:108:VAL:HA	34:DM:109:PRO:HD3	1.81	0.45
22:BA:1445:G:C6	22:BA:1446:C:C4	3.04	0.45
19:CT:42:ASP:O	19:CT:43:LYS:C	2.54	0.45
21:AA:340:U:H2'	21:AA:341:C:H6	1.81	0.45
22:BA:2699:C:H2'	22:BA:2700:A:O4'	2.16	0.45
8:CI:15:ALA:O	8:CI:66:VAL:HA	2.15	0.45
27:BF:82:TYR:HA	27:BF:83:PRO:HD2	1.73	0.45
3:CD:1:ALA:HB1	53:CA:405:U:O4	2.17	0.45
40:DS:5:ALA:HB3	40:DS:54:ALA:HB2	1.97	0.45
8:CI:80:HIS:O	8:CI:84:ARG:HB2	2.17	0.45
24:DC:115:ILE:HB	24:DC:126:GLY:O	2.16	0.45
53:CA:525:C:N4	53:CA:526:C:N4	2.64	0.45
53:CA:1466:C:N4	57:CA:1839:HOH:O	2.49	0.45
45:BX:10:ARG:HB2	45:BX:11:PRO:CD	2.47	0.45
22:BA:1216:G:C6	22:BA:1217:U:C4	3.04	0.45
3:CD:48:SER:O	3:CD:49:ASP:C	2.53	0.45
11:AL:80:LEU:HD12	11:AL:80:LEU:HA	1.64	0.45
31:BJ:36:LEU:HD12	31:BJ:36:LEU:HA	1.67	0.45
13:AN:47:LEU:HD23	13:AN:47:LEU:O	2.16	0.45
22:DA:1769:U:H1'	22:DA:1984:G:N2	2.32	0.45
31:BJ:3:THR:HG21	38:BQ:60:TRP:NE1	2.31	0.45
10:CK:91:GLY:O	10:CK:92:ARG:C	2.55	0.45
21:AA:197:A:H1'	21:AA:198:G:O4'	2.17	0.45
31:DJ:44:TYR:HD1	38:DQ:63:ARG:HH21	1.61	0.45
10:AK:95:THR:HG23	10:AK:96:ILE:N	2.31	0.45
24:DC:226:PRO:O	24:DC:227:VAL:C	2.55	0.45
20:AU:34:ARG:C	20:AU:36:PHE:N	2.69	0.45
53:CA:765:G:C6	53:CA:812:G:C5	3.05	0.45
41:BT:26:LYS:O	41:BT:27:SER:CB	2.65	0.45
41:BT:50:LEU:HD12	41:BT:50:LEU:N	2.17	0.45
54:DB:42:C:C5	27:DF:65:LEU:HD22	2.51	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:1857:G:C1'	22:DA:1884:G:H22	2.16	0.45
22:DA:1288:G:N3	22:DA:1288:G:H2'	2.31	0.45
22:BA:2134:A:OP1	22:BA:2134:A:H8	1.99	0.45
22:DA:507:A:OP2	22:DA:507:A:H2'	2.16	0.45
22:DA:112:U:H5'	46:DY:58:ASN:ND2	2.30	0.45
41:DT:25:GLU:HA	41:DT:29:THR:O	2.16	0.45
1:CB:90:PHE:HE1	1:CB:92:ASN:HD22	1.63	0.45
22:DA:300:A:N7	22:DA:334:C:H4'	2.32	0.45
13:CN:80:ARG:HG2	13:CN:81:ILE:N	2.32	0.45
22:BA:2092:U:C2	22:BA:2225:A:O2'	2.64	0.45
22:BA:783:A:H2'	22:BA:783:A:H8	1.31	0.45
1:AB:30:ILE:HD11	1:AB:38:HIS:CG	2.52	0.45
6:AG:110:ARG:HH11	6:AG:110:ARG:HB2	1.81	0.45
1:CB:202:ASN:HB3	1:CB:203:ASP:H	1.62	0.45
12:CM:22:TYR:HB2	12:CM:65:GLU:HG2	1.99	0.45
1:AB:107:ARG:O	1:AB:110:ILE:HB	2.16	0.45
13:AN:20:PHE:C	13:AN:22:LYS:N	2.70	0.45
11:AL:43:LYS:HB2	11:AL:44:PRO:HD2	1.95	0.45
21:AA:1432:G:H1'	21:AA:1468:A:N6	2.32	0.45
22:BA:478:A:H62	22:BA:502:A:N6	2.14	0.45
25:DD:122:VAL:HG22	25:DD:127:PHE:O	2.16	0.45
22:DA:61:C:C4	22:DA:94:A:C2	3.05	0.45
22:DA:1867:G:H2'	22:DA:1868:C:C6	2.51	0.45
16:AQ:64:ARG:HE	16:AQ:66:LEU:HD21	1.82	0.45
7:AH:9:MET:HG3	7:AH:26:MET:SD	2.56	0.45
36:DO:31:THR:HG23	36:DO:34:HIS:O	2.16	0.45
19:AT:4:LYS:O	19:AT:6:ALA:N	2.50	0.45
12:CM:100:ARG:NH1	12:CM:102:LYS:HE3	2.30	0.45
18:CS:33:TRP:H	18:CS:33:TRP:HE3	1.62	0.45
48:D0:6:LYS:HG2	48:D0:7:PRO:O	2.17	0.45
22:DA:1264:A:N3	22:DA:2015:A:N6	2.64	0.45
22:DA:1826:G:OP2	24:DC:220:ARG:HB3	2.16	0.45
22:BA:1312:U:H4'	22:BA:1313:U:O5'	2.16	0.45
22:DA:1700:A:C2'	22:DA:1701:A:H5'	2.47	0.45
15:AP:20:VAL:HG22	15:AP:21:VAL:N	2.31	0.45
21:AA:1338:G:C6	21:AA:1339:A:C6	3.05	0.45
39:DR:48:LYS:N	39:DR:48:LYS:HD2	2.29	0.45
21:AA:1272:G:C5	21:AA:1273:C:C4	3.04	0.45
21:AA:267:C:O2'	21:AA:268:U:C5'	2.64	0.45
22:DA:426:C:O2'	22:DA:427:U:H5'	2.17	0.45
22:DA:2513:A:H2	25:DD:148:GLN:HE21	1.62	0.45
11:AL:74:GLN:O	11:AL:75:GLU:C	2.54	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
45:BX:52:ALA:O	45:BX:53:LYS:HB3	2.14	0.45
22:BA:2611:C:H2'	22:BA:2612:C:H6	1.81	0.45
29:DH:49:ALA:HB3	29:DH:50:ARG:NH2	2.31	0.45
21:AA:1052:U:H5''	21:AA:1053:G:OP2	2.16	0.45
21:AA:672:U:H2'	21:AA:673:A:H8	1.81	0.45
42:DU:85:ARG:NE	42:DU:85:ARG:HA	2.32	0.45
53:CA:1441:A:H2'	53:CA:1442:G:O4'	2.17	0.45
43:DV:75:GLN:HG3	43:DV:92:VAL:HG11	1.98	0.45
3:CD:106:PHE:CD1	3:CD:106:PHE:N	2.70	0.45
24:BC:83:ASP:HA	24:BC:84:PRO:HD3	1.76	0.45
31:DJ:77:HIS:CE1	31:DJ:83:GLY:HA3	2.51	0.45
27:BF:33:ILE:HG12	27:BF:155:ILE:HG12	1.98	0.45
49:B1:39:ASP:HA	49:B1:40:PRO:HD2	1.85	0.45
27:DF:155:ILE:HD12	27:DF:155:ILE:H	1.80	0.45
22:BA:1029:A:C8	22:BA:1030:C:C6	3.04	0.45
53:CA:888:G:O3'	53:CA:1488:G:H4'	2.17	0.45
1:AB:156:LEU:O	1:AB:156:LEU:HG	2.17	0.45
2:AC:61:LYS:HA	2:AC:61:LYS:HD2	1.65	0.45
22:DA:295:G:H2'	22:DA:295:G:N3	2.31	0.45
2:AC:96:VAL:HB	2:AC:97:PRO:HD2	1.98	0.45
22:DA:586:A:H5'	26:DE:84:THR:HG21	1.97	0.45
22:BA:608:A:H2'	22:BA:609:A:O4'	2.17	0.45
44:BW:41:GLY:C	44:BW:43:LYS:N	2.67	0.45
22:DA:656:G:O2'	22:DA:657:U:O4'	2.23	0.45
22:DA:1022:G:N2	22:DA:1142:A:C2	2.76	0.45
10:AK:125:LYS:O	10:AK:126:ARG:HB2	2.17	0.45
22:DA:2209:G:C6	22:DA:2216:G:N1	2.85	0.45
22:DA:2657:A:O2'	22:DA:2658:C:C5'	2.64	0.45
28:DG:91:VAL:O	28:DG:93:TYR:N	2.50	0.45
22:DA:1654:A:O2'	22:DA:1655:A:O5'	2.34	0.45
41:DT:40:LYS:HA	41:DT:43:ILE:CG2	2.46	0.45
53:CA:981:U:O4	53:CA:1222:G:O6	2.35	0.45
22:BA:2196:C:O2'	22:BA:2197:U:H5'	2.16	0.45
22:BA:705:A:C2	22:BA:706:A:C4	3.04	0.45
22:DA:855:G:C2	44:DW:23:LYS:HG2	2.52	0.45
1:AB:148:GLY:CA	1:AB:151:LYS:HE3	2.45	0.45
22:BA:2430:A:H5'	22:BA:2431:U:OP2	2.16	0.45
53:CA:1447:A:O3'	53:CA:1448:C:H6	2.00	0.45
10:AK:39:ASN:O	10:AK:40:ALA:CB	2.65	0.45
22:DA:2467:C:N4	22:DA:2468:A:C6	2.85	0.45
26:BE:190:ALA:C	26:BE:192:ALA:N	2.70	0.45
1:AB:53:LEU:HD21	1:AB:212:TYR:OH	2.17	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:2835:A:N6	22:DA:2879:A:C4	2.85	0.45
6:AG:3:ARG:HB2	6:AG:3:ARG:HH11	1.81	0.45
19:CT:4:LYS:HB3	19:CT:4:LYS:HE3	1.72	0.45
24:BC:257:ARG:NH1	24:BC:263:ASP:OD2	2.48	0.45
29:DH:84:ALA:HB3	29:DH:148:ALA:HB2	1.99	0.45
22:DA:1301:A:C4	22:DA:1303:G:N7	2.85	0.45
18:CS:11:ASP:O	18:CS:14:LEU:HG	2.17	0.45
24:DC:171:VAL:HG23	24:DC:185:ALA:HB1	1.99	0.45
2:AC:34:SER:OG	2:AC:94:ALA:HA	2.17	0.45
22:BA:1669:A:C2'	22:BA:1669:A:N3	2.77	0.45
38:DQ:4:LYS:HZ1	38:DQ:6:GLY:HA3	1.81	0.45
32:BK:99:ILE:CG2	32:BK:100:PHE:N	2.78	0.45
53:CA:166:U:C2'	53:CA:167:A:H5'	2.47	0.45
22:BA:1885:A:H2'	22:BA:1886:U:O4'	2.17	0.45
31:DJ:92:MET:HE2	31:DJ:95:ARG:HD2	1.98	0.45
22:BA:435:C:O2'	22:BA:436:C:H5'	2.16	0.45
22:BA:2742:G:P	52:B4:24:ARG:HH12	2.39	0.45
22:DA:2508:G:N2	22:DA:2582:G:C6	2.84	0.45
24:BC:184:GLU:O	24:BC:185:ALA:HB3	2.17	0.45
21:AA:765:G:N1	21:AA:812:G:O2'	2.38	0.45
12:AM:52:ILE:O	12:AM:55:LEU:HB2	2.17	0.45
1:CB:86:CYS:SG	1:CB:220:VAL:HB	2.57	0.45
24:DC:196:ASN:OD1	24:DC:199:HIS:HB2	2.17	0.45
22:DA:121:G:H2'	22:DA:122:G:H8	1.80	0.45
40:DS:19:LEU:HD11	48:D0:19:ASP:O	2.15	0.45
7:CH:104:SER:OG	7:CH:109:VAL:HG22	2.17	0.45
22:BA:2315:G:O2'	22:BA:2316:G:H5'	2.16	0.45
29:BH:132:PHE:CG	29:BH:133:GLN:N	2.84	0.45
21:AA:697:U:O2	21:AA:798:U:H1'	2.17	0.45
22:DA:1651:G:N2	22:DA:2007:U:C2	2.85	0.45
23:BB:8:C:O3'	36:BO:25:ARG:NH1	2.50	0.45
28:BG:38:ASP:OD1	28:BG:38:ASP:N	2.48	0.45
32:DK:73:ASP:OD1	32:DK:73:ASP:N	2.42	0.45
53:CA:610:U:O4'	53:CA:610:U:O2	2.35	0.45
6:AG:7:GLY:O	6:AG:8:GLN:HB3	2.16	0.45
22:DA:1437:C:N4	22:DA:1552:A:H2	2.15	0.45
22:DA:833:A:H2'	22:DA:834:G:H8	1.78	0.45
44:BW:44:PHE:O	44:BW:78:PHE:HA	2.16	0.45
22:DA:33:C:O2	22:DA:447:A:N6	2.49	0.45
37:DP:90:ALA:HB3	37:DP:110:LYS:HB2	1.99	0.45
35:BN:103:ARG:HD3	35:BN:110:MET:CE	2.46	0.45
22:DA:2093:G:N2	22:DA:2094:A:C4	2.84	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:2024:G:H2'	22:DA:2025:C:C6	2.52	0.45
1:AB:185:ILE:CG1	1:AB:185:ILE:O	2.65	0.45
24:DC:147:PRO:HD3	24:DC:184:GLU:CG	2.39	0.45
22:DA:319:G:O6	22:DA:333:G:C6	2.70	0.45
3:AD:187:ARG:NH1	3:AD:190:LEU:O	2.45	0.45
53:CA:1129:C:H1'	53:CA:1146:A:N6	2.29	0.45
22:BA:459:U:OP2	22:BA:469:G:N1	2.42	0.45
22:DA:279:A:C6	22:DA:280:U:N3	2.85	0.45
34:BM:42:THR:HG22	34:BM:93:VAL:HG23	1.97	0.45
47:BZ:43:ILE:C	47:BZ:43:ILE:HD12	2.36	0.45
28:DG:94:ARG:NH2	28:DG:111:PRO:HB3	2.31	0.45
53:CA:66:A:C2'	53:CA:66:A:N3	2.78	0.45
24:DC:73:ILE:HA	24:DC:74:PRO:HD2	1.78	0.45
15:AP:10:GLY:HA3	15:AP:15:PRO:CA	2.44	0.45
38:DQ:40:LYS:HD2	38:DQ:44:TYR:HE2	1.79	0.45
22:BA:2820:A:O2'	22:BA:2821:A:P	2.74	0.45
29:BH:95:GLY:C	29:BH:97:ARG:N	2.70	0.45
24:DC:52:HIS:HD2	24:DC:217:PRO:O	1.99	0.45
21:AA:1394:A:C6	21:AA:1501:C:H4'	2.51	0.45
22:BA:322:A:C2	22:BA:340:A:C6	3.05	0.45
24:DC:67:LYS:CB	24:DC:150:GLY:HA2	2.45	0.45
21:AA:1272:G:C6	21:AA:1273:C:C4	3.04	0.45
33:DL:100:ILE:O	33:DL:101:ILE:CB	2.64	0.45
22:BA:283:G:N1	22:BA:284:U:C2	2.85	0.45
22:BA:2340:A:H2'	22:BA:2341:G:C8	2.51	0.45
22:DA:7:G:O2'	31:DJ:15:TRP:HZ2	1.99	0.45
22:BA:303:G:C5	22:BA:304:U:C5	3.04	0.45
22:BA:1183:U:H2'	22:BA:1184:U:C6	2.51	0.45
53:CA:321:A:O2'	53:CA:1436:U:H5'	2.16	0.45
13:CN:16:ALA:HA	13:CN:20:PHE:HD1	1.82	0.45
39:BR:66:HIS:CE1	39:BR:94:THR:HG22	2.51	0.45
30:DI:28:GLY:O	30:DI:29:GLN:C	2.54	0.45
8:AI:105:ARG:HE	21:AA:1118:U:P	2.39	0.45
21:AA:1215:G:O2'	21:AA:1216:A:H5'	2.16	0.45
22:DA:811:U:C4	33:DL:21:ARG:NH1	2.82	0.45
33:DL:21:ARG:CZ	33:DL:21:ARG:HB3	2.46	0.45
53:CA:1060:U:N3	53:CA:1198:G:C6	2.84	0.45
38:DQ:71:ASN:ND2	38:DQ:106:THR:HA	2.31	0.45
22:DA:1232:G:H2'	22:DA:1233:C:C6	2.51	0.45
2:CC:198:LYS:HE2	53:CA:1058:G:OP1	2.17	0.45
5:AF:1:MET:CE	5:AF:67:PRO:HD3	2.47	0.45
2:CC:134:LYS:HD3	2:CC:138:GLN:OE1	2.17	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:1903:G:H2'	22:DA:1904:G:H8	1.82	0.45
22:DA:487:C:H2'	22:DA:488:G:H5'	1.99	0.45
22:BA:300:A:H2'	22:BA:334:C:H1'	1.99	0.45
13:CN:6:LYS:O	13:CN:10:VAL:HG23	2.16	0.45
12:AM:23:GLY:HA3	12:AM:64:VAL:HG12	1.99	0.45
22:DA:1421:G:H8	22:DA:1421:G:OP2	1.99	0.45
21:AA:1302:C:H2'	21:AA:1302:C:H6	1.12	0.45
21:AA:439:U:C2'	21:AA:440:C:H5'	2.47	0.45
1:CB:214:GLY:HA2	1:CB:217:ALA:HB3	1.99	0.45
31:DJ:69:ARG:CZ	31:DJ:89:PHE:HE1	2.29	0.45
25:DD:193:VAL:HB	25:DD:194:PRO:HD2	1.98	0.45
36:DO:28:VAL:HG23	36:DO:106:LEU:HD23	1.97	0.45
22:DA:2394:C:H5''	33:DL:63:LYS:HE3	1.98	0.45
38:DQ:87:VAL:CG1	38:DQ:88:GLU:H	2.27	0.45
22:DA:1537:G:C3'	22:DA:1538:G:H4'	2.47	0.45
22:BA:1061:U:H1'	22:BA:1070:A:O4'	2.16	0.45
22:BA:2530:A:N6	28:BG:155:PRO:HG3	2.32	0.45
28:BG:104:LEU:O	28:BG:112:VAL:HG22	2.17	0.45
6:CG:91:ARG:NH2	6:CG:92:PRO:HB2	2.32	0.45
3:CD:35:GLN:O	3:CD:36:ALA:HB2	2.17	0.45
38:DQ:91:ARG:HH11	39:DR:10:LYS:HB3	1.79	0.45
22:DA:1274:A:C6	22:DA:1302:A:C2	3.04	0.45
53:CA:1288:A:H2'	53:CA:1289:A:C8	2.52	0.45
22:DA:2199:A:C6	22:DA:2225:A:C4	3.04	0.45
22:DA:222:A:H3'	22:DA:421:C:H5'	1.98	0.45
25:DD:200:ASP:O	25:DD:201:LEU:HD23	2.17	0.45
22:BA:1722:A:H61	22:BA:1738:G:H1'	1.81	0.45
22:DA:1085:A:H3'	22:DA:1086:A:N3	2.32	0.45
13:AN:42:ASN:HD21	13:AN:46:LYS:NZ	2.14	0.45
22:DA:1286:A:O2'	22:DA:1288:G:N2	2.50	0.45
27:BF:3:LEU:HD13	27:BF:3:LEU:HA	1.62	0.45
22:DA:329:G:H4'	22:DA:330:A:OP1	2.13	0.45
4:CE:95:MET:CE	4:CE:114:LEU:HD21	2.46	0.45
22:DA:855:G:N2	44:DW:23:LYS:HG2	2.31	0.45
22:DA:127:A:H5''	22:DA:128:C:C6	2.52	0.45
33:BL:82:LEU:C	33:BL:84:LYS:H	2.19	0.45
22:BA:1011:G:H5''	38:BQ:76:SER:OG	2.16	0.45
53:CA:72:A:N6	53:CA:99:C:H1'	2.32	0.45
21:AA:1280:A:O2'	21:AA:1281:C:H5'	2.16	0.45
22:DA:362:A:C5	22:DA:363:G:C8	3.05	0.45
21:AA:243:A:C4'	21:AA:244:U:H5''	2.40	0.45
22:DA:95:A:O2'	46:DY:41:HIS:HD2	2.00	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
53:CA:335:C:O2	53:CA:1433:A:H2	1.99	0.45
22:DA:1816:C:H2'	24:DC:61:TYR:OH	2.16	0.45
34:BM:42:THR:CG2	34:BM:93:VAL:HG23	2.46	0.45
28:DG:143:VAL:O	28:DG:147:LEU:HG	2.17	0.45
26:DE:122:GLU:O	26:DE:123:LYS:HB3	2.15	0.45
33:DL:81:ASP:C	33:DL:82:LEU:HD12	2.37	0.45
25:BD:62:LYS:N	25:BD:63:PRO:CD	2.79	0.45
22:BA:2637:U:O2'	22:BA:2638:G:H5'	2.16	0.45
22:DA:781:A:H2'	22:DA:1777:U:H1'	1.98	0.45
22:BA:2148:G:HO2'	22:BA:2149:U:P	2.39	0.45
44:BW:9:THR:CG2	44:BW:10:ARG:HD3	2.47	0.45
22:DA:1721:G:HO2'	22:DA:1722:A:P	2.39	0.45
29:BH:68:ARG:NH2	29:BH:69:ALA:HA	2.32	0.45
19:CT:3:ILE:H	19:CT:3:ILE:HD12	1.82	0.45
2:CC:152:VAL:HA	2:CC:197:VAL:HG22	1.99	0.45
36:DO:18:LEU:HD21	36:DO:91:SER:HB2	1.99	0.45
15:AP:22:ALA:CB	15:AP:32:PHE:HA	2.47	0.45
21:AA:265:G:C2'	21:AA:266:G:H5'	2.47	0.45
6:AG:2:ARG:HB2	21:AA:1380:U:O4	2.17	0.45
25:BD:111:GLY:O	25:BD:169:ARG:O	2.34	0.45
22:BA:1427:A:C4	22:BA:1428:C:N4	2.85	0.45
22:DA:265:A:C6	22:DA:428:A:O4'	2.69	0.45
32:BK:97:THR:O	32:BK:118:LEU:HD21	2.17	0.45
22:BA:90:U:H2'	22:BA:91:A:H8	1.81	0.45
21:AA:1533:C:C3'	21:AA:1534:A:H5''	2.46	0.45
12:AM:13:HIS:CG	12:AM:41:ASP:HB2	2.52	0.45
27:DF:103:ILE:HG21	27:DF:173:ASP:O	2.16	0.45
21:AA:1202:U:O2'	21:AA:1203:C:C5'	2.65	0.45
28:BG:23:ILE:HD12	28:BG:23:ILE:N	2.31	0.45
22:BA:646:U:H3'	22:BA:647:G:C5'	2.46	0.45
31:DJ:54:ILE:O	31:DJ:122:LEU:HD12	2.17	0.45
22:BA:974:G:C8	22:BA:989:G:C2	3.05	0.45
53:CA:968:A:N3	53:CA:1062:U:H4'	2.32	0.45
22:BA:2792:A:C2	22:BA:2793:C:C2	3.05	0.45
32:BK:92:GLU:O	32:BK:93:GLN:O	2.35	0.45
22:DA:2771:C:H2'	22:DA:2772:C:H6	1.80	0.45
2:AC:32:LEU:HD21	13:AN:92:ILE:HG12	1.99	0.45
22:DA:2107:G:H2'	22:DA:2108:A:H8	1.81	0.45
22:BA:1116:G:C2'	22:BA:1117:C:O5'	2.65	0.45
34:DM:2:LEU:O	34:DM:69:PRO:HG2	2.17	0.45
22:BA:942:G:C2'	22:BA:943:A:H5'	2.47	0.45
27:DF:122:ASP:HB2	27:DF:126:ASN:HB2	1.99	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
43:BV:1:MET:HG3	43:BV:2:PHE:N	2.31	0.45
22:BA:2768:U:H2'	22:BA:2769:U:O4'	2.17	0.45
22:BA:57:C:H2'	22:BA:58:G:O4'	2.17	0.45
10:AK:64:VAL:O	10:AK:67:GLU:HB2	2.17	0.45
53:CA:386:C:C4	53:CA:387:U:C5	3.05	0.45
3:AD:123:MET:HA	3:AD:128:VAL:HA	1.98	0.45
41:DT:7:LEU:O	41:DT:7:LEU:HD23	2.17	0.45
22:BA:976:G:C2	22:BA:977:G:C8	3.05	0.45
22:BA:532:A:N3	22:BA:532:A:H2'	2.30	0.45
22:DA:1337:G:H8	22:DA:1337:G:OP2	1.99	0.45
18:AS:78:THR:OG1	18:AS:78:THR:O	2.33	0.45
53:CA:438:U:C5	53:CA:494:G:N7	2.85	0.45
22:DA:1201:U:H2'	22:DA:1202:G:H8	1.81	0.45
29:BH:34:GLY:O	29:BH:35:LYS:HG3	2.16	0.45
31:BJ:6:ALA:O	31:BJ:48:VAL:HG21	2.16	0.45
49:D1:24:LYS:HE2	49:D1:52:LYS:NZ	2.32	0.45
39:BR:49:ILE:HG21	39:BR:53:PHE:N	2.32	0.45
39:BR:49:ILE:HG22	39:BR:54:VAL:N	2.31	0.45
44:BW:22:VAL:O	44:BW:25:PHE:HB2	2.17	0.45
44:BW:39:GLN:NE2	44:BW:43:LYS:H	2.15	0.45
22:BA:1060:U:O4'	22:BA:1062:G:C5'	2.61	0.45
21:AA:198:G:C2	21:AA:220:G:H1'	2.52	0.45
28:BG:84:LYS:HE2	28:BG:84:LYS:N	2.32	0.45
22:DA:1346:G:HO2'	22:DA:1347:A:H8	1.55	0.45
3:CD:25:ARG:HG2	3:CD:25:ARG:NH1	2.31	0.45
11:AL:33:CYS:CB	11:AL:54:VAL:HG22	2.32	0.45
6:CG:21:LEU:O	6:CG:25:PHE:N	2.50	0.45
25:BD:93:GLY:O	25:BD:94:GLN:C	2.54	0.45
8:CI:53:LEU:O	8:CI:54:VAL:HG13	2.16	0.45
20:AU:33:ARG:CD	20:AU:34:ARG:HG3	2.47	0.45
41:BT:27:SER:O	41:BT:28:ASN:CG	2.55	0.45
25:BD:12:THR:HG22	25:BD:13:ARG:H	1.81	0.45
22:BA:1198:U:O2'	38:BQ:4:LYS:HE3	2.17	0.45
22:DA:2798:U:H5'	22:DA:2800:A:C6	2.51	0.45
22:DA:500:G:H1'	22:DA:505:A:N6	2.32	0.45
4:AE:112:ALA:O	4:AE:113:VAL:C	2.56	0.45
22:DA:1205:A:N7	26:DE:165:HIS:CG	2.85	0.45
53:CA:1357:A:C5	53:CA:1358:U:C4	3.04	0.45
37:BP:63:ILE:HG22	37:BP:63:ILE:O	2.17	0.45
22:DA:800:A:N1	22:DA:802:A:C8	2.85	0.45
22:DA:859:G:O2'	22:DA:860:U:P	2.74	0.45
22:DA:2261:C:C2	22:DA:2280:G:C2	3.05	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
24:DC:122:ALA:HB3	24:DC:127:ASN:HD21	1.80	0.45
21:AA:1319:A:C8	21:AA:1323:G:C6	3.04	0.45
31:DJ:97:PRO:C	31:DJ:99:ARG:H	2.20	0.45
12:CM:64:VAL:O	12:CM:65:GLU:C	2.55	0.45
22:BA:1868:C:H2'	22:BA:1869:G:O4'	2.16	0.45
49:B1:47:ILE:CD1	49:B1:47:ILE:H	2.21	0.45
30:BI:52:LEU:HD12	30:BI:52:LEU:N	2.32	0.45
28:DG:94:ARG:HG2	28:DG:104:LEU:HA	1.99	0.45
28:DG:103:ASN:O	28:DG:104:LEU:HD23	2.17	0.45
22:BA:1499:C:H2'	22:BA:1500:G:C8	2.40	0.45
53:CA:687:A:C2	53:CA:704:A:C5	3.05	0.45
53:CA:1452:C:H4'	53:CA:1453:G:C5'	2.47	0.45
22:BA:313:G:H2'	22:BA:314:C:H6	1.82	0.45
21:AA:80:A:C2	21:AA:90:C:C2	3.05	0.45
53:CA:513:C:O2'	53:CA:514:C:H6	2.00	0.45
21:AA:885:G:H1'	21:AA:914:A:N1	2.32	0.45
29:BH:8:LYS:O	29:BH:9:VAL:CB	2.62	0.45
10:CK:30:ILE:HG12	10:CK:45:THR:HG22	1.99	0.45
22:BA:1588:G:C2	22:BA:1589:U:C6	3.05	0.45
21:AA:414:A:C2	21:AA:415:A:N9	2.85	0.45
22:DA:85:G:O2'	22:DA:86:G:C5'	2.65	0.45
8:AI:129:ARG:HA	8:AI:129:ARG:NH1	2.32	0.45
22:BA:2320:U:H4'	22:BA:2321:U:C5'	2.47	0.45
15:AP:37:GLY:HA2	15:AP:51:ARG:NH1	2.31	0.45
22:DA:2035:G:H5''	22:DA:2036:C:C5	2.51	0.45
22:DA:348:A:H2'	22:DA:349:U:C6	2.52	0.45
22:DA:426:C:H2'	22:DA:427:U:H5'	1.98	0.45
29:BH:1:MET:HG2	29:BH:23:ALA:HA	1.98	0.45
36:BO:2:ASP:HB3	36:BO:5:SER:CB	2.47	0.45
22:BA:283:G:C6	22:BA:284:U:C2	3.05	0.45
22:BA:2630:G:H2'	22:BA:2631:G:C8	2.48	0.45
53:CA:157:U:C2'	53:CA:158:G:H5'	2.46	0.45
22:BA:2531:A:OP1	28:BG:174:LYS:HG3	2.17	0.45
12:CM:86:ARG:HH11	12:CM:90:HIS:HD2	1.65	0.45
22:BA:534:U:H2'	22:BA:535:G:C8	2.52	0.45
29:BH:147:VAL:CG1	29:BH:149:GLU:HG3	2.47	0.45
21:AA:1442:G:C4	21:AA:1443:C:C5	3.05	0.45
9:AJ:11:LYS:CG	9:AJ:97:ASP:HB3	2.45	0.45
22:DA:2812:G:N2	22:DA:2889:C:C2	2.84	0.45
33:BL:89:VAL:HA	33:BL:121:THR:HG23	1.99	0.45
22:BA:81:G:C6	22:BA:82:U:C2	3.05	0.45
22:BA:1444:G:H2'	22:BA:1445:G:H8	1.81	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
15:AP:14:ARG:NH1	21:AA:617:G:H21	2.15	0.45
36:BO:39:VAL:HG12	36:BO:39:VAL:O	2.16	0.45
9:CJ:49:PHE:HE2	13:CN:73:LEU:HD13	1.80	0.45
53:CA:202:G:O2'	53:CA:468:A:H8	2.00	0.45
22:BA:1582:C:C5	22:BA:1583:A:C2	3.05	0.45
21:AA:368:U:O2'	21:AA:369:G:P	2.74	0.45
53:CA:688:G:C5	53:CA:700:G:C2	3.05	0.45
22:BA:1441:G:H2'	22:BA:1442:U:C6	2.52	0.45
22:DA:2691:C:C4	22:DA:2719:G:N2	2.85	0.45
22:BA:45:G:H5''	22:BA:46:G:OP1	2.16	0.45
18:AS:62:THR:HG22	18:AS:63:ASP:N	2.32	0.45
40:DS:13:SER:OG	40:DS:16:LYS:HD2	2.16	0.45
22:BA:1291:C:H2'	22:BA:1292:G:O4'	2.17	0.45
2:AC:171:ARG:O	2:AC:202:PHE:CD2	2.69	0.45
22:DA:289:G:C2	22:DA:352:A:C2	3.05	0.45
22:BA:2784:U:H4'	25:BD:42:ASN:HD21	1.82	0.45
42:BU:60:LYS:HA	42:BU:60:LYS:HD2	1.76	0.45
22:DA:2672:U:H6	22:DA:2672:U:O5'	1.99	0.45
43:BV:64:VAL:HG12	43:BV:67:GLY:HA2	1.99	0.45
21:AA:621:A:H2'	21:AA:622:A:C8	2.52	0.45
22:DA:2066:C:H5''	57:DA:3528:HOH:O	2.17	0.45
21:AA:543:U:H2'	21:AA:544:G:O4'	2.17	0.45
38:BQ:63:ARG:NH2	38:BQ:96:ASP:N	2.65	0.45
49:D1:5:ARG:HH21	49:D1:23:THR:HB	1.79	0.45
22:DA:2415:G:C5	22:DA:2416:C:C4	3.04	0.45
44:BW:39:GLN:HG2	44:BW:40:ARG:N	2.31	0.45
22:DA:1342:A:C6	22:DA:1397:U:C5	3.04	0.45
53:CA:1207:G:H2'	53:CA:1208:C:H6	1.82	0.45
22:DA:2094:A:O2'	22:DA:2095:A:O4'	2.18	0.45
22:DA:229:C:O2'	22:DA:230:G:O5'	2.35	0.45
22:DA:1027:A:N7	22:DA:1126:A:C2	2.85	0.45
22:DA:1857:G:H1'	22:DA:1884:G:N2	2.15	0.45
32:DK:87:LEU:HD23	32:DK:87:LEU:N	2.31	0.45
28:DG:90:GLY:HA3	28:DG:93:TYR:CZ	2.52	0.45
22:DA:2324:U:C5'	22:DA:2325:G:H5''	2.33	0.45
22:DA:311:A:C2	22:DA:328:U:O4	2.69	0.45
18:CS:36:ARG:HG3	53:CA:1320:C:H41	1.82	0.45
53:CA:1366:C:O2'	53:CA:1367:C:O4'	2.35	0.45
53:CA:982:U:C6	53:CA:983:A:C6	3.05	0.45
35:DN:67:PHE:CE2	35:DN:73:ASN:ND2	2.84	0.45
26:BE:134:LEU:HD21	26:BE:161:ALA:HB2	1.98	0.45
22:DA:202:U:H3'	22:DA:203:A:C8	2.52	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
28:DG:1:SER:C	28:DG:3:VAL:N	2.70	0.45
22:DA:49:A:N6	22:DA:177:G:N7	2.65	0.45
35:BN:73:ASN:HD22	35:BN:76:VAL:HG11	1.82	0.45
22:BA:460:A:H2'	22:BA:461:C:O4'	2.17	0.45
22:BA:2307:G:O6	27:BF:40:GLY:HA3	2.17	0.45
22:BA:622:G:H2'	22:BA:623:C:C6	2.52	0.45
7:CH:54:THR:C	7:CH:56:PRO:HD3	2.38	0.45
22:DA:972:A:C2	22:DA:973:A:N6	2.85	0.45
22:DA:2290:G:H2'	22:DA:2291:U:C6	2.52	0.45
53:CA:533:A:H2'	57:CA:1850:HOH:O	2.17	0.45
28:DG:116:LEU:HA	28:DG:117:PRO:HD3	1.70	0.45
7:AH:4:ASP:HA	7:AH:5:PRO:HD2	1.84	0.45
22:DA:1607:C:H4'	22:DA:1608:A:O5'	2.16	0.45
30:DI:60:VAL:HG22	30:DI:66:PHE:HE2	1.82	0.45
30:DI:69:VAL:O	30:DI:69:VAL:HG13	2.17	0.45
13:CN:94:GLY:O	13:CN:95:LEU:C	2.54	0.45
13:CN:12:ARG:NH2	53:CA:980:C:O3'	2.50	0.45
5:CF:44:ARG:HA	5:CF:58:HIS:HA	1.99	0.45
53:CA:803:G:H2'	53:CA:804:U:C6	2.51	0.45
28:DG:148:ARG:HB2	28:DG:152:ARG:HH21	1.78	0.45
40:DS:66:ILE:CD1	40:DS:66:ILE:H	2.28	0.45
5:AF:9:MET:HE3	17:AR:64:LEU:HD22	1.98	0.45
32:BK:40:LYS:HD2	32:BK:58:LEU:O	2.16	0.45
53:CA:142:G:C5	53:CA:143:A:C8	3.05	0.45
36:BO:88:LYS:HE2	36:BO:116:GLN:HE22	1.82	0.45
22:DA:388:G:N7	22:DA:390:U:H2'	2.32	0.45
22:DA:1997:C:P	25:DD:129:THR:HG1	2.39	0.45
22:DA:1426:G:H8	22:DA:1426:G:OP2	2.00	0.45
41:BT:68:LYS:O	41:BT:69:ARG:O	2.34	0.45
38:DQ:26:ALA:HA	38:DQ:29:ARG:CG	2.47	0.45
53:CA:814:A:H2'	53:CA:816:A:O5'	2.16	0.45
6:CG:108:ARG:HH21	53:CA:1240:U:H5''	1.81	0.45
1:AB:136:ARG:HD2	1:AB:136:ARG:O	2.17	0.45
22:DA:1936:A:H2	22:DA:1943:U:C5	2.35	0.45
54:DB:38:C:O2'	54:DB:39:A:H5'	2.17	0.45
22:BA:875:G:H2'	22:BA:876:C:H5'	1.99	0.45
1:CB:169:HIS:CD2	1:CB:173:LYS:HZ1	2.35	0.45
22:DA:2620:C:H2'	22:DA:2621:G:O4'	2.17	0.45
2:AC:146:LYS:HB2	2:AC:202:PHE:CD2	2.52	0.45
8:AI:112:ARG:HH22	9:AJ:64:GLN:NE2	2.14	0.45
22:BA:2594:C:N4	57:BA:3793:HOH:O	2.50	0.45
46:DY:6:LEU:HD21	46:DY:56:LEU:HD12	1.98	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:AN:62:ARG:O	13:AN:63:CYS:C	2.54	0.45
34:DM:97:GLN:HB2	34:DM:98:PRO:HD2	1.99	0.45
22:BA:393:C:H2'	22:BA:394:C:H6	1.82	0.45
54:DB:29:A:OP2	36:DO:32:PRO:HD2	2.17	0.45
22:DA:732:C:N4	22:DA:733:G:C6	2.85	0.45
22:BA:1681:G:O2'	22:BA:1762:A:H1'	2.16	0.45
36:DO:94:ARG:HD2	36:DO:97:PHE:O	2.16	0.45
3:CD:56:GLU:HA	3:CD:56:GLU:OE1	2.17	0.45
21:AA:103:U:H2'	21:AA:103:U:O2	2.17	0.45
22:BA:2777:G:C8	22:BA:2777:G:O5'	2.69	0.45
22:BA:1889:A:H2'	22:BA:1890:A:O4'	2.17	0.45
22:DA:1304:A:O2'	22:DA:1305:C:O5'	2.34	0.45
22:BA:1152:C:H3'	57:BA:3365:HOH:O	2.17	0.45
31:BJ:44:TYR:HB2	38:BQ:63:ARG:CB	2.24	0.45
38:BQ:57:ARG:HA	38:BQ:60:TRP:CE3	2.52	0.45
27:BF:87:LYS:O	27:BF:88:VAL:HG23	2.16	0.45
22:BA:2331:G:O2'	44:BW:39:GLN:O	2.34	0.45
31:DJ:51:GLY:O	31:DJ:121:LYS:HE3	2.16	0.45
22:DA:616:A:H4'	26:DE:101:TYR:CZ	2.51	0.45
9:CJ:9:ARG:HB3	9:CJ:71:LEU:HD11	1.99	0.45
9:CJ:11:LYS:HE2	9:CJ:97:ASP:CG	2.38	0.45
22:DA:1275:A:O2'	22:DA:1276:A:C4'	2.65	0.45
22:DA:2216:G:O2'	22:DA:2217:G:O4'	2.35	0.45
41:BT:24:MET:HG3	41:BT:29:THR:CG2	2.47	0.45
52:D4:16:ILE:O	52:D4:17:VAL:HG13	2.17	0.45
53:CA:794:A:H8	53:CA:794:A:H5''	1.82	0.45
22:DA:1282:U:H2'	22:DA:1283:G:O4'	2.17	0.45
22:DA:82:U:H2'	22:DA:83:A:O4'	2.17	0.45
18:CS:38:THR:N	18:CS:69:LYS:HD3	2.32	0.45
26:DE:57:LYS:NZ	26:DE:58:LYS:H	2.15	0.45
53:CA:1242:G:N2	53:CA:1243:C:H1'	2.32	0.45
3:AD:169:TRP:CD2	3:AD:185:PRO:HB3	2.52	0.45
28:DG:53:PRO:HB3	28:DG:61:TRP:H	1.82	0.45
53:CA:1348:U:H2'	53:CA:1349:A:C8	2.49	0.45
22:BA:623:C:H2'	22:BA:624:C:C6	2.52	0.45
26:BE:119:ILE:HD11	26:BE:187:VAL:CG2	2.37	0.45
7:CH:59:GLU:C	7:CH:60:LEU:HD12	2.38	0.45
22:BA:571:U:C4	22:BA:575:A:C4	3.05	0.45
22:BA:2887:A:H3'	22:BA:2888:C:H6	1.81	0.45
10:CK:51:PHE:CE2	10:CK:64:VAL:HG21	2.52	0.45
33:DL:70:LYS:O	33:DL:70:LYS:HG2	2.17	0.45
53:CA:1005:A:C8	53:CA:1006:G:H1'	2.52	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:2652:C:H2'	22:DA:2653:U:O4'	2.17	0.45
22:BA:1731:G:C4	22:BA:1733:G:C8	3.05	0.45
53:CA:1447:A:O2'	53:CA:1448:C:OP1	2.29	0.45
53:CA:382:A:O2'	53:CA:383:A:H5'	2.17	0.45
25:DD:106:LYS:HB3	25:DD:206:ALA:H	1.82	0.45
21:AA:1226:C:H4'	21:AA:1227:A:OP1	2.16	0.45
21:AA:80:A:C2	21:AA:90:C:N3	2.84	0.45
25:DD:36:GLN:HE21	25:DD:38:LYS:NZ	2.14	0.45
1:AB:211:LEU:O	1:AB:215:ALA:HB2	2.17	0.45
22:DA:2835:A:C6	22:DA:2879:A:C4	3.05	0.45
21:AA:414:A:C2	21:AA:415:A:C4	3.05	0.45
21:AA:687:A:C8	21:AA:701:U:H5	2.35	0.45
22:BA:321:U:O2'	22:BA:340:A:O2'	2.16	0.45
22:BA:815:C:O2'	22:BA:816:C:H5'	2.17	0.45
53:CA:683:G:C6	53:CA:708:C:N3	2.85	0.45
25:DD:148:GLN:HG2	25:DD:152:PRO:HG2	1.99	0.45
36:BO:103:VAL:O	36:BO:105:ALA:O	2.35	0.45
53:CA:611:C:C5	53:CA:612:C:H5	2.34	0.45
21:AA:1306:A:C2'	21:AA:1307:U:H5'	2.47	0.45
26:DE:146:VAL:O	26:DE:167:VAL:HA	2.17	0.45
19:AT:38:ILE:C	19:AT:40:ALA:N	2.71	0.45
22:DA:751:A:O5'	40:DS:90:LYS:HA	2.17	0.45
9:AJ:59:LYS:CG	21:AA:972:C:H4'	2.47	0.45
22:BA:2383:G:H2'	22:BA:2384:U:H6	1.81	0.45
22:DA:1982:U:O5'	22:DA:1982:U:C6	2.70	0.45
22:BA:2402:U:C2'	22:BA:2403:C:OP2	2.64	0.45
12:AM:81:ASP:OD2	27:BF:111:ARG:HD2	2.16	0.45
22:DA:811:U:H1'	22:DA:1251:C:C2	2.52	0.45
22:DA:2497:A:H4'	22:DA:2498:C:O5'	2.16	0.45
19:CT:35:TYR:OH	53:CA:258:G:O3'	2.34	0.45
38:DQ:77:LYS:HE2	38:DQ:116:LEU:HD21	1.99	0.45
49:B1:18:HIS:HE1	49:B1:20:TYR:CE2	2.35	0.45
22:DA:2401:U:H3'	22:DA:2402:U:H5''	1.99	0.45
22:BA:1225:G:OP1	39:BR:71:LYS:HD2	2.16	0.45
22:DA:2140:G:C6	22:DA:2152:G:C6	3.05	0.45
22:BA:2264:C:H41	44:BW:11:ASN:HD21	1.65	0.45
15:AP:6:LEU:HG	15:AP:17:TYR:CB	2.47	0.45
14:AO:3:SER:O	14:AO:7:THR:HG23	2.16	0.45
30:DI:139:VAL:O	30:DI:140:GLU:HB2	2.17	0.45
49:D1:38:PHE:CD2	49:D1:39:ASP:N	2.85	0.45
22:BA:833:A:H2'	22:BA:834:G:C8	2.52	0.45
53:CA:554:A:H2'	53:CA:555:U:C6	2.52	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
30:DI:72:THR:HA	30:DI:73:PRO:HD2	1.85	0.45
16:AQ:4:ILE:N	16:AQ:4:ILE:HD12	2.31	0.45
13:CN:100:TRP:CD1	13:CN:100:TRP:C	2.89	0.45
53:CA:1049:U:H4'	53:CA:1050:G:OP2	2.17	0.45
22:BA:1061:U:H3'	22:BA:1062:G:H5''	1.99	0.44
28:BG:120:ILE:HG21	28:BG:143:VAL:HG21	1.98	0.44
3:CD:32:LYS:HD2	53:CA:429:U:OP2	2.17	0.44
3:CD:34:GLU:O	3:CD:37:PRO:HD3	2.17	0.44
16:AQ:13:SER:O	16:AQ:20:ILE:CD1	2.65	0.44
12:CM:27:THR:HG21	53:CA:1328:C:OP1	2.17	0.44
19:AT:66:ILE:O	19:AT:67:HIS:O	2.34	0.44
22:DA:204:A:C4	22:DA:206:U:O4	2.70	0.44
3:CD:80:ARG:HB2	3:CD:81:LEU:H	1.42	0.44
9:CJ:79:PRO:HA	9:CJ:84:VAL:HG11	1.98	0.44
9:CJ:41:PRO:O	9:CJ:42:LEU:HB2	2.16	0.44
41:BT:29:THR:HA	41:BT:86:THR:H	1.82	0.44
22:DA:1127:A:H2'	22:DA:1127:A:H8	1.67	0.44
22:DA:1063:G:H2'	22:DA:1064:C:C5	2.52	0.44
13:AN:42:ASN:C	13:AN:44:VAL:N	2.69	0.44
22:DA:1281:G:C6	22:DA:1290:C:N4	2.85	0.44
22:DA:1655:A:H4'	25:DD:118:PHE:CE1	2.52	0.44
22:DA:1656:C:H5''	25:DD:141:ARG:HB2	1.98	0.44
24:BC:104:LEU:HA	24:BC:104:LEU:HD12	1.59	0.44
24:BC:90:ILE:HD12	24:BC:103:ILE:O	2.17	0.44
22:BA:1459:G:O2'	22:BA:1460:U:H3'	2.16	0.44
46:BY:12:GLU:O	46:BY:15:ASN:HB2	2.17	0.44
18:CS:5:LYS:HE3	18:CS:6:LYS:H	1.81	0.44
18:CS:72:GLU:HA	53:CA:1320:C:O2'	2.17	0.44
37:BP:63:ILE:CA	37:BP:68:GLY:HA2	2.37	0.44
22:DA:2815:C:O2	48:D0:40:HIS:CE1	2.70	0.44
6:CG:4:ARG:HG2	6:CG:6:ILE:HG22	1.99	0.44
20:AU:41:THR:O	20:AU:45:LYS:HB2	2.16	0.44
37:DP:104:GLY:O	37:DP:105:LYS:HB2	2.17	0.44
14:AO:73:ASP:CB	14:AO:76:ARG:HG3	2.47	0.44
22:DA:495:G:H4'	40:DS:4:ILE:O	2.17	0.44
32:DK:104:THR:O	32:DK:107:LEU:HD22	2.16	0.44
22:BA:306:U:H2'	22:BA:307:G:O4'	2.17	0.44
22:BA:477:A:C6	22:BA:478:A:C6	3.04	0.44
22:BA:482:A:N6	22:BA:506:G:H1'	2.32	0.44
22:DA:1613:G:H2'	22:DA:1617:C:H42	1.81	0.44
22:DA:242:G:H8	51:D3:3:ILE:O	2.00	0.44
53:CA:1089:G:H1'	53:CA:1167:A:N6	2.31	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
34:DM:73:ILE:HG21	34:DM:91:TYR:CZ	2.52	0.44
19:CT:2:ASN:O	19:CT:3:ILE:C	2.55	0.44
29:BH:96:THR:C	29:BH:97:ARG:HG3	2.36	0.44
22:DA:103:A:H2'	22:DA:104:A:C8	2.52	0.44
21:AA:966:G:H2'	21:AA:967:C:C6	2.52	0.44
12:AM:9:PRO:O	12:AM:10:ASP:HB2	2.18	0.44
22:BA:811:U:C2	22:BA:1251:C:C5	3.05	0.44
22:DA:2297:A:O2'	22:DA:2298:A:H5'	2.17	0.44
22:DA:1300:G:H5'	22:DA:1301:A:N3	2.33	0.44
22:BA:2250:G:OP1	22:BA:2275:C:H2'	2.16	0.44
21:AA:1087:G:HO2'	21:AA:1088:G:H8	1.63	0.44
24:DC:78:GLU:OE2	24:DC:94:LEU:HD22	2.18	0.44
34:BM:83:GLY:O	34:BM:85:GLY:N	2.47	0.44
22:DA:265:A:C5	22:DA:428:A:C8	3.05	0.44
19:AT:72:ALA:O	19:AT:73:ARG:C	2.56	0.44
4:CE:148:SER:O	4:CE:151:MET:HB3	2.16	0.44
37:BP:19:PHE:CE2	37:BP:83:ILE:HD12	2.52	0.44
45:BX:53:LYS:C	45:BX:53:LYS:HD3	2.37	0.44
4:AE:11:GLN:HG3	4:AE:116:VAL:HG12	1.99	0.44
22:DA:164:C:H2'	22:DA:165:A:O4'	2.17	0.44
22:DA:2550:G:C6	22:DA:2551:C:C4	3.04	0.44
22:DA:2353:G:H2'	22:DA:2354:C:O4'	2.16	0.44
22:DA:749:A:H1'	22:DA:1618:A:OP1	2.17	0.44
53:CA:357:G:C8	53:CA:357:G:OP2	2.67	0.44
53:CA:321:A:N7	53:CA:328:C:C2	2.85	0.44
35:BN:66:ALA:O	35:BN:69:ARG:O	2.35	0.44
53:CA:1008:U:C4	53:CA:1009:U:C4	3.05	0.44
53:CA:106:C:C2'	53:CA:107:G:H5'	2.47	0.44
22:DA:1510:G:OP2	22:DA:1510:G:H3'	2.17	0.44
22:BA:2794:C:H2'	22:BA:2795:C:C6	2.52	0.44
22:DA:2624:G:H2'	22:DA:2625:G:O4'	2.17	0.44
53:CA:414:A:H2'	53:CA:415:A:H5''	1.98	0.44
22:DA:1229:C:H2'	22:DA:1230:A:H8	1.82	0.44
22:DA:2520:C:H2'	22:DA:2521:C:C6	2.52	0.44
21:AA:660:C:H2'	21:AA:661:G:O4'	2.18	0.44
30:DI:5:GLN:HB2	30:DI:7:TYR:CE2	2.52	0.44
22:DA:1766:G:C6	22:DA:1987:A:C6	3.05	0.44
1:CB:91:VAL:HG21	1:CB:95:TRP:CD1	2.52	0.44
22:DA:2674:G:H4'	32:DK:30:ARG:HD2	1.98	0.44
2:CC:21:TRP:CH2	13:CN:93:PRO:HG2	2.51	0.44
53:CA:1406:U:C2'	53:CA:1407:C:H5'	2.47	0.44
43:DV:8:VAL:HG13	43:DV:66:ASP:OD2	2.17	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:1579:A:H2'	22:DA:1580:A:C8	2.52	0.44
21:AA:126:G:H2'	21:AA:127:G:O4'	2.17	0.44
22:DA:2491:U:H5''	22:DA:2570:G:H5''	1.99	0.44
30:DI:105:LEU:O	30:DI:105:LEU:HD23	2.17	0.44
47:DZ:29:ARG:CZ	47:DZ:29:ARG:H	2.30	0.44
22:BA:1613:G:C2	22:BA:1619:G:C5	3.05	0.44
22:DA:2415:G:C5	22:DA:2416:C:C5	3.04	0.44
22:DA:2385:C:O2'	22:DA:2386:A:C8	2.38	0.44
44:DW:37:VAL:O	44:DW:38:ARG:HB2	2.17	0.44
21:AA:587:G:C2	21:AA:755:G:C6	3.06	0.44
28:BG:148:ARG:CD	28:BG:163:TYR:CE2	3.00	0.44
22:DA:1340:U:O2'	22:DA:1341:G:P	2.75	0.44
19:CT:70:LYS:HD2	19:CT:73:ARG:HH21	1.81	0.44
15:CP:5:ARG:HB2	53:CA:376:G:H5''	1.99	0.44
31:DJ:43:GLU:HG2	31:DJ:43:GLU:O	2.16	0.44
33:BL:109:LYS:HA	33:BL:126:ARG:O	2.17	0.44
10:CK:104:PHE:N	10:CK:104:PHE:CD1	2.84	0.44
35:DN:14:SER:C	35:DN:16:HIS:N	2.70	0.44
10:CK:121:ARG:HA	10:CK:122:PRO:HD3	1.81	0.44
13:AN:46:LYS:C	13:AN:48:GLN:N	2.70	0.44
22:DA:1507:C:H5'	22:DA:1508:A:OP2	2.17	0.44
23:BB:90:C:H5'	34:BM:18:ARG:HG2	2.00	0.44
53:CA:596:A:N6	53:CA:645:G:N1	2.66	0.44
4:AE:110:MET:O	4:AE:114:LEU:HB2	2.18	0.44
22:DA:78:U:H2'	22:DA:79:C:C6	2.52	0.44
41:DT:29:THR:CA	41:DT:87:LEU:HB2	2.47	0.44
46:BY:57:LEU:O	46:BY:57:LEU:HD12	2.17	0.44
53:CA:1271:A:C6	53:CA:1272:G:C6	3.05	0.44
9:CJ:52:LEU:CD2	9:CJ:62:ARG:HG2	2.45	0.44
22:BA:783:A:H8	22:BA:784:G:H4'	1.82	0.44
12:CM:13:HIS:CD2	12:CM:14:ALA:N	2.85	0.44
53:CA:1134:G:N1	53:CA:1141:C:C4	2.85	0.44
35:BN:33:ILE:HG23	35:BN:114:GLU:HB3	1.99	0.44
21:AA:346:G:OP1	37:BP:33:GLU:OE1	2.35	0.44
7:AH:105:THR:HG22	7:AH:121:GLY:C	2.37	0.44
32:DK:17:ARG:HG2	32:DK:18:ARG:H	1.82	0.44
21:AA:113:G:H2'	21:AA:114:U:H6	1.82	0.44
3:AD:33:ILE:O	3:AD:33:ILE:HG23	2.17	0.44
53:CA:948:C:H2'	53:CA:949:A:C8	2.52	0.44
1:AB:112:ARG:O	1:AB:116:LEU:HD23	2.17	0.44
28:DG:86:LEU:HA	28:DG:163:TYR:CB	2.41	0.44
26:DE:5:LEU:HD22	26:DE:122:GLU:N	2.32	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
47:BZ:20:LYS:O	47:BZ:21:ALA:C	2.56	0.44
22:BA:1963:U:H6	22:BA:1963:U:O5'	2.00	0.44
38:BQ:97:ILE:CD1	38:BQ:105:PHE:N	2.76	0.44
35:BN:63:ARG:O	35:BN:64:ARG:C	2.53	0.44
3:CD:144:ILE:HD12	3:CD:177:MET:CB	2.47	0.44
13:CN:8:ARG:HH11	13:CN:12:ARG:NH2	2.15	0.44
22:BA:1469:A:H2'	22:BA:1470:A:H8	1.77	0.44
22:DA:1695:G:H8	24:DC:7:PRO:HB2	1.78	0.44
16:AQ:68:LYS:HB2	21:AA:266:G:O3'	2.17	0.44
33:BL:55:MET:HE2	33:BL:56:PRO:CD	2.48	0.44
22:DA:223:A:O2'	22:DA:408:G:N3	2.48	0.44
21:AA:260:G:H2'	21:AA:261:U:C6	2.52	0.44
4:CE:51:LYS:NZ	53:CA:1080:A:OP1	2.49	0.44
11:AL:85:ARG:HH21	11:AL:87:LYS:HD2	1.82	0.44
21:AA:579:A:H5'	21:AA:728:A:H1'	1.98	0.44
21:AA:128:G:O2'	21:AA:129:A:H5'	2.16	0.44
17:AR:41:SER:C	17:AR:43:ILE:N	2.70	0.44
17:CR:35:SER:O	17:CR:71:ASP:HB2	2.17	0.44
22:DA:417:C:H2'	22:DA:418:C:C6	2.50	0.44
38:DQ:77:LYS:HE3	38:DQ:116:LEU:HD11	1.98	0.44
30:DI:18:ASN:HB3	30:DI:19:PRO:HD3	1.98	0.44
22:BA:1335:C:C2'	22:BA:1336:A:O5'	2.65	0.44
36:DO:49:VAL:CG1	36:DO:81:ARG:HB3	2.47	0.44
17:CR:33:THR:HG23	17:CR:39:VAL:HG22	1.99	0.44
17:CR:39:VAL:HA	17:CR:40:PRO:HD3	1.86	0.44
8:AI:82:ILE:O	8:AI:86:LEU:N	2.50	0.44
22:BA:2576:G:C8	22:BA:2580:U:O4	2.70	0.44
27:BF:79:ARG:O	27:BF:82:TYR:HB2	2.16	0.44
30:DI:102:ARG:NH1	30:DI:105:LEU:HD13	2.32	0.44
22:DA:405:U:H3'	22:DA:406:G:H5'	1.98	0.44
48:B0:12:ARG:O	48:B0:13:GLY:C	2.56	0.44
1:AB:191:ASP:HA	1:AB:192:PRO:HD2	1.77	0.44
22:BA:2532:G:C5	22:BA:2533:U:C5	3.05	0.44
22:DA:2833:U:H3'	22:DA:2834:G:C5'	2.47	0.44
2:CC:172:VAL:O	2:CC:174:LEU:HD23	2.17	0.44
26:DE:42:GLY:HA2	26:DE:92:HIS:HE1	1.82	0.44
2:AC:66:THR:HG22	2:AC:68:HIS:CD2	2.52	0.44
38:DQ:84:LYS:C	38:DQ:86:SER:H	2.20	0.44
39:DR:55:ASP:CG	39:DR:56:GLY:H	2.20	0.44
26:BE:32:VAL:HG23	26:BE:33:VAL:N	2.32	0.44
1:CB:67:LEU:HD23	1:CB:67:LEU:HA	1.82	0.44
26:DE:9:GLN:O	26:DE:9:GLN:HG3	2.18	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
33:DL:54:GLN:O	33:DL:55:MET:C	2.56	0.44
44:DW:35:ILE:HB	44:DW:36:ILE:H	1.47	0.44
19:AT:43:LYS:CB	19:AT:86:ALA:HB1	2.22	0.44
53:CA:1215:G:H2'	53:CA:1216:A:C8	2.49	0.44
22:BA:856:G:C1'	44:BW:23:LYS:HB3	2.38	0.44
44:BW:24:ARG:O	44:BW:25:PHE:CB	2.65	0.44
44:BW:37:VAL:C	44:BW:38:ARG:CG	2.84	0.44
39:DR:51:VAL:HB	39:DR:52:PRO:HD2	1.99	0.44
22:BA:1068:G:H2'	22:BA:1069:A:H5'	1.98	0.44
3:CD:12:ARG:NH2	3:CD:36:ALA:O	2.51	0.44
24:BC:229:HIS:CG	24:BC:230:PRO:HD2	2.53	0.44
36:BO:30:ARG:HG2	36:BO:31:THR:N	2.33	0.44
25:BD:34:VAL:CG2	25:BD:91:THR:HA	2.48	0.44
25:BD:34:VAL:HA	25:BD:50:VAL:HG12	1.99	0.44
22:DA:2315:G:H5'	27:DF:156:THR:HG23	1.99	0.44
27:DF:31:GLU:HA	27:DF:95:MET:HE1	1.99	0.44
22:DA:233:A:H2'	22:DA:234:U:C6	2.53	0.44
22:BA:1722:A:N6	22:BA:1738:G:H1'	2.32	0.44
22:DA:2657:A:O3'	28:DG:159:LYS:NZ	2.50	0.44
34:DM:26:VAL:HA	34:DM:66:ARG:NH2	2.32	0.44
21:AA:1002:G:C6	21:AA:1003:G:C5	3.05	0.44
21:AA:1003:G:H21	21:AA:1005:A:H5'	1.78	0.44
22:BA:871:U:OP1	34:BM:5:LYS:HG3	2.17	0.44
46:DY:47:ARG:O	46:DY:50:VAL:N	2.45	0.44
35:DN:28:LEU:O	35:DN:32:GLU:N	2.38	0.44
53:CA:982:U:H1'	53:CA:983:A:C8	2.52	0.44
22:BA:1510:G:O2'	22:BA:1511:G:C5'	2.64	0.44
52:B4:9:LYS:HB3	52:B4:14:CYS:HB2	1.98	0.44
34:BM:132:THR:CG2	34:BM:133:LYS:N	2.68	0.44
35:BN:71:ARG:HG2	35:BN:71:ARG:HH21	1.77	0.44
22:DA:975:A:N6	22:DA:989:G:H1'	2.33	0.44
53:CA:319:G:C2	53:CA:335:C:C2	3.06	0.44
22:BA:1866:A:C2	22:BA:1876:A:C4	3.06	0.44
22:DA:1568:G:N3	24:DC:57:HIS:CE1	2.85	0.44
22:DA:1609:A:N6	22:DA:1616:A:C2	2.85	0.44
53:CA:818:G:HO2'	53:CA:820:U:H6	1.61	0.44
2:AC:54:ILE:HD12	2:AC:55:VAL:N	2.33	0.44
46:DY:1:MET:O	46:DY:52:ARG:NH2	2.50	0.44
22:BA:1113:U:H2'	22:BA:1114:C:C6	2.46	0.44
36:DO:18:LEU:HD13	36:DO:25:ARG:HG2	1.98	0.44
22:DA:139:U:N3	41:DT:1:MET:HA	2.33	0.44
22:DA:1259:G:H2'	22:DA:1260:A:H8	1.83	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
42:DU:58:VAL:HG12	42:DU:59:GLU:N	2.32	0.44
4:AE:28:ARG:NH1	21:AA:15:G:O4'	2.51	0.44
22:DA:2334:U:O3'	36:DO:13:ARG:HB2	2.17	0.44
53:CA:142:G:N3	53:CA:196:A:H2	2.15	0.44
37:BP:19:PHE:O	37:BP:23:ASP:OD1	2.35	0.44
22:DA:581:C:OP1	38:DQ:32:ARG:HB2	2.17	0.44
22:DA:2223:G:H2'	22:DA:2224:G:H5'	2.00	0.44
10:AK:28:ASN:OD1	10:AK:29:THR:N	2.38	0.44
22:BA:1753:G:H5''	37:BP:92:ARG:HE	1.82	0.44
30:DI:20:SER:N	30:DI:21:PRO:CD	2.80	0.44
22:DA:1527:G:H1'	22:DA:1546:G:H22	1.83	0.44
22:BA:1815:A:H1'	22:BA:1817:G:C8	2.53	0.44
22:DA:1456:G:O2'	22:DA:1457:U:H5'	2.16	0.44
1:CB:14:HIS:CD2	1:CB:16:GLY:HA3	2.52	0.44
4:AE:71:ILE:HD11	4:AE:144:GLU:HG3	1.99	0.44
22:BA:2305:U:H5''	27:BF:130:GLY:HA3	1.98	0.44
53:CA:1049:U:H2'	53:CA:1049:U:O2	2.18	0.44
6:AG:35:LYS:HB2	21:AA:1373:G:H5''	1.98	0.44
7:AH:114:ALA:O	7:AH:117:GLN:N	2.51	0.44
24:BC:115:ILE:HA	24:BC:115:ILE:HD12	1.73	0.44
5:CF:66:ALA:HB1	5:CF:70:VAL:HG23	1.99	0.44
22:DA:1153:C:H2'	22:DA:1154:G:C8	2.52	0.44
36:BO:15:ARG:NE	36:BO:93:ASP:OD1	2.50	0.44
22:BA:2808:G:O2'	22:BA:2890:G:O6	2.33	0.44
1:CB:111:LYS:C	1:CB:113:LEU:H	2.20	0.44
21:AA:1231:G:C6	21:AA:1232:U:C4	3.06	0.44
22:DA:2760:C:H2'	22:DA:2760:C:O2	2.18	0.44
45:BX:1:SER:O	45:BX:3:VAL:N	2.50	0.44
22:BA:995:C:HO2'	22:BA:996:A:P	2.37	0.44
22:DA:1555:G:H2'	22:DA:1556:C:C6	2.52	0.44
22:DA:1627:G:C2	22:DA:1628:G:C8	3.05	0.44
38:BQ:86:SER:HB3	39:BR:51:VAL:HG12	2.00	0.44
22:BA:1131:G:OP1	31:BJ:82:GLY:HA2	2.17	0.44
21:AA:173:U:C2	21:AA:197:A:C2	3.05	0.44
22:DA:1387:A:N3	22:DA:1388:G:C8	2.85	0.44
53:CA:431:A:C2	53:CA:432:A:H1'	2.52	0.44
9:CJ:77:VAL:O	9:CJ:79:PRO:HD3	2.17	0.44
53:CA:717:U:C2	53:CA:734:G:C8	3.05	0.44
9:CJ:11:LYS:NZ	9:CJ:99:GLN:HB3	2.31	0.44
22:DA:1021:A:H2'	22:DA:1021:A:H8	1.55	0.44
22:DA:2093:G:C2	22:DA:2094:A:N7	2.85	0.44
21:AA:95:C:H2'	21:AA:96:U:C6	2.53	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:1056:G:O5'	22:DA:1085:A:C2	2.71	0.44
22:DA:1059:G:O2'	30:DI:131:THR:HG21	2.18	0.44
22:DA:1286:A:C6	22:DA:1289:C:N3	2.86	0.44
34:DM:26:VAL:HA	34:DM:66:ARG:HH22	1.82	0.44
22:DA:1654:A:O2'	22:DA:1655:A:O4'	2.36	0.44
6:CG:88:VAL:CG2	6:CG:89:GLU:H	2.16	0.44
22:BA:2136:G:C2	22:BA:2137:U:C4	3.05	0.44
4:AE:94:PHE:C	4:AE:94:PHE:CD1	2.89	0.44
22:DA:70:G:OP2	22:DA:70:G:H8	2.00	0.44
22:BA:558:U:OP1	31:BJ:111:LYS:HE3	2.17	0.44
46:BY:6:LEU:O	46:BY:7:ARG:HB3	2.16	0.44
53:CA:89:U:O2'	53:CA:90:C:O5'	2.35	0.44
4:CE:80:LEU:N	4:CE:121:ASN:HD21	2.15	0.44
22:DA:397:U:OP2	45:DX:9:LYS:HE2	2.17	0.44
35:DN:72:ASP:O	35:DN:75:ILE:HG13	2.18	0.44
22:DA:807:U:H1'	22:DA:2445:G:H5'	1.99	0.44
22:DA:922:C:H2'	22:DA:923:G:H8	1.82	0.44
37:BP:24:THR:O	37:BP:24:THR:HG23	2.16	0.44
22:DA:862:G:H2'	22:DA:863:A:O4'	2.18	0.44
29:BH:86:ASP:O	29:BH:87:GLU:C	2.56	0.44
9:AJ:9:ARG:NH1	21:AA:1280:A:OP1	2.50	0.44
26:BE:119:ILE:O	26:BE:187:VAL:O	2.35	0.44
47:DZ:16:LEU:HD23	47:DZ:19:HIS:HD2	1.82	0.44
7:CH:29:SER:OG	7:CH:32:LYS:HB3	2.17	0.44
46:DY:25:GLN:HA	46:DY:28:LEU:HB3	1.99	0.44
3:AD:33:ILE:O	3:AD:34:GLU:CB	2.62	0.44
29:DH:2:GLN:HB3	29:DH:18:GLN:CD	2.38	0.44
22:BA:2746:U:H2'	22:BA:2747:G:H5'	1.98	0.44
22:BA:2748:A:C2	22:BA:2757:A:C5	3.05	0.44
22:BA:2747:G:HO2'	28:BG:66:THR:HG22	1.81	0.44
53:CA:1005:A:N7	53:CA:1006:G:H1'	2.32	0.44
39:BR:18:GLN:O	39:BR:97:LYS:O	2.36	0.44
53:CA:1067:A:C4'	53:CA:1068:G:O5'	2.63	0.44
22:DA:2652:C:N4	22:DA:2653:U:C4	2.86	0.44
51:D3:41:ARG:HB3	51:D3:41:ARG:CZ	2.46	0.44
53:CA:701:U:HO2'	53:CA:702:A:P	2.40	0.44
53:CA:1168:U:H2'	53:CA:1168:U:O2	2.16	0.44
53:CA:513:C:HO2'	53:CA:514:C:H6	1.65	0.44
27:BF:72:SER:HB2	27:BF:80:GLN:N	2.32	0.44
47:DZ:40:THR:C	47:DZ:42:ALA:N	2.70	0.44
22:BA:2392:A:H4'	51:B3:27:ASN:ND2	2.31	0.44
24:BC:254:LYS:HE3	24:BC:254:LYS:HB3	1.75	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
29:DH:84:ALA:HB3	29:DH:148:ALA:CB	2.48	0.44
12:AM:10:ASP:O	12:AM:11:HIS:HB2	2.17	0.44
22:DA:2322:A:H3'	22:DA:2323:G:H8	1.81	0.44
22:DA:538:A:O2'	31:DJ:8:PRO:CG	2.66	0.44
6:AG:2:ARG:HA	21:AA:1380:U:C4	2.53	0.44
29:BH:2:GLN:HA	29:BH:20:ASN:HA	1.99	0.44
3:AD:21:LYS:O	21:AA:409:U:OP1	2.36	0.44
22:BA:2068:U:C5'	22:BA:2068:U:H6	2.29	0.44
22:BA:656:G:H8	22:BA:656:G:O5'	2.01	0.44
25:DD:88:GLU:O	25:DD:89:GLU:HG3	2.18	0.44
22:DA:1180:U:C4	22:DA:1181:U:C4	3.05	0.44
4:CE:37:VAL:HG12	4:CE:38:VAL:N	2.31	0.44
53:CA:286:C:C2	53:CA:287:U:C6	3.06	0.44
22:DA:2425:A:H4'	22:DA:2426:A:C5'	2.47	0.44
25:DD:208:LYS:O	25:DD:209:ALA:HB2	2.16	0.44
42:BU:38:ILE:O	42:BU:40:LEU:N	2.50	0.44
22:DA:1425:G:H2'	22:DA:1426:G:O4'	2.18	0.44
22:DA:1426:G:H5''	22:DA:1427:A:H3'	1.98	0.44
24:BC:69:ASN:O	24:BC:70:LYS:C	2.54	0.44
12:AM:13:HIS:ND1	12:AM:41:ASP:HB2	2.32	0.44
21:AA:1203:C:H2'	21:AA:1204:A:O4'	2.16	0.44
28:BG:39:ALA:HB1	28:BG:57:TYR:CG	2.52	0.44
5:CF:98:GLU:O	5:CF:99:ALA:CB	2.65	0.44
21:AA:633:G:O2'	21:AA:634:C:H5'	2.17	0.44
29:DH:66:ASN:HA	29:DH:137:GLU:CD	2.38	0.44
22:DA:770:G:H1'	22:DA:1379:U:C4	2.52	0.44
22:BA:684:G:OP1	50:B2:16:HIS:CD2	2.71	0.44
33:BL:65:GLY:O	33:BL:66:PHE:CB	2.64	0.44
53:CA:1197:A:C2'	53:CA:1198:G:H5'	2.47	0.44
30:BI:107:GLU:HA	30:BI:110:GLN:HB3	1.98	0.44
7:AH:49:LYS:O	7:AH:58:LEU:HD22	2.17	0.44
8:CI:79:ARG:O	8:CI:83:THR:HG22	2.18	0.44
31:DJ:105:VAL:O	31:DJ:109:LEU:HG	2.18	0.44
22:DA:815:C:OP1	39:DR:85:LYS:HE2	2.17	0.44
22:BA:103:A:H2'	22:BA:104:A:C8	2.53	0.44
53:CA:885:G:O2'	53:CA:886:G:H5'	2.16	0.44
11:AL:101:LEU:HB3	11:AL:102:ASP:H	1.57	0.44
44:BW:64:GLY:HA3	44:BW:82:GLU:O	2.17	0.44
9:CJ:17:LEU:HD23	9:CJ:96:VAL:HG13	2.00	0.44
40:DS:10:ALA:HB3	40:DS:101:SER:O	2.17	0.44
21:AA:292:G:N2	21:AA:309:A:C4	2.86	0.44
22:BA:2235:G:H2'	22:BA:2236:U:C6	2.52	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
24:DC:231:HIS:O	24:DC:232:GLY:C	2.56	0.44
22:BA:1686:C:H2'	22:BA:1687:G:O4'	2.17	0.44
21:AA:285:C:O2	21:AA:285:C:H2'	2.16	0.44
10:CK:12:ARG:HD3	10:CK:12:ARG:N	2.32	0.44
36:DO:99:TYR:CD1	36:DO:99:TYR:O	2.70	0.44
22:DA:1854:A:O4'	22:DA:2233:U:H4'	2.17	0.44
44:DW:25:PHE:CE1	44:DW:27:GLY:HA2	2.53	0.44
39:BR:49:ILE:HG22	39:BR:53:PHE:C	2.37	0.44
20:CU:24:LYS:HZ1	20:CU:25:ALA:HB2	1.83	0.44
5:AF:90:MET:HB3	5:AF:91:ARG:H	1.49	0.44
22:DA:2686:G:H2'	22:DA:2687:U:C6	2.52	0.44
7:AH:45:ILE:C	7:AH:63:LYS:HD2	2.37	0.44
10:CK:18:GLY:O	10:CK:81:LEU:HA	2.17	0.44
25:DD:16:THR:HG22	25:DD:20:VAL:N	2.32	0.44
10:AK:62:ALA:O	10:AK:65:ALA:HB3	2.16	0.44
21:AA:182:A:N6	21:AA:194:C:H42	1.97	0.44
53:CA:1287:A:H2'	53:CA:1288:A:C8	2.52	0.44
8:CI:74:GLN:O	8:CI:78:ILE:HG13	2.17	0.44
22:DA:1056:G:O5'	22:DA:1085:A:H2	2.01	0.44
27:DF:137:PHE:HB2	27:DF:138:PRO:CD	2.36	0.44
22:DA:1325:U:O2'	22:DA:1326:U:H5'	2.17	0.44
21:AA:212:G:N3	21:AA:213:G:N7	2.65	0.44
7:CH:85:TYR:CE2	7:CH:123:GLU:HB2	2.53	0.44
22:BA:271:G:C6	22:BA:367:G:C6	3.06	0.44
1:CB:114:LYS:C	1:CB:117:GLU:HG2	2.38	0.44
42:DU:3:LYS:O	42:DU:4:ILE:C	2.56	0.44
22:BA:1509:A:C2	22:BA:1510:G:C8	3.06	0.44
22:DA:1965:C:H5''	22:DA:1966:A:H2'	1.99	0.44
53:CA:927:G:N1	53:CA:1391:U:C2	2.86	0.44
50:D2:35:ARG:HG3	50:D2:42:LEU:HD21	1.98	0.44
22:DA:2438:U:O2'	22:DA:2439:A:H5''	2.16	0.44
22:DA:1668:A:H4'	22:DA:1669:A:O5'	2.17	0.44
21:AA:725:G:O2'	21:AA:726:C:H5'	2.17	0.44
27:BF:131:VAL:HG22	27:BF:151:LEU:O	2.18	0.44
22:DA:273:G:O2'	22:DA:274:C:O4'	2.33	0.44
22:DA:988:A:C2	22:DA:989:G:C2	3.06	0.44
22:DA:2290:G:H4'	22:DA:2381:A:O2'	2.18	0.44
22:DA:1565:C:C3'	24:DC:17:LYS:HE2	2.46	0.44
22:BA:2013:A:C2	40:BS:88:ARG:NH1	2.86	0.44
37:BP:105:LYS:O	37:BP:108:ARG:HD3	2.17	0.44
28:BG:59:ASP:O	28:BG:60:GLY:C	2.55	0.44
53:CA:1004:A:N3	53:CA:1026:G:C5	2.86	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
51:D3:44:ARG:H	51:D3:45:PRO:HD2	1.82	0.44
7:AH:4:ASP:OD1	7:AH:76:ARG:NH1	2.51	0.44
43:DV:4:ILE:HD11	43:DV:50:MET:HE2	1.98	0.44
3:AD:130:ASN:CB	21:AA:619:U:H3	2.24	0.44
3:AD:117:VAL:HA	3:AD:122:ILE:HD11	1.98	0.44
22:DA:627:A:O4'	22:DA:637:A:N6	2.50	0.44
30:BI:30:GLN:NE2	30:BI:32:VAL:HB	2.33	0.44
19:CT:61:ALA:HA	19:CT:67:HIS:HA	2.00	0.44
21:AA:16:A:C2'	21:AA:17:U:H5'	2.48	0.44
31:DJ:64:VAL:CG1	31:DJ:65:THR:N	2.80	0.44
31:BJ:54:ILE:HD12	31:BJ:54:ILE:C	2.38	0.44
31:BJ:54:ILE:HD12	31:BJ:55:ILE:C	2.37	0.44
53:CA:204:G:H2'	53:CA:205:A:C8	2.53	0.44
8:AI:119:LYS:O	8:AI:120:ALA:HB3	2.16	0.44
22:DA:1789:A:OP2	24:DC:220:ARG:NH1	2.50	0.44
19:CT:49:ALA:O	19:CT:52:GLU:HB3	2.17	0.44
2:CC:133:MET:CE	2:CC:152:VAL:HG13	2.48	0.44
22:BA:324:A:H61	22:BA:338:G:C2'	2.31	0.44
24:DC:70:LYS:HB2	24:DC:101:ARG:HH22	1.83	0.44
27:BF:7:TYR:HD2	27:BF:11:VAL:HG11	1.82	0.44
29:BH:1:MET:SD	29:BH:27:ARG:NH2	2.91	0.44
22:BA:2491:U:HO2'	22:BA:2492:U:H5	1.66	0.44
35:DN:56:LYS:HA	35:DN:84:GLY:CA	2.48	0.44
21:AA:928:G:O2'	21:AA:1533:C:OP1	2.36	0.44
27:DF:107:VAL:N	27:DF:108:PRO:HD2	2.32	0.44
22:BA:637:A:N1	22:BA:651:G:O2'	2.45	0.44
53:CA:408:A:C5	53:CA:409:U:C5	3.05	0.44
30:DI:28:GLY:O	30:DI:30:GLN:N	2.51	0.44
43:BV:65:VAL:O	43:BV:65:VAL:HG22	2.18	0.44
53:CA:1062:U:H2'	53:CA:1063:C:C5	2.53	0.44
22:BA:464:U:O2'	50:B2:16:HIS:CE1	2.70	0.44
8:AI:105:ARG:NE	21:AA:1117:A:O3'	2.51	0.44
8:AI:26:LYS:O	8:AI:62:LEU:HD23	2.16	0.44
53:CA:348:G:H2'	53:CA:349:A:C8	2.50	0.44
14:AO:16:ARG:O	14:AO:17:ASP:OD1	2.35	0.44
22:DA:813:U:N1	22:DA:1195:G:N2	2.65	0.44
22:DA:2649:C:H2'	22:DA:2650:U:H6	1.83	0.44
22:BA:2023:C:H5''	22:BA:2023:C:C6	2.52	0.44
22:DA:1594:U:H2'	22:DA:1595:C:C6	2.52	0.44
25:DD:161:MET:O	25:DD:162:ALA:O	2.35	0.44
53:CA:178:C:H2'	53:CA:179:A:O4'	2.18	0.44
22:BA:807:U:H2'	22:BA:808:G:H8	1.83	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
15:CP:56:ARG:O	15:CP:59:HIS:HB3	2.17	0.44
27:DF:67:THR:O	27:DF:84:ILE:HG22	2.17	0.44
22:BA:50:U:H4'	22:BA:51:G:OP2	2.17	0.44
21:AA:438:U:C6	21:AA:494:G:O6	2.71	0.44
11:AL:6:LEU:HD23	16:AQ:33:TYR:CE2	2.52	0.44
21:AA:140:U:H2'	21:AA:141:G:O4'	2.17	0.44
22:BA:864:G:C6	22:BA:865:C:N4	2.86	0.44
22:DA:486:C:O5'	22:DA:486:C:H6	2.00	0.44
34:BM:25:ASP:OD2	34:BM:25:ASP:N	2.50	0.44
22:BA:2270:A:H2'	22:BA:2271:G:O4'	2.18	0.44
22:BA:2462:C:H2'	22:BA:2463:C:C6	2.52	0.44
54:DB:57:A:C2'	54:DB:58:A:H8	2.31	0.44
22:DA:2331:G:C6	22:DA:2385:C:N4	2.86	0.44
22:DA:2135:A:C3'	22:DA:2136:G:C5'	2.90	0.44
5:AF:92:THR:HG22	5:AF:93:LYS:N	2.33	0.44
53:CA:1494:G:N2	53:CA:1495:U:C2	2.86	0.44
3:CD:23:GLY:O	3:CD:24:VAL:HG22	2.16	0.44
16:AQ:12:VAL:CG1	16:AQ:13:SER:N	2.79	0.44
22:BA:1057:A:C2	22:BA:1082:U:C2	3.05	0.44
53:CA:764:C:N4	53:CA:812:G:C6	2.86	0.44
22:DA:2657:A:O2'	22:DA:2658:C:H5'	2.17	0.44
22:DA:1330:C:O2'	22:DA:1331:G:O5'	2.36	0.44
22:DA:2232:C:P	45:DX:26:ARG:NH1	2.91	0.44
21:AA:203:G:C2	21:AA:215:C:N3	2.85	0.44
22:DA:1515:A:H2'	22:DA:1516:G:O4'	2.17	0.44
46:BY:9:LYS:HB3	46:BY:12:GLU:CB	2.48	0.44
22:BA:2225:A:H4'	22:BA:2226:C:H6	1.83	0.44
53:CA:1301:U:H2'	53:CA:1301:U:O2	2.16	0.44
22:DA:54:G:N2	22:DA:117:G:H1'	2.33	0.44
2:AC:155:ARG:HG2	2:AC:159:ALA:O	2.18	0.44
22:DA:715:A:C6	22:DA:716:A:C6	3.05	0.44
22:BA:244:A:C2	22:BA:255:A:C4	3.05	0.44
22:DA:272:A:C2	22:DA:273:G:C5	3.06	0.44
22:DA:704:G:C2'	22:DA:726:G:N2	2.80	0.44
22:DA:1568:G:H8	22:DA:1568:G:H2'	1.66	0.44
27:DF:57:ALA:HB2	27:DF:64:PRO:HG2	2.00	0.44
43:DV:4:ILE:HG21	43:DV:42:LEU:HD22	2.00	0.44
28:DG:112:VAL:HG12	28:DG:114:HIS:N	2.23	0.44
3:AD:113:ALA:O	3:AD:116:LEU:HB2	2.16	0.44
22:BA:1964:G:C2	22:BA:1967:C:C5	3.06	0.44
22:DA:242:G:C8	51:D3:4:LYS:HG3	2.52	0.44
29:DH:114:GLU:OE1	29:DH:132:PHE:HE1	2.01	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:BA:2791:G:H8	22:BA:2791:G:C5'	2.26	0.44
53:CA:511:C:C2	53:CA:512:U:C5	3.06	0.44
21:AA:1062:U:H2'	21:AA:1063:C:C5	2.53	0.44
12:CM:102:LYS:HA	53:CA:1226:C:C4	2.52	0.44
22:DA:665:U:H2'	22:DA:666:A:C8	2.43	0.44
2:AC:131:ARG:O	2:AC:135:ARG:HG2	2.18	0.44
22:DA:966:G:H5'	22:DA:2272:U:O2	2.17	0.44
54:DB:8:C:O3'	36:DO:25:ARG:NH1	2.51	0.44
36:DO:90:VAL:HB	36:DO:91:SER:H	1.57	0.44
24:DC:170:TYR:HD2	24:DC:183:VAL:O	2.01	0.44
21:AA:1168:U:H5''	21:AA:1169:A:OP2	2.18	0.44
33:DL:116:VAL:HG13	33:DL:117:THR:H	1.82	0.44
3:AD:100:VAL:O	3:AD:100:VAL:CG1	2.65	0.44
22:DA:992:C:H5'	39:DR:87:GLN:HE22	1.82	0.44
2:AC:196:GLY:N	21:AA:1057:G:H4'	2.29	0.44
26:BE:48:THR:O	26:BE:50:ALA:N	2.51	0.44
38:DQ:38:VAL:O	38:DQ:42:GLY:N	2.46	0.44
22:DA:170:U:C2	22:DA:171:U:C5	3.05	0.44
2:CC:187:GLU:HB3	2:CC:188:ALA:H	1.60	0.44
22:DA:1796:U:H2'	22:DA:1797:G:H8	1.81	0.44
22:BA:919:U:H6	22:BA:919:U:C3'	2.30	0.44
21:AA:820:U:H4'	21:AA:821:G:OP2	2.18	0.44
22:DA:749:A:N3	22:DA:750:A:C8	2.86	0.44
13:AN:25:GLU:CG	13:AN:26:LEU:HD12	2.47	0.44
31:BJ:118:MET:HA	31:BJ:121:LYS:HE2	2.00	0.44
39:DR:19:THR:HG22	39:DR:20:VAL:H	1.83	0.44
20:CU:13:VAL:HG22	20:CU:15:LEU:HD23	2.00	0.44
37:BP:88:ARG:HG2	37:BP:112:ARG:NH1	2.33	0.44
12:CM:106:ARG:HH21	12:CM:112:ARG:NE	2.14	0.44
19:AT:59:ARG:HG2	19:AT:60:GLN:N	2.32	0.44
49:B1:14:ALA:HB3	49:B1:16:THR:HG23	1.99	0.44
1:AB:27:LYS:C	1:AB:29:PHE:H	2.19	0.44
25:DD:22:ILE:HA	25:DD:23:PRO:HD2	1.86	0.44
42:BU:64:ILE:O	42:BU:65:GLN:C	2.55	0.44
1:AB:61:SER:HA	1:AB:223:GLY:C	2.38	0.44
22:DA:2378:A:H2'	22:DA:2379:G:H5'	2.00	0.44
6:CG:49:LEU:HD13	6:CG:49:LEU:O	2.18	0.44
22:BA:1419:A:N7	22:BA:1421:G:C6	2.86	0.44
22:BA:1356:G:C6	22:BA:1357:C:C4	3.06	0.44
53:CA:524:G:H2'	53:CA:525:C:C6	2.53	0.44
30:DI:102:ARG:HH11	30:DI:105:LEU:HD13	1.82	0.44
22:DA:404:A:H5'	22:DA:405:U:OP1	2.18	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:AA:1231:G:C5	21:AA:1232:U:C5	3.05	0.44
25:BD:85:ALA:O	25:BD:86:GLU:HB2	2.18	0.44
22:BA:2560:A:C6	22:BA:2561:U:C4	3.05	0.44
47:BZ:39:ASP:CG	47:BZ:44:ARG:HH11	2.21	0.44
21:AA:287:U:H2'	21:AA:288:A:H8	1.83	0.44
22:BA:2578:G:C5	25:BD:145:SER:HB2	2.52	0.44
22:DA:2456:C:H2'	22:DA:2457:U:O4'	2.18	0.44
22:BA:1556:C:O2'	22:BA:1557:C:H5'	2.17	0.44
22:BA:1833:C:C5	22:BA:1834:U:C5	3.06	0.44
22:BA:866:A:O2'	22:BA:867:C:H5'	2.17	0.44
20:AU:32:ARG:O	20:AU:32:ARG:HG2	2.18	0.44
22:BA:933:A:H2'	22:BA:933:A:N3	2.32	0.44
32:BK:2:ILE:HD12	32:BK:2:ILE:N	2.32	0.44
22:DA:1497:U:H5''	22:DA:1498:C:OP2	2.17	0.44
12:CM:5:GLY:C	12:CM:6:ILE:HG13	2.37	0.44
22:BA:2828:G:C2	22:BA:2829:A:C8	3.05	0.44
10:CK:116:PRO:HB3	53:CA:676:A:H1'	2.00	0.44
22:BA:2373:G:H2'	22:BA:2374:C:C6	2.52	0.44
22:DA:2522:U:C2'	22:DA:2523:G:H5'	2.48	0.44
22:DA:1628:G:H2'	22:DA:1629:U:H6	1.83	0.44
44:DW:44:PHE:HB3	44:DW:78:PHE:HD1	1.83	0.44
19:AT:82:ILE:HD12	19:AT:82:ILE:C	2.38	0.44
44:BW:39:GLN:HE21	44:BW:43:LYS:H	1.65	0.44
38:DQ:87:VAL:CG1	39:DR:52:PRO:HG3	2.44	0.44
28:BG:84:LYS:HB2	28:BG:132:LEU:HG	1.99	0.44
22:DA:1398:C:O2'	22:DA:1399:C:H6	2.00	0.44
9:CJ:5:ARG:CG	9:CJ:79:PRO:HG3	2.47	0.44
21:AA:434:U:H2'	21:AA:435:A:O4'	2.18	0.44
53:CA:664:G:N2	53:CA:666:G:C8	2.86	0.44
22:DA:1103:A:H3'	22:DA:1104:C:C6	2.53	0.44
28:DG:88:LEU:N	28:DG:128:THR:O	2.49	0.44
22:DA:1329:U:O2'	22:DA:1330:C:OP1	2.32	0.44
40:DS:6:LYS:HB2	40:DS:103:ILE:O	2.18	0.44
53:CA:95:C:C6	53:CA:95:C:H5''	2.53	0.44
53:CA:1261:A:N7	53:CA:1274:A:C2	2.85	0.44
4:CE:80:LEU:HD21	4:CE:143:LEU:HD21	1.98	0.44
22:DA:468:G:H4'	26:DE:57:LYS:CG	2.48	0.44
14:CO:38:LEU:HG	14:CO:42:PHE:CE1	2.53	0.44
6:CG:99:ALA:HB3	6:CG:100:MET:CE	2.47	0.44
22:DA:1667:G:O5'	22:DA:1667:G:H8	2.01	0.44
22:DA:685:A:C8	22:DA:773:U:O4	2.70	0.44
22:DA:2636:C:H4'	25:DD:81:GLU:OE1	2.18	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
46:DY:28:LEU:HD11	46:DY:43:LEU:CD1	2.47	0.44
4:CE:102:THR:HG21	53:CA:6:G:H1	1.83	0.44
6:CG:4:ARG:CG	6:CG:6:ILE:HG22	2.48	0.44
22:DA:1814:G:C6	22:DA:1815:A:N6	2.85	0.44
12:CM:104:ASN:CB	53:CA:948:C:H5''	2.40	0.44
28:DG:117:PRO:HG2	28:DG:143:VAL:CG1	2.47	0.44
24:DC:62:ARG:NH2	24:DC:62:ARG:HG2	2.26	0.44
15:CP:44:SER:N	15:CP:46:LYS:HZ2	2.14	0.44
53:CA:238:A:H2'	53:CA:239:U:C4'	2.48	0.44
24:BC:145:MET:SD	24:BC:153:LEU:HD21	2.58	0.44
31:DJ:35:ARG:HA	31:DJ:40:HIS:HD2	1.82	0.44
26:BE:5:LEU:HD21	26:BE:120:VAL:HG22	2.00	0.44
40:BS:14:ALA:O	40:BS:15:GLN:C	2.55	0.44
26:BE:121:VAL:O	26:BE:189:THR:HA	2.18	0.44
53:CA:1217:C:H2'	53:CA:1218:C:C6	2.52	0.44
35:BN:2:ARG:O	35:BN:5:LYS:HG3	2.17	0.44
22:BA:1586:A:N7	22:BA:1587:G:C8	2.86	0.44
22:BA:1798:U:P	24:BC:255:LYS:O	2.76	0.44
21:AA:702:A:C1'	22:BA:1847:A:H2	2.31	0.44
22:DA:777:G:N7	22:DA:793:A:C2	2.80	0.44
22:BA:633:A:H8	22:BA:633:A:H3'	1.82	0.44
27:BF:114:ARG:N	27:BF:114:ARG:HD2	2.29	0.44
46:DY:18:LEU:HD13	46:DY:22:LEU:HD13	2.00	0.44
22:DA:1381:G:C2'	22:DA:1382:G:H5''	2.43	0.44
53:CA:913:A:HO2'	53:CA:914:A:P	2.40	0.44
29:BH:39:ALA:O	29:BH:41:LYS:N	2.51	0.44
21:AA:488:C:O2'	21:AA:489:C:H5'	2.17	0.44
8:AI:57:VAL:O	8:AI:58:GLU:HG2	2.18	0.44
16:AQ:37:ILE:N	16:AQ:37:ILE:HD12	2.31	0.44
1:AB:118:THR:O	1:AB:119:GLN:HB2	2.18	0.44
22:DA:30:G:C5	22:DA:31:C:C4	3.06	0.44
45:BX:53:LYS:O	45:BX:57:VAL:HG23	2.18	0.44
22:BA:743:A:C2'	22:BA:744:U:H5'	2.48	0.44
22:DA:608:A:H2'	22:DA:609:A:C8	2.52	0.44
19:AT:78:LEU:HA	19:AT:78:LEU:HD23	1.74	0.44
22:DA:1426:G:H5'	22:DA:1427:A:OP2	2.17	0.44
22:DA:1428:C:H42	22:DA:1570:A:H62	1.65	0.44
27:DF:139:GLU:CB	27:DF:142:TYR:HB3	2.46	0.44
8:AI:41:GLU:HB3	8:AI:42:THR:H	1.53	0.44
41:DT:69:ARG:NE	41:DT:70:HIS:CD2	2.86	0.44
47:DZ:32:GLY:C	47:DZ:34:THR:N	2.70	0.44
47:DZ:6:ILE:HG22	47:DZ:7:THR:N	2.33	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:167:A:H2'	22:DA:168:G:O4'	2.17	0.44
38:DQ:69:ARG:HB2	38:DQ:69:ARG:NH2	2.32	0.44
3:CD:125:ASN:N	3:CD:141:VAL:O	2.51	0.44
45:BX:29:LEU:HB2	45:BX:30:PRO:CD	2.48	0.44
25:DD:49:GLN:HE21	25:DD:79:LEU:HB3	1.80	0.44
48:D0:27:LEU:N	48:D0:27:LEU:HD22	2.33	0.44
11:CL:89:LEU:HA	11:CL:90:PRO:HD2	1.68	0.44
53:CA:926:G:H3'	53:CA:1505:G:N2	2.32	0.44
9:AJ:65:TYR:HB3	13:AN:95:LEU:HD11	1.98	0.44
3:CD:166:LYS:HA	3:CD:167:PRO:HD2	1.70	0.44
13:CN:72:PHE:CG	13:CN:73:LEU:N	2.86	0.44
22:BA:60:G:O2'	22:BA:61:C:P	2.76	0.44
37:DP:3:ILE:C	37:DP:5:LYS:H	2.21	0.44
19:CT:11:ILE:H	19:CT:11:ILE:HG13	1.65	0.44
12:CM:46:GLU:O	12:CM:47:LEU:HB2	2.17	0.44
22:DA:1153:C:H2'	22:DA:1154:G:O4'	2.18	0.44
22:BA:1832:C:N4	22:BA:1833:C:C4	2.86	0.44
22:DA:2900:A:H2'	22:DA:2901:C:H6	1.83	0.44
1:CB:21:TYR:CD1	1:CB:21:TYR:N	2.86	0.44
22:BA:2688:G:H1'	22:BA:2721:A:H61	1.83	0.44
32:BK:88:ASN:ND2	32:BK:90:ASN:H	2.16	0.44
42:BU:66:VAL:C	42:BU:68:ASN:H	2.21	0.44
22:BA:995:C:H42	31:BJ:2:LYS:HB2	1.82	0.44
22:BA:1009:A:OP2	31:BJ:39:LYS:CE	2.65	0.44
38:BQ:63:ARG:HH22	38:BQ:96:ASP:CA	2.31	0.44
22:DA:2269:G:H2'	22:DA:2270:A:H8	1.83	0.44
22:DA:2332:C:O2'	44:DW:40:ARG:NH2	2.51	0.44
22:BA:1062:G:C6	22:BA:1063:G:C6	3.06	0.44
22:DA:1999:C:H5''	22:DA:2723:C:O2'	2.18	0.44
33:BL:74:THR:HA	33:BL:107:PHE:O	2.18	0.44
22:DA:1068:G:H2'	22:DA:1069:A:C8	2.52	0.44
1:AB:70:GLY:HA2	1:AB:163:ILE:HG22	1.99	0.44
22:DA:1931:U:O2'	22:DA:1932:A:H5'	2.17	0.44
22:DA:479:A:H1'	22:DA:480:A:H5''	2.00	0.44
22:DA:489:G:C5	22:DA:491:G:C5	3.06	0.44
22:DA:493:G:H4'	40:DS:8:ARG:O	2.17	0.44
4:AE:132:PRO:O	4:AE:136:VAL:HG13	2.18	0.44
41:DT:29:THR:OG1	41:DT:85:VAL:HB	2.17	0.44
22:DA:307:G:N1	22:DA:310:A:OP2	2.51	0.44
22:DA:310:A:C2	22:DA:330:A:C5	3.06	0.44
53:CA:959:A:N6	53:CA:1222:G:H4'	2.32	0.44
53:CA:1320:C:H2'	53:CA:1321:U:O4'	2.18	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:CE:114:LEU:O	4:CE:119:VAL:HG23	2.18	0.44
22:DA:527:C:H2'	22:DA:527:C:O2	2.17	0.44
44:DW:8:SER:O	44:DW:9:THR:CB	2.65	0.44
21:AA:1283:U:O2'	21:AA:1284:C:O4'	2.34	0.44
26:BE:149:ILE:HG23	26:BE:188:MET:HG3	2.00	0.44
21:AA:1160:G:C6	21:AA:1181:G:O6	2.71	0.44
34:BM:71:LYS:HB3	34:BM:93:VAL:O	2.17	0.44
22:BA:1912:A:C2	22:BA:1919:A:C5	3.06	0.44
2:AC:190:THR:C	2:AC:192:TYR:H	2.21	0.44
22:DA:1586:A:C4	22:DA:1587:G:C8	3.06	0.44
49:B1:8:ILE:HD11	49:B1:52:LYS:HB2	1.99	0.44
3:CD:84:ASN:CB	3:CD:87:GLU:HG3	2.42	0.44
3:CD:57:LYS:HG3	3:CD:58:GLN:N	2.32	0.44
22:BA:96:C:H4'	46:BY:41:HIS:CE1	2.53	0.44
53:CA:210:C:O2	53:CA:210:C:H2'	2.18	0.44
21:AA:1065:U:H5''	21:AA:1190:G:N2	2.33	0.44
14:AO:57:ARG:CB	14:AO:57:ARG:HH11	2.28	0.44
21:AA:518:C:H2'	21:AA:530:G:C8	2.53	0.44
22:DA:484:C:O2'	22:DA:485:C:H5'	2.17	0.44
24:BC:139:THR:O	24:BC:140:VAL:O	2.36	0.44
22:DA:84:A:H2	22:DA:98:G:N3	2.14	0.44
15:AP:75:ILE:HG22	15:AP:80:LYS:NZ	2.33	0.44
1:AB:113:LEU:HB2	1:AB:143:LEU:HD12	2.00	0.44
22:DA:1264:A:H1'	22:DA:2015:A:N6	2.32	0.44
22:BA:163:C:O2'	22:BA:164:C:P	2.75	0.44
34:BM:23:GLY:O	34:BM:101:VAL:HG12	2.18	0.44
40:DS:29:VAL:O	40:DS:33:LEU:HB2	2.18	0.44
24:DC:93:VAL:HG11	24:DC:101:ARG:H	1.82	0.44
24:DC:75:ALA:HA	24:DC:95:TYR:HA	1.99	0.44
21:AA:75:G:N3	21:AA:76:G:H1'	2.33	0.44
4:AE:28:ARG:H	4:AE:28:ARG:HG2	1.65	0.44
22:DA:223:A:C5	22:DA:422:A:C8	3.06	0.44
53:CA:612:C:H2'	53:CA:613:C:H6	1.82	0.44
22:BA:920:A:C6	22:BA:921:C:C4	3.06	0.44
24:BC:117:SER:CB	24:BC:128:THR:HB	2.48	0.44
12:AM:79:LEU:HD22	12:AM:86:ARG:HB2	1.99	0.44
22:BA:2772:C:H2'	22:BA:2773:C:C6	2.53	0.44
25:BD:121:THR:O	25:BD:122:VAL:CB	2.66	0.44
22:DA:2507:C:H1'	22:DA:2583:G:C2	2.53	0.44
43:DV:48:MET:SD	43:DV:85:LYS:HA	2.58	0.44
8:AI:62:LEU:HD23	8:AI:62:LEU:N	2.32	0.44
1:CB:104:LYS:N	1:CB:104:LYS:HD2	2.32	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:BA:877:A:C6	22:BA:899:A:C6	3.06	0.44
22:DA:1465:G:H2'	22:DA:1466:U:O4'	2.18	0.44
36:BO:52:SER:OG	36:BO:54:VAL:HG12	2.18	0.44
6:AG:101:ARG:HD3	21:AA:940:C:OP1	2.18	0.44
22:DA:778:G:H5''	22:DA:779:U:OP2	2.17	0.44
16:CQ:27:PHE:CD1	16:CQ:36:PHE:HB3	2.53	0.44
48:D0:33:SER:HB3	48:D0:34:GLY:H	1.60	0.44
15:CP:25:ARG:O	15:CP:26:ASN:ND2	2.50	0.44
1:AB:156:LEU:HD23	1:AB:156:LEU:H	1.83	0.44
18:AS:62:THR:O	18:AS:64:GLU:N	2.51	0.44
34:DM:50:ARG:O	34:DM:53:MET:HB3	2.18	0.44
22:BA:172:A:O2'	22:BA:173:A:H5'	2.17	0.44
22:DA:146:A:C6	22:DA:147:C:C4	3.06	0.44
1:AB:51:GLU:HG2	1:AB:197:PHE:CE1	2.53	0.44
23:BB:112:G:H2'	23:BB:113:C:C6	2.53	0.44
27:DF:13:LYS:N	27:DF:13:LYS:HD2	2.33	0.44
22:BA:34:U:H2'	22:BA:34:U:H6	1.53	0.44
27:DF:73:VAL:HG12	27:DF:73:VAL:O	2.17	0.44
11:CL:48:LEU:N	11:CL:48:LEU:HD23	2.33	0.44
40:DS:65:ASP:C	40:DS:67:ASP:H	2.21	0.44
22:DA:2416:C:N4	22:DA:2417:C:N4	2.66	0.44
22:DA:246:C:H4'	22:DA:385:C:O2'	2.18	0.44
22:DA:2319:G:O2'	22:DA:2320:U:O5'	2.32	0.44
45:BX:46:VAL:HG11	45:BX:77:TYR:CE1	2.53	0.44
45:BX:34:SER:HB3	45:BX:49:ARG:HA	1.99	0.44
20:CU:24:LYS:HD2	20:CU:24:LYS:HA	1.91	0.44
39:DR:51:VAL:HB	39:DR:52:PRO:CD	2.48	0.44
28:BG:83:THR:O	28:BG:84:LYS:HB3	2.17	0.44
3:AD:147:LYS:O	3:AD:149:LYS:N	2.51	0.44
20:AU:36:PHE:CD1	20:AU:39:LYS:HB3	2.50	0.44
22:DA:2519:U:C2	22:DA:2542:A:C6	3.06	0.44
32:DK:87:LEU:HD23	32:DK:87:LEU:H	1.83	0.44
46:BY:47:ARG:NH2	46:BY:47:ARG:HG3	2.14	0.44
22:DA:2798:U:H5''	22:DA:2799:A:OP1	2.17	0.44
22:DA:2800:A:N3	22:DA:2801:G:H1'	2.33	0.44
4:AE:94:PHE:CZ	4:AE:96:GLN:HG2	2.52	0.44
18:CS:4:LEU:HD21	53:CA:1319:A:OP2	2.18	0.44
4:CE:112:ALA:O	4:CE:113:VAL:C	2.56	0.44
22:BA:2197:U:P	3:CD:150:LYS:HD2	2.58	0.44
22:DA:856:G:O4'	44:DW:23:LYS:HB3	2.18	0.44
22:DA:715:A:N6	22:DA:716:A:C6	2.86	0.44
21:AA:46:G:O2'	21:AA:365:U:O2	2.35	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
53:CA:72:A:HO2'	53:CA:73:C:H5'	1.78	0.44
27:BF:39:VAL:HG13	27:BF:40:GLY:N	2.32	0.44
22:BA:621:A:H2'	22:BA:622:G:O4'	2.18	0.44
11:CL:3:VAL:O	11:CL:7:VAL:HG23	2.18	0.44
22:DA:1565:C:HO2'	22:DA:1566:A:H2'	1.81	0.44
21:AA:109:A:C4	21:AA:327:A:C2	3.06	0.44
22:DA:1814:G:C6	22:DA:1815:A:C6	3.06	0.44
28:DG:132:LEU:N	28:DG:132:LEU:HD12	2.33	0.44
51:B3:56:LEU:H	51:B3:56:LEU:CD2	2.29	0.44
25:DD:113:SER:OG	25:DD:114:LYS:N	2.51	0.44
47:BZ:38:GLU:O	47:BZ:43:ILE:HG12	2.17	0.44
7:AH:80:PRO:HG2	21:AA:878:A:C5'	2.48	0.44
7:AH:12:ARG:HH21	21:AA:826:C:H5'	1.82	0.44
53:CA:1451:U:O2	53:CA:1453:G:N7	2.51	0.44
51:D3:15:LYS:HZ2	51:D3:19:GLY:CA	2.31	0.44
22:DA:2020:A:O2'	22:DA:2021:C:H3'	2.18	0.44
22:DA:1694:C:H4'	22:DA:1695:G:H5''	2.00	0.44
11:AL:24:GLU:O	11:AL:25:ALA:C	2.55	0.44
39:DR:68:ARG:NH1	39:DR:90:ARG:HG2	2.32	0.44
22:BA:142:A:H2'	22:BA:143:C:C5	2.53	0.44
44:BW:73:PRO:O	44:BW:74:LYS:HB3	2.17	0.44
53:CA:900:A:O2'	53:CA:901:A:H5'	2.18	0.44
21:AA:596:A:N6	21:AA:645:G:N1	2.66	0.44
22:DA:2034:U:O2'	22:DA:2035:G:O4'	2.36	0.44
22:DA:108:G:H2'	22:DA:109:C:H6	1.82	0.44
14:AO:68:TYR:CE2	14:AO:72:LYS:HG3	2.53	0.44
12:AM:65:GLU:HB3	12:AM:66:GLY:H	1.64	0.44
27:BF:7:TYR:CD2	27:BF:11:VAL:HG11	2.52	0.44
16:CQ:28:VAL:HG11	16:CQ:39:ARG:HD3	1.99	0.44
36:BO:2:ASP:O	36:BO:3:LYS:CB	2.66	0.44
19:CT:76:ALA:C	19:CT:78:LEU:H	2.21	0.44
21:AA:322:C:H5	21:AA:328:C:C5	2.36	0.44
53:CA:935:A:O2'	53:CA:936:C:O5'	2.35	0.44
42:BU:42:LYS:HB3	42:BU:57:ILE:HG23	1.99	0.44
11:AL:115:LYS:O	11:AL:116:TYR:CB	2.64	0.44
2:CC:149:LYS:HD2	2:CC:200:TRP:CE3	2.53	0.44
53:CA:407:U:H2'	53:CA:408:A:C8	2.53	0.44
45:BX:29:LEU:CD2	45:BX:29:LEU:N	2.80	0.44
27:BF:175:PRO:O	27:BF:176:PHE:HB2	2.17	0.44
53:CA:1504:G:C3'	53:CA:1505:G:H5'	2.47	0.44
49:B1:18:HIS:CG	49:B1:19:PHE:N	2.84	0.44
24:BC:196:ASN:OD1	24:BC:199:HIS:HB2	2.18	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
24:BC:198:GLU:O	24:BC:199:HIS:C	2.54	0.44
53:CA:1399:C:O2	53:CA:1401:G:C6	2.70	0.44
22:DA:2734:A:C2'	22:DA:2735:G:H5'	2.48	0.44
42:DU:64:ILE:O	42:DU:65:GLN:O	2.36	0.44
30:DI:105:LEU:HD21	30:DI:129:GLU:OE2	2.18	0.44
5:CF:66:ALA:HB1	5:CF:70:VAL:CG2	2.48	0.44
21:AA:104:G:O2'	21:AA:105:G:H5'	2.18	0.44
53:CA:634:C:H2'	53:CA:635:A:O4'	2.18	0.44
53:CA:825:A:H2'	53:CA:826:C:H6	1.83	0.44
24:BC:35:LYS:HB3	24:BC:35:LYS:HE3	1.76	0.44
22:BA:2536:G:C5	22:BA:2537:U:C4	3.06	0.44
53:CA:194:C:O2'	53:CA:195:A:H5'	2.17	0.44
27:BF:173:ASP:O	27:BF:174:PHE:C	2.56	0.44
25:BD:105:LYS:HD2	25:BD:105:LYS:HA	1.65	0.44
28:DG:175:LYS:HD3	28:DG:175:LYS:C	2.38	0.44
22:DA:2442:C:H2'	22:DA:2442:C:O2	2.18	0.44
33:DL:76:GLU:O	33:DL:76:GLU:HG3	2.16	0.44
1:CB:42:LEU:HG	1:CB:42:LEU:H	1.54	0.44
2:AC:86:LEU:O	2:AC:90:VAL:HG23	2.18	0.44
3:AD:86:GLY:O	3:AD:89:LEU:HB3	2.18	0.44
25:BD:57:ALA:O	25:BD:60:VAL:HG12	2.18	0.44
22:DA:1627:G:C2	22:DA:1628:G:N7	2.86	0.43
51:D3:31:ILE:HG21	51:D3:34:LYS:NZ	2.33	0.43
53:CA:1048:G:N2	53:CA:1214:C:H5	2.15	0.43
22:BA:2364:C:OP1	44:BW:54:ARG:HD2	2.18	0.43
3:CD:31:CYS:O	3:CD:32:LYS:HB2	2.18	0.43
19:AT:25:SER:O	19:AT:28:ARG:N	2.50	0.43
29:DH:25:TYR:CD1	29:DH:30:LEU:HG	2.53	0.43
27:DF:128:SER:HA	27:DF:153:ILE:O	2.18	0.43
34:DM:41:LEU:HB3	34:DM:46:ILE:CG2	2.48	0.43
24:BC:80:LEU:HA	24:BC:90:ILE:O	2.18	0.43
22:DA:1241:A:H5'	22:DA:1241:A:N3	2.32	0.43
35:DN:73:ASN:HA	35:DN:76:VAL:HG13	2.00	0.43
26:BE:134:LEU:CD2	26:BE:161:ALA:HB2	2.48	0.43
53:CA:1137:C:H4'	53:CA:1138:G:C2	2.52	0.43
35:BN:117:ASP:O	35:BN:119:SER:N	2.43	0.43
44:DW:23:LYS:CD	44:DW:24:ARG:N	2.72	0.43
22:DA:49:A:C8	22:DA:51:G:C2	3.06	0.43
21:AA:450:G:H2'	21:AA:451:A:OP1	2.18	0.43
22:DA:1667:G:O2'	22:DA:1668:A:P	2.76	0.43
21:AA:652:U:O4	21:AA:752:G:H2'	2.17	0.43
27:DF:43:ILE:HG23	27:DF:44:ALA:N	2.24	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:989:G:C4'	22:DA:990:A:OP1	2.63	0.43
22:DA:2345:G:C6	22:DA:2381:A:C6	3.06	0.43
53:CA:1364:U:O2	53:CA:1364:U:O4'	2.37	0.43
16:AQ:46:HIS:HB3	16:AQ:73:THR:HA	2.00	0.43
22:BA:229:C:H2'	22:BA:230:G:O4'	2.18	0.43
33:DL:64:PHE:HB3	51:D3:24:LYS:HE2	2.00	0.43
21:AA:86:G:N3	21:AA:87:C:C5	2.86	0.43
44:BW:8:SER:O	44:BW:9:THR:CG2	2.65	0.43
22:BA:2199:A:H5'	22:BA:2200:C:C5	2.45	0.43
22:BA:2722:G:H2'	22:BA:2723:C:C6	2.52	0.43
1:AB:100:LEU:HB3	1:AB:174:GLU:HG2	2.00	0.43
1:AB:178:LEU:HD12	1:AB:178:LEU:HA	1.85	0.43
22:DA:1792:G:O2'	22:DA:1793:C:H5'	2.17	0.43
22:DA:1519:G:C6	22:DA:1520:U:N3	2.85	0.43
21:AA:1501:C:C5	21:AA:1504:G:C4	3.06	0.43
21:AA:674:G:N2	21:AA:717:U:O2	2.51	0.43
24:DC:69:ASN:O	24:DC:70:LYS:C	2.56	0.43
21:AA:596:A:H2'	21:AA:597:G:C8	2.45	0.43
53:CA:739:C:H2'	53:CA:739:C:O2	2.18	0.43
42:DU:10:VAL:O	42:DU:21:ARG:HA	2.18	0.43
21:AA:1413:A:C2	21:AA:1488:G:C2	3.06	0.43
4:CE:45:VAL:O	4:CE:71:ILE:HG22	2.18	0.43
22:DA:1571:A:H2'	22:DA:1572:A:C8	2.53	0.43
54:DB:116:G:H2'	54:DB:117:G:C8	2.50	0.43
21:AA:1357:A:C5	21:AA:1358:U:C4	3.06	0.43
31:BJ:141:ASP:HB3	31:BJ:142:ILE:H	1.53	0.43
21:AA:1049:U:C1'	21:AA:1201:A:N7	2.81	0.43
17:CR:22:TYR:CE1	17:CR:64:LEU:HD12	2.53	0.43
46:DY:31:GLN:C	46:DY:33:ALA:N	2.70	0.43
8:AI:62:LEU:HD23	8:AI:62:LEU:H	1.82	0.43
22:BA:494:G:H21	40:BS:57:ASN:HD21	1.64	0.43
3:CD:68:GLU:O	3:CD:69:ARG:C	2.56	0.43
22:BA:78:U:O2'	22:BA:79:C:H5'	2.17	0.43
39:BR:70:GLU:O	39:BR:71:LYS:C	2.55	0.43
22:DA:2556:C:H2'	22:DA:2557:G:O4'	2.18	0.43
21:AA:82:G:H2'	21:AA:83:C:H4'	1.98	0.43
22:BA:2672:U:H2'	22:BA:2673:G:O5'	2.18	0.43
3:CD:158:LEU:O	3:CD:162:GLU:HG3	2.18	0.43
22:BA:70:G:H5''	22:BA:112:U:O2	2.17	0.43
21:AA:1091:U:O2	21:AA:1093:A:C8	2.71	0.43
53:CA:582:C:C4	53:CA:583:A:N7	2.86	0.43
53:CA:807:A:H2'	53:CA:808:C:C6	2.53	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
15:CP:62:GLY:O	15:CP:63:GLN:HB2	2.18	0.43
1:CB:23:ASN:HB2	1:CB:189:ASN:O	2.18	0.43
28:BG:27:GLY:O	28:BG:28:LYS:C	2.55	0.43
22:DA:1249:U:H4'	38:DQ:3:VAL:CB	2.48	0.43
10:AK:15:VAL:HG13	10:AK:78:ILE:CG2	2.48	0.43
22:DA:698:C:O2'	22:DA:734:A:N6	2.51	0.43
23:BB:61:G:C5	23:BB:62:C:C5	3.06	0.43
53:CA:762:U:O5'	53:CA:762:U:H6	2.02	0.43
35:DN:46:ARG:HG3	35:DN:46:ARG:H	1.53	0.43
21:AA:1135:U:H6	21:AA:1135:U:OP2	2.01	0.43
53:CA:1418:A:H2	22:DA:1948:G:N3	2.15	0.43
25:BD:97:SER:O	25:BD:99:GLU:CG	2.66	0.43
44:BW:30:VAL:HG23	44:BW:60:ALA:O	2.17	0.43
53:CA:1409:C:H6	53:CA:1409:C:O5'	2.01	0.43
22:DA:1386:C:O2'	22:DA:1387:A:O5'	2.33	0.43
22:DA:1998:A:H2'	22:DA:1999:C:O4'	2.19	0.43
22:DA:206:U:O2'	22:DA:207:A:C5'	2.65	0.43
4:AE:152:VAL:CG1	4:AE:155:LYS:HZ1	2.31	0.43
22:BA:1106:G:C2	22:BA:1107:G:N9	2.86	0.43
10:AK:125:LYS:O	20:AU:33:ARG:CZ	2.66	0.43
25:BD:16:THR:O	25:BD:17:GLU:C	2.57	0.43
41:BT:8:LEU:HD13	41:BT:46:ALA:CA	2.47	0.43
41:BT:28:ASN:HA	41:BT:91:GLN:OE1	2.18	0.43
27:DF:76:PHE:HD2	27:DF:76:PHE:N	2.03	0.43
22:DA:1071:G:O2'	22:DA:1072:C:C5'	2.66	0.43
22:DA:1087:G:C4	22:DA:1089:A:C2	3.06	0.43
22:DA:1326:U:O2'	22:DA:1327:A:C5'	2.66	0.43
21:AA:212:G:C2	21:AA:213:G:C5	3.06	0.43
22:BA:2135:A:H2'	22:BA:2136:G:C8	2.53	0.43
22:DA:476:G:O2'	22:DA:477:A:O5'	2.17	0.43
53:CA:596:A:C2	53:CA:597:G:C8	3.06	0.43
46:DY:58:ASN:C	46:DY:60:LYS:N	2.71	0.43
22:DA:2874:C:H2'	22:DA:2875:C:C5	2.53	0.43
18:CS:36:ARG:O	18:CS:36:ARG:HG2	2.17	0.43
1:AB:202:ASN:OD1	1:AB:203:ASP:N	2.51	0.43
2:AC:156:LEU:HD13	2:AC:163:ARG:HB2	1.99	0.43
53:CA:1136:C:C5	53:CA:1138:G:O6	2.71	0.43
22:DA:189:G:C2'	22:DA:190:A:O5'	2.65	0.43
21:AA:1055:A:C8	21:AA:1055:A:O5'	2.71	0.43
22:DA:1432:G:H2'	22:DA:1433:A:C8	2.53	0.43
1:CB:103:TRP:HD1	1:CB:107:ARG:HB3	1.83	0.43
14:AO:73:ASP:HB3	14:AO:76:ARG:HG3	2.00	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:AA:1160:G:O2'	21:AA:1161:C:C5'	2.66	0.43
28:DG:116:LEU:HD13	28:DG:120:ILE:O	2.18	0.43
22:DA:1620:G:C6	22:DA:1621:U:C4	3.06	0.43
39:BR:34:GLU:HG3	39:BR:60:LYS:HZ3	1.83	0.43
53:CA:1454:G:O2'	53:CA:1455:G:C5'	2.66	0.43
53:CA:1102:A:H5''	53:CA:1102:A:H8	1.83	0.43
22:BA:1964:G:O2'	22:BA:1967:C:P	2.76	0.43
22:DA:532:A:C4	22:DA:2021:C:O2	2.70	0.43
22:BA:1798:U:OP1	24:BC:257:ARG:HB2	2.18	0.43
53:CA:275:G:H2'	53:CA:276:G:H8	1.83	0.43
22:BA:947:A:H2'	22:BA:948:C:C6	2.53	0.43
22:BA:1076:C:C2	22:BA:1077:A:C8	3.06	0.43
4:CE:48:GLY:CA	4:CE:66:ALA:HB2	2.45	0.43
22:DA:424:G:O2'	22:DA:425:G:H5'	2.18	0.43
42:BU:53:GLN:N	42:BU:54:PRO:HD2	2.33	0.43
3:CD:151:GLN:O	3:CD:152:SER:C	2.55	0.43
53:CA:155:A:C5	53:CA:156:C:C4	3.06	0.43
22:DA:2461:A:H1'	22:DA:2492:U:C2	2.52	0.43
53:CA:1113:C:O2'	53:CA:1114:C:H5'	2.19	0.43
54:DB:81:G:H2'	54:DB:82:U:H6	1.83	0.43
26:BE:174:GLY:O	26:BE:175:ILE:O	2.35	0.43
22:DA:1380:G:H1'	22:DA:1569:A:N6	2.33	0.43
2:CC:149:LYS:O	2:CC:149:LYS:HD2	2.18	0.43
33:BL:68:SER:O	33:BL:69:ARG:CB	2.65	0.43
28:BG:109:SER:O	28:BG:110:HIS:CB	2.65	0.43
22:DA:1943:U:H4'	22:DA:1944:U:OP1	2.18	0.43
53:CA:1342:C:H2'	53:CA:1343:G:C8	2.54	0.43
22:DA:2788:C:H2'	22:DA:2789:C:H6	1.81	0.43
49:B1:31:GLU:O	49:B1:31:GLU:HG2	2.17	0.43
38:DQ:77:LYS:HE2	38:DQ:116:LEU:HD11	1.99	0.43
1:CB:169:HIS:HD2	1:CB:173:LYS:HZ3	1.66	0.43
22:BA:845:A:C6	22:BA:847:U:C6	3.06	0.43
1:AB:58:LYS:NZ	1:AB:62:ARG:HG3	2.32	0.43
53:CA:1442:G:H2'	53:CA:1443:C:H6	1.83	0.43
22:DA:1838:C:C2	22:DA:1899:A:C2	3.06	0.43
16:CQ:68:LYS:O	16:CQ:69:THR:HG23	2.18	0.43
34:BM:70:ASP:C	34:BM:70:ASP:OD1	2.55	0.43
19:CT:11:ILE:C	19:CT:13:SER:N	2.71	0.43
22:BA:608:A:C6	22:BA:609:A:C6	3.05	0.43
22:BA:1711:A:H2'	22:BA:1712:U:C6	2.54	0.43
22:BA:2776:A:C8	22:BA:2782:G:C6	3.06	0.43
43:BV:26:PHE:HB2	43:BV:27:PRO:HD2	2.00	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:CD:39:GLN:C	3:CD:41:GLY:H	2.21	0.43
5:AF:7:VAL:HA	5:AF:60:VAL:O	2.17	0.43
22:BA:122:G:H2'	22:BA:123:G:O4'	2.18	0.43
22:BA:1039:A:H2'	22:BA:1040:A:O4'	2.18	0.43
22:DA:1835:G:H2'	22:DA:1836:C:H6	1.84	0.43
7:CH:100:ILE:HD12	7:CH:100:ILE:C	2.38	0.43
22:DA:2751:G:H2'	22:DA:2751:G:N3	2.33	0.43
42:BU:78:LYS:HG2	42:BU:79:ALA:H	1.83	0.43
9:AJ:15:HIS:CG	9:AJ:16:ARG:N	2.85	0.43
21:AA:1426:G:H2'	21:AA:1427:C:O4'	2.17	0.43
22:DA:1213:A:N6	22:DA:1236:G:H1'	2.33	0.43
6:CG:20:GLU:O	6:CG:23:ALA:HB3	2.18	0.43
38:BQ:94:LEU:HD22	38:BQ:94:LEU:HA	1.84	0.43
22:DA:1441:G:C6	22:DA:1442:U:C4	3.06	0.43
45:BX:34:SER:CB	45:BX:49:ARG:HA	2.48	0.43
39:DR:49:ILE:HG13	39:DR:49:ILE:O	2.18	0.43
37:BP:7:LEU:O	37:BP:10:GLU:HG2	2.18	0.43
22:BA:1064:C:O2'	30:BI:89:SER:HB2	2.18	0.43
53:CA:1408:A:C2	53:CA:1494:G:C2	3.06	0.43
28:BG:84:LYS:CB	28:BG:132:LEU:H	2.31	0.43
3:CD:25:ARG:HG2	3:CD:25:ARG:HH11	1.82	0.43
3:CD:25:ARG:O	3:CD:26:ALA:C	2.56	0.43
16:AQ:60:ILE:HG22	16:AQ:61:ARG:N	2.33	0.43
11:AL:33:CYS:CA	11:AL:54:VAL:HA	2.28	0.43
15:CP:78:VAL:C	15:CP:80:LYS:N	2.70	0.43
21:AA:1457:G:H2'	21:AA:1458:G:O4'	2.19	0.43
22:DA:447:A:C8	22:DA:473:G:C6	3.05	0.43
38:DQ:91:ARG:HG3	39:DR:11:GLN:NE2	2.32	0.43
22:BA:1108:U:H2'	22:BA:1109:C:O4'	2.18	0.43
22:DA:2093:G:O2'	22:DA:2094:A:P	2.76	0.43
53:CA:790:A:H2'	53:CA:791:G:O4'	2.18	0.43
27:DF:65:LEU:CD2	27:DF:65:LEU:H	2.30	0.43
22:DA:1329:U:O2'	22:DA:1330:C:P	2.76	0.43
34:DM:41:LEU:C	34:DM:93:VAL:HG23	2.39	0.43
22:DA:2748:A:C2	22:DA:2749:A:C4	3.07	0.43
41:DT:55:VAL:HG22	41:DT:56:GLU:N	2.33	0.43
46:BY:7:ARG:HG3	46:BY:7:ARG:O	2.18	0.43
53:CA:1366:C:O2'	53:CA:1367:C:C6	2.63	0.43
1:AB:20:ARG:HH11	1:AB:20:ARG:HA	1.82	0.43
22:DA:201:C:C4	22:DA:202:U:C5	3.06	0.43
22:DA:1666:G:H4'	32:DK:6:THR:HG23	1.99	0.43
6:AG:68:VAL:HG21	6:AG:103:ILE:HD11	2.00	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:DD:137:SER:HB3	25:DD:138:LEU:CD2	2.40	0.43
43:DV:61:LEU:N	43:DV:61:LEU:HD23	2.25	0.43
11:AL:43:LYS:CB	11:AL:44:PRO:CD	2.87	0.43
22:BA:1912:A:C2	22:BA:1919:A:C6	3.07	0.43
40:BS:95:ARG:O	40:BS:96:ILE:HG12	2.18	0.43
22:DA:1993:U:H4'	25:DD:133:THR:HG21	2.00	0.43
30:BI:3:LYS:HD2	30:BI:4:VAL:H	1.82	0.43
53:CA:237:G:C2'	53:CA:238:A:H5'	2.47	0.43
53:CA:1294:G:C8	53:CA:1294:G:OP2	2.72	0.43
53:CA:1451:U:C2	53:CA:1453:G:O6	2.71	0.43
36:DO:31:THR:HG21	36:DO:36:TYR:HE2	1.83	0.43
22:BA:278:A:H2'	22:BA:278:A:N3	2.32	0.43
34:DM:71:LYS:HA	34:DM:72:PRO:HD3	1.81	0.43
39:BR:21:ARG:NH2	39:BR:93:PHE:CZ	2.86	0.43
18:AS:5:LYS:HD3	21:AA:1314:C:C5	2.53	0.43
53:CA:250:A:O2'	53:CA:251:G:H5''	2.19	0.43
28:DG:126:THR:HG22	28:DG:127:GLN:N	2.28	0.43
24:BC:156:SER:HB3	24:BC:159:THR:HG21	1.99	0.43
1:AB:95:TRP:CZ3	1:AB:174:GLU:OE2	2.71	0.43
1:CB:131:LYS:O	1:CB:131:LYS:HE3	2.18	0.43
22:DA:181:A:C2	22:DA:434:U:H1'	2.52	0.43
9:CJ:30:LYS:HG3	9:CJ:36:VAL:HG22	2.00	0.43
11:AL:72:ASN:CG	11:AL:73:LEU:H	2.22	0.43
22:DA:1519:G:N3	22:DA:1519:G:H2'	2.33	0.43
5:AF:55:HIS:O	5:AF:56:LYS:CB	2.65	0.43
24:DC:76:VAL:O	24:DC:93:VAL:O	2.36	0.43
22:DA:2642:G:C2	22:DA:2773:C:C2	3.06	0.43
22:DA:422:A:O2'	22:DA:423:A:C5'	2.66	0.43
42:BU:73:ASN:C	42:BU:75:ALA:H	2.21	0.43
34:DM:76:LYS:NZ	34:DM:84:LYS:H	2.15	0.43
18:AS:14:LEU:HD22	18:AS:34:SER:HB3	2.00	0.43
14:AO:86:LEU:C	14:AO:88:ARG:H	2.20	0.43
12:AM:89:ARG:HH11	12:AM:94:LEU:HB2	1.83	0.43
22:DA:1380:G:H1'	22:DA:1569:A:H61	1.83	0.43
19:CT:71:ALA:O	19:CT:72:ALA:C	2.57	0.43
49:B1:42:VAL:CG1	49:B1:42:VAL:O	2.66	0.43
21:AA:958:A:C5	21:AA:959:A:C6	3.06	0.43
22:DA:1527:G:H1'	22:DA:1546:G:N2	2.33	0.43
1:AB:27:LYS:O	1:AB:29:PHE:N	2.51	0.43
4:CE:88:HIS:O	4:CE:89:THR:C	2.57	0.43
22:BA:1205:A:H3'	22:BA:1206:G:H5'	1.99	0.43
49:D1:13:SER:OG	49:D1:46:VAL:HG22	2.17	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:BA:1321:A:H2'	22:BA:1322:A:C8	2.54	0.43
5:AF:18:VAL:N	5:AF:19:PRO:HD2	2.33	0.43
22:DA:1838:C:C5	22:DA:1899:A:C5	3.06	0.43
28:DG:154:GLU:C	28:DG:156:TYR:H	2.21	0.43
57:BB:315:HOH:O	43:BV:14:LYS:HD2	2.17	0.43
15:CP:20:VAL:CG2	15:CP:32:PHE:HB2	2.48	0.43
53:CA:650:G:N3	53:CA:650:G:H2'	2.33	0.43
5:CF:46:GLN:OE1	5:CF:55:HIS:O	2.37	0.43
22:BA:2578:G:H2'	22:BA:2578:G:N3	2.32	0.43
14:CO:10:ILE:HA	14:CO:13:GLU:HB2	2.00	0.43
50:B2:20:ALA:O	50:B2:23:ALA:HB3	2.18	0.43
22:BA:1479:G:O2'	22:BA:1480:C:H5'	2.17	0.43
26:DE:2:GLU:HA	26:DE:13:THR:HA	2.00	0.43
22:BA:1614:A:C2	40:BS:93:ALA:HB2	2.53	0.43
12:AM:25:GLY:H	21:AA:1329:A:H5''	1.83	0.43
23:BB:78:A:H2'	23:BB:79:G:O4'	2.19	0.43
21:AA:1187:G:N3	21:AA:1187:G:H2'	2.33	0.43
38:BQ:49:ARG:HH11	38:BQ:49:ARG:HG3	1.83	0.43
8:CI:119:LYS:O	8:CI:119:LYS:HG3	2.19	0.43
37:DP:83:ILE:O	37:DP:83:ILE:HD13	2.18	0.43
22:BA:241:A:O2'	51:B3:2:LYS:NZ	2.49	0.43
22:DA:775:G:OP1	24:DC:47:ARG:NH2	2.51	0.43
22:DA:57:C:O2'	41:DT:36:LYS:HE2	2.18	0.43
22:BA:1429:G:O2'	22:BA:1430:G:H5'	2.17	0.43
22:BA:923:G:N2	44:BW:23:LYS:HZ3	2.17	0.43
25:BD:186:LEU:HD12	25:BD:186:LEU:HA	1.81	0.43
5:AF:62:MET:O	5:AF:63:ASN:HB2	2.18	0.43
22:BA:1061:U:H6	22:BA:1070:A:N9	2.17	0.43
21:AA:175:C:O2'	21:AA:176:C:H5'	2.19	0.43
20:AU:7:GLU:HB2	20:AU:11:PHE:CE1	2.53	0.43
3:CD:12:ARG:NE	3:CD:36:ALA:O	2.52	0.43
53:CA:375:U:C2	53:CA:376:G:C8	3.06	0.43
22:DA:617:G:H2'	22:DA:618:G:H8	1.82	0.43
34:BM:35:ALA:O	34:BM:36:VAL:CB	2.45	0.43
22:BA:1082:U:C2	22:BA:1083:U:O2	2.71	0.43
21:AA:100:G:C6	21:AA:101:A:C6	3.06	0.43
22:DA:1056:G:H21	22:DA:1102:C:H41	1.67	0.43
22:DA:1333:G:O2'	22:DA:1334:G:H5'	2.19	0.43
22:DA:1809:A:C2'	22:DA:1810:A:H8	2.29	0.43
22:BA:2134:A:C6	22:BA:2135:A:N6	2.87	0.43
22:DA:2874:C:HO2'	22:DA:2875:C:H6	1.65	0.43
22:DA:333:G:C2	22:DA:334:C:C5	3.06	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
46:BY:7:ARG:CA	46:BY:60:LYS:HZ3	2.31	0.43
13:CN:30:ILE:C	13:CN:40:ARG:HA	2.37	0.43
1:AB:38:HIS:CD2	1:AB:38:HIS:H	2.35	0.43
22:DA:2884:U:P	48:D0:40:HIS:HE2	2.41	0.43
38:BQ:77:LYS:HE2	38:BQ:116:LEU:HD23	1.99	0.43
22:DA:137:U:C4	22:DA:138:U:C2	3.07	0.43
3:AD:28:ASP:HB2	3:AD:33:ILE:HB	2.00	0.43
37:DP:28:LYS:O	37:DP:80:VAL:O	2.36	0.43
24:DC:62:ARG:NH2	24:DC:62:ARG:CG	2.81	0.43
34:BM:81:ARG:HG3	34:BM:82:MET:H	1.83	0.43
53:CA:1006:G:H2'	53:CA:1006:G:N3	2.32	0.43
28:DG:43:LYS:HB2	28:DG:50:THR:O	2.18	0.43
28:DG:48:THR:O	28:DG:49:LEU:CB	2.60	0.43
22:DA:1332:G:C6	22:DA:1609:A:C8	3.06	0.43
22:BA:1733:G:O2'	22:BA:1734:G:C5'	2.67	0.43
37:DP:50:ARG:O	37:DP:51:ASN:HB2	2.18	0.43
2:CC:147:GLY:O	2:CC:202:PHE:N	2.47	0.43
47:DZ:40:THR:H	47:DZ:43:ILE:CD1	2.28	0.43
40:DS:96:ILE:HG12	40:DS:96:ILE:O	2.17	0.43
2:CC:86:LEU:O	2:CC:90:VAL:HG13	2.18	0.43
29:DH:109:GLU:HB3	29:DH:110:VAL:H	1.54	0.43
24:BC:190:THR:CG2	24:BC:191:LEU:N	2.80	0.43
22:BA:1416:G:O2'	22:BA:1417:C:O5'	2.36	0.43
3:AD:84:ASN:HD22	3:AD:87:GLU:HG2	1.83	0.43
26:BE:96:VAL:O	26:BE:96:VAL:HG12	2.14	0.43
29:BH:82:SER:HA	29:BH:101:ASP:OD1	2.19	0.43
25:BD:182:ALA:O	25:BD:183:GLU:C	2.56	0.43
21:AA:1068:G:N7	21:AA:1094:G:H2'	2.34	0.43
11:AL:82:ARG:HB2	11:AL:97:VAL:HG23	2.00	0.43
3:CD:195:ASN:N	3:CD:195:ASN:OD1	2.50	0.43
18:AS:50:VAL:CG2	18:AS:70:LEU:HB3	2.46	0.43
21:AA:895:G:C5	21:AA:896:C:C4	3.06	0.43
36:DO:7:ARG:O	36:DO:8:ILE:C	2.56	0.43
11:AL:88:ASP:HB2	21:AA:523:A:H61	1.83	0.43
45:BX:32:LEU:H	45:BX:32:LEU:HD12	1.83	0.43
50:B2:35:ARG:HG3	50:B2:42:LEU:HD11	1.99	0.43
22:BA:2793:C:H2'	22:BA:2794:C:C6	2.53	0.43
22:DA:2635:A:C5'	25:DD:79:LEU:HB2	2.48	0.43
27:BF:111:ARG:HB3	27:BF:112:ASP:H	1.35	0.43
22:DA:2009:A:C6	22:DA:2010:G:N7	2.86	0.43
22:DA:470:A:C6	22:DA:471:A:C6	3.06	0.43
37:BP:8:GLU:HB3	37:BP:54:LEU:CD2	2.48	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:2735:G:C4	22:DA:2736:A:C8	3.06	0.43
22:BA:685:A:H2'	22:BA:773:U:O4	2.18	0.43
18:AS:79:TYR:CG	18:AS:80:ARG:N	2.84	0.43
16:CQ:45:VAL:HG21	16:CQ:60:ILE:HG21	2.00	0.43
22:DA:487:C:C2'	22:DA:488:G:H5'	2.48	0.43
22:BA:2536:G:C6	22:BA:2537:U:C4	3.06	0.43
26:BE:126:VAL:HG22	26:BE:127:GLU:H	1.82	0.43
13:CN:63:CYS:HB3	13:CN:67:GLY:H	1.83	0.43
22:DA:936:A:C6	22:DA:937:C:C4	3.07	0.43
10:CK:79:LYS:HB3	10:CK:80:ASN:OD1	2.19	0.43
22:BA:1471:G:H2'	22:BA:1472:C:C6	2.53	0.43
22:BA:2788:C:H2'	22:BA:2789:C:C6	2.53	0.43
37:BP:95:LYS:HG2	37:BP:97:TYR:CZ	2.53	0.43
11:AL:22:ALA:HB1	11:AL:56:LEU:HD12	2.00	0.43
21:AA:399:G:H2'	21:AA:400:C:C6	2.53	0.43
24:DC:1:ALA:O	24:DC:18:VAL:HG23	2.18	0.43
1:AB:82:ALA:O	1:AB:85:SER:OG	2.37	0.43
2:CC:106:ARG:H	2:CC:106:ARG:HD3	1.83	0.43
1:AB:57:ASN:HD22	1:AB:57:ASN:C	2.21	0.43
21:AA:1164:G:C6	21:AA:1165:U:C4	3.06	0.43
22:BA:2825:G:H5''	22:BA:2826:A:OP2	2.18	0.43
1:CB:221:ARG:C	1:CB:223:GLY:H	2.20	0.43
22:DA:1439:A:C6	22:DA:1552:A:C8	3.07	0.43
51:D3:33:THR:CG2	51:D3:34:LYS:N	2.81	0.43
22:DA:2388:A:H5'	22:DA:2389:G:OP2	2.18	0.43
38:BQ:85:ALA:HA	38:BQ:115:ALA:CB	2.47	0.43
45:BX:36:ARG:HG2	45:BX:45:PHE:HB3	2.00	0.43
22:BA:2356:U:H5''	44:BW:16:GLU:HG3	2.00	0.43
22:DA:1536:C:H4'	22:DA:1537:G:C5'	2.48	0.43
22:BA:1130:U:O2'	22:BA:1131:G:H8	2.01	0.43
22:DA:1916:A:H2'	22:DA:1917:U:H6	1.81	0.43
22:DA:1390:U:O2'	22:DA:1391:U:H5'	2.17	0.43
41:DT:19:LYS:HA	41:DT:19:LYS:HD3	1.68	0.43
16:AQ:12:VAL:CG1	16:AQ:16:MET:HE2	2.47	0.43
22:DA:206:U:H2'	22:DA:207:A:C8	2.53	0.43
9:CJ:81:GLU:O	9:CJ:86:ALA:HB3	2.18	0.43
31:DJ:48:VAL:HG12	31:DJ:49:ASP:N	2.33	0.43
38:DQ:57:ARG:CZ	38:DQ:92:LYS:HE2	2.48	0.43
25:BD:34:VAL:HG22	25:BD:94:GLN:N	2.32	0.43
22:BA:1104:C:H2'	22:BA:1105:U:C6	2.53	0.43
8:CI:59:LYS:HB3	8:CI:59:LYS:HE2	1.79	0.43
41:BT:28:ASN:OD1	41:BT:29:THR:HG22	2.19	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:AA:71:A:O2'	21:AA:72:A:C5'	2.66	0.43
22:DA:2312:U:C2'	22:DA:2312:U:O2	2.65	0.43
54:DB:44:G:H3'	27:DF:91:ARG:NE	2.33	0.43
22:DA:1055:G:C2'	22:DA:1056:G:H5'	2.49	0.43
22:DA:492:A:O2'	22:DA:493:G:C5'	2.67	0.43
1:CB:206:ILE:C	1:CB:208:ALA:H	2.21	0.43
4:AE:108:GLY:C	4:AE:109:ALA:O	2.56	0.43
28:BG:36:LEU:HD13	28:BG:36:LEU:HA	1.74	0.43
21:AA:841:C:H3'	21:AA:843:U:OP2	2.18	0.43
22:DA:296:U:C2	22:DA:297:G:C8	3.06	0.43
53:CA:960:U:C4'	53:CA:961:U:H5''	2.48	0.43
22:DA:395:U:O2'	22:DA:396:G:C8	2.54	0.43
22:BA:1508:A:O2'	22:BA:1509:A:C8	2.65	0.43
35:BN:33:ILE:HD11	35:BN:118:ARG:HH21	1.82	0.43
35:DN:35:LYS:NZ	35:DN:112:TYR:HE1	2.09	0.43
22:DA:856:G:C2	22:DA:922:C:C2	3.07	0.43
50:D2:31:LEU:HA	50:D2:34:ARG:CB	2.43	0.43
44:DW:14:ASP:C	44:DW:16:GLU:H	2.22	0.43
21:AA:372:C:C4'	21:AA:373:A:OP1	2.67	0.43
21:AA:451:A:C6	21:AA:480:U:H2'	2.53	0.43
32:BK:43:ILE:HG12	32:BK:56:ASP:HB2	1.99	0.43
18:AS:35:ARG:HB3	18:AS:71:GLY:HA3	2.01	0.43
29:DH:38:PRO:O	29:DH:40:THR:N	2.52	0.43
24:DC:206:LYS:HG3	24:DC:209:ALA:H	1.84	0.43
22:DA:962:G:H2'	22:DA:963:U:C6	2.53	0.43
28:DG:122:ALA:HB2	28:DG:132:LEU:HA	2.00	0.43
37:DP:28:LYS:NZ	37:DP:28:LYS:H	2.17	0.43
22:BA:1911:U:O4	22:BA:1918:A:H2'	2.18	0.43
22:BA:250:G:H2'	22:BA:251:A:H8	1.79	0.43
28:BG:59:ASP:O	28:BG:62:ALA:HB3	2.18	0.43
1:AB:162:VAL:HG22	1:AB:184:ALA:HB2	1.99	0.43
22:DA:638:G:O2'	22:DA:639:U:H5'	2.19	0.43
47:DZ:43:ILE:HD12	47:DZ:44:ARG:N	2.34	0.43
2:CC:76:ILE:HG12	2:CC:83:VAL:HG11	2.01	0.43
53:CA:275:G:O2'	53:CA:276:G:H5'	2.18	0.43
27:DF:8:LYS:HG3	27:DF:12:VAL:HG21	2.01	0.43
24:DC:161:VAL:HG13	24:DC:174:ARG:O	2.18	0.43
22:DA:526:A:C6	22:DA:2626:C:C4'	3.01	0.43
31:DJ:110:PRO:O	31:DJ:115:GLY:HA3	2.19	0.43
22:DA:2035:G:H4'	22:DA:2036:C:OP2	2.18	0.43
34:DM:76:LYS:HG2	34:DM:80:VAL:CG1	2.48	0.43
26:DE:85:PHE:O	26:DE:86:ALA:C	2.57	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:BD:11:MET:HE1	25:BD:192:ALA:HA	2.00	0.43
3:AD:114:ARG:O	3:AD:115:GLN:C	2.54	0.43
14:AO:32:THR:HG21	14:AO:84:LEU:HG	2.01	0.43
20:AU:23:GLU:HB3	20:AU:24:LYS:H	1.52	0.43
22:DA:1352:U:H5	22:DA:1377:G:C6	2.34	0.43
9:AJ:59:LYS:HE3	21:AA:972:C:P	2.59	0.43
18:AS:54:ARG:HG3	18:AS:54:ARG:H	1.64	0.43
39:DR:61:ALA:HB1	39:DR:96:VAL:HB	2.00	0.43
27:DF:37:MET:CA	27:DF:151:LEU:HB3	2.49	0.43
53:CA:769:G:H4'	53:CA:1513:A:H4'	2.00	0.43
22:DA:851:C:C4'	47:DZ:46:MET:HG2	2.49	0.43
25:DD:79:LEU:HD22	25:DD:79:LEU:N	2.33	0.43
26:BE:132:LYS:HB3	26:BE:132:LYS:HZ2	1.82	0.43
21:AA:1348:U:O2'	21:AA:1349:A:H5'	2.17	0.43
22:BA:1452:G:H3'	57:BA:3420:HOH:O	2.18	0.43
22:DA:2734:A:H2'	22:DA:2735:G:C5'	2.49	0.43
1:CB:95:TRP:CH2	1:CB:171:ALA:HA	2.53	0.43
21:AA:781:A:C4	21:AA:802:A:C2	3.06	0.43
21:AA:935:A:C2	21:AA:936:C:C6	3.06	0.43
53:CA:923:A:O4'	53:CA:1398:A:C2	2.72	0.43
21:AA:139:A:C2'	21:AA:140:U:H5'	2.49	0.43
22:BA:2461:A:H2'	22:BA:2462:C:C6	2.52	0.43
22:DA:1249:U:H4'	38:DQ:3:VAL:HB	2.01	0.43
39:BR:28:ALA:O	39:BR:63:VAL:HG21	2.19	0.43
25:BD:137:SER:O	25:BD:138:LEU:HB2	2.18	0.43
5:CF:49:TYR:HB2	5:CF:50:PRO:HD2	2.01	0.43
22:BA:1277:G:H4'	35:BN:20:MET:HE2	2.01	0.43
2:AC:36:PHE:HZ	13:AN:89:ARG:HH12	1.67	0.43
10:CK:15:VAL:O	10:CK:16:SER:HB2	2.19	0.43
22:BA:2216:G:H2'	22:BA:2217:G:C8	2.52	0.43
21:AA:120:A:C5	21:AA:122:G:C6	3.07	0.43
21:AA:591:U:H2'	21:AA:592:G:H8	1.84	0.43
14:AO:21:THR:HG23	21:AA:657:U:O2	2.18	0.43
3:AD:104:MET:SD	3:AD:179:GLY:HA3	2.59	0.43
47:BZ:9:THR:HG23	47:BZ:10:ARG:HB2	2.00	0.43
21:AA:11:G:C6	21:AA:12:U:C4	3.06	0.43
21:AA:719:C:H5''	21:AA:720:C:OP2	2.19	0.43
22:BA:1786:A:H1'	22:BA:1938:A:N6	2.34	0.43
53:CA:232:G:H2'	53:CA:233:C:O4'	2.18	0.43
33:BL:95:LEU:HD22	33:BL:100:ILE:CD1	2.48	0.43
44:DW:37:VAL:CG2	44:DW:38:ARG:NH1	2.81	0.43
45:BX:5:GLN:HE21	45:BX:49:ARG:H	1.63	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
53:CA:1046:A:H2'	53:CA:1047:G:O4'	2.18	0.43
44:BW:51:GLY:O	44:BW:52:CYS:C	2.57	0.43
30:BI:79:LEU:HD21	30:BI:132:ALA:HB1	2.00	0.43
16:AQ:14:ASP:O	16:AQ:20:ILE:CD1	2.66	0.43
4:AE:152:VAL:HB	4:AE:156:ARG:HG3	2.00	0.43
10:AK:62:ALA:CB	10:AK:91:GLY:HA3	2.48	0.43
53:CA:1278:G:OP2	53:CA:1278:G:H8	2.01	0.43
9:CJ:42:LEU:HB3	9:CJ:43:PRO:HD2	2.00	0.43
10:CK:126:ARG:O	20:CU:33:ARG:CZ	2.67	0.43
22:BA:2725:A:HO2'	22:BA:2726:A:H2'	1.80	0.43
22:DA:1092:C:H2'	22:DA:1093:G:O4'	2.19	0.43
22:DA:2873:A:H5''	22:DA:2874:C:OP2	2.19	0.43
53:CA:962:C:H2'	53:CA:963:G:C8	2.53	0.43
4:CE:113:VAL:HG12	4:CE:114:LEU:N	2.34	0.43
4:AE:143:LEU:O	4:AE:146:MET:HB3	2.18	0.43
26:DE:58:LYS:O	26:DE:60:TRP:HD1	2.01	0.43
22:BA:1508:A:O2'	22:BA:1509:A:O4'	2.37	0.43
22:BA:1670:C:H5''	22:BA:1671:U:OP2	2.19	0.43
53:CA:1130:A:N7	53:CA:1146:A:C6	2.87	0.43
22:DA:51:G:N3	22:DA:119:A:C2	2.87	0.43
22:DA:861:A:O2'	22:DA:862:G:H5'	2.18	0.43
22:DA:17:G:H2'	22:DA:18:U:H6	1.83	0.43
39:DR:27:ILE:CG2	39:DR:28:ALA:H	2.14	0.43
22:DA:142:A:H2'	22:DA:143:C:H6	1.78	0.43
22:DA:575:A:H2'	22:DA:576:U:C5	2.53	0.43
25:BD:9:VAL:CG2	25:BD:10:GLY:N	2.81	0.43
45:DX:3:VAL:O	45:DX:3:VAL:HG23	2.17	0.43
22:BA:1866:A:O2'	22:BA:1867:G:H5'	2.18	0.43
49:B1:24:LYS:NZ	49:B1:51:ALA:O	2.47	0.43
2:CC:166:TRP:CE3	2:CC:166:TRP:N	2.86	0.43
21:AA:642:A:C4	21:AA:643:C:C6	3.06	0.43
10:AK:110:THR:HG22	20:AU:4:LYS:HB2	1.97	0.43
5:CF:51:ILE:O	5:CF:54:LEU:HB2	2.19	0.43
31:DJ:35:ARG:HA	31:DJ:40:HIS:CD2	2.54	0.43
22:DA:1608:A:O3'	22:DA:1609:A:H3'	2.18	0.43
53:CA:297:G:N2	53:CA:300:A:OP2	2.49	0.43
9:AJ:36:VAL:HG13	9:AJ:76:ILE:HG12	2.00	0.43
53:CA:65:A:N1	53:CA:381:C:C5	2.87	0.43
13:CN:76:PHE:CE2	13:CN:92:ILE:HD13	2.54	0.43
1:AB:209:VAL:CG2	1:AB:210:THR:H	2.26	0.43
22:BA:2199:A:C5'	22:BA:2200:C:H5	2.29	0.43
53:CA:338:A:H61	53:CA:351:G:H1	1.67	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:496:G:H2'	22:DA:497:A:O4'	2.19	0.43
1:CB:130:LYS:O	1:CB:134:LEU:HG	2.17	0.43
22:BA:1045:C:C3'	22:BA:1046:A:H5'	2.48	0.43
53:CA:172:A:C5	53:CA:174:A:N7	2.87	0.43
12:AM:26:LYS:HA	12:AM:26:LYS:HD3	1.93	0.43
22:DA:185:G:C4	22:DA:212:G:N2	2.87	0.43
22:BA:580:U:H2'	22:BA:581:C:C6	2.52	0.43
13:AN:14:ALA:C	13:AN:18:LYS:HE2	2.39	0.43
24:DC:44:ASN:O	24:DC:46:GLY:N	2.51	0.43
21:AA:1285:A:C5'	21:AA:1286:U:C4	3.00	0.43
22:DA:2492:U:H6	22:DA:2492:U:O5'	2.01	0.43
22:BA:216:A:H2'	22:BA:217:A:C8	2.53	0.43
36:BO:104:GLN:C	36:BO:105:ALA:O	2.51	0.43
22:BA:2611:C:H2'	22:BA:2612:C:C6	2.53	0.43
32:BK:98:ARG:CA	32:BK:118:LEU:HD23	2.46	0.43
21:AA:574:A:H1'	21:AA:883:C:O4'	2.19	0.43
21:AA:382:A:O2'	21:AA:383:A:H5'	2.18	0.43
31:BJ:49:ASP:OD2	31:BJ:49:ASP:C	2.57	0.43
41:BT:68:LYS:CG	41:BT:69:ARG:H	2.31	0.43
2:CC:148:ILE:HG23	2:CC:169:GLU:HB3	2.00	0.43
5:AF:53:LYS:HG3	5:AF:54:LEU:N	2.33	0.43
53:CA:1385:G:H2'	53:CA:1386:G:O4'	2.19	0.43
18:AS:22:VAL:HG12	18:AS:23:GLU:N	2.33	0.43
53:CA:106:C:O2'	53:CA:107:G:H5'	2.18	0.43
22:DA:1944:U:O4'	22:DA:1955:U:H1'	2.19	0.43
22:DA:2787:C:O2'	22:DA:2788:C:H5'	2.18	0.43
53:CA:441:A:H61	53:CA:493:A:H62	1.66	0.43
22:BA:2884:U:O2	22:BA:2884:U:O4'	2.36	0.43
22:DA:2064:C:H1'	22:DA:2450:A:C6	2.54	0.43
1:CB:57:ASN:OD1	1:CB:219:THR:O	2.37	0.43
11:CL:22:ALA:O	11:CL:58:ASN:ND2	2.50	0.43
21:AA:1508:A:H2'	21:AA:1509:C:O4'	2.18	0.43
53:CA:545:C:H2'	53:CA:546:A:H5'	2.00	0.43
22:BA:1421:G:C2	22:BA:1422:G:C8	3.06	0.43
28:BG:45:ALA:O	28:BG:46:ASP:CB	2.66	0.43
22:DA:2436:G:C2	22:DA:2437:G:C8	3.06	0.43
27:BF:60:SER:O	27:BF:61:GLY:C	2.56	0.43
45:DX:34:SER:O	45:DX:35:HIS:HB2	2.19	0.43
33:DL:85:VAL:O	33:DL:86:GLU:HB2	2.18	0.43
22:BA:2691:C:C6	22:BA:2872:A:C2	3.06	0.43
29:DH:103:VAL:C	29:DH:105:ALA:H	2.21	0.43
32:BK:77:ILE:HD13	32:BK:105:ARG:HH12	1.83	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
28:BG:37:ASN:OD1	28:BG:37:ASN:N	2.51	0.43
22:BA:1607:C:H4'	22:BA:1608:A:O5'	2.19	0.43
22:BA:1607:C:N4	22:BA:1622:G:N7	2.65	0.43
11:CL:114:SER:CB	53:CA:35:G:H21	2.32	0.43
53:CA:229:U:H2'	53:CA:230:G:O4'	2.18	0.43
27:BF:129:MET:CG	27:BF:153:ILE:CD1	2.87	0.43
33:BL:85:VAL:HG21	33:BL:94:THR:HG23	1.99	0.43
54:DB:58:A:O2'	54:DB:59:A:H5'	2.19	0.43
44:BW:37:VAL:HG13	44:BW:55:ASP:O	2.17	0.43
5:AF:5:GLU:HG3	5:AF:63:ASN:OD1	2.18	0.43
22:DA:600:G:C5'	26:DE:27:LEU:HD22	2.47	0.43
53:CA:254:G:C4	53:CA:255:G:C8	3.06	0.43
16:CQ:46:HIS:HB2	16:CQ:70:LYS:CE	2.43	0.43
22:DA:455:C:H3'	22:DA:456:C:H5'	1.99	0.43
36:BO:31:THR:O	36:BO:102:ARG:NH1	2.47	0.43
53:CA:734:G:H2'	53:CA:735:C:H6	1.81	0.43
22:BA:1287:A:O2'	22:BA:1288:G:H5'	2.18	0.43
22:DA:2092:U:C5	22:DA:2225:A:O2'	2.71	0.43
22:DA:2092:U:H4'	22:DA:2093:G:OP1	2.19	0.43
41:BT:19:LYS:O	41:BT:23:ALA:N	2.29	0.43
41:BT:88:LYS:O	41:BT:89:GLU:HG2	2.18	0.43
53:CA:790:A:C6	53:CA:791:G:C5	3.06	0.43
10:CK:126:ARG:HB2	20:CU:33:ARG:CD	2.42	0.43
10:CK:121:ARG:HH21	20:CU:35:GLU:HB2	1.84	0.43
27:DF:131:VAL:O	27:DF:132:ARG:HB2	2.19	0.43
22:DA:2407:A:H2'	22:DA:2408:U:C6	2.54	0.43
22:BA:2727:A:H2'	22:BA:2728:U:C6	2.53	0.43
22:DA:1289:C:HO2'	22:DA:1290:C:C5'	2.31	0.43
45:DX:13:THR:HA	45:DX:27:ARG:HA	2.00	0.43
21:AA:214:C:O2'	21:AA:215:C:C5'	2.66	0.43
53:CA:595:A:H5''	53:CA:596:A:OP1	2.19	0.43
42:DU:3:LYS:HD3	42:DU:82:VAL:CG2	2.47	0.43
53:CA:961:U:O4	53:CA:983:A:C6	2.71	0.43
3:CD:150:LYS:HA	3:CD:150:LYS:HD3	1.89	0.43
22:BA:548:G:O2'	22:BA:549:G:C5	2.72	0.43
45:DX:32:LEU:HD22	45:DX:32:LEU:N	2.33	0.43
53:CA:1241:G:C2	53:CA:1242:G:C5	3.07	0.43
1:AB:16:GLY:HA2	1:AB:202:ASN:HB2	2.00	0.43
53:CA:1143:G:H2'	53:CA:1144:G:H8	1.83	0.43
22:DA:2237:G:H5''	22:DA:2238:G:OP1	2.19	0.43
22:DA:2837:A:N6	22:DA:2882:A:C6	2.87	0.43
22:DA:2831:G:N2	22:DA:2884:U:OP2	2.52	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
37:BP:87:ARG:NH2	37:BP:111:GLU:HG3	2.34	0.43
22:DA:54:G:C5	22:DA:55:G:C8	3.07	0.43
30:DI:54:ILE:HG23	30:DI:70:THR:HG21	2.01	0.43
1:AB:103:TRP:NE1	1:AB:150:ILE:HD11	2.34	0.43
28:DG:83:THR:O	28:DG:140:ILE:HD12	2.19	0.43
21:AA:34:C:H2'	21:AA:35:G:C8	2.50	0.43
37:DP:95:LYS:HB3	37:DP:97:TYR:CE1	2.54	0.43
22:BA:1269:A:O5'	22:BA:1269:A:H8	2.02	0.43
32:DK:103:VAL:HB	32:DK:104:THR:H	1.63	0.43
49:B1:8:ILE:HD11	49:B1:24:LYS:HG2	1.99	0.43
28:BG:59:ASP:CB	28:BG:63:GLN:HG2	2.44	0.43
53:CA:1179:A:C2'	53:CA:1180:A:H5'	2.49	0.43
28:DG:51:PHE:CE2	28:DG:68:ARG:HA	2.52	0.43
20:AU:18:PHE:HB3	20:AU:19:LYS:HE2	1.99	0.43
22:DA:1867:G:O2'	22:DA:1868:C:C5'	2.67	0.43
1:AB:67:LEU:HD21	1:AB:91:VAL:HG23	2.01	0.43
30:BI:56:VAL:CG2	30:BI:68:PHE:HB2	2.49	0.43
22:DA:374:A:C6	22:DA:401:A:N7	2.86	0.43
21:AA:87:C:H2'	21:AA:88:U:O4'	2.19	0.43
22:DA:1267:U:O2'	22:DA:1268:A:C5'	2.66	0.43
22:DA:1268:A:C6	22:DA:2013:A:C8	3.07	0.43
22:DA:2013:A:OP1	40:DS:96:ILE:HA	2.19	0.43
8:AI:113:LYS:HG2	8:AI:114:LYS:H	1.82	0.43
22:DA:1695:G:C8	24:DC:7:PRO:O	2.63	0.43
3:AD:8:LEU:HB2	21:AA:430:A:OP1	2.19	0.43
24:BC:257:ARG:HG3	24:BC:269:ARG:NH1	2.29	0.43
12:AM:44:ILE:N	12:AM:44:ILE:HD12	2.33	0.43
22:DA:1789:A:H5''	24:DC:218:THR:O	2.18	0.43
22:DA:1793:C:H2'	22:DA:1794:A:O4'	2.19	0.43
2:CC:130:ARG:O	2:CC:133:MET:HG2	2.19	0.43
21:AA:1504:G:C3'	21:AA:1505:G:H5'	2.48	0.43
2:AC:58:ARG:HD2	2:AC:63:ILE:HG13	2.01	0.43
22:DA:465:G:C4'	50:D2:16:HIS:CD2	3.01	0.43
38:DQ:46:TYR:CE2	38:DQ:50:ARG:NH1	2.87	0.43
10:AK:19:VAL:HB	10:AK:34:THR:HG23	2.00	0.43
29:BH:27:ARG:NH1	45:BX:59:ASP:O	2.51	0.43
21:AA:258:G:C2	21:AA:259:G:H1'	2.54	0.43
22:BA:2286:G:H4'	22:BA:2287:A:O4'	2.19	0.43
22:DA:1343:G:O2'	22:DA:1344:U:C6	2.62	0.43
2:AC:137:VAL:HG11	2:AC:169:GLU:HB3	2.01	0.43
32:BK:119:ALA:HA	32:BK:120:PRO:HD2	1.83	0.43
53:CA:607:A:N1	53:CA:608:A:C2	2.87	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:BA:1257:C:H5'	26:BE:78:TRP:CH2	2.54	0.43
22:DA:724:U:C4	22:DA:725:G:C6	3.07	0.43
28:BG:39:ALA:HB1	28:BG:57:TYR:CB	2.48	0.43
28:BG:39:ALA:HB1	28:BG:57:TYR:HB3	2.00	0.43
12:AM:89:ARG:HH11	12:AM:94:LEU:CB	2.31	0.43
12:AM:89:ARG:HG3	12:AM:96:VAL:HA	2.00	0.43
25:BD:151:THR:HG22	25:BD:152:PRO:CD	2.48	0.43
26:BE:23:PHE:CD1	26:BE:111:GLU:HG3	2.53	0.43
21:AA:917:G:C6	21:AA:918:A:C6	3.07	0.43
21:AA:1450:U:H2'	21:AA:1452:C:C5	2.54	0.43
22:BA:684:G:OP1	50:B2:16:HIS:HD2	2.02	0.43
32:DK:113:MET:O	32:DK:116:ILE:HG13	2.18	0.43
22:DA:1925:C:C6	22:DA:1925:C:C3'	3.02	0.43
22:DA:195:A:C5	22:DA:198:C:C5	3.06	0.43
39:DR:25:LEU:H	39:DR:94:THR:HG21	1.84	0.43
22:BA:1636:U:H2'	22:BA:1637:A:C8	2.53	0.43
30:BI:59:THR:HG22	30:BI:61:TYR:CE2	2.53	0.43
50:D2:24:THR:HG23	50:D2:27:GLY:HA3	2.01	0.43
22:DA:121:G:C2	22:DA:131:A:C5	3.06	0.43
22:DA:352:A:C6	22:DA:353:C:C2	3.07	0.43
22:BA:1429:G:H2'	22:BA:1430:G:C8	2.53	0.43
21:AA:155:A:H2'	21:AA:156:C:H6	1.84	0.43
22:BA:2665:A:C2	22:BA:2666:C:C2	3.07	0.43
22:BA:2480:C:C2'	22:BA:2481:G:H5'	2.49	0.43
20:AU:27:VAL:O	20:AU:30:GLU:HB3	2.19	0.43
28:DG:31:GLU:O	28:DG:32:LEU:HB2	2.18	0.43
2:AC:188:ALA:O	2:AC:194:VAL:HA	2.19	0.43
22:BA:2807:U:O5'	22:BA:2807:U:H6	2.02	0.43
34:BM:111:GLU:OE2	34:BM:111:GLU:HA	2.17	0.43
47:BZ:30:ARG:HE	47:BZ:30:ARG:HB2	1.48	0.43
12:CM:8:ILE:N	12:CM:9:PRO:CD	2.82	0.43
14:CO:32:THR:O	14:CO:33:ALA:C	2.56	0.43
22:BA:1000:A:C6	22:BA:1001:A:C6	3.07	0.43
22:DA:1441:G:H4'	22:DA:1628:G:OP1	2.18	0.43
27:BF:35:LEU:CD1	27:BF:88:VAL:HB	2.45	0.43
38:BQ:82:LEU:HD22	38:BQ:88:GLU:OE2	2.18	0.43
44:BW:40:ARG:NH1	44:BW:45:HIS:NE2	2.65	0.43
44:BW:46:ALA:HB2	44:BW:78:PHE:HB3	2.01	0.43
39:DR:5:PHE:HA	39:DR:39:LEU:HD23	2.00	0.43
22:DA:668:A:N7	22:DA:670:A:C8	2.87	0.43
52:B4:36:ARG:CG	52:B4:37:GLN:H	2.12	0.43
15:CP:75:ILE:HA	15:CP:78:VAL:CG2	2.48	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:BA:763:G:H2'	22:BA:763:G:H8	1.52	0.43
38:DQ:91:ARG:HH12	39:DR:10:LYS:HB3	1.75	0.43
21:AA:97:G:H2'	21:AA:98:A:O4'	2.18	0.43
10:CK:121:ARG:O	53:CA:778:G:O2'	2.36	0.43
54:DB:42:C:C4	54:DB:43:C:N4	2.87	0.43
27:DF:32:LYS:HZ2	27:DF:32:LYS:CB	2.32	0.43
27:DF:1:ALA:HB3	27:DF:93:GLU:OE2	2.18	0.43
22:BA:221:A:N1	22:BA:265:A:O2'	2.35	0.43
22:DA:1654:A:C2'	22:DA:1655:A:H8	2.31	0.43
21:AA:213:G:C8	21:AA:214:C:C5	3.06	0.43
22:DA:503:A:C4	22:DA:506:G:N7	2.87	0.43
22:DA:2145:C:H6	22:DA:2145:C:H2'	1.72	0.43
22:DA:1204:A:H4'	22:DA:1205:A:H5''	1.99	0.43
22:DA:301:G:O2'	22:DA:302:C:P	2.76	0.43
46:BY:9:LYS:HB3	46:BY:12:GLU:CG	2.48	0.43
13:CN:62:ARG:HB3	13:CN:68:ARG:O	2.18	0.43
22:DA:855:G:N3	44:DW:23:LYS:HG2	2.34	0.43
22:DA:528:A:H2	22:DA:2043:C:C5'	2.32	0.43
6:CG:30:MET:HE2	6:CG:30:MET:HB3	1.97	0.43
22:DA:2847:U:H3'	37:DP:94:ALA:HB2	1.99	0.43
22:DA:1493:C:O2	22:DA:1493:C:H2'	2.19	0.43
21:AA:652:U:O2'	21:AA:653:U:P	2.77	0.43
42:BU:27:VAL:HA	42:BU:33:VAL:HG12	2.01	0.43
22:DA:728:G:N3	22:DA:730:A:C8	2.87	0.43
22:BA:1874:C:H2'	22:BA:1875:G:O4'	2.18	0.43
53:CA:65:A:C2'	53:CA:382:A:H61	2.31	0.43
22:BA:2504:U:H6	22:BA:2504:U:O5'	2.01	0.43
1:CB:49:PHE:O	1:CB:53:LEU:N	2.32	0.43
22:DA:254:G:N7	51:D3:4:LYS:HE2	2.34	0.43
1:AB:128:LEU:HB3	1:AB:129:THR:H	1.69	0.43
3:CD:144:ILE:HD12	3:CD:177:MET:CG	2.48	0.43
44:BW:8:SER:O	44:BW:9:THR:HB	2.18	0.43
22:DA:2839:G:N2	22:DA:2880:C:C4	2.86	0.43
24:BC:106:PRO:HA	24:BC:141:HIS:NE2	2.34	0.43
22:DA:45:G:H4'	22:DA:46:G:H5'	2.00	0.43
20:CU:9:GLU:HB2	20:CU:11:PHE:CE2	2.53	0.43
22:BA:324:A:H2'	22:BA:325:G:C8	2.53	0.43
3:AD:7:LYS:HB2	3:AD:20:LEU:HB3	1.99	0.43
22:BA:27:G:HO2'	22:BA:28:A:P	2.39	0.43
22:BA:28:A:C4	22:BA:29:U:C6	3.06	0.43
22:DA:1812:U:H1'	24:DC:43:ASN:HD21	1.82	0.43
40:DS:70:LYS:O	40:DS:72:THR:N	2.52	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:CC:39:ARG:HG2	2:CC:54:ILE:HG21	2.01	0.43
22:BA:1413:A:H2'	22:BA:1414:C:O4'	2.18	0.43
22:BA:2287:A:C2	22:BA:2289:G:C6	3.07	0.43
2:CC:117:ASP:HA	2:CC:120:THR:HB	1.99	0.43
21:AA:715:A:H8	21:AA:715:A:O5'	2.00	0.43
22:DA:411:G:C4'	22:DA:412:A:OP1	2.66	0.43
22:DA:164:C:H5''	22:DA:164:C:H6	1.83	0.43
53:CA:160:A:O2'	53:CA:344:A:N6	2.51	0.43
22:DA:1819:A:C3'	22:DA:1820:U:H5'	2.46	0.43
53:CA:728:A:C6	53:CA:729:A:C6	3.07	0.43
53:CA:1432:G:H1'	53:CA:1468:A:N6	2.34	0.43
22:DA:2771:C:H2'	22:DA:2772:C:C6	2.54	0.43
22:BA:150:U:H2'	22:BA:151:C:C6	2.54	0.43
7:AH:48:PHE:O	7:AH:49:LYS:HG3	2.19	0.43
53:CA:579:A:H2'	53:CA:580:C:H6	1.84	0.43
22:BA:943:A:H2'	22:BA:944:C:O5'	2.19	0.43
22:BA:2023:C:H5''	22:BA:2023:C:H6	1.83	0.43
22:BA:391:A:C6	22:BA:411:G:C2	3.07	0.43
32:DK:121:GLU:O	32:DK:122:VAL:C	2.57	0.43
22:BA:1262:A:N3	22:BA:1262:A:H2'	2.33	0.43
22:BA:641:U:H5''	22:BA:642:U:OP2	2.18	0.43
21:AA:577:G:H2'	21:AA:578:C:C6	2.53	0.43
40:BS:43:ALA:O	40:BS:47:VAL:HG12	2.18	0.43
22:DA:255:A:H2'	22:DA:256:A:O4'	2.18	0.43
21:AA:941:G:N2	21:AA:942:G:H1'	2.33	0.43
5:AF:14:GLN:OE1	5:AF:17:GLN:HB2	2.19	0.43
21:AA:1418:A:C2	21:AA:1483:A:C2	3.07	0.43
28:DG:87:GLN:HA	28:DG:129:GLU:HA	2.00	0.43
22:BA:1081:U:H2'	22:BA:1081:U:O2	2.19	0.43
3:AD:19:PHE:CD1	3:AD:19:PHE:N	2.87	0.43
18:CS:20:LYS:C	18:CS:20:LYS:HD3	2.38	0.43
25:DD:196:ALA:O	25:DD:197:THR:C	2.57	0.43
45:BX:6:VAL:HG13	45:BX:7:THR:HG23	2.01	0.43
31:BJ:44:TYR:HA	38:BQ:59:LEU:CD2	2.47	0.43
22:DA:1441:G:C2	22:DA:1442:U:C2	3.07	0.43
22:DA:858:G:C5	22:DA:2268:A:C2	3.07	0.43
44:DW:77:LYS:O	44:DW:78:PHE:CB	2.67	0.43
22:BA:2266:A:H4'	22:BA:2267:A:O5'	2.18	0.43
22:DA:1992:G:N2	22:DA:1995:U:C5	2.87	0.43
22:DA:33:C:HO2'	22:DA:34:U:H5'	1.73	0.43
53:CA:1181:G:H2'	53:CA:1182:G:C8	2.54	0.43
34:BM:34:LYS:HD3	43:BV:81:PRO:O	2.19	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:CJ:11:LYS:HB3	9:CJ:71:LEU:CD1	2.45	0.43
22:DA:1744:A:H3'	22:DA:1745:A:C8	2.49	0.43
41:BT:8:LEU:N	41:BT:8:LEU:HD23	2.34	0.43
22:DA:1506:U:H2'	22:DA:1507:C:O4'	2.17	0.43
2:AC:49:ALA:HB1	2:AC:75:VAL:HG22	2.00	0.43
5:CF:3:HIS:HB2	5:CF:92:THR:HA	2.00	0.43
24:DC:131:MET:CG	24:DC:134:ILE:HD11	2.40	0.43
26:DE:129:PRO:HG3	26:DE:159:LEU:HB3	2.00	0.43
53:CA:243:A:C4'	53:CA:244:U:H5'	2.46	0.43
35:DN:73:ASN:HA	35:DN:76:VAL:CG2	2.46	0.43
25:DD:184:ARG:O	25:DD:186:LEU:HD13	2.19	0.43
21:AA:1124:G:O2'	21:AA:1125:U:C6	2.72	0.43
43:BV:44:HIS:CE1	43:BV:85:LYS:HB2	2.54	0.43
53:CA:1133:G:N2	53:CA:1142:G:C4	2.87	0.43
35:BN:116:VAL:HG22	35:BN:116:VAL:O	2.18	0.43
35:BN:116:VAL:O	35:BN:117:ASP:HB3	2.19	0.43
14:CO:44:GLU:HG2	14:CO:45:HIS:CD2	2.54	0.43
21:AA:345:C:OP1	37:BP:35:SER:HB2	2.19	0.43
37:BP:33:GLU:CG	37:BP:34:GLY:N	2.80	0.43
22:DA:2261:C:N1	22:DA:2280:G:N2	2.66	0.43
38:BQ:114:ALA:C	38:BQ:116:LEU:N	2.72	0.43
22:DA:1500:G:N1	22:DA:1501:G:C5	2.87	0.43
27:DF:39:VAL:HG13	27:DF:49:LEU:CD2	2.49	0.43
27:DF:41:GLU:O	27:DF:43:ILE:HG22	2.19	0.43
3:AD:172:VAL:HG13	3:AD:173:ASP:N	2.34	0.43
21:AA:1526:G:H2'	21:AA:1527:U:H6	1.84	0.43
21:AA:1322:C:O2'	21:AA:1323:G:O5'	2.36	0.43
28:BG:31:GLU:O	28:BG:32:LEU:C	2.57	0.43
41:DT:14:PRO:HG2	41:DT:15:HIS:H	1.84	0.43
37:DP:26:GLU:OE1	37:DP:28:LYS:HE2	2.19	0.43
34:DM:62:LYS:C	34:DM:63:ILE:HD12	2.38	0.43
47:BZ:8:GLN:O	47:BZ:53:MET:O	2.35	0.43
22:DA:763:G:C4	22:DA:765:C:C6	3.07	0.43
22:BA:2149:U:C2'	22:BA:2150:C:O5'	2.67	0.43
22:BA:2148:G:O2'	22:BA:2149:U:O5'	2.37	0.43
28:BG:115:GLN:OE1	28:BG:115:GLN:N	2.52	0.43
29:BH:66:ASN:C	29:BH:68:ARG:N	2.72	0.43
22:DA:1754:A:N6	22:DA:1755:A:C6	2.87	0.43
22:BA:1820:U:O2	24:BC:200:MET:HB2	2.19	0.43
1:CB:130:LYS:HD3	1:CB:130:LYS:HA	1.83	0.43
1:CB:132:GLU:OE1	1:CB:136:ARG:HG3	2.18	0.43
24:DC:174:ARG:HA	24:DC:180:MET:HG2	2.01	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
17:AR:69:TYR:CE1	21:AA:674:G:H4'	2.53	0.43
25:BD:169:ARG:C	25:BD:170:VAL:CG1	2.87	0.43
29:BH:21:VAL:HG22	29:BH:22:LYS:N	2.34	0.43
22:DA:469:G:OP2	26:DE:54:GLY:O	2.37	0.43
22:BA:380:G:H2'	22:BA:381:G:O4'	2.19	0.43
21:AA:1462:C:H2'	21:AA:1463:U:O4'	2.18	0.43
22:DA:68:G:N2	22:DA:69:C:H1'	2.34	0.43
53:CA:155:A:H2'	53:CA:156:C:O4'	2.19	0.43
22:DA:1596:A:C6	22:DA:1597:A:C6	3.07	0.43
22:DA:1596:A:N6	22:DA:1597:A:N6	2.66	0.43
29:DH:54:LEU:HA	29:DH:57:LYS:HG3	2.00	0.43
2:CC:126:ARG:HA	2:CC:126:ARG:NE	2.33	0.43
22:DA:983:A:N6	22:DA:984:A:C2	2.87	0.43
53:CA:1386:G:C2	53:CA:1387:G:C8	3.07	0.43
53:CA:1514:G:H2'	53:CA:1515:G:C8	2.53	0.43
22:BA:2514:U:H2'	22:BA:2515:C:C6	2.53	0.43
22:DA:2074:U:H2'	22:DA:2075:U:C6	2.54	0.43
8:AI:3:ASN:ND2	8:AI:4:GLN:H	2.16	0.43
9:AJ:49:PHE:CE1	13:AN:76:PHE:HZ	2.37	0.43
2:CC:183:TYR:HE1	2:CC:198:LYS:HB3	1.84	0.43
50:D2:24:THR:O	50:D2:28:ARG:HB3	2.19	0.43
22:BA:449:A:C2'	22:BA:450:G:H5'	2.48	0.43
3:CD:127:ARG:CZ	3:CD:127:ARG:HB2	2.49	0.43
22:DA:352:A:C2	22:DA:353:C:H1'	2.53	0.43
26:BE:127:GLU:N	26:BE:127:GLU:CD	2.72	0.43
21:AA:1387:G:H2'	21:AA:1388:C:C6	2.54	0.43
22:DA:1767:G:C2	22:DA:1986:C:C2	3.06	0.43
53:CA:1352:C:O2	53:CA:1371:G:C2	2.72	0.43
22:DA:2102:G:C5	22:DA:2103:C:C5	3.07	0.43
5:CF:96:VAL:HG12	5:CF:97:THR:N	2.33	0.43
38:DQ:48:ASP:HA	38:DQ:51:GLN:HB2	2.01	0.43
21:AA:137:U:H1'	21:AA:227:G:N2	2.33	0.43
22:DA:1549:A:H2'	22:DA:1550:C:O4'	2.19	0.43
1:CB:94:ARG:HD2	53:CA:1100:C:OP2	2.19	0.43
35:DN:21:PHE:N	35:DN:21:PHE:CD1	2.87	0.43
4:AE:35:LEU:HA	4:AE:35:LEU:HD12	1.70	0.43
29:DH:96:THR:HA	29:DH:113:SER:OG	2.19	0.43
21:AA:358:U:H2'	21:AA:359:G:H8	1.83	0.43
21:AA:424:G:O2'	21:AA:425:G:H5'	2.19	0.43
52:D4:27:CYS:CB	52:D4:33:HIS:HB2	2.49	0.43
22:DA:833:A:P	33:DL:39:LYS:NZ	2.92	0.43
44:DW:43:LYS:CG	44:DW:79:ILE:HD11	2.49	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
44:BW:25:PHE:O	44:BW:26:GLY:C	2.57	0.43
5:AF:4:TYR:O	5:AF:63:ASN:HA	2.19	0.43
22:DA:668:A:C5	22:DA:670:A:C5	3.07	0.43
31:DJ:4:PHE:CG	31:DJ:5:THR:N	2.87	0.43
12:CM:95:PRO:HB3	53:CA:1308:U:OP1	2.18	0.43
22:DA:784:G:C2	24:DC:227:VAL:CG2	3.02	0.43
8:CI:35:GLU:HA	8:CI:39:GLY:N	2.34	0.43
8:CI:45:MET:HA	8:CI:48:ARG:HB2	2.01	0.43
41:BT:55:VAL:O	41:BT:55:VAL:HG12	2.19	0.43
21:AA:212:G:H2'	21:AA:213:G:C8	2.53	0.43
21:AA:211:G:N1	21:AA:212:G:N3	2.67	0.43
35:BN:24:MET:HG2	35:BN:44:LEU:CD2	2.32	0.43
27:BF:100:GLU:O	27:BF:104:THR:N	2.52	0.43
22:DA:2682:A:O2'	22:DA:2683:C:O5'	2.37	0.43
21:AA:275:G:C4	21:AA:276:G:C8	3.07	0.43
22:BA:2093:G:H1'	22:BA:2198:A:C2	2.53	0.43
22:BA:780:G:H2'	22:BA:782:A:N7	2.34	0.43
26:DE:57:LYS:HZ1	26:DE:58:LYS:N	2.17	0.43
53:CA:1135:U:H3'	53:CA:1137:C:O2	2.19	0.43
22:DA:868:U:C4	22:DA:869:G:N7	2.87	0.43
38:DQ:27:ARG:HE	38:DQ:37:ALA:HB1	1.83	0.43
21:AA:49:U:C4	21:AA:364:A:C6	3.07	0.43
22:DA:2869:G:H2'	22:DA:2870:C:O4'	2.19	0.43
28:BG:8:VAL:HG12	28:BG:9:VAL:H	1.84	0.43
22:BA:1110:G:O2'	22:BA:1111:A:P	2.77	0.43
27:DF:45:ASP:HB3	27:DF:48:LEU:CD2	2.49	0.43
26:DE:147:LEU:CB	26:DE:186:VAL:HG23	2.49	0.43
1:CB:163:ILE:HA	1:CB:185:ILE:HG12	2.01	0.43
21:AA:1322:C:O4'	21:AA:1322:C:O2	2.35	0.43
21:AA:1161:C:O2'	21:AA:1162:C:C6	2.71	0.43
22:BA:1735:A:H2'	22:BA:1736:U:O4'	2.18	0.43
22:DA:373:U:C2	22:DA:374:A:N7	2.87	0.43
22:DA:762:U:H4'	22:DA:763:G:C5'	2.49	0.43
1:AB:72:LYS:NZ	1:AB:204:ASP:HB3	2.34	0.43
29:BH:68:ARG:HH22	29:BH:72:ILE:HG21	1.80	0.43
21:AA:519:C:H2'	21:AA:520:A:H8	1.82	0.43
53:CA:570:G:C6	53:CA:873:A:C2	3.07	0.43
22:BA:1797:G:C6	22:BA:1798:U:C4	3.07	0.43
22:BA:1798:U:H5'	24:BC:256:THR:HG1	1.84	0.43
22:BA:729:G:C2'	22:BA:729:G:N3	2.80	0.43
28:DG:145:ALA:HA	28:DG:148:ARG:HG2	2.01	0.43
23:BB:12:C:C4	44:BW:72:GLY:HA3	2.54	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:BA:962:G:H2'	22:BA:963:U:C6	2.54	0.43
22:DA:1048:A:C6	22:DA:1111:A:C2	3.07	0.43
5:AF:85:ILE:HG12	5:AF:85:ILE:H	1.67	0.43
2:AC:108:PRO:C	2:AC:110:LEU:H	2.22	0.43
22:BA:1570:A:H2'	22:BA:1571:A:H8	1.82	0.43
10:AK:82:GLU:H	10:AK:82:GLU:CD	2.20	0.43
24:BC:259:ASN:O	24:BC:260:LYS:CB	2.66	0.43
21:AA:1095:U:O2'	21:AA:1096:C:H5'	2.19	0.43
22:DA:2511:U:O4	22:DA:2575:C:N3	2.52	0.43
49:B1:34:GLU:CD	49:B1:49:LYS:HG3	2.40	0.43
22:BA:2860:A:C8	22:BA:2860:A:H3'	2.54	0.43
22:DA:151:C:OP1	22:DA:1359:A:O2'	2.32	0.43
22:BA:1023:U:H5'	22:BA:1023:U:C6	2.51	0.43
22:DA:64:A:OP1	41:DT:77:ARG:HA	2.19	0.43
1:CB:141:GLU:O	1:CB:145:ASN:N	2.52	0.43
12:AM:15:VAL:HG13	12:AM:40:GLU:O	2.19	0.43
22:DA:1671:U:O2	22:DA:1673:G:C8	2.71	0.43
22:BA:42:A:H2'	22:BA:43:G:H5''	2.01	0.43
31:BJ:37:ARG:HA	31:BJ:118:MET:HE2	2.00	0.43
31:BJ:40:HIS:N	31:BJ:40:HIS:CD2	2.83	0.43
21:AA:1365:G:H2'	21:AA:1366:C:H6	1.83	0.43
53:CA:892:A:C4	53:CA:893:C:C6	3.07	0.43
22:BA:1256:G:H2'	26:BE:77:ILE:HD11	2.00	0.43
25:DD:56:LYS:HB3	25:DD:56:LYS:HZ2	1.84	0.43
24:BC:211:ARG:C	24:BC:213:ARG:H	2.23	0.43
30:DI:24:GLY:HA3	30:DI:25:PRO:HD3	1.91	0.43
53:CA:1236:A:H2'	53:CA:1237:C:H6	1.83	0.43
22:DA:2108:A:C8	22:DA:2108:A:OP2	2.72	0.43
41:DT:10:VAL:HG23	41:DT:11:LEU:CD1	2.49	0.43
22:DA:1187:G:H8	22:DA:1187:G:O5'	2.02	0.43
6:AG:128:GLU:O	6:AG:129:ASN:C	2.56	0.43
3:CD:164:ARG:HB3	3:CD:165:GLU:H	1.47	0.43
14:AO:45:HIS:C	14:AO:47:LYS:H	2.21	0.43
21:AA:979:C:C5	21:AA:980:C:C5	3.06	0.43
2:CC:41:TYR:CE1	2:CC:89:VAL:HG12	2.53	0.43
22:DA:953:G:O2'	22:DA:954:G:H5'	2.18	0.43
48:B0:33:SER:O	48:B0:34:GLY:O	2.37	0.43
23:BB:96:G:C2'	23:BB:97:C:H5'	2.49	0.43
53:CA:922:G:C2	53:CA:923:A:C4	3.07	0.43
36:DO:28:VAL:O	36:DO:28:VAL:HG13	2.18	0.43
22:BA:167:A:H2'	22:BA:168:G:O4'	2.18	0.43
27:BF:121:PHE:HD1	27:BF:126:ASN:O	2.01	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:BA:1296:G:O2'	22:BA:1297:C:H5'	2.18	0.43
24:DC:242:HIS:HA	24:DC:243:PRO:HD3	1.84	0.43
22:BA:2053:G:N2	22:BA:2054:A:H1'	2.34	0.43
22:BA:1767:G:C6	22:BA:1768:C:C5	3.07	0.43
12:AM:47:LEU:HD23	12:AM:51:GLN:HB3	2.01	0.43
54:DB:35:C:H2'	54:DB:36:C:H4'	2.00	0.43
22:BA:1597:A:H5''	22:BA:1598:A:H5'	2.00	0.43
6:AG:21:LEU:HD23	6:AG:21:LEU:HA	1.74	0.43
26:BE:115:GLN:O	26:BE:116:ASP:C	2.58	0.43
30:DI:89:SER:HB3	30:DI:97:VAL:HG11	2.00	0.43
21:AA:729:A:H2'	21:AA:730:G:O4'	2.19	0.43
22:BA:1009:A:P	31:BJ:39:LYS:HZ1	2.41	0.42
44:DW:45:HIS:HB3	44:DW:58:LEU:HD11	1.99	0.42
39:BR:49:ILE:O	39:BR:51:VAL:O	2.37	0.42
54:DB:109:A:C6	54:DB:110:C:C4	3.07	0.42
44:BW:43:LYS:HE2	44:BW:68:PHE:HE1	1.84	0.42
53:CA:429:U:C1'	53:CA:430:A:H5''	2.44	0.42
16:AQ:20:ILE:HG22	16:AQ:47:ASP:OD1	2.18	0.42
24:BC:245:THR:HG1	24:BC:249:VAL:HB	1.82	0.42
22:DA:204:A:OP1	22:DA:206:U:H1'	2.18	0.42
41:DT:39:THR:C	41:DT:41:ALA:H	2.22	0.42
53:CA:1250:A:C6	53:CA:1251:A:C5	3.07	0.42
22:DA:1286:A:C5	22:DA:1289:C:C4	3.07	0.42
22:DA:1326:U:O2'	22:DA:1327:A:H5'	2.18	0.42
22:DA:2748:A:C4	22:DA:2757:A:N6	2.87	0.42
22:DA:1809:A:C2	22:DA:1810:A:C5	3.06	0.42
22:DA:1929:G:C4'	22:DA:1930:G:OP1	2.63	0.42
30:BI:19:PRO:HB2	30:BI:22:PRO:HD2	2.01	0.42
22:BA:1459:G:C5	22:BA:1461:C:C4	3.07	0.42
22:DA:481:G:OP2	42:DU:43:LYS:HA	2.19	0.42
1:CB:208:ALA:C	1:CB:211:LEU:HB3	2.39	0.42
22:DA:1208:C:O2'	22:DA:1209:U:H5'	2.19	0.42
53:CA:978:A:C8	53:CA:1319:A:C2	3.06	0.42
13:CN:60:ARG:NH2	13:CN:70:HIS:HB3	2.34	0.42
13:CN:68:ARG:NH2	53:CA:974:A:OP1	2.52	0.42
4:CE:104:ILE:H	4:CE:122:VAL:N	2.02	0.42
22:DA:919:U:C2	22:DA:920:A:N7	2.87	0.42
35:BN:70:THR:O	35:BN:72:ASP:N	2.52	0.42
53:CA:1346:A:C8	53:CA:1348:U:C2	3.06	0.42
27:BF:133:GLU:H	27:BF:150:GLY:HA2	1.83	0.42
36:DO:82:ALA:HB3	36:DO:115:LEU:CD1	2.49	0.42
27:DF:45:ASP:OD2	27:DF:47:LYS:HB2	2.19	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:AG:68:VAL:O	6:AG:69:ARG:C	2.57	0.42
3:AD:12:ARG:HG2	3:AD:33:ILE:HD12	2.01	0.42
22:BA:2421:G:N7	51:B3:30:HIS:CD2	2.87	0.42
29:DH:2:GLN:HB3	29:DH:18:GLN:HG2	2.01	0.42
31:DJ:97:PRO:C	31:DJ:99:ARG:N	2.72	0.42
16:CQ:4:ILE:HG22	16:CQ:5:ARG:N	2.24	0.42
1:AB:116:LEU:HD12	1:AB:140:LEU:HD11	2.00	0.42
41:DT:14:PRO:O	41:DT:32:LEU:HA	2.19	0.42
21:AA:1464:U:P	37:BP:108:ARG:HH12	2.42	0.42
22:BA:497:A:C4	22:BA:498:G:C8	3.07	0.42
25:DD:127:PHE:CZ	25:DD:160:LYS:HD2	2.53	0.42
53:CA:1093:A:C5	53:CA:1095:U:O4'	2.72	0.42
26:DE:149:ILE:HG23	26:DE:188:MET:HA	1.99	0.42
9:AJ:80:THR:HG22	9:AJ:82:LYS:H	1.84	0.42
31:BJ:32:LEU:CD2	31:BJ:54:ILE:HG12	2.46	0.42
2:CC:8:GLY:HA3	13:CN:88:MET:SD	2.59	0.42
22:BA:1812:U:H2'	22:BA:1813:G:H8	1.84	0.42
22:BA:30:G:H2'	22:BA:31:C:C6	2.54	0.42
22:DA:483:A:OP2	22:DA:484:C:C5	2.72	0.42
22:DA:2808:G:O2'	22:DA:2809:A:H8	2.00	0.42
53:CA:575:G:C6	53:CA:821:G:C5	3.07	0.42
24:BC:156:SER:O	24:BC:157:ALA:C	2.56	0.42
1:CB:125:PHE:HA	1:CB:136:ARG:NH2	2.34	0.42
22:BA:2555:U:H5	22:BA:2556:C:C2	2.34	0.42
22:DA:1520:U:O4	22:DA:1521:G:C6	2.71	0.42
21:AA:1504:G:H3'	21:AA:1505:G:H5'	2.00	0.42
40:DS:35:ILE:HA	48:D0:24:VAL:HG21	2.00	0.42
22:DA:348:A:H2'	22:DA:349:U:H6	1.83	0.42
16:CQ:37:ILE:HD11	16:CQ:39:ARG:NH1	2.34	0.42
22:BA:1858:A:O2'	22:BA:1859:U:C5'	2.67	0.42
33:BL:39:LYS:C	33:BL:40:SER:O	2.58	0.42
14:CO:23:SER:HB3	14:CO:26:VAL:CG2	2.49	0.42
31:BJ:25:LEU:HD22	31:BJ:26:GLY:N	2.34	0.42
22:BA:1432:G:O2'	22:BA:1433:A:H5'	2.18	0.42
47:BZ:3:THR:C	47:BZ:4:ILE:HG22	2.39	0.42
48:D0:28:SER:O	48:D0:36:LYS:HA	2.19	0.42
21:AA:1363:A:C8	21:AA:1365:G:C5	3.07	0.42
19:AT:60:GLN:NE2	19:AT:65:LEU:HD21	2.34	0.42
6:CG:37:THR:HA	6:CG:40:SER:HB2	2.00	0.42
53:CA:942:G:N2	53:CA:1342:C:H1'	2.33	0.42
22:BA:2415:G:H2'	22:BA:2416:C:C6	2.54	0.42
6:CG:32:ASP:CB	6:CG:34:LYS:HD3	2.49	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
32:BK:7:MET:C	32:BK:8:LEU:HD23	2.39	0.42
9:AJ:65:TYR:HB2	13:AN:95:LEU:HD11	2.01	0.42
21:AA:1210:C:H2'	21:AA:1211:U:H5'	2.00	0.42
16:AQ:50:ASN:OD1	16:AQ:50:ASN:N	2.52	0.42
23:BB:34:A:N3	23:BB:36:C:N4	2.55	0.42
33:BL:127:VAL:HG11	33:BL:142:ILE:HG21	2.01	0.42
26:BE:154:ASP:OD2	26:BE:157:LEU:HB3	2.19	0.42
7:CH:109:VAL:C	7:CH:110:MET:HG3	2.38	0.42
22:BA:2688:G:H1'	22:BA:2721:A:N6	2.34	0.42
6:AG:86:VAL:HG22	6:AG:150:PHE:HB3	2.00	0.42
22:BA:184:C:H2'	22:BA:185:G:H8	1.83	0.42
22:DA:2048:G:C6	22:DA:2049:G:C5	3.07	0.42
7:AH:85:TYR:O	7:AH:86:LYS:HD2	2.18	0.42
21:AA:1496:C:H2'	21:AA:1497:G:O4'	2.19	0.42
53:CA:115:G:C2	53:CA:289:G:N7	2.87	0.42
13:AN:11:LYS:NZ	13:AN:11:LYS:HB2	2.34	0.42
21:AA:1438:G:C2'	21:AA:1439:G:H5'	2.50	0.42
22:BA:424:G:H2'	22:BA:425:G:O5'	2.19	0.42
12:CM:53:ASP:HA	12:CM:56:ARG:CZ	2.49	0.42
22:DA:2784:U:O3'	25:DD:42:ASN:ND2	2.51	0.42
38:BQ:96:ASP:C	38:BQ:98:ALA:N	2.72	0.42
49:D1:8:ILE:O	49:D1:21:THR:HA	2.19	0.42
10:CK:92:ARG:HD2	10:CK:92:ARG:HA	1.74	0.42
22:BA:2364:C:H4'	44:BW:55:ASP:OD1	2.19	0.42
3:CD:22:SER:OG	3:CD:23:GLY:N	2.51	0.42
3:CD:77:GLU:O	3:CD:81:LEU:HD12	2.19	0.42
36:BO:35:ILE:O	36:BO:53:THR:HG23	2.18	0.42
22:BA:1084:A:C4	22:BA:1085:A:N7	2.86	0.42
22:DA:2092:U:C4'	22:DA:2093:G:H5''	2.32	0.42
52:D4:7:VAL:HG22	52:D4:25:VAL:CG2	2.48	0.42
22:DA:1060:U:O4'	22:DA:1061:U:H2'	2.18	0.42
22:DA:1076:C:O2'	22:DA:1077:A:C4	2.72	0.42
42:DU:35:VAL:CG1	42:DU:36:GLU:H	2.25	0.42
53:CA:1241:G:C4	53:CA:1242:G:N7	2.87	0.42
1:AB:187:ASP:HB2	1:AB:203:ASP:CG	2.40	0.42
22:DA:799:G:P	22:DA:800:A:H3'	2.58	0.42
27:BF:42:ALA:HB2	27:BF:49:LEU:HB2	2.01	0.42
30:DI:44:LYS:O	30:DI:48:ILE:HG12	2.19	0.42
26:BE:187:VAL:O	26:BE:188:MET:HB3	2.19	0.42
27:DF:147:ARG:HG2	27:DF:149:ARG:NH1	2.32	0.42
20:AU:48:LYS:HG2	21:AA:723:U:H5''	2.00	0.42
22:BA:63:A:C2	22:BA:64:A:C5	3.07	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
53:CA:1002:G:C6	53:CA:1003:G:C6	3.07	0.42
22:DA:2654:A:H62	22:DA:2667:C:N4	2.17	0.42
43:DV:26:PHE:CE2	43:DV:42:LEU:HB2	2.53	0.42
22:DA:1324:G:O2'	22:DA:1616:A:N6	2.52	0.42
15:AP:5:ARG:HA	15:AP:68:SER:HG	1.84	0.42
22:BA:2502:G:H5'	22:BA:2503:A:O5'	2.19	0.42
22:DA:371:A:H61	22:DA:401:A:H3'	1.85	0.42
21:AA:88:U:O2'	21:AA:89:U:O5'	2.37	0.42
40:BS:12:SER:OG	40:BS:13:SER:N	2.52	0.42
22:BA:404:A:O2'	22:BA:405:U:P	2.77	0.42
2:AC:4:VAL:HG12	21:AA:1190:G:OP1	2.19	0.42
21:AA:429:U:H1'	21:AA:430:A:C5'	2.46	0.42
32:DK:20:MET:O	32:DK:41:ILE:HG13	2.20	0.42
2:CC:133:MET:HB2	2:CC:150:VAL:HG21	2.01	0.42
22:BA:322:A:OP1	26:BE:162:ARG:NE	2.53	0.42
3:AD:7:LYS:HZ3	3:AD:21:LYS:HB2	1.84	0.42
46:DY:23:ARG:HB3	46:DY:27:ASN:OD1	2.19	0.42
22:DA:2642:G:H5'	31:DJ:80:HIS:CE1	2.54	0.42
22:DA:265:A:N7	22:DA:427:U:O2'	2.49	0.42
22:DA:2492:U:O2'	22:DA:2493:U:C5'	2.66	0.42
35:BN:38:LEU:C	35:BN:38:LEU:HD12	2.39	0.42
25:BD:11:MET:HA	25:BD:24:VAL:O	2.19	0.42
4:AE:10:LEU:HG	4:AE:11:GLN:H	1.84	0.42
41:DT:68:LYS:O	41:DT:74:ILE:HG13	2.19	0.42
12:CM:92:ARG:HD2	18:CS:79:TYR:OH	2.19	0.42
31:BJ:31:GLU:OE2	31:BJ:35:ARG:HD2	2.20	0.42
46:BY:45:GLN:HA	46:BY:48:ARG:HB2	2.01	0.42
20:AU:25:ALA:O	20:AU:26:GLY:C	2.56	0.42
37:BP:112:ARG:O	37:BP:113:LEU:C	2.57	0.42
53:CA:1481:U:H2'	53:CA:1482:G:H8	1.83	0.42
53:CA:1022:A:H2'	53:CA:1023:U:H6	1.84	0.42
45:BX:32:LEU:HD12	45:BX:32:LEU:N	2.34	0.42
22:DA:693:A:C2	22:DA:770:G:C2	3.06	0.42
53:CA:632:U:H2'	53:CA:633:G:OP1	2.19	0.42
22:DA:554:U:H2'	22:DA:555:G:O4'	2.19	0.42
22:DA:1465:G:C5	22:DA:1466:U:C5	3.07	0.42
22:BA:2285:C:P	49:B1:5:ARG:HH21	2.43	0.42
22:DA:818:G:H4'	22:DA:838:C:O3'	2.18	0.42
29:BH:75:LEU:HD22	29:BH:143:ILE:CG1	2.49	0.42
49:D1:46:VAL:HG22	49:D1:47:ILE:N	2.34	0.42
23:BB:54:G:H2'	23:BB:55:U:C6	2.54	0.42
22:BA:943:A:C2'	22:BA:944:C:O5'	2.67	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:BA:1300:G:H2'	22:BA:1635:A:OP1	2.19	0.42
22:BA:2834:G:O6	22:BA:2879:A:H2'	2.20	0.42
28:BG:45:ALA:O	28:BG:46:ASP:HB3	2.19	0.42
22:BA:2579:C:C2'	22:BA:2580:U:H5'	2.49	0.42
22:BA:1050:A:C2	22:BA:2751:G:C5	3.07	0.42
51:D3:51:LYS:O	51:D3:54:LEU:HB3	2.20	0.42
10:CK:34:THR:HG1	10:CK:39:ASN:C	2.22	0.42
1:CB:98:GLY:N	1:CB:174:GLU:OE2	2.43	0.42
9:CJ:73:LEU:HD11	53:CA:1126:U:O4	2.19	0.42
29:BH:85:GLY:HA3	29:BH:91:PHE:HB3	2.00	0.42
43:BV:42:LEU:CD1	43:BV:47:VAL:HG21	2.49	0.42
7:AH:30:LYS:HA	7:AH:30:LYS:HD2	1.74	0.42
26:DE:175:ILE:O	26:DE:175:ILE:HG23	2.18	0.42
38:DQ:21:LYS:HA	38:DQ:21:LYS:HD2	1.77	0.42
1:CB:71:THR:O	1:CB:72:LYS:C	2.58	0.42
53:CA:1403:C:H2'	53:CA:1404:C:C6	2.53	0.42
45:BX:40:GLU:O	45:BX:43:LYS:HD2	2.19	0.42
21:AA:19:A:H2'	21:AA:20:U:H6	1.84	0.42
22:DA:2285:C:C5	49:D1:5:ARG:NH2	2.87	0.42
49:D1:7:LYS:O	49:D1:8:ILE:HD13	2.20	0.42
22:DA:2288:A:H4'	22:DA:2289:G:OP1	2.13	0.42
22:DA:2390:U:OP2	51:D3:34:LYS:HE2	2.18	0.42
44:BW:30:VAL:HG23	44:BW:59:PHE:CD1	2.51	0.42
5:AF:61:LEU:HD12	5:AF:62:MET:H	1.83	0.42
22:DA:1345:C:C5'	22:DA:1396:U:O4	2.66	0.42
15:CP:52:LEU:O	15:CP:53:ASP:CB	2.66	0.42
9:CJ:82:LYS:HA	9:CJ:86:ALA:HB3	2.01	0.42
7:AH:63:LYS:C	7:AH:64:TYR:CD1	2.92	0.42
10:CK:81:LEU:HD13	10:CK:81:LEU:N	2.35	0.42
2:CC:22:PHE:HD1	9:CJ:13:PHE:CE1	2.37	0.42
25:BD:114:LYS:HE3	25:BD:114:LYS:O	2.19	0.42
22:DA:1716:U:N3	22:DA:1745:A:N6	2.68	0.42
22:DA:2209:G:C6	22:DA:2216:G:C6	3.08	0.42
41:BT:87:LEU:O	41:BT:88:LYS:C	2.57	0.42
21:AA:72:A:H2'	21:AA:73:C:H6	1.84	0.42
54:DB:43:C:O2'	54:DB:44:G:H5'	2.19	0.42
22:DA:2305:U:OP1	27:DF:132:ARG:HG3	2.19	0.42
22:DA:234:U:O2'	22:DA:235:U:C5'	2.67	0.42
22:BA:1739:A:H2'	22:BA:1740:G:O4'	2.19	0.42
22:DA:1290:C:HO2'	22:DA:1291:C:H6	0.67	0.42
22:DA:2821:A:H2'	22:DA:2822:G:O4'	2.19	0.42
22:DA:1558:C:H1'	22:DA:1560:G:N7	2.34	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:AE:93:VAL:HG21	4:AE:139:THR:CG2	2.49	0.42
22:DA:2876:G:H4'	37:DP:2:ASN:HD21	1.84	0.42
22:DA:300:A:H1'	22:DA:333:G:H21	1.85	0.42
22:DA:309:A:C2	22:DA:329:G:O2'	2.65	0.42
1:AB:40:ILE:HG21	1:AB:201:GLY:N	2.34	0.42
3:AD:190:LEU:O	3:AD:191:SER:HB2	2.19	0.42
53:CA:1130:A:C5	53:CA:1146:A:C5	3.07	0.42
32:BK:113:MET:O	32:BK:115:ILE:N	2.52	0.42
6:CG:96:ASN:O	6:CG:100:MET:HE1	2.19	0.42
22:DA:1500:G:C6	22:DA:1501:G:N7	2.87	0.42
22:DA:2056:G:N2	22:DA:2057:G:N9	2.68	0.42
22:DA:1156:A:P	38:DQ:54:ARG:HE	2.42	0.42
20:AU:48:LYS:HD3	21:AA:723:U:OP1	2.20	0.42
22:DA:1801:A:C3'	22:DA:1802:A:H5'	2.48	0.42
30:BI:53:PRO:HB2	30:BI:74:PRO:CG	2.49	0.42
19:CT:26:MET:O	19:CT:29:THR:HB	2.18	0.42
49:B1:33:LEU:N	49:B1:51:ALA:CB	2.80	0.42
53:CA:149:A:H2'	53:CA:150:U:C6	2.54	0.42
36:DO:34:HIS:O	36:DO:35:ILE:HG12	2.19	0.42
22:DA:243:U:O2'	22:DA:244:A:C5'	2.67	0.42
22:DA:782:A:H5'	22:DA:783:A:C2	2.53	0.42
31:BJ:32:LEU:HA	31:BJ:32:LEU:HD23	1.80	0.42
9:CJ:65:TYR:HB3	13:CN:95:LEU:CD1	2.49	0.42
4:CE:56:PRO:O	4:CE:59:ILE:HG23	2.18	0.42
21:AA:414:A:H2'	21:AA:415:A:H8	1.84	0.42
22:DA:84:A:N1	22:DA:98:G:H2'	2.34	0.42
29:DH:89:LYS:HD2	29:DH:124:THR:HA	2.01	0.42
15:AP:4:ILE:HG12	15:AP:21:VAL:HG22	2.00	0.42
22:BA:633:A:H8	22:BA:633:A:C3'	2.31	0.42
46:DY:22:LEU:HG	46:DY:23:ARG:H	1.83	0.42
32:DK:118:LEU:O	32:DK:120:PRO:CD	2.67	0.42
25:DD:94:GLN:O	25:DD:95:SER:C	2.56	0.42
22:BA:1858:A:N6	22:BA:1884:G:H1'	2.34	0.42
22:DA:2571:U:O4	22:DA:2574:G:C8	2.71	0.42
21:AA:189:A:O2'	21:AA:190:A:H5'	2.19	0.42
32:BK:99:ILE:HG23	32:BK:100:PHE:N	2.35	0.42
15:CP:38:PHE:HZ	15:CP:48:GLU:OE1	2.02	0.42
22:DA:1000:A:C6	22:DA:1001:A:C6	3.07	0.42
18:AS:32:THR:HB	18:AS:34:SER:H	1.84	0.42
53:CA:164:G:H2'	53:CA:165:G:H5'	2.01	0.42
53:CA:1520:C:H2'	53:CA:1521:C:H6	1.78	0.42
22:DA:2508:G:O3'	22:DA:2555:U:H5'	2.19	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
48:D0:28:SER:HB3	48:D0:39:ARG:CZ	2.49	0.42
24:DC:211:ARG:C	24:DC:213:ARG:N	2.72	0.42
22:DA:1638:C:H1'	22:DA:2698:U:O2'	2.20	0.42
39:BR:66:HIS:CE1	39:BR:94:THR:HG21	2.54	0.42
13:CN:55:SER:HA	13:CN:56:PRO:HD2	1.85	0.42
26:BE:168:ASP:OD1	26:BE:169:VAL:N	2.52	0.42
27:BF:110:ILE:O	27:BF:113:PHE:HB2	2.20	0.42
22:BA:2004:G:C2'	22:BA:2005:A:H5'	2.49	0.42
22:DA:2478:A:C8	22:DA:2529:G:C6	3.08	0.42
22:DA:2072:C:H2'	22:DA:2073:C:H5'	2.00	0.42
29:DH:8:LYS:HD2	29:DH:9:VAL:N	2.34	0.42
24:BC:66:PHE:HB3	24:BC:150:GLY:O	2.19	0.42
22:BA:792:A:C5'	22:BA:793:A:H5'	2.49	0.42
8:AI:112:ARG:HH22	9:AJ:64:GLN:HE22	1.66	0.42
30:DI:102:ARG:CZ	30:DI:105:LEU:HD22	2.49	0.42
21:AA:122:G:H2'	21:AA:123:U:C6	2.54	0.42
22:BA:735:A:H3'	22:BA:736:C:C6	2.54	0.42
8:CI:98:ARG:NH2	53:CA:1178:G:H5''	2.34	0.42
7:AH:83:ARG:O	7:AH:84:ILE:HD13	2.18	0.42
3:AD:141:VAL:HG13	3:AD:180:THR:HG23	2.00	0.42
22:BA:1381:G:C2'	22:BA:1382:G:H5'	2.48	0.42
29:DH:45:GLU:C	29:DH:47:PHE:H	2.22	0.42
21:AA:307:C:H5''	21:AA:308:C:OP2	2.18	0.42
21:AA:1030:U:H5'	21:AA:1031:C:O2	2.18	0.42
22:DA:1843:C:O2'	24:DC:253:GLY:HA3	2.19	0.42
22:DA:2857:G:N2	22:DA:2861:U:C4	2.88	0.42
15:AP:36:VAL:HG22	15:AP:36:VAL:O	2.19	0.42
39:DR:86:GLN:HE21	39:DR:86:GLN:HB2	1.63	0.42
22:DA:1782:U:H6	22:DA:1782:U:O5'	2.02	0.42
8:AI:53:LEU:HD12	8:AI:53:LEU:N	2.33	0.42
18:AS:42:ASN:ND2	18:AS:42:ASN:C	2.72	0.42
7:AH:82:LEU:HD22	7:AH:82:LEU:C	2.40	0.42
53:CA:1310:G:C6	53:CA:1311:A:C6	3.08	0.42
53:CA:690:G:H2'	53:CA:691:G:O4'	2.18	0.42
22:BA:155:A:H2'	22:BA:156:A:C8	2.54	0.42
22:BA:1167:C:H2'	22:BA:1168:G:O5'	2.19	0.42
31:BJ:44:TYR:CE1	38:BQ:59:LEU:HD11	2.53	0.42
22:DA:857:G:O2'	44:DW:19:ARG:CZ	2.67	0.42
39:BR:55:ASP:CG	39:BR:56:GLY:H	2.23	0.42
39:DR:49:ILE:HG22	39:DR:54:VAL:HB	2.01	0.42
22:DA:623:C:H2'	22:DA:624:C:O4'	2.19	0.42
8:AI:6:TYR:O	8:AI:85:ALA:HA	2.19	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
28:BG:116:LEU:HA	28:BG:117:PRO:HD2	1.83	0.42
22:DA:1999:C:H4'	22:DA:2723:C:O2	2.19	0.42
53:CA:375:U:C4	53:CA:376:G:N7	2.87	0.42
19:AT:27:MET:O	19:AT:27:MET:HE2	2.19	0.42
22:DA:447:A:H5'	22:DA:449:A:C4	2.54	0.42
22:DA:447:A:H4'	22:DA:449:A:N7	2.35	0.42
9:CJ:40:ILE:HG21	53:CA:1125:U:C4	2.54	0.42
41:DT:38:ALA:C	41:DT:39:THR:HG22	2.40	0.42
22:BA:1107:G:H2'	22:BA:1108:U:H6	1.85	0.42
8:CI:51:LEU:C	8:CI:53:LEU:N	2.71	0.42
10:CK:124:LYS:HG3	20:CU:34:ARG:HD2	2.01	0.42
20:CU:37:TYR:O	20:CU:37:TYR:HD2	2.02	0.42
22:BA:265:A:N6	22:BA:428:A:C1'	2.83	0.42
30:BI:49:GLU:HG2	30:BI:50:LYS:H	1.83	0.42
22:DA:1283:G:N1	22:DA:1286:A:OP2	2.51	0.42
24:DC:131:MET:HE2	24:DC:187:CYS:O	2.19	0.42
22:DA:2144:G:N2	22:DA:2148:G:O6	2.51	0.42
22:DA:308:G:C8	22:DA:501:A:H1'	2.53	0.42
53:CA:90:C:O2'	53:CA:91:U:O4'	2.38	0.42
53:CA:961:U:O4	53:CA:983:A:N6	2.51	0.42
9:CJ:59:LYS:H	9:CJ:59:LYS:HG3	1.67	0.42
21:AA:1144:G:H2'	21:AA:1145:A:O4'	2.20	0.42
22:BA:2214:C:H6	22:BA:2214:C:C5'	2.22	0.42
22:DA:1010:A:O2'	22:DA:1011:G:C5'	2.67	0.42
36:DO:115:LEU:H	36:DO:115:LEU:CD1	2.18	0.42
22:DA:137:U:O5'	22:DA:137:U:H6	2.02	0.42
41:DT:45:ALA:HA	41:DT:48:GLN:HG2	2.01	0.42
22:DA:705:A:H61	22:DA:726:G:H1'	1.79	0.42
12:CM:65:GLU:H	12:CM:65:GLU:HG3	1.66	0.42
22:BA:753:A:H2'	22:BA:754:U:C6	2.54	0.42
28:DG:116:LEU:HD13	28:DG:121:THR:HA	2.01	0.42
10:CK:64:VAL:O	10:CK:68:ARG:CB	2.62	0.42
22:BA:1799:G:H22	22:BA:1818:U:HO2'	1.62	0.42
53:CA:563:A:N6	57:CA:1818:HOH:O	2.52	0.42
33:DL:111:ILE:HA	33:DL:128:THR:OG1	2.19	0.42
3:CD:115:GLN:NE2	3:CD:153:ARG:HH22	2.17	0.42
29:BH:134:VAL:HG21	29:BH:139:PHE:O	2.19	0.42
22:BA:1075:C:N3	22:BA:1076:C:C4	2.87	0.42
19:CT:30:PHE:HE2	19:CT:52:GLU:CG	2.29	0.42
21:AA:279:A:H5''	21:AA:281:G:H5'	2.02	0.42
43:DV:58:SER:OG	43:DV:59:GLU:N	2.53	0.42
40:DS:27:LYS:O	40:DS:28:LYS:O	2.37	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
42:BU:71:ILE:HD13	42:BU:82:VAL:HG23	2.01	0.42
29:BH:40:THR:O	29:BH:42:LYS:N	2.48	0.42
22:DA:871:U:OP1	34:DM:4:PRO:HA	2.20	0.42
22:BA:1673:G:C2'	22:BA:1674:G:H5'	2.49	0.42
2:CC:120:THR:CB	2:CC:186:SER:HG	2.33	0.42
22:BA:1528:A:C8	22:BA:1529:G:C8	3.07	0.42
53:CA:847:G:C2	53:CA:848:C:C2	3.07	0.42
22:BA:2471:A:H2'	22:BA:2472:G:H5'	2.01	0.42
41:DT:68:LYS:HG3	57:DT:201:HOH:O	2.19	0.42
41:DT:69:ARG:HG3	41:DT:70:HIS:N	2.34	0.42
6:AG:88:VAL:HG22	6:AG:89:GLU:H	1.81	0.42
53:CA:163:C:H2'	53:CA:164:G:O5'	2.19	0.42
33:BL:112:LEU:HD12	33:BL:130:GLY:HA3	2.00	0.42
21:AA:923:A:H2'	21:AA:924:C:H6	1.85	0.42
31:BJ:30:THR:HG22	31:BJ:31:GLU:N	2.34	0.42
21:AA:829:G:O2'	21:AA:830:G:H5'	2.18	0.42
22:DA:2506:U:H3'	22:DA:2506:U:C6	2.54	0.42
16:AQ:58:VAL:HG22	16:AQ:59:GLU:H	1.84	0.42
53:CA:62:U:O2'	53:CA:379:C:O2	2.36	0.42
22:BA:1316:U:H2'	22:BA:1317:G:H8	1.85	0.42
22:DA:693:A:C6	22:DA:694:U:C4	3.07	0.42
38:BQ:40:LYS:HG2	38:BQ:44:TYR:CD1	2.54	0.42
22:DA:818:G:C2'	22:DA:819:A:H5''	2.49	0.42
22:DA:2476:A:C2'	22:DA:2477:U:H5'	2.49	0.42
22:DA:2615:U:O2'	22:DA:2616:C:C5'	2.67	0.42
53:CA:188:C:H42	53:CA:189:A:N6	2.16	0.42
21:AA:1171:A:H2'	21:AA:1172:C:C6	2.54	0.42
35:DN:83:LEU:HD11	35:DN:86:ARG:HH21	1.84	0.42
8:CI:102:PHE:C	8:CI:104:THR:H	2.22	0.42
22:BA:2805:C:C4	22:BA:2806:C:C5	3.07	0.42
21:AA:82:G:H21	21:AA:84:U:H3	1.66	0.42
22:DA:1838:C:N4	22:DA:1898:U:H2'	2.34	0.42
36:BO:55:GLU:O	36:BO:56:LYS:C	2.58	0.42
22:DA:2102:G:H2'	22:DA:2103:C:H5'	2.01	0.42
10:CK:19:VAL:N	10:CK:34:THR:O	2.51	0.42
22:BA:2388:A:H5'	22:BA:2389:G:OP2	2.18	0.42
32:DK:94:PRO:HG3	32:DK:115:ILE:HD12	2.00	0.42
22:BA:1851:U:C4	22:BA:1852:U:C4	3.08	0.42
22:BA:2754:U:O3'	52:B4:19:ARG:NH2	2.53	0.42
3:AD:56:GLU:O	3:AD:59:LYS:HB3	2.19	0.42
10:CK:86:LYS:HE3	10:CK:112:VAL:HG23	2.01	0.42
53:CA:1204:A:H2'	53:CA:1205:U:C6	2.54	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:BA:2527:C:H2'	22:BA:2528:U:O4'	2.19	0.42
47:DZ:31:ILE:O	47:DZ:31:ILE:HG13	2.19	0.42
15:CP:69:ASP:OD2	15:CP:69:ASP:N	2.53	0.42
22:BA:2182:U:H2'	22:BA:2183:A:OP1	2.19	0.42
3:AD:137:SER:HB3	3:AD:138:PRO:HD2	2.02	0.42
22:BA:523:C:O2	22:BA:554:U:O2'	2.35	0.42
22:DA:2287:A:C6	22:DA:2289:G:C5	3.07	0.42
22:DA:386:G:H4'	22:DA:387:U:OP2	2.19	0.42
44:DW:18:LYS:N	44:DW:36:ILE:HG12	2.33	0.42
44:BW:22:VAL:HG13	44:BW:25:PHE:CD2	2.54	0.42
37:BP:4:ILE:CG2	37:BP:5:LYS:N	2.67	0.42
5:AF:4:TYR:HA	5:AF:91:ARG:O	2.19	0.42
53:CA:1206:G:H2'	53:CA:1207:G:O4'	2.19	0.42
16:AQ:13:SER:HB3	16:AQ:16:MET:HE1	2.00	0.42
16:AQ:18:LYS:O	16:AQ:47:ASP:OD2	2.37	0.42
15:CP:5:ARG:HH12	15:CP:24:SER:HA	1.85	0.42
3:AD:145:ARG:C	3:AD:147:LYS:N	2.69	0.42
2:AC:166:TRP:N	2:AC:166:TRP:CE3	2.76	0.42
22:DA:410:G:C2	22:DA:2407:A:C6	3.07	0.42
25:BD:13:ARG:NE	25:BD:15:PHE:CZ	2.87	0.42
22:BA:2727:A:O2'	22:BA:2728:U:H5'	2.19	0.42
54:DB:90:C:H5'	34:DM:18:ARG:HD2	2.02	0.42
5:CF:2:ARG:HD2	5:CF:92:THR:OG1	2.19	0.42
25:DD:13:ARG:H	25:DD:13:ARG:HG2	1.69	0.42
22:DA:321:U:H5'	26:DE:129:PRO:HB3	2.02	0.42
53:CA:77:A:C2	53:CA:93:U:C2	3.07	0.42
22:DA:397:U:O2'	22:DA:398:C:O4'	2.26	0.42
22:DA:1965:C:C5'	22:DA:1965:C:H6	2.33	0.42
6:CG:137:ARG:NH1	6:CG:138:GLU:HG2	2.34	0.42
21:AA:394:G:C5	21:AA:395:C:C5	3.07	0.42
53:CA:71:A:C5	53:CA:100:G:C5	3.07	0.42
22:DA:1015:U:H2'	22:DA:1016:G:O4'	2.20	0.42
21:AA:1287:A:H2'	21:AA:1288:A:H8	1.77	0.42
14:AO:30:LEU:O	14:AO:33:ALA:HB3	2.19	0.42
28:BG:9:VAL:HA	28:BG:48:THR:HA	2.00	0.42
22:DA:584:C:OP1	38:DQ:5:ARG:HD3	2.19	0.42
29:BH:99:ILE:HG22	29:BH:99:ILE:O	2.18	0.42
3:AD:29:THR:HG22	3:AD:30:LYS:N	2.34	0.42
53:CA:522:C:O2'	53:CA:523:A:H5'	2.19	0.42
22:DA:1802:A:H2'	22:DA:1803:A:C8	2.55	0.42
34:BM:45:GLN:O	34:BM:46:ILE:C	2.58	0.42
29:DH:80:ILE:HB	29:DH:101:ASP:OD2	2.20	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
53:CA:1012:A:C5	53:CA:1013:G:N7	2.88	0.42
1:AB:148:GLY:HA2	1:AB:151:LYS:CE	2.50	0.42
20:AU:3:ILE:N	20:AU:19:LYS:HZ1	2.18	0.42
28:DG:104:LEU:N	28:DG:112:VAL:HG23	2.34	0.42
21:AA:792:A:C4	21:AA:794:A:C6	3.08	0.42
2:CC:11:LEU:C	2:CC:13:ILE:N	2.73	0.42
22:BA:2149:U:O2'	22:BA:2150:C:C4'	2.68	0.42
9:AJ:40:ILE:HA	9:AJ:41:PRO:HD2	1.88	0.42
53:CA:1265:C:H2'	53:CA:1266:G:H5'	2.02	0.42
2:CC:84:GLU:C	2:CC:86:LEU:N	2.73	0.42
1:CB:9:LEU:O	1:CB:10:LYS:HB3	2.18	0.42
22:BA:948:C:H6	22:BA:948:C:O5'	2.02	0.42
1:AB:113:LEU:O	1:AB:117:GLU:HG3	2.18	0.42
22:BA:2322:A:C6	22:BA:2333:A:N6	2.87	0.42
24:DC:230:PRO:HD2	24:DC:246:PRO:HA	2.00	0.42
44:BW:71:LYS:HB3	44:BW:72:GLY:H	1.69	0.42
22:BA:298:G:C2	22:BA:339:U:C5	3.08	0.42
3:AD:21:LYS:O	3:AD:23:GLY:N	2.53	0.42
21:AA:892:A:C6	21:AA:893:C:C4	3.07	0.42
24:DC:94:LEU:HB2	24:DC:100:ARG:HD2	2.01	0.42
12:CM:82:LEU:HB2	18:CS:73:PHE:CE2	2.55	0.42
22:DA:155:A:C2	22:DA:172:A:C6	3.07	0.42
19:AT:74:HIS:O	19:AT:75:LYS:C	2.57	0.42
24:BC:20:ASN:HA	24:BC:21:PRO:HD2	1.88	0.42
2:AC:5:HIS:HA	2:AC:6:PRO:HD2	1.81	0.42
33:DL:105:ILE:HG22	33:DL:106:GLU:N	2.34	0.42
34:BM:108:VAL:HG13	34:BM:109:PRO:HD2	2.02	0.42
8:AI:42:THR:O	8:AI:43:ALA:HB2	2.18	0.42
22:DA:2758:A:C2'	22:DA:2759:G:H5'	2.47	0.42
22:DA:2553:G:C2	22:DA:2554:U:H1'	2.55	0.42
12:CM:106:ARG:CZ	12:CM:112:ARG:HB3	2.50	0.42
9:AJ:73:LEU:O	9:AJ:74:VAL:HB	2.19	0.42
39:BR:25:LEU:H	39:BR:94:THR:HG21	1.83	0.42
45:BX:31:ASN:OD1	45:BX:33:HIS:NE2	2.52	0.42
22:DA:2264:C:H2'	22:DA:2265:U:O4'	2.19	0.42
31:DJ:125:TYR:HE2	31:DJ:132:HIS:CD2	2.37	0.42
22:BA:2663:G:C4	22:BA:2664:G:C8	3.08	0.42
38:DQ:73:ILE:HD11	38:DQ:77:LYS:HB2	2.01	0.42
22:BA:2140:G:C4	22:BA:2152:G:N2	2.87	0.42
31:DJ:105:VAL:O	31:DJ:105:VAL:HG22	2.19	0.42
21:AA:341:C:H2'	21:AA:342:C:H6	1.85	0.42
22:BA:976:G:C2	22:BA:977:G:N7	2.87	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
30:DI:102:ARG:HG2	30:DI:141:ASP:O	2.18	0.42
10:CK:12:ARG:N	10:CK:12:ARG:CD	2.83	0.42
40:DS:65:ASP:C	40:DS:67:ASP:N	2.73	0.42
35:BN:20:MET:HE2	35:BN:20:MET:HB2	1.80	0.42
29:DH:96:THR:HG22	29:DH:113:SER:OG	2.18	0.42
14:AO:81:ILE:C	14:AO:83:ARG:H	2.23	0.42
36:DO:2:ASP:O	36:DO:4:LYS:N	2.52	0.42
27:DF:9:ASP:O	27:DF:10:GLU:HB3	2.19	0.42
21:AA:1480:A:C6	21:AA:1481:U:C4	3.07	0.42
21:AA:949:A:H2'	21:AA:950:U:O4'	2.20	0.42
39:DR:30:GLY:HA2	39:DR:63:VAL:O	2.19	0.42
44:DW:83:ALA:O	44:DW:84:GLU:HB2	2.20	0.42
4:AE:69:ASN:OD1	4:AE:69:ASN:O	2.37	0.42
1:AB:170:ILE:HG12	1:AB:170:ILE:H	1.34	0.42
36:BO:21:LEU:HD23	36:BO:21:LEU:HA	1.83	0.42
43:DV:32:GLY:O	43:DV:33:GLY:C	2.58	0.42
22:DA:2246:G:H2'	22:DA:2247:A:C8	2.54	0.42
22:DA:1036:G:C6	22:DA:1120:G:C6	3.08	0.42
22:BA:610:C:H2'	22:BA:611:C:H6	1.83	0.42
40:BS:4:ILE:HG21	40:BS:106:VAL:HG22	2.00	0.42
37:BP:3:ILE:C	37:BP:4:ILE:O	2.57	0.42
22:DA:600:G:N2	22:DA:605:G:O3'	2.52	0.42
22:DA:1663:G:C6	22:DA:1998:A:N6	2.88	0.42
19:AT:50:PHE:HA	19:AT:53:MET:HG2	2.02	0.42
4:AE:152:VAL:O	4:AE:155:LYS:CE	2.68	0.42
38:DQ:61:ILE:HD12	38:DQ:61:ILE:H	1.84	0.42
53:CA:1117:A:C6	53:CA:1184:G:O6	2.72	0.42
53:CA:734:G:N3	53:CA:735:C:C6	2.87	0.42
9:CJ:40:ILE:HG12	53:CA:1125:U:C6	2.53	0.42
22:DA:1787:A:O5'	22:DA:1787:A:C8	2.71	0.42
10:AK:125:LYS:C	20:AU:33:ARG:CZ	2.88	0.42
22:BA:1176:U:H2'	22:BA:1177:G:C4	2.55	0.42
46:BY:44:LYS:O	46:BY:47:ARG:HB3	2.19	0.42
22:DA:1131:G:C5	22:DA:2025:C:H4'	2.55	0.42
21:AA:210:C:H4'	21:AA:211:G:C2	2.54	0.42
27:BF:3:LEU:HD23	27:BF:100:GLU:HB2	2.02	0.42
33:BL:53:GLY:O	33:BL:54:GLN:C	2.58	0.42
37:DP:52:ARG:HA	37:DP:52:ARG:HD3	1.74	0.42
46:DY:58:ASN:O	46:DY:61:ALA:HB2	2.19	0.42
22:BA:271:G:O2'	22:BA:272:A:C5'	2.67	0.42
22:BA:528:A:H2'	22:BA:529:A:H5''	2.02	0.42
22:DA:1206:G:O2'	22:DA:1207:C:C5'	2.68	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:AA:1124:G:H2'	21:AA:1145:A:H61	1.85	0.42
35:DN:45:ARG:C	35:DN:47:VAL:H	2.21	0.42
32:DK:17:ARG:O	32:DK:18:ARG:C	2.58	0.42
22:DA:2869:G:C5	22:DA:2870:C:C4	3.07	0.42
22:DA:584:C:C4	22:DA:585:G:C5	3.07	0.42
7:CH:58:LEU:HD22	7:CH:60:LEU:HD11	2.01	0.42
6:AG:95:ARG:HB3	6:AG:96:ASN:H	1.70	0.42
24:BC:132:ARG:O	24:BC:132:ARG:HD3	2.19	0.42
3:AD:34:GLU:C	3:AD:36:ALA:H	2.22	0.42
21:AA:1157:A:H1'	21:AA:1181:G:H22	1.80	0.42
21:AA:1163:A:C2	21:AA:1174:G:C2	3.08	0.42
20:AU:14:ALA:O	20:AU:15:LEU:HD12	2.18	0.42
47:BZ:46:MET:O	47:BZ:47:ILE:C	2.58	0.42
47:BZ:20:LYS:O	47:BZ:23:LEU:N	2.52	0.42
22:BA:1159:U:C2'	22:BA:1160:G:H5'	2.49	0.42
21:AA:86:G:N3	21:AA:87:C:H5	2.18	0.42
9:CJ:65:TYR:HB3	13:CN:95:LEU:HD11	2.00	0.42
21:AA:913:A:HO2'	21:AA:914:A:P	2.43	0.42
22:DA:533:G:OP1	38:DQ:23:TYR:HB3	2.19	0.42
21:AA:519:C:O2'	21:AA:520:A:C5'	2.68	0.42
29:BH:95:GLY:O	29:BH:97:ARG:N	2.51	0.42
3:AD:71:PHE:CE1	3:AD:199:ILE:HD11	2.54	0.42
11:CL:35:ARG:HA	11:CL:35:ARG:HD3	1.79	0.42
24:DC:52:HIS:CD2	24:DC:217:PRO:O	2.72	0.42
18:CS:10:ILE:N	18:CS:10:ILE:HD12	2.34	0.42
7:AH:10:LEU:HD11	7:AH:126:CYS:CB	2.49	0.42
22:DA:67:U:C2	22:DA:68:G:C8	3.08	0.42
46:DY:48:ARG:O	46:DY:51:ALA:HB3	2.19	0.42
33:BL:38:GLN:O	33:BL:40:SER:O	2.37	0.42
22:DA:2902:C:H6	22:DA:2902:C:OP2	2.03	0.42
22:BA:747:U:O2	22:BA:2014:A:H1'	2.19	0.42
29:DH:117:LEU:HD22	29:DH:122:LEU:HD12	2.01	0.42
22:DA:1572:A:O5'	22:DA:1572:A:H8	2.02	0.42
24:BC:69:ASN:O	24:BC:117:SER:OG	2.38	0.42
53:CA:160:A:C2	53:CA:343:U:H1'	2.55	0.42
31:BJ:40:HIS:C	31:BJ:41:LYS:CG	2.87	0.42
1:CB:26:MET:O	1:CB:30:ILE:HG13	2.20	0.42
25:DD:40:LEU:H	25:DD:40:LEU:HD12	1.84	0.42
21:AA:582:C:C4	21:AA:583:A:N7	2.88	0.42
45:BX:31:ASN:O	45:BX:51:SER:HA	2.19	0.42
21:AA:900:A:N1	21:AA:901:A:C2	2.87	0.42
19:CT:57:VAL:HG12	19:CT:71:ALA:CB	2.49	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:CH:31:LEU:O	7:CH:35:ILE:HG13	2.20	0.42
22:DA:1650:A:O2'	35:DN:108:ALA:HB1	2.19	0.42
34:DM:15:GLY:O	34:DM:16:ARG:CB	2.67	0.42
22:BA:1915:U:H2'	22:BA:1916:A:C8	2.54	0.42
22:BA:1190:G:H5''	33:BL:32:GLY:HA2	2.00	0.42
14:AO:17:ASP:O	14:AO:20:ASP:HB3	2.19	0.42
29:BH:124:THR:HB	29:BH:125:THR:H	1.61	0.42
35:DN:9:GLN:O	35:DN:10:LEU:O	2.37	0.42
20:CU:28:LEU:C	20:CU:28:LEU:HD23	2.39	0.42
2:AC:24:ASN:HD22	2:AC:25:THR:H	1.66	0.42
25:DD:61:THR:CB	25:DD:63:PRO:HD2	2.49	0.42
47:DZ:29:ARG:H	47:DZ:29:ARG:NH2	2.17	0.42
43:BV:88:HIS:CG	43:BV:89:ILE:N	2.88	0.42
22:DA:1353:A:H2'	22:DA:1354:A:C8	2.55	0.42
53:CA:7:A:H5'	53:CA:298:A:O4'	2.20	0.42
2:CC:33:ASP:O	2:CC:37:LYS:HG2	2.20	0.42
22:BA:952:G:H2'	22:BA:953:G:O5'	2.19	0.42
45:DX:12:VAL:HG23	45:DX:12:VAL:O	2.20	0.42
41:DT:61:LEU:C	41:DT:61:LEU:HD12	2.40	0.42
41:DT:64:LYS:N	41:DT:64:LYS:HD2	2.35	0.42
22:DA:498:G:C6	22:DA:499:U:C4	3.07	0.42
54:DB:23:G:C2	54:DB:61:G:C2	3.07	0.42
54:DB:109:A:O2'	54:DB:110:C:O5'	2.38	0.42
53:CA:994:A:C6	53:CA:1216:A:H5'	2.54	0.42
22:BA:2846:G:H2'	22:BA:2847:U:O4'	2.19	0.42
44:BW:47:GLY:C	44:BW:49:ASN:H	2.23	0.42
39:DR:38:VAL:O	39:DR:53:PHE:HA	2.19	0.42
22:DA:621:A:C2'	22:DA:622:G:O5'	2.68	0.42
22:DA:2617:U:H2'	22:DA:2618:G:H5'	2.01	0.42
28:BG:162:ARG:HB3	28:BG:163:TYR:H	1.65	0.42
28:BG:85:LYS:HG2	28:BG:131:VAL:CG1	2.50	0.42
45:DX:52:ALA:C	45:DX:54:GLY:N	2.73	0.42
16:AQ:45:VAL:O	16:AQ:47:ASP:OD1	2.36	0.42
22:DA:1661:G:H2'	22:DA:1662:U:H6	1.84	0.42
22:BA:263:G:H1'	22:BA:430:A:N3	2.34	0.42
22:DA:1127:A:H1'	22:DA:2518:A:C2	2.55	0.42
22:DA:2543:G:C6	22:DA:2765:A:C5	3.08	0.42
13:AN:30:ILE:HG23	13:AN:44:VAL:CG1	2.50	0.42
21:AA:1004:A:C6	21:AA:1005:A:C4	3.08	0.42
22:DA:503:A:C5	22:DA:506:G:C5	3.07	0.42
4:AE:108:GLY:O	4:AE:109:ALA:O	2.37	0.42
22:DA:2145:C:H2'	22:DA:2146:C:H3'	2.01	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:BA:1139:G:C2'	22:BA:1140:C:H5'	2.50	0.42
22:BA:1141:U:C4'	22:BA:1142:A:O5'	2.61	0.42
22:DA:335:C:O2'	22:DA:336:C:O4'	2.36	0.42
53:CA:1243:C:C2	53:CA:1244:G:N7	2.87	0.42
22:BA:1507:C:C2	22:BA:1508:A:C2	3.07	0.42
22:DA:192:C:OP1	22:DA:2243:U:OP1	2.38	0.42
22:DA:2243:U:H2'	22:DA:2244:U:C6	2.55	0.42
22:DA:116:C:O2'	22:DA:117:G:H5'	2.20	0.42
14:CO:42:PHE:CE2	14:CO:51:SER:HB2	2.55	0.42
37:BP:33:GLU:N	37:BP:36:LYS:O	2.53	0.42
35:BN:73:ASN:CA	35:BN:76:VAL:HG12	2.38	0.42
53:CA:64:G:C8	53:CA:99:C:N4	2.87	0.42
27:BF:134:GLN:C	27:BF:136:ILE:N	2.73	0.42
22:DA:136:G:O5'	22:DA:136:G:H8	2.03	0.42
27:DF:146:ASP:HB3	27:DF:147:ARG:H	1.55	0.42
21:AA:1157:A:C6	21:AA:1180:A:C5	3.08	0.42
31:DJ:56:VAL:HG22	31:DJ:124:VAL:HA	2.02	0.42
22:DA:630:G:N2	22:DA:633:A:OP2	2.52	0.42
22:BA:498:G:C2	22:BA:499:U:C5	3.07	0.42
22:DA:651:G:C6	22:DA:652:U:C4	3.08	0.42
24:DC:130:PRO:C	24:DC:132:ARG:N	2.73	0.42
22:DA:459:U:H2'	22:DA:460:A:C8	2.55	0.42
2:CC:181:ILE:HG12	2:CC:202:PHE:HB2	2.01	0.42
9:CJ:63:ASP:OD1	13:CN:97:LYS:HE3	2.20	0.42
29:BH:68:ARG:HH21	29:BH:69:ALA:HA	1.84	0.42
22:DA:1269:A:OP2	57:DA:3392:HOH:O	2.21	0.42
29:BH:12:LEU:HB2	29:BH:19:VAL:CG1	2.49	0.42
29:DH:1:MET:HE3	29:DH:23:ALA:HB2	2.01	0.42
43:BV:72:VAL:HB	43:BV:92:VAL:O	2.19	0.42
27:DF:5:ASP:C	27:DF:7:TYR:N	2.73	0.42
40:DS:18:ARG:O	40:DS:21:ALA:HB3	2.20	0.42
22:DA:46:G:C2	22:DA:47:C:C5	3.08	0.42
40:DS:31:GLN:O	40:DS:33:LEU:N	2.53	0.42
2:AC:107:LYS:HA	2:AC:108:PRO:HD2	1.78	0.42
22:DA:684:G:H5'	50:D2:16:HIS:CE1	2.54	0.42
9:AJ:91:ASP:N	9:AJ:91:ASP:OD1	2.53	0.42
33:DL:121:THR:OG1	33:DL:141:LYS:HE3	2.20	0.42
22:BA:910:A:C4	34:BM:13:HIS:CE1	3.07	0.42
33:DL:93:ASN:O	33:DL:94:THR:HB	2.20	0.42
42:BU:73:ASN:HD22	42:BU:76:THR:H	1.68	0.42
42:BU:73:ASN:O	42:BU:75:ALA:N	2.53	0.42
22:DA:2493:U:C2'	22:DA:2494:G:H5''	2.49	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
14:CO:22:GLY:O	14:CO:23:SER:C	2.58	0.42
53:CA:611:C:H2'	53:CA:612:C:H6	1.84	0.42
22:DA:1411:U:C4	22:DA:1412:U:C4	3.07	0.42
22:DA:1411:U:H2'	22:DA:1412:U:O4'	2.20	0.42
13:CN:99:SER:HB2	53:CA:1114:C:O2'	2.19	0.42
29:DH:6:LEU:HD13	29:DH:36:ALA:HA	2.01	0.42
21:AA:515:G:N2	21:AA:537:G:C4	2.88	0.42
22:BA:1433:A:H61	22:BA:1560:G:H1	1.68	0.42
22:BA:118:A:H2'	22:BA:120:U:O4	2.19	0.42
32:DK:59:LYS:HE3	32:DK:89:ASN:CG	2.40	0.42
22:DA:2506:U:H3'	22:DA:2506:U:H6	1.85	0.42
22:BA:2592:G:C6	22:BA:2593:U:C4	3.08	0.42
8:AI:26:LYS:HG3	8:AI:61:ASP:OD1	2.18	0.42
16:CQ:23:ALA:HA	16:CQ:41:THR:O	2.20	0.42
21:AA:1510:C:H2'	21:AA:1511:G:C8	2.54	0.42
22:BA:1443:U:H2'	22:BA:1444:G:H8	1.84	0.42
23:BB:110:C:C4	23:BB:111:U:C5	3.08	0.42
22:DA:1220:G:C2	22:DA:1230:A:C2	3.08	0.42
21:AA:497:G:N2	21:AA:498:A:C6	2.88	0.42
16:CQ:10:ARG:HG2	16:CQ:11:VAL:O	2.19	0.42
21:AA:676:A:C6	21:AA:677:U:C4	3.07	0.42
22:DA:2316:G:H2'	22:DA:2317:A:C8	2.55	0.42
34:BM:4:PRO:CG	34:BM:70:ASP:HA	2.50	0.42
4:CE:74:ALA:O	4:CE:75:LEU:HB2	2.19	0.42
27:DF:122:ASP:HB3	27:DF:123:GLY:H	1.58	0.42
15:CP:23:ASP:O	15:CP:25:ARG:N	2.52	0.42
42:DU:39:ASN:HD21	42:DU:64:ILE:HG22	1.84	0.42
22:BA:1419:A:C6	22:BA:1421:G:C4	3.07	0.42
9:CJ:92:LEU:HD22	9:CJ:93:ALA:N	2.35	0.42
22:BA:1429:G:H2'	22:BA:1430:G:H8	1.84	0.42
22:BA:2665:A:H2	22:BA:2666:C:C2	2.38	0.42
22:BA:1261:C:C2'	22:BA:1262:A:O5'	2.68	0.42
53:CA:117:G:O2'	53:CA:118:U:H5'	2.20	0.42
22:BA:2182:U:C2'	22:BA:2183:A:OP1	2.68	0.42
21:AA:1473:G:H2'	21:AA:1474:U:C6	2.55	0.42
16:CQ:52:CYS:HB2	16:CQ:53:GLY:H	1.62	0.42
22:DA:277:G:H4'	22:DA:278:A:C8	2.53	0.42
53:CA:573:A:N3	53:CA:883:C:O2'	2.51	0.42
14:AO:55:LEU:HA	14:AO:58:MET:HG3	2.01	0.42
22:BA:1220:G:H2'	22:BA:1221:C:O4'	2.19	0.42
19:CT:85:LEU:HD23	19:CT:85:LEU:HA	1.85	0.42
3:CD:183:ARG:HE	3:CD:183:ARG:HB2	1.49	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
53:CA:317:U:H2'	53:CA:318:G:C8	2.54	0.42
22:BA:1984:G:C6	22:BA:1985:C:C5	3.07	0.42
22:BA:246:C:C2'	22:BA:247:G:H5'	2.50	0.42
21:AA:1082:A:H2'	21:AA:1083:U:O4'	2.19	0.42
12:CM:105:ALA:HB1	12:CM:109:LYS:HB2	2.01	0.42
45:BX:48:LEU:HD11	45:BX:67:LEU:HD21	2.01	0.42
20:CU:19:LYS:HA	20:CU:19:LYS:HD3	1.81	0.42
26:DE:24:ASN:O	26:DE:28:VAL:HG13	2.20	0.42
45:DX:53:LYS:CA	45:DX:56:ARG:HB3	2.29	0.42
22:DA:1312:U:O2'	22:DA:1314:C:C5	2.73	0.42
9:CJ:76:ILE:HG22	9:CJ:77:VAL:N	2.34	0.42
7:AH:62:LEU:HD13	7:AH:62:LEU:HA	1.77	0.42
38:DQ:91:ARG:CZ	38:DQ:93:ILE:HG21	2.49	0.42
22:BA:1057:A:N3	22:BA:1082:U:C2	2.88	0.42
22:DA:2093:G:H4'	29:DH:24:GLY:HA3	2.01	0.42
22:DA:2199:A:C4	22:DA:2200:C:C6	3.07	0.42
10:AK:124:LYS:O	20:AU:33:ARG:HG2	2.20	0.42
22:BA:1341:G:H3'	22:BA:1397:U:O2	2.20	0.42
41:BT:40:LYS:H	41:BT:43:ILE:HG23	1.84	0.42
52:D4:37:GLN:HG2	52:D4:38:GLY:N	2.35	0.42
22:DA:1087:G:H1'	22:DA:1089:A:H1'	2.02	0.42
22:DA:1091:G:C2	22:DA:1101:U:N3	2.88	0.42
54:DB:89:U:H5''	54:DB:90:C:C5	2.54	0.42
22:BA:1777:U:O2'	22:BA:1778:U:H5'	2.20	0.42
22:DA:1807:G:H1'	22:DA:1810:A:H62	1.84	0.42
40:DS:6:LYS:HD2	40:DS:8:ARG:HD2	2.01	0.42
22:DA:217:A:O2'	22:DA:218:A:H5'	2.19	0.42
1:CB:92:ASN:OD1	1:CB:93:HIS:ND1	2.53	0.42
4:CE:131:ASN:C	4:CE:135:VAL:HG23	2.40	0.42
24:BC:252:LYS:NZ	24:BC:252:LYS:HB2	2.33	0.42
6:CG:129:ASN:OD1	6:CG:134:VAL:HG11	2.19	0.42
32:BK:73:ASP:OD1	32:BK:74:GLY:N	2.52	0.42
29:BH:86:ASP:CB	29:BH:89:LYS:HB3	2.50	0.42
27:DF:43:ILE:HD13	27:DF:82:TYR:CE2	2.55	0.42
26:DE:147:LEU:HD21	26:DE:179:SER:HB2	2.02	0.42
22:DA:1132:U:H5''	31:DJ:84:ILE:HD13	2.01	0.42
22:DA:1799:G:OP1	24:DC:257:ARG:NH1	2.52	0.42
32:DK:103:VAL:O	32:DK:104:THR:HB	2.19	0.42
26:DE:5:LEU:CD1	26:DE:10:SER:HB2	2.50	0.42
22:DA:1417:C:O2'	22:DA:1418:G:C5'	2.67	0.42
15:CP:46:LYS:H	15:CP:46:LYS:HZ2	1.68	0.42
7:AH:4:ASP:HB2	7:AH:80:PRO:HG3	2.00	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
33:DL:79:LEU:HD23	33:DL:82:LEU:HD11	2.02	0.42
30:DI:27:LEU:HD13	30:DI:32:VAL:HG11	2.01	0.42
53:CA:1097:C:H2'	53:CA:1098:C:C6	2.55	0.42
19:CT:58:ASP:O	19:CT:61:ALA:HB3	2.19	0.42
39:BR:3:ALA:CB	39:BR:59:ILE:HD11	2.45	0.42
22:BA:2144:G:H2'	22:BA:2148:G:O6	2.19	0.42
1:AB:211:LEU:O	1:AB:215:ALA:CB	2.67	0.42
31:BJ:103:ILE:HG13	31:BJ:104:ALA:N	2.34	0.42
22:DA:1824:G:O3'	24:DC:246:PRO:HD3	2.19	0.42
44:BW:72:GLY:C	44:BW:74:LYS:H	2.22	0.42
22:BA:28:A:C5	22:BA:29:U:C5	3.08	0.42
31:DJ:80:HIS:O	31:DJ:81:ILE:O	2.37	0.42
21:AA:1273:C:H2'	21:AA:1274:A:O4'	2.19	0.42
7:AH:21:LYS:HE2	7:AH:22:ALA:H	1.84	0.42
22:DA:66:C:C4	22:DA:67:U:C4	3.08	0.42
31:DJ:37:ARG:HG3	31:DJ:118:MET:CE	2.50	0.42
26:BE:79:ARG:CG	26:BE:80:SER:N	2.82	0.42
22:DA:1427:A:H4'	22:DA:1428:C:O5'	2.19	0.42
51:B3:54:LEU:HD12	51:B3:54:LEU:HA	1.77	0.42
22:DA:749:A:H2'	22:DA:750:A:H8	1.84	0.42
22:DA:1878:G:H2'	22:DA:1879:C:C6	2.53	0.42
21:AA:1052:U:H5'	21:AA:1053:G:OP2	2.19	0.42
15:AP:48:GLU:CG	15:AP:49:GLY:H	2.32	0.42
22:DA:1942:C:H2'	22:DA:1943:U:O2	2.18	0.42
27:DF:113:PHE:O	27:DF:114:ARG:HB3	2.20	0.42
22:DA:471:A:H2'	22:DA:472:A:O4'	2.19	0.42
22:DA:2734:A:N7	22:DA:2735:G:C8	2.88	0.42
22:DA:2377:A:C6	22:DA:2378:A:C6	3.08	0.42
22:DA:1232:G:C5	22:DA:1233:C:C5	3.07	0.42
22:DA:2674:G:H4'	32:DK:30:ARG:CG	2.50	0.42
15:CP:20:VAL:HG21	15:CP:32:PHE:HB2	2.02	0.42
29:BH:133:GLN:HA	29:BH:133:GLN:OE1	2.20	0.42
22:DA:352:A:C4	22:DA:353:C:H1'	2.55	0.42
54:DB:23:G:N2	54:DB:61:G:C2	2.88	0.42
45:DX:14:GLY:HA3	45:DX:28:PHE:HE1	1.85	0.42
54:DB:77:U:C2'	54:DB:78:A:H5'	2.50	0.42
32:DK:9:ASN:O	32:DK:83:ALA:HA	2.19	0.42
27:BF:125:GLY:HA3	27:BF:159:ALA:HB3	2.02	0.42
6:AG:83:THR:O	6:AG:84:TYR:C	2.58	0.42
22:BA:1467:U:C4	22:BA:1546:G:C2	3.07	0.42
48:B0:50:GLY:O	48:B0:51:ARG:O	2.38	0.42
53:CA:302:G:C5	53:CA:303:A:N7	2.88	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
16:CQ:62:GLU:HB2	16:CQ:72:TRP:CH2	2.55	0.42
22:BA:666:A:H4'	33:BL:48:ARG:HD2	2.01	0.42
21:AA:217:C:H2'	21:AA:218:U:O4'	2.19	0.42
42:BU:46:LYS:HG2	42:BU:47:PRO:HD2	2.02	0.42
22:DA:2863:C:O2'	22:DA:2864:G:H5'	2.19	0.42
4:CE:25:LYS:HB2	4:CE:25:LYS:NZ	2.34	0.42
3:AD:75:TYR:C	3:AD:75:TYR:CD1	2.93	0.42
22:DA:911:A:H8	22:DA:911:A:O5'	2.02	0.42
22:BA:1513:U:C2'	22:BA:1514:G:H5'	2.50	0.42
22:BA:518:G:H2'	22:BA:519:U:C6	2.54	0.42
54:DB:62:C:H2'	54:DB:63:C:O4'	2.20	0.42
21:AA:66:A:O4'	21:AA:173:U:C4	2.73	0.42
53:CA:453:G:H2'	53:CA:454:G:C8	2.55	0.42
19:AT:53:MET:CE	19:AT:57:VAL:HG21	2.49	0.42
19:AT:69:ASN:OD1	19:AT:69:ASN:N	2.53	0.42
22:DA:649:G:C5	22:DA:650:C:C4	3.08	0.42
4:AE:148:SER:O	4:AE:152:VAL:CG1	2.67	0.42
37:DP:113:LEU:HD23	37:DP:114:ASN:N	2.35	0.42
53:CA:1151:A:C2'	53:CA:1152:A:O5'	2.67	0.42
53:CA:1258:G:N2	53:CA:1259:C:C2	2.88	0.42
22:BA:2680:U:H5'	25:BD:194:PRO:HA	2.02	0.42
22:DA:2209:G:C5	22:DA:2210:U:C5	3.08	0.42
54:DB:42:C:H2'	54:DB:43:C:H6	1.76	0.42
22:DA:2408:U:O2'	22:DA:2409:G:C8	2.37	0.42
22:DA:1070:A:H61	30:DI:8:VAL:CG1	2.32	0.42
27:DF:110:ILE:HA	27:DF:111:ARG:HH11	1.85	0.42
21:AA:1006:G:H2'	21:AA:1007:U:H6	1.83	0.42
42:DU:16:LYS:HB3	42:DU:17:ASP:H	1.55	0.42
22:DA:301:G:O3'	42:DU:81:ARG:NH1	2.53	0.42
53:CA:961:U:O2'	53:CA:962:C:C5'	2.68	0.42
9:CJ:52:LEU:CB	13:CN:80:ARG:HE	2.33	0.42
18:CS:38:THR:OG1	18:CS:39:ILE:N	2.52	0.42
22:BA:548:G:H3'	22:BA:548:G:C8	2.54	0.42
35:DN:55:ALA:CB	35:DN:79:LEU:HD22	2.50	0.42
22:BA:1507:C:C4	22:BA:1508:A:C2	3.07	0.42
22:BA:1509:A:O2'	22:BA:1510:G:OP2	2.26	0.42
53:CA:1133:G:C6	53:CA:1134:G:N7	2.88	0.42
48:D0:37:HIS:HB2	48:D0:41:HIS:CE1	2.54	0.42
35:DN:100:CYS:O	48:D0:41:HIS:CD2	2.72	0.42
22:DA:2045:C:O3'	48:D0:14:MET:HB3	2.20	0.42
21:AA:372:C:H5'	21:AA:373:A:OP1	2.19	0.42
21:AA:563:A:C8	21:AA:567:G:O4'	2.73	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:2867:G:O2'	22:DA:2868:A:OP2	2.38	0.42
21:AA:1241:G:HO2'	21:AA:1242:G:H8	1.65	0.42
21:AA:1279:G:C2'	21:AA:1279:G:N3	2.70	0.42
30:DI:52:LEU:HD11	30:DI:78:LEU:HD21	2.02	0.42
22:DA:685:A:H1'	22:DA:688:U:O4	2.18	0.42
1:CB:182:VAL:O	1:CB:195:VAL:HG13	2.20	0.42
3:AD:28:ASP:C	3:AD:29:THR:O	2.57	0.42
22:DA:728:G:C4	22:DA:730:A:C8	3.07	0.42
2:AC:154:GLY:HA2	2:AC:162:ALA:HB1	2.02	0.42
2:AC:164:THR:O	2:AC:165:GLU:O	2.38	0.42
22:BA:307:G:N2	22:BA:309:A:H3'	2.35	0.42
7:AH:80:PRO:HG2	21:AA:878:A:H5''	2.02	0.42
28:DG:102:ILE:HB	28:DG:114:HIS:O	2.19	0.42
53:CA:560:A:C8	53:CA:566:G:C4	3.08	0.42
53:CA:1453:G:C2'	53:CA:1453:G:N3	2.82	0.42
18:AS:46:LEU:HB3	18:AS:47:THR:H	1.71	0.42
32:DK:35:VAL:HG23	32:DK:36:GLY:N	2.27	0.42
53:CA:248:C:O2'	53:CA:249:U:O5'	2.37	0.42
53:CA:818:G:H3'	53:CA:819:A:C5'	2.49	0.42
24:BC:106:PRO:HB3	24:BC:141:HIS:NE2	2.34	0.42
24:BC:141:HIS:HB3	24:BC:142:ASN:H	1.08	0.42
53:CA:678:U:H1'	53:CA:777:A:O3'	2.20	0.42
27:DF:15:LEU:O	27:DF:27:VAL:HG12	2.20	0.42
12:CM:78:ARG:HH11	12:CM:78:ARG:HG2	1.83	0.42
22:BA:1416:G:O2'	22:BA:1417:C:P	2.78	0.42
22:BA:1045:C:H5''	22:BA:1047:G:H5'	2.02	0.42
46:DY:52:ARG:C	46:DY:54:LYS:N	2.73	0.42
24:DC:229:HIS:ND1	24:DC:230:PRO:HD2	2.34	0.42
53:CA:212:G:O2'	53:CA:213:G:H5''	2.20	0.42
2:CC:129:PHE:CE2	2:CC:156:LEU:HD13	2.55	0.42
15:AP:20:VAL:HG21	15:AP:32:PHE:CB	2.50	0.42
29:DH:78:VAL:HG11	29:DH:144:VAL:HG12	2.01	0.42
31:BJ:73:VAL:CG2	31:BJ:74:TYR:H	2.28	0.42
9:CJ:39:PRO:HA	9:CJ:74:VAL:H	1.85	0.42
32:BK:47:ILE:HD12	32:BK:47:ILE:HA	1.81	0.42
22:BA:1252:G:O2'	22:BA:1253:A:C8	2.72	0.42
16:CQ:59:GLU:HB3	16:CQ:76:ARG:HG3	2.02	0.42
12:CM:82:LEU:HD22	18:CS:73:PHE:HE2	1.85	0.42
3:AD:60:VAL:CA	3:AD:63:ILE:HG22	2.50	0.42
34:DM:76:LYS:HG2	34:DM:80:VAL:HG11	2.02	0.42
42:BU:100:GLU:O	42:BU:101:THR:CB	2.68	0.42
46:BY:22:LEU:O	46:BY:23:ARG:O	2.37	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:CM:69:ARG:HD2	12:CM:69:ARG:N	2.34	0.42
42:BU:35:VAL:HB	42:BU:38:ILE:HG13	2.01	0.42
26:DE:3:LEU:HD11	26:DE:113:VAL:HG21	2.01	0.42
21:AA:929:G:OP1	21:AA:1533:C:N4	2.53	0.42
22:DA:366:C:H2'	22:DA:367:G:O5'	2.20	0.42
28:BG:174:LYS:HD2	28:BG:174:LYS:O	2.19	0.42
22:DA:1683:U:H2'	22:DA:1684:G:H8	1.84	0.42
12:AM:86:ARG:NH2	12:AM:96:VAL:HG12	2.35	0.42
25:DD:73:VAL:HG22	25:DD:74:GLU:N	2.35	0.42
39:BR:23:GLU:O	39:BR:25:LEU:HD13	2.20	0.42
53:CA:1385:G:C4	53:CA:1386:G:C8	3.08	0.42
22:BA:1316:U:H2'	22:BA:1317:G:C8	2.55	0.42
30:DI:98:GLY:HA2	30:DI:137:LEU:HD23	2.01	0.42
37:DP:32:VAL:HB	37:DP:37:LYS:HG2	2.02	0.42
43:DV:87:GLN:O	43:DV:88:HIS:HB2	2.20	0.42
22:BA:1115:G:O2'	22:BA:1116:G:O5'	2.35	0.42
22:BA:1098:A:H3'	22:BA:1099:G:C8	2.54	0.42
22:BA:2140:G:C6	22:BA:2152:G:N1	2.88	0.42
53:CA:414:A:C2'	53:CA:415:A:H5''	2.50	0.42
54:DB:94:A:OP1	43:DV:19:ARG:HD3	2.20	0.42
22:DA:954:G:C5	22:DA:955:U:C5	3.07	0.42
22:BA:1419:A:C5	22:BA:1421:G:C5	3.07	0.42
22:BA:2314:A:C2	22:BA:2315:G:C4	3.07	0.42
22:DA:2491:U:OP1	22:DA:2570:G:H4'	2.18	0.42
27:BF:60:SER:O	27:BF:62:GLN:N	2.52	0.42
22:BA:424:G:C2'	22:BA:425:G:O5'	2.68	0.42
22:DA:133:U:H2'	22:DA:134:G:O4'	2.20	0.42
41:BT:16:VAL:C	41:BT:17:SER:OG	2.58	0.42
24:DC:35:LYS:O	24:DC:36:ASN:CB	2.66	0.42
22:DA:2097:A:H2'	22:DA:2098:U:C6	2.55	0.42
3:CD:98:ASP:OD1	3:CD:99:ASN:N	2.53	0.42
12:CM:85:TYR:HE2	12:CM:96:VAL:HG13	1.85	0.42
22:DA:2370:G:O6	22:DA:2371:G:C6	2.72	0.42
38:BQ:71:ASN:OD1	38:BQ:106:THR:HG23	2.20	0.42
22:DA:260:G:C6	22:DA:261:G:C5	3.08	0.42
22:BA:841:G:H2'	22:BA:842:U:C6	2.55	0.42
24:DC:152:GLN:HA	24:DC:155:ARG:HD3	2.02	0.42
23:BB:74:U:O2	43:BV:29:ILE:HD12	2.20	0.42
42:DU:102:ILE:HD12	42:DU:102:ILE:HA	1.93	0.42
26:DE:90:GLN:OE1	26:DE:90:GLN:HA	2.19	0.42
53:CA:59:A:H2'	53:CA:59:A:N3	2.34	0.42
22:BA:165:A:H2'	22:BA:166:U:H6	1.85	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
49:D1:51:ALA:O	49:D1:52:LYS:CB	2.64	0.42
49:D1:7:LYS:C	49:D1:8:ILE:HD13	2.40	0.42
44:DW:20:LEU:HD11	44:DW:35:ILE:CG1	2.49	0.42
53:CA:996:A:C2	53:CA:997:U:C2	3.07	0.42
53:CA:1055:A:C6	53:CA:1206:G:C5	3.08	0.42
12:CM:19:THR:HA	12:CM:25:GLY:O	2.20	0.42
16:CQ:67:SER:HA	53:CA:265:G:O2'	2.19	0.42
19:AT:68:LYS:CD	21:AA:132:C:H5''	2.49	0.42
22:BA:1084:A:C2'	22:BA:1085:A:H8	2.13	0.42
35:BN:103:ARG:CD	35:BN:110:MET:HE3	2.50	0.42
22:DA:1144:A:H2'	22:DA:1145:C:C6	2.55	0.42
22:BA:1340:U:H5	22:BA:1603:A:C8	2.37	0.42
53:CA:791:G:C6	53:CA:792:A:N7	2.88	0.42
10:CK:123:PRO:HB2	10:CK:125:LYS:HD3	2.02	0.42
22:DA:2309:A:H3'	22:DA:2310:C:C6	2.55	0.42
22:DA:2545:G:N3	22:DA:2565:A:H2	2.17	0.42
22:DA:2645:G:H3'	22:DA:2646:C:H5'	2.02	0.42
22:DA:1506:U:O5'	22:DA:1506:U:H6	2.02	0.42
21:AA:747:A:C6	21:AA:748:G:C6	3.07	0.42
22:BA:271:G:O2'	22:BA:272:A:H5''	2.20	0.42
53:CA:93:U:H2'	53:CA:95:C:C5	2.53	0.42
26:DE:58:LYS:O	26:DE:60:TRP:CD1	2.73	0.42
22:DA:193:U:C2'	22:DA:194:G:H5'	2.49	0.42
22:DA:1278:C:O2'	22:DA:1279:G:H5'	2.20	0.42
22:DA:124:G:H2'	50:D2:19:ARG:NE	2.35	0.42
22:DA:867:C:O2'	22:DA:868:U:H6	2.03	0.42
33:DL:96:LYS:HE2	33:DL:102:GLY:O	2.20	0.42
53:CA:69:G:N2	53:CA:71:A:H62	2.18	0.42
22:DA:589:U:C2	22:DA:590:A:N7	2.87	0.42
22:DA:584:C:N4	22:DA:585:G:C6	2.88	0.42
22:BA:85:G:OP1	42:BU:27:VAL:HG11	2.19	0.42
22:DA:275:C:H1'	22:DA:363:G:N2	2.34	0.42
1:CB:164:ASP:HB3	1:CB:167:HIS:H	1.84	0.42
53:CA:522:C:O4'	53:CA:536:C:H4'	2.20	0.42
53:CA:537:G:H2'	53:CA:538:G:C8	2.54	0.42
22:DA:1364:G:N3	22:DA:1368:G:C2	2.88	0.42
28:BG:30:GLY:CA	28:BG:78:VAL:HG12	2.46	0.42
34:BM:69:PRO:O	34:BM:71:LYS:N	2.50	0.42
13:AN:22:LYS:CG	13:AN:23:ARG:H	2.20	0.42
13:AN:20:PHE:HA	13:AN:24:ALA:HB3	2.02	0.42
22:DA:287:G:N1	22:DA:354:A:C6	2.88	0.42
22:DA:1308:A:C6	22:DA:1309:G:C2	3.08	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
53:CA:1004:A:C8	53:CA:1025:U:O2'	2.73	0.42
53:CA:701:U:O2'	53:CA:702:A:P	2.77	0.42
22:DA:1865:U:C4	22:DA:1875:G:C2	3.08	0.42
28:DG:112:VAL:O	28:DG:113:ASP:HB2	2.19	0.42
3:CD:87:GLU:O	3:CD:88:ASN:C	2.59	0.42
30:BI:56:VAL:CG2	30:BI:57:VAL:N	2.83	0.42
26:BE:5:LEU:CD2	26:BE:120:VAL:HG22	2.50	0.42
1:AB:53:LEU:N	1:AB:53:LEU:HD22	2.35	0.42
9:AJ:22:THR:HG22	9:AJ:23:ALA:N	2.34	0.42
22:DA:85:G:O2'	22:DA:86:G:O4'	2.37	0.42
22:BA:1416:G:O2'	22:BA:1417:C:H5''	2.20	0.42
11:AL:3:VAL:HG23	11:AL:4:ASN:N	2.34	0.42
22:DA:1791:A:C2'	22:DA:1792:G:H5'	2.50	0.42
22:DA:1827:U:H4'	22:DA:1970:A:O2'	2.18	0.42
22:BA:408:G:O2'	22:BA:409:G:H5'	2.20	0.42
33:DL:99:ASN:O	33:DL:100:ILE:HB	2.20	0.42
26:BE:48:THR:HG22	26:BE:86:ALA:CB	2.50	0.42
22:DA:1171:G:C6	22:DA:1179:G:C2	3.08	0.42
4:AE:10:LEU:H	4:AE:10:LEU:HD23	1.84	0.42
41:DT:69:ARG:HD2	41:DT:70:HIS:H	1.84	0.42
41:DT:68:LYS:HB3	41:DT:69:ARG:H	1.52	0.42
25:BD:124:ARG:HG2	25:BD:125:TRP:CD1	2.55	0.42
22:DA:929:U:O2'	22:DA:930:G:H5'	2.20	0.42
50:B2:35:ARG:CG	50:B2:42:LEU:HD11	2.50	0.42
22:BA:568:U:O2	22:BA:570:G:C8	2.72	0.42
22:DA:1511:G:HO2'	22:DA:1512:C:H6	1.67	0.42
53:CA:552:U:H2'	53:CA:553:A:C8	2.54	0.42
27:BF:30:VAL:CG1	27:BF:96:TRP:CH2	3.03	0.42
22:BA:721:A:H2'	22:BA:722:A:H8	1.83	0.42
22:DA:72:U:O2'	22:DA:73:A:H5'	2.20	0.42
22:BA:1384:A:H1'	22:BA:1405:U:H1'	2.02	0.42
35:DN:82:GLU:O	35:DN:85:PRO:HD2	2.20	0.42
17:CR:27:THR:O	17:CR:30:ASN:HB3	2.20	0.42
4:CE:83:PRO:HB3	4:CE:96:GLN:HG2	2.01	0.42
22:DA:1160:G:C6	22:DA:1161:C:C4	3.07	0.42
22:BA:657:U:H2'	22:BA:658:U:C6	2.55	0.42
9:CJ:32:THR:HG23	9:CJ:83:THR:OG1	2.20	0.42
22:BA:1501:G:C2'	22:BA:1502:A:H5'	2.50	0.42
1:CB:166:ASP:HB2	1:CB:190:SER:HB2	2.02	0.42
22:DA:924:G:O2'	22:DA:925:A:H5'	2.20	0.42
9:CJ:87:LEU:HD22	9:CJ:87:LEU:HA	1.92	0.42
22:DA:1971:U:H6	22:DA:1971:U:H2'	1.47	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:AH:116:ARG:HE	7:AH:116:ARG:HB2	1.71	0.42
22:DA:1991:U:H6	22:DA:1991:U:H5''	1.85	0.42
8:AI:99:LYS:O	8:AI:99:LYS:HG2	2.20	0.42
21:AA:513:C:H2'	21:AA:514:C:H6	1.84	0.42
21:AA:1423:G:C6	21:AA:1424:U:C4	3.08	0.42
36:DO:12:THR:HG23	36:DO:16:ARG:HH11	1.85	0.42
38:BQ:63:ARG:HH22	38:BQ:96:ASP:N	2.18	0.41
54:DB:57:A:H2'	54:DB:58:A:C8	2.55	0.41
44:BW:29:SER:O	44:BW:30:VAL:CB	2.64	0.41
3:CD:29:THR:C	3:CD:31:CYS:N	2.74	0.41
19:AT:66:ILE:CD1	19:AT:70:LYS:HE3	2.46	0.41
41:DT:73:ARG:HA	41:DT:73:ARG:HD3	1.94	0.41
31:DJ:119:PHE:C	31:DJ:121:LYS:N	2.74	0.41
41:BT:39:THR:CG2	41:BT:41:ALA:HB3	2.47	0.41
27:DF:35:LEU:CD1	27:DF:153:ILE:HG23	2.49	0.41
22:BA:1178:C:O2	22:BA:1178:C:C2'	2.67	0.41
22:DA:1127:A:O2'	22:DA:1128:G:C5'	2.67	0.41
28:DG:157:LYS:HB2	28:DG:157:LYS:HE2	1.89	0.41
54:DB:90:C:H4'	34:DM:38:ARG:NH1	2.34	0.41
22:DA:2756:U:H1'	22:DA:2757:A:C5'	2.50	0.41
24:BC:90:ILE:HD13	24:BC:90:ILE:HA	1.58	0.41
40:DS:7:HIS:HB2	40:DS:50:VAL:CG2	2.50	0.41
42:DU:43:LYS:HE3	42:DU:45:GLN:CD	2.40	0.41
34:BM:6:ARG:HD2	34:BM:8:LYS:NZ	2.35	0.41
22:DA:2876:G:C2	22:DA:2877:G:H1'	2.55	0.41
41:DT:58:VAL:HG22	41:DT:59:ASN:N	2.34	0.41
42:DU:12:VAL:HG11	42:DU:38:ILE:HG12	2.02	0.41
46:BY:8:GLU:O	46:BY:9:LYS:CB	2.68	0.41
18:CS:4:LEU:CD1	53:CA:1319:A:H5''	2.51	0.41
32:BK:18:ARG:CG	32:BK:18:ARG:NH1	2.75	0.41
26:DE:57:LYS:HZ2	26:DE:58:LYS:H	1.68	0.41
22:BA:728:G:C4	22:BA:730:A:C8	3.07	0.41
35:DN:98:LEU:CD2	48:D0:53:VAL:HG11	2.46	0.41
22:DA:922:C:H2'	22:DA:923:G:O4'	2.19	0.41
22:DA:53:A:N3	50:D2:35:ARG:NH1	2.68	0.41
22:DA:119:A:H5'	22:DA:120:U:OP1	2.20	0.41
22:DA:15:G:H2'	22:DA:16:C:C6	2.55	0.41
22:DA:523:C:O2'	22:DA:524:G:H5'	2.20	0.41
21:AA:652:U:O2'	21:AA:653:U:O5'	2.36	0.41
22:BA:460:A:C2	22:BA:470:A:C4	3.08	0.41
26:BE:187:VAL:O	26:BE:188:MET:CB	2.67	0.41
28:BG:25:ILE:HG22	28:BG:78:VAL:HG21	2.02	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:BA:752:A:O2'	22:BA:753:A:P	2.78	0.41
47:BZ:40:THR:HG23	47:BZ:43:ILE:H	1.84	0.41
22:BA:2496:C:OP2	34:BM:81:ARG:HD2	2.19	0.41
53:CA:1453:G:H2'	53:CA:1454:G:O4'	2.20	0.41
54:DB:5:U:H2'	54:DB:6:G:H8	1.82	0.41
2:CC:173:PRO:C	2:CC:175:HIS:H	2.23	0.41
22:BA:760:G:H4'	22:BA:1776:G:OP1	2.20	0.41
53:CA:512:U:O2'	53:CA:513:C:C5'	2.68	0.41
53:CA:512:U:O2'	53:CA:513:C:H5'	2.20	0.41
1:AB:75:ALA:O	1:AB:79:VAL:HG23	2.20	0.41
29:BH:8:LYS:O	29:BH:13:GLY:CA	2.68	0.41
10:CK:55:ARG:O	10:CK:56:LYS:C	2.59	0.41
24:DC:6:LYS:HA	24:DC:7:PRO:HD3	1.79	0.41
22:BA:1798:U:C4	22:BA:1819:A:C2	3.08	0.41
22:BA:1821:A:H2'	22:BA:1822:C:C6	2.55	0.41
40:BS:69:LEU:HD12	40:BS:108:SER:O	2.19	0.41
46:DY:52:ARG:C	46:DY:54:LYS:H	2.23	0.41
1:AB:138:ARG:HH11	1:AB:138:ARG:HB2	1.85	0.41
40:DS:33:LEU:HD12	40:DS:51:LEU:HD23	2.01	0.41
24:DC:76:VAL:HG13	24:DC:96:LYS:HZ3	1.86	0.41
53:CA:913:A:O2'	53:CA:914:A:OP2	2.38	0.41
51:B3:44:ARG:N	51:B3:45:PRO:CD	2.81	0.41
40:DS:87:PRO:HG2	40:DS:87:PRO:O	2.20	0.41
22:DA:871:U:H2'	22:DA:872:U:C6	2.55	0.41
22:BA:2287:A:N3	22:BA:2287:A:H2'	2.35	0.41
26:DE:105:LEU:HD13	26:DE:105:LEU:O	2.20	0.41
11:AL:74:GLN:CG	11:AL:75:GLU:HG2	2.46	0.41
37:BP:19:PHE:HE2	37:BP:83:ILE:HD12	1.85	0.41
22:DA:389:G:O2'	22:DA:390:U:H5'	2.19	0.41
22:BA:1716:U:H2'	22:BA:1717:A:C8	2.56	0.41
36:DO:7:ARG:HH21	36:DO:95:SER:HB3	1.84	0.41
53:CA:345:C:H3'	37:DP:38:ARG:NH1	2.35	0.41
53:CA:369:G:OP2	53:CA:388:G:N1	2.51	0.41
22:DA:1377:G:H8	22:DA:1377:G:O5'	2.03	0.41
25:DD:110:THR:HG23	25:DD:171:THR:HG22	2.02	0.41
11:AL:88:ASP:CG	21:AA:523:A:H61	2.24	0.41
9:AJ:73:LEU:HA	9:AJ:73:LEU:HD22	1.81	0.41
53:CA:1417:G:C6	53:CA:1482:G:C6	3.08	0.41
22:BA:988:A:P	47:BZ:11:SER:HB3	2.60	0.41
22:DA:518:G:C4	22:DA:519:U:C5	3.08	0.41
22:BA:1958:C:H2'	22:BA:1959:G:H5'	2.01	0.41
53:CA:552:U:C4	53:CA:553:A:N7	2.88	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
36:BO:59:ALA:C	36:BO:61:GLN:N	2.74	0.41
47:BZ:6:ILE:O	47:BZ:34:THR:HA	2.19	0.41
53:CA:1197:A:O2'	53:CA:1198:G:H5'	2.20	0.41
22:DA:2478:A:C8	22:DA:2529:G:C5	3.07	0.41
9:AJ:12:ALA:HB2	9:AJ:96:VAL:HA	2.02	0.41
14:AO:37:HIS:HE1	21:AA:740:U:OP1	2.03	0.41
3:CD:106:PHE:HD1	3:CD:158:LEU:HD21	1.84	0.41
22:BA:10:A:C2	22:BA:2800:A:C4	3.08	0.41
22:DA:961:C:H5	22:DA:2456:C:O4'	2.03	0.41
32:BK:2:ILE:CD1	32:BK:2:ILE:N	2.82	0.41
22:BA:2216:G:H2'	22:BA:2217:G:H8	1.84	0.41
22:BA:1380:G:C2	22:BA:1381:G:C8	3.07	0.41
16:CQ:14:ASP:OD2	16:CQ:52:CYS:HB2	2.20	0.41
32:DK:66:LYS:HA	32:DK:79:PHE:O	2.20	0.41
22:BA:2345:G:N3	22:BA:2381:A:H2'	2.35	0.41
21:AA:550:G:H2'	21:AA:551:U:C6	2.54	0.41
39:DR:7:SER:OG	39:DR:12:HIS:CE1	2.73	0.41
53:CA:455:G:N2	53:CA:478:A:C2	2.87	0.41
26:BE:176:ASP:OD2	26:BE:179:SER:HB3	2.20	0.41
46:DY:30:MET:SD	46:DY:30:MET:O	2.78	0.41
11:AL:71:HIS:ND1	11:AL:71:HIS:C	2.73	0.41
22:DA:1741:C:H6	22:DA:1741:C:O5'	2.02	0.41
5:CF:29:ILE:HG22	5:CF:34:GLY:O	2.20	0.41
46:BY:49:ASP:O	46:BY:53:VAL:HG23	2.20	0.41
44:DW:36:ILE:HG22	44:DW:37:VAL:O	2.20	0.41
22:DA:2330:G:H1'	44:DW:38:ARG:HB3	2.01	0.41
53:CA:1215:G:N3	53:CA:1216:A:C8	2.88	0.41
20:CU:24:LYS:NZ	20:CU:25:ALA:N	2.68	0.41
44:BW:43:LYS:HZ2	44:BW:43:LYS:HG2	1.47	0.41
53:CA:374:A:H2'	53:CA:375:U:C6	2.55	0.41
3:AD:121:ALA:HA	3:AD:145:ARG:HG3	2.01	0.41
16:CQ:65:PRO:HG2	53:CA:264:C:H1'	2.02	0.41
16:CQ:65:PRO:HG2	53:CA:264:C:O2'	2.20	0.41
19:AT:26:MET:HB3	21:AA:1457:G:O3'	2.20	0.41
22:DA:36:G:N1	22:DA:445:C:C4	2.88	0.41
22:DA:1981:A:H8	22:DA:1981:A:H2'	1.79	0.41
22:DA:1030:C:O2'	22:DA:1031:G:H5'	2.20	0.41
1:AB:9:LEU:HB2	1:AB:42:LEU:CD1	2.51	0.41
1:AB:89:PHE:CE1	1:AB:153:MET:HB2	2.54	0.41
22:DA:2023:C:O2'	22:DA:2024:G:H5'	2.20	0.41
26:DE:133:LEU:C	26:DE:133:LEU:HD23	2.40	0.41
34:DM:22:GLN:HB2	34:DM:100:LYS:HZ3	1.84	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:1926:U:H2'	22:DA:1928:A:N7	2.34	0.41
22:BA:2135:A:O2'	22:BA:2136:G:O5'	2.38	0.41
22:DA:481:G:O2'	22:DA:482:A:P	2.78	0.41
22:DA:503:A:C5	22:DA:506:G:C6	3.07	0.41
4:AE:114:LEU:HG	4:AE:119:VAL:HG21	2.01	0.41
35:DN:29:VAL:O	35:DN:30:ARG:HB2	2.20	0.41
1:CB:151:LYS:HG3	1:CB:152:ASP:N	2.34	0.41
22:DA:304:U:H2'	22:DA:305:C:H6	1.81	0.41
22:DA:310:A:C8	22:DA:312:G:C6	3.08	0.41
53:CA:1273:C:H2'	53:CA:1274:A:C8	2.55	0.41
13:CN:33:VAL:HG21	53:CA:1271:A:O2'	2.21	0.41
9:CJ:55:PRO:HA	13:CN:81:ILE:HG21	2.02	0.41
53:CA:243:A:C2	53:CA:245:U:H2'	2.56	0.41
1:AB:15:PHE:CD1	1:AB:16:GLY:N	2.87	0.41
21:AA:496:A:C2'	21:AA:496:A:N3	2.72	0.41
22:DA:861:A:O2'	22:DA:862:G:C5'	2.68	0.41
22:DA:1011:G:H4'	22:DA:1012:U:OP1	2.20	0.41
21:AA:652:U:O4	21:AA:752:G:C2'	2.68	0.41
32:BK:70:ARG:CD	32:BK:76:VAL:HG22	2.40	0.41
1:CB:203:ASP:OD2	1:CB:204:ASP:HB2	2.20	0.41
22:BA:574:A:H4'	22:BA:575:A:C5'	2.49	0.41
51:B3:14:LYS:HD3	51:B3:15:LYS:O	2.20	0.41
22:DA:2717:C:H2'	22:DA:2718:G:O4'	2.20	0.41
28:DG:51:PHE:HE2	28:DG:68:ARG:HA	1.84	0.41
28:DG:6:ALA:HA	28:DG:7:PRO:HD3	1.67	0.41
13:CN:89:ARG:HG3	13:CN:91:GLU:CG	2.51	0.41
43:DV:26:PHE:HE2	43:DV:42:LEU:HD12	1.85	0.41
3:CD:55:ARG:HH12	3:CD:58:GLN:HG2	1.85	0.41
30:BI:58:ILE:HG22	30:BI:60:VAL:CG2	2.50	0.41
8:AI:50:PRO:HB3	8:AI:83:THR:HG22	2.02	0.41
45:DX:63:ILE:O	45:DX:67:LEU:HD12	2.20	0.41
30:BI:123:ALA:C	30:BI:125:THR:N	2.72	0.41
9:AJ:71:LEU:O	9:AJ:72:ARG:CD	2.66	0.41
22:BA:2685:G:OP1	32:BK:78:ARG:NH2	2.51	0.41
2:CC:76:ILE:HD11	2:CC:102:ILE:CD1	2.47	0.41
22:DA:85:G:HO2'	22:DA:86:G:H8	1.68	0.41
22:BA:192:C:H5''	22:BA:193:U:OP2	2.19	0.41
3:AD:196:GLU:C	3:AD:198:LEU:N	2.73	0.41
22:DA:14:A:C6	22:DA:526:A:C2	3.09	0.41
22:DA:1792:G:H5''	24:DC:203:VAL:CG2	2.50	0.41
24:DC:52:HIS:O	24:DC:215:VAL:HA	2.20	0.41
21:AA:1151:A:C4	21:AA:1152:A:N7	2.88	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
29:DH:99:ILE:HG22	29:DH:100:ALA:N	2.35	0.41
22:DA:1260:A:C2	22:DA:1261:C:C2	3.08	0.41
32:BK:58:LEU:N	32:BK:58:LEU:HD23	2.35	0.41
42:BU:3:LYS:O	42:BU:82:VAL:HG21	2.21	0.41
18:CS:59:VAL:HB	18:CS:73:PHE:CD2	2.52	0.41
43:DV:6:ALA:HB1	43:DV:40:ILE:HB	2.02	0.41
53:CA:749:A:C2	53:CA:750:C:C2	3.08	0.41
21:AA:601:G:C2	21:AA:602:A:C4	3.08	0.41
15:CP:67:ILE:HG23	15:CP:67:ILE:O	2.20	0.41
21:AA:965:U:H4'	21:AA:969:A:C8	2.56	0.41
22:BA:2582:G:C2	22:BA:2583:G:C8	3.07	0.41
31:BJ:121:LYS:HE3	31:BJ:121:LYS:HB2	1.80	0.41
22:DA:2197:U:C5	22:DA:2224:G:C6	3.09	0.41
27:DF:37:MET:HA	27:DF:151:LEU:HB3	2.02	0.41
22:DA:1638:C:O2	22:DA:2698:U:O2'	2.30	0.41
26:BE:23:PHE:CZ	26:BE:28:VAL:HG11	2.55	0.41
22:DA:852:U:H5'	47:DZ:45:GLY:HA3	2.02	0.41
22:DA:2595:G:C6	22:DA:2599:G:C6	3.08	0.41
53:CA:1508:A:H2'	53:CA:1509:C:O4'	2.20	0.41
2:CC:5:HIS:CD2	2:CC:183:TYR:HE2	2.38	0.41
22:BA:451:U:C2	22:BA:453:A:N7	2.88	0.41
28:DG:154:GLU:HA	28:DG:155:PRO:HD2	1.84	0.41
22:DA:2531:A:H5''	28:DG:156:TYR:CZ	2.55	0.41
21:AA:122:G:O2'	21:AA:123:U:H5'	2.20	0.41
42:BU:46:LYS:HB3	42:BU:46:LYS:HE2	1.89	0.41
28:BG:106:LEU:O	28:BG:151:ARG:NH2	2.42	0.41
53:CA:259:G:H2'	53:CA:260:G:O4'	2.19	0.41
22:BA:465:G:H2'	22:BA:466:A:C8	2.55	0.41
21:AA:756:C:H2'	21:AA:757:U:O4'	2.20	0.41
53:CA:363:A:H2'	53:CA:364:A:O4'	2.20	0.41
22:BA:9:G:C6	22:BA:2629:U:C6	3.08	0.41
53:CA:214:C:H2'	53:CA:215:C:H6	1.85	0.41
22:BA:936:A:H2'	22:BA:937:C:C6	2.55	0.41
19:AT:39:GLU:O	19:AT:39:GLU:HG2	2.20	0.41
21:AA:607:A:H2'	21:AA:608:A:C8	2.55	0.41
22:BA:1601:G:H2'	22:BA:1602:U:O4'	2.20	0.41
22:DA:2240:U:C2	22:DA:2241:A:C8	3.09	0.41
25:BD:56:LYS:HD3	25:BD:58:ASN:HD21	1.84	0.41
44:DW:39:GLN:CD	44:DW:39:GLN:O	2.59	0.41
54:DB:11:C:H3'	54:DB:12:C:C5'	2.50	0.41
54:DB:18:G:C6	54:DB:19:C:C4	3.08	0.41
22:BA:1062:G:C4	22:BA:1088:A:N7	2.88	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:604:G:C6	22:DA:625:G:N1	2.89	0.41
28:BG:84:LYS:CG	28:BG:132:LEU:N	2.61	0.41
22:DA:1339:G:N2	22:DA:1603:A:H1'	2.35	0.41
22:DA:1346:G:O2'	22:DA:1347:A:O4'	2.37	0.41
53:CA:373:A:C2	53:CA:374:A:C8	3.08	0.41
22:DA:35:G:C2'	22:DA:36:G:O5'	2.68	0.41
23:BB:48:U:H2'	23:BB:49:C:C6	2.55	0.41
53:CA:733:G:O2'	53:CA:734:G:C5'	2.68	0.41
3:AD:109:THR:HG21	21:AA:408:A:O5'	2.20	0.41
35:DN:12:ARG:HG2	35:DN:16:HIS:CG	2.55	0.41
53:CA:1287:A:C2	53:CA:1288:A:C4	3.08	0.41
22:DA:257:C:H2'	22:DA:258:G:O4'	2.20	0.41
1:AB:65:LYS:HG2	1:AB:153:MET:HG3	2.03	0.41
22:DA:2755:C:O3'	22:DA:2756:U:C6	2.74	0.41
2:AC:49:ALA:HB1	2:AC:75:VAL:CG2	2.50	0.41
22:BA:2135:A:O2'	22:BA:2136:G:C8	2.65	0.41
22:DA:508:A:C3'	22:DA:509:C:H5'	2.51	0.41
22:DA:1476:U:N3	22:DA:1516:G:C6	2.87	0.41
46:DY:58:ASN:C	46:DY:60:LYS:H	2.24	0.41
35:DN:114:GLU:HG2	35:DN:115:LEU:N	2.34	0.41
22:DA:297:G:C2	22:DA:342:A:C2	3.09	0.41
46:BY:9:LYS:CB	46:BY:12:GLU:HG3	2.50	0.41
53:CA:1270:G:H2'	53:CA:1271:A:C8	2.55	0.41
4:AE:121:ASN:CG	4:AE:122:VAL:N	2.73	0.41
53:CA:1241:G:C2'	53:CA:1242:G:H8	2.21	0.41
22:DA:2236:U:H2'	22:DA:2237:G:O4'	2.20	0.41
22:DA:1279:G:OP1	35:DN:35:LYS:HG3	2.20	0.41
6:CG:137:ARG:HD2	6:CG:137:ARG:C	2.41	0.41
22:DA:2044:C:N3	22:DA:2045:C:C5	2.89	0.41
22:DA:1665:A:H2'	22:DA:1666:G:O4'	2.21	0.41
22:DA:747:U:H3'	22:DA:748:G:C5'	2.50	0.41
32:BK:69:VAL:O	32:BK:76:VAL:HA	2.20	0.41
11:CL:106:VAL:HB	11:CL:109:ARG:HG2	2.02	0.41
28:BG:29:ASN:OD1	28:BG:30:GLY:N	2.53	0.41
28:BG:75:VAL:O	28:BG:76:ILE:C	2.58	0.41
22:DA:1759:A:H2'	22:DA:1760:C:H6	1.83	0.41
53:CA:1294:G:H2'	53:CA:1295:U:O5'	2.19	0.41
53:CA:148:G:N2	53:CA:1447:A:H2	2.18	0.41
12:AM:112:ARG:C	12:AM:113:LYS:HG3	2.40	0.41
30:BI:115:ASP:C	30:BI:115:ASP:OD1	2.59	0.41
53:CA:513:C:O2'	53:CA:514:C:O5'	2.38	0.41
19:AT:4:LYS:HE2	19:AT:5:SER:N	2.35	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:AN:79:SER:O	13:AN:80:ARG:C	2.58	0.41
17:CR:61:ALA:HB1	17:CR:66:LEU:HB2	2.03	0.41
33:DL:36:LYS:HB3	33:DL:37:GLY:H	1.68	0.41
53:CA:275:G:O2'	53:CA:276:G:C5'	2.68	0.41
27:DF:105:ILE:HG22	27:DF:105:ILE:O	2.20	0.41
41:BT:7:LEU:O	41:BT:9:LYS:N	2.53	0.41
53:CA:211:G:HO2'	53:CA:212:G:P	2.44	0.41
21:AA:1152:A:O2'	21:AA:1153:G:C5'	2.69	0.41
22:BA:321:U:OP2	26:BE:130:LYS:HA	2.21	0.41
5:AF:9:MET:HG2	5:AF:86:ARG:O	2.20	0.41
22:DA:139:U:H2'	22:DA:139:U:O2	2.19	0.41
2:AC:21:TRP:HZ3	2:AC:23:ALA:HB3	1.83	0.41
27:BF:8:LYS:HB2	27:BF:9:ASP:H	1.54	0.41
16:CQ:37:ILE:HD11	16:CQ:39:ARG:CZ	2.50	0.41
26:DE:111:GLU:CB	26:DE:114:ARG:HH21	2.33	0.41
22:DA:74:A:H4'	22:DA:75:G:O5'	2.20	0.41
22:DA:2575:C:H4'	25:DD:148:GLN:O	2.21	0.41
26:DE:196:VAL:O	26:DE:196:VAL:HG12	2.20	0.41
37:BP:19:PHE:O	37:BP:20:ARG:CB	2.68	0.41
21:AA:1305:G:HO2'	21:AA:1306:A:H8	1.66	0.41
22:BA:928:A:H2'	22:BA:929:U:O4'	2.19	0.41
53:CA:845:A:N3	53:CA:845:A:H2'	2.35	0.41
52:B4:16:ILE:HA	52:B4:24:ARG:O	2.20	0.41
22:BA:1184:U:C2'	22:BA:1185:G:O5'	2.68	0.41
25:DD:181:ASP:C	25:DD:183:GLU:N	2.72	0.41
1:CB:83:ALA:O	1:CB:88:GLN:OE1	2.38	0.41
8:CI:127:SER:C	8:CI:129:ARG:H	2.23	0.41
22:BA:2311:A:O3'	22:BA:2312:U:C6	2.72	0.41
22:DA:2010:G:OP1	40:DS:41:LYS:HD3	2.21	0.41
22:BA:1568:G:H4'	24:BC:58:LYS:HB3	2.02	0.41
22:BA:1814:G:C6	22:BA:1815:A:C6	3.08	0.41
22:DA:1231:U:H2'	22:DA:1232:G:C8	2.55	0.41
4:AE:43:GLY:O	4:AE:44:ARG:C	2.59	0.41
51:D3:57:VAL:HA	51:D3:60:CYS:HB2	2.02	0.41
27:DF:127:TYR:O	27:DF:155:ILE:HD11	2.21	0.41
22:DA:1903:G:O2'	22:DA:1904:G:H5'	2.20	0.41
18:AS:62:THR:HB	18:AS:65:MET:HG3	2.02	0.41
22:DA:1825:U:H4'	24:DC:231:HIS:HE1	1.85	0.41
22:BA:173:A:H2'	22:BA:174:U:H6	1.84	0.41
22:BA:523:C:H1'	22:BA:554:U:O2'	2.20	0.41
48:B0:32:THR:OG1	48:B0:50:GLY:HA2	2.21	0.41
29:BH:119:ASN:C	29:BH:121:VAL:H	2.23	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
45:DX:70:LEU:O	45:DX:74:GLY:N	2.53	0.41
53:CA:775:G:C2'	53:CA:776:G:H5'	2.51	0.41
30:BI:93:ASN:OD1	30:BI:136:GLY:HA2	2.21	0.41
22:DA:2474:U:O4'	22:DA:2474:U:O2	2.38	0.41
19:AT:19:HIS:O	19:AT:23:ARG:HG2	2.20	0.41
51:D3:30:HIS:HB3	51:D3:31:ILE:H	1.44	0.41
25:BD:107:VAL:N	25:BD:206:ALA:H	2.11	0.41
45:BX:44:ARG:CG	45:BX:45:PHE:N	2.84	0.41
22:BA:2846:G:OP2	37:BP:51:ASN:HB2	2.19	0.41
37:BP:50:ARG:HG2	37:BP:57:ALA:C	2.41	0.41
22:DA:1662:U:O2	22:DA:2687:U:C5'	2.69	0.41
37:DP:19:PHE:CD2	37:DP:19:PHE:N	2.88	0.41
20:AU:34:ARG:C	20:AU:36:PHE:H	2.23	0.41
21:AA:94:G:C4'	21:AA:95:C:H5''	2.35	0.41
35:DN:8:ARG:NH2	35:DN:39:PRO:HA	2.35	0.41
27:DF:93:GLU:O	27:DF:95:MET:N	2.47	0.41
22:BA:265:A:N6	22:BA:428:A:N9	2.69	0.41
22:DA:1071:G:O6	22:DA:1089:A:C2	2.73	0.41
22:DA:1079:C:N3	22:DA:1088:A:C2	2.84	0.41
22:DA:1080:A:C5	22:DA:1081:U:C4	3.09	0.41
24:DC:144:GLU:HG3	24:DC:151:GLY:HA2	2.03	0.41
4:AE:83:PRO:CB	4:AE:96:GLN:HE21	2.34	0.41
37:DP:52:ARG:HB3	37:DP:55:HIS:HB2	2.02	0.41
22:DA:300:A:N6	57:DA:3590:HOH:O	2.53	0.41
53:CA:80:A:H3'	53:CA:81:A:C4'	2.50	0.41
53:CA:1200:C:O2'	53:CA:1201:A:P	2.78	0.41
22:BA:780:G:H5''	22:BA:781:A:P	2.60	0.41
6:CG:114:SER:O	6:CG:118:ARG:HG3	2.20	0.41
25:BD:133:THR:HG23	25:BD:134:HIS:HD2	1.83	0.41
22:DA:2077:A:C2	22:DA:2244:U:O2	2.74	0.41
22:DA:116:C:H2'	22:DA:117:G:O4'	2.20	0.41
22:DA:54:G:H22	22:DA:117:G:H1'	1.85	0.41
22:DA:1429:G:O2'	22:DA:1430:G:C5'	2.68	0.41
37:BP:32:VAL:O	37:BP:33:GLU:O	2.38	0.41
22:DA:13:A:C2	22:DA:525:U:C2	3.08	0.41
22:DA:2019:A:H4'	38:DQ:33:VAL:HG21	2.03	0.41
38:BQ:76:SER:O	38:BQ:77:LYS:C	2.56	0.41
22:BA:457:A:O4'	22:BA:459:U:C6	2.73	0.41
7:CH:28:SER:O	7:CH:29:SER:HB3	2.20	0.41
22:DA:946:C:O2'	22:DA:947:A:C5'	2.68	0.41
22:DA:975:A:C2'	22:DA:976:G:C8	3.04	0.41
1:AB:116:LEU:HA	1:AB:116:LEU:HD13	1.81	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:1244:A:C2'	22:DA:1245:G:H5'	2.51	0.41
11:AL:42:LYS:O	11:AL:44:PRO:HD2	2.21	0.41
26:DE:5:LEU:HD23	26:DE:120:VAL:HG13	2.01	0.41
22:DA:1567:G:H1'	22:DA:1568:G:C6	2.55	0.41
34:DM:29:GLY:CA	34:DM:64:TRP:HZ3	2.33	0.41
6:CG:116:ALA:O	6:CG:120:ALA:HB3	2.21	0.41
39:DR:2:TYR:O	39:DR:3:ALA:HB2	2.19	0.41
22:DA:1735:A:C6	22:DA:1736:U:C4	3.08	0.41
2:AC:119:ILE:HG21	2:AC:197:VAL:HG11	2.01	0.41
22:DA:1210:G:N7	22:DA:1237:A:N6	2.68	0.41
31:BJ:114:LEU:O	31:BJ:117:ALA:N	2.53	0.41
29:BH:67:ALA:C	29:BH:69:ALA:N	2.73	0.41
53:CA:204:G:C6	53:CA:465:A:C2	3.08	0.41
22:BA:2392:A:H4'	51:B3:27:ASN:HD21	1.85	0.41
21:AA:430:A:O2'	21:AA:431:A:H5'	2.20	0.41
1:CB:11:ALA:C	1:CB:13:VAL:H	2.22	0.41
12:AM:10:ASP:OD1	12:AM:44:ILE:HB	2.21	0.41
31:BJ:60:ASP:HB3	31:BJ:97:PRO:HG2	2.02	0.41
22:DA:1112:G:C5	22:DA:1113:U:C4	3.08	0.41
46:DY:18:LEU:O	46:DY:18:LEU:HD13	2.20	0.41
22:BA:356:G:C6	22:BA:357:C:C4	3.08	0.41
21:AA:1088:G:H21	21:AA:1167:A:N6	2.18	0.41
43:DV:56:PHE:C	43:DV:58:SER:N	2.71	0.41
22:DA:845:A:C2	22:DA:847:U:N1	2.88	0.41
14:AO:68:TYR:O	14:AO:71:ARG:HG2	2.19	0.41
16:CQ:26:ARG:HG3	16:CQ:39:ARG:HB3	2.02	0.41
3:AD:170:LEU:HD12	3:AD:170:LEU:O	2.20	0.41
31:DJ:37:ARG:CZ	31:DJ:39:LYS:HZ3	2.33	0.41
38:DQ:6:GLY:C	38:DQ:8:ILE:N	2.73	0.41
11:AL:96:THR:O	11:AL:97:VAL:C	2.59	0.41
13:AN:52:ARG:C	13:AN:54:SER:H	2.22	0.41
22:DA:1571:A:O5'	22:DA:1571:A:H8	2.04	0.41
6:AG:71:THR:HB	6:AG:141:HIS:NE2	2.36	0.41
40:BS:51:LEU:O	40:BS:51:LEU:HD12	2.20	0.41
24:BC:147:PRO:HD2	24:BC:184:GLU:OE2	2.20	0.41
24:BC:185:ALA:C	24:BC:187:CYS:N	2.72	0.41
6:CG:41:ILE:HG22	6:CG:41:ILE:O	2.20	0.41
24:DC:244:VAL:HG12	24:DC:250:GLN:HA	2.01	0.41
4:CE:157:GLY:HA3	7:CH:63:LYS:NZ	2.35	0.41
5:AF:43:GLY:O	5:AF:58:HIS:HA	2.21	0.41
26:DE:151:GLY:HA3	26:DE:191:ASP:HB3	2.02	0.41
34:BM:56:ALA:H	34:BM:58:LYS:H	1.67	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:1898:U:O2'	22:DA:1899:A:H5'	2.20	0.41
22:DA:2443:C:O2'	22:DA:2444:G:H5'	2.21	0.41
22:BA:2316:G:H2'	22:BA:2317:A:H8	1.84	0.41
22:BA:393:C:H2'	22:BA:394:C:C6	2.56	0.41
21:AA:1438:G:O2'	21:AA:1439:G:H5'	2.20	0.41
22:BA:841:G:H2'	22:BA:842:U:H6	1.85	0.41
22:BA:20:C:H2'	22:BA:21:A:H8	1.84	0.41
14:AO:22:GLY:HA3	21:AA:656:G:N2	2.35	0.41
22:BA:1960:A:H5''	22:BA:1961:C:OP2	2.21	0.41
22:DA:2204:G:C2	22:DA:2205:A:C8	3.08	0.41
22:DA:2099:U:H2'	22:DA:2099:U:O2	2.19	0.41
22:DA:1371:G:H8	22:DA:1371:G:O5'	2.02	0.41
46:BY:19:LEU:HA	46:BY:19:LEU:HD12	1.78	0.41
22:DA:1438:U:C5	22:DA:1552:A:N1	2.87	0.41
44:DW:28:GLU:HG3	44:DW:29:SER:H	1.85	0.41
31:BJ:81:ILE:CG2	31:BJ:82:GLY:N	2.67	0.41
21:AA:67:C:H4'	21:AA:172:A:O4'	2.20	0.41
24:BC:247:TRP:C	24:BC:249:VAL:N	2.73	0.41
22:DA:35:G:O2'	22:DA:36:G:O5'	2.38	0.41
22:DA:995:C:O2'	38:DQ:93:ILE:HD12	2.20	0.41
36:BO:34:HIS:CD2	36:BO:53:THR:OG1	2.73	0.41
21:AA:184:G:O4'	21:AA:224:U:H4'	2.20	0.41
22:DA:2209:G:C6	22:DA:2210:U:O4	2.73	0.41
53:CA:198:G:C6	53:CA:220:G:C4	3.08	0.41
22:DA:1091:G:N2	22:DA:1092:C:C2	2.89	0.41
13:AN:44:VAL:HG23	13:AN:45:LEU:N	2.29	0.41
34:DM:23:GLY:N	34:DM:100:LYS:HZ3	2.18	0.41
53:CA:330:C:H2'	53:CA:331:G:C8	2.56	0.41
22:DA:2822:G:H5''	25:DD:164:GLN:HE22	1.86	0.41
28:BG:35:THR:OG1	28:BG:74:MET:SD	2.77	0.41
53:CA:1270:G:H2'	53:CA:1271:A:O4'	2.20	0.41
4:CE:80:LEU:HD22	4:CE:80:LEU:HA	1.88	0.41
53:CA:1142:G:C2	53:CA:1143:G:H1'	2.55	0.41
22:DA:2815:C:C2	22:DA:2816:G:C8	3.08	0.41
22:DA:2837:A:H61	22:DA:2882:A:N6	2.18	0.41
21:AA:1241:G:C2	21:AA:1242:G:C5	3.09	0.41
53:CA:98:A:C2	53:CA:99:C:C2	3.08	0.41
28:BG:8:VAL:HG13	28:BG:9:VAL:N	2.36	0.41
27:BF:147:ARG:HG3	27:BF:148:VAL:N	2.35	0.41
22:DA:1417:C:H4'	22:DA:1587:G:N2	2.35	0.41
37:BP:105:LYS:HA	37:BP:108:ARG:HD3	2.02	0.41
43:DV:77:VAL:HG13	43:DV:77:VAL:O	2.20	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
44:DW:49:ASN:CG	44:DW:81:ILE:HG23	2.41	0.41
22:DA:1865:U:C5	22:DA:1875:G:C2	3.09	0.41
47:BZ:15:ARG:NH1	47:BZ:15:ARG:HG3	2.35	0.41
53:CA:513:C:O2'	53:CA:514:C:P	2.78	0.41
2:CC:179:ALA:HB1	2:CC:202:PHE:CE1	2.55	0.41
1:AB:74:ALA:O	1:AB:75:ALA:HB2	2.20	0.41
29:BH:9:VAL:O	29:BH:13:GLY:N	2.51	0.41
53:CA:678:U:H2'	53:CA:679:C:O4'	2.20	0.41
9:AJ:35:GLN:HG2	9:AJ:77:VAL:CB	2.46	0.41
12:CM:75:SER:HB2	12:CM:79:LEU:CD1	2.51	0.41
23:BB:13:G:O2'	23:BB:15:A:OP2	2.38	0.41
1:CB:17:HIS:CG	1:CB:18:GLN:H	2.38	0.41
21:AA:1152:A:H2'	21:AA:1153:G:C8	2.52	0.41
22:DA:425:G:H2'	22:DA:426:C:C6	2.56	0.41
26:DE:105:LEU:HD12	26:DE:200:LEU:HD21	2.02	0.41
26:DE:35:TYR:HE2	26:DE:177:PRO:HD2	1.85	0.41
31:DJ:58:ASN:CG	31:DJ:127:GLY:HA2	2.40	0.41
31:DJ:57:LEU:HG	31:DJ:128:ASN:N	2.33	0.41
37:BP:83:ILE:CD1	37:BP:83:ILE:C	2.86	0.41
6:CG:3:ARG:HH12	53:CA:1092:A:H4'	1.86	0.41
53:CA:607:A:C6	53:CA:608:A:C6	3.08	0.41
22:DA:2425:A:H1'	22:DA:2427:C:C4	2.55	0.41
42:BU:57:ILE:CG2	42:BU:58:VAL:N	2.83	0.41
25:DD:32:ASN:HB3	25:DD:52:THR:OG1	2.21	0.41
36:DO:7:ARG:HA	36:DO:10:ARG:NH2	2.36	0.41
22:BA:2294:G:H5''	36:BO:10:ARG:HD3	2.01	0.41
22:DA:545:U:C4	22:DA:547:A:H4'	2.55	0.41
34:DM:136:MET:HE1	43:DV:57:TYR:CD2	2.55	0.41
21:AA:1409:C:H2'	21:AA:1410:A:C8	2.53	0.41
22:BA:644:A:H2'	22:BA:645:C:C4'	2.50	0.41
22:DA:1510:G:N2	22:DA:1511:G:N3	2.68	0.41
21:AA:1196:A:O2'	21:AA:1197:A:P	2.78	0.41
54:DB:39:A:O2'	54:DB:46:A:N1	2.54	0.41
34:DM:1:MET:HB3	34:DM:2:LEU:H	1.54	0.41
4:CE:17:VAL:HG13	4:CE:17:VAL:O	2.21	0.41
22:DA:2649:C:H2'	22:DA:2650:U:C6	2.55	0.41
39:DR:43:ASN:HD22	39:DR:44:GLY:H	1.69	0.41
36:BO:26:LEU:HD22	36:BO:115:LEU:CD2	2.50	0.41
25:BD:201:LEU:HA	25:BD:201:LEU:HD12	1.62	0.41
30:DI:96:LYS:HD2	30:DI:96:LYS:HA	1.97	0.41
2:CC:88:LYS:HA	2:CC:91:ALA:HB3	2.02	0.41
53:CA:544:G:C2'	53:CA:545:C:O5'	2.68	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:954:G:O3'	34:DM:13:HIS:CD2	2.73	0.41
22:DA:121:G:N2	22:DA:131:A:C4	2.89	0.41
6:AG:6:ILE:HB	6:AG:7:GLY:H	1.64	0.41
30:DI:102:ARG:HD2	30:DI:105:LEU:HB3	2.03	0.41
22:DA:1249:U:H4'	38:DQ:3:VAL:HG21	2.03	0.41
22:DA:1213:A:O2'	22:DA:1214:A:H5'	2.21	0.41
22:BA:1277:G:H5'	35:BN:20:MET:CE	2.51	0.41
22:BA:734:A:C4	22:BA:735:A:C8	3.08	0.41
21:AA:1244:G:C6	21:AA:1245:C:N4	2.88	0.41
22:BA:2046:G:OP1	48:B0:11:LYS:HE3	2.20	0.41
3:CD:94:GLU:OE1	3:CD:103:ARG:NE	2.47	0.41
22:BA:1744:A:H5''	22:BA:1745:A:OP2	2.20	0.41
21:AA:603:U:H2'	21:AA:604:G:H8	1.86	0.41
21:AA:860:A:H2'	21:AA:861:G:O5'	2.21	0.41
2:AC:59:PRO:O	2:AC:60:ALA:O	2.38	0.41
9:AJ:88:MET:C	9:AJ:90:LEU:H	2.23	0.41
39:DR:79:ARG:O	39:DR:80:ARG:CB	2.68	0.41
36:DO:63:LYS:C	36:DO:63:LYS:HD3	2.41	0.41
38:DQ:108:LEU:O	38:DQ:108:LEU:HD23	2.20	0.41
43:DV:35:GLU:HB2	43:DV:93:ARG:NH1	2.35	0.41
3:CD:52:VAL:HG12	3:CD:53:GLN:N	2.36	0.41
12:CM:52:ILE:C	12:CM:54:THR:H	2.24	0.41
53:CA:127:G:N2	53:CA:235:C:C2	2.88	0.41
22:DA:250:G:OP1	33:DL:59:ARG:NH1	2.53	0.41
25:BD:97:SER:OG	25:BD:98:VAL:N	2.54	0.41
22:DA:2262:U:H5''	44:DW:38:ARG:HH22	1.85	0.41
39:BR:5:PHE:CE2	39:BR:7:SER:HB2	2.55	0.41
20:CU:25:ALA:O	20:CU:26:GLY:C	2.59	0.41
37:BP:57:ALA:CB	37:BP:73:PHE:O	2.68	0.41
22:BA:2269:G:C4'	44:BW:18:LYS:HE2	2.38	0.41
44:BW:23:LYS:CG	44:BW:24:ARG:O	2.55	0.41
44:BW:28:GLU:HB3	44:BW:31:LEU:CD2	2.31	0.41
22:BA:1062:G:N7	22:BA:1088:A:H8	2.17	0.41
53:CA:1492:A:C8	22:DA:1913:A:C8	3.07	0.41
22:DA:1386:C:O2'	22:DA:1387:A:C8	2.72	0.41
53:CA:428:G:H1'	53:CA:430:A:C8	2.56	0.41
38:DQ:57:ARG:C	38:DQ:59:LEU:N	2.72	0.41
10:CK:33:ILE:HG13	10:CK:73:VAL:HG21	2.01	0.41
21:AA:433:G:H2'	21:AA:434:U:H5'	2.03	0.41
37:DP:112:ARG:O	37:DP:113:LEU:HB3	2.20	0.41
22:BA:1107:G:C6	22:BA:1108:U:C4	3.09	0.41
53:CA:764:C:H3'	53:CA:765:G:H21	1.85	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
53:CA:765:G:N7	53:CA:812:G:C4	2.89	0.41
25:BD:19:GLY:HA3	37:BP:79:VAL:HG12	2.02	0.41
41:BT:39:THR:C	41:BT:41:ALA:N	2.74	0.41
52:D4:19:ARG:HD2	52:D4:24:ARG:HD2	2.03	0.41
22:BA:264:C:H2'	22:BA:265:A:H5''	2.03	0.41
30:BI:49:GLU:HG2	30:BI:50:LYS:N	2.35	0.41
22:DA:1059:G:H21	30:DI:131:THR:N	2.19	0.41
24:BC:108:GLY:C	24:BC:109:LEU:HD22	2.40	0.41
34:BM:8:LYS:HD2	34:BM:8:LYS:HA	1.65	0.41
22:BA:826:U:O2'	33:BL:53:GLY:CA	2.64	0.41
7:CH:123:GLU:HG2	7:CH:124:ILE:O	2.21	0.41
22:DA:1557:C:H2'	22:DA:1558:C:C5	2.55	0.41
4:AE:114:LEU:HA	4:AE:114:LEU:HD12	1.83	0.41
22:DA:112:U:C5	22:DA:113:U:C5	3.08	0.41
18:CS:40:PHE:CB	18:CS:41:PRO:CD	2.97	0.41
45:DX:32:LEU:HD13	45:DX:50:VAL:O	2.21	0.41
12:CM:14:ALA:HB1	12:CM:33:LEU:CD1	2.50	0.41
53:CA:1133:G:C5	53:CA:1134:G:N7	2.89	0.41
4:CE:20:VAL:O	4:CE:30:PHE:O	2.38	0.41
6:CG:99:ALA:HB3	6:CG:100:MET:HE2	2.03	0.41
22:DA:16:C:H2'	22:DA:17:G:H8	1.85	0.41
21:AA:374:A:C5'	21:AA:452:A:N1	2.75	0.41
22:DA:2261:C:N4	44:DW:10:ARG:O	2.54	0.41
30:DI:78:LEU:O	30:DI:81:LYS:HG2	2.21	0.41
22:DA:136:G:H2'	22:DA:137:U:C6	2.55	0.41
22:DA:140:C:O2'	22:DA:141:G:OP2	2.38	0.41
24:BC:129:LEU:HD22	24:BC:133:ASN:HB2	2.02	0.41
22:DA:1565:C:O2'	22:DA:1566:A:O5'	2.36	0.41
31:BJ:88:THR:CG2	31:BJ:91:GLU:H	2.33	0.41
22:BA:1269:A:H2'	22:BA:1270:C:C6	2.55	0.41
22:DA:1677:A:N6	22:DA:1678:A:C6	2.88	0.41
24:DC:83:ASP:HA	24:DC:84:PRO:HD2	1.94	0.41
22:BA:2747:G:O6	22:BA:2755:C:H5''	2.20	0.41
30:BI:78:LEU:HD13	30:BI:108:ILE:CG2	2.46	0.41
10:AK:109:ILE:HB	20:AU:5:VAL:HG23	2.02	0.41
33:DL:79:LEU:C	33:DL:82:LEU:HD11	2.40	0.41
9:AJ:29:ALA:CB	9:AJ:36:VAL:HG21	2.51	0.41
30:BI:41:PHE:CE2	30:BI:45:THR:HG21	2.56	0.41
30:BI:57:VAL:HG12	30:BI:58:ILE:N	2.35	0.41
22:BA:1967:C:O2	22:BA:1967:C:C2'	2.68	0.41
53:CA:1089:G:H1'	53:CA:1167:A:H61	1.85	0.41
51:D3:35:LYS:O	51:D3:40:LYS:HE2	2.21	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:BJ:18:VAL:CG2	31:BJ:54:ILE:HD13	2.49	0.41
2:CC:10:ARG:O	2:CC:15:LYS:HB2	2.20	0.41
22:BA:1347:A:O2'	22:BA:1348:C:H5'	2.21	0.41
25:DD:48:ILE:CG2	25:DD:84:LEU:HD23	2.51	0.41
22:DA:720:U:H2'	22:DA:721:A:H8	1.79	0.41
53:CA:713:G:N2	53:CA:714:G:C2	2.88	0.41
21:AA:937:A:C2	21:AA:1379:G:O6	2.73	0.41
22:BA:960:A:H2'	22:BA:962:G:H5'	2.02	0.41
22:BA:962:G:O2'	22:BA:963:U:H5'	2.21	0.41
26:BE:112:LEU:HD23	26:BE:112:LEU:HA	1.80	0.41
21:AA:1167:A:N7	21:AA:1169:A:C6	2.88	0.41
22:DA:684:G:OP1	50:D2:16:HIS:CD2	2.74	0.41
33:DL:118:THR:HG23	33:DL:120:VAL:HG23	2.03	0.41
22:DA:1494:A:O2'	22:DA:1495:A:H5'	2.20	0.41
22:DA:1495:A:H2'	22:DA:1496:A:C8	2.55	0.41
22:DA:843:G:C6	22:DA:844:A:N6	2.88	0.41
33:DL:95:LEU:HB3	33:DL:100:ILE:HG23	2.02	0.41
33:DL:77:ILE:HG12	33:DL:101:ILE:HD11	2.02	0.41
22:BA:6:A:O2'	22:BA:7:G:H5'	2.20	0.41
24:DC:77:VAL:CG2	24:DC:112:GLY:H	2.34	0.41
22:DA:238:C:H4'	22:DA:608:A:O2'	2.20	0.41
11:AL:82:ARG:HG3	11:AL:82:ARG:O	2.21	0.41
25:BD:25:THR:N	25:BD:191:GLY:HA2	2.36	0.41
29:DH:49:ALA:HB3	29:DH:50:ARG:HH22	1.86	0.41
3:AD:106:PHE:HB3	3:AD:144:ILE:HD11	2.03	0.41
11:AL:106:VAL:CG2	11:AL:116:TYR:HB3	2.51	0.41
22:BA:117:G:C6	22:BA:119:A:C6	3.09	0.41
41:BT:68:LYS:HE2	41:BT:77:ARG:HD2	2.02	0.41
22:DA:700:G:C6	22:DA:701:G:C5	3.08	0.41
12:CM:35:ALA:HB3	12:CM:55:LEU:HD22	2.03	0.41
40:BS:28:LYS:O	40:BS:29:VAL:C	2.59	0.41
27:DF:19:PHE:HB3	27:DF:21:TYR:CZ	2.55	0.41
3:CD:102:TYR:O	3:CD:104:MET:N	2.53	0.41
24:BC:183:VAL:HG12	24:BC:184:GLU:N	2.35	0.41
53:CA:1022:A:H2'	53:CA:1023:U:C6	2.56	0.41
24:BC:208:GLY:O	24:BC:211:ARG:HB2	2.20	0.41
39:DR:98:ILE:N	39:DR:98:ILE:HD12	2.36	0.41
22:DA:2068:U:C5'	22:DA:2068:U:H6	2.34	0.41
30:BI:111:THR:O	30:BI:113:ALA:N	2.47	0.41
28:BG:123:GLU:CD	28:BG:124:CYS:H	2.23	0.41
11:CL:36:VAL:HA	11:CL:52:CYS:HA	2.03	0.41
53:CA:1058:G:C6	53:CA:1059:C:C4	3.09	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
43:BV:51:GLN:NE2	43:BV:79:ARG:HH12	2.17	0.41
22:DA:1838:C:C4	22:DA:1899:A:C4	3.09	0.41
22:BA:1524:G:H2'	22:BA:1525:A:H8	1.86	0.41
22:DA:2187:U:O2'	22:DA:2188:U:H5'	2.21	0.41
46:BY:59:GLU:O	46:BY:63:ALA:HB3	2.20	0.41
6:AG:30:MET:HG2	6:AG:31:VAL:N	2.36	0.41
22:BA:1833:C:C4	22:BA:1834:U:C5	3.09	0.41
24:BC:35:LYS:NZ	24:BC:37:SER:HB2	2.36	0.41
10:AK:15:VAL:O	10:AK:16:SER:OG	2.36	0.41
10:AK:15:VAL:HG13	10:AK:78:ILE:HG23	2.01	0.41
21:AA:1426:G:H2'	21:AA:1427:C:C6	2.55	0.41
10:CK:17:ASP:OD2	10:CK:80:ASN:HB2	2.21	0.41
53:CA:115:G:H1'	53:CA:116:A:N7	2.35	0.41
21:AA:1290:G:C5	21:AA:1291:U:C5	3.09	0.41
25:DD:175:LEU:HB3	25:DD:176:ASP:H	1.62	0.41
22:DA:1702:G:C6	22:DA:1703:G:N7	2.89	0.41
22:BA:1922:G:H2'	22:BA:1923:U:O4'	2.20	0.41
24:BC:39:SER:C	24:BC:41:GLY:H	2.24	0.41
53:CA:858:G:N7	57:CA:1821:HOH:O	2.37	0.41
22:BA:1782:U:H6	22:BA:1782:U:O5'	2.03	0.41
12:CM:107:THR:O	12:CM:107:THR:HG22	2.20	0.41
22:DA:2287:A:C5	22:DA:2289:G:C8	3.08	0.41
54:DB:110:C:O2'	54:DB:111:U:C5'	2.66	0.41
53:CA:1215:G:C4	53:CA:1216:A:N7	2.88	0.41
28:BG:88:LEU:CD2	28:BG:161:VAL:HG22	2.49	0.41
28:BG:168:VAL:HG23	28:BG:168:VAL:O	2.21	0.41
16:AQ:16:MET:CG	16:AQ:20:ILE:HD12	2.50	0.41
53:CA:372:C:HO2'	53:CA:373:A:P	2.42	0.41
16:CQ:19:SER:CB	16:CQ:70:LYS:HZ2	2.34	0.41
22:DA:204:A:C4	22:DA:206:U:C4	3.08	0.41
5:AF:68:GLN:HA	5:AF:71:ILE:HG21	2.03	0.41
41:BT:29:THR:HG22	41:BT:86:THR:HG22	2.02	0.41
22:DA:2313:C:O3'	27:DF:34:THR:HG21	2.21	0.41
54:DB:42:C:H2'	54:DB:43:C:C5	2.54	0.41
22:DA:2458:G:H1'	22:DA:2459:A:N7	2.36	0.41
22:DA:2563:U:H1'	22:DA:2566:A:C6	2.56	0.41
22:DA:2567:G:H2'	22:DA:2568:U:C5	2.55	0.41
1:CB:213:LEU:HD12	1:CB:213:LEU:HA	1.92	0.41
34:BM:6:ARG:CZ	34:BM:6:ARG:HB2	2.50	0.41
22:DA:2875:C:O2'	22:DA:2876:G:O5'	2.38	0.41
41:DT:29:THR:HB	41:DT:86:THR:CA	2.50	0.41
52:B4:27:CYS:HB2	52:B4:33:HIS:HB2	2.03	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:800:A:C4	22:DA:802:A:H5'	2.55	0.41
22:DA:1278:C:O2'	35:DN:27:SER:HB3	2.20	0.41
22:DA:117:G:H4'	22:DA:126:A:C2	2.55	0.41
22:DA:49:A:C6	22:DA:177:G:C5	3.09	0.41
32:BK:115:ILE:HG23	32:BK:115:ILE:O	2.21	0.41
37:DP:63:ILE:O	37:DP:63:ILE:HG22	2.21	0.41
37:DP:67:GLU:OE1	37:DP:68:GLY:N	2.54	0.41
22:DA:590:A:C4	22:DA:591:U:C6	3.08	0.41
27:DF:49:LEU:N	27:DF:49:LEU:HD22	2.23	0.41
27:DF:69:ALA:HB2	27:DF:82:TYR:O	2.20	0.41
27:DF:82:TYR:HA	27:DF:83:PRO:HD2	1.85	0.41
26:DE:147:LEU:CB	26:DE:186:VAL:HA	2.51	0.41
21:AA:113:G:C4	21:AA:114:U:C6	3.09	0.41
7:CH:60:LEU:N	7:CH:60:LEU:HD12	2.35	0.41
22:DA:947:A:N6	22:DA:971:G:C6	2.89	0.41
51:B3:31:ILE:HG13	51:B3:31:ILE:O	2.19	0.41
22:DA:703:U:H2'	22:DA:704:G:O4'	2.21	0.41
22:BA:250:G:C6	22:BA:251:A:C6	3.08	0.41
6:CG:119:LEU:HD23	6:CG:120:ALA:N	2.35	0.41
15:AP:67:ILE:HG23	15:AP:72:ALA:HB2	1.99	0.41
12:AM:106:ARG:NH2	12:AM:112:ARG:HB3	2.28	0.41
2:CC:179:ALA:O	2:CC:180:ASP:C	2.58	0.41
22:BA:2684:U:C4	22:BA:2685:G:N7	2.89	0.41
24:BC:106:PRO:HA	24:BC:141:HIS:HE2	1.84	0.41
53:CA:677:U:H2'	53:CA:678:U:C6	2.56	0.41
22:DA:1751:U:C2	22:DA:1752:C:C5	3.08	0.41
25:DD:11:MET:CE	25:DD:192:ALA:HA	2.46	0.41
29:DH:71:LYS:N	29:DH:71:LYS:CD	2.83	0.41
18:CS:52:ASN:OD1	18:CS:57:VAL:HG13	2.21	0.41
22:BA:1936:A:N3	22:BA:1943:U:H5	2.18	0.41
22:DA:2054:A:H2'	48:D0:4:GLN:OE1	2.21	0.41
24:DC:77:VAL:HG23	24:DC:112:GLY:H	1.85	0.41
22:DA:171:U:H2'	22:DA:172:A:C8	2.54	0.41
18:AS:4:LEU:HD22	18:AS:8:PRO:HA	2.02	0.41
22:DA:2412:A:H2'	22:DA:2413:G:O4'	2.21	0.41
29:DH:53:GLU:C	29:DH:55:GLU:N	2.72	0.41
53:CA:846:G:C2'	53:CA:847:G:H5'	2.50	0.41
21:AA:1084:G:C4	21:AA:1085:U:C5	3.08	0.41
23:BB:40:U:HO2'	23:BB:43:C:H5	1.54	0.41
28:BG:174:LYS:C	28:BG:174:LYS:HD2	2.41	0.41
32:DK:40:LYS:HZ1	32:DK:89:ASN:HD21	1.68	0.41
2:AC:26:LYS:HE2	21:AA:1256:A:H5"	2.02	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:BA:686:U:H2'	22:BA:788:A:N1	2.36	0.41
22:DA:1512:C:H2'	22:DA:1513:U:O4'	2.20	0.41
53:CA:552:U:C2	53:CA:553:A:C8	3.09	0.41
36:BO:57:ALA:C	36:BO:59:ALA:N	2.74	0.41
27:BF:107:VAL:N	27:BF:108:PRO:HD2	2.35	0.41
22:DA:1649:G:N1	22:DA:2009:A:C6	2.88	0.41
22:BA:2004:G:C6	22:BA:2005:A:C4	3.08	0.41
21:AA:1294:G:C6	21:AA:1295:U:C4	3.09	0.41
22:DA:2623:G:N2	48:D0:18:HIS:CE1	2.89	0.41
22:BA:448:U:H4'	22:BA:449:A:OP2	2.21	0.41
11:CL:114:SER:HB3	53:CA:35:G:H21	1.86	0.41
22:DA:2369:A:O2'	22:DA:2370:G:H5'	2.21	0.41
22:BA:2486:C:H2'	22:BA:2487:G:O5'	2.21	0.41
22:BA:189:G:H2'	22:BA:205:G:N2	2.36	0.41
53:CA:1444:U:H2'	53:CA:1445:U:C6	2.56	0.41
26:DE:124:PHE:HB3	26:DE:189:THR:HG22	2.03	0.41
22:DA:536:G:H2'	22:DA:537:G:O4'	2.21	0.41
1:AB:64:GLY:HA3	1:AB:158:ASP:OD2	2.21	0.41
28:BG:146:ASP:O	28:BG:147:LEU:C	2.58	0.41
30:DI:2:LYS:HB3	30:DI:3:LYS:H	1.66	0.41
21:AA:1326:U:H2'	21:AA:1327:C:H6	1.85	0.41
22:DA:1839:G:O2'	22:DA:1840:G:H5'	2.21	0.41
22:BA:2252:G:H2'	22:BA:2253:G:C8	2.56	0.41
22:BA:1882:U:O2'	22:BA:1883:U:H5'	2.20	0.41
50:B2:19:ARG:HD3	50:B2:19:ARG:HH21	1.75	0.41
22:BA:1584:U:H2'	22:BA:1584:U:O2	2.21	0.41
43:BV:68:LYS:O	43:BV:69:GLU:O	2.39	0.41
15:CP:19:VAL:HG13	15:CP:37:GLY:CA	2.51	0.41
22:BA:2639:A:C2	22:BA:2778:A:C8	3.08	0.41
22:BA:1789:A:OP2	24:BC:220:ARG:NH1	2.53	0.41
22:DA:247:G:N7	22:DA:249:C:C2	2.89	0.41
22:DA:247:G:C4	22:DA:249:C:H1'	2.56	0.41
25:BD:97:SER:H	25:BD:99:GLU:CD	2.24	0.41
22:DA:857:G:H1'	44:DW:19:ARG:HE	1.80	0.41
38:BQ:111:LYS:NZ	39:BR:48:LYS:HD3	2.36	0.41
22:DA:2136:G:C2'	22:DA:2137:U:H6	2.34	0.41
21:AA:974:A:C4'	21:AA:975:A:H5'	2.46	0.41
25:BD:179:ARG:O	25:BD:187:LEU:HA	2.20	0.41
21:AA:66:A:O2'	21:AA:67:C:H5'	2.21	0.41
25:DD:146:ILE:HG13	25:DD:155:VAL:HG22	2.03	0.41
16:AQ:11:VAL:HG12	16:AQ:13:SER:H	1.86	0.41
19:CT:73:ARG:O	19:CT:77:ASN:OD1	2.38	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:AA:132:C:H2'	21:AA:133:U:O4'	2.21	0.41
21:AA:466:A:C4'	21:AA:467:U:OP2	2.69	0.41
22:BA:1054:A:C6	22:BA:1106:G:O6	2.74	0.41
22:DA:2307:G:N1	27:DF:38:GLY:HA3	2.36	0.41
22:DA:226:A:H4'	22:DA:258:G:OP1	2.21	0.41
22:DA:2458:G:H2'	22:DA:2490:G:N1	2.34	0.41
22:DA:1059:G:C5	22:DA:1060:U:O2	2.74	0.41
22:DA:1290:C:O2'	22:DA:1291:C:O5'	2.39	0.41
8:AI:44:ARG:H	8:AI:44:ARG:HG2	1.47	0.41
53:CA:1137:C:O2'	53:CA:1138:G:N2	2.54	0.41
35:BN:117:ASP:OD2	35:BN:118:ARG:N	2.52	0.41
1:CB:103:TRP:CD1	1:CB:107:ARG:HB3	2.56	0.41
22:DA:1256:G:N3	26:DE:77:ILE:HG22	2.36	0.41
22:DA:686:U:H2'	22:DA:788:A:C2	2.56	0.41
22:DA:975:A:H2'	22:DA:976:G:H8	1.85	0.41
28:DG:83:THR:HB	28:DG:84:LYS:H	1.72	0.41
25:BD:53:GLY:HA3	25:BD:77:ARG:N	2.24	0.41
41:DT:14:PRO:HG2	41:DT:15:HIS:N	2.36	0.41
22:DA:754:U:O2'	22:DA:755:U:C5'	2.69	0.41
20:AU:16:ARG:HG2	20:AU:19:LYS:HG2	2.03	0.41
22:DA:1868:C:N4	22:DA:1869:G:C6	2.89	0.41
53:CA:684:U:H3	53:CA:706:A:H61	1.68	0.41
22:BA:1160:G:C6	22:BA:1161:C:N4	2.89	0.41
34:DM:72:PRO:O	34:DM:92:TRP:HA	2.20	0.41
22:BA:1027:A:C6	22:BA:1126:A:N3	2.89	0.41
1:AB:46:VAL:O	1:AB:49:PHE:CD2	2.73	0.41
44:BW:8:SER:C	44:BW:9:THR:HG22	2.41	0.41
53:CA:1219:A:C6	53:CA:1220:G:C5	3.08	0.41
53:CA:249:U:H5'	53:CA:250:A:P	2.61	0.41
21:AA:484:G:HO2'	21:AA:485:U:P	2.44	0.41
6:CG:75:LYS:HE3	6:CG:76:SER:H	1.84	0.41
10:CK:55:ARG:N	10:CK:55:ARG:HD2	2.27	0.41
53:CA:818:G:H3'	53:CA:819:A:H5''	2.02	0.41
22:BA:1819:A:H1'	22:BA:1821:A:C6	2.56	0.41
24:BC:269:ARG:HA	24:BC:269:ARG:HD3	1.84	0.41
22:DA:904:G:C6	22:DA:905:A:C5	3.08	0.41
24:DC:161:VAL:CG1	24:DC:173:LEU:HB2	2.51	0.41
25:BD:141:ARG:HH11	25:BD:141:ARG:HD3	1.73	0.41
22:DA:2626:C:H2'	22:DA:2627:G:O4'	2.20	0.41
22:DA:2628:C:H1'	22:DA:2781:A:C4	2.56	0.41
18:CS:57:VAL:HA	18:CS:58:PRO:HD2	1.83	0.41
40:DS:36:LEU:O	40:DS:38:TYR:N	2.54	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:CI:61:ASP:C	8:CI:62:LEU:HD22	2.41	0.41
9:CJ:37:ARG:HB3	9:CJ:75:ASP:HB3	2.03	0.41
22:DA:1479:G:H2'	22:DA:1480:C:O4'	2.21	0.41
39:BR:89:HIS:NE2	39:BR:91:GLN:HB2	2.36	0.41
22:DA:1167:C:O2'	22:DA:1168:G:H5'	2.20	0.41
22:DA:1918:A:O2'	22:DA:1919:A:N7	2.41	0.41
22:BA:2569:G:C2	22:BA:2570:G:C8	3.09	0.41
21:AA:947:G:C6	21:AA:948:C:C4	3.08	0.41
25:BD:51:THR:HB	25:BD:78:GLY:O	2.21	0.41
22:BA:2682:A:C8	25:BD:11:MET:HG2	2.56	0.41
25:BD:24:VAL:HA	25:BD:189:VAL:O	2.21	0.41
11:CL:62:VAL:HG21	11:CL:94:TYR:CD2	2.56	0.41
3:AD:96:ARG:HH21	3:AD:114:ARG:HE	1.67	0.41
41:DT:74:ILE:HG13	41:DT:75:GLY:H	1.85	0.41
12:AM:13:HIS:HB3	12:AM:41:ASP:HA	2.03	0.41
22:DA:2619:C:H5'	25:DD:157:LYS:CG	2.50	0.41
24:DC:30:ALA:N	24:DC:31:PRO:CD	2.84	0.41
33:BL:79:LEU:HB2	33:BL:114:GLY:O	2.21	0.41
21:AA:1111:A:O2'	21:AA:1112:C:H5'	2.20	0.41
45:BX:33:HIS:N	45:BX:50:VAL:O	2.54	0.41
15:CP:60:TRP:O	15:CP:61:VAL:C	2.59	0.41
33:BL:92:LEU:HA	33:BL:125:LEU:CD2	2.51	0.41
4:CE:157:GLY:HA3	7:CH:63:LYS:CE	2.51	0.41
22:BA:1444:G:H2'	22:BA:1445:G:C8	2.55	0.41
22:DA:1455:G:O2'	22:DA:1456:G:H8	2.02	0.41
22:DA:1229:C:C2	22:DA:1230:A:C8	3.09	0.41
53:CA:202:G:O2'	53:CA:468:A:C8	2.71	0.41
2:CC:196:GLY:H	53:CA:1057:G:H4'	1.85	0.41
22:DA:1746:A:H2'	22:DA:1747:U:H6	1.85	0.41
11:CL:101:LEU:HB3	11:CL:102:ASP:H	1.72	0.41
42:DU:39:ASN:OD1	42:DU:64:ILE:HB	2.21	0.41
53:CA:177:G:C2'	53:CA:178:C:H5'	2.51	0.41
21:AA:316:C:H2'	21:AA:317:U:C6	2.56	0.41
22:BA:1954:G:O2'	22:BA:1956:U:O4	2.31	0.41
22:BA:792:A:H5''	22:BA:793:A:H5'	2.01	0.41
22:DA:121:G:N3	22:DA:131:A:C2	2.89	0.41
36:BO:55:GLU:OE1	36:BO:58:ILE:HD11	2.20	0.41
53:CA:438:U:H2'	53:CA:494:G:O6	2.20	0.41
2:AC:147:GLY:CA	2:AC:171:ARG:H	2.34	0.41
22:BA:1680:U:H2'	22:BA:1681:G:O4'	2.21	0.41
22:BA:2577:A:H5''	22:BA:2578:G:H5'	2.02	0.41
53:CA:1418:A:H8	53:CA:1418:A:O5'	2.03	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
30:DI:95:ASP:HB3	30:DI:97:VAL:HG23	2.02	0.41
22:BA:931:U:HO2'	22:BA:932:U:P	2.44	0.41
53:CA:364:A:C2	53:CA:365:U:O4	2.74	0.41
22:BA:21:A:H2'	22:BA:22:C:C6	2.56	0.41
21:AA:1326:U:H2'	21:AA:1327:C:C6	2.56	0.41
22:DA:1614:A:N6	40:DS:91:GLY:HA2	2.36	0.41
53:CA:433:G:O2'	53:CA:434:U:H5'	2.21	0.41
22:BA:1725:U:H2'	22:BA:1726:C:O4'	2.21	0.41
22:BA:830:G:H4'	22:BA:831:G:OP2	2.21	0.41
21:AA:761:G:H2'	21:AA:762:U:C6	2.56	0.41
53:CA:1461:G:C6	53:CA:1462:C:C4	3.09	0.41
22:BA:756:A:H2'	22:BA:757:G:O4'	2.21	0.41
3:AD:47:LEU:HG	3:AD:52:VAL:HG12	2.03	0.41
22:DA:2588:G:H2'	22:DA:2589:A:O4'	2.21	0.41
10:CK:115:ILE:HD12	20:CU:23:GLU:HG2	2.01	0.41
22:BA:806:C:O5'	22:BA:806:C:H6	2.04	0.41
52:D4:1:MET:HE2	52:D4:1:MET:HB3	1.89	0.41
17:CR:51:GLN:HA	17:CR:51:GLN:OE1	2.21	0.41
1:AB:84:LEU:HG	1:AB:84:LEU:O	2.20	0.41
1:AB:130:LYS:NZ	1:AB:130:LYS:HA	2.35	0.41
42:BU:87:GLU:O	42:BU:88:ASP:O	2.38	0.41
38:BQ:60:TRP:CH2	38:BQ:93:ILE:HB	2.56	0.41
22:DA:857:G:H1'	44:DW:19:ARG:CZ	2.51	0.41
22:DA:857:G:H2'	22:DA:858:G:C4'	2.50	0.41
44:DW:42:THR:O	44:DW:43:LYS:HG2	2.21	0.41
54:DB:11:C:H2'	54:DB:15:A:H61	1.86	0.41
22:BA:1131:G:C8	31:BJ:77:HIS:CE1	3.09	0.41
21:AA:197:A:O2'	21:AA:198:G:O4'	2.39	0.41
8:AI:6:TYR:CD1	8:AI:7:GLY:N	2.88	0.41
28:BG:122:ALA:HB2	28:BG:132:LEU:HB3	2.03	0.41
16:AQ:12:VAL:HG11	16:AQ:21:VAL:HG22	2.01	0.41
53:CA:1328:C:H2'	53:CA:1329:A:C8	2.56	0.41
53:CA:372:C:H4'	53:CA:373:A:OP2	2.21	0.41
53:CA:372:C:O2'	53:CA:373:A:OP2	2.35	0.41
53:CA:130:A:H1'	53:CA:264:C:H5'	2.03	0.41
31:DJ:49:ASP:HB2	31:DJ:121:LYS:HZ2	1.85	0.41
38:DQ:93:ILE:O	38:DQ:96:ASP:HB3	2.20	0.41
6:CG:22:LEU:HD23	6:CG:22:LEU:O	2.21	0.41
6:CG:25:PHE:CZ	6:CG:61:PHE:HZ	2.39	0.41
10:CK:104:PHE:N	10:CK:104:PHE:HD1	2.18	0.41
37:DP:87:ARG:HG2	37:DP:88:ARG:N	2.35	0.41
21:AA:224:U:H2'	21:AA:225:C:C6	2.56	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:BA:1105:U:H2'	22:BA:1106:G:C8	2.53	0.41
12:CM:108:ARG:HA	12:CM:108:ARG:HD2	1.96	0.41
12:CM:95:PRO:HG2	12:CM:99:GLN:HB3	2.03	0.41
8:CI:51:LEU:HB2	8:CI:56:MET:HB3	2.03	0.41
22:BA:1337:G:C2'	22:BA:1338:G:H5'	2.51	0.41
22:BA:1392:A:C6	22:BA:1393:A:C6	3.08	0.41
52:D4:15:LYS:O	52:D4:16:ILE:HB	2.20	0.41
10:CK:126:ARG:O	10:CK:127:ARG:HB2	2.21	0.41
10:CK:121:ARG:NH2	20:CU:35:GLU:HB2	2.36	0.41
22:BA:263:G:H2'	22:BA:264:C:O5'	2.20	0.41
1:AB:89:PHE:CE2	1:AB:153:MET:HB2	2.56	0.41
22:DA:2541:A:C2	22:DA:2765:A:N6	2.87	0.41
22:BA:2727:A:H2'	22:BA:2728:U:H6	1.85	0.41
30:BI:50:LYS:HE2	30:BI:50:LYS:HB2	1.88	0.41
22:DA:1062:G:N2	22:DA:1077:A:H2	2.19	0.41
22:DA:1080:A:H2'	22:DA:1081:U:H6	1.78	0.41
13:AN:40:ARG:NH1	13:AN:44:VAL:HG21	2.35	0.41
22:DA:1287:A:O2'	22:DA:1288:G:H5'	2.21	0.41
53:CA:330:C:C2'	53:CA:331:G:H8	2.32	0.41
22:DA:2800:A:C2'	22:DA:2801:G:C4'	2.99	0.41
22:DA:500:G:N2	22:DA:503:A:C8	2.88	0.41
53:CA:596:A:C2	53:CA:597:G:C5	3.09	0.41
4:AE:104:ILE:O	4:AE:104:ILE:HG23	2.19	0.41
53:CA:643:C:H2'	53:CA:644:U:H6	1.85	0.41
22:DA:1558:C:H1'	22:DA:1560:G:C5	2.55	0.41
22:DA:2683:C:C5	22:DA:2684:U:C5	3.09	0.41
22:BA:528:A:H2	22:BA:2043:C:H5'	1.86	0.41
1:CB:114:LYS:O	1:CB:117:GLU:HG2	2.21	0.41
22:DA:299:A:N3	22:DA:319:G:O2'	2.43	0.41
22:DA:100:U:O2'	22:DA:101:A:O5'	2.39	0.41
22:DA:296:U:H2'	22:DA:297:G:O4'	2.20	0.41
22:DA:320:A:N7	26:DE:132:LYS:HB2	2.36	0.41
53:CA:960:U:O2'	53:CA:1223:C:C5'	2.68	0.41
53:CA:976:G:C2	53:CA:1363:A:C2	3.09	0.41
4:CE:114:LEU:C	4:CE:116:VAL:H	2.25	0.41
7:CH:77:VAL:HG12	7:CH:84:ILE:HG13	2.03	0.41
22:BA:2196:C:C2'	22:BA:2197:U:H5'	2.51	0.41
22:BA:547:A:H8	22:BA:548:G:N3	2.19	0.41
53:CA:1241:G:N3	53:CA:1242:G:N7	2.69	0.41
53:CA:1243:C:N4	53:CA:1244:G:O6	2.54	0.41
21:AA:1142:G:N3	21:AA:1143:G:H1'	2.35	0.41
1:AB:17:HIS:O	1:AB:18:GLN:O	2.39	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
52:B4:9:LYS:HB3	52:B4:14:CYS:CB	2.51	0.41
53:CA:1140:C:H2'	53:CA:1141:C:C5	2.55	0.41
22:DA:190:A:H2'	22:DA:191:A:C8	2.55	0.41
32:DK:15:GLY:O	32:DK:16:ALA:O	2.39	0.41
22:DA:2849:U:OP2	37:DP:92:ARG:HG3	2.20	0.41
22:DA:1146:C:N4	22:DA:1147:A:N6	2.69	0.41
21:AA:1288:A:O2'	21:AA:1289:A:O4'	2.35	0.41
27:BF:48:LEU:HD11	27:BF:147:ARG:HH21	1.86	0.41
24:DC:105:ALA:HA	24:DC:106:PRO:HD3	1.70	0.41
22:DA:142:A:C2	22:DA:143:C:C2	3.09	0.41
27:DF:48:LEU:HG	27:DF:49:LEU:CD2	2.51	0.41
22:DA:584:C:C5	22:DA:585:G:N7	2.88	0.41
27:DF:46:LYS:HE2	27:DF:83:PRO:HG3	2.03	0.41
22:DA:576:U:H4'	22:DA:2502:G:C8	2.56	0.41
21:AA:114:U:H2'	21:AA:115:G:C8	2.56	0.41
22:DA:971:G:H2'	22:DA:972:A:H5'	2.02	0.41
22:DA:95:A:H2'	22:DA:96:C:C4'	2.51	0.41
22:DA:1565:C:O2'	22:DA:1566:A:P	2.78	0.41
1:AB:110:ILE:C	1:AB:112:ARG:N	2.73	0.41
1:AB:116:LEU:HG	1:AB:140:LEU:HG	2.02	0.41
34:BM:41:LEU:N	34:BM:41:LEU:HD23	2.35	0.41
22:DA:287:G:C2	22:DA:354:A:C2	3.09	0.41
22:BA:1912:A:O2'	22:BA:1913:A:H5''	2.21	0.41
49:B1:6:GLU:OE1	49:B1:52:LYS:HD2	2.21	0.41
3:CD:96:ARG:HB3	3:CD:96:ARG:HE	1.62	0.41
22:DA:2668:G:O2'	22:DA:2669:G:C5'	2.68	0.41
5:CF:52:ASN:C	5:CF:54:LEU:H	2.24	0.41
22:DA:638:G:O2'	22:DA:639:U:O4'	2.22	0.41
53:CA:1084:G:OP1	53:CA:1086:U:C5	2.74	0.41
53:CA:1101:A:C4'	53:CA:1102:A:O5'	2.63	0.41
26:BE:5:LEU:HA	26:BE:120:VAL:HG13	2.02	0.41
36:DO:62:LEU:HD21	36:DO:65:THR:HA	2.03	0.41
8:AI:79:ARG:O	8:AI:83:THR:HG23	2.21	0.41
51:D3:24:LYS:HB3	51:D3:25:HIS:H	1.66	0.41
19:CT:64:GLY:O	19:CT:65:LEU:C	2.59	0.41
22:DA:782:A:C8	22:DA:782:A:OP1	2.74	0.41
31:DJ:25:LEU:C	31:DJ:27:ARG:N	2.74	0.41
15:AP:59:HIS:HE1	15:AP:63:GLN:HE22	1.62	0.41
53:CA:1073:U:H2'	53:CA:1074:G:C8	2.54	0.41
2:CC:11:LEU:O	2:CC:13:ILE:N	2.53	0.41
1:AB:72:LYS:HZ1	1:AB:204:ASP:HA	1.85	0.41
1:AB:207:ARG:C	1:AB:209:VAL:N	2.74	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:CC:9:ILE:HD12	13:CN:97:LYS:CD	2.47	0.41
9:AJ:42:LEU:HB3	9:AJ:43:PRO:CD	2.44	0.41
53:CA:247:G:O2'	53:CA:248:C:H5'	2.21	0.41
29:BH:67:ALA:HA	29:BH:138:VAL:CB	2.48	0.41
53:CA:754:C:C2'	53:CA:755:G:H5'	2.51	0.41
19:CT:7:LYS:O	19:CT:10:ALA:HB3	2.20	0.41
53:CA:570:G:H1'	53:CA:820:U:C4	2.55	0.41
22:BA:1820:U:O2	24:BC:200:MET:N	2.53	0.41
1:CB:119:GLN:HE22	1:CB:136:ARG:HH12	1.69	0.41
3:AD:131:ILE:C	3:AD:133:SER:H	2.24	0.41
3:AD:133:SER:O	3:AD:134:TYR:C	2.58	0.41
32:DK:62:VAL:HG11	32:DK:65:THR:HG23	2.02	0.41
22:DA:2016:U:C4	22:DA:2017:U:C4	3.09	0.41
20:CU:9:GLU:OE1	20:CU:11:PHE:HE2	2.03	0.41
1:CB:34:ARG:HD3	1:CB:35:ASN:N	2.35	0.41
21:AA:1303:C:H2'	21:AA:1304:G:H8	1.85	0.41
21:AA:1381:U:H2'	21:AA:1382:C:H6	1.83	0.41
22:DA:1049:C:O2'	22:DA:1050:A:C5'	2.68	0.41
21:AA:688:G:H2'	21:AA:689:C:H6	1.85	0.41
22:BA:633:A:C8	22:BA:633:A:C4'	3.03	0.41
41:DT:9:LYS:CG	41:DT:9:LYS:O	2.69	0.41
38:BQ:13:HIS:HD2	38:BQ:31:TYR:CZ	2.38	0.41
22:BA:581:C:O2'	22:BA:582:A:H5'	2.21	0.41
22:DA:845:A:H2	22:DA:934:U:O2	2.04	0.41
53:CA:181:A:H4'	53:CA:182:A:OP1	2.21	0.41
8:CI:10:ARG:HA	8:CI:14:SER:O	2.21	0.41
22:DA:426:C:H2'	22:DA:427:U:C5'	2.51	0.41
22:BA:2715:C:C4	22:BA:2716:C:C5	3.09	0.41
22:DA:1171:G:C4	22:DA:1179:G:N2	2.89	0.41
21:AA:1342:C:H2'	21:AA:1343:G:C8	2.55	0.41
22:BA:283:G:C6	22:BA:284:U:C4	3.08	0.41
22:DA:1598:A:H2'	22:DA:1599:U:O4'	2.21	0.41
22:DA:2461:A:H2'	22:DA:2462:C:C6	2.55	0.41
2:AC:10:ARG:O	2:AC:13:ILE:N	2.51	0.41
22:BA:215:G:C4'	22:BA:216:A:H4'	2.50	0.41
6:CG:3:ARG:NH1	53:CA:1092:A:H4'	2.36	0.41
22:DA:2603:G:C6	22:DA:2604:U:C4	3.09	0.41
33:DL:132:ARG:HA	33:DL:135:ILE:HG22	2.03	0.41
11:AL:97:VAL:O	11:AL:97:VAL:HG12	2.20	0.41
53:CA:166:U:OP2	53:CA:166:U:C6	2.72	0.41
3:CD:138:PRO:C	3:CD:140:ASP:H	2.25	0.41
22:DA:2897:U:H2'	22:DA:2898:U:O4'	2.20	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:AL:113:ARG:O	11:AL:115:LYS:O	2.38	0.41
21:AA:1084:G:C6	21:AA:1085:U:O4	2.74	0.41
53:CA:159:G:H5'	53:CA:160:A:OP2	2.21	0.41
15:CP:66:THR:HG22	15:CP:67:ILE:N	2.36	0.41
23:BB:43:C:H2'	23:BB:44:G:H5'	2.01	0.41
48:D0:47:TYR:CE2	48:D0:52:LYS:HG3	2.56	0.41
22:DA:1819:A:C4'	22:DA:1820:U:H5'	2.50	0.41
1:CB:191:ASP:HA	1:CB:192:PRO:HD2	1.97	0.41
22:DA:2581:G:H4'	22:DA:2582:G:C8	2.56	0.41
22:BA:2799:A:C6	22:BA:2801:G:C5	3.08	0.41
53:CA:946:A:H2'	53:CA:947:G:C8	2.56	0.41
3:CD:124:VAL:O	3:CD:125:ASN:C	2.59	0.41
30:DI:29:GLN:O	30:DI:30:GLN:HB3	2.21	0.41
22:BA:2646:C:OP2	22:BA:2732:G:O2'	2.39	0.41
35:DN:51:LEU:HD23	35:DN:51:LEU:HA	1.87	0.41
4:AE:88:HIS:O	4:AE:89:THR:C	2.59	0.41
22:DA:1528:A:H2'	22:DA:1529:G:O4'	2.21	0.41
53:CA:1236:A:O2'	53:CA:1237:C:H5'	2.21	0.41
2:AC:89:VAL:O	2:AC:93:ILE:HG13	2.21	0.41
38:BQ:40:LYS:HD3	38:BQ:44:TYR:CZ	2.55	0.41
38:BQ:40:LYS:HA	38:BQ:43:GLN:HG3	2.01	0.41
22:DA:1468:U:O2	22:DA:1525:A:C2	2.74	0.41
22:DA:813:U:C2	22:DA:1195:G:C2	3.09	0.41
25:BD:74:GLU:O	25:BD:75:ALA:C	2.59	0.41
22:BA:323:C:H6	22:BA:1205:A:N1	2.18	0.41
53:CA:223:A:C5	53:CA:224:U:C5	3.09	0.41
22:BA:1445:G:C5	22:BA:1446:C:C5	3.09	0.41
33:DL:4:ASN:HD22	33:DL:4:ASN:HA	1.59	0.41
22:DA:2829:A:C2'	22:DA:2830:C:H5'	2.51	0.41
23:BB:2:G:C5	23:BB:119:A:C2	3.08	0.41
2:CC:5:HIS:HA	2:CC:6:PRO:HD2	1.82	0.41
34:BM:53:MET:HE2	34:BM:53:MET:HB2	1.63	0.41
5:AF:67:PRO:O	5:AF:69:GLU:N	2.51	0.41
7:CH:12:ARG:NH1	7:CH:27:PRO:HD2	2.36	0.41
22:BA:1521:G:C6	22:BA:1522:A:C6	3.08	0.41
22:DA:2188:U:C4	22:DA:2189:U:C4	3.08	0.41
42:DU:39:ASN:O	42:DU:40:LEU:C	2.59	0.41
22:DA:2193:G:H2'	22:DA:2194:U:H6	1.86	0.41
25:BD:2:ILE:HD12	25:BD:96:ILE:HD13	2.03	0.41
14:AO:2:LEU:HD22	14:AO:34:GLN:HG2	2.02	0.41
22:BA:1394:U:H2'	22:BA:1395:A:O5'	2.21	0.41
16:CQ:45:VAL:HG11	16:CQ:60:ILE:CG2	2.51	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
27:BF:43:ILE:HG22	27:BF:82:TYR:CE1	2.56	0.41
21:AA:797:C:O2'	21:AA:798:U:H5'	2.21	0.41
22:DA:1902:C:C5	22:DA:1903:G:C8	3.09	0.41
22:DA:2691:C:O2'	22:DA:2692:G:H5'	2.20	0.41
24:BC:114:GLN:O	24:BC:115:ILE:HD12	2.20	0.41
22:BA:2889:C:C2'	22:BA:2890:G:H5'	2.51	0.41
22:BA:1832:C:H2'	22:BA:1833:C:O5'	2.21	0.41
21:AA:1092:A:H2'	21:AA:1093:A:C8	2.55	0.41
22:BA:2776:A:C8	22:BA:2782:G:C5	3.09	0.41
38:BQ:49:ARG:HG3	38:BQ:49:ARG:NH1	2.36	0.41
22:BA:2217:G:H2'	22:BA:2218:G:O4'	2.19	0.41
53:CA:1351:U:O2'	53:CA:1352:C:H5'	2.21	0.41
54:DB:35:C:H3'	54:DB:36:C:H5''	2.02	0.41
53:CA:1309:G:H2'	53:CA:1310:G:H8	1.86	0.41
22:BA:2527:C:H6	22:BA:2527:C:O5'	2.02	0.41
21:AA:1423:G:C5	21:AA:1424:U:C5	3.09	0.41
5:CF:25:TYR:O	5:CF:29:ILE:HD13	2.20	0.41
21:AA:1245:C:H2'	21:AA:1246:A:H8	1.85	0.41
22:DA:2406:A:C2	33:DL:69:ARG:NH2	2.88	0.41
22:BA:1447:C:H2'	22:BA:1448:G:C8	2.56	0.41
22:BA:813:U:C2	22:BA:1195:G:N2	2.89	0.41
24:BC:63:ILE:O	24:BC:64:VAL:HB	2.21	0.41
22:BA:2024:G:OP2	22:BA:2034:U:H4'	2.21	0.41
22:BA:560:C:O2	38:BQ:47:ARG:NH1	2.51	0.41
53:CA:865:A:H2'	53:CA:866:C:O4'	2.21	0.41
21:AA:788:U:H2'	21:AA:789:U:C6	2.56	0.41
22:BA:2258:C:H4'	22:BA:2259:U:OP2	2.21	0.41
38:BQ:23:TYR:O	38:BQ:28:SER:HB3	2.20	0.41
22:DA:2704:C:H2'	22:DA:2705:A:O4'	2.21	0.41
37:BP:102:ARG:O	37:BP:103:THR:CG2	2.69	0.41
37:BP:13:LYS:HE3	37:BP:76:HIS:C	2.41	0.41
53:CA:28:A:H2'	53:CA:29:U:O4'	2.21	0.41
22:BA:2511:U:O4	22:BA:2575:C:N3	2.54	0.41
30:BI:130:GLY:HA2	30:BI:133:ARG:HB3	2.01	0.41
26:DE:44:ARG:HH21	26:DE:44:ARG:HG3	1.86	0.41
3:CD:82:LYS:HD3	3:CD:82:LYS:HA	1.81	0.41
16:CQ:51:GLU:H	16:CQ:51:GLU:HG2	1.52	0.41
18:CS:32:THR:O	18:CS:32:THR:HG23	2.20	0.41
40:BS:103:ILE:HD12	40:BS:103:ILE:N	2.36	0.41
26:BE:31:VAL:HG21	26:BE:104:ALA:CB	2.51	0.41
13:AN:82:LYS:HE2	13:AN:85:GLU:HG3	2.02	0.41
22:BA:1001:A:H2'	22:BA:1002:G:O4'	2.21	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:1439:A:C2	22:DA:1552:A:N1	2.76	0.41
22:DA:833:A:P	33:DL:39:LYS:HZ2	2.44	0.41
21:AA:338:A:H61	21:AA:351:G:H1	1.69	0.41
3:CD:187:ARG:O	3:CD:189:ASP:N	2.53	0.41
3:CD:187:ARG:HG3	3:CD:191:SER:OG	2.21	0.41
10:CK:92:ARG:NH2	10:CK:111:ASP:OD1	2.54	0.41
44:BW:22:VAL:CG2	44:BW:23:LYS:N	2.84	0.41
39:DR:4:VAL:O	39:DR:38:VAL:HG23	2.20	0.41
5:AF:3:HIS:HB2	5:AF:92:THR:HA	2.02	0.41
22:DA:1313:U:O2'	22:DA:1314:C:H5'	2.21	0.41
3:CD:29:THR:O	3:CD:30:LYS:NZ	2.37	0.41
22:DA:1662:U:O2	22:DA:2687:U:H5''	2.21	0.41
4:AE:148:SER:O	4:AE:152:VAL:N	2.54	0.41
2:CC:22:PHE:HD1	9:CJ:13:PHE:CD1	2.39	0.41
9:CJ:40:ILE:HA	9:CJ:41:PRO:HD2	1.84	0.41
10:AK:125:LYS:O	10:AK:126:ARG:CB	2.68	0.41
25:BD:18:ASP:OD1	25:BD:20:VAL:HB	2.20	0.41
41:BT:49:LYS:HB2	41:BT:50:LEU:HD12	2.03	0.41
41:BT:29:THR:H	41:BT:86:THR:HA	1.86	0.41
22:DA:2305:U:H5	22:DA:2312:U:C4	2.39	0.41
22:DA:1028:A:N6	22:DA:1125:G:H2'	2.36	0.41
22:DA:1884:G:N3	22:DA:1884:G:H2'	2.36	0.41
22:DA:1335:C:H2'	22:DA:1336:A:O4'	2.20	0.41
4:AE:109:ALA:C	4:AE:111:ARG:N	2.73	0.41
53:CA:979:C:C6	53:CA:1318:A:N1	2.89	0.41
53:CA:1366:C:O2'	53:CA:1367:C:H6	2.04	0.41
4:CE:80:LEU:HB3	4:CE:97:PRO:HB3	2.02	0.41
4:CE:131:ASN:HA	4:CE:132:PRO:HD2	1.85	0.41
12:CM:13:HIS:HA	12:CM:43:LYS:HA	2.02	0.41
1:AB:14:HIS:O	1:AB:16:GLY:N	2.54	0.41
22:DA:563:A:N3	38:DQ:36:GLN:NE2	2.68	0.41
32:DK:16:ALA:HB1	32:DK:45:GLU:HG3	2.03	0.41
1:CB:96:LEU:N	1:CB:99:MET:HE3	2.33	0.41
25:BD:117:GLY:C	25:BD:118:PHE:CD1	2.95	0.41
22:DA:142:A:C2'	22:DA:143:C:C6	2.95	0.41
26:BE:147:LEU:O	26:BE:148:ILE:C	2.58	0.41
22:DA:1254:A:N1	26:DE:77:ILE:HD12	2.36	0.41
2:CC:53:ARG:HB2	2:CC:53:ARG:NH1	2.36	0.41
22:DA:664:G:H4'	22:DA:941:A:P	2.61	0.41
25:BD:54:ALA:H	25:BD:77:ARG:H	1.68	0.41
22:DA:2663:G:H2'	22:DA:2664:G:H8	1.86	0.41
21:AA:642:A:C4	21:AA:643:C:C5	3.09	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
53:CA:1006:G:N2	53:CA:1007:U:H1'	2.36	0.41
44:DW:49:ASN:OD1	44:DW:80:SER:HA	2.21	0.41
22:DA:1868:C:N4	22:DA:1869:G:O6	2.54	0.41
43:DV:41:GLU:HG2	43:DV:42:LEU:N	2.36	0.41
16:AQ:66:LEU:O	16:AQ:67:SER:HB3	2.20	0.41
47:BZ:23:LEU:HD21	47:BZ:53:MET:HE1	2.03	0.41
22:BA:2637:U:H2'	22:BA:2638:G:O4'	2.21	0.41
37:DP:50:ARG:CA	37:DP:57:ALA:O	2.68	0.41
22:DA:763:G:H8	22:DA:763:G:H2'	1.46	0.41
53:CA:513:C:C2'	53:CA:514:C:C6	3.04	0.41
2:CC:4:VAL:HG11	2:CC:9:ILE:HD13	2.02	0.41
29:BH:5:LEU:HD21	29:BH:12:LEU:HD12	2.03	0.41
28:BG:139:VAL:O	28:BG:140:ILE:C	2.56	0.41
1:AB:98:GLY:HA2	1:AB:101:THR:HG22	2.02	0.41
12:AM:10:ASP:CG	12:AM:44:ILE:HB	2.42	0.41
33:BL:28:GLY:O	33:BL:29:LYS:O	2.39	0.41
3:AD:196:GLU:CA	3:AD:199:ILE:HG22	2.47	0.41
22:BA:1996:C:H5	32:BK:32:TYR:OH	2.03	0.41
22:DA:2627:G:H2'	22:DA:2628:C:C6	2.56	0.41
22:DA:2267:A:H8	22:DA:2267:A:H2'	1.23	0.41
20:CU:9:GLU:HB3	20:CU:10:PRO:HD2	2.02	0.41
2:CC:133:MET:HG2	2:CC:133:MET:H	1.76	0.41
22:BA:407:G:O2'	22:BA:408:G:H5'	2.21	0.41
22:BA:28:A:H2'	22:BA:29:U:C6	2.52	0.41
33:DL:121:THR:OG1	33:DL:141:LYS:HB3	2.20	0.41
25:BD:72:GLY:O	25:BD:73:VAL:O	2.38	0.41
21:AA:75:G:H2'	21:AA:76:G:O4'	2.21	0.41
12:CM:82:LEU:HD12	12:CM:82:LEU:N	2.36	0.41
21:AA:270:A:H2'	21:AA:271:C:H6	1.83	0.41
36:BO:67:ASN:O	36:BO:68:LYS:C	2.59	0.41
24:BC:259:ASN:ND2	24:BC:262:THR:CG2	2.84	0.41
22:DA:155:A:H2'	22:DA:156:A:C8	2.56	0.41
22:BA:1946:U:C2	22:BA:1947:C:C5	3.09	0.41
37:BP:19:PHE:HB2	37:BP:20:ARG:H	1.50	0.41
37:DP:24:THR:O	37:DP:25:VAL:C	2.59	0.41
22:BA:1274:A:H2	22:BA:1644:C:O2	2.04	0.41
3:AD:2:ARG:NH2	3:AD:114:ARG:HD3	2.35	0.41
47:BZ:4:ILE:HD13	47:BZ:4:ILE:HG23	1.83	0.41
53:CA:158:G:N2	53:CA:162:A:N6	2.68	0.41
22:BA:41:C:H2'	22:BA:42:A:O5'	2.20	0.41
29:BH:30:LEU:HD23	29:BH:30:LEU:HA	1.82	0.41
27:DF:103:ILE:H	27:DF:107:VAL:CG1	2.34	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:BA:2243:U:H2'	22:BA:2244:U:H6	1.85	0.41
22:DA:357:C:H2'	22:DA:358:U:C6	2.53	0.41
3:CD:141:VAL:HG12	3:CD:142:VAL:N	2.36	0.41
8:CI:129:ARG:CZ	8:CI:129:ARG:HA	2.51	0.41
53:CA:1432:G:H1'	53:CA:1468:A:H61	1.86	0.41
24:BC:211:ARG:HA	24:BC:211:ARG:HD2	1.45	0.41
22:DA:1197:G:H2'	22:DA:1198:U:H6	1.86	0.41
49:B1:3:GLY:O	49:B1:4:ILE:HG12	2.21	0.41
27:DF:174:PHE:CG	27:DF:175:PRO:HD2	2.56	0.41
22:DA:1455:G:H2'	22:DA:1456:G:C8	2.56	0.41
40:BS:33:LEU:CD1	40:BS:48:LYS:HD3	2.51	0.41
22:BA:1583:A:N3	22:BA:1583:A:O4'	2.54	0.41
22:BA:2468:A:HO2'	22:BA:2469:A:P	2.43	0.41
22:BA:2469:A:C6	22:BA:2482:A:C8	3.09	0.41
14:AO:3:SER:OG	14:AO:5:GLU:HG2	2.20	0.41
31:DJ:72:LYS:HG3	31:DJ:89:PHE:HB2	2.03	0.41
33:DL:85:VAL:O	33:DL:85:VAL:HG22	2.21	0.41
22:BA:735:A:H3'	22:BA:736:C:H6	1.86	0.41
14:AO:81:ILE:C	14:AO:83:ARG:N	2.72	0.41
10:CK:96:ILE:HD13	10:CK:109:ILE:HD13	2.03	0.41
22:DA:2087:G:H2'	22:DA:2088:A:H8	1.86	0.41
51:D3:9:ALA:HB1	51:D3:13:PHE:HD2	1.84	0.41
47:DZ:38:GLU:CD	47:DZ:39:ASP:H	2.23	0.41
22:BA:108:G:O2'	22:BA:109:C:H5'	2.21	0.41
31:BJ:105:VAL:HG23	31:BJ:109:LEU:HD11	2.02	0.41
37:BP:22:GLY:O	37:BP:109:ILE:HD11	2.21	0.41
22:DA:543:G:N2	22:DA:551:G:C4	2.88	0.41
22:BA:2337:G:C2	22:BA:2338:C:C6	3.09	0.41
21:AA:1050:G:C2	21:AA:1209:C:O2	2.74	0.41
25:DD:60:VAL:O	25:DD:60:VAL:HG13	2.20	0.41
42:DU:48:VAL:HG22	42:DU:50:ALA:H	1.86	0.41
22:BA:996:A:C2	22:BA:997:G:C8	3.09	0.40
38:BQ:91:ARG:HH12	39:BR:10:LYS:HB3	1.84	0.40
39:BR:49:ILE:CB	39:BR:51:VAL:O	2.69	0.40
22:BA:1059:G:C2	22:BA:1080:A:C4	3.09	0.40
22:DA:603:A:H4'	22:DA:604:G:O5'	2.21	0.40
21:AA:67:C:OP1	21:AA:199:A:H5''	2.21	0.40
28:BG:86:LEU:HB3	28:BG:162:ARG:O	2.21	0.40
28:BG:86:LEU:H	28:BG:86:LEU:HD12	1.82	0.40
9:CJ:80:THR:C	9:CJ:84:VAL:HG22	2.40	0.40
22:BA:1327:A:N6	22:BA:1328:A:C2	2.89	0.40
22:DA:2095:A:C2	22:DA:2195:U:C2	3.09	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:AK:125:LYS:HD3	10:AK:125:LYS:N	2.36	0.40
25:DD:119:ALA:CB	25:DD:163:GLY:C	2.89	0.40
53:CA:80:A:N1	53:CA:81:A:O2'	2.55	0.40
53:CA:79:G:N2	53:CA:91:U:O2	2.54	0.40
4:CE:110:MET:O	4:CE:114:LEU:HD12	2.20	0.40
4:CE:132:PRO:C	4:CE:134:ASN:N	2.74	0.40
35:DN:57:THR:O	35:DN:80:PHE:HD1	2.04	0.40
26:DE:60:TRP:C	26:DE:62:GLN:H	2.23	0.40
22:BA:1671:U:H1'	25:BD:134:HIS:CE1	2.56	0.40
22:DA:191:A:N6	22:DA:203:A:H2'	2.36	0.40
22:DA:2882:A:H5'	35:DN:96:ARG:HD3	2.02	0.40
44:DW:9:THR:HG23	44:DW:10:ARG:N	2.36	0.40
22:DA:2849:U:O4	22:DA:2867:G:C8	2.74	0.40
22:DA:1500:G:C6	22:DA:1501:G:C5	3.09	0.40
3:AD:201:GLU:O	21:AA:8:A:N6	2.52	0.40
27:BF:131:VAL:O	27:BF:132:ARG:C	2.59	0.40
24:DC:141:HIS:HB3	24:DC:190:THR:HB	2.02	0.40
22:DA:2612:C:O2	48:D0:1:ALA:HB2	2.21	0.40
27:DF:48:LEU:HB2	27:DF:149:ARG:NH2	2.36	0.40
22:DA:585:G:H2'	22:DA:1254:A:H61	1.86	0.40
1:CB:203:ASP:C	1:CB:203:ASP:OD2	2.59	0.40
22:DA:976:G:O6	22:DA:988:A:C2	2.74	0.40
22:BA:1926:U:H1'	22:BA:1929:G:C6	2.57	0.40
53:CA:1433:A:OP1	37:DP:105:LYS:HE2	2.20	0.40
21:AA:109:A:C6	21:AA:326:G:C6	3.09	0.40
22:DA:962:G:O2'	22:DA:963:U:O5'	2.39	0.40
28:DG:117:PRO:HG2	28:DG:143:VAL:HG11	2.03	0.40
21:AA:36:C:O2'	21:AA:501:C:OP1	2.39	0.40
25:DD:116:LYS:HA	25:DD:116:LYS:HD3	1.97	0.40
21:AA:1492:A:H2'	21:AA:1493:A:H5''	2.03	0.40
53:CA:300:A:C2	53:CA:566:G:O6	2.74	0.40
19:CT:64:GLY:O	19:CT:67:HIS:HB2	2.21	0.40
2:CC:8:GLY:HA2	2:CC:11:LEU:HG	2.02	0.40
28:BG:115:GLN:HG2	28:BG:115:GLN:O	2.21	0.40
29:BH:72:ILE:HG12	29:BH:72:ILE:O	2.21	0.40
6:AG:3:ARG:NH1	6:AG:3:ARG:HB2	2.35	0.40
24:BC:190:THR:HG22	24:BC:191:LEU:N	2.34	0.40
29:DH:70:GLU:HB2	29:DH:71:LYS:HD2	2.02	0.40
22:BA:1075:C:H2'	22:BA:1076:C:C6	2.56	0.40
1:CB:20:ARG:NE	1:CB:20:ARG:HA	2.36	0.40
2:CC:129:PHE:O	2:CC:133:MET:HG2	2.21	0.40
22:BA:2274:A:H5''	22:BA:2275:C:OP2	2.21	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
24:DC:166:ARG:HB2	24:DC:171:VAL:CG2	2.49	0.40
22:BA:28:A:O2'	22:BA:29:U:H5'	2.20	0.40
13:AN:15:LEU:O	13:AN:17:ASP:N	2.54	0.40
22:DA:1259:G:H2'	22:DA:1260:A:C8	2.56	0.40
21:AA:903:G:C6	21:AA:904:U:C4	3.09	0.40
12:AM:4:ALA:H	12:AM:56:ARG:HG3	1.86	0.40
3:AD:93:LEU:HD23	3:AD:93:LEU:HA	1.72	0.40
1:AB:118:THR:O	1:AB:119:GLN:CB	2.69	0.40
6:CG:77:ARG:HD3	6:CG:77:ARG:HA	1.73	0.40
29:DH:82:SER:O	29:DH:83:LYS:HB3	2.21	0.40
29:DH:50:ARG:HA	29:DH:53:GLU:CB	2.52	0.40
32:BK:59:LYS:HG3	32:BK:89:ASN:ND2	2.34	0.40
53:CA:36:C:H2'	53:CA:37:U:O4'	2.21	0.40
1:AB:80:LYS:HG3	1:AB:90:PHE:HE1	1.86	0.40
11:AL:87:LYS:HB2	11:AL:87:LYS:NZ	2.35	0.40
53:CA:369:G:H2'	53:CA:370:C:H6	1.84	0.40
21:AA:923:A:O2'	21:AA:924:C:H5'	2.21	0.40
43:BV:43:ASP:OD1	43:BV:43:ASP:C	2.60	0.40
22:DA:167:A:C2	22:DA:168:G:H1'	2.56	0.40
22:BA:2771:C:H2'	22:BA:2772:C:H6	1.86	0.40
29:BH:78:VAL:CG1	29:BH:145:ASN:HB3	2.50	0.40
21:AA:1442:G:C5	21:AA:1443:C:C5	3.09	0.40
1:AB:132:GLU:O	1:AB:136:ARG:CB	2.69	0.40
22:DA:693:A:C5	22:DA:694:U:C4	3.09	0.40
15:AP:46:LYS:HB2	15:AP:47:GLU:H	1.60	0.40
33:DL:40:SER:O	33:DL:41:ARG:C	2.59	0.40
22:DA:1527:G:H5''	22:DA:1528:A:OP1	2.21	0.40
35:DN:10:LEU:HA	35:DN:10:LEU:HD13	1.85	0.40
9:AJ:67:ILE:CG1	13:AN:95:LEU:HD13	2.51	0.40
22:BA:1445:G:H2'	22:BA:1446:C:C6	2.56	0.40
53:CA:855:U:OP2	53:CA:871:U:N3	2.53	0.40
3:CD:167:PRO:HB3	3:CD:169:TRP:CH2	2.56	0.40
22:BA:649:G:H2'	22:BA:650:C:H6	1.85	0.40
27:BF:109:ARG:HH11	27:BF:138:PRO:CG	2.34	0.40
22:DA:289:G:H2'	22:DA:290:U:O4'	2.21	0.40
53:CA:583:A:H3'	53:CA:584:G:H8	1.86	0.40
22:BA:1166:G:C2'	22:BA:1167:C:H5'	2.50	0.40
21:AA:604:G:C2	21:AA:635:A:C2	3.08	0.40
8:CI:85:ALA:HA	8:CI:88:GLU:OE1	2.21	0.40
3:AD:164:ARG:O	3:AD:165:GLU:C	2.59	0.40
22:DA:841:G:O2'	22:DA:842:U:H5'	2.20	0.40
26:DE:59:PRO:HB2	26:DE:67:ARG:NH2	2.37	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
27:DF:4:HIS:CE1	27:DF:96:TRP:CZ2	3.09	0.40
22:BA:934:U:H2'	22:BA:935:C:C6	2.56	0.40
7:CH:73:SER:H	7:CH:129:ALA:HB3	1.86	0.40
22:BA:125:A:C6	50:B2:10:LEU:HD13	2.56	0.40
28:BG:175:LYS:HD3	28:BG:175:LYS:HA	1.88	0.40
8:AI:27:ILE:N	8:AI:27:ILE:HD12	2.36	0.40
2:CC:124:GLU:CD	2:CC:124:GLU:N	2.75	0.40
22:DA:145:C:H6	22:DA:145:C:O5'	2.03	0.40
22:DA:2463:C:H6	22:DA:2463:C:O5'	2.03	0.40
22:BA:1122:G:N3	22:BA:1122:G:H2'	2.35	0.40
22:DA:676:A:H2	22:DA:2069:G:N3	2.20	0.40
22:BA:252:G:N2	22:BA:253:C:H1'	2.36	0.40
38:BQ:63:ARG:NH2	38:BQ:96:ASP:CA	2.84	0.40
38:BQ:63:ARG:CZ	38:BQ:96:ASP:CA	2.94	0.40
44:DW:44:PHE:HB2	44:DW:78:PHE:H	1.85	0.40
21:AA:585:G:C6	21:AA:586:C:C4	3.10	0.40
22:BA:855:G:H21	44:BW:23:LYS:CB	2.27	0.40
22:BA:1074:G:N3	22:BA:1074:G:H2'	2.36	0.40
22:BA:1079:C:C2	22:BA:1080:A:C8	3.09	0.40
22:DA:602:A:H1'	22:DA:605:G:H5''	2.02	0.40
22:DA:2617:U:C2'	22:DA:2618:G:H5'	2.52	0.40
28:BG:112:VAL:O	28:BG:113:ASP:HB2	2.21	0.40
16:AQ:12:VAL:HG11	16:AQ:21:VAL:H	1.86	0.40
4:AE:156:ARG:HH12	7:AH:113:ARG:HH12	1.69	0.40
34:BM:33:LEU:HD22	34:BM:128:THR:HB	2.03	0.40
8:CI:69:GLY:H	53:CA:1250:A:H4'	1.87	0.40
22:DA:2307:G:O2'	22:DA:2308:G:C8	2.69	0.40
25:BD:12:THR:CG2	25:BD:13:ARG:H	2.34	0.40
22:DA:1331:G:N3	22:DA:1333:G:C8	2.89	0.40
34:DM:35:ALA:HB2	34:DM:100:LYS:O	2.20	0.40
1:AB:185:ILE:O	1:AB:185:ILE:HG12	2.21	0.40
24:BC:90:ILE:HG23	24:BC:102:TYR:CD1	2.56	0.40
40:DS:103:ILE:HD12	40:DS:103:ILE:N	2.36	0.40
22:DA:2148:G:O2'	22:DA:2149:U:C5	2.73	0.40
42:DU:90:LYS:HB2	42:DU:92:VAL:CG1	2.51	0.40
22:DA:855:G:C2'	44:DW:23:LYS:HD3	2.51	0.40
28:DG:53:PRO:HG3	28:DG:61:TRP:CE2	2.57	0.40
37:BP:33:GLU:OE1	37:BP:33:GLU:C	2.59	0.40
35:BN:70:THR:CG2	35:BN:75:ILE:HD11	2.52	0.40
6:CG:9:ARG:NH2	53:CA:1346:A:N1	2.68	0.40
28:BG:9:VAL:HG13	28:BG:9:VAL:O	2.21	0.40
27:BF:84:ILE:O	27:BF:84:ILE:HG23	2.22	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:976:G:O2'	22:DA:977:G:H5'	2.21	0.40
24:BC:15:VAL:HA	24:BC:203:VAL:HG11	2.03	0.40
25:BD:9:VAL:O	25:BD:197:THR:HG23	2.22	0.40
22:DA:726:G:C8	22:DA:726:G:OP2	2.74	0.40
22:DA:726:G:OP2	22:DA:726:G:H8	2.03	0.40
12:CM:64:VAL:CG1	12:CM:65:GLU:H	2.25	0.40
21:AA:1492:A:H2'	21:AA:1492:A:N3	2.36	0.40
2:AC:153:SER:CB	2:AC:164:THR:HG22	2.51	0.40
22:DA:2230:G:H2'	22:DA:2231:U:H6	1.83	0.40
22:DA:1609:A:O2'	22:DA:1610:A:C5'	2.69	0.40
7:AH:8:ASP:O	7:AH:12:ARG:HB2	2.22	0.40
30:BI:41:PHE:N	30:BI:68:PHE:HZ	2.19	0.40
53:CA:148:G:C2	53:CA:149:A:C4	3.09	0.40
22:DA:371:A:C4	22:DA:373:U:O4	2.75	0.40
53:CA:1167:A:O2'	53:CA:1168:U:OP1	2.33	0.40
45:DX:76:LYS:HB2	45:DX:76:LYS:HE3	1.70	0.40
35:BN:64:ARG:O	35:BN:67:PHE:HB3	2.22	0.40
35:BN:63:ARG:HA	35:BN:80:PHE:CE2	2.57	0.40
26:BE:190:ALA:O	26:BE:192:ALA:N	2.54	0.40
29:BH:134:VAL:HG23	29:BH:138:VAL:HG23	2.03	0.40
29:BH:131:SER:CB	29:BH:139:PHE:HD2	2.34	0.40
53:CA:818:G:C3'	53:CA:819:A:C5'	2.99	0.40
40:BS:65:ASP:C	40:BS:67:ASP:H	2.24	0.40
2:AC:35:ASP:OD1	2:AC:56:ILE:HG21	2.22	0.40
11:CL:34:THR:HG22	11:CL:35:ARG:HE	1.86	0.40
2:AC:128:MET:HE2	2:AC:128:MET:HB2	1.91	0.40
22:DA:1792:G:H1	22:DA:1828:G:H1'	1.86	0.40
28:DG:152:ARG:HD2	28:DG:153:PRO:CD	2.51	0.40
18:CS:14:LEU:C	18:CS:14:LEU:HD12	2.41	0.40
22:BA:324:A:N6	22:BA:339:U:H5'	2.36	0.40
22:DA:211:C:H2'	22:DA:212:G:O4'	2.21	0.40
19:CT:9:ARG:HG3	53:CA:108:G:O6	2.22	0.40
22:DA:422:A:C2'	22:DA:423:A:C8	3.02	0.40
28:DG:11:PRO:O	28:DG:14:VAL:HG22	2.21	0.40
3:CD:148:ALA:HB1	3:CD:151:GLN:HE22	1.86	0.40
22:DA:2185:U:H6	22:DA:2185:U:O5'	2.05	0.40
39:DR:62:GLU:CD	39:DR:97:LYS:HD2	2.41	0.40
37:DP:25:VAL:HG23	37:DP:25:VAL:O	2.21	0.40
32:BK:99:ILE:CG2	32:BK:119:ALA:HA	2.51	0.40
22:BA:2682:A:H8	25:BD:11:MET:CG	2.35	0.40
22:BA:1795:C:H2'	22:BA:1796:U:C6	2.57	0.40
29:DH:53:GLU:C	29:DH:55:GLU:H	2.24	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
26:BE:8:ALA:O	26:BE:9:GLN:C	2.60	0.40
53:CA:1175:G:O2'	53:CA:1176:A:H5'	2.20	0.40
27:DF:102:LEU:C	27:DF:103:ILE:HD12	2.42	0.40
27:DF:102:LEU:HD22	27:DF:102:LEU:N	2.36	0.40
22:BA:627:A:C4	22:BA:637:A:N7	2.88	0.40
43:DV:48:MET:SD	43:DV:86:LEU:HG	2.61	0.40
13:CN:15:LEU:O	13:CN:54:SER:HB2	2.21	0.40
6:AG:144:ALA:C	6:AG:146:ALA:N	2.75	0.40
18:CS:62:THR:HG22	18:CS:63:ASP:N	2.34	0.40
22:DA:2106:U:C4	22:DA:2107:G:N7	2.89	0.40
23:BB:94:A:C2'	23:BB:95:U:H5'	2.51	0.40
3:CD:4:LEU:HA	3:CD:4:LEU:HD23	1.68	0.40
53:CA:168:G:H2'	53:CA:169:C:H5'	2.02	0.40
37:DP:9:GLN:HB3	37:DP:12:MET:CE	2.51	0.40
21:AA:369:G:OP2	21:AA:388:G:N1	2.48	0.40
53:CA:57:G:C5	53:CA:58:C:C4	3.09	0.40
21:AA:695:A:H61	21:AA:797:C:H1'	1.86	0.40
22:BA:2578:G:N7	25:BD:145:SER:HB2	2.36	0.40
53:CA:761:G:C6	53:CA:762:U:C4	3.10	0.40
22:BA:1606:C:HO2'	22:BA:1607:C:P	2.44	0.40
21:AA:155:A:H2'	21:AA:156:C:C6	2.56	0.40
53:CA:116:A:H2'	53:CA:117:G:H8	1.85	0.40
22:BA:736:C:C2	22:BA:737:C:C5	3.09	0.40
22:BA:553:G:H2'	22:BA:554:U:O4'	2.21	0.40
53:CA:775:G:H2'	53:CA:776:G:H5'	2.03	0.40
39:DR:80:ARG:HA	39:DR:80:ARG:HE	1.86	0.40
53:CA:865:A:C2	53:CA:918:A:H4'	2.56	0.40
22:BA:223:A:O4'	22:BA:421:C:H4'	2.20	0.40
25:BD:142:VAL:HB	25:BD:143:PRO:CD	2.50	0.40
22:BA:749:A:H4'	22:BA:1271:G:N3	2.36	0.40
57:BA:3292:HOH:O	26:BE:98:LYS:HE2	2.20	0.40
22:BA:1827:U:H2'	22:BA:1828:G:O4'	2.21	0.40
27:BF:142:TYR:HA	27:BF:145:VAL:HG13	2.03	0.40
43:DV:21:ARG:C	43:DV:23:ALA:H	2.24	0.40
22:DA:814:C:C2	22:DA:1194:A:C2	3.10	0.40
22:BA:1208:C:C4	22:BA:1209:U:C4	3.10	0.40
6:AG:22:LEU:HD11	6:AG:46:LEU:CD2	2.51	0.40
21:AA:1159:U:O4'	21:AA:1159:U:O2	2.39	0.40
22:DA:1896:G:N3	22:DA:1896:G:H2'	2.36	0.40
5:CF:20:GLY:HA2	5:CF:23:GLU:HG2	2.04	0.40
27:BF:127:TYR:O	27:BF:128:SER:HB2	2.21	0.40
33:BL:91:ASP:O	33:BL:93:ASN:O	2.39	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
49:D1:3:GLY:C	49:D1:5:ARG:H	2.24	0.40
3:CD:2:ARG:NE	3:CD:114:ARG:HD3	2.36	0.40
21:AA:754:C:H3'	21:AA:755:G:H5'	2.03	0.40
38:BQ:78:PHE:CE2	38:BQ:109:VAL:HA	2.57	0.40
45:BX:42:GLU:OE2	45:BX:44:ARG:NH2	2.53	0.40
44:BW:39:GLN:NE2	44:BW:43:LYS:N	2.68	0.40
22:BA:1059:G:C6	22:BA:1080:A:N1	2.89	0.40
38:DQ:75:TYR:OH	38:DQ:92:LYS:HE3	2.22	0.40
37:DP:19:PHE:N	37:DP:19:PHE:HD2	2.19	0.40
53:CA:1124:G:O2'	53:CA:1127:G:O6	2.39	0.40
53:CA:1255:G:H2'	53:CA:1278:G:H21	1.85	0.40
41:DT:38:ALA:HB1	41:DT:81:LYS:HZ3	1.86	0.40
22:DA:784:G:O6	24:DC:227:VAL:HG11	2.21	0.40
22:DA:2209:G:C4	22:DA:2210:U:C5	3.09	0.40
22:BA:1177:G:C5	22:BA:1178:C:C5	3.09	0.40
22:DA:1057:A:C8	22:DA:1086:A:C8	3.09	0.40
22:DA:1328:A:H2'	22:DA:1330:C:C5	2.56	0.40
1:AB:163:ILE:CG2	1:AB:164:ASP:N	2.74	0.40
22:DA:489:G:H4'	22:DA:490:C:OP1	2.21	0.40
22:BA:870:U:C2'	22:BA:871:U:H5'	2.50	0.40
22:DA:1560:G:N3	22:DA:1560:G:H2'	2.37	0.40
22:DA:301:G:C5	22:DA:302:C:N4	2.90	0.40
42:DU:96:LYS:O	42:DU:97:SER:HB3	2.21	0.40
26:BE:164:LEU:CB	26:BE:167:VAL:HG12	2.50	0.40
1:AB:20:ARG:HB3	1:AB:21:TYR:H	1.61	0.40
1:AB:32:GLY:O	1:AB:38:HIS:HB3	2.22	0.40
52:B4:7:VAL:O	52:B4:35:GLN:OE1	2.39	0.40
22:DA:799:G:O6	22:DA:800:A:C6	2.74	0.40
37:BP:85:VAL:CG1	37:BP:86:LYS:N	2.77	0.40
22:DA:55:G:N1	22:DA:116:C:C4	2.89	0.40
14:CO:44:GLU:O	14:CO:45:HIS:C	2.59	0.40
22:DA:2018:G:O2'	22:DA:2019:A:H5'	2.21	0.40
22:DA:2848:G:C4	22:DA:2849:U:H5	2.39	0.40
22:DA:1014:A:N1	22:DA:1149:G:C6	2.89	0.40
21:AA:1221:G:H2'	21:AA:1222:G:C8	2.54	0.40
22:DA:595:C:O2	22:DA:663:G:C2	2.74	0.40
24:BC:131:MET:O	24:BC:132:ARG:C	2.60	0.40
53:CA:319:G:N2	53:CA:335:C:C2	2.89	0.40
28:BG:30:GLY:O	28:BG:78:VAL:HG12	2.22	0.40
53:CA:949:A:H4'	53:CA:1364:U:O4	2.21	0.40
33:BL:57:LEU:HD22	51:B3:53:ASP:HB3	2.04	0.40
50:D2:6:GLN:HA	50:D2:7:PRO:HD2	1.84	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:1675:C:H2'	22:DA:1676:A:C8	2.55	0.40
30:BI:52:LEU:HD11	30:BI:81:LYS:HE2	2.03	0.40
47:BZ:15:ARG:HG3	47:BZ:15:ARG:HH11	1.85	0.40
32:BK:63:VAL:HG12	32:BK:64:ARG:HG3	2.03	0.40
22:BA:1747:U:H2'	22:BA:1748:C:H6	1.85	0.40
46:BY:39:GLN:HB2	46:BY:41:HIS:NE2	2.36	0.40
12:CM:89:ARG:HD3	12:CM:94:LEU:O	2.21	0.40
53:CA:1014:A:C2	53:CA:1219:A:H1'	2.56	0.40
22:BA:1842:G:O4'	24:BC:242:HIS:HE1	2.05	0.40
33:DL:48:ARG:HG3	33:DL:48:ARG:HH11	1.86	0.40
36:DO:11:ALA:O	36:DO:15:ARG:HG3	2.21	0.40
22:BA:1798:U:OP1	24:BC:255:LYS:O	2.40	0.40
1:CB:116:LEU:HD13	1:CB:140:LEU:HB2	2.02	0.40
53:CA:1285:A:O2'	53:CA:1286:U:H5'	2.21	0.40
12:CM:75:SER:HB2	12:CM:79:LEU:HG	2.04	0.40
12:CM:77:LYS:C	12:CM:77:LYS:HD3	2.42	0.40
11:AL:2:THR:HG22	11:AL:4:ASN:N	2.37	0.40
53:CA:216:U:C5'	53:CA:464:U:H4'	2.51	0.40
40:DS:51:LEU:HG	40:DS:55:ILE:HD13	2.02	0.40
22:DA:1049:C:O2	22:DA:1113:U:H4'	2.20	0.40
31:DJ:80:HIS:O	31:DJ:81:ILE:C	2.60	0.40
22:DA:579:G:N2	22:DA:1262:A:C4	2.89	0.40
22:BA:2733:A:O5'	22:BA:2733:A:C8	2.66	0.40
22:DA:224:U:OP2	22:DA:408:G:N2	2.49	0.40
40:DS:86:MET:HE2	40:DS:87:PRO:HD2	2.02	0.40
24:DC:80:LEU:HD21	24:DC:109:LEU:HB3	2.03	0.40
22:DA:2405:G:C2'	22:DA:2412:A:H61	2.34	0.40
25:BD:25:THR:OG1	25:BD:191:GLY:HA2	2.20	0.40
18:AS:17:LYS:NZ	21:AA:1014:A:OP1	2.52	0.40
53:CA:162:A:H3'	53:CA:163:C:H6	1.86	0.40
26:BE:175:ILE:CG2	26:BE:175:ILE:O	2.68	0.40
22:BA:2244:U:C2'	22:BA:2245:U:H5'	2.52	0.40
29:DH:76:GLU:OE1	29:DH:102:ALA:HB2	2.22	0.40
34:DM:135:VAL:HB	34:DM:136:MET:H	1.67	0.40
22:BA:1565:C:O2'	22:BA:1566:A:P	2.78	0.40
27:DF:37:MET:HE3	27:DF:56:LEU:HB2	2.02	0.40
22:DA:2697:G:H2'	22:DA:2698:U:O4'	2.21	0.40
45:BX:29:LEU:HD23	45:BX:29:LEU:N	2.35	0.40
22:BA:988:A:C2'	22:BA:989:G:O5'	2.69	0.40
18:AS:23:GLU:HG3	18:AS:23:GLU:O	2.21	0.40
22:DA:1532:A:N1	22:DA:1540:G:C6	2.90	0.40
17:AR:39:VAL:HA	17:AR:40:PRO:HD2	1.78	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:BA:2394:C:H5''	33:BL:63:LYS:HE2	2.03	0.40
22:BA:851:C:O2'	47:BZ:45:GLY:HA3	2.22	0.40
22:BA:2663:G:H2'	22:BA:2664:G:H8	1.86	0.40
22:DA:735:A:C6	22:DA:736:C:C2	3.10	0.40
21:AA:1170:A:H2'	21:AA:1171:A:O4'	2.22	0.40
35:DN:83:LEU:CD1	35:DN:86:ARG:HH21	2.34	0.40
22:BA:1334:G:O2'	22:BA:1335:C:H5'	2.22	0.40
33:BL:9:ALA:O	33:BL:12:SER:HB3	2.22	0.40
4:AE:71:ILE:HD13	4:AE:144:GLU:HB2	2.04	0.40
53:CA:872:A:C5	53:CA:874:G:C8	3.10	0.40
22:DA:2531:A:C5'	28:DG:156:TYR:CZ	3.05	0.40
25:DD:187:LEU:HD12	25:DD:188:LEU:H	1.87	0.40
18:AS:80:ARG:HG3	18:AS:80:ARG:O	2.21	0.40
22:BA:2783:U:H2'	22:BA:2784:U:H6	1.87	0.40
21:AA:292:G:C2	21:AA:309:A:C2	3.10	0.40
22:BA:1555:G:H2'	22:BA:1556:C:C6	2.56	0.40
53:CA:1403:C:H2'	53:CA:1404:C:H6	1.87	0.40
25:DD:175:LEU:O	25:DD:176:ASP:HB2	2.21	0.40
22:DA:2252:G:H2'	22:DA:2253:G:O4'	2.21	0.40
26:BE:69:ARG:HB2	26:BE:70:SER:H	1.60	0.40
26:DE:194:LYS:O	26:DE:197:GLU:HB3	2.21	0.40
22:BA:718:A:H2'	22:BA:719:C:H5'	2.03	0.40
15:CP:10:GLY:HA2	53:CA:624:C:O2'	2.20	0.40
35:BN:13:ASN:O	35:BN:14:SER:C	2.60	0.40
26:BE:178:VAL:O	26:BE:181:ILE:N	2.52	0.40
39:BR:80:ARG:C	39:BR:81:LYS:HD3	2.42	0.40
12:AM:102:LYS:O	12:AM:103:THR:HG23	2.20	0.40
10:CK:113:THR:HA	10:CK:114:PRO:HD2	1.94	0.40
48:D0:42:ILE:HD13	48:D0:42:ILE:HA	1.75	0.40
42:BU:67:SER:OG	42:BU:67:SER:O	2.37	0.40
15:AP:76:LYS:HD3	15:AP:76:LYS:HA	1.79	0.40
35:BN:30:ARG:HE	35:BN:30:ARG:HB2	1.44	0.40
22:BA:1031:G:H4'	52:B4:6:SER:HB2	2.04	0.40
21:AA:1333:A:H2'	21:AA:1334:G:O4'	2.21	0.40
38:BQ:91:ARG:HB2	38:BQ:94:LEU:HB2	2.03	0.40
54:DB:67:G:O2'	54:DB:68:C:C6	2.61	0.40
38:DQ:87:VAL:O	38:DQ:88:GLU:O	2.38	0.40
22:DA:647:G:C4	22:DA:648:G:N7	2.90	0.40
10:CK:70:ALA:HB1	10:CK:104:PHE:HZ	1.83	0.40
6:CG:140:VAL:C	6:CG:142:ARG:H	2.24	0.40
53:CA:1182:G:C3'	53:CA:1183:U:H5'	2.50	0.40
41:BT:24:MET:O	41:BT:24:MET:HG3	2.22	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
41:BT:13:ALA:O	41:BT:32:LEU:HB2	2.21	0.40
22:DA:2516:A:H2'	22:DA:2517:C:O4'	2.21	0.40
22:DA:1857:G:N3	22:DA:1884:G:C2	2.90	0.40
34:DM:34:LYS:O	34:DM:128:THR:HB	2.22	0.40
24:BC:107:LYS:O	24:BC:109:LEU:HD13	2.22	0.40
22:DA:2149:U:O2'	22:DA:2150:C:O4'	2.40	0.40
22:DA:2843:G:N2	22:DA:2875:C:C2	2.90	0.40
22:DA:299:A:C2	22:DA:319:G:N3	2.90	0.40
22:DA:319:G:H2'	22:DA:320:A:O4'	2.21	0.40
13:CN:30:ILE:O	13:CN:40:ARG:HA	2.21	0.40
22:BA:2197:U:OP1	3:CD:150:LYS:CE	2.69	0.40
22:BA:548:G:H3'	22:BA:548:G:H8	1.87	0.40
22:DA:396:G:O2'	22:DA:397:U:O5'	2.39	0.40
45:DX:6:VAL:HG12	45:DX:50:VAL:HG12	2.02	0.40
1:AB:38:HIS:C	1:AB:39:ILE:HD13	2.41	0.40
3:AD:94:GLU:OE2	3:AD:103:ARG:NE	2.54	0.40
22:DA:194:G:C2	22:DA:202:U:H1'	2.56	0.40
53:CA:406:G:N7	53:CA:495:A:H2'	2.36	0.40
22:DA:864:G:C6	22:DA:865:C:C4	3.10	0.40
22:DA:863:A:H2'	22:DA:864:G:H8	1.86	0.40
7:AH:87:ARG:O	7:AH:88:LYS:HB3	2.21	0.40
21:AA:653:U:H2'	21:AA:653:U:H6	1.58	0.40
22:BA:1655:A:C2	22:BA:1656:C:H1'	2.57	0.40
27:DF:41:GLU:O	27:DF:42:ALA:C	2.60	0.40
22:BA:335:C:C5'	42:BU:81:ARG:HD3	2.40	0.40
46:DY:37:LEU:HD13	46:DY:42:LEU:CD1	2.52	0.40
24:BC:134:ILE:O	24:BC:166:ARG:NH1	2.54	0.40
22:DA:1816:C:O3'	22:DA:1817:G:H8	2.04	0.40
34:BM:69:PRO:CA	34:BM:94:ALA:HB2	2.51	0.40
33:BL:57:LEU:CD2	51:B3:53:ASP:HB3	2.52	0.40
2:AC:190:THR:CG2	2:AC:195:ILE:HG13	2.50	0.40
28:BG:3:VAL:HG13	28:BG:4:ALA:N	2.36	0.40
33:DL:111:ILE:N	33:DL:111:ILE:HD13	2.36	0.40
30:BI:56:VAL:HG22	30:BI:68:PHE:HB2	2.03	0.40
31:DJ:64:VAL:HG22	31:DJ:68:LYS:HG3	2.04	0.40
31:BJ:114:LEU:O	31:BJ:117:ALA:HB3	2.21	0.40
15:CP:40:ASN:HA	15:CP:41:PRO:HD3	1.91	0.40
22:BA:1387:A:H5'	22:BA:1469:A:H1'	2.04	0.40
53:CA:821:G:H4'	57:CA:1740:HOH:O	2.21	0.40
22:BA:1588:G:N3	22:BA:1589:U:C6	2.89	0.40
21:AA:414:A:N6	21:AA:431:A:N3	2.68	0.40
22:DA:876:C:O2	22:DA:876:C:O4'	2.40	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:BA:2322:A:H2'	22:BA:2323:G:O4'	2.22	0.40
53:CA:213:G:H2'	53:CA:213:G:N3	2.36	0.40
1:CB:17:HIS:HB2	1:CB:37:VAL:HG21	2.04	0.40
43:DV:56:PHE:CD1	43:DV:56:PHE:C	2.95	0.40
22:DA:844:A:H2'	22:DA:845:A:O4'	2.22	0.40
7:AH:104:SER:HB2	7:AH:125:ILE:CD1	2.47	0.40
21:AA:1413:A:C6	21:AA:1414:U:C4	3.09	0.40
22:DA:174:U:H2'	22:DA:174:U:O2	2.20	0.40
19:AT:73:ARG:NH1	21:AA:263:A:P	2.95	0.40
22:BA:1223:G:OP2	39:BR:68:ARG:NH1	2.55	0.40
39:BR:90:ARG:O	39:BR:91:GLN:CB	2.65	0.40
28:DG:11:PRO:HD2	28:DG:14:VAL:HG11	2.02	0.40
53:CA:931:C:H2'	53:CA:932:C:H6	1.86	0.40
46:BY:18:LEU:HD22	46:BY:18:LEU:HA	1.80	0.40
13:AN:52:ARG:C	13:AN:54:SER:N	2.75	0.40
22:DA:1360:G:C6	22:DA:1372:U:C2	3.09	0.40
18:AS:30:LEU:O	18:AS:49:ALA:HB3	2.22	0.40
3:AD:13:ARG:HG3	3:AD:55:ARG:HE	1.87	0.40
19:AT:77:ASN:C	19:AT:77:ASN:HD22	2.24	0.40
22:BA:372:G:P	45:BX:61:LYS:NZ	2.95	0.40
22:DA:749:A:C6	22:DA:750:A:N7	2.89	0.40
22:BA:2211:A:C4'	22:BA:2211:A:OP2	2.69	0.40
12:AM:94:LEU:O	12:AM:108:ARG:HG2	2.22	0.40
16:CQ:58:VAL:HG12	16:CQ:77:VAL:HG22	2.03	0.40
22:DA:2576:G:C8	22:DA:2580:U:O4	2.75	0.40
27:DF:36:ASN:HA	27:DF:86:CYS:O	2.22	0.40
28:DG:25:ILE:HG22	28:DG:78:VAL:HG11	2.03	0.40
46:DY:33:ALA:C	46:DY:35:GLY:H	2.24	0.40
22:BA:645:C:H42	22:BA:2350:C:C4'	2.35	0.40
36:DO:69:ASP:O	36:DO:70:ALA:C	2.59	0.40
53:CA:967:C:H2'	53:CA:968:A:C2	2.56	0.40
53:CA:770:C:O2'	53:CA:771:G:H5'	2.21	0.40
24:BC:94:LEU:HD13	24:BC:100:ARG:NH1	2.35	0.40
22:BA:1615:C:H2'	22:BA:1617:C:C5	2.56	0.40
6:AG:14:ASP:OD2	6:AG:14:ASP:C	2.60	0.40
22:DA:1530:G:H8	22:DA:1530:G:OP2	2.04	0.40
32:BK:7:MET:SD	32:BK:20:MET:HB2	2.61	0.40
22:DA:1248:G:C4	38:DQ:2:ARG:HG2	2.56	0.40
30:DI:61:TYR:HE2	30:DI:67:THR:N	2.18	0.40
22:DA:2403:C:H2'	22:DA:2404:U:H6	1.87	0.40
8:CI:113:LYS:HG2	8:CI:114:LYS:N	2.37	0.40
22:DA:949:G:C2	22:DA:969:G:C2	3.10	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:BA:2673:G:C2	22:BA:2674:G:C8	3.10	0.40
26:BE:157:LEU:HG	26:BE:157:LEU:O	2.20	0.40
21:AA:781:A:C3'	21:AA:782:A:H5'	2.52	0.40
22:DA:1304:A:O2'	22:DA:1305:C:O4'	2.39	0.40
43:BV:42:LEU:HD13	43:BV:47:VAL:HG21	2.04	0.40
53:CA:858:G:O6	53:CA:869:G:C8	2.75	0.40
4:CE:57:ALA:O	4:CE:60:GLN:HB3	2.22	0.40
18:AS:57:VAL:HA	18:AS:58:PRO:HD2	1.95	0.40
24:DC:64:VAL:HG22	24:DC:90:ILE:HD11	2.04	0.40
9:AJ:63:ASP:OD2	13:AN:97:LYS:NZ	2.55	0.40
10:AK:117:HIS:HB3	21:AA:718:A:C8	2.57	0.40
22:DA:540:C:O2'	22:DA:541:A:H5'	2.21	0.40
22:BA:1135:C:H6	22:BA:1135:C:H5''	1.85	0.40
22:DA:1122:G:N3	22:DA:1122:G:H2'	2.36	0.40
22:BA:319:G:C4	22:BA:333:G:N2	2.90	0.40
49:D1:24:LYS:HE2	49:D1:52:LYS:HZ2	1.87	0.40
22:DA:858:G:H2'	22:DA:2268:A:N3	2.36	0.40
20:CU:18:PHE:C	20:CU:19:LYS:NZ	2.74	0.40
44:BW:44:PHE:HD1	44:BW:45:HIS:CE1	2.40	0.40
22:BA:1069:A:N1	22:BA:1073:A:N6	2.70	0.40
22:DA:1914:C:O4'	22:DA:1914:C:O2	2.39	0.40
28:BG:169:ARG:O	28:BG:170:THR:O	2.40	0.40
21:AA:464:U:C2	21:AA:466:A:H5''	2.57	0.40
25:BD:92:VAL:HG12	25:BD:92:VAL:O	2.21	0.40
54:DB:42:C:C5	27:DF:65:LEU:HD13	2.56	0.40
22:DA:1069:A:H4'	22:DA:1070:A:C5'	2.51	0.40
22:DA:1084:A:H2	22:DA:1105:U:O2	2.05	0.40
22:DA:1287:A:H5'	35:DN:103:ARG:NH1	2.37	0.40
24:BC:90:ILE:CG2	24:BC:102:TYR:CD1	3.05	0.40
7:CH:124:ILE:HG22	7:CH:125:ILE:H	1.87	0.40
4:AE:131:ASN:O	4:AE:135:VAL:HG12	2.22	0.40
22:BA:273:G:O2'	22:BA:274:C:O4'	2.31	0.40
42:DU:73:ASN:HB3	42:DU:95:PHE:CE2	2.56	0.40
53:CA:976:G:H5'	53:CA:977:A:OP2	2.21	0.40
9:CJ:52:LEU:HB2	13:CN:80:ARG:NE	2.34	0.40
22:BA:2226:C:H2'	22:BA:2227:A:C8	2.56	0.40
22:BA:726:G:HO2'	22:BA:727:A:P	2.39	0.40
1:AB:66:ILE:CB	1:AB:88:GLN:HB3	2.39	0.40
22:DA:1431:A:O2'	22:DA:1432:G:H5'	2.21	0.40
53:CA:72:A:H4'	53:CA:72:A:OP1	2.22	0.40
5:AF:97:THR:O	5:AF:98:GLU:CG	2.59	0.40
22:BA:242:G:O2'	51:B3:5:THR:HG23	2.22	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:AA:113:G:C4	21:AA:114:U:C5	3.09	0.40
22:DA:976:G:C5'	22:DA:1156:A:N6	2.85	0.40
22:DA:989:G:OP2	47:DZ:11:SER:HB2	2.21	0.40
24:DC:206:LYS:HE2	24:DC:212:TRP:CH2	2.56	0.40
28:BG:26:LYS:HB3	28:BG:32:LEU:HA	2.02	0.40
28:BG:72:ASN:ND2	28:BG:72:ASN:C	2.74	0.40
34:BM:43:ALA:H	34:BM:46:ILE:HG23	1.87	0.40
22:DA:754:U:H2'	22:DA:755:U:C5	2.54	0.40
24:BC:30:ALA:N	24:BC:31:PRO:HD2	2.36	0.40
34:BM:80:VAL:HG22	34:BM:81:ARG:N	2.36	0.40
22:BA:478:A:N6	22:BA:480:A:N6	2.70	0.40
22:DA:2230:G:O4'	45:DX:31:ASN:HB3	2.22	0.40
10:AK:109:ILE:HG21	20:AU:16:ARG:NE	2.37	0.40
22:DA:1607:C:H4'	22:DA:1608:A:H8	1.86	0.40
22:BA:2059:A:N6	22:BA:2503:A:H2'	2.37	0.40
22:DA:374:A:O2'	22:DA:375:G:O4'	2.40	0.40
53:CA:513:C:C2'	53:CA:514:C:H6	2.34	0.40
22:BA:2144:G:H3'	22:BA:2144:G:N3	2.37	0.40
22:BA:2149:U:O2'	22:BA:2150:C:O5'	2.38	0.40
53:CA:951:G:O2'	53:CA:952:U:H5'	2.21	0.40
18:CS:16:LYS:O	18:CS:17:LYS:HD3	2.22	0.40
22:BA:1385:A:C5	22:BA:1403:A:C6	3.10	0.40
22:DA:721:A:H8	22:DA:721:A:O5'	2.04	0.40
21:AA:411:A:C5	21:AA:429:U:C5	3.10	0.40
24:BC:161:VAL:CG1	24:BC:173:LEU:HG	2.52	0.40
53:CA:677:U:H2'	53:CA:678:U:H6	1.86	0.40
14:AO:19:ASN:HA	14:AO:19:ASN:HD22	1.70	0.40
1:AB:139:GLU:O	1:AB:143:LEU:CD2	2.69	0.40
22:DA:1826:G:C5	22:DA:1827:U:C5	3.10	0.40
22:BA:1936:A:C2	22:BA:1943:U:O4	2.73	0.40
53:CA:914:A:H2'	53:CA:915:A:C8	2.57	0.40
33:DL:100:ILE:HD12	33:DL:101:ILE:H	1.86	0.40
12:CM:82:LEU:CD2	18:CS:60:PHE:HB3	2.49	0.40
1:AB:106:VAL:HA	1:AB:109:SER:OG	2.21	0.40
2:CC:188:ALA:O	2:CC:194:VAL:HA	2.21	0.40
2:AC:13:ILE:O	2:AC:15:LYS:N	2.54	0.40
21:AA:190:A:H8	21:AA:190:A:O5'	2.04	0.40
53:CA:611:C:C4	53:CA:612:C:C5	3.09	0.40
22:BA:2856:A:C2'	22:BA:2857:G:H5'	2.52	0.40
53:CA:846:G:H2'	53:CA:847:G:H8	1.87	0.40
22:BA:675:A:C4	22:BA:804:A:C2	3.10	0.40
21:AA:921:U:H2'	21:AA:922:G:O4'	2.22	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:BA:42:A:C2'	22:BA:43:G:H5''	2.52	0.40
27:DF:103:ILE:N	27:DF:103:ILE:HD12	2.36	0.40
22:DA:547:A:C8	22:DA:549:G:N2	2.90	0.40
41:BT:68:LYS:HE2	41:BT:77:ARG:CD	2.52	0.40
25:BD:121:THR:HG22	25:BD:125:TRP:HD1	1.87	0.40
22:DA:2552:U:C2	22:DA:2554:U:H5'	2.57	0.40
48:D0:28:SER:HB3	48:D0:39:ARG:NH2	2.36	0.40
29:BH:62:LEU:C	29:BH:62:LEU:HD12	2.41	0.40
43:BV:38:LEU:HG	43:BV:40:ILE:HD11	2.03	0.40
33:BL:67:THR:CG2	33:BL:68:SER:N	2.84	0.40
31:DJ:125:TYR:HE2	31:DJ:132:HIS:HD2	1.69	0.40
7:CH:33:VAL:C	7:CH:35:ILE:N	2.75	0.40
29:DH:125:THR:CG2	29:DH:146:VAL:HG11	2.50	0.40
22:BA:1916:A:H8	22:BA:1916:A:O5'	2.05	0.40
38:BQ:43:GLN:NE2	39:BR:77:PHE:HB3	2.36	0.40
53:CA:1472:U:C2	53:CA:1473:G:C8	3.10	0.40
28:BG:124:CYS:HA	28:BG:125:PRO:HD2	1.80	0.40
35:DN:82:GLU:O	35:DN:86:ARG:HG3	2.22	0.40
2:CC:41:TYR:HE1	2:CC:89:VAL:CG1	2.35	0.40
22:BA:343:C:O2	22:BA:343:C:H2'	2.21	0.40
8:CI:81:GLY:HA2	8:CI:84:ARG:HB2	2.03	0.40
24:BC:115:ILE:HG13	24:BC:126:GLY:O	2.21	0.40
22:BA:2808:G:N2	22:BA:2891:U:C6	2.90	0.40
32:DK:121:GLU:HB3	32:DK:122:VAL:H	1.59	0.40
22:BA:2107:G:O6	22:BA:2183:A:C6	2.74	0.40
53:CA:28:A:O2'	53:CA:296:U:H5''	2.21	0.40
14:CO:28:VAL:HG13	14:CO:62:ARG:HG3	2.04	0.40
22:BA:1562:U:H2'	22:BA:1563:U:O4'	2.21	0.40
54:DB:52:A:C6	36:DO:33:ARG:NH2	2.79	0.40
2:AC:149:LYS:HB3	2:AC:168:ARG:HA	2.03	0.40
8:AI:33:SER:OG	8:AI:35:GLU:HG2	2.21	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	
1	AB	216/241 (90%)	131 (61%)	49 (23%)	36 (17%)	0	1
1	CB	216/241 (90%)	149 (69%)	47 (22%)	20 (9%)	1	8
2	AC	204/233 (88%)	151 (74%)	35 (17%)	18 (9%)	1	8
2	CC	204/233 (88%)	144 (71%)	41 (20%)	19 (9%)	1	8
3	AD	203/206 (98%)	140 (69%)	36 (18%)	27 (13%)	0	2
3	CD	203/206 (98%)	142 (70%)	39 (19%)	22 (11%)	1	5
4	AE	148/167 (89%)	107 (72%)	25 (17%)	16 (11%)	1	5
4	CE	148/167 (89%)	111 (75%)	21 (14%)	16 (11%)	1	5
5	AF	98/135 (73%)	74 (76%)	15 (15%)	9 (9%)	1	8
5	CF	98/135 (73%)	68 (69%)	18 (18%)	12 (12%)	1	3
6	AG	149/179 (83%)	108 (72%)	34 (23%)	7 (5%)	4	27
6	CG	148/179 (83%)	99 (67%)	35 (24%)	14 (10%)	1	7
7	AH	127/130 (98%)	93 (73%)	30 (24%)	4 (3%)	7	41
7	CH	127/130 (98%)	96 (76%)	20 (16%)	11 (9%)	1	8
8	AI	125/130 (96%)	84 (67%)	31 (25%)	10 (8%)	1	10
8	CI	125/130 (96%)	90 (72%)	21 (17%)	14 (11%)	1	4
9	AJ	96/103 (93%)	67 (70%)	18 (19%)	11 (12%)	1	4
9	CJ	96/103 (93%)	55 (57%)	24 (25%)	17 (18%)	0	1
10	AK	115/129 (89%)	85 (74%)	21 (18%)	9 (8%)	1	11
10	CK	115/129 (89%)	85 (74%)	22 (19%)	8 (7%)	2	13
11	AL	121/124 (98%)	87 (72%)	20 (16%)	14 (12%)	1	4
11	CL	121/124 (98%)	85 (70%)	29 (24%)	7 (6%)	3	21
12	AM	112/118 (95%)	89 (80%)	16 (14%)	7 (6%)	2	18
12	CM	111/118 (94%)	60 (54%)	38 (34%)	13 (12%)	1	4
13	AN	92/101 (91%)	56 (61%)	24 (26%)	12 (13%)	0	3
13	CN	91/101 (90%)	60 (66%)	26 (29%)	5 (6%)	3	23
14	AO	86/89 (97%)	63 (73%)	20 (23%)	3 (4%)	6	37
14	CO	86/89 (97%)	62 (72%)	20 (23%)	4 (5%)	4	27
15	AP	80/82 (98%)	58 (72%)	14 (18%)	8 (10%)	1	6
15	CP	78/82 (95%)	50 (64%)	17 (22%)	11 (14%)	0	2

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
16	AQ	78/84 (93%)	51 (65%)	15 (19%)	12 (15%)	0	1
16	CQ	78/84 (93%)	59 (76%)	10 (13%)	9 (12%)	1	4
17	AR	53/75 (71%)	40 (76%)	11 (21%)	2 (4%)	5	34
17	CR	53/75 (71%)	39 (74%)	12 (23%)	2 (4%)	5	34
18	AS	77/92 (84%)	59 (77%)	9 (12%)	9 (12%)	1	4
18	CS	77/92 (84%)	46 (60%)	24 (31%)	7 (9%)	1	8
19	AT	83/87 (95%)	56 (68%)	20 (24%)	7 (8%)	1	9
19	CT	83/87 (95%)	59 (71%)	16 (19%)	8 (10%)	1	7
20	AU	49/71 (69%)	25 (51%)	13 (26%)	11 (22%)	0	0
20	CU	49/71 (69%)	21 (43%)	11 (22%)	17 (35%)	0	0
24	BC	269/273 (98%)	194 (72%)	50 (19%)	25 (9%)	1	8
24	DC	269/273 (98%)	174 (65%)	63 (23%)	32 (12%)	1	4
25	BD	207/209 (99%)	146 (70%)	27 (13%)	34 (16%)	0	1
25	DD	207/209 (99%)	132 (64%)	43 (21%)	32 (16%)	0	1
26	BE	199/201 (99%)	155 (78%)	24 (12%)	20 (10%)	1	6
26	DE	199/201 (99%)	130 (65%)	46 (23%)	23 (12%)	1	4
27	BF	175/179 (98%)	134 (77%)	25 (14%)	16 (9%)	1	8
27	DF	176/179 (98%)	98 (56%)	43 (24%)	35 (20%)	0	0
28	BG	174/177 (98%)	111 (64%)	38 (22%)	25 (14%)	0	2
28	DG	174/177 (98%)	106 (61%)	38 (22%)	30 (17%)	0	1
29	BH	147/149 (99%)	68 (46%)	47 (32%)	32 (22%)	0	0
29	DH	147/149 (99%)	75 (51%)	54 (37%)	18 (12%)	1	3
30	BI	139/142 (98%)	84 (60%)	41 (30%)	14 (10%)	1	6
30	DI	139/142 (98%)	81 (58%)	39 (28%)	19 (14%)	0	2
31	BJ	140/142 (99%)	107 (76%)	21 (15%)	12 (9%)	1	8
31	DJ	140/142 (99%)	91 (65%)	38 (27%)	11 (8%)	1	11
32	BK	120/123 (98%)	86 (72%)	15 (12%)	19 (16%)	0	1
32	DK	120/123 (98%)	80 (67%)	20 (17%)	20 (17%)	0	1
33	BL	141/144 (98%)	101 (72%)	32 (23%)	8 (6%)	3	22
33	DL	141/144 (98%)	81 (57%)	40 (28%)	20 (14%)	0	2
34	BM	134/136 (98%)	97 (72%)	22 (16%)	15 (11%)	1	4

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
34	DM	134/136 (98%)	92 (69%)	29 (22%)	13 (10%)	1	7
35	BN	118/127 (93%)	92 (78%)	17 (14%)	9 (8%)	2	12
35	DN	118/127 (93%)	72 (61%)	30 (25%)	16 (14%)	0	2
36	BO	114/117 (97%)	91 (80%)	12 (10%)	11 (10%)	1	7
36	DO	114/117 (97%)	77 (68%)	30 (26%)	7 (6%)	2	19
37	BP	112/115 (97%)	77 (69%)	18 (16%)	17 (15%)	0	1
37	DP	112/115 (97%)	68 (61%)	27 (24%)	17 (15%)	0	1
38	BQ	115/118 (98%)	100 (87%)	9 (8%)	6 (5%)	3	25
38	DQ	115/118 (98%)	80 (70%)	25 (22%)	10 (9%)	1	8
39	BR	101/103 (98%)	80 (79%)	13 (13%)	8 (8%)	1	11
39	DR	101/103 (98%)	70 (69%)	21 (21%)	10 (10%)	1	7
40	BS	108/110 (98%)	86 (80%)	16 (15%)	6 (6%)	3	23
40	DS	108/110 (98%)	76 (70%)	23 (21%)	9 (8%)	1	9
41	BT	91/100 (91%)	52 (57%)	24 (26%)	15 (16%)	0	1
41	DT	91/100 (91%)	46 (50%)	31 (34%)	14 (15%)	0	1
42	BU	100/104 (96%)	69 (69%)	15 (15%)	16 (16%)	0	1
42	DU	100/104 (96%)	51 (51%)	26 (26%)	23 (23%)	0	0
43	BV	92/94 (98%)	77 (84%)	13 (14%)	2 (2%)	10	53
43	DV	92/94 (98%)	61 (66%)	23 (25%)	8 (9%)	1	8
44	BW	77/85 (91%)	30 (39%)	24 (31%)	23 (30%)	0	0
44	DW	77/85 (91%)	33 (43%)	27 (35%)	17 (22%)	0	0
45	BX	75/78 (96%)	56 (75%)	14 (19%)	5 (7%)	2	16
45	DX	75/78 (96%)	47 (63%)	20 (27%)	8 (11%)	1	5
46	BY	61/63 (97%)	38 (62%)	16 (26%)	7 (12%)	1	4
46	DY	61/63 (97%)	42 (69%)	14 (23%)	5 (8%)	1	10
47	BZ	56/59 (95%)	45 (80%)	9 (16%)	2 (4%)	5	36
47	DZ	56/59 (95%)	34 (61%)	16 (29%)	6 (11%)	1	5
48	B0	54/57 (95%)	41 (76%)	9 (17%)	4 (7%)	2	12
48	D0	54/57 (95%)	39 (72%)	8 (15%)	7 (13%)	0	3
49	B1	48/55 (87%)	36 (75%)	7 (15%)	5 (10%)	1	5
49	D1	48/55 (87%)	37 (77%)	7 (15%)	4 (8%)	1	9

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
50	B2	44/46 (96%)	39 (89%)	4 (9%)	1 (2%)	10	52
50	D2	44/46 (96%)	31 (70%)	10 (23%)	3 (7%)	2	15
51	B3	62/65 (95%)	53 (86%)	5 (8%)	4 (6%)	2	17
51	D3	62/65 (95%)	39 (63%)	18 (29%)	5 (8%)	1	10
52	B4	36/38 (95%)	31 (86%)	2 (6%)	3 (8%)	1	9
52	D4	36/38 (95%)	23 (64%)	7 (19%)	6 (17%)	0	1
All	All	11238/11970 (94%)	7646 (68%)	2332 (21%)	1260 (11%)	1	4

All (1260) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	AB	18	GLN
1	AB	20	ARG
1	AB	40	ILE
1	AB	75	ALA
1	AB	119	GLN
1	AB	133	ALA
1	AB	200	PRO
1	AB	210	THR
2	AC	16	PRO
2	AC	17	TRP
2	AC	60	ALA
2	AC	165	GLU
3	AD	26	ALA
3	AD	28	ASP
3	AD	29	THR
3	AD	34	GLU
3	AD	191	SER
3	AD	192	ALA
4	AE	44	ARG
4	AE	97	PRO
4	AE	121	ASN
4	AE	137	ARG
4	AE	154	ALA
4	AE	156	ARG
5	AF	86	ARG
6	AG	93	VAL
6	AG	95	ARG
6	AG	129	ASN
7	AH	49	LYS

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Mol	Chain	Res	Type
8	AI	8	THR
8	AI	40	ARG
8	AI	43	ALA
8	AI	55	ASP
8	AI	119	LYS
9	AJ	57	VAL
9	AJ	61	ALA
9	AJ	92	LEU
10	AK	13	LYS
10	AK	51	PHE
10	AK	125	LYS
10	AK	126	ARG
11	AL	23	LEU
11	AL	33	CYS
11	AL	43	LYS
11	AL	73	LEU
11	AL	75	GLU
11	AL	88	ASP
11	AL	97	VAL
13	AN	22	LYS
13	AN	33	VAL
13	AN	51	PRO
13	AN	52	ARG
13	AN	61	ASN
14	AO	17	ASP
15	AP	80	LYS
16	AQ	12	VAL
16	AQ	16	MET
16	AQ	52	CYS
17	AR	47	ARG
18	AS	22	VAL
18	AS	63	ASP
19	AT	3	ILE
19	AT	5	SER
19	AT	67	HIS
20	AU	11	PHE
20	AU	23	GLU
24	BC	104	LEU
24	BC	105	ALA
24	BC	120	ASP
24	BC	121	ALA
24	BC	196	ASN

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Mol	Chain	Res	Type
25	BD	43	ASP
25	BD	54	ALA
25	BD	73	VAL
25	BD	92	VAL
25	BD	99	GLU
25	BD	103	ASP
25	BD	104	VAL
25	BD	122	VAL
25	BD	183	GLU
25	BD	187	LEU
25	BD	191	GLY
25	BD	192	ALA
26	BE	8	ALA
26	BE	46	GLN
26	BE	79	ARG
26	BE	175	ILE
27	BF	8	LYS
27	BF	134	GLN
28	BG	7	PRO
28	BG	8	VAL
28	BG	28	LYS
28	BG	31	GLU
28	BG	33	THR
28	BG	45	ALA
28	BG	84	LYS
28	BG	94	ARG
28	BG	118	ALA
28	BG	168	VAL
28	BG	170	THR
29	BH	3	VAL
29	BH	8	LYS
29	BH	9	VAL
29	BH	10	ALA
29	BH	14	SER
29	BH	15	LEU
29	BH	28	ASN
29	BH	32	PRO
29	BH	33	GLN
29	BH	54	LEU
29	BH	101	ASP
29	BH	121	VAL
30	BI	65	SER

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Mol	Chain	Res	Type
30	BI	92	PRO
31	BJ	2	LYS
31	BJ	21	THR
31	BJ	44	TYR
31	BJ	45	THR
32	BK	13	ASN
32	BK	35	VAL
32	BK	49	ARG
32	BK	71	ARG
32	BK	72	PRO
32	BK	118	LEU
33	BL	15	ALA
33	BL	29	LYS
33	BL	66	PHE
33	BL	88	GLY
34	BM	14	LYS
34	BM	35	ALA
34	BM	36	VAL
34	BM	56	ALA
34	BM	77	PRO
35	BN	117	ASP
36	BO	3	LYS
36	BO	68	LYS
36	BO	111	ARG
36	BO	112	GLU
37	BP	4	ILE
37	BP	5	LYS
37	BP	25	VAL
37	BP	33	GLU
37	BP	50	ARG
37	BP	65	ASN
37	BP	86	LYS
38	BQ	87	VAL
38	BQ	91	ARG
39	BR	55	ASP
40	BS	3	THR
40	BS	14	ALA
40	BS	64	ALA
41	BT	27	SER
41	BT	29	THR
41	BT	69	ARG
41	BT	70	HIS

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Mol	Chain	Res	Type
41	BT	86	THR
41	BT	88	LYS
42	BU	6	ARG
42	BU	18	LYS
42	BU	88	ASP
42	BU	98	ASN
43	BV	69	GLU
44	BW	9	THR
44	BW	14	ASP
44	BW	23	LYS
44	BW	29	SER
44	BW	30	VAL
44	BW	47	GLY
44	BW	50	VAL
45	BX	53	LYS
46	BY	22	LEU
46	BY	23	ARG
47	BZ	3	THR
48	B0	35	GLU
48	B0	54	ILE
49	B1	4	ILE
49	B1	51	ALA
51	B3	31	ILE
52	B4	4	ARG
1	CB	81	ASP
1	CB	102	ASN
1	CB	129	THR
1	CB	150	ILE
2	CC	59	PRO
2	CC	87	ARG
3	CD	24	VAL
3	CD	26	ALA
3	CD	29	THR
3	CD	35	GLN
3	CD	39	GLN
3	CD	80	ARG
3	CD	191	SER
3	CD	192	ALA
4	CE	31	SER
4	CE	68	ARG
4	CE	69	ASN
5	CF	68	GLN

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Mol	Chain	Res	Type
5	CF	82	ASP
5	CF	92	THR
5	CF	98	GLU
6	CG	29	LEU
6	CG	30	MET
6	CG	31	VAL
6	CG	52	ARG
7	CH	29	SER
8	CI	71	ILE
9	CJ	57	VAL
9	CJ	93	ALA
10	CK	14	GLN
10	CK	70	ALA
10	CK	90	PRO
10	CK	126	ARG
10	CK	127	ARG
11	CL	8	ARG
11	CL	34	THR
12	CM	4	ALA
12	CM	14	ALA
12	CM	65	GLU
13	CN	53	ASP
13	CN	95	LEU
15	CP	63	GLN
16	CQ	52	CYS
18	CS	46	LEU
19	CT	3	ILE
19	CT	43	LYS
19	CT	65	LEU
20	CU	4	LYS
20	CU	15	LEU
20	CU	23	GLU
20	CU	32	ARG
20	CU	34	ARG
20	CU	35	GLU
20	CU	36	PHE
20	CU	38	GLU
24	DC	9	SER
24	DC	28	PRO
24	DC	186	ASP
24	DC	269	ARG
25	DD	14	ILE

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Mol	Chain	Res	Type
25	DD	74	GLU
25	DD	77	ARG
25	DD	102	ALA
25	DD	112	THR
25	DD	136	ASN
25	DD	150	GLN
25	DD	162	ALA
25	DD	164	GLN
25	DD	170	VAL
25	DD	175	LEU
25	DD	194	PRO
26	DE	41	GLN
26	DE	55	SER
26	DE	99	LYS
26	DE	116	ASP
27	DF	10	GLU
27	DF	12	VAL
27	DF	32	LYS
27	DF	36	ASN
27	DF	42	ALA
27	DF	112	ASP
27	DF	114	ARG
27	DF	120	SER
27	DF	122	ASP
27	DF	137	PHE
28	DG	49	LEU
28	DG	95	ALA
28	DG	149	ALA
28	DG	164	ALA
28	DG	165	ASP
29	DH	3	VAL
29	DH	9	VAL
29	DH	10	ALA
29	DH	72	ILE
29	DH	76	GLU
29	DH	98	ASP
29	DH	102	ALA
30	DI	22	PRO
30	DI	23	VAL
30	DI	29	GLN
30	DI	52	LEU
30	DI	58	ILE

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Mol	Chain	Res	Type
30	DI	140	GLU
31	DJ	45	THR
31	DJ	81	ILE
31	DJ	95	ARG
32	DK	16	ALA
32	DK	18	ARG
32	DK	46	ALA
32	DK	71	ARG
32	DK	93	GLN
32	DK	110	GLU
32	DK	119	ALA
32	DK	120	PRO
33	DL	4	ASN
33	DL	41	ARG
33	DL	82	LEU
33	DL	85	VAL
33	DL	89	VAL
33	DL	101	ILE
33	DL	111	ILE
34	DM	2	LEU
34	DM	72	PRO
34	DM	77	PRO
34	DM	135	VAL
35	DN	10	LEU
35	DN	30	ARG
35	DN	104	ALA
36	DO	90	VAL
37	DP	25	VAL
37	DP	50	ARG
37	DP	83	ILE
37	DP	85	VAL
37	DP	108	ARG
37	DP	112	ARG
39	DR	3	ALA
40	DS	28	LYS
40	DS	33	LEU
40	DS	72	THR
41	DT	14	PRO
41	DT	15	HIS
41	DT	20	ALA
41	DT	29	THR
41	DT	56	GLU

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Mol	Chain	Res	Type
41	DT	88	LYS
42	DU	4	ILE
42	DU	65	GLN
42	DU	82	VAL
42	DU	92	VAL
42	DU	95	PHE
42	DU	96	LYS
43	DV	55	GLU
43	DV	56	PHE
43	DV	58	SER
44	DW	9	THR
44	DW	18	LYS
44	DW	34	SER
44	DW	35	ILE
44	DW	83	ALA
45	DX	2	ARG
47	DZ	13	ILE
48	D0	21	LEU
48	D0	54	ILE
51	D3	29	ARG
52	D4	8	LYS
52	D4	20	ASP
1	AB	17	HIS
1	AB	33	ALA
1	AB	37	VAL
1	AB	41	ASN
1	AB	58	LYS
1	AB	63	LYS
1	AB	72	LYS
1	AB	125	PHE
1	AB	136	ARG
1	AB	140	LEU
1	AB	150	ILE
1	AB	169	HIS
1	AB	219	THR
2	AC	100	ILE
2	AC	126	ARG
3	AD	22	SER
3	AD	23	GLY
3	AD	31	CYS
3	AD	35	GLN
3	AD	124	VAL

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Mol	Chain	Res	Type
3	AD	147	LYS
3	AD	148	ALA
3	AD	172	VAL
3	AD	173	ASP
3	AD	174	ALA
4	AE	11	GLN
4	AE	109	ALA
4	AE	157	GLY
5	AF	91	ARG
5	AF	98	GLU
6	AG	6	ILE
7	AH	66	GLN
7	AH	77	VAL
7	AH	88	LYS
8	AI	128	LYS
9	AJ	74	VAL
11	AL	24	GLU
12	AM	3	ILE
12	AM	46	GLU
13	AN	27	LYS
13	AN	41	TRP
13	AN	43	ALA
13	AN	81	ILE
15	AP	10	GLY
15	AP	11	ALA
16	AQ	50	ASN
16	AQ	70	LYS
16	AQ	75	VAL
18	AS	48	ILE
18	AS	61	VAL
19	AT	4	LYS
19	AT	74	HIS
20	AU	12	ASP
20	AU	35	GLU
24	BC	35	LYS
24	BC	77	VAL
24	BC	140	VAL
24	BC	239	PHE
25	BD	17	GLU
25	BD	118	PHE
25	BD	144	GLY
25	BD	169	ARG

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Mol	Chain	Res	Type
25	BD	190	LYS
26	BE	6	LYS
26	BE	11	ALA
26	BE	116	ASP
26	BE	153	LEU
26	BE	191	ASP
27	BF	11	VAL
27	BF	61	GLY
27	BF	111	ARG
27	BF	147	ARG
27	BF	174	PHE
27	BF	175	PRO
28	BG	9	VAL
28	BG	30	GLY
28	BG	44	HIS
28	BG	53	PRO
28	BG	164	ALA
29	BH	13	GLY
29	BH	31	VAL
29	BH	34	GLY
29	BH	35	LYS
29	BH	40	THR
29	BH	81	ALA
29	BH	83	LYS
29	BH	106	ALA
29	BH	107	GLY
29	BH	111	ALA
29	BH	131	SER
30	BI	30	GLN
30	BI	105	LEU
31	BJ	14	ASP
31	BJ	39	LYS
31	BJ	41	LYS
31	BJ	81	ILE
32	BK	17	ARG
32	BK	69	VAL
32	BK	75	SER
32	BK	92	GLU
32	BK	108	ARG
33	BL	81	ASP
33	BL	111	ILE
33	BL	114	GLY

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Mol	Chain	Res	Type
34	BM	2	LEU
34	BM	54	THR
34	BM	55	ARG
34	BM	60	GLN
35	BN	71	ARG
35	BN	80	PHE
35	BN	101	GLY
36	BO	22	GLY
36	BO	58	ILE
37	BP	2	ASN
37	BP	15	ASP
37	BP	51	ASN
37	BP	93	LYS
37	BP	103	THR
37	BP	105	LYS
38	BQ	4	LYS
38	BQ	5	ARG
38	BQ	86	SER
39	BR	49	ILE
40	BS	19	LEU
40	BS	96	ILE
41	BT	16	VAL
41	BT	39	THR
41	BT	68	LYS
42	BU	51	LEU
42	BU	83	GLY
42	BU	85	ARG
42	BU	87	GLU
42	BU	92	VAL
44	BW	15	SER
44	BW	18	LYS
44	BW	27	GLY
44	BW	33	GLY
44	BW	36	ILE
44	BW	51	GLY
44	BW	52	CYS
45	BX	2	ARG
45	BX	17	ARG
45	BX	34	SER
46	BY	24	GLU
48	B0	34	GLY
48	B0	51	ARG

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Mol	Chain	Res	Type
50	B2	44	VAL
51	B3	27	ASN
52	B4	16	ILE
1	CB	26	MET
1	CB	84	LEU
1	CB	85	SER
1	CB	128	LEU
1	CB	148	GLY
2	CC	63	ILE
2	CC	130	ARG
2	CC	140	ALA
2	CC	155	ARG
2	CC	178	ARG
2	CC	180	ASP
2	CC	188	ALA
3	CD	25	ARG
3	CD	33	ILE
3	CD	47	LEU
3	CD	82	LYS
3	CD	187	ARG
3	CD	188	SER
3	CD	196	GLU
4	CE	29	ILE
4	CE	100	GLU
4	CE	143	LEU
4	CE	144	GLU
5	CF	44	ARG
5	CF	85	ILE
5	CF	99	ALA
6	CG	36	SER
6	CG	62	GLU
6	CG	113	LYS
7	CH	30	LYS
7	CH	34	ALA
7	CH	43	GLY
8	CI	44	ARG
8	CI	54	VAL
8	CI	55	ASP
8	CI	58	GLU
9	CJ	46	LYS
9	CJ	83	THR
9	CJ	87	LEU

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Mol	Chain	Res	Type
10	CK	91	GLY
11	CL	43	LYS
12	CM	11	HIS
12	CM	45	SER
12	CM	46	GLU
12	CM	49	GLU
12	CM	76	ILE
13	CN	21	ALA
14	CO	87	ARG
15	CP	24	SER
15	CP	31	ARG
15	CP	43	ALA
15	CP	78	VAL
16	CQ	12	VAL
16	CQ	29	LYS
16	CQ	69	THR
17	CR	70	THR
18	CS	4	LEU
19	CT	67	HIS
20	CU	7	GLU
20	CU	8	ASN
20	CU	9	GLU
20	CU	31	VAL
20	CU	43	GLU
24	DC	3	VAL
24	DC	37	SER
24	DC	59	GLN
24	DC	94	LEU
24	DC	121	ALA
24	DC	140	VAL
24	DC	141	HIS
24	DC	232	GLY
24	DC	239	PHE
25	DD	11	MET
25	DD	31	ALA
25	DD	48	ILE
25	DD	93	GLY
25	DD	107	VAL
25	DD	118	PHE
25	DD	119	ALA
26	DE	13	THR
26	DE	62	GLN

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Mol	Chain	Res	Type
26	DE	69	ARG
26	DE	79	ARG
26	DE	80	SER
26	DE	127	GLU
26	DE	153	LEU
26	DE	165	HIS
27	DF	8	LYS
27	DF	37	MET
27	DF	43	ILE
27	DF	67	THR
27	DF	76	PHE
27	DF	113	PHE
27	DF	133	GLU
27	DF	138	PRO
27	DF	145	VAL
27	DF	148	VAL
28	DG	40	VAL
28	DG	59	ASP
28	DG	85	LYS
28	DG	86	LEU
28	DG	92	GLY
28	DG	93	TYR
28	DG	150	TYR
29	DH	61	VAL
29	DH	66	ASN
29	DH	97	ARG
29	DH	144	VAL
30	DI	30	GLN
30	DI	51	GLY
30	DI	62	ALA
30	DI	69	VAL
31	DJ	13	ARG
31	DJ	87	ALA
31	DJ	112	GLY
32	DK	35	VAL
32	DK	49	ARG
32	DK	72	PRO
32	DK	104	THR
33	DL	88	GLY
34	DM	14	LYS
34	DM	16	ARG
34	DM	73	ILE

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Mol	Chain	Res	Type
35	DN	63	ARG
35	DN	105	GLY
36	DO	3	LYS
36	DO	8	ILE
36	DO	72	ALA
37	DP	51	ASN
37	DP	65	ASN
37	DP	109	ILE
38	DQ	23	TYR
38	DQ	86	SER
38	DQ	88	GLU
38	DQ	91	ARG
39	DR	15	SER
39	DR	40	MET
39	DR	98	ILE
40	DS	40	ASN
40	DS	71	VAL
41	DT	19	LYS
41	DT	38	ALA
41	DT	39	THR
41	DT	68	LYS
42	DU	8	ASP
42	DU	54	PRO
42	DU	87	GLU
42	DU	88	ASP
42	DU	89	GLY
42	DU	97	SER
43	DV	33	GLY
44	DW	33	GLY
44	DW	36	ILE
44	DW	39	GLN
44	DW	53	GLY
44	DW	71	LYS
45	DX	63	ILE
45	DX	69	GLU
46	DY	9	LYS
46	DY	22	LEU
46	DY	37	LEU
47	DZ	4	ILE
47	DZ	27	GLY
48	D0	32	THR
48	D0	55	ALA

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Mol	Chain	Res	Type
49	D1	36	LYS
50	D2	24	THR
51	D3	22	LYS
51	D3	51	LYS
52	D4	3	VAL
52	D4	4	ARG
1	AB	15	PHE
1	AB	21	TYR
1	AB	22	TRP
1	AB	73	ARG
2	AC	35	ASP
2	AC	138	GLN
2	AC	192	TYR
3	AD	131	ILE
3	AD	150	LYS
3	AD	159	GLU
3	AD	167	PRO
3	AD	196	GLU
4	AE	98	ALA
5	AF	54	LEU
5	AF	68	GLN
9	AJ	33	GLY
11	AL	122	LYS
12	AM	4	ALA
12	AM	113	LYS
13	AN	28	ALA
15	AP	49	GLY
16	AQ	5	ARG
16	AQ	11	VAL
16	AQ	13	SER
16	AQ	49	ASN
18	AS	3	SER
18	AS	27	LYS
19	AT	19	HIS
20	AU	8	ASN
20	AU	37	TYR
24	BC	57	HIS
24	BC	94	LEU
24	BC	110	LYS
24	BC	141	HIS
24	BC	157	ALA
24	BC	160	TYR

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Mol	Chain	Res	Type
24	BC	237	ARG
25	BD	100	LEU
25	BD	107	VAL
25	BD	170	VAL
25	BD	182	ALA
25	BD	184	ARG
26	BE	45	ALA
27	BF	133	GLU
28	BG	61	TRP
28	BG	110	HIS
30	BI	59	THR
31	BJ	65	THR
31	BJ	111	LYS
32	BK	48	PRO
32	BK	73	ASP
32	BK	93	GLN
32	BK	119	ALA
34	BM	69	PRO
34	BM	70	ASP
35	BN	2	ARG
35	BN	3	HIS
35	BN	15	SER
35	BN	70	THR
36	BO	56	LYS
36	BO	113	ALA
37	BP	34	GLY
41	BT	49	LYS
42	BU	38	ILE
42	BU	45	GLN
44	BW	16	GLU
44	BW	34	SER
44	BW	40	ARG
44	BW	56	HIS
44	BW	74	LYS
46	BY	37	LEU
46	BY	43	LEU
49	B1	43	ARG
51	B3	22	LYS
1	CB	176	ASN
1	CB	177	ASN
1	CB	179	GLY
1	CB	203	ASP

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Mol	Chain	Res	Type
1	CB	205	ALA
1	CB	208	ALA
2	CC	100	ILE
2	CC	128	MET
2	CC	145	ALA
2	CC	186	SER
4	CE	81	GLN
5	CF	94	HIS
6	CG	133	ALA
7	CH	2	MET
8	CI	103	VAL
9	CJ	34	ALA
9	CJ	44	THR
10	CK	88	PRO
11	CL	85	ARG
12	CM	77	LYS
14	CO	13	GLU
15	CP	47	GLU
15	CP	49	GLY
16	CQ	78	VAL
16	CQ	79	GLU
18	CS	3	SER
18	CS	7	GLY
19	CT	72	ALA
19	CT	82	ILE
20	CU	10	PRO
20	CU	11	PHE
24	DC	36	ASN
24	DC	69	ASN
24	DC	195	GLY
24	DC	204	LEU
24	DC	212	TRP
24	DC	227	VAL
24	DC	237	ARG
25	DD	176	ASP
25	DD	197	THR
26	DE	96	VAL
26	DE	188	MET
27	DF	41	GLU
28	DG	9	VAL
28	DG	11	PRO
28	DG	46	ASP

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Mol	Chain	Res	Type
28	DG	80	GLU
28	DG	83	THR
28	DG	91	VAL
28	DG	117	PRO
28	DG	123	GLU
28	DG	125	PRO
28	DG	169	ARG
29	DH	39	ALA
29	DH	86	ASP
29	DH	99	ILE
29	DH	121	VAL
30	DI	35	MET
30	DI	87	SER
32	DK	14	SER
32	DK	17	ARG
32	DK	103	VAL
32	DK	105	ARG
33	DL	9	ALA
33	DL	19	LEU
33	DL	29	LYS
33	DL	66	PHE
33	DL	99	ASN
33	DL	100	ILE
33	DL	115	GLU
34	DM	69	PRO
35	DN	2	ARG
35	DN	5	LYS
35	DN	8	ARG
35	DN	13	ASN
35	DN	82	GLU
36	DO	7	ARG
37	DP	94	ALA
38	DQ	29	ARG
38	DQ	45	ALA
38	DQ	58	GLN
39	DR	29	THR
40	DS	32	ALA
42	DU	40	LEU
43	DV	79	ARG
44	DW	41	GLY
44	DW	46	ALA
44	DW	57	THR

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Mol	Chain	Res	Type
45	DX	35	HIS
45	DX	41	SER
47	DZ	30	ARG
49	D1	35	LEU
50	D2	39	ARG
50	D2	43	THR
52	D4	16	ILE
1	AB	96	LEU
2	AC	36	PHE
2	AC	65	VAL
2	AC	139	ASN
2	AC	191	THR
3	AD	152	SER
3	AD	181	PHE
4	AE	23	THR
4	AE	102	THR
5	AF	15	SER
8	AI	71	ILE
8	AI	120	ALA
9	AJ	58	ASN
10	AK	40	ALA
10	AK	102	ALA
10	AK	124	LYS
11	AL	2	THR
11	AL	72	ASN
11	AL	117	GLY
12	AM	10	ASP
14	AO	24	THR
14	AO	45	HIS
15	AP	45	GLU
17	AR	42	ARG
18	AS	5	LYS
20	AU	24	LYS
20	AU	36	PHE
20	AU	52	VAL
24	BC	109	LEU
24	BC	149	LYS
24	BC	243	PRO
24	BC	257	ARG
24	BC	264	LYS
25	BD	11	MET
25	BD	18	ASP

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Mol	Chain	Res	Type
25	BD	40	LEU
25	BD	53	GLY
25	BD	175	LEU
26	BE	5	LEU
26	BE	69	ARG
26	BE	86	ALA
26	BE	123	LYS
27	BF	2	LYS
27	BF	113	PHE
27	BF	149	ARG
28	BG	75	VAL
28	BG	85	LYS
29	BH	16	GLY
29	BH	30	LEU
29	BH	96	THR
30	BI	6	ALA
30	BI	83	ALA
30	BI	89	SER
31	BJ	125	TYR
32	BK	3	GLN
32	BK	16	ALA
32	BK	46	ALA
33	BL	41	ARG
34	BM	73	ILE
34	BM	110	GLU
35	BN	118	ARG
36	BO	77	ALA
36	BO	100	HIS
37	BP	20	ARG
37	BP	104	GLY
38	BQ	90	ASP
39	BR	51	VAL
41	BT	84	TYR
42	BU	8	ASP
42	BU	67	SER
42	BU	81	ARG
44	BW	25	PHE
44	BW	41	GLY
46	BY	57	LEU
47	BZ	34	THR
51	B3	30	HIS
52	B4	8	LYS

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Mol	Chain	Res	Type
1	CB	18	GLN
1	CB	200	PRO
2	CC	173	PRO
3	CD	103	ARG
4	CE	38	VAL
4	CE	89	THR
4	CE	111	ARG
6	CG	13	PRO
7	CH	58	LEU
7	CH	66	GLN
7	CH	88	LYS
7	CH	98	LEU
7	CH	117	GLN
8	CI	11	ARG
8	CI	127	SER
9	CJ	23	ALA
9	CJ	31	ARG
9	CJ	82	LYS
11	CL	87	LYS
12	CM	42	VAL
12	CM	93	GLY
15	CP	25	ARG
15	CP	54	LEU
16	CQ	67	SER
16	CQ	68	LYS
17	CR	69	TYR
18	CS	79	TYR
20	CU	22	CYS
20	CU	26	GLY
24	DC	96	LYS
24	DC	98	GLY
24	DC	106	PRO
25	DD	75	ALA
25	DD	95	SER
25	DD	145	SER
25	DD	169	ARG
26	DE	45	ALA
26	DE	60	TRP
26	DE	63	LYS
26	DE	126	VAL
26	DE	148	ILE
26	DE	187	VAL

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Mol	Chain	Res	Type
27	DF	70	ARG
27	DF	83	PRO
27	DF	94	ARG
27	DF	104	THR
27	DF	116	LEU
28	DG	45	ALA
28	DG	119	GLY
28	DG	126	THR
29	DH	143	ILE
30	DI	19	PRO
30	DI	119	ALA
31	DJ	25	LEU
31	DJ	113	PRO
31	DJ	120	ARG
32	DK	89	ASN
32	DK	98	ARG
33	DL	28	GLY
33	DL	48	ARG
34	DM	35	ALA
34	DM	106	ASP
34	DM	111	GLU
34	DM	134	THR
35	DN	32	GLU
35	DN	71	ARG
36	DO	42	PRO
37	DP	20	ARG
37	DP	32	VAL
37	DP	33	GLU
37	DP	113	LEU
38	DQ	5	ARG
38	DQ	87	VAL
39	DR	65	ALA
40	DS	3	THR
40	DS	61	ASN
41	DT	11	LEU
41	DT	18	GLU
42	DU	52	ASN
44	DW	16	GLU
44	DW	23	LYS
44	DW	26	GLY
46	DY	2	LYS
47	DZ	32	GLY

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Mol	Chain	Res	Type
48	D0	26	SER
48	D0	33	SER
48	D0	53	VAL
49	D1	4	ILE
49	D1	50	GLU
51	D3	3	ILE
52	D4	37	GLN
1	AB	52	ALA
1	AB	141	GLU
1	AB	176	ASN
1	AB	189	ASN
1	AB	211	LEU
2	AC	88	LYS
2	AC	145	ALA
2	AC	148	ILE
3	AD	166	LYS
3	AD	197	HIS
4	AE	110	MET
5	AF	56	LYS
5	AF	63	ASN
6	AG	130	LYS
8	AI	38	PHE
8	AI	56	MET
9	AJ	36	VAL
9	AJ	62	ARG
9	AJ	93	ALA
10	AK	14	GLN
11	AL	22	ALA
11	AL	77	SER
13	AN	16	ALA
13	AN	44	VAL
15	AP	46	LYS
16	AQ	17	GLU
18	AS	26	ASP
19	AT	72	ALA
20	AU	47	ALA
24	BC	37	SER
24	BC	64	VAL
24	BC	248	GLY
25	BD	71	ALA
25	BD	91	THR
25	BD	93	GLY

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Mol	Chain	Res	Type
25	BD	145	SER
25	BD	173	GLN
26	BE	70	SER
26	BE	96	VAL
27	BF	20	ASN
27	BF	83	PRO
27	BF	92	GLY
28	BG	16	VAL
28	BG	83	THR
28	BG	97	VAL
28	BG	153	PRO
29	BH	29	PHE
29	BH	89	LYS
30	BI	3	LYS
30	BI	20	SER
31	BJ	74	TYR
32	BK	6	THR
34	BM	3	GLN
39	BR	53	PHE
39	BR	65	ALA
39	BR	91	GLN
39	BR	98	ILE
41	BT	8	LEU
41	BT	38	ALA
41	BT	55	VAL
42	BU	39	ASN
43	BV	71	LYS
44	BW	39	GLN
1	CB	73	ARG
1	CB	101	THR
2	CC	24	ASN
2	CC	205	GLU
3	CD	172	VAL
4	CE	75	LEU
4	CE	115	GLU
5	CF	63	ASN
6	CG	10	LYS
6	CG	99	ALA
8	CI	52	GLU
8	CI	119	LYS
8	CI	122	ARG
9	CJ	36	VAL

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Mol	Chain	Res	Type
9	CJ	61	ALA
9	CJ	62	ARG
10	CK	92	ARG
12	CM	43	LYS
13	CN	51	PRO
14	CO	86	LEU
16	CQ	31	PRO
18	CS	54	ARG
19	CT	61	ALA
19	CT	77	ASN
24	DC	13	ARG
24	DC	38	LYS
24	DC	45	ASN
24	DC	64	VAL
24	DC	196	ASN
24	DC	217	PRO
25	DD	44	GLY
25	DD	106	LYS
25	DD	120	GLY
25	DD	122	VAL
25	DD	143	PRO
26	DE	81	GLY
26	DE	98	LYS
27	DF	31	GLU
27	DF	82	TYR
27	DF	86	CYS
27	DF	87	LYS
28	DG	152	ARG
28	DG	155	PRO
28	DG	166	GLU
29	DH	103	VAL
29	DH	124	THR
32	DK	88	ASN
33	DL	30	THR
35	DN	3	HIS
35	DN	91	ALA
38	DQ	6	GLY
39	DR	53	PHE
40	DS	96	ILE
41	DT	50	LEU
42	DU	35	VAL
42	DU	41	VAL

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Mol	Chain	Res	Type
43	DV	88	HIS
45	DX	17	ARG
45	DX	27	ARG
45	DX	49	ARG
46	DY	46	VAL
51	D3	6	VAL
1	AB	31	PHE
1	AB	142	LYS
1	AB	163	ILE
2	AC	107	LYS
2	AC	205	GLU
4	AE	148	SER
12	AM	9	PRO
25	BD	109	VAL
26	BE	83	VAL
26	BE	148	ILE
27	BF	150	GLY
29	BH	87	GLU
29	BH	103	VAL
30	BI	7	TYR
34	BM	134	THR
42	BU	53	GLN
45	BX	76	LYS
49	B1	28	THR
49	B1	50	GLU
1	CB	163	ILE
2	CC	167	TYR
2	CC	174	LEU
3	CD	34	GLU
3	CD	79	ALA
3	CD	166	LYS
4	CE	113	VAL
5	CF	57	ALA
5	CF	64	VAL
5	CF	69	GLU
8	CI	126	PHE
9	CJ	75	ASP
13	CN	56	PRO
14	CO	15	GLY
15	CP	64	GLY
24	DC	246	PRO
25	DD	99	GLU

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Mol	Chain	Res	Type
25	DD	109	VAL
27	DF	88	VAL
27	DF	130	GLY
28	DG	39	ALA
30	DI	31	GLY
30	DI	83	ALA
31	DJ	44	TYR
32	DK	5	GLN
34	DM	70	ASP
35	DN	102	PHE
36	DO	27	VAL
37	DP	4	ILE
37	DP	63	ILE
39	DR	91	GLN
41	DT	16	VAL
42	DU	5	ARG
42	DU	12	VAL
42	DU	47	PRO
42	DU	101	THR
1	AB	28	PRO
3	AD	51	GLY
4	AE	50	GLY
4	AE	104	ILE
6	AG	5	VAL
9	AJ	41	PRO
15	AP	78	VAL
16	AQ	34	GLY
18	AS	25	GLY
20	AU	26	GLY
26	BE	4	VAL
28	BG	91	VAL
29	BH	80	ILE
30	BI	97	VAL
40	BS	74	ILE
46	BY	46	VAL
2	CC	65	VAL
3	CD	27	ILE
4	CE	104	ILE
6	CG	68	VAL
9	CJ	74	VAL
12	CM	50	GLY
18	CS	29	PRO

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Mol	Chain	Res	Type
26	DE	129	PRO
27	DF	84	ILE
30	DI	28	GLY
30	DI	138	VAL
31	DJ	96	ARG
35	DN	85	PRO
37	DP	34	GLY
39	DR	75	VAL
43	DV	84	PRO
1	AB	148	GLY
5	AF	7	VAL
24	BC	150	GLY
25	BD	151	THR
26	BE	71	GLY
39	BR	64	VAL
44	BW	70	VAL
6	CG	93	VAL
7	CH	119	GLY
11	CL	92	VAL
15	CP	42	ILE
24	DC	2	VAL
27	DF	125	GLY
27	DF	175	PRO
39	DR	27	ILE
42	DU	64	ILE
3	AD	36	ALA
10	AK	88	PRO
15	AP	42	ILE
30	BI	23	VAL
37	BP	91	VAL
41	BT	90	GLY
6	CG	5	VAL
9	CJ	25	ILE
24	DC	147	PRO
30	DI	121	ILE
33	DL	65	GLY
42	DU	33	VAL
42	DU	34	ILE
43	DV	15	GLY
9	AJ	42	LEU
12	AM	23	GLY
30	BI	31	GLY

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Mol	Chain	Res	Type
36	BO	66	GLY
3	CD	107	GLY
4	CE	90	GLY
8	CI	50	PRO
8	CI	68	GLY
9	CJ	33	GLY
28	DG	53	PRO
33	DL	114	GLY
44	DW	22	VAL
47	DZ	50	VAL
6	AG	63	VAL
29	BH	138	VAL
11	CL	121	PRO

5.3.2 Protein sidechains ⓘ

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution. The Analysed column shows the number of residues for which the sidechain conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	AB	180/199 (90%)	138 (77%)	42 (23%)	1	5
1	CB	180/199 (90%)	155 (86%)	25 (14%)	5	24
2	AC	170/190 (90%)	139 (82%)	31 (18%)	2	12
2	CC	170/190 (90%)	152 (89%)	18 (11%)	10	38
3	AD	172/173 (99%)	144 (84%)	28 (16%)	3	15
3	CD	172/173 (99%)	138 (80%)	34 (20%)	2	9
4	AE	113/126 (90%)	94 (83%)	19 (17%)	3	14
4	CE	113/126 (90%)	93 (82%)	20 (18%)	3	13
5	AF	87/116 (75%)	74 (85%)	13 (15%)	4	20
5	CF	87/116 (75%)	74 (85%)	13 (15%)	4	20
6	AG	124/147 (84%)	109 (88%)	15 (12%)	7	32
6	CG	123/147 (84%)	99 (80%)	24 (20%)	2	10
7	AH	104/105 (99%)	88 (85%)	16 (15%)	4	18
7	CH	104/105 (99%)	90 (86%)	14 (14%)	6	26
8	AI	105/107 (98%)	88 (84%)	17 (16%)	3	15

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
8	CI	105/107 (98%)	91 (87%)	14 (13%)	6	27
9	AJ	86/90 (96%)	72 (84%)	14 (16%)	3	15
9	CJ	86/90 (96%)	77 (90%)	9 (10%)	10	39
10	AK	90/99 (91%)	71 (79%)	19 (21%)	1	8
10	CK	90/99 (91%)	78 (87%)	12 (13%)	6	27
11	AL	103/104 (99%)	81 (79%)	22 (21%)	1	7
11	CL	103/104 (99%)	84 (82%)	19 (18%)	2	11
12	AM	92/96 (96%)	88 (96%)	4 (4%)	40	81
12	CM	91/96 (95%)	80 (88%)	11 (12%)	7	32
13	AN	79/84 (94%)	73 (92%)	6 (8%)	19	60
13	CN	79/84 (94%)	67 (85%)	12 (15%)	4	19
14	AO	76/77 (99%)	69 (91%)	7 (9%)	13	47
14	CO	76/77 (99%)	70 (92%)	6 (8%)	18	58
15	AP	65/65 (100%)	54 (83%)	11 (17%)	3	14
15	CP	65/65 (100%)	53 (82%)	12 (18%)	2	11
16	AQ	74/78 (95%)	61 (82%)	13 (18%)	3	13
16	CQ	74/78 (95%)	63 (85%)	11 (15%)	4	20
17	AR	48/65 (74%)	45 (94%)	3 (6%)	25	69
17	CR	48/65 (74%)	46 (96%)	2 (4%)	40	82
18	AS	70/79 (89%)	62 (89%)	8 (11%)	8	35
18	CS	70/79 (89%)	62 (89%)	8 (11%)	8	35
19	AT	65/66 (98%)	48 (74%)	17 (26%)	1	2
19	CT	65/66 (98%)	54 (83%)	11 (17%)	3	14
20	AU	44/61 (72%)	32 (73%)	12 (27%)	0	2
20	CU	44/61 (72%)	34 (77%)	10 (23%)	1	6
24	BC	216/218 (99%)	173 (80%)	43 (20%)	2	9
24	DC	216/218 (99%)	188 (87%)	28 (13%)	6	28
25	BD	164/164 (100%)	136 (83%)	28 (17%)	3	14
25	DD	164/164 (100%)	140 (85%)	24 (15%)	5	21
26	BE	165/165 (100%)	125 (76%)	40 (24%)	1	4
26	DE	165/165 (100%)	150 (91%)	15 (9%)	14	47

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
27	BF	148/150 (99%)	128 (86%)	20 (14%)	6	26
27	DF	149/150 (99%)	122 (82%)	27 (18%)	2	12
28	BG	137/138 (99%)	107 (78%)	30 (22%)	1	7
28	DG	137/138 (99%)	119 (87%)	18 (13%)	6	28
29	BH	114/114 (100%)	96 (84%)	18 (16%)	4	16
29	DH	114/114 (100%)	96 (84%)	18 (16%)	4	16
30	BI	109/110 (99%)	91 (84%)	18 (16%)	3	14
30	DI	109/110 (99%)	102 (94%)	7 (6%)	25	69
31	BJ	116/116 (100%)	89 (77%)	27 (23%)	1	5
31	DJ	116/116 (100%)	104 (90%)	12 (10%)	10	40
32	BK	103/104 (99%)	84 (82%)	19 (18%)	2	11
32	DK	103/104 (99%)	87 (84%)	16 (16%)	4	17
33	BL	102/103 (99%)	79 (78%)	23 (22%)	1	6
33	DL	102/103 (99%)	88 (86%)	14 (14%)	5	25
34	BM	109/109 (100%)	87 (80%)	22 (20%)	2	9
34	DM	109/109 (100%)	99 (91%)	10 (9%)	13	47
35	BN	100/103 (97%)	83 (83%)	17 (17%)	3	14
35	DN	100/103 (97%)	85 (85%)	15 (15%)	4	19
36	BO	86/87 (99%)	69 (80%)	17 (20%)	2	9
36	DO	86/87 (99%)	78 (91%)	8 (9%)	13	46
37	BP	99/100 (99%)	78 (79%)	21 (21%)	1	8
37	DP	99/100 (99%)	90 (91%)	9 (9%)	14	47
38	BQ	89/90 (99%)	74 (83%)	15 (17%)	3	14
38	DQ	89/90 (99%)	78 (88%)	11 (12%)	7	30
39	BR	84/84 (100%)	65 (77%)	19 (23%)	1	6
39	DR	84/84 (100%)	71 (84%)	13 (16%)	4	17
40	BS	93/93 (100%)	73 (78%)	20 (22%)	1	7
40	DS	93/93 (100%)	76 (82%)	17 (18%)	2	12
41	BT	80/84 (95%)	61 (76%)	19 (24%)	1	4
41	DT	80/84 (95%)	74 (92%)	6 (8%)	19	61
42	BU	83/85 (98%)	66 (80%)	17 (20%)	2	8

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
42	DU	83/85 (98%)	74 (89%)	9 (11%)	9	37
43	BV	78/78 (100%)	61 (78%)	17 (22%)	1	7
43	DV	78/78 (100%)	66 (85%)	12 (15%)	4	18
44	BW	59/63 (94%)	42 (71%)	17 (29%)	0	1
44	DW	59/63 (94%)	44 (75%)	15 (25%)	1	3
45	BX	67/68 (98%)	53 (79%)	14 (21%)	1	8
45	DX	67/68 (98%)	58 (87%)	9 (13%)	6	26
46	BY	55/55 (100%)	43 (78%)	12 (22%)	1	7
46	DY	55/55 (100%)	52 (94%)	3 (6%)	30	75
47	BZ	48/49 (98%)	32 (67%)	16 (33%)	0	0
47	DZ	48/49 (98%)	41 (85%)	7 (15%)	5	21
48	B0	47/48 (98%)	43 (92%)	4 (8%)	15	53
48	D0	47/48 (98%)	40 (85%)	7 (15%)	4	20
49	B1	45/49 (92%)	36 (80%)	9 (20%)	2	9
49	D1	45/49 (92%)	41 (91%)	4 (9%)	14	49
50	B2	38/38 (100%)	31 (82%)	7 (18%)	2	11
50	D2	38/38 (100%)	34 (90%)	4 (10%)	10	39
51	B3	51/52 (98%)	44 (86%)	7 (14%)	5	25
51	D3	51/52 (98%)	42 (82%)	9 (18%)	3	13
52	B4	34/34 (100%)	30 (88%)	4 (12%)	8	33
52	D4	34/34 (100%)	29 (85%)	5 (15%)	4	21
All	All	9331/9756 (96%)	7837 (84%)	1494 (16%)	3	16

All (1494) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	AB	10	LYS
1	AB	13	VAL
1	AB	15	PHE
1	AB	19	THR
1	AB	20	ARG
1	AB	22	TRP
1	AB	30	ILE
1	AB	31	PHE
1	AB	36	LYS

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Mol	Chain	Res	Type
1	AB	38	HIS
1	AB	41	ASN
1	AB	42	LEU
1	AB	56	LEU
1	AB	57	ASN
1	AB	67	LEU
1	AB	73	ARG
1	AB	86	CYS
1	AB	87	ASP
1	AB	88	GLN
1	AB	90	PHE
1	AB	94	ARG
1	AB	100	LEU
1	AB	102	ASN
1	AB	108	GLN
1	AB	115	ASP
1	AB	116	LEU
1	AB	119	GLN
1	AB	125	PHE
1	AB	128	LEU
1	AB	130	LYS
1	AB	138	ARG
1	AB	141	GLU
1	AB	143	LEU
1	AB	156	LEU
1	AB	170	ILE
1	AB	185	ILE
1	AB	193	ASP
1	AB	206	ILE
1	AB	207	ARG
1	AB	209	VAL
1	AB	212	TYR
1	AB	219	THR
2	AC	2	GLN
2	AC	13	ILE
2	AC	17	TRP
2	AC	24	ASN
2	AC	25	THR
2	AC	26	LYS
2	AC	27	GLU
2	AC	32	LEU
2	AC	35	ASP

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Mol	Chain	Res	Type
2	AC	36	PHE
2	AC	50	SER
2	AC	54	ILE
2	AC	69	THR
2	AC	79	LYS
2	AC	89	VAL
2	AC	102	ILE
2	AC	106	ARG
2	AC	119	ILE
2	AC	120	THR
2	AC	127	VAL
2	AC	139	ASN
2	AC	143	LEU
2	AC	152	VAL
2	AC	156	LEU
2	AC	161	ILE
2	AC	164	THR
2	AC	165	GLU
2	AC	166	TRP
2	AC	177	LEU
2	AC	184	ASN
2	AC	199	VAL
3	AD	2	ARG
3	AD	11	SER
3	AD	21	LYS
3	AD	25	ARG
3	AD	30	LYS
3	AD	31	CYS
3	AD	43	ARG
3	AD	54	LEU
3	AD	55	ARG
3	AD	57	LYS
3	AD	58	GLN
3	AD	73	ASN
3	AD	88	ASN
3	AD	92	LEU
3	AD	103	ARG
3	AD	115	GLN
3	AD	122	ILE
3	AD	127	ARG
3	AD	128	VAL
3	AD	131	ILE

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Mol	Chain	Res	Type
3	AD	141	VAL
3	AD	147	LYS
3	AD	160	LEU
3	AD	166	LYS
3	AD	170	LEU
3	AD	178	GLU
3	AD	193	ASP
3	AD	205	LYS
4	AE	10	LEU
4	AE	11	GLN
4	AE	14	LEU
4	AE	28	ARG
4	AE	68	ARG
4	AE	75	LEU
4	AE	79	THR
4	AE	81	GLN
4	AE	94	PHE
4	AE	95	MET
4	AE	99	SER
4	AE	100	GLU
4	AE	121	ASN
4	AE	123	LEU
4	AE	135	VAL
4	AE	136	VAL
4	AE	141	ASP
4	AE	155	LYS
4	AE	156	ARG
5	AF	14	GLN
5	AF	17	GLN
5	AF	24	ARG
5	AF	29	ILE
5	AF	38	ARG
5	AF	46	GLN
5	AF	54	LEU
5	AF	55	HIS
5	AF	68	GLN
5	AF	69	GLU
5	AF	77	THR
5	AF	85	ILE
5	AF	86	ARG
6	AG	3	ARG
6	AG	8	GLN

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Mol	Chain	Res	Type
6	AG	12	LEU
6	AG	20	GLU
6	AG	37	THR
6	AG	47	GLU
6	AG	62	GLU
6	AG	83	THR
6	AG	84	TYR
6	AG	93	VAL
6	AG	105	GLU
6	AG	110	ARG
6	AG	123	LEU
6	AG	132	THR
6	AG	143	MET
7	AH	11	THR
7	AH	21	LYS
7	AH	25	THR
7	AH	29	SER
7	AH	65	PHE
7	AH	72	GLU
7	AH	76	ARG
7	AH	79	ARG
7	AH	82	LEU
7	AH	86	LYS
7	AH	89	ASP
7	AH	98	LEU
7	AH	110	MET
7	AH	111	THR
7	AH	116	ARG
7	AH	120	LEU
8	AI	4	GLN
8	AI	13	SER
8	AI	37	TYR
8	AI	44	ARG
8	AI	47	VAL
8	AI	48	ARG
8	AI	54	VAL
8	AI	56	MET
8	AI	62	LEU
8	AI	67	LYS
8	AI	87	MET
8	AI	88	GLU
8	AI	98	ARG

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Mol	Chain	Res	Type
8	AI	105	ARG
8	AI	125	GLN
8	AI	126	PHE
8	AI	128	LYS
9	AJ	17	LEU
9	AJ	22	THR
9	AJ	32	THR
9	AJ	35	GLN
9	AJ	48	ARG
9	AJ	50	THR
9	AJ	59	LYS
9	AJ	63	ASP
9	AJ	70	HIS
9	AJ	73	LEU
9	AJ	87	LEU
9	AJ	89	ARG
9	AJ	92	LEU
9	AJ	96	VAL
10	AK	17	ASP
10	AK	29	THR
10	AK	30	ILE
10	AK	45	THR
10	AK	51	PHE
10	AK	55	ARG
10	AK	64	VAL
10	AK	76	TYR
10	AK	78	ILE
10	AK	81	LEU
10	AK	82	GLU
10	AK	96	ILE
10	AK	100	ASN
10	AK	106	ILE
10	AK	118	ASN
10	AK	124	LYS
10	AK	125	LYS
10	AK	127	ARG
10	AK	128	VAL
11	AL	3	VAL
11	AL	9	LYS
11	AL	15	VAL
11	AL	17	LYS
11	AL	18	SER

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Mol	Chain	Res	Type
11	AL	20	VAL
11	AL	26	CYS
11	AL	35	ARG
11	AL	43	LYS
11	AL	49	ARG
11	AL	51	VAL
11	AL	63	THR
11	AL	74	GLN
11	AL	77	SER
11	AL	81	ILE
11	AL	87	LYS
11	AL	88	ASP
11	AL	94	TYR
11	AL	96	THR
11	AL	101	LEU
11	AL	104	SER
11	AL	109	ARG
12	AM	7	ASN
12	AM	42	VAL
12	AM	58	GLU
12	AM	106	ARG
13	AN	3	GLN
13	AN	48	GLN
13	AN	58	ARG
13	AN	59	GLN
13	AN	61	ASN
13	AN	96	LYS
14	AO	16	ARG
14	AO	24	THR
14	AO	34	GLN
14	AO	57	ARG
14	AO	65	LEU
14	AO	67	ASP
14	AO	86	LEU
15	AP	1	MET
15	AP	6	LEU
15	AP	19	VAL
15	AP	28	ARG
15	AP	29	ASN
15	AP	35	ARG
15	AP	46	LYS
15	AP	55	ASP

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Mol	Chain	Res	Type
15	AP	63	GLN
15	AP	67	ILE
15	AP	77	GLU
16	AQ	3	LYS
16	AQ	16	MET
16	AQ	21	VAL
16	AQ	29	LYS
16	AQ	37	ILE
16	AQ	49	ASN
16	AQ	50	ASN
16	AQ	51	GLU
16	AQ	54	ILE
16	AQ	64	ARG
16	AQ	74	LEU
16	AQ	75	VAL
16	AQ	80	LYS
17	AR	35	SER
17	AR	41	SER
17	AR	54	LEU
18	AS	42	ASN
18	AS	54	ARG
18	AS	55	GLN
18	AS	57	VAL
18	AS	60	PHE
18	AS	61	VAL
18	AS	64	GLU
18	AS	79	TYR
19	AT	4	LYS
19	AT	5	SER
19	AT	11	ILE
19	AT	17	ARG
19	AT	23	ARG
19	AT	26	MET
19	AT	27	MET
19	AT	29	THR
19	AT	33	LYS
19	AT	35	TYR
19	AT	38	ILE
19	AT	42	ASP
19	AT	53	MET
19	AT	67	HIS
19	AT	75	LYS

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Mol	Chain	Res	Type
19	AT	77	ASN
19	AT	84	LYS
20	AU	4	LYS
20	AU	8	ASN
20	AU	9	GLU
20	AU	15	LEU
20	AU	18	PHE
20	AU	27	VAL
20	AU	33	ARG
20	AU	37	TYR
20	AU	39	LYS
20	AU	42	THR
20	AU	44	ARG
20	AU	45	LYS
24	BC	12	ARG
24	BC	20	ASN
24	BC	23	LEU
24	BC	27	LYS
24	BC	38	LYS
24	BC	43	ASN
24	BC	71	ASP
24	BC	73	ILE
24	BC	77	VAL
24	BC	85	ASN
24	BC	90	ILE
24	BC	93	VAL
24	BC	103	ILE
24	BC	104	LEU
24	BC	109	LEU
24	BC	110	LYS
24	BC	114	GLN
24	BC	115	ILE
24	BC	120	ASP
24	BC	123	ILE
24	BC	129	LEU
24	BC	132	ARG
24	BC	142	ASN
24	BC	155	ARG
24	BC	164	VAL
24	BC	166	ARG
24	BC	171	VAL
24	BC	172	THR

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Mol	Chain	Res	Type
24	BC	173	LEU
24	BC	176	ARG
24	BC	201	LEU
24	BC	202	ARG
24	BC	203	VAL
24	BC	212	TRP
24	BC	213	ARG
24	BC	215	VAL
24	BC	216	ARG
24	BC	250	GLN
24	BC	252	LYS
24	BC	254	LYS
24	BC	257	ARG
24	BC	261	ARG
24	BC	268	ARG
25	BD	9	VAL
25	BD	14	ILE
25	BD	16	THR
25	BD	17	GLU
25	BD	42	ASN
25	BD	43	ASP
25	BD	45	TYR
25	BD	51	THR
25	BD	60	VAL
25	BD	73	VAL
25	BD	89	GLU
25	BD	90	PHE
25	BD	91	THR
25	BD	98	VAL
25	BD	106	LYS
25	BD	114	LYS
25	BD	118	PHE
25	BD	124	ARG
25	BD	131	ASP
25	BD	140	HIS
25	BD	150	GLN
25	BD	151	THR
25	BD	159	LYS
25	BD	169	ARG
25	BD	171	THR
25	BD	176	ASP
25	BD	183	GLU

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Mol	Chain	Res	Type
25	BD	197	THR
26	BE	12	LEU
26	BE	14	VAL
26	BE	18	THR
26	BE	21	ARG
26	BE	24	ASN
26	BE	40	ARG
26	BE	44	ARG
26	BE	48	THR
26	BE	61	ARG
26	BE	62	GLN
26	BE	65	THR
26	BE	69	ARG
26	BE	77	ILE
26	BE	78	TRP
26	BE	80	SER
26	BE	84	THR
26	BE	90	GLN
26	BE	91	ASP
26	BE	93	SER
26	BE	108	ILE
26	BE	109	LEU
26	BE	113	VAL
26	BE	118	LEU
26	BE	119	ILE
26	BE	121	VAL
26	BE	123	LYS
26	BE	127	GLU
26	BE	132	LYS
26	BE	141	MET
26	BE	146	VAL
26	BE	147	LEU
26	BE	148	ILE
26	BE	153	LEU
26	BE	163	ASN
26	BE	167	VAL
26	BE	171	ASP
26	BE	178	VAL
26	BE	186	VAL
26	BE	189	THR
26	BE	196	VAL
27	BF	3	LEU

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Mol	Chain	Res	Type
27	BF	8	LYS
27	BF	9	ASP
27	BF	10	GLU
27	BF	12	VAL
27	BF	34	THR
27	BF	35	LEU
27	BF	36	ASN
27	BF	46	LYS
27	BF	80	GLN
27	BF	82	TYR
27	BF	90	LEU
27	BF	103	ILE
27	BF	109	ARG
27	BF	111	ARG
27	BF	114	ARG
27	BF	132	ARG
27	BF	134	GLN
27	BF	154	THR
27	BF	157	THR
28	BG	2	ARG
28	BG	8	VAL
28	BG	15	ASP
28	BG	18	ILE
28	BG	21	GLN
28	BG	34	ARG
28	BG	35	THR
28	BG	37	ASN
28	BG	40	VAL
28	BG	59	ASP
28	BG	68	ARG
28	BG	72	ASN
28	BG	78	VAL
28	BG	80	GLU
28	BG	84	LYS
28	BG	86	LEU
28	BG	91	VAL
28	BG	101	VAL
28	BG	115	GLN
28	BG	116	LEU
28	BG	120	ILE
28	BG	121	THR
28	BG	123	GLU

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Mol	Chain	Res	Type
28	BG	131	VAL
28	BG	132	LEU
28	BG	138	GLN
28	BG	148	ARG
28	BG	155	PRO
28	BG	170	THR
28	BG	174	LYS
29	BH	3	VAL
29	BH	6	LEU
29	BH	12	LEU
29	BH	14	SER
29	BH	15	LEU
29	BH	18	GLN
29	BH	28	ASN
29	BH	31	VAL
29	BH	43	ASN
29	BH	46	PHE
29	BH	50	ARG
29	BH	54	LEU
29	BH	68	ARG
29	BH	75	LEU
29	BH	83	LYS
29	BH	96	THR
29	BH	104	THR
29	BH	135	HIS
30	BI	2	LYS
30	BI	10	LEU
30	BI	11	GLN
30	BI	12	VAL
30	BI	23	VAL
30	BI	30	GLN
30	BI	37	PHE
30	BI	39	LYS
30	BI	49	GLU
30	BI	61	TYR
30	BI	71	LYS
30	BI	81	LYS
30	BI	86	LYS
30	BI	95	ASP
30	BI	107	GLU
30	BI	124	MET
30	BI	126	ARG

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Mol	Chain	Res	Type
30	BI	135	MET
31	BJ	1	MET
31	BJ	2	LYS
31	BJ	7	LYS
31	BJ	24	THR
31	BJ	25	LEU
31	BJ	30	THR
31	BJ	31	GLU
31	BJ	36	LEU
31	BJ	40	HIS
31	BJ	41	LYS
31	BJ	44	TYR
31	BJ	50	THR
31	BJ	54	ILE
31	BJ	55	ILE
31	BJ	57	LEU
31	BJ	64	VAL
31	BJ	65	THR
31	BJ	69	ARG
31	BJ	78	THR
31	BJ	86	GLN
31	BJ	88	THR
31	BJ	103	ILE
31	BJ	111	LYS
31	BJ	114	LEU
31	BJ	129	GLU
31	BJ	139	VAL
31	BJ	140	LEU
32	BK	8	LEU
32	BK	13	ASN
32	BK	14	SER
32	BK	18	ARG
32	BK	23	LYS
32	BK	28	SER
32	BK	47	ILE
32	BK	51	LYS
32	BK	52	VAL
32	BK	54	LYS
32	BK	58	LEU
32	BK	73	ASP
32	BK	88	ASN
32	BK	89	ASN

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Mol	Chain	Res	Type
32	BK	93	GLN
32	BK	99	ILE
32	BK	105	ARG
32	BK	111	LYS
32	BK	114	LYS
33	BL	3	LEU
33	BL	4	ASN
33	BL	6	LEU
33	BL	13	LYS
33	BL	14	LYS
33	BL	21	ARG
33	BL	27	LEU
33	BL	33	ARG
33	BL	46	VAL
33	BL	47	ARG
33	BL	55	MET
33	BL	61	LEU
33	BL	66	PHE
33	BL	82	LEU
33	BL	91	ASP
33	BL	93	ASN
33	BL	94	THR
33	BL	101	ILE
33	BL	111	ILE
33	BL	112	LEU
33	BL	115	GLU
33	BL	121	THR
33	BL	122	VAL
34	BM	8	LYS
34	BM	10	ARG
34	BM	12	MET
34	BM	20	LEU
34	BM	24	THR
34	BM	25	ASP
34	BM	33	LEU
34	BM	36	VAL
34	BM	51	ARG
34	BM	58	LYS
34	BM	69	PRO
34	BM	70	ASP
34	BM	75	GLU
34	BM	81	ARG

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Mol	Chain	Res	Type
34	BM	90	GLU
34	BM	96	ILE
34	BM	97	GLN
34	BM	100	LYS
34	BM	102	LEU
34	BM	131	VAL
34	BM	133	LYS
34	BM	134	THR
35	BN	2	ARG
35	BN	3	HIS
35	BN	8	ARG
35	BN	10	LEU
35	BN	11	ASN
35	BN	15	SER
35	BN	30	ARG
35	BN	33	ILE
35	BN	35	LYS
35	BN	51	LEU
35	BN	69	ARG
35	BN	71	ARG
35	BN	75	ILE
35	BN	83	LEU
35	BN	86	ARG
35	BN	95	THR
35	BN	118	ARG
36	BO	9	ARG
36	BO	17	LYS
36	BO	28	VAL
36	BO	31	THR
36	BO	36	TYR
36	BO	39	VAL
36	BO	65	THR
36	BO	78	VAL
36	BO	80	GLU
36	BO	83	LEU
36	BO	84	GLU
36	BO	89	ASP
36	BO	94	ARG
36	BO	100	HIS
36	BO	103	VAL
36	BO	111	ARG
36	BO	116	GLN

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Mol	Chain	Res	Type
37	BP	3	ILE
37	BP	6	GLN
37	BP	8	GLU
37	BP	14	GLN
37	BP	16	VAL
37	BP	20	ARG
37	BP	24	THR
37	BP	28	LYS
37	BP	36	LYS
37	BP	37	LYS
37	BP	38	ARG
37	BP	61	ARG
37	BP	69	VAL
37	BP	75	THR
37	BP	77	SER
37	BP	83	ILE
37	BP	91	VAL
37	BP	92	ARG
37	BP	95	LYS
37	BP	96	LEU
37	BP	99	LEU
38	BQ	2	ARG
38	BQ	10	ARG
38	BQ	40	LYS
38	BQ	50	ARG
38	BQ	63	ARG
38	BQ	65	ASN
38	BQ	69	ARG
38	BQ	73	ILE
38	BQ	88	GLU
38	BQ	89	ILE
38	BQ	93	ILE
38	BQ	94	LEU
38	BQ	96	ASP
38	BQ	97	ILE
38	BQ	103	VAL
39	BR	10	LYS
39	BR	14	VAL
39	BR	20	VAL
39	BR	25	LEU
39	BR	33	VAL
39	BR	37	GLU

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Mol	Chain	Res	Type
39	BR	38	VAL
39	BR	39	LEU
39	BR	43	ASN
39	BR	46	GLU
39	BR	48	LYS
39	BR	54	VAL
39	BR	63	VAL
39	BR	72	VAL
39	BR	85	LYS
39	BR	86	GLN
39	BR	87	GLN
39	BR	97	LYS
39	BR	101	ILE
40	BS	3	THR
40	BS	4	ILE
40	BS	7	HIS
40	BS	30	SER
40	BS	33	LEU
40	BS	36	LEU
40	BS	45	VAL
40	BS	48	LYS
40	BS	66	ILE
40	BS	68	ASP
40	BS	70	LYS
40	BS	71	VAL
40	BS	73	LYS
40	BS	74	ILE
40	BS	76	VAL
40	BS	84	ARG
40	BS	88	ARG
40	BS	96	ILE
40	BS	101	SER
40	BS	107	VAL
41	BT	2	ILE
41	BT	3	ARG
41	BT	4	GLU
41	BT	8	LEU
41	BT	11	LEU
41	BT	17	SER
41	BT	18	GLU
41	BT	19	LYS
41	BT	29	THR

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Mol	Chain	Res	Type
41	BT	30	ILE
41	BT	31	VAL
41	BT	32	LEU
41	BT	43	ILE
41	BT	48	GLN
41	BT	49	LYS
41	BT	64	LYS
41	BT	68	LYS
41	BT	69	ARG
41	BT	74	ILE
42	BU	4	ILE
42	BU	5	ARG
42	BU	6	ARG
42	BU	8	ASP
42	BU	10	VAL
42	BU	23	LYS
42	BU	30	SER
42	BU	33	VAL
42	BU	42	LYS
42	BU	61	GLU
42	BU	64	ILE
42	BU	67	SER
42	BU	80	ASP
42	BU	82	VAL
42	BU	86	PHE
42	BU	92	VAL
42	BU	102	ILE
43	BV	1	MET
43	BV	3	THR
43	BV	5	ASN
43	BV	8	VAL
43	BV	10	LYS
43	BV	20	LEU
43	BV	29	ILE
43	BV	35	GLU
43	BV	41	GLU
43	BV	42	LEU
43	BV	46	LYS
43	BV	51	GLN
43	BV	55	GLU
43	BV	61	LEU
43	BV	65	VAL

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Mol	Chain	Res	Type
43	BV	66	ASP
43	BV	90	ASP
44	BW	14	ASP
44	BW	15	SER
44	BW	19	ARG
44	BW	22	VAL
44	BW	23	LYS
44	BW	24	ARG
44	BW	25	PHE
44	BW	38	ARG
44	BW	40	ARG
44	BW	45	HIS
44	BW	49	ASN
44	BW	54	ARG
44	BW	58	LEU
44	BW	67	LYS
44	BW	71	LYS
44	BW	77	LYS
44	BW	80	SER
45	BX	10	ARG
45	BX	19	HIS
45	BX	24	THR
45	BX	26	ARG
45	BX	27	ARG
45	BX	29	LEU
45	BX	36	ARG
45	BX	46	VAL
45	BX	47	THR
45	BX	53	LYS
45	BX	63	ILE
45	BX	65	THR
45	BX	73	ARG
45	BX	77	TYR
46	BY	9	LYS
46	BY	10	SER
46	BY	14	LEU
46	BY	18	LEU
46	BY	19	LEU
46	BY	22	LEU
46	BY	37	LEU
46	BY	42	LEU
46	BY	47	ARG

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Mol	Chain	Res	Type
46	BY	56	LEU
46	BY	57	LEU
46	BY	59	GLU
47	BZ	2	LYS
47	BZ	3	THR
47	BZ	4	ILE
47	BZ	5	LYS
47	BZ	7	THR
47	BZ	8	GLN
47	BZ	9	THR
47	BZ	15	ARG
47	BZ	23	LEU
47	BZ	29	ARG
47	BZ	30	ARG
47	BZ	37	ARG
47	BZ	38	GLU
47	BZ	43	ILE
47	BZ	51	SER
47	BZ	58	GLU
48	B0	5	ASN
48	B0	9	ARG
48	B0	26	SER
48	B0	39	ARG
49	B1	4	ILE
49	B1	9	LYS
49	B1	16	THR
49	B1	21	THR
49	B1	33	LEU
49	B1	35	LEU
49	B1	41	VAL
49	B1	42	VAL
49	B1	43	ARG
50	B2	1	MET
50	B2	3	ARG
50	B2	12	ARG
50	B2	16	HIS
50	B2	21	ARG
50	B2	39	ARG
50	B2	45	SER
51	B3	5	THR
51	B3	7	ARG
51	B3	22	LYS

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Mol	Chain	Res	Type
51	B3	31	ILE
51	B3	49	VAL
51	B3	51	LYS
51	B3	56	LEU
52	B4	1	MET
52	B4	4	ARG
52	B4	9	LYS
52	B4	13	ASN
1	CB	9	LEU
1	CB	10	LYS
1	CB	14	HIS
1	CB	19	THR
1	CB	21	TYR
1	CB	26	MET
1	CB	34	ARG
1	CB	36	LYS
1	CB	39	ILE
1	CB	42	LEU
1	CB	46	VAL
1	CB	69	VAL
1	CB	88	GLN
1	CB	103	TRP
1	CB	124	THR
1	CB	125	PHE
1	CB	131	LYS
1	CB	146	SER
1	CB	147	LEU
1	CB	162	VAL
1	CB	177	ASN
1	CB	182	VAL
1	CB	191	ASP
1	CB	196	ASP
1	CB	212	TYR
2	CC	26	LYS
2	CC	35	ASP
2	CC	41	TYR
2	CC	53	ARG
2	CC	106	ARG
2	CC	123	LEU
2	CC	126	ARG
2	CC	134	LYS
2	CC	139	ASN

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Mol	Chain	Res	Type
2	CC	152	VAL
2	CC	160	GLU
2	CC	161	ILE
2	CC	164	THR
2	CC	166	TRP
2	CC	174	LEU
2	CC	178	ARG
2	CC	182	ASP
2	CC	183	TYR
3	CD	2	ARG
3	CD	8	LEU
3	CD	24	VAL
3	CD	29	THR
3	CD	30	LYS
3	CD	34	GLU
3	CD	55	ARG
3	CD	57	LYS
3	CD	62	ARG
3	CD	80	ARG
3	CD	84	ASN
3	CD	106	PHE
3	CD	116	LEU
3	CD	120	LYS
3	CD	125	ASN
3	CD	127	ARG
3	CD	140	ASP
3	CD	147	LYS
3	CD	151	GLN
3	CD	152	SER
3	CD	158	LEU
3	CD	159	GLU
3	CD	160	LEU
3	CD	163	GLN
3	CD	165	GLU
3	CD	168	THR
3	CD	170	LEU
3	CD	182	LYS
3	CD	183	ARG
3	CD	184	LYS
3	CD	194	ILE
3	CD	195	ASN
3	CD	199	ILE

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Mol	Chain	Res	Type
3	CD	204	SER
4	CE	11	GLN
4	CE	13	LYS
4	CE	25	LYS
4	CE	51	LYS
4	CE	59	ILE
4	CE	75	LEU
4	CE	76	ASN
4	CE	80	LEU
4	CE	87	VAL
4	CE	92	ARG
4	CE	95	MET
4	CE	99	SER
4	CE	104	ILE
4	CE	119	VAL
4	CE	129	SER
4	CE	131	ASN
4	CE	133	ILE
4	CE	136	VAL
4	CE	139	THR
4	CE	144	GLU
5	CF	7	VAL
5	CF	33	GLU
5	CF	38	ARG
5	CF	44	ARG
5	CF	52	ASN
5	CF	54	LEU
5	CF	56	LYS
5	CF	58	HIS
5	CF	61	LEU
5	CF	72	ASP
5	CF	75	GLU
5	CF	86	ARG
5	CF	90	MET
6	CG	3	ARG
6	CG	5	VAL
6	CG	6	ILE
6	CG	10	LYS
6	CG	12	LEU
6	CG	16	LYS
6	CG	48	THR
6	CG	55	LYS

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Mol	Chain	Res	Type
6	CG	58	LEU
6	CG	66	GLU
6	CG	75	LYS
6	CG	78	ARG
6	CG	85	GLN
6	CG	90	VAL
6	CG	100	MET
6	CG	102	TRP
6	CG	110	ARG
6	CG	112	ASP
6	CG	115	MET
6	CG	119	LEU
6	CG	123	LEU
6	CG	137	ARG
6	CG	139	ASP
6	CG	148	LYS
7	CH	2	MET
7	CH	37	ASN
7	CH	42	GLU
7	CH	46	GLU
7	CH	50	VAL
7	CH	54	THR
7	CH	59	GLU
7	CH	70	VAL
7	CH	75	GLN
7	CH	76	ARG
7	CH	82	LEU
7	CH	89	ASP
7	CH	93	LYS
7	CH	110	MET
8	CI	3	ASN
8	CI	4	GLN
8	CI	5	TYR
8	CI	26	LYS
8	CI	36	GLN
8	CI	37	TYR
8	CI	45	MET
8	CI	53	LEU
8	CI	54	VAL
8	CI	60	LEU
8	CI	83	THR
8	CI	87	MET

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Mol	Chain	Res	Type
8	CI	125	GLN
8	CI	129	ARG
9	CJ	11	LYS
9	CJ	15	HIS
9	CJ	59	LYS
9	CJ	60	ASP
9	CJ	67	ILE
9	CJ	69	THR
9	CJ	82	LYS
9	CJ	87	LEU
9	CJ	92	LEU
10	CK	12	ARG
10	CK	27	ASN
10	CK	33	ILE
10	CK	34	THR
10	CK	73	VAL
10	CK	78	ILE
10	CK	80	ASN
10	CK	81	LEU
10	CK	94	SER
10	CK	95	THR
10	CK	105	ARG
10	CK	115	ILE
11	CL	4	ASN
11	CL	5	GLN
11	CL	9	LYS
11	CL	14	LYS
11	CL	15	VAL
11	CL	19	ASN
11	CL	28	GLN
11	CL	39	THR
11	CL	48	LEU
11	CL	49	ARG
11	CL	57	THR
11	CL	62	VAL
11	CL	72	ASN
11	CL	88	ASP
11	CL	96	THR
11	CL	97	VAL
11	CL	102	ASP
11	CL	107	LYS
11	CL	120	ARG

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Mol	Chain	Res	Type
12	CM	12	LYS
12	CM	24	VAL
12	CM	28	ARG
12	CM	32	ILE
12	CM	46	GLU
12	CM	53	ASP
12	CM	77	LYS
12	CM	91	ARG
12	CM	92	ARG
12	CM	100	ARG
12	CM	113	LYS
13	CN	3	GLN
13	CN	17	ASP
13	CN	27	LYS
13	CN	41	TRP
13	CN	52	ARG
13	CN	53	ASP
13	CN	58	ARG
13	CN	61	ASN
13	CN	65	GLN
13	CN	72	PHE
13	CN	78	LEU
13	CN	96	LYS
14	CO	16	ARG
14	CO	34	GLN
14	CO	39	GLN
14	CO	45	HIS
14	CO	47	LYS
14	CO	80	LEU
15	CP	1	MET
15	CP	3	THR
15	CP	6	LEU
15	CP	19	VAL
15	CP	32	PHE
15	CP	34	GLU
15	CP	35	ARG
15	CP	46	LYS
15	CP	54	LEU
15	CP	56	ARG
15	CP	69	ASP
15	CP	71	VAL
16	CQ	3	LYS

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Mol	Chain	Res	Type
16	CQ	6	THR
16	CQ	7	LEU
16	CQ	20	ILE
16	CQ	32	ILE
16	CQ	37	ILE
16	CQ	39	ARG
16	CQ	51	GLU
16	CQ	52	CYS
16	CQ	60	ILE
16	CQ	80	LYS
17	CR	25	ILE
17	CR	72	ARG
18	CS	5	LYS
18	CS	10	ILE
18	CS	11	ASP
18	CS	52	ASN
18	CS	54	ARG
18	CS	55	GLN
18	CS	56	HIS
18	CS	73	PHE
19	CT	11	ILE
19	CT	26	MET
19	CT	30	PHE
19	CT	47	GLN
19	CT	53	MET
19	CT	67	HIS
19	CT	68	LYS
19	CT	69	ASN
19	CT	73	ARG
19	CT	78	LEU
19	CT	82	ILE
20	CU	4	LYS
20	CU	9	GLU
20	CU	17	ARG
20	CU	18	PHE
20	CU	19	LYS
20	CU	27	VAL
20	CU	32	ARG
20	CU	36	PHE
20	CU	37	TYR
20	CU	53	LYS
24	DC	23	LEU

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Mol	Chain	Res	Type
24	DC	35	LYS
24	DC	51	ARG
24	DC	53	ILE
24	DC	57	HIS
24	DC	62	ARG
24	DC	71	ASP
24	DC	90	ILE
24	DC	102	TYR
24	DC	124	LYS
24	DC	129	LEU
24	DC	152	GLN
24	DC	166	ARG
24	DC	172	THR
24	DC	173	LEU
24	DC	176	ARG
24	DC	183	VAL
24	DC	187	CYS
24	DC	188	ARG
24	DC	190	THR
24	DC	203	VAL
24	DC	212	TRP
24	DC	213	ARG
24	DC	220	ARG
24	DC	227	VAL
24	DC	235	GLU
24	DC	256	THR
24	DC	269	ARG
25	DD	24	VAL
25	DD	28	GLU
25	DD	33	ARG
25	DD	34	VAL
25	DD	35	THR
25	DD	38	LYS
25	DD	50	VAL
25	DD	55	LYS
25	DD	56	LYS
25	DD	58	ASN
25	DD	62	LYS
25	DD	79	LEU
25	DD	84	LEU
25	DD	106	LYS
25	DD	107	VAL

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Mol	Chain	Res	Type
25	DD	121	THR
25	DD	138	LEU
25	DD	141	ARG
25	DD	148	GLN
25	DD	150	GLN
25	DD	159	LYS
25	DD	168	GLU
25	DD	189	VAL
25	DD	193	VAL
26	DE	53	THR
26	DE	57	LYS
26	DE	77	ILE
26	DE	84	THR
26	DE	108	ILE
26	DE	112	LEU
26	DE	117	ARG
26	DE	126	VAL
26	DE	127	GLU
26	DE	139	LYS
26	DE	149	ILE
26	DE	157	LEU
26	DE	163	ASN
26	DE	164	LEU
26	DE	166	LYS
27	DF	13	LYS
27	DF	25	MET
27	DF	47	LYS
27	DF	48	LEU
27	DF	49	LEU
27	DF	76	PHE
27	DF	77	LYS
27	DF	82	TYR
27	DF	91	ARG
27	DF	94	ARG
27	DF	97	GLU
27	DF	110	ILE
27	DF	111	ARG
27	DF	113	PHE
27	DF	119	LYS
27	DF	131	VAL
27	DF	133	GLU
27	DF	134	GLN

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Mol	Chain	Res	Type
27	DF	135	ILE
27	DF	139	GLU
27	DF	142	TYR
27	DF	147	ARG
27	DF	151	LEU
27	DF	160	LYS
27	DF	166	ARG
27	DF	172	PHE
27	DF	177	ARG
28	DG	2	ARG
28	DG	18	ILE
28	DG	19	ASN
28	DG	21	GLN
28	DG	34	ARG
28	DG	35	THR
28	DG	40	VAL
28	DG	42	VAL
28	DG	51	PHE
28	DG	72	ASN
28	DG	84	LYS
28	DG	91	VAL
28	DG	93	TYR
28	DG	120	ILE
28	DG	162	ARG
28	DG	163	TYR
28	DG	166	GLU
28	DG	176	LYS
29	DH	8	LYS
29	DH	22	LYS
29	DH	25	TYR
29	DH	27	ARG
29	DH	28	ASN
29	DH	50	ARG
29	DH	57	LYS
29	DH	66	ASN
29	DH	68	ARG
29	DH	76	GLU
29	DH	86	ASP
29	DH	90	LEU
29	DH	91	PHE
29	DH	98	ASP
29	DH	104	THR

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Mol	Chain	Res	Type
29	DH	109	GLU
29	DH	132	PHE
29	DH	144	VAL
30	DI	7	TYR
30	DI	16	MET
30	DI	30	GLN
30	DI	58	ILE
30	DI	68	PHE
30	DI	72	THR
30	DI	93	ASN
31	DJ	3	THR
31	DJ	5	THR
31	DJ	25	LEU
31	DJ	36	LEU
31	DJ	43	GLU
31	DJ	47	HIS
31	DJ	54	ILE
31	DJ	57	LEU
31	DJ	95	ARG
31	DJ	106	LYS
31	DJ	129	GLU
31	DJ	139	VAL
32	DK	3	GLN
32	DK	7	MET
32	DK	13	ASN
32	DK	24	VAL
32	DK	25	LEU
32	DK	39	ILE
32	DK	41	ILE
32	DK	49	ARG
32	DK	54	LYS
32	DK	73	ASP
32	DK	87	LEU
32	DK	103	VAL
32	DK	105	ARG
32	DK	106	GLU
32	DK	107	LEU
32	DK	111	LYS
33	DL	3	LEU
33	DL	4	ASN
33	DL	6	LEU
33	DL	47	ARG

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Mol	Chain	Res	Type
33	DL	48	ARG
33	DL	79	LEU
33	DL	82	LEU
33	DL	92	LEU
33	DL	99	ASN
33	DL	103	ILE
33	DL	111	ILE
33	DL	112	LEU
33	DL	141	LYS
33	DL	143	GLU
34	DM	8	LYS
34	DM	38	ARG
34	DM	78	LEU
34	DM	96	ILE
34	DM	97	GLN
34	DM	102	LEU
34	DM	105	MET
34	DM	115	GLU
34	DM	126	ILE
34	DM	129	THR
35	DN	14	SER
35	DN	18	GLN
35	DN	20	MET
35	DN	29	VAL
35	DN	33	ILE
35	DN	53	THR
35	DN	54	LEU
35	DN	62	ASN
35	DN	63	ARG
35	DN	69	ARG
35	DN	94	TYR
35	DN	95	THR
35	DN	96	ARG
35	DN	98	LEU
35	DN	114	GLU
36	DO	17	LYS
36	DO	31	THR
36	DO	63	LYS
36	DO	65	THR
36	DO	68	LYS
36	DO	90	VAL
36	DO	115	LEU

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Mol	Chain	Res	Type
36	DO	117	PHE
37	DP	6	GLN
37	DP	7	LEU
37	DP	13	LYS
37	DP	28	LYS
37	DP	31	VAL
37	DP	83	ILE
37	DP	86	LYS
37	DP	95	LYS
37	DP	101	GLU
38	DQ	3	VAL
38	DQ	10	ARG
38	DQ	12	ARG
38	DQ	35	PHE
38	DQ	47	ARG
38	DQ	54	ARG
38	DQ	57	ARG
38	DQ	63	ARG
38	DQ	69	ARG
38	DQ	79	ILE
38	DQ	93	ILE
39	DR	6	GLN
39	DR	10	LYS
39	DR	13	ARG
39	DR	37	GLU
39	DR	48	LYS
39	DR	58	VAL
39	DR	75	VAL
39	DR	80	ARG
39	DR	81	LYS
39	DR	86	GLN
39	DR	90	ARG
39	DR	93	PHE
39	DR	95	ASP
40	DS	4	ILE
40	DS	6	LYS
40	DS	22	ASP
40	DS	23	LEU
40	DS	31	GLN
40	DS	33	LEU
40	DS	36	LEU
40	DS	45	VAL

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Mol	Chain	Res	Type
40	DS	46	LEU
40	DS	66	ILE
40	DS	70	LYS
40	DS	74	ILE
40	DS	76	VAL
40	DS	84	ARG
40	DS	85	ILE
40	DS	86	MET
40	DS	88	ARG
41	DT	9	LYS
41	DT	12	ARG
41	DT	18	GLU
41	DT	39	THR
41	DT	50	LEU
41	DT	54	GLU
42	DU	13	LEU
42	DU	20	LYS
42	DU	21	ARG
42	DU	40	LEU
42	DU	45	GLN
42	DU	82	VAL
42	DU	85	ARG
42	DU	94	PHE
42	DU	95	PHE
43	DV	26	PHE
43	DV	40	ILE
43	DV	41	GLU
43	DV	44	HIS
43	DV	51	GLN
43	DV	53	LYS
43	DV	61	LEU
43	DV	65	VAL
43	DV	69	GLU
43	DV	70	ILE
43	DV	76	ASP
43	DV	90	ASP
44	DW	18	LYS
44	DW	20	LEU
44	DW	22	VAL
44	DW	23	LYS
44	DW	25	PHE
44	DW	30	VAL

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Mol	Chain	Res	Type
44	DW	35	ILE
44	DW	37	VAL
44	DW	39	GLN
44	DW	40	ARG
44	DW	44	PHE
44	DW	58	LEU
44	DW	68	PHE
44	DW	76	ARG
44	DW	77	LYS
45	DX	5	GLN
45	DX	26	ARG
45	DX	31	ASN
45	DX	33	HIS
45	DX	46	VAL
45	DX	47	THR
45	DX	57	VAL
45	DX	63	ILE
45	DX	73	ARG
46	DY	1	MET
46	DY	4	LYS
46	DY	28	LEU
47	DZ	16	LEU
47	DZ	28	LEU
47	DZ	29	ARG
47	DZ	30	ARG
47	DZ	50	VAL
47	DZ	53	MET
47	DZ	55	LYS
48	D0	3	GLN
48	D0	5	ASN
48	D0	9	ARG
48	D0	41	HIS
48	D0	42	ILE
48	D0	49	ARG
48	D0	53	VAL
49	D1	10	LEU
49	D1	20	TYR
49	D1	35	LEU
49	D1	44	GLN
50	D2	8	SER
50	D2	26	ASN
50	D2	28	ARG

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Mol	Chain	Res	Type
50	D2	33	ARG
51	D3	12	ARG
51	D3	14	LYS
51	D3	27	ASN
51	D3	29	ARG
51	D3	41	ARG
51	D3	46	LYS
51	D3	48	MET
51	D3	51	LYS
51	D3	61	LEU
52	D4	1	MET
52	D4	2	LYS
52	D4	9	LYS
52	D4	15	LYS
52	D4	17	VAL

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (333) such sidechains are listed below:

Mol	Chain	Res	Type
1	AB	14	HIS
1	AB	38	HIS
1	AB	41	ASN
1	AB	57	ASN
1	AB	88	GLN
1	AB	102	ASN
1	AB	108	GLN
1	AB	119	GLN
1	AB	167	HIS
2	AC	5	HIS
2	AC	24	ASN
2	AC	68	HIS
2	AC	138	GLN
2	AC	139	ASN
3	AD	40	HIS
3	AD	53	GLN
3	AD	58	GLN
3	AD	70	GLN
3	AD	73	ASN
3	AD	84	ASN
3	AD	163	GLN
4	AE	11	GLN
4	AE	42	ASN

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Mol	Chain	Res	Type
4	AE	69	ASN
4	AE	72	ASN
4	AE	77	ASN
4	AE	121	ASN
5	AF	11	HIS
5	AF	46	GLN
5	AF	52	ASN
5	AF	68	GLN
6	AG	85	GLN
6	AG	121	ASN
6	AG	147	ASN
7	AH	3	GLN
7	AH	17	GLN
7	AH	117	GLN
8	AI	3	ASN
8	AI	4	GLN
8	AI	74	GLN
8	AI	80	HIS
8	AI	125	GLN
9	AJ	20	GLN
9	AJ	35	GLN
9	AJ	64	GLN
10	AK	21	HIS
10	AK	108	ASN
10	AK	118	ASN
11	AL	45	ASN
12	AM	7	ASN
13	AN	42	ASN
13	AN	48	GLN
13	AN	59	GLN
13	AN	61	ASN
14	AO	19	ASN
14	AO	36	ASN
14	AO	45	HIS
14	AO	61	GLN
15	AP	9	HIS
15	AP	26	ASN
15	AP	59	HIS
16	AQ	44	HIS
16	AQ	49	ASN
17	AR	30	ASN
17	AR	53	GLN

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Mol	Chain	Res	Type
18	AS	42	ASN
19	AT	12	GLN
19	AT	20	ASN
19	AT	54	GLN
19	AT	60	GLN
19	AT	77	ASN
20	AU	8	ASN
24	BC	14	HIS
24	BC	20	ASN
24	BC	43	ASN
24	BC	59	GLN
24	BC	89	ASN
24	BC	114	GLN
24	BC	141	HIS
24	BC	152	GLN
24	BC	225	ASN
24	BC	238	ASN
24	BC	242	HIS
24	BC	250	GLN
24	BC	259	ASN
25	BD	32	ASN
25	BD	49	GLN
25	BD	58	ASN
25	BD	126	ASN
25	BD	130	GLN
26	BE	24	ASN
26	BE	29	HIS
26	BE	30	GLN
26	BE	41	GLN
26	BE	62	GLN
26	BE	97	ASN
26	BE	136	GLN
27	BF	22	ASN
27	BF	26	GLN
27	BF	134	GLN
28	BG	72	ASN
28	BG	114	HIS
28	BG	138	GLN
29	BH	18	GLN
29	BH	20	ASN
29	BH	33	GLN
29	BH	43	ASN

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Mol	Chain	Res	Type
29	BH	145	ASN
30	BI	5	GLN
30	BI	30	GLN
30	BI	110	GLN
31	BJ	40	HIS
31	BJ	47	HIS
31	BJ	58	ASN
31	BJ	76	HIS
31	BJ	77	HIS
31	BJ	128	ASN
31	BJ	130	HIS
32	BK	5	GLN
32	BK	88	ASN
32	BK	89	ASN
33	BL	4	ASN
33	BL	54	GLN
33	BL	93	ASN
33	BL	104	GLN
34	BM	97	GLN
35	BN	9	GLN
35	BN	11	ASN
35	BN	18	GLN
35	BN	23	ASN
35	BN	62	ASN
35	BN	73	ASN
36	BO	19	GLN
36	BO	38	GLN
37	BP	9	GLN
37	BP	74	GLN
38	BQ	13	HIS
38	BQ	51	GLN
38	BQ	65	ASN
39	BR	18	GLN
39	BR	43	ASN
39	BR	66	HIS
39	BR	82	HIS
40	BS	15	GLN
40	BS	57	ASN
40	BS	61	ASN
41	BT	48	GLN
41	BT	70	HIS
41	BT	72	GLN

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Mol	Chain	Res	Type
41	BT	91	GLN
42	BU	52	ASN
42	BU	65	GLN
42	BU	73	ASN
43	BV	5	ASN
43	BV	44	HIS
43	BV	51	GLN
43	BV	80	HIS
43	BV	88	HIS
44	BW	11	ASN
44	BW	39	GLN
44	BW	49	ASN
45	BX	5	GLN
45	BX	22	ASN
46	BY	15	ASN
46	BY	20	ASN
46	BY	27	ASN
46	BY	31	GLN
46	BY	41	HIS
48	B0	3	GLN
48	B0	4	GLN
50	B2	13	ASN
50	B2	16	HIS
51	B3	27	ASN
52	B4	35	GLN
1	CB	18	GLN
1	CB	38	HIS
1	CB	108	GLN
1	CB	145	ASN
1	CB	169	HIS
1	CB	176	ASN
1	CB	177	ASN
2	CC	2	GLN
2	CC	18	ASN
2	CC	31	ASN
2	CC	68	HIS
2	CC	139	ASN
2	CC	184	ASN
3	CD	70	GLN
3	CD	84	ASN
3	CD	115	GLN
3	CD	119	HIS

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Mol	Chain	Res	Type
3	CD	125	ASN
3	CD	163	GLN
4	CE	11	GLN
4	CE	76	ASN
4	CE	121	ASN
4	CE	131	ASN
5	CF	11	HIS
5	CF	14	GLN
5	CF	17	GLN
5	CF	81	ASN
6	CG	67	ASN
6	CG	85	GLN
7	CH	3	GLN
7	CH	17	GLN
7	CH	37	ASN
8	CI	3	ASN
8	CI	4	GLN
8	CI	49	GLN
8	CI	74	GLN
8	CI	109	GLN
8	CI	125	GLN
9	CJ	56	HIS
9	CJ	70	HIS
10	CK	27	ASN
10	CK	118	ASN
11	CL	4	ASN
11	CL	5	GLN
11	CL	19	ASN
11	CL	72	ASN
11	CL	74	GLN
11	CL	111	GLN
12	CM	90	HIS
13	CN	59	GLN
13	CN	65	GLN
14	CO	27	GLN
14	CO	39	GLN
14	CO	45	HIS
16	CQ	44	HIS
16	CQ	49	ASN
18	CS	13	HIS
18	CS	51	HIS
18	CS	52	ASN

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Mol	Chain	Res	Type
18	CS	56	HIS
19	CT	12	GLN
19	CT	69	ASN
19	CT	81	GLN
20	CU	8	ASN
24	DC	43	ASN
24	DC	52	HIS
24	DC	57	HIS
24	DC	59	GLN
24	DC	89	ASN
24	DC	116	GLN
24	DC	133	ASN
24	DC	141	HIS
24	DC	152	GLN
25	DD	36	GLN
25	DD	49	GLN
25	DD	126	ASN
25	DD	130	GLN
25	DD	140	HIS
25	DD	150	GLN
25	DD	185	ASN
27	DF	4	HIS
27	DF	126	ASN
28	DG	19	ASN
28	DG	21	GLN
28	DG	37	ASN
28	DG	44	HIS
28	DG	103	ASN
28	DG	138	GLN
29	DH	2	GLN
29	DH	28	ASN
29	DH	43	ASN
29	DH	66	ASN
30	DI	42	ASN
30	DI	93	ASN
30	DI	106	GLN
31	DJ	40	HIS
31	DJ	138	GLN
32	DK	3	GLN
32	DK	9	ASN
32	DK	13	ASN
32	DK	89	ASN

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Mol	Chain	Res	Type
33	DL	4	ASN
33	DL	35	HIS
33	DL	54	GLN
34	DM	3	GLN
34	DM	13	HIS
35	DN	3	HIS
35	DN	16	HIS
35	DN	23	ASN
35	DN	73	ASN
35	DN	107	ASN
36	DO	29	HIS
36	DO	38	GLN
37	DP	2	ASN
37	DP	6	GLN
37	DP	9	GLN
37	DP	11	GLN
37	DP	65	ASN
37	DP	114	ASN
38	DQ	19	GLN
38	DQ	71	ASN
39	DR	6	GLN
39	DR	12	HIS
39	DR	86	GLN
39	DR	87	GLN
40	DS	9	HIS
40	DS	31	GLN
40	DS	57	ASN
41	DT	15	HIS
41	DT	48	GLN
41	DT	91	GLN
41	DT	92	ASN
42	DU	44	HIS
42	DU	45	GLN
42	DU	52	ASN
42	DU	53	GLN
43	DV	51	GLN
43	DV	80	HIS
43	DV	88	HIS
45	DX	15	ASN
45	DX	22	ASN
45	DX	31	ASN
45	DX	35	HIS

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Mol	Chain	Res	Type
46	DY	15	ASN
46	DY	20	ASN
46	DY	41	HIS
46	DY	45	GLN
46	DY	58	ASN
47	DZ	19	HIS
48	D0	5	ASN
48	D0	18	HIS
48	D0	41	HIS
50	D2	6	GLN
50	D2	16	HIS
50	D2	26	ASN
50	D2	29	GLN
51	D3	27	ASN
51	D3	42	HIS
52	D4	37	GLN

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
21	AA	1532/1533 (99%)	471 (30%)	241 (15%)
22	BA	2850/2903 (98%)	800 (28%)	404 (14%)
22	DA	2838/2903 (97%)	1022 (36%)	515 (18%)
23	BB	117/118 (99%)	29 (24%)	19 (16%)
53	CA	1529/1530 (99%)	512 (33%)	238 (15%)
54	DB	116/117 (99%)	36 (31%)	19 (16%)
All	All	8982/9104 (98%)	2870 (31%)	1436 (15%)

All (2870) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
21	AA	5	U
21	AA	6	G
21	AA	7	A
21	AA	8	A
21	AA	9	G
21	AA	13	U
21	AA	14	U
21	AA	22	G
21	AA	31	G
21	AA	32	A

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Mol	Chain	Res	Type
21	AA	39	G
21	AA	47	C
21	AA	48	C
21	AA	50	A
21	AA	51	A
21	AA	52	C
21	AA	53	A
21	AA	61	G
21	AA	64	G
21	AA	65	A
21	AA	66	A
21	AA	67	C
21	AA	70	U
21	AA	71	A
21	AA	72	A
21	AA	73	C
21	AA	74	A
21	AA	75	G
21	AA	76	G
21	AA	77	A
21	AA	79	G
21	AA	82	G
21	AA	83	C
21	AA	85	U
21	AA	86	G
21	AA	87	C
21	AA	88	U
21	AA	89	U
21	AA	90	C
21	AA	91	U
21	AA	92	U
21	AA	94	G
21	AA	95	C
21	AA	96	U
21	AA	97	G
21	AA	98	A
21	AA	109	A
21	AA	110	C
21	AA	111	G
21	AA	116	A
21	AA	119	A
21	AA	120	A

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Mol	Chain	Res	Type
21	AA	121	U
21	AA	122	G
21	AA	129	A
21	AA	130	A
21	AA	131	A
21	AA	132	C
21	AA	138	G
21	AA	141	G
21	AA	143	A
21	AA	159	G
21	AA	163	C
21	AA	173	U
21	AA	174	A
21	AA	175	C
21	AA	176	C
21	AA	177	G
21	AA	181	A
21	AA	182	A
21	AA	183	C
21	AA	184	G
21	AA	185	U
21	AA	197	A
21	AA	198	G
21	AA	199	A
21	AA	200	G
21	AA	205	A
21	AA	207	C
21	AA	209	U
21	AA	210	C
21	AA	211	G
21	AA	212	G
21	AA	213	G
21	AA	214	C
21	AA	215	C
21	AA	216	U
21	AA	232	G
21	AA	240	G
21	AA	243	A
21	AA	244	U
21	AA	245	U
21	AA	247	G
21	AA	250	A

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Mol	Chain	Res	Type
21	AA	251	G
21	AA	252	U
21	AA	253	A
21	AA	258	G
21	AA	266	G
21	AA	267	C
21	AA	268	U
21	AA	273	U
21	AA	274	A
21	AA	275	G
21	AA	276	G
21	AA	279	A
21	AA	285	C
21	AA	289	G
21	AA	306	A
21	AA	315	A
21	AA	316	C
21	AA	320	A
21	AA	321	A
21	AA	328	C
21	AA	329	A
21	AA	330	C
21	AA	331	G
21	AA	332	G
21	AA	344	A
21	AA	345	C
21	AA	346	G
21	AA	347	G
21	AA	352	C
21	AA	353	A
21	AA	354	G
21	AA	356	A
21	AA	367	U
21	AA	368	U
21	AA	369	G
21	AA	370	C
21	AA	373	A
21	AA	374	A
21	AA	384	G
21	AA	388	G
21	AA	389	A
21	AA	392	C

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Mol	Chain	Res	Type
21	AA	406	G
21	AA	411	A
21	AA	412	A
21	AA	413	G
21	AA	414	A
21	AA	415	A
21	AA	421	U
21	AA	422	C
21	AA	423	G
21	AA	424	G
21	AA	428	G
21	AA	429	U
21	AA	430	A
21	AA	431	A
21	AA	439	U
21	AA	451	A
21	AA	452	A
21	AA	453	G
21	AA	454	G
21	AA	458	U
21	AA	459	A
21	AA	461	A
21	AA	462	G
21	AA	463	U
21	AA	466	A
21	AA	467	U
21	AA	468	A
21	AA	469	C
21	AA	478	A
21	AA	481	G
21	AA	482	A
21	AA	484	G
21	AA	485	U
21	AA	486	U
21	AA	487	A
21	AA	495	A
21	AA	496	A
21	AA	497	G
21	AA	498	A
21	AA	500	G
21	AA	501	C
21	AA	508	U

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Mol	Chain	Res	Type
21	AA	509	A
21	AA	510	A
21	AA	511	C
21	AA	512	U
21	AA	513	C
21	AA	518	C
21	AA	519	C
21	AA	520	A
21	AA	527	G
21	AA	532	A
21	AA	533	A
21	AA	534	U
21	AA	535	A
21	AA	536	C
21	AA	537	G
21	AA	548	G
21	AA	549	C
21	AA	550	G
21	AA	559	A
21	AA	560	A
21	AA	562	U
21	AA	563	A
21	AA	564	C
21	AA	566	G
21	AA	567	G
21	AA	572	A
21	AA	573	A
21	AA	575	G
21	AA	576	C
21	AA	588	G
21	AA	595	A
21	AA	596	A
21	AA	597	G
21	AA	633	G
21	AA	642	A
21	AA	653	U
21	AA	654	G
21	AA	665	A
21	AA	688	G
21	AA	689	C
21	AA	700	G
21	AA	701	U

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Mol	Chain	Res	Type
21	AA	702	A
21	AA	703	G
21	AA	717	U
21	AA	718	A
21	AA	719	C
21	AA	721	G
21	AA	722	G
21	AA	723	U
21	AA	724	G
21	AA	731	G
21	AA	734	G
21	AA	748	G
21	AA	754	C
21	AA	755	G
21	AA	776	G
21	AA	777	A
21	AA	792	A
21	AA	793	U
21	AA	794	A
21	AA	795	C
21	AA	802	A
21	AA	809	G
21	AA	812	G
21	AA	813	U
21	AA	814	A
21	AA	815	A
21	AA	816	A
21	AA	817	C
21	AA	818	G
21	AA	828	U
21	AA	832	G
21	AA	841	C
21	AA	843	U
21	AA	845	A
21	AA	846	G
21	AA	849	G
21	AA	855	U
21	AA	856	C
21	AA	859	G
21	AA	861	G
21	AA	870	U
21	AA	871	U

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Mol	Chain	Res	Type
21	AA	874	G
21	AA	884	U
21	AA	885	G
21	AA	889	A
21	AA	890	G
21	AA	910	C
21	AA	914	A
21	AA	915	A
21	AA	926	G
21	AA	927	G
21	AA	932	C
21	AA	934	C
21	AA	935	A
21	AA	936	C
21	AA	960	U
21	AA	961	U
21	AA	966	G
21	AA	968	A
21	AA	969	A
21	AA	971	G
21	AA	972	C
21	AA	974	A
21	AA	975	A
21	AA	976	G
21	AA	977	A
21	AA	982	U
21	AA	983	A
21	AA	992	U
21	AA	993	G
21	AA	1003	G
21	AA	1004	A
21	AA	1008	U
21	AA	1017	U
21	AA	1018	G
21	AA	1022	A
21	AA	1029	U
21	AA	1030	U
21	AA	1031	C
21	AA	1032	G
21	AA	1033	G
21	AA	1034	G
21	AA	1037	C

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Mol	Chain	Res	Type
21	AA	1046	A
21	AA	1050	G
21	AA	1051	C
21	AA	1052	U
21	AA	1053	G
21	AA	1054	C
21	AA	1064	G
21	AA	1065	U
21	AA	1066	C
21	AA	1068	G
21	AA	1069	C
21	AA	1085	U
21	AA	1086	U
21	AA	1087	G
21	AA	1088	G
21	AA	1094	G
21	AA	1095	U
21	AA	1101	A
21	AA	1102	A
21	AA	1104	G
21	AA	1113	C
21	AA	1124	G
21	AA	1125	U
21	AA	1126	U
21	AA	1127	G
21	AA	1128	C
21	AA	1129	C
21	AA	1130	A
21	AA	1131	G
21	AA	1133	G
21	AA	1135	U
21	AA	1137	C
21	AA	1138	G
21	AA	1140	C
21	AA	1141	C
21	AA	1142	G
21	AA	1144	G
21	AA	1145	A
21	AA	1146	A
21	AA	1152	A
21	AA	1153	G
21	AA	1157	A

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Mol	Chain	Res	Type
21	AA	1158	C
21	AA	1159	U
21	AA	1160	G
21	AA	1161	C
21	AA	1162	C
21	AA	1167	A
21	AA	1168	U
21	AA	1169	A
21	AA	1170	A
21	AA	1181	G
21	AA	1182	G
21	AA	1183	U
21	AA	1184	G
21	AA	1190	G
21	AA	1191	A
21	AA	1192	C
21	AA	1193	G
21	AA	1196	A
21	AA	1197	A
21	AA	1198	G
21	AA	1200	C
21	AA	1201	A
21	AA	1202	U
21	AA	1203	C
21	AA	1212	U
21	AA	1213	A
21	AA	1214	C
21	AA	1224	U
21	AA	1225	A
21	AA	1226	C
21	AA	1227	A
21	AA	1228	C
21	AA	1229	A
21	AA	1238	A
21	AA	1239	A
21	AA	1240	U
21	AA	1241	G
21	AA	1242	G
21	AA	1256	A
21	AA	1257	A
21	AA	1258	G
21	AA	1278	G

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Mol	Chain	Res	Type
21	AA	1279	G
21	AA	1280	A
21	AA	1282	C
21	AA	1283	U
21	AA	1284	C
21	AA	1285	A
21	AA	1286	U
21	AA	1287	A
21	AA	1288	A
21	AA	1289	A
21	AA	1293	C
21	AA	1297	G
21	AA	1298	U
21	AA	1299	A
21	AA	1303	C
21	AA	1304	G
21	AA	1305	G
21	AA	1308	U
21	AA	1315	U
21	AA	1316	G
21	AA	1317	C
21	AA	1318	A
21	AA	1320	C
21	AA	1321	U
21	AA	1322	C
21	AA	1323	G
21	AA	1324	A
21	AA	1332	A
21	AA	1333	A
21	AA	1336	C
21	AA	1337	G
21	AA	1338	G
21	AA	1345	U
21	AA	1346	A
21	AA	1348	U
21	AA	1349	A
21	AA	1353	G
21	AA	1362	A
21	AA	1363	A
21	AA	1364	U
21	AA	1365	G
21	AA	1366	C

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Mol	Chain	Res	Type
21	AA	1371	G
21	AA	1380	U
21	AA	1381	U
21	AA	1382	C
21	AA	1394	A
21	AA	1395	C
21	AA	1396	A
21	AA	1397	C
21	AA	1398	A
21	AA	1400	C
21	AA	1402	C
21	AA	1406	U
21	AA	1411	C
21	AA	1413	A
21	AA	1433	A
21	AA	1434	A
21	AA	1441	A
21	AA	1446	A
21	AA	1447	A
21	AA	1448	C
21	AA	1451	U
21	AA	1452	C
21	AA	1453	G
21	AA	1454	G
21	AA	1455	G
21	AA	1469	C
21	AA	1470	U
21	AA	1476	A
21	AA	1492	A
21	AA	1494	G
21	AA	1497	G
21	AA	1499	A
21	AA	1502	A
21	AA	1503	A
21	AA	1505	G
21	AA	1506	U
21	AA	1507	A
21	AA	1517	G
21	AA	1529	G
21	AA	1530	G
21	AA	1531	A
22	BA	10	A

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Mol	Chain	Res	Type
22	BA	13	A
22	BA	14	A
22	BA	15	G
22	BA	27	G
22	BA	28	A
22	BA	33	C
22	BA	34	U
22	BA	35	G
22	BA	42	A
22	BA	43	G
22	BA	45	G
22	BA	46	G
22	BA	49	A
22	BA	50	U
22	BA	52	A
22	BA	53	A
22	BA	61	C
22	BA	63	A
22	BA	70	G
22	BA	71	A
22	BA	74	A
22	BA	75	G
22	BA	76	C
22	BA	80	G
22	BA	82	U
22	BA	84	A
22	BA	85	G
22	BA	92	U
22	BA	93	G
22	BA	101	A
22	BA	118	A
22	BA	119	A
22	BA	120	U
22	BA	126	A
22	BA	127	A
22	BA	131	A
22	BA	135	U
22	BA	136	G
22	BA	137	U
22	BA	138	U
22	BA	139	U
22	BA	140	C

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Mol	Chain	Res	Type
22	BA	141	G
22	BA	142	A
22	BA	143	C
22	BA	144	A
22	BA	149	A
22	BA	162	U
22	BA	163	C
22	BA	164	C
22	BA	165	A
22	BA	181	A
22	BA	186	G
22	BA	188	G
22	BA	196	A
22	BA	197	A
22	BA	199	A
22	BA	200	U
22	BA	204	A
22	BA	205	G
22	BA	206	U
22	BA	207	A
22	BA	215	G
22	BA	216	A
22	BA	221	A
22	BA	222	A
22	BA	223	A
22	BA	228	C
22	BA	229	C
22	BA	230	G
22	BA	231	A
22	BA	233	A
22	BA	242	G
22	BA	243	U
22	BA	244	A
22	BA	248	G
22	BA	249	C
22	BA	250	G
22	BA	255	A
22	BA	256	A
22	BA	264	C
22	BA	265	A
22	BA	266	G
22	BA	267	C

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Mol	Chain	Res	Type
22	BA	271	G
22	BA	272	A
22	BA	273	G
22	BA	276	U
22	BA	277	G
22	BA	278	A
22	BA	285	G
22	BA	299	A
22	BA	301	G
22	BA	302	C
22	BA	303	G
22	BA	311	A
22	BA	312	G
22	BA	313	G
22	BA	322	A
22	BA	323	C
22	BA	329	G
22	BA	330	A
22	BA	331	C
22	BA	345	A
22	BA	346	A
22	BA	347	A
22	BA	349	U
22	BA	353	C
22	BA	359	G
22	BA	361	G
22	BA	371	A
22	BA	372	G
22	BA	383	C
22	BA	386	G
22	BA	387	U
22	BA	388	G
22	BA	389	G
22	BA	390	U
22	BA	391	A
22	BA	396	G
22	BA	404	A
22	BA	405	U
22	BA	411	G
22	BA	412	A
22	BA	413	C
22	BA	421	C

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Mol	Chain	Res	Type
22	BA	422	A
22	BA	424	G
22	BA	435	C
22	BA	436	C
22	BA	443	A
22	BA	449	A
22	BA	452	G
22	BA	455	C
22	BA	457	A
22	BA	459	U
22	BA	460	A
22	BA	475	C
22	BA	476	G
22	BA	479	A
22	BA	480	A
22	BA	481	G
22	BA	482	A
22	BA	483	A
22	BA	490	C
22	BA	491	G
22	BA	492	A
22	BA	504	A
22	BA	505	A
22	BA	506	G
22	BA	507	A
22	BA	508	A
22	BA	509	C
22	BA	510	C
22	BA	512	G
22	BA	513	A
22	BA	521	U
22	BA	528	A
22	BA	529	A
22	BA	530	G
22	BA	531	C
22	BA	532	A
22	BA	533	G
22	BA	541	A
22	BA	544	C
22	BA	546	U
22	BA	547	A
22	BA	548	G

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Mol	Chain	Res	Type
22	BA	549	G
22	BA	550	C
22	BA	556	A
22	BA	563	A
22	BA	572	A
22	BA	573	U
22	BA	574	A
22	BA	575	A
22	BA	586	A
22	BA	588	U
22	BA	604	G
22	BA	613	A
22	BA	614	A
22	BA	615	U
22	BA	619	G
22	BA	621	A
22	BA	622	G
22	BA	627	A
22	BA	631	A
22	BA	634	C
22	BA	637	A
22	BA	638	G
22	BA	645	C
22	BA	646	U
22	BA	647	G
22	BA	654	A
22	BA	655	A
22	BA	656	G
22	BA	668	A
22	BA	670	A
22	BA	685	A
22	BA	686	U
22	BA	687	C
22	BA	688	U
22	BA	705	A
22	BA	706	A
22	BA	713	G
22	BA	714	U
22	BA	715	A
22	BA	717	C
22	BA	722	A
22	BA	727	A

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Mol	Chain	Res	Type
22	BA	728	G
22	BA	729	G
22	BA	730	A
22	BA	738	G
22	BA	740	C
22	BA	747	U
22	BA	748	G
22	BA	752	A
22	BA	753	A
22	BA	763	G
22	BA	764	A
22	BA	765	C
22	BA	774	G
22	BA	775	G
22	BA	776	G
22	BA	777	G
22	BA	782	A
22	BA	784	G
22	BA	785	G
22	BA	791	C
22	BA	792	A
22	BA	801	G
22	BA	805	G
22	BA	806	C
22	BA	812	C
22	BA	819	A
22	BA	827	U
22	BA	828	U
22	BA	829	A
22	BA	830	G
22	BA	845	A
22	BA	846	U
22	BA	847	U
22	BA	859	G
22	BA	860	U
22	BA	861	A
22	BA	865	C
22	BA	866	A
22	BA	869	G
22	BA	876	C
22	BA	878	A
22	BA	896	A

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Mol	Chain	Res	Type
22	BA	897	C
22	BA	910	A
22	BA	914	G
22	BA	915	C
22	BA	916	G
22	BA	919	U
22	BA	932	U
22	BA	933	A
22	BA	934	U
22	BA	941	A
22	BA	945	A
22	BA	946	C
22	BA	958	U
22	BA	959	A
22	BA	961	C
22	BA	962	G
22	BA	968	C
22	BA	973	A
22	BA	974	G
22	BA	983	A
22	BA	984	A
22	BA	985	C
22	BA	989	G
22	BA	990	A
22	BA	991	C
22	BA	995	C
22	BA	996	A
22	BA	1005	C
22	BA	1009	A
22	BA	1010	A
22	BA	1011	G
22	BA	1012	U
22	BA	1013	C
22	BA	1017	G
22	BA	1021	A
22	BA	1022	G
22	BA	1023	U
22	BA	1024	G
22	BA	1025	G
22	BA	1026	G
22	BA	1027	A
22	BA	1033	U

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Mol	Chain	Res	Type
22	BA	1034	G
22	BA	1043	C
22	BA	1044	C
22	BA	1045	C
22	BA	1046	A
22	BA	1047	G
22	BA	1060	U
22	BA	1061	U
22	BA	1062	G
22	BA	1063	G
22	BA	1065	U
22	BA	1066	U
22	BA	1070	A
22	BA	1071	G
22	BA	1072	C
22	BA	1073	A
22	BA	1074	G
22	BA	1078	U
22	BA	1082	U
22	BA	1083	U
22	BA	1084	A
22	BA	1088	A
22	BA	1090	A
22	BA	1091	G
22	BA	1092	C
22	BA	1098	A
22	BA	1111	A
22	BA	1112	G
22	BA	1117	C
22	BA	1128	G
22	BA	1129	A
22	BA	1130	U
22	BA	1131	G
22	BA	1132	U
22	BA	1133	A
22	BA	1135	C
22	BA	1136	G
22	BA	1138	G
22	BA	1139	G
22	BA	1142	A
22	BA	1151	A
22	BA	1156	A

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Mol	Chain	Res	Type
22	BA	1157	G
22	BA	1158	C
22	BA	1170	C
22	BA	1172	C
22	BA	1175	A
22	BA	1176	U
22	BA	1180	U
22	BA	1181	U
22	BA	1185	G
22	BA	1186	G
22	BA	1190	G
22	BA	1205	A
22	BA	1206	G
22	BA	1210	G
22	BA	1211	C
22	BA	1212	G
22	BA	1213	A
22	BA	1236	G
22	BA	1238	G
22	BA	1247	A
22	BA	1248	G
22	BA	1249	U
22	BA	1250	G
22	BA	1253	A
22	BA	1256	G
22	BA	1266	G
22	BA	1271	G
22	BA	1272	A
22	BA	1273	U
22	BA	1275	A
22	BA	1276	A
22	BA	1277	G
22	BA	1287	A
22	BA	1288	G
22	BA	1289	C
22	BA	1300	G
22	BA	1301	A
22	BA	1303	G
22	BA	1305	C
22	BA	1320	C
22	BA	1321	A
22	BA	1324	G

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Mol	Chain	Res	Type
22	BA	1325	U
22	BA	1329	U
22	BA	1330	C
22	BA	1333	G
22	BA	1336	A
22	BA	1341	G
22	BA	1343	G
22	BA	1344	U
22	BA	1349	C
22	BA	1352	U
22	BA	1359	A
22	BA	1360	G
22	BA	1363	C
22	BA	1365	A
22	BA	1368	G
22	BA	1371	G
22	BA	1379	U
22	BA	1380	G
22	BA	1383	A
22	BA	1386	C
22	BA	1395	A
22	BA	1397	U
22	BA	1398	C
22	BA	1399	C
22	BA	1416	G
22	BA	1417	C
22	BA	1419	A
22	BA	1420	A
22	BA	1421	G
22	BA	1425	G
22	BA	1427	A
22	BA	1428	C
22	BA	1434	A
22	BA	1440	U
22	BA	1441	G
22	BA	1451	C
22	BA	1452	G
22	BA	1453	A
22	BA	1455	G
22	BA	1459	G
22	BA	1460	U
22	BA	1461	C

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Mol	Chain	Res	Type
22	BA	1468	U
22	BA	1475	G
22	BA	1476	U
22	BA	1477	A
22	BA	1482	G
22	BA	1490	A
22	BA	1491	G
22	BA	1494	A
22	BA	1495	A
22	BA	1497	U
22	BA	1498	C
22	BA	1499	C
22	BA	1504	A
22	BA	1508	A
22	BA	1509	A
22	BA	1510	G
22	BA	1512	C
22	BA	1515	A
22	BA	1522	A
22	BA	1523	U
22	BA	1533	C
22	BA	1535	A
22	BA	1536	C
22	BA	1537	G
22	BA	1538	G
22	BA	1539	U
22	BA	1540	G
22	BA	1555	G
22	BA	1558	C
22	BA	1559	U
22	BA	1565	C
22	BA	1566	A
22	BA	1569	A
22	BA	1578	U
22	BA	1581	G
22	BA	1583	A
22	BA	1584	U
22	BA	1585	C
22	BA	1603	A
22	BA	1607	C
22	BA	1608	A
22	BA	1610	A

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Mol	Chain	Res	Type
22	BA	1615	C
22	BA	1616	A
22	BA	1627	G
22	BA	1634	A
22	BA	1635	A
22	BA	1647	U
22	BA	1648	U
22	BA	1649	G
22	BA	1652	A
22	BA	1653	G
22	BA	1654	A
22	BA	1655	A
22	BA	1674	G
22	BA	1675	C
22	BA	1677	A
22	BA	1682	G
22	BA	1683	U
22	BA	1695	G
22	BA	1696	G
22	BA	1698	A
22	BA	1699	G
22	BA	1707	G
22	BA	1713	A
22	BA	1714	U
22	BA	1715	G
22	BA	1716	U
22	BA	1717	A
22	BA	1723	G
22	BA	1729	U
22	BA	1730	C
22	BA	1732	C
22	BA	1733	G
22	BA	1734	G
22	BA	1736	U
22	BA	1737	G
22	BA	1738	G
22	BA	1744	A
22	BA	1758	U
22	BA	1759	A
22	BA	1764	C
22	BA	1773	A
22	BA	1780	A

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Mol	Chain	Res	Type
22	BA	1782	U
22	BA	1785	A
22	BA	1787	A
22	BA	1788	C
22	BA	1791	A
22	BA	1799	G
22	BA	1800	C
22	BA	1801	A
22	BA	1808	A
22	BA	1809	A
22	BA	1815	A
22	BA	1816	C
22	BA	1817	G
22	BA	1819	A
22	BA	1827	U
22	BA	1829	A
22	BA	1848	A
22	BA	1849	G
22	BA	1858	A
22	BA	1859	U
22	BA	1865	U
22	BA	1866	A
22	BA	1867	G
22	BA	1869	G
22	BA	1871	A
22	BA	1872	A
22	BA	1873	G
22	BA	1876	A
22	BA	1885	A
22	BA	1886	U
22	BA	1897	G
22	BA	1898	U
22	BA	1900	A
22	BA	1901	A
22	BA	1906	G
22	BA	1907	G
22	BA	1913	A
22	BA	1914	C
22	BA	1918	A
22	BA	1919	A
22	BA	1920	C
22	BA	1926	U

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Mol	Chain	Res	Type
22	BA	1927	A
22	BA	1929	G
22	BA	1930	G
22	BA	1931	U
22	BA	1932	A
22	BA	1937	A
22	BA	1938	A
22	BA	1941	C
22	BA	1942	C
22	BA	1943	U
22	BA	1944	U
22	BA	1954	G
22	BA	1955	U
22	BA	1960	A
22	BA	1963	U
22	BA	1964	G
22	BA	1965	C
22	BA	1966	A
22	BA	1967	C
22	BA	1968	G
22	BA	1970	A
22	BA	1971	U
22	BA	1972	G
22	BA	1986	C
22	BA	1991	U
22	BA	1993	U
22	BA	1996	C
22	BA	1997	C
22	BA	2021	C
22	BA	2022	U
22	BA	2023	C
22	BA	2030	A
22	BA	2031	A
22	BA	2032	G
22	BA	2033	A
22	BA	2035	G
22	BA	2036	C
22	BA	2043	C
22	BA	2049	G
22	BA	2051	A
22	BA	2052	A
22	BA	2055	C

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Mol	Chain	Res	Type
22	BA	2056	G
22	BA	2060	A
22	BA	2061	G
22	BA	2062	A
22	BA	2063	C
22	BA	2066	C
22	BA	2067	G
22	BA	2068	U
22	BA	2069	G
22	BA	2092	U
22	BA	2093	G
22	BA	2104	C
22	BA	2106	U
22	BA	2107	G
22	BA	2109	U
22	BA	2110	G
22	BA	2134	A
22	BA	2135	A
22	BA	2136	G
22	BA	2137	U
22	BA	2140	G
22	BA	2143	C
22	BA	2144	G
22	BA	2145	C
22	BA	2146	C
22	BA	2147	A
22	BA	2148	G
22	BA	2149	U
22	BA	2150	C
22	BA	2151	U
22	BA	2155	U
22	BA	2156	G
22	BA	2180	U
22	BA	2183	A
22	BA	2184	A
22	BA	2185	U
22	BA	2187	U
22	BA	2197	U
22	BA	2198	A
22	BA	2199	A
22	BA	2200	C
22	BA	2203	U

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Mol	Chain	Res	Type
22	BA	2204	G
22	BA	2210	U
22	BA	2211	A
22	BA	2212	A
22	BA	2214	C
22	BA	2215	C
22	BA	2225	A
22	BA	2226	C
22	BA	2233	U
22	BA	2238	G
22	BA	2239	G
22	BA	2243	U
22	BA	2250	G
22	BA	2258	C
22	BA	2259	U
22	BA	2267	A
22	BA	2268	A
22	BA	2273	A
22	BA	2275	C
22	BA	2276	G
22	BA	2278	A
22	BA	2283	C
22	BA	2284	A
22	BA	2286	G
22	BA	2287	A
22	BA	2297	A
22	BA	2305	U
22	BA	2307	G
22	BA	2308	G
22	BA	2310	C
22	BA	2312	U
22	BA	2317	A
22	BA	2320	U
22	BA	2321	U
22	BA	2325	G
22	BA	2326	C
22	BA	2327	A
22	BA	2328	A
22	BA	2333	A
22	BA	2334	U
22	BA	2335	A
22	BA	2336	A

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Mol	Chain	Res	Type
22	BA	2337	G
22	BA	2344	U
22	BA	2345	G
22	BA	2347	C
22	BA	2350	C
22	BA	2358	A
22	BA	2361	G
22	BA	2383	G
22	BA	2384	U
22	BA	2385	C
22	BA	2389	G
22	BA	2392	A
22	BA	2402	U
22	BA	2403	C
22	BA	2406	A
22	BA	2423	U
22	BA	2424	C
22	BA	2425	A
22	BA	2426	A
22	BA	2427	C
22	BA	2429	G
22	BA	2430	A
22	BA	2431	U
22	BA	2435	A
22	BA	2439	A
22	BA	2440	C
22	BA	2441	U
22	BA	2447	G
22	BA	2448	A
22	BA	2458	G
22	BA	2459	A
22	BA	2474	U
22	BA	2476	A
22	BA	2478	A
22	BA	2490	G
22	BA	2491	U
22	BA	2502	G
22	BA	2503	A
22	BA	2504	U
22	BA	2505	G
22	BA	2506	U
22	BA	2508	G

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Mol	Chain	Res	Type
22	BA	2517	C
22	BA	2518	A
22	BA	2529	G
22	BA	2542	A
22	BA	2543	G
22	BA	2554	U
22	BA	2566	A
22	BA	2567	G
22	BA	2572	A
22	BA	2573	C
22	BA	2574	G
22	BA	2585	U
22	BA	2586	U
22	BA	2603	G
22	BA	2609	U
22	BA	2610	C
22	BA	2611	C
22	BA	2612	C
22	BA	2613	U
22	BA	2614	A
22	BA	2615	U
22	BA	2616	C
22	BA	2629	U
22	BA	2630	G
22	BA	2638	G
22	BA	2639	A
22	BA	2645	G
22	BA	2646	C
22	BA	2654	A
22	BA	2655	G
22	BA	2661	G
22	BA	2663	G
22	BA	2681	C
22	BA	2682	A
22	BA	2689	U
22	BA	2690	U
22	BA	2712	C
22	BA	2713	U
22	BA	2714	G
22	BA	2716	C
22	BA	2724	U
22	BA	2725	A

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Mol	Chain	Res	Type
22	BA	2726	A
22	BA	2727	A
22	BA	2728	U
22	BA	2729	G
22	BA	2732	G
22	BA	2733	A
22	BA	2748	A
22	BA	2750	A
22	BA	2751	G
22	BA	2753	A
22	BA	2756	U
22	BA	2757	A
22	BA	2765	A
22	BA	2771	C
22	BA	2778	A
22	BA	2779	U
22	BA	2781	A
22	BA	2791	G
22	BA	2792	A
22	BA	2798	U
22	BA	2799	A
22	BA	2800	A
22	BA	2801	G
22	BA	2812	G
22	BA	2820	A
22	BA	2821	A
22	BA	2825	G
22	BA	2832	U
22	BA	2833	U
22	BA	2835	A
22	BA	2836	U
22	BA	2849	U
22	BA	2850	A
22	BA	2866	U
22	BA	2867	G
22	BA	2874	C
22	BA	2879	A
22	BA	2880	C
22	BA	2883	A
22	BA	2884	U
22	BA	2886	A
22	BA	2894	G

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Mol	Chain	Res	Type
22	BA	2895	G
23	BB	12	C
23	BB	13	G
23	BB	14	U
23	BB	15	A
23	BB	16	G
23	BB	24	G
23	BB	25	U
23	BB	35	C
23	BB	37	C
23	BB	41	G
23	BB	42	C
23	BB	43	C
23	BB	44	G
23	BB	45	A
23	BB	52	A
23	BB	53	A
23	BB	56	G
23	BB	57	A
23	BB	58	A
23	BB	66	A
23	BB	67	G
23	BB	87	U
23	BB	88	C
23	BB	89	U
23	BB	90	C
23	BB	91	C
23	BB	98	G
23	BB	99	A
23	BB	109	A
53	CA	6	G
53	CA	7	A
53	CA	8	A
53	CA	9	G
53	CA	13	U
53	CA	14	U
53	CA	15	G
53	CA	16	A
53	CA	30	U
53	CA	31	G
53	CA	32	A
53	CA	33	A

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Mol	Chain	Res	Type
53	CA	39	G
53	CA	40	C
53	CA	47	C
53	CA	48	C
53	CA	51	A
53	CA	52	C
53	CA	53	A
53	CA	61	G
53	CA	65	A
53	CA	66	A
53	CA	67	C
53	CA	68	G
53	CA	70	U
53	CA	71	A
53	CA	72	A
53	CA	73	C
53	CA	76	G
53	CA	77	A
53	CA	80	A
53	CA	81	A
53	CA	82	G
53	CA	83	C
53	CA	85	U
53	CA	86	G
53	CA	87	C
53	CA	88	U
53	CA	89	U
53	CA	90	C
53	CA	91	U
53	CA	92	U
53	CA	94	G
53	CA	95	C
53	CA	96	U
53	CA	98	A
53	CA	101	A
53	CA	110	C
53	CA	115	G
53	CA	116	A
53	CA	120	A
53	CA	121	U
53	CA	122	G
53	CA	130	A

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Mol	Chain	Res	Type
53	CA	131	A
53	CA	132	C
53	CA	133	U
53	CA	139	A
53	CA	141	G
53	CA	143	A
53	CA	144	G
53	CA	154	U
53	CA	155	A
53	CA	164	G
53	CA	166	U
53	CA	174	A
53	CA	175	C
53	CA	177	G
53	CA	178	C
53	CA	181	A
53	CA	182	A
53	CA	195	A
53	CA	198	G
53	CA	199	A
53	CA	200	G
53	CA	201	G
53	CA	206	C
53	CA	207	C
53	CA	208	U
53	CA	209	U
53	CA	210	C
53	CA	211	G
53	CA	212	G
53	CA	213	G
53	CA	214	C
53	CA	239	U
53	CA	240	G
53	CA	243	A
53	CA	244	U
53	CA	245	U
53	CA	246	A
53	CA	247	G
53	CA	248	C
53	CA	249	U
53	CA	250	A
53	CA	251	G

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Mol	Chain	Res	Type
53	CA	252	U
53	CA	253	A
53	CA	266	G
53	CA	267	C
53	CA	268	U
53	CA	275	G
53	CA	276	G
53	CA	277	C
53	CA	280	C
53	CA	282	A
53	CA	283	U
53	CA	289	G
53	CA	298	A
53	CA	301	G
53	CA	306	A
53	CA	315	A
53	CA	316	C
53	CA	317	U
53	CA	321	A
53	CA	328	C
53	CA	329	A
53	CA	330	C
53	CA	331	G
53	CA	332	G
53	CA	338	A
53	CA	339	C
53	CA	344	A
53	CA	345	C
53	CA	346	G
53	CA	347	G
53	CA	348	G
53	CA	349	A
53	CA	352	C
53	CA	353	A
53	CA	354	G
53	CA	357	G
53	CA	367	U
53	CA	368	U
53	CA	369	G
53	CA	372	C
53	CA	373	A
53	CA	374	A

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Mol	Chain	Res	Type
53	CA	381	C
53	CA	382	A
53	CA	383	A
53	CA	384	G
53	CA	389	A
53	CA	390	U
53	CA	397	A
53	CA	398	U
53	CA	406	G
53	CA	411	A
53	CA	412	A
53	CA	413	G
53	CA	414	A
53	CA	415	A
53	CA	421	U
53	CA	422	C
53	CA	423	G
53	CA	424	G
53	CA	425	G
53	CA	428	G
53	CA	429	U
53	CA	430	A
53	CA	435	A
53	CA	436	C
53	CA	452	A
53	CA	453	G
53	CA	456	A
53	CA	457	G
53	CA	458	U
53	CA	459	A
53	CA	460	A
53	CA	461	A
53	CA	463	U
53	CA	464	U
53	CA	465	A
53	CA	466	A
53	CA	467	U
53	CA	468	A
53	CA	469	C
53	CA	474	G
53	CA	476	U
53	CA	478	A

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Mol	Chain	Res	Type
53	CA	479	U
53	CA	481	G
53	CA	482	A
53	CA	484	G
53	CA	485	U
53	CA	486	U
53	CA	493	A
53	CA	496	A
53	CA	497	G
53	CA	498	A
53	CA	500	G
53	CA	501	C
53	CA	508	U
53	CA	509	A
53	CA	510	A
53	CA	511	C
53	CA	512	U
53	CA	513	C
53	CA	514	C
53	CA	517	G
53	CA	518	C
53	CA	519	C
53	CA	520	A
53	CA	527	G
53	CA	530	G
53	CA	532	A
53	CA	533	A
53	CA	534	U
53	CA	535	A
53	CA	536	C
53	CA	537	G
53	CA	548	G
53	CA	549	C
53	CA	559	A
53	CA	560	A
53	CA	562	U
53	CA	563	A
53	CA	564	C
53	CA	565	U
53	CA	566	G
53	CA	567	G
53	CA	568	G

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Mol	Chain	Res	Type
53	CA	572	A
53	CA	573	A
53	CA	575	G
53	CA	576	C
53	CA	577	G
53	CA	578	C
53	CA	596	A
53	CA	597	G
53	CA	610	U
53	CA	616	G
53	CA	642	A
53	CA	643	C
53	CA	653	U
53	CA	654	G
53	CA	655	A
53	CA	665	A
53	CA	684	U
53	CA	688	G
53	CA	689	C
53	CA	695	A
53	CA	700	G
53	CA	701	U
53	CA	702	A
53	CA	703	G
53	CA	704	A
53	CA	705	G
53	CA	721	G
53	CA	722	G
53	CA	723	U
53	CA	724	G
53	CA	731	G
53	CA	733	G
53	CA	734	G
53	CA	748	G
53	CA	754	C
53	CA	755	G
53	CA	760	G
53	CA	777	A
53	CA	781	A
53	CA	782	A
53	CA	785	G
53	CA	787	A

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Mol	Chain	Res	Type
53	CA	792	A
53	CA	793	U
53	CA	794	A
53	CA	795	C
53	CA	799	G
53	CA	803	G
53	CA	810	C
53	CA	812	G
53	CA	815	A
53	CA	816	A
53	CA	817	C
53	CA	819	A
53	CA	820	U
53	CA	821	G
53	CA	822	U
53	CA	828	U
53	CA	829	G
53	CA	841	C
53	CA	842	U
53	CA	843	U
53	CA	844	G
53	CA	845	A
53	CA	846	G
53	CA	847	G
53	CA	849	G
53	CA	870	U
53	CA	871	U
53	CA	874	G
53	CA	875	U
53	CA	880	C
53	CA	885	G
53	CA	889	A
53	CA	890	G
53	CA	891	U
53	CA	892	A
53	CA	914	A
53	CA	915	A
53	CA	926	G
53	CA	927	G
53	CA	934	C
53	CA	935	A
53	CA	936	C

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Mol	Chain	Res	Type
53	CA	942	G
53	CA	945	G
53	CA	960	U
53	CA	961	U
53	CA	962	C
53	CA	966	G
53	CA	968	A
53	CA	969	A
53	CA	972	C
53	CA	974	A
53	CA	975	A
53	CA	976	G
53	CA	977	A
53	CA	978	A
53	CA	982	U
53	CA	983	A
53	CA	984	C
53	CA	985	C
53	CA	990	C
53	CA	991	U
53	CA	992	U
53	CA	993	G
53	CA	995	C
53	CA	996	A
53	CA	1000	A
53	CA	1004	A
53	CA	1006	G
53	CA	1016	A
53	CA	1019	A
53	CA	1020	G
53	CA	1022	A
53	CA	1024	G
53	CA	1026	G
53	CA	1029	U
53	CA	1031	C
53	CA	1032	G
53	CA	1033	G
53	CA	1034	G
53	CA	1036	A
53	CA	1037	C
53	CA	1049	U
53	CA	1050	G

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Mol	Chain	Res	Type
53	CA	1051	C
53	CA	1052	U
53	CA	1053	G
53	CA	1054	C
53	CA	1055	A
53	CA	1056	U
53	CA	1064	G
53	CA	1065	U
53	CA	1066	C
53	CA	1067	A
53	CA	1068	G
53	CA	1085	U
53	CA	1086	U
53	CA	1087	G
53	CA	1094	G
53	CA	1095	U
53	CA	1101	A
53	CA	1102	A
53	CA	1103	C
53	CA	1124	G
53	CA	1125	U
53	CA	1127	G
53	CA	1128	C
53	CA	1130	A
53	CA	1131	G
53	CA	1136	C
53	CA	1137	C
53	CA	1138	G
53	CA	1139	G
53	CA	1140	C
53	CA	1141	C
53	CA	1142	G
53	CA	1143	G
53	CA	1145	A
53	CA	1146	A
53	CA	1147	C
53	CA	1148	U
53	CA	1151	A
53	CA	1152	A
53	CA	1158	C
53	CA	1159	U
53	CA	1160	G

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Mol	Chain	Res	Type
53	CA	1161	C
53	CA	1169	A
53	CA	1181	G
53	CA	1183	U
53	CA	1184	G
53	CA	1185	G
53	CA	1190	G
53	CA	1191	A
53	CA	1192	C
53	CA	1193	G
53	CA	1196	A
53	CA	1197	A
53	CA	1198	G
53	CA	1200	C
53	CA	1201	A
53	CA	1202	U
53	CA	1203	C
53	CA	1212	U
53	CA	1213	A
53	CA	1214	C
53	CA	1215	G
53	CA	1216	A
53	CA	1217	C
53	CA	1222	G
53	CA	1224	U
53	CA	1225	A
53	CA	1226	C
53	CA	1227	A
53	CA	1228	C
53	CA	1229	A
53	CA	1230	C
53	CA	1238	A
53	CA	1239	A
53	CA	1240	U
53	CA	1241	G
53	CA	1242	G
53	CA	1243	C
53	CA	1244	G
53	CA	1250	A
53	CA	1251	A
53	CA	1256	A
53	CA	1257	A

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Mol	Chain	Res	Type
53	CA	1260	G
53	CA	1266	G
53	CA	1278	G
53	CA	1279	G
53	CA	1280	A
53	CA	1281	C
53	CA	1282	C
53	CA	1283	U
53	CA	1284	C
53	CA	1285	A
53	CA	1286	U
53	CA	1287	A
53	CA	1288	A
53	CA	1294	G
53	CA	1295	U
53	CA	1297	G
53	CA	1298	U
53	CA	1299	A
53	CA	1300	G
53	CA	1301	U
53	CA	1302	C
53	CA	1305	G
53	CA	1312	G
53	CA	1316	G
53	CA	1317	C
53	CA	1320	C
53	CA	1322	C
53	CA	1323	G
53	CA	1324	A
53	CA	1346	A
53	CA	1348	U
53	CA	1349	A
53	CA	1350	A
53	CA	1359	C
53	CA	1362	A
53	CA	1364	U
53	CA	1365	G
53	CA	1366	C
53	CA	1367	C
53	CA	1379	G
53	CA	1381	U
53	CA	1382	C

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Mol	Chain	Res	Type
53	CA	1394	A
53	CA	1395	C
53	CA	1396	A
53	CA	1397	C
53	CA	1398	A
53	CA	1399	C
53	CA	1400	C
53	CA	1411	C
53	CA	1429	A
53	CA	1432	G
53	CA	1441	A
53	CA	1446	A
53	CA	1447	A
53	CA	1448	C
53	CA	1449	C
53	CA	1452	C
53	CA	1453	G
53	CA	1454	G
53	CA	1455	G
53	CA	1491	G
53	CA	1493	A
53	CA	1494	G
53	CA	1497	G
53	CA	1499	A
53	CA	1502	A
53	CA	1503	A
53	CA	1505	G
53	CA	1506	U
53	CA	1507	A
53	CA	1508	A
53	CA	1517	G
53	CA	1519	A
53	CA	1520	C
53	CA	1528	U
53	CA	1529	G
53	CA	1530	G
53	CA	1531	A
53	CA	1534	A
22	DA	12	U
22	DA	14	A
22	DA	15	G
22	DA	27	G

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Mol	Chain	Res	Type
22	DA	28	A
22	DA	29	U
22	DA	34	U
22	DA	35	G
22	DA	36	G
22	DA	37	C
22	DA	39	G
22	DA	46	G
22	DA	49	A
22	DA	50	U
22	DA	52	A
22	DA	53	A
22	DA	54	G
22	DA	55	G
22	DA	61	C
22	DA	62	U
22	DA	70	G
22	DA	71	A
22	DA	73	A
22	DA	74	A
22	DA	75	G
22	DA	76	C
22	DA	77	G
22	DA	79	C
22	DA	83	A
22	DA	84	A
22	DA	85	G
22	DA	86	G
22	DA	87	U
22	DA	91	A
22	DA	92	U
22	DA	96	C
22	DA	100	U
22	DA	101	A
22	DA	102	U
22	DA	103	A
22	DA	104	A
22	DA	118	A
22	DA	119	A
22	DA	120	U
22	DA	121	G
22	DA	122	G

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Mol	Chain	Res	Type
22	DA	123	G
22	DA	126	A
22	DA	128	C
22	DA	129	C
22	DA	134	G
22	DA	139	U
22	DA	140	C
22	DA	141	G
22	DA	142	A
22	DA	143	C
22	DA	144	A
22	DA	155	A
22	DA	156	A
22	DA	160	A
22	DA	162	U
22	DA	163	C
22	DA	164	C
22	DA	165	A
22	DA	166	U
22	DA	180	G
22	DA	181	A
22	DA	196	A
22	DA	197	A
22	DA	199	A
22	DA	204	A
22	DA	205	G
22	DA	206	U
22	DA	207	A
22	DA	216	A
22	DA	217	A
22	DA	221	A
22	DA	222	A
22	DA	223	A
22	DA	224	U
22	DA	225	C
22	DA	227	A
22	DA	228	C
22	DA	229	C
22	DA	230	G
22	DA	231	A
22	DA	233	A
22	DA	234	U

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Mol	Chain	Res	Type
22	DA	235	U
22	DA	241	A
22	DA	242	G
22	DA	244	A
22	DA	245	G
22	DA	248	G
22	DA	249	C
22	DA	250	G
22	DA	251	A
22	DA	255	A
22	DA	264	C
22	DA	265	A
22	DA	266	G
22	DA	271	G
22	DA	272	A
22	DA	273	G
22	DA	274	C
22	DA	277	G
22	DA	279	A
22	DA	280	U
22	DA	281	C
22	DA	284	U
22	DA	285	G
22	DA	294	A
22	DA	295	G
22	DA	299	A
22	DA	301	G
22	DA	302	C
22	DA	303	G
22	DA	304	U
22	DA	311	A
22	DA	312	G
22	DA	313	G
22	DA	314	C
22	DA	315	G
22	DA	322	A
22	DA	323	C
22	DA	324	A
22	DA	325	G
22	DA	329	G
22	DA	330	A
22	DA	334	C

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Mol	Chain	Res	Type
22	DA	335	C
22	DA	336	C
22	DA	343	C
22	DA	351	C
22	DA	353	C
22	DA	354	A
22	DA	362	A
22	DA	367	G
22	DA	370	G
22	DA	371	A
22	DA	372	G
22	DA	374	A
22	DA	375	G
22	DA	383	C
22	DA	385	C
22	DA	386	G
22	DA	387	U
22	DA	388	G
22	DA	389	G
22	DA	390	U
22	DA	391	A
22	DA	392	U
22	DA	396	G
22	DA	397	U
22	DA	398	C
22	DA	399	U
22	DA	404	A
22	DA	405	U
22	DA	406	G
22	DA	407	G
22	DA	411	G
22	DA	412	A
22	DA	413	C
22	DA	421	C
22	DA	422	A
22	DA	423	A
22	DA	424	G
22	DA	430	A
22	DA	436	C
22	DA	437	U
22	DA	438	G
22	DA	442	G

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Mol	Chain	Res	Type
22	DA	443	A
22	DA	444	C
22	DA	445	C
22	DA	446	G
22	DA	447	A
22	DA	450	G
22	DA	451	U
22	DA	455	C
22	DA	457	A
22	DA	459	U
22	DA	460	A
22	DA	461	C
22	DA	475	C
22	DA	476	G
22	DA	477	A
22	DA	479	A
22	DA	480	A
22	DA	481	G
22	DA	482	A
22	DA	483	A
22	DA	484	C
22	DA	490	C
22	DA	491	G
22	DA	492	A
22	DA	498	G
22	DA	502	A
22	DA	504	A
22	DA	505	A
22	DA	506	G
22	DA	507	A
22	DA	509	C
22	DA	510	C
22	DA	512	G
22	DA	527	C
22	DA	528	A
22	DA	529	A
22	DA	530	G
22	DA	531	C
22	DA	532	A
22	DA	533	G
22	DA	534	U
22	DA	544	C

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Mol	Chain	Res	Type
22	DA	546	U
22	DA	547	A
22	DA	548	G
22	DA	549	G
22	DA	550	C
22	DA	562	U
22	DA	563	A
22	DA	571	U
22	DA	572	A
22	DA	573	U
22	DA	574	A
22	DA	575	A
22	DA	576	U
22	DA	577	G
22	DA	586	A
22	DA	590	A
22	DA	592	A
22	DA	603	A
22	DA	604	G
22	DA	605	G
22	DA	606	U
22	DA	613	A
22	DA	614	A
22	DA	615	U
22	DA	616	A
22	DA	617	G
22	DA	618	G
22	DA	621	A
22	DA	622	G
22	DA	623	C
22	DA	627	A
22	DA	628	G
22	DA	629	G
22	DA	637	A
22	DA	638	G
22	DA	639	U
22	DA	645	C
22	DA	646	U
22	DA	648	G
22	DA	649	G
22	DA	653	U
22	DA	654	A

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Mol	Chain	Res	Type
22	DA	655	A
22	DA	656	G
22	DA	662	G
22	DA	664	G
22	DA	669	G
22	DA	671	C
22	DA	672	C
22	DA	673	C
22	DA	686	U
22	DA	687	C
22	DA	688	U
22	DA	695	G
22	DA	699	A
22	DA	705	A
22	DA	711	G
22	DA	717	C
22	DA	726	G
22	DA	727	A
22	DA	728	G
22	DA	729	G
22	DA	730	A
22	DA	739	A
22	DA	740	C
22	DA	741	U
22	DA	745	G
22	DA	746	U
22	DA	747	U
22	DA	748	G
22	DA	749	A
22	DA	751	A
22	DA	753	A
22	DA	754	U
22	DA	757	G
22	DA	763	G
22	DA	764	A
22	DA	775	G
22	DA	776	G
22	DA	777	G
22	DA	778	G
22	DA	782	A
22	DA	783	A
22	DA	784	G

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Mol	Chain	Res	Type
22	DA	785	G
22	DA	789	A
22	DA	790	U
22	DA	791	C
22	DA	792	A
22	DA	800	A
22	DA	801	G
22	DA	802	A
22	DA	803	U
22	DA	805	G
22	DA	806	C
22	DA	807	U
22	DA	812	C
22	DA	819	A
22	DA	827	U
22	DA	828	U
22	DA	830	G
22	DA	831	G
22	DA	846	U
22	DA	847	U
22	DA	858	G
22	DA	859	G
22	DA	860	U
22	DA	861	A
22	DA	866	A
22	DA	867	C
22	DA	868	U
22	DA	873	C
22	DA	875	G
22	DA	877	A
22	DA	878	A
22	DA	902	C
22	DA	910	A
22	DA	912	C
22	DA	913	U
22	DA	914	G
22	DA	915	C
22	DA	916	G
22	DA	917	A
22	DA	919	U
22	DA	922	C
22	DA	932	U

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Mol	Chain	Res	Type
22	DA	933	A
22	DA	934	U
22	DA	941	A
22	DA	946	C
22	DA	947	A
22	DA	948	C
22	DA	953	G
22	DA	958	U
22	DA	959	A
22	DA	960	A
22	DA	961	C
22	DA	962	G
22	DA	963	U
22	DA	964	C
22	DA	973	A
22	DA	974	G
22	DA	976	G
22	DA	982	C
22	DA	983	A
22	DA	985	C
22	DA	990	A
22	DA	991	C
22	DA	992	C
22	DA	995	C
22	DA	996	A
22	DA	1005	C
22	DA	1008	A
22	DA	1009	A
22	DA	1010	A
22	DA	1011	G
22	DA	1012	U
22	DA	1013	C
22	DA	1014	A
22	DA	1020	A
22	DA	1021	A
22	DA	1022	G
22	DA	1023	U
22	DA	1024	G
22	DA	1025	G
22	DA	1026	G
22	DA	1027	A
22	DA	1033	U

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Mol	Chain	Res	Type
22	DA	1034	G
22	DA	1035	U
22	DA	1044	C
22	DA	1045	C
22	DA	1046	A
22	DA	1047	G
22	DA	1048	A
22	DA	1049	C
22	DA	1050	A
22	DA	1055	G
22	DA	1056	G
22	DA	1057	A
22	DA	1060	U
22	DA	1061	U
22	DA	1063	G
22	DA	1064	C
22	DA	1066	U
22	DA	1068	G
22	DA	1069	A
22	DA	1070	A
22	DA	1071	G
22	DA	1072	C
22	DA	1073	A
22	DA	1074	G
22	DA	1076	C
22	DA	1077	A
22	DA	1079	C
22	DA	1080	A
22	DA	1083	U
22	DA	1088	A
22	DA	1089	A
22	DA	1090	A
22	DA	1091	G
22	DA	1092	C
22	DA	1097	U
22	DA	1100	C
22	DA	1103	A
22	DA	1111	A
22	DA	1112	G
22	DA	1113	U
22	DA	1114	C
22	DA	1115	G

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Mol	Chain	Res	Type
22	DA	1126	A
22	DA	1127	A
22	DA	1128	G
22	DA	1129	A
22	DA	1130	U
22	DA	1132	U
22	DA	1133	A
22	DA	1134	A
22	DA	1135	C
22	DA	1136	G
22	DA	1137	G
22	DA	1139	G
22	DA	1142	A
22	DA	1144	A
22	DA	1145	C
22	DA	1156	A
22	DA	1157	G
22	DA	1158	C
22	DA	1159	U
22	DA	1169	A
22	DA	1170	C
22	DA	1172	C
22	DA	1174	U
22	DA	1176	U
22	DA	1204	A
22	DA	1205	A
22	DA	1206	G
22	DA	1207	C
22	DA	1211	C
22	DA	1213	A
22	DA	1227	G
22	DA	1231	U
22	DA	1236	G
22	DA	1237	A
22	DA	1241	A
22	DA	1242	U
22	DA	1246	A
22	DA	1247	A
22	DA	1248	G
22	DA	1249	U
22	DA	1250	G
22	DA	1253	A

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Mol	Chain	Res	Type
22	DA	1255	U
22	DA	1256	G
22	DA	1257	C
22	DA	1262	A
22	DA	1265	A
22	DA	1266	G
22	DA	1267	U
22	DA	1268	A
22	DA	1269	A
22	DA	1271	G
22	DA	1272	A
22	DA	1273	U
22	DA	1274	A
22	DA	1275	A
22	DA	1276	A
22	DA	1277	G
22	DA	1278	C
22	DA	1286	A
22	DA	1287	A
22	DA	1288	G
22	DA	1290	C
22	DA	1291	C
22	DA	1292	G
22	DA	1300	G
22	DA	1301	A
22	DA	1303	G
22	DA	1304	A
22	DA	1305	C
22	DA	1311	G
22	DA	1313	U
22	DA	1314	C
22	DA	1315	C
22	DA	1321	A
22	DA	1324	G
22	DA	1325	U
22	DA	1326	U
22	DA	1327	A
22	DA	1328	A
22	DA	1329	U
22	DA	1330	C
22	DA	1331	G
22	DA	1332	G

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Mol	Chain	Res	Type
22	DA	1333	G
22	DA	1334	G
22	DA	1336	A
22	DA	1337	G
22	DA	1340	U
22	DA	1341	G
22	DA	1345	C
22	DA	1346	G
22	DA	1347	A
22	DA	1349	C
22	DA	1352	U
22	DA	1365	A
22	DA	1368	G
22	DA	1374	G
22	DA	1376	C
22	DA	1379	U
22	DA	1382	G
22	DA	1383	A
22	DA	1385	A
22	DA	1386	C
22	DA	1387	A
22	DA	1388	G
22	DA	1389	G
22	DA	1397	U
22	DA	1398	C
22	DA	1399	C
22	DA	1400	U
22	DA	1401	G
22	DA	1403	A
22	DA	1404	C
22	DA	1416	G
22	DA	1417	C
22	DA	1418	G
22	DA	1419	A
22	DA	1421	G
22	DA	1427	A
22	DA	1428	C
22	DA	1430	G
22	DA	1439	A
22	DA	1440	U
22	DA	1444	G
22	DA	1452	G

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Mol	Chain	Res	Type
22	DA	1453	A
22	DA	1455	G
22	DA	1456	G
22	DA	1459	G
22	DA	1460	U
22	DA	1461	C
22	DA	1470	A
22	DA	1477	A
22	DA	1478	G
22	DA	1479	G
22	DA	1482	G
22	DA	1483	G
22	DA	1490	A
22	DA	1491	G
22	DA	1492	G
22	DA	1493	C
22	DA	1494	A
22	DA	1497	U
22	DA	1498	C
22	DA	1499	C
22	DA	1503	A
22	DA	1504	A
22	DA	1507	C
22	DA	1508	A
22	DA	1509	A
22	DA	1510	G
22	DA	1511	G
22	DA	1512	C
22	DA	1520	U
22	DA	1522	A
22	DA	1524	G
22	DA	1528	A
22	DA	1530	G
22	DA	1531	C
22	DA	1532	A
22	DA	1534	U
22	DA	1535	A
22	DA	1536	C
22	DA	1537	G
22	DA	1538	G
22	DA	1539	U
22	DA	1540	G

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Mol	Chain	Res	Type
22	DA	1541	C
22	DA	1555	G
22	DA	1556	C
22	DA	1557	C
22	DA	1558	C
22	DA	1559	U
22	DA	1560	G
22	DA	1561	C
22	DA	1565	C
22	DA	1566	A
22	DA	1567	G
22	DA	1568	G
22	DA	1569	A
22	DA	1570	A
22	DA	1583	A
22	DA	1584	U
22	DA	1585	C
22	DA	1586	A
22	DA	1603	A
22	DA	1607	C
22	DA	1608	A
22	DA	1610	A
22	DA	1611	C
22	DA	1612	C
22	DA	1613	G
22	DA	1616	A
22	DA	1618	A
22	DA	1626	A
22	DA	1635	A
22	DA	1636	U
22	DA	1640	A
22	DA	1646	C
22	DA	1647	U
22	DA	1648	U
22	DA	1649	G
22	DA	1650	A
22	DA	1653	G
22	DA	1654	A
22	DA	1655	A
22	DA	1663	G
22	DA	1668	A
22	DA	1669	A

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Mol	Chain	Res	Type
22	DA	1670	C
22	DA	1674	G
22	DA	1675	C
22	DA	1676	A
22	DA	1682	G
22	DA	1683	U
22	DA	1694	C
22	DA	1695	G
22	DA	1696	G
22	DA	1698	A
22	DA	1699	G
22	DA	1700	A
22	DA	1701	A
22	DA	1707	G
22	DA	1713	A
22	DA	1714	U
22	DA	1715	G
22	DA	1717	A
22	DA	1718	G
22	DA	1722	A
22	DA	1723	G
22	DA	1728	C
22	DA	1729	U
22	DA	1730	C
22	DA	1731	G
22	DA	1732	C
22	DA	1733	G
22	DA	1734	G
22	DA	1735	A
22	DA	1739	A
22	DA	1740	G
22	DA	1758	U
22	DA	1759	A
22	DA	1760	C
22	DA	1764	C
22	DA	1773	A
22	DA	1776	G
22	DA	1780	A
22	DA	1781	U
22	DA	1782	U
22	DA	1784	A
22	DA	1785	A

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Mol	Chain	Res	Type
22	DA	1786	A
22	DA	1787	A
22	DA	1800	C
22	DA	1802	A
22	DA	1803	A
22	DA	1808	A
22	DA	1809	A
22	DA	1810	A
22	DA	1811	G
22	DA	1815	A
22	DA	1816	C
22	DA	1817	G
22	DA	1818	U
22	DA	1820	U
22	DA	1821	A
22	DA	1822	C
22	DA	1824	G
22	DA	1829	A
22	DA	1838	C
22	DA	1839	G
22	DA	1847	A
22	DA	1848	A
22	DA	1857	G
22	DA	1866	A
22	DA	1867	G
22	DA	1869	G
22	DA	1870	C
22	DA	1873	G
22	DA	1876	A
22	DA	1877	A
22	DA	1884	G
22	DA	1889	A
22	DA	1900	A
22	DA	1901	A
22	DA	1902	C
22	DA	1903	G
22	DA	1906	G
22	DA	1913	A
22	DA	1914	C
22	DA	1915	U
22	DA	1916	A
22	DA	1919	A

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Mol	Chain	Res	Type
22	DA	1920	C
22	DA	1927	A
22	DA	1929	G
22	DA	1930	G
22	DA	1931	U
22	DA	1932	A
22	DA	1937	A
22	DA	1938	A
22	DA	1939	U
22	DA	1941	C
22	DA	1942	C
22	DA	1943	U
22	DA	1944	U
22	DA	1945	G
22	DA	1955	U
22	DA	1956	U
22	DA	1962	C
22	DA	1963	U
22	DA	1964	G
22	DA	1966	A
22	DA	1967	C
22	DA	1968	G
22	DA	1970	A
22	DA	1971	U
22	DA	1972	G
22	DA	1975	G
22	DA	1980	G
22	DA	1981	A
22	DA	1982	U
22	DA	1983	G
22	DA	1991	U
22	DA	1993	U
22	DA	1996	C
22	DA	1997	C
22	DA	1998	A
22	DA	2018	G
22	DA	2020	A
22	DA	2021	C
22	DA	2022	U
22	DA	2023	C
22	DA	2024	G
22	DA	2030	A

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Mol	Chain	Res	Type
22	DA	2031	A
22	DA	2033	A
22	DA	2034	U
22	DA	2035	G
22	DA	2036	C
22	DA	2037	A
22	DA	2043	C
22	DA	2052	A
22	DA	2055	C
22	DA	2056	G
22	DA	2060	A
22	DA	2061	G
22	DA	2062	A
22	DA	2063	C
22	DA	2064	C
22	DA	2068	U
22	DA	2069	G
22	DA	2080	A
22	DA	2092	U
22	DA	2093	G
22	DA	2094	A
22	DA	2095	A
22	DA	2104	C
22	DA	2107	G
22	DA	2108	A
22	DA	2109	U
22	DA	2110	G
22	DA	2134	A
22	DA	2135	A
22	DA	2136	G
22	DA	2137	U
22	DA	2138	G
22	DA	2139	U
22	DA	2143	C
22	DA	2144	G
22	DA	2145	C
22	DA	2147	A
22	DA	2148	G
22	DA	2149	U
22	DA	2150	C
22	DA	2152	G
22	DA	2153	C

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Mol	Chain	Res	Type
22	DA	2154	A
22	DA	2156	G
22	DA	2157	G
22	DA	2180	U
22	DA	2181	U
22	DA	2183	A
22	DA	2187	U
22	DA	2191	A
22	DA	2192	U
22	DA	2198	A
22	DA	2199	A
22	DA	2200	C
22	DA	2203	U
22	DA	2204	G
22	DA	2210	U
22	DA	2211	A
22	DA	2212	A
22	DA	2213	U
22	DA	2214	C
22	DA	2215	C
22	DA	2216	G
22	DA	2217	G
22	DA	2225	A
22	DA	2226	C
22	DA	2227	A
22	DA	2238	G
22	DA	2239	G
22	DA	2242	G
22	DA	2249	U
22	DA	2250	G
22	DA	2259	U
22	DA	2260	C
22	DA	2266	A
22	DA	2267	A
22	DA	2268	A
22	DA	2275	C
22	DA	2276	G
22	DA	2277	G
22	DA	2279	G
22	DA	2283	C
22	DA	2284	A
22	DA	2286	G

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Mol	Chain	Res	Type
22	DA	2287	A
22	DA	2289	G
22	DA	2290	G
22	DA	2297	A
22	DA	2298	A
22	DA	2299	U
22	DA	2305	U
22	DA	2306	C
22	DA	2308	G
22	DA	2309	A
22	DA	2310	C
22	DA	2311	A
22	DA	2312	U
22	DA	2313	C
22	DA	2314	A
22	DA	2320	U
22	DA	2325	G
22	DA	2332	C
22	DA	2334	U
22	DA	2335	A
22	DA	2337	G
22	DA	2338	C
22	DA	2339	C
22	DA	2345	G
22	DA	2347	C
22	DA	2348	U
22	DA	2349	G
22	DA	2357	G
22	DA	2358	A
22	DA	2361	G
22	DA	2382	G
22	DA	2383	G
22	DA	2384	U
22	DA	2385	C
22	DA	2386	A
22	DA	2387	U
22	DA	2388	A
22	DA	2401	U
22	DA	2402	U
22	DA	2403	C
22	DA	2404	U
22	DA	2405	G

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Mol	Chain	Res	Type
22	DA	2406	A
22	DA	2407	A
22	DA	2409	G
22	DA	2410	G
22	DA	2423	U
22	DA	2424	C
22	DA	2426	A
22	DA	2427	C
22	DA	2428	G
22	DA	2429	G
22	DA	2430	A
22	DA	2431	U
22	DA	2435	A
22	DA	2439	A
22	DA	2440	C
22	DA	2441	U
22	DA	2447	G
22	DA	2448	A
22	DA	2457	U
22	DA	2459	A
22	DA	2460	U
22	DA	2475	C
22	DA	2476	A
22	DA	2490	G
22	DA	2491	U
22	DA	2493	U
22	DA	2494	G
22	DA	2498	C
22	DA	2499	C
22	DA	2500	U
22	DA	2502	G
22	DA	2503	A
22	DA	2504	U
22	DA	2505	G
22	DA	2507	C
22	DA	2513	A
22	DA	2518	A
22	DA	2519	U
22	DA	2520	C
22	DA	2521	C
22	DA	2529	G
22	DA	2534	A

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Mol	Chain	Res	Type
22	DA	2542	A
22	DA	2543	G
22	DA	2544	G
22	DA	2547	A
22	DA	2554	U
22	DA	2567	G
22	DA	2573	C
22	DA	2578	G
22	DA	2582	G
22	DA	2583	G
22	DA	2585	U
22	DA	2586	U
22	DA	2602	A
22	DA	2609	U
22	DA	2610	C
22	DA	2611	C
22	DA	2612	C
22	DA	2613	U
22	DA	2614	A
22	DA	2615	U
22	DA	2616	C
22	DA	2629	U
22	DA	2630	G
22	DA	2632	A
22	DA	2645	G
22	DA	2654	A
22	DA	2655	G
22	DA	2656	U
22	DA	2657	A
22	DA	2658	C
22	DA	2660	A
22	DA	2667	C
22	DA	2668	G
22	DA	2682	A
22	DA	2683	C
22	DA	2690	U
22	DA	2691	C
22	DA	2713	U
22	DA	2714	G
22	DA	2717	C
22	DA	2718	G
22	DA	2725	A

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Mol	Chain	Res	Type
22	DA	2726	A
22	DA	2727	A
22	DA	2728	U
22	DA	2729	G
22	DA	2732	G
22	DA	2736	A
22	DA	2739	U
22	DA	2748	A
22	DA	2750	A
22	DA	2751	G
22	DA	2752	C
22	DA	2753	A
22	DA	2756	U
22	DA	2757	A
22	DA	2758	A
22	DA	2765	A
22	DA	2777	G
22	DA	2778	A
22	DA	2791	G
22	DA	2799	A
22	DA	2800	A
22	DA	2801	G
22	DA	2808	G
22	DA	2820	A
22	DA	2822	G
22	DA	2833	U
22	DA	2834	G
22	DA	2835	A
22	DA	2836	U
22	DA	2837	A
22	DA	2838	G
22	DA	2848	G
22	DA	2849	U
22	DA	2850	A
22	DA	2851	A
22	DA	2852	G
22	DA	2861	U
22	DA	2866	U
22	DA	2867	G
22	DA	2872	A
22	DA	2873	A
22	DA	2874	C

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Mol	Chain	Res	Type
22	DA	2875	C
22	DA	2876	G
22	DA	2879	A
22	DA	2880	C
22	DA	2881	U
22	DA	2883	A
22	DA	2894	G
22	DA	2895	G
22	DA	2896	C
22	DA	2902	C
54	DB	12	C
54	DB	13	G
54	DB	15	A
54	DB	16	G
54	DB	17	C
54	DB	24	G
54	DB	25	U
54	DB	27	C
54	DB	28	C
54	DB	30	C
54	DB	35	C
54	DB	36	C
54	DB	41	G
54	DB	42	C
54	DB	43	C
54	DB	44	G
54	DB	45	A
54	DB	48	U
54	DB	57	A
54	DB	58	A
54	DB	59	A
54	DB	63	C
54	DB	64	G
54	DB	65	U
54	DB	66	A
54	DB	67	G
54	DB	68	C
54	DB	87	U
54	DB	88	C
54	DB	89	U
54	DB	90	C
54	DB	91	C

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Mol	Chain	Res	Type
54	DB	99	A
54	DB	109	A
54	DB	110	C
54	DB	111	U

All (1436) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
21	AA	7	A
21	AA	13	U
21	AA	30	U
21	AA	32	A
21	AA	47	C
21	AA	51	A
21	AA	52	C
21	AA	60	A
21	AA	61	G
21	AA	64	G
21	AA	66	A
21	AA	72	A
21	AA	73	C
21	AA	74	A
21	AA	85	U
21	AA	87	C
21	AA	90	C
21	AA	91	U
21	AA	94	G
21	AA	95	C
21	AA	96	U
21	AA	97	G
21	AA	109	A
21	AA	110	C
21	AA	115	G
21	AA	116	A
21	AA	119	A
21	AA	121	U
21	AA	129	A
21	AA	131	A
21	AA	173	U
21	AA	174	A
21	AA	175	C
21	AA	181	A

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Mol	Chain	Res	Type
21	AA	184	G
21	AA	197	A
21	AA	198	G
21	AA	199	A
21	AA	213	G
21	AA	214	C
21	AA	215	C
21	AA	243	A
21	AA	245	U
21	AA	246	A
21	AA	247	G
21	AA	250	A
21	AA	251	G
21	AA	252	U
21	AA	266	G
21	AA	267	C
21	AA	268	U
21	AA	274	A
21	AA	275	G
21	AA	279	A
21	AA	305	G
21	AA	306	A
21	AA	315	A
21	AA	327	A
21	AA	330	C
21	AA	331	G
21	AA	344	A
21	AA	346	G
21	AA	351	G
21	AA	352	C
21	AA	366	A
21	AA	368	U
21	AA	369	G
21	AA	372	C
21	AA	373	A
21	AA	388	G
21	AA	411	A
21	AA	414	A
21	AA	422	C
21	AA	423	G
21	AA	428	G
21	AA	429	U

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Mol	Chain	Res	Type
21	AA	430	A
21	AA	451	A
21	AA	452	A
21	AA	453	G
21	AA	466	A
21	AA	467	U
21	AA	468	A
21	AA	484	G
21	AA	486	U
21	AA	487	A
21	AA	495	A
21	AA	496	A
21	AA	497	G
21	AA	499	A
21	AA	500	G
21	AA	508	U
21	AA	509	A
21	AA	511	C
21	AA	512	U
21	AA	517	G
21	AA	519	C
21	AA	531	U
21	AA	534	U
21	AA	535	A
21	AA	536	C
21	AA	547	A
21	AA	548	G
21	AA	549	C
21	AA	559	A
21	AA	563	A
21	AA	566	G
21	AA	575	G
21	AA	595	A
21	AA	596	A
21	AA	641	U
21	AA	652	U
21	AA	654	G
21	AA	686	U
21	AA	688	G
21	AA	701	U
21	AA	717	U
21	AA	718	A

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Mol	Chain	Res	Type
21	AA	721	G
21	AA	722	G
21	AA	724	G
21	AA	734	G
21	AA	752	G
21	AA	753	A
21	AA	754	C
21	AA	755	G
21	AA	792	A
21	AA	794	A
21	AA	812	G
21	AA	813	U
21	AA	815	A
21	AA	816	A
21	AA	817	C
21	AA	870	U
21	AA	874	G
21	AA	884	U
21	AA	885	G
21	AA	889	A
21	AA	913	A
21	AA	914	A
21	AA	934	C
21	AA	935	A
21	AA	960	U
21	AA	961	U
21	AA	965	U
21	AA	968	A
21	AA	969	A
21	AA	971	G
21	AA	974	A
21	AA	976	G
21	AA	982	U
21	AA	991	U
21	AA	994	A
21	AA	1046	A
21	AA	1049	U
21	AA	1050	G
21	AA	1064	G
21	AA	1066	C
21	AA	1068	G
21	AA	1085	U

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Mol	Chain	Res	Type
21	AA	1087	G
21	AA	1094	G
21	AA	1095	U
21	AA	1101	A
21	AA	1102	A
21	AA	1125	U
21	AA	1127	G
21	AA	1129	C
21	AA	1130	A
21	AA	1136	C
21	AA	1138	G
21	AA	1141	C
21	AA	1151	A
21	AA	1152	A
21	AA	1157	A
21	AA	1158	C
21	AA	1159	U
21	AA	1160	G
21	AA	1161	C
21	AA	1168	U
21	AA	1169	A
21	AA	1181	G
21	AA	1183	U
21	AA	1184	G
21	AA	1190	G
21	AA	1191	A
21	AA	1196	A
21	AA	1197	A
21	AA	1200	C
21	AA	1201	A
21	AA	1202	U
21	AA	1213	A
21	AA	1215	G
21	AA	1224	U
21	AA	1227	A
21	AA	1228	C
21	AA	1239	A
21	AA	1241	G
21	AA	1256	A
21	AA	1258	G
21	AA	1278	G
21	AA	1282	C

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Mol	Chain	Res	Type
21	AA	1283	U
21	AA	1287	A
21	AA	1288	A
21	AA	1297	G
21	AA	1302	C
21	AA	1303	C
21	AA	1319	A
21	AA	1320	C
21	AA	1322	C
21	AA	1323	G
21	AA	1324	A
21	AA	1331	G
21	AA	1332	A
21	AA	1336	C
21	AA	1337	G
21	AA	1345	U
21	AA	1348	U
21	AA	1362	A
21	AA	1365	G
21	AA	1380	U
21	AA	1381	U
21	AA	1394	A
21	AA	1395	C
21	AA	1396	A
21	AA	1398	A
21	AA	1399	C
21	AA	1432	G
21	AA	1433	A
21	AA	1447	A
21	AA	1452	C
21	AA	1453	G
21	AA	1454	G
21	AA	1498	U
21	AA	1502	A
21	AA	1505	G
21	AA	1507	A
21	AA	1528	U
21	AA	1530	G
21	AA	1531	A
22	BA	13	A
22	BA	14	A
22	BA	27	G

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Mol	Chain	Res	Type
22	BA	33	C
22	BA	34	U
22	BA	49	A
22	BA	52	A
22	BA	60	G
22	BA	62	U
22	BA	70	G
22	BA	71	A
22	BA	73	A
22	BA	74	A
22	BA	75	G
22	BA	84	A
22	BA	91	A
22	BA	92	U
22	BA	100	U
22	BA	119	A
22	BA	125	A
22	BA	126	A
22	BA	137	U
22	BA	138	U
22	BA	142	A
22	BA	143	C
22	BA	162	U
22	BA	164	C
22	BA	177	G
22	BA	196	A
22	BA	199	A
22	BA	204	A
22	BA	206	U
22	BA	215	G
22	BA	221	A
22	BA	227	A
22	BA	229	C
22	BA	230	G
22	BA	232	G
22	BA	241	A
22	BA	243	U
22	BA	249	C
22	BA	265	A
22	BA	266	G
22	BA	271	G
22	BA	273	G

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Mol	Chain	Res	Type
22	BA	301	G
22	BA	302	C
22	BA	310	A
22	BA	312	G
22	BA	321	U
22	BA	324	A
22	BA	329	G
22	BA	345	A
22	BA	369	U
22	BA	386	G
22	BA	388	G
22	BA	390	U
22	BA	395	U
22	BA	403	U
22	BA	404	A
22	BA	411	G
22	BA	412	A
22	BA	421	C
22	BA	434	U
22	BA	435	C
22	BA	442	G
22	BA	446	G
22	BA	454	A
22	BA	459	U
22	BA	474	G
22	BA	475	C
22	BA	479	A
22	BA	480	A
22	BA	481	G
22	BA	482	A
22	BA	489	G
22	BA	491	G
22	BA	503	A
22	BA	505	A
22	BA	506	G
22	BA	507	A
22	BA	509	C
22	BA	512	G
22	BA	513	A
22	BA	527	C
22	BA	528	A
22	BA	529	A

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Mol	Chain	Res	Type
22	BA	530	G
22	BA	531	C
22	BA	533	G
22	BA	555	G
22	BA	571	U
22	BA	572	A
22	BA	573	U
22	BA	587	C
22	BA	588	U
22	BA	603	A
22	BA	604	G
22	BA	613	A
22	BA	616	A
22	BA	620	G
22	BA	637	A
22	BA	638	G
22	BA	645	C
22	BA	655	A
22	BA	669	G
22	BA	685	A
22	BA	687	C
22	BA	704	G
22	BA	705	A
22	BA	726	G
22	BA	727	A
22	BA	728	G
22	BA	740	C
22	BA	746	U
22	BA	747	U
22	BA	752	A
22	BA	753	A
22	BA	762	U
22	BA	763	G
22	BA	764	A
22	BA	765	C
22	BA	774	G
22	BA	790	U
22	BA	800	A
22	BA	805	G
22	BA	811	U
22	BA	829	A
22	BA	858	G

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Mol	Chain	Res	Type
22	BA	860	U
22	BA	865	C
22	BA	913	U
22	BA	914	G
22	BA	915	C
22	BA	931	U
22	BA	933	A
22	BA	945	A
22	BA	957	C
22	BA	958	U
22	BA	961	C
22	BA	984	A
22	BA	988	A
22	BA	990	A
22	BA	995	C
22	BA	996	A
22	BA	1008	A
22	BA	1009	A
22	BA	1011	G
22	BA	1013	C
22	BA	1020	A
22	BA	1021	A
22	BA	1022	G
22	BA	1023	U
22	BA	1025	G
22	BA	1026	G
22	BA	1033	U
22	BA	1045	C
22	BA	1048	A
22	BA	1060	U
22	BA	1062	G
22	BA	1070	A
22	BA	1072	C
22	BA	1073	A
22	BA	1091	G
22	BA	1110	G
22	BA	1112	G
22	BA	1128	G
22	BA	1129	A
22	BA	1130	U
22	BA	1135	C
22	BA	1141	U

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Mol	Chain	Res	Type
22	BA	1150	C
22	BA	1157	G
22	BA	1180	U
22	BA	1184	U
22	BA	1204	A
22	BA	1206	G
22	BA	1210	G
22	BA	1236	G
22	BA	1247	A
22	BA	1249	U
22	BA	1267	U
22	BA	1272	A
22	BA	1273	U
22	BA	1275	A
22	BA	1276	A
22	BA	1286	A
22	BA	1287	A
22	BA	1288	G
22	BA	1289	C
22	BA	1300	G
22	BA	1303	G
22	BA	1320	C
22	BA	1321	A
22	BA	1324	G
22	BA	1329	U
22	BA	1330	C
22	BA	1340	U
22	BA	1343	G
22	BA	1378	A
22	BA	1379	U
22	BA	1385	A
22	BA	1386	C
22	BA	1396	U
22	BA	1398	C
22	BA	1416	G
22	BA	1417	C
22	BA	1427	A
22	BA	1429	G
22	BA	1451	C
22	BA	1458	U
22	BA	1459	G
22	BA	1461	C

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Mol	Chain	Res	Type
22	BA	1475	G
22	BA	1476	U
22	BA	1490	A
22	BA	1491	G
22	BA	1493	C
22	BA	1494	A
22	BA	1497	U
22	BA	1498	C
22	BA	1508	A
22	BA	1510	G
22	BA	1522	A
22	BA	1535	A
22	BA	1537	G
22	BA	1538	G
22	BA	1554	U
22	BA	1555	G
22	BA	1558	C
22	BA	1565	C
22	BA	1602	U
22	BA	1606	C
22	BA	1615	C
22	BA	1634	A
22	BA	1647	U
22	BA	1653	G
22	BA	1654	A
22	BA	1674	G
22	BA	1682	G
22	BA	1693	U
22	BA	1695	G
22	BA	1696	G
22	BA	1698	A
22	BA	1706	C
22	BA	1713	A
22	BA	1714	U
22	BA	1716	U
22	BA	1732	C
22	BA	1733	G
22	BA	1758	U
22	BA	1759	A
22	BA	1780	A
22	BA	1782	U
22	BA	1784	A

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Mol	Chain	Res	Type
22	BA	1786	A
22	BA	1787	A
22	BA	1799	G
22	BA	1808	A
22	BA	1815	A
22	BA	1816	C
22	BA	1818	U
22	BA	1819	A
22	BA	1838	C
22	BA	1847	A
22	BA	1848	A
22	BA	1857	G
22	BA	1858	A
22	BA	1865	U
22	BA	1866	A
22	BA	1870	C
22	BA	1871	A
22	BA	1872	A
22	BA	1884	G
22	BA	1885	A
22	BA	1900	A
22	BA	1918	A
22	BA	1919	A
22	BA	1929	G
22	BA	1931	U
22	BA	1936	A
22	BA	1941	C
22	BA	1943	U
22	BA	1945	G
22	BA	1954	G
22	BA	1962	C
22	BA	1963	U
22	BA	1964	G
22	BA	1965	C
22	BA	1966	A
22	BA	1967	C
22	BA	1970	A
22	BA	1971	U
22	BA	1981	A
22	BA	1996	C
22	BA	2021	C
22	BA	2023	C

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Mol	Chain	Res	Type
22	BA	2030	A
22	BA	2035	G
22	BA	2036	C
22	BA	2051	A
22	BA	2052	A
22	BA	2060	A
22	BA	2063	C
22	BA	2067	G
22	BA	2068	U
22	BA	2092	U
22	BA	2135	A
22	BA	2136	G
22	BA	2146	C
22	BA	2148	G
22	BA	2149	U
22	BA	2197	U
22	BA	2199	A
22	BA	2210	U
22	BA	2214	C
22	BA	2225	A
22	BA	2238	G
22	BA	2249	U
22	BA	2258	C
22	BA	2267	A
22	BA	2275	C
22	BA	2282	G
22	BA	2283	C
22	BA	2286	G
22	BA	2296	U
22	BA	2297	A
22	BA	2307	G
22	BA	2309	A
22	BA	2311	A
22	BA	2319	G
22	BA	2321	U
22	BA	2324	U
22	BA	2325	G
22	BA	2326	C
22	BA	2327	A
22	BA	2333	A
22	BA	2336	A
22	BA	2337	G

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Mol	Chain	Res	Type
22	BA	2344	U
22	BA	2347	C
22	BA	2382	G
22	BA	2383	G
22	BA	2385	C
22	BA	2391	G
22	BA	2405	G
22	BA	2407	A
22	BA	2423	U
22	BA	2425	A
22	BA	2430	A
22	BA	2439	A
22	BA	2447	G
22	BA	2458	G
22	BA	2468	A
22	BA	2490	G
22	BA	2503	A
22	BA	2517	C
22	BA	2542	A
22	BA	2566	A
22	BA	2572	A
22	BA	2573	C
22	BA	2581	G
22	BA	2602	A
22	BA	2609	U
22	BA	2611	C
22	BA	2613	U
22	BA	2615	U
22	BA	2629	U
22	BA	2638	G
22	BA	2645	G
22	BA	2654	A
22	BA	2656	U
22	BA	2681	C
22	BA	2689	U
22	BA	2712	C
22	BA	2725	A
22	BA	2727	A
22	BA	2728	U
22	BA	2729	G
22	BA	2732	G
22	BA	2750	A

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Mol	Chain	Res	Type
22	BA	2752	C
22	BA	2756	U
22	BA	2757	A
22	BA	2777	G
22	BA	2778	A
22	BA	2781	A
22	BA	2790	U
22	BA	2791	G
22	BA	2797	U
22	BA	2800	A
22	BA	2801	G
22	BA	2808	G
22	BA	2820	A
22	BA	2832	U
22	BA	2835	A
22	BA	2848	G
22	BA	2850	A
22	BA	2866	U
22	BA	2868	A
22	BA	2873	A
22	BA	2879	A
22	BA	2893	A
22	BA	2894	G
23	BB	12	C
23	BB	13	G
23	BB	14	U
23	BB	16	G
23	BB	24	G
23	BB	25	U
23	BB	40	U
23	BB	42	C
23	BB	44	G
23	BB	45	A
23	BB	52	A
23	BB	56	G
23	BB	57	A
23	BB	66	A
23	BB	67	G
23	BB	87	U
23	BB	90	C
23	BB	108	A
23	BB	109	A

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Mol	Chain	Res	Type
53	CA	6	G
53	CA	9	G
53	CA	13	U
53	CA	14	U
53	CA	15	G
53	CA	30	U
53	CA	32	A
53	CA	47	C
53	CA	52	C
53	CA	60	A
53	CA	66	A
53	CA	70	U
53	CA	71	A
53	CA	72	A
53	CA	73	C
53	CA	81	A
53	CA	82	G
53	CA	84	U
53	CA	86	G
53	CA	87	C
53	CA	89	U
53	CA	90	C
53	CA	91	U
53	CA	94	G
53	CA	95	C
53	CA	109	A
53	CA	115	G
53	CA	116	A
53	CA	119	A
53	CA	130	A
53	CA	131	A
53	CA	132	C
53	CA	173	U
53	CA	174	A
53	CA	181	A
53	CA	197	A
53	CA	198	G
53	CA	199	A
53	CA	212	G
53	CA	239	U
53	CA	240	G
53	CA	243	A

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Mol	Chain	Res	Type
53	CA	245	U
53	CA	247	G
53	CA	248	C
53	CA	251	G
53	CA	252	U
53	CA	274	A
53	CA	275	G
53	CA	276	G
53	CA	279	A
53	CA	282	A
53	CA	305	G
53	CA	315	A
53	CA	316	C
53	CA	327	A
53	CA	328	C
53	CA	330	C
53	CA	331	G
53	CA	344	A
53	CA	346	G
53	CA	347	G
53	CA	348	G
53	CA	351	G
53	CA	352	C
53	CA	366	A
53	CA	368	U
53	CA	372	C
53	CA	373	A
53	CA	374	A
53	CA	382	A
53	CA	383	A
53	CA	388	G
53	CA	389	A
53	CA	411	A
53	CA	414	A
53	CA	421	U
53	CA	423	G
53	CA	424	G
53	CA	428	G
53	CA	429	U
53	CA	430	A
53	CA	451	A
53	CA	452	A

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Mol	Chain	Res	Type
53	CA	460	A
53	CA	481	G
53	CA	482	A
53	CA	484	G
53	CA	495	A
53	CA	496	A
53	CA	497	G
53	CA	499	A
53	CA	500	G
53	CA	501	C
53	CA	508	U
53	CA	509	A
53	CA	511	C
53	CA	512	U
53	CA	513	C
53	CA	517	G
53	CA	519	C
53	CA	531	U
53	CA	532	A
53	CA	534	U
53	CA	535	A
53	CA	536	C
53	CA	547	A
53	CA	548	G
53	CA	559	A
53	CA	563	A
53	CA	564	C
53	CA	566	G
53	CA	567	G
53	CA	575	G
53	CA	577	G
53	CA	595	A
53	CA	596	A
53	CA	641	U
53	CA	642	A
53	CA	643	C
53	CA	652	U
53	CA	654	G
53	CA	686	U
53	CA	688	G
53	CA	701	U
53	CA	704	A

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Mol	Chain	Res	Type
53	CA	721	G
53	CA	722	G
53	CA	733	G
53	CA	734	G
53	CA	753	A
53	CA	755	G
53	CA	792	A
53	CA	794	A
53	CA	803	G
53	CA	815	A
53	CA	816	A
53	CA	821	G
53	CA	870	U
53	CA	874	G
53	CA	884	U
53	CA	889	A
53	CA	891	U
53	CA	913	A
53	CA	914	A
53	CA	934	C
53	CA	935	A
53	CA	936	C
53	CA	960	U
53	CA	961	U
53	CA	962	C
53	CA	968	A
53	CA	973	G
53	CA	974	A
53	CA	975	A
53	CA	977	A
53	CA	978	A
53	CA	982	U
53	CA	983	A
53	CA	984	C
53	CA	992	U
53	CA	995	C
53	CA	1033	G
53	CA	1049	U
53	CA	1050	G
53	CA	1051	C
53	CA	1055	A
53	CA	1064	G

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Mol	Chain	Res	Type
53	CA	1066	C
53	CA	1067	A
53	CA	1085	U
53	CA	1086	U
53	CA	1087	G
53	CA	1101	A
53	CA	1102	A
53	CA	1124	G
53	CA	1127	G
53	CA	1138	G
53	CA	1140	C
53	CA	1141	C
53	CA	1142	G
53	CA	1145	A
53	CA	1146	A
53	CA	1147	C
53	CA	1151	A
53	CA	1152	A
53	CA	1157	A
53	CA	1158	C
53	CA	1160	G
53	CA	1161	C
53	CA	1184	G
53	CA	1190	G
53	CA	1191	A
53	CA	1198	G
53	CA	1200	C
53	CA	1201	A
53	CA	1202	U
53	CA	1213	A
53	CA	1215	G
53	CA	1216	A
53	CA	1226	C
53	CA	1228	C
53	CA	1229	A
53	CA	1242	G
53	CA	1278	G
53	CA	1282	C
53	CA	1283	U
53	CA	1285	A
53	CA	1287	A
53	CA	1299	A

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Mol	Chain	Res	Type
53	CA	1300	G
53	CA	1345	U
53	CA	1348	U
53	CA	1349	A
53	CA	1364	U
53	CA	1365	G
53	CA	1366	C
53	CA	1380	U
53	CA	1381	U
53	CA	1394	A
53	CA	1395	C
53	CA	1396	A
53	CA	1397	C
53	CA	1398	A
53	CA	1399	C
53	CA	1447	A
53	CA	1448	C
53	CA	1449	C
53	CA	1452	C
53	CA	1453	G
53	CA	1454	G
53	CA	1498	U
53	CA	1499	A
53	CA	1502	A
53	CA	1505	G
53	CA	1507	A
53	CA	1528	U
53	CA	1530	G
22	DA	13	A
22	DA	14	A
22	DA	27	G
22	DA	33	C
22	DA	35	G
22	DA	36	G
22	DA	49	A
22	DA	52	A
22	DA	60	G
22	DA	61	C
22	DA	70	G
22	DA	73	A
22	DA	75	G
22	DA	76	C

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Mol	Chain	Res	Type
22	DA	84	A
22	DA	85	G
22	DA	86	G
22	DA	91	A
22	DA	100	U
22	DA	103	A
22	DA	119	A
22	DA	121	G
22	DA	122	G
22	DA	125	A
22	DA	128	C
22	DA	142	A
22	DA	143	C
22	DA	162	U
22	DA	163	C
22	DA	164	C
22	DA	196	A
22	DA	197	A
22	DA	204	A
22	DA	206	U
22	DA	207	A
22	DA	215	G
22	DA	216	A
22	DA	222	A
22	DA	223	A
22	DA	224	U
22	DA	227	A
22	DA	229	C
22	DA	230	G
22	DA	232	G
22	DA	233	A
22	DA	234	U
22	DA	241	A
22	DA	243	U
22	DA	244	A
22	DA	249	C
22	DA	250	G
22	DA	271	G
22	DA	273	G
22	DA	301	G
22	DA	302	C
22	DA	303	G

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Mol	Chain	Res	Type
22	DA	313	G
22	DA	321	U
22	DA	324	A
22	DA	329	G
22	DA	335	C
22	DA	370	G
22	DA	373	U
22	DA	374	A
22	DA	386	G
22	DA	388	G
22	DA	389	G
22	DA	390	U
22	DA	391	A
22	DA	395	U
22	DA	396	G
22	DA	397	U
22	DA	404	A
22	DA	406	G
22	DA	411	G
22	DA	412	A
22	DA	422	A
22	DA	424	G
22	DA	437	U
22	DA	442	G
22	DA	443	A
22	DA	444	C
22	DA	445	C
22	DA	446	G
22	DA	449	A
22	DA	454	A
22	DA	459	U
22	DA	474	G
22	DA	475	C
22	DA	476	G
22	DA	479	A
22	DA	480	A
22	DA	482	A
22	DA	483	A
22	DA	489	G
22	DA	491	G
22	DA	492	A
22	DA	503	A

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Mol	Chain	Res	Type
22	DA	505	A
22	DA	509	C
22	DA	510	C
22	DA	527	C
22	DA	528	A
22	DA	530	G
22	DA	531	C
22	DA	533	G
22	DA	571	U
22	DA	572	A
22	DA	573	U
22	DA	575	A
22	DA	576	U
22	DA	589	U
22	DA	603	A
22	DA	604	G
22	DA	605	G
22	DA	615	U
22	DA	616	A
22	DA	617	G
22	DA	620	G
22	DA	621	A
22	DA	622	G
22	DA	627	A
22	DA	628	G
22	DA	637	A
22	DA	638	G
22	DA	648	G
22	DA	655	A
22	DA	656	G
22	DA	669	G
22	DA	670	A
22	DA	672	C
22	DA	685	A
22	DA	687	C
22	DA	704	G
22	DA	705	A
22	DA	726	G
22	DA	727	A
22	DA	739	A
22	DA	740	C
22	DA	746	U

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Mol	Chain	Res	Type
22	DA	747	U
22	DA	748	G
22	DA	754	U
22	DA	762	U
22	DA	763	G
22	DA	765	C
22	DA	777	G
22	DA	782	A
22	DA	783	A
22	DA	788	A
22	DA	794	A
22	DA	800	A
22	DA	802	A
22	DA	806	C
22	DA	829	A
22	DA	831	G
22	DA	859	G
22	DA	860	U
22	DA	861	A
22	DA	865	C
22	DA	867	C
22	DA	913	U
22	DA	915	C
22	DA	916	G
22	DA	931	U
22	DA	933	A
22	DA	945	A
22	DA	946	C
22	DA	947	A
22	DA	957	C
22	DA	958	U
22	DA	959	A
22	DA	961	C
22	DA	962	G
22	DA	963	U
22	DA	973	A
22	DA	975	A
22	DA	976	G
22	DA	989	G
22	DA	990	A
22	DA	991	C
22	DA	1008	A

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Mol	Chain	Res	Type
22	DA	1009	A
22	DA	1010	A
22	DA	1011	G
22	DA	1013	C
22	DA	1020	A
22	DA	1021	A
22	DA	1023	U
22	DA	1024	G
22	DA	1025	G
22	DA	1026	G
22	DA	1027	A
22	DA	1033	U
22	DA	1034	G
22	DA	1048	A
22	DA	1049	C
22	DA	1060	U
22	DA	1063	G
22	DA	1069	A
22	DA	1071	G
22	DA	1072	C
22	DA	1073	A
22	DA	1076	C
22	DA	1078	U
22	DA	1079	C
22	DA	1091	G
22	DA	1110	G
22	DA	1112	G
22	DA	1113	U
22	DA	1126	A
22	DA	1128	G
22	DA	1129	A
22	DA	1135	C
22	DA	1136	G
22	DA	1141	U
22	DA	1144	A
22	DA	1156	A
22	DA	1157	G
22	DA	1158	C
22	DA	1204	A
22	DA	1206	G
22	DA	1207	C
22	DA	1210	G

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Mol	Chain	Res	Type
22	DA	1213	A
22	DA	1247	A
22	DA	1249	U
22	DA	1254	A
22	DA	1255	U
22	DA	1256	G
22	DA	1265	A
22	DA	1267	U
22	DA	1268	A
22	DA	1272	A
22	DA	1274	A
22	DA	1275	A
22	DA	1276	A
22	DA	1286	A
22	DA	1289	C
22	DA	1290	C
22	DA	1291	C
22	DA	1300	G
22	DA	1303	G
22	DA	1304	A
22	DA	1312	U
22	DA	1313	U
22	DA	1314	C
22	DA	1325	U
22	DA	1326	U
22	DA	1327	A
22	DA	1329	U
22	DA	1333	G
22	DA	1340	U
22	DA	1345	C
22	DA	1346	G
22	DA	1385	A
22	DA	1386	C
22	DA	1387	A
22	DA	1388	G
22	DA	1398	C
22	DA	1399	C
22	DA	1400	U
22	DA	1415	U
22	DA	1417	C
22	DA	1427	A
22	DA	1429	G

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Mol	Chain	Res	Type
22	DA	1451	C
22	DA	1455	G
22	DA	1456	G
22	DA	1477	A
22	DA	1478	G
22	DA	1489	C
22	DA	1491	G
22	DA	1492	G
22	DA	1497	U
22	DA	1498	C
22	DA	1508	A
22	DA	1510	G
22	DA	1511	G
22	DA	1536	C
22	DA	1537	G
22	DA	1539	U
22	DA	1552	A
22	DA	1554	U
22	DA	1555	G
22	DA	1556	C
22	DA	1558	C
22	DA	1560	G
22	DA	1565	C
22	DA	1568	G
22	DA	1569	A
22	DA	1602	U
22	DA	1603	A
22	DA	1606	C
22	DA	1611	C
22	DA	1612	C
22	DA	1615	C
22	DA	1619	G
22	DA	1634	A
22	DA	1635	A
22	DA	1636	U
22	DA	1647	U
22	DA	1648	U
22	DA	1649	G
22	DA	1653	G
22	DA	1654	A
22	DA	1667	G
22	DA	1669	A

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Mol	Chain	Res	Type
22	DA	1674	G
22	DA	1675	C
22	DA	1681	G
22	DA	1682	G
22	DA	1683	U
22	DA	1693	U
22	DA	1695	G
22	DA	1696	G
22	DA	1698	A
22	DA	1700	A
22	DA	1706	C
22	DA	1713	A
22	DA	1716	U
22	DA	1717	A
22	DA	1722	A
22	DA	1731	G
22	DA	1733	G
22	DA	1734	G
22	DA	1738	G
22	DA	1739	A
22	DA	1758	U
22	DA	1759	A
22	DA	1780	A
22	DA	1782	U
22	DA	1784	A
22	DA	1785	A
22	DA	1786	A
22	DA	1787	A
22	DA	1799	G
22	DA	1802	A
22	DA	1803	A
22	DA	1808	A
22	DA	1809	A
22	DA	1810	A
22	DA	1815	A
22	DA	1816	C
22	DA	1817	G
22	DA	1818	U
22	DA	1821	A
22	DA	1828	G
22	DA	1838	C
22	DA	1839	G

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Mol	Chain	Res	Type
22	DA	1857	G
22	DA	1866	A
22	DA	1900	A
22	DA	1901	A
22	DA	1913	A
22	DA	1915	U
22	DA	1918	A
22	DA	1919	A
22	DA	1929	G
22	DA	1931	U
22	DA	1936	A
22	DA	1941	C
22	DA	1942	C
22	DA	1943	U
22	DA	1945	G
22	DA	1954	G
22	DA	1962	C
22	DA	1963	U
22	DA	1965	C
22	DA	1967	C
22	DA	1970	A
22	DA	1980	G
22	DA	1981	A
22	DA	1982	U
22	DA	1992	G
22	DA	1993	U
22	DA	1996	C
22	DA	1997	C
22	DA	2021	C
22	DA	2023	C
22	DA	2024	G
22	DA	2030	A
22	DA	2034	U
22	DA	2036	C
22	DA	2051	A
22	DA	2052	A
22	DA	2061	G
22	DA	2063	C
22	DA	2067	G
22	DA	2068	U
22	DA	2092	U
22	DA	2093	G

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Mol	Chain	Res	Type
22	DA	2094	A
22	DA	2133	G
22	DA	2135	A
22	DA	2136	G
22	DA	2143	C
22	DA	2147	A
22	DA	2148	G
22	DA	2149	U
22	DA	2197	U
22	DA	2198	A
22	DA	2199	A
22	DA	2210	U
22	DA	2214	C
22	DA	2216	G
22	DA	2225	A
22	DA	2226	C
22	DA	2238	G
22	DA	2239	G
22	DA	2249	U
22	DA	2258	C
22	DA	2259	U
22	DA	2266	A
22	DA	2275	C
22	DA	2276	G
22	DA	2282	G
22	DA	2283	C
22	DA	2286	G
22	DA	2288	A
22	DA	2289	G
22	DA	2296	U
22	DA	2297	A
22	DA	2298	A
22	DA	2310	C
22	DA	2311	A
22	DA	2313	C
22	DA	2334	U
22	DA	2335	A
22	DA	2337	G
22	DA	2338	C
22	DA	2344	U
22	DA	2347	C
22	DA	2348	U

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Mol	Chain	Res	Type
22	DA	2384	U
22	DA	2386	A
22	DA	2402	U
22	DA	2403	C
22	DA	2406	A
22	DA	2407	A
22	DA	2408	U
22	DA	2409	G
22	DA	2425	A
22	DA	2427	C
22	DA	2428	G
22	DA	2429	G
22	DA	2439	A
22	DA	2440	C
22	DA	2447	G
22	DA	2450	A
22	DA	2458	G
22	DA	2459	A
22	DA	2490	G
22	DA	2492	U
22	DA	2493	U
22	DA	2497	A
22	DA	2498	C
22	DA	2499	C
22	DA	2503	A
22	DA	2504	U
22	DA	2517	C
22	DA	2520	C
22	DA	2542	A
22	DA	2543	G
22	DA	2566	A
22	DA	2567	G
22	DA	2581	G
22	DA	2582	G
22	DA	2585	U
22	DA	2601	C
22	DA	2603	G
22	DA	2609	U
22	DA	2611	C
22	DA	2613	U
22	DA	2615	U
22	DA	2616	C

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Mol	Chain	Res	Type
22	DA	2654	A
22	DA	2656	U
22	DA	2657	A
22	DA	2666	C
22	DA	2667	C
22	DA	2668	G
22	DA	2681	C
22	DA	2682	A
22	DA	2689	U
22	DA	2691	C
22	DA	2712	C
22	DA	2714	G
22	DA	2725	A
22	DA	2727	A
22	DA	2728	U
22	DA	2750	A
22	DA	2752	C
22	DA	2753	A
22	DA	2756	U
22	DA	2757	A
22	DA	2776	A
22	DA	2777	G
22	DA	2781	A
22	DA	2798	U
22	DA	2832	U
22	DA	2836	U
22	DA	2837	A
22	DA	2848	G
22	DA	2850	A
22	DA	2851	A
22	DA	2866	U
22	DA	2868	A
22	DA	2873	A
22	DA	2874	C
22	DA	2875	C
22	DA	2879	A
22	DA	2880	C
22	DA	2893	A
22	DA	2895	G
54	DB	12	C
54	DB	13	G
54	DB	16	G

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Mol	Chain	Res	Type
54	DB	17	C
54	DB	27	C
54	DB	40	U
54	DB	41	G
54	DB	42	C
54	DB	43	C
54	DB	56	G
54	DB	58	A
54	DB	66	A
54	DB	67	G
54	DB	68	C
54	DB	88	C
54	DB	90	C
54	DB	108	A
54	DB	109	A
54	DB	110	C

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 365 ligands modelled in this entry, 365 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

5.7 Other polymers ⓘ

There are no such residues in this entry.

5.8 Polymer linkage issues

There are no chain breaks in this entry.

6 Fit of model and data ⓘ

6.1 Protein, DNA and RNA chains ⓘ

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

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
1	AB	218/241 (90%)	0.04	7 (3%) 45 9	85, 115, 146, 164	0
1	CB	218/241 (90%)	0.12	3 (1%) 72 22	90, 125, 152, 170	0
2	AC	206/233 (88%)	-0.24	0 100 100	57, 83, 116, 147	0
2	CC	206/233 (88%)	0.19	1 (0%) 88 46	83, 129, 170, 188	0
3	AD	205/206 (99%)	-0.20	3 (1%) 70 21	50, 87, 137, 176	0
3	CD	205/206 (99%)	-0.26	1 (0%) 88 46	41, 63, 102, 148	0
4	AE	150/167 (89%)	-0.22	0 100 100	51, 70, 116, 147	0
4	CE	150/167 (89%)	-0.10	0 100 100	65, 87, 122, 144	0
5	AF	100/135 (74%)	-0.13	0 100 100	60, 90, 125, 142	0
5	CF	100/135 (74%)	-0.04	0 100 100	65, 113, 147, 158	0
6	AG	151/179 (84%)	-0.05	1 (0%) 84 38	69, 108, 139, 157	0
6	CG	150/179 (83%)	1.08	31 (20%) 1 1	98, 173, 223, 233	0
7	AH	129/130 (99%)	-0.38	0 100 100	49, 71, 106, 133	0
7	CH	129/130 (99%)	-0.17	0 100 100	63, 100, 133, 159	0
8	AI	127/130 (97%)	0.13	6 (4%) 30 6	56, 115, 166, 189	0
8	CI	127/130 (97%)	0.64	11 (8%) 10 3	127, 174, 225, 239	0
9	AJ	98/103 (95%)	0.00	2 (2%) 62 17	59, 97, 152, 160	0
9	CJ	98/103 (95%)	0.90	13 (13%) 4 1	122, 160, 189, 201	0
10	AK	117/129 (90%)	-0.11	0 100 100	43, 88, 124, 137	0
10	CK	117/129 (90%)	-0.02	0 100 100	57, 99, 130, 151	0
11	AL	123/124 (99%)	-0.21	2 (1%) 68 20	33, 54, 96, 135	0
11	CL	123/124 (99%)	-0.00	1 (0%) 83 35	47, 74, 110, 135	0
12	AM	114/118 (96%)	0.01	1 (0%) 81 32	70, 117, 155, 177	0
12	CM	113/118 (95%)	1.45	27 (23%) 1 1	220, 351, 413, 434	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
13	AN	96/101 (95%)	-0.11	0 100 100	59, 86, 136, 158	0
13	CN	95/101 (94%)	0.84	10 (10%) 7 2	102, 191, 256, 269	0
14	AO	88/89 (98%)	-0.28	0 100 100	48, 75, 106, 128	0
14	CO	88/89 (98%)	0.01	1 (1%) 77 27	72, 109, 141, 167	0
15	AP	82/82 (100%)	-0.18	3 (3%) 39 8	55, 79, 129, 174	0
15	CP	80/82 (97%)	0.09	0 100 100	64, 96, 133, 152	0
16	AQ	80/84 (95%)	0.02	2 (2%) 54 12	38, 73, 112, 144	0
16	CQ	80/84 (95%)	0.38	3 (3%) 38 7	54, 96, 117, 131	0
17	AR	55/75 (73%)	0.03	1 (1%) 65 18	56, 80, 129, 146	0
17	CR	55/75 (73%)	0.13	0 100 100	57, 89, 131, 170	0
18	AS	79/92 (85%)	0.09	1 (1%) 74 24	79, 110, 152, 161	0
18	CS	79/92 (85%)	1.44	22 (27%) 1 1	250, 307, 359, 371	0
19	AT	85/87 (97%)	-0.11	0 100 100	51, 81, 114, 133	0
19	CT	85/87 (97%)	0.49	3 (3%) 42 8	79, 125, 161, 177	0
20	AU	51/71 (71%)	0.16	0 100 100	60, 104, 138, 148	0
20	CU	51/71 (71%)	0.08	0 100 100	63, 97, 143, 153	0
21	AA	1533/1533 (100%)	-0.60	22 (1%) 72 22	34, 72, 169, 235	0
22	BA	2854/2903 (98%)	-0.59	52 (1%) 65 18	13, 33, 142, 320	0
22	DA	2841/2903 (97%)	0.25	102 (3%) 41 8	59, 119, 216, 320	0
23	BB	118/118 (100%)	-0.69	0 100 100	18, 47, 75, 99	0
24	BC	271/273 (99%)	-0.31	2 (0%) 84 38	20, 43, 83, 142	0
24	DC	271/273 (99%)	0.12	3 (1%) 77 27	63, 94, 128, 153	0
25	BD	209/209 (100%)	-0.46	0 100 100	13, 29, 72, 96	0
25	DD	209/209 (100%)	0.14	1 (0%) 88 46	68, 108, 141, 168	0
26	BE	201/201 (100%)	-0.44	0 100 100	15, 42, 87, 124	0
26	DE	201/201 (100%)	0.63	13 (6%) 18 4	89, 191, 252, 282	0
27	BF	177/179 (98%)	-0.22	0 100 100	32, 67, 116, 132	0
27	DF	178/179 (99%)	1.01	26 (14%) 3 1	125, 209, 220, 232	0
28	BG	176/177 (99%)	-0.30	0 100 100	27, 57, 103, 128	0
28	DG	176/177 (99%)	0.71	13 (7%) 14 3	120, 165, 207, 220	0
29	BH	149/149 (100%)	1.10	42 (28%) 1 1	42, 178, 213, 217	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
29	DH	149/149 (100%)	1.33	38 (25%) 1 1	104, 173, 208, 219	0
30	BI	141/142 (99%)	1.64	42 (29%) 1 1	199, 245, 286, 294	0
30	DI	141/142 (99%)	2.86	83 (58%) 0 0	264, 305, 323, 331	0
31	BJ	142/142 (100%)	-0.47	0 100 100	12, 25, 57, 111	0
31	DJ	142/142 (100%)	0.08	0 100 100	76, 110, 134, 153	0
32	BK	122/123 (99%)	-0.46	0 100 100	20, 32, 76, 121	0
32	DK	122/123 (99%)	0.00	1 (0%) 83 35	71, 93, 127, 142	0
33	BL	143/144 (99%)	-0.46	0 100 100	13, 38, 74, 100	0
33	DL	143/144 (99%)	0.62	8 (5%) 24 5	80, 150, 189, 202	0
34	BM	136/136 (100%)	-0.50	0 100 100	14, 30, 61, 99	0
34	DM	136/136 (100%)	0.03	0 100 100	73, 117, 143, 161	0
35	BN	120/127 (94%)	-0.48	0 100 100	14, 28, 44, 97	0
35	DN	120/127 (94%)	0.33	1 (0%) 83 35	89, 121, 152, 171	0
36	BO	116/117 (99%)	-0.38	0 100 100	30, 46, 73, 101	0
36	DO	116/117 (99%)	0.88	13 (11%) 6 2	146, 178, 207, 216	0
37	BP	114/115 (99%)	-0.39	0 100 100	22, 39, 90, 131	0
37	DP	114/115 (99%)	0.18	3 (2%) 53 11	80, 108, 135, 143	0
38	BQ	117/118 (99%)	-0.48	0 100 100	9, 22, 46, 96	0
38	DQ	117/118 (99%)	0.39	2 (1%) 67 19	87, 112, 154, 191	0
39	BR	103/103 (100%)	-0.44	0 100 100	11, 33, 75, 91	0
39	DR	103/103 (100%)	0.69	6 (5%) 22 5	85, 135, 170, 190	0
40	BS	110/110 (100%)	-0.52	0 100 100	14, 23, 57, 118	0
40	DS	110/110 (100%)	0.47	7 (6%) 19 4	76, 120, 154, 170	0
41	BT	93/100 (93%)	-0.15	0 100 100	28, 51, 112, 140	0
41	DT	93/100 (93%)	0.81	9 (9%) 8 2	132, 189, 223, 233	0
42	BU	102/104 (98%)	-0.20	0 100 100	29, 54, 100, 155	0
42	DU	102/104 (98%)	1.20	21 (20%) 1 1	153, 202, 250, 283	0
43	BV	94/94 (100%)	-0.49	0 100 100	17, 39, 79, 105	0
43	DV	94/94 (100%)	0.21	1 (1%) 77 27	113, 143, 165, 179	0
44	BW	79/85 (92%)	-0.22	0 100 100	18, 39, 94, 127	0
44	DW	79/85 (92%)	0.74	4 (5%) 27 5	99, 157, 191, 201	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
45	BX	77/78 (98%)	-0.33	0 100 100	23, 43, 80, 104	0
45	DX	77/78 (98%)	0.34	2 (2%) 53 11	84, 124, 170, 177	0
46	BY	63/63 (100%)	-0.17	0 100 100	41, 68, 113, 128	0
46	DY	63/63 (100%)	0.83	6 (9%) 8 2	180, 226, 268, 278	0
47	BZ	58/59 (98%)	-0.46	0 100 100	13, 27, 56, 97	0
47	DZ	58/59 (98%)	0.40	1 (1%) 67 19	97, 143, 180, 187	0
48	B0	56/57 (98%)	-0.55	0 100 100	12, 29, 61, 113	0
48	D0	56/57 (98%)	0.65	2 (3%) 41 8	84, 128, 163, 172	0
49	B1	50/55 (90%)	-0.20	0 100 100	29, 50, 91, 116	0
49	D1	50/55 (90%)	0.99	6 (12%) 5 1	110, 143, 159, 168	0
50	B2	46/46 (100%)	-0.43	0 100 100	20, 30, 49, 131	0
50	D2	46/46 (100%)	0.49	1 (2%) 59 14	87, 115, 137, 147	0
51	B3	64/65 (98%)	-0.51	0 100 100	15, 30, 43, 62	0
51	D3	64/65 (98%)	0.76	7 (10%) 6 2	93, 126, 150, 169	0
52	B4	38/38 (100%)	-0.38	0 100 100	19, 33, 62, 87	0
52	D4	38/38 (100%)	0.60	2 (5%) 25 5	84, 127, 158, 161	0
53	CA	1530/1530 (100%)	-0.00	68 (4%) 33 7	44, 100, 246, 325	0
54	DB	117/117 (100%)	0.30	3 (2%) 53 11	108, 175, 209, 221	0
All	All	20431/21074 (96%)	-0.01	769 (3%) 38 7	9, 93, 219, 434	0

All (769) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
22	BA	2154	A	14.9
53	CA	209	U	13.2
30	BI	2	LYS	12.8
29	DH	92	GLY	12.4
30	DI	2	LYS	10.6
30	DI	119	ALA	9.2
30	DI	58	ILE	8.7
22	BA	2155	U	8.5
22	BA	2138	G	8.4
30	DI	3	LYS	8.3
22	BA	1072	C	8.1
53	CA	210	C	8.1
29	DH	91	PHE	8.1

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Mol	Chain	Res	Type	RSRZ
22	DA	1075	C	8.1
22	DA	1067	A	7.9
30	DI	4	VAL	7.8
22	BA	2179	C	7.8
30	DI	68	PHE	7.8
22	BA	2110	G	7.6
22	DA	1066	U	7.2
29	DH	123	ARG	7.1
29	DH	112	LYS	7.1
22	BA	2139	U	7.0
22	BA	2146	C	7.0
27	DF	129	MET	7.0
21	AA	86	G	6.9
30	BI	52	LEU	6.9
30	DI	118	GLY	6.9
30	DI	25	PRO	6.6
21	AA	88	U	6.5
22	BA	2145	C	6.5
22	DA	2799	A	6.4
22	DA	1090	A	6.4
30	DI	22	PRO	6.3
29	DH	105	ALA	6.3
22	DA	1095	A	6.3
22	BA	2180	U	6.2
29	DH	124	THR	6.2
22	BA	2147	A	6.2
22	DA	1073	A	6.2
22	BA	1065	U	6.2
18	CS	29	PRO	6.1
30	DI	120	ASP	6.1
28	DG	32	LEU	6.1
22	BA	1094	U	6.1
29	DH	127	GLU	6.0
21	AA	87	C	6.0
30	BI	1	ALA	6.0
48	D0	56	LYS	6.0
30	DI	53	PRO	5.9
21	AA	1030	U	5.8
30	DI	51	GLY	5.8
29	DH	95	GLY	5.8
29	BH	74	ALA	5.8
29	BH	92	GLY	5.7

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Mol	Chain	Res	Type	RSRZ
30	BI	3	LYS	5.7
22	BA	2143	C	5.7
30	DI	14	ALA	5.6
53	CA	1302	C	5.6
21	AA	1032	G	5.6
30	DI	57	VAL	5.6
22	DA	1537	G	5.5
22	DA	1094	U	5.5
53	CA	461	A	5.5
22	DA	645	C	5.4
18	CS	23	GLU	5.4
18	CS	28	LYS	5.4
29	BH	90	LEU	5.4
51	D3	20	GLY	5.4
30	BI	10	LEU	5.4
22	DA	2402	U	5.3
30	BI	67	THR	5.3
30	BI	13	ALA	5.3
30	DI	5	GLN	5.2
6	CG	150	PHE	5.2
30	DI	75	ALA	5.2
30	DI	67	THR	5.1
30	DI	21	PRO	5.1
30	BI	86	LYS	5.0
30	DI	9	LYS	5.0
46	DY	63	ALA	5.0
22	DA	1065	U	5.0
30	DI	52	LEU	5.0
30	BI	11	GLN	5.0
22	BA	2136	G	5.0
21	AA	85	U	4.9
18	CS	12	LEU	4.9
22	BA	884	U	4.9
22	BA	2149	U	4.9
30	BI	51	GLY	4.9
29	BH	98	ASP	4.8
53	CA	1224	U	4.8
21	AA	81	A	4.8
30	DI	76	ALA	4.8
22	BA	1093	G	4.7
29	DH	90	LEU	4.7
49	D1	35	LEU	4.7

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Mol	Chain	Res	Type	RSRZ
22	BA	2150	C	4.7
22	DA	546	U	4.7
30	BI	66	PHE	4.7
12	CM	94	LEU	4.7
30	DI	55	PRO	4.7
29	BH	73	ASN	4.7
22	DA	1074	G	4.6
30	BI	99	LYS	4.6
30	DI	117	THR	4.6
30	BI	16	MET	4.6
30	DI	27	LEU	4.6
30	DI	83	ALA	4.6
22	DA	1084	A	4.6
30	DI	24	GLY	4.6
29	BH	128	HIS	4.5
30	DI	86	LYS	4.5
18	CS	73	PHE	4.5
22	BA	1066	U	4.5
29	DH	143	ILE	4.5
22	DA	1536	C	4.5
6	CG	7	GLY	4.5
13	CN	33	VAL	4.5
29	DH	87	GLU	4.5
53	CA	1027	C	4.4
30	DI	54	ILE	4.4
30	DI	137	LEU	4.4
22	DA	1077	A	4.4
22	DA	1072	C	4.4
29	BH	80	ILE	4.4
29	DH	126	GLY	4.4
53	CA	86	G	4.3
30	DI	26	ALA	4.3
15	AP	80	LYS	4.3
21	AA	1031	C	4.3
22	BA	885	C	4.3
30	DI	13	ALA	4.3
8	AI	129	ARG	4.3
29	DH	133	GLN	4.3
53	CA	1218	C	4.3
13	CN	52	ARG	4.3
30	DI	129	GLU	4.3
30	DI	44	LYS	4.3

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Mol	Chain	Res	Type	RSRZ
22	BA	546	U	4.2
8	CI	127	SER	4.2
22	DA	2146	C	4.2
29	BH	84	ALA	4.2
53	CA	208	U	4.2
22	DA	1078	U	4.2
29	BH	122	LEU	4.2
6	CG	151	ALA	4.2
30	DI	50	LYS	4.2
30	DI	93	ASN	4.2
30	DI	56	VAL	4.2
1	CB	129	THR	4.1
22	DA	2110	G	4.1
21	AA	78	A	4.1
18	CS	38	THR	4.1
22	BA	896	A	4.1
30	DI	15	GLY	4.1
30	BI	53	PRO	4.1
30	DI	123	ALA	4.1
11	CL	123	ALA	4.1
30	BI	139	VAL	4.1
22	DA	139	U	4.1
30	DI	41	PHE	4.1
53	CA	1322	C	4.0
30	DI	59	THR	4.0
22	DA	1087	G	4.0
28	DG	8	VAL	4.0
16	AQ	82	VAL	4.0
22	DA	846	U	4.0
22	BA	1171	G	4.0
22	DA	613	A	4.0
29	DH	93	SER	3.9
12	CM	22	TYR	3.9
22	BA	2144	G	3.9
30	BI	22	PRO	3.9
11	AL	123	ALA	3.9
6	CG	73	GLU	3.9
3	CD	27	ILE	3.9
30	DI	128	ILE	3.9
28	DG	33	THR	3.9
30	BI	9	LYS	3.9
30	BI	7	TYR	3.8

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Mol	Chain	Res	Type	RSRZ
6	CG	106	ALA	3.8
22	BA	138	U	3.8
6	CG	64	ALA	3.8
12	CM	95	PRO	3.8
42	DU	85	ARG	3.8
29	BH	85	GLY	3.8
29	BH	105	ALA	3.7
12	CM	38	ILE	3.7
22	BA	2108	A	3.7
22	DA	1057	A	3.7
53	CA	81	A	3.7
30	DI	94	LYS	3.7
22	DA	1068	G	3.7
30	DI	1	ALA	3.7
22	DA	1535	A	3.7
18	CS	70	LEU	3.7
22	DA	1076	C	3.7
53	CA	1241	G	3.7
29	BH	143	ILE	3.6
13	CN	26	LEU	3.6
29	BH	71	LYS	3.6
26	DE	119	ILE	3.6
21	AA	461	A	3.6
22	DA	931	U	3.6
22	DA	1083	U	3.6
53	CA	207	C	3.6
22	BA	1071	G	3.6
22	DA	12	U	3.6
30	DI	23	VAL	3.6
30	DI	28	GLY	3.6
22	DA	878	A	3.6
12	CM	62	PHE	3.6
22	BA	2402	U	3.6
29	DH	145	ASN	3.6
22	DA	1044	C	3.6
22	BA	1175	A	3.6
26	DE	103	GLY	3.6
29	BH	88	GLY	3.6
22	DA	2147	A	3.6
21	AA	844	G	3.6
29	DH	125	THR	3.6
8	AI	31	GLN	3.6

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Mol	Chain	Res	Type	RSRZ
13	CN	34	ASN	3.5
46	DY	24	GLU	3.5
29	BH	79	THR	3.5
17	AR	19	GLU	3.5
29	DH	85	GLY	3.5
26	DE	144	GLU	3.5
21	AA	79	G	3.5
27	DF	94	ARG	3.5
30	BI	60	VAL	3.5
6	AG	4	ARG	3.5
21	AA	80	A	3.5
37	DP	114	ASN	3.5
27	DF	83	PRO	3.5
22	DA	1211	C	3.5
27	DF	1	ALA	3.5
9	CJ	40	ILE	3.5
49	D1	52	LYS	3.5
8	CI	128	LYS	3.5
9	CJ	76	ILE	3.5
30	BI	68	PHE	3.5
30	BI	132	ALA	3.4
16	CQ	7	LEU	3.4
22	DA	2797	U	3.4
22	DA	2602	A	3.4
6	CG	65	LEU	3.4
30	DI	95	ASP	3.4
33	DL	92	LEU	3.4
33	DL	82	LEU	3.4
28	DG	56	GLY	3.4
22	DA	1172	C	3.4
21	AA	412	A	3.4
30	DI	66	PHE	3.4
8	CI	42	THR	3.4
27	DF	105	ILE	3.4
22	DA	1173	U	3.4
22	DA	1870	C	3.4
29	DH	74	ALA	3.4
27	DF	141	ASP	3.4
22	DA	76	C	3.4
22	DA	318	C	3.4
29	BH	89	LYS	3.4
29	BH	124	THR	3.3

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Mol	Chain	Res	Type	RSRZ
53	CA	88	U	3.3
22	BA	2148	G	3.3
29	DH	144	VAL	3.3
29	DH	70	GLU	3.3
30	BI	21	PRO	3.3
37	DP	109	ILE	3.3
6	CG	8	GLN	3.3
22	DA	329	G	3.3
30	DI	8	VAL	3.3
22	BA	1172	C	3.3
29	BH	123	ARG	3.3
29	DH	106	ALA	3.3
29	BH	70	GLU	3.3
22	DA	2107	G	3.3
29	BH	93	SER	3.3
49	D1	36	LYS	3.3
36	DO	64	TYR	3.3
12	CM	87	GLY	3.3
18	CS	65	MET	3.3
42	DU	78	LYS	3.3
29	BH	87	GLU	3.2
22	DA	1091	G	3.2
53	CA	87	C	3.2
30	DI	121	ILE	3.2
13	CN	40	ARG	3.2
29	BH	112	LYS	3.2
42	DU	86	PHE	3.2
22	DA	2145	C	3.2
29	DH	120	GLY	3.2
22	DA	1085	A	3.2
12	CM	54	THR	3.2
29	DH	146	VAL	3.2
53	CA	984	C	3.2
22	BA	2142	A	3.2
18	CS	75	PRO	3.2
29	BH	149	GLU	3.2
53	CA	1242	G	3.2
12	CM	84	CYS	3.2
30	DI	43	ALA	3.2
30	BI	4	VAL	3.2
26	DE	143	LEU	3.2
28	DG	118	ALA	3.2

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Mol	Chain	Res	Type	RSRZ
6	CG	58	LEU	3.2
39	DR	96	VAL	3.2
18	CS	43	MET	3.1
27	DF	39	VAL	3.1
53	CA	1021	A	3.1
29	DH	83	LYS	3.1
6	CG	110	ARG	3.1
33	DL	142	ILE	3.1
53	CA	1019	A	3.1
29	BH	125	THR	3.1
53	CA	1031	C	3.1
30	DI	7	TYR	3.1
22	DA	2181	U	3.1
12	CM	8	ILE	3.1
22	DA	2157	G	3.1
12	CM	23	GLY	3.1
22	BA	1073	A	3.1
29	DH	147	VAL	3.1
29	DH	73	ASN	3.1
53	CA	1235	U	3.1
22	DA	1171	G	3.1
30	DI	122	GLU	3.1
8	CI	15	ALA	3.1
18	CS	47	THR	3.1
30	BI	114	ALA	3.0
36	DO	51	ALA	3.0
53	CA	1312	G	3.0
12	CM	31	ALA	3.0
1	AB	8	MET	3.0
6	CG	52	ARG	3.0
12	CM	63	VAL	3.0
42	DU	31	GLY	3.0
22	DA	1082	U	3.0
53	CA	1321	U	3.0
52	D4	10	LEU	3.0
15	AP	81	ALA	3.0
42	DU	50	ALA	3.0
53	CA	94	G	3.0
9	AJ	35	GLN	3.0
13	CN	51	PRO	3.0
36	DO	52	SER	3.0
22	BA	1057	A	3.0

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Mol	Chain	Res	Type	RSRZ
53	CA	412	A	3.0
30	DI	29	GLN	3.0
42	DU	87	GLU	3.0
12	CM	88	LEU	3.0
36	DO	117	PHE	2.9
13	CN	19	TYR	2.9
22	DA	914	G	2.9
6	CG	136	LYS	2.9
22	DA	1053	C	2.9
22	DA	1205	A	2.9
29	BH	147	VAL	2.9
29	BH	81	ALA	2.9
22	DA	1107	G	2.9
30	DI	60	VAL	2.9
29	BH	116	ARG	2.9
36	DO	65	THR	2.9
53	CA	950	U	2.9
8	CI	66	VAL	2.9
9	CJ	75	ASP	2.9
22	DA	877	A	2.9
29	DH	121	VAL	2.9
53	CA	1022	A	2.9
12	CM	30	LYS	2.9
21	AA	209	U	2.9
30	DI	72	THR	2.9
30	DI	78	LEU	2.9
22	DA	2667	C	2.9
29	DH	142	VAL	2.9
30	DI	49	GLU	2.9
30	DI	109	ALA	2.9
53	CA	1270	G	2.9
22	DA	228	C	2.9
38	DQ	36	GLN	2.9
30	BI	5	GLN	2.9
30	DI	74	PRO	2.9
30	DI	77	VAL	2.9
22	DA	345	A	2.9
28	DG	7	PRO	2.9
29	BH	148	ALA	2.8
6	CG	143	MET	2.8
53	CA	85	U	2.8
30	BI	58	ILE	2.8

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Mol	Chain	Res	Type	RSRZ
35	DN	63	ARG	2.8
16	CQ	6	THR	2.8
3	AD	35	GLN	2.8
6	CG	130	LYS	2.8
21	AA	1033	G	2.8
22	DA	33	C	2.8
22	DA	549	G	2.8
22	BA	139	U	2.8
22	DA	1175	A	2.8
42	DU	79	ALA	2.8
16	AQ	6	THR	2.8
22	DA	1089	A	2.8
53	CA	212	G	2.8
53	CA	1323	G	2.8
6	CG	128	GLU	2.8
33	DL	77	ILE	2.8
9	AJ	102	LEU	2.8
14	CO	16	ARG	2.8
27	DF	41	GLU	2.8
8	CI	68	GLY	2.8
6	CG	75	LYS	2.8
53	CA	1036	A	2.8
1	AB	224	ARG	2.8
29	DH	119	ASN	2.8
30	BI	6	ALA	2.8
22	DA	1086	A	2.8
53	CA	958	A	2.8
8	CI	57	VAL	2.8
22	DA	75	G	2.8
53	CA	202	G	2.8
29	DH	86	ASP	2.7
18	CS	71	GLY	2.7
12	CM	28	ARG	2.7
29	DH	131	SER	2.7
51	D3	51	LYS	2.7
9	CJ	8	ILE	2.7
41	DT	36	LYS	2.7
22	BA	892	A	2.7
53	CA	1534	A	2.7
53	CA	979	C	2.7
9	CJ	7	ARG	2.7
22	BA	2137	U	2.7

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Mol	Chain	Res	Type	RSRZ
51	D3	19	GLY	2.7
9	CJ	6	ILE	2.7
9	CJ	72	ARG	2.7
53	CA	1320	C	2.7
29	BH	113	SER	2.7
36	DO	60	GLU	2.7
40	DS	92	ARG	2.7
41	DT	3	ARG	2.7
22	BA	2153	C	2.7
3	AD	24	VAL	2.7
29	BH	134	VAL	2.7
21	AA	89	U	2.7
53	CA	219	U	2.7
27	DF	38	GLY	2.7
28	DG	55	ASP	2.7
30	BI	78	LEU	2.7
30	DI	125	THR	2.7
28	DG	82	PHE	2.7
6	CG	78	ARG	2.7
22	DA	1093	G	2.7
25	DD	91	THR	2.7
26	DE	9	GLN	2.7
41	DT	42	GLU	2.7
6	CG	132	THR	2.7
22	BA	277	G	2.7
30	DI	48	ILE	2.7
36	DO	56	LYS	2.7
22	BA	2151	U	2.7
22	BA	2181	U	2.7
29	BH	86	ASP	2.7
30	DI	140	GLU	2.7
41	DT	15	HIS	2.6
54	DB	23	G	2.6
12	CM	47	LEU	2.6
30	BI	46	ASP	2.6
53	CA	1305	G	2.6
6	CG	74	VAL	2.6
33	DL	132	ARG	2.6
29	BH	117	LEU	2.6
30	BI	141	ASP	2.6
6	CG	87	PRO	2.6
53	CA	1325	C	2.6

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Mol	Chain	Res	Type	RSRZ
12	CM	39	ALA	2.6
26	DE	135	ALA	2.6
53	CA	1219	A	2.6
26	DE	104	ALA	2.6
47	DZ	55	LYS	2.6
53	CA	211	G	2.6
1	AB	51	GLU	2.6
22	BA	2109	U	2.6
6	CG	107	ALA	2.6
18	CS	79	TYR	2.6
28	DG	83	THR	2.6
1	CB	34	ARG	2.6
22	DA	1538	G	2.6
53	CA	1222	G	2.6
18	CS	30	LEU	2.6
49	D1	34	GLU	2.6
22	DA	932	U	2.6
22	DA	1459	G	2.6
53	CA	1220	G	2.6
3	AD	27	ILE	2.6
41	DT	56	GLU	2.6
29	BH	130	VAL	2.6
30	DI	116	MET	2.6
22	DA	1729	U	2.6
36	DO	62	LEU	2.6
29	BH	99	ILE	2.6
22	DA	2310	C	2.6
8	AI	42	THR	2.6
50	D2	33	ARG	2.6
13	CN	50	LEU	2.6
33	DL	78	ARG	2.5
44	DW	45	HIS	2.6
18	CS	74	ALA	2.5
30	DI	130	GLY	2.5
29	BH	127	GLU	2.5
37	DP	111	GLU	2.5
21	AA	83	C	2.5
19	CT	84	LYS	2.5
52	D4	8	LYS	2.5
39	DR	103	ALA	2.5
22	DA	1105	U	2.5
22	DA	1523	U	2.5

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Mol	Chain	Res	Type	RSRZ
46	DY	1	MET	2.5
19	CT	2	ASN	2.5
30	BI	79	LEU	2.5
39	DR	20	VAL	2.5
53	CA	1223	C	2.5
29	DH	122	LEU	2.5
6	CG	48	THR	2.5
28	DG	57	TYR	2.5
41	DT	72	GLN	2.5
42	DU	5	ARG	2.5
42	DU	32	LYS	2.5
30	BI	77	VAL	2.5
41	DT	43	ILE	2.5
22	BA	1061	U	2.5
30	BI	98	GLY	2.5
27	DF	77	LYS	2.5
30	DI	127	SER	2.5
22	DA	1061	U	2.5
29	DH	128	HIS	2.5
8	CI	4	GLN	2.5
42	DU	75	ALA	2.5
22	DA	2135	A	2.5
30	BI	137	LEU	2.5
42	DU	80	ASP	2.5
18	CS	39	ILE	2.5
26	DE	128	ALA	2.5
8	AI	32	ARG	2.5
12	CM	100	ARG	2.5
21	AA	91	U	2.5
22	DA	290	U	2.5
27	DF	24	VAL	2.5
27	DF	25	MET	2.5
30	BI	54	ILE	2.5
8	CI	3	ASN	2.5
29	DH	84	ALA	2.5
30	BI	138	VAL	2.5
16	CQ	5	ARG	2.5
53	CA	1271	A	2.5
36	DO	61	GLN	2.4
30	DI	61	TYR	2.4
30	DI	17	ALA	2.4
22	DA	2106	U	2.4

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Mol	Chain	Res	Type	RSRZ
53	CA	1217	C	2.4
42	DU	25	LYS	2.4
29	DH	94	ILE	2.4
9	CJ	71	LEU	2.4
30	DI	70	THR	2.4
27	DF	31	GLU	2.4
41	DT	55	VAL	2.4
26	DE	164	LEU	2.4
24	BC	235	GLU	2.4
22	DA	32	C	2.4
8	CI	129	ARG	2.4
22	DA	512	G	2.4
9	CJ	74	VAL	2.4
1	CB	128	LEU	2.4
22	DA	344	A	2.4
27	DF	93	GLU	2.4
42	DU	76	THR	2.4
44	DW	34	SER	2.4
46	DY	5	GLU	2.4
13	CN	32	ASP	2.4
22	DA	308	G	2.4
18	CS	41	PRO	2.4
30	DI	11	GLN	2.4
41	DT	2	ILE	2.4
30	DI	91	LYS	2.4
53	CA	983	A	2.4
53	CA	1441	A	2.4
28	DG	140	ILE	2.4
53	CA	1026	G	2.4
18	CS	37	SER	2.4
29	BH	126	GLY	2.4
53	CA	632	U	2.4
1	AB	135	MET	2.4
9	CJ	73	LEU	2.4
18	CS	31	ARG	2.4
39	DR	26	ASP	2.4
12	CM	44	ILE	2.4
13	CN	25	GLU	2.4
29	DH	82	SER	2.4
30	DI	16	MET	2.4
36	DO	87	ILE	2.4
22	DA	1103	A	2.4

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Mol	Chain	Res	Type	RSRZ
24	BC	236	GLY	2.3
42	DU	34	ILE	2.3
29	BH	72	ILE	2.3
26	DE	98	LYS	2.3
21	AA	842	U	2.3
18	CS	27	LYS	2.3
30	DI	30	GLN	2.3
18	AS	2	ARG	2.3
30	DI	20	SER	2.3
28	DG	51	PHE	2.3
26	DE	127	GLU	2.3
6	CG	43	TYR	2.3
53	CA	1296	C	2.3
21	AA	82	G	2.3
22	DA	876	C	2.3
12	CM	51	GLN	2.3
53	CA	1025	U	2.3
36	DO	25	ARG	2.3
42	DU	12	VAL	2.3
22	DA	343	C	2.3
1	AB	87	ASP	2.3
22	BA	2140	G	2.3
8	AI	128	LYS	2.3
22	BA	1069	A	2.3
30	DI	126	ARG	2.3
30	BI	75	ALA	2.3
6	CG	84	TYR	2.3
29	BH	145	ASN	2.3
27	DF	10	GLU	2.3
12	CM	89	ARG	2.3
42	DU	77	GLY	2.3
22	DA	1064	C	2.3
29	BH	75	LEU	2.3
12	CM	112	ARG	2.3
39	DR	34	GLU	2.3
53	CA	1209	C	2.3
22	DA	1071	G	2.2
22	DA	1212	G	2.2
22	DA	1237	A	2.2
29	BH	118	PRO	2.2
6	CG	149	ALA	2.2
22	BA	1078	U	2.2

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Mol	Chain	Res	Type	RSRZ
22	DA	646	U	2.2
30	DI	88	GLY	2.2
22	BA	1068	G	2.2
46	DY	13	GLU	2.2
40	DS	93	ALA	2.2
45	DX	17	ARG	2.2
27	DF	153	ILE	2.2
22	BA	2141	G	2.2
44	DW	18	LYS	2.2
49	D1	29	LYS	2.2
22	DA	67	U	2.2
29	BH	91	PHE	2.2
30	DI	12	VAL	2.2
45	DX	32	LEU	2.2
6	CG	116	ALA	2.2
22	DA	1731	G	2.2
53	CA	1221	G	2.2
30	BI	37	PHE	2.2
12	CM	108	ARG	2.2
42	DU	20	LYS	2.2
22	BA	2106	U	2.2
22	DA	2585	U	2.2
15	AP	47	GLU	2.2
51	D3	22	LYS	2.2
22	BA	2133	G	2.2
53	CA	466	A	2.2
53	CA	989	U	2.2
27	DF	51	ASN	2.2
33	DL	10	GLU	2.2
42	DU	42	LYS	2.2
19	CT	3	ILE	2.2
27	DF	152	ASP	2.2
27	DF	54	ALA	2.2
51	D3	1	PRO	2.2
53	CA	1138	G	2.2
30	DI	138	VAL	2.2
33	DL	89	VAL	2.2
18	CS	13	HIS	2.2
27	DF	30	VAL	2.2
30	DI	81	LYS	2.2
22	DA	2309	A	2.2
27	DF	150	GLY	2.2

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Mol	Chain	Res	Type	RSRZ
49	D1	46	VAL	2.2
36	DO	24	THR	2.2
51	D3	21	PHE	2.1
18	CS	60	PHE	2.1
53	CA	1240	U	2.1
22	DA	1215	G	2.1
21	AA	841	C	2.1
53	CA	467	U	2.1
54	DB	22	U	2.1
22	DA	2766	A	2.1
8	AI	89	TYR	2.1
24	DC	236	GLY	2.1
9	CJ	41	PRO	2.1
22	DA	2300	C	2.1
53	CA	1314	C	2.1
53	CA	1236	A	2.1
6	CG	85	GLN	2.1
27	DF	65	LEU	2.1
6	CG	44	SER	2.1
12	CM	68	LEU	2.1
54	DB	20	G	2.1
24	DC	47	ARG	2.1
11	AL	24	GLU	2.1
12	AM	4	ALA	2.1
38	DQ	1	ALA	2.1
40	DS	70	LYS	2.1
12	CM	37	GLY	2.1
8	CI	65	THR	2.1
27	DF	22	ASN	2.1
46	DY	56	LEU	2.1
53	CA	978	A	2.1
12	CM	93	GLY	2.1
22	BA	2107	G	2.1
40	DS	84	ARG	2.1
53	CA	1048	G	2.1
27	DF	78	ILE	2.1
36	DO	63	LYS	2.1
30	DI	96	LYS	2.1
48	D0	55	ALA	2.1
22	DA	314	C	2.1
27	DF	154	THR	2.1
53	CA	974	A	2.1

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Mol	Chain	Res	Type	RSRZ
29	BH	102	ALA	2.1
9	CJ	9	ARG	2.1
28	DG	110	HIS	2.1
30	DI	124	MET	2.1
43	DV	94	ALA	2.1
53	CA	1023	U	2.1
1	AB	220	VAL	2.1
6	CG	51	GLN	2.0
22	DA	2406	A	2.0
29	DH	98	ASP	2.0
27	DF	171	ALA	2.0
42	DU	2	ALA	2.0
2	CC	41	TYR	2.0
9	CJ	91	ASP	2.0
30	BI	126	ARG	2.0
30	DI	65	SER	2.0
32	DK	110	GLU	2.0
42	DU	30	SER	2.0
26	DE	11	ALA	2.0
6	CG	86	VAL	2.0
6	CG	105	GLU	2.0
29	DH	141	LYS	2.0
30	BI	96	LYS	2.0
12	CM	96	VAL	2.0
40	DS	110	ARG	2.0
22	DA	2062	A	2.0
30	BI	29	GLN	2.0
53	CA	1362	A	2.0
30	BI	38	CYS	2.0
30	DI	84	GLY	2.0
42	DU	35	VAL	2.0
51	D3	23	HIS	2.0
40	DS	95	ARG	2.0
44	DW	19	ARG	2.0
39	DR	31	GLU	2.0
22	DA	336	C	2.0
22	DA	1100	C	2.0
26	DE	122	GLU	2.0
53	CA	1018	G	2.0
1	AB	73	ARG	2.0
24	DC	238	ASN	2.0
40	DS	94	ASP	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, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors(Å ²)	Q<0.9
55	MG	DJ	201	1/1	4.07	779.80	242,242,242,242	0
55	MG	DA	3064	1/1	3.11	275.86	204,204,204,204	0
55	MG	CA	1624	1/1	0.77	102.18	120,120,120,120	0
55	MG	DA	3110	1/1	1.11	90.83	181,181,181,181	0
55	MG	DA	3065	1/1	2.72	87.12	221,221,221,221	0
55	MG	DA	3015	1/1	0.81	77.40	183,183,183,183	0
55	MG	BA	3026	1/1	0.56	62.08	152,152,152,152	0
55	MG	DA	3075	1/1	1.51	55.58	207,207,207,207	0
55	MG	DA	3129	1/1	1.07	55.43	194,194,194,194	0
55	MG	CA	1619	1/1	0.44	52.82	180,180,180,180	0
55	MG	BB	201	1/1	0.36	38.05	187,187,187,187	0
55	MG	DA	3063	1/1	1.08	37.07	191,191,191,191	0
55	MG	BA	3120	1/1	0.24	36.45	156,156,156,156	0
55	MG	BA	3071	1/1	0.36	34.56	132,132,132,132	0
55	MG	BA	3057	1/1	0.63	31.45	219,219,219,219	0
55	MG	DA	3020	1/1	0.63	31.19	207,207,207,207	0
55	MG	BA	3060	1/1	0.32	28.99	129,129,129,129	0
55	MG	BA	3015	1/1	0.40	28.48	221,221,221,221	0
55	MG	CA	1614	1/1	0.69	28.34	178,178,178,178	0
55	MG	AA	1619	1/1	0.43	26.45	165,165,165,165	0
55	MG	DA	3005	1/1	0.81	23.19	208,208,208,208	0
55	MG	BA	3035	1/1	0.34	22.26	168,168,168,168	0
55	MG	DA	3061	1/1	0.48	20.58	160,160,160,160	0
55	MG	BA	3056	1/1	0.37	20.54	187,187,187,187	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors(Å ²)	Q<0.9
55	MG	AA	1636	1/1	0.60	20.38	164,164,164,164	0
55	MG	DA	3079	1/1	0.44	19.96	184,184,184,184	0
55	MG	CA	1612	1/1	0.34	17.13	117,117,117,117	0
55	MG	DA	3060	1/1	0.29	16.98	198,198,198,198	0
55	MG	BA	3132	1/1	0.37	16.77	202,202,202,202	0
55	MG	BA	3062	1/1	0.36	16.31	193,193,193,193	0
55	MG	BA	3014	1/1	0.25	15.94	64,64,64,64	0
55	MG	DA	3002	1/1	1.15	15.60	179,179,179,179	0
55	MG	BA	3072	1/1	0.33	15.02	94,94,94,94	0
55	MG	BA	3037	1/1	0.29	14.54	171,171,171,171	0
55	MG	AA	1627	1/1	0.24	12.58	86,86,86,86	0
55	MG	DA	3027	1/1	1.41	12.46	195,195,195,195	0
55	MG	BA	3125	1/1	0.60	11.69	162,162,162,162	0
55	MG	BA	3020	1/1	0.29	11.25	16,16,16,16	0
55	MG	DA	3059	1/1	0.50	11.16	188,188,188,188	0
55	MG	CA	1620	1/1	0.27	10.94	172,172,172,172	0
55	MG	DA	3013	1/1	0.57	10.80	211,211,211,211	0
55	MG	DA	3042	1/1	0.36	10.68	139,139,139,139	0
55	MG	BA	3077	1/1	0.22	10.58	90,90,90,90	0
55	MG	BA	3058	1/1	0.22	10.17	164,164,164,164	0
55	MG	CA	1625	1/1	0.29	10.14	118,118,118,118	0
55	MG	BA	3061	1/1	0.19	9.33	171,171,171,171	0
55	MG	AA	1611	1/1	0.23	9.29	176,176,176,176	0
55	MG	BA	3137	1/1	0.35	8.87	188,188,188,188	0
55	MG	DA	3039	1/1	0.41	8.12	220,220,220,220	0
55	MG	AA	1628	1/1	0.31	7.70	96,96,96,96	0
55	MG	DA	3098	1/1	0.44	7.63	158,158,158,158	0
55	MG	CA	1628	1/1	1.00	7.57	204,204,204,204	0
55	MG	BA	3105	1/1	0.23	7.47	16,16,16,16	0
55	MG	DA	3058	1/1	0.36	7.26	171,171,171,171	0
55	MG	BA	3088	1/1	0.20	6.96	81,81,81,81	0
55	MG	BA	3134	1/1	0.51	6.94	137,137,137,137	0
55	MG	CA	1615	1/1	0.27	6.83	136,136,136,136	0
55	MG	DA	3132	1/1	0.80	6.79	216,216,216,216	0
55	MG	BA	3045	1/1	0.18	6.26	21,21,21,21	0
55	MG	DA	3131	1/1	1.27	5.94	204,204,204,204	0
55	MG	CA	1603	1/1	0.20	5.80	169,169,169,169	0
55	MG	CA	1627	1/1	0.25	5.61	166,166,166,166	0
55	MG	DA	3022	1/1	0.24	5.56	155,155,155,155	0
55	MG	AA	1626	1/1	0.19	5.50	39,39,39,39	0
55	MG	DA	3029	1/1	0.63	5.33	205,205,205,205	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors(\AA^2)	Q<0.9
55	MG	BA	3110	1/1	0.21	5.30	11,11,11,11	0
55	MG	BA	3038	1/1	0.17	5.20	30,30,30,30	0
55	MG	DA	3127	1/1	0.34	5.12	97,97,97,97	0
55	MG	BA	3136	1/1	0.18	4.79	150,150,150,150	0
55	MG	DA	3109	1/1	0.43	4.42	165,165,165,165	0
55	MG	BA	3028	1/1	0.20	4.29	100,100,100,100	0
55	MG	CA	1626	1/1	0.20	4.08	40,40,40,40	0
55	MG	BA	3084	1/1	0.15	3.72	58,58,58,58	0
55	MG	DA	3007	1/1	0.24	3.48	198,198,198,198	0
55	MG	BA	3103	1/1	0.15	3.45	60,60,60,60	0
55	MG	DA	3021	1/1	0.23	3.37	66,66,66,66	0
55	MG	DA	3101	1/1	0.37	3.31	127,127,127,127	0
55	MG	DA	3134	1/1	0.44	3.13	198,198,198,198	0
55	MG	BA	3011	1/1	0.20	2.82	120,120,120,120	0
55	MG	AA	1622	1/1	0.15	2.81	30,30,30,30	0
55	MG	DA	3115	1/1	0.21	2.68	151,151,151,151	0
55	MG	CA	1610	1/1	0.17	2.54	145,145,145,145	0
55	MG	AA	1615	1/1	0.18	2.53	164,164,164,164	0
55	MG	BA	3049	1/1	0.17	2.50	104,104,104,104	0
55	MG	AA	1641	1/1	0.19	2.48	131,131,131,131	0
55	MG	BA	3127	1/1	0.16	2.47	43,43,43,43	0
55	MG	AA	1609	1/1	0.17	2.27	71,71,71,71	0
55	MG	BA	3092	1/1	0.17	2.19	75,75,75,75	0
55	MG	BA	3117	1/1	0.18	2.13	23,23,23,23	0
55	MG	DA	3070	1/1	0.37	2.13	209,209,209,209	0
55	MG	BA	3109	1/1	0.15	2.03	13,13,13,13	0
55	MG	DA	3116	1/1	0.24	2.03	154,154,154,154	0
55	MG	BA	3040	1/1	0.14	2.03	27,27,27,27	0
55	MG	DA	3104	1/1	0.21	2.00	109,109,109,109	0
55	MG	AA	1642	1/1	0.15	1.99	40,40,40,40	0
55	MG	DA	3085	1/1	0.37	1.97	169,169,169,169	0
55	MG	BA	3041	1/1	0.16	1.89	19,19,19,19	0
55	MG	CA	1640	1/1	0.20	1.73	161,161,161,161	0
55	MG	BA	3098	1/1	0.21	1.71	60,60,60,60	0
55	MG	BA	3089	1/1	0.14	1.63	134,134,134,134	0
55	MG	BA	3106	1/1	0.15	1.40	37,37,37,37	0
55	MG	DA	3072	1/1	0.24	1.36	80,80,80,80	0
55	MG	DA	3050	1/1	0.18	1.29	209,209,209,209	0
55	MG	BA	3108	1/1	0.16	1.22	30,30,30,30	0
55	MG	DA	3126	1/1	0.41	1.22	164,164,164,164	0
55	MG	DA	3121	1/1	0.23	1.18	97,97,97,97	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors(Å ²)	Q<0.9
55	MG	AA	1606	1/1	0.16	1.01	38,38,38,38	0
55	MG	BA	3126	1/1	0.14	0.91	21,21,21,21	0
55	MG	CA	1637	1/1	0.18	0.72	100,100,100,100	0
55	MG	DA	3100	1/1	0.18	0.64	171,171,171,171	0
55	MG	DA	3107	1/1	0.30	0.61	169,169,169,169	0
55	MG	CA	1631	1/1	0.18	0.57	92,92,92,92	0
55	MG	DA	3130	1/1	0.42	0.56	102,102,102,102	0
55	MG	BA	3093	1/1	0.13	0.54	110,110,110,110	0
55	MG	DA	3034	1/1	0.24	0.54	105,105,105,105	0
55	MG	DA	3135	1/1	0.24	0.52	162,162,162,162	0
55	MG	BA	3042	1/1	0.14	0.45	18,18,18,18	0
55	MG	DA	3124	1/1	0.31	0.44	165,165,165,165	0
55	MG	BA	3112	1/1	0.14	0.44	121,121,121,121	0
55	MG	AA	1629	1/1	0.17	0.44	58,58,58,58	0
55	MG	BA	3004	1/1	0.16	0.31	155,155,155,155	0
55	MG	DA	3087	1/1	0.19	0.29	87,87,87,87	0
55	MG	CA	1605	1/1	0.15	0.28	48,48,48,48	0
55	MG	CA	1623	1/1	0.20	0.28	96,96,96,96	0
55	MG	DA	3048	1/1	0.18	0.26	128,128,128,128	0
55	MG	BA	3076	1/1	0.15	0.23	16,16,16,16	0
55	MG	CA	1636	1/1	0.25	0.18	171,171,171,171	0
55	MG	DA	3086	1/1	0.23	0.17	122,122,122,122	0
55	MG	BA	3075	1/1	0.27	0.14	119,119,119,119	0
55	MG	BA	3047	1/1	0.16	0.12	20,20,20,20	0
55	MG	DA	3038	1/1	0.21	-0.00	97,97,97,97	0
55	MG	BA	3131	1/1	0.16	-0.05	17,17,17,17	0
55	MG	CA	1621	1/1	0.16	-0.06	40,40,40,40	0
55	MG	DA	3014	1/1	0.22	-0.18	151,151,151,151	0
55	MG	BA	3029	1/1	0.15	-0.19	43,43,43,43	0
55	MG	DA	3128	1/1	0.20	-0.21	153,153,153,153	0
55	MG	DA	3096	1/1	0.21	-0.24	107,107,107,107	0
55	MG	DA	3077	1/1	0.19	-0.25	159,159,159,159	0
55	MG	CA	1607	1/1	0.15	-0.34	154,154,154,154	0
55	MG	BA	3031	1/1	0.13	-0.35	11,11,11,11	0
55	MG	DA	3006	1/1	0.21	-0.35	200,200,200,200	0
55	MG	DA	3076	1/1	0.21	-0.39	167,167,167,167	0
55	MG	BA	3001	1/1	0.12	-0.39	109,109,109,109	0
55	MG	DA	3025	1/1	0.21	-0.40	108,108,108,108	0
55	MG	DA	3105	1/1	0.17	-0.40	62,62,62,62	0
55	MG	BA	3133	1/1	0.18	-0.40	103,103,103,103	0
55	MG	AA	1618	1/1	0.13	-0.42	68,68,68,68	0
55	MG	CA	1639	1/1	0.17	-0.43	149,149,149,149	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors(\AA^2)	Q<0.9
55	MG	DA	3106	1/1	0.19	-0.44	69,69,69,69	0
55	MG	BA	3034	1/1	0.13	-0.45	8,8,8,8	0
55	MG	DA	3078	1/1	0.18	-0.45	68,68,68,68	0
55	MG	DA	3094	1/1	0.20	-0.46	172,172,172,172	0
55	MG	AA	1635	1/1	0.13	-0.49	64,64,64,64	0
55	MG	AA	1603	1/1	0.12	-0.50	124,124,124,124	0
55	MG	DA	3052	1/1	0.16	-0.55	110,110,110,110	0
55	MG	BA	3114	1/1	0.14	-0.55	86,86,86,86	0
55	MG	DA	3122	1/1	0.17	-0.56	113,113,113,113	0
55	MG	DA	3018	1/1	0.18	-0.60	194,194,194,194	0
55	MG	BA	3002	1/1	0.13	-0.61	81,81,81,81	0
55	MG	AA	1612	1/1	0.10	-0.63	60,60,60,60	0
55	MG	AA	1640	1/1	0.12	-0.64	109,109,109,109	0
55	MG	BA	3013	1/1	0.13	-0.67	8,8,8,8	0
55	MG	CA	1632	1/1	0.15	-0.67	160,160,160,160	0
55	MG	DA	3028	1/1	0.17	-0.68	162,162,162,162	0
55	MG	AA	1633	1/1	0.10	-0.70	78,78,78,78	0
55	MG	DA	3035	1/1	0.15	-0.70	87,87,87,87	0
55	MG	DA	3017	1/1	0.23	-0.72	86,86,86,86	0
55	MG	CA	1633	1/1	0.08	-0.72	61,61,61,61	0
55	MG	DA	3037	1/1	0.18	-0.75	176,176,176,176	0
55	MG	AA	1630	1/1	0.09	-0.77	163,163,163,163	0
55	MG	CA	1611	1/1	0.16	-0.78	108,108,108,108	0
55	MG	DA	3032	1/1	0.18	-0.78	71,71,71,71	0
55	MG	BA	3083	1/1	0.12	-0.81	42,42,42,42	0
55	MG	AA	1623	1/1	0.10	-0.81	70,70,70,70	0
55	MG	CA	1617	1/1	0.22	-0.84	220,220,220,220	0
55	MG	DA	3011	1/1	0.18	-0.85	126,126,126,126	0
55	MG	CA	1616	1/1	0.23	-0.89	192,192,192,192	0
55	MG	DA	3009	1/1	0.18	-0.91	107,107,107,107	0
55	MG	BA	3085	1/1	0.12	-0.92	116,116,116,116	0
55	MG	DA	3084	1/1	0.16	-0.92	178,178,178,178	0
55	MG	BB	203	1/1	0.10	-0.92	37,37,37,37	0
55	MG	AA	1602	1/1	0.13	-0.92	121,121,121,121	0
55	MG	DA	3092	1/1	0.20	-0.94	157,157,157,157	0
55	MG	DA	3045	1/1	0.17	-0.96	102,102,102,102	0
56	ZN	D4	101	1/1	0.08	-0.97	156,156,156,156	0
55	MG	CA	1602	1/1	0.14	-0.97	120,120,120,120	0
55	MG	BA	3122	1/1	0.06	-0.99	64,64,64,64	0
55	MG	CA	1638	1/1	0.16	-1.03	155,155,155,155	0
55	MG	AA	1637	1/1	0.08	-1.05	85,85,85,85	0
55	MG	DA	3031	1/1	0.15	-1.05	113,113,113,113	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors(\AA^2)	Q<0.9
55	MG	DA	3089	1/1	0.13	-1.07	169,169,169,169	0
55	MG	DA	3081	1/1	0.15	-1.08	141,141,141,141	0
55	MG	DA	3111	1/1	0.15	-1.09	166,166,166,166	0
55	MG	DA	3041	1/1	0.17	-1.11	77,77,77,77	0
55	MG	BA	3130	1/1	0.12	-1.12	8,8,8,8	0
55	MG	BA	3027	1/1	0.13	-1.17	31,31,31,31	0
55	MG	AA	1620	1/1	0.11	-1.19	107,107,107,107	0
55	MG	BA	3007	1/1	0.09	-1.21	67,67,67,67	0
55	MG	BA	3023	1/1	0.11	-1.21	11,11,11,11	0
55	MG	BA	3050	1/1	0.12	-1.23	16,16,16,16	0
55	MG	DA	3073	1/1	0.14	-1.23	141,141,141,141	0
55	MG	BA	3107	1/1	0.12	-1.23	11,11,11,11	0
55	MG	BA	3008	1/1	0.12	-1.24	17,17,17,17	0
55	MG	DA	3019	1/1	0.15	-1.25	161,161,161,161	0
55	MG	BA	3024	1/1	0.12	-1.29	16,16,16,16	0
55	MG	BA	3116	1/1	0.12	-1.29	133,133,133,133	0
55	MG	DA	3044	1/1	0.15	-1.33	138,138,138,138	0
55	MG	BA	3046	1/1	0.13	-1.33	23,23,23,23	0
55	MG	CA	1601	1/1	0.09	-1.34	124,124,124,124	0
55	MG	DA	3026	1/1	0.17	-1.35	145,145,145,145	0
55	MG	DA	3074	1/1	0.12	-1.35	194,194,194,194	0
55	MG	DA	3099	1/1	0.14	-1.39	142,142,142,142	0
55	MG	BA	3025	1/1	0.11	-1.39	21,21,21,21	0
55	MG	DA	3125	1/1	0.17	-1.40	77,77,77,77	0
55	MG	BA	3012	1/1	0.13	-1.44	8,8,8,8	0
55	MG	DA	3049	1/1	0.15	-1.50	99,99,99,99	0
55	MG	DA	3036	1/1	0.11	-1.52	97,97,97,97	0
55	MG	BA	3003	1/1	0.10	-1.54	63,63,63,63	0
55	MG	CA	1608	1/1	0.15	-1.55	60,60,60,60	0
55	MG	BA	3063	1/1	0.10	-1.56	42,42,42,42	0
55	MG	CA	1629	1/1	0.10	-1.57	174,174,174,174	0
55	MG	BB	202	1/1	0.10	-1.64	67,67,67,67	0
55	MG	BA	3101	1/1	0.11	-1.64	27,27,27,27	0
55	MG	BA	3135	1/1	0.11	-1.65	12,12,12,12	0
55	MG	BA	3123	1/1	0.13	-1.66	10,10,10,10	0
55	MG	DA	3097	1/1	0.15	-1.68	110,110,110,110	0
55	MG	BA	3086	1/1	0.12	-1.68	45,45,45,45	0
55	MG	AA	1639	1/1	0.09	-1.69	96,96,96,96	0
55	MG	DA	3004	1/1	0.17	-1.72	118,118,118,118	0
55	MG	BA	3017	1/1	0.12	-1.74	9,9,9,9	0
55	MG	DA	3012	1/1	0.19	-1.83	75,75,75,75	0
55	MG	DB	201	1/1	0.08	-1.83	117,117,117,117	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors(\AA^2)	Q<0.9
55	MG	DA	3090	1/1	0.12	-1.87	90,90,90,90	0
56	ZN	B4	101	1/1	0.08	-1.93	51,51,51,51	0
55	MG	AA	1624	1/1	0.09	-1.94	101,101,101,101	0
55	MG	DA	3046	1/1	0.12	-1.94	173,173,173,173	0
55	MG	AA	1616	1/1	0.09	-1.96	126,126,126,126	0
55	MG	DA	3001	1/1	0.08	-2.00	109,109,109,109	0
55	MG	CA	1635	1/1	0.14	-2.00	76,76,76,76	0
55	MG	DA	3091	1/1	0.14	-2.04	95,95,95,95	0
55	MG	DA	3053	1/1	0.14	-2.04	59,59,59,59	0
55	MG	AA	1607	1/1	0.10	-2.05	62,62,62,62	0
55	MG	CA	1630	1/1	0.08	-2.06	121,121,121,121	0
55	MG	DA	3088	1/1	0.17	-2.06	160,160,160,160	0
55	MG	BA	3032	1/1	0.10	-2.06	31,31,31,31	0
55	MG	DA	3119	1/1	0.08	-2.07	86,86,86,86	0
55	MG	AA	1613	1/1	0.11	-2.08	102,102,102,102	0
55	MG	BA	3070	1/1	0.10	-2.08	164,164,164,164	0
55	MG	AA	1604	1/1	0.10	-2.13	98,98,98,98	0
55	MG	CA	1618	1/1	0.10	-2.16	90,90,90,90	0
55	MG	DA	3108	1/1	0.12	-2.16	103,103,103,103	0
55	MG	DA	3033	1/1	0.14	-2.21	113,113,113,113	0
55	MG	CA	1622	1/1	0.07	-2.29	169,169,169,169	0
55	MG	BA	3087	1/1	0.11	-2.30	13,13,13,13	0
55	MG	DA	3112	1/1	0.11	-2.31	148,148,148,148	0
55	MG	BA	3100	1/1	0.10	-2.36	47,47,47,47	0
55	MG	DA	3051	1/1	0.14	-2.37	140,140,140,140	0
55	MG	BA	3065	1/1	0.08	-2.38	26,26,26,26	0
55	MG	DA	3102	1/1	0.18	-2.40	83,83,83,83	0
55	MG	DA	3095	1/1	0.13	-2.46	114,114,114,114	0
55	MG	BA	3036	1/1	0.13	-2.48	11,11,11,11	0
55	MG	BA	3129	1/1	0.10	-2.48	31,31,31,31	0
55	MG	BA	3030	1/1	0.10	-2.48	57,57,57,57	0
55	MG	CA	1634	1/1	0.10	-2.57	112,112,112,112	0
55	MG	AA	1621	1/1	0.08	-2.57	139,139,139,139	0
55	MG	DA	3120	1/1	0.10	-2.61	84,84,84,84	0
55	MG	DA	3054	1/1	0.11	-2.63	75,75,75,75	0
55	MG	BA	3022	1/1	0.05	-2.65	37,37,37,37	0
55	MG	DA	3040	1/1	0.17	-2.67	117,117,117,117	0
55	MG	DA	3023	1/1	0.12	-2.69	71,71,71,71	0
55	MG	BA	3113	1/1	0.10	-2.71	60,60,60,60	0
55	MG	BA	3074	1/1	0.07	-2.72	59,59,59,59	0
55	MG	DA	3066	1/1	0.09	-2.76	94,94,94,94	0
55	MG	DA	3067	1/1	0.09	-2.79	70,70,70,70	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors(\AA^2)	Q<0.9
55	MG	BA	3073	1/1	0.11	-2.79	12,12,12,12	0
55	MG	BA	3079	1/1	0.07	-2.79	99,99,99,99	0
55	MG	BA	3119	1/1	0.10	-2.80	88,88,88,88	0
55	MG	BA	3048	1/1	0.09	-2.80	144,144,144,144	0
55	MG	DA	3117	1/1	0.12	-2.82	67,67,67,67	0
55	MG	BA	3124	1/1	0.09	-2.89	39,39,39,39	0
55	MG	DA	3080	1/1	0.10	-2.92	74,74,74,74	0
55	MG	DA	3071	1/1	0.11	-2.96	64,64,64,64	0
55	MG	AA	1601	1/1	0.09	-2.96	82,82,82,82	0
55	MG	BA	3066	1/1	0.09	-2.99	18,18,18,18	0
55	MG	DA	3113	1/1	0.09	-3.06	59,59,59,59	0
55	MG	BA	3115	1/1	0.13	-3.08	49,49,49,49	0
55	MG	BA	3121	1/1	0.10	-3.16	12,12,12,12	0
55	MG	BA	3043	1/1	0.05	-3.17	17,17,17,17	0
55	MG	BA	3018	1/1	0.07	-3.20	35,35,35,35	0
55	MG	DA	3047	1/1	0.11	-3.29	82,82,82,82	0
55	MG	DA	3118	1/1	0.13	-3.33	77,77,77,77	0
55	MG	CA	1642	1/1	0.06	-3.33	78,78,78,78	0
55	MG	DA	3068	1/1	0.08	-3.36	65,65,65,65	0
55	MG	DA	3083	1/1	0.14	-3.41	144,144,144,144	0
55	MG	DA	3123	1/1	0.08	-3.43	99,99,99,99	0
55	MG	BA	3051	1/1	0.07	-3.51	71,71,71,71	0
55	MG	BA	3078	1/1	0.06	-3.53	26,26,26,26	0
55	MG	CA	1604	1/1	0.07	-3.56	71,71,71,71	0
55	MG	BA	3091	1/1	0.08	-3.57	47,47,47,47	0
55	MG	DA	3057	1/1	0.15	-3.59	104,104,104,104	0
55	MG	CA	1641	1/1	0.07	-3.64	68,68,68,68	0
55	MG	AA	1608	1/1	0.09	-3.70	106,106,106,106	0
55	MG	DA	3103	1/1	0.13	-3.71	62,62,62,62	0
55	MG	BA	3006	1/1	0.06	-3.75	32,32,32,32	0
55	MG	DA	3062	1/1	0.07	-3.79	113,113,113,113	0
55	MG	BA	3059	1/1	0.06	-3.81	36,36,36,36	0
55	MG	AA	1617	1/1	0.11	-3.82	83,83,83,83	0
55	MG	BA	3095	1/1	0.09	-3.94	38,38,38,38	0
55	MG	AA	1614	1/1	0.06	-4.00	55,55,55,55	0
55	MG	DA	3024	1/1	0.04	-4.00	85,85,85,85	0
55	MG	DA	3069	1/1	0.07	-4.07	79,79,79,79	0
55	MG	DA	3082	1/1	0.12	-4.07	83,83,83,83	0
55	MG	BA	3052	1/1	0.08	-4.23	25,25,25,25	0
55	MG	DA	3055	1/1	0.06	-4.29	75,75,75,75	0
55	MG	BA	3054	1/1	0.09	-4.31	14,14,14,14	0
55	MG	AA	1643	1/1	0.05	-4.41	35,35,35,35	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors(\AA^2)	Q<0.9
55	MG	BA	3064	1/1	0.09	-4.48	38,38,38,38	0
55	MG	AA	1632	1/1	0.06	-4.52	81,81,81,81	0
55	MG	BA	3068	1/1	0.10	-4.52	11,11,11,11	0
55	MG	DA	3016	1/1	0.14	-4.53	169,169,169,169	0
55	MG	BA	3005	1/1	0.09	-4.56	86,86,86,86	0
55	MG	AA	1631	1/1	0.06	-4.56	165,165,165,165	0
55	MG	BA	3021	1/1	0.08	-4.56	17,17,17,17	0
55	MG	BA	3081	1/1	0.07	-4.74	32,32,32,32	0
55	MG	AA	1610	1/1	0.07	-4.81	33,33,33,33	0
55	MG	BA	3102	1/1	0.07	-4.97	36,36,36,36	0
55	MG	DA	3133	1/1	0.09	-5.03	84,84,84,84	0
55	MG	BA	3009	1/1	0.08	-5.04	13,13,13,13	0
55	MG	DA	3056	1/1	0.14	-5.10	103,103,103,103	0
55	MG	BB	204	1/1	0.09	-5.17	40,40,40,40	0
55	MG	BA	3082	1/1	0.07	-5.19	30,30,30,30	0
55	MG	BA	3016	1/1	0.06	-5.20	64,64,64,64	0
55	MG	BA	3069	1/1	0.06	-5.38	14,14,14,14	0
55	MG	BA	3118	1/1	0.06	-5.54	13,13,13,13	0
55	MG	DA	3043	1/1	0.15	-5.64	104,104,104,104	0
55	MG	DA	3114	1/1	0.10	-5.78	95,95,95,95	0
55	MG	BA	3067	1/1	0.09	-5.79	21,21,21,21	0
55	MG	BA	3019	1/1	0.07	-6.18	39,39,39,39	0
55	MG	BA	3033	1/1	0.09	-6.25	9,9,9,9	0
55	MG	BA	3080	1/1	0.07	-6.26	31,31,31,31	0
55	MG	BA	3094	1/1	0.06	-6.34	37,37,37,37	0
55	MG	AA	1634	1/1	0.08	-6.45	59,59,59,59	0
55	MG	CA	1613	1/1	0.07	-6.51	96,96,96,96	0
55	MG	BA	3055	1/1	0.08	-6.51	25,25,25,25	0
55	MG	AA	1625	1/1	0.05	-7.02	67,67,67,67	0
55	MG	CA	1609	1/1	0.11	-7.26	83,83,83,83	0
55	MG	CA	1606	1/1	0.11	-7.52	64,64,64,64	0
55	MG	BA	3111	1/1	0.06	-7.70	47,47,47,47	0
55	MG	AA	1605	1/1	0.06	-7.73	123,123,123,123	0
55	MG	BA	3097	1/1	0.06	-7.95	18,18,18,18	0
55	MG	DA	3008	1/1	0.11	-8.74	100,100,100,100	0
55	MG	DA	3093	1/1	0.16	-8.75	121,121,121,121	0
55	MG	BA	3044	1/1	0.07	-9.05	34,34,34,34	0
55	MG	BA	3010	1/1	0.07	-9.72	29,29,29,29	0
55	MG	BA	3053	1/1	0.09	-11.54	30,30,30,30	0
55	MG	BA	3128	1/1	0.09	-11.92	18,18,18,18	0
55	MG	DA	3030	1/1	0.14	-12.92	144,144,144,144	0
55	MG	AA	1638	1/1	0.09	-14.02	29,29,29,29	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors(\AA^2)	Q<0.9
55	MG	BA	3104	1/1	0.09	-14.16	22,22,22,22	0
55	MG	BA	3099	1/1	0.09	-17.00	82,82,82,82	0
55	MG	BA	3090	1/1	0.05	-17.28	28,28,28,28	0
55	MG	BA	3039	1/1	0.08	-17.68	9,9,9,9	0
55	MG	BA	3096	1/1	0.04	-20.37	40,40,40,40	0
55	MG	DA	3010	1/1	1.06	-	200,200,200,200	0
55	MG	DA	3003	1/1	1.01	-	210,210,210,210	0

6.5 Other polymers ⓘ

There are no such residues in this entry.