



# Full wwPDB X-ray Structure Validation Report

Jun 16, 2014 – 08:20 PM BST

PDB ID : 4V80  
Title : Crystal structure of the E. coli ribosome bound to CEM-101.  
Authors : Dunkle, J.A.; Zhang, W.; Cate, J.H.D.; Mankin, A.S.  
Deposited on : 2010-09-06  
Resolution : 3.30 Å(reported)

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

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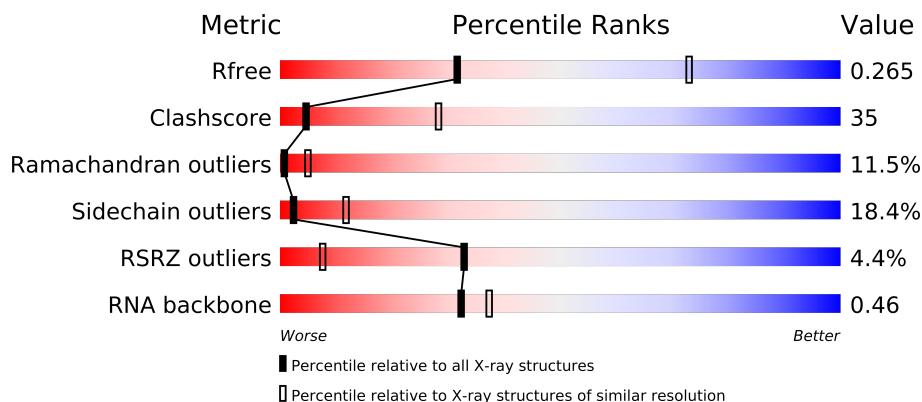
The following versions of software and data (see [references](#)) were used in the production of this report:

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

# 1 Overall quality at a glance

The reported resolution of this entry is 3.30 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	1341 (3.40-3.20)
Clashscore	79885	1696 (3.40-3.20)
Ramachandran outliers	78287	1664 (3.40-3.20)
Sidechain outliers	78261	1662 (3.40-3.20)
RSRZ outliers	66119	1342 (3.40-3.20)
RNA backbone	1838	1042 (3.90-2.70)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments on the lower bar indicate the fraction of residues that contain outliers for  $\geq 3$ , 2, 1 and 0 types of geometric quality criteria. The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density.

Mol	Chain	Length	Quality of chain
1	AA	1533	
1	CA	1533	
2	AB	241	
2	CB	241	
3	AC	233	
3	CC	233	
4	AD	206	
4	CD	206	
5	AE	167	
5	CE	167	
6	AF	135	
6	CF	135	

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Mol	Chain	Length	Quality of chain
7	AG	179	
7	CG	179	
8	AH	130	
8	CH	130	
9	AI	130	
9	CI	130	
10	AJ	103	
10	CJ	103	
11	AK	129	
11	CK	129	
12	AL	124	
12	CL	124	
13	AM	118	
13	CM	118	
14	AN	101	
14	CN	101	
15	AO	89	
15	CO	89	
16	AP	82	
16	CP	82	
17	AQ	84	
17	CQ	84	
18	AR	75	
18	CR	75	
19	AS	92	
19	CS	92	
20	AT	87	
20	CT	87	
21	AU	71	
21	CU	71	
22	BA	2904	
22	DA	2904	
23	BB	120	
23	DB	120	
24	BC	273	
24	DC	273	
25	BD	209	
25	DD	209	
26	BE	201	
26	DE	201	
27	BF	179	
27	DF	179	

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Mol	Chain	Length	Quality of chain
28	BG	177	
28	DG	177	
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	

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Mol	Chain	Length	Quality of chain
49	B1	55	
49	D1	55	
50	B2	46	
50	D2	46	
51	B3	65	
51	D3	65	
52	B4	38	
52	D4	38	

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

Mol	Type	Chain	Res	Geometry	Electron density
53	MG	AA	1608	-	X
53	MG	AA	1614	-	X
53	MG	AA	1619	-	X
53	MG	AA	1626	-	X
53	MG	AA	1628	-	X
53	MG	AA	1631	-	X
53	MG	AA	1636	-	X
53	MG	AA	1639	-	X
53	MG	AA	1641	-	X
53	MG	BA	3018	-	X
53	MG	BA	3020	-	X
53	MG	BA	3024	-	X
53	MG	BA	3035	-	X
53	MG	BA	3036	-	X
53	MG	BA	3039	-	X
53	MG	BA	3043	-	X
53	MG	BA	3054	-	X
53	MG	BA	3055	-	X
53	MG	BA	3058	-	X
53	MG	BA	3059	-	X
53	MG	BA	3060	-	X
53	MG	BA	3069	-	X
53	MG	BA	3070	-	X
53	MG	BA	3073	-	X
53	MG	BA	3081	-	X
53	MG	BA	3085	-	X
53	MG	BA	3089	-	X
53	MG	BA	3096	-	X
53	MG	BA	3099	-	X

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Mol	Type	Chain	Res	Geometry	Electron density
53	MG	BA	3100	-	X
53	MG	BA	3105	-	X
53	MG	BA	3107	-	X
53	MG	BA	3114	-	X
53	MG	BA	3117	-	X
53	MG	BA	3120	-	X
53	MG	BA	3122	-	X
53	MG	BA	3124	-	X
53	MG	BA	3129	-	X
53	MG	BA	3131	-	X
53	MG	BA	3133	-	X
53	MG	BA	3134	-	X
53	MG	BB	201	-	X
53	MG	CA	1608	-	X
53	MG	CA	1614	-	X
53	MG	CA	1615	-	X
53	MG	CA	1616	-	X
53	MG	CA	1624	-	X
53	MG	CA	1625	-	X
53	MG	CA	1626	-	X
53	MG	CA	1627	-	X
53	MG	CA	1628	-	X
53	MG	CA	1640	-	X
53	MG	DA	3002	-	X
53	MG	DA	3003	-	X
53	MG	DA	3005	-	X
53	MG	DA	3007	-	X
53	MG	DA	3008	-	X
53	MG	DA	3019	-	X
53	MG	DA	3021	-	X
53	MG	DA	3022	-	X
53	MG	DA	3026	-	X
53	MG	DA	3031	-	X
53	MG	DA	3033	-	X
53	MG	DA	3049	-	X
53	MG	DA	3053	-	X
53	MG	DA	3057	-	X
53	MG	DA	3058	-	X
53	MG	DA	3060	-	X
53	MG	DA	3062	-	X
53	MG	DA	3063	-	X
53	MG	DA	3064	-	X

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Mol	Type	Chain	Res	Geometry	Electron density
53	MG	DA	3074	-	X
53	MG	DA	3075	-	X
53	MG	DA	3078	-	X
53	MG	DA	3079	-	X
53	MG	DA	3088	-	X
53	MG	DA	3105	-	X
53	MG	DA	3108	-	X
53	MG	DA	3109	-	X
53	MG	DA	3120	-	X
53	MG	DA	3123	-	X
53	MG	DA	3127	-	X
53	MG	DA	3128	-	X
53	MG	DA	3129	-	X
53	MG	DA	3130	-	X
53	MG	DA	3132	-	X
53	MG	DC	301	-	X
53	MG	DE	301	-	X
53	MG	DJ	201	-	X
54	EM1	BA	3135	-	X

## 2 Entry composition

There are 56 unique types of molecules in this entry. The entry contains 284464 atoms, of which 0 are hydrogen and 0 are deuterium.

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	AA	1533	Total	C	N	O	P	0	0	0
			32895	14671	6036	10655	1533			
1	CA	1530	Total	C	N	O	P	0	0	0
			32831	14642	6024	10635	1530			

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

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

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

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

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

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

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



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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
14	AN	96	Total	C	N	O	S	0	0	0
			774	483	160	128	3			
14	CN	91	Total	C	N	O	S	0	0	0
			735	461	151	120	3			

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

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

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

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

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

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

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

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

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

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

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

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

- Molecule 21 is a protein called 30S ribosomal protein S21.

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

- 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			
23	DB	117	Total	C	N	O	P	0	0	0
			2507	1116	459	815	117			

- 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			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
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			
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	S	0	0	0
			947	604	192	151				
38	DQ	117	Total	C	N	O	S	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	S	0	0	0
			779	492	146	141				

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

- 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			
			753	479	137	134	3	0	0	0
43	DV	94	Total	C	N	O	S			
			753	479	137	134	3	0	0	0

- 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			
			596	367	120	108	1	0	0	0
44	DW	79	Total	C	N	O	S			
			596	367	120	108	1	0	0	0

- 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			
			625	388	129	106	2	0	0	0
45	DX	77	Total	C	N	O	S			
			625	388	129	106	2	0	0	0

- 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			
			509	313	99	95	2	0	0	0
46	DY	63	Total	C	N	O	S			
			509	313	99	95	2	0	0	0

- 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			
			449	281	87	79	2	0	0	0
47	DZ	58	Total	C	N	O	S			
			449	281	87	79	2	0	0	0



- 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			
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			

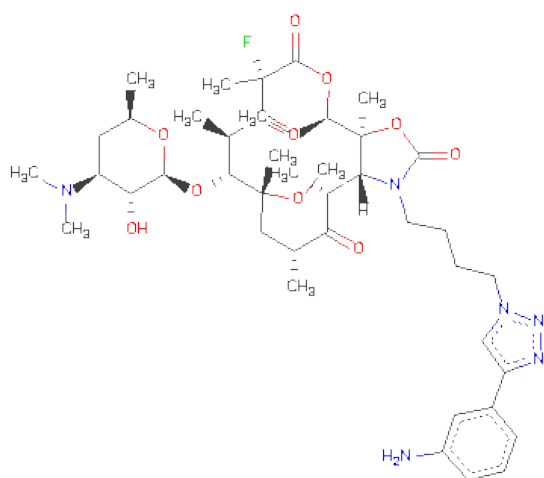
- Molecule 52 is a protein called 50S ribosomal protein L36.

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

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
53	BB	4	Total Mg 4 4	0	0
53	DE	1	Total Mg 1 1	0	0
53	BA	134	Total Mg 134 134	0	0
53	CA	42	Total Mg 42 42	0	0
53	DJ	1	Total Mg 1 1	0	0
53	BL	1	Total Mg 1 1	0	0
53	AA	43	Total Mg 43 43	0	0
53	DA	133	Total Mg 133 133	0	0
53	DC	1	Total Mg 1 1	0	0
53	DB	1	Total Mg 1 1	0	0

- Molecule 54 is (3a*S*,4*R*,7*S*,9*R*,10*R*,11*R*,13*R*,15*R*,15a*R*)-1-{4-[4-(3-aminophenyl)-1*H*-1,2,3-triazol-1-yl]butyl}-4-ethyl-7-fluoro-11-methoxy-3a,7,9,11,13,15-hexamethyl-2,6,8,14-tetraoxotetradecahydro-2*H*-oxacyclotetradecino[4,3-*d*][1,3]oxazol-10-yl-3,4,6-trideoxy-3-(dimethylamino)-β-D-xylo-hexopyranoside (three-letter code: EM1) (formula: C<sub>43</sub>H<sub>65</sub>FN<sub>6</sub>O<sub>10</sub>).



Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
54	BA	1	Total	C	F	N	O	0	0
			60	43	1	6	10		

- Molecule 55 is ZINC ION (three-letter code: ZN) (formula: Zn).

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

- Molecule 56 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
56	AA	200	Total	O	0	0
			200	200		
56	AL	1	Total	O	0	0
			1	1		
56	AN	5	Total	O	0	0
			5	5		
56	AT	1	Total	O	0	0
			1	1		
56	AU	1	Total	O	0	0
			1	1		
56	BA	606	Total	O	0	0
			606	606		
56	BB	20	Total	O	0	0
			20	20		
56	BC	9	Total	O	0	0
			9	9		
56	BD	1	Total	O	0	0
			1	1		
56	BL	4	Total	O	0	0
			4	4		
56	BN	3	Total	O	0	0
			3	3		
56	BT	2	Total	O	0	0
			2	2		
56	B2	1	Total	O	0	0
			1	1		
56	B3	2	Total	O	0	0
			2	2		
56	B4	2	Total	O	0	0
			2	2		

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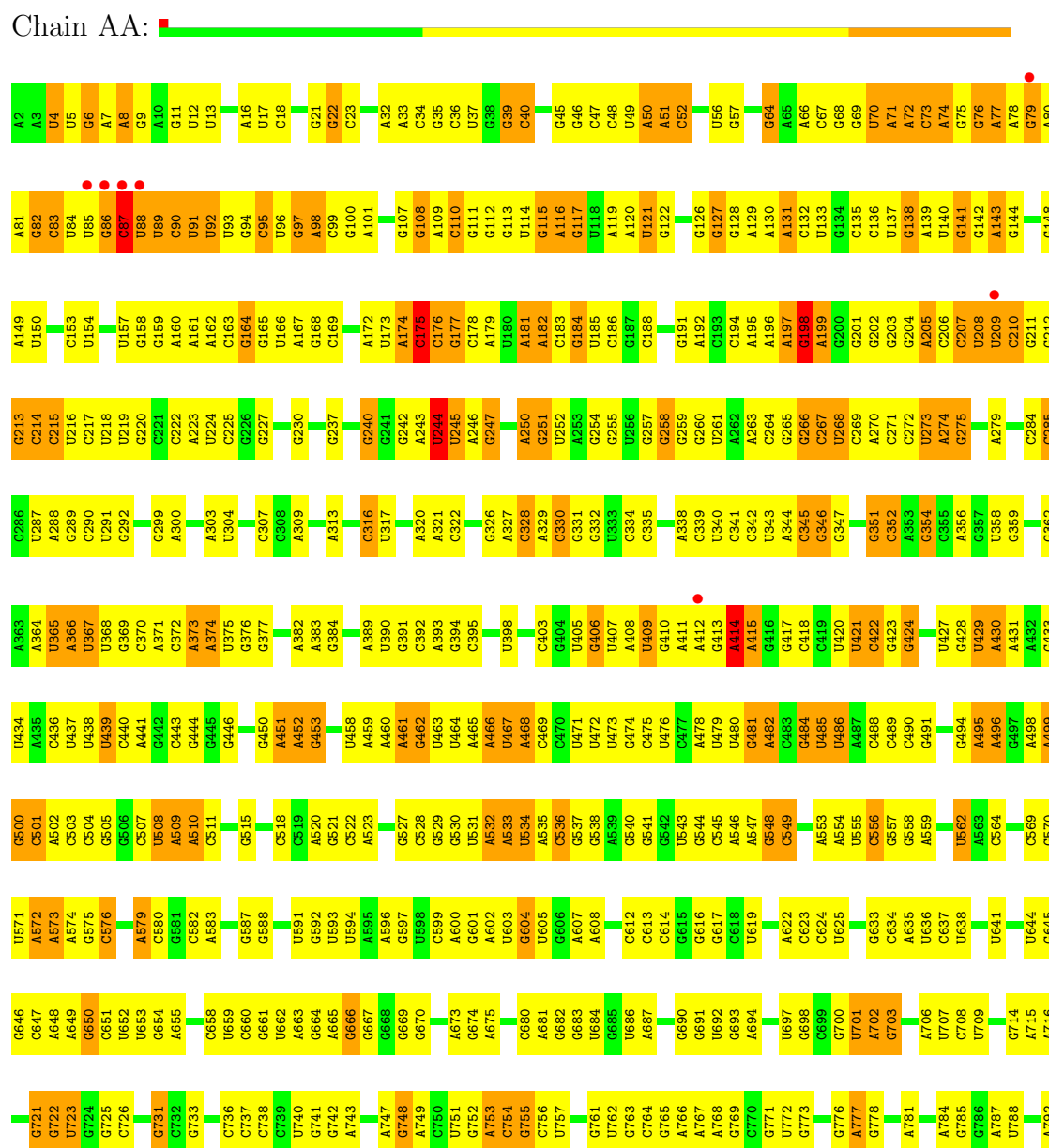
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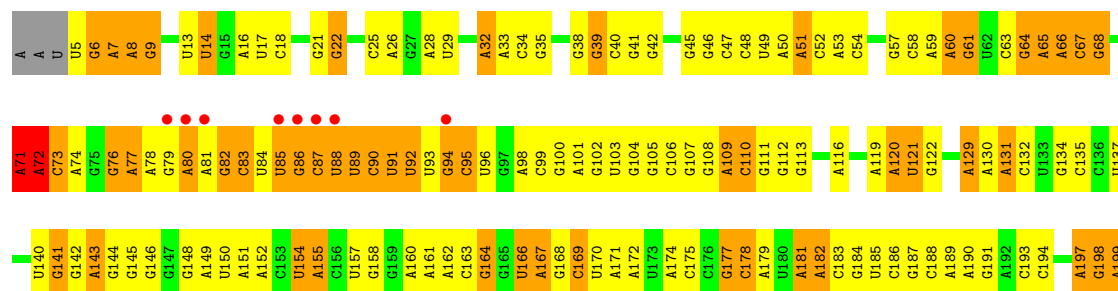
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
56	CA	194	Total 194	O 194	0	0
56	CE	5	Total 5	O 5	0	0
56	CI	1	Total 1	O 1	0	0
56	CL	1	Total 1	O 1	0	0
56	CN	3	Total 3	O 3	0	0
56	CT	2	Total 2	O 2	0	0
56	CU	1	Total 1	O 1	0	0
56	DA	605	Total 605	O 605	0	0
56	DB	4	Total 4	O 4	0	0
56	DC	8	Total 8	O 8	0	0
56	DD	3	Total 3	O 3	0	0
56	DE	3	Total 3	O 3	0	0
56	DJ	3	Total 3	O 3	0	0
56	DL	4	Total 4	O 4	0	0
56	DN	1	Total 1	O 1	0	0
56	DT	2	Total 2	O 2	0	0
56	DU	2	Total 2	O 2	0	0
56	DV	1	Total 1	O 1	0	0
56	D2	1	Total 1	O 1	0	0
56	D3	1	Total 1	O 1	0	0
56	D4	5	Total 5	O 5	0	0

### 3 Residue-property plots

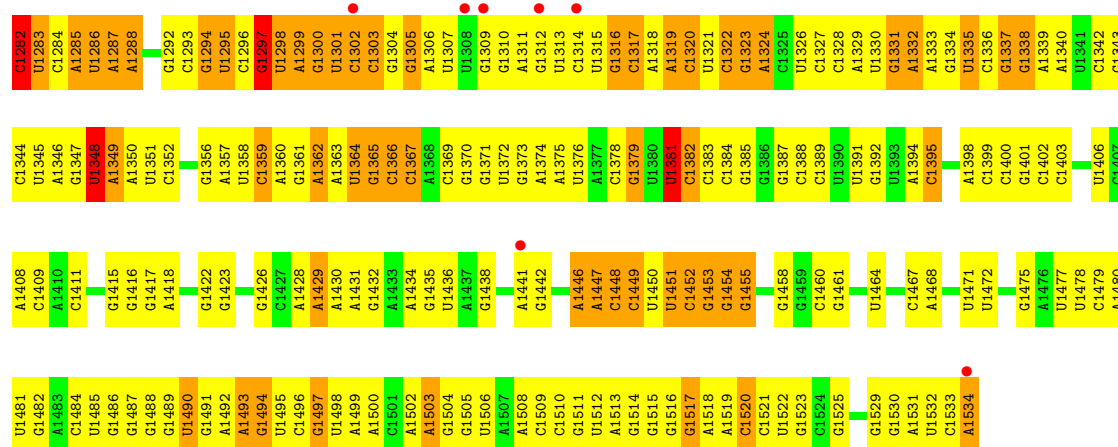
These plots are drawn for all protein, RNA and DNA chains in the entry. The first graphic for a chain summarises the proportions of errors displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density. Residues are color-coded according 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: 16S rRNA



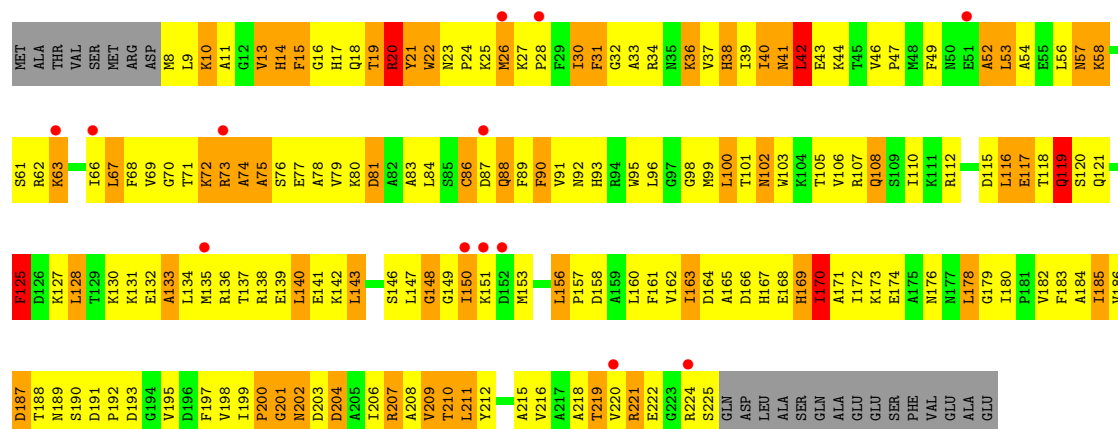


A1213	A1146	A1080	A1019	A959	G881	A814	U751	C679	A609	A532	C469	C403	G337	C267	G200
C1214	C1147	A1081	G1020	U960	C882	A815	G752	C680	U610	A533	C470	G404	A338	U288	G201
G1215	U1148	A1082	A1021	U961	C883	A816	A753	A681	G615	U534	U471	U406	C339	C269	G202
A1216	C1149	U1083	A1022	C962	G884	G818	G754	G682	G616	A535	U472	G406	G339	A270	G203
C1217	A1150	G1084	U1023	G963	G885	G819	G755	G683	G617	C536	U473	U407	G344	C271	G204
A1218	A1151	G1085	G1024	A964	G889	A819	G756	U684	G618	C537	G474	A408	U343	A205	G205
A1219	A1152	U1086	U1025	U965	G890	U820	U757	G685	C618	C538	C475	U409	C345	C206	G206
G1220	G1153	G1089	G1026	G966	U891	G821	C758	U686	U619	U542	U476	C410	C346	C207	G207
G1221	G1154	C967	C1027	C967	A892	U822	A759	A687	C620	U543	U477	C411	G347	C208	G208
C1222	C1155	A968	C1028	A968	C893	C923	G760	G688	A621	U544	C478	A411	G348	C277	U209
C1223	C1156	U1091	U1029	A969	C893	G824	G761	C689	A622	A547	U479	C413	A349	C278	C210
U1224	U1159	A1092	U1030	C970	G898	A825	U762	G690	C623	G560	U480	A414	G350	G211	G211
A1225	G1160	A1093	C1031	C971	C899	C826	G763	G691	C624	G561	G481	A415	G351	C280	G212
C1226	C1161	G1094	G1032	C972	A900	U827	C764	U692	U625	G562	G482	A416	C352	G281	G213
A1227	C1162	U1095	G1033	G973	A901	U828	A766	G693	G626	A554	G484	G417	A353	A282	C214
C1228	C1163	C1096	G1034	A974	G906	G829	G765	A694	G627	U555	U485	C418	G354	C215	C215
A1229	U1167	C1097	A1035	A975	A906	G830	A766	A695	G628	C556	U486	C419	C355	C284	U216
U1232	A1169	U1036	A1036	G976	A907	A831	G769	A696	A629	C557	U487	U421	A356	C285	C217
G1233	A1170	C1037	C1037	A977	A908	U834	G770	G700	A630	C558	C488	C422	G357	C286	U218
A1238	A1171	G1038	G1038	A978	A909	U835	G771	U701	C632	A559	C489	G423	U358	U287	U219
A1239	C1172	A1101	U1039	C979	C910	U836	U772	U702	U633	U561	C490	G424	G359	A288	G220
C1240	U1173	C1103	G1041	U980	A913	U837	G773	G703	G633	U562	C491	G425	G360	C289	C221
G1241	G1174	G1104	A1042	U982	A914	G841	G775	A704	U636	U563	A493	U427	G361	C290	C222
G1242	A1176	A1105	G1043	A983	G917	U842	A777	A706	U637	C564	G494	G428	G362	U291	A223
C1243	G1177	G1106	A1046	C984	A918	U843	A778	U707	U638	G567	A495	U429	A366	G292	U224
C1244	G1178	G1108	G1047	C985	A919	U844	C779	C708	A640	U568	U496	A430	U367	C295	G227
C1245	A1179	U1048	U1048	U986	A920	A845	A780	U709	U641	C569	U498	A435	G369	U296	A228
A1246	A1180	G946	U921	C987	U921	A846	A781	G710	A642	C570	U499	C436	G370	U297	U229
U1249	G1181	G1112	G1050	U989	G926	G847	U782	G711	C643	U571	G500	U437	A371	C298	G230
A1250	U1182	C1113	C1051	C990	G927	G848	C783	A712	U644	A572	C501	U438	C372	A300	G237
A1251	U1183	C1114	U1052	U991	A927	G849	A784	G713	G645	A573	A502	U439	A373	U239	A238
U1254	G1185	U1118	C1053	U992	C932	C853	G785	U717	G650	A574	C503	G442	A374	G302	G240
A1256	G1186	C1119	A1055	A994	C933	U854	A787	C718	U653	C578	G514	A451	U375	G306	A243
A1257	A1187	U1056	G1057	A996	A935	U855	A790	C720	G654	C579	A509	A452	G377	A306	U244
G1258	U1189	G1124	C1058	U997	C936	C857	G791	G721	U659	U580	A510	C443	G378	U245	U245
C1259	A1191	U1125	C1059	C998	G944	G858	A792	G722	C660	U581	C511	C444	C379	A312	A246
G1260	C1192	U1126	U1060	C999	G945	G867	U793	U723	U661	C582	U512	G447	C381	C314	C247
U1264	G1193	G1127	G1061	A1000	C940	G861	A794	G724	U662	C583	C513	A448	A382	A315	C248
C1265	U1194	U1062	C1063	C1001	G941	C862	C795	G725	U663	G587	G515	A451	A383	C316	U249
C1266	C1195	G1064	G1064	G1003	U943	A865	C796	U728	A663	U590	U516	G453	G384	U317	A250
G1267	A1196	U1065	U1065	A1004	G944	C866	U798	A729	A664	U591	G517	G454	C385	G318	C251
C1268	A1197	C1066	C1066	A1005	G945	C867	G799	G730	A665	U591	C518	G455	C386	G319	U252
A1269	G1198	A1067	A1067	G1006	A946	C868	G800	C732	G666	C589	C519	A456	U387	A320	A253
U1270	U1199	G1134	G1068	U1007	G947	G869	U801	C733	G667	A595	A520	G457	G388	A321	G254
A1271	C1200	U1135	C1069	U1008	C948	U870	A802	C736	G668	A596	G521	U458	A389	C322	G255
G1272	A1201	C1136	U1070	U1009	A949	U871	G803	C737	G669	U597	C522	A459	U390	A327	U256
C1273	U1202	C1137	C1071	U1010	U950	A872	U804	C738	G670	U598	A523	A460	C391	C328	G257
U1276	C1203	G1138	G1072	C1011	G951	A873	C805	C739	U671	C599	G524	A461	C392	C329	G258
G1206	G1206	G1139	U1073	A1012	U952	G874	C806	U740	G672	C599	C525	G462	A393	A329	G259
C1207	U1207	G1140	G1074	G1013	G953	U875	A807	G741	A602	C599	C526	U463	G394	C330	G260
G1208	G1208	C1141	U1075	A1014	G954	C876	A808	G741	U603	C599	G527	U464	C395	G331	U261
G1278	G1278	G1142	U1076	G1015	U955	G877	G811	A747	A675	G604	C528	A465	A397	U333	A263
G1279	C1209	G1143	U1077	A1016	U956	A878	G812	G749	A676	U605	G529	A466	U398	C334	C265
A1280	U1017	G1144	U1078	U957	A958	C879	G812	A749	U677	U605	G529	U467	C399	C335	G266
C1281	U1212	A1145	G1079	G1018	A958	C880	U813	C750	U678	A608	U531	A468	G399	A336	G266



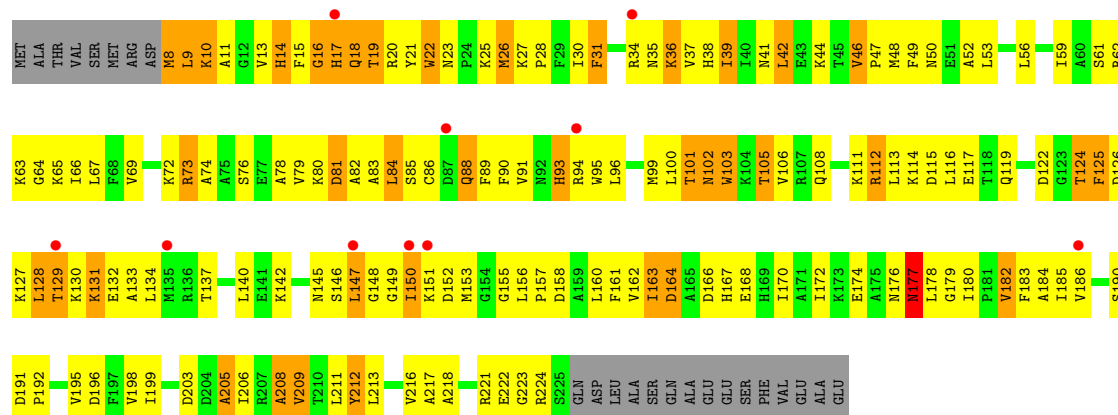
### • Molecule 2: 30S ribosomal protein S2

Chain AB:



### • Molecule 2: 30S ribosomal protein S2

Chain CB:

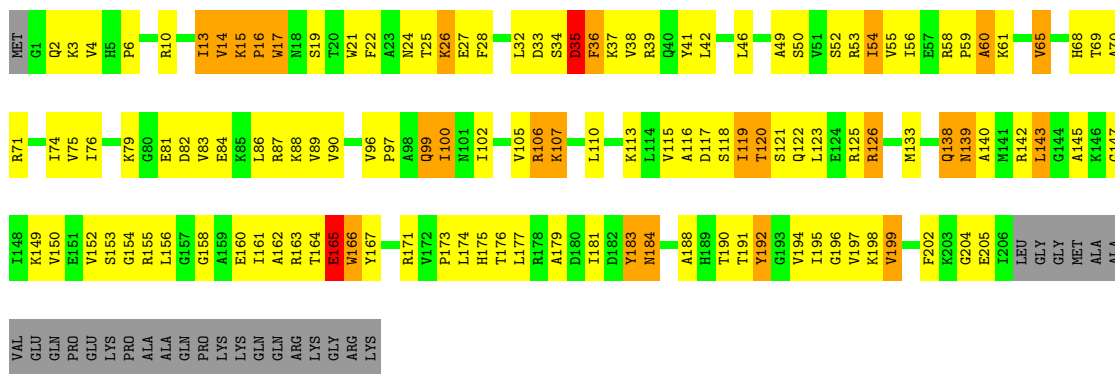


### • Molecule 3: 30S ribosomal protein S3

Chain AC:

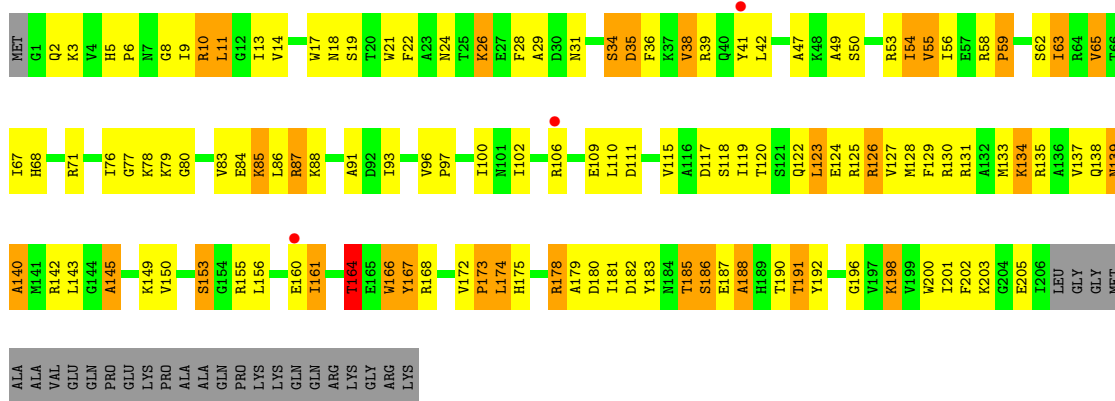






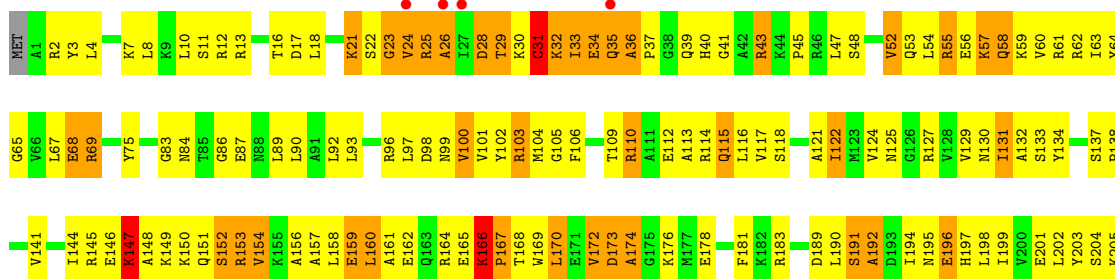
• Molecule 3: 30S ribosomal protein S3

Chain CC:



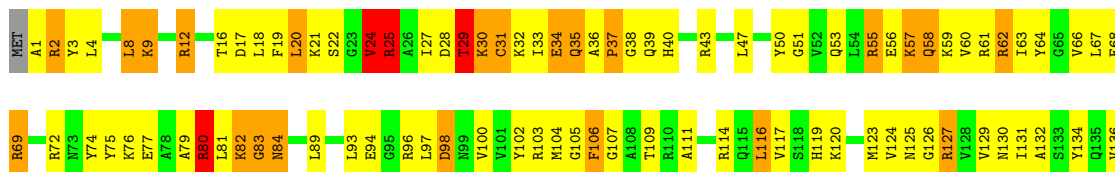
• Molecule 4: 30S ribosomal protein S4

Chain AD:



• Molecule 4: 30S ribosomal protein S4

Chain CD:

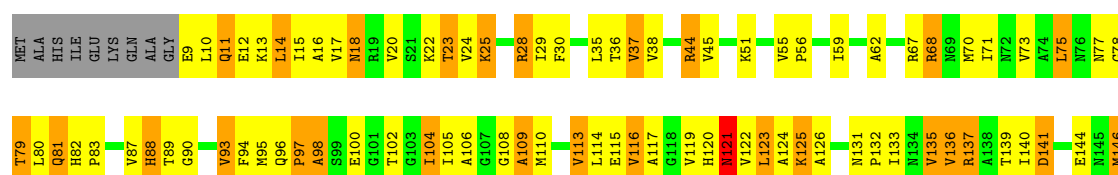




S204  
K205

• Molecule 5: 30S ribosomal protein S5

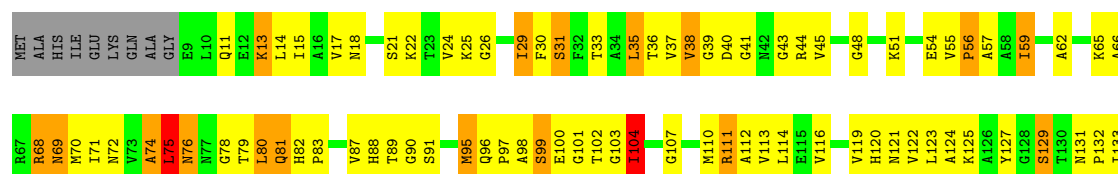
Chain AE:



N147, S148, P149, M150, M151, V152, A153, K154, K155, R156, G157, S158, VAL, GLU, ILE, LEU, GLY, LYS

• Molecule 5: 30S ribosomal protein S5

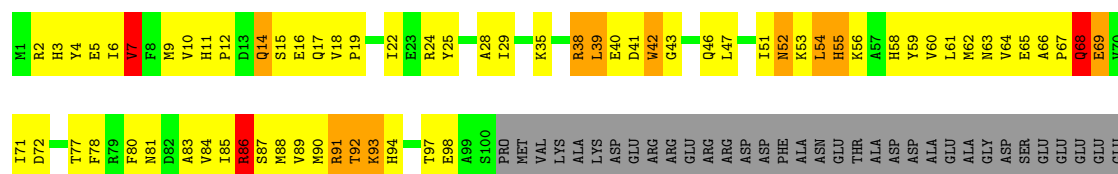
Chain CE:



N134, V135, R136, R137, M138, T139, L143, E144, N145, M146, N147, S148, P149, E150, M151, V152, A153, K154, K155, R156, G157, S158, VAL, GLU, ILE, LEU, GLY, LYS

• Molecule 6: 30S ribosomal protein S6

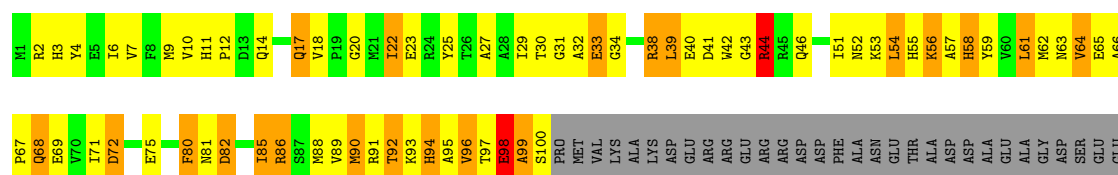
Chain AF:



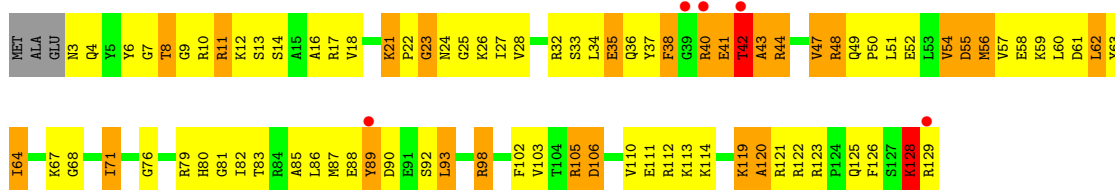
GLU

• Molecule 6: 30S ribosomal protein S6

Chain CF:

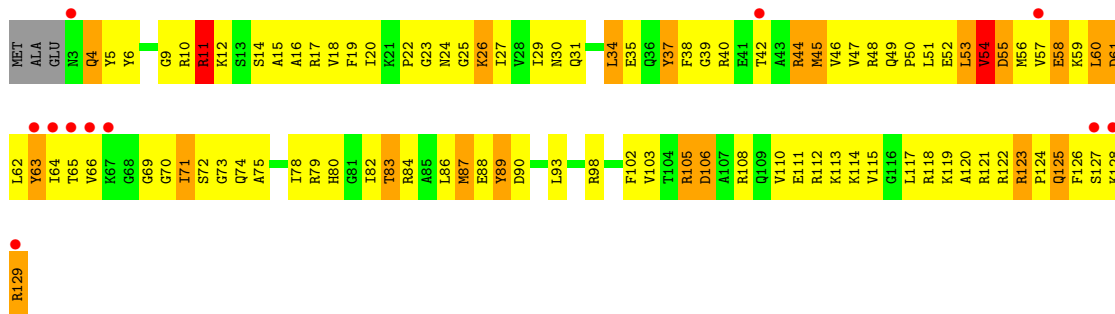






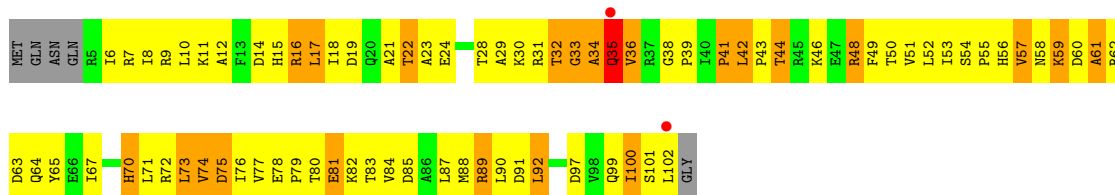
• Molecule 9: 30S ribosomal protein S9

Chain CI:



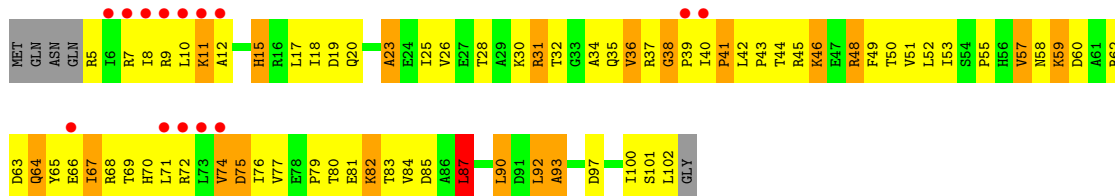
• Molecule 10: 30S ribosomal protein S10

Chain AJ:



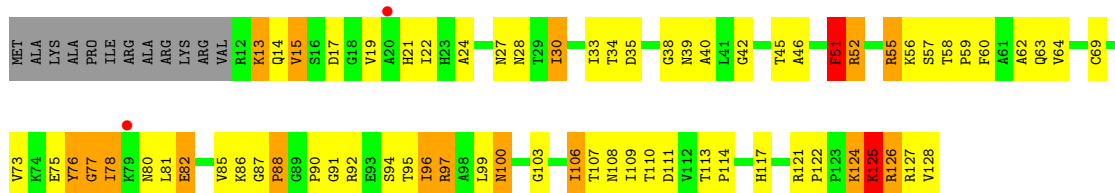
• Molecule 10: 30S ribosomal protein S10

Chain CJ:



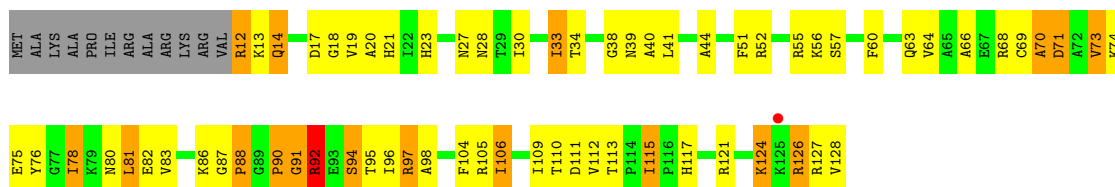
• Molecule 11: 30S ribosomal protein S11

Chain AK:



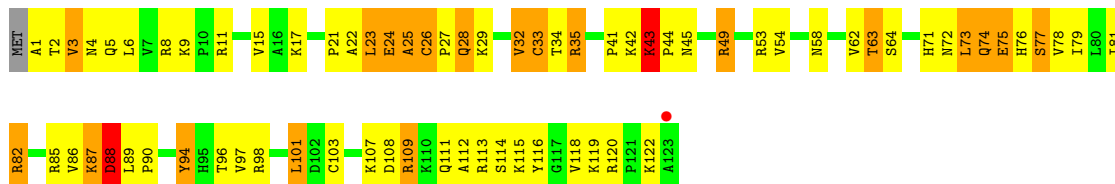
• Molecule 11: 30S ribosomal protein S11

Chain CK:



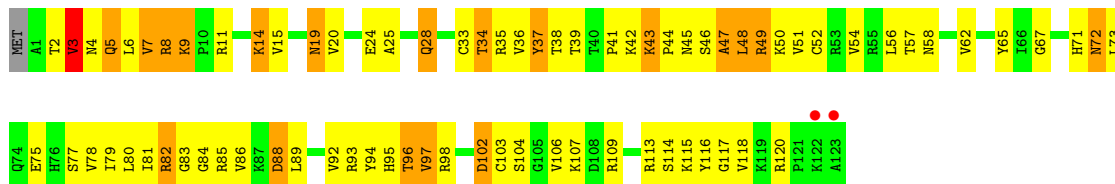
- Molecule 12: 30S ribosomal protein S12

Chain AL:



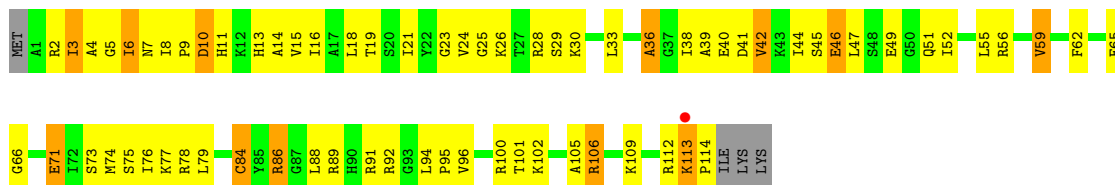
- Molecule 12: 30S ribosomal protein S12

Chain CL:



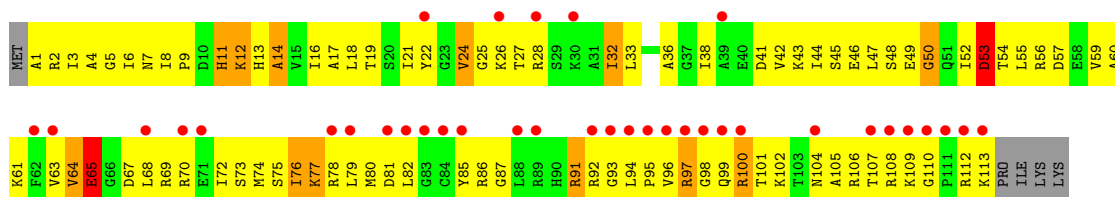
- Molecule 13: 30S ribosomal protein S13

Chain AM:



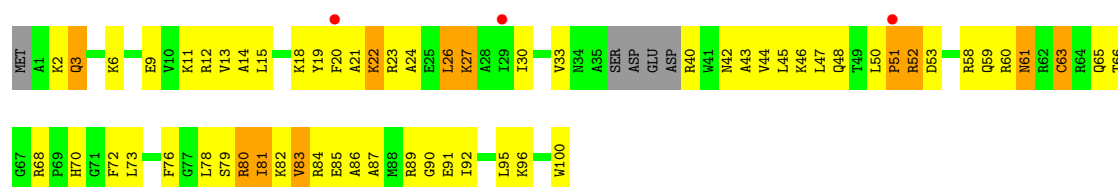
- Molecule 13: 30S ribosomal protein S13

Chain CM:



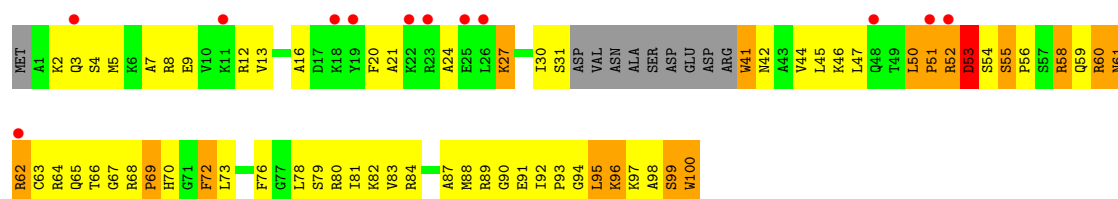
- Molecule 14: 30S ribosomal protein S14

Chain AN:



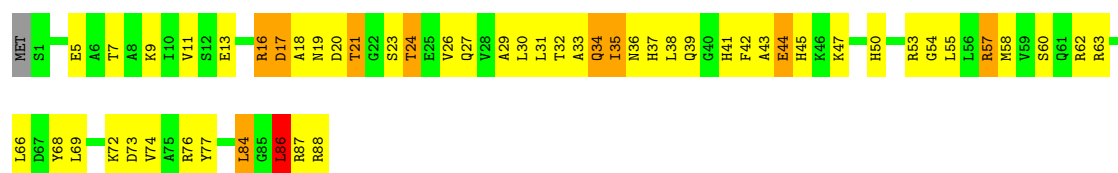
• Molecule 14: 30S ribosomal protein S14

Chain CN:



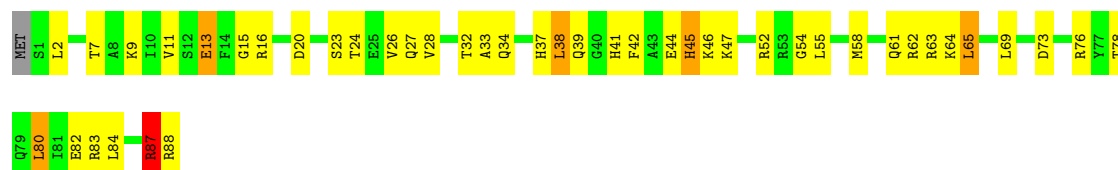
• Molecule 15: 30S ribosomal protein S15

Chain AO:



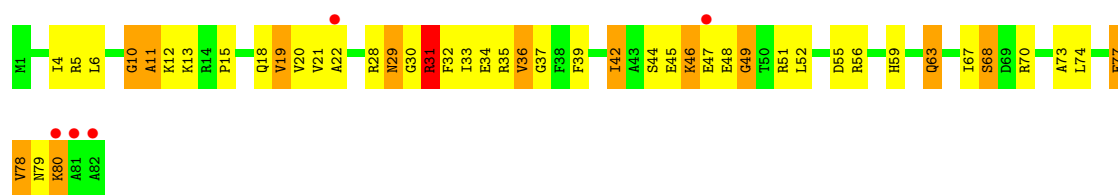
• Molecule 15: 30S ribosomal protein S15

Chain CO:



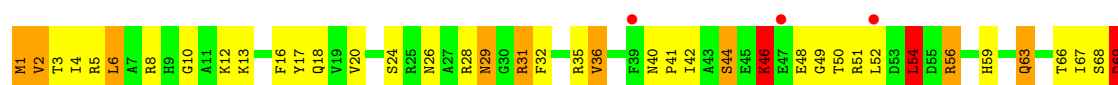
• Molecule 16: 30S ribosomal protein S16

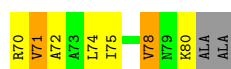
Chain AP:



• Molecule 16: 30S ribosomal protein S16

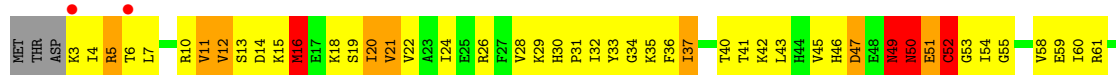
Chain CP:





- Molecule 17: 30S ribosomal protein S17

Chain AQ:



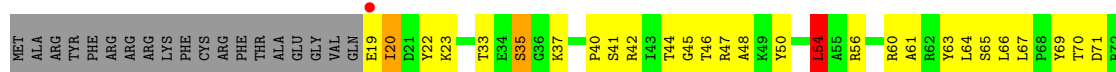
- Molecule 17: 30S ribosomal protein S17

Chain CQ:



- Molecule 18: 30S ribosomal protein S18

Chain AR:



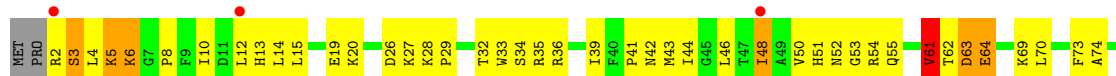
- Molecule 18: 30S ribosomal protein S18

Chain CR:



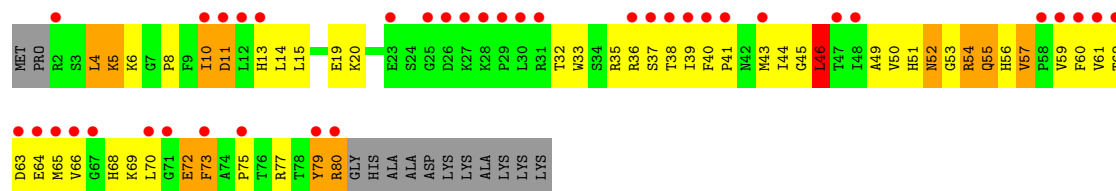
- Molecule 19: 30S ribosomal protein S19

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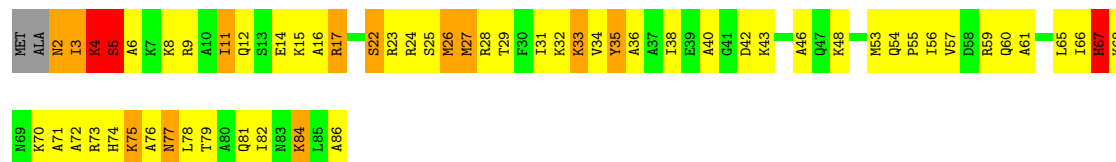
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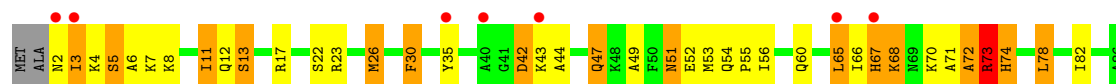
- Molecule 20: 30S ribosomal protein S20

Chain AT: 



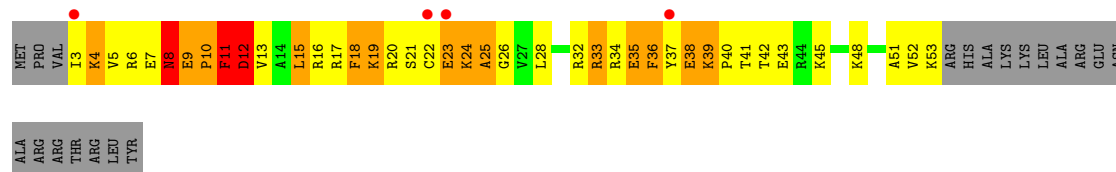
- Molecule 20: 30S ribosomal protein S20

Chain CT:



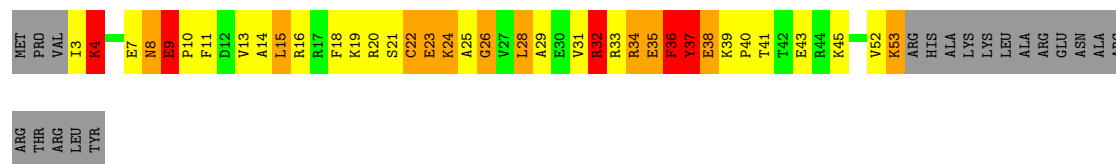
- Molecule 21: 30S ribosomal protein S21

Chain AU: 



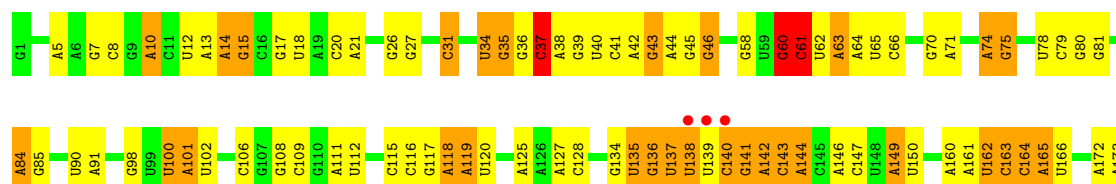
- Molecule 21: 30S ribosomal protein S21

Chain CU:



- Molecule 22: 23S rRNA

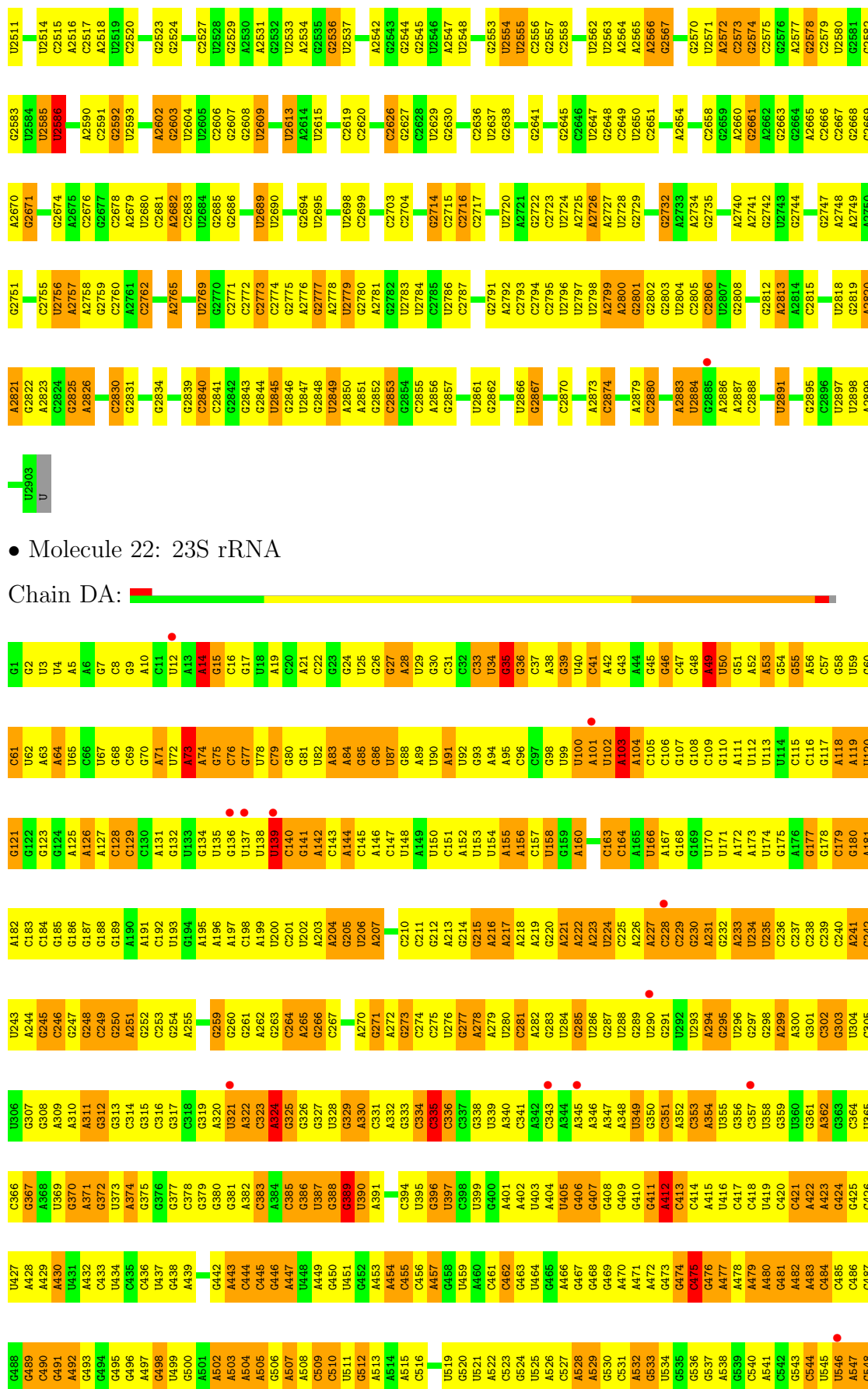
Chain BA:





WORLDWIDE  
**PDB**  
PROTEIN DATA BANK

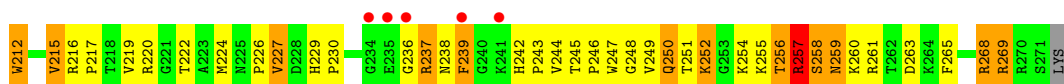
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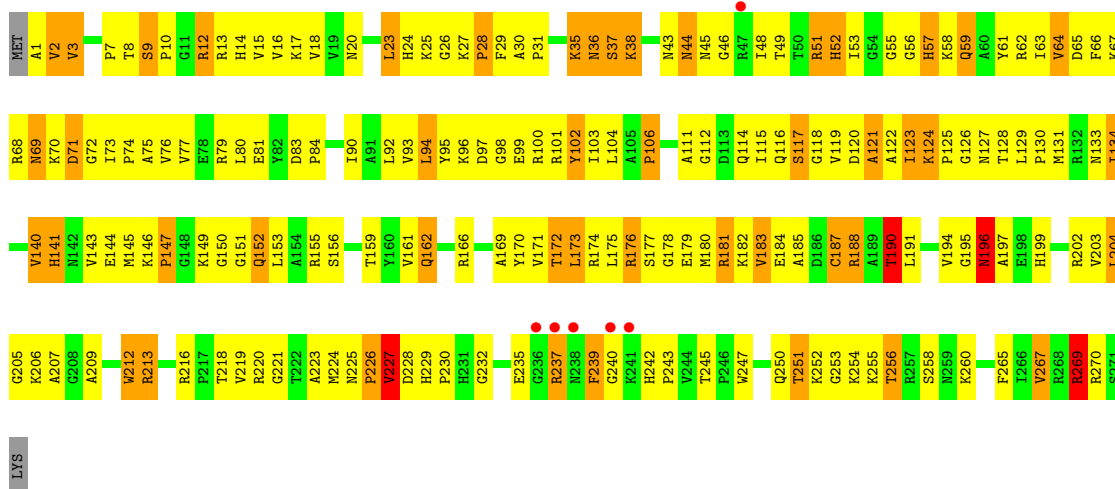
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G2465		U2334			G		G1945	C1867	G1797		G1669		U1534
G2466		A2335			G		U1946	U1868	U1798		C1670		A1535
G2467		U2336			G		G1947	G1869	G1799		U1671		C1536
A2468		G2337			G		U1948	C1870	C1800		A1672		G1537
A2469		U2338			G		U1949	C1871	A1801		G1673		U1538
		G2339			G		U1950	A1872	A1802		G1674		U1539
		U2340			G		U1951	C1873	A1803		C1675		G1540
		G2341			G		U1952	C1874	A1804		A1676		C1541
		U2342			G		U1953	G1875	A1805		U1677		U1542
		G2343			G		U1954	A1876	G1806		C1678		G1543
		U2344			G		U1955	A1877	G1807		A1679		A1544
		G2345			G		U1956	C1878	A1808		G1681		A1545
		U2346			G		U1957	U1879	A1809		U1682		C1550
		G2347			G		U1958	U1880	A1810		C1683		A1551
		U2348			G		U1959	U1881	G1811		G1684		A1552
		G2349			G		U1960	U1882	U1812		C1685		U1553
		C2350			G		U1961	G1884	G1813		C1686		A1554
		U2351			G		U1962	A1889	C1816		U1687		C1555
		G2352			G		U1963	A1890	G1817		G1688		G1556
		U2353			G		U1964	A1891	U1818		C1689		C1557
		G2354			G		U1965	U1892	A1819		U1690		U1558
		U2355			G		U1966	G1902	U1820		G1691		C1559
		G2356			G		U1967	C1903	A1821		U1692		G1560
		U2357			G		U1968	G1904	U1822		G1693		U1562
		G2358			G		U1969	U1901	G1823		C1694		U1563
		U2359			G		U1970	G1905	A1824		G1695		C1564
		G2360			G		U1971	G1906	G1825		C1696		A1565
		U2361			G		U1972	G1907	U1826		G1697		G1566
		G2362			G		U1973	U1908	U1827		A1700		U1567
		U2363			G		U1974	G1909	G1828		A1701		C1568
		G2364			G		U1975	U1910	U1829		G1702		A1569
		U2365			G		U1976	G1912	G1830		C1704		G1567
		G2366			G		U1977	C1914					
		U2367			G		U1978						
		G2368			G		U1979						
					G		U1980						
					G		U1981						
					G		U1982						
					G		U1983						
					G		U1984						
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					G		U2048						
					G		U2049						
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					G		U2051						
					G		U2052						
					G		U2053						
					G		U2054						





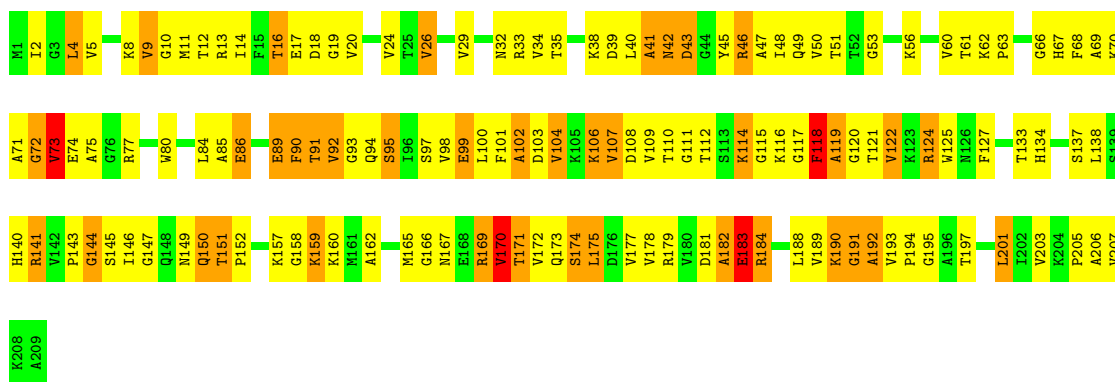
• Molecule 24: 50S ribosomal protein L2

Chain DC:



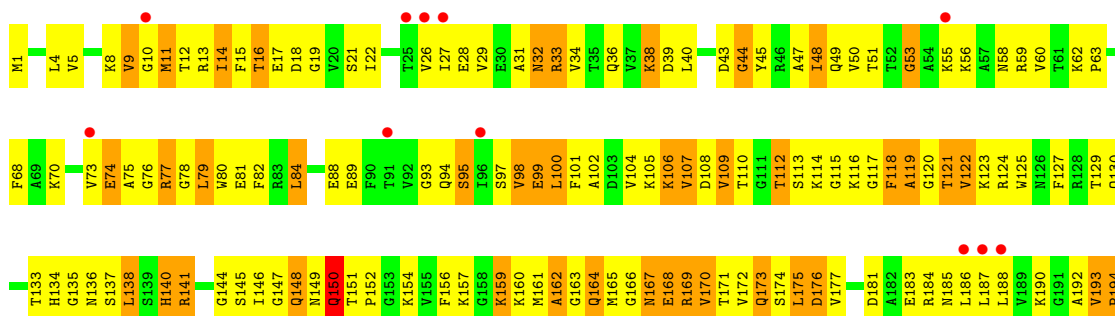
• Molecule 25: 50S ribosomal protein L3

Chain BD:



• Molecule 25: 50S ribosomal protein L3

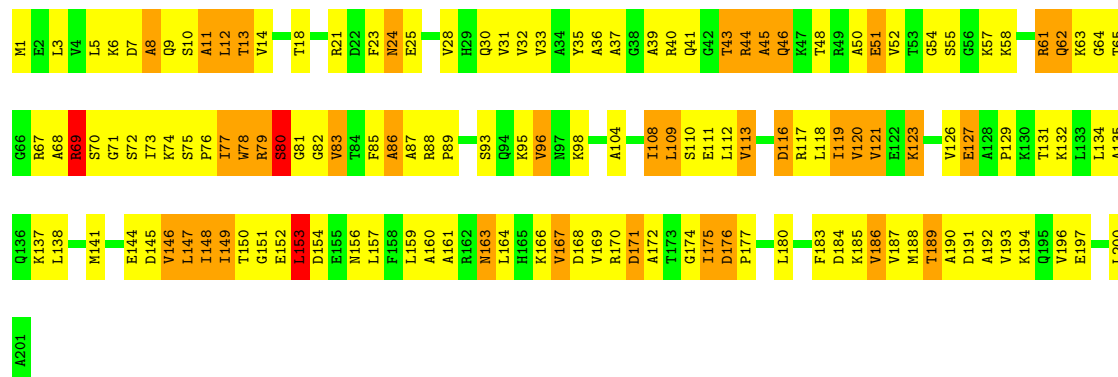
Chain DD:





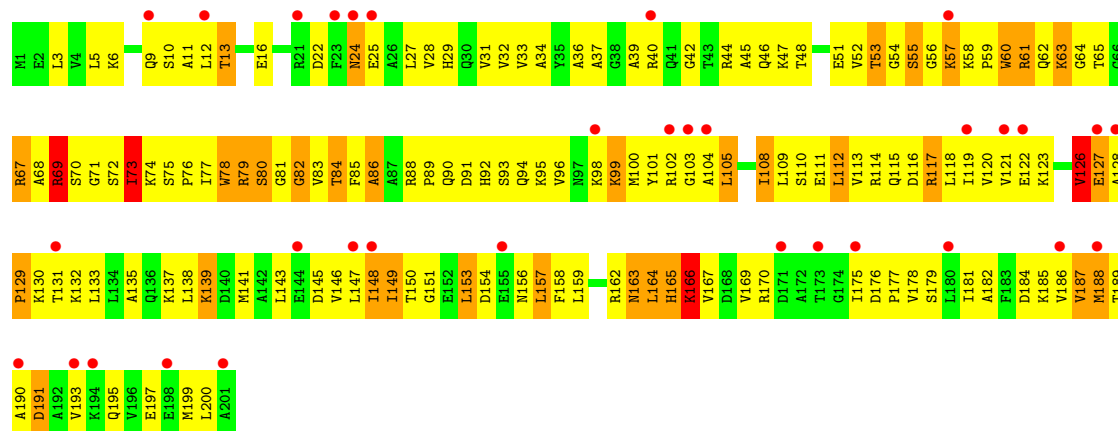
- Molecule 26: 50S ribosomal protein L4

Chain BE:



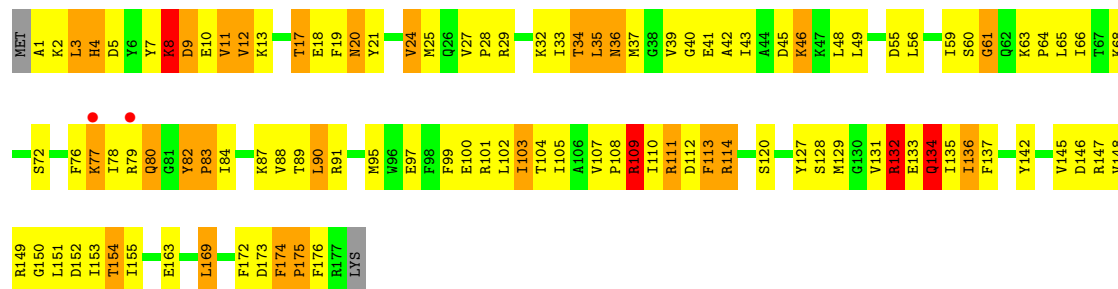
- Molecule 26: 50S ribosomal protein L4

Chain DE:



- Molecule 27: 50S ribosomal protein L5

Chain BF:

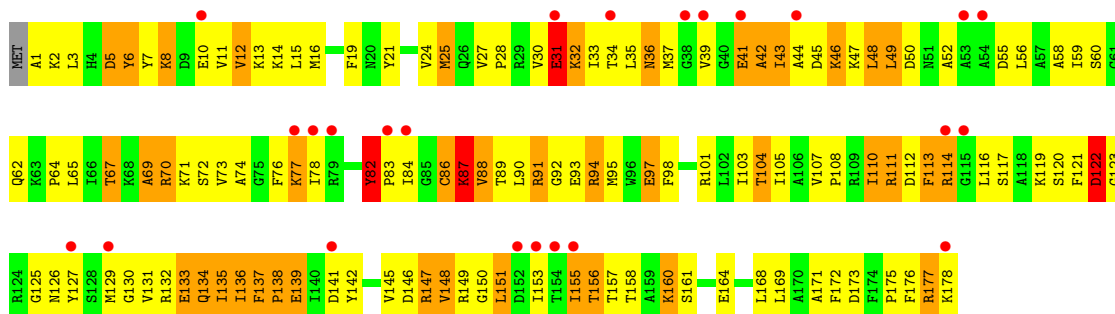


- Molecule 27: 50S ribosomal protein L5

Chain DF:

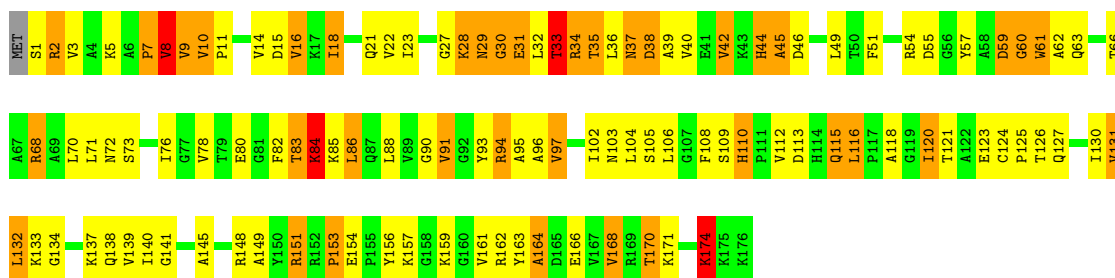






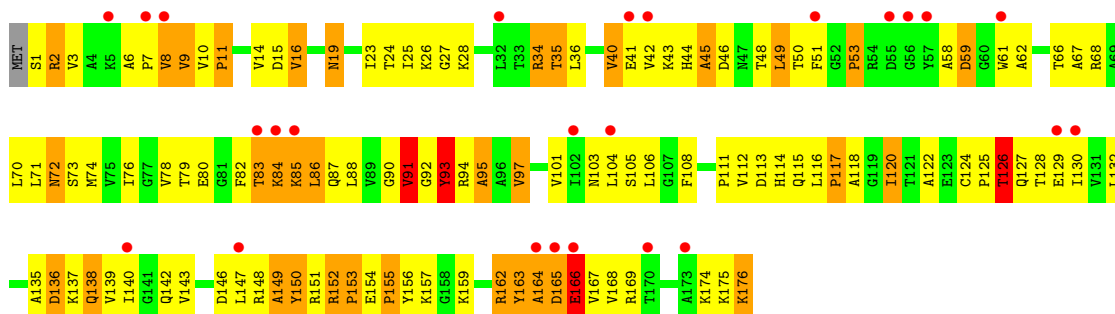
- Molecule 28: 50S ribosomal protein L6

Chain BG:



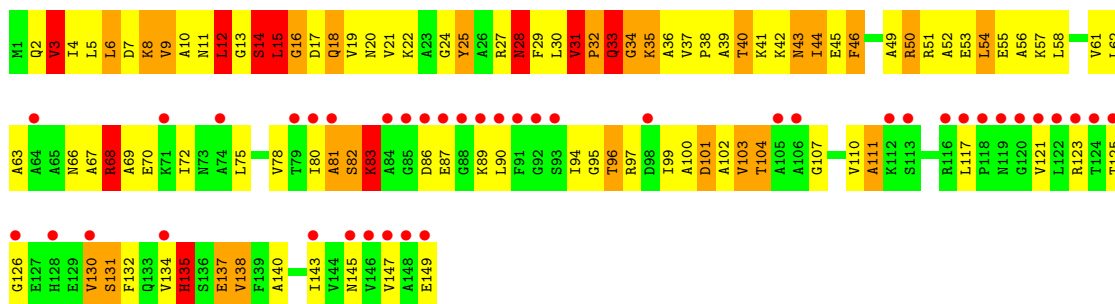
- Molecule 28: 50S ribosomal protein L6

Chain DG:



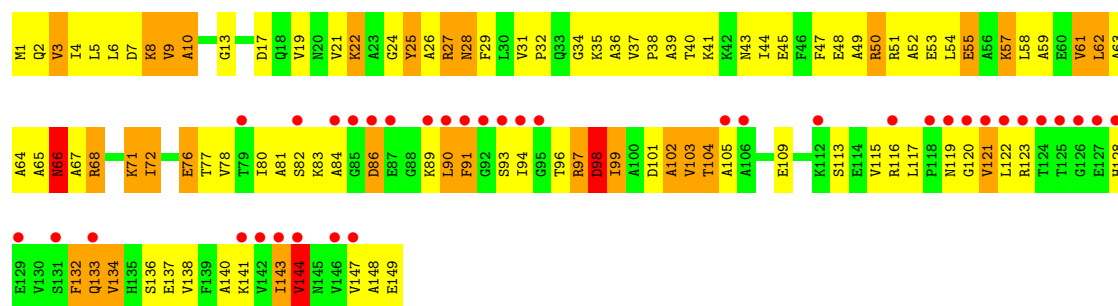
- Molecule 29: 50S ribosomal protein L9

Chain BH:



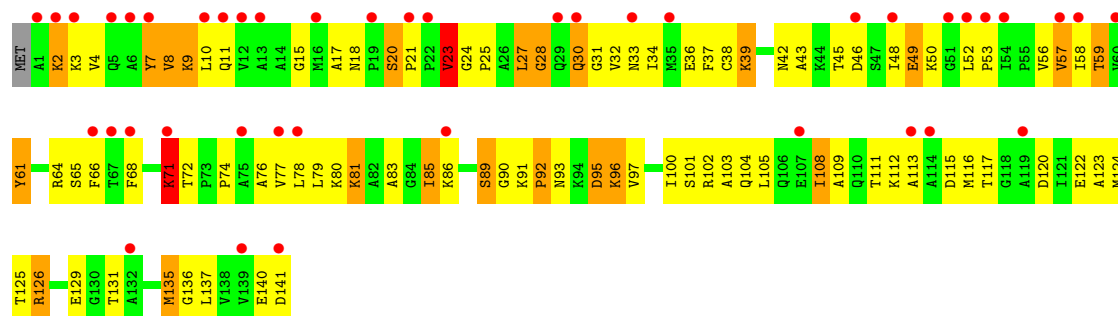
- Molecule 29: 50S ribosomal protein L9

Chain DH:



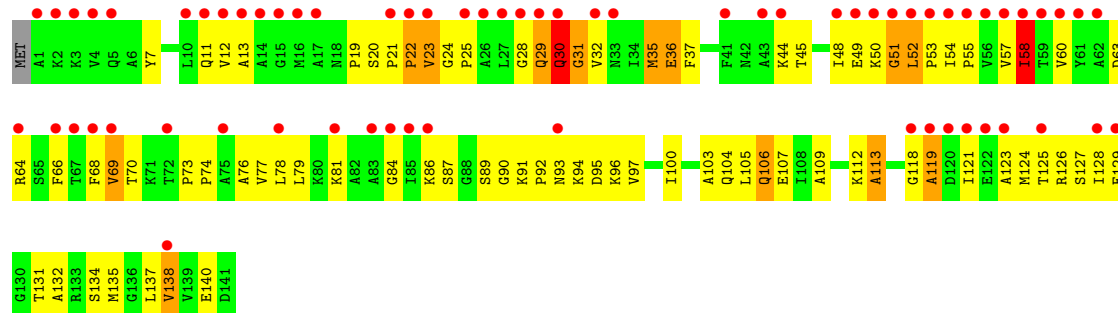
- Molecule 30: 50S ribosomal protein L11

Chain BI:



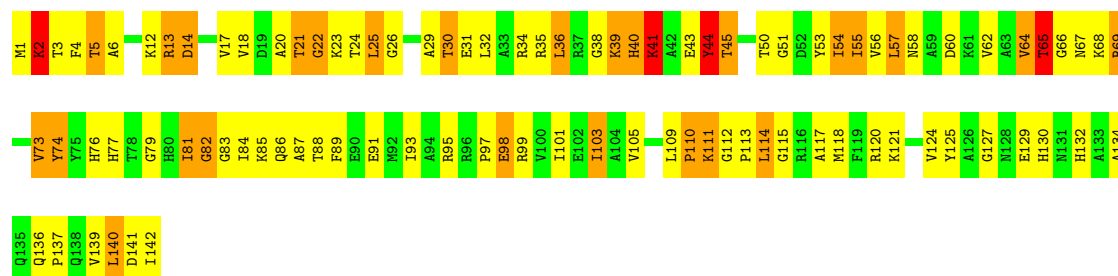
- Molecule 30: 50S ribosomal protein L11

Chain DI:



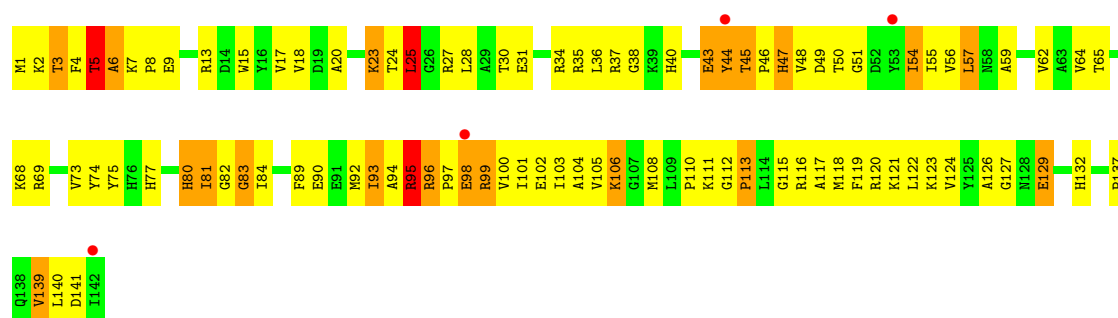
- Molecule 31: 50S ribosomal protein L13

Chain BJ:



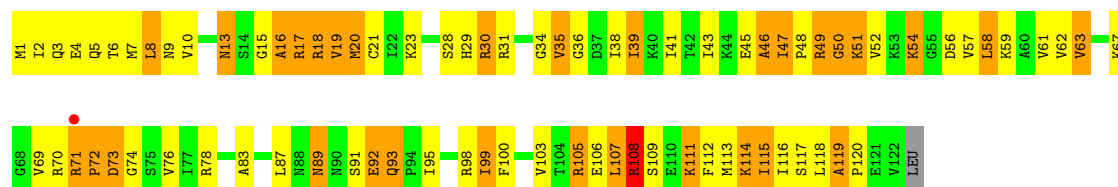
- Molecule 31: 50S ribosomal protein L13

Chain DJ:



- Molecule 32: 50S ribosomal protein L14

Chain BK:



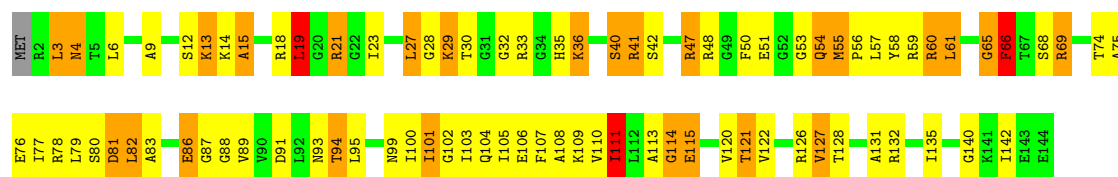
- Molecule 32: 50S ribosomal protein L14

Chain DK:



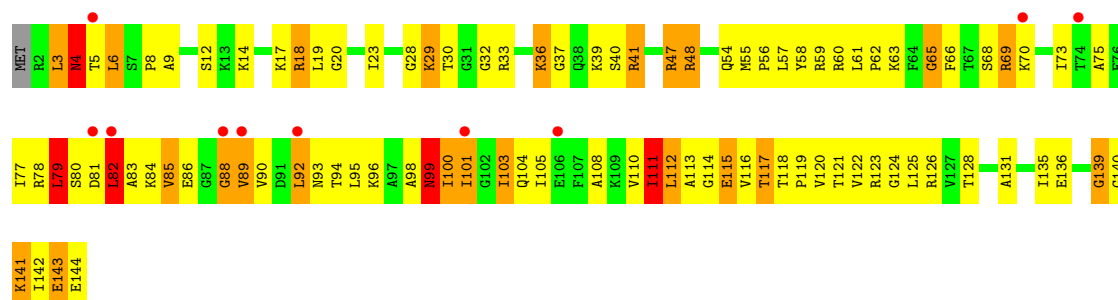
- Molecule 33: 50S ribosomal protein L15

Chain BL:



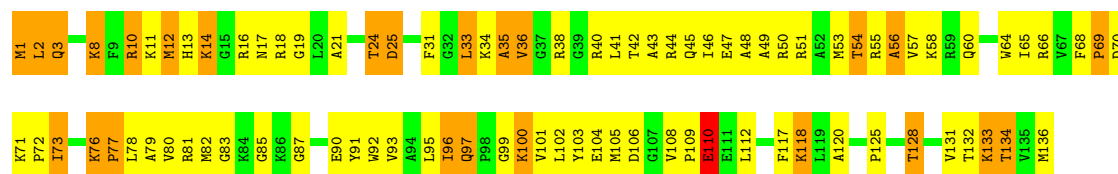
- Molecule 33: 50S ribosomal protein L15

Chain DL:



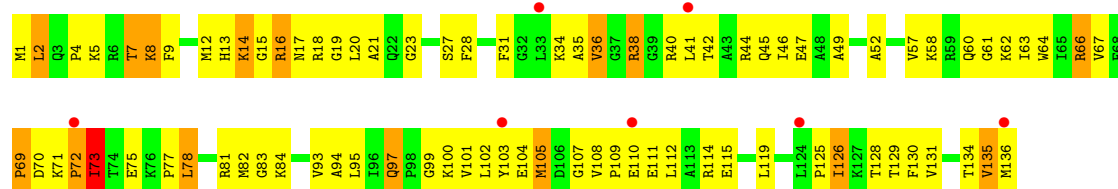
- Molecule 34: 50S ribosomal protein L16

Chain BM:



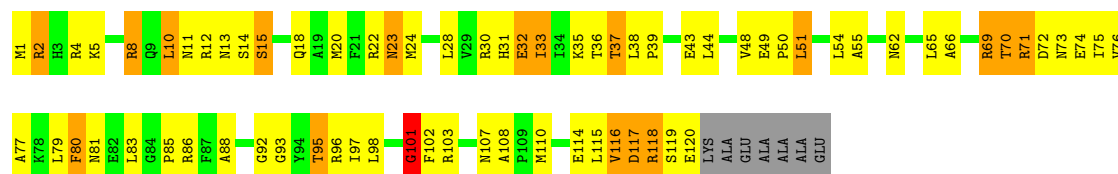
- Molecule 34: 50S ribosomal protein L16

Chain DM:



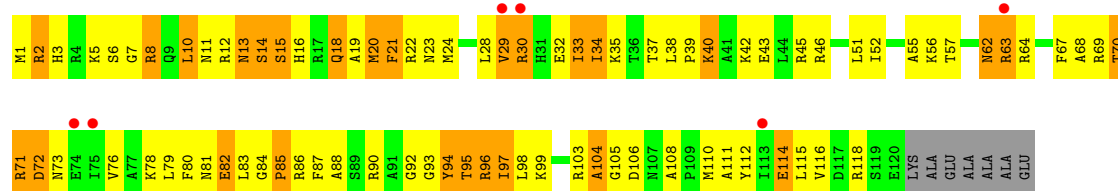
- Molecule 35: 50S ribosomal protein L17

Chain BN:



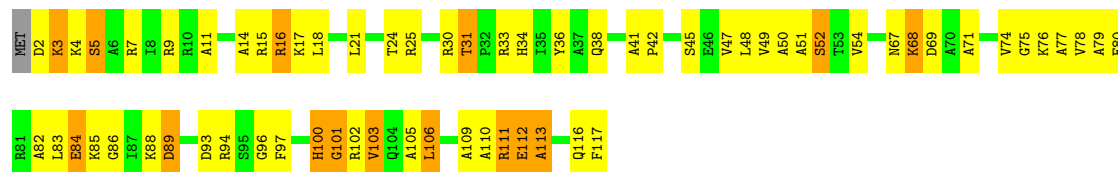
- Molecule 35: 50S ribosomal protein L17

Chain DN:



- Molecule 36: 50S ribosomal protein L18

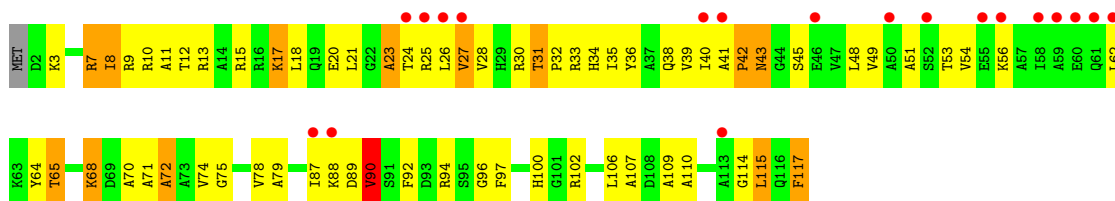
Chain BO:



- Molecule 36: 50S ribosomal protein L18

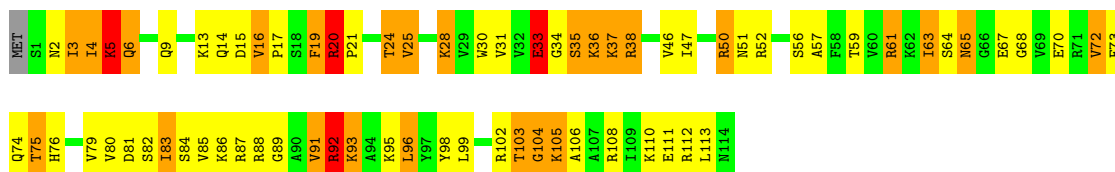
Chain DO:





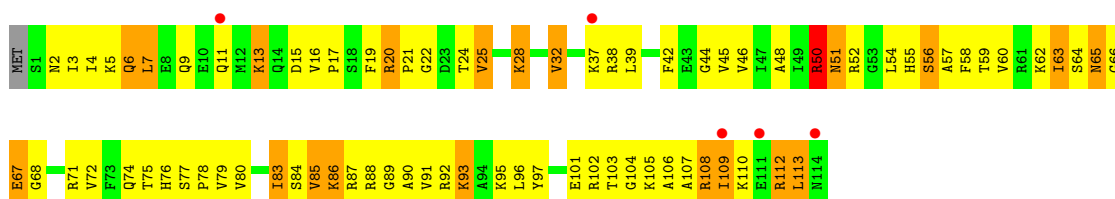
• Molecule 37: 50S ribosomal protein L19

Chain BP:



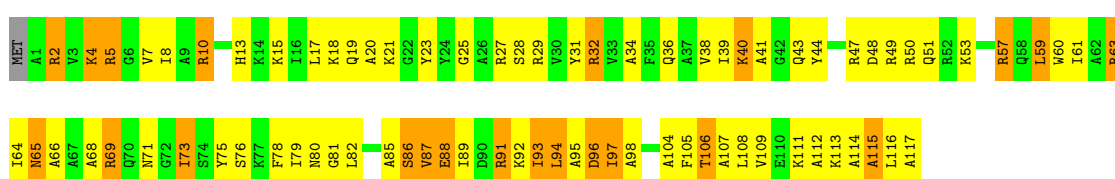
• Molecule 37: 50S ribosomal protein L19

Chain DP:



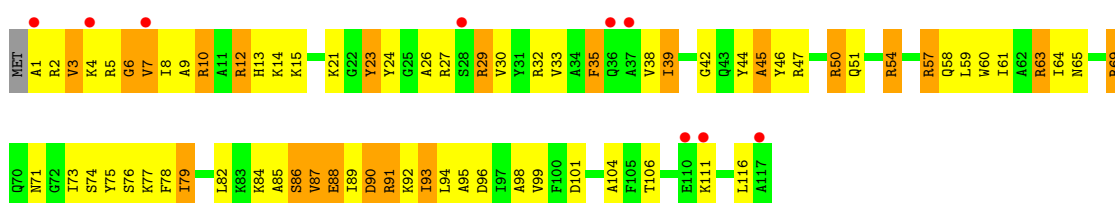
• Molecule 38: 50S ribosomal protein L20

Chain BQ:



• Molecule 38: 50S ribosomal protein L20

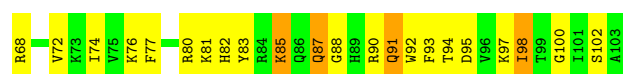
Chain DQ:



• Molecule 39: 50S ribosomal protein L21

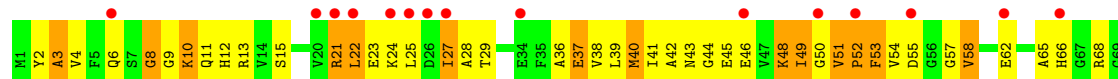
Chain BR:





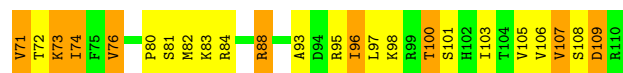
• Molecule 39: 50S ribosomal protein L21

Chain DR:



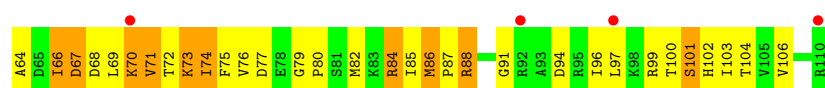
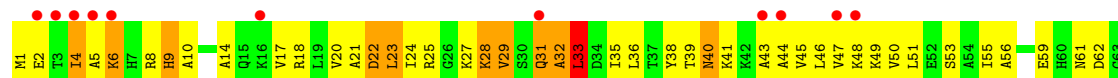
• Molecule 40: 50S ribosomal protein L22

Chain BS:



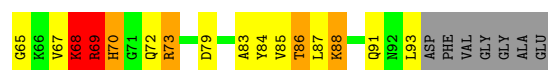
• Molecule 40: 50S ribosomal protein L22

Chain DS:



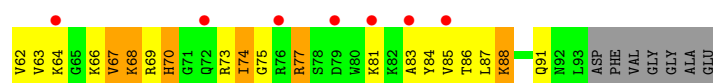
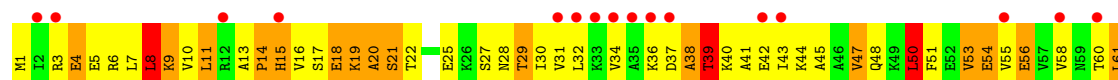
• Molecule 41: 50S ribosomal protein L23

Chain BT:



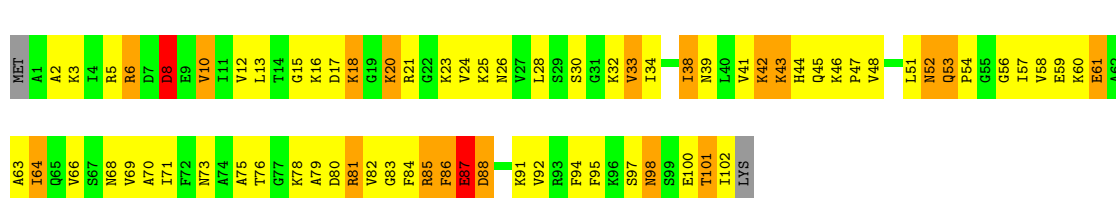
• Molecule 41: 50S ribosomal protein L23

Chain DT:



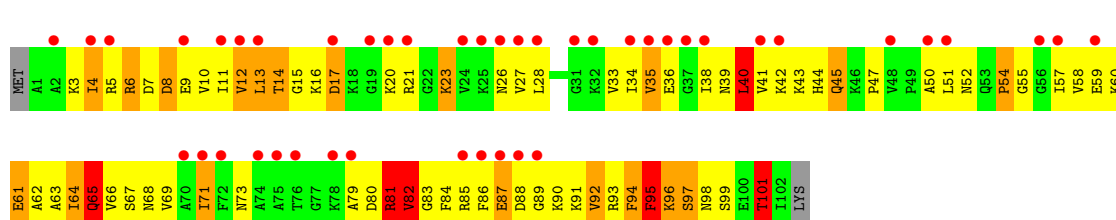
- Molecule 42: 50S ribosomal protein L24

Chain BU:



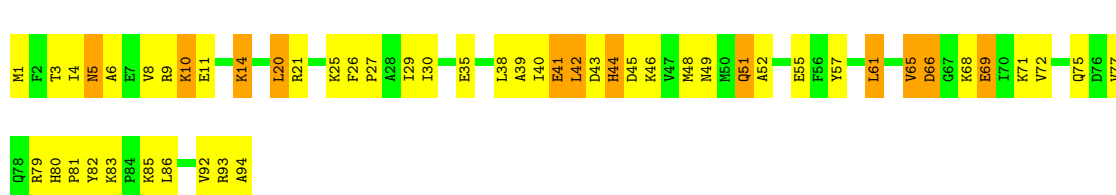
- Molecule 42: 50S ribosomal protein L24

Chain DU:



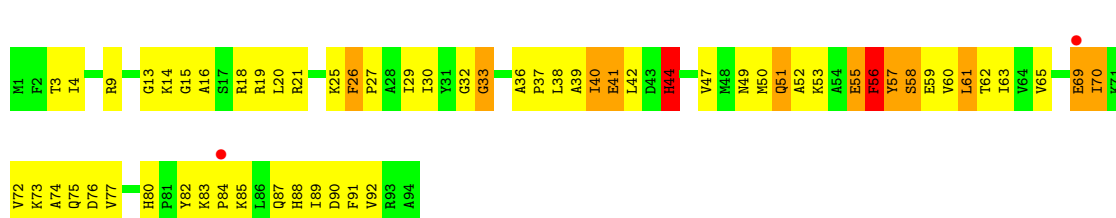
- Molecule 43: 50S ribosomal protein L25

Chain BV:



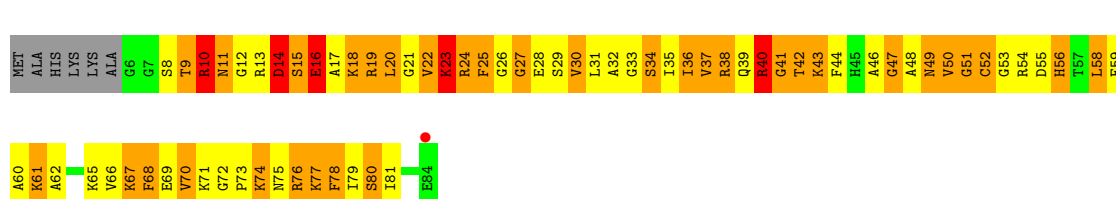
- Molecule 43: 50S ribosomal protein L25

Chain DV:



- Molecule 44: 50S ribosomal protein L27

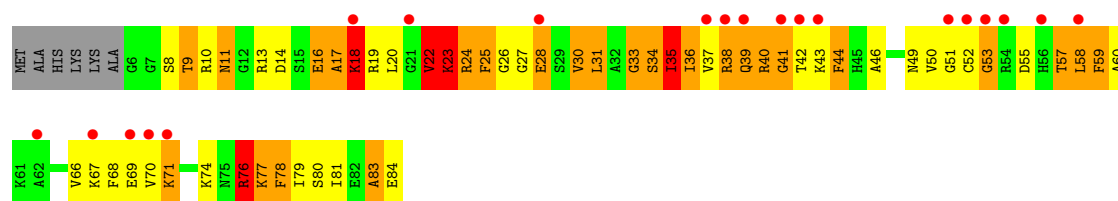
Chain BW:



- Molecule 44: 50S ribosomal protein L27

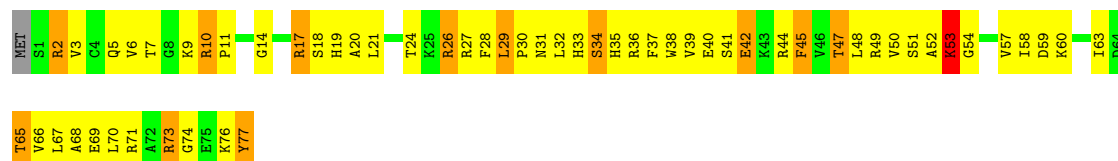
Chain DW:





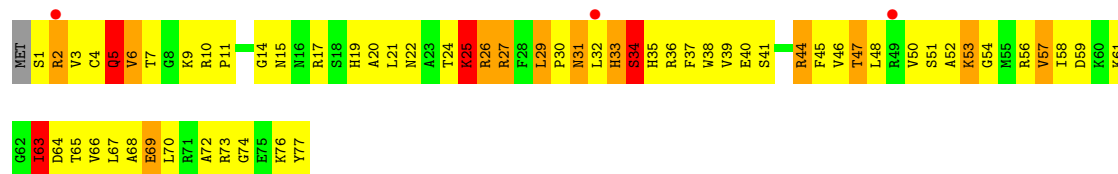
- Molecule 45: 50S ribosomal protein L28

Chain BX:



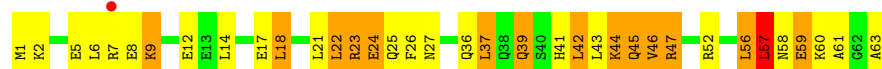
- Molecule 45: 50S ribosomal protein L28

Chain DX:



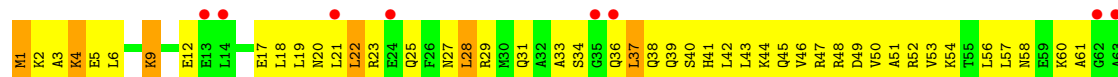
- Molecule 46: 50S ribosomal protein L29

Chain BY:



- Molecule 46: 50S ribosomal protein L29

Chain DY:



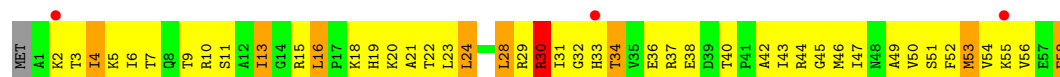
- Molecule 47: 50S ribosomal protein L30

Chain BZ:



- Molecule 47: 50S ribosomal protein L30

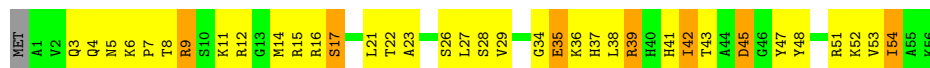
Chain DZ:





- Molecule 48: 50S ribosomal protein L32

Chain B0:



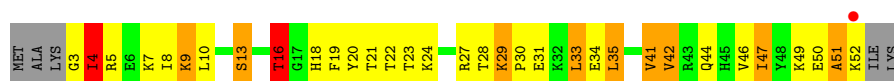
- Molecule 48: 50S ribosomal protein L32

Chain D0:



- Molecule 49: 50S ribosomal protein L33

Chain B1:



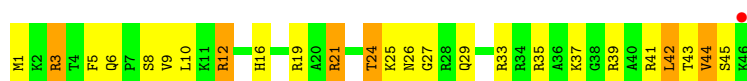
- Molecule 49: 50S ribosomal protein L33

Chain D1:



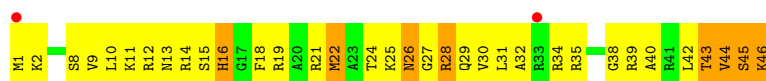
- Molecule 50: 50S ribosomal protein L34

Chain B2:



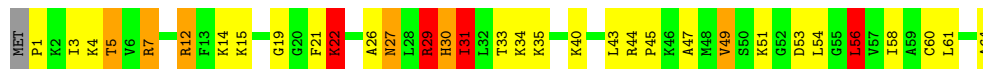
- Molecule 50: 50S ribosomal protein L34

Chain D2:



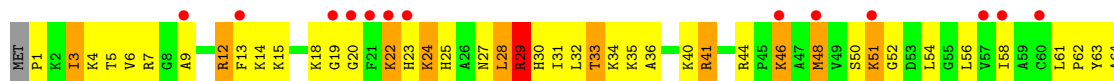
- Molecule 51: 50S ribosomal protein L35

Chain B3:

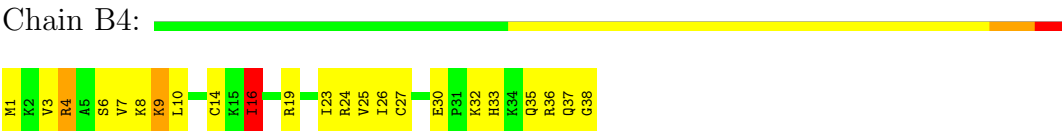


- Molecule 51: 50S ribosomal protein L35

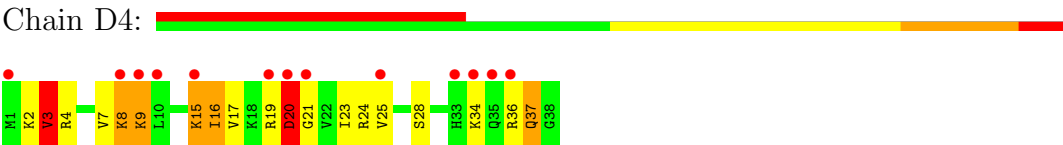
Chain D3:



- Molecule 52: 50S ribosomal protein L36



- Molecule 52: 50S ribosomal protein L36



## 4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, $\alpha$ , $\beta$ , $\gamma$	210.76Å 433.27Å 618.86Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	69.78 – 3.30 69.78 – 3.10	Depositor EDS
% Data completeness (in resolution range)	97.8 (69.78-3.30) 95.9 (69.78-3.10)	Depositor EDS
$R_{merge}$	0.11	Depositor
$R_{sym}$	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ <sup>1</sup>	1.51 (at 3.13Å)	Xtriage
Refinement program	PHENIX (phenix.refine: dev_501)	Depositor
R, $R_{free}$	0.187 , 0.244 0.216 , 0.265	Depositor DCC
$R_{free}$ test set	19581 reflections (2.06%)	DCC
Wilson B-factor (Å <sup>2</sup> )	68.1	Xtriage
Anisotropy	0.435	Xtriage
Bulk solvent $k_{sol}$ (e/Å <sup>3</sup> ), $B_{sol}$ (Å <sup>2</sup> )	0.24 , 53.4	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 971020 reflections	Xtriage
$F_o, F_c$ correlation	0.93	EDS
Total number of atoms	284464	wwPDB-VP
Average B, all atoms (Å <sup>2</sup> )	117.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.42% of the height of the origin peak. No significant pseudotranslation is detected.*

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

## 5 Model quality ⓘ

### 5.1 Standard geometry ⓘ

Bond lengths and bond angles in the following residue types are not validated in this section: ZN, EM1, 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	AA	0.43	0/36834	0.82	31/57462 (0.1%)
1	CA	0.39	0/36762	0.80	29/57350 (0.1%)
2	AB	0.30	0/1735	0.55	0/2338
2	CB	0.26	0/1735	0.49	0/2338
3	AC	0.30	0/1651	0.53	1/2225 (0.0%)
3	CC	0.26	0/1651	0.48	0/2225
4	AD	0.32	0/1665	0.54	0/2227
4	CD	0.40	0/1665	0.63	0/2227
5	AE	0.38	0/1118	0.63	0/1504
5	CE	0.35	0/1118	0.60	0/1504
6	AF	0.31	0/835	0.51	0/1128
6	CF	0.30	0/835	0.54	0/1128
7	AG	0.27	0/1195	0.47	0/1602
7	CG	0.25	0/1187	0.48	0/1591
8	AH	0.35	0/989	0.56	0/1326
8	CH	0.30	0/989	0.51	0/1326
9	AI	0.27	0/1034	0.51	0/1375
9	CI	0.26	0/1034	0.48	0/1375
10	AJ	0.30	0/796	0.52	0/1077
10	CJ	0.26	0/796	0.50	0/1077
11	AK	0.29	0/893	0.54	0/1205
11	CK	0.29	0/893	0.55	0/1205
12	AL	0.35	0/969	0.67	0/1300
12	CL	0.34	0/969	0.58	0/1300
13	AM	0.26	0/892	0.50	0/1193
13	CM	0.22	0/884	0.44	0/1181
14	AN	0.29	0/785	0.51	0/1043
14	CN	0.23	0/746	0.42	0/990
15	AO	0.31	0/722	0.49	0/964
15	CO	0.27	0/722	0.46	0/964
16	AP	0.29	0/659	0.51	0/884
16	CP	0.31	0/648	0.53	0/870

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
17	AQ	0.39	0/657	0.63	0/881
17	CQ	0.32	0/657	0.53	0/881
18	AR	0.30	0/462	0.52	0/621
18	CR	0.35	0/462	0.50	0/621
19	AS	0.26	0/652	0.48	0/877
19	CS	0.22	0/652	0.45	0/877
20	AT	0.38	0/671	0.58	0/888
20	CT	0.27	0/671	0.52	0/888
21	AU	0.33	0/430	0.50	0/570
21	CU	0.38	0/430	0.64	0/570
22	BA	0.73	7/68626 (0.0%)	1.08	288/107056 (0.3%)
22	DA	0.38	0/68314	0.83	60/106569 (0.1%)
23	BB	0.64	0/2828	0.94	1/4410 (0.0%)
23	DB	0.30	0/2803	0.76	1/4371 (0.0%)
24	BC	0.47	0/2121	0.72	1/2852 (0.0%)
24	DC	0.32	0/2121	0.55	0/2852
25	BD	0.56	0/1586	0.80	1/2134 (0.0%)
25	DD	0.31	0/1586	0.57	0/2134
26	BE	0.43	0/1571	0.66	0/2113
26	DE	0.27	0/1571	0.51	0/2113
27	BF	0.32	0/1434	0.53	0/1926
27	DF	0.24	0/1444	0.50	0/1937
28	BG	0.40	0/1343	0.65	0/1816
28	DG	0.24	0/1343	0.50	0/1816
29	BH	0.32	0/1122	0.56	0/1515
29	DH	0.29	0/1122	0.52	0/1515
30	BI	0.23	0/1046	0.48	0/1410
30	DI	0.22	0/1046	0.47	0/1410
31	BJ	0.57	0/1152	0.82	1/1551 (0.1%)
31	DJ	0.29	0/1152	0.60	1/1551 (0.1%)
32	BK	0.54	0/947	0.80	0/1268
32	DK	0.34	0/947	0.58	0/1268
33	BL	0.44	0/1054	0.75	1/1403 (0.1%)
33	DL	0.28	0/1054	0.56	0/1403
34	BM	0.50	0/1093	0.71	0/1460
34	DM	0.29	0/1093	0.50	0/1460
35	BN	0.49	0/973	0.72	0/1301
35	DN	0.30	0/973	0.53	0/1301
36	BO	0.41	0/902	0.63	0/1209
36	DO	0.24	0/902	0.45	0/1209
37	BP	0.48	0/929	0.73	0/1242
37	DP	0.32	0/929	0.52	0/1242
38	BQ	0.58	0/960	0.75	0/1278

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
38	DQ	0.30	0/960	0.47	0/1278
39	BR	0.59	0/829	0.80	0/1107
39	DR	0.30	0/829	0.52	0/1107
40	BS	0.54	0/864	0.76	0/1156
40	DS	0.29	0/864	0.54	1/1156 (0.1%)
41	BT	0.47	0/744	0.72	0/994
41	DT	0.26	0/744	0.54	0/994
42	BU	0.43	0/787	0.68	0/1051
42	DU	0.26	0/787	0.51	0/1051
43	BV	0.42	0/766	0.61	0/1025
43	DV	0.24	0/766	0.44	0/1025
44	BW	0.67	1/603 (0.2%)	0.96	2/797 (0.3%)
44	DW	0.29	0/603	0.54	0/797
45	BX	0.44	0/635	0.69	0/848
45	DX	0.28	0/635	0.58	0/848
46	BY	0.35	0/510	0.61	0/677
46	DY	0.23	0/510	0.50	0/677
47	BZ	0.56	0/453	0.77	0/605
47	DZ	0.28	0/453	0.53	0/605
48	B0	0.45	0/450	0.74	0/599
48	D0	0.30	0/450	0.52	0/599
49	B1	0.39	0/416	0.63	0/554
49	D1	0.27	0/416	0.49	0/554
50	B2	0.52	0/380	0.76	0/498
50	D2	0.30	0/380	0.54	0/498
51	B3	0.46	0/513	0.73	1/676 (0.1%)
51	D3	0.29	0/513	0.56	0/676
52	B4	0.52	0/303	0.73	0/397
52	D4	0.33	0/303	0.53	0/397
All	All	0.48	8/306703 (0.0%)	0.84	420/458519 (0.1%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
25	BD	0	1
31	BJ	0	1
35	BN	0	1
51	B3	0	1
All	All	0	4

All (8) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
22	BA	984	A	N9-C4	-8.71	1.32	1.37
22	BA	1142	A	N9-C4	-8.61	1.32	1.37
22	BA	1936	A	N9-C4	-6.89	1.33	1.37
44	BW	32	ALA	CA-CB	5.66	1.64	1.52
22	BA	984	A	C5-C6	-5.54	1.36	1.41
22	BA	804	A	N9-C4	-5.31	1.34	1.37
22	BA	528	A	N7-C5	-5.13	1.36	1.39
22	BA	1142	A	C5-C6	-5.01	1.36	1.41

All (420) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	974	G	C5-N7-C8	-11.14	98.73	104.30
22	BA	1142	A	C2-N3-C4	-10.75	105.23	110.60
22	BA	974	G	N7-C8-N9	10.43	118.31	113.10
22	BA	1990	C	C6-N1-C2	10.42	124.47	120.30
22	BA	560	C	N3-C4-C5	10.30	126.02	121.90
22	BA	783	A	C5-N7-C8	-10.18	98.81	103.90
22	BA	1278	C	C6-N1-C2	10.10	124.34	120.30
22	BA	1936	A	C2-N3-C4	-9.95	105.63	110.60
22	BA	560	C	C6-N1-C2	9.94	124.28	120.30
22	BA	2055	C	C6-N1-C2	9.74	124.20	120.30
22	BA	783	A	N7-C8-N9	9.70	118.65	113.80
22	BA	698	C	C6-N1-C2	9.39	124.06	120.30
22	BA	2250	G	C5-N7-C8	-9.37	99.61	104.30
22	BA	974	G	C4-C5-N7	9.35	114.54	110.80
22	BA	783	A	N1-C6-N6	9.20	124.12	118.60
22	BA	984	A	C2-N3-C4	-9.20	106.00	110.60
22	BA	2815	C	C6-N1-C2	9.19	123.98	120.30
22	BA	984	A	C5-N7-C8	-8.99	99.40	103.90
22	BA	2499	C	N1-C2-O2	-8.96	113.53	118.90
22	BA	740	C	C6-N1-C2	8.87	123.85	120.30
22	BA	2250	G	C4-C5-N7	8.76	114.30	110.80
22	BA	2773	C	C6-N1-C2	8.72	123.79	120.30
22	BA	2606	C	C6-N1-C2	8.56	123.73	120.30
22	BA	1790	C	C6-N1-C2	8.45	123.68	120.30
22	BA	1997	C	C6-N1-C2	8.31	123.62	120.30
22	BA	984	A	N1-C6-N6	8.26	123.55	118.60
22	BA	1142	A	N3-C4-C5	8.17	132.52	126.80
22	BA	1790	C	N3-C4-C5	8.12	125.15	121.90
1	CA	765	G	C4-N9-C1'	8.08	137.01	126.50
22	BA	951	C	C6-N1-C2	8.02	123.51	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	783	A	C4-C5-N7	7.94	114.67	110.70
22	BA	1779	U	C5-C6-N1	-7.75	118.83	122.70
22	BA	528	A	N7-C8-N9	7.71	117.65	113.80
1	CA	210	C	C2-N1-C1'	7.69	127.25	118.80
22	BA	2606	C	N3-C4-C5	7.68	124.97	121.90
1	CA	251	G	C4-N9-C1'	7.65	136.45	126.50
22	BA	787	C	C6-N1-C2	7.65	123.36	120.30
22	BA	786	C	N3-C4-C5	7.61	124.94	121.90
1	AA	365	U	C5-C6-N1	-7.55	118.92	122.70
22	BA	2870	C	C6-N1-C2	7.41	123.27	120.30
22	BA	686	U	C2-N1-C1'	-7.28	108.97	117.70
22	BA	2806	C	C6-N1-C2	7.25	123.20	120.30
22	BA	2501	C	C2-N1-C1'	-7.25	110.83	118.80
22	BA	2815	C	C5-C6-N1	-7.24	117.38	121.00
1	CA	381	C	C2-N1-C1'	7.24	126.76	118.80
22	BA	2527	C	C6-N1-C2	7.23	123.19	120.30
22	BA	2419	U	C5-C6-N1	-7.23	119.08	122.70
22	BA	1200	C	C6-N1-C2	7.23	123.19	120.30
22	BA	2000	C	C6-N1-C2	7.20	123.18	120.30
22	BA	783	A	C6-C5-N7	-7.18	127.27	132.30
22	BA	2250	G	N7-C8-N9	7.14	116.67	113.10
22	BA	2586	U	C5-C6-N1	7.14	126.27	122.70
22	BA	528	A	C5-N7-C8	-7.08	100.36	103.90
22	BA	736	C	C6-N1-C2	7.08	123.13	120.30
22	BA	984	A	C4-C5-N7	7.06	114.23	110.70
22	BA	705	A	N1-C6-N6	7.05	122.83	118.60
22	BA	1962	C	N1-C2-O2	-7.04	114.67	118.90
22	BA	2606	C	C2-N3-C4	-7.04	116.38	119.90
22	BA	2274	A	C8-N9-C4	7.03	108.61	105.80
22	BA	528	A	C8-N9-C4	-6.98	103.01	105.80
22	BA	1694	C	C6-N1-C2	6.97	123.09	120.30
22	BA	740	C	N3-C4-C5	6.96	124.69	121.90
22	BA	786	C	C6-N1-C2	6.96	123.09	120.30
22	BA	783	A	C8-N9-C4	-6.96	103.02	105.80
1	AA	733	G	C4-N9-C1'	-6.95	117.46	126.50
22	BA	2055	C	C5-C6-N1	-6.92	117.54	121.00
1	CA	251	G	C8-N9-C1'	-6.92	118.01	127.00
1	AA	1484	C	C6-N1-C2	6.91	123.06	120.30
22	BA	128	C	C6-N1-C2	6.89	123.06	120.30
22	BA	2606	C	C5-C6-N1	-6.87	117.56	121.00
1	CA	765	G	C8-N9-C1'	-6.80	118.15	127.00
22	BA	974	G	C8-N9-C4	-6.79	103.68	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	1656	C	N3-C4-C5	6.79	124.61	121.90
22	BA	561	G	N3-C4-N9	-6.78	121.93	126.00
22	BA	1790	C	C2-N3-C4	-6.78	116.51	119.90
22	BA	736	C	N3-C4-C5	6.78	124.61	121.90
22	BA	2853	C	C6-N1-C2	6.76	123.01	120.30
22	BA	732	C	C6-N1-C2	6.76	123.00	120.30
22	BA	2250	G	N1-C6-O6	6.72	123.93	119.90
22	BA	1348	C	C6-N1-C2	6.69	122.97	120.30
22	BA	1278	C	C5-C6-N1	-6.67	117.67	121.00
22	BA	2250	G	C2-N3-C4	-6.60	108.60	111.90
1	AA	1053	G	C4-N9-C1'	-6.59	117.94	126.50
22	BA	1142	A	N1-C6-N6	6.58	122.55	118.60
22	BA	835	C	N3-C4-C5	6.57	124.53	121.90
22	DA	335	C	C2-N1-C1'	6.54	125.99	118.80
22	DA	1428	C	C2-N1-C1'	-6.53	111.62	118.80
22	BA	2874	C	C6-N1-C2	6.48	122.89	120.30
22	BA	794	A	C8-N9-C4	6.48	108.39	105.80
22	BA	2843	G	C8-N9-C4	6.46	108.98	106.40
22	BA	1936	A	N1-C6-N6	6.44	122.47	118.60
31	DJ	25	LEU	CA-CB-CG	6.38	129.97	115.30
22	BA	1828	G	C4-C5-N7	-6.36	108.25	110.80
22	BA	743	A	C8-N9-C4	6.35	108.34	105.80
22	BA	1152	C	N1-C2-O2	-6.34	115.09	118.90
22	BA	2503	A	C2-N3-C4	6.34	113.77	110.60
22	BA	2630	G	C8-N9-C4	6.34	108.94	106.40
22	BA	1830	C	C6-N1-C2	6.34	122.83	120.30
1	AA	4	U	C2-N1-C1'	6.33	125.30	117.70
22	BA	853	C	C6-N1-C2	6.29	122.81	120.30
1	CA	210	C	C6-N1-C1'	-6.28	113.27	120.80
22	BA	742	A	N1-C6-N6	6.26	122.36	118.60
22	BA	2283	C	N1-C2-O2	-6.25	115.15	118.90
22	DA	740	C	C6-N1-C2	6.25	122.80	120.30
22	BA	2769	U	C5-C6-N1	-6.21	119.59	122.70
22	BA	1962	C	N3-C2-O2	6.21	126.24	121.90
22	BA	686	U	C5-C6-N1	-6.20	119.60	122.70
22	BA	229	C	C6-N1-C1'	-6.18	113.39	120.80
22	BA	974	G	C4-N9-C1'	6.18	134.53	126.50
22	DA	2405	G	C4-N9-C1'	6.17	134.53	126.50
22	BA	128	C	N3-C2-O2	6.17	126.22	121.90
22	BA	494	G	C8-N9-C4	6.15	108.86	106.40
22	DA	776	G	C4-N9-C1'	6.14	134.48	126.50
22	BA	2250	G	N3-C4-C5	6.13	131.67	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	1022	G	N9-C4-C5	6.12	107.85	105.40
33	BL	19	LEU	CA-CB-CG	6.12	129.37	115.30
22	BA	229	C	C2-N1-C1'	6.11	125.52	118.80
31	BJ	82	GLY	N-CA-C	-6.10	97.85	113.10
22	BA	2609	U	C2-N1-C1'	-6.09	110.39	117.70
22	BA	2501	C	C6-N1-C1'	6.08	128.09	120.80
1	CA	1297	G	C4-N9-C1'	-6.07	118.61	126.50
22	BA	673	C	C6-N1-C2	6.07	122.73	120.30
22	BA	378	C	C6-N1-C2	6.06	122.72	120.30
22	BA	815	C	C6-N1-C2	6.06	122.72	120.30
24	BC	109	LEU	CA-CB-CG	6.05	129.23	115.30
22	BA	1663	G	C8-N9-C4	6.04	108.82	106.40
22	BA	2250	G	C6-C5-N7	-6.04	126.78	130.40
22	BA	1520	U	C6-N1-C2	6.03	124.62	121.00
22	BA	561	G	C5-N7-C8	-6.02	101.29	104.30
22	BA	2870	C	N3-C4-C5	6.02	124.31	121.90
22	BA	1618	A	N1-C6-N6	-6.02	114.99	118.60
22	BA	1994	C	C6-N1-C2	6.02	122.71	120.30
22	BA	1997	C	C2-N1-C1'	-6.02	112.18	118.80
22	BA	1936	A	C5-N7-C8	-6.01	100.89	103.90
22	BA	2626	C	C6-N1-C2	5.99	122.70	120.30
22	DA	828	U	C2-N1-C1'	5.99	124.89	117.70
22	BA	1604	C	C6-N1-C2	5.98	122.69	120.30
22	BA	1760	C	C6-N1-C2	5.97	122.69	120.30
22	BA	742	A	C8-N9-C4	5.97	108.19	105.80
22	BA	2419	U	C6-N1-C2	5.93	124.56	121.00
22	BA	1452	G	C5-N7-C8	-5.92	101.34	104.30
1	AA	244	U	N3-C2-O2	-5.92	118.06	122.20
22	BA	1168	G	N3-C4-N9	5.92	129.55	126.00
22	BA	1790	C	C5-C6-N1	-5.91	118.05	121.00
22	BA	560	C	N3-C4-N4	-5.91	113.86	118.00
22	BA	2286	G	C4-C5-N7	5.90	113.16	110.80
1	CA	381	C	C5-C6-N1	5.90	123.95	121.00
22	BA	846	U	C2-N1-C1'	5.89	124.77	117.70
22	BA	2023	C	C6-N1-C2	5.89	122.66	120.30
22	DA	1799	G	N3-C4-C5	-5.89	125.66	128.60
22	BA	1573	G	C8-N9-C4	5.88	108.75	106.40
1	AA	733	G	C8-N9-C1'	5.88	134.64	127.00
22	BA	2815	C	C2-N1-C1'	-5.88	112.34	118.80
22	BA	1245	G	C8-N9-C4	5.87	108.75	106.40
22	BA	1828	G	C5-C6-O6	5.86	132.12	128.60
22	BA	687	C	C6-N1-C2	5.86	122.64	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	899	C	C6-N1-C2	5.84	122.64	120.30
22	BA	253	C	C6-N1-C2	5.84	122.64	120.30
22	BA	740	C	N3-C2-O2	5.84	125.99	121.90
22	DA	2620	C	C6-N1-C2	5.84	122.64	120.30
22	BA	1776	G	N1-C6-O6	5.83	123.40	119.90
22	BA	2385	C	N1-C2-O2	-5.83	115.41	118.90
1	AA	108	G	N7-C8-N9	5.82	116.01	113.10
22	BA	61	C	C6-N1-C2	5.81	122.62	120.30
1	CA	328	C	C6-N1-C2	-5.80	117.98	120.30
22	BA	2286	G	C5-N7-C8	-5.78	101.41	104.30
22	BA	1276	A	N1-C6-N6	5.78	122.07	118.60
22	BA	595	C	C6-N1-C2	5.78	122.61	120.30
44	BW	20	LEU	CB-CG-CD2	5.77	120.81	111.00
22	BA	698	C	C5-C6-N1	-5.75	118.12	121.00
1	AA	1496	C	C6-N1-C2	5.75	122.60	120.30
22	BA	593	U	C5-C6-N1	-5.74	119.83	122.70
23	BB	92	C	C6-N1-C2	5.74	122.60	120.30
1	CA	1297	G	C8-N9-C1'	5.73	134.45	127.00
22	DA	1255	U	C2-N1-C1'	5.73	124.58	117.70
1	AA	1451	U	C2-N1-C1'	5.73	124.57	117.70
22	BA	2286	G	N7-C8-N9	5.72	115.96	113.10
22	BA	1764	C	C6-N1-C2	5.72	122.59	120.30
22	BA	528	A	N1-C6-N6	5.72	122.03	118.60
22	BA	732	C	C5-C6-N1	-5.71	118.14	121.00
22	BA	2830	C	C6-N1-C2	5.71	122.58	120.30
22	BA	1836	C	C6-N1-C2	5.70	122.58	120.30
22	DA	774	G	C4-N9-C1'	-5.70	119.09	126.50
22	BA	1771	C	N1-C2-O2	-5.70	115.48	118.90
22	BA	2275	C	N1-C2-O2	5.69	122.31	118.90
22	BA	1072	C	C2-N1-C1'	5.69	125.06	118.80
1	CA	765	G	N7-C8-N9	5.68	115.94	113.10
22	DA	757	G	N3-C4-C5	5.68	131.44	128.60
22	BA	2055	C	N1-C2-O2	-5.68	115.49	118.90
1	CA	717	U	C2-N1-C1'	5.67	124.50	117.70
22	BA	31	C	C6-N1-C2	5.66	122.56	120.30
22	BA	128	C	N1-C2-O2	-5.66	115.50	118.90
22	BA	854	C	C6-N1-C2	5.66	122.56	120.30
22	BA	1229	C	N1-C2-O2	-5.65	115.51	118.90
22	BA	1020	A	N1-C6-N6	5.64	121.99	118.60
22	BA	2645	G	C4-N9-C1'	5.64	133.84	126.50
22	BA	1142	A	N3-C4-N9	-5.64	122.89	127.40
22	BA	727	A	C8-N9-C4	5.63	108.05	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	783	A	C2-N3-C4	-5.63	107.78	110.60
22	BA	804	A	C8-N9-C4	5.62	108.05	105.80
22	BA	560	C	C2-N1-C1'	-5.62	112.61	118.80
22	BA	561	G	N3-C4-C5	5.62	131.41	128.60
22	DA	246	C	C6-N1-C2	5.62	122.55	120.30
22	BA	528	A	C6-C5-N7	-5.61	128.37	132.30
22	DA	1428	C	C6-N1-C1'	5.61	127.53	120.80
22	DA	2405	G	C8-N9-C1'	-5.61	119.70	127.00
22	BA	381	G	C8-N9-C4	5.61	108.64	106.40
22	BA	1936	A	C4-C5-N7	5.60	113.50	110.70
22	BA	984	A	N3-C4-C5	5.60	130.72	126.80
22	BA	2844	G	C8-N9-C4	5.59	108.64	106.40
22	BA	731	C	C6-N1-C2	5.59	122.53	120.30
22	BA	1990	C	N3-C4-C5	5.58	124.13	121.90
22	BA	2845	U	C5-C6-N1	-5.58	119.91	122.70
22	BA	2042	A	N1-C6-N6	5.58	121.94	118.60
22	BA	2499	C	N3-C2-O2	5.57	125.80	121.90
22	DA	475	C	C2-N1-C1'	5.57	124.92	118.80
22	BA	2774	C	N3-C4-C5	5.55	124.12	121.90
22	BA	984	A	N7-C8-N9	5.55	116.57	113.80
22	BA	740	C	N1-C2-O2	-5.55	115.57	118.90
22	BA	1168	G	N9-C4-C5	-5.54	103.18	105.40
22	DA	1021	A	C3'-C2'-C1'	5.54	105.93	101.50
22	BA	1278	C	N3-C4-C5	5.53	124.11	121.90
22	BA	2032	G	N1-C6-O6	5.53	123.22	119.90
1	CA	251	G	C6-C5-N7	-5.53	127.08	130.40
1	CA	765	G	C6-C5-N7	-5.51	127.09	130.40
22	BA	556	A	N1-C6-N6	5.51	121.91	118.60
22	BA	698	C	C2-N1-C1'	-5.50	112.75	118.80
22	BA	1990	C	C5-C6-N1	-5.50	118.25	121.00
22	DA	139	U	C2-N1-C1'	5.50	124.30	117.70
22	BA	2282	G	N3-C4-C5	-5.49	125.85	128.60
22	DA	1568	G	C8-N9-C1'	-5.48	119.87	127.00
22	BA	2586	U	C4-C5-C6	-5.48	116.41	119.70
22	BA	381	G	N3-C4-C5	5.48	131.34	128.60
22	BA	1168	G	C8-N9-C1'	-5.47	119.89	127.00
1	AA	1053	G	N3-C4-N9	-5.47	122.72	126.00
22	BA	984	A	C6-C5-N7	-5.47	128.47	132.30
22	BA	832	U	C5-C6-N1	-5.45	119.97	122.70
22	BA	2658	C	C6-N1-C2	5.45	122.48	120.30
22	BA	2055	C	C2-N1-C1'	-5.44	112.82	118.80
22	BA	974	G	N3-C4-C5	5.44	131.32	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	1760	C	C5-C6-N1	-5.43	118.28	121.00
22	BA	1999	C	C6-N1-C2	5.43	122.47	120.30
1	AA	1053	G	N3-C4-C5	5.43	131.32	128.60
22	DA	2310	C	C3'-C2'-C1'	5.43	105.84	101.50
22	BA	1399	C	C6-N1-C2	5.41	122.47	120.30
40	DS	97	LEU	CA-CB-CG	5.41	127.75	115.30
22	BA	2536	G	C8-N9-C4	5.41	108.56	106.40
22	BA	1351	C	C2-N1-C1'	-5.40	112.86	118.80
22	BA	507	A	C3'-C2'-C1'	5.40	105.82	101.50
1	AA	733	G	N3-C4-C5	5.38	131.29	128.60
22	BA	1452	G	N7-C8-N9	5.38	115.79	113.10
22	BA	2815	C	N3-C4-C5	5.37	124.05	121.90
1	AA	414	A	C3'-C2'-C1'	5.37	105.80	101.50
22	BA	1156	A	N1-C6-N6	5.37	121.82	118.60
22	BA	1977	A	C8-N9-C4	5.37	107.95	105.80
22	BA	1706	C	C6-N1-C1'	-5.37	114.36	120.80
22	BA	1994	C	N3-C4-C5	5.37	124.05	121.90
22	DA	49	A	C3'-C2'-C1'	5.37	105.80	101.50
1	AA	733	G	N3-C4-N9	-5.36	122.78	126.00
22	BA	1785	A	N1-C6-N6	5.36	121.82	118.60
22	DA	476	G	C4-N9-C1'	5.36	133.47	126.50
22	DA	671	C	C2-N1-C1'	5.36	124.69	118.80
22	DA	1455	G	C3'-C2'-C1'	5.36	105.78	101.50
1	AA	1323	G	C3'-C2'-C1'	5.35	105.78	101.50
22	BA	727	A	N1-C6-N6	5.35	121.81	118.60
22	BA	37	C	C6-N1-C2	5.34	122.44	120.30
22	BA	2012	G	N3-C4-N9	5.34	129.20	126.00
1	CA	239	U	C5-C6-N1	5.34	125.37	122.70
22	DA	335	C	C6-N1-C1'	-5.34	114.39	120.80
22	BA	978	G	C8-N9-C4	5.33	108.53	106.40
22	BA	1638	C	C6-N1-C2	5.33	122.43	120.30
1	AA	198	G	C3'-C2'-C1'	5.33	105.77	101.50
22	BA	981	A	C8-N9-C4	5.33	107.93	105.80
1	CA	1381	U	C3'-C2'-C1'	5.32	105.76	101.50
22	BA	686	U	C6-N1-C2	5.31	124.19	121.00
22	BA	2385	C	C6-N1-C2	5.31	122.42	120.30
22	BA	1816	C	C3'-C2'-C1'	5.30	105.74	101.50
22	BA	834	G	N1-C6-O6	5.30	123.08	119.90
22	BA	1858	A	C3'-C2'-C1'	5.30	105.74	101.50
22	BA	2555	U	C2-N1-C1'	-5.30	111.34	117.70
22	BA	1706	C	C2-N1-C1'	5.29	124.62	118.80
22	BA	2815	C	C2-N3-C4	-5.29	117.25	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	AA	1287	A	C3'-C2'-C1'	5.29	105.73	101.50
22	BA	60	G	N3-C4-C5	-5.29	125.95	128.60
22	BA	2774	C	C6-N1-C2	5.29	122.42	120.30
22	BA	974	G	C6-C5-N7	-5.28	127.23	130.40
22	DA	2061	G	N1-C6-O6	5.28	123.07	119.90
1	AA	1303	C	C3'-C2'-C1'	5.28	105.72	101.50
22	DA	2347	C	C3'-C2'-C1'	5.28	105.72	101.50
1	CA	765	G	C8-N9-C4	-5.27	104.29	106.40
1	AA	1286	U	C2-N1-C1'	5.27	124.03	117.70
1	AA	1053	G	C8-N9-C1'	5.27	133.85	127.00
1	AA	1241	G	C3'-C2'-C1'	5.27	105.71	101.50
22	BA	973	A	C6-N1-C2	-5.26	115.44	118.60
22	BA	2274	A	N7-C8-N9	-5.26	111.17	113.80
22	DA	2682	A	C3'-C2'-C1'	5.26	105.71	101.50
22	BA	1936	A	N3-C4-C5	5.26	130.48	126.80
22	BA	2853	C	C5-C6-N1	-5.26	118.37	121.00
22	BA	1223	G	C4-N9-C1'	-5.25	119.68	126.50
1	CA	247	G	C3'-C2'-C1'	5.25	105.70	101.50
22	DA	389	G	C3'-C2'-C1'	5.25	105.70	101.50
3	AC	204	GLY	N-CA-C	5.24	126.21	113.10
22	BA	2762	C	C6-N1-C2	5.24	122.40	120.30
22	DA	412	A	C3'-C2'-C1'	5.24	105.69	101.50
22	BA	2773	C	N3-C4-C5	5.24	124.00	121.90
22	BA	650	C	C6-N1-C2	5.23	122.39	120.30
22	BA	1135	C	C6-N1-C2	5.23	122.39	120.30
22	BA	1666	G	N3-C4-C5	5.23	131.22	128.60
22	DA	1314	C	C2-N1-C1'	5.23	124.56	118.80
22	BA	1764	C	N1-C2-O2	-5.23	115.76	118.90
1	CA	519	C	C3'-C2'-C1'	5.23	105.68	101.50
22	BA	835	C	C6-N1-C2	5.23	122.39	120.30
22	BA	2749	A	C8-N9-C4	5.23	107.89	105.80
22	DA	1274	A	C3'-C2'-C1'	5.23	105.68	101.50
22	DA	73	A	C3'-C2'-C1'	5.22	105.68	101.50
22	DA	2615	U	C3'-C2'-C1'	5.22	105.67	101.50
22	DA	1648	U	C3'-C2'-C1'	5.21	105.67	101.50
1	CA	1348	U	C3'-C2'-C1'	5.21	105.67	101.50
22	DA	1555	G	C3'-C2'-C1'	5.21	105.67	101.50
22	DA	35	G	C3'-C2'-C1'	5.21	105.66	101.50
22	DA	1568	G	C4-N9-C1'	5.20	133.26	126.50
22	BA	2645	G	C6-C5-N7	-5.20	127.28	130.40
22	DA	2458	G	C4-N9-C1'	5.20	133.25	126.50
22	BA	2275	C	N3-C2-O2	-5.19	118.27	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	60	G	C8-N9-C4	-5.19	104.32	106.40
22	DA	1400	U	C3'-C2'-C1'	5.19	105.65	101.50
22	BA	783	A	C5-C6-N6	-5.17	119.56	123.70
22	BA	1150	C	C3'-C2'-C1'	5.17	105.63	101.50
22	BA	836	G	N1-C6-O6	5.16	123.00	119.90
22	BA	1983	G	N3-C4-C5	5.16	131.18	128.60
1	AA	1302	C	C2-N1-C1'	5.16	124.47	118.80
22	DA	1682	G	C3'-C2'-C1'	5.16	105.63	101.50
22	BA	2072	C	C6-N1-C2	5.15	122.36	120.30
22	DA	1612	C	C3'-C2'-C1'	5.15	105.62	101.50
22	BA	1123	C	C6-N1-C2	5.15	122.36	120.30
22	DA	990	A	C3'-C2'-C1'	5.14	105.61	101.50
22	BA	736	C	N3-C2-O2	5.14	125.50	121.90
1	AA	534	U	C3'-C2'-C1'	5.14	105.61	101.50
1	AA	1212	U	C2-N1-C1'	5.14	123.87	117.70
22	BA	1989	G	N9-C4-C5	-5.14	103.34	105.40
22	BA	1062	G	C3'-C2'-C1'	5.14	105.61	101.50
22	BA	2012	G	N9-C4-C5	-5.14	103.34	105.40
22	BA	561	G	N7-C8-N9	5.13	115.67	113.10
22	BA	2844	G	N9-C4-C5	-5.13	103.35	105.40
1	AA	87	C	C3'-C2'-C1'	5.13	105.60	101.50
1	AA	108	G	C8-N9-C4	-5.13	104.35	106.40
1	AA	175	C	C3'-C2'-C1'	5.13	105.60	101.50
1	CA	1138	G	C3'-C2'-C1'	5.13	105.60	101.50
22	DA	1915	U	C3'-C2'-C1'	5.12	105.60	101.50
22	BA	1997	C	C5-C6-N1	-5.12	118.44	121.00
22	DA	475	C	C6-N1-C1'	-5.12	114.65	120.80
22	DA	1695	G	C3'-C2'-C1'	5.12	105.60	101.50
22	BA	954	G	N3-C4-C5	5.12	131.16	128.60
1	CA	1160	G	C3'-C2'-C1'	5.12	105.60	101.50
1	CA	534	U	C3'-C2'-C1'	5.12	105.59	101.50
22	DA	1388	G	C3'-C2'-C1'	5.12	105.59	101.50
22	BA	1152	C	N3-C2-O2	5.11	125.48	121.90
22	BA	1288	G	N1-C6-O6	5.11	122.97	119.90
22	DA	1439	A	C4-C5-C6	5.11	119.56	117.00
22	BA	2286	G	C6-C5-N7	-5.11	127.33	130.40
1	AA	530	G	C4-N9-C1'	5.11	133.14	126.50
22	BA	794	A	N7-C8-N9	-5.11	111.25	113.80
22	DA	103	A	C3'-C2'-C1'	5.11	105.58	101.50
22	BA	761	A	N7-C8-N9	5.10	116.35	113.80
22	BA	1957	C	N3-C4-C5	5.10	123.94	121.90
1	CA	71	A	C3'-C2'-C1'	5.10	105.58	101.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	BA	919	U	C2-N1-C1'	5.10	123.82	117.70
22	BA	2699	C	C6-N1-C2	5.10	122.34	120.30
22	BA	743	A	N7-C8-N9	-5.09	111.25	113.80
51	B3	56	LEU	CA-CB-CG	5.09	127.02	115.30
1	CA	1282	C	C3'-C2'-C1'	5.09	105.57	101.50
22	DA	2656	U	C3'-C2'-C1'	5.09	105.57	101.50
22	BA	208	C	C6-N1-C2	5.08	122.33	120.30
22	BA	1987	A	C8-N9-C4	5.08	107.83	105.80
22	BA	2565	A	C8-N9-C4	5.08	107.83	105.80
22	BA	973	A	N1-C2-N3	5.08	131.84	129.30
22	BA	2503	A	C8-N9-C4	-5.08	103.77	105.80
22	DA	2777	G	C3'-C2'-C1'	5.08	105.56	101.50
22	BA	61	C	C5-C6-N1	-5.08	118.46	121.00
22	BA	736	C	N1-C2-O2	-5.08	115.85	118.90
22	BA	848	C	C6-N1-C2	5.07	122.33	120.30
22	DA	1489	C	C3'-C2'-C1'	5.07	105.56	101.50
22	BA	958	U	C3'-C2'-C1'	5.07	105.55	101.50
22	DA	1799	G	C4-N9-C1'	5.07	133.09	126.50
22	BA	586	A	N7-C8-N9	-5.06	111.27	113.80
22	DA	604	G	C3'-C2'-C1'	5.06	105.55	101.50
23	DB	41	G	C4-N9-C1'	5.06	133.08	126.50
22	BA	1655	A	C8-N9-C4	5.06	107.82	105.80
22	BA	2760	C	C6-N1-C2	5.06	122.32	120.30
22	DA	1789	A	C8-N9-C4	5.06	107.82	105.80
22	BA	906	U	C2-N1-C1'	-5.05	111.64	117.70
22	BA	2263	C	C5-C6-N1	-5.05	118.47	121.00
22	BA	1791	A	C8-N9-C4	5.05	107.82	105.80
22	BA	2830	C	N3-C4-C5	5.05	123.92	121.90
1	CA	381	C	C6-N1-C2	-5.05	118.28	120.30
22	BA	2045	C	C6-N1-C2	5.04	122.32	120.30
22	BA	2456	C	C6-N1-C2	5.04	122.32	120.30
1	CA	328	C	C5-C6-N1	5.04	123.52	121.00
22	DA	324	A	C3'-C2'-C1'	5.04	105.53	101.50
22	BA	1142	A	C5-N7-C8	-5.04	101.38	103.90
44	BW	43	LYS	CD-CE-NZ	-5.04	100.10	111.70
25	BD	10	GLY	N-CA-C	5.04	125.69	113.10
22	DA	2752	C	C3'-C2'-C1'	5.04	105.53	101.50
22	BA	1276	A	N9-C4-C5	-5.04	103.79	105.80
22	BA	2813	A	C8-N9-C4	5.04	107.81	105.80
22	DA	2727	A	C3'-C2'-C1'	5.03	105.53	101.50
22	BA	1651	G	C8-N9-C1'	-5.03	120.46	127.00
22	BA	1985	C	C5-C6-N1	-5.03	118.48	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	DA	1135	C	C3'-C2'-C1'	5.03	105.52	101.50
22	DA	14	A	C3'-C2'-C1'	5.02	105.52	101.50
22	DA	1313	U	N3-C2-O2	-5.02	118.69	122.20
1	AA	1282	C	C3'-C2'-C1'	5.02	105.51	101.50
22	BA	1758	U	C5-C6-N1	-5.02	120.19	122.70
22	BA	2773	C	C5-C6-N1	-5.02	118.49	121.00
22	BA	395	U	C5-C6-N1	-5.02	120.19	122.70
1	CA	72	A	C3'-C2'-C1'	5.02	105.51	101.50
22	BA	2592	G	N3-C2-N2	-5.01	116.39	119.90
22	BA	2840	C	C6-N1-C2	5.01	122.30	120.30
22	BA	776	G	C5-C6-N1	-5.01	109.00	111.50
22	BA	2815	C	N1-C2-O2	-5.00	115.90	118.90

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
31	BJ	110	PRO	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	AA	32895	0	16553	1244	0
1	CA	32831	0	16521	1591	0
2	AB	1704	0	1732	225	0
2	CB	1704	0	1732	160	0
3	AC	1624	0	1699	109	0
3	CC	1624	0	1699	125	0
4	AD	1643	0	1710	153	0
4	CD	1643	0	1710	156	0
5	AE	1105	0	1148	135	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
5	CE	1105	0	1148	106	0
6	AF	817	0	808	83	0
6	CF	817	0	808	85	0
7	AG	1181	0	1240	93	0
7	CG	1174	0	1230	130	0
8	AH	979	0	1034	86	0
8	CH	979	0	1034	97	0
9	AI	1022	0	1070	99	0
9	CI	1022	0	1070	127	0
10	AJ	786	0	828	93	0
10	CJ	786	0	828	96	0
11	AK	877	0	887	83	0
11	CK	877	0	887	74	0
12	AL	955	0	1019	88	0
12	CL	955	0	1019	86	0
13	AM	883	0	944	67	0
13	CM	876	0	937	106	0
14	AN	774	0	827	78	0
14	CN	735	0	790	97	0
15	AO	714	0	737	54	0
15	CO	714	0	737	43	0
16	AP	649	0	666	48	0
16	CP	638	0	656	51	0
17	AQ	648	0	691	89	0
17	CQ	648	0	691	56	0
18	AR	455	0	478	21	0
18	CR	455	0	478	39	0
19	AS	637	0	665	54	0
19	CS	637	0	665	87	0
20	AT	665	0	714	85	0
20	CT	665	0	714	40	0
21	AU	425	0	449	79	0
21	CU	425	0	449	76	0
22	BA	61274	0	30819	1807	0
22	DA	60995	0	30679	3669	0
23	BB	2529	0	1281	57	0
23	DB	2507	0	1270	166	0
24	BC	2082	0	2157	207	0
24	DC	2082	0	2157	227	0
25	BD	1565	0	1616	201	0
25	DD	1565	0	1616	202	0
26	BE	1552	0	1619	151	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
26	DE	1552	0	1619	188	0
27	BF	1410	0	1447	128	0
27	DF	1420	0	1460	158	0
28	BG	1323	0	1374	138	0
28	DG	1323	0	1374	144	0
29	BH	1111	0	1148	97	0
29	DH	1111	0	1148	119	0
30	BI	1032	0	1088	108	0
30	DI	1032	0	1088	83	0
31	BJ	1129	0	1162	151	0
31	DJ	1129	0	1162	132	0
32	BK	938	0	1012	91	0
32	DK	938	0	1012	107	0
33	BL	1045	0	1117	110	0
33	DL	1045	0	1117	136	0
34	BM	1074	0	1157	94	0
34	DM	1074	0	1157	91	0
35	BN	960	0	1000	77	0
35	DN	960	0	1000	141	0
36	BO	892	0	923	50	0
36	DO	892	0	923	76	0
37	BP	917	0	965	122	0
37	DP	917	0	965	123	0
38	BQ	947	0	1022	139	0
38	DQ	947	0	1022	124	0
39	BR	816	0	839	102	0
39	DR	816	0	839	94	0
40	BS	857	0	922	83	0
40	DS	857	0	922	69	0
41	BT	738	0	807	107	0
41	DT	738	0	807	104	0
42	BU	779	0	834	61	0
42	DU	779	0	834	98	0
43	BV	753	0	780	47	0
43	DV	753	0	780	62	0
44	BW	596	0	610	191	0
44	DW	596	0	610	127	0
45	BX	625	0	655	53	0
45	DX	625	0	655	77	0
46	BY	509	0	543	40	0
46	DY	509	0	543	76	0
47	BZ	449	0	491	33	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
47	DZ	449	0	491	42	0
48	B0	444	0	461	29	0
48	D0	444	0	461	54	0
49	B1	409	0	440	42	0
49	D1	409	0	440	39	0
50	B2	377	0	418	25	0
50	D2	377	0	418	52	0
51	B3	504	0	574	42	0
51	D3	504	0	574	52	0
52	B4	302	0	340	29	0
52	D4	302	0	342	22	0
53	AA	43	0	0	0	0
53	BA	134	0	0	0	0
53	BB	4	0	0	0	0
53	BL	1	0	0	0	0
53	CA	42	0	0	0	0
53	DA	133	0	0	0	0
53	DB	1	0	0	0	0
53	DC	1	0	0	0	0
53	DE	1	0	0	0	0
53	DJ	1	0	0	0	0
54	BA	60	0	64	7	0
55	B4	1	0	0	0	0
55	D4	1	0	0	0	0
56	AA	200	0	0	4	0
56	AL	1	0	0	0	0
56	AN	5	0	0	1	0
56	AT	1	0	0	0	0
56	AU	1	0	0	0	0
56	B2	1	0	0	0	0
56	B3	2	0	0	0	0
56	B4	2	0	0	0	0
56	BA	606	0	0	39	0
56	BB	20	0	0	0	0
56	BC	9	0	0	0	0
56	BD	1	0	0	0	0
56	BL	4	0	0	0	0
56	BN	3	0	0	0	0
56	BT	2	0	0	0	0
56	CA	194	0	0	7	0
56	CE	5	0	0	1	0
56	CI	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
56	CL	1	0	0	0	0
56	CN	3	0	0	0	0
56	CT	2	0	0	0	0
56	CU	1	0	0	0	0
56	D2	1	0	0	1	0
56	D3	1	0	0	0	0
56	D4	5	0	0	0	0
56	DA	605	0	0	35	0
56	DB	4	0	0	1	0
56	DC	8	0	0	0	0
56	DD	3	0	0	0	0
56	DE	3	0	0	0	0
56	DJ	3	0	0	0	0
56	DL	4	0	0	0	0
56	DN	1	0	0	0	0
56	DT	2	0	0	0	0
56	DU	2	0	0	0	0
56	DV	1	0	0	0	0
All	All	284464	0	190872	16438	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 35.

All (16438) 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	1.42	1.33
12:CL:43:LYS:HB3	12:CL:44:PRO:HD2	1.18	1.17
22:BA:1073:A:H3'	22:BA:1074:G:H5''	1.20	1.17
1:CA:120:A:C3'	1:CA:121:U:H5''	1.75	1.17
6:AF:16:GLU:HG2	4:CD:191:SER:HB2	1.20	1.17
4:CD:2:ARG:HH21	4:CD:114:ARG:HD3	1.05	1.16
1:AA:1468:A:H2'	1:AA:1469:C:H5''	1.25	1.15
22:DA:216:A:O2'	22:DA:217:A:H8	1.31	1.14
37:BP:50:ARG:HB3	37:BP:57:ALA:H	1.12	1.13
29:BH:31:VAL:HB	29:BH:32:PRO:HD2	1.30	1.13
1:AA:982:U:H4'	1:AA:983:A:O5'	1.35	1.13
12:AL:49:ARG:HH11	12:AL:49:ARG:HG2	1.06	1.12
22:DA:397:U:OP1	45:DX:30:PRO:HA	1.48	1.12
38:BQ:63:ARG:HH12	38:BQ:96:ASP:CA	1.63	1.12
27:BF:35:LEU:HB3	27:BF:153:ILE:HG22	1.26	1.11
38:DQ:87:VAL:HG21	39:DR:52:PRO:HD3	1.32	1.11
44:BW:76:ARG:HH21	44:BW:76:ARG:HG3	1.15	1.11

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:BJ:81:ILE:HG23	31:BJ:82:GLY:H	1.09	1.11
22:DA:1565:C:H3'	24:DC:17:LYS:HE2	1.29	1.11
39:BR:49:ILE:HD12	39:BR:52:PRO:HA	1.33	1.11
23:DB:12:C:H4'	23:DB:13:G:OP1	1.33	1.11
6:AF:38:ARG:HH11	6:AF:38:ARG:HG2	1.14	1.10
31:BJ:44:TYR:HB2	38:BQ:63:ARG:HB3	1.27	1.10
1:CA:1278:G:H4'	1:CA:1279:G:O5'	1.46	1.10
44:BW:18:LYS:HA	44:BW:36:ILE:HG13	1.30	1.10
21:CU:16:ARG:HG3	21:CU:19:LYS:HG2	1.32	1.10
6:CF:86:ARG:NH1	18:CR:63:TYR:HB3	1.64	1.09
22:DA:454:A:H4'	22:DA:455:C:OP2	1.47	1.09
1:CA:1183:U:H3'	1:CA:1184:G:H5''	1.23	1.09
37:BP:4:ILE:HG22	37:BP:5:LYS:H	1.06	1.09
1:CA:6:G:N3	1:CA:6:G:H2'	1.53	1.08
15:AO:63:ARG:HG2	15:AO:87:ARG:HH12	1.18	1.08
22:DA:1489:C:H4'	22:DA:1490:A:OP1	1.36	1.08
22:BA:271:G:H4'	22:BA:272:A:OP1	1.44	1.08
22:DA:1817:G:O2'	22:DA:1818:U:H5'	1.53	1.07
22:BA:2800:A:H4'	22:BA:2801:G:OP2	1.31	1.07
51:B3:31:ILE:HD11	51:B3:34:LYS:HD2	1.36	1.07
23:DB:56:G:H4'	23:DB:57:A:O5'	1.48	1.07
9:CI:71:ILE:HD12	9:CI:72:SER:H	1.20	1.07
37:BP:50:ARG:CB	37:BP:57:ALA:H	1.67	1.07
2:AB:185:ILE:HD11	2:AB:203:ASP:HA	1.35	1.06
5:CE:29:ILE:HG23	5:CE:30:PHE:N	1.68	1.06
12:CL:43:LYS:HB3	12:CL:44:PRO:CD	1.85	1.06
15:AO:63:ARG:HD3	15:AO:87:ARG:HH22	1.15	1.06
31:BJ:6:ALA:HB3	31:BJ:45:THR:HG21	1.36	1.06
1:CA:120:A:H3'	1:CA:121:U:H5''	1.34	1.05
1:CA:1224:U:H5'	1:CA:1225:A:OP2	1.56	1.05
22:DA:1552:A:O2'	22:DA:1553:A:H5'	1.54	1.05
31:BJ:111:LYS:HD3	31:BJ:112:GLY:H	1.18	1.05
38:DQ:4:LYS:HE3	38:DQ:7:VAL:HG13	1.36	1.05
28:BG:84:LYS:HG3	28:BG:132:LEU:H	1.18	1.05
24:DC:144:GLU:HA	24:DC:151:GLY:HA2	1.36	1.05
44:BW:28:GLU:HB3	44:BW:31:LEU:HD21	1.35	1.05
25:BD:106:LYS:HB3	25:BD:206:ALA:HB3	1.35	1.05
44:DW:40:ARG:HG2	44:DW:40:ARG:HH11	0.92	1.05
49:D1:7:LYS:HD3	51:D3:33:THR:HG21	1.28	1.05
22:DA:2346:A:H3'	22:DA:2347:C:H5''	1.35	1.04
22:DA:1032:A:H1'	52:D4:23:ILE:HD13	1.38	1.04
27:DF:28:PRO:HB2	27:DF:168:LEU:HD21	1.37	1.04

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
39:DR:39:LEU:HA	39:DR:49:ILE:HG21	1.39	1.04
22:BA:1179:G:H3'	22:BA:1180:U:H4'	1.32	1.04
22:DA:249:C:H5'	22:DA:2394:C:O2'	1.58	1.04
22:DA:975:A:O2'	22:DA:976:G:H8	1.38	1.04
20:AT:43:LYS:HB3	20:AT:86:ALA:HB1	1.37	1.04
1:AA:1129:C:H5''	9:AI:17:ARG:HH22	0.94	1.04
1:CA:701:U:O2'	1:CA:702:A:OP2	1.73	1.04
32:BK:18:ARG:HG3	32:BK:18:ARG:HH11	1.16	1.04
22:BA:1060:U:H4'	22:BA:1061:U:H5'	1.33	1.04
1:CA:1157:A:H4'	1:CA:1158:C:O5'	1.53	1.04
1:CA:1329:A:H5''	13:CM:25:GLY:H	1.18	1.04
22:DA:227:A:H4'	22:DA:228:C:OP1	1.54	1.03
22:DA:1537:G:C2'	22:DA:1538:G:H4'	1.88	1.03
1:AA:484:G:H4'	1:AA:485:U:O5'	1.58	1.03
24:DC:128:THR:HG22	24:DC:188:ARG:HB3	1.40	1.03
28:BG:84:LYS:HG3	28:BG:132:LEU:N	1.73	1.03
22:DA:1913:A:H4'	22:DA:1914:C:OP1	1.52	1.03
26:BE:44:ARG:HH21	26:BE:44:ARG:HG3	1.24	1.03
22:BA:1458:U:H4'	22:BA:1459:G:O5'	1.56	1.02
5:CE:29:ILE:HG23	5:CE:30:PHE:H	0.90	1.02
22:DA:1237:A:C2	22:DA:1238:G:H1'	1.94	1.02
20:CT:73:ARG:HG2	20:CT:73:ARG:HH11	1.24	1.02
22:DA:1385:A:H4'	22:DA:1386:C:OP1	1.52	1.02
22:DA:197:A:H62	22:DA:2430:A:H2'	1.17	1.02
22:DA:2023:C:HO2'	22:DA:2024:G:H8	1.07	1.02
1:AA:1101:A:H4'	1:AA:1102:A:O5'	1.54	1.02
22:DA:2838:G:H1'	35:DN:45:ARG:HH22	1.20	1.02
22:BA:2577:A:H5''	22:BA:2578:G:H5'	1.40	1.02
22:BA:335:C:H5''	42:BU:81:ARG:HD3	1.37	1.02
31:BJ:111:LYS:CD	31:BJ:112:GLY:H	1.72	1.02
22:BA:1179:G:C6	22:BA:1180:U:H1'	1.94	1.02
10:AJ:53:ILE:HG22	10:AJ:61:ALA:HB1	1.40	1.02
1:AA:1468:A:C2'	1:AA:1469:C:H5''	1.90	1.01
22:BA:1179:G:C5	22:BA:1180:U:H1'	1.95	1.01
22:BA:1509:A:H1'	22:BA:1510:G:H5'	1.41	1.01
44:DW:28:GLU:H	44:DW:31:LEU:HD21	1.19	1.01
1:AA:486:U:H5''	1:AA:486:U:C6	1.94	1.01
26:DE:108:ILE:HD11	26:DE:181:ILE:HB	1.38	1.01
22:DA:2216:G:H2'	22:DA:2217:G:H8	1.24	1.01
1:AA:204:G:H3'	1:AA:205:A:H5''	1.36	1.01
4:AD:25:ARG:HH11	4:AD:30:LYS:HE3	1.20	1.01
21:AU:33:ARG:HE	21:AU:34:ARG:HG3	1.24	1.01

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
35:DN:37:THR:HG22	35:DN:39:PRO:HD2	1.41	1.01
1:CA:1182:G:H4'	1:CA:1183:U:H5'	1.42	1.01
22:DA:1808:A:H3'	22:DA:1809:A:H8	1.23	1.01
31:BJ:130:HIS:HD2	31:BJ:132:HIS:H	1.06	1.01
13:CM:78:ARG:HH21	13:CM:79:LEU:HD23	1.26	1.01
22:DA:297:G:H5''	42:DU:84:PHE:HB2	1.37	1.01
38:BQ:69:ARG:HB2	38:BQ:69:ARG:HH21	1.22	1.01
24:DC:146:LYS:HB2	24:DC:149:LYS:HB2	1.42	1.01
43:BV:80:HIS:HD2	43:BV:83:LYS:HB2	1.25	1.01
39:BR:42:ALA:HA	39:BR:46:GLU:HB2	1.39	1.01
22:BA:1073:A:H3'	22:BA:1074:G:C5'	1.90	1.01
22:DA:1809:A:O2'	22:DA:1810:A:H8	1.43	1.01
22:BA:2355:G:H4'	44:BW:20:LEU:HD13	1.42	1.01
38:DQ:61:ILE:HD11	38:DQ:92:LYS:HD3	1.42	1.01
22:DA:996:A:H4'	38:DQ:91:ARG:HD2	1.42	1.01
6:CF:86:ARG:HH11	18:CR:63:TYR:HB3	1.26	1.00
26:DE:130:LYS:HB3	26:DE:133:LEU:HB3	1.43	1.00
31:DJ:44:TYR:HB2	38:DQ:63:ARG:CZ	1.89	1.00
22:DA:2822:G:H5''	25:DD:164:GLN:HE22	1.25	1.00
22:DA:1537:G:H2'	22:DA:1538:G:H4'	1.37	1.00
1:CA:202:G:HO2'	1:CA:468:A:H8	1.06	1.00
19:AS:28:LYS:HB3	19:AS:29:PRO:HD2	1.40	1.00
1:CA:1074:G:H4'	2:CB:101:THR:O	1.60	1.00
5:AE:81:GLN:H	5:AE:81:GLN:NE2	1.60	1.00
22:DA:1458:U:O3'	22:DA:1459:G:H4'	1.60	0.99
1:AA:975:A:H4'	1:AA:976:G:H5'	1.43	0.99
44:BW:39:GLN:HG2	44:BW:41:GLY:H	1.24	0.99
11:CK:74:LYS:HA	11:CK:78:ILE:HD11	1.44	0.99
2:CB:114:LYS:HA	2:CB:117:GLU:HG2	1.44	0.99
2:AB:209:VAL:HG23	2:AB:210:THR:H	1.28	0.99
33:BL:93:ASN:HD22	33:BL:94:THR:N	1.59	0.99
1:AA:486:U:H6	1:AA:486:U:H5''	1.22	0.99
10:AJ:57:VAL:HG22	10:AJ:58:ASN:H	1.27	0.99
1:AA:841:C:C2	1:AA:843:U:H5'	1.98	0.99
22:DA:1056:G:H1'	22:DA:1103:A:H61	1.28	0.99
1:CA:330:C:O2'	1:CA:331:G:H8	1.41	0.99
7:AG:114:SER:HB3	7:AG:117:LEU:HG	1.44	0.99
22:DA:1447:C:H2'	22:DA:1448:G:C8	1.98	0.99
5:CE:76:ASN:O	5:CE:79:THR:HG22	1.62	0.99
11:CK:70:ALA:HA	11:CK:73:VAL:HG22	1.44	0.98
48:D0:28:SER:HB3	48:D0:39:ARG:HE	1.27	0.98
22:BA:2352:A:C2	44:BW:30:VAL:HG11	1.98	0.98

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
23:DB:57:A:O2'	23:DB:58:A:H8	1.45	0.98
37:DP:91:VAL:HG22	37:DP:109:ILE:HG21	1.41	0.98
1:CA:532:A:C8	3:CC:192:TYR:HE2	1.81	0.98
16:AP:4:ILE:HG12	16:AP:21:VAL:HG22	1.44	0.98
1:CA:209:U:H5''	1:CA:210:C:OP2	1.63	0.98
23:DB:42:C:O2'	23:DB:43:C:H5'	1.63	0.98
22:DA:2297:A:O2'	22:DA:2298:A:H8	1.43	0.98
33:DL:48:ARG:HG3	33:DL:48:ARG:HH11	1.28	0.98
22:DA:491:G:H2'	22:DA:492:A:C8	1.98	0.98
4:CD:2:ARG:NH2	4:CD:114:ARG:HD3	1.77	0.97
22:BA:1654:A:O2'	25:BD:118:PHE:CG	2.16	0.97
17:AQ:18:LYS:HA	17:AQ:47:ASP:HB2	1.46	0.97
22:BA:2346:A:H3'	22:BA:2347:C:H5''	1.44	0.97
44:DW:37:VAL:HG23	44:DW:38:ARG:HD2	1.46	0.97
52:B4:9:LYS:H	52:B4:9:LYS:HD3	1.28	0.97
22:DA:2267:A:H61	22:DA:2272:U:H3	1.11	0.97
22:DA:2776:A:H4'	22:DA:2777:G:O5'	1.60	0.97
1:AA:451:A:H4'	1:AA:452:A:O5'	1.58	0.97
22:DA:483:A:H2'	22:DA:484:C:H6	1.24	0.97
30:DI:52:LEU:HD12	30:DI:53:PRO:HD2	1.44	0.97
22:DA:49:A:H4'	22:DA:50:U:O5'	1.63	0.97
22:DA:867:C:O2'	22:DA:868:U:H6	1.46	0.97
44:DW:18:LYS:HD3	44:DW:19:ARG:H	1.29	0.97
22:DA:1079:C:H41	22:DA:1088:A:H5''	1.24	0.96
1:CA:702:A:H8	1:CA:702:A:OP1	1.47	0.96
38:BQ:65:ASN:HD21	38:BQ:69:ARG:HH22	1.11	0.96
28:DG:93:TYR:HD2	28:DG:93:TYR:H	1.04	0.96
31:BJ:55:ILE:HD11	31:BJ:57:LEU:HD22	1.44	0.96
22:DA:647:G:H2'	22:DA:648:G:H8	1.30	0.96
22:BA:243:U:OP1	51:B3:5:THR:HG21	1.64	0.96
8:CH:103:VAL:HG12	8:CH:124:ILE:HA	1.46	0.96
42:DU:14:THR:HG23	42:DU:15:GLY:H	1.29	0.96
22:DA:873:C:H4'	34:DM:64:TRP:HE1	1.31	0.96
1:CA:1151:A:O2'	1:CA:1152:A:H8	1.46	0.96
1:AA:1129:C:H5''	9:AI:17:ARG:NH2	1.79	0.96
22:DA:2311:A:H5'	22:DA:2312:U:C6	2.00	0.96
22:BA:265:A:H4'	22:BA:266:G:OP1	1.62	0.96
22:DA:1662:U:H2'	22:DA:1663:G:H5''	1.45	0.96
26:BE:119:ILE:HD11	26:BE:187:VAL:HG22	1.47	0.96
43:DV:77:VAL:HA	43:DV:89:ILE:HG22	1.48	0.96
22:BA:636:G:C5	33:BL:111:ILE:HD11	2.00	0.96
22:BA:780:G:H21	22:BA:783:A:H62	1.09	0.96

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:BA:1535:A:H4'	22:BA:1536:C:OP2	1.66	0.96
22:DA:627:A:H2'	33:DL:78:ARG:HH11	1.31	0.96
22:DA:215:G:H4'	22:DA:216:A:OP1	1.62	0.95
22:DA:2216:G:H2'	22:DA:2217:G:C8	1.99	0.95
25:BD:118:PHE:HD2	25:BD:119:ALA:H	1.05	0.95
22:BA:1073:A:C3'	22:BA:1074:G:H5''	1.96	0.95
1:CA:82:G:H2'	1:CA:83:C:H4'	1.49	0.95
22:DA:1808:A:H3'	22:DA:1809:A:C8	2.00	0.95
22:DA:310:A:O2'	22:DA:311:A:H8	1.49	0.95
22:DA:508:A:H62	40:DS:9:HIS:CE1	1.85	0.95
17:CQ:30:HIS:HE1	17:CQ:32:ILE:HG13	1.29	0.95
34:DM:27:SER:H	34:DM:66:ARG:NH2	1.65	0.95
22:DA:1021:A:O2'	22:DA:1022:G:H4'	1.66	0.95
5:AE:11:GLN:HA	5:AE:11:GLN:HE21	1.29	0.95
24:DC:59:GLN:HE21	24:DC:84:PRO:HB2	1.28	0.95
22:BA:161:A:H3'	22:BA:162:U:H5''	1.48	0.95
22:DA:445:C:H2'	22:DA:446:G:C8	2.01	0.95
1:AA:1279:G:H1'	1:AA:1282:C:N4	1.81	0.95
25:BD:169:ARG:O	25:BD:170:VAL:HG13	1.67	0.95
22:BA:855:G:N3	44:BW:23:LYS:HD3	1.82	0.95
7:CG:22:LEU:HA	7:CG:25:PHE:HB3	1.47	0.95
27:BF:134:GLN:HE21	27:BF:134:GLN:H	1.04	0.95
2:AB:163:ILE:HG23	2:AB:164:ASP:H	1.31	0.95
22:DA:2389:G:H5''	22:DA:2390:U:H5'	1.48	0.95
43:BV:10:LYS:H	43:BV:10:LYS:HD3	1.31	0.95
24:DC:16:VAL:H	24:DC:203:VAL:HG12	1.27	0.95
30:BI:23:VAL:HB	30:BI:27:LEU:HB3	1.48	0.95
24:BC:12:ARG:HH11	24:BC:12:ARG:CG	1.80	0.94
17:AQ:45:VAL:HG21	17:AQ:60:ILE:HD13	1.46	0.94
35:DN:90:ARG:NH2	35:DN:116:VAL:HG11	1.82	0.94
1:CA:820:U:H4'	1:CA:821:G:OP2	1.67	0.94
34:BM:35:ALA:O	34:BM:36:VAL:HB	1.65	0.94
45:DX:53:LYS:HA	45:DX:56:ARG:HB3	1.49	0.94
39:DR:27:ILE:HG22	39:DR:28:ALA:H	1.31	0.94
22:DA:740:C:H5'	22:DA:1784:A:H3'	1.48	0.94
22:DA:479:A:H4'	22:DA:480:A:OP1	1.64	0.94
1:CA:961:U:O2'	1:CA:962:C:H6	1.49	0.94
44:DW:40:ARG:NH1	44:DW:40:ARG:HG2	1.72	0.94
19:CS:5:LYS:HE3	19:CS:6:LYS:H	1.32	0.94
22:DA:483:A:H2'	22:DA:484:C:C6	2.02	0.94
38:BQ:48:ASP:HA	38:BQ:51:GLN:HB2	1.49	0.94
48:D0:12:ARG:HG3	48:D0:15:ARG:HH11	1.33	0.94

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:2344:U:H4'	22:DA:2345:G:OP1	1.64	0.94
44:BW:8:SER:O	44:BW:9:THR:HG22	1.68	0.94
22:BA:1993:U:H4'	25:BD:133:THR:HG21	1.49	0.94
22:DA:33:C:H4'	22:DA:34:U:OP1	1.65	0.94
1:CA:60:A:H4'	1:CA:61:G:O5'	1.67	0.94
46:DY:20:ASN:HD22	46:DY:50:VAL:HG22	1.29	0.94
4:CD:25:ARG:NH1	4:CD:30:LYS:HG2	1.83	0.94
2:CB:130:LYS:HA	2:CB:133:ALA:HB3	1.46	0.94
1:CA:1217:C:H2'	1:CA:1218:C:H6	1.31	0.93
22:DA:870:U:H2'	22:DA:871:U:H5'	1.49	0.93
22:DA:2466:C:OP1	52:D4:4:ARG:HB3	1.67	0.93
25:DD:53:GLY:HA3	25:DD:77:ARG:HG3	1.48	0.93
30:BI:100:ILE:HG22	30:BI:101:SER:H	1.33	0.93
22:DA:2666:C:O2'	22:DA:2667:C:H5'	1.69	0.93
19:CS:40:PHE:HB3	19:CS:41:PRO:HD2	1.49	0.93
22:DA:1935:G:H1'	22:DA:1964:G:N2	1.83	0.93
30:BI:15:GLY:HA2	30:BI:50:LYS:HB3	1.50	0.93
26:DE:148:ILE:HD13	26:DE:187:VAL:HG21	1.50	0.93
2:CB:146:SER:HB2	2:CB:147:LEU:HD12	1.49	0.93
22:DA:1847:A:HO2'	22:DA:1848:A:H8	1.02	0.93
22:DA:674:G:O2'	26:DE:69:ARG:HG2	1.67	0.93
22:DA:138:U:H2'	22:DA:140:C:H1'	1.50	0.93
1:AA:1123:U:H4'	10:AJ:39:PRO:HD2	1.47	0.93
1:CA:1299:A:N3	1:CA:1299:A:H2'	1.80	0.93
4:AD:109:THR:HG23	4:AD:112:GLU:H	1.34	0.93
1:CA:245:U:O2'	1:CA:246:A:H5'	1.69	0.93
22:DA:241:A:H4'	22:DA:242:G:OP1	1.67	0.93
8:CH:68:LYS:HD3	8:CH:69:ALA:H	1.34	0.93
4:AD:25:ARG:NH1	4:AD:30:LYS:HE3	1.82	0.93
1:CA:1239:A:H5''	7:CG:118:ARG:HH12	1.34	0.93
38:BQ:63:ARG:HH12	38:BQ:96:ASP:HA	0.80	0.93
22:DA:2387:U:H1'	44:DW:38:ARG:HH12	1.34	0.93
5:AE:80:LEU:HD23	5:AE:122:VAL:HG11	1.51	0.93
27:BF:134:GLN:H	27:BF:134:GLN:NE2	1.66	0.93
10:CJ:5:ARG:HH21	10:CJ:77:VAL:HG13	1.29	0.93
22:DA:668:A:H2'	22:DA:670:A:H62	1.32	0.92
16:CP:70:ARG:O	16:CP:74:LEU:HG	1.69	0.92
1:AA:1138:G:H2'	1:AA:1138:G:N3	1.84	0.92
33:BL:93:ASN:HD22	33:BL:94:THR:H	1.14	0.92
22:DA:1846:G:H5''	22:DA:1847:A:OP2	1.69	0.92
22:DA:2060:A:H62	26:DE:69:ARG:HH12	1.17	0.92
22:BA:1733:G:HO2'	22:BA:1734:G:H8	0.96	0.92

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:AH:74:ILE:HD13	8:AH:128:VAL:HG13	1.50	0.92
1:CA:239:U:OP1	1:CA:239:U:H4'	1.68	0.92
22:BA:855:G:H21	44:BW:23:LYS:HG2	1.34	0.92
10:CJ:84:VAL:HG23	10:CJ:85:ASP:H	1.35	0.92
23:DB:13:G:H5''	23:DB:13:G:H8	1.34	0.92
1:CA:330:C:HO2'	1:CA:331:G:H8	0.94	0.92
31:BJ:17:VAL:HG23	31:BJ:137:PRO:HB2	1.52	0.92
47:DZ:30:ARG:NH2	47:DZ:33:HIS:HB2	1.83	0.92
10:AJ:65:TYR:HB3	14:AN:95:LEU:HD11	1.50	0.92
30:DI:74:PRO:HB2	30:DI:77:VAL:HG22	1.49	0.92
25:BD:90:PHE:HB2	25:BD:92:VAL:HG23	1.52	0.92
29:BH:89:LYS:HG2	29:BH:90:LEU:H	1.34	0.92
1:AA:86:G:N2	1:AA:87:C:H41	1.67	0.92
22:DA:873:C:H4'	34:DM:64:TRP:NE1	1.84	0.92
1:AA:1239:A:H62	1:AA:1299:A:N6	1.68	0.92
32:DK:71:ARG:HB3	32:DK:72:PRO:HD3	1.52	0.92
44:BW:37:VAL:HG12	44:BW:38:ARG:H	1.33	0.92
22:DA:503:A:H4'	22:DA:504:A:O5'	1.70	0.92
22:DA:2748:A:H1'	28:DG:66:THR:HG22	1.50	0.92
1:AA:667:G:H4'	15:AO:50:HIS:CE1	2.05	0.92
22:DA:206:U:H2'	22:DA:207:A:H8	1.33	0.91
1:AA:1021:A:H2'	1:AA:1022:A:H5''	1.51	0.91
8:AH:21:LYS:HE2	8:AH:22:ALA:H	1.32	0.91
1:AA:975:A:H4'	1:AA:976:G:C5'	2.00	0.91
1:AA:1441:A:N6	1:AA:1461:G:H21	1.68	0.91
22:DA:811:U:H5''	22:DA:812:C:OP2	1.71	0.91
37:BP:4:ILE:HG22	37:BP:5:LYS:N	1.85	0.91
5:AE:155:LYS:HA	5:AE:158:LYS:NZ	1.84	0.91
22:DA:784:G:C2	24:DC:227:VAL:HG21	2.05	0.91
25:DD:13:ARG:HH12	37:DP:74:GLN:HE21	1.16	0.91
1:CA:664:G:H22	1:CA:741:G:H1	1.19	0.91
44:BW:51:GLY:HA3	44:BW:59:PHE:CE2	2.05	0.91
25:DD:106:LYS:HB3	25:DD:206:ALA:HB3	1.52	0.91
49:B1:47:ILE:H	49:B1:47:ILE:HD12	1.34	0.91
24:BC:81:GLU:HB2	24:BC:90:ILE:HG22	1.53	0.91
5:CE:29:ILE:CG2	5:CE:30:PHE:H	1.77	0.91
6:AF:3:HIS:H	6:AF:92:THR:HG23	1.32	0.91
22:DA:2875:C:O2'	22:DA:2876:G:H8	1.53	0.91
33:BL:30:THR:O	33:BL:33:ARG:HG2	1.69	0.91
22:DA:1274:A:O2'	22:DA:1275:A:H5''	1.71	0.91
41:DT:60:THR:HG22	41:DT:83:ALA:HA	1.52	0.91
1:CA:1129:C:H1'	1:CA:1146:A:H61	1.35	0.91

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:CJ:15:HIS:HA	10:CJ:18:ILE:HG22	1.51	0.91
45:DX:31:ASN:ND2	45:DX:31:ASN:H	1.69	0.91
22:BA:1734:G:H2'	22:BA:1735:A:H8	1.34	0.91
24:DC:52:HIS:HA	24:DC:216:ARG:HB2	1.51	0.91
22:DA:1024:G:H3'	22:DA:1025:G:H5''	1.53	0.91
44:BW:17:ALA:HA	44:BW:35:ILE:HG23	1.52	0.90
18:CR:72:ARG:H	18:CR:72:ARG:HE	1.15	0.90
1:CA:135:C:O2	16:CP:1:MET:HB2	1.71	0.90
23:DB:57:A:HO2'	23:DB:58:A:H8	0.94	0.90
28:BG:83:THR:HA	28:BG:84:LYS:HZ3	1.35	0.90
22:DA:249:C:H3'	22:DA:2394:C:H4'	1.51	0.90
22:DA:1447:C:H2'	22:DA:1448:G:H8	1.32	0.90
22:DA:492:A:N1	40:DS:49:LYS:HE2	1.86	0.90
25:DD:29:VAL:HB	25:DD:98:VAL:HG12	1.52	0.90
35:DN:28:LEU:HD21	35:DN:115:LEU:HD21	1.49	0.90
1:CA:279:A:H5''	1:CA:280:C:H3'	1.53	0.90
32:DK:61:VAL:HG11	32:DK:112:PHE:HE2	1.36	0.90
44:DW:18:LYS:H	44:DW:36:ILE:HG12	1.35	0.90
2:AB:22:TRP:CZ3	2:AB:24:PRO:HA	2.06	0.90
22:BA:276:U:O2'	22:BA:278:A:N7	2.04	0.90
14:AN:60:ARG:O	14:AN:61:ASN:HB2	1.70	0.90
1:CA:973:G:O2'	1:CA:974:A:H5'	1.72	0.90
33:BL:110:VAL:O	33:BL:111:ILE:HB	1.71	0.90
1:CA:814:A:H5'	1:CA:1511:G:H4'	1.52	0.90
6:AF:86:ARG:NH1	18:AR:63:TYR:HB3	1.86	0.90
25:DD:184:ARG:HH22	37:DP:6:GLN:HE21	1.18	0.90
43:BV:72:VAL:HG12	43:BV:93:ARG:HA	1.54	0.90
22:DA:762:U:H4'	22:DA:763:G:O5'	1.69	0.90
22:BA:1340:U:H4'	22:BA:1341:G:OP2	1.71	0.90
1:CA:976:G:H5'	1:CA:977:A:OP2	1.70	0.90
22:DA:1387:A:H5'	22:DA:1469:A:H1'	1.50	0.90
5:CE:103:GLY:O	5:CE:104:ILE:HG22	1.71	0.90
45:DX:31:ASN:HD22	45:DX:31:ASN:N	1.67	0.90
22:BA:574:A:P	56:BA:3268:HOH:O	2.30	0.90
22:DA:1359:A:C2	22:DA:1360:G:H1'	2.06	0.90
4:AD:10:LEU:HD22	4:AD:62:ARG:HG3	1.53	0.90
28:BG:8:VAL:HG11	28:BG:49:LEU:HB2	1.51	0.90
22:DA:96:C:H4'	46:DY:41:HIS:CD2	2.07	0.90
37:DP:50:ARG:HB3	37:DP:57:ALA:N	1.85	0.90
13:AM:10:ASP:CG	13:AM:11:HIS:H	1.75	0.90
1:AA:507:C:H3'	1:AA:508:U:H5''	1.52	0.90
41:BT:32:LEU:H	41:BT:83:ALA:HB3	1.34	0.90

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:1341:G:O2'	22:DA:1398:C:H5'	1.72	0.90
39:BR:60:LYS:H	39:BR:100:GLY:HA3	1.37	0.90
22:DA:118:A:N3	22:DA:178:G:H1'	1.87	0.90
33:BL:29:LYS:HG2	33:BL:30:THR:HG23	1.54	0.90
1:AA:1441:A:H62	1:AA:1461:G:H21	1.19	0.89
1:AA:747:A:H5'	1:AA:748:G:OP2	1.72	0.89
22:DA:302:C:O2'	22:DA:303:G:H8	1.54	0.89
4:AD:172:VAL:HG22	4:AD:173:ASP:H	1.37	0.89
44:DW:18:LYS:HD3	44:DW:19:ARG:N	1.86	0.89
32:BK:18:ARG:H	32:BK:45:GLU:HB2	1.37	0.89
25:DD:11:MET:HE1	25:DD:192:ALA:HA	1.54	0.89
22:BA:947:A:HO2'	22:BA:984:A:H2	0.93	0.89
26:DE:128:ALA:HB1	26:DE:129:PRO:HD2	1.55	0.89
31:BJ:21:THR:O	31:BJ:23:LYS:N	2.04	0.89
1:CA:439:U:H4'	4:CD:120:LYS:HD2	1.53	0.89
1:CA:429:U:H3'	4:CD:8:LEU:HD23	1.52	0.89
22:DA:616:A:O2'	22:DA:617:G:H8	1.53	0.89
24:DC:70:LYS:HD3	24:DC:101:ARG:HH12	1.37	0.89
7:CG:88:VAL:HG22	7:CG:89:GLU:H	1.33	0.89
1:AA:198:G:HO2'	1:AA:199:A:H8	1.15	0.89
6:AF:38:ARG:HG2	6:AF:38:ARG:NH1	1.84	0.89
31:BJ:21:THR:HG22	31:BJ:22:GLY:N	1.87	0.89
9:CI:51:LEU:HB2	9:CI:56:MET:SD	2.11	0.89
1:CA:752:G:H1'	1:CA:754:C:N4	1.88	0.89
12:AL:72:ASN:ND2	12:AL:73:LEU:H	1.71	0.89
31:BJ:81:ILE:CG2	31:BJ:82:GLY:H	1.84	0.89
17:CQ:46:HIS:HB2	17:CQ:70:LYS:HE3	1.54	0.89
24:BC:108:GLY:O	24:BC:109:LEU:HD22	1.72	0.89
22:DA:1474:U:H2'	22:DA:1475:G:H5'	1.54	0.89
1:CA:1195:C:H5''	1:CA:1196:A:OP2	1.72	0.89
1:CA:1134:G:C6	1:CA:1135:U:H1'	2.07	0.89
37:BP:61:ARG:HG2	37:BP:70:GLU:HG2	1.55	0.89
37:DP:28:LYS:HB2	37:DP:28:LYS:HZ2	1.38	0.89
25:BD:151:THR:HG22	25:BD:152:PRO:CD	2.03	0.89
2:AB:42:LEU:HG	2:AB:43:GLU:HG3	1.55	0.89
4:CD:137:SER:HB2	4:CD:138:PRO:HD2	1.55	0.89
1:CA:913:A:H4'	1:CA:914:A:O5'	1.71	0.89
33:BL:27:LEU:HD12	33:BL:27:LEU:H	1.38	0.89
29:DH:115:VAL:HG12	29:DH:132:PHE:HB2	1.55	0.89
12:AL:49:ARG:NH1	12:AL:49:ARG:HG2	1.81	0.88
1:CA:1279:G:H5'	10:CJ:9:ARG:HH12	1.36	0.88
25:BD:151:THR:HG22	25:BD:152:PRO:HD3	1.55	0.88

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:BD:125:TRP:CE3	25:BD:160:LYS:HD3	2.09	0.88
24:BC:140:VAL:CG1	24:BC:189:ALA:HB1	2.03	0.88
29:BH:67:ALA:HA	29:BH:138:VAL:HB	1.55	0.88
49:B1:33:LEU:H	49:B1:51:ALA:HB3	1.37	0.88
42:BU:38:ILE:HG22	42:BU:39:ASN:N	1.87	0.88
47:DZ:30:ARG:HH21	47:DZ:33:HIS:HB2	1.38	0.88
22:DA:2356:U:H4'	44:DW:16:GLU:HG3	1.54	0.88
6:CF:18:VAL:O	6:CF:22:ILE:HG12	1.73	0.88
2:CB:49:PHE:HA	2:CB:52:ALA:HB3	1.53	0.88
29:BH:32:PRO:HB3	45:BX:38:TRP:HB3	1.54	0.88
28:BG:83:THR:HA	28:BG:84:LYS:NZ	1.88	0.88
22:BA:1082:U:H5'	30:BI:117:THR:O	1.73	0.88
17:AQ:12:VAL:HG11	17:AQ:21:VAL:HG13	1.54	0.88
22:DA:674:G:H1'	26:DE:69:ARG:HE	1.38	0.88
38:BQ:4:LYS:HG3	38:BQ:5:ARG:H	1.37	0.88
21:AU:9:GLU:HG3	21:AU:10:PRO:HD3	1.56	0.88
22:DA:822:G:O6	22:DA:943:A:H2	1.55	0.88
3:AC:152:VAL:HG12	3:AC:197:VAL:HG13	1.56	0.88
17:AQ:78:VAL:HG12	17:AQ:79:GLU:HG3	1.52	0.88
9:AI:128:LYS:HD2	9:AI:129:ARG:H	1.35	0.88
1:CA:1101:A:H4'	1:CA:1102:A:O5'	1.74	0.88
22:DA:1205:A:H5''	22:DA:1206:G:C8	2.08	0.88
34:DM:27:SER:H	34:DM:66:ARG:HH22	1.22	0.88
19:AS:50:VAL:HG21	19:AS:70:LEU:HB3	1.53	0.88
41:DT:13:ALA:O	41:DT:32:LEU:HB2	1.72	0.88
1:AA:1469:C:H5'	1:AA:1469:C:H6	1.37	0.88
22:DA:2313:C:HO2'	22:DA:2314:A:H8	0.93	0.88
30:BI:7:TYR:HA	30:BI:58:ILE:HB	1.54	0.88
22:BA:2134:A:HO2'	22:BA:2135:A:H8	0.94	0.88
22:BA:1605:C:H5''	22:BA:1606:C:OP2	1.74	0.88
2:CB:127:LYS:HE3	2:CB:132:GLU:HG3	1.56	0.88
37:BP:50:ARG:HD3	37:BP:56:SER:HB3	1.54	0.88
22:DA:2389:G:C5'	22:DA:2390:U:H5'	2.04	0.88
7:CG:134:VAL:HB	7:CG:137:ARG:HH21	1.38	0.88
22:BA:137:U:O5'	22:BA:137:U:H6	1.57	0.88
24:DC:68:ARG:HD3	24:DC:103:ILE:HD13	1.55	0.88
34:DM:35:ALA:HB3	34:DM:99:GLY:H	1.37	0.88
2:AB:40:ILE:HD13	2:AB:201:GLY:HA2	1.54	0.88
7:CG:91:ARG:HG2	7:CG:92:PRO:HD2	1.55	0.88
25:DD:16:THR:HG23	25:DD:18:ASP:H	1.39	0.88
22:DA:2297:A:HO2'	22:DA:2298:A:H8	0.88	0.87
22:BA:84:A:H4'	22:BA:85:G:O5'	1.73	0.87

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:CA:522:C:H41	12:CL:49:ARG:HH22	1.20	0.87
22:DA:1965:C:H5''	22:DA:1965:C:H6	1.39	0.87
22:DA:1049:C:HO2'	22:DA:1050:A:H8	0.92	0.87
22:BA:1779:U:H5	22:BA:1784:A:N7	1.71	0.87
51:B3:26:ALA:O	51:B3:27:ASN:HB2	1.73	0.87
23:DB:42:C:H2'	23:DB:43:C:C6	2.07	0.87
22:DA:627:A:H2'	33:DL:78:ARG:NH1	1.89	0.87
23:DB:112:G:H21	36:DO:45:SER:HA	1.37	0.87
28:DG:86:LEU:HA	28:DG:163:TYR:HB3	1.55	0.87
37:BP:50:ARG:HG2	37:BP:57:ALA:N	1.89	0.87
22:DA:491:G:H2'	22:DA:492:A:H8	1.36	0.87
22:DA:286:U:H2'	22:DA:287:G:H8	1.40	0.87
1:CA:1215:G:HO2'	1:CA:1216:A:H8	0.89	0.87
22:DA:320:A:H4'	22:DA:322:A:N7	1.90	0.87
30:BI:126:ARG:HA	30:BI:129:GLU:HB2	1.57	0.87
22:DA:644:A:O2'	22:DA:645:C:H5'	1.73	0.87
47:DZ:16:LEU:H	47:DZ:16:LEU:HD22	1.37	0.87
27:DF:137:PHE:HB2	27:DF:138:PRO:HD2	1.55	0.87
25:BD:13:ARG:HH12	37:BP:74:GLN:HE21	1.20	0.87
1:CA:1268:G:H21	1:CA:1327:C:H1'	1.39	0.87
4:CD:25:ARG:HG2	4:CD:25:ARG:HH11	1.40	0.87
22:DA:240:C:H3'	22:DA:241:A:H5''	1.57	0.87
12:AL:33:CYS:HA	12:AL:54:VAL:HA	1.55	0.87
19:AS:51:HIS:CD2	19:AS:53:GLY:H	1.92	0.87
1:CA:940:C:H5'	7:CG:101:ARG:HH22	1.39	0.87
1:CA:451:A:H4'	1:CA:452:A:O5'	1.74	0.87
25:BD:68:PHE:HB3	25:BD:73:VAL:HG12	1.56	0.87
22:BA:2180:U:H2'	22:BA:2181:U:H5	1.39	0.87
24:BC:140:VAL:HG11	24:BC:189:ALA:HB1	1.56	0.86
28:BG:22:VAL:HG22	28:BG:36:LEU:HD11	1.57	0.86
13:CM:12:LYS:HB3	13:CM:17:ALA:HB2	1.56	0.86
10:CJ:57:VAL:HG22	10:CJ:58:ASN:H	1.39	0.86
13:CM:12:LYS:HE3	13:CM:12:LYS:HA	1.55	0.86
36:BO:31:THR:HG22	36:BO:34:HIS:H	1.38	0.86
22:DA:2214:C:O2'	22:DA:2215:C:H5'	1.76	0.86
1:AA:204:G:H3'	1:AA:205:A:C5'	2.03	0.86
2:CB:89:PHE:HE2	2:CB:152:ASP:HB2	1.38	0.86
26:BE:119:ILE:HD11	26:BE:187:VAL:CG2	2.06	0.86
45:DX:31:ASN:HD22	45:DX:31:ASN:H	0.89	0.86
4:CD:153:ARG:HG2	4:CD:154:VAL:N	1.87	0.86
49:D1:8:ILE:HD11	49:D1:52:LYS:HE3	1.58	0.86
22:DA:332:A:H61	42:DU:68:ASN:HD21	1.22	0.86

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
17:AQ:12:VAL:HG13	17:AQ:13:SER:H	1.41	0.86
40:BS:73:LYS:HE3	40:BS:74:ILE:H	1.40	0.86
32:BK:108:ARG:HH11	32:BK:108:ARG:CG	1.88	0.86
40:BS:88:ARG:CG	40:BS:88:ARG:HH21	1.88	0.86
1:AA:974:A:H4'	1:AA:975:A:H5'	1.58	0.86
3:AC:166:TRP:H	3:AC:166:TRP:HE3	1.22	0.86
16:CP:74:LEU:O	16:CP:78:VAL:HG23	1.75	0.86
1:AA:243:A:H4'	1:AA:244:U:H5''	1.58	0.86
22:DA:1606:C:H5'	22:DA:1606:C:O2	1.75	0.86
38:BQ:65:ASN:ND2	38:BQ:69:ARG:HH22	1.74	0.86
48:B0:42:ILE:HD12	48:B0:48:TYR:HB2	1.57	0.86
28:DG:112:VAL:HG12	28:DG:114:HIS:H	1.40	0.86
22:DA:915:C:H2'	22:DA:916:G:H8	1.39	0.86
1:AA:71:A:O2'	1:AA:72:A:H5''	1.75	0.86
1:CA:120:A:C2'	1:CA:121:U:H5''	2.05	0.86
22:DA:1847:A:O2'	22:DA:1848:A:H8	1.58	0.86
41:BT:39:THR:HB	41:BT:42:GLU:HB2	1.58	0.86
1:AA:414:A:H2'	1:AA:415:A:H8	1.40	0.86
25:BD:174:SER:O	25:BD:175:LEU:HB2	1.74	0.86
10:CJ:35:GLN:HG2	10:CJ:76:ILE:HG23	1.57	0.86
1:AA:49:U:O4	1:AA:365:U:H5	1.58	0.86
31:BJ:110:PRO:HB2	31:BJ:111:LYS:HG3	1.56	0.85
30:BI:33:ASN:HD22	30:BI:64:ARG:HH22	1.23	0.85
29:BH:31:VAL:HG13	29:BH:36:ALA:O	1.74	0.85
1:CA:1493:A:H8	22:DA:1913:A:H61	1.22	0.85
22:DA:972:A:H3'	22:DA:973:A:H5''	1.55	0.85
22:DA:990:A:O2'	22:DA:991:C:H5''	1.76	0.85
22:BA:2148:G:H2'	22:BA:2149:U:O4'	1.75	0.85
34:BM:42:THR:HG22	34:BM:93:VAL:HG23	1.57	0.85
1:AA:1303:C:H2'	1:AA:1304:G:C8	2.10	0.85
25:BD:5:VAL:H	25:BD:32:ASN:HD21	1.22	0.85
22:DA:1817:G:HO2'	22:DA:1818:U:H5'	1.41	0.85
22:DA:648:G:HO2'	22:DA:649:G:H8	0.91	0.85
1:CA:1299:A:C8	1:CA:1301:U:H1'	2.12	0.85
22:DA:279:A:C2	22:DA:362:A:H4'	2.11	0.85
22:BA:1309:G:OP1	50:B2:9:VAL:HG12	1.76	0.85
8:AH:9:MET:HE1	8:AH:32:LYS:HA	1.59	0.85
6:CF:43:GLY:HA2	6:CF:58:HIS:CE1	2.10	0.85
1:CA:642:A:HO2'	1:CA:643:C:H6	1.21	0.85
22:DA:810:U:O4	33:DL:30:THR:HG22	1.77	0.85
1:CA:120:A:H3'	1:CA:121:U:C5'	2.07	0.85
24:DC:144:GLU:HB3	24:DC:187:CYS:HB2	1.55	0.85

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:204:A:H4'	22:DA:205:G:OP1	1.75	0.85
2:AB:108:GLN:H	2:AB:108:GLN:HE21	1.22	0.85
1:CA:247:G:O6	1:CA:278:G:C6	2.30	0.85
33:DL:9:ALA:HB3	33:DL:12:SER:HB3	1.58	0.85
22:DA:1639:C:H2'	22:DA:1640:A:H5''	1.59	0.85
2:CB:74:ALA:HB1	2:CB:206:ILE:HD11	1.57	0.85
31:BJ:130:HIS:CD2	31:BJ:132:HIS:H	1.95	0.85
43:BV:80:HIS:CD2	43:BV:83:LYS:HB2	2.11	0.85
8:AH:76:ARG:HH11	8:AH:76:ARG:HG3	1.41	0.85
7:CG:110:ARG:HG3	7:CG:111:GLY:H	1.41	0.85
1:AA:923:A:H5''	5:AE:25:LYS:HE2	1.58	0.85
22:BA:1110:G:O2'	22:BA:1111:A:H8	1.60	0.85
28:BG:96:ALA:HB3	28:BG:103:ASN:HB3	1.56	0.85
24:DC:147:PRO:HD3	24:DC:184:GLU:HG3	1.59	0.85
1:AA:496:A:H2'	1:AA:496:A:N3	1.90	0.85
22:DA:2612:C:H5''	22:DA:2613:U:OP1	1.75	0.85
22:DA:1417:C:H2'	22:DA:1418:G:C8	2.12	0.85
1:AA:1183:U:H3'	1:AA:1184:G:H5''	1.57	0.85
52:B4:36:ARG:HG2	52:B4:37:GLN:H	1.41	0.85
13:CM:64:VAL:HG12	13:CM:65:GLU:H	1.41	0.85
39:BR:51:VAL:HB	39:BR:52:PRO:HD2	1.56	0.84
1:AA:205:A:H4'	1:AA:205:A:OP1	1.73	0.84
17:AQ:22:VAL:HG21	17:AQ:60:ILE:HD11	1.56	0.84
26:BE:149:ILE:HD11	26:BE:172:ALA:HA	1.59	0.84
22:DA:286:U:H2'	22:DA:287:G:C8	2.12	0.84
1:AA:1373:G:H5''	7:AG:35:LYS:HD2	1.59	0.84
22:BA:65:U:H2'	22:BA:66:C:H6	1.42	0.84
37:BP:3:ILE:HD13	37:BP:3:ILE:O	1.76	0.84
22:DA:1080:A:H2'	22:DA:1081:U:C6	2.12	0.84
22:DA:617:G:HO2'	22:DA:618:G:H8	0.84	0.84
8:AH:17:GLN:NE2	8:AH:71:VAL:HG23	1.92	0.84
44:DW:23:LYS:HD2	44:DW:24:ARG:N	1.91	0.84
22:BA:1180:U:H2'	22:BA:1181:U:C6	2.12	0.84
22:DA:616:A:HO2'	22:DA:617:G:H8	0.86	0.84
31:BJ:21:THR:HG22	31:BJ:22:GLY:H	1.41	0.84
2:CB:99:MET:HA	2:CB:106:VAL:HG21	1.59	0.84
46:BY:47:ARG:HG3	46:BY:47:ARG:HH21	1.41	0.84
22:DA:197:A:N6	22:DA:2430:A:H2'	1.91	0.84
1:AA:922:G:H4'	5:AE:24:VAL:HA	1.59	0.84
38:BQ:63:ARG:HD2	38:BQ:64:ILE:N	1.93	0.84
5:AE:81:GLN:H	5:AE:81:GLN:HE21	1.25	0.84
1:CA:90:C:O2'	1:CA:91:U:C6	2.31	0.84

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:1135:C:N4	22:DA:1139:G:C6	2.45	0.84
8:AH:28:SER:HB2	8:AH:58:LEU:HB2	1.59	0.84
3:AC:38:VAL:O	3:AC:42:LEU:HB2	1.76	0.84
23:DB:24:G:H1'	23:DB:27:C:H42	1.43	0.84
38:DQ:57:ARG:NH1	38:DQ:92:LYS:HE2	1.92	0.84
22:BA:1084:A:H2'	22:BA:1085:A:C8	2.12	0.84
25:BD:114:LYS:HE3	25:BD:114:LYS:O	1.77	0.84
22:DA:649:G:H2'	22:DA:650:C:C6	2.12	0.84
25:DD:13:ARG:HH12	37:DP:74:GLN:NE2	1.74	0.84
1:CA:1141:C:HO2'	1:CA:1142:G:H8	1.23	0.84
41:DT:44:LYS:O	41:DT:48:GLN:HG2	1.77	0.84
27:DF:39:VAL:HA	27:DF:49:LEU:HG	1.60	0.84
9:CI:90:ASP:HB3	9:CI:93:LEU:HD23	1.60	0.84
22:BA:1063:G:H2'	22:BA:1064:C:O4'	1.77	0.84
22:DA:1303:G:HO2'	22:DA:1304:A:H8	0.89	0.84
22:DA:45:G:H5'	22:DA:46:G:H5'	1.58	0.84
38:BQ:91:ARG:NH2	38:BQ:93:ILE:HD13	1.92	0.84
22:BA:784:G:C6	24:BC:227:VAL:HG11	2.13	0.84
22:DA:876:C:H3'	22:DA:877:A:H8	1.41	0.84
22:DA:1706:C:H4'	22:DA:1707:G:OP2	1.75	0.84
24:DC:83:ASP:HB2	24:DC:90:ILE:HD12	1.59	0.84
1:AA:982:U:C4'	1:AA:983:A:O5'	2.23	0.84
16:CP:52:LEU:HD21	16:CP:75:ILE:HG12	1.60	0.84
1:CA:519:C:H2'	1:CA:520:A:C8	2.13	0.84
38:BQ:97:ILE:HD11	38:BQ:105:PHE:HA	1.59	0.84
22:DA:1989:G:H2'	22:DA:1990:C:H5'	1.59	0.84
1:AA:731:G:OP1	1:AA:766:A:H1'	1.77	0.84
37:BP:50:ARG:CD	37:BP:51:ASN:H	1.91	0.83
15:AO:63:ARG:HD3	15:AO:87:ARG:NH2	1.93	0.83
1:CA:1225:A:H4'	19:CS:77:ARG:NH1	1.93	0.83
22:DA:834:G:H1'	22:DA:2358:A:N3	1.93	0.83
25:BD:91:THR:O	25:BD:93:GLY:N	2.11	0.83
24:BC:251:THR:HG22	24:BC:252:LYS:H	1.43	0.83
32:BK:71:ARG:HG3	32:BK:106:GLU:OE2	1.78	0.83
28:BG:104:LEU:HB2	28:BG:112:VAL:CG2	2.08	0.83
38:BQ:65:ASN:HD21	38:BQ:69:ARG:NH2	1.76	0.83
32:DK:17:ARG:HH11	32:DK:18:ARG:HG2	1.41	0.83
29:BH:8:LYS:O	29:BH:9:VAL:HB	1.77	0.83
1:AA:1055:A:H1'	3:AC:155:ARG:HH21	1.42	0.83
50:B2:3:ARG:HH21	50:B2:3:ARG:HG2	1.43	0.83
22:DA:489:G:HO2'	22:DA:491:G:H8	1.27	0.83
22:DA:15:G:OP1	48:D0:20:ALA:HB2	1.78	0.83

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:1716:U:O2'	22:DA:1717:A:H8	1.60	0.83
22:DA:1127:A:O2'	22:DA:1128:G:H5'	1.77	0.83
31:BJ:6:ALA:CB	31:BJ:45:THR:HG21	2.06	0.83
1:CA:94:G:H4'	1:CA:95:C:OP1	1.76	0.83
1:CA:245:U:H5''	1:CA:245:U:H6	1.44	0.83
34:DM:19:GLY:H	34:DM:38:ARG:NH2	1.77	0.83
32:BK:113:MET:O	32:BK:116:ILE:HG13	1.77	0.83
22:BA:2225:A:H4'	22:BA:2226:C:O5'	1.79	0.83
23:DB:24:G:H1'	23:DB:27:C:N4	1.92	0.83
22:DA:1352:U:H5	22:DA:1377:G:C6	1.96	0.83
22:DA:1303:G:O2'	22:DA:1304:A:H8	1.61	0.83
24:BC:210:ALA:O	24:BC:215:VAL:HG23	1.77	0.83
29:BH:31:VAL:HB	29:BH:32:PRO:CD	2.08	0.83
52:B4:9:LYS:H	52:B4:9:LYS:CD	1.87	0.83
49:B1:13:SER:HB3	49:B1:47:ILE:O	1.76	0.83
22:BA:1110:G:HO2'	22:BA:1111:A:H8	0.84	0.83
1:CA:372:C:H1'	1:CA:373:A:OP2	1.77	0.83
32:DK:35:VAL:HG23	32:DK:36:GLY:H	1.43	0.83
22:DA:1568:G:H21	24:DC:57:HIS:CE1	1.96	0.83
51:D3:41:ARG:HH21	51:D3:41:ARG:HG3	1.42	0.83
22:BA:1654:A:O2'	25:BD:118:PHE:CD2	2.31	0.83
22:DA:654:A:H2'	22:DA:655:A:H5''	1.60	0.83
22:BA:1238:G:O2'	22:BA:1239:G:H5'	1.77	0.83
32:BK:76:VAL:HB	37:BP:72:VAL:CG2	2.09	0.83
1:AA:619:U:H3	4:AD:130:ASN:HB3	1.43	0.83
1:CA:704:A:O2'	1:CA:705:G:H8	1.62	0.83
22:DA:2060:A:H62	26:DE:69:ARG:NH1	1.77	0.83
1:AA:1299:A:N3	1:AA:1299:A:H2'	1.94	0.83
22:BA:1056:G:H5''	22:BA:1057:A:H5'	1.61	0.83
22:BA:100:U:H4'	22:BA:101:A:O5'	1.78	0.83
29:DH:27:ARG:NH1	45:DX:59:ASP:HA	1.92	0.83
6:CF:92:THR:HG22	6:CF:94:HIS:H	1.43	0.83
38:DQ:69:ARG:HH21	38:DQ:69:ARG:HB2	1.43	0.83
25:DD:114:LYS:HD2	25:DD:116:LYS:HZ2	1.42	0.83
22:DA:2720:U:H5''	37:DP:52:ARG:HH21	1.42	0.82
24:BC:230:PRO:HD2	24:BC:246:PRO:HA	1.61	0.82
28:BG:73:SER:HA	28:BG:76:ILE:HG22	1.61	0.82
13:CM:33:LEU:HB3	13:CM:38:ILE:HB	1.59	0.82
22:BA:2813:A:H2	22:BA:2887:A:N6	1.76	0.82
21:CU:35:GLU:O	21:CU:36:PHE:HD2	1.59	0.82
41:DT:50:LEU:HD23	41:DT:51:PHE:H	1.44	0.82
28:BG:84:LYS:CG	28:BG:132:LEU:H	1.92	0.82

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:604:G:O2'	22:DA:605:G:H5'	1.80	0.82
41:DT:14:PRO:O	41:DT:15:HIS:HB2	1.79	0.82
7:AG:86:VAL:HG22	7:AG:150:PHE:HB3	1.59	0.82
22:DA:2836:U:O2'	22:DA:2837:A:H8	1.60	0.82
7:CG:142:ARG:O	7:CG:146:ALA:HB3	1.79	0.82
1:CA:496:A:N3	1:CA:496:A:H2'	1.94	0.82
26:BE:44:ARG:HH21	26:BE:44:ARG:CG	1.92	0.82
25:DD:119:ALA:HB3	25:DD:163:GLY:H	1.44	0.82
33:BL:93:ASN:ND2	33:BL:94:THR:N	2.27	0.82
2:CB:209:VAL:O	2:CB:213:LEU:HB2	1.78	0.82
22:DA:1126:A:H4'	22:DA:1127:A:O5'	1.79	0.82
47:DZ:4:ILE:HD12	47:DZ:58:GLU:HA	1.61	0.82
22:DA:647:G:H2'	22:DA:648:G:C8	2.13	0.82
22:DA:2458:G:H8	22:DA:2459:A:H62	1.27	0.82
24:DC:159:THR:O	24:DC:194:VAL:HG12	1.79	0.82
28:BG:115:GLN:CD	28:BG:115:GLN:H	1.82	0.82
29:DH:93:SER:HB3	29:DH:121:VAL:HG21	1.60	0.82
22:DA:593:U:H2'	22:DA:594:U:C6	2.14	0.82
22:DA:226:A:H2'	22:DA:227:A:H8	1.43	0.82
17:AQ:16:MET:HB2	17:AQ:19:SER:HB3	1.58	0.82
17:CQ:30:HIS:CE1	17:CQ:32:ILE:HG13	2.13	0.82
22:DA:2197:U:O2'	22:DA:2198:A:C8	2.32	0.82
42:DU:95:PHE:H	42:DU:95:PHE:HD1	1.23	0.82
22:BA:1475:G:H1'	22:BA:1476:U:OP2	1.79	0.82
25:BD:11:MET:HE1	25:BD:192:ALA:HA	1.61	0.82
1:CA:129:A:O2'	1:CA:130:A:C8	2.33	0.82
41:DT:39:THR:HG21	41:DT:42:GLU:HB2	1.59	0.82
23:DB:57:A:O2'	23:DB:58:A:C8	2.24	0.82
22:DA:78:U:O2'	22:DA:79:C:H5'	1.79	0.82
1:AA:464:U:C2	1:AA:466:A:H5'	2.14	0.82
22:DA:2800:A:H2'	22:DA:2801:G:H4'	1.58	0.82
23:BB:90:C:H6	23:BB:90:C:H5''	1.43	0.82
22:DA:1714:U:H3'	22:DA:1715:G:H5'	1.61	0.82
44:BW:24:ARG:HD2	44:BW:25:PHE:N	1.95	0.82
1:AA:484:G:C4'	1:AA:485:U:O5'	2.28	0.82
22:DA:126:A:O5'	50:D2:19:ARG:HG3	1.80	0.82
22:DA:915:C:H2'	22:DA:916:G:C8	2.15	0.82
4:AD:43:ARG:O	4:AD:45:PRO:HD3	1.79	0.82
5:CE:55:VAL:O	5:CE:59:ILE:HG22	1.80	0.82
37:BP:63:ILE:HA	37:BP:68:GLY:HA2	1.61	0.82
32:DK:13:ASN:H	32:DK:13:ASN:HD22	1.25	0.82
36:BO:49:VAL:HG21	36:BO:82:ALA:HA	1.61	0.82

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:BD:97:SER:O	25:BD:99:GLU:HG2	1.79	0.82
3:CC:140:ALA:O	3:CC:145:ALA:HB3	1.80	0.82
39:BR:39:LEU:N	39:BR:39:LEU:HD23	1.94	0.81
22:DA:2336:A:N7	44:DW:40:ARG:CZ	2.42	0.81
44:DW:40:ARG:CG	44:DW:40:ARG:HH11	1.84	0.81
22:DA:1965:C:H5'	22:DA:1966:A:H5''	1.61	0.81
22:BA:1813:G:N3	24:BC:49:THR:HG21	1.94	0.81
22:DA:2056:G:N2	48:D0:1:ALA:H1	1.77	0.81
32:DK:76:VAL:HB	37:DP:72:VAL:HG22	1.61	0.81
32:DK:87:LEU:HD12	32:DK:92:GLU:HA	1.62	0.81
22:BA:1605:C:H3'	22:BA:1606:C:H5''	1.60	0.81
38:BQ:97:ILE:HD11	38:BQ:105:PHE:CA	2.10	0.81
7:CG:74:VAL:HG13	7:CG:140:VAL:HG13	1.62	0.81
20:CT:23:ARG:HB3	20:CT:60:GLN:NE2	1.95	0.81
22:DA:181:A:H2	22:DA:434:U:H1'	1.43	0.81
22:BA:509:C:H5''	22:BA:510:C:OP2	1.80	0.81
23:DB:75:G:H1	23:DB:102:G:H22	1.26	0.81
22:BA:1150:C:O2'	22:BA:1151:A:O5'	1.98	0.81
4:CD:58:GLN:O	4:CD:62:ARG:HG2	1.80	0.81
44:BW:37:VAL:HG12	44:BW:38:ARG:N	1.94	0.81
1:CA:1183:U:H3'	1:CA:1184:G:C5'	2.09	0.81
22:DA:1489:C:C4'	22:DA:1490:A:OP1	2.26	0.81
27:BF:134:GLN:HE21	27:BF:134:GLN:N	1.78	0.81
22:DA:1716:U:HO2'	22:DA:1717:A:H8	0.87	0.81
22:DA:1126:A:H4'	22:DA:1127:A:C5'	2.09	0.81
33:DL:117:THR:HG22	33:DL:118:THR:H	1.43	0.81
17:CQ:3:LYS:NZ	17:CQ:6:THR:HG21	1.94	0.81
9:CI:44:ARG:HH21	9:CI:48:ARG:NH1	1.77	0.81
22:DA:1197:G:H5'	22:DA:1227:G:O2'	1.81	0.81
22:DA:2022:U:HO2'	22:DA:2616:C:HO2'	1.26	0.81
3:AC:156:LEU:H	3:AC:156:LEU:HD12	1.45	0.81
15:AO:63:ARG:CG	15:AO:87:ARG:HH12	1.93	0.81
22:DA:1915:U:H2'	22:DA:1916:A:C8	2.15	0.81
22:DA:2838:G:H1'	35:DN:45:ARG:NH2	1.94	0.81
1:CA:109:A:H4'	1:CA:110:C:OP2	1.79	0.81
32:BK:21:CYS:HA	32:BK:41:ILE:HD12	1.60	0.81
24:BC:70:LYS:HE2	24:BC:73:ILE:HD12	1.61	0.81
22:DA:1493:C:O2	22:DA:1493:C:H2'	1.81	0.81
39:BR:49:ILE:HD12	39:BR:52:PRO:CA	2.11	0.81
37:BP:50:ARG:HB3	37:BP:57:ALA:N	1.95	0.81
11:CK:111:ASP:H	21:CU:3:ILE:N	1.77	0.81
1:CA:279:A:H4'	1:CA:280:C:O5'	1.78	0.81

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
32:BK:21:CYS:HB2	32:BK:39:ILE:HD11	1.62	0.81
3:CC:110:LEU:O	3:CC:110:LEU:HD23	1.80	0.81
38:DQ:87:VAL:HG11	39:DR:52:PRO:HG3	1.62	0.81
22:DA:2291:U:H2'	22:DA:2292:U:C6	2.16	0.81
22:DA:2266:A:H4'	22:DA:2267:A:O5'	1.81	0.81
22:DA:1714:U:H3'	22:DA:1715:G:C5'	2.11	0.81
30:BI:89:SER:HB3	30:BI:92:PRO:HG3	1.63	0.81
24:BC:123:ILE:HG12	24:BC:123:ILE:O	1.78	0.81
22:DA:12:U:O2	22:DA:12:U:H2'	1.81	0.81
22:DA:1056:G:H1'	22:DA:1103:A:N6	1.95	0.81
1:CA:668:G:O2'	15:CO:45:HIS:HB3	1.79	0.81
1:AA:1062:U:H2'	1:AA:1063:C:C6	2.16	0.81
1:CA:471:U:H2'	1:CA:472:U:H6	1.46	0.81
22:DA:2836:U:HO2'	22:DA:2837:A:H8	0.82	0.81
41:DT:3:ARG:HD2	41:DT:42:GLU:HG2	1.62	0.81
20:AT:67:HIS:HB3	20:AT:68:LYS:NZ	1.94	0.81
1:AA:344:A:O3'	37:BP:36:LYS:HE3	1.81	0.81
1:AA:250:A:H4'	1:AA:251:G:O5'	1.79	0.81
45:BX:5:GLN:NE2	45:BX:49:ARG:H	1.79	0.81
39:BR:49:ILE:CD1	39:BR:52:PRO:HA	2.11	0.81
22:DA:1847:A:O2'	22:DA:1848:A:C8	2.31	0.81
12:AL:23:LEU:O	12:AL:25:ALA:N	2.14	0.81
3:CC:56:ILE:HG12	3:CC:65:VAL:HG22	1.63	0.81
1:CA:1278:G:C4'	1:CA:1279:G:O5'	2.28	0.81
1:CA:960:U:H4'	1:CA:961:U:H5''	1.60	0.81
22:DA:2215:C:HO2'	22:DA:2216:G:H8	1.27	0.81
22:DA:2887:A:H1'	48:D0:39:ARG:HH22	1.44	0.81
22:DA:206:U:H6	22:DA:206:U:H5'	1.46	0.81
22:BA:2135:A:HO2'	22:BA:2136:G:H8	1.29	0.81
1:CA:994:A:HO2'	1:CA:995:C:H6	1.27	0.81
22:BA:2427:C:H5''	22:BA:2428:G:OP1	1.80	0.81
22:DA:1552:A:N3	22:DA:1552:A:H2'	1.95	0.80
22:DA:1381:G:H2'	22:DA:1382:G:H5''	1.63	0.80
47:DZ:16:LEU:CD2	47:DZ:16:LEU:H	1.93	0.80
2:AB:137:THR:HA	2:AB:140:LEU:HD13	1.61	0.80
2:AB:127:LYS:HG3	2:AB:128:LEU:H	1.46	0.80
35:BN:79:LEU:O	35:BN:80:PHE:HB2	1.81	0.80
1:CA:1182:G:C4'	1:CA:1183:U:H5'	2.10	0.80
22:DA:230:G:HO2'	22:DA:231:A:H8	1.28	0.80
22:DA:2829:A:H2'	22:DA:2830:C:H5'	1.62	0.80
1:AA:1277:C:O2'	1:AA:1279:G:H8	1.63	0.80
1:CA:1129:C:O2'	1:CA:1130:A:C8	2.34	0.80

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:1989:G:C2'	22:DA:1990:C:H5'	2.11	0.80
6:CF:92:THR:O	6:CF:93:LYS:HG2	1.81	0.80
7:CG:75:LYS:HE3	7:CG:76:SER:H	1.46	0.80
16:AP:10:GLY:HA3	16:AP:15:PRO:HA	1.63	0.80
22:BA:931:U:H4'	22:BA:932:U:OP2	1.81	0.80
12:CL:43:LYS:CB	12:CL:44:PRO:HD2	2.06	0.80
1:CA:1492:A:H2'	22:DA:1913:A:N7	1.96	0.80
17:AQ:12:VAL:HG13	17:AQ:13:SER:N	1.95	0.80
50:D2:34:ARG:HB3	50:D2:42:LEU:HD11	1.63	0.80
22:DA:627:A:H5''	33:DL:78:ARG:HH12	1.43	0.80
1:AA:1279:G:N3	1:AA:1279:G:H2'	1.96	0.80
27:BF:134:GLN:HG2	27:BF:135:ILE:H	1.46	0.80
22:DA:95:A:H1'	46:DY:40:SER:HB2	1.60	0.80
25:DD:114:LYS:HD2	25:DD:116:LYS:NZ	1.96	0.80
4:CD:55:ARG:HH11	4:CD:55:ARG:HA	1.46	0.80
24:BC:250:GLN:N	24:BC:250:GLN:HE21	1.80	0.80
22:BA:1287:A:H5'	35:BN:103:ARG:HD2	1.64	0.80
3:CC:190:THR:HG22	3:CC:191:THR:H	1.46	0.80
6:CF:41:ASP:OD2	6:CF:58:HIS:HE1	1.65	0.80
1:CA:154:U:H2'	1:CA:155:A:H5'	1.63	0.80
22:DA:2808:G:HO2'	22:DA:2809:A:H8	1.29	0.80
22:BA:1747:U:H2'	22:BA:1748:C:C6	2.16	0.80
9:AI:83:THR:HG21	9:AI:102:PHE:HB3	1.63	0.80
22:BA:762:U:H4'	22:BA:763:G:O5'	1.82	0.80
3:AC:56:ILE:HG12	3:AC:65:VAL:HG22	1.64	0.80
36:DO:23:ALA:HB1	36:DO:90:VAL:HG12	1.64	0.80
44:DW:27:GLY:CA	44:DW:31:LEU:HD11	2.11	0.80
35:DN:97:ILE:HG13	35:DN:98:LEU:N	1.97	0.80
22:BA:1733:G:O2'	22:BA:1734:G:H8	1.65	0.80
5:AE:14:LEU:O	5:AE:14:LEU:HD13	1.81	0.80
29:DH:77:THR:HG22	29:DH:143:ILE:HD11	1.62	0.80
4:CD:2:ARG:HH21	4:CD:114:ARG:CD	1.92	0.80
19:CS:52:ASN:ND2	19:CS:54:ARG:HG2	1.96	0.80
22:DA:322:A:H3'	26:DE:163:ASN:ND2	1.96	0.80
22:BA:636:G:C6	33:BL:111:ILE:HD11	2.16	0.80
24:BC:109:LEU:HD23	24:BC:110:LYS:H	1.44	0.80
22:BA:2502:G:H5'	22:BA:2503:A:H5''	1.63	0.80
22:DA:364:C:H2'	22:DA:365:U:C6	2.17	0.80
45:BX:58:ILE:HG13	45:BX:66:VAL:HG21	1.64	0.80
22:DA:1913:A:C4'	22:DA:1914:C:OP1	2.29	0.80
1:AA:1277:C:HO2'	1:AA:1279:G:H8	0.82	0.80
37:DP:50:ARG:HB3	37:DP:57:ALA:H	1.44	0.80

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:1411:C:C2'	1:AA:1412:C:H5'	2.12	0.80
3:AC:142:ARG:HB3	3:AC:143:LEU:HD13	1.60	0.80
41:BT:64:LYS:HA	41:BT:79:ASP:OD1	1.81	0.80
35:DN:35:LYS:HZ2	35:DN:112:TYR:HE1	1.30	0.80
31:BJ:43:GLU:O	31:BJ:45:THR:HG22	1.81	0.80
22:BA:923:G:N3	44:BW:23:LYS:HE2	1.95	0.80
41:BT:50:LEU:HD12	41:BT:50:LEU:H	1.46	0.80
22:DA:1870:C:H5''	22:DA:1871:A:H2	1.46	0.80
40:DS:14:ALA:O	40:DS:18:ARG:HB2	1.81	0.80
14:AN:19:TYR:O	14:AN:22:LYS:HB3	1.80	0.80
31:DJ:99:ARG:HA	31:DJ:102:GLU:HB3	1.62	0.80
4:AD:145:ARG:HH11	4:AD:147:LYS:HE3	1.45	0.80
22:BA:923:G:H1'	44:BW:23:LYS:HE2	1.63	0.80
38:DQ:91:ARG:NH1	39:DR:10:LYS:HB3	1.97	0.80
22:DA:1255:U:H3'	22:DA:1256:G:H5''	1.61	0.80
30:BI:115:ASP:O	30:BI:116:MET:HG2	1.82	0.80
22:BA:1019:U:C4	22:BA:1020:A:N6	2.50	0.80
22:BA:2720:U:OP1	37:BP:52:ARG:NH2	2.15	0.80
1:CA:702:A:C8	1:CA:702:A:OP1	2.34	0.80
3:CC:110:LEU:HD21	3:CC:203:LYS:HD2	1.62	0.80
1:AA:1007:U:H2'	1:AA:1008:U:H5''	1.64	0.80
5:AE:155:LYS:HA	5:AE:158:LYS:HZ3	1.47	0.79
22:DA:1079:C:N4	22:DA:1088:A:H5''	1.95	0.79
22:BA:137:U:O2'	22:BA:138:U:P	2.40	0.79
25:DD:112:THR:HG22	25:DD:113:SER:N	1.98	0.79
49:D1:25:ASN:HB3	49:D1:28:THR:OG1	1.82	0.79
50:B2:42:LEU:HD22	50:B2:42:LEU:H	1.47	0.79
22:DA:2387:U:H1'	44:DW:38:ARG:NH1	1.97	0.79
5:AE:155:LYS:HD2	5:AE:156:ARG:H	1.45	0.79
23:DB:40:U:O2	23:DB:43:C:H2'	1.81	0.79
17:AQ:51:GLU:HG2	17:AQ:52:CYS:SG	2.22	0.79
1:CA:1348:U:H4'	9:CI:121:ARG:HG3	1.64	0.79
1:CA:643:C:H5''	8:CH:31:LEU:HD22	1.62	0.79
22:DA:2577:A:H2	48:D0:1:ALA:H2	1.29	0.79
31:BJ:77:HIS:CD2	31:BJ:79:GLY:H	1.99	0.79
1:AA:92:U:H2'	1:AA:93:U:C6	2.17	0.79
29:DH:116:ARG:O	29:DH:117:LEU:HG	1.81	0.79
3:CC:179:ALA:HB1	3:CC:202:PHE:CE1	2.18	0.79
44:DW:37:VAL:HG12	44:DW:55:ASP:HB2	1.62	0.79
26:BE:44:ARG:HG3	26:BE:44:ARG:NH2	1.92	0.79
10:CJ:67:ILE:HG23	14:CN:95:LEU:H	1.46	0.79
22:DA:67:U:H2'	22:DA:68:G:H8	1.47	0.79

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:CA:243:A:H4'	1:CA:244:U:H5'	1.65	0.79
22:BA:1605:C:C3'	22:BA:1606:C:H5''	2.12	0.79
38:BQ:71:ASN:OD1	38:BQ:106:THR:HG23	1.82	0.79
15:AO:9:LYS:O	15:AO:13:GLU:HG3	1.83	0.79
27:BF:104:THR:HG22	27:BF:105:ILE:HG23	1.65	0.79
1:CA:1322:C:H2'	1:CA:1322:C:O2	1.82	0.79
38:DQ:60:TRP:O	38:DQ:64:ILE:HG12	1.82	0.79
2:AB:13:VAL:HG23	2:AB:207:ARG:HH22	1.48	0.79
5:CE:104:ILE:H	5:CE:122:VAL:H	1.26	0.79
22:BA:289:G:H2'	22:BA:290:U:O4'	1.82	0.79
29:DH:68:ARG:HD2	29:DH:71:LYS:HB2	1.64	0.79
21:CU:19:LYS:N	21:CU:19:LYS:HZ3	1.79	0.79
22:DA:83:A:H61	22:DA:101:A:H5'	1.45	0.79
2:AB:110:ILE:HD12	2:AB:147:LEU:HD13	1.65	0.79
1:CA:990:C:H2'	1:CA:991:U:O4'	1.83	0.79
33:DL:124:GLY:H	33:DL:143:GLU:HG3	1.48	0.79
3:AC:96:VAL:HB	3:AC:97:PRO:HD2	1.65	0.79
5:AE:114:LEU:HG	5:AE:119:VAL:HG21	1.65	0.79
14:CN:76:PHE:HE2	14:CN:92:ILE:HG21	1.47	0.79
22:DA:1157:G:H2'	22:DA:1158:C:C6	2.17	0.79
49:B1:7:LYS:HA	49:B1:23:THR:HG22	1.63	0.79
1:CA:1287:A:O2'	1:CA:1288:A:C8	2.34	0.79
41:BT:61:LEU:C	41:BT:61:LEU:HD12	2.03	0.79
22:BA:228:C:H4'	22:BA:229:C:H5''	1.64	0.79
1:CA:87:C:O2'	1:CA:88:U:H4'	1.82	0.79
1:CA:1135:U:H5'	1:CA:1136:C:OP2	1.83	0.79
2:AB:89:PHE:HB3	2:AB:149:GLY:HA2	1.63	0.79
22:DA:2771:C:H2'	22:DA:2772:C:H6	1.48	0.79
5:CE:38:VAL:HG12	5:CE:39:GLY:N	1.98	0.79
25:BD:172:VAL:O	25:BD:173:GLN:HB2	1.80	0.79
22:DA:1607:C:H4'	22:DA:1608:A:C8	2.18	0.79
22:DA:617:G:O2'	22:DA:618:G:H8	1.64	0.79
27:DF:49:LEU:H	27:DF:49:LEU:HD22	1.47	0.79
22:DA:1258:U:H2'	22:DA:1259:G:C8	2.17	0.79
22:BA:2324:U:H3'	22:BA:2325:G:H5''	1.64	0.79
1:CA:1013:G:N2	1:CA:1015:G:H3'	1.98	0.79
22:BA:1161:C:H1'	39:BR:8:GLY:O	1.83	0.79
1:CA:6:G:N3	1:CA:6:G:C2'	2.40	0.78
51:B3:31:ILE:CD1	51:B3:34:LYS:HD2	2.12	0.78
1:CA:1329:A:H5''	13:CM:25:GLY:N	1.97	0.78
28:DG:124:CYS:HB3	28:DG:130:ILE:HA	1.65	0.78
22:BA:1019:U:H3	22:BA:1142:A:H62	1.30	0.78

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:1854:A:H2'	22:DA:1855:U:H5'	1.65	0.78
22:BA:479:A:H4'	22:BA:480:A:OP1	1.83	0.78
22:DA:2468:A:O2'	22:DA:2469:A:H8	1.67	0.78
7:CG:14:ASP:HB3	7:CG:18:GLY:H	1.46	0.78
5:AE:83:PRO:HB3	5:AE:96:GLN:NE2	1.98	0.78
2:AB:76:SER:HB2	2:AB:92:ASN:HB2	1.65	0.78
1:CA:1224:U:C5'	1:CA:1225:A:OP2	2.31	0.78
2:CB:114:LYS:CA	2:CB:117:GLU:HG2	2.12	0.78
22:DA:2304:G:H22	22:DA:2312:U:H3	1.29	0.78
1:CA:1241:G:H2'	1:CA:1242:G:H8	1.47	0.78
1:CA:1299:A:O2'	1:CA:1300:G:H4'	1.82	0.78
27:DF:42:ALA:HB2	27:DF:49:LEU:HD21	1.65	0.78
31:DJ:73:VAL:HG23	31:DJ:74:TYR:H	1.46	0.78
22:BA:1714:U:H2'	22:BA:1714:U:O2	1.81	0.78
46:BY:9:LYS:HB3	46:BY:12:GLU:HG3	1.65	0.78
18:AR:56:ARG:O	18:AR:60:ARG:HB2	1.82	0.78
22:DA:1467:U:H2'	22:DA:1468:U:H5'	1.64	0.78
22:DA:634:C:H2'	22:DA:635:C:C6	2.19	0.78
22:BA:733:G:C8	22:BA:761:A:N6	2.51	0.78
24:DC:16:VAL:N	24:DC:203:VAL:HG12	1.98	0.78
44:DW:9:THR:HG23	44:DW:10:ARG:HG3	1.64	0.78
1:AA:548:G:H2'	1:AA:549:C:H6	1.47	0.78
44:DW:13:ARG:HG3	44:DW:14:ASP:H	1.47	0.78
32:DK:38:ILE:HG12	32:DK:61:VAL:HG12	1.64	0.78
22:DA:1586:A:H2'	22:DA:1587:G:H8	1.49	0.78
22:BA:1071:G:H8	22:BA:1071:G:OP2	1.66	0.78
15:CO:61:GLN:O	15:CO:65:LEU:HD12	1.84	0.78
1:AA:6:G:O6	5:AE:98:ALA:HB1	1.83	0.78
2:CB:31:PHE:HB2	2:CB:41:ASN:HB2	1.65	0.78
14:AN:44:VAL:HG23	14:AN:45:LEU:H	1.47	0.78
39:DR:87:GLN:HG2	39:DR:88:GLY:H	1.48	0.78
31:BJ:44:TYR:O	31:BJ:45:THR:HB	1.82	0.78
22:DA:1210:G:H4'	22:DA:1211:C:O5'	1.83	0.78
22:DA:1307:A:H62	22:DA:1606:C:H6	1.30	0.78
33:DL:48:ARG:CG	33:DL:48:ARG:HH11	1.95	0.78
1:AA:481:G:HO2'	1:AA:482:A:H8	1.31	0.78
22:BA:2180:U:H2'	22:BA:2181:U:C5	2.19	0.78
21:CU:35:GLU:HG3	21:CU:36:PHE:H	1.47	0.78
1:CA:1422:G:H5''	32:DK:48:PRO:HB3	1.66	0.78
1:AA:473:U:H2'	1:AA:474:G:H8	1.46	0.78
1:CA:464:U:O4	1:CA:466:A:H4'	1.82	0.78
1:CA:66:A:H2'	1:CA:66:A:N3	1.98	0.78

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
47:BZ:29:ARG:HH21	47:BZ:29:ARG:HG3	1.49	0.78
31:DJ:55:ILE:HG22	31:DJ:123:LYS:HB2	1.64	0.78
26:BE:112:LEU:HD13	26:BE:186:VAL:HG11	1.66	0.78
38:BQ:85:ALA:O	38:BQ:86:SER:C	2.21	0.78
32:BK:18:ARG:HG3	32:BK:18:ARG:NH1	1.96	0.78
22:DA:2023:C:O2'	22:DA:2024:G:H8	1.65	0.78
43:BV:80:HIS:HD2	43:BV:83:LYS:CB	1.95	0.78
1:AA:374:A:OP1	1:AA:452:A:N1	2.17	0.78
27:DF:46:LYS:HE2	27:DF:83:PRO:HG3	1.64	0.78
3:CC:126:ARG:HE	3:CC:126:ARG:HA	1.47	0.78
37:BP:4:ILE:O	37:BP:6:GLN:N	2.15	0.78
1:AA:464:U:N3	1:AA:466:A:H5'	1.99	0.78
30:BI:79:LEU:HD13	30:BI:135:MET:SD	2.23	0.78
27:DF:103:ILE:HA	27:DF:107:VAL:HG21	1.64	0.78
22:BA:1069:A:O2'	22:BA:1070:A:H5''	1.83	0.78
23:DB:110:C:O2'	23:DB:111:U:H5'	1.84	0.78
31:BJ:111:LYS:CD	31:BJ:112:GLY:N	2.47	0.78
22:DA:2882:A:H4'	35:DN:97:ILE:HG12	1.64	0.78
52:B4:10:LEU:HD12	52:B4:33:HIS:CD2	2.19	0.78
22:DA:287:G:O2'	22:DA:288:U:H5'	1.84	0.78
40:BS:88:ARG:HH21	40:BS:88:ARG:HG3	1.46	0.78
2:CB:79:VAL:HA	2:CB:213:LEU:HD21	1.66	0.78
22:BA:819:A:OP2	22:BA:1187:G:N2	2.15	0.78
12:AL:43:LYS:HB2	12:AL:44:PRO:HD3	1.64	0.78
41:DT:1:MET:HG2	41:DT:4:GLU:HA	1.65	0.78
22:BA:1078:U:H4'	22:BA:1079:C:H6	1.48	0.78
1:CA:977:A:O2'	1:CA:978:A:H5''	1.81	0.78
1:CA:1493:A:C8	22:DA:1913:A:N6	2.51	0.78
35:DN:90:ARG:HH21	35:DN:116:VAL:HG11	1.48	0.78
22:DA:1051:G:H5'	22:DA:2752:C:H1'	1.66	0.78
6:CF:18:VAL:HG21	6:CF:58:HIS:CD2	2.19	0.78
25:BD:12:THR:HG22	25:BD:13:ARG:N	1.99	0.78
22:DA:963:U:OP1	22:DA:2497:A:H5''	1.84	0.78
22:DA:2716:C:H2'	22:DA:2717:C:H6	1.47	0.78
22:DA:1231:U:H2'	22:DA:1232:G:C8	2.19	0.78
1:AA:1103:C:H2'	1:AA:1104:G:O4'	1.84	0.78
22:BA:1590:A:H2'	22:BA:1591:A:C8	2.19	0.78
22:DA:1652:A:H62	35:DN:11:ASN:HD21	1.30	0.78
22:BA:2800:A:C2	22:BA:2895:G:H1'	2.18	0.77
17:AQ:18:LYS:CA	17:AQ:47:ASP:HB2	2.13	0.77
23:BB:30:C:H2'	23:BB:31:C:H5'	1.66	0.77
23:DB:86:G:H2'	23:DB:87:U:H5''	1.66	0.77

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:AB:32:GLY:HA3	2:AB:39:ILE:H	1.49	0.77
26:DE:47:LYS:HB3	26:DE:51:GLU:HB2	1.65	0.77
1:AA:188:C:O2	1:AA:188:C:H2'	1.83	0.77
1:CA:533:A:O2'	1:CA:535:A:OP2	2.02	0.77
5:CE:103:GLY:HA3	5:CE:121:ASN:HA	1.64	0.77
4:CD:30:LYS:HD3	4:CD:30:LYS:N	1.99	0.77
4:AD:31:CYS:O	4:AD:32:LYS:HB2	1.82	0.77
21:CU:15:LEU:HD12	21:CU:15:LEU:O	1.84	0.77
22:DA:412:A:N6	22:DA:2412:A:O4'	2.17	0.77
6:CF:11:HIS:HD2	6:CF:12:PRO:HD2	1.50	0.77
44:BW:23:LYS:O	44:BW:66:VAL:HB	1.85	0.77
1:CA:1221:G:H4'	19:CS:35:ARG:NH2	1.99	0.77
1:AA:409:U:H2'	1:AA:410:G:H8	1.47	0.77
1:CA:532:A:C8	3:CC:192:TYR:CE2	2.70	0.77
22:BA:2135:A:O2'	22:BA:2136:G:H8	1.67	0.77
22:BA:84:A:H62	22:BA:101:A:H2	1.33	0.77
22:DA:2286:G:H4'	22:DA:2287:A:O4'	1.83	0.77
1:AA:1370:G:O5'	9:AI:110:VAL:HG21	1.85	0.77
24:DC:224:MET:SD	24:DC:229:HIS:HB2	2.25	0.77
11:AK:108:ASN:HB3	21:AU:6:ARG:HG2	1.67	0.77
1:CA:876:C:H1'	8:CH:11:THR:HG21	1.64	0.77
45:BX:7:THR:OG1	45:BX:9:LYS:HG3	1.84	0.77
31:BJ:81:ILE:HG23	31:BJ:82:GLY:N	1.93	0.77
22:BA:2269:G:H4'	44:BW:18:LYS:HE2	1.64	0.77
22:DA:320:A:H2'	26:DE:131:THR:OG1	1.84	0.77
22:DA:1071:G:N7	22:DA:1089:A:C6	2.53	0.77
1:CA:822:U:H2'	1:CA:823:C:H6	1.48	0.77
8:CH:1:SER:HB3	8:CH:3:GLN:HG3	1.65	0.77
7:AG:3:ARG:HG3	7:AG:4:ARG:H	1.48	0.77
22:DA:1490:A:H8	24:DC:73:ILE:HD12	1.50	0.77
52:B4:10:LEU:HD12	52:B4:33:HIS:HD2	1.49	0.77
22:DA:2311:A:H5'	22:DA:2312:U:C5	2.19	0.77
7:CG:35:LYS:O	9:CI:42:THR:HG21	1.84	0.77
1:CA:266:G:O2'	1:CA:267:C:H3'	1.83	0.77
1:AA:8:A:H62	4:AD:204:SER:HB2	1.48	0.77
39:BR:3:ALA:HB3	39:BR:59:ILE:HD11	1.64	0.77
47:DZ:10:ARG:HB2	47:DZ:53:MET:HB3	1.65	0.77
22:BA:588:U:H1'	26:BE:85:PHE:CD1	2.19	0.77
18:CR:62:ARG:HB3	18:CR:69:TYR:CE1	2.19	0.77
22:DA:834:G:H5'	51:D3:56:LEU:HD11	1.65	0.77
22:DA:1062:G:HO2'	22:DA:1063:G:H8	1.33	0.77
25:BD:133:THR:HG23	25:BD:134:HIS:CD2	2.18	0.77

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:AM:10:ASP:CG	13:AM:11:HIS:N	2.36	0.77
22:DA:855:G:N3	44:DW:23:LYS:HE3	1.99	0.77
20:CT:23:ARG:HB3	20:CT:60:GLN:HE22	1.50	0.77
24:DC:75:ALA:HB2	24:DC:95:TYR:CD1	2.20	0.77
35:BN:71:ARG:CG	35:BN:71:ARG:HH21	1.98	0.77
23:DB:50:A:C2	23:DB:51:G:H1'	2.20	0.77
1:AA:721:G:H4'	1:AA:722:G:O5'	1.84	0.77
42:DU:58:VAL:HG12	42:DU:60:LYS:H	1.49	0.77
22:DA:2544:G:H5'	22:DA:2645:G:N7	1.99	0.77
1:AA:1320:C:OP1	19:AS:69:LYS:HE2	1.84	0.77
39:BR:48:LYS:HD2	39:BR:48:LYS:H	1.47	0.77
44:BW:76:ARG:HG3	44:BW:76:ARG:NH2	1.93	0.77
23:DB:12:C:C4'	23:DB:13:G:OP1	2.25	0.77
22:DA:1060:U:O4'	22:DA:1061:U:H2'	1.85	0.77
1:AA:452:A:H2'	1:AA:453:G:O4'	1.84	0.77
45:DX:58:ILE:HG12	45:DX:66:VAL:HG21	1.67	0.77
32:BK:108:ARG:HH11	32:BK:108:ARG:HG2	1.50	0.77
35:DN:103:ARG:HD3	35:DN:110:MET:SD	2.25	0.77
24:BC:166:ARG:HG3	24:BC:166:ARG:O	1.85	0.77
22:BA:528:A:C2	22:BA:2043:C:H4'	2.19	0.77
22:BA:137:U:O2'	22:BA:138:U:OP1	2.02	0.77
1:CA:374:A:H5''	1:CA:452:A:N1	2.00	0.77
1:AA:94:G:H4'	1:AA:95:C:H5''	1.67	0.77
22:DA:1231:U:H2'	22:DA:1232:G:H8	1.49	0.77
25:BD:9:VAL:HG22	25:BD:26:VAL:HB	1.67	0.77
31:BJ:73:VAL:HG23	31:BJ:74:TYR:H	1.48	0.77
1:CA:961:U:HO2'	1:CA:962:C:H6	0.78	0.77
35:DN:97:ILE:HG13	35:DN:98:LEU:H	1.50	0.77
22:DA:184:C:H2'	22:DA:185:G:C8	2.20	0.77
10:CJ:44:THR:OG1	10:CJ:70:HIS:CE1	2.38	0.77
24:BC:20:ASN:HD21	24:BC:22:GLU:HG2	1.49	0.77
5:AE:23:THR:HA	5:AE:28:ARG:HA	1.67	0.77
21:CU:8:ASN:ND2	21:CU:9:GLU:H	1.82	0.77
35:BN:116:VAL:O	35:BN:116:VAL:HG22	1.85	0.77
22:BA:1062:G:OP1	22:BA:1070:A:H4'	1.85	0.76
22:DA:624:C:O2'	22:DA:657:U:H5''	1.85	0.76
41:BT:44:LYS:HG3	41:BT:55:VAL:HG11	1.67	0.76
1:CA:166:U:H2'	1:CA:167:A:H5'	1.67	0.76
31:BJ:64:VAL:O	31:BJ:65:THR:HB	1.83	0.76
33:DL:17:LYS:NZ	33:DL:19:LEU:HD22	2.00	0.76
22:BA:826:U:O2'	33:BL:53:GLY:HA3	1.85	0.76
27:BF:40:GLY:CA	27:BF:84:ILE:HD11	2.15	0.76

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:CA:1225:A:H4'	19:CS:77:ARG:HH12	1.50	0.76
35:DN:38:LEU:HB3	35:DN:39:PRO:HD3	1.67	0.76
5:AE:156:ARG:O	5:AE:158:LYS:N	2.18	0.76
27:BF:134:GLN:HG2	27:BF:135:ILE:N	1.98	0.76
2:AB:9:LEU:HD12	2:AB:42:LEU:HD13	1.65	0.76
34:BM:40:ARG:HB2	34:BM:93:VAL:CG2	2.15	0.76
1:AA:721:G:H4'	1:AA:722:G:C5'	2.14	0.76
1:CA:1305:G:H22	1:CA:1331:G:H2'	1.49	0.76
22:DA:1379:U:H2'	22:DA:1379:U:O2	1.86	0.76
2:AB:131:LYS:O	2:AB:135:MET:HB2	1.86	0.76
29:DH:72:ILE:HD11	29:DH:141:LYS:H	1.51	0.76
12:AL:49:ARG:CG	12:AL:49:ARG:HH11	1.95	0.76
44:DW:17:ALA:O	44:DW:18:LYS:HB3	1.85	0.76
22:DA:228:C:H5''	22:DA:229:C:C5	2.21	0.76
22:DA:482:A:N6	22:DA:506:G:C4	2.52	0.76
22:DA:2757:A:N1	28:DG:66:THR:HG21	2.00	0.76
1:CA:1138:G:N2	1:CA:1140:C:C4	2.54	0.76
22:BA:1392:A:H61	41:BT:18:GLU:CD	1.89	0.76
1:AA:73:C:O2'	1:AA:74:A:O4'	2.02	0.76
1:AA:214:C:O2'	1:AA:215:C:C6	2.39	0.76
41:DT:29:THR:H	41:DT:87:LEU:HB2	1.51	0.76
25:DD:159:LYS:HE2	25:DD:160:LYS:H	1.48	0.76
10:CJ:26:VAL:O	10:CJ:30:LYS:HB3	1.84	0.76
22:DA:2847:U:H2'	22:DA:2848:G:H5'	1.67	0.76
13:AM:2:ARG:O	13:AM:3:ILE:HG12	1.85	0.76
1:AA:1066:C:H6	1:AA:1066:C:H5''	1.49	0.76
40:DS:27:LYS:O	40:DS:71:VAL:HG12	1.86	0.76
30:BI:76:ALA:HB2	30:BI:131:THR:HG22	1.67	0.76
1:CA:1242:G:O2'	1:CA:1243:C:O5'	2.04	0.76
32:DK:61:VAL:HG11	32:DK:112:PHE:CE2	2.21	0.76
49:D1:5:ARG:HD2	49:D1:25:ASN:HB2	1.67	0.76
24:BC:20:ASN:HB3	24:BC:23:LEU:HD23	1.65	0.76
22:BA:2203:U:H5''	22:BA:2204:G:OP1	1.85	0.76
2:CB:185:ILE:HG22	2:CB:199:ILE:HG13	1.66	0.76
22:DA:2142:A:H2'	22:DA:2144:G:P	2.24	0.76
23:DB:24:G:H5'	23:DB:25:U:C5	2.21	0.76
22:DA:1238:G:O2'	22:DA:1239:G:H5'	1.84	0.76
1:AA:409:U:H2'	1:AA:410:G:C8	2.21	0.76
33:BL:95:LEU:HD22	33:BL:100:ILE:HD11	1.67	0.76
1:CA:1296:C:C4	1:CA:1297:G:N2	2.53	0.76
12:AL:62:VAL:HG21	12:AL:94:TYR:CE2	2.19	0.76
11:CK:44:ALA:HB3	11:CK:69:CYS:HB2	1.67	0.76

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:CA:563:A:N3	1:CA:563:A:H2'	1.99	0.76
6:AF:16:GLU:CG	4:CD:191:SER:HB2	2.10	0.76
15:AO:63:ARG:HG2	15:AO:87:ARG:NH1	2.00	0.76
22:DA:1799:G:H4'	22:DA:1800:C:O5'	1.85	0.76
22:DA:226:A:C2	22:DA:230:G:O6	2.38	0.76
22:DA:1237:A:H2	22:DA:1238:G:H1'	1.46	0.76
22:DA:2822:G:H2'	22:DA:2823:A:H5''	1.68	0.76
4:CD:34:GLU:O	4:CD:37:PRO:HD3	1.85	0.76
1:CA:1239:A:O2'	1:CA:1241:G:C5	2.38	0.76
22:DA:2746:U:H5''	28:DG:137:LYS:HG2	1.65	0.76
41:BT:51:PHE:O	41:BT:52:GLU:HG2	1.86	0.76
22:DA:921:C:C2'	22:DA:922:C:H5'	2.16	0.76
22:DA:686:U:O4	50:D2:12:ARG:HG3	1.85	0.76
22:BA:1820:U:OP1	24:BC:176:ARG:HG2	1.85	0.76
11:AK:14:GLN:HA	11:AK:76:TYR:O	1.84	0.76
9:AI:28:VAL:HB	9:AI:63:TYR:HD2	1.51	0.76
31:BJ:117:ALA:HA	31:BJ:120:ARG:NH2	2.01	0.76
20:CT:73:ARG:CG	20:CT:73:ARG:HH11	1.99	0.76
1:AA:1138:G:O2'	1:AA:1139:G:H4'	1.86	0.76
1:CA:1147:C:H4'	9:CI:6:TYR:CE1	2.21	0.76
22:DA:1300:G:H4'	22:DA:1301:A:O5'	1.85	0.76
22:BA:729:G:H4'	22:BA:763:G:H5'	1.65	0.76
22:DA:2503:A:H4'	22:DA:2504:U:OP1	1.84	0.76
31:BJ:77:HIS:HD2	31:BJ:79:GLY:H	1.34	0.76
3:AC:10:ARG:HH21	3:AC:181:ILE:HG13	1.51	0.76
22:DA:2619:C:H5'	25:DD:157:LYS:HA	1.67	0.76
50:B2:43:THR:O	50:B2:44:VAL:HB	1.84	0.76
24:BC:100:ARG:HH11	24:BC:100:ARG:CG	1.98	0.76
22:DA:221:A:H5''	22:DA:222:A:OP1	1.86	0.76
22:DA:1056:G:N2	22:DA:1102:C:H5	1.83	0.76
22:DA:922:C:H1'	44:DW:22:VAL:HG21	1.68	0.76
21:CU:33:ARG:NH1	21:CU:34:ARG:HD3	2.01	0.76
22:BA:508:A:H4'	22:BA:509:C:OP2	1.85	0.76
3:CC:34:SER:O	3:CC:38:VAL:HG13	1.85	0.76
22:BA:1454:C:H41	35:BN:73:ASN:HD21	1.34	0.76
22:DA:2136:G:H2'	22:DA:2137:U:C6	2.21	0.76
1:CA:728:A:H2'	1:CA:729:A:C8	2.21	0.76
22:BA:1936:A:H2	22:BA:1943:U:C5	2.04	0.76
44:BW:39:GLN:HG3	44:BW:42:THR:H	1.50	0.76
31:BJ:111:LYS:HD3	31:BJ:112:GLY:N	2.00	0.76
22:DA:2093:G:O6	22:DA:2225:A:C8	2.38	0.76
22:DA:762:U:C4'	22:DA:763:G:O5'	2.33	0.76

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
37:DP:56:SER:O	37:DP:75:THR:HG22	1.85	0.76
34:DM:17:ASN:O	34:DM:18:ARG:HG2	1.86	0.76
4:CD:109:THR:HG22	4:CD:111:ALA:H	1.50	0.76
22:DA:2143:C:H3'	22:DA:2144:G:C8	2.21	0.76
4:CD:195:ASN:HB3	4:CD:197:HIS:CD2	2.21	0.76
22:BA:682:G:H5'	50:B2:26:ASN:OD1	1.86	0.76
22:BA:2557:G:H2'	22:BA:2558:C:C6	2.21	0.76
1:CA:1159:U:H5	1:CA:1182:G:HO2'	1.34	0.75
22:DA:2346:A:H3'	22:DA:2347:C:C5'	2.14	0.75
22:DA:1339:G:H5'	22:DA:1393:A:N1	2.01	0.75
22:DA:300:A:OP2	42:DU:96:LYS:HD3	1.84	0.75
43:BV:80:HIS:ND1	43:BV:81:PRO:HD2	2.01	0.75
22:DA:614:A:H4'	22:DA:616:A:H62	1.49	0.75
22:DA:95:A:H4'	46:DY:38:GLN:O	1.85	0.75
1:CA:1215:G:O2'	1:CA:1216:A:H8	1.69	0.75
22:DA:45:G:H5'	22:DA:46:G:OP1	1.86	0.75
22:DA:1780:A:OP1	56:DA:3679:HOH:O	2.04	0.75
36:BO:88:LYS:O	36:BO:89:ASP:HB2	1.84	0.75
1:AA:1191:A:H5''	3:AC:3:LYS:HE3	1.68	0.75
42:DU:35:VAL:HG12	42:DU:36:GLU:H	1.51	0.75
22:DA:995:C:O2	31:DJ:3:THR:HG23	1.86	0.75
1:CA:328:C:H1'	1:CA:329:A:OP2	1.86	0.75
22:DA:806:C:H2'	22:DA:807:U:H6	1.51	0.75
22:DA:1476:U:H1'	22:DA:1732:C:C2	2.21	0.75
22:DA:942:G:H2'	22:DA:943:A:H5'	1.68	0.75
24:BC:246:PRO:HG2	24:BC:247:TRP:CZ3	2.20	0.75
12:AL:23:LEU:HG	12:AL:24:GLU:H	1.50	0.75
37:DP:88:ARG:HE	37:DP:112:ARG:HH21	1.34	0.75
11:AK:88:PRO:HD3	21:AU:28:LEU:HD13	1.68	0.75
3:AC:76:ILE:HA	3:AC:83:VAL:HG23	1.66	0.75
25:BD:107:VAL:H	25:BD:206:ALA:H	1.32	0.75
1:AA:1239:A:H62	1:AA:1299:A:H62	1.33	0.75
22:DA:942:G:C2'	22:DA:943:A:H5'	2.16	0.75
22:BA:1778:U:H2'	22:BA:1784:A:N6	2.01	0.75
1:CA:374:A:H5''	1:CA:452:A:C2	2.21	0.75
2:CB:46:VAL:HG13	2:CB:47:PRO:HD3	1.67	0.75
1:AA:1227:A:N3	1:AA:1227:A:H2'	2.00	0.75
31:BJ:40:HIS:HD2	31:BJ:41:LYS:HG2	1.51	0.75
22:DA:84:A:C5	22:DA:103:A:N6	2.55	0.75
26:DE:133:LEU:O	26:DE:137:LYS:HB2	1.86	0.75
30:DI:45:THR:HG23	30:DI:54:ILE:HD13	1.69	0.75
24:BC:12:ARG:HH11	24:BC:12:ARG:HG3	1.51	0.75

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:616:A:C2'	22:DA:617:G:H8	1.99	0.75
22:DA:729:G:H3'	22:DA:730:A:C5'	2.17	0.75
1:AA:94:G:H4'	1:AA:95:C:C5'	2.16	0.75
40:BS:18:ARG:O	40:BS:19:LEU:HB2	1.85	0.75
1:CA:77:A:H2'	1:CA:78:A:C8	2.22	0.75
22:BA:1415:U:O2	22:BA:1415:U:H2'	1.85	0.75
29:BH:6:LEU:O	29:BH:15:LEU:HA	1.86	0.75
2:AB:185:ILE:HA	2:AB:199:ILE:HB	1.67	0.75
22:DA:1312:U:H4'	22:DA:1313:U:O5'	1.85	0.75
4:AD:34:GLU:O	4:AD:37:PRO:HD3	1.86	0.75
1:CA:202:G:O2'	1:CA:468:A:H8	1.69	0.75
1:CA:597:G:H2'	1:CA:598:U:H5'	1.69	0.75
22:BA:1287:A:O2'	22:BA:1288:G:H5'	1.86	0.75
11:AK:28:ASN:OD1	11:AK:46:ALA:HB3	1.86	0.75
1:CA:14:U:H2'	1:CA:16:A:OP2	1.85	0.75
1:AA:475:C:H2'	1:AA:476:U:H6	1.52	0.75
1:CA:1091:U:O2	1:CA:1093:A:H8	1.70	0.75
1:AA:210:C:H4'	1:AA:211:G:N2	2.02	0.75
22:BA:2602:A:H4'	22:BA:2603:G:C5'	2.17	0.75
5:AE:106:ALA:HB2	5:AE:124:ALA:HB3	1.68	0.75
5:AE:109:ALA:O	5:AE:110:MET:HG2	1.86	0.75
1:AA:807:A:H2'	1:AA:808:C:H6	1.50	0.75
21:CU:19:LYS:HB3	21:CU:24:LYS:HB2	1.66	0.75
22:DA:1469:A:H2'	22:DA:1470:A:C8	2.22	0.75
1:CA:1070:U:H2'	1:CA:1071:C:H6	1.51	0.75
22:DA:1056:G:C1'	22:DA:1103:A:H61	2.00	0.75
23:DB:42:C:H2'	23:DB:43:C:H6	1.49	0.75
17:AQ:42:LYS:O	17:AQ:43:LEU:HD23	1.87	0.75
1:CA:1239:A:H1'	1:CA:1241:G:C4	2.21	0.75
22:BA:481:G:C4	22:BA:507:A:C2	2.75	0.75
2:CB:9:LEU:HB2	2:CB:11:ALA:H	1.51	0.75
7:AG:12:LEU:H	7:AG:12:LEU:HD22	1.51	0.75
1:AA:322:C:O2'	20:AT:17:ARG:HG2	1.87	0.75
31:BJ:4:PHE:O	31:BJ:44:TYR:CE1	2.39	0.75
22:DA:1387:A:C5'	22:DA:1469:A:H1'	2.16	0.75
4:AD:29:THR:HG22	4:AD:30:LYS:HD3	1.68	0.75
31:DJ:5:THR:HA	31:DJ:44:TYR:CD2	2.21	0.75
1:AA:86:G:H21	1:AA:87:C:H41	1.33	0.75
29:DH:32:PRO:HA	45:DX:38:TRP:HD1	1.52	0.75
42:DU:10:VAL:HG12	42:DU:71:ILE:HA	1.68	0.75
1:CA:1167:A:N7	1:CA:1169:A:N6	2.35	0.75
29:BH:2:GLN:O	29:BH:3:VAL:HG22	1.86	0.75

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:1364:G:N7	45:DX:1:SER:HB2	2.02	0.75
1:CA:181:A:H4'	1:CA:182:A:OP1	1.85	0.75
40:DS:73:LYS:HB2	40:DS:106:VAL:HB	1.69	0.75
22:DA:172:A:H2'	22:DA:173:A:H8	1.49	0.75
1:CA:1201:A:H4'	1:CA:1202:U:O5'	1.86	0.75
1:AA:174:A:H2'	1:AA:175:C:H5'	1.69	0.75
31:BJ:44:TYR:CD2	38:BQ:63:ARG:HG2	2.21	0.75
1:CA:120:A:C3'	1:CA:121:U:C5'	2.62	0.75
10:CJ:52:LEU:HD21	10:CJ:59:LYS:HA	1.67	0.75
22:DA:1606:C:O2'	22:DA:1607:C:OP2	2.04	0.75
5:AE:158:LYS:HE2	8:AH:63:LYS:HZ1	1.52	0.75
22:DA:184:C:H2'	22:DA:185:G:H8	1.50	0.75
41:DT:29:THR:HB	41:DT:87:LEU:H	1.52	0.75
11:AK:21:HIS:CE1	11:AK:34:THR:HG21	2.22	0.75
26:DE:6:LYS:HB2	26:DE:121:VAL:HG12	1.69	0.75
22:BA:284:U:H2'	22:BA:285:G:H8	1.50	0.75
28:BG:126:THR:HG22	28:BG:127:GLN:H	1.51	0.75
29:BH:96:THR:O	29:BH:97:ARG:HG3	1.87	0.75
41:BT:73:ARG:CZ	41:BT:73:ARG:HB3	2.16	0.75
22:BA:2415:G:H4'	33:BL:66:PHE:HB2	1.68	0.75
22:DA:230:G:O2'	22:DA:231:A:H8	1.70	0.75
1:CA:1493:A:H8	22:DA:1913:A:N6	1.85	0.75
22:DA:75:G:H4'	46:DY:48:ARG:NH2	2.02	0.75
26:DE:143:LEU:HG	26:DE:185:LYS:HD3	1.68	0.75
6:AF:3:HIS:H	6:AF:92:THR:CG2	1.99	0.75
49:B1:24:LYS:HE2	49:B1:52:LYS:HB2	1.68	0.75
7:CG:137:ARG:CZ	7:CG:138:GLU:HG2	2.17	0.75
22:DA:2142:A:C3'	22:DA:2143:C:H4'	2.17	0.75
18:AR:40:PRO:HB2	18:AR:42:ARG:HG2	1.66	0.75
28:DG:78:VAL:HG23	28:DG:79:THR:HG23	1.67	0.75
26:BE:41:GLN:OE1	26:BE:43:THR:HG21	1.87	0.75
22:DA:2190:G:H5'	22:DA:2191:A:OP2	1.85	0.75
8:AH:86:LYS:HG3	8:AH:90:GLU:HB3	1.69	0.75
30:DI:76:ALA:HB2	30:DI:131:THR:HB	1.69	0.74
14:AN:22:LYS:HG3	14:AN:23:ARG:N	2.02	0.74
4:CD:66:VAL:HG22	4:CD:96:ARG:NH1	2.02	0.74
27:BF:34:THR:HG23	27:BF:89:THR:HG23	1.69	0.74
22:BA:2320:U:H4'	22:BA:2321:U:H5''	1.67	0.74
25:BD:48:ILE:HG23	25:BD:84:LEU:HD21	1.69	0.74
24:DC:59:GLN:NE2	24:DC:84:PRO:HB2	2.00	0.74
22:DA:2056:G:C2	22:DA:2057:G:C8	2.74	0.74
36:BO:51:ALA:HB3	36:BO:78:VAL:HG13	1.67	0.74

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:1387:G:H2'	1:AA:1388:C:C6	2.22	0.74
4:CD:143:SER:HB3	4:CD:178:GLU:HG3	1.68	0.74
8:CH:9:MET:O	8:CH:13:ILE:HG13	1.86	0.74
23:DB:13:G:H5''	23:DB:13:G:C8	2.21	0.74
1:CA:1366:C:O2'	1:CA:1367:C:C6	2.39	0.74
41:DT:20:ALA:HB1	41:DT:31:VAL:HG11	1.68	0.74
1:AA:204:G:H1'	1:AA:465:A:C2	2.22	0.74
22:DA:320:A:N7	26:DE:132:LYS:HB2	2.02	0.74
22:BA:962:G:OP1	56:BA:3355:HOH:O	2.05	0.74
22:DA:1324:G:H1'	22:DA:1616:A:N6	2.01	0.74
28:BG:60:GLY:O	28:BG:61:TRP:HB2	1.84	0.74
24:BC:14:HIS:O	24:BC:203:VAL:HG11	1.87	0.74
1:AA:113:G:H1'	1:AA:354:G:H5'	1.69	0.74
21:AU:39:LYS:H	21:AU:40:PRO:HD2	1.52	0.74
30:BI:53:PRO:HD2	30:BI:77:VAL:HG21	1.70	0.74
25:BD:8:LYS:HB2	25:BD:201:LEU:HD22	1.69	0.74
22:BA:2648:G:H2'	22:BA:2649:C:C6	2.21	0.74
22:DA:1387:A:N6	22:DA:1401:G:C6	2.54	0.74
22:BA:2136:G:O2'	22:BA:2137:U:C6	2.39	0.74
22:DA:1870:C:H5''	22:DA:1871:A:C2	2.21	0.74
27:BF:76:PHE:O	27:BF:77:LYS:HB2	1.87	0.74
1:CA:346:G:H2'	1:CA:346:G:N3	1.99	0.74
1:CA:1361:G:H2'	1:CA:1362:A:H5'	1.69	0.74
25:DD:33:ARG:H	25:DD:33:ARG:HD2	1.52	0.74
11:AK:87:GLY:H	11:AK:113:THR:HG22	1.51	0.74
34:BM:1:MET:O	34:BM:2:LEU:HB2	1.87	0.74
22:BA:2353:G:H1'	44:BW:30:VAL:HG13	1.69	0.74
1:CA:1218:C:H2'	1:CA:1219:A:C8	2.23	0.74
22:DA:312:G:H5'	22:DA:331:C:O2'	1.86	0.74
2:AB:207:ARG:O	2:AB:211:LEU:HB2	1.86	0.74
22:DA:118:A:C8	22:DA:119:A:C8	2.76	0.74
1:CA:1151:A:HO2'	1:CA:1152:A:H8	0.77	0.74
22:DA:2261:C:C2	22:DA:2280:G:N2	2.56	0.74
22:DA:163:C:O2'	22:DA:164:C:O4'	2.05	0.74
1:CA:1276:G:H21	1:CA:1282:C:H1'	1.51	0.74
37:DP:63:ILE:HA	37:DP:68:GLY:HA2	1.68	0.74
22:BA:2793:C:H2'	22:BA:2794:C:H6	1.53	0.74
22:DA:1695:G:H2'	22:DA:1696:G:O4'	1.87	0.74
25:DD:106:LYS:HB3	25:DD:206:ALA:CB	2.17	0.74
29:DH:8:LYS:HD2	29:DH:9:VAL:N	2.02	0.74
22:BA:1469:A:H2'	22:BA:1470:A:C8	2.21	0.74
22:BA:1871:A:O2'	22:BA:1872:A:C8	2.41	0.74

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:1049:U:H4'	1:AA:1050:G:OP2	1.87	0.74
19:CS:10:ILE:HG22	19:CS:14:LEU:HD11	1.69	0.74
1:CA:704:A:O2'	1:CA:705:G:C8	2.39	0.74
22:DA:27:G:N2	22:DA:512:G:H2'	2.02	0.74
22:DA:506:G:H4'	22:DA:507:A:H5'	1.70	0.74
1:CA:995:C:N3	1:CA:1046:A:O2'	2.20	0.74
1:CA:373:A:H2'	1:CA:374:A:H8	1.52	0.74
1:AA:548:G:H2'	1:AA:549:C:C6	2.22	0.74
46:DY:19:LEU:HG	46:DY:22:LEU:HD22	1.70	0.74
25:DD:137:SER:HB3	25:DD:138:LEU:HD22	1.67	0.74
22:DA:1783:A:H5'	22:DA:2608:G:H4'	1.70	0.74
22:BA:2092:U:H4'	22:BA:2093:G:O5'	1.87	0.74
44:BW:39:GLN:HG3	44:BW:42:THR:N	2.02	0.74
1:CA:701:U:O2'	1:CA:702:A:P	2.46	0.74
13:CM:78:ARG:NH2	13:CM:79:LEU:HD23	2.03	0.74
1:CA:330:C:O2'	1:CA:331:G:C8	2.25	0.74
25:BD:118:PHE:HD2	25:BD:119:ALA:N	1.83	0.74
22:DA:2267:A:N6	22:DA:2272:U:H3	1.85	0.74
22:DA:870:U:C2'	22:DA:871:U:H5'	2.18	0.74
21:CU:38:GLU:N	21:CU:40:PRO:HD2	2.02	0.74
12:AL:24:GLU:HB2	12:AL:26:CYS:SG	2.28	0.74
22:DA:962:G:OP1	22:DA:962:G:H3'	1.88	0.74
22:DA:1324:G:H1	22:DA:1330:C:H42	1.35	0.74
8:AH:104:SER:O	8:AH:122:GLY:HA3	1.86	0.74
22:DA:1857:G:O2'	22:DA:1884:G:N2	2.19	0.74
4:AD:169:TRP:CD1	4:AD:170:LEU:HG	2.22	0.74
47:BZ:7:THR:HG23	47:BZ:34:THR:N	2.02	0.74
25:DD:149:ASN:O	25:DD:152:PRO:HD2	1.87	0.74
13:CM:81:ASP:HB3	13:CM:82:LEU:HD12	1.70	0.74
36:DO:94:ARG:HD2	36:DO:97:PHE:O	1.87	0.74
14:AN:51:PRO:O	14:AN:52:ARG:HB2	1.88	0.74
1:AA:110:C:H2'	1:AA:111:G:C8	2.23	0.74
22:DA:2423:U:O2'	22:DA:2425:A:H2'	1.88	0.74
22:DA:1210:G:C6	22:DA:1237:A:N7	2.56	0.74
22:DA:335:C:HO2'	22:DA:336:C:H6	1.34	0.74
22:DA:2750:A:H4'	22:DA:2751:G:OP2	1.87	0.74
1:AA:214:C:O2'	1:AA:215:C:H6	1.71	0.74
1:AA:202:G:H21	1:AA:466:A:H61	1.35	0.74
25:DD:124:ARG:HD3	25:DD:125:TRP:NE1	2.03	0.74
1:AA:338:A:N1	1:AA:351:G:O6	2.21	0.74
22:DA:1453:A:H4'	22:DA:1454:C:OP2	1.87	0.74
22:BA:995:C:H5'	22:BA:995:C:H6	1.51	0.74

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
14:CN:16:ALA:HA	14:CN:20:PHE:HD1	1.52	0.74
22:DA:2333:A:C2	22:DA:2335:A:N6	2.55	0.74
22:DA:2269:G:O3'	44:DW:18:LYS:HE2	1.88	0.74
22:DA:335:C:O2'	22:DA:336:C:C6	2.40	0.74
44:BW:9:THR:OG1	44:BW:10:ARG:N	2.20	0.74
26:DE:147:LEU:HB3	26:DE:186:VAL:HG23	1.69	0.74
7:CG:110:ARG:CG	7:CG:111:GLY:H	2.01	0.74
22:BA:1455:G:OP2	56:BA:3413:HOH:O	2.04	0.74
4:AD:11:SER:HA	4:AD:18:LEU:HD12	1.69	0.74
9:AI:90:ASP:OD2	9:AI:93:LEU:HG	1.87	0.74
22:DA:1558:C:H4'	22:DA:1559:U:H5'	1.70	0.74
38:BQ:69:ARG:CB	38:BQ:69:ARG:HH21	1.99	0.73
7:CG:68:VAL:HG22	7:CG:134:VAL:HG12	1.70	0.73
22:BA:506:G:H4'	22:BA:507:A:H5'	1.70	0.73
22:BA:1371:G:N7	56:BA:3402:HOH:O	2.21	0.73
22:BA:933:A:H5'	22:BA:934:U:OP2	1.88	0.73
22:DA:41:C:H2'	22:DA:42:A:C8	2.23	0.73
35:DN:71:ARG:HB2	35:DN:71:ARG:NH2	2.03	0.73
27:DF:5:ASP:C	27:DF:7:TYR:H	1.90	0.73
22:BA:1131:G:OP1	31:BJ:82:GLY:HA2	1.88	0.73
2:AB:13:VAL:CG2	2:AB:207:ARG:HH22	2.00	0.73
22:DA:1080:A:H2'	22:DA:1081:U:H6	1.49	0.73
22:BA:430:A:H5''	22:BA:431:U:OP2	1.88	0.73
33:DL:79:LEU:HB2	33:DL:113:ALA:H	1.51	0.73
27:DF:110:ILE:HA	27:DF:111:ARG:HH11	1.52	0.73
1:CA:373:A:C8	1:CA:373:A:H5'	2.23	0.73
22:DA:1645:G:OP1	22:DA:1646:C:H5'	1.89	0.73
1:CA:701:U:HO2'	1:CA:702:A:P	2.11	0.73
22:DA:223:A:N6	22:DA:422:A:N6	2.37	0.73
35:DN:98:LEU:HD21	48:D0:53:VAL:HG21	1.67	0.73
22:DA:2316:G:H2'	22:DA:2317:A:H8	1.51	0.73
31:DJ:59:ALA:O	31:DJ:62:VAL:HG12	1.88	0.73
12:AL:27:PRO:HB2	12:AL:28:GLN:OE1	1.87	0.73
22:BA:1022:G:N2	22:BA:1142:A:C2	2.56	0.73
46:DY:18:LEU:O	46:DY:22:LEU:HD13	1.88	0.73
12:AL:86:VAL:HG11	12:AL:89:LEU:HD23	1.68	0.73
25:DD:68:PHE:HB3	25:DD:73:VAL:HA	1.70	0.73
28:DG:43:LYS:O	28:DG:49:LEU:HD12	1.88	0.73
32:BK:63:VAL:HG22	32:BK:107:LEU:HD21	1.69	0.73
33:BL:109:LYS:HG2	33:BL:126:ARG:HB3	1.69	0.73
1:CA:381:C:H2'	1:CA:381:C:O2	1.87	0.73
22:BA:2636:C:H2'	22:BA:2637:U:C6	2.22	0.73

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
37:BP:50:ARG:CG	37:BP:57:ALA:H	2.00	0.73
1:AA:86:G:N2	1:AA:87:C:N4	2.36	0.73
41:BT:32:LEU:N	41:BT:83:ALA:HB3	2.03	0.73
6:CF:3:HIS:HD2	6:CF:65:GLU:HG2	1.53	0.73
5:AE:82:HIS:HB2	5:AE:83:PRO:HD2	1.70	0.73
1:AA:601:G:H2'	1:AA:602:A:C8	2.23	0.73
26:DE:166:LYS:HA	26:DE:166:LYS:HE2	1.70	0.73
16:CP:36:VAL:O	16:CP:36:VAL:HG13	1.87	0.73
44:BW:73:PRO:HG2	44:BW:76:ARG:HB2	1.71	0.73
22:BA:2352:A:N1	44:BW:30:VAL:HG11	2.03	0.73
22:DA:1394:U:H4'	22:DA:1603:A:H4'	1.69	0.73
22:DA:242:G:H8	51:D3:3:ILE:O	1.71	0.73
14:AN:22:LYS:HG3	14:AN:23:ARG:H	1.54	0.73
22:DA:1255:U:H2'	26:DE:68:ALA:HB2	1.70	0.73
26:BE:46:GLN:HG3	26:BE:87:ALA:H	1.53	0.73
7:AG:69:ARG:HG3	7:AG:95:ARG:HG2	1.69	0.73
22:BA:856:G:H1'	44:BW:23:LYS:HB3	1.69	0.73
48:D0:12:ARG:HG3	48:D0:15:ARG:NH1	2.01	0.73
2:CB:103:TRP:HB2	2:CB:106:VAL:HB	1.69	0.73
32:DK:13:ASN:HD21	32:DK:97:THR:H	1.35	0.73
32:DK:70:ARG:HB3	32:DK:76:VAL:HG22	1.71	0.73
12:AL:113:ARG:HB3	12:AL:118:VAL:HB	1.71	0.73
1:CA:876:C:C1'	8:CH:11:THR:HG21	2.19	0.73
11:AK:30:ILE:HB	11:AK:45:THR:HG22	1.71	0.73
25:DD:49:GLN:HE21	25:DD:79:LEU:HB3	1.53	0.73
46:DY:31:GLN:HE22	46:DY:37:LEU:HD12	1.54	0.73
1:AA:858:G:O2'	1:AA:859:G:H5'	1.87	0.73
38:BQ:63:ARG:CZ	38:BQ:96:ASP:HA	2.16	0.73
26:DE:130:LYS:CB	26:DE:133:LEU:HB3	2.18	0.73
5:AE:114:LEU:HG	5:AE:119:VAL:CG2	2.17	0.73
5:AE:158:LYS:HE2	8:AH:63:LYS:NZ	2.04	0.73
22:DA:1070:A:H5'	22:DA:1071:G:H5''	1.71	0.73
1:CA:1242:G:N2	1:CA:1243:C:H1'	2.03	0.73
1:CA:1138:G:O2'	1:CA:1139:G:OP1	2.07	0.73
2:CB:103:TRP:HA	2:CB:106:VAL:HB	1.70	0.73
41:DT:38:ALA:HB1	41:DT:81:LYS:NZ	2.04	0.73
30:BI:79:LEU:HA	30:BI:83:ALA:HB3	1.70	0.73
2:CB:48:MET:O	2:CB:199:ILE:HG22	1.87	0.73
3:AC:75:VAL:O	3:AC:82:ASP:HB3	1.88	0.73
27:DF:91:ARG:HH21	27:DF:91:ARG:HB3	1.51	0.73
22:DA:1929:G:H4'	22:DA:1930:G:OP1	1.86	0.73
1:CA:560:A:H4'	1:CA:561:U:H5''	1.71	0.73

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
38:BQ:63:ARG:NH1	38:BQ:96:ASP:CA	2.35	0.73
38:BQ:93:ILE:HG23	38:BQ:94:LEU:N	2.04	0.73
1:CA:1279:G:H5''	10:CJ:9:ARG:HH22	1.53	0.73
44:BW:41:GLY:HA2	44:BW:44:PHE:CE2	2.24	0.73
44:BW:47:GLY:O	44:BW:49:ASN:N	2.20	0.73
22:DA:27:G:H1'	22:DA:513:A:N6	2.04	0.73
21:AU:33:ARG:NE	21:AU:34:ARG:HG3	2.02	0.73
12:CL:49:ARG:HG2	12:CL:89:LEU:HD21	1.71	0.73
25:BD:12:THR:CG2	25:BD:13:ARG:H	2.02	0.73
22:DA:2056:G:N2	48:D0:1:ALA:N	2.36	0.73
1:AA:206:C:H2'	1:AA:207:C:O4'	1.89	0.73
1:AA:111:G:O6	1:AA:330:C:N4	2.21	0.73
46:DY:31:GLN:OE1	46:DY:37:LEU:HB2	1.88	0.73
40:BS:20:VAL:HA	40:BS:23:LEU:HD12	1.71	0.73
9:AI:98:ARG:HG2	9:AI:103:VAL:HG21	1.69	0.73
22:DA:846:U:O2'	22:DA:847:U:H5''	1.88	0.73
22:BA:927:A:H2'	22:BA:928:A:C8	2.24	0.73
25:DD:133:THR:HG23	25:DD:134:HIS:H	1.53	0.73
26:BE:108:ILE:HD13	26:BE:109:LEU:N	2.04	0.73
22:BA:2199:A:C8	22:BA:2199:A:H5'	2.24	0.73
1:CA:1183:U:C3'	1:CA:1184:G:H5''	2.12	0.73
22:DA:2331:G:O2'	44:DW:40:ARG:HB3	1.88	0.73
22:DA:1912:A:H62	22:DA:1917:U:H3	1.37	0.73
22:DA:1654:A:H2'	22:DA:1655:A:H8	1.53	0.73
22:DA:1062:G:H8	22:DA:1070:A:OP2	1.71	0.73
48:D0:38:LEU:HB2	48:D0:41:HIS:NE2	2.04	0.73
1:AA:373:A:O2'	1:AA:374:A:H5'	1.88	0.73
40:DS:8:ARG:O	40:DS:9:HIS:HB2	1.88	0.73
37:DP:20:ARG:HD2	37:DP:21:PRO:HD2	1.70	0.73
17:AQ:55:GLY:HA3	17:AQ:82:VAL:HG11	1.69	0.73
15:CO:7:THR:O	15:CO:11:VAL:HG23	1.89	0.73
20:CT:2:ASN:N	20:CT:7:LYS:HZ3	1.86	0.73
21:CU:16:ARG:CG	21:CU:19:LYS:HG2	2.14	0.73
1:AA:1101:A:C4'	1:AA:1102:A:O5'	2.35	0.73
1:CA:1242:G:C2	1:CA:1243:C:H1'	2.23	0.73
2:AB:22:TRP:O	2:AB:22:TRP:CG	2.41	0.73
1:AA:49:U:O4	1:AA:365:U:C5	2.42	0.73
7:CG:112:ASP:HB3	7:CG:117:LEU:HB3	1.70	0.73
22:DA:2468:A:HO2'	22:DA:2469:A:H8	1.34	0.73
12:CL:82:ARG:HG2	12:CL:82:ARG:HH11	1.54	0.73
22:DA:984:A:O2'	22:DA:985:C:OP1	2.06	0.73
29:DH:83:LYS:HE2	29:DH:149:GLU:HB3	1.68	0.73

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
23:DB:38:C:H4'	36:DO:100:HIS:NE2	2.03	0.73
11:CK:55:ARG:H	11:CK:55:ARG:HD2	1.54	0.73
47:BZ:13:ILE:HG22	47:BZ:14:GLY:N	2.02	0.73
12:CL:19:ASN:H	12:CL:19:ASN:HD22	1.34	0.73
42:BU:73:ASN:ND2	42:BU:76:THR:HG23	2.03	0.73
22:BA:994:C:H1'	39:BR:10:LYS:HZ1	1.52	0.72
22:DA:1917:U:H2'	22:DA:1918:A:H5'	1.71	0.72
22:DA:1351:C:H4'	22:DA:1572:A:O4'	1.89	0.72
1:AA:1441:A:H62	1:AA:1461:G:N2	1.87	0.72
2:AB:9:LEU:HB2	2:AB:42:LEU:HD13	1.70	0.72
28:BG:73:SER:HA	28:BG:76:ILE:CG2	2.18	0.72
1:AA:202:G:N2	1:AA:466:A:H61	1.87	0.72
40:DS:14:ALA:HB1	40:DS:18:ARG:NH2	2.03	0.72
34:BM:72:PRO:O	34:BM:91:TYR:O	2.06	0.72
3:CC:166:TRP:HE3	3:CC:166:TRP:H	1.35	0.72
3:CC:22:PHE:CD2	10:CJ:97:ASP:HB2	2.24	0.72
31:BJ:2:LYS:HD3	31:BJ:2:LYS:N	2.02	0.72
22:BA:1256:G:C2'	26:BE:77:ILE:HD11	2.19	0.72
1:AA:1338:G:H2'	1:AA:1339:A:C8	2.25	0.72
1:CA:932:C:H5''	7:CG:2:ARG:HD3	1.69	0.72
1:CA:982:U:H4'	1:CA:983:A:H5'	1.71	0.72
22:DA:249:C:C3'	22:DA:2394:C:H4'	2.19	0.72
48:D0:28:SER:HB3	48:D0:39:ARG:NE	2.03	0.72
24:BC:12:ARG:HG2	24:BC:12:ARG:HH11	1.52	0.72
42:BU:38:ILE:HG22	42:BU:39:ASN:H	1.54	0.72
22:BA:2135:A:O2'	22:BA:2136:G:C8	2.41	0.72
5:CE:14:LEU:HD13	5:CE:59:ILE:HD12	1.69	0.72
22:BA:2428:G:H5''	22:BA:2429:G:OP1	1.89	0.72
9:CI:75:ALA:HA	9:CI:78:ILE:HD12	1.69	0.72
22:BA:545:U:H2'	22:BA:546:U:O3'	1.89	0.72
33:DL:23:ILE:HG13	39:DR:82:HIS:CE1	2.24	0.72
22:DA:379:G:C6	22:DA:396:G:O6	2.42	0.72
28:BG:104:LEU:HB2	28:BG:112:VAL:HG22	1.71	0.72
1:CA:205:A:C6	1:CA:206:C:N4	2.57	0.72
22:DA:128:C:O2'	22:DA:129:C:C6	2.42	0.72
22:DA:185:G:H2'	22:DA:186:G:C8	2.23	0.72
22:DA:784:G:N1	24:DC:227:VAL:HG21	2.04	0.72
32:DK:60:ALA:HA	32:DK:87:LEU:HD23	1.69	0.72
22:DA:686:U:H3	50:D2:12:ARG:HB2	1.54	0.72
3:AC:10:ARG:NH2	3:AC:181:ILE:HG13	2.04	0.72
31:BJ:2:LYS:H	31:BJ:2:LYS:HD3	1.53	0.72
22:BA:2276:G:OP2	34:BM:83:GLY:O	2.07	0.72

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:184:G:H2'	1:AA:185:U:C6	2.24	0.72
22:DA:528:A:C2	22:DA:2043:C:H4'	2.25	0.72
22:DA:845:A:N6	22:DA:932:U:H3	1.87	0.72
22:DA:389:G:C8	22:DA:2413:G:H4'	2.25	0.72
22:BA:372:G:H5''	45:BX:60:LYS:HE3	1.69	0.72
26:BE:5:LEU:HD12	26:BE:10:SER:HB3	1.71	0.72
1:AA:423:G:H2'	1:AA:424:G:O4'	1.89	0.72
20:AT:4:LYS:HE2	20:AT:5:SER:HB3	1.70	0.72
44:BW:37:VAL:CG1	44:BW:38:ARG:H	2.02	0.72
22:DA:2358:A:H61	33:DL:54:GLN:HE22	1.37	0.72
39:BR:42:ALA:HA	39:BR:46:GLU:CB	2.17	0.72
22:DA:480:A:H5'	42:DU:43:LYS:HD2	1.69	0.72
22:DA:729:G:H3'	22:DA:730:A:H5''	1.71	0.72
1:AA:1183:U:H3'	1:AA:1184:G:C5'	2.17	0.72
22:DA:2286:G:H5''	22:DA:2287:A:H1'	1.70	0.72
31:BJ:74:TYR:HB2	31:BJ:87:ALA:O	1.88	0.72
24:BC:16:VAL:HB	24:BC:203:VAL:HB	1.70	0.72
14:AN:50:LEU:HB3	14:AN:51:PRO:HD2	1.72	0.72
22:DA:1521:G:C6	22:DA:1522:A:N6	2.57	0.72
22:DA:1723:G:H2'	22:DA:1724:G:H8	1.53	0.72
26:DE:149:ILE:O	26:DE:188:MET:HA	1.89	0.72
38:BQ:91:ARG:NH1	39:BR:10:LYS:HB3	2.04	0.72
22:DA:642:U:H4'	22:DA:2349:G:O2'	1.89	0.72
22:DA:83:A:N6	22:DA:101:A:H5'	2.04	0.72
26:BE:189:THR:OG1	26:BE:191:ASP:HB3	1.88	0.72
45:DX:52:ALA:O	45:DX:53:LYS:HB3	1.89	0.72
22:DA:616:A:H4'	26:DE:101:TYR:CZ	2.24	0.72
22:DA:464:U:H1'	22:DA:686:U:H5	1.54	0.72
24:BC:16:VAL:H	24:BC:203:VAL:HG12	1.53	0.72
1:CA:157:U:O2'	1:CA:158:G:H5'	1.88	0.72
24:DC:79:ARG:HD3	24:DC:81:GLU:OE1	1.90	0.72
39:BR:16:GLU:HA	39:BR:98:ILE:HG22	1.70	0.72
16:AP:59:HIS:CE1	16:AP:63:GLN:HE22	2.08	0.72
1:AA:940:C:OP1	7:AG:101:ARG:HD3	1.89	0.72
22:BA:1319:C:O2'	22:BA:1320:C:H5'	1.89	0.72
22:DA:1439:A:H1'	22:DA:1553:A:N6	2.05	0.72
25:DD:118:PHE:CD1	25:DD:119:ALA:N	2.58	0.72
2:CB:114:LYS:HE3	2:CB:151:LYS:HB2	1.70	0.72
1:CA:1301:U:H2'	1:CA:1301:U:O2	1.87	0.72
22:BA:572:A:C2	22:BA:2033:A:C2	2.78	0.72
30:BI:104:GLN:O	30:BI:105:LEU:HB2	1.90	0.72
46:DY:21:LEU:HA	46:DY:25:GLN:HB3	1.71	0.72

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:CC:39:ARG:HG2	3:CC:54:ILE:HD13	1.72	0.72
22:BA:2188:U:H2'	22:BA:2189:U:H6	1.54	0.72
23:DB:5:U:H2'	23:DB:6:G:C8	2.24	0.72
22:DA:301:G:H3'	42:DU:81:ARG:NH1	2.05	0.72
22:DA:1275:A:N7	35:DN:16:HIS:HB2	2.04	0.72
9:CI:58:GLU:HG3	9:CI:59:LYS:H	1.55	0.72
34:DM:126:ILE:O	34:DM:128:THR:HG23	1.88	0.72
32:DK:13:ASN:HD21	32:DK:97:THR:N	1.88	0.72
22:BA:1746:A:H2'	22:BA:1747:U:C6	2.25	0.72
5:AE:105:ILE:HD11	5:AE:123:LEU:HD23	1.70	0.72
45:BX:67:LEU:HD13	45:BX:77:TYR:CE1	2.24	0.72
1:CA:1264:U:H2'	1:CA:1265:C:C6	2.24	0.72
35:BN:2:ARG:HA	35:BN:5:LYS:HD2	1.71	0.72
25:BD:120:GLY:HA2	25:BD:162:ALA:CB	2.20	0.72
1:CA:142:G:C2	1:CA:143:A:H1'	2.25	0.72
31:BJ:13:ARG:O	31:BJ:14:ASP:HB2	1.90	0.72
23:DB:18:G:C2	23:DB:67:G:O6	2.43	0.72
41:BT:48:GLN:HB2	41:BT:49:LYS:HE3	1.71	0.72
22:DA:181:A:C2	22:DA:434:U:H1'	2.25	0.72
1:CA:471:U:H2'	1:CA:472:U:C6	2.23	0.72
43:BV:51:GLN:HE22	43:BV:79:ARG:HH12	1.38	0.72
29:DH:97:ARG:O	29:DH:98:ASP:HB2	1.88	0.72
44:BW:23:LYS:HG3	44:BW:24:ARG:O	1.89	0.72
22:DA:232:G:H4'	22:DA:233:A:OP1	1.90	0.72
5:AE:152:VAL:O	5:AE:156:ARG:HB2	1.90	0.72
22:DA:2311:A:H3'	22:DA:2312:U:O4'	1.90	0.72
22:DA:352:A:C4	22:DA:353:C:H1'	2.25	0.72
22:DA:1206:G:H2'	22:DA:1207:C:C6	2.25	0.72
1:AA:390:U:H2'	1:AA:391:G:C8	2.24	0.72
1:CA:764:C:H2'	1:CA:765:G:H5'	1.71	0.72
4:AD:100:VAL:O	4:AD:100:VAL:HG12	1.89	0.72
1:AA:358:U:H2'	1:AA:359:G:H8	1.55	0.72
28:DG:162:ARG:H	28:DG:162:ARG:HD2	1.54	0.72
36:DO:26:LEU:HB3	36:DO:92:PHE:HD1	1.55	0.72
19:CS:52:ASN:HD21	19:CS:54:ARG:HG2	1.52	0.72
1:AA:266:G:H3'	17:AQ:68:LYS:HB2	1.71	0.72
1:CA:1337:G:H5''	1:CA:1338:G:OP1	1.89	0.72
1:CA:1136:C:C5	1:CA:1138:G:O6	2.42	0.72
22:BA:2591:C:OP1	24:BC:237:ARG:HG3	1.89	0.72
28:BG:11:PRO:O	28:BG:14:VAL:HG22	1.89	0.72
22:DA:2230:G:H2'	22:DA:2231:U:C6	2.25	0.71
21:CU:24:LYS:HG3	21:CU:25:ALA:H	1.55	0.71

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:1097:U:H2'	22:DA:1098:A:O4'	1.89	0.71
22:DA:867:C:HO2'	22:DA:868:U:H6	0.73	0.71
49:B1:8:ILE:HG23	49:B1:51:ALA:HA	1.71	0.71
9:CI:48:ARG:C	9:CI:50:PRO:HD2	2.10	0.71
7:CG:76:SER:HA	7:CG:85:GLN:HA	1.70	0.71
22:DA:2571:U:C4	22:DA:2574:G:C8	2.78	0.71
50:D2:22:MET:HG2	50:D2:22:MET:O	1.90	0.71
36:DO:70:ALA:O	36:DO:74:VAL:HG23	1.90	0.71
14:AN:15:LEU:HD12	14:AN:53:ASP:HB2	1.70	0.71
7:CG:135:LYS:O	7:CG:139:ASP:HB2	1.90	0.71
4:AD:99:ASN:O	4:AD:103:ARG:HB2	1.90	0.71
35:BN:31:HIS:O	35:BN:33:ILE:HD12	1.88	0.71
23:DB:58:A:H2'	23:DB:59:A:H8	1.53	0.71
22:DA:1437:C:H2'	22:DA:1438:U:C6	2.25	0.71
22:DA:422:A:O2'	22:DA:423:A:C8	2.43	0.71
22:DA:1343:G:C5	22:DA:1597:A:N6	2.58	0.71
11:AK:126:ARG:HB2	21:AU:33:ARG:NH1	2.05	0.71
2:AB:211:LEU:O	2:AB:215:ALA:HB2	1.90	0.71
16:AP:20:VAL:HG21	16:AP:32:PHE:CG	2.25	0.71
26:DE:178:VAL:HG13	26:DE:179:SER:H	1.55	0.71
1:CA:1268:G:N2	1:CA:1327:C:H1'	2.06	0.71
28:DG:112:VAL:HG13	28:DG:150:TYR:HE1	1.55	0.71
1:CA:66:A:N6	1:CA:67:C:N4	2.38	0.71
22:DA:2619:C:H4'	25:DD:156:PHE:O	1.90	0.71
40:DS:86:MET:SD	40:DS:87:PRO:HD2	2.29	0.71
1:AA:761:G:H2'	1:AA:762:U:H6	1.55	0.71
30:DI:106:GLN:HA	30:DI:109:ALA:HB3	1.71	0.71
30:BI:20:SER:HB3	30:BI:21:PRO:HD3	1.72	0.71
22:DA:1816:C:H2'	24:DC:61:TYR:CZ	2.24	0.71
1:CA:1217:C:H2'	1:CA:1218:C:C6	2.21	0.71
22:BA:1178:C:H2'	22:BA:1179:G:N7	2.05	0.71
22:DA:1345:C:OP2	22:DA:1345:C:H3'	1.91	0.71
1:CA:108:G:H5'	1:CA:109:A:H5''	1.72	0.71
40:DS:6:LYS:HD2	40:DS:8:ARG:HD2	1.71	0.71
22:DA:1416:G:C6	22:DA:1417:C:N4	2.57	0.71
22:DA:273:G:H2'	22:DA:274:C:O4'	1.90	0.71
22:DA:2135:A:H2'	22:DA:2136:G:C8	2.24	0.71
51:B3:22:LYS:HA	51:B3:47:ALA:O	1.90	0.71
6:AF:81:ASN:HB3	6:AF:84:VAL:HG12	1.73	0.71
1:CA:252:U:H6	1:CA:252:U:H5'	1.54	0.71
3:CC:84:GLU:C	3:CC:86:LEU:H	1.91	0.71
7:AG:61:PHE:HE1	7:AG:65:LEU:HD22	1.55	0.71

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
6:AF:38:ARG:HG3	6:AF:39:LEU:N	2.03	0.71
19:CS:35:ARG:HH21	19:CS:51:HIS:CD2	2.08	0.71
22:DA:410:G:C6	22:DA:2407:A:N6	2.58	0.71
1:CA:268:U:H2'	1:CA:269:C:C6	2.25	0.71
22:BA:1779:U:C5	22:BA:1784:A:N7	2.56	0.71
34:BM:40:ARG:HB2	34:BM:93:VAL:HG21	1.71	0.71
2:CB:96:LEU:H	2:CB:99:MET:HE3	1.56	0.71
3:CC:18:ASN:HD21	3:CC:53:ARG:NH1	1.88	0.71
22:BA:2420:C:OP1	51:B3:33:THR:HB	1.91	0.71
1:CA:1011:C:H2'	1:CA:1012:A:H8	1.54	0.71
36:BO:76:LYS:O	36:BO:80:GLU:HG3	1.91	0.71
42:BU:46:LYS:HG2	42:BU:47:PRO:HD2	1.71	0.71
1:AA:143:A:H5'	1:AA:144:G:H5'	1.72	0.71
1:CA:1226:C:H41	13:CM:102:LYS:HG2	1.56	0.71
44:BW:18:LYS:HA	44:BW:36:ILE:CG1	2.16	0.71
1:CA:1322:C:O2'	1:CA:1323:G:H5'	1.89	0.71
25:BD:106:LYS:HB3	25:BD:206:ALA:CB	2.16	0.71
22:DA:226:A:H2'	22:DA:227:A:C8	2.25	0.71
22:DA:1314:C:OP1	22:DA:1332:G:H5''	1.90	0.71
22:DA:1056:G:N2	22:DA:1102:C:C5	2.58	0.71
25:BD:118:PHE:CD2	25:BD:119:ALA:N	2.56	0.71
25:BD:12:THR:CG2	25:BD:13:ARG:N	2.53	0.71
4:CD:151:GLN:HB3	4:CD:154:VAL:HG12	1.71	0.71
1:AA:76:G:H2'	1:AA:76:G:N3	2.05	0.71
2:AB:66:ILE:HB	2:AB:88:GLN:HB3	1.71	0.71
25:BD:114:LYS:HE3	25:BD:114:LYS:N	2.06	0.71
32:DK:69:VAL:HG11	32:DK:106:GLU:HG2	1.72	0.71
1:AA:1003:G:N2	1:AA:1005:A:H5'	2.06	0.71
1:CA:1081:A:H5'	5:CE:22:LYS:HD2	1.72	0.71
22:BA:1498:C:O2'	22:BA:1499:C:H6	1.72	0.71
22:DA:568:U:H2'	22:DA:570:G:OP2	1.91	0.71
29:BH:18:GLN:HE21	29:BH:18:GLN:HA	1.54	0.71
22:DA:2051:A:H4'	22:DA:2052:A:OP1	1.90	0.71
36:BO:105:ALA:O	36:BO:106:LEU:HB3	1.88	0.71
1:AA:409:U:OP1	4:AD:23:GLY:HA3	1.91	0.71
1:CA:328:C:H2'	1:CA:328:C:O2	1.89	0.71
8:CH:86:LYS:HB2	8:CH:124:ILE:HD11	1.72	0.71
10:CJ:84:VAL:HG23	10:CJ:85:ASP:N	2.04	0.71
1:AA:86:G:H21	1:AA:87:C:N4	1.87	0.71
24:BC:68:ARG:HD3	24:BC:103:ILE:HD11	1.72	0.71
6:AF:92:THR:O	6:AF:93:LYS:HG2	1.90	0.71
24:BC:141:HIS:HB2	24:BC:190:THR:HB	1.73	0.71

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:CG:110:ARG:HG3	7:CG:111:GLY:N	2.04	0.71
20:AT:67:HIS:HB3	20:AT:68:LYS:HZ2	1.55	0.71
42:DU:58:VAL:HG13	42:DU:60:LYS:HG2	1.71	0.71
6:CF:61:LEU:HD13	6:CF:62:MET:H	1.54	0.71
27:BF:131:VAL:HG22	27:BF:151:LEU:O	1.91	0.71
1:CA:1450:U:H4'	1:CA:1451:U:H5	1.55	0.71
22:BA:2615:U:C2	48:B0:3:GLN:HA	2.26	0.71
1:CA:1024:G:H2'	1:CA:1025:U:O4'	1.91	0.71
35:BN:65:LEU:HD11	35:BN:69:ARG:NH2	2.04	0.71
42:BU:97:SER:O	42:BU:98:ASN:HB3	1.89	0.71
22:BA:1060:U:O4'	22:BA:1062:G:H5''	1.90	0.71
39:DR:4:VAL:HG23	39:DR:39:LEU:HG	1.72	0.71
44:BW:28:GLU:HB3	44:BW:31:LEU:CD2	2.19	0.71
1:CA:983:A:O2'	1:CA:984:C:H5'	1.89	0.71
2:CB:89:PHE:CE2	2:CB:152:ASP:HB2	2.22	0.71
22:DA:1060:U:C4'	22:DA:1061:U:H2'	2.21	0.71
1:CA:239:U:C5'	1:CA:239:U:H6	2.04	0.71
6:AF:3:HIS:N	6:AF:92:THR:HG23	2.04	0.71
17:CQ:46:HIS:HE2	17:CQ:48:GLU:HG2	1.54	0.71
22:BA:141:G:H5'	22:BA:142:A:C8	2.25	0.71
22:BA:2793:C:H2'	22:BA:2794:C:C6	2.25	0.71
22:DA:969:G:H2'	22:DA:970:U:C6	2.25	0.71
22:DA:132:G:N2	22:DA:148:U:C2	2.58	0.71
5:CE:74:ALA:O	5:CE:75:LEU:HB2	1.91	0.71
13:CM:95:PRO:HD3	13:CM:108:ARG:HG2	1.72	0.71
22:BA:1929:G:H4'	22:BA:1930:G:OP1	1.90	0.71
3:AC:150:VAL:HG12	3:AC:199:VAL:HB	1.71	0.71
30:DI:32:VAL:HG22	30:DI:58:ILE:HG21	1.73	0.71
29:DH:80:ILE:HB	29:DH:101:ASP:CB	2.20	0.71
22:DA:2147:A:OP1	22:DA:2147:A:H4'	1.90	0.71
24:DC:15:VAL:HG22	24:DC:205:GLY:HA3	1.73	0.71
40:BS:73:LYS:HE3	40:BS:74:ILE:N	2.04	0.71
22:DA:923:G:H1'	44:DW:23:LYS:NZ	2.05	0.71
24:BC:251:THR:HG22	24:BC:252:LYS:N	2.04	0.71
1:AA:389:A:C6	1:AA:390:U:H1'	2.26	0.71
9:CI:26:LYS:O	9:CI:62:LEU:HB2	1.90	0.71
3:CC:178:ARG:O	3:CC:178:ARG:HD2	1.90	0.71
22:DA:2258:C:H4'	22:DA:2259:U:OP2	1.90	0.71
35:DN:63:ARG:O	35:DN:67:PHE:HB2	1.89	0.71
39:DR:27:ILE:HG22	39:DR:28:ALA:N	2.04	0.71
4:CD:34:GLU:O	4:CD:36:ALA:N	2.24	0.71
25:BD:13:ARG:HH12	37:BP:74:GLN:NE2	1.88	0.71

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
33:DL:81:ASP:O	33:DL:83:ALA:N	2.23	0.71
31:DJ:117:ALA:HA	31:DJ:120:ARG:HD2	1.72	0.71
22:DA:1281:G:C6	22:DA:1290:C:N4	2.58	0.71
36:BO:74:VAL:O	36:BO:78:VAL:HG22	1.90	0.71
9:CI:10:ARG:HG3	9:CI:14:SER:O	1.91	0.71
3:AC:21:TRP:HB3	3:AC:58:ARG:H	1.56	0.71
1:AA:1491:G:H5'	1:AA:1492:A:OP1	1.90	0.71
31:DJ:20:ALA:HA	31:DJ:23:LYS:HG3	1.73	0.71
2:AB:14:HIS:O	2:AB:14:HIS:CG	2.44	0.71
4:AD:61:ARG:NH1	4:AD:68:GLU:HG2	2.05	0.71
44:BW:30:VAL:O	44:BW:30:VAL:HG22	1.91	0.71
22:BA:2336:A:N6	44:BW:40:ARG:HD2	2.05	0.71
5:CE:29:ILE:CG2	5:CE:30:PHE:N	2.42	0.71
32:BK:18:ARG:N	32:BK:45:GLU:HB2	2.06	0.71
1:AA:267:C:H2'	1:AA:268:U:C6	2.26	0.71
27:BF:132:ARG:O	27:BF:133:GLU:HB3	1.91	0.71
22:DA:68:G:N2	22:DA:74:A:OP2	2.24	0.71
35:DN:12:ARG:HG3	35:DN:13:ASN:H	1.55	0.71
34:DM:36:VAL:HG22	43:DV:82:TYR:HB2	1.72	0.71
24:BC:244:VAL:HG12	24:BC:250:GLN:HA	1.73	0.71
40:BS:14:ALA:O	40:BS:18:ARG:HG3	1.90	0.71
22:DA:1324:G:O2'	22:DA:1616:A:C6	2.44	0.71
17:AQ:7:LEU:HD23	17:AQ:24:ILE:CD1	2.21	0.71
38:BQ:88:GLU:C	38:BQ:88:GLU:OE1	2.28	0.70
1:CA:1129:C:O2'	1:CA:1130:A:H8	1.74	0.70
7:CG:10:LYS:O	7:CG:10:LYS:HD2	1.91	0.70
22:BA:2321:U:H6	22:BA:2321:U:H5''	1.56	0.70
25:DD:49:GLN:NE2	25:DD:79:LEU:HB3	2.04	0.70
6:CF:14:GLN:HB3	6:CF:17:GLN:NE2	2.06	0.70
12:AL:34:THR:HG22	12:AL:35:ARG:NE	2.04	0.70
28:DG:1:SER:HB2	28:DG:61:TRP:HB3	1.73	0.70
1:CA:1038:C:H2'	1:CA:1039:G:C8	2.26	0.70
4:AD:60:VAL:O	4:AD:63:ILE:HG22	1.91	0.70
31:DJ:106:LYS:HB2	31:DJ:119:PHE:HE2	1.56	0.70
22:DA:1310:G:H2'	22:DA:1311:G:O4'	1.91	0.70
22:DA:1340:U:OP1	22:DA:1340:U:H4'	1.89	0.70
22:DA:502:A:C5	22:DA:505:A:N7	2.59	0.70
27:BF:105:ILE:O	27:BF:109:ARG:HD3	1.90	0.70
25:DD:106:LYS:O	25:DD:107:VAL:HB	1.91	0.70
1:CA:1143:G:H2'	1:CA:1144:G:H8	1.55	0.70
24:BC:106:PRO:HB3	24:BC:141:HIS:CE1	2.26	0.70
22:BA:137:U:H5''	22:BA:140:C:C5	2.25	0.70

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:CD:144:ILE:CD1	4:CD:154:VAL:HG21	2.21	0.70
22:DA:1639:C:C2'	22:DA:1640:A:H5''	2.21	0.70
22:BA:1590:A:H2'	22:BA:1591:A:H8	1.57	0.70
22:BA:1450:G:C6	22:BA:1451:C:N4	2.59	0.70
26:DE:126:VAL:HG13	26:DE:127:GLU:N	2.05	0.70
1:AA:1307:U:H2'	1:AA:1308:U:C6	2.25	0.70
35:BN:8:ARG:HB3	35:BN:10:LEU:HD22	1.73	0.70
25:DD:34:VAL:HG12	25:DD:48:ILE:HD11	1.73	0.70
21:CU:24:LYS:CG	21:CU:25:ALA:H	2.04	0.70
22:DA:246:C:H2'	22:DA:247:G:H5'	1.73	0.70
22:DA:1352:U:C5	22:DA:1377:G:C6	2.79	0.70
22:DA:301:G:C6	22:DA:302:C:N4	2.59	0.70
22:DA:664:G:H4'	22:DA:941:A:OP1	1.91	0.70
32:BK:71:ARG:HB2	32:BK:72:PRO:HD3	1.73	0.70
21:CU:35:GLU:O	21:CU:36:PHE:CD2	2.43	0.70
31:DJ:74:TYR:CE2	31:DJ:103:ILE:HD11	2.26	0.70
29:DH:90:LEU:HB2	29:DH:123:ARG:HB3	1.73	0.70
43:BV:44:HIS:HE1	43:BV:86:LEU:H	1.37	0.70
27:DF:43:ILE:HG23	27:DF:44:ALA:H	1.56	0.70
25:DD:4:LEU:HD23	25:DD:101:PHE:CE1	2.26	0.70
22:DA:422:A:O2'	22:DA:423:A:H8	1.73	0.70
4:AD:62:ARG:HA	4:AD:62:ARG:NE	2.07	0.70
26:DE:60:TRP:CZ2	26:DE:71:GLY:HA2	2.26	0.70
22:DA:1049:C:O2'	22:DA:1050:A:H8	1.71	0.70
2:AB:133:ALA:O	2:AB:137:THR:HG23	1.90	0.70
22:BA:2199:A:C8	22:BA:2199:A:C5'	2.74	0.70
28:BG:3:VAL:O	28:BG:68:ARG:HG3	1.91	0.70
12:CL:98:ARG:HB2	12:CL:116:TYR:HA	1.73	0.70
22:DA:1797:G:O3'	24:DC:255:LYS:O	2.09	0.70
20:CT:22:SER:O	20:CT:26:MET:HB2	1.91	0.70
28:DG:117:PRO:HG2	28:DG:143:VAL:HG11	1.72	0.70
24:DC:9:SER:O	24:DC:12:ARG:HB2	1.91	0.70
22:DA:745:G:H5''	22:DA:746:U:OP2	1.91	0.70
2:AB:187:ASP:HB2	2:AB:203:ASP:HB3	1.73	0.70
7:AG:114:SER:HB3	7:AG:117:LEU:CG	2.22	0.70
4:CD:25:ARG:HH12	4:CD:30:LYS:HG2	1.56	0.70
49:B1:47:ILE:HD12	49:B1:47:ILE:N	2.07	0.70
22:BA:1056:G:HO2'	22:BA:1086:A:H8	1.39	0.70
9:CI:118:ARG:HH21	9:CI:122:ARG:HE	1.36	0.70
22:DA:1682:G:O2'	22:DA:1683:U:C6	2.43	0.70
31:DJ:74:TYR:HE2	31:DJ:103:ILE:HD11	1.55	0.70
1:CA:1304:G:H1'	1:CA:1333:A:H61	1.56	0.70

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:CA:1451:U:O2'	1:CA:1452:C:OP1	2.09	0.70
11:AK:35:ASP:OD2	11:AK:39:ASN:HB2	1.91	0.70
39:DR:39:LEU:O	39:DR:40:MET:HB2	1.92	0.70
44:BW:40:ARG:H	44:BW:56:HIS:HB3	1.56	0.70
22:DA:1439:A:H1'	22:DA:1553:A:H61	1.57	0.70
42:DU:45:GLN:HE21	42:DU:45:GLN:HA	1.56	0.70
25:DD:123:LYS:HG2	25:DD:165:MET:SD	2.32	0.70
1:CA:412:A:H4'	1:CA:413:G:OP1	1.91	0.70
1:CA:1239:A:H62	1:CA:1299:A:H61	1.37	0.70
34:BM:42:THR:O	34:BM:44:ARG:N	2.24	0.70
2:AB:69:VAL:HB	2:AB:162:VAL:HG12	1.73	0.70
3:AC:156:LEU:HD13	3:AC:163:ARG:HB2	1.72	0.70
12:CL:19:ASN:H	12:CL:19:ASN:ND2	1.89	0.70
27:BF:131:VAL:CG2	27:BF:151:LEU:H	2.05	0.70
1:CA:1450:U:H4'	1:CA:1451:U:C5	2.25	0.70
1:CA:831:A:OP1	2:CB:20:ARG:HG3	1.90	0.70
22:DA:758:C:O2	22:DA:758:C:H2'	1.90	0.70
3:CC:8:GLY:HA3	14:CN:88:MET:SD	2.31	0.70
4:CD:25:ARG:HG2	4:CD:25:ARG:NH1	2.06	0.70
22:BA:2136:G:H2'	22:BA:2137:U:H5	1.56	0.70
14:AN:42:ASN:C	14:AN:44:VAL:H	1.95	0.70
25:DD:159:LYS:HE2	25:DD:160:LYS:N	2.06	0.70
1:CA:17:U:H2'	1:CA:18:C:C6	2.26	0.70
30:DI:106:GLN:O	30:DI:106:GLN:HG3	1.91	0.70
1:CA:1033:G:O2'	1:CA:1034:G:H5''	1.92	0.70
1:AA:222:C:H2'	1:AA:223:A:H8	1.54	0.70
30:DI:113:ALA:HB1	30:DI:124:MET:SD	2.31	0.70
39:DR:62:GLU:HB3	39:DR:97:LYS:HB3	1.73	0.70
22:BA:2352:A:N1	44:BW:30:VAL:HG21	2.07	0.70
22:BA:2577:A:H5''	22:BA:2578:G:C5'	2.20	0.70
5:AE:81:GLN:N	5:AE:81:GLN:HE21	1.89	0.70
10:CJ:40:ILE:HG22	10:CJ:42:LEU:HD12	1.72	0.70
27:DF:74:ALA:HB3	27:DF:78:ILE:HB	1.73	0.70
35:DN:33:ILE:HA	35:DN:114:GLU:HB2	1.73	0.70
22:DA:2458:G:H8	22:DA:2459:A:N6	1.90	0.70
37:BP:33:GLU:CB	37:BP:38:ARG:HH11	2.04	0.70
22:DA:935:C:H2'	22:DA:936:A:H8	1.56	0.70
25:DD:51:THR:HG21	25:DD:75:ALA:O	1.91	0.70
10:CJ:64:GLN:HB2	14:CN:98:ALA:HB3	1.74	0.70
5:AE:59:ILE:O	5:AE:62:ALA:HB3	1.92	0.70
22:DA:5:A:C2	22:DA:2899:A:C2	2.79	0.70
6:AF:6:ILE:HG12	6:AF:89:VAL:HG23	1.72	0.70

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:CA:701:U:H4'	1:CA:702:A:H5''	1.72	0.70
24:DC:140:VAL:CG2	24:DC:161:VAL:HB	2.22	0.70
22:DA:319:G:OP2	26:DE:132:LYS:HD2	1.91	0.70
22:DA:1059:G:H1	22:DA:1088:A:H2	1.40	0.70
1:CA:210:C:O2	1:CA:210:C:H2'	1.91	0.70
23:DB:42:C:H41	27:DF:87:LYS:NZ	1.90	0.70
31:BJ:18:VAL:HG22	31:BJ:140:LEU:CD1	2.22	0.70
31:BJ:18:VAL:HG23	31:BJ:54:ILE:HD13	1.74	0.70
22:DA:77:G:N2	22:DA:110:G:H1'	2.07	0.70
22:DA:279:A:H61	22:DA:361:G:H1'	1.57	0.70
21:CU:39:LYS:N	21:CU:40:PRO:HD2	2.06	0.70
31:BJ:73:VAL:HG23	31:BJ:74:TYR:N	2.05	0.70
20:CT:4:LYS:HB3	20:CT:6:ALA:H	1.57	0.70
22:BA:1498:C:O2'	22:BA:1499:C:C6	2.45	0.70
37:DP:25:VAL:HA	37:DP:85:VAL:HA	1.74	0.70
31:BJ:105:VAL:HG23	31:BJ:109:LEU:HD11	1.73	0.70
1:AA:1038:C:H2'	1:AA:1039:G:H8	1.56	0.70
36:DO:115:LEU:H	36:DO:115:LEU:HD13	1.55	0.70
1:CA:1278:G:H4'	1:CA:1279:G:C5'	2.22	0.70
5:AE:79:THR:HB	5:AE:121:ASN:ND2	2.06	0.70
22:DA:648:G:O2'	22:DA:649:G:H8	1.71	0.70
1:CA:93:U:H2'	1:CA:95:C:C5	2.27	0.70
4:AD:145:ARG:NH1	4:AD:147:LYS:HE3	2.06	0.70
22:DA:1695:G:H8	24:DC:7:PRO:O	1.75	0.70
22:DA:982:C:H5''	22:DA:983:A:OP1	1.92	0.70
10:AJ:81:GLU:O	10:AJ:85:ASP:HB2	1.92	0.70
22:DA:443:A:H61	26:DE:36:ALA:HB1	1.57	0.70
22:DA:1440:U:O2'	22:DA:1441:G:H5'	1.91	0.69
22:DA:247:G:H4'	22:DA:386:G:C5	2.27	0.69
22:DA:1345:C:H5''	22:DA:1396:U:O4	1.93	0.69
22:DA:1809:A:C2	22:DA:1810:A:C4	2.80	0.69
22:DA:675:A:OP1	26:DE:60:TRP:CZ2	2.45	0.69
22:DA:1204:A:H4'	22:DA:1205:A:O5'	1.91	0.69
1:CA:994:A:O2'	1:CA:995:C:H6	1.74	0.69
47:DZ:16:LEU:N	47:DZ:16:LEU:HD22	2.07	0.69
41:BT:10:VAL:HG23	41:BT:11:LEU:HD23	1.74	0.69
22:BA:2887:A:H5'	22:BA:2888:C:OP2	1.92	0.69
31:DJ:55:ILE:CG2	31:DJ:123:LYS:HB2	2.21	0.69
41:DT:87:LEU:HD23	41:DT:88:LYS:N	2.06	0.69
35:DN:71:ARG:HB2	35:DN:71:ARG:HH21	1.57	0.69
25:DD:133:THR:HG23	25:DD:134:HIS:N	2.06	0.69
1:CA:491:G:O2'	1:CA:492:C:H5'	1.91	0.69

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:CA:54:C:H41	1:CA:352:C:H2'	1.55	0.69
38:DQ:27:ARG:HA	38:DQ:33:VAL:HG12	1.74	0.69
8:CH:5:PRO:O	8:CH:8:ASP:HB3	1.92	0.69
26:BE:146:VAL:HG23	26:BE:167:VAL:HG23	1.73	0.69
22:DA:2707:U:H2'	22:DA:2708:G:C8	2.27	0.69
22:BA:1076:C:H2'	22:BA:1077:A:H8	1.57	0.69
27:BF:129:MET:HG2	27:BF:153:ILE:HD11	1.74	0.69
22:DA:1490:A:C8	24:DC:73:ILE:HD12	2.26	0.69
1:CA:1319:A:N6	1:CA:1323:G:C2	2.60	0.69
5:CE:98:ALA:HB2	5:CE:123:LEU:HG	1.73	0.69
17:AQ:45:VAL:HG22	17:AQ:72:TRP:HB2	1.74	0.69
43:BV:10:LYS:H	43:BV:10:LYS:CD	1.95	0.69
25:DD:107:VAL:H	25:DD:206:ALA:H	1.38	0.69
28:BG:22:VAL:HG22	28:BG:36:LEU:CD1	2.22	0.69
4:CD:61:ARG:HH21	4:CD:67:LEU:HA	1.57	0.69
1:AA:807:A:H2'	1:AA:808:C:C6	2.26	0.69
34:BM:133:LYS:O	34:BM:134:THR:HB	1.91	0.69
1:AA:479:U:O2'	1:AA:480:U:H5'	1.92	0.69
32:BK:61:VAL:HG22	32:BK:87:LEU:HD11	1.72	0.69
11:CK:51:PHE:O	11:CK:52:ARG:HD2	1.91	0.69
52:D4:19:ARG:O	52:D4:20:ASP:HB2	1.92	0.69
38:BQ:86:SER:O	38:BQ:88:GLU:N	2.25	0.69
44:BW:51:GLY:HA3	44:BW:59:PHE:CZ	2.26	0.69
2:AB:20:ARG:HA	2:AB:20:ARG:NH1	2.08	0.69
7:CG:94:ARG:HB3	7:CG:98:LEU:HG	1.74	0.69
23:DB:83:G:OP1	47:DZ:16:LEU:HD21	1.92	0.69
41:BT:39:THR:O	41:BT:40:LYS:HB2	1.92	0.69
2:AB:67:LEU:HB3	2:AB:160:LEU:CD1	2.23	0.69
22:DA:747:U:H3'	22:DA:748:G:C5'	2.21	0.69
1:AA:1160:G:O6	1:AA:1181:G:C6	2.45	0.69
1:CA:464:U:C4	1:CA:466:A:H4'	2.27	0.69
27:BF:40:GLY:HA2	27:BF:84:ILE:HD11	1.74	0.69
30:DI:60:VAL:HG22	30:DI:66:PHE:HE2	1.57	0.69
1:AA:1307:U:H2'	1:AA:1308:U:H6	1.56	0.69
1:CA:351:G:H4'	1:CA:352:C:OP2	1.93	0.69
19:AS:14:LEU:HD13	19:AS:32:THR:HG21	1.74	0.69
52:D4:16:ILE:HG12	52:D4:25:VAL:HG22	1.72	0.69
43:DV:16:ALA:HA	43:DV:19:ARG:CZ	2.22	0.69
22:BA:1780:A:OP1	56:BA:3691:HOH:O	2.10	0.69
43:DV:30:ILE:HG12	43:DV:91:PHE:HB2	1.73	0.69
24:DC:177:SER:O	24:DC:270:ARG:HG3	1.91	0.69
22:BA:1078:U:H4'	22:BA:1079:C:C6	2.27	0.69

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
37:BP:51:ASN:O	37:BP:52:ARG:HG2	1.92	0.69
22:DA:1597:A:O3'	22:DA:1598:A:H8	1.76	0.69
22:DA:2212:A:C8	22:DA:2214:C:N4	2.61	0.69
22:DA:321:U:H5'	26:DE:129:PRO:HB3	1.73	0.69
22:DA:116:C:H5''	22:DA:128:C:H41	1.57	0.69
26:BE:151:GLY:HA2	26:BE:192:ALA:HB2	1.74	0.69
22:BA:1150:C:O2'	22:BA:1151:A:O4'	2.11	0.69
9:CI:35:GLU:HA	9:CI:39:GLY:HA3	1.74	0.69
22:BA:2310:C:H2'	27:BF:76:PHE:HE1	1.55	0.69
25:DD:148:GLN:HG2	25:DD:152:PRO:HG2	1.75	0.69
26:BE:76:PRO:HA	26:BE:82:GLY:HA3	1.74	0.69
1:AA:246:A:H4'	1:AA:247:G:OP1	1.93	0.69
7:CG:59:GLU:HG3	7:CG:60:ALA:N	2.06	0.69
22:DA:1311:G:H1'	22:DA:1313:U:O4	1.92	0.69
38:DQ:57:ARG:O	38:DQ:61:ILE:HD13	1.92	0.69
17:AQ:11:VAL:HG21	17:AQ:53:GLY:O	1.93	0.69
22:DA:481:G:H1'	22:DA:506:G:H21	1.55	0.69
22:DA:614:A:C4'	22:DA:616:A:H62	2.04	0.69
22:BA:572:A:OP2	39:BR:80:ARG:NH2	2.24	0.69
6:CF:59:TYR:HE2	18:CR:66:LEU:HD21	1.58	0.69
3:AC:55:VAL:O	3:AC:65:VAL:HA	1.92	0.69
22:DA:1259:G:H2'	22:DA:1260:A:H8	1.57	0.69
7:AG:3:ARG:HG3	7:AG:4:ARG:N	2.08	0.69
33:DL:17:LYS:HE2	33:DL:19:LEU:HD13	1.74	0.69
11:AK:21:HIS:HE1	11:AK:34:THR:HG21	1.58	0.69
27:DF:16:MET:HA	27:DF:21:TYR:HB2	1.74	0.69
23:DB:44:G:H5''	27:DF:91:ARG:CZ	2.22	0.69
42:BU:73:ASN:ND2	42:BU:75:ALA:HB3	2.07	0.69
22:DA:1938:A:OP2	56:DA:3717:HOH:O	2.11	0.69
22:BA:1378:A:H4'	22:BA:1379:U:OP1	1.91	0.69
8:CH:76:ARG:HD3	8:CH:77:VAL:N	2.08	0.69
22:BA:1941:C:H5'	22:BA:1941:C:H6	1.57	0.69
22:DA:1700:A:H2'	22:DA:1701:A:O4'	1.92	0.69
37:BP:51:ASN:C	37:BP:52:ARG:HG2	2.13	0.69
6:AF:71:ILE:HD11	6:AF:89:VAL:HG21	1.75	0.69
22:DA:1156:A:C8	38:DQ:50:ARG:HG2	2.27	0.69
22:DA:335:C:O2'	22:DA:336:C:H6	1.74	0.69
22:DA:508:A:H3'	22:DA:509:C:H5'	1.73	0.69
22:BA:1731:G:H2'	22:BA:1732:C:H5''	1.74	0.69
27:DF:134:GLN:HG3	27:DF:149:ARG:O	1.92	0.69
1:CA:373:A:H5'	1:CA:373:A:H8	1.58	0.69
41:BT:40:LYS:H	41:BT:43:ILE:HG23	1.55	0.69

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
32:DK:54:LYS:H	32:DK:54:LYS:HD2	1.58	0.69
22:BA:2636:C:H2'	22:BA:2637:U:H6	1.58	0.69
26:DE:110:SER:O	26:DE:113:VAL:HG12	1.92	0.69
22:DA:2415:G:H4'	33:DL:66:PHE:HB2	1.74	0.69
22:DA:455:C:H42	22:DA:473:G:H5'	1.58	0.69
22:DA:1809:A:O2'	22:DA:1810:A:C8	2.26	0.69
22:BA:1654:A:O2'	25:BD:118:PHE:CD1	2.45	0.69
28:DG:93:TYR:N	28:DG:93:TYR:CD2	2.55	0.69
22:DA:649:G:H2'	22:DA:650:C:H6	1.58	0.69
1:AA:1285:A:H5'	1:AA:1286:U:C4	2.27	0.69
1:CA:1241:G:C2	1:CA:1242:G:N7	2.61	0.69
1:AA:87:C:H2'	1:AA:88:U:H6	1.56	0.69
12:AL:33:CYS:HB3	12:AL:54:VAL:HG22	1.75	0.69
22:DA:2798:U:H5'	22:DA:2800:A:C6	2.27	0.69
5:CE:132:PRO:O	5:CE:136:VAL:HG12	1.92	0.69
32:BK:59:LYS:HE2	32:BK:89:ASN:O	1.93	0.69
22:DA:2138:G:OP2	22:DA:2138:G:H8	1.75	0.69
1:AA:17:U:H2'	1:AA:18:C:C6	2.28	0.69
22:DA:1590:A:H2'	22:DA:1591:A:C8	2.28	0.69
22:BA:996:A:H4'	38:BQ:91:ARG:HG2	1.74	0.69
37:BP:50:ARG:CG	37:BP:57:ALA:N	2.56	0.69
44:BW:49:ASN:HA	44:BW:61:LYS:HB2	1.74	0.69
11:CK:110:THR:HG22	21:CU:4:LYS:HA	1.74	0.69
38:DQ:4:LYS:NZ	38:DQ:6:GLY:HA3	2.07	0.69
25:BD:106:LYS:H	25:BD:106:LYS:HD2	1.56	0.69
44:DW:39:GLN:HG2	44:DW:42:THR:HB	1.75	0.69
22:DA:226:A:C4	22:DA:227:A:N7	2.61	0.69
22:DA:1391:U:H4'	41:DT:19:LYS:NZ	2.08	0.69
22:DA:332:A:C4	22:DA:335:C:N4	2.61	0.69
5:AE:152:VAL:HG12	5:AE:155:LYS:HZ1	1.57	0.69
22:DA:125:A:H3'	50:D2:19:ARG:CD	2.23	0.69
22:DA:784:G:O2'	22:DA:785:G:H8	1.75	0.69
22:DA:201:C:C5	22:DA:202:U:H5	2.10	0.69
25:DD:12:THR:HG22	25:DD:13:ARG:O	1.93	0.69
24:BC:81:GLU:HB2	24:BC:90:ILE:CG2	2.22	0.69
46:DY:28:LEU:HG	46:DY:42:LEU:HD22	1.74	0.69
22:DA:1205:A:H5''	22:DA:1206:G:N7	2.08	0.69
27:DF:147:ARG:HG2	27:DF:149:ARG:HH12	1.57	0.69
22:DA:2800:A:C4	22:DA:2801:G:H1'	2.28	0.69
37:DP:48:ALA:HB3	37:DP:59:THR:OG1	1.93	0.69
33:DL:117:THR:HG22	33:DL:118:THR:N	2.07	0.69
1:AA:1409:C:O2'	1:AA:1410:A:H5'	1.93	0.69

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:CA:1249:C:H2'	1:CA:1250:A:H5''	1.72	0.69
27:DF:104:THR:HG22	27:DF:105:ILE:HG13	1.75	0.69
1:CA:16:A:C2'	1:CA:17:U:H5'	2.23	0.69
22:BA:2591:C:H2'	22:BA:2592:G:C8	2.27	0.69
25:DD:4:LEU:HD12	25:DD:32:ASN:OD1	1.93	0.69
22:DA:1308:A:H2'	22:DA:1309:G:O4'	1.92	0.69
9:CI:12:LYS:H	9:CI:105:ARG:HH12	1.41	0.69
1:CA:1172:C:O2'	1:CA:1173:U:H5'	1.92	0.69
13:AM:26:LYS:O	13:AM:30:LYS:HG3	1.92	0.69
1:AA:1228:C:H2'	1:AA:1229:A:C8	2.28	0.69
22:BA:74:A:H4'	22:BA:75:G:O5'	1.93	0.69
33:BL:87:GLY:O	33:BL:89:VAL:N	2.25	0.69
1:CA:1067:A:H4'	1:CA:1068:G:O5'	1.92	0.69
24:BC:170:TYR:CD2	24:BC:184:GLU:HA	2.28	0.69
22:DA:1181:U:H2'	22:DA:1182:G:H8	1.58	0.69
22:DA:1722:A:N6	22:DA:1739:A:C8	2.61	0.69
22:DA:1941:C:H2'	22:DA:1942:C:C6	2.28	0.69
38:BQ:63:ARG:HH22	38:BQ:96:ASP:N	1.91	0.69
44:BW:39:GLN:HG3	44:BW:42:THR:HB	1.74	0.69
1:CA:1366:C:HO2'	1:CA:1367:C:H6	1.37	0.69
14:CN:52:ARG:HA	14:CN:52:ARG:CZ	2.23	0.69
22:DA:2336:A:N7	44:DW:40:ARG:NH2	2.40	0.69
2:AB:101:THR:HG22	2:AB:174:GLU:OE1	1.93	0.69
14:AN:78:LEU:HB2	14:AN:83:VAL:HG23	1.73	0.69
4:AD:10:LEU:CD2	4:AD:62:ARG:HG3	2.23	0.69
22:DA:303:G:H2'	22:DA:304:U:C6	2.28	0.69
22:DA:354:A:H2'	22:DA:355:U:O4'	1.92	0.69
30:BI:105:LEU:HD23	30:BI:108:ILE:HG21	1.75	0.69
50:D2:15:SER:O	50:D2:16:HIS:CD2	2.45	0.69
22:BA:1090:A:O2'	22:BA:1091:G:H5'	1.92	0.69
26:DE:75:SER:O	26:DE:78:TRP:HB2	1.92	0.69
22:DA:2563:U:H1'	22:DA:2566:A:N6	2.07	0.69
11:CK:23:HIS:HB3	11:CK:30:ILE:HB	1.73	0.69
8:AH:87:ARG:O	8:AH:121:GLY:HA3	1.93	0.69
22:BA:1867:G:C2'	22:BA:1868:C:H5'	2.23	0.69
22:DA:139:U:H2'	22:DA:139:U:O2	1.92	0.69
15:AO:72:LYS:HA	15:AO:72:LYS:HE2	1.75	0.69
1:AA:1452:C:H5'	1:AA:1453:G:C6	2.28	0.69
39:BR:39:LEU:HD23	39:BR:39:LEU:H	1.55	0.69
36:DO:53:THR:HB	36:DO:65:THR:HG22	1.74	0.69
9:CI:71:ILE:CD1	9:CI:72:SER:H	2.02	0.69
2:AB:17:HIS:CD2	2:AB:202:ASN:HD21	2.10	0.69

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:CS:39:ILE:HG12	19:CS:68:HIS:O	1.92	0.69
26:BE:196:VAL:HG13	26:BE:200:LEU:HD23	1.73	0.69
8:AH:21:LYS:HE2	8:AH:22:ALA:N	2.07	0.69
2:AB:20:ARG:CZ	2:AB:20:ARG:HA	2.23	0.69
13:CM:13:HIS:HD1	13:CM:43:LYS:HE2	1.57	0.69
22:DA:2800:A:H2'	22:DA:2801:G:C4'	2.23	0.69
22:DA:2788:C:H2'	22:DA:2789:C:H6	1.57	0.69
45:BX:65:THR:O	45:BX:68:ALA:HB3	1.93	0.69
35:BN:32:GLU:HA	35:BN:115:LEU:HD12	1.74	0.69
22:BA:356:G:O2'	22:BA:357:C:H5'	1.93	0.69
1:AA:115:G:H4'	1:AA:116:A:O5'	1.93	0.69
51:B3:54:LEU:O	51:B3:58:ILE:HG13	1.93	0.69
22:DA:2355:G:H5''	44:DW:20:LEU:HD22	1.74	0.69
12:CL:72:ASN:HD22	12:CL:72:ASN:H	1.40	0.69
45:DX:4:CYS:HA	45:DX:32:LEU:HD11	1.74	0.68
5:AE:155:LYS:HA	5:AE:158:LYS:HZ2	1.57	0.68
22:DA:475:C:H2'	22:DA:476:G:C8	2.28	0.68
22:DA:1998:A:H2'	22:DA:1999:C:H6	1.58	0.68
22:DA:727:A:H2'	22:DA:728:G:C8	2.28	0.68
3:AC:119:ILE:HG21	3:AC:197:VAL:HG11	1.75	0.68
22:DA:1241:A:H5'	22:DA:1241:A:N3	2.08	0.68
1:CA:1328:C:H5''	13:CM:27:THR:HG21	1.76	0.68
40:BS:88:ARG:CG	40:BS:88:ARG:NH2	2.51	0.68
42:DU:95:PHE:O	42:DU:97:SER:N	2.26	0.68
25:BD:29:VAL:HB	25:BD:98:VAL:HG22	1.74	0.68
37:DP:88:ARG:HH11	37:DP:112:ARG:HH21	1.39	0.68
22:BA:2104:C:H2'	22:BA:2105:U:O4'	1.93	0.68
22:DA:2902:C:H2'	22:DA:2903:U:O4'	1.93	0.68
31:BJ:31:GLU:HG3	31:BJ:142:ILE:HG21	1.75	0.68
22:DA:1666:G:O3'	32:DK:6:THR:HG23	1.93	0.68
15:AO:18:ALA:O	15:AO:19:ASN:HB2	1.91	0.68
22:BA:404:A:H1'	22:BA:405:U:OP2	1.93	0.68
1:CA:120:A:O2'	1:CA:121:U:H4'	1.94	0.68
37:BP:50:ARG:CD	37:BP:56:SER:HB3	2.23	0.68
1:CA:977:A:H8	1:CA:1223:C:C4	2.11	0.68
22:DA:1311:G:H21	22:DA:1603:A:H62	1.39	0.68
22:DA:1388:G:N1	22:DA:1400:U:N3	2.40	0.68
38:DQ:91:ARG:HG3	39:DR:11:GLN:CD	2.14	0.68
22:DA:125:A:H4'	22:DA:126:A:OP2	1.93	0.68
1:CA:413:G:C6	4:CD:32:LYS:HE3	2.27	0.68
19:CS:40:PHE:CB	19:CS:41:PRO:HD2	2.23	0.68
49:B1:33:LEU:N	49:B1:51:ALA:HB3	2.07	0.68

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:1742:U:H2'	22:DA:1743:G:C8	2.28	0.68
1:CA:728:A:H2'	1:CA:729:A:H8	1.58	0.68
24:BC:15:VAL:HA	24:BC:203:VAL:HG11	1.75	0.68
22:BA:2648:G:H2'	22:BA:2649:C:H6	1.56	0.68
7:AG:61:PHE:CE1	7:AG:65:LEU:HD22	2.28	0.68
28:BG:82:PHE:CE2	28:BG:137:LYS:HB2	2.29	0.68
6:CF:80:PHE:CE2	24:DC:123:ILE:HG21	2.29	0.68
37:BP:92:ARG:O	37:BP:93:LYS:HB2	1.91	0.68
17:CQ:59:GLU:O	17:CQ:75:VAL:HG22	1.93	0.68
22:BA:1098:A:H5'	22:BA:1099:G:OP2	1.92	0.68
27:BF:129:MET:CG	27:BF:153:ILE:HD11	2.22	0.68
11:AK:124:LYS:CE	21:AU:33:ARG:HH21	2.06	0.68
1:CA:1151:A:O2'	1:CA:1152:A:C8	2.30	0.68
22:DA:675:A:OP1	26:DE:60:TRP:HZ2	1.76	0.68
22:DA:142:A:O2'	22:DA:143:C:C6	2.46	0.68
8:CH:68:LYS:HD3	8:CH:69:ALA:N	2.09	0.68
1:CA:495:A:C6	1:CA:496:A:N6	2.62	0.68
1:CA:67:C:OP1	1:CA:199:A:H5''	1.93	0.68
35:BN:71:ARG:HH21	35:BN:71:ARG:HG3	1.57	0.68
37:DP:20:ARG:HG2	37:DP:112:ARG:HH12	1.57	0.68
22:DA:1326:U:O2'	22:DA:1327:A:H8	1.76	0.68
22:BA:1829:A:N3	24:BC:14:HIS:HE1	1.92	0.68
22:BA:1867:G:O2'	22:BA:1868:C:H5'	1.92	0.68
34:DM:136:MET:HE1	43:DV:57:TYR:HD2	1.56	0.68
46:BY:2:LYS:HG3	46:BY:52:ARG:HD3	1.74	0.68
30:BI:102:ARG:HH21	30:BI:103:ALA:HB2	1.58	0.68
3:CC:149:LYS:HG3	3:CC:168:ARG:HB2	1.75	0.68
31:BJ:44:TYR:C	31:BJ:44:TYR:CD1	2.66	0.68
22:BA:558:U:OP1	31:BJ:111:LYS:HE3	1.92	0.68
22:DA:1032:A:H1'	52:D4:23:ILE:CD1	2.21	0.68
10:CJ:44:THR:HG22	10:CJ:45:ARG:H	1.58	0.68
8:CH:17:GLN:NE2	8:CH:69:ALA:HB1	2.09	0.68
24:BC:104:LEU:O	24:BC:105:ALA:HB2	1.93	0.68
10:CJ:12:ALA:HB3	10:CJ:18:ILE:HB	1.75	0.68
17:AQ:79:GLU:C	17:AQ:80:LYS:HD3	2.14	0.68
8:CH:54:THR:HG23	8:CH:55:LYS:H	1.58	0.68
30:BI:105:LEU:HA	30:BI:108:ILE:HB	1.76	0.68
33:DL:92:LEU:HD22	33:DL:124:GLY:HA3	1.75	0.68
1:CA:765:G:C5	1:CA:812:G:C5	2.81	0.68
38:DQ:27:ARG:HA	38:DQ:33:VAL:CG1	2.23	0.68
23:BB:7:G:O2'	36:BO:38:GLN:NE2	2.27	0.68
9:AI:27:ILE:HG13	9:AI:62:LEU:HD21	1.75	0.68

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
24:BC:131:MET:HA	24:BC:134:ILE:HD12	1.74	0.68
11:AK:22:ILE:HD13	11:AK:95:THR:HG21	1.75	0.68
37:BP:91:VAL:HG11	37:BP:96:LEU:HD21	1.76	0.68
22:DA:229:C:O2'	22:DA:230:G:O4'	2.10	0.68
50:D2:19:ARG:HB3	50:D2:19:ARG:NH2	2.08	0.68
22:DA:53:A:C2	22:DA:179:C:H4'	2.28	0.68
41:BT:18:GLU:HA	41:BT:18:GLU:OE2	1.93	0.68
49:B1:33:LEU:H	49:B1:51:ALA:CB	2.06	0.68
1:CA:373:A:O2'	1:CA:374:A:H5'	1.93	0.68
1:CA:518:C:H2'	1:CA:530:G:N7	2.07	0.68
50:B2:3:ARG:HG2	50:B2:3:ARG:NH2	2.04	0.68
22:BA:1238:G:C2'	22:BA:1239:G:H5'	2.22	0.68
2:CB:184:ALA:O	2:CB:199:ILE:HG12	1.94	0.68
21:AU:39:LYS:N	21:AU:40:PRO:HD2	2.08	0.68
28:DG:68:ARG:O	28:DG:72:ASN:HB3	1.94	0.68
6:CF:6:ILE:HD12	6:CF:6:ILE:N	2.09	0.68
34:BM:108:VAL:HG13	34:BM:109:PRO:HD2	1.76	0.68
4:CD:2:ARG:HE	4:CD:114:ARG:CD	2.07	0.68
9:AI:6:TYR:HE2	9:AI:17:ARG:HB2	1.59	0.68
1:CA:1130:A:C5	1:CA:1146:A:C6	2.81	0.68
22:BA:276:U:O2	22:BA:276:U:H2'	1.93	0.68
1:AA:967:C:H1'	9:AI:129:ARG:HH22	1.58	0.68
22:DA:1240:U:O2'	22:DA:1241:A:H5''	1.93	0.68
41:BT:38:ALA:HB1	41:BT:43:ILE:CG2	2.22	0.68
1:AA:414:A:N6	1:AA:431:A:N3	2.42	0.68
22:DA:989:G:H4'	22:DA:990:A:OP1	1.94	0.68
8:AH:9:MET:HE2	8:AH:32:LYS:HG2	1.76	0.68
22:BA:1818:U:OP2	24:BC:155:ARG:NH1	2.27	0.68
34:DM:72:PRO:O	34:DM:73:ILE:HB	1.93	0.68
1:CA:1363:A:C6	1:CA:1365:G:O6	2.45	0.68
1:CA:1014:A:C2	19:CS:33:TRP:HB2	2.28	0.68
22:DA:2345:G:H4'	22:DA:2346:A:H5''	1.74	0.68
22:DA:1012:U:O4	31:DJ:30:THR:HG21	1.93	0.68
9:CI:74:GLN:O	9:CI:78:ILE:HG13	1.93	0.68
34:BM:73:ILE:HG21	34:BM:91:TYR:CZ	2.29	0.68
22:DA:1315:C:OP2	56:DA:3745:HOH:O	2.12	0.68
22:DA:2623:G:H4'	22:DA:2825:G:C8	2.28	0.68
43:BV:25:LYS:HD3	43:BV:43:ASP:HA	1.76	0.68
41:DT:67:VAL:HG23	41:DT:75:GLY:O	1.92	0.68
39:BR:51:VAL:HB	39:BR:52:PRO:CD	2.22	0.68
22:BA:1179:G:H3'	22:BA:1180:U:C4'	2.19	0.68
42:DU:90:LYS:HE2	42:DU:92:VAL:HG12	1.73	0.68

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:2822:G:C5'	25:DD:164:GLN:HE22	2.05	0.68
22:DA:118:A:H1'	22:DA:178:G:O4'	1.92	0.68
26:BE:119:ILE:O	26:BE:119:ILE:HG12	1.92	0.68
30:BI:126:ARG:HA	30:BI:129:GLU:CB	2.24	0.68
8:CH:54:THR:O	8:CH:56:PRO:HD3	1.94	0.68
21:CU:39:LYS:N	21:CU:40:PRO:CD	2.57	0.68
36:DO:24:THR:HG22	36:DO:41:ALA:HA	1.76	0.68
12:CL:80:LEU:HD23	12:CL:97:VAL:HG21	1.76	0.68
44:DW:49:ASN:ND2	44:DW:81:ILE:HG23	2.08	0.68
34:BM:71:LYS:HD3	34:BM:95:LEU:CD1	2.24	0.68
1:AA:194:C:O2'	1:AA:195:A:H5'	1.93	0.68
22:BA:2674:G:H4'	32:BK:30:ARG:HG3	1.74	0.68
30:BI:71:LYS:HG2	30:BI:72:THR:H	1.59	0.68
41:BT:4:GLU:HG3	41:BT:6:ARG:NE	2.09	0.68
22:BA:78:U:H2'	22:BA:79:C:C6	2.29	0.68
22:BA:2641:G:OP1	31:BJ:76:HIS:HE1	1.77	0.68
26:BE:24:ASN:O	26:BE:28:VAL:HG12	1.94	0.68
43:BV:61:LEU:O	43:BV:71:LYS:HA	1.94	0.68
45:BX:50:VAL:HG12	45:BX:51:SER:O	1.94	0.68
23:DB:116:G:H2'	23:DB:117:G:H8	1.58	0.68
39:DR:39:LEU:O	39:DR:49:ILE:HG12	1.94	0.68
36:DO:30:ARG:HA	36:DO:35:ILE:HD13	1.75	0.68
1:AA:485:U:O2'	1:AA:486:U:OP1	2.12	0.68
22:DA:333:G:O2'	22:DA:334:C:H6	1.77	0.68
38:BQ:65:ASN:ND2	38:BQ:69:ARG:NH2	2.38	0.68
22:DA:1062:G:O2'	22:DA:1063:G:H8	1.77	0.68
1:CA:1135:U:H2'	1:CA:1135:U:O2	1.93	0.68
24:DC:52:HIS:HB3	24:DC:216:ARG:O	1.93	0.68
49:B1:8:ILE:HG22	49:B1:9:LYS:N	2.09	0.68
6:CF:41:ASP:OD2	6:CF:58:HIS:CE1	2.47	0.68
41:BT:40:LYS:N	41:BT:43:ILE:HG23	2.09	0.68
25:DD:112:THR:HG22	25:DD:113:SER:H	1.57	0.68
44:DW:8:SER:O	44:DW:9:THR:HB	1.93	0.68
39:BR:48:LYS:HD2	39:BR:48:LYS:N	2.09	0.68
28:BG:140:ILE:HD12	28:BG:141:GLY:N	2.08	0.68
10:AJ:80:THR:HB	10:AJ:83:THR:HG22	1.75	0.68
27:DF:58:ALA:HB1	27:DF:139:GLU:HG2	1.75	0.68
22:BA:2051:A:OP2	22:BA:2051:A:H8	1.77	0.68
22:BA:1153:C:OP2	56:BA:3360:HOH:O	2.12	0.68
13:CM:68:LEU:O	13:CM:72:ILE:HG22	1.94	0.68
22:DA:396:G:O2'	22:DA:397:U:C6	2.43	0.68
22:DA:1439:A:N7	22:DA:1440:U:C1'	2.57	0.68

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:1555:G:H2'	22:DA:1556:C:C6	2.28	0.68
28:BG:86:LEU:HB3	28:BG:162:ARG:O	1.94	0.68
5:AE:81:GLN:HE22	5:AE:146:MET:CE	2.07	0.68
22:DA:70:G:H4'	22:DA:71:A:OP1	1.91	0.68
46:DY:49:ASP:HA	46:DY:52:ARG:HD2	1.76	0.68
1:AA:1021:A:C2'	1:AA:1022:A:H5''	2.23	0.68
24:DC:94:LEU:HB2	24:DC:100:ARG:HD2	1.75	0.68
1:CA:1054:C:O2'	1:CA:1055:A:H5''	1.94	0.68
22:DA:45:G:C5'	22:DA:46:G:H5'	2.23	0.68
21:CU:36:PHE:HD1	21:CU:40:PRO:HB3	1.59	0.68
42:DU:95:PHE:N	42:DU:95:PHE:HD1	1.92	0.68
22:DA:2788:C:O2'	22:DA:2809:A:N3	2.25	0.68
33:DL:17:LYS:HZ1	33:DL:19:LEU:HD22	1.59	0.68
12:AL:86:VAL:CG1	12:AL:89:LEU:HD23	2.24	0.68
22:DA:574:A:H4'	22:DA:575:A:H5'	1.76	0.68
1:AA:116:A:H2'	1:AA:117:G:H8	1.58	0.68
23:BB:42:C:OP1	27:BF:63:LYS:HE2	1.94	0.68
22:DA:1734:G:HO2'	22:DA:1735:A:H8	1.41	0.68
41:BT:28:ASN:HA	41:BT:91:GLN:NE2	2.09	0.68
33:BL:74:THR:HG22	33:BL:107:PHE:HB2	1.73	0.68
9:AI:21:LYS:HG2	9:AI:22:PRO:HD2	1.75	0.68
1:AA:259:G:H2'	1:AA:260:G:H8	1.59	0.68
22:DA:1774:C:O2	24:DC:10:PRO:HB2	1.93	0.68
31:BJ:44:TYR:C	31:BJ:44:TYR:HD1	1.96	0.67
22:BA:1092:C:H2'	22:BA:1093:G:O4'	1.92	0.67
37:BP:50:ARG:CB	37:BP:57:ALA:N	2.51	0.67
44:DW:27:GLY:HA3	44:DW:31:LEU:HD11	1.76	0.67
22:DA:27:G:H22	22:DA:512:G:H2'	1.58	0.67
22:BA:2052:A:O4'	25:BD:147:GLY:HA3	1.93	0.67
4:AD:33:ILE:O	4:AD:34:GLU:HB3	1.94	0.67
13:CM:79:LEU:HD13	13:CM:86:ARG:HG2	1.76	0.67
1:AA:973:G:H3'	1:AA:974:A:H5''	1.76	0.67
52:B4:25:VAL:HB	52:B4:35:GLN:HB2	1.75	0.67
22:DA:804:A:H2'	22:DA:806:C:C4	2.29	0.67
22:DA:806:C:H2'	22:DA:807:U:C6	2.28	0.67
22:DA:244:A:H2'	22:DA:245:G:O4'	1.93	0.67
22:DA:973:A:OP1	22:DA:973:A:H8	1.78	0.67
17:CQ:3:LYS:HZ3	17:CQ:6:THR:HG21	1.59	0.67
1:AA:1411:C:H2'	1:AA:1412:C:H5'	1.76	0.67
22:DA:956:G:C2	22:DA:962:G:O6	2.47	0.67
22:DA:959:A:H2'	22:DA:960:A:C8	2.29	0.67
41:DT:29:THR:CB	41:DT:86:THR:H	2.08	0.67

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:AI:51:LEU:HB3	9:AI:56:MET:HG2	1.75	0.67
32:BK:5:GLN:O	32:BK:6:THR:HB	1.92	0.67
22:BA:204:A:H4'	22:BA:205:G:OP1	1.94	0.67
1:AA:1168:U:OP1	1:AA:1168:U:C6	2.48	0.67
24:BC:153:LEU:N	24:BC:153:LEU:HD23	2.09	0.67
22:BA:977:G:O6	56:BA:3586:HOH:O	2.12	0.67
1:AA:443:C:O2'	1:AA:444:G:H5'	1.94	0.67
38:BQ:91:ARG:CZ	39:BR:11:GLN:H	2.06	0.67
22:BA:271:G:C4'	22:BA:272:A:OP1	2.35	0.67
28:BG:132:LEU:HD23	28:BG:132:LEU:N	2.10	0.67
31:BJ:56:VAL:HG12	31:BJ:57:LEU:N	2.09	0.67
22:DA:1662:U:C2'	22:DA:1663:G:H5''	2.21	0.67
1:AA:198:G:O2'	1:AA:199:A:H8	1.76	0.67
22:BA:1141:U:H4'	22:BA:1142:A:O4'	1.93	0.67
1:CA:13:U:O2'	1:CA:14:U:H5'	1.94	0.67
19:CS:59:VAL:HB	19:CS:73:PHE:HD2	1.59	0.67
3:CC:166:TRP:HE3	3:CC:166:TRP:N	1.92	0.67
1:CA:765:G:C8	1:CA:812:G:C2	2.82	0.67
43:DV:30:ILE:HG13	43:DV:40:ILE:HD11	1.76	0.67
22:DA:874:G:H5'	22:DA:875:G:OP2	1.93	0.67
33:DL:63:LYS:HB3	51:D3:12:ARG:HD3	1.76	0.67
22:DA:251:A:H4'	33:DL:47:ARG:NH2	2.08	0.67
34:BM:49:ALA:HB1	34:BM:120:ALA:HB1	1.77	0.67
2:AB:187:ASP:HB2	2:AB:203:ASP:CG	2.14	0.67
22:DA:2348:U:H2'	22:DA:2349:G:H8	1.58	0.67
22:DA:1605:C:C3'	22:DA:1606:C:H5''	2.25	0.67
10:AJ:57:VAL:HG22	10:AJ:58:ASN:N	2.04	0.67
22:DA:128:C:H6	22:DA:128:C:H5''	1.59	0.67
33:DL:79:LEU:HD12	33:DL:112:LEU:HA	1.76	0.67
22:DA:782:A:H5'	22:DA:783:A:C2	2.28	0.67
22:BA:948:C:OP1	56:BA:3355:HOH:O	2.12	0.67
41:BT:39:THR:O	41:BT:39:THR:HG22	1.94	0.67
11:AK:95:THR:O	11:AK:99:LEU:HB2	1.94	0.67
1:CA:256:U:H2'	1:CA:257:G:O4'	1.94	0.67
1:CA:718:A:C5	11:CK:117:HIS:CD2	2.82	0.67
22:DA:21:A:C2	22:DA:520:G:C2	2.82	0.67
30:BI:42:ASN:HA	30:BI:45:THR:HB	1.74	0.67
22:DA:2353:G:H21	44:DW:30:VAL:HG21	1.59	0.67
22:BA:2197:U:OP1	4:CD:150:LYS:HE3	1.94	0.67
22:DA:304:U:H2'	22:DA:305:C:C6	2.30	0.67
32:DK:18:ARG:HB2	32:DK:45:GLU:HB2	1.76	0.67
20:AT:66:ILE:HD11	20:AT:70:LYS:HE3	1.76	0.67

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:1411:C:O2'	1:AA:1412:C:H5'	1.95	0.67
2:CB:10:LYS:HA	2:CB:10:LYS:HE3	1.76	0.67
21:AU:35:GLU:O	21:AU:36:PHE:HB2	1.93	0.67
22:BA:1385:A:H1'	22:BA:1386:C:C6	2.30	0.67
22:BA:2757:A:N1	28:BG:66:THR:HG21	2.10	0.67
22:BA:1190:G:OP1	33:BL:32:GLY:HA2	1.94	0.67
27:DF:64:PRO:HA	27:DF:88:VAL:HG22	1.74	0.67
1:AA:1052:U:H5''	1:AA:1053:G:OP2	1.95	0.67
22:DA:2331:G:N1	22:DA:2385:C:N4	2.43	0.67
22:DA:1357:C:C5	56:DA:3417:HOH:O	2.47	0.67
29:BH:68:ARG:NH2	29:BH:72:ILE:HG21	2.08	0.67
6:CF:42:TRP:HB2	6:CF:59:TYR:HB2	1.75	0.67
22:BA:740:C:H5'	22:BA:1784:A:H3'	1.77	0.67
13:CM:13:HIS:HB3	13:CM:16:ILE:HD13	1.76	0.67
1:AA:414:A:H2'	1:AA:415:A:C8	2.27	0.67
1:AA:495:A:H4'	1:AA:496:A:OP1	1.93	0.67
22:BA:580:U:H2'	22:BA:581:C:H6	1.58	0.67
22:DA:1258:U:H2'	22:DA:1259:G:H8	1.59	0.67
29:DH:32:PRO:HA	45:DX:38:TRP:CD1	2.28	0.67
27:DF:91:ARG:NH2	27:DF:91:ARG:HB3	2.09	0.67
22:DA:1905:C:O2'	22:DA:1929:G:H1'	1.94	0.67
10:CJ:48:ARG:HB3	14:CN:100:TRP:HZ2	1.60	0.67
22:DA:1693:U:H4'	22:DA:1694:C:OP2	1.93	0.67
43:DV:59:GLU:HG2	43:DV:60:VAL:H	1.57	0.67
13:AM:106:ARG:HH21	13:AM:112:ARG:HB3	1.59	0.67
22:DA:774:G:HO2'	22:DA:775:G:H8	1.42	0.67
28:BG:86:LEU:N	28:BG:86:LEU:HD12	2.09	0.67
22:DA:298:G:H2'	22:DA:339:U:O4	1.95	0.67
42:DU:35:VAL:HG12	42:DU:36:GLU:N	2.10	0.67
22:DA:1153:C:H2'	22:DA:1154:G:C8	2.30	0.67
1:AA:373:A:H2'	1:AA:374:A:H8	1.60	0.67
22:DA:626:A:H2'	33:DL:78:ARG:NH2	2.09	0.67
25:BD:92:VAL:O	25:BD:92:VAL:HG12	1.95	0.67
1:AA:198:G:C2'	1:AA:199:A:H8	2.06	0.67
4:CD:57:LYS:HG3	4:CD:58:GLN:N	2.10	0.67
6:CF:54:LEU:HD12	6:CF:56:LYS:O	1.95	0.67
39:BR:48:LYS:CD	39:BR:48:LYS:H	2.04	0.67
2:CB:47:PRO:HA	2:CB:50:ASN:HB2	1.77	0.67
26:DE:149:ILE:HG23	26:DE:188:MET:CA	2.23	0.67
39:BR:97:LYS:O	39:BR:98:ILE:HB	1.94	0.67
28:DG:117:PRO:HD2	28:DG:120:ILE:CG2	2.24	0.67
9:CI:9:GLY:HA3	9:CI:16:ALA:HB3	1.77	0.67

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:AJ:48:ARG:NH2	14:AN:100:TRP:CD2	2.63	0.67
37:BP:83:ILE:HD13	37:BP:83:ILE:C	2.15	0.67
22:DA:1635:A:O2'	22:DA:1636:U:H5'	1.93	0.67
1:CA:1387:G:H2'	1:CA:1388:C:C6	2.30	0.67
1:AA:461:A:H3'	1:AA:461:A:N3	2.10	0.67
23:DB:8:C:H5'	36:DO:27:VAL:HG11	1.75	0.67
22:BA:923:G:N3	44:BW:23:LYS:CE	2.57	0.67
22:DA:1490:A:H8	24:DC:73:ILE:CD1	2.07	0.67
5:AE:81:GLN:HG2	5:AE:149:PRO:HB3	1.76	0.67
22:DA:1055:G:N3	22:DA:1055:G:H2'	2.10	0.67
22:DA:2758:A:H2'	22:DA:2759:G:H5'	1.76	0.67
1:AA:667:G:H4'	15:AO:50:HIS:ND1	2.08	0.67
22:DA:1273:U:H4'	22:DA:1275:A:OP2	1.95	0.67
22:BA:574:A:OP1	56:BA:3268:HOH:O	2.10	0.67
27:DF:136:ILE:O	27:DF:137:PHE:O	2.13	0.67
1:CA:372:C:C1'	1:CA:373:A:OP2	2.42	0.67
1:CA:736:C:H2'	1:CA:737:C:C6	2.29	0.67
22:BA:2502:G:H5'	22:BA:2503:A:C5'	2.24	0.67
1:CA:1201:A:H1'	1:CA:1202:U:OP2	1.94	0.67
23:DB:44:G:H3'	27:DF:91:ARG:NE	2.10	0.67
28:DG:115:GLN:HG2	28:DG:116:LEU:N	2.10	0.67
34:DM:28:PHE:HB2	34:DM:104:GLU:OE1	1.95	0.67
22:BA:1277:G:H5'	35:BN:20:MET:CE	2.25	0.67
40:DS:22:ASP:HA	40:DS:25:ARG:HH12	1.60	0.67
1:AA:299:G:H2'	1:AA:300:A:C8	2.28	0.67
39:BR:54:VAL:HG23	39:BR:57:GLY:H	1.57	0.67
22:BA:319:G:C4	22:BA:333:G:N2	2.63	0.67
6:AF:55:HIS:O	6:AF:56:LYS:HB2	1.93	0.67
18:CR:59:LYS:O	18:CR:63:TYR:CD1	2.48	0.67
22:DA:454:A:C4'	22:DA:455:C:OP2	2.36	0.67
22:DA:2384:U:H3'	22:DA:2385:C:H3'	1.77	0.67
22:DA:857:G:H1'	44:DW:19:ARG:NE	2.09	0.67
44:DW:36:ILE:HG22	44:DW:39:GLN:HB2	1.77	0.67
22:DA:223:A:C4	22:DA:408:G:H1'	2.30	0.67
22:DA:1063:G:C6	22:DA:1064:C:N4	2.63	0.67
1:CA:245:U:HO2'	1:CA:246:A:H5'	1.58	0.67
24:BC:109:LEU:CD2	24:BC:110:LYS:H	2.08	0.67
1:CA:642:A:O2'	1:CA:643:C:H6	1.78	0.67
37:DP:88:ARG:NE	37:DP:112:ARG:HH21	1.93	0.67
1:AA:113:G:C1'	1:AA:354:G:H5'	2.24	0.67
28:DG:120:ILE:HG13	28:DG:140:ILE:HG22	1.76	0.67
22:BA:460:A:OP1	50:B2:41:ARG:NH1	2.28	0.67

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:658:C:H1'	15:AO:21:THR:HG21	1.75	0.67
27:BF:82:TYR:HD2	27:BF:83:PRO:HD2	1.59	0.67
1:CA:632:U:O2	1:CA:632:U:H2'	1.94	0.67
7:CG:45:ALA:HB1	7:CG:120:ALA:HB2	1.76	0.67
22:BA:1300:G:H5''	22:BA:1301:A:H5'	1.77	0.67
27:BF:68:LYS:HD2	27:BF:68:LYS:H	1.58	0.67
22:DA:2880:C:H1'	35:DN:93:GLY:H	1.60	0.67
33:DL:100:ILE:O	33:DL:101:ILE:HB	1.95	0.67
1:CA:976:G:C5'	1:CA:977:A:OP2	2.41	0.67
24:DC:181:ARG:HE	24:DC:265:PHE:HB2	1.60	0.67
5:AE:148:SER:O	5:AE:152:VAL:HG13	1.95	0.67
1:CA:1150:A:N6	1:CA:1151:A:N6	2.42	0.67
1:CA:93:U:H2'	1:CA:95:C:H5	1.58	0.67
24:BC:100:ARG:HH11	24:BC:100:ARG:HG2	1.59	0.67
22:BA:995:C:C6	22:BA:995:C:H5'	2.29	0.67
22:BA:545:U:H2'	22:BA:546:U:H4'	1.75	0.67
22:DA:388:G:N7	22:DA:390:U:H2'	2.10	0.67
25:DD:51:THR:CG2	25:DD:76:GLY:HA3	2.25	0.67
1:AA:1453:G:H2'	1:AA:1453:G:N3	2.08	0.67
41:BT:4:GLU:HG3	41:BT:6:ARG:HE	1.60	0.67
3:AC:41:TYR:OH	3:AC:89:VAL:HG21	1.94	0.67
1:AA:1219:A:H2'	1:AA:1220:G:C8	2.30	0.67
22:BA:386:G:H4'	22:BA:387:U:OP2	1.95	0.67
22:DA:275:C:H2'	22:DA:276:U:O4'	1.95	0.67
31:BJ:99:ARG:O	31:BJ:103:ILE:HG23	1.95	0.67
1:CA:1049:U:H4'	1:CA:1050:G:OP2	1.94	0.67
4:CD:69:ARG:HG3	4:CD:69:ARG:HH11	1.59	0.67
2:AB:36:LYS:HA	2:AB:36:LYS:HE3	1.76	0.67
31:DJ:110:PRO:HG2	31:DJ:111:LYS:HG2	1.77	0.67
4:CD:2:ARG:NH2	4:CD:114:ARG:HH11	1.92	0.67
44:BW:23:LYS:HE3	44:BW:24:ARG:HG3	1.77	0.67
22:DA:206:U:H5'	22:DA:206:U:C6	2.28	0.67
35:DN:22:ARG:HG3	35:DN:70:THR:HA	1.77	0.67
41:BT:37:ASP:O	41:BT:38:ALA:O	2.13	0.67
1:AA:1181:G:O2'	1:AA:1182:G:C5	2.48	0.67
22:BA:2188:U:H2'	22:BA:2189:U:C6	2.29	0.67
38:DQ:24:TYR:O	38:DQ:27:ARG:HB3	1.95	0.67
33:BL:61:LEU:O	51:B3:12:ARG:HD3	1.95	0.67
40:BS:95:ARG:O	40:BS:96:ILE:HG12	1.94	0.67
10:CJ:25:ILE:O	10:CJ:25:ILE:HG22	1.94	0.67
1:AA:433:G:C2'	1:AA:434:U:H5'	2.25	0.67
23:BB:116:G:H4'	36:BO:54:VAL:HG22	1.77	0.67

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
44:BW:23:LYS:CE	44:BW:24:ARG:HG3	2.26	0.66
44:BW:39:GLN:HE21	44:BW:43:LYS:N	1.92	0.66
42:DU:3:LYS:HD3	42:DU:82:VAL:HG21	1.77	0.66
22:DA:489:G:H4'	22:DA:490:C:OP1	1.95	0.66
49:B1:8:ILE:HD11	49:B1:24:LYS:HG2	1.77	0.66
21:AU:9:GLU:CG	21:AU:10:PRO:HD3	2.25	0.66
28:DG:103:ASN:HD22	28:DG:111:PRO:HB2	1.59	0.66
22:DA:594:U:H2'	22:DA:595:C:C6	2.30	0.66
41:DT:39:THR:CG2	41:DT:42:GLU:HB2	2.26	0.66
42:BU:42:LYS:HA	42:BU:58:VAL:O	1.95	0.66
37:DP:88:ARG:HH11	37:DP:112:ARG:NH2	1.92	0.66
31:DJ:20:ALA:HA	31:DJ:23:LYS:CG	2.25	0.66
9:AI:51:LEU:HA	9:AI:54:VAL:HG23	1.78	0.66
8:AH:105:THR:HG21	8:AH:120:LEU:HD13	1.76	0.66
46:BY:57:LEU:HA	46:BY:60:LYS:HB3	1.77	0.66
1:AA:865:A:H2'	1:AA:866:C:H6	1.60	0.66
9:CI:11:ARG:HH22	9:CI:108:ARG:NH2	1.93	0.66
34:DM:42:THR:HB	34:DM:45:GLN:HG3	1.76	0.66
22:DA:397:U:OP2	45:DX:9:LYS:HE2	1.95	0.66
44:BW:39:GLN:C	44:BW:41:GLY:N	2.46	0.66
22:DA:447:A:H5'	22:DA:449:A:C5	2.30	0.66
37:BP:4:ILE:CG2	37:BP:5:LYS:H	1.94	0.66
1:AA:430:A:OP1	4:AD:8:LEU:HB2	1.95	0.66
42:DU:82:VAL:O	42:DU:96:LYS:HG3	1.96	0.66
22:DA:2305:U:OP1	27:DF:132:ARG:HG3	1.95	0.66
10:AJ:65:TYR:CB	14:AN:95:LEU:HD11	2.25	0.66
25:DD:10:GLY:O	25:DD:11:MET:HB2	1.96	0.66
38:BQ:4:LYS:HG3	38:BQ:5:ARG:N	2.10	0.66
32:DK:7:MET:CE	32:DK:7:MET:HA	2.25	0.66
21:CU:33:ARG:HH12	21:CU:34:ARG:HD3	1.59	0.66
22:BA:2503:A:H4'	22:BA:2504:U:OP1	1.94	0.66
22:BA:1188:U:O2'	22:BA:1189:A:H5'	1.95	0.66
41:DT:28:ASN:HB2	41:DT:87:LEU:HB3	1.77	0.66
22:BA:284:U:H2'	22:BA:285:G:C8	2.30	0.66
22:BA:1152:C:H3'	56:BA:3360:HOH:O	1.94	0.66
1:AA:740:U:O2'	1:AA:741:G:H5'	1.95	0.66
37:BP:112:ARG:C	37:BP:113:LEU:HD23	2.15	0.66
42:BU:15:GLY:O	42:BU:17:ASP:N	2.28	0.66
1:AA:723:U:OP1	21:AU:48:LYS:HD3	1.94	0.66
1:CA:649:A:H2'	1:CA:650:G:O4'	1.95	0.66
22:DA:270:A:N1	22:DA:369:U:H1'	2.10	0.66
22:DA:187:G:C2	22:DA:210:C:C2	2.84	0.66

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:BA:2063:C:O2	22:BA:2450:A:N1	2.28	0.66
22:DA:1951:U:H2'	22:DA:1953:A:OP2	1.95	0.66
43:DV:42:LEU:HD13	43:DV:47:VAL:HG21	1.77	0.66
22:BA:994:C:H3'	38:BQ:53:LYS:HE2	1.78	0.66
1:CA:1279:G:OP2	1:CA:1279:G:N2	2.29	0.66
22:BA:924:G:H4'	44:BW:24:ARG:HH21	1.60	0.66
38:DQ:8:ILE:O	38:DQ:8:ILE:HG12	1.95	0.66
24:DC:103:ILE:HD12	24:DC:104:LEU:H	1.60	0.66
27:DF:56:LEU:O	27:DF:60:SER:HB3	1.95	0.66
34:DM:66:ARG:CZ	34:DM:101:VAL:HG11	2.25	0.66
31:DJ:24:THR:HB	31:DJ:27:ARG:HB2	1.78	0.66
1:AA:1281:C:O2'	1:AA:1282:C:H5'	1.95	0.66
7:CG:27:ASN:O	7:CG:30:MET:HB2	1.95	0.66
22:DA:2752:C:H2'	22:DA:2753:A:C8	2.29	0.66
22:DA:1474:U:C2'	22:DA:1475:G:H5'	2.23	0.66
22:BA:134:G:H5'	22:BA:135:U:OP2	1.96	0.66
21:CU:35:GLU:CG	21:CU:36:PHE:H	2.09	0.66
25:DD:125:TRP:CG	25:DD:160:LYS:HB3	2.30	0.66
2:CB:163:ILE:HG23	2:CB:185:ILE:HD11	1.77	0.66
22:DA:1973:G:C6	22:DA:1974:C:C4	2.83	0.66
22:DA:2540:C:C2	22:DA:2541:A:C8	2.83	0.66
22:DA:682:G:H5'	50:D2:26:ASN:OD1	1.95	0.66
22:BA:2021:C:OP1	48:B0:8:THR:HG21	1.95	0.66
14:CN:89:ARG:HG3	14:CN:91:GLU:HG3	1.77	0.66
22:BA:1688:U:H1'	22:BA:1701:A:C6	2.31	0.66
25:BD:53:GLY:HA3	25:BD:77:ARG:HB2	1.76	0.66
27:BF:7:TYR:O	27:BF:12:VAL:HG12	1.96	0.66
23:DB:65:U:H3'	23:DB:108:A:N6	2.11	0.66
20:AT:27:MET:CE	20:AT:57:VAL:HG22	2.26	0.66
22:DA:639:U:H2'	22:DA:640:C:H6	1.60	0.66
22:DA:2876:G:H4'	37:DP:2:ASN:HD21	1.60	0.66
3:CC:109:GLU:HG2	3:CC:139:ASN:HB2	1.77	0.66
3:AC:139:ASN:HA	3:AC:142:ARG:HB2	1.76	0.66
22:DA:2286:G:H4'	22:DA:2287:A:C1'	2.25	0.66
35:BN:66:ALA:O	35:BN:69:ARG:O	2.13	0.66
9:CI:11:ARG:HH22	9:CI:108:ARG:HH21	1.44	0.66
39:DR:43:ASN:ND2	39:DR:44:GLY:H	1.92	0.66
22:DA:2403:C:H2'	22:DA:2404:U:H6	1.60	0.66
31:BJ:3:THR:HB	31:BJ:44:TYR:OH	1.94	0.66
2:AB:186:VAL:O	2:AB:186:VAL:HG23	1.95	0.66
22:DA:339:U:H2'	22:DA:340:A:C8	2.31	0.66
6:AF:86:ARG:HH12	18:AR:63:TYR:HB3	1.59	0.66

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
17:CQ:46:HIS:NE2	17:CQ:48:GLU:HG2	2.10	0.66
24:BC:159:THR:O	24:BC:194:VAL:HG12	1.95	0.66
41:BT:39:THR:HB	41:BT:42:GLU:CB	2.25	0.66
51:D3:41:ARG:HH21	51:D3:41:ARG:CG	2.09	0.66
5:CE:55:VAL:N	5:CE:56:PRO:HD2	2.11	0.66
22:BA:1252:G:N3	38:BQ:32:ARG:HG2	2.10	0.66
3:CC:84:GLU:HA	3:CC:87:ARG:HB2	1.76	0.66
27:BF:9:ASP:O	27:BF:10:GLU:HB2	1.95	0.66
22:DA:917:A:H2	23:DB:79:G:H21	1.38	0.66
4:AD:105:GLY:HA3	4:AD:161:ALA:HB1	1.78	0.66
16:AP:73:ALA:O	16:AP:77:GLU:HB2	1.95	0.66
15:CO:73:ASP:OD2	15:CO:76:ARG:HD3	1.96	0.66
21:AU:16:ARG:NH1	21:AU:19:LYS:HG3	2.11	0.66
13:AM:45:SER:O	13:AM:46:GLU:HB2	1.94	0.66
12:CL:34:THR:HG22	12:CL:35:ARG:HG2	1.76	0.66
22:DA:797:G:OP1	26:DE:57:LYS:HG2	1.96	0.66
44:BW:39:GLN:O	44:BW:41:GLY:N	2.29	0.66
22:DA:2324:U:H5'	22:DA:2325:G:C5'	2.25	0.66
33:DL:56:PRO:O	33:DL:60:ARG:HG3	1.95	0.66
1:AA:254:G:O2'	1:AA:255:G:H5'	1.95	0.66
22:DA:2665:A:H2'	22:DA:2666:C:O2	1.96	0.66
32:DK:60:ALA:HA	32:DK:87:LEU:CD2	2.25	0.66
22:BA:446:G:OP1	38:BQ:2:ARG:HD2	1.96	0.66
4:AD:167:PRO:HB2	4:AD:170:LEU:HD11	1.76	0.66
38:BQ:40:LYS:HG2	38:BQ:44:TYR:CD1	2.31	0.66
26:DE:48:THR:O	26:DE:52:VAL:HG23	1.95	0.66
4:AD:166:LYS:NZ	4:AD:166:LYS:HB3	2.10	0.66
21:AU:17:ARG:HH11	21:AU:17:ARG:HG3	1.60	0.66
11:AK:42:GLY:HA3	11:AK:73:VAL:HG12	1.77	0.66
22:BA:1653:G:H1	35:BN:11:ASN:ND2	1.92	0.66
29:BH:82:SER:O	29:BH:83:LYS:HB2	1.95	0.66
29:DH:5:LEU:HD11	29:DH:13:GLY:HA3	1.77	0.66
22:BA:1411:U:O2'	22:BA:1412:U:H5'	1.96	0.66
1:CA:1105:A:H2'	1:CA:1106:G:H8	1.59	0.66
33:BL:55:MET:HE3	33:BL:55:MET:HA	1.77	0.66
22:BA:533:G:H5'	38:BQ:23:TYR:CD2	2.30	0.66
22:DA:2893:A:H4'	22:DA:2894:G:O5'	1.95	0.66
24:BC:7:PRO:HB3	24:BC:13:ARG:HB2	1.76	0.66
49:D1:10:LEU:HB2	49:D1:20:TYR:HB2	1.77	0.66
22:BA:1459:G:O2'	22:BA:1460:U:H3'	1.96	0.66
2:AB:212:TYR:O	2:AB:216:VAL:HG23	1.95	0.66
5:CE:79:THR:HG23	5:CE:81:GLN:H	1.61	0.66

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:CA:1239:A:H62	1:CA:1299:A:N6	1.93	0.66
22:DA:243:U:HO2'	22:DA:244:A:H8	1.44	0.66
1:CA:663:A:O2'	1:CA:664:G:H5'	1.96	0.66
28:DG:85:LYS:HD3	28:DG:164:ALA:HB3	1.77	0.66
1:CA:693:G:OP1	11:CK:126:ARG:NH1	2.29	0.66
29:DH:93:SER:CB	29:DH:121:VAL:HG21	2.25	0.66
7:CG:63:VAL:HG11	7:CG:127:ALA:HB2	1.76	0.66
46:BY:56:LEU:O	46:BY:57:LEU:HB3	1.95	0.66
22:DA:1510:G:N2	22:DA:1511:G:C4	2.63	0.66
22:DA:2264:C:C2	22:DA:2277:G:N2	2.64	0.66
42:DU:83:GLY:O	42:DU:93:ARG:HA	1.96	0.66
22:DA:2636:C:H2'	22:DA:2637:U:C6	2.31	0.66
22:BA:2897:U:H2'	22:BA:2898:U:C6	2.30	0.66
40:DS:20:VAL:HG23	40:DS:23:LEU:HD12	1.78	0.66
32:BK:105:ARG:HD3	32:BK:105:ARG:H	1.60	0.66
22:DA:636:G:H5'	22:DA:639:U:OP1	1.96	0.66
35:DN:62:ASN:O	35:DN:63:ARG:HB2	1.95	0.66
22:DA:241:A:C8	22:DA:243:U:C4	2.84	0.66
12:AL:21:PRO:O	12:AL:23:LEU:N	2.28	0.66
24:BC:78:GLU:OE1	24:BC:100:ARG:NE	2.28	0.66
1:CA:708:C:H2'	1:CA:709:U:H6	1.61	0.66
1:CA:1430:A:H2'	1:CA:1431:A:O4'	1.95	0.66
10:AJ:41:PRO:O	10:AJ:42:LEU:HB2	1.94	0.66
22:BA:611:C:C2'	22:BA:612:G:H5'	2.25	0.66
22:BA:1070:A:H2'	22:BA:1097:U:OP1	1.95	0.66
36:DO:31:THR:HG21	36:DO:36:TYR:HE2	1.59	0.66
1:AA:428:G:H4'	1:AA:429:U:OP1	1.95	0.66
31:BJ:56:VAL:O	31:BJ:124:VAL:O	2.14	0.66
22:DA:873:C:H4'	34:DM:64:TRP:CD1	2.30	0.66
30:BI:23:VAL:HG23	30:BI:24:GLY:H	1.60	0.66
1:CA:1245:C:H2'	1:CA:1246:A:H8	1.61	0.66
1:AA:408:A:OP1	4:AD:109:THR:HG21	1.95	0.66
22:BA:1734:G:H2'	22:BA:1735:A:C8	2.24	0.66
5:CE:45:VAL:O	5:CE:71:ILE:HG22	1.96	0.66
39:DR:81:LYS:N	39:DR:81:LYS:HD3	2.10	0.66
1:AA:358:U:H2'	1:AA:359:G:C8	2.31	0.66
6:CF:14:GLN:HB3	6:CF:17:GLN:HE22	1.61	0.66
1:CA:350:G:C6	1:CA:351:G:C6	2.84	0.66
41:BT:28:ASN:HA	41:BT:91:GLN:OE1	1.96	0.66
8:AH:93:LYS:HE3	8:AH:116:ARG:HH12	1.61	0.66
22:DA:851:C:H4'	47:DZ:46:MET:HG2	1.78	0.66
24:DC:68:ARG:HH12	24:DC:115:ILE:HD12	1.61	0.66

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:538:A:H5''	31:DJ:7:LYS:NZ	2.11	0.66
2:AB:49:PHE:CG	2:AB:212:TYR:OH	2.48	0.66
22:DA:2305:U:O2'	27:DF:132:ARG:HA	1.95	0.66
22:DA:2667:C:O2'	22:DA:2668:G:C8	2.48	0.66
22:DA:1965:C:H5''	22:DA:1965:C:C6	2.28	0.66
22:DA:593:U:H2'	22:DA:594:U:H6	1.60	0.66
22:DA:2798:U:H5'	22:DA:2800:A:C5	2.31	0.66
22:BA:1813:G:N3	24:BC:49:THR:CG2	2.58	0.66
22:DA:532:A:N1	22:DA:2020:A:H1'	2.11	0.66
4:AD:147:LYS:H	4:AD:147:LYS:HE2	1.61	0.66
22:BA:1964:G:H4'	22:BA:1965:C:OP2	1.96	0.66
1:AA:1454:G:H2'	1:AA:1455:G:H8	1.61	0.66
29:DH:5:LEU:O	29:DH:6:LEU:HD12	1.96	0.66
22:DA:1245:G:OP1	33:DL:8:PRO:HG3	1.95	0.66
29:BH:117:LEU:HD11	29:BH:130:VAL:HG11	1.78	0.66
1:CA:456:A:H2'	1:CA:457:G:H8	1.60	0.66
22:BA:2328:A:H2'	22:BA:2329:U:C6	2.31	0.66
22:BA:2394:C:OP2	51:B3:29:ARG:HD3	1.95	0.66
33:BL:114:GLY:C	33:BL:115:GLU:HG3	2.16	0.66
1:CA:963:G:C6	1:CA:973:G:O6	2.48	0.65
49:D1:51:ALA:O	49:D1:52:LYS:HB2	1.96	0.65
22:DA:2430:A:H5'	22:DA:2431:U:OP2	1.96	0.65
22:DA:2448:A:HO2'	22:DA:2449:U:H5	1.44	0.65
20:CT:73:ARG:HG2	20:CT:73:ARG:NH1	2.03	0.65
38:DQ:60:TRP:CZ2	38:DQ:93:ILE:HB	2.31	0.65
37:DP:91:VAL:HG11	37:DP:96:LEU:HD11	1.77	0.65
1:AA:265:G:N2	1:AA:267:C:H5''	2.10	0.65
10:CJ:80:THR:O	10:CJ:84:VAL:HG22	1.96	0.65
8:AH:76:ARG:NE	8:AH:78:SER:O	2.29	0.65
45:BX:34:SER:HA	45:BX:49:ARG:HA	1.78	0.65
1:CA:1249:C:H4'	9:CI:74:GLN:HE22	1.61	0.65
24:BC:15:VAL:HA	24:BC:203:VAL:CG1	2.25	0.65
35:BN:33:ILE:HD11	35:BN:118:ARG:NH2	2.11	0.65
7:AG:115:MET:HA	7:AG:118:ARG:HD3	1.78	0.65
29:BH:45:GLU:O	29:BH:49:ALA:N	2.27	0.65
19:CS:79:TYR:O	19:CS:80:ARG:HB2	1.95	0.65
24:BC:259:ASN:O	24:BC:261:ARG:N	2.27	0.65
5:CE:154:ALA:HB1	8:CH:65:PHE:HE2	1.60	0.65
31:DJ:57:LEU:HD11	31:DJ:129:GLU:H	1.60	0.65
23:DB:13:G:N2	23:DB:16:G:C4	2.64	0.65
19:CS:52:ASN:HD21	19:CS:55:GLN:N	1.94	0.65
32:BK:18:ARG:HH11	32:BK:18:ARG:CG	2.02	0.65

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:1313:U:H2'	22:DA:1313:U:O2	1.94	0.65
22:DA:1598:A:H2'	22:DA:1599:U:C6	2.31	0.65
22:DA:185:G:H2'	22:DA:186:G:H8	1.59	0.65
22:DA:2311:A:H1'	27:DF:78:ILE:HD11	1.78	0.65
22:BA:780:G:N2	22:BA:783:A:H62	1.91	0.65
22:BA:2134:A:O2'	22:BA:2135:A:H8	1.71	0.65
36:BO:31:THR:HG22	36:BO:34:HIS:N	2.11	0.65
31:BJ:65:THR:HG22	31:BJ:68:LYS:HE3	1.77	0.65
27:BF:45:ASP:HB3	27:BF:48:LEU:HB2	1.76	0.65
22:DA:2135:A:H2'	22:DA:2136:G:H8	1.59	0.65
22:DA:1364:G:C5	45:DX:1:SER:HB2	2.31	0.65
27:DF:58:ALA:HB1	27:DF:139:GLU:CG	2.25	0.65
27:BF:43:ILE:HG22	27:BF:82:TYR:CE1	2.31	0.65
22:BA:2017:U:H4'	48:B0:4:GLN:O	1.95	0.65
22:DA:1429:G:HO2'	22:DA:1430:G:H8	1.43	0.65
15:AO:34:GLN:NE2	15:AO:38:LEU:HD21	2.10	0.65
29:BH:24:GLY:O	29:BH:28:ASN:HB2	1.96	0.65
16:AP:51:ARG:C	16:AP:52:LEU:HD12	2.16	0.65
32:DK:118:LEU:C	32:DK:120:PRO:HD2	2.17	0.65
44:BW:41:GLY:O	44:BW:42:THR:C	2.34	0.65
1:CA:973:G:C2'	1:CA:974:A:H5'	2.26	0.65
17:AQ:13:SER:O	17:AQ:20:ILE:HD11	1.96	0.65
22:DA:636:G:H3'	33:DL:128:THR:HG21	1.77	0.65
1:CA:1298:U:H5	7:CG:113:LYS:HA	1.61	0.65
51:D3:3:ILE:HG21	51:D3:62:PRO:HG2	1.76	0.65
16:CP:78:VAL:O	16:CP:78:VAL:HG12	1.95	0.65
32:DK:71:ARG:HB3	32:DK:72:PRO:CD	2.26	0.65
22:DA:1568:G:N2	24:DC:57:HIS:CE1	2.64	0.65
7:CG:136:LYS:O	7:CG:140:VAL:HG23	1.96	0.65
22:DA:532:A:N1	22:DA:2020:A:O2'	2.21	0.65
9:AI:51:LEU:HB3	9:AI:56:MET:CG	2.26	0.65
9:CI:11:ARG:HD3	9:CI:106:ASP:OD1	1.95	0.65
38:DQ:42:GLY:HA3	39:DR:75:VAL:HG21	1.78	0.65
22:BA:2339:C:H2'	22:BA:2340:A:C8	2.31	0.65
26:BE:61:ARG:NH1	26:BE:64:GLY:HA3	2.10	0.65
31:BJ:43:GLU:O	31:BJ:44:TYR:C	2.34	0.65
22:DA:1249:U:H3'	22:DA:1249:U:OP1	1.97	0.65
31:DJ:44:TYR:HB2	38:DQ:63:ARG:NH1	2.10	0.65
22:DA:781:A:H5''	22:DA:782:A:OP1	1.96	0.65
9:CI:51:LEU:HG	9:CI:86:LEU:HD22	1.79	0.65
2:AB:40:ILE:HG21	2:AB:201:GLY:H	1.61	0.65
23:BB:28:C:C2'	23:BB:29:A:H5'	2.26	0.65

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:AH:76:ARG:HH11	8:AH:76:ARG:CG	2.09	0.65
47:DZ:4:ILE:CD1	47:DZ:58:GLU:HA	2.26	0.65
4:AD:145:ARG:HD2	4:AD:147:LYS:CE	2.27	0.65
22:DA:1281:G:H2'	22:DA:1282:U:O4'	1.95	0.65
1:AA:475:C:H2'	1:AA:476:U:C6	2.31	0.65
22:DA:2631:G:H2'	22:DA:2632:A:H5''	1.78	0.65
10:AJ:28:THR:HG22	10:AJ:28:THR:O	1.96	0.65
24:DC:38:LYS:HE2	24:DC:55:GLY:H	1.61	0.65
23:BB:48:U:H2'	23:BB:49:C:C6	2.31	0.65
1:CA:119:A:H4'	1:CA:120:A:O5'	1.97	0.65
1:CA:1323:G:H2'	1:CA:1324:A:C8	2.31	0.65
11:CK:74:LYS:HD2	11:CK:104:PHE:HE1	1.60	0.65
1:AA:452:A:H5''	1:AA:452:A:H8	1.60	0.65
22:DA:1109:C:C5	22:DA:1110:G:C6	2.84	0.65
2:AB:75:ALA:O	2:AB:79:VAL:HG23	1.95	0.65
45:BX:34:SER:HB3	45:BX:49:ARG:HG3	1.78	0.65
26:DE:145:ASP:OD1	26:DE:166:LYS:HG3	1.97	0.65
1:AA:1472:U:O2'	1:AA:1473:G:H5'	1.96	0.65
26:DE:59:PRO:HB2	26:DE:67:ARG:NH2	2.12	0.65
1:CA:461:A:P	1:CA:462:G:OP2	2.55	0.65
5:AE:67:ARG:HB2	5:AE:68:ARG:HE	1.61	0.65
22:DA:1494:A:H2'	22:DA:1495:A:C8	2.31	0.65
1:CA:961:U:O4	1:CA:983:A:C6	2.50	0.65
22:DA:1441:G:H2'	22:DA:1442:U:C6	2.32	0.65
22:DA:2324:U:H5'	22:DA:2325:G:H5''	1.78	0.65
22:DA:247:G:H4'	22:DA:386:G:C4	2.31	0.65
22:DA:223:A:C5	22:DA:422:A:N7	2.65	0.65
16:AP:22:ALA:HA	16:AP:33:ILE:HG13	1.78	0.65
22:DA:74:A:H4'	22:DA:75:G:O5'	1.97	0.65
22:DA:587:C:H1'	22:DA:671:C:H5'	1.78	0.65
37:DP:50:ARG:CB	37:DP:57:ALA:H	2.09	0.65
22:DA:2197:U:O2'	22:DA:2198:A:H2'	1.96	0.65
5:CE:14:LEU:HD22	5:CE:59:ILE:HD13	1.78	0.65
22:BA:1747:U:H2'	22:BA:1748:C:H6	1.58	0.65
39:DR:87:GLN:HG2	39:DR:88:GLY:N	2.11	0.65
28:DG:167:VAL:HG23	28:DG:168:VAL:H	1.61	0.65
1:CA:251:G:H21	1:CA:253:A:H62	1.45	0.65
20:CT:26:MET:HE1	20:CT:56:ILE:HD13	1.79	0.65
22:DA:2353:G:H21	44:DW:30:VAL:CG2	2.10	0.65
48:B0:29:VAL:HG13	48:B0:34:GLY:O	1.97	0.65
22:DA:1838:C:H4'	22:DA:1839:G:C8	2.32	0.65
1:CA:170:U:O2'	1:CA:171:A:H5'	1.96	0.65

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:AG:145:GLU:HA	7:AG:148:LYS:HB2	1.76	0.65
1:CA:738:C:H2'	1:CA:739:C:H6	1.60	0.65
7:AG:23:ALA:O	7:AG:26:VAL:HG22	1.95	0.65
22:DA:90:U:H3'	22:DA:91:A:H5''	1.77	0.65
22:DA:63:A:N6	22:DA:91:A:N6	2.44	0.65
5:AE:136:VAL:O	5:AE:137:ARG:HB2	1.97	0.65
22:DA:2529:G:H4'	28:DG:174:LYS:CD	2.27	0.65
1:CA:976:G:O5'	1:CA:1358:U:O2'	2.14	0.65
22:BA:1179:G:C5	22:BA:1180:U:C1'	2.77	0.65
17:AQ:46:HIS:HB2	17:AQ:66:LEU:HD12	1.78	0.65
22:BA:2346:A:H3'	22:BA:2347:C:C5'	2.22	0.65
22:DA:502:A:H5'	22:DA:503:A:OP2	1.97	0.65
50:D2:19:ARG:HB3	50:D2:19:ARG:HH21	1.62	0.65
29:BH:90:LEU:HB2	29:BH:123:ARG:HB3	1.78	0.65
8:AH:21:LYS:CE	8:AH:22:ALA:H	2.06	0.65
1:AA:198:G:C6	1:AA:220:G:C2	2.85	0.65
29:BH:68:ARG:HH12	29:BH:140:ALA:HB2	1.60	0.65
22:BA:31:C:OP1	56:BA:3701:HOH:O	2.15	0.65
22:BA:2887:A:H2'	22:BA:2887:A:N3	2.10	0.65
22:DA:2617:U:C2'	22:DA:2618:G:H5'	2.27	0.65
1:CA:1011:C:H2'	1:CA:1012:A:C8	2.31	0.65
42:BU:43:LYS:O	42:BU:57:ILE:HA	1.97	0.65
1:CA:456:A:H2'	1:CA:457:G:C8	2.32	0.65
1:AA:596:A:N6	1:AA:645:G:C6	2.65	0.65
6:AF:97:THR:O	6:AF:98:GLU:HG2	1.96	0.65
38:BQ:68:ALA:HB1	38:BQ:73:ILE:HG23	1.79	0.65
29:DH:41:LYS:HA	29:DH:44:ILE:HG12	1.79	0.65
44:BW:11:ASN:HD22	44:BW:12:GLY:H	1.43	0.65
19:AS:3:SER:O	19:AS:5:LYS:HG3	1.97	0.65
12:AL:78:VAL:O	12:AL:101:LEU:HB3	1.96	0.65
22:DA:1023:U:C6	22:DA:1023:U:H5'	2.32	0.65
22:DA:615:U:O4	26:DE:39:ALA:HB2	1.96	0.65
1:CA:1160:G:C6	1:CA:1181:G:O6	2.49	0.65
35:DN:99:LYS:O	48:D0:41:HIS:HB2	1.96	0.65
31:DJ:64:VAL:HG22	31:DJ:68:LYS:HE2	1.79	0.65
1:CA:1145:A:H4'	1:CA:1146:A:OP1	1.95	0.65
10:CJ:15:HIS:CE1	10:CJ:68:ARG:HD3	2.32	0.65
7:CG:28:ILE:HG21	7:CG:100:MET:HG3	1.78	0.65
27:DF:59:ILE:HD13	27:DF:137:PHE:HZ	1.62	0.65
1:CA:372:C:H4'	1:CA:373:A:C5'	2.26	0.65
22:BA:2151:U:H2'	22:BA:2152:G:O4'	1.95	0.65
22:DA:2285:C:H5	49:D1:5:ARG:NH2	1.95	0.65

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:BA:229:C:H2'	22:BA:230:G:O4'	1.97	0.65
1:CA:920:U:H2'	1:CA:921:U:C6	2.32	0.65
22:DA:2147:A:C4'	22:DA:2147:A:OP1	2.45	0.65
41:DT:67:VAL:O	41:DT:68:LYS:HG3	1.97	0.65
9:AI:23:GLY:H	9:AI:60:LEU:HA	1.62	0.65
22:DA:2537:U:H2'	22:DA:2538:C:C6	2.32	0.65
43:DV:73:LYS:HD3	43:DV:74:ALA:N	2.12	0.65
1:AA:89:U:O2'	1:AA:90:C:H5''	1.96	0.65
46:DY:4:LYS:HB2	46:DY:4:LYS:NZ	2.12	0.65
9:AI:32:ARG:HG2	9:AI:36:GLN:HB3	1.79	0.65
1:AA:1469:C:C5'	1:AA:1469:C:H6	2.09	0.65
6:AF:61:LEU:HD12	6:AF:62:MET:H	1.61	0.65
44:BW:24:ARG:HB2	44:BW:65:LYS:HD3	1.79	0.65
19:CS:35:ARG:HA	19:CS:70:LEU:HB2	1.78	0.65
44:DW:37:VAL:C	44:DW:39:GLN:H	2.01	0.65
2:AB:95:TRP:HZ2	2:AB:100:LEU:HD23	1.61	0.65
34:BM:35:ALA:O	34:BM:128:THR:HA	1.97	0.65
32:DK:61:VAL:HG13	32:DK:87:LEU:CD2	2.27	0.65
29:DH:72:ILE:HD11	29:DH:141:LYS:N	2.12	0.65
19:AS:44:ILE:HA	19:AS:61:VAL:HB	1.78	0.65
22:BA:45:G:H5''	22:BA:46:G:H5'	1.79	0.65
30:DI:30:GLN:HG3	30:DI:31:GLY:H	1.62	0.65
26:DE:88:ARG:HB3	26:DE:89:PRO:HD2	1.79	0.65
22:BA:2573:C:H3'	56:BA:3712:HOH:O	1.97	0.65
42:DU:26:ASN:O	42:DU:34:ILE:HB	1.97	0.65
22:BA:2466:C:OP1	52:B4:4:ARG:HB2	1.97	0.65
12:CL:42:LYS:HG2	12:CL:43:LYS:N	2.12	0.65
1:CA:981:U:H2'	1:CA:982:U:C5	2.31	0.65
20:AT:27:MET:HE3	20:AT:57:VAL:HG22	1.79	0.65
11:AK:126:ARG:C	21:AU:33:ARG:HH12	1.99	0.65
1:CA:414:A:H2'	1:CA:415:A:H5''	1.77	0.65
28:DG:139:VAL:HA	28:DG:142:GLN:HB3	1.79	0.65
22:DA:763:G:HO2'	22:DA:764:A:H3'	1.60	0.65
31:BJ:21:THR:C	31:BJ:23:LYS:H	1.98	0.65
21:AU:11:PHE:O	21:AU:12:ASP:HB2	1.96	0.65
25:BD:13:ARG:NH1	37:BP:74:GLN:HE21	1.93	0.65
22:BA:65:U:H2'	22:BA:66:C:C6	2.28	0.65
21:CU:14:ALA:O	21:CU:15:LEU:O	2.15	0.65
22:DA:172:A:H2'	22:DA:173:A:C8	2.30	0.65
28:BG:59:ASP:HB2	28:BG:63:GLN:HG2	1.77	0.65
1:CA:160:A:H2'	1:CA:161:A:O4'	1.97	0.65
1:CA:1003:G:N2	1:CA:1005:A:H5''	2.12	0.65

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:1470:U:O2'	1:AA:1471:U:H5'	1.97	0.65
24:DC:67:LYS:HB3	24:DC:150:GLY:HA2	1.78	0.65
31:BJ:88:THR:HG22	31:BJ:91:GLU:CD	2.17	0.65
26:BE:131:THR:HG22	26:BE:160:ALA:HA	1.78	0.65
4:AD:55:ARG:HH12	4:AD:58:GLN:HG2	1.62	0.65
22:BA:320:A:H4'	22:BA:322:A:N7	2.12	0.65
19:CS:36:ARG:O	19:CS:69:LYS:HD2	1.97	0.64
22:DA:2332:C:O2'	44:DW:40:ARG:NH2	2.30	0.64
22:DA:1605:C:H4'	22:DA:1610:A:C6	2.31	0.64
22:DA:206:U:H2'	22:DA:207:A:C8	2.25	0.64
1:CA:1348:U:H2'	1:CA:1349:A:H8	1.62	0.64
22:DA:1255:U:H5'	22:DA:2502:G:H22	1.61	0.64
1:AA:721:G:H4'	1:AA:722:G:H5''	1.78	0.64
22:DA:769:U:C4	22:DA:770:G:N7	2.65	0.64
9:CI:12:LYS:H	9:CI:105:ARG:NH1	1.95	0.64
7:AG:145:GLU:CA	7:AG:148:LYS:HB2	2.27	0.64
1:AA:1069:C:H4'	1:AA:1192:C:O2	1.97	0.64
10:AJ:8:ILE:HG12	10:AJ:100:ILE:HG22	1.78	0.64
22:BA:587:C:OP2	33:BL:21:ARG:NH1	2.30	0.64
34:BM:17:ASN:O	34:BM:38:ARG:HD3	1.97	0.64
24:BC:43:ASN:HB3	24:BC:45:ASN:H	1.61	0.64
22:DA:992:C:H4'	39:DR:74:ILE:HD13	1.79	0.64
33:BL:68:SER:O	33:BL:69:ARG:HB2	1.97	0.64
22:DA:1358:G:N2	22:DA:1374:G:C6	2.65	0.64
31:DJ:44:TYR:O	31:DJ:45:THR:HB	1.95	0.64
33:BL:77:ILE:CD1	33:BL:108:ALA:HB1	2.27	0.64
22:DA:628:G:H2'	22:DA:629:G:C8	2.32	0.64
22:DA:804:A:H2'	22:DA:806:C:N4	2.12	0.64
22:BA:137:U:O5'	22:BA:137:U:C6	2.46	0.64
7:CG:117:LEU:HG	7:CG:121:ASN:HD22	1.60	0.64
22:BA:2425:A:H5''	22:BA:2427:C:O4'	1.98	0.64
22:DA:2788:C:H2'	22:DA:2789:C:C6	2.32	0.64
36:DO:23:ALA:O	36:DO:42:PRO:HG3	1.97	0.64
22:DA:1364:G:C8	45:DX:1:SER:HB2	2.32	0.64
22:DA:170:U:H2'	22:DA:171:U:H6	1.61	0.64
9:AI:25:GLY:N	9:AI:58:GLU:HA	2.13	0.64
22:DA:1973:G:C6	22:DA:1974:C:N4	2.66	0.64
22:DA:1507:C:H5'	22:DA:1508:A:OP2	1.96	0.64
32:BK:1:MET:HG3	32:BK:67:LYS:HG3	1.77	0.64
8:AH:15:ASN:O	8:AH:18:ALA:HB3	1.98	0.64
51:B3:40:LYS:HA	51:B3:43:LEU:HD12	1.79	0.64
22:DA:1400:U:O2'	22:DA:1401:G:O4'	2.13	0.64

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:CG:91:ARG:CG	7:CG:92:PRO:HD2	2.25	0.64
27:DF:147:ARG:O	27:DF:148:VAL:HG22	1.97	0.64
22:DA:747:U:O2	22:DA:2014:A:H1'	1.98	0.64
22:DA:1744:A:H3'	22:DA:1745:A:H8	1.62	0.64
9:CI:24:ASN:O	9:CI:61:ASP:HA	1.98	0.64
1:CA:1038:C:H2'	1:CA:1039:G:H8	1.62	0.64
1:AA:1219:A:H2'	1:AA:1220:G:H8	1.61	0.64
14:CN:89:ARG:HG3	14:CN:91:GLU:CG	2.27	0.64
38:BQ:39:ILE:O	38:BQ:43:GLN:HG3	1.97	0.64
42:DU:39:ASN:HB3	42:DU:62:ALA:HB3	1.79	0.64
1:CA:1382:C:O2'	1:CA:1383:C:H5'	1.97	0.64
22:DA:1264:A:H5'	48:D0:7:PRO:HG2	1.79	0.64
12:CL:42:LYS:HG2	12:CL:43:LYS:HG2	1.80	0.64
2:AB:187:ASP:HB2	2:AB:203:ASP:CB	2.28	0.64
44:DW:19:ARG:HA	44:DW:34:SER:HA	1.78	0.64
1:AA:1201:A:H1'	1:AA:1202:U:OP2	1.97	0.64
22:DA:54:G:H2'	22:DA:55:G:O4'	1.97	0.64
27:BF:55:ASP:O	27:BF:59:ILE:HG13	1.97	0.64
22:DA:71:A:H5''	22:DA:73:A:C8	2.32	0.64
22:DA:2093:G:N2	22:DA:2094:A:C4	2.66	0.64
22:DA:1416:G:C4	22:DA:1417:C:C5	2.86	0.64
32:DK:97:THR:O	32:DK:98:ARG:HB2	1.96	0.64
12:AL:23:LEU:C	12:AL:25:ALA:H	2.00	0.64
1:AA:548:G:H5''	1:AA:548:G:H8	1.61	0.64
22:DA:2716:C:H2'	22:DA:2717:C:C6	2.32	0.64
22:DA:1286:A:H5''	35:DN:104:ALA:HB2	1.79	0.64
3:AC:13:ILE:O	3:AC:15:LYS:N	2.30	0.64
1:CA:1095:U:H2'	1:CA:1096:C:C6	2.32	0.64
1:AA:601:G:H2'	1:AA:602:A:H8	1.62	0.64
3:CC:22:PHE:HD2	10:CJ:97:ASP:HB2	1.62	0.64
22:DA:1519:G:H5'	22:DA:1520:U:OP2	1.98	0.64
22:DA:1429:G:O2'	22:DA:1430:G:H8	1.79	0.64
9:CI:23:GLY:H	9:CI:60:LEU:HA	1.61	0.64
1:CA:679:C:O2	1:CA:712:A:C2	2.50	0.64
22:BA:1720:U:H2'	22:BA:1721:G:O4'	1.97	0.64
22:DA:456:C:O2'	41:DT:73:ARG:HG3	1.97	0.64
26:BE:95:LYS:O	26:BE:96:VAL:HB	1.97	0.64
2:CB:116:LEU:HA	2:CB:119:GLN:HB3	1.78	0.64
1:CA:312:C:H2'	1:CA:313:A:H8	1.63	0.64
29:BH:42:LYS:HG2	29:BH:43:ASN:HD22	1.62	0.64
23:DB:109:A:C2	23:DB:110:C:C2	2.86	0.64
22:DA:109:C:H4'	22:DA:348:A:H4'	1.78	0.64

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:CG:107:ALA:O	7:CG:118:ARG:HB3	1.98	0.64
22:DA:621:A:H3'	22:DA:621:A:OP2	1.97	0.64
29:BH:67:ALA:HA	29:BH:138:VAL:CB	2.23	0.64
6:CF:3:HIS:HB2	6:CF:92:THR:HA	1.78	0.64
1:CA:1250:A:N3	1:CA:1287:A:N6	2.46	0.64
22:BA:2557:G:H2'	22:BA:2558:C:H6	1.61	0.64
40:BS:17:VAL:HG12	40:BS:76:VAL:HG11	1.78	0.64
1:CA:1035:A:H2	1:CA:1036:A:H62	1.46	0.64
13:CM:95:PRO:HG2	13:CM:99:GLN:HB3	1.80	0.64
12:CL:109:ARG:HB2	12:CL:118:VAL:HG21	1.78	0.64
1:AA:16:A:O2'	1:AA:17:U:H5'	1.97	0.64
22:BA:611:C:H2'	22:BA:612:G:H5'	1.78	0.64
22:DA:2727:A:O2'	22:DA:2728:U:H5'	1.98	0.64
29:DH:1:MET:HB3	29:DH:21:VAL:O	1.97	0.64
7:CG:4:ARG:HD2	7:CG:5:VAL:H	1.63	0.64
1:AA:84:U:O2	1:AA:84:U:H2'	1.97	0.64
25:BD:182:ALA:C	25:BD:183:GLU:HG3	2.18	0.64
32:DK:24:VAL:HG13	32:DK:33:ALA:HB2	1.78	0.64
32:BK:111:LYS:H	32:BK:111:LYS:HE2	1.60	0.64
51:B3:44:ARG:N	51:B3:45:PRO:HD2	2.12	0.64
44:BW:18:LYS:HG3	44:BW:19:ARG:N	2.12	0.64
44:BW:21:GLY:C	44:BW:22:VAL:HG12	2.17	0.64
22:DA:976:G:H5'	22:DA:1156:A:C6	2.32	0.64
22:DA:1343:G:O2'	22:DA:1344:U:C6	2.41	0.64
26:DE:108:ILE:HD13	26:DE:108:ILE:O	1.98	0.64
22:DA:1654:A:O2'	22:DA:1655:A:O4'	2.15	0.64
22:DA:2829:A:C2'	22:DA:2830:C:H5'	2.27	0.64
1:CA:93:U:O5'	1:CA:93:U:H6	1.81	0.64
22:DA:764:A:C2	22:DA:781:A:C2	2.85	0.64
24:DC:206:LYS:HG3	24:DC:209:ALA:H	1.63	0.64
22:BA:2136:G:H2'	22:BA:2137:U:C5	2.33	0.64
28:DG:83:THR:C	28:DG:84:LYS:HD3	2.18	0.64
41:BT:43:ILE:O	41:BT:47:VAL:HG23	1.98	0.64
22:BA:2680:U:OP1	25:BD:114:LYS:HG3	1.98	0.64
25:BD:97:SER:C	25:BD:99:GLU:HG2	2.18	0.64
22:DA:2735:G:H2'	22:DA:2736:A:H8	1.63	0.64
22:DA:1281:G:C2	22:DA:1290:C:N3	2.65	0.64
37:DP:88:ARG:NH1	37:DP:112:ARG:HH21	1.95	0.64
28:BG:59:ASP:HB2	28:BG:63:GLN:CG	2.28	0.64
22:DA:1695:G:C8	24:DC:7:PRO:HB2	2.33	0.64
52:D4:7:VAL:HG13	52:D4:8:LYS:N	2.13	0.64
31:DJ:111:LYS:HB2	31:DJ:115:GLY:N	2.13	0.64

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
24:DC:125:PRO:HA	24:DC:191:LEU:HB2	1.79	0.64
1:CA:808:C:OP1	15:CO:47:LYS:HE2	1.97	0.64
26:DE:61:ARG:HD2	26:DE:61:ARG:O	1.98	0.64
44:DW:67:LYS:HB3	44:DW:80:SER:HB2	1.79	0.64
1:CA:465:A:H8	1:CA:467:U:OP1	1.80	0.64
4:AD:53:GLN:HE21	4:AD:202:LEU:HA	1.62	0.64
22:DA:2773:C:H2'	22:DA:2774:C:H6	1.63	0.64
1:AA:1348:U:HO2'	1:AA:1349:A:H8	1.44	0.64
22:BA:1996:C:H4'	22:BA:1997:C:OP1	1.96	0.64
31:BJ:40:HIS:CD2	31:BJ:41:LYS:HG2	2.33	0.64
5:AE:80:LEU:HD23	5:AE:122:VAL:CG1	2.25	0.64
5:AE:81:GLN:HG2	5:AE:149:PRO:HG3	1.78	0.64
1:CA:86:G:O2'	1:CA:87:C:P	2.54	0.64
27:BF:134:GLN:HE22	27:BF:150:GLY:H	1.45	0.64
46:DY:48:ARG:HH11	46:DY:48:ARG:HG3	1.61	0.64
22:DA:616:A:H2'	22:DA:617:G:C8	2.32	0.64
22:BA:141:G:H5'	22:BA:142:A:N7	2.13	0.64
22:BA:2680:U:P	25:BD:114:LYS:HE2	2.38	0.64
1:AA:203:G:N2	1:AA:215:C:C2	2.66	0.64
12:AL:43:LYS:HB2	12:AL:44:PRO:CD	2.27	0.64
22:BA:2849:U:O4	37:BP:20:ARG:NH1	2.31	0.64
38:BQ:40:LYS:HG2	38:BQ:44:TYR:CE1	2.32	0.64
27:BF:114:ARG:H	27:BF:114:ARG:HD2	1.62	0.64
18:CR:21:ASP:HB3	18:CR:23:LYS:HG2	1.79	0.64
12:AL:2:THR:HB	12:AL:5:GLN:HG3	1.78	0.64
1:AA:121:U:H5''	1:AA:121:U:H6	1.63	0.64
25:DD:45:TYR:HE2	25:DD:47:ALA:HB3	1.62	0.64
44:BW:18:LYS:CA	44:BW:36:ILE:HG13	2.19	0.64
28:BG:96:ALA:O	28:BG:97:VAL:HB	1.98	0.64
22:DA:303:G:C2	22:DA:304:U:C2	2.86	0.64
42:DU:14:THR:HG23	42:DU:15:GLY:N	2.10	0.64
42:DU:81:ARG:HB2	42:DU:96:LYS:HD2	1.80	0.64
22:BA:780:G:H21	22:BA:783:A:N6	1.89	0.64
35:DN:56:LYS:HA	35:DN:84:GLY:HA2	1.80	0.64
1:AA:1123:U:O3'	10:AJ:38:GLY:HA3	1.97	0.64
1:CA:1135:U:H3'	1:CA:1137:C:O2	1.98	0.64
1:AA:198:G:H2'	1:AA:199:A:C8	2.33	0.64
1:CA:268:U:H2'	1:CA:269:C:H6	1.62	0.64
21:AU:10:PRO:O	21:AU:11:PHE:HB3	1.98	0.64
2:AB:40:ILE:HG21	2:AB:201:GLY:HA2	1.78	0.64
41:BT:44:LYS:O	41:BT:48:GLN:HG2	1.96	0.64
22:BA:2148:G:C2'	22:BA:2149:U:O4'	2.45	0.64

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:AB:90:PHE:HE2	2:AB:148:GLY:HA3	1.62	0.64
1:AA:406:G:C8	1:AA:495:A:C2	2.86	0.64
22:DA:876:C:H3'	22:DA:877:A:C8	2.29	0.64
22:DA:1545:A:H2'	22:DA:1546:G:O4'	1.98	0.64
6:CF:11:HIS:CD2	6:CF:12:PRO:HD2	2.31	0.64
4:CD:195:ASN:HB3	4:CD:197:HIS:NE2	2.12	0.64
22:DA:851:C:C4'	47:DZ:46:MET:HG2	2.28	0.64
25:BD:182:ALA:C	25:BD:184:ARG:N	2.49	0.64
32:DK:15:GLY:O	32:DK:16:ALA:O	2.16	0.64
1:AA:769:G:H4'	1:AA:1513:A:H4'	1.80	0.64
22:BA:2514:U:H2'	22:BA:2515:C:C6	2.32	0.64
32:BK:38:ILE:HD11	32:BK:112:PHE:HZ	1.61	0.64
4:CD:53:GLN:HB3	4:CD:202:LEU:HD12	1.78	0.64
33:BL:82:LEU:HD23	33:BL:83:ALA:N	2.13	0.64
2:AB:19:THR:HB	2:AB:37:VAL:HB	1.80	0.64
27:DF:65:LEU:HD23	27:DF:65:LEU:H	1.63	0.64
1:AA:481:G:O2'	1:AA:482:A:H8	1.80	0.64
22:BA:783:A:H8	22:BA:784:G:H4'	1.63	0.64
1:CA:1350:A:C2	7:CG:33:GLY:HA3	2.32	0.64
22:DA:1207:C:H2'	22:DA:1208:C:H6	1.63	0.64
4:CD:116:LEU:HD21	4:CD:153:ARG:HD3	1.79	0.64
28:BG:115:GLN:CD	28:BG:115:GLN:N	2.51	0.64
1:AA:215:C:O2'	1:AA:216:U:H5'	1.98	0.64
41:DT:29:THR:H	41:DT:87:LEU:CB	2.10	0.64
1:CA:79:G:H2'	1:CA:80:A:H8	1.63	0.64
16:AP:56:ARG:O	16:AP:59:HIS:HB3	1.98	0.64
22:DA:1023:U:H6	22:DA:1023:U:H5'	1.63	0.64
22:BA:876:C:H2'	22:BA:877:A:O4'	1.98	0.64
38:DQ:79:ILE:C	38:DQ:79:ILE:HD13	2.18	0.64
30:DI:12:VAL:HG12	30:DI:13:ALA:N	2.13	0.64
6:AF:19:PRO:HA	6:AF:22:ILE:HD12	1.80	0.64
22:DA:1648:U:O2'	22:DA:1649:G:O4'	2.08	0.64
22:BA:1028:A:N6	22:BA:1125:G:H2'	2.13	0.64
22:BA:1958:C:H2'	22:BA:1959:G:H5'	1.79	0.64
39:BR:39:LEU:HA	39:BR:49:ILE:HG21	1.79	0.64
24:DC:68:ARG:HH21	24:DC:190:THR:HG23	1.63	0.64
22:DA:319:G:C6	22:DA:333:G:N1	2.66	0.64
25:BD:119:ALA:HB2	25:BD:165:MET:HB2	1.80	0.64
1:AA:374:A:H5''	1:AA:452:A:N1	2.13	0.64
44:BW:8:SER:O	44:BW:9:THR:CG2	2.44	0.64
26:DE:98:LYS:O	26:DE:99:LYS:HB2	1.98	0.64
9:CI:118:ARG:NH2	9:CI:122:ARG:HE	1.96	0.64

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
47:DZ:4:ILE:HG23	47:DZ:56:VAL:HG13	1.80	0.64
22:DA:533:G:H5'	38:DQ:23:TYR:CE2	2.33	0.64
31:DJ:73:VAL:HG23	31:DJ:74:TYR:N	2.13	0.64
50:B2:43:THR:O	50:B2:44:VAL:CB	2.46	0.64
40:BS:13:SER:O	40:BS:14:ALA:HB2	1.97	0.64
25:DD:94:GLN:HG2	25:DD:94:GLN:O	1.98	0.64
12:AL:87:LYS:O	12:AL:88:ASP:HB2	1.98	0.64
22:BA:1256:G:H2'	26:BE:77:ILE:HD11	1.80	0.64
22:DA:845:A:N6	22:DA:932:U:N3	2.45	0.64
30:DI:109:ALA:HB1	30:DI:125:THR:HG22	1.79	0.64
2:CB:20:ARG:NE	2:CB:20:ARG:HA	2.13	0.64
1:CA:1381:U:C4	7:CG:77:ARG:NH1	2.66	0.64
1:AA:918:A:H2'	1:AA:919:A:C8	2.32	0.64
22:DA:1709:U:H2'	22:DA:1710:G:C8	2.33	0.64
14:AN:26:LEU:HD23	14:AN:30:ILE:HD11	1.80	0.64
1:CA:824:G:O2'	1:CA:825:A:H5'	1.97	0.64
22:BA:2796:U:H3	22:BA:2799:A:H61	1.45	0.64
3:CC:120:THR:HG23	3:CC:187:GLU:O	1.97	0.64
22:BA:1315:C:OP2	56:BA:3763:HOH:O	2.15	0.64
26:DE:139:LYS:NZ	26:DE:139:LYS:HB2	2.13	0.64
36:BO:41:ALA:HB2	36:BO:48:LEU:HD21	1.80	0.64
31:DJ:80:HIS:HB3	31:DJ:81:ILE:HG13	1.80	0.64
13:CM:21:ILE:HB	13:CM:24:VAL:HG23	1.80	0.63
17:AQ:20:ILE:H	17:AQ:47:ASP:CG	2.02	0.63
33:BL:28:GLY:O	33:BL:29:LYS:HB3	1.99	0.63
19:AS:50:VAL:CG2	19:AS:70:LEU:HB3	2.27	0.63
30:BI:126:ARG:HA	30:BI:129:GLU:CG	2.27	0.63
22:DA:279:A:N6	22:DA:361:G:O2'	2.31	0.63
22:BA:1475:G:O2'	22:BA:1476:U:P	2.55	0.63
5:CE:131:ASN:O	5:CE:135:VAL:HG23	1.98	0.63
22:DA:533:G:H21	38:DQ:44:TYR:HD1	1.46	0.63
22:DA:2285:C:OP2	49:D1:5:ARG:HD3	1.98	0.63
22:DA:2135:A:C2'	22:DA:2136:G:O4'	2.46	0.63
12:AL:88:ASP:HB3	12:AL:89:LEU:HD22	1.80	0.63
22:BA:545:U:H2'	22:BA:546:U:C4'	2.28	0.63
1:CA:537:G:H5''	12:CL:109:ARG:NH1	2.12	0.63
22:DA:1590:A:H2'	22:DA:1591:A:H8	1.61	0.63
41:BT:28:ASN:OD1	41:BT:29:THR:HG22	1.98	0.63
41:BT:28:ASN:HA	41:BT:91:GLN:HE22	1.61	0.63
22:BA:842:U:O4	56:BA:3584:HOH:O	2.12	0.63
41:BT:9:LYS:HG3	41:BT:9:LYS:O	1.98	0.63
22:BA:1079:C:C4	22:BA:1088:A:H2	2.16	0.63

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:1338:G:H4'	41:DT:18:GLU:CG	2.29	0.63
11:AK:122:PRO:HG2	21:AU:33:ARG:O	1.99	0.63
42:DU:12:VAL:HG21	42:DU:38:ILE:HG12	1.80	0.63
52:D4:36:ARG:HG2	52:D4:37:GLN:N	2.12	0.63
14:AN:9:GLU:OE1	14:AN:60:ARG:HB3	1.98	0.63
39:DR:78:ARG:HB3	39:DR:83:TYR:CD1	2.33	0.63
2:AB:148:GLY:O	2:AB:151:LYS:HG2	1.97	0.63
21:CU:35:GLU:HA	21:CU:35:GLU:OE2	1.97	0.63
3:AC:156:LEU:N	3:AC:156:LEU:HD12	2.12	0.63
1:AA:500:G:H2'	1:AA:501:C:C6	2.34	0.63
24:BC:16:VAL:H	24:BC:203:VAL:CG1	2.11	0.63
22:DA:1993:U:H4'	25:DD:133:THR:CG2	2.28	0.63
22:DA:2376:A:H2	36:DO:92:PHE:HD2	1.46	0.63
24:BC:259:ASN:C	24:BC:261:ARG:H	2.02	0.63
23:BB:49:C:OP1	36:BO:101:GLY:HA3	1.98	0.63
9:CI:30:ASN:O	9:CI:31:GLN:HG2	1.98	0.63
22:DA:565:C:H4'	22:DA:1253:A:N6	2.13	0.63
37:DP:92:ARG:HG2	37:DP:92:ARG:O	1.98	0.63
1:CA:377:G:H2'	1:CA:378:G:H8	1.63	0.63
22:DA:1728:C:H2'	22:DA:1730:C:O2	1.98	0.63
15:AO:26:VAL:HG12	15:AO:30:LEU:HD11	1.80	0.63
1:CA:51:A:H4'	1:CA:52:C:C5'	2.29	0.63
48:B0:9:ARG:HH21	48:B0:9:ARG:HG3	1.63	0.63
28:DG:154:GLU:O	28:DG:156:TYR:N	2.30	0.63
24:DC:51:ARG:O	24:DC:53:ILE:HG22	1.96	0.63
22:DA:857:G:H2'	22:DA:858:G:H4'	1.80	0.63
39:BR:1:MET:HG3	39:BR:1:MET:O	1.97	0.63
37:DP:50:ARG:HA	37:DP:57:ALA:O	1.99	0.63
40:BS:74:ILE:HD13	40:BS:105:VAL:HG22	1.79	0.63
2:AB:103:TRP:HE1	2:AB:150:ILE:HD11	1.62	0.63
20:AT:68:LYS:HB2	20:AT:68:LYS:NZ	2.14	0.63
22:DA:1309:G:OP1	50:D2:9:VAL:HG12	1.98	0.63
22:DA:774:G:O2'	22:DA:775:G:H8	1.82	0.63
40:BS:84:ARG:HB2	40:BS:96:ILE:HD11	1.79	0.63
19:AS:4:LEU:HD12	19:AS:4:LEU:H	1.62	0.63
4:CD:84:ASN:HD22	4:CD:84:ASN:C	2.02	0.63
22:BA:714:U:H5'	22:BA:715:A:OP2	1.98	0.63
42:BU:13:LEU:HD11	42:BU:70:ALA:HB2	1.80	0.63
6:AF:52:ASN:O	6:AF:53:LYS:HB3	1.98	0.63
1:AA:1329:A:H5''	13:AM:25:GLY:H	1.63	0.63
33:DL:20:GLY:HA2	33:DL:28:GLY:HA2	1.80	0.63
2:CB:212:TYR:HD2	2:CB:212:TYR:O	1.82	0.63

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:BA:2086:U:H2'	22:BA:2087:G:C8	2.34	0.63
24:DC:196:ASN:OD1	24:DC:199:HIS:HB2	1.99	0.63
1:AA:1447:A:H5'	1:AA:1448:C:OP2	1.99	0.63
22:BA:1059:G:C6	22:BA:1060:U:C4	2.86	0.63
28:BG:83:THR:HA	28:BG:84:LYS:CE	2.28	0.63
20:AT:82:ILE:O	20:AT:86:ALA:HB3	1.98	0.63
22:BA:1509:A:O2'	22:BA:1510:G:P	2.57	0.63
22:DA:308:G:H21	22:DA:329:G:H21	1.45	0.63
22:DA:616:A:H2'	22:DA:617:G:H8	1.63	0.63
25:DD:107:VAL:CG1	25:DD:109:VAL:HG23	2.28	0.63
31:DJ:23:LYS:HB3	31:DJ:28:LEU:HD13	1.80	0.63
33:BL:55:MET:HA	33:BL:55:MET:CE	2.29	0.63
1:AA:1316:G:N2	1:AA:1318:A:H3'	2.13	0.63
43:DV:75:GLN:HB2	43:DV:90:ASP:O	1.98	0.63
22:DA:2550:G:C2	22:DA:2559:C:O2	2.51	0.63
22:DA:1827:U:H2'	22:DA:1828:G:O4'	1.97	0.63
1:AA:109:A:H2'	1:AA:326:G:N2	2.12	0.63
39:DR:49:ILE:HG22	39:DR:54:VAL:N	2.14	0.63
22:BA:1509:A:O2'	22:BA:1510:G:OP2	2.13	0.63
22:DA:301:G:H3'	42:DU:81:ARG:HH12	1.64	0.63
22:DA:310:A:O2'	22:DA:311:A:C8	2.35	0.63
22:DA:2886:A:H62	48:D0:39:ARG:HD3	1.64	0.63
35:DN:97:ILE:HD11	35:DN:99:LYS:NZ	2.12	0.63
22:DA:128:C:HO2'	22:DA:129:C:H6	1.42	0.63
31:BJ:54:ILE:HD12	31:BJ:54:ILE:C	2.19	0.63
22:DA:1021:A:C2'	22:DA:1022:G:H4'	2.28	0.63
22:DA:622:G:H2'	22:DA:623:C:C6	2.34	0.63
1:CA:238:A:H2'	1:CA:239:U:H5''	1.81	0.63
40:BS:73:LYS:HB2	40:BS:106:VAL:HB	1.79	0.63
35:BN:98:LEU:HD22	48:B0:42:ILE:HD11	1.79	0.63
22:BA:580:U:H2'	22:BA:581:C:C6	2.33	0.63
25:DD:124:ARG:HD3	25:DD:125:TRP:CD1	2.33	0.63
21:AU:36:PHE:HD1	21:AU:39:LYS:HB3	1.63	0.63
9:AI:90:ASP:CG	9:AI:92:SER:HB3	2.19	0.63
1:CA:444:G:O2'	1:CA:445:G:H5'	1.97	0.63
9:AI:24:ASN:H	9:AI:61:ASP:HB2	1.63	0.63
22:DA:755:U:O2'	22:DA:756:A:H5'	1.99	0.63
26:BE:154:ASP:OD2	26:BE:157:LEU:HB3	1.98	0.63
51:D3:15:LYS:NZ	51:D3:19:GLY:HA2	2.14	0.63
24:BC:18:VAL:O	24:BC:18:VAL:HG13	1.98	0.63
11:AK:19:VAL:HG22	11:AK:82:GLU:HG2	1.80	0.63
12:CL:79:ILE:HD12	12:CL:96:THR:HG21	1.80	0.63

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
44:BW:73:PRO:CG	44:BW:76:ARG:HD2	2.29	0.63
44:BW:76:ARG:HH21	44:BW:76:ARG:CG	2.01	0.63
22:BA:2800:A:C4'	22:BA:2801:G:OP2	2.25	0.63
2:AB:163:ILE:HG23	2:AB:164:ASP:N	2.09	0.63
22:DA:223:A:N6	22:DA:422:A:C6	2.67	0.63
22:DA:151:C:H2'	22:DA:152:A:C8	2.34	0.63
31:BJ:130:HIS:HD2	31:BJ:132:HIS:N	1.88	0.63
42:DU:81:ARG:CB	42:DU:96:LYS:HD2	2.29	0.63
22:DA:1081:U:H4'	30:DI:123:ALA:HA	1.81	0.63
22:DA:1998:A:H4'	22:DA:2724:U:O2'	1.98	0.63
4:CD:8:LEU:HD22	4:CD:21:LYS:HD2	1.80	0.63
1:CA:1239:A:N6	1:CA:1299:A:N6	2.46	0.63
10:CJ:84:VAL:CG2	10:CJ:85:ASP:H	2.11	0.63
25:DD:10:GLY:HA3	25:DD:26:VAL:HB	1.80	0.63
1:AA:346:G:OP1	37:BP:33:GLU:OE1	2.17	0.63
1:CA:1250:A:H2'	1:CA:1251:A:O4'	1.98	0.63
22:BA:2324:U:H3'	22:BA:2325:G:C5'	2.27	0.63
1:AA:212:G:H2'	1:AA:213:G:H8	1.63	0.63
22:BA:2649:C:H2'	22:BA:2650:U:H6	1.64	0.63
1:AA:1049:U:C4'	1:AA:1050:G:OP2	2.46	0.63
9:AI:25:GLY:H	9:AI:58:GLU:HA	1.63	0.63
22:BA:627:A:C6	22:BA:637:A:C8	2.87	0.63
1:AA:1430:A:C2	1:AA:1471:U:C2	2.87	0.63
22:DA:2729:G:H5''	25:DD:190:LYS:HZ3	1.62	0.63
22:BA:1958:C:C2'	22:BA:1959:G:H5'	2.28	0.63
24:DC:77:VAL:CG2	24:DC:112:GLY:H	2.12	0.63
11:CK:63:GLN:HB2	11:CK:98:ALA:HB2	1.79	0.63
22:BA:90:U:H2'	22:BA:91:A:C8	2.34	0.63
28:BG:174:LYS:HD2	28:BG:174:LYS:C	2.19	0.63
1:AA:1225:A:H2'	1:AA:1226:C:C5	2.33	0.63
12:CL:6:LEU:HA	12:CL:9:LYS:O	1.98	0.63
30:DI:36:GLU:HG2	30:DI:36:GLU:O	1.98	0.63
41:DT:62:VAL:HG12	41:DT:63:VAL:N	2.13	0.63
36:DO:17:LYS:HE3	36:DO:17:LYS:O	1.99	0.63
22:DA:217:A:H2'	22:DA:218:A:O4'	1.99	0.63
44:BW:19:ARG:HA	44:BW:34:SER:HA	1.81	0.63
24:DC:71:ASP:HA	24:DC:117:SER:O	1.99	0.63
22:DA:2337:G:N3	22:DA:2337:G:H2'	2.13	0.63
22:DA:857:G:N7	22:DA:858:G:C8	2.66	0.63
22:DA:230:G:N2	22:DA:231:A:C5	2.67	0.63
16:AP:22:ALA:HB2	16:AP:32:PHE:HA	1.80	0.63
50:D2:46:LYS:N	50:D2:46:LYS:HD2	2.13	0.63

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
14:CN:76:PHE:CE2	14:CN:92:ILE:HG21	2.31	0.63
22:DA:740:C:H5'	22:DA:1784:A:C3'	2.26	0.63
1:AA:1239:A:N6	1:AA:1299:A:H62	1.97	0.63
3:CC:63:ILE:HG12	3:CC:65:VAL:HG23	1.81	0.63
22:BA:1188:U:C2'	22:BA:1189:A:H5'	2.29	0.63
22:DA:960:A:H2'	22:DA:962:G:H5'	1.81	0.63
24:BC:203:VAL:O	24:BC:204:LEU:HB2	1.99	0.63
27:DF:8:LYS:HG3	27:DF:12:VAL:HG21	1.81	0.63
27:BF:131:VAL:HG21	27:BF:151:LEU:HG	1.81	0.63
12:CL:97:VAL:O	12:CL:97:VAL:HG23	1.98	0.63
41:BT:27:SER:O	41:BT:28:ASN:CG	2.36	0.63
51:B3:56:LEU:H	51:B3:56:LEU:HD22	1.64	0.63
26:DE:122:GLU:HA	26:DE:190:ALA:HB2	1.79	0.63
22:BA:2703:C:H2'	22:BA:2704:C:H6	1.64	0.63
22:BA:1023:U:H5'	22:BA:1023:U:H6	1.64	0.63
19:CS:38:THR:HA	19:CS:69:LYS:HA	1.80	0.63
22:DA:1313:U:C2'	22:DA:1313:U:O2	2.46	0.63
35:DN:37:THR:HB	35:DN:40:LYS:HB2	1.81	0.63
38:DQ:61:ILE:CD1	38:DQ:92:LYS:HD3	2.26	0.63
22:DA:2815:C:O2	48:D0:40:HIS:CE1	2.52	0.63
43:BV:10:LYS:N	43:BV:10:LYS:HD3	2.04	0.63
22:DA:137:U:C4	22:DA:138:U:C2	2.86	0.63
2:AB:105:THR:HG22	2:AB:105:THR:O	1.97	0.63
2:CB:78:ALA:O	2:CB:213:LEU:HD23	1.99	0.63
24:BC:229:HIS:CD2	24:BC:246:PRO:HB3	2.33	0.63
22:DA:1364:G:H1'	22:DA:1368:G:N2	2.14	0.63
1:AA:116:A:H2'	1:AA:117:G:C8	2.33	0.63
10:AJ:8:ILE:HA	10:AJ:99:GLN:O	1.99	0.63
2:AB:19:THR:HA	2:AB:37:VAL:HG23	1.81	0.63
26:BE:153:LEU:HB3	26:BE:171:ASP:HB3	1.81	0.63
1:AA:569:C:H5''	1:AA:570:G:OP1	1.98	0.63
22:DA:2332:C:H5''	22:DA:2333:A:OP2	1.99	0.63
1:AA:1458:G:H5'	20:AT:26:MET:HB3	1.81	0.63
22:DA:1307:A:N6	22:DA:1606:C:H6	1.96	0.63
22:DA:1339:G:H21	22:DA:1603:A:H1'	1.63	0.63
22:DA:152:A:C2	22:DA:175:G:C2	2.87	0.63
5:AE:152:VAL:HB	5:AE:155:LYS:HZ2	1.63	0.63
27:DF:36:ASN:O	27:DF:37:MET:HB3	1.99	0.63
1:AA:272:C:H2'	1:AA:273:U:H6	1.63	0.63
40:DS:9:HIS:H	40:DS:102:HIS:CE1	2.17	0.63
22:DA:2760:C:H2'	22:DA:2760:C:O2	1.99	0.63
22:DA:200:U:C5	22:DA:201:C:C4	2.87	0.63

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:BA:2149:U:O2'	22:BA:2150:C:O4'	2.15	0.63
24:BC:123:ILE:CG1	24:BC:123:ILE:O	2.47	0.63
1:CA:1013:G:H22	1:CA:1015:G:H3'	1.62	0.63
12:AL:43:LYS:HB2	12:AL:43:LYS:NZ	2.14	0.63
29:BH:3:VAL:HB	29:BH:37:VAL:O	1.99	0.63
11:AK:87:GLY:N	11:AK:113:THR:HG22	2.14	0.63
29:DH:94:ILE:HB	29:DH:98:ASP:HB2	1.81	0.63
51:B3:53:ASP:HA	51:B3:56:LEU:HD23	1.80	0.63
40:BS:96:ILE:HG13	40:BS:96:ILE:O	1.97	0.63
21:AU:19:LYS:HE2	21:AU:19:LYS:N	2.14	0.63
18:AR:50:TYR:O	18:AR:54:LEU:HB2	1.98	0.63
35:BN:24:MET:HG2	35:BN:44:LEU:HD22	1.79	0.63
1:CA:624:C:H2'	1:CA:625:U:O4'	1.99	0.63
9:AI:112:ARG:HH22	10:AJ:64:GLN:HE22	1.46	0.63
22:BA:1026:G:H2'	22:BA:1027:A:C8	2.33	0.63
31:BJ:43:GLU:O	31:BJ:45:THR:N	2.31	0.62
31:BJ:44:TYR:CB	38:BQ:63:ARG:HB3	2.18	0.62
39:BR:4:VAL:HG23	39:BR:39:LEU:HG	1.80	0.62
19:CS:50:VAL:HG11	19:CS:70:LEU:HB3	1.81	0.62
22:DA:2423:U:H5''	22:DA:2424:C:OP1	1.99	0.62
22:DA:1608:A:N7	22:DA:1611:C:N4	2.46	0.62
35:DN:42:LYS:HA	35:DN:45:ARG:HD3	1.80	0.62
5:AE:81:GLN:N	5:AE:81:GLN:NE2	2.42	0.62
1:AA:451:A:C4'	1:AA:452:A:O5'	2.41	0.62
22:DA:647:G:O2'	22:DA:648:G:H5'	1.99	0.62
22:BA:1993:U:H4'	25:BD:133:THR:CG2	2.25	0.62
1:CA:1134:G:C5	1:CA:1135:U:H1'	2.33	0.62
37:DP:54:LEU:HA	37:DP:76:HIS:CD2	2.33	0.62
1:CA:270:A:H2'	1:CA:271:C:H6	1.64	0.62
25:BD:151:THR:HG22	25:BD:152:PRO:N	2.13	0.62
27:DF:110:ILE:HD13	27:DF:110:ILE:H	1.64	0.62
1:CA:1268:G:H21	1:CA:1327:C:C1'	2.10	0.62
1:CA:1375:A:O2'	7:CG:101:ARG:NH2	2.32	0.62
22:BA:1045:C:O5'	22:BA:1046:A:H5'	1.99	0.62
22:DA:2617:U:H2'	22:DA:2618:G:H5'	1.81	0.62
32:BK:21:CYS:CB	32:BK:39:ILE:HD11	2.29	0.62
1:AA:1002:G:H2'	1:AA:1003:G:O4'	1.99	0.62
22:DA:2288:A:H4'	22:DA:2289:G:OP2	1.99	0.62
22:BA:2325:G:C6	22:BA:2326:C:N4	2.66	0.62
28:BG:126:THR:HG22	28:BG:127:GLN:N	2.13	0.62
19:CS:45:GLY:H	19:CS:61:VAL:HB	1.64	0.62
22:DA:2147:A:N3	22:DA:2147:A:H2'	2.13	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:1038:C:H2'	1:AA:1039:G:C8	2.34	0.62
11:AK:85:VAL:HG11	11:AK:92:ARG:HG3	1.81	0.62
34:BM:31:PHE:CE2	34:BM:110:GLU:HG2	2.34	0.62
1:CA:1052:U:H5''	1:CA:1053:G:OP2	1.99	0.62
22:BA:727:A:H2	24:BC:8:THR:HG21	1.63	0.62
22:DA:1956:U:O2	22:DA:1985:C:H4'	1.97	0.62
27:DF:122:ASP:HB2	27:DF:126:ASN:HB2	1.80	0.62
19:AS:10:ILE:HD11	19:AS:15:LEU:HB2	1.80	0.62
30:DI:91:LYS:HB3	30:DI:94:LYS:HB2	1.81	0.62
31:BJ:44:TYR:O	31:BJ:45:THR:CB	2.47	0.62
1:CA:1255:G:O2'	1:CA:1258:G:H1'	1.99	0.62
1:CA:1183:U:O2'	1:CA:1184:G:OP1	2.17	0.62
23:DB:5:U:H2'	23:DB:6:G:H8	1.63	0.62
44:DW:37:VAL:HG23	44:DW:38:ARG:HH11	1.63	0.62
20:AT:38:ILE:HD11	20:AT:82:ILE:HG22	1.81	0.62
5:AE:149:PRO:O	5:AE:152:VAL:HG22	1.98	0.62
27:BF:175:PRO:O	27:BF:176:PHE:HB2	1.98	0.62
22:DA:1830:C:H5'	24:DC:14:HIS:CE1	2.34	0.62
35:DN:63:ARG:HH12	35:DN:81:ASN:HD21	1.46	0.62
1:CA:575:G:H4'	1:CA:576:C:O5'	1.99	0.62
46:DY:48:ARG:O	46:DY:51:ALA:HB3	2.00	0.62
22:DA:622:G:H2'	22:DA:623:C:C5	2.34	0.62
37:DP:48:ALA:HB3	37:DP:59:THR:CB	2.29	0.62
22:BA:1820:U:O2	24:BC:199:HIS:HB3	2.00	0.62
1:CA:344:A:H5''	1:CA:345:C:C5	2.35	0.62
27:BF:131:VAL:HG22	27:BF:151:LEU:H	1.64	0.62
1:CA:1066:C:H2'	1:CA:1067:A:C8	2.34	0.62
22:DA:1734:G:O2'	22:DA:1735:A:H8	1.82	0.62
39:DR:43:ASN:HD22	39:DR:44:GLY:H	1.45	0.62
42:DU:26:ASN:OD1	42:DU:34:ILE:HD12	1.99	0.62
23:DB:52:A:O2'	23:DB:53:A:C8	2.51	0.62
22:BA:815:C:OP1	39:BR:85:LYS:HE2	2.00	0.62
25:DD:208:LYS:O	25:DD:209:ALA:HB2	1.98	0.62
22:BA:1798:U:OP1	24:BC:255:LYS:O	2.17	0.62
1:CA:39:G:H2'	1:CA:40:C:H6	1.63	0.62
41:DT:10:VAL:HG23	41:DT:11:LEU:HD12	1.80	0.62
22:BA:869:G:O2'	34:BM:8:LYS:HD3	1.99	0.62
1:CA:500:G:H5''	1:CA:500:G:H8	1.62	0.62
24:BC:71:ASP:HA	24:BC:117:SER:O	1.99	0.62
13:CM:36:ALA:HB3	13:CM:55:LEU:HD11	1.79	0.62
16:AP:67:ILE:HG23	16:AP:68:SER:O	1.98	0.62
38:DQ:4:LYS:HZ2	38:DQ:6:GLY:HA3	1.63	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:CA:702:A:H5'	1:CA:703:G:N7	2.14	0.62
22:DA:511:U:H5''	22:DA:512:G:OP2	2.00	0.62
22:DA:1393:A:N6	41:DT:19:LYS:HB2	2.14	0.62
33:BL:93:ASN:ND2	33:BL:94:THR:H	1.92	0.62
22:DA:1059:G:N1	22:DA:1088:A:C2	2.67	0.62
22:DA:991:C:O5'	22:DA:991:C:H6	1.82	0.62
12:AL:29:LYS:O	12:AL:81:ILE:HG22	1.99	0.62
37:DP:88:ARG:HE	37:DP:112:ARG:NH2	1.96	0.62
1:CA:765:G:N7	1:CA:812:G:C4	2.67	0.62
52:D4:7:VAL:HG13	52:D4:8:LYS:H	1.64	0.62
4:AD:158:LEU:O	4:AD:161:ALA:HB3	2.00	0.62
36:DO:13:ARG:O	36:DO:17:LYS:HB2	1.99	0.62
1:CA:500:G:H5''	1:CA:500:G:C8	2.33	0.62
43:DV:61:LEU:HD23	43:DV:61:LEU:H	1.65	0.62
22:BA:1176:U:H2'	22:BA:1177:G:C4	2.34	0.62
1:AA:284:C:H2'	1:AA:285:C:H6	1.63	0.62
1:AA:896:C:H2'	1:AA:897:C:H6	1.63	0.62
29:DH:59:ALA:HA	29:DH:63:ALA:HB3	1.80	0.62
1:AA:1234:C:O2'	1:AA:1235:U:H5'	1.99	0.62
39:BR:90:ARG:O	39:BR:91:GLN:HB3	2.00	0.62
2:AB:139:GLU:O	2:AB:143:LEU:HD23	1.99	0.62
22:DA:2345:G:C8	22:DA:2347:C:C5	2.87	0.62
22:DA:2822:G:H5''	25:DD:164:GLN:NE2	2.08	0.62
2:CB:66:ILE:H	2:CB:88:GLN:HB3	1.64	0.62
25:BD:90:PHE:C	25:BD:92:VAL:H	2.03	0.62
17:AQ:80:LYS:HB2	17:AQ:80:LYS:NZ	2.13	0.62
32:BK:69:VAL:O	32:BK:76:VAL:HA	2.00	0.62
23:DB:75:G:H1	23:DB:102:G:N2	1.97	0.62
50:B2:35:ARG:HG2	50:B2:42:LEU:HD11	1.80	0.62
22:DA:957:C:O2'	22:DA:959:A:H5''	1.99	0.62
12:CL:19:ASN:N	12:CL:19:ASN:HD22	1.96	0.62
22:DA:2401:U:H5''	22:DA:2402:U:OP2	1.99	0.62
25:BD:182:ALA:O	25:BD:184:ARG:N	2.31	0.62
22:DA:706:A:H2'	22:DA:707:G:O4'	2.00	0.62
1:CA:748:G:H2'	1:CA:749:A:H8	1.63	0.62
26:DE:29:HIS:HA	26:DE:32:VAL:HG22	1.81	0.62
22:BA:893:C:H2'	22:BA:894:U:O4'	2.00	0.62
38:BQ:63:ARG:HD2	38:BQ:64:ILE:H	1.64	0.62
39:BR:49:ILE:O	39:BR:49:ILE:HG13	2.00	0.62
1:CA:1363:A:C6	1:CA:1365:G:C6	2.88	0.62
22:DA:1398:C:O2'	22:DA:1399:C:O4'	2.18	0.62
22:DA:1605:C:H3'	22:DA:1606:C:C5'	2.30	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:CA:1073:U:H2'	1:CA:1074:G:H8	1.64	0.62
22:DA:185:G:C6	22:DA:212:G:C2	2.87	0.62
30:BI:15:GLY:CA	30:BI:50:LYS:HB3	2.28	0.62
22:DA:1024:G:C3'	22:DA:1025:G:H5''	2.29	0.62
13:AM:10:ASP:CG	13:AM:44:ILE:HB	2.20	0.62
22:BA:1045:C:C3'	22:BA:1046:A:H5'	2.29	0.62
22:DA:2812:G:N2	22:DA:2889:C:C2	2.67	0.62
3:AC:54:ILE:HD12	3:AC:54:ILE:C	2.19	0.62
31:DJ:89:PHE:HE2	31:DJ:100:VAL:HG11	1.65	0.62
3:CC:179:ALA:HB1	3:CC:202:PHE:HE1	1.60	0.62
47:BZ:29:ARG:HH21	47:BZ:29:ARG:CG	2.12	0.62
19:CS:59:VAL:HG21	19:CS:73:PHE:HB3	1.80	0.62
27:DF:12:VAL:HA	27:DF:15:LEU:HB2	1.81	0.62
36:DO:26:LEU:HB3	36:DO:92:PHE:CD1	2.34	0.62
36:DO:51:ALA:HB3	36:DO:78:VAL:CG2	2.30	0.62
44:DW:20:LEU:HD12	44:DW:20:LEU:N	2.13	0.62
22:DA:2622:U:O2'	22:DA:2825:G:N7	2.32	0.62
22:BA:2021:C:P	48:B0:8:THR:HG21	2.39	0.62
47:DZ:18:LYS:O	47:DZ:22:THR:HG23	1.98	0.62
22:BA:666:A:H2'	22:BA:667:U:H6	1.65	0.62
40:BS:59:GLU:HA	40:BS:64:ALA:HB2	1.81	0.62
22:BA:118:A:C8	22:BA:119:A:C8	2.87	0.62
9:CI:114:LYS:HB2	9:CI:117:LEU:HD12	1.80	0.62
22:DA:2244:U:H2'	22:DA:2245:U:O4'	1.99	0.62
22:DA:1865:U:H2'	22:DA:1866:A:H8	1.64	0.62
38:BQ:91:ARG:NE	39:BR:11:GLN:HB2	2.14	0.62
38:BQ:91:ARG:HH12	39:BR:10:LYS:HB3	1.65	0.62
22:DA:397:U:OP1	45:DX:30:PRO:CA	2.39	0.62
22:DA:1534:U:H6	22:DA:1538:G:N1	1.98	0.62
22:DA:311:A:O2'	22:DA:312:G:OP1	2.17	0.62
1:CA:109:A:C6	1:CA:327:A:C6	2.88	0.62
1:CA:204:G:H2'	1:CA:205:A:H8	1.64	0.62
22:DA:503:A:C4	22:DA:506:G:N7	2.67	0.62
46:DY:60:LYS:HG2	46:DY:60:LYS:O	1.99	0.62
34:DM:35:ALA:HB3	34:DM:99:GLY:N	2.12	0.62
2:AB:89:PHE:CZ	2:AB:153:MET:HB2	2.35	0.62
22:DA:2226:C:H2'	22:DA:2227:A:O4'	1.99	0.62
13:CM:93:GLY:O	13:CM:109:LYS:HG3	1.98	0.62
22:DA:2401:U:H3'	22:DA:2402:U:H5''	1.81	0.62
22:BA:875:G:C2'	22:BA:876:C:H5'	2.29	0.62
26:DE:5:LEU:HA	26:DE:120:VAL:HG13	1.81	0.62
1:CA:890:G:HO2'	1:CA:891:U:P	2.23	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
40:BS:2:GLU:O	40:BS:107:VAL:O	2.16	0.62
4:CD:196:GLU:O	4:CD:199:ILE:HG12	2.00	0.62
26:BE:36:ALA:O	26:BE:39:ALA:HB3	2.00	0.62
25:DD:141:ARG:HH11	25:DD:141:ARG:HB3	1.64	0.62
1:CA:1502:A:H5'	1:CA:1504:G:N7	2.15	0.62
22:DA:1361:G:C2'	22:DA:1362:C:H5'	2.30	0.62
2:CB:89:PHE:HB3	2:CB:149:GLY:O	1.99	0.62
2:AB:212:TYR:HA	2:AB:215:ALA:HB3	1.82	0.62
22:DA:142:A:HO2'	22:DA:143:C:H6	1.45	0.62
1:CA:1146:A:O2'	1:CA:1147:C:H5'	2.00	0.62
14:AN:60:ARG:O	14:AN:61:ASN:CB	2.47	0.62
8:CH:28:SER:HA	8:CH:58:LEU:HD12	1.81	0.62
22:BA:64:A:H2'	22:BA:65:U:C6	2.34	0.62
22:DA:2195:U:H2'	22:DA:2196:C:H6	1.63	0.62
23:BB:90:C:C6	23:BB:90:C:H5''	2.31	0.62
31:BJ:77:HIS:HD2	31:BJ:79:GLY:N	1.96	0.62
22:BA:2286:G:C8	22:BA:2286:G:H5'	2.35	0.62
31:BJ:65:THR:HG23	31:BJ:66:GLY:N	2.14	0.62
22:BA:2308:G:N7	27:BF:76:PHE:HE2	1.97	0.62
30:DI:57:VAL:O	30:DI:58:ILE:HG13	1.99	0.62
33:DL:93:ASN:CG	33:DL:94:THR:H	2.02	0.62
22:DA:1511:G:O2'	22:DA:1512:C:H5'	2.00	0.62
1:AA:662:U:H2'	1:AA:663:A:C8	2.35	0.62
22:BA:675:A:OP1	26:BE:58:LYS:HE2	2.00	0.62
34:BM:77:PRO:HD2	34:BM:80:VAL:HG11	1.82	0.62
4:CD:191:SER:O	4:CD:192:ALA:HB2	2.00	0.62
1:CA:980:C:O3'	14:CN:12:ARG:NH2	2.33	0.62
44:DW:18:LYS:HD3	44:DW:19:ARG:HG2	1.81	0.62
44:DW:28:GLU:N	44:DW:31:LEU:HD21	2.03	0.62
20:AT:25:SER:O	20:AT:28:ARG:HG3	1.99	0.62
1:CA:1309:G:H2'	1:CA:1310:G:H8	1.64	0.62
22:DA:529:A:C8	22:DA:2023:C:N4	2.68	0.62
4:AD:24:VAL:HG12	4:AD:25:ARG:N	2.13	0.62
1:AA:674:G:H2'	1:AA:675:A:H8	1.65	0.62
1:AA:414:A:O2'	1:AA:415:A:O4'	2.12	0.62
27:DF:47:LYS:HA	27:DF:50:ASP:HB3	1.82	0.62
1:AA:467:U:O2'	1:AA:468:A:O5'	2.11	0.62
22:DA:2798:U:H5'	22:DA:2800:A:N6	2.14	0.62
1:CA:1287:A:HO2'	1:CA:1288:A:H8	1.38	0.62
13:AM:5:GLY:HA3	13:AM:65:GLU:HG3	1.81	0.62
20:AT:14:GLU:HA	20:AT:17:ARG:HB2	1.82	0.62
22:DA:2414:G:H2'	22:DA:2415:G:H5'	1.80	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
33:DL:98:ALA:O	33:DL:100:ILE:HG22	1.99	0.62
19:AS:46:LEU:H	19:AS:61:VAL:HG23	1.65	0.62
5:AE:89:THR:HG22	5:AE:90:GLY:N	2.15	0.62
22:DA:2626:C:O2'	22:DA:2627:G:H5'	1.99	0.62
25:DD:110:THR:OG1	25:DD:171:THR:HG22	1.99	0.62
22:DA:558:U:OP1	31:DJ:113:PRO:HD2	1.99	0.62
24:BC:77:VAL:O	24:BC:77:VAL:HG22	2.00	0.62
38:BQ:63:ARG:NH2	38:BQ:96:ASP:N	2.48	0.62
22:DA:1248:G:H2'	38:DQ:1:ALA:O	2.00	0.62
28:BG:102:ILE:HD13	28:BG:130:ILE:HD13	1.82	0.62
1:CA:1494:G:N2	1:CA:1495:U:C2	2.68	0.62
22:DA:1388:G:H2'	22:DA:1389:G:H8	1.62	0.62
46:DY:28:LEU:HD11	46:DY:43:LEU:HD13	1.82	0.62
22:DA:942:G:H4'	22:DA:1190:G:H5'	1.81	0.62
1:CA:451:A:H61	1:CA:481:G:H5'	1.64	0.62
1:AA:74:A:H1'	1:AA:97:G:N2	2.15	0.62
2:CB:206:ILE:HA	2:CB:209:VAL:HG22	1.82	0.62
22:DA:1417:C:C2'	22:DA:1418:G:C8	2.82	0.62
1:AA:554:A:H5''	12:AL:25:ALA:HB1	1.82	0.62
6:CF:11:HIS:HD2	6:CF:12:PRO:CD	2.11	0.62
22:DA:770:G:H1'	22:DA:1379:U:C4	2.35	0.62
25:DD:73:VAL:O	25:DD:74:GLU:HB2	2.00	0.62
20:CT:49:ALA:O	20:CT:52:GLU:HB3	2.00	0.62
41:BT:25:GLU:C	41:BT:27:SER:H	2.03	0.62
41:BT:29:THR:HB	41:BT:86:THR:CG2	2.29	0.62
1:CA:1388:C:H2'	1:CA:1389:C:H6	1.64	0.62
33:BL:57:LEU:HD22	51:B3:53:ASP:HB3	1.81	0.62
13:CM:36:ALA:HB2	13:CM:55:LEU:HD21	1.82	0.62
1:AA:1247:U:O2'	1:AA:1248:A:H5'	2.00	0.62
22:DA:9:G:H1	22:DA:2629:U:H2'	1.63	0.62
4:AD:16:THR:HG22	4:AD:17:ASP:N	2.14	0.62
35:BN:49:GLU:OE2	35:BN:95:THR:HG22	2.00	0.62
22:BA:1105:U:H2'	22:BA:1106:G:H8	1.65	0.62
7:AG:24:LYS:O	7:AG:28:ILE:HG12	1.99	0.62
10:AJ:91:ASP:O	10:AJ:92:LEU:O	2.18	0.62
16:CP:4:ILE:HD12	16:CP:4:ILE:N	2.14	0.62
7:AG:53:SER:C	7:AG:55:LYS:H	2.02	0.62
1:CA:1160:G:O6	1:CA:1181:G:C6	2.53	0.62
23:DB:49:C:OP1	36:DO:102:ARG:N	2.33	0.62
22:DA:302:C:HO2'	22:DA:303:G:H8	0.73	0.62
31:DJ:43:GLU:O	31:DJ:45:THR:N	2.33	0.62
5:AE:155:LYS:HD2	5:AE:156:ARG:N	2.14	0.62

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:CJ:15:HIS:HA	10:CJ:18:ILE:CG2	2.27	0.62
22:DA:2093:G:H5'	29:DH:24:GLY:HA3	1.82	0.62
22:BA:1045:C:C4'	22:BA:1046:A:H5'	2.29	0.62
29:BH:5:LEU:HD13	29:BH:13:GLY:HA2	1.80	0.62
32:DK:104:THR:OG1	32:DK:106:GLU:HB2	2.00	0.62
22:DA:533:G:H5'	38:DQ:23:TYR:CD2	2.35	0.62
1:CA:166:U:C2'	1:CA:167:A:H5'	2.29	0.62
5:CE:38:VAL:HG12	5:CE:39:GLY:H	1.63	0.62
22:DA:2260:C:H2'	22:DA:2261:C:H6	1.65	0.62
22:DA:910:A:H62	34:DM:12:MET:HA	1.65	0.62
1:CA:631:C:H3'	1:CA:632:U:H5'	1.81	0.62
36:BO:67:ASN:O	36:BO:69:ASP:N	2.32	0.62
37:BP:104:GLY:O	37:BP:106:ALA:N	2.33	0.62
22:BA:2014:A:H2'	22:BA:2015:A:C8	2.35	0.62
1:AA:830:G:H2'	1:AA:831:A:H8	1.65	0.62
28:BG:120:ILE:HD13	28:BG:121:THR:N	2.15	0.62
13:AM:84:CYS:HA	19:AS:73:PHE:HD2	1.65	0.62
3:AC:174:LEU:O	3:AC:174:LEU:HD12	2.00	0.62
50:B2:12:ARG:HB2	50:B2:12:ARG:CZ	2.29	0.62
33:BL:127:VAL:HG11	33:BL:142:ILE:HG21	1.81	0.62
22:BA:979:A:H2'	22:BA:982:C:H42	1.65	0.62
38:BQ:82:LEU:O	38:BQ:88:GLU:HB3	2.00	0.61
39:DR:49:ILE:HB	39:DR:51:VAL:O	2.00	0.61
22:DA:2298:A:O2'	22:DA:2299:U:C6	2.44	0.61
22:DA:1345:C:C5'	22:DA:1396:U:O4	2.48	0.61
22:DA:1358:G:C5	56:DA:3417:HOH:O	2.53	0.61
17:AQ:18:LYS:HA	17:AQ:47:ASP:CB	2.28	0.61
35:DN:67:PHE:HE2	35:DN:73:ASN:OD1	1.82	0.61
22:DA:104:A:H2'	22:DA:105:C:O4'	2.00	0.61
22:DA:2746:U:H2'	22:DA:2747:G:H5'	1.81	0.61
22:DA:192:C:OP1	56:DA:3724:HOH:O	2.16	0.61
30:BI:56:VAL:HG11	30:BI:68:PHE:CD2	2.35	0.61
7:CG:117:LEU:HA	7:CG:121:ASN:HB2	1.81	0.61
6:CF:91:ARG:O	6:CF:93:LYS:HE3	2.00	0.61
1:CA:1304:G:H1'	1:CA:1333:A:N6	2.14	0.61
35:BN:73:ASN:O	35:BN:76:VAL:HG12	1.99	0.61
22:BA:544:C:N3	22:BA:548:G:OP1	2.33	0.61
13:CM:93:GLY:O	13:CM:94:LEU:HG	2.00	0.61
22:DA:63:A:N6	22:DA:91:A:H62	1.97	0.61
29:DH:37:VAL:HG23	29:DH:38:PRO:HD2	1.82	0.61
26:DE:5:LEU:HD23	26:DE:120:VAL:HG22	1.82	0.61
24:BC:257:ARG:NE	24:BC:269:ARG:HH22	1.99	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:8:C:O2'	22:DA:9:G:H5'	2.00	0.61
9:AI:40:ARG:HA	9:AI:44:ARG:HB3	1.82	0.61
30:DI:35:MET:C	30:DI:37:PHE:H	2.03	0.61
2:AB:58:LYS:NZ	2:AB:62:ARG:HG3	2.14	0.61
22:BA:654:A:H5'	22:BA:654:A:N3	2.15	0.61
7:CG:64:ALA:HB2	7:CG:126:ALA:HB1	1.81	0.61
21:AU:4:LYS:O	21:AU:4:LYS:HD2	1.99	0.61
2:AB:119:GLN:C	2:AB:119:GLN:HE21	2.02	0.61
22:DA:2506:U:H3'	22:DA:2506:U:H6	1.65	0.61
7:CG:148:LYS:NZ	7:CG:148:LYS:HB2	2.15	0.61
22:DA:2236:U:H2'	22:DA:2237:G:O4'	2.00	0.61
13:AM:86:ARG:HH21	13:AM:96:VAL:HG12	1.65	0.61
22:BA:613:A:H8	22:BA:616:A:N1	1.98	0.61
39:BR:39:LEU:HA	39:BR:49:ILE:CG2	2.30	0.61
19:CS:5:LYS:HE3	19:CS:6:LYS:N	2.09	0.61
22:DA:975:A:O2'	22:DA:976:G:O5'	2.17	0.61
22:DA:1388:G:HO2'	22:DA:1389:G:H8	1.47	0.61
25:DD:117:GLY:O	25:DD:119:ALA:N	2.32	0.61
1:AA:841:C:H3'	1:AA:843:U:OP2	2.00	0.61
22:DA:655:A:H4'	22:DA:656:G:H5'	1.83	0.61
22:DA:2093:G:C5'	29:DH:24:GLY:HA3	2.31	0.61
22:DA:763:G:O2'	22:DA:764:A:H3'	2.00	0.61
1:CA:940:C:H5'	7:CG:101:ARG:NH2	2.13	0.61
16:CP:8:ARG:HB3	16:CP:28:ARG:NH1	2.15	0.61
1:AA:1003:G:H22	1:AA:1005:A:H5'	1.65	0.61
22:DA:1157:G:H2'	22:DA:1158:C:H6	1.64	0.61
2:CB:44:LYS:O	2:CB:48:MET:HG3	2.00	0.61
22:BA:1936:A:C2	22:BA:1943:U:H5	2.18	0.61
12:AL:85:ARG:NH2	12:AL:87:LYS:HD2	2.15	0.61
26:BE:108:ILE:HD11	26:BE:180:LEU:HD13	1.81	0.61
1:CA:252:U:H2'	1:CA:253:A:C8	2.34	0.61
22:DA:1796:U:H2'	22:DA:1797:G:C8	2.35	0.61
34:DM:40:ARG:HB2	34:DM:93:VAL:HG21	1.82	0.61
1:CA:935:A:HO2'	1:CA:936:C:H6	1.43	0.61
22:BA:2296:U:H4'	22:BA:2297:A:OP1	2.00	0.61
29:BH:62:LEU:HD12	29:BH:63:ALA:N	2.14	0.61
37:BP:80:VAL:O	37:BP:81:ASP:HB3	2.01	0.61
40:BS:66:ILE:HD13	40:BS:67:ASP:N	2.16	0.61
40:DS:32:ALA:O	40:DS:33:LEU:HB2	2.00	0.61
1:AA:1136:C:H2'	1:AA:1136:C:O2	1.99	0.61
25:BD:62:LYS:HB2	25:BD:63:PRO:HD3	1.81	0.61
1:AA:261:U:OP2	20:AT:73:ARG:NH2	2.34	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
44:BW:17:ALA:O	44:BW:18:LYS:HB3	2.00	0.61
22:DA:1439:A:C2	22:DA:1553:A:N7	2.68	0.61
22:DA:826:U:H5'	22:DA:2428:G:O2'	1.99	0.61
5:AE:79:THR:OG1	5:AE:80:LEU:N	2.33	0.61
1:CA:1206:G:H4'	3:CC:191:THR:O	2.00	0.61
1:CA:206:C:H2'	1:CA:207:C:H4'	1.81	0.61
22:DA:674:G:O3'	26:DE:60:TRP:HH2	1.82	0.61
22:DA:617:G:H21	22:DA:618:G:H1'	1.65	0.61
22:DA:201:C:C4	22:DA:202:U:C5	2.88	0.61
35:DN:28:LEU:O	35:DN:32:GLU:N	2.30	0.61
8:AH:9:MET:CE	8:AH:32:LYS:HA	2.30	0.61
1:AA:1161:C:O2'	1:AA:1162:C:C6	2.52	0.61
22:BA:2680:U:OP1	25:BD:114:LYS:HE2	2.01	0.61
22:BA:819:A:C4	22:BA:1189:A:C2	2.88	0.61
29:DH:84:ALA:H	29:DH:148:ALA:HA	1.65	0.61
24:BC:171:VAL:HG23	24:BC:185:ALA:HA	1.83	0.61
39:BR:54:VAL:CG2	39:BR:57:GLY:HA3	2.30	0.61
1:AA:978:A:HO2'	1:AA:1322:C:H5	1.49	0.61
3:CC:120:THR:O	3:CC:120:THR:HG22	2.01	0.61
22:BA:2291:U:H2'	22:BA:2292:U:C6	2.35	0.61
1:CA:1078:U:C5	1:CA:1079:G:C5	2.88	0.61
1:CA:1533:C:H2'	1:CA:1534:A:H5''	1.82	0.61
22:BA:1199:U:H2'	22:BA:1200:C:C6	2.35	0.61
38:BQ:109:VAL:HG12	38:BQ:113:LYS:HD2	1.81	0.61
22:DA:2662:A:H2'	22:DA:2663:G:O4'	2.00	0.61
22:BA:419:U:H5''	56:BA:3233:HOH:O	2.00	0.61
22:DA:1769:U:H1'	22:DA:1984:G:N2	2.15	0.61
32:DK:108:ARG:HA	32:DK:116:ILE:HD13	1.82	0.61
44:BW:39:GLN:HE21	44:BW:43:LYS:H	1.48	0.61
1:CA:1492:A:C8	22:DA:1913:A:C8	2.88	0.61
5:AE:158:LYS:HG3	8:AH:63:LYS:HZ1	1.66	0.61
22:DA:127:A:N7	50:D2:46:LYS:HE3	2.16	0.61
22:DA:627:A:H5''	33:DL:78:ARG:NH1	2.15	0.61
22:DA:74:A:H5'	46:DY:48:ARG:HH22	1.66	0.61
22:DA:240:C:C3'	22:DA:241:A:H5''	2.29	0.61
18:CR:72:ARG:H	18:CR:72:ARG:NE	1.93	0.61
24:DC:94:LEU:HD13	24:DC:100:ARG:HD3	1.81	0.61
2:AB:67:LEU:HD21	2:AB:91:VAL:HG23	1.82	0.61
13:CM:22:TYR:HB2	13:CM:65:GLU:HG2	1.83	0.61
21:CU:41:THR:O	21:CU:45:LYS:HB2	2.00	0.61
41:DT:5:GLU:HA	41:DT:8:LEU:HB2	1.82	0.61
16:AP:79:ASN:O	16:AP:80:LYS:HB2	2.00	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:1508:A:H4'	22:DA:1509:A:OP1	2.00	0.61
1:CA:312:C:H2'	1:CA:313:A:C8	2.34	0.61
30:DI:12:VAL:HG12	30:DI:13:ALA:H	1.64	0.61
37:BP:102:ARG:O	37:BP:103:THR:HG22	2.00	0.61
1:CA:512:U:O2'	1:CA:513:C:H6	1.83	0.61
1:CA:425:G:H2'	1:CA:426:U:O4'	2.00	0.61
27:BF:72:SER:HB2	27:BF:80:GLN:H	1.65	0.61
36:BO:11:ALA:HB2	36:BO:96:GLY:N	2.15	0.61
1:CA:1272:G:H2'	1:CA:1273:C:H5'	1.81	0.61
22:BA:744:U:H2'	22:BA:745:G:O4'	2.00	0.61
1:AA:991:U:HO2'	1:AA:1212:U:H6	1.47	0.61
30:DI:50:LYS:HE2	30:DI:50:LYS:HA	1.82	0.61
28:BG:30:GLY:HA3	28:BG:78:VAL:HG12	1.83	0.61
22:BA:2097:A:H2'	22:BA:2098:U:C6	2.34	0.61
1:AA:1356:G:H2'	1:AA:1357:A:C8	2.36	0.61
22:DA:2520:C:H2'	22:DA:2521:C:H6	1.65	0.61
27:BF:36:ASN:HB2	27:BF:87:LYS:HB2	1.83	0.61
22:BA:1132:U:H3'	22:BA:1133:A:H5''	1.82	0.61
31:BJ:117:ALA:HA	31:BJ:120:ARG:HH21	1.64	0.61
1:CA:263:A:P	20:CT:73:ARG:HH12	2.24	0.61
1:AA:428:G:O4'	1:AA:430:A:C8	2.54	0.61
22:DA:311:A:C2	22:DA:328:U:O4	2.53	0.61
38:DQ:91:ARG:NH2	38:DQ:93:ILE:HD13	2.15	0.61
33:BL:100:ILE:HD12	33:BL:101:ILE:HD13	1.82	0.61
10:CJ:51:VAL:HB	14:CN:80:ARG:HB2	1.83	0.61
25:DD:19:GLY:O	32:DK:72:PRO:HB2	1.99	0.61
28:DG:95:ALA:HB3	28:DG:127:GLN:HA	1.82	0.61
1:AA:1236:A:H4'	1:AA:1304:G:H4'	1.82	0.61
22:DA:749:A:C5	22:DA:750:A:N7	2.68	0.61
8:AH:17:GLN:NE2	8:AH:71:VAL:H	1.99	0.61
24:BC:245:THR:OG1	24:BC:249:VAL:HB	2.00	0.61
5:CE:59:ILE:HG13	5:CE:59:ILE:O	2.00	0.61
22:BA:1414:C:C4	22:BA:1415:U:H5	2.17	0.61
1:CA:252:U:H6	1:CA:252:U:C5'	2.11	0.61
1:CA:1029:U:H1'	1:CA:1033:G:O6	1.99	0.61
9:CI:112:ARG:HH22	10:CJ:64:GLN:NE2	1.98	0.61
40:BS:83:LYS:O	40:BS:84:ARG:HD3	2.00	0.61
26:DE:28:VAL:O	26:DE:32:VAL:HG13	2.00	0.61
22:BA:1182:G:H2'	22:BA:1183:U:O4'	1.99	0.61
34:DM:112:LEU:O	34:DM:112:LEU:HD13	2.01	0.61
1:AA:128:G:O2'	1:AA:129:A:H5'	1.99	0.61
1:CA:106:C:O2	1:CA:379:C:H4'	2.00	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:AS:6:LYS:HE2	19:AS:6:LYS:HA	1.82	0.61
45:BX:53:LYS:O	45:BX:57:VAL:HG23	2.00	0.61
22:BA:1062:G:HO2'	22:BA:1063:G:H8	1.46	0.61
23:DB:16:G:O6	23:DB:69:G:C5	2.53	0.61
22:BA:1179:G:C3'	22:BA:1180:U:H4'	2.18	0.61
20:AT:53:MET:O	20:AT:56:ILE:HG22	1.99	0.61
22:DA:228:C:H5''	22:DA:229:C:C6	2.36	0.61
26:DE:130:LYS:HB3	26:DE:133:LEU:CB	2.26	0.61
17:AQ:10:ARG:O	17:AQ:22:VAL:HG13	2.01	0.61
1:CA:1298:U:C5	7:CG:113:LYS:HA	2.35	0.61
1:CA:1140:C:HO2'	1:CA:1141:C:H6	1.44	0.61
48:B0:42:ILE:CD1	48:B0:48:TYR:HB2	2.30	0.61
2:AB:218:ALA:HA	2:AB:221:ARG:HH21	1.66	0.61
22:DA:2223:G:H2'	22:DA:2224:G:H5'	1.81	0.61
22:DA:1255:U:O2'	22:DA:1256:G:OP1	2.18	0.61
22:DA:2734:A:C2'	22:DA:2735:G:H5'	2.30	0.61
22:DA:686:U:OP2	56:DA:3708:HOH:O	2.16	0.61
40:BS:18:ARG:HG2	40:BS:76:VAL:HG13	1.82	0.61
22:BA:2298:A:C2	22:BA:2321:U:N3	2.68	0.61
22:DA:969:G:H2'	22:DA:970:U:H6	1.64	0.61
3:CC:39:ARG:HE	3:CC:54:ILE:HG23	1.64	0.61
22:DA:2353:G:H1'	44:DW:30:VAL:HG13	1.81	0.61
22:DA:852:U:H2'	22:DA:853:C:C6	2.35	0.61
52:B4:3:VAL:O	52:B4:4:ARG:O	2.19	0.61
22:BA:1103:A:H2'	22:BA:1104:C:H5'	1.82	0.61
38:BQ:114:ALA:C	38:BQ:116:LEU:H	2.02	0.61
20:AT:55:PRO:O	20:AT:59:ARG:HB3	2.01	0.61
22:DA:64:A:OP1	41:DT:77:ARG:HA	2.00	0.61
22:BA:994:C:H1'	39:BR:10:LYS:NZ	2.15	0.61
44:BW:73:PRO:HG3	44:BW:76:ARG:HD2	1.82	0.61
44:BW:31:LEU:HD23	44:BW:31:LEU:N	2.16	0.61
1:CA:704:A:O2'	1:CA:705:G:O5'	2.17	0.61
13:CM:77:LYS:O	13:CM:77:LYS:HD3	2.01	0.61
2:AB:209:VAL:HG23	2:AB:210:THR:N	2.08	0.61
22:DA:1076:C:O2	30:DI:92:PRO:HG2	2.00	0.61
22:DA:2316:G:H2'	22:DA:2317:A:C8	2.34	0.61
50:D2:35:ARG:HG3	50:D2:42:LEU:HD21	1.83	0.61
7:CG:27:ASN:HA	7:CG:30:MET:HG3	1.82	0.61
24:BC:80:LEU:HD11	24:BC:109:LEU:HG	1.83	0.61
24:BC:230:PRO:CD	24:BC:246:PRO:HA	2.29	0.61
21:CU:33:ARG:HH22	21:CU:34:ARG:HH11	1.49	0.61
42:DU:73:ASN:HB2	42:DU:95:PHE:HE2	1.66	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:CA:162:A:H2'	1:CA:163:C:O4'	2.00	0.61
36:DO:51:ALA:HB3	36:DO:78:VAL:HG22	1.83	0.61
29:BH:18:GLN:HE21	29:BH:18:GLN:CA	2.14	0.61
34:DM:136:MET:HE1	43:DV:57:TYR:CD2	2.36	0.61
37:BP:25:VAL:HG11	37:BP:46:VAL:HG23	1.83	0.61
1:AA:433:G:H2'	1:AA:434:U:H5'	1.83	0.61
22:BA:533:G:H5'	38:BQ:23:TYR:CE2	2.36	0.61
22:DA:414:C:H5''	22:DA:1879:C:O2'	2.00	0.61
22:DA:2406:A:C2	33:DL:69:ARG:NH2	2.68	0.61
25:DD:56:LYS:NZ	25:DD:58:ASN:HD22	1.99	0.61
6:CF:90:MET:HE1	18:CR:60:ARG:HD3	1.83	0.61
3:AC:69:THR:O	3:AC:105:VAL:HG23	2.00	0.61
13:AM:113:LYS:H	13:AM:114:PRO:CD	2.14	0.61
16:AP:19:VAL:HG13	16:AP:37:GLY:C	2.20	0.61
22:DA:2339:C:H2'	22:DA:2340:A:C8	2.35	0.61
25:BD:121:THR:O	25:BD:122:VAL:HB	2.01	0.61
22:BA:14:A:H5''	22:BA:15:G:OP2	2.01	0.61
44:BW:24:ARG:C	44:BW:24:ARG:HD2	2.20	0.61
11:CK:27:ASN:HA	11:CK:57:SER:HB3	1.83	0.61
22:BA:272:A:O2'	22:BA:273:G:H8	1.82	0.61
31:DJ:4:PHE:O	31:DJ:44:TYR:CZ	2.53	0.61
22:DA:1054:A:C4	22:DA:1055:G:H1'	2.36	0.61
2:CB:74:ALA:CB	2:CB:206:ILE:HD11	2.30	0.61
27:DF:45:ASP:C	27:DF:47:LYS:H	2.03	0.61
22:DA:1706:C:H2'	22:DA:1757:A:OP2	2.01	0.61
22:BA:1475:G:HO2'	22:BA:1476:U:P	2.23	0.61
22:DA:2808:G:O2'	22:DA:2809:A:H8	1.82	0.61
22:DA:364:C:H2'	22:DA:365:U:H6	1.62	0.61
1:CA:216:U:H4'	1:CA:464:U:H4'	1.82	0.61
22:DA:2733:A:O2'	22:DA:2734:A:H5'	2.00	0.61
22:BA:2602:A:H4'	22:BA:2603:G:O5'	1.99	0.61
1:AA:182:A:C2	1:AA:184:G:C8	2.89	0.61
52:D4:7:VAL:CG1	52:D4:8:LYS:H	2.13	0.61
29:BH:50:ARG:O	29:BH:54:LEU:HB2	2.01	0.61
22:DA:425:G:H2'	22:DA:426:C:H6	1.66	0.61
18:AR:35:SER:HA	18:AR:71:ASP:HB3	1.82	0.61
32:DK:10:VAL:HG13	32:DK:12:ASP:OD1	2.01	0.61
34:BM:43:ALA:H	34:BM:46:ILE:HG23	1.65	0.61
1:AA:604:G:C2	1:AA:635:A:C2	2.89	0.61
1:CA:227:G:H2'	1:CA:228:A:O4'	2.00	0.61
1:AA:982:U:H4'	1:AA:983:A:C5'	2.29	0.61
22:DA:379:G:C6	22:DA:396:G:C6	2.89	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:2038:G:H2'	22:DA:2039:U:O4'	2.00	0.61
1:AA:204:G:C1'	1:AA:465:A:C2	2.83	0.61
22:DA:321:U:O4'	26:DE:159:LEU:HG	2.00	0.61
26:DE:128:ALA:HB1	26:DE:129:PRO:CD	2.28	0.61
39:DR:9:GLY:H	39:DR:10:LYS:HD2	1.63	0.61
2:CB:114:LYS:CE	2:CB:151:LYS:HB2	2.31	0.61
22:DA:125:A:H3'	50:D2:19:ARG:HD2	1.82	0.61
10:CJ:11:LYS:HB3	10:CJ:71:LEU:HD13	1.83	0.61
28:BG:8:VAL:HG12	28:BG:49:LEU:H	1.64	0.61
22:BA:31:C:O3'	22:BA:1238:G:H5''	2.01	0.61
22:BA:287:G:H2'	22:BA:288:U:C6	2.36	0.61
22:DA:1280:G:H2'	22:DA:1281:G:H5'	1.82	0.61
1:CA:251:G:H4'	1:CA:252:U:H5''	1.81	0.61
22:DA:1007:C:O3'	31:DJ:110:PRO:HB3	2.01	0.61
31:DJ:111:LYS:HB2	31:DJ:115:GLY:CA	2.31	0.61
31:DJ:110:PRO:O	31:DJ:115:GLY:HA3	2.00	0.61
14:AN:89:ARG:O	14:AN:91:GLU:HG2	1.99	0.61
10:CJ:31:ARG:NH2	10:CJ:32:THR:HB	2.16	0.61
22:DA:2839:G:H21	35:DN:92:GLY:HA3	1.65	0.61
10:AJ:35:GLN:HG2	10:AJ:77:VAL:HB	1.83	0.61
32:BK:2:ILE:O	32:BK:3:GLN:HB3	2.00	0.61
22:BA:1062:G:O2'	22:BA:1063:G:C8	2.53	0.61
37:BP:50:ARG:HD3	37:BP:56:SER:CB	2.31	0.61
22:DA:225:C:H2'	22:DA:226:A:O4'	2.00	0.61
22:DA:1399:C:O2'	22:DA:1400:U:H5'	2.00	0.61
26:BE:119:ILE:CD1	26:BE:187:VAL:HG22	2.27	0.61
26:BE:187:VAL:O	26:BE:188:MET:HB3	1.99	0.61
22:DA:78:U:C2'	22:DA:79:C:H5'	2.30	0.61
22:DA:202:U:H2'	22:DA:202:U:O2	2.00	0.61
12:AL:28:GLN:HB2	12:AL:81:ILE:O	2.01	0.61
3:AC:15:LYS:HG3	3:AC:16:PRO:HD2	1.81	0.61
22:DA:1616:A:H8	22:DA:1616:A:OP1	1.83	0.61
22:DA:1884:G:H8	22:DA:1884:G:OP2	1.84	0.61
12:AL:85:ARG:CZ	12:AL:87:LYS:HB3	2.31	0.61
28:DG:16:VAL:HG11	28:DG:44:HIS:ND1	2.16	0.61
28:DG:8:VAL:O	28:DG:9:VAL:HB	1.99	0.61
1:AA:390:U:H2'	1:AA:391:G:H8	1.63	0.61
1:CA:1451:U:C2	1:CA:1453:G:O6	2.54	0.61
25:BD:53:GLY:HA3	25:BD:77:ARG:H	1.66	0.61
1:CA:935:A:O2'	1:CA:936:C:H6	1.82	0.61
24:DC:77:VAL:HG23	24:DC:112:GLY:H	1.65	0.61
1:CA:748:G:H2'	1:CA:749:A:C8	2.35	0.61

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:AM:84:CYS:HB3	19:AS:73:PHE:HE2	1.66	0.61
1:CA:1513:A:H2'	1:CA:1514:G:C8	2.36	0.61
32:BK:15:GLY:O	32:BK:46:ALA:HA	2.01	0.61
1:AA:847:G:H2'	1:AA:848:C:C6	2.36	0.61
26:DE:79:ARG:HG2	26:DE:80:SER:H	1.65	0.61
27:DF:33:ILE:HB	27:DF:90:LEU:HB2	1.83	0.61
22:DA:2721:A:H2'	22:DA:2722:G:O4'	2.01	0.61
22:BA:1079:C:C4	22:BA:1088:A:C2	2.89	0.60
22:BA:1098:A:H3'	22:BA:1099:G:C8	2.35	0.60
44:BW:37:VAL:CG1	44:BW:38:ARG:N	2.62	0.60
22:DA:1915:U:O2'	22:DA:1916:A:H5'	2.01	0.60
22:DA:1071:G:N7	22:DA:1089:A:C5	2.69	0.60
10:CJ:38:GLY:O	10:CJ:40:ILE:HD12	2.00	0.60
22:DA:1965:C:H3'	22:DA:1966:A:C5'	2.30	0.60
1:CA:1242:G:O2'	1:CA:1243:C:O4'	2.18	0.60
12:AL:33:CYS:HA	12:AL:53:ARG:O	2.01	0.60
22:BA:1057:A:C2	22:BA:1082:U:C2	2.88	0.60
1:AA:1160:G:O6	1:AA:1181:G:O6	2.19	0.60
46:BY:43:LEU:O	46:BY:47:ARG:HB2	2.01	0.60
42:BU:42:LYS:HB3	42:BU:57:ILE:HG23	1.81	0.60
22:DA:21:A:H2'	22:DA:22:C:C6	2.36	0.60
33:DL:73:ILE:O	33:DL:105:ILE:HG23	2.00	0.60
8:AH:75:GLN:O	8:AH:126:CYS:HB2	2.01	0.60
31:BJ:53:TYR:CE1	31:BJ:121:LYS:HG2	2.36	0.60
25:BD:35:THR:OG1	25:BD:49:GLN:HG2	2.01	0.60
26:DE:119:ILE:HG13	26:DE:119:ILE:O	2.01	0.60
3:CC:14:VAL:HG12	3:CC:14:VAL:O	2.00	0.60
22:BA:1429:G:O2'	22:BA:1430:G:H5'	2.01	0.60
23:DB:12:C:O2'	44:DW:74:LYS:HA	2.00	0.60
18:CR:59:LYS:O	18:CR:63:TYR:HD1	1.83	0.60
36:DO:30:ARG:HG2	36:DO:31:THR:N	2.15	0.60
22:DA:1439:A:N7	22:DA:1440:U:H1'	2.17	0.60
28:BG:83:THR:C	28:BG:84:LYS:HD3	2.20	0.60
22:DA:2332:C:H4'	44:DW:40:ARG:NH2	2.16	0.60
27:DF:28:PRO:HB2	27:DF:168:LEU:CD2	2.23	0.60
22:DA:1533:C:C2'	22:DA:1534:U:H5'	2.30	0.60
22:DA:151:C:OP1	22:DA:1359:A:O2'	2.19	0.60
42:DU:17:ASP:HB2	42:DU:38:ILE:HA	1.82	0.60
31:DJ:5:THR:HA	31:DJ:44:TYR:CE2	2.36	0.60
1:AA:269:C:H2'	1:AA:270:A:C8	2.36	0.60
17:AQ:12:VAL:CG1	17:AQ:13:SER:H	2.13	0.60
50:D2:45:SER:C	50:D2:46:LYS:HD2	2.22	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:867:C:O2'	22:DA:868:U:O5'	2.18	0.60
1:CA:90:C:O2'	1:CA:91:U:H5'	2.02	0.60
1:CA:1350:A:H2	7:CG:33:GLY:HA3	1.65	0.60
22:DA:2667:C:O2'	22:DA:2668:G:H8	1.84	0.60
1:AA:198:G:H2'	1:AA:199:A:H8	1.63	0.60
1:CA:640:A:O2'	8:CH:106:SER:HB2	2.01	0.60
8:AH:76:ARG:HD3	8:AH:77:VAL:N	2.16	0.60
30:BI:80:LYS:HA	30:BI:85:ILE:O	2.01	0.60
22:DA:2716:C:O2'	22:DA:2717:C:H5'	2.00	0.60
22:BA:2199:A:H8	22:BA:2199:A:C5'	2.14	0.60
26:DE:42:GLY:HA3	26:DE:90:GLN:O	2.00	0.60
51:B3:21:PHE:HB2	51:B3:49:VAL:CG1	2.30	0.60
1:CA:39:G:H2'	1:CA:40:C:C6	2.37	0.60
40:BS:63:GLY:O	40:BS:64:ALA:CB	2.49	0.60
18:CR:22:TYR:HA	18:CR:57:ALA:HB1	1.83	0.60
8:AH:88:LYS:HA	8:AH:91:LEU:HD12	1.82	0.60
22:DA:394:C:H2'	22:DA:395:U:H5'	1.83	0.60
22:DA:742:A:H2'	22:DA:743:A:C8	2.36	0.60
4:AD:160:LEU:H	4:AD:160:LEU:HD13	1.65	0.60
1:CA:476:U:C6	1:CA:476:U:OP2	2.54	0.60
1:AA:328:C:O2	1:AA:328:C:H2'	2.01	0.60
22:BA:1154:G:OP2	38:BQ:57:ARG:NH1	2.33	0.60
6:AF:4:TYR:O	6:AF:63:ASN:HA	2.01	0.60
22:DA:2345:G:C6	22:DA:2347:C:N4	2.67	0.60
22:DA:1341:G:H3'	22:DA:1397:U:O2	2.00	0.60
22:DA:125:A:H5''	50:D2:19:ARG:HD3	1.82	0.60
1:CA:1241:G:C4	1:CA:1242:G:N7	2.69	0.60
22:DA:243:U:O2'	22:DA:244:A:H8	1.84	0.60
7:CG:88:VAL:HG22	7:CG:89:GLU:N	2.13	0.60
28:DG:84:LYS:O	28:DG:85:LYS:HB3	1.99	0.60
22:BA:1071:G:OP2	22:BA:1071:G:C8	2.53	0.60
22:DA:2135:A:H2'	22:DA:2136:G:O4'	2.02	0.60
22:BA:2320:U:H4'	22:BA:2321:U:C5'	2.31	0.60
28:DG:10:VAL:HB	28:DG:14:VAL:HG21	1.83	0.60
22:BA:545:U:O4'	22:BA:545:U:O2	2.18	0.60
22:BA:357:C:H2'	22:BA:358:U:C6	2.36	0.60
1:CA:675:A:H1'	11:CK:117:HIS:ND1	2.16	0.60
36:DO:7:ARG:HA	36:DO:10:ARG:NH2	2.16	0.60
1:CA:465:A:C8	1:CA:467:U:OP1	2.55	0.60
24:BC:77:VAL:O	24:BC:77:VAL:CG2	2.48	0.60
32:DK:113:MET:HA	32:DK:116:ILE:HD11	1.83	0.60
1:CA:769:G:H4'	1:CA:1513:A:H4'	1.82	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
34:BM:54:THR:O	34:BM:56:ALA:N	2.33	0.60
22:BA:2065:C:H2'	22:BA:2066:C:H6	1.66	0.60
22:DA:2591:C:OP1	24:DC:237:ARG:HD2	2.01	0.60
1:AA:439:U:C2'	1:AA:440:C:H5'	2.31	0.60
38:BQ:94:LEU:C	38:BQ:96:ASP:H	2.04	0.60
22:BA:1075:C:C4	22:BA:1076:C:N4	2.69	0.60
44:BW:37:VAL:HG13	44:BW:56:HIS:HB2	1.83	0.60
1:CA:972:C:H4'	10:CJ:59:LYS:HG2	1.83	0.60
38:DQ:50:ARG:N	38:DQ:50:ARG:HD2	2.17	0.60
22:DA:81:G:H2'	22:DA:82:U:O4'	2.02	0.60
22:DA:538:A:N6	22:DA:555:G:O2'	2.34	0.60
33:BL:77:ILE:HD13	33:BL:108:ALA:HB1	1.83	0.60
22:DA:665:U:H2'	22:DA:666:A:H8	1.66	0.60
22:DA:2305:U:H4'	27:DF:132:ARG:HG2	1.82	0.60
35:DN:73:ASN:HD22	35:DN:76:VAL:HG21	1.65	0.60
22:DA:601:C:H4'	26:DE:99:LYS:HE2	1.83	0.60
1:CA:1140:C:O2'	1:CA:1141:C:C6	2.51	0.60
22:DA:2091:C:OP2	22:DA:2092:U:H3'	2.01	0.60
12:AL:73:LEU:HD11	12:AL:79:ILE:HG21	1.82	0.60
25:DD:169:ARG:O	25:DD:170:VAL:HG22	2.01	0.60
21:CU:38:GLU:HA	21:CU:41:THR:OG1	2.01	0.60
22:DA:2577:A:H5''	22:DA:2578:G:H5'	1.83	0.60
22:DA:2020:A:H5'	48:D0:8:THR:HG22	1.82	0.60
22:DA:1499:C:H2'	22:DA:1500:G:H5'	1.83	0.60
25:DD:120:GLY:O	25:DD:124:ARG:HB2	2.01	0.60
1:AA:174:A:C2'	1:AA:175:C:H5'	2.30	0.60
1:AA:601:G:O2'	1:AA:602:A:H5'	2.00	0.60
1:AA:1349:A:OP1	9:AI:122:ARG:N	2.29	0.60
9:AI:3:ASN:CG	9:AI:4:GLN:H	2.05	0.60
22:DA:2059:A:O3'	26:DE:64:GLY:HA2	2.01	0.60
22:DA:716:A:C3'	22:DA:717:C:H5''	2.31	0.60
22:DA:660:C:H5''	26:DE:94:GLN:OE1	2.02	0.60
45:BX:38:TRP:HB2	45:BX:45:PHE:HE2	1.66	0.60
1:CA:1316:G:N2	1:CA:1318:A:H3'	2.15	0.60
22:DA:1551:A:C4	22:DA:1552:A:C8	2.89	0.60
25:BD:107:VAL:O	25:BD:174:SER:O	2.19	0.60
22:DA:1210:G:H4'	22:DA:1211:C:C5'	2.32	0.60
4:AD:25:ARG:O	4:AD:26:ALA:HB2	2.01	0.60
7:CG:22:LEU:O	7:CG:26:VAL:HG22	2.00	0.60
22:DA:2094:A:H2'	22:DA:2095:A:O4'	2.00	0.60
24:BC:139:THR:O	24:BC:161:VAL:O	2.19	0.60
42:BU:38:ILE:CG2	42:BU:39:ASN:N	2.62	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:AS:51:HIS:HD2	19:AS:53:GLY:H	1.46	0.60
2:AB:110:ILE:CD1	2:AB:147:LEU:HD13	2.31	0.60
1:AA:344:A:H4'	1:AA:345:C:OP2	2.00	0.60
1:AA:1001:C:H2'	1:AA:1002:G:H8	1.65	0.60
46:BY:9:LYS:HA	46:BY:9:LYS:NZ	2.17	0.60
22:DA:1232:G:H2'	22:DA:1233:C:C6	2.36	0.60
1:AA:206:C:C2	1:AA:207:C:H1'	2.35	0.60
28:DG:117:PRO:CG	28:DG:143:VAL:HG11	2.30	0.60
22:DA:1665:A:C2'	22:DA:1666:G:H5'	2.32	0.60
21:AU:48:LYS:HA	21:AU:51:ALA:HB3	1.82	0.60
22:DA:467:G:H4'	22:DA:796:C:O2'	2.01	0.60
32:DK:2:ILE:HG22	32:DK:3:GLN:N	2.17	0.60
1:CA:1514:G:H2'	1:CA:1515:G:H8	1.65	0.60
22:BA:2471:A:H2'	22:BA:2472:G:H5'	1.82	0.60
1:CA:968:A:C4	1:CA:1062:U:H4'	2.37	0.60
1:AA:107:G:H2'	1:AA:108:G:H5'	1.82	0.60
37:DP:44:GLY:HA3	37:DP:60:VAL:HG12	1.84	0.60
1:AA:1025:U:H5''	1:AA:1026:G:OP1	2.02	0.60
22:DA:1480:C:H2'	22:DA:1481:U:O4'	2.01	0.60
1:AA:1031:C:O2'	1:AA:1032:G:H5''	2.02	0.60
6:CF:97:THR:O	6:CF:98:GLU:HG3	2.02	0.60
32:BK:51:LYS:O	32:BK:51:LYS:HD2	2.01	0.60
31:DJ:35:ARG:NH1	31:DJ:140:LEU:HD11	2.16	0.60
42:BU:82:VAL:O	42:BU:94:PHE:O	2.20	0.60
25:BD:33:ARG:NH2	25:BD:51:THR:HG23	2.17	0.60
22:DA:379:G:C6	22:DA:380:G:C5	2.90	0.60
14:CN:13:VAL:HG22	14:CN:59:GLN:NE2	2.17	0.60
14:CN:60:ARG:NH2	14:CN:70:HIS:HB3	2.17	0.60
20:AT:43:LYS:CB	20:AT:86:ALA:HB1	2.24	0.60
22:DA:234:U:H2'	22:DA:235:U:C6	2.37	0.60
22:DA:1404:C:O2'	22:DA:1405:U:H5'	2.02	0.60
23:DB:42:C:H41	27:DF:87:LYS:HZ3	1.50	0.60
7:CG:30:MET:O	7:CG:31:VAL:HB	2.01	0.60
1:CA:374:A:OP1	1:CA:452:A:N1	2.34	0.60
22:DA:1568:G:H21	24:DC:57:HIS:HE1	1.47	0.60
4:CD:58:GLN:OE1	4:CD:58:GLN:HA	2.02	0.60
49:D1:5:ARG:NH2	49:D1:23:THR:HB	2.17	0.60
39:DR:89:HIS:NE2	39:DR:91:GLN:HB2	2.17	0.60
22:BA:2358:A:H61	33:BL:54:GLN:HE22	1.48	0.60
10:CJ:30:LYS:CG	10:CJ:36:VAL:HG22	2.32	0.60
47:BZ:7:THR:HG23	47:BZ:34:THR:H	1.67	0.60
31:BJ:13:ARG:HD3	31:BJ:51:GLY:O	2.01	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:1492:A:H2'	1:AA:1493:A:H5''	1.84	0.60
22:DA:2414:G:C2'	22:DA:2415:G:H5'	2.31	0.60
1:AA:1314:C:C5	19:AS:5:LYS:HD3	2.36	0.60
51:D3:22:LYS:H	51:D3:48:MET:CB	2.15	0.60
43:DV:4:ILE:HB	43:DV:63:ILE:HG13	1.83	0.60
1:AA:737:C:H2'	1:AA:738:C:H6	1.65	0.60
7:AG:121:ASN:O	7:AG:125:ASP:HB2	2.00	0.60
2:CB:164:ASP:HB3	2:CB:167:HIS:HB3	1.83	0.60
1:CA:458:U:H2'	1:CA:459:A:C8	2.37	0.60
22:BA:470:A:H61	41:BT:72:GLN:HE22	1.49	0.60
28:BG:15:ASP:CG	28:BG:16:VAL:N	2.55	0.60
1:CA:1400:C:H4'	1:CA:1401:G:OP2	2.02	0.60
29:BH:32:PRO:O	29:BH:33:GLN:HB2	2.00	0.60
6:AF:40:GLU:CB	6:AF:42:TRP:HE1	2.15	0.60
6:AF:38:ARG:HB3	6:AF:63:ASN:HB2	1.83	0.60
5:CE:79:THR:HA	5:CE:121:ASN:OD1	2.01	0.60
22:DA:492:A:H2'	22:DA:493:G:O4'	2.02	0.60
19:CS:40:PHE:HB3	19:CS:41:PRO:CD	2.29	0.60
26:DE:179:SER:HA	26:DE:182:ALA:HB3	1.83	0.60
22:DA:2060:A:H2'	26:DE:63:LYS:NZ	2.17	0.60
1:CA:1336:C:H1'	1:CA:1337:G:C2	2.37	0.60
22:DA:620:G:H8	22:DA:622:G:O6	1.83	0.60
1:CA:1141:C:O2'	1:CA:1142:G:H8	1.85	0.60
16:CP:8:ARG:HB3	16:CP:28:ARG:HH11	1.66	0.60
40:BS:4:ILE:CG2	40:BS:106:VAL:HG22	2.31	0.60
22:BA:1110:G:O2'	22:BA:1111:A:C8	2.44	0.60
22:BA:1149:G:O2'	22:BA:1150:C:H5'	2.01	0.60
22:BA:1150:C:HO2'	22:BA:1151:A:C5'	2.15	0.60
28:DG:48:THR:O	28:DG:49:LEU:HB2	2.01	0.60
33:BL:109:LYS:CG	33:BL:126:ARG:HB3	2.31	0.60
1:AA:603:U:H3'	1:AA:603:U:H6	1.66	0.60
1:AA:259:G:H2'	1:AA:260:G:C8	2.36	0.60
9:CI:17:ARG:HB2	9:CI:65:THR:HB	1.84	0.60
22:DA:2638:G:O2'	22:DA:2639:A:C8	2.55	0.60
22:DA:2873:A:H4'	56:DA:3801:HOH:O	2.01	0.60
29:BH:14:SER:O	29:BH:16:GLY:N	2.34	0.60
35:DN:1:MET:O	35:DN:2:ARG:HB2	2.01	0.60
48:D0:37:HIS:CG	48:D0:43:THR:HG22	2.37	0.60
5:CE:24:VAL:HG23	5:CE:26:GLY:H	1.67	0.60
22:DA:2:G:C6	22:DA:3:U:C4	2.90	0.60
10:AJ:22:THR:HG22	10:AJ:23:ALA:N	2.17	0.60
5:AE:44:ARG:HA	5:AE:71:ILE:O	2.02	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:CA:1365:G:O2'	1:CA:1366:C:C6	2.55	0.60
22:DA:226:A:N6	22:DA:227:A:N6	2.50	0.60
24:DC:173:LEU:H	24:DC:173:LEU:HD22	1.66	0.60
27:DF:34:THR:O	27:DF:35:LEU:HB2	2.00	0.60
41:BT:32:LEU:O	41:BT:83:ALA:HB2	2.01	0.60
12:AL:72:ASN:HD22	12:AL:73:LEU:H	1.50	0.60
8:CH:85:TYR:CE1	17:CQ:36:PHE:HE2	2.20	0.60
2:AB:89:PHE:HB3	2:AB:149:GLY:CA	2.31	0.60
2:CB:76:SER:O	2:CB:79:VAL:HG12	2.00	0.60
32:DK:35:VAL:HG23	32:DK:36:GLY:N	2.16	0.60
24:BC:250:GLN:H	24:BC:250:GLN:HE21	1.47	0.60
22:BA:1936:A:C2	22:BA:1943:U:C5	2.87	0.60
22:DA:1521:G:C6	22:DA:1522:A:C6	2.89	0.60
26:BE:146:VAL:HG23	26:BE:167:VAL:CG2	2.32	0.60
1:AA:181:A:N6	1:AA:195:A:C8	2.70	0.60
22:DA:1635:A:H2'	22:DA:1636:U:H6	1.66	0.60
22:DA:2234:G:C5	22:DA:2235:G:C8	2.89	0.60
1:AA:1212:U:H2'	1:AA:1212:U:O2	2.02	0.60
1:CA:71:A:O2'	1:CA:72:A:O4'	2.16	0.60
1:AA:135:C:H2'	1:AA:136:C:H5'	1.82	0.60
22:BA:1062:G:O2'	22:BA:1063:G:O4'	2.20	0.60
22:BA:2356:U:H4'	44:BW:16:GLU:HG3	1.84	0.60
38:DQ:46:TYR:CZ	38:DQ:50:ARG:NH1	2.70	0.60
1:CA:1118:U:H1'	1:CA:1179:A:C4	2.36	0.60
5:AE:114:LEU:HD21	5:AE:122:VAL:HG21	1.82	0.60
22:DA:1083:U:H1'	22:DA:1086:A:C2	2.37	0.60
22:DA:478:A:N1	22:DA:480:A:C4	2.70	0.60
22:DA:128:C:O2'	22:DA:129:C:H6	1.81	0.60
27:BF:134:GLN:CG	27:BF:135:ILE:H	2.09	0.60
7:CG:92:PRO:HA	7:CG:95:ARG:HB2	1.82	0.60
1:CA:1327:C:N4	1:CA:1328:C:N4	2.49	0.60
22:DA:1286:A:O2'	22:DA:1288:G:N2	2.35	0.60
29:DH:84:ALA:HA	29:DH:89:LYS:O	2.00	0.60
41:BT:29:THR:HB	41:BT:86:THR:HG22	1.84	0.60
36:DO:18:LEU:HD13	36:DO:25:ARG:HG2	1.82	0.60
1:AA:1218:C:H2'	1:AA:1219:A:C8	2.37	0.60
40:BS:84:ARG:HB2	40:BS:96:ILE:CG1	2.31	0.60
22:BA:1738:G:HO2'	22:BA:1739:A:H8	1.50	0.60
22:DA:2729:G:H5''	25:DD:190:LYS:NZ	2.17	0.60
14:CN:68:ARG:HG3	14:CN:69:PRO:HD2	1.82	0.60
1:AA:1287:A:H2'	1:AA:1288:A:C8	2.37	0.60
38:DQ:10:ARG:HA	38:DQ:13:HIS:HB2	1.82	0.60

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:BA:194:G:C8	56:BA:3760:HOH:O	2.52	0.60
22:BA:1501:G:O2'	22:BA:1502:A:H5'	2.02	0.60
29:DH:57:LYS:HD2	29:DH:57:LYS:O	2.02	0.60
23:DB:11:C:C5	23:DB:12:C:H5	2.20	0.60
11:AK:124:LYS:HE2	21:AU:33:ARG:HH21	1.66	0.60
5:AE:81:GLN:HG2	5:AE:149:PRO:CB	2.32	0.60
7:CG:19:SER:HB3	7:CG:22:LEU:HB3	1.81	0.60
27:BF:134:GLN:O	27:BF:136:ILE:N	2.30	0.60
22:DA:785:G:O2'	22:DA:1779:U:H5''	2.01	0.60
25:DD:108:ASP:OD1	25:DD:207:VAL:HG23	2.02	0.60
12:AL:33:CYS:H	12:AL:54:VAL:HG13	1.66	0.60
1:AA:1005:A:C2	1:AA:1006:G:H1'	2.37	0.60
31:DJ:84:ILE:HG23	31:DJ:84:ILE:O	2.00	0.60
29:DH:117:LEU:HD22	29:DH:122:LEU:HB2	1.83	0.60
22:BA:973:A:O4'	22:BA:1188:U:C6	2.55	0.60
46:DY:19:LEU:HA	46:DY:22:LEU:HB2	1.83	0.60
36:BO:75:GLY:HA3	36:BO:109:ALA:HB3	1.84	0.60
5:AE:55:VAL:N	5:AE:56:PRO:HD2	2.17	0.60
45:BX:52:ALA:O	45:BX:53:LYS:CB	2.49	0.60
26:DE:79:ARG:HG2	26:DE:80:SER:N	2.17	0.60
35:BN:72:ASP:OD1	35:BN:75:ILE:HG23	2.02	0.60
14:AN:90:GLY:O	14:AN:92:ILE:N	2.32	0.60
22:BA:1585:C:H2'	22:BA:1586:A:O4'	2.01	0.60
8:CH:73:SER:HB2	8:CH:129:ALA:HB3	1.84	0.60
26:DE:170:ARG:HH22	26:DE:176:ASP:HB2	1.67	0.60
22:BA:1794:A:H2'	22:BA:1795:C:C6	2.37	0.60
48:D0:30:ASP:OD1	48:D0:47:TYR:HB3	2.02	0.60
30:BI:18:ASN:HB2	30:BI:38:CYS:HB3	1.84	0.60
31:DJ:77:HIS:CE1	31:DJ:83:GLY:HA3	2.37	0.60
22:DA:120:U:H4'	22:DA:121:G:H5'	1.84	0.60
44:BW:39:GLN:NE2	44:BW:43:LYS:H	2.00	0.59
22:DA:2448:A:H61	33:DL:36:LYS:NZ	1.99	0.59
22:DA:247:G:N7	22:DA:249:C:C2	2.70	0.59
22:DA:1608:A:C8	22:DA:1611:C:N4	2.70	0.59
22:DA:1607:C:H4'	22:DA:1608:A:H8	1.66	0.59
17:AQ:60:ILE:HG22	17:AQ:72:TRP:HE3	1.66	0.59
22:DA:125:A:C5'	50:D2:19:ARG:HD3	2.32	0.59
5:AE:11:GLN:HA	5:AE:11:GLN:NE2	2.10	0.59
1:AA:1124:G:H2'	1:AA:1145:A:H61	1.67	0.59
22:BA:962:G:H21	22:BA:2250:G:H1	1.50	0.59
1:AA:1304:G:H1'	1:AA:1334:G:N2	2.17	0.59
24:BC:251:THR:CG2	24:BC:252:LYS:H	2.14	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
23:DB:86:G:C2'	23:DB:87:U:H5''	2.31	0.59
35:BN:71:ARG:NH2	35:BN:71:ARG:HG3	2.15	0.59
22:DA:2765:A:H3'	22:DA:2766:A:H5'	1.83	0.59
29:DH:94:ILE:HG13	29:DH:98:ASP:CB	2.32	0.59
11:AK:57:SER:O	11:AK:90:PRO:HG3	2.02	0.59
34:BM:31:PHE:CZ	34:BM:110:GLU:HG2	2.35	0.59
43:BV:21:ARG:HA	43:BV:25:LYS:O	2.01	0.59
28:DG:154:GLU:C	28:DG:156:TYR:H	2.06	0.59
9:CI:114:LYS:HD2	9:CI:120:ALA:O	2.02	0.59
14:AN:87:ALA:HB2	14:AN:92:ILE:HD12	1.84	0.59
29:BH:41:LYS:HA	29:BH:44:ILE:HG12	1.83	0.59
7:CG:42:VAL:O	7:CG:43:TYR:HB2	2.00	0.59
11:AK:60:PHE:O	11:AK:63:GLN:HB3	2.01	0.59
25:DD:140:HIS:CD2	25:DD:140:HIS:N	2.69	0.59
15:CO:34:GLN:OE1	15:CO:38:LEU:HD22	2.02	0.59
33:BL:77:ILE:HD11	33:BL:101:ILE:HD11	1.83	0.59
22:DA:481:G:O2'	22:DA:507:A:N6	2.35	0.59
22:DA:638:G:H2'	22:DA:639:U:C6	2.37	0.59
34:BM:35:ALA:O	34:BM:36:VAL:CB	2.46	0.59
22:DA:784:G:HO2'	22:DA:785:G:H8	1.48	0.59
22:DA:80:G:O2'	22:DA:346:A:C2	2.55	0.59
29:DH:24:GLY:O	29:DH:28:ASN:HB2	2.00	0.59
1:CA:1046:A:H2'	1:CA:1047:G:O4'	2.03	0.59
36:BO:31:THR:CG2	36:BO:34:HIS:H	2.10	0.59
8:AH:58:LEU:HD13	8:AH:59:GLU:N	2.17	0.59
25:DD:114:LYS:HB2	25:DD:116:LYS:HE3	1.84	0.59
25:BD:98:VAL:O	25:BD:99:GLU:C	2.41	0.59
22:BA:26:G:H1'	22:BA:514:A:N6	2.17	0.59
22:DA:532:A:C4	22:DA:2021:C:O2	2.55	0.59
35:DN:35:LYS:NZ	35:DN:112:TYR:HE1	1.98	0.59
22:DA:1232:G:H2'	22:DA:1233:C:H6	1.67	0.59
22:BA:285:G:H2'	22:BA:285:G:N3	2.16	0.59
22:DA:2191:A:H5''	22:DA:2192:U:OP2	2.03	0.59
1:CA:54:C:N4	1:CA:352:C:H2'	2.17	0.59
1:CA:1049:U:H4'	1:CA:1050:G:C5'	2.33	0.59
22:DA:558:U:OP2	31:DJ:113:PRO:HG2	2.02	0.59
34:DM:57:VAL:O	34:DM:58:LYS:HB2	2.02	0.59
47:BZ:40:THR:HG23	47:BZ:43:ILE:H	1.67	0.59
1:CA:1124:G:H1'	1:CA:1125:U:H5	1.65	0.59
22:DA:1843:C:O2'	24:DC:253:GLY:HA3	2.03	0.59
22:BA:790:U:O2'	22:BA:791:C:O5'	2.20	0.59
46:BY:39:GLN:HB2	46:BY:41:HIS:CD2	2.37	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:BA:1157:G:O2'	47:BZ:31:ILE:HD11	2.01	0.59
4:CD:190:LEU:O	4:CD:191:SER:O	2.20	0.59
4:CD:191:SER:O	4:CD:192:ALA:CB	2.51	0.59
22:BA:1180:U:H2'	22:BA:1181:U:C5	2.37	0.59
32:BK:10:VAL:HB	32:BK:16:ALA:HB1	1.85	0.59
22:DA:1338:G:H5''	41:DT:17:SER:HB3	1.83	0.59
22:DA:84:A:H2	22:DA:98:G:N3	2.00	0.59
31:BJ:55:ILE:O	31:BJ:55:ILE:HG13	2.01	0.59
1:CA:87:C:O2'	1:CA:88:U:C4'	2.49	0.59
22:DA:142:A:O2'	22:DA:143:C:H6	1.83	0.59
22:DA:2680:U:OP2	25:DD:114:LYS:HD3	2.02	0.59
49:D1:5:ARG:CD	49:D1:25:ASN:HB2	2.30	0.59
35:BN:73:ASN:HD22	35:BN:76:VAL:HG11	1.66	0.59
1:AA:330:C:H5''	1:AA:330:C:C6	2.37	0.59
22:DA:2898:U:H2'	22:DA:2899:A:C8	2.37	0.59
1:AA:1314:C:O2'	1:AA:1315:U:H5'	2.02	0.59
26:BE:161:ALA:HA	26:BE:164:LEU:HB2	1.83	0.59
33:BL:132:ARG:HG3	33:BL:142:ILE:HD12	1.84	0.59
10:AJ:32:THR:HG23	10:AJ:33:GLY:H	1.68	0.59
36:BO:111:ARG:O	36:BO:113:ALA:N	2.32	0.59
22:DA:327:G:H21	42:DU:67:SER:HB2	1.66	0.59
1:CA:356:A:H2'	1:CA:357:G:O4'	2.01	0.59
22:BA:1931:U:O2'	22:BA:1932:A:H5'	2.01	0.59
22:BA:1014:A:H2'	22:BA:1015:U:C6	2.37	0.59
22:BA:568:U:OP1	33:BL:36:LYS:HE3	2.02	0.59
34:DM:8:LYS:N	34:DM:8:LYS:HD2	2.16	0.59
11:CK:60:PHE:O	11:CK:64:VAL:HG13	2.02	0.59
22:BA:811:U:C2	22:BA:1251:C:C5	2.90	0.59
25:BD:107:VAL:N	25:BD:206:ALA:H	1.99	0.59
22:DA:246:C:H4'	22:DA:385:C:O2'	2.02	0.59
22:DA:410:G:N1	22:DA:2407:A:N6	2.49	0.59
38:BQ:69:ARG:HB2	38:BQ:69:ARG:NH2	2.06	0.59
31:DJ:6:ALA:HB3	31:DJ:45:THR:HB	1.84	0.59
5:AE:114:LEU:HD21	5:AE:122:VAL:CG2	2.32	0.59
2:AB:211:LEU:O	2:AB:215:ALA:CB	2.49	0.59
22:DA:2816:G:O3'	35:DN:99:LYS:HE3	2.00	0.59
22:DA:503:A:C4'	22:DA:504:A:O5'	2.47	0.59
22:DA:647:G:C5	22:DA:648:G:N7	2.70	0.59
22:DA:1998:A:H2'	22:DA:1999:C:C6	2.36	0.59
22:DA:79:C:H2'	22:DA:80:G:O4'	2.01	0.59
35:DN:12:ARG:HA	35:DN:12:ARG:NE	2.17	0.59
41:BT:51:PHE:C	41:BT:52:GLU:HG2	2.22	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:AB:103:TRP:NE1	2:AB:150:ILE:HD11	2.17	0.59
22:BA:1047:G:N2	22:BA:1110:G:C4	2.71	0.59
1:CA:671:G:N2	1:CA:736:C:C2	2.70	0.59
22:DA:2286:G:H4'	22:DA:2287:A:C4	2.37	0.59
5:AE:110:MET:H	5:AE:113:VAL:HG13	1.66	0.59
25:DD:149:ASN:O	25:DD:151:THR:N	2.35	0.59
22:DA:90:U:H3'	22:DA:91:A:C5'	2.32	0.59
22:DA:2478:A:N7	22:DA:2529:G:C6	2.69	0.59
22:DA:850:U:O2'	47:DZ:22:THR:HG22	2.02	0.59
22:DA:2627:G:O2'	22:DA:2781:A:N1	2.31	0.59
22:DA:370:G:N1	22:DA:424:G:C5	2.70	0.59
26:DE:79:ARG:CG	26:DE:80:SER:H	2.14	0.59
22:DA:813:U:H2'	22:DA:814:C:C6	2.36	0.59
17:CQ:25:GLU:HA	17:CQ:39:ARG:O	2.03	0.59
4:CD:125:ASN:N	4:CD:141:VAL:O	2.35	0.59
1:AA:1256:A:H5''	3:AC:26:LYS:HE2	1.84	0.59
9:AI:18:VAL:HA	9:AI:64:ILE:HG23	1.84	0.59
47:DZ:23:LEU:HD12	47:DZ:28:LEU:HD21	1.83	0.59
2:CB:168:GLU:O	2:CB:172:ILE:HG12	2.02	0.59
22:DA:536:G:C2'	22:DA:537:G:H5'	2.33	0.59
37:DP:86:LYS:HA	37:DP:86:LYS:HZ2	1.68	0.59
38:BQ:85:ALA:O	38:BQ:86:SER:O	2.21	0.59
22:BA:1076:C:H2'	22:BA:1077:A:C8	2.37	0.59
21:CU:3:ILE:O	21:CU:4:LYS:HG2	2.01	0.59
1:CA:1365:G:C2	1:CA:1366:C:C2	2.91	0.59
2:AB:49:PHE:O	2:AB:52:ALA:HB3	2.02	0.59
17:AQ:11:VAL:HG12	17:AQ:12:VAL:HG12	1.85	0.59
52:B4:9:LYS:HB3	52:B4:14:CYS:HB2	1.82	0.59
30:DI:51:GLY:O	30:DI:52:LEU:HB2	2.01	0.59
22:DA:2305:U:P	27:DF:132:ARG:HE	2.25	0.59
22:BA:1731:G:O2'	22:BA:1732:C:H3'	2.02	0.59
22:BA:1731:G:C4	22:BA:1733:G:N7	2.71	0.59
10:AJ:65:TYR:HB3	14:AN:95:LEU:CD1	2.27	0.59
22:BA:573:U:O2'	22:BA:574:A:H3'	2.03	0.59
28:BG:8:VAL:CG1	28:BG:9:VAL:N	2.64	0.59
13:AM:10:ASP:OD1	13:AM:44:ILE:HB	2.02	0.59
1:CA:522:C:H41	12:CL:49:ARG:NH2	1.96	0.59
22:DA:1327:A:H2'	22:DA:1328:A:O4'	2.02	0.59
23:DB:38:C:O2'	23:DB:39:A:H5'	2.02	0.59
22:DA:1522:A:H1'	22:DA:1524:G:C4	2.38	0.59
22:BA:459:U:O2'	22:BA:460:A:H5'	2.03	0.59
29:DH:4:ILE:HG23	29:DH:17:ASP:O	2.02	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:CA:457:G:OP2	1:CA:457:G:C8	2.56	0.59
1:AA:1319:A:C8	1:AA:1323:G:C6	2.90	0.59
7:CG:4:ARG:HD2	7:CG:5:VAL:N	2.16	0.59
22:BA:893:C:O2'	22:BA:894:U:H5'	2.03	0.59
35:BN:74:GLU:O	35:BN:77:ALA:HB3	2.03	0.59
47:BZ:39:ASP:CG	47:BZ:44:ARG:HH11	2.06	0.59
39:BR:27:ILE:HD13	39:BR:27:ILE:N	2.15	0.59
35:BN:85:PRO:HA	35:BN:88:ALA:HB2	1.84	0.59
22:DA:263:G:H4'	22:DA:430:A:O4'	2.03	0.59
22:DA:560:C:O2	38:DQ:47:ARG:NH1	2.35	0.59
19:AS:79:TYR:O	19:AS:80:ARG:HB3	2.02	0.59
29:BH:4:ILE:HG23	29:BH:17:ASP:O	2.02	0.59
42:BU:86:PHE:CE1	42:BU:101:THR:HG21	2.37	0.59
39:BR:45:GLU:HA	39:BR:45:GLU:OE2	2.02	0.59
29:BH:99:ILE:HG22	29:BH:99:ILE:O	2.01	0.59
1:AA:1257:A:H4'	1:AA:1258:G:OP2	2.02	0.59
35:BN:102:PHE:HD1	35:BN:107:ASN:HD21	1.50	0.59
39:BR:24:LYS:HA	39:BR:94:THR:HG23	1.84	0.59
1:AA:1469:C:H5'	1:AA:1469:C:C6	2.29	0.59
1:CA:1014:A:H4'	19:CS:13:HIS:ND1	2.17	0.59
19:CS:35:ARG:NH2	19:CS:53:GLY:H	2.00	0.59
22:DA:386:G:H4'	22:DA:387:U:OP2	2.01	0.59
20:AT:27:MET:HE2	20:AT:31:ILE:HD11	1.85	0.59
22:DA:301:G:C5	22:DA:302:C:N4	2.71	0.59
33:BL:76:GLU:C	33:BL:77:ILE:HD12	2.22	0.59
22:DA:483:A:C8	42:DU:44:HIS:CG	2.90	0.59
27:DF:131:VAL:C	27:DF:133:GLU:H	2.06	0.59
1:AA:70:U:O2'	1:AA:71:A:C8	2.56	0.59
22:DA:1255:U:H3'	22:DA:1256:G:C5'	2.31	0.59
12:AL:42:LYS:O	12:AL:44:PRO:HD2	2.01	0.59
29:DH:82:SER:O	29:DH:90:LEU:HD11	2.03	0.59
3:CC:166:TRP:CE3	3:CC:166:TRP:N	2.70	0.59
36:BO:75:GLY:HA3	36:BO:106:LEU:HA	1.83	0.59
41:BT:29:THR:N	41:BT:91:GLN:HE22	2.00	0.59
22:BA:322:A:H5'	22:BA:340:A:H1'	1.84	0.59
10:AJ:33:GLY:O	10:AJ:34:ALA:HB2	2.03	0.59
42:BU:100:GLU:O	42:BU:101:THR:HB	2.02	0.59
18:AR:44:THR:OG1	18:AR:46:THR:HG22	2.02	0.59
1:AA:575:G:O3'	56:AA:1740:HOH:O	2.17	0.59
45:DX:39:VAL:HG22	45:DX:44:ARG:O	2.03	0.59
22:DA:1413:A:C6	22:DA:1414:C:N4	2.71	0.59
22:BA:813:U:H2'	22:BA:814:C:C6	2.38	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:CC:88:LYS:HA	3:CC:91:ALA:HB3	1.84	0.59
1:AA:1489:G:C2'	1:AA:1490:U:H5'	2.32	0.59
39:DR:24:LYS:HA	39:DR:94:THR:HG23	1.84	0.59
22:BA:1567:G:H2'	24:BC:84:PRO:HG3	1.84	0.59
37:BP:87:ARG:NH2	37:BP:111:GLU:HG3	2.17	0.59
3:AC:46:LEU:HB3	3:AC:49:ALA:HB3	1.84	0.59
22:DA:2846:G:OP1	37:DP:51:ASN:HB2	2.03	0.59
5:CE:157:GLY:HA3	8:CH:63:LYS:NZ	2.17	0.59
34:BM:13:HIS:O	34:BM:14:LYS:CB	2.50	0.59
1:CA:1037:C:O2	1:CA:1037:C:H2'	2.00	0.59
22:BA:603:A:H4'	22:BA:604:G:H5'	1.84	0.59
22:DA:2515:C:H42	22:DA:2569:G:H1	1.48	0.59
1:CA:140:U:H2'	1:CA:141:G:O4'	2.02	0.59
23:DB:69:G:H3'	23:DB:70:C:H6	1.66	0.59
22:BA:527:C:H4'	22:BA:528:A:O5'	2.02	0.59
22:DA:1388:G:H2'	22:DA:1389:G:C8	2.38	0.59
22:DA:84:A:C4	22:DA:103:A:N6	2.71	0.59
22:DA:1079:C:O2'	22:DA:1080:A:O4'	2.20	0.59
22:DA:1062:G:O4'	22:DA:1088:A:N7	2.35	0.59
23:DB:42:C:N4	27:DF:87:LYS:HD2	2.18	0.59
22:DA:637:A:OP2	33:DL:128:THR:HG21	2.02	0.59
34:DM:19:GLY:H	34:DM:38:ARG:HH21	1.51	0.59
2:AB:15:PHE:O	2:AB:40:ILE:HG12	2.03	0.59
41:BT:38:ALA:HB1	41:BT:43:ILE:HG22	1.83	0.59
9:CI:49:GLN:N	9:CI:50:PRO:HD2	2.17	0.59
22:DA:1259:G:H2'	22:DA:1260:A:C8	2.38	0.59
13:AM:3:ILE:HA	13:AM:56:ARG:NH1	2.18	0.59
40:DS:71:VAL:O	40:DS:71:VAL:HG13	2.03	0.59
1:CA:1170:A:H2'	1:CA:1171:A:O4'	2.02	0.59
1:CA:951:G:H1'	1:CA:970:C:O2'	2.02	0.59
1:CA:457:G:N3	1:CA:457:G:H2'	2.18	0.59
5:CE:154:ALA:HB1	8:CH:65:PHE:CE2	2.38	0.59
17:CQ:13:SER:HB3	17:CQ:21:VAL:HB	1.85	0.59
16:CP:44:SER:H	16:CP:46:LYS:NZ	2.01	0.59
25:BD:149:ASN:CG	25:BD:150:GLN:H	2.05	0.59
16:CP:67:ILE:HG12	16:CP:72:ALA:HB2	1.84	0.59
22:DA:1574:C:H6	22:DA:1574:C:O5'	1.85	0.59
22:DA:553:G:H2'	22:DA:554:U:O4'	2.03	0.59
24:DC:20:ASN:HB2	24:DC:23:LEU:HD22	1.84	0.59
43:BV:5:ASN:ND2	43:BV:5:ASN:H	2.01	0.59
22:BA:343:C:O2	22:BA:343:C:H2'	2.03	0.59
1:CA:1372:U:H5''	9:CI:71:ILE:HD11	1.84	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:1551:A:C4	22:DA:1552:A:H8	2.20	0.59
22:DA:1553:A:N7	22:DA:1555:G:C6	2.71	0.59
31:BJ:114:LEU:O	31:BJ:117:ALA:HB3	2.02	0.59
2:AB:49:PHE:CB	2:AB:212:TYR:OH	2.50	0.59
1:AA:255:G:H4'	17:AQ:18:LYS:HE3	1.83	0.59
22:DA:2310:C:O2'	22:DA:2311:A:C4'	2.50	0.59
22:DA:353:C:N4	22:DA:354:A:N6	2.51	0.59
26:DE:147:LEU:O	26:DE:148:ILE:HB	2.02	0.59
1:CA:376:G:H5''	16:CP:5:ARG:HB2	1.84	0.59
22:BA:1734:G:C4	22:BA:1735:A:C8	2.91	0.59
49:B1:46:VAL:HG12	49:B1:47:ILE:H	1.68	0.59
2:AB:9:LEU:HB2	2:AB:42:LEU:CD1	2.32	0.59
25:BD:66:GLY:O	25:BD:69:ALA:HB3	2.03	0.59
1:CA:987:G:H2'	1:CA:988:G:C8	2.38	0.59
22:DA:686:U:H6	22:DA:788:A:N1	2.01	0.59
1:CA:1458:G:O2'	20:CT:22:SER:HB3	2.02	0.59
22:BA:2449:U:H4'	22:BA:2450:A:OP1	2.03	0.59
24:BC:259:ASN:O	24:BC:260:LYS:HB2	2.03	0.59
22:DA:2725:A:C4	22:DA:2727:A:N7	2.71	0.59
3:CC:187:GLU:O	3:CC:188:ALA:HB2	2.03	0.59
47:BZ:8:GLN:O	47:BZ:53:MET:O	2.21	0.59
5:CE:80:LEU:HD22	5:CE:146:MET:HE1	1.83	0.59
8:CH:104:SER:HA	8:CH:109:VAL:HG22	1.85	0.59
24:BC:30:ALA:HB3	24:BC:31:PRO:HD3	1.83	0.59
34:BM:78:LEU:HD23	34:BM:79:ALA:N	2.16	0.59
52:B4:7:VAL:HG23	52:B4:8:LYS:H	1.68	0.59
1:AA:636:U:H5''	17:AQ:5:ARG:HG2	1.83	0.59
31:BJ:39:LYS:HA	31:BJ:43:GLU:HG3	1.83	0.59
1:CA:963:G:O2'	1:CA:964:A:H5'	2.03	0.59
1:CA:984:C:O2'	1:CA:985:C:C6	2.55	0.59
22:DA:976:G:H2'	22:DA:977:G:H8	1.68	0.59
22:DA:226:A:C5	22:DA:227:A:N7	2.71	0.59
2:CB:90:PHE:CE2	2:CB:149:GLY:HA3	2.37	0.59
31:BJ:124:VAL:O	31:BJ:125:TYR:HB2	2.03	0.59
1:CA:86:G:HO2'	1:CA:87:C:P	2.26	0.59
22:DA:67:U:H2'	22:DA:68:G:C8	2.33	0.59
22:DA:1252:G:H5''	56:DA:3286:HOH:O	2.02	0.59
6:AF:93:LYS:O	6:AF:94:HIS:HB2	2.03	0.59
1:CA:1134:G:N1	1:CA:1135:U:H1'	2.18	0.59
1:AA:64:G:C8	1:AA:99:C:N4	2.71	0.59
29:DH:120:GLY:O	29:DH:121:VAL:HB	2.02	0.59
22:DA:464:U:C1'	22:DA:686:U:H5	2.14	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:CA:1169:A:H2'	1:CA:1170:A:H8	1.68	0.59
1:AA:707:U:OP1	11:AK:86:LYS:HE3	2.03	0.59
28:DG:44:HIS:HA	28:DG:49:LEU:HA	1.84	0.59
1:AA:865:A:H2'	1:AA:866:C:C6	2.37	0.59
10:AJ:7:ARG:HD3	10:AJ:75:ASP:OD1	2.03	0.59
25:DD:97:SER:HB2	25:DD:99:GLU:HG2	1.84	0.59
22:DA:1593:A:C6	22:DA:1594:U:C4	2.91	0.59
22:BA:39:G:H2'	22:BA:40:U:C6	2.38	0.59
22:BA:747:U:C5	22:BA:2613:U:C5	2.91	0.59
26:DE:138:LEU:HA	26:DE:141:MET:HE2	1.83	0.59
42:BU:6:ARG:O	42:BU:24:VAL:HB	2.03	0.59
12:CL:41:PRO:HD2	12:CL:47:ALA:O	2.03	0.59
27:DF:160:LYS:HD3	27:DF:161:SER:N	2.18	0.59
4:AD:96:ARG:HB3	4:AD:98:ASP:OD1	2.03	0.59
22:DA:590:A:H2'	22:DA:591:U:H6	1.67	0.59
1:CA:1254:A:H2'	1:CA:1255:G:C8	2.38	0.59
44:BW:23:LYS:HD2	44:BW:24:ARG:N	2.18	0.59
20:AT:79:THR:O	20:AT:82:ILE:HG13	2.02	0.59
22:DA:27:G:H1'	22:DA:513:A:H62	1.66	0.59
22:DA:1808:A:N7	45:DX:27:ARG:NH1	2.51	0.59
22:DA:321:U:C2	26:DE:159:LEU:HD21	2.38	0.59
22:DA:1062:G:OP1	22:DA:1070:A:OP2	2.20	0.59
24:BC:12:ARG:CG	24:BC:12:ARG:NH1	2.51	0.59
1:CA:822:U:H2'	1:CA:823:C:C6	2.35	0.59
22:DA:78:U:H2'	22:DA:79:C:C6	2.38	0.59
22:DA:621:A:O2'	22:DA:622:G:O4'	2.21	0.59
41:BT:19:LYS:O	41:BT:20:ALA:C	2.40	0.59
4:AD:173:ASP:O	4:AD:174:ALA:HB2	2.03	0.59
41:DT:14:PRO:O	41:DT:32:LEU:HA	2.02	0.59
30:BI:90:GLY:O	30:BI:92:PRO:HD3	2.03	0.59
37:DP:62:LYS:O	37:DP:63:ILE:HB	2.03	0.59
22:BA:1935:G:H1'	22:BA:1964:G:N2	2.17	0.59
22:DA:1178:C:H2'	22:DA:1179:G:O4'	2.03	0.59
34:DM:42:THR:HG22	34:DM:44:ARG:H	1.68	0.59
22:DA:459:U:C5	22:DA:469:G:N2	2.71	0.59
2:AB:143:LEU:H	2:AB:143:LEU:HD23	1.67	0.59
22:DA:1866:A:H2'	22:DA:1867:G:O4'	2.03	0.59
22:DA:394:C:C2'	22:DA:395:U:H5'	2.32	0.59
37:BP:105:LYS:HA	37:BP:108:ARG:HD3	1.84	0.59
11:AK:100:ASN:HD22	11:AK:106:ILE:HG22	1.67	0.59
22:DA:711:G:C2	22:DA:721:A:C2	2.90	0.59
1:CA:659:U:H2'	1:CA:660:C:H6	1.67	0.59

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:CD:170:LEU:HA	4:CD:182:LYS:HB2	1.84	0.59
1:AA:1331:G:O2'	1:AA:1332:A:P	2.61	0.59
14:CN:27:LYS:HB2	14:CN:45:LEU:CD2	2.32	0.59
34:DM:41:LEU:HD23	34:DM:46:ILE:HG22	1.85	0.59
22:BA:1073:A:N7	22:BA:1074:G:H8	2.02	0.58
22:BA:1079:C:N4	22:BA:1088:A:C2	2.71	0.58
4:CD:2:ARG:CZ	4:CD:114:ARG:HD3	2.32	0.58
44:BW:23:LYS:HE3	44:BW:24:ARG:O	2.02	0.58
22:DA:37:C:H2'	22:DA:38:A:O4'	2.03	0.58
19:CS:38:THR:N	19:CS:69:LYS:HD3	2.18	0.58
22:DA:2345:G:H4'	22:DA:2346:A:C5'	2.32	0.58
1:CA:261:U:H2'	1:CA:263:A:OP2	2.02	0.58
1:AA:843:U:H2'	1:AA:844:G:H5'	1.85	0.58
25:BD:133:THR:HG23	25:BD:134:HIS:HD2	1.66	0.58
22:DA:2066:C:O2'	22:DA:2067:G:H5'	2.02	0.58
1:AA:1461:G:O2'	1:AA:1462:C:H5'	2.04	0.58
22:DA:1475:G:O2'	22:DA:1476:U:C6	2.55	0.58
1:CA:1084:G:H5'	1:CA:1102:A:OP2	2.03	0.58
37:BP:33:GLU:CA	37:BP:38:ARG:HH11	2.15	0.58
45:BX:34:SER:HA	45:BX:48:LEU:O	2.03	0.58
22:DA:1378:A:O2'	22:DA:1379:U:H3'	2.03	0.58
10:CJ:30:LYS:HG3	10:CJ:36:VAL:HG22	1.85	0.58
28:DG:162:ARG:HB2	28:DG:166:GLU:CB	2.32	0.58
28:BG:10:VAL:HB	28:BG:14:VAL:HG21	1.84	0.58
3:CC:84:GLU:C	3:CC:86:LEU:N	2.57	0.58
1:CA:1033:G:HO2'	1:CA:1034:G:H5''	1.68	0.58
36:BO:52:SER:HB2	36:BO:54:VAL:HG12	1.85	0.58
1:AA:82:G:N2	1:AA:84:U:N3	2.51	0.58
22:BA:900:A:H2'	22:BA:901:C:O4'	2.02	0.58
22:BA:1315:C:O2'	22:BA:1316:U:H5'	2.03	0.58
22:BA:693:A:H2'	22:BA:694:U:O4'	2.03	0.58
26:BE:48:THR:HG22	26:BE:86:ALA:HB3	1.85	0.58
22:BA:1185:G:H5''	22:BA:1186:G:P	2.43	0.58
3:CC:129:PHE:CE1	3:CC:156:LEU:HB3	2.37	0.58
7:AG:136:LYS:O	7:AG:140:VAL:HG23	2.03	0.58
22:DA:1924:C:O2'	22:DA:1925:C:H5'	2.03	0.58
42:DU:47:PRO:HB3	42:DU:54:PRO:HG2	1.85	0.58
28:DG:148:ARG:HB2	28:DG:152:ARG:NH2	2.18	0.58
26:BE:23:PHE:CD1	26:BE:111:GLU:HG3	2.37	0.58
1:CA:784:A:N6	1:CA:799:G:C6	2.70	0.58
24:DC:147:PRO:CD	24:DC:184:GLU:HG3	2.32	0.58
22:DA:167:A:H2'	22:DA:168:G:O4'	2.03	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:CA:1206:G:C6	1:CA:1207:G:C5	2.90	0.58
1:CA:204:G:H2'	1:CA:205:A:C8	2.38	0.58
1:AA:481:G:O2'	1:AA:482:A:C8	2.56	0.58
1:AA:1279:G:H1'	1:AA:1282:C:H42	1.63	0.58
2:CB:133:ALA:HA	2:CB:137:THR:HG21	1.85	0.58
30:BI:100:ILE:HG22	30:BI:101:SER:N	2.11	0.58
1:CA:754:C:H2'	1:CA:754:C:O2	2.03	0.58
1:CA:322:C:O2'	20:CT:17:ARG:HG3	2.02	0.58
43:BV:44:HIS:CE1	43:BV:85:LYS:HB2	2.38	0.58
45:BX:31:ASN:O	45:BX:51:SER:HA	2.03	0.58
22:DA:1733:G:H5'	22:DA:1733:G:C8	2.38	0.58
15:AO:35:ILE:HG22	15:AO:36:ASN:N	2.18	0.58
25:BD:121:THR:HB	25:BD:127:PHE:CD1	2.38	0.58
1:AA:439:U:H1'	4:AD:118:SER:O	2.03	0.58
22:DA:2718:G:OP1	37:DP:97:TYR:HD1	1.86	0.58
1:CA:723:U:H6	1:CA:723:U:O5'	1.86	0.58
24:DC:143:VAL:HB	24:DC:153:LEU:HB3	1.83	0.58
1:CA:33:A:H2'	1:CA:34:C:H6	1.66	0.58
46:DY:1:MET:H2	46:DY:5:GLU:CG	2.15	0.58
28:BG:93:TYR:O	28:BG:94:ARG:O	2.21	0.58
12:CL:2:THR:HB	12:CL:5:GLN:HB2	1.83	0.58
10:AJ:44:THR:HG23	10:AJ:70:HIS:HA	1.85	0.58
31:BJ:44:TYR:CD1	31:BJ:44:TYR:O	2.57	0.58
23:DB:109:A:O2'	23:DB:110:C:C6	2.53	0.58
6:AF:38:ARG:HH11	6:AF:38:ARG:CG	2.01	0.58
22:DA:1349:C:H2'	22:DA:1350:C:C5	2.39	0.58
19:AS:28:LYS:HB3	19:AS:29:PRO:CD	2.19	0.58
22:DA:1062:G:H22	22:DA:1077:A:H2	1.50	0.58
17:AQ:21:VAL:HA	17:AQ:43:LEU:O	2.04	0.58
31:BJ:140:LEU:HD13	31:BJ:140:LEU:C	2.24	0.58
1:AA:1286:U:O2	1:AA:1286:U:H2'	2.02	0.58
1:CA:410:G:OP1	4:CD:25:ARG:HD2	2.03	0.58
1:AA:507:C:C3'	1:AA:508:U:H5''	2.31	0.58
28:DG:85:LYS:O	28:DG:86:LEU:HG	2.03	0.58
40:BS:88:ARG:NH2	40:BS:88:ARG:HG2	2.17	0.58
22:DA:989:G:OP2	47:DZ:11:SER:HB2	2.04	0.58
22:DA:1303:G:O2'	22:DA:1304:A:O5'	2.21	0.58
22:BA:2813:A:C2	22:BA:2887:A:N6	2.66	0.58
11:CK:126:ARG:HB2	21:CU:33:ARG:HD2	1.84	0.58
22:BA:475:C:C4	22:BA:481:G:O6	2.56	0.58
1:AA:6:G:HO2'	1:AA:7:A:H8	1.50	0.58
8:CH:1:SER:C	8:CH:3:GLN:H	2.05	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:172:A:O2'	22:DA:173:A:H5'	2.02	0.58
27:DF:8:LYS:HB2	27:DF:8:LYS:NZ	2.18	0.58
28:DG:7:PRO:O	28:DG:8:VAL:HB	2.03	0.58
3:AC:21:TRP:CD1	3:AC:58:ARG:HG2	2.38	0.58
22:DA:2415:G:C6	22:DA:2416:C:C4	2.90	0.58
24:BC:144:GLU:HA	24:BC:151:GLY:HA2	1.85	0.58
22:DA:1635:A:H5'	22:DA:1635:A:H8	1.67	0.58
32:DK:2:ILE:HB	32:DK:33:ALA:HB3	1.85	0.58
22:BA:2292:U:H2'	22:BA:2293:G:H8	1.68	0.58
22:DA:716:A:H2'	22:DA:717:C:H5''	1.85	0.58
1:AA:1028:C:C2	1:AA:1034:G:C2	2.91	0.58
6:CF:98:GLU:O	6:CF:99:ALA:HB3	2.04	0.58
22:DA:2516:A:O2'	22:DA:2517:C:H5'	2.04	0.58
1:CA:618:C:H5''	1:CA:619:U:H5''	1.86	0.58
8:CH:38:VAL:HA	8:CH:41:GLU:HG3	1.85	0.58
7:CG:78:ARG:HA	7:CG:84:TYR:HB2	1.85	0.58
22:DA:1200:C:H6	22:DA:1200:C:O5'	1.86	0.58
1:CA:1416:G:N2	1:CA:1485:U:H1'	2.18	0.58
38:DQ:71:ASN:ND2	38:DQ:106:THR:HA	2.18	0.58
17:AQ:37:ILE:H	17:AQ:37:ILE:HD12	1.67	0.58
42:DU:94:PHE:HD2	42:DU:94:PHE:O	1.87	0.58
12:CL:33:CYS:HB3	12:CL:77:SER:O	2.02	0.58
40:DS:84:ARG:HB3	40:DS:96:ILE:HG23	1.85	0.58
1:CA:263:A:OP1	20:CT:73:ARG:NH1	2.33	0.58
22:DA:1612:C:O2'	22:DA:1613:G:O5'	2.21	0.58
22:BA:2052:A:C2	22:BA:2053:G:C8	2.92	0.58
10:AJ:53:ILE:HG13	14:AN:84:ARG:CZ	2.33	0.58
31:DJ:3:THR:HG21	38:DQ:60:TRP:HE1	1.69	0.58
10:AJ:57:VAL:CG2	10:AJ:58:ASN:H	2.08	0.58
7:AG:113:LYS:HB2	7:AG:117:LEU:HD12	1.85	0.58
1:AA:1282:C:H2'	1:AA:1283:U:C6	2.38	0.58
16:CP:68:SER:HB3	16:CP:71:VAL:HG13	1.86	0.58
1:AA:1299:A:O2'	1:AA:1300:G:H4'	2.03	0.58
22:DA:1048:A:N6	22:DA:1111:A:C4	2.71	0.58
22:DA:2758:A:C2'	22:DA:2759:G:H5'	2.32	0.58
25:DD:9:VAL:HG22	37:DP:4:ILE:HD11	1.86	0.58
1:CA:1130:A:N7	1:CA:1146:A:N6	2.52	0.58
51:B3:26:ALA:O	51:B3:27:ASN:CB	2.47	0.58
8:CH:28:SER:HB3	8:CH:56:PRO:HB2	1.84	0.58
22:BA:2637:U:C2'	22:BA:2638:G:H5'	2.34	0.58
10:AJ:80:THR:HG22	10:AJ:82:LYS:H	1.68	0.58
32:BK:105:ARG:HD3	32:BK:105:ARG:N	2.17	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:AJ:74:VAL:HG12	10:AJ:75:ASP:N	2.17	0.58
1:AA:1343:G:O3'	9:AI:123:ARG:HB3	2.03	0.58
22:BA:613:A:C8	22:BA:616:A:N1	2.71	0.58
1:CA:423:G:H2'	1:CA:424:G:O4'	2.04	0.58
24:DC:56:GLY:HA3	24:DC:213:ARG:O	2.03	0.58
27:BF:33:ILE:O	27:BF:90:LEU:HB2	2.03	0.58
45:DX:6:VAL:HG22	45:DX:7:THR:HG23	1.84	0.58
22:BA:2311:A:H1'	27:BF:78:ILE:HD13	1.86	0.58
11:CK:34:THR:HA	11:CK:41:LEU:HG	1.85	0.58
2:CB:216:VAL:C	2:CB:218:ALA:H	2.07	0.58
4:CD:18:LEU:HD22	4:CD:63:ILE:HG12	1.85	0.58
39:DR:51:VAL:HB	39:DR:52:PRO:HD2	1.85	0.58
22:BA:2354:C:C4'	44:BW:31:LEU:HD22	2.32	0.58
22:DA:35:G:N2	22:DA:36:G:H1'	2.19	0.58
22:DA:2386:A:O2'	22:DA:2387:U:C6	2.56	0.58
1:AA:1072:G:H2'	1:AA:1073:U:C6	2.39	0.58
22:BA:1506:U:H2'	22:BA:1507:C:C6	2.38	0.58
22:DA:1358:G:C6	56:DA:3417:HOH:O	2.52	0.58
33:BL:91:ASP:CB	33:BL:94:THR:HB	2.34	0.58
33:BL:91:ASP:HB3	33:BL:94:THR:HB	1.85	0.58
5:CE:79:THR:HA	5:CE:121:ASN:CG	2.24	0.58
22:BA:783:A:C8	22:BA:784:G:H4'	2.38	0.58
34:DM:27:SER:N	34:DM:66:ARG:HH22	1.97	0.58
22:DA:600:G:C5'	26:DE:27:LEU:HD22	2.33	0.58
16:CP:78:VAL:C	16:CP:80:LYS:H	2.06	0.58
1:AA:1022:A:H2'	1:AA:1023:U:O4'	2.04	0.58
6:AF:91:ARG:HG3	6:AF:92:THR:H	1.69	0.58
1:CA:814:A:C5'	1:CA:1511:G:H4'	2.30	0.58
29:BH:137:GLU:HG3	29:BH:138:VAL:N	2.19	0.58
8:AH:17:GLN:HE21	8:AH:71:VAL:HG23	1.66	0.58
22:DA:921:C:H2'	22:DA:922:C:H5'	1.85	0.58
24:DC:83:ASP:CB	24:DC:90:ILE:HD12	2.33	0.58
17:CQ:3:LYS:HZ2	17:CQ:6:THR:HG21	1.68	0.58
37:BP:33:GLU:HB2	37:BP:38:ARG:HH11	1.67	0.58
22:DA:2808:G:O2'	22:DA:2809:A:C8	2.55	0.58
1:AA:1006:G:H2'	1:AA:1007:U:O4'	2.03	0.58
33:DL:123:ARG:HG2	33:DL:143:GLU:HB3	1.85	0.58
27:DF:31:GLU:C	27:DF:95:MET:HE1	2.23	0.58
1:AA:1452:C:H4'	1:AA:1453:G:C4	2.38	0.58
41:BT:24:MET:HG3	41:BT:29:THR:HG23	1.84	0.58
1:AA:723:U:H5'	21:AU:48:LYS:HE2	1.85	0.58
1:AA:978:A:OP2	1:AA:1362:A:N6	2.23	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
24:DC:77:VAL:HG23	24:DC:111:ALA:HA	1.86	0.58
16:AP:5:ARG:HA	16:AP:68:SER:OG	2.03	0.58
34:DM:8:LYS:HA	34:DM:8:LYS:HE3	1.86	0.58
22:BA:1266:G:H5''	40:BS:15:GLN:HE22	1.68	0.58
13:CM:106:ARG:HA	13:CM:110:GLY:O	2.02	0.58
22:BA:1826:G:H2'	22:BA:1827:U:H6	1.69	0.58
7:AG:96:ASN:O	7:AG:100:MET:HG3	2.02	0.58
30:BI:3:LYS:CD	30:BI:4:VAL:HG23	2.33	0.58
22:DA:708:G:H2'	22:DA:709:U:H6	1.68	0.58
22:BA:1223:G:OP2	39:BR:68:ARG:NH1	2.37	0.58
21:CU:31:VAL:O	21:CU:32:ARG:C	2.41	0.58
50:D2:11:LYS:NZ	56:D2:101:HOH:O	2.37	0.58
2:CB:84:LEU:O	2:CB:84:LEU:HG	2.03	0.58
38:BQ:18:LYS:O	38:BQ:21:LYS:HG3	2.03	0.58
22:BA:1786:A:C5	22:BA:1938:A:C2	2.92	0.58
1:CA:960:U:H4'	1:CA:961:U:C5'	2.30	0.58
1:CA:1219:A:OP1	14:CN:52:ARG:HG3	2.03	0.58
38:DQ:6:GLY:C	38:DQ:8:ILE:H	2.07	0.58
22:DA:860:U:O4	22:DA:2268:A:C5	2.57	0.58
51:D3:29:ARG:HH21	51:D3:29:ARG:HG2	1.68	0.58
22:DA:324:A:O2'	22:DA:325:G:O4'	2.16	0.58
42:DU:14:THR:HB	42:DU:68:ASN:HB3	1.84	0.58
22:DA:478:A:C6	22:DA:480:A:C5	2.92	0.58
26:BE:175:ILE:HG23	26:BE:175:ILE:O	2.04	0.58
1:CA:238:A:H2'	1:CA:239:U:C4'	2.33	0.58
22:DA:1048:A:C6	22:DA:1111:A:C2	2.90	0.58
1:CA:254:G:O2'	1:CA:255:G:H5'	2.03	0.58
28:DG:103:ASN:O	28:DG:104:LEU:HD23	2.03	0.58
35:BN:96:ARG:HH22	35:BN:116:VAL:HG23	1.69	0.58
22:BA:1820:U:H4'	22:BA:1821:A:OP2	2.04	0.58
26:BE:45:ALA:O	26:BE:46:GLN:HG2	2.03	0.58
26:DE:149:ILE:HG23	26:DE:188:MET:N	2.17	0.58
54:BA:3135:EM1:H38A	54:BA:3135:EM1:C13	2.34	0.58
1:CA:512:U:O2'	1:CA:513:C:C6	2.55	0.58
18:CR:19:GLU:CD	18:CR:20:ILE:H	2.06	0.58
9:AI:48:ARG:C	9:AI:50:PRO:HD2	2.23	0.58
29:DH:2:GLN:O	29:DH:3:VAL:O	2.22	0.58
38:DQ:111:LYS:HE2	39:DR:48:LYS:HD3	1.86	0.58
1:CA:218:U:H2'	1:CA:219:U:O4'	2.04	0.58
22:BA:1857:G:N2	22:BA:1884:G:O2'	2.37	0.58
22:BA:914:G:C8	22:BA:914:G:H5''	2.38	0.58
14:AN:48:GLN:NE2	14:AN:48:GLN:HA	2.19	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:AH:34:ALA:O	8:AH:37:ASN:HB3	2.03	0.58
38:BQ:91:ARG:HH21	38:BQ:93:ILE:HD13	1.66	0.58
39:BR:39:LEU:CD2	39:BR:39:LEU:N	2.65	0.58
23:DB:58:A:H2'	23:DB:59:A:C8	2.38	0.58
22:DA:1807:G:H2'	22:DA:1808:A:H5'	1.85	0.58
24:DC:146:LYS:HG3	24:DC:149:LYS:HD3	1.85	0.58
5:AE:148:SER:HB2	5:AE:151:MET:HB2	1.85	0.58
5:AE:80:LEU:HD12	5:AE:146:MET:CE	2.34	0.58
11:CK:81:LEU:HD11	11:CK:104:PHE:CD2	2.38	0.58
22:DA:1140:C:O2'	22:DA:1141:U:H5'	2.04	0.58
1:AA:1138:G:C2'	1:AA:1138:G:N3	2.64	0.58
22:DA:2720:U:H5''	37:DP:52:ARG:NH2	2.16	0.58
32:BK:108:ARG:HG2	32:BK:108:ARG:NH1	2.19	0.58
22:DA:923:G:H1'	44:DW:23:LYS:HZ1	1.66	0.58
22:BA:588:U:H2'	22:BA:589:U:C6	2.39	0.58
22:DA:1287:A:H5'	35:DN:103:ARG:NH1	2.19	0.58
22:DA:845:A:N1	22:DA:932:U:O2	2.37	0.58
22:DA:631:A:O2'	33:DL:66:PHE:HB3	2.04	0.58
22:DA:684:G:C2	22:DA:794:A:C2	2.92	0.58
22:DA:1773:A:H2'	22:DA:1774:C:O4'	2.04	0.58
1:CA:1050:G:O2'	1:CA:1051:C:C6	2.56	0.58
43:DV:73:LYS:HD3	43:DV:74:ALA:H	1.68	0.58
22:DA:1826:G:C6	22:DA:1827:U:C4	2.92	0.58
1:AA:1248:A:H2	9:AI:71:ILE:HD11	1.69	0.58
29:BH:104:THR:O	29:BH:104:THR:HG23	2.03	0.58
4:AD:21:LYS:HD3	4:AD:21:LYS:O	2.03	0.58
40:DS:39:THR:HG22	40:DS:40:ASN:N	2.17	0.58
42:BU:52:ASN:C	42:BU:54:PRO:HD2	2.24	0.58
22:BA:2267:A:H5''	22:BA:2268:A:H5'	1.84	0.58
22:DA:2001:C:H4'	22:DA:2689:U:O2'	2.04	0.58
1:CA:223:A:C6	1:CA:224:U:C4	2.92	0.58
44:BW:23:LYS:HD2	44:BW:24:ARG:H	1.67	0.58
22:DA:35:G:H21	22:DA:36:G:H1'	1.68	0.58
22:DA:1249:U:O2'	22:DA:1250:G:OP2	2.19	0.58
22:DA:2297:A:O2'	22:DA:2298:A:C8	2.36	0.58
22:DA:858:G:C4	22:DA:2268:A:C2	2.92	0.58
51:D3:32:LEU:HD23	51:D3:35:LYS:HE2	1.86	0.58
20:AT:24:ARG:O	20:AT:28:ARG:HG2	2.03	0.58
20:AT:28:ARG:HA	20:AT:31:ILE:HD12	1.86	0.58
22:DA:2310:C:O2'	22:DA:2311:A:C5'	2.52	0.58
22:DA:2443:C:O2'	22:DA:2444:G:H5'	2.04	0.58
26:DE:58:LYS:HB3	26:DE:60:TRP:HE1	1.68	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:CA:243:A:H4'	1:CA:244:U:OP2	2.04	0.58
41:BT:31:VAL:C	41:BT:32:LEU:HD23	2.23	0.58
1:CA:1215:G:O2'	1:CA:1216:A:C8	2.50	0.58
28:DG:94:ARG:CZ	28:DG:105:SER:HB2	2.33	0.58
22:DA:46:G:C2	22:DA:47:C:C5	2.91	0.58
6:CF:3:HIS:CE1	6:CF:95:ALA:H	2.22	0.58
7:CG:140:VAL:C	7:CG:142:ARG:H	2.06	0.58
37:BP:33:GLU:HA	37:BP:38:ARG:HH11	1.69	0.58
22:DA:2788:C:H1'	22:DA:2809:A:H2	1.69	0.58
22:DA:2732:G:H5''	22:DA:2733:A:O4'	2.04	0.58
27:BF:24:VAL:O	27:BF:27:VAL:HG12	2.04	0.58
32:DK:101:GLY:O	32:DK:120:PRO:HB3	2.04	0.58
22:DA:1494:A:C2	22:DA:1495:A:C4	2.92	0.58
1:CA:68:G:H5'	1:CA:171:A:H1'	1.85	0.58
1:AA:1034:G:H2'	1:AA:1035:A:C8	2.38	0.58
5:CE:80:LEU:O	5:CE:80:LEU:HD13	2.03	0.58
22:DA:2714:G:H2'	22:DA:2715:C:H6	1.68	0.58
23:DB:81:G:C6	23:DB:82:U:C4	2.92	0.58
22:DA:1669:A:OP2	56:DA:3711:HOH:O	2.17	0.58
1:AA:591:U:H2'	1:AA:592:G:H8	1.68	0.58
9:CI:128:LYS:O	9:CI:129:ARG:HB2	2.04	0.58
22:BA:1419:A:N7	22:BA:1421:G:C6	2.72	0.58
5:CE:152:VAL:HG21	8:CH:98:LEU:HD22	1.84	0.58
20:AT:29:THR:HA	20:AT:32:LYS:HG2	1.85	0.58
22:BA:1508:A:O2'	22:BA:1509:A:OP2	2.20	0.58
22:DA:307:G:N2	22:DA:310:A:C8	2.72	0.58
17:AQ:13:SER:O	17:AQ:16:MET:SD	2.62	0.58
22:DA:211:C:H2'	22:DA:212:G:O4'	2.04	0.58
22:DA:647:G:C8	22:DA:648:G:N7	2.72	0.58
1:CA:1241:G:N3	1:CA:1242:G:N7	2.52	0.58
28:DG:163:TYR:N	28:DG:163:TYR:CD2	2.71	0.58
22:BA:2149:U:O2'	22:BA:2150:C:O5'	2.20	0.58
2:AB:221:ARG:HG2	2:AB:221:ARG:HH11	1.67	0.58
2:AB:67:LEU:HA	2:AB:89:PHE:O	2.04	0.58
32:BK:71:ARG:CB	32:BK:72:PRO:HD3	2.33	0.58
32:DK:7:MET:CG	32:DK:17:ARG:HH12	2.17	0.58
6:CF:51:ILE:O	6:CF:54:LEU:HB2	2.03	0.58
25:BD:9:VAL:HG13	25:BD:26:VAL:O	2.04	0.58
26:BE:45:ALA:C	26:BE:46:GLN:HG2	2.24	0.58
1:AA:1387:G:H2'	1:AA:1388:C:H6	1.64	0.58
32:BK:59:LYS:HG3	32:BK:89:ASN:HD22	1.69	0.58
22:DA:1739:A:C6	22:DA:1740:G:C5	2.92	0.58

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:1510:G:N2	22:DA:1511:G:N3	2.50	0.58
22:BA:899:A:HO2'	22:BA:900:A:H8	1.50	0.58
22:DA:259:G:C6	22:DA:260:G:N7	2.72	0.58
11:CK:40:ALA:O	11:CK:41:LEU:HD23	2.04	0.58
34:DM:67:VAL:HG21	34:DM:102:LEU:HD12	1.84	0.58
1:AA:1417:G:C6	1:AA:1482:G:C6	2.92	0.58
1:CA:1270:G:H2'	1:CA:1271:A:H8	1.69	0.58
10:AJ:36:VAL:HG22	10:AJ:76:ILE:HG23	1.86	0.58
1:CA:392:C:C2	1:CA:393:A:C8	2.91	0.58
22:BA:1050:A:C2	22:BA:2751:G:C4	2.92	0.58
7:CG:12:LEU:HD22	7:CG:13:PRO:O	2.03	0.58
36:BO:2:ASP:OD1	36:BO:3:LYS:HG2	2.04	0.58
22:DA:2298:A:C6	22:DA:2321:U:C5	2.92	0.58
22:DA:1807:G:C2'	22:DA:1808:A:H5'	2.33	0.58
2:AB:22:TRP:CE3	2:AB:24:PRO:HA	2.38	0.58
36:BO:31:THR:HG23	36:BO:33:ARG:H	1.69	0.58
38:BQ:97:ILE:HD11	38:BQ:105:PHE:N	2.18	0.58
1:AA:1055:A:H8	1:AA:1055:A:O5'	1.86	0.58
7:AG:68:VAL:HB	7:AG:99:ALA:HB1	1.84	0.58
39:DR:82:HIS:O	39:DR:82:HIS:CG	2.57	0.58
14:AN:11:LYS:O	14:AN:15:LEU:HG	2.04	0.58
34:BM:71:LYS:HD3	34:BM:95:LEU:HD11	1.86	0.58
22:BA:2262:U:H4'	22:BA:2328:A:H2	1.69	0.58
1:AA:1361:G:C3'	1:AA:1362:A:H5''	2.34	0.58
1:CA:747:A:H2'	1:CA:748:G:O4'	2.03	0.58
22:DA:1866:A:O2'	22:DA:1867:G:H5'	2.04	0.58
8:AH:88:LYS:HG3	8:AH:89:ASP:H	1.68	0.58
1:AA:957:U:O2	1:AA:959:A:H8	1.87	0.58
32:BK:57:VAL:C	32:BK:58:LEU:HD23	2.24	0.58
1:AA:1418:A:C2	1:AA:1483:A:C2	2.92	0.58
22:DA:453:A:H4'	22:DA:472:A:H62	1.69	0.58
33:BL:131:ALA:O	33:BL:135:ILE:HD12	2.04	0.58
22:DA:85:G:HO2'	22:DA:86:G:H8	1.51	0.58
1:AA:666:G:H5'	1:AA:726:C:H1'	1.86	0.58
4:CD:2:ARG:NH2	4:CD:114:ARG:NH1	2.51	0.57
1:CA:5:U:H4'	1:CA:6:G:H5'	1.84	0.57
22:DA:2344:U:H2'	49:D1:35:LEU:O	2.04	0.57
22:DA:2392:A:H2	33:DL:55:MET:SD	2.26	0.57
1:CA:112:G:C2	1:CA:330:C:N4	2.72	0.57
29:BH:68:ARG:HH21	29:BH:72:ILE:HG21	1.69	0.57
22:BA:2681:C:C2	22:BA:2724:U:O4	2.57	0.57
31:BJ:64:VAL:HG13	31:BJ:65:THR:O	2.04	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
40:BS:20:VAL:HG21	40:BS:43:ALA:HB3	1.86	0.57
1:AA:182:A:N3	1:AA:184:G:C8	2.71	0.57
22:DA:2400:G:H2'	22:DA:2401:U:O4'	2.04	0.57
22:BA:2340:A:H2'	22:BA:2341:G:H8	1.69	0.57
34:BM:43:ALA:O	34:BM:46:ILE:HG13	2.03	0.57
29:DH:3:VAL:H	29:DH:39:ALA:HB2	1.68	0.57
22:BA:2393:U:H5'	33:BL:60:ARG:O	2.04	0.57
1:AA:1251:A:H2'	1:AA:1252:A:C8	2.39	0.57
39:BR:46:GLU:O	39:BR:46:GLU:OE1	2.22	0.57
22:DA:995:C:O2'	38:DQ:93:ILE:HD12	2.03	0.57
31:BJ:56:VAL:CG1	31:BJ:57:LEU:N	2.67	0.57
31:DJ:25:LEU:HB2	31:DJ:62:VAL:HG21	1.85	0.57
41:BT:32:LEU:H	41:BT:83:ALA:CB	2.11	0.57
22:BA:569:U:H1'	22:BA:947:A:O4'	2.04	0.57
22:BA:2134:A:OP1	22:BA:2134:A:H8	1.86	0.57
22:BA:100:U:C4'	22:BA:101:A:O5'	2.51	0.57
41:BT:38:ALA:HB1	41:BT:43:ILE:HG21	1.86	0.57
22:BA:1110:G:O2'	22:BA:1111:A:O5'	2.22	0.57
49:D1:25:ASN:OD1	49:D1:28:THR:HG23	2.03	0.57
50:B2:42:LEU:CD2	50:B2:42:LEU:H	2.16	0.57
22:DA:2544:G:H2'	22:DA:2545:G:H8	1.69	0.57
1:AA:211:G:C6	1:AA:212:G:H1'	2.38	0.57
19:CS:60:PHE:CG	19:CS:61:VAL:N	2.72	0.57
50:D2:28:ARG:C	50:D2:30:VAL:H	2.08	0.57
35:BN:28:LEU:HD23	35:BN:48:VAL:HG11	1.86	0.57
28:DG:116:LEU:HD13	28:DG:120:ILE:O	2.04	0.57
38:DQ:26:ALA:O	38:DQ:30:VAL:HB	2.04	0.57
22:BA:1268:A:C2	22:BA:2013:A:C4	2.92	0.57
22:DA:1510:G:O2'	22:DA:1511:G:O4'	2.22	0.57
1:AA:1234:C:C2'	1:AA:1235:U:H5'	2.33	0.57
47:BZ:8:GLN:HB3	47:BZ:31:ILE:HA	1.86	0.57
22:DA:591:U:H1'	51:D3:1:PRO:HD2	1.85	0.57
22:BA:1858:A:H2'	22:BA:1859:U:C6	2.40	0.57
48:B0:11:LYS:HA	48:B0:14:MET:HG3	1.86	0.57
1:CA:615:G:H2'	1:CA:616:G:H8	1.70	0.57
22:BA:2678:C:H2'	22:BA:2679:A:O4'	2.04	0.57
22:DA:254:G:N7	51:D3:4:LYS:HE2	2.19	0.57
46:BY:17:GLU:HG3	46:BY:18:LEU:N	2.19	0.57
38:DQ:101:ASP:HB2	39:DR:2:TYR:OH	2.03	0.57
23:DB:30:C:O2	23:DB:30:C:H2'	2.03	0.57
28:BG:163:TYR:O	28:BG:164:ALA:HB2	2.04	0.57
22:DA:779:U:OP1	24:DC:48:ILE:HG13	2.05	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:CA:791:G:C2'	1:CA:792:A:H5'	2.34	0.57
6:AF:40:GLU:HB2	6:AF:42:TRP:HE1	1.69	0.57
22:BA:923:G:H5'	44:BW:25:PHE:CZ	2.39	0.57
21:CU:16:ARG:HG3	21:CU:19:LYS:CG	2.21	0.57
19:CS:35:ARG:NH2	19:CS:51:HIS:CD2	2.73	0.57
10:AJ:53:ILE:CG2	10:AJ:61:ALA:HB1	2.24	0.57
22:DA:1071:G:O2'	22:DA:1072:C:O5'	2.21	0.57
1:CA:328:C:C1'	1:CA:329:A:OP2	2.52	0.57
22:DA:1965:C:H3'	22:DA:1966:A:H5''	1.86	0.57
26:DE:178:VAL:HG13	26:DE:179:SER:N	2.17	0.57
1:CA:666:G:C6	1:CA:741:G:C6	2.92	0.57
10:CJ:10:LEU:HB2	10:CJ:72:ARG:HB2	1.86	0.57
32:DK:61:VAL:HG13	32:DK:87:LEU:HD21	1.86	0.57
27:DF:111:ARG:HG3	27:DF:135:ILE:HG12	1.86	0.57
5:CE:35:LEU:HD11	5:CE:136:VAL:HG11	1.86	0.57
30:BI:52:LEU:HD11	30:BI:81:LYS:HE2	1.86	0.57
22:BA:2649:C:H2'	22:BA:2650:U:C6	2.39	0.57
22:DA:1676:A:H2'	22:DA:1677:A:O4'	2.04	0.57
1:CA:765:G:C6	1:CA:812:G:C5	2.92	0.57
4:AD:69:ARG:HE	4:AD:69:ARG:HA	1.69	0.57
41:BT:28:ASN:HA	41:BT:91:GLN:CD	2.25	0.57
27:BF:4:HIS:O	27:BF:7:TYR:HB3	2.04	0.57
1:AA:1324:A:H2'	1:AA:1325:C:C6	2.39	0.57
1:AA:1314:C:OP2	19:AS:5:LYS:HD2	2.03	0.57
22:DA:2629:U:H5''	22:DA:2630:G:OP1	2.04	0.57
2:AB:58:LYS:HZ1	2:AB:62:ARG:HG3	1.68	0.57
15:CO:28:VAL:HG13	15:CO:62:ARG:HG3	1.86	0.57
1:AA:818:G:O2'	1:AA:819:A:H5'	2.04	0.57
22:BA:959:A:H62	34:BM:82:MET:HE3	1.69	0.57
22:DA:777:G:N7	22:DA:793:A:H2	2.02	0.57
1:CA:801:U:H2'	1:CA:802:A:H8	1.69	0.57
28:BG:88:LEU:HD11	28:BG:95:ALA:HB2	1.85	0.57
28:BG:154:GLU:OE1	28:BG:157:LYS:HB2	2.04	0.57
29:BH:46:PHE:O	29:BH:46:PHE:HD2	1.87	0.57
41:DT:40:LYS:HE3	41:DT:58:VAL:O	2.04	0.57
22:BA:1068:G:H2'	22:BA:1069:A:H5'	1.86	0.57
21:CU:24:LYS:CG	21:CU:25:ALA:N	2.67	0.57
1:CA:977:A:H1'	1:CA:1223:C:H42	1.69	0.57
1:CA:974:A:H5''	14:CN:70:HIS:CE1	2.38	0.57
51:D3:33:THR:HG23	51:D3:34:LYS:N	2.20	0.57
22:DA:246:C:C2'	22:DA:247:G:H5'	2.34	0.57
22:DA:1342:A:C5	22:DA:1345:C:N4	2.73	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:1338:G:H4'	41:DT:18:GLU:HG3	1.86	0.57
22:DA:1131:G:O6	22:DA:2024:G:O2'	2.22	0.57
22:DA:82:U:N3	22:DA:83:A:C8	2.72	0.57
1:CA:330:C:O2'	1:CA:331:G:O5'	2.21	0.57
22:DA:489:G:C4	22:DA:491:G:C8	2.92	0.57
50:D2:34:ARG:HB3	50:D2:42:LEU:CD1	2.34	0.57
22:DA:1830:C:C4'	24:DC:14:HIS:HE1	2.18	0.57
1:CA:1143:G:H2'	1:CA:1144:G:C8	2.39	0.57
28:DG:163:TYR:N	28:DG:163:TYR:HD2	2.02	0.57
1:AA:1181:G:O2'	1:AA:1182:G:N7	2.37	0.57
22:BA:511:U:O4	22:BA:512:G:C2	2.57	0.57
12:AL:81:ILE:HD11	12:AL:94:TYR:CG	2.39	0.57
5:AE:14:LEU:CB	5:AE:36:THR:HG22	2.34	0.57
22:DA:1320:C:H5	22:DA:1329:U:H5''	1.70	0.57
22:DA:2847:U:C2'	22:DA:2848:G:H5'	2.33	0.57
22:DA:1609:A:N6	22:DA:1616:A:C2	2.72	0.57
13:CM:94:LEU:HD22	13:CM:101:THR:HG22	1.85	0.57
34:DM:40:ARG:HB2	34:DM:93:VAL:CG2	2.34	0.57
27:BF:68:LYS:HD2	27:BF:68:LYS:N	2.18	0.57
33:DL:94:THR:O	33:DL:98:ALA:N	2.38	0.57
22:BA:2062:A:O2'	22:BA:2063:C:H5'	2.05	0.57
29:DH:41:LYS:H	29:DH:44:ILE:HG23	1.69	0.57
24:BC:257:ARG:NE	24:BC:269:ARG:NH2	2.53	0.57
1:CA:818:G:O2'	1:CA:819:A:H5'	2.04	0.57
3:CC:21:TRP:CH2	14:CN:93:PRO:HG2	2.40	0.57
22:DA:1176:U:H2'	22:DA:1177:G:C8	2.39	0.57
22:BA:1568:G:H4'	24:BC:58:LYS:CG	2.34	0.57
29:DH:67:ALA:HA	29:DH:138:VAL:HG22	1.87	0.57
44:BW:72:GLY:N	44:BW:73:PRO:HD2	2.20	0.57
44:DW:18:LYS:H	44:DW:36:ILE:CG1	2.12	0.57
20:AT:53:MET:CE	20:AT:57:VAL:HG21	2.34	0.57
1:CA:1496:C:H2'	1:CA:1497:G:O4'	2.05	0.57
22:BA:2355:G:H4'	44:BW:20:LEU:CD1	2.28	0.57
31:DJ:5:THR:HG23	31:DJ:7:LYS:HE2	1.87	0.57
2:CB:66:ILE:O	2:CB:88:GLN:HB2	2.05	0.57
22:DA:483:A:O2'	22:DA:484:C:H5'	2.03	0.57
35:DN:56:LYS:HE2	35:DN:87:PHE:O	2.03	0.57
1:CA:570:G:H1'	1:CA:820:U:C4	2.39	0.57
1:CA:822:U:C2	1:CA:823:C:C5	2.92	0.57
6:AF:5:GLU:HG2	6:AF:90:MET:HE3	1.85	0.57
37:DP:48:ALA:HB3	37:DP:59:THR:HB	1.86	0.57
37:DP:59:THR:HG23	37:DP:72:VAL:HG12	1.86	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:AD:145:ARG:HD2	4:AD:147:LYS:HE2	1.85	0.57
39:DR:90:ARG:O	39:DR:91:GLN:HB3	2.04	0.57
1:AA:1370:G:P	9:AI:110:VAL:HG21	2.44	0.57
22:DA:2734:A:H2'	22:DA:2735:G:H5'	1.87	0.57
1:AA:1320:C:N3	19:AS:35:ARG:NH1	2.53	0.57
46:DY:22:LEU:HG	46:DY:23:ARG:NH1	2.19	0.57
22:DA:443:A:H2'	26:DE:40:ARG:NE	2.19	0.57
26:DE:42:GLY:HA2	26:DE:92:HIS:HE1	1.68	0.57
22:DA:2638:G:O2'	22:DA:2639:A:H8	1.88	0.57
1:CA:1382:C:H2'	1:CA:1383:C:H6	1.70	0.57
24:BC:77:VAL:HA	24:BC:93:VAL:HA	1.85	0.57
32:DK:113:MET:O	32:DK:116:ILE:HG13	2.05	0.57
1:CA:1514:G:H2'	1:CA:1515:G:C8	2.39	0.57
1:AA:439:U:H2'	1:AA:440:C:H5'	1.86	0.57
22:DA:813:U:H2'	22:DA:814:C:H6	1.69	0.57
22:BA:2572:A:N7	25:BD:150:GLN:HB3	2.20	0.57
12:CL:3:VAL:HG23	12:CL:4:ASN:H	1.70	0.57
14:CN:63:CYS:HB3	14:CN:67:GLY:H	1.70	0.57
1:CA:1339:A:H2'	1:CA:1340:A:O4'	2.04	0.57
10:AJ:59:LYS:HD2	10:AJ:60:ASP:N	2.19	0.57
22:BA:1006:C:O2'	22:BA:1007:C:H5'	2.04	0.57
12:AL:98:ARG:HD2	12:AL:103:CYS:SG	2.43	0.57
1:CA:1009:U:H2'	1:CA:1010:U:C6	2.39	0.57
1:AA:1159:U:O4'	1:AA:1159:U:O2	2.22	0.57
22:BA:299:A:H8	22:BA:299:A:OP2	1.87	0.57
49:D1:46:VAL:HG22	49:D1:47:ILE:N	2.19	0.57
14:AN:46:LYS:HD2	19:AS:12:LEU:HD21	1.86	0.57
1:AA:1241:G:HO2'	1:AA:1242:G:H8	1.53	0.57
1:AA:240:G:OP1	1:AA:240:G:H4'	2.05	0.57
22:DA:1156:A:P	38:DQ:54:ARG:HE	2.28	0.57
22:DA:323:C:H3'	26:DE:163:ASN:HD21	1.69	0.57
17:AQ:58:VAL:HG22	17:AQ:59:GLU:N	2.20	0.57
31:DJ:25:LEU:HD12	31:DJ:64:VAL:HA	1.87	0.57
22:DA:2666:C:O2'	22:DA:2667:C:C5'	2.46	0.57
16:CP:1:MET:HG3	16:CP:1:MET:O	2.04	0.57
24:BC:250:GLN:H	24:BC:250:GLN:NE2	2.02	0.57
1:CA:1018:G:H2'	1:CA:1019:A:O4'	2.04	0.57
31:BJ:65:THR:HG22	31:BJ:68:LYS:CE	2.34	0.57
9:AI:28:VAL:HB	9:AI:63:TYR:CD2	2.36	0.57
1:CA:1446:A:H2'	1:CA:1447:A:C5'	2.35	0.57
24:BC:143:VAL:HG12	24:BC:144:GLU:O	2.04	0.57
9:CI:17:ARG:NH1	9:CI:65:THR:HG21	2.19	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
10:AJ:42:LEU:HB3	10:AJ:43:PRO:HD2	1.86	0.57
22:BA:1853:A:N1	22:BA:2087:G:H1'	2.20	0.57
22:BA:1014:A:H2'	22:BA:1015:U:H6	1.70	0.57
46:BY:23:ARG:O	46:BY:24:GLU:C	2.42	0.57
3:CC:133:MET:HB2	3:CC:150:VAL:HG21	1.85	0.57
22:DA:100:U:C6	22:DA:100:U:OP1	2.57	0.57
26:BE:88:ARG:HB3	26:BE:89:PRO:HD2	1.86	0.57
21:AU:24:LYS:HG2	21:AU:25:ALA:H	1.68	0.57
2:AB:117:GLU:HA	2:AB:120:SER:HB2	1.86	0.57
29:DH:62:LEU:C	29:DH:64:ALA:H	2.08	0.57
4:CD:127:ARG:CZ	4:CD:127:ARG:HB2	2.35	0.57
22:BA:397:U:H6	22:BA:397:U:O5'	1.88	0.57
22:BA:969:G:H2'	22:BA:970:U:C6	2.38	0.57
37:BP:50:ARG:CG	37:BP:57:ALA:O	2.53	0.57
1:CA:978:A:O5'	1:CA:978:A:H8	1.88	0.57
38:DQ:4:LYS:CE	38:DQ:7:VAL:H	2.17	0.57
49:D1:24:LYS:HE2	49:D1:29:LYS:O	2.05	0.57
22:DA:1914:C:O2'	22:DA:1915:U:O4'	2.21	0.57
22:BA:1510:G:H2'	22:BA:1511:G:O4'	2.05	0.57
24:DC:145:MET:CE	24:DC:181:ARG:HH22	2.17	0.57
48:D0:54:ILE:O	48:D0:55:ALA:HB2	2.05	0.57
22:DA:2313:C:O2'	22:DA:2314:A:C8	2.54	0.57
27:DF:35:LEU:O	27:DF:87:LYS:HA	2.05	0.57
1:AA:267:C:O2'	1:AA:268:U:H5'	2.05	0.57
1:CA:86:G:O2'	1:CA:87:C:OP2	2.22	0.57
22:DA:110:G:N2	22:DA:111:A:H1'	2.20	0.57
4:CD:25:ARG:NH1	4:CD:30:LYS:HE2	2.19	0.57
22:DA:203:A:O5'	22:DA:204:A:H2'	2.05	0.57
41:BT:59:ASN:O	41:BT:83:ALA:O	2.22	0.57
31:BJ:21:THR:CG2	31:BJ:22:GLY:N	2.62	0.57
1:CA:269:C:H2'	1:CA:270:A:C8	2.39	0.57
22:DA:1475:G:O2'	22:DA:1476:U:H6	1.87	0.57
22:DA:1259:G:C4	22:DA:1260:A:C8	2.93	0.57
27:DF:107:VAL:N	27:DF:108:PRO:CD	2.68	0.57
42:DU:58:VAL:CG1	42:DU:60:LYS:HG2	2.35	0.57
14:AN:51:PRO:O	14:AN:52:ARG:CB	2.53	0.57
12:CL:97:VAL:O	12:CL:97:VAL:CG2	2.53	0.57
36:DO:11:ALA:O	36:DO:15:ARG:HG3	2.03	0.57
1:AA:1151:A:H5'	10:AJ:42:LEU:O	2.05	0.57
1:CA:51:A:H4'	1:CA:52:C:H5''	1.85	0.57
1:CA:888:G:H3'	1:CA:889:A:H5''	1.87	0.57
1:CA:513:C:H2'	1:CA:514:C:H6	1.69	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
51:D3:22:LYS:H	51:D3:48:MET:HB3	1.69	0.57
42:DU:54:PRO:HG2	42:DU:55:GLY:H	1.70	0.57
22:BA:1040:A:H2	22:BA:1115:G:H22	1.53	0.57
26:DE:105:LEU:HD12	26:DE:200:LEU:HD11	1.86	0.57
29:DH:48:GLU:HG2	29:DH:51:ARG:HH21	1.69	0.57
1:AA:538:G:OP2	12:AL:111:GLN:HB2	2.04	0.57
42:BU:41:VAL:O	42:BU:59:GLU:HA	2.05	0.57
21:AU:32:ARG:O	21:AU:32:ARG:HG2	2.04	0.57
22:BA:2547:A:H2'	22:BA:2548:U:C6	2.39	0.57
10:AJ:51:VAL:HB	14:AN:80:ARG:HB2	1.85	0.57
38:BQ:82:LEU:CD2	38:BQ:112:ALA:HB2	2.35	0.57
18:CR:63:TYR:CD2	18:CR:69:TYR:OH	2.57	0.57
19:CS:54:ARG:HG2	19:CS:55:GLN:H	1.70	0.57
22:DA:1537:G:H2'	22:DA:1538:G:C4'	2.23	0.57
43:BV:80:HIS:CD2	43:BV:83:LYS:H	2.22	0.57
22:DA:1090:A:H3'	22:DA:1091:G:H5''	1.87	0.57
35:DN:96:ARG:HG3	35:DN:97:ILE:H	1.68	0.57
22:DA:489:G:O2'	22:DA:491:G:H8	1.85	0.57
22:DA:2310:C:O2'	22:DA:2311:A:H4'	2.05	0.57
22:DA:738:G:H2'	22:DA:739:A:C8	2.40	0.57
22:DA:2683:C:OP1	37:DP:55:HIS:HB3	2.05	0.57
25:DD:184:ARG:NH2	37:DP:6:GLN:HE21	1.97	0.57
4:AD:172:VAL:HG22	4:AD:173:ASP:N	2.15	0.57
6:CF:2:ARG:HG2	6:CF:4:TYR:CZ	2.39	0.57
22:DA:2223:G:C2'	22:DA:2224:G:H5'	2.34	0.57
22:BA:510:C:H2'	22:BA:511:U:O4'	2.05	0.57
22:DA:2287:A:O2'	22:DA:2288:A:H2'	2.04	0.57
22:DA:1157:G:C8	22:DA:1157:G:H5'	2.40	0.57
22:DA:1467:U:C2'	22:DA:1468:U:H5'	2.34	0.57
22:DA:2620:C:O4'	25:DD:161:MET:HG3	2.04	0.57
3:AC:14:VAL:O	3:AC:15:LYS:HD2	2.05	0.57
22:BA:1256:G:H21	26:BE:77:ILE:HG13	1.70	0.57
7:AG:101:ARG:O	7:AG:105:GLU:HB3	2.04	0.57
27:BF:151:LEU:C	27:BF:151:LEU:HD12	2.24	0.57
1:CA:1446:A:H2'	1:CA:1447:A:H5''	1.85	0.57
10:AJ:81:GLU:HA	10:AJ:84:VAL:CG1	2.35	0.57
22:DA:17:G:H4'	38:DQ:24:TYR:HE1	1.70	0.57
22:BA:2196:C:O3'	4:CD:150:LYS:HD2	2.05	0.57
47:DZ:46:MET:O	47:DZ:49:ALA:HB3	2.04	0.57
25:BD:182:ALA:C	25:BD:184:ARG:H	2.07	0.57
12:AL:2:THR:HG22	12:AL:4:ASN:H	1.70	0.57
22:DA:7:G:H4'	31:DJ:15:TRP:CH2	2.40	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
29:BH:101:ASP:O	29:BH:104:THR:HB	2.04	0.57
40:DS:39:THR:O	40:DS:40:ASN:HB3	2.05	0.57
1:CA:1161:C:O2	1:CA:1176:A:C2	2.58	0.57
3:CC:161:ILE:H	3:CC:161:ILE:HD13	1.70	0.57
1:AA:1435:G:H2'	1:AA:1436:U:C6	2.40	0.57
40:DS:66:ILE:O	40:DS:68:ASP:N	2.38	0.57
39:BR:21:ARG:NH2	39:BR:93:PHE:CE1	2.73	0.57
31:BJ:45:THR:HG23	31:BJ:45:THR:O	2.05	0.57
44:DW:37:VAL:CG2	44:DW:38:ARG:HH11	2.17	0.57
4:AD:36:ALA:HA	4:AD:41:GLY:HA3	1.87	0.57
48:D0:42:ILE:HD11	48:D0:48:TYR:HB2	1.87	0.57
37:DP:22:GLY:HA3	37:DP:91:VAL:CG2	2.35	0.57
4:CD:29:THR:C	4:CD:30:LYS:HD3	2.25	0.57
26:DE:147:LEU:CB	26:DE:186:VAL:HG23	2.35	0.57
22:DA:612:G:N2	22:DA:614:A:O2'	2.38	0.57
22:DA:617:G:O2'	22:DA:618:G:O4'	2.23	0.57
25:DD:12:THR:HG22	25:DD:13:ARG:N	2.20	0.57
22:DA:1275:A:C4	35:DN:16:HIS:HD2	2.23	0.57
30:BI:78:LEU:HD13	30:BI:108:ILE:HG12	1.86	0.57
4:AD:147:LYS:O	4:AD:149:LYS:N	2.37	0.57
14:AN:42:ASN:O	14:AN:44:VAL:N	2.38	0.57
22:BA:38:A:N3	26:BE:43:THR:HB	2.19	0.57
25:BD:120:GLY:HA2	25:BD:162:ALA:HB2	1.86	0.57
1:AA:1040:U:H2'	1:AA:1041:G:C8	2.39	0.57
1:AA:1348:U:O2'	1:AA:1349:A:H8	1.88	0.57
22:BA:2531:A:OP1	28:BG:174:LYS:HG3	2.05	0.57
15:CO:2:LEU:HD13	15:CO:34:GLN:HG2	1.86	0.57
22:DA:154:U:H2'	22:DA:155:A:O4'	2.04	0.57
4:AD:196:GLU:C	4:AD:198:LEU:H	2.08	0.57
1:AA:771:G:H2'	1:AA:772:U:C6	2.40	0.57
12:AL:74:GLN:HG3	12:AL:75:GLU:HG2	1.86	0.57
25:DD:181:ASP:C	25:DD:183:GLU:H	2.08	0.57
22:BA:221:A:H4'	22:BA:222:A:O5'	2.04	0.57
22:BA:1515:A:H2'	22:BA:1516:G:O4'	2.04	0.57
23:DB:23:G:N2	23:DB:61:G:C2	2.73	0.57
38:BQ:82:LEU:HD23	38:BQ:112:ALA:HB2	1.86	0.57
4:CD:187:ARG:CZ	4:CD:191:SER:OG	2.53	0.57
22:DA:446:G:H4'	22:DA:447:A:OP1	2.04	0.57
22:DA:1555:G:N2	22:DA:1556:C:C2	2.73	0.57
1:CA:1492:A:C8	22:DA:1913:A:H8	2.22	0.57
11:AK:125:LYS:O	11:AK:126:ARG:HB2	2.05	0.57
22:DA:329:G:H4'	22:DA:330:A:OP2	2.05	0.57

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:CE:103:GLY:HA3	5:CE:121:ASN:CA	2.34	0.57
40:DS:8:ARG:HA	40:DS:102:HIS:ND1	2.19	0.57
1:CA:1123:U:H4'	10:CJ:39:PRO:HD2	1.86	0.57
7:CG:30:MET:HE1	7:CG:33:GLY:HA2	1.87	0.57
45:DX:53:LYS:HA	45:DX:56:ARG:CB	2.28	0.57
22:DA:28:A:C6	22:DA:29:U:O2	2.58	0.57
1:CA:1133:G:C6	1:CA:1134:G:N7	2.73	0.57
1:CA:371:A:O2'	1:CA:372:C:H5'	2.05	0.57
32:BK:108:ARG:HH11	32:BK:108:ARG:HG3	1.68	0.57
34:BM:40:ARG:HB2	34:BM:93:VAL:HG22	1.86	0.57
37:BP:59:THR:HG23	37:BP:72:VAL:HG13	1.87	0.57
22:DA:1499:C:C2'	22:DA:1500:G:H5'	2.35	0.57
22:DA:2502:G:H5'	22:DA:2503:A:H5''	1.85	0.57
9:CI:66:VAL:HG21	9:CI:74:GLN:HB3	1.86	0.57
1:AA:8:A:N6	4:AD:201:GLU:O	2.38	0.57
1:CA:79:G:H2'	1:CA:80:A:C8	2.40	0.57
29:DH:84:ALA:HB3	29:DH:148:ALA:HB2	1.87	0.57
41:DT:9:LYS:HG2	41:DT:9:LYS:O	2.05	0.57
12:CL:113:ARG:HB3	12:CL:118:VAL:HB	1.86	0.57
9:CI:16:ALA:HA	9:CI:65:THR:O	2.04	0.57
42:BU:13:LEU:HD12	42:BU:69:VAL:C	2.25	0.57
12:CL:79:ILE:HD12	12:CL:96:THR:CG2	2.35	0.57
22:BA:1107:G:H2'	22:BA:1108:U:C6	2.40	0.57
1:CA:65:A:C5	1:CA:200:G:O2'	2.58	0.57
22:DA:2552:U:C2	22:DA:2554:U:H5'	2.39	0.57
22:BA:1833:C:C4	22:BA:1834:U:C5	2.93	0.57
1:CA:858:G:O6	56:CA:1822:HOH:O	2.17	0.57
23:BB:112:G:H2'	23:BB:113:C:C6	2.40	0.57
42:DU:13:LEU:H	42:DU:13:LEU:HD12	1.70	0.57
4:AD:86:GLY:O	4:AD:89:LEU:HB3	2.05	0.57
22:DA:864:G:C6	22:DA:865:C:N4	2.72	0.57
22:BA:1061:U:H3'	22:BA:1062:G:H5''	1.86	0.56
44:BW:49:ASN:HB2	44:BW:60:ALA:HA	1.87	0.56
22:DA:2259:U:H1'	22:DA:2427:C:C2	2.40	0.56
22:DA:2428:G:H4'	22:DA:2429:G:C5	2.40	0.56
22:DA:831:G:H5''	33:DL:37:GLY:HA2	1.86	0.56
22:DA:974:G:H1'	22:DA:975:A:C8	2.40	0.56
22:DA:308:G:C6	22:DA:309:A:C6	2.93	0.56
40:DS:8:ARG:HB3	40:DS:102:HIS:CE1	2.40	0.56
22:DA:466:A:P	50:D2:34:ARG:HH21	2.27	0.56
1:CA:1151:A:O2'	1:CA:1152:A:O5'	2.23	0.56
22:BA:137:U:OP2	22:BA:137:U:H5	1.88	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
30:BI:126:ARG:CA	30:BI:129:GLU:HB2	2.30	0.56
1:AA:49:U:H5	1:AA:365:U:O4	1.88	0.56
22:DA:819:A:OP2	22:DA:1187:G:N2	2.38	0.56
2:AB:71:THR:HG22	2:AB:72:LYS:H	1.70	0.56
27:DF:49:LEU:HA	27:DF:52:ALA:HB3	1.87	0.56
22:BA:1288:G:C4	22:BA:1327:A:C2	2.92	0.56
22:DA:2738:A:H2	22:DA:2766:A:H61	1.50	0.56
41:BT:70:HIS:HB2	41:BT:73:ARG:O	2.05	0.56
28:DG:28:LYS:HG3	28:DG:79:THR:HG22	1.87	0.56
30:DI:57:VAL:HG12	30:DI:58:ILE:H	1.70	0.56
1:CA:1032:G:N2	1:CA:1033:G:C5	2.73	0.56
19:AS:41:PRO:O	19:AS:44:ILE:HG13	2.04	0.56
22:BA:194:G:N7	56:BA:3760:HOH:O	2.38	0.56
17:CQ:22:VAL:HG21	17:CQ:58:VAL:HG21	1.86	0.56
34:DM:114:ARG:HA	34:DM:130:PHE:CE1	2.39	0.56
22:BA:2058:A:H5''	22:BA:2059:A:OP2	2.05	0.56
33:BL:47:ARG:NH2	33:BL:47:ARG:HG2	2.18	0.56
22:DA:2850:A:OP2	22:DA:2866:U:N3	2.35	0.56
16:AP:36:VAL:HG13	16:AP:36:VAL:O	2.05	0.56
22:DA:1044:C:O2	22:DA:1044:C:H2'	2.04	0.56
14:AN:63:CYS:HB2	14:AN:79:SER:OG	2.05	0.56
45:DX:19:HIS:C	45:DX:21:LEU:H	2.08	0.56
22:BA:1061:U:H1'	22:BA:1070:A:O4'	2.05	0.56
37:BP:50:ARG:HB2	37:BP:56:SER:HA	1.87	0.56
24:DC:74:PRO:HA	24:DC:116:GLN:HG3	1.87	0.56
2:AB:70:GLY:HA2	2:AB:163:ILE:HG22	1.86	0.56
22:DA:1553:A:C8	22:DA:1555:G:C6	2.92	0.56
22:DA:1401:G:C5	22:DA:1402:U:C4	2.93	0.56
22:DA:2815:C:H2'	22:DA:2816:G:H8	1.70	0.56
37:DP:22:GLY:HA3	37:DP:91:VAL:HG21	1.87	0.56
30:BI:48:ILE:HG13	30:BI:49:GLU:H	1.70	0.56
1:CA:238:A:H2'	1:CA:239:U:C5'	2.34	0.56
49:B1:47:ILE:CD1	49:B1:47:ILE:H	2.09	0.56
28:BG:8:VAL:HG12	28:BG:9:VAL:N	2.20	0.56
46:DY:39:GLN:O	46:DY:42:LEU:HB2	2.04	0.56
22:BA:142:A:O2'	22:BA:143:C:O5'	2.23	0.56
2:AB:40:ILE:HG21	2:AB:201:GLY:N	2.20	0.56
2:AB:67:LEU:HD22	2:AB:69:VAL:HG22	1.87	0.56
7:CG:117:LEU:HG	7:CG:121:ASN:ND2	2.20	0.56
29:BH:8:LYS:O	29:BH:13:GLY:HA3	2.06	0.56
25:BD:24:VAL:HA	25:BD:191:GLY:H	1.69	0.56
4:AD:116:LEU:C	4:AD:122:ILE:HD11	2.26	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
42:BU:42:LYS:HD3	42:BU:42:LYS:N	2.21	0.56
25:DD:137:SER:C	25:DD:138:LEU:HD22	2.25	0.56
22:DA:570:G:H2'	22:DA:571:U:H5'	1.87	0.56
22:DA:1181:U:H2'	22:DA:1182:G:C8	2.38	0.56
7:AG:112:ASP:HB2	7:AG:118:ARG:HG2	1.86	0.56
22:DA:2506:U:H3'	22:DA:2506:U:C6	2.39	0.56
1:CA:502:A:H2'	1:CA:503:C:O4'	2.04	0.56
22:BA:1421:G:C2	22:BA:1422:G:C8	2.92	0.56
26:BE:132:LYS:NZ	26:BE:132:LYS:HB3	2.20	0.56
28:BG:109:SER:O	28:BG:110:HIS:HB3	2.05	0.56
22:DA:2097:A:H2'	22:DA:2098:U:C6	2.40	0.56
48:B0:35:GLU:OE1	48:B0:45:ASP:HB2	2.05	0.56
22:DA:2842:G:H2'	22:DA:2843:G:O4'	2.05	0.56
2:CB:35:ASN:O	2:CB:36:LYS:HD2	2.05	0.56
3:CC:29:ALA:HB1	14:CN:64:ARG:NH1	2.20	0.56
1:CA:775:G:C2'	1:CA:776:G:H5'	2.35	0.56
37:BP:31:VAL:O	37:BP:31:VAL:HG13	2.05	0.56
1:AA:1449:C:C2'	1:AA:1450:U:H5'	2.35	0.56
38:BQ:63:ARG:HH22	38:BQ:96:ASP:CA	2.18	0.56
38:BQ:91:ARG:HD3	39:BR:11:GLN:HG3	1.87	0.56
39:BR:9:GLY:C	39:BR:10:LYS:HD2	2.25	0.56
44:BW:24:ARG:HD3	44:BW:65:LYS:CD	2.35	0.56
44:BW:39:GLN:O	44:BW:40:ARG:C	2.43	0.56
22:DA:1799:G:H8	24:DC:179:GLU:OE1	1.88	0.56
1:CA:1319:A:C2'	1:CA:1320:C:OP2	2.53	0.56
24:DC:144:GLU:HG3	24:DC:151:GLY:N	2.20	0.56
22:DA:1469:A:H2'	22:DA:1470:A:H8	1.70	0.56
22:DA:1809:A:N3	22:DA:1810:A:C8	2.73	0.56
22:DA:1373:A:C5'	22:DA:2212:A:H1'	2.35	0.56
22:DA:309:A:N3	22:DA:329:G:H1'	2.19	0.56
24:DC:173:LEU:HD22	24:DC:181:ARG:O	2.04	0.56
22:DA:1059:G:N1	22:DA:1088:A:H2	2.03	0.56
1:CA:315:A:C5	1:CA:330:C:H5''	2.40	0.56
22:DA:2815:C:H2'	22:DA:2816:G:C8	2.40	0.56
1:CA:209:U:C5'	1:CA:210:C:OP2	2.48	0.56
10:CJ:41:PRO:O	10:CJ:42:LEU:HB2	2.05	0.56
22:DA:1992:G:N2	22:DA:1996:C:O2'	2.39	0.56
25:BD:169:ARG:O	25:BD:170:VAL:CG1	2.48	0.56
22:DA:111:A:C2	22:DA:112:U:C2	2.93	0.56
46:DY:50:VAL:HA	46:DY:53:VAL:HG23	1.86	0.56
22:DA:676:A:H2	22:DA:2069:G:N3	2.02	0.56
22:DA:242:G:C8	51:D3:3:ILE:O	2.55	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:BA:1733:G:N3	22:BA:1734:G:C8	2.73	0.56
6:AF:92:THR:HG22	6:AF:93:LYS:N	2.20	0.56
41:BT:19:LYS:O	41:BT:23:ALA:N	2.29	0.56
49:B1:49:LYS:O	49:B1:50:GLU:HB3	2.04	0.56
2:AB:40:ILE:HG21	2:AB:201:GLY:CA	2.35	0.56
13:CM:12:LYS:CE	13:CM:12:LYS:HA	2.30	0.56
28:DG:97:VAL:HG21	28:DG:124:CYS:H	1.71	0.56
22:DA:972:A:C3'	22:DA:973:A:H5''	2.32	0.56
2:AB:90:PHE:H	2:AB:149:GLY:HA2	1.70	0.56
22:DA:1301:A:C4	22:DA:1303:G:N7	2.73	0.56
7:CG:110:ARG:HG2	7:CG:112:ASP:OD1	2.05	0.56
22:DA:748:G:O2'	22:DA:749:A:H3'	2.04	0.56
44:DW:22:VAL:O	44:DW:23:LYS:HG3	2.05	0.56
24:BC:229:HIS:HD2	24:BC:246:PRO:HB3	1.69	0.56
5:CE:135:VAL:O	5:CE:139:THR:HG23	2.06	0.56
22:BA:565:C:H4'	56:BA:3332:HOH:O	2.05	0.56
22:BA:1327:A:H2'	22:BA:1328:A:O4'	2.05	0.56
31:DJ:97:PRO:C	31:DJ:99:ARG:H	2.08	0.56
4:AD:113:ALA:O	4:AD:116:LEU:HB2	2.05	0.56
22:DA:2771:C:H2'	22:DA:2772:C:C6	2.35	0.56
22:DA:1525:A:H2'	22:DA:1526:C:O4'	2.05	0.56
47:DZ:10:ARG:HD2	47:DZ:52:PHE:O	2.05	0.56
22:DA:1378:A:H2'	22:DA:1380:G:N7	2.19	0.56
1:CA:16:A:H2'	1:CA:17:U:H5'	1.85	0.56
29:DH:31:VAL:HB	29:DH:32:PRO:HD3	1.87	0.56
26:BE:46:GLN:HE21	26:BE:87:ALA:H	1.54	0.56
30:BI:74:PRO:O	30:BI:77:VAL:HG22	2.05	0.56
27:DF:11:VAL:O	27:DF:12:VAL:HB	2.04	0.56
27:DF:1:ALA:HA	27:DF:97:GLU:HB3	1.87	0.56
17:AQ:6:THR:O	17:AQ:7:LEU:HD12	2.05	0.56
24:DC:8:THR:O	24:DC:9:SER:HB3	2.05	0.56
22:DA:1734:G:H2'	22:DA:1735:A:C8	2.40	0.56
40:DS:22:ASP:HA	40:DS:25:ARG:NH1	2.20	0.56
23:DB:78:A:C2	23:DB:99:A:C4	2.93	0.56
22:DA:2725:A:C4	22:DA:2727:A:C8	2.93	0.56
32:BK:111:LYS:H	32:BK:111:LYS:CE	2.18	0.56
24:DC:196:ASN:O	24:DC:197:ALA:HB3	2.05	0.56
22:DA:120:U:O4	22:DA:177:G:C8	2.58	0.56
39:BR:66:HIS:CD2	39:BR:94:THR:HG22	2.40	0.56
12:CL:3:VAL:O	12:CL:7:VAL:HG23	2.06	0.56
22:BA:1885:A:H2'	22:BA:1886:U:O4'	2.06	0.56
1:CA:629:A:H2'	1:CA:630:A:O4'	2.05	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:1108:G:H5''	3:AC:175:HIS:ND1	2.19	0.56
13:AM:21:ILE:HB	13:AM:24:VAL:HG22	1.86	0.56
22:BA:1310:G:C2'	22:BA:1311:G:H5'	2.35	0.56
22:BA:41:C:H2'	22:BA:42:A:O5'	2.05	0.56
40:DS:47:VAL:HG12	40:DS:103:ILE:HG12	1.87	0.56
22:DA:1651:G:N2	22:DA:2007:U:C2	2.72	0.56
17:CQ:45:VAL:HG21	17:CQ:60:ILE:HD12	1.87	0.56
22:DA:646:U:H6	22:DA:646:U:OP2	1.87	0.56
43:DV:36:ALA:HB1	43:DV:37:PRO:HD2	1.86	0.56
1:AA:903:G:C5	1:AA:904:U:C5	2.93	0.56
45:DX:48:LEU:O	45:DX:50:VAL:HG13	2.05	0.56
22:DA:447:A:H5'	22:DA:449:A:C4	2.41	0.56
36:DO:62:LEU:HD11	36:DO:65:THR:N	2.20	0.56
22:DA:265:A:N7	22:DA:427:U:O2'	2.37	0.56
10:AJ:53:ILE:HD11	14:AN:84:ARG:NH2	2.20	0.56
52:B4:9:LYS:O	52:B4:10:LEU:HD23	2.05	0.56
22:DA:504:A:O2'	22:DA:505:A:P	2.63	0.56
25:BD:169:ARG:C	25:BD:170:VAL:CG1	2.74	0.56
22:DA:620:G:C8	22:DA:622:G:O6	2.59	0.56
2:AB:24:PRO:C	2:AB:26:MET:H	2.09	0.56
22:BA:278:A:C2	22:BA:362:A:C8	2.93	0.56
44:DW:16:GLU:OE2	44:DW:16:GLU:HA	2.05	0.56
1:AA:71:A:N7	1:AA:100:G:C6	2.73	0.56
22:DA:1586:A:H2'	22:DA:1587:G:C8	2.35	0.56
25:DD:112:THR:O	25:DD:113:SER:HB2	2.04	0.56
22:BA:34:U:H1'	22:BA:35:G:OP1	2.05	0.56
22:BA:2199:A:H5''	22:BA:2199:A:H8	1.70	0.56
3:CC:76:ILE:HA	3:CC:83:VAL:CG1	2.34	0.56
36:BO:75:GLY:HA2	36:BO:106:LEU:CD1	2.35	0.56
1:CA:1448:C:O2'	1:CA:1449:C:C6	2.58	0.56
28:DG:143:VAL:HA	28:DG:146:ASP:OD2	2.05	0.56
10:AJ:81:GLU:HA	10:AJ:84:VAL:HG12	1.87	0.56
26:BE:146:VAL:HA	26:BE:185:LYS:O	2.05	0.56
23:DB:116:G:H4'	36:DO:54:VAL:HG22	1.87	0.56
22:DA:1831:G:N2	22:DA:1975:G:C4	2.73	0.56
22:BA:560:C:O2	38:BQ:47:ARG:NH1	2.38	0.56
1:CA:888:G:H4'	1:CA:1488:G:O2'	2.05	0.56
1:CA:423:G:N3	1:CA:423:G:H2'	2.20	0.56
22:BA:2496:C:OP1	34:BM:82:MET:HB2	2.05	0.56
41:DT:40:LYS:HA	41:DT:43:ILE:HG22	1.86	0.56
22:DA:1409:U:H6	22:DA:1409:U:O5'	1.89	0.56
22:BA:1847:A:H4'	22:BA:1848:A:OP2	2.05	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:CA:1190:G:H5'	3:CC:175:HIS:NE2	2.20	0.56
36:BO:24:THR:HG22	36:BO:42:PRO:HD3	1.88	0.56
30:DI:95:ASP:CG	30:DI:96:LYS:H	2.09	0.56
22:DA:2232:C:P	45:DX:26:ARG:NH1	2.79	0.56
22:DA:2336:A:C8	44:DW:40:ARG:NH2	2.73	0.56
22:DA:834:G:C5'	51:D3:56:LEU:HD11	2.36	0.56
9:AI:6:TYR:CE2	9:AI:17:ARG:HB2	2.41	0.56
22:DA:233:A:H61	22:DA:428:A:H61	1.54	0.56
22:DA:234:U:H2'	22:DA:235:U:H6	1.70	0.56
35:DN:37:THR:OG1	35:DN:40:LYS:HE2	2.05	0.56
22:DA:320:A:H62	26:DE:132:LYS:HG3	1.71	0.56
35:DN:97:ILE:HD11	35:DN:99:LYS:HZ3	1.71	0.56
1:AA:1125:U:OP2	1:AA:1145:A:N6	2.39	0.56
1:CA:243:A:C4'	1:CA:244:U:OP2	2.53	0.56
22:DA:2745:C:N4	22:DA:2759:G:H1	2.04	0.56
10:CJ:15:HIS:N	10:CJ:15:HIS:ND1	2.53	0.56
22:DA:2093:G:H4'	29:DH:24:GLY:HA3	1.88	0.56
1:AA:675:A:H1'	11:AK:117:HIS:CD2	2.41	0.56
22:BA:1605:C:H3'	22:BA:1606:C:C5'	2.34	0.56
7:CG:24:LYS:O	7:CG:28:ILE:HG12	2.05	0.56
23:DB:90:C:H4'	34:DM:38:ARG:NH1	2.20	0.56
1:CA:994:A:N3	1:CA:995:C:C6	2.73	0.56
22:BA:2813:A:H2	22:BA:2887:A:H62	1.51	0.56
22:DA:2615:U:C2	48:D0:3:GLN:HA	2.40	0.56
37:BP:33:GLU:OE1	37:BP:33:GLU:C	2.44	0.56
4:AD:117:VAL:N	4:AD:122:ILE:HD11	2.20	0.56
22:DA:2645:G:H4'	22:DA:2732:G:H2'	1.88	0.56
22:DA:2135:A:O2'	22:DA:2136:G:O4'	2.23	0.56
40:DS:4:ILE:CG2	40:DS:106:VAL:HG22	2.35	0.56
12:CL:82:ARG:HG2	12:CL:82:ARG:NH1	2.19	0.56
3:AC:21:TRP:CG	3:AC:58:ARG:HG2	2.41	0.56
17:AQ:6:THR:C	17:AQ:7:LEU:HD12	2.26	0.56
22:DA:2415:G:H2'	22:DA:2416:C:H6	1.71	0.56
27:BF:7:TYR:OH	27:BF:29:ARG:HB3	2.06	0.56
42:BU:70:ALA:CB	42:BU:79:ALA:HB1	2.35	0.56
28:BG:174:LYS:O	28:BG:174:LYS:HD2	2.05	0.56
43:DV:69:GLU:HG2	43:DV:70:ILE:N	2.19	0.56
35:DN:2:ARG:HG2	35:DN:5:LYS:HD3	1.87	0.56
22:BA:1585:C:C2'	22:BA:1586:A:H5'	2.36	0.56
1:CA:659:U:H2'	1:CA:660:C:C6	2.41	0.56
22:DA:85:G:OP2	42:DU:6:ARG:HB2	2.06	0.56
22:DA:1651:G:C2	22:DA:2007:U:C2	2.94	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:CA:1191:A:H5''	3:CC:3:LYS:HE3	1.87	0.56
22:BA:1554:U:H4'	22:BA:1555:G:OP2	2.05	0.56
1:AA:862:C:C2'	1:AA:863:U:H5'	2.35	0.56
7:AG:34:LYS:HB3	7:AG:37:THR:HG23	1.88	0.56
1:AA:418:C:N4	56:AA:1718:HOH:O	2.39	0.56
12:CL:50:LYS:HD2	12:CL:50:LYS:N	2.19	0.56
8:CH:100:ILE:HD12	8:CH:100:ILE:C	2.25	0.56
31:DJ:2:LYS:NZ	31:DJ:2:LYS:HB2	2.21	0.56
22:DA:2345:G:C4	22:DA:2347:C:H5	2.23	0.56
22:DA:2345:G:C6	22:DA:2381:A:C6	2.94	0.56
22:DA:2391:G:HO2'	22:DA:2392:A:P	2.28	0.56
22:DA:1360:G:H2'	22:DA:1361:G:H5'	1.88	0.56
5:AE:80:LEU:HD12	5:AE:146:MET:HE1	1.86	0.56
1:CA:328:C:C2'	1:CA:328:C:O2	2.53	0.56
5:CE:81:GLN:OE1	5:CE:149:PRO:HD3	2.06	0.56
50:D2:31:LEU:HA	50:D2:34:ARG:HB2	1.86	0.56
1:CA:1151:A:C2	1:CA:1152:A:C5	2.94	0.56
1:CA:245:U:H6	1:CA:245:U:C5'	2.16	0.56
22:DA:612:G:N2	22:DA:614:A:HO2'	2.04	0.56
22:DA:1275:A:O3'	22:DA:1276:A:O4'	2.24	0.56
22:BA:2134:A:N6	22:BA:2135:A:N6	2.53	0.56
41:BT:40:LYS:H	41:BT:43:ILE:CG2	2.18	0.56
22:DA:1742:U:H2'	22:DA:1743:G:H8	1.70	0.56
22:DA:1126:A:H4'	22:DA:1127:A:H5''	1.87	0.56
22:DA:2200:C:N4	22:DA:2224:G:N2	2.52	0.56
24:BC:100:ARG:NH1	24:BC:100:ARG:CG	2.66	0.56
22:BA:545:U:C2'	22:BA:546:U:O3'	2.54	0.56
28:DG:167:VAL:HG23	28:DG:168:VAL:N	2.20	0.56
22:DA:1688:U:O2	22:DA:1700:A:H5'	2.06	0.56
23:DB:116:G:H2'	23:DB:117:G:C8	2.40	0.56
23:DB:8:C:O2'	36:DO:40:ILE:HD13	2.06	0.56
9:CI:11:ARG:NH2	9:CI:108:ARG:HH21	2.02	0.56
4:AD:105:GLY:HA3	4:AD:161:ALA:CB	2.35	0.56
21:AU:18:PHE:HB3	21:AU:19:LYS:HE2	1.87	0.56
19:AS:46:LEU:H	19:AS:61:VAL:CG2	2.17	0.56
25:DD:22:ILE:HD12	25:DD:190:LYS:HD2	1.88	0.56
18:AR:19:GLU:HG3	18:AR:54:LEU:HD22	1.87	0.56
22:DA:526:A:N6	22:DA:2626:C:H4'	2.21	0.56
11:AK:109:ILE:HB	21:AU:5:VAL:CG2	2.36	0.56
32:BK:43:ILE:HG21	32:BK:46:ALA:HB2	1.87	0.56
51:D3:22:LYS:HG2	51:D3:46:LYS:HE2	1.87	0.56
1:CA:1124:G:H4'	1:CA:1125:U:OP1	2.05	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
33:BL:35:HIS:O	33:BL:36:LYS:HB2	2.06	0.56
39:BR:25:LEU:H	39:BR:94:THR:CG2	2.18	0.56
22:BA:804:A:H5''	22:BA:805:G:OP1	2.06	0.56
9:AI:8:THR:O	9:AI:81:GLY:HA3	2.06	0.56
25:DD:105:LYS:HA	25:DD:177:VAL:HG22	1.88	0.56
1:CA:636:U:H2'	1:CA:637:C:C6	2.40	0.56
1:CA:1113:C:H2'	1:CA:1114:C:H6	1.70	0.56
22:DA:1794:A:H2'	22:DA:1795:C:H6	1.70	0.56
22:DA:2583:G:C2'	22:DA:2584:U:H5'	2.36	0.56
1:AA:1451:U:O2	1:AA:1451:U:H2'	2.04	0.56
22:BA:1528:A:H2'	22:BA:1529:G:O4'	2.06	0.56
22:DA:216:A:O2'	22:DA:217:A:C8	2.20	0.56
23:DB:67:G:HO2'	23:DB:68:C:H6	1.53	0.56
14:CN:60:ARG:HG2	14:CN:61:ASN:H	1.71	0.56
32:BK:10:VAL:CB	32:BK:16:ALA:HB1	2.36	0.56
22:DA:226:A:H2	22:DA:230:G:O6	1.88	0.56
22:BA:1458:U:C4'	22:BA:1459:G:O5'	2.42	0.56
22:DA:1341:G:HO2'	22:DA:1398:C:H5'	1.69	0.56
22:DA:1427:A:H4'	22:DA:1428:C:OP1	2.05	0.56
22:DA:2212:A:N7	22:DA:2214:C:N4	2.54	0.56
22:DA:1102:C:OP2	22:DA:1102:C:H6	1.89	0.56
22:DA:2314:A:C2	22:DA:2315:G:C5	2.93	0.56
22:DA:2314:A:H5''	27:DF:34:THR:OG1	2.06	0.56
1:CA:266:G:HO2'	1:CA:267:C:H3'	1.70	0.56
22:DA:1731:G:H4'	22:DA:1732:C:OP1	2.03	0.56
22:BA:1778:U:H2'	22:BA:1784:A:H62	1.70	0.56
1:CA:653:U:H5'	8:CH:55:LYS:NZ	2.21	0.56
2:AB:103:TRP:CH2	2:AB:107:ARG:HD3	2.41	0.56
32:DK:17:ARG:CG	32:DK:18:ARG:H	2.17	0.56
5:CE:131:ASN:C	5:CE:135:VAL:HG23	2.25	0.56
24:BC:242:HIS:O	24:BC:244:VAL:HG13	2.06	0.56
29:DH:82:SER:O	29:DH:83:LYS:HB3	2.06	0.56
3:CC:166:TRP:O	3:CC:167:TYR:HB2	2.05	0.56
22:BA:545:U:H6	22:BA:546:U:HO2'	1.54	0.56
1:CA:812:G:H4'	1:CA:812:G:OP1	2.06	0.56
29:DH:80:ILE:HB	29:DH:101:ASP:HB2	1.88	0.56
1:AA:82:G:N2	1:AA:84:U:H3	2.02	0.56
26:BE:153:LEU:HD12	26:BE:154:ASP:O	2.05	0.56
22:BA:2292:U:H2'	22:BA:2293:G:C8	2.41	0.56
15:AO:86:LEU:C	15:AO:88:ARG:H	2.08	0.56
22:BA:697:G:H2'	22:BA:698:C:C6	2.40	0.56
22:BA:469:G:O6	50:B2:37:LYS:HE2	2.06	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:CE:89:THR:OG1	5:CE:90:GLY:N	2.35	0.56
11:AK:51:PHE:HB2	11:AK:55:ARG:HB3	1.86	0.56
1:CA:1097:C:H2'	1:CA:1098:C:H6	1.71	0.56
1:CA:212:G:O2'	1:CA:213:G:OP2	2.21	0.56
16:AP:18:GLN:HE21	16:AP:35:ARG:HD2	1.70	0.56
23:BB:66:A:H4'	23:BB:67:G:OP1	2.06	0.56
1:CA:1086:U:H6	1:CA:1086:U:O5'	1.88	0.56
21:AU:8:ASN:N	21:AU:8:ASN:HD22	2.03	0.56
10:AJ:11:LYS:HG3	10:AJ:97:ASP:HB3	1.86	0.56
39:BR:49:ILE:C	39:BR:51:VAL:O	2.44	0.56
22:BA:1063:G:OP1	30:BI:76:ALA:HB3	2.06	0.56
23:DB:16:G:H2'	23:DB:17:C:C6	2.41	0.56
22:DA:221:A:C2	22:DA:233:A:C5	2.94	0.56
4:AD:28:ASP:OD1	4:AD:33:ILE:HG12	2.05	0.56
2:AB:13:VAL:HG23	2:AB:207:ARG:NH2	2.19	0.56
17:AQ:12:VAL:HG12	17:AQ:21:VAL:O	2.06	0.56
22:DA:507:A:OP2	22:DA:507:A:H2'	2.05	0.56
22:DA:59:U:H1'	22:DA:73:A:O2'	2.05	0.56
9:CI:58:GLU:HG3	9:CI:59:LYS:N	2.20	0.56
28:DG:94:ARG:NH2	28:DG:111:PRO:HB3	2.20	0.56
46:BY:47:ARG:NH2	46:BY:47:ARG:HG3	2.18	0.56
1:AA:131:A:H2'	1:AA:132:C:C6	2.41	0.56
23:DB:85:G:O2'	23:DB:86:G:H5'	2.05	0.56
1:CA:1169:A:H2'	1:CA:1170:A:C8	2.39	0.56
25:DD:149:ASN:OD1	25:DD:150:GLN:N	2.39	0.56
27:DF:1:ALA:HB2	27:DF:93:GLU:O	2.05	0.56
22:DA:1993:U:H4'	25:DD:133:THR:HG22	1.87	0.56
9:AI:26:LYS:C	9:AI:27:ILE:HD12	2.25	0.56
41:BT:29:THR:HA	41:BT:86:THR:HA	1.88	0.56
22:DA:2403:C:O2'	22:DA:2404:U:H5'	2.06	0.56
1:AA:1361:G:H2'	1:AA:1362:A:H5''	1.87	0.56
1:CA:313:A:H2'	1:CA:314:C:C6	2.41	0.56
39:BR:27:ILE:HG13	39:BR:33:VAL:HG12	1.86	0.56
22:DA:453:A:N3	22:DA:457:A:O2'	2.39	0.56
49:D1:46:VAL:HG22	49:D1:47:ILE:H	1.71	0.56
1:CA:637:C:H2'	1:CA:638:U:C6	2.41	0.56
22:BA:1032:A:H1'	52:B4:23:ILE:HD13	1.88	0.56
12:CL:24:GLU:O	12:CL:25:ALA:HB3	2.05	0.56
26:BE:152:GLU:OE2	26:BE:152:GLU:HA	2.06	0.56
22:DA:677:A:O2'	22:DA:2071:A:H5'	2.06	0.56
2:AB:168:GLU:O	2:AB:169:HIS:C	2.43	0.56
22:BA:1000:A:H62	22:BA:1154:G:H2'	1.71	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:BA:2093:G:C2'	22:BA:2094:A:H5'	2.36	0.56
44:BW:22:VAL:HG13	44:BW:25:PHE:CE2	2.41	0.56
21:CU:24:LYS:HG3	21:CU:25:ALA:N	2.18	0.56
15:AO:74:VAL:O	15:AO:77:TYR:HB3	2.06	0.56
2:AB:163:ILE:CG2	2:AB:164:ASP:H	2.14	0.56
1:CA:982:U:H4'	1:CA:983:A:C5'	2.34	0.56
38:DQ:4:LYS:HE3	38:DQ:7:VAL:H	1.70	0.56
22:DA:1071:G:O2'	22:DA:1072:C:C5'	2.54	0.56
30:DI:74:PRO:HB2	30:DI:77:VAL:CG2	2.30	0.56
8:CH:78:SER:HB2	8:CH:124:ILE:O	2.06	0.56
22:DA:674:G:H4'	26:DE:69:ARG:HB3	1.88	0.56
1:AA:1239:A:N6	1:AA:1299:A:N6	2.47	0.56
22:DA:781:A:H2'	22:DA:1777:U:H1'	1.88	0.56
21:AU:7:GLU:HB2	21:AU:11:PHE:CE1	2.40	0.56
22:DA:279:A:N6	22:DA:361:G:H1'	2.21	0.56
22:DA:1567:G:H1'	22:DA:1568:G:C6	2.40	0.56
9:CI:44:ARG:O	9:CI:48:ARG:HG2	2.06	0.56
22:BA:225:C:H2'	22:BA:226:A:O4'	2.06	0.56
33:DL:18:ARG:HA	33:DL:18:ARG:HE	1.71	0.56
27:BF:39:VAL:HG11	27:BF:49:LEU:HD13	1.88	0.56
22:BA:1319:C:C2'	22:BA:1320:C:H5'	2.34	0.56
35:BN:33:ILE:HG12	35:BN:118:ARG:CZ	2.35	0.56
2:CB:20:ARG:C	2:CB:21:TYR:HD1	2.09	0.56
34:BM:71:LYS:HD3	34:BM:95:LEU:HD13	1.85	0.56
10:CJ:66:GLU:HG3	14:CN:100:TRP:HZ3	1.71	0.56
22:DA:2638:G:H1'	22:DA:2778:A:N6	2.21	0.56
26:DE:59:PRO:HB2	26:DE:67:ARG:HH22	1.70	0.56
22:BA:2515:C:O2'	22:BA:2516:A:H5'	2.05	0.56
43:DV:56:PHE:C	43:DV:58:SER:H	2.09	0.56
40:BS:63:GLY:O	40:BS:64:ALA:HB3	2.06	0.56
38:DQ:10:ARG:O	38:DQ:14:LYS:HB2	2.06	0.56
22:BA:1014:A:O2'	22:BA:1015:U:H5'	2.06	0.56
22:DA:261:G:H2'	22:DA:262:A:H8	1.71	0.56
22:DA:1413:A:H2'	22:DA:1414:C:C6	2.41	0.56
22:BA:39:G:H2'	22:BA:40:U:H6	1.70	0.56
22:DA:732:C:H2'	22:DA:733:G:O4'	2.06	0.56
22:BA:2344:U:H4'	22:BA:2345:G:OP1	2.04	0.56
7:AG:77:ARG:HB2	7:AG:84:TYR:O	2.06	0.56
30:DI:118:GLY:O	30:DI:119:ALA:HB3	2.05	0.56
27:BF:142:TYR:O	27:BF:145:VAL:HG22	2.06	0.56
47:DZ:7:THR:O	47:DZ:54:VAL:HA	2.06	0.56
19:CS:49:ALA:HB1	19:CS:56:HIS:HB3	1.86	0.56

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:402:A:H2'	22:DA:403:U:O4'	2.06	0.56
1:AA:1057:G:O3'	3:AC:196:GLY:HA3	2.05	0.56
19:AS:19:GLU:HA	19:AS:19:GLU:OE2	2.06	0.56
22:BA:1434:A:OP1	22:BA:1434:A:H4'	2.05	0.56
1:CA:983:A:O2'	1:CA:984:C:C5'	2.54	0.56
22:DA:1392:A:H62	22:DA:1393:A:N6	2.04	0.56
22:DA:83:A:N6	22:DA:101:A:C5'	2.69	0.56
2:AB:209:VAL:HG23	2:AB:210:THR:HG23	1.88	0.56
26:BE:149:ILE:O	26:BE:188:MET:HA	2.06	0.56
26:BE:196:VAL:HG13	26:BE:200:LEU:CD2	2.36	0.56
35:DN:62:ASN:O	35:DN:63:ARG:CB	2.54	0.56
1:AA:87:C:H2'	1:AA:88:U:C6	2.40	0.56
1:CA:1146:A:O2'	1:CA:1147:C:C5'	2.54	0.56
7:CG:89:GLU:O	7:CG:90:VAL:HG13	2.06	0.56
7:CG:100:MET:HA	7:CG:103:ILE:HB	1.87	0.56
1:CA:644:U:H2'	1:CA:645:G:H8	1.71	0.56
22:DA:1717:A:H2'	22:DA:1718:G:O4'	2.06	0.56
1:AA:806:C:O2'	1:AA:807:A:H5'	2.06	0.56
33:BL:66:PHE:CD1	33:BL:66:PHE:C	2.77	0.56
4:CD:66:VAL:HG22	4:CD:96:ARG:HH11	1.68	0.56
22:DA:571:U:C4	22:DA:2030:A:C6	2.93	0.56
28:DG:120:ILE:O	28:DG:120:ILE:HD13	2.06	0.56
1:CA:490:C:O2'	1:CA:491:G:H5'	2.06	0.56
22:DA:2415:G:C5	22:DA:2416:C:C4	2.94	0.56
22:DA:270:A:H2	22:DA:369:U:H4'	1.70	0.56
22:BA:2340:A:H2'	22:BA:2341:G:C8	2.40	0.56
25:DD:110:THR:HA	25:DD:171:THR:HA	1.86	0.56
1:CA:1513:A:H2'	1:CA:1514:G:H8	1.70	0.56
32:BK:43:ILE:HG13	32:BK:56:ASP:HB2	1.88	0.56
16:CP:44:SER:HB2	16:CP:46:LYS:CG	2.36	0.56
22:BA:1185:G:H5"	22:BA:1186:G:OP2	2.06	0.56
22:BA:2311:A:O3'	22:BA:2312:U:O4'	2.24	0.56
40:DS:17:VAL:HG11	40:DS:103:ILE:HG13	1.88	0.56
36:DO:39:VAL:HB	36:DO:49:VAL:O	2.05	0.56
3:AC:179:ALA:HB1	3:AC:202:PHE:HE1	1.71	0.56
8:AH:85:TYR:CE2	8:AH:123:GLU:HB2	2.41	0.56
32:DK:63:VAL:HG12	32:DK:64:ARG:HD3	1.88	0.56
1:CA:571:U:H5"	1:CA:572:A:OP2	2.06	0.56
1:AA:795:C:H5"	1:AA:796:C:OP2	2.06	0.56
22:DA:499:U:H5"	42:DU:42:LYS:NZ	2.21	0.56
44:BW:35:ILE:O	44:BW:37:VAL:N	2.39	0.55
44:BW:50:VAL:C	44:BW:52:CYS:H	2.09	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:1555:G:C2	22:DA:1556:C:C2	2.94	0.55
22:BA:528:A:H8	22:BA:528:A:H3'	1.70	0.55
44:DW:36:ILE:CG2	44:DW:39:GLN:HB2	2.36	0.55
1:CA:1309:G:H2'	1:CA:1310:G:C8	2.40	0.55
1:CA:1409:C:H5'	22:DA:1916:A:N1	2.21	0.55
22:DA:1352:U:H5	22:DA:1377:G:C5	2.23	0.55
38:DQ:60:TRP:CH2	38:DQ:93:ILE:HB	2.42	0.55
22:DA:1087:G:C5	22:DA:1089:A:C2	2.94	0.55
22:DA:1663:G:C6	22:DA:1998:A:N6	2.74	0.55
22:DA:294:A:N1	22:DA:346:A:N1	2.54	0.55
22:DA:352:A:C6	22:DA:353:C:C2	2.94	0.55
22:DA:73:A:O5'	22:DA:73:A:H8	1.89	0.55
22:DA:602:A:H1'	22:DA:656:G:N2	2.20	0.55
22:DA:811:U:C5'	22:DA:812:C:OP2	2.51	0.55
22:DA:1275:A:C8	35:DN:16:HIS:CD2	2.94	0.55
22:DA:1277:G:H5'	35:DN:20:MET:SD	2.46	0.55
34:DM:17:ASN:OD1	34:DM:95:LEU:HB3	2.06	0.55
8:CH:52:GLY:HA3	8:CH:56:PRO:HA	1.86	0.55
21:CU:35:GLU:HG3	21:CU:36:PHE:N	2.20	0.55
22:DA:2544:G:H5'	22:DA:2645:G:C8	2.40	0.55
22:DA:1324:G:C2	22:DA:1328:A:N6	2.74	0.55
22:BA:2648:G:O2'	22:BA:2649:C:H5'	2.06	0.55
22:DA:570:G:C2'	22:DA:571:U:H5'	2.36	0.55
1:AA:546:A:P	4:AD:68:GLU:HB2	2.46	0.55
22:DA:1797:G:H4'	24:DC:254:LYS:O	2.06	0.55
22:BA:1090:A:C2'	22:BA:1091:G:H5'	2.36	0.55
22:DA:2623:G:C4'	22:DA:2825:G:H8	2.19	0.55
1:AA:1261:A:C2	1:AA:1274:A:C2	2.94	0.55
10:CJ:63:ASP:OD2	14:CN:84:ARG:NH1	2.39	0.55
22:BA:2786:U:O2'	22:BA:2787:C:H5'	2.06	0.55
1:AA:968:A:H4'	1:AA:969:A:OP2	2.06	0.55
13:AM:52:ILE:O	13:AM:55:LEU:HB2	2.05	0.55
25:DD:15:PHE:CE2	37:DP:77:SER:HA	2.40	0.55
13:CM:76:ILE:O	13:CM:76:ILE:HG22	2.06	0.55
26:BE:7:ASP:O	26:BE:9:GLN:N	2.40	0.55
22:DA:1462:C:C1'	22:DA:2702:G:H21	2.19	0.55
37:BP:50:ARG:HD2	37:BP:51:ASN:H	1.69	0.55
44:BW:51:GLY:O	44:BW:52:CYS:C	2.45	0.55
1:CA:1363:A:C5	1:CA:1365:G:C6	2.94	0.55
19:CS:5:LYS:CE	19:CS:6:LYS:H	2.14	0.55
28:BG:85:LYS:HA	28:BG:130:ILE:O	2.06	0.55
22:DA:1605:C:H5''	22:DA:1606:C:OP2	2.06	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:2213:U:O2'	22:DA:2214:C:H5'	2.06	0.55
22:DA:1056:G:H3'	22:DA:1056:G:OP2	2.06	0.55
50:D2:43:THR:HG23	50:D2:45:SER:OG	2.05	0.55
1:CA:91:U:C4	1:CA:92:U:C4	2.94	0.55
10:CJ:37:ARG:HB3	10:CJ:74:VAL:O	2.06	0.55
22:BA:1394:U:H4'	22:BA:1603:A:H4'	1.88	0.55
22:BA:574:A:H4'	22:BA:575:A:O5'	2.06	0.55
29:BH:137:GLU:HG3	29:BH:138:VAL:HG13	1.88	0.55
30:BI:57:VAL:HG12	30:BI:58:ILE:N	2.21	0.55
1:AA:1303:C:H2'	1:AA:1304:G:H8	1.63	0.55
22:DA:855:G:O2'	44:DW:23:LYS:HD3	2.07	0.55
20:CT:60:GLN:HB3	20:CT:65:LEU:HD12	1.89	0.55
9:CI:40:ARG:H	9:CI:44:ARG:HD3	1.72	0.55
22:BA:2425:A:H4'	22:BA:2426:A:O5'	2.06	0.55
29:DH:78:VAL:HB	29:DH:144:VAL:HA	1.88	0.55
40:BS:13:SER:O	40:BS:14:ALA:CB	2.54	0.55
25:BD:110:THR:HG23	25:BD:171:THR:HG22	1.88	0.55
22:DA:1856:U:O4	22:DA:1857:G:C2	2.59	0.55
1:AA:112:G:C6	1:AA:330:C:N4	2.74	0.55
28:DG:162:ARG:HG3	28:DG:166:GLU:HG3	1.88	0.55
1:AA:1453:G:H2'	1:AA:1454:G:O4'	2.05	0.55
22:BA:2103:C:H2'	22:BA:2104:C:H5'	1.88	0.55
31:BJ:93:ILE:O	31:BJ:97:PRO:HG3	2.07	0.55
1:AA:376:G:H2'	1:AA:377:G:H8	1.70	0.55
22:BA:675:A:H4'	26:BE:62:GLN:NE2	2.20	0.55
1:CA:512:U:O2'	1:CA:513:C:O5'	2.23	0.55
22:BA:2097:A:H2'	22:BA:2098:U:H6	1.70	0.55
34:DM:57:VAL:HA	34:DM:112:LEU:HD11	1.89	0.55
8:CH:41:GLU:C	8:CH:43:GLY:H	2.09	0.55
13:CM:106:ARG:HH21	13:CM:112:ARG:CZ	2.19	0.55
1:AA:1449:C:H2'	1:AA:1450:U:H5'	1.89	0.55
27:BF:142:TYR:HA	27:BF:145:VAL:HG13	1.89	0.55
5:CE:95:MET:HB3	5:CE:124:ALA:HB2	1.88	0.55
22:BA:1245:G:OP1	33:BL:13:LYS:HE3	2.05	0.55
22:DA:1016:G:C2	22:DA:1147:A:C2	2.94	0.55
30:BI:61:TYR:CD2	30:BI:61:TYR:N	2.74	0.55
22:BA:1224:U:C4	22:BA:1225:G:C6	2.94	0.55
33:BL:23:ILE:HG12	39:BR:82:HIS:CE1	2.42	0.55
22:DA:145:C:H6	22:DA:145:C:O5'	1.89	0.55
22:BA:2819:G:H5''	56:BA:3806:HOH:O	2.07	0.55
37:BP:50:ARG:HD3	37:BP:51:ASN:H	1.71	0.55
24:DC:71:ASP:O	24:DC:73:ILE:HG12	2.07	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
23:DB:58:A:C8	23:DB:59:A:N7	2.75	0.55
2:AB:16:GLY:HA2	2:AB:202:ASN:HB2	1.87	0.55
22:DA:1553:A:N7	22:DA:1555:G:C5	2.74	0.55
24:DC:129:LEU:HB2	24:DC:130:PRO:HD2	1.87	0.55
22:BA:1248:G:OP2	26:BE:44:ARG:NH1	2.40	0.55
5:AE:81:GLN:HG2	5:AE:149:PRO:CG	2.36	0.55
33:BL:77:ILE:O	33:BL:110:VAL:O	2.24	0.55
22:DA:503:A:N3	22:DA:505:A:H2'	2.21	0.55
1:CA:1280:A:H5''	10:CJ:43:PRO:CG	2.36	0.55
31:DJ:62:VAL:HG11	31:DJ:101:ILE:HD11	1.88	0.55
35:DN:73:ASN:HA	35:DN:76:VAL:HG22	1.87	0.55
1:CA:667:G:C2	1:CA:740:U:O2	2.59	0.55
1:AA:674:G:H2'	1:AA:675:A:C8	2.41	0.55
22:BA:571:U:C5	22:BA:575:A:C6	2.95	0.55
49:B1:8:ILE:CG2	49:B1:9:LYS:N	2.69	0.55
22:DA:1208:C:N3	22:DA:1209:U:C5	2.75	0.55
41:DT:14:PRO:O	41:DT:15:HIS:CB	2.53	0.55
22:BA:142:A:O2'	22:BA:143:C:O4'	2.24	0.55
1:AA:71:A:N6	1:AA:100:G:N7	2.54	0.55
41:BT:10:VAL:CG2	41:BT:11:LEU:HD23	2.36	0.55
1:CA:247:G:C6	1:CA:278:G:C2	2.94	0.55
21:CU:33:ARG:CZ	21:CU:34:ARG:HD3	2.36	0.55
25:BD:97:SER:H	25:BD:99:GLU:CD	2.10	0.55
9:AI:83:THR:HG21	9:AI:102:PHE:CB	2.33	0.55
22:DA:2287:A:N7	22:DA:2289:G:C8	2.74	0.55
8:CH:11:THR:HG22	8:CH:14:ARG:NH1	2.21	0.55
41:DT:29:THR:N	41:DT:87:LEU:HB2	2.21	0.55
46:DY:23:ARG:HB3	46:DY:27:ASN:OD1	2.07	0.55
14:AN:15:LEU:HD23	14:AN:18:LYS:HE3	1.87	0.55
22:DA:571:U:C5	22:DA:575:A:C6	2.94	0.55
36:BO:103:VAL:O	36:BO:105:ALA:O	2.25	0.55
22:DA:1181:U:O2'	22:DA:1182:G:H5'	2.06	0.55
1:AA:1471:U:O2'	1:AA:1472:U:H5'	2.07	0.55
29:DH:21:VAL:HG22	29:DH:22:LYS:H	1.70	0.55
22:DA:1709:U:H2'	22:DA:1710:G:H8	1.72	0.55
13:AM:84:CYS:HB3	19:AS:73:PHE:CE2	2.41	0.55
22:DA:2657:A:O3'	28:DG:159:LYS:NZ	2.40	0.55
6:CF:99:ALA:O	6:CF:100:SER:HB2	2.06	0.55
22:DA:2096:C:H2'	22:DA:2097:A:C8	2.41	0.55
13:AM:19:THR:HA	13:AM:24:VAL:HG23	1.88	0.55
13:AM:55:LEU:O	13:AM:59:VAL:HG12	2.06	0.55
24:BC:165:ALA:HB3	24:BC:172:THR:HG23	1.89	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
34:BM:21:ALA:HA	34:BM:97:GLN:HG2	1.88	0.55
1:AA:616:G:O2'	1:AA:617:G:H5'	2.06	0.55
18:AR:22:TYR:CZ	18:AR:23:LYS:HE3	2.41	0.55
27:BF:3:LEU:HD23	27:BF:100:GLU:HB2	1.88	0.55
22:BA:997:G:OP1	38:BQ:92:LYS:HD2	2.06	0.55
22:DA:1535:A:H5''	22:DA:1536:C:OP2	2.06	0.55
24:DC:68:ARG:HH12	24:DC:115:ILE:CD1	2.19	0.55
11:AK:126:ARG:CA	21:AU:33:ARG:HH12	2.19	0.55
22:DA:1055:G:H2'	22:DA:1056:G:H5'	1.89	0.55
22:DA:1019:U:O2'	22:DA:1021:A:N1	2.34	0.55
22:DA:1139:G:N2	22:DA:1140:C:C2	2.74	0.55
35:DN:82:GLU:C	35:DN:85:PRO:HD2	2.27	0.55
22:DA:1965:C:H5''	22:DA:1966:A:H2'	1.89	0.55
22:DA:674:G:H2'	22:DA:804:A:H61	1.70	0.55
22:DA:2746:U:C2	22:DA:2759:G:N2	2.75	0.55
35:DN:70:THR:O	35:DN:70:THR:HG22	2.06	0.55
28:BG:8:VAL:O	28:BG:9:VAL:HG12	2.06	0.55
1:CA:270:A:H2'	1:CA:271:C:C6	2.40	0.55
17:AQ:80:LYS:HB2	17:AQ:80:LYS:HZ3	1.70	0.55
41:BT:40:LYS:O	41:BT:44:LYS:N	2.39	0.55
2:AB:71:THR:HG22	2:AB:72:LYS:N	2.20	0.55
8:AH:17:GLN:HE21	8:AH:71:VAL:H	1.51	0.55
1:CA:796:C:H4'	11:CK:126:ARG:NH2	2.20	0.55
5:CE:110:MET:HG2	5:CE:139:THR:HG21	1.89	0.55
7:AG:4:ARG:NE	7:AG:4:ARG:HA	2.21	0.55
24:BC:20:ASN:HD22	24:BC:20:ASN:C	2.10	0.55
1:CA:1303:C:H42	1:CA:1334:G:H1	1.52	0.55
22:DA:2574:G:O2'	25:DD:148:GLN:HB2	2.06	0.55
22:DA:1520:U:O4	22:DA:1521:G:C6	2.59	0.55
16:AP:59:HIS:CE1	16:AP:63:GLN:NE2	2.73	0.55
1:CA:1452:C:H4'	1:CA:1453:G:O5'	2.06	0.55
34:BM:108:VAL:HG13	34:BM:112:LEU:HB3	1.89	0.55
26:BE:28:VAL:O	26:BE:32:VAL:HG13	2.07	0.55
22:DA:1733:G:H5'	22:DA:1733:G:H8	1.71	0.55
22:DA:565:C:H2'	22:DA:566:U:O4'	2.06	0.55
2:AB:138:ARG:HG3	2:AB:139:GLU:N	2.21	0.55
1:AA:192:A:C2'	20:AT:54:GLN:HE22	2.18	0.55
2:CB:164:ASP:HB3	2:CB:167:HIS:CB	2.37	0.55
1:CA:33:A:H2'	1:CA:34:C:C6	2.41	0.55
1:CA:35:G:H21	12:CL:114:SER:HB3	1.70	0.55
26:DE:105:LEU:HB3	26:DE:200:LEU:HD11	1.88	0.55
22:DA:2850:A:N7	22:DA:2868:A:O2'	2.25	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:DD:105:LYS:HA	25:DD:177:VAL:CG2	2.37	0.55
1:CA:1342:C:H2'	1:CA:1343:G:C8	2.41	0.55
36:BO:79:ALA:HB2	36:BO:110:ALA:HA	1.87	0.55
1:AA:834:U:OP1	18:AR:48:ALA:HB2	2.06	0.55
24:DC:131:MET:HG2	24:DC:134:ILE:HD11	1.87	0.55
23:BB:34:A:H2'	23:BB:35:C:OP2	2.06	0.55
22:DA:2651:C:O2'	22:DA:2652:C:H5'	2.06	0.55
9:AI:88:GLU:HG3	9:AI:89:TYR:H	1.70	0.55
1:AA:217:C:O2'	1:AA:218:U:H5'	2.07	0.55
49:D1:34:GLU:HG3	49:D1:49:LYS:HB2	1.88	0.55
13:CM:52:ILE:C	13:CM:54:THR:H	2.09	0.55
45:DX:30:PRO:HG2	45:DX:32:LEU:CD2	2.37	0.55
22:DA:1249:U:H4'	38:DQ:3:VAL:HG21	1.86	0.55
22:DA:1213:A:H1'	22:DA:1237:A:C2	2.41	0.55
22:DA:299:A:C2	22:DA:319:G:N3	2.75	0.55
22:DA:183:C:H2'	22:DA:184:C:H5'	1.87	0.55
1:CA:93:U:C2	1:CA:95:C:N4	2.74	0.55
22:BA:161:A:C3'	22:BA:162:U:H5''	2.32	0.55
2:CB:133:ALA:HA	2:CB:137:THR:CG2	2.36	0.55
22:DA:142:A:H2'	22:DA:143:C:C6	2.42	0.55
25:BD:34:VAL:HG22	25:BD:94:GLN:H	1.71	0.55
1:CA:664:G:N2	1:CA:666:G:C8	2.74	0.55
22:DA:2093:G:O2'	22:DA:2094:A:P	2.64	0.55
24:DC:70:LYS:HD3	24:DC:101:ARG:NH1	2.16	0.55
17:CQ:19:SER:HB3	17:CQ:70:LYS:NZ	2.20	0.55
24:BC:140:VAL:HA	24:BC:190:THR:O	2.07	0.55
28:DG:104:LEU:H	28:DG:112:VAL:HG23	1.71	0.55
47:DZ:4:ILE:CG2	47:DZ:56:VAL:HG13	2.36	0.55
9:CI:44:ARG:HH21	9:CI:48:ARG:HH11	1.50	0.55
3:CC:35:ASP:OD1	3:CC:56:ILE:HG21	2.07	0.55
11:AK:13:LYS:O	11:AK:14:GLN:HB3	2.06	0.55
29:BH:2:GLN:HA	29:BH:20:ASN:HA	1.88	0.55
22:BA:2308:G:N7	27:BF:76:PHE:CE2	2.74	0.55
39:DR:80:ARG:HB3	39:DR:81:LYS:HD3	1.88	0.55
28:BG:1:SER:O	28:BG:3:VAL:N	2.37	0.55
6:CF:6:ILE:HD12	6:CF:6:ILE:H	1.71	0.55
9:AI:24:ASN:HA	9:AI:58:GLU:O	2.06	0.55
22:BA:2262:U:H4'	22:BA:2328:A:C2	2.42	0.55
19:AS:3:SER:HB2	19:AS:4:LEU:HD12	1.89	0.55
22:BA:322:A:H3'	26:BE:163:ASN:HD21	1.72	0.55
50:B2:12:ARG:NH2	50:B2:12:ARG:HB2	2.21	0.55
22:DA:2721:A:C2	22:DA:2873:A:C5	2.94	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:BA:1794:A:H2'	22:BA:1795:C:H6	1.70	0.55
18:CR:19:GLU:CD	18:CR:20:ILE:N	2.60	0.55
22:BA:1856:U:C2'	22:BA:1857:G:H5'	2.37	0.55
3:CC:133:MET:O	3:CC:137:VAL:HG23	2.07	0.55
51:B3:60:CYS:O	51:B3:61:LEU:HD23	2.07	0.55
39:BR:28:ALA:O	39:BR:63:VAL:HG21	2.06	0.55
22:BA:1009:A:O5'	22:BA:1009:A:H8	1.89	0.55
31:BJ:43:GLU:O	31:BJ:45:THR:CG2	2.54	0.55
39:DR:39:LEU:HB2	39:DR:49:ILE:HG12	1.87	0.55
51:B3:31:ILE:HG13	51:B3:31:ILE:O	2.05	0.55
36:DO:62:LEU:HD11	36:DO:65:THR:HG23	1.89	0.55
9:CI:38:PHE:CE2	9:CI:71:ILE:HG22	2.42	0.55
1:CA:1366:C:O2'	1:CA:1367:C:H6	1.82	0.55
1:CA:981:U:OP2	1:CA:982:U:H3'	2.06	0.55
1:CA:1269:A:H2	1:CA:1312:G:H21	1.54	0.55
1:AA:486:U:C5'	1:AA:486:U:C6	2.82	0.55
24:DC:140:VAL:HG23	24:DC:141:HIS:H	1.71	0.55
42:DU:92:VAL:HB	42:DU:101:THR:CG2	2.36	0.55
1:CA:1074:G:H2'	1:CA:1075:U:H6	1.72	0.55
2:AB:49:PHE:HB2	2:AB:53:LEU:HD23	1.87	0.55
1:CA:239:U:H5'	1:CA:239:U:H6	1.72	0.55
22:DA:191:A:H2'	22:DA:192:C:C6	2.42	0.55
1:CA:1139:G:H4'	1:CA:1140:C:O5'	2.07	0.55
22:BA:1084:A:H2'	22:BA:1085:A:H8	1.69	0.55
22:DA:1188:U:O2'	22:DA:1189:A:H5'	2.07	0.55
1:AA:1305:G:HO2'	1:AA:1306:A:H8	1.53	0.55
1:CA:274:A:N3	1:CA:275:G:C8	2.75	0.55
1:AA:923:A:OP1	5:AE:25:LYS:HG2	2.07	0.55
6:CF:3:HIS:ND1	6:CF:92:THR:HG23	2.20	0.55
1:AA:367:U:OP1	1:AA:395:C:H1'	2.07	0.55
27:DF:103:ILE:O	27:DF:103:ILE:HG22	2.07	0.55
23:DB:32:U:C2	23:DB:51:G:N2	2.74	0.55
29:DH:80:ILE:HB	29:DH:101:ASP:OD2	2.06	0.55
31:DJ:51:GLY:O	31:DJ:121:LYS:HE3	2.06	0.55
22:DA:1178:C:C2	22:DA:1179:G:C8	2.94	0.55
33:DL:73:ILE:O	33:DL:105:ILE:HA	2.06	0.55
46:DY:4:LYS:H	46:DY:4:LYS:HD3	1.70	0.55
1:CA:935:A:O2'	1:CA:936:C:C6	2.55	0.55
2:CB:119:GLN:HG3	2:CB:124:THR:HG21	1.88	0.55
17:AQ:28:VAL:O	17:AQ:36:PHE:HA	2.07	0.55
1:AA:1329:A:H5''	13:AM:25:GLY:N	2.20	0.55
1:CA:72:A:N6	1:CA:99:C:H1'	2.22	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
35:BN:75:ILE:C	35:BN:75:ILE:HD12	2.27	0.55
1:AA:957:U:O2	1:AA:959:A:C8	2.59	0.55
1:AA:914:A:H2'	1:AA:915:A:H8	1.72	0.55
5:CE:68:ARG:O	5:CE:70:MET:HG2	2.06	0.55
1:CA:998:C:H2'	1:CA:999:C:H6	1.70	0.55
7:AG:92:PRO:O	7:AG:93:VAL:HG13	2.06	0.55
1:CA:555:U:H2'	1:CA:556:C:C6	2.41	0.55
1:AA:1190:G:OP1	3:AC:4:VAL:HG12	2.06	0.55
22:BA:1945:G:C4	22:BA:1946:U:C5	2.94	0.55
22:BA:1947:C:O2'	22:BA:1948:G:H5'	2.06	0.55
22:BA:2520:C:C6	22:BA:2567:G:H1'	2.41	0.55
20:CT:71:ALA:O	20:CT:74:HIS:HB2	2.07	0.55
17:CQ:11:VAL:HG12	17:CQ:12:VAL:N	2.22	0.55
1:CA:794:A:H2'	1:CA:795:C:C6	2.41	0.55
22:BA:250:G:H2'	22:BA:251:A:C8	2.42	0.55
22:BA:975:A:H1'	22:BA:990:A:C2	2.42	0.55
38:BQ:86:SER:O	38:BQ:87:VAL:C	2.45	0.55
44:BW:39:GLN:HG2	44:BW:41:GLY:N	2.08	0.55
1:CA:1160:G:O6	1:CA:1181:G:O6	2.25	0.55
22:DA:1551:A:C6	22:DA:1552:A:N7	2.74	0.55
28:BG:162:ARG:NH1	28:BG:168:VAL:HG21	2.22	0.55
22:DA:2407:A:C2	22:DA:2408:U:N3	2.75	0.55
22:DA:1392:A:N6	22:DA:1393:A:N6	2.54	0.55
26:DE:130:LYS:HG3	26:DE:133:LEU:HD13	1.88	0.55
22:DA:1019:U:O4	22:DA:1020:A:N6	2.39	0.55
1:AA:1285:A:H5'	1:AA:1286:U:O4	2.06	0.55
4:CD:29:THR:HG22	4:CD:30:LYS:HD3	1.88	0.55
30:BI:49:GLU:HG2	30:BI:50:LYS:N	2.22	0.55
22:DA:2750:A:H1'	22:DA:2752:C:H41	1.72	0.55
35:DN:14:SER:C	35:DN:16:HIS:H	2.08	0.55
2:CB:49:PHE:O	2:CB:53:LEU:N	2.31	0.55
1:AA:71:A:C2	1:AA:72:A:C8	2.94	0.55
41:BT:39:THR:HG22	41:BT:41:ALA:HB3	1.89	0.55
34:BM:42:THR:CG2	34:BM:93:VAL:HG23	2.31	0.55
25:BD:98:VAL:O	25:BD:100:LEU:N	2.39	0.55
3:AC:156:LEU:C	3:AC:158:GLY:H	2.09	0.55
35:BN:103:ARG:HD3	35:BN:110:MET:CE	2.37	0.55
22:DA:1286:A:H5''	35:DN:104:ALA:CB	2.36	0.55
34:BM:1:MET:CE	34:BM:2:LEU:H	2.19	0.55
46:DY:23:ARG:O	46:DY:27:ASN:HB2	2.07	0.55
13:CM:105:ALA:HB1	13:CM:109:LYS:HB2	1.89	0.55
1:CA:1067:A:H1'	1:CA:1068:G:C8	2.42	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:1179:G:H2'	22:DA:1180:U:H6	1.71	0.55
13:CM:67:ASP:O	13:CM:70:ARG:HB3	2.07	0.55
22:DA:1635:A:H5'	22:DA:1635:A:C8	2.41	0.55
26:DE:44:ARG:HB2	26:DE:88:ARG:O	2.07	0.55
48:D0:37:HIS:CD2	48:D0:43:THR:HG22	2.42	0.55
22:DA:1412:U:H2'	22:DA:1413:A:O4'	2.06	0.55
34:BM:13:HIS:O	34:BM:14:LYS:HB2	2.06	0.55
22:DA:457:A:N1	22:DA:470:A:H5''	2.21	0.55
23:BB:112:G:H2'	23:BB:113:C:H6	1.71	0.55
36:DO:39:VAL:HG12	36:DO:48:LEU:HB2	1.88	0.55
13:CM:59:VAL:HG13	13:CM:60:ALA:N	2.22	0.55
1:CA:360:G:O2'	1:CA:361:G:H5'	2.07	0.55
1:CA:367:U:OP1	1:CA:395:C:H1'	2.06	0.55
1:AA:1112:C:N4	3:AC:177:LEU:HD22	2.22	0.55
45:DX:63:ILE:O	45:DX:67:LEU:HD12	2.07	0.55
22:BA:2140:G:C6	22:BA:2141:G:C6	2.95	0.55
1:AA:138:G:O2'	1:AA:139:A:H5'	2.07	0.55
22:BA:615:U:C4	26:BE:35:TYR:CE1	2.94	0.55
1:CA:145:G:C2	1:CA:146:G:C8	2.95	0.55
8:AH:49:LYS:HB3	8:AH:51:GLU:OE2	2.06	0.55
44:BW:67:LYS:HB3	44:BW:80:SER:H	1.72	0.55
22:BA:1171:G:C6	22:BA:1172:C:C4	2.95	0.55
22:DA:1340:U:C4	22:DA:1603:A:C8	2.95	0.55
22:DA:303:G:C6	22:DA:315:G:O6	2.60	0.55
22:DA:82:U:H5''	22:DA:296:U:H5''	1.89	0.55
22:DA:491:G:N2	22:DA:492:A:H1'	2.22	0.55
22:DA:116:C:H2'	22:DA:117:G:H8	1.72	0.55
22:BA:784:G:O6	24:BC:227:VAL:HG11	2.06	0.55
1:CA:409:U:H2'	1:CA:410:G:O4'	2.06	0.55
22:DA:2748:A:H1'	28:DG:66:THR:CG2	2.31	0.55
22:DA:61:C:N3	22:DA:94:A:C2	2.75	0.55
37:DP:50:ARG:CA	37:DP:57:ALA:H	2.19	0.55
30:BI:56:VAL:HG11	30:BI:68:PHE:HD2	1.70	0.55
1:CA:437:U:O2'	4:CD:119:HIS:HD2	1.90	0.55
2:AB:148:GLY:HA2	2:AB:151:LYS:HB3	1.88	0.55
51:D3:41:ARG:HD2	51:D3:41:ARG:O	2.06	0.55
1:CA:1011:C:N3	1:CA:1019:A:C2	2.75	0.55
3:AC:84:GLU:HA	3:AC:87:ARG:HE	1.72	0.55
22:BA:635:C:H3'	33:BL:109:LYS:HZ1	1.71	0.55
14:AN:12:ARG:HG2	14:AN:53:ASP:HB3	1.89	0.55
24:BC:255:LYS:O	24:BC:257:ARG:N	2.35	0.55
22:DA:1593:A:C5	22:DA:1594:U:C4	2.95	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
21:AU:24:LYS:CG	21:AU:25:ALA:H	2.18	0.55
22:BA:974:G:H8	22:BA:990:A:H62	1.55	0.55
45:DX:63:ILE:HD12	45:DX:64:ASP:H	1.71	0.55
22:BA:172:A:O2'	22:BA:173:A:H5'	2.06	0.55
37:DP:32:VAL:HG13	37:DP:32:VAL:O	2.06	0.55
22:DA:752:A:O2'	22:DA:753:A:OP2	2.15	0.55
22:BA:848:C:H2'	22:BA:849:A:C8	2.42	0.55
8:CH:114:ALA:O	8:CH:117:GLN:HB3	2.07	0.55
45:BX:10:ARG:HB2	45:BX:11:PRO:CD	2.36	0.55
3:CC:26:LYS:HA	3:CC:26:LYS:HE3	1.88	0.55
8:CH:89:ASP:N	8:CH:89:ASP:OD1	2.38	0.55
16:CP:12:LYS:HG2	16:CP:13:LYS:HG2	1.88	0.55
1:AA:1533:C:H3'	1:AA:1534:A:H5''	1.89	0.55
1:CA:1503:A:C8	1:CA:1531:A:H1'	2.42	0.55
19:CS:54:ARG:CG	19:CS:55:GLN:H	2.20	0.55
22:DA:1438:U:O2'	22:DA:1439:A:H5'	2.06	0.55
22:DA:2295:C:O2'	22:DA:2296:U:H5'	2.07	0.55
22:DA:224:U:C4	22:DA:225:C:C5	2.94	0.55
22:DA:663:G:O6	22:DA:664:G:C6	2.59	0.55
22:DA:479:A:C2	22:DA:480:A:C6	2.94	0.55
22:DA:807:U:H1'	22:DA:2445:G:H5'	1.89	0.55
1:CA:1238:A:OP1	1:CA:1336:C:H5	1.90	0.55
22:DA:607:U:O4	22:DA:619:G:H2'	2.07	0.55
22:DA:202:U:H3'	22:DA:203:A:C8	2.41	0.55
25:DD:184:ARG:HH22	37:DP:6:GLN:NE2	1.97	0.55
1:CA:752:G:HO2'	1:CA:753:A:P	2.30	0.55
24:BC:141:HIS:HD2	24:BC:192:GLY:O	1.88	0.55
3:AC:153:SER:CB	3:AC:164:THR:HA	2.37	0.55
1:CA:437:U:H4'	4:CD:151:GLN:OE1	2.07	0.55
40:BS:73:LYS:CB	40:BS:106:VAL:HB	2.36	0.55
37:BP:67:GLU:HG3	37:BP:68:GLY:H	1.71	0.55
25:BD:100:LEU:HD23	25:BD:101:PHE:HE1	1.71	0.55
25:BD:101:PHE:CD1	25:BD:101:PHE:N	2.75	0.55
8:CH:11:THR:CG2	8:CH:14:ARG:HH22	2.20	0.55
1:CA:1303:C:O2	1:CA:1303:C:H2'	2.07	0.55
1:CA:1331:G:HO2'	1:CA:1332:A:H8	1.53	0.55
37:DP:20:ARG:HG2	37:DP:112:ARG:NH1	2.21	0.55
1:CA:920:U:O2'	1:CA:921:U:H5'	2.07	0.55
1:CA:182:A:O2'	1:CA:183:C:H2'	2.06	0.55
27:DF:92:GLY:O	27:DF:95:MET:HB3	2.07	0.55
9:AI:9:GLY:HA2	9:AI:80:HIS:HD2	1.71	0.55
22:BA:2820:A:OP1	35:BN:2:ARG:NH2	2.39	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:CA:1005:A:C5	1:CA:1006:G:H1'	2.42	0.55
12:CL:98:ARG:HD3	12:CL:103:CYS:SG	2.47	0.55
22:BA:2339:C:H2'	22:BA:2340:A:H8	1.69	0.55
4:AD:16:THR:HG22	4:AD:17:ASP:H	1.72	0.55
43:DV:70:ILE:HD13	43:DV:70:ILE:N	2.22	0.55
1:CA:71:A:C6	1:CA:100:G:C5	2.95	0.55
22:DA:156:A:H2'	22:DA:157:C:H6	1.71	0.55
13:AM:18:LEU:O	13:AM:24:VAL:HG21	2.07	0.55
22:BA:1032:A:H1'	52:B4:23:ILE:CD1	2.37	0.55
25:DD:8:LYS:HB2	25:DD:201:LEU:HD11	1.89	0.55
22:BA:370:G:OP2	56:BA:3560:HOH:O	2.18	0.55
30:BI:109:ALA:HB1	30:BI:124:MET:HE1	1.89	0.55
43:DV:44:HIS:CE1	43:DV:85:LYS:HD3	2.42	0.55
22:DA:2015:A:C4	48:D0:2:VAL:HG11	2.42	0.55
1:AA:537:G:H5''	12:AL:109:ARG:HH12	1.72	0.55
22:DA:2799:A:H2'	22:DA:2799:A:N3	2.22	0.55
2:CB:156:LEU:HD23	2:CB:156:LEU:H	1.71	0.55
16:AP:48:GLU:HG3	16:AP:49:GLY:N	2.22	0.55
22:BA:855:G:H21	44:BW:23:LYS:CG	2.14	0.55
24:DC:147:PRO:HA	24:DC:187:CYS:HB3	1.89	0.55
22:DA:2882:A:H5''	35:DN:96:ARG:HD3	1.89	0.55
22:DA:481:G:H1'	22:DA:506:G:N2	2.22	0.55
22:BA:1731:G:C2	22:BA:1733:G:C5	2.95	0.55
4:CD:137:SER:HB2	4:CD:138:PRO:CD	2.33	0.55
22:DA:1240:U:O2	22:DA:1240:U:H2'	2.06	0.55
30:BI:64:ARG:HG3	30:BI:65:SER:N	2.22	0.55
22:BA:2145:C:OP1	22:BA:2148:G:C5	2.60	0.55
52:B4:37:GLN:HG2	52:B4:37:GLN:O	2.06	0.55
22:DA:1197:G:H2'	22:DA:1198:U:C6	2.41	0.55
22:DA:531:C:H4'	22:DA:532:A:C8	2.42	0.55
22:DA:1286:A:C6	22:DA:1289:C:N3	2.75	0.55
20:CT:3:ILE:O	20:CT:4:LYS:HG2	2.07	0.55
1:AA:1337:G:H5''	1:AA:1338:G:OP1	2.06	0.55
26:DE:149:ILE:HG23	26:DE:188:MET:HA	1.89	0.55
39:BR:61:ALA:HB2	39:BR:98:ILE:HA	1.89	0.55
24:BC:131:MET:HA	24:BC:134:ILE:CD1	2.37	0.55
22:DA:1737:G:C5	22:DA:1738:G:C6	2.95	0.55
4:AD:151:GLN:O	4:AD:152:SER:C	2.45	0.55
11:AK:42:GLY:HA3	11:AK:73:VAL:CG1	2.37	0.55
43:DV:56:PHE:CE1	43:DV:61:LEU:HD13	2.42	0.55
22:BA:655:A:H4'	22:BA:656:G:OP1	2.05	0.55
27:BF:72:SER:HB2	27:BF:80:GLN:N	2.21	0.55

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
33:DL:68:SER:O	33:DL:69:ARG:HB2	2.06	0.55
45:DX:44:ARG:HB3	45:DX:44:ARG:NH1	2.22	0.55
16:CP:46:LYS:H	16:CP:46:LYS:HZ2	1.55	0.55
22:DA:2350:C:H2'	22:DA:2351:G:O4'	2.07	0.55
22:BA:1452:G:H2'	22:BA:1457:U:O4	2.07	0.55
26:DE:162:ARG:C	26:DE:164:LEU:H	2.10	0.55
35:BN:18:GLN:HE21	35:BN:22:ARG:NH1	2.05	0.55
11:CK:87:GLY:H	11:CK:113:THR:HG23	1.72	0.55
1:AA:4:U:H2'	1:AA:4:U:O2	2.06	0.55
24:BC:28:PRO:HG2	24:BC:33:LEU:HD11	1.88	0.55
3:CC:118:SER:O	3:CC:122:GLN:HG2	2.07	0.55
1:AA:1468:A:C3'	1:AA:1469:C:H5''	2.37	0.54
39:DR:38:VAL:N	39:DR:53:PHE:HB3	2.21	0.54
44:BW:24:ARG:HD3	44:BW:65:LYS:HE2	1.89	0.54
44:BW:28:GLU:HG3	44:BW:29:SER:H	1.71	0.54
1:CA:1181:G:O2'	1:CA:1182:G:O4'	2.25	0.54
22:BA:1171:G:C5	22:BA:1172:C:C5	2.96	0.54
22:DA:1394:U:H3'	22:DA:1394:U:H6	1.72	0.54
22:DA:1358:G:N7	22:DA:1371:G:C6	2.75	0.54
1:CA:1070:U:H2'	1:CA:1071:C:C6	2.36	0.54
5:AE:81:GLN:HE22	5:AE:146:MET:HE1	1.71	0.54
1:AA:842:U:H2'	1:AA:844:G:P	2.47	0.54
22:DA:1056:G:H1'	22:DA:1103:A:C6	2.42	0.54
22:DA:2310:C:C2'	22:DA:2311:A:H5''	2.36	0.54
29:BH:67:ALA:C	29:BH:69:ALA:H	2.09	0.54
9:CI:35:GLU:HA	9:CI:39:GLY:CA	2.37	0.54
14:AN:20:PHE:HA	14:AN:24:ALA:HB3	1.89	0.54
5:AE:94:PHE:CZ	5:AE:96:GLN:HG2	2.42	0.54
24:BC:199:HIS:O	24:BC:202:ARG:HG3	2.06	0.54
1:CA:920:U:C2	1:CA:921:U:C5	2.95	0.54
45:DX:1:SER:O	45:DX:3:VAL:N	2.40	0.54
26:BE:46:GLN:HG3	26:BE:87:ALA:N	2.19	0.54
22:DA:2100:G:N2	22:DA:2190:G:H1'	2.22	0.54
21:AU:36:PHE:HB3	21:AU:40:PRO:HD3	1.89	0.54
26:DE:149:ILE:HD12	26:DE:175:ILE:HD13	1.88	0.54
1:AA:761:G:H2'	1:AA:762:U:C6	2.40	0.54
3:CC:76:ILE:HD11	3:CC:102:ILE:HD11	1.89	0.54
22:DA:2623:G:H4'	22:DA:2825:G:H8	1.70	0.54
22:BA:1153:C:OP2	56:BA:3358:HOH:O	2.18	0.54
31:DJ:111:LYS:HB2	31:DJ:115:GLY:HA3	1.87	0.54
32:DK:119:ALA:N	32:DK:120:PRO:HD2	2.21	0.54
2:CB:119:GLN:HG3	2:CB:124:THR:CG2	2.37	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:CA:749:A:C2	1:CA:750:C:C2	2.96	0.54
1:CA:510:A:H5''	1:CA:511:C:OP2	2.06	0.54
24:BC:29:PHE:CE2	24:BC:31:PRO:HG2	2.42	0.54
1:CA:791:G:H2'	1:CA:792:A:H5'	1.89	0.54
1:CA:8:A:C5	4:CD:205:LYS:HG3	2.41	0.54
22:BA:2383:G:H2'	22:BA:2384:U:C6	2.42	0.54
22:DA:2556:C:H2'	22:DA:2557:G:O4'	2.07	0.54
1:CA:1391:U:H2'	1:CA:1392:G:C8	2.42	0.54
10:CJ:87:LEU:HD22	10:CJ:90:LEU:HD13	1.89	0.54
22:BA:17:G:H2'	22:BA:18:U:H6	1.72	0.54
22:DA:227:A:C4'	22:DA:228:C:OP1	2.42	0.54
2:AB:102:ASN:O	2:AB:106:VAL:HG23	2.08	0.54
22:DA:1356:G:N2	22:DA:1357:C:H1'	2.22	0.54
22:DA:1370:C:H2'	22:DA:1371:G:C8	2.43	0.54
22:DA:82:U:H2'	22:DA:83:A:O4'	2.06	0.54
25:DD:119:ALA:HB3	25:DD:163:GLY:N	2.19	0.54
14:CN:87:ALA:HB2	14:CN:92:ILE:HD12	1.89	0.54
30:BI:46:ASP:HA	30:BI:50:LYS:HD2	1.88	0.54
32:DK:39:ILE:HD11	32:DK:62:VAL:CG2	2.38	0.54
46:DY:28:LEU:HD22	46:DY:28:LEU:O	2.07	0.54
22:DA:1475:G:H2'	22:DA:1475:G:N3	2.23	0.54
34:DM:38:ARG:O	34:DM:126:ILE:HG21	2.07	0.54
34:DM:34:LYS:HB3	34:DM:129:THR:HG22	1.89	0.54
40:BS:73:LYS:CE	40:BS:73:LYS:HA	2.33	0.54
1:AA:100:G:C6	1:AA:101:A:C5	2.95	0.54
2:CB:103:TRP:CA	2:CB:106:VAL:HB	2.36	0.54
22:DA:1493:C:O2	22:DA:1493:C:C2'	2.54	0.54
46:BY:5:GLU:O	46:BY:8:GLU:HB2	2.07	0.54
13:AM:3:ILE:O	13:AM:5:GLY:N	2.40	0.54
1:AA:174:A:C5	1:AA:175:C:C5	2.96	0.54
28:DG:70:LEU:O	28:DG:74:MET:HB2	2.07	0.54
1:AA:600:A:H2'	1:AA:601:G:C8	2.42	0.54
22:DA:1519:G:C6	22:DA:1520:U:N3	2.76	0.54
29:BH:18:GLN:HG3	29:BH:18:GLN:O	2.06	0.54
1:CA:1451:U:C2'	1:CA:1452:C:OP1	2.54	0.54
22:DA:17:G:H4'	38:DQ:24:TYR:CE1	2.42	0.54
26:DE:61:ARG:HE	26:DE:65:THR:HB	1.71	0.54
12:AL:6:LEU:HB3	17:AQ:33:TYR:CE1	2.42	0.54
1:CA:1533:C:H3'	1:CA:1533:C:H6	1.72	0.54
20:AT:55:PRO:O	20:AT:59:ARG:CB	2.55	0.54
25:BD:50:VAL:HG22	25:BD:80:TRP:O	2.07	0.54
22:DA:1196:C:H1'	22:DA:1226:A:C4	2.41	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
39:BR:27:ILE:HD13	39:BR:27:ILE:H	1.71	0.54
26:BE:132:LYS:O	26:BE:135:ALA:HB3	2.07	0.54
3:CC:122:GLN:O	3:CC:127:VAL:HG13	2.07	0.54
1:CA:295:C:H2'	1:CA:296:U:H6	1.71	0.54
1:CA:45:G:O2'	1:CA:46:G:H5'	2.08	0.54
22:BA:207:A:H2'	22:BA:208:C:O4'	2.06	0.54
22:DA:2586:U:H2'	22:DA:2587:A:O4'	2.07	0.54
22:BA:2808:G:N2	22:BA:2891:U:C6	2.76	0.54
22:BA:215:G:H4'	22:BA:216:A:OP1	2.08	0.54
39:BR:29:THR:HG22	39:BR:29:THR:O	2.07	0.54
2:AB:161:PHE:HA	2:AB:183:PHE:O	2.06	0.54
31:BJ:44:TYR:HA	38:BQ:59:LEU:CD2	2.37	0.54
38:BQ:93:ILE:CG2	38:BQ:94:LEU:N	2.71	0.54
38:BQ:91:ARG:HD3	39:BR:11:GLN:CG	2.38	0.54
22:BA:1131:G:H4'	22:BA:1132:U:OP1	2.07	0.54
51:B3:31:ILE:HD11	51:B3:34:LYS:CD	2.24	0.54
1:CA:977:A:O2'	1:CA:1224:U:O4	2.20	0.54
1:CA:1365:G:O2'	1:CA:1366:C:C5'	2.56	0.54
1:CA:1365:G:O2'	1:CA:1366:C:H6	1.90	0.54
22:DA:976:G:H5'	22:DA:1156:A:N6	2.22	0.54
1:AA:1127:G:C2'	1:AA:1128:C:H5'	2.37	0.54
4:AD:25:ARG:HH12	4:AD:30:LYS:HG2	1.72	0.54
31:DJ:4:PHE:HB3	38:DQ:63:ARG:HH22	1.72	0.54
31:DJ:4:PHE:HB3	38:DQ:63:ARG:NH2	2.23	0.54
39:DR:10:LYS:N	39:DR:10:LYS:HD2	2.22	0.54
1:AA:975:A:H4'	1:AA:976:G:H5''	1.85	0.54
34:BM:36:VAL:HG23	43:BV:82:TYR:HB2	1.89	0.54
22:DA:288:U:H2'	22:DA:289:G:C8	2.42	0.54
22:DA:2669:G:H2'	22:DA:2670:A:C8	2.42	0.54
1:CA:1299:A:C2'	1:CA:1299:A:N3	2.62	0.54
1:CA:1133:G:C2	1:CA:1142:G:C5	2.94	0.54
1:CA:1054:C:OP2	1:CA:1197:A:OP2	2.26	0.54
22:BA:2134:A:O2'	22:BA:2135:A:C8	2.53	0.54
30:BI:33:ASN:ND2	30:BI:64:ARG:HH22	2.00	0.54
22:BA:2149:U:O2'	22:BA:2150:C:C4'	2.55	0.54
2:AB:86:CYS:HB2	2:AB:88:GLN:HG3	1.89	0.54
22:DA:1197:G:H2'	22:DA:1198:U:H6	1.72	0.54
25:DD:173:GLN:HA	25:DD:173:GLN:HE21	1.72	0.54
27:BF:84:ILE:HG13	27:BF:84:ILE:O	2.08	0.54
25:DD:89:GLU:HG2	25:DD:94:GLN:NE2	2.22	0.54
14:AN:15:LEU:HD23	14:AN:18:LYS:HD2	1.89	0.54
31:BJ:97:PRO:O	31:BJ:99:ARG:N	2.40	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:1323:G:O2'	1:AA:1324:A:O4'	2.25	0.54
15:CO:88:ARG:HH21	22:DA:715:A:H4'	1.72	0.54
25:DD:99:GLU:HG3	25:DD:100:LEU:N	2.23	0.54
10:AJ:51:VAL:O	10:AJ:62:ARG:HA	2.07	0.54
22:DA:2624:G:C2	22:DA:2625:G:H1'	2.42	0.54
4:CD:64:TYR:CE2	4:CD:93:LEU:HB3	2.43	0.54
2:CB:17:HIS:CG	2:CB:18:GLN:N	2.72	0.54
22:DA:1626:A:C2'	22:DA:1627:G:OP2	2.55	0.54
1:AA:1394:A:C5	1:AA:1501:C:H4'	2.42	0.54
9:AI:33:SER:OG	9:AI:35:GLU:HG2	2.06	0.54
22:BA:1062:G:O2'	22:BA:1063:G:O5'	2.25	0.54
23:DB:17:C:O2'	23:DB:18:G:H5'	2.07	0.54
23:DB:18:G:C2	23:DB:19:C:C2	2.96	0.54
22:DA:38:A:C2	22:DA:442:G:C6	2.94	0.54
22:DA:445:C:O2'	22:DA:449:A:N3	2.41	0.54
1:CA:981:U:H5	1:CA:982:U:HO2'	1.56	0.54
19:CS:35:ARG:HH22	19:CS:53:GLY:H	1.54	0.54
22:DA:417:C:O5'	22:DA:417:C:H6	1.90	0.54
2:AB:53:LEU:HA	2:AB:56:LEU:HB3	1.88	0.54
22:DA:2668:G:O2'	22:DA:2669:G:H5'	2.07	0.54
25:BD:90:PHE:HB2	25:BD:92:VAL:CG2	2.33	0.54
24:BC:106:PRO:CB	24:BC:141:HIS:CE1	2.90	0.54
23:BB:28:C:O2'	23:BB:29:A:H5'	2.07	0.54
27:DF:42:ALA:CB	27:DF:49:LEU:HD21	2.37	0.54
32:DK:43:ILE:HG22	32:DK:54:LYS:HA	1.89	0.54
22:BA:2887:A:H3'	22:BA:2888:C:H6	1.72	0.54
3:CC:139:ASN:HB3	3:CC:142:ARG:NH2	2.23	0.54
22:BA:514:A:H1'	22:BA:581:C:O2'	2.08	0.54
22:DA:630:G:N2	22:DA:633:A:OP2	2.31	0.54
3:CC:126:ARG:HE	3:CC:126:ARG:CA	2.19	0.54
1:CA:533:A:OP1	56:CA:1852:HOH:O	2.17	0.54
22:DA:2542:A:H4'	22:DA:2543:G:H5'	1.88	0.54
1:AA:1386:G:H2'	1:AA:1387:G:H8	1.70	0.54
22:BA:1872:A:H2'	22:BA:1873:G:O4'	2.08	0.54
19:CS:10:ILE:CG2	19:CS:14:LEU:HD11	2.36	0.54
6:CF:38:ARG:HD2	6:CF:63:ASN:OD1	2.08	0.54
28:DG:117:PRO:HG2	28:DG:143:VAL:CG1	2.38	0.54
39:DR:97:LYS:O	39:DR:97:LYS:HG2	2.07	0.54
1:AA:1015:G:H1'	1:AA:1218:C:O2'	2.07	0.54
44:BW:11:ASN:HD22	44:BW:12:GLY:N	2.06	0.54
1:AA:652:U:C5	1:AA:752:G:C2	2.95	0.54
22:DA:716:A:H3'	22:DA:717:C:H5''	1.89	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
29:BH:58:LEU:HA	29:BH:61:VAL:HB	1.89	0.54
22:DA:357:C:H2'	22:DA:358:U:H6	1.71	0.54
45:DX:70:LEU:O	45:DX:74:GLY:N	2.39	0.54
22:BA:1203:U:H1'	33:BL:4:ASN:HB3	1.90	0.54
33:DL:122:VAL:O	33:DL:122:VAL:HG23	2.07	0.54
1:AA:438:U:C4	1:AA:494:G:C5	2.95	0.54
22:BA:2272:U:H5''	22:BA:2273:A:OP1	2.07	0.54
22:DA:2230:G:H2'	22:DA:2231:U:H6	1.70	0.54
39:DR:49:ILE:HG22	39:DR:54:VAL:HB	1.88	0.54
22:DA:449:A:H2'	22:DA:450:G:H5'	1.90	0.54
44:DW:25:PHE:O	44:DW:27:GLY:N	2.37	0.54
22:DA:1387:A:O2'	22:DA:1388:G:H8	1.89	0.54
22:DA:315:G:H2'	22:DA:316:C:O4'	2.08	0.54
22:DA:1655:A:H5'	25:DD:118:PHE:CE1	2.43	0.54
23:DB:42:C:C5	27:DF:65:LEU:HD13	2.42	0.54
22:DA:482:A:N6	22:DA:506:G:N9	2.54	0.54
26:BE:187:VAL:O	26:BE:188:MET:CB	2.55	0.54
22:DA:78:U:H2'	22:DA:79:C:H6	1.71	0.54
22:DA:657:U:C2	22:DA:658:U:C5	2.95	0.54
1:CA:994:A:N6	1:CA:1216:A:H5'	2.22	0.54
13:CM:13:HIS:HB3	13:CM:16:ILE:HB	1.88	0.54
40:BS:73:LYS:CA	40:BS:73:LYS:HE3	2.38	0.54
8:AH:78:SER:OG	8:AH:83:ARG:HA	2.08	0.54
2:CB:103:TRP:CB	2:CB:106:VAL:HB	2.36	0.54
1:CA:519:C:O2'	1:CA:520:A:C5'	2.56	0.54
11:CK:126:ARG:N	21:CU:33:ARG:HE	2.06	0.54
25:BD:4:LEU:HD23	25:BD:29:VAL:HG11	1.89	0.54
9:CI:46:VAL:O	9:CI:79:ARG:HG3	2.07	0.54
42:DU:60:LYS:N	42:DU:60:LYS:HD2	2.21	0.54
22:BA:1415:U:O2	22:BA:1415:U:C2'	2.55	0.54
1:AA:807:A:C5	1:AA:808:C:C5	2.96	0.54
25:DD:79:LEU:HD22	25:DD:79:LEU:N	2.22	0.54
1:AA:184:G:H2'	1:AA:185:U:H6	1.71	0.54
22:DA:1723:G:H2'	22:DA:1724:G:C8	2.40	0.54
22:DA:1182:G:H2'	22:DA:1183:U:O4'	2.07	0.54
21:AU:16:ARG:HH11	21:AU:19:LYS:HG3	1.72	0.54
1:CA:68:G:H5'	1:CA:171:A:O2'	2.07	0.54
22:BA:2511:U:O4	22:BA:2575:C:N3	2.41	0.54
17:AQ:33:TYR:O	17:AQ:35:LYS:N	2.40	0.54
14:AN:27:LYS:HA	14:AN:30:ILE:HB	1.89	0.54
1:CA:513:C:H2'	1:CA:514:C:C6	2.43	0.54
8:CH:97:GLY:O	8:CH:98:LEU:HB2	2.08	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
47:BZ:3:THR:HA	47:BZ:37:ARG:O	2.07	0.54
22:BA:742:A:H2'	22:BA:743:A:C8	2.42	0.54
18:CR:44:THR:OG1	18:CR:46:THR:HG22	2.07	0.54
22:DA:2654:A:H4'	22:DA:2655:G:OP1	2.08	0.54
11:AK:33:ILE:HG12	11:AK:69:CYS:SG	2.48	0.54
22:BA:500:G:N2	22:BA:502:A:H3'	2.22	0.54
38:DQ:9:ALA:O	38:DQ:12:ARG:HG2	2.06	0.54
2:CB:112:ARG:O	2:CB:112:ARG:HG3	2.08	0.54
27:BF:66:ILE:O	27:BF:66:ILE:HG13	2.07	0.54
22:DA:343:C:O2	22:DA:343:C:H2'	2.06	0.54
2:CB:208:ALA:HA	2:CB:211:LEU:HB3	1.90	0.54
13:AM:89:ARG:HH11	13:AM:94:LEU:HB3	1.72	0.54
31:BJ:38:GLY:O	31:BJ:43:GLU:HB2	2.08	0.54
38:BQ:85:ALA:O	38:BQ:88:GLU:HB2	2.07	0.54
1:CA:1159:U:H5	1:CA:1182:G:O2'	1.88	0.54
22:BA:10:A:H2	22:BA:2800:A:H2'	1.73	0.54
1:CA:1316:G:H22	1:CA:1318:A:H3'	1.73	0.54
22:BA:526:A:H5''	22:BA:527:C:OP1	2.08	0.54
22:DA:2282:G:H4'	22:DA:2283:C:OP2	2.08	0.54
22:DA:569:U:H5''	22:DA:821:A:C2	2.41	0.54
22:DA:1608:A:C5	22:DA:1611:C:N4	2.75	0.54
22:DA:324:A:C2	22:DA:325:G:H1'	2.43	0.54
22:DA:182:A:H2'	22:DA:183:C:C6	2.43	0.54
35:DN:73:ASN:HA	35:DN:76:VAL:HG13	1.89	0.54
22:DA:201:C:C5	22:DA:202:U:C5	2.95	0.54
35:DN:19:ALA:HA	35:DN:22:ARG:HB3	1.89	0.54
1:CA:1137:C:H4'	1:CA:1138:G:C2	2.42	0.54
43:DV:80:HIS:CD2	43:DV:83:LYS:N	2.76	0.54
43:DV:80:HIS:HD2	43:DV:83:LYS:N	2.05	0.54
25:BD:68:PHE:CB	25:BD:73:VAL:HG12	2.34	0.54
5:CE:131:ASN:HD22	5:CE:132:PRO:HD2	1.72	0.54
22:DA:2286:G:H5''	22:DA:2287:A:C1'	2.36	0.54
1:AA:473:U:H2'	1:AA:474:G:C8	2.36	0.54
27:DF:105:ILE:C	27:DF:108:PRO:HD2	2.27	0.54
22:DA:954:G:C2	22:DA:964:C:O2	2.61	0.54
3:AC:6:PRO:HG2	3:AC:183:TYR:CG	2.43	0.54
22:DA:2415:G:H2'	22:DA:2416:C:C6	2.42	0.54
22:BA:2327:A:H2'	22:BA:2328:A:C8	2.42	0.54
22:DA:1819:A:H4'	22:DA:1820:U:H5'	1.89	0.54
40:BS:107:VAL:HG12	40:BS:107:VAL:O	2.06	0.54
35:DN:94:TYR:N	35:DN:94:TYR:CD1	2.72	0.54
52:B4:7:VAL:O	52:B4:8:LYS:HB2	2.08	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
37:BP:105:LYS:HA	37:BP:108:ARG:HH21	1.73	0.54
1:CA:1176:A:H2'	1:CA:1177:G:O4'	2.08	0.54
22:DA:699:A:C8	22:DA:700:G:C8	2.95	0.54
22:BA:1433:A:H2'	22:BA:1434:A:O4'	2.08	0.54
13:AM:94:LEU:HB3	13:AM:95:PRO:HD2	1.88	0.54
41:DT:69:ARG:HD2	41:DT:70:HIS:H	1.72	0.54
22:DA:515:A:H2'	22:DA:516:C:H5'	1.88	0.54
6:CF:67:PRO:O	6:CF:69:GLU:N	2.41	0.54
32:BK:34:GLY:O	32:BK:35:VAL:C	2.45	0.54
22:DA:563:A:C4	22:DA:2018:G:C2	2.96	0.54
22:DA:1823:G:H5''	56:DA:3767:HOH:O	2.06	0.54
38:DQ:74:SER:O	38:DQ:78:PHE:HB2	2.08	0.54
49:B1:31:GLU:O	49:B1:31:GLU:HG2	2.07	0.54
22:DA:2372:U:H1'	49:D1:45:HIS:CE1	2.42	0.54
22:DA:1588:G:H2'	22:DA:1589:U:C6	2.43	0.54
4:AD:129:VAL:HG13	4:AD:131:ILE:HD12	1.88	0.54
1:CA:1256:A:O5'	1:CA:1278:G:N2	2.41	0.54
2:AB:165:ALA:HA	2:AB:172:ILE:HD11	1.89	0.54
22:BA:558:U:H5''	31:BJ:111:LYS:HE3	1.90	0.54
22:DA:1338:G:H4'	41:DT:18:GLU:OE2	2.08	0.54
4:AD:3:TYR:O	4:AD:4:LEU:HB2	2.08	0.54
22:DA:81:G:H2'	22:DA:82:U:C6	2.43	0.54
1:CA:1072:G:H2'	1:CA:1073:U:O4'	2.08	0.54
11:CK:74:LYS:HA	11:CK:78:ILE:CD1	2.29	0.54
31:BJ:54:ILE:HD12	31:BJ:55:ILE:N	2.23	0.54
22:DA:104:A:N7	22:DA:105:C:C4	2.75	0.54
22:DA:2745:C:H42	22:DA:2759:G:H1	1.56	0.54
28:DG:62:ALA:O	28:DG:66:THR:HG23	2.07	0.54
32:DK:19:VAL:HG12	32:DK:41:ILE:HG13	1.89	0.54
22:BA:983:A:C6	22:BA:984:A:C2	2.96	0.54
22:DA:1190:G:OP1	33:DL:32:GLY:HA2	2.08	0.54
27:DF:101:ARG:HH11	27:DF:138:PRO:HB3	1.73	0.54
7:CG:71:THR:HG23	7:CG:72:VAL:HG23	1.88	0.54
30:BI:105:LEU:HD23	30:BI:108:ILE:HD13	1.90	0.54
1:CA:197:A:C6	1:CA:221:C:H4'	2.43	0.54
22:DA:2544:G:H2'	22:DA:2545:G:C8	2.42	0.54
5:AE:106:ALA:CB	5:AE:124:ALA:HB3	2.38	0.54
25:DD:148:GLN:CG	25:DD:152:PRO:HG2	2.38	0.54
22:DA:1905:C:O4'	22:DA:1928:A:C2	2.61	0.54
22:DA:1166:G:N2	22:DA:1184:U:H1'	2.23	0.54
7:CG:4:ARG:NH2	7:CG:6:ILE:HB	2.23	0.54
22:DA:2008:C:H2'	22:DA:2009:A:H8	1.73	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
27:BF:33:ILE:HG12	27:BF:155:ILE:HG12	1.88	0.54
32:BK:58:LEU:N	32:BK:58:LEU:HD23	2.22	0.54
25:DD:27:ILE:HG12	25:DD:201:LEU:HD12	1.90	0.54
22:DA:2015:A:C5	48:D0:2:VAL:HG11	2.42	0.54
22:BA:2562:U:H2'	22:BA:2563:U:H5'	1.89	0.54
7:CG:128:GLU:HG3	7:CG:130:LYS:H	1.73	0.54
13:AM:29:SER:O	13:AM:33:LEU:HD12	2.07	0.54
22:DA:545:U:H2'	22:DA:547:A:OP1	2.07	0.54
22:BA:1680:U:H2'	22:BA:1681:G:O4'	2.08	0.54
15:AO:44:GLU:HG3	15:AO:45:HIS:N	2.23	0.54
15:AO:44:GLU:O	15:AO:45:HIS:HB2	2.07	0.54
5:AE:13:LYS:HD3	5:AE:115:GLU:OE2	2.07	0.54
1:AA:168:G:C6	1:AA:169:C:C4	2.96	0.54
40:DS:79:GLY:HA3	40:DS:100:THR:OG1	2.07	0.54
22:BA:1079:C:N4	22:BA:1088:A:H2	2.05	0.54
44:BW:28:GLU:CG	44:BW:29:SER:H	2.20	0.54
1:CA:982:U:C4	1:CA:983:A:N6	2.76	0.54
22:DA:1439:A:C8	22:DA:1440:U:O4'	2.61	0.54
22:DA:30:G:C5	22:DA:31:C:C4	2.95	0.54
22:DA:2420:C:OP1	51:D3:33:THR:HB	2.07	0.54
22:DA:1156:A:H8	22:DA:1156:A:OP1	1.91	0.54
20:AT:23:ARG:O	20:AT:26:MET:HG3	2.07	0.54
20:AT:43:LYS:HD3	20:AT:86:ALA:O	2.07	0.54
22:DA:1537:G:O2'	22:DA:1538:G:H4'	2.07	0.54
22:DA:1598:A:H2'	22:DA:1599:U:H6	1.72	0.54
39:BR:41:ILE:O	39:BR:46:GLU:HB2	2.08	0.54
1:CA:1072:G:C6	1:CA:1073:U:C4	2.96	0.54
1:CA:204:G:H2'	1:CA:205:A:O4'	2.08	0.54
31:BJ:56:VAL:CG1	31:BJ:57:LEU:H	2.21	0.54
22:DA:1998:A:O3'	22:DA:2724:U:H4'	2.08	0.54
2:CB:137:THR:O	2:CB:140:LEU:HB3	2.07	0.54
22:DA:2666:C:H2'	22:DA:2667:C:H6	1.72	0.54
4:AD:109:THR:HG23	4:AD:112:GLU:N	2.15	0.54
1:CA:245:U:H5''	1:CA:245:U:C6	2.35	0.54
1:CA:280:C:H4'	1:CA:281:G:OP2	2.08	0.54
28:DG:139:VAL:HA	28:DG:142:GLN:CB	2.37	0.54
2:AB:20:ARG:O	2:AB:22:TRP:HB3	2.07	0.54
6:AF:85:ILE:O	6:AF:86:ARG:C	2.45	0.54
22:DA:1206:G:C2	22:DA:1207:C:C2	2.96	0.54
6:CF:2:ARG:HG2	6:CF:4:TYR:OH	2.08	0.54
11:CK:124:LYS:O	21:CU:34:ARG:HB2	2.08	0.54
7:CG:74:VAL:CG1	7:CG:143:MET:HB2	2.37	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:BA:1475:G:C1'	22:BA:1476:U:OP2	2.53	0.54
22:BA:511:U:C5	22:BA:512:G:C5	2.95	0.54
9:CI:48:ARG:HH21	9:CI:57:VAL:HG21	1.73	0.54
31:DJ:94:ALA:O	31:DJ:95:ARG:CB	2.56	0.54
1:CA:991:U:C5	1:CA:1212:U:H1'	2.43	0.54
22:DA:1286:A:C4	22:DA:1289:C:N4	2.76	0.54
41:DT:29:THR:HB	41:DT:86:THR:N	2.23	0.54
22:DA:1857:G:N3	22:DA:1884:G:N1	2.55	0.54
22:DA:389:G:O2'	22:DA:390:U:H5'	2.07	0.54
1:CA:764:C:N4	1:CA:812:G:H1	2.06	0.54
50:D2:28:ARG:O	50:D2:30:VAL:N	2.41	0.54
1:CA:338:A:N1	1:CA:351:G:N2	2.55	0.54
43:DV:30:ILE:HB	43:DV:38:LEU:HB3	1.90	0.54
37:BP:88:ARG:HG2	37:BP:112:ARG:NH1	2.22	0.54
1:AA:89:U:O2'	1:AA:90:C:C5'	2.55	0.54
13:CM:53:ASP:HA	13:CM:56:ARG:CZ	2.38	0.54
3:CC:125:ARG:HG3	3:CC:125:ARG:HH11	1.73	0.54
26:BE:79:ARG:CG	26:BE:80:SER:H	2.20	0.54
4:AD:75:TYR:C	4:AD:75:TYR:CD1	2.81	0.54
22:BA:1913:A:H4'	22:BA:1913:A:OP1	2.08	0.54
28:BG:23:ILE:HG21	28:BG:71:LEU:HD11	1.89	0.54
38:BQ:111:LYS:CE	39:BR:50:GLY:HA2	2.38	0.54
22:DA:1008:A:H4'	22:DA:1009:A:OP1	2.08	0.54
12:AL:115:LYS:O	12:AL:116:TYR:HB2	2.07	0.54
1:CA:397:A:H5'	1:CA:398:U:OP1	2.08	0.54
1:AA:489:C:O2'	1:AA:490:C:H5'	2.08	0.54
23:DB:62:C:H2'	23:DB:63:C:O4'	2.08	0.54
1:AA:633:G:H2'	1:AA:634:C:H6	1.73	0.54
1:CA:1279:G:OP2	1:CA:1279:G:C2	2.61	0.54
11:CK:27:ASN:O	11:CK:28:ASN:HB2	2.07	0.54
21:CU:25:ALA:O	21:CU:29:ALA:N	2.39	0.54
22:DA:454:A:H3'	22:DA:455:C:H5''	1.88	0.54
22:BA:528:A:H2	22:BA:2043:C:H5'	1.73	0.54
28:BG:104:LEU:HB2	28:BG:112:VAL:HG21	1.87	0.54
22:DA:1536:C:C2	22:DA:1536:C:OP2	2.61	0.54
22:DA:1391:U:H4'	41:DT:19:LYS:HZ1	1.71	0.54
22:DA:1351:C:O2'	22:DA:1571:A:H1'	2.08	0.54
22:DA:301:G:C6	22:DA:317:G:C6	2.95	0.54
31:DJ:45:THR:HG21	31:DJ:50:THR:HG23	1.89	0.54
35:DN:96:ARG:HG3	35:DN:97:ILE:N	2.23	0.54
1:AA:267:C:C6	1:AA:267:C:H5'	2.43	0.54
22:DA:628:G:C6	22:DA:636:G:C2	2.96	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:141:G:H2'	22:DA:142:A:O4'	2.08	0.54
22:DA:1275:A:C5	35:DN:16:HIS:HD2	2.26	0.54
22:DA:95:A:O2'	46:DY:41:HIS:CD2	2.60	0.54
22:DA:822:G:O6	22:DA:943:A:C2	2.48	0.54
9:AI:128:LYS:CD	9:AI:129:ARG:H	2.15	0.54
27:DF:46:LYS:HD3	27:DF:50:ASP:HB2	1.89	0.54
1:AA:1054:C:O2	1:AA:1054:C:O4'	2.26	0.54
22:DA:2195:U:O2'	22:DA:2196:C:H5'	2.08	0.54
22:BA:27:G:N2	22:BA:512:G:H1'	2.22	0.54
22:DA:2285:C:C5	49:D1:5:ARG:NH2	2.75	0.54
22:DA:2286:G:H4'	22:DA:2287:A:N9	2.23	0.54
1:CA:1012:A:C5	1:CA:1013:G:N7	2.75	0.54
22:DA:2468:A:O2'	22:DA:2469:A:C8	2.50	0.54
11:AK:108:ASN:CB	21:AU:6:ARG:HG2	2.37	0.54
22:DA:2519:U:C6	22:DA:2542:A:N6	2.76	0.54
22:DA:1285:A:N6	22:DA:1329:U:C5	2.76	0.54
22:DA:1320:C:O2'	22:DA:1321:A:C8	2.60	0.54
22:BA:1936:A:H2	22:BA:1943:U:C4	2.25	0.54
1:CA:920:U:H2'	1:CA:921:U:H6	1.71	0.54
1:CA:344:A:H5''	1:CA:345:C:H5	1.71	0.54
22:DA:438:G:C6	22:DA:439:A:C6	2.96	0.54
1:CA:1025:U:O2'	1:CA:1026:G:OP2	2.26	0.54
2:CB:20:ARG:HE	2:CB:20:ARG:HA	1.72	0.54
22:DA:1168:G:C2	22:DA:1182:G:C2	2.96	0.54
1:AA:1053:G:O6	1:AA:1199:U:H2'	2.08	0.54
22:DA:1635:A:H2'	22:DA:1636:U:O4'	2.07	0.54
1:CA:1387:G:C6	1:CA:1388:C:N4	2.75	0.54
1:AA:1361:G:C2'	1:AA:1362:A:H5''	2.38	0.54
32:DK:2:ILE:O	32:DK:3:GLN:HG2	2.07	0.54
15:AO:23:SER:O	15:AO:24:THR:C	2.46	0.54
22:BA:1419:A:C6	22:BA:1421:G:C4	2.96	0.54
22:BA:17:G:H2'	22:BA:18:U:C6	2.43	0.54
23:DB:63:C:H2'	23:DB:63:C:O2	2.08	0.54
22:DA:1317:G:C6	22:DA:1318:U:N3	2.75	0.54
17:CQ:23:ALA:C	17:CQ:24:ILE:HD12	2.28	0.54
37:DP:102:ARG:HD2	37:DP:106:ALA:O	2.06	0.54
22:BA:304:U:H2'	22:BA:305:C:C6	2.43	0.54
1:CA:946:A:H2'	1:CA:947:G:C8	2.42	0.54
11:CK:106:ILE:O	11:CK:106:ILE:HG12	2.08	0.54
1:AA:613:C:H2'	1:AA:614:C:H6	1.73	0.54
36:DO:117:PHE:CD2	36:DO:117:PHE:C	2.81	0.54
25:BD:42:ASN:HD22	25:BD:42:ASN:C	2.11	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
42:DU:9:GLU:OE1	42:DU:23:LYS:HA	2.07	0.54
44:BW:23:LYS:NZ	44:BW:24:ARG:HG3	2.22	0.54
10:CJ:57:VAL:HG22	10:CJ:58:ASN:N	2.18	0.54
14:CN:59:GLN:O	14:CN:60:ARG:HB2	2.06	0.54
1:CA:704:A:H2'	1:CA:705:G:C8	2.43	0.54
22:DA:1536:C:H4'	22:DA:1537:G:C5'	2.38	0.54
22:DA:1210:G:H5''	22:DA:1211:C:H3'	1.89	0.54
1:CA:1074:G:H2'	1:CA:1075:U:C6	2.42	0.54
25:BD:111:GLY:O	25:BD:169:ARG:O	2.26	0.54
4:CD:24:VAL:HG23	4:CD:25:ARG:HB2	1.90	0.54
22:DA:2746:U:C5'	28:DG:137:LYS:HG2	2.37	0.54
37:DP:3:ILE:O	37:DP:7:LEU:HB2	2.08	0.54
49:B1:49:LYS:HG2	49:B1:50:GLU:H	1.73	0.54
49:B1:24:LYS:NZ	49:B1:51:ALA:O	2.40	0.54
1:AA:71:A:O2'	1:AA:72:A:C5'	2.51	0.54
22:DA:818:G:O2'	22:DA:819:A:H5''	2.07	0.54
8:AH:8:ASP:O	8:AH:9:MET:C	2.47	0.54
3:CC:53:ARG:HG3	3:CC:68:HIS:CD2	2.43	0.54
1:AA:212:G:H2'	1:AA:213:G:C8	2.42	0.54
40:DS:4:ILE:O	40:DS:4:ILE:HG13	2.08	0.54
25:DD:150:GLN:HG3	25:DD:151:THR:N	2.23	0.54
22:DA:2635:A:H5'	25:DD:79:LEU:HB2	1.90	0.54
22:DA:2043:C:H2'	22:DA:2043:C:O2	2.08	0.54
32:BK:61:VAL:CG2	32:BK:87:LEU:HD11	2.36	0.54
1:AA:114:U:O2'	1:AA:115:G:H5'	2.08	0.54
1:CA:719:C:H3'	1:CA:720:C:C6	2.42	0.54
22:BA:2013:A:OP1	40:BS:96:ILE:HA	2.09	0.54
21:AU:16:ARG:HH11	21:AU:19:LYS:CG	2.20	0.54
51:D3:15:LYS:HZ1	51:D3:19:GLY:HA2	1.71	0.54
1:CA:888:G:O3'	1:CA:1488:G:H4'	2.06	0.54
30:DI:23:VAL:HG21	30:DI:37:PHE:HE2	1.73	0.54
11:AK:110:THR:HG22	21:AU:4:LYS:CB	2.37	0.54
22:BA:1856:U:O2'	22:BA:1857:G:H5'	2.08	0.54
22:BA:1419:A:C5	22:BA:1421:G:C5	2.95	0.54
42:DU:7:ASP:O	42:DU:8:ASP:HB2	2.08	0.54
1:CA:802:A:H2'	1:CA:803:G:O5'	2.08	0.54
22:BA:1537:G:H2'	22:BA:1538:G:O4'	2.06	0.54
9:AI:11:ARG:NH1	9:AI:106:ASP:HB3	2.23	0.54
1:AA:1381:U:HO2'	1:AA:1382:C:H6	1.52	0.54
4:AD:190:LEU:HD12	4:AD:190:LEU:O	2.08	0.54
22:BA:492:A:H2'	22:BA:493:G:O4'	2.08	0.54
30:DI:55:PRO:HG2	30:DI:70:THR:HG23	1.90	0.54

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:CT:54:GLN:N	20:CT:55:PRO:HD2	2.22	0.54
22:BA:2006:C:H6	22:BA:2006:C:O5'	1.91	0.54
20:AT:77:ASN:N	20:AT:77:ASN:HD22	2.05	0.54
11:CK:12:ARG:HD3	11:CK:12:ARG:N	2.23	0.54
22:BA:930:G:H1'	47:BZ:24:LEU:HD21	1.90	0.54
1:AA:1084:G:C5	1:AA:1085:U:C4	2.96	0.54
10:CJ:92:LEU:HD22	10:CJ:93:ALA:N	2.23	0.54
22:BA:163:C:O2'	22:BA:164:C:H5''	2.08	0.54
22:DA:2221:G:C5	22:DA:2222:C:C5	2.96	0.54
22:BA:996:A:H4'	38:BQ:91:ARG:CG	2.37	0.53
1:CA:933:G:OP1	7:CG:3:ARG:NH1	2.41	0.53
20:AT:71:ALA:O	20:AT:74:HIS:HB2	2.08	0.53
22:DA:1234:U:H2'	22:DA:1235:G:C8	2.43	0.53
22:DA:995:C:O2'	38:DQ:60:TRP:CZ2	2.61	0.53
22:DA:1059:G:N3	30:DI:131:THR:HG22	2.23	0.53
22:DA:1066:U:H2'	22:DA:1068:G:OP2	2.08	0.53
22:BA:1654:A:H2'	22:BA:1655:A:H8	1.73	0.53
30:DI:49:GLU:HG3	30:DI:54:ILE:HD11	1.89	0.53
25:BD:169:ARG:C	25:BD:170:VAL:HG13	2.28	0.53
4:CD:25:ARG:HH11	4:CD:25:ARG:CG	2.16	0.53
26:DE:146:VAL:O	26:DE:167:VAL:HA	2.08	0.53
22:DA:1050:A:C2	22:DA:2751:G:N3	2.76	0.53
22:DA:729:G:C2'	22:DA:729:G:N3	2.70	0.53
13:CM:13:HIS:NE2	13:CM:41:ASP:HA	2.23	0.53
22:DA:749:A:C6	22:DA:750:A:N7	2.76	0.53
1:AA:1055:A:H1'	3:AC:155:ARG:NH2	2.20	0.53
32:DK:69:VAL:HG12	32:DK:70:ARG:H	1.72	0.53
24:BC:199:HIS:O	24:BC:201:LEU:N	2.40	0.53
11:AK:87:GLY:H	11:AK:113:THR:CG2	2.20	0.53
22:DA:41:C:H2'	22:DA:42:A:H8	1.72	0.53
1:AA:600:A:H2'	1:AA:601:G:H8	1.73	0.53
11:AK:30:ILE:HG13	11:AK:30:ILE:O	2.08	0.53
41:DT:74:ILE:HG13	41:DT:75:GLY:H	1.72	0.53
10:CJ:48:ARG:NH1	10:CJ:48:ARG:HB2	2.24	0.53
1:CA:1387:G:H2'	1:CA:1388:C:H6	1.71	0.53
32:DK:24:VAL:CG1	32:DK:33:ALA:HB2	2.37	0.53
34:BM:46:ILE:C	34:BM:46:ILE:HD12	2.28	0.53
1:AA:107:G:C2'	1:AA:108:G:H5'	2.37	0.53
17:CQ:42:LYS:HB3	17:CQ:42:LYS:NZ	2.23	0.53
39:DR:3:ALA:HB2	39:DR:101:ILE:HD13	1.90	0.53
22:DA:158:U:H2'	22:DA:158:U:O2	2.08	0.53
22:DA:1317:G:C2	22:DA:1336:A:C2	2.96	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:BA:632:A:H2'	22:BA:633:A:C8	2.43	0.53
22:DA:1424:G:O6	22:DA:1425:G:C2	2.61	0.53
23:DB:96:G:O2'	23:DB:97:C:H5'	2.08	0.53
22:BA:2553:G:C2	22:BA:2554:U:O2	2.61	0.53
1:CA:957:U:C5	1:CA:959:A:OP2	2.61	0.53
50:D2:10:LEU:HD21	50:D2:14:ARG:HH11	1.73	0.53
44:DW:11:ASN:ND2	44:DW:11:ASN:O	2.41	0.53
22:BA:1789:A:OP2	24:BC:220:ARG:NH1	2.42	0.53
21:AU:38:GLU:CD	21:AU:41:THR:HG21	2.29	0.53
25:DD:36:GLN:HE21	25:DD:38:LYS:HZ1	1.57	0.53
31:BJ:40:HIS:C	31:BJ:41:LYS:CG	2.75	0.53
12:CL:42:LYS:HG2	12:CL:43:LYS:H	1.73	0.53
7:CG:2:ARG:HG2	7:CG:3:ARG:N	2.23	0.53
1:CA:973:G:HO2'	1:CA:974:A:H5'	1.68	0.53
22:DA:2330:G:N1	22:DA:2386:A:C6	2.76	0.53
9:AI:6:TYR:CG	9:AI:7:GLY:N	2.76	0.53
22:DA:223:A:H61	22:DA:422:A:N6	2.06	0.53
22:DA:1339:G:N2	22:DA:1603:A:H1'	2.22	0.53
22:DA:311:A:O2'	22:DA:332:A:H5'	2.09	0.53
1:CA:1073:U:C2	1:CA:1074:G:C8	2.95	0.53
23:DB:42:C:O2'	23:DB:43:C:C5'	2.46	0.53
1:CA:1152:A:H2'	1:CA:1153:G:C8	2.43	0.53
22:DA:108:G:H2'	22:DA:109:C:C6	2.43	0.53
1:CA:1296:C:N4	1:CA:1297:G:H22	2.06	0.53
22:DA:764:A:N3	22:DA:781:A:C6	2.77	0.53
22:DA:95:A:O2'	46:DY:41:HIS:HD2	1.91	0.53
1:CA:796:C:H4'	11:CK:126:ARG:HH21	1.72	0.53
31:DJ:93:ILE:HA	31:DJ:97:PRO:HB3	1.89	0.53
4:AD:146:GLU:HB3	4:AD:147:LYS:NZ	2.23	0.53
22:BA:1019:U:O4	22:BA:1020:A:N6	2.41	0.53
44:DW:13:ARG:HG3	44:DW:14:ASP:N	2.22	0.53
22:DA:2571:U:O4	22:DA:2574:G:C8	2.61	0.53
19:CS:44:ILE:HA	19:CS:61:VAL:CG1	2.38	0.53
7:CG:116:ALA:O	7:CG:120:ALA:HB3	2.08	0.53
1:AA:740:U:OP1	15:AO:37:HIS:HE1	1.91	0.53
2:CB:115:ASP:O	2:CB:119:GLN:HB2	2.09	0.53
22:BA:2703:C:O5'	22:BA:2703:C:H6	1.91	0.53
35:DN:1:MET:O	35:DN:2:ARG:CB	2.57	0.53
3:AC:22:PHE:C	3:AC:22:PHE:CD2	2.81	0.53
4:AD:191:SER:O	4:AD:192:ALA:HB2	2.09	0.53
2:CB:161:PHE:HA	2:CB:183:PHE:O	2.08	0.53
22:BA:2220:U:H2'	22:BA:2221:G:H8	1.71	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:CB:26:MET:HE1	2:CB:192:PRO:HB3	1.90	0.53
29:BH:75:LEU:HD22	29:BH:143:ILE:HG23	1.89	0.53
22:BA:1967:C:C2'	22:BA:1968:G:H5'	2.38	0.53
8:AH:39:LEU:HB2	8:AH:45:ILE:HD11	1.89	0.53
45:BX:36:ARG:HG2	45:BX:47:THR:HB	1.91	0.53
33:DL:103:ILE:N	33:DL:103:ILE:HD12	2.24	0.53
44:BW:37:VAL:C	44:BW:38:ARG:CG	2.77	0.53
44:BW:46:ALA:HB3	44:BW:79:ILE:O	2.09	0.53
1:CA:961:U:O4	1:CA:983:A:N6	2.42	0.53
22:DA:30:G:C6	22:DA:31:C:N3	2.77	0.53
22:BA:1169:A:C2	22:BA:1181:U:O2	2.61	0.53
4:AD:28:ASP:C	4:AD:29:THR:O	2.46	0.53
33:BL:95:LEU:HD22	33:BL:100:ILE:CD1	2.36	0.53
1:CA:89:U:O2'	1:CA:90:C:O4'	2.26	0.53
1:AA:1279:G:N3	1:AA:1279:G:C2'	2.70	0.53
4:CD:28:ASP:O	4:CD:29:THR:O	2.26	0.53
22:DA:2741:A:C8	22:DA:2742:G:C8	2.96	0.53
35:DN:12:ARG:HA	35:DN:12:ARG:HE	1.74	0.53
17:CQ:46:HIS:HB2	17:CQ:70:LYS:CE	2.31	0.53
6:CF:43:GLY:HA2	6:CF:58:HIS:ND1	2.23	0.53
22:BA:1057:A:N6	22:BA:1087:G:OP2	2.29	0.53
2:CB:132:GLU:C	2:CB:134:LEU:H	2.10	0.53
2:AB:148:GLY:C	2:AB:150:ILE:H	2.11	0.53
6:CF:3:HIS:ND1	6:CF:95:ALA:N	2.56	0.53
41:DT:38:ALA:HB1	41:DT:81:LYS:HZ2	1.70	0.53
1:AA:1007:U:C2'	1:AA:1008:U:H5''	2.37	0.53
1:CA:1091:U:O2	1:CA:1093:A:C8	2.57	0.53
22:DA:847:U:H5'	22:DA:848:C:OP2	2.08	0.53
36:BO:75:GLY:HA2	36:BO:106:LEU:HD13	1.88	0.53
2:AB:14:HIS:HB2	2:AB:208:ALA:HB2	1.91	0.53
22:DA:1179:G:H2'	22:DA:1180:U:C6	2.43	0.53
21:AU:3:ILE:HD13	21:AU:19:LYS:NZ	2.23	0.53
29:DH:41:LYS:HA	29:DH:44:ILE:CG1	2.38	0.53
1:AA:1323:G:O2'	1:AA:1324:A:C8	2.60	0.53
10:AJ:71:LEU:O	10:AJ:72:ARG:HD3	2.08	0.53
45:DX:44:ARG:HH11	45:DX:44:ARG:HB3	1.73	0.53
39:DR:66:HIS:CD2	39:DR:94:THR:HG22	2.43	0.53
22:BA:2267:A:H5''	22:BA:2268:A:C5'	2.38	0.53
1:CA:223:A:H2'	1:CA:224:U:C6	2.43	0.53
1:CA:1114:C:O2	14:CN:99:SER:HB3	2.08	0.53
22:DA:1794:A:H2'	22:DA:1795:C:C6	2.44	0.53
22:BA:2345:G:N3	22:BA:2381:A:H2'	2.23	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
36:DO:48:LEU:HD13	36:DO:87:ILE:HD12	1.89	0.53
30:BI:61:TYR:N	30:BI:61:TYR:HD2	2.07	0.53
23:BB:33:G:O2'	23:BB:34:A:H5'	2.09	0.53
22:BA:455:C:N3	22:BA:472:A:H2'	2.23	0.53
4:AD:137:SER:HB3	4:AD:138:PRO:HD2	1.89	0.53
27:DF:113:PHE:O	27:DF:114:ARG:CB	2.56	0.53
22:DA:1726:C:H2'	22:DA:1727:C:H6	1.74	0.53
27:DF:155:ILE:HD12	27:DF:155:ILE:H	1.73	0.53
1:CA:1417:G:C6	1:CA:1482:G:C6	2.97	0.53
40:DS:70:LYS:H	40:DS:70:LYS:HE3	1.73	0.53
22:DA:56:A:C2	22:DA:115:C:C2	2.97	0.53
44:BW:72:GLY:N	44:BW:73:PRO:CD	2.72	0.53
23:DB:15:A:C8	23:DB:109:A:N6	2.76	0.53
22:BA:923:G:N3	44:BW:23:LYS:NZ	2.56	0.53
44:BW:37:VAL:CG2	44:BW:55:ASP:O	2.57	0.53
36:DO:31:THR:HG23	36:DO:34:HIS:C	2.28	0.53
22:DA:1551:A:C5	22:DA:1552:A:N7	2.76	0.53
33:DL:55:MET:SD	33:DL:59:ARG:HB3	2.48	0.53
22:DA:418:C:H2'	22:DA:419:U:H6	1.74	0.53
22:DA:1537:G:N3	22:DA:1537:G:H2'	2.22	0.53
42:DU:4:ILE:HD13	42:DU:69:VAL:HG12	1.91	0.53
22:DA:1654:A:H2'	22:DA:1655:A:C8	2.39	0.53
5:CE:79:THR:OG1	5:CE:121:ASN:ND2	2.41	0.53
22:DA:502:A:N6	22:DA:505:A:C6	2.76	0.53
46:DY:57:LEU:O	46:DY:60:LYS:HE3	2.08	0.53
22:DA:142:A:H2'	22:DA:143:C:C5	2.43	0.53
1:CA:1239:A:N3	1:CA:1241:G:C2	2.76	0.53
4:AD:173:ASP:O	4:AD:174:ALA:CB	2.56	0.53
37:DP:28:LYS:HB2	37:DP:28:LYS:NZ	2.16	0.53
1:CA:1046:A:O2'	1:CA:1047:G:H5'	2.08	0.53
22:BA:2109:U:C4	22:BA:2181:U:O4	2.61	0.53
13:CM:13:HIS:HB2	13:CM:43:LYS:HE2	1.91	0.53
34:BM:40:ARG:HD3	34:BM:93:VAL:HG21	1.89	0.53
1:CA:275:G:HO2'	1:CA:276:G:H8	1.55	0.53
1:CA:519:C:O2'	1:CA:520:A:H5'	2.09	0.53
22:BA:31:C:O3'	22:BA:1238:G:C5'	2.56	0.53
25:BD:99:GLU:CG	25:BD:100:LEU:N	2.72	0.53
1:CA:154:U:C2'	1:CA:155:A:H5'	2.34	0.53
3:AC:143:LEU:HD22	3:AC:143:LEU:H	1.72	0.53
27:DF:103:ILE:HG21	27:DF:173:ASP:O	2.09	0.53
35:DN:7:GLY:O	35:DN:8:ARG:HB2	2.08	0.53
22:DA:2142:A:C2'	22:DA:2143:C:H4'	2.38	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:AC:10:ARG:O	3:AC:13:ILE:O	2.26	0.53
37:DP:88:ARG:CZ	37:DP:112:ARG:HH21	2.21	0.53
14:CN:46:LYS:NZ	19:CS:10:ILE:HD13	2.23	0.53
25:DD:148:GLN:CD	25:DD:148:GLN:N	2.62	0.53
1:CA:764:C:N4	1:CA:812:G:C6	2.77	0.53
4:AD:57:LYS:NZ	4:AD:68:GLU:OE2	2.35	0.53
22:DA:1736:U:H2'	22:DA:1737:G:O4'	2.09	0.53
6:AF:47:LEU:HB3	18:AR:65:SER:OG	2.08	0.53
22:DA:270:A:C2	22:DA:369:U:H4'	2.44	0.53
22:DA:2636:C:H4'	25:DD:81:GLU:OE1	2.08	0.53
1:AA:1321:U:H5''	1:AA:1322:C:OP2	2.09	0.53
22:DA:2008:C:H2'	22:DA:2009:A:C8	2.42	0.53
26:BE:169:VAL:O	26:BE:170:ARG:HD2	2.07	0.53
38:BQ:81:GLY:HA2	38:BQ:116:LEU:HD13	1.89	0.53
22:DA:64:A:H2'	22:DA:65:U:O4'	2.09	0.53
16:CP:46:LYS:H	16:CP:46:LYS:NZ	2.06	0.53
29:BH:81:ALA:O	29:BH:102:ALA:HB2	2.09	0.53
42:BU:48:VAL:O	42:BU:48:VAL:HG13	2.08	0.53
1:AA:1251:A:H2'	1:AA:1252:A:H8	1.72	0.53
22:BA:2046:G:OP1	48:B0:11:LYS:HE3	2.09	0.53
43:DV:44:HIS:NE2	43:DV:85:LYS:HB2	2.24	0.53
6:CF:46:GLN:OE1	6:CF:55:HIS:O	2.25	0.53
37:BP:13:LYS:HE3	37:BP:76:HIS:HA	1.91	0.53
6:AF:17:GLN:HG2	4:CD:188:SER:HB2	1.90	0.53
22:BA:2783:U:H2'	22:BA:2784:U:C6	2.43	0.53
3:CC:9:ILE:HG23	3:CC:10:ARG:HG2	1.90	0.53
1:AA:692:U:O2	1:AA:694:A:C8	2.61	0.53
1:CA:844:G:O2'	1:CA:845:A:H5''	2.07	0.53
28:DG:149:ALA:O	28:DG:151:ARG:N	2.41	0.53
16:AP:44:SER:O	16:AP:46:LYS:HG3	2.08	0.53
45:DX:29:LEU:HB2	45:DX:30:PRO:CD	2.38	0.53
1:CA:1258:G:O2'	1:CA:1259:C:H5'	2.08	0.53
21:CU:24:LYS:CD	21:CU:25:ALA:H	2.21	0.53
22:BA:2776:A:H4'	22:BA:2777:G:H5''	1.89	0.53
22:DA:319:G:O6	22:DA:333:G:C6	2.61	0.53
1:CA:109:A:C8	1:CA:327:A:O4'	2.61	0.53
1:CA:109:A:C6	1:CA:327:A:C5	2.97	0.53
17:AQ:45:VAL:HG22	17:AQ:72:TRP:CB	2.39	0.53
22:DA:180:G:P	50:D2:35:ARG:HH12	2.31	0.53
22:DA:2307:G:H1'	22:DA:2308:G:C5	2.43	0.53
22:DA:605:G:H2'	22:DA:606:U:C6	2.43	0.53
22:BA:1731:G:N1	22:BA:1733:G:C6	2.77	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
35:DN:20:MET:C	35:DN:22:ARG:H	2.11	0.53
13:AM:10:ASP:OD1	13:AM:11:HIS:N	2.30	0.53
22:BA:1784:A:H4'	22:BA:1785:A:O5'	2.08	0.53
27:DF:42:ALA:HB1	27:DF:46:LYS:HA	1.91	0.53
38:BQ:104:ALA:O	38:BQ:107:ALA:HB3	2.08	0.53
22:DA:2577:A:C2	48:D0:1:ALA:N	2.75	0.53
35:BN:103:ARG:NH1	35:BN:110:MET:HE3	2.24	0.53
22:DA:413:C:H4'	22:DA:1880:U:H4'	1.89	0.53
22:DA:1287:A:O2'	22:DA:1288:G:H5'	2.08	0.53
28:DG:25:ILE:HG22	28:DG:78:VAL:HG11	1.90	0.53
6:CF:38:ARG:HG3	6:CF:63:ASN:HB2	1.89	0.53
43:DV:40:ILE:HD13	43:DV:40:ILE:N	2.24	0.53
51:B3:49:VAL:HG23	51:B3:53:ASP:HB2	1.91	0.53
21:AU:3:ILE:N	21:AU:19:LYS:HZ1	2.06	0.53
22:DA:1432:G:O2'	22:DA:1433:A:H5'	2.08	0.53
1:CA:377:G:H2'	1:CA:378:G:C8	2.43	0.53
1:AA:1248:A:C2	9:AI:71:ILE:HD11	2.44	0.53
22:DA:2235:G:C6	22:DA:2236:U:C4	2.97	0.53
11:AK:100:ASN:HB2	11:AK:106:ILE:HG21	1.91	0.53
22:BA:1568:G:H4'	24:BC:58:LYS:HG2	1.90	0.53
1:AA:217:C:C2'	1:AA:218:U:H5'	2.38	0.53
22:BA:304:U:H2'	22:BA:305:C:H6	1.73	0.53
1:AA:1118:U:OP1	9:AI:10:ARG:HD2	2.09	0.53
1:CA:892:A:O2'	1:CA:1415:G:H4'	2.09	0.53
22:BA:1728:C:O2'	22:BA:1729:U:H6	1.91	0.53
35:DN:55:ALA:HA	35:DN:80:PHE:CE1	2.44	0.53
25:DD:21:SER:H	32:DK:73:ASP:HA	1.74	0.53
42:BU:25:LYS:O	42:BU:26:ASN:HB3	2.08	0.53
22:BA:202:U:H2'	22:BA:203:A:C8	2.43	0.53
22:DA:1465:G:H2'	22:DA:1466:U:H6	1.74	0.53
4:AD:65:GLY:HA3	4:AD:114:ARG:HH22	1.74	0.53
22:BA:1610:A:H8	22:BA:1610:A:H5'	1.74	0.53
16:CP:54:LEU:H	16:CP:54:LEU:HD23	1.74	0.53
2:AB:166:ASP:OD1	2:AB:167:HIS:N	2.41	0.53
44:BW:16:GLU:OE2	44:BW:16:GLU:CA	2.56	0.53
44:BW:16:GLU:HA	44:BW:16:GLU:OE2	2.09	0.53
1:CA:981:U:O4	1:CA:1222:G:O6	2.27	0.53
22:DA:418:C:H2'	22:DA:419:U:C6	2.44	0.53
1:CA:260:G:H2'	1:CA:261:U:C6	2.44	0.53
25:DD:117:GLY:HA2	25:DD:164:GLN:OE1	2.09	0.53
25:DD:118:PHE:CG	25:DD:119:ALA:N	2.76	0.53
1:CA:1072:G:C5	1:CA:1073:U:C4	2.97	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
27:DF:65:LEU:O	27:DF:86:CYS:HB3	2.08	0.53
22:DA:53:A:H2	22:DA:179:C:H4'	1.71	0.53
10:CJ:5:ARG:HG2	10:CJ:79:PRO:HG3	1.91	0.53
1:CA:1136:C:H5	1:CA:1138:G:O6	1.89	0.53
22:DA:2093:G:N7	22:DA:2225:A:C4	2.77	0.53
1:CA:752:G:Cl'	1:CA:754:C:N4	2.67	0.53
7:CG:100:MET:H	7:CG:100:MET:CE	2.22	0.53
1:CA:523:A:H61	12:CL:49:ARG:HH12	1.56	0.53
16:CP:28:ARG:HG2	16:CP:29:ASN:OD1	2.09	0.53
8:AH:17:GLN:NE2	8:AH:69:ALA:HB1	2.24	0.53
22:DA:2053:G:H2'	22:DA:2054:A:O4'	2.09	0.53
44:DW:8:SER:O	44:DW:9:THR:CB	2.57	0.53
1:AA:1397:C:OP2	5:AE:28:ARG:NH2	2.41	0.53
22:BA:1140:C:P	31:BJ:68:LYS:HZ3	2.32	0.53
22:DA:1378:A:C8	22:DA:1380:G:C6	2.96	0.53
22:DA:1327:A:C6	22:DA:1328:A:C4	2.97	0.53
25:DD:33:ARG:HB3	25:DD:95:SER:OG	2.08	0.53
22:DA:40:U:C4	22:DA:41:C:N4	2.77	0.53
1:CA:157:U:C2'	1:CA:158:G:H5'	2.38	0.53
22:BA:2821:A:H2'	22:BA:2822:G:O4'	2.09	0.53
31:BJ:32:LEU:O	31:BJ:36:LEU:HB2	2.09	0.53
41:BT:28:ASN:CA	41:BT:91:GLN:HE22	2.21	0.53
41:BT:87:LEU:HB2	41:BT:91:GLN:HG2	1.89	0.53
22:DA:917:A:H2	23:DB:79:G:N2	2.04	0.53
19:AS:46:LEU:HB2	19:AS:61:VAL:HG21	1.89	0.53
22:DA:1957:C:H5'	22:DA:1984:G:O2'	2.09	0.53
36:BO:11:ALA:HB2	36:BO:96:GLY:CA	2.39	0.53
26:DE:153:LEU:HD21	26:DE:157:LEU:HG	1.90	0.53
47:BZ:38:GLU:O	47:BZ:43:ILE:HG12	2.08	0.53
45:DX:39:VAL:O	45:DX:40:GLU:HB2	2.08	0.53
1:AA:1489:G:O2'	1:AA:1490:U:H5'	2.09	0.53
9:AI:49:GLN:N	9:AI:50:PRO:HD2	2.23	0.53
30:DI:89:SER:HB3	30:DI:97:VAL:HG11	1.89	0.53
22:DA:374:A:H2'	22:DA:375:G:O4'	2.07	0.53
22:DA:1936:A:C2	22:DA:1945:G:C4	2.96	0.53
1:AA:659:U:O2'	1:AA:660:C:H5'	2.09	0.53
1:AA:1496:C:H2'	1:AA:1497:G:O4'	2.08	0.53
15:AO:16:ARG:HD3	15:AO:20:ASP:OD2	2.09	0.53
22:BA:1113:U:H2'	22:BA:1114:C:H6	1.72	0.53
24:DC:166:ARG:HG3	24:DC:166:ARG:O	2.07	0.53
22:DA:919:U:H2'	22:DA:920:A:C8	2.44	0.53
22:BA:1322:A:H2'	22:BA:1323:C:H5'	1.91	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:2863:C:O2'	22:DA:2864:G:H5'	2.09	0.53
25:BD:70:LYS:O	25:BD:71:ALA:HB3	2.09	0.53
38:BQ:87:VAL:HB	39:BR:52:PRO:HD3	1.90	0.53
22:BA:923:G:C1'	44:BW:23:LYS:HE2	2.35	0.53
11:CK:92:ARG:HH22	21:CU:19:LYS:HD2	1.72	0.53
2:AB:165:ALA:HB3	2:AB:190:SER:HB3	1.90	0.53
1:CA:972:C:H4'	10:CJ:59:LYS:HE2	1.90	0.53
22:DA:857:G:H2'	22:DA:858:G:C4'	2.38	0.53
22:DA:249:C:H3'	22:DA:2394:C:C4'	2.33	0.53
38:DQ:50:ARG:O	38:DQ:54:ARG:HD3	2.09	0.53
1:CA:704:A:C2'	1:CA:705:G:C8	2.92	0.53
5:AE:80:LEU:HD12	5:AE:146:MET:SD	2.49	0.53
33:DL:48:ARG:CG	33:DL:48:ARG:NH1	2.64	0.53
26:BE:121:VAL:O	26:BE:189:THR:HA	2.08	0.53
26:BE:193:VAL:O	26:BE:197:GLU:HB2	2.08	0.53
35:DN:67:PHE:HE2	35:DN:73:ASN:CG	2.12	0.53
25:BD:133:THR:CG2	25:BD:134:HIS:HD2	2.22	0.53
22:DA:105:C:H2'	22:DA:106:C:C6	2.44	0.53
22:DA:1965:C:C5'	22:DA:1965:C:H6	2.17	0.53
22:BA:946:C:O2'	22:BA:947:A:H5'	2.09	0.53
2:CB:205:ALA:O	2:CB:209:VAL:HG13	2.09	0.53
38:BQ:97:ILE:CD1	38:BQ:105:PHE:N	2.71	0.53
22:DA:1821:A:H5'	24:DC:156:SER:OG	2.09	0.53
20:AT:66:ILE:CD1	20:AT:70:LYS:HE3	2.39	0.53
31:BJ:26:GLY:HA2	31:BJ:29:ALA:HB3	1.90	0.53
1:CA:1304:G:C1'	1:CA:1333:A:H61	2.19	0.53
1:CA:332:G:OP2	20:CT:4:LYS:HG3	2.09	0.53
41:DT:9:LYS:HG3	46:DY:21:LEU:HD13	1.90	0.53
1:CA:764:C:C2'	1:CA:765:G:H5'	2.38	0.53
35:BN:32:GLU:OE1	35:BN:118:ARG:HA	2.08	0.53
22:DA:1666:G:O2'	22:DA:1667:G:H5'	2.09	0.53
34:DM:71:LYS:HG3	34:DM:72:PRO:HD2	1.90	0.53
24:BC:259:ASN:C	24:BC:261:ARG:N	2.59	0.53
18:CR:57:ALA:O	18:CR:60:ARG:N	2.41	0.53
31:DJ:35:ARG:HG2	31:DJ:40:HIS:CD2	2.44	0.53
39:DR:23:GLU:O	39:DR:25:LEU:HD22	2.08	0.53
26:BE:48:THR:C	26:BE:50:ALA:H	2.12	0.53
1:AA:1381:U:O2'	1:AA:1382:C:O5'	2.26	0.53
22:DA:1936:A:H2	22:DA:1943:U:C5	2.27	0.53
40:BS:42:LYS:O	40:BS:45:VAL:HG13	2.09	0.53
19:AS:62:THR:HG22	19:AS:63:ASP:N	2.24	0.53
22:DA:836:G:C6	22:DA:837:C:N3	2.76	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:1522:U:O2'	1:AA:1523:G:H5'	2.09	0.53
22:BA:1882:U:O2'	22:BA:1883:U:H5'	2.08	0.53
20:AT:60:GLN:HA	20:AT:60:GLN:NE2	2.23	0.53
22:BA:146:A:H2'	22:BA:147:C:C6	2.44	0.53
13:CM:57:ASP:O	13:CM:61:LYS:HG3	2.06	0.53
1:CA:1317:C:OP1	14:CN:56:PRO:HD2	2.08	0.53
22:DA:432:A:O2'	22:DA:433:C:H5'	2.09	0.53
22:DA:380:G:O3'	45:DX:15:ASN:HB2	2.08	0.53
19:CS:35:ARG:HH21	19:CS:51:HIS:HD2	1.57	0.53
22:DA:2426:A:H3'	22:DA:2427:C:C5'	2.37	0.53
22:DA:1387:A:N3	22:DA:1388:G:C8	2.77	0.53
22:DA:1596:A:N6	22:DA:1597:A:N6	2.57	0.53
2:AB:95:TRP:O	2:AB:95:TRP:HE3	1.92	0.53
22:DA:1351:C:C2	22:DA:1381:G:C2	2.96	0.53
22:DA:1809:A:C2	22:DA:1810:A:C5	2.96	0.53
22:DA:1072:C:O2'	22:DA:1093:G:O6	2.26	0.53
22:DA:179:C:H2'	22:DA:180:G:O4'	2.09	0.53
10:CJ:7:ARG:HG3	10:CJ:75:ASP:OD1	2.09	0.53
24:BC:103:ILE:O	24:BC:104:LEU:O	2.26	0.53
1:CA:1130:A:C6	1:CA:1131:G:N7	2.77	0.53
22:BA:142:A:O2'	22:BA:143:C:C6	2.61	0.53
2:AB:40:ILE:O	2:AB:41:ASN:HB2	2.09	0.53
40:BS:74:ILE:HG23	40:BS:74:ILE:O	2.09	0.53
8:CH:85:TYR:HE1	17:CQ:36:PHE:CE2	2.27	0.53
2:AB:153:MET:SD	2:AB:157:PRO:HD3	2.49	0.53
1:CA:274:A:H4'	1:CA:275:G:OP1	2.08	0.53
22:DA:1684:G:C6	22:DA:1685:C:C4	2.96	0.53
37:BP:67:GLU:HA	37:BP:67:GLU:OE1	2.09	0.53
22:DA:532:A:H4'	22:DA:533:G:C8	2.43	0.53
5:AE:14:LEU:HB2	5:AE:36:THR:HG22	1.90	0.53
22:BA:1020:A:H2	22:BA:1141:U:HO2'	1.56	0.53
25:BD:157:LYS:HD2	31:BJ:79:GLY:O	2.09	0.53
22:DA:1544:A:N1	22:DA:1545:A:C2	2.77	0.53
22:DA:412:A:N7	22:DA:2412:A:H1'	2.23	0.53
1:AA:259:G:C4	1:AA:260:G:C8	2.97	0.53
43:DV:41:GLU:HG2	43:DV:42:LEU:N	2.22	0.53
19:AS:4:LEU:N	19:AS:4:LEU:HD12	2.24	0.53
22:DA:2728:U:HO2'	22:DA:2729:G:H8	1.56	0.53
41:DT:7:LEU:O	41:DT:7:LEU:HD23	2.08	0.53
1:AA:376:G:H5''	16:AP:5:ARG:HB2	1.91	0.53
10:AJ:35:GLN:HA	10:AJ:35:GLN:HE21	1.72	0.53
22:DA:813:U:H1'	22:DA:1226:A:N3	2.24	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:CA:1343:G:C5	1:CA:1344:C:C4	2.96	0.53
12:CL:81:ILE:HD11	12:CL:94:TYR:CB	2.39	0.53
2:CB:95:TRP:CZ3	2:CB:174:GLU:OE2	2.61	0.53
5:AE:29:ILE:HD12	5:AE:30:PHE:H	1.73	0.53
43:DV:20:LEU:HD22	43:DV:25:LYS:HD2	1.88	0.53
22:BA:108:G:C2'	22:BA:109:C:H5'	2.39	0.53
12:CL:51:VAL:HG12	12:CL:52:CYS:N	2.24	0.53
22:BA:503:A:H5'	22:BA:505:A:OP1	2.07	0.53
24:BC:76:VAL:O	24:BC:76:VAL:HG23	2.08	0.53
1:CA:781:A:H2'	1:CA:782:A:H5'	1.91	0.53
1:CA:1508:A:H2'	1:CA:1509:C:C6	2.43	0.53
24:DC:179:GLU:HA	24:DC:269:ARG:O	2.09	0.53
22:DA:2269:G:O2'	44:DW:18:LYS:HG2	2.09	0.53
22:DA:2282:G:C4	22:DA:2425:A:N6	2.77	0.53
22:DA:1605:C:H3'	22:DA:1606:C:H5''	1.91	0.53
22:DA:332:A:O2'	22:DA:333:G:H3'	2.08	0.53
22:DA:1062:G:OP1	22:DA:1070:A:H4'	2.09	0.53
17:AQ:20:ILE:N	17:AQ:47:ASP:OD1	2.40	0.53
17:AQ:67:SER:OG	17:AQ:70:LYS:HB3	2.09	0.53
1:AA:373:A:H2'	1:AA:374:A:C8	2.44	0.53
22:DA:637:A:O5'	33:DL:112:LEU:HD21	2.08	0.53
27:BF:133:GLU:H	27:BF:150:GLY:HA3	1.74	0.53
4:CD:20:LEU:HD23	4:CD:20:LEU:N	2.24	0.53
22:BA:571:U:H3'	39:BR:80:ARG:NH2	2.24	0.53
22:BA:574:A:OP2	56:BA:3268:HOH:O	2.18	0.53
1:CA:653:U:C2	8:CH:55:LYS:HG2	2.44	0.53
44:DW:23:LYS:HD2	44:DW:24:ARG:H	1.72	0.53
36:BO:49:VAL:HG12	36:BO:50:ALA:N	2.24	0.53
3:CC:142:ARG:HG2	3:CC:143:LEU:HD12	1.90	0.53
1:AA:36:C:O2'	1:AA:501:C:OP1	2.26	0.53
1:AA:502:A:H2'	1:AA:503:C:C6	2.44	0.53
31:BJ:73:VAL:CG2	31:BJ:74:TYR:H	2.17	0.53
1:CA:185:U:O5'	1:CA:185:U:H6	1.91	0.53
22:DA:1324:G:O2'	22:DA:1616:A:N6	2.42	0.53
22:BA:2773:C:OP1	25:BD:171:THR:CG2	2.57	0.53
19:CS:10:ILE:N	19:CS:10:ILE:HD12	2.23	0.53
32:BK:98:ARG:O	32:BK:99:ILE:HD12	2.08	0.53
22:DA:1723:G:H2'	22:DA:1724:G:O4'	2.09	0.53
26:DE:126:VAL:CG1	26:DE:127:GLU:N	2.72	0.53
21:AU:17:ARG:HG3	21:AU:17:ARG:NH1	2.22	0.53
4:CD:84:ASN:CG	5:CE:101:GLY:HA3	2.28	0.53
26:BE:154:ASP:C	26:BE:154:ASP:OD2	2.47	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:BA:954:G:OP2	34:BM:16:ARG:NH2	2.35	0.53
22:DA:100:U:OP1	22:DA:100:U:H2'	2.08	0.53
22:DA:2097:A:H2'	22:DA:2098:U:H6	1.73	0.53
13:AM:15:VAL:HA	13:AM:33:LEU:CD1	2.39	0.53
22:DA:1335:C:H2'	22:DA:1336:A:C1'	2.39	0.53
30:BI:111:THR:O	30:BI:113:ALA:N	2.40	0.53
22:BA:2834:G:O6	22:BA:2879:A:H2'	2.08	0.53
22:DA:2106:U:C4	22:DA:2107:G:N7	2.77	0.53
12:CL:37:TYR:O	12:CL:38:THR:HG23	2.09	0.53
22:DA:659:G:H4'	26:DE:95:LYS:CD	2.39	0.53
37:BP:37:LYS:H	37:BP:37:LYS:HD3	1.74	0.53
15:CO:23:SER:O	15:CO:26:VAL:HB	2.09	0.53
1:AA:420:U:O2'	1:AA:421:U:H5''	2.09	0.53
1:CA:878:A:OP1	8:CH:79:ARG:HB2	2.08	0.53
1:AA:1170:A:H2'	1:AA:1171:A:O4'	2.08	0.53
31:BJ:40:HIS:C	31:BJ:41:LYS:HG2	2.29	0.53
22:DA:214:G:O2'	22:DA:216:A:O3'	2.26	0.53
44:BW:49:ASN:ND2	44:BW:49:ASN:C	2.61	0.53
15:AO:77:TYR:OH	15:AO:87:ARG:HG2	2.09	0.53
22:DA:1799:G:N7	24:DC:175:LEU:HD13	2.23	0.53
19:CS:52:ASN:HD22	19:CS:54:ARG:H	1.56	0.53
22:DA:2428:G:C2	33:DL:54:GLN:NE2	2.77	0.53
22:DA:222:A:H3'	22:DA:421:C:H5'	1.91	0.53
22:DA:265:A:C5	22:DA:428:A:C8	2.96	0.53
42:DU:35:VAL:HB	42:DU:38:ILE:HD13	1.91	0.53
33:BL:93:ASN:O	33:BL:95:LEU:N	2.40	0.53
22:DA:1085:A:H2'	22:DA:1086:A:N3	2.24	0.53
34:DM:62:LYS:C	34:DM:63:ILE:HD12	2.29	0.53
35:DN:82:GLU:O	35:DN:86:ARG:HG3	2.09	0.53
7:CG:37:THR:HA	7:CG:40:SER:HB2	1.91	0.53
22:DA:2756:U:H4'	22:DA:2757:A:O5'	2.08	0.53
41:BT:15:HIS:HB3	41:BT:31:VAL:HG22	1.91	0.53
24:DC:93:VAL:CG1	24:DC:101:ARG:H	2.22	0.53
1:CA:254:G:H5''	17:CQ:70:LYS:HD3	1.91	0.53
1:CA:267:C:OP2	17:CQ:68:LYS:HD2	2.09	0.53
1:CA:1346:A:C8	1:CA:1348:U:N3	2.76	0.53
1:CA:644:U:H2'	1:CA:645:G:C8	2.44	0.53
1:CA:495:A:N1	1:CA:496:A:N6	2.57	0.53
4:CD:57:LYS:HE2	4:CD:61:ARG:HD3	1.91	0.53
3:AC:154:GLY:O	3:AC:195:ILE:HG12	2.08	0.53
22:BA:1020:A:H4'	22:BA:1021:A:O5'	2.10	0.53
5:AE:83:PRO:HB3	5:AE:96:GLN:HE22	1.69	0.53

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:BJ:64:VAL:O	31:BJ:65:THR:CB	2.55	0.53
1:CA:1202:U:O2	14:CN:81:ILE:HD13	2.09	0.53
1:AA:1338:G:H2'	1:AA:1339:A:H8	1.74	0.53
1:CA:763:G:H2'	1:CA:764:C:H6	1.74	0.53
22:BA:1965:C:H5''	22:BA:1966:A:H2'	1.91	0.53
22:DA:1739:A:N6	22:DA:1740:G:C6	2.77	0.53
22:DA:1665:A:H2'	22:DA:1666:G:H5'	1.91	0.53
45:BX:30:PRO:O	45:BX:32:LEU:HD12	2.09	0.53
22:BA:2747:G:O2'	28:BG:66:THR:HG22	2.09	0.53
1:AA:80:A:C2	1:AA:90:C:N3	2.77	0.53
8:AH:88:LYS:HG3	8:AH:89:ASP:N	2.24	0.53
22:BA:1501:G:C2'	22:BA:1502:A:H5'	2.38	0.53
11:AK:100:ASN:HB2	11:AK:106:ILE:CG2	2.39	0.53
1:CA:1484:C:H2'	1:CA:1485:U:O4'	2.09	0.53
28:BG:23:ILE:HD12	28:BG:23:ILE:H	1.74	0.53
1:AA:633:G:O2'	1:AA:634:C:H5'	2.08	0.53
1:AA:149:A:C2	1:AA:150:U:C2	2.96	0.53
42:DU:11:ILE:HG12	42:DU:11:ILE:O	2.09	0.53
46:DY:34:SER:O	46:DY:36:GLN:HG3	2.09	0.53
22:BA:1417:C:H2'	22:BA:1418:G:O4'	2.09	0.53
26:BE:145:ASP:HB3	26:BE:184:ASP:HB2	1.89	0.53
7:AG:38:ALA:O	7:AG:42:VAL:HG23	2.08	0.53
9:CI:88:GLU:H	9:CI:88:GLU:CD	2.12	0.53
23:DB:16:G:C6	23:DB:69:G:C4	2.97	0.52
19:CS:68:HIS:HB3	19:CS:72:GLU:HG3	1.91	0.52
22:DA:422:A:C2	22:DA:423:A:C5	2.96	0.52
27:DF:32:LYS:NZ	27:DF:32:LYS:HB2	2.24	0.52
1:AA:254:G:H2'	1:AA:255:G:H8	1.74	0.52
22:DA:484:C:O2'	22:DA:485:C:H5'	2.09	0.52
22:DA:638:G:O2'	22:DA:639:U:H5'	2.09	0.52
1:CA:60:A:C4'	1:CA:61:G:O5'	2.50	0.52
22:DA:2741:A:H2'	22:DA:2742:G:O4'	2.09	0.52
1:AA:408:A:P	4:AD:109:THR:HG21	2.49	0.52
22:DA:612:G:C2	22:DA:614:A:H1'	2.44	0.52
22:DA:604:G:C6	22:DA:625:G:C6	2.97	0.52
25:BD:90:PHE:C	25:BD:92:VAL:N	2.61	0.52
13:AM:10:ASP:OD1	13:AM:44:ILE:HD13	2.09	0.52
12:AL:54:VAL:HG21	12:AL:79:ILE:HD11	1.91	0.52
4:CD:137:SER:O	4:CD:140:ASP:HB2	2.08	0.52
9:CI:118:ARG:HG3	9:CI:124:PRO:HG3	1.90	0.52
3:AC:166:TRP:N	3:AC:166:TRP:HE3	1.99	0.52
22:BA:2742:G:OP1	52:B4:36:ARG:HD3	2.09	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
32:DK:76:VAL:O	37:DP:71:ARG:HG3	2.09	0.52
22:BA:26:G:H1'	22:BA:514:A:H61	1.74	0.52
22:DA:2889:C:N4	22:DA:2890:G:C6	2.76	0.52
9:CI:78:ILE:O	9:CI:82:ILE:HG13	2.09	0.52
22:DA:1290:C:C6	22:DA:1291:C:H5	2.27	0.52
22:DA:2191:A:C5'	22:DA:2192:U:OP2	2.56	0.52
25:BD:47:ALA:N	25:BD:84:LEU:HD12	2.24	0.52
22:DA:567:U:O4	22:DA:568:U:C4	2.62	0.52
52:D4:19:ARG:O	52:D4:20:ASP:CB	2.56	0.52
22:DA:2355:G:C5'	44:DW:20:LEU:HD22	2.39	0.52
22:DA:1665:A:N7	56:DA:3439:HOH:O	2.33	0.52
43:DV:55:GLU:O	43:DV:57:TYR:N	2.42	0.52
8:AH:105:THR:HG21	8:AH:120:LEU:CD1	2.38	0.52
38:BQ:44:TYR:O	38:BQ:47:ARG:HB3	2.10	0.52
22:DA:2276:G:O2'	22:DA:2277:G:H5'	2.09	0.52
1:AA:1472:U:H2'	1:AA:1473:G:H8	1.74	0.52
1:AA:978:A:O2'	1:AA:1322:C:H5	1.91	0.52
41:DT:64:LYS:N	41:DT:64:LYS:HD2	2.24	0.52
24:BC:257:ARG:NH1	24:BC:263:ASP:OD2	2.42	0.52
22:DA:1875:G:H8	22:DA:1875:G:OP2	1.92	0.52
10:CJ:81:GLU:O	10:CJ:83:THR:N	2.41	0.52
22:DA:3:U:C4	22:DA:4:U:C5	2.97	0.52
1:AA:820:U:H4'	1:AA:821:G:OP2	2.09	0.52
29:DH:2:GLN:O	29:DH:19:VAL:O	2.27	0.52
30:BI:109:ALA:HB1	30:BI:124:MET:CE	2.39	0.52
6:CF:68:GLN:O	6:CF:71:ILE:HG22	2.08	0.52
35:DN:21:PHE:N	35:DN:21:PHE:CD1	2.77	0.52
22:DA:2576:G:C8	22:DA:2580:U:O4	2.63	0.52
13:AM:47:LEU:HD23	13:AM:51:GLN:HB3	1.91	0.52
22:BA:864:G:O2'	22:BA:865:C:H5'	2.08	0.52
22:DA:1835:G:H2'	22:DA:1836:C:H6	1.73	0.52
2:AB:156:LEU:HG	2:AB:156:LEU:O	2.09	0.52
22:DA:136:G:O5'	22:DA:136:G:H8	1.93	0.52
17:AQ:30:HIS:HE1	17:AQ:32:ILE:HD12	1.74	0.52
22:DA:1812:U:H2'	22:DA:1813:G:C8	2.44	0.52
12:CL:42:LYS:HD3	12:CL:43:LYS:HZ2	1.74	0.52
1:CA:1182:G:C3'	1:CA:1183:U:H5'	2.38	0.52
22:BA:273:G:N2	22:BA:365:U:C2	2.78	0.52
28:BG:162:ARG:CZ	28:BG:168:VAL:HG21	2.39	0.52
31:DJ:45:THR:HG23	31:DJ:45:THR:O	2.08	0.52
5:AE:121:ASN:N	5:AE:121:ASN:HD22	2.06	0.52
2:AB:52:ALA:O	2:AB:54:ALA:N	2.42	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:1060:U:H1'	22:DA:1062:G:OP2	2.10	0.52
1:CA:1126:U:C4	10:CJ:42:LEU:HD21	2.44	0.52
27:BF:107:VAL:HG13	27:BF:113:PHE:CZ	2.44	0.52
22:DA:2669:G:H2'	22:DA:2670:A:H8	1.74	0.52
22:DA:2746:U:C2'	22:DA:2747:G:H5'	2.39	0.52
1:AA:579:A:H2'	1:AA:580:C:H6	1.74	0.52
1:CA:1346:A:N6	7:CG:9:ARG:HH12	2.07	0.52
22:DA:748:G:HO2'	22:DA:749:A:H3'	1.72	0.52
22:DA:45:G:C5'	22:DA:46:G:OP1	2.55	0.52
22:BA:1474:U:C2'	22:BA:1475:G:H5'	2.40	0.52
1:AA:554:A:C5'	12:AL:25:ALA:HB1	2.38	0.52
16:AP:10:GLY:HA3	16:AP:15:PRO:CA	2.38	0.52
31:DJ:74:TYR:OH	31:DJ:100:VAL:HG13	2.09	0.52
1:AA:501:C:H1'	1:AA:549:C:H1'	1.90	0.52
22:DA:1650:A:O2'	35:DN:108:ALA:HB1	2.09	0.52
22:DA:686:U:N3	50:D2:12:ARG:HB2	2.23	0.52
22:DA:2353:G:N3	44:DW:30:VAL:HG13	2.23	0.52
43:DV:29:ILE:HG22	43:DV:39:ALA:HA	1.91	0.52
4:AD:157:ALA:O	4:AD:161:ALA:HB2	2.09	0.52
22:DA:469:G:OP2	26:DE:54:GLY:O	2.26	0.52
1:AA:978:A:N7	1:AA:1318:A:N6	2.56	0.52
22:BA:45:G:H5''	22:BA:46:G:OP1	2.09	0.52
10:AJ:73:LEU:O	10:AJ:74:VAL:HB	2.08	0.52
12:AL:1:ALA:HB3	12:AL:5:GLN:OE1	2.09	0.52
22:BA:875:G:H2'	22:BA:876:C:H5'	1.92	0.52
27:DF:122:ASP:HB3	27:DF:126:ASN:ND2	2.23	0.52
23:DB:52:A:N6	36:DO:33:ARG:HE	2.06	0.52
39:BR:90:ARG:O	39:BR:91:GLN:CB	2.56	0.52
22:BA:665:U:O2'	22:BA:666:A:H5'	2.08	0.52
34:DM:57:VAL:HG23	34:DM:58:LYS:O	2.09	0.52
22:BA:2572:A:C8	25:BD:149:ASN:ND2	2.78	0.52
22:BA:1786:A:C4	22:BA:1938:A:C6	2.97	0.52
1:AA:1240:U:H3'	1:AA:1241:G:H5'	1.90	0.52
1:CA:1343:G:C6	1:CA:1344:C:C4	2.98	0.52
9:AI:11:ARG:HA	9:AI:105:ARG:NH1	2.24	0.52
16:CP:41:PRO:O	16:CP:42:ILE:HD13	2.09	0.52
24:DC:120:ASP:CG	24:DC:121:ALA:H	2.12	0.52
22:BA:2486:C:H2'	22:BA:2487:G:O5'	2.09	0.52
1:AA:572:A:H5'	1:AA:573:A:OP2	2.08	0.52
22:BA:1420:A:C8	22:BA:2211:A:N6	2.78	0.52
22:BA:1229:C:H2'	22:BA:1230:A:C8	2.44	0.52
34:BM:66:ARG:NH1	34:BM:104:GLU:OE1	2.40	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:CL:14:LYS:HE2	12:CL:15:VAL:C	2.29	0.52
27:DF:116:LEU:HG	27:DF:117:SER:H	1.73	0.52
24:DC:245:THR:C	24:DC:247:TRP:H	2.13	0.52
1:AA:1134:G:H2'	1:AA:1135:U:H1'	1.91	0.52
24:DC:24:HIS:CG	24:DC:25:LYS:H	2.26	0.52
26:BE:176:ASP:C	26:BE:176:ASP:OD1	2.47	0.52
30:DI:86:LYS:O	30:DI:87:SER:HB2	2.09	0.52
25:DD:40:LEU:HA	25:DD:44:GLY:HA2	1.90	0.52
2:CB:221:ARG:O	2:CB:224:ARG:HG2	2.09	0.52
4:CD:2:ARG:HE	4:CD:114:ARG:HD3	1.73	0.52
22:BA:2331:G:O2'	44:BW:39:GLN:O	2.27	0.52
19:CS:38:THR:CA	19:CS:69:LYS:HD3	2.38	0.52
22:DA:2425:A:H4'	22:DA:2426:A:O5'	2.09	0.52
22:DA:150:U:H2'	22:DA:151:C:C6	2.44	0.52
1:CA:1071:C:H2'	1:CA:1072:G:C8	2.44	0.52
5:AE:114:LEU:O	5:AE:119:VAL:HG22	2.09	0.52
22:DA:505:A:O2'	22:DA:506:G:H5'	2.08	0.52
45:DX:57:VAL:CG1	45:DX:58:ILE:N	2.71	0.52
22:DA:623:C:H2'	22:DA:624:C:C6	2.45	0.52
25:BD:159:LYS:HA	25:BD:159:LYS:HZ3	1.74	0.52
27:DF:111:ARG:H	27:DF:111:ARG:NE	2.07	0.52
1:AA:100:G:O6	1:AA:101:A:C6	2.61	0.52
41:BT:39:THR:O	41:BT:41:ALA:N	2.43	0.52
8:AH:5:PRO:O	8:AH:8:ASP:HB3	2.09	0.52
1:AA:1157:A:C5	1:AA:1180:A:C6	2.97	0.52
22:DA:921:C:O2'	22:DA:922:C:H5'	2.08	0.52
1:AA:36:C:OP1	12:AL:119:LYS:HE3	2.09	0.52
9:AI:80:HIS:HE1	9:AI:103:VAL:O	1.93	0.52
3:AC:183:TYR:HA	3:AC:199:VAL:O	2.09	0.52
34:BM:132:THR:HG22	34:BM:133:LYS:N	2.23	0.52
22:DA:2415:G:H4'	33:DL:65:GLY:O	2.09	0.52
22:DA:1666:G:H4'	32:DK:6:THR:HG23	1.90	0.52
24:BC:151:GLY:C	24:BC:152:GLN:HG3	2.30	0.52
22:DA:1494:A:H2'	22:DA:1495:A:H8	1.71	0.52
22:DA:2529:G:H4'	28:DG:174:LYS:HD3	1.91	0.52
9:CI:22:PRO:HA	9:CI:60:LEU:HB3	1.91	0.52
7:AG:20:GLU:HB3	7:AG:24:LYS:HE2	1.89	0.52
22:DA:708:G:H2'	22:DA:709:U:C6	2.44	0.52
22:DA:709:U:O2'	22:DA:710:U:H5'	2.08	0.52
15:AO:16:ARG:O	15:AO:17:ASP:HB3	2.09	0.52
22:DA:2107:G:C2	22:DA:2183:A:C2	2.98	0.52
22:DA:1319:C:O2	22:DA:1334:G:C2	2.63	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
5:AE:15:ILE:HG22	5:AE:16:ALA:N	2.23	0.52
3:CC:124:GLU:CD	3:CC:124:GLU:H	2.12	0.52
22:BA:591:U:H1'	51:B3:1:PRO:N	2.24	0.52
18:CR:58:ILE:O	18:CR:62:ARG:HG3	2.09	0.52
22:BA:527:C:N3	22:BA:2779:U:H2'	2.25	0.52
28:BG:84:LYS:CB	28:BG:132:LEU:H	2.22	0.52
28:BG:85:LYS:HG2	28:BG:131:VAL:HG12	1.91	0.52
44:DW:77:LYS:O	44:DW:78:PHE:HB2	2.10	0.52
22:DA:1313:U:OP2	22:DA:1314:C:H5	1.92	0.52
26:DE:128:ALA:O	26:DE:130:LYS:HG2	2.09	0.52
22:DA:1061:U:O2'	22:DA:1062:G:H5''	2.10	0.52
22:DA:1087:G:C6	22:DA:1089:A:C2	2.98	0.52
5:CE:96:GLN:HG2	5:CE:97:PRO:HD2	1.91	0.52
22:BA:243:U:OP1	51:B3:5:THR:CG2	2.48	0.52
33:DL:79:LEU:HB3	33:DL:114:GLY:H	1.73	0.52
4:CD:29:THR:C	4:CD:31:CYS:H	2.13	0.52
2:AB:20:ARG:O	2:AB:21:TYR:C	2.47	0.52
22:BA:1392:A:N6	22:BA:1393:A:N6	2.57	0.52
22:DA:1204:A:H1'	22:DA:1205:A:OP2	2.10	0.52
9:CI:119:LYS:O	9:CI:119:LYS:HG3	2.09	0.52
28:DG:84:LYS:O	28:DG:85:LYS:CB	2.57	0.52
28:DG:112:VAL:HG12	28:DG:114:HIS:N	2.19	0.52
41:BT:50:LEU:HD12	41:BT:50:LEU:N	2.20	0.52
2:AB:72:LYS:HZ2	2:AB:204:ASP:HB3	1.75	0.52
22:DA:749:A:C4	22:DA:750:A:C8	2.97	0.52
5:CE:131:ASN:ND2	5:CE:132:PRO:HD2	2.24	0.52
25:BD:99:GLU:HG3	25:BD:100:LEU:N	2.24	0.52
44:DW:13:ARG:CG	44:DW:14:ASP:H	2.18	0.52
22:DA:2543:G:C6	22:DA:2765:A:C5	2.97	0.52
1:AA:211:G:C2	1:AA:212:G:H1'	2.44	0.52
22:BA:2414:G:C2'	22:BA:2415:G:H5'	2.40	0.52
7:AG:102:TRP:O	7:AG:106:ALA:HB2	2.08	0.52
29:DH:84:ALA:N	29:DH:148:ALA:HA	2.24	0.52
1:CA:1051:C:O2'	1:CA:1052:U:O5'	2.27	0.52
9:CI:11:ARG:HH12	9:CI:108:ARG:HE	1.58	0.52
15:CO:47:LYS:HD2	15:CO:47:LYS:H	1.75	0.52
22:DA:1868:C:N4	22:DA:1869:G:O6	2.42	0.52
1:CA:64:G:H5''	1:CA:65:A:OP1	2.08	0.52
3:CC:19:SER:O	14:CN:93:PRO:HG3	2.10	0.52
13:CM:52:ILE:HG13	13:CM:56:ARG:HH21	1.74	0.52
2:CB:17:HIS:CE1	2:CB:18:GLN:HG3	2.44	0.52
22:BA:1537:G:H5''	22:BA:1537:G:N3	2.25	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:DD:36:GLN:HG3	25:DD:38:LYS:HZ1	1.75	0.52
35:DN:57:THR:O	35:DN:80:PHE:HD1	1.92	0.52
22:DA:1943:U:H4'	22:DA:1944:U:OP1	2.08	0.52
10:AJ:54:SER:OG	10:AJ:55:PRO:HD2	2.09	0.52
45:DX:51:SER:OG	45:DX:54:GLY:HA3	2.08	0.52
3:CC:24:ASN:O	3:CC:28:PHE:HB2	2.10	0.52
22:BA:671:C:H3'	33:BL:42:SER:OG	2.09	0.52
1:CA:665:A:N3	1:CA:732:C:H2'	2.23	0.52
22:DA:2033:A:H2'	22:DA:2033:A:OP1	2.10	0.52
30:DI:104:GLN:HA	30:DI:107:GLU:CB	2.40	0.52
39:DR:70:GLU:CD	39:DR:70:GLU:H	2.13	0.52
44:BW:19:ARG:CZ	44:BW:22:VAL:HB	2.39	0.52
44:BW:24:ARG:HD3	44:BW:65:LYS:CE	2.40	0.52
51:B3:30:HIS:O	51:B3:31:ILE:C	2.48	0.52
14:CN:52:ARG:HA	14:CN:52:ARG:NE	2.25	0.52
22:BA:1171:G:N2	22:BA:1179:G:C6	2.78	0.52
1:CA:704:A:C2'	1:CA:705:G:H8	2.22	0.52
1:CA:1408:A:C2	1:CA:1494:G:C4	2.98	0.52
22:DA:1917:U:C2'	22:DA:1918:A:H5'	2.39	0.52
22:DA:1373:A:H2'	22:DA:1374:G:O4'	2.10	0.52
1:AA:1202:U:C1'	14:AN:68:ARG:HD2	2.40	0.52
2:AB:53:LEU:HD21	2:AB:212:TYR:OH	2.10	0.52
1:AA:451:A:H5''	16:AP:70:ARG:HH22	1.75	0.52
30:DI:52:LEU:O	30:DI:54:ILE:HD12	2.10	0.52
22:BA:263:G:H1'	22:BA:430:A:N3	2.24	0.52
27:BF:107:VAL:N	27:BF:108:PRO:CD	2.73	0.52
22:DA:614:A:H4'	22:DA:616:A:N6	2.20	0.52
1:CA:1130:A:N7	1:CA:1146:A:C6	2.78	0.52
22:DA:2093:G:C2	22:DA:2094:A:C5	2.97	0.52
25:DD:186:LEU:HD21	37:DP:3:ILE:HD11	1.90	0.52
37:DP:50:ARG:CB	37:DP:56:SER:HB3	2.39	0.52
22:DA:1208:C:C2	22:DA:1209:U:C5	2.98	0.52
4:CD:106:PHE:CD1	4:CD:106:PHE:N	2.77	0.52
2:AB:89:PHE:CE1	2:AB:153:MET:HB2	2.45	0.52
24:BC:20:ASN:CB	24:BC:23:LEU:HD23	2.36	0.52
1:CA:78:A:H2'	1:CA:79:G:C8	2.45	0.52
1:CA:1094:G:C2'	1:CA:1095:U:OP2	2.56	0.52
1:CA:183:C:H2'	1:CA:183:C:O2	2.08	0.52
1:AA:330:C:H5''	1:AA:330:C:H6	1.73	0.52
22:DA:528:A:N1	22:DA:2043:C:O5'	2.42	0.52
1:CA:1004:A:N7	1:CA:1025:U:O2'	2.41	0.52
1:CA:491:G:C2'	1:CA:492:C:H5'	2.40	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:2563:U:C1'	22:DA:2566:A:N6	2.72	0.52
22:BA:2341:G:H2'	22:BA:2342:C:C6	2.44	0.52
1:AA:510:A:N3	1:AA:543:U:H1'	2.25	0.52
9:AI:119:LYS:O	9:AI:119:LYS:HG3	2.09	0.52
9:AI:41:GLU:O	9:AI:44:ARG:HG2	2.08	0.52
22:BA:1050:A:C2	22:BA:2751:G:C5	2.97	0.52
29:DH:61:VAL:HG13	29:DH:62:LEU:N	2.25	0.52
1:AA:633:G:H2'	1:AA:634:C:C6	2.44	0.52
1:AA:1134:G:H2'	1:AA:1135:U:C1'	2.39	0.52
7:AG:137:ARG:C	7:AG:139:ASP:H	2.13	0.52
24:DC:212:TRP:C	24:DC:212:TRP:CD1	2.82	0.52
27:BF:120:SER:HB2	27:BF:127:TYR:CE1	2.44	0.52
22:BA:184:C:H2'	22:BA:185:G:C8	2.45	0.52
27:BF:32:LYS:HD3	27:BF:91:ARG:NH1	2.24	0.52
34:BM:11:LYS:HE2	34:BM:87:GLY:O	2.09	0.52
31:DJ:56:VAL:CG2	31:DJ:124:VAL:HG23	2.40	0.52
1:AA:582:C:C2	1:AA:583:A:C8	2.97	0.52
22:BA:2406:A:OP2	22:BA:2406:A:H2'	2.09	0.52
39:DR:58:VAL:HG13	39:DR:102:SER:OG	2.09	0.52
22:BA:756:A:N7	56:BA:3298:HOH:O	2.34	0.52
1:AA:291:U:O2'	1:AA:292:G:H5'	2.10	0.52
2:CB:30:ILE:HG23	2:CB:39:ILE:O	2.10	0.52
29:DH:49:ALA:O	29:DH:53:GLU:HB2	2.10	0.52
22:BA:679:C:H2'	22:BA:680:C:H6	1.75	0.52
38:BQ:63:ARG:HH12	38:BQ:96:ASP:CB	2.23	0.52
29:BH:25:TYR:HE1	29:BH:29:PHE:CD2	2.28	0.52
39:DR:49:ILE:HG22	39:DR:54:VAL:H	1.74	0.52
44:DW:39:GLN:HE22	44:DW:58:LEU:HD23	1.75	0.52
22:DA:1596:A:C6	22:DA:1597:A:C6	2.98	0.52
22:DA:1611:C:C2	22:DA:1612:C:H5	2.27	0.52
22:DA:1349:C:H2'	22:DA:1350:C:C6	2.44	0.52
22:DA:311:A:O2'	22:DA:332:A:O4'	2.21	0.52
10:CJ:42:LEU:HB3	10:CJ:43:PRO:HD2	1.91	0.52
7:CG:27:ASN:OD1	7:CG:35:LYS:HD2	2.10	0.52
22:DA:1963:U:O2'	22:DA:1964:G:H5'	2.10	0.52
1:CA:246:A:N3	1:CA:279:A:N6	2.58	0.52
22:DA:2751:G:H5'	28:DG:2:ARG:HH21	1.75	0.52
22:BA:2250:G:O5'	22:BA:2250:G:H8	1.93	0.52
1:AA:67:C:H4'	1:AA:172:A:O4'	2.10	0.52
2:AB:103:TRP:C	2:AB:105:THR:H	2.13	0.52
22:DA:748:G:OP2	40:DS:88:ARG:HG3	2.08	0.52
22:DA:1744:A:H3'	22:DA:1745:A:C8	2.44	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:2197:U:HO2'	22:DA:2198:A:H8	1.45	0.52
36:DO:88:LYS:O	36:DO:89:ASP:HB3	2.10	0.52
9:CI:18:VAL:HG11	9:CI:82:ILE:HA	1.91	0.52
1:CA:197:A:H4'	1:CA:198:G:O5'	2.08	0.52
35:BN:116:VAL:O	35:BN:116:VAL:CG2	2.55	0.52
22:DA:696:G:C2	22:DA:767:U:O2	2.63	0.52
2:CB:162:VAL:HG13	2:CB:184:ALA:HB2	1.92	0.52
22:DA:1857:G:C4	22:DA:1884:G:N1	2.77	0.52
25:DD:151:THR:HG22	25:DD:152:PRO:HD3	1.91	0.52
13:CM:100:ARG:CZ	13:CM:102:LYS:HD3	2.39	0.52
1:CA:1004:A:N3	1:CA:1026:G:C5	2.77	0.52
22:BA:118:A:N3	22:BA:178:G:H1'	2.24	0.52
22:BA:1107:G:H2'	22:BA:1108:U:H6	1.74	0.52
20:AT:54:GLN:HB3	20:AT:55:PRO:HD3	1.92	0.52
1:AA:1331:G:O2'	1:AA:1332:A:OP2	2.25	0.52
14:CN:63:CYS:HA	14:CN:78:LEU:HA	1.91	0.52
12:AL:111:GLN:O	12:AL:112:ALA:HB3	2.10	0.52
33:BL:47:ARG:HH21	33:BL:47:ARG:CG	2.23	0.52
22:BA:163:C:O2'	22:BA:164:C:P	2.66	0.52
1:CA:542:G:H2'	1:CA:543:U:H6	1.74	0.52
29:BH:125:THR:HG23	29:BH:126:GLY:H	1.75	0.52
36:DO:79:ALA:HB1	36:DO:114:GLY:HA3	1.91	0.52
28:DG:87:GLN:HA	28:DG:129:GLU:HA	1.91	0.52
26:DE:16:GLU:O	26:DE:16:GLU:HG3	2.09	0.52
32:BK:91:SER:O	32:BK:92:GLU:C	2.48	0.52
1:AA:1352:C:H2'	1:AA:1353:G:C8	2.43	0.52
22:BA:996:A:H4'	38:BQ:91:ARG:CD	2.39	0.52
44:BW:22:VAL:HG13	44:BW:25:PHE:CD2	2.45	0.52
44:BW:37:VAL:HG22	44:BW:55:ASP:O	2.09	0.52
11:CK:57:SER:C	11:CK:90:PRO:HG3	2.29	0.52
1:CA:978:A:C6	1:CA:1319:A:C5	2.98	0.52
51:D3:33:THR:HG23	51:D3:34:LYS:H	1.74	0.52
22:DA:2259:U:H4'	22:DA:2427:C:O2'	2.09	0.52
1:AA:1127:G:O2'	1:AA:1128:C:H5'	2.10	0.52
1:CA:1492:A:H2'	22:DA:1913:A:C8	2.44	0.52
22:DA:1314:C:OP1	22:DA:1332:G:OP1	2.26	0.52
1:AA:1060:U:H4'	10:AJ:53:ILE:HG23	1.90	0.52
22:DA:1071:G:O6	22:DA:1089:A:C2	2.63	0.52
16:AP:20:VAL:CG2	16:AP:32:PHE:HB2	2.40	0.52
22:DA:476:G:O2'	22:DA:477:A:H5''	2.10	0.52
31:BJ:140:LEU:CD1	31:BJ:140:LEU:C	2.77	0.52
1:CA:1152:A:OP2	10:CJ:70:HIS:CE1	2.62	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:2304:G:H2'	22:DA:2305:U:H5''	1.92	0.52
22:DA:106:C:O2'	22:DA:294:A:O2'	2.27	0.52
25:DD:28:GLU:HA	25:DD:185:ASN:O	2.09	0.52
29:DH:132:PHE:CD1	29:DH:133:GLN:N	2.77	0.52
25:BD:72:GLY:O	25:BD:73:VAL:O	2.27	0.52
41:BT:50:LEU:O	41:BT:51:PHE:HB2	2.08	0.52
4:CD:3:TYR:O	4:CD:4:LEU:HB2	2.10	0.52
1:AA:624:C:H4'	16:AP:10:GLY:O	2.08	0.52
1:AA:393:A:OP2	16:AP:12:LYS:HD2	2.10	0.52
14:AN:20:PHE:C	14:AN:22:LYS:H	2.13	0.52
4:AD:121:ALA:C	4:AD:122:ILE:HD13	2.29	0.52
7:AG:4:ARG:HA	7:AG:4:ARG:HE	1.74	0.52
27:BF:39:VAL:CG2	27:BF:48:LEU:HD23	2.39	0.52
5:AE:108:GLY:O	5:AE:109:ALA:HB3	2.10	0.52
22:BA:449:A:H2'	22:BA:450:G:H5'	1.91	0.52
22:DA:1326:U:O2'	22:DA:1327:A:C8	2.61	0.52
25:DD:88:GLU:O	25:DD:89:GLU:HG3	2.10	0.52
22:BA:2199:A:H3'	22:BA:2200:C:C6	2.44	0.52
1:CA:764:C:N4	1:CA:812:G:N1	2.57	0.52
22:DA:571:U:C4	22:DA:575:A:C5	2.97	0.52
1:CA:1026:G:H1	1:CA:1036:A:N6	2.08	0.52
9:CI:61:ASP:C	9:CI:62:LEU:HD22	2.30	0.52
31:DJ:106:LYS:HE2	31:DJ:106:LYS:HA	1.92	0.52
22:DA:2355:G:H4'	44:DW:20:LEU:HD22	1.92	0.52
1:AA:723:U:O2	1:AA:855:U:H4'	2.10	0.52
5:AE:132:PRO:HA	5:AE:135:VAL:CG1	2.40	0.52
43:DV:75:GLN:HG3	43:DV:92:VAL:HG13	1.91	0.52
12:AL:4:ASN:ND2	12:AL:8:ARG:HH12	2.08	0.52
2:AB:34:ARG:O	2:AB:37:VAL:O	2.28	0.52
26:BE:57:LYS:HG3	26:BE:58:LYS:N	2.25	0.52
22:DA:7:G:HO2'	31:DJ:15:TRP:HZ2	1.58	0.52
37:BP:99:LEU:HA	37:BP:102:ARG:HG3	1.92	0.52
42:BU:71:ILE:HD13	42:BU:82:VAL:HG22	1.89	0.52
48:D0:32:THR:HG21	48:D0:47:TYR:CE2	2.44	0.52
22:DA:589:U:O2'	22:DA:590:A:OP2	2.27	0.52
46:DY:1:MET:H2	46:DY:5:GLU:HG2	1.75	0.52
22:BA:41:C:C2'	22:BA:42:A:O5'	2.57	0.52
1:CA:1086:U:H6	1:CA:1086:U:C5'	2.23	0.52
23:BB:35:C:H2'	23:BB:36:C:O4'	2.10	0.52
32:BK:36:GLY:HA2	32:BK:62:VAL:O	2.10	0.52
22:DA:836:G:C5	22:DA:837:C:C4	2.97	0.52
34:DM:119:LEU:HD23	34:DM:119:LEU:O	2.09	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
49:B1:10:LEU:O	49:B1:19:PHE:HB2	2.10	0.52
25:BD:104:VAL:O	25:BD:177:VAL:HG21	2.08	0.52
1:AA:697:U:H2'	1:AA:698:G:H5'	1.90	0.52
22:BA:1593:A:H2'	22:BA:1594:U:O4'	2.09	0.52
1:AA:880:C:O2'	1:AA:881:G:H5'	2.10	0.52
4:AD:194:ILE:O	4:AD:194:ILE:HG13	2.10	0.52
19:CS:46:LEU:H	19:CS:46:LEU:HD23	1.75	0.52
45:BX:39:VAL:HG22	45:BX:44:ARG:O	2.09	0.52
39:DR:51:VAL:HB	39:DR:52:PRO:CD	2.40	0.52
22:DA:1552:A:C2'	22:DA:1552:A:N3	2.69	0.52
24:DC:147:PRO:HD3	24:DC:184:GLU:CG	2.36	0.52
22:BA:1458:U:H5'	22:BA:1459:G:N3	2.24	0.52
20:CT:73:ARG:CG	20:CT:73:ARG:NH1	2.61	0.52
22:DA:305:C:H1'	22:DA:313:G:N2	2.25	0.52
31:DJ:46:PRO:HD2	31:DJ:47:HIS:CE1	2.45	0.52
33:BL:101:ILE:CG2	33:BL:102:GLY:N	2.73	0.52
22:DA:1063:G:N2	22:DA:1076:C:C2	2.78	0.52
22:DA:1076:C:O2'	22:DA:1077:A:C8	2.63	0.52
22:DA:2271:G:H2'	22:DA:2272:U:C6	2.45	0.52
22:DA:116:C:H2'	22:DA:117:G:C8	2.45	0.52
22:DA:186:G:N2	22:DA:211:C:O2	2.43	0.52
22:DA:2310:C:H2'	22:DA:2311:A:H5''	1.90	0.52
1:AA:1253:G:N1	1:AA:1285:A:N6	2.57	0.52
27:BF:133:GLU:H	27:BF:150:GLY:CA	2.23	0.52
22:DA:623:C:H2'	22:DA:624:C:H6	1.74	0.52
22:DA:2747:G:O6	22:DA:2755:C:H5''	2.10	0.52
1:AA:508:U:H4'	1:AA:509:A:OP1	2.10	0.52
24:DC:93:VAL:HG13	24:DC:94:LEU:N	2.25	0.52
2:CB:59:ILE:C	2:CB:59:ILE:HD12	2.29	0.52
23:DB:91:C:OP1	34:DM:19:GLY:HA3	2.10	0.52
28:DG:112:VAL:CG1	28:DG:114:HIS:HB3	2.40	0.52
41:BT:50:LEU:CD1	41:BT:50:LEU:H	2.18	0.52
1:AA:49:U:C5	1:AA:365:U:O4	2.62	0.52
11:CK:124:LYS:HE3	21:CU:34:ARG:CZ	2.40	0.52
32:BK:39:ILE:HD13	32:BK:41:ILE:HD13	1.92	0.52
13:AM:7:ASN:O	13:AM:9:PRO:HD3	2.10	0.52
27:DF:19:PHE:HB3	27:DF:21:TYR:CE2	2.44	0.52
23:DB:94:A:OP1	43:DV:19:ARG:HD3	2.09	0.52
41:BT:87:LEU:O	41:BT:88:LYS:C	2.48	0.52
26:DE:79:ARG:O	26:DE:80:SER:C	2.47	0.52
34:BM:53:MET:O	34:BM:56:ALA:HB3	2.10	0.52
22:BA:342:A:C6	22:BA:343:C:C5	2.98	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:AM:24:VAL:O	13:AM:24:VAL:HG23	2.10	0.52
4:AD:190:LEU:HD12	4:AD:190:LEU:C	2.30	0.52
18:CR:32:ILE:HG13	18:CR:32:ILE:O	2.09	0.52
22:DA:1833:C:C4	22:DA:1834:U:C5	2.98	0.52
28:BG:54:ARG:C	28:BG:54:ARG:HD3	2.29	0.52
17:AQ:40:THR:HG22	17:AQ:41:THR:N	2.25	0.52
21:CU:3:ILE:HG21	21:CU:18:PHE:HB3	1.91	0.52
22:DA:1490:A:H5'	22:DA:1490:A:N3	2.25	0.52
22:DA:223:A:H2	22:DA:407:G:N3	2.08	0.52
22:DA:1069:A:O2'	22:DA:1072:C:OP2	2.26	0.52
1:AA:1277:C:H2'	1:AA:1278:G:H5''	1.92	0.52
22:DA:616:A:C2'	22:DA:617:G:C8	2.86	0.52
22:DA:668:A:H2'	22:DA:670:A:N6	2.13	0.52
22:DA:192:C:N4	22:DA:193:U:C2	2.78	0.52
22:DA:729:G:N3	22:DA:729:G:H2'	2.25	0.52
24:BC:106:PRO:CA	24:BC:141:HIS:CE1	2.92	0.52
6:CF:43:GLY:HA2	6:CF:58:HIS:HE1	1.71	0.52
41:DT:13:ALA:HB1	41:DT:14:PRO:HD2	1.92	0.52
1:CA:994:A:C6	1:CA:1216:A:H5''	2.45	0.52
1:CA:369:G:OP2	1:CA:388:G:N2	2.42	0.52
40:BS:74:ILE:CD1	40:BS:105:VAL:HG22	2.39	0.52
2:AB:77:GLU:HB2	2:AB:80:LYS:HE2	1.92	0.52
1:CA:496:A:C2	1:CA:497:G:C5	2.98	0.52
22:BA:565:C:C2'	22:BA:566:U:H5'	2.40	0.52
37:BP:33:GLU:OE2	37:BP:38:ARG:NH1	2.42	0.52
42:DU:58:VAL:CG1	42:DU:60:LYS:H	2.19	0.52
22:DA:1281:G:C2'	22:DA:1282:U:H5'	2.40	0.52
22:DA:808:G:O2'	22:DA:1254:A:H4'	2.10	0.52
1:CA:1454:G:HO2'	1:CA:1455:G:H8	1.55	0.52
26:BE:117:ARG:HA	26:BE:185:LYS:HD3	1.91	0.52
52:D4:7:VAL:CG1	52:D4:8:LYS:N	2.71	0.52
1:AA:181:A:N6	1:AA:195:A:OP2	2.43	0.52
33:DL:47:ARG:HG2	33:DL:47:ARG:HH21	1.74	0.52
22:BA:1277:G:H4'	35:BN:20:MET:HE2	1.91	0.52
46:BY:61:ALA:C	46:BY:63:ALA:H	2.14	0.52
7:AG:144:ALA:C	7:AG:146:ALA:H	2.13	0.52
26:DE:5:LEU:HD12	26:DE:10:SER:HB2	1.92	0.52
22:DA:2656:U:H2'	22:DA:2657:A:H8	1.75	0.52
1:AA:965:U:O2	1:AA:969:A:C2	2.63	0.52
31:DJ:37:ARG:HG3	31:DJ:118:MET:SD	2.49	0.52
2:CB:174:GLU:O	2:CB:178:LEU:HB2	2.09	0.52
26:BE:145:ASP:OD1	26:BE:183:PHE:HD2	1.92	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:BA:1635:A:C6	22:BA:1636:U:C2	2.98	0.52
22:DA:724:U:H2'	22:DA:725:G:O4'	2.09	0.52
22:BA:1205:A:H4'	22:BA:1206:G:OP2	2.09	0.52
1:CA:1477:U:H2'	1:CA:1478:U:C6	2.44	0.52
22:DA:2562:U:H1'	32:DK:23:LYS:HE2	1.92	0.52
22:DA:2853:C:H2'	22:DA:2854:G:H8	1.74	0.52
22:DA:1451:C:N4	22:DA:1461:C:H42	2.08	0.52
23:BB:2:G:C6	23:BB:119:A:C2	2.98	0.52
32:BK:8:LEU:HD23	32:BK:8:LEU:N	2.24	0.52
15:AO:62:ARG:HG2	15:AO:66:LEU:HD12	1.92	0.52
1:CA:1418:A:H2	22:DA:1948:G:N3	2.07	0.52
1:AA:654:G:H2'	1:AA:655:A:H8	1.75	0.52
22:BA:998:C:OP2	38:BQ:57:ARG:NH2	2.37	0.52
6:AF:71:ILE:HG23	6:AF:72:ASP:N	2.25	0.52
22:DA:35:G:C8	22:DA:454:A:C2	2.98	0.52
23:DB:28:C:OP1	36:DO:31:THR:HG21	2.10	0.52
22:DA:1515:A:H4'	22:DA:1556:C:O2'	2.10	0.52
22:DA:2345:G:C5	22:DA:2347:C:N4	2.78	0.52
22:DA:827:U:H5'	22:DA:828:U:O5'	2.10	0.52
32:BK:18:ARG:HB2	32:BK:45:GLU:CG	2.40	0.52
22:DA:1532:A:C5	22:DA:1533:C:C4	2.98	0.52
22:BA:301:G:OP2	42:BU:81:ARG:NH1	2.43	0.52
1:AA:1060:U:H5''	10:AJ:53:ILE:HD13	1.92	0.52
22:DA:1055:G:C3'	22:DA:1056:G:H5'	2.40	0.52
34:DM:62:LYS:HG2	34:DM:64:TRP:CZ2	2.45	0.52
1:CA:86:G:H1'	1:CA:87:C:O5'	2.10	0.52
22:DA:351:C:N4	22:DA:352:A:H62	2.08	0.52
8:AH:74:ILE:CD1	8:AH:128:VAL:HG22	2.40	0.52
29:BH:89:LYS:HG2	29:BH:90:LEU:N	2.14	0.52
28:DG:138:GLN:O	28:DG:138:GLN:HG2	2.09	0.52
2:AB:22:TRP:HA	2:AB:189:ASN:HA	1.92	0.52
37:DP:54:LEU:HD12	37:DP:76:HIS:CB	2.40	0.52
12:AL:53:ARG:HA	12:AL:63:THR:HA	1.91	0.52
28:DG:164:ALA:O	28:DG:165:ASP:HB2	2.10	0.52
1:CA:598:U:H4'	8:CH:85:TYR:CD1	2.45	0.52
13:CM:64:VAL:HG12	13:CM:65:GLU:HG3	1.92	0.52
2:CB:103:TRP:HA	2:CB:106:VAL:H	1.74	0.52
1:CA:1287:A:O2'	1:CA:1288:A:H8	1.84	0.52
35:DN:103:ARG:HG3	35:DN:104:ALA:H	1.75	0.52
22:DA:1330:C:O2'	22:DA:1331:G:O5'	2.27	0.52
1:AA:708:C:O2'	1:AA:709:U:H5'	2.09	0.52
22:BA:2638:G:O2'	22:BA:2775:G:N2	2.38	0.52

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:1968:G:H5'	56:DA:3484:HOH:O	2.10	0.52
1:AA:1053:G:N2	1:AA:1056:U:C4	2.78	0.52
31:BJ:97:PRO:O	31:BJ:98:GLU:C	2.48	0.52
22:DA:468:G:H5'	22:DA:797:G:OP1	2.09	0.52
7:CG:4:ARG:CZ	7:CG:6:ILE:HB	2.40	0.52
24:DC:191:LEU:HD22	24:DC:191:LEU:N	2.25	0.52
12:AL:3:VAL:HG23	12:AL:4:ASN:H	1.75	0.52
22:BA:2097:A:C2	22:BA:2193:G:C2	2.98	0.52
1:CA:1124:G:N2	1:CA:1127:G:N2	2.57	0.52
1:AA:821:G:H4'	56:AA:1742:HOH:O	2.10	0.52
10:AJ:15:HIS:C	10:AJ:17:LEU:H	2.11	0.52
1:AA:725:G:H2'	1:AA:726:C:H6	1.74	0.52
22:DA:2583:G:H2'	22:DA:2584:U:H5'	1.92	0.52
22:DA:1588:G:H2'	22:DA:1589:U:H6	1.74	0.52
4:CD:72:ARG:HD2	4:CD:203:TYR:CE1	2.45	0.52
38:BQ:8:ILE:C	38:BQ:8:ILE:HD12	2.30	0.52
1:AA:953:G:H2'	1:AA:954:G:O4'	2.10	0.52
36:DO:72:ALA:HA	36:DO:106:LEU:HA	1.91	0.52
1:AA:1414:U:H2'	1:AA:1415:G:C8	2.44	0.52
46:BY:26:PHE:HD1	46:BY:27:ASN:HD22	1.58	0.52
13:AM:28:ARG:NH2	13:AM:62:PHE:HB2	2.25	0.52
7:AG:44:SER:O	7:AG:48:THR:HG23	2.10	0.52
1:CA:1040:U:C2'	1:CA:1041:G:H5'	2.40	0.52
1:CA:695:A:H61	1:CA:797:C:H1'	1.75	0.52
44:BW:76:ARG:CG	44:BW:76:ARG:NH2	2.65	0.51
24:DC:72:GLY:O	24:DC:73:ILE:HD13	2.11	0.51
22:DA:1437:C:H2'	22:DA:1438:U:H6	1.75	0.51
22:DA:1531:C:H2'	22:DA:1532:A:O4'	2.10	0.51
22:DA:1311:G:H21	22:DA:1603:A:N6	2.08	0.51
22:DA:1809:A:C2'	22:DA:1810:A:C8	2.93	0.51
27:DF:32:LYS:HB3	27:DF:156:THR:HB	1.92	0.51
42:DU:44:HIS:HD2	42:DU:57:ILE:HG21	1.74	0.51
30:DI:48:ILE:HG13	30:DI:49:GLU:N	2.24	0.51
22:DA:183:C:H6	22:DA:183:C:O5'	1.93	0.51
22:DA:1139:G:O2'	22:DA:1140:C:H5'	2.09	0.51
22:DA:68:G:C2	22:DA:69:C:C2	2.98	0.51
2:CB:125:PHE:CD1	2:CB:137:THR:HG22	2.45	0.51
52:D4:36:ARG:HG2	52:D4:37:GLN:H	1.75	0.51
6:CF:41:ASP:O	6:CF:42:TRP:C	2.48	0.51
1:CA:597:G:C2'	1:CA:598:U:H5'	2.38	0.51
22:DA:810:U:C4	33:DL:30:THR:HG22	2.43	0.51
2:AB:86:CYS:SG	2:AB:221:ARG:HB2	2.50	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:2013:A:N6	22:DA:2014:A:C2	2.79	0.51
1:AA:1055:A:C6	1:AA:1206:G:C5	2.98	0.51
22:DA:1716:U:O2'	22:DA:1717:A:C8	2.47	0.51
22:DA:2197:U:O2'	22:DA:2198:A:H8	1.91	0.51
1:CA:988:G:H2'	1:CA:989:U:O4'	2.11	0.51
22:DA:1320:C:O2'	22:DA:1321:A:H8	1.93	0.51
22:DA:2142:A:O3'	22:DA:2143:C:H4'	2.10	0.51
4:CD:96:ARG:O	4:CD:100:VAL:HG23	2.10	0.51
12:AL:87:LYS:O	12:AL:88:ASP:CB	2.58	0.51
35:BN:65:LEU:O	35:BN:65:LEU:HD12	2.10	0.51
41:BT:4:GLU:OE1	41:BT:6:ARG:HG3	2.10	0.51
22:DA:2352:A:C6	44:DW:30:VAL:HG11	2.45	0.51
51:B3:56:LEU:H	51:B3:56:LEU:CD2	2.22	0.51
16:AP:77:GLU:C	16:AP:79:ASN:H	2.13	0.51
1:CA:151:A:H2'	1:CA:152:A:O4'	2.11	0.51
1:AA:751:U:C5	1:AA:752:G:C6	2.98	0.51
26:DE:5:LEU:CD2	26:DE:120:VAL:HG22	2.40	0.51
1:AA:1261:A:N1	1:AA:1274:A:C2	2.78	0.51
22:BA:2563:U:H1'	22:BA:2566:A:N6	2.25	0.51
37:DP:107:ALA:O	37:DP:108:ARG:C	2.48	0.51
1:AA:1381:U:O2'	1:AA:1382:C:O4'	2.27	0.51
4:AD:190:LEU:O	4:AD:191:SER:HB2	2.10	0.51
2:CB:95:TRP:CZ3	2:CB:170:ILE:HG22	2.45	0.51
40:DS:55:ILE:O	40:DS:59:GLU:HG2	2.10	0.51
4:CD:98:ASP:OD2	4:CD:132:ALA:HB1	2.10	0.51
22:BA:2852:G:H2'	22:BA:2853:C:O4'	2.10	0.51
22:DA:1638:C:H5''	22:DA:2710:C:O2'	2.11	0.51
4:CD:149:LYS:NZ	4:CD:176:LYS:NZ	2.58	0.51
1:CA:1394:A:H4'	1:CA:1395:C:OP2	2.08	0.51
1:AA:1311:A:C2	1:AA:1327:C:N3	2.78	0.51
43:BV:40:ILE:HG22	43:BV:41:GLU:N	2.25	0.51
26:DE:9:GLN:O	26:DE:9:GLN:HG3	2.10	0.51
28:DG:76:ILE:HG22	28:DG:76:ILE:O	2.10	0.51
22:BA:2373:G:H2'	22:BA:2374:C:C6	2.44	0.51
22:DA:379:G:C5	22:DA:396:G:C6	2.97	0.51
39:DR:39:LEU:CA	39:DR:49:ILE:HG21	2.25	0.51
6:AF:29:ILE:HG12	6:AF:64:VAL:HG11	1.92	0.51
22:BA:364:C:H2'	22:BA:365:U:C6	2.45	0.51
22:DA:1340:U:O2'	22:DA:1602:U:H2'	2.09	0.51
13:CM:75:SER:C	13:CM:77:LYS:H	2.12	0.51
8:AH:63:LYS:C	8:AH:64:TYR:HD1	2.14	0.51
1:AA:271:C:O2'	1:AA:272:C:H5'	2.10	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:484:C:N4	22:DA:497:A:C2	2.78	0.51
30:DI:52:LEU:CD1	30:DI:53:PRO:HD2	2.30	0.51
22:DA:628:G:O2'	22:DA:629:G:H5'	2.10	0.51
48:D0:12:ARG:O	48:D0:16:ARG:HG3	2.10	0.51
1:AA:579:A:O2'	15:AO:53:ARG:NH1	2.43	0.51
22:DA:2092:U:H4'	22:DA:2093:G:H5''	1.93	0.51
32:DK:39:ILE:HB	32:DK:41:ILE:HD13	1.93	0.51
22:DA:727:A:C2'	22:DA:728:G:C8	2.94	0.51
22:BA:571:U:C5	22:BA:575:A:C5	2.98	0.51
4:CD:138:PRO:O	4:CD:139:ASN:HB2	2.10	0.51
1:CA:1213:A:C8	1:CA:1215:G:C5	2.98	0.51
22:DA:1299:G:H22	22:DA:1640:A:H5'	1.74	0.51
1:AA:1181:G:O2'	1:AA:1182:G:C8	2.63	0.51
22:BA:31:C:O2'	22:BA:1238:G:H5'	2.10	0.51
33:DL:83:ALA:CB	33:DL:117:THR:HB	2.40	0.51
22:DA:1157:G:H2'	22:DA:1158:C:C5	2.45	0.51
22:DA:1545:A:N6	22:DA:1546:G:N2	2.58	0.51
2:AB:32:GLY:CA	2:AB:39:ILE:H	2.20	0.51
47:DZ:52:PHE:CD2	47:DZ:53:MET:HG2	2.46	0.51
22:DA:769:U:HO2'	22:DA:1379:U:H6	1.56	0.51
41:DT:29:THR:HB	41:DT:86:THR:CA	2.39	0.51
22:BA:2414:G:O2'	22:BA:2415:G:H5'	2.10	0.51
19:CS:45:GLY:N	19:CS:61:VAL:HB	2.25	0.51
39:DR:80:ARG:HG2	39:DR:81:LYS:NZ	2.24	0.51
12:CL:98:ARG:HA	12:CL:103:CYS:SG	2.50	0.51
1:CA:337:G:H2'	1:CA:338:A:C8	2.45	0.51
22:BA:1378:A:O2'	56:BA:3754:HOH:O	2.18	0.51
17:CQ:61:ARG:HG2	17:CQ:75:VAL:CG1	2.40	0.51
3:CC:183:TYR:HE1	3:CC:198:LYS:HB3	1.74	0.51
33:DL:101:ILE:HG23	33:DL:105:ILE:HG13	1.92	0.51
38:BQ:23:TYR:O	38:BQ:28:SER:HB3	2.10	0.51
1:AA:82:G:H2'	1:AA:83:C:H4'	1.91	0.51
22:DA:425:G:H2'	22:DA:426:C:C6	2.43	0.51
22:DA:777:G:N7	22:DA:793:A:C2	2.77	0.51
1:CA:858:G:O6	1:CA:869:G:C8	2.64	0.51
22:DA:498:G:C2	22:DA:499:U:C6	2.99	0.51
22:DA:1628:G:H2'	22:DA:1629:U:H6	1.74	0.51
22:BA:454:A:H4'	22:BA:455:C:OP2	2.10	0.51
30:DI:103:ALA:O	30:DI:107:GLU:HB2	2.09	0.51
37:BP:64:SER:O	37:BP:65:ASN:C	2.48	0.51
25:DD:115:GLY:O	35:DN:3:HIS:HE1	1.93	0.51
16:CP:56:ARG:O	16:CP:59:HIS:HB3	2.10	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:CA:455:G:N2	1:CA:478:A:C2	2.77	0.51
4:CD:60:VAL:HG22	4:CD:194:ILE:HG21	1.92	0.51
22:BA:232:G:H4'	22:BA:233:A:OP1	2.09	0.51
6:AF:41:ASP:O	6:AF:43:GLY:N	2.43	0.51
1:AA:1405:G:O4'	1:AA:1519:A:H4'	2.11	0.51
44:BW:50:VAL:O	44:BW:52:CYS:N	2.35	0.51
44:BW:40:ARG:HG3	44:BW:52:CYS:SG	2.50	0.51
22:DA:2347:C:O2'	22:DA:2348:U:O5'	2.29	0.51
22:DA:2282:G:N3	22:DA:2425:A:N6	2.58	0.51
20:AT:78:LEU:O	20:AT:82:ILE:HG23	2.10	0.51
22:DA:406:G:O2'	22:DA:407:G:O4'	2.27	0.51
24:DC:122:ALA:HB3	24:DC:127:ASN:ND2	2.24	0.51
22:DA:83:A:P	42:DU:91:LYS:HZ2	2.33	0.51
24:DC:145:MET:HB2	24:DC:152:GLN:HE22	1.75	0.51
17:AQ:18:LYS:C	17:AQ:47:ASP:OD2	2.49	0.51
17:AQ:20:ILE:HG22	17:AQ:47:ASP:OD1	2.10	0.51
35:DN:90:ARG:CZ	35:DN:116:VAL:HG11	2.39	0.51
1:CA:279:A:C4'	1:CA:280:C:O5'	2.57	0.51
25:DD:108:ASP:N	25:DD:204:LYS:O	2.35	0.51
29:DH:132:PHE:CZ	29:DH:134:VAL:HB	2.45	0.51
41:DT:14:PRO:HA	41:DT:32:LEU:HB3	1.91	0.51
12:CL:89:LEU:HB3	12:CL:92:VAL:HG21	1.91	0.51
1:CA:1326:U:H2'	1:CA:1327:C:C6	2.46	0.51
2:AB:72:LYS:O	2:AB:74:ALA:N	2.42	0.51
22:DA:2021:C:H4'	22:DA:2022:U:OP2	2.10	0.51
29:DH:68:ARG:HD2	29:DH:71:LYS:HD3	1.92	0.51
8:AH:94:VAL:HG12	8:AH:95:MET:HG3	1.92	0.51
40:DS:27:LYS:O	40:DS:28:LYS:O	2.28	0.51
22:DA:686:U:C6	22:DA:788:A:N1	2.77	0.51
30:BI:52:LEU:HD12	30:BI:52:LEU:N	2.25	0.51
22:BA:544:C:H3'	22:BA:545:U:O2	2.09	0.51
6:AF:81:ASN:HB3	6:AF:84:VAL:CG1	2.40	0.51
1:CA:1226:C:O2'	1:CA:1227:A:H5'	2.10	0.51
1:CA:444:G:C2'	1:CA:445:G:H5'	2.40	0.51
3:CC:5:HIS:CD2	3:CC:183:TYR:HE2	2.29	0.51
22:DA:874:G:C2	22:DA:904:G:C2	2.99	0.51
1:CA:1050:G:O2'	1:CA:1051:C:H6	1.92	0.51
40:BS:84:ARG:HB2	40:BS:96:ILE:CD1	2.40	0.51
33:BL:55:MET:HE2	33:BL:56:PRO:HD3	1.93	0.51
22:DA:2894:G:H2'	22:DA:2894:G:OP2	2.10	0.51
1:CA:461:A:N3	1:CA:461:A:H2'	2.25	0.51
5:AE:136:VAL:O	5:AE:136:VAL:HG22	2.10	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:652:U:C5	1:AA:752:G:C4	2.98	0.51
22:DA:2531:A:H5'	28:DG:156:TYR:CZ	2.45	0.51
43:DV:51:GLN:HA	43:DV:56:PHE:CD2	2.45	0.51
1:AA:996:A:C2	1:AA:1046:A:H5'	2.46	0.51
26:DE:34:ALA:HB1	26:DE:94:GLN:HB2	1.91	0.51
41:DT:34:VAL:HG21	41:DT:43:ILE:HD12	1.91	0.51
1:AA:1241:G:N2	1:AA:1242:G:C4	2.79	0.51
1:AA:1108:G:OP1	3:AC:175:HIS:HB2	2.11	0.51
37:DP:32:VAL:HA	37:DP:37:LYS:HA	1.91	0.51
1:AA:612:C:O2'	1:AA:613:C:H5'	2.10	0.51
22:BA:1441:G:H2'	22:BA:1442:U:C6	2.45	0.51
3:CC:134:LYS:HD3	3:CC:138:GLN:OE1	2.10	0.51
32:DK:40:LYS:NZ	32:DK:89:ASN:HD21	2.07	0.51
1:CA:1370:G:H5''	9:CI:110:VAL:HG21	1.92	0.51
13:AM:39:ALA:HB3	13:AM:42:VAL:HG22	1.92	0.51
1:CA:291:U:O2'	1:CA:292:G:H5'	2.09	0.51
1:AA:872:A:C4	1:AA:874:G:N7	2.78	0.51
1:CA:681:A:C2	1:CA:710:G:C2	2.99	0.51
35:BN:23:ASN:HD22	35:BN:23:ASN:N	2.08	0.51
1:AA:11:G:C5	1:AA:12:U:C5	2.98	0.51
22:DA:1678:A:C8	56:DA:3453:HOH:O	2.54	0.51
28:BG:33:THR:C	28:BG:34:ARG:HD3	2.30	0.51
1:CA:1057:G:H4'	3:CC:196:GLY:H	1.75	0.51
1:CA:1258:G:H2'	1:CA:1259:C:C6	2.45	0.51
44:BW:47:GLY:C	44:BW:49:ASN:H	2.14	0.51
44:BW:50:VAL:HB	44:BW:61:LYS:NZ	2.26	0.51
21:CU:24:LYS:CE	21:CU:25:ALA:H	2.23	0.51
37:BP:3:ILE:HD13	37:BP:3:ILE:C	2.30	0.51
22:DA:2331:G:H1	22:DA:2385:C:N4	2.08	0.51
22:DA:860:U:C4	22:DA:2268:A:C5	2.99	0.51
1:AA:430:A:OP2	4:AD:7:LYS:HG2	2.11	0.51
22:DA:301:G:C4	22:DA:302:C:C4	2.98	0.51
22:DA:305:C:C2	22:DA:313:G:C2	2.97	0.51
22:DA:2887:A:C1'	48:D0:39:ARG:HH22	2.18	0.51
22:DA:118:A:N7	22:DA:119:A:C8	2.78	0.51
1:CA:1280:A:H5''	10:CJ:43:PRO:HG2	1.91	0.51
31:DJ:30:THR:HG23	31:DJ:31:GLU:N	2.25	0.51
35:DN:56:LYS:HD3	35:DN:88:ALA:HA	1.92	0.51
22:DA:195:A:C6	22:DA:198:C:C5	2.98	0.51
1:AA:1441:A:N7	1:AA:1442:G:N7	2.59	0.51
1:CA:666:G:N2	1:CA:667:G:H1'	2.25	0.51
25:BD:125:TRP:CD2	25:BD:160:LYS:HD3	2.45	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:BA:84:A:N6	22:BA:101:A:H2	2.05	0.51
1:CA:1327:C:C4	1:CA:1328:C:N4	2.79	0.51
13:CM:11:HIS:HA	13:CM:44:ILE:HB	1.92	0.51
40:BS:73:LYS:HA	40:BS:73:LYS:HE3	1.92	0.51
22:DA:279:A:H8	22:DA:279:A:P	2.33	0.51
2:AB:81:ASP:OD1	2:AB:83:ALA:N	2.38	0.51
22:DA:1297:C:H2'	22:DA:1298:C:H6	1.75	0.51
3:AC:110:LEU:HD21	3:AC:143:LEU:HD23	1.90	0.51
46:BY:1:MET:HG2	46:BY:5:GLU:OE1	2.09	0.51
22:DA:1526:C:H2'	22:DA:1527:G:O4'	2.11	0.51
1:CA:66:A:C6	1:CA:67:C:C4	2.99	0.51
22:DA:2543:G:H2'	22:DA:2544:G:C8	2.46	0.51
41:DT:29:THR:HB	41:DT:87:LEU:N	2.21	0.51
3:AC:86:LEU:O	3:AC:90:VAL:HG23	2.11	0.51
22:BA:2415:G:H2'	22:BA:2416:C:C6	2.45	0.51
29:DH:9:VAL:CG1	29:DH:10:ALA:N	2.73	0.51
26:DE:90:GLN:HG3	26:DE:92:HIS:NE2	2.26	0.51
30:BI:102:ARG:HB2	30:BI:141:ASP:OD2	2.11	0.51
14:CN:100:TRP:CD1	14:CN:100:TRP:C	2.84	0.51
22:BA:323:C:N4	22:BA:333:G:C5	2.78	0.51
22:DA:1974:C:H2'	22:DA:1975:G:H8	1.75	0.51
23:DB:78:A:H2'	23:DB:79:G:O4'	2.10	0.51
22:DA:468:G:H5''	26:DE:55:SER:CB	2.40	0.51
26:DE:53:THR:OG1	26:DE:54:GLY:N	2.43	0.51
22:DA:852:U:H5'	47:DZ:45:GLY:HA3	1.92	0.51
34:BM:43:ALA:HA	34:BM:46:ILE:HG13	1.91	0.51
22:DA:1411:U:H2'	22:DA:1412:U:C6	2.45	0.51
22:DA:590:A:C5	22:DA:591:U:C5	2.97	0.51
22:BA:1786:A:H1'	22:BA:1938:A:N6	2.25	0.51
12:AL:76:HIS:O	12:AL:77:SER:HB2	2.10	0.51
28:BG:109:SER:O	28:BG:110:HIS:CB	2.59	0.51
1:CA:1108:G:H5''	3:CC:175:HIS:CE1	2.45	0.51
51:B3:61:LEU:HB3	51:B3:64:ALA:HB2	1.93	0.51
2:CB:91:VAL:HG11	2:CB:95:TRP:HD1	1.75	0.51
1:AA:1296:C:O2'	1:AA:1302:C:C4	2.63	0.51
1:AA:56:U:H2'	1:AA:57:G:C8	2.46	0.51
22:BA:833:A:H2'	22:BA:834:G:C8	2.46	0.51
22:DA:669:G:C2	22:DA:801:G:C6	2.98	0.51
27:DF:129:MET:HG3	27:DF:153:ILE:HD12	1.92	0.51
1:AA:316:C:C2	1:AA:317:U:C5	2.98	0.51
1:CA:335:C:H2'	1:CA:336:A:C8	2.46	0.51
1:AA:531:U:H5''	3:AC:160:GLU:OE2	2.11	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:396:G:O2'	22:DA:397:U:O5'	2.28	0.51
39:DR:39:LEU:HD23	39:DR:39:LEU:H	1.76	0.51
44:BW:22:VAL:O	44:BW:25:PHE:HD2	1.94	0.51
51:B3:31:ILE:CG1	51:B3:34:LYS:HD2	2.40	0.51
22:DA:2298:A:O2'	22:DA:2299:U:O5'	2.28	0.51
24:DC:127:ASN:O	24:DC:190:THR:HA	2.10	0.51
16:AP:20:VAL:HG23	16:AP:34:GLU:O	2.11	0.51
22:DA:2267:A:N6	22:DA:2272:U:N3	2.53	0.51
46:DY:57:LEU:O	46:DY:60:LYS:HB3	2.11	0.51
22:DA:612:G:C2	22:DA:617:G:O6	2.64	0.51
22:DA:2093:G:N3	22:DA:2094:A:C8	2.78	0.51
1:CA:1346:A:C8	1:CA:1348:U:C2	2.99	0.51
27:DF:137:PHE:CB	27:DF:138:PRO:HD2	2.35	0.51
1:AA:365:U:H5''	1:AA:366:A:OP1	2.11	0.51
22:DA:818:G:C2'	22:DA:819:A:H5''	2.40	0.51
22:DA:1417:C:H4'	22:DA:1587:G:H21	1.75	0.51
22:DA:856:G:O4'	44:DW:23:LYS:HB3	2.10	0.51
25:BD:114:LYS:CE	25:BD:114:LYS:N	2.72	0.51
31:DJ:95:ARG:O	31:DJ:96:ARG:C	2.49	0.51
22:BA:480:A:H2'	22:BA:481:G:OP1	2.10	0.51
1:CA:1422:G:O2'	1:CA:1423:G:H5'	2.11	0.51
22:DA:412:A:O2'	22:DA:413:C:H5'	2.11	0.51
1:AA:1371:G:H5''	1:AA:1372:U:OP2	2.10	0.51
8:CH:11:THR:HG23	8:CH:14:ARG:HH22	1.73	0.51
22:DA:1282:U:O4	22:DA:1283:G:C6	2.64	0.51
22:DA:2729:G:H2'	22:DA:2730:C:C6	2.46	0.51
42:BU:12:VAL:O	42:BU:18:LYS:O	2.28	0.51
26:DE:170:ARG:NH2	26:DE:176:ASP:HB2	2.25	0.51
1:CA:1270:G:H2'	1:CA:1271:A:C8	2.45	0.51
22:DA:453:A:H4'	22:DA:472:A:N6	2.24	0.51
22:DA:99:U:H5'	22:DA:100:U:H2'	1.91	0.51
22:DA:56:A:C2	22:DA:57:C:C2	2.97	0.51
22:DA:836:G:C6	22:DA:837:C:C4	2.99	0.51
7:AG:134:VAL:O	7:AG:137:ARG:HB3	2.11	0.51
1:AA:890:G:O2'	1:AA:906:A:N6	2.43	0.51
1:CA:620:C:H1'	4:CD:131:ILE:HG21	1.93	0.51
22:BA:2714:G:P	56:BA:3546:HOH:O	2.68	0.51
22:DA:2492:U:H2'	22:DA:2493:U:C6	2.44	0.51
22:BA:125:A:OP2	50:B2:19:ARG:NH2	2.43	0.51
22:BA:684:G:OP1	50:B2:21:ARG:NH1	2.43	0.51
50:D2:25:LYS:HG2	50:D2:25:LYS:O	2.11	0.51
30:BI:96:LYS:HD2	30:BI:96:LYS:N	2.25	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:2508:G:H2'	22:DA:2509:G:H8	1.75	0.51
45:DX:10:ARG:HB3	45:DX:11:PRO:HD2	1.92	0.51
1:AA:908:A:C2	1:AA:909:A:C4	2.98	0.51
30:BI:8:VAL:HG23	30:BI:9:LYS:N	2.26	0.51
19:CS:35:ARG:HH22	19:CS:53:GLY:N	2.09	0.51
22:BA:528:A:C8	22:BA:528:A:H3'	2.45	0.51
22:BA:528:A:H2'	22:BA:529:A:H5''	1.91	0.51
22:DA:833:A:H2'	22:DA:834:G:C8	2.45	0.51
22:DA:1131:G:N7	22:DA:2025:C:H4'	2.26	0.51
22:DA:321:U:O2	26:DE:159:LEU:HD11	2.11	0.51
23:DB:42:C:H5	27:DF:65:LEU:HD13	1.75	0.51
30:BI:27:LEU:O	30:BI:27:LEU:HD12	2.11	0.51
22:DA:2744:G:C6	22:DA:2761:A:C6	2.99	0.51
22:DA:782:A:N7	24:DC:219:VAL:HG21	2.26	0.51
19:AS:39:ILE:HD11	19:AS:70:LEU:HD23	1.93	0.51
34:DM:34:LYS:O	34:DM:128:THR:HB	2.11	0.51
25:BD:5:VAL:N	25:BD:32:ASN:HD21	1.99	0.51
1:CA:642:A:O2'	1:CA:643:C:C6	2.54	0.51
22:DA:2021:C:O2	22:DA:2021:C:C2'	2.58	0.51
1:AA:132:C:H2'	1:AA:133:U:O4'	2.11	0.51
1:AA:553:A:O2'	1:AA:554:A:H5'	2.11	0.51
24:DC:95:TYR:C	24:DC:97:ASP:H	2.13	0.51
29:DH:8:LYS:HD2	29:DH:8:LYS:C	2.30	0.51
14:CN:20:PHE:CA	14:CN:24:ALA:HB2	2.40	0.51
22:BA:1496:A:H2'	22:BA:1498:C:N4	2.26	0.51
52:D4:15:LYS:O	52:D4:16:ILE:HB	2.10	0.51
37:BP:21:PRO:HA	37:BP:46:VAL:CG1	2.41	0.51
51:D3:23:HIS:ND1	51:D3:24:LYS:O	2.43	0.51
3:CC:29:ALA:HB1	14:CN:64:ARG:HH12	1.75	0.51
13:AM:49:GLU:O	13:AM:52:ILE:HG22	2.10	0.51
24:BC:33:LEU:CD2	24:BC:62:ARG:HD3	2.40	0.51
2:AB:183:PHE:CE1	2:AB:197:PHE:CD2	2.99	0.51
1:CA:892:A:C6	1:CA:893:C:C4	2.99	0.51
22:BA:2210:U:C2	22:BA:2212:A:N7	2.79	0.51
22:DA:1566:A:C2	24:DC:212:TRP:HB2	2.45	0.51
22:BA:2075:U:H2'	22:BA:2238:G:N2	2.26	0.51
47:DZ:40:THR:H	47:DZ:43:ILE:HD11	1.74	0.51
1:CA:861:G:C6	1:CA:862:C:C4	2.99	0.51
37:DP:90:ALA:HB3	37:DP:110:LYS:HB2	1.92	0.51
48:D0:27:LEU:N	48:D0:27:LEU:HD22	2.26	0.51
1:CA:486:U:O2	1:CA:486:U:H2'	2.10	0.51
22:BA:2430:A:N3	22:BA:2430:A:H2'	2.26	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:BD:45:TYR:CD1	25:BD:45:TYR:N	2.78	0.51
22:DA:1202:G:N7	22:DA:1203:U:C5	2.78	0.51
1:CA:880:C:C2'	1:CA:881:G:H5'	2.40	0.51
17:AQ:49:ASN:O	17:AQ:50:ASN:C	2.48	0.51
1:CA:1351:U:O2'	1:CA:1352:C:H5'	2.11	0.51
1:CA:977:A:H8	1:CA:1223:C:N3	2.08	0.51
22:DA:2360:G:H1'	33:DL:60:ARG:HH21	1.74	0.51
20:AT:53:MET:HE1	20:AT:57:VAL:HG21	1.92	0.51
1:CA:1408:A:C2	1:CA:1492:A:N6	2.78	0.51
22:DA:1384:A:H1'	22:DA:1405:U:H1'	1.92	0.51
22:DA:329:G:O6	42:DU:16:LYS:HB2	2.10	0.51
33:BL:101:ILE:HG22	33:BL:102:GLY:N	2.25	0.51
22:DA:1079:C:N4	22:DA:1088:A:N3	2.59	0.51
22:DA:1092:C:C2'	22:DA:1093:G:H5'	2.40	0.51
31:BJ:17:VAL:CG2	31:BJ:137:PRO:HB2	2.34	0.51
10:AJ:67:ILE:HG13	14:AN:95:LEU:HD13	1.92	0.51
29:DH:24:GLY:O	29:DH:25:TYR:C	2.48	0.51
22:DA:1775:U:H2'	22:DA:1776:G:O5'	2.10	0.51
1:CA:642:A:N7	8:CH:106:SER:HA	2.26	0.51
2:CB:103:TRP:HA	2:CB:106:VAL:CB	2.41	0.51
27:DF:49:LEU:N	27:DF:49:LEU:HD22	2.21	0.51
41:DT:38:ALA:HB1	41:DT:81:LYS:HZ3	1.75	0.51
41:DT:39:THR:HG21	41:DT:42:GLU:CB	2.34	0.51
23:BB:89:U:H3'	23:BB:90:C:C5'	2.40	0.51
39:DR:68:ARG:CZ	39:DR:90:ARG:HG2	2.41	0.51
25:DD:133:THR:O	25:DD:134:HIS:C	2.49	0.51
1:AA:176:C:H2'	1:AA:177:G:N3	2.26	0.51
4:AD:68:GLU:O	4:AD:69:ARG:C	2.47	0.51
20:CT:26:MET:CE	20:CT:30:PHE:HD1	2.24	0.51
1:AA:222:C:H2'	1:AA:223:A:C8	2.40	0.51
22:DA:1734:G:C2'	22:DA:1735:A:H8	2.24	0.51
1:CA:708:C:H2'	1:CA:709:U:C6	2.44	0.51
1:CA:624:C:O2'	16:CP:10:GLY:HA2	2.10	0.51
1:CA:64:G:H4'	1:CA:65:A:H5''	1.93	0.51
1:AA:575:G:H4'	1:AA:576:C:OP1	2.11	0.51
1:AA:636:U:O2'	1:AA:637:C:H5'	2.11	0.51
1:CA:38:G:C2	1:CA:397:A:C2	2.99	0.51
22:BA:164:C:H2'	22:BA:165:A:O4'	2.11	0.51
51:D3:36:ALA:O	51:D3:40:LYS:HG3	2.10	0.51
19:CS:15:LEU:O	19:CS:19:GLU:HB2	2.10	0.51
22:DA:609:A:H2'	22:DA:610:C:O4'	2.11	0.51
1:CA:189:A:H3'	1:CA:190:A:C8	2.46	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:BA:1275:A:C2	22:BA:1295:C:O2	2.64	0.51
7:AG:22:LEU:O	7:AG:25:PHE:HB3	2.10	0.51
22:DA:927:A:C6	22:DA:928:A:C6	2.99	0.51
25:DD:17:GLU:H	25:DD:17:GLU:CD	2.14	0.51
1:CA:1042:A:H2'	1:CA:1043:G:O4'	2.11	0.51
22:DA:597:G:H2'	22:DA:598:U:O4'	2.11	0.51
22:DA:2435:A:H2'	22:DA:2436:G:O5'	2.10	0.51
44:BW:14:ASP:OD2	44:BW:16:GLU:OE1	2.29	0.51
22:DA:2324:U:HO2'	22:DA:2385:C:H5	1.59	0.51
42:DU:81:ARG:O	42:DU:82:VAL:HG13	2.10	0.51
22:DA:666:A:H4'	33:DL:48:ARG:HD3	1.93	0.51
1:AA:267:C:H5'	1:AA:267:C:H6	1.75	0.51
17:AQ:18:LYS:O	17:AQ:47:ASP:OD2	2.29	0.51
17:AQ:12:VAL:HG21	17:AQ:21:VAL:HG13	1.93	0.51
22:DA:508:A:H3'	22:DA:509:C:C5'	2.41	0.51
22:DA:2305:U:H4'	27:DF:132:ARG:CG	2.41	0.51
33:DL:79:LEU:HA	33:DL:82:LEU:HD11	1.93	0.51
46:DY:47:ARG:O	46:DY:50:VAL:N	2.39	0.51
22:DA:1965:C:H2'	22:DA:1966:A:C8	2.46	0.51
1:CA:1244:G:H2'	1:CA:1245:C:C6	2.45	0.51
22:DA:617:G:N3	22:DA:618:G:C8	2.79	0.51
25:BD:92:VAL:O	25:BD:93:GLY:C	2.48	0.51
25:DD:29:VAL:HB	25:DD:98:VAL:CG1	2.31	0.51
32:DK:21:CYS:SG	32:DK:39:ILE:CG2	2.99	0.51
24:DC:70:LYS:HB2	24:DC:101:ARG:HH22	1.75	0.51
30:BI:56:VAL:HG22	30:BI:68:PHE:HB2	1.92	0.51
22:DA:1188:U:H2'	22:DA:1189:A:H8	1.76	0.51
22:BA:2813:A:H2	22:BA:2887:A:H61	1.57	0.51
32:BK:21:CYS:SG	32:BK:39:ILE:HD11	2.51	0.51
22:DA:2788:C:H1'	22:DA:2809:A:C2	2.46	0.51
22:DA:1854:A:C2'	22:DA:1855:U:H5'	2.40	0.51
1:AA:211:G:N1	1:AA:212:G:H1'	2.25	0.51
1:CA:765:G:C5	1:CA:812:G:C6	2.99	0.51
1:CA:765:G:C6	1:CA:812:G:N7	2.79	0.51
1:CA:1453:G:H2'	1:CA:1454:G:O4'	2.11	0.51
12:CL:109:ARG:NH2	12:CL:116:TYR:HE2	2.09	0.51
26:DE:73:ILE:HG13	26:DE:78:TRP:HE1	1.75	0.51
30:BI:17:ALA:HB1	30:BI:42:ASN:HD21	1.76	0.51
1:CA:1049:U:H4'	1:CA:1050:G:H5'	1.92	0.51
27:BF:7:TYR:HD2	27:BF:11:VAL:HG11	1.75	0.51
1:CA:711:G:O2'	1:CA:712:A:H5'	2.11	0.51
22:BA:659:G:H4'	26:BE:95:LYS:HD3	1.92	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:2727:A:O2'	22:DA:2728:U:C5'	2.58	0.51
40:BS:59:GLU:HA	40:BS:64:ALA:CB	2.41	0.51
10:AJ:91:ASP:C	10:AJ:92:LEU:HD23	2.31	0.51
1:AA:956:U:H2'	1:AA:957:U:H6	1.75	0.51
29:DH:58:LEU:HA	29:DH:61:VAL:HG12	1.93	0.51
10:AJ:11:LYS:CG	10:AJ:97:ASP:HB3	2.40	0.51
24:DC:131:MET:HA	24:DC:134:ILE:HD11	1.92	0.51
26:BE:72:SER:C	26:BE:74:LYS:H	2.14	0.51
22:DA:2072:C:C2'	22:DA:2073:C:H5'	2.40	0.51
1:AA:912:C:O2'	1:AA:913:A:H5'	2.10	0.51
22:DA:1229:C:H2'	22:DA:1230:A:C8	2.45	0.51
1:AA:157:U:O2'	1:AA:158:G:H5'	2.11	0.51
33:DL:90:VAL:HG12	33:DL:90:VAL:O	2.09	0.51
36:BO:84:GLU:C	36:BO:86:GLY:H	2.14	0.51
1:CA:1178:G:OP2	9:CI:98:ARG:NH2	2.44	0.51
1:AA:1017:U:OP2	1:AA:1017:U:H6	1.93	0.51
22:BA:195:A:C6	22:BA:198:C:C5	2.98	0.51
23:BB:98:G:H1	43:BV:14:LYS:HB3	1.76	0.51
1:CA:827:U:H2'	1:CA:870:U:O4	2.10	0.51
22:BA:915:C:H6	22:BA:915:C:H5''	1.76	0.51
4:AD:56:GLU:O	4:AD:59:LYS:HB3	2.10	0.51
1:CA:672:U:H2'	1:CA:673:A:H8	1.76	0.51
22:DA:1497:U:C5	22:DA:1578:U:O5'	2.64	0.51
22:BA:2182:U:C2'	22:BA:2183:A:OP1	2.58	0.51
30:DI:132:ALA:HA	30:DI:137:LEU:HD12	1.92	0.51
1:AA:622:A:C8	1:AA:623:C:C6	2.99	0.51
22:DA:2512:C:H2'	22:DA:2513:A:O4'	2.11	0.51
39:DR:21:ARG:HB2	39:DR:93:PHE:HD1	1.75	0.51
45:DX:29:LEU:HB2	45:DX:30:PRO:HD2	1.93	0.51
1:CA:701:U:C2'	1:CA:702:A:OP2	2.57	0.51
1:CA:1408:A:N1	1:CA:1494:G:C6	2.79	0.51
22:DA:1403:A:C2	22:DA:1404:C:C2	2.99	0.51
31:DJ:44:TYR:O	31:DJ:45:THR:CB	2.59	0.51
11:CK:74:LYS:O	11:CK:74:LYS:HG2	2.10	0.51
2:AB:49:PHE:CD1	2:AB:53:LEU:HD23	2.46	0.51
1:CA:1435:G:H2'	1:CA:1436:U:C6	2.45	0.51
5:CE:79:THR:HA	5:CE:121:ASN:ND2	2.26	0.51
17:AQ:13:SER:O	17:AQ:20:ILE:CD1	2.59	0.51
17:AQ:22:VAL:HG21	17:AQ:60:ILE:CD1	2.36	0.51
27:BF:107:VAL:HG11	27:BF:175:PRO:HG2	1.92	0.51
43:BV:10:LYS:NZ	43:BV:11:GLU:HG3	2.26	0.51
1:CA:407:U:H2'	1:CA:408:A:C8	2.45	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:CB:147:LEU:N	2:CB:147:LEU:HD12	2.25	0.51
22:DA:600:G:H1'	26:DE:100:MET:HG2	1.91	0.51
22:DA:608:A:C6	22:DA:621:A:C8	2.99	0.51
35:DN:12:ARG:HG2	35:DN:16:HIS:CG	2.46	0.51
22:BA:1394:U:H2'	22:BA:1395:A:O5'	2.11	0.51
22:DA:1417:C:O2'	22:DA:1418:G:O4'	2.29	0.51
22:DA:1027:A:N7	22:DA:1126:A:C2	2.79	0.51
6:CF:3:HIS:O	6:CF:4:TYR:CG	2.63	0.51
1:CA:496:A:C2'	1:CA:496:A:N3	2.71	0.51
42:DU:95:PHE:CD1	42:DU:95:PHE:N	2.64	0.51
42:DU:73:ASN:CB	42:DU:95:PHE:HE2	2.24	0.51
12:AL:23:LEU:HB3	12:AL:58:ASN:HD22	1.76	0.51
35:DN:35:LYS:HG2	35:DN:112:TYR:CE1	2.45	0.51
22:DA:694:U:OP1	22:DA:1569:A:H1'	2.11	0.51
25:DD:161:MET:O	25:DD:162:ALA:O	2.29	0.51
1:CA:17:U:H2'	1:CA:18:C:H6	1.73	0.51
25:BD:193:VAL:HB	25:BD:194:PRO:HD2	1.93	0.51
27:DF:12:VAL:CG1	27:DF:16:MET:HG3	2.40	0.51
22:BA:1906:G:H2'	22:BA:1907:G:O5'	2.10	0.51
2:CB:20:ARG:HH21	2:CB:38:HIS:CE1	2.28	0.51
22:DA:2019:A:H4'	38:DQ:33:VAL:HG21	1.93	0.51
22:BA:2196:C:O2'	22:BA:2197:U:H5'	2.10	0.51
1:AA:1053:G:C6	1:AA:1199:U:C2	2.99	0.51
37:BP:21:PRO:HA	37:BP:46:VAL:HG12	1.93	0.51
12:AL:2:THR:HG22	12:AL:4:ASN:N	2.26	0.51
37:BP:80:VAL:HG12	37:BP:81:ASP:N	2.25	0.51
22:BA:2193:G:H2'	22:BA:2194:U:C6	2.45	0.51
22:DA:260:G:C6	22:DA:261:G:C5	2.99	0.51
1:CA:32:A:C2	1:CA:33:A:C5	2.99	0.51
1:AA:1152:A:OP1	10:AJ:70:HIS:ND1	2.42	0.51
22:DA:2584:U:H2'	22:DA:2585:U:H5'	1.92	0.51
1:AA:928:G:O2'	1:AA:1533:C:OP1	2.29	0.51
6:CF:67:PRO:O	6:CF:68:GLN:C	2.49	0.51
37:BP:37:LYS:HD3	37:BP:37:LYS:N	2.25	0.51
22:BA:2405:G:O2'	22:BA:2406:A:OP1	2.26	0.51
22:DA:2818:U:H2'	22:DA:2819:G:C8	2.46	0.51
22:BA:191:A:H2'	22:BA:192:C:C6	2.46	0.51
43:DV:27:PRO:O	43:DV:88:HIS:HA	2.11	0.51
1:AA:186:C:O4'	20:AT:75:LYS:HD2	2.11	0.51
3:CC:185:THR:O	3:CC:186:SER:HB2	2.11	0.51
37:DP:13:LYS:H	37:DP:13:LYS:HD2	1.75	0.51
40:BS:103:ILE:H	40:BS:103:ILE:HD12	1.76	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:1295:C:H1'	35:DN:23:ASN:HD21	1.76	0.51
22:BA:987:C:H2'	22:BA:988:A:H5'	1.93	0.51
22:BA:2492:U:H2'	22:BA:2493:U:H6	1.76	0.51
24:BC:79:ARG:HG3	24:BC:92:LEU:HB3	1.92	0.51
39:DR:49:ILE:CG2	39:DR:54:VAL:H	2.24	0.51
44:BW:39:GLN:CG	44:BW:41:GLY:H	2.11	0.51
22:DA:1817:G:C2'	22:DA:1818:U:H5'	2.38	0.51
2:AB:17:HIS:CE1	2:AB:202:ASN:HD21	2.29	0.51
22:BA:2779:U:C6	22:BA:2781:A:C2	2.99	0.51
28:BG:83:THR:O	28:BG:84:LYS:HD3	2.09	0.51
22:DA:2324:U:C5'	22:DA:2325:G:H5''	2.40	0.51
22:DA:2330:G:H2'	22:DA:2331:G:H5'	1.92	0.51
44:DW:33:GLY:O	44:DW:34:SER:CB	2.59	0.51
44:DW:36:ILE:O	44:DW:39:GLN:CB	2.60	0.51
22:DA:249:C:C5'	22:DA:2394:C:O2'	2.45	0.51
20:AT:26:MET:CE	20:AT:56:ILE:HD11	2.41	0.51
22:DA:1337:G:N2	22:DA:1338:G:H1'	2.26	0.51
4:AD:33:ILE:O	4:AD:33:ILE:HG23	2.11	0.51
13:CM:78:ARG:HH21	13:CM:79:LEU:CD2	2.09	0.51
22:DA:295:G:C2	22:DA:296:U:C6	2.99	0.51
22:DA:322:A:H3'	26:DE:163:ASN:HD21	1.72	0.51
22:DA:84:A:H5'	42:DU:5:ARG:HD2	1.93	0.51
30:DI:74:PRO:O	30:DI:78:LEU:HG	2.11	0.51
10:CJ:65:TYR:HB3	14:CN:95:LEU:CD1	2.41	0.51
26:BE:189:THR:OG1	26:BE:191:ASP:CB	2.58	0.51
1:CA:83:C:H2'	1:CA:83:C:O2	2.11	0.51
22:DA:1140:C:OP2	31:DJ:68:LYS:HE3	2.11	0.51
1:CA:429:U:H1'	1:CA:430:A:H5''	1.93	0.51
2:CB:125:PHE:HD1	2:CB:137:THR:HG22	1.75	0.51
22:DA:2667:C:HO2'	22:DA:2668:G:H8	1.44	0.51
22:DA:668:A:C5	22:DA:670:A:C8	2.99	0.51
22:DA:2751:G:N3	28:DG:2:ARG:NH2	2.59	0.51
22:BA:276:U:O2'	22:BA:277:G:O5'	2.28	0.51
49:B1:34:GLU:HG2	49:B1:49:LYS:HG3	1.93	0.51
22:BA:137:U:OP2	22:BA:137:U:C5	2.64	0.51
1:CA:373:A:C5'	1:CA:373:A:H8	2.23	0.51
2:AB:79:VAL:O	2:AB:83:ALA:HB3	2.10	0.51
2:CB:73:ARG:HG3	2:CB:74:ALA:N	2.26	0.51
22:DA:1417:C:O2'	22:DA:1418:G:C8	2.64	0.51
24:BC:251:THR:CG2	24:BC:252:LYS:N	2.72	0.51
25:BD:97:SER:HB3	25:BD:99:GLU:OE1	2.11	0.51
3:AC:156:LEU:CD1	3:AC:156:LEU:H	2.17	0.51

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:CA:216:U:C4	1:CA:217:C:N4	2.79	0.51
22:BA:1386:C:H2'	22:BA:1387:A:C8	2.45	0.51
1:CA:1447:A:O3'	1:CA:1448:C:H6	1.94	0.51
11:AK:22:ILE:HG13	11:AK:22:ILE:O	2.10	0.51
22:DA:520:G:H2'	22:DA:521:U:C6	2.46	0.51
37:BP:19:PHE:CE2	37:BP:83:ILE:HD12	2.45	0.51
22:DA:1245:G:H4'	26:DE:33:VAL:HG11	1.93	0.51
29:BH:42:LYS:HG2	29:BH:43:ASN:ND2	2.26	0.51
15:AO:23:SER:HB3	15:AO:26:VAL:HG23	1.92	0.51
25:DD:208:LYS:O	25:DD:209:ALA:CB	2.59	0.51
1:CA:511:C:C2	1:CA:512:U:C5	2.99	0.51
42:BU:48:VAL:O	42:BU:53:GLN:HB3	2.11	0.51
1:CA:801:U:H2'	1:CA:802:A:C8	2.46	0.51
1:AA:1261:A:N1	1:AA:1274:A:N3	2.58	0.51
45:BX:10:ARG:HB2	45:BX:11:PRO:HD2	1.92	0.51
22:DA:545:U:C4	22:DA:547:A:H4'	2.46	0.51
22:BA:2461:A:H1'	22:BA:2492:U:C2	2.45	0.51
1:AA:1378:C:N4	1:AA:1379:G:C4	2.79	0.51
34:DM:69:PRO:O	34:DM:70:ASP:HB3	2.11	0.51
1:AA:51:A:H4'	1:AA:52:C:C5'	2.41	0.51
22:DA:842:U:C4	22:DA:843:G:N7	2.79	0.51
3:AC:106:ARG:HG2	3:AC:106:ARG:O	2.12	0.51
22:DA:1278:C:O2'	22:DA:1279:G:H5'	2.11	0.51
15:AO:31:LEU:O	15:AO:32:THR:C	2.49	0.51
23:DB:104:A:H2'	23:DB:105:G:O4'	2.11	0.51
42:BU:87:GLU:O	42:BU:88:ASP:O	2.29	0.51
24:BC:219:VAL:HG12	24:BC:224:MET:CE	2.41	0.51
40:DS:2:GLU:OE2	40:DS:2:GLU:HA	2.10	0.51
38:BQ:13:HIS:HD2	38:BQ:31:TYR:CE1	2.28	0.51
13:CM:69:ARG:O	13:CM:73:SER:HB3	2.10	0.51
38:BQ:60:TRP:CH2	38:BQ:93:ILE:HB	2.46	0.50
22:BA:1060:U:O4'	22:BA:1062:G:C5'	2.57	0.50
22:DA:2232:C:OP1	45:DX:26:ARG:NH1	2.44	0.50
38:DQ:87:VAL:HG12	38:DQ:88:GLU:H	1.76	0.50
39:DR:38:VAL:O	39:DR:53:PHE:HA	2.12	0.50
1:CA:1014:A:C6	19:CS:33:TRP:CE3	2.98	0.50
44:DW:36:ILE:O	44:DW:39:GLN:HB3	2.12	0.50
22:DA:223:A:C6	22:DA:422:A:N7	2.79	0.50
22:DA:1344:U:H5'	22:DA:1384:A:C6	2.46	0.50
22:BA:2052:A:OP1	25:BD:145:SER:HA	2.11	0.50
1:AA:429:U:H4'	1:AA:430:A:OP1	2.11	0.50
22:DA:1062:G:C8	22:DA:1088:A:C8	2.99	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:1056:G:C2	22:DA:1102:C:H5	2.29	0.50
1:AA:266:G:H4'	1:AA:267:C:OP1	2.10	0.50
17:AQ:45:VAL:O	17:AQ:47:ASP:OD1	2.29	0.50
22:DA:477:A:H2'	22:DA:478:A:H8	1.76	0.50
22:DA:2308:G:C2'	22:DA:2309:A:OP1	2.58	0.50
27:BF:134:GLN:CG	27:BF:135:ILE:N	2.68	0.50
22:DA:1045:C:H4'	22:DA:1047:G:C4	2.46	0.50
22:DA:581:C:P	38:DQ:32:ARG:HE	2.33	0.50
3:AC:119:ILE:HA	3:AC:122:GLN:HG3	1.93	0.50
22:BA:2134:A:C6	22:BA:2135:A:N6	2.79	0.50
22:DA:748:G:H2'	22:DA:750:A:OP2	2.12	0.50
22:BA:1188:U:H2'	22:BA:1189:A:H5'	1.92	0.50
22:DA:1652:A:H62	35:DN:11:ASN:ND2	2.05	0.50
31:BJ:65:THR:CG2	31:BJ:68:LYS:HE3	2.40	0.50
22:DA:2135:A:HO2'	22:DA:2136:G:C1'	2.24	0.50
22:BA:2564:A:C2	22:BA:2647:U:H4'	2.45	0.50
22:BA:1385:A:C4	22:BA:1386:C:C5	2.99	0.50
22:DA:2044:C:N3	22:DA:2045:C:C5	2.79	0.50
22:DA:931:U:H2'	22:DA:931:U:O2	2.11	0.50
1:AA:683:G:H2'	1:AA:684:U:O4'	2.10	0.50
22:DA:935:C:H2'	22:DA:936:A:C8	2.44	0.50
34:BM:132:THR:CG2	34:BM:133:LYS:N	2.75	0.50
22:DA:684:G:OP1	50:D2:16:HIS:CE1	2.64	0.50
1:CA:1105:A:H2'	1:CA:1106:G:C8	2.44	0.50
22:DA:851:C:H2'	22:DA:852:U:C6	2.46	0.50
42:BU:70:ALA:HB3	42:BU:79:ALA:HB1	1.93	0.50
22:DA:1244:A:O2'	26:DE:29:HIS:CE1	2.65	0.50
22:BA:2474:U:H5''	22:BA:2475:C:OP2	2.11	0.50
26:DE:153:LEU:HD12	26:DE:170:ARG:O	2.09	0.50
22:BA:1224:U:H4'	39:BR:88:GLY:O	2.11	0.50
1:AA:1112:C:H2'	1:AA:1113:C:O5'	2.11	0.50
1:CA:8:A:C6	4:CD:205:LYS:HG3	2.46	0.50
22:BA:743:A:O3'	56:BA:3653:HOH:O	2.19	0.50
15:AO:17:ASP:O	15:AO:20:ASP:HB3	2.11	0.50
1:CA:1058:G:C6	1:CA:1059:C:C4	2.99	0.50
22:DA:2819:G:H5''	56:DA:3802:HOH:O	2.11	0.50
1:AA:1478:U:H2'	1:AA:1479:C:C6	2.45	0.50
1:AA:1009:U:O2'	1:AA:1010:U:H5'	2.11	0.50
5:CE:82:HIS:HB2	5:CE:83:PRO:HD2	1.92	0.50
34:BM:65:ILE:HG12	34:BM:103:TYR:CE2	2.47	0.50
24:BC:180:MET:HG3	24:BC:268:ARG:NH1	2.25	0.50
22:BA:1767:G:C2	22:BA:1768:C:C5	2.98	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
29:DH:103:VAL:HG23	29:DH:105:ALA:O	2.11	0.50
1:CA:841:C:H3'	1:CA:843:U:OP2	2.11	0.50
22:BA:594:U:H2'	22:BA:595:C:C6	2.46	0.50
22:DA:924:G:O2'	22:DA:925:A:H5'	2.11	0.50
26:DE:150:THR:HA	26:DE:189:THR:OG1	2.11	0.50
47:DZ:31:ILE:O	47:DZ:31:ILE:HG13	2.11	0.50
6:CF:32:ALA:O	6:CF:33:GLU:HB2	2.11	0.50
39:BR:4:VAL:HA	39:BR:12:HIS:O	2.12	0.50
39:DR:49:ILE:CG2	39:DR:54:VAL:N	2.74	0.50
44:BW:44:PHE:O	44:BW:78:PHE:HA	2.10	0.50
20:AT:29:THR:O	20:AT:33:LYS:HE2	2.12	0.50
22:DA:1391:U:H4'	41:DT:19:LYS:HZ2	1.75	0.50
22:DA:1400:U:HO2'	22:DA:1401:G:C1'	2.23	0.50
2:AB:98:GLY:HA2	2:AB:101:THR:HG22	1.92	0.50
11:AK:125:LYS:O	21:AU:33:ARG:CZ	2.59	0.50
22:DA:319:G:C6	22:DA:333:G:C6	2.99	0.50
22:DA:323:C:H3'	26:DE:163:ASN:ND2	2.26	0.50
42:DU:91:LYS:O	42:DU:92:VAL:HG22	2.11	0.50
33:BL:95:LEU:HB3	33:BL:100:ILE:HD11	1.93	0.50
33:BL:77:ILE:HG12	33:BL:95:LEU:HD13	1.94	0.50
22:DA:2831:G:OP2	25:DD:59:ARG:NE	2.44	0.50
1:CA:205:A:C5	1:CA:206:C:N4	2.79	0.50
1:AA:272:C:H2'	1:AA:273:U:C6	2.43	0.50
22:DA:55:G:N2	22:DA:116:C:C2	2.80	0.50
3:CC:8:GLY:HA2	3:CC:11:LEU:HG	1.93	0.50
26:BE:151:GLY:CA	26:BE:192:ALA:HB2	2.40	0.50
2:CB:146:SER:HB2	2:CB:147:LEU:CD1	2.30	0.50
25:DD:13:ARG:NH1	37:DP:74:GLN:NE2	2.53	0.50
1:CA:1349:A:OP1	9:CI:121:ARG:HB2	2.12	0.50
22:BA:143:C:H2'	22:BA:144:A:H8	1.77	0.50
27:DF:135:ILE:O	27:DF:137:PHE:N	2.45	0.50
27:DF:147:ARG:HD3	27:DF:149:ARG:HH22	1.75	0.50
1:AA:243:A:C2	1:AA:245:U:H2'	2.47	0.50
41:BT:55:VAL:O	41:BT:55:VAL:HG12	2.11	0.50
22:DA:1491:G:O6	22:DA:1500:G:C2	2.64	0.50
22:BA:478:A:C6	22:BA:480:A:C6	2.99	0.50
1:CA:464:U:O4	1:CA:466:A:C4'	2.58	0.50
40:BS:18:ARG:O	40:BS:19:LEU:CB	2.58	0.50
6:CF:62:MET:O	6:CF:63:ASN:HB2	2.11	0.50
13:CM:95:PRO:HG3	13:CM:99:GLN:CD	2.31	0.50
22:BA:1277:G:H5'	35:BN:20:MET:HE1	1.93	0.50
33:DL:93:ASN:CG	33:DL:94:THR:N	2.64	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:DJ:111:LYS:HB2	31:DJ:115:GLY:H	1.74	0.50
1:AA:1474:U:H2'	1:AA:1475:G:H5''	1.92	0.50
1:CA:68:G:N2	1:CA:152:A:H1'	2.26	0.50
42:DU:34:ILE:HG12	42:DU:63:ALA:HA	1.93	0.50
51:D3:18:LYS:HD2	51:D3:19:GLY:H	1.76	0.50
1:AA:1331:G:C2'	1:AA:1332:A:OP2	2.59	0.50
26:BE:48:THR:C	26:BE:50:ALA:N	2.62	0.50
22:BA:1857:G:H1'	22:BA:1858:A:OP2	2.11	0.50
42:BU:52:ASN:C	42:BU:54:PRO:CD	2.79	0.50
1:AA:1135:U:H6	1:AA:1135:U:OP2	1.95	0.50
1:AA:1464:U:O2'	1:AA:1465:A:H5'	2.11	0.50
24:DC:29:PHE:CE2	24:DC:31:PRO:HG2	2.46	0.50
5:AE:12:GLU:CB	5:AE:38:VAL:HG12	2.41	0.50
36:DO:75:GLY:HA3	36:DO:109:ALA:O	2.11	0.50
44:DW:83:ALA:O	44:DW:84:GLU:HB2	2.11	0.50
40:DS:44:ALA:O	40:DS:48:LYS:HB2	2.10	0.50
1:AA:687:A:C5	1:AA:701:U:H5	2.29	0.50
13:CM:47:LEU:HD23	13:CM:48:SER:N	2.26	0.50
1:CA:1007:U:H2'	1:CA:1007:U:O2	2.11	0.50
1:CA:1489:G:C6	1:CA:1490:U:C4	2.99	0.50
4:AD:64:TYR:CD1	4:AD:93:LEU:HD13	2.46	0.50
38:BQ:96:ASP:C	38:BQ:98:ALA:N	2.63	0.50
39:BR:49:ILE:HB	39:BR:51:VAL:O	2.10	0.50
4:CD:2:ARG:NE	4:CD:114:ARG:HD3	2.26	0.50
27:BF:35:LEU:O	27:BF:35:LEU:HD12	2.11	0.50
44:BW:51:GLY:HA3	44:BW:59:PHE:HE2	1.71	0.50
22:DA:455:C:N3	22:DA:473:G:H4'	2.26	0.50
1:CA:1092:A:C2	1:CA:1183:U:N3	2.75	0.50
36:DO:71:ALA:CB	36:DO:102:ARG:HB3	2.41	0.50
19:CS:52:ASN:C	19:CS:54:ARG:H	2.15	0.50
24:DC:144:GLU:HB3	24:DC:187:CYS:CB	2.33	0.50
44:DW:37:VAL:CG2	44:DW:38:ARG:NH1	2.74	0.50
22:DA:976:G:N2	22:DA:1155:A:C2	2.80	0.50
41:DT:19:LYS:O	41:DT:20:ALA:HB2	2.12	0.50
11:AK:124:LYS:O	21:AU:33:ARG:NE	2.45	0.50
22:DA:1060:U:H4'	22:DA:1061:U:O5'	2.11	0.50
1:CA:1150:A:N6	1:CA:1151:A:H62	2.08	0.50
26:BE:119:ILE:O	26:BE:187:VAL:O	2.28	0.50
31:DJ:25:LEU:C	31:DJ:27:ARG:H	2.14	0.50
30:BI:15:GLY:HA2	30:BI:50:LYS:CB	2.34	0.50
22:DA:141:G:H3'	22:DA:142:A:C8	2.46	0.50
22:DA:584:C:N4	22:DA:585:G:C6	2.79	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:CI:51:LEU:HG	9:CI:86:LEU:CD2	2.41	0.50
6:CF:43:GLY:O	6:CF:44:ARG:C	2.49	0.50
21:AU:11:PHE:O	21:AU:12:ASP:CB	2.59	0.50
30:BI:123:ALA:HA	30:BI:126:ARG:CZ	2.42	0.50
2:AB:71:THR:O	2:AB:72:LYS:HG2	2.11	0.50
32:BK:72:PRO:O	32:BK:74:GLY:N	2.41	0.50
29:DH:27:ARG:CZ	45:DX:59:ASP:HA	2.41	0.50
6:CF:92:THR:HG22	6:CF:93:LYS:N	2.26	0.50
21:CU:38:GLU:OE1	21:CU:41:THR:OG1	2.28	0.50
35:BN:103:ARG:HD3	35:BN:110:MET:HE3	1.94	0.50
22:DA:1525:A:C6	22:DA:1526:C:C2	2.99	0.50
8:CH:11:THR:HG22	8:CH:14:ARG:HH12	1.76	0.50
22:DA:2048:G:C6	22:DA:2049:G:C5	2.99	0.50
2:CB:9:LEU:O	2:CB:10:LYS:CB	2.59	0.50
22:DA:758:C:C2'	22:DA:758:C:O2	2.57	0.50
33:DL:77:ILE:HD11	33:DL:108:ALA:HB1	1.93	0.50
36:BO:54:VAL:HG22	36:BO:54:VAL:O	2.11	0.50
1:CA:149:A:C2	1:CA:150:U:C2	2.99	0.50
1:AA:895:G:C6	1:AA:896:C:C4	2.99	0.50
22:BA:1197:G:H2'	22:BA:1198:U:C6	2.46	0.50
34:BM:43:ALA:HA	34:BM:46:ILE:CG1	2.42	0.50
6:CF:98:GLU:O	6:CF:99:ALA:CB	2.59	0.50
29:DH:54:LEU:HA	29:DH:57:LYS:HG3	1.94	0.50
22:DA:264:C:H4'	22:DA:264:C:OP1	2.12	0.50
1:CA:802:A:C2'	1:CA:803:G:O5'	2.59	0.50
1:AA:771:G:H2'	1:AA:772:U:H6	1.77	0.50
22:DA:1936:A:C2	22:DA:1943:U:C5	2.98	0.50
22:DA:1944:U:O4'	22:DA:1955:U:H1'	2.11	0.50
22:DA:2492:U:H2'	22:DA:2493:U:H6	1.77	0.50
36:BO:116:GLN:O	36:BO:117:PHE:HB3	2.11	0.50
23:BB:12:C:H4'	23:BB:13:G:OP1	2.12	0.50
22:DA:2184:A:H2'	22:DA:2185:U:O4'	2.11	0.50
22:DA:2857:G:N2	22:DA:2860:A:OP2	2.36	0.50
14:AN:13:VAL:HG23	14:AN:59:GLN:HG2	1.93	0.50
22:BA:2438:U:O2'	22:BA:2439:A:H5''	2.12	0.50
42:BU:66:VAL:C	42:BU:68:ASN:H	2.15	0.50
3:CC:119:ILE:O	3:CC:123:LEU:HB2	2.10	0.50
27:BF:87:LYS:HG3	27:BF:88:VAL:N	2.27	0.50
38:DQ:84:LYS:C	38:DQ:86:SER:H	2.15	0.50
9:CI:70:GLY:O	9:CI:73:GLY:N	2.41	0.50
1:CA:977:A:C8	1:CA:1223:C:N3	2.80	0.50
49:D1:10:LEU:HB2	49:D1:20:TYR:CB	2.41	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:945:A:C8	22:DA:2448:A:C2	2.99	0.50
22:DA:1210:G:C4'	22:DA:1211:C:O5'	2.57	0.50
22:DA:1348:C:OP2	22:DA:1349:C:N4	2.45	0.50
22:DA:998:C:OP2	38:DQ:57:ARG:NH2	2.43	0.50
38:DQ:93:ILE:O	38:DQ:96:ASP:HB3	2.12	0.50
52:B4:30:GLU:OE2	52:B4:32:LYS:HG3	2.12	0.50
22:DA:466:A:P	50:D2:34:ARG:NH2	2.84	0.50
22:DA:108:G:H2'	22:DA:109:C:H6	1.75	0.50
16:CP:5:ARG:HA	16:CP:71:VAL:HG11	1.92	0.50
22:BA:1735:A:C2	22:BA:1736:U:C2	2.99	0.50
25:BD:91:THR:C	25:BD:93:GLY:H	2.07	0.50
35:DN:12:ARG:HB3	35:DN:16:HIS:ND1	2.27	0.50
32:DK:61:VAL:HG13	32:DK:87:LEU:HD22	1.93	0.50
22:BA:276:U:O2	22:BA:276:U:C2'	2.60	0.50
22:BA:1340:U:C5	22:BA:1603:A:C8	2.99	0.50
1:AA:967:C:C1'	9:AI:129:ARG:HH22	2.24	0.50
22:BA:2149:U:HO2'	22:BA:2150:C:C4'	2.22	0.50
2:AB:108:GLN:HE21	2:AB:108:GLN:N	2.01	0.50
1:AA:1182:G:H4'	1:AA:1183:U:H5'	1.93	0.50
29:BH:9:VAL:O	29:BH:13:GLY:N	2.41	0.50
22:DA:2201:G:C4	22:DA:2202:U:C6	3.00	0.50
22:DA:2615:U:H2'	22:DA:2616:C:C6	2.46	0.50
1:AA:624:C:C2	1:AA:625:U:C6	2.99	0.50
14:AN:45:LEU:O	14:AN:45:LEU:HG	2.12	0.50
8:AH:104:SER:HB2	8:AH:125:ILE:HD11	1.93	0.50
22:DA:981:A:H5''	22:DA:982:C:OP2	2.11	0.50
22:BA:1499:C:H2'	22:BA:1500:G:H8	1.77	0.50
1:CA:338:A:H61	1:CA:351:G:H1	1.60	0.50
33:DL:61:LEU:O	51:D3:12:ARG:NH2	2.43	0.50
22:DA:1973:G:O6	22:DA:1974:C:N4	2.44	0.50
22:DA:1023:U:H6	22:DA:1023:U:C5'	2.23	0.50
22:DA:716:A:C2'	22:DA:717:C:H5''	2.40	0.50
37:BP:111:GLU:CD	37:BP:111:GLU:N	2.65	0.50
22:BA:1826:G:C5	22:BA:1827:U:C5	2.99	0.50
22:BA:1419:A:N7	22:BA:1421:G:C5	2.80	0.50
28:BG:163:TYR:O	28:BG:164:ALA:CB	2.59	0.50
45:DX:19:HIS:O	45:DX:20:ALA:HB3	2.12	0.50
1:AA:953:G:C2	1:AA:954:G:H1'	2.47	0.50
22:DA:2435:A:C2'	22:DA:2436:G:O5'	2.59	0.50
1:CA:672:U:H2'	1:CA:673:A:C8	2.45	0.50
15:CO:52:ARG:O	15:CO:55:LEU:HB3	2.11	0.50
22:BA:186:G:O2'	22:BA:187:G:H5'	2.10	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:BD:16:THR:O	25:BD:19:GLY:N	2.41	0.50
22:BA:1486:U:H2'	22:BA:1487:U:C6	2.44	0.50
3:CC:181:ILE:HA	3:CC:201:ILE:O	2.11	0.50
22:BA:414:C:H1'	22:BA:1864:U:O2'	2.12	0.50
25:BD:40:LEU:O	25:BD:41:ALA:C	2.50	0.50
22:BA:686:U:H2'	22:BA:788:A:N1	2.27	0.50
2:AB:132:GLU:HG3	2:AB:132:GLU:O	2.11	0.50
22:BA:885:C:H6	22:BA:885:C:O5'	1.93	0.50
39:DR:98:ILE:HG22	39:DR:98:ILE:O	2.12	0.50
28:BG:116:LEU:HD13	28:BG:116:LEU:H	1.75	0.50
20:AT:81:GLN:HA	20:AT:84:LYS:HB2	1.93	0.50
22:BA:2032:G:C8	56:BA:3532:HOH:O	2.54	0.50
40:DS:53:SER:O	40:DS:56:ALA:HB3	2.11	0.50
31:BJ:44:TYR:CE1	38:BQ:59:LEU:HD11	2.47	0.50
39:DR:37:GLU:HB2	39:DR:53:PHE:CD2	2.47	0.50
1:CA:974:A:O2'	1:CA:975:A:OP1	2.23	0.50
22:DA:858:G:C6	22:DA:2268:A:C6	3.00	0.50
22:DA:249:C:O2'	22:DA:250:G:OP2	2.26	0.50
22:DA:834:G:H2'	22:DA:835:C:O4'	2.11	0.50
22:DA:1918:A:O2'	22:DA:1920:C:N4	2.44	0.50
22:DA:1655:A:C6	22:DA:1656:C:C2	2.99	0.50
2:CB:102:ASN:CG	2:CB:102:ASN:O	2.50	0.50
22:DA:1056:G:H1'	22:DA:1103:A:N1	2.27	0.50
1:CA:109:A:H8	1:CA:327:A:H5'	1.77	0.50
1:AA:374:A:H5''	1:AA:452:A:C2	2.47	0.50
30:DI:48:ILE:HG13	30:DI:49:GLU:H	1.77	0.50
22:DA:58:G:N3	22:DA:73:A:H2	2.10	0.50
22:DA:71:A:H5''	22:DA:73:A:C5	2.46	0.50
22:DA:2742:G:OP1	52:D4:36:ARG:HD3	2.10	0.50
26:DE:148:ILE:HA	26:DE:187:VAL:HB	1.93	0.50
22:DA:611:C:H2'	22:DA:612:G:O4'	2.10	0.50
22:DA:604:G:O6	22:DA:625:G:C6	2.64	0.50
1:CA:239:U:C6	1:CA:239:U:H5'	2.46	0.50
1:CA:1133:G:C2	1:CA:1142:G:C6	2.99	0.50
22:DA:2093:G:O2'	22:DA:2094:A:H8	1.95	0.50
2:AB:22:TRP:O	2:AB:22:TRP:CD2	2.65	0.50
41:BT:14:PRO:HA	41:BT:32:LEU:HB3	1.92	0.50
41:DT:14:PRO:HA	41:DT:32:LEU:CB	2.41	0.50
43:DV:80:HIS:CD2	43:DV:83:LYS:HB2	2.46	0.50
1:AA:76:G:N1	1:AA:95:C:N4	2.58	0.50
2:AB:103:TRP:CD1	2:AB:150:ILE:HD11	2.46	0.50
41:DT:48:GLN:HA	41:DT:48:GLN:HE21	1.77	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:CI:49:GLN:N	9:CI:50:PRO:CD	2.74	0.50
2:AB:137:THR:O	2:AB:140:LEU:HB2	2.11	0.50
35:BN:108:ALA:O	35:BN:110:MET:HG2	2.12	0.50
1:AA:6:G:O2'	1:AA:7:A:H8	1.94	0.50
24:BC:20:ASN:ND2	24:BC:22:GLU:HG2	2.24	0.50
31:BJ:25:LEU:HD13	31:BJ:25:LEU:O	2.12	0.50
1:CA:1304:G:C2'	1:CA:1333:A:H61	2.24	0.50
45:BX:67:LEU:O	45:BX:69:GLU:O	2.30	0.50
1:AA:143:A:N3	1:AA:143:A:H2'	2.24	0.50
1:AA:178:C:O2'	1:AA:179:A:H5'	2.12	0.50
22:DA:2051:A:C2	22:DA:2052:A:N6	2.79	0.50
1:CA:1388:C:C2	1:CA:1389:C:C5	3.00	0.50
37:BP:113:LEU:O	37:BP:113:LEU:HG	2.12	0.50
22:DA:1973:G:C5	22:DA:1974:C:C4	2.99	0.50
29:BH:117:LEU:CD1	29:BH:130:VAL:HG11	2.41	0.50
14:AN:27:LYS:CA	14:AN:30:ILE:HB	2.42	0.50
42:BU:12:VAL:HG22	42:BU:69:VAL:HG12	1.93	0.50
40:DS:33:LEU:HD12	40:DS:51:LEU:HD23	1.94	0.50
15:CO:62:ARG:NH2	15:CO:88:ARG:HH21	2.09	0.50
1:CA:382:A:O2'	1:CA:383:A:O4'	2.28	0.50
22:DA:2869:G:H2'	22:DA:2870:C:C6	2.46	0.50
31:DJ:18:VAL:HG13	31:DJ:56:VAL:HA	1.94	0.50
1:CA:696:A:H8	1:CA:696:A:O5'	1.93	0.50
1:CA:676:A:H2'	1:CA:677:U:C6	2.47	0.50
1:CA:676:A:H2'	1:CA:677:U:H6	1.76	0.50
2:AB:179:GLY:O	2:AB:180:ILE:HD13	2.10	0.50
1:CA:262:A:H5'	20:CT:68:LYS:HD3	1.93	0.50
22:DA:2373:G:C6	22:DA:2374:C:C4	3.00	0.50
9:CI:5:TYR:HD2	9:CI:5:TYR:N	2.09	0.50
26:BE:1:MET:HG3	26:BE:14:VAL:HG23	1.93	0.50
22:BA:1409:U:O2'	22:BA:1410:G:H5'	2.12	0.50
32:DK:28:SER:O	32:DK:29:HIS:HB3	2.12	0.50
4:CD:19:PHE:O	4:CD:22:SER:HB2	2.11	0.50
22:BA:5:A:C2	22:BA:2899:A:C2	2.99	0.50
32:DK:111:LYS:HE3	32:DK:111:LYS:H	1.77	0.50
22:DA:2108:A:OP2	22:DA:2108:A:H8	1.95	0.50
14:CN:47:LEU:O	14:CN:50:LEU:HG	2.11	0.50
31:BJ:38:GLY:C	31:BJ:40:HIS:H	2.14	0.50
23:DB:69:G:H3'	23:DB:70:C:C6	2.45	0.50
22:BA:2336:A:H61	44:BW:40:ARG:HB3	1.76	0.50
21:CU:24:LYS:HE3	21:CU:25:ALA:HB2	1.94	0.50
22:DA:1438:U:H2'	22:DA:1439:A:O4'	2.12	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:BJ:111:LYS:HE2	31:BJ:115:GLY:H	1.75	0.50
24:DC:144:GLU:CA	24:DC:151:GLY:HA2	2.25	0.50
22:DA:2297:A:N3	22:DA:2298:A:C8	2.79	0.50
22:DA:860:U:O2'	22:DA:861:A:H8	1.95	0.50
22:BA:1173:U:H2'	22:BA:1173:U:O2	2.11	0.50
22:DA:1535:A:H2'	22:DA:1535:A:N3	2.27	0.50
22:DA:1342:A:C4	22:DA:1345:C:N4	2.79	0.50
22:DA:538:A:H5''	31:DJ:7:LYS:HZ3	1.77	0.50
31:DJ:45:THR:H	31:DJ:46:PRO:HD3	1.75	0.50
22:DA:2823:A:H2'	22:DA:2824:C:H5'	1.94	0.50
5:AE:79:THR:HB	5:AE:121:ASN:CG	2.32	0.50
2:CB:81:ASP:CG	2:CB:82:ALA:H	2.14	0.50
22:DA:1053:C:N4	22:DA:1054:A:N6	2.58	0.50
1:CA:108:G:H5'	1:CA:109:A:C5'	2.40	0.50
22:DA:2315:G:C2	22:DA:2316:G:C4	2.99	0.50
22:DA:502:A:H62	22:DA:505:A:N6	2.10	0.50
8:AH:74:ILE:O	8:AH:74:ILE:HG23	2.11	0.50
1:CA:239:U:C6	1:CA:239:U:C5'	2.91	0.50
22:DA:729:G:O6	24:DC:207:ALA:N	2.37	0.50
22:BA:572:A:H5''	22:BA:573:U:OP2	2.11	0.50
37:DP:50:ARG:HA	37:DP:57:ALA:H	1.76	0.50
41:BT:39:THR:CG2	41:BT:39:THR:O	2.58	0.50
2:AB:72:LYS:HZ1	2:AB:204:ASP:HA	1.77	0.50
22:BA:1046:A:H3'	22:BA:1047:G:H5'	1.94	0.50
2:CB:96:LEU:H	2:CB:99:MET:CE	2.20	0.50
32:BK:70:ARG:CD	32:BK:76:VAL:HG22	2.41	0.50
21:CU:35:GLU:OE1	21:CU:37:TYR:CD1	2.64	0.50
22:BA:2682:A:C8	25:BD:11:MET:CG	2.95	0.50
20:AT:67:HIS:HB3	20:AT:68:LYS:HZ1	1.73	0.50
36:DO:41:ALA:O	36:DO:43:ASN:N	2.44	0.50
22:BA:1714:U:H5'	22:BA:1715:G:H5'	1.94	0.50
22:DA:1525:A:C6	22:DA:1526:C:N3	2.79	0.50
6:CF:12:PRO:HD2	6:CF:54:LEU:HD11	1.94	0.50
22:DA:768:G:C2'	22:DA:769:U:H5'	2.42	0.50
22:DA:2144:G:C2	22:DA:2148:G:O6	2.64	0.50
1:AA:707:U:H2'	1:AA:708:C:C6	2.47	0.50
19:CS:11:ASP:O	19:CS:14:LEU:HG	2.11	0.50
27:DF:7:TYR:O	27:DF:8:LYS:HG3	2.11	0.50
22:BA:1494:A:C2	22:BA:1495:A:C4	2.99	0.50
43:DV:9:ARG:HG2	43:DV:39:ALA:O	2.11	0.50
33:BL:78:ARG:HB3	33:BL:113:ALA:CB	2.42	0.50
22:BA:869:G:H4'	34:BM:8:LYS:HE2	1.93	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:BA:2472:G:H2'	22:BA:2475:C:H42	1.76	0.50
22:BA:1013:C:H2'	22:BA:1014:A:C8	2.47	0.50
22:BA:1857:G:N3	22:BA:1884:G:C2	2.80	0.50
12:AL:74:GLN:O	12:AL:75:GLU:C	2.49	0.50
22:BA:1310:G:H2'	22:BA:1311:G:H5'	1.93	0.50
17:CQ:24:ILE:HD12	17:CQ:24:ILE:N	2.27	0.50
6:AF:41:ASP:OD2	6:AF:58:HIS:NE2	2.44	0.50
22:DA:2461:A:H1'	22:DA:2492:U:C2	2.47	0.50
22:DA:1229:C:H2'	22:DA:1230:A:H8	1.76	0.50
22:DA:841:G:C2'	22:DA:842:U:H5'	2.42	0.50
25:BD:40:LEU:HD12	25:BD:40:LEU:H	1.76	0.50
3:CC:96:VAL:HB	3:CC:97:PRO:HD2	1.94	0.50
22:BA:523:C:O2'	22:BA:524:G:H5'	2.12	0.50
11:CK:17:ASP:HA	11:CK:80:ASN:O	2.11	0.50
29:DH:43:ASN:O	29:DH:47:PHE:HD2	1.94	0.50
43:BV:29:ILE:HG12	43:BV:30:ILE:N	2.27	0.50
33:BL:40:SER:O	33:BL:41:ARG:O	2.30	0.50
22:DA:859:G:OP2	22:DA:859:G:C8	2.65	0.50
1:AA:279:A:H5'	1:AA:279:A:H8	1.76	0.50
24:BC:124:LYS:HB3	24:BC:127:ASN:ND2	2.27	0.50
5:AE:77:ASN:CG	5:AE:78:GLY:N	2.65	0.50
22:BA:996:A:C2	22:BA:997:G:C8	2.99	0.50
38:DQ:87:VAL:HG11	39:DR:52:PRO:CG	2.38	0.50
23:DB:65:U:C4	23:DB:108:A:C4	3.00	0.50
23:DB:15:A:OP1	23:DB:108:A:H5'	2.12	0.50
24:DC:184:GLU:HB2	24:DC:187:CYS:SG	2.52	0.50
22:DA:2337:G:OP1	22:DA:2385:C:OP2	2.29	0.50
22:BA:1172:C:N3	22:BA:1173:U:H1'	2.27	0.50
1:CA:706:A:C5	1:CA:707:U:C5	2.99	0.50
24:DC:140:VAL:HG23	24:DC:141:HIS:N	2.27	0.50
22:DA:1211:C:H5''	22:DA:1212:G:C8	2.47	0.50
22:DA:1385:A:N6	22:DA:1403:A:C5	2.80	0.50
5:AE:120:HIS:O	5:AE:121:ASN:HB3	2.10	0.50
22:DA:1062:G:C8	22:DA:1088:A:H8	2.30	0.50
22:BA:1535:A:C4'	22:BA:1536:C:OP2	2.50	0.50
45:DX:57:VAL:HG12	45:DX:58:ILE:N	2.27	0.50
1:AA:1123:U:H5''	1:AA:1124:G:OP2	2.11	0.50
10:CJ:77:VAL:O	10:CJ:79:PRO:HD3	2.12	0.50
22:DA:2094:A:C4	22:DA:2095:A:C8	3.00	0.50
1:CA:1511:G:C5	1:CA:1512:U:C5	3.00	0.50
7:CG:91:ARG:NH2	7:CG:92:PRO:HB2	2.27	0.50
4:CD:154:VAL:O	4:CD:157:ALA:HB3	2.11	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:AB:66:ILE:HB	2:AB:88:GLN:CB	2.41	0.50
1:AA:1157:A:C4	1:AA:1181:G:C6	2.99	0.50
25:BD:114:LYS:NZ	25:BD:116:LYS:HE2	2.27	0.50
32:DK:104:THR:C	32:DK:106:GLU:H	2.15	0.50
1:AA:1062:U:H2'	1:AA:1063:C:C5	2.46	0.50
1:AA:91:U:C5	1:AA:92:U:C2	3.00	0.50
22:DA:2261:C:N4	44:DW:10:ARG:HB3	2.27	0.50
31:DJ:120:ARG:O	31:DJ:123:LYS:NZ	2.43	0.50
28:BG:61:TRP:CE3	28:BG:61:TRP:HA	2.46	0.50
21:AU:40:PRO:HA	21:AU:43:GLU:HB2	1.93	0.50
22:BA:2308:G:C5	27:BF:76:PHE:HE2	2.29	0.50
37:DP:64:SER:O	37:DP:66:GLY:N	2.43	0.50
22:DA:1783:A:C2	22:DA:2588:G:O4'	2.64	0.50
4:AD:167:PRO:HB2	4:AD:170:LEU:CD1	2.41	0.50
32:BK:107:LEU:C	32:BK:109:SER:H	2.15	0.50
22:DA:1906:G:C8	22:DA:1929:G:H2'	2.46	0.50
22:DA:1993:U:H4'	25:DD:133:THR:HG21	1.94	0.50
1:CA:250:A:H1'	1:CA:252:U:C4	2.47	0.50
22:BA:1941:C:C5'	22:BA:1941:C:H6	2.25	0.50
37:BP:25:VAL:CG1	37:BP:46:VAL:HG23	2.42	0.50
23:DB:7:G:O2'	36:DO:38:GLN:NE2	2.45	0.50
27:BF:68:LYS:CD	27:BF:68:LYS:H	2.25	0.50
1:CA:1053:G:O6	1:CA:1199:U:H2'	2.12	0.50
8:AH:93:LYS:HE3	8:AH:116:ARG:NH1	2.27	0.50
1:AA:652:U:C5	1:AA:752:G:N3	2.79	0.50
48:B0:9:ARG:CG	48:B0:9:ARG:HH21	2.25	0.50
1:AA:991:U:O2'	1:AA:1212:U:H6	1.92	0.50
16:CP:66:THR:HG22	16:CP:67:ILE:N	2.27	0.50
22:BA:747:U:C4	22:BA:2613:U:C5	3.00	0.50
1:AA:1240:U:H3'	1:AA:1241:G:C5'	2.42	0.50
23:DB:23:G:C2	23:DB:61:G:C2	3.00	0.50
1:AA:1273:C:H2'	1:AA:1274:A:O4'	2.11	0.50
1:AA:1111:A:N1	3:AC:176:THR:HG23	2.27	0.50
22:DA:1628:G:H2'	22:DA:1629:U:C6	2.47	0.50
24:DC:166:ARG:HA	24:DC:171:VAL:HA	1.93	0.50
5:AE:29:ILE:HD12	5:AE:30:PHE:N	2.26	0.50
31:DJ:54:ILE:O	31:DJ:122:LEU:HD12	2.10	0.50
22:BA:988:A:H8	22:BA:988:A:O5'	1.95	0.50
22:BA:1539:U:H2'	22:BA:1540:G:H8	1.76	0.50
1:AA:1392:G:C2'	1:AA:1393:U:H5'	2.42	0.50
1:CA:300:A:H2'	1:CA:301:G:O4'	2.12	0.50
22:DA:1272:A:C5	22:DA:1618:A:H1'	2.47	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:CD:161:ALA:O	4:CD:164:ARG:HB2	2.11	0.50
25:DD:193:VAL:HB	25:DD:194:PRO:HD2	1.94	0.50
22:DA:377:G:C6	22:DA:378:C:C4	2.99	0.50
6:AF:40:GLU:HB2	6:AF:42:TRP:NE1	2.26	0.50
22:BA:856:G:H21	44:BW:19:ARG:HH22	1.58	0.50
37:BP:4:ILE:CG2	37:BP:5:LYS:N	2.60	0.50
1:CA:961:U:C4	1:CA:983:A:C6	2.99	0.50
44:DW:27:GLY:HA2	44:DW:31:LEU:HD11	1.90	0.50
22:DA:234:U:O2'	22:DA:235:U:H5'	2.12	0.50
13:CM:75:SER:HB2	13:CM:79:LEU:CD1	2.42	0.50
22:DA:81:G:H2'	22:DA:82:U:H6	1.77	0.50
1:CA:1072:G:H2'	1:CA:1073:U:C6	2.47	0.50
1:AA:974:A:P	14:AN:68:ARG:HH22	2.34	0.50
22:DA:479:A:C4'	22:DA:480:A:OP1	2.47	0.50
33:DL:111:ILE:HA	33:DL:128:THR:OG1	2.12	0.50
4:CD:20:LEU:O	4:CD:21:LYS:C	2.50	0.50
1:CA:1301:U:H5''	1:CA:1302:C:OP2	2.12	0.50
22:DA:600:G:H5'	26:DE:27:LEU:HD13	1.94	0.50
22:DA:608:A:C5	22:DA:621:A:N7	2.80	0.50
1:AA:1141:C:C2	1:AA:1142:G:C8	3.00	0.50
10:CJ:80:THR:C	10:CJ:84:VAL:HG22	2.32	0.50
22:DA:2751:G:N3	22:DA:2751:G:H2'	2.27	0.50
1:AA:579:A:H2'	1:AA:580:C:C6	2.47	0.50
32:DK:92:GLU:O	32:DK:93:GLN:O	2.30	0.50
46:DY:28:LEU:HD23	46:DY:42:LEU:HD13	1.94	0.50
22:BA:1338:G:O2'	41:BT:18:GLU:HG2	2.12	0.50
22:BA:960:A:H5''	22:BA:961:C:OP2	2.12	0.50
17:CQ:19:SER:HB3	17:CQ:70:LYS:HZ2	1.75	0.50
49:B1:3:GLY:O	49:B1:4:ILE:HG12	2.11	0.50
22:DA:1205:A:H5''	22:DA:1206:G:H8	1.71	0.50
30:BI:56:VAL:HG22	30:BI:57:VAL:N	2.27	0.50
22:DA:1500:G:N1	22:DA:1501:G:C5	2.80	0.50
1:AA:345:C:H3'	37:BP:33:GLU:OE1	2.12	0.50
1:AA:1001:C:H2'	1:AA:1002:G:C8	2.46	0.50
15:AO:5:GLU:O	15:AO:9:LYS:HG3	2.12	0.50
40:BS:12:SER:OG	40:BS:13:SER:N	2.45	0.50
22:DA:931:U:H4'	22:DA:932:U:OP2	2.11	0.50
1:CA:251:G:N2	1:CA:253:A:H62	2.07	0.50
22:DA:570:G:C5	22:DA:2030:A:N7	2.80	0.50
1:CA:1453:G:O2'	1:CA:1454:G:H4'	2.12	0.50
2:CB:19:THR:HG22	2:CB:37:VAL:HG23	1.93	0.50
31:BJ:88:THR:HG22	31:BJ:91:GLU:CG	2.42	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
42:DU:39:ASN:CB	42:DU:62:ALA:HB3	2.41	0.50
22:DA:565:C:H1'	22:DA:577:G:N2	2.26	0.50
15:CO:88:ARG:CZ	22:DA:715:A:O3'	2.60	0.50
37:DP:45:VAL:O	37:DP:60:VAL:HA	2.11	0.50
47:BZ:8:GLN:O	47:BZ:9:THR:HG22	2.12	0.50
22:BA:747:U:C4	22:BA:2613:U:C4	2.99	0.50
1:CA:721:G:H4'	1:CA:722:G:O5'	2.12	0.50
46:DY:5:GLU:O	46:DY:6:LEU:HG	2.12	0.50
1:CA:223:A:C5	1:CA:224:U:C5	3.00	0.50
33:BL:47:ARG:HG2	33:BL:47:ARG:HH21	1.77	0.50
5:CE:68:ARG:O	5:CE:69:ASN:C	2.48	0.50
4:AD:2:ARG:CZ	4:AD:114:ARG:HD3	2.41	0.50
56:BA:3242:HOH:O	26:BE:81:GLY:HA2	2.12	0.50
40:BS:29:VAL:HG13	40:BS:55:ILE:HD11	1.92	0.50
1:CA:811:C:H4'	1:CA:900:A:N6	2.26	0.50
22:DA:1620:G:C6	22:DA:1621:U:C4	3.00	0.50
22:BA:484:C:H2'	22:BA:485:C:H6	1.77	0.50
22:BA:388:G:N7	22:BA:390:U:H2'	2.26	0.50
17:CQ:77:VAL:HG12	17:CQ:78:VAL:O	2.11	0.50
22:BA:1477:A:H2'	22:BA:1478:G:O4'	2.12	0.50
22:BA:621:A:OP2	33:BL:99:ASN:OD1	2.30	0.50
22:BA:997:G:O2'	22:BA:998:C:H5'	2.11	0.50
31:BJ:38:GLY:O	31:BJ:40:HIS:N	2.45	0.50
1:AA:983:A:H2	1:AA:1222:G:H22	1.60	0.50
44:BW:17:ALA:CA	44:BW:35:ILE:HG23	2.35	0.50
44:BW:39:GLN:NE2	44:BW:43:LYS:N	2.57	0.50
1:CA:1221:G:N2	1:CA:1222:G:H1'	2.27	0.50
1:CA:1014:A:H4'	19:CS:13:HIS:CE1	2.47	0.50
22:DA:2408:U:O2'	22:DA:2409:G:C8	2.64	0.50
1:CA:1497:G:H2'	1:CA:1498:U:H5'	1.93	0.50
22:DA:1388:G:C2'	22:DA:1389:G:H8	2.23	0.50
37:DP:91:VAL:HG21	37:DP:96:LEU:HD21	1.94	0.50
22:DA:117:G:C2	22:DA:119:A:N6	2.80	0.50
10:CJ:40:ILE:HG22	10:CJ:42:LEU:CD1	2.42	0.50
27:DF:74:ALA:HB1	27:DF:76:PHE:CD2	2.47	0.50
22:DA:142:A:O2'	22:DA:143:C:O4'	2.29	0.50
7:CG:114:SER:O	7:CG:118:ARG:HG3	2.12	0.50
1:CA:243:A:H2	1:CA:245:U:H2'	1.77	0.50
22:DA:607:U:H5	22:DA:619:G:C2	2.30	0.50
22:DA:1049:C:O2'	22:DA:1050:A:O5'	2.30	0.50
22:DA:2757:A:O2'	22:DA:2758:A:H5'	2.12	0.50
1:CA:663:A:H5'	1:CA:836:G:OP1	2.11	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:BJ:21:THR:C	31:BJ:23:LYS:N	2.61	0.50
22:BA:2148:G:O2'	22:BA:2149:U:C4'	2.60	0.50
22:DA:1416:G:C2	22:DA:1417:C:C4	3.00	0.50
1:AA:1163:A:C2	1:AA:1174:G:C2	3.00	0.50
16:AP:10:GLY:O	16:AP:11:ALA:HB2	2.11	0.50
29:DH:68:ARG:HB3	29:DH:68:ARG:CZ	2.37	0.50
22:BA:477:A:C6	22:BA:478:A:C6	3.00	0.50
27:DF:104:THR:H	27:DF:107:VAL:HG22	1.77	0.50
22:DA:412:A:O2'	22:DA:413:C:C5'	2.60	0.50
23:DB:50:A:OP1	36:DO:68:LYS:HB2	2.12	0.50
22:DA:1378:A:C8	22:DA:1380:G:C5	3.00	0.50
22:BA:1955:U:H5	22:BA:2557:G:N2	2.10	0.50
22:BA:1413:A:C6	22:BA:1414:C:N3	2.80	0.50
1:CA:1089:G:H2'	1:CA:1090:U:O4'	2.12	0.50
46:DY:31:GLN:NE2	46:DY:37:LEU:HD12	2.25	0.50
22:BA:2199:A:H3'	22:BA:2200:C:H6	1.76	0.50
23:DB:94:A:OP1	43:DV:19:ARG:CD	2.60	0.50
22:DA:2415:G:C2	22:DA:2416:C:C2	3.00	0.50
22:DA:2415:G:C5	22:DA:2416:C:C5	3.00	0.50
33:BL:120:VAL:O	33:BL:140:GLY:HA2	2.12	0.50
22:DA:1180:U:C4	22:DA:1181:U:C4	3.00	0.50
22:BA:2186:G:C6	22:BA:2187:U:C2	3.00	0.50
29:BH:131:SER:O	29:BH:132:PHE:HB3	2.12	0.50
10:AJ:28:THR:CG2	10:AJ:28:THR:O	2.59	0.50
1:AA:1319:A:C4	1:AA:1323:G:C8	3.00	0.50
9:AI:32:ARG:HG2	9:AI:36:GLN:CB	2.42	0.50
1:CA:1533:C:C2'	1:CA:1534:A:H5''	2.42	0.50
22:DA:1759:A:O2'	22:DA:2714:G:H1'	2.12	0.50
23:BB:65:U:C4	23:BB:108:A:C4	3.00	0.50
22:BA:1945:G:H2'	22:BA:1946:U:H6	1.77	0.50
45:DX:67:LEU:O	45:DX:77:TYR:OH	2.28	0.50
27:DF:127:TYR:O	27:DF:155:ILE:HD11	2.12	0.50
32:DK:28:SER:O	32:DK:29:HIS:CB	2.60	0.50
22:DA:1042:G:C6	22:DA:1043:C:C4	3.00	0.50
26:BE:127:GLU:H	26:BE:127:GLU:CD	2.14	0.50
22:DA:146:A:C6	22:DA:147:C:C4	3.00	0.50
48:B0:53:VAL:O	48:B0:54:ILE:O	2.30	0.50
27:BF:19:PHE:O	27:BF:20:ASN:C	2.50	0.50
22:DA:280:U:C5	22:DA:281:C:C4	3.00	0.50
31:BJ:95:ARG:O	31:BJ:95:ARG:HG3	2.10	0.50
22:DA:1460:U:OP2	22:DA:1460:U:C6	2.64	0.50
1:CA:1499:A:H1'	1:CA:1520:C:H5'	1.94	0.50

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
19:CS:38:THR:HB	19:CS:69:LYS:NZ	2.27	0.49
22:DA:2384:U:OP2	22:DA:2384:U:H6	1.95	0.49
22:DA:2429:G:H3'	22:DA:2429:G:OP2	2.12	0.49
22:DA:1361:G:H2'	22:DA:1362:C:H5'	1.93	0.49
22:DA:1809:A:C2'	22:DA:1810:A:H8	2.24	0.49
25:BD:117:GLY:C	25:BD:118:PHE:CG	2.82	0.49
22:DA:118:A:O5'	22:DA:119:A:H5''	2.12	0.49
22:DA:867:C:O2'	22:DA:868:U:C6	2.35	0.49
3:CC:17:TRP:CD1	14:CN:90:GLY:HA2	2.47	0.49
27:BF:134:GLN:NE2	27:BF:150:GLY:H	2.10	0.49
26:DE:165:HIS:O	26:DE:167:VAL:N	2.45	0.49
22:DA:600:G:H5''	26:DE:27:LEU:HD22	1.94	0.49
22:DA:670:A:H4'	22:DA:671:C:H3'	1.94	0.49
3:AC:153:SER:HB3	3:AC:164:THR:HA	1.93	0.49
22:DA:1207:C:H2'	22:DA:1208:C:C6	2.45	0.49
8:CH:85:TYR:CE1	17:CQ:36:PHE:CE2	3.00	0.49
1:AA:1160:G:O2'	1:AA:1161:C:O5'	2.28	0.49
22:DA:1719:G:C2	22:DA:1742:U:O2	2.65	0.49
22:DA:2056:G:H21	48:D0:1:ALA:N	2.08	0.49
30:BI:135:MET:HG2	30:BI:137:LEU:HG	1.93	0.49
1:CA:1095:U:H2'	1:CA:1096:C:H6	1.77	0.49
1:AA:174:A:C6	1:AA:175:C:C4	3.00	0.49
22:BA:2415:G:H2'	22:BA:2416:C:H6	1.77	0.49
22:BA:2772:C:H2'	22:BA:2773:C:H6	1.76	0.49
20:AT:6:ALA:HA	20:AT:8:LYS:HG2	1.93	0.49
46:DY:21:LEU:HD23	46:DY:25:GLN:HG2	1.92	0.49
35:BN:33:ILE:HD11	35:BN:118:ARG:HH21	1.77	0.49
35:BN:33:ILE:CD1	35:BN:118:ARG:NH2	2.75	0.49
22:BA:1496:A:C4	22:BA:1498:C:N4	2.80	0.49
32:DK:6:THR:O	32:DK:8:LEU:HD12	2.11	0.49
9:AI:57:VAL:O	9:AI:58:GLU:HG2	2.12	0.49
22:BA:2516:A:O2'	22:BA:2517:C:H5'	2.12	0.49
26:BE:153:LEU:HG	26:BE:153:LEU:O	2.11	0.49
22:BA:2192:U:O2'	22:BA:2193:G:H5'	2.12	0.49
8:AH:88:LYS:O	8:AH:91:LEU:HB2	2.12	0.49
35:BN:77:ALA:O	35:BN:81:ASN:HB2	2.12	0.49
22:BA:603:A:H4'	22:BA:604:G:C5'	2.41	0.49
34:DM:41:LEU:HB3	34:DM:46:ILE:HG23	1.94	0.49
7:AG:77:ARG:HB3	7:AG:79:VAL:HG23	1.93	0.49
22:DA:373:U:O2	22:DA:374:A:C8	2.65	0.49
1:AA:833:G:O2'	1:AA:834:U:H5'	2.12	0.49
22:DA:2371:G:O3'	49:D1:44:GLN:NE2	2.46	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:CA:892:A:C5	1:CA:893:C:C5	3.00	0.49
22:DA:659:G:H4'	26:DE:95:LYS:HD2	1.93	0.49
34:DM:69:PRO:HA	34:DM:94:ALA:HB2	1.94	0.49
1:CA:602:A:O2'	1:CA:603:U:H5'	2.11	0.49
22:BA:2856:A:C2'	22:BA:2857:G:H5'	2.42	0.49
1:CA:1356:G:H2'	1:CA:1357:A:C8	2.47	0.49
1:AA:1480:A:C6	1:AA:1481:U:C4	3.00	0.49
1:CA:590:U:O2'	1:CA:591:U:H5'	2.12	0.49
32:DK:57:VAL:O	32:DK:57:VAL:HG13	2.11	0.49
22:DA:948:C:H6	22:DA:948:C:O5'	1.95	0.49
22:BA:237:C:O2'	22:BA:238:C:H5'	2.12	0.49
22:BA:2378:A:N7	22:BA:2379:G:H1'	2.26	0.49
22:BA:2336:A:N6	44:BW:40:ARG:HB3	2.28	0.49
44:BW:30:VAL:HA	44:BW:60:ALA:O	2.11	0.49
22:BA:271:G:C6	22:BA:272:A:N6	2.80	0.49
1:CA:973:G:H2'	1:CA:974:A:H2'	1.94	0.49
22:BA:528:A:C2	22:BA:2042:A:H2'	2.47	0.49
22:DA:1131:G:C5	22:DA:2025:C:H4'	2.47	0.49
4:AD:29:THR:C	4:AD:30:LYS:HD3	2.32	0.49
1:AA:784:A:O2'	1:AA:785:G:H5'	2.13	0.49
22:DA:2823:A:C5	22:DA:2824:C:C5	2.99	0.49
22:DA:480:A:H3'	22:DA:481:G:H5''	1.94	0.49
31:BJ:124:VAL:HG23	31:BJ:125:TYR:H	1.77	0.49
22:DA:348:A:H2'	22:DA:349:U:H6	1.76	0.49
22:DA:674:G:O3'	26:DE:60:TRP:CH2	2.64	0.49
22:DA:617:G:O2'	22:DA:618:G:C8	2.48	0.49
1:CA:754:C:O2'	1:CA:755:G:H5'	2.11	0.49
27:DF:59:ILE:HD13	27:DF:137:PHE:CZ	2.46	0.49
1:CA:373:A:C5'	1:CA:373:A:C8	2.95	0.49
2:AB:74:ALA:O	2:AB:75:ALA:HB2	2.12	0.49
32:BK:76:VAL:HB	37:BP:72:VAL:HG23	1.90	0.49
5:CE:54:GLU:C	5:CE:56:PRO:HD2	2.32	0.49
5:CE:56:PRO:O	5:CE:59:ILE:HG23	2.12	0.49
22:BA:1253:A:N7	56:BA:3332:HOH:O	2.35	0.49
17:CQ:3:LYS:O	17:CQ:3:LYS:HG3	2.11	0.49
9:CI:45:MET:HA	9:CI:48:ARG:CG	2.42	0.49
45:BX:5:GLN:HE21	45:BX:49:ARG:CB	2.25	0.49
5:CE:37:VAL:HG12	5:CE:38:VAL:H	1.76	0.49
1:AA:35:G:H2'	1:AA:36:C:C6	2.47	0.49
1:AA:1066:C:H6	1:AA:1066:C:C5'	2.21	0.49
22:DA:464:U:H1'	22:DA:686:U:C5	2.43	0.49
1:CA:343:U:HO2'	1:CA:344:A:H8	1.60	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:BA:1869:G:N2	22:BA:1873:G:C6	2.79	0.49
19:CS:11:ASP:H	19:CS:14:LEU:HD21	1.76	0.49
28:DG:41:GLU:O	28:DG:43:LYS:HG3	2.12	0.49
22:BA:635:C:H3'	33:BL:109:LYS:NZ	2.26	0.49
42:BU:73:ASN:HD22	42:BU:75:ALA:HB3	1.77	0.49
4:AD:100:VAL:O	4:AD:100:VAL:CG1	2.60	0.49
26:DE:126:VAL:HG13	26:DE:127:GLU:H	1.74	0.49
1:CA:1066:C:H2'	1:CA:1067:A:N7	2.28	0.49
34:BM:109:PRO:O	34:BM:110:GLU:C	2.51	0.49
45:BX:29:LEU:HB2	45:BX:30:PRO:HD3	1.94	0.49
39:BR:54:VAL:HG23	39:BR:57:GLY:N	2.27	0.49
24:DC:77:VAL:CG2	24:DC:111:ALA:HA	2.41	0.49
22:BA:870:U:C2'	22:BA:871:U:H5'	2.42	0.49
22:DA:2663:G:H2'	22:DA:2664:G:C8	2.46	0.49
22:DA:2712:C:OP1	22:DA:2714:G:H4'	2.12	0.49
42:DU:6:ARG:HG2	42:DU:7:ASP:N	2.26	0.49
17:CQ:11:VAL:HG12	17:CQ:12:VAL:H	1.76	0.49
26:BE:147:LEU:HD23	26:BE:183:PHE:CD1	2.46	0.49
5:AE:15:ILE:HG21	5:AE:35:LEU:HD23	1.92	0.49
7:AG:129:ASN:HA	7:AG:134:VAL:HG11	1.94	0.49
18:CR:33:THR:C	18:CR:35:SER:H	2.16	0.49
28:BG:116:LEU:N	28:BG:116:LEU:HD13	2.27	0.49
31:DJ:8:PRO:HG2	31:DJ:9:GLU:H	1.77	0.49
22:BA:646:U:H3'	22:BA:647:G:H5''	1.94	0.49
4:CD:94:GLU:OE1	4:CD:103:ARG:NE	2.38	0.49
25:DD:121:THR:HG21	25:DD:127:PHE:CD1	2.47	0.49
8:CH:91:LEU:HD12	8:CH:116:ARG:HG3	1.94	0.49
22:BA:687:C:H2'	22:BA:688:U:O4'	2.12	0.49
41:DT:61:LEU:C	41:DT:61:LEU:HD12	2.33	0.49
33:DL:40:SER:OG	33:DL:41:ARG:N	2.45	0.49
1:AA:536:C:OP1	56:AA:1889:HOH:O	2.20	0.49
22:DA:2140:G:C6	22:DA:2152:G:C6	3.00	0.49
38:BQ:60:TRP:O	38:BQ:61:ILE:C	2.51	0.49
39:BR:39:LEU:HB3	39:BR:49:ILE:HD13	1.94	0.49
24:DC:17:LYS:HD3	24:DC:18:VAL:N	2.26	0.49
6:AF:62:MET:O	6:AF:63:ASN:HB2	2.12	0.49
21:CU:20:ARG:NH1	21:CU:24:LYS:HG2	2.26	0.49
1:CA:1159:U:O4'	1:CA:1182:G:N2	2.45	0.49
36:DO:62:LEU:CD1	36:DO:65:THR:HG23	2.43	0.49
22:DA:857:G:H1'	44:DW:19:ARG:HE	1.77	0.49
22:DA:2290:G:C6	22:DA:2291:U:C4	3.00	0.49
22:DA:642:U:H2'	22:DA:644:A:OP2	2.12	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
24:DC:68:ARG:NE	24:DC:128:THR:OG1	2.46	0.49
22:DA:1060:U:H4'	22:DA:1061:U:H2'	1.95	0.49
33:DL:48:ARG:HG3	33:DL:48:ARG:NH1	2.08	0.49
10:CJ:67:ILE:HG23	14:CN:95:LEU:N	2.22	0.49
1:CA:83:C:C2	1:CA:87:C:N4	2.79	0.49
24:BC:12:ARG:HG2	24:BC:12:ARG:NH1	2.23	0.49
22:DA:670:A:H4'	22:DA:671:C:O5'	2.12	0.49
1:AA:1142:G:H2'	1:AA:1143:G:O4'	2.12	0.49
22:DA:1251:C:C5	38:DQ:5:ARG:NH1	2.81	0.49
37:DP:50:ARG:CA	37:DP:57:ALA:O	2.60	0.49
22:BA:2136:G:O2'	22:BA:2137:U:H6	1.90	0.49
13:CM:11:HIS:N	13:CM:44:ILE:HD12	2.27	0.49
23:BB:28:C:OP1	36:BO:31:THR:HG21	2.12	0.49
41:BT:39:THR:HB	41:BT:42:GLU:H	1.77	0.49
41:BT:44:LYS:HG3	41:BT:55:VAL:CG1	2.41	0.49
22:DA:1757:A:N1	22:DA:1762:A:H2	2.10	0.49
29:BH:9:VAL:HG12	29:BH:9:VAL:O	2.12	0.49
23:BB:90:C:H5'	34:BM:18:ARG:HG2	1.94	0.49
5:CE:55:VAL:N	5:CE:56:PRO:CD	2.75	0.49
22:BA:2257:U:O2'	22:BA:2258:C:H5'	2.13	0.49
31:DJ:99:ARG:HA	31:DJ:102:GLU:CB	2.37	0.49
21:CU:8:ASN:CG	21:CU:9:GLU:H	2.14	0.49
22:DA:170:U:H2'	22:DA:171:U:C6	2.44	0.49
22:BA:37:C:O2'	26:BE:45:ALA:HA	2.13	0.49
22:BA:2849:U:H1'	22:BA:2866:U:O2	2.10	0.49
22:BA:1277:G:C5'	35:BN:20:MET:CE	2.89	0.49
22:BA:323:C:C4	22:BA:333:G:C8	3.01	0.49
33:BL:55:MET:HE2	33:BL:56:PRO:CD	2.42	0.49
40:DS:20:VAL:HG11	40:DS:43:ALA:HB1	1.95	0.49
1:AA:1224:U:O2'	1:AA:1322:C:OP1	2.31	0.49
22:DA:705:A:H2'	22:DA:706:A:C8	2.47	0.49
42:DU:47:PRO:HB3	42:DU:54:PRO:CG	2.42	0.49
1:CA:1161:C:O2	1:CA:1176:A:H2	1.95	0.49
22:DA:1425:G:H2'	22:DA:1426:G:C8	2.46	0.49
1:AA:237:G:H5''	17:AQ:26:ARG:NH2	2.27	0.49
20:CT:11:ILE:C	20:CT:13:SER:H	2.16	0.49
24:BC:181:ARG:HH21	24:BC:181:ARG:CG	2.24	0.49
1:CA:1460:C:H6	1:CA:1460:C:O5'	1.95	0.49
49:B1:29:LYS:HB3	49:B1:29:LYS:NZ	2.27	0.49
5:AE:87:VAL:O	5:AE:88:HIS:HB2	2.11	0.49
22:DA:88:G:C2	22:DA:89:A:C8	3.00	0.49
38:BQ:60:TRP:O	38:BQ:63:ARG:HG3	2.11	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
44:BW:30:VAL:O	44:BW:30:VAL:CG2	2.60	0.49
2:AB:172:ILE:HG23	2:AB:182:VAL:HG11	1.93	0.49
22:DA:1440:U:H2'	22:DA:1441:G:H8	1.75	0.49
22:DA:2331:G:N1	22:DA:2385:C:C4	2.80	0.49
22:DA:2290:G:H4'	22:DA:2381:A:O2'	2.12	0.49
22:DA:1313:U:OP1	56:DA:3407:HOH:O	2.18	0.49
22:DA:1312:U:N3	22:DA:1603:A:C6	2.81	0.49
22:DA:1607:C:C4'	22:DA:1608:A:C8	2.92	0.49
22:DA:309:A:N7	22:DA:330:A:N6	2.60	0.49
42:DU:3:LYS:HD3	42:DU:82:VAL:CG2	2.42	0.49
5:AE:153:ALA:HA	5:AE:156:ARG:HB2	1.94	0.49
27:DF:37:MET:HE3	27:DF:56:LEU:HD23	1.95	0.49
1:AA:450:G:N7	1:AA:481:G:O6	2.45	0.49
22:DA:1139:G:N3	22:DA:1143:A:H2	2.10	0.49
1:AA:1283:U:H2'	1:AA:1284:C:C6	2.47	0.49
35:DN:67:PHE:CE2	35:DN:73:ASN:OD1	2.65	0.49
24:DC:226:PRO:O	24:DC:227:VAL:C	2.51	0.49
1:CA:408:A:C2	1:CA:435:A:C2	3.00	0.49
22:DA:2667:C:O2'	22:DA:2668:G:O4'	2.30	0.49
1:CA:1239:A:N7	1:CA:1298:U:N3	2.54	0.49
1:CA:1242:G:HO2'	1:CA:1243:C:C4'	2.26	0.49
25:BD:34:VAL:HG21	25:BD:90:PHE:O	2.13	0.49
22:DA:584:C:C4	22:DA:585:G:C5	3.00	0.49
25:DD:106:LYS:HD3	25:DD:106:LYS:N	2.27	0.49
22:DA:1476:U:H1'	22:DA:1732:C:O2	2.11	0.49
29:BH:72:ILE:O	29:BH:72:ILE:HG23	2.11	0.49
49:B1:9:LYS:O	49:B1:50:GLU:HG2	2.11	0.49
22:DA:942:G:H2'	22:DA:943:A:C5'	2.39	0.49
13:CM:12:LYS:H	13:CM:44:ILE:HG13	1.76	0.49
28:DG:95:ALA:HB1	28:DG:124:CYS:SG	2.53	0.49
28:DG:94:ARG:O	28:DG:95:ALA:HB2	2.13	0.49
30:BI:33:ASN:HD22	30:BI:64:ARG:NH2	2.02	0.49
1:AA:405:U:OP1	1:AA:406:G:O2'	2.28	0.49
22:DA:1705:A:C5	22:DA:1706:C:C4	3.00	0.49
22:DA:2056:G:N2	22:DA:2057:G:N9	2.60	0.49
30:BI:90:GLY:C	30:BI:92:PRO:HD3	2.31	0.49
3:AC:39:ARG:CZ	3:AC:54:ILE:HD11	2.42	0.49
7:CG:14:ASP:HB3	7:CG:18:GLY:N	2.22	0.49
22:BA:2298:A:C2	22:BA:2321:U:C4	3.00	0.49
1:AA:116:A:C2'	1:AA:117:G:O5'	2.60	0.49
27:BF:79:ARG:O	27:BF:82:TYR:HB2	2.13	0.49
22:DA:992:C:H4'	39:DR:74:ILE:CD1	2.42	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:CD:84:ASN:C	4:CD:84:ASN:ND2	2.64	0.49
26:DE:5:LEU:HD22	26:DE:122:GLU:N	2.27	0.49
1:AA:191:G:C4	1:AA:192:A:C8	3.00	0.49
37:BP:24:THR:CG2	37:BP:86:LYS:HB2	2.43	0.49
22:BA:2489:U:O2	22:BA:2491:U:C4	2.66	0.49
22:DA:1594:U:H2'	22:DA:1595:C:C6	2.47	0.49
24:DC:131:MET:HA	24:DC:134:ILE:CD1	2.43	0.49
13:AM:15:VAL:HG13	13:AM:40:GLU:O	2.13	0.49
22:DA:280:U:H5	22:DA:281:C:C4	2.30	0.49
30:BI:32:VAL:HG13	30:BI:66:PHE:CE2	2.47	0.49
1:CA:168:G:H2'	1:CA:169:C:H5'	1.94	0.49
2:CB:153:MET:HE3	2:CB:155:GLY:O	2.11	0.49
1:CA:1378:C:H3'	1:CA:1379:G:H5''	1.93	0.49
12:AL:107:LYS:O	12:AL:108:ASP:HB2	2.12	0.49
22:BA:1851:U:C4	22:BA:1852:U:C4	3.00	0.49
10:AJ:88:MET:C	10:AJ:90:LEU:H	2.16	0.49
22:DA:1292:G:C6	22:DA:1293:C:N4	2.80	0.49
22:DA:382:A:H2'	22:DA:383:C:H5''	1.94	0.49
23:BB:77:U:C2'	23:BB:78:A:H5'	2.43	0.49
22:BA:884:U:O2	22:BA:884:U:H2'	2.12	0.49
49:D1:42:VAL:HG12	49:D1:42:VAL:O	2.11	0.49
14:CN:30:ILE:HG22	14:CN:41:TRP:N	2.26	0.49
22:DA:653:U:H2'	22:DA:653:U:O2	2.13	0.49
22:DA:2232:C:P	45:DX:26:ARG:HH12	2.35	0.49
44:BW:35:ILE:O	44:BW:37:VAL:HG23	2.13	0.49
1:CA:1014:A:C2	1:CA:1219:A:H1'	2.47	0.49
22:DA:1553:A:C8	22:DA:1555:G:C5	3.00	0.49
22:DA:860:U:C4	22:DA:2268:A:C4	3.01	0.49
36:DO:9:ARG:HA	36:DO:12:THR:OG1	2.13	0.49
49:D1:8:ILE:CD1	49:D1:52:LYS:HG3	2.43	0.49
22:DA:2428:G:OP1	22:DA:2428:G:H3'	2.12	0.49
22:DA:1237:A:N3	22:DA:1238:G:H1'	2.26	0.49
22:DA:1054:A:C2	22:DA:1106:G:C2	3.00	0.49
22:DA:1056:G:O5'	22:DA:1085:A:C2	2.64	0.49
22:DA:49:A:C8	22:DA:51:G:C2	3.00	0.49
1:CA:86:G:O2'	1:CA:87:C:O5'	2.30	0.49
22:DA:1779:U:H5	22:DA:1784:A:N7	2.10	0.49
22:DA:784:G:C2	24:DC:227:VAL:CG2	2.90	0.49
22:DA:345:A:O2'	22:DA:346:A:C2	2.61	0.49
52:D4:3:VAL:O	52:D4:4:ARG:HB2	2.12	0.49
4:AD:109:THR:HG22	4:AD:112:GLU:HB2	1.93	0.49
22:DA:2758:A:H2'	22:DA:2759:G:C5'	2.42	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:192:C:OP1	22:DA:2243:U:OP1	2.31	0.49
32:DK:20:MET:HG2	32:DK:21:CYS:O	2.13	0.49
2:AB:22:TRP:HA	2:AB:188:THR:O	2.13	0.49
1:AA:748:G:C6	1:AA:749:A:C6	3.00	0.49
1:CA:752:G:H1'	1:CA:754:C:H41	1.70	0.49
12:AL:72:ASN:CG	12:AL:73:LEU:H	2.12	0.49
28:DG:132:LEU:HD12	28:DG:132:LEU:N	2.27	0.49
13:CM:18:LEU:N	13:CM:18:LEU:HD12	2.28	0.49
1:AA:73:C:O2'	1:AA:74:A:C5'	2.61	0.49
46:BY:42:LEU:O	46:BY:45:GLN:O	2.30	0.49
22:BA:2886:A:C2	22:BA:2887:A:H1'	2.47	0.49
22:DA:1491:G:N2	22:DA:1492:G:C4	2.80	0.49
46:BY:9:LYS:HA	46:BY:9:LYS:HZ1	1.78	0.49
24:DC:75:ALA:HA	24:DC:95:TYR:HA	1.93	0.49
41:DT:29:THR:OG1	41:DT:85:VAL:HB	2.12	0.49
22:DA:2142:A:H2'	22:DA:2143:C:H4'	1.95	0.49
37:DP:67:GLU:CD	37:DP:68:GLY:H	2.16	0.49
22:DA:2376:A:H2'	22:DA:2377:A:O4'	2.13	0.49
1:AA:222:C:O2'	1:AA:223:A:H5'	2.12	0.49
22:BA:1867:G:H2'	22:BA:1868:C:H5'	1.95	0.49
22:BA:357:C:H2'	22:BA:358:U:H6	1.76	0.49
39:BR:54:VAL:O	39:BR:55:ASP:C	2.50	0.49
22:DA:2485:G:H5''	34:DM:45:GLN:NE2	2.28	0.49
22:BA:2517:C:C2	22:BA:2542:A:N6	2.80	0.49
25:DD:99:GLU:HG3	25:DD:100:LEU:H	1.78	0.49
26:DE:105:LEU:HD12	26:DE:200:LEU:HD21	1.95	0.49
1:AA:903:G:H2'	1:AA:904:U:H6	1.78	0.49
22:DA:546:U:H5'	22:DA:547:A:OP1	2.12	0.49
1:AA:1117:A:O3'	9:AI:105:ARG:NE	2.46	0.49
1:CA:878:A:O2'	1:CA:879:C:H5'	2.13	0.49
30:DI:100:ILE:HD11	30:DI:137:LEU:HD22	1.93	0.49
22:BA:987:C:C2'	22:BA:988:A:H5'	2.43	0.49
1:AA:1379:G:C6	1:AA:1380:U:C4	2.99	0.49
22:BA:1443:U:H2'	22:BA:1444:G:C8	2.48	0.49
1:AA:562:U:H1'	12:AL:11:ARG:HB3	1.93	0.49
33:BL:14:LYS:CG	33:BL:15:ALA:N	2.75	0.49
22:DA:19:A:C2	22:DA:522:A:C2	2.99	0.49
1:CA:731:G:OP1	1:CA:766:A:H1'	2.13	0.49
22:BA:1669:A:H5''	22:BA:1670:C:OP2	2.13	0.49
22:DA:1455:G:N7	35:DN:64:ARG:NH1	2.60	0.49
1:CA:386:C:H2'	1:CA:387:U:H5'	1.94	0.49
9:CI:29:ILE:HA	9:CI:64:ILE:O	2.12	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:BA:353:C:O2	22:BA:353:C:H2'	2.11	0.49
22:BA:254:G:N7	51:B3:4:LYS:HE2	2.27	0.49
23:BB:94:A:O2'	23:BB:95:U:H5'	2.12	0.49
6:AF:25:TYR:O	6:AF:28:ALA:HB3	2.12	0.49
1:CA:1255:G:N1	1:CA:1279:G:N7	2.60	0.49
22:BA:922:C:HO2'	44:BW:25:PHE:HE2	1.60	0.49
44:BW:19:ARG:NH2	44:BW:22:VAL:HG21	2.27	0.49
44:BW:28:GLU:HA	44:BW:28:GLU:OE2	2.12	0.49
6:CF:86:ARG:HD3	18:CR:63:TYR:O	2.12	0.49
22:DA:2335:A:C4	22:DA:2337:G:N7	2.81	0.49
20:AT:33:LYS:HE2	20:AT:33:LYS:N	2.27	0.49
1:AA:1128:C:C2'	1:AA:1129:C:H5'	2.42	0.49
22:DA:1314:C:OP1	22:DA:1332:G:C5'	2.60	0.49
24:DC:149:LYS:HE3	24:DC:152:GLN:NE2	2.28	0.49
1:AA:842:U:H3'	1:AA:843:U:C5'	2.42	0.49
30:DI:52:LEU:HD11	30:DI:78:LEU:HD21	1.93	0.49
28:DG:88:LEU:HD11	28:DG:128:THR:HA	1.95	0.49
22:DA:628:G:H2'	22:DA:629:G:H8	1.74	0.49
31:DJ:65:THR:O	31:DJ:68:LYS:NZ	2.38	0.49
7:CG:29:LEU:O	7:CG:30:MET:O	2.30	0.49
1:CA:407:U:H2'	1:CA:408:A:H8	1.77	0.49
1:CA:279:A:H4'	1:CA:280:C:C5'	2.41	0.49
22:DA:607:U:H5	22:DA:619:G:C4	2.31	0.49
22:DA:2356:U:C4'	44:DW:16:GLU:HG3	2.35	0.49
12:CL:89:LEU:HB3	12:CL:92:VAL:CG2	2.42	0.49
41:BT:11:LEU:HD23	41:BT:11:LEU:N	2.27	0.49
22:DA:277:G:O2'	22:DA:278:A:C4	2.66	0.49
2:AB:162:VAL:HG22	2:AB:184:ALA:HB2	1.93	0.49
32:DK:7:MET:HG3	32:DK:17:ARG:HH12	1.78	0.49
22:DA:2197:U:C5	22:DA:2224:G:C6	3.00	0.49
32:DK:13:ASN:H	32:DK:13:ASN:ND2	2.03	0.49
22:BA:1252:G:C2	38:BQ:32:ARG:HG2	2.48	0.49
22:DA:2054:A:C2	22:DA:2616:C:C2	3.00	0.49
1:AA:1410:A:C2'	1:AA:1411:C:O5'	2.61	0.49
22:DA:1157:G:H8	22:DA:1157:G:H5'	1.75	0.49
26:BE:112:LEU:HD13	26:BE:186:VAL:CG1	2.41	0.49
20:CT:3:ILE:H	20:CT:3:ILE:HD12	1.77	0.49
22:BA:373:U:O2'	22:BA:423:A:H1'	2.12	0.49
20:AT:4:LYS:O	20:AT:5:SER:C	2.51	0.49
1:CA:252:U:C6	1:CA:252:U:H5'	2.42	0.49
22:BA:1496:A:H2'	22:BA:1498:C:C4	2.48	0.49
27:DF:43:ILE:HG12	27:DF:77:LYS:HD3	1.93	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:BA:517:C:OP2	48:B0:9:ARG:NH2	2.41	0.49
22:BA:1106:G:N2	22:BA:1107:G:H1'	2.27	0.49
45:BX:52:ALA:O	45:BX:53:LYS:HB3	2.12	0.49
6:CF:88:MET:HG2	6:CF:90:MET:SD	2.53	0.49
31:DJ:140:LEU:HD22	31:DJ:141:ASP:H	1.76	0.49
10:AJ:10:LEU:HD22	10:AJ:22:THR:OG1	2.12	0.49
29:BH:101:ASP:OD2	29:BH:102:ALA:N	2.44	0.49
22:DA:470:A:C2	22:DA:471:A:C4	3.00	0.49
41:DT:34:VAL:O	41:DT:34:VAL:HG12	2.12	0.49
22:DA:646:U:C6	22:DA:646:U:OP2	2.65	0.49
11:CK:12:ARG:NH1	11:CK:76:TYR:HE1	2.10	0.49
21:AU:38:GLU:OE2	21:AU:41:THR:HG21	2.12	0.49
1:AA:1521:C:C2	1:AA:1522:U:C5	3.00	0.49
48:D0:26:SER:O	48:D0:27:LEU:HD13	2.12	0.49
2:CB:153:MET:SD	2:CB:157:PRO:HD3	2.53	0.49
23:BB:78:A:H2'	23:BB:79:G:O4'	2.12	0.49
1:AA:1095:U:O2'	1:AA:1096:C:H5'	2.12	0.49
22:BA:182:A:H2'	22:BA:183:C:C6	2.48	0.49
22:BA:1926:U:H2'	22:BA:1928:A:N7	2.27	0.49
22:DA:999:U:O2'	22:DA:1000:A:H5'	2.13	0.49
27:BF:147:ARG:HG3	27:BF:148:VAL:N	2.28	0.49
23:BB:46:A:C5	23:BB:47:C:C5	3.00	0.49
11:CK:115:ILE:O	11:CK:115:ILE:HG12	2.11	0.49
21:CU:22:CYS:O	21:CU:23:GLU:O	2.30	0.49
22:BA:770:G:O2'	22:BA:771:G:H5'	2.12	0.49
1:AA:1149:C:H2'	1:AA:1150:A:C8	2.47	0.49
48:D0:4:GLN:HG2	48:D0:4:GLN:O	2.13	0.49
1:AA:714:G:H2'	1:AA:715:A:C8	2.47	0.49
22:DA:1816:C:O2'	22:DA:1817:G:P	2.70	0.49
2:AB:17:HIS:CD2	2:AB:202:ASN:ND2	2.80	0.49
22:DA:858:G:H2'	22:DA:2268:A:N3	2.27	0.49
20:AT:28:ARG:O	20:AT:32:LYS:HG2	2.13	0.49
1:CA:1158:C:H2'	1:CA:1158:C:O2	2.12	0.49
35:DN:98:LEU:HG	48:D0:42:ILE:HG13	1.94	0.49
17:AQ:51:GLU:H	17:AQ:51:GLU:CD	2.15	0.49
22:DA:475:C:O2'	22:DA:476:G:H5'	2.13	0.49
7:CG:21:LEU:O	7:CG:25:PHE:N	2.45	0.49
22:DA:655:A:H4'	22:DA:656:G:OP1	2.12	0.49
22:DA:2875:C:O2'	22:DA:2876:G:O5'	2.30	0.49
1:CA:1148:U:H2'	1:CA:1149:C:O4'	2.12	0.49
1:CA:752:G:H1'	1:CA:754:C:H42	1.72	0.49
3:AC:152:VAL:O	3:AC:164:THR:O	2.30	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
28:DG:84:LYS:HB3	28:DG:132:LEU:O	2.13	0.49
22:DA:750:A:H5''	22:DA:751:A:OP2	2.12	0.49
38:DQ:65:ASN:O	38:DQ:69:ARG:HB2	2.13	0.49
25:BD:101:PHE:HD1	25:BD:101:PHE:N	2.11	0.49
37:DP:87:ARG:HG2	37:DP:88:ARG:H	1.77	0.49
1:CA:1202:U:H2'	1:CA:1203:C:C5'	2.43	0.49
22:BA:1469:A:H2'	22:BA:1470:A:H8	1.73	0.49
22:DA:1857:G:H1'	22:DA:1884:G:H22	1.77	0.49
22:DA:2634:A:C2	22:DA:2635:A:C4	3.01	0.49
26:BE:5:LEU:CD1	26:BE:10:SER:HB3	2.41	0.49
31:BJ:12:LYS:O	31:BJ:13:ARG:HB2	2.11	0.49
22:DA:1844:C:O3'	24:DC:255:LYS:NZ	2.34	0.49
1:AA:1040:U:H2'	1:AA:1041:G:H8	1.78	0.49
1:AA:115:G:C6	1:AA:313:A:C2	3.00	0.49
41:BT:30:ILE:HG23	41:BT:85:VAL:HB	1.94	0.49
22:BA:2848:G:N3	22:BA:2867:G:C2	2.81	0.49
1:CA:40:C:H2'	1:CA:41:G:O4'	2.12	0.49
40:DS:24:ILE:HG21	40:DS:36:LEU:HD21	1.95	0.49
43:DV:63:ILE:O	43:DV:70:ILE:HD11	2.13	0.49
22:DA:85:G:O2'	22:DA:86:G:H8	1.95	0.49
3:CC:21:TRP:CZ3	14:CN:93:PRO:HG2	2.47	0.49
22:BA:2562:U:C2'	22:BA:2563:U:H5'	2.42	0.49
1:AA:1118:U:H2'	1:AA:1119:C:C6	2.47	0.49
22:BA:1790:C:O2'	24:BC:207:ALA:HB2	2.12	0.49
1:AA:420:U:C2'	1:AA:421:U:H5''	2.43	0.49
1:AA:290:C:C2'	1:AA:291:U:H5'	2.43	0.49
1:CA:673:A:H2'	1:CA:674:G:C8	2.47	0.49
8:CH:23:ALA:HB1	8:CH:60:LEU:O	2.12	0.49
25:DD:129:THR:HG22	25:DD:130:GLN:O	2.13	0.49
25:DD:78:GLY:C	25:DD:80:TRP:CZ3	2.86	0.49
36:BO:15:ARG:NE	36:BO:93:ASP:OD1	2.43	0.49
22:DA:712:G:C2	22:DA:720:U:O2	2.65	0.49
22:DA:815:C:P	39:DR:85:LYS:HE2	2.53	0.49
1:AA:1508:A:H2'	1:AA:1509:C:O4'	2.12	0.49
13:CM:8:ILE:N	13:CM:9:PRO:HD3	2.28	0.49
56:BA:3780:HOH:O	31:BJ:39:LYS:HE3	2.12	0.49
18:CR:63:TYR:CE2	18:CR:69:TYR:OH	2.64	0.49
1:CA:6:G:H1	5:CE:102:THR:HG21	1.78	0.49
22:BA:364:C:H2'	22:BA:365:U:H6	1.78	0.49
1:CA:979:C:OP2	1:CA:981:U:O4	2.31	0.49
22:DA:2392:A:C2	33:DL:55:MET:SD	3.04	0.49
22:DA:2392:A:C8	22:DA:2429:G:C2	3.00	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
32:BK:16:ALA:O	32:BK:17:ARG:HB2	2.12	0.49
22:DA:229:C:O2'	22:DA:230:G:O5'	2.31	0.49
22:DA:160:A:N6	22:DA:167:A:H1'	2.28	0.49
4:AD:3:TYR:HB2	4:AD:62:ARG:NH2	2.27	0.49
22:DA:311:A:H1'	22:DA:332:A:C8	2.48	0.49
26:DE:135:ALA:C	26:DE:137:LYS:H	2.15	0.49
31:DJ:43:GLU:O	31:DJ:45:THR:HG22	2.12	0.49
16:AP:20:VAL:HG22	16:AP:21:VAL:N	2.28	0.49
17:AQ:12:VAL:HG11	17:AQ:21:VAL:H	1.77	0.49
22:BA:244:A:OP2	51:B3:7:ARG:NH2	2.46	0.49
22:DA:626:A:H2'	33:DL:78:ARG:HH22	1.77	0.49
34:BM:35:ALA:HB3	34:BM:99:GLY:H	1.77	0.49
22:DA:870:U:H2'	22:DA:871:U:C5'	2.33	0.49
22:DA:141:G:H3'	22:DA:142:A:H8	1.78	0.49
1:CA:1138:G:N3	1:CA:1138:G:H5''	2.28	0.49
32:DK:19:VAL:HG12	32:DK:41:ILE:CG1	2.42	0.49
22:BA:277:G:H4'	22:BA:278:A:N7	2.28	0.49
22:BA:361:G:O2'	22:BA:362:A:O5'	2.28	0.49
9:CI:51:LEU:C	9:CI:53:LEU:H	2.16	0.49
2:AB:9:LEU:HD23	2:AB:11:ALA:N	2.28	0.49
22:DA:2356:U:H4'	44:DW:16:GLU:CG	2.36	0.49
22:BA:1085:A:H2'	22:BA:1086:A:N3	2.28	0.49
30:BI:58:ILE:HG22	30:BI:58:ILE:O	2.12	0.49
2:AB:221:ARG:CZ	2:AB:221:ARG:HB3	2.43	0.49
25:BD:114:LYS:HE3	25:BD:114:LYS:C	2.32	0.49
1:CA:737:C:OP1	6:CF:91:ARG:HD2	2.13	0.49
41:DT:39:THR:HG21	41:DT:42:GLU:CD	2.33	0.49
1:AA:201:G:H2'	1:AA:202:G:O4'	2.13	0.49
32:DK:13:ASN:N	32:DK:13:ASN:HD22	1.96	0.49
22:DA:534:U:H6	22:DA:534:U:O5'	1.96	0.49
45:BX:34:SER:CA	45:BX:49:ARG:HA	2.43	0.49
1:AA:1005:A:H4'	1:AA:1037:C:O2	2.12	0.49
39:BR:38:VAL:HG11	39:BR:59:ILE:HG13	1.93	0.49
11:AK:121:ARG:CZ	21:AU:35:GLU:HG3	2.42	0.49
22:DA:1906:G:H5''	22:DA:1929:G:O2'	2.13	0.49
22:DA:983:A:N6	22:DA:984:A:C2	2.81	0.49
31:BJ:13:ARG:O	31:BJ:14:ASP:CB	2.57	0.49
32:BK:59:LYS:HG3	32:BK:89:ASN:ND2	2.27	0.49
38:BQ:40:LYS:O	38:BQ:41:ALA:C	2.49	0.49
22:DA:2726:A:HO2'	22:DA:2727:A:C5'	2.26	0.49
22:DA:2773:C:C2	22:DA:2774:C:C5	3.01	0.49
22:BA:870:U:O2'	22:BA:871:U:H5'	2.12	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:BA:745:G:H2'	22:BA:746:U:H5'	1.95	0.49
22:DA:64:A:O2'	22:DA:65:U:H5'	2.12	0.49
25:BD:149:ASN:OD1	25:BD:150:GLN:N	2.46	0.49
22:BA:1266:G:H5''	40:BS:15:GLN:NE2	2.27	0.49
46:BY:22:LEU:O	46:BY:23:ARG:O	2.30	0.49
1:AA:1111:A:O2'	1:AA:1112:C:H5'	2.13	0.49
22:DA:752:A:C6	22:DA:1781:U:H1'	2.48	0.49
3:CC:124:GLU:CD	3:CC:124:GLU:N	2.66	0.49
34:DM:52:ALA:HB1	34:DM:119:LEU:CD2	2.43	0.49
1:CA:484:G:H4'	1:CA:485:U:OP1	2.09	0.49
24:BC:219:VAL:HG12	24:BC:224:MET:HE3	1.93	0.49
9:CI:5:TYR:CD2	9:CI:5:TYR:N	2.80	0.49
24:DC:28:PRO:HG3	24:DC:62:ARG:NH1	2.28	0.49
50:D2:1:MET:HG3	50:D2:2:LYS:N	2.27	0.49
22:BA:1467:U:C5	22:BA:1546:G:N3	2.81	0.49
49:B1:27:ARG:O	49:B1:30:PRO:HD3	2.12	0.49
1:CA:1486:G:H2'	1:CA:1487:G:O4'	2.13	0.49
28:BG:38:ASP:OD1	28:BG:38:ASP:N	2.46	0.49
1:AA:955:U:O5'	1:AA:955:U:H6	1.95	0.49
2:AB:84:LEU:HG	2:AB:84:LEU:O	2.13	0.49
22:DA:949:G:C6	22:DA:950:G:N7	2.80	0.49
1:AA:1423:G:O2'	1:AA:1424:U:H5'	2.12	0.49
1:CA:872:A:C5	1:CA:874:G:C8	3.01	0.49
11:AK:17:ASP:HB3	11:AK:80:ASN:OD1	2.13	0.49
38:BQ:63:ARG:NH2	38:BQ:96:ASP:CA	2.76	0.49
22:BA:2353:G:H1'	44:BW:30:VAL:CG1	2.39	0.49
51:D3:28:LEU:HD23	51:D3:32:LEU:HD21	1.93	0.49
22:DA:2345:G:C5	22:DA:2381:A:C2	3.01	0.49
22:DA:246:C:O2'	22:DA:385:C:H4'	2.13	0.49
20:AT:32:LYS:O	20:AT:35:TYR:CD2	2.66	0.49
22:DA:410:G:N2	22:DA:418:C:C2	2.81	0.49
22:DA:2023:C:O2'	22:DA:2024:G:O5'	2.31	0.49
2:AB:95:TRP:HZ3	2:AB:98:GLY:N	2.11	0.49
22:DA:1361:G:C6	22:DA:1371:G:N2	2.81	0.49
2:CB:83:ALA:O	2:CB:85:SER:N	2.45	0.49
48:D0:42:ILE:CD1	48:D0:48:TYR:HB2	2.43	0.49
22:DA:54:G:C4	22:DA:55:G:C8	3.01	0.49
31:BJ:54:ILE:HD12	31:BJ:55:ILE:C	2.33	0.49
35:DN:81:ASN:O	35:DN:82:GLU:HB2	2.13	0.49
35:DN:83:LEU:HD11	35:DN:86:ARG:HH21	1.78	0.49
22:DA:785:G:O2'	22:DA:1779:U:C5'	2.61	0.49
22:DA:142:A:C2'	22:DA:143:C:C6	2.96	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:CA:243:A:C2	1:CA:246:A:C8	3.01	0.49
22:BA:1733:G:N2	22:BA:1734:G:C4	2.81	0.49
1:CA:1134:G:C6	1:CA:1141:C:N4	2.81	0.49
22:DA:1789:A:H2'	22:DA:1790:C:C6	2.48	0.49
1:AA:198:G:O2'	1:AA:199:A:C5'	2.61	0.49
6:CF:42:TRP:HB2	6:CF:59:TYR:CB	2.41	0.49
25:BD:68:PHE:CE2	25:BD:75:ALA:HA	2.48	0.49
1:AA:97:G:H2'	1:AA:98:A:O4'	2.13	0.49
8:AH:5:PRO:HB2	8:AH:32:LYS:NZ	2.28	0.49
1:CA:519:C:O2'	1:CA:520:A:O4'	2.22	0.49
25:DD:113:SER:HB3	25:DD:168:GLU:H	1.78	0.49
33:DL:83:ALA:HB2	33:DL:117:THR:HB	1.93	0.49
7:CG:16:LYS:HG2	9:CI:45:MET:SD	2.53	0.49
35:BN:79:LEU:O	35:BN:80:PHE:CB	2.56	0.49
1:AA:1005:A:H2'	1:AA:1006:G:O4'	2.13	0.49
5:CE:37:VAL:HG12	5:CE:38:VAL:N	2.28	0.49
27:BF:45:ASP:CB	27:BF:48:LEU:HB2	2.43	0.49
33:BL:65:GLY:O	33:BL:66:PHE:CB	2.60	0.49
22:DA:1926:U:H2'	22:DA:1928:A:N7	2.28	0.49
22:DA:931:U:C2'	22:DA:931:U:O2	2.60	0.49
30:DI:69:VAL:O	30:DI:69:VAL:HG13	2.12	0.49
22:DA:1635:A:H2'	22:DA:1636:U:C6	2.45	0.49
38:BQ:20:ALA:HA	38:BQ:23:TYR:CE1	2.48	0.49
19:AS:4:LEU:HD22	19:AS:8:PRO:HA	1.95	0.49
1:AA:1226:C:N4	13:AM:102:LYS:HG3	2.27	0.49
22:DA:1869:G:N1	22:DA:1873:G:C6	2.81	0.49
34:DM:108:VAL:HG21	34:DM:112:LEU:HB3	1.94	0.49
22:DA:2590:A:H4'	24:DC:237:ARG:NH2	2.27	0.49
1:CA:64:G:C8	1:CA:99:C:N4	2.81	0.49
26:DE:154:ASP:C	26:DE:156:ASN:H	2.15	0.49
46:DY:1:MET:H2	46:DY:5:GLU:HG3	1.77	0.49
40:BS:82:MET:HB2	40:BS:98:LYS:HB2	1.94	0.49
9:AI:50:PRO:HG3	9:AI:82:ILE:HD12	1.94	0.49
8:AH:85:TYR:CD2	8:AH:123:GLU:HB2	2.47	0.49
4:AD:191:SER:O	4:AD:192:ALA:CB	2.61	0.49
1:CA:484:G:H4'	1:CA:485:U:O5'	2.09	0.49
15:CO:54:GLY:O	15:CO:58:MET:HG3	2.13	0.49
1:CA:1522:U:H2'	1:CA:1523:G:H8	1.78	0.49
22:BA:2579:C:H2'	22:BA:2580:U:O4'	2.13	0.49
1:CA:9:G:OP2	5:CE:125:LYS:HG3	2.12	0.49
2:AB:195:VAL:HG11	2:AB:198:VAL:HA	1.95	0.49
18:CR:53:GLN:O	18:CR:56:ARG:HB2	2.12	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:BA:1584:U:H2'	22:BA:1584:U:O2	2.13	0.49
14:AN:47:LEU:HD23	14:AN:47:LEU:O	2.13	0.49
22:DA:1760:C:H2'	22:DA:1761:C:H5'	1.94	0.49
37:BP:56:SER:O	37:BP:75:THR:HG23	2.13	0.49
22:BA:2269:G:O2'	44:BW:18:LYS:HG2	2.13	0.49
14:CN:61:ASN:N	14:CN:61:ASN:OD1	2.45	0.49
32:BK:47:ILE:HG13	32:BK:48:PRO:HD3	1.94	0.49
22:DA:2407:A:HO2'	22:DA:2408:U:C5'	2.26	0.49
22:DA:416:U:H2'	22:DA:417:C:C6	2.48	0.49
22:DA:2024:G:N2	22:DA:2040:G:H1'	2.27	0.49
22:DA:1361:G:O2'	22:DA:1362:C:H5'	2.13	0.49
22:DA:1377:G:H8	22:DA:1377:G:O5'	1.96	0.49
1:AA:797:C:O2'	1:AA:798:U:H5'	2.13	0.49
22:DA:485:C:C4	22:DA:496:G:N1	2.81	0.49
22:DA:117:G:N1	22:DA:119:A:N6	2.60	0.49
22:DA:2311:A:H3'	22:DA:2312:U:H6	1.78	0.49
22:DA:2303:G:H5'	27:DF:121:PHE:CE1	2.47	0.49
22:DA:108:G:C6	22:DA:109:C:C4	3.01	0.49
22:DA:71:A:H5''	22:DA:73:A:C4	2.48	0.49
1:CA:1133:G:C5	1:CA:1134:G:N7	2.81	0.49
22:BA:962:G:N2	22:BA:2250:G:H1	2.11	0.49
22:DA:1517:G:N2	22:DA:1732:C:C6	2.81	0.49
1:CA:996:A:N1	1:CA:1046:A:H5'	2.28	0.49
35:BN:98:LEU:HB3	48:B0:42:ILE:HG12	1.95	0.49
1:AA:1304:G:H1'	1:AA:1334:G:H22	1.77	0.49
1:AA:406:G:C8	1:AA:495:A:N3	2.81	0.49
22:DA:747:U:H3'	22:DA:748:G:H5'	1.95	0.49
22:BA:2683:C:O2	32:BK:70:ARG:NH2	2.44	0.49
1:AA:133:U:H1'	1:AA:230:G:N2	2.28	0.49
20:AT:61:ALA:HA	20:AT:66:ILE:HG22	1.95	0.49
2:AB:134:LEU:HA	2:AB:137:THR:OG1	2.13	0.49
22:DA:2286:G:C8	49:D1:33:LEU:HD21	2.48	0.49
31:BJ:77:HIS:HD2	31:BJ:79:GLY:CA	2.25	0.49
1:CA:197:A:H4'	1:CA:198:G:OP1	2.10	0.49
22:DA:1287:A:H5'	35:DN:103:ARG:CZ	2.43	0.49
22:BA:2321:U:C6	22:BA:2321:U:H5''	2.44	0.49
1:AA:351:G:H4'	1:AA:352:C:OP2	2.11	0.49
35:BN:33:ILE:HG23	35:BN:114:GLU:HB3	1.93	0.49
1:CA:1226:C:C5'	13:CM:94:LEU:HD21	2.43	0.49
31:DJ:106:LYS:HB2	31:DJ:119:PHE:CE2	2.42	0.49
34:BM:50:ARG:HG2	34:BM:50:ARG:NH2	2.28	0.49
22:BA:2196:C:H5''	4:CD:150:LYS:HD2	1.95	0.49

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:AM:45:SER:O	13:AM:46:GLU:CB	2.60	0.49
29:DH:35:LYS:O	29:DH:36:ALA:HB2	2.13	0.49
22:DA:1819:A:H4'	22:DA:1820:U:C5'	2.43	0.49
11:AK:110:THR:HA	21:AU:4:LYS:HA	1.95	0.49
1:AA:995:C:N3	1:AA:1046:A:O2'	2.46	0.49
29:BH:54:LEU:O	29:BH:56:ALA:N	2.46	0.49
14:AN:86:ALA:O	14:AN:91:GLU:HB2	2.12	0.49
22:BA:1006:C:C2'	22:BA:1007:C:H5'	2.43	0.49
20:CT:71:ALA:O	20:CT:72:ALA:C	2.51	0.49
25:DD:39:ASP:CG	25:DD:40:LEU:H	2.16	0.49
1:AA:1414:U:H2'	1:AA:1415:G:H8	1.76	0.49
22:BA:920:A:C6	22:BA:921:C:C4	3.01	0.49
45:DX:65:THR:O	45:DX:68:ALA:HB3	2.13	0.49
18:CR:25:ILE:O	18:CR:25:ILE:HG13	2.12	0.49
22:DA:2600:A:C6	22:DA:2601:C:N4	2.81	0.49
22:BA:996:A:N6	22:BA:1160:G:C6	2.81	0.48
45:BX:44:ARG:HG2	45:BX:45:PHE:N	2.28	0.48
22:DA:396:G:O2'	22:DA:397:U:H6	1.91	0.48
2:AB:165:ALA:HB2	2:AB:186:VAL:HG12	1.94	0.48
1:CA:956:U:O2	1:CA:1225:A:C2	2.66	0.48
22:BA:528:A:H2	22:BA:2043:C:C5'	2.26	0.48
49:D1:8:ILE:HG12	49:D1:24:LYS:HB3	1.95	0.48
22:DA:1533:C:H2'	22:DA:1534:U:H5'	1.95	0.48
22:DA:1361:G:C2	22:DA:1362:C:C6	3.00	0.48
22:DA:312:G:C2	22:DA:313:G:C8	3.00	0.48
1:CA:321:A:N7	1:CA:328:C:C2	2.81	0.48
1:AA:451:A:O4'	1:AA:452:A:C8	2.66	0.48
22:DA:2060:A:H2'	26:DE:63:LYS:HZ1	1.78	0.48
1:CA:1130:A:C6	1:CA:1146:A:C5	3.00	0.48
22:BA:1392:A:C6	22:BA:1393:A:C6	3.00	0.48
9:CI:86:LEU:O	9:CI:86:LEU:HG	2.12	0.48
1:CA:254:G:HO2'	1:CA:255:G:H5'	1.77	0.48
34:DM:35:ALA:O	34:DM:128:THR:HA	2.12	0.48
28:BG:35:THR:C	28:BG:36:LEU:HD22	2.34	0.48
1:AA:1157:A:C6	1:AA:1180:A:C5	3.00	0.48
22:DA:1026:G:H2'	22:DA:1027:A:C8	2.48	0.48
32:BK:116:ILE:HD12	32:BK:117:SER:N	2.28	0.48
21:CU:38:GLU:CA	21:CU:40:PRO:HD2	2.43	0.48
22:DA:593:U:C2	22:DA:594:U:C5	3.01	0.48
16:AP:12:LYS:O	16:AP:13:LYS:HB2	2.13	0.48
35:BN:73:ASN:HA	35:BN:76:VAL:HG12	1.95	0.48
1:CA:1201:A:C4'	1:CA:1202:U:O5'	2.58	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:1905:C:O4'	22:DA:1928:A:H2	1.94	0.48
22:BA:545:U:H6	22:BA:546:U:O2'	1.95	0.48
22:BA:2820:A:C2'	22:BA:2821:A:OP1	2.61	0.48
22:BA:2103:C:C2'	22:BA:2104:C:H5'	2.42	0.48
11:AK:90:PRO:C	11:AK:92:ARG:H	2.16	0.48
37:BP:89:GLY:O	37:BP:112:ARG:HD3	2.13	0.48
22:DA:2540:C:H2'	22:DA:2541:A:H8	1.78	0.48
22:DA:469:G:OP2	26:DE:55:SER:HB3	2.13	0.48
48:D0:6:LYS:HG2	48:D0:7:PRO:O	2.13	0.48
29:BH:43:ASN:HD22	29:BH:43:ASN:N	2.11	0.48
22:BA:675:A:H4'	26:BE:62:GLN:HE22	1.77	0.48
34:BM:47:GLU:O	34:BM:48:ALA:C	2.51	0.48
1:CA:383:A:C8	1:CA:384:G:H1'	2.48	0.48
22:DA:263:G:H2'	22:DA:264:C:O4'	2.13	0.48
22:BA:1856:U:H2'	22:BA:1857:G:H5'	1.94	0.48
22:DA:2868:A:C6	22:DA:2869:G:C6	3.01	0.48
1:CA:1108:G:H5''	3:CC:175:HIS:ND1	2.28	0.48
5:CE:48:GLY:HA3	5:CE:66:ALA:HB2	1.94	0.48
22:BA:832:U:H2'	22:BA:833:A:C8	2.48	0.48
22:DA:2461:A:H1'	22:DA:2492:U:O2	2.13	0.48
40:BS:29:VAL:HG22	40:BS:51:LEU:HD11	1.94	0.48
8:CH:91:LEU:HB3	8:CH:112:ASP:OD2	2.13	0.48
26:BE:134:LEU:O	26:BE:134:LEU:HD12	2.13	0.48
13:AM:75:SER:O	13:AM:78:ARG:HB3	2.12	0.48
22:DA:2474:U:O4'	22:DA:2474:U:O2	2.30	0.48
40:BS:10:ALA:O	40:BS:100:THR:HB	2.12	0.48
22:BA:1576:U:O2'	22:BA:1577:C:H5'	2.13	0.48
1:CA:579:A:H2'	1:CA:580:C:C6	2.48	0.48
36:DO:8:ILE:H	36:DO:8:ILE:HD12	1.77	0.48
2:CB:186:VAL:O	2:CB:186:VAL:HG23	2.13	0.48
28:DG:135:ALA:O	28:DG:136:ASP:HB2	2.11	0.48
22:BA:149:A:H2'	22:BA:150:U:H6	1.77	0.48
38:BQ:88:GLU:OE1	38:BQ:88:GLU:O	2.31	0.48
37:BP:50:ARG:HG3	37:BP:57:ALA:O	2.13	0.48
39:DR:49:ILE:HG22	39:DR:54:VAL:CB	2.43	0.48
6:AF:6:ILE:HB	6:AF:62:MET:HB3	1.95	0.48
11:CK:27:ASN:N	11:CK:27:ASN:OD1	2.46	0.48
11:CK:91:GLY:O	11:CK:92:ARG:C	2.51	0.48
14:CN:12:ARG:HD3	14:CN:58:ARG:O	2.13	0.48
19:CS:50:VAL:CG1	19:CS:70:LEU:HB3	2.43	0.48
22:DA:2384:U:H5''	22:DA:2386:A:OP1	2.13	0.48
22:DA:2360:G:C1'	33:DL:60:ARG:HH21	2.27	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
33:DL:57:LEU:HA	33:DL:60:ARG:HG3	1.93	0.48
20:AT:33:LYS:O	20:AT:36:ALA:HB3	2.13	0.48
32:BK:18:ARG:HB2	32:BK:45:GLU:HG2	1.94	0.48
22:DA:1351:C:H2'	22:DA:1352:U:O4'	2.13	0.48
31:DJ:45:THR:C	31:DJ:47:HIS:H	2.15	0.48
17:AQ:51:GLU:O	17:AQ:52:CYS:O	2.31	0.48
30:DI:52:LEU:HD12	30:DI:53:PRO:CD	2.31	0.48
22:DA:183:C:N4	22:DA:184:C:C4	2.81	0.48
22:BA:264:C:O2'	22:BA:265:A:H2'	2.13	0.48
22:DA:1663:G:C6	22:DA:1992:G:N7	2.81	0.48
26:BE:187:VAL:HG12	26:BE:188:MET:N	2.27	0.48
1:AA:1282:C:H2'	1:AA:1283:U:H6	1.76	0.48
27:BF:109:ARG:O	27:BF:136:ILE:HG22	2.12	0.48
24:BC:12:ARG:HG3	24:BC:12:ARG:NH1	2.22	0.48
22:DA:2748:A:C2	22:DA:2749:A:C4	3.02	0.48
22:DA:28:A:C6	22:DA:29:U:C2	3.01	0.48
29:DH:24:GLY:O	29:DH:26:ALA:O	2.31	0.48
9:CI:53:LEU:O	9:CI:54:VAL:HG13	2.13	0.48
28:DG:84:LYS:HB2	28:DG:132:LEU:H	1.78	0.48
30:BI:120:ASP:HB3	30:BI:123:ALA:HB3	1.94	0.48
22:BA:1812:U:H2'	22:BA:1813:G:H8	1.78	0.48
31:DJ:99:ARG:HG3	31:DJ:102:GLU:CD	2.32	0.48
22:BA:1020:A:O5'	22:BA:1020:A:H8	1.97	0.48
1:AA:34:C:H2'	1:AA:35:G:H8	1.77	0.48
1:AA:188:C:O2	1:AA:188:C:C2'	2.60	0.48
11:AK:76:TYR:N	11:AK:76:TYR:CD1	2.81	0.48
11:AK:21:HIS:CE1	11:AK:34:THR:CG2	2.94	0.48
22:BA:445:C:H5''	38:BQ:2:ARG:HB2	1.95	0.48
22:DA:1324:G:C2	22:DA:1328:A:C6	3.01	0.48
19:CS:44:ILE:HD12	19:CS:63:ASP:HB2	1.95	0.48
27:DF:12:VAL:HG12	27:DF:16:MET:HG3	1.95	0.48
22:DA:984:A:HO2'	22:DA:985:C:P	2.33	0.48
42:BU:73:ASN:HA	42:BU:95:PHE:CE2	2.48	0.48
39:BR:18:GLN:O	39:BR:97:LYS:O	2.31	0.48
1:CA:177:G:O2'	1:CA:1448:C:H4'	2.12	0.48
22:DA:1667:G:O5'	22:DA:1667:G:H8	1.97	0.48
22:DA:2637:U:C2'	22:DA:2638:G:H5'	2.42	0.48
1:AA:830:G:H2'	1:AA:831:A:C8	2.46	0.48
10:AJ:70:HIS:H	10:AJ:70:HIS:CD2	2.31	0.48
22:BA:1857:G:C1'	22:BA:1858:A:OP2	2.61	0.48
9:CI:127:SER:O	9:CI:128:LYS:HB3	2.13	0.48
39:DR:2:TYR:O	39:DR:3:ALA:HB2	2.13	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:CA:858:G:C6	56:CA:1822:HOH:O	2.65	0.48
43:DV:44:HIS:NE2	43:DV:85:LYS:HD3	2.28	0.48
33:DL:103:ILE:H	33:DL:103:ILE:HD12	1.77	0.48
42:DU:11:ILE:HG21	42:DU:79:ALA:HB2	1.96	0.48
1:AA:51:A:H4'	1:AA:52:C:O5'	2.13	0.48
33:BL:19:LEU:HD23	33:BL:19:LEU:C	2.33	0.48
27:BF:128:SER:OG	27:BF:154:THR:HB	2.13	0.48
1:AA:471:U:H2'	1:AA:472:U:O4'	2.13	0.48
10:CJ:49:PHE:CE2	14:CN:73:LEU:HD13	2.48	0.48
34:BM:96:ILE:C	34:BM:96:ILE:HD12	2.33	0.48
22:BA:346:A:C2	22:BA:347:A:H1'	2.48	0.48
22:BA:996:A:H4'	38:BQ:91:ARG:HD2	1.95	0.48
24:DC:74:PRO:HG2	24:DC:96:LYS:HB2	1.94	0.48
22:DA:2298:A:H5'	22:DA:2322:A:O2'	2.13	0.48
22:DA:1346:G:H2'	22:DA:1347:A:C8	2.49	0.48
22:DA:2209:G:C2	22:DA:2216:G:C2	3.02	0.48
22:DA:2217:G:C4	22:DA:2218:G:C8	3.01	0.48
22:DA:300:A:H1'	22:DA:333:G:N2	2.29	0.48
48:D0:55:ALA:HB3	48:D0:56:LYS:NZ	2.28	0.48
37:DP:91:VAL:HG11	37:DP:96:LEU:HD21	1.94	0.48
22:DA:480:A:H3'	22:DA:481:G:C5'	2.43	0.48
22:DA:54:G:C5	22:DA:55:G:C8	3.02	0.48
3:CC:11:LEU:HA	3:CC:11:LEU:HD23	1.59	0.48
22:DA:1019:U:OP1	22:DA:1035:U:O2'	2.24	0.48
46:DY:44:LYS:NZ	46:DY:48:ARG:NE	2.61	0.48
22:BA:1777:U:O2'	22:BA:1778:U:H5'	2.13	0.48
1:CA:1213:A:C4	1:CA:1215:G:C8	3.01	0.48
27:DF:111:ARG:N	27:DF:111:ARG:HE	2.11	0.48
25:BD:12:THR:HG22	25:BD:13:ARG:H	1.64	0.48
23:BB:30:C:C2'	23:BB:31:C:H5'	2.39	0.48
8:AH:7:ALA:H	8:AH:76:ARG:HH12	1.61	0.48
1:AA:921:U:H2'	1:AA:922:G:O4'	2.13	0.48
22:DA:1682:G:HO2'	22:DA:1683:U:H6	1.46	0.48
16:AP:11:ALA:O	16:AP:12:LYS:C	2.51	0.48
29:DH:128:HIS:HB2	29:DH:144:VAL:HG22	1.94	0.48
22:DA:2772:C:O2	22:DA:2772:C:H2'	2.12	0.48
46:BY:6:LEU:O	46:BY:7:ARG:HB3	2.12	0.48
22:DA:767:U:O2'	22:DA:768:G:H5'	2.14	0.48
22:DA:1609:A:C6	22:DA:1616:A:C4	3.00	0.48
24:BC:16:VAL:N	24:BC:203:VAL:CG1	2.76	0.48
37:DP:63:ILE:O	37:DP:63:ILE:HG22	2.11	0.48
29:DH:80:ILE:HG13	29:DH:81:ALA:H	1.78	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
11:AK:22:ILE:HD11	11:AK:85:VAL:HG13	1.94	0.48
10:CJ:48:ARG:CZ	10:CJ:48:ARG:HB2	2.43	0.48
5:AE:132:PRO:HA	5:AE:135:VAL:HG13	1.95	0.48
33:BL:79:LEU:O	33:BL:81:ASP:O	2.31	0.48
1:AA:1226:C:C5	13:AM:102:LYS:HA	2.48	0.48
22:BA:1025:G:H4'	22:BA:1026:G:OP2	2.13	0.48
22:DA:1865:U:C4	22:DA:1875:G:C2	3.01	0.48
31:DJ:140:LEU:HD22	31:DJ:141:ASP:N	2.28	0.48
42:BU:3:LYS:HD3	42:BU:82:VAL:HB	1.94	0.48
47:DZ:28:LEU:HD23	47:DZ:28:LEU:N	2.28	0.48
22:DA:2845:U:H5''	37:DP:51:ASN:O	2.13	0.48
1:CA:223:A:H2'	1:CA:224:U:H6	1.78	0.48
10:AJ:36:VAL:HG13	10:AJ:76:ILE:HG12	1.95	0.48
26:BE:132:LYS:HB3	26:BE:132:LYS:HZ2	1.78	0.48
23:BB:46:A:C5	23:BB:47:C:C4	3.02	0.48
1:AA:471:U:O2'	1:AA:472:U:H5'	2.13	0.48
5:CE:107:GLY:O	5:CE:111:ARG:HB2	2.12	0.48
39:BR:37:GLU:N	39:BR:37:GLU:CD	2.65	0.48
4:CD:82:LYS:O	4:CD:83:GLY:O	2.31	0.48
27:DF:67:THR:O	27:DF:84:ILE:HG22	2.13	0.48
22:BA:415:A:N6	22:BA:2407:A:H61	2.11	0.48
1:CA:865:A:H2	1:CA:918:A:H4'	1.79	0.48
1:CA:286:C:H2'	1:CA:287:U:O4'	2.13	0.48
1:AA:1203:C:H4'	14:AN:66:THR:HG22	1.95	0.48
22:BA:112:U:H5'	46:BY:58:ASN:ND2	2.28	0.48
31:DJ:105:VAL:O	31:DJ:105:VAL:HG22	2.14	0.48
21:AU:45:LYS:HE3	21:AU:45:LYS:HA	1.95	0.48
47:BZ:19:HIS:O	47:BZ:22:THR:HB	2.14	0.48
39:BR:49:ILE:HG21	39:BR:53:PHE:H	1.79	0.48
22:DA:379:G:N1	22:DA:380:G:C4	2.82	0.48
44:BW:35:ILE:HG12	44:BW:35:ILE:O	2.13	0.48
1:CA:960:U:O2	1:CA:960:U:H2'	2.14	0.48
22:DA:2331:G:C2	22:DA:2385:C:N3	2.81	0.48
44:DW:37:VAL:HG23	44:DW:38:ARG:NH1	2.29	0.48
51:D3:31:ILE:HG21	51:D3:34:LYS:NZ	2.28	0.48
11:AK:124:LYS:O	21:AU:33:ARG:CZ	2.61	0.48
31:DJ:44:TYR:CD2	31:DJ:44:TYR:C	2.86	0.48
38:DQ:91:ARG:HG3	39:DR:11:GLN:NE2	2.28	0.48
1:CA:1071:C:H2'	1:CA:1072:G:H8	1.78	0.48
7:AG:114:SER:CB	7:AG:117:LEU:HG	2.30	0.48
40:DS:49:LYS:HB3	40:DS:49:LYS:NZ	2.29	0.48
22:DA:492:A:C2	40:DS:49:LYS:HE2	2.46	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:BD:119:ALA:HB2	25:BD:165:MET:CB	2.42	0.48
22:DA:55:G:C2	22:DA:116:C:C2	3.01	0.48
28:DG:90:GLY:HA3	28:DG:93:TYR:CZ	2.48	0.48
22:DA:1011:G:H4'	22:DA:1012:U:OP2	2.10	0.48
7:CG:30:MET:SD	7:CG:35:LYS:HB2	2.53	0.48
22:DA:112:U:H5'	46:DY:58:ASN:HD21	1.77	0.48
22:DA:141:G:H3'	22:DA:142:A:O4'	2.12	0.48
1:AA:407:U:H2'	1:AA:408:A:H8	1.77	0.48
22:DA:192:C:C4	22:DA:193:U:C2	3.01	0.48
35:DN:15:SER:HA	35:DN:18:GLN:HB3	1.95	0.48
22:DA:1275:A:C5	35:DN:16:HIS:CD2	3.00	0.48
1:CA:1133:G:N2	1:CA:1142:G:C5	2.82	0.48
1:AA:674:G:OP1	6:AF:51:ILE:HG13	2.13	0.48
1:CA:265:G:H5'	17:CQ:65:PRO:O	2.14	0.48
1:CA:390:U:O2'	1:CA:391:G:H5'	2.13	0.48
4:CD:154:VAL:O	4:CD:158:LEU:HD12	2.13	0.48
1:AA:95:C:H6	1:AA:95:C:H5''	1.78	0.48
22:DA:990:A:H61	39:DR:78:ARG:NH1	2.11	0.48
2:AB:146:SER:O	2:AB:147:LEU:HD23	2.14	0.48
27:DF:39:VAL:HG22	27:DF:49:LEU:HG	1.94	0.48
22:DA:46:G:N2	22:DA:47:C:C2	2.82	0.48
32:BK:113:MET:O	32:BK:114:LYS:C	2.52	0.48
22:DA:2201:G:C5	22:DA:2202:U:C5	3.01	0.48
11:AK:76:TYR:HD1	11:AK:76:TYR:N	2.11	0.48
41:BT:73:ARG:NH2	41:BT:73:ARG:HB3	2.28	0.48
22:BA:38:A:O2'	26:BE:43:THR:HA	2.13	0.48
46:DY:18:LEU:O	46:DY:18:LEU:HD13	2.13	0.48
14:AN:50:LEU:O	14:AN:52:ARG:N	2.47	0.48
28:DG:162:ARG:NH1	28:DG:168:VAL:HG21	2.27	0.48
22:DA:575:A:C2	22:DA:576:U:C5	3.01	0.48
1:AA:545:C:H5'	4:AD:68:GLU:CG	2.44	0.48
1:AA:1052:U:C5'	1:AA:1053:G:OP2	2.61	0.48
23:DB:77:U:C2'	23:DB:78:A:H5'	2.44	0.48
22:DA:852:U:H2'	22:DA:853:C:H6	1.78	0.48
1:AA:77:A:N6	1:AA:90:C:C4	2.81	0.48
42:DU:33:VAL:O	42:DU:34:ILE:HG13	2.12	0.48
14:AN:26:LEU:HA	14:AN:30:ILE:HD13	1.95	0.48
22:DA:754:U:H2'	22:DA:755:U:H6	1.77	0.48
22:BA:1106:G:C2	22:BA:1107:G:C8	3.01	0.48
1:AA:575:G:C6	1:AA:821:G:N7	2.82	0.48
22:DA:1573:G:H2'	22:DA:1574:C:H5'	1.95	0.48
22:BA:2383:G:H2'	22:BA:2384:U:H6	1.78	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:488:C:O2'	1:AA:489:C:H5'	2.13	0.48
1:CA:946:A:H2'	1:CA:947:G:H8	1.78	0.48
22:BA:1789:A:OP1	24:BC:220:ARG:HD3	2.13	0.48
25:BD:177:VAL:HG23	25:BD:177:VAL:O	2.13	0.48
22:DA:1833:C:H2'	22:DA:1834:U:H6	1.77	0.48
22:BA:2454:G:H1'	56:BA:3532:HOH:O	2.13	0.48
1:CA:677:U:H3	1:CA:713:G:H22	1.60	0.48
25:DD:122:VAL:HA	25:DD:127:PHE:H	1.78	0.48
22:DA:712:G:N2	22:DA:720:U:H1'	2.29	0.48
5:CE:125:LYS:HB2	5:CE:125:LYS:HE3	1.54	0.48
27:BF:128:SER:HA	27:BF:154:THR:HA	1.95	0.48
56:BA:3654:HOH:O	25:BD:140:HIS:CE1	2.64	0.48
22:DA:1614:A:H2'	22:DA:1615:C:H5'	1.94	0.48
3:AC:190:THR:C	3:AC:192:TYR:H	2.17	0.48
3:AC:188:ALA:O	3:AC:194:VAL:HA	2.12	0.48
22:BA:2223:G:C2'	22:BA:2224:G:H5'	2.43	0.48
22:BA:2233:U:H2'	22:BA:2234:G:C8	2.49	0.48
22:DA:543:G:N2	22:DA:551:G:C4	2.81	0.48
23:BB:109:A:C6	23:BB:110:C:C4	3.02	0.48
22:DA:2582:G:H2'	22:DA:2582:G:N3	2.28	0.48
38:BQ:86:SER:HB3	39:BR:51:VAL:HA	1.95	0.48
45:DX:30:PRO:HG2	45:DX:32:LEU:HD21	1.94	0.48
27:BF:35:LEU:HD12	27:BF:88:VAL:HB	1.96	0.48
36:DO:34:HIS:CD2	36:DO:65:THR:HG21	2.48	0.48
1:CA:976:G:N2	1:CA:1363:A:C4	2.81	0.48
25:BD:107:VAL:HG13	25:BD:203:VAL:HG23	1.95	0.48
22:DA:510:C:H2'	22:DA:511:U:C6	2.49	0.48
22:DA:1358:G:H2'	22:DA:1372:U:O4	2.14	0.48
22:DA:295:G:H2'	22:DA:295:G:N3	2.28	0.48
42:DU:3:LYS:O	42:DU:4:ILE:C	2.52	0.48
22:DA:2886:A:N7	48:D0:39:ARG:NE	2.61	0.48
22:DA:185:G:C5	22:DA:212:G:N2	2.81	0.48
1:CA:1123:U:O3'	10:CJ:38:GLY:HA3	2.14	0.48
24:DC:16:VAL:N	24:DC:203:VAL:CG1	2.73	0.48
4:CD:8:LEU:CD2	4:CD:21:LYS:HD2	2.43	0.48
22:DA:240:C:H5''	22:DA:623:C:OP1	2.13	0.48
8:AH:74:ILE:HD12	8:AH:127:TYR:O	2.14	0.48
22:DA:204:A:C5	22:DA:206:U:O4	2.66	0.48
22:DA:727:A:O2'	22:DA:728:G:C8	2.63	0.48
25:BD:151:THR:CG2	25:BD:152:PRO:HD3	2.36	0.48
25:DD:16:THR:HG23	25:DD:18:ASP:N	2.20	0.48
22:BA:2109:U:N3	22:BA:2181:U:C4	2.81	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:922:G:H2'	1:AA:923:A:C8	2.49	0.48
30:BI:104:GLN:O	30:BI:105:LEU:CB	2.61	0.48
3:AC:96:VAL:HG23	3:AC:97:PRO:O	2.14	0.48
22:DA:1526:C:N4	22:DA:1527:G:C6	2.81	0.48
1:AA:548:G:C8	1:AA:548:G:H5''	2.46	0.48
22:BA:1071:G:C8	22:BA:1089:A:N6	2.80	0.48
27:BF:42:ALA:HA	27:BF:45:ASP:O	2.13	0.48
2:CB:46:VAL:HG13	2:CB:47:PRO:CD	2.42	0.48
30:BI:53:PRO:O	30:BI:74:PRO:HD2	2.14	0.48
25:BD:201:LEU:HA	25:BD:201:LEU:HD12	1.61	0.48
27:DF:31:GLU:CA	27:DF:95:MET:HE1	2.44	0.48
31:BJ:105:VAL:HG23	31:BJ:109:LEU:CD1	2.41	0.48
22:DA:1737:G:C6	22:DA:1738:G:N1	2.82	0.48
1:AA:444:G:N2	1:AA:491:G:C4	2.81	0.48
22:BA:2756:U:H5''	52:B4:19:ARG:HG2	1.96	0.48
22:DA:2294:G:OP1	36:DO:10:ARG:HD3	2.13	0.48
3:CC:36:PHE:CE1	14:CN:91:GLU:HB3	2.48	0.48
1:AA:1319:A:C8	1:AA:1323:G:C5	3.01	0.48
1:AA:1329:A:C2'	1:AA:1330:U:H5'	2.44	0.48
34:BM:8:LYS:HD2	34:BM:8:LYS:N	2.19	0.48
22:DA:370:G:C6	22:DA:424:G:N7	2.81	0.48
51:D3:23:HIS:O	51:D3:46:LYS:HE3	2.13	0.48
22:DA:2371:G:C2	22:DA:2372:U:C6	3.02	0.48
28:BG:23:ILE:HD12	28:BG:23:ILE:N	2.28	0.48
1:AA:489:C:C2'	1:AA:490:C:H5'	2.43	0.48
1:CA:1330:U:H5'	13:CM:69:ARG:HH22	1.79	0.48
25:BD:39:ASP:OD2	25:BD:40:LEU:HD12	2.14	0.48
23:BB:77:U:H2'	23:BB:78:A:H5'	1.96	0.48
43:DV:3:THR:HA	43:DV:62:THR:O	2.13	0.48
11:AK:27:ASN:O	11:AK:56:LYS:HE3	2.14	0.48
22:DA:1099:G:C6	22:DA:1100:C:C2	3.01	0.48
7:AG:88:VAL:HG22	7:AG:89:GLU:N	2.27	0.48
22:BA:2676:C:O2	22:BA:2732:G:N2	2.46	0.48
27:BF:13:LYS:O	27:BF:17:THR:HG23	2.13	0.48
15:AO:41:HIS:CD2	15:AO:42:PHE:CE2	3.00	0.48
8:AH:124:ILE:O	8:AH:124:ILE:HG13	2.13	0.48
2:CB:128:LEU:O	2:CB:129:THR:C	2.52	0.48
1:AA:1221:G:H2'	1:AA:1222:G:H8	1.79	0.48
22:DA:2230:G:O3'	45:DX:29:LEU:HD12	2.13	0.48
49:D1:8:ILE:O	49:D1:21:THR:HA	2.13	0.48
22:DA:1394:U:H3'	22:DA:1394:U:C6	2.48	0.48
14:AN:83:VAL:HG12	14:AN:84:ARG:N	2.28	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:301:G:C2	22:DA:317:G:C4	3.01	0.48
22:DA:1153:C:H2'	22:DA:1154:G:H8	1.75	0.48
22:DA:996:A:OP2	38:DQ:91:ARG:NH1	2.47	0.48
2:AB:49:PHE:HB2	2:AB:53:LEU:CD2	2.43	0.48
22:DA:1092:C:H2'	22:DA:1093:G:H5'	1.94	0.48
22:DA:1059:G:O2'	30:DI:131:THR:HG21	2.13	0.48
22:DA:53:A:C8	22:DA:54:G:C8	3.01	0.48
1:AA:1253:G:H2'	1:AA:1254:A:H8	1.79	0.48
27:BF:174:PHE:CD1	27:BF:176:PHE:CE1	3.02	0.48
22:DA:2067:G:H4'	22:DA:2068:U:OP2	2.12	0.48
1:AA:1124:G:H2'	1:AA:1145:A:N6	2.27	0.48
1:CA:1239:A:H1'	1:CA:1241:G:N3	2.27	0.48
1:CA:1295:U:H2'	1:CA:1296:C:C6	2.48	0.48
22:DA:672:C:H3'	22:DA:672:C:C6	2.49	0.48
22:BA:1733:G:O2'	22:BA:1734:G:O5'	2.32	0.48
25:DD:107:VAL:HG13	25:DD:203:VAL:HG23	1.95	0.48
1:CA:134:G:H2'	1:CA:135:C:O4'	2.14	0.48
22:BA:277:G:H4'	22:BA:278:A:C8	2.49	0.48
7:CG:70:PRO:HG2	7:CG:98:LEU:HB2	1.96	0.48
28:DG:122:ALA:HB2	28:DG:132:LEU:HA	1.95	0.48
1:AA:95:C:O2'	1:AA:96:U:H5'	2.14	0.48
1:AA:345:C:C3'	37:BP:33:GLU:OE1	2.62	0.48
36:DO:89:ASP:O	36:DO:90:VAL:HG13	2.13	0.48
4:AD:117:VAL:HA	4:AD:122:ILE:CG1	2.43	0.48
22:DA:2285:C:O4'	22:DA:2288:A:C2	2.66	0.48
22:BA:286:U:H2'	22:BA:287:G:O4'	2.13	0.48
1:CA:216:U:H2'	1:CA:217:C:C6	2.48	0.48
1:CA:919:A:C2	1:CA:920:U:C5	3.02	0.48
1:AA:211:G:N1	1:AA:212:G:N3	2.62	0.48
2:CB:8:MET:SD	2:CB:9:LEU:HG	2.54	0.48
11:AK:86:LYS:HA	11:AK:113:THR:HG22	1.95	0.48
20:AT:5:SER:OG	20:AT:6:ALA:N	2.45	0.48
24:DC:92:LEU:HD13	24:DC:102:TYR:CE1	2.48	0.48
25:BD:120:GLY:HA2	25:BD:162:ALA:HB1	1.95	0.48
14:AN:14:ALA:O	14:AN:18:LYS:HG3	2.13	0.48
1:CA:1068:G:C2'	1:CA:1069:C:H5'	2.44	0.48
44:DW:49:ASN:HB3	44:DW:81:ILE:HG12	1.96	0.48
45:BX:29:LEU:CD2	45:BX:29:LEU:N	2.76	0.48
41:BT:25:GLU:C	41:BT:27:SER:N	2.67	0.48
9:AI:56:MET:CE	9:AI:57:VAL:H	2.27	0.48
1:CA:1048:G:C2	1:CA:1050:G:N7	2.82	0.48
1:AA:1323:G:H2'	1:AA:1324:A:C8	2.49	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:77:A:N6	1:AA:90:C:C5	2.81	0.48
26:BE:95:LYS:O	26:BE:96:VAL:CB	2.59	0.48
2:AB:139:GLU:O	2:AB:143:LEU:CD2	2.62	0.48
40:BS:69:LEU:HG	40:BS:107:VAL:HG13	1.94	0.48
22:DA:2626:C:H2'	22:DA:2627:G:O4'	2.13	0.48
15:CO:62:ARG:HH22	15:CO:88:ARG:HH21	1.61	0.48
22:BA:1013:C:H2'	22:BA:1014:A:H8	1.78	0.48
22:BA:2311:A:H1'	27:BF:78:ILE:CD1	2.44	0.48
22:BA:1419:A:C5	22:BA:1421:G:C4	3.01	0.48
4:AD:2:ARG:CZ	4:AD:114:ARG:CD	2.91	0.48
40:BS:42:LYS:O	40:BS:42:LYS:HD3	2.13	0.48
22:DA:1319:C:H1'	22:DA:1334:G:N2	2.28	0.48
15:AO:41:HIS:HD2	15:AO:42:PHE:CE2	2.32	0.48
51:D3:5:THR:O	51:D3:7:ARG:N	2.47	0.48
4:CD:77:GLU:HG3	4:CD:81:LEU:HD11	1.96	0.48
15:CO:78:THR:O	15:CO:82:GLU:HB2	2.13	0.48
22:BA:1754:A:C6	22:BA:1755:A:C6	3.02	0.48
22:DA:102:U:H3	46:DY:2:LYS:HB3	1.77	0.48
22:DA:540:C:O2'	22:DA:541:A:H5'	2.14	0.48
38:DQ:77:LYS:CE	38:DQ:116:LEU:HD11	2.44	0.48
22:DA:2797:U:O2	22:DA:2797:U:H2'	2.13	0.48
38:BQ:27:ARG:HH11	38:BQ:27:ARG:HG3	1.79	0.48
4:CD:104:MET:SD	4:CD:142:VAL:HG13	2.53	0.48
27:BF:97:GLU:O	27:BF:101:ARG:HG2	2.14	0.48
14:CN:61:ASN:HB2	14:CN:72:PHE:CZ	2.48	0.48
25:BD:106:LYS:N	25:BD:106:LYS:HD2	2.28	0.48
22:DA:226:A:C6	22:DA:227:A:N6	2.82	0.48
22:DA:2408:U:O2'	22:DA:2409:G:H8	1.97	0.48
22:DA:303:G:C6	22:DA:315:G:C6	3.01	0.48
1:CA:1073:U:H2'	1:CA:1074:G:C8	2.47	0.48
5:AE:155:LYS:HD2	5:AE:155:LYS:N	2.28	0.48
35:DN:73:ASN:O	35:DN:76:VAL:HG22	2.14	0.48
22:DA:349:U:H2'	22:DA:350:G:H8	1.78	0.48
26:DE:58:LYS:O	26:DE:60:TRP:HD1	1.97	0.48
22:DA:728:G:C2	22:DA:730:A:C4	3.01	0.48
1:CA:752:G:C2'	1:CA:753:A:OP2	2.62	0.48
25:BD:124:ARG:HG2	25:BD:125:TRP:CD1	2.49	0.48
1:CA:373:A:N3	1:CA:374:A:C8	2.81	0.48
22:BA:2151:U:C4	22:BA:2152:G:N7	2.82	0.48
22:DA:1716:U:C6	22:DA:1743:G:N2	2.82	0.48
22:BA:26:G:C6	22:BA:27:G:N1	2.81	0.48
22:DA:2808:G:N2	22:DA:2891:U:C6	2.81	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:DJ:94:ALA:O	31:DJ:95:ARG:HB3	2.14	0.48
11:CK:33:ILE:HD11	11:CK:69:CYS:O	2.12	0.48
22:BA:2772:C:H2'	22:BA:2773:C:C6	2.49	0.48
1:CA:345:C:H4'	1:CA:346:G:H5''	1.95	0.48
20:CT:4:LYS:HE3	20:CT:5:SER:H	1.79	0.48
3:CC:85:LYS:O	3:CC:86:LEU:HD23	2.14	0.48
22:DA:16:C:O2'	22:DA:17:G:H5'	2.14	0.48
33:BL:57:LEU:C	33:BL:59:ARG:H	2.16	0.48
6:AF:97:THR:O	6:AF:98:GLU:CG	2.61	0.48
22:DA:1649:G:O2'	35:DN:106:ASP:OD2	2.31	0.48
22:DA:1754:A:C6	22:DA:1755:A:C6	3.01	0.48
39:BR:76:LYS:HD2	39:BR:85:LYS:HD2	1.95	0.48
22:DA:2663:G:H2'	22:DA:2664:G:H8	1.78	0.48
32:BK:51:LYS:HE2	32:BK:95:ILE:HG12	1.95	0.48
1:AA:1449:C:H2'	1:AA:1450:U:C5'	2.44	0.48
37:DP:37:LYS:O	37:DP:38:ARG:HB3	2.13	0.48
1:AA:167:A:H2'	1:AA:168:G:O4'	2.13	0.48
23:DB:63:C:C4	23:DB:64:G:N7	2.82	0.48
22:DA:1335:C:N4	56:DA:3409:HOH:O	2.40	0.48
6:AF:41:ASP:C	6:AF:43:GLY:H	2.17	0.48
23:BB:94:A:C2'	23:BB:95:U:H5'	2.43	0.48
22:BA:2667:C:H2'	22:BA:2668:G:O4'	2.13	0.48
23:BB:24:G:C6	23:BB:56:G:C2	3.01	0.48
22:BA:1485:U:C2	22:BA:1505:A:C2	3.01	0.48
27:DF:71:LYS:HG3	27:DF:73:VAL:H	1.79	0.48
41:BT:8:LEU:N	41:BT:8:LEU:HD23	2.27	0.48
10:CJ:8:ILE:HG22	10:CJ:100:ILE:HG12	1.95	0.48
34:DM:15:GLY:O	34:DM:16:ARG:HB3	2.14	0.48
27:DF:27:VAL:O	27:DF:27:VAL:HG23	2.13	0.48
4:AD:176:LYS:N	4:AD:176:LYS:HD3	2.28	0.48
5:AE:10:LEU:H	5:AE:10:LEU:HD23	1.79	0.48
43:BV:65:VAL:O	43:BV:65:VAL:HG22	2.13	0.48
22:DA:736:C:O5'	22:DA:736:C:H6	1.97	0.48
13:CM:2:ARG:O	13:CM:3:ILE:HB	2.14	0.48
26:DE:25:GLU:HG2	33:DL:6:LEU:HD23	1.96	0.48
29:BH:31:VAL:O	29:BH:32:PRO:C	2.51	0.48
23:DB:14:U:H3'	23:DB:15:A:H5''	1.95	0.48
23:DB:16:G:O6	23:DB:69:G:C6	2.66	0.48
1:CA:1255:G:HO2'	1:CA:1258:G:H1'	1.79	0.48
44:BW:40:ARG:HB2	44:BW:56:HIS:ND1	2.27	0.48
44:BW:42:THR:HG22	44:BW:43:LYS:HZ2	1.78	0.48
1:CA:1319:A:N6	1:CA:1323:G:N3	2.62	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
28:BG:96:ALA:O	28:BG:97:VAL:CB	2.61	0.48
22:DA:2337:G:C3'	22:DA:2338:C:H5'	2.43	0.48
44:DW:31:LEU:C	44:DW:33:GLY:H	2.17	0.48
22:DA:511:U:H3'	22:DA:512:G:O4'	2.14	0.48
2:AB:95:TRP:CH2	2:AB:99:MET:HG2	2.49	0.48
11:AK:124:LYS:HE3	21:AU:34:ARG:HG2	1.96	0.48
22:DA:320:A:H8	22:DA:320:A:O5'	1.97	0.48
2:CB:100:LEU:C	2:CB:102:ASN:H	2.16	0.48
22:DA:1058:U:H2'	22:DA:1059:G:O4'	2.13	0.48
22:DA:508:A:N6	40:DS:9:HIS:CE1	2.68	0.48
22:DA:49:A:C8	22:DA:51:G:N2	2.82	0.48
22:DA:868:U:C4	22:DA:869:G:N7	2.81	0.48
31:BJ:136:GLN:N	31:BJ:137:PRO:CD	2.76	0.48
22:BA:262:A:C2'	22:BA:263:G:H5'	2.43	0.48
22:DA:740:C:O2'	22:DA:741:U:H5'	2.13	0.48
22:DA:348:A:H2'	22:DA:349:U:C6	2.49	0.48
22:DA:237:C:N3	22:DA:238:C:C5	2.82	0.48
26:DE:24:ASN:HB3	26:DE:27:LEU:HB3	1.95	0.48
22:DA:204:A:C4	22:DA:206:U:O4	2.67	0.48
22:BA:569:U:C4	22:BA:570:G:C6	3.01	0.48
24:BC:106:PRO:HA	24:BC:141:HIS:HE2	1.78	0.48
22:BA:1081:U:O2'	30:BI:117:THR:O	2.26	0.48
22:BA:2136:G:C2'	22:BA:2137:U:C5	2.97	0.48
27:DF:146:ASP:HB3	27:DF:147:ARG:H	1.50	0.48
33:DL:9:ALA:HB3	33:DL:12:SER:CB	2.34	0.48
1:CA:787:A:C2	1:CA:796:C:N3	2.82	0.48
11:CK:126:ARG:O	21:CU:33:ARG:NH2	2.47	0.48
1:CA:495:A:H4'	1:CA:496:A:O5'	2.12	0.48
3:CC:38:VAL:O	3:CC:42:LEU:HD23	2.13	0.48
1:AA:1004:A:H2'	1:AA:1005:A:O4'	2.13	0.48
33:DL:123:ARG:HA	33:DL:143:GLU:HB3	1.95	0.48
27:DF:103:ILE:HG12	27:DF:175:PRO:HD3	1.95	0.48
22:DA:39:G:C2	22:DA:40:U:C4	3.02	0.48
46:DY:31:GLN:C	46:DY:33:ALA:H	2.15	0.48
28:BG:10:VAL:O	28:BG:10:VAL:CG2	2.62	0.48
3:CC:67:ILE:H	3:CC:102:ILE:HA	1.79	0.48
1:CA:952:U:H5	13:CM:102:LYS:HZ1	1.57	0.48
28:DG:53:PRO:HB3	28:DG:61:TRP:H	1.78	0.48
25:DD:4:LEU:HD23	25:DD:101:PHE:CZ	2.47	0.48
2:CB:19:THR:HB	2:CB:37:VAL:HA	1.95	0.48
22:DA:443:A:N6	26:DE:36:ALA:HB1	2.27	0.48
22:DA:2700:A:C2	22:DA:2708:G:C2	3.02	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:CH:102:VAL:CG2	8:CH:125:ILE:HB	2.44	0.48
9:AI:54:VAL:O	9:AI:55:ASP:O	2.31	0.48
22:BA:2747:G:C2	22:BA:2756:U:C5	3.02	0.48
5:AE:131:ASN:O	5:AE:135:VAL:HG12	2.13	0.48
15:CO:62:ARG:HH22	15:CO:88:ARG:NH2	2.12	0.48
22:DA:536:G:H2'	22:DA:537:G:H5'	1.94	0.48
5:CE:157:GLY:HA3	8:CH:63:LYS:HE3	1.96	0.48
22:DA:254:G:N7	51:D3:4:LYS:CE	2.77	0.48
23:DB:29:A:C6	23:DB:30:C:N4	2.82	0.48
20:CT:72:ALA:C	20:CT:74:HIS:H	2.17	0.48
1:CA:29:U:H5'	1:CA:296:U:OP1	2.13	0.48
35:DN:21:PHE:HE2	35:DN:43:GLU:HB3	1.78	0.48
43:BV:39:ALA:C	43:BV:40:ILE:HD13	2.34	0.48
47:DZ:40:THR:C	47:DZ:42:ALA:H	2.16	0.48
24:BC:219:VAL:O	24:BC:224:MET:HE3	2.14	0.48
25:BD:140:HIS:CD2	25:BD:140:HIS:N	2.81	0.48
22:BA:2667:C:O2	28:BG:108:PHE:HB3	2.13	0.48
1:AA:153:C:C2'	1:AA:154:U:H5'	2.44	0.48
22:BA:1274:A:H2	22:BA:1644:C:O2	1.97	0.48
22:BA:376:G:O2'	22:BA:377:G:H5'	2.14	0.48
27:DF:3:LEU:O	27:DF:6:TYR:HB3	2.14	0.48
1:CA:288:A:H2'	1:CA:289:G:H4'	1.94	0.48
30:BI:95:ASP:O	30:BI:97:VAL:HG23	2.13	0.48
46:BY:21:LEU:HD23	46:BY:21:LEU:N	2.29	0.48
18:AR:67:LEU:HA	18:AR:67:LEU:HD23	1.70	0.48
23:DB:109:A:C2	23:DB:110:C:N3	2.82	0.48
44:BW:39:GLN:HG2	44:BW:40:ARG:N	2.28	0.48
22:BA:271:G:C4	22:BA:272:A:N7	2.82	0.48
22:DA:1439:A:N7	22:DA:1440:U:N1	2.62	0.48
22:DA:2298:A:N1	22:DA:2321:U:C5	2.82	0.48
22:DA:834:G:H1'	22:DA:2358:A:C2	2.49	0.48
22:DA:420:C:H2'	22:DA:421:C:H6	1.78	0.48
22:DA:1387:A:C4	22:DA:1388:G:N7	2.81	0.48
22:DA:1385:A:C6	22:DA:1403:A:C5	3.01	0.48
22:DA:1612:C:C2'	22:DA:1613:G:O5'	2.62	0.48
5:CE:121:ASN:O	5:CE:121:ASN:ND2	2.46	0.48
22:DA:966:G:H5'	22:DA:2272:U:O2	2.14	0.48
1:CA:821:G:H2'	1:CA:822:U:C6	2.49	0.48
1:CA:1297:G:C8	1:CA:1297:G:OP2	2.67	0.48
22:DA:237:C:C4	22:DA:238:C:H5	2.31	0.48
24:BC:104:LEU:O	24:BC:105:ALA:CB	2.58	0.48
1:CA:1137:C:H4'	1:CA:1138:G:N1	2.28	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:AB:24:PRO:C	2:AB:26:MET:N	2.67	0.48
22:DA:1788:C:C2'	22:DA:1789:A:H5'	2.43	0.48
24:BC:190:THR:CG2	24:BC:191:LEU:N	2.76	0.48
9:AI:129:ARG:HA	9:AI:129:ARG:NH1	2.29	0.48
34:DM:34:LYS:HB2	34:DM:131:VAL:CG2	2.44	0.48
1:CA:391:G:H5''	16:CP:8:ARG:CD	2.44	0.48
1:CA:530:G:H5''	1:CA:531:U:H5''	1.96	0.48
22:DA:1568:G:N3	24:DC:57:HIS:HE1	2.11	0.48
21:CU:35:GLU:CG	21:CU:36:PHE:N	2.77	0.48
1:AA:393:A:O2'	1:AA:394:G:H5'	2.14	0.48
35:DN:35:LYS:NZ	35:DN:112:TYR:CE1	2.75	0.48
22:BA:1714:U:C2'	22:BA:1714:U:O2	2.57	0.48
1:AA:1371:G:OP1	9:AI:13:SER:HB3	2.13	0.48
4:AD:11:SER:HA	4:AD:18:LEU:CD1	2.41	0.48
22:DA:1930:G:HO2'	22:DA:1968:G:H1	1.57	0.48
29:DH:84:ALA:HB3	29:DH:148:ALA:CB	2.43	0.48
26:DE:149:ILE:HG12	26:DE:149:ILE:O	2.14	0.48
22:BA:2592:G:C6	22:BA:2593:U:C4	3.01	0.48
22:DA:1798:U:C5	24:DC:270:ARG:NH1	2.82	0.48
1:AA:1453:G:N2	1:AA:1454:G:C8	2.82	0.48
22:DA:1737:G:N7	22:DA:1738:G:O6	2.46	0.48
3:CC:36:PHE:HE1	14:CN:91:GLU:OE1	1.96	0.48
22:BA:320:A:HO2'	22:BA:322:A:H8	1.62	0.48
1:AA:1348:U:O2'	1:AA:1349:A:O4'	2.32	0.48
1:AA:1374:A:H2'	1:AA:1375:A:H8	1.79	0.48
7:CG:124:SER:C	7:CG:126:ALA:H	2.17	0.48
1:AA:192:A:H2'	20:AT:54:GLN:HE22	1.79	0.48
1:CA:770:C:H1'	1:CA:899:C:H42	1.79	0.48
22:DA:743:A:OP1	25:DD:135:GLY:HA2	2.13	0.48
10:AJ:10:LEU:O	10:AJ:71:LEU:HA	2.13	0.48
26:BE:48:THR:O	26:BE:50:ALA:N	2.47	0.48
1:AA:725:G:O2'	1:AA:726:C:H5'	2.13	0.48
23:BB:66:A:C2	23:BB:108:A:C2	3.01	0.48
22:DA:1465:G:H2'	22:DA:1466:U:C6	2.49	0.48
1:AA:1520:C:H2'	1:AA:1521:C:H6	1.79	0.48
47:DZ:43:ILE:HD12	47:DZ:44:ARG:N	2.29	0.48
1:AA:1018:G:N3	1:AA:1018:G:H2'	2.28	0.48
22:DA:382:A:H2'	22:DA:383:C:C5'	2.44	0.48
22:BA:2667:C:C2'	22:BA:2668:G:H5'	2.44	0.48
30:BI:95:ASP:O	30:BI:97:VAL:N	2.46	0.48
24:DC:202:ARG:HE	24:DC:204:LEU:HD21	1.79	0.48
40:BS:39:THR:HG22	40:BS:44:ALA:HB2	1.95	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
15:CO:69:LEU:O	15:CO:69:LEU:HD13	2.14	0.48
47:DZ:32:GLY:C	47:DZ:34:THR:H	2.17	0.48
16:AP:28:ARG:HE	16:AP:29:ASN:HD21	1.60	0.48
35:BN:38:LEU:O	35:BN:38:LEU:HD12	2.13	0.48
28:DG:19:ASN:N	28:DG:19:ASN:HD22	2.11	0.48
6:CF:20:GLY:HA2	6:CF:23:GLU:HG2	1.94	0.48
1:AA:436:C:O2'	1:AA:437:U:H5'	2.14	0.48
1:AA:1088:G:H21	1:AA:1167:A:H62	1.62	0.48
1:AA:763:G:H2'	1:AA:764:C:C6	2.48	0.48
44:BW:67:LYS:O	44:BW:67:LYS:HE2	2.13	0.48
1:CA:981:U:O2'	14:CN:60:ARG:NH1	2.46	0.48
1:CA:707:U:H4'	11:CK:21:HIS:CD2	2.48	0.48
32:BK:17:ARG:HB3	32:BK:45:GLU:HB3	1.96	0.48
4:AD:34:GLU:O	4:AD:36:ALA:N	2.43	0.48
22:DA:301:G:O5'	42:DU:81:ARG:NH1	2.46	0.48
38:DQ:57:ARG:C	38:DQ:59:LEU:H	2.15	0.48
22:DA:503:A:N3	22:DA:506:G:C8	2.82	0.48
22:DA:504:A:HO2'	22:DA:505:A:P	2.36	0.48
34:DM:27:SER:N	34:DM:66:ARG:NH2	2.49	0.48
22:DA:2443:C:C2	22:DA:2444:G:C8	3.02	0.48
22:DA:138:U:H2'	22:DA:140:C:C1'	2.34	0.48
1:CA:1140:C:O2'	1:CA:1141:C:H6	1.93	0.48
28:BG:45:ALA:O	28:BG:46:ASP:CB	2.62	0.48
25:BD:151:THR:CG2	25:BD:152:PRO:N	2.76	0.48
3:AC:119:ILE:O	3:AC:123:LEU:HG	2.14	0.48
7:CG:9:ARG:HD3	7:CG:24:LYS:HZ1	1.79	0.48
22:DA:364:C:H2'	22:DA:365:U:O4'	2.14	0.48
15:CO:63:ARG:O	15:CO:65:LEU:N	2.46	0.48
22:DA:2766:A:N3	22:DA:2766:A:H2'	2.29	0.48
22:BA:1414:C:C4	22:BA:1415:U:C5	3.00	0.48
28:BG:59:ASP:O	28:BG:60:GLY:C	2.51	0.48
1:CA:1361:G:H2'	1:CA:1362:A:C5'	2.39	0.48
47:BZ:7:THR:HG22	47:BZ:32:GLY:HA2	1.96	0.48
1:AA:706:A:O2'	11:AK:30:ILE:HD11	2.14	0.48
1:CA:951:G:H2'	1:CA:952:U:C6	2.49	0.48
1:CA:350:G:C6	1:CA:351:G:O6	2.67	0.48
22:BA:2848:G:H1'	22:BA:2867:G:N2	2.29	0.48
22:BA:460:A:P	50:B2:41:ARG:HH12	2.37	0.48
4:CD:69:ARG:HG3	4:CD:69:ARG:NH1	2.28	0.48
22:DA:1430:G:H2'	22:DA:1431:A:C8	2.48	0.48
5:AE:136:VAL:O	5:AE:137:ARG:CB	2.62	0.48
1:AA:1346:A:N1	1:AA:1374:A:H5''	2.29	0.48

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:2531:A:H4'	28:DG:156:TYR:CE1	2.49	0.48
22:DA:526:A:C6	22:DA:2626:C:H4'	2.49	0.48
37:BP:103:THR:HG23	37:BP:103:THR:O	2.14	0.48
1:AA:1136:C:C2'	1:AA:1136:C:O2	2.61	0.48
1:CA:510:A:H5''	1:CA:511:C:P	2.54	0.48
43:DV:69:GLU:C	43:DV:70:ILE:HD13	2.33	0.48
22:DA:3:U:C4	22:DA:4:U:C4	3.02	0.48
47:BZ:43:ILE:C	47:BZ:43:ILE:HD12	2.33	0.48
8:CH:37:ASN:O	8:CH:41:GLU:HG2	2.14	0.48
22:DA:155:A:H2'	22:DA:156:A:C8	2.49	0.48
1:AA:1533:C:H3'	1:AA:1534:A:C5'	2.43	0.48
22:BA:190:A:C4	22:BA:207:A:C2	3.02	0.48
1:AA:1381:U:O2'	1:AA:1382:C:H6	1.96	0.48
18:CR:40:PRO:HB2	18:CR:42:ARG:HG3	1.95	0.48
22:BA:197:A:N6	22:BA:2430:A:O2'	2.41	0.48
1:AA:186:C:H4'	20:AT:75:LYS:HG3	1.95	0.48
5:AE:77:ASN:CG	5:AE:78:GLY:H	2.17	0.48
6:CF:72:ASP:O	6:CF:75:GLU:HB2	2.14	0.48
25:BD:166:GLY:O	25:BD:167:ASN:HB3	2.13	0.48
22:BA:2243:U:O2	22:BA:2434:A:C2	2.66	0.48
30:BI:93:ASN:OD1	30:BI:136:GLY:HA2	2.13	0.48
3:AC:71:ARG:O	3:AC:74:ILE:HG22	2.13	0.48
2:CB:111:LYS:C	2:CB:113:LEU:H	2.17	0.48
40:DS:74:ILE:HG12	40:DS:74:ILE:O	2.14	0.48
36:DO:56:LYS:HD3	36:DO:56:LYS:O	2.13	0.48
22:DA:1647:U:H3'	22:DA:1647:U:OP2	2.14	0.48
12:CL:36:VAL:HG23	12:CL:36:VAL:O	2.13	0.48
13:CM:32:ILE:O	13:CM:32:ILE:HD13	2.14	0.48
38:DQ:90:ASP:O	38:DQ:94:LEU:HB2	2.13	0.48
1:CA:949:A:C2	1:CA:1233:G:C2	3.02	0.48
22:BA:1070:A:C2	22:BA:1097:U:H4'	2.49	0.47
22:BA:1079:C:C4	22:BA:1080:A:N7	2.82	0.47
38:DQ:87:VAL:CG2	39:DR:52:PRO:HD3	2.23	0.47
23:DB:65:U:H3'	23:DB:108:A:H62	1.77	0.47
11:CK:92:ARG:HH11	11:CK:92:ARG:HG3	1.77	0.47
21:CU:19:LYS:C	21:CU:21:SER:H	2.17	0.47
36:DO:34:HIS:O	36:DO:35:ILE:HG12	2.13	0.47
1:CA:983:A:OP1	14:CN:8:ARG:NH2	2.47	0.47
22:DA:1515:A:H2'	22:DA:1516:G:O4'	2.14	0.47
22:DA:1550:C:O2'	22:DA:1551:A:H5'	2.13	0.47
22:DA:2319:G:O2'	22:DA:2320:U:O5'	2.32	0.47
1:CA:1157:A:C4'	1:CA:1158:C:O5'	2.43	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:419:U:H5''	56:DA:3233:HOH:O	2.12	0.47
22:DA:1386:C:HO2'	22:DA:1387:A:H8	1.61	0.47
41:DT:18:GLU:HA	41:DT:22:THR:HG21	1.95	0.47
22:DA:160:A:H1'	22:DA:2208:C:O2'	2.14	0.47
4:AD:29:THR:HG22	4:AD:30:LYS:N	2.29	0.47
5:AE:153:ALA:HA	5:AE:156:ARG:CB	2.44	0.47
5:AE:153:ALA:O	5:AE:154:ALA:C	2.52	0.47
8:AH:20:ASN:HA	8:AH:64:TYR:OH	2.14	0.47
33:BL:110:VAL:HG12	33:BL:111:ILE:N	2.29	0.47
1:CA:112:G:N3	1:CA:330:C:N4	2.62	0.47
22:DA:478:A:N6	22:DA:480:A:C6	2.82	0.47
31:BJ:56:VAL:HG12	31:BJ:57:LEU:H	1.75	0.47
10:CJ:65:TYR:HD2	14:CN:96:LYS:O	1.97	0.47
35:DN:56:LYS:HA	35:DN:84:GLY:CA	2.44	0.47
46:DY:58:ASN:O	46:DY:61:ALA:HB2	2.14	0.47
26:DE:184:ASP:O	26:DE:185:LYS:HG3	2.14	0.47
22:DA:202:U:H5''	22:DA:203:A:OP2	2.14	0.47
22:DA:583:G:C6	22:DA:584:C:C4	3.02	0.47
1:CA:1133:G:N1	1:CA:1142:G:C6	2.82	0.47
41:DT:50:LEU:HD23	41:DT:51:PHE:N	2.21	0.47
24:BC:69:ASN:O	24:BC:70:LYS:C	2.52	0.47
3:CC:55:VAL:O	3:CC:56:ILE:HG13	2.14	0.47
2:AB:112:ARG:HG2	2:AB:116:LEU:HD23	1.95	0.47
1:AA:1409:C:C2'	1:AA:1410:A:H5'	2.44	0.47
5:CE:39:GLY:HA2	5:CE:44:ARG:O	2.14	0.47
14:AN:44:VAL:HG23	14:AN:45:LEU:N	2.24	0.47
22:DA:2497:A:O5'	22:DA:2497:A:H8	1.97	0.47
22:DA:963:U:O2'	22:DA:964:C:P	2.72	0.47
22:BA:36:G:O2'	22:BA:450:G:H2'	2.14	0.47
12:AL:85:ARG:HH21	12:AL:87:LYS:HD2	1.77	0.47
1:AA:858:G:C2'	1:AA:859:G:H5'	2.44	0.47
22:DA:389:G:C6	22:DA:2413:G:O2'	2.66	0.47
22:DA:1519:G:N1	22:DA:1520:U:C2	2.82	0.47
4:AD:61:ARG:HH21	4:AD:67:LEU:HD23	1.79	0.47
12:CL:72:ASN:HD21	12:CL:104:SER:H	1.61	0.47
6:CF:80:PHE:N	6:CF:80:PHE:CD1	2.81	0.47
28:BG:66:THR:O	28:BG:70:LEU:HG	2.14	0.47
36:DO:11:ALA:HB2	36:DO:96:GLY:N	2.29	0.47
33:BL:59:ARG:HA	51:B3:12:ARG:NH2	2.28	0.47
1:AA:433:G:O2'	1:AA:434:U:H5'	2.13	0.47
51:B3:35:LYS:O	51:B3:40:LYS:HE2	2.14	0.47
1:CA:678:U:H2'	1:CA:679:C:C6	2.49	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:2728:U:O2'	22:DA:2729:G:H8	1.97	0.47
27:BF:110:ILE:O	27:BF:111:ARG:C	2.52	0.47
22:BA:1959:G:H2'	22:BA:1960:A:O5'	2.14	0.47
1:AA:650:G:N2	1:AA:651:C:H1'	2.28	0.47
22:DA:2550:G:N2	22:DA:2559:C:O2	2.47	0.47
22:DA:1865:U:O4	22:DA:1875:G:C2	2.67	0.47
7:AG:21:LEU:HD23	7:AG:24:LYS:HD2	1.95	0.47
12:CL:33:CYS:HA	12:CL:54:VAL:HA	1.96	0.47
38:DQ:111:LYS:CE	39:DR:48:LYS:HD3	2.44	0.47
22:BA:1434:A:H2'	22:BA:1435:G:C8	2.49	0.47
23:BB:34:A:C2'	23:BB:35:C:OP2	2.61	0.47
22:BA:499:U:O4	22:BA:500:G:C6	2.67	0.47
37:DP:104:GLY:O	37:DP:105:LYS:HB2	2.14	0.47
1:CA:957:U:O2'	1:CA:958:A:N7	2.40	0.47
1:AA:691:G:H2'	1:AA:692:U:C6	2.49	0.47
22:BA:1728:C:O2'	22:BA:1729:U:C6	2.67	0.47
22:DA:841:G:O2'	22:DA:842:U:H5'	2.13	0.47
33:DL:3:LEU:O	33:DL:4:ASN:C	2.52	0.47
22:DA:1969:A:H2'	22:DA:1972:G:H21	1.79	0.47
22:DA:2464:G:H2'	22:DA:2465:C:O4'	2.14	0.47
1:CA:1060:U:H5'	10:CJ:53:ILE:HG12	1.96	0.47
44:BW:26:GLY:O	44:BW:27:GLY:O	2.32	0.47
22:DA:2306:C:H42	27:DF:150:GLY:N	2.12	0.47
22:BA:634:C:O5'	22:BA:634:C:H6	1.97	0.47
1:CA:59:A:H2'	1:CA:59:A:N3	2.29	0.47
1:CA:1017:U:H2'	1:CA:1017:U:O2	2.13	0.47
22:DA:2417:C:H2'	22:DA:2418:A:C8	2.49	0.47
1:AA:587:G:H4'	8:AH:3:GLN:HA	1.96	0.47
23:DB:6:G:H4'	23:DB:28:C:H4'	1.95	0.47
1:CA:1221:G:H5'	19:CS:35:ARG:NE	2.29	0.47
27:DF:30:VAL:HG13	27:DF:168:LEU:HD23	1.96	0.47
1:AA:429:U:H1'	1:AA:430:A:H5''	1.95	0.47
22:DA:335:C:O2'	22:DA:336:C:O5'	2.32	0.47
25:DD:118:PHE:O	25:DD:119:ALA:HB3	2.13	0.47
5:AE:153:ALA:CA	5:AE:156:ARG:HB2	2.43	0.47
17:AQ:46:HIS:HB2	17:AQ:66:LEU:CD1	2.43	0.47
22:DA:53:A:N7	22:DA:54:G:C5	2.82	0.47
22:DA:108:G:P	22:DA:293:U:HO2'	2.37	0.47
22:DA:671:C:O2'	22:DA:672:C:P	2.72	0.47
1:AA:1460:C:N4	1:AA:1461:G:C6	2.82	0.47
45:DX:33:HIS:O	45:DX:34:SER:O	2.32	0.47
43:DV:80:HIS:NE2	43:DV:83:LYS:HB2	2.30	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:CI:90:ASP:CB	9:CI:93:LEU:HD23	2.37	0.47
32:BK:70:ARG:HD2	32:BK:76:VAL:HG22	1.96	0.47
7:AG:86:VAL:HG13	7:AG:87:PRO:HD2	1.95	0.47
22:DA:2457:U:C2'	22:DA:2458:G:H5'	2.44	0.47
25:BD:189:VAL:O	25:BD:191:GLY:N	2.40	0.47
5:CE:56:PRO:HG2	5:CE:57:ALA:H	1.79	0.47
30:BI:89:SER:OG	30:BI:135:MET:HA	2.15	0.47
1:CA:472:U:H2'	1:CA:472:U:O2	2.13	0.47
22:DA:273:G:N2	22:DA:365:U:O2	2.45	0.47
1:CA:573:A:N3	1:CA:883:C:O2'	2.44	0.47
22:BA:1820:U:C2	24:BC:200:MET:HB2	2.49	0.47
22:DA:2571:U:C4	22:DA:2574:G:H8	2.29	0.47
14:AN:15:LEU:HD23	14:AN:18:LYS:CE	2.44	0.47
1:CA:952:U:C5	13:CM:102:LYS:NZ	2.81	0.47
1:CA:1454:G:O2'	1:CA:1455:G:O4'	2.31	0.47
26:DE:37:ALA:HA	26:DE:40:ARG:HB3	1.95	0.47
7:CG:59:GLU:HG3	7:CG:60:ALA:H	1.75	0.47
3:CC:149:LYS:CG	3:CC:168:ARG:HB2	2.42	0.47
22:DA:1734:G:H2'	22:DA:1735:A:H8	1.78	0.47
29:DH:4:ILE:HG22	29:DH:5:LEU:N	2.29	0.47
4:CD:53:GLN:CB	4:CD:202:LEU:HD12	2.42	0.47
22:BA:877:A:C6	22:BA:899:A:C6	3.02	0.47
22:DA:1649:G:N1	22:DA:2009:A:C6	2.82	0.47
22:BA:2531:A:P	28:BG:174:LYS:HG3	2.53	0.47
22:DA:2506:U:C3'	22:DA:2506:U:C6	2.96	0.47
40:DS:33:LEU:HA	40:DS:36:LEU:HD23	1.96	0.47
32:BK:13:ASN:O	32:BK:15:GLY:N	2.47	0.47
22:BA:2471:A:C2'	22:BA:2472:G:H5'	2.43	0.47
48:D0:32:THR:HG21	48:D0:47:TYR:CD2	2.49	0.47
1:CA:1271:A:H5'	1:CA:1314:C:H5''	1.96	0.47
1:CA:1189:U:O2'	3:CC:175:HIS:CD2	2.67	0.47
18:CR:32:ILE:HD12	18:CR:33:THR:O	2.14	0.47
1:AA:1018:G:H5'	1:AA:1019:A:OP2	2.13	0.47
39:BR:37:GLU:H	39:BR:37:GLU:CD	2.18	0.47
22:DA:2255:G:H2'	22:DA:2256:G:O4'	2.14	0.47
22:BA:622:G:H2'	22:BA:623:C:C6	2.49	0.47
1:AA:736:C:H5'	6:AF:88:MET:HE1	1.96	0.47
45:BX:70:LEU:O	45:BX:74:GLY:N	2.47	0.47
22:BA:2480:C:C2'	22:BA:2481:G:H5'	2.44	0.47
16:AP:30:GLY:O	16:AP:31:ARG:C	2.52	0.47
46:DY:9:LYS:HB3	46:DY:12:GLU:HG3	1.96	0.47
26:BE:31:VAL:HG21	26:BE:104:ALA:HB2	1.95	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
27:BF:46:LYS:HD2	27:BF:46:LYS:N	2.29	0.47
6:AF:42:TRP:HZ2	6:AF:61:LEU:HD22	1.79	0.47
22:BA:2365:G:H4'	44:BW:59:PHE:CZ	2.48	0.47
37:BP:5:LYS:O	37:BP:9:GLN:HG2	2.15	0.47
23:DB:55:U:H2'	23:DB:56:G:C8	2.49	0.47
22:DA:1441:G:C2	22:DA:1551:A:C2	3.02	0.47
24:DC:144:GLU:HG3	24:DC:151:GLY:CA	2.44	0.47
22:DA:860:U:O2'	22:DA:861:A:O5'	2.27	0.47
20:AT:34:VAL:O	20:AT:38:ILE:HG12	2.14	0.47
22:DA:1606:C:O2'	22:DA:1607:C:P	2.72	0.47
13:CM:75:SER:HB2	13:CM:79:LEU:HG	1.95	0.47
22:DA:98:G:O2'	22:DA:103:A:C8	2.67	0.47
1:AA:1202:U:O2'	14:AN:68:ARG:HB2	2.14	0.47
2:CB:151:LYS:HG3	2:CB:152:ASP:OD1	2.14	0.47
1:AA:452:A:H5''	1:AA:452:A:C8	2.44	0.47
28:DG:91:VAL:N	28:DG:93:TYR:CD2	2.81	0.47
22:DA:1019:U:O2'	22:DA:1021:A:C2	2.65	0.47
1:CA:239:U:H5''	1:CA:239:U:H6	1.78	0.47
22:DA:2744:G:N2	22:DA:2745:C:C2	2.82	0.47
24:BC:109:LEU:HD23	24:BC:110:LYS:N	2.21	0.47
18:CR:64:LEU:O	18:CR:66:LEU:HD23	2.14	0.47
6:CF:59:TYR:CE2	18:CR:66:LEU:HD21	2.45	0.47
2:CB:59:ILE:HA	2:CB:62:ARG:HD3	1.96	0.47
7:CG:100:MET:HE2	7:CG:100:MET:H	1.79	0.47
7:CG:91:ARG:HG2	7:CG:92:PRO:CD	2.36	0.47
13:CM:17:ALA:HB3	13:CM:18:LEU:HD12	1.95	0.47
1:AA:414:A:N3	1:AA:415:A:C8	2.82	0.47
1:CA:406:G:H5'	4:CD:4:LEU:HD22	1.95	0.47
22:DA:2056:G:H2'	22:DA:2056:G:N3	2.30	0.47
1:CA:668:G:O2'	1:CA:669:G:H5'	2.14	0.47
1:AA:345:C:OP1	37:BP:35:SER:OG	2.27	0.47
31:DJ:73:VAL:HB	31:DJ:75:TYR:CE2	2.49	0.47
22:BA:477:A:H2'	22:BA:478:A:C8	2.49	0.47
2:AB:32:GLY:HA3	2:AB:39:ILE:HG12	1.95	0.47
25:DD:125:TRP:CE3	25:DD:160:LYS:HD3	2.49	0.47
7:AG:68:VAL:HG12	7:AG:102:TRP:HE3	1.80	0.47
40:BS:20:VAL:HG11	40:BS:47:VAL:HG11	1.96	0.47
28:DG:162:ARG:HB2	28:DG:166:GLU:HB3	1.95	0.47
3:CC:76:ILE:HA	3:CC:83:VAL:HG13	1.96	0.47
26:DE:126:VAL:HG22	26:DE:127:GLU:OE2	2.14	0.47
20:CT:30:PHE:HE2	20:CT:52:GLU:HG2	1.79	0.47
24:BC:184:GLU:O	24:BC:185:ALA:HB3	2.13	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:BA:1090:A:N1	22:BA:1091:G:C5	2.82	0.47
22:BA:2102:G:N2	22:BA:2103:C:C2	2.83	0.47
11:AK:22:ILE:HG12	11:AK:85:VAL:HG22	1.96	0.47
22:DA:1633:G:C5	22:DA:1635:A:C5	3.02	0.47
46:BY:59:GLU:HG3	46:BY:60:LYS:N	2.29	0.47
12:AL:3:VAL:HG23	12:AL:4:ASN:N	2.29	0.47
28:BG:120:ILE:C	28:BG:120:ILE:HD13	2.34	0.47
25:BD:121:THR:O	25:BD:122:VAL:CB	2.61	0.47
26:DE:79:ARG:CG	26:DE:80:SER:N	2.77	0.47
1:CA:784:A:H2'	1:CA:785:G:C8	2.49	0.47
10:AJ:14:ASP:HB3	10:AJ:17:LEU:HB3	1.96	0.47
10:AJ:15:HIS:HB3	10:AJ:70:HIS:CE1	2.49	0.47
27:BF:33:ILE:HD12	27:BF:95:MET:HG3	1.97	0.47
1:AA:772:U:C2'	1:AA:773:G:H5'	2.44	0.47
32:DK:64:ARG:HD2	32:DK:102:PRO:O	2.14	0.47
1:CA:794:A:H2'	1:CA:795:C:H6	1.80	0.47
22:BA:499:U:C4	22:BA:500:G:C5	3.02	0.47
4:AD:189:ASP:O	4:AD:190:LEU:HB3	2.14	0.47
35:DN:52:ILE:HA	35:DN:55:ALA:HB3	1.95	0.47
1:AA:1521:C:O2'	1:AA:1522:U:H5'	2.14	0.47
34:BM:10:ARG:HB3	34:BM:11:LYS:HG3	1.95	0.47
22:DA:1833:C:C4	22:DA:1834:U:C4	3.02	0.47
40:BS:29:VAL:O	40:BS:33:LEU:HD22	2.14	0.47
20:CT:11:ILE:C	20:CT:13:SER:N	2.67	0.47
24:BC:209:ALA:HA	24:BC:212:TRP:CE2	2.49	0.47
1:CA:908:A:H2'	1:CA:909:A:H8	1.78	0.47
6:AF:10:VAL:HG12	6:AF:11:HIS:N	2.29	0.47
22:BA:1939:U:OP1	22:BA:2604:U:O2'	2.30	0.47
1:CA:954:G:H1	1:CA:1228:C:N4	2.12	0.47
32:BK:9:ASN:O	32:BK:83:ALA:HA	2.14	0.47
1:CA:772:U:O2'	1:CA:773:G:H5'	2.14	0.47
1:CA:778:G:C2	1:CA:779:C:O2	2.67	0.47
15:CO:87:ARG:HA	15:CO:87:ARG:HD2	1.68	0.47
22:BA:1817:G:OP1	24:BC:86:ARG:NH2	2.47	0.47
22:BA:2352:A:C6	44:BW:30:VAL:HG11	2.50	0.47
28:BG:85:LYS:HG2	28:BG:131:VAL:CG1	2.44	0.47
1:CA:1179:A:H2'	1:CA:1180:A:O4'	2.13	0.47
22:DA:1537:G:C3'	22:DA:1538:G:H4'	2.41	0.47
22:DA:1313:U:OP2	22:DA:1314:C:C5	2.67	0.47
22:DA:1612:C:O2'	22:DA:1613:G:O4'	2.28	0.47
1:AA:797:C:OP2	11:AK:125:LYS:HG3	2.14	0.47
33:BL:110:VAL:O	33:BL:111:ILE:CB	2.49	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:185:G:N1	22:DA:212:G:C2	2.82	0.47
28:DG:88:LEU:HD13	28:DG:93:TYR:HB3	1.96	0.47
22:DA:739:A:H4'	22:DA:740:C:OP1	2.13	0.47
22:DA:347:A:N6	22:DA:348:A:N6	2.62	0.47
46:DY:48:ARG:HH11	46:DY:48:ARG:CG	2.26	0.47
1:AA:1124:G:H3'	1:AA:1145:A:N6	2.29	0.47
22:DA:607:U:H6	22:DA:607:U:H3'	1.79	0.47
1:CA:375:U:C4	1:CA:376:G:N7	2.82	0.47
22:DA:2748:A:C1'	28:DG:66:THR:HG22	2.35	0.47
25:DD:12:THR:CG2	25:DD:13:ARG:N	2.77	0.47
25:DD:9:VAL:O	37:DP:4:ILE:HD11	2.14	0.47
1:CA:1134:G:N1	1:CA:1141:C:C4	2.82	0.47
25:BD:159:LYS:NZ	25:BD:160:LYS:H	2.11	0.47
22:DA:1682:G:C2	22:DA:1757:A:O4'	2.68	0.47
25:BD:191:GLY:O	25:BD:192:ALA:HB3	2.14	0.47
12:AL:23:LEU:C	12:AL:25:ALA:N	2.63	0.47
41:BT:61:LEU:HD12	41:BT:61:LEU:O	2.14	0.47
22:BA:480:A:C2'	22:BA:481:G:OP1	2.63	0.47
1:CA:346:G:O2'	1:CA:347:G:O4'	2.31	0.47
27:DF:11:VAL:HG12	27:DF:12:VAL:N	2.29	0.47
40:BS:43:ALA:O	40:BS:47:VAL:HG12	2.14	0.47
12:CL:106:VAL:HG23	12:CL:116:TYR:HB3	1.95	0.47
21:AU:21:SER:C	21:AU:22:CYS:SG	2.93	0.47
22:BA:1411:U:C2'	22:BA:1412:U:H5'	2.45	0.47
15:AO:34:GLN:HA	15:AO:34:GLN:OE1	2.14	0.47
41:DT:63:VAL:C	41:DT:64:LYS:HD2	2.33	0.47
43:DV:61:LEU:O	43:DV:72:VAL:HG22	2.14	0.47
1:AA:1355:G:O2'	1:AA:1356:G:H5'	2.14	0.47
14:CN:27:LYS:HD2	14:CN:27:LYS:C	2.34	0.47
34:DM:41:LEU:HB3	34:DM:46:ILE:CG2	2.44	0.47
12:CL:75:GLU:C	12:CL:77:SER:H	2.16	0.47
21:AU:24:LYS:O	21:AU:26:GLY:N	2.48	0.47
3:CC:161:ILE:H	3:CC:161:ILE:CD1	2.27	0.47
15:AO:84:LEU:HB3	15:AO:86:LEU:HD22	1.97	0.47
1:AA:1083:U:C5	1:AA:1084:G:C5	3.02	0.47
22:BA:1588:G:C4	22:BA:1589:U:C5	3.02	0.47
49:B1:16:THR:HG21	49:B1:41:VAL:HG22	1.95	0.47
22:BA:851:C:H2'	22:BA:852:U:C6	2.50	0.47
13:AM:105:ALA:O	13:AM:109:LYS:HB2	2.14	0.47
24:BC:32:LEU:HA	24:BC:32:LEU:HD23	1.65	0.47
5:CE:40:ASP:OD1	5:CE:41:GLY:N	2.46	0.47
22:DA:219:A:N7	22:DA:220:G:C5	2.82	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
42:DU:50:ALA:O	42:DU:51:LEU:HB2	2.13	0.47
10:AJ:21:ALA:HA	10:AJ:24:GLU:OE2	2.14	0.47
39:BR:49:ILE:HG21	39:BR:53:PHE:N	2.29	0.47
22:BA:1069:A:O2'	22:BA:1070:A:C5'	2.58	0.47
37:BP:57:ALA:HB1	37:BP:73:PHE:O	2.15	0.47
45:DX:47:THR:O	45:DX:48:LEU:HD23	2.14	0.47
1:CA:1279:G:C5'	10:CJ:9:ARG:HH12	2.19	0.47
22:DA:1441:G:H2'	22:DA:1442:U:H6	1.78	0.47
22:DA:1553:A:C8	22:DA:1555:G:O6	2.67	0.47
22:DA:2335:A:O2'	22:DA:2336:A:H2'	2.15	0.47
22:DA:2426:A:H3'	22:DA:2427:C:H5'	1.96	0.47
22:DA:2429:G:OP2	22:DA:2430:A:OP2	2.31	0.47
22:DA:233:A:O2'	22:DA:234:U:O4'	2.32	0.47
1:CA:110:C:H2'	1:CA:111:G:O4'	2.15	0.47
16:AP:20:VAL:HG21	16:AP:32:PHE:CB	2.44	0.47
22:DA:500:G:N2	22:DA:503:A:C8	2.83	0.47
22:DA:1021:A:H2'	22:DA:1022:G:H4'	1.96	0.47
35:DN:67:PHE:HE2	35:DN:73:ASN:ND2	2.11	0.47
22:DA:740:C:O2'	22:DA:741:U:C5'	2.63	0.47
1:CA:1241:G:C2	1:CA:1242:G:C5	3.02	0.47
22:DA:2683:C:H4'	25:DD:13:ARG:NH2	2.30	0.47
22:DA:2683:C:OP1	37:DP:55:HIS:CB	2.62	0.47
22:DA:2876:G:H4'	37:DP:2:ASN:ND2	2.26	0.47
41:BT:32:LEU:HG	41:BT:83:ALA:CB	2.44	0.47
1:AA:198:G:O6	1:AA:220:G:C6	2.67	0.47
22:DA:1473:G:O2'	22:DA:1474:U:H5'	2.13	0.47
24:BC:140:VAL:HG13	24:BC:189:ALA:HB1	1.91	0.47
41:BT:34:VAL:O	41:BT:34:VAL:HG23	2.14	0.47
52:B4:36:ARG:HG2	52:B4:37:GLN:N	2.19	0.47
22:BA:2886:A:C5	22:BA:2887:A:C8	3.02	0.47
22:BA:1998:A:H2'	22:BA:1999:C:C6	2.50	0.47
5:CE:14:LEU:HD22	5:CE:59:ILE:CD1	2.43	0.47
5:CE:14:LEU:HD12	5:CE:15:ILE:H	1.78	0.47
22:DA:1259:G:H2'	22:DA:1260:A:O4'	2.14	0.47
47:BZ:29:ARG:CG	47:BZ:29:ARG:NH2	2.76	0.47
22:DA:2848:G:H1'	22:DA:2849:U:C5	2.48	0.47
3:AC:86:LEU:O	3:AC:87:ARG:C	2.53	0.47
5:AE:37:VAL:HG11	5:AE:113:VAL:HA	1.97	0.47
7:AG:12:LEU:HD13	7:AG:12:LEU:N	2.30	0.47
41:BT:69:ARG:CZ	41:BT:70:HIS:HA	2.44	0.47
22:DA:1326:U:O2'	22:DA:1327:A:O5'	2.31	0.47
14:CN:16:ALA:HA	14:CN:20:PHE:CD1	2.42	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:CT:2:ASN:O	20:CT:3:ILE:C	2.53	0.47
22:DA:2707:U:H2'	22:DA:2708:G:H8	1.75	0.47
7:CG:59:GLU:C	7:CG:61:PHE:H	2.16	0.47
22:DA:1666:G:C2'	22:DA:1667:G:H5'	2.44	0.47
6:CF:80:PHE:N	6:CF:80:PHE:HD1	2.13	0.47
22:DA:1734:G:O2'	22:DA:1735:A:C8	2.59	0.47
23:DB:8:C:O3'	36:DO:25:ARG:NH1	2.48	0.47
33:DL:93:ASN:O	33:DL:95:LEU:N	2.44	0.47
22:BA:2897:U:H2'	22:BA:2898:U:H6	1.75	0.47
1:AA:596:A:H2'	1:AA:597:G:H8	1.79	0.47
1:AA:84:U:O2	1:AA:84:U:C2'	2.63	0.47
4:AD:52:VAL:CG2	4:AD:53:GLN:N	2.77	0.47
22:DA:1866:A:H2'	22:DA:1867:G:C8	2.49	0.47
15:CO:38:LEU:HD12	15:CO:41:HIS:CB	2.45	0.47
22:BA:1157:G:O2'	47:BZ:31:ILE:CD1	2.62	0.47
1:AA:1488:G:O2'	1:AA:1489:G:H5'	2.14	0.47
42:BU:53:GLN:N	42:BU:54:PRO:CD	2.77	0.47
22:DA:2714:G:H2'	22:DA:2715:C:C6	2.48	0.47
1:AA:1367:C:C4	1:AA:1368:A:N7	2.82	0.47
22:BA:1832:C:N4	22:BA:1833:C:C4	2.82	0.47
31:DJ:1:MET:SD	31:DJ:2:LYS:HE3	2.54	0.47
1:CA:1098:C:H2'	1:CA:1099:G:O4'	2.14	0.47
37:DP:77:SER:OG	37:DP:79:VAL:HG22	2.15	0.47
22:BA:2140:G:C2	22:BA:2141:G:C4	3.02	0.47
1:AA:1118:U:P	9:AI:105:ARG:HE	2.37	0.47
22:BA:2783:U:H2'	22:BA:2784:U:H6	1.78	0.47
22:BA:2486:C:C2'	22:BA:2487:G:O5'	2.63	0.47
1:AA:292:G:C2	1:AA:309:A:C2	3.02	0.47
22:DA:2073:C:O2'	22:DA:2074:U:H5'	2.14	0.47
40:DS:1:MET:O	40:DS:2:GLU:HG2	2.15	0.47
1:AA:715:A:H2'	1:AA:716:A:C8	2.49	0.47
33:BL:18:ARG:O	33:BL:19:LEU:HB3	2.14	0.47
34:DM:1:MET:O	34:DM:2:LEU:O	2.32	0.47
49:D1:38:PHE:CD2	49:D1:39:ASP:N	2.82	0.47
32:DK:9:ASN:O	32:DK:83:ALA:HA	2.14	0.47
7:CG:65:LEU:O	7:CG:69:ARG:HB2	2.15	0.47
1:CA:557:G:H2'	1:CA:558:G:C8	2.50	0.47
33:BL:9:ALA:HB3	33:BL:12:SER:HB2	1.95	0.47
16:CP:16:PHE:CE2	16:CP:40:ASN:HB2	2.49	0.47
1:CA:404:G:O6	4:CD:1:ALA:HB2	2.15	0.47
10:AJ:29:ALA:C	10:AJ:31:ARG:H	2.18	0.47
11:AK:96:ILE:HG13	11:AK:97:ARG:N	2.29	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:CL:42:LYS:HD3	12:CL:43:LYS:NZ	2.30	0.47
29:BH:29:PHE:O	29:BH:33:GLN:HB3	2.14	0.47
38:DQ:87:VAL:O	38:DQ:88:GLU:O	2.32	0.47
24:DC:17:LYS:HD3	24:DC:18:VAL:O	2.15	0.47
6:CF:9:MET:HB2	6:CF:85:ILE:HG13	1.96	0.47
1:CA:6:G:O6	5:CE:99:SER:HB2	2.14	0.47
23:DB:24:G:C6	23:DB:56:G:C2	3.01	0.47
2:AB:185:ILE:HA	2:AB:199:ILE:O	2.15	0.47
22:DA:971:G:OP2	22:DA:974:G:N2	2.48	0.47
22:DA:233:A:H2'	22:DA:234:U:C6	2.50	0.47
4:AD:12:ARG:NH1	4:AD:36:ALA:O	2.48	0.47
22:DA:299:A:H2	22:DA:320:A:O4'	1.96	0.47
22:DA:323:C:H2'	26:DE:163:ASN:CG	2.35	0.47
1:AA:1202:U:H1'	14:AN:68:ARG:HD2	1.96	0.47
22:DA:1073:A:O2'	22:DA:1074:G:C8	2.57	0.47
1:AA:274:A:H4'	1:AA:275:G:O5'	2.10	0.47
17:AQ:47:ASP:HA	17:AQ:51:GLU:OE2	2.14	0.47
22:BA:2478:A:H5'	52:B4:32:LYS:HD3	1.96	0.47
22:DA:116:C:C4	22:DA:117:G:C5	3.03	0.47
26:BE:190:ALA:HA	26:BE:193:VAL:HB	1.97	0.47
22:DA:1011:G:H5''	38:DQ:76:SER:HB2	1.96	0.47
22:DA:1785:A:N1	22:DA:1787:A:H1'	2.30	0.47
4:CD:35:GLN:O	4:CD:36:ALA:HB2	2.14	0.47
22:DA:140:C:H5'	22:DA:141:G:N2	2.30	0.47
1:CA:1336:C:C2'	1:CA:1337:G:OP2	2.62	0.47
22:DA:241:A:C4	22:DA:243:U:O4	2.68	0.47
22:DA:607:U:O2	22:DA:622:G:C6	2.67	0.47
22:DA:1251:C:C6	38:DQ:5:ARG:NH1	2.82	0.47
22:DA:1789:A:OP2	24:DC:220:ARG:NH1	2.43	0.47
49:B1:50:GLU:O	49:B1:51:ALA:HB2	2.14	0.47
41:DT:14:PRO:HG2	41:DT:15:HIS:H	1.79	0.47
7:CG:98:LEU:O	7:CG:99:ALA:C	2.53	0.47
23:DB:90:C:H6	23:DB:90:C:H5''	1.80	0.47
1:CA:369:G:O2'	1:CA:370:C:H5'	2.13	0.47
22:DA:922:C:H1'	44:DW:22:VAL:CG2	2.41	0.47
3:AC:33:ASP:O	3:AC:37:LYS:HB2	2.15	0.47
31:BJ:77:HIS:CD2	31:BJ:79:GLY:N	2.74	0.47
22:DA:960:A:H5''	22:DA:961:C:OP2	2.14	0.47
6:CF:56:LYS:O	6:CF:57:ALA:HB2	2.15	0.47
22:BA:34:U:C1'	22:BA:35:G:OP1	2.63	0.47
28:DG:6:ALA:HA	28:DG:7:PRO:HD3	1.63	0.47
20:AT:6:ALA:HB1	20:AT:9:ARG:HB2	1.96	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:BA:1965:C:H3'	22:BA:1966:A:H8	1.79	0.47
3:AC:116:ALA:HB2	3:AC:199:VAL:CG1	2.45	0.47
2:CB:19:THR:OG1	2:CB:20:ARG:N	2.47	0.47
1:AA:222:C:C2	1:AA:223:A:C8	3.03	0.47
9:AI:60:LEU:H	9:AI:60:LEU:HD23	1.79	0.47
13:AM:106:ARG:HG2	13:AM:106:ARG:HH11	1.80	0.47
22:DA:1495:A:H2'	22:DA:1496:A:C8	2.50	0.47
1:AA:644:U:O2'	1:AA:645:G:H5'	2.14	0.47
12:AL:2:THR:HB	12:AL:5:GLN:H	1.79	0.47
33:BL:82:LEU:HD23	33:BL:82:LEU:C	2.35	0.47
1:AA:570:G:H2'	1:AA:571:U:C6	2.50	0.47
22:DA:8:C:C2'	22:DA:9:G:H5'	2.45	0.47
22:DA:9:G:C6	22:DA:2629:U:C5	3.03	0.47
35:BN:49:GLU:N	35:BN:50:PRO:HD3	2.30	0.47
22:DA:2515:C:O2'	22:DA:2516:A:H5'	2.15	0.47
22:BA:1138:G:H5''	22:BA:1139:G:OP2	2.13	0.47
22:BA:2563:U:C1'	22:BA:2566:A:N6	2.78	0.47
47:DZ:40:THR:C	47:DZ:42:ALA:N	2.67	0.47
1:AA:164:G:C2'	1:AA:165:G:H5'	2.45	0.47
25:BD:16:THR:CG2	25:BD:20:VAL:HB	2.44	0.47
22:DA:1456:G:C5	22:DA:1457:U:C5	3.02	0.47
22:BA:181:A:C2	22:BA:182:A:C4	3.03	0.47
24:DC:63:ILE:O	24:DC:64:VAL:HB	2.15	0.47
40:BS:24:ILE:O	40:BS:71:VAL:HG11	2.14	0.47
22:DA:693:A:O2'	22:DA:1353:A:N3	2.44	0.47
22:DA:2031:A:C6	22:DA:2498:C:H1'	2.49	0.47
1:AA:574:A:H1'	1:AA:883:C:O4'	2.15	0.47
22:DA:1746:A:H2'	22:DA:1747:U:C6	2.50	0.47
42:BU:61:GLU:HG2	42:BU:61:GLU:H	1.34	0.47
19:AS:48:ILE:HD12	19:AS:48:ILE:O	2.14	0.47
2:CB:177:ASN:O	2:CB:177:ASN:ND2	2.48	0.47
10:AJ:18:ILE:CG2	10:AJ:19:ASP:N	2.77	0.47
38:BQ:78:PHE:CZ	38:BQ:82:LEU:HD11	2.50	0.47
39:BR:10:LYS:CD	39:BR:10:LYS:N	2.77	0.47
39:BR:39:LEU:O	39:BR:49:ILE:HG23	2.13	0.47
22:BA:1063:G:C2	22:BA:1064:C:H1'	2.50	0.47
1:CA:120:A:O2'	1:CA:121:U:C4'	2.62	0.47
22:BA:2846:G:H2'	22:BA:2847:U:O4'	2.14	0.47
38:DQ:82:LEU:O	38:DQ:85:ALA:HB3	2.14	0.47
44:BW:49:ASN:OD1	44:BW:79:ILE:O	2.32	0.47
44:BW:37:VAL:HG13	44:BW:55:ASP:C	2.35	0.47
22:DA:37:C:H1'	26:DE:45:ALA:HB2	1.97	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:CA:1224:U:C4'	1:CA:1225:A:OP2	2.63	0.47
22:DA:2425:A:H1'	22:DA:2426:A:OP2	2.14	0.47
24:DC:140:VAL:O	24:DC:141:HIS:HB2	2.15	0.47
22:DA:1596:A:N6	22:DA:1597:A:C6	2.83	0.47
22:DA:1312:U:O2	22:DA:1603:A:C2	2.68	0.47
22:DA:1370:C:O4'	22:DA:1810:A:H2	1.96	0.47
22:DA:308:G:N2	22:DA:329:G:H21	2.12	0.47
42:DU:14:THR:CG2	42:DU:15:GLY:H	2.10	0.47
11:CK:70:ALA:CA	11:CK:73:VAL:HG22	2.29	0.47
1:CA:321:A:O2'	1:CA:1436:U:H5'	2.15	0.47
48:D0:38:LEU:HB2	48:D0:41:HIS:CE1	2.50	0.47
27:DF:36:ASN:HA	27:DF:86:CYS:O	2.15	0.47
1:AA:270:A:H2'	1:AA:271:C:C6	2.49	0.47
22:DA:116:C:H5''	22:DA:128:C:N4	2.27	0.47
22:DA:51:G:N3	22:DA:119:A:C2	2.82	0.47
22:DA:116:C:H5''	22:DA:128:C:C5	2.50	0.47
31:BJ:55:ILE:HD12	31:BJ:56:VAL:O	2.15	0.47
22:DA:2304:G:N2	22:DA:2312:U:H3	2.07	0.47
22:DA:1135:C:N4	22:DA:1139:G:O6	2.47	0.47
22:DA:68:G:C2'	22:DA:69:C:H5'	2.45	0.47
1:CA:414:A:H2'	1:CA:415:A:C5'	2.45	0.47
22:DA:1965:C:C5'	22:DA:1966:A:H2'	2.45	0.47
2:CB:147:LEU:O	2:CB:150:ILE:HG22	2.15	0.47
1:AA:1124:G:HO2'	1:AA:1125:U:H6	1.53	0.47
1:CA:1240:U:O2'	7:CG:37:THR:HB	2.14	0.47
1:CA:1239:A:H5''	7:CG:118:ARG:NH1	2.17	0.47
22:DA:607:U:H5	22:DA:619:G:C5	2.33	0.47
22:DA:2748:A:N1	22:DA:2757:A:N7	2.62	0.47
8:AH:21:LYS:HE2	8:AH:21:LYS:HA	1.96	0.47
22:DA:1252:G:N3	38:DQ:32:ARG:HG2	2.30	0.47
25:DD:13:ARG:HH22	37:DP:74:GLN:NE2	2.13	0.47
22:DA:1275:A:H4'	22:DA:1276:A:OP1	2.14	0.47
16:CP:1:MET:HE2	16:CP:2:VAL:N	2.29	0.47
35:DN:28:LEU:HD23	35:DN:29:VAL:N	2.30	0.47
6:AF:86:ARG:CZ	18:AR:63:TYR:HB3	2.41	0.47
22:DA:1788:C:O2'	22:DA:1789:A:H5'	2.14	0.47
41:BT:13:ALA:HB1	41:BT:14:PRO:HD2	1.95	0.47
22:BA:983:A:N6	22:BA:984:A:N1	2.63	0.47
9:CI:56:MET:O	9:CI:58:GLU:HG2	2.15	0.47
25:BD:124:ARG:HG2	25:BD:125:TRP:NE1	2.29	0.47
22:BA:2151:U:N3	22:BA:2152:G:N7	2.62	0.47
22:DA:1300:G:C4'	22:DA:1301:A:O5'	2.59	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:CM:64:VAL:HG12	13:CM:65:GLU:N	2.21	0.47
11:CK:126:ARG:O	21:CU:33:ARG:CZ	2.61	0.47
1:CA:406:G:C8	1:CA:495:A:C4	3.02	0.47
25:BD:11:MET:HA	25:BD:24:VAL:O	2.15	0.47
20:AT:68:LYS:HZ3	20:AT:68:LYS:HB2	1.80	0.47
1:AA:345:C:H4'	37:BP:33:GLU:CD	2.35	0.47
1:AA:250:A:C4'	1:AA:251:G:O5'	2.56	0.47
33:DL:124:GLY:H	33:DL:143:GLU:CG	2.25	0.47
14:AN:42:ASN:C	14:AN:44:VAL:N	2.63	0.47
1:CA:203:G:N2	1:CA:215:C:C2	2.83	0.47
47:BZ:30:ARG:HE	47:BZ:30:ARG:HB2	1.46	0.47
26:DE:47:LYS:HD3	26:DE:51:GLU:HB3	1.97	0.47
26:DE:47:LYS:O	26:DE:83:VAL:HB	2.14	0.47
1:CA:533:A:C2	1:CA:536:C:C5	3.02	0.47
1:AA:1371:G:OP2	9:AI:12:LYS:HD3	2.14	0.47
23:DB:51:G:C8	36:DO:64:TYR:CE2	3.03	0.47
33:DL:17:LYS:CE	33:DL:19:LEU:HD13	2.44	0.47
41:DT:29:THR:HA	41:DT:87:LEU:HB2	1.96	0.47
10:CJ:30:LYS:O	10:CJ:30:LYS:HG2	2.15	0.47
22:BA:1802:A:N1	22:BA:1822:C:H1'	2.30	0.47
45:DX:1:SER:C	45:DX:3:VAL:N	2.68	0.47
33:BL:65:GLY:O	33:BL:66:PHE:HB3	2.14	0.47
25:DD:137:SER:CB	25:DD:138:LEU:HD22	2.39	0.47
46:DY:18:LEU:HD13	46:DY:22:LEU:HD13	1.97	0.47
22:DA:39:G:C6	22:DA:40:U:O4	2.68	0.47
16:CP:36:VAL:O	16:CP:36:VAL:CG1	2.59	0.47
45:BX:77:TYR:CG	45:BX:77:TYR:O	2.68	0.47
43:BV:48:MET:O	43:BV:51:GLN:HG3	2.14	0.47
36:DO:26:LEU:O	36:DO:28:VAL:N	2.48	0.47
28:BG:1:SER:HB3	28:BG:5:LYS:NZ	2.30	0.47
28:DG:117:PRO:HD2	28:DG:120:ILE:HG23	1.95	0.47
25:DD:51:THR:HG21	25:DD:76:GLY:HA3	1.97	0.47
1:AA:16:A:C2'	1:AA:17:U:H5'	2.45	0.47
1:AA:1453:G:N3	1:AA:1453:G:C2'	2.76	0.47
45:BX:30:PRO:HD2	45:BX:32:LEU:HD11	1.96	0.47
22:DA:1733:G:C6	22:DA:1734:G:N7	2.82	0.47
22:DA:2353:G:H1'	44:DW:30:VAL:CG1	2.45	0.47
30:BI:17:ALA:CB	30:BI:42:ASN:HD21	2.27	0.47
14:CN:89:ARG:HG3	14:CN:91:GLU:HG2	1.97	0.47
27:BF:10:GLU:O	27:BF:11:VAL:HB	2.14	0.47
5:CE:153:ALA:O	5:CE:156:ARG:HG2	2.14	0.47
1:CA:461:A:O5'	1:CA:462:G:OP2	2.32	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
29:DH:38:PRO:HB2	29:DH:40:THR:CG2	2.45	0.47
22:BA:322:A:H5'	22:BA:340:A:C1'	2.45	0.47
22:DA:754:U:H2'	22:DA:755:U:C6	2.50	0.47
26:DE:28:VAL:HG23	26:DE:29:HIS:N	2.30	0.47
22:BA:117:G:C6	22:BA:119:A:C6	3.03	0.47
22:BA:666:A:H4'	33:BL:48:ARG:HD2	1.96	0.47
35:BN:49:GLU:N	35:BN:50:PRO:CD	2.78	0.47
1:AA:191:G:H2'	1:AA:192:A:H8	1.79	0.47
17:CQ:42:LYS:HB3	17:CQ:42:LYS:HZ3	1.80	0.47
22:DA:1594:U:H2'	22:DA:1595:C:O4'	2.15	0.47
26:BE:48:THR:N	26:BE:51:GLU:HG3	2.30	0.47
22:BA:1422:G:C4	22:BA:1423:G:C8	3.03	0.47
21:AU:24:LYS:HG2	21:AU:25:ALA:N	2.30	0.47
17:CQ:45:VAL:HG11	17:CQ:60:ILE:CG2	2.44	0.47
37:DP:77:SER:HB3	37:DP:80:VAL:HG23	1.97	0.47
1:CA:998:C:H2'	1:CA:999:C:C6	2.50	0.47
45:DX:63:ILE:CD1	45:DX:64:ASP:H	2.27	0.47
22:DA:2439:A:C8	22:DA:2586:U:H4'	2.50	0.47
47:BZ:26:LEU:O	47:BZ:37:ARG:NH1	2.48	0.47
22:BA:679:C:H2'	22:BA:680:C:C6	2.50	0.47
49:B1:18:HIS:CG	49:B1:19:PHE:N	2.82	0.47
22:DA:1638:C:H1'	22:DA:2698:U:O2'	2.14	0.47
22:BA:2075:U:C4	22:BA:2238:G:C6	3.02	0.47
1:AA:164:G:H2'	1:AA:165:G:H5'	1.96	0.47
25:DD:193:VAL:O	25:DD:194:PRO:O	2.33	0.47
1:AA:471:U:C2'	1:AA:472:U:H5'	2.45	0.47
22:BA:2223:G:H2'	22:BA:2224:G:C5'	2.44	0.47
1:CA:949:A:C2	1:CA:1233:G:N3	2.83	0.47
1:CA:909:A:H2'	1:CA:910:C:O4'	2.14	0.47
1:AA:1091:U:O2	1:AA:1093:A:C8	2.68	0.47
22:DA:2083:G:C5	22:DA:2084:C:C5	3.03	0.47
38:DQ:35:PHE:HE1	38:DQ:39:ILE:HD11	1.80	0.47
22:DA:661:A:H2'	22:DA:662:G:O4'	2.15	0.47
22:BA:1279:G:O2'	22:BA:1280:G:H5'	2.14	0.47
22:BA:1004:U:C2'	22:BA:1005:C:OP2	2.62	0.47
22:BA:1682:G:H2'	22:BA:1683:U:C6	2.49	0.47
22:BA:1570:A:H2'	22:BA:1571:A:C8	2.49	0.47
20:CT:66:ILE:CG1	20:CT:67:HIS:N	2.78	0.47
23:BB:8:C:O3'	36:BO:25:ARG:NH1	2.47	0.47
15:AO:54:GLY:O	15:AO:58:MET:HG3	2.14	0.47
21:CU:52:VAL:O	21:CU:52:VAL:HG22	2.15	0.47
37:DP:65:ASN:N	37:DP:65:ASN:HD22	2.13	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
37:DP:65:ASN:N	37:DP:65:ASN:ND2	2.63	0.47
12:AL:71:HIS:ND1	12:AL:71:HIS:C	2.68	0.47
22:BA:608:A:H2'	22:BA:609:A:C8	2.50	0.47
1:CA:690:G:H2'	1:CA:691:G:O4'	2.15	0.47
15:AO:55:LEU:HD12	15:AO:55:LEU:O	2.14	0.47
32:BK:119:ALA:HA	32:BK:120:PRO:HD2	1.78	0.47
4:CD:76:LYS:O	4:CD:79:ALA:HB3	2.15	0.47
1:AA:754:C:O2'	1:AA:755:G:OP1	2.31	0.47
13:AM:73:SER:O	13:AM:77:LYS:HG2	2.15	0.47
22:DA:579:G:C2	22:DA:1262:A:C5	3.03	0.47
22:BA:1842:G:H2'	22:BA:1843:C:C6	2.50	0.47
26:BE:12:LEU:O	26:BE:13:THR:HB	2.15	0.47
22:BA:2444:G:OP2	26:BE:63:LYS:HD2	2.14	0.47
39:DR:41:ILE:HG22	39:DR:42:ALA:N	2.30	0.47
1:AA:1406:U:C5	1:AA:1407:C:C5	3.03	0.47
1:AA:1232:U:C4	1:AA:1233:G:N7	2.83	0.47
22:DA:1487:U:O5'	22:DA:1487:U:H6	1.97	0.47
5:AE:125:LYS:HG3	5:AE:126:ALA:N	2.30	0.47
22:DA:2246:G:H2'	22:DA:2247:A:C8	2.50	0.47
22:DA:2341:G:H2'	22:DA:2342:C:O4'	2.15	0.47
23:DB:110:C:O2'	23:DB:111:U:C5'	2.60	0.47
11:CK:88:PRO:HD3	21:CU:28:LEU:HD11	1.97	0.47
22:DA:455:C:N3	22:DA:473:G:C4'	2.78	0.47
19:CS:38:THR:O	19:CS:43:MET:SD	2.73	0.47
19:CS:57:VAL:HG21	19:CS:75:PRO:HD2	1.97	0.47
22:BA:528:A:C2	22:BA:2043:C:C5'	2.97	0.47
22:DA:828:U:C5	22:DA:829:A:N6	2.83	0.47
22:DA:1155:A:H5''	38:DQ:54:ARG:CZ	2.45	0.47
1:AA:485:U:O2	1:AA:485:U:O4'	2.30	0.47
1:CA:1494:G:C2	1:CA:1495:U:C2	3.03	0.47
22:DA:1358:G:N7	56:DA:3417:HOH:O	2.46	0.47
22:DA:1810:A:H3'	22:DA:1811:G:C8	2.50	0.47
22:DA:302:C:O2'	22:DA:303:G:O5'	2.33	0.47
39:DR:9:GLY:H	39:DR:10:LYS:NZ	2.12	0.47
22:DA:1068:G:C8	22:DA:1069:A:N7	2.83	0.47
22:DA:1087:G:H1'	22:DA:1089:A:H1'	1.96	0.47
17:AQ:13:SER:O	17:AQ:16:MET:HE2	2.15	0.47
17:AQ:14:ASP:O	17:AQ:16:MET:SD	2.73	0.47
22:DA:500:G:C2	22:DA:503:A:N7	2.83	0.47
22:DA:1142:A:H4'	31:DJ:27:ARG:HH22	1.80	0.47
8:AH:74:ILE:CD1	8:AH:128:VAL:HG13	2.34	0.47
1:CA:1138:G:N2	1:CA:1140:C:N3	2.61	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:BA:278:A:H2'	22:BA:278:A:N3	2.28	0.47
1:AA:198:G:N3	1:AA:199:A:C8	2.83	0.47
3:AC:133:MET:HE3	3:AC:167:TYR:HB2	1.95	0.47
41:BT:54:GLU:O	41:BT:55:VAL:HB	2.13	0.47
22:DA:818:G:HO2'	22:DA:819:A:H5''	1.79	0.47
22:DA:1585:C:H2'	22:DA:1586:A:O5'	2.15	0.47
46:BY:45:GLN:O	46:BY:46:VAL:CB	2.63	0.47
8:CH:11:THR:CG2	8:CH:14:ARG:NH2	2.78	0.47
19:AS:35:ARG:HH21	19:AS:74:ALA:HB3	1.79	0.47
24:BC:67:LYS:HE2	24:BC:149:LYS:O	2.15	0.47
11:AK:86:LYS:CG	11:AK:114:PRO:HD3	2.44	0.47
22:BA:2821:A:OP2	25:BD:115:GLY:N	2.46	0.47
22:DA:1722:A:C6	22:DA:1739:A:C8	3.03	0.47
22:BA:1866:A:H2'	22:BA:1867:G:H5'	1.95	0.47
31:BJ:30:THR:HG22	31:BJ:31:GLU:N	2.29	0.47
22:BA:404:A:C1'	22:BA:405:U:OP2	2.62	0.47
28:BG:82:PHE:CZ	28:BG:137:LYS:HD2	2.50	0.47
22:DA:1737:G:C5'	22:DA:1738:G:OP2	2.63	0.47
36:DO:10:ARG:HD2	36:DO:96:GLY:O	2.14	0.47
27:BF:7:TYR:O	27:BF:11:VAL:HB	2.14	0.47
1:AA:1348:U:O2'	1:AA:1349:A:O5'	2.33	0.47
9:AI:119:LYS:HG3	9:AI:122:ARG:HB3	1.96	0.47
42:BU:5:ARG:O	42:BU:8:ASP:HB2	2.14	0.47
30:BI:59:THR:HG22	30:BI:61:TYR:HE2	1.79	0.47
11:CK:87:GLY:H	11:CK:113:THR:CG2	2.28	0.47
41:DT:69:ARG:HG3	41:DT:70:HIS:N	2.30	0.47
22:BA:304:U:C2	22:BA:305:C:C5	3.02	0.47
25:DD:36:GLN:NE2	25:DD:38:LYS:HZ1	2.12	0.47
1:CA:186:C:O2'	1:CA:187:G:H5'	2.15	0.47
33:DL:89:VAL:HG22	33:DL:90:VAL:N	2.30	0.47
4:CD:164:ARG:HB3	4:CD:165:GLU:H	1.53	0.47
2:AB:30:ILE:HG23	2:AB:31:PHE:N	2.30	0.47
33:DL:84:LYS:O	33:DL:85:VAL:HB	2.15	0.47
26:DE:85:PHE:O	26:DE:86:ALA:C	2.53	0.47
3:AC:59:PRO:O	3:AC:60:ALA:O	2.33	0.47
39:BR:74:ILE:HB	39:BR:87:GLN:O	2.15	0.47
11:AK:75:GLU:C	11:AK:77:GLY:H	2.17	0.47
22:DA:1563:U:H2'	22:DA:1564:C:C6	2.50	0.47
1:CA:211:G:C2'	1:CA:211:G:N3	2.77	0.47
1:AA:1403:C:H6	1:AA:1403:C:O5'	1.98	0.47
6:CF:27:ALA:O	6:CF:31:GLY:HA3	2.14	0.47
23:DB:67:G:O2'	23:DB:68:C:H6	1.97	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
23:DB:55:U:O2'	23:DB:56:G:H5'	2.15	0.47
23:DB:59:A:H2'	23:DB:60:C:O4'	2.14	0.47
2:AB:172:ILE:HG22	2:AB:176:ASN:OD1	2.15	0.47
1:CA:961:U:O2'	1:CA:962:C:O5'	2.32	0.47
14:CN:52:ARG:HA	14:CN:52:ARG:NH1	2.30	0.47
22:DA:2425:A:P	22:DA:2427:C:H5'	2.54	0.47
22:DA:231:A:C2'	22:DA:232:G:H5'	2.45	0.47
22:DA:1238:G:HO2'	22:DA:1239:G:H5'	1.79	0.47
22:DA:1394:U:C4	22:DA:1395:A:C6	3.03	0.47
22:DA:1341:G:C2	41:DT:84:TYR:CE2	3.03	0.47
13:CM:74:MET:HG3	13:CM:78:ARG:HB2	1.97	0.47
2:CB:88:GLN:C	2:CB:89:PHE:CG	2.88	0.47
22:DA:2816:G:C2	22:DA:2831:G:C2	3.03	0.47
22:DA:2313:C:O2'	22:DA:2314:A:H8	1.74	0.47
17:AQ:76:ARG:HG2	17:AQ:77:VAL:H	1.80	0.47
22:DA:637:A:P	33:DL:128:THR:HG21	2.54	0.47
22:DA:675:A:C8	22:DA:802:A:N6	2.83	0.47
22:DA:607:U:C5	22:DA:619:G:C2	3.03	0.47
22:DA:607:U:C6	22:DA:607:U:H3'	2.50	0.47
22:DA:2756:U:H1'	22:DA:2757:A:C5'	2.45	0.47
22:DA:206:U:O2'	22:DA:207:A:H5'	2.15	0.47
22:DA:1277:G:O2'	35:DN:24:MET:HB2	2.15	0.47
1:AA:673:A:H2'	1:AA:674:G:C8	2.50	0.47
22:BA:2285:C:P	49:B1:5:ARG:HH21	2.38	0.47
12:CL:86:VAL:HG11	12:CL:89:LEU:HD23	1.96	0.47
22:BA:2485:G:H5''	34:BM:45:GLN:HE21	1.80	0.47
2:AB:86:CYS:H	2:AB:88:GLN:NE2	2.13	0.47
22:DA:1716:U:C4	22:DA:1745:A:N6	2.83	0.47
29:DH:27:ARG:HH12	45:DX:59:ASP:HA	1.75	0.47
22:BA:26:G:OP1	40:BS:80:PRO:HB3	2.15	0.47
29:DH:143:ILE:O	29:DH:144:VAL:HG13	2.14	0.47
14:AN:22:LYS:CG	14:AN:23:ARG:H	2.20	0.47
35:DN:8:ARG:HG2	35:DN:10:LEU:HD22	1.96	0.47
22:BA:545:U:O5'	22:BA:545:U:O2	2.32	0.47
39:DR:80:ARG:HG2	39:DR:81:LYS:HZ3	1.80	0.47
8:CH:77:VAL:N	8:CH:125:ILE:O	2.47	0.47
1:AA:1453:G:N2	1:AA:1454:G:C5	2.83	0.47
2:CB:122:ASP:HB3	2:CB:124:THR:HG22	1.97	0.47
23:DB:52:A:N6	36:DO:33:ARG:NE	2.62	0.47
41:DT:10:VAL:HG23	41:DT:11:LEU:H	1.80	0.47
1:CA:509:A:C6	1:CA:510:A:C6	3.03	0.47
22:DA:425:G:C2	22:DA:426:C:C4	3.03	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:DD:140:HIS:CD2	25:DD:140:HIS:H	2.33	0.47
3:AC:22:PHE:CD1	10:AJ:12:ALA:HA	2.50	0.47
22:DA:85:G:OP2	42:DU:27:VAL:HG11	2.15	0.47
1:AA:1240:U:H3	7:AG:29:LEU:CD2	2.28	0.47
2:CB:176:ASN:C	2:CB:178:LEU:H	2.18	0.47
1:CA:1509:C:O2'	1:CA:1510:C:H5'	2.15	0.47
22:BA:2211:A:OP2	22:BA:2211:A:H4'	2.14	0.47
22:BA:1206:G:C6	22:BA:1207:C:C4	3.03	0.47
13:CM:48:SER:O	13:CM:50:GLY:N	2.48	0.47
1:AA:827:U:C4	1:AA:870:U:C2	3.02	0.47
1:AA:173:U:C2	1:AA:197:A:N1	2.83	0.47
22:BA:907:G:O2'	22:BA:908:C:H5'	2.15	0.47
22:DA:2740:A:N6	22:DA:2764:A:C8	2.83	0.47
1:CA:284:C:H2'	1:CA:285:C:C6	2.50	0.47
22:BA:827:U:H5'	22:BA:828:U:O5'	2.15	0.47
15:AO:57:ARG:HB3	15:AO:57:ARG:HH11	1.80	0.47
18:AR:33:THR:HG22	18:AR:37:LYS:N	2.30	0.47
17:CQ:14:ASP:OD2	17:CQ:52:CYS:HB2	2.14	0.47
22:BA:999:U:C5	22:BA:1154:G:C5	3.02	0.47
29:BH:31:VAL:CG1	29:BH:36:ALA:O	2.57	0.47
22:DA:379:G:C6	22:DA:380:G:N7	2.83	0.47
22:BA:2385:C:O2'	22:BA:2386:A:H5'	2.14	0.47
11:CK:91:GLY:O	11:CK:95:THR:HG22	2.14	0.47
1:CA:1225:A:H2'	1:CA:1225:A:N3	2.29	0.47
22:DA:1549:A:C6	22:DA:1550:C:N3	2.83	0.47
25:BD:107:VAL:HA	25:BD:205:PRO:HA	1.97	0.47
22:DA:2336:A:N7	44:DW:40:ARG:NE	2.63	0.47
22:DA:857:G:O2'	44:DW:19:ARG:CZ	2.63	0.47
44:DW:37:VAL:C	44:DW:39:GLN:N	2.67	0.47
22:DA:2345:G:C5	22:DA:2347:C:C5	3.02	0.47
33:DL:56:PRO:HD2	33:DL:59:ARG:HB2	1.97	0.47
32:BK:47:ILE:HD12	32:BK:47:ILE:HA	1.75	0.47
22:DA:233:A:H61	22:DA:428:A:N6	2.12	0.47
1:CA:1495:U:O2'	1:CA:1496:C:H5'	2.15	0.47
20:CT:70:LYS:HD2	20:CT:73:ARG:HH21	1.80	0.47
31:DJ:45:THR:C	31:DJ:47:HIS:N	2.68	0.47
1:AA:269:C:H2'	1:AA:270:A:H8	1.79	0.47
22:DA:475:C:O2'	22:DA:476:G:C5'	2.63	0.47
22:DA:636:G:H3'	33:DL:128:THR:CG2	2.43	0.47
1:CA:60:A:N3	1:CA:61:G:H1'	2.29	0.47
22:DA:141:G:C2'	22:DA:142:A:O4'	2.63	0.47
1:CA:243:A:H4'	1:CA:244:U:C5'	2.41	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:616:A:N3	22:DA:617:G:C8	2.83	0.47
22:DA:2093:G:C6	22:DA:2225:A:C8	3.03	0.47
30:BI:7:TYR:HB3	30:BI:58:ILE:H	1.79	0.47
1:CA:372:C:H4'	1:CA:373:A:H5'	1.97	0.47
41:BT:39:THR:H	41:BT:43:ILE:HG22	1.80	0.47
1:AA:364:A:C2	1:AA:365:U:O4	2.68	0.47
22:BA:2151:U:N3	22:BA:2152:G:C5	2.82	0.47
22:DA:1639:C:C3'	22:DA:1640:A:H5''	2.45	0.47
8:AH:83:ARG:O	8:AH:84:ILE:HD13	2.16	0.47
6:CF:3:HIS:CD2	6:CF:65:GLU:HG2	2.42	0.47
22:DA:1255:U:O2'	22:DA:1256:G:P	2.72	0.47
22:BA:2286:G:H5'	22:BA:2286:G:H8	1.77	0.47
1:AA:34:C:H2'	1:AA:35:G:C8	2.49	0.47
12:AL:42:LYS:HD3	12:AL:90:PRO:HG3	1.96	0.47
22:DA:962:G:O2'	22:DA:963:U:O5'	2.32	0.47
22:BA:588:U:H2'	22:BA:589:U:H6	1.78	0.47
11:AK:13:LYS:O	11:AK:14:GLN:CB	2.63	0.47
3:AC:81:GLU:O	3:AC:84:GLU:HB3	2.15	0.47
1:AA:208:U:H3	1:AA:212:G:N2	2.12	0.47
2:CB:9:LEU:HB2	2:CB:11:ALA:N	2.25	0.47
45:DX:38:TRP:HA	45:DX:38:TRP:CE3	2.50	0.47
28:DG:74:MET:O	28:DG:78:VAL:HG13	2.15	0.47
22:BA:35:G:N2	22:BA:36:G:H1'	2.30	0.47
22:DA:1518:C:H2'	22:DA:1519:G:O4'	2.15	0.47
6:AF:81:ASN:OD1	6:AF:83:ALA:HB3	2.15	0.47
22:DA:1308:A:N6	22:DA:1309:G:C2	2.83	0.47
1:AA:645:G:C2'	1:AA:646:G:H5'	2.45	0.47
22:BA:2574:G:C6	22:BA:2575:C:C4	3.04	0.47
22:DA:1709:U:C2	22:DA:1750:G:N2	2.82	0.47
22:BA:1176:U:H2'	22:BA:1177:G:N9	2.30	0.47
28:BG:30:GLY:O	28:BG:32:LEU:N	2.47	0.47
1:CA:72:A:O2'	1:CA:73:C:H5'	2.14	0.47
22:BA:958:U:N3	34:BM:16:ARG:HD3	2.30	0.47
12:CL:2:THR:O	12:CL:3:VAL:C	2.51	0.47
22:BA:1266:G:O2'	22:BA:2012:G:O6	2.23	0.47
22:BA:2012:G:OP1	40:BS:98:LYS:HG2	2.15	0.47
40:DS:103:ILE:HD12	40:DS:103:ILE:N	2.30	0.47
13:CM:52:ILE:HG23	13:CM:53:ASP:N	2.30	0.47
22:BA:250:G:C6	22:BA:251:A:C6	3.03	0.47
26:BE:126:VAL:HG22	26:BE:127:GLU:H	1.79	0.47
1:CA:168:G:C2'	1:CA:169:C:H5'	2.45	0.47
22:DA:1455:G:O2'	22:DA:1456:G:O5'	2.32	0.47

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:CA:211:G:H2'	1:CA:211:G:N3	2.29	0.47
1:CA:320:A:C2	1:CA:334:C:N3	2.83	0.47
22:DA:2078:C:C4	22:DA:2079:U:C4	3.02	0.47
16:CP:48:GLU:HG3	16:CP:51:ARG:HE	1.80	0.47
24:DC:225:ASN:HB2	24:DC:228:ASP:OD2	2.14	0.47
22:DA:1753:G:C2	22:DA:1756:G:C2	3.04	0.47
1:AA:767:A:H2'	1:AA:768:A:O4'	2.15	0.47
22:DA:2453:A:O2'	22:DA:2572:A:H1'	2.15	0.47
22:DA:2675:A:C2	22:DA:2676:C:C2	3.02	0.47
1:CA:104:G:H4'	1:CA:174:A:O4'	2.15	0.47
34:DM:13:HIS:O	34:DM:14:LYS:HB2	2.15	0.47
24:BC:115:ILE:HA	24:BC:115:ILE:HD12	1.61	0.47
1:CA:610:U:O4'	1:CA:610:U:O2	2.33	0.47
1:AA:607:A:H2'	1:AA:608:A:C8	2.50	0.47
22:BA:409:G:O2'	22:BA:410:G:H5'	2.15	0.47
22:BA:2825:G:C3'	22:BA:2826:A:H5'	2.44	0.47
39:BR:11:GLN:C	39:BR:12:HIS:ND1	2.68	0.46
22:BA:2845:U:H5''	37:BP:51:ASN:O	2.15	0.46
22:BA:855:G:N3	44:BW:23:LYS:CD	2.68	0.46
22:BA:923:G:H1'	44:BW:23:LYS:CE	2.40	0.46
44:BW:50:VAL:HG12	44:BW:51:GLY:N	2.30	0.46
23:DB:57:A:H2'	23:DB:57:A:OP2	2.15	0.46
2:AB:187:ASP:OD2	2:AB:202:ASN:HA	2.14	0.46
22:DA:2330:G:C2	22:DA:2386:A:N1	2.83	0.46
22:DA:1337:G:H8	22:DA:1337:G:OP2	1.97	0.46
41:DT:19:LYS:HA	41:DT:19:LYS:HD3	1.71	0.46
5:AE:119:VAL:O	5:AE:119:VAL:HG23	2.14	0.46
22:BA:2823:A:OP2	25:BD:118:PHE:HD1	1.98	0.46
1:CA:1150:A:H1'	1:CA:1280:A:N6	2.30	0.46
10:CJ:45:ARG:O	10:CJ:46:LYS:C	2.53	0.46
22:DA:627:A:O4'	22:DA:637:A:N6	2.48	0.46
22:DA:2446:G:H5''	22:DA:2447:G:OP2	2.15	0.46
22:DA:201:C:H6	22:DA:201:C:O5'	1.99	0.46
43:DV:80:HIS:CD2	43:DV:82:TYR:H	2.32	0.46
1:CA:523:A:H61	12:CL:88:ASP:HB2	1.80	0.46
13:CM:16:ILE:HD12	13:CM:16:ILE:N	2.31	0.46
2:AB:67:LEU:HD22	2:AB:69:VAL:CG2	2.45	0.46
1:AA:1161:C:HO2'	1:AA:1162:C:H6	1.51	0.46
22:DA:923:G:H1'	44:DW:23:LYS:HZ2	1.80	0.46
1:CA:518:C:H2'	1:CA:530:G:C8	2.50	0.46
24:BC:247:TRP:C	24:BC:249:VAL:H	2.17	0.46
21:CU:36:PHE:HA	21:CU:39:LYS:HE2	1.97	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:595:C:O5'	22:DA:595:C:H6	1.98	0.46
2:AB:134:LEU:HD12	2:AB:137:THR:OG1	2.14	0.46
1:CA:1331:G:O2'	1:CA:1332:A:H8	1.97	0.46
22:DA:2136:G:H2'	22:DA:2137:U:H6	1.76	0.46
1:AA:807:A:C4	1:AA:808:C:C5	3.02	0.46
2:CB:11:ALA:C	2:CB:13:VAL:H	2.17	0.46
1:CA:182:A:C2	1:CA:194:C:N4	2.79	0.46
1:CA:183:C:HO2'	1:CA:184:G:C5'	2.27	0.46
22:BA:1871:A:C8	22:BA:1872:A:C6	3.03	0.46
1:AA:340:U:H2'	1:AA:341:C:C6	2.49	0.46
28:DG:11:PRO:O	28:DG:14:VAL:HG22	2.14	0.46
26:BE:5:LEU:HD23	26:BE:120:VAL:O	2.15	0.46
20:AT:4:LYS:CE	20:AT:5:SER:HB3	2.43	0.46
1:CA:765:G:C4	1:CA:812:G:C6	3.03	0.46
22:DA:574:A:H4'	22:DA:575:A:C5'	2.44	0.46
8:CH:102:VAL:HG22	8:CH:125:ILE:HB	1.97	0.46
22:DA:2415:G:C4	22:DA:2416:C:C5	3.03	0.46
41:BT:29:THR:HA	41:BT:86:THR:H	1.80	0.46
22:BA:2755:C:O2'	22:BA:2756:U:H2'	2.15	0.46
13:AM:106:ARG:HG2	13:AM:106:ARG:NH1	2.29	0.46
51:B3:14:LYS:O	51:B3:21:PHE:O	2.33	0.46
4:AD:166:LYS:HB3	4:AD:166:LYS:HZ2	1.79	0.46
5:CE:151:MET:O	5:CE:154:ALA:HB3	2.15	0.46
7:AG:146:ALA:C	7:AG:148:LYS:H	2.17	0.46
19:AS:43:MET:O	19:AS:61:VAL:HG21	2.15	0.46
22:BA:1738:G:O2'	22:BA:1739:A:H8	1.96	0.46
29:BH:40:THR:O	29:BH:42:LYS:N	2.46	0.46
22:DA:2235:G:C5	22:DA:2236:U:C5	3.04	0.46
47:BZ:40:THR:CG2	47:BZ:43:ILE:HG23	2.45	0.46
7:AG:29:LEU:C	7:AG:29:LEU:HD23	2.36	0.46
22:BA:2140:G:C6	22:BA:2141:G:C5	3.02	0.46
13:AM:15:VAL:HA	13:AM:33:LEU:HD11	1.96	0.46
22:BA:184:C:H2'	22:BA:185:G:H8	1.79	0.46
1:AA:1017:U:C2	1:AA:1018:G:C8	3.03	0.46
1:CA:1520:C:H2'	1:CA:1521:C:C6	2.50	0.46
1:CA:608:A:H2'	1:CA:609:A:O4'	2.15	0.46
22:BA:2239:G:H5'	24:BC:248:GLY:HA3	1.96	0.46
2:CB:64:GLY:HA2	2:CB:158:ASP:OD2	2.15	0.46
1:CA:358:U:H2'	1:CA:359:G:C8	2.51	0.46
22:DA:1436:G:N2	22:DA:1557:C:C2	2.83	0.46
22:DA:1801:A:C4	22:DA:2203:U:C5	3.03	0.46
12:AL:64:SER:OG	12:AL:96:THR:HG23	2.14	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:CH:75:GLN:O	8:CH:126:CYS:HB2	2.15	0.46
22:BA:776:G:H4'	22:BA:777:G:O5'	2.15	0.46
1:CA:759:A:H2'	1:CA:760:G:H5'	1.96	0.46
13:AM:88:LEU:HD23	13:AM:91:ARG:HH21	1.80	0.46
38:BQ:96:ASP:OD2	38:BQ:96:ASP:C	2.54	0.46
22:BA:1063:G:C6	22:BA:1064:C:C2	3.04	0.46
4:CD:111:ALA:O	4:CD:114:ARG:HB3	2.15	0.46
45:DX:35:HIS:O	45:DX:47:THR:HA	2.15	0.46
27:BF:36:ASN:HA	27:BF:87:LYS:HA	1.97	0.46
31:BJ:81:ILE:HG23	31:BJ:83:GLY:N	2.30	0.46
23:DB:18:G:C6	23:DB:19:C:C4	3.03	0.46
44:BW:22:VAL:HA	44:BW:68:PHE:HE2	1.80	0.46
22:BA:923:G:N2	44:BW:23:LYS:HZ3	2.13	0.46
1:CA:1363:A:N1	1:CA:1365:G:O6	2.48	0.46
1:CA:972:C:O2'	10:CJ:57:VAL:HG23	2.15	0.46
27:DF:157:THR:HB	27:DF:168:LEU:HD22	1.97	0.46
22:DA:2394:C:O2'	22:DA:2395:C:H5'	2.15	0.46
24:DC:106:PRO:HB3	24:DC:141:HIS:CE1	2.49	0.46
22:DA:1387:A:C4	22:DA:1388:G:C8	3.03	0.46
22:DA:1341:G:C4	41:DT:84:TYR:CE2	3.03	0.46
5:AE:147:ASN:O	5:AE:149:PRO:HD3	2.15	0.46
2:CB:80:LYS:O	2:CB:83:ALA:N	2.48	0.46
33:BL:75:ALA:O	33:BL:108:ALA:HA	2.15	0.46
48:D0:39:ARG:O	48:D0:40:HIS:HB2	2.15	0.46
48:D0:53:VAL:HG23	48:D0:54:ILE:H	1.80	0.46
22:DA:466:A:H2	22:DA:795:C:O2	1.98	0.46
51:B3:7:ARG:HD2	51:B3:7:ARG:HA	1.48	0.46
3:CC:17:TRP:CZ2	14:CN:94:GLY:O	2.69	0.46
26:BE:148:ILE:H	26:BE:187:VAL:H	1.63	0.46
1:CA:375:U:N3	1:CA:376:G:N7	2.63	0.46
1:AA:1239:A:H62	1:AA:1299:A:H61	1.58	0.46
1:CA:1130:A:C5	1:CA:1146:A:C5	3.02	0.46
10:CJ:71:LEU:HD12	10:CJ:72:ARG:H	1.79	0.46
1:CA:254:G:H21	17:CQ:17:GLU:HG3	1.78	0.46
1:CA:1054:C:H1'	1:CA:1196:A:C5	2.50	0.46
24:BC:141:HIS:N	24:BC:190:THR:O	2.42	0.46
30:BI:56:VAL:CG2	30:BI:68:PHE:HB2	2.45	0.46
22:BA:141:G:H3'	22:BA:142:A:O4'	2.15	0.46
27:DF:110:ILE:HA	27:DF:111:ARG:NH1	2.24	0.46
1:CA:1326:U:C2	1:CA:1327:C:C5	3.03	0.46
1:CA:369:G:OP2	1:CA:388:G:N1	2.46	0.46
1:CA:653:U:H5'	8:CH:55:LYS:CE	2.45	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:AB:78:ALA:O	2:AB:81:ASP:OD2	2.33	0.46
2:CB:99:MET:O	2:CB:103:TRP:HB3	2.16	0.46
6:CF:3:HIS:ND1	6:CF:94:HIS:HA	2.30	0.46
1:CA:1525:G:OP1	21:CU:37:TYR:HD1	1.97	0.46
22:BA:565:C:O2'	22:BA:566:U:H5'	2.15	0.46
22:DA:532:A:H5'	22:DA:533:G:O4'	2.14	0.46
22:DA:1492:G:H3'	22:DA:1493:C:C5'	2.45	0.46
1:AA:1409:C:H2'	1:AA:1410:A:H8	1.79	0.46
4:AD:145:ARG:HD2	4:AD:147:LYS:HE3	1.95	0.46
1:CA:1287:A:O2'	1:CA:1288:A:O5'	2.33	0.46
22:DA:1286:A:C5	22:DA:1289:C:N4	2.83	0.46
1:AA:207:C:H5''	1:AA:208:U:OP2	2.15	0.46
22:DA:1884:G:OP2	22:DA:1884:G:C8	2.67	0.46
24:DC:92:LEU:HA	24:DC:92:LEU:HD12	1.82	0.46
35:BN:1:MET:O	35:BN:2:ARG:CB	2.62	0.46
1:CA:764:C:H42	1:CA:812:G:H1	1.62	0.46
14:AN:15:LEU:CD1	14:AN:53:ASP:HB2	2.43	0.46
1:CA:969:A:C5	1:CA:970:C:O2	2.68	0.46
28:DG:1:SER:C	28:DG:3:VAL:H	2.18	0.46
4:AD:60:VAL:HA	4:AD:63:ILE:HG22	1.95	0.46
25:DD:48:ILE:HG23	25:DD:48:ILE:O	2.15	0.46
12:CL:113:ARG:HD2	12:CL:118:VAL:CG1	2.45	0.46
37:BP:19:PHE:CD2	37:BP:19:PHE:N	2.81	0.46
23:DB:99:A:C5	23:DB:100:G:C5	3.03	0.46
21:AU:3:ILE:HA	21:AU:19:LYS:NZ	2.30	0.46
1:CA:1103:C:N4	1:CA:1104:G:C6	2.83	0.46
22:BA:2515:C:H6	22:BA:2515:C:O5'	1.99	0.46
1:AA:109:A:C6	1:AA:326:G:C6	3.02	0.46
40:DS:36:LEU:C	40:DS:38:TYR:N	2.69	0.46
25:BD:61:THR:OG1	25:BD:63:PRO:HD2	2.14	0.46
1:CA:1532:U:H2'	1:CA:1534:A:OP2	2.14	0.46
22:DA:2656:U:OP2	22:DA:2664:G:N2	2.45	0.46
34:DM:108:VAL:HG23	34:DM:109:PRO:HD2	1.97	0.46
22:DA:2059:A:H4'	26:DE:64:GLY:O	2.15	0.46
1:CA:65:A:C2'	1:CA:382:A:H61	2.28	0.46
22:BA:789:A:OP1	22:BA:790:U:C5	2.68	0.46
30:BI:2:LYS:HB3	30:BI:3:LYS:H	1.57	0.46
1:CA:1189:U:O2'	3:CC:175:HIS:HD2	1.99	0.46
17:AQ:30:HIS:ND1	17:AQ:31:PRO:HD2	2.30	0.46
1:AA:697:U:C5	1:AA:698:G:C8	3.03	0.46
1:AA:316:C:N3	1:AA:317:U:C5	2.83	0.46
3:AC:106:ARG:O	3:AC:107:LYS:O	2.32	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
24:BC:173:LEU:O	24:BC:180:MET:HA	2.14	0.46
23:BB:78:A:C2	23:BB:99:A:C4	3.03	0.46
34:DM:81:ARG:HH21	34:DM:84:LYS:HE2	1.80	0.46
7:AG:107:ALA:CA	7:AG:122:GLU:HG3	2.46	0.46
42:DU:64:ILE:HG23	42:DU:64:ILE:O	2.15	0.46
22:BA:2804:U:H2'	22:BA:2805:C:C6	2.50	0.46
5:CE:129:SER:HA	56:CE:204:HOH:O	2.14	0.46
13:AM:36:ALA:HB3	13:AM:38:ILE:HG12	1.97	0.46
2:AB:63:LYS:HD3	2:AB:63:LYS:C	2.35	0.46
36:BO:14:ALA:O	36:BO:18:LEU:HB2	2.15	0.46
22:BA:1684:G:C2	22:BA:1705:A:C2	3.03	0.46
22:BA:2523:G:C2'	22:BA:2524:G:H5'	2.46	0.46
24:BC:211:ARG:HD2	24:BC:211:ARG:HA	1.43	0.46
24:DC:2:VAL:O	24:DC:3:VAL:HB	2.15	0.46
31:BJ:4:PHE:O	31:BJ:44:TYR:CZ	2.68	0.46
22:BA:1060:U:O4	22:BA:1088:A:C6	2.68	0.46
45:BX:44:ARG:CG	45:BX:45:PHE:N	2.78	0.46
22:BA:10:A:C2	22:BA:2800:A:H2'	2.51	0.46
1:CA:1319:A:H2'	1:CA:1320:C:OP2	2.14	0.46
22:BA:528:A:C8	22:BA:528:A:C3'	2.98	0.46
25:BD:108:ASP:OD2	25:BD:173:GLN:HA	2.15	0.46
51:D3:28:LEU:O	51:D3:29:ARG:HB3	2.15	0.46
22:DA:333:G:C4	22:DA:334:C:C5	3.03	0.46
38:DQ:64:ILE:HD12	38:DQ:95:ALA:CB	2.46	0.46
2:CB:80:LYS:HD3	2:CB:90:PHE:CZ	2.50	0.46
22:DA:1055:G:C2'	22:DA:1056:G:H5'	2.46	0.46
1:CA:109:A:C5	1:CA:327:A:C4	3.04	0.46
23:DB:40:U:O2	23:DB:43:C:C2'	2.58	0.46
22:DA:1784:A:H4'	22:DA:1785:A:O5'	2.15	0.46
22:DA:70:G:H3'	22:DA:113:U:H4'	1.95	0.46
22:DA:353:C:N4	22:DA:354:A:H62	2.14	0.46
22:DA:584:C:P	38:DQ:5:ARG:HD3	2.55	0.46
22:BA:360:U:C4	22:BA:361:G:C6	3.04	0.46
22:DA:729:G:O2'	22:DA:1775:U:H1'	2.15	0.46
1:CA:913:A:C4'	1:CA:914:A:O5'	2.53	0.46
28:DG:112:VAL:HG12	28:DG:114:HIS:HB3	1.97	0.46
22:BA:1474:U:H2'	22:BA:1475:G:H5'	1.98	0.46
22:BA:581:C:O2'	22:BA:582:A:H5'	2.16	0.46
9:CI:45:MET:O	9:CI:49:GLN:N	2.35	0.46
37:BP:33:GLU:HB2	37:BP:38:ARG:HE	1.80	0.46
22:BA:2503:A:OP2	22:BA:2503:A:H3'	2.15	0.46
22:BA:761:A:N6	56:BA:3293:HOH:O	2.48	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:2496:C:N4	56:DA:3562:HOH:O	2.49	0.46
5:AE:110:MET:HB3	5:AE:139:THR:HG21	1.97	0.46
22:BA:36:G:C2'	22:BA:37:C:H5'	2.45	0.46
30:BI:74:PRO:HB2	30:BI:77:VAL:HG13	1.98	0.46
27:DF:11:VAL:HG22	27:DF:171:ALA:HA	1.98	0.46
1:CA:1006:G:C6	1:CA:1024:G:C2	3.04	0.46
1:CA:1067:A:C4'	1:CA:1068:G:O5'	2.63	0.46
15:AO:68:TYR:O	15:AO:69:LEU:C	2.54	0.46
37:BP:112:ARG:O	37:BP:113:LEU:HD23	2.15	0.46
1:AA:1319:A:C4	1:AA:1323:G:N7	2.84	0.46
24:BC:257:ARG:HE	24:BC:269:ARG:HH22	1.63	0.46
7:CG:124:SER:C	7:CG:126:ALA:N	2.69	0.46
28:BG:29:ASN:CG	28:BG:30:GLY:N	2.68	0.46
1:CA:785:G:H2'	1:CA:785:G:N3	2.30	0.46
9:CI:129:ARG:CZ	9:CI:129:ARG:HA	2.46	0.46
22:BA:1421:G:C2	22:BA:1422:G:N7	2.84	0.46
1:AA:446:G:N2	1:AA:489:C:C2	2.84	0.46
22:DA:1451:C:H42	22:DA:1461:C:H42	1.62	0.46
1:CA:190:A:O5'	1:CA:190:A:H8	1.98	0.46
22:BA:686:U:H1'	50:B2:6:GLN:O	2.15	0.46
8:CH:111:THR:HG22	8:CH:112:ASP:N	2.29	0.46
10:AJ:88:MET:O	10:AJ:90:LEU:N	2.48	0.46
22:DA:1354:A:OP1	24:DC:35:LYS:HE2	2.16	0.46
1:CA:793:U:O2	1:CA:1516:G:H4'	2.15	0.46
22:BA:1727:C:O2	22:BA:1727:C:H2'	2.16	0.46
22:BA:383:C:H5'	22:BA:384:A:H5''	1.97	0.46
44:BW:69:GLU:O	44:BW:77:LYS:O	2.33	0.46
22:BA:996:A:C6	22:BA:1160:G:C2	3.03	0.46
22:BA:1059:G:C6	22:BA:1080:A:N1	2.83	0.46
44:BW:75:ASN:O	44:BW:76:ARG:HB2	2.15	0.46
1:CA:1277:C:O2'	1:CA:1279:G:C8	2.63	0.46
1:CA:1279:G:H2'	1:CA:1279:G:N3	2.31	0.46
44:BW:30:VAL:HG23	44:BW:59:PHE:HD1	1.79	0.46
22:DA:455:C:N4	22:DA:473:G:H5'	2.29	0.46
1:CA:1372:U:OP1	9:CI:70:GLY:O	2.33	0.46
19:CS:52:ASN:C	19:CS:52:ASN:HD22	2.18	0.46
22:DA:1551:A:C5	22:DA:1552:A:C8	3.03	0.46
31:BJ:111:LYS:HD2	31:BJ:112:GLY:N	2.29	0.46
22:DA:2322:A:C8	22:DA:2323:G:C8	3.03	0.46
44:DW:37:VAL:HG12	44:DW:55:ASP:CB	2.40	0.46
22:DA:227:A:H5'	22:DA:229:C:N4	2.31	0.46
22:DA:235:U:N3	22:DA:236:C:C5	2.83	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:266:G:N2	22:DA:427:U:H1'	2.30	0.46
22:DA:1394:U:C3'	22:DA:1394:U:C6	2.99	0.46
22:DA:1402:U:H2'	22:DA:1403:A:O5'	2.15	0.46
22:DA:2025:C:H2'	22:DA:2026:U:C6	2.51	0.46
22:DA:2037:A:C6	22:DA:2038:G:C6	3.04	0.46
22:BA:301:G:C4	22:BA:302:C:C5	3.03	0.46
22:DA:1570:A:O5'	22:DA:1570:A:H8	1.99	0.46
22:DA:332:A:C5	22:DA:335:C:N4	2.83	0.46
22:DA:82:U:H5''	22:DA:296:U:C5'	2.46	0.46
33:BL:94:THR:HG22	33:BL:95:LEU:N	2.30	0.46
5:CE:78:GLY:O	5:CE:121:ASN:OD1	2.34	0.46
1:AA:267:C:O2'	1:AA:268:U:C5'	2.63	0.46
1:AA:274:A:H4'	17:AQ:15:LYS:HE2	1.96	0.46
22:DA:483:A:O2'	22:DA:484:C:C5'	2.64	0.46
22:DA:118:A:P	22:DA:119:A:H5''	2.55	0.46
1:CA:90:C:O2'	1:CA:91:U:H6	1.91	0.46
22:BA:160:A:C6	22:BA:161:A:C6	3.03	0.46
7:CG:26:VAL:HG23	7:CG:27:ASN:H	1.81	0.46
1:CA:820:U:C4'	1:CA:821:G:OP2	2.51	0.46
1:CA:411:A:O3'	1:CA:412:A:O4'	2.32	0.46
1:CA:428:G:H4'	1:CA:429:U:OP1	2.15	0.46
1:CA:1238:A:N6	1:CA:1302:C:N4	2.63	0.46
2:AB:20:ARG:HA	2:AB:20:ARG:NE	2.30	0.46
24:BC:141:HIS:CD2	24:BC:192:GLY:O	2.68	0.46
49:B1:34:GLU:O	49:B1:35:LEU:HB3	2.15	0.46
3:AC:164:THR:O	3:AC:165:GLU:O	2.33	0.46
34:DM:17:ASN:HB3	34:DM:38:ARG:NH2	2.30	0.46
22:BA:1784:A:H4'	22:BA:1785:A:C5'	2.46	0.46
40:BS:4:ILE:HG22	40:BS:106:VAL:HG22	1.98	0.46
2:AB:68:PHE:HE2	2:AB:88:GLN:HB2	1.80	0.46
22:DA:1265:A:C4	22:DA:1267:U:C4	3.04	0.46
31:DJ:123:LYS:HG2	31:DJ:132:HIS:NE2	2.31	0.46
24:BC:20:ASN:HA	24:BC:21:PRO:HD2	1.75	0.46
25:DD:159:LYS:O	25:DD:161:MET:HG2	2.16	0.46
22:BA:2556:C:H2'	22:BA:2557:G:H5'	1.97	0.46
1:CA:1202:U:C2'	1:CA:1203:C:H5'	2.45	0.46
22:DA:1324:G:N2	22:DA:1328:A:C6	2.84	0.46
22:DA:2571:U:N3	22:DA:2574:G:C8	2.84	0.46
1:AA:342:C:C2'	1:AA:343:U:H5'	2.45	0.46
13:CM:95:PRO:HG3	13:CM:99:GLN:OE1	2.15	0.46
28:BG:51:PHE:CE2	28:BG:68:ARG:HA	2.50	0.46
27:BF:82:TYR:CD2	27:BF:83:PRO:HD2	2.44	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:864:A:H3'	1:AA:865:A:C8	2.51	0.46
3:CC:36:PHE:CZ	14:CN:91:GLU:HB3	2.51	0.46
29:DH:6:LEU:HD13	29:DH:36:ALA:HA	1.98	0.46
3:CC:120:THR:CG2	3:CC:120:THR:O	2.63	0.46
42:BU:10:VAL:HB	42:BU:70:ALA:O	2.15	0.46
26:DE:5:LEU:HD22	26:DE:122:GLU:H	1.81	0.46
1:AA:263:A:OP2	20:AT:73:ARG:NH1	2.47	0.46
2:CB:164:ASP:CG	2:CB:203:ASP:HB2	2.36	0.46
22:BA:958:U:H3	34:BM:16:ARG:HD3	1.79	0.46
22:DA:1936:A:H2	22:DA:1943:U:C4	2.33	0.46
22:BA:1417:C:O2'	22:BA:1587:G:O2'	2.24	0.46
34:DM:69:PRO:CA	34:DM:94:ALA:HB2	2.46	0.46
5:AE:12:GLU:HB3	5:AE:38:VAL:HG12	1.97	0.46
22:DA:718:A:C3'	22:DA:719:C:H5'	2.45	0.46
40:BS:24:ILE:HD11	40:BS:35:ILE:HB	1.98	0.46
1:CA:104:G:C2	1:CA:105:G:C8	3.04	0.46
22:DA:1801:A:C5	22:DA:2203:U:C5	3.03	0.46
51:D3:9:ALA:HB1	51:D3:13:PHE:CD2	2.50	0.46
13:CM:85:TYR:HE2	13:CM:96:VAL:HG13	1.80	0.46
22:DA:1420:A:N3	22:DA:2211:A:N7	2.63	0.46
9:AI:111:GLU:HG2	9:AI:120:ALA:HB1	1.96	0.46
22:BA:843:G:O2'	22:BA:844:A:H5'	2.15	0.46
29:DH:50:ARG:C	29:DH:52:ALA:N	2.69	0.46
25:BD:179:ARG:HB3	25:BD:188:LEU:HB2	1.97	0.46
1:CA:948:C:OP2	13:CM:104:ASN:HB3	2.14	0.46
24:BC:85:ASN:OD1	24:BC:85:ASN:N	2.48	0.46
1:AA:1266:G:N1	1:AA:1270:G:C6	2.83	0.46
22:BA:1061:U:H6	22:BA:1070:A:N9	2.14	0.46
38:DQ:87:VAL:HG12	38:DQ:88:GLU:N	2.30	0.46
23:DB:15:A:H1'	23:DB:109:A:N7	2.30	0.46
1:CA:1256:A:N1	1:CA:1278:G:H2'	2.31	0.46
22:BA:923:G:H21	44:BW:23:LYS:HZ3	1.62	0.46
21:CU:3:ILE:CG2	21:CU:19:LYS:HZ1	2.28	0.46
22:DA:1532:A:H2'	22:DA:1533:C:C6	2.51	0.46
22:BA:301:G:H4'	22:BA:302:C:OP1	2.15	0.46
22:DA:995:C:HO2'	38:DQ:60:TRP:HZ2	1.53	0.46
5:CE:103:GLY:CA	5:CE:121:ASN:HA	2.40	0.46
16:AP:20:VAL:HG21	16:AP:32:PHE:HB2	1.98	0.46
17:AQ:58:VAL:HG23	17:AQ:76:ARG:O	2.15	0.46
22:DA:186:G:N2	22:DA:211:C:C2	2.83	0.46
1:CA:85:U:O2	1:CA:85:U:O4'	2.32	0.46
1:CA:1240:U:OP1	7:CG:118:ARG:CZ	2.64	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:654:A:C2'	22:DA:655:A:H5''	2.40	0.46
22:DA:587:C:N3	33:DL:33:ARG:NH2	2.63	0.46
22:DA:1033:U:O2'	22:DA:2750:A:N6	2.48	0.46
22:DA:1109:C:H5''	22:DA:1110:G:OP2	2.15	0.46
22:DA:203:A:OP2	22:DA:204:A:O2'	2.29	0.46
1:AA:1460:C:C2	1:AA:1461:G:C8	3.03	0.46
35:DN:16:HIS:CE1	35:DN:20:MET:CE	2.99	0.46
22:DA:2091:C:H1'	45:DX:33:HIS:NE2	2.30	0.46
13:CM:13:HIS:ND1	13:CM:43:LYS:HE2	2.26	0.46
1:AA:76:G:C2	1:AA:95:C:N3	2.84	0.46
1:AA:72:A:N6	1:AA:99:C:H1'	2.30	0.46
39:DR:78:ARG:HB3	39:DR:83:TYR:HD1	1.79	0.46
22:BA:2152:G:H2'	22:BA:2153:C:H6	1.80	0.46
8:CH:57:GLU:O	8:CH:58:LEU:HB2	2.15	0.46
22:BA:1045:C:H4'	22:BA:1046:A:H5'	1.98	0.46
2:AB:116:LEU:HG	2:AB:140:LEU:HG	1.96	0.46
5:CE:44:ARG:HG2	5:CE:72:ASN:HA	1.97	0.46
1:CA:505:G:C6	1:CA:535:A:C2	3.04	0.46
33:BL:53:GLY:O	33:BL:54:GLN:C	2.53	0.46
25:DD:94:GLN:O	25:DD:95:SER:C	2.53	0.46
22:DA:2574:G:N2	22:DA:2575:C:H1'	2.30	0.46
22:DA:40:U:C4	22:DA:41:C:C4	3.04	0.46
1:CA:251:G:N2	1:CA:253:A:N6	2.63	0.46
5:AE:56:PRO:O	5:AE:59:ILE:HG13	2.15	0.46
10:AJ:81:GLU:CA	10:AJ:84:VAL:HG12	2.45	0.46
45:BX:32:LEU:O	45:BX:33:HIS:CG	2.68	0.46
33:DL:47:ARG:H	33:DL:47:ARG:HG3	1.60	0.46
19:AS:43:MET:HA	19:AS:46:LEU:HD12	1.97	0.46
37:BP:24:THR:O	37:BP:24:THR:HG23	2.15	0.46
22:DA:1410:G:N2	22:DA:1593:A:C4	2.83	0.46
14:CN:31:SER:HA	14:CN:45:LEU:HD11	1.98	0.46
1:CA:35:G:H21	12:CL:114:SER:CB	2.28	0.46
7:CG:12:LEU:O	7:CG:12:LEU:HD13	2.15	0.46
1:CA:801:U:O2'	1:CA:802:A:H5'	2.16	0.46
1:AA:772:U:O2'	1:AA:773:G:H5'	2.16	0.46
7:AG:83:THR:O	7:AG:84:TYR:C	2.53	0.46
22:DA:371:A:N6	22:DA:402:A:OP2	2.44	0.46
34:BM:19:GLY:O	34:BM:97:GLN:HB2	2.15	0.46
13:CM:56:ARG:C	13:CM:59:VAL:HG12	2.36	0.46
4:AD:191:SER:OG	4:AD:192:ALA:N	2.45	0.46
4:CD:60:VAL:CG2	4:CD:194:ILE:HG21	2.46	0.46
22:DA:2492:U:H6	22:DA:2492:U:O5'	1.99	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
36:BO:84:GLU:O	36:BO:86:GLY:N	2.48	0.46
22:BA:2223:G:H2'	22:BA:2224:G:H5'	1.98	0.46
24:DC:35:LYS:O	24:DC:36:ASN:CB	2.62	0.46
37:DP:19:PHE:CD2	37:DP:19:PHE:N	2.83	0.46
1:AA:370:C:O2'	1:AA:371:A:H5'	2.15	0.46
4:AD:168:THR:HG22	4:AD:183:ARG:HH21	1.81	0.46
22:BA:2669:G:C2'	22:BA:2670:A:H5'	2.45	0.46
1:CA:354:G:C2	1:CA:355:C:C6	3.04	0.46
22:BA:1563:U:H2'	22:BA:1564:C:C6	2.51	0.46
3:AC:53:ARG:O	3:AC:68:HIS:HB2	2.16	0.46
22:BA:488:G:O2'	40:BS:49:LYS:NZ	2.44	0.46
23:BB:104:A:H2'	23:BB:105:G:O4'	2.16	0.46
1:AA:993:G:N3	1:AA:993:G:H2'	2.30	0.46
7:AG:46:LEU:O	7:AG:50:ALA:HB2	2.15	0.46
38:BQ:91:ARG:CZ	38:BQ:93:ILE:HG21	2.46	0.46
38:BQ:91:ARG:CB	38:BQ:94:LEU:HB2	2.46	0.46
1:CA:120:A:O2'	1:CA:121:U:H5''	2.15	0.46
22:DA:1799:G:O2'	24:DC:179:GLU:OE2	2.34	0.46
1:CA:1014:A:C5	19:CS:33:TRP:CE3	3.04	0.46
1:CA:963:G:C2	1:CA:973:G:C6	3.03	0.46
1:CA:986:U:C2	1:CA:1220:G:N2	2.83	0.46
1:CA:1319:A:OP2	19:CS:4:LEU:HD21	2.15	0.46
22:DA:2321:U:H5''	22:DA:2322:A:OP2	2.16	0.46
49:D1:8:ILE:HD12	49:D1:52:LYS:HG3	1.96	0.46
22:DA:406:G:O2'	22:DA:407:G:O5'	2.34	0.46
42:DU:3:LYS:HG2	42:DU:84:PHE:CZ	2.51	0.46
24:DC:149:LYS:HE3	24:DC:152:GLN:CD	2.36	0.46
33:BL:93:ASN:O	33:BL:94:THR:HB	2.15	0.46
1:CA:1434:A:N6	1:CA:1435:G:C6	2.84	0.46
17:AQ:12:VAL:CG1	17:AQ:21:VAL:O	2.64	0.46
1:AA:450:G:H2'	1:AA:451:A:OP1	2.15	0.46
22:DA:478:A:C2	22:DA:480:A:N9	2.84	0.46
22:DA:482:A:N6	22:DA:506:G:C5	2.83	0.46
14:CN:80:ARG:HH11	14:CN:80:ARG:HG2	1.80	0.46
35:DN:73:ASN:CA	35:DN:76:VAL:HG22	2.45	0.46
22:DA:105:C:H2'	22:DA:106:C:H6	1.78	0.46
22:BA:1733:G:C2	22:BA:1734:G:C5	3.04	0.46
22:DA:204:A:C8	22:DA:206:U:C4	3.03	0.46
1:CA:1133:G:C4	1:CA:1134:G:C8	3.04	0.46
29:DH:25:TYR:O	29:DH:29:PHE:HB3	2.15	0.46
7:CG:68:VAL:O	7:CG:70:PRO:HD3	2.15	0.46
1:CA:996:A:C2	1:CA:1046:A:H5'	2.50	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:CM:13:HIS:CD2	13:CM:14:ALA:H	2.34	0.46
1:AA:95:C:C6	1:AA:95:C:H5'	2.51	0.46
34:BM:42:THR:H	34:BM:45:GLN:HB2	1.80	0.46
8:CH:29:SER:OG	8:CH:32:LYS:HB2	2.15	0.46
2:AB:71:THR:HG23	2:AB:93:HIS:C	2.36	0.46
22:DA:1568:G:N2	24:DC:57:HIS:HE1	2.07	0.46
22:BA:508:A:C4'	22:BA:509:C:OP2	2.61	0.46
22:DA:1222:U:H2'	22:DA:1223:G:C8	2.50	0.46
22:DA:533:G:N2	38:DQ:44:TYR:CE1	2.83	0.46
1:AA:33:A:H2'	1:AA:34:C:C6	2.51	0.46
22:DA:1378:A:N7	22:DA:1380:G:C6	2.83	0.46
22:BA:2204:G:O5'	24:BC:149:LYS:HE3	2.15	0.46
22:DA:2142:A:H2'	22:DA:2143:C:O3'	2.15	0.46
14:CN:46:LYS:HE3	19:CS:10:ILE:HB	1.98	0.46
1:CA:562:U:H1'	12:CL:11:ARG:HD2	1.97	0.46
39:BR:15:SER:O	39:BR:18:GLN:HB3	2.14	0.46
1:CA:1226:C:H5'	13:CM:94:LEU:HD21	1.97	0.46
22:DA:1179:G:C4	22:DA:1180:U:C5	3.04	0.46
22:DA:1512:C:C4	22:DA:1513:U:C4	3.03	0.46
22:BA:1721:G:O2'	22:BA:1739:A:N6	2.49	0.46
2:CB:124:THR:C	2:CB:126:ASP:H	2.18	0.46
27:BF:111:ARG:HA	27:BF:111:ARG:NE	2.30	0.46
22:DA:2686:G:C5	22:DA:2687:U:C4	3.03	0.46
2:CB:164:ASP:OD2	2:CB:203:ASP:HB2	2.16	0.46
1:AA:819:A:N7	1:AA:1529:G:C2	2.84	0.46
42:DU:54:PRO:CG	42:DU:55:GLY:H	2.27	0.46
48:B0:14:MET:O	48:B0:17:SER:HB3	2.15	0.46
22:DA:2097:A:C4	22:DA:2098:U:C5	3.04	0.46
1:AA:417:G:O2'	1:AA:418:C:H5'	2.15	0.46
22:BA:2553:G:N1	22:BA:2554:U:O2	2.49	0.46
30:DI:104:GLN:HA	30:DI:107:GLU:HB3	1.98	0.46
22:BA:1275:A:H2	22:BA:1295:C:O2	1.98	0.46
24:BC:181:ARG:NH2	24:BC:265:PHE:HB3	2.29	0.46
33:BL:14:LYS:HG3	33:BL:15:ALA:N	2.31	0.46
9:CI:63:TYR:C	9:CI:64:ILE:HD12	2.36	0.46
22:DA:2474:U:H2'	22:DA:2475:C:O5'	2.16	0.46
8:AH:1:SER:C	8:AH:3:GLN:H	2.19	0.46
37:DP:16:VAL:HA	37:DP:17:PRO:HD3	1.59	0.46
34:DM:7:THR:HG22	34:DM:9:PHE:H	1.80	0.46
8:CH:33:VAL:C	8:CH:35:ILE:H	2.18	0.46
1:AA:924:C:H2'	1:AA:925:G:H8	1.80	0.46
40:DS:10:ALA:HB3	40:DS:101:SER:O	2.15	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:680:C:O2'	1:AA:681:A:H5'	2.16	0.46
31:BJ:58:ASN:N	31:BJ:127:GLY:O	2.45	0.46
45:BX:20:ALA:O	45:BX:21:LEU:HB2	2.16	0.46
22:BA:402:A:C2'	22:BA:403:U:H5'	2.46	0.46
22:DA:1114:C:H2'	22:DA:1115:G:C8	2.50	0.46
1:AA:1014:A:H4'	19:AS:13:HIS:CD2	2.51	0.46
22:BA:996:A:O2'	38:BQ:91:ARG:HG3	2.16	0.46
39:BR:49:ILE:O	39:BR:51:VAL:O	2.33	0.46
12:CL:42:LYS:CG	12:CL:43:LYS:HG2	2.45	0.46
22:DA:217:A:H2'	22:DA:218:A:C8	2.51	0.46
23:DB:13:G:O2'	23:DB:14:U:H5''	2.15	0.46
22:DA:454:A:C3'	22:DA:455:C:H5''	2.46	0.46
22:DA:266:G:H2'	22:DA:267:C:O5'	2.15	0.46
1:AA:484:G:H4'	1:AA:485:U:C5'	2.46	0.46
22:DA:1611:C:O2'	22:DA:1612:C:O5'	2.32	0.46
2:AB:95:TRP:HZ3	2:AB:98:GLY:H	1.61	0.46
11:AK:124:LYS:HE2	21:AU:33:ARG:NH2	2.31	0.46
22:DA:321:U:O2'	22:DA:340:A:N3	2.46	0.46
22:DA:1655:A:H4'	25:DD:118:PHE:CD1	2.50	0.46
17:AQ:16:MET:HE2	17:AQ:20:ILE:HD12	1.98	0.46
17:AQ:46:HIS:HB3	17:AQ:73:THR:HG23	1.98	0.46
25:BD:133:THR:CG2	25:BD:134:HIS:CD2	2.92	0.46
1:CA:415:A:H3'	1:CA:416:G:H8	1.81	0.46
22:DA:2444:G:C6	22:DA:2445:G:C5	3.04	0.46
22:DA:617:G:N2	22:DA:618:G:C4	2.83	0.46
22:DA:811:U:H1'	22:DA:1251:C:C2	2.51	0.46
1:CA:1130:A:C6	1:CA:1146:A:N7	2.83	0.46
31:BJ:20:ALA:O	31:BJ:21:THR:O	2.34	0.46
24:BC:141:HIS:NE2	24:BC:194:VAL:HA	2.30	0.46
1:AA:967:C:H6	1:AA:967:C:O5'	1.99	0.46
13:CM:12:LYS:HB3	13:CM:17:ALA:CB	2.38	0.46
22:DA:279:A:C2	22:DA:362:A:C4'	2.92	0.46
25:BD:101:PHE:O	25:BD:102:ALA:C	2.54	0.46
32:DK:69:VAL:HG12	32:DK:70:ARG:N	2.30	0.46
9:CI:45:MET:HA	9:CI:48:ARG:HG2	1.97	0.46
35:BN:36:THR:HG23	35:BN:37:THR:O	2.16	0.46
9:CI:15:ALA:O	9:CI:66:VAL:HA	2.15	0.46
42:BU:44:HIS:HD2	42:BU:57:ILE:HG12	1.81	0.46
22:BA:733:G:O6	22:BA:761:A:C8	2.69	0.46
1:CA:203:G:H8	1:CA:203:G:O5'	1.97	0.46
22:DA:1281:G:O2'	22:DA:1282:U:H5'	2.15	0.46
22:DA:170:U:H6	22:DA:170:U:O5'	1.99	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:173:A:H2'	22:DA:174:U:C6	2.51	0.46
22:BA:449:A:C2'	22:BA:450:G:H5'	2.45	0.46
22:DA:2635:A:C5'	25:DD:79:LEU:HB2	2.46	0.46
22:DA:968:C:H2'	22:DA:969:G:H8	1.81	0.46
22:BA:989:G:C8	47:BZ:13:ILE:HD11	2.51	0.46
1:AA:184:G:H2'	1:AA:185:U:C5	2.51	0.46
50:D2:24:THR:O	50:D2:28:ARG:HB3	2.15	0.46
1:CA:251:G:H4'	1:CA:252:U:OP1	2.14	0.46
27:BF:151:LEU:HD12	27:BF:152:ASP:N	2.31	0.46
9:CI:27:ILE:HD13	9:CI:62:LEU:HG	1.98	0.46
1:AA:545:C:H5'	4:AD:68:GLU:HG3	1.97	0.46
37:DP:24:THR:O	37:DP:25:VAL:C	2.54	0.46
22:DA:1171:G:C4	22:DA:1179:G:N2	2.84	0.46
1:AA:1056:U:H5'	3:AC:162:ALA:HB2	1.97	0.46
6:AF:47:LEU:HG	6:AF:56:LYS:H	1.81	0.46
1:AA:855:U:H2'	1:AA:856:C:H6	1.81	0.46
33:BL:78:ARG:HA	33:BL:113:ALA:HB3	1.97	0.46
51:D3:18:LYS:CD	51:D3:19:GLY:H	2.29	0.46
22:DA:1244:A:HO2'	26:DE:29:HIS:CE1	2.32	0.46
24:BC:77:VAL:HG22	24:BC:111:ALA:HA	1.98	0.46
1:AA:990:C:H2'	1:AA:991:U:C6	2.51	0.46
22:DA:2845:U:H2'	22:DA:2846:G:O4'	2.16	0.46
22:BA:2311:A:O3'	22:BA:2312:U:C6	2.69	0.46
17:CQ:20:ILE:HG13	17:CQ:22:VAL:HG23	1.98	0.46
22:DA:2096:C:H2'	22:DA:2097:A:H8	1.81	0.46
24:DC:251:THR:HG22	24:DC:252:LYS:HG3	1.97	0.46
1:AA:140:U:H2'	1:AA:141:G:O4'	2.15	0.46
1:CA:878:A:C5	1:CA:879:C:C5	3.03	0.46
13:CM:1:ALA:HB3	13:CM:8:ILE:HG23	1.96	0.46
22:BA:2282:G:H4'	22:BA:2389:G:O2'	2.16	0.46
3:CC:131:ARG:O	3:CC:135:ARG:HB2	2.15	0.46
14:CN:79:SER:O	14:CN:83:VAL:HG23	2.15	0.46
1:CA:805:C:C2	1:CA:806:C:C5	3.03	0.46
1:CA:828:U:H2'	1:CA:829:G:O5'	2.14	0.46
23:BB:54:G:H21	27:BF:25:MET:CE	2.28	0.46
8:CH:93:LYS:N	8:CH:93:LYS:HD3	2.31	0.46
31:BJ:5:THR:O	31:BJ:5:THR:HG22	2.14	0.46
22:BA:2884:U:O2	22:BA:2884:U:O4'	2.33	0.46
26:BE:110:SER:O	26:BE:113:VAL:HG12	2.16	0.46
22:DA:381:G:H5'	45:DX:15:ASN:HD22	1.79	0.46
22:BA:364:C:O2'	22:BA:365:U:H5'	2.15	0.46
1:CA:976:G:N2	1:CA:1363:A:N3	2.64	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
44:DW:37:VAL:CG1	44:DW:55:ASP:HB2	2.38	0.46
51:D3:29:ARG:CG	51:D3:29:ARG:HH21	2.29	0.46
22:DA:2394:C:H41	51:D3:30:HIS:CE1	2.33	0.46
22:DA:2390:U:O2	22:DA:2390:U:H2'	2.16	0.46
32:BK:10:VAL:HG11	32:BK:16:ALA:HB2	1.96	0.46
22:DA:231:A:H2'	22:DA:232:G:H5'	1.97	0.46
22:DA:1571:A:H2'	22:DA:1572:A:C8	2.50	0.46
22:DA:302:C:C2'	22:DA:303:G:H8	2.28	0.46
8:AH:20:ASN:HA	8:AH:64:TYR:CE2	2.51	0.46
22:DA:126:A:H2'	50:D2:46:LYS:HE2	1.98	0.46
22:DA:125:A:H5''	50:D2:19:ARG:HB2	1.98	0.46
4:CD:28:ASP:O	4:CD:31:CYS:SG	2.74	0.46
22:BA:1730:C:H1'	22:BA:1731:G:C2	2.51	0.46
22:BA:2033:A:H1'	22:BA:2035:G:OP2	2.15	0.46
37:DP:50:ARG:HB2	37:DP:56:SER:HB3	1.96	0.46
37:DP:75:THR:HG23	37:DP:76:HIS:CD2	2.50	0.46
1:CA:752:G:O2'	1:CA:753:A:P	2.73	0.46
1:CA:275:G:H2'	1:CA:276:G:C8	2.50	0.46
1:AA:1160:G:HO2'	1:AA:1161:C:C5'	2.28	0.46
22:BA:2680:U:OP2	25:BD:114:LYS:HE2	2.16	0.46
51:D3:41:ARG:NH2	51:D3:41:ARG:CG	2.72	0.46
21:CU:33:ARG:HG2	21:CU:34:ARG:N	2.31	0.46
22:DA:2800:A:C2'	22:DA:2801:G:H4'	2.39	0.46
1:CA:989:U:C2'	1:CA:990:C:H5'	2.46	0.46
46:BY:5:GLU:O	46:BY:6:LEU:C	2.54	0.46
44:DW:9:THR:HG23	44:DW:10:ARG:N	2.31	0.46
39:DR:68:ARG:NH1	39:DR:90:ARG:HG2	2.30	0.46
1:CA:1305:G:C6	1:CA:1331:G:C2	3.03	0.46
1:CA:563:A:C8	1:CA:567:G:O4'	2.68	0.46
3:AC:13:ILE:HD13	3:AC:13:ILE:N	2.30	0.46
42:DU:71:ILE:H	42:DU:71:ILE:HG12	1.47	0.46
22:BA:1792:G:OP1	24:BC:203:VAL:O	2.34	0.46
23:DB:44:G:H3'	27:DF:91:ARG:HE	1.80	0.46
22:DA:567:U:H4'	22:DA:808:G:OP1	2.15	0.46
51:B3:54:LEU:HA	51:B3:54:LEU:HD12	1.70	0.46
34:DM:73:ILE:HG12	34:DM:93:VAL:CG1	2.45	0.46
30:BI:71:LYS:CG	30:BI:72:THR:H	2.28	0.46
41:BT:29:THR:CA	41:BT:86:THR:HA	2.45	0.46
1:CA:632:U:O2	1:CA:632:U:C2'	2.63	0.46
22:DA:2636:C:H4'	25:DD:81:GLU:CD	2.36	0.46
22:DA:2726:A:O2'	22:DA:2727:A:H5'	2.16	0.46
25:DD:45:TYR:CE2	25:DD:47:ALA:HB3	2.48	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:263:A:H2'	1:AA:264:C:C5	2.51	0.46
27:BF:72:SER:HB2	27:BF:80:GLN:HB2	1.98	0.46
22:BA:2064:C:H2'	22:BA:2065:C:C6	2.50	0.46
37:BP:24:THR:HG22	37:BP:87:ARG:H	1.80	0.46
5:CE:157:GLY:HA3	8:CH:63:LYS:CE	2.46	0.46
1:AA:1332:A:H5''	1:AA:1333:A:OP2	2.16	0.46
1:CA:802:A:HO2'	1:CA:803:G:P	2.37	0.46
14:CN:78:LEU:N	14:CN:78:LEU:HD12	2.31	0.46
13:AM:18:LEU:O	13:AM:24:VAL:CG2	2.63	0.46
1:CA:1099:G:H5''	2:CB:94:ARG:NH2	2.31	0.46
1:CA:998:C:C6	1:CA:999:C:H5	2.33	0.46
45:BX:3:VAL:HG22	45:BX:10:ARG:HB3	1.98	0.46
8:AH:36:ALA:HA	8:AH:39:LEU:HD12	1.98	0.46
1:CA:1000:A:C2	1:CA:1041:G:C5	3.04	0.46
23:BB:13:G:O2'	23:BB:15:A:H5'	2.16	0.46
1:AA:804:U:H5''	1:AA:805:C:OP2	2.15	0.46
22:BA:1005:C:H1'	22:BA:1012:U:N3	2.30	0.46
22:BA:2523:G:O2'	22:BA:2524:G:H5'	2.15	0.46
7:AG:49:LEU:CD2	7:AG:124:SER:HB2	2.45	0.46
51:D3:50:SER:O	51:D3:52:GLY:N	2.49	0.46
22:BA:2654:A:N1	22:BA:2665:A:H5''	2.31	0.46
22:BA:722:A:H2'	22:BA:723:C:O4'	2.16	0.46
4:CD:75:TYR:HA	4:CD:89:LEU:HD13	1.98	0.46
22:BA:1356:G:C2	22:BA:1357:C:C2	3.04	0.46
2:CB:14:HIS:CD2	2:CB:16:GLY:HA3	2.51	0.46
38:BQ:75:TYR:C	38:BQ:75:TYR:CD2	2.88	0.46
22:DA:1483:G:C6	22:DA:1484:U:C4	3.04	0.46
1:CA:102:G:H2'	1:CA:103:U:H6	1.80	0.46
22:DA:1006:C:O5'	22:DA:1006:C:H6	1.99	0.46
38:BQ:93:ILE:HG23	38:BQ:94:LEU:H	1.80	0.46
22:BA:2846:G:OP2	37:BP:51:ASN:CB	2.64	0.46
22:BA:2365:G:H2'	22:BA:2366:A:C8	2.51	0.46
6:CF:86:ARG:NH1	18:CR:63:TYR:CB	2.57	0.46
22:DA:1816:C:H2'	24:DC:61:TYR:OH	2.15	0.46
36:DO:62:LEU:HD11	36:DO:65:THR:CA	2.46	0.46
1:CA:1219:A:C6	1:CA:1220:G:C5	3.04	0.46
22:DA:2298:A:N6	22:DA:2321:U:O4	2.49	0.46
22:DA:2330:G:H8	22:DA:2330:G:O5'	1.99	0.46
22:DA:945:A:C5	22:DA:2448:A:C2	3.04	0.46
22:DA:1534:U:H6	22:DA:1538:G:H1	1.61	0.46
42:DU:16:LYS:HB3	42:DU:17:ASP:H	1.52	0.46
1:AA:972:C:O2'	10:AJ:57:VAL:HG23	2.14	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:842:U:H2'	1:AA:844:G:OP1	2.15	0.46
16:AP:22:ALA:CB	16:AP:32:PHE:HA	2.43	0.46
22:DA:647:G:N7	22:DA:648:G:N7	2.63	0.46
22:BA:263:G:H2'	22:BA:264:C:O5'	2.16	0.46
1:CA:86:G:N2	1:CA:87:C:C2	2.84	0.46
22:DA:2067:G:O6	22:DA:2444:G:C6	2.69	0.46
26:DE:98:LYS:O	26:DE:99:LYS:CB	2.63	0.46
1:CA:1133:G:C6	1:CA:1142:G:O6	2.68	0.46
29:DH:25:TYR:CE1	29:DH:29:PHE:HD2	2.33	0.46
22:BA:574:A:C4'	22:BA:575:A:O5'	2.63	0.46
41:BT:15:HIS:O	41:BT:17:SER:N	2.49	0.46
1:CA:267:C:H2'	1:CA:268:U:O5'	2.16	0.46
22:BA:2134:A:C4	22:BA:2135:A:N7	2.84	0.46
7:CG:68:VAL:CG2	7:CG:134:VAL:HG12	2.45	0.46
23:BB:27:C:OP1	36:BO:34:HIS:CE1	2.68	0.46
23:BB:28:C:H2'	23:BB:29:A:H5'	1.98	0.46
1:AA:71:A:C6	1:AA:100:G:C8	3.04	0.46
41:BT:34:VAL:HG21	41:BT:43:ILE:HD12	1.98	0.46
22:DA:1187:G:H8	22:DA:1187:G:O5'	1.98	0.46
2:AB:66:ILE:HG13	2:AB:220:VAL:HG11	1.97	0.46
22:BA:1045:C:H3'	22:BA:1046:A:C5'	2.46	0.46
22:BA:1110:G:O2'	22:BA:1111:A:P	2.74	0.46
46:BY:47:ARG:CG	46:BY:47:ARG:HH21	2.17	0.46
25:BD:114:LYS:HE3	25:BD:114:LYS:CA	2.45	0.46
22:DA:2198:A:O2'	22:DA:2199:A:H8	1.98	0.46
35:BN:37:THR:HG22	35:BN:110:MET:HE1	1.98	0.46
31:DJ:69:ARG:HH21	31:DJ:93:ILE:HG12	1.80	0.46
5:AE:82:HIS:CE1	8:AH:95:MET:HE2	2.51	0.46
22:DA:2543:G:H5'	22:DA:2543:G:H8	1.80	0.46
22:DA:1280:G:C2'	22:DA:1281:G:H5'	2.46	0.46
22:DA:1378:A:N6	22:DA:1569:A:N1	2.59	0.46
7:AG:12:LEU:HD22	7:AG:12:LEU:N	2.25	0.46
1:CA:1167:A:C2'	1:CA:1168:U:OP1	2.64	0.46
22:DA:172:A:C2	22:DA:173:A:C5	3.04	0.46
29:BH:96:THR:C	29:BH:97:ARG:HG3	2.36	0.46
41:BT:68:LYS:O	41:BT:69:ARG:O	2.33	0.46
24:BC:15:VAL:CA	24:BC:203:VAL:HG11	2.43	0.46
21:AU:39:LYS:N	21:AU:40:PRO:CD	2.76	0.46
34:BM:1:MET:HE3	34:BM:2:LEU:H	1.81	0.46
22:BA:2794:C:H2'	22:BA:2795:C:H6	1.81	0.46
25:DD:148:GLN:O	25:DD:149:ASN:HB2	2.16	0.46
27:DF:14:LYS:O	27:DF:15:LEU:HD23	2.16	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
27:DF:91:ARG:HA	27:DF:95:MET:SD	2.56	0.46
1:CA:1024:G:C5	1:CA:1025:U:C5	3.04	0.46
30:DI:112:LYS:HZ3	30:DI:128:ILE:HD12	1.81	0.46
22:DA:2623:G:C4'	22:DA:2825:G:C8	2.94	0.46
44:DW:49:ASN:HB2	44:DW:60:ALA:HA	1.98	0.46
9:AI:56:MET:SD	9:AI:57:VAL:N	2.89	0.46
33:DL:58:TYR:O	51:D3:12:ARG:CZ	2.64	0.46
54:BA:3135:EM1:H24A	54:BA:3135:EM1:H7	1.89	0.46
54:BA:3135:EM1:O32	54:BA:3135:EM1:C26	2.63	0.46
22:DA:1430:G:H2'	22:DA:1431:A:H8	1.80	0.46
1:AA:1343:G:H1'	9:AI:122:ARG:NH1	2.30	0.46
22:DA:2550:G:N2	22:DA:2559:C:H1'	2.31	0.46
1:AA:604:G:C6	1:AA:605:U:N3	2.84	0.46
10:AJ:35:GLN:HG2	10:AJ:77:VAL:CB	2.45	0.46
35:BN:70:THR:HG21	35:BN:75:ILE:HD11	1.97	0.46
35:BN:101:GLY:HA3	35:BN:102:PHE:HD2	1.80	0.46
45:DX:39:VAL:O	45:DX:41:SER:N	2.41	0.46
1:CA:1010:U:C2	1:CA:1020:G:N2	2.84	0.46
4:CD:127:ARG:HG2	4:CD:127:ARG:HH11	1.80	0.46
22:DA:2507:C:H1'	22:DA:2583:G:N2	2.31	0.46
1:AA:613:C:H2'	1:AA:614:C:C6	2.50	0.46
9:AI:11:ARG:HA	9:AI:105:ARG:HH12	1.80	0.46
22:DA:898:C:H2'	22:DA:899:A:O4'	2.16	0.46
1:AA:935:A:O2'	1:AA:1383:C:N3	2.40	0.46
22:BA:1924:C:C4	22:BA:1925:C:C5	3.03	0.46
13:AM:92:ARG:HH11	13:AM:92:ARG:HG2	1.80	0.46
24:DC:124:LYS:NZ	24:DC:124:LYS:HB3	2.30	0.46
39:BR:49:ILE:HD12	39:BR:53:PHE:H	1.81	0.46
44:BW:13:ARG:O	44:BW:14:ASP:C	2.55	0.46
22:BA:2354:C:H4'	44:BW:31:LEU:HD22	1.98	0.46
21:CU:24:LYS:HE3	21:CU:25:ALA:H	1.80	0.46
38:DQ:6:GLY:C	38:DQ:8:ILE:N	2.69	0.46
22:DA:2391:G:O2'	22:DA:2392:A:O5'	2.27	0.46
22:DA:265:A:O2'	22:DA:266:G:H1'	2.16	0.46
22:DA:1919:A:H2'	22:DA:1920:C:H5'	1.97	0.46
2:AB:98:GLY:O	2:AB:102:ASN:N	2.47	0.46
22:DA:1359:A:N3	22:DA:1359:A:H2'	2.31	0.46
22:DA:2218:G:H2'	22:DA:2219:U:H6	1.81	0.46
4:AD:34:GLU:C	4:AD:36:ALA:H	2.19	0.46
22:DA:323:C:OP1	22:DA:339:U:O2'	2.32	0.46
31:DJ:4:PHE:CD2	38:DQ:99:VAL:HG11	2.51	0.46
1:AA:841:C:H2'	1:AA:841:C:O2	2.15	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
3:CC:190:THR:HG22	3:CC:191:THR:N	2.22	0.46
28:DG:88:LEU:N	28:DG:128:THR:O	2.49	0.46
22:DA:2311:A:N3	27:DF:78:ILE:HD11	2.31	0.46
22:BA:263:G:C2'	22:BA:264:C:O5'	2.64	0.46
26:BE:119:ILE:HD11	26:BE:187:VAL:HG23	1.93	0.46
22:DA:636:G:O5'	33:DL:128:THR:HG23	2.16	0.46
22:DA:1022:G:N7	31:DJ:68:LYS:HD3	2.31	0.46
22:DA:287:G:N1	22:DA:354:A:C6	2.84	0.46
4:CD:12:ARG:NH2	4:CD:36:ALA:O	2.49	0.46
22:DA:1965:C:C3'	22:DA:1966:A:H5''	2.46	0.46
1:CA:1301:U:H2'	1:CA:1302:C:H5	1.80	0.46
22:BA:960:A:C5'	22:BA:961:C:OP2	2.64	0.46
24:DC:94:LEU:HA	24:DC:100:ARG:HG2	1.97	0.46
22:BA:2284:A:OP1	49:B1:4:ILE:HG12	2.16	0.46
2:AB:90:PHE:CD2	2:AB:90:PHE:O	2.69	0.46
21:CU:39:LYS:O	21:CU:43:GLU:HB2	2.15	0.46
30:BI:115:ASP:C	30:BI:115:ASP:OD1	2.54	0.46
22:BA:228:C:H4'	22:BA:229:C:C5'	2.43	0.46
22:DA:1526:C:C4	22:DA:1527:G:C5	3.03	0.46
1:AA:208:U:H3	1:AA:212:G:H21	1.64	0.46
26:BE:46:GLN:CG	26:BE:87:ALA:H	2.27	0.46
22:DA:1324:G:O2'	22:DA:1616:A:N1	2.49	0.46
22:DA:1695:G:H8	24:DC:7:PRO:HB2	1.81	0.46
13:CM:82:LEU:HD21	19:CS:60:PHE:HB3	1.97	0.46
24:DC:79:ARG:HG3	24:DC:92:LEU:HB2	1.98	0.46
1:CA:1264:U:H2'	1:CA:1265:C:H6	1.76	0.46
1:CA:1449:C:C2'	1:CA:1450:U:H5'	2.46	0.46
28:BG:1:SER:HB3	28:BG:5:LYS:HZ3	1.80	0.46
22:BA:1941:C:H5'	22:BA:1941:C:C6	2.46	0.46
22:BA:2756:U:H1'	22:BA:2757:A:H5''	1.98	0.46
22:BA:2849:U:H5'	22:BA:2849:U:C6	2.50	0.46
22:BA:309:A:H4'	42:BU:15:GLY:HA2	1.97	0.46
29:DH:5:LEU:C	29:DH:6:LEU:HD12	2.35	0.46
22:DA:1431:A:H2'	22:DA:1432:G:O4'	2.16	0.46
1:AA:1473:G:O2'	1:AA:1474:U:H5'	2.16	0.46
38:BQ:43:GLN:NE2	39:BR:77:PHE:HB3	2.30	0.46
32:DK:1:MET:HA	32:DK:33:ALA:O	2.16	0.46
22:DA:1709:U:O2'	22:DA:1710:G:H5'	2.16	0.46
15:AO:26:VAL:O	15:AO:27:GLN:C	2.54	0.46
13:AM:84:CYS:HA	19:AS:73:PHE:CD2	2.47	0.46
1:CA:512:U:HO2'	1:CA:513:C:H6	1.46	0.46
15:CO:88:ARG:NH2	22:DA:715:A:H4'	2.29	0.46

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:1031:C:C2'	1:AA:1032:G:OP2	2.63	0.46
8:CH:82:LEU:HD21	17:CQ:34:GLY:O	2.16	0.46
11:CK:34:THR:HG1	11:CK:39:ASN:C	2.18	0.46
23:DB:81:G:C5	23:DB:82:U:C5	3.05	0.46
22:DA:1668:A:H4'	22:DA:1669:A:O5'	2.15	0.46
10:AJ:59:LYS:HD2	10:AJ:60:ASP:H	1.79	0.46
49:D1:47:ILE:HD12	49:D1:47:ILE:N	2.31	0.46
33:BL:47:ARG:HG3	33:BL:50:PHE:HB2	1.97	0.46
1:CA:998:C:C5	1:CA:999:C:H5	2.34	0.46
11:CK:87:GLY:N	11:CK:113:THR:HG23	2.32	0.46
15:AO:16:ARG:O	15:AO:17:ASP:CB	2.63	0.46
22:DA:599:A:N3	22:DA:659:G:C2	2.84	0.46
24:DC:212:TRP:HD1	24:DC:212:TRP:C	2.19	0.46
7:AG:48:THR:O	7:AG:52:ARG:HB2	2.16	0.46
1:CA:1040:U:O2'	1:CA:1041:G:H5'	2.16	0.46
22:DA:2697:G:C2	22:DA:2711:A:C2	3.04	0.46
33:DL:88:GLY:O	33:DL:89:VAL:HG12	2.16	0.46
40:BS:50:VAL:HG12	40:BS:51:LEU:N	2.32	0.46
22:BA:646:U:H3'	22:BA:647:G:C5'	2.46	0.46
11:CK:115:ILE:HD12	21:CU:23:GLU:HG2	1.97	0.46
4:CD:80:ARG:HB2	4:CD:81:LEU:H	1.50	0.46
27:BF:60:SER:O	27:BF:61:GLY:C	2.54	0.46
43:BV:49:ASN:O	43:BV:52:ALA:HB3	2.16	0.46
30:DI:28:GLY:O	30:DI:29:GLN:C	2.53	0.46
1:CA:499:A:C6	1:CA:547:A:C8	3.03	0.46
19:CS:20:LYS:O	19:CS:20:LYS:HD3	2.15	0.46
1:AA:161:A:N6	1:AA:162:A:C6	2.84	0.46
22:DA:2895:G:H2'	22:DA:2896:C:C6	2.50	0.46
23:DB:66:A:C2	23:DB:108:A:C6	3.04	0.45
22:DA:1388:G:O6	22:DA:1400:U:O4	2.34	0.45
22:BA:1507:C:C4	22:BA:1508:A:C2	3.04	0.45
31:DJ:4:PHE:CB	38:DQ:63:ARG:HH22	2.28	0.45
1:CA:1072:G:H21	2:CB:105:THR:HG21	1.81	0.45
5:AE:155:LYS:CD	5:AE:155:LYS:H	2.28	0.45
30:DI:76:ALA:O	30:DI:135:MET:HE1	2.16	0.45
8:CH:103:VAL:CG1	8:CH:124:ILE:HA	2.30	0.45
22:DA:2304:G:H2'	22:DA:2304:G:N3	2.31	0.45
22:DA:1138:G:H2'	22:DA:1139:G:O4'	2.16	0.45
1:AA:1284:C:C4	1:AA:1285:A:N7	2.84	0.45
22:DA:2443:C:C2'	22:DA:2444:G:H5'	2.45	0.45
6:AF:51:ILE:HD13	6:AF:86:ARG:HB2	1.98	0.45
41:BT:18:GLU:O	41:BT:19:LYS:C	2.54	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:BA:947:A:O2'	22:BA:984:A:C2	2.56	0.45
30:BI:7:TYR:HA	30:BI:58:ILE:CB	2.36	0.45
1:CA:372:C:H4'	1:CA:373:A:O5'	2.13	0.45
1:CA:530:G:C5'	1:CA:531:U:H5''	2.46	0.45
32:DK:17:ARG:HD3	32:DK:18:ARG:H	1.80	0.45
1:CA:737:C:OP1	6:CF:91:ARG:HB3	2.17	0.45
28:BG:73:SER:CA	28:BG:76:ILE:HG22	2.39	0.45
32:DK:107:LEU:C	32:DK:109:SER:H	2.19	0.45
9:CI:46:VAL:O	9:CI:50:PRO:HD3	2.16	0.45
1:AA:345:C:P	37:BP:35:SER:HG	2.38	0.45
22:BA:1165:A:H2'	22:BA:1166:G:C8	2.51	0.45
22:DA:2542:A:H4'	22:DA:2543:G:C5'	2.47	0.45
33:DL:17:LYS:HZ3	33:DL:19:LEU:HD22	1.79	0.45
8:AH:104:SER:HB2	8:AH:125:ILE:CD1	2.46	0.45
29:DH:83:LYS:HG3	29:DH:149:GLU:HB2	1.97	0.45
24:DC:79:ARG:C	24:DC:80:LEU:HD12	2.36	0.45
50:D2:22:MET:HA	50:D2:28:ARG:HB2	1.97	0.45
50:D2:28:ARG:C	50:D2:30:VAL:N	2.69	0.45
1:CA:1446:A:C2'	1:CA:1447:A:H5''	2.46	0.45
22:DA:1773:A:N7	22:DA:1829:A:H1'	2.32	0.45
31:BJ:97:PRO:C	31:BJ:99:ARG:N	2.68	0.45
1:CA:1049:U:C4'	1:CA:1050:G:OP2	2.63	0.45
41:DT:62:VAL:CG1	41:DT:63:VAL:N	2.79	0.45
38:BQ:114:ALA:C	38:BQ:116:LEU:N	2.68	0.45
6:CF:99:ALA:O	6:CF:100:SER:CB	2.64	0.45
1:AA:1332:A:C5'	1:AA:1333:A:OP2	2.64	0.45
7:CG:13:PRO:HA	7:CG:23:ALA:HB2	1.97	0.45
1:AA:1241:G:O2'	1:AA:1242:G:H8	1.98	0.45
1:AA:1368:A:O2'	1:AA:1369:C:H5'	2.16	0.45
15:AO:29:ALA:HA	15:AO:84:LEU:HD21	1.99	0.45
34:BM:97:GLN:CD	34:BM:97:GLN:N	2.69	0.45
1:CA:366:A:O2'	1:CA:394:G:N2	2.49	0.45
1:AA:421:U:H2'	1:AA:422:C:OP1	2.16	0.45
22:DA:799:G:P	22:DA:800:A:H3'	2.56	0.45
22:DA:1000:A:N1	22:DA:1001:A:C2	2.84	0.45
35:BN:38:LEU:HB3	35:BN:39:PRO:HD3	1.97	0.45
22:BA:721:A:H2'	22:BA:722:A:C8	2.52	0.45
12:CL:85:ARG:HA	12:CL:93:ARG:HA	1.98	0.45
22:BA:2024:G:OP2	22:BA:2034:U:H4'	2.14	0.45
8:AH:10:LEU:O	8:AH:13:ILE:HB	2.16	0.45
12:CL:48:LEU:N	12:CL:48:LEU:HD23	2.30	0.45
1:AA:528:C:H41	12:AL:45:ASN:ND2	2.15	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:1686:C:H2'	22:DA:1687:G:O4'	2.16	0.45
9:CI:83:THR:HG21	9:CI:102:PHE:HB3	1.98	0.45
23:DB:54:G:N2	27:DF:25:MET:HE1	2.31	0.45
22:BA:996:A:N6	22:BA:1160:G:N1	2.64	0.45
31:BJ:44:TYR:HD2	38:BQ:63:ARG:HG2	1.79	0.45
39:BR:49:ILE:CG1	39:BR:49:ILE:O	2.64	0.45
44:BW:37:VAL:HG13	44:BW:55:ASP:O	2.16	0.45
22:DA:35:G:C5	22:DA:454:A:C2	3.05	0.45
1:CA:1316:G:N1	1:CA:1319:A:OP2	2.35	0.45
20:AT:82:ILE:HD12	20:AT:82:ILE:C	2.36	0.45
2:AB:99:MET:HA	2:AB:106:VAL:HG21	1.97	0.45
35:DN:38:LEU:CB	35:DN:39:PRO:HD3	2.43	0.45
1:CA:1072:G:N2	2:CB:105:THR:HG21	2.32	0.45
10:AJ:56:HIS:HD2	10:AJ:57:VAL:HG12	1.81	0.45
31:BJ:17:VAL:HG22	31:BJ:55:ILE:HG12	1.98	0.45
22:DA:140:C:O2'	22:DA:141:G:OP2	2.34	0.45
1:CA:1294:G:C6	1:CA:1295:U:C4	3.04	0.45
10:CJ:37:ARG:HG2	10:CJ:75:ASP:HB3	1.99	0.45
6:AF:9:MET:HE3	18:AR:64:LEU:HD22	1.98	0.45
25:DD:10:GLY:O	25:DD:11:MET:CB	2.62	0.45
29:BH:68:ARG:NH2	29:BH:69:ALA:HA	2.30	0.45
22:BA:1083:U:H2'	22:BA:1084:A:O5'	2.17	0.45
22:BA:2134:A:O2'	22:BA:2135:A:H5''	2.17	0.45
8:AH:28:SER:HA	8:AH:32:LYS:HD2	1.98	0.45
2:AB:80:LYS:HG3	2:AB:90:PHE:CE1	2.50	0.45
2:AB:83:ALA:O	2:AB:88:GLN:NE2	2.50	0.45
46:BY:45:GLN:O	46:BY:46:VAL:HB	2.17	0.45
6:CF:3:HIS:O	6:CF:4:TYR:CD1	2.69	0.45
22:BA:2888:C:O2	22:BA:2888:C:H2'	2.16	0.45
1:AA:466:A:O2'	1:AA:467:U:C6	2.69	0.45
37:BP:63:ILE:HG22	37:BP:63:ILE:O	2.17	0.45
20:AT:67:HIS:C	20:AT:68:LYS:HZ2	2.20	0.45
22:BA:2428:G:H5''	22:BA:2429:G:P	2.57	0.45
22:DA:1255:U:HO2'	22:DA:1256:G:P	2.37	0.45
22:DA:2468:A:O2'	22:DA:2469:A:O5'	2.35	0.45
22:BA:733:G:N7	22:BA:761:A:N6	2.64	0.45
1:AA:501:C:O2'	1:AA:502:A:H5'	2.15	0.45
27:DF:103:ILE:HA	27:DF:107:VAL:CG2	2.43	0.45
2:CB:185:ILE:HA	2:CB:199:ILE:HG13	1.98	0.45
22:DA:1363:C:C2	22:DA:1364:G:C8	3.04	0.45
37:DP:67:GLU:OE1	37:DP:68:GLY:N	2.50	0.45
1:AA:601:G:C2	1:AA:602:A:C4	3.04	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
26:DE:40:ARG:NH2	26:DE:92:HIS:NE2	2.65	0.45
1:AA:479:U:C2'	1:AA:480:U:H5'	2.46	0.45
33:BL:120:VAL:HG12	33:BL:121:THR:N	2.32	0.45
46:BY:2:LYS:HE3	46:BY:52:ARG:CZ	2.46	0.45
41:BT:29:THR:H	41:BT:91:GLN:HE22	1.63	0.45
33:DL:63:LYS:HB3	51:D3:12:ARG:CD	2.43	0.45
33:DL:47:ARG:HG2	33:DL:47:ARG:NH2	2.32	0.45
1:CA:1387:G:C4	1:CA:1388:C:C5	3.04	0.45
1:CA:631:C:H5''	1:CA:632:U:O4'	2.16	0.45
54:BA:3135:EM1:H38	54:BA:3135:EM1:H84	1.99	0.45
54:BA:3135:EM1:H38A	54:BA:3135:EM1:O18	2.15	0.45
26:BE:61:ARG:HG2	26:BE:61:ARG:H	1.46	0.45
29:DH:38:PRO:O	29:DH:40:THR:HG23	2.16	0.45
1:AA:544:G:OP1	4:AD:55:ARG:NH1	2.49	0.45
22:BA:1607:C:N4	22:BA:1622:G:C5	2.84	0.45
1:CA:1381:U:HO2'	1:CA:1382:C:C5'	2.30	0.45
9:AI:119:LYS:CG	9:AI:122:ARG:HB3	2.46	0.45
1:AA:652:U:C6	1:AA:752:G:C2	3.04	0.45
22:DA:2626:C:C2'	22:DA:2627:G:H5'	2.47	0.45
22:BA:654:A:H2'	22:BA:655:A:H5''	1.97	0.45
1:CA:71:A:C2	1:CA:72:A:C8	3.04	0.45
35:BN:51:LEU:HD12	35:BN:51:LEU:HA	1.62	0.45
1:AA:819:A:H4'	1:AA:820:U:OP2	2.17	0.45
10:AJ:17:LEU:C	10:AJ:17:LEU:HD23	2.36	0.45
9:CI:128:LYS:HG3	9:CI:128:LYS:O	2.16	0.45
22:DA:99:U:O2	22:DA:99:U:O4'	2.33	0.45
1:CA:868:C:H2'	1:CA:869:G:O4'	2.17	0.45
22:BA:697:G:H2'	22:BA:698:C:H6	1.80	0.45
27:BF:3:LEU:HD13	27:BF:3:LEU:HA	1.63	0.45
1:CA:398:U:H2'	1:CA:399:G:H8	1.81	0.45
22:DA:2072:C:H2'	22:DA:2073:C:H5'	1.99	0.45
22:BA:2107:G:H2'	22:BA:2107:G:N3	2.31	0.45
4:CD:102:TYR:C	4:CD:104:MET:H	2.19	0.45
8:AH:1:SER:C	8:AH:3:GLN:N	2.68	0.45
22:BA:1726:C:H2'	22:BA:1727:C:H6	1.81	0.45
2:CB:93:HIS:CD2	2:CB:145:ASN:HB3	2.51	0.45
31:DJ:17:VAL:HG23	31:DJ:137:PRO:HB2	1.97	0.45
1:AA:1293:C:H2'	1:AA:1294:G:C8	2.51	0.45
1:CA:1442:G:O2'	37:DP:113:LEU:HD13	2.15	0.45
2:AB:46:VAL:HB	2:AB:47:PRO:HD3	1.98	0.45
22:BA:2685:G:O2'	22:BA:2686:G:H5'	2.16	0.45
3:AC:113:LYS:HE3	3:AC:117:ASP:OD2	2.16	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:CA:1283:U:H2'	1:CA:1284:C:H6	1.80	0.45
26:BE:3:LEU:O	26:BE:11:ALA:HA	2.16	0.45
2:CB:195:VAL:HB	2:CB:198:VAL:HG12	1.97	0.45
3:AC:120:THR:HG22	3:AC:121:SER:N	2.31	0.45
14:AN:2:LYS:N	56:AN:205:HOH:O	2.48	0.45
43:BV:75:GLN:HA	43:BV:75:GLN:OE1	2.16	0.45
33:BL:3:LEU:HD23	33:BL:3:LEU:HA	1.76	0.45
22:BA:1246:A:H2'	22:BA:1247:A:O5'	2.16	0.45
2:AB:186:VAL:N	2:AB:199:ILE:O	2.42	0.45
1:CA:1323:G:H2'	1:CA:1324:A:H8	1.81	0.45
1:CA:1364:U:O2'	1:CA:1365:G:H5'	2.16	0.45
22:DA:30:G:OP1	38:DQ:4:LYS:HG3	2.15	0.45
22:DA:247:G:N2	22:DA:250:G:H3'	2.31	0.45
32:BK:17:ARG:HG3	32:BK:47:ILE:HD13	1.97	0.45
1:CA:1408:A:C8	1:CA:1409:C:C5	3.04	0.45
22:DA:510:C:C4	22:DA:511:U:C4	3.05	0.45
22:DA:2040:G:H2'	22:DA:2041:U:H6	1.82	0.45
11:AK:126:ARG:CB	21:AU:33:ARG:NH1	2.76	0.45
22:DA:1655:A:H5'	25:DD:118:PHE:CD1	2.52	0.45
1:CA:532:A:H62	3:CC:191:THR:HG21	1.81	0.45
22:DA:476:G:O2'	22:DA:477:A:C5'	2.65	0.45
3:CC:17:TRP:HD1	14:CN:90:GLY:HA2	1.81	0.45
26:BE:148:ILE:HA	26:BE:187:VAL:HB	1.98	0.45
1:CA:91:U:C6	1:CA:92:U:C5	3.04	0.45
22:DA:1019:U:C2'	22:DA:1021:A:N1	2.79	0.45
25:BD:170:VAL:O	25:BD:170:VAL:HG22	2.16	0.45
22:DA:351:C:H42	22:DA:352:A:N6	2.15	0.45
30:BI:50:LYS:HE2	30:BI:50:LYS:HB2	1.83	0.45
22:DA:605:G:H2'	22:DA:606:U:H6	1.79	0.45
22:DA:618:G:C2	22:DA:619:G:H1'	2.51	0.45
22:DA:668:A:C5	22:DA:670:A:N7	2.84	0.45
22:DA:2755:C:O2'	22:DA:2756:U:H2'	2.16	0.45
49:B1:47:ILE:CD1	49:B1:47:ILE:N	2.75	0.45
22:DA:698:C:C4	22:DA:762:U:O4	2.69	0.45
22:DA:96:C:C4'	46:DY:41:HIS:CD2	2.92	0.45
17:CQ:18:LYS:HE3	17:CQ:48:GLU:OE1	2.17	0.45
29:BH:67:ALA:O	29:BH:69:ALA:N	2.40	0.45
34:DM:17:ASN:HB3	34:DM:38:ARG:HH22	1.81	0.45
1:AA:73:C:HO2'	1:AA:74:A:H8	1.61	0.45
22:DA:278:A:O3'	22:DA:279:A:H8	1.99	0.45
1:CA:599:C:H4'	8:CH:121:GLY:C	2.37	0.45
2:CB:72:LYS:O	2:CB:74:ALA:N	2.50	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:2013:A:H2	40:DS:88:ARG:HH11	1.59	0.45
1:CA:796:C:O3'	11:CK:126:ARG:NH2	2.47	0.45
22:DA:1501:G:C4	22:DA:1502:A:C8	3.04	0.45
14:AN:20:PHE:HA	14:AN:24:ALA:CB	2.47	0.45
31:DJ:94:ALA:O	31:DJ:95:ARG:CG	2.65	0.45
22:BA:1071:G:C5	22:BA:1089:A:C6	3.05	0.45
27:DF:107:VAL:N	27:DF:108:PRO:HD2	2.30	0.45
41:DT:5:GLU:HA	41:DT:8:LEU:CD1	2.46	0.45
36:DO:68:LYS:NZ	36:DO:68:LYS:HB2	2.31	0.45
37:DP:89:GLY:O	37:DP:112:ARG:NH1	2.48	0.45
26:BE:108:ILE:C	26:BE:108:ILE:HD13	2.36	0.45
12:CL:82:ARG:N	12:CL:95:HIS:O	2.38	0.45
22:DA:1519:G:N3	22:DA:1519:G:H2'	2.31	0.45
1:AA:684:U:O2'	11:AK:39:ASN:O	2.32	0.45
2:CB:21:TYR:N	2:CB:21:TYR:HD1	2.14	0.45
38:DQ:26:ALA:HB1	38:DQ:30:VAL:CG2	2.46	0.45
1:CA:1172:C:C2'	1:CA:1173:U:H5'	2.46	0.45
22:BA:2104:C:C2	22:BA:2186:G:N2	2.85	0.45
11:AK:22:ILE:HG12	11:AK:85:VAL:HA	1.98	0.45
34:DM:72:PRO:HB2	34:DM:73:ILE:H	1.62	0.45
34:BM:50:ARG:HG2	34:BM:50:ARG:HH21	1.80	0.45
22:DA:2353:G:N3	44:DW:30:VAL:CG1	2.78	0.45
22:BA:1268:A:H2'	22:BA:1269:A:O4'	2.17	0.45
38:DQ:42:GLY:O	38:DQ:45:ALA:HB3	2.16	0.45
1:AA:978:A:C5	1:AA:1318:A:C6	3.03	0.45
19:AS:4:LEU:CD1	19:AS:4:LEU:H	2.27	0.45
1:CA:936:C:H1'	1:CA:1382:C:H42	1.80	0.45
27:BF:111:ARG:HB3	27:BF:112:ASP:H	1.39	0.45
17:AQ:35:LYS:HG2	17:AQ:36:PHE:N	2.32	0.45
23:DB:53:A:H2'	23:DB:53:A:N3	2.32	0.45
39:BR:76:LYS:HB2	39:BR:85:LYS:HG3	1.98	0.45
22:BA:868:U:C4	22:BA:869:G:N7	2.84	0.45
37:BP:102:ARG:O	37:BP:103:THR:CG2	2.64	0.45
7:CG:148:LYS:HD3	7:CG:148:LYS:O	2.16	0.45
10:AJ:35:GLN:HE21	10:AJ:35:GLN:CA	2.27	0.45
1:AA:1033:G:H2'	1:AA:1034:G:H5''	1.98	0.45
1:CA:722:G:O3'	1:CA:723:U:C5	2.69	0.45
1:CA:367:U:C6	1:CA:394:G:N2	2.85	0.45
11:CK:86:LYS:HB2	11:CK:113:THR:HA	1.99	0.45
22:DA:358:U:N3	22:DA:359:G:N7	2.63	0.45
22:DA:1316:U:O2'	22:DA:1317:G:H5'	2.16	0.45
1:AA:1526:G:P	21:AU:38:GLU:HB2	2.56	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:659:G:C5'	26:DE:95:LYS:HD2	2.47	0.45
35:DN:21:PHE:N	35:DN:21:PHE:HD1	2.14	0.45
22:BA:2210:U:O2	22:BA:2212:A:C8	2.69	0.45
1:AA:701:U:H4'	1:AA:702:A:O5'	2.15	0.45
22:BA:187:G:C2	22:BA:210:C:O2	2.69	0.45
2:CB:65:LYS:HB2	2:CB:157:PRO:HA	1.98	0.45
22:BA:812:C:H1'	22:BA:1250:G:C2	2.51	0.45
22:DA:1647:U:H3'	22:DA:1647:U:P	2.57	0.45
1:CA:908:A:H2'	1:CA:909:A:C8	2.51	0.45
7:AG:119:LEU:CD2	7:AG:123:LEU:HD23	2.46	0.45
1:AA:1293:C:H2'	1:AA:1294:G:H8	1.80	0.45
1:CA:1406:U:H1'	1:CA:1518:A:H4'	1.99	0.45
1:CA:442:G:C6	1:CA:443:C:C4	3.04	0.45
22:BA:465:G:H4'	50:B2:16:HIS:CD2	2.51	0.45
22:BA:81:G:C2	22:BA:106:C:C2	3.04	0.45
41:DT:21:SER:HA	41:DT:25:GLU:HB2	1.98	0.45
29:BH:147:VAL:CG1	29:BH:149:GLU:HG3	2.46	0.45
25:BD:38:LYS:O	25:BD:46:ARG:HA	2.17	0.45
2:AB:38:HIS:CD2	2:AB:38:HIS:H	2.35	0.45
44:DW:70:VAL:O	44:DW:70:VAL:HG22	2.16	0.45
4:AD:84:ASN:HB3	4:AD:87:GLU:HG2	1.98	0.45
22:BA:1844:C:C2	22:BA:1897:G:C2	3.04	0.45
4:CD:2:ARG:N	4:CD:2:ARG:HH11	2.15	0.45
44:BW:37:VAL:CG1	44:BW:55:ASP:O	2.64	0.45
44:BW:41:GLY:HA2	44:BW:44:PHE:CZ	2.52	0.45
25:BD:172:VAL:O	25:BD:173:GLN:CB	2.55	0.45
22:DA:2332:C:H4'	44:DW:40:ARG:CZ	2.47	0.45
49:D1:7:LYS:C	49:D1:8:ILE:HD13	2.37	0.45
1:CA:1409:C:H6	1:CA:1409:C:O5'	1.98	0.45
4:AD:25:ARG:O	4:AD:26:ALA:CB	2.65	0.45
25:DD:118:PHE:CE1	25:DD:119:ALA:O	2.69	0.45
11:CK:18:GLY:O	11:CK:81:LEU:HA	2.16	0.45
48:D0:38:LEU:N	48:D0:41:HIS:CE1	2.83	0.45
22:DA:183:C:C2'	22:DA:184:C:H5'	2.46	0.45
1:CA:91:U:O2'	1:CA:92:U:OP2	2.31	0.45
22:DA:1021:A:HO2'	22:DA:1022:G:P	2.39	0.45
26:DE:146:VAL:HG13	26:DE:187:VAL:HG23	1.97	0.45
22:DA:621:A:HO2'	22:DA:622:G:C4'	2.29	0.45
10:CJ:5:ARG:CG	10:CJ:79:PRO:HG3	2.46	0.45
22:DA:2748:A:C2	22:DA:2757:A:C5	3.04	0.45
6:AF:91:ARG:HG3	6:AF:92:THR:N	2.31	0.45
35:DN:14:SER:C	35:DN:16:HIS:N	2.69	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:2093:G:HO2'	22:DA:2094:A:P	2.37	0.45
24:BC:106:PRO:HA	24:BC:141:HIS:NE2	2.31	0.45
29:BH:66:ASN:C	29:BH:68:ARG:N	2.70	0.45
1:CA:1348:U:H2'	1:CA:1349:A:C8	2.47	0.45
1:CA:653:U:H5'	8:CH:55:LYS:HE3	1.99	0.45
22:BA:64:A:C5	22:BA:65:U:C4	3.05	0.45
22:DA:876:C:O2	22:DA:876:C:O4'	2.32	0.45
22:BA:1253:A:C5	56:BA:3332:HOH:O	2.69	0.45
22:BA:286:U:H2'	22:BA:287:G:C8	2.51	0.45
5:CE:38:VAL:CG1	5:CE:39:GLY:N	2.70	0.45
22:DA:1260:A:C2	22:DA:1261:C:C2	3.04	0.45
1:CA:1090:U:H2'	1:CA:1091:U:H6	1.80	0.45
1:AA:521:G:O2'	1:AA:522:C:H5'	2.17	0.45
22:BA:2199:A:H5'	22:BA:2200:C:H5	1.81	0.45
22:BA:544:C:C4	22:BA:550:C:N4	2.85	0.45
39:DR:81:LYS:O	39:DR:82:HIS:C	2.55	0.45
4:AD:103:ARG:NH1	4:AD:110:ARG:HH22	2.15	0.45
39:DR:62:GLU:CD	39:DR:97:LYS:HD2	2.37	0.45
26:DE:90:GLN:OE1	26:DE:90:GLN:HA	2.15	0.45
22:BA:1378:A:C4'	22:BA:1379:U:OP1	2.60	0.45
22:BA:247:G:C8	22:BA:249:C:C6	3.04	0.45
4:AD:154:VAL:O	4:AD:157:ALA:HB3	2.16	0.45
21:AU:19:LYS:C	21:AU:21:SER:H	2.19	0.45
5:AE:67:ARG:O	5:AE:70:MET:HE3	2.16	0.45
1:CA:503:C:O2	1:CA:510:A:H2	1.99	0.45
22:BA:1430:G:O2'	22:BA:1431:A:H5'	2.17	0.45
39:BR:66:HIS:CG	39:BR:94:THR:HG22	2.51	0.45
37:BP:85:VAL:O	37:BP:86:LYS:HB2	2.16	0.45
22:DA:86:G:HO2'	22:DA:87:U:H6	1.62	0.45
22:DA:1651:G:C2	22:DA:2007:U:N3	2.85	0.45
2:CB:17:HIS:CG	2:CB:18:GLN:H	2.33	0.45
13:AM:13:HIS:CD2	13:AM:41:ASP:HB2	2.52	0.45
1:AA:1520:C:C2	1:AA:1521:C:C5	3.04	0.45
22:BA:1355:G:C2	22:BA:1356:G:C8	3.05	0.45
1:AA:756:C:H2'	1:AA:757:U:O4'	2.17	0.45
22:BA:2049:G:C2'	22:BA:2050:C:H5'	2.46	0.45
7:AG:14:ASP:CG	7:AG:17:PHE:HB2	2.36	0.45
1:CA:1384:C:O2'	1:CA:1385:G:H5'	2.15	0.45
35:BN:62:ASN:HD22	35:BN:62:ASN:N	2.13	0.45
1:CA:1402:C:H2'	1:CA:1403:C:O4'	2.17	0.45
11:AK:62:ALA:CB	11:AK:91:GLY:HA3	2.46	0.45
22:BA:2092:U:C2	22:BA:2225:A:O2'	2.69	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
38:DQ:82:LEU:HB3	38:DQ:88:GLU:OE2	2.16	0.45
22:DA:450:G:N1	22:DA:454:A:OP2	2.42	0.45
25:BD:174:SER:O	25:BD:175:LEU:CB	2.53	0.45
25:BD:174:SER:OG	25:BD:175:LEU:N	2.49	0.45
22:DA:2337:G:C2'	22:DA:2338:C:H5'	2.46	0.45
24:DC:68:ARG:NH2	24:DC:126:GLY:O	2.41	0.45
22:DA:510:C:OP1	22:DA:511:U:OP2	2.35	0.45
22:DA:1605:C:C3'	22:DA:1606:C:C5'	2.89	0.45
22:DA:2025:C:H42	22:DA:2037:A:H61	1.64	0.45
22:DA:2314:A:N1	22:DA:2315:G:C6	2.85	0.45
22:DA:489:G:C4'	22:DA:490:C:OP1	2.65	0.45
22:BA:2478:A:C2'	22:BA:2479:U:H5'	2.47	0.45
22:DA:482:A:N6	22:DA:506:G:C8	2.85	0.45
22:DA:125:A:OP2	50:D2:19:ARG:NH2	2.49	0.45
22:DA:872:U:C2'	22:DA:873:C:H5'	2.46	0.45
22:DA:352:A:H2'	22:DA:353:C:H4'	1.99	0.45
26:DE:143:LEU:HD23	26:DE:146:VAL:HG22	1.98	0.45
22:DA:2755:C:O3'	22:DA:2756:U:H6	1.99	0.45
24:DC:76:VAL:O	24:DC:93:VAL:O	2.34	0.45
9:CI:119:LYS:O	9:CI:121:ARG:N	2.39	0.45
41:BT:11:LEU:HA	41:BT:34:VAL:HG12	1.98	0.45
22:DA:1299:G:H5''	56:DA:3648:HOH:O	2.17	0.45
22:DA:1415:U:O3'	22:DA:1416:G:H4'	2.16	0.45
46:BY:42:LEU:HD12	46:BY:42:LEU:HA	1.80	0.45
22:BA:2680:U:OP2	25:BD:114:LYS:CE	2.65	0.45
27:DF:52:ALA:HA	27:DF:55:ASP:HB2	1.98	0.45
22:DA:876:C:H2'	22:DA:877:A:OP1	2.17	0.45
32:BK:19:VAL:CG1	32:BK:41:ILE:HG12	2.46	0.45
30:BI:78:LEU:HD13	30:BI:108:ILE:HG23	1.99	0.45
14:AN:20:PHE:C	14:AN:22:LYS:N	2.70	0.45
22:BA:760:G:H4'	22:BA:1776:G:OP1	2.16	0.45
22:DA:1652:A:OP1	35:DN:8:ARG:HD3	2.16	0.45
31:BJ:73:VAL:CG2	31:BJ:74:TYR:N	2.74	0.45
1:CA:1303:C:N4	1:CA:1334:G:H1	2.14	0.45
41:DT:30:ILE:O	41:DT:85:VAL:HG23	2.17	0.45
1:AA:1066:C:H5''	1:AA:1066:C:C6	2.40	0.45
1:CA:567:G:H1'	56:CA:1820:HOH:O	2.16	0.45
22:BA:2602:A:H4'	22:BA:2603:G:H5'	1.94	0.45
13:CM:82:LEU:CD2	19:CS:60:PHE:HB3	2.47	0.45
9:AI:9:GLY:HA2	9:AI:80:HIS:CD2	2.52	0.45
22:BA:1966:A:C2	22:BA:2593:U:O4'	2.69	0.45
14:AN:14:ALA:HB1	14:AN:18:LYS:HE2	1.99	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
24:DC:8:THR:O	24:DC:9:SER:CB	2.65	0.45
1:AA:1039:G:O2'	1:AA:1040:U:H5'	2.17	0.45
22:DA:1740:G:O2'	22:DA:1741:C:H5'	2.17	0.45
37:BP:19:PHE:O	37:BP:20:ARG:CB	2.64	0.45
1:AA:664:G:H22	1:AA:741:G:H1	1.65	0.45
29:DH:4:ILE:O	29:DH:36:ALA:HB1	2.17	0.45
1:AA:1473:G:C2'	1:AA:1474:U:H5'	2.46	0.45
42:DU:40:LEU:HA	42:DU:61:GLU:HA	1.99	0.45
1:AA:1309:G:C6	1:AA:1329:A:N1	2.84	0.45
26:BE:153:LEU:HB3	26:BE:171:ASP:CB	2.46	0.45
27:DF:122:ASP:HB3	27:DF:123:GLY:H	1.40	0.45
22:DA:2234:G:C6	22:DA:2235:G:N7	2.85	0.45
10:CJ:81:GLU:C	10:CJ:83:THR:H	2.18	0.45
7:AG:125:ASP:OD2	7:AG:130:LYS:HG3	2.16	0.45
29:BH:39:ALA:O	29:BH:41:LYS:N	2.48	0.45
42:BU:5:ARG:O	42:BU:6:ARG:C	2.54	0.45
22:BA:693:A:O2'	22:BA:694:U:H5'	2.17	0.45
7:AG:78:ARG:HA	7:AG:83:THR:HA	1.99	0.45
24:BC:96:LYS:HA	24:BC:96:LYS:HD3	1.81	0.45
22:BA:593:U:H2'	22:BA:594:U:C6	2.51	0.45
13:CM:7:ASN:C	13:CM:9:PRO:HD3	2.37	0.45
33:DL:3:LEU:C	33:DL:3:LEU:HD12	2.36	0.45
22:DA:579:G:N2	22:DA:1262:A:C4	2.85	0.45
42:DU:65:GLN:HB3	42:DU:65:GLN:HE21	1.59	0.45
4:AD:156:ALA:O	4:AD:159:GLU:HB3	2.16	0.45
21:AU:13:VAL:HG13	21:AU:15:LEU:HG	1.99	0.45
1:AA:460:A:O3'	1:AA:462:G:OP2	2.34	0.45
34:DM:61:GLY:CA	34:DM:107:GLY:HA3	2.47	0.45
1:AA:1291:U:O2'	1:AA:1292:G:H5'	2.16	0.45
32:BK:7:MET:SD	32:BK:20:MET:HB2	2.57	0.45
13:CM:87:GLY:O	13:CM:91:ARG:HD2	2.16	0.45
34:DM:21:ALA:HB2	34:DM:97:GLN:O	2.17	0.45
1:AA:950:U:H2'	1:AA:951:G:H8	1.82	0.45
3:AC:99:GLN:O	3:AC:100:ILE:HB	2.17	0.45
29:BH:78:VAL:HB	29:BH:145:ASN:HB3	1.98	0.45
22:BA:598:U:H2'	22:BA:599:A:C8	2.52	0.45
38:BQ:10:ARG:HH11	38:BQ:10:ARG:HB2	1.81	0.45
47:BZ:12:ALA:HA	47:BZ:15:ARG:HD3	1.97	0.45
7:CG:34:LYS:NZ	7:CG:34:LYS:HB2	2.31	0.45
42:DU:80:ASP:OD1	42:DU:80:ASP:N	2.50	0.45
22:BA:1743:G:O5'	22:BA:1743:G:H8	2.00	0.45
4:AD:133:SER:O	4:AD:134:TYR:C	2.53	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:AD:101:VAL:HG13	4:AD:106:PHE:HB2	1.98	0.45
4:CD:2:ARG:HE	4:CD:114:ARG:HD2	1.80	0.45
23:DB:16:G:H2'	23:DB:17:C:H6	1.82	0.45
44:BW:21:GLY:O	44:BW:22:VAL:HB	2.17	0.45
11:CK:90:PRO:O	11:CK:91:GLY:C	2.55	0.45
22:DA:447:A:C8	22:DA:473:G:C6	3.04	0.45
23:DB:25:U:H2'	23:DB:25:U:O2	2.16	0.45
1:CA:1315:U:C5	1:CA:1316:G:N7	2.85	0.45
1:CA:1319:A:C6	1:CA:1323:G:C4	3.04	0.45
1:CA:978:A:N3	1:CA:1318:A:C2	2.85	0.45
19:CS:32:THR:O	19:CS:32:THR:HG23	2.16	0.45
22:DA:2296:U:H4'	22:DA:2297:A:OP1	2.16	0.45
22:BA:1171:G:C6	22:BA:1172:C:C5	3.05	0.45
1:CA:1269:A:C2	1:CA:1313:U:H1'	2.52	0.45
22:DA:310:A:C2	22:DA:330:A:C5	3.04	0.45
22:DA:1060:U:O4'	22:DA:1061:U:C2'	2.62	0.45
22:DA:1087:G:C4	22:DA:1089:A:C2	3.04	0.45
22:DA:2272:U:H6	22:DA:2272:U:O5'	1.98	0.45
22:DA:180:G:O6	22:DA:213:A:N6	2.50	0.45
22:DA:2305:U:H5	22:DA:2312:U:O4	2.00	0.45
35:DN:84:GLY:N	35:DN:85:PRO:CD	2.79	0.45
22:DA:1778:U:H2'	22:DA:1784:A:N6	2.31	0.45
22:DA:785:G:C6	22:DA:786:C:C4	3.04	0.45
1:CA:1243:C:N4	1:CA:1244:G:O6	2.50	0.45
22:DA:238:C:H2'	22:DA:239:C:O4'	2.17	0.45
22:DA:617:G:O2'	22:DA:618:G:O5'	2.35	0.45
22:DA:586:A:H5'	26:DE:84:THR:HG21	1.98	0.45
35:DN:16:HIS:O	35:DN:20:MET:CB	2.65	0.45
28:BG:7:PRO:O	28:BG:8:VAL:HB	2.15	0.45
46:DY:40:SER:C	46:DY:42:LEU:H	2.19	0.45
1:CA:994:A:C6	1:CA:1216:A:C5'	3.00	0.45
25:BD:69:ALA:HA	25:BD:73:VAL:HG13	1.98	0.45
22:DA:855:G:H21	44:DW:23:LYS:HZ2	1.64	0.45
9:CI:90:ASP:HB3	9:CI:93:LEU:CD2	2.40	0.45
22:BA:31:C:H4'	22:BA:1238:G:H4'	1.98	0.45
22:DA:181:A:H2	22:DA:434:U:C1'	2.22	0.45
22:DA:2809:A:OP2	22:DA:2890:G:N1	2.47	0.45
35:DN:35:LYS:HA	35:DN:111:ALA:O	2.17	0.45
8:CH:1:SER:C	8:CH:3:GLN:N	2.70	0.45
33:DL:18:ARG:O	33:DL:19:LEU:HB3	2.16	0.45
25:BD:110:THR:HA	25:BD:171:THR:HA	1.98	0.45
1:AA:339:C:H2'	1:AA:340:U:H6	1.80	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
29:DH:94:ILE:CB	29:DH:98:ASP:HB2	2.47	0.45
35:BN:8:ARG:HB2	35:BN:43:GLU:HG3	1.99	0.45
12:CL:113:ARG:HD2	12:CL:118:VAL:HG12	1.97	0.45
22:BA:1818:U:O2'	24:BC:152:GLN:O	2.19	0.45
33:DL:77:ILE:HG12	33:DL:101:ILE:HD11	1.98	0.45
22:BA:627:A:OP1	33:BL:78:ARG:NH1	2.49	0.45
22:DA:1429:G:H8	22:DA:1429:G:O5'	1.99	0.45
19:AS:41:PRO:C	19:AS:43:MET:H	2.20	0.45
1:CA:679:C:C2	1:CA:712:A:C2	3.04	0.45
1:AA:82:G:H22	1:AA:84:U:H3	1.64	0.45
22:DA:1867:G:O6	22:DA:1875:G:N2	2.50	0.45
26:BE:37:ALA:C	26:BE:39:ALA:H	2.20	0.45
29:BH:99:ILE:CG2	29:BH:99:ILE:O	2.64	0.45
12:CL:2:THR:HB	12:CL:5:GLN:H	1.80	0.45
9:CI:126:PHE:O	9:CI:126:PHE:CG	2.68	0.45
12:AL:74:GLN:O	12:AL:76:HIS:N	2.50	0.45
22:BA:1528:A:C2'	22:BA:1529:G:H5'	2.45	0.45
22:DA:732:C:C4	22:DA:733:G:C5	3.05	0.45
22:DA:2015:A:C6	48:D0:2:VAL:HG11	2.51	0.45
22:BA:163:C:O2'	22:BA:164:C:C5'	2.65	0.45
1:CA:1480:A:H2'	1:CA:1481:U:O4'	2.17	0.45
22:BA:668:A:H2'	22:BA:670:A:H62	1.80	0.45
22:BA:253:C:OP2	51:B3:4:LYS:NZ	2.44	0.45
39:BR:36:ALA:N	39:BR:37:GLU:OE2	2.49	0.45
34:DM:61:GLY:HA2	34:DM:107:GLY:HA3	1.98	0.45
22:DA:1014:A:C2	22:DA:1149:G:C2	3.05	0.45
47:DZ:37:ARG:HA	47:DZ:37:ARG:NE	2.32	0.45
22:BA:1402:U:H2'	22:BA:1403:A:O5'	2.17	0.45
22:BA:2715:C:O5'	22:BA:2715:C:H6	2.00	0.45
40:BS:36:LEU:HA	40:BS:36:LEU:HD12	1.55	0.45
1:CA:623:C:H6	1:CA:623:C:O5'	2.00	0.45
29:DH:136:SER:C	29:DH:137:GLU:HG3	2.37	0.45
22:DA:486:C:O2	22:DA:495:G:N2	2.50	0.45
39:BR:53:PHE:CD1	39:BR:53:PHE:N	2.83	0.45
11:CK:66:ALA:HB2	11:CK:95:THR:OG1	2.16	0.45
1:CA:976:G:N7	1:CA:1359:C:O4'	2.49	0.45
22:BA:1178:C:C5	22:BA:1180:U:C4	3.05	0.45
22:DA:1392:A:N6	22:DA:1393:A:C6	2.85	0.45
4:AD:7:LYS:O	4:AD:10:LEU:HB2	2.17	0.45
22:DA:2831:G:C8	25:DD:59:ARG:NH1	2.84	0.45
1:CA:1151:A:OP1	10:CJ:43:PRO:HA	2.16	0.45
46:DY:20:ASN:ND2	46:DY:50:VAL:HG22	2.14	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:CD:29:THR:O	4:CD:30:LYS:HB2	2.16	0.45
1:CA:1239:A:H3'	7:CG:118:ARG:NH2	2.32	0.45
10:CJ:76:ILE:HG22	10:CJ:77:VAL:N	2.31	0.45
9:CI:59:LYS:HB3	9:CI:59:LYS:HE2	1.72	0.45
1:CA:1346:A:N1	7:CG:9:ARG:NH2	2.64	0.45
30:BI:126:ARG:HD3	30:BI:126:ARG:H	1.80	0.45
22:DA:46:G:N1	22:DA:47:C:C4	2.85	0.45
22:DA:1744:A:N6	22:DA:1745:A:C2	2.85	0.45
22:BA:1998:A:O2'	22:BA:1999:C:H5'	2.17	0.45
30:BI:91:LYS:O	30:BI:92:PRO:O	2.34	0.45
22:DA:2889:C:C4	22:DA:2890:G:C6	3.04	0.45
35:DN:10:LEU:HA	35:DN:10:LEU:HD13	1.84	0.45
21:CU:13:VAL:HG22	21:CU:15:LEU:HD23	1.98	0.45
1:CA:1331:G:C2'	1:CA:1332:A:OP2	2.65	0.45
3:AC:82:ASP:O	3:AC:86:LEU:HG	2.16	0.45
14:CN:46:LYS:CE	19:CS:10:ILE:HB	2.47	0.45
22:DA:1723:G:O2'	22:DA:1724:G:H5'	2.16	0.45
22:DA:570:G:C4	22:DA:2030:A:N7	2.85	0.45
37:BP:20:ARG:HG2	37:BP:21:PRO:HD2	1.98	0.45
23:DB:8:C:H2'	23:DB:9:G:O4'	2.17	0.45
36:DO:10:ARG:HB2	36:DO:96:GLY:HA2	1.98	0.45
22:DA:187:G:N2	22:DA:210:C:H1'	2.32	0.45
4:AD:158:LEU:HA	4:AD:161:ALA:HB3	1.99	0.45
21:AU:18:PHE:O	21:AU:21:SER:HB3	2.17	0.45
7:AG:145:GLU:N	7:AG:148:LYS:HB2	2.32	0.45
43:DV:56:PHE:CD1	43:DV:56:PHE:C	2.90	0.45
25:DD:181:ASP:C	25:DD:183:GLU:N	2.70	0.45
22:BA:2563:U:H1'	22:BA:2566:A:C6	2.52	0.45
26:BE:79:ARG:HG2	26:BE:80:SER:N	2.32	0.45
1:AA:1381:U:O2'	1:AA:1382:C:C5'	2.65	0.45
24:DC:171:VAL:N	24:DC:185:ALA:HB2	2.32	0.45
37:BP:37:LYS:HG2	37:BP:37:LYS:O	2.15	0.45
22:DA:1805:A:O2'	24:DC:49:THR:HA	2.16	0.45
1:CA:1058:G:C5	1:CA:1059:C:C4	3.04	0.45
30:BI:96:LYS:H	30:BI:96:LYS:HD2	1.81	0.45
30:DI:79:LEU:C	30:DI:81:LYS:H	2.19	0.45
4:AD:64:TYR:CE1	4:AD:93:LEU:HD13	2.52	0.45
22:BA:1478:G:O2'	22:BA:1479:G:H5'	2.16	0.45
23:BB:109:A:C5	23:BB:110:C:C4	3.05	0.45
22:BA:1289:C:H2'	22:BA:1290:C:H6	1.82	0.45
1:CA:626:G:H2'	1:CA:627:G:C8	2.51	0.45
1:AA:947:G:C6	1:AA:948:C:C4	3.05	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
15:CO:80:LEU:HD22	15:CO:84:LEU:HD12	1.97	0.45
22:DA:2463:C:H6	22:DA:2463:C:O5'	1.98	0.45
22:DA:2677:G:H2'	22:DA:2678:C:C6	2.52	0.45
22:BA:395:U:O2'	22:BA:396:G:N7	2.45	0.45
42:BU:60:LYS:HA	42:BU:60:LYS:HD2	1.68	0.45
21:CU:53:LYS:HB2	21:CU:53:LYS:NZ	2.31	0.45
13:CM:97:ARG:O	13:CM:97:ARG:HG2	2.17	0.45
33:BL:104:GLN:HA	33:BL:104:GLN:HE21	1.80	0.45
12:CL:65:TYR:CE1	12:CL:67:GLY:HA2	2.51	0.45
16:AP:39:PHE:CD2	16:AP:74:LEU:HD11	2.51	0.45
43:DV:49:ASN:O	43:DV:52:ALA:HB3	2.16	0.45
1:AA:813:U:H2'	1:AA:814:A:H5''	1.97	0.45
38:BQ:34:ALA:O	38:BQ:38:VAL:HG23	2.17	0.45
39:DR:22:LEU:HD21	39:DR:96:VAL:HG22	1.97	0.45
14:CN:4:SER:O	14:CN:7:ALA:HB3	2.17	0.45
31:BJ:41:LYS:N	38:BQ:66:ALA:HB1	2.32	0.45
22:BA:1069:A:N1	22:BA:1073:A:N6	2.43	0.45
22:BA:1073:A:H8	22:BA:1073:A:OP1	2.00	0.45
44:BW:23:LYS:CG	44:BW:24:ARG:N	2.76	0.45
1:CA:981:U:C4	1:CA:982:U:C2	3.04	0.45
22:DA:860:U:O4	22:DA:2268:A:C4	2.70	0.45
24:DC:128:THR:O	24:DC:129:LEU:HB3	2.17	0.45
22:DA:1914:C:O2'	22:DA:1915:U:C5'	2.64	0.45
2:AB:100:LEU:HA	2:AB:100:LEU:HD13	1.79	0.45
22:DA:168:G:HO2'	22:DA:2209:G:HO2'	1.64	0.45
22:DA:2215:C:O2'	22:DA:2216:G:H8	1.94	0.45
4:AD:37:PRO:HD2	4:AD:41:GLY:HA2	1.99	0.45
5:AE:104:ILE:O	5:AE:104:ILE:HG23	2.17	0.45
5:AE:148:SER:O	5:AE:152:VAL:CG1	2.64	0.45
22:DA:1056:G:O5'	22:DA:1085:A:H2	2.00	0.45
1:CA:111:G:O6	1:CA:330:C:H5	2.00	0.45
5:CE:103:GLY:HA3	5:CE:120:HIS:O	2.17	0.45
22:DA:508:A:C3'	22:DA:509:C:C5'	2.95	0.45
1:AA:1283:U:H2'	1:AA:1284:C:H6	1.81	0.45
1:AA:1253:G:C6	1:AA:1285:A:N6	2.85	0.45
22:DA:2067:G:C6	22:DA:2444:G:N1	2.84	0.45
22:DA:2445:G:H2'	22:DA:2446:G:C8	2.52	0.45
22:DA:200:U:O4	22:DA:248:G:C2	2.70	0.45
6:AF:91:ARG:CG	6:AF:92:THR:H	2.27	0.45
22:DA:764:A:C2	22:DA:781:A:C4	3.05	0.45
22:DA:94:A:C6	22:DA:95:A:C6	3.05	0.45
22:BA:1056:G:O2'	22:BA:1086:A:H1'	2.17	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:BA:1084:A:C6	22:BA:1085:A:C6	3.05	0.45
1:CA:1326:U:N3	1:CA:1327:C:C4	2.85	0.45
1:CA:1375:A:H2'	1:CA:1376:U:C6	2.52	0.45
13:CM:16:ILE:H	13:CM:16:ILE:HD12	1.82	0.45
2:AB:221:ARG:CG	2:AB:221:ARG:HH11	2.30	0.45
22:BA:1045:C:H3'	22:BA:1046:A:H5'	1.98	0.45
27:DF:45:ASP:C	27:DF:47:LYS:N	2.69	0.45
22:BA:1165:A:H2'	22:BA:1166:G:H8	1.81	0.45
31:DJ:69:ARG:CZ	31:DJ:89:PHE:HE1	2.30	0.45
31:BJ:77:HIS:HD2	31:BJ:79:GLY:HA2	1.82	0.45
22:DA:1544:A:C6	22:DA:1545:A:C6	3.05	0.45
5:AE:97:PRO:HB2	5:AE:98:ALA:H	1.59	0.45
2:AB:32:GLY:HA3	2:AB:39:ILE:N	2.25	0.45
8:CH:9:MET:HG3	8:CH:26:MET:SD	2.57	0.45
22:DA:1558:C:H4'	22:DA:1559:U:C5'	2.44	0.45
1:AA:603:U:H3'	1:AA:603:U:C6	2.48	0.45
9:CI:27:ILE:HG13	9:CI:34:LEU:HD13	1.99	0.45
22:DA:758:C:O2	22:DA:759:G:C8	2.69	0.45
33:DL:65:GLY:O	33:DL:66:PHE:HB2	2.16	0.45
24:BC:170:TYR:HD2	24:BC:183:VAL:C	2.21	0.45
1:AA:988:G:C6	1:AA:989:U:C4	3.04	0.45
46:BY:56:LEU:O	46:BY:57:LEU:CB	2.57	0.45
22:DA:1973:G:C5	22:DA:1974:C:C5	3.05	0.45
16:AP:51:ARG:HG2	16:AP:52:LEU:N	2.31	0.45
24:BC:257:ARG:O	24:BC:258:SER:HB2	2.16	0.45
1:CA:750:C:O2'	15:CO:20:ASP:HB2	2.17	0.45
22:BA:1106:G:C2	22:BA:1107:G:N9	2.85	0.45
9:AI:40:ARG:O	9:AI:44:ARG:HD3	2.17	0.45
30:DI:20:SER:N	30:DI:21:PRO:CD	2.80	0.45
22:DA:121:G:N2	22:DA:131:A:C4	2.85	0.45
22:BA:2572:A:H2'	25:BD:149:ASN:HD22	1.82	0.45
28:DG:152:ARG:CD	28:DG:153:PRO:HD2	2.46	0.45
30:BI:3:LYS:HD3	30:BI:4:VAL:HG23	1.97	0.45
22:BA:866:A:C2'	22:BA:867:C:H5'	2.47	0.45
1:AA:591:U:H2'	1:AA:592:G:C8	2.51	0.45
22:DA:2652:C:H2'	22:DA:2653:U:O4'	2.17	0.45
3:CC:10:ARG:O	3:CC:13:ILE:O	2.34	0.45
16:AP:42:ILE:O	16:AP:44:SER:N	2.42	0.45
22:BA:1881:C:H2'	22:BA:1882:U:O4'	2.17	0.45
22:BA:1587:G:C2	22:BA:1588:G:C8	3.05	0.45
1:CA:1000:A:H1'	1:CA:1041:G:N2	2.31	0.45
43:BV:38:LEU:HD23	43:BV:40:ILE:HD11	1.99	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:BA:183:C:H1'	22:BA:433:C:H1'	1.99	0.45
26:BE:134:LEU:HD12	26:BE:138:LEU:HG	1.98	0.45
47:DZ:6:ILE:O	47:DZ:34:THR:HA	2.17	0.45
25:BD:166:GLY:O	25:BD:167:ASN:CB	2.64	0.45
33:DL:85:VAL:O	33:DL:86:GLU:HB2	2.17	0.45
1:CA:948:C:H5''	13:CM:104:ASN:HB3	1.98	0.45
24:DC:180:MET:O	24:DC:267:VAL:HG23	2.16	0.45
22:DA:2786:U:OP1	25:DD:70:LYS:HD2	2.16	0.45
22:BA:553:G:H2'	22:BA:554:U:O4'	2.17	0.45
2:AB:125:PHE:HD2	2:AB:125:PHE:N	2.15	0.45
1:CA:487:A:H2'	1:CA:488:C:O4'	2.17	0.45
22:BA:1326:U:N3	22:BA:1648:U:O2'	2.49	0.45
30:DI:105:LEU:HD21	30:DI:129:GLU:OE2	2.16	0.45
24:BC:114:GLN:HB2	24:BC:114:GLN:HE21	1.53	0.45
28:BG:37:ASN:OD1	28:BG:37:ASN:N	2.50	0.45
5:AE:133:ILE:H	5:AE:133:ILE:HD12	1.82	0.45
2:CB:25:LYS:HD2	2:CB:25:LYS:H	1.81	0.45
22:BA:1664:A:C2	22:BA:2726:A:C8	3.05	0.45
22:BA:1009:A:P	31:BJ:39:LYS:HZ1	2.40	0.45
22:BA:1064:C:C4	22:BA:1066:U:O2	2.70	0.45
6:AF:6:ILE:O	6:AF:61:LEU:HD12	2.16	0.45
9:CI:38:PHE:HE2	9:CI:71:ILE:HG22	1.80	0.45
1:CA:1319:A:H5''	19:CS:4:LEU:CD1	2.47	0.45
22:BA:2780:G:H4'	22:BA:2781:A:OP2	2.17	0.45
25:BD:108:ASP:CG	25:BD:206:ALA:HA	2.36	0.45
20:AT:27:MET:HG3	20:AT:28:ARG:N	2.30	0.45
22:DA:1352:U:C5	22:DA:1377:G:O6	2.70	0.45
22:DA:1570:A:C6	22:DA:1571:A:C6	3.05	0.45
22:DA:322:A:H3'	26:DE:163:ASN:CG	2.37	0.45
2:AB:49:PHE:CD1	2:AB:49:PHE:C	2.90	0.45
33:BL:95:LEU:HD13	33:BL:100:ILE:HD11	1.99	0.45
22:DA:1090:A:C6	22:DA:1102:C:O2	2.70	0.45
30:DI:92:PRO:HB3	30:DI:134:SER:O	2.16	0.45
1:AA:267:C:H2'	1:AA:268:U:H6	1.80	0.45
14:CN:76:PHE:CE2	14:CN:95:LEU:HD22	2.51	0.45
22:DA:1019:U:H2'	22:DA:1021:A:N1	2.31	0.45
1:AA:1278:G:O5'	1:AA:1279:G:H5'	2.17	0.45
22:DA:348:A:C6	22:DA:349:U:C4	3.04	0.45
22:DA:77:G:H2'	22:DA:78:U:O4'	2.17	0.45
46:DY:53:VAL:O	46:DY:57:LEU:HB2	2.16	0.45
22:DA:672:C:C3'	22:DA:672:C:C6	3.00	0.45
25:BD:90:PHE:N	25:BD:90:PHE:CD1	2.84	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:1047:G:C2'	22:DA:1048:A:OP2	2.64	0.45
1:CA:1147:C:HO2'	1:CA:1148:U:H6	1.62	0.45
22:BA:361:G:HO2'	22:BA:362:A:C5'	2.30	0.45
43:BV:93:ARG:O	43:BV:94:ALA:HB2	2.16	0.45
22:BA:571:U:H3'	39:BR:80:ARG:CZ	2.47	0.45
19:AS:33:TRP:CD1	19:AS:51:HIS:CG	3.05	0.45
1:CA:939:G:O3'	7:CG:101:ARG:NH2	2.50	0.45
48:B0:42:ILE:HA	48:B0:42:ILE:HD12	1.81	0.45
44:DW:23:LYS:HD2	44:DW:24:ARG:HB2	1.99	0.45
1:CA:516:U:C4	1:CA:517:G:C6	3.05	0.45
22:DA:1716:U:C5	22:DA:1743:G:N2	2.84	0.45
22:DA:2458:G:H1'	22:DA:2459:A:N7	2.31	0.45
22:DA:1223:G:N1	22:DA:1227:G:C6	2.85	0.45
37:BP:33:GLU:CB	37:BP:36:LYS:HB2	2.47	0.45
12:AL:81:ILE:HD11	12:AL:94:TYR:CB	2.47	0.45
2:AB:127:LYS:HG3	2:AB:128:LEU:N	2.24	0.45
22:BA:2323:G:C2'	22:BA:2324:U:H5'	2.47	0.45
42:DU:58:VAL:CG1	42:DU:59:GLU:N	2.79	0.45
22:BA:2556:C:C2'	22:BA:2557:G:H5'	2.47	0.45
5:AE:113:VAL:O	5:AE:117:ALA:HB2	2.16	0.45
1:AA:111:G:C6	1:AA:330:C:N4	2.85	0.45
28:DG:43:LYS:HB2	28:DG:50:THR:O	2.17	0.45
1:AA:601:G:C2	1:AA:638:U:O2	2.69	0.45
22:DA:2043:C:C2	22:DA:2044:C:C5	3.05	0.45
25:DD:48:ILE:HG22	25:DD:82:PHE:O	2.17	0.45
1:AA:1039:G:C6	1:AA:1040:U:C4	3.04	0.45
52:D4:16:ILE:CG1	52:D4:25:VAL:HG22	2.45	0.45
43:DV:40:ILE:HD13	43:DV:40:ILE:H	1.80	0.45
8:CH:77:VAL:HG12	8:CH:84:ILE:HG13	1.98	0.45
34:BM:108:VAL:CG1	34:BM:112:LEU:HB3	2.46	0.45
37:BP:25:VAL:HA	37:BP:84:SER:O	2.17	0.45
23:DB:76:G:H2'	23:DB:77:U:H6	1.81	0.45
22:BA:2573:C:OP1	22:BA:2574:G:OP1	2.34	0.45
9:CI:25:GLY:HA2	9:CI:60:LEU:O	2.16	0.45
22:BA:900:A:C2	22:BA:901:C:H1'	2.52	0.45
26:DE:139:LYS:HZ3	26:DE:139:LYS:HB2	1.82	0.45
22:DA:2531:A:C4	22:DA:2532:G:C8	3.05	0.45
42:BU:13:LEU:HD12	42:BU:69:VAL:CA	2.47	0.45
22:BA:727:A:C2	24:BC:8:THR:HG21	2.47	0.45
35:DN:92:GLY:H	35:DN:94:TYR:HE1	1.62	0.45
25:BD:35:THR:HG1	25:BD:49:GLN:HG2	1.81	0.45
5:AE:71:ILE:CD1	5:AE:144:GLU:HG3	2.46	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
39:BR:24:LYS:HE2	39:BR:24:LYS:HB3	1.68	0.45
42:BU:2:ALA:HB3	42:BU:5:ARG:NH2	2.32	0.45
22:BA:1826:G:C4	22:BA:1827:U:C5	3.05	0.45
1:AA:958:A:C6	1:AA:959:A:N1	2.84	0.45
7:AG:29:LEU:HD23	7:AG:29:LEU:O	2.17	0.45
22:BA:1833:C:C5	22:BA:1834:U:C5	3.05	0.45
1:AA:141:G:C2	1:AA:142:G:H1'	2.52	0.45
22:BA:1322:A:C2'	22:BA:1323:C:H5'	2.47	0.45
39:DR:36:ALA:HA	39:DR:58:VAL:HA	1.99	0.45
22:DA:2853:C:H2'	22:DA:2854:G:C8	2.51	0.45
28:BG:34:ARG:HD3	28:BG:34:ARG:N	2.32	0.45
13:CM:47:LEU:HD23	13:CM:48:SER:C	2.38	0.45
2:AB:132:GLU:O	2:AB:136:ARG:HB3	2.17	0.45
1:CA:301:G:H2'	1:CA:302:G:H8	1.82	0.45
4:CD:105:GLY:HA2	4:CD:161:ALA:HB2	1.99	0.45
22:BA:646:U:C3'	22:BA:647:G:H5''	2.46	0.45
22:DA:816:C:H2'	22:DA:817:C:H6	1.82	0.45
39:BR:37:GLU:O	39:BR:37:GLU:OE1	2.35	0.45
1:CA:283:U:H2'	1:CA:284:C:C6	2.52	0.45
22:DA:2674:G:H4'	32:DK:30:ARG:HD2	1.99	0.45
4:AD:106:PHE:CG	4:AD:144:ILE:HD11	2.52	0.45
22:DA:2367:G:O2'	22:DA:2368:C:H5'	2.17	0.45
22:BA:2585:U:HO2'	22:BA:2586:U:C5'	2.30	0.45
22:BA:1037:G:C2	22:BA:1119:U:O2	2.70	0.45
1:AA:441:A:N3	1:AA:441:A:H2'	2.32	0.45
30:BI:122:GLU:O	30:BI:122:GLU:HG3	2.16	0.45
2:AB:130:LYS:HE2	2:AB:130:LYS:HA	1.98	0.45
22:DA:1112:G:H2'	22:DA:1113:U:C5	2.52	0.45
22:DA:1958:C:C2'	22:DA:1959:G:H5'	2.46	0.45
28:BG:18:ILE:HD12	28:BG:42:VAL:HG13	1.99	0.45
22:BA:434:U:H4'	22:BA:435:C:OP1	2.16	0.45
38:BQ:63:ARG:NH2	38:BQ:95:ALA:C	2.70	0.45
22:BA:2846:G:OP2	37:BP:51:ASN:HB2	2.17	0.45
38:DQ:86:SER:HB3	39:DR:50:GLY:O	2.17	0.45
44:BW:39:GLN:NE2	44:BW:43:LYS:HB2	2.32	0.45
22:DA:1440:U:H2'	22:DA:1441:G:C8	2.52	0.45
49:D1:10:LEU:HD12	49:D1:50:GLU:O	2.17	0.45
22:DA:249:C:C4'	22:DA:250:G:O5'	2.65	0.45
38:DQ:46:TYR:CE1	38:DQ:50:ARG:NH2	2.85	0.45
1:CA:1309:G:C6	1:CA:1329:A:N1	2.84	0.45
22:DA:1601:G:C5	22:DA:1602:U:C4	3.05	0.45
22:DA:1341:G:C2	41:DT:84:TYR:HE2	2.35	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:2036:C:H2'	22:DA:2037:A:C8	2.52	0.45
4:AD:29:THR:CG2	4:AD:30:LYS:HD3	2.45	0.45
22:DA:84:A:C2	22:DA:98:G:N2	2.79	0.45
27:DF:65:LEU:HD21	27:DF:87:LYS:HG3	1.99	0.45
50:D2:18:PHE:O	50:D2:21:ARG:N	2.50	0.45
22:DA:1019:U:C4	22:DA:1020:A:N6	2.85	0.45
45:DX:53:LYS:O	45:DX:57:VAL:N	2.43	0.45
4:CD:32:LYS:O	4:CD:35:GLN:HG2	2.16	0.45
1:CA:1335:U:H5''	1:CA:1336:C:H5'	1.98	0.45
22:DA:586:A:O5'	22:DA:586:A:H8	1.99	0.45
22:BA:1731:G:C5	22:BA:1733:G:N7	2.85	0.45
22:DA:2760:C:C2'	22:DA:2761:A:H5'	2.47	0.45
37:DP:52:ARG:HH11	37:DP:52:ARG:HG2	1.82	0.45
22:DA:2876:G:H5''	37:DP:2:ASN:ND2	2.32	0.45
22:DA:1775:U:C2'	22:DA:1776:G:O5'	2.65	0.45
1:AA:198:G:C6	1:AA:220:G:N3	2.85	0.45
22:DA:1208:C:O2'	22:DA:1209:U:H5'	2.16	0.45
1:CA:1326:U:N3	1:CA:1327:C:N4	2.65	0.45
28:DG:112:VAL:HG13	28:DG:150:TYR:CE1	2.45	0.45
1:CA:275:G:O2'	1:CA:276:G:H8	2.00	0.45
25:DD:114:LYS:CD	25:DD:116:LYS:NZ	2.75	0.45
22:DA:2056:G:N2	22:DA:2057:G:C8	2.85	0.45
22:BA:1288:G:C5	22:BA:1327:A:C2	3.05	0.45
31:DJ:69:ARG:O	31:DJ:90:GLU:HB2	2.16	0.45
31:DJ:95:ARG:NH1	31:DJ:99:ARG:HH21	2.15	0.45
6:CF:12:PRO:CD	6:CF:54:LEU:HD11	2.46	0.45
2:CB:199:ILE:O	2:CB:199:ILE:HG13	2.16	0.45
11:AK:24:ALA:O	11:AK:88:PRO:O	2.35	0.45
28:BG:59:ASP:O	28:BG:60:GLY:O	2.35	0.45
25:DD:73:VAL:HG22	25:DD:74:GLU:N	2.31	0.45
1:AA:858:G:C6	1:AA:869:G:C8	3.05	0.45
1:CA:764:C:O2	1:CA:764:C:H2'	2.16	0.45
1:CA:952:U:H5	13:CM:102:LYS:NZ	2.14	0.45
30:DI:57:VAL:HG12	30:DI:58:ILE:N	2.32	0.45
12:CL:115:LYS:O	12:CL:116:TYR:CB	2.64	0.45
31:BJ:105:VAL:O	31:BJ:109:LEU:HD12	2.16	0.45
1:AA:1039:G:C2'	1:AA:1040:U:H5'	2.47	0.45
31:BJ:31:GLU:O	31:BJ:32:LEU:C	2.54	0.45
3:CC:6:PRO:HG3	3:CC:200:TRP:HE1	1.81	0.45
22:DA:21:A:H2'	22:DA:22:C:H6	1.80	0.45
1:CA:631:C:C3'	1:CA:632:U:H5'	2.46	0.45
33:BL:57:LEU:CD2	51:B3:53:ASP:HB3	2.46	0.45

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:BA:2020:A:H5'	48:B0:8:THR:HG22	1.98	0.45
27:BF:27:VAL:O	27:BF:29:ARG:NH1	2.50	0.45
24:DC:196:ASN:HB3	24:DC:197:ALA:H	1.66	0.45
22:DA:2687:U:H2'	22:DA:2688:G:O4'	2.17	0.45
34:BM:54:THR:O	34:BM:57:VAL:HG22	2.16	0.45
1:CA:140:U:H3'	1:CA:140:U:H6	1.82	0.45
28:DG:152:ARG:HG3	28:DG:153:PRO:HD2	1.98	0.45
18:CR:19:GLU:CG	18:CR:20:ILE:N	2.80	0.45
29:DH:3:VAL:N	29:DH:39:ALA:HB2	2.31	0.45
39:BR:21:ARG:HG3	39:BR:95:ASP:OD1	2.17	0.45
17:CQ:45:VAL:CG2	17:CQ:60:ILE:HD12	2.46	0.45
25:DD:15:PHE:CD2	37:DP:77:SER:HA	2.52	0.45
5:CE:69:ASN:ND2	5:CE:69:ASN:O	2.49	0.45
3:CC:122:GLN:HA	3:CC:125:ARG:HG3	1.98	0.45
4:AD:75:TYR:CD2	4:AD:203:TYR:HD1	2.34	0.45
22:BA:2220:U:H2'	22:BA:2221:G:C8	2.50	0.45
22:BA:231:A:N7	22:BA:232:G:C6	2.85	0.45
1:AA:1378:C:C5	1:AA:1379:G:C8	3.05	0.45
24:DC:30:ALA:N	24:DC:31:PRO:CD	2.80	0.45
9:CI:4:GLN:HG2	9:CI:4:GLN:H	1.37	0.45
22:DA:653:U:H4'	22:DA:653:U:OP1	2.17	0.45
16:AP:28:ARG:NE	16:AP:29:ASN:HD21	2.15	0.45
22:DA:219:A:N6	22:DA:220:G:N1	2.65	0.45
17:CQ:52:CYS:HB2	17:CQ:53:GLY:H	1.58	0.45
22:BA:1724:G:C2'	22:BA:1725:U:H5'	2.46	0.45
37:DP:19:PHE:N	37:DP:19:PHE:HD2	2.15	0.45
13:AM:92:ARG:HB3	13:AM:92:ARG:CZ	2.47	0.45
1:CA:623:C:H3'	1:CA:623:C:C6	2.52	0.45
1:AA:40:C:O2	1:AA:40:C:H2'	2.16	0.45
22:DA:2361:G:C6	22:DA:2362:C:C4	3.05	0.45
22:BA:734:A:C4	22:BA:735:A:C8	3.05	0.45
22:BA:1002:G:H2'	22:BA:1003:G:O5'	2.16	0.45
20:CT:47:GLN:O	20:CT:51:ASN:OD1	2.35	0.45
17:CQ:51:GLU:H	17:CQ:51:GLU:HG2	1.42	0.45
4:AD:47:LEU:H	4:AD:47:LEU:HD23	1.81	0.45
12:CL:78:VAL:O	12:CL:102:ASP:HB2	2.17	0.45
6:CF:25:TYR:O	6:CF:29:ILE:HD13	2.16	0.45
22:DA:685:A:C8	22:DA:773:U:O4	2.70	0.45
1:AA:1517:G:O6	1:AA:1518:A:C6	2.69	0.45
23:DB:108:A:O2'	23:DB:109:A:OP1	2.28	0.44
23:DB:17:C:H2'	23:DB:18:G:H8	1.83	0.44
44:BW:37:VAL:HG11	44:BW:55:ASP:HB2	1.98	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:CA:1092:A:H5'	7:CG:3:ARG:NH2	2.32	0.44
36:DO:30:ARG:HH12	36:DO:102:ARG:HB2	1.81	0.44
2:AB:164:ASP:CG	2:AB:203:ASP:OD1	2.56	0.44
22:DA:2331:G:C1'	44:DW:40:ARG:HB3	2.46	0.44
20:AT:32:LYS:O	20:AT:35:TYR:HD2	1.99	0.44
1:CA:706:A:N7	1:CA:707:U:C5	2.85	0.44
22:DA:1210:G:H4'	22:DA:1211:C:H5''	1.98	0.44
22:DA:1338:G:N3	22:DA:1393:A:H2	2.16	0.44
22:DA:1571:A:O5'	22:DA:1571:A:H8	1.99	0.44
11:AK:125:LYS:O	11:AK:126:ARG:CB	2.65	0.44
13:CM:77:LYS:HA	13:CM:80:MET:CE	2.47	0.44
38:DQ:63:ARG:O	38:DQ:64:ILE:C	2.54	0.44
1:CA:207:C:N3	1:CA:208:U:O4	2.50	0.44
22:DA:2307:G:N7	22:DA:2312:U:C5	2.85	0.44
33:DL:79:LEU:HD12	33:DL:112:LEU:CA	2.46	0.44
27:BF:105:ILE:C	27:BF:108:PRO:HD2	2.37	0.44
35:DN:83:LEU:CD1	35:DN:86:ARG:HH21	2.30	0.44
1:CA:575:G:C6	1:CA:821:G:C5	3.06	0.44
46:DY:17:GLU:HG3	46:DY:53:VAL:HG11	1.99	0.44
26:DE:146:VAL:HG12	26:DE:167:VAL:HG23	1.99	0.44
25:BD:34:VAL:CG2	25:BD:91:THR:HA	2.47	0.44
35:DN:16:HIS:CE1	35:DN:20:MET:HE2	2.52	0.44
2:AB:26:MET:HA	2:AB:26:MET:HE3	1.99	0.44
22:DA:1789:A:H5''	24:DC:218:THR:O	2.17	0.44
22:DA:1790:C:O2'	24:DC:207:ALA:HB2	2.16	0.44
1:AA:362:G:N2	1:AA:365:U:OP2	2.50	0.44
1:CA:599:C:H4'	8:CH:121:GLY:HA3	1.99	0.44
22:BA:1045:C:C3'	22:BA:1046:A:C5'	2.95	0.44
41:DT:45:ALA:HA	41:DT:48:GLN:CG	2.47	0.44
22:DA:2200:C:N4	22:DA:2224:G:H21	2.14	0.44
1:AA:466:A:C3'	1:AA:467:U:H5''	2.46	0.44
22:DA:2056:G:H21	48:D0:1:ALA:H3	1.66	0.44
22:BA:1746:A:C2	22:BA:1747:U:N3	2.85	0.44
36:DO:24:THR:H	36:DO:90:VAL:CG1	2.29	0.44
22:DA:2286:G:O6	49:D1:22:THR:HG21	2.17	0.44
49:B1:22:THR:OG1	49:B1:23:THR:N	2.50	0.44
41:DT:55:VAL:HG23	41:DT:86:THR:O	2.17	0.44
13:AM:65:GLU:HB3	13:AM:66:GLY:H	1.57	0.44
22:DA:1327:A:N6	22:DA:1328:A:C6	2.85	0.44
22:DA:2607:G:H2'	22:DA:2608:G:O4'	2.17	0.44
14:AN:50:LEU:O	14:AN:51:PRO:C	2.56	0.44
12:AL:41:PRO:HA	12:AL:88:ASP:O	2.17	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
42:BU:73:ASN:HD22	42:BU:76:THR:H	1.64	0.44
7:AG:105:GLU:O	7:AG:105:GLU:HG2	2.17	0.44
28:BG:10:VAL:HG23	28:BG:10:VAL:O	2.16	0.44
22:DA:571:U:C6	22:DA:575:A:N6	2.85	0.44
6:CF:61:LEU:CD1	6:CF:62:MET:H	2.25	0.44
24:DC:255:LYS:C	24:DC:256:THR:HG23	2.36	0.44
45:BX:29:LEU:HD23	45:BX:29:LEU:H	1.82	0.44
1:CA:1050:G:O6	1:CA:1209:C:N3	2.50	0.44
22:DA:271:G:C2	22:DA:367:G:N3	2.86	0.44
27:BF:21:TYR:CE2	27:BF:27:VAL:HA	2.52	0.44
4:AD:151:GLN:H	4:AD:154:VAL:HG13	1.81	0.44
32:DK:118:LEU:O	32:DK:120:PRO:HD2	2.16	0.44
1:CA:469:C:H2'	1:CA:470:C:O4'	2.18	0.44
33:BL:80:SER:C	33:BL:81:ASP:O	2.54	0.44
22:BA:1316:U:H2'	22:BA:1317:G:C8	2.53	0.44
22:DA:1827:U:O4'	22:DA:1970:A:O2'	2.34	0.44
22:BA:1797:G:C6	22:BA:1798:U:C4	3.05	0.44
22:DA:2234:G:C5	22:DA:2235:G:N7	2.85	0.44
1:AA:191:G:C5	1:AA:192:A:N7	2.85	0.44
22:BA:1932:A:H2'	22:BA:1933:G:O4'	2.17	0.44
22:BA:2571:U:H2'	22:BA:2572:A:OP1	2.16	0.44
22:BA:2307:G:N2	22:BA:2311:A:C8	2.85	0.44
4:CD:59:LYS:O	4:CD:63:ILE:HG13	2.17	0.44
1:CA:637:C:H2'	1:CA:638:U:H6	1.81	0.44
15:AO:86:LEU:C	15:AO:88:ARG:N	2.70	0.44
1:AA:1394:A:C6	1:AA:1501:C:H4'	2.52	0.44
26:BE:79:ARG:O	26:BE:80:SER:C	2.56	0.44
27:DF:73:VAL:HG12	27:DF:73:VAL:O	2.17	0.44
22:DA:2254:C:C2'	22:DA:2255:G:H5'	2.46	0.44
6:AF:11:HIS:CD2	6:AF:12:PRO:HD2	2.53	0.44
1:AA:828:U:H2'	1:AA:829:G:O5'	2.17	0.44
1:CA:53:A:C2	1:CA:359:G:C6	3.05	0.44
29:DH:50:ARG:C	29:DH:52:ALA:H	2.20	0.44
22:BA:1246:A:C2'	22:BA:1247:A:O5'	2.65	0.44
2:AB:121:GLN:HA	2:AB:125:PHE:CE1	2.51	0.44
2:AB:125:PHE:N	2:AB:125:PHE:CD2	2.84	0.44
19:AS:34:SER:C	19:AS:36:ARG:H	2.19	0.44
23:DB:95:U:O4	56:DB:303:HOH:O	2.15	0.44
22:BA:1922:G:H2'	22:BA:1923:U:O4'	2.17	0.44
15:AO:7:THR:O	15:AO:11:VAL:HG23	2.17	0.44
24:BC:196:ASN:C	24:BC:198:GLU:H	2.19	0.44
50:B2:29:GLN:O	50:B2:33:ARG:HG3	2.16	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:CL:56:LEU:HB2	12:CL:58:ASN:OD1	2.17	0.44
22:DA:462:C:C2'	22:DA:463:G:H5'	2.47	0.44
1:AA:1503:A:C8	1:AA:1531:A:H1'	2.53	0.44
1:CA:944:G:H3'	1:CA:945:G:H5'	1.97	0.44
8:CH:45:ILE:O	8:CH:45:ILE:HG13	2.17	0.44
1:AA:1432:G:O2'	1:AA:1433:A:OP2	2.27	0.44
22:BA:2544:G:H2'	22:BA:2545:G:O4'	2.17	0.44
27:DF:177:ARG:NE	27:DF:178:LYS:H	2.13	0.44
22:BA:996:A:C2'	22:BA:997:G:O5'	2.66	0.44
38:BQ:60:TRP:CZ2	38:BQ:93:ILE:HB	2.52	0.44
22:BA:1059:G:C8	22:BA:1060:U:H2'	2.52	0.44
22:BA:2353:G:O2'	44:BW:31:LEU:CD2	2.65	0.44
1:CA:1364:U:O2	1:CA:1364:U:O4'	2.34	0.44
19:CS:39:ILE:HG13	19:CS:39:ILE:O	2.17	0.44
22:DA:228:C:C5'	22:DA:229:C:C5	2.98	0.44
31:DJ:43:GLU:O	31:DJ:44:TYR:C	2.56	0.44
11:CK:74:LYS:HG3	11:CK:78:ILE:HG12	2.00	0.44
1:CA:207:C:O2	1:CA:207:C:H2'	2.17	0.44
27:DF:65:LEU:HD11	27:DF:87:LYS:NZ	2.31	0.44
1:AA:273:U:O4	1:AA:274:A:N6	2.49	0.44
17:AQ:12:VAL:CG1	17:AQ:21:VAL:HG13	2.38	0.44
52:B4:9:LYS:HB3	52:B4:14:CYS:CB	2.47	0.44
22:DA:475:C:C2'	22:DA:476:G:C8	2.98	0.44
7:CG:36:SER:HA	9:CI:42:THR:CG2	2.47	0.44
35:DN:87:PHE:CD1	35:DN:90:ARG:HD3	2.52	0.44
1:CA:575:G:O2'	1:CA:821:G:H5'	2.18	0.44
44:BW:8:SER:C	44:BW:9:THR:HG22	2.36	0.44
22:DA:75:G:O2'	22:DA:76:C:O5'	2.34	0.44
4:CD:8:LEU:O	4:CD:9:LYS:C	2.54	0.44
22:DA:2066:C:H5''	56:DA:3533:HOH:O	2.17	0.44
22:DA:28:A:O2'	22:DA:583:G:H5'	2.18	0.44
22:DA:584:C:H2'	22:DA:585:G:C8	2.52	0.44
6:AF:92:THR:HG22	6:AF:93:LYS:H	1.81	0.44
32:DK:60:ALA:HB2	32:DK:86:LEU:HA	1.99	0.44
37:DP:28:LYS:HB3	37:DP:39:LEU:HD23	1.99	0.44
22:BA:1085:A:C2	22:BA:1086:A:N7	2.85	0.44
27:DF:134:GLN:HE22	27:DF:136:ILE:H	1.65	0.44
25:BD:68:PHE:CD2	25:BD:75:ALA:HA	2.52	0.44
13:CM:13:HIS:O	13:CM:14:ALA:C	2.55	0.44
32:DK:17:ARG:O	32:DK:18:ARG:O	2.36	0.44
1:CA:495:A:C2	1:CA:496:A:C6	3.05	0.44
42:DU:73:ASN:HD22	42:DU:95:PHE:HD2	1.65	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:BA:1999:C:H4'	22:BA:2723:C:O2	2.17	0.44
41:DT:39:THR:C	41:DT:41:ALA:H	2.19	0.44
22:DA:1499:C:C4	22:DA:1500:G:N7	2.85	0.44
22:BA:1019:U:C2	22:BA:1142:A:N6	2.85	0.44
22:DA:635:C:OP2	33:DL:126:ARG:NH1	2.48	0.44
22:DA:770:G:H1'	22:DA:1379:U:O4	2.17	0.44
22:DA:2049:G:H21	25:DD:161:MET:HE2	1.82	0.44
13:AM:2:ARG:HA	13:AM:8:ILE:HG12	1.99	0.44
1:CA:567:G:H2'	1:CA:568:G:O4'	2.17	0.44
29:BH:110:VAL:HG23	29:BH:111:ALA:N	2.32	0.44
1:CA:160:A:C2	1:CA:343:U:H1'	2.52	0.44
7:AG:94:ARG:O	7:AG:95:ARG:C	2.55	0.44
22:DA:1677:A:C8	56:DA:3749:HOH:O	2.70	0.44
1:CA:178:C:H2'	1:CA:179:A:H8	1.82	0.44
39:DR:62:GLU:OE1	39:DR:97:LYS:HD2	2.18	0.44
22:DA:684:G:H5'	50:D2:16:HIS:NE2	2.32	0.44
34:BM:108:VAL:HG13	34:BM:109:PRO:CD	2.45	0.44
9:AI:22:PRO:HA	9:AI:60:LEU:HA	1.98	0.44
22:DA:2402:U:O2'	22:DA:2403:C:OP1	2.31	0.44
23:DB:76:G:P	43:DV:13:GLY:H	2.41	0.44
23:DB:78:A:H2'	23:DB:79:G:H8	1.82	0.44
22:DA:1506:U:H2'	22:DA:1507:C:O4'	2.17	0.44
43:DV:75:GLN:HG3	43:DV:92:VAL:CG1	2.47	0.44
9:CI:30:ASN:O	9:CI:31:GLN:CG	2.65	0.44
22:BA:715:A:OP1	22:BA:715:A:H8	1.99	0.44
1:CA:41:G:H2'	1:CA:42:G:C8	2.51	0.44
24:BC:77:VAL:HG13	24:BC:113:ASP:O	2.17	0.44
22:BA:1104:C:H2'	22:BA:1105:U:C6	2.52	0.44
8:AH:91:LEU:HD23	8:AH:92:PRO:HD2	1.99	0.44
1:AA:1033:G:H2'	1:AA:1034:G:C5'	2.48	0.44
26:DE:153:LEU:HD23	26:DE:154:ASP:N	2.32	0.44
29:BH:39:ALA:C	29:BH:41:LYS:H	2.20	0.44
22:BA:866:A:C8	22:BA:914:G:C6	3.05	0.44
23:DB:81:G:C5	23:DB:82:U:C4	3.05	0.44
22:DA:1672:A:O4'	22:DA:2553:G:H4'	2.17	0.44
1:CA:858:G:C8	1:CA:869:G:O6	2.70	0.44
22:DA:2850:A:C6	22:DA:2869:G:H4'	2.51	0.44
1:CA:934:C:H5	1:CA:1344:C:C2	2.35	0.44
22:BA:1945:G:H2'	22:BA:1946:U:C6	2.51	0.44
25:DD:200:ASP:O	25:DD:201:LEU:HD23	2.16	0.44
7:CG:128:GLU:O	7:CG:129:ASN:HB2	2.18	0.44
22:DA:1936:A:C2	22:DA:1943:U:H5	2.34	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:CB:15:PHE:O	2:CB:39:ILE:HD11	2.17	0.44
1:AA:1296:C:O3'	1:AA:1302:C:N4	2.50	0.44
22:DA:609:A:N7	22:DA:610:C:C2	2.86	0.44
22:DA:146:A:C2	22:DA:147:C:C2	3.05	0.44
8:CH:23:ALA:HA	8:CH:62:LEU:HD22	1.98	0.44
40:BS:24:ILE:HA	40:BS:24:ILE:HD12	1.62	0.44
38:BQ:75:TYR:CE2	38:BQ:79:ILE:HG13	2.52	0.44
22:BA:464:U:O2'	50:B2:16:HIS:CE1	2.70	0.44
22:BA:2585:U:O2'	22:BA:2586:U:O5'	2.34	0.44
22:DA:1112:G:H2'	22:DA:1113:U:C6	2.53	0.44
22:DA:1485:U:C2	22:DA:1505:A:C2	3.05	0.44
22:DA:2813:A:H2'	22:DA:2814:A:C8	2.52	0.44
27:BF:99:PHE:O	27:BF:103:ILE:HG12	2.17	0.44
26:DE:72:SER:C	26:DE:74:LYS:H	2.20	0.44
34:BM:117:PHE:O	34:BM:118:LYS:C	2.54	0.44
48:B0:43:THR:HG23	48:B0:47:TYR:O	2.17	0.44
23:BB:63:C:O2'	23:BB:64:G:H5'	2.17	0.44
2:AB:170:ILE:HG12	2:AB:170:ILE:H	1.50	0.44
28:DG:176:LYS:HD2	28:DG:176:LYS:OXT	2.16	0.44
1:AA:1398:A:H8	1:AA:1398:A:H5''	1.82	0.44
29:DH:104:THR:CG2	29:DH:104:THR:O	2.65	0.44
24:BC:216:ARG:HB3	24:BC:217:PRO:HD2	1.99	0.44
1:AA:21:G:N2	1:AA:22:G:C6	2.85	0.44
22:BA:1347:A:H2'	22:BA:1348:C:O4'	2.17	0.44
31:BJ:40:HIS:O	31:BJ:41:LYS:HG2	2.17	0.44
22:DA:214:G:H1'	22:DA:217:A:H5'	1.98	0.44
44:BW:74:LYS:HE2	44:BW:74:LYS:HB3	1.77	0.44
6:AF:6:ILE:HG22	6:AF:7:VAL:N	2.32	0.44
6:AF:7:VAL:HA	6:AF:60:VAL:O	2.17	0.44
11:CK:92:ARG:HD2	11:CK:92:ARG:HA	1.65	0.44
22:DA:1799:G:C8	24:DC:175:LEU:HD13	2.53	0.44
22:DA:1439:A:H8	22:DA:1440:U:O4'	1.99	0.44
9:AI:7:GLY:HA3	9:AI:85:ALA:HB2	1.99	0.44
22:DA:511:U:C5'	22:DA:1235:G:H4'	2.47	0.44
22:DA:1386:C:O2'	22:DA:1387:A:H8	1.99	0.44
35:DN:45:ARG:HG2	35:DN:95:THR:HG21	1.99	0.44
22:DA:1350:C:C2	22:DA:1382:G:N7	2.85	0.44
22:DA:1381:G:C2'	22:DA:1382:G:H5''	2.43	0.44
1:AA:976:G:N1	1:AA:1363:A:C2	2.85	0.44
22:DA:1062:G:H2'	22:DA:1070:A:OP1	2.17	0.44
1:CA:109:A:C8	1:CA:327:A:H5'	2.52	0.44
22:DA:648:G:N3	22:DA:649:G:C8	2.86	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:1830:C:H5'	24:DC:14:HIS:HE1	1.81	0.44
4:CD:29:THR:C	4:CD:31:CYS:N	2.70	0.44
4:CD:25:ARG:HH12	4:CD:30:LYS:HE2	1.80	0.44
1:AA:1461:G:H2'	1:AA:1462:C:H6	1.82	0.44
25:DD:107:VAL:HA	25:DD:204:LYS:O	2.18	0.44
6:AF:90:MET:HB3	6:AF:91:ARG:H	1.49	0.44
17:CQ:68:LYS:O	17:CQ:69:THR:HG23	2.17	0.44
22:BA:1081:U:H2'	22:BA:1081:U:O2	2.17	0.44
41:BT:2:ILE:HB	41:BT:3:ARG:NH1	2.32	0.44
27:DF:110:ILE:CD1	27:DF:110:ILE:H	2.31	0.44
1:CA:642:A:O2'	1:CA:643:C:O5'	2.34	0.44
1:CA:249:U:C2	1:CA:276:G:N1	2.85	0.44
41:DT:47:VAL:O	41:DT:53:VAL:O	2.35	0.44
41:DT:48:GLN:NE2	41:DT:54:GLU:HB2	2.32	0.44
32:DK:46:ALA:HB3	32:DK:54:LYS:NZ	2.32	0.44
24:BC:246:PRO:HG2	24:BC:247:TRP:CH2	2.51	0.44
21:CU:33:ARG:NH2	21:CU:34:ARG:HD3	2.33	0.44
7:CG:72:VAL:O	7:CG:140:VAL:HG11	2.18	0.44
5:CE:136:VAL:HG22	5:CE:137:ARG:N	2.31	0.44
22:BA:1252:G:O2'	22:BA:1253:A:C8	2.68	0.44
4:CD:55:ARG:HH12	4:CD:58:GLN:HG2	1.82	0.44
3:AC:54:ILE:HD12	3:AC:55:VAL:N	2.33	0.44
4:AD:113:ALA:O	4:AD:117:VAL:HG23	2.17	0.44
4:AD:121:ALA:HA	4:AD:145:ARG:HG3	2.00	0.44
22:DA:2287:A:O2'	22:DA:2288:A:H3'	2.18	0.44
1:CA:1422:G:C5'	32:DK:48:PRO:HB3	2.44	0.44
22:DA:2005:A:H5''	22:DA:2006:C:OP2	2.17	0.44
35:DN:103:ARG:HG3	35:DN:104:ALA:N	2.32	0.44
13:AM:2:ARG:HG3	13:AM:3:ILE:H	1.82	0.44
22:DA:2135:A:H8	22:DA:2135:A:OP2	2.00	0.44
1:AA:207:C:H2'	1:AA:207:C:O2	2.17	0.44
45:DX:3:VAL:O	45:DX:3:VAL:HG23	2.17	0.44
4:CD:100:VAL:HG21	4:CD:136:VAL:HG21	1.98	0.44
22:DA:1616:A:OP1	22:DA:1616:A:C8	2.68	0.44
22:BA:2792:A:C2	22:BA:2793:C:C2	3.06	0.44
46:DY:22:LEU:CD1	46:DY:23:ARG:HH12	2.31	0.44
1:AA:342:C:H2'	1:AA:343:U:H5'	1.98	0.44
1:AA:340:U:OP2	32:BK:98:ARG:NE	2.51	0.44
12:AL:87:LYS:HB2	12:AL:87:LYS:NZ	2.32	0.44
16:AP:56:ARG:HD2	16:AP:56:ARG:HA	1.69	0.44
45:BX:69:GLU:O	45:BX:71:ARG:N	2.48	0.44
2:CB:21:TYR:CD1	2:CB:21:TYR:N	2.84	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:1216:A:C2	1:AA:1217:C:C4	3.05	0.44
1:CA:1050:G:O2'	1:CA:1051:C:O5'	2.35	0.44
9:CI:106:ASP:N	9:CI:106:ASP:OD1	2.51	0.44
23:DB:77:U:H2'	23:DB:78:A:H5'	2.00	0.44
23:DB:99:A:N6	23:DB:100:G:C6	2.86	0.44
1:AA:284:C:H2'	1:AA:285:C:C6	2.48	0.44
35:BN:92:GLY:O	35:BN:93:GLY:C	2.54	0.44
22:DA:414:C:H4'	22:DA:1879:C:O2	2.17	0.44
22:DA:48:G:N2	22:DA:177:G:C2	2.85	0.44
22:DA:2718:G:O2'	37:DP:95:LYS:HG3	2.18	0.44
28:BG:164:ALA:C	28:BG:166:GLU:H	2.20	0.44
1:AA:1241:G:C2	1:AA:1242:G:C5	3.06	0.44
1:CA:858:G:C5	56:CA:1822:HOH:O	2.69	0.44
7:AG:80:GLY:C	7:AG:82:SER:H	2.21	0.44
26:BE:79:ARG:CG	26:BE:80:SER:N	2.80	0.44
22:BA:2553:G:H2'	22:BA:2554:U:O4'	2.17	0.44
2:CB:176:ASN:O	2:CB:178:LEU:N	2.50	0.44
25:DD:43:ASP:HB3	25:DD:44:GLY:H	1.59	0.44
1:AA:56:U:H2'	1:AA:57:G:H8	1.80	0.44
1:CA:188:C:H42	1:CA:189:A:N6	2.15	0.44
15:CO:55:LEU:HA	15:CO:58:MET:HG3	1.98	0.44
22:DA:2373:G:C2	22:DA:2374:C:C2	3.04	0.44
29:DH:45:GLU:C	29:DH:47:PHE:H	2.21	0.44
47:BZ:16:LEU:O	47:BZ:19:HIS:HB2	2.18	0.44
33:DL:3:LEU:HG	33:DL:4:ASN:N	2.33	0.44
44:BW:26:GLY:O	44:BW:27:GLY:C	2.55	0.44
22:DA:1562:U:H2'	22:DA:1563:U:O4'	2.17	0.44
2:AB:61:SER:C	2:AB:63:LYS:H	2.20	0.44
23:DB:54:G:H21	27:DF:25:MET:CE	2.29	0.44
1:AA:1154:G:N1	1:AA:1155:A:C5	2.85	0.44
26:DE:102:ARG:O	26:DE:104:ALA:N	2.50	0.44
22:BA:1799:G:H8	24:BC:179:GLU:OE1	2.00	0.44
20:AT:2:ASN:O	20:AT:3:ILE:C	2.55	0.44
1:AA:777:A:H2'	1:AA:778:G:C8	2.52	0.44
22:BA:497:A:H2'	22:BA:498:G:O4'	2.18	0.44
22:DA:2650:U:C2	22:DA:2671:G:N2	2.85	0.44
22:BA:58:G:N2	22:BA:70:G:C4	2.85	0.44
1:CA:853:C:H2'	1:CA:854:U:O4'	2.18	0.44
22:BA:258:G:H8	22:BA:258:G:O5'	2.00	0.44
3:CC:93:ILE:O	3:CC:93:ILE:HG13	2.17	0.44
22:BA:2146:C:O4'	22:BA:2146:C:O2	2.34	0.44
22:DA:1670:C:C4	22:DA:1671:U:C2	3.05	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
38:BQ:85:ALA:HA	38:BQ:115:ALA:CB	2.48	0.44
23:DB:24:G:H4'	23:DB:26:C:H5	1.83	0.44
28:BG:97:VAL:HG22	28:BG:102:ILE:HG12	1.99	0.44
22:DA:857:G:H4'	44:DW:43:LYS:HE2	1.99	0.44
41:DT:18:GLU:HA	41:DT:22:THR:CG2	2.48	0.44
22:DA:2214:C:O2'	22:DA:2215:C:C5'	2.57	0.44
22:DA:320:A:H5''	22:DA:321:U:OP1	2.18	0.44
8:AH:63:LYS:O	8:AH:70:VAL:HG23	2.18	0.44
33:BL:95:LEU:CD2	33:BL:100:ILE:HD11	2.43	0.44
22:DA:1064:C:C4	22:DA:1065:U:C5	3.05	0.44
22:DA:1070:A:C5	22:DA:1097:U:H4'	2.52	0.44
1:CA:327:A:O2'	1:CA:328:C:H6	2.00	0.44
22:DA:2300:C:O2'	22:DA:2301:C:H5'	2.18	0.44
25:BD:119:ALA:CB	25:BD:165:MET:HB2	2.48	0.44
14:CN:96:LYS:HD2	14:CN:96:LYS:H	1.81	0.44
22:DA:2307:G:O2'	22:DA:2308:G:O4'	2.36	0.44
30:BI:24:GLY:HA3	30:BI:25:PRO:HD3	1.86	0.44
46:DY:57:LEU:O	46:DY:57:LEU:HD13	2.17	0.44
19:CS:40:PHE:CE1	19:CS:66:VAL:HG12	2.52	0.44
22:DA:600:G:C5	22:DA:601:C:C4	3.05	0.44
22:DA:1109:C:C4	22:DA:1110:G:C6	3.06	0.44
22:DA:1251:C:O2'	56:DA:3286:HOH:O	2.21	0.44
24:BC:90:ILE:HA	24:BC:90:ILE:HD12	1.53	0.44
22:DA:2875:C:HO2'	22:DA:2876:G:H8	0.70	0.44
28:DG:85:LYS:HG3	28:DG:163:TYR:HB2	1.98	0.44
1:AA:1304:G:H5''	1:AA:1305:G:OP1	2.17	0.44
1:CA:247:G:N2	1:CA:248:C:C2	2.86	0.44
22:DA:1417:C:H2'	22:DA:1418:G:N7	2.29	0.44
22:DA:854:C:O2'	22:DA:855:G:H5'	2.18	0.44
7:CG:74:VAL:HG11	7:CG:143:MET:HB2	1.99	0.44
2:AB:116:LEU:HA	2:AB:116:LEU:HD13	1.76	0.44
22:DA:2287:A:C8	22:DA:2289:G:C8	3.06	0.44
46:BY:8:GLU:O	46:BY:9:LYS:HB3	2.17	0.44
41:DT:27:SER:O	41:DT:28:ASN:HB3	2.17	0.44
41:DT:85:VAL:O	41:DT:86:THR:OG1	2.31	0.44
13:AM:2:ARG:HA	13:AM:7:ASN:O	2.17	0.44
1:AA:210:C:H4'	1:AA:211:G:C2	2.52	0.44
24:BC:238:ASN:O	24:BC:239:PHE:HB2	2.18	0.44
36:DO:74:VAL:O	36:DO:78:VAL:HG23	2.17	0.44
1:AA:177:G:C2'	1:AA:178:C:H5'	2.47	0.44
26:DE:127:GLU:H	26:DE:127:GLU:CD	2.21	0.44
1:AA:684:U:H1'	11:AK:39:ASN:O	2.17	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
26:BE:24:ASN:C	26:BE:24:ASN:HD22	2.19	0.44
1:AA:1216:A:C6	1:AA:1217:C:N4	2.86	0.44
22:BA:2062:A:N6	54:BA:3135:EM1:H55A	2.33	0.44
5:CE:154:ALA:C	5:CE:156:ARG:H	2.20	0.44
5:AE:132:PRO:O	5:AE:136:VAL:HG13	2.17	0.44
3:CC:117:ASP:HA	3:CC:120:THR:HB	1.99	0.44
22:DA:1754:A:OP1	37:DP:93:LYS:HE3	2.18	0.44
22:DA:2234:G:C4	22:DA:2235:G:C8	3.06	0.44
34:DM:58:LYS:O	34:DM:60:GLN:N	2.51	0.44
38:DQ:10:ARG:HB2	38:DQ:10:ARG:NH1	2.32	0.44
1:CA:636:U:O2'	1:CA:637:C:H5'	2.18	0.44
7:AG:78:ARG:HD2	7:AG:83:THR:HA	2.00	0.44
22:DA:401:A:H2'	22:DA:402:A:C8	2.52	0.44
18:CR:41:SER:HA	18:CR:46:THR:HG22	1.99	0.44
1:CA:484:G:C5	1:CA:486:U:H1'	2.52	0.44
1:CA:484:G:C6	1:CA:486:U:H1'	2.53	0.44
22:DA:2817:U:H2'	22:DA:2818:U:O5'	2.18	0.44
22:DA:2151:U:H2'	22:DA:2152:G:C8	2.52	0.44
23:BB:94:A:C5	23:BB:95:U:C4	3.05	0.44
25:DD:5:VAL:HG21	25:DD:80:TRP:CG	2.53	0.44
22:DA:2474:U:C2'	22:DA:2475:C:O5'	2.65	0.44
1:AA:45:G:O2'	1:AA:46:G:H5'	2.17	0.44
22:DA:135:U:H3	22:DA:144:A:H61	1.64	0.44
22:DA:1528:A:H2'	22:DA:1529:G:O4'	2.18	0.44
22:DA:1266:G:O2'	22:DA:2012:G:O6	2.21	0.44
22:DA:2204:G:C2	22:DA:2205:A:C8	3.05	0.44
22:BA:2459:A:C8	22:BA:2459:A:O5'	2.70	0.44
46:DY:56:LEU:HD22	46:DY:56:LEU:N	2.32	0.44
7:CG:79:VAL:HG23	7:CG:79:VAL:O	2.18	0.44
34:BM:24:THR:HG23	34:BM:24:THR:O	2.18	0.44
22:DA:1270:C:H6	22:DA:1270:C:O5'	2.00	0.44
1:AA:1342:C:O2'	9:AI:125:GLN:HG3	2.17	0.44
3:CC:59:PRO:HG2	3:CC:62:SER:HB3	1.99	0.44
22:BA:1438:U:O2'	22:BA:1439:A:H5'	2.17	0.44
38:BQ:91:ARG:NH2	38:BQ:93:ILE:CD1	2.74	0.44
22:BA:1062:G:H2'	22:BA:1063:G:C8	2.52	0.44
45:BX:39:VAL:HG21	45:BX:42:GLU:HB3	1.99	0.44
27:BF:129:MET:O	27:BF:129:MET:HG3	2.18	0.44
44:BW:67:LYS:O	44:BW:68:PHE:HB2	2.18	0.44
22:BA:271:G:C2	22:BA:367:G:N3	2.86	0.44
36:DO:62:LEU:HD21	36:DO:65:THR:HA	1.98	0.44
22:DA:410:G:C2	22:DA:2407:A:C6	3.05	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:405:U:H3'	22:DA:406:G:C5'	2.48	0.44
22:DA:1534:U:H3'	22:DA:1534:U:O2	2.18	0.44
22:DA:1400:U:H2'	22:DA:1401:G:O4'	2.17	0.44
22:DA:1608:A:C5	22:DA:1611:C:C4	3.05	0.44
22:DA:2039:U:H2'	22:DA:2040:G:C8	2.53	0.44
22:DA:1371:G:H8	22:DA:1371:G:O5'	2.00	0.44
38:DQ:57:ARG:HH12	38:DQ:92:LYS:HE2	1.76	0.44
17:AQ:60:ILE:HG22	17:AQ:72:TRP:CE3	2.50	0.44
22:DA:474:G:H4'	22:DA:475:C:OP2	2.16	0.44
22:DA:2724:U:H5''	25:DD:123:LYS:NZ	2.32	0.44
31:DJ:64:VAL:HG22	31:DJ:68:LYS:HG3	1.99	0.44
46:DY:49:ASP:O	46:DY:52:ARG:HB2	2.16	0.44
1:CA:428:G:OP2	4:CD:9:LYS:HE3	2.18	0.44
22:DA:803:U:C2'	22:DA:804:A:H5'	2.47	0.44
16:CP:71:VAL:O	16:CP:74:LEU:HB2	2.18	0.44
22:BA:1734:G:N3	22:BA:1735:A:C8	2.86	0.44
10:CJ:15:HIS:CA	10:CJ:18:ILE:HG22	2.35	0.44
35:DN:114:GLU:HG3	35:DN:118:ARG:HD3	1.99	0.44
28:BG:44:HIS:O	28:BG:45:ALA:O	2.35	0.44
49:B1:5:ARG:HG3	49:B1:24:LYS:O	2.17	0.44
2:CB:56:LEU:HD22	2:CB:59:ILE:HD11	1.98	0.44
21:AU:10:PRO:C	21:AU:11:PHE:HD2	2.20	0.44
28:DG:94:ARG:CG	28:DG:104:LEU:HA	2.47	0.44
1:AA:70:U:H5	1:AA:94:G:HO2'	1.62	0.44
22:BA:2145:C:P	22:BA:2148:G:C6	3.11	0.44
22:DA:1268:A:H2'	22:DA:1269:A:O4'	2.18	0.44
22:DA:2196:C:O2'	22:DA:2197:U:H5'	2.17	0.44
1:CA:130:A:O2'	1:CA:131:A:O5'	2.32	0.44
22:BA:226:A:N6	22:BA:227:A:C6	2.85	0.44
15:CO:63:ARG:C	15:CO:65:LEU:H	2.21	0.44
35:DN:108:ALA:O	35:DN:110:MET:HG2	2.17	0.44
37:DP:21:PRO:HA	37:DP:46:VAL:HG12	1.98	0.44
5:AE:93:VAL:HG11	5:AE:139:THR:HG22	1.99	0.44
22:BA:2298:A:H2'	22:BA:2299:U:O4'	2.18	0.44
25:BD:110:THR:O	25:BD:201:LEU:HD12	2.18	0.44
32:BK:107:LEU:HD12	32:BK:107:LEU:HA	1.76	0.44
29:DH:90:LEU:CD2	29:DH:91:PHE:H	2.30	0.44
1:CA:158:G:C5	1:CA:164:G:C6	3.06	0.44
1:AA:177:G:H2'	1:AA:178:C:H5'	1.98	0.44
1:CA:1449:C:C2	1:CA:1455:G:N2	2.85	0.44
3:CC:5:HIS:NE2	3:CC:183:TYR:HE2	2.15	0.44
37:BP:19:PHE:HE2	37:BP:83:ILE:HD12	1.82	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
7:CG:116:ALA:C	7:CG:120:ALA:HB3	2.38	0.44
22:BA:659:G:H21	26:BE:30:GLN:HE22	1.66	0.44
1:AA:109:A:C6	1:AA:327:A:C6	3.06	0.44
1:CA:888:G:H3'	1:CA:889:A:C5'	2.47	0.44
30:DI:21:PRO:N	30:DI:22:PRO:HD2	2.33	0.44
35:BN:51:LEU:HD21	35:BN:70:THR:HG22	2.00	0.44
1:CA:1098:C:OP1	2:CB:142:LYS:HE3	2.16	0.44
25:DD:8:LYS:HE2	25:DD:197:THR:H	1.82	0.44
22:DA:1626:A:O2'	22:DA:1627:G:OP2	2.35	0.44
22:DA:547:A:H8	22:DA:548:G:H5'	1.82	0.44
12:CL:37:TYR:O	12:CL:38:THR:CG2	2.66	0.44
22:BA:863:A:H2'	22:BA:864:G:C8	2.53	0.44
1:CA:1057:G:H2'	1:CA:1058:G:O4'	2.17	0.44
22:BA:782:A:C2	24:BC:224:MET:SD	3.11	0.44
26:BE:127:GLU:N	26:BE:127:GLU:CD	2.71	0.44
1:CA:865:A:C2	1:CA:918:A:H4'	2.52	0.44
15:AO:41:HIS:CD2	15:AO:42:PHE:CD2	3.06	0.44
1:AA:753:A:H4'	1:AA:754:C:O2	2.17	0.44
1:AA:757:U:O2'	1:AA:879:C:H1'	2.17	0.44
7:AG:14:ASP:OD1	7:AG:17:PHE:HB2	2.16	0.44
22:DA:1485:U:N3	22:DA:1505:A:C2	2.85	0.44
22:DA:2787:C:O4'	25:DD:63:PRO:HA	2.17	0.44
26:BE:137:LYS:O	26:BE:141:MET:HG3	2.17	0.44
22:DA:252:G:N2	22:DA:253:C:C2	2.85	0.44
22:BA:1837:C:C2	22:BA:1899:A:N6	2.86	0.44
24:BC:39:SER:C	24:BC:41:GLY:H	2.19	0.44
27:DF:69:ALA:O	27:DF:70:ARG:HB2	2.18	0.44
29:BH:134:VAL:O	29:BH:135:HIS:HB2	2.18	0.44
25:DD:166:GLY:O	25:DD:167:ASN:CB	2.65	0.44
22:BA:1970:A:H4'	22:BA:1971:U:O5'	2.17	0.44
22:BA:1234:U:H2'	22:BA:1235:G:O4'	2.17	0.44
3:AC:125:ARG:O	3:AC:126:ARG:CB	2.66	0.44
22:BA:2765:A:H2'	22:BA:2765:A:N3	2.31	0.44
1:AA:1250:A:O3'	9:AI:68:GLY:HA2	2.17	0.44
22:DA:2262:U:H1'	22:DA:2328:A:H1'	2.00	0.44
14:AN:72:PHE:CD1	14:AN:73:LEU:N	2.86	0.44
22:BA:2364:C:H4'	44:BW:55:ASP:OD1	2.17	0.44
22:BA:923:G:H21	44:BW:23:LYS:NZ	2.16	0.44
44:BW:36:ILE:O	44:BW:39:GLN:OE1	2.35	0.44
1:CA:960:U:C5	1:CA:1225:A:H1'	2.53	0.44
14:CN:60:ARG:CZ	14:CN:70:HIS:HB3	2.48	0.44
28:BG:96:ALA:CB	28:BG:103:ASN:HB3	2.39	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:249:C:H4'	22:DA:250:G:O5'	2.18	0.44
22:DA:229:C:O2'	22:DA:230:G:C5'	2.66	0.44
22:DA:1342:A:H4'	22:DA:1343:G:OP2	2.17	0.44
22:DA:1360:G:C2'	22:DA:1361:G:H5'	2.48	0.44
38:BQ:69:ARG:CG	38:BQ:69:ARG:HH21	2.31	0.44
39:BR:1:MET:HA	39:BR:42:ALA:O	2.18	0.44
1:CA:1074:G:C4'	2:CB:102:ASN:HB2	2.47	0.44
2:AB:209:VAL:O	2:AB:211:LEU:N	2.51	0.44
22:DA:1096:A:H3'	22:DA:1097:U:C5	2.52	0.44
22:DA:1091:G:C2	22:DA:1101:U:N3	2.86	0.44
30:DI:90:GLY:O	30:DI:92:PRO:HD3	2.18	0.44
22:DA:2882:A:C5'	35:DN:96:ARG:HD3	2.48	0.44
22:DA:2881:U:O2'	35:DN:96:ARG:HA	2.16	0.44
37:DP:91:VAL:HG11	37:DP:96:LEU:CD1	2.45	0.44
37:DP:91:VAL:HG11	37:DP:96:LEU:CG	2.48	0.44
22:BA:1655:A:H3'	22:BA:1656:C:C6	2.52	0.44
17:AQ:46:HIS:N	17:AQ:72:TRP:O	2.40	0.44
22:DA:478:A:C2	22:DA:480:A:C8	3.06	0.44
22:DA:182:A:O2'	22:DA:183:C:H5'	2.17	0.44
28:DG:91:VAL:O	28:DG:93:TYR:N	2.51	0.44
1:CA:82:G:N7	1:CA:89:U:C4	2.85	0.44
35:DN:72:ASP:O	35:DN:76:VAL:HG13	2.18	0.44
22:DA:59:U:H2'	22:DA:60:G:H5'	1.98	0.44
22:DA:241:A:C5	22:DA:243:U:O4	2.71	0.44
22:DA:2746:U:H1'	28:DG:138:GLN:HE21	1.83	0.44
10:CJ:18:ILE:O	10:CJ:18:ILE:HG12	2.18	0.44
32:DK:38:ILE:C	32:DK:39:ILE:HD13	2.38	0.44
41:BT:13:ALA:O	41:BT:33:LYS:N	2.50	0.44
1:CA:265:G:O2'	17:CQ:67:SER:HA	2.17	0.44
22:BA:1058:U:O2'	30:BI:117:THR:HG23	2.17	0.44
13:CM:18:LEU:H	13:CM:18:LEU:HD12	1.83	0.44
41:BT:40:LYS:CA	41:BT:43:ILE:HG23	2.47	0.44
41:BT:49:LYS:HB2	41:BT:50:LEU:HD12	2.00	0.44
1:AA:1305:G:O2'	1:AA:1306:A:H8	2.00	0.44
2:AB:107:ARG:O	2:AB:110:ILE:HB	2.18	0.44
2:AB:90:PHE:O	2:AB:149:GLY:HA3	2.17	0.44
22:DA:1298:C:H2'	22:DA:1299:G:O4'	2.17	0.44
46:BY:44:LYS:O	46:BY:47:ARG:HB3	2.18	0.44
22:DA:1026:G:O2'	22:DA:1027:A:H5'	2.17	0.44
33:DL:110:VAL:HG23	33:DL:126:ARG:O	2.18	0.44
1:CA:198:G:H1'	1:CA:199:A:H5'	1.99	0.44
22:DA:1232:G:C4	22:DA:1233:C:C5	3.05	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:AM:2:ARG:O	13:AM:7:ASN:O	2.36	0.44
4:CD:197:HIS:O	4:CD:201:GLU:HG3	2.17	0.44
1:CA:184:G:C6	1:CA:185:U:O4	2.71	0.44
36:BO:51:ALA:O	36:BO:74:VAL:HG13	2.17	0.44
34:BM:2:LEU:O	34:BM:3:GLN:HB3	2.17	0.44
22:BA:2822:G:OP2	25:BD:115:GLY:O	2.35	0.44
1:AA:144:G:N2	1:AA:179:A:H1'	2.33	0.44
27:DF:41:GLU:O	27:DF:43:ILE:N	2.51	0.44
22:BA:1866:A:C2	22:BA:1876:A:C5	3.06	0.44
9:AI:26:LYS:HB3	9:AI:26:LYS:HE2	1.86	0.44
12:CL:80:LEU:HD23	12:CL:97:VAL:CG2	2.43	0.44
9:AI:21:LYS:HE3	9:AI:21:LYS:HB3	1.89	0.44
10:CJ:25:ILE:O	10:CJ:25:ILE:CG2	2.64	0.44
1:AA:855:U:H2'	1:AA:856:C:C6	2.53	0.44
16:AP:52:LEU:HD12	16:AP:52:LEU:N	2.32	0.44
29:BH:27:ARG:NH1	45:BX:59:ASP:O	2.51	0.44
36:DO:17:LYS:HE2	36:DO:21:LEU:HD11	1.99	0.44
22:DA:1867:G:C2	22:DA:1868:C:C2	3.06	0.44
35:BN:93:GLY:C	35:BN:95:THR:H	2.21	0.44
9:AI:40:ARG:N	9:AI:44:ARG:HA	2.33	0.44
22:DA:2237:G:H5''	22:DA:2238:G:OP1	2.18	0.44
32:BK:51:LYS:HE3	32:BK:52:VAL:HG12	1.99	0.44
14:CN:68:ARG:HG3	14:CN:69:PRO:CD	2.47	0.44
46:BY:39:GLN:HB2	46:BY:41:HIS:HD2	1.80	0.44
9:AI:18:VAL:HG22	9:AI:64:ILE:CG2	2.48	0.44
8:CH:46:GLU:N	8:CH:63:LYS:HG3	2.32	0.44
8:CH:82:LEU:HG	12:CL:3:VAL:HG11	2.00	0.44
1:AA:592:G:C6	1:AA:648:A:C6	3.06	0.44
10:AJ:52:LEU:HD23	10:AJ:62:ARG:CG	2.48	0.44
22:DA:2869:G:H2'	22:DA:2870:C:O4'	2.17	0.44
26:BE:8:ALA:O	26:BE:9:GLN:C	2.56	0.44
22:BA:848:C:H2'	22:BA:849:A:H8	1.81	0.44
43:DV:44:HIS:CD2	43:DV:85:LYS:HB2	2.53	0.44
24:DC:120:ASP:CG	24:DC:121:ALA:N	2.71	0.44
32:DK:25:LEU:HD23	32:DK:25:LEU:H	1.82	0.44
30:DI:132:ALA:CA	30:DI:137:LEU:HD12	2.48	0.44
23:BB:15:A:O2'	23:BB:16:G:H5'	2.17	0.44
22:DA:817:C:O2'	22:DA:839:U:H5''	2.17	0.44
2:CB:128:LEU:HB3	2:CB:131:LYS:HB3	1.99	0.44
22:BA:827:U:H2'	22:BA:2068:U:C2	2.53	0.44
22:DA:773:U:H4'	24:DC:46:GLY:HA3	1.99	0.44
22:DA:965:C:H5''	56:DA:3346:HOH:O	2.16	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:BA:1193:G:O2'	22:BA:1194:A:H5'	2.17	0.44
22:BA:2315:G:O2'	22:BA:2316:G:H5'	2.17	0.44
22:BA:1122:G:N3	22:BA:1122:G:H2'	2.31	0.44
35:BN:30:ARG:HE	35:BN:30:ARG:HB2	1.57	0.44
1:CA:762:U:O5'	1:CA:762:U:H6	1.99	0.44
22:BA:2722:G:H4'	35:BN:4:ARG:HB2	2.00	0.44
7:AG:6:ILE:HB	7:AG:7:GLY:H	1.57	0.44
45:BX:38:TRP:HE3	45:BX:45:PHE:CE2	2.35	0.44
22:DA:1565:C:H3'	24:DC:17:LYS:CE	2.21	0.44
22:BA:2352:A:C2	22:BA:2366:A:C2	3.05	0.44
44:BW:22:VAL:O	44:BW:23:LYS:O	2.35	0.44
44:BW:22:VAL:CG1	44:BW:25:PHE:CE2	3.01	0.44
1:CA:932:C:O2	1:CA:932:C:H2'	2.18	0.44
1:CA:978:A:C5	1:CA:1319:A:C2	3.06	0.44
22:BA:2780:G:OP2	31:BJ:120:ARG:HD3	2.18	0.44
22:DA:2298:A:C6	22:DA:2321:U:C4	3.05	0.44
22:DA:2385:C:O2'	22:DA:2386:A:H8	2.01	0.44
51:D3:28:LEU:O	51:D3:29:ARG:CB	2.66	0.44
22:DA:1400:U:C2'	22:DA:1401:G:O4'	2.64	0.44
22:DA:2209:G:C6	22:DA:2216:G:N1	2.86	0.44
22:DA:333:G:O2'	22:DA:334:C:O5'	2.34	0.44
22:DA:1080:A:O2'	30:DI:126:ARG:O	2.35	0.44
17:AQ:59:GLU:HG2	17:AQ:60:ILE:H	1.83	0.44
22:DA:477:A:H2'	22:DA:478:A:C8	2.52	0.44
22:DA:2303:G:H2'	22:DA:2304:G:H8	1.83	0.44
31:DJ:27:ARG:O	31:DJ:30:THR:HG22	2.17	0.44
35:DN:84:GLY:O	35:DN:88:ALA:HB2	2.18	0.44
22:DA:352:A:N3	22:DA:353:C:H1'	2.31	0.44
22:DA:2665:A:C2	22:DA:2666:C:N3	2.85	0.44
22:DA:1935:G:N2	22:DA:1964:G:OP2	2.51	0.44
22:DA:607:U:H5	22:DA:619:G:C6	2.36	0.44
22:DA:614:A:H4'	22:DA:616:A:N7	2.33	0.44
22:DA:671:C:H1'	22:DA:672:C:H5'	1.99	0.44
24:BC:106:PRO:HB3	24:BC:141:HIS:NE2	2.32	0.44
22:DA:1204:A:O4'	22:DA:1206:G:N7	2.51	0.44
13:CM:11:HIS:CE1	13:CM:43:LYS:HD2	2.52	0.44
28:DG:94:ARG:HG2	28:DG:104:LEU:HA	1.99	0.44
2:AB:103:TRP:C	2:AB:105:THR:N	2.69	0.44
1:AA:1054:C:O2'	1:AA:1055:A:OP2	2.29	0.44
22:BA:2887:A:H3'	22:BA:2888:C:C6	2.52	0.44
22:DA:1714:U:C3'	22:DA:1715:G:C5'	2.90	0.44
32:DK:104:THR:O	32:DK:107:LEU:HD22	2.18	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:AL:62:VAL:HG21	12:AL:94:TYR:HE2	1.78	0.44
1:CA:155:A:C4	1:CA:167:A:C2	3.06	0.44
1:AA:1410:A:H2'	1:AA:1411:C:C6	2.53	0.44
22:BA:481:G:O2'	22:BA:507:A:N1	2.45	0.44
22:DA:633:A:H8	22:DA:633:A:O5'	1.99	0.44
27:DF:103:ILE:N	27:DF:103:ILE:HD12	2.33	0.44
41:DT:5:GLU:HA	41:DT:8:LEU:HD12	2.00	0.44
22:DA:1285:A:C6	22:DA:1329:U:C5	3.05	0.44
22:BA:1140:C:OP1	31:BJ:25:LEU:O	2.36	0.44
1:CA:567:G:N2	56:CA:1819:HOH:O	2.36	0.44
28:DG:44:HIS:O	28:DG:45:ALA:HB3	2.17	0.44
1:CA:812:G:H2'	1:CA:812:G:N3	2.33	0.44
22:BA:1906:G:C6	22:BA:1929:G:N2	2.86	0.44
30:DI:113:ALA:HB2	30:DI:124:MET:HB3	2.00	0.44
38:DQ:30:VAL:HG12	38:DQ:33:VAL:H	1.83	0.44
5:CE:148:SER:O	5:CE:151:MET:HB3	2.18	0.44
7:CG:77:ARG:HA	7:CG:77:ARG:HD3	1.59	0.44
12:AL:2:THR:O	12:AL:5:GLN:HB2	2.18	0.44
1:AA:1246:A:H2'	1:AA:1247:U:O4'	2.18	0.44
11:AK:109:ILE:HB	21:AU:5:VAL:HG22	1.99	0.44
22:DA:425:G:C4	22:DA:426:C:C5	3.06	0.44
22:BA:568:U:P	33:BL:36:LYS:HE3	2.58	0.44
37:BP:85:VAL:HG13	37:BP:86:LYS:N	2.32	0.44
11:CK:19:VAL:HG12	11:CK:34:THR:HG22	1.99	0.44
22:BA:1786:A:C6	22:BA:1938:A:C2	3.06	0.44
1:CA:1270:G:C4	1:CA:1271:A:C8	3.06	0.44
1:AA:417:G:H2'	1:AA:418:C:C6	2.53	0.44
30:BI:59:THR:HG22	30:BI:61:TYR:CE2	2.52	0.44
22:BA:630:G:N2	22:BA:633:A:OP2	2.46	0.44
22:BA:108:G:O2'	22:BA:109:C:H5'	2.18	0.44
29:DH:53:GLU:C	29:DH:55:GLU:H	2.20	0.44
22:BA:1486:U:H2'	22:BA:1487:U:H6	1.82	0.44
22:DA:2151:U:H2'	22:DA:2152:G:H8	1.83	0.44
22:DA:815:C:OP2	39:DR:85:LYS:HE2	2.18	0.44
22:DA:2253:G:C6	22:DA:2254:C:C4	3.06	0.44
1:CA:1228:C:HO2'	1:CA:1229:A:P	2.40	0.44
22:DA:2674:G:H2'	22:DA:2675:A:C8	2.52	0.44
6:CF:29:ILE:HG22	6:CF:34:GLY:O	2.18	0.44
22:DA:92:U:C6	22:DA:93:G:C8	3.05	0.44
22:DA:2832:U:H5''	22:DA:2834:G:H5'	2.00	0.44
22:BA:2026:U:H2'	22:BA:2027:G:O4'	2.18	0.44
22:BA:43:G:C2	22:BA:437:U:C2	3.05	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:CA:866:C:C4	1:CA:867:G:H1'	2.53	0.44
24:DC:176:ARG:C	24:DC:178:GLY:H	2.21	0.44
1:AA:799:G:H2'	1:AA:800:G:O4'	2.18	0.44
12:AL:120:ARG:C	12:AL:122:LYS:H	2.21	0.44
1:CA:855:U:H2'	1:CA:856:C:C6	2.52	0.44
1:CA:688:G:C4	1:CA:700:G:C2	3.06	0.44
22:BA:2072:C:H6	22:BA:2072:C:H5''	1.83	0.44
8:AH:46:GLU:O	8:AH:47:ASP:HB3	2.18	0.44
30:DI:63:ASP:O	30:DI:64:ARG:HB2	2.18	0.44
11:AK:15:VAL:HG13	11:AK:78:ILE:CG2	2.48	0.44
21:CU:16:ARG:NE	21:CU:16:ARG:HA	2.25	0.44
28:BG:83:THR:C	28:BG:84:LYS:CD	2.85	0.44
44:DW:35:ILE:O	44:DW:36:ILE:O	2.36	0.44
10:AJ:53:ILE:O	10:AJ:53:ILE:HG12	2.16	0.44
24:DC:149:LYS:CE	24:DC:152:GLN:NE2	2.81	0.44
5:AE:121:ASN:CG	5:AE:122:VAL:N	2.71	0.44
1:AA:841:C:N3	1:AA:843:U:H5'	2.32	0.44
22:DA:1071:G:H8	22:DA:1071:G:OP1	2.00	0.44
52:B4:14:CYS:HA	52:B4:26:ILE:O	2.17	0.44
1:AA:373:A:O2'	1:AA:374:A:C5'	2.62	0.44
50:D2:43:THR:O	50:D2:44:VAL:C	2.56	0.44
22:DA:1661:G:C5	22:DA:1662:U:C5	3.06	0.44
26:DE:165:HIS:C	26:DE:167:VAL:H	2.22	0.44
22:DA:2447:G:N7	22:DA:2500:U:H2'	2.33	0.44
26:DE:58:LYS:HD3	26:DE:58:LYS:N	2.33	0.44
22:DA:616:A:H4'	26:DE:101:TYR:OH	2.17	0.44
22:BA:1394:U:C2'	22:BA:1395:A:O5'	2.64	0.44
1:AA:66:A:H2'	1:AA:67:C:H5'	1.99	0.44
22:DA:1204:A:N1	22:DA:1241:A:N1	2.65	0.44
9:CI:118:ARG:NH2	9:CI:122:ARG:NE	2.65	0.44
28:BG:36:LEU:N	28:BG:36:LEU:HD22	2.32	0.44
7:AG:35:LYS:O	7:AG:39:GLU:HG2	2.18	0.44
1:AA:466:A:H5''	1:AA:466:A:H8	1.83	0.44
22:DA:2021:C:O2	22:DA:2021:C:H2'	2.18	0.44
22:DA:533:G:C5	22:DA:534:U:C4	3.06	0.44
41:BT:65:GLY:N	41:BT:79:ASP:OD1	2.49	0.44
49:D1:5:ARG:HH21	49:D1:23:THR:HB	1.83	0.44
25:DD:173:GLN:HA	25:DD:173:GLN:NE2	2.33	0.44
42:BU:44:HIS:O	42:BU:45:GLN:C	2.57	0.44
22:DA:633:A:C5	22:DA:634:C:H1'	2.52	0.44
1:AA:36:C:H2'	1:AA:37:U:O4'	2.18	0.44
9:AI:110:VAL:O	9:AI:110:VAL:HG23	2.16	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
33:DL:18:ARG:HA	33:DL:18:ARG:NE	2.33	0.44
29:DH:72:ILE:CD1	29:DH:140:ALA:HA	2.47	0.44
22:DA:2142:A:N3	22:DA:2144:G:OP1	2.51	0.44
1:CA:1360:A:C2	1:CA:1361:G:H1'	2.52	0.44
22:BA:2199:A:H5'	22:BA:2200:C:C5	2.52	0.44
22:DA:983:A:C6	22:DA:984:A:C2	3.05	0.44
20:AT:11:ILE:HG12	20:AT:12:GLN:N	2.33	0.44
20:AT:8:LYS:HA	20:AT:11:ILE:HG23	2.00	0.44
35:BN:32:GLU:CA	35:BN:115:LEU:HD12	2.44	0.44
1:AA:222:C:O2	1:AA:223:A:C8	2.71	0.44
9:CI:112:ARG:HH22	10:CJ:64:GLN:HE21	1.66	0.44
1:CA:1068:G:H2'	1:CA:1069:C:H5'	1.99	0.44
34:DM:12:MET:HG3	34:DM:72:PRO:HG2	2.00	0.44
22:DA:1735:A:C6	22:DA:1736:U:C4	3.06	0.44
9:AI:57:VAL:C	9:AI:58:GLU:HG2	2.37	0.44
43:DV:47:VAL:O	43:DV:47:VAL:HG12	2.17	0.44
22:BA:637:A:H4'	22:BA:638:G:O5'	2.17	0.44
22:DA:90:U:C4	22:DA:91:A:C5	3.06	0.44
46:DY:4:LYS:HB2	46:DY:4:LYS:HZ2	1.79	0.44
1:AA:1348:U:H4'	9:AI:121:ARG:HG2	1.99	0.44
9:AI:42:THR:O	9:AI:43:ALA:HB2	2.17	0.44
1:AA:1034:G:C6	1:AA:1035:A:C6	3.05	0.44
33:DL:62:PRO:HG2	51:D3:24:LYS:HB3	1.98	0.44
22:DA:2:G:H2'	22:DA:3:U:O4'	2.18	0.44
22:DA:1411:U:H2'	22:DA:1412:U:O4'	2.18	0.44
22:DA:591:U:C2	22:DA:592:A:C8	3.06	0.44
8:CH:41:GLU:C	8:CH:43:GLY:N	2.70	0.44
36:BO:2:ASP:HB3	36:BO:5:SER:OG	2.17	0.44
1:AA:1272:G:C6	1:AA:1273:C:C4	3.04	0.44
1:AA:832:G:C6	1:AA:833:G:N7	2.86	0.44
13:AM:14:ALA:HB1	13:AM:33:LEU:HD21	2.00	0.44
1:CA:1479:C:H2'	1:CA:1480:A:H8	1.83	0.44
6:AF:14:GLN:OE1	6:AF:17:GLN:HB2	2.18	0.44
22:BA:2211:A:HO2'	22:BA:2212:A:P	2.41	0.44
22:BA:670:A:H4'	22:BA:671:C:O5'	2.18	0.44
22:DA:1833:C:C2	22:DA:1834:U:C6	3.06	0.44
3:CC:119:ILE:HG22	3:CC:123:LEU:HD12	2.00	0.44
10:CJ:8:ILE:HG13	10:CJ:8:ILE:O	2.18	0.44
1:AA:153:C:O2'	1:AA:154:U:H5'	2.18	0.44
7:AG:7:GLY:O	7:AG:8:GLN:HB3	2.18	0.44
25:DD:1:MET:HB3	25:DD:205:PRO:HG3	2.00	0.44
22:BA:2802:G:H2'	22:BA:2803:G:O4'	2.18	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
26:DE:112:LEU:HD12	26:DE:118:LEU:HD13	2.00	0.44
23:BB:37:C:C5	23:BB:38:C:C4	3.06	0.44
22:DA:993:G:O2'	22:DA:994:C:H5'	2.18	0.44
37:BP:28:LYS:HB2	37:BP:82:SER:HB3	1.99	0.44
50:B2:24:THR:O	50:B2:25:LYS:C	2.55	0.44
28:BG:27:GLY:O	28:BG:28:LYS:C	2.56	0.44
1:CA:1471:U:O2'	1:CA:1472:U:H5'	2.17	0.44
22:DA:1463:C:H2'	22:DA:1464:G:C8	2.53	0.44
4:CD:38:GLY:O	4:CD:40:HIS:N	2.51	0.44
45:BX:39:VAL:HG23	45:BX:40:GLU:N	2.33	0.44
27:BF:35:LEU:CD1	27:BF:88:VAL:HB	2.48	0.44
22:BA:2366:A:H2'	22:BA:2367:G:O4'	2.18	0.44
15:AO:63:ARG:CD	15:AO:87:ARG:HH12	2.29	0.44
22:DA:2349:G:OP1	51:D3:44:ARG:NH2	2.51	0.44
20:AT:33:LYS:HD3	20:AT:33:LYS:HA	1.64	0.44
1:CA:703:G:H4'	1:CA:704:A:H5'	2.00	0.44
22:DA:409:G:O2'	22:DA:410:G:H5'	2.18	0.44
24:DC:103:ILE:HD12	24:DC:104:LEU:N	2.28	0.44
2:AB:95:TRP:CD1	2:AB:171:ALA:HB2	2.53	0.44
2:AB:95:TRP:CZ2	2:AB:99:MET:HG2	2.53	0.44
22:DA:1374:G:H2'	22:DA:1375:U:O4'	2.18	0.44
22:DA:83:A:H2	22:DA:103:A:H62	1.65	0.44
22:DA:308:G:N1	22:DA:309:A:C2	2.86	0.44
5:AE:104:ILE:HG13	5:AE:114:LEU:HD23	2.00	0.44
1:AA:843:U:O5'	1:AA:844:G:OP2	2.36	0.44
22:DA:1071:G:O4'	22:DA:1088:A:O2'	2.35	0.44
22:BA:244:A:C2	22:BA:255:A:C4	3.06	0.44
46:DY:44:LYS:HZ1	46:DY:48:ARG:NE	2.16	0.44
22:DA:1935:G:H1'	22:DA:1964:G:H21	1.78	0.44
8:CH:17:GLN:NE2	8:CH:71:VAL:HG23	2.33	0.44
22:DA:2744:G:C6	22:DA:2761:A:N6	2.86	0.44
32:DK:60:ALA:CB	32:DK:86:LEU:HA	2.48	0.44
22:BA:1340:U:C4'	22:BA:1341:G:OP2	2.54	0.44
46:DY:28:LEU:CD2	46:DY:42:LEU:HD13	2.48	0.44
9:AI:129:ARG:HA	9:AI:129:ARG:HH11	1.83	0.44
22:BA:2134:A:C6	22:BA:2135:A:C6	3.05	0.44
1:CA:451:A:O4'	1:CA:452:A:C8	2.71	0.44
22:DA:915:C:O2'	22:DA:916:G:H5'	2.17	0.44
1:AA:100:G:C6	1:AA:101:A:C6	3.06	0.44
22:BA:2148:G:HO2'	22:BA:2149:U:P	2.41	0.44
27:DF:45:ASP:O	27:DF:47:LYS:N	2.50	0.44
6:CF:64:VAL:HG23	6:CF:65:GLU:N	2.32	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:BA:511:U:H5	22:BA:512:G:C5	2.36	0.44
9:CI:44:ARG:HH21	9:CI:48:ARG:HH12	1.62	0.44
22:DA:2004:G:C5	22:DA:2005:A:C8	3.06	0.44
31:BJ:64:VAL:CG1	31:BJ:65:THR:N	2.81	0.44
1:CA:1331:G:H2'	1:CA:1332:A:OP2	2.18	0.44
22:DA:2847:U:H2'	22:DA:2848:G:C5'	2.44	0.44
1:CA:16:A:O4'	5:CE:21:SER:HB3	2.18	0.44
1:AA:212:G:C2'	1:AA:213:G:H8	2.28	0.44
22:DA:1368:G:O5'	22:DA:1368:G:H8	2.00	0.44
22:BA:449:A:H4'	38:BQ:2:ARG:NH1	2.33	0.44
1:AA:858:G:O6	1:AA:869:G:C8	2.71	0.44
22:DA:1931:U:OP2	22:DA:1968:G:N2	2.43	0.44
1:CA:764:C:C4	1:CA:812:G:O6	2.71	0.44
52:D4:16:ILE:HA	52:D4:24:ARG:O	2.18	0.44
22:BA:1090:A:C6	22:BA:1091:G:N7	2.86	0.44
27:BF:27:VAL:O	27:BF:27:VAL:HG13	2.18	0.44
1:CA:150:U:O2'	1:CA:151:A:H5'	2.17	0.44
26:BE:131:THR:CG2	26:BE:160:ALA:HA	2.48	0.44
2:CB:115:ASP:O	2:CB:119:GLN:CB	2.66	0.44
22:BA:1317:G:C2	22:BA:1336:A:C2	3.06	0.44
22:BA:666:A:C4	22:BA:667:U:C5	3.06	0.44
1:AA:663:A:H5'	1:AA:836:G:OP1	2.17	0.44
22:DA:64:A:P	41:DT:77:ARG:HG2	2.58	0.44
16:CP:44:SER:O	16:CP:46:LYS:HG3	2.18	0.44
28:DG:152:ARG:HD2	28:DG:153:PRO:HD2	2.00	0.44
42:DU:27:VAL:O	42:DU:28:LEU:HD23	2.17	0.44
28:BG:166:GLU:OE2	28:BG:166:GLU:C	2.57	0.44
22:DA:863:A:C2	22:DA:864:G:C4	3.05	0.44
1:AA:1526:G:OP2	21:AU:38:GLU:HB2	2.18	0.44
37:BP:37:LYS:CD	37:BP:37:LYS:N	2.81	0.44
22:BA:756:A:H2'	22:BA:757:G:O4'	2.18	0.44
27:DF:71:LYS:O	27:DF:72:SER:HB3	2.17	0.44
1:CA:174:A:C2'	1:CA:175:C:H5'	2.48	0.44
1:CA:582:C:C4	1:CA:760:G:C6	3.05	0.44
22:BA:2665:A:C2	22:BA:2666:C:C2	3.06	0.44
1:AA:1517:G:C6	1:AA:1518:A:C6	3.05	0.44
22:DA:1670:C:N4	22:DA:1671:U:N3	2.66	0.44
22:DA:2834:G:H1'	22:DA:2879:A:N6	2.32	0.44
9:AI:34:LEU:HD11	9:AI:47:VAL:HG21	2.00	0.44
16:CP:32:PHE:C	16:CP:32:PHE:CD1	2.91	0.44
1:AA:557:G:C6	1:AA:558:G:N1	2.86	0.44
22:BA:1770:G:C4'	56:BA:3729:HOH:O	2.66	0.44

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
26:DE:151:GLY:HA3	26:DE:191:ASP:HB3	2.00	0.44
12:AL:82:ARG:HG2	12:AL:82:ARG:NH1	2.33	0.44
25:DD:60:VAL:O	25:DD:60:VAL:HG13	2.18	0.44
19:AS:64:GLU:N	19:AS:64:GLU:CD	2.70	0.44
27:BF:169:LEU:HD12	27:BF:169:LEU:HA	1.81	0.44
2:AB:16:GLY:HA2	2:AB:202:ASN:CB	2.47	0.43
1:CA:981:U:C5	1:CA:982:U:C2	3.06	0.43
22:DA:858:G:C5	22:DA:2268:A:N1	2.86	0.43
22:DA:2297:A:C2	22:DA:2298:A:N7	2.86	0.43
44:DW:25:PHE:CD1	44:DW:25:PHE:C	2.92	0.43
22:BA:1178:C:H2'	22:BA:1179:G:C8	2.53	0.43
22:DA:826:U:C5	22:DA:828:U:H6	2.36	0.43
22:DA:311:A:H1'	22:DA:332:A:N9	2.33	0.43
42:DU:35:VAL:CG1	42:DU:36:GLU:H	2.20	0.43
24:DC:145:MET:HE2	24:DC:181:ARG:HH22	1.82	0.43
2:AB:53:LEU:CA	2:AB:56:LEU:HB3	2.48	0.43
22:DA:1069:A:C2	22:DA:1072:C:O2'	2.66	0.43
23:DB:42:C:O2	27:DF:89:THR:N	2.50	0.43
26:BE:190:ALA:C	26:BE:192:ALA:N	2.70	0.43
31:DJ:30:THR:CG2	31:DJ:31:GLU:N	2.81	0.43
24:DC:203:VAL:O	24:DC:205:GLY:N	2.51	0.43
22:DA:1779:U:C5	22:DA:1784:A:N7	2.86	0.43
22:DA:1965:C:C5'	22:DA:1966:A:H5''	2.41	0.43
1:AA:407:U:H2'	1:AA:408:A:C8	2.53	0.43
6:AF:9:MET:CE	6:AF:59:TYR:CE2	3.01	0.43
22:DA:61:C:C2	22:DA:94:A:C2	3.06	0.43
22:BA:1604:C:H2'	22:BA:1605:C:H6	1.83	0.43
22:BA:2150:C:C5	22:BA:2151:U:O4	2.71	0.43
22:DA:1304:A:C6	22:DA:1305:C:C4	3.06	0.43
1:AA:1160:G:C6	1:AA:1181:G:O6	2.71	0.43
1:AA:1162:C:H2'	1:AA:1163:A:C8	2.53	0.43
22:DA:2201:G:C5	22:DA:2223:G:C2	3.06	0.43
1:AA:464:U:C2	1:AA:466:A:C5'	2.94	0.43
22:BA:1745:A:C2	22:BA:1746:A:C8	3.06	0.43
5:CE:39:GLY:HA2	5:CE:45:VAL:HA	2.00	0.43
22:BA:480:A:OP2	42:BU:43:LYS:HD2	2.18	0.43
1:AA:501:C:H2'	1:AA:502:A:C8	2.53	0.43
1:CA:1303:C:N4	1:CA:1304:G:C2	2.86	0.43
22:BA:1821:A:H2'	22:BA:1822:C:C6	2.53	0.43
22:BA:2794:C:H2'	22:BA:2795:C:C6	2.53	0.43
1:CA:158:G:C4	1:CA:164:G:C2	3.05	0.43
4:AD:57:LYS:HZ2	4:AD:61:ARG:HD3	1.83	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
15:AO:73:ASP:CG	15:AO:76:ARG:HG3	2.38	0.43
22:BA:356:G:C6	22:BA:357:C:C4	3.06	0.43
22:BA:358:U:H2'	22:BA:359:G:O4'	2.18	0.43
46:BY:2:LYS:HE3	46:BY:52:ARG:NH2	2.33	0.43
9:AI:27:ILE:HG13	9:AI:62:LEU:CD2	2.46	0.43
28:DG:72:ASN:OD1	28:DG:73:SER:N	2.51	0.43
22:DA:1734:G:C2'	22:DA:1735:A:C8	2.99	0.43
1:CA:148:G:N1	1:CA:149:A:C5	2.86	0.43
5:AE:137:ARG:O	5:AE:141:ASP:HB2	2.18	0.43
51:B3:44:ARG:N	51:B3:45:PRO:CD	2.79	0.43
12:AL:6:LEU:HD23	17:AQ:33:TYR:CE2	2.53	0.43
41:DT:7:LEU:O	41:DT:10:VAL:HG13	2.18	0.43
22:DA:2688:G:H1'	22:DA:2721:A:H61	1.83	0.43
1:CA:458:U:OP2	1:CA:458:U:H6	2.01	0.43
47:BZ:23:LEU:HD21	47:BZ:53:MET:HE1	2.00	0.43
26:BE:48:THR:O	26:BE:52:VAL:HG23	2.17	0.43
22:DA:1907:G:C2	22:DA:1924:C:O2	2.71	0.43
11:CK:82:GLU:N	11:CK:82:GLU:OE2	2.51	0.43
22:DA:709:U:H2'	22:DA:710:U:H6	1.82	0.43
22:DA:86:G:O2'	22:DA:87:U:H6	2.01	0.43
22:DA:1901:A:OP2	24:DC:252:LYS:HE3	2.18	0.43
52:B4:23:ILE:HB	52:B4:38:GLY:HA3	2.00	0.43
1:CA:1343:G:H2'	1:CA:1344:C:C6	2.52	0.43
1:AA:1190:G:P	3:AC:4:VAL:HG12	2.58	0.43
1:AA:613:C:C2	1:AA:614:C:C5	3.06	0.43
1:AA:1527:U:OP2	21:AU:38:GLU:HG2	2.17	0.43
1:CA:1509:C:H2'	1:CA:1510:C:H6	1.83	0.43
23:BB:2:G:C2	23:BB:119:A:N3	2.86	0.43
22:BA:2373:G:H2'	22:BA:2374:C:H6	1.82	0.43
22:DA:2461:A:C2	22:DA:2490:G:N2	2.86	0.43
3:AC:190:THR:O	3:AC:192:TYR:N	2.51	0.43
16:CP:48:GLU:CD	16:CP:51:ARG:HB2	2.37	0.43
22:DA:1753:G:N2	22:DA:1756:G:OP2	2.49	0.43
8:CH:30:LYS:O	8:CH:33:VAL:HB	2.18	0.43
22:BA:1404:C:O2'	22:BA:1405:U:H5'	2.18	0.43
1:CA:525:C:N4	1:CA:526:C:N4	2.66	0.43
34:BM:136:MET:HE1	43:BV:57:TYR:HD2	1.83	0.43
22:DA:1242:U:H2'	22:DA:1243:C:C6	2.53	0.43
22:DA:1751:U:H2'	22:DA:1752:C:C6	2.53	0.43
22:BA:2861:U:C2	22:BA:2862:G:C8	3.06	0.43
29:BH:86:ASP:O	29:BH:87:GLU:C	2.56	0.43
1:AA:593:U:O2'	1:AA:594:U:H5'	2.18	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
47:DZ:5:LYS:HG2	47:DZ:36:GLU:HB2	2.00	0.43
27:DF:48:LEU:HD23	27:DF:48:LEU:H	1.82	0.43
22:DA:2099:U:H2'	22:DA:2099:U:O2	2.18	0.43
12:CL:20:VAL:O	12:CL:20:VAL:HG23	2.18	0.43
43:DV:32:GLY:O	43:DV:33:GLY:C	2.56	0.43
29:BH:21:VAL:HG22	29:BH:22:LYS:N	2.33	0.43
22:BA:674:G:O2'	26:BE:69:ARG:HD2	2.18	0.43
22:BA:1062:G:C8	22:BA:1088:A:C8	3.06	0.43
22:BA:2846:G:P	37:BP:51:ASN:HB2	2.57	0.43
39:DR:49:ILE:C	39:DR:51:VAL:N	2.71	0.43
5:CE:100:GLU:O	5:CE:102:THR:HG23	2.18	0.43
2:AB:186:VAL:CG2	2:AB:186:VAL:O	2.65	0.43
1:CA:1316:G:N2	1:CA:1318:A:C8	2.86	0.43
22:BA:528:A:C2	22:BA:2043:C:C4'	2.97	0.43
22:DA:229:C:O2'	22:DA:230:G:C4'	2.66	0.43
22:DA:1388:G:N3	22:DA:1389:G:C8	2.86	0.43
22:DA:301:G:N1	22:DA:302:C:N4	2.65	0.43
22:DA:338:G:H2'	22:DA:339:U:H5'	2.00	0.43
22:DA:2887:A:C4	48:D0:39:ARG:NH1	2.85	0.43
22:DA:2314:A:N1	22:DA:2315:G:C5	2.86	0.43
22:DA:481:G:OP2	42:DU:43:LYS:HA	2.18	0.43
42:DU:43:LYS:HG2	42:DU:45:GLN:HG2	2.00	0.43
3:CC:11:LEU:HD13	3:CC:17:TRP:NE1	2.32	0.43
24:DC:13:ARG:HG2	24:DC:14:HIS:CD2	2.52	0.43
22:DA:351:C:N4	22:DA:352:A:N6	2.66	0.43
21:AU:9:GLU:CB	21:AU:10:PRO:HD3	2.47	0.43
1:AA:71:A:C5	1:AA:100:G:C5	3.05	0.43
1:CA:598:U:H2'	1:CA:599:C:C6	2.52	0.43
1:AA:1160:G:C2	1:AA:1161:C:C5	3.06	0.43
23:BB:90:C:H6	23:BB:90:C:C5'	2.23	0.43
22:BA:580:U:O2'	22:BA:581:C:H5'	2.18	0.43
29:DH:68:ARG:CD	29:DH:71:LYS:HB2	2.43	0.43
24:DC:221:GLY:O	24:DC:224:MET:HG2	2.18	0.43
22:DA:2519:U:C2	22:DA:2542:A:C6	3.06	0.43
22:DA:2765:A:C3'	22:DA:2766:A:H5'	2.46	0.43
22:DA:1286:A:C8	22:DA:1289:C:N4	2.85	0.43
33:BL:53:GLY:O	33:BL:54:GLN:O	2.36	0.43
27:BF:39:VAL:HG13	27:BF:40:GLY:N	2.33	0.43
1:CA:1332:A:C6	1:CA:1333:A:C4	3.05	0.43
1:CA:1202:U:H2'	1:CA:1203:C:H5'	1.99	0.43
37:DP:62:LYS:HD3	37:DP:64:SER:HB2	2.00	0.43
13:CM:82:LEU:HB2	19:CS:73:PHE:CE2	2.53	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:330:C:C5'	1:AA:330:C:H6	2.30	0.43
1:AA:341:C:H2'	1:AA:342:C:H6	1.82	0.43
32:BK:99:ILE:CG2	32:BK:100:PHE:N	2.79	0.43
26:BE:108:ILE:CD1	26:BE:180:LEU:HD13	2.47	0.43
3:CC:83:VAL:O	3:CC:87:ARG:N	2.51	0.43
1:CA:1449:C:H2'	1:CA:1450:U:C5'	2.47	0.43
1:CA:1066:C:C2'	1:CA:1067:A:C8	3.01	0.43
22:BA:1190:G:H5''	33:BL:32:GLY:HA2	2.00	0.43
22:BA:2849:U:N3	22:BA:2867:G:O4'	2.51	0.43
33:DL:101:ILE:HD13	33:DL:101:ILE:HA	1.81	0.43
33:BL:113:ALA:O	33:BL:114:GLY:O	2.35	0.43
6:AF:18:VAL:HB	6:AF:19:PRO:CD	2.48	0.43
37:DP:92:ARG:CG	37:DP:92:ARG:O	2.66	0.43
1:AA:751:U:H4'	15:AO:23:SER:HA	1.99	0.43
22:BA:1853:A:C5	22:BA:1889:A:C6	3.06	0.43
22:BA:871:U:H5''	34:BM:68:PHE:CZ	2.53	0.43
7:AG:20:GLU:O	7:AG:24:LYS:HG3	2.18	0.43
37:BP:103:THR:O	37:BP:104:GLY:O	2.35	0.43
30:DI:35:MET:C	30:DI:37:PHE:N	2.70	0.43
1:CA:511:C:O2'	1:CA:512:U:H5''	2.18	0.43
13:AM:113:LYS:H	13:AM:114:PRO:HD2	1.83	0.43
29:BH:52:ALA:C	29:BH:54:LEU:H	2.20	0.43
34:BM:46:ILE:HD12	34:BM:47:GLU:N	2.33	0.43
1:CA:769:G:O2'	1:CA:770:C:H5'	2.18	0.43
27:DF:90:LEU:HG	27:DF:98:PHE:CD2	2.53	0.43
22:DA:2688:G:H1'	22:DA:2721:A:N6	2.33	0.43
37:BP:111:GLU:CD	37:BP:111:GLU:H	2.20	0.43
29:BH:100:ALA:O	29:BH:101:ASP:C	2.56	0.43
7:AG:37:THR:O	7:AG:41:ILE:HG13	2.18	0.43
3:AC:179:ALA:HB1	3:AC:202:PHE:CE1	2.53	0.43
1:AA:1501:C:C4	1:AA:1504:G:C5	3.06	0.43
1:AA:1494:G:C8	22:BA:1913:A:C2	3.06	0.43
22:DA:56:A:C6	22:DA:57:C:N3	2.86	0.43
22:BA:1408:G:C2'	22:BA:1409:U:H5'	2.48	0.43
43:BV:66:ASP:CG	43:BV:66:ASP:O	2.57	0.43
1:CA:283:U:C4	1:CA:284:C:C4	3.06	0.43
51:D3:9:ALA:HB1	51:D3:13:PHE:HD2	1.83	0.43
11:CK:94:SER:O	11:CK:97:ARG:HB2	2.18	0.43
26:DE:3:LEU:O	26:DE:11:ALA:HA	2.17	0.43
1:CA:57:G:C6	1:CA:58:C:N4	2.87	0.43
33:DL:14:LYS:NZ	33:DL:14:LYS:HB3	2.34	0.43
22:BA:2727:A:C6	22:BA:2728:U:O4	2.71	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:BJ:44:TYR:HA	38:BQ:59:LEU:HD21	1.99	0.43
22:BA:2093:G:O2'	22:BA:2094:A:H5'	2.18	0.43
22:DA:1565:C:C3'	24:DC:17:LYS:HE2	2.22	0.43
23:DB:11:C:H5'	44:DW:71:LYS:HD3	2.00	0.43
1:CA:1320:C:H2'	1:CA:1321:U:O4'	2.18	0.43
22:DA:1437:C:C2	22:DA:1438:U:C5	3.05	0.43
44:DW:37:VAL:HG23	44:DW:38:ARG:CD	2.33	0.43
22:DA:2333:A:P	44:DW:76:ARG:HH12	2.42	0.43
22:DA:2359:C:H2'	22:DA:2360:G:O4'	2.18	0.43
20:AT:43:LYS:O	20:AT:46:ALA:HB3	2.19	0.43
22:DA:226:A:N6	22:DA:409:G:N2	2.66	0.43
22:DA:1912:A:N6	22:DA:1917:U:H3	2.10	0.43
22:BA:444:C:H4'	26:BE:44:ARG:HD3	2.00	0.43
22:DA:1343:G:N2	22:DA:1344:U:C2	2.86	0.43
22:DA:311:A:O2'	22:DA:312:G:P	2.76	0.43
22:DA:334:C:O2'	22:DA:335:C:OP1	2.28	0.43
5:CE:103:GLY:O	5:CE:104:ILE:CG2	2.54	0.43
27:DF:36:ASN:O	27:DF:37:MET:CB	2.66	0.43
17:AQ:60:ILE:CG2	17:AQ:61:ARG:N	2.81	0.43
17:AQ:66:LEU:HB2	17:AQ:70:LYS:HG2	2.00	0.43
1:CA:1126:U:N3	1:CA:1280:A:OP1	2.51	0.43
19:CS:40:PHE:CB	19:CS:41:PRO:CD	2.95	0.43
1:CA:1301:U:C2'	1:CA:1301:U:O2	2.62	0.43
32:DK:88:ASN:CB	32:DK:91:SER:HB2	2.48	0.43
22:BA:948:C:O2'	22:BA:949:G:H5'	2.18	0.43
25:BD:12:THR:HG23	25:BD:13:ARG:H	1.78	0.43
28:DG:104:LEU:N	28:DG:112:VAL:HG23	2.32	0.43
46:BY:47:ARG:NH2	46:BY:47:ARG:CG	2.78	0.43
32:BK:113:MET:O	32:BK:116:ILE:N	2.52	0.43
5:CE:59:ILE:O	5:CE:62:ALA:HB3	2.17	0.43
1:CA:155:A:C6	1:CA:167:A:C6	3.06	0.43
22:DA:2734:A:H2'	22:DA:2735:G:C5'	2.47	0.43
27:BF:39:VAL:C	27:BF:41:GLU:H	2.21	0.43
1:CA:568:G:N2	1:CA:883:C:C2	2.86	0.43
19:CS:14:LEU:HD22	19:CS:37:SER:OG	2.18	0.43
1:CA:251:G:H4'	1:CA:252:U:C5'	2.47	0.43
42:BU:97:SER:O	42:BU:98:ASN:CB	2.58	0.43
1:AA:1000:A:C2	1:AA:1041:G:C2	3.07	0.43
26:DE:73:ILE:HG13	26:DE:78:TRP:NE1	2.33	0.43
28:BG:139:VAL:C	28:BG:141:GLY:N	2.71	0.43
27:BF:114:ARG:HD2	27:BF:114:ARG:N	2.29	0.43
22:BA:1798:U:P	24:BC:255:LYS:O	2.76	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:2406:A:OP2	22:DA:2411:A:N6	2.34	0.43
3:AC:70:ALA:HA	3:AC:105:VAL:HB	2.00	0.43
22:DA:2846:G:P	37:DP:51:ASN:HB2	2.58	0.43
23:DB:29:A:H3'	23:DB:30:C:H6	1.83	0.43
1:CA:50:A:N6	1:CA:361:G:H4'	2.33	0.43
6:CF:71:ILE:HD12	6:CF:71:ILE:HA	1.93	0.43
22:DA:1008:A:H5''	31:DJ:37:ARG:HH22	1.82	0.43
37:DP:102:ARG:O	37:DP:103:THR:CB	2.66	0.43
2:CB:176:ASN:C	2:CB:178:LEU:N	2.71	0.43
22:DA:724:U:O4	22:DA:725:G:N1	2.51	0.43
1:CA:403:C:H5'	4:CD:131:ILE:HD12	2.00	0.43
30:DI:79:LEU:HD13	30:DI:100:ILE:HD12	2.01	0.43
22:BA:1513:U:C2'	22:BA:1514:G:H5'	2.49	0.43
34:DM:1:MET:O	34:DM:2:LEU:C	2.55	0.43
1:AA:827:U:H5''	1:AA:828:U:OP2	2.17	0.43
33:DL:119:PRO:HB3	33:DL:139:GLY:O	2.19	0.43
48:B0:12:ARG:O	48:B0:16:ARG:HG3	2.18	0.43
26:DE:115:GLN:O	26:DE:117:ARG:N	2.51	0.43
1:AA:126:G:H2'	1:AA:127:G:O5'	2.19	0.43
22:BA:324:A:H2'	22:BA:325:G:O4'	2.17	0.43
22:DA:2791:G:OP1	22:DA:2791:G:O4'	2.37	0.43
22:DA:691:C:O5'	22:DA:691:C:H6	2.01	0.43
38:BQ:15:LYS:O	38:BQ:19:GLN:HG3	2.18	0.43
28:DG:36:LEU:N	28:DG:36:LEU:HD12	2.32	0.43
22:DA:701:G:H2'	22:DA:701:G:N3	2.31	0.43
1:AA:307:C:O5'	1:AA:307:C:H6	2.02	0.43
22:DA:2103:C:H2'	22:DA:2103:C:O2	2.17	0.43
22:BA:1061:U:H3'	22:BA:1062:G:C5'	2.47	0.43
27:BF:64:PRO:HA	27:BF:88:VAL:CG2	2.48	0.43
39:DR:39:LEU:HA	39:DR:53:PHE:HA	2.01	0.43
22:BA:855:G:N2	44:BW:23:LYS:HG2	2.16	0.43
44:BW:46:ALA:O	44:BW:47:GLY:O	2.37	0.43
44:BW:30:VAL:HA	44:BW:60:ALA:HB3	2.00	0.43
23:DB:58:A:C8	23:DB:59:A:C8	3.07	0.43
36:DO:62:LEU:HD13	36:DO:62:LEU:C	2.38	0.43
1:CA:1365:G:O2'	1:CA:1366:C:O5'	2.35	0.43
1:CA:704:A:O2'	1:CA:705:G:O4'	2.36	0.43
1:CA:1158:C:O2	1:CA:1158:C:C2'	2.67	0.43
22:DA:265:A:C6	22:DA:428:A:O4'	2.71	0.43
22:DA:511:U:H4'	22:DA:1235:G:H4'	2.00	0.43
22:DA:1338:G:O2'	22:DA:1393:A:N1	2.43	0.43
22:DA:1401:G:C4	22:DA:1402:U:C5	3.07	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:1807:G:H2'	22:DA:1809:A:OP2	2.19	0.43
22:DA:2209:G:C4	22:DA:2216:G:N2	2.86	0.43
4:AD:35:GLN:O	4:AD:36:ALA:HB2	2.18	0.43
22:DA:303:G:C2	22:DA:304:U:O2	2.71	0.43
22:DA:308:G:O5'	22:DA:308:G:H8	2.02	0.43
22:DA:82:U:C2	22:DA:83:A:C8	3.07	0.43
24:DC:181:ARG:NE	24:DC:265:PHE:HB2	2.31	0.43
38:DQ:96:ASP:C	38:DQ:98:ALA:H	2.22	0.43
38:DQ:96:ASP:C	38:DQ:98:ALA:N	2.71	0.43
5:AE:152:VAL:CB	5:AE:155:LYS:HZ2	2.27	0.43
22:DA:1091:G:C2	22:DA:1092:C:C2	3.06	0.43
1:CA:208:U:O2	1:CA:210:C:H4'	2.18	0.43
17:AQ:45:VAL:HG21	17:AQ:60:ILE:CD1	2.34	0.43
50:D2:18:PHE:O	50:D2:19:ARG:C	2.57	0.43
44:BW:8:SER:O	44:BW:9:THR:CB	2.66	0.43
1:CA:1241:G:H2'	1:CA:1242:G:C8	2.39	0.43
1:CA:246:A:C4	1:CA:279:A:N6	2.87	0.43
1:CA:1129:C:C4	1:CA:1139:G:C5	3.06	0.43
24:BC:109:LEU:CD2	24:BC:110:LYS:N	2.79	0.43
21:AU:10:PRO:HG2	3:CC:71:ARG:NH2	2.33	0.43
1:CA:643:C:O2'	1:CA:644:U:H5'	2.18	0.43
22:BA:1045:C:O5'	22:BA:1046:A:C5'	2.64	0.43
22:DA:2014:A:H2	22:DA:2613:U:C2	2.36	0.43
22:DA:855:G:C2'	44:DW:23:LYS:HD3	2.48	0.43
24:BC:252:LYS:HZ2	24:BC:252:LYS:HA	1.83	0.43
22:DA:2578:G:H4'	22:DA:2578:G:OP2	2.18	0.43
22:BA:1011:G:C2	22:BA:1151:A:C2	3.07	0.43
30:BI:78:LEU:C	30:BI:79:LEU:HG	2.39	0.43
12:AL:23:LEU:CB	12:AL:58:ASN:HD22	2.31	0.43
1:AA:1410:A:H2'	1:AA:1411:C:O5'	2.18	0.43
22:DA:962:G:H4'	22:DA:2496:C:O2'	2.18	0.43
1:CA:587:G:H4'	8:CH:3:GLN:HA	2.00	0.43
22:DA:1287:A:OP1	35:DN:103:ARG:HD2	2.18	0.43
1:CA:1307:U:H1'	13:CM:107:THR:CG2	2.48	0.43
28:BG:124:CYS:HB3	28:BG:126:THR:O	2.18	0.43
29:BH:97:ARG:HG2	29:BH:111:ALA:HB1	1.99	0.43
46:DY:22:LEU:HG	46:DY:23:ARG:H	1.83	0.43
32:BK:99:ILE:HG23	32:BK:100:PHE:N	2.34	0.43
7:AG:70:PRO:HD2	7:AG:95:ARG:CG	2.48	0.43
22:DA:2635:A:H5''	25:DD:79:LEU:O	2.18	0.43
22:DA:970:U:H1'	22:DA:985:C:OP1	2.18	0.43
1:CA:163:C:H2'	1:CA:164:G:O5'	2.17	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
43:BV:51:GLN:HG2	43:BV:86:LEU:HD11	2.00	0.43
22:DA:2052:A:H8	22:DA:2052:A:O5'	2.01	0.43
36:BO:106:LEU:HD12	36:BO:106:LEU:C	2.38	0.43
27:BF:131:VAL:CG2	27:BF:151:LEU:HG	2.47	0.43
20:CT:26:MET:HE1	20:CT:30:PHE:CD1	2.53	0.43
20:CT:30:PHE:CE2	20:CT:52:GLU:HG2	2.53	0.43
22:DA:1700:A:O2'	22:DA:1701:A:H5'	2.18	0.43
22:DA:1179:G:C2	22:DA:1180:U:C2	3.06	0.43
28:BG:82:PHE:HB2	28:BG:134:GLY:O	2.17	0.43
34:DM:73:ILE:HD13	34:DM:73:ILE:HA	1.79	0.43
1:AA:461:A:C3'	1:AA:461:A:N3	2.81	0.43
1:CA:631:C:O5'	1:CA:631:C:H6	2.02	0.43
15:AO:34:GLN:O	15:AO:35:ILE:C	2.56	0.43
30:DI:30:GLN:CG	30:DI:31:GLY:H	2.31	0.43
1:AA:895:G:H2'	1:AA:896:C:C6	2.53	0.43
22:BA:666:A:C5	22:BA:667:U:C5	3.07	0.43
22:DA:1877:A:H2'	22:DA:1878:G:C8	2.54	0.43
30:DI:20:SER:HB3	30:DI:21:PRO:HD3	2.00	0.43
38:BQ:114:ALA:O	38:BQ:116:LEU:N	2.50	0.43
1:AA:135:C:C2'	1:AA:136:C:H5'	2.47	0.43
15:CO:38:LEU:HD12	15:CO:41:HIS:HB3	2.00	0.43
2:CB:216:VAL:C	2:CB:218:ALA:N	2.70	0.43
22:BA:1266:G:OP1	48:B0:15:ARG:NE	2.50	0.43
23:DB:29:A:OP2	36:DO:32:PRO:HD2	2.17	0.43
9:AI:8:THR:O	9:AI:81:GLY:CA	2.66	0.43
1:CA:212:G:N2	1:CA:213:G:C8	2.86	0.43
22:BA:2383:G:H8	22:BA:2383:G:H5''	1.83	0.43
22:DA:1627:G:C2	22:DA:1628:G:C8	3.06	0.43
32:BK:34:GLY:O	32:BK:36:GLY:N	2.51	0.43
1:CA:1481:U:H2'	1:CA:1482:G:C8	2.53	0.43
1:CA:1509:C:H2'	1:CA:1510:C:C6	2.53	0.43
35:DN:21:PHE:HD1	35:DN:21:PHE:H	1.65	0.43
2:CB:221:ARG:C	2:CB:223:GLY:H	2.20	0.43
1:AA:290:C:H2'	1:AA:291:U:H5'	2.00	0.43
1:CA:880:C:H2'	1:CA:881:G:H5'	1.98	0.43
1:CA:188:C:N4	1:CA:189:A:C6	2.87	0.43
1:AA:877:G:H21	8:AH:1:SER:HB2	1.84	0.43
22:DA:2254:C:H2'	22:DA:2255:G:H5'	2.00	0.43
2:CB:182:VAL:O	2:CB:195:VAL:HG13	2.19	0.43
4:AD:83:GLY:O	4:AD:84:ASN:C	2.57	0.43
7:AG:16:LYS:O	7:AG:17:PHE:CD1	2.72	0.43
22:DA:2463:C:C2	22:DA:2488:G:N2	2.87	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:BA:1716:U:H2'	22:BA:1717:A:C8	2.54	0.43
22:BA:2850:A:H2'	22:BA:2851:A:O4'	2.18	0.43
18:CR:31:TYR:CG	18:CR:54:LEU:HD21	2.53	0.43
1:CA:25:C:H2'	1:CA:26:A:C8	2.53	0.43
1:CA:898:G:N2	1:CA:901:A:OP2	2.43	0.43
22:DA:524:G:H2'	22:DA:525:U:C6	2.53	0.43
40:DS:75:PHE:CZ	40:DS:104:THR:HG21	2.53	0.43
22:BA:2533:U:H2'	22:BA:2534:A:O4'	2.19	0.43
22:BA:2694:G:H2'	22:BA:2695:U:C6	2.53	0.43
1:CA:49:U:O2	1:CA:362:G:H1'	2.18	0.43
17:CQ:7:LEU:HD23	17:CQ:72:TRP:HZ3	1.83	0.43
22:BA:586:A:C2	22:BA:1254:A:C2	3.07	0.43
22:BA:211:C:O2'	22:BA:212:G:H5'	2.18	0.43
22:BA:1952:A:C6	22:BA:1953:A:N1	2.86	0.43
31:DJ:48:VAL:HG12	31:DJ:49:ASP:N	2.33	0.43
22:BA:1972:G:H2'	22:BA:1973:G:H8	1.83	0.43
22:BA:501:A:O5'	22:BA:501:A:H8	2.01	0.43
2:AB:10:LYS:HE3	2:AB:10:LYS:HB2	1.72	0.43
28:DG:175:LYS:HD3	28:DG:175:LYS:C	2.39	0.43
30:DI:11:GLN:HG3	30:DI:11:GLN:O	2.18	0.43
22:BA:1855:U:H6	22:BA:1855:U:O5'	2.01	0.43
6:AF:66:ALA:HB1	6:AF:67:PRO:HD2	2.01	0.43
31:BJ:40:HIS:HD2	31:BJ:41:LYS:CG	2.27	0.43
22:BA:1073:A:C2'	22:BA:1074:G:H5''	2.45	0.43
22:DA:2229:U:H2'	22:DA:2230:G:C8	2.54	0.43
45:DX:32:LEU:HD13	45:DX:50:VAL:O	2.19	0.43
37:BP:3:ILE:C	37:BP:4:ILE:O	2.56	0.43
44:DW:18:LYS:CD	44:DW:19:ARG:N	2.71	0.43
24:DC:130:PRO:HG2	24:DC:133:ASN:ND2	2.34	0.43
22:DA:1387:A:O2'	22:DA:1388:G:P	2.77	0.43
22:DA:1387:A:O2'	22:DA:1388:G:OP2	2.29	0.43
22:DA:1403:A:C6	22:DA:1404:C:C4	3.07	0.43
22:DA:1606:C:O2	22:DA:1606:C:C5'	2.58	0.43
22:DA:1129:A:HO2'	22:DA:1130:U:P	2.41	0.43
22:DA:1355:G:C2	22:DA:1356:G:C8	3.07	0.43
22:DA:295:G:N2	22:DA:296:U:C6	2.87	0.43
22:DA:301:G:N1	22:DA:317:G:C5	2.86	0.43
31:DJ:44:TYR:HD1	38:DQ:63:ARG:NH2	2.17	0.43
2:CB:100:LEU:O	2:CB:102:ASN:N	2.50	0.43
1:AA:1202:U:N3	14:AN:81:ILE:HG21	2.33	0.43
1:CA:1126:U:O4'	1:CA:1281:C:C2	2.71	0.43
33:DL:112:LEU:HD23	33:DL:112:LEU:H	1.83	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:107:G:C2	22:DA:108:G:C8	3.05	0.43
22:DA:288:U:H2'	22:DA:289:G:H8	1.83	0.43
4:CD:24:VAL:HG23	4:CD:25:ARG:N	2.33	0.43
22:DA:804:A:C2'	22:DA:806:C:C4	3.00	0.43
22:DA:237:C:C4	22:DA:238:C:C5	3.06	0.43
22:DA:625:G:H1'	22:DA:656:G:O2'	2.18	0.43
16:CP:6:LEU:HB2	16:CP:17:TYR:HB3	2.00	0.43
25:BD:89:GLU:HG3	25:BD:94:GLN:OE1	2.18	0.43
6:AF:86:ARG:HH12	18:AR:63:TYR:CB	2.28	0.43
25:DD:184:ARG:O	25:DD:186:LEU:HD13	2.18	0.43
22:BA:141:G:N1	41:BT:2:ILE:HG23	2.34	0.43
1:AA:100:G:C5	1:AA:101:A:C5	3.06	0.43
22:DA:991:C:OP2	22:DA:1186:G:OP2	2.35	0.43
41:DT:48:GLN:NE2	41:DT:54:GLU:CB	2.82	0.43
22:DA:2201:G:H2'	22:DA:2202:U:H6	1.82	0.43
22:BA:2681:C:H4'	22:BA:2682:A:OP1	2.18	0.43
22:BA:581:C:H2'	22:BA:582:A:C8	2.53	0.43
22:DA:2022:U:O2'	22:DA:2617:U:H5'	2.18	0.43
37:BP:33:GLU:HA	37:BP:38:ARG:NH1	2.33	0.43
47:BZ:29:ARG:C	47:BZ:30:ARG:HG3	2.39	0.43
1:CA:16:A:N1	1:CA:919:A:H2	2.17	0.43
32:DK:80:ASP:HB2	37:DP:67:GLU:OE1	2.18	0.43
22:BA:1387:A:H5'	22:BA:1469:A:H1'	1.99	0.43
27:DF:93:GLU:C	27:DF:95:MET:H	2.22	0.43
1:CA:560:A:C5	5:CE:127:TYR:CE2	3.07	0.43
22:DA:2052:A:OP1	25:DD:146:ILE:HG12	2.19	0.43
34:BM:132:THR:CG2	34:BM:133:LYS:H	2.31	0.43
7:CG:61:PHE:O	7:CG:63:VAL:N	2.50	0.43
1:AA:1053:G:N7	1:AA:1199:U:C6	2.86	0.43
40:BS:84:ARG:O	40:BS:95:ARG:O	2.36	0.43
22:BA:666:A:H8	22:BA:666:A:O5'	2.00	0.43
11:AK:109:ILE:HG22	11:AK:110:THR:N	2.34	0.43
1:AA:1029:U:N3	1:AA:1033:G:C6	2.87	0.43
6:CF:97:THR:C	6:CF:98:GLU:HG3	2.38	0.43
28:DG:152:ARG:HD2	28:DG:153:PRO:CD	2.48	0.43
12:CL:7:VAL:O	12:CL:8:ARG:HB2	2.18	0.43
42:DU:27:VAL:HG22	42:DU:28:LEU:N	2.34	0.43
4:AD:196:GLU:C	4:AD:198:LEU:N	2.71	0.43
1:CA:1114:C:O2'	14:CN:99:SER:HB2	2.17	0.43
7:AG:91:ARG:HA	7:AG:92:PRO:HD3	1.81	0.43
22:BA:2879:A:H4'	22:BA:2880:C:OP1	2.19	0.43
1:AA:654:G:H4'	8:AH:2:MET:CE	2.48	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:1497:U:O2'	22:DA:1577:C:H4'	2.19	0.43
43:BV:29:ILE:HG12	43:BV:30:ILE:H	1.84	0.43
1:CA:1460:C:N4	1:CA:1461:G:C6	2.86	0.43
22:DA:1455:G:HO2'	22:DA:1456:G:H8	1.64	0.43
8:AH:1:SER:HB3	8:AH:3:GLN:HG3	1.99	0.43
22:BA:1725:U:H2'	22:BA:1726:C:O4'	2.19	0.43
30:DI:64:ARG:HB2	30:DI:64:ARG:CZ	2.49	0.43
25:BD:143:PRO:HD2	25:BD:144:GLY:H	1.83	0.43
1:AA:382:A:H2'	1:AA:383:A:C8	2.54	0.43
22:BA:820:A:H2'	22:BA:821:A:O4'	2.18	0.43
10:CJ:20:GLN:O	10:CJ:23:ALA:HB3	2.19	0.43
22:DA:1530:G:N2	22:DA:1542:U:O2	2.52	0.43
28:DG:58:ALA:O	28:DG:59:ASP:C	2.57	0.43
1:AA:1120:C:H2'	1:AA:1121:U:C6	2.54	0.43
1:AA:1514:G:O2'	1:AA:1515:G:H5'	2.18	0.43
22:BA:2080:A:O5'	45:BX:18:SER:HB2	2.19	0.43
3:CC:49:ALA:O	3:CC:50:SER:HB2	2.18	0.43
1:AA:809:G:C6	1:AA:810:C:C5	3.06	0.43
23:DB:67:G:N3	23:DB:68:C:C6	2.87	0.43
22:BA:2353:G:O2'	44:BW:31:LEU:HD23	2.18	0.43
44:BW:16:GLU:O	44:BW:17:ALA:HB3	2.19	0.43
11:CK:92:ARG:NH2	11:CK:111:ASP:OD1	2.51	0.43
19:CS:69:LYS:O	19:CS:72:GLU:HB2	2.18	0.43
22:DA:1551:A:H2'	22:DA:1552:A:O4'	2.19	0.43
22:DA:858:G:C5	22:DA:2268:A:C2	3.07	0.43
22:DA:2347:C:O2'	22:DA:2348:U:C6	2.71	0.43
22:DA:2392:A:OP1	51:D3:30:HIS:ND1	2.51	0.43
34:BM:34:LYS:HE3	34:BM:131:VAL:HG11	1.99	0.43
22:DA:1091:G:N2	22:DA:1101:U:C2	2.86	0.43
7:CG:22:LEU:HA	7:CG:25:PHE:CB	2.33	0.43
22:DA:142:A:C2	22:DA:143:C:C2	3.06	0.43
22:DA:621:A:O2'	22:DA:622:G:C4'	2.67	0.43
15:AO:50:HIS:O	15:AO:53:ARG:N	2.52	0.43
22:BA:275:C:H3'	22:BA:276:U:H5''	2.00	0.43
24:BC:106:PRO:HA	24:BC:141:HIS:CE1	2.54	0.43
2:CB:52:ALA:O	2:CB:56:LEU:HB2	2.18	0.43
1:CA:996:A:H2'	1:CA:997:U:C6	2.53	0.43
5:CE:35:LEU:HD22	5:CE:36:THR:N	2.32	0.43
22:BA:511:U:O4	22:BA:512:G:N1	2.52	0.43
45:BX:5:GLN:HE21	45:BX:49:ARG:HB3	1.83	0.43
22:DA:2142:A:H3'	22:DA:2143:C:H4'	1.96	0.43
28:DG:24:THR:C	28:DG:25:ILE:HD12	2.39	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:1435:G:N2	22:DA:1558:C:N4	2.67	0.43
7:AG:70:PRO:HD2	7:AG:95:ARG:HG2	2.01	0.43
26:BE:109:LEU:HD13	26:BE:109:LEU:HA	1.47	0.43
39:BR:14:VAL:HA	39:BR:18:GLN:OE1	2.17	0.43
1:CA:143:A:N3	1:CA:143:A:H2'	2.33	0.43
1:CA:1003:G:H21	1:CA:1005:A:H5''	1.82	0.43
29:DH:101:ASP:O	29:DH:102:ALA:O	2.36	0.43
28:DG:53:PRO:HG3	28:DG:61:TRP:CE2	2.54	0.43
37:DP:25:VAL:HG23	37:DP:25:VAL:O	2.19	0.43
22:DA:2699:C:H2'	22:DA:2700:A:C8	2.53	0.43
1:CA:632:U:H3'	1:CA:633:G:H5'	2.00	0.43
33:BL:78:ARG:HB3	33:BL:113:ALA:HB3	2.01	0.43
22:BA:1737:G:H5''	22:BA:1738:G:OP2	2.18	0.43
26:BE:150:THR:CG2	26:BE:153:LEU:HA	2.48	0.43
43:DV:61:LEU:N	43:DV:61:LEU:HD23	2.33	0.43
22:BA:1931:U:C2'	22:BA:1932:A:H5'	2.48	0.43
8:CH:63:LYS:O	8:CH:70:VAL:HG12	2.17	0.43
1:AA:863:U:O2	1:AA:867:G:C2	2.72	0.43
22:DA:372:G:N2	22:DA:401:A:OP2	2.42	0.43
34:BM:97:GLN:CD	34:BM:97:GLN:H	2.22	0.43
1:CA:934:C:N3	1:CA:1345:U:C5	2.87	0.43
1:CA:398:U:H2'	1:CA:399:G:C8	2.53	0.43
1:AA:660:C:H2'	1:AA:661:G:O4'	2.18	0.43
22:DA:2029:G:C2	22:DA:2033:A:N7	2.87	0.43
38:BQ:7:VAL:HG22	38:BQ:8:ILE:N	2.33	0.43
1:CA:1040:U:H2'	1:CA:1041:G:H5'	2.01	0.43
22:DA:800:A:H4'	22:DA:801:G:O5'	2.18	0.43
29:DH:103:VAL:C	29:DH:105:ALA:H	2.21	0.43
22:DA:487:C:H1'	40:DS:53:SER:OG	2.18	0.43
22:BA:2223:G:O2'	22:BA:2224:G:H5'	2.18	0.43
1:AA:765:G:H2'	1:AA:812:G:N2	2.34	0.43
1:CA:284:C:H2'	1:CA:285:C:H6	1.83	0.43
36:BO:16:ARG:C	36:BO:18:LEU:H	2.21	0.43
9:CI:80:HIS:O	9:CI:83:THR:HG23	2.19	0.43
11:AK:59:PRO:HB2	11:AK:94:SER:HB2	2.00	0.43
1:AA:946:A:H2'	1:AA:947:G:C8	2.54	0.43
22:BA:1257:C:H5'	26:BE:78:TRP:CZ3	2.53	0.43
2:AB:27:LYS:HB3	2:AB:28:PRO:HD3	2.00	0.43
8:AH:66:GLN:HB3	8:AH:67:GLY:H	1.60	0.43
30:BI:39:LYS:HB2	30:BI:39:LYS:NZ	2.33	0.43
22:BA:910:A:C6	22:BA:911:A:C6	3.06	0.43
22:BA:1566:A:P	24:BC:17:LYS:HZ1	2.41	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:933:G:OP2	7:AG:2:ARG:HB3	2.19	0.43
22:BA:2626:C:H2'	22:BA:2627:G:O4'	2.19	0.43
24:BC:35:LYS:NZ	24:BC:37:SER:HB2	2.34	0.43
22:BA:846:U:C2'	22:BA:847:U:OP2	2.67	0.43
22:BA:1614:A:C2	40:BS:93:ALA:HB2	2.54	0.43
22:BA:1614:A:N1	40:BS:93:ALA:HB2	2.34	0.43
28:BG:153:PRO:HD3	28:BG:161:VAL:O	2.19	0.43
34:BM:25:ASP:OD2	34:BM:25:ASP:N	2.52	0.43
34:DM:31:PHE:O	34:DM:105:MET:N	2.43	0.43
22:DA:1120:G:O2'	22:DA:1121:C:H5'	2.19	0.43
1:CA:229:U:H2'	1:CA:230:G:O4'	2.19	0.43
28:DG:15:ASP:HB3	28:DG:26:LYS:H	1.83	0.43
1:CA:1352:C:O2	1:CA:1371:G:C2	2.72	0.43
1:CA:960:U:H1'	1:CA:1223:C:H5'	2.00	0.43
22:DA:1438:U:C5	22:DA:1552:A:N1	2.86	0.43
22:DA:821:A:O2'	22:DA:945:A:H5'	2.18	0.43
22:DA:233:A:O2'	22:DA:234:U:O5'	2.37	0.43
22:DA:415:A:C2	22:DA:2409:G:C6	3.06	0.43
22:DA:1534:U:H2'	22:DA:1536:C:O2	2.19	0.43
1:CA:1408:A:N1	1:CA:1494:G:C5	2.87	0.43
22:DA:1611:C:C2	22:DA:1612:C:C5	3.06	0.43
22:DA:166:U:C2'	22:DA:167:A:H5'	2.49	0.43
22:DA:340:A:H2'	22:DA:341:C:O4'	2.18	0.43
22:DA:2886:A:N7	48:D0:39:ARG:CZ	2.82	0.43
1:CA:204:G:C4	1:CA:205:A:C8	3.06	0.43
52:B4:33:HIS:O	52:B4:35:GLN:HG3	2.18	0.43
1:AA:374:A:H2'	1:AA:375:U:H6	1.83	0.43
22:DA:485:C:C2	22:DA:496:G:N2	2.87	0.43
22:DA:54:G:C6	22:DA:55:G:N7	2.87	0.43
22:DA:622:G:O2'	22:DA:623:C:H5'	2.18	0.43
22:DA:623:C:H2'	22:DA:624:C:O4'	2.18	0.43
22:DA:2749:A:P	22:DA:2750:A:H3'	2.59	0.43
32:DK:87:LEU:N	32:DK:87:LEU:HD23	2.34	0.43
22:BA:960:A:C8	22:BA:962:G:C8	3.07	0.43
22:BA:1604:C:H2'	22:BA:1605:C:C6	2.53	0.43
12:CL:86:VAL:C	12:CL:88:ASP:H	2.21	0.43
1:CA:994:A:O2'	1:CA:995:C:O5'	2.36	0.43
22:BA:1599:U:OP2	41:BT:40:LYS:HD2	2.17	0.43
1:AA:1303:C:O2'	1:AA:1304:G:C5'	2.66	0.43
8:AH:78:SER:CB	8:AH:84:ILE:H	2.32	0.43
22:DA:1585:C:C2'	22:DA:1586:A:O5'	2.66	0.43
22:BA:65:U:C2	22:BA:66:C:C5	3.06	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:BA:1805:A:H1'	24:BC:49:THR:HG23	1.99	0.43
9:CI:44:ARG:NH1	9:CI:44:ARG:HB3	2.34	0.43
31:DJ:97:PRO:C	31:DJ:99:ARG:N	2.69	0.43
49:B1:7:LYS:HE3	51:B3:33:THR:HG21	2.00	0.43
12:AL:43:LYS:HZ3	12:AL:43:LYS:HB2	1.83	0.43
22:DA:1287:A:O2'	22:DA:1288:G:C5'	2.67	0.43
24:BC:20:ASN:C	24:BC:20:ASN:ND2	2.72	0.43
22:BA:826:U:HO2'	33:BL:53:GLY:HA3	1.81	0.43
22:DA:768:G:N2	22:DA:1379:U:O2'	2.41	0.43
1:CA:181:A:C4'	1:CA:182:A:OP1	2.59	0.43
22:DA:173:A:H2'	22:DA:174:U:H6	1.82	0.43
28:BG:59:ASP:CB	28:BG:63:GLN:HG2	2.45	0.43
11:AK:86:LYS:HG2	11:AK:114:PRO:HD3	2.00	0.43
25:DD:151:THR:HG22	25:DD:152:PRO:CD	2.49	0.43
22:BA:927:A:H2'	22:BA:928:A:H8	1.81	0.43
1:AA:1338:G:C6	1:AA:1339:A:C6	3.07	0.43
29:DH:94:ILE:HG13	29:DH:98:ASP:CG	2.39	0.43
35:BN:65:LEU:C	35:BN:65:LEU:HD12	2.38	0.43
22:DA:1590:A:C6	22:DA:1591:A:N6	2.86	0.43
22:BA:357:C:O2'	22:BA:358:U:H5'	2.19	0.43
22:DA:2636:C:H2'	22:DA:2637:U:H6	1.78	0.43
1:CA:171:A:N1	1:CA:172:A:C2	2.87	0.43
25:BD:182:ALA:O	25:BD:183:GLU:C	2.57	0.43
40:DS:33:LEU:CA	40:DS:36:LEU:HD23	2.47	0.43
1:AA:1210:C:C2'	1:AA:1211:U:H5'	2.49	0.43
22:BA:790:U:HO2'	22:BA:791:C:P	2.40	0.43
10:AJ:33:GLY:O	10:AJ:34:ALA:CB	2.66	0.43
16:CP:44:SER:HB2	16:CP:46:LYS:HG3	2.00	0.43
14:CN:63:CYS:O	14:CN:67:GLY:HA2	2.18	0.43
29:DH:62:LEU:C	29:DH:64:ALA:N	2.72	0.43
22:DA:371:A:C4	22:DA:373:U:O4	2.72	0.43
22:BA:1789:A:H2'	22:BA:1790:C:O4'	2.18	0.43
1:AA:1520:C:H2'	1:AA:1521:C:C6	2.53	0.43
22:DA:927:A:N1	22:DA:928:A:C2	2.87	0.43
22:DA:1760:C:C2'	22:DA:1761:C:H5'	2.48	0.43
22:BA:1754:A:N1	22:BA:2716:C:O2'	2.45	0.43
1:CA:954:G:H1	1:CA:1228:C:H42	1.65	0.43
22:DA:2031:A:O2'	22:DA:2454:G:N2	2.52	0.43
17:CQ:14:ASP:HB2	17:CQ:54:ILE:HG22	1.99	0.43
17:CQ:14:ASP:CB	17:CQ:54:ILE:HG22	2.49	0.43
7:AG:119:LEU:O	7:AG:122:GLU:N	2.52	0.43
1:AA:370:C:C2'	1:AA:371:A:H5'	2.48	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
47:DZ:37:ARG:HB3	47:DZ:38:GLU:H	1.59	0.43
48:B0:47:TYR:CZ	48:B0:52:LYS:HD3	2.54	0.43
22:BA:2727:A:C2'	22:BA:2728:U:H5'	2.48	0.43
22:BA:1696:G:C6	22:BA:1697:G:C4	3.06	0.43
56:BA:3288:HOH:O	26:BE:98:LYS:HE2	2.19	0.43
22:BA:839:U:H2'	22:BA:840:C:C6	2.54	0.43
40:BS:57:ASN:O	40:BS:61:ASN:HB2	2.18	0.43
22:BA:766:U:H2'	22:BA:767:U:C6	2.54	0.43
1:CA:683:G:C2'	1:CA:684:U:H5'	2.49	0.43
22:DA:2157:G:N2	22:DA:2157:G:OP2	2.49	0.43
22:BA:1916:A:H8	22:BA:1916:A:O5'	2.01	0.43
22:DA:2061:G:N7	22:DA:2501:C:H4'	2.33	0.43
22:BA:1692:U:O2'	22:BA:1693:U:H2'	2.19	0.43
39:BR:49:ILE:CG1	39:BR:52:PRO:HA	2.49	0.43
4:CD:190:LEU:O	4:CD:190:LEU:HD23	2.19	0.43
22:BA:2846:G:OP1	37:BP:52:ARG:NH1	2.51	0.43
22:DA:36:G:C6	22:DA:37:C:C4	3.07	0.43
36:DO:31:THR:HG23	36:DO:34:HIS:O	2.19	0.43
1:CA:977:A:H1'	1:CA:1223:C:N4	2.31	0.43
19:CS:50:VAL:HG22	19:CS:57:VAL:O	2.19	0.43
20:AT:53:MET:HE3	20:AT:57:VAL:HG21	2.01	0.43
22:DA:266:G:C2'	22:DA:267:C:O5'	2.66	0.43
31:DJ:3:THR:CG2	38:DQ:60:TRP:HE1	2.29	0.43
48:D0:53:VAL:HG23	48:D0:54:ILE:HG12	2.00	0.43
27:DF:131:VAL:O	27:DF:132:ARG:HB2	2.18	0.43
24:DC:58:LYS:O	24:DC:59:GLN:HB2	2.19	0.43
22:DA:289:G:H2'	22:DA:290:U:O4'	2.19	0.43
22:DA:2443:C:H2'	22:DA:2444:G:O4'	2.19	0.43
1:CA:237:G:C6	1:CA:238:A:C5	3.06	0.43
22:DA:1047:G:H2'	22:DA:1048:A:OP2	2.18	0.43
1:AA:1460:C:C4	1:AA:1461:G:C5	3.07	0.43
22:DA:2682:A:O2'	22:DA:2683:C:O4'	2.37	0.43
22:DA:2093:G:C4'	29:DH:24:GLY:HA3	2.49	0.43
37:DP:50:ARG:HB3	37:DP:56:SER:HB3	1.99	0.43
1:AA:748:G:C6	1:AA:749:A:C5	3.07	0.43
22:BA:947:A:H2'	22:BA:948:C:C6	2.54	0.43
24:DC:93:VAL:HG12	24:DC:101:ARG:N	2.34	0.43
1:CA:267:C:C2'	1:CA:268:U:O5'	2.66	0.43
40:BS:72:THR:HG21	40:BS:108:SER:OG	2.19	0.43
22:BA:2887:A:C5'	22:BA:2888:C:OP2	2.63	0.43
1:CA:1525:G:OP1	21:CU:37:TYR:CD1	2.71	0.43
7:CG:74:VAL:HG12	7:CG:143:MET:HB2	2.00	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
12:AL:94:TYR:CD2	12:AL:94:TYR:N	2.87	0.43
22:BA:229:C:C2'	22:BA:230:G:O5'	2.67	0.43
22:BA:1071:G:C4	22:BA:1089:A:C6	3.06	0.43
8:CH:11:THR:HG22	8:CH:14:ARG:CZ	2.49	0.43
22:DA:2848:G:H1'	22:DA:2849:U:H5	1.83	0.43
5:AE:109:ALA:O	5:AE:110:MET:CG	2.61	0.43
28:DG:10:VAL:HG21	28:DG:44:HIS:HE1	1.84	0.43
1:AA:603:U:C6	1:AA:603:U:C3'	3.01	0.43
29:DH:94:ILE:HD12	29:DH:98:ASP:OD1	2.19	0.43
24:BC:236:GLY:O	24:BC:237:ARG:HB2	2.19	0.43
1:AA:761:G:C4	1:AA:762:U:C5	3.07	0.43
36:BO:105:ALA:O	36:BO:106:LEU:CB	2.61	0.43
1:CA:1028:C:H2'	1:CA:1029:U:H5'	2.01	0.43
22:DA:2415:G:C4	22:DA:2416:C:C6	3.06	0.43
31:BJ:141:ASP:HB3	31:BJ:142:ILE:H	1.42	0.43
22:DA:1733:G:C2	22:DA:1734:G:C8	3.07	0.43
38:DQ:38:VAL:O	38:DQ:42:GLY:N	2.52	0.43
22:BA:659:G:H21	26:BE:30:GLN:NE2	2.16	0.43
33:BL:81:ASP:O	33:BL:82:LEU:HB3	2.18	0.43
22:DA:2076:U:H5''	22:DA:2238:G:H22	1.84	0.43
1:CA:106:C:O2'	1:CA:107:G:H5'	2.19	0.43
15:CO:34:GLN:O	15:CO:38:LEU:HB2	2.19	0.43
22:BA:958:U:H5'	34:BM:14:LYS:NZ	2.33	0.43
22:BA:2491:U:H5''	22:BA:2570:G:H5''	1.99	0.43
12:CL:46:SER:O	12:CL:47:ALA:HB2	2.19	0.43
1:AA:647:C:O2'	1:AA:648:A:H5'	2.18	0.43
22:BA:1847:A:C2'	22:BA:1847:A:N3	2.81	0.43
22:BA:443:A:H2	22:BA:1245:G:N3	2.17	0.43
1:AA:1405:G:H1'	1:AA:1519:A:O4'	2.18	0.43
22:BA:125:A:C6	50:B2:10:LEU:HD13	2.54	0.43
9:CI:5:TYR:O	9:CI:19:PHE:HA	2.18	0.43
22:DA:1042:G:C5	22:DA:1043:C:C4	3.06	0.43
22:BA:236:C:O2'	22:BA:237:C:H5'	2.18	0.43
22:DA:391:A:C2	22:DA:411:G:C5	3.07	0.43
22:BA:919:U:C4	22:BA:920:A:N7	2.87	0.43
22:DA:2677:G:C4	22:DA:2731:G:N2	2.86	0.43
1:AA:777:A:H2'	1:AA:778:G:H8	1.83	0.43
15:CO:9:LYS:O	15:CO:13:GLU:OE2	2.36	0.43
31:DJ:104:ALA:O	31:DJ:108:MET:HG3	2.18	0.43
49:B1:42:VAL:HG12	49:B1:44:GLN:HB2	2.01	0.43
22:BA:768:G:C5	22:BA:769:U:C5	3.07	0.43
7:AG:43:TYR:O	7:AG:47:GLU:HB2	2.19	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
39:DR:72:VAL:HG23	39:DR:72:VAL:O	2.18	0.43
22:DA:2603:G:H4'	22:DA:2603:G:OP2	2.19	0.43
1:AA:1086:U:O2'	1:AA:1087:G:H5'	2.19	0.43
29:BH:34:GLY:O	29:BH:35:LYS:HG3	2.19	0.43
1:AA:540:G:H2'	1:AA:541:G:O4'	2.18	0.43
44:BW:41:GLY:C	44:BW:43:LYS:N	2.68	0.43
2:AB:199:ILE:O	2:AB:200:PRO:O	2.37	0.43
2:AB:70:GLY:O	2:AB:92:ASN:HA	2.19	0.43
14:CN:54:SER:O	14:CN:55:SER:HB2	2.19	0.43
19:CS:54:ARG:HG2	19:CS:55:GLN:N	2.32	0.43
22:DA:2331:G:C2	22:DA:2385:C:C4	3.07	0.43
44:DW:18:LYS:CD	44:DW:19:ARG:HG2	2.47	0.43
22:DA:2448:A:H61	33:DL:36:LYS:HZ1	1.66	0.43
32:BK:10:VAL:CG2	32:BK:16:ALA:HB1	2.49	0.43
24:DC:128:THR:CG2	24:DC:188:ARG:HB3	2.28	0.43
22:DA:1236:G:O2'	22:DA:1237:A:C8	2.72	0.43
1:AA:410:G:C2	1:AA:429:U:C2	3.06	0.43
1:AA:784:A:H2'	1:AA:785:G:H8	1.84	0.43
1:AA:976:G:OP1	14:AN:70:HIS:ND1	2.52	0.43
5:CE:98:ALA:O	5:CE:121:ASN:HB2	2.18	0.43
22:DA:1663:G:C2	22:DA:1998:A:C5	3.07	0.43
46:DY:50:VAL:C	46:DY:52:ARG:H	2.22	0.43
22:DA:2069:G:N2	22:DA:2443:C:C2	2.87	0.43
1:AA:1145:A:HO2'	1:AA:1146:A:P	2.41	0.43
35:DN:114:GLU:HG2	35:DN:115:LEU:N	2.34	0.43
1:CA:523:A:C2	1:CA:527:G:O6	2.72	0.43
22:DA:915:C:H6	22:DA:915:C:H5''	1.84	0.43
1:AA:69:G:N3	1:AA:69:G:H2'	2.34	0.43
8:CH:29:SER:O	8:CH:31:LEU:N	2.51	0.43
1:AA:1157:A:C6	1:AA:1180:A:C6	3.07	0.43
22:BA:62:U:H4'	22:BA:63:A:OP1	2.19	0.43
22:BA:63:A:O2'	22:BA:64:A:H5'	2.19	0.43
22:DA:1757:A:N1	22:DA:1762:A:C2	2.87	0.43
37:BP:59:THR:OG1	37:BP:72:VAL:HG12	2.18	0.43
37:BP:67:GLU:CG	37:BP:68:GLY:H	2.32	0.43
3:CC:53:ARG:HB2	3:CC:53:ARG:HH11	1.84	0.43
22:DA:1255:U:H6	22:DA:1255:U:H2'	1.56	0.43
8:AH:95:MET:SD	8:AH:129:ALA:HB1	2.59	0.43
24:BC:132:ARG:O	24:BC:132:ARG:HD3	2.19	0.43
31:BJ:25:LEU:HD22	31:BJ:26:GLY:N	2.34	0.43
31:BJ:26:GLY:HA2	31:BJ:29:ALA:CB	2.49	0.43
1:CA:1306:A:N6	1:CA:1331:G:H1'	2.34	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:BA:1414:C:C5	22:BA:1415:U:H5	2.36	0.43
41:BT:70:HIS:HB2	41:BT:73:ARG:C	2.39	0.43
22:DA:1609:A:N3	22:DA:1616:A:O4'	2.51	0.43
22:DA:42:A:C2	22:DA:438:G:C2	3.07	0.43
27:DF:31:GLU:HA	27:DF:95:MET:HE1	2.01	0.43
43:BV:77:VAL:CG2	43:BV:86:LEU:HD22	2.48	0.43
50:D2:27:GLY:O	50:D2:30:VAL:HB	2.18	0.43
1:CA:1026:G:O6	1:CA:1035:A:N1	2.52	0.43
10:AJ:80:THR:O	10:AJ:83:THR:N	2.52	0.43
10:CJ:66:GLU:CG	14:CN:100:TRP:HZ3	2.31	0.43
1:CA:1347:G:N2	1:CA:1373:G:H2'	2.33	0.43
29:DH:40:THR:O	29:DH:41:LYS:HB2	2.18	0.43
31:DJ:80:HIS:O	31:DJ:81:ILE:C	2.57	0.43
1:CA:890:G:O2'	1:CA:906:A:N6	2.52	0.43
36:BO:67:ASN:O	36:BO:68:LYS:C	2.57	0.43
22:BA:418:C:H2'	22:BA:419:U:C6	2.53	0.43
32:DK:108:ARG:CA	32:DK:116:ILE:HD13	2.49	0.43
22:DA:743:A:O2'	22:DA:744:U:H5'	2.19	0.43
1:AA:1025:U:H5''	1:AA:1026:G:H5'	2.00	0.43
1:CA:71:A:C5	1:CA:100:G:C5	3.07	0.43
1:CA:65:A:H2'	1:CA:382:A:H61	1.83	0.43
26:DE:153:LEU:HD22	26:DE:158:PHE:HD2	1.84	0.43
22:DA:590:A:H2'	22:DA:591:U:C6	2.50	0.43
14:CN:27:LYS:O	14:CN:45:LEU:HD21	2.18	0.43
1:CA:1270:G:O2'	1:CA:1314:C:H5'	2.18	0.43
22:DA:153:U:O2'	22:DA:154:U:H5'	2.18	0.43
1:AA:914:A:H2'	1:AA:915:A:C8	2.53	0.43
38:BQ:111:LYS:HE3	39:BR:50:GLY:HA2	2.00	0.43
1:AA:693:G:C2'	1:AA:694:A:H5'	2.49	0.43
12:CL:84:GLY:H	12:CL:94:TYR:HA	1.84	0.43
22:BA:986:C:C2'	22:BA:987:C:H5'	2.49	0.43
1:AA:687:A:N7	1:AA:701:U:H5	2.16	0.43
25:BD:16:THR:HG23	25:BD:18:ASP:OD1	2.19	0.43
9:CI:4:GLN:HE21	9:CI:4:GLN:HB3	1.61	0.43
1:CA:301:G:H2'	1:CA:302:G:C8	2.54	0.43
22:DA:1637:A:H5'	22:DA:1760:C:O2'	2.19	0.43
47:BZ:20:LYS:O	47:BZ:22:THR:N	2.52	0.43
22:DA:1014:A:O2'	22:DA:1015:U:H5'	2.18	0.43
1:AA:39:G:H2'	1:AA:40:C:H6	1.84	0.43
13:AM:71:GLU:O	13:AM:74:MET:HB3	2.18	0.43
39:BR:58:VAL:HG13	39:BR:102:SER:HB2	2.00	0.43
22:BA:2038:G:H2'	22:BA:2039:U:O4'	2.18	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:BA:1838:C:H4'	22:BA:1839:G:C8	2.54	0.43
22:BA:1840:G:C2	22:BA:1841:U:C2	3.07	0.43
22:BA:2335:A:N6	22:BA:2337:G:H1'	2.33	0.43
31:BJ:69:ARG:O	31:BJ:89:PHE:HB3	2.19	0.43
22:BA:1097:U:H3'	22:BA:1098:A:H4'	2.01	0.43
45:DX:15:ASN:C	45:DX:26:ARG:HG2	2.39	0.43
38:DQ:86:SER:O	38:DQ:87:VAL:C	2.58	0.43
22:DA:447:A:C2	22:DA:454:A:C8	3.07	0.43
1:CA:1320:C:H41	19:CS:36:ARG:HG3	1.84	0.43
22:DA:2331:G:C2'	22:DA:2332:C:O5'	2.67	0.43
22:DA:250:G:OP1	33:DL:59:ARG:NH1	2.52	0.43
22:DA:944:C:H5'	22:DA:945:A:C5'	2.49	0.43
32:BK:10:VAL:HG21	32:BK:16:ALA:HB1	2.00	0.43
22:DA:1396:U:C2'	22:DA:1397:U:OP1	2.67	0.43
1:AA:1073:U:O2'	2:AB:102:ASN:ND2	2.52	0.43
1:AA:844:G:H2'	1:AA:844:G:N3	2.34	0.43
22:DA:1091:G:O2'	22:DA:1092:C:H5'	2.19	0.43
22:DA:1095:A:N1	22:DA:1096:A:N6	2.66	0.43
5:CE:104:ILE:N	5:CE:122:VAL:H	2.05	0.43
22:DA:126:A:P	50:D2:19:ARG:HG3	2.59	0.43
22:DA:49:A:C6	22:DA:118:A:C6	3.06	0.43
28:DG:88:LEU:HG	28:DG:128:THR:O	2.18	0.43
10:CJ:44:THR:HG22	10:CJ:45:ARG:N	2.28	0.43
27:BF:172:PHE:O	27:BF:173:ASP:C	2.56	0.43
1:CA:410:G:P	4:CD:25:ARG:HD2	2.59	0.43
22:DA:871:U:OP1	34:DM:4:PRO:HA	2.19	0.43
22:DA:616:A:O2'	22:DA:617:G:O5'	2.37	0.43
22:DA:656:G:H2'	22:DA:657:U:O4'	2.18	0.43
24:BC:90:ILE:HD12	24:BC:103:ILE:O	2.19	0.43
30:BI:33:ASN:HB3	30:BI:36:GLU:HB2	2.01	0.43
32:DK:45:GLU:O	32:DK:54:LYS:HE3	2.19	0.43
21:CU:35:GLU:OE2	21:CU:35:GLU:CA	2.64	0.43
22:DA:2200:C:O2	22:DA:2226:C:N4	2.52	0.43
41:DT:37:ASP:O	41:DT:38:ALA:O	2.36	0.43
22:DA:2615:U:H2'	22:DA:2616:C:C5	2.54	0.43
22:DA:531:C:H5''	22:DA:532:A:N7	2.34	0.43
35:DN:35:LYS:HD3	35:DN:112:TYR:CZ	2.54	0.43
2:AB:32:GLY:HA3	2:AB:39:ILE:CB	2.49	0.43
1:CA:728:A:C6	1:CA:729:A:N6	2.87	0.43
22:BA:2415:G:C4'	33:BL:66:PHE:HB2	2.44	0.43
22:BA:1873:G:N2	22:BA:1874:C:C2	2.87	0.43
26:DE:175:ILE:O	26:DE:175:ILE:HG23	2.18	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
45:BX:76:LYS:O	45:BX:77:TYR:O	2.37	0.43
22:BA:2755:C:HO2'	22:BA:2756:U:H2'	1.82	0.43
22:DA:1633:G:C6	22:DA:1635:A:C5	3.07	0.43
33:DL:108:ALA:HB3	33:DL:125:LEU:HD22	2.00	0.43
1:AA:988:G:O6	1:AA:989:U:C4	2.72	0.43
1:CA:1048:G:H21	1:CA:1214:C:H5	1.66	0.43
1:AA:723:U:H5''	21:AU:48:LYS:HG2	2.01	0.43
22:DA:1512:C:H2'	22:DA:1513:U:O4'	2.19	0.43
7:AG:112:ASP:HB2	7:AG:118:ARG:CG	2.49	0.43
1:AA:1323:G:N2	1:AA:1324:A:C2	2.87	0.43
1:AA:80:A:C2	1:AA:81:A:H1'	2.54	0.43
22:BA:44:A:H2'	22:BA:45:G:O4'	2.18	0.43
22:BA:1738:G:HO2'	22:BA:1739:A:P	2.39	0.43
4:AD:48:SER:O	4:AD:52:VAL:HG13	2.18	0.43
1:AA:1343:G:H2'	1:AA:1344:C:C6	2.54	0.43
9:AI:38:PHE:HA	9:AI:41:GLU:OE1	2.19	0.43
22:BA:418:C:H2'	22:BA:419:U:O4'	2.19	0.43
22:DA:1480:C:C4	22:DA:1481:U:C5	3.07	0.43
15:CO:42:PHE:O	15:CO:46:LYS:HG2	2.19	0.43
11:CK:64:VAL:O	11:CK:68:ARG:HB2	2.18	0.43
22:DA:2568:U:H2'	22:DA:2569:G:O4'	2.19	0.43
42:BU:2:ALA:HB3	42:BU:5:ARG:HH21	1.84	0.43
11:CK:19:VAL:HG22	11:CK:82:GLU:HG2	2.01	0.43
22:BA:1858:A:O2'	22:BA:1859:U:C5'	2.67	0.43
22:DA:1408:G:H2'	22:DA:1409:U:C6	2.54	0.43
1:CA:1190:G:HO2'	1:CA:1191:A:P	2.41	0.43
1:AA:862:C:H2'	1:AA:863:U:H5'	2.01	0.43
22:DA:2701:U:H3'	22:DA:2702:G:H5''	2.00	0.43
16:AP:48:GLU:CG	16:AP:49:GLY:N	2.82	0.43
22:DA:544:C:N4	22:DA:545:U:H3	2.16	0.43
19:AS:62:THR:CG2	19:AS:63:ASP:N	2.82	0.43
15:CO:26:VAL:HG12	15:CO:27:GLN:N	2.34	0.43
1:AA:1327:C:C2'	1:AA:1328:C:H5'	2.48	0.43
22:DA:924:G:C2'	22:DA:925:A:H5'	2.49	0.43
9:CI:4:GLN:C	9:CI:5:TYR:HD2	2.22	0.43
22:DA:1997:C:P	25:DD:129:THR:HG1	2.41	0.43
22:BA:1576:U:C2'	22:BA:1577:C:H5'	2.49	0.43
22:DA:2253:G:C5	22:DA:2254:C:C5	3.07	0.43
22:BA:1005:C:O2	22:BA:1005:C:H2'	2.18	0.43
33:DL:85:VAL:O	33:DL:85:VAL:HG22	2.18	0.43
22:DA:1484:U:H6	22:DA:1484:U:O5'	2.02	0.43
4:AD:104:MET:HB3	4:AD:106:PHE:CE2	2.53	0.43

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:2677:G:H2'	22:DA:2678:C:H6	1.84	0.43
24:DC:44:ASN:C	24:DC:46:GLY:H	2.21	0.43
22:BA:2071:A:H2'	22:BA:2072:C:C6	2.53	0.43
22:BA:2694:G:C5	22:BA:2695:U:C4	3.07	0.43
22:BA:1261:C:C2'	22:BA:1262:A:O5'	2.67	0.43
1:AA:555:U:H2'	1:AA:556:C:C6	2.54	0.43
33:DL:136:GLU:HG3	33:DL:140:GLY:O	2.19	0.43
10:AJ:78:GLU:HA	10:AJ:79:PRO:HD2	1.87	0.43
22:BA:1638:C:H1'	22:BA:2698:U:O2'	2.18	0.43
22:BA:857:G:H2'	22:BA:858:G:O4'	2.19	0.43
22:BA:1581:G:C6	22:BA:1582:C:C4	3.07	0.43
22:DA:832:U:OP1	33:DL:39:LYS:N	2.43	0.43
22:DA:929:U:O2'	22:DA:930:G:H5'	2.18	0.43
28:BG:171:LYS:HD3	28:BG:171:LYS:HA	1.78	0.43
29:DH:96:THR:HA	29:DH:113:SER:OG	2.19	0.43
38:BQ:94:LEU:O	38:BQ:96:ASP:N	2.50	0.42
37:BP:50:ARG:HG2	37:BP:57:ALA:CA	2.49	0.42
27:BF:56:LEU:HA	27:BF:56:LEU:HD23	1.71	0.42
39:DR:4:VAL:HA	39:DR:12:HIS:O	2.18	0.42
6:AF:25:TYR:CE1	6:AF:78:PHE:HE2	2.37	0.42
44:BW:50:VAL:HB	44:BW:61:LYS:HZ1	1.84	0.42
2:AB:173:LYS:O	2:AB:176:ASN:HB2	2.19	0.42
38:DQ:4:LYS:HZ1	38:DQ:6:GLY:HA3	1.81	0.42
13:CM:19:THR:HA	13:CM:25:GLY:O	2.19	0.42
1:CA:259:G:O2'	1:CA:260:G:H5'	2.19	0.42
14:AN:65:GLN:HG3	14:AN:78:LEU:HD21	2.01	0.42
22:DA:1079:C:N3	22:DA:1088:A:C2	2.87	0.42
35:DN:96:ARG:HB2	35:DN:96:ARG:CZ	2.48	0.42
30:DI:44:LYS:O	30:DI:48:ILE:HG12	2.19	0.42
22:BA:262:A:H2'	22:BA:263:G:H5'	2.00	0.42
26:BE:196:VAL:O	26:BE:197:GLU:C	2.57	0.42
22:DA:287:G:C2'	22:DA:288:U:H5'	2.49	0.42
22:DA:351:C:C2	22:DA:352:A:N7	2.87	0.42
22:DA:803:U:H2'	22:DA:804:A:H5'	2.00	0.42
22:DA:241:A:C8	22:DA:243:U:N3	2.87	0.42
32:DK:39:ILE:HB	32:DK:41:ILE:CD1	2.49	0.42
24:BC:80:LEU:CD1	24:BC:109:LEU:HG	2.47	0.42
25:BD:159:LYS:HZ2	25:BD:160:LYS:H	1.67	0.42
3:AC:119:ILE:CG2	3:AC:197:VAL:HG11	2.46	0.42
22:BA:141:G:H5'	22:BA:142:A:C5	2.54	0.42
1:AA:74:A:C2	1:AA:97:G:C6	3.07	0.42
1:AA:98:A:H2'	1:AA:99:C:H6	1.84	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:1299:G:H5''	22:DA:1300:G:H5''	2.00	0.42
22:DA:2199:A:C6	22:DA:2200:C:C2	3.07	0.42
36:BO:49:VAL:HG21	36:BO:82:ALA:CA	2.41	0.42
22:BA:1812:U:H2'	22:BA:1813:G:C8	2.54	0.42
31:DJ:75:TYR:CD1	31:DJ:84:ILE:HD11	2.54	0.42
22:BA:2286:G:O6	49:B1:22:THR:HG21	2.19	0.42
1:CA:215:C:H2'	1:CA:216:U:O4'	2.19	0.42
1:CA:198:G:O6	1:CA:220:G:C2	2.72	0.42
45:DX:3:VAL:C	45:DX:5:GLN:N	2.73	0.42
29:BH:96:THR:HG23	29:BH:96:THR:O	2.19	0.42
22:BA:2417:C:C2	22:BA:2418:A:C8	3.07	0.42
28:DG:28:LYS:H	28:DG:79:THR:HG22	1.83	0.42
1:AA:1386:G:H2'	1:AA:1387:G:C8	2.52	0.42
1:AA:945:G:C6	1:AA:1337:G:C5	3.06	0.42
1:CA:765:G:O6	1:CA:812:G:C8	2.72	0.42
30:DI:109:ALA:HB1	30:DI:125:THR:HA	2.00	0.42
9:CI:61:ASP:O	9:CI:62:LEU:HD22	2.19	0.42
28:DG:120:ILE:O	28:DG:120:ILE:HG23	2.19	0.42
1:CA:490:C:OP1	4:CD:145:ARG:NH2	2.52	0.42
37:BP:47:ILE:HA	37:BP:96:LEU:HB2	2.00	0.42
41:BT:30:ILE:O	41:BT:85:VAL:HB	2.19	0.42
27:BF:5:ASP:O	27:BF:8:LYS:N	2.52	0.42
23:DB:100:G:H2'	23:DB:101:A:C8	2.54	0.42
22:DA:2638:G:C2'	22:DA:2639:A:OP2	2.66	0.42
26:BE:61:ARG:HH11	26:BE:64:GLY:HA3	1.80	0.42
18:CR:23:LYS:H	18:CR:23:LYS:HG2	1.67	0.42
22:DA:2009:A:N6	56:DA:3385:HOH:O	2.52	0.42
31:DJ:81:ILE:HG22	31:DJ:82:GLY:N	2.34	0.42
12:CL:9:LYS:HB2	12:CL:9:LYS:HE2	1.81	0.42
22:BA:116:C:H2'	22:BA:117:G:O4'	2.19	0.42
1:AA:263:A:P	20:AT:73:ARG:HH11	2.42	0.42
22:DA:64:A:H8	22:DA:64:A:O5'	2.02	0.42
27:DF:90:LEU:HG	27:DF:98:PHE:CE2	2.53	0.42
22:DA:716:A:H2'	22:DA:717:C:O4'	2.19	0.42
29:BH:16:GLY:C	29:BH:51:ARG:HH21	2.22	0.42
28:BG:93:TYR:HD2	28:BG:93:TYR:HA	1.63	0.42
21:AU:23:GLU:HB3	21:AU:24:LYS:H	1.55	0.42
1:AA:903:G:C6	1:AA:904:U:C4	3.07	0.42
1:AA:903:G:C4	1:AA:904:U:C5	3.08	0.42
5:CE:88:HIS:CE1	5:CE:89:THR:HG23	2.54	0.42
45:DX:76:LYS:HG3	45:DX:77:TYR:N	2.33	0.42
22:DA:2624:G:H2'	22:DA:2625:G:O4'	2.19	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:544:C:C4	22:DA:545:U:N3	2.86	0.42
37:DP:103:THR:O	37:DP:106:ALA:HB3	2.19	0.42
33:DL:103:ILE:HD13	33:DL:104:GLN:NE2	2.34	0.42
1:CA:751:U:H4'	15:CO:23:SER:HA	2.01	0.42
1:AA:290:C:H2'	1:AA:291:U:C5'	2.49	0.42
1:AA:880:C:C2'	1:AA:881:G:H5'	2.49	0.42
18:CR:39:VAL:HA	18:CR:40:PRO:HD3	1.89	0.42
1:CA:695:A:N1	1:CA:696:A:C2	2.87	0.42
1:AA:874:G:C6	1:AA:875:U:C4	3.07	0.42
24:BC:180:MET:HG3	24:BC:268:ARG:HH11	1.83	0.42
22:BA:2480:C:H2'	22:BA:2481:G:H5'	2.01	0.42
1:AA:935:A:H2'	1:AA:936:C:H6	1.84	0.42
24:BC:39:SER:C	24:BC:41:GLY:N	2.72	0.42
40:BS:54:ALA:O	40:BS:57:ASN:HB2	2.19	0.42
22:BA:1839:G:C4	22:BA:1840:G:C8	3.07	0.42
25:BD:137:SER:O	25:BD:138:LEU:HB2	2.18	0.42
4:CD:123:MET:CE	4:CD:126:GLY:O	2.67	0.42
22:BA:2018:G:H2'	22:BA:2019:A:O4'	2.19	0.42
22:DA:2784:U:C4	22:DA:2785:C:N4	2.87	0.42
1:AA:303:A:H2'	1:AA:304:U:O4'	2.19	0.42
22:DA:1365:A:H3'	22:DA:1366:A:C8	2.54	0.42
22:DA:282:A:C6	22:DA:283:G:C5	3.07	0.42
3:AC:61:LYS:HA	3:AC:61:LYS:HD2	1.89	0.42
38:BQ:53:LYS:H	38:BQ:53:LYS:HG2	1.60	0.42
22:BA:1061:U:O4'	30:BI:9:LYS:HD2	2.20	0.42
22:BA:1070:A:C6	30:BI:9:LYS:O	2.72	0.42
6:AF:38:ARG:O	6:AF:39:LEU:HB2	2.19	0.42
44:BW:36:ILE:O	44:BW:39:GLN:CD	2.57	0.42
22:DA:447:A:N1	22:DA:454:A:H2'	2.33	0.42
24:DC:269:ARG:HA	24:DC:269:ARG:HE	1.84	0.42
1:CA:1221:G:C2	1:CA:1222:G:H1'	2.53	0.42
22:DA:1438:U:H5''	56:DA:3643:HOH:O	2.20	0.42
22:DA:1555:G:H2'	22:DA:1556:C:C5	2.54	0.42
22:DA:2320:U:H1'	22:DA:2333:A:H62	1.84	0.42
20:AT:26:MET:HE1	20:AT:56:ILE:HD11	1.99	0.42
20:AT:56:ILE:CG2	20:AT:57:VAL:N	2.81	0.42
1:AA:1128:C:O2'	1:AA:1129:C:H5'	2.18	0.42
32:BK:47:ILE:HG13	32:BK:48:PRO:CD	2.49	0.42
22:DA:417:C:H2'	22:DA:418:C:H6	1.83	0.42
1:AA:485:U:O2'	1:AA:486:U:P	2.77	0.42
22:DA:1395:A:H4'	22:DA:1397:U:C5	2.53	0.42
22:DA:1338:G:O2'	41:DT:18:GLU:HG3	2.19	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
38:DQ:64:ILE:HD12	38:DQ:95:ALA:HB3	2.00	0.42
38:DQ:91:ARG:CZ	39:DR:11:GLN:H	2.32	0.42
1:AA:255:G:H4'	17:AQ:18:LYS:CE	2.49	0.42
22:BA:243:U:O2'	22:BA:244:A:H5'	2.18	0.42
31:DJ:24:THR:O	31:DJ:25:LEU:HB3	2.18	0.42
22:DA:607:U:C3'	22:DA:607:U:C6	3.02	0.42
22:DA:656:G:H2'	22:DA:657:U:C6	2.54	0.42
1:CA:238:A:C2'	1:CA:239:U:H5''	2.47	0.42
22:DA:1050:A:O2'	22:DA:1051:G:H5'	2.19	0.42
37:DP:52:ARG:O	37:DP:55:HIS:HB2	2.18	0.42
24:DC:76:VAL:HG12	24:DC:114:GLN:HG3	2.01	0.42
17:CQ:19:SER:CB	17:CQ:70:LYS:HZ2	2.32	0.42
7:CG:99:ALA:HB3	7:CG:100:MET:HE2	2.01	0.42
1:CA:1213:A:C8	1:CA:1215:G:N7	2.87	0.42
1:CA:451:A:C4'	1:CA:452:A:O5'	2.57	0.42
5:AE:24:VAL:O	5:AE:25:LYS:C	2.57	0.42
22:DA:922:C:H2'	22:DA:923:G:C8	2.54	0.42
25:BD:114:LYS:H	25:BD:114:LYS:HG3	1.48	0.42
22:BA:2723:C:H6	22:BA:2723:C:O5'	2.02	0.42
22:DA:2054:A:C2	22:DA:2616:C:N3	2.87	0.42
1:AA:1003:G:C6	1:AA:1036:A:N6	2.87	0.42
22:BA:2286:G:H4'	22:BA:2287:A:O4'	2.19	0.42
33:DL:70:LYS:O	33:DL:70:LYS:HG2	2.19	0.42
22:BA:1187:G:HO2'	22:BA:1188:U:H6	1.65	0.42
8:CH:11:THR:HG22	8:CH:14:ARG:NH2	2.33	0.42
22:DA:2738:A:C2	22:DA:2739:U:C2	3.08	0.42
22:DA:1283:G:N1	22:DA:1286:A:OP2	2.52	0.42
27:BF:40:GLY:C	27:BF:84:ILE:HD11	2.40	0.42
22:DA:768:G:O2'	22:DA:769:U:H5'	2.19	0.42
40:DS:28:LYS:O	40:DS:29:VAL:HG23	2.19	0.42
35:BN:73:ASN:ND2	35:BN:76:VAL:HG11	2.32	0.42
22:BA:2320:U:H5'	22:BA:2321:U:C5	2.55	0.42
25:DD:89:GLU:HG2	25:DD:94:GLN:HE22	1.83	0.42
22:DA:1856:U:H2'	22:DA:1857:G:O5'	2.18	0.42
22:BA:1358:G:N7	56:BA:3402:HOH:O	2.37	0.42
32:BK:63:VAL:HG13	32:BK:103:VAL:HG12	2.01	0.42
17:AQ:55:GLY:HA3	17:AQ:82:VAL:CG1	2.46	0.42
29:DH:147:VAL:O	29:DH:148:ALA:HB3	2.19	0.42
1:CA:142:G:N2	1:CA:143:A:H1'	2.34	0.42
22:BA:1906:G:C2'	22:BA:1907:G:O5'	2.68	0.42
17:AQ:7:LEU:HD23	17:AQ:24:ILE:HD13	1.97	0.42
30:DI:112:LYS:O	30:DI:113:ALA:HB2	2.18	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
30:DI:124:MET:O	30:DI:127:SER:HB2	2.18	0.42
22:DA:1308:A:N7	22:DA:1309:G:C5	2.87	0.42
15:AO:69:LEU:HD21	15:AO:76:ARG:HB2	2.01	0.42
37:BP:96:LEU:HD12	37:BP:96:LEU:HA	1.76	0.42
28:BG:139:VAL:O	28:BG:140:ILE:C	2.57	0.42
1:CA:1051:C:O2'	1:CA:1052:U:C6	2.66	0.42
1:AA:865:A:C5	1:AA:866:C:C5	3.06	0.42
1:CA:68:G:H5'	1:CA:171:A:C1'	2.49	0.42
1:CA:807:A:H2'	1:CA:808:C:C6	2.54	0.42
4:AD:53:GLN:HE21	4:AD:202:LEU:CA	2.31	0.42
1:AA:1346:A:C4	1:AA:1348:U:C4	3.07	0.42
22:BA:1028:A:H61	22:BA:1125:G:H2'	1.80	0.42
34:BM:8:LYS:HD2	34:BM:8:LYS:HA	1.65	0.42
30:DI:22:PRO:HB2	30:DI:23:VAL:H	1.61	0.42
22:DA:370:G:N1	22:DA:424:G:N7	2.66	0.42
10:AJ:35:GLN:CG	10:AJ:77:VAL:HB	2.49	0.42
16:CP:44:SER:H	16:CP:46:LYS:HZ2	1.66	0.42
1:AA:725:G:H2'	1:AA:726:C:C6	2.54	0.42
1:AA:903:G:C5	1:AA:904:U:C4	3.06	0.42
22:BA:1434:A:H2'	22:BA:1435:G:H8	1.84	0.42
1:CA:295:C:C4	1:CA:296:U:C5	3.07	0.42
37:DP:105:LYS:HA	37:DP:108:ARG:NE	2.33	0.42
20:CT:54:GLN:N	20:CT:55:PRO:CD	2.82	0.42
1:AA:1081:A:OP1	5:AE:20:VAL:HG23	2.19	0.42
22:BA:591:U:H1'	51:B3:1:PRO:H3	1.84	0.42
18:CR:39:VAL:HG13	18:CR:40:PRO:HD2	2.01	0.42
4:CD:149:LYS:HZ2	4:CD:176:LYS:NZ	2.17	0.42
4:CD:149:LYS:HZ1	4:CD:176:LYS:HD2	1.85	0.42
1:AA:11:G:C6	1:AA:12:U:C4	3.07	0.42
39:DR:21:ARG:HB2	39:DR:93:PHE:CD1	2.53	0.42
1:AA:937:A:C2	1:AA:1379:G:O6	2.72	0.42
40:BS:28:LYS:O	40:BS:29:VAL:C	2.58	0.42
1:CA:1460:C:N4	1:CA:1461:G:C5	2.87	0.42
22:BA:149:A:H2'	22:BA:150:U:C6	2.53	0.42
6:CF:72:ASP:OD1	6:CF:72:ASP:N	2.52	0.42
24:BC:209:ALA:HA	24:BC:212:TRP:NE1	2.35	0.42
1:AA:949:A:C6	1:AA:950:U:C4	3.07	0.42
27:DF:176:PHE:HB3	27:DF:177:ARG:H	1.72	0.42
6:AF:67:PRO:C	6:AF:69:GLU:H	2.22	0.42
22:BA:818:G:H5'	22:BA:839:U:OP1	2.19	0.42
48:B0:22:THR:HG22	48:B0:23:ALA:O	2.19	0.42
22:BA:2422:C:H5'	22:BA:2423:U:OP2	2.19	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
24:BC:142:ASN:O	24:BC:142:ASN:CG	2.58	0.42
45:BX:73:ARG:O	45:BX:73:ARG:HG3	2.19	0.42
1:AA:1137:C:O2	1:AA:1137:C:O4'	2.37	0.42
3:AC:138:GLN:C	3:AC:140:ALA:H	2.21	0.42
1:AA:148:G:N3	1:AA:1446:A:H2	2.17	0.42
42:BU:85:ARG:HA	42:BU:91:LYS:O	2.19	0.42
12:CL:42:LYS:CG	12:CL:43:LYS:N	2.81	0.42
6:AF:15:SER:C	6:AF:16:GLU:HG3	2.39	0.42
23:DB:65:U:H2'	23:DB:65:U:O2	2.19	0.42
6:AF:62:MET:HG3	6:AF:64:VAL:HG23	1.99	0.42
44:BW:50:VAL:C	44:BW:52:CYS:N	2.73	0.42
22:DA:1248:G:O2'	38:DQ:2:ARG:HA	2.20	0.42
22:BA:271:G:N1	22:BA:367:G:C4	2.87	0.42
20:AT:74:HIS:O	20:AT:78:LEU:HB2	2.19	0.42
24:DC:161:VAL:HG13	24:DC:174:ARG:O	2.18	0.42
1:CA:1408:A:N7	1:CA:1409:C:N4	2.67	0.42
22:DA:1349:C:N3	22:DA:1382:G:O6	2.52	0.42
22:DA:1428:C:H5''	24:DC:27:LYS:NZ	2.33	0.42
22:DA:303:G:N1	22:DA:315:G:C6	2.87	0.42
22:DA:1154:G:O5'	22:DA:1154:G:H8	2.02	0.42
22:DA:1056:G:C5'	22:DA:1085:A:C2	3.02	0.42
22:DA:1075:C:O2'	22:DA:1076:C:H5'	2.19	0.42
1:CA:112:G:C2	1:CA:330:C:C4	3.06	0.42
22:DA:952:G:C6	22:DA:966:G:N1	2.88	0.42
42:DU:44:HIS:O	42:DU:45:GLN:C	2.57	0.42
22:DA:55:G:H2'	22:DA:55:G:N3	2.34	0.42
1:CA:1241:G:C4	1:CA:1242:G:C8	3.07	0.42
1:CA:375:U:C2	1:CA:376:G:C8	3.07	0.42
1:AA:748:G:O6	1:AA:749:A:N6	2.52	0.42
17:CQ:17:GLU:O	17:CQ:18:LYS:HB2	2.19	0.42
22:DA:1475:G:C2'	22:DA:1476:U:OP2	2.67	0.42
22:BA:1085:A:H2'	22:BA:1086:A:C4	2.54	0.42
3:AC:166:TRP:CE3	3:AC:166:TRP:N	2.79	0.42
22:DA:1186:G:H2'	22:DA:1187:G:O4'	2.20	0.42
2:AB:218:ALA:CA	2:AB:221:ARG:HH21	2.32	0.42
21:CU:34:ARG:O	21:CU:35:GLU:O	2.37	0.42
7:CG:140:VAL:C	7:CG:142:ARG:N	2.72	0.42
5:CE:36:THR:HG23	5:CE:62:ALA:HB1	2.00	0.42
22:DA:2615:U:HO2'	22:DA:2616:C:H6	1.66	0.42
1:AA:251:G:H4'	1:AA:252:U:O5'	2.20	0.42
3:CC:18:ASN:HA	3:CC:55:VAL:HG13	2.00	0.42
14:AN:20:PHE:O	14:AN:21:ALA:HB3	2.19	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
31:DJ:73:VAL:CG2	31:DJ:74:TYR:H	2.23	0.42
4:AD:145:ARG:C	4:AD:147:LYS:N	2.71	0.42
1:CA:198:G:O2'	1:CA:199:A:P	2.77	0.42
22:DA:953:G:O2'	22:DA:954:G:H5'	2.19	0.42
22:DA:2620:C:O2'	25:DD:162:ALA:O	2.30	0.42
21:AU:28:LEU:HA	21:AU:28:LEU:HD23	1.80	0.42
29:DH:32:PRO:C	29:DH:34:GLY:H	2.22	0.42
1:CA:183:C:O2'	1:CA:184:G:C5'	2.66	0.42
22:BA:1385:A:N3	22:BA:1386:C:C6	2.87	0.42
22:DA:2574:G:C2	22:DA:2575:C:C2	3.07	0.42
14:CN:20:PHE:HB3	14:CN:24:ALA:HB2	2.01	0.42
40:BS:20:VAL:O	40:BS:23:LEU:HB2	2.19	0.42
47:BZ:13:ILE:CG2	47:BZ:14:GLY:N	2.73	0.42
1:AA:1453:G:HO2'	1:AA:1454:G:P	2.42	0.42
34:BM:49:ALA:O	34:BM:50:ARG:C	2.57	0.42
46:BY:59:GLU:O	46:BY:63:ALA:HB3	2.18	0.42
8:CH:65:PHE:CD2	8:CH:66:GLN:HG2	2.55	0.42
22:BA:1996:C:OP1	32:BK:31:ARG:NE	2.51	0.42
22:DA:1648:U:OP1	56:DA:3399:HOH:O	2.20	0.42
4:CD:84:ASN:OD1	5:CE:101:GLY:HA3	2.19	0.42
24:BC:269:ARG:HA	24:BC:269:ARG:HD3	1.59	0.42
22:DA:1865:U:O2	22:DA:1877:A:C6	2.73	0.42
34:BM:43:ALA:O	34:BM:47:GLU:HB2	2.19	0.42
15:CO:34:GLN:NE2	15:CO:37:HIS:HD2	2.17	0.42
40:DS:40:ASN:OD1	40:DS:41:LYS:N	2.52	0.42
22:BA:2547:A:O2'	22:BA:2548:U:H5'	2.19	0.42
22:DA:2552:U:C2	22:DA:2554:U:C5'	3.01	0.42
1:CA:1097:C:C2	1:CA:1098:C:C5	3.08	0.42
22:DA:752:A:O2'	22:DA:753:A:C8	2.72	0.42
1:AA:4:U:C2'	1:AA:4:U:O2	2.68	0.42
1:AA:1083:U:H5	1:AA:1084:G:C6	2.37	0.42
9:CI:88:GLU:CD	9:CI:88:GLU:N	2.72	0.42
43:BV:9:ARG:HD2	43:BV:40:ILE:O	2.19	0.42
4:AD:87:GLU:O	4:AD:90:LEU:HB2	2.20	0.42
11:AK:91:GLY:HA2	11:AK:94:SER:HB3	2.02	0.42
20:AT:3:ILE:HG13	20:AT:3:ILE:H	1.70	0.42
22:BA:2459:A:H8	22:BA:2459:A:O5'	2.03	0.42
22:BA:2396:G:O2'	22:BA:2397:G:H5'	2.19	0.42
32:BK:49:ARG:HB3	32:BK:50:GLY:H	1.64	0.42
1:AA:1312:G:N7	19:AS:2:ARG:HA	2.33	0.42
29:BH:94:ILE:HG22	29:BH:95:GLY:O	2.19	0.42
22:BA:1773:A:H2'	22:BA:1774:C:H5'	2.00	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:792:A:H4'	1:AA:793:U:O5'	2.19	0.42
33:BL:105:ILE:CG2	33:BL:106:GLU:N	2.82	0.42
34:DM:5:LYS:HA	34:DM:5:LYS:HD2	1.78	0.42
1:AA:504:C:O5'	1:AA:504:C:H6	2.02	0.42
38:BQ:93:ILE:O	38:BQ:96:ASP:HB3	2.19	0.42
22:BA:1073:A:N7	22:BA:1074:G:C8	2.84	0.42
22:BA:1059:G:C2	22:BA:1080:A:N3	2.87	0.42
22:DA:36:G:C6	22:DA:445:C:N4	2.87	0.42
22:DA:1438:U:C2'	22:DA:1439:A:H5'	2.49	0.42
22:DA:2337:G:N3	22:DA:2337:G:C2'	2.81	0.42
22:DA:233:A:O2'	22:DA:234:U:C5'	2.67	0.42
22:DA:1359:A:OP1	22:DA:1360:G:OP2	2.37	0.42
22:DA:2214:C:H2'	22:DA:2215:C:C6	2.54	0.42
35:DN:38:LEU:HB3	35:DN:39:PRO:CD	2.45	0.42
22:DA:335:C:O2'	22:DA:336:C:P	2.77	0.42
1:AA:971:G:H1'	1:AA:1365:G:O2'	2.20	0.42
27:DF:56:LEU:O	27:DF:56:LEU:HD13	2.20	0.42
1:CA:1126:U:O2	1:CA:1281:C:C6	2.72	0.42
24:DC:14:HIS:O	24:DC:203:VAL:HG11	2.19	0.42
22:DA:110:G:H2'	22:DA:110:G:N3	2.34	0.42
52:D4:3:VAL:HB	52:D4:37:GLN:NE2	2.35	0.42
22:DA:675:A:N6	22:DA:676:A:N6	2.68	0.42
2:AB:191:ASP:HA	2:AB:192:PRO:HD2	1.69	0.42
41:BT:19:LYS:H	41:BT:19:LYS:HG3	1.63	0.42
25:BD:158:GLY:O	25:BD:159:LYS:C	2.58	0.42
49:B1:3:GLY:C	49:B1:5:ARG:H	2.22	0.42
1:CA:1084:G:C5	1:CA:1085:U:C4	3.07	0.42
22:BA:2154:A:H2'	22:BA:2155:U:O4'	2.19	0.42
22:BA:2136:G:O6	22:BA:2156:G:C2	2.72	0.42
22:DA:1127:A:O2'	22:DA:1128:G:C5'	2.58	0.42
22:DA:2202:U:H2'	22:DA:2202:U:O2	2.19	0.42
41:DT:38:ALA:C	41:DT:39:THR:HG22	2.39	0.42
5:CE:114:LEU:C	5:CE:116:VAL:H	2.23	0.42
22:BA:1813:G:C2	24:BC:49:THR:CG2	3.01	0.42
1:AA:394:G:H2'	1:AA:395:C:H6	1.85	0.42
3:AC:39:ARG:NE	3:AC:54:ILE:HD11	2.35	0.42
1:AA:36:C:H4'	12:AL:118:VAL:O	2.20	0.42
39:BR:3:ALA:HA	39:BR:40:MET:O	2.18	0.42
25:DD:125:TRP:CD2	25:DD:160:LYS:HB3	2.54	0.42
14:CN:20:PHE:CB	14:CN:24:ALA:HB2	2.49	0.42
11:CK:55:ARG:O	11:CK:56:LYS:C	2.58	0.42
34:BM:83:GLY:O	34:BM:85:GLY:N	2.52	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:570:G:C5	22:DA:2030:A:C5	3.08	0.42
35:BN:69:ARG:HG2	35:BN:69:ARG:H	1.24	0.42
1:AA:1040:U:C2	1:AA:1041:G:C8	3.08	0.42
22:DA:1171:G:C5	22:DA:1179:G:N2	2.87	0.42
24:BC:129:LEU:O	24:BC:134:ILE:HD11	2.20	0.42
46:BY:56:LEU:HA	46:BY:59:GLU:HG2	2.00	0.42
22:BA:1959:G:C2'	22:BA:1960:A:O5'	2.67	0.42
3:CC:187:GLU:O	3:CC:188:ALA:CB	2.67	0.42
22:DA:1865:U:C2'	22:DA:1866:A:H8	2.32	0.42
20:AT:72:ALA:O	20:AT:73:ARG:C	2.57	0.42
33:DL:68:SER:O	33:DL:69:ARG:CB	2.68	0.42
22:DA:425:G:C2	22:DA:426:C:C5	3.08	0.42
22:DA:121:G:C2	22:DA:131:A:C5	3.07	0.42
37:DP:86:LYS:HA	37:DP:86:LYS:NZ	2.33	0.42
26:BE:83:VAL:HG12	26:BE:86:ALA:N	2.35	0.42
2:CB:84:LEU:O	2:CB:84:LEU:CG	2.67	0.42
1:CA:223:A:C4	1:CA:224:U:C5	3.08	0.42
22:DA:862:G:C4	22:DA:863:A:C8	3.07	0.42
7:AG:78:ARG:HA	7:AG:82:SER:O	2.19	0.42
1:CA:1343:G:H4'	9:CI:123:ARG:O	2.18	0.42
13:AM:13:HIS:CG	13:AM:41:ASP:HB2	2.55	0.42
4:AD:138:PRO:HA	4:AD:181:PHE:HD2	1.84	0.42
1:AA:1327:C:O2'	1:AA:1328:C:H5'	2.19	0.42
1:CA:602:A:C2'	1:CA:603:U:H5'	2.50	0.42
1:AA:1480:A:C2	1:AA:1481:U:C2	3.07	0.42
1:CA:386:C:C2'	1:CA:387:U:H5'	2.48	0.42
22:BA:415:A:H61	22:BA:2407:A:N6	2.17	0.42
22:BA:2716:C:C2	22:BA:2717:C:C5	3.08	0.42
22:DA:1353:A:O2'	22:DA:1354:A:H5'	2.19	0.42
15:AO:55:LEU:HA	15:AO:58:MET:HG3	2.02	0.42
22:BA:396:G:H1'	45:BX:28:PHE:HB3	2.01	0.42
22:BA:1001:A:H2'	22:BA:1002:G:O4'	2.19	0.42
24:DC:44:ASN:C	24:DC:46:GLY:N	2.73	0.42
1:CA:944:G:C3'	1:CA:945:G:H5'	2.49	0.42
22:DA:2011:U:H2'	22:DA:2012:G:O4'	2.19	0.42
30:BI:39:LYS:O	30:BI:43:ALA:HB2	2.20	0.42
24:DC:118:GLY:O	24:DC:119:VAL:C	2.57	0.42
1:CA:1438:G:C2	1:CA:1464:U:O2	2.72	0.42
22:DA:2844:G:N2	22:DA:2874:C:N3	2.68	0.42
33:DL:142:ILE:HG22	33:DL:144:GLU:H	1.85	0.42
45:DX:69:GLU:HA	45:DX:72:ALA:HB3	2.01	0.42
26:DE:12:LEU:O	26:DE:13:THR:HB	2.18	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:BA:950:G:C6	22:BA:951:C:C4	3.08	0.42
22:BA:2076:U:O2	22:BA:2076:U:O4'	2.36	0.42
5:CE:17:VAL:HA	5:CE:33:THR:O	2.19	0.42
45:DX:24:THR:O	45:DX:25:LYS:C	2.57	0.42
39:BR:49:ILE:CD1	39:BR:53:PHE:H	2.33	0.42
22:BA:2313:C:H5''	27:BF:87:LYS:HD3	2.01	0.42
39:DR:4:VAL:O	39:DR:38:VAL:HG23	2.20	0.42
6:AF:25:TYR:O	6:AF:29:ILE:HD12	2.20	0.42
6:AF:40:GLU:CB	6:AF:42:TRP:NE1	2.81	0.42
1:CA:1258:G:C2	1:CA:1278:G:N1	2.88	0.42
22:BA:2352:A:C2	44:BW:30:VAL:CG1	2.86	0.42
21:CU:19:LYS:HB2	21:CU:20:ARG:CZ	2.49	0.42
22:DA:455:C:N3	22:DA:473:G:H5'	2.35	0.42
23:DB:27:C:C5	23:DB:28:C:C5	3.08	0.42
2:AB:199:ILE:HA	2:AB:200:PRO:HD2	1.87	0.42
22:BA:558:U:OP2	31:BJ:113:PRO:HG2	2.19	0.42
22:DA:2331:G:H1'	44:DW:40:ARG:HB3	2.01	0.42
22:DA:2335:A:C2	22:DA:2337:G:C8	3.07	0.42
24:DC:115:ILE:HB	24:DC:127:ASN:OD1	2.20	0.42
22:DA:1390:U:O2'	22:DA:1391:U:H5'	2.20	0.42
11:AK:125:LYS:O	21:AU:33:ARG:NH1	2.53	0.42
13:CM:78:ARG:NH2	13:CM:79:LEU:HA	2.34	0.42
22:DA:300:A:H2	22:DA:319:G:N2	2.17	0.42
22:DA:323:C:N4	22:DA:333:G:N7	2.68	0.42
5:AE:120:HIS:C	5:AE:121:ASN:HD22	2.23	0.42
11:CK:70:ALA:HB1	11:CK:104:PHE:CZ	2.55	0.42
22:DA:1056:G:H5''	22:DA:1085:A:C2	2.54	0.42
23:DB:42:C:H2'	23:DB:43:C:C5	2.52	0.42
30:DI:53:PRO:O	30:DI:73:PRO:HG3	2.19	0.42
10:CJ:84:VAL:CG2	10:CJ:85:ASP:N	2.74	0.42
22:DA:28:A:H2'	22:DA:29:U:O4'	2.20	0.42
18:CR:71:ASP:CB	18:CR:72:ARG:HH21	2.33	0.42
1:CA:754:C:C2'	1:CA:754:C:O2	2.64	0.42
22:BA:137:U:HO2'	22:BA:138:U:P	2.27	0.42
23:DB:112:G:N2	36:DO:45:SER:HA	2.18	0.42
1:CA:370:C:O2'	1:CA:371:A:H5'	2.20	0.42
13:CM:11:HIS:NE2	13:CM:43:LYS:HD2	2.34	0.42
1:AA:49:U:O2'	1:AA:50:A:H2'	2.18	0.42
22:BA:2149:U:C2'	22:BA:2150:C:O5'	2.67	0.42
22:DA:1303:G:O2'	22:DA:1304:A:C8	2.47	0.42
3:AC:34:SER:O	3:AC:37:LYS:HB3	2.19	0.42
32:DK:46:ALA:HB3	32:DK:54:LYS:CE	2.50	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
38:DQ:69:ARG:HH21	38:DQ:69:ARG:CB	2.22	0.42
24:DC:159:THR:N	24:DC:194:VAL:CG1	2.83	0.42
25:BD:190:LYS:O	25:BD:191:GLY:O	2.38	0.42
22:BA:1252:G:N1	38:BQ:36:GLN:OE1	2.38	0.42
33:DL:120:VAL:HG12	33:DL:121:THR:N	2.34	0.42
3:CC:31:ASN:O	3:CC:35:ASP:HB2	2.19	0.42
1:AA:1003:G:H21	1:AA:1005:A:P	2.41	0.42
4:AD:97:LEU:HD22	4:AD:117:VAL:HG11	2.01	0.42
22:BA:733:G:C5	22:BA:761:A:C5	3.08	0.42
1:AA:1370:G:C2	1:AA:1371:G:C8	3.08	0.42
22:DA:769:U:H1'	22:DA:1379:U:C6	2.54	0.42
1:AA:1066:C:C6	1:AA:1066:C:C5'	3.02	0.42
22:BA:2555:U:C5	22:BA:2556:C:C2	3.08	0.42
40:BS:19:LEU:O	48:B0:21:LEU:HD12	2.19	0.42
22:BA:1385:A:H4'	22:BA:1386:C:OP1	2.20	0.42
22:BA:1495:A:C6	22:BA:1496:A:C6	3.08	0.42
36:BO:71:ALA:O	36:BO:106:LEU:HB2	2.19	0.42
25:DD:32:ASN:HB2	25:DD:50:VAL:HB	2.01	0.42
26:DE:70:SER:HG	26:DE:78:TRP:HH2	1.68	0.42
9:AI:27:ILE:N	9:AI:27:ILE:HD12	2.34	0.42
41:DT:74:ILE:HG23	41:DT:75:GLY:N	2.34	0.42
9:CI:9:GLY:CA	9:CI:16:ALA:HB3	2.48	0.42
22:DA:2540:C:H2'	22:DA:2541:A:C8	2.54	0.42
29:DH:7:ASP:OD2	29:DH:35:LYS:HD3	2.20	0.42
22:BA:627:A:C5	22:BA:637:A:N7	2.87	0.42
42:DU:39:ASN:O	42:DU:40:LEU:C	2.57	0.42
22:DA:1866:A:C4	22:DA:1876:A:N6	2.88	0.42
24:BC:77:VAL:CG2	24:BC:111:ALA:HA	2.49	0.42
22:DA:2238:G:H4'	22:DA:2239:G:OP1	2.20	0.42
38:BQ:116:LEU:O	38:BQ:117:ALA:C	2.58	0.42
3:AC:36:PHE:HZ	14:AN:89:ARG:HH12	1.68	0.42
22:DA:2058:A:N6	22:DA:2059:A:N6	2.68	0.42
1:AA:737:C:H2'	1:AA:738:C:C6	2.51	0.42
47:DZ:28:LEU:CD2	47:DZ:28:LEU:N	2.82	0.42
19:AS:79:TYR:CE1	19:AS:80:ARG:HB2	2.54	0.42
14:CN:27:LYS:HB2	14:CN:45:LEU:HD23	2.00	0.42
8:AH:33:VAL:HG12	8:AH:34:ALA:N	2.33	0.42
1:CA:1065:U:H5	1:CA:1190:G:N7	2.16	0.42
1:CA:1097:C:H2'	1:CA:1098:C:C6	2.52	0.42
22:DA:498:G:C6	22:DA:499:U:C4	3.07	0.42
23:DB:21:G:C2	23:DB:63:C:C2	3.07	0.42
37:DP:103:THR:HG22	37:DP:104:GLY:N	2.34	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
9:AI:10:ARG:HB2	9:AI:14:SER:O	2.19	0.42
30:BI:96:LYS:H	30:BI:96:LYS:CD	2.32	0.42
24:BC:79:ARG:HG3	24:BC:92:LEU:CB	2.50	0.42
1:CA:1489:G:C5	1:CA:1490:U:C5	3.08	0.42
1:AA:1391:U:H2'	1:AA:1392:G:C8	2.55	0.42
40:BS:28:LYS:O	40:BS:31:GLN:N	2.53	0.42
22:BA:2856:A:N6	22:BA:2857:G:C6	2.88	0.42
24:BC:181:ARG:NH2	24:BC:181:ARG:CG	2.80	0.42
2:CB:67:LEU:HG	2:CB:157:PRO:HG3	2.01	0.42
9:CI:63:TYR:C	9:CI:63:TYR:CD1	2.93	0.42
23:BB:94:A:H2'	23:BB:95:U:C6	2.55	0.42
1:AA:715:A:OP1	1:AA:805:C:O2'	2.32	0.42
45:DX:65:THR:O	45:DX:68:ALA:CB	2.67	0.42
33:DL:4:ASN:O	33:DL:6:LEU:N	2.51	0.42
1:AA:765:G:H2'	1:AA:812:G:H21	1.85	0.42
22:BA:1562:U:H2'	22:BA:1563:U:O4'	2.20	0.42
22:BA:1354:A:C8	22:BA:1355:G:C8	3.08	0.42
22:BA:2694:G:H2'	22:BA:2695:U:H6	1.85	0.42
22:BA:2831:G:OP1	25:BD:56:LYS:NZ	2.50	0.42
2:AB:23:ASN:OD1	2:AB:25:LYS:HB2	2.19	0.42
5:CE:112:ALA:O	5:CE:113:VAL:C	2.56	0.42
25:DD:175:LEU:HB3	25:DD:176:ASP:H	1.61	0.42
1:CA:1467:C:H2'	1:CA:1468:A:C8	2.55	0.42
1:CA:926:G:C6	1:CA:1505:G:C6	3.07	0.42
28:DG:67:ALA:O	28:DG:71:LEU:HB2	2.19	0.42
22:DA:123:G:O3'	22:DA:1376:C:H4'	2.20	0.42
35:BN:54:LEU:HD12	35:BN:54:LEU:HA	1.77	0.42
22:BA:1612:C:H4'	50:B2:5:PHE:O	2.19	0.42
22:BA:845:A:H3'	22:BA:845:A:N3	2.34	0.42
11:CK:96:ILE:HD13	11:CK:109:ILE:CD1	2.48	0.42
22:DA:1123:C:H2'	22:DA:1124:G:H8	1.85	0.42
23:DB:13:G:N2	23:DB:16:G:N3	2.67	0.42
44:BW:31:LEU:O	44:BW:33:GLY:N	2.53	0.42
22:DA:444:C:O2'	22:DA:445:C:P	2.77	0.42
28:BG:84:LYS:O	28:BG:85:LYS:HB2	2.19	0.42
22:DA:2331:G:H4'	44:DW:41:GLY:N	2.34	0.42
51:D3:31:ILE:HG22	51:D3:34:LYS:HG2	2.01	0.42
32:BK:18:ARG:HD2	32:BK:18:ARG:HA	1.80	0.42
22:DA:1346:G:H2'	22:DA:1347:A:H8	1.85	0.42
22:DA:1395:A:H4'	22:DA:1397:U:C4	2.54	0.42
22:BA:301:G:H1'	22:BA:302:C:C6	2.55	0.42
22:DA:325:G:H2'	22:DA:326:G:H8	1.84	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:995:C:O2'	38:DQ:60:TRP:HZ2	2.01	0.42
5:AE:104:ILE:HD11	5:AE:114:LEU:HB3	2.00	0.42
22:DA:1082:U:N3	22:DA:1086:A:C6	2.88	0.42
1:CA:330:C:O2'	1:CA:331:G:P	2.77	0.42
5:CE:96:GLN:N	5:CE:123:LEU:O	2.51	0.42
22:DA:2884:U:P	48:D0:40:HIS:HE2	2.41	0.42
22:BA:1655:A:H5'	25:BD:118:PHE:CD2	2.54	0.42
17:AQ:13:SER:O	17:AQ:16:MET:CE	2.68	0.42
22:DA:2266:A:N6	22:DA:2273:A:OP2	2.49	0.42
10:CJ:51:VAL:HG22	10:CJ:65:TYR:HE1	1.83	0.42
26:BE:194:LYS:O	26:BE:197:GLU:HB3	2.20	0.42
44:BW:9:THR:HG23	44:BW:10:ARG:HG3	2.01	0.42
1:CA:408:A:C5	1:CA:409:U:C5	3.08	0.42
1:CA:413:G:H1'	1:CA:428:G:H21	1.85	0.42
1:CA:429:U:H4'	1:CA:430:A:O5'	2.18	0.42
1:CA:243:A:C2	1:CA:245:U:C2	3.08	0.42
1:AA:1441:A:C8	1:AA:1442:G:C8	3.07	0.42
37:DP:52:ARG:HB3	37:DP:55:HIS:HB2	2.00	0.42
22:DA:729:G:C6	24:DC:206:LYS:HB2	2.54	0.42
27:DF:111:ARG:NE	27:DF:111:ARG:N	2.68	0.42
28:BG:36:LEU:HD13	28:BG:36:LEU:HA	1.85	0.42
3:AC:166:TRP:CE3	3:AC:166:TRP:O	2.72	0.42
1:AA:68:G:C5	1:AA:69:G:H1'	2.55	0.42
22:BA:1599:U:H2'	22:BA:1600:C:C6	2.55	0.42
2:AB:105:THR:CG2	2:AB:105:THR:O	2.64	0.42
8:AH:76:ARG:NH1	8:AH:76:ARG:CG	2.74	0.42
22:DA:2014:A:H5'	40:DS:94:ASP:OD2	2.20	0.42
38:BQ:104:ALA:O	38:BQ:108:LEU:HD12	2.19	0.42
38:BQ:105:PHE:HA	38:BQ:108:LEU:HD12	2.01	0.42
24:BC:229:HIS:CG	24:BC:230:PRO:HD2	2.55	0.42
25:BD:24:VAL:HA	25:BD:189:VAL:O	2.19	0.42
5:CE:131:ASN:HA	5:CE:132:PRO:HD2	1.82	0.42
30:BI:79:LEU:O	30:BI:85:ILE:HD12	2.19	0.42
3:CC:18:ASN:ND2	3:CC:53:ARG:NH1	2.62	0.42
22:DA:2771:C:O2'	25:DD:173:GLN:OE1	2.38	0.42
1:AA:502:A:H2'	1:AA:503:C:O4'	2.20	0.42
22:DA:957:C:OP2	34:DM:75:GLU:HA	2.20	0.42
1:AA:1370:G:C5'	9:AI:110:VAL:HG21	2.49	0.42
22:DA:1286:A:C5	22:DA:1289:C:C4	3.07	0.42
7:AG:12:LEU:H	7:AG:12:LEU:CD2	2.20	0.42
20:AT:14:GLU:O	20:AT:15:LYS:C	2.57	0.42
28:BG:59:ASP:HB2	28:BG:63:GLN:HG3	2.01	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:CA:577:G:C6	1:CA:812:G:N2	2.87	0.42
13:CM:101:THR:O	13:CM:102:LYS:C	2.57	0.42
9:CI:27:ILE:HD13	9:CI:62:LEU:HB3	2.01	0.42
31:DJ:51:GLY:C	31:DJ:121:LYS:HE3	2.39	0.42
1:CA:446:G:N2	1:CA:489:C:C2	2.88	0.42
1:CA:444:G:C6	1:CA:491:G:C6	3.08	0.42
40:BS:96:ILE:CG1	40:BS:96:ILE:O	2.65	0.42
1:CA:1347:G:H8	9:CI:108:ARG:O	2.02	0.42
38:BQ:40:LYS:HD3	38:BQ:44:TYR:CE1	2.54	0.42
8:CH:65:PHE:C	8:CH:67:GLY:H	2.23	0.42
26:BE:150:THR:HG21	26:BE:153:LEU:HA	2.01	0.42
22:DA:7:G:O2'	31:DJ:15:TRP:HZ2	2.03	0.42
22:BA:1105:U:H2'	22:BA:1106:G:C8	2.51	0.42
1:AA:1046:A:O2'	1:AA:1047:G:H5'	2.20	0.42
1:CA:509:A:C5	1:CA:510:A:C6	3.07	0.42
22:DA:370:G:C2	22:DA:424:G:C8	3.08	0.42
27:DF:33:ILE:HB	27:DF:90:LEU:HD23	2.02	0.42
42:DU:66:VAL:CG1	42:DU:67:SER:N	2.81	0.42
46:BY:18:LEU:O	46:BY:22:LEU:HB2	2.20	0.42
1:CA:554:A:H2'	1:CA:555:U:C6	2.54	0.42
4:AD:114:ARG:O	4:AD:115:GLN:C	2.58	0.42
22:DA:843:G:C6	22:DA:844:A:N6	2.87	0.42
1:AA:702:A:H3'	1:AA:703:G:C5'	2.49	0.42
24:BC:124:LYS:HB3	24:BC:127:ASN:HD22	1.85	0.42
47:DZ:6:ILE:HD12	47:DZ:47:ILE:HD11	2.01	0.42
22:BA:735:A:H3'	22:BA:736:C:H6	1.85	0.42
47:DZ:13:ILE:C	47:DZ:15:ARG:H	2.23	0.42
47:DZ:21:ALA:O	47:DZ:24:LEU:N	2.52	0.42
22:BA:912:C:C2'	22:BA:913:U:H5'	2.49	0.42
22:BA:2498:C:O2'	22:BA:2499:C:H5'	2.19	0.42
22:BA:2402:U:H2'	22:BA:2403:C:OP2	2.19	0.42
1:CA:1001:C:H2'	1:CA:1002:G:O4'	2.20	0.42
39:DR:45:GLU:OE1	39:DR:46:GLU:O	2.38	0.42
48:D0:33:SER:HB3	48:D0:34:GLY:H	1.43	0.42
2:CB:63:LYS:HG2	2:CB:63:LYS:O	2.20	0.42
22:DA:2672:U:H6	22:DA:2672:U:O5'	2.03	0.42
22:DA:216:A:N7	22:DA:432:A:C6	2.88	0.42
1:AA:1221:G:H2'	1:AA:1222:G:C8	2.54	0.42
51:B3:31:ILE:C	51:B3:31:ILE:HD12	2.40	0.42
1:CA:955:U:H3	1:CA:1225:A:H61	1.67	0.42
14:CN:9:GLU:HA	14:CN:12:ARG:HD2	2.02	0.42
14:CN:8:ARG:HD2	14:CN:12:ARG:CZ	2.50	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:BA:558:U:OP1	31:BJ:113:PRO:HD2	2.20	0.42
22:BA:2771:C:HO2'	25:BD:173:GLN:HE22	1.66	0.42
22:DA:2322:A:N7	22:DA:2323:G:C5	2.88	0.42
22:DA:2331:G:H2'	22:DA:2332:C:O5'	2.20	0.42
44:DW:37:VAL:O	44:DW:39:GLN:N	2.52	0.42
22:DA:828:U:H4'	22:DA:831:G:N1	2.35	0.42
33:DL:55:MET:SD	33:DL:59:ARG:NE	2.81	0.42
22:DA:1342:A:C6	22:DA:1397:U:C5	3.07	0.42
22:DA:1810:A:H2'	22:DA:1811:G:O4'	2.20	0.42
1:AA:204:G:C3'	1:AA:205:A:C5'	2.88	0.42
2:CB:90:PHE:CD2	2:CB:149:GLY:HA3	2.55	0.42
2:CB:80:LYS:O	2:CB:81:ASP:C	2.58	0.42
17:AQ:66:LEU:O	17:AQ:67:SER:HB3	2.19	0.42
40:DS:9:HIS:H	40:DS:102:HIS:HE1	1.66	0.42
27:DF:151:LEU:N	27:DF:151:LEU:HD13	2.35	0.42
27:DF:131:VAL:CG2	27:DF:151:LEU:H	2.32	0.42
22:DA:637:A:P	33:DL:112:LEU:HD22	2.60	0.42
22:BA:160:A:N6	22:BA:161:A:C6	2.88	0.42
27:BF:173:ASP:O	27:BF:174:PHE:C	2.58	0.42
22:DA:104:A:C8	22:DA:105:C:C5	3.08	0.42
22:DA:2668:G:H2'	22:DA:2669:G:H8	1.85	0.42
22:DA:191:A:N6	22:DA:203:A:H2'	2.34	0.42
2:AB:26:MET:HE3	2:AB:192:PRO:HG3	2.01	0.42
1:CA:254:G:OP1	17:CQ:68:LYS:O	2.38	0.42
3:AC:119:ILE:HD11	3:AC:133:MET:HA	2.02	0.42
1:CA:1349:A:H1'	1:CA:1374:A:N6	2.34	0.42
1:AA:71:A:N3	1:AA:72:A:C8	2.87	0.42
2:AB:103:TRP:O	2:AB:105:THR:N	2.53	0.42
2:AB:221:ARG:HH12	2:AB:222:GLU:HB2	1.83	0.42
1:CA:275:G:O2'	1:CA:276:G:C5'	2.68	0.42
22:BA:64:A:C6	22:BA:65:U:C4	3.08	0.42
22:DA:1568:G:C2	24:DC:57:HIS:HE1	2.38	0.42
29:DH:119:ASN:HB3	29:DH:120:GLY:H	1.68	0.42
22:BA:1142:A:C4	22:BA:1144:A:C8	3.08	0.42
22:BA:286:U:H2'	22:BA:287:G:H8	1.84	0.42
1:CA:1012:A:C6	1:CA:1013:G:N7	2.88	0.42
22:DA:2468:A:H1'	22:DA:2482:A:N6	2.35	0.42
39:DR:88:GLY:O	39:DR:89:HIS:CB	2.68	0.42
23:DB:84:G:O2'	23:DB:85:G:H5'	2.20	0.42
1:CA:1306:A:C6	1:CA:1307:U:C4	3.08	0.42
22:BA:1820:U:OP1	24:BC:176:ARG:CG	2.64	0.42
22:DA:171:U:H2'	22:DA:172:A:C8	2.54	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
28:BG:61:TRP:O	28:BG:62:ALA:C	2.57	0.42
40:BS:20:VAL:CG1	40:BS:47:VAL:HG11	2.49	0.42
22:BA:545:U:H2'	22:BA:546:U:C3'	2.49	0.42
1:CA:1006:G:N1	1:CA:1024:G:C2	2.88	0.42
9:CI:26:LYS:HE3	9:CI:26:LYS:HB3	1.82	0.42
1:AA:443:C:C2'	1:AA:444:G:H5'	2.50	0.42
34:DM:45:GLN:OE1	34:DM:125:PRO:HG3	2.20	0.42
1:AA:82:G:H2'	1:AA:83:C:C4'	2.50	0.42
27:BF:112:ASP:OD2	27:BF:114:ARG:HG3	2.19	0.42
33:BL:79:LEU:O	33:BL:82:LEU:HD22	2.19	0.42
1:AA:1225:A:H2'	1:AA:1226:C:C6	2.55	0.42
1:CA:137:U:H1'	1:CA:227:G:N2	2.35	0.42
22:DA:394:C:H2'	22:DA:395:U:C5'	2.49	0.42
22:BA:2571:U:C2'	22:BA:2572:A:OP1	2.67	0.42
28:BG:93:TYR:O	28:BG:105:SER:O	2.38	0.42
40:DS:82:MET:HE1	40:DS:84:ARG:NH2	2.35	0.42
9:CI:129:ARG:NE	9:CI:129:ARG:HA	2.34	0.42
36:BO:3:LYS:CG	36:BO:4:LYS:H	2.33	0.42
9:CI:123:ARG:HE	9:CI:123:ARG:HB2	1.72	0.42
22:DA:2015:A:C2	48:D0:2:VAL:HG11	2.55	0.42
1:AA:1084:G:C6	1:AA:1085:U:O4	2.72	0.42
22:BA:1967:C:H2'	22:BA:1968:G:H5'	2.01	0.42
22:DA:2033:A:H4'	22:DA:2034:U:OP1	2.20	0.42
22:DA:2034:U:O2'	22:DA:2035:G:O5'	2.25	0.42
4:CD:149:LYS:NZ	4:CD:176:LYS:HD2	2.35	0.42
22:BA:197:A:N6	22:BA:2430:A:H2'	2.35	0.42
1:AA:257:G:H2'	1:AA:258:G:H8	1.85	0.42
22:BA:540:C:O2'	22:BA:541:A:H5'	2.20	0.42
22:BA:1443:U:H2'	22:BA:1444:G:H8	1.84	0.42
22:BA:1668:A:H4'	22:BA:1669:A:O5'	2.20	0.42
33:DL:4:ASN:HD22	33:DL:4:ASN:HA	1.68	0.42
27:BF:46:LYS:H	27:BF:46:LYS:HD2	1.84	0.42
1:CA:53:A:N1	1:CA:359:G:C6	2.88	0.42
22:BA:720:U:H2'	22:BA:721:A:C8	2.54	0.42
22:DA:1482:G:C4	22:DA:1483:G:C8	3.08	0.42
22:DA:898:C:C5	22:DA:899:A:C5	3.08	0.42
25:BD:46:ARG:HG2	25:BD:46:ARG:NH1	2.35	0.42
1:CA:1384:C:C2'	1:CA:1385:G:H5'	2.50	0.42
22:BA:324:A:C2	22:BA:325:G:H1'	2.54	0.42
7:AG:76:SER:HA	7:AG:85:GLN:HB2	2.02	0.42
1:AA:1280:A:OP1	10:AJ:9:ARG:NH1	2.52	0.42
22:DA:2379:G:H2'	22:DA:2380:C:C6	2.54	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
24:DC:242:HIS:HA	24:DC:243:PRO:HD3	1.88	0.42
22:DA:1419:A:C2	22:DA:1579:A:C2	3.08	0.42
22:DA:1837:C:O2	22:DA:1927:A:H2	2.03	0.42
26:BE:159:LEU:HD12	26:BE:159:LEU:HA	1.73	0.42
38:DQ:87:VAL:CG1	38:DQ:88:GLU:H	2.32	0.42
23:DB:109:A:O2'	23:DB:110:C:O5'	2.38	0.42
44:BW:24:ARG:CD	44:BW:24:ARG:C	2.85	0.42
1:CA:975:A:H1'	1:CA:1358:U:H1'	2.02	0.42
28:BG:102:ILE:HG22	28:BG:104:LEU:HG	2.01	0.42
24:DC:170:TYR:HD2	24:DC:183:VAL:O	2.03	0.42
44:DW:43:LYS:HD2	44:DW:79:ILE:HD11	2.02	0.42
1:CA:1408:A:C2	1:CA:1494:G:C2	3.07	0.42
1:CA:259:G:C2'	1:CA:260:G:H5'	2.49	0.42
22:DA:1387:A:C5'	22:DA:1469:A:C1'	2.93	0.42
22:DA:1361:G:C6	22:DA:1371:G:C2	3.08	0.42
22:DA:1350:C:O2	22:DA:1382:G:C8	2.73	0.42
22:DA:299:A:N3	22:DA:319:G:O2'	2.43	0.42
22:DA:302:C:O2'	22:DA:303:G:C8	2.42	0.42
22:DA:323:C:H3'	22:DA:323:C:OP2	2.19	0.42
42:DU:35:VAL:CG1	42:DU:36:GLU:N	2.77	0.42
25:DD:119:ALA:CB	25:DD:163:GLY:C	2.88	0.42
1:CA:1072:G:C5	1:CA:1073:U:C5	3.08	0.42
22:DA:1069:A:N6	22:DA:1073:A:H5''	2.34	0.42
27:DF:60:SER:C	27:DF:62:GLN:H	2.23	0.42
1:AA:481:G:C2'	1:AA:482:A:C8	3.02	0.42
42:DU:43:LYS:HE3	42:DU:45:GLN:CD	2.40	0.42
22:DA:466:A:OP1	50:D2:34:ARG:NH2	2.53	0.42
26:BE:174:GLY:O	26:BE:175:ILE:C	2.58	0.42
1:CA:429:U:H3'	4:CD:8:LEU:CD2	2.36	0.42
22:DA:141:G:HO2'	22:DA:142:A:P	2.43	0.42
1:CA:1298:U:H4'	1:CA:1299:A:O5'	2.20	0.42
22:DA:601:C:H2'	22:DA:602:A:O4'	2.20	0.42
22:DA:204:A:C4	22:DA:206:U:C4	3.07	0.42
22:DA:204:A:O4'	22:DA:206:U:C6	2.73	0.42
1:AA:1462:C:H2'	1:AA:1463:U:O4'	2.20	0.42
24:BC:104:LEU:HB3	24:BC:105:ALA:H	1.66	0.42
1:CA:264:C:H2'	1:CA:265:G:O4'	2.19	0.42
29:BH:67:ALA:C	29:BH:69:ALA:N	2.72	0.42
9:AI:128:LYS:HG3	9:AI:128:LYS:H	1.71	0.42
7:CG:10:LYS:N	7:CG:10:LYS:HE3	2.35	0.42
41:BT:43:ILE:CD1	41:BT:58:VAL:HG21	2.50	0.42
8:CH:29:SER:OG	8:CH:32:LYS:CB	2.68	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
2:AB:66:ILE:HG22	2:AB:67:LEU:N	2.34	0.42
1:CA:518:C:H4'	1:CA:519:C:O5'	2.19	0.42
22:DA:2836:U:O2'	22:DA:2837:A:P	2.78	0.42
28:BG:115:GLN:NE2	28:BG:115:GLN:H	2.18	0.42
41:DT:38:ALA:O	41:DT:39:THR:HB	2.20	0.42
22:BA:1166:G:C2'	22:BA:1167:C:H5'	2.49	0.42
45:BX:54:GLY:O	45:BX:58:ILE:HD12	2.20	0.42
22:BA:1141:U:H4'	22:BA:1142:A:O5'	2.20	0.42
1:CA:1249:C:H4'	9:CI:74:GLN:NE2	2.32	0.42
22:DA:1545:A:H62	22:DA:1546:G:N2	2.18	0.42
41:DT:4:GLU:O	41:DT:8:LEU:HD12	2.20	0.42
25:BD:9:VAL:O	25:BD:197:THR:HG23	2.19	0.42
29:DH:140:ALA:O	29:DH:141:LYS:HG3	2.19	0.42
22:DA:1324:G:N2	22:DA:1328:A:N1	2.68	0.42
25:BD:193:VAL:HG21	25:BD:201:LEU:HD21	2.02	0.42
22:BA:2647:U:O2'	22:BA:2648:G:H5'	2.19	0.42
22:BA:1870:C:H2'	22:BA:1871:A:C2	2.55	0.42
1:AA:522:C:H2'	1:AA:523:A:O4'	2.20	0.42
22:BA:545:U:H1'	22:BA:547:A:H5'	2.01	0.42
1:CA:1265:C:C4	1:CA:1266:G:N7	2.88	0.42
1:CA:1004:A:C4	1:CA:1026:G:N7	2.88	0.42
12:CL:109:ARG:HD2	12:CL:109:ARG:HA	1.83	0.42
38:DQ:26:ALA:HA	38:DQ:29:ARG:HG3	2.02	0.42
7:CG:61:PHE:C	7:CG:63:VAL:H	2.23	0.42
45:BX:29:LEU:HB2	45:BX:30:PRO:CD	2.49	0.42
44:DW:51:GLY:HA2	44:DW:59:PHE:HD2	1.84	0.42
1:AA:741:G:H2'	1:AA:742:G:O4'	2.19	0.42
1:AA:1319:A:OP1	19:AS:4:LEU:HD11	2.20	0.42
22:DA:1791:A:N6	22:DA:1828:G:O2'	2.52	0.42
32:DK:113:MET:O	32:DK:116:ILE:CG1	2.68	0.42
15:CO:38:LEU:HG	15:CO:42:PHE:CE1	2.55	0.42
22:DA:429:A:N6	22:DA:430:A:N6	2.68	0.42
14:CN:27:LYS:HB2	14:CN:45:LEU:HD22	2.01	0.42
1:CA:723:U:O5'	1:CA:723:U:C6	2.68	0.42
1:CA:34:C:H2'	1:CA:35:G:C8	2.55	0.42
5:CE:152:VAL:O	5:CE:155:LYS:HB2	2.20	0.42
1:AA:1242:G:O2'	1:AA:1243:C:H5'	2.19	0.42
22:DA:374:A:N6	22:DA:401:A:C8	2.87	0.42
22:DA:374:A:C2	22:DA:375:G:H1'	2.55	0.42
5:CE:66:ALA:O	5:CE:68:ARG:O	2.38	0.42
4:CD:149:LYS:HZ2	4:CD:176:LYS:HZ3	1.67	0.42
1:AA:258:G:H5'	20:AT:81:GLN:NE2	2.35	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:2373:G:O2'	22:DA:2374:C:H5'	2.19	0.42
9:CI:63:TYR:C	9:CI:63:TYR:HD1	2.23	0.42
49:B1:16:THR:HB	49:B1:41:VAL:HG21	2.02	0.42
22:BA:1570:A:C6	22:BA:1571:A:C6	3.07	0.42
24:BC:35:LYS:HB3	24:BC:35:LYS:HE3	1.46	0.42
9:CI:84:ARG:O	9:CI:87:MET:SD	2.78	0.42
8:CH:24:VAL:HG22	8:CH:25:THR:N	2.34	0.42
26:BE:129:PRO:HG3	26:BE:156:ASN:OD1	2.19	0.42
3:AC:147:GLY:HA3	3:AC:171:ARG:O	2.20	0.42
22:BA:1917:U:C4	22:BA:1918:A:C5	3.07	0.42
42:BU:20:LYS:O	42:BU:21:ARG:HG3	2.19	0.42
24:DC:239:PHE:HD1	24:DC:240:GLY:H	1.67	0.42
1:CA:1426:G:C4	1:CA:1475:G:C2	3.07	0.42
1:CA:756:C:C2'	1:CA:757:U:H5'	2.50	0.42
22:DA:43:G:N2	22:DA:437:U:C6	2.88	0.42
22:BA:2255:G:C2'	22:BA:2256:G:H5'	2.50	0.42
1:CA:76:G:H2'	1:CA:76:G:N3	2.35	0.42
44:BW:58:LEU:N	44:BW:58:LEU:HD13	2.34	0.42
4:CD:56:GLU:HA	4:CD:56:GLU:OE1	2.20	0.42
43:BV:68:LYS:O	43:BV:69:GLU:O	2.38	0.42
28:BG:39:ALA:HB1	28:BG:57:TYR:CB	2.50	0.42
4:CD:50:TYR:O	4:CD:51:GLY:C	2.57	0.42
22:DA:2526:G:C5	22:DA:2527:C:C5	3.07	0.42
22:BA:996:A:C4'	38:BQ:91:ARG:HD2	2.50	0.42
38:BQ:94:LEU:HA	38:BQ:94:LEU:HD13	1.81	0.42
22:BA:1092:C:O5'	22:BA:1093:G:OP2	2.37	0.42
37:BP:50:ARG:HD2	37:BP:51:ASN:N	2.34	0.42
39:DR:54:VAL:O	39:DR:55:ASP:C	2.57	0.42
23:DB:58:A:C2'	23:DB:59:A:H8	2.26	0.42
1:CA:974:A:C3'	1:CA:975:A:H5'	2.50	0.42
22:BA:2043:C:C4	22:BA:2777:G:C2	3.08	0.42
44:DW:17:ALA:HB1	44:DW:36:ILE:HG12	2.01	0.42
22:DA:2270:A:H5'	44:DW:18:LYS:HG2	2.02	0.42
44:DW:35:ILE:HB	44:DW:36:ILE:H	1.50	0.42
22:BA:1178:C:C4	22:BA:1180:U:C4	3.07	0.42
22:DA:2283:C:C5	22:DA:2389:G:C4	3.07	0.42
20:AT:43:LYS:NZ	20:AT:86:ALA:HA	2.34	0.42
42:DU:3:LYS:HG2	42:DU:84:PHE:HZ	1.84	0.42
22:DA:2821:A:H2'	22:DA:2822:G:O4'	2.20	0.42
22:DA:1059:G:C6	22:DA:1080:A:N1	2.88	0.42
22:DA:1103:A:H8	22:DA:1103:A:O5'	2.02	0.42
7:AG:114:SER:H	7:AG:117:LEU:HD12	1.84	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
48:D0:41:HIS:HD1	48:D0:41:HIS:C	2.22	0.42
22:DA:491:G:O2'	22:DA:492:A:C5'	2.68	0.42
1:AA:451:A:H5'	16:AP:70:ARG:HH12	1.84	0.42
22:DA:500:G:N2	22:DA:502:A:H3'	2.35	0.42
40:DS:5:ALA:O	40:DS:6:LYS:HB3	2.20	0.42
30:DI:52:LEU:HD11	30:DI:78:LEU:CD2	2.50	0.42
10:CJ:40:ILE:HG23	10:CJ:41:PRO:HD2	2.01	0.42
22:DA:58:G:N3	22:DA:73:A:C2	2.87	0.42
46:DY:52:ARG:C	46:DY:54:LYS:N	2.73	0.42
4:CD:21:LYS:HE2	4:CD:21:LYS:HB2	1.79	0.42
1:CA:413:G:N1	4:CD:32:LYS:HE3	2.35	0.42
22:DA:2445:G:H2'	22:DA:2446:G:H8	1.84	0.42
22:DA:622:G:O2'	22:DA:623:C:C5'	2.68	0.42
22:DA:584:C:C5	22:DA:585:G:N7	2.88	0.42
22:DA:1775:U:H2'	22:DA:1776:G:O4'	2.19	0.42
28:BG:8:VAL:HG12	28:BG:9:VAL:H	1.84	0.42
1:AA:198:G:C4	1:AA:199:A:N7	2.87	0.42
4:CD:106:PHE:CD1	4:CD:158:LEU:HD21	2.54	0.42
28:DG:94:ARG:HH21	28:DG:111:PRO:HB3	1.83	0.42
22:DA:973:A:H1'	22:DA:1188:U:C5	2.55	0.42
1:CA:642:A:C2	1:CA:643:C:C2	3.08	0.42
1:CA:248:C:C2'	1:CA:249:U:O5'	2.68	0.42
22:DA:749:A:C2	22:DA:750:A:C8	3.08	0.42
32:DK:17:ARG:CD	32:DK:18:ARG:H	2.33	0.42
22:BA:224:U:H2'	22:BA:225:C:O5'	2.19	0.42
39:DR:87:GLN:CG	39:DR:88:GLY:H	2.24	0.42
1:AA:722:G:H5''	1:AA:722:G:N3	2.35	0.42
20:AT:16:ALA:O	20:AT:17:ARG:C	2.58	0.42
22:BA:2416:C:H2'	22:BA:2417:C:H6	1.85	0.42
22:BA:2308:G:H2'	22:BA:2310:C:H5	1.84	0.42
25:DD:137:SER:HB3	25:DD:138:LEU:CD2	2.41	0.42
22:DA:1782:U:O2	22:DA:2608:G:O2'	2.22	0.42
22:DA:2574:G:N2	25:DD:147:GLY:O	2.49	0.42
27:DF:1:ALA:HB3	27:DF:93:GLU:OE2	2.20	0.42
50:D2:30:VAL:C	50:D2:32:ALA:H	2.22	0.42
35:BN:10:LEU:O	35:BN:12:ARG:HG3	2.19	0.42
26:DE:55:SER:OG	26:DE:56:GLY:N	2.52	0.42
22:BA:1695:G:H1'	24:BC:7:PRO:O	2.19	0.42
1:AA:1315:U:C4	1:AA:1316:G:C6	3.08	0.42
26:BE:160:ALA:O	26:BE:161:ALA:HB3	2.19	0.42
7:CG:4:ARG:HG2	7:CG:4:ARG:NH1	2.35	0.42
28:DG:154:GLU:HA	28:DG:155:PRO:HD2	1.86	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
41:DT:10:VAL:HG23	41:DT:11:LEU:CD1	2.49	0.42
24:BC:117:SER:HB3	24:BC:128:THR:HB	2.02	0.42
26:DE:28:VAL:O	26:DE:31:VAL:HG22	2.19	0.42
22:DA:2629:U:C5'	22:DA:2630:G:OP1	2.67	0.42
22:DA:7:G:H2'	22:DA:8:C:O4'	2.20	0.42
37:BP:30:TRP:CD1	37:BP:81:ASP:HB2	2.55	0.42
22:BA:1429:G:C2'	22:BA:1430:G:H5'	2.50	0.42
22:DA:394:C:O2'	22:DA:395:U:H5'	2.19	0.42
22:BA:790:U:HO2'	22:BA:791:C:C5'	2.31	0.42
22:DA:814:C:OP1	39:DR:86:GLN:NE2	2.53	0.42
22:BA:1419:A:N6	22:BA:1421:G:N3	2.68	0.42
22:DA:85:G:O2'	22:DA:86:G:H5''	2.19	0.42
23:DB:29:A:H2'	23:DB:30:C:C6	2.55	0.42
37:BP:31:VAL:O	37:BP:31:VAL:CG1	2.67	0.42
34:BM:21:ALA:CB	34:BM:100:LYS:N	2.82	0.42
22:DA:1465:G:H2'	22:DA:1466:U:O4'	2.20	0.42
22:DA:1465:G:C4	22:DA:1466:U:C6	3.08	0.42
5:AE:20:VAL:O	5:AE:30:PHE:HA	2.20	0.42
34:BM:66:ARG:NH1	34:BM:101:VAL:HG11	2.35	0.42
1:CA:318:G:C2	1:CA:336:A:C2	3.08	0.42
1:CA:187:G:N2	1:CA:190:A:OP2	2.53	0.42
15:CO:55:LEU:O	15:CO:58:MET:N	2.43	0.42
22:DA:2601:C:H4'	22:DA:2602:A:OP2	2.19	0.42
7:AG:89:GLU:N	7:AG:89:GLU:OE2	2.53	0.42
1:AA:1120:C:H2'	1:AA:1121:U:H6	1.85	0.42
1:AA:555:U:C2'	1:AA:556:C:O5'	2.67	0.42
22:BA:1627:G:C2	22:BA:1628:G:C8	3.08	0.42
22:DA:2684:U:N3	22:DA:2685:G:C8	2.88	0.42
22:BA:918:A:H4'	23:BB:97:C:O2	2.20	0.42
22:BA:1059:G:C6	22:BA:1080:A:C6	3.08	0.42
23:DB:16:G:C6	23:DB:69:G:C5	3.08	0.42
22:BA:2331:G:N2	22:BA:2385:C:C2	2.87	0.42
22:DA:2345:G:H4'	22:DA:2346:A:O5'	2.19	0.42
27:DF:28:PRO:CB	27:DF:168:LEU:HD21	2.28	0.42
22:DA:1532:A:N1	22:DA:1540:G:C6	2.88	0.42
22:DA:1339:G:O4'	22:DA:1393:A:C2	2.73	0.42
22:DA:1388:G:O2'	22:DA:1389:G:O4'	2.38	0.42
22:DA:2214:C:HO2'	22:DA:2215:C:H5'	1.80	0.42
4:AD:8:LEU:O	4:AD:12:ARG:HG3	2.20	0.42
22:DA:310:A:H5''	42:DU:14:THR:O	2.19	0.42
1:CA:1074:G:H4'	2:CB:102:ASN:HB2	2.01	0.42
22:DA:1066:U:O2	22:DA:1069:A:OP2	2.37	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:481:G:HO2'	22:DA:507:A:H61	1.68	0.42
42:DU:44:HIS:CD2	42:DU:57:ILE:HG21	2.54	0.42
22:BA:784:G:O2'	22:BA:785:G:H5''	2.19	0.42
33:DL:78:ARG:C	33:DL:80:SER:H	2.23	0.42
1:CA:91:U:C5	1:CA:92:U:C4	3.08	0.42
31:DJ:25:LEU:C	31:DJ:27:ARG:N	2.73	0.42
27:BF:174:PHE:HD1	27:BF:176:PHE:CE1	2.38	0.42
22:DA:70:G:H3'	22:DA:113:U:C4'	2.49	0.42
52:D4:3:VAL:O	52:D4:4:ARG:CB	2.67	0.42
25:BD:90:PHE:O	25:BD:92:VAL:N	2.53	0.42
37:DP:52:ARG:HA	37:DP:52:ARG:HD3	1.78	0.42
22:DA:2875:C:O2'	22:DA:2876:G:C8	2.41	0.42
22:DA:1275:A:N6	35:DN:15:SER:O	2.53	0.42
34:DM:36:VAL:HG13	43:DV:82:TYR:CD1	2.55	0.42
30:BI:126:ARG:HA	30:BI:129:GLU:CD	2.40	0.42
1:AA:243:A:H2	1:AA:245:U:H2'	1.85	0.42
1:CA:599:C:C2	1:CA:640:A:C2	3.08	0.42
8:CH:28:SER:HB2	8:CH:57:GLU:O	2.20	0.42
22:BA:2258:C:O2'	22:BA:2426:A:H4'	2.19	0.42
22:BA:476:G:C2	22:BA:479:A:C8	3.08	0.42
22:DA:1285:A:H2'	22:DA:1286:A:H5'	2.01	0.42
28:DG:25:ILE:CG2	28:DG:78:VAL:HG21	2.50	0.42
22:BA:2650:U:O2'	22:BA:2651:C:H5'	2.19	0.42
22:BA:1871:A:H8	22:BA:1872:A:C6	2.38	0.42
27:DF:1:ALA:CB	27:DF:93:GLU:HA	2.49	0.42
29:DH:94:ILE:HG13	29:DH:98:ASP:OD1	2.20	0.42
22:DA:1168:G:C6	22:DA:1182:G:C6	3.07	0.42
34:DM:135:VAL:HB	34:DM:136:MET:H	1.66	0.42
3:CC:5:HIS:HA	3:CC:6:PRO:HD2	1.92	0.42
22:DA:520:G:H2'	22:DA:521:U:H6	1.85	0.42
10:AJ:48:ARG:NH2	14:AN:100:TRP:CE2	2.88	0.42
1:CA:1048:G:N1	1:CA:1050:G:O6	2.53	0.42
22:DA:270:A:N1	22:DA:369:U:C1'	2.81	0.42
1:CA:460:A:O3'	1:CA:462:G:OP2	2.37	0.42
24:BC:255:LYS:C	24:BC:256:THR:HG23	2.40	0.42
43:DV:50:MET:O	43:DV:53:LYS:HB2	2.20	0.42
1:CA:71:A:N6	1:CA:100:G:N7	2.67	0.42
1:CA:65:A:C4	1:CA:200:G:O2'	2.73	0.42
22:DA:1593:A:C6	22:DA:1594:U:N3	2.88	0.42
10:AJ:12:ALA:O	10:AJ:70:HIS:HD2	2.03	0.42
22:DA:1199:U:H2'	22:DA:1200:C:C6	2.54	0.42
1:CA:218:U:O2'	1:CA:219:U:H5'	2.20	0.42

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:BA:1858:A:C8	22:BA:1885:A:C6	3.08	0.42
8:CH:97:GLY:O	8:CH:98:LEU:CB	2.68	0.42
22:DA:699:A:H2'	22:DA:700:G:O4'	2.20	0.42
1:AA:833:G:C2'	1:AA:834:U:H5'	2.50	0.42
26:DE:162:ARG:C	26:DE:164:LEU:N	2.72	0.42
1:AA:403:C:H5'	4:AD:131:ILE:HG22	2.01	0.42
22:BA:632:A:O2'	22:BA:633:A:H5'	2.20	0.42
28:BG:33:THR:N	28:BG:34:ARG:HH11	2.18	0.42
22:BA:833:A:H2'	22:BA:834:G:H8	1.83	0.42
27:BF:146:ASP:O	27:BF:147:ARG:HB2	2.19	0.42
15:CO:24:THR:HG21	15:CO:69:LEU:HB2	2.02	0.42
49:B1:16:THR:CG2	49:B1:41:VAL:HG22	2.49	0.42
22:BA:1682:G:C8	22:BA:1757:A:C2	3.07	0.42
16:CP:48:GLU:HG3	16:CP:51:ARG:HH21	1.84	0.42
22:BA:1355:G:C6	22:BA:1377:G:N2	2.88	0.42
27:DF:24:VAL:HB	27:DF:25:MET:SD	2.60	0.42
22:DA:462:C:O2'	22:DA:463:G:H5'	2.19	0.42
50:B2:24:THR:HG23	50:B2:27:GLY:H	1.84	0.42
22:DA:188:G:H2'	22:DA:189:G:H5'	2.01	0.42
22:BA:1840:G:C6	22:BA:1841:U:C4	3.07	0.42
26:DE:195:GLN:O	26:DE:199:MET:N	2.53	0.42
28:BG:106:LEU:O	28:BG:151:ARG:NH2	2.46	0.42
23:BB:14:U:OP2	23:BB:70:C:O2'	2.34	0.42
4:CD:97:LEU:HB2	4:CD:134:TYR:HB3	2.02	0.42
1:CA:621:A:H2'	1:CA:622:A:O4'	2.20	0.42
2:CB:160:LEU:HD13	2:CB:180:ILE:HG21	2.01	0.42
48:B0:38:LEU:O	48:B0:41:HIS:HB2	2.20	0.42
22:BA:1232:G:C5	22:BA:1233:C:C5	3.07	0.42
18:AR:20:ILE:H	18:AR:20:ILE:HG13	1.61	0.42
38:BQ:49:ARG:HH11	38:BQ:49:ARG:HG3	1.84	0.42
38:BQ:25:GLY:O	38:BQ:29:ARG:HG3	2.20	0.42
39:DR:4:VAL:HG22	39:DR:40:MET:HB3	2.02	0.41
22:BA:2356:U:H5''	44:BW:16:GLU:HG3	2.02	0.41
24:DC:73:ILE:O	24:DC:116:GLN:HG2	2.20	0.41
14:CN:8:ARG:HD3	14:CN:12:ARG:NH2	2.35	0.41
14:CN:60:ARG:HH22	14:CN:70:HIS:HB3	1.85	0.41
22:DA:2324:U:C5'	22:DA:2325:G:C5'	2.96	0.41
44:DW:69:GLU:O	44:DW:78:PHE:O	2.38	0.41
1:CA:1310:G:O6	1:CA:1311:A:N6	2.53	0.41
22:DA:224:U:N3	22:DA:225:C:C6	2.88	0.41
22:DA:417:C:O2'	22:DA:418:C:H5'	2.20	0.41
24:DC:106:PRO:HB3	24:DC:141:HIS:HE1	1.85	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:1235:G:C6	22:DA:1236:G:N2	2.88	0.41
22:DA:1394:U:C4	22:DA:1395:A:N6	2.88	0.41
22:DA:1130:U:HO2'	22:DA:1131:G:H8	1.66	0.41
22:DA:167:A:H3'	22:DA:168:G:H8	1.84	0.41
35:DN:37:THR:HB	35:DN:40:LYS:H	1.85	0.41
5:AE:149:PRO:HG2	5:AE:150:GLU:H	1.86	0.41
1:AA:1202:U:O4'	14:AN:68:ARG:HD2	2.20	0.41
22:DA:2831:G:N7	25:DD:59:ARG:NH1	2.67	0.41
35:DN:98:LEU:HG	48:D0:42:ILE:CG1	2.50	0.41
22:DA:2301:C:C5	22:DA:2302:U:C5	3.08	0.41
22:BA:2347:C:H2'	22:BA:2348:U:C6	2.55	0.41
22:DA:180:G:P	50:D2:35:ARG:NH1	2.93	0.41
22:DA:183:C:C5	22:DA:184:C:C5	3.08	0.41
26:BE:149:ILE:HD12	26:BE:175:ILE:HB	2.02	0.41
1:CA:83:C:O2	1:CA:87:C:N3	2.53	0.41
7:CG:26:VAL:HG23	7:CG:27:ASN:N	2.35	0.41
43:BV:10:LYS:NZ	43:BV:10:LYS:HB2	2.35	0.41
45:DX:57:VAL:HG12	45:DX:58:ILE:HG13	2.02	0.41
22:DA:72:U:O2'	22:DA:73:A:H5'	2.20	0.41
22:DA:71:A:O4'	22:DA:73:A:C5	2.73	0.41
1:CA:1297:G:O2'	1:CA:1298:U:OP2	2.28	0.41
22:DA:1048:A:C5	22:DA:1049:C:N4	2.88	0.41
6:AF:92:THR:CG2	6:AF:93:LYS:H	2.33	0.41
27:DF:59:ILE:HG23	27:DF:137:PHE:HE1	1.84	0.41
2:AB:90:PHE:H	2:AB:149:GLY:CA	2.33	0.41
22:DA:1265:A:C5	22:DA:1267:U:C4	3.08	0.41
22:DA:1267:U:O2'	22:DA:1268:A:O5'	2.30	0.41
1:AA:619:U:N3	4:AD:130:ASN:HB3	2.24	0.41
25:DD:113:SER:HB2	25:DD:168:GLU:OE1	2.20	0.41
22:BA:2258:C:H4'	22:BA:2259:U:OP2	2.20	0.41
22:BA:227:A:H4'	22:BA:229:C:C4	2.55	0.41
15:CO:63:ARG:C	15:CO:65:LEU:N	2.73	0.41
14:AN:40:ARG:HH12	14:AN:44:VAL:HG11	1.85	0.41
14:AN:40:ARG:NH1	14:AN:44:VAL:HG11	2.34	0.41
22:DA:1231:U:H6	22:DA:1231:U:OP2	2.02	0.41
29:DH:72:ILE:HD11	29:DH:140:ALA:HA	2.03	0.41
41:DT:29:THR:CB	41:DT:86:THR:N	2.77	0.41
1:CA:920:U:N3	1:CA:921:U:C4	2.87	0.41
1:CA:193:C:O2'	1:CA:194:C:H5'	2.19	0.41
29:DH:9:VAL:HG12	29:DH:10:ALA:N	2.34	0.41
28:DG:8:VAL:HB	28:DG:49:LEU:HB3	2.02	0.41
41:DT:9:LYS:CG	41:DT:9:LYS:O	2.67	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:1183:U:H2'	22:DA:1184:U:C6	2.55	0.41
43:BV:20:LEU:HD23	43:BV:25:LYS:HB2	2.03	0.41
1:CA:718:A:C8	1:CA:719:C:C5	3.08	0.41
23:DB:9:G:OP2	36:DO:15:ARG:HD3	2.20	0.41
22:DA:519:U:H5''	40:DS:25:ARG:NH2	2.34	0.41
54:BA:3135:EM1:C12	54:BA:3135:EM1:C10	2.97	0.41
1:CA:1104:G:H2'	1:CA:1105:A:O4'	2.20	0.41
22:DA:1509:A:C3'	22:DA:1510:G:C5'	2.98	0.41
1:AA:1472:U:H2'	1:AA:1473:G:C8	2.54	0.41
1:AA:1315:U:C5	1:AA:1316:G:C5	3.08	0.41
43:DV:73:LYS:HB3	43:DV:92:VAL:HG23	2.02	0.41
1:AA:649:A:H2'	1:AA:650:G:O4'	2.20	0.41
22:DA:1820:U:H3	24:DC:197:ALA:HA	1.85	0.41
22:BA:869:G:H2'	22:BA:870:U:O4'	2.19	0.41
40:DS:31:GLN:O	40:DS:33:LEU:N	2.54	0.41
28:DG:157:LYS:C	28:DG:159:LYS:N	2.73	0.41
29:BH:54:LEU:O	29:BH:57:LYS:N	2.52	0.41
47:BZ:43:ILE:O	47:BZ:47:ILE:HG13	2.20	0.41
9:AI:18:VAL:HG22	9:AI:64:ILE:HG23	2.01	0.41
29:DH:67:ALA:HA	29:DH:138:VAL:CG2	2.50	0.41
40:DS:66:ILE:HG12	40:DS:67:ASP:N	2.34	0.41
1:CA:1191:A:OP1	3:CC:2:GLN:NE2	2.53	0.41
9:AI:8:THR:O	9:AI:16:ALA:O	2.38	0.41
22:BA:2210:U:H4'	22:BA:2211:A:O5'	2.20	0.41
25:DD:40:LEU:HD12	25:DD:40:LEU:N	2.35	0.41
22:DA:1833:C:C2	22:DA:1834:U:C5	3.08	0.41
22:DA:2853:C:H6	22:DA:2853:C:O5'	2.03	0.41
17:AQ:50:ASN:OD1	17:AQ:50:ASN:N	2.52	0.41
1:AA:157:U:O2	1:AA:165:G:C2	2.73	0.41
22:BA:384:A:H2'	22:BA:384:A:N3	2.35	0.41
22:DA:1420:A:C4	22:DA:2211:A:N7	2.88	0.41
1:AA:1270:G:H2'	1:AA:1271:A:C8	2.54	0.41
1:AA:160:A:H2'	1:AA:161:A:O4'	2.20	0.41
1:CA:1285:A:H4'	1:CA:1286:U:OP1	2.19	0.41
22:BA:1403:A:H2'	22:BA:1404:C:C6	2.55	0.41
22:BA:1095:A:H8	22:BA:1095:A:OP1	2.01	0.41
1:CA:1076:U:N3	1:CA:1082:A:C2	2.88	0.41
22:DA:2743:U:OP1	52:D4:34:LYS:NZ	2.49	0.41
1:AA:669:G:O2'	1:AA:670:G:H5'	2.19	0.41
2:CB:27:LYS:N	2:CB:28:PRO:CD	2.83	0.41
28:DG:106:LEU:HB2	28:DG:108:PHE:HE1	1.85	0.41
22:BA:936:A:H2'	22:BA:937:C:C6	2.55	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:BA:2607:G:H2'	22:BA:2608:G:O4'	2.20	0.41
22:BA:1963:U:H6	22:BA:1963:U:O5'	2.03	0.41
9:CI:89:TYR:HD1	9:CI:89:TYR:O	2.03	0.41
15:CO:32:THR:O	15:CO:33:ALA:C	2.57	0.41
22:BA:2734:A:H2'	22:BA:2735:G:H5'	2.01	0.41
1:AA:811:C:H4'	1:AA:900:A:N6	2.34	0.41
22:DA:2706:A:N6	56:DA:3670:HOH:O	2.49	0.41
22:BA:1061:U:H2'	22:BA:1061:U:O2	2.20	0.41
22:BA:1062:G:C2'	22:BA:1063:G:C8	3.03	0.41
22:DA:2231:U:H6	22:DA:2231:U:O5'	2.03	0.41
6:AF:64:VAL:HG12	6:AF:65:GLU:N	2.35	0.41
22:BA:855:G:C4	22:BA:923:G:C2	3.07	0.41
22:BA:272:A:HO2'	22:BA:273:G:P	2.42	0.41
1:CA:1218:C:H2'	1:CA:1219:A:H8	1.81	0.41
19:CS:35:ARG:NH1	19:CS:52:ASN:HA	2.35	0.41
19:CS:4:LEU:HB3	19:CS:5:LYS:H	1.52	0.41
22:DA:2420:C:N4	51:D3:29:ARG:O	2.43	0.41
22:DA:2391:G:H22	22:DA:2427:C:H4'	1.86	0.41
1:CA:687:A:N3	1:CA:704:A:N6	2.68	0.41
1:CA:705:G:H2'	1:CA:706:A:O4'	2.20	0.41
1:CA:1157:A:C6	1:CA:1180:A:C6	3.08	0.41
22:DA:223:A:C6	22:DA:408:G:O4'	2.73	0.41
22:DA:410:G:N2	22:DA:418:C:O2	2.54	0.41
22:DA:1532:A:C2	22:DA:1540:G:N1	2.88	0.41
22:DA:1915:U:H2'	22:DA:1916:A:H8	1.78	0.41
2:AB:174:GLU:O	2:AB:178:LEU:HB2	2.20	0.41
22:BA:2578:G:C5	25:BD:145:SER:HB2	2.55	0.41
26:DE:108:ILE:CD1	26:DE:181:ILE:HB	2.28	0.41
22:DA:1358:G:C8	22:DA:1371:G:C6	3.08	0.41
22:DA:298:G:O5'	22:DA:298:G:H8	2.03	0.41
22:DA:2316:G:C2	22:DA:2317:A:C4	3.08	0.41
25:BD:117:GLY:C	25:BD:118:PHE:CD1	2.93	0.41
17:AQ:51:GLU:HG3	17:AQ:74:LEU:HD21	2.02	0.41
22:DA:476:G:O2'	22:DA:477:A:H3'	2.20	0.41
50:D2:38:GLY:O	50:D2:42:LEU:HD13	2.20	0.41
26:BE:189:THR:O	26:BE:192:ALA:N	2.31	0.41
28:DG:137:LYS:C	28:DG:139:VAL:H	2.22	0.41
37:DP:52:ARG:HG2	37:DP:52:ARG:NH1	2.35	0.41
10:CJ:10:LEU:O	10:CJ:18:ILE:HD11	2.20	0.41
22:BA:274:C:H2'	22:BA:275:C:O4'	2.19	0.41
6:AF:9:MET:CE	18:AR:64:LEU:HD22	2.50	0.41
1:CA:265:G:C2'	1:CA:266:G:H5'	2.50	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
24:BC:190:THR:HG22	24:BC:191:LEU:N	2.34	0.41
29:BH:66:ASN:C	29:BH:68:ARG:H	2.23	0.41
2:AB:41:ASN:OD1	2:AB:44:LYS:HB2	2.19	0.41
22:BA:740:C:H5'	22:BA:1784:A:C3'	2.46	0.41
1:CA:276:G:O2'	1:CA:277:C:H5'	2.20	0.41
29:BH:12:LEU:HD12	29:BH:19:VAL:HG11	2.01	0.41
29:BH:9:VAL:HG12	29:BH:12:LEU:HG	2.01	0.41
32:DK:107:LEU:HD23	32:DK:107:LEU:C	2.40	0.41
3:AC:154:GLY:H	3:AC:156:LEU:HD11	1.85	0.41
22:DA:1500:G:C6	22:DA:1501:G:C5	3.08	0.41
1:AA:132:C:H5''	20:AT:68:LYS:HD2	2.01	0.41
22:BA:1746:A:C2	22:BA:1747:U:C2	3.08	0.41
35:DN:35:LYS:HD3	35:DN:112:TYR:OH	2.20	0.41
31:BJ:25:LEU:HB2	31:BJ:62:VAL:CG2	2.50	0.41
3:AC:13:ILE:HB	3:AC:14:VAL:HG13	2.01	0.41
3:AC:13:ILE:C	3:AC:15:LYS:H	2.24	0.41
1:AA:1387:G:C6	1:AA:1388:C:N4	2.88	0.41
22:DA:1330:C:O2'	22:DA:1331:G:P	2.77	0.41
14:CN:20:PHE:HA	14:CN:24:ALA:HB2	2.02	0.41
22:BA:2637:U:H2'	22:BA:2638:G:H5'	2.01	0.41
34:BM:72:PRO:HG3	34:BM:92:TRP:CZ3	2.55	0.41
43:BV:51:GLN:NE2	43:BV:79:ARG:HH12	2.10	0.41
1:CA:1003:G:N3	1:CA:1005:A:OP1	2.53	0.41
30:DI:57:VAL:HG21	30:DI:69:VAL:H	1.86	0.41
31:DJ:119:PHE:C	31:DJ:121:LYS:H	2.23	0.41
25:DD:48:ILE:CG2	25:DD:84:LEU:HD23	2.50	0.41
2:CB:20:ARG:CA	2:CB:20:ARG:NE	2.82	0.41
34:DM:71:LYS:HA	34:DM:72:PRO:HD3	1.70	0.41
10:AJ:48:ARG:NH2	14:AN:100:TRP:CE3	2.88	0.41
1:AA:1217:C:H2'	1:AA:1218:C:H6	1.85	0.41
27:BF:21:TYR:CE2	27:BF:28:PRO:HD3	2.55	0.41
10:AJ:8:ILE:O	10:AJ:73:LEU:O	2.38	0.41
25:BD:181:ASP:OD2	25:BD:184:ARG:HD2	2.21	0.41
12:AL:6:LEU:HD23	17:AQ:33:TYR:CZ	2.56	0.41
33:DL:20:GLY:CA	33:DL:28:GLY:HA2	2.49	0.41
26:BE:150:THR:HG22	26:BE:170:ARG:O	2.20	0.41
10:AJ:92:LEU:HD23	10:AJ:92:LEU:N	2.35	0.41
7:CG:148:LYS:HB2	7:CG:148:LYS:HZ3	1.85	0.41
32:DK:113:MET:SD	32:DK:116:ILE:HD11	2.60	0.41
1:AA:328:C:O2	1:AA:328:C:C2'	2.68	0.41
22:DA:2590:A:H5''	24:DC:237:ARG:HG3	2.01	0.41
9:AI:3:ASN:CG	9:AI:4:GLN:N	2.71	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
42:BU:84:PHE:N	42:BU:94:PHE:HE2	2.17	0.41
30:BI:18:ASN:CB	30:BI:38:CYS:HB3	2.49	0.41
50:D2:11:LYS:C	50:D2:13:ASN:N	2.72	0.41
22:BA:1006:C:C2	22:BA:1138:G:N2	2.88	0.41
23:DB:23:G:C2	23:DB:61:G:N1	2.89	0.41
17:CQ:45:VAL:HG21	17:CQ:60:ILE:HG21	2.02	0.41
30:DI:118:GLY:O	30:DI:119:ALA:CB	2.68	0.41
19:CS:49:ALA:O	19:CS:56:HIS:HB3	2.20	0.41
4:CD:64:TYR:CD2	4:CD:93:LEU:HB3	2.55	0.41
13:AM:40:GLU:HG3	13:AM:41:ASP:N	2.35	0.41
22:BA:163:C:OP1	22:BA:163:C:H6	2.02	0.41
1:AA:690:G:C6	1:AA:691:G:C6	3.08	0.41
2:CB:91:VAL:HG11	2:CB:95:TRP:CD1	2.54	0.41
22:BA:108:G:H2'	22:BA:109:C:H5'	2.01	0.41
17:AQ:30:HIS:HA	17:AQ:31:PRO:HD3	1.85	0.41
1:AA:292:G:N2	1:AA:309:A:C4	2.88	0.41
4:CD:173:ASP:OD1	4:CD:176:LYS:HB3	2.20	0.41
22:BA:2107:G:O6	22:BA:2183:A:C6	2.74	0.41
3:AC:184:ASN:O	3:AC:198:LYS:HA	2.20	0.41
1:AA:950:U:H2'	1:AA:951:G:C8	2.55	0.41
1:CA:623:C:C6	1:CA:623:C:C3'	3.03	0.41
22:BA:734:A:C5	22:BA:735:A:C8	3.09	0.41
1:AA:22:G:C5	1:AA:23:C:C5	3.08	0.41
22:BA:1351:C:H2'	22:BA:1352:U:O4'	2.20	0.41
22:BA:279:A:H2'	22:BA:280:U:O4'	2.19	0.41
22:DA:2648:G:H2'	22:DA:2649:C:O4'	2.20	0.41
22:DA:1712:U:O4	22:DA:1713:A:C2	2.72	0.41
22:DA:2658:C:H2'	22:DA:2659:G:H5'	2.02	0.41
42:BU:33:VAL:O	42:BU:64:ILE:HG22	2.19	0.41
1:CA:685:G:O2'	1:CA:686:U:H5'	2.20	0.41
40:BS:97:LEU:HD22	40:BS:97:LEU:N	2.34	0.41
15:CO:83:ARG:HG2	15:CO:83:ARG:O	2.20	0.41
4:CD:166:LYS:HE2	4:CD:166:LYS:HB2	1.84	0.41
22:DA:2419:U:H5	56:DA:3656:HOH:O	2.04	0.41
25:DD:187:LEU:O	25:DD:188:LEU:HD23	2.20	0.41
3:CC:111:ASP:O	3:CC:115:VAL:HG12	2.20	0.41
22:DA:866:A:N1	22:DA:914:G:H5'	2.35	0.41
22:BA:1061:U:O2'	22:BA:1062:G:P	2.79	0.41
23:DB:16:G:O2'	23:DB:17:C:H5'	2.20	0.41
22:DA:449:A:H4'	38:DQ:2:ARG:HH22	1.84	0.41
31:BJ:111:LYS:HE2	31:BJ:114:LEU:HB3	2.03	0.41
22:DA:2428:G:H4'	22:DA:2429:G:C4	2.55	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:2448:A:H61	33:DL:36:LYS:CE	2.33	0.41
20:AT:29:THR:HA	20:AT:32:LYS:CG	2.49	0.41
24:DC:26:GLY:O	24:DC:27:LYS:C	2.57	0.41
22:DA:1087:G:C4	22:DA:1089:A:N3	2.88	0.41
22:DA:1096:A:C8	22:DA:1097:U:C5	3.08	0.41
22:DA:2830:C:H2'	22:DA:2831:G:O4'	2.20	0.41
22:DA:489:G:C2'	22:DA:491:G:H8	2.33	0.41
22:BA:1656:C:OP1	25:BD:141:ARG:NH1	2.47	0.41
17:AQ:16:MET:CE	17:AQ:20:ILE:HD12	2.51	0.41
22:DA:2266:A:C4'	22:DA:2267:A:O5'	2.57	0.41
22:DA:480:A:H2'	22:DA:480:A:N3	2.34	0.41
22:DA:502:A:C6	22:DA:505:A:N7	2.88	0.41
22:DA:117:G:C6	22:DA:119:A:C6	3.09	0.41
22:DA:639:U:H2'	22:DA:640:C:C6	2.47	0.41
27:BF:135:ILE:C	27:BF:137:PHE:N	2.73	0.41
35:DN:62:ASN:N	35:DN:62:ASN:OD1	2.51	0.41
35:DN:73:ASN:HA	35:DN:76:VAL:CG2	2.50	0.41
22:DA:2067:G:C6	22:DA:2444:G:C6	3.08	0.41
22:DA:586:A:O2'	22:DA:671:C:O2	2.36	0.41
22:BA:1731:G:C4	22:BA:1733:G:C8	3.08	0.41
25:BD:91:THR:C	25:BD:93:GLY:N	2.64	0.41
32:DK:88:ASN:HB2	32:DK:91:SER:HB2	2.02	0.41
25:DD:185:ASN:O	25:DD:186:LEU:HD12	2.20	0.41
22:DA:1207:C:N4	22:DA:1208:C:H41	2.18	0.41
7:CG:103:ILE:HG22	7:CG:103:ILE:O	2.20	0.41
23:DB:90:C:H2'	23:DB:91:C:O4'	2.21	0.41
28:DG:86:LEU:HA	28:DG:163:TYR:CB	2.39	0.41
1:AA:71:A:C2	1:AA:72:A:C5	3.07	0.41
22:DA:855:G:N2	22:DA:923:G:C4	2.88	0.41
6:CF:64:VAL:HG23	6:CF:66:ALA:H	1.86	0.41
28:BG:72:ASN:O	28:BG:76:ILE:HG22	2.20	0.41
5:CE:13:LYS:HB2	5:CE:116:VAL:HG11	2.03	0.41
22:BA:581:C:OP1	38:BQ:32:ARG:HB2	2.20	0.41
23:DB:75:G:H22	23:DB:102:G:N2	2.19	0.41
22:DA:532:A:C2'	22:DA:532:A:N3	2.83	0.41
12:AL:21:PRO:HD2	12:AL:94:TYR:OH	2.20	0.41
1:AA:1412:C:H2'	1:AA:1413:A:C8	2.55	0.41
4:AD:146:GLU:HB3	4:AD:147:LYS:HZ3	1.83	0.41
3:AC:96:VAL:HB	3:AC:97:PRO:CD	2.45	0.41
5:AE:105:ILE:HD11	5:AE:123:LEU:CD2	2.47	0.41
1:CA:16:A:O2'	1:CA:17:U:H5'	2.19	0.41
45:DX:38:TRP:HE3	45:DX:38:TRP:HA	1.85	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:170:U:C2	22:DA:171:U:C5	3.08	0.41
22:BA:1873:G:O2'	22:BA:1874:C:H5'	2.21	0.41
19:CS:59:VAL:HB	19:CS:73:PHE:CD2	2.47	0.41
22:DA:1676:A:C2	22:DA:1993:U:H5'	2.55	0.41
3:CC:22:PHE:CE2	10:CJ:97:ASP:HB2	2.54	0.41
45:BX:68:ALA:C	45:BX:69:GLU:O	2.59	0.41
28:BG:51:PHE:N	28:BG:51:PHE:CD2	2.88	0.41
22:DA:1796:U:H2'	22:DA:1797:G:H8	1.82	0.41
22:DA:2825:G:H3'	22:DA:2826:A:H8	1.84	0.41
37:BP:17:PRO:HG3	37:BP:83:ILE:O	2.21	0.41
22:DA:270:A:H2'	22:DA:271:G:OP1	2.20	0.41
27:BF:4:HIS:O	27:BF:8:LYS:HG2	2.20	0.41
23:DB:100:G:H2'	23:DB:101:A:O4'	2.21	0.41
22:BA:626:A:H2'	33:BL:78:ARG:CZ	2.51	0.41
42:DU:33:VAL:O	42:DU:34:ILE:CG1	2.68	0.41
24:DC:65:ASP:OD1	24:DC:67:LYS:O	2.38	0.41
4:AD:13:ARG:HG3	4:AD:55:ARG:HE	1.86	0.41
15:AO:30:LEU:O	15:AO:33:ALA:HB3	2.20	0.41
1:AA:1226:C:H5''	13:AM:101:THR:OG1	2.19	0.41
1:CA:889:A:O3'	1:CA:890:G:H4'	2.21	0.41
1:AA:663:A:C2	1:AA:743:A:C2	3.08	0.41
22:BA:1104:C:H2'	22:BA:1105:U:H6	1.85	0.41
37:BP:99:LEU:HD12	37:BP:99:LEU:HA	1.81	0.41
22:DA:2235:G:C4	22:DA:2236:U:C5	3.08	0.41
25:DD:56:LYS:HB3	25:DD:56:LYS:NZ	2.35	0.41
13:AM:113:LYS:N	13:AM:114:PRO:CD	2.80	0.41
10:CJ:32:THR:HG23	10:CJ:83:THR:OG1	2.20	0.41
1:CA:770:C:O2'	1:CA:771:G:H5'	2.21	0.41
31:DJ:38:GLY:C	31:DJ:40:HIS:H	2.23	0.41
28:BG:15:ASP:CG	28:BG:16:VAL:H	2.22	0.41
47:BZ:53:MET:O	47:BZ:54:VAL:HG13	2.20	0.41
9:AI:48:ARG:HH21	9:AI:52:GLU:HA	1.85	0.41
8:AH:30:LYS:O	8:AH:33:VAL:HB	2.20	0.41
49:D1:47:ILE:H	49:D1:47:ILE:HD12	1.85	0.41
22:DA:157:C:C2	22:DA:158:U:C6	3.07	0.41
22:DA:862:G:H2'	22:DA:863:A:O4'	2.20	0.41
2:CB:35:ASN:O	2:CB:36:LYS:C	2.57	0.41
30:DI:95:ASP:HB3	30:DI:97:VAL:HG23	2.00	0.41
1:AA:1111:A:C2'	1:AA:1112:C:H5'	2.50	0.41
7:CG:128:GLU:OE2	7:CG:130:LYS:HB2	2.20	0.41
25:DD:38:LYS:HB3	25:DD:38:LYS:HZ3	1.85	0.41
22:BA:1587:G:C4	22:BA:1588:G:C8	3.09	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
43:BV:40:ILE:N	43:BV:40:ILE:HD13	2.35	0.41
22:BA:2182:U:H2'	22:BA:2183:A:OP1	2.20	0.41
22:BA:595:C:H2'	22:BA:596:U:C6	2.54	0.41
26:BE:138:LEU:HD23	26:BE:138:LEU:HA	1.85	0.41
1:CA:289:G:C6	1:CA:290:C:N4	2.89	0.41
47:DZ:32:GLY:C	47:DZ:34:THR:N	2.74	0.41
22:BA:2243:U:H2'	22:BA:2244:U:C6	2.55	0.41
49:D1:38:PHE:CG	49:D1:39:ASP:N	2.88	0.41
40:BS:34:ASP:O	40:BS:35:ILE:C	2.56	0.41
22:BA:2067:G:H4'	22:BA:2068:U:OP2	2.20	0.41
22:BA:2805:C:C4	22:BA:2806:C:C4	3.08	0.41
22:BA:1724:G:C6	22:BA:1725:U:C4	3.08	0.41
44:BW:69:GLU:HB3	44:BW:70:VAL:H	1.73	0.41
28:BG:18:ILE:CD1	28:BG:42:VAL:HG13	2.50	0.41
26:DE:109:LEU:HA	26:DE:112:LEU:HB2	2.03	0.41
48:B0:38:LEU:O	48:B0:39:ARG:C	2.57	0.41
18:AR:41:SER:O	18:AR:45:GLY:N	2.53	0.41
22:BA:2001:C:H1'	22:BA:2689:U:C4	2.55	0.41
1:CA:604:G:H2'	1:CA:605:U:O4'	2.20	0.41
8:AH:110:MET:SD	8:AH:115:ALA:HA	2.60	0.41
44:DW:52:CYS:O	44:DW:53:GLY:O	2.39	0.41
10:CJ:17:LEU:C	10:CJ:19:ASP:H	2.24	0.41
7:CG:102:TRP:C	7:CG:104:VAL:H	2.23	0.41
4:CD:146:GLU:C	4:CD:148:ALA:H	2.23	0.41
43:DV:21:ARG:NH2	43:DV:87:GLN:O	2.51	0.41
1:AA:224:U:O2'	1:AA:225:C:H5'	2.20	0.41
22:BA:2619:C:O2'	22:BA:2620:C:H5'	2.21	0.41
25:DD:104:VAL:O	25:DD:104:VAL:HG12	2.19	0.41
22:BA:2855:C:O5'	22:BA:2855:C:H6	2.03	0.41
45:BX:17:ARG:HD2	45:BX:17:ARG:N	2.36	0.41
1:AA:781:A:C5	1:AA:802:A:C2	3.08	0.41
22:BA:1242:U:H2'	22:BA:1243:C:C6	2.54	0.41
1:AA:1080:A:OP1	5:AE:51:LYS:HE3	2.21	0.41
22:BA:1065:U:H5	22:BA:1074:G:H21	1.69	0.41
39:DR:49:ILE:C	39:DR:51:VAL:H	2.24	0.41
1:CA:6:G:O2'	1:CA:7:A:P	2.77	0.41
23:DB:27:C:H2'	23:DB:28:C:O4'	2.20	0.41
28:BG:84:LYS:HB3	28:BG:132:LEU:O	2.19	0.41
24:DC:183:VAL:HG22	24:DC:184:GLU:H	1.84	0.41
44:DW:44:PHE:HE2	44:DW:76:ARG:NE	2.18	0.41
44:DW:77:LYS:O	44:DW:78:PHE:CB	2.68	0.41
38:DQ:51:GLN:O	38:DQ:54:ARG:N	2.49	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:405:U:H3'	22:DA:406:G:H5'	2.02	0.41
22:DA:26:G:H5'	22:DA:27:G:OP2	2.21	0.41
22:DA:1358:G:H1'	22:DA:1374:G:N2	2.34	0.41
22:DA:1808:A:H4'	22:DA:1809:A:OP2	2.21	0.41
4:AD:29:THR:O	4:AD:30:LYS:HB2	2.20	0.41
22:DA:1069:A:H2	22:DA:1097:U:OP1	2.03	0.41
22:DA:1083:U:H1'	22:DA:1086:A:N1	2.36	0.41
22:DA:1092:C:H2'	22:DA:1093:G:C5'	2.50	0.41
17:AQ:14:ASP:O	17:AQ:16:MET:HG2	2.21	0.41
22:DA:184:C:N3	22:DA:213:A:H2	2.18	0.41
22:DA:1661:G:H2'	22:DA:1662:U:H6	1.86	0.41
1:CA:83:C:N4	1:CA:85:U:C4	2.88	0.41
39:DR:27:ILE:CG2	39:DR:28:ALA:N	2.73	0.41
22:DA:1964:G:H4'	22:DA:1965:C:OP2	2.20	0.41
25:BD:91:THR:OG1	25:BD:91:THR:O	2.34	0.41
35:DN:28:LEU:C	35:DN:30:ARG:H	2.23	0.41
22:DA:822:G:H5''	56:DA:3359:HOH:O	2.20	0.41
9:CI:113:LYS:HG3	9:CI:119:LYS:HA	2.02	0.41
22:BA:136:G:C6	22:BA:142:A:N6	2.89	0.41
12:CL:49:ARG:HG2	12:CL:49:ARG:HH11	1.86	0.41
22:BA:2180:U:C2'	22:BA:2181:U:H5	2.21	0.41
22:BA:2742:G:OP2	52:B4:24:ARG:NH1	2.53	0.41
22:DA:922:C:H2'	22:DA:923:G:H8	1.85	0.41
3:AC:34:SER:O	3:AC:38:VAL:HG13	2.21	0.41
41:DT:53:VAL:HB	41:DT:54:GLU:H	1.76	0.41
1:CA:530:G:N3	1:CA:530:G:H3'	2.35	0.41
1:AA:203:G:C2	1:AA:215:C:N3	2.88	0.41
3:AC:110:LEU:HD22	3:AC:110:LEU:N	2.36	0.41
9:AI:12:LYS:O	9:AI:13:SER:HB3	2.20	0.41
22:DA:2519:U:N1	22:DA:2542:A:N6	2.68	0.41
28:DG:8:VAL:HG21	28:DG:49:LEU:HD23	2.01	0.41
1:AA:602:A:O2'	1:AA:603:U:H5'	2.20	0.41
22:BA:548:G:H3'	22:BA:548:G:H8	1.85	0.41
22:DA:528:A:C2	22:DA:2043:C:C5'	3.04	0.41
1:CA:765:G:C8	1:CA:812:G:N3	2.89	0.41
22:BA:2590:A:H2'	22:BA:2591:C:C6	2.56	0.41
9:CI:14:SER:OG	9:CI:69:GLY:HA3	2.19	0.41
52:D4:7:VAL:HG22	52:D4:25:VAL:HG23	2.03	0.41
24:BC:171:VAL:HG23	24:BC:185:ALA:CA	2.49	0.41
22:DA:1740:G:C2	22:DA:1741:C:C2	3.09	0.41
43:DV:57:TYR:N	43:DV:57:TYR:CD1	2.89	0.41
41:BT:85:VAL:O	41:BT:86:THR:O	2.38	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
33:DL:63:LYS:HA	51:D3:12:ARG:HB3	2.01	0.41
51:B3:21:PHE:HB2	51:B3:49:VAL:HG13	1.99	0.41
11:AK:111:ASP:O	21:AU:3:ILE:HG23	2.20	0.41
22:DA:468:G:H4'	26:DE:57:LYS:CG	2.51	0.41
31:DJ:57:LEU:O	31:DJ:126:ALA:HA	2.20	0.41
22:DA:2538:C:O2'	22:DA:2539:C:H5'	2.21	0.41
1:AA:543:U:H2'	1:AA:544:G:O4'	2.20	0.41
30:DI:12:VAL:CG1	30:DI:13:ALA:N	2.81	0.41
24:DC:196:ASN:O	24:DC:197:ALA:CB	2.67	0.41
11:AK:110:THR:HG22	21:AU:4:LYS:HB3	2.02	0.41
22:DA:2234:G:C6	22:DA:2235:G:C5	3.08	0.41
1:CA:509:A:C6	1:CA:510:A:N1	2.87	0.41
8:AH:88:LYS:HB2	8:AH:88:LYS:HE3	1.87	0.41
43:DV:4:ILE:HD11	43:DV:50:MET:HE2	2.03	0.41
10:AJ:10:LEU:O	10:AJ:71:LEU:HD13	2.21	0.41
1:CA:72:A:H2'	1:CA:73:C:C6	2.55	0.41
39:DR:8:GLY:HA3	39:DR:23:GLU:HG2	2.02	0.41
42:BU:5:ARG:O	42:BU:6:ARG:O	2.38	0.41
26:BE:48:THR:OG1	26:BE:50:ALA:HB3	2.20	0.41
40:DS:82:MET:HE1	40:DS:84:ARG:HH22	1.85	0.41
30:BI:3:LYS:HD2	30:BI:4:VAL:H	1.84	0.41
32:DK:11:ALA:O	32:DK:99:ILE:HG23	2.21	0.41
9:AI:88:GLU:HG3	9:AI:89:TYR:N	2.34	0.41
20:CT:74:HIS:O	20:CT:78:LEU:HB2	2.21	0.41
22:DA:752:A:O2'	22:DA:753:A:H8	2.02	0.41
29:BH:75:LEU:HD22	29:BH:143:ILE:CG2	2.50	0.41
1:AA:1521:C:N3	1:AA:1522:U:C5	2.88	0.41
1:AA:1521:C:C2	1:AA:1522:U:C6	3.08	0.41
22:BA:1588:G:C2	22:BA:1589:U:C5	3.08	0.41
22:BA:1229:C:H2'	22:BA:1230:A:H8	1.85	0.41
22:DA:2461:A:N1	22:DA:2490:G:N2	2.68	0.41
22:DA:776:G:N1	22:DA:2072:C:OP1	2.41	0.41
38:DQ:77:LYS:HE3	38:DQ:116:LEU:HD11	2.01	0.41
22:BA:907:G:C2'	22:BA:908:C:H5'	2.51	0.41
37:DP:19:PHE:HE1	37:DP:58:PHE:CG	2.39	0.41
22:BA:1384:A:H1'	22:BA:1405:U:C1'	2.50	0.41
22:BA:1384:A:H1'	22:BA:1405:U:H1'	2.00	0.41
22:DA:2262:U:H4'	22:DA:2328:A:H2	1.85	0.41
22:DA:524:G:H2'	22:DA:525:U:H6	1.86	0.41
22:BA:2830:C:O3'	25:BD:56:LYS:NZ	2.53	0.41
7:AG:71:THR:O	7:AG:90:VAL:HG12	2.20	0.41
1:AA:287:U:H2'	1:AA:288:A:H8	1.85	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:1511:G:C5	1:AA:1512:U:C5	3.08	0.41
22:BA:2839:G:C5	22:BA:2840:C:C5	3.08	0.41
24:BC:156:SER:O	24:BC:157:ALA:C	2.59	0.41
22:BA:374:A:H2'	22:BA:375:G:O4'	2.20	0.41
1:CA:1186:G:N2	1:CA:1187:G:H1'	2.35	0.41
22:DA:2396:G:C2'	22:DA:2397:G:H5'	2.50	0.41
1:AA:137:U:O2	1:AA:227:G:C2	2.73	0.41
14:AN:3:GLN:O	14:AN:6:LYS:HB3	2.21	0.41
43:DV:14:LYS:HG3	43:DV:18:ARG:HD2	2.02	0.41
43:DV:26:PHE:CD1	43:DV:26:PHE:C	2.93	0.41
31:DJ:116:ARG:HA	31:DJ:116:ARG:HD2	1.66	0.41
35:DN:51:LEU:HD23	35:DN:51:LEU:HA	1.82	0.41
37:BP:98:TYR:H	37:BP:98:TYR:HD1	1.64	0.41
25:BD:85:ALA:O	25:BD:86:GLU:CB	2.69	0.41
25:BD:85:ALA:O	25:BD:86:GLU:HB2	2.21	0.41
44:BW:73:PRO:HG2	44:BW:76:ARG:CB	2.47	0.41
6:AF:2:ARG:HH21	6:AF:68:GLN:NE2	2.19	0.41
22:BA:272:A:O2'	22:BA:273:G:P	2.78	0.41
1:CA:1363:A:C5	1:CA:1365:G:O6	2.72	0.41
19:CS:43:MET:HG3	19:CS:43:MET:H	1.73	0.41
22:DA:2387:U:H6	22:DA:2387:U:H3'	1.84	0.41
49:D1:52:LYS:HB2	49:D1:52:LYS:NZ	2.36	0.41
22:DA:223:A:O2'	22:DA:224:U:P	2.79	0.41
22:DA:416:U:H2'	22:DA:417:C:O4'	2.20	0.41
1:CA:259:G:C4	1:CA:260:G:C8	3.08	0.41
22:DA:1345:C:O2'	22:DA:1346:G:P	2.79	0.41
42:DU:81:ARG:HD2	42:DU:81:ARG:H	1.85	0.41
33:BL:111:ILE:HD12	33:BL:128:THR:HG21	2.03	0.41
22:DA:117:G:C4'	22:DA:126:A:H2	2.32	0.41
27:DF:130:GLY:HA2	27:DF:151:LEU:O	2.20	0.41
33:DL:79:LEU:HD22	33:DL:115:GLU:O	2.20	0.41
27:BF:172:PHE:O	27:BF:174:PHE:N	2.53	0.41
22:DA:112:U:H2'	22:DA:113:U:H5'	2.03	0.41
46:DY:17:GLU:OE1	46:DY:53:VAL:HB	2.20	0.41
16:CP:78:VAL:C	16:CP:80:LYS:N	2.72	0.41
1:CA:1144:G:N1	1:CA:1145:A:C6	2.88	0.41
28:BG:44:HIS:HA	28:BG:49:LEU:HD23	2.03	0.41
6:CF:18:VAL:HG13	6:CF:22:ILE:HD11	2.01	0.41
22:BA:1083:U:H3'	22:BA:1083:U:H6	1.84	0.41
22:DA:822:G:H2'	22:DA:823:C:C6	2.55	0.41
1:CA:1084:G:C8	1:CA:1085:U:C6	3.08	0.41
13:CM:12:LYS:CE	13:CM:16:ILE:HG22	2.50	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:AT:66:ILE:O	20:AT:67:HIS:O	2.39	0.41
22:DA:2807:U:C5'	22:DA:2808:G:OP2	2.68	0.41
22:BA:1748:C:H2'	22:BA:1749:A:H8	1.86	0.41
1:CA:505:G:H5'	1:CA:534:U:C2	2.55	0.41
24:DC:229:HIS:ND1	24:DC:230:PRO:HD2	2.35	0.41
31:BJ:25:LEU:HD22	31:BJ:25:LEU:C	2.41	0.41
1:CA:1331:G:O2'	1:CA:1332:A:O5'	2.38	0.41
41:DT:55:VAL:HG22	41:DT:56:GLU:N	2.34	0.41
22:BA:1955:U:C5	22:BA:2557:G:N2	2.89	0.41
43:DV:30:ILE:HG12	43:DV:91:PHE:CB	2.48	0.41
13:CM:72:ILE:HG12	13:CM:72:ILE:O	2.21	0.41
37:BP:19:PHE:HB2	37:BP:20:ARG:H	1.41	0.41
22:DA:2880:C:C1'	35:DN:93:GLY:H	2.29	0.41
10:AJ:42:LEU:HB3	10:AJ:43:PRO:CD	2.50	0.41
22:DA:1429:G:O2'	22:DA:1430:G:P	2.79	0.41
22:DA:1432:G:H2'	22:DA:1433:A:C8	2.55	0.41
22:BA:2341:G:H2'	22:BA:2342:C:H6	1.85	0.41
7:AG:144:ALA:C	7:AG:146:ALA:N	2.73	0.41
6:AF:97:THR:HG22	6:AF:98:GLU:N	2.35	0.41
1:AA:1348:U:C2'	1:AA:1349:A:H8	2.33	0.41
22:DA:1152:C:H5''	38:DQ:79:ILE:HG23	2.01	0.41
26:DE:139:LYS:HB2	26:DE:139:LYS:HZ2	1.83	0.41
15:AO:27:GLN:HA	15:AO:30:LEU:HD12	2.02	0.41
13:AM:86:ARG:NH2	13:AM:96:VAL:HG12	2.34	0.41
42:BU:84:PHE:N	42:BU:94:PHE:CE2	2.89	0.41
26:DE:157:LEU:HD12	26:DE:157:LEU:O	2.20	0.41
19:AS:79:TYR:CZ	19:AS:80:ARG:HB2	2.55	0.41
17:AQ:4:ILE:HG22	17:AQ:5:ARG:HD3	2.02	0.41
12:CL:41:PRO:HG2	12:CL:45:ASN:O	2.21	0.41
39:BR:68:ARG:HD3	39:BR:92:TRP:CZ2	2.54	0.41
22:BA:1856:U:H3	22:BA:1886:U:H3	1.69	0.41
34:DM:102:LEU:HB3	34:DM:103:TYR:CD1	2.56	0.41
22:BA:1568:G:H1'	24:BC:57:HIS:HE1	1.84	0.41
4:AD:195:ASN:O	4:AD:196:GLU:HG3	2.19	0.41
1:AA:903:G:H2'	1:AA:904:U:C6	2.56	0.41
22:DA:1842:G:N2	22:DA:1901:A:C4	2.89	0.41
22:BA:2383:G:H5''	22:BA:2383:G:C8	2.55	0.41
4:CD:64:TYR:N	4:CD:64:TYR:CD1	2.89	0.41
24:DC:166:ARG:CB	24:DC:171:VAL:HG22	2.50	0.41
12:CL:81:ILE:HD11	12:CL:94:TYR:CG	2.55	0.41
24:BC:76:VAL:CG1	24:BC:96:LYS:NZ	2.84	0.41
22:DA:1638:C:H4'	22:DA:2710:C:O2	2.21	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
25:DD:115:GLY:O	35:DN:3:HIS:CE1	2.72	0.41
22:BA:1927:A:C6	22:BA:1928:A:C6	3.08	0.41
40:BS:24:ILE:HG23	40:BS:71:VAL:HG11	2.02	0.41
10:AJ:18:ILE:HG23	10:AJ:19:ASP:N	2.34	0.41
1:AA:1406:U:C2'	1:AA:1407:C:H5'	2.51	0.41
22:DA:2079:U:H2'	22:DA:2080:A:O4'	2.20	0.41
7:AG:14:ASP:OD2	7:AG:14:ASP:C	2.58	0.41
22:BA:1095:A:C6	22:BA:1096:A:N6	2.88	0.41
10:CJ:17:LEU:C	10:CJ:19:ASP:N	2.74	0.41
7:AG:71:THR:C	7:AG:90:VAL:HG12	2.40	0.41
3:CC:172:VAL:O	3:CC:174:LEU:N	2.54	0.41
20:CT:42:ASP:O	20:CT:44:ALA:N	2.53	0.41
28:BG:90:GLY:HA3	28:BG:159:LYS:HG3	2.03	0.41
22:BA:778:G:C5	22:BA:779:U:C4	3.08	0.41
19:CS:62:THR:HG21	19:CS:64:GLU:OE2	2.20	0.41
1:CA:1111:A:O5'	1:CA:1111:A:H8	2.03	0.41
22:BA:980:A:C6	22:BA:981:A:N1	2.89	0.41
22:BA:1808:A:O2'	45:BX:2:ARG:NH1	2.54	0.41
6:CF:39:LEU:HD12	6:CF:40:GLU:O	2.21	0.41
1:CA:1315:U:C4	1:CA:1316:G:C6	3.09	0.41
1:CA:1321:U:N3	1:CA:1322:C:N3	2.67	0.41
1:CA:978:A:HO2'	1:CA:979:C:H6	1.66	0.41
1:CA:1320:C:N4	19:CS:36:ARG:HG3	2.36	0.41
19:CS:38:THR:HA	19:CS:69:LYS:HD3	2.01	0.41
22:DA:1249:U:P	22:DA:1249:U:H3'	2.60	0.41
22:DA:2296:U:H5	36:DO:9:ARG:NH2	2.18	0.41
49:D1:8:ILE:HG22	49:D1:10:LEU:HD13	2.03	0.41
22:DA:234:U:O2'	22:DA:235:U:C5'	2.69	0.41
22:BA:1509:A:C1'	22:BA:1510:G:H5'	2.31	0.41
22:DA:324:A:N6	22:DA:339:U:H5'	2.36	0.41
22:DA:98:G:N3	22:DA:98:G:H2'	2.35	0.41
24:DC:66:PHE:CZ	24:DC:155:ARG:NH1	2.89	0.41
31:DJ:4:PHE:HD1	31:DJ:44:TYR:HB3	1.86	0.41
22:DA:2315:G:H5'	27:DF:156:THR:HG23	2.01	0.41
1:AA:254:G:H2'	1:AA:255:G:C8	2.55	0.41
22:DA:478:A:C6	22:DA:480:A:C6	3.09	0.41
25:BD:133:THR:O	25:BD:134:HIS:C	2.58	0.41
1:CA:279:A:H5''	1:CA:280:C:C3'	2.39	0.41
22:DA:604:G:C2	22:DA:605:G:C5	3.09	0.41
22:DA:668:A:C4	22:DA:670:A:N7	2.89	0.41
1:AA:1142:G:C4	1:AA:1143:G:H1'	2.56	0.41
22:BA:1734:G:O2'	22:BA:1735:A:H5'	2.21	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
28:DG:82:PHE:CE2	28:DG:137:LYS:HB2	2.56	0.41
22:DA:198:C:H42	22:DA:248:G:H1	1.67	0.41
45:DX:31:ASN:HB2	45:DX:33:HIS:CE1	2.55	0.41
32:DK:91:SER:O	32:DK:92:GLU:C	2.58	0.41
1:CA:270:A:C5	1:CA:271:C:C5	3.09	0.41
32:BK:78:ARG:NH1	37:BP:70:GLU:OE2	2.50	0.41
24:BC:141:HIS:HB2	24:BC:190:THR:CB	2.48	0.41
13:CM:12:LYS:HE2	13:CM:16:ILE:HG22	2.02	0.41
8:AH:24:VAL:O	8:AH:59:GLU:HA	2.21	0.41
2:AB:150:ILE:O	2:AB:151:LYS:C	2.58	0.41
52:B4:16:ILE:HA	52:B4:24:ARG:O	2.21	0.41
3:AC:35:ASP:C	3:AC:37:LYS:H	2.24	0.41
22:BA:2812:G:H2'	22:BA:2813:A:O4'	2.21	0.41
1:CA:796:C:C3'	11:CK:126:ARG:HH21	2.33	0.41
1:AA:201:G:C2	1:AA:202:G:H1'	2.55	0.41
5:CE:110:MET:HG2	5:CE:139:THR:CG2	2.49	0.41
25:BD:98:VAL:C	25:BD:100:LEU:N	2.74	0.41
37:DP:72:VAL:O	37:DP:72:VAL:HG23	2.19	0.41
31:DJ:98:GLU:O	31:DJ:102:GLU:HB2	2.21	0.41
1:AA:499:A:H4'	1:AA:500:G:OP1	2.20	0.41
27:BF:84:ILE:O	27:BF:84:ILE:HG23	2.21	0.41
22:DA:769:U:O2'	22:DA:1379:U:H6	2.04	0.41
1:CA:1203:C:O5'	1:CA:1203:C:H6	2.02	0.41
22:DA:1323:C:C4	22:DA:1324:G:N7	2.89	0.41
22:DA:1883:U:H2'	22:DA:1884:G:O4'	2.19	0.41
22:DA:1520:U:C4	22:DA:1521:G:C6	3.08	0.41
3:AC:6:PRO:CG	3:AC:183:TYR:CG	3.04	0.41
22:DA:1180:U:O4	22:DA:1181:U:C4	2.74	0.41
22:DA:684:G:OP1	50:D2:16:HIS:ND1	2.53	0.41
1:AA:195:A:C6	1:AA:196:A:C6	3.08	0.41
22:BA:2747:G:HO2'	28:BG:66:THR:HG22	1.85	0.41
22:BA:1190:G:OP1	33:BL:32:GLY:CA	2.66	0.41
33:DL:75:ALA:HB2	33:DL:105:ILE:CD1	2.50	0.41
8:AH:105:THR:CG2	8:AH:120:LEU:HD13	2.47	0.41
1:AA:89:U:HO2'	1:AA:90:C:C5'	2.32	0.41
22:DA:2727:A:C2	22:DA:2728:U:N3	2.88	0.41
37:DP:92:ARG:O	37:DP:93:LYS:HB2	2.20	0.41
6:AF:52:ASN:O	6:AF:53:LYS:CB	2.68	0.41
22:BA:1889:A:H2'	22:BA:1890:A:C8	2.56	0.41
41:DT:62:VAL:HG12	41:DT:63:VAL:H	1.84	0.41
1:AA:895:G:C5	1:AA:896:C:C4	3.08	0.41
28:BG:31:GLU:O	28:BG:31:GLU:HG3	2.20	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
28:BG:31:GLU:O	28:BG:32:LEU:C	2.59	0.41
22:DA:424:G:C2	22:DA:425:G:C8	3.08	0.41
1:AA:604:G:N1	1:AA:605:U:C2	2.89	0.41
34:BM:56:ALA:H	34:BM:58:LYS:H	1.69	0.41
15:CO:88:ARG:HD3	15:CO:88:ARG:N	2.36	0.41
22:DA:715:A:C6	22:DA:716:A:C6	3.08	0.41
22:BA:1585:C:H2'	22:BA:1586:A:H5'	2.02	0.41
15:CO:2:LEU:HD12	15:CO:2:LEU:HA	1.89	0.41
17:CQ:21:VAL:HG11	17:CQ:42:LYS:NZ	2.35	0.41
1:CA:790:A:N6	1:CA:791:G:C6	2.88	0.41
41:DT:43:ILE:CG2	41:DT:58:VAL:HG11	2.50	0.41
1:CA:1161:C:O2'	1:CA:1162:C:H5'	2.21	0.41
45:DX:19:HIS:C	45:DX:21:LEU:N	2.73	0.41
1:CA:213:G:H2'	1:CA:213:G:N3	2.36	0.41
1:AA:1114:C:H2'	1:AA:1115:U:O4'	2.21	0.41
35:BN:18:GLN:NE2	35:BN:22:ARG:NH1	2.68	0.41
24:DC:169:ALA:O	24:DC:185:ALA:HB3	2.20	0.41
22:BA:1587:G:N3	22:BA:1588:G:C8	2.89	0.41
26:BE:147:LEU:O	26:BE:168:ASP:O	2.39	0.41
30:DI:104:GLN:HA	30:DI:107:GLU:HB2	2.03	0.41
4:CD:72:ARG:HA	4:CD:203:TYR:HE1	1.85	0.41
1:CA:1369:C:H2'	1:CA:1370:G:O4'	2.21	0.41
1:AA:11:G:H2'	1:AA:12:U:H6	1.86	0.41
1:CA:881:G:C2	1:CA:882:C:C2	3.09	0.41
22:BA:915:C:O2	23:BB:100:G:H4'	2.20	0.41
1:AA:51:A:H4'	1:AA:52:C:H5'	2.03	0.41
3:AC:106:ARG:CG	3:AC:106:ARG:O	2.69	0.41
23:DB:73:A:C4	23:DB:104:A:C2	3.09	0.41
24:BC:268:ARG:HH11	24:BC:268:ARG:CB	2.33	0.41
22:DA:1452:G:C8	22:DA:1457:U:N3	2.88	0.41
41:BT:7:LEU:C	41:BT:8:LEU:HD23	2.41	0.41
34:DM:21:ALA:HA	34:DM:97:GLN:HG2	2.03	0.41
34:BM:105:MET:HE3	34:BM:117:PHE:CE1	2.56	0.41
17:CQ:62:GLU:HB2	17:CQ:72:TRP:CH2	2.56	0.41
22:BA:2660:A:H2'	22:BA:2661:G:C8	2.55	0.41
22:DA:1803:A:H2'	22:DA:1804:C:O4'	2.21	0.41
37:DP:5:LYS:HE3	37:DP:9:GLN:NE2	2.36	0.41
48:D0:21:LEU:HB3	48:D0:22:THR:H	1.78	0.41
43:BV:4:ILE:O	43:BV:4:ILE:HG22	2.21	0.41
29:DH:86:ASP:CG	29:DH:86:ASP:O	2.58	0.41
25:BD:112:THR:O	25:BD:195:GLY:HA2	2.21	0.41
13:CM:5:GLY:C	13:CM:6:ILE:HG13	2.41	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
38:BQ:63:ARG:CZ	38:BQ:96:ASP:CA	2.90	0.41
22:BA:2094:A:H5''	29:BH:25:TYR:CD2	2.54	0.41
44:BW:21:GLY:O	44:BW:22:VAL:CB	2.68	0.41
44:BW:24:ARG:HD3	44:BW:65:LYS:HD3	2.02	0.41
21:CU:18:PHE:C	21:CU:19:LYS:HZ3	2.21	0.41
21:CU:28:LEU:O	21:CU:29:ALA:C	2.58	0.41
1:CA:1365:G:O2'	1:CA:1366:C:H5'	2.20	0.41
14:CN:53:ASP:HA	14:CN:58:ARG:HD3	2.03	0.41
22:DA:2332:C:C4'	44:DW:40:ARG:NH2	2.82	0.41
44:DW:44:PHE:HB3	44:DW:78:PHE:CD1	2.55	0.41
22:DA:828:U:H2'	22:DA:829:A:C8	2.56	0.41
38:DQ:46:TYR:CZ	38:DQ:50:ARG:CZ	3.04	0.41
22:DA:1155:A:H5''	38:DQ:54:ARG:NE	2.35	0.41
20:AT:53:MET:HE3	20:AT:57:VAL:CG2	2.51	0.41
20:AT:27:MET:HE1	20:AT:57:VAL:HG22	2.01	0.41
22:DA:228:C:O2	22:DA:418:C:H4'	2.20	0.41
22:DA:1400:U:HO2'	22:DA:1401:G:C4'	2.28	0.41
22:BA:1507:C:H5''	22:BA:1508:A:OP2	2.20	0.41
22:DA:2212:A:C8	22:DA:2214:C:C4	3.09	0.41
22:DA:319:G:H2'	22:DA:320:A:C5'	2.51	0.41
38:DQ:89:ILE:O	38:DQ:91:ARG:N	2.53	0.41
11:CK:70:ALA:HB1	11:CK:104:PHE:HZ	1.85	0.41
22:DA:664:G:C2	22:DA:665:U:O2	2.73	0.41
22:DA:2307:G:O2'	22:DA:2308:G:C8	2.69	0.41
7:CG:30:MET:HE2	7:CG:30:MET:HB3	1.93	0.41
27:BF:59:ILE:HG23	27:BF:137:PHE:CD1	2.56	0.41
1:CA:1336:C:O2'	1:CA:1337:G:C4	2.71	0.41
22:DA:604:G:C6	22:DA:625:G:N1	2.89	0.41
8:AH:74:ILE:HD13	8:AH:128:VAL:CG1	2.36	0.41
32:DK:71:ARG:CB	32:DK:72:PRO:HD3	2.36	0.41
22:DA:195:A:C5	22:DA:198:C:C5	3.08	0.41
6:AF:86:ARG:HD3	6:AF:86:ARG:C	2.41	0.41
22:DA:727:A:O2'	22:DA:728:G:O5'	2.38	0.41
24:DC:99:GLU:HG2	24:DC:100:ARG:N	2.35	0.41
12:AL:32:VAL:O	12:AL:33:CYS:O	2.38	0.41
7:CG:9:ARG:C	7:CG:10:LYS:HG3	2.41	0.41
41:BT:37:ASP:C	41:BT:38:ALA:O	2.59	0.41
22:DA:1584:U:C5	22:DA:1585:C:H1'	2.55	0.41
22:BA:61:C:H5''	22:BA:62:U:OP2	2.21	0.41
22:DA:1681:G:H2'	22:DA:1757:A:N1	2.36	0.41
25:DD:168:GLU:HB2	25:DD:169:ARG:H	1.66	0.41
24:DC:156:SER:O	24:DC:194:VAL:HG11	2.21	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:CD:57:LYS:HE3	4:CD:68:GLU:OE1	2.20	0.41
5:AE:14:LEU:HA	5:AE:36:THR:HA	2.03	0.41
1:AA:1008:U:OP2	14:AN:23:ARG:NH2	2.54	0.41
31:DJ:74:TYR:HE2	31:DJ:103:ILE:CD1	2.28	0.41
22:DA:2087:G:C2	22:DA:2233:U:O2	2.73	0.41
22:BA:760:G:C2'	22:BA:761:A:H5'	2.51	0.41
22:DA:2141:G:H2'	22:DA:2142:A:C8	2.55	0.41
1:AA:807:A:C5	1:AA:808:C:C4	3.09	0.41
22:DA:163:C:O2'	22:DA:164:C:C5'	2.69	0.41
26:BE:75:SER:OG	26:BE:77:ILE:HG23	2.21	0.41
22:BA:372:G:N2	22:BA:400:G:H2'	2.36	0.41
22:BA:2820:A:O2'	22:BA:2821:A:P	2.79	0.41
22:DA:2376:A:C2	36:DO:92:PHE:HD2	2.33	0.41
1:CA:1003:G:N2	1:CA:1005:A:C5'	2.81	0.41
22:DA:2897:U:H2'	22:DA:2898:U:O4'	2.20	0.41
15:AO:68:TYR:CZ	15:AO:72:LYS:HG3	2.56	0.41
22:DA:2355:G:C4'	44:DW:20:LEU:HD22	2.51	0.41
17:CQ:61:ARG:HG2	17:CQ:75:VAL:HG11	2.02	0.41
26:BE:32:VAL:CG2	26:BE:33:VAL:N	2.83	0.41
22:DA:1733:G:C2'	22:DA:1734:G:O5'	2.69	0.41
41:BT:26:LYS:O	41:BT:27:SER:HB2	2.21	0.41
28:DG:154:GLU:C	28:DG:156:TYR:N	2.71	0.41
22:DA:1826:G:O2'	22:DA:1971:U:OP2	2.38	0.41
1:AA:285:C:O2	1:AA:285:C:H2'	2.21	0.41
22:DA:1865:U:O2	22:DA:1877:A:N1	2.54	0.41
22:DA:1867:G:O2'	22:DA:1868:C:H5'	2.21	0.41
51:D3:22:LYS:H	51:D3:48:MET:HB2	1.86	0.41
22:BA:1795:C:H2'	22:BA:1796:U:C6	2.56	0.41
19:AS:79:TYR:CG	19:AS:80:ARG:N	2.87	0.41
22:BA:958:U:O4	34:BM:16:ARG:HA	2.21	0.41
46:DY:3:ALA:C	46:DY:5:GLU:N	2.73	0.41
8:CH:38:VAL:O	8:CH:38:VAL:HG12	2.21	0.41
4:AD:21:LYS:O	4:AD:22:SER:C	2.59	0.41
46:BY:24:GLU:O	46:BY:25:GLN:C	2.59	0.41
28:BG:156:TYR:O	28:BG:157:LYS:HG3	2.21	0.41
1:CA:572:A:H5''	1:CA:917:G:H4'	2.01	0.41
10:CJ:63:ASP:OD1	14:CN:97:LYS:HE3	2.19	0.41
24:DC:131:MET:CG	24:DC:134:ILE:HD11	2.48	0.41
22:DA:2652:C:C4	22:DA:2653:U:C4	3.09	0.41
22:DA:1317:G:N2	22:DA:1336:A:C2	2.88	0.41
31:DJ:18:VAL:HG12	31:DJ:54:ILE:HD11	2.03	0.41
18:CR:40:PRO:HB2	18:CR:42:ARG:CG	2.50	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
46:BY:26:PHE:HD1	46:BY:27:ASN:ND2	2.19	0.41
22:BA:541:A:H2'	22:BA:542:C:O4'	2.20	0.41
22:DA:383:C:N3	22:DA:391:A:N6	2.68	0.41
22:DA:2417:C:H2'	22:DA:2418:A:H8	1.84	0.41
22:BA:1816:C:HO2'	22:BA:1817:G:P	2.44	0.41
7:AG:110:ARG:NH1	7:AG:122:GLU:HG2	2.35	0.41
25:BD:178:VAL:N	25:BD:188:LEU:O	2.40	0.41
8:CH:33:VAL:O	8:CH:35:ILE:N	2.54	0.41
29:BH:147:VAL:HG12	29:BH:149:GLU:HG3	2.02	0.41
22:DA:92:U:H3'	22:DA:93:G:H8	1.86	0.41
28:DG:26:LYS:HD3	28:DG:27:GLY:N	2.35	0.41
22:DA:2784:U:C4	22:DA:2785:C:C4	3.09	0.41
17:CQ:47:ASP:HB3	17:CQ:74:LEU:CB	2.51	0.41
9:AI:113:LYS:HG2	9:AI:114:LYS:N	2.35	0.41
22:BA:2536:G:C6	22:BA:2537:U:C4	3.09	0.41
35:BN:13:ASN:O	35:BN:14:SER:C	2.59	0.41
28:BG:148:ARG:O	28:BG:149:ALA:C	2.59	0.41
1:CA:661:G:C5	1:CA:662:U:C5	3.08	0.41
22:DA:562:U:H2'	22:DA:572:A:O4'	2.20	0.41
11:CK:75:GLU:OE2	11:CK:75:GLU:HA	2.20	0.41
34:DM:78:LEU:HA	34:DM:78:LEU:HD22	1.68	0.41
1:AA:209:U:O2	1:AA:209:U:O4'	2.39	0.41
1:AA:1045:C:H2'	1:AA:1045:C:O2	2.19	0.41
22:BA:1333:G:C2	22:BA:1334:G:C8	3.08	0.41
11:CK:20:ALA:HB3	11:CK:83:VAL:HA	2.02	0.41
22:DA:2522:U:C2'	22:DA:2523:G:H5'	2.51	0.41
1:AA:960:U:H1'	1:AA:1222:G:O2'	2.20	0.41
44:BW:28:GLU:CG	44:BW:29:SER:N	2.83	0.41
21:CU:24:LYS:HD2	21:CU:24:LYS:HA	1.81	0.41
22:DA:449:A:C5	22:DA:450:G:C8	3.09	0.41
1:CA:974:A:H5''	14:CN:70:HIS:ND1	2.35	0.41
27:DF:164:GLU:O	27:DF:168:LEU:HD12	2.21	0.41
20:AT:22:SER:OG	20:AT:23:ARG:HD2	2.20	0.41
1:AA:1101:A:H61	2:AB:101:THR:HG21	1.86	0.41
1:AA:1101:A:N3	1:AA:1102:A:H1'	2.35	0.41
22:DA:1355:G:O2'	22:DA:1356:G:H5'	2.20	0.41
22:DA:2316:G:C4	22:DA:2317:A:C8	3.09	0.41
1:AA:254:G:N2	1:AA:273:U:C2	2.89	0.41
14:CN:94:GLY:O	14:CN:95:LEU:C	2.58	0.41
27:BF:134:GLN:C	27:BF:136:ILE:N	2.74	0.41
1:CA:415:A:N1	1:CA:428:G:O6	2.54	0.41
1:CA:243:A:C2	1:CA:245:U:H2'	2.56	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
16:CP:6:LEU:CD2	16:CP:71:VAL:HG12	2.51	0.41
22:DA:1050:A:C2	22:DA:2751:G:C2	3.08	0.41
22:DA:2093:G:O2'	22:DA:2094:A:O5'	2.39	0.41
16:CP:1:MET:HE2	16:CP:2:VAL:O	2.20	0.41
22:DA:1789:A:OP1	24:DC:219:VAL:HA	2.21	0.41
22:DA:95:A:HO2'	46:DY:39:GLN:HA	1.86	0.41
22:BA:143:C:H2'	22:BA:144:A:C8	2.55	0.41
34:DM:36:VAL:HG21	34:DM:129:THR:HG22	2.02	0.41
30:BI:120:ASP:HB3	30:BI:123:ALA:CB	2.51	0.41
23:BB:29:A:H2'	23:BB:30:C:C6	2.56	0.41
1:AA:242:G:C2	1:AA:245:U:C4	3.09	0.41
1:AA:70:U:N3	1:AA:94:G:C5	2.88	0.41
22:DA:279:A:C8	22:DA:279:A:P	3.13	0.41
8:CH:85:TYR:CD1	17:CQ:36:PHE:HE2	2.38	0.41
1:CA:247:G:OP1	1:CA:247:G:H4'	2.21	0.41
22:BA:1047:G:N2	22:BA:1110:G:N9	2.69	0.41
22:DA:1267:U:N3	22:DA:2013:A:N7	2.69	0.41
1:AA:1157:A:C2	1:AA:1181:G:C4	3.09	0.41
46:BY:46:VAL:HB	46:BY:47:ARG:H	1.77	0.41
41:DT:44:LYS:C	41:DT:48:GLN:HG2	2.40	0.41
22:DA:1126:A:H8	22:DA:1126:A:OP1	2.04	0.41
3:CC:110:LEU:HD21	3:CC:203:LYS:CD	2.43	0.41
7:CG:85:GLN:HE21	7:CG:85:GLN:HB3	1.63	0.41
22:DA:2287:A:O2'	22:DA:2288:A:C2'	2.69	0.41
1:AA:78:A:N7	1:AA:79:G:N7	2.69	0.41
22:BA:288:U:O2'	22:BA:289:G:H5'	2.21	0.41
33:DL:92:LEU:HD23	33:DL:92:LEU:H	1.86	0.41
1:CA:1305:G:N2	1:CA:1331:G:H2'	2.28	0.41
7:AG:12:LEU:HD13	7:AG:12:LEU:H	1.85	0.41
29:DH:31:VAL:CB	29:DH:32:PRO:HD3	2.49	0.41
22:BA:2310:C:C5	27:BF:76:PHE:CZ	3.08	0.41
22:BA:1385:A:H1'	22:BA:1386:C:H6	1.84	0.41
1:CA:322:C:C2	1:CA:332:G:N2	2.88	0.41
22:BA:373:U:C5	22:BA:400:G:C2	3.08	0.41
22:BA:2820:A:HO2'	22:BA:2821:A:P	2.44	0.41
29:DH:98:ASP:O	29:DH:99:ILE:HG12	2.20	0.41
11:AK:39:ASN:O	11:AK:40:ALA:HB3	2.21	0.41
12:CL:72:ASN:HD22	12:CL:72:ASN:N	2.13	0.41
33:DL:99:ASN:O	33:DL:100:ILE:HB	2.21	0.41
31:BJ:60:ASP:HB3	31:BJ:97:PRO:HG2	2.02	0.41
14:CN:2:LYS:HD3	14:CN:5:MET:CG	2.51	0.41
22:DA:366:C:H2'	22:DA:367:G:O5'	2.20	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
4:AD:164:ARG:O	4:AD:166:LYS:N	2.54	0.41
22:DA:1513:U:O4	22:DA:1514:G:O6	2.37	0.41
22:DA:2638:G:O2'	22:DA:2639:A:P	2.79	0.41
29:BH:130:VAL:HG23	29:BH:131:SER:H	1.86	0.41
22:DA:1838:C:C5	22:DA:1899:A:C6	3.08	0.41
9:AI:41:GLU:HB3	9:AI:42:THR:H	1.58	0.41
22:DA:1769:U:H1'	22:DA:1984:G:H22	1.81	0.41
6:CF:96:VAL:HG12	6:CF:97:THR:H	1.85	0.41
14:CN:62:ARG:HB3	14:CN:68:ARG:O	2.21	0.41
22:DA:121:G:N3	22:DA:131:A:N1	2.68	0.41
11:CK:68:ARG:HA	11:CK:71:ASP:HB2	2.02	0.41
5:CE:157:GLY:HA3	8:CH:63:LYS:HZ2	1.85	0.41
1:CA:32:A:H2'	1:CA:32:A:N3	2.35	0.41
46:DY:1:MET:N	46:DY:5:GLU:CG	2.84	0.41
10:AJ:14:ASP:CB	10:AJ:17:LEU:HB3	2.51	0.41
29:DH:2:GLN:HA	29:DH:2:GLN:NE2	2.35	0.41
22:BA:1858:A:O2'	22:BA:1859:U:O5'	2.38	0.41
1:AA:119:A:C6	1:AA:240:G:C8	3.09	0.41
22:DA:99:U:H5'	22:DA:100:U:OP1	2.21	0.41
22:BA:804:A:H2'	22:BA:806:C:C4	2.54	0.41
12:CL:24:GLU:O	12:CL:25:ALA:CB	2.69	0.41
13:CM:59:VAL:HG13	13:CM:60:ALA:H	1.85	0.41
17:CQ:10:ARG:HG2	17:CQ:11:VAL:O	2.21	0.41
22:DA:1425:G:O5'	22:DA:1425:G:H8	2.04	0.41
22:BA:2508:G:HO2'	22:BA:2554:U:HO2'	1.69	0.41
26:BE:127:GLU:N	26:BE:127:GLU:OE1	2.54	0.41
22:BA:645:C:O2'	22:BA:646:U:H5''	2.20	0.41
22:DA:736:C:H42	22:DA:760:G:H1	1.69	0.41
1:CA:289:G:C4	1:CA:290:C:C5	3.09	0.41
1:AA:436:C:H2'	1:AA:437:U:C6	2.56	0.41
1:AA:437:U:H4'	4:AD:153:ARG:NH2	2.36	0.41
22:DA:2275:C:O2	34:DM:84:LYS:HD3	2.21	0.41
22:BA:1278:C:H2'	22:BA:1279:G:H8	1.85	0.41
22:BA:2825:G:H5''	22:BA:2826:A:OP2	2.20	0.41
37:DP:19:PHE:CE1	37:DP:58:PHE:CD2	3.08	0.41
37:DP:19:PHE:HE1	37:DP:58:PHE:CD2	2.39	0.41
3:AC:113:LYS:HD3	3:AC:184:ASN:ND2	2.36	0.41
1:CA:1284:C:P	1:CA:1285:A:H3'	2.61	0.41
1:AA:1154:G:C2	1:AA:1155:A:C4	3.09	0.41
22:BA:2830:C:O2	22:BA:2883:A:H2	2.04	0.41
22:BA:1918:A:O2'	22:BA:1920:C:N4	2.54	0.41
22:BA:2839:G:C6	22:BA:2840:C:C4	3.09	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
32:DK:121:GLU:HB3	32:DK:122:VAL:H	1.63	0.41
26:DE:193:VAL:O	26:DE:197:GLU:HB2	2.20	0.41
8:AH:112:ASP:O	8:AH:113:ARG:C	2.59	0.41
22:BA:2758:A:C2'	22:BA:2759:G:H5'	2.51	0.41
5:AE:17:VAL:HG22	5:AE:18:ASN:N	2.35	0.41
22:BA:7:G:H2'	22:BA:8:C:C6	2.56	0.41
40:BS:68:ASP:O	40:BS:109:ASP:HB3	2.21	0.41
4:AD:39:GLN:OE1	4:AD:40:HIS:CD2	2.74	0.41
48:B0:6:LYS:HA	48:B0:7:PRO:HD3	1.93	0.41
4:CD:16:THR:HG22	4:CD:17:ASP:N	2.35	0.41
22:BA:1676:A:H2'	22:BA:1677:A:C8	2.55	0.41
1:CA:846:G:O2'	1:CA:847:G:H5'	2.21	0.41
24:DC:172:THR:HG22	24:DC:182:LYS:HG2	2.02	0.41
37:BP:15:ASP:O	37:BP:16:VAL:C	2.58	0.41
32:DK:66:LYS:HG2	32:DK:66:LYS:O	2.21	0.41
8:AH:65:PHE:HD1	8:AH:65:PHE:HA	1.69	0.41
9:CI:37:TYR:HD2	9:CI:37:TYR:H	1.69	0.41
27:DF:2:LYS:HD3	27:DF:2:LYS:N	2.36	0.41
16:CP:26:ASN:OD1	16:CP:31:ARG:HB3	2.20	0.41
38:BQ:91:ARG:HE	39:BR:11:GLN:HB2	1.85	0.41
31:BJ:38:GLY:C	31:BJ:40:HIS:N	2.74	0.41
22:BA:1059:G:C5	22:BA:1060:U:C4	3.08	0.41
4:CD:187:ARG:NH2	4:CD:191:SER:HB3	2.36	0.41
1:AA:960:U:H5	19:AS:77:ARG:HG2	1.86	0.41
45:DX:36:ARG:HG2	45:DX:47:THR:HB	2.03	0.41
27:BF:129:MET:HG2	27:BF:153:ILE:CD1	2.44	0.41
21:CU:25:ALA:O	21:CU:26:GLY:C	2.59	0.41
26:DE:45:ALA:O	26:DE:46:GLN:HB2	2.21	0.41
1:CA:1371:G:O3'	9:CI:70:GLY:HA3	2.20	0.41
14:CN:52:ARG:O	14:CN:53:ASP:HB2	2.21	0.41
14:CN:55:SER:HB3	14:CN:58:ARG:HG2	2.03	0.41
19:CS:35:ARG:HH12	19:CS:52:ASN:HA	1.86	0.41
28:BG:132:LEU:CD2	28:BG:132:LEU:N	2.81	0.41
28:BG:83:THR:HA	28:BG:84:LYS:HE2	2.03	0.41
28:BG:84:LYS:NZ	28:BG:133:LYS:HD3	2.35	0.41
28:BG:86:LEU:HD11	28:BG:132:LEU:HD21	2.03	0.41
22:DA:2331:G:C6	22:DA:2385:C:N4	2.89	0.41
22:DA:857:G:H1'	44:DW:19:ARG:CZ	2.51	0.41
22:DA:2345:G:C4	22:DA:2381:A:C2	3.08	0.41
27:DF:28:PRO:HA	27:DF:158:THR:OG1	2.21	0.41
22:DA:830:G:H4'	22:DA:831:G:OP2	2.20	0.41
22:DA:833:A:C6	22:DA:834:G:C6	3.09	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
20:AT:57:VAL:HG12	20:AT:71:ALA:HB1	2.03	0.41
13:CM:19:THR:C	13:CM:21:ILE:H	2.24	0.41
22:DA:227:A:C5'	22:DA:229:C:H41	2.33	0.41
24:DC:141:HIS:HB3	24:DC:190:THR:O	2.21	0.41
24:DC:104:LEU:HD12	24:DC:104:LEU:HA	1.75	0.41
22:DA:1213:A:O2'	22:DA:1214:A:H5'	2.21	0.41
22:DA:1606:C:C2	22:DA:1606:C:H5'	2.53	0.41
22:DA:2025:C:OP1	25:DD:154:LYS:HE2	2.21	0.41
4:AD:33:ILE:O	4:AD:34:GLU:CB	2.67	0.41
13:CM:75:SER:HA	13:CM:78:ARG:HB3	2.03	0.41
22:DA:307:G:H2'	22:DA:309:A:OP2	2.21	0.41
22:DA:324:A:N3	22:DA:325:G:H1'	2.36	0.41
22:DA:336:C:H2'	22:DA:336:C:O2	2.20	0.41
24:DC:152:GLN:HA	24:DC:155:ARG:HD3	2.03	0.41
5:AE:121:ASN:N	5:AE:121:ASN:ND2	2.68	0.41
5:AE:152:VAL:O	5:AE:155:LYS:HD2	2.21	0.41
10:AJ:56:HIS:O	10:AJ:57:VAL:HG12	2.21	0.41
22:DA:2887:A:H1'	48:D0:39:ARG:NH2	2.24	0.41
1:AA:268:U:H2'	1:AA:269:C:C6	2.55	0.41
22:BA:2823:A:OP2	25:BD:118:PHE:CD1	2.74	0.41
42:DU:44:HIS:HD2	42:DU:57:ILE:HD13	1.86	0.41
10:CJ:46:LYS:HA	10:CJ:67:ILE:O	2.21	0.41
26:BE:172:ALA:HB2	26:BE:192:ALA:HB1	2.02	0.41
1:CA:821:G:H2'	1:CA:822:U:H6	1.86	0.41
22:DA:71:A:H5''	22:DA:73:A:N9	2.35	0.41
22:DA:109:C:N3	22:DA:110:G:C8	2.89	0.41
22:DA:347:A:H2'	22:DA:348:A:H8	1.86	0.41
26:DE:147:LEU:HD21	26:DE:179:SER:HB2	2.03	0.41
4:AD:109:THR:CG2	4:AD:112:GLU:HB2	2.51	0.41
1:CA:246:A:C2	1:CA:279:A:N6	2.89	0.41
22:DA:656:G:H2'	22:DA:657:U:H6	1.86	0.41
10:CJ:5:ARG:HA	10:CJ:7:ARG:HH12	1.86	0.41
16:CP:69:ASP:O	16:CP:70:ARG:C	2.59	0.41
22:DA:1045:C:H5''	22:DA:1047:G:H1'	2.02	0.41
22:DA:2751:G:C5'	28:DG:2:ARG:HH21	2.34	0.41
22:DA:2760:C:H2'	22:DA:2761:A:H5'	2.03	0.41
22:DA:782:A:O2'	24:DC:223:ALA:O	2.36	0.41
22:BA:571:U:OP1	39:BR:80:ARG:NH1	2.53	0.41
34:DM:17:ASN:C	34:DM:18:ARG:HG2	2.40	0.41
1:CA:527:G:C2	1:CA:528:C:C6	3.08	0.41
1:CA:994:A:C5	1:CA:1216:A:H4'	2.56	0.41
47:DZ:16:LEU:HD23	47:DZ:19:HIS:CD2	2.56	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
27:DF:101:ARG:HH11	27:DF:138:PRO:CB	2.33	0.41
28:DG:126:THR:HG22	28:DG:127:GLN:H	1.85	0.41
1:AA:76:G:C2'	1:AA:76:G:N3	2.81	0.41
1:AA:414:A:O2'	1:AA:415:A:C5'	2.68	0.41
22:BA:2148:G:O2'	22:BA:2149:U:H4'	2.21	0.41
1:CA:653:U:O2'	1:CA:654:G:H8	2.04	0.41
2:AB:69:VAL:CB	2:AB:162:VAL:HG12	2.47	0.41
22:DA:1297:C:C2	22:DA:1298:C:C5	3.09	0.41
1:AA:1158:C:N3	1:AA:1160:G:N7	2.69	0.41
38:DQ:65:ASN:HA	38:DQ:75:TYR:HB2	2.01	0.41
5:CE:56:PRO:O	5:CE:57:ALA:C	2.59	0.41
5:CE:13:LYS:HD3	5:CE:14:LEU:N	2.35	0.41
3:CC:139:ASN:O	3:CC:140:ALA:HB2	2.20	0.41
22:BA:1150:C:C2'	22:BA:1151:A:O5'	2.69	0.41
9:CI:39:GLY:HA2	9:CI:44:ARG:HD3	2.03	0.41
3:CC:110:LEU:CD2	3:CC:203:LYS:HD2	2.43	0.41
22:DA:2889:C:O2'	22:DA:2890:G:H5'	2.21	0.41
22:BA:1744:A:C2	22:BA:1745:A:H1'	2.56	0.41
5:AE:14:LEU:HB3	5:AE:36:THR:HG22	2.02	0.41
22:DA:2284:A:OP1	49:D1:5:ARG:HG3	2.21	0.41
1:AA:92:U:OP2	1:AA:92:U:H6	2.04	0.41
29:DH:71:LYS:N	29:DH:71:LYS:HD3	2.36	0.41
22:BA:226:A:N6	22:BA:227:A:N1	2.69	0.41
5:AE:105:ILE:HD11	5:AE:123:LEU:HB3	2.03	0.41
5:AE:96:GLN:HB2	5:AE:123:LEU:HD12	2.03	0.41
22:DA:1525:A:O5'	22:DA:1525:A:H8	2.03	0.41
22:DA:1527:G:C2	22:DA:1546:G:N1	2.89	0.41
1:AA:35:G:N2	12:AL:114:SER:OG	2.53	0.41
5:AE:97:PRO:O	5:AE:98:ALA:HB3	2.20	0.41
22:DA:1652:A:C2	22:DA:2006:C:N3	2.89	0.41
39:BR:38:VAL:CG1	39:BR:59:ILE:HG13	2.50	0.41
22:DA:1281:G:C5	22:DA:1282:U:C5	3.08	0.41
1:CA:1305:G:H2'	1:CA:1306:A:H8	1.86	0.41
22:DA:2144:G:N2	22:DA:2148:G:O6	2.53	0.41
2:CB:11:ALA:HA	2:CB:13:VAL:HG22	2.02	0.41
1:CA:183:C:O2'	1:CA:184:G:H5'	2.20	0.41
22:DA:1857:G:N3	22:DA:1884:G:C2	2.89	0.41
20:CT:4:LYS:HB3	20:CT:4:LYS:HE3	1.83	0.41
29:DH:89:LYS:HB2	29:DH:90:LEU:H	1.73	0.41
34:BM:12:MET:HB2	34:BM:72:PRO:HD2	2.03	0.41
22:BA:1256:G:O2'	26:BE:77:ILE:HD11	2.19	0.41
1:AA:1336:C:C4'	1:AA:1337:G:OP2	2.68	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:DA:845:A:N6	22:DA:932:U:C2	2.89	0.41
41:DT:6:ARG:O	41:DT:9:LYS:HD2	2.21	0.41
43:BV:44:HIS:O	43:BV:45:ASP:C	2.59	0.41
1:AA:761:G:C5	1:AA:762:U:C5	3.09	0.41
1:CA:177:G:C2'	1:CA:178:C:H5'	2.51	0.41
6:CF:38:ARG:HD2	6:CF:63:ASN:CG	2.41	0.41
30:DI:58:ILE:HG23	30:DI:66:PHE:CD2	2.55	0.41
31:DJ:119:PHE:C	31:DJ:121:LYS:N	2.74	0.41
22:DA:746:U:O2'	22:DA:2611:C:O2'	2.21	0.41
22:DA:1171:G:C6	22:DA:1179:G:C2	3.09	0.41
22:BA:1090:A:H2'	22:BA:1091:G:H5'	2.02	0.41
22:DA:684:G:H5'	50:D2:16:HIS:CE1	2.56	0.41
22:BA:2185:U:H2'	22:BA:2186:G:C8	2.56	0.41
31:BJ:141:ASP:O	31:BJ:142:ILE:O	2.39	0.41
13:CM:68:LEU:C	13:CM:70:ARG:H	2.25	0.41
22:DA:1734:G:N2	22:DA:1735:A:C4	2.89	0.41
32:BK:4:GLU:O	32:BK:5:GLN:HB2	2.21	0.41
1:CA:719:C:O2	18:CR:38:ILE:HG13	2.20	0.41
44:DW:30:VAL:HG23	44:DW:59:PHE:HD1	1.86	0.41
1:CA:1049:U:H2'	14:CN:2:LYS:HD2	2.03	0.41
22:DA:468:G:H5''	26:DE:55:SER:HB2	2.02	0.41
23:DB:78:A:H2'	23:DB:79:G:C8	2.56	0.41
29:BH:82:SER:C	29:BH:83:LYS:HD3	2.40	0.41
38:BQ:20:ALA:HA	38:BQ:23:TYR:CD1	2.55	0.41
22:BA:2898:U:O2	31:BJ:134:ALA:HB1	2.21	0.41
31:DJ:127:GLY:O	31:DJ:129:GLU:HG3	2.21	0.41
32:DK:119:ALA:O	32:DK:120:PRO:C	2.59	0.41
19:AS:3:SER:CB	19:AS:4:LEU:HD12	2.50	0.41
26:DE:88:ARG:HB3	26:DE:89:PRO:CD	2.49	0.41
33:BL:21:ARG:HA	33:BL:21:ARG:HD3	1.53	0.41
1:CA:1381:U:O2	1:CA:1381:U:C2'	2.67	0.41
22:DA:1710:G:H2'	22:DA:1711:A:C8	2.55	0.41
22:BA:1316:U:H2'	22:BA:1317:G:H8	1.85	0.41
1:CA:624:C:H4'	16:CP:10:GLY:C	2.42	0.41
22:DA:1867:G:H2'	22:DA:1868:C:C6	2.55	0.41
22:DA:7:G:H4'	31:DJ:15:TRP:HH2	1.85	0.41
25:BD:49:GLN:C	25:BD:50:VAL:HG13	2.42	0.41
1:CA:1399:C:O2	1:CA:1401:G:C5	2.73	0.41
22:DA:582:A:OP1	38:DQ:13:HIS:ND1	2.52	0.41
22:DA:48:G:N3	22:DA:48:G:H2'	2.35	0.41
45:DX:44:ARG:HH11	45:DX:44:ARG:CB	2.33	0.41
22:BA:2570:G:C2'	22:BA:2571:U:H5'	2.50	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:CA:1416:G:C2	1:CA:1485:U:O2	2.74	0.41
42:DU:94:PHE:CD2	42:DU:94:PHE:O	2.70	0.41
29:BH:100:ALA:O	29:BH:102:ALA:N	2.54	0.41
40:DS:39:THR:O	40:DS:40:ASN:CB	2.69	0.41
1:AA:591:U:O2'	1:AA:592:G:H5'	2.20	0.41
34:DM:49:ALA:HB3	34:DM:103:TYR:OH	2.21	0.41
38:DQ:101:ASP:OD1	38:DQ:104:ALA:HB2	2.21	0.41
22:BA:969:G:H2'	22:BA:970:U:H6	1.85	0.41
10:AJ:52:LEU:HB2	14:AN:80:ARG:HD2	2.01	0.41
40:DS:68:ASP:O	40:DS:69:LEU:HD12	2.20	0.41
1:CA:869:G:C8	56:CA:1822:HOH:O	2.74	0.41
22:BA:1848:A:H2'	22:BA:1849:G:O4'	2.21	0.41
27:BF:1:ALA:O	27:BF:3:LEU:N	2.54	0.41
26:BE:35:TYR:CD2	26:BE:177:PRO:HD2	2.56	0.41
1:CA:28:A:H2'	1:CA:29:U:O4'	2.20	0.41
22:BA:163:C:C6	22:BA:163:C:OP1	2.74	0.41
22:DA:57:C:O2'	41:DT:36:LYS:HE2	2.21	0.41
35:DN:79:LEU:O	35:DN:80:PHE:HB2	2.20	0.41
4:AD:2:ARG:NH2	4:AD:114:ARG:HD3	2.36	0.41
22:DA:2182:U:H2'	22:DA:2183:A:C8	2.56	0.41
12:CL:14:LYS:HG3	12:CL:14:LYS:O	2.20	0.41
49:B1:18:HIS:HE1	49:B1:20:TYR:CE2	2.39	0.41
22:DA:2697:G:H2'	22:DA:2698:U:O4'	2.21	0.41
22:DA:2508:G:H2'	22:DA:2509:G:C8	2.53	0.41
22:BA:2430:A:P	56:BA:3344:HOH:O	2.79	0.41
1:CA:186:C:C2'	1:CA:187:G:H5'	2.51	0.41
39:DR:93:PHE:CD2	39:DR:93:PHE:C	2.93	0.41
13:CM:69:ARG:HD2	13:CM:69:ARG:N	2.36	0.41
1:CA:841:C:H2'	1:CA:843:U:O4'	2.20	0.41
25:BD:17:GLU:C	25:BD:19:GLY:H	2.24	0.41
1:AA:279:A:C8	1:AA:279:A:H5'	2.55	0.41
22:BA:1477:A:N6	22:BA:1514:G:O2'	2.49	0.41
1:AA:520:A:N1	1:AA:536:C:H1'	2.35	0.41
22:DA:719:C:C2'	22:DA:720:U:H5'	2.51	0.41
22:DA:718:A:H3'	22:DA:719:C:C5'	2.51	0.41
22:BA:111:A:H2'	22:BA:112:U:O4'	2.20	0.41
43:BV:65:VAL:O	43:BV:66:ASP:OD1	2.38	0.41
1:AA:1166:G:N1	1:AA:1169:A:OP2	2.54	0.41
1:CA:1233:G:P	9:CI:125:GLN:HE22	2.43	0.41
24:BC:56:GLY:HA2	24:BC:212:TRP:HA	2.02	0.41
22:DA:1262:A:C6	22:DA:1263:U:C2	3.08	0.41
22:DA:2080:A:H4'	45:DX:22:ASN:HD22	1.85	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:CA:358:U:H2'	1:CA:359:G:H8	1.85	0.41
42:DU:64:ILE:O	42:DU:65:GLN:O	2.39	0.41
1:AA:924:C:H2'	1:AA:925:G:C8	2.55	0.41
38:BQ:79:ILE:O	38:BQ:80:ASN:C	2.58	0.41
11:AK:58:THR:HB	11:AK:59:PRO:HD2	2.02	0.41
4:AD:102:TYR:C	4:AD:104:MET:H	2.24	0.41
22:BA:496:G:C5	22:BA:497:A:C8	3.08	0.41
22:DA:523:C:O2'	22:DA:524:G:H5'	2.19	0.41
33:DL:141:LYS:HD2	33:DL:142:ILE:N	2.35	0.41
8:CH:24:VAL:HG22	8:CH:25:THR:H	1.86	0.41
22:BA:2840:C:H2'	22:BA:2841:C:H6	1.86	0.41
1:AA:641:U:H4'	8:AH:106:SER:O	2.20	0.41
18:AR:61:ALA:O	18:AR:66:LEU:HB2	2.20	0.41
51:D3:63:TYR:O	51:D3:64:ALA:O	2.39	0.41
13:AM:76:ILE:O	13:AM:79:LEU:HB2	2.21	0.41
6:CF:81:ASN:O	6:CF:82:ASP:C	2.59	0.41
1:AA:860:A:H2'	1:AA:861:G:O5'	2.21	0.41
43:BV:26:PHE:HB2	43:BV:27:PRO:HD2	2.02	0.41
1:CA:1292:G:C6	1:CA:1293:C:C4	3.09	0.41
2:CB:166:ASP:HB2	2:CB:190:SER:HB2	2.02	0.41
1:AA:1269:A:C2	1:AA:1326:U:O2	2.74	0.41
1:AA:887:G:H2'	1:AA:888:G:H5'	2.03	0.41
5:CE:65:LYS:HA	5:CE:65:LYS:HD3	1.88	0.41
43:BV:92:VAL:HG12	43:BV:92:VAL:O	2.20	0.41
1:CA:453:G:OP2	1:CA:453:G:H8	2.04	0.41
34:DM:82:MET:HE2	34:DM:82:MET:HB3	1.81	0.41
14:AN:82:LYS:HE2	14:AN:82:LYS:HA	2.03	0.41
28:DG:34:ARG:O	28:DG:35:THR:HG23	2.20	0.41
1:CA:21:G:H2'	1:CA:22:G:C8	2.55	0.41
33:DL:131:ALA:O	33:DL:135:ILE:HG22	2.20	0.41
9:AI:76:GLY:O	9:AI:79:ARG:HB3	2.21	0.41
3:CC:153:SER:HB3	3:CC:164:THR:HB	2.03	0.41
3:AC:115:VAL:O	3:AC:118:SER:HB3	2.20	0.41
34:BM:41:LEU:CD2	34:BM:125:PRO:HD2	2.51	0.41
25:DD:14:ILE:HA	37:DP:11:GLN:HE22	1.86	0.41
38:BQ:91:ARG:HB2	38:BQ:94:LEU:HB2	2.02	0.41
6:AF:71:ILE:CG2	6:AF:72:ASP:N	2.84	0.41
11:CK:92:ARG:NH1	11:CK:92:ARG:HG3	2.35	0.41
1:CA:933:G:O5'	1:CA:933:G:H8	2.04	0.41
9:CI:71:ILE:HD12	9:CI:72:SER:N	2.05	0.41
1:CA:1311:A:H2'	1:CA:1312:G:O4'	2.21	0.41
22:DA:265:A:C6	22:DA:428:A:C8	3.09	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:CA:1497:G:C2'	1:CA:1498:U:H5'	2.51	0.41
22:DA:1310:G:N2	22:DA:1605:C:C2	2.89	0.41
22:DA:323:C:H2'	26:DE:163:ASN:OD1	2.21	0.41
22:DA:1654:A:O2'	25:DD:118:PHE:HB2	2.21	0.41
5:AE:152:VAL:C	5:AE:156:ARG:HB2	2.39	0.41
1:CA:110:C:O2	1:CA:110:C:H2'	2.20	0.41
22:DA:2301:C:C2	22:DA:2316:G:N2	2.89	0.41
22:DA:665:U:H2'	22:DA:666:A:C8	2.51	0.41
52:B4:25:VAL:HG11	52:B4:35:GLN:HE21	1.86	0.41
22:DA:502:A:N6	22:DA:505:A:C5	2.89	0.41
31:BJ:124:VAL:O	31:BJ:125:TYR:CB	2.68	0.41
22:DA:2308:G:O6	22:DA:2311:A:N7	2.54	0.41
22:DA:1999:C:H4'	22:DA:2723:C:O2	2.20	0.41
22:DA:1022:G:O6	31:DJ:68:LYS:NZ	2.48	0.41
1:CA:1301:U:H2'	1:CA:1302:C:C5	2.55	0.41
22:DA:200:U:C5	22:DA:201:C:C5	3.09	0.41
1:CA:836:G:C6	1:CA:837:U:N3	2.89	0.41
6:AF:9:MET:HG2	6:AF:86:ARG:O	2.21	0.41
1:CA:255:G:O3'	17:CQ:18:LYS:HD2	2.21	0.41
22:BA:2155:U:O4	22:BA:2156:G:N1	2.53	0.41
1:AA:414:A:C2'	1:AA:415:A:H8	2.23	0.41
22:BA:60:G:H1'	22:BA:61:C:OP1	2.21	0.41
32:BK:72:PRO:O	32:BK:72:PRO:CD	2.69	0.41
29:BH:11:ASN:C	29:BH:12:LEU:HD23	2.41	0.41
32:BK:21:CYS:HA	32:BK:41:ILE:CD1	2.41	0.41
35:BN:55:ALA:HA	35:BN:80:PHE:CE1	2.55	0.41
1:AA:1002:G:C5	1:AA:1003:G:C8	3.09	0.41
50:B2:42:LEU:HD22	50:B2:42:LEU:N	2.26	0.41
5:AE:94:PHE:CE1	5:AE:96:GLN:HG2	2.56	0.41
22:DA:633:A:H5''	33:DL:70:LYS:HD3	2.02	0.41
41:DT:55:VAL:HG21	41:DT:85:VAL:O	2.21	0.41
3:AC:76:ILE:C	3:AC:82:ASP:HB2	2.41	0.41
1:AA:211:G:C5	1:AA:212:G:H1'	2.56	0.41
1:AA:212:G:N3	1:AA:213:G:N7	2.69	0.41
22:DA:163:C:O2'	22:DA:164:C:O5'	2.38	0.41
22:DA:979:A:H2'	22:DA:982:C:H41	1.86	0.41
23:DB:38:C:C4'	36:DO:100:HIS:NE2	2.80	0.41
26:DE:149:ILE:HG23	26:DE:188:MET:H	1.83	0.41
29:DH:94:ILE:HG21	29:DH:98:ASP:OD1	2.21	0.41
22:BA:2591:C:H2'	22:BA:2592:G:H8	1.81	0.41
24:BC:237:ARG:O	24:BC:238:ASN:HB2	2.20	0.41
1:CA:1004:A:C2	1:CA:1026:G:C5	3.09	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
8:CH:8:ASP:OD2	8:CH:12:ARG:NH1	2.53	0.41
1:AA:1452:C:H5'	1:AA:1453:G:C5	2.56	0.41
31:BJ:31:GLU:O	31:BJ:35:ARG:HG3	2.21	0.41
15:AO:18:ALA:O	15:AO:19:ASN:CB	2.66	0.41
3:CC:149:LYS:HD2	3:CC:200:TRP:CE3	2.56	0.41
41:BT:24:MET:O	41:BT:28:ASN:O	2.39	0.41
1:CA:1387:G:C6	1:CA:1388:C:C4	3.08	0.41
22:DA:2402:U:O2'	22:DA:2403:C:P	2.79	0.41
23:DB:99:A:C6	23:DB:100:G:C5	3.09	0.41
21:AU:16:ARG:HH11	21:AU:19:LYS:HD2	1.85	0.41
22:DA:467:G:O3'	22:DA:797:G:H5'	2.21	0.41
22:DA:851:C:O4'	47:DZ:46:MET:HG2	2.20	0.41
1:AA:1315:U:C4	1:AA:1316:G:C5	3.09	0.41
22:BA:1738:G:O2'	22:BA:1739:A:C8	2.74	0.41
29:BH:27:ARG:NH1	29:BH:38:PRO:HG3	2.36	0.41
29:BH:38:PRO:HB2	29:BH:40:THR:HG23	2.02	0.41
30:DI:12:VAL:CG1	30:DI:13:ALA:H	2.31	0.41
22:BA:1103:A:H2'	22:BA:1104:C:C5'	2.51	0.41
22:DA:1768:C:H2'	22:DA:1769:U:O4'	2.21	0.41
26:DE:176:ASP:HA	26:DE:177:PRO:HD3	1.83	0.41
22:DA:2846:G:P	37:DP:51:ASN:CB	3.09	0.41
28:DG:152:ARG:CG	28:DG:153:PRO:HD2	2.51	0.41
10:AJ:15:HIS:CG	10:AJ:16:ARG:N	2.89	0.41
22:DA:470:A:N1	22:DA:471:A:C4	2.89	0.41
19:AS:12:LEU:HA	19:AS:12:LEU:HD23	1.91	0.41
11:AK:52:ARG:O	11:AK:55:ARG:HB2	2.21	0.41
1:AA:515:G:N3	1:AA:537:G:C2	2.90	0.41
38:DQ:73:ILE:HG13	38:DQ:74:SER:N	2.36	0.41
13:AM:15:VAL:HG23	13:AM:16:ILE:HG13	2.02	0.41
1:AA:1084:G:C6	1:AA:1085:U:C4	3.09	0.41
1:AA:1077:G:C6	1:AA:1081:A:C6	3.09	0.41
31:DJ:36:LEU:HD21	31:DJ:122:LEU:HD13	2.03	0.41
22:DA:2461:A:H1'	22:DA:2492:U:N3	2.36	0.41
22:DA:2074:U:H2'	22:DA:2075:U:C6	2.56	0.41
36:BO:84:GLU:C	36:BO:86:GLY:N	2.74	0.41
22:BA:187:G:C2	22:BA:210:C:C2	3.09	0.41
1:AA:533:A:C2	1:AA:536:C:C5	3.09	0.41
1:CA:113:G:H1'	1:CA:354:G:H5'	2.03	0.41
22:BA:735:A:H3'	22:BA:736:C:C6	2.56	0.41
20:CT:51:ASN:OD1	20:CT:51:ASN:N	2.52	0.41
16:CP:20:VAL:HG21	16:CP:32:PHE:CG	2.56	0.41
38:BQ:49:ARG:HG3	38:BQ:49:ARG:NH1	2.36	0.41

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
28:BG:145:ALA:O	28:BG:148:ARG:HB3	2.21	0.41
1:CA:1428:A:H2'	1:CA:1429:A:O4'	2.21	0.41
26:DE:76:PRO:HA	26:DE:82:GLY:O	2.21	0.41
1:AA:1400:C:H4'	1:AA:1401:G:OP2	2.21	0.41
22:BA:115:C:O2'	22:BA:127:A:O2'	2.33	0.41
19:AS:52:ASN:OD1	19:AS:52:ASN:C	2.60	0.41
7:CG:115:MET:O	7:CG:115:MET:HE3	2.20	0.41
22:BA:703:U:C2'	22:BA:704:G:H5'	2.51	0.41
12:CL:71:HIS:ND1	12:CL:73:LEU:N	2.69	0.41
3:CC:77:GLY:O	3:CC:79:LYS:N	2.54	0.41
38:BQ:63:ARG:O	38:BQ:64:ILE:C	2.58	0.40
39:BR:10:LYS:HD2	39:BR:10:LYS:N	2.36	0.40
22:BA:1074:G:N3	22:BA:1074:G:H2'	2.36	0.40
6:AF:68:GLN:HB3	6:AF:68:GLN:HE21	1.60	0.40
44:BW:19:ARG:NH2	44:BW:22:VAL:CG2	2.84	0.40
22:DA:38:A:C2	22:DA:442:G:N1	2.89	0.40
1:CA:961:U:H5	1:CA:1223:C:H1'	1.85	0.40
22:DA:830:G:C2	22:DA:2448:A:N7	2.89	0.40
22:DA:235:U:C4	22:DA:236:C:C5	3.09	0.40
22:DA:419:U:C2	22:DA:420:C:C5	3.09	0.40
1:CA:1495:U:O2'	22:DA:1919:A:N1	2.44	0.40
22:DA:26:G:C5'	22:DA:27:G:OP2	2.69	0.40
22:DA:1389:G:C2	22:DA:1399:C:N3	2.89	0.40
22:DA:2024:G:C2	22:DA:2040:G:N3	2.89	0.40
22:DA:529:A:H4'	22:DA:530:G:OP1	2.21	0.40
22:DA:299:A:H8	22:DA:299:A:P	2.44	0.40
43:BV:80:HIS:CD2	43:BV:83:LYS:N	2.88	0.40
34:BM:34:LYS:HD3	43:BV:81:PRO:O	2.21	0.40
22:DA:1095:A:C2	22:DA:1096:A:C5	3.08	0.40
22:DA:475:C:H4'	22:DA:509:C:O2'	2.21	0.40
22:DA:118:A:OP2	22:DA:119:A:H2'	2.21	0.40
28:DG:93:TYR:HD2	28:DG:93:TYR:N	1.88	0.40
22:DA:648:G:C2	22:DA:649:G:C5	3.08	0.40
10:CJ:65:TYR:HB3	14:CN:95:LEU:HD11	2.03	0.40
46:DY:50:VAL:C	46:DY:52:ARG:N	2.74	0.40
4:CD:32:LYS:HB3	4:CD:35:GLN:OE1	2.21	0.40
30:BI:101:SER:HB2	30:BI:140:GLU:O	2.21	0.40
16:CP:75:ILE:HA	16:CP:78:VAL:HG23	2.02	0.40
1:CA:1147:C:O2'	1:CA:1148:U:H6	2.05	0.40
24:DC:52:HIS:HA	24:DC:216:ARG:CB	2.37	0.40
18:AR:63:TYR:CD1	18:AR:69:TYR:OH	2.73	0.40
22:BA:960:A:N7	22:BA:962:G:C8	2.89	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
30:BI:57:VAL:CG1	30:BI:58:ILE:N	2.84	0.40
34:DM:34:LYS:HD3	34:DM:131:VAL:HG21	2.02	0.40
47:DZ:19:HIS:O	47:DZ:20:LYS:C	2.60	0.40
25:BD:67:HIS:O	25:BD:68:PHE:C	2.58	0.40
28:DG:112:VAL:O	28:DG:113:ASP:HB2	2.21	0.40
1:CA:644:U:C2	1:CA:645:G:C8	3.10	0.40
22:DA:1683:U:O2'	22:DA:1684:G:H5'	2.21	0.40
22:BA:2723:C:H2'	22:BA:2724:U:O5'	2.21	0.40
41:DT:39:THR:HG21	41:DT:42:GLU:OE1	2.21	0.40
5:CE:135:VAL:O	5:CE:138:ALA:HB3	2.22	0.40
22:BA:1011:G:H5''	38:BQ:76:SER:OG	2.21	0.40
9:CI:39:GLY:HA2	9:CI:44:ARG:CD	2.51	0.40
32:BK:19:VAL:HG13	32:BK:41:ILE:HG12	2.02	0.40
1:AA:1004:A:C6	1:AA:1005:A:C4	3.09	0.40
22:DA:2504:U:H5''	56:DA:3512:HOH:O	2.21	0.40
49:D1:5:ARG:NH2	49:D1:23:THR:CB	2.83	0.40
41:BT:61:LEU:C	41:BT:61:LEU:CD1	2.78	0.40
22:DA:1854:A:O4'	22:DA:2233:U:H4'	2.20	0.40
39:DR:68:ARG:HD2	39:DR:92:TRP:CZ3	2.56	0.40
1:CA:587:G:H4'	8:CH:3:GLN:CA	2.52	0.40
28:BG:124:CYS:HA	28:BG:125:PRO:HD2	1.78	0.40
1:AA:338:A:C6	1:AA:339:C:C4	3.09	0.40
22:DA:1645:G:H5''	22:DA:1646:C:O5'	2.21	0.40
22:DA:1931:U:H2'	22:DA:1932:A:H8	1.86	0.40
22:DA:1968:G:C5'	56:DA:3484:HOH:O	2.67	0.40
1:CA:561:U:O2'	1:CA:562:U:OP1	2.28	0.40
50:D2:24:THR:HG23	50:D2:24:THR:O	2.21	0.40
30:DI:60:VAL:HG22	30:DI:66:PHE:CE2	2.46	0.40
28:DG:143:VAL:O	28:DG:147:LEU:HG	2.21	0.40
45:BX:32:LEU:HA	45:BX:51:SER:HA	2.02	0.40
22:DA:1773:A:H2'	22:DA:1774:C:C5'	2.52	0.40
22:BA:976:G:C2	22:BA:977:G:C8	3.10	0.40
1:CA:708:C:H4'	11:CK:38:GLY:HA3	2.03	0.40
5:CE:147:ASN:HA	5:CE:151:MET:HE3	2.03	0.40
1:AA:751:U:C5	1:AA:752:G:C5	3.09	0.40
22:DA:2531:A:C5'	28:DG:156:TYR:CZ	3.04	0.40
22:DA:1826:G:C5	22:DA:1827:U:C5	3.09	0.40
40:BS:2:GLU:O	40:BS:3:THR:O	2.38	0.40
22:DA:14:A:C6	22:DA:526:A:C2	3.10	0.40
22:BA:2293:G:H2'	22:BA:2294:G:O4'	2.21	0.40
32:DK:115:ILE:HG22	32:DK:116:ILE:N	2.35	0.40
32:DK:94:PRO:HG3	32:DK:115:ILE:HD12	2.03	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:CA:227:G:O2'	16:CP:63:GLN:HG2	2.21	0.40
1:AA:1032:G:C6	1:AA:1033:G:H1'	2.56	0.40
24:BC:83:ASP:HA	24:BC:84:PRO:HD3	1.83	0.40
42:DU:52:ASN:C	42:DU:54:PRO:HD3	2.41	0.40
42:BU:52:ASN:O	42:BU:54:PRO:HD2	2.21	0.40
22:BA:1422:G:C6	22:BA:1423:G:C5	3.10	0.40
1:AA:1417:G:N2	1:AA:1482:G:H2'	2.36	0.40
22:DA:2553:G:H2'	22:DA:2554:U:H4'	2.02	0.40
3:CC:173:PRO:O	3:CC:175:HIS:N	2.54	0.40
32:DK:11:ALA:HB2	32:DK:64:ARG:NH1	2.36	0.40
1:AA:1501:C:C4	1:AA:1504:G:C4	3.09	0.40
22:BA:164:C:H6	22:BA:164:C:H5''	1.85	0.40
22:BA:2508:G:C2	22:BA:2582:G:C6	3.08	0.40
1:AA:686:U:HO2'	1:AA:687:A:H8	1.66	0.40
14:CN:50:LEU:CB	14:CN:51:PRO:HD3	2.51	0.40
22:DA:2152:G:N3	22:DA:2152:G:H2'	2.36	0.40
1:AA:715:A:H8	1:AA:715:A:O5'	2.04	0.40
22:DA:1614:A:N6	40:DS:91:GLY:HA2	2.36	0.40
34:DM:81:ARG:NH2	34:DM:84:LYS:HE2	2.36	0.40
1:CA:804:U:H5''	1:CA:805:C:OP2	2.21	0.40
22:DA:2357:G:C2	22:DA:2361:G:C6	3.09	0.40
26:BE:68:ALA:O	26:BE:69:ARG:C	2.58	0.40
34:DM:23:GLY:H	34:DM:100:LYS:NZ	2.19	0.40
24:BC:66:PHE:HB3	24:BC:150:GLY:O	2.21	0.40
7:AG:31:VAL:HG22	7:AG:32:ASP:N	2.36	0.40
22:DA:1703:G:H2'	22:DA:1704:C:C6	2.56	0.40
22:DA:24:G:O2'	40:DS:77:ASP:HB3	2.21	0.40
23:BB:59:A:H2'	23:BB:60:C:O4'	2.20	0.40
22:DA:285:G:C2	22:DA:356:G:C4	3.08	0.40
2:AB:224:ARG:O	2:AB:225:SER:HB2	2.20	0.40
22:BA:1220:G:H2'	22:BA:1221:C:C6	2.56	0.40
6:CF:30:THR:O	6:CF:30:THR:HG22	2.21	0.40
16:AP:78:VAL:O	16:AP:78:VAL:HG22	2.22	0.40
10:AJ:102:LEU:HD22	10:AJ:102:LEU:N	2.35	0.40
22:BA:792:A:H5''	22:BA:793:A:H5'	2.02	0.40
22:BA:592:A:C2	51:B3:3:ILE:HD11	2.57	0.40
10:AJ:49:PHE:CE1	14:AN:76:PHE:HZ	2.39	0.40
22:BA:521:U:H2'	22:BA:522:A:C8	2.56	0.40
36:DO:20:GLU:HG3	44:DW:50:VAL:HG11	2.03	0.40
7:AG:59:GLU:O	7:AG:63:VAL:HG23	2.21	0.40
31:BJ:44:TYR:CD1	38:BQ:59:LEU:HD11	2.57	0.40
44:BW:72:GLY:C	44:BW:74:LYS:N	2.74	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
23:DB:109:A:O2'	23:DB:110:C:H6	1.99	0.40
22:BA:2354:C:O4'	44:BW:31:LEU:HD22	2.22	0.40
44:BW:16:GLU:HB2	44:BW:17:ALA:H	1.52	0.40
44:BW:18:LYS:H	44:BW:36:ILE:N	2.20	0.40
44:BW:28:GLU:OE2	44:BW:29:SER:N	2.54	0.40
44:BW:39:GLN:CG	44:BW:42:THR:H	2.27	0.40
1:CA:6:G:O2'	1:CA:7:A:OP2	2.37	0.40
44:DW:35:ILE:O	44:DW:36:ILE:C	2.59	0.40
22:DA:2258:C:C4'	22:DA:2259:U:OP2	2.65	0.40
22:DA:1532:A:C6	22:DA:1533:C:C4	3.09	0.40
22:DA:296:U:C2	22:DA:297:G:C8	3.09	0.40
22:DA:81:G:C8	22:DA:82:U:C5	3.09	0.40
1:CA:1073:U:N3	1:CA:1074:G:N7	2.69	0.40
5:AE:80:LEU:HD22	5:AE:80:LEU:N	2.36	0.40
1:AA:1363:A:C5	1:AA:1365:G:C6	3.09	0.40
22:DA:1067:A:H2'	22:DA:1068:G:H5''	2.03	0.40
1:AA:450:G:C2'	1:AA:451:A:OP1	2.69	0.40
1:CA:92:U:H2'	1:CA:93:U:C6	2.56	0.40
22:DA:291:G:N1	22:DA:350:G:C5	2.90	0.40
22:DA:72:U:O2	46:DY:51:ALA:HB1	2.21	0.40
1:CA:410:G:H5''	1:CA:411:A:OP1	2.22	0.40
26:DE:146:VAL:HA	26:DE:185:LYS:O	2.21	0.40
22:DA:673:C:C2'	22:DA:674:G:H5'	2.51	0.40
1:CA:1241:G:N3	1:CA:1242:G:C8	2.89	0.40
10:CJ:7:ARG:HD3	10:CJ:102:LEU:HD23	2.02	0.40
1:AA:1139:G:N2	1:AA:1141:C:N4	2.69	0.40
29:BH:89:LYS:CG	29:BH:90:LEU:H	2.14	0.40
22:DA:2745:C:C4	22:DA:2746:U:C4	3.09	0.40
22:DA:2759:G:C5	22:DA:2760:C:C5	3.08	0.40
22:DA:1275:A:C4	35:DN:16:HIS:CD2	3.05	0.40
10:CJ:15:HIS:CE1	10:CJ:68:ARG:CD	3.03	0.40
24:DC:69:ASN:O	24:DC:70:LYS:C	2.58	0.40
30:BI:123:ALA:C	30:BI:125:THR:H	2.24	0.40
30:BI:126:ARG:C	30:BI:129:GLU:HB2	2.41	0.40
2:AB:71:THR:O	2:AB:72:LYS:O	2.39	0.40
52:B4:1:MET:SD	52:B4:36:ARG:HB2	2.61	0.40
32:BK:113:MET:O	32:BK:115:ILE:N	2.53	0.40
25:DD:113:SER:OG	25:DD:114:LYS:N	2.55	0.40
1:CA:1525:G:H5''	21:CU:37:TYR:CD1	2.56	0.40
22:DA:2836:U:O2'	22:DA:2837:A:C8	2.49	0.40
1:CA:496:A:O2'	1:CA:497:G:C8	2.67	0.40
22:DA:2800:A:N3	22:DA:2801:G:H1'	2.35	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
33:DL:118:THR:O	33:DL:120:VAL:N	2.49	0.40
49:B1:7:LYS:CA	49:B1:23:THR:HG22	2.41	0.40
22:DA:2765:A:H5''	22:DA:2766:A:OP2	2.21	0.40
22:DA:1380:G:H1'	22:DA:1569:A:N6	2.35	0.40
22:DA:687:C:C2	22:DA:788:A:O4'	2.74	0.40
14:CN:44:VAL:C	14:CN:46:LYS:H	2.25	0.40
22:BA:1358:G:N7	22:BA:1371:G:N7	2.70	0.40
1:AA:523:A:H61	12:AL:88:ASP:CB	2.34	0.40
46:DY:31:GLN:C	46:DY:33:ALA:N	2.75	0.40
1:AA:857:C:H2'	1:AA:858:G:O4'	2.21	0.40
22:DA:1926:U:H1'	22:DA:1929:G:C6	2.57	0.40
35:BN:28:LEU:O	35:BN:32:GLU:N	2.52	0.40
2:CB:20:ARG:NH2	2:CB:38:HIS:CE1	2.89	0.40
1:CA:489:C:C4	1:CA:490:C:C5	3.09	0.40
33:BL:89:VAL:HA	33:BL:121:THR:HG23	2.02	0.40
22:DA:1179:G:C6	22:DA:1180:U:C4	3.09	0.40
31:BJ:36:LEU:HD12	31:BJ:36:LEU:HA	1.84	0.40
41:BT:4:GLU:CG	41:BT:6:ARG:HE	2.30	0.40
1:CA:1388:C:N3	1:CA:1389:C:C5	2.89	0.40
23:DB:76:G:H1	23:DB:101:A:N6	2.19	0.40
22:BA:1411:U:H2'	22:BA:1412:U:O4'	2.22	0.40
22:BA:876:C:N3	22:BA:901:C:N4	2.68	0.40
22:BA:2531:A:OP1	28:BG:174:LYS:HE3	2.21	0.40
40:BS:69:LEU:HD12	40:BS:69:LEU:HA	1.91	0.40
40:DS:35:ILE:HG13	40:DS:36:LEU:HD22	2.03	0.40
22:BA:417:C:H2'	22:BA:418:C:H6	1.86	0.40
32:DK:10:VAL:HG13	32:DK:12:ASP:H	1.85	0.40
4:CD:124:VAL:O	4:CD:125:ASN:C	2.60	0.40
37:BP:24:THR:HG22	37:BP:85:VAL:O	2.21	0.40
1:CA:619:U:O2	4:CD:129:VAL:HA	2.21	0.40
9:CI:126:PHE:CE1	9:CI:129:ARG:NH2	2.88	0.40
40:DS:47:VAL:O	40:DS:50:VAL:HB	2.21	0.40
1:CA:1065:U:H5	1:CA:1190:G:C8	2.40	0.40
1:CA:212:G:N2	1:CA:213:G:C4	2.90	0.40
1:AA:616:G:C2'	1:AA:617:G:H5'	2.51	0.40
1:AA:138:G:C2'	1:AA:139:A:H5'	2.51	0.40
1:AA:139:A:O2'	1:AA:140:U:H5'	2.21	0.40
25:DD:197:THR:O	25:DD:197:THR:HG22	2.21	0.40
22:DA:2862:G:C2	22:DA:2863:C:C2	3.09	0.40
18:CR:32:ILE:HA	18:CR:39:VAL:HG23	2.03	0.40
47:DZ:40:THR:N	47:DZ:43:ILE:HD11	2.35	0.40
1:CA:881:G:C6	1:CA:882:C:C4	3.09	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
26:BE:54:GLY:HA3	26:BE:74:LYS:HE2	2.03	0.40
38:BQ:13:HIS:CD2	38:BQ:31:TYR:CD1	3.08	0.40
5:AE:12:GLU:HB2	5:AE:38:VAL:HG12	2.03	0.40
22:DA:2373:G:H2'	22:DA:2374:C:C6	2.57	0.40
22:BA:523:C:H4'	22:BA:540:C:O2	2.20	0.40
22:BA:1669:A:OP2	56:BA:3723:HOH:O	2.21	0.40
22:BA:182:A:H2'	22:BA:183:C:O4'	2.21	0.40
1:AA:1167:A:C8	1:AA:1169:A:C6	3.09	0.40
16:CP:50:THR:O	16:CP:51:ARG:CZ	2.69	0.40
22:BA:1844:C:C2	22:BA:1897:G:N2	2.88	0.40
22:BA:2725:A:O2'	22:BA:2726:A:H2'	2.21	0.40
22:BA:497:A:C4	22:BA:498:G:C8	3.09	0.40
22:DA:1123:C:H2'	22:DA:1124:G:C8	2.56	0.40
1:CA:1426:G:C5	1:CA:1475:G:C2	3.10	0.40
1:CA:1076:U:C2	1:CA:1082:A:C2	3.09	0.40
16:CP:26:ASN:HD22	16:CP:26:ASN:HA	1.62	0.40
43:BV:6:ALA:HB2	43:BV:42:LEU:HD22	2.03	0.40
4:CD:117:VAL:O	4:CD:130:ASN:HA	2.21	0.40
48:B0:36:LYS:O	48:B0:37:HIS:HB3	2.22	0.40
36:BO:7:ARG:HD3	36:BO:97:PHE:CE1	2.57	0.40
1:CA:834:U:H2'	1:CA:835:U:C6	2.56	0.40
29:DH:65:ALA:O	29:DH:66:ASN:C	2.59	0.40
22:DA:580:U:O5'	22:DA:580:U:H6	2.04	0.40
22:DA:588:U:H6	22:DA:588:U:O5'	2.04	0.40
52:D4:9:LYS:O	52:D4:9:LYS:HD3	2.21	0.40
36:BO:21:LEU:HD23	36:BO:21:LEU:HA	1.57	0.40
8:CH:94:VAL:HG21	8:CH:101:ALA:HB2	2.03	0.40
1:AA:13:U:C4	1:AA:916:U:O4	2.75	0.40
30:BI:28:GLY:O	30:BI:34:ILE:HD11	2.21	0.40
1:AA:960:U:O2'	1:AA:1223:C:C5'	2.70	0.40
27:BF:35:LEU:HD13	27:BF:56:LEU:HD22	2.02	0.40
39:DR:37:GLU:HB2	39:DR:53:PHE:CE2	2.56	0.40
44:BW:72:GLY:C	44:BW:74:LYS:H	2.24	0.40
22:DA:1565:C:H5''	24:DC:17:LYS:CE	2.51	0.40
24:DC:1:ALA:O	24:DC:18:VAL:HG23	2.21	0.40
23:DB:69:G:C2	23:DB:70:C:H1'	2.57	0.40
6:AF:68:GLN:HA	6:AF:71:ILE:HG21	2.04	0.40
2:AB:70:GLY:HA2	2:AB:163:ILE:CG2	2.51	0.40
1:CA:972:C:OP2	1:CA:1366:C:H5''	2.21	0.40
19:CS:32:THR:HG21	19:CS:70:LEU:HD13	2.03	0.40
38:DQ:3:VAL:HG13	38:DQ:4:LYS:N	2.36	0.40
22:DA:2330:G:C2	22:DA:2386:A:C6	3.10	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
13:CM:19:THR:HG22	13:CM:26:LYS:HA	2.03	0.40
24:DC:141:HIS:CB	24:DC:190:THR:O	2.70	0.40
22:DA:1342:A:C6	22:DA:1345:C:N3	2.90	0.40
22:DA:2209:G:C5	22:DA:2210:U:C4	3.09	0.40
1:AA:427:U:C4	1:AA:428:G:C6	3.09	0.40
22:DA:1154:G:OP1	38:DQ:57:ARG:HD2	2.21	0.40
5:AE:152:VAL:CB	5:AE:155:LYS:NZ	2.84	0.40
2:CB:80:LYS:HG3	2:CB:81:ASP:H	1.86	0.40
2:AB:53:LEU:CD2	2:AB:53:LEU:H	2.34	0.40
33:BL:111:ILE:HD12	33:BL:128:THR:CG2	2.51	0.40
22:DA:1069:A:C2	22:DA:1097:U:OP1	2.75	0.40
22:DA:1085:A:C5'	22:DA:1105:U:H4'	2.51	0.40
35:DN:97:ILE:HD12	35:DN:99:LYS:HD3	2.03	0.40
52:B4:30:GLU:HB3	52:B4:33:HIS:ND1	2.36	0.40
1:AA:481:G:H3'	1:AA:481:G:H8	1.87	0.40
34:DM:101:VAL:HG13	34:DM:101:VAL:O	2.22	0.40
22:DA:290:U:C4	22:DA:291:G:N7	2.90	0.40
4:CD:31:CYS:O	4:CD:32:LYS:HB2	2.21	0.40
4:CD:8:LEU:HD13	4:CD:8:LEU:HA	1.85	0.40
1:CA:1239:A:H3'	7:CG:118:ARG:HH22	1.87	0.40
22:DA:238:C:H4'	22:DA:608:A:O2'	2.21	0.40
22:DA:1048:A:C6	22:DA:1049:C:N4	2.89	0.40
22:DA:584:C:H2'	22:DA:585:G:H8	1.86	0.40
25:DD:12:THR:OG1	37:DP:4:ILE:HG23	2.22	0.40
39:BR:80:ARG:C	39:BR:81:LYS:HD3	2.41	0.40
28:BG:7:PRO:HB2	28:BG:8:VAL:H	1.65	0.40
1:AA:67:C:OP1	1:AA:199:A:H5''	2.22	0.40
27:DF:149:ARG:HA	27:DF:149:ARG:HD3	1.92	0.40
1:AA:96:U:O2'	1:AA:97:G:P	2.79	0.40
1:AA:74:A:N3	1:AA:97:G:C2	2.89	0.40
33:DL:29:LYS:HG2	33:DL:30:THR:HG23	2.04	0.40
22:BA:1047:G:C2	22:BA:1110:G:C4	3.09	0.40
1:AA:1160:G:O6	1:AA:1181:G:C5	2.74	0.40
1:CA:517:G:H5'	1:CA:519:C:C2	2.57	0.40
25:DD:169:ARG:O	25:DD:170:VAL:CG2	2.68	0.40
12:AL:24:GLU:O	12:AL:25:ALA:C	2.60	0.40
3:CC:38:VAL:HG21	3:CC:56:ILE:HD11	2.03	0.40
7:CG:75:LYS:CE	7:CG:76:SER:H	2.26	0.40
35:DN:34:ILE:O	35:DN:112:TYR:HA	2.20	0.40
1:CA:990:C:C2'	1:CA:991:U:O4'	2.63	0.40
22:BA:1187:G:H5''	39:BR:83:TYR:CE2	2.57	0.40
12:AL:43:LYS:NZ	12:AL:44:PRO:HD3	2.37	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
24:BC:132:ARG:NH2	24:BC:166:ARG:HD2	2.36	0.40
5:AE:116:VAL:CG2	5:AE:117:ALA:N	2.84	0.40
22:BA:2416:C:H2'	22:BA:2417:C:C6	2.56	0.40
22:DA:2573:C:OP1	22:DA:2575:C:OP2	2.39	0.40
14:AN:52:ARG:HD3	14:AN:52:ARG:HA	1.88	0.40
12:AL:89:LEU:HD22	12:AL:89:LEU:N	2.36	0.40
22:BA:372:G:O2'	22:BA:400:G:O6	2.21	0.40
35:BN:32:GLU:CB	35:BN:115:LEU:HD12	2.51	0.40
3:CC:83:VAL:HA	3:CC:86:LEU:HD12	2.03	0.40
1:AA:683:G:N2	11:AK:39:ASN:HA	2.36	0.40
1:AA:599:C:H5''	8:AH:87:ARG:HA	2.02	0.40
29:BH:27:ARG:HH21	29:BH:27:ARG:HG2	1.86	0.40
1:AA:651:C:C4	1:AA:652:U:O4	2.74	0.40
2:AB:118:THR:O	2:AB:119:GLN:HB2	2.21	0.40
22:DA:2533:U:H4'	22:DA:2664:G:H4'	2.03	0.40
47:BZ:9:THR:HG22	47:BZ:53:MET:C	2.42	0.40
22:BA:1857:G:H1'	22:BA:1884:G:N2	2.36	0.40
3:CC:133:MET:HG2	3:CC:133:MET:H	1.77	0.40
29:DH:61:VAL:CG1	29:DH:62:LEU:N	2.85	0.40
22:DA:2866:U:H4'	22:DA:2867:G:OP1	2.21	0.40
23:BB:33:G:C2'	23:BB:34:A:H5'	2.51	0.40
13:CM:52:ILE:HG23	13:CM:53:ASP:H	1.86	0.40
1:AA:1113:C:H2'	1:AA:1114:C:H6	1.86	0.40
40:DS:80:PRO:HD2	40:DS:100:THR:OG1	2.20	0.40
22:DA:2221:G:C6	22:DA:2222:C:C4	3.10	0.40
16:AP:46:LYS:HB2	16:AP:47:GLU:H	1.62	0.40
22:DA:2579:C:H2'	22:DA:2580:U:O4'	2.21	0.40
22:DA:1813:G:N2	24:DC:49:THR:HB	2.36	0.40
34:DM:52:ALA:HB1	34:DM:119:LEU:HD22	2.03	0.40
1:AA:1392:G:O2'	1:AA:1393:U:H5'	2.21	0.40
47:BZ:20:LYS:C	47:BZ:22:THR:N	2.75	0.40
1:AA:764:C:O2'	1:AA:765:G:H5'	2.21	0.40
1:CA:949:A:C2	1:CA:1233:G:C4	3.10	0.40
1:CA:908:A:O2'	1:CA:909:A:H5'	2.21	0.40
40:BS:24:ILE:O	40:BS:71:VAL:CG1	2.69	0.40
1:AA:1270:G:H2'	1:AA:1271:A:H8	1.86	0.40
22:BA:2670:A:H2'	22:BA:2671:G:O5'	2.21	0.40
30:DI:105:LEU:HD21	30:DI:129:GLU:CD	2.41	0.40
22:BA:2765:A:C2'	22:BA:2765:A:N3	2.84	0.40
4:CD:123:MET:HE1	4:CD:126:GLY:O	2.20	0.40
42:BU:20:LYS:C	42:BU:21:ARG:HG3	2.42	0.40
22:DA:2658:C:C2'	22:DA:2659:G:H5'	2.51	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
14:AN:82:LYS:HE2	14:AN:85:GLU:HG3	2.04	0.40
22:DA:24:G:C2'	22:DA:25:U:H5'	2.51	0.40
22:BA:2740:A:C6	22:BA:2741:A:C6	3.09	0.40
22:DA:2187:U:N3	22:DA:2188:U:C5	2.89	0.40
42:DU:86:PHE:CD2	42:DU:87:GLU:HG3	2.56	0.40
11:CK:13:LYS:O	11:CK:14:GLN:O	2.39	0.40
26:DE:111:GLU:HG2	26:DE:114:ARG:NH2	2.37	0.40
30:DI:24:GLY:HA3	30:DI:25:PRO:HD3	1.85	0.40
45:BX:35:HIS:HB3	45:BX:37:PHE:CE2	2.57	0.40
51:B3:15:LYS:HE2	51:B3:19:GLY:HA2	2.04	0.40
22:BA:483:A:O2'	42:BU:56:GLY:HA2	2.22	0.40
1:CA:63:C:H4'	1:CA:380:G:H4'	2.03	0.40
12:CL:28:GLN:HE21	12:CL:28:GLN:HB3	1.61	0.40
22:DA:1765:U:O2'	22:DA:1766:G:H5'	2.21	0.40
23:DB:17:C:C2'	23:DB:18:G:H5'	2.51	0.40
6:AF:42:TRP:CZ2	6:AF:61:LEU:HD22	2.55	0.40
6:CF:85:ILE:HB	6:CF:86:ARG:H	1.64	0.40
24:DC:96:LYS:HD3	24:DC:96:LYS:HA	1.86	0.40
1:CA:963:G:N1	1:CA:973:G:O6	2.54	0.40
14:CN:55:SER:HB3	14:CN:58:ARG:HD2	2.02	0.40
19:CS:39:ILE:HD12	19:CS:65:MET:HG3	2.03	0.40
22:DA:2337:G:C6	22:DA:2338:C:N4	2.89	0.40
44:DW:37:VAL:HG21	44:DW:38:ARG:NH1	2.36	0.40
22:DA:826:U:OP1	56:DA:3687:HOH:O	2.22	0.40
22:DA:415:A:C2	22:DA:2409:G:N1	2.89	0.40
22:DA:1533:C:H6	22:DA:1533:C:O5'	2.04	0.40
1:CA:1517:G:N3	22:DA:1919:A:O2'	2.48	0.40
22:DA:1213:A:H2'	22:DA:1214:A:O4'	2.21	0.40
22:DA:1339:G:C5'	22:DA:1393:A:N1	2.78	0.40
22:DA:1341:G:C2'	22:DA:1397:U:O2'	2.70	0.40
22:DA:1401:G:C6	22:DA:1402:U:C4	3.09	0.40
22:DA:1355:G:C6	22:DA:1377:G:N2	2.90	0.40
4:AD:28:ASP:O	4:AD:29:THR:O	2.39	0.40
11:AK:125:LYS:C	21:AU:33:ARG:NH2	2.75	0.40
22:DA:83:A:H61	22:DA:101:A:C5'	2.25	0.40
31:DJ:44:TYR:CD1	38:DQ:63:ARG:NH2	2.89	0.40
16:AP:20:VAL:HG22	16:AP:32:PHE:HB2	2.02	0.40
22:DA:2314:A:H2'	22:DA:2315:G:C8	2.57	0.40
35:DN:73:ASN:HA	35:DN:76:VAL:CG1	2.52	0.40
45:DX:53:LYS:CA	45:DX:56:ARG:HB3	2.35	0.40
46:DY:58:ASN:C	46:DY:60:LYS:N	2.74	0.40
46:DY:57:LEU:HD13	46:DY:60:LYS:HE3	2.03	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:CA:1242:G:HO2'	1:CA:1243:C:C5'	2.31	0.40
1:CA:1301:U:H5''	1:CA:1302:C:P	2.62	0.40
1:AA:1441:A:C8	1:AA:1442:G:N7	2.90	0.40
1:CA:1147:C:H4'	9:CI:6:TYR:CZ	2.55	0.40
46:DY:40:SER:C	46:DY:42:LEU:N	2.74	0.40
24:BC:139:THR:O	24:BC:140:VAL:O	2.39	0.40
23:DB:90:C:C6	23:DB:90:C:H5''	2.56	0.40
1:CA:527:G:C6	1:CA:528:C:C5	3.09	0.40
19:AS:51:HIS:CD2	19:AS:53:GLY:N	2.75	0.40
1:AA:71:A:C2	1:AA:72:A:N7	2.89	0.40
1:CA:642:A:C8	8:CH:106:SER:HA	2.56	0.40
8:CH:28:SER:O	8:CH:29:SER:HB3	2.21	0.40
2:AB:71:THR:CG2	2:AB:72:LYS:N	2.83	0.40
22:DA:2013:A:C6	22:DA:2014:A:C2	3.09	0.40
1:AA:1161:C:O2'	1:AA:1162:C:H6	1.99	0.40
44:DW:24:ARG:HA	44:DW:66:VAL:H	1.86	0.40
11:CK:124:LYS:O	21:CU:33:ARG:CZ	2.69	0.40
1:AA:214:C:O2'	1:AA:215:C:O5'	2.39	0.40
25:BD:99:GLU:CG	25:BD:100:LEU:H	2.34	0.40
20:AT:61:ALA:CA	20:AT:66:ILE:HG22	2.51	0.40
3:AC:19:SER:HB2	3:AC:39:ARG:NH2	2.36	0.40
22:DA:1525:A:C2'	22:DA:1526:C:H5'	2.52	0.40
1:CA:220:G:O2'	1:CA:221:C:H5'	2.22	0.40
42:DU:58:VAL:HG12	42:DU:59:GLU:N	2.34	0.40
1:CA:1093:A:C5	1:CA:1095:U:O4'	2.75	0.40
22:DA:846:U:O4'	22:DA:846:U:O2	2.40	0.40
22:BA:2592:G:C5	22:BA:2593:U:C4	3.09	0.40
36:DO:51:ALA:HB3	36:DO:78:VAL:HG23	2.03	0.40
3:CC:80:GLY:O	3:CC:83:VAL:HG22	2.21	0.40
1:CA:444:G:C2	1:CA:445:G:C4	3.10	0.40
11:AK:22:ILE:CD1	11:AK:85:VAL:HG22	2.51	0.40
22:BA:323:C:N4	22:BA:333:G:N7	2.69	0.40
22:DA:271:G:N2	22:DA:367:G:H1'	2.36	0.40
21:AU:17:ARG:HA	21:AU:20:ARG:CG	2.52	0.40
1:CA:462:G:O6	1:CA:469:C:N4	2.54	0.40
22:DA:2529:G:H4'	28:DG:174:LYS:HD2	2.02	0.40
19:AS:4:LEU:O	19:AS:5:LYS:HB2	2.20	0.40
31:DJ:81:ILE:HG22	31:DJ:82:GLY:H	1.87	0.40
1:AA:896:C:H2'	1:AA:897:C:C6	2.51	0.40
22:DA:1868:C:N4	22:DA:1869:G:C6	2.90	0.40
7:AG:53:SER:C	7:AG:55:LYS:N	2.70	0.40
2:AB:57:ASN:O	2:AB:58:LYS:HB2	2.22	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:BA:2296:U:C4'	22:BA:2297:A:OP1	2.68	0.40
22:BA:1198:U:H2'	22:BA:1199:U:C6	2.56	0.40
22:BA:1183:U:O2'	22:BA:1184:U:H5'	2.22	0.40
22:DA:2873:A:O4'	35:DN:6:SER:HB3	2.21	0.40
51:D3:23:HIS:O	51:D3:46:LYS:HB2	2.22	0.40
1:CA:73:C:H2'	1:CA:74:A:H8	1.86	0.40
22:BA:1794:A:O4'	22:BA:1900:A:C2	2.74	0.40
22:DA:48:G:H22	22:DA:177:G:N2	2.19	0.40
22:DA:262:A:C2	22:DA:430:A:H1'	2.56	0.40
22:DA:471:A:H2'	22:DA:472:A:O4'	2.22	0.40
1:AA:1243:C:O2'	1:AA:1244:G:H5'	2.21	0.40
1:AA:1367:C:H5'	10:AJ:62:ARG:NH1	2.36	0.40
30:DI:96:LYS:HE2	30:DI:138:VAL:HG11	2.03	0.40
22:DA:1795:C:O2	24:DC:252:LYS:NZ	2.54	0.40
22:DA:374:A:C6	22:DA:401:A:C8	3.10	0.40
22:DA:563:A:H1'	22:DA:2018:G:N2	2.36	0.40
22:DA:2371:G:H4'	49:D1:44:GLN:HE21	1.86	0.40
40:DS:79:GLY:CA	40:DS:100:THR:OG1	2.68	0.40
22:DA:1009:A:O2'	22:DA:1010:A:C8	2.59	0.40
22:BA:2582:G:C2	22:BA:2583:G:C8	3.10	0.40
1:AA:875:U:O2'	8:AH:14:ARG:NH1	2.53	0.40
1:CA:1059:C:O2	10:CJ:55:PRO:HG3	2.21	0.40
26:BE:72:SER:C	26:BE:74:LYS:N	2.75	0.40
22:DA:719:C:O2'	22:DA:720:U:H5'	2.21	0.40
22:DA:816:C:C2	22:DA:1192:G:N2	2.90	0.40
22:BA:1577:C:H2'	22:BA:1578:U:O4'	2.21	0.40
22:DA:2256:G:N2	22:DA:2275:C:C4	2.90	0.40
1:CA:954:G:N1	1:CA:1228:C:N4	2.68	0.40
40:BS:71:VAL:HG22	40:BS:71:VAL:O	2.21	0.40
24:DC:36:ASN:HB3	24:DC:37:SER:H	1.78	0.40
22:DA:2341:G:C5	22:DA:2342:C:C5	3.10	0.40
22:BA:2825:G:C2'	22:BA:2826:A:H5'	2.51	0.40
13:CM:96:VAL:C	13:CM:98:GLY:H	2.25	0.40
24:DC:44:ASN:O	24:DC:46:GLY:N	2.55	0.40
1:AA:334:C:O2'	1:AA:335:C:H5'	2.21	0.40
22:BA:20:C:H2'	22:BA:21:A:H8	1.86	0.40
45:DX:37:PHE:O	45:DX:45:PHE:HA	2.21	0.40
22:BA:1809:A:C6	22:BA:1810:A:C6	3.09	0.40
51:D3:54:LEU:HD11	51:D3:58:ILE:HD11	2.03	0.40
2:CB:22:TRP:CG	2:CB:23:ASN:N	2.87	0.40
34:BM:64:TRP:CZ3	34:BM:106:ASP:HB2	2.57	0.40
22:BA:1042:G:C2'	22:BA:1043:C:H5'	2.51	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:787:A:C5	1:AA:788:U:C5	3.10	0.40
45:BX:14:GLY:O	45:BX:26:ARG:HG3	2.22	0.40
1:AA:532:A:O4'	1:AA:532:A:OP2	2.40	0.40
1:AA:1187:G:N3	1:AA:1187:G:H2'	2.36	0.40
22:BA:1489:C:O5'	22:BA:1489:C:H6	2.05	0.40
22:BA:1762:A:H8	22:BA:1762:A:O5'	2.05	0.40
34:BM:33:LEU:HD23	34:BM:33:LEU:HA	1.55	0.40
5:AE:73:VAL:CG1	5:AE:75:LEU:HD12	2.52	0.40
22:BA:348:A:H2'	22:BA:349:U:O4'	2.21	0.40
23:DB:71:C:C2	23:DB:106:G:N2	2.89	0.40
31:BJ:45:THR:CG2	31:BJ:45:THR:O	2.69	0.40
23:DB:18:G:C6	23:DB:19:C:N3	2.90	0.40
21:CU:28:LEU:O	21:CU:28:LEU:HD23	2.22	0.40
9:CI:70:GLY:O	9:CI:72:SER:N	2.55	0.40
44:DW:55:ASP:C	44:DW:57:THR:H	2.25	0.40
22:DA:833:A:N6	22:DA:834:G:O6	2.55	0.40
20:AT:26:MET:HG3	20:AT:27:MET:N	2.37	0.40
1:AA:486:U:C5'	1:AA:486:U:H6	2.11	0.40
24:DC:161:VAL:CG1	24:DC:162:GLN:N	2.84	0.40
22:DA:1210:G:H5'	22:DA:1212:G:O4'	2.21	0.40
24:DC:145:MET:HE3	24:DC:181:ARG:HH22	1.86	0.40
38:DQ:61:ILE:HD12	38:DQ:61:ILE:N	2.36	0.40
22:DA:2823:A:C2'	22:DA:2824:C:H5'	2.51	0.40
10:AJ:57:VAL:O	10:AJ:58:ASN:HB2	2.21	0.40
22:DA:647:G:C4	22:DA:648:G:N7	2.89	0.40
22:DA:1830:C:C5'	24:DC:14:HIS:HE1	2.34	0.40
24:BC:5:CYS:HB3	24:BC:12:ARG:NH1	2.37	0.40
22:DA:77:G:C6	22:DA:78:U:N3	2.90	0.40
46:DY:60:LYS:HE3	46:DY:60:LYS:HB3	1.85	0.40
22:BA:1731:G:C6	22:BA:1733:G:O6	2.75	0.40
49:B1:46:VAL:HG12	49:B1:47:ILE:N	2.33	0.40
16:CP:1:MET:C	16:CP:1:MET:HE2	2.42	0.40
41:BT:17:SER:O	41:BT:18:GLU:CB	2.68	0.40
1:CA:1349:A:OP1	9:CI:122:ARG:N	2.47	0.40
7:CG:137:ARG:HD2	7:CG:137:ARG:C	2.42	0.40
25:BD:73:VAL:HB	25:BD:74:GLU:H	1.54	0.40
36:BO:30:ARG:HG2	36:BO:31:THR:N	2.36	0.40
40:BS:72:THR:O	40:BS:73:LYS:HD2	2.21	0.40
2:AB:105:THR:HA	2:AB:108:GLN:HE22	1.87	0.40
27:DF:82:TYR:HA	27:DF:83:PRO:HD2	1.83	0.40
22:DA:1027:A:C6	22:DA:1126:A:C4	3.09	0.40
24:BC:245:THR:HG1	24:BC:249:VAL:HB	1.85	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
1:AA:202:G:N2	1:AA:216:U:O2	2.54	0.40
22:BA:1149:G:C6	22:BA:1150:C:N4	2.90	0.40
3:CC:35:ASP:OD1	3:CC:58:ARG:NH1	2.54	0.40
42:BU:42:LYS:HB3	42:BU:57:ILE:CG2	2.49	0.40
22:DA:2261:C:H41	44:DW:10:ARG:HB3	1.84	0.40
22:BA:1071:G:N7	22:BA:1089:A:N6	2.70	0.40
2:CB:185:ILE:HA	2:CB:199:ILE:O	2.20	0.40
2:CB:46:VAL:HG22	2:CB:47:PRO:N	2.35	0.40
1:CA:919:A:O2'	1:CA:920:U:H5'	2.21	0.40
5:AE:113:VAL:HG21	5:AE:140:ILE:HD12	2.04	0.40
45:DX:1:SER:O	45:DX:2:ARG:C	2.59	0.40
22:BA:37:C:H2'	22:BA:38:A:O5'	2.21	0.40
21:AU:36:PHE:CD1	21:AU:39:LYS:HB3	2.48	0.40
30:BI:52:LEU:HA	30:BI:53:PRO:HD3	1.98	0.40
22:DA:1858:A:N1	22:DA:1859:U:C2	2.89	0.40
19:CS:44:ILE:HG12	19:CS:45:GLY:N	2.35	0.40
7:AG:68:VAL:O	7:AG:69:ARG:C	2.60	0.40
46:DY:25:GLN:O	46:DY:29:ARG:HD3	2.21	0.40
22:DA:570:G:N7	22:DA:2030:A:N6	2.70	0.40
1:CA:1449:C:C2	1:CA:1455:G:C2	3.09	0.40
22:DA:1665:A:H2'	22:DA:1666:G:C5'	2.50	0.40
26:BE:25:GLU:O	26:BE:28:VAL:HG13	2.21	0.40
10:AJ:80:THR:O	10:AJ:82:LYS:N	2.54	0.40
41:BT:88:LYS:HA	41:BT:88:LYS:HD3	1.93	0.40
36:DO:27:VAL:HB	36:DO:38:GLN:HG3	2.03	0.40
33:DL:98:ALA:O	33:DL:99:ASN:C	2.59	0.40
22:BA:247:G:H4'	22:BA:386:G:C5	2.56	0.40
23:DB:76:G:OP1	43:DV:9:ARG:NH2	2.54	0.40
26:DE:54:GLY:O	26:DE:55:SER:HB3	2.22	0.40
40:DS:21:ALA:C	40:DS:23:LEU:H	2.24	0.40
22:BA:626:A:C2	33:BL:78:ARG:HD3	2.56	0.40
1:AA:1323:G:C2'	1:AA:1324:A:C8	3.05	0.40
12:AL:4:ASN:OD1	17:AQ:35:LYS:HE3	2.21	0.40
2:CB:212:TYR:O	2:CB:212:TYR:CD2	2.69	0.40
34:BM:76:LYS:O	34:BM:77:PRO:O	2.39	0.40
20:AT:54:GLN:N	20:AT:55:PRO:HD2	2.37	0.40
29:BH:53:GLU:O	29:BH:54:LEU:HD22	2.22	0.40
22:BA:2065:C:H2'	22:BA:2066:C:C6	2.51	0.40
26:DE:154:ASP:C	26:DE:156:ASN:N	2.75	0.40
15:CO:41:HIS:O	15:CO:44:GLU:O	2.40	0.40
39:DR:25:LEU:H	39:DR:94:THR:HG21	1.86	0.40
22:DA:589:U:O2'	22:DA:590:A:H8	2.04	0.40

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Atom-1	Atom-2	Distance(Å)	Clash(Å)
22:BA:1049:C:C2'	22:BA:1050:A:H5'	2.52	0.40
23:DB:29:A:C4	23:DB:30:C:C5	3.10	0.40
1:AA:1241:G:N2	1:AA:1242:G:C5	2.90	0.40
29:DH:61:VAL:HG13	29:DH:62:LEU:HG	2.04	0.40
40:DS:68:ASP:N	40:DS:68:ASP:OD1	2.55	0.40
22:DA:1794:A:H1'	22:DA:1900:A:C2	2.56	0.40
22:BA:2345:G:C5	22:BA:2381:A:C2	3.09	0.40
22:DA:372:G:P	45:DX:61:LYS:HZ1	2.45	0.40
37:DP:77:SER:OG	37:DP:78:PRO:HD2	2.22	0.40
1:AA:1112:C:C2'	1:AA:1113:C:O5'	2.68	0.40
16:AP:48:GLU:HG3	16:AP:49:GLY:H	1.85	0.40
18:CR:41:SER:C	18:CR:43:ILE:H	2.25	0.40
6:CF:53:LYS:O	6:CF:55:HIS:CD2	2.75	0.40
16:AP:46:LYS:HD3	16:AP:47:GLU:N	2.36	0.40
1:AA:1081:A:H5'	5:AE:22:LYS:HG3	2.03	0.40
32:BK:92:GLU:O	32:BK:93:GLN:O	2.39	0.40
32:DK:23:LYS:O	32:DK:25:LEU:HD23	2.21	0.40
32:DK:59:LYS:HG2	32:DK:89:ASN:HA	2.03	0.40
22:DA:2108:A:C8	22:DA:2108:A:OP2	2.74	0.40
1:CA:1499:A:O2'	1:CA:1500:A:H5'	2.22	0.40
22:BA:1250:G:OP2	33:BL:18:ARG:NH2	2.48	0.40
23:BB:110:C:C4	23:BB:111:U:C5	3.10	0.40
4:CD:102:TYR:C	4:CD:104:MET:N	2.75	0.40
22:BA:1644:C:O2	22:BA:1644:C:H2'	2.21	0.40
1:AA:764:C:H2'	1:AA:765:G:H8	1.86	0.40
37:DP:19:PHE:CE1	37:DP:58:PHE:CG	3.10	0.40
22:BA:1563:U:H2'	22:BA:1564:C:H6	1.86	0.40
1:CA:442:G:C6	1:CA:443:C:N4	2.89	0.40
22:DA:1752:C:H6	22:DA:1752:C:O5'	2.04	0.40
45:DX:14:GLY:O	45:DX:25:LYS:HA	2.22	0.40
28:DG:23:ILE:HG21	28:DG:71:LEU:HD21	2.04	0.40
22:BA:1360:G:C6	22:BA:1372:U:C2	3.10	0.40
14:CN:66:THR:HG23	14:CN:82:LYS:HE3	2.03	0.40
21:AU:52:VAL:HG13	21:AU:53:LYS:N	2.37	0.40
22:BA:2505:G:O2'	22:BA:2506:U:H5''	2.22	0.40
7:CG:86:VAL:HA	7:CG:87:PRO:HD2	1.87	0.40
13:CM:63:VAL:HG23	13:CM:63:VAL:O	2.21	0.40
22:BA:971:G:H2'	22:BA:972:A:H5'	2.03	0.40
22:DA:1691:C:H6	22:DA:1691:C:O5'	2.05	0.40
35:DN:46:ARG:HG3	35:DN:46:ARG:H	1.54	0.40
1:AA:1419:G:C6	1:AA:1420:U:C4	3.10	0.40

There are no symmetry-related clashes.

## 5.3 Torsion angles

### 5.3.1 Protein backbone ⓘ

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
2	AB	216/241 (90%)	129 (60%)	51 (24%)	36 (17%)	0	1
2	CB	216/241 (90%)	146 (68%)	49 (23%)	21 (10%)	1	8
3	AC	204/233 (88%)	159 (78%)	26 (13%)	19 (9%)	1	9
3	CC	204/233 (88%)	137 (67%)	44 (22%)	23 (11%)	1	5
4	AD	203/206 (98%)	135 (66%)	39 (19%)	29 (14%)	0	2
4	CD	203/206 (98%)	141 (70%)	44 (22%)	18 (9%)	1	10
5	AE	148/167 (89%)	108 (73%)	25 (17%)	15 (10%)	1	8
5	CE	148/167 (89%)	110 (74%)	24 (16%)	14 (10%)	1	9
6	AF	98/135 (73%)	62 (63%)	28 (29%)	8 (8%)	1	13
6	CF	98/135 (73%)	59 (60%)	28 (29%)	11 (11%)	1	5
7	AG	149/179 (83%)	108 (72%)	33 (22%)	8 (5%)	3	26
7	CG	148/179 (83%)	86 (58%)	46 (31%)	16 (11%)	1	6
8	AH	127/130 (98%)	95 (75%)	25 (20%)	7 (6%)	3	25
8	CH	127/130 (98%)	92 (72%)	25 (20%)	10 (8%)	1	13
9	AI	125/130 (96%)	88 (70%)	25 (20%)	12 (10%)	1	9
9	CI	125/130 (96%)	91 (73%)	25 (20%)	9 (7%)	2	16
10	AJ	96/103 (93%)	64 (67%)	17 (18%)	15 (16%)	0	1
10	CJ	96/103 (93%)	61 (64%)	22 (23%)	13 (14%)	0	3
11	AK	115/129 (89%)	83 (72%)	22 (19%)	10 (9%)	1	11
11	CK	115/129 (89%)	87 (76%)	18 (16%)	10 (9%)	1	11
12	AL	121/124 (98%)	87 (72%)	23 (19%)	11 (9%)	1	10
12	CL	121/124 (98%)	90 (74%)	22 (18%)	9 (7%)	2	15
13	AM	112/118 (95%)	83 (74%)	20 (18%)	9 (8%)	1	13
13	CM	111/118 (94%)	64 (58%)	33 (30%)	14 (13%)	0	3
14	AN	92/101 (91%)	57 (62%)	25 (27%)	10 (11%)	1	6

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
14	CN	87/101 (86%)	58 (67%)	18 (21%)	11 (13%)	0	3
15	AO	86/89 (97%)	55 (64%)	26 (30%)	5 (6%)	3	23
15	CO	86/89 (97%)	64 (74%)	18 (21%)	4 (5%)	4	30
16	AP	80/82 (98%)	55 (69%)	17 (21%)	8 (10%)	1	8
16	CP	78/82 (95%)	52 (67%)	18 (23%)	8 (10%)	1	7
17	AQ	78/84 (93%)	55 (70%)	11 (14%)	12 (15%)	0	1
17	CQ	78/84 (93%)	63 (81%)	6 (8%)	9 (12%)	1	5
18	AR	53/75 (71%)	41 (77%)	10 (19%)	2 (4%)	5	37
18	CR	53/75 (71%)	37 (70%)	15 (28%)	1 (2%)	12	60
19	AS	77/92 (84%)	57 (74%)	14 (18%)	6 (8%)	1	14
19	CS	77/92 (84%)	47 (61%)	25 (32%)	5 (6%)	2	19
20	AT	83/87 (95%)	61 (74%)	16 (19%)	6 (7%)	2	16
20	CT	83/87 (95%)	59 (71%)	18 (22%)	6 (7%)	2	16
21	AU	49/71 (69%)	25 (51%)	14 (29%)	10 (20%)	0	1
21	CU	49/71 (69%)	21 (43%)	12 (24%)	16 (33%)	0	0
24	BC	269/273 (98%)	198 (74%)	43 (16%)	28 (10%)	1	7
24	DC	269/273 (98%)	180 (67%)	60 (22%)	29 (11%)	1	6
25	BD	207/209 (99%)	147 (71%)	31 (15%)	29 (14%)	0	2
25	DD	207/209 (99%)	128 (62%)	45 (22%)	34 (16%)	0	1
26	BE	199/201 (99%)	146 (73%)	32 (16%)	21 (11%)	1	6
26	DE	199/201 (99%)	117 (59%)	55 (28%)	27 (14%)	0	3
27	BF	175/179 (98%)	138 (79%)	22 (13%)	15 (9%)	1	11
27	DF	176/179 (98%)	102 (58%)	42 (24%)	32 (18%)	0	1
28	BG	174/177 (98%)	121 (70%)	26 (15%)	27 (16%)	0	1
28	DG	174/177 (98%)	104 (60%)	36 (21%)	34 (20%)	0	1
29	BH	147/149 (99%)	64 (44%)	49 (33%)	34 (23%)	0	0
29	DH	147/149 (99%)	73 (50%)	59 (40%)	15 (10%)	1	7
30	BI	139/142 (98%)	84 (60%)	42 (30%)	13 (9%)	1	9
30	DI	139/142 (98%)	85 (61%)	37 (27%)	17 (12%)	1	4
31	BJ	140/142 (99%)	107 (76%)	19 (14%)	14 (10%)	1	8
31	DJ	140/142 (99%)	98 (70%)	28 (20%)	14 (10%)	1	8

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
32	BK	120/123 (98%)	87 (72%)	16 (13%)	17 (14%)	0	2
32	DK	120/123 (98%)	83 (69%)	20 (17%)	17 (14%)	0	2
33	BL	141/144 (98%)	98 (70%)	27 (19%)	16 (11%)	1	5
33	DL	141/144 (98%)	77 (55%)	45 (32%)	19 (14%)	0	3
34	BM	134/136 (98%)	97 (72%)	22 (16%)	15 (11%)	1	5
34	DM	134/136 (98%)	92 (69%)	28 (21%)	14 (10%)	1	7
35	BN	118/127 (93%)	96 (81%)	14 (12%)	8 (7%)	2	18
35	DN	118/127 (93%)	72 (61%)	30 (25%)	16 (14%)	0	3
36	BO	114/117 (97%)	89 (78%)	17 (15%)	8 (7%)	2	17
36	DO	114/117 (97%)	74 (65%)	29 (25%)	11 (10%)	1	9
37	BP	112/115 (97%)	78 (70%)	18 (16%)	16 (14%)	0	2
37	DP	112/115 (97%)	70 (62%)	25 (22%)	17 (15%)	0	1
38	BQ	115/118 (98%)	93 (81%)	17 (15%)	5 (4%)	4	34
38	DQ	115/118 (98%)	77 (67%)	27 (24%)	11 (10%)	1	9
39	BR	101/103 (98%)	82 (81%)	11 (11%)	8 (8%)	1	13
39	DR	101/103 (98%)	66 (65%)	22 (22%)	13 (13%)	0	3
40	BS	108/110 (98%)	88 (82%)	10 (9%)	10 (9%)	1	9
40	DS	108/110 (98%)	75 (69%)	22 (20%)	11 (10%)	1	7
41	BT	91/100 (91%)	51 (56%)	25 (28%)	15 (16%)	0	1
41	DT	91/100 (91%)	42 (46%)	27 (30%)	22 (24%)	0	0
42	BU	100/104 (96%)	69 (69%)	16 (16%)	15 (15%)	0	2
42	DU	100/104 (96%)	53 (53%)	23 (23%)	24 (24%)	0	0
43	BV	92/94 (98%)	81 (88%)	9 (10%)	2 (2%)	10	55
43	DV	92/94 (98%)	61 (66%)	23 (25%)	8 (9%)	1	11
44	BW	77/85 (91%)	34 (44%)	16 (21%)	27 (35%)	0	0
44	DW	77/85 (91%)	30 (39%)	27 (35%)	20 (26%)	0	0
45	BX	75/78 (96%)	58 (77%)	14 (19%)	3 (4%)	5	36
45	DX	75/78 (96%)	45 (60%)	22 (29%)	8 (11%)	1	6
46	BY	61/63 (97%)	38 (62%)	15 (25%)	8 (13%)	0	3
46	DY	61/63 (97%)	37 (61%)	20 (33%)	4 (7%)	2	19
47	BZ	56/59 (95%)	46 (82%)	8 (14%)	2 (4%)	5	40

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
47	DZ	56/59 (95%)	34 (61%)	16 (29%)	6 (11%)	1	6
48	B0	54/57 (95%)	42 (78%)	9 (17%)	3 (6%)	3	25
48	D0	54/57 (95%)	38 (70%)	7 (13%)	9 (17%)	0	1
49	B1	48/55 (87%)	36 (75%)	8 (17%)	4 (8%)	1	12
49	D1	48/55 (87%)	33 (69%)	10 (21%)	5 (10%)	1	7
50	B2	44/46 (96%)	37 (84%)	5 (11%)	2 (4%)	4	32
50	D2	44/46 (96%)	29 (66%)	9 (20%)	6 (14%)	0	3
51	B3	62/65 (95%)	50 (81%)	8 (13%)	4 (6%)	2	19
51	D3	62/65 (95%)	43 (69%)	13 (21%)	6 (10%)	1	8
52	B4	36/38 (95%)	29 (81%)	5 (14%)	2 (6%)	3	25
52	D4	36/38 (95%)	22 (61%)	8 (22%)	6 (17%)	0	1
All	All	11234/11970 (94%)	7596 (68%)	2346 (21%)	1292 (12%)	1	5

All (1292) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	AB	20	ARG
2	AB	33	ALA
2	AB	40	ILE
2	AB	58	LYS
2	AB	72	LYS
2	AB	74	ALA
2	AB	75	ALA
2	AB	119	GLN
2	AB	133	ALA
2	AB	169	HIS
2	AB	200	PRO
3	AC	14	VAL
3	AC	16	PRO
3	AC	17	TRP
3	AC	60	ALA
3	AC	100	ILE
3	AC	165	GLU
4	AD	26	ALA
4	AD	28	ASP
4	AD	29	THR
4	AD	32	LYS
4	AD	34	GLU

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Mol	Chain	Res	Type
4	AD	148	ALA
4	AD	152	SER
4	AD	159	GLU
4	AD	173	ASP
4	AD	191	SER
4	AD	192	ALA
5	AE	44	ARG
5	AE	97	PRO
5	AE	154	ALA
5	AE	156	ARG
5	AE	157	GLY
6	AF	7	VAL
6	AF	91	ARG
7	AG	93	VAL
8	AH	66	GLN
9	AI	8	THR
9	AI	43	ALA
9	AI	55	ASP
9	AI	71	ILE
10	AJ	57	VAL
10	AJ	61	ALA
10	AJ	92	LEU
10	AJ	101	SER
11	AK	13	LYS
11	AK	126	ARG
12	AL	23	LEU
12	AL	24	GLU
12	AL	33	CYS
12	AL	43	LYS
12	AL	73	LEU
12	AL	75	GLU
13	AM	46	GLU
14	AN	33	VAL
14	AN	51	PRO
14	AN	52	ARG
14	AN	61	ASN
14	AN	81	ILE
15	AO	17	ASP
15	AO	35	ILE
16	AP	11	ALA
16	AP	80	LYS
17	AQ	12	VAL

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Mol	Chain	Res	Type
17	AQ	16	MET
17	AQ	52	CYS
17	AQ	70	LYS
17	AQ	75	VAL
18	AR	47	ARG
20	AT	3	ILE
20	AT	5	SER
20	AT	67	HIS
21	AU	11	PHE
21	AU	23	GLU
24	BC	104	LEU
24	BC	121	ALA
24	BC	200	MET
24	BC	239	PHE
24	BC	243	PRO
25	BD	43	ASP
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	190	LYS
25	BD	191	GLY
25	BD	192	ALA
26	BE	8	ALA
26	BE	79	ARG
26	BE	175	ILE
27	BF	134	GLN
27	BF	175	PRO
28	BG	7	PRO
28	BG	8	VAL
28	BG	28	LYS
28	BG	31	GLU
28	BG	33	THR
28	BG	84	LYS
28	BG	94	ARG
28	BG	110	HIS
28	BG	118	ALA
28	BG	170	THR
29	BH	3	VAL
29	BH	8	LYS

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Mol	Chain	Res	Type
29	BH	9	VAL
29	BH	10	ALA
29	BH	15	LEU
29	BH	32	PRO
29	BH	33	GLN
30	BI	30	GLN
30	BI	92	PRO
30	BI	96	LYS
31	BJ	21	THR
31	BJ	44	TYR
31	BJ	45	THR
32	BK	13	ASN
32	BK	35	VAL
32	BK	71	ARG
32	BK	72	PRO
33	BL	15	ALA
33	BL	66	PHE
33	BL	81	ASP
33	BL	88	GLY
34	BM	2	LEU
34	BM	35	ALA
34	BM	36	VAL
34	BM	55	ARG
34	BM	69	PRO
35	BN	101	GLY
36	BO	68	LYS
37	BP	25	VAL
37	BP	33	GLU
37	BP	50	ARG
37	BP	93	LYS
37	BP	103	THR
37	BP	105	LYS
38	BQ	5	ARG
38	BQ	87	VAL
38	BQ	91	ARG
40	BS	3	THR
40	BS	19	LEU
40	BS	64	ALA
41	BT	27	SER
41	BT	29	THR
41	BT	38	ALA
41	BT	69	ARG

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Mol	Chain	Res	Type
41	BT	70	HIS
41	BT	86	THR
41	BT	88	LYS
42	BU	6	ARG
42	BU	51	LEU
42	BU	88	ASP
42	BU	98	ASN
43	BV	69	GLU
44	BW	9	THR
44	BW	14	ASP
44	BW	22	VAL
44	BW	23	LYS
44	BW	30	VAL
44	BW	34	SER
44	BW	40	ARG
44	BW	48	ALA
44	BW	50	VAL
44	BW	70	VAL
45	BX	2	ARG
46	BY	22	LEU
46	BY	23	ARG
46	BY	24	GLU
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
2	CB	84	LEU
2	CB	102	ASN
2	CB	129	THR
3	CC	59	PRO
3	CC	140	ALA
3	CC	188	ALA
3	CC	205	GLU
4	CD	24	VAL
4	CD	33	ILE
4	CD	35	GLN
4	CD	39	GLN
4	CD	80	ARG
4	CD	191	SER

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Mol	Chain	Res	Type
4	CD	192	ALA
5	CE	29	ILE
5	CE	31	SER
5	CE	111	ARG
5	CE	144	GLU
6	CF	68	GLN
6	CF	82	ASP
6	CF	99	ALA
7	CG	10	LYS
7	CG	29	LEU
7	CG	30	MET
7	CG	31	VAL
7	CG	52	ARG
7	CG	99	ALA
9	CI	54	VAL
9	CI	71	ILE
10	CJ	36	VAL
10	CJ	57	VAL
10	CJ	87	LEU
11	CK	14	GLN
11	CK	70	ALA
11	CK	92	ARG
12	CL	34	THR
13	CM	4	ALA
13	CM	11	HIS
13	CM	14	ALA
13	CM	49	GLU
14	CN	53	ASP
16	CP	63	GLN
17	CQ	12	VAL
17	CQ	52	CYS
17	CQ	69	THR
20	CT	3	ILE
20	CT	43	LYS
20	CT	65	LEU
21	CU	4	LYS
21	CU	15	LEU
21	CU	23	GLU
21	CU	32	ARG
21	CU	34	ARG
21	CU	35	GLU
21	CU	36	PHE

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Mol	Chain	Res	Type
24	DC	9	SER
24	DC	28	PRO
24	DC	69	ASN
24	DC	140	VAL
24	DC	141	HIS
24	DC	227	VAL
24	DC	232	GLY
24	DC	269	ARG
25	DD	14	ILE
25	DD	31	ALA
25	DD	48	ILE
25	DD	74	GLU
25	DD	77	ARG
25	DD	95	SER
25	DD	102	ALA
25	DD	112	THR
25	DD	118	PHE
25	DD	150	GLN
25	DD	162	ALA
25	DD	164	GLN
25	DD	170	VAL
25	DD	175	LEU
25	DD	194	PRO
25	DD	208	LYS
26	DE	55	SER
26	DE	69	ARG
26	DE	116	ASP
26	DE	153	LEU
26	DE	165	HIS
27	DF	10	GLU
27	DF	12	VAL
27	DF	32	LYS
27	DF	36	ASN
27	DF	42	ALA
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	125	PRO
28	DG	164	ALA

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Mol	Chain	Res	Type
28	DG	165	ASP
29	DH	3	VAL
29	DH	9	VAL
29	DH	10	ALA
29	DH	66	ASN
29	DH	72	ILE
29	DH	98	ASP
29	DH	102	ALA
30	DI	22	PRO
30	DI	29	GLN
30	DI	113	ALA
31	DJ	45	THR
31	DJ	95	ARG
32	DK	16	ALA
32	DK	18	ARG
32	DK	49	ARG
32	DK	71	ARG
32	DK	72	PRO
32	DK	110	GLU
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	99	ASN
33	DL	101	ILE
33	DL	111	ILE
34	DM	2	LEU
34	DM	14	LYS
34	DM	72	PRO
34	DM	77	PRO
34	DM	135	VAL
35	DN	104	ALA
36	DO	27	VAL
36	DO	72	ALA
36	DO	90	VAL
37	DP	25	VAL
37	DP	50	ARG
37	DP	83	ILE
37	DP	85	VAL
37	DP	109	ILE

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Mol	Chain	Res	Type
37	DP	112	ARG
39	DR	3	ALA
39	DR	29	THR
39	DR	98	ILE
40	DS	28	LYS
40	DS	33	LEU
40	DS	40	ASN
40	DS	72	THR
41	DT	14	PRO
41	DT	20	ALA
41	DT	29	THR
41	DT	39	THR
41	DT	56	GLU
41	DT	88	LYS
42	DU	4	ILE
42	DU	6	ARG
42	DU	54	PRO
42	DU	65	GLN
42	DU	82	VAL
42	DU	92	VAL
42	DU	96	LYS
42	DU	101	THR
43	DV	56	PHE
44	DW	9	THR
44	DW	34	SER
44	DW	35	ILE
44	DW	36	ILE
44	DW	83	ALA
45	DX	2	ARG
45	DX	25	LYS
46	DY	9	LYS
46	DY	37	LEU
48	D0	54	ILE
48	D0	55	ALA
51	D3	6	VAL
51	D3	29	ARG
51	D3	51	LYS
52	D4	3	VAL
52	D4	8	LYS
52	D4	20	ASP
2	AB	18	GLN
2	AB	21	TYR

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Mol	Chain	Res	Type
2	AB	52	ALA
2	AB	53	LEU
2	AB	63	LYS
2	AB	73	ARG
2	AB	96	LEU
2	AB	125	PHE
2	AB	142	LYS
2	AB	150	ILE
2	AB	163	ILE
2	AB	170	ILE
2	AB	202	ASN
2	AB	210	THR
2	AB	219	THR
3	AC	88	LYS
3	AC	126	ARG
3	AC	191	THR
4	AD	23	GLY
4	AD	31	CYS
4	AD	147	LYS
4	AD	150	LYS
4	AD	172	VAL
4	AD	174	ALA
5	AE	88	HIS
5	AE	121	ASN
5	AE	137	ARG
6	AF	42	TRP
6	AF	92	THR
7	AG	6	ILE
7	AG	129	ASN
8	AH	49	LYS
9	AI	40	ARG
9	AI	119	LYS
9	AI	128	LYS
10	AJ	33	GLY
10	AJ	74	VAL
11	AK	38	GLY
11	AK	51	PHE
11	AK	77	GLY
11	AK	125	LYS
12	AL	22	ALA
12	AL	88	ASP
12	AL	97	VAL

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Mol	Chain	Res	Type
14	AN	22	LYS
14	AN	27	LYS
14	AN	43	ALA
15	AO	24	THR
16	AP	10	GLY
17	AQ	5	ARG
17	AQ	34	GLY
17	AQ	50	ASN
19	AS	3	SER
19	AS	27	LYS
19	AS	63	ASP
20	AT	4	LYS
21	AU	8	ASN
21	AU	12	ASP
24	BC	105	ALA
24	BC	110	LYS
24	BC	120	ASP
24	BC	140	VAL
24	BC	141	HIS
24	BC	154	ALA
24	BC	167	ASP
25	BD	106	LYS
25	BD	118	PHE
25	BD	144	GLY
25	BD	169	ARG
25	BD	175	LEU
25	BD	183	GLU
25	BD	184	ARG
26	BE	46	GLN
26	BE	80	SER
26	BE	86	ALA
26	BE	123	LYS
27	BF	61	GLY
27	BF	77	LYS
27	BF	113	PHE
27	BF	132	ARG
28	BG	9	VAL
28	BG	45	ALA
28	BG	60	GLY
28	BG	83	THR
28	BG	164	ALA
28	BG	168	VAL

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Mol	Chain	Res	Type
29	BH	28	ASN
29	BH	34	GLY
29	BH	40	THR
29	BH	81	ALA
29	BH	83	LYS
29	BH	107	GLY
29	BH	131	SER
29	BH	138	VAL
31	BJ	2	LYS
31	BJ	22	GLY
31	BJ	39	LYS
31	BJ	41	LYS
31	BJ	81	ILE
31	BJ	98	GLU
32	BK	16	ALA
32	BK	17	ARG
32	BK	29	HIS
32	BK	46	ALA
32	BK	118	LEU
33	BL	41	ARG
33	BL	54	GLN
33	BL	65	GLY
33	BL	111	ILE
33	BL	114	GLY
34	BM	14	LYS
34	BM	56	ALA
34	BM	60	GLN
34	BM	77	PRO
35	BN	117	ASP
36	BO	3	LYS
36	BO	100	HIS
36	BO	112	GLU
37	BP	4	ILE
37	BP	5	LYS
37	BP	65	ASN
37	BP	92	ARG
37	BP	104	GLY
38	BQ	86	SER
40	BS	14	ALA
40	BS	63	GLY
41	BT	16	VAL
41	BT	84	TYR

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Mol	Chain	Res	Type
42	BU	8	ASP
42	BU	87	GLU
42	BU	92	VAL
44	BW	27	GLY
44	BW	36	ILE
44	BW	41	GLY
44	BW	47	GLY
44	BW	53	GLY
44	BW	74	LYS
44	BW	78	PHE
45	BX	34	SER
45	BX	53	LYS
46	BY	37	LEU
47	BZ	34	THR
49	B1	16	THR
50	B2	44	VAL
51	B3	27	ASN
51	B3	30	HIS
2	CB	73	ARG
2	CB	81	ASP
2	CB	101	THR
2	CB	128	LEU
2	CB	148	GLY
2	CB	150	ILE
2	CB	208	ALA
3	CC	100	ILE
3	CC	180	ASP
4	CD	29	THR
4	CD	82	LYS
4	CD	83	GLY
4	CD	187	ARG
5	CE	69	ASN
5	CE	74	ALA
5	CE	75	LEU
5	CE	143	LEU
6	CF	44	ARG
6	CF	85	ILE
6	CF	92	THR
6	CF	94	HIS
6	CF	98	GLU
7	CG	62	GLU
7	CG	113	LYS

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Mol	Chain	Res	Type
8	CH	29	SER
8	CH	30	LYS
9	CI	11	ARG
10	CJ	34	ALA
10	CJ	82	LYS
10	CJ	93	ALA
11	CK	126	ARG
12	CL	8	ARG
12	CL	43	LYS
12	CL	117	GLY
13	CM	45	SER
14	CN	60	ARG
14	CN	62	ARG
14	CN	95	LEU
15	CO	13	GLU
15	CO	15	GLY
15	CO	87	ARG
16	CP	31	ARG
16	CP	54	LEU
17	CQ	81	ALA
19	CS	4	LEU
19	CS	46	LEU
20	CT	72	ALA
21	CU	7	GLU
21	CU	8	ASN
21	CU	11	PHE
24	DC	3	VAL
24	DC	59	GLN
24	DC	94	LEU
24	DC	239	PHE
25	DD	93	GLY
25	DD	107	VAL
25	DD	119	ALA
25	DD	136	ASN
25	DD	144	GLY
25	DD	145	SER
25	DD	169	ARG
25	DD	174	SER
26	DE	24	ASN
26	DE	62	GLN
26	DE	80	SER
26	DE	96	VAL

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Mol	Chain	Res	Type
26	DE	99	LYS
26	DE	166	LYS
26	DE	188	MET
27	DF	6	TYR
27	DF	41	GLU
27	DF	43	ILE
27	DF	70	ARG
27	DF	86	CYS
27	DF	138	PRO
27	DF	145	VAL
27	DF	148	VAL
28	DG	80	GLU
28	DG	83	THR
28	DG	85	LYS
28	DG	86	LEU
28	DG	92	GLY
28	DG	126	THR
28	DG	136	ASP
28	DG	149	ALA
28	DG	150	TYR
28	DG	155	PRO
29	DH	76	GLU
29	DH	99	ILE
30	DI	23	VAL
30	DI	30	GLN
30	DI	35	MET
30	DI	58	ILE
30	DI	69	VAL
30	DI	119	ALA
30	DI	140	GLU
31	DJ	44	TYR
31	DJ	81	ILE
32	DK	14	SER
32	DK	35	VAL
32	DK	93	GLN
33	DL	65	GLY
33	DL	88	GLY
34	DM	73	ILE
34	DM	83	GLY
35	DN	2	ARG
35	DN	8	ARG
35	DN	10	LEU

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Mol	Chain	Res	Type
35	DN	13	ASN
35	DN	71	ARG
35	DN	82	GLU
36	DO	110	ALA
37	DP	63	ILE
37	DP	108	ARG
38	DQ	88	GLU
38	DQ	91	ARG
39	DR	8	GLY
39	DR	57	GLY
39	DR	65	ALA
39	DR	89	HIS
40	DS	32	ALA
40	DS	61	ASN
40	DS	67	ASP
41	DT	4	GLU
41	DT	15	HIS
41	DT	16	VAL
41	DT	38	ALA
41	DT	50	LEU
41	DT	68	LYS
42	DU	8	ASP
42	DU	17	ASP
42	DU	40	LEU
42	DU	87	GLU
42	DU	95	PHE
42	DU	97	SER
42	DU	99	SER
43	DV	15	GLY
43	DV	33	GLY
44	DW	16	GLU
44	DW	33	GLY
44	DW	46	ALA
44	DW	53	GLY
44	DW	57	THR
44	DW	71	LYS
45	DX	34	SER
45	DX	69	GLU
46	DY	46	VAL
47	DZ	4	ILE
47	DZ	13	ILE
47	DZ	30	ARG

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Mol	Chain	Res	Type
48	D0	21	LEU
48	D0	25	THR
48	D0	32	THR
50	D2	29	GLN
50	D2	43	THR
51	D3	20	GLY
51	D3	22	LYS
2	AB	22	TRP
2	AB	41	ASN
3	AC	35	ASP
3	AC	192	TYR
3	AC	205	GLU
4	AD	35	GLN
4	AD	125	ASN
4	AD	165	GLU
4	AD	197	HIS
5	AE	102	THR
6	AF	54	LEU
6	AF	68	GLN
6	AF	80	PHE
6	AF	86	ARG
7	AG	95	ARG
9	AI	38	PHE
9	AI	120	ALA
10	AJ	30	LYS
10	AJ	34	ALA
11	AK	88	PRO
11	AK	97	ARG
13	AM	4	ALA
13	AM	36	ALA
13	AM	84	CYS
13	AM	113	LYS
16	AP	31	ARG
16	AP	45	GLU
16	AP	49	GLY
17	AQ	11	VAL
20	AT	76	ALA
21	AU	25	ALA
21	AU	37	TYR
24	BC	149	LYS
24	BC	184	GLU
24	BC	196	ASN

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Mol	Chain	Res	Type
24	BC	257	ARG
24	BC	258	SER
25	BD	41	ALA
25	BD	72	GLY
25	BD	102	ALA
25	BD	107	VAL
25	BD	174	SER
26	BE	6	LYS
26	BE	116	ASP
26	BE	153	LEU
27	BF	8	LYS
27	BF	109	ARG
27	BF	111	ARG
27	BF	149	ARG
28	BG	2	ARG
28	BG	44	HIS
28	BG	61	TRP
28	BG	97	VAL
28	BG	113	ASP
28	BG	174	LYS
29	BH	35	LYS
29	BH	55	GLU
29	BH	68	ARG
29	BH	101	ASP
29	BH	137	GLU
30	BI	112	LYS
31	BJ	14	ASP
31	BJ	74	TYR
32	BK	50	GLY
32	BK	92	GLU
33	BL	29	LYS
33	BL	40	SER
34	BM	54	THR
35	BN	15	SER
35	BN	119	SER
37	BP	2	ASN
37	BP	20	ARG
37	BP	110	LYS
38	BQ	115	ALA
40	BS	57	ASN
40	BS	96	ILE
41	BT	2	ILE

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Mol	Chain	Res	Type
41	BT	49	LYS
42	BU	81	ARG
44	BW	15	SER
44	BW	51	GLY
44	BW	56	HIS
50	B2	42	LEU
51	B3	22	LYS
2	CB	18	GLN
2	CB	42	LEU
2	CB	93	HIS
2	CB	179	GLY
3	CC	47	ALA
3	CC	87	ARG
3	CC	128	MET
3	CC	174	LEU
3	CC	186	SER
4	CD	9	LYS
4	CD	27	ILE
5	CE	56	PRO
5	CE	81	GLN
5	CE	104	ILE
6	CF	39	LEU
7	CG	59	GLU
8	CH	41	GLU
8	CH	58	LEU
9	CI	44	ARG
9	CI	55	ASP
10	CJ	23	ALA
10	CJ	46	LYS
11	CK	88	PRO
11	CK	124	LYS
11	CK	127	ARG
13	CM	76	ILE
13	CM	77	LYS
14	CN	69	PRO
14	CN	99	SER
16	CP	24	SER
16	CP	46	LYS
16	CP	69	ASP
17	CQ	68	LYS
19	CS	79	TYR
21	CU	9	GLU

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Mol	Chain	Res	Type
21	CU	26	GLY
21	CU	37	TYR
24	DC	36	ASN
24	DC	37	SER
24	DC	98	GLY
24	DC	121	ALA
24	DC	190	THR
24	DC	196	ASN
24	DC	237	ARG
25	DD	11	MET
25	DD	44	GLY
25	DD	99	GLU
25	DD	122	VAL
25	DD	167	ASN
25	DD	173	GLN
26	DE	79	ARG
26	DE	123	LYS
26	DE	127	GLU
27	DF	46	LYS
27	DF	67	THR
27	DF	69	ALA
27	DF	88	VAL
27	DF	94	ARG
27	DF	112	ASP
28	DG	9	VAL
28	DG	91	VAL
28	DG	93	TYR
28	DG	169	ARG
29	DH	97	ARG
30	DI	19	PRO
31	DJ	6	ALA
31	DJ	13	ARG
31	DJ	83	GLY
31	DJ	112	GLY
32	DK	17	ARG
32	DK	48	PRO
33	DL	5	THR
33	DL	29	LYS
33	DL	115	GLU
33	DL	117	THR
34	DM	110	GLU
34	DM	111	GLU

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Mol	Chain	Res	Type
34	DM	134	THR
35	DN	30	ARG
36	DO	23	ALA
36	DO	43	ASN
37	DP	20	ARG
37	DP	42	PHE
38	DQ	23	TYR
38	DQ	58	GLN
38	DQ	86	SER
38	DQ	87	VAL
39	DR	15	SER
39	DR	40	MET
40	DS	71	VAL
41	DT	66	LYS
41	DT	77	ARG
42	DU	23	LYS
42	DU	88	ASP
44	DW	17	ALA
44	DW	23	LYS
44	DW	24	ARG
45	DX	27	ARG
45	DX	63	ILE
46	DY	22	LEU
47	DZ	2	LYS
48	D0	26	SER
49	D1	35	LEU
52	D4	16	ILE
2	AB	148	GLY
2	AB	201	GLY
3	AC	99	GLN
3	AC	107	LYS
3	AC	138	GLN
4	AD	33	ILE
4	AD	124	VAL
4	AD	132	ALA
4	AD	166	LYS
5	AE	109	ALA
5	AE	148	SER
7	AG	119	LEU
8	AH	48	PHE
8	AH	88	LYS
10	AJ	16	ARG

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Mol	Chain	Res	Type
10	AJ	35	GLN
10	AJ	36	VAL
10	AJ	81	GLU
10	AJ	89	ARG
11	AK	15	VAL
13	AM	3	ILE
13	AM	10	ASP
13	AM	23	GLY
14	AN	63	CYS
14	AN	80	ARG
17	AQ	67	SER
17	AQ	69	THR
19	AS	5	LYS
21	AU	36	PHE
24	BC	37	SER
24	BC	77	VAL
24	BC	150	GLY
24	BC	237	ARG
25	BD	119	ALA
25	BD	170	VAL
25	BD	182	ALA
26	BE	43	THR
26	BE	45	ALA
26	BE	67	ARG
26	BE	71	GLY
27	BF	20	ASN
27	BF	174	PHE
28	BG	91	VAL
29	BH	7	ASP
29	BH	12	LEU
29	BH	14	SER
29	BH	70	GLU
29	BH	82	SER
29	BH	103	VAL
29	BH	121	VAL
29	BH	135	HIS
30	BI	59	THR
30	BI	89	SER
31	BJ	13	ARG
32	BK	73	ASP
32	BK	93	GLN
32	BK	108	ARG

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Mol	Chain	Res	Type
32	BK	119	ALA
33	BL	86	GLU
34	BM	134	THR
35	BN	2	ARG
35	BN	80	PHE
36	BO	85	LYS
36	BO	113	ALA
39	BR	55	ASP
39	BR	65	ALA
39	BR	91	GLN
40	BS	56	ALA
41	BT	39	THR
42	BU	85	ARG
43	BV	44	HIS
44	BW	10	ARG
44	BW	18	LYS
44	BW	52	CYS
44	BW	68	PHE
46	BY	44	LYS
46	BY	57	LEU
48	B0	51	ARG
49	B1	28	THR
2	CB	86	CYS
2	CB	217	ALA
3	CC	63	ILE
3	CC	164	THR
4	CD	37	PRO
5	CE	38	VAL
5	CE	68	ARG
7	CG	88	VAL
7	CG	93	VAL
7	CG	107	ALA
7	CG	125	ASP
7	CG	133	ALA
8	CH	2	MET
8	CH	34	ALA
8	CH	66	GLN
9	CI	58	GLU
10	CJ	41	PRO
10	CJ	62	ARG
12	CL	83	GLY
13	CM	42	VAL

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Mol	Chain	Res	Type
13	CM	46	GLU
13	CM	53	ASP
14	CN	21	ALA
16	CP	49	GLY
16	CP	78	VAL
17	CQ	29	LYS
17	CQ	31	PRO
20	CT	12	GLN
20	CT	73	ARG
21	CU	22	CYS
21	CU	38	GLU
24	DC	123	ILE
24	DC	204	LEU
24	DC	226	PRO
25	DD	53	GLY
25	DD	176	ASP
26	DE	22	ASP
26	DE	60	TRP
26	DE	148	ILE
27	DF	8	LYS
27	DF	31	GLU
27	DF	77	LYS
27	DF	87	LYS
27	DF	104	THR
28	DG	8	VAL
28	DG	11	PRO
28	DG	45	ALA
28	DG	46	ASP
28	DG	59	ASP
28	DG	118	ALA
29	DH	121	VAL
29	DH	143	ILE
29	DH	144	VAL
30	DI	51	GLY
30	DI	52	LEU
31	DJ	25	LEU
31	DJ	96	ARG
31	DJ	113	PRO
31	DJ	139	VAL
32	DK	46	ALA
32	DK	88	ASN
33	DL	79	LEU

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Mol	Chain	Res	Type
34	DM	69	PRO
36	DO	7	ARG
36	DO	8	ILE
36	DO	42	PRO
37	DP	32	VAL
37	DP	51	ASN
37	DP	56	SER
37	DP	93	LYS
38	DQ	45	ALA
38	DQ	90	ASP
39	DR	53	PHE
40	DS	64	ALA
41	DT	19	LYS
41	DT	53	VAL
41	DT	70	HIS
42	DU	14	THR
43	DV	58	SER
43	DV	84	PRO
44	DW	18	LYS
44	DW	26	GLY
45	DX	17	ARG
47	DZ	9	THR
49	D1	18	HIS
49	D1	36	LYS
50	D2	16	HIS
50	D2	39	ARG
50	D2	40	ALA
52	D4	37	GLN
2	AB	31	PHE
3	AC	65	VAL
3	AC	102	ILE
3	AC	145	ALA
4	AD	24	VAL
4	AD	167	PRO
5	AE	23	THR
5	AE	98	ALA
7	AG	30	MET
8	AH	114	ALA
9	AI	23	GLY
10	AJ	41	PRO
12	AL	25	ALA
12	AL	77	SER

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Mol	Chain	Res	Type
15	AO	43	ALA
17	AQ	49	ASN
18	AR	54	LEU
20	AT	40	ALA
21	AU	24	LYS
21	AU	35	GLU
24	BC	30	ALA
24	BC	57	HIS
24	BC	64	VAL
24	BC	199	HIS
24	BC	204	LEU
25	BD	86	GLU
25	BD	95	SER
25	BD	109	VAL
26	BE	11	ALA
26	BE	13	THR
26	BE	96	VAL
27	BF	2	LYS
27	BF	11	VAL
28	BG	16	VAL
28	BG	38	ASP
29	BH	16	GLY
29	BH	30	LEU
29	BH	111	ALA
30	BI	20	SER
30	BI	71	LYS
31	BJ	65	THR
31	BJ	73	VAL
32	BK	54	LYS
33	BL	69	ARG
34	BM	110	GLU
34	BM	133	LYS
35	BN	32	GLU
35	BN	118	ARG
36	BO	77	ALA
39	BR	53	PHE
39	BR	98	ILE
41	BT	55	VAL
41	BT	68	LYS
42	BU	38	ILE
42	BU	53	GLN
42	BU	63	ALA

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Mol	Chain	Res	Type
42	BU	83	GLY
44	BW	62	ALA
46	BY	36	GLN
52	B4	16	ILE
2	CB	177	ASN
2	CB	205	ALA
2	CB	222	GLU
3	CC	85	LYS
3	CC	130	ARG
3	CC	145	ALA
3	CC	155	ARG
3	CC	167	TYR
3	CC	173	PRO
4	CD	25	ARG
4	CD	47	LEU
8	CH	98	LEU
8	CH	117	GLN
9	CI	52	GLU
10	CJ	31	ARG
11	CK	97	ARG
12	CL	3	VAL
12	CL	7	VAL
12	CL	37	TYR
13	CM	50	GLY
13	CM	65	GLU
15	CO	64	LYS
17	CQ	4	ILE
19	CS	55	GLN
21	CU	10	PRO
24	DC	38	LYS
24	DC	45	ASN
24	DC	64	VAL
24	DC	106	PRO
25	DD	109	VAL
26	DE	13	THR
26	DE	86	ALA
26	DE	103	GLY
26	DE	129	PRO
27	DF	82	TYR
27	DF	136	ILE
27	DF	156	THR
28	DG	40	VAL

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Mol	Chain	Res	Type
28	DG	53	PRO
28	DG	138	GLN
29	DH	61	VAL
30	DI	84	GLY
31	DJ	5	THR
31	DJ	23	LYS
32	DK	98	ARG
33	DL	96	LYS
33	DL	100	ILE
34	DM	16	ARG
34	DM	20	LEU
35	DN	15	SER
35	DN	29	VAL
35	DN	68	ALA
35	DN	72	ASP
35	DN	85	PRO
36	DO	3	LYS
36	DO	107	ALA
37	DP	65	ASN
37	DP	84	SER
37	DP	113	LEU
38	DQ	29	ARG
39	DR	52	PRO
39	DR	91	GLN
40	DS	29	VAL
41	DT	8	LEU
41	DT	61	LEU
42	DU	81	ARG
43	DV	55	GLU
44	DW	41	GLY
44	DW	76	ARG
45	DX	5	GLN
48	D0	33	SER
49	D1	38	PHE
2	AB	42	LEU
2	AB	81	ASP
2	AB	140	LEU
2	AB	187	ASP
3	AC	173	PRO
7	AG	8	GLN
7	AG	55	LYS
8	AH	77	VAL

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Mol	Chain	Res	Type
9	AI	41	GLU
9	AI	42	THR
11	AK	103	GLY
15	AO	86	LEU
26	BE	69	ARG
26	BE	83	VAL
32	BK	49	ARG
33	BL	36	LYS
33	BL	58	TYR
34	BM	73	ILE
36	BO	101	GLY
39	BR	43	ASN
40	BS	74	ILE
41	BT	36	LYS
42	BU	16	LYS
42	BU	101	THR
44	BW	16	GLU
3	CC	11	LEU
3	CC	78	LYS
4	CD	107	GLY
4	CD	166	LYS
9	CI	34	LEU
10	CJ	38	GLY
11	CK	90	PRO
11	CK	91	GLY
12	CL	47	ALA
13	CM	97	ARG
14	CN	42	ASN
14	CN	51	PRO
14	CN	55	SER
17	CQ	78	VAL
18	CR	34	GLU
26	DE	73	ILE
26	DE	126	VAL
26	DE	187	VAL
28	DG	117	PRO
28	DG	166	GLU
33	DL	36	LYS
33	DL	139	GLY
35	DN	63	ARG
35	DN	70	THR
35	DN	105	GLY

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Mol	Chain	Res	Type
40	DS	99	ARG
41	DT	11	LEU
42	DU	12	VAL
42	DU	41	VAL
42	DU	64	ILE
43	DV	44	HIS
43	DV	57	TYR
44	DW	22	VAL
44	DW	78	PHE
48	D0	7	PRO
48	D0	53	VAL
16	AP	78	VAL
19	AS	48	ILE
25	BD	2	ILE
29	BH	31	VAL
29	BH	44	ILE
30	BI	8	VAL
30	BI	31	GLY
33	BL	127	VAL
34	BM	3	GLN
40	BS	29	VAL
46	BY	46	VAL
3	CC	65	VAL
6	CF	64	VAL
10	CJ	74	VAL
19	CS	8	PRO
26	DE	82	GLY
28	DG	16	VAL
28	DG	97	VAL
30	DI	138	VAL
32	DK	103	VAL
39	DR	27	ILE
42	DU	35	VAL
42	DU	89	GLY
51	D3	3	ILE
52	D4	21	GLY
8	AH	102	VAL
10	AJ	42	LEU
16	AP	42	ILE
37	BP	34	GLY
39	BR	50	GLY
39	BR	64	VAL

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Mol	Chain	Res	Type
3	CC	54	ILE
7	CG	68	VAL
9	CI	103	VAL
34	DM	36	VAL
49	D1	4	ILE
50	D2	44	VAL
4	AD	36	ALA
5	AE	104	ILE
19	AS	61	VAL
21	AU	10	PRO
24	BC	9	SER
28	BG	30	GLY
29	BH	80	ILE
2	CB	16	GLY
6	CF	22	ILE
7	CG	90	VAL
24	DC	147	PRO
24	DC	195	GLY
25	DD	9	VAL
26	DE	81	GLY
28	DG	152	ARG
29	DH	134	VAL
32	DK	119	ALA
38	DQ	6	GLY
2	AB	209	VAL
4	AD	100	VAL
13	AM	6	ILE
24	BC	226	PRO
26	BE	73	ILE
26	BE	148	ILE
27	BF	83	PRO
28	BG	153	PRO
30	BI	23	VAL
30	BI	28	GLY
37	BP	63	ILE
44	BW	37	VAL
2	CB	163	ILE
5	CE	43	GLY
13	CM	64	VAL
24	DC	2	VAL
27	DF	125	GLY
28	DG	153	PRO

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Mol	Chain	Res	Type
41	DT	47	VAL
41	DT	74	ILE
5	AE	149	PRO
30	BI	57	VAL
8	CH	74	ILE
14	CN	50	LEU
30	DI	31	GLY
30	DI	121	ILE
38	DQ	7	VAL
47	DZ	50	VAL

### 5.3.2 Protein sidechains ⓘ

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
2	AB	180/199 (90%)	138 (77%)	42 (23%)	1	5
2	CB	180/199 (90%)	148 (82%)	32 (18%)	2	13
3	AC	170/190 (90%)	142 (84%)	28 (16%)	3	16
3	CC	170/190 (90%)	148 (87%)	22 (13%)	6	29
4	AD	172/173 (99%)	142 (83%)	30 (17%)	3	14
4	CD	172/173 (99%)	133 (77%)	39 (23%)	1	5
5	AE	113/126 (90%)	86 (76%)	27 (24%)	1	4
5	CE	113/126 (90%)	89 (79%)	24 (21%)	1	7
6	AF	87/116 (75%)	71 (82%)	16 (18%)	2	12
6	CF	87/116 (75%)	69 (79%)	18 (21%)	2	8
7	AG	124/147 (84%)	105 (85%)	19 (15%)	4	20
7	CG	123/147 (84%)	94 (76%)	29 (24%)	1	4
8	AH	104/105 (99%)	85 (82%)	19 (18%)	2	12
8	CH	104/105 (99%)	84 (81%)	20 (19%)	2	10
9	AI	105/107 (98%)	82 (78%)	23 (22%)	1	7
9	CI	105/107 (98%)	82 (78%)	23 (22%)	1	7
10	AJ	86/90 (96%)	69 (80%)	17 (20%)	2	9

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
10	CJ	86/90 (96%)	70 (81%)	16 (19%)	2	11
11	AK	90/99 (91%)	73 (81%)	17 (19%)	2	11
11	CK	90/99 (91%)	76 (84%)	14 (16%)	4	19
12	AL	103/104 (99%)	85 (82%)	18 (18%)	3	14
12	CL	103/104 (99%)	84 (82%)	19 (18%)	2	12
13	AM	92/96 (96%)	85 (92%)	7 (8%)	19	61
13	CM	91/96 (95%)	81 (89%)	10 (11%)	9	38
14	AN	79/84 (94%)	74 (94%)	5 (6%)	25	70
14	CN	75/84 (89%)	64 (85%)	11 (15%)	4	22
15	AO	76/77 (99%)	66 (87%)	10 (13%)	6	28
15	CO	76/77 (99%)	69 (91%)	7 (9%)	13	48
16	AP	65/65 (100%)	55 (85%)	10 (15%)	4	20
16	CP	65/65 (100%)	51 (78%)	14 (22%)	1	7
17	AQ	74/78 (95%)	57 (77%)	17 (23%)	1	5
17	CQ	74/78 (95%)	57 (77%)	17 (23%)	1	5
18	AR	48/65 (74%)	44 (92%)	4 (8%)	16	56
18	CR	48/65 (74%)	42 (88%)	6 (12%)	7	31
19	AS	70/79 (89%)	61 (87%)	9 (13%)	6	29
19	CS	70/79 (89%)	60 (86%)	10 (14%)	5	23
20	AT	65/66 (98%)	48 (74%)	17 (26%)	1	2
20	CT	65/66 (98%)	48 (74%)	17 (26%)	1	2
21	AU	44/61 (72%)	32 (73%)	12 (27%)	0	2
21	CU	44/61 (72%)	36 (82%)	8 (18%)	2	12
24	BC	216/218 (99%)	164 (76%)	52 (24%)	1	4
24	DC	216/218 (99%)	181 (84%)	35 (16%)	3	17
25	BD	164/164 (100%)	138 (84%)	26 (16%)	4	18
25	DD	164/164 (100%)	142 (87%)	22 (13%)	6	27
26	BE	165/165 (100%)	126 (76%)	39 (24%)	1	4
26	DE	165/165 (100%)	140 (85%)	25 (15%)	4	20
27	BF	148/150 (99%)	121 (82%)	27 (18%)	2	12
27	DF	149/150 (99%)	120 (80%)	29 (20%)	2	9

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
28	BG	137/138 (99%)	108 (79%)	29 (21%)	1	7
28	DG	137/138 (99%)	119 (87%)	18 (13%)	6	28
29	BH	114/114 (100%)	93 (82%)	21 (18%)	2	12
29	DH	114/114 (100%)	91 (80%)	23 (20%)	2	8
30	BI	109/110 (99%)	89 (82%)	20 (18%)	2	12
30	DI	109/110 (99%)	102 (94%)	7 (6%)	25	69
31	BJ	116/116 (100%)	86 (74%)	30 (26%)	1	3
31	DJ	116/116 (100%)	99 (85%)	17 (15%)	4	22
32	BK	103/104 (99%)	81 (79%)	22 (21%)	1	7
32	DK	103/104 (99%)	84 (82%)	19 (18%)	2	12
33	BL	102/103 (99%)	80 (78%)	22 (22%)	1	7
33	DL	102/103 (99%)	85 (83%)	17 (17%)	3	16
34	BM	109/109 (100%)	89 (82%)	20 (18%)	2	12
34	DM	109/109 (100%)	98 (90%)	11 (10%)	11	42
35	BN	100/103 (97%)	82 (82%)	18 (18%)	2	13
35	DN	100/103 (97%)	85 (85%)	15 (15%)	4	21
36	BO	86/87 (99%)	67 (78%)	19 (22%)	1	6
36	DO	86/87 (99%)	79 (92%)	7 (8%)	17	58
37	BP	99/100 (99%)	76 (77%)	23 (23%)	1	5
37	DP	99/100 (99%)	89 (90%)	10 (10%)	11	42
38	BQ	89/90 (99%)	69 (78%)	20 (22%)	1	6
38	DQ	89/90 (99%)	75 (84%)	14 (16%)	4	19
39	BR	84/84 (100%)	70 (83%)	14 (17%)	3	16
39	DR	84/84 (100%)	67 (80%)	17 (20%)	2	8
40	BS	93/93 (100%)	70 (75%)	23 (25%)	1	3
40	DS	93/93 (100%)	73 (78%)	20 (22%)	1	7
41	BT	80/84 (95%)	62 (78%)	18 (22%)	1	6
41	DT	80/84 (95%)	71 (89%)	9 (11%)	9	36
42	BU	83/85 (98%)	63 (76%)	20 (24%)	1	4
42	DU	83/85 (98%)	68 (82%)	15 (18%)	2	12
43	BV	78/78 (100%)	62 (80%)	16 (20%)	2	8

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
43	DV	78/78 (100%)	67 (86%)	11 (14%)	5	24
44	BW	59/63 (94%)	37 (63%)	22 (37%)	0	0
44	DW	59/63 (94%)	41 (70%)	18 (30%)	0	1
45	BX	67/68 (98%)	50 (75%)	17 (25%)	1	3
45	DX	67/68 (98%)	52 (78%)	15 (22%)	1	6
46	BY	55/55 (100%)	44 (80%)	11 (20%)	2	9
46	DY	55/55 (100%)	51 (93%)	4 (7%)	20	63
47	BZ	48/49 (98%)	33 (69%)	15 (31%)	0	1
47	DZ	48/49 (98%)	37 (77%)	11 (23%)	1	5
48	B0	47/48 (98%)	38 (81%)	9 (19%)	2	10
48	D0	47/48 (98%)	34 (72%)	13 (28%)	0	2
49	B1	45/49 (92%)	34 (76%)	11 (24%)	1	3
49	D1	45/49 (92%)	41 (91%)	4 (9%)	14	51
50	B2	38/38 (100%)	30 (79%)	8 (21%)	1	7
50	D2	38/38 (100%)	32 (84%)	6 (16%)	4	18
51	B3	51/52 (98%)	42 (82%)	9 (18%)	3	13
51	D3	51/52 (98%)	38 (74%)	13 (26%)	1	3
52	B4	34/34 (100%)	30 (88%)	4 (12%)	8	34
52	D4	34/34 (100%)	27 (79%)	7 (21%)	2	8
All	All	9327/9756 (96%)	7607 (82%)	1720 (18%)	2	12

All (1720) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	AB	8	MET
2	AB	10	LYS
2	AB	13	VAL
2	AB	14	HIS
2	AB	15	PHE
2	AB	19	THR
2	AB	20	ARG
2	AB	26	MET
2	AB	30	ILE
2	AB	36	LYS
2	AB	38	HIS

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Mol	Chain	Res	Type
2	AB	42	LEU
2	AB	57	ASN
2	AB	67	LEU
2	AB	73	ARG
2	AB	86	CYS
2	AB	87	ASP
2	AB	88	GLN
2	AB	90	PHE
2	AB	100	LEU
2	AB	102	ASN
2	AB	108	GLN
2	AB	115	ASP
2	AB	116	LEU
2	AB	117	GLU
2	AB	119	GLN
2	AB	125	PHE
2	AB	128	LEU
2	AB	141	GLU
2	AB	143	LEU
2	AB	156	LEU
2	AB	158	ASP
2	AB	170	ILE
2	AB	178	LEU
2	AB	185	ILE
2	AB	193	ASP
2	AB	204	ASP
2	AB	206	ILE
2	AB	207	ARG
2	AB	211	LEU
2	AB	219	THR
2	AB	221	ARG
3	AC	2	GLN
3	AC	13	ILE
3	AC	15	LYS
3	AC	17	TRP
3	AC	24	ASN
3	AC	25	THR
3	AC	26	LYS
3	AC	27	GLU
3	AC	28	PHE
3	AC	32	LEU
3	AC	35	ASP

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Mol	Chain	Res	Type
3	AC	36	PHE
3	AC	50	SER
3	AC	52	SER
3	AC	54	ILE
3	AC	79	LYS
3	AC	106	ARG
3	AC	119	ILE
3	AC	120	THR
3	AC	139	ASN
3	AC	143	LEU
3	AC	149	LYS
3	AC	161	ILE
3	AC	165	GLU
3	AC	166	TRP
3	AC	183	TYR
3	AC	184	ASN
3	AC	199	VAL
4	AD	21	LYS
4	AD	25	ARG
4	AD	31	CYS
4	AD	43	ARG
4	AD	52	VAL
4	AD	54	LEU
4	AD	55	ARG
4	AD	57	LYS
4	AD	58	GLN
4	AD	68	GLU
4	AD	69	ARG
4	AD	92	LEU
4	AD	103	ARG
4	AD	110	ARG
4	AD	115	GLN
4	AD	122	ILE
4	AD	127	ARG
4	AD	131	ILE
4	AD	141	VAL
4	AD	147	LYS
4	AD	153	ARG
4	AD	154	VAL
4	AD	160	LEU
4	AD	162	GLU
4	AD	166	LYS

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Mol	Chain	Res	Type
4	AD	170	LEU
4	AD	178	GLU
4	AD	196	GLU
4	AD	199	ILE
4	AD	205	LYS
5	AE	9	GLU
5	AE	11	GLN
5	AE	14	LEU
5	AE	18	ASN
5	AE	25	LYS
5	AE	28	ARG
5	AE	37	VAL
5	AE	45	VAL
5	AE	68	ARG
5	AE	75	LEU
5	AE	79	THR
5	AE	81	GLN
5	AE	93	VAL
5	AE	95	MET
5	AE	100	GLU
5	AE	113	VAL
5	AE	116	VAL
5	AE	121	ASN
5	AE	123	LEU
5	AE	125	LYS
5	AE	135	VAL
5	AE	136	VAL
5	AE	141	ASP
5	AE	146	MET
5	AE	147	ASN
5	AE	155	LYS
5	AE	156	ARG
6	AF	7	VAL
6	AF	14	GLN
6	AF	24	ARG
6	AF	35	LYS
6	AF	38	ARG
6	AF	39	LEU
6	AF	46	GLN
6	AF	52	ASN
6	AF	54	LEU
6	AF	55	HIS

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Mol	Chain	Res	Type
6	AF	68	GLN
6	AF	69	GLU
6	AF	77	THR
6	AF	86	ARG
6	AF	87	SER
6	AF	93	LYS
7	AG	3	ARG
7	AG	6	ILE
7	AG	8	GLN
7	AG	11	ILE
7	AG	12	LEU
7	AG	20	GLU
7	AG	21	LEU
7	AG	22	LEU
7	AG	37	THR
7	AG	47	GLU
7	AG	58	LEU
7	AG	62	GLU
7	AG	72	VAL
7	AG	83	THR
7	AG	85	GLN
7	AG	93	VAL
7	AG	108	ARG
7	AG	123	LEU
7	AG	139	ASP
8	AH	11	THR
8	AH	20	ASN
8	AH	21	LYS
8	AH	58	LEU
8	AH	59	GLU
8	AH	62	LEU
8	AH	65	PHE
8	AH	72	GLU
8	AH	76	ARG
8	AH	79	ARG
8	AH	82	LEU
8	AH	86	LYS
8	AH	89	ASP
8	AH	98	LEU
8	AH	103	VAL
8	AH	110	MET
8	AH	116	ARG

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Mol	Chain	Res	Type
8	AH	120	LEU
8	AH	128	VAL
9	AI	11	ARG
9	AI	21	LYS
9	AI	35	GLU
9	AI	37	TYR
9	AI	42	THR
9	AI	44	ARG
9	AI	47	VAL
9	AI	48	ARG
9	AI	54	VAL
9	AI	56	MET
9	AI	59	LYS
9	AI	62	LEU
9	AI	64	ILE
9	AI	67	LYS
9	AI	86	LEU
9	AI	87	MET
9	AI	89	TYR
9	AI	93	LEU
9	AI	98	ARG
9	AI	105	ARG
9	AI	106	ASP
9	AI	126	PHE
9	AI	128	LYS
10	AJ	6	ILE
10	AJ	17	LEU
10	AJ	22	THR
10	AJ	32	THR
10	AJ	35	GLN
10	AJ	44	THR
10	AJ	46	LYS
10	AJ	48	ARG
10	AJ	50	THR
10	AJ	59	LYS
10	AJ	63	ASP
10	AJ	70	HIS
10	AJ	73	LEU
10	AJ	75	ASP
10	AJ	87	LEU
10	AJ	89	ARG
10	AJ	100	ILE

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Mol	Chain	Res	Type
11	AK	30	ILE
11	AK	51	PHE
11	AK	52	ARG
11	AK	55	ARG
11	AK	64	VAL
11	AK	76	TYR
11	AK	78	ILE
11	AK	81	LEU
11	AK	82	GLU
11	AK	96	ILE
11	AK	100	ASN
11	AK	106	ILE
11	AK	107	THR
11	AK	124	LYS
11	AK	125	LYS
11	AK	127	ARG
11	AK	128	VAL
12	AL	3	VAL
12	AL	9	LYS
12	AL	15	VAL
12	AL	17	LYS
12	AL	26	CYS
12	AL	28	GLN
12	AL	32	VAL
12	AL	35	ARG
12	AL	43	LYS
12	AL	49	ARG
12	AL	63	THR
12	AL	74	GLN
12	AL	82	ARG
12	AL	87	LYS
12	AL	88	ASP
12	AL	94	TYR
12	AL	101	LEU
12	AL	109	ARG
13	AM	6	ILE
13	AM	42	VAL
13	AM	59	VAL
13	AM	71	GLU
13	AM	86	ARG
13	AM	100	ARG
13	AM	106	ARG

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Mol	Chain	Res	Type
14	AN	3	GLN
14	AN	26	LEU
14	AN	58	ARG
14	AN	83	VAL
14	AN	96	LYS
15	AO	16	ARG
15	AO	21	THR
15	AO	34	GLN
15	AO	39	GLN
15	AO	44	GLU
15	AO	47	LYS
15	AO	57	ARG
15	AO	60	SER
15	AO	84	LEU
15	AO	86	LEU
16	AP	6	LEU
16	AP	19	VAL
16	AP	29	ASN
16	AP	31	ARG
16	AP	36	VAL
16	AP	46	LYS
16	AP	55	ASP
16	AP	63	GLN
16	AP	68	SER
16	AP	77	GLU
17	AQ	3	LYS
17	AQ	16	MET
17	AQ	20	ILE
17	AQ	21	VAL
17	AQ	29	LYS
17	AQ	37	ILE
17	AQ	47	ASP
17	AQ	49	ASN
17	AQ	50	ASN
17	AQ	51	GLU
17	AQ	52	CYS
17	AQ	54	ILE
17	AQ	64	ARG
17	AQ	73	THR
17	AQ	74	LEU
17	AQ	75	VAL
17	AQ	80	LYS

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Mol	Chain	Res	Type
18	AR	20	ILE
18	AR	35	SER
18	AR	54	LEU
18	AR	70	THR
19	AS	6	LYS
19	AS	20	LYS
19	AS	26	ASP
19	AS	42	ASN
19	AS	54	ARG
19	AS	55	GLN
19	AS	61	VAL
19	AS	64	GLU
19	AS	79	TYR
20	AT	2	ASN
20	AT	4	LYS
20	AT	5	SER
20	AT	11	ILE
20	AT	17	ARG
20	AT	22	SER
20	AT	26	MET
20	AT	27	MET
20	AT	33	LYS
20	AT	35	TYR
20	AT	42	ASP
20	AT	48	LYS
20	AT	65	LEU
20	AT	67	HIS
20	AT	75	LYS
20	AT	77	ASN
20	AT	84	LYS
21	AU	4	LYS
21	AU	8	ASN
21	AU	9	GLU
21	AU	11	PHE
21	AU	12	ASP
21	AU	15	LEU
21	AU	18	PHE
21	AU	19	LYS
21	AU	33	ARG
21	AU	38	GLU
21	AU	39	LYS
21	AU	42	THR

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Mol	Chain	Res	Type
24	BC	2	VAL
24	BC	8	THR
24	BC	12	ARG
24	BC	13	ARG
24	BC	17	LYS
24	BC	20	ASN
24	BC	27	LYS
24	BC	38	LYS
24	BC	43	ASN
24	BC	63	ILE
24	BC	68	ARG
24	BC	70	LYS
24	BC	76	VAL
24	BC	77	VAL
24	BC	79	ARG
24	BC	85	ASN
24	BC	90	ILE
24	BC	93	VAL
24	BC	100	ARG
24	BC	103	ILE
24	BC	109	LEU
24	BC	114	GLN
24	BC	115	ILE
24	BC	119	VAL
24	BC	120	ASP
24	BC	123	ILE
24	BC	142	ASN
24	BC	155	ARG
24	BC	163	ILE
24	BC	166	ARG
24	BC	167	ASP
24	BC	172	THR
24	BC	173	LEU
24	BC	175	LEU
24	BC	176	ARG
24	BC	181	ARG
24	BC	194	VAL
24	BC	198	GLU
24	BC	202	ARG
24	BC	203	VAL
24	BC	212	TRP
24	BC	215	VAL

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Mol	Chain	Res	Type
24	BC	222	THR
24	BC	227	VAL
24	BC	250	GLN
24	BC	252	LYS
24	BC	254	LYS
24	BC	256	THR
24	BC	257	ARG
24	BC	259	ASN
24	BC	268	ARG
24	BC	269	ARG
25	BD	4	LEU
25	BD	14	ILE
25	BD	16	THR
25	BD	26	VAL
25	BD	42	ASN
25	BD	43	ASP
25	BD	46	ARG
25	BD	60	VAL
25	BD	73	VAL
25	BD	89	GLU
25	BD	90	PHE
25	BD	91	THR
25	BD	95	SER
25	BD	114	LYS
25	BD	118	PHE
25	BD	124	ARG
25	BD	141	ARG
25	BD	146	ILE
25	BD	150	GLN
25	BD	151	THR
25	BD	159	LYS
25	BD	170	VAL
25	BD	171	THR
25	BD	183	GLU
25	BD	201	LEU
25	BD	207	VAL
26	BE	12	LEU
26	BE	18	THR
26	BE	21	ARG
26	BE	24	ASN
26	BE	40	ARG
26	BE	44	ARG

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Mol	Chain	Res	Type
26	BE	51	GLU
26	BE	55	SER
26	BE	61	ARG
26	BE	62	GLN
26	BE	65	THR
26	BE	69	ARG
26	BE	70	SER
26	BE	77	ILE
26	BE	78	TRP
26	BE	80	SER
26	BE	93	SER
26	BE	108	ILE
26	BE	109	LEU
26	BE	113	VAL
26	BE	116	ASP
26	BE	118	LEU
26	BE	119	ILE
26	BE	120	VAL
26	BE	121	VAL
26	BE	123	LYS
26	BE	127	GLU
26	BE	144	GLU
26	BE	146	VAL
26	BE	147	LEU
26	BE	149	ILE
26	BE	153	LEU
26	BE	163	ASN
26	BE	166	LYS
26	BE	167	VAL
26	BE	171	ASP
26	BE	176	ASP
26	BE	186	VAL
26	BE	189	THR
27	BF	3	LEU
27	BF	4	HIS
27	BF	8	LYS
27	BF	9	ASP
27	BF	12	VAL
27	BF	17	THR
27	BF	18	GLU
27	BF	24	VAL
27	BF	34	THR

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Mol	Chain	Res	Type
27	BF	35	LEU
27	BF	36	ASN
27	BF	37	MET
27	BF	46	LYS
27	BF	65	LEU
27	BF	80	GLN
27	BF	82	TYR
27	BF	90	LEU
27	BF	102	LEU
27	BF	103	ILE
27	BF	109	ARG
27	BF	114	ARG
27	BF	132	ARG
27	BF	134	GLN
27	BF	136	ILE
27	BF	154	THR
27	BF	163	GLU
27	BF	169	LEU
28	BG	2	ARG
28	BG	8	VAL
28	BG	10	VAL
28	BG	18	ILE
28	BG	21	GLN
28	BG	29	ASN
28	BG	33	THR
28	BG	34	ARG
28	BG	35	THR
28	BG	37	ASN
28	BG	40	VAL
28	BG	42	VAL
28	BG	55	ASP
28	BG	59	ASP
28	BG	68	ARG
28	BG	80	GLU
28	BG	84	LYS
28	BG	86	LEU
28	BG	91	VAL
28	BG	115	GLN
28	BG	116	LEU
28	BG	120	ILE
28	BG	123	GLU
28	BG	131	VAL

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Mol	Chain	Res	Type
28	BG	132	LEU
28	BG	138	GLN
28	BG	151	ARG
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	25	TYR
29	BH	28	ASN
29	BH	31	VAL
29	BH	33	GLN
29	BH	43	ASN
29	BH	46	PHE
29	BH	50	ARG
29	BH	54	LEU
29	BH	68	ARG
29	BH	83	LYS
29	BH	96	THR
29	BH	103	VAL
29	BH	104	THR
29	BH	130	VAL
29	BH	135	HIS
30	BI	2	LYS
30	BI	7	TYR
30	BI	9	LYS
30	BI	10	LEU
30	BI	11	GLN
30	BI	23	VAL
30	BI	27	LEU
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	85	ILE
30	BI	86	LYS

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Mol	Chain	Res	Type
30	BI	95	ASP
30	BI	108	ILE
30	BI	126	ARG
30	BI	135	MET
31	BJ	1	MET
31	BJ	2	LYS
31	BJ	5	THR
31	BJ	24	THR
31	BJ	25	LEU
31	BJ	30	THR
31	BJ	34	ARG
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	67	ASN
31	BJ	69	ARG
31	BJ	84	ILE
31	BJ	85	LYS
31	BJ	86	GLN
31	BJ	101	ILE
31	BJ	103	ILE
31	BJ	111	LYS
31	BJ	114	LEU
31	BJ	118	MET
31	BJ	129	GLU
31	BJ	139	VAL
31	BJ	140	LEU
32	BK	8	LEU
32	BK	18	ARG
32	BK	19	VAL
32	BK	20	MET
32	BK	23	LYS
32	BK	28	SER
32	BK	30	ARG
32	BK	39	ILE

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Mol	Chain	Res	Type
32	BK	47	ILE
32	BK	51	LYS
32	BK	54	LYS
32	BK	58	LEU
32	BK	63	VAL
32	BK	73	ASP
32	BK	89	ASN
32	BK	99	ILE
32	BK	105	ARG
32	BK	107	LEU
32	BK	108	ARG
32	BK	111	LYS
32	BK	114	LYS
32	BK	115	ILE
33	BL	3	LEU
33	BL	4	ASN
33	BL	6	LEU
33	BL	13	LYS
33	BL	19	LEU
33	BL	21	ARG
33	BL	27	LEU
33	BL	47	ARG
33	BL	51	GLU
33	BL	55	MET
33	BL	60	ARG
33	BL	61	LEU
33	BL	66	PHE
33	BL	82	LEU
33	BL	86	GLU
33	BL	94	THR
33	BL	101	ILE
33	BL	103	ILE
33	BL	111	ILE
33	BL	115	GLU
33	BL	121	THR
33	BL	122	VAL
34	BM	1	MET
34	BM	8	LYS
34	BM	10	ARG
34	BM	12	MET
34	BM	24	THR
34	BM	25	ASP

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Mol	Chain	Res	Type
34	BM	33	LEU
34	BM	51	ARG
34	BM	69	PRO
34	BM	70	ASP
34	BM	76	LYS
34	BM	81	ARG
34	BM	90	GLU
34	BM	96	ILE
34	BM	97	GLN
34	BM	100	LYS
34	BM	102	LEU
34	BM	110	GLU
34	BM	118	LYS
34	BM	128	THR
35	BN	8	ARG
35	BN	10	LEU
35	BN	15	SER
35	BN	23	ASN
35	BN	33	ILE
35	BN	35	LYS
35	BN	37	THR
35	BN	51	LEU
35	BN	69	ARG
35	BN	70	THR
35	BN	71	ARG
35	BN	83	LEU
35	BN	86	ARG
35	BN	95	THR
35	BN	97	ILE
35	BN	116	VAL
35	BN	117	ASP
35	BN	120	GLU
36	BO	5	SER
36	BO	9	ARG
36	BO	16	ARG
36	BO	17	LYS
36	BO	31	THR
36	BO	36	TYR
36	BO	45	SER
36	BO	47	VAL
36	BO	52	SER
36	BO	83	LEU

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Mol	Chain	Res	Type
36	BO	84	GLU
36	BO	89	ASP
36	BO	94	ARG
36	BO	100	HIS
36	BO	102	ARG
36	BO	103	VAL
36	BO	106	LEU
36	BO	111	ARG
36	BO	112	GLU
37	BP	3	ILE
37	BP	5	LYS
37	BP	6	GLN
37	BP	14	GLN
37	BP	16	VAL
37	BP	19	PHE
37	BP	20	ARG
37	BP	24	THR
37	BP	28	LYS
37	BP	33	GLU
37	BP	35	SER
37	BP	36	LYS
37	BP	37	LYS
37	BP	38	ARG
37	BP	61	ARG
37	BP	72	VAL
37	BP	75	THR
37	BP	79	VAL
37	BP	83	ILE
37	BP	91	VAL
37	BP	92	ARG
37	BP	95	LYS
37	BP	96	LEU
38	BQ	2	ARG
38	BQ	4	LYS
38	BQ	10	ARG
38	BQ	17	LEU
38	BQ	32	ARG
38	BQ	40	LYS
38	BQ	50	ARG
38	BQ	57	ARG
38	BQ	59	LEU
38	BQ	63	ARG

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Mol	Chain	Res	Type
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	106	THR
39	BR	10	LYS
39	BR	25	LEU
39	BR	37	GLU
39	BR	38	VAL
39	BR	39	LEU
39	BR	43	ASN
39	BR	46	GLU
39	BR	48	LYS
39	BR	55	ASP
39	BR	58	VAL
39	BR	63	VAL
39	BR	72	VAL
39	BR	85	LYS
39	BR	87	GLN
40	BS	3	THR
40	BS	4	ILE
40	BS	12	SER
40	BS	24	ILE
40	BS	30	SER
40	BS	33	LEU
40	BS	35	ILE
40	BS	36	LEU
40	BS	45	VAL
40	BS	48	LYS
40	BS	50	VAL
40	BS	57	ASN
40	BS	66	ILE
40	BS	68	ASP
40	BS	71	VAL
40	BS	73	LYS
40	BS	76	VAL
40	BS	81	SER

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
40	BS	88	ARG
40	BS	100	THR
40	BS	101	SER
40	BS	107	VAL
40	BS	109	ASP
41	BT	2	ILE
41	BT	3	ARG
41	BT	4	GLU
41	BT	8	LEU
41	BT	17	SER
41	BT	29	THR
41	BT	30	ILE
41	BT	31	VAL
41	BT	32	LEU
41	BT	43	ILE
41	BT	49	LYS
41	BT	58	VAL
41	BT	64	LYS
41	BT	67	VAL
41	BT	68	LYS
41	BT	69	ARG
41	BT	73	ARG
41	BT	93	LEU
42	BU	8	ASP
42	BU	10	VAL
42	BU	18	LYS
42	BU	20	LYS
42	BU	23	LYS
42	BU	28	LEU
42	BU	30	SER
42	BU	32	LYS
42	BU	33	VAL
42	BU	34	ILE
42	BU	42	LYS
42	BU	43	LYS
42	BU	52	ASN
42	BU	61	GLU
42	BU	64	ILE
42	BU	78	LYS
42	BU	80	ASP
42	BU	86	PHE
42	BU	87	GLU

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Mol	Chain	Res	Type
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	14	LYS
43	BV	20	LEU
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
43	BV	66	ASP
44	BW	10	ARG
44	BW	11	ASN
44	BW	14	ASP
44	BW	15	SER
44	BW	16	GLU
44	BW	19	ARG
44	BW	23	LYS
44	BW	24	ARG
44	BW	25	PHE
44	BW	38	ARG
44	BW	40	ARG
44	BW	42	THR
44	BW	49	ASN
44	BW	54	ARG
44	BW	58	LEU
44	BW	61	LYS
44	BW	67	LYS
44	BW	71	LYS
44	BW	76	ARG
44	BW	77	LYS
44	BW	80	SER
44	BW	81	ILE
45	BX	6	VAL
45	BX	10	ARG
45	BX	17	ARG

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Mol	Chain	Res	Type
45	BX	19	HIS
45	BX	24	THR
45	BX	26	ARG
45	BX	27	ARG
45	BX	29	LEU
45	BX	41	SER
45	BX	42	GLU
45	BX	45	PHE
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	14	LEU
46	BY	18	LEU
46	BY	37	LEU
46	BY	39	GLN
46	BY	42	LEU
46	BY	45	GLN
46	BY	47	ARG
46	BY	56	LEU
46	BY	57	LEU
46	BY	59	GLU
47	BZ	3	THR
47	BZ	4	ILE
47	BZ	5	LYS
47	BZ	8	GLN
47	BZ	9	THR
47	BZ	13	ILE
47	BZ	15	ARG
47	BZ	23	LEU
47	BZ	29	ARG
47	BZ	30	ARG
47	BZ	34	THR
47	BZ	37	ARG
47	BZ	38	GLU
47	BZ	51	SER
47	BZ	58	GLU
48	B0	5	ASN
48	B0	9	ARG

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Mol	Chain	Res	Type
48	B0	17	SER
48	B0	26	SER
48	B0	27	LEU
48	B0	28	SER
48	B0	39	ARG
48	B0	42	ILE
48	B0	45	ASP
49	B1	4	ILE
49	B1	9	LYS
49	B1	13	SER
49	B1	16	THR
49	B1	21	THR
49	B1	29	LYS
49	B1	33	LEU
49	B1	35	LEU
49	B1	41	VAL
49	B1	42	VAL
49	B1	47	ILE
50	B2	1	MET
50	B2	3	ARG
50	B2	8	SER
50	B2	12	ARG
50	B2	21	ARG
50	B2	24	THR
50	B2	39	ARG
50	B2	45	SER
51	B3	5	THR
51	B3	7	ARG
51	B3	12	ARG
51	B3	22	LYS
51	B3	29	ARG
51	B3	31	ILE
51	B3	49	VAL
51	B3	51	LYS
51	B3	56	LEU
52	B4	6	SER
52	B4	9	LYS
52	B4	16	ILE
52	B4	27	CYS
2	CB	8	MET
2	CB	9	LEU
2	CB	10	LYS

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Mol	Chain	Res	Type
2	CB	14	HIS
2	CB	17	HIS
2	CB	19	THR
2	CB	22	TRP
2	CB	26	MET
2	CB	31	PHE
2	CB	34	ARG
2	CB	36	LYS
2	CB	39	ILE
2	CB	42	LEU
2	CB	46	VAL
2	CB	61	SER
2	CB	69	VAL
2	CB	88	GLN
2	CB	103	TRP
2	CB	105	THR
2	CB	108	GLN
2	CB	112	ARG
2	CB	124	THR
2	CB	125	PHE
2	CB	131	LYS
2	CB	147	LEU
2	CB	164	ASP
2	CB	177	ASN
2	CB	182	VAL
2	CB	191	ASP
2	CB	196	ASP
2	CB	209	VAL
2	CB	212	TYR
3	CC	10	ARG
3	CC	26	LYS
3	CC	34	SER
3	CC	35	ASP
3	CC	38	VAL
3	CC	41	TYR
3	CC	55	VAL
3	CC	106	ARG
3	CC	123	LEU
3	CC	126	ARG
3	CC	134	LYS
3	CC	139	ASN
3	CC	153	SER

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Mol	Chain	Res	Type
3	CC	160	GLU
3	CC	161	ILE
3	CC	164	THR
3	CC	166	TRP
3	CC	178	ARG
3	CC	182	ASP
3	CC	185	THR
3	CC	191	THR
3	CC	198	LYS
4	CD	2	ARG
4	CD	8	LEU
4	CD	12	ARG
4	CD	20	LEU
4	CD	24	VAL
4	CD	25	ARG
4	CD	29	THR
4	CD	30	LYS
4	CD	31	CYS
4	CD	34	GLU
4	CD	43	ARG
4	CD	55	ARG
4	CD	57	LYS
4	CD	58	GLN
4	CD	62	ARG
4	CD	69	ARG
4	CD	74	TYR
4	CD	80	ARG
4	CD	84	ASN
4	CD	98	ASP
4	CD	106	PHE
4	CD	116	LEU
4	CD	127	ARG
4	CD	146	GLU
4	CD	147	LYS
4	CD	151	GLN
4	CD	152	SER
4	CD	153	ARG
4	CD	154	VAL
4	CD	160	LEU
4	CD	168	THR
4	CD	170	LEU
4	CD	183	ARG

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Mol	Chain	Res	Type
4	CD	184	LYS
4	CD	187	ARG
4	CD	189	ASP
4	CD	194	ILE
4	CD	199	ILE
4	CD	204	SER
5	CE	11	GLN
5	CE	13	LYS
5	CE	18	ASN
5	CE	25	LYS
5	CE	31	SER
5	CE	35	LEU
5	CE	51	LYS
5	CE	59	ILE
5	CE	75	LEU
5	CE	76	ASN
5	CE	80	LEU
5	CE	87	VAL
5	CE	91	SER
5	CE	95	MET
5	CE	99	SER
5	CE	104	ILE
5	CE	119	VAL
5	CE	129	SER
5	CE	133	ILE
5	CE	134	ASN
5	CE	136	VAL
5	CE	137	ARG
5	CE	139	THR
5	CE	144	GLU
6	CF	7	VAL
6	CF	10	VAL
6	CF	17	GLN
6	CF	33	GLU
6	CF	38	ARG
6	CF	44	ARG
6	CF	52	ASN
6	CF	54	LEU
6	CF	56	LYS
6	CF	58	HIS
6	CF	61	LEU
6	CF	72	ASP

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Mol	Chain	Res	Type
6	CF	80	PHE
6	CF	86	ARG
6	CF	89	VAL
6	CF	90	MET
6	CF	96	VAL
6	CF	98	GLU
7	CG	3	ARG
7	CG	5	VAL
7	CG	6	ILE
7	CG	8	GLN
7	CG	9	ARG
7	CG	10	LYS
7	CG	12	LEU
7	CG	34	LYS
7	CG	49	LEU
7	CG	55	LYS
7	CG	57	GLU
7	CG	58	LEU
7	CG	61	PHE
7	CG	66	GLU
7	CG	75	LYS
7	CG	77	ARG
7	CG	78	ARG
7	CG	85	GLN
7	CG	95	ARG
7	CG	100	MET
7	CG	101	ARG
7	CG	102	TRP
7	CG	110	ARG
7	CG	119	LEU
7	CG	123	LEU
7	CG	125	ASP
7	CG	137	ARG
7	CG	139	ASP
7	CG	148	LYS
8	CH	37	ASN
8	CH	40	LYS
8	CH	42	GLU
8	CH	46	GLU
8	CH	47	ASP
8	CH	50	VAL
8	CH	54	THR

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Mol	Chain	Res	Type
8	CH	59	GLU
8	CH	62	LEU
8	CH	70	VAL
8	CH	76	ARG
8	CH	79	ARG
8	CH	82	LEU
8	CH	84	ILE
8	CH	89	ASP
8	CH	93	LYS
8	CH	102	VAL
8	CH	103	VAL
8	CH	106	SER
8	CH	110	MET
9	CI	4	GLN
9	CI	11	ARG
9	CI	20	ILE
9	CI	26	LYS
9	CI	37	TYR
9	CI	45	MET
9	CI	47	VAL
9	CI	53	LEU
9	CI	54	VAL
9	CI	55	ASP
9	CI	60	LEU
9	CI	61	ASP
9	CI	63	TYR
9	CI	83	THR
9	CI	87	MET
9	CI	89	TYR
9	CI	105	ARG
9	CI	106	ASP
9	CI	111	GLU
9	CI	115	VAL
9	CI	123	ARG
9	CI	125	GLN
9	CI	129	ARG
10	CJ	11	LYS
10	CJ	15	HIS
10	CJ	28	THR
10	CJ	48	ARG
10	CJ	50	THR
10	CJ	59	LYS

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Mol	Chain	Res	Type
10	CJ	60	ASP
10	CJ	64	GLN
10	CJ	67	ILE
10	CJ	69	THR
10	CJ	75	ASP
10	CJ	82	LYS
10	CJ	87	LEU
10	CJ	90	LEU
10	CJ	92	LEU
10	CJ	101	SER
11	CK	12	ARG
11	CK	33	ILE
11	CK	71	ASP
11	CK	73	VAL
11	CK	78	ILE
11	CK	81	LEU
11	CK	92	ARG
11	CK	94	SER
11	CK	105	ARG
11	CK	106	ILE
11	CK	112	VAL
11	CK	115	ILE
11	CK	121	ARG
11	CK	128	VAL
12	CL	3	VAL
12	CL	5	GLN
12	CL	9	LYS
12	CL	14	LYS
12	CL	19	ASN
12	CL	28	GLN
12	CL	39	THR
12	CL	48	LEU
12	CL	49	ARG
12	CL	57	THR
12	CL	62	VAL
12	CL	72	ASN
12	CL	82	ARG
12	CL	88	ASP
12	CL	96	THR
12	CL	97	VAL
12	CL	102	ASP
12	CL	107	LYS

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Mol	Chain	Res	Type
12	CL	120	ARG
13	CM	12	LYS
13	CM	24	VAL
13	CM	28	ARG
13	CM	32	ILE
13	CM	53	ASP
13	CM	65	GLU
13	CM	91	ARG
13	CM	92	ARG
13	CM	100	ARG
13	CM	113	LYS
14	CN	3	GLN
14	CN	27	LYS
14	CN	41	TRP
14	CN	52	ARG
14	CN	53	ASP
14	CN	58	ARG
14	CN	61	ASN
14	CN	65	GLN
14	CN	72	PHE
14	CN	96	LYS
14	CN	100	TRP
15	CO	16	ARG
15	CO	38	LEU
15	CO	39	GLN
15	CO	45	HIS
15	CO	65	LEU
15	CO	80	LEU
15	CO	87	ARG
16	CP	1	MET
16	CP	2	VAL
16	CP	3	THR
16	CP	6	LEU
16	CP	18	GLN
16	CP	29	ASN
16	CP	35	ARG
16	CP	36	VAL
16	CP	44	SER
16	CP	46	LYS
16	CP	54	LEU
16	CP	56	ARG
16	CP	69	ASP

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Mol	Chain	Res	Type
16	CP	71	VAL
17	CQ	3	LYS
17	CQ	4	ILE
17	CQ	6	THR
17	CQ	20	ILE
17	CQ	27	PHE
17	CQ	28	VAL
17	CQ	32	ILE
17	CQ	37	ILE
17	CQ	39	ARG
17	CQ	43	LEU
17	CQ	51	GLU
17	CQ	52	CYS
17	CQ	54	ILE
17	CQ	67	SER
17	CQ	73	THR
17	CQ	78	VAL
17	CQ	80	LYS
18	CR	25	ILE
18	CR	30	ASN
18	CR	32	ILE
18	CR	47	ARG
18	CR	49	LYS
18	CR	72	ARG
19	CS	5	LYS
19	CS	10	ILE
19	CS	11	ASP
19	CS	46	LEU
19	CS	52	ASN
19	CS	54	ARG
19	CS	57	VAL
19	CS	72	GLU
19	CS	73	PHE
19	CS	80	ARG
20	CT	5	SER
20	CT	8	LYS
20	CT	11	ILE
20	CT	13	SER
20	CT	26	MET
20	CT	30	PHE
20	CT	35	TYR
20	CT	42	ASP

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Mol	Chain	Res	Type
20	CT	47	GLN
20	CT	51	ASN
20	CT	53	MET
20	CT	67	HIS
20	CT	68	LYS
20	CT	73	ARG
20	CT	74	HIS
20	CT	78	LEU
20	CT	82	ILE
21	CU	4	LYS
21	CU	9	GLU
21	CU	24	LYS
21	CU	28	LEU
21	CU	32	ARG
21	CU	36	PHE
21	CU	37	TYR
21	CU	53	LYS
24	DC	12	ARG
24	DC	23	LEU
24	DC	35	LYS
24	DC	43	ASN
24	DC	44	ASN
24	DC	51	ARG
24	DC	52	HIS
24	DC	57	HIS
24	DC	71	ASP
24	DC	102	TYR
24	DC	117	SER
24	DC	124	LYS
24	DC	134	ILE
24	DC	152	GLN
24	DC	162	GLN
24	DC	172	THR
24	DC	173	LEU
24	DC	176	ARG
24	DC	181	ARG
24	DC	183	VAL
24	DC	187	CYS
24	DC	188	ARG
24	DC	190	THR
24	DC	196	ASN
24	DC	212	TRP

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Mol	Chain	Res	Type
24	DC	213	ARG
24	DC	227	VAL
24	DC	235	GLU
24	DC	250	GLN
24	DC	251	THR
24	DC	256	THR
24	DC	258	SER
24	DC	260	LYS
24	DC	267	VAL
24	DC	269	ARG
25	DD	16	THR
25	DD	32	ASN
25	DD	33	ARG
25	DD	38	LYS
25	DD	55	LYS
25	DD	62	LYS
25	DD	79	LEU
25	DD	84	LEU
25	DD	98	VAL
25	DD	100	LEU
25	DD	106	LYS
25	DD	121	THR
25	DD	138	LEU
25	DD	140	HIS
25	DD	141	ARG
25	DD	148	GLN
25	DD	150	GLN
25	DD	159	LYS
25	DD	168	GLU
25	DD	172	VAL
25	DD	193	VAL
25	DD	203	VAL
26	DE	53	THR
26	DE	57	LYS
26	DE	61	ARG
26	DE	63	LYS
26	DE	67	ARG
26	DE	69	ARG
26	DE	73	ILE
26	DE	77	ILE
26	DE	78	TRP
26	DE	84	THR

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
26	DE	91	ASP
26	DE	93	SER
26	DE	105	LEU
26	DE	108	ILE
26	DE	112	LEU
26	DE	117	ARG
26	DE	126	VAL
26	DE	139	LYS
26	DE	149	ILE
26	DE	157	LEU
26	DE	163	ASN
26	DE	164	LEU
26	DE	166	LYS
26	DE	169	VAL
26	DE	191	ASP
27	DF	5	ASP
27	DF	13	LYS
27	DF	25	MET
27	DF	31	GLU
27	DF	48	LEU
27	DF	49	LEU
27	DF	82	TYR
27	DF	87	LYS
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	122	ASP
27	DF	133	GLU
27	DF	134	GLN
27	DF	135	ILE
27	DF	139	GLU
27	DF	141	ASP
27	DF	142	TYR
27	DF	147	ARG
27	DF	151	LEU
27	DF	155	ILE
27	DF	160	LYS
27	DF	169	LEU

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Mol	Chain	Res	Type
27	DF	172	PHE
27	DF	177	ARG
28	DG	2	ARG
28	DG	19	ASN
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	101	VAL
28	DG	120	ILE
28	DG	126	THR
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	55	GLU
29	DH	57	LYS
29	DH	62	LEU
29	DH	66	ASN
29	DH	68	ARG
29	DH	71	LYS
29	DH	76	GLU
29	DH	86	ASP
29	DH	90	LEU
29	DH	91	PHE
29	DH	98	ASP
29	DH	103	VAL
29	DH	104	THR
29	DH	109	GLU
29	DH	132	PHE
29	DH	133	GLN

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Mol	Chain	Res	Type
29	DH	144	VAL
30	DI	7	TYR
30	DI	30	GLN
30	DI	36	GLU
30	DI	58	ILE
30	DI	68	PHE
30	DI	93	ASN
30	DI	106	GLN
31	DJ	3	THR
31	DJ	5	THR
31	DJ	25	LEU
31	DJ	34	ARG
31	DJ	43	GLU
31	DJ	47	HIS
31	DJ	54	ILE
31	DJ	57	LEU
31	DJ	80	HIS
31	DJ	92	MET
31	DJ	93	ILE
31	DJ	95	ARG
31	DJ	98	GLU
31	DJ	99	ARG
31	DJ	106	LYS
31	DJ	129	GLU
31	DJ	139	VAL
32	DK	3	GLN
32	DK	7	MET
32	DK	10	VAL
32	DK	13	ASN
32	DK	24	VAL
32	DK	25	LEU
32	DK	39	ILE
32	DK	41	ILE
32	DK	47	ILE
32	DK	49	ARG
32	DK	54	LYS
32	DK	65	THR
32	DK	77	ILE
32	DK	87	LEU
32	DK	105	ARG
32	DK	106	GLU
32	DK	107	LEU

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Mol	Chain	Res	Type
32	DK	111	LYS
32	DK	114	LYS
33	DL	3	LEU
33	DL	4	ASN
33	DL	6	LEU
33	DL	18	ARG
33	DL	47	ARG
33	DL	48	ARG
33	DL	69	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	116	VAL
33	DL	141	LYS
33	DL	143	GLU
34	DM	7	THR
34	DM	8	LYS
34	DM	38	ARG
34	DM	47	GLU
34	DM	66	ARG
34	DM	73	ILE
34	DM	78	LEU
34	DM	97	GLN
34	DM	105	MET
34	DM	115	GLU
34	DM	126	ILE
35	DN	14	SER
35	DN	18	GLN
35	DN	20	MET
35	DN	21	PHE
35	DN	33	ILE
35	DN	34	ILE
35	DN	40	LYS
35	DN	62	ASN
35	DN	69	ARG
35	DN	78	LYS
35	DN	94	TYR
35	DN	95	THR

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Mol	Chain	Res	Type
35	DN	96	ARG
35	DN	97	ILE
35	DN	114	GLU
36	DO	17	LYS
36	DO	31	THR
36	DO	65	THR
36	DO	68	LYS
36	DO	90	VAL
36	DO	115	LEU
36	DO	117	PHE
37	DP	6	GLN
37	DP	7	LEU
37	DP	13	LYS
37	DP	15	ASP
37	DP	28	LYS
37	DP	50	ARG
37	DP	67	GLU
37	DP	83	ILE
37	DP	86	LYS
37	DP	101	GLU
38	DQ	3	VAL
38	DQ	10	ARG
38	DQ	12	ARG
38	DQ	15	LYS
38	DQ	21	LYS
38	DQ	35	PHE
38	DQ	39	ILE
38	DQ	50	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	21	ARG
39	DR	22	LEU
39	DR	37	GLU
39	DR	48	LYS
39	DR	49	ILE

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Mol	Chain	Res	Type
39	DR	51	VAL
39	DR	58	VAL
39	DR	75	VAL
39	DR	80	ARG
39	DR	83	TYR
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	9	HIS
40	DS	22	ASP
40	DS	23	LEU
40	DS	31	GLN
40	DS	33	LEU
40	DS	45	VAL
40	DS	46	LEU
40	DS	62	ASP
40	DS	66	ILE
40	DS	70	LYS
40	DS	73	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
40	DS	101	SER
41	DT	8	LEU
41	DT	9	LYS
41	DT	18	GLU
41	DT	21	SER
41	DT	39	THR
41	DT	50	LEU
41	DT	54	GLU
41	DT	67	VAL
41	DT	91	GLN
42	DU	13	LEU
42	DU	20	LYS
42	DU	21	ARG
42	DU	40	LEU

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Mol	Chain	Res	Type
42	DU	45	GLN
42	DU	61	GLU
42	DU	65	GLN
42	DU	71	ILE
42	DU	81	ARG
42	DU	82	VAL
42	DU	85	ARG
42	DU	94	PHE
42	DU	95	PHE
42	DU	98	ASN
42	DU	101	THR
43	DV	26	PHE
43	DV	40	ILE
43	DV	41	GLU
43	DV	44	HIS
43	DV	51	GLN
43	DV	56	PHE
43	DV	61	LEU
43	DV	65	VAL
43	DV	69	GLU
43	DV	70	ILE
43	DV	76	ASP
44	DW	11	ASN
44	DW	18	LYS
44	DW	22	VAL
44	DW	23	LYS
44	DW	25	PHE
44	DW	28	GLU
44	DW	30	VAL
44	DW	31	LEU
44	DW	35	ILE
44	DW	38	ARG
44	DW	39	GLN
44	DW	40	ARG
44	DW	44	PHE
44	DW	58	LEU
44	DW	59	PHE
44	DW	68	PHE
44	DW	76	ARG
44	DW	77	LYS
45	DX	5	GLN
45	DX	6	VAL

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Mol	Chain	Res	Type
45	DX	25	LYS
45	DX	26	ARG
45	DX	29	LEU
45	DX	31	ASN
45	DX	33	HIS
45	DX	34	SER
45	DX	44	ARG
45	DX	46	VAL
45	DX	47	THR
45	DX	53	LYS
45	DX	57	VAL
45	DX	63	ILE
45	DX	73	ARG
46	DY	1	MET
46	DY	4	LYS
46	DY	28	LEU
46	DY	45	GLN
47	DZ	3	THR
47	DZ	16	LEU
47	DZ	24	LEU
47	DZ	28	LEU
47	DZ	29	ARG
47	DZ	30	ARG
47	DZ	34	THR
47	DZ	51	SER
47	DZ	53	MET
47	DZ	55	LYS
47	DZ	58	GLU
48	D0	3	GLN
48	D0	5	ASN
48	D0	9	ARG
48	D0	27	LEU
48	D0	33	SER
48	D0	37	HIS
48	D0	39	ARG
48	D0	41	HIS
48	D0	42	ILE
48	D0	48	TYR
48	D0	49	ARG
48	D0	53	VAL
48	D0	54	ILE
49	D1	10	LEU

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Mol	Chain	Res	Type
49	D1	20	TYR
49	D1	44	GLN
49	D1	45	HIS
50	D2	8	SER
50	D2	22	MET
50	D2	26	ASN
50	D2	28	ARG
50	D2	45	SER
50	D2	46	LYS
51	D3	12	ARG
51	D3	14	LYS
51	D3	24	LYS
51	D3	25	HIS
51	D3	27	ASN
51	D3	28	LEU
51	D3	29	ARG
51	D3	33	THR
51	D3	41	ARG
51	D3	46	LYS
51	D3	48	MET
51	D3	51	LYS
51	D3	61	LEU
52	D4	2	LYS
52	D4	3	VAL
52	D4	9	LYS
52	D4	15	LYS
52	D4	17	VAL
52	D4	20	ASP
52	D4	28	SER

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (309) such sidechains are listed below:

Mol	Chain	Res	Type
2	AB	14	HIS
2	AB	38	HIS
2	AB	57	ASN
2	AB	88	GLN
2	AB	102	ASN
2	AB	108	GLN
2	AB	119	GLN
2	AB	167	HIS
2	AB	189	ASN

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Mol	Chain	Res	Type
3	AC	5	HIS
3	AC	24	ASN
3	AC	68	HIS
3	AC	139	ASN
3	AC	184	ASN
4	AD	40	HIS
4	AD	53	GLN
4	AD	58	GLN
4	AD	70	GLN
4	AD	73	ASN
4	AD	84	ASN
4	AD	99	ASN
4	AD	163	GLN
5	AE	11	GLN
5	AE	42	ASN
5	AE	69	ASN
5	AE	72	ASN
5	AE	81	GLN
5	AE	121	ASN
6	AF	11	HIS
6	AF	68	GLN
8	AH	3	GLN
8	AH	17	GLN
8	AH	20	ASN
8	AH	117	GLN
9	AI	4	GLN
9	AI	74	GLN
9	AI	80	HIS
10	AJ	15	HIS
10	AJ	20	GLN
10	AJ	35	GLN
10	AJ	56	HIS
10	AJ	64	GLN
11	AK	21	HIS
11	AK	100	ASN
11	AK	108	ASN
12	AL	45	ASN
12	AL	72	ASN
12	AL	95	HIS
14	AN	42	ASN
14	AN	48	GLN
14	AN	59	GLN

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Mol	Chain	Res	Type
15	AO	19	ASN
15	AO	36	ASN
16	AP	9	HIS
16	AP	26	ASN
16	AP	29	ASN
16	AP	59	HIS
17	AQ	44	HIS
18	AR	30	ASN
18	AR	53	GLN
19	AS	42	ASN
19	AS	55	GLN
20	AT	12	GLN
20	AT	20	ASN
20	AT	54	GLN
20	AT	60	GLN
20	AT	77	ASN
21	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	250	GLN
25	BD	32	ASN
25	BD	42	ASN
25	BD	58	ASN
25	BD	126	ASN
25	BD	130	GLN
25	BD	150	GLN
26	BE	24	ASN
26	BE	29	HIS
26	BE	30	GLN
26	BE	46	GLN
26	BE	62	GLN
26	BE	97	ASN
26	BE	136	GLN
27	BF	20	ASN
27	BF	22	ASN
27	BF	26	GLN

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Mol	Chain	Res	Type
27	BF	134	GLN
28	BG	72	ASN
28	BG	114	HIS
28	BG	138	GLN
29	BH	2	GLN
29	BH	18	GLN
29	BH	20	ASN
29	BH	28	ASN
29	BH	33	GLN
29	BH	43	ASN
29	BH	145	ASN
30	BI	5	GLN
30	BI	30	GLN
30	BI	33	ASN
31	BJ	40	HIS
31	BJ	58	ASN
31	BJ	76	HIS
31	BJ	77	HIS
31	BJ	128	ASN
31	BJ	130	HIS
32	BK	3	GLN
32	BK	88	ASN
32	BK	89	ASN
33	BL	4	ASN
33	BL	54	GLN
33	BL	93	ASN
33	BL	99	ASN
33	BL	104	GLN
34	BM	13	HIS
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
35	BN	107	ASN
36	BO	19	GLN
36	BO	34	HIS
36	BO	38	GLN
37	BP	9	GLN
37	BP	74	GLN

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Mol	Chain	Res	Type
38	BQ	13	HIS
38	BQ	65	ASN
40	BS	15	GLN
40	BS	57	ASN
40	BS	61	ASN
41	BT	70	HIS
41	BT	72	GLN
41	BT	91	GLN
42	BU	26	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
45	BX	5	GLN
45	BX	15	ASN
45	BX	22	ASN
46	BY	15	ASN
46	BY	20	ASN
46	BY	27	ASN
46	BY	31	GLN
46	BY	41	HIS
46	BY	45	GLN
46	BY	58	ASN
47	BZ	8	GLN
48	B0	4	GLN
50	B2	13	ASN
50	B2	16	HIS
51	B3	27	ASN
52	B4	33	HIS
52	B4	35	GLN
52	B4	37	GLN
2	CB	17	HIS
2	CB	38	HIS
2	CB	108	GLN
2	CB	119	GLN
2	CB	169	HIS
2	CB	176	ASN

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Mol	Chain	Res	Type
3	CC	2	GLN
3	CC	18	ASN
3	CC	31	ASN
3	CC	68	HIS
4	CD	73	ASN
4	CD	84	ASN
4	CD	115	GLN
4	CD	119	HIS
4	CD	125	ASN
4	CD	163	GLN
5	CE	11	GLN
5	CE	121	ASN
5	CE	131	ASN
6	CF	11	HIS
6	CF	17	GLN
6	CF	58	HIS
6	CF	81	ASN
7	CG	67	ASN
7	CG	85	GLN
7	CG	121	ASN
8	CH	3	GLN
8	CH	17	GLN
9	CI	3	ASN
9	CI	4	GLN
9	CI	49	GLN
9	CI	125	GLN
10	CJ	70	HIS
11	CK	21	HIS
11	CK	108	ASN
11	CK	118	ASN
12	CL	19	ASN
12	CL	28	GLN
12	CL	72	ASN
12	CL	74	GLN
12	CL	111	GLN
14	CN	59	GLN
14	CN	65	GLN
15	CO	27	GLN
15	CO	37	HIS
15	CO	39	GLN
15	CO	45	HIS
16	CP	26	ASN

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Mol	Chain	Res	Type
16	CP	63	GLN
17	CQ	49	ASN
18	CR	30	ASN
19	CS	51	HIS
19	CS	52	ASN
20	CT	12	GLN
20	CT	60	GLN
21	CU	8	ASN
24	DC	20	ASN
24	DC	43	ASN
24	DC	52	HIS
24	DC	57	HIS
24	DC	59	GLN
24	DC	85	ASN
24	DC	133	ASN
24	DC	141	HIS
24	DC	152	GLN
24	DC	162	GLN
24	DC	196	ASN
25	DD	36	GLN
25	DD	49	GLN
25	DD	58	ASN
25	DD	140	HIS
25	DD	164	GLN
26	DE	41	GLN
26	DE	165	HIS
27	DF	134	GLN
28	DG	19	ASN
28	DG	103	ASN
28	DG	138	GLN
29	DH	2	GLN
29	DH	28	ASN
29	DH	66	ASN
30	DI	42	ASN
30	DI	93	ASN
30	DI	106	GLN
31	DJ	40	HIS
31	DJ	77	HIS
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	54	GLN
34	DM	13	HIS
35	DN	3	HIS
35	DN	11	ASN
35	DN	16	HIS
35	DN	23	ASN
35	DN	73	ASN
35	DN	81	ASN
36	DO	29	HIS
36	DO	34	HIS
36	DO	38	GLN
37	DP	6	GLN
37	DP	9	GLN
37	DP	11	GLN
37	DP	74	GLN
38	DQ	19	GLN
38	DQ	71	ASN
39	DR	6	GLN
39	DR	12	HIS
39	DR	43	ASN
39	DR	66	HIS
39	DR	82	HIS
39	DR	86	GLN
40	DS	9	HIS
40	DS	31	GLN
41	DT	48	GLN
41	DT	92	ASN
42	DU	44	HIS
42	DU	45	GLN
42	DU	53	GLN
42	DU	65	GLN
42	DU	68	ASN
43	DV	51	GLN
43	DV	80	HIS
44	DW	11	ASN
45	DX	15	ASN
45	DX	31	ASN
45	DX	35	HIS
46	DY	15	ASN
46	DY	20	ASN
46	DY	41	HIS

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Mol	Chain	Res	Type
46	DY	58	ASN
47	DZ	19	HIS
48	D0	5	ASN
48	D0	37	HIS
50	D2	6	GLN
50	D2	29	GLN

### 5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	AA	1532/1533 (99%)	372 (24%)	56 (3%)
1	CA	1529/1533 (99%)	442 (28%)	70 (4%)
22	BA	2850/2904 (98%)	547 (19%)	74 (2%)
22	DA	2837/2904 (97%)	870 (30%)	153 (5%)
23	BB	117/120 (97%)	22 (18%)	0
23	DB	116/120 (96%)	31 (26%)	6 (5%)
All	All	8981/9114 (98%)	2284 (25%)	359 (3%)

All (2284) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	AA	5	U
1	AA	6	G
1	AA	8	A
1	AA	9	G
1	AA	22	G
1	AA	32	A
1	AA	39	G
1	AA	40	C
1	AA	47	C
1	AA	48	C
1	AA	50	A
1	AA	51	A
1	AA	52	C
1	AA	64	G
1	AA	70	U
1	AA	71	A
1	AA	72	A
1	AA	73	C
1	AA	74	A
1	AA	75	G

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Mol	Chain	Res	Type
1	AA	76	G
1	AA	77	A
1	AA	79	G
1	AA	82	G
1	AA	83	C
1	AA	85	U
1	AA	86	G
1	AA	87	C
1	AA	88	U
1	AA	89	U
1	AA	90	C
1	AA	91	U
1	AA	92	U
1	AA	95	C
1	AA	97	G
1	AA	98	A
1	AA	116	A
1	AA	117	G
1	AA	120	A
1	AA	121	U
1	AA	122	G
1	AA	127	G
1	AA	130	A
1	AA	131	A
1	AA	138	G
1	AA	141	G
1	AA	143	A
1	AA	159	G
1	AA	163	C
1	AA	164	G
1	AA	166	U
1	AA	174	A
1	AA	175	C
1	AA	176	C
1	AA	177	G
1	AA	181	A
1	AA	182	A
1	AA	183	C
1	AA	184	G
1	AA	197	A
1	AA	198	G
1	AA	199	A

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Mol	Chain	Res	Type
1	AA	205	A
1	AA	207	C
1	AA	208	U
1	AA	209	U
1	AA	210	C
1	AA	213	G
1	AA	214	C
1	AA	215	C
1	AA	219	U
1	AA	240	G
1	AA	244	U
1	AA	245	U
1	AA	247	G
1	AA	251	G
1	AA	258	G
1	AA	266	G
1	AA	267	C
1	AA	268	U
1	AA	273	U
1	AA	274	A
1	AA	275	G
1	AA	285	C
1	AA	289	G
1	AA	316	C
1	AA	320	A
1	AA	321	A
1	AA	328	C
1	AA	329	A
1	AA	330	C
1	AA	331	G
1	AA	332	G
1	AA	345	C
1	AA	346	G
1	AA	347	G
1	AA	352	C
1	AA	354	G
1	AA	356	A
1	AA	366	A
1	AA	367	U
1	AA	369	G
1	AA	372	C
1	AA	373	A

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Mol	Chain	Res	Type
1	AA	374	A
1	AA	384	G
1	AA	392	C
1	AA	398	U
1	AA	406	G
1	AA	409	U
1	AA	411	A
1	AA	412	A
1	AA	413	G
1	AA	414	A
1	AA	415	A
1	AA	421	U
1	AA	422	C
1	AA	424	G
1	AA	429	U
1	AA	430	A
1	AA	439	U
1	AA	452	A
1	AA	453	G
1	AA	458	U
1	AA	459	A
1	AA	461	A
1	AA	462	G
1	AA	463	U
1	AA	466	A
1	AA	467	U
1	AA	468	A
1	AA	469	C
1	AA	478	A
1	AA	481	G
1	AA	482	A
1	AA	484	G
1	AA	485	U
1	AA	486	U
1	AA	496	A
1	AA	498	A
1	AA	500	G
1	AA	501	C
1	AA	505	G
1	AA	508	U
1	AA	509	A
1	AA	510	A

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Mol	Chain	Res	Type
1	AA	511	C
1	AA	518	C
1	AA	527	G
1	AA	529	G
1	AA	532	A
1	AA	533	A
1	AA	534	U
1	AA	535	A
1	AA	536	C
1	AA	547	A
1	AA	548	G
1	AA	549	C
1	AA	556	C
1	AA	559	A
1	AA	562	U
1	AA	564	C
1	AA	572	A
1	AA	573	A
1	AA	576	C
1	AA	579	A
1	AA	588	G
1	AA	604	G
1	AA	650	G
1	AA	653	U
1	AA	665	A
1	AA	666	G
1	AA	682	G
1	AA	700	G
1	AA	701	U
1	AA	702	A
1	AA	703	G
1	AA	721	G
1	AA	722	G
1	AA	723	U
1	AA	731	G
1	AA	748	G
1	AA	753	A
1	AA	754	C
1	AA	755	G
1	AA	776	G
1	AA	777	A
1	AA	793	U

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Mol	Chain	Res	Type
1	AA	794	A
1	AA	802	A
1	AA	809	G
1	AA	814	A
1	AA	815	A
1	AA	817	C
1	AA	827	U
1	AA	828	U
1	AA	841	C
1	AA	843	U
1	AA	845	A
1	AA	846	G
1	AA	859	G
1	AA	861	G
1	AA	876	C
1	AA	889	A
1	AA	914	A
1	AA	926	G
1	AA	927	G
1	AA	932	C
1	AA	934	C
1	AA	935	A
1	AA	960	U
1	AA	966	G
1	AA	969	A
1	AA	971	G
1	AA	974	A
1	AA	975	A
1	AA	976	G
1	AA	977	A
1	AA	983	A
1	AA	993	G
1	AA	1003	G
1	AA	1004	A
1	AA	1008	U
1	AA	1017	U
1	AA	1018	G
1	AA	1022	A
1	AA	1025	U
1	AA	1026	G
1	AA	1027	C
1	AA	1028	C

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Mol	Chain	Res	Type
1	AA	1029	U
1	AA	1030	U
1	AA	1031	C
1	AA	1032	G
1	AA	1033	G
1	AA	1034	G
1	AA	1037	C
1	AA	1039	G
1	AA	1050	G
1	AA	1052	U
1	AA	1053	G
1	AA	1054	C
1	AA	1055	A
1	AA	1065	U
1	AA	1066	C
1	AA	1086	U
1	AA	1093	A
1	AA	1094	G
1	AA	1095	U
1	AA	1101	A
1	AA	1102	A
1	AA	1104	G
1	AA	1113	C
1	AA	1124	G
1	AA	1125	U
1	AA	1130	A
1	AA	1132	C
1	AA	1133	G
1	AA	1135	U
1	AA	1136	C
1	AA	1137	C
1	AA	1138	G
1	AA	1140	C
1	AA	1141	C
1	AA	1144	G
1	AA	1145	A
1	AA	1158	C
1	AA	1159	U
1	AA	1160	G
1	AA	1161	C
1	AA	1162	C
1	AA	1167	A

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Mol	Chain	Res	Type
1	AA	1168	U
1	AA	1181	G
1	AA	1182	G
1	AA	1183	U
1	AA	1184	G
1	AA	1193	G
1	AA	1196	A
1	AA	1197	A
1	AA	1202	U
1	AA	1212	U
1	AA	1213	A
1	AA	1214	C
1	AA	1226	C
1	AA	1227	A
1	AA	1228	C
1	AA	1238	A
1	AA	1240	U
1	AA	1241	G
1	AA	1242	G
1	AA	1249	C
1	AA	1253	G
1	AA	1256	A
1	AA	1261	A
1	AA	1275	A
1	AA	1278	G
1	AA	1279	G
1	AA	1280	A
1	AA	1282	C
1	AA	1283	U
1	AA	1285	A
1	AA	1286	U
1	AA	1287	A
1	AA	1288	A
1	AA	1293	C
1	AA	1297	G
1	AA	1299	A
1	AA	1301	U
1	AA	1303	C
1	AA	1304	G
1	AA	1305	G
1	AA	1308	U
1	AA	1309	G

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Mol	Chain	Res	Type
1	AA	1315	U
1	AA	1316	G
1	AA	1317	C
1	AA	1318	A
1	AA	1320	C
1	AA	1321	U
1	AA	1322	C
1	AA	1323	G
1	AA	1324	A
1	AA	1331	G
1	AA	1332	A
1	AA	1336	C
1	AA	1337	G
1	AA	1338	G
1	AA	1348	U
1	AA	1349	A
1	AA	1353	G
1	AA	1362	A
1	AA	1363	A
1	AA	1364	U
1	AA	1368	A
1	AA	1370	G
1	AA	1371	G
1	AA	1381	U
1	AA	1382	C
1	AA	1398	A
1	AA	1411	C
1	AA	1412	C
1	AA	1413	A
1	AA	1419	G
1	AA	1432	G
1	AA	1433	A
1	AA	1441	A
1	AA	1442	G
1	AA	1446	A
1	AA	1448	C
1	AA	1451	U
1	AA	1452	C
1	AA	1453	G
1	AA	1454	G
1	AA	1455	G
1	AA	1469	C

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Mol	Chain	Res	Type
1	AA	1470	U
1	AA	1474	U
1	AA	1475	G
1	AA	1476	A
1	AA	1490	U
1	AA	1492	A
1	AA	1494	G
1	AA	1497	G
1	AA	1503	A
1	AA	1505	G
1	AA	1506	U
1	AA	1509	C
1	AA	1517	G
1	AA	1529	G
1	AA	1530	G
1	AA	1531	A
22	BA	10	A
22	BA	12	U
22	BA	13	A
22	BA	14	A
22	BA	15	G
22	BA	34	U
22	BA	35	G
22	BA	37	C
22	BA	43	G
22	BA	46	G
22	BA	61	C
22	BA	63	A
22	BA	71	A
22	BA	74	A
22	BA	75	G
22	BA	80	G
22	BA	84	A
22	BA	98	G
22	BA	101	A
22	BA	102	U
22	BA	118	A
22	BA	119	A
22	BA	120	U
22	BA	135	U
22	BA	136	G
22	BA	137	U

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Mol	Chain	Res	Type
22	BA	138	U
22	BA	139	U
22	BA	140	C
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	166	U
22	BA	174	U
22	BA	181	A
22	BA	196	A
22	BA	215	G
22	BA	216	A
22	BA	221	A
22	BA	222	A
22	BA	230	G
22	BA	248	G
22	BA	250	G
22	BA	255	A
22	BA	256	A
22	BA	265	A
22	BA	266	G
22	BA	267	C
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	302	C
22	BA	311	A
22	BA	325	G
22	BA	329	G
22	BA	330	A
22	BA	331	C

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Mol	Chain	Res	Type
22	BA	346	A
22	BA	347	A
22	BA	350	G
22	BA	353	C
22	BA	359	G
22	BA	361	G
22	BA	362	A
22	BA	371	A
22	BA	372	G
22	BA	383	C
22	BA	386	G
22	BA	396	G
22	BA	404	A
22	BA	405	U
22	BA	411	G
22	BA	412	A
22	BA	424	G
22	BA	457	A
22	BA	461	C
22	BA	480	A
22	BA	481	G
22	BA	482	A
22	BA	491	G
22	BA	496	G
22	BA	504	A
22	BA	505	A
22	BA	507	A
22	BA	508	A
22	BA	509	C
22	BA	510	C
22	BA	527	C
22	BA	528	A
22	BA	529	A
22	BA	531	C
22	BA	532	A
22	BA	533	G
22	BA	544	C
22	BA	546	U
22	BA	547	A
22	BA	548	G
22	BA	549	G
22	BA	550	C

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Mol	Chain	Res	Type
22	BA	555	G
22	BA	556	A
22	BA	563	A
22	BA	573	U
22	BA	575	A
22	BA	586	A
22	BA	603	A
22	BA	604	G
22	BA	613	A
22	BA	614	A
22	BA	615	U
22	BA	627	A
22	BA	631	A
22	BA	634	C
22	BA	637	A
22	BA	645	C
22	BA	646	U
22	BA	647	G
22	BA	648	G
22	BA	654	A
22	BA	655	A
22	BA	656	G
22	BA	664	G
22	BA	670	A
22	BA	686	U
22	BA	714	U
22	BA	715	A
22	BA	717	C
22	BA	722	A
22	BA	730	A
22	BA	738	G
22	BA	740	C
22	BA	747	U
22	BA	748	G
22	BA	763	G
22	BA	764	A
22	BA	765	C
22	BA	775	G
22	BA	776	G
22	BA	782	A
22	BA	784	G
22	BA	785	G

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Mol	Chain	Res	Type
22	BA	791	C
22	BA	792	A
22	BA	805	G
22	BA	812	C
22	BA	819	A
22	BA	827	U
22	BA	828	U
22	BA	845	A
22	BA	846	U
22	BA	847	U
22	BA	859	G
22	BA	876	C
22	BA	878	A
22	BA	879	G
22	BA	884	U
22	BA	896	A
22	BA	897	C
22	BA	910	A
22	BA	914	G
22	BA	915	C
22	BA	931	U
22	BA	932	U
22	BA	941	A
22	BA	946	C
22	BA	958	U
22	BA	959	A
22	BA	961	C
22	BA	974	G
22	BA	983	A
22	BA	989	G
22	BA	995	C
22	BA	996	A
22	BA	997	G
22	BA	1005	C
22	BA	1012	U
22	BA	1013	C
22	BA	1021	A
22	BA	1022	G
22	BA	1023	U
22	BA	1024	G
22	BA	1026	G
22	BA	1033	U

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Mol	Chain	Res	Type
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	1064	C
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	1083	U
22	BA	1084	A
22	BA	1088	A
22	BA	1092	C
22	BA	1098	A
22	BA	1104	C
22	BA	1106	G
22	BA	1111	A
22	BA	1112	G
22	BA	1128	G
22	BA	1130	U
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	1150	C
22	BA	1151	A
22	BA	1167	C
22	BA	1169	A
22	BA	1170	C
22	BA	1171	G
22	BA	1175	A

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Mol	Chain	Res	Type
22	BA	1176	U
22	BA	1180	U
22	BA	1182	G
22	BA	1185	G
22	BA	1186	G
22	BA	1212	G
22	BA	1238	G
22	BA	1248	G
22	BA	1249	U
22	BA	1250	G
22	BA	1253	A
22	BA	1256	G
22	BA	1258	U
22	BA	1266	G
22	BA	1271	G
22	BA	1272	A
22	BA	1273	U
22	BA	1276	A
22	BA	1281	G
22	BA	1300	G
22	BA	1301	A
22	BA	1317	G
22	BA	1324	G
22	BA	1341	G
22	BA	1352	U
22	BA	1359	A
22	BA	1365	A
22	BA	1368	G
22	BA	1371	G
22	BA	1378	A
22	BA	1379	U
22	BA	1380	G
22	BA	1383	A
22	BA	1386	C
22	BA	1395	A
22	BA	1416	G
22	BA	1419	A
22	BA	1420	A
22	BA	1427	A
22	BA	1428	C
22	BA	1434	A
22	BA	1435	G

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Mol	Chain	Res	Type
22	BA	1437	C
22	BA	1440	U
22	BA	1452	G
22	BA	1453	A
22	BA	1458	U
22	BA	1459	G
22	BA	1475	G
22	BA	1476	U
22	BA	1482	G
22	BA	1483	G
22	BA	1493	C
22	BA	1499	C
22	BA	1502	A
22	BA	1504	A
22	BA	1507	C
22	BA	1508	A
22	BA	1509	A
22	BA	1510	G
22	BA	1512	C
22	BA	1515	A
22	BA	1533	C
22	BA	1534	U
22	BA	1535	A
22	BA	1536	C
22	BA	1538	G
22	BA	1540	G
22	BA	1554	U
22	BA	1555	G
22	BA	1558	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	1588	G
22	BA	1606	C
22	BA	1607	C
22	BA	1608	A
22	BA	1610	A
22	BA	1613	G

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Mol	Chain	Res	Type
22	BA	1626	A
22	BA	1647	U
22	BA	1648	U
22	BA	1649	G
22	BA	1652	A
22	BA	1674	G
22	BA	1688	U
22	BA	1696	G
22	BA	1700	A
22	BA	1707	G
22	BA	1714	U
22	BA	1715	G
22	BA	1723	G
22	BA	1729	U
22	BA	1730	C
22	BA	1732	C
22	BA	1734	G
22	BA	1737	G
22	BA	1738	G
22	BA	1739	A
22	BA	1744	A
22	BA	1755	A
22	BA	1764	C
22	BA	1773	A
22	BA	1776	G
22	BA	1782	U
22	BA	1800	C
22	BA	1801	A
22	BA	1802	A
22	BA	1808	A
22	BA	1809	A
22	BA	1812	U
22	BA	1815	A
22	BA	1816	C
22	BA	1817	G
22	BA	1828	G
22	BA	1829	A
22	BA	1848	A
22	BA	1858	A
22	BA	1859	U
22	BA	1865	U
22	BA	1869	G

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Mol	Chain	Res	Type
22	BA	1870	C
22	BA	1871	A
22	BA	1872	A
22	BA	1873	G
22	BA	1897	G
22	BA	1902	C
22	BA	1906	G
22	BA	1913	A
22	BA	1914	C
22	BA	1927	A
22	BA	1929	G
22	BA	1930	G
22	BA	1937	A
22	BA	1938	A
22	BA	1941	C
22	BA	1942	C
22	BA	1955	U
22	BA	1967	C
22	BA	1970	A
22	BA	1971	U
22	BA	1972	G
22	BA	1991	U
22	BA	1993	U
22	BA	1997	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	2043	C
22	BA	2055	C
22	BA	2056	G
22	BA	2060	A
22	BA	2061	G
22	BA	2062	A
22	BA	2063	C
22	BA	2069	G
22	BA	2093	G
22	BA	2096	C
22	BA	2104	C
22	BA	2106	U

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Mol	Chain	Res	Type
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	2181	U
22	BA	2183	A
22	BA	2184	A
22	BA	2185	U
22	BA	2187	U
22	BA	2190	G
22	BA	2194	U
22	BA	2198	A
22	BA	2199	A
22	BA	2203	U
22	BA	2204	G
22	BA	2211	A
22	BA	2212	A
22	BA	2214	C
22	BA	2225	A
22	BA	2226	C
22	BA	2238	G
22	BA	2239	G
22	BA	2243	U
22	BA	2268	A
22	BA	2273	A
22	BA	2278	A

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Mol	Chain	Res	Type
22	BA	2279	G
22	BA	2283	C
22	BA	2287	A
22	BA	2297	A
22	BA	2305	U
22	BA	2308	G
22	BA	2311	A
22	BA	2312	U
22	BA	2317	A
22	BA	2321	U
22	BA	2325	G
22	BA	2326	C
22	BA	2327	A
22	BA	2335	A
22	BA	2347	C
22	BA	2350	C
22	BA	2357	G
22	BA	2361	G
22	BA	2383	G
22	BA	2384	U
22	BA	2385	C
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	2428	G
22	BA	2429	G
22	BA	2430	A
22	BA	2431	U
22	BA	2434	A
22	BA	2435	A
22	BA	2441	U
22	BA	2445	G
22	BA	2447	G
22	BA	2448	A
22	BA	2476	A
22	BA	2484	G
22	BA	2491	U

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Mol	Chain	Res	Type
22	BA	2502	G
22	BA	2503	A
22	BA	2505	G
22	BA	2506	U
22	BA	2518	A
22	BA	2529	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	2578	G
22	BA	2585	U
22	BA	2586	U
22	BA	2602	A
22	BA	2603	G
22	BA	2609	U
22	BA	2613	U
22	BA	2629	U
22	BA	2661	G
22	BA	2663	G
22	BA	2671	G
22	BA	2682	A
22	BA	2689	U
22	BA	2690	U
22	BA	2714	G
22	BA	2716	C
22	BA	2726	A
22	BA	2729	G
22	BA	2732	G
22	BA	2744	G
22	BA	2748	A
22	BA	2757	A
22	BA	2762	C
22	BA	2765	A
22	BA	2769	U
22	BA	2777	G
22	BA	2778	A
22	BA	2779	U
22	BA	2791	G
22	BA	2797	U

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Mol	Chain	Res	Type
22	BA	2798	U
22	BA	2799	A
22	BA	2800	A
22	BA	2801	G
22	BA	2818	U
22	BA	2820	A
22	BA	2821	A
22	BA	2825	G
22	BA	2826	A
22	BA	2849	U
22	BA	2867	G
22	BA	2873	A
22	BA	2874	C
22	BA	2880	C
22	BA	2883	A
22	BA	2884	U
22	BA	2891	U
23	BB	3	C
23	BB	4	C
23	BB	12	C
23	BB	15	A
23	BB	16	G
23	BB	25	U
23	BB	35	C
23	BB	37	C
23	BB	41	G
23	BB	42	C
23	BB	44	G
23	BB	45	A
23	BB	56	G
23	BB	66	A
23	BB	85	G
23	BB	87	U
23	BB	88	C
23	BB	89	U
23	BB	90	C
23	BB	91	C
23	BB	99	A
23	BB	109	A
1	CA	6	G
1	CA	7	A
1	CA	8	A

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Mol	Chain	Res	Type
1	CA	9	G
1	CA	14	U
1	CA	22	G
1	CA	32	A
1	CA	39	G
1	CA	47	C
1	CA	48	C
1	CA	51	A
1	CA	61	G
1	CA	64	G
1	CA	65	A
1	CA	66	A
1	CA	67	C
1	CA	68	G
1	CA	71	A
1	CA	72	A
1	CA	73	C
1	CA	76	G
1	CA	77	A
1	CA	80	A
1	CA	81	A
1	CA	82	G
1	CA	83	C
1	CA	84	U
1	CA	85	U
1	CA	86	G
1	CA	87	C
1	CA	88	U
1	CA	89	U
1	CA	90	C
1	CA	91	U
1	CA	92	U
1	CA	94	G
1	CA	95	C
1	CA	96	U
1	CA	98	A
1	CA	101	A
1	CA	110	C
1	CA	116	A
1	CA	120	A
1	CA	121	U
1	CA	122	G

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Mol	Chain	Res	Type
1	CA	129	A
1	CA	131	A
1	CA	132	C
1	CA	141	G
1	CA	143	A
1	CA	144	G
1	CA	154	U
1	CA	155	A
1	CA	164	G
1	CA	166	U
1	CA	167	A
1	CA	169	C
1	CA	177	G
1	CA	178	C
1	CA	181	A
1	CA	182	A
1	CA	191	G
1	CA	198	G
1	CA	199	A
1	CA	201	G
1	CA	206	C
1	CA	207	C
1	CA	208	U
1	CA	209	U
1	CA	210	C
1	CA	211	G
1	CA	212	G
1	CA	214	C
1	CA	239	U
1	CA	240	G
1	CA	243	A
1	CA	244	U
1	CA	245	U
1	CA	246	A
1	CA	247	G
1	CA	248	C
1	CA	250	A
1	CA	251	G
1	CA	252	U
1	CA	253	A
1	CA	258	G
1	CA	262	A

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Mol	Chain	Res	Type
1	CA	266	G
1	CA	267	C
1	CA	268	U
1	CA	275	G
1	CA	279	A
1	CA	280	C
1	CA	289	G
1	CA	298	A
1	CA	301	G
1	CA	306	A
1	CA	316	C
1	CA	321	A
1	CA	328	C
1	CA	329	A
1	CA	330	C
1	CA	331	G
1	CA	332	G
1	CA	338	A
1	CA	339	C
1	CA	345	C
1	CA	346	G
1	CA	347	G
1	CA	348	G
1	CA	352	C
1	CA	353	A
1	CA	354	G
1	CA	366	A
1	CA	367	U
1	CA	369	G
1	CA	372	C
1	CA	373	A
1	CA	374	A
1	CA	381	C
1	CA	382	A
1	CA	383	A
1	CA	384	G
1	CA	397	A
1	CA	398	U
1	CA	406	G
1	CA	408	A
1	CA	409	U
1	CA	411	A

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Mol	Chain	Res	Type
1	CA	412	A
1	CA	413	G
1	CA	415	A
1	CA	418	C
1	CA	421	U
1	CA	422	C
1	CA	423	G
1	CA	424	G
1	CA	425	G
1	CA	429	U
1	CA	430	A
1	CA	435	A
1	CA	436	C
1	CA	448	A
1	CA	451	A
1	CA	452	A
1	CA	456	A
1	CA	457	G
1	CA	458	U
1	CA	461	A
1	CA	462	G
1	CA	463	U
1	CA	464	U
1	CA	466	A
1	CA	467	U
1	CA	468	A
1	CA	474	G
1	CA	476	U
1	CA	477	C
1	CA	478	A
1	CA	479	U
1	CA	481	G
1	CA	484	G
1	CA	485	U
1	CA	486	U
1	CA	493	A
1	CA	496	A
1	CA	497	G
1	CA	500	G
1	CA	501	C
1	CA	509	A
1	CA	511	C

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Mol	Chain	Res	Type
1	CA	512	U
1	CA	513	C
1	CA	518	C
1	CA	519	C
1	CA	520	A
1	CA	522	C
1	CA	527	G
1	CA	530	G
1	CA	531	U
1	CA	532	A
1	CA	533	A
1	CA	534	U
1	CA	535	A
1	CA	536	C
1	CA	547	A
1	CA	550	G
1	CA	559	A
1	CA	562	U
1	CA	563	A
1	CA	564	C
1	CA	568	G
1	CA	572	A
1	CA	573	A
1	CA	576	C
1	CA	577	G
1	CA	579	A
1	CA	595	A
1	CA	604	G
1	CA	616	G
1	CA	617	G
1	CA	628	G
1	CA	633	G
1	CA	641	U
1	CA	642	A
1	CA	643	C
1	CA	653	U
1	CA	665	A
1	CA	687	A
1	CA	694	A
1	CA	695	A
1	CA	700	G
1	CA	701	U

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Mol	Chain	Res	Type
1	CA	702	A
1	CA	703	G
1	CA	704	A
1	CA	705	G
1	CA	721	G
1	CA	723	U
1	CA	724	G
1	CA	731	G
1	CA	748	G
1	CA	753	A
1	CA	754	C
1	CA	755	G
1	CA	758	C
1	CA	776	G
1	CA	777	A
1	CA	781	A
1	CA	782	A
1	CA	785	G
1	CA	787	A
1	CA	792	A
1	CA	793	U
1	CA	794	A
1	CA	803	G
1	CA	812	G
1	CA	813	U
1	CA	815	A
1	CA	817	C
1	CA	820	U
1	CA	828	U
1	CA	829	G
1	CA	841	C
1	CA	842	U
1	CA	843	U
1	CA	844	G
1	CA	845	A
1	CA	846	G
1	CA	847	G
1	CA	849	G
1	CA	880	C
1	CA	889	A
1	CA	890	G
1	CA	914	A

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Mol	Chain	Res	Type
1	CA	926	G
1	CA	927	G
1	CA	934	C
1	CA	935	A
1	CA	936	C
1	CA	942	G
1	CA	945	G
1	CA	960	U
1	CA	961	U
1	CA	962	C
1	CA	966	G
1	CA	968	A
1	CA	969	A
1	CA	972	C
1	CA	974	A
1	CA	975	A
1	CA	976	G
1	CA	977	A
1	CA	982	U
1	CA	985	C
1	CA	990	C
1	CA	991	U
1	CA	992	U
1	CA	993	G
1	CA	995	C
1	CA	996	A
1	CA	1000	A
1	CA	1004	A
1	CA	1007	U
1	CA	1009	U
1	CA	1016	A
1	CA	1019	A
1	CA	1020	G
1	CA	1022	A
1	CA	1026	G
1	CA	1028	C
1	CA	1029	U
1	CA	1031	C
1	CA	1032	G
1	CA	1036	A
1	CA	1037	C
1	CA	1050	G

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Mol	Chain	Res	Type
1	CA	1051	C
1	CA	1052	U
1	CA	1053	G
1	CA	1054	C
1	CA	1065	U
1	CA	1066	C
1	CA	1067	A
1	CA	1068	G
1	CA	1086	U
1	CA	1094	G
1	CA	1095	U
1	CA	1101	A
1	CA	1102	A
1	CA	1118	U
1	CA	1119	C
1	CA	1125	U
1	CA	1130	A
1	CA	1131	G
1	CA	1136	C
1	CA	1137	C
1	CA	1138	G
1	CA	1139	G
1	CA	1140	C
1	CA	1141	C
1	CA	1142	G
1	CA	1143	G
1	CA	1145	A
1	CA	1146	A
1	CA	1147	C
1	CA	1148	U
1	CA	1150	A
1	CA	1151	A
1	CA	1152	A
1	CA	1158	C
1	CA	1159	U
1	CA	1160	G
1	CA	1161	C
1	CA	1167	A
1	CA	1169	A
1	CA	1175	G
1	CA	1178	G
1	CA	1181	G

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Mol	Chain	Res	Type
1	CA	1183	U
1	CA	1184	G
1	CA	1191	A
1	CA	1193	G
1	CA	1196	A
1	CA	1197	A
1	CA	1201	A
1	CA	1202	U
1	CA	1212	U
1	CA	1213	A
1	CA	1214	C
1	CA	1215	G
1	CA	1216	A
1	CA	1217	C
1	CA	1219	A
1	CA	1222	G
1	CA	1224	U
1	CA	1225	A
1	CA	1226	C
1	CA	1228	C
1	CA	1229	A
1	CA	1232	U
1	CA	1238	A
1	CA	1239	A
1	CA	1240	U
1	CA	1241	G
1	CA	1243	C
1	CA	1250	A
1	CA	1251	A
1	CA	1256	A
1	CA	1257	A
1	CA	1260	G
1	CA	1266	G
1	CA	1272	G
1	CA	1278	G
1	CA	1279	G
1	CA	1280	A
1	CA	1281	C
1	CA	1282	C
1	CA	1283	U
1	CA	1285	A
1	CA	1286	U

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Mol	Chain	Res	Type
1	CA	1287	A
1	CA	1288	A
1	CA	1294	G
1	CA	1295	U
1	CA	1297	G
1	CA	1298	U
1	CA	1299	A
1	CA	1300	G
1	CA	1301	U
1	CA	1302	C
1	CA	1303	C
1	CA	1305	G
1	CA	1316	G
1	CA	1317	C
1	CA	1319	A
1	CA	1320	C
1	CA	1322	C
1	CA	1323	G
1	CA	1324	A
1	CA	1332	A
1	CA	1335	U
1	CA	1337	G
1	CA	1338	G
1	CA	1348	U
1	CA	1349	A
1	CA	1359	C
1	CA	1362	A
1	CA	1364	U
1	CA	1365	G
1	CA	1366	C
1	CA	1367	C
1	CA	1379	G
1	CA	1381	U
1	CA	1382	C
1	CA	1395	C
1	CA	1398	A
1	CA	1411	C
1	CA	1429	A
1	CA	1432	G
1	CA	1441	A
1	CA	1446	A
1	CA	1447	A

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Mol	Chain	Res	Type
1	CA	1448	C
1	CA	1449	C
1	CA	1452	C
1	CA	1453	G
1	CA	1454	G
1	CA	1455	G
1	CA	1490	U
1	CA	1491	G
1	CA	1493	A
1	CA	1494	G
1	CA	1497	G
1	CA	1503	A
1	CA	1506	U
1	CA	1517	G
1	CA	1519	A
1	CA	1520	C
1	CA	1529	G
1	CA	1530	G
1	CA	1534	A
22	DA	10	A
22	DA	14	A
22	DA	15	G
22	DA	27	G
22	DA	28	A
22	DA	34	U
22	DA	35	G
22	DA	36	G
22	DA	39	G
22	DA	41	C
22	DA	46	G
22	DA	49	A
22	DA	50	U
22	DA	52	A
22	DA	53	A
22	DA	55	G
22	DA	61	C
22	DA	62	U
22	DA	64	A
22	DA	71	A
22	DA	73	A
22	DA	74	A
22	DA	75	G

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Mol	Chain	Res	Type
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	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	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	144	A
22	DA	155	A
22	DA	156	A
22	DA	158	U
22	DA	160	A
22	DA	163	C
22	DA	164	C
22	DA	166	U
22	DA	177	G
22	DA	180	G
22	DA	181	A
22	DA	196	A
22	DA	199	A
22	DA	204	A
22	DA	205	G
22	DA	206	U

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Mol	Chain	Res	Type
22	DA	207	A
22	DA	215	G
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	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
22	DA	235	U
22	DA	241	A
22	DA	242	G
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	259	G
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	277	G
22	DA	278	A
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	302	C
22	DA	303	G
22	DA	311	A

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Mol	Chain	Res	Type
22	DA	312	G
22	DA	314	C
22	DA	321	U
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
22	DA	335	C
22	DA	336	C
22	DA	349	U
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	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	396	G
22	DA	397	U
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	423	A
22	DA	424	G

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Mol	Chain	Res	Type
22	DA	430	A
22	DA	436	C
22	DA	443	A
22	DA	444	C
22	DA	445	C
22	DA	446	G
22	DA	447	A
22	DA	451	U
22	DA	455	C
22	DA	457	A
22	DA	461	C
22	DA	462	C
22	DA	475	C
22	DA	477	A
22	DA	480	A
22	DA	481	G
22	DA	482	A
22	DA	483	A
22	DA	484	C
22	DA	489	G
22	DA	490	C
22	DA	491	G
22	DA	492	A
22	DA	498	G
22	DA	502	A
22	DA	503	A
22	DA	504	A
22	DA	505	A
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	532	A
22	DA	533	G
22	DA	544	C
22	DA	546	U
22	DA	547	A
22	DA	548	G
22	DA	549	G

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Mol	Chain	Res	Type
22	DA	550	C
22	DA	563	A
22	DA	572	A
22	DA	573	U
22	DA	575	A
22	DA	576	U
22	DA	586	A
22	DA	587	C
22	DA	590	A
22	DA	592	A
22	DA	603	A
22	DA	604	G
22	DA	605	G
22	DA	609	A
22	DA	613	A
22	DA	614	A
22	DA	616	A
22	DA	617	G
22	DA	618	G
22	DA	620	G
22	DA	621	A
22	DA	622	G
22	DA	623	C
22	DA	627	A
22	DA	628	G
22	DA	631	A
22	DA	634	C
22	DA	637	A
22	DA	638	G
22	DA	639	U
22	DA	645	C
22	DA	646	U
22	DA	649	G
22	DA	653	U
22	DA	654	A
22	DA	655	A
22	DA	656	G
22	DA	662	G
22	DA	664	G
22	DA	671	C
22	DA	672	C
22	DA	685	A

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Mol	Chain	Res	Type
22	DA	686	U
22	DA	695	G
22	DA	699	A
22	DA	711	G
22	DA	717	C
22	DA	726	G
22	DA	728	G
22	DA	729	G
22	DA	730	A
22	DA	740	C
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	757	G
22	DA	763	G
22	DA	764	A
22	DA	770	G
22	DA	775	G
22	DA	776	G
22	DA	782	A
22	DA	784	G
22	DA	785	G
22	DA	789	A
22	DA	790	U
22	DA	791	C
22	DA	792	A
22	DA	801	G
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	846	U
22	DA	847	U
22	DA	858	G
22	DA	859	G

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Mol	Chain	Res	Type
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	905	A
22	DA	910	A
22	DA	911	A
22	DA	912	C
22	DA	914	G
22	DA	915	C
22	DA	916	G
22	DA	919	U
22	DA	922	C
22	DA	931	U
22	DA	932	U
22	DA	933	A
22	DA	941	A
22	DA	946	C
22	DA	953	G
22	DA	958	U
22	DA	961	C
22	DA	963	U
22	DA	964	C
22	DA	973	A
22	DA	974	G
22	DA	976	G
22	DA	981	A
22	DA	983	A
22	DA	985	C
22	DA	990	A
22	DA	991	C
22	DA	996	A
22	DA	1005	C
22	DA	1009	A
22	DA	1010	A
22	DA	1012	U

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Mol	Chain	Res	Type
22	DA	1013	C
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
22	DA	1034	G
22	DA	1044	C
22	DA	1045	C
22	DA	1046	A
22	DA	1047	G
22	DA	1048	A
22	DA	1050	A
22	DA	1055	G
22	DA	1056	G
22	DA	1057	A
22	DA	1060	U
22	DA	1063	G
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	1086	A
22	DA	1088	A
22	DA	1089	A
22	DA	1090	A
22	DA	1091	G
22	DA	1097	U
22	DA	1100	C
22	DA	1103	A

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Mol	Chain	Res	Type
22	DA	1110	G
22	DA	1111	A
22	DA	1112	G
22	DA	1114	C
22	DA	1115	G
22	DA	1116	G
22	DA	1119	U
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	1139	G
22	DA	1142	A
22	DA	1155	A
22	DA	1157	G
22	DA	1158	C
22	DA	1169	A
22	DA	1170	C
22	DA	1172	C
22	DA	1174	U
22	DA	1176	U
22	DA	1195	G
22	DA	1204	A
22	DA	1205	A
22	DA	1206	G
22	DA	1207	C
22	DA	1211	C
22	DA	1227	G
22	DA	1231	U
22	DA	1235	G
22	DA	1236	G
22	DA	1237	A
22	DA	1238	G
22	DA	1241	A
22	DA	1242	U
22	DA	1246	A
22	DA	1247	A

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Mol	Chain	Res	Type
22	DA	1249	U
22	DA	1253	A
22	DA	1255	U
22	DA	1256	G
22	DA	1262	A
22	DA	1266	G
22	DA	1267	U
22	DA	1268	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	1278	C
22	DA	1286	A
22	DA	1287	A
22	DA	1288	G
22	DA	1290	C
22	DA	1291	C
22	DA	1300	G
22	DA	1301	A
22	DA	1304	A
22	DA	1311	G
22	DA	1312	U
22	DA	1313	U
22	DA	1317	G
22	DA	1321	A
22	DA	1324	G
22	DA	1325	U
22	DA	1326	U
22	DA	1327	A
22	DA	1330	C
22	DA	1331	G
22	DA	1332	G
22	DA	1336	A
22	DA	1337	G
22	DA	1340	U
22	DA	1341	G
22	DA	1342	A
22	DA	1343	G
22	DA	1344	U

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Mol	Chain	Res	Type
22	DA	1345	C
22	DA	1346	G
22	DA	1349	C
22	DA	1352	U
22	DA	1355	G
22	DA	1360	G
22	DA	1365	A
22	DA	1368	G
22	DA	1374	G
22	DA	1376	C
22	DA	1379	U
22	DA	1380	G
22	DA	1382	G
22	DA	1383	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	1420	A
22	DA	1421	G
22	DA	1424	G
22	DA	1426	G
22	DA	1427	A
22	DA	1428	C
22	DA	1430	G
22	DA	1437	C
22	DA	1440	U
22	DA	1444	G
22	DA	1452	G
22	DA	1453	A
22	DA	1455	G

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Mol	Chain	Res	Type
22	DA	1456	G
22	DA	1459	G
22	DA	1460	U
22	DA	1461	C
22	DA	1470	A
22	DA	1478	G
22	DA	1481	U
22	DA	1482	G
22	DA	1483	G
22	DA	1489	C
22	DA	1490	A
22	DA	1491	G
22	DA	1493	C
22	DA	1494	A
22	DA	1498	C
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	1520	U
22	DA	1522	A
22	DA	1523	U
22	DA	1524	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	1541	C
22	DA	1555	G
22	DA	1556	C
22	DA	1559	U
22	DA	1560	G
22	DA	1565	C
22	DA	1567	G
22	DA	1568	G
22	DA	1569	A

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Mol	Chain	Res	Type
22	DA	1583	A
22	DA	1584	U
22	DA	1585	C
22	DA	1586	A
22	DA	1587	G
22	DA	1600	C
22	DA	1601	G
22	DA	1602	U
22	DA	1603	A
22	DA	1606	C
22	DA	1607	C
22	DA	1608	A
22	DA	1610	A
22	DA	1612	C
22	DA	1613	G
22	DA	1616	A
22	DA	1618	A
22	DA	1626	A
22	DA	1633	G
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	1655	A
22	DA	1661	G
22	DA	1663	G
22	DA	1674	G
22	DA	1683	U
22	DA	1695	G
22	DA	1696	G
22	DA	1699	G
22	DA	1700	A
22	DA	1701	A
22	DA	1707	G
22	DA	1714	U
22	DA	1715	G
22	DA	1717	A
22	DA	1722	A
22	DA	1723	G

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Mol	Chain	Res	Type
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	1738	G
22	DA	1750	G
22	DA	1758	U
22	DA	1764	C
22	DA	1773	A
22	DA	1776	G
22	DA	1782	U
22	DA	1787	A
22	DA	1800	C
22	DA	1802	A
22	DA	1808	A
22	DA	1809	A
22	DA	1810	A
22	DA	1811	G
22	DA	1817	G
22	DA	1818	U
22	DA	1820	U
22	DA	1821	A
22	DA	1822	C
22	DA	1823	G
22	DA	1824	G
22	DA	1829	A
22	DA	1834	U
22	DA	1847	A
22	DA	1848	A
22	DA	1857	G
22	DA	1865	U
22	DA	1866	A
22	DA	1867	G
22	DA	1869	G
22	DA	1870	C
22	DA	1873	G
22	DA	1875	G
22	DA	1876	A

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Mol	Chain	Res	Type
22	DA	1877	A
22	DA	1884	G
22	DA	1889	A
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	1927	A
22	DA	1929	G
22	DA	1930	G
22	DA	1931	U
22	DA	1937	A
22	DA	1938	A
22	DA	1939	U
22	DA	1941	C
22	DA	1944	U
22	DA	1945	G
22	DA	1955	U
22	DA	1956	U
22	DA	1963	U
22	DA	1964	G
22	DA	1966	A
22	DA	1967	C
22	DA	1970	A
22	DA	1971	U
22	DA	1972	G
22	DA	1975	G
22	DA	1981	A
22	DA	1982	U
22	DA	1993	U
22	DA	1997	C
22	DA	2018	G
22	DA	2020	A
22	DA	2022	U
22	DA	2023	C
22	DA	2024	G
22	DA	2031	A
22	DA	2033	A
22	DA	2034	U
22	DA	2035	G

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Mol	Chain	Res	Type
22	DA	2043	C
22	DA	2049	G
22	DA	2055	C
22	DA	2056	G
22	DA	2060	A
22	DA	2061	G
22	DA	2062	A
22	DA	2068	U
22	DA	2069	G
22	DA	2079	U
22	DA	2080	A
22	DA	2092	U
22	DA	2093	G
22	DA	2094	A
22	DA	2104	C
22	DA	2105	U
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	2138	G
22	DA	2139	U
22	DA	2143	C
22	DA	2144	G
22	DA	2145	C
22	DA	2146	C
22	DA	2147	A
22	DA	2148	G
22	DA	2150	C
22	DA	2152	G
22	DA	2153	C
22	DA	2154	A
22	DA	2156	G
22	DA	2157	G
22	DA	2181	U
22	DA	2183	A
22	DA	2187	U
22	DA	2191	A
22	DA	2192	U
22	DA	2194	U

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Mol	Chain	Res	Type
22	DA	2199	A
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	2216	G
22	DA	2225	A
22	DA	2238	G
22	DA	2239	G
22	DA	2250	G
22	DA	2267	A
22	DA	2268	A
22	DA	2279	G
22	DA	2283	C
22	DA	2286	G
22	DA	2289	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	2321	U
22	DA	2322	A
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

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Mol	Chain	Res	Type
22	DA	2348	U
22	DA	2358	A
22	DA	2361	G
22	DA	2379	G
22	DA	2382	G
22	DA	2383	G
22	DA	2385	C
22	DA	2386	A
22	DA	2387	U
22	DA	2388	A
22	DA	2390	U
22	DA	2392	A
22	DA	2401	U
22	DA	2402	U
22	DA	2403	C
22	DA	2405	G
22	DA	2407	A
22	DA	2409	G
22	DA	2423	U
22	DA	2424	C
22	DA	2425	A
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	2441	U
22	DA	2447	G
22	DA	2448	A
22	DA	2469	A
22	DA	2475	C
22	DA	2476	A
22	DA	2491	U
22	DA	2494	G
22	DA	2498	C
22	DA	2502	G
22	DA	2505	G
22	DA	2506	U
22	DA	2513	A
22	DA	2514	U

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Mol	Chain	Res	Type
22	DA	2518	A
22	DA	2520	C
22	DA	2529	G
22	DA	2534	A
22	DA	2535	G
22	DA	2541	A
22	DA	2542	A
22	DA	2543	G
22	DA	2544	G
22	DA	2547	A
22	DA	2554	U
22	DA	2555	U
22	DA	2566	A
22	DA	2567	G
22	DA	2573	C
22	DA	2574	G
22	DA	2576	G
22	DA	2578	G
22	DA	2579	C
22	DA	2586	U
22	DA	2602	A
22	DA	2603	G
22	DA	2606	C
22	DA	2609	U
22	DA	2612	C
22	DA	2613	U
22	DA	2614	A
22	DA	2615	U
22	DA	2616	C
22	DA	2618	G
22	DA	2620	C
22	DA	2629	U
22	DA	2630	G
22	DA	2632	A
22	DA	2638	G
22	DA	2639	A
22	DA	2645	G
22	DA	2646	C
22	DA	2656	U
22	DA	2657	A
22	DA	2666	C
22	DA	2667	C

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Mol	Chain	Res	Type
22	DA	2681	C
22	DA	2682	A
22	DA	2683	C
22	DA	2689	U
22	DA	2690	U
22	DA	2714	G
22	DA	2718	G
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	2744	G
22	DA	2748	A
22	DA	2751	G
22	DA	2752	C
22	DA	2753	A
22	DA	2757	A
22	DA	2758	A
22	DA	2761	A
22	DA	2765	A
22	DA	2766	A
22	DA	2777	G
22	DA	2778	A
22	DA	2791	G
22	DA	2798	U
22	DA	2799	A
22	DA	2808	G
22	DA	2820	A
22	DA	2822	G
22	DA	2832	U
22	DA	2834	G
22	DA	2835	A
22	DA	2836	U
22	DA	2837	A
22	DA	2850	A
22	DA	2851	A
22	DA	2861	U
22	DA	2867	G
22	DA	2872	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	2883	A
22	DA	2894	G
22	DA	2895	G
23	DB	11	C
23	DB	13	G
23	DB	15	A
23	DB	16	G
23	DB	24	G
23	DB	25	U
23	DB	30	C
23	DB	35	C
23	DB	36	C
23	DB	40	U
23	DB	41	G
23	DB	42	C
23	DB	43	C
23	DB	44	G
23	DB	45	A
23	DB	48	U
23	DB	57	A
23	DB	58	A
23	DB	60	C
23	DB	64	G
23	DB	65	U
23	DB	66	A
23	DB	67	G
23	DB	68	C
23	DB	87	U
23	DB	89	U
23	DB	90	C
23	DB	91	C
23	DB	99	A
23	DB	109	A
23	DB	110	C

All (359) RNA pucker outliers are listed below:

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Mol	Chain	Res	Type
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Mol	Chain	Res	Type
1	AA	51	A
1	AA	72	A
1	AA	87	C
1	AA	95	C
1	AA	110	C
1	AA	115	G
1	AA	175	C
1	AA	184	G
1	AA	198	G
1	AA	250	A
1	AA	266	G
1	AA	267	C
1	AA	274	A
1	AA	330	C
1	AA	346	G
1	AA	351	G
1	AA	366	A
1	AA	368	U
1	AA	373	A
1	AA	414	A
1	AA	429	U
1	AA	451	A
1	AA	452	A
1	AA	484	G
1	AA	486	U
1	AA	495	A
1	AA	499	A
1	AA	500	G
1	AA	534	U
1	AA	548	G
1	AA	701	U
1	AA	722	G
1	AA	754	C
1	AA	884	U
1	AA	913	A
1	AA	982	U
1	AA	1049	U
1	AA	1066	C
1	AA	1101	A
1	AA	1136	C
1	AA	1158	C

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Mol	Chain	Res	Type
1	AA	1201	A
1	AA	1228	C
1	AA	1241	G
1	AA	1282	C
1	AA	1287	A
1	AA	1303	C
1	AA	1323	G
1	AA	1331	G
1	AA	1336	C
1	AA	1348	U
1	AA	1381	U
1	AA	1432	G
1	AA	1453	G
1	AA	1454	G
1	AA	1505	G
22	BA	34	U
22	BA	60	G
22	BA	100	U
22	BA	137	U
22	BA	164	C
22	BA	199	A
22	BA	229	C
22	BA	271	G
22	BA	301	G
22	BA	310	A
22	BA	404	A
22	BA	479	A
22	BA	507	A
22	BA	527	C
22	BA	555	G
22	BA	614	A
22	BA	655	A
22	BA	746	U
22	BA	764	A
22	BA	914	G
22	BA	931	U
22	BA	958	U
22	BA	995	C
22	BA	1011	G
22	BA	1020	A
22	BA	1023	U
22	BA	1062	G

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Mol	Chain	Res	Type
22	BA	1110	G
22	BA	1150	C
22	BA	1247	A
22	BA	1275	A
22	BA	1287	A
22	BA	1378	A
22	BA	1379	U
22	BA	1458	U
22	BA	1459	G
22	BA	1475	G
22	BA	1535	A
22	BA	1537	G
22	BA	1554	U
22	BA	1606	C
22	BA	1626	A
22	BA	1695	G
22	BA	1706	C
22	BA	1714	U
22	BA	1738	G
22	BA	1816	C
22	BA	1847	A
22	BA	1857	G
22	BA	1858	A
22	BA	1871	A
22	BA	1941	C
22	BA	2062	A
22	BA	2136	G
22	BA	2148	G
22	BA	2149	U
22	BA	2199	A
22	BA	2225	A
22	BA	2275	C
22	BA	2282	G
22	BA	2296	U
22	BA	2311	A
22	BA	2321	U
22	BA	2324	U
22	BA	2326	C
22	BA	2383	G
22	BA	2406	A
22	BA	2425	A
22	BA	2430	A

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Mol	Chain	Res	Type
22	BA	2602	A
22	BA	2756	U
22	BA	2800	A
22	BA	2820	A
22	BA	2873	A
1	CA	6	G
1	CA	14	U
1	CA	60	A
1	CA	66	A
1	CA	71	A
1	CA	72	A
1	CA	86	G
1	CA	87	C
1	CA	95	C
1	CA	109	A
1	CA	131	A
1	CA	197	A
1	CA	243	A
1	CA	245	U
1	CA	247	G
1	CA	251	G
1	CA	252	U
1	CA	274	A
1	CA	279	A
1	CA	305	G
1	CA	328	C
1	CA	347	G
1	CA	351	G
1	CA	352	C
1	CA	366	A
1	CA	368	U
1	CA	372	C
1	CA	373	A
1	CA	382	A
1	CA	423	G
1	CA	424	G
1	CA	429	U
1	CA	451	A
1	CA	484	G
1	CA	496	A
1	CA	500	G
1	CA	512	U

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Mol	Chain	Res	Type
1	CA	519	C
1	CA	534	U
1	CA	559	A
1	CA	563	A
1	CA	701	U
1	CA	752	G
1	CA	802	A
1	CA	913	A
1	CA	973	G
1	CA	977	A
1	CA	1049	U
1	CA	1064	G
1	CA	1066	C
1	CA	1067	A
1	CA	1086	U
1	CA	1101	A
1	CA	1138	G
1	CA	1142	G
1	CA	1157	A
1	CA	1160	G
1	CA	1190	G
1	CA	1201	A
1	CA	1224	U
1	CA	1242	G
1	CA	1278	G
1	CA	1282	C
1	CA	1299	A
1	CA	1331	G
1	CA	1348	U
1	CA	1381	U
1	CA	1447	A
1	CA	1451	U
1	CA	1453	G
22	DA	14	A
22	DA	33	C
22	DA	35	G
22	DA	49	A
22	DA	52	A
22	DA	73	A
22	DA	86	G
22	DA	103	A
22	DA	121	G

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Mol	Chain	Res	Type
22	DA	140	C
22	DA	179	C
22	DA	196	A
22	DA	204	A
22	DA	206	U
22	DA	215	G
22	DA	221	A
22	DA	223	A
22	DA	227	A
22	DA	234	U
22	DA	249	C
22	DA	311	A
22	DA	324	A
22	DA	329	G
22	DA	386	G
22	DA	388	G
22	DA	389	G
22	DA	406	G
22	DA	412	A
22	DA	422	A
22	DA	423	A
22	DA	443	A
22	DA	454	A
22	DA	474	G
22	DA	479	A
22	DA	483	A
22	DA	489	G
22	DA	491	G
22	DA	503	A
22	DA	575	A
22	DA	604	G
22	DA	617	G
22	DA	621	A
22	DA	622	G
22	DA	638	G
22	DA	648	G
22	DA	670	A
22	DA	727	A
22	DA	740	C
22	DA	746	U
22	DA	762	U
22	DA	763	G

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Mol	Chain	Res	Type
22	DA	800	A
22	DA	806	C
22	DA	915	C
22	DA	931	U
22	DA	984	A
22	DA	990	A
22	DA	1009	A
22	DA	1011	G
22	DA	1021	A
22	DA	1023	U
22	DA	1026	G
22	DA	1079	C
22	DA	1129	A
22	DA	1135	C
22	DA	1157	G
22	DA	1204	A
22	DA	1206	G
22	DA	1210	G
22	DA	1267	U
22	DA	1274	A
22	DA	1275	A
22	DA	1312	U
22	DA	1325	U
22	DA	1339	G
22	DA	1385	A
22	DA	1388	G
22	DA	1398	C
22	DA	1399	C
22	DA	1400	U
22	DA	1417	C
22	DA	1427	A
22	DA	1455	G
22	DA	1482	G
22	DA	1489	C
22	DA	1510	G
22	DA	1537	G
22	DA	1555	G
22	DA	1612	C
22	DA	1635	A
22	DA	1648	U
22	DA	1654	A
22	DA	1682	G

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Mol	Chain	Res	Type
22	DA	1695	G
22	DA	1700	A
22	DA	1706	C
22	DA	1713	A
22	DA	1731	G
22	DA	1733	G
22	DA	1734	G
22	DA	1775	U
22	DA	1799	G
22	DA	1810	A
22	DA	1816	C
22	DA	1817	G
22	DA	1828	G
22	DA	1866	A
22	DA	1913	A
22	DA	1915	U
22	DA	1941	C
22	DA	1943	U
22	DA	1965	C
22	DA	1981	A
22	DA	2068	U
22	DA	2143	C
22	DA	2148	G
22	DA	2214	C
22	DA	2282	G
22	DA	2286	G
22	DA	2288	A
22	DA	2310	C
22	DA	2311	A
22	DA	2337	G
22	DA	2344	U
22	DA	2347	C
22	DA	2391	G
22	DA	2406	A
22	DA	2425	A
22	DA	2427	C
22	DA	2428	G
22	DA	2468	A
22	DA	2497	A
22	DA	2543	G
22	DA	2566	A
22	DA	2613	U

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Mol	Chain	Res	Type
22	DA	2615	U
22	DA	2638	G
22	DA	2656	U
22	DA	2666	C
22	DA	2681	C
22	DA	2682	A
22	DA	2727	A
22	DA	2750	A
22	DA	2752	C
22	DA	2756	U
22	DA	2757	A
22	DA	2776	A
22	DA	2777	G
22	DA	2798	U
22	DA	2850	A
22	DA	2866	U
22	DA	2874	C
22	DA	2875	C
23	DB	12	C
23	DB	13	G
23	DB	16	G
23	DB	56	G
23	DB	90	C
23	DB	110	C

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

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

## 5.5 Carbohydrates [i](#)

There are no carbohydrates in this entry.

## 5.6 Ligand geometry [i](#)

Of 364 ligands modelled in this entry, 363 are monoatomic - leaving 1 for Mogul analysis.

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

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\# Z  > 2$	Counts	RMSZ	$\# Z  > 2$
54	EM1	BA	3135	-	64,64,64	2.13	11 (17%)	97,97,97	3.88	38 (39%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
54	EM1	BA	3135	-	-	0/77/112/112	0/5/5/5

All (11) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
54	BA	3135	EM1	O16-C10	10.30	1.37	1.21
54	BA	3135	EM1	C10-N6	7.51	1.50	1.35
54	BA	3135	EM1	F25-C21	-3.82	1.34	1.40
54	BA	3135	EM1	N82-N81	-3.73	1.28	1.34
54	BA	3135	EM1	O5-C10	3.58	1.41	1.35
54	BA	3135	EM1	O9-C4	-3.10	1.40	1.46
54	BA	3135	EM1	C79-N80	2.83	1.38	1.35
54	BA	3135	EM1	C76-C78	-2.66	1.44	1.48
54	BA	3135	EM1	C7-C3	-2.50	1.51	1.54
54	BA	3135	EM1	O45-C50	-2.38	1.40	1.44
54	BA	3135	EM1	O32-C28	-2.23	1.39	1.44

All (38) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
54	BA	3135	EM1	C3-N6-C10	-14.86	93.81	111.97
54	BA	3135	EM1	C4-C2-C3	12.24	123.77	110.26
54	BA	3135	EM1	C7-C3-N6	11.57	132.88	112.50
54	BA	3135	EM1	O5-C10-N6	-11.01	100.69	109.87
54	BA	3135	EM1	O5-C10-O16	-10.08	109.74	122.49
54	BA	3135	EM1	C12-C7-C3	-9.66	94.98	112.64
54	BA	3135	EM1	O16-C10-N6	-9.57	113.58	128.02
54	BA	3135	EM1	C3-C7-C13	9.53	134.07	111.13
54	BA	3135	EM1	C1-C2-C3	-8.77	106.81	116.79
54	BA	3135	EM1	C11-N6-C10	-6.38	114.10	122.14

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
54	BA	3135	EM1	F25-C21-C26	5.29	115.44	108.26
54	BA	3135	EM1	O5-C2-C3	-4.79	98.32	103.28
54	BA	3135	EM1	O39-C42-O45	-4.19	100.29	110.70
54	BA	3135	EM1	C8-C4-C2	-4.18	109.82	115.55
54	BA	3135	EM1	C42-C44-C49	-4.12	102.30	109.31
54	BA	3135	EM1	C2-C3-C7	4.04	128.02	117.39
54	BA	3135	EM1	C11-N6-C3	3.83	130.20	122.74
54	BA	3135	EM1	C55-C50-C54	-3.33	107.79	113.37
54	BA	3135	EM1	C35-C30-C26	-3.29	100.36	108.19
54	BA	3135	EM1	C42-O45-C50	-3.01	107.99	112.86
54	BA	3135	EM1	C76-C78-N82	2.95	124.56	120.74
54	BA	3135	EM1	O48-C44-C42	-2.83	103.89	110.03
54	BA	3135	EM1	C84-C83-N80	-2.80	107.20	112.44
54	BA	3135	EM1	C17-C11-N6	-2.78	109.70	113.53
54	BA	3135	EM1	C75-C76-C78	-2.78	116.78	121.22
54	BA	3135	EM1	C12-C7-C13	-2.68	103.18	108.22
54	BA	3135	EM1	N82-N81-N80	2.66	109.32	107.31
54	BA	3135	EM1	C25-C21-C26	-2.60	107.42	111.32
54	BA	3135	EM1	C76-C77-C72	-2.55	118.41	120.59
54	BA	3135	EM1	F25-C21-C25	2.37	110.85	107.85
54	BA	3135	EM1	C28-C24-C19	2.35	120.05	115.99
54	BA	3135	EM1	O45-C50-C54	2.24	112.68	109.07
54	BA	3135	EM1	O45-C42-C44	-2.16	105.89	110.30
54	BA	3135	EM1	C23-C19-C24	-2.15	106.09	109.93
54	BA	3135	EM1	C75-C76-C77	2.11	121.05	118.19
54	BA	3135	EM1	C25-C21-C15	-2.10	108.17	111.32
54	BA	3135	EM1	C2-C3-N6	-2.02	96.80	100.50
54	BA	3135	EM1	C78-N82-N81	2.02	109.31	106.90

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, 95<sup>th</sup> percentile and maximum values of the occupancy-weighted average B-factor per residue. The column labelled ‘Q< 0.9’ lists the number of (and percentage) of residues with an average occupancy less than 0.9.

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
1	AA	1533/1533 (100%)	-0.63	15 (0%) 79 33	46, 97, 198, 345	0
1	CA	1530/1533 (99%)	-0.27	24 (1%) 68 22	55, 113, 259, 356	0
2	AB	218/241 (90%)	0.42	13 (5%) 21 5	82, 141, 198, 243	0
2	CB	218/241 (90%)	0.61	10 (4%) 31 7	93, 145, 201, 251	0
3	AC	206/233 (88%)	-0.01	0 100 100	71, 107, 156, 198	0
3	CC	206/233 (88%)	0.24	3 (1%) 70 24	86, 136, 185, 215	0
4	AD	205/206 (99%)	0.11	4 (1%) 62 19	57, 114, 174, 236	0
4	CD	205/206 (99%)	-0.17	0 100 100	41, 78, 132, 212	0
5	AE	150/167 (89%)	-0.12	0 100 100	59, 90, 147, 217	0
5	CE	150/167 (89%)	-0.19	0 100 100	55, 92, 141, 191	0
6	AF	100/135 (74%)	-0.05	0 100 100	80, 126, 168, 190	0
6	CF	100/135 (74%)	0.02	0 100 100	82, 119, 176, 211	0
7	AG	151/179 (84%)	0.13	3 (1%) 62 19	98, 138, 186, 203	0
7	CG	150/179 (83%)	0.99	26 (17%) 2 1	121, 195, 245, 277	0
8	AH	129/130 (99%)	0.00	1 (0%) 83 39	62, 101, 142, 189	0
8	CH	129/130 (99%)	0.01	0 100 100	77, 115, 152, 209	0
9	AI	127/130 (97%)	0.50	5 (3%) 37 8	82, 137, 209, 250	0
9	CI	127/130 (97%)	0.70	11 (8%) 10 3	114, 158, 225, 259	0
10	AJ	98/103 (95%)	0.17	2 (2%) 62 19	71, 121, 175, 200	0
10	CJ	98/103 (95%)	0.85	14 (14%) 3 1	117, 166, 211, 238	0
11	AK	117/129 (90%)	0.42	2 (1%) 67 21	54, 123, 177, 206	0
11	CK	117/129 (90%)	-0.03	1 (0%) 81 37	67, 115, 162, 186	0
12	AL	123/124 (99%)	-0.02	1 (0%) 83 39	50, 79, 123, 189	0
12	CL	123/124 (99%)	0.14	2 (1%) 68 22	61, 89, 142, 202	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
13	AM	114/118 (96%)	0.11	1 (0%) 81 37	94, 142, 198, 217	0
13	CM	113/118 (95%)	1.59	36 (31%) 1 1	218, 370, 442, 470	0
14	AN	96/101 (95%)	0.23	3 (3%) 47 11	80, 116, 187, 224	0
14	CN	91/101 (90%)	0.98	12 (13%) 4 2	107, 180, 260, 287	0
15	AO	88/89 (98%)	-0.04	0 100 100	64, 102, 139, 188	0
15	CO	88/89 (98%)	-0.17	0 100 100	76, 116, 160, 209	0
16	AP	82/82 (100%)	0.37	5 (6%) 21 5	78, 99, 166, 223	0
16	CP	80/82 (97%)	0.52	3 (3%) 38 9	72, 107, 158, 222	0
17	AQ	80/84 (95%)	0.37	3 (3%) 38 9	62, 96, 136, 164	0
17	CQ	80/84 (95%)	0.69	5 (6%) 19 5	78, 115, 144, 155	0
18	AR	55/75 (73%)	0.20	1 (1%) 65 20	90, 110, 168, 218	0
18	CR	55/75 (73%)	0.06	0 100 100	74, 103, 171, 243	0
19	AS	79/92 (85%)	0.54	3 (3%) 38 9	110, 143, 197, 208	0
19	CS	79/92 (85%)	2.17	38 (48%) 1 0	205, 346, 411, 424	0
20	AT	85/87 (97%)	0.16	0 100 100	74, 103, 147, 179	0
20	CT	85/87 (97%)	0.70	7 (8%) 12 3	91, 134, 190, 216	0
21	AU	51/71 (71%)	0.75	4 (7%) 13 4	96, 139, 187, 225	0
21	CU	51/71 (71%)	0.17	0 100 100	83, 120, 184, 224	0
22	BA	2854/2904 (98%)	-0.53	36 (1%) 74 27	19, 47, 175, 400	0
22	DA	2841/2904 (97%)	0.03	73 (2%) 53 13	64, 141, 260, 408	0
23	BB	118/120 (98%)	-0.66	0 100 100	32, 61, 95, 115	0
23	DB	117/120 (97%)	-0.29	0 100 100	111, 185, 242, 277	0
24	BC	271/273 (99%)	-0.17	5 (1%) 65 20	25, 57, 97, 202	0
24	DC	271/273 (99%)	0.23	6 (2%) 59 16	64, 107, 154, 181	0
25	BD	209/209 (100%)	-0.28	0 100 100	19, 41, 90, 149	0
25	DD	209/209 (100%)	0.44	11 (5%) 25 6	71, 122, 174, 236	0
26	BE	201/201 (100%)	-0.20	0 100 100	23, 58, 116, 177	0
26	DE	201/201 (100%)	1.08	33 (16%) 2 1	91, 214, 335, 378	0
27	BF	177/179 (98%)	0.09	2 (1%) 77 30	52, 93, 166, 225	0
27	DF	178/179 (99%)	1.10	24 (13%) 4 2	154, 229, 270, 299	0
28	BG	176/177 (99%)	-0.07	0 100 100	41, 75, 129, 161	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
28	DG	176/177 (99%)	1.03	25 (14%) 3 1	129, 198, 270, 312	0
29	BH	149/149 (100%)	1.29	41 (27%) 1 1	59, 178, 260, 278	0
29	DH	149/149 (100%)	1.29	37 (24%) 1 1	100, 197, 252, 272	0
30	BI	141/142 (99%)	1.83	42 (29%) 1 1	149, 241, 292, 339	0
30	DI	141/142 (99%)	2.30	66 (46%) 1 0	231, 317, 353, 360	0
31	BJ	142/142 (100%)	-0.35	0 100 100	21, 40, 76, 139	0
31	DJ	142/142 (100%)	0.26	4 (2%) 50 12	75, 127, 168, 193	0
32	BK	122/123 (99%)	-0.26	1 (0%) 83 39	23, 45, 94, 191	0
32	DK	122/123 (99%)	0.35	3 (2%) 54 14	66, 107, 155, 228	0
33	BL	143/144 (99%)	-0.31	0 100 100	18, 55, 93, 123	0
33	DL	143/144 (99%)	0.75	10 (6%) 16 4	86, 169, 242, 284	0
34	BM	136/136 (100%)	-0.32	0 100 100	17, 45, 85, 146	0
34	DM	136/136 (100%)	0.56	7 (5%) 27 6	78, 131, 175, 208	0
35	BN	120/127 (94%)	-0.33	0 100 100	18, 41, 63, 132	0
35	DN	120/127 (94%)	0.56	6 (5%) 28 6	88, 136, 190, 237	0
36	BO	116/117 (99%)	-0.17	0 100 100	40, 64, 97, 124	0
36	DO	116/117 (99%)	1.08	19 (16%) 2 1	134, 182, 227, 252	0
37	BP	114/115 (99%)	-0.24	0 100 100	29, 53, 104, 149	0
37	DP	114/115 (99%)	0.32	5 (4%) 33 7	82, 121, 160, 197	0
38	BQ	117/118 (99%)	-0.40	0 100 100	19, 34, 63, 108	0
38	DQ	117/118 (99%)	0.71	9 (7%) 13 4	88, 126, 203, 287	0
39	BR	103/103 (100%)	-0.33	0 100 100	20, 48, 92, 115	0
39	DR	103/103 (100%)	1.06	19 (18%) 2 1	98, 154, 219, 274	0
40	BS	110/110 (100%)	-0.31	0 100 100	20, 38, 83, 143	0
40	DS	110/110 (100%)	0.97	15 (13%) 4 2	86, 141, 208, 266	0
41	BT	93/100 (93%)	0.22	1 (1%) 77 30	35, 69, 134, 207	0
41	DT	93/100 (93%)	1.42	23 (24%) 1 1	133, 215, 282, 315	0
42	BU	102/104 (98%)	-0.02	0 100 100	38, 72, 160, 192	0
42	DU	102/104 (98%)	1.96	44 (43%) 1 0	151, 251, 347, 416	0
43	BV	94/94 (100%)	-0.18	0 100 100	31, 61, 102, 114	0
43	DV	94/94 (100%)	0.57	2 (2%) 60 17	107, 157, 199, 222	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
44	BW	79/85 (92%)	0.03	1 (1%) 74 27	22, 53, 114, 195	0
44	DW	79/85 (92%)	1.31	20 (25%) 1 1	108, 163, 232, 250	0
45	BX	77/78 (98%)	-0.08	0 100 100	32, 58, 110, 124	0
45	DX	77/78 (98%)	0.57	3 (3%) 37 8	88, 134, 182, 237	0
46	BY	63/63 (100%)	0.13	1 (1%) 68 22	53, 90, 153, 175	0
46	DY	63/63 (100%)	0.85	8 (12%) 4 2	167, 286, 366, 383	0
47	BZ	58/59 (98%)	-0.24	0 100 100	19, 40, 87, 117	0
47	DZ	58/59 (98%)	0.57	3 (5%) 26 6	104, 143, 200, 247	0
48	B0	56/57 (98%)	-0.38	0 100 100	17, 42, 85, 150	0
48	D0	56/57 (98%)	0.74	6 (10%) 6 2	87, 161, 210, 255	0
49	B1	50/55 (90%)	0.08	1 (2%) 62 19	45, 65, 111, 143	0
49	D1	50/55 (90%)	1.06	5 (10%) 8 2	106, 161, 203, 255	0
50	B2	46/46 (100%)	-0.27	1 (2%) 59 16	30, 42, 69, 166	0
50	D2	46/46 (100%)	0.70	2 (4%) 34 8	95, 128, 162, 176	0
51	B3	64/65 (98%)	-0.35	0 100 100	25, 44, 64, 91	0
51	D3	64/65 (98%)	1.15	13 (20%) 1 1	96, 140, 173, 212	0
52	B4	38/38 (100%)	0.02	0 100 100	40, 58, 98, 108	0
52	D4	38/38 (100%)	1.69	13 (34%) 1 0	94, 155, 195, 203	0
All	All	20427/21084 (96%)	0.07	904 (4%) 33 7	17, 111, 252, 470	0

All (904) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
22	BA	2179	C	13.6
30	BI	52	LEU	11.4
1	CA	209	U	11.0
30	BI	2	LYS	10.8
22	BA	2154	A	10.8
27	DF	129	MET	10.6
29	DH	91	PHE	9.7
13	CM	93	GLY	8.9
30	BI	1	ALA	8.8
46	DY	63	ALA	8.7
30	DI	2	LYS	8.5
19	CS	29	PRO	8.4
13	CM	94	LEU	8.3

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
30	BI	3	LYS	8.3
22	BA	2147	A	7.9
29	DH	124	THR	7.8
29	BH	92	GLY	7.6
30	DI	119	ALA	7.5
7	CG	58	LEU	7.5
30	DI	51	GLY	7.4
30	DI	15	GLY	7.4
30	DI	57	VAL	7.4
30	DI	3	LYS	7.3
16	AP	80	LYS	7.1
22	BA	2143	C	7.0
1	CA	210	C	6.9
29	DH	123	ARG	6.9
9	CI	42	THR	6.9
19	CS	23	GLU	6.8
29	DH	112	LYS	6.6
22	BA	2180	U	6.5
29	DH	92	GLY	6.5
30	DI	56	VAL	6.5
13	CM	95	PRO	6.4
19	CS	70	LEU	6.4
22	BA	139	U	6.4
30	DI	55	PRO	6.4
29	BH	122	LEU	6.3
49	D1	35	LEU	6.3
22	DA	1067	A	6.3
26	DE	127	GLU	6.3
30	DI	5	GLN	6.3
19	CS	12	LEU	6.2
14	CN	52	ARG	6.2
42	DU	85	ARG	6.2
1	CA	1224	U	6.2
19	CS	38	THR	6.1
29	BH	90	LEU	6.1
30	BI	11	GLN	6.1
48	D0	56	LYS	6.1
22	BA	2110	G	6.1
22	BA	2146	C	6.0
42	DU	35	VAL	5.9
30	DI	68	PHE	5.9
29	DH	95	GLY	5.9

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
29	BH	118	PRO	5.8
17	AQ	82	VAL	5.8
1	AA	86	G	5.8
30	DI	4	VAL	5.8
12	CL	123	ALA	5.7
29	BH	84	ALA	5.6
22	DA	613	A	5.5
22	BA	2138	G	5.5
13	CM	112	ARG	5.4
42	DU	12	VAL	5.4
22	DA	2799	A	5.3
19	CS	28	LYS	5.3
30	BI	78	LEU	5.3
29	DH	127	GLU	5.3
49	D1	52	LYS	5.2
36	DO	61	GLN	5.2
13	CM	88	LEU	5.2
19	CS	65	MET	5.2
42	DU	38	ILE	5.1
19	CS	39	ILE	5.1
29	BH	80	ILE	5.1
30	BI	51	GLY	5.1
42	DU	17	ASP	5.1
7	CG	151	ALA	5.1
22	DA	1078	U	5.0
22	DA	2181	U	5.0
36	DO	62	LEU	5.0
30	DI	17	ALA	5.0
40	DS	48	LYS	5.0
42	DU	59	GLU	4.9
29	DH	105	ALA	4.9
51	D3	20	GLY	4.9
22	DA	1075	C	4.9
26	DE	175	ILE	4.9
30	BI	13	ALA	4.8
22	DA	645	C	4.8
41	DT	42	GLU	4.8
13	CM	89	ARG	4.8
22	BA	138	U	4.8
29	BH	124	THR	4.8
30	BI	66	PHE	4.8
19	CS	64	GLU	4.8

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Mol	Chain	Res	Type	RSRZ
29	DH	87	GLU	4.8
30	DI	59	THR	4.8
42	DU	78	LYS	4.8
22	BA	2139	U	4.8
29	BH	105	ALA	4.8
30	DI	14	ALA	4.8
41	DT	3	ARG	4.8
30	BI	67	THR	4.7
22	DA	2402	U	4.7
22	DA	2146	C	4.7
22	BA	2149	U	4.7
30	DI	52	LEU	4.6
29	DH	125	THR	4.6
22	DA	345	A	4.6
29	BH	123	ARG	4.6
30	DI	50	LYS	4.6
1	CA	86	G	4.6
19	CS	36	ARG	4.6
41	BT	1	MET	4.6
39	DR	103	ALA	4.5
22	DA	546	U	4.5
42	DU	31	GLY	4.5
19	CS	71	GLY	4.5
30	DI	118	GLY	4.5
42	DU	51	LEU	4.5
29	BH	113	SER	4.5
52	D4	20	ASP	4.5
11	CK	125	LYS	4.5
22	DA	1095	A	4.4
9	CI	127	SER	4.4
28	DG	56	GLY	4.4
29	BH	117	LEU	4.4
12	AL	123	ALA	4.4
1	AA	85	U	4.4
22	DA	846	U	4.4
18	AR	19	GLU	4.3
28	DG	83	THR	4.3
42	DU	70	ALA	4.3
22	BA	546	U	4.3
22	DA	1090	A	4.3
36	DO	60	GLU	4.3
36	DO	56	LYS	4.3

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Mol	Chain	Res	Type	RSRZ
52	D4	8	LYS	4.3
22	BA	2155	U	4.3
19	CS	47	THR	4.3
29	BH	149	GLU	4.3
22	DA	1172	C	4.3
14	CN	19	TYR	4.3
28	DG	7	PRO	4.3
42	DU	87	GLU	4.3
9	AI	40	ARG	4.3
30	DI	44	LYS	4.3
41	DT	55	VAL	4.3
22	DA	139	U	4.3
2	CB	147	LEU	4.3
7	CG	7	GLY	4.2
42	DU	42	LYS	4.2
28	DG	57	TYR	4.2
30	BI	10	LEU	4.2
7	CG	150	PHE	4.2
39	DR	20	VAL	4.2
30	DI	66	PHE	4.2
14	CN	48	GLN	4.2
7	CG	55	LYS	4.2
26	DE	119	ILE	4.2
22	DA	2157	G	4.1
30	BI	12	VAL	4.1
30	DI	48	ILE	4.1
10	CJ	8	ILE	4.1
42	DU	11	ILE	4.1
52	D4	1	MET	4.1
46	DY	62	GLY	4.1
30	BI	16	MET	4.1
40	DS	110	ARG	4.1
42	DU	5	ARG	4.1
9	AI	42	THR	4.1
22	DA	1066	U	4.0
46	DY	24	GLU	4.0
1	AA	1030	U	4.0
16	AP	81	ALA	4.0
19	CS	60	PHE	4.0
30	DI	16	MET	4.0
7	CG	73	GLU	4.0
2	AB	51	GLU	4.0

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Mol	Chain	Res	Type	RSRZ
39	DR	96	VAL	4.0
26	DE	147	LEU	4.0
30	BI	5	GLN	4.0
30	DI	81	LYS	4.0
42	DU	27	VAL	4.0
19	CS	63	ASP	3.9
19	CS	73	PHE	3.9
29	DH	93	SER	3.9
29	BH	79	THR	3.9
28	DG	41	GLU	3.9
26	DE	190	ALA	3.9
1	CA	461	A	3.9
10	AJ	102	LEU	3.9
22	DA	1077	A	3.9
42	DU	19	GLY	3.9
27	DF	178	LYS	3.9
30	BI	114	ALA	3.9
13	CM	108	ARG	3.9
29	BH	87	GLU	3.9
35	DN	74	GLU	3.8
48	D0	36	LYS	3.8
50	D2	33	ARG	3.8
42	DU	26	ASN	3.8
27	DF	41	GLU	3.8
14	CN	22	LYS	3.8
42	DU	32	LYS	3.8
2	CB	87	ASP	3.8
29	BH	98	ASP	3.8
4	AD	35	GLN	3.8
19	AS	2	ARG	3.8
19	CS	58	PRO	3.8
29	BH	143	ILE	3.8
22	DA	2307	G	3.8
30	BI	30	GLN	3.8
26	DE	25	GLU	3.7
44	DW	52	CYS	3.7
30	DI	25	PRO	3.7
37	DP	109	ILE	3.7
22	DA	2602	A	3.7
30	DI	41	PHE	3.7
26	DE	144	GLU	3.7
51	D3	60	CYS	3.7

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
30	DI	13	ALA	3.7
29	BH	85	GLY	3.7
13	CM	62	PHE	3.7
33	DL	82	LEU	3.7
29	DH	106	ALA	3.7
41	DT	36	LYS	3.7
19	CS	75	PRO	3.7
28	DG	55	ASP	3.7
29	BH	148	ALA	3.7
30	DI	58	ILE	3.7
30	DI	83	ALA	3.7
41	DT	81	LYS	3.7
29	BH	74	ALA	3.7
22	DA	1173	U	3.7
25	DD	55	LYS	3.7
28	DG	8	VAL	3.7
28	DG	51	PHE	3.6
29	BH	116	ARG	3.6
14	CN	25	GLU	3.6
33	DL	5	THR	3.6
22	BA	2150	C	3.6
42	DU	75	ALA	3.6
22	DA	2104	C	3.6
26	DE	173	THR	3.6
28	DG	140	ILE	3.6
29	DH	120	GLY	3.6
39	DR	50	GLY	3.6
42	DU	86	PHE	3.6
26	DE	98	LYS	3.5
30	DI	120	ASP	3.5
29	BH	86	ASP	3.5
29	BH	93	SER	3.5
51	D3	21	PHE	3.5
33	DL	92	LEU	3.5
9	AI	89	TYR	3.5
19	CS	2	ARG	3.5
29	DH	90	LEU	3.5
24	BC	236	GLY	3.5
1	AA	88	U	3.5
41	DT	35	ALA	3.5
29	DH	133	GLN	3.5
41	DT	83	ALA	3.5

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Mol	Chain	Res	Type	RSRZ
13	CM	109	LYS	3.5
22	DA	1870	C	3.5
32	BK	71	ARG	3.5
30	BI	7	TYR	3.4
52	D4	19	ARG	3.4
27	DF	141	ASP	3.4
22	DA	1175	A	3.4
13	CM	28	ARG	3.4
28	DG	166	GLU	3.4
51	D3	57	VAL	3.4
29	BH	125	THR	3.4
51	D3	13	PHE	3.4
42	DU	88	ASP	3.4
44	DW	42	THR	3.4
14	CN	18	LYS	3.4
29	DH	143	ILE	3.4
42	DU	2	ALA	3.4
9	CI	63	TYR	3.4
28	DG	85	LYS	3.4
28	DG	165	ASP	3.4
14	CN	26	LEU	3.4
30	DI	10	LEU	3.4
24	BC	234	GLY	3.3
19	CS	43	MET	3.3
21	AU	22	CYS	3.3
41	DT	2	ILE	3.3
16	CP	52	LEU	3.3
29	DH	128	HIS	3.3
42	DU	28	LEU	3.3
1	AA	87	C	3.3
7	CG	43	TYR	3.3
26	DE	180	LEU	3.3
33	DL	101	ILE	3.3
51	D3	19	GLY	3.3
36	DO	40	ILE	3.3
40	DS	70	LYS	3.3
22	DA	1536	C	3.3
38	DQ	36	GLN	3.3
30	DI	121	ILE	3.3
39	DR	46	GLU	3.3
22	DA	2306	C	3.3
1	CA	85	U	3.3

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
42	DU	24	VAL	3.3
10	CJ	71	LEU	3.3
30	DI	75	ALA	3.3
42	DU	34	ILE	3.3
16	CP	47	GLU	3.3
30	BI	46	ASP	3.3
30	DI	33	ASN	3.3
13	CM	104	ASN	3.3
13	CM	96	VAL	3.2
30	BI	75	ALA	3.2
44	DW	54	ARG	3.2
13	CM	63	VAL	3.2
30	BI	53	PRO	3.2
12	CL	122	LYS	3.2
13	CM	92	ARG	3.2
29	DH	121	VAL	3.2
30	BI	86	LYS	3.2
42	DU	20	LYS	3.2
51	D3	22	LYS	3.2
27	BF	79	ARG	3.2
49	D1	34	GLU	3.2
17	CQ	7	LEU	3.2
28	DG	32	LEU	3.2
35	DN	29	VAL	3.2
36	DO	46	GLU	3.2
19	CS	30	LEU	3.2
42	DU	13	LEU	3.2
52	D4	10	LEU	3.2
7	CG	65	LEU	3.2
22	BA	2309	A	3.2
39	DR	26	ASP	3.2
43	DV	69	GLU	3.2
14	CN	51	PRO	3.2
22	DA	2585	U	3.2
30	DI	29	GLN	3.2
30	DI	61	TYR	3.2
41	DT	15	HIS	3.2
7	CG	57	GLU	3.2
30	BI	6	ALA	3.2
26	DE	104	ALA	3.2
22	DA	2313	C	3.2
26	DE	128	ALA	3.2

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Mol	Chain	Res	Type	RSRZ
30	BI	21	PRO	3.1
1	CA	94	G	3.1
13	CM	82	LEU	3.1
49	D1	46	VAL	3.1
13	CM	97	ARG	3.1
9	CI	66	VAL	3.1
22	BA	1175	A	3.1
26	DE	40	ARG	3.1
1	CA	1312	G	3.1
22	BA	2144	G	3.1
29	DH	86	ASP	3.1
29	DH	141	LYS	3.1
9	CI	128	LYS	3.1
29	BH	89	LYS	3.1
29	DH	119	ASN	3.1
19	CS	25	GLY	3.1
22	DA	2142	A	3.1
41	DT	12	ARG	3.1
41	DT	43	ILE	3.1
20	CT	65	LEU	3.1
29	BH	81	ALA	3.1
30	DI	12	VAL	3.1
22	BA	2153	C	3.1
41	DT	34	VAL	3.1
7	CG	149	ALA	3.0
14	CN	62	ARG	3.0
36	DO	58	ILE	3.0
36	DO	52	SER	3.0
52	D4	9	LYS	3.0
13	CM	111	PRO	3.0
36	DO	87	ILE	3.0
42	DU	76	THR	3.0
22	BA	2885	G	3.0
10	CJ	73	LEU	3.0
29	BH	128	HIS	3.0
29	BH	91	PHE	3.0
29	BH	126	GLY	3.0
30	DI	53	PRO	3.0
13	CM	85	TYR	3.0
4	AD	26	ALA	3.0
1	AA	841	C	3.0
22	DA	2150	C	3.0

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Mol	Chain	Res	Type	RSRZ
26	DE	121	VAL	3.0
27	DF	115	GLY	3.0
30	DI	67	THR	3.0
2	AB	73	ARG	3.0
52	D4	25	VAL	3.0
13	CM	79	LEU	3.0
52	D4	33	HIS	3.0
27	DF	114	ARG	3.0
30	DI	1	ALA	3.0
22	DA	2151	U	2.9
30	BI	57	VAL	2.9
30	DI	60	VAL	2.9
9	CI	67	LYS	2.9
10	CJ	12	ALA	2.9
26	DE	12	LEU	2.9
1	CA	87	C	2.9
30	DI	43	ALA	2.9
30	DI	49	GLU	2.9
14	AN	29	ILE	2.9
26	DE	102	ARG	2.9
13	CM	22	TYR	2.9
19	CS	27	LYS	2.9
37	DP	114	ASN	2.9
19	CS	67	GLY	2.9
19	CS	79	TYR	2.9
40	DS	6	LYS	2.9
22	BA	2108	A	2.9
17	AQ	6	THR	2.9
26	DE	201	ALA	2.9
50	B2	46	LYS	2.9
42	DU	36	GLU	2.9
48	D0	23	ALA	2.9
27	DF	152	ASP	2.9
30	BI	58	ILE	2.9
30	DI	32	VAL	2.9
10	CJ	11	LYS	2.9
51	D3	48	MET	2.9
22	BA	2148	G	2.9
30	DI	22	PRO	2.9
34	DM	72	PRO	2.9
8	AH	129	ALA	2.9
20	CT	40	ALA	2.9

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Mol	Chain	Res	Type	RSRZ
10	CJ	7	ARG	2.9
19	CS	80	ARG	2.9
24	DC	238	ASN	2.9
7	CG	83	THR	2.9
22	BA	2145	C	2.8
22	DA	1420	A	2.8
36	DO	41	ALA	2.8
7	CG	16	LYS	2.8
42	DU	37	GLY	2.8
29	BH	88	GLY	2.8
29	DH	122	LEU	2.8
41	DT	72	GLN	2.8
22	DA	1073	A	2.8
29	DH	126	GLY	2.8
19	CS	48	ILE	2.8
30	BI	139	VAL	2.8
13	CM	70	ARG	2.8
2	AB	26	MET	2.8
13	CM	107	THR	2.8
2	AB	135	MET	2.8
30	BI	29	GLN	2.8
13	CM	30	LYS	2.8
26	DE	57	LYS	2.8
30	DI	30	GLN	2.8
52	D4	36	ARG	2.8
1	CA	1031	C	2.8
42	DU	4	ILE	2.8
30	BI	77	VAL	2.8
27	DF	153	ILE	2.8
22	DA	1171	G	2.8
10	AJ	35	GLN	2.8
16	AP	82	ALA	2.8
27	DF	78	ILE	2.8
29	BH	64	ALA	2.8
30	DI	21	PRO	2.8
42	DU	50	ALA	2.8
25	DD	10	GLY	2.8
26	DE	148	ILE	2.8
22	DA	1065	U	2.8
30	DI	78	LEU	2.8
26	DE	198	GLU	2.8
13	CM	84	CYS	2.8

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Mol	Chain	Res	Type	RSRZ
29	BH	147	VAL	2.8
2	CB	94	ARG	2.8
22	DA	1537	G	2.8
7	CG	72	VAL	2.7
36	DO	27	VAL	2.7
44	DW	39	GLN	2.7
22	BA	884	U	2.7
22	BA	2402	U	2.7
13	CM	98	GLY	2.7
13	CM	110	GLY	2.7
44	DW	69	GLU	2.7
22	DA	2309	A	2.7
28	DG	164	ALA	2.7
45	DX	32	LEU	2.7
30	BI	132	ALA	2.7
44	DW	58	LEU	2.7
1	CA	81	A	2.7
26	DE	21	ARG	2.7
10	CJ	72	ARG	2.7
30	DI	54	ILE	2.7
17	AQ	3	LYS	2.7
29	BH	106	ALA	2.7
29	DH	85	GLY	2.7
36	DO	59	ALA	2.7
29	DH	82	SER	2.7
42	DU	21	ARG	2.7
41	DT	64	LYS	2.7
51	D3	51	LYS	2.7
19	CS	11	ASP	2.7
30	DI	122	GLU	2.7
22	BA	277	G	2.7
7	CG	64	ALA	2.7
10	CJ	40	ILE	2.7
27	DF	127	TYR	2.7
39	DR	62	GLU	2.7
22	DA	137	U	2.7
30	DI	125	THR	2.7
42	DU	89	GLY	2.7
22	DA	2107	G	2.7
7	AG	4	ARG	2.7
7	CG	130	LYS	2.7
51	D3	46	LYS	2.7

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Mol	Chain	Res	Type	RSRZ
52	D4	15	LYS	2.7
30	BI	68	PHE	2.7
41	DT	32	LEU	2.7
22	DA	12	U	2.7
34	DM	103	TYR	2.7
52	D4	35	GLN	2.7
9	CI	64	ILE	2.7
3	CC	160	GLU	2.6
30	BI	60	VAL	2.6
39	DR	22	LEU	2.6
44	DW	62	ALA	2.6
24	BC	235	GLU	2.6
1	AA	412	A	2.6
13	CM	113	LYS	2.6
42	DU	79	ALA	2.6
27	DF	34	THR	2.6
2	AB	224	ARG	2.6
22	DA	1094	U	2.6
20	CT	3	ILE	2.6
22	DA	1076	C	2.6
46	DY	36	GLN	2.6
22	DA	2141	G	2.6
20	CT	67	HIS	2.6
29	BH	130	VAL	2.6
44	DW	71	LYS	2.6
1	CA	207	C	2.6
39	DR	52	PRO	2.6
44	DW	67	LYS	2.6
26	DE	188	MET	2.6
27	DF	77	LYS	2.6
27	DF	44	ALA	2.6
9	CI	65	THR	2.6
19	CS	66	VAL	2.6
9	CI	129	ARG	2.6
29	DH	116	ARG	2.6
41	DT	76	ARG	2.6
40	DS	4	ILE	2.6
22	BA	2106	U	2.6
41	DT	58	VAL	2.6
29	DH	129	GLU	2.6
30	DI	62	ALA	2.6
40	DS	5	ALA	2.6

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Mol	Chain	Res	Type	RSRZ
22	DA	1459	G	2.6
35	DN	63	ARG	2.6
41	DT	33	LYS	2.6
29	DH	147	VAL	2.6
22	DA	228	C	2.6
9	AI	39	GLY	2.6
27	DF	79	ARG	2.5
40	DS	47	VAL	2.5
1	AA	209	U	2.5
22	DA	2106	U	2.5
39	DR	25	LEU	2.5
20	CT	43	LYS	2.5
22	BA	2136	G	2.5
29	BH	121	VAL	2.5
2	AB	151	LYS	2.5
30	DI	72	THR	2.5
32	DK	89	ASN	2.5
19	CS	37	SER	2.5
28	DG	102	ILE	2.5
31	DJ	142	ILE	2.5
44	DW	38	ARG	2.5
24	DC	236	GLY	2.5
21	AU	23	GLU	2.5
33	DL	81	ASP	2.5
10	CJ	6	ILE	2.5
25	DD	27	ILE	2.5
19	CS	31	ARG	2.5
36	DO	25	ARG	2.5
36	DO	113	ALA	2.5
22	BA	1065	U	2.5
29	BH	134	VAL	2.5
17	CQ	5	ARG	2.5
36	DO	88	LYS	2.5
34	DM	136	MET	2.5
1	CA	1314	C	2.5
13	CM	68	LEU	2.5
13	AM	113	LYS	2.5
25	DD	25	THR	2.5
29	BH	120	GLY	2.5
39	DR	88	GLY	2.5
1	CA	1227	A	2.5
22	DA	2152	G	2.5

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
43	DV	84	PRO	2.5
22	DA	2103	C	2.5
30	DI	93	ASN	2.5
46	DY	35	GLY	2.5
30	DI	123	ALA	2.5
34	DM	110	GLU	2.5
22	DA	1409	U	2.5
1	AA	1534	A	2.5
10	CJ	39	PRO	2.5
7	CG	84	TYR	2.5
2	CB	135	MET	2.5
22	DA	2145	C	2.5
1	CA	1308	U	2.5
42	DU	71	ILE	2.5
46	DY	13	GLU	2.5
1	CA	1441	A	2.5
22	DA	2147	A	2.5
25	DD	91	THR	2.5
26	DE	171	ASP	2.5
48	D0	22	THR	2.5
13	CM	78	ARG	2.5
19	CS	40	PHE	2.5
22	BA	1094	U	2.5
30	DI	28	GLY	2.5
36	DO	55	GLU	2.4
46	DY	14	LEU	2.4
13	CM	99	GLN	2.4
24	DC	241	LYS	2.4
1	CA	1534	A	2.4
13	CM	71	GLU	2.4
28	DG	42	VAL	2.4
46	DY	21	LEU	2.4
30	BI	35	MET	2.4
30	BI	113	ALA	2.4
2	CB	34	ARG	2.4
19	CS	41	PRO	2.4
26	DE	194	LYS	2.4
30	DI	23	VAL	2.4
49	B1	52	LYS	2.4
1	AA	1032	G	2.4
29	BH	145	ASN	2.4
30	DI	27	LEU	2.4

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Mol	Chain	Res	Type	RSRZ
7	CG	85	GLN	2.4
1	CA	79	G	2.4
9	AI	129	ARG	2.4
29	DH	144	VAL	2.4
9	CI	3	ASN	2.4
37	DP	111	GLU	2.4
39	DR	34	GLU	2.4
22	DA	2136	G	2.4
28	DG	61	TRP	2.4
29	BH	146	VAL	2.4
42	DU	41	VAL	2.4
4	AD	24	VAL	2.4
16	AP	22	ALA	2.4
29	DH	94	ILE	2.4
44	DW	51	GLY	2.4
7	CG	136	LYS	2.4
22	DA	2110	G	2.4
1	AA	1493	A	2.4
29	DH	131	SER	2.4
2	CB	151	LYS	2.4
21	AU	37	TYR	2.4
2	CB	186	VAL	2.4
25	DD	26	VAL	2.4
1	CA	208	U	2.4
25	DD	96	ILE	2.4
2	AB	220	VAL	2.4
7	CG	143	MET	2.4
22	DA	2149	U	2.4
22	DA	101	A	2.4
44	DW	18	LYS	2.4
10	CJ	10	LEU	2.4
19	CS	26	ASP	2.4
13	CM	39	ALA	2.4
27	DF	10	GLU	2.4
16	CP	39	PHE	2.4
30	DI	84	GLY	2.3
39	DR	27	ILE	2.3
39	DR	6	GLN	2.3
46	BY	7	ARG	2.3
47	DZ	33	HIS	2.3
29	BH	71	LYS	2.3
33	DL	70	LYS	2.3

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Mol	Chain	Res	Type	RSRZ
44	DW	70	VAL	2.3
36	DO	26	LEU	2.3
1	CA	1302	C	2.3
3	CC	41	TYR	2.3
22	DA	1407	G	2.3
29	DH	146	VAL	2.3
31	DJ	53	TYR	2.3
44	BW	84	GLU	2.3
48	D0	34	GLY	2.3
28	DG	147	LEU	2.3
22	BA	140	C	2.3
24	BC	241	LYS	2.3
19	CS	59	VAL	2.3
28	DG	84	LYS	2.3
38	DQ	117	ALA	2.3
25	DD	73	VAL	2.3
30	DI	64	ARG	2.3
42	DU	57	ILE	2.3
42	DU	74	ALA	2.3
39	DR	21	ARG	2.3
2	AB	66	ILE	2.3
30	BI	22	PRO	2.3
44	DW	56	HIS	2.3
36	DO	24	THR	2.3
30	DI	86	LYS	2.3
28	DG	129	GLU	2.3
29	DH	89	LYS	2.3
10	CJ	66	GLU	2.3
7	CG	54	GLY	2.3
22	DA	1606	C	2.3
26	DE	103	GLY	2.3
2	AB	28	PRO	2.3
13	CM	100	ARG	2.3
26	DE	24	ASN	2.3
44	DW	43	LYS	2.3
42	DU	56	GLY	2.3
40	DS	16	LYS	2.3
51	D3	9	ALA	2.3
16	AP	47	GLU	2.3
1	CA	1309	G	2.3
11	AK	20	ALA	2.3
39	DR	24	LYS	2.3

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Mol	Chain	Res	Type	RSRZ
22	BA	1072	C	2.3
28	DG	104	LEU	2.3
26	DE	122	GLU	2.3
1	AA	79	G	2.2
7	AG	3	ARG	2.2
32	DK	38	ILE	2.2
1	CA	1271	A	2.2
2	CB	150	ILE	2.2
22	BA	885	C	2.2
39	DR	87	GLN	2.2
7	CG	74	VAL	2.2
19	AS	48	ILE	2.2
42	DU	9	GLU	2.2
45	DX	2	ARG	2.2
47	DZ	55	LYS	2.2
7	CG	15	PRO	2.2
34	DM	124	LEU	2.2
22	DA	321	U	2.2
22	DA	1044	C	2.2
51	D3	58	ILE	2.2
7	CG	59	GLU	2.2
7	CG	75	LYS	2.2
17	CQ	43	LEU	2.2
7	AG	84	TYR	2.2
22	DA	914	G	2.2
30	BI	141	ASP	2.2
45	DX	49	ARG	2.2
50	D2	1	MET	2.2
11	AK	79	LYS	2.2
22	DA	2109	U	2.2
24	BC	239	PHE	2.2
30	DI	129	GLU	2.2
40	DS	44	ALA	2.2
30	BI	19	PRO	2.2
31	DJ	44	TYR	2.2
38	DQ	37	ALA	2.2
24	DC	47	ARG	2.2
17	CQ	6	THR	2.2
27	DF	39	VAL	2.2
33	DL	89	VAL	2.2
35	DN	75	ILE	2.2
49	D1	20	TYR	2.2

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Mol	Chain	Res	Type	RSRZ
24	DC	240	GLY	2.2
33	DL	88	GLY	2.2
19	CS	62	THR	2.2
30	BI	71	LYS	2.2
34	DM	41	LEU	2.2
19	CS	13	HIS	2.2
22	DA	1535	A	2.2
29	DH	84	ALA	2.2
41	DT	37	ASP	2.2
1	AA	1362	A	2.2
2	CB	129	THR	2.2
19	CS	61	VAL	2.2
28	DG	170	THR	2.2
22	DA	357	C	2.2
22	DA	795	C	2.2
21	AU	3	ILE	2.2
26	DE	193	VAL	2.2
22	DA	136	G	2.2
30	DI	26	ALA	2.2
2	CB	17	HIS	2.2
35	DN	30	ARG	2.2
27	DF	84	ILE	2.1
27	DF	154	THR	2.1
28	DG	5	LYS	2.1
44	DW	41	GLY	2.1
52	D4	34	LYS	2.1
13	CM	83	GLY	2.1
52	D4	21	GLY	2.1
39	DR	55	ASP	2.1
3	CC	106	ARG	2.1
1	AA	1031	C	2.1
36	DO	50	ALA	2.1
40	DS	3	THR	2.1
14	AN	20	PHE	2.1
2	AB	152	ASP	2.1
22	DA	549	G	2.1
41	DT	60	THR	2.1
4	AD	27	ILE	2.1
30	BI	107	GLU	2.1
29	DH	79	THR	2.1
34	DM	33	LEU	2.1
22	DA	2143	C	2.1

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Mol	Chain	Res	Type	RSRZ
38	DQ	111	LYS	2.1
30	DI	138	VAL	2.1
1	CA	80	A	2.1
22	DA	2135	A	2.1
27	DF	38	GLY	2.1
33	DL	106	GLU	2.1
7	CG	8	GLN	2.1
38	DQ	7	VAL	2.1
30	BI	54	ILE	2.1
48	D0	41	HIS	2.1
26	DE	186	VAL	2.1
10	CJ	9	ARG	2.1
22	DA	290	U	2.1
29	BH	119	ASN	2.1
25	DD	187	LEU	2.1
7	CG	146	ALA	2.1
22	DA	2140	G	2.1
13	CM	81	ASP	2.1
27	DF	54	ALA	2.1
27	DF	83	PRO	2.1
30	DI	128	ILE	2.1
41	DT	31	VAL	2.1
29	BH	112	LYS	2.1
30	BI	119	ALA	2.1
31	DJ	98	GLU	2.1
42	DU	25	LYS	2.1
40	DS	43	ALA	2.1
28	DG	130	ILE	2.1
40	DS	97	LEU	2.1
30	DI	69	VAL	2.1
42	DU	48	VAL	2.1
1	AA	844	G	2.1
22	DA	343	C	2.1
25	DD	186	LEU	2.1
40	DS	31	GLN	2.1
22	BA	2109	U	2.1
41	DT	79	ASP	2.1
44	DW	37	VAL	2.1
28	DG	173	ALA	2.1
19	CS	10	ILE	2.1
14	CN	3	GLN	2.1
24	DC	237	ARG	2.1

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Mol	Chain	Res	Type	RSRZ
25	DD	188	LEU	2.1
38	DQ	110	GLU	2.1
51	D3	23	HIS	2.1
20	CT	35	TYR	2.0
44	DW	21	GLY	2.0
2	AB	63	LYS	2.0
39	DR	66	HIS	2.0
40	DS	92	ARG	2.0
38	DQ	28	SER	2.0
40	DS	2	GLU	2.0
26	DE	9	GLN	2.0
27	DF	53	ALA	2.0
37	DP	11	GLN	2.0
14	CN	23	ARG	2.0
1	CA	88	U	2.0
26	DE	155	GLU	2.0
2	AB	150	ILE	2.0
17	CQ	8	GLN	2.0
30	BI	48	ILE	2.0
30	DI	11	GLN	2.0
32	DK	68	GLY	2.0
44	DW	53	GLY	2.0
2	AB	87	ASP	2.0
14	CN	11	LYS	2.0
22	BA	2142	A	2.0
47	DZ	2	LYS	2.0
26	DE	23	PHE	2.0
13	CM	26	LYS	2.0
27	DF	31	GLU	2.0
30	BI	33	ASN	2.0
38	DQ	1	ALA	2.0
9	CI	57	VAL	2.0
14	AN	51	PRO	2.0
26	DE	131	THR	2.0
29	DH	118	PRO	2.0
10	CJ	74	VAL	2.0
30	DI	85	ILE	2.0
33	DL	74	THR	2.0
22	BA	2181	U	2.0
22	DA	790	U	2.0
27	BF	77	LYS	2.0
27	DF	155	ILE	2.0

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Mol	Chain	Res	Type	RSRZ
29	DH	142	VAL	2.0
35	DN	113	ILE	2.0
37	DP	37	LYS	2.0
38	DQ	4	LYS	2.0
44	DW	28	GLU	2.0
20	CT	2	ASN	2.0
41	DT	85	VAL	2.0
19	AS	12	LEU	2.0
42	DU	72	PHE	2.0

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

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

## 6.3 Carbohydrates ⓘ

There are no carbohydrates in this entry.

## 6.4 Ligands ⓘ

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

Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors(Å <sup>2</sup> )	Q<0.9
53	MG	DA	3063	1/1	1.62	411.00	273,273,273,273	0
53	MG	DA	3109	1/1	1.52	114.58	227,227,227,227	0
53	MG	DJ	201	1/1	2.46	70.17	319,319,319,319	0
53	MG	DA	3127	1/1	1.27	59.42	248,248,248,248	0
53	MG	DA	3005	1/1	0.70	59.25	282,282,282,282	0
53	MG	BA	3060	1/1	0.53	51.97	236,236,236,236	0
53	MG	AA	1628	1/1	0.22	50.99	142,142,142,142	0
53	MG	BA	3024	1/1	0.49	49.87	210,210,210,210	0
53	MG	DA	3058	1/1	0.38	47.36	249,249,249,249	0
53	MG	BA	3129	1/1	1.02	46.37	285,285,285,285	0
53	MG	BA	3059	1/1	0.41	46.14	207,207,207,207	0
53	MG	CA	1614	1/1	0.86	44.65	236,236,236,236	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors(Å <sup>2</sup> )	Q<0.9
53	MG	DA	3064	1/1	1.07	41.63	256,256,256,256	0
53	MG	DA	3003	1/1	1.50	40.14	238,238,238,238	0
53	MG	BA	3054	1/1	0.34	36.15	198,198,198,198	0
53	MG	AA	1619	1/1	0.58	35.58	230,230,230,230	0
53	MG	BB	201	1/1	0.24	33.25	255,255,255,255	0
53	MG	DA	3060	1/1	0.79	32.28	235,235,235,235	0
53	MG	DA	3079	1/1	0.77	27.74	225,225,225,225	0
53	MG	DA	3108	1/1	0.82	25.82	217,217,217,217	0
53	MG	AA	1636	1/1	0.39	25.10	218,218,218,218	0
53	MG	BA	3055	1/1	0.35	20.04	252,252,252,252	0
53	MG	BA	3096	1/1	0.18	16.67	169,169,169,169	0
53	MG	DA	3132	1/1	0.54	15.32	240,240,240,240	0
53	MG	DA	3074	1/1	0.54	13.53	260,260,260,260	0
53	MG	DA	3002	1/1	0.56	13.29	231,231,231,231	0
53	MG	BA	3120	1/1	0.30	13.04	45,45,45,45	0
53	MG	DA	3019	1/1	0.59	11.76	278,278,278,278	0
53	MG	BA	3018	1/1	0.33	11.04	32,32,32,32	0
53	MG	DE	301	1/1	0.28	10.57	199,199,199,199	0
53	MG	CA	1626	1/1	0.24	9.92	20,20,20,20	0
53	MG	CA	1608	1/1	0.25	9.53	47,47,47,47	0
53	MG	DA	3075	1/1	0.44	9.37	209,209,209,209	0
53	MG	CA	1624	1/1	0.40	9.32	146,146,146,146	0
53	MG	BA	3122	1/1	0.52	9.27	164,164,164,164	0
53	MG	DC	301	1/1	0.28	9.19	201,201,201,201	0
53	MG	BA	3133	1/1	0.23	8.42	116,116,116,116	0
53	MG	DA	3088	1/1	0.30	8.30	222,222,222,222	0
53	MG	DA	3026	1/1	1.10	8.18	242,242,242,242	0
53	MG	BA	3043	1/1	0.25	8.10	11,11,11,11	0
53	MG	DA	3057	1/1	0.25	7.32	205,205,205,205	0
53	MG	BA	3124	1/1	0.20	7.29	63,63,63,63	0
53	MG	DA	3078	1/1	0.25	6.92	214,214,214,214	0
53	MG	CA	1615	1/1	0.17	6.69	187,187,187,187	0
53	MG	DA	3062	1/1	0.52	6.07	190,190,190,190	0
53	MG	BA	3020	1/1	0.31	5.93	200,200,200,200	0
53	MG	AA	1608	1/1	0.26	5.84	61,61,61,61	0
53	MG	BA	3131	1/1	0.65	5.46	187,187,187,187	0
53	MG	BA	3134	1/1	0.28	5.38	210,210,210,210	0
53	MG	BA	3058	1/1	0.22	5.37	100,100,100,100	0
53	MG	BA	3100	1/1	0.24	5.17	119,119,119,119	0
53	MG	DA	3049	1/1	0.37	5.09	243,243,243,243	0
53	MG	BA	3069	1/1	0.22	4.77	198,198,198,198	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
53	MG	DA	3130	1/1	2.06	4.62	271,271,271,271	0
53	MG	AA	1626	1/1	0.20	4.60	29,29,29,29	0
53	MG	BA	3070	1/1	0.29	4.22	137,137,137,137	0
53	MG	DA	3031	1/1	0.22	4.17	80,80,80,80	0
53	MG	BA	3039	1/1	0.22	4.12	7,7,7,7	0
53	MG	DA	3053	1/1	0.15	4.01	127,127,127,127	0
53	MG	DA	3123	1/1	0.35	3.95	217,217,217,217	0
53	MG	BA	3073	1/1	0.25	3.91	43,43,43,43	0
53	MG	CA	1640	1/1	0.17	3.86	137,137,137,137	0
53	MG	BA	3081	1/1	0.15	3.59	99,99,99,99	0
53	MG	DA	3007	1/1	0.34	3.51	232,232,232,232	0
53	MG	BA	3035	1/1	0.27	3.50	189,189,189,189	0
53	MG	BA	3117	1/1	0.17	3.38	162,162,162,162	0
53	MG	CA	1625	1/1	0.21	3.37	111,111,111,111	0
54	EM1	BA	3135	60/60	0.23	3.32	0,28,50,62	0
53	MG	BA	3114	1/1	0.20	3.13	28,28,28,28	0
53	MG	DA	3033	1/1	0.31	3.07	151,151,151,151	0
53	MG	BA	3036	1/1	0.17	2.87	23,23,23,23	0
53	MG	CA	1628	1/1	0.35	2.82	224,224,224,224	0
53	MG	DA	3008	1/1	0.27	2.75	147,147,147,147	0
53	MG	BA	3089	1/1	0.14	2.72	127,127,127,127	0
53	MG	BA	3105	1/1	0.21	2.72	66,66,66,66	0
53	MG	AA	1631	1/1	0.19	2.72	228,228,228,228	0
53	MG	BA	3085	1/1	0.15	2.68	133,133,133,133	0
53	MG	AA	1614	1/1	0.19	2.55	159,159,159,159	0
53	MG	BA	3099	1/1	0.17	2.52	34,34,34,34	0
53	MG	DA	3021	1/1	0.24	2.49	183,183,183,183	0
53	MG	BA	3107	1/1	0.21	2.49	17,17,17,17	0
53	MG	AA	1639	1/1	0.18	2.28	118,118,118,118	0
53	MG	CA	1627	1/1	0.21	2.24	197,197,197,197	0
53	MG	CA	1616	1/1	0.53	2.15	195,195,195,195	0
53	MG	AA	1641	1/1	0.16	2.12	171,171,171,171	0
53	MG	DA	3022	1/1	0.24	2.07	149,149,149,149	0
53	MG	DA	3105	1/1	0.20	2.04	97,97,97,97	0
53	MG	DA	3120	1/1	0.22	2.04	124,124,124,124	0
53	MG	AA	1621	1/1	0.13	1.99	131,131,131,131	0
53	MG	DA	3128	1/1	0.85	1.86	163,163,163,163	0
53	MG	BA	3106	1/1	0.18	1.86	13,13,13,13	0
53	MG	DA	3115	1/1	0.20	1.85	176,176,176,176	0
53	MG	CA	1610	1/1	0.14	1.83	168,168,168,168	0
53	MG	BA	3102	1/1	0.17	1.83	24,24,24,24	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
53	MG	BA	3003	1/1	0.17	1.77	77,77,77,77	0
53	MG	DA	3129	1/1	0.75	1.76	261,261,261,261	0
53	MG	BA	3028	1/1	0.17	1.75	92,92,92,92	0
53	MG	DA	3076	1/1	0.20	1.74	195,195,195,195	0
53	MG	CA	1605	1/1	0.20	1.73	54,54,54,54	0
53	MG	BA	3004	1/1	0.19	1.61	184,184,184,184	0
53	MG	DA	3013	1/1	0.38	1.58	241,241,241,241	0
53	MG	AA	1627	1/1	0.15	1.41	132,132,132,132	0
53	MG	DA	3093	1/1	0.33	1.40	189,189,189,189	0
53	MG	AA	1605	1/1	0.18	1.37	72,72,72,72	0
53	MG	DA	3020	1/1	0.20	1.33	53,53,53,53	0
53	MG	DA	3133	1/1	0.28	1.26	220,220,220,220	0
53	MG	CA	1631	1/1	0.23	1.24	82,82,82,82	0
53	MG	AA	1634	1/1	0.15	1.18	94,94,94,94	0
53	MG	DA	3125	1/1	0.39	1.17	200,200,200,200	0
53	MG	BA	3053	1/1	0.15	1.13	55,55,55,55	0
53	MG	AA	1610	1/1	0.10	1.12	197,197,197,197	0
53	MG	CA	1620	1/1	0.16	1.06	182,182,182,182	0
53	MG	DA	3009	1/1	0.28	1.06	157,157,157,157	0
53	MG	DA	3028	1/1	0.37	1.04	222,222,222,222	0
53	MG	BA	3090	1/1	0.14	1.04	135,135,135,135	0
53	MG	AA	1622	1/1	0.17	1.01	54,54,54,54	0
53	MG	BA	3065	1/1	0.15	1.01	35,35,35,35	0
53	MG	DA	3046	1/1	0.23	0.99	73,73,73,73	0
53	MG	DA	3101	1/1	0.21	0.87	96,96,96,96	0
53	MG	DA	3104	1/1	0.20	0.86	52,52,52,52	0
53	MG	DA	3071	1/1	0.20	0.81	102,102,102,102	0
53	MG	DA	3047	1/1	0.19	0.78	174,174,174,174	0
53	MG	CA	1636	1/1	0.39	0.75	224,224,224,224	0
53	MG	BA	3005	1/1	0.13	0.69	74,74,74,74	0
53	MG	AA	1623	1/1	0.10	0.68	77,77,77,77	0
53	MG	DA	3059	1/1	0.19	0.65	233,233,233,233	0
53	MG	DA	3069	1/1	0.24	0.64	267,267,267,267	0
53	MG	CA	1641	1/1	0.15	0.61	116,116,116,116	0
53	MG	DA	3027	1/1	0.22	0.59	194,194,194,194	0
53	MG	DA	3107	1/1	0.21	0.57	91,91,91,91	0
53	MG	DA	3097	1/1	0.20	0.56	159,159,159,159	0
53	MG	BA	3029	1/1	0.17	0.52	14,14,14,14	0
53	MG	DA	3011	1/1	0.22	0.52	150,150,150,150	0
53	MG	DA	3004	1/1	0.19	0.48	134,134,134,134	0
53	MG	BA	3050	1/1	0.16	0.46	39,39,39,39	0
53	MG	BA	3048	1/1	0.17	0.39	25,25,25,25	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors(Å <sup>2</sup> )	Q<0.9
53	MG	BA	3095	1/1	0.18	0.37	139,139,139,139	0
53	MG	BA	3006	1/1	0.12	0.32	54,54,54,54	0
53	MG	DA	3091	1/1	0.20	0.29	184,184,184,184	0
53	MG	BA	3109	1/1	0.16	0.29	46,46,46,46	0
53	MG	DA	3082	1/1	0.19	0.23	164,164,164,164	0
53	MG	AA	1633	1/1	0.13	0.23	70,70,70,70	0
53	MG	DA	3029	1/1	0.24	0.21	178,178,178,178	0
53	MG	DA	3089	1/1	0.21	0.14	101,101,101,101	0
53	MG	BA	3062	1/1	0.15	0.14	19,19,19,19	0
53	MG	AA	1616	1/1	0.17	0.12	98,98,98,98	0
53	MG	BA	3041	1/1	0.13	0.09	38,38,38,38	0
53	MG	BA	3091	1/1	0.13	0.05	84,84,84,84	0
53	MG	DA	3126	1/1	0.19	0.03	120,120,120,120	0
53	MG	DA	3122	1/1	0.15	0.00	104,104,104,104	0
53	MG	DA	3066	1/1	0.17	-0.04	105,105,105,105	0
53	MG	BA	3007	1/1	0.10	-0.11	112,112,112,112	0
53	MG	BA	3011	1/1	0.18	-0.11	129,129,129,129	0
53	MG	DA	3050	1/1	0.18	-0.16	154,154,154,154	0
53	MG	BA	3110	1/1	0.15	-0.17	84,84,84,84	0
53	MG	BA	3038	1/1	0.16	-0.28	19,19,19,19	0
53	MG	DA	3036	1/1	0.15	-0.28	205,205,205,205	0
53	MG	CA	1630	1/1	0.15	-0.30	160,160,160,160	0
53	MG	BA	3103	1/1	0.15	-0.31	30,30,30,30	0
53	MG	CA	1613	1/1	0.17	-0.33	147,147,147,147	0
53	MG	BA	3130	1/1	0.24	-0.34	118,118,118,118	0
53	MG	AA	1637	1/1	0.17	-0.39	131,131,131,131	0
53	MG	CA	1633	1/1	0.11	-0.45	79,79,79,79	0
53	MG	BA	3064	1/1	0.13	-0.46	28,28,28,28	0
53	MG	BA	3121	1/1	0.14	-0.46	45,45,45,45	0
53	MG	DA	3043	1/1	0.25	-0.47	155,155,155,155	0
53	MG	BA	3104	1/1	0.16	-0.47	23,23,23,23	0
53	MG	DA	3014	1/1	0.20	-0.48	113,113,113,113	0
53	MG	AA	1617	1/1	0.14	-0.53	129,129,129,129	0
53	MG	BA	3033	1/1	0.15	-0.54	159,159,159,159	0
53	MG	DA	3085	1/1	0.20	-0.60	158,158,158,158	0
53	MG	DA	3080	1/1	0.19	-0.60	154,154,154,154	0
53	MG	BA	3040	1/1	0.12	-0.64	47,47,47,47	0
53	MG	DA	3006	1/1	0.12	-0.64	237,237,237,237	0
53	MG	BA	3014	1/1	0.15	-0.66	38,38,38,38	0
53	MG	DA	3024	1/1	0.17	-0.71	102,102,102,102	0
53	MG	AA	1630	1/1	0.12	-0.73	196,196,196,196	0
53	MG	BA	3118	1/1	0.14	-0.76	48,48,48,48	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
53	MG	DA	3045	1/1	0.20	-0.76	206,206,206,206	0
53	MG	DA	3073	1/1	0.16	-0.80	193,193,193,193	0
53	MG	DA	3084	1/1	0.16	-0.81	168,168,168,168	0
53	MG	BA	3008	1/1	0.13	-0.81	45,45,45,45	0
53	MG	CA	1621	1/1	0.14	-0.83	57,57,57,57	0
53	MG	AA	1612	1/1	0.15	-0.83	113,113,113,113	0
53	MG	BA	3119	1/1	0.08	-0.83	56,56,56,56	0
53	MG	AA	1606	1/1	0.12	-0.84	80,80,80,80	0
53	MG	AA	1642	1/1	0.13	-0.85	79,79,79,79	0
53	MG	BA	3026	1/1	0.14	-0.86	143,143,143,143	0
53	MG	AA	1624	1/1	0.12	-0.86	143,143,143,143	0
53	MG	BB	203	1/1	0.12	-0.88	58,58,58,58	0
53	MG	CA	1638	1/1	0.14	-0.89	204,204,204,204	0
53	MG	BA	3068	1/1	0.12	-0.90	176,176,176,176	0
53	MG	BA	3044	1/1	0.14	-0.92	34,34,34,34	0
53	MG	DA	3017	1/1	0.14	-0.94	185,185,185,185	0
53	MG	CA	1632	1/1	0.10	-0.96	122,122,122,122	0
53	MG	DA	3030	1/1	0.18	-0.97	130,130,130,130	0
53	MG	BA	3063	1/1	0.13	-0.98	26,26,26,26	0
53	MG	DA	3095	1/1	0.14	-1.01	138,138,138,138	0
53	MG	CA	1629	1/1	0.15	-1.04	190,190,190,190	0
53	MG	CA	1617	1/1	0.11	-1.05	202,202,202,202	0
53	MG	DA	3055	1/1	0.16	-1.05	103,103,103,103	0
53	MG	BA	3084	1/1	0.14	-1.05	26,26,26,26	0
53	MG	AA	1602	1/1	0.12	-1.06	177,177,177,177	0
53	MG	AA	1618	1/1	0.14	-1.07	78,78,78,78	0
53	MG	BA	3111	1/1	0.14	-1.07	31,31,31,31	0
53	MG	DA	3083	1/1	0.10	-1.08	214,214,214,214	0
53	MG	DA	3096	1/1	0.14	-1.09	127,127,127,127	0
53	MG	DA	3098	1/1	0.19	-1.14	183,183,183,183	0
53	MG	BB	202	1/1	0.10	-1.16	82,82,82,82	0
53	MG	CA	1609	1/1	0.16	-1.16	98,98,98,98	0
53	MG	DA	3042	1/1	0.16	-1.19	81,81,81,81	0
53	MG	CA	1618	1/1	0.13	-1.20	136,136,136,136	0
53	MG	BA	3013	1/1	0.14	-1.23	18,18,18,18	0
53	MG	BA	3049	1/1	0.12	-1.31	76,76,76,76	0
53	MG	DB	201	1/1	0.09	-1.32	111,111,111,111	0
53	MG	BA	3083	1/1	0.15	-1.34	53,53,53,53	0
53	MG	DA	3070	1/1	0.13	-1.34	91,91,91,91	0
53	MG	DA	3025	1/1	0.14	-1.34	162,162,162,162	0
53	MG	DA	3131	1/1	0.15	-1.37	94,94,94,94	0
53	MG	DA	3018	1/1	0.09	-1.43	185,185,185,185	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
53	MG	DA	3106	1/1	0.15	-1.45	218,218,218,218	0
53	MG	CA	1606	1/1	0.13	-1.48	93,93,93,93	0
53	MG	BA	3126	1/1	0.12	-1.49	40,40,40,40	0
53	MG	CA	1622	1/1	0.07	-1.49	187,187,187,187	0
53	MG	DA	3051	1/1	0.14	-1.51	88,88,88,88	0
53	MG	DA	3110	1/1	0.07	-1.56	120,120,120,120	0
53	MG	AA	1603	1/1	0.09	-1.56	65,65,65,65	0
53	MG	DA	3037	1/1	0.11	-1.57	81,81,81,81	0
53	MG	DA	3116	1/1	0.12	-1.58	84,84,84,84	0
53	MG	BA	3045	1/1	0.14	-1.58	25,25,25,25	0
53	MG	CA	1601	1/1	0.09	-1.59	106,106,106,106	0
53	MG	DA	3001	1/1	0.11	-1.59	141,141,141,141	0
53	MG	AA	1638	1/1	0.13	-1.60	67,67,67,67	0
53	MG	CA	1637	1/1	0.13	-1.63	94,94,94,94	0
53	MG	DA	3067	1/1	0.11	-1.64	72,72,72,72	0
53	MG	BA	3128	1/1	0.14	-1.66	33,33,33,33	0
53	MG	BA	3088	1/1	0.10	-1.70	59,59,59,59	0
53	MG	DA	3111	1/1	0.12	-1.74	202,202,202,202	0
53	MG	BA	3017	1/1	0.08	-1.76	57,57,57,57	0
53	MG	DA	3094	1/1	0.13	-1.77	145,145,145,145	0
55	ZN	D4	101	1/1	0.07	-1.81	169,169,169,169	0
53	MG	CA	1634	1/1	0.12	-1.83	165,165,165,165	0
53	MG	DA	3117	1/1	0.17	-1.85	73,73,73,73	0
53	MG	CA	1619	1/1	0.12	-1.90	212,212,212,212	0
53	MG	BA	3132	1/1	0.10	-1.91	20,20,20,20	0
55	ZN	B4	101	1/1	0.10	-1.94	108,108,108,108	0
53	MG	BA	3113	1/1	0.16	-1.97	190,190,190,190	0
53	MG	DA	3034	1/1	0.13	-1.99	88,88,88,88	0
53	MG	BA	3056	1/1	0.12	-2.00	148,148,148,148	0
53	MG	DA	3099	1/1	0.14	-2.01	188,188,188,188	0
53	MG	DA	3086	1/1	0.15	-2.01	109,109,109,109	0
53	MG	BA	3112	1/1	0.10	-2.03	49,49,49,49	0
53	MG	CA	1642	1/1	0.10	-2.06	139,139,139,139	0
53	MG	BA	3022	1/1	0.12	-2.09	27,27,27,27	0
53	MG	DA	3119	1/1	0.12	-2.09	60,60,60,60	0
53	MG	DA	3121	1/1	0.16	-2.11	168,168,168,168	0
53	MG	AA	1601	1/1	0.05	-2.11	94,94,94,94	0
53	MG	BB	204	1/1	0.12	-2.13	45,45,45,45	0
53	MG	AA	1615	1/1	0.12	-2.14	152,152,152,152	0
53	MG	DA	3072	1/1	0.12	-2.16	183,183,183,183	0
53	MG	DA	3061	1/1	0.11	-2.19	110,110,110,110	0
53	MG	BA	3079	1/1	0.13	-2.21	32,32,32,32	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors(Å <sup>2</sup> )	Q<0.9
53	MG	CA	1612	1/1	0.16	-2.21	125,125,125,125	0
53	MG	BA	3009	1/1	0.13	-2.23	38,38,38,38	0
53	MG	DA	3040	1/1	0.15	-2.25	72,72,72,72	0
53	MG	DA	3054	1/1	0.11	-2.26	86,86,86,86	0
53	MG	BA	3078	1/1	0.13	-2.26	58,58,58,58	0
53	MG	DA	3039	1/1	0.15	-2.26	105,105,105,105	0
53	MG	BA	3098	1/1	0.07	-2.26	49,49,49,49	0
53	MG	DA	3035	1/1	0.11	-2.27	90,90,90,90	0
53	MG	BA	3108	1/1	0.13	-2.27	95,95,95,95	0
53	MG	CA	1623	1/1	0.12	-2.31	108,108,108,108	0
53	MG	DA	3112	1/1	0.09	-2.31	79,79,79,79	0
53	MG	DA	3032	1/1	0.13	-2.32	162,162,162,162	0
53	MG	DA	3065	1/1	0.13	-2.34	88,88,88,88	0
53	MG	AA	1632	1/1	0.13	-2.36	85,85,85,85	0
53	MG	BA	3021	1/1	0.12	-2.41	24,24,24,24	0
53	MG	CA	1602	1/1	0.12	-2.43	139,139,139,139	0
53	MG	AA	1607	1/1	0.12	-2.45	136,136,136,136	0
53	MG	BA	3032	1/1	0.12	-2.50	23,23,23,23	0
53	MG	AA	1635	1/1	0.07	-2.52	87,87,87,87	0
53	MG	AA	1620	1/1	0.08	-2.54	116,116,116,116	0
53	MG	BA	3092	1/1	0.09	-2.55	68,68,68,68	0
53	MG	BA	3023	1/1	0.11	-2.57	22,22,22,22	0
53	MG	DA	3092	1/1	0.15	-2.58	169,169,169,169	0
53	MG	DA	3044	1/1	0.15	-2.59	87,87,87,87	0
53	MG	BA	3051	1/1	0.16	-2.62	70,70,70,70	0
53	MG	AA	1640	1/1	0.04	-2.62	79,79,79,79	0
53	MG	DA	3041	1/1	0.12	-2.70	119,119,119,119	0
53	MG	CA	1607	1/1	0.14	-2.70	167,167,167,167	0
53	MG	DA	3068	1/1	0.06	-2.79	98,98,98,98	0
53	MG	DA	3103	1/1	0.12	-2.81	86,86,86,86	0
53	MG	BA	3047	1/1	0.12	-2.84	122,122,122,122	0
53	MG	BA	3010	1/1	0.12	-2.85	31,31,31,31	0
53	MG	DA	3114	1/1	0.11	-3.00	182,182,182,182	0
53	MG	DA	3124	1/1	0.14	-3.25	82,82,82,82	0
53	MG	DA	3100	1/1	0.12	-3.32	124,124,124,124	0
53	MG	BA	3125	1/1	0.13	-3.35	40,40,40,40	0
53	MG	DA	3023	1/1	0.10	-3.43	130,130,130,130	0
53	MG	DA	3048	1/1	0.11	-3.50	103,103,103,103	0
53	MG	CA	1603	1/1	0.08	-3.54	136,136,136,136	0
53	MG	BA	3030	1/1	0.10	-3.62	56,56,56,56	0
53	MG	BA	3037	1/1	0.13	-3.69	30,30,30,30	0
53	MG	BA	3002	1/1	0.10	-3.76	75,75,75,75	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
53	MG	AA	1625	1/1	0.12	-3.76	101,101,101,101	0
53	MG	BA	3067	1/1	0.13	-3.87	28,28,28,28	0
53	MG	BA	3027	1/1	0.11	-3.95	33,33,33,33	0
53	MG	BA	3077	1/1	0.09	-3.96	63,63,63,63	0
53	MG	BA	3123	1/1	0.10	-4.00	24,24,24,24	0
53	MG	BA	3012	1/1	0.11	-4.06	20,20,20,20	0
53	MG	BA	3046	1/1	0.08	-4.10	176,176,176,176	0
53	MG	CA	1604	1/1	0.08	-4.23	96,96,96,96	0
53	MG	DA	3102	1/1	0.12	-4.23	118,118,118,118	0
53	MG	BA	3031	1/1	0.13	-4.29	37,37,37,37	0
53	MG	BA	3066	1/1	0.14	-4.34	32,32,32,32	0
53	MG	BA	3082	1/1	0.12	-4.37	86,86,86,86	0
53	MG	BA	3052	1/1	0.13	-4.44	34,34,34,34	0
53	MG	DA	3052	1/1	0.07	-4.44	72,72,72,72	0
53	MG	AA	1629	1/1	0.06	-4.45	97,97,97,97	0
53	MG	DA	3090	1/1	0.09	-4.50	112,112,112,112	0
53	MG	CA	1639	1/1	0.06	-4.53	159,159,159,159	0
53	MG	AA	1613	1/1	0.08	-4.55	76,76,76,76	0
53	MG	BA	3061	1/1	0.10	-4.58	18,18,18,18	0
53	MG	BA	3116	1/1	0.08	-4.62	72,72,72,72	0
53	MG	DA	3056	1/1	0.08	-4.77	85,85,85,85	0
53	MG	DA	3012	1/1	0.09	-4.77	72,72,72,72	0
53	MG	DA	3016	1/1	0.09	-4.85	60,60,60,60	0
53	MG	DA	3087	1/1	0.09	-5.00	199,199,199,199	0
53	MG	BA	3076	1/1	0.07	-5.20	107,107,107,107	0
53	MG	DA	3015	1/1	0.17	-5.27	219,219,219,219	0
53	MG	BA	3097	1/1	0.12	-5.45	54,54,54,54	0
53	MG	BA	3057	1/1	0.07	-5.68	71,71,71,71	0
53	MG	DA	3113	1/1	0.05	-5.74	128,128,128,128	0
53	MG	BA	3016	1/1	0.10	-5.79	22,22,22,22	0
53	MG	AA	1611	1/1	0.13	-5.79	57,57,57,57	0
53	MG	CA	1611	1/1	0.11	-5.83	110,110,110,110	0
53	MG	AA	1609	1/1	0.09	-5.92	77,77,77,77	0
53	MG	AA	1643	1/1	0.09	-5.96	67,67,67,67	0
53	MG	BA	3075	1/1	0.05	-6.06	43,43,43,43	0
53	MG	AA	1604	1/1	0.05	-6.09	139,139,139,139	0
53	MG	BA	3086	1/1	0.09	-6.15	151,151,151,151	0
53	MG	BA	3101	1/1	0.10	-6.37	48,48,48,48	0
53	MG	DA	3077	1/1	0.09	-6.41	109,109,109,109	0
53	MG	BA	3094	1/1	0.09	-6.57	32,32,32,32	0
53	MG	BA	3025	1/1	0.06	-6.93	40,40,40,40	0
53	MG	BA	3115	1/1	0.06	-6.97	22,22,22,22	0

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Mol	Type	Chain	Res	Atoms	RSR	LLDF	B-factors( $\text{\AA}^2$ )	Q<0.9
53	MG	BA	3080	1/1	0.07	-7.00	60,60,60,60	0
53	MG	DA	3081	1/1	0.09	-7.47	83,83,83,83	0
53	MG	BA	3127	1/1	0.08	-7.54	8,8,8,8	0
53	MG	DA	3118	1/1	0.14	-7.59	100,100,100,100	0
53	MG	BA	3072	1/1	0.06	-7.87	61,61,61,61	0
53	MG	BA	3015	1/1	0.06	-8.04	65,65,65,65	0
53	MG	DA	3038	1/1	0.07	-8.24	234,234,234,234	0
53	MG	BA	3071	1/1	0.10	-8.34	16,16,16,16	0
53	MG	CA	1635	1/1	0.11	-8.60	76,76,76,76	0
53	MG	BA	3093	1/1	0.06	-9.01	45,45,45,45	0
53	MG	BL	201	1/1	0.06	-10.82	61,61,61,61	0
53	MG	BA	3001	1/1	0.09	-14.97	98,98,98,98	0
53	MG	BA	3034	1/1	0.08	-14.99	11,11,11,11	0
53	MG	BA	3087	1/1	0.08	-17.46	47,47,47,47	0
53	MG	BA	3019	1/1	0.06	-18.67	34,34,34,34	0
53	MG	BA	3042	1/1	0.08	-19.64	60,60,60,60	0
53	MG	BA	3074	1/1	0.10	-20.45	93,93,93,93	0
53	MG	DA	3010	1/1	1.08	-	272,272,272,272	0

## 6.5 Other polymers ⓘ

There are no such residues in this entry.