



## wwPDB EM Map/Model Validation Report ⓘ

Sep 29, 2016 – 07:22 PM EDT

PDB ID : 5JUT  
EMDB ID: : EMD-6646  
Title : Saccharomyces cerevisiae 80S ribosome bound with elongation factor eEF2-GDP-sordarin and Taura Syndrome Virus IRES, Structure IV (almost non-rotated 40S subunit)  
Authors : Abeyrathne, P.; Koh, C.S.; Grant, T.; Grigorieff, N.; Korostelev, A.A.  
Deposited on : 2016-05-10  
Resolution : 4.00 Å(reported)

This is a wwPDB EM Map/Model Validation Report for a publicly released PDB/EMDB entry.  
For rigid body fitted models, validation errors reported here could stem from errors in the original structure(s) used in the fitting.

We welcome your comments at [validation@mail.wwpdb.org](mailto:validation@mail.wwpdb.org)

A user guide is available at

<http://wwpdb.org/validation/2016/EMValidationReportHelp>

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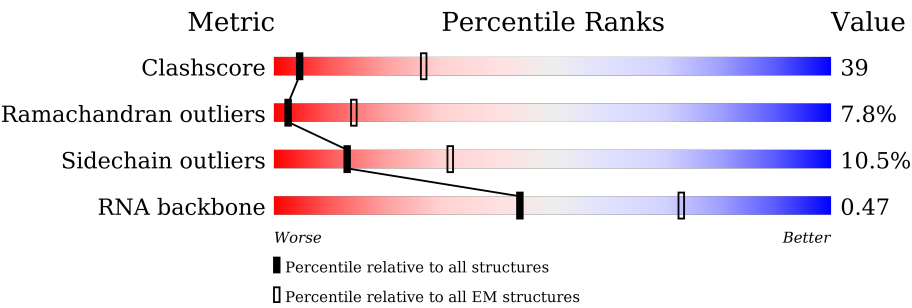
MolProbity : 4.02b-467  
Mogul : 1.7.1 (RC1), CSD as537be (2016)  
Percentile statistics : 20151230.v01 (using entries in the PDB archive December 30th 2015)  
Ideal geometry (proteins) : Engh & Huber (2001)  
Ideal geometry (DNA, RNA) : Parkinson et. al. (1996)  
Validation Pipeline (wwPDB-VP) : rb-20027939

# 1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:  
*ELECTRON MICROSCOPY*

The reported resolution of this entry is 4.00 Å.

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




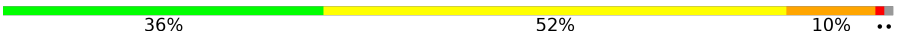
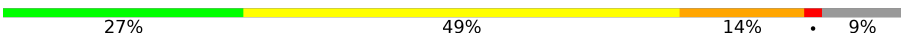


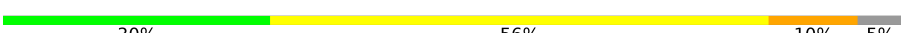
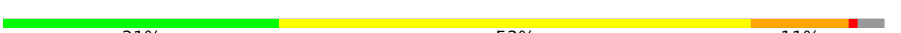




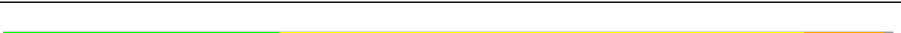









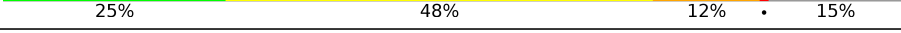



Metric	Whole archive (#Entries)	EM structures (#Entries)
Clashscore	114402	924
Ramachandran outliers	111179	726
Sidechain outliers	111093	686
RNA backbone	3027	244

The table below summarises the geometric issues observed across the polymeric chains. The red, orange, yellow and green segments on the bar indicate the fraction of residues that contain outliers for  $\geq 3$ , 2, 1 and 0 types of geometric quality criteria. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions  $\leq 5\%$

Mol	Chain	Length	Quality of chain
1	A	1798	23% 60% 16% .
2	B	3396	19% 63% 15% . .
3	C	158	22% 63% 13% .
4	D	121	18% 72% 10%
5	E	217	29% 43% . . 21%
6	F	254	24% 59% 14% . .
7	G	387	27% 62% 10% .
8	H	362	32% 51% 16% .

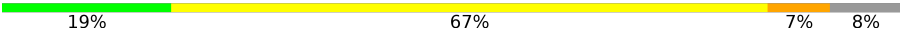
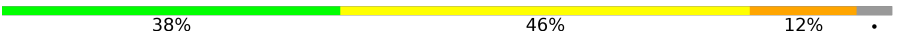
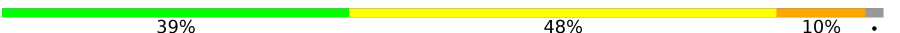


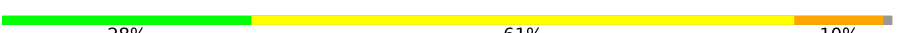
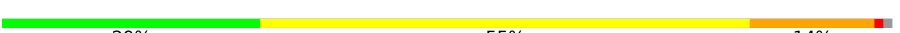




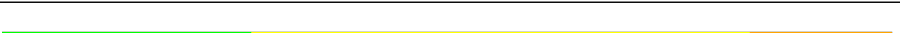





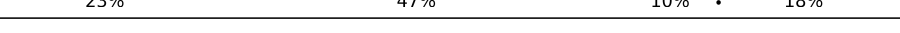
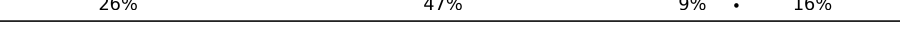



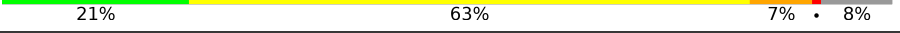


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Mol	Chain	Length	Quality of chain
9	I	297	
10	J	176	
11	K	244	
12	L	256	
13	M	191	
14	N	221	
15	O	174	
16	P	165	
17	Q	199	
18	R	138	
19	S	204	
20	T	199	
21	U	184	
22	V	186	
23	W	189	
24	X	172	
25	Y	160	
26	Z	121	
27	AA	137	
28	BA	155	
29	CA	142	
30	DA	127	
31	EA	136	
32	FA	149	
33	GA	59	

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Mol	Chain	Length	Quality of chain
34	HA	105	
35	IA	113	
36	JA	130	
37	KA	107	
38	LA	121	
39	MA	120	
40	NA	100	
41	OA	88	
42	PA	78	
43	QA	51	
44	RA	128	
45	SA	25	
46	TA	106	
47	UA	92	
48	VA	312	
49	WA	319	
50	XA	252	
51	YA	255	
52	ZA	254	
53	AB	240	
54	BB	261	
55	CB	225	
56	DB	236	
57	EB	190	
58	FB	200	

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Mol	Chain	Length	Quality of chain
59	GB	197	
60	HB	105	
61	IB	156	
62	JB	143	
63	KB	151	
64	LB	137	
65	MB	142	
66	NB	143	
67	OB	136	
68	PB	146	
69	QB	144	
70	RB	121	
71	SB	87	
72	TB	130	
73	UB	145	
74	VB	135	
75	WB	108	
76	XB	119	
77	YB	82	
78	ZB	67	
79	AC	56	
80	BC	63	
81	CC	152	
82	DC	842	
83	EC	201	

## 2 Entry composition [i](#)

There are 86 unique types of molecules in this entry. The entry contains 215222 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, 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 18S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	A	1781	Total	C	N	O	P	0	0
			37658	16811	6630	12436	1781		

- Molecule 2 is a RNA chain called 25S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	B	3309	Total	C	N	O	P	0	0
			70288	31354	12595	23030	3309		

- Molecule 3 is a RNA chain called 5.8S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
3	C	158	Total	C	N	O	P	0	0
			3354	1500	586	1110	158		

- Molecule 4 is a RNA chain called 5S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
4	D	121	Total	C	N	O	P	0	0
			2580	1152	461	846	121		

- Molecule 5 is a protein called uL1 (yeast L1).

Mol	Chain	Residues	Atoms					AltConf	Trace
5	E	171	Total	C	N	O	S	0	0
			1359	869	232	251	7		

- Molecule 6 is a protein called uL2 (yeast L2).

Mol	Chain	Residues	Atoms					AltConf	Trace
6	F	252	Total	C	N	O	S	0	0
			1918	1193	389	335	1		

- Molecule 7 is a protein called uL3 (yeast L3).

Mol	Chain	Residues	Atoms					AltConf	Trace
7	G	386	Total	C	N	O	S	0	0
			3082	1956	584	534	8		

- Molecule 8 is a protein called uL4 (yeast L4).

Mol	Chain	Residues	Atoms					AltConf	Trace
8	H	361	Total	C	N	O	S	0	0
			2750	1730	522	495	3		

- Molecule 9 is a protein called uL18 (yeast L5).

Mol	Chain	Residues	Atoms					AltConf	Trace
9	I	296	Total	C	N	O	S	0	0
			2376	1501	414	459	2		

- Molecule 10 is a protein called eL6 (yeast L6).

Mol	Chain	Residues	Atoms					AltConf	Trace
10	J	175	Total	C	N	O	S	0	0
			1401	902	251	247	1		

- Molecule 11 is a protein called uL30 (yeast L7).

Mol	Chain	Residues	Atoms					AltConf	Trace
11	K	222	Total	C	N	O	S	0	0
			1785	1151	324	309	1		

- Molecule 12 is a protein called eL8 (yeast L8).

Mol	Chain	Residues	Atoms					AltConf	Trace
12	L	233	Total	C	N	O	S	0	0
			1818	1159	326	330	3		

- Molecule 13 is a protein called uL6 (yeast L9).

Mol	Chain	Residues	Atoms					AltConf	Trace
13	M	191	Total	C	N	O	S	0	0
			1519	963	274	278	4		

- Molecule 14 is a protein called uL16 (yeast L10).

Mol	Chain	Residues	Atoms					AltConf	Trace
14	N	211	Total	C	N	O	S	0	0
			1718	1089	325	298	6		

- Molecule 15 is a protein called uL5 (yeast L11).

Mol	Chain	Residues	Atoms					AltConf	Trace
15	O	169	Total	C	N	O	S	0	0
			1354	847	253	250	4		

- Molecule 16 is a protein called uL11 (yeast L12).

Mol	Chain	Residues	Atoms					AltConf	Trace
16	P	94	Total	C	N	O	S	0	0
			723	448	138	135	2		

- Molecule 17 is a protein called eL13 (yeast L13).

Mol	Chain	Residues	Atoms				AltConf	Trace
17	Q	193	Total	C	N	O	0	0
			1543	962	315	266		

- Molecule 18 is a protein called eL14 (yeast L14).

Mol	Chain	Residues	Atoms					AltConf	Trace
18	R	136	Total	C	N	O	S	0	0
			1054	675	199	178	2		

- Molecule 19 is a protein called eL15 (yeast L15).

Mol	Chain	Residues	Atoms					AltConf	Trace
19	S	203	Total	C	N	O	S	0	0
			1721	1077	361	282	1		

- Molecule 20 is a protein called uL13 (yeast L16).

Mol	Chain	Residues	Atoms					AltConf	Trace
20	T	197	Total	C	N	O	S	0	0
			1556	1003	289	263	1		

- Molecule 21 is a protein called uL22 (yeast L17).



Mol	Chain	Residues	Atoms				AltConf	Trace
21	U	183	Total	C	N	O	0	0
			1443	896	287	260		

- Molecule 22 is a protein called eL18 (yeast L18).

Mol	Chain	Residues	Atoms					AltConf	Trace
22	V	185	Total	C	N	O	S	0	0
			1442	908	290	242	2		

- Molecule 23 is a protein called eL19 (yeast L19).

Mol	Chain	Residues	Atoms				AltConf	Trace
23	W	188	Total	C	N	O	0	0
			1522	935	326	261		

- Molecule 24 is a protein called eL20 (yeast L20).

Mol	Chain	Residues	Atoms					AltConf	Trace
24	X	172	Total	C	N	O	S	0	0
			1446	930	267	245	4		

- Molecule 25 is a protein called eL21 (yeast L21).

Mol	Chain	Residues	Atoms					AltConf	Trace
25	Y	159	Total	C	N	O	S	0	0
			1277	805	246	222	4		

- Molecule 26 is a protein called eL22 (yeast L22).

Mol	Chain	Residues	Atoms				AltConf	Trace
26	Z	100	Total	C	N	O	0	0
			796	516	131	149		

- Molecule 27 is a protein called uL14 (yeast L23).

Mol	Chain	Residues	Atoms					AltConf	Trace
27	AA	136	Total	C	N	O	S	0	0
			1004	628	189	180	7		

- Molecule 28 is a protein called eL24 (yeast L24).

Mol	Chain	Residues	Atoms					AltConf	Trace
28	BA	61	Total	C	N	O	S	0	0
			509	328	100	80	1		

- Molecule 29 is a protein called uL23 (yeast L25).

Mol	Chain	Residues	Atoms					AltConf	Trace
29	CA	121	Total	C	N	O	S	0	0
			969	623	170	174	2		

- Molecule 30 is a protein called uL24 (yeast L26).

Mol	Chain	Residues	Atoms					AltConf	Trace
30	DA	126	Total	C	N	O		0	0
			994	625	192	177			

- Molecule 31 is a protein called eL27 (yeast L27).

Mol	Chain	Residues	Atoms					AltConf	Trace
31	EA	135	Total	C	N	O		0	0
			1093	710	202	181			

- Molecule 32 is a protein called uL15 (yeast L28).

Mol	Chain	Residues	Atoms					AltConf	Trace
32	FA	148	Total	C	N	O	S	0	0
			1174	749	231	191	3		

- Molecule 33 is a protein called eL29 (yeast L29).

Mol	Chain	Residues	Atoms					AltConf	Trace
33	GA	58	Total	C	N	O		0	0
			463	289	100	74			

- Molecule 34 is a protein called eL30 (yeast L30).

Mol	Chain	Residues	Atoms					AltConf	Trace
34	HA	97	Total	C	N	O	S	0	0
			743	479	124	139	1		

- Molecule 35 is a protein called eL31 (yeast L31).

Mol	Chain	Residues	Atoms					AltConf	Trace
35	IA	109	Total	C	N	O	S	0	0
			890	565	168	156	1		

- Molecule 36 is a protein called eL32 (yeast L32).

Mol	Chain	Residues	Atoms					AltConf	Trace
36	JA	127	Total	C	N	O	S	0	0
			1020	647	205	167	1		

- Molecule 37 is a protein called eL33 (yeast L33).

Mol	Chain	Residues	Atoms					AltConf	Trace
37	KA	106	Total	C	N	O	S	0	0
			851	540	165	145	1		

- Molecule 38 is a protein called eL34 (yeast L34).

Mol	Chain	Residues	Atoms					AltConf	Trace
38	LA	112	Total	C	N	O	S	0	0
			881	546	179	152	4		

- Molecule 39 is a protein called uL29 (yeast L35).

Mol	Chain	Residues	Atoms					AltConf	Trace
39	MA	119	Total	C	N	O	S	0	0
			970	615	186	168	1		

- Molecule 40 is a protein called eL36 (yeast L36).

Mol	Chain	Residues	Atoms					AltConf	Trace
40	NA	99	Total	C	N	O	S	0	0
			772	481	156	133	2		

- Molecule 41 is a protein called eL37 (yeast L37).

Mol	Chain	Residues	Atoms					AltConf	Trace
41	OA	87	Total	C	N	O	S	0	0
			682	414	148	115	5		

- Molecule 42 is a protein called eL38 (yeast L38).

Mol	Chain	Residues	Atoms				AltConf	Trace
42	PA	77	Total	C	N	O	0	0
			613	391	115	107		

- Molecule 43 is a protein called eL39 (yeast L39).

Mol	Chain	Residues	Atoms					AltConf	Trace
43	QA	50	Total	C	N	O	S	0	0
			437	272	97	66	2		

- Molecule 44 is a protein called eL40 (yeast L40).

Mol	Chain	Residues	Atoms					AltConf	Trace
44	RA	52	Total	C	N	O	S	0	0
			418	259	86	68	5		

- Molecule 45 is a protein called eL41 (yeast L41).

Mol	Chain	Residues	Atoms					AltConf	Trace
45	SA	25	Total	C	N	O	S	0	0
			234	142	63	28	1		

- Molecule 46 is a protein called eL42 (yeast L42).

Mol	Chain	Residues	Atoms					AltConf	Trace
46	TA	105	Total	C	N	O	S	0	0
			848	534	170	139	5		

- Molecule 47 is a protein called eL43 (yeast L43).

Mol	Chain	Residues	Atoms					AltConf	Trace
47	UA	91	Total	C	N	O	S	0	0
			695	429	138	122	6		

- Molecule 48 is a protein called uL10 (yeast P0).

Mol	Chain	Residues	Atoms					AltConf	Trace
48	VA	189	Total	C	N	O	S	0	0
			1473	942	257	270	4		

- Molecule 49 is a protein called RACK1 (yeast Asc1).

Mol	Chain	Residues	Atoms					AltConf	Trace
49	WA	318	Total	C	N	O	S	0	0
			2445	1546	419	472	8		

- Molecule 50 is a protein called uS2 (yeast S0).

Mol	Chain	Residues	Atoms					AltConf	Trace
50	XA	206	Total	C	N	O	S	0	0
			1612	1034	285	291	2		

- Molecule 51 is a protein called eS1 (yeast S1).

Mol	Chain	Residues	Atoms					AltConf	Trace
51	YA	214	Total	C	N	O	S	0	0
			1709	1084	310	311	4		

- Molecule 52 is a protein called uS5 (yeast S2).

Mol	Chain	Residues	Atoms					AltConf	Trace
52	ZA	217	Total	C	N	O	S	0	0
			1635	1047	289	297	2		

- Molecule 53 is a protein called uS3 (yeast S3).

Mol	Chain	Residues	Atoms					AltConf	Trace
53	AB	223	Total	C	N	O	S	0	0
			1734	1101	313	314	6		

- Molecule 54 is a protein called eS4 (yeast S4).

Mol	Chain	Residues	Atoms					AltConf	Trace
54	BB	260	Total	C	N	O	S	0	0
			2069	1316	389	361	3		

- Molecule 55 is a protein called uS7 (yeast S5).

Mol	Chain	Residues	Atoms					AltConf	Trace
55	CB	206	Total	C	N	O	S	0	0
			1610	1007	300	300	3		

- Molecule 56 is a protein called eS6 (yeast S6).

Mol	Chain	Residues	Atoms					AltConf	Trace
56	DB	226	Total	C	N	O	S	0	0
			1820	1142	350	325	3		

- Molecule 57 is a protein called eS7 (yeast S7).

Mol	Chain	Residues	Atoms					AltConf	Trace
57	EB	184	Total	C	N	O	S	0	0
			1481	951	265	265			

- Molecule 58 is a protein called eS8 (yeast S8).

Mol	Chain	Residues	Atoms					AltConf	Trace
58	FB	188	Total	C	N	O	S	0	0
			1490	925	298	265	2		

- Molecule 59 is a protein called uS4 (yeast S9).

Mol	Chain	Residues	Atoms					AltConf	Trace
59	GB	185	Total	C	N	O	S	0	0
			1494	943	289	261	1		

- Molecule 60 is a protein called eS10 (yeast S10).

Mol	Chain	Residues	Atoms					AltConf	Trace
60	HB	96	Total	C	N	O	S	0	0
			817	529	133	153	2		

- Molecule 61 is a protein called uS17 (yeast S11).

Mol	Chain	Residues	Atoms					AltConf	Trace
61	IB	155	Total	C	N	O	S	0	0
			1245	798	235	209	3		

- Molecule 62 is a protein called eS12 (yeast S12).

Mol	Chain	Residues	Atoms					AltConf	Trace
62	JB	124	Total	C	N	O	S	0	0
			496	248	124	124			

- Molecule 63 is a protein called uS15 (yeast S13).

Mol	Chain	Residues	Atoms					AltConf	Trace
63	KB	150	Total	C	N	O	S	0	0
			1193	759	224	208	2		

- Molecule 64 is a protein called uS11 (yeast S14).

Mol	Chain	Residues	Atoms					AltConf	Trace
64	LB	127	Total	C	N	O	S	0	0
			942	578	186	175	3		

- Molecule 65 is a protein called uS19 (yeast S15).

Mol	Chain	Residues	Atoms					AltConf	Trace
65	MB	122	Total	C	N	O	S	0	0
			975	622	182	164	7		

- Molecule 66 is a protein called uS9 (yeast S16).

Mol	Chain	Residues	Atoms				AltConf	Trace
66	NB	141	Total	C	N	O	0	0
			1106	708	203	195		

- Molecule 67 is a protein called eS17 (yeast S17).

Mol	Chain	Residues	Atoms					AltConf	Trace
67	OB	117	Total	C	N	O	S	0	0
			836	515	166	153	2		

- Molecule 68 is a protein called uS13 (yeast S18).

Mol	Chain	Residues	Atoms					AltConf	Trace
68	PB	145	Total	C	N	O	S	0	0
			1193	743	237	211	2		

- Molecule 69 is a protein called eS19 (yeast S19).

Mol	Chain	Residues	Atoms					AltConf	Trace
69	QB	143	Total	C	N	O	S	0	0
			1113	694	208	209	2		

- Molecule 70 is a protein called uS10 (yeast S20).

Mol	Chain	Residues	Atoms					AltConf	Trace
70	RB	107	Total	C	N	O	S	0	0
			856	539	156	160	1		

- Molecule 71 is a protein called eS21 (yeast S21).

Mol	Chain	Residues	Atoms					AltConf	Trace
71	SB	87	Total	C	N	O	S	0	0
			685	420	125	138	2		

- Molecule 72 is a protein called uS8 (yeast S22).

Mol	Chain	Residues	Atoms					AltConf	Trace
72	TB	129	Total	C	N	O	S	0	0
			1022	650	188	181	3		

- Molecule 73 is a protein called uS12 (yeast S23).

Mol	Chain	Residues	Atoms					AltConf	Trace
73	UB	144	Total	C	N	O	S	0	0
			1122	708	220	192	2		

- Molecule 74 is a protein called eS24 (yeast S24).

Mol	Chain	Residues	Atoms				AltConf	Trace
74	VB	134	Total	C	N	O	0	0
			1074	676	208	190		

- Molecule 75 is a protein called eS25 (yeast S25).

Mol	Chain	Residues	Atoms				AltConf	Trace
75	WB	70	Total	C	N	O	0	0
			563	360	104	99		

- Molecule 76 is a protein called eS26 (yeast S26).

Mol	Chain	Residues	Atoms					AltConf	Trace
76	XB	97	Total	C	N	O	S	0	0
			769	475	160	129	5		

- Molecule 77 is a protein called eS27 (yeast S27).



Mol	Chain	Residues	Atoms					AltConf	Trace
77	YB	81	Total	C	N	O	S	0	0
			611	382	110	114	5		

- Molecule 78 is a protein called eS28 (yeast S28).

Mol	Chain	Residues	Atoms					AltConf	Trace
78	ZB	63	Total	C	N	O	S	0	0
			498	306	99	92	1		

- Molecule 79 is a protein called uS14 (yeast S29).

Mol	Chain	Residues	Atoms					AltConf	Trace
79	AC	53	Total	C	N	O	S	0	0
			444	275	92	73	4		

- Molecule 80 is a protein called eS30 (yeast S30).

Mol	Chain	Residues	Atoms					AltConf	Trace
80	BC	60	Total	C	N	O	S	0	0
			475	299	98	77	1		

- Molecule 81 is a protein called eS31 (yeast S31).

Mol	Chain	Residues	Atoms				AltConf	Trace
81	CC	71	Total	C	N	O	0	0
			284	142	71	71		

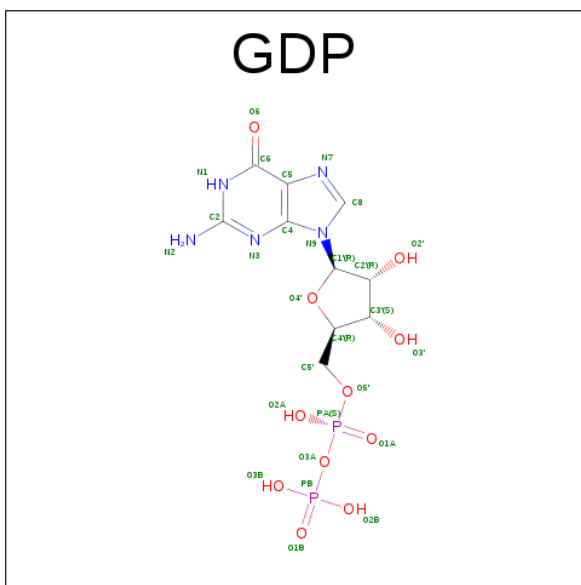
- Molecule 82 is a protein called yeast eEF2.

Mol	Chain	Residues	Atoms					AltConf	Trace
82	DC	824	Total	C	N	O	S	0	0
			6419	4085	1096	1208	30		

- Molecule 83 is a RNA chain called IRES.

Mol	Chain	Residues	Atoms					AltConf	Trace
83	EC	198	Total	C	N	O	P	0	0
			4105	1826	718	1363	198		

- Molecule 84 is GUANOSINE-5'-DIPHOSPHATE (three-letter code: GDP) (formula: C<sub>10</sub>H<sub>15</sub>N<sub>5</sub>O<sub>11</sub>P<sub>2</sub>).

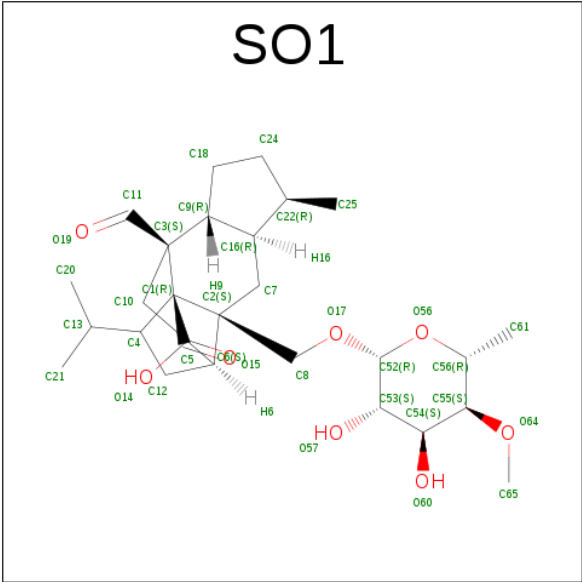


Mol	Chain	Residues	Atoms					AltConf
84	DC	1	Total	C	N	O	P	0
			28	10	5	11	2	

- Molecule 85 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms	AltConf
85	DC	1	Total Mg 1 1	0

- Molecule 86 is [1R-(1.ALPHA.,3A.BETA.,4.BETA.,4A.BETA.,7.BETA.,7A.ALPHA.,8A.BETA.)]8A-[(6-DEOXY-4-O-METHYL-BETA-D-ALTROPYRANOSYLOXY)METHYL]-4-FORMYL-4,4A,5,6,7,7A,8,8A-OCTAHYDRO-7-METHYL-3-(1-METHYLETHYL)-1,4-METHANO-S-INDACENE-3A(1H)-CARBOXYLIC ACID (three-letter code: SO1) (formula: C<sub>27</sub>H<sub>42</sub>O<sub>8</sub>).

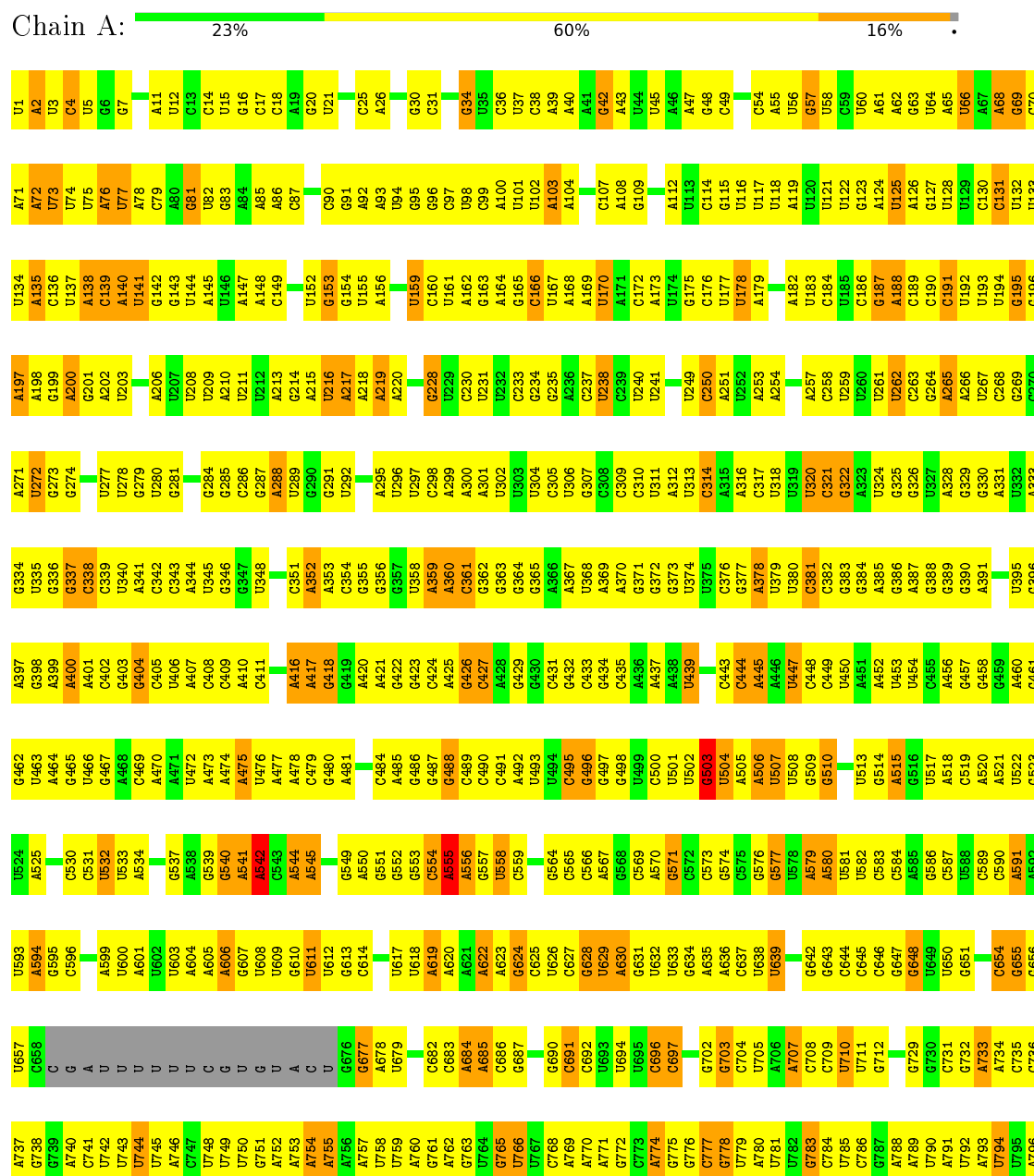


Mol	Chain	Residues	Atoms			AltConf
86	DC	1	Total	C	O	0
			35	27	8	

### 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. 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. 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: 18S ribosomal RNA



G1788	G1726	G1652	A1586	U1520	C1457	C1393	A1329	G1255	A1193	A1124	G1064	A995	U928	A863	G797
G1789	G1727	C1653	A1587	G1521	G1468	G1394	G1330	A1286	A1194	A1125	A1065	U996	A929	U864	C798
A1790	A1728	G1654	C1469	U1522	C1469	U1398	C1331	U1287	A1196	G1126	C1066	G997	A930	A865	A799
A1791	C1729	A1655	G1588	G1523	A1460	C1332	C1332	U1259	A1197	G1127	C1067	U998	C931	G866	U800
G1792	A1730	U1656	G1590	A1524	C1462	C1399	U1334	U1259	C1197	C1068	C1068	U999	U932	G801	G802
G1793	A1731	U1657	C1591	A1525	G1463	A1400	U1335	U1259	G1198	U1128	A1069	C1000	A933	G868	G803
A1794	A1732	G1658	A1592	A1526	C1463	A1401	U1335	U1259	G1199	U1129	C1070	A1001	C934	A869	A803
U1795	C1733	A1659	A1593	C1527	G1464	G1402	U1338	U1266	G1200	A1133	U1071	G1002	U935	C870	A804
C1796	U1734	A1660	A1594	U1527	C1465	C1403	C1338	G1267	G1201	C1134	C1072	A1003	U936	C871	U805
A1797	G1735	U1661	U1595	U1530	G1466	U1407	C1339	U1268	A1202	U1135	G1073	A1004	C937	G872	A806
U1798	G1736	G1662	C1596	G1532	C1467	G1408	U1340	U1269	A1203	U1136	G1074	A1005	U938	U873	A807
C1799	G1737	U1663	A1597	U1533	U1468	G1409	C1341	G1270	A1204	A1139	C1075	U1076	A939	C874	U808
U1799	U1738	C1664	A1598	G1534	C1470	A1410	U1343	G1271	C1205	G1140	C1077	U1077	A940	C875	U809
	C1799	U1685	U1599	U1535	A1471	A1411	A1344	U1272	U1206	G1141	C1078	U1078	A941	C876	U810
	A1740	G1601	C1602	U1536	C1472	G1412	A1345	G1273	C1207	G1142	C1079	U1079	G942	C877	U811
U1741	U1742	U1603	U1604	C1537	U1473	U1413	A1346	A1274	A1208	A1143	C1080	G943	U942	C878	A814
		U1604	U1605	U1538	G1474	U1414	U1347	U1275	C1209	A1143	U1080	G944	U945	C879	G815
		U1605	U1606	G1539	A1475	U1415	A1348	U1276	C1210	A1144	U1081	U1015	U946	C880	G816
		C1606	U1607	G1540	C1476	G1416	G1349	U1277	A1211	U1145	C1082	U1016	U946	A881	A817
		G1607	G1541	U1544	C1477	A1417	U1350	G1278	G1213	C1148	U1083	U1017	C950	C818	C819
		U1608	U1542	G1545	G1478	G1418	G1351	C1279	U1214	G1149	G1085	A1020	A951	C883	C818
		U1609	A1543	U1546	A1481	G1419	G1352	G1280	U1214	G1150	A1086	A1021	A952	A884	U820
		A1611	U1545	U1547	C1482	C1420	U1353	U1281	A1217	A1151	U1087	C1022	G953	G885	U821
		U1612	U1546	U1548	C1483	A1421	G1354	U1283	G1218	A1152	A1088	A1023	G954	A887	U822
		U1613	U1549	U1550	C1484	A1422	C1355	U1287	A1219	G1153	U1089	U1024	A955	U888	G823
		C1614	U1551	U1552	C1485	U1423	U1356	U1287	C1222	C1158	C1090	A1025	C956	U889	U825
		U1615	U1553	U1554	C1486	U1424	A1357	U1288	U1222	C1159	G1085	A1026	C957	U826	U826
		G1616	U1555	U1556	C1487	U1425	G1358	U1289	A1223	G1160	A1092	A1027	U958	A891	C827
		U1617	U1557	U1558	C1488	U1426	C1359	U1290	A1224	A1161	A1093	A1028	U959	U828	U828
		C1618	U1559	U1560	C1489	U1427	U1360	U1291	U1225	C1162	U1095	U1029	U960	A833	A833
		U1619	U1561	U1562	C1490	U1428	U1361	U1292	A1226	C1163	U1096	A1030	U961	U830	U830
		U1620	U1563	U1564	C1491	U1429	U1362	U1293	A1227	A1164	U1097	C1032	C962	U831	U831
		U1621	U1565	U1566	C1492	U1430	U1363	U1294	G1228	G1165	U1098	C1033	U965	U832	U833
		C1625	U1567	U1568	C1493	U1431	C1365	U1298	U1231	A1166	U1099	G1034	A966	G834	G834
		U1626	U1569	U1569	C1494	U1432	U1366	U1299	U1232	G1170	G1100	G1035	A967	A900	U835
		U1627	U1570	U1570	C1495	U1433	U1367	U1300	U1232	G1171	G1101	A1036	U968	G901	U835
		U1628	U1571	U1571	C1496	U1434	U1368	U1304	G1233	A1172	U1103	A1039	U969	G902	U839
		U1629	U1572	U1572	U1497	U1435	U1369	G1304	A1234	G1173	U1104	A1040	C969	U903	U840
		U1630	U1573	U1573	C1498	U1436	U1370	U1305	C1235	C1174	U1105	G1041	A970	G904	U841
		A1631	U1574	U1574	C1499	U1437	A1371	C1306	A1236	C1175	U1106	G1042	A971	A905	C842
		C1632	U1575	U1575	C1500	U1438	U1372	C1307	G1237	G1176	U1107	A1043	G972	A906	U843
		A1633	U1576	U1576	C1501	U1440	C1373	U1309	A1238	G1177	G1108	U1043	U975	A907	U844
		C1634	U1577	U1577	C1502	U1441	C1374	U1310	U1239	C1178	G1109	G1046	C975	U911	G845
		U1635	U1578	U1578	U1503	U1442	A1375	U1314	U1240	G1179	G1110	G1047	U980	U912	G846
		C1636	U1579	U1579	G1504	U1443	C1376	U1315	G1241	G1180	G1111	G1048	U981	G913	A850
		U1637	U1580	U1580	U1505	U1444	U1377	U1316	A1242	U1181	G1112	U1051	U982	G914	U851
		A1638	U1581	U1581	C1506	U1445	U1378	G1316	G1243	U1182	G1113	U1052	A983	A915	C852
		C1639	U1582	U1582	U1510	U1446	C1379	C1317	G1245	A1183	G1114	U1053	U986	U916	G853
		U1640	U1583	U1583	U1511	C1447	U1381	U1380	C1246	A1184	U1115	G1053	G986	U917	U854
		C1641	U1584	U1584	U1512	U1448	A1382	U1321	U1247	U1185	A1116	U1057	U987	U918	U855
		U1642	U1585	U1585	G1513	U1449	G1383	A1322	C1248	U1186	U1117	U1058	A988	A919	A856
		C1644	U1586	U1586	U1514	U1450	A1384	U1324	U1249	U1187	G1118	U1059	U989	U857	U857
		U1645	U1587	U1587	U1515	U1451	U1385	U1325	U1250	G1188	G1119	U1060	C990	A859	G858
		U1646	U1588	U1588	U1516	U1452	A1386	U1326	U1251	G1189	U1120	A1061	G991	A924	A859
		C1647	U1589	U1589	U1517	U1453	C1389	U1327	U1252	A1190	G1121	A1062	A992	G925	U860
		U1648	U1590	U1590	U1518	U1454	U1390	C1326	U1253	U1191	G1122	A1063	A993	U861	U861
		U1649	U1591	U1591	U1519	U1455	U1392	U1328	U1254	C1192	C1123	U1063	G994	C927	A862

• Molecule 2: 25S ribosomal RNA

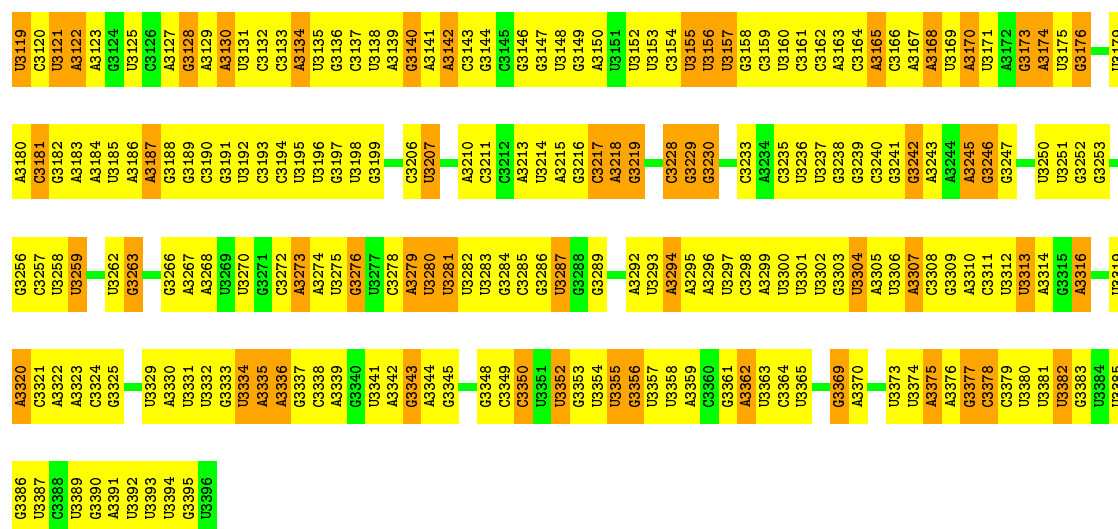
Chain B:  19% 63% 15% ..

U860	U861	U862	G963	G964	U965	U966	U967	G968	G969	U970	G971	U972	G973	G974	G975	U976	G977	G978	U979	U980	U981	G982	U983	G984	U985	U986	U987	U988	U989	U990	G991	U992	G993	G994	U995	U996	U997	U998	G999	G1000	A1001	A1002	A1003	U1004	U1007	U1008	A1009	G1010	A1011	G1012	U1017	G1018	G1019	G1020	U1024	A1025																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
U898	U899	G900	G901	G902	U903	U904	U905	A906	G907	G908	U909	G910	G911	G912	G913	A914	G915	U916	U917	G918	U919	U920	C921	A925	A926	U927	U928	U929	U930	U931	U932	A933	G934	U935	A936	U937	U938	U939	U940	U941	U942	U943	C944	U945	U946	U947	U948	U949	U950	U951	U952	U953	U954	U955	U956	C957	U958	U959	U960	U961																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
A836	A837	G838	G839	G840	G841	G842	A843	U844	A845	U846	A847	A848	C849	U852	G853	G854	G855	G856	G857	U858	U859	U860	C861	U862	G863	G864	U865	U866	U867	U868	U869	U870	U871	U872	U873	U874	U875	U876	U877	U878	U879	A880	U881	U882	U883	U884	U885	U886	U887	U888	U889	U890	U891	U892	U893	U894	U895	U896	U897	U898	U899	U900	U901																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
U776	U777	U778	U779	U780	U781	U782	U783	U784	U785	U786	U787	U788	U789	U790	U791	U792	U793	U794	U795	U796	U797	U798	U799	U800	A801	C802	C803	C804	G805	A806	A807	U808	U809	U810	U811	U812	U813	U814	U815	U816	U817	U818	U819	A820	U821	U822	U823	U824	U825	U826	U827	U828	U829	U830	U831	U832	U833	U834	U835	U836	U837	U838	U839	U840																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
A836	A837	G838	G839	G840	G841	G842	A843	U844	A845	U846	A847	A848	C849	U852	G853	G854	G855	G856	G857	U858	U859	U860	C861	U862	G863	G864	U865	U866	U867	U868	U869	U870	U871	U872	U873	U874	U875	U876	U877	U878	U879	A880	U881	U882	U883	U884	U885	U886	U887	U888	U889	U890	U891	U892	U893	U894	U895	U896	U897	U898	U899	U900	U901	U902	U903	U904	U905	U906	U907	U908	U909	U910																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
U709	A710	A711	G712	G713	G714	G715	A716	G717	G718	U719	U720	U721	U722	U723	U724	U725	U726	U727	U728	U729	U730	U731	U732	U733	U734	U735	U736	U737	U738	U739	U740	U741	U742	U743	U744	U745	U746	U747	U748	U749	U750	U751	U752	U753	U754	U755	U756	U757	U758	U759	U760	U761	U762	U763	U764	U765	U766	U767	U768	U769	U770	U771	U772	U773	U774	U775	U776	U777	U778	U779	U780																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
C648	A649	C650	G651	G652	C653	C654	C655	A656	A657	G658	G659	A660	G661	U662	C663	U664	A665	A666	C667	G668	U669	C670	U671	U672	U673	U674	U675	U676	U677	U678	U679	U680	U681	U682	U683	U684	U685	U686	U687	U688	U689	U690	U691	U692	U693	U694	U695	U696	U697	U698	U699	U700	U701	U702	U703	U704	U705	U706	U707	U708	U709	U710	U711	U712	U713	U714	U715	U716	U717	U718	U719	U720	U721	U722	U723	U724	U725	U726	U727	U728	U729	U730	U731	U732	U733	U734	U735	U736	U737	U738	U739	U740	U741	U742	U743	U744	U745	U746	U747	U748	U749	U750	U751	U752	U753	U754	U755	U756	U757	U758	U759	U760	U761	U762	U763	U764	U765	U766	U767	U768	U769	U770	U771	U772	U773	U774	U775	U776	U777	U778	U779	U780	U781	U782	U783	U784	U785	U786	U787	U788	U789	U790	U791	U792	U793	U794	U795	U796	U797	U798	U799	U800	U801	U802	U803	U804	U805	U806	U807	U808	U809	U810	U811	U812	U813	U814	U815	U816	U817	U818	U819	U820	U821	U822	U823	U824	U825	U826	U827	U828	U829	U830	U831	U832	U833	U834	U835	U836	U837	U838	U839	U840	U841	U842	U843	U844	U845	U846	U847	U848	U849	U850	U851	U852	U853	U854	U855	U856	U857	U858	U859	U860	U861	U862	U863	U864	U865	U866	U867	U868	U869	U870	U871	U872	U873	U874	U875	U876	U877	U878	U879	U880	U881	U882	U883	U884	U885	U886	U887	U888	U889	U890	U891	U892	U893	U894	U895	U896	U897	U898	U899	U900	U901	U902	U903	U904	U905	U906	U907	U908	U909	U910	U911	U912	U913	U914	U915	U916	U917	U918	U919	U920	U921	U922	U923	U924	U925	U926	U927	U928	U929	U930	U931	U932	U933	U934	U935	U936	U937	U938	U939	U940	U941	U942	U943	U944	U945	U946	U947	U948	U949	U950	U951	U952	U953	U954	U955	U956	U957	U958	U959	U960	U961	U962	U963	U964	U965	U966	U967	U968	U969	U970	U971	U972	U973	U974	U975	U976	U977	U978	U979	U980	U981	U982	U983	U984	U985	U986	U987	U988	U989	U990	U991	U992	U993	U994	U995	U996	U997	U998	U999	G1000	A1001	A1002	A1003	U1004	U1007	U1008	A1009	G1010	A1011	G1012	U1017	G1018	G1019	G1020	U1024	A1025																																																																																																																																																																																																					
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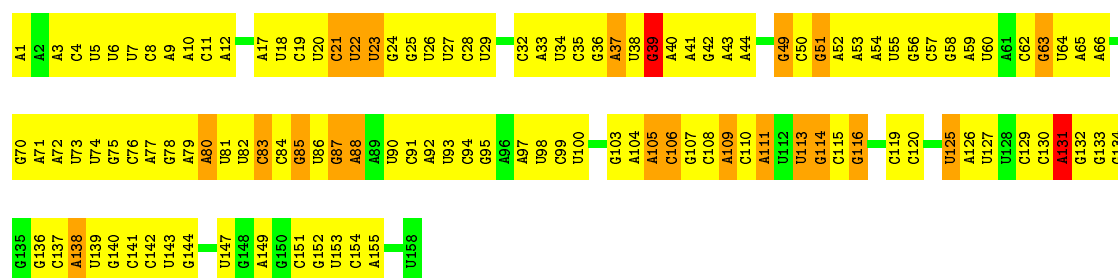
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C3067	C3004	U2937	U2873	A2808	A2738	G2669	G2605		C2475	G2412	C2346	U2286	U2217	A2149	A2086
U3068	A3005	G2938	G2874	C2809	A2739	G2670	G2606		C2476	A2413	U2347	U2287	U2218		C2087
G3069	A3006	U2939	U2875	C2810	A2740	G2671	G2607		C2477	G2414	U2348	C2288	G2219		A2088
A3070	U3007	A2940	C2876	U2812	C2741		G2608		C2478	C2415	U2349	U2289	A2219	A	U
U3071	A3008		G2877	C2813	C2742		A2609		C2479		U2350	C2290		U	
C3072	G3009		G2878	A2813	A2743		G2610		A2480	G2418	C2350	A2222		G2155	
A3073	U3010		C2879	G2814	A2744		U2611		G2481		U2351	A2223		G2156	
G3074	A3011		G2880	U2815	G2745		G2612		U2482		A2352	A2224		G2157	A2093
G3075	A3012		U2881	G2816	A2746		U2613		C2483	C2420	C2353	U2225		U2158	C2094
C3076	U3013		U2882	G2817	A2747		G2614		A2484	U2421	C2354	U2226		U2159	G2095
A3077	U3014		U2883	U2818	A2748		G2615		A2485	U2422	G2355	C2227		G2160	A2096
U3078	G3015		C2884	U2819			C2616		A2486	U2423	A2356	A2228		G2161	
U3079	A3016		G2885	A2820	G2753		U2617		U2487	A2424	C2357	A2229		U2162	C2101
G3080	A3017		U2886	C2821	G2754		G2618		A2488	U2425	A2358	U2297		C2163	U2102
C3081	C3018		A2887	U2822	C2755				C2489	U2426	C2359	U2298		A2164	U2103
G3082	U3019		U2888	G2823					C2490	U2427	C2360	U2299		G2165	A2104
G3083	U3020		C2889						A2491	U2428	A2361	U2301		A2166	G2105
C3084	A3021		A2890	U2826	U2759		G2622		C2492	A2430	C2362	G2302		A2167	A2106
G3085	G3022		U2891	U2827	G2760		G2623		U2493	C2431	A2363	A2303		G2168	A2107
A3086	U3023		A2892	C2828	G2761		C2624		U2494	A2432	G2364	A2304		A2169	C2108
A3087	A3024		C2893		A2762		C2625		C2495	U2433	C2365	G2305			U2109
G3088			C2894	U2831	G2763		A2627		C2496	U2434	C2366	A2306		A2172	G2110
C3089			G2895	C2832	C2764		A2628			U2435	A2367	G2307		G2173	G2111
U3090	G3028		A2896	A2833	U2765		U2631		A2500	U2436	A2368	C2308		G2174	
A3091	A3029		C2897	U2837	U2766		G2632		U2501	G2437	C2369	A2309			
C3092	G3030		G2898	U2838	U2767		U2633		G2502	U2438	C2370	U2310			
A3094			C2899	A2839	A2768		U2634		A2503	A2439	G2371	A2311		G2177	A2113
U3095			A2900	G2840	G2770		U2635		G2504	G2440	A2372	A2312		C2179	G2116
C3096			G2901	C2841	U2771		A2637		U2505		A2373	G2313		G2180	A2117
G3097			A2902	U2842	C2772		C2638			A2443	C2374	U2314		C2181	C2118
G3098			A2903	U2843	C2773		G2639		U2510	C2444	G2375	G2315		A2182	A2119
C3099			U2904	A2844	C2774		A2640		A2511	A2445	G2376	G2316		A2183	A2120
U3100	A3040		G2905	C2845	U2775		U2641		C2512		G2377	A2317		U2184	G2121
G3101	U3041		U2906	A2846	C2776		A2642		G2448		C2378	U2318		G2185	G2122
G3102	U3042		G2907	U2847	G2777		C2643		C2449		U2379	U2319		U2186	G2123
A3103	C3043		U2908	U2848	G2778		G2644		C2450		U2380	A2320		G2187	G2124
U3104	G3044		U2909	G2849	A2779		U2645		G2451		G2381	G2261		A2188	A2125
G3105	A3045		A2910	U2850	C2780		G2646		U2452		C2382	A2262			A2126
A3106	A3046		U2911	A2851	U2781		A2647		U2453		C2383	C2263		C2192	U2127
U3107	U3047		G2912	C2852	A2715		G2648		G2454		U2388	C2264		U2193	C2128
G3108	A3048		C2913	U2853	U2716		U2649		U2455		C2389	U2265		G2194	U2129
G3109	U3050		G2914	A2854	A2717		U2650		A2456		A2390	U2266		C2195	G2130
C3110	U3051		U2915	U2855	U2718		G2651		G2457		G2391	C2267		C2196	A2131
U3111	G3052		U2916	U2856	U2719		U2652		U2458		U2328	U2268		C2197	C2132
A3112	C3053		U2917	A2857	C2788		C2653		A2459		C2329	U2269			U2200
G3113	U3054		G2918	U2858	U2789		U2654		U2460		G2392	C2270		G2201	G2134
A3114	U3055		U2919	U2859	U2790		U2655		G2461		C2393	C2330		U2135	U2135
C3115	U3056		U2920	U2860	U2791		A2656		A2462		G2394	C2331		G2202	C2136
G3116	U3057		C2921	U2861	G2792		U2657		G2463		G2395	A2332		G2273	U2137
C3117			U2922	G2862	C2793		U2658		U2464		A2397	U2334		U2275	A2138
C3118			A2994	U2863	A2799		G2660		G2465			G2335		U2205	U2139





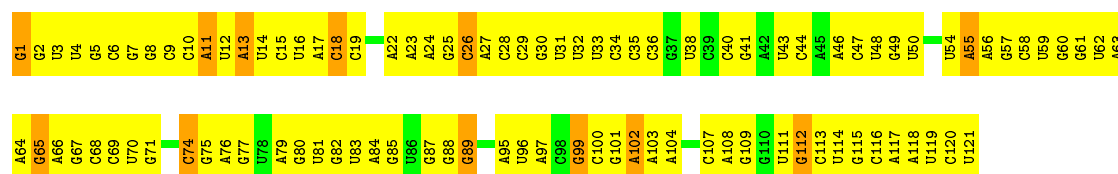
• Molecule 3: 5.8S ribosomal RNA

Chain C: 22% 63% 13%



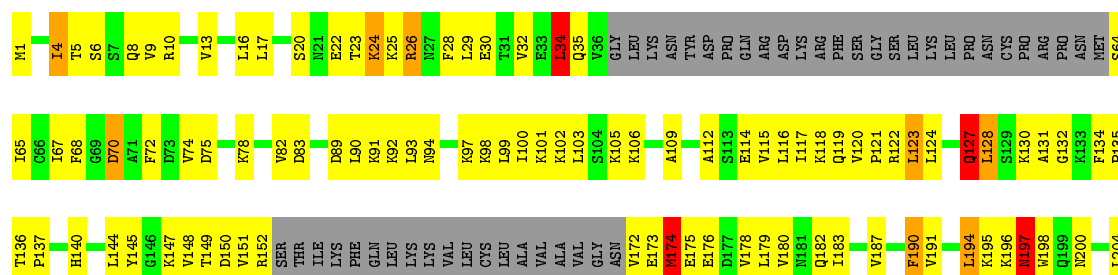
• Molecule 4: 5S ribosomal RNA

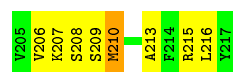
Chain D: 18% 72% 10%



• Molecule 5: uL1 (yeast L1)

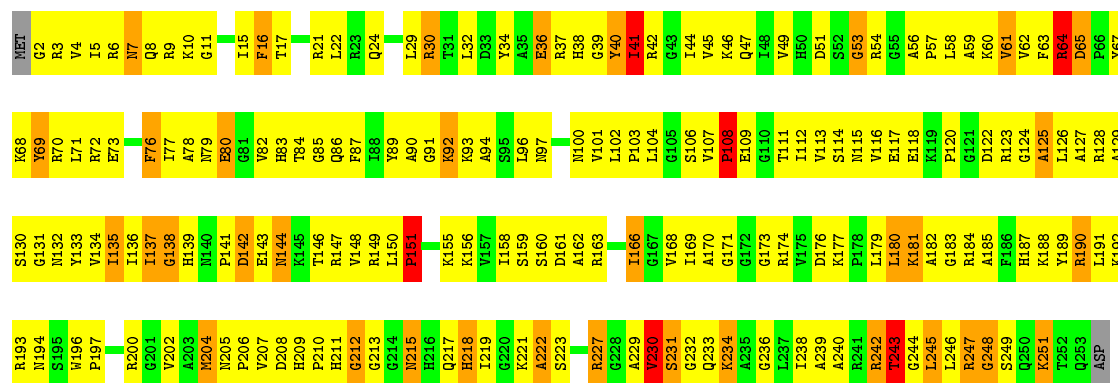
Chain E: 29% 43% 21%





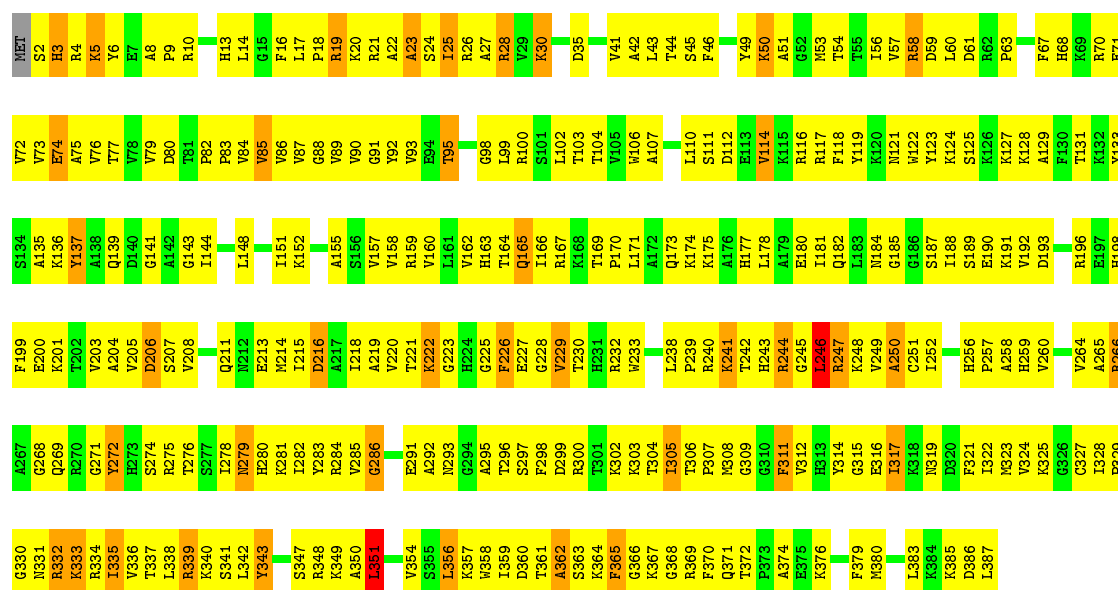
• Molecule 6: uL2 (yeast L2)

Chain F: 24% 59% 14% ..



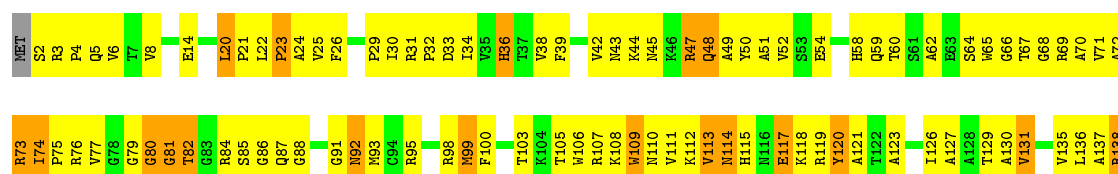
• Molecule 7: uL3 (yeast L3)

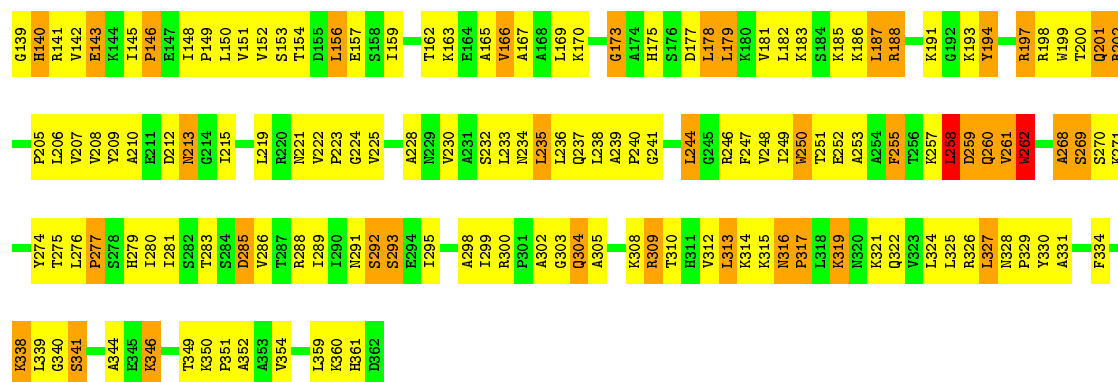
Chain G: 27% 62% 10% ..



• Molecule 8: uL4 (yeast L4)

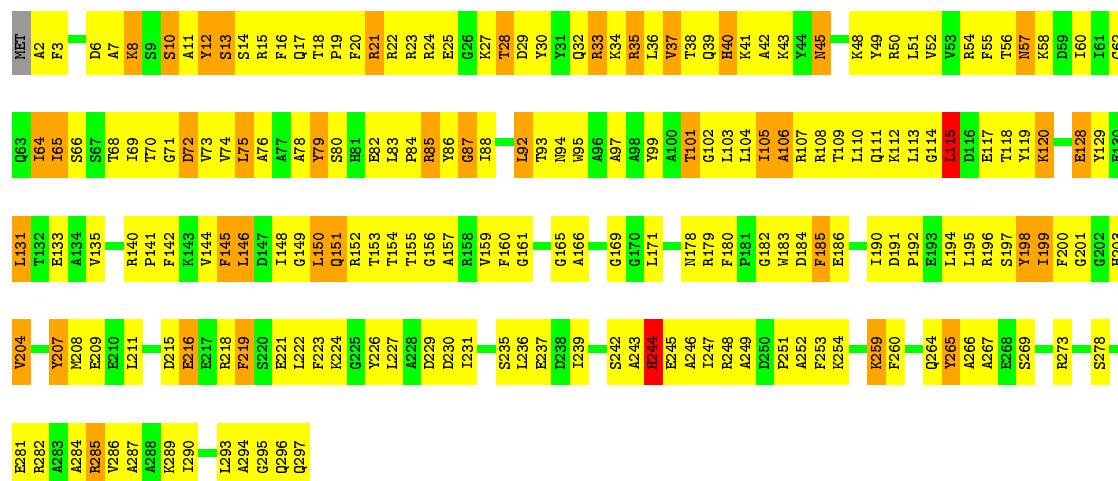
Chain H: 32% 51% 16% ..





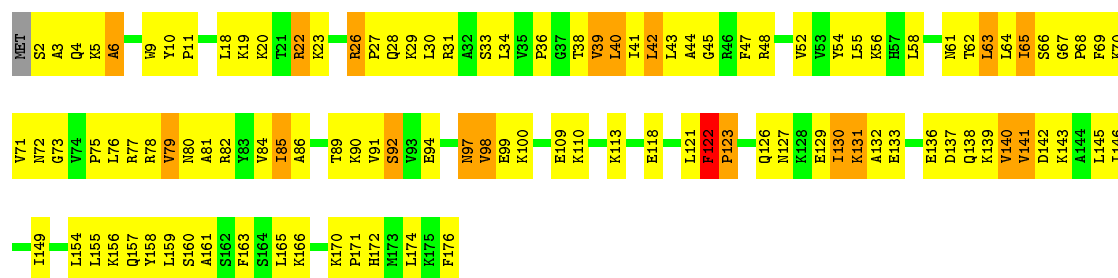
• Molecule 9: uL18 (yeast L5)

Chain I: 32% 54% 13%



• Molecule 10: eL6 (yeast L6)

Chain J: 36% 52% 10%

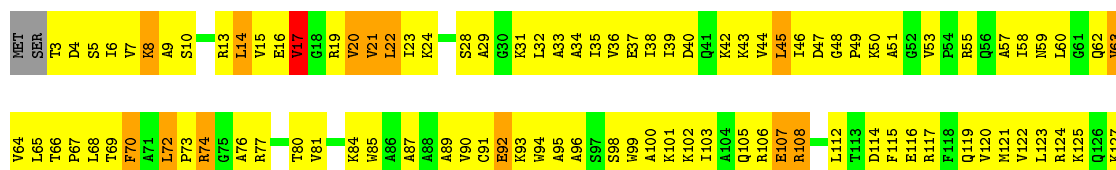


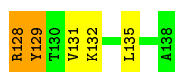
• Molecule 11: uL30 (yeast L7)

Chain K: 27% 49% 14% 9%



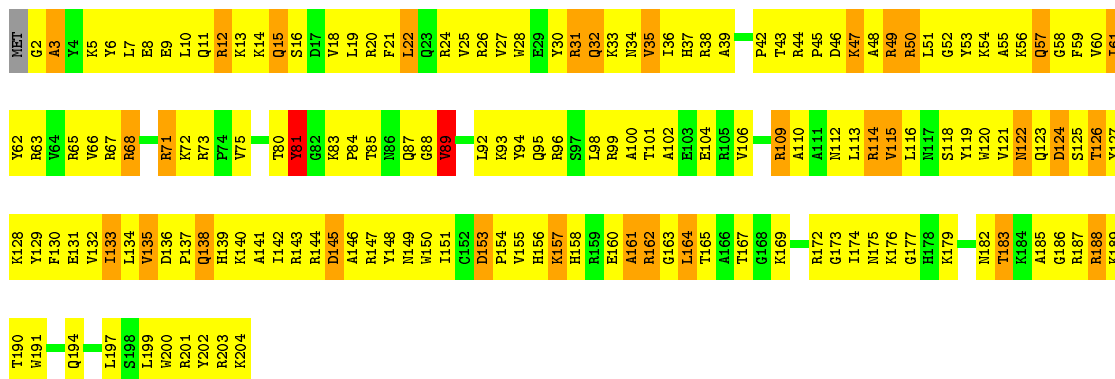






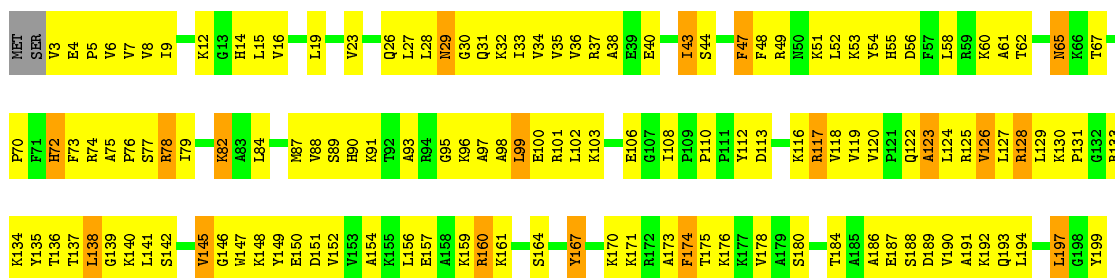
• Molecule 19: eL15 (yeast L15)

Chain S: 20% 64% 15%



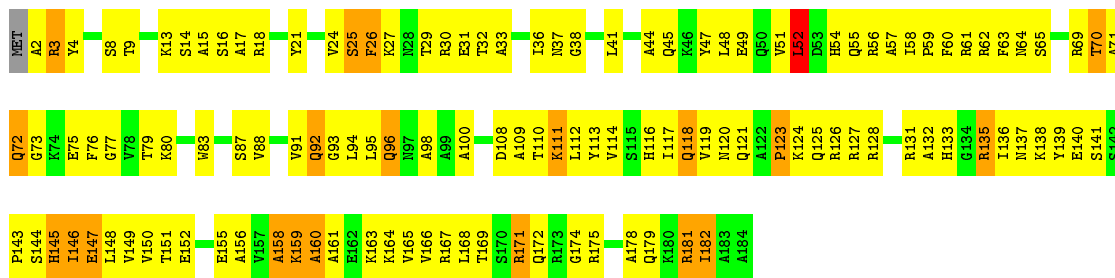
• Molecule 20: uL13 (yeast L16)

Chain T: 31% 59% 9%



• Molecule 21: uL22 (yeast L17)

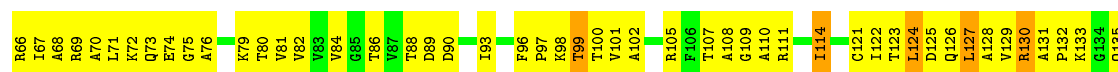
Chain U: 32% 57% 11%



• Molecule 22: eL18 (yeast L18)

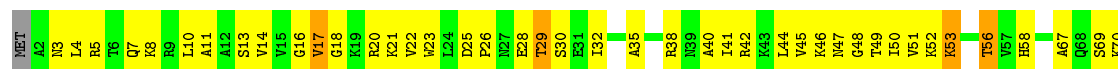
Chain V: 30% 60% 9%





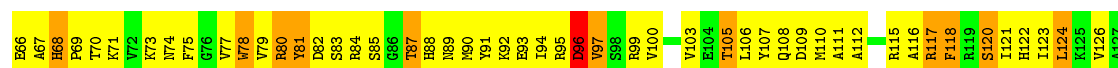
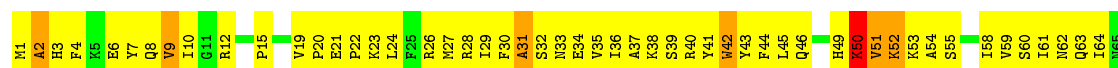
• Molecule 23: eL19 (yeast L19)

Chain W: 35% 57% 6% ..



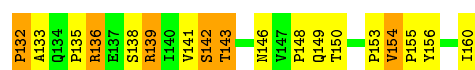
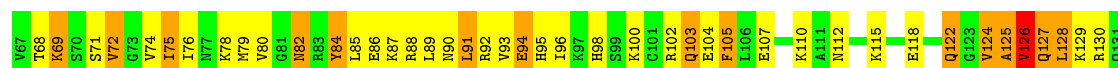
• Molecule 24: eL20 (yeast L20)

Chain X: 22% 65% 12% .



• Molecule 25: eL21 (yeast L21)

Chain Y: 32% 48% 19% ..



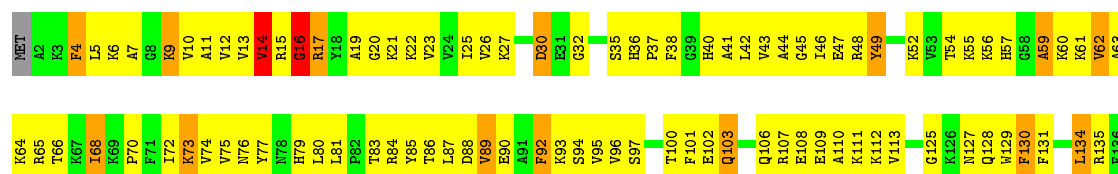
• Molecule 26: eL22 (yeast L22)

Chain Z: 40% 41% 17%



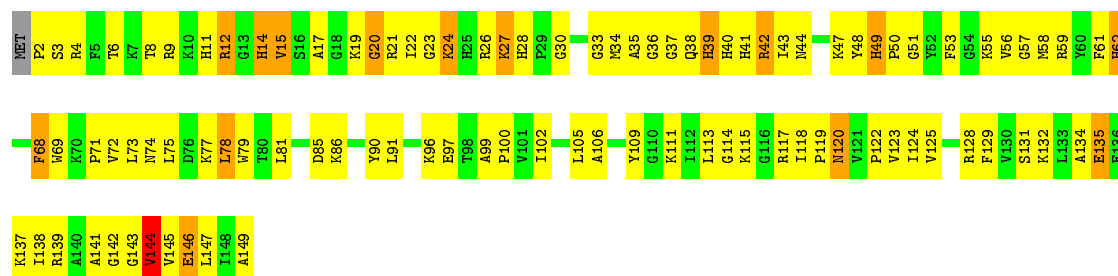






• Molecule 32: uL15 (yeast L28)

Chain FA: 34% 55% 10% ..



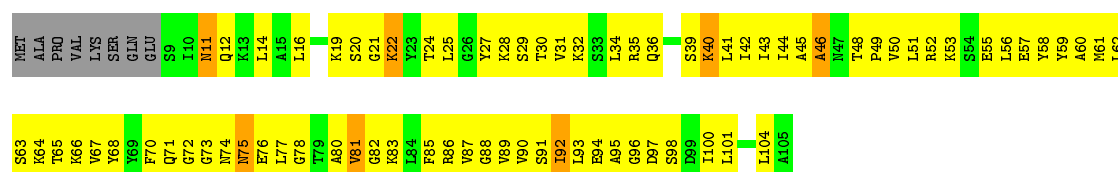
• Molecule 33: eL29 (yeast L29)

Chain GA: 44% 44% 10% .



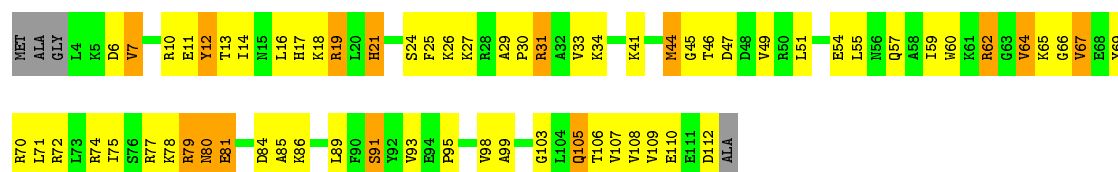
• Molecule 34: eL30 (yeast L30)

Chain HA: 19% 67% 7% 8%



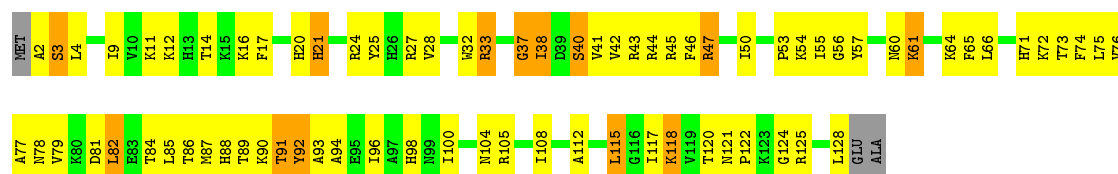
• Molecule 35: eL31 (yeast L31)

Chain IA: 38% 46% 12% .



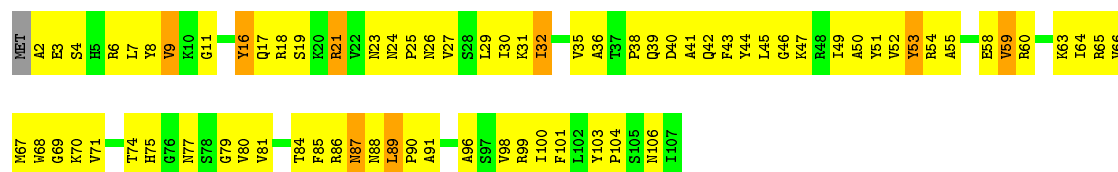
• Molecule 36: eL32 (yeast L32)

Chain JA: 39% 48% 10% .



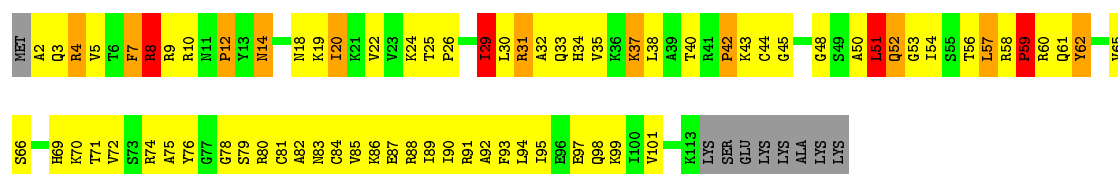
• Molecule 37: eL33 (yeast L33)

Chain KA: 29% 63% 7%



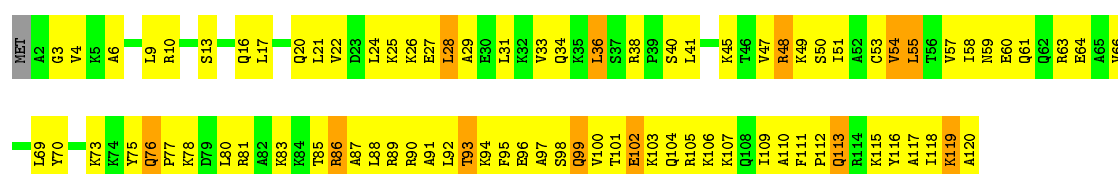
• Molecule 38: eL34 (yeast L34)

Chain LA: 31% 50% 9% 7%



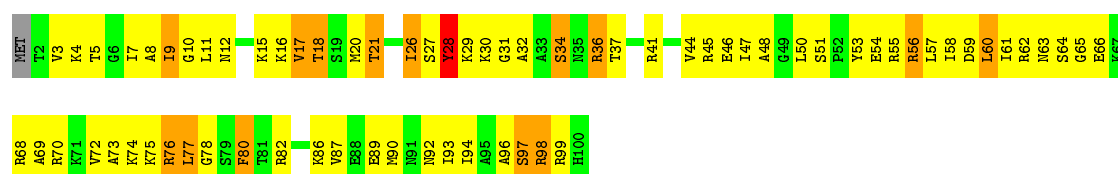
• Molecule 39: uL29 (yeast L35)

Chain MA: 28% 61% 10%



• Molecule 40: eL36 (yeast L36)

Chain NA: 29% 55% 14%

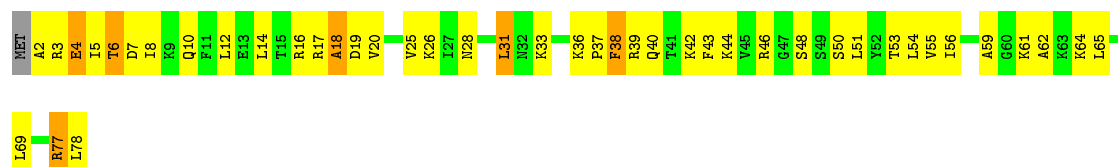


• Molecule 41: eL37 (yeast L37)

Chain OA: 38% 52% 8%

- Molecule 42: eL38 (yeast L38)

Chain PA: 



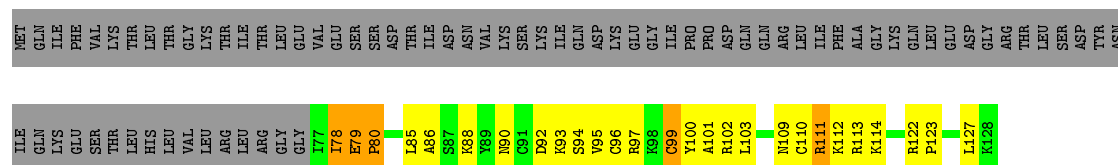
- Molecule 43: eL39 (yeast L39)

Chain QA:  27% 61% 10%



- Molecule 44: eL40 (yeast L40)

Chain RA: 



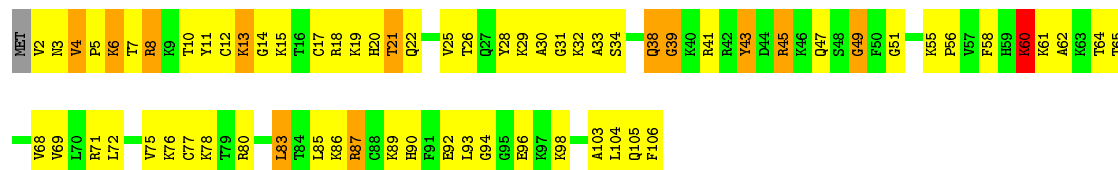
- Molecule 45: eL41 (yeast L41)

Chain SA: 

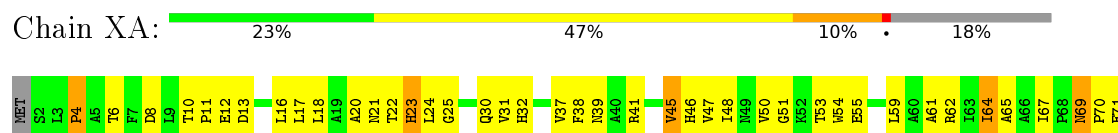


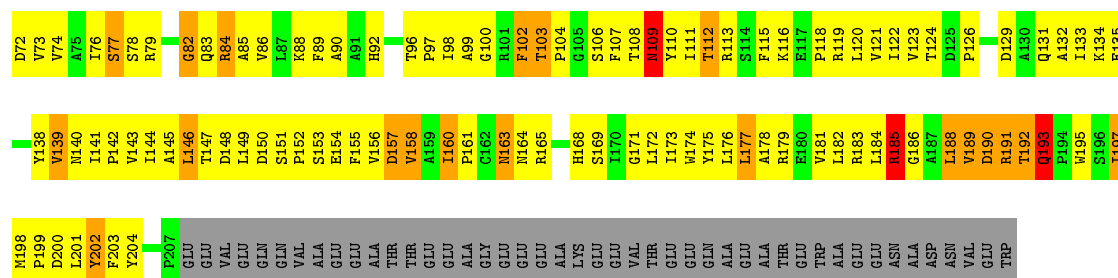
- Molecule 46: eL42 (yeast L42)

Chain TA: 

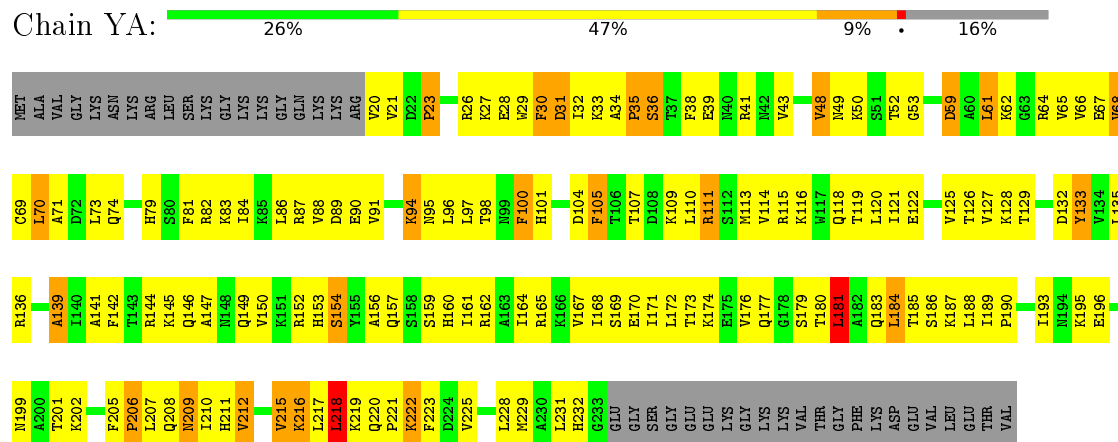


- Molecule 47: eL43 (yeast L43)

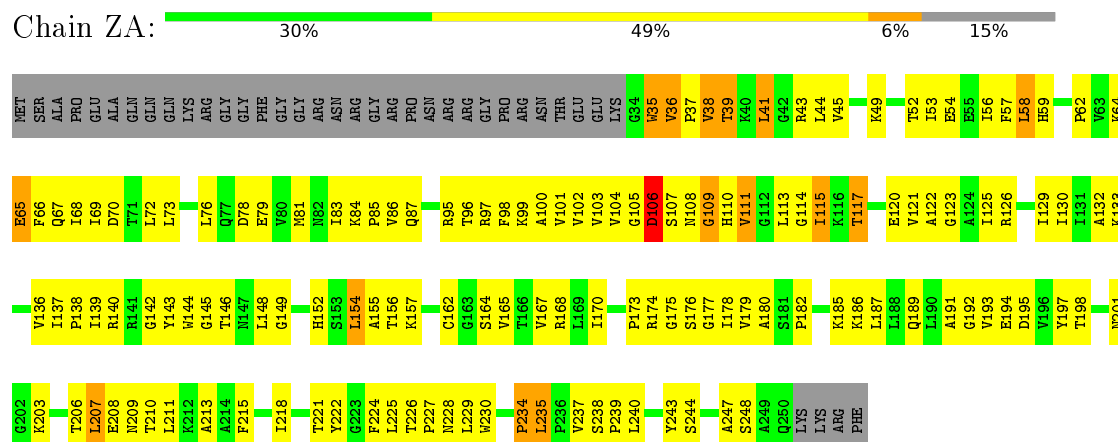




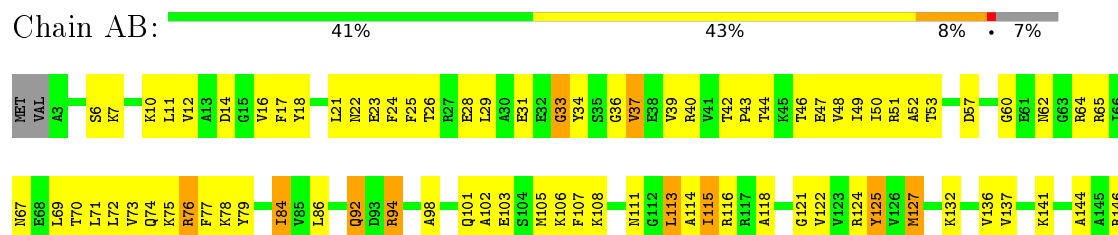
• Molecule 51: eS1 (yeast S1)

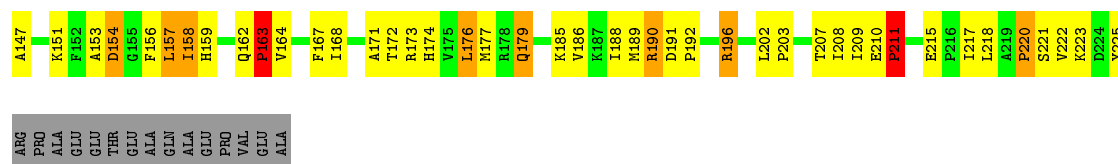


• Molecule 52: uS5 (yeast S2)



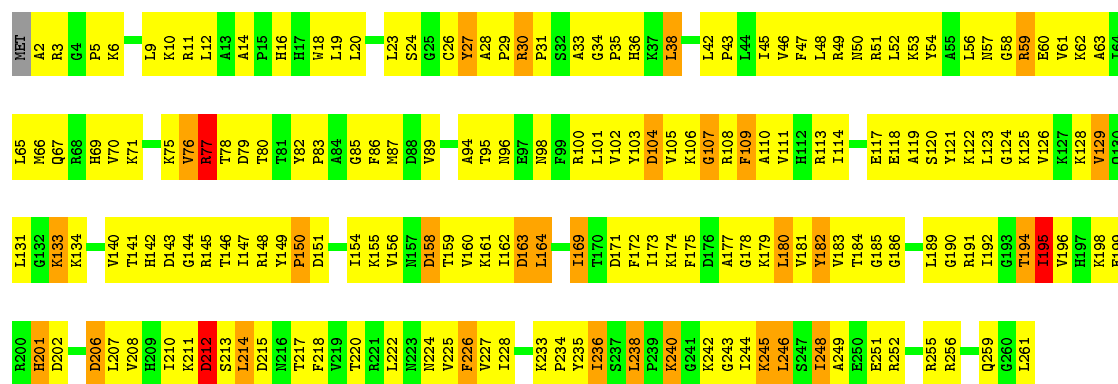
• Molecule 53: uS3 (yeast S3)





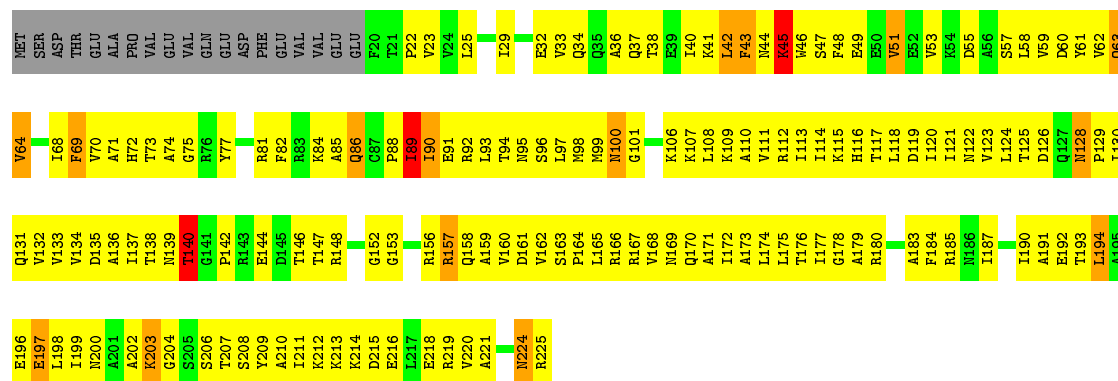
• Molecule 54: eS4 (yeast S4)

Chain BB: 30% 58% 11% .



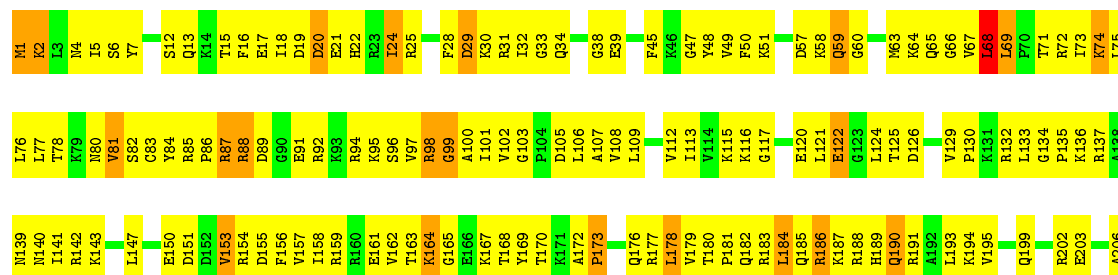
• Molecule 55: uS7 (yeast S5)

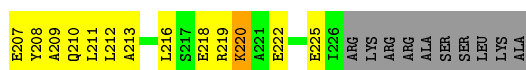
Chain CB: 21% 63% 7% 8% .



• Molecule 56: eS6 (yeast S6)

Chain DB: 28% 58% 9% .

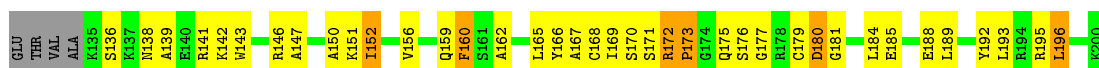
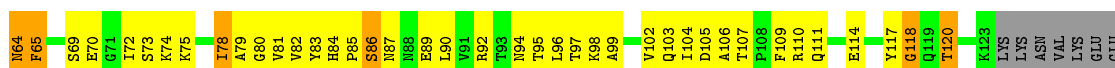




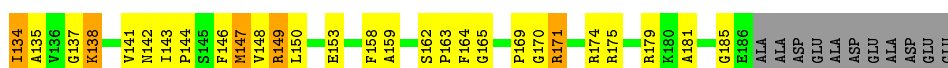
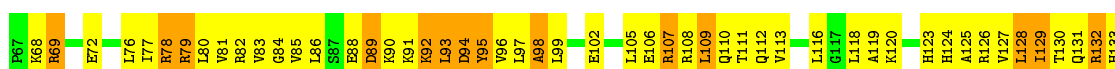
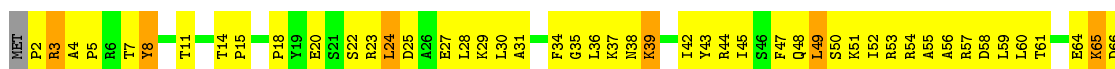
- Molecule 57: eS7 (yeast S7)



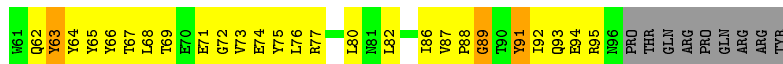
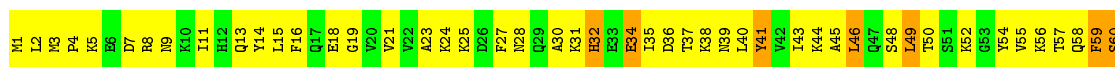
- Molecule 58: eS8 (yeast S8)



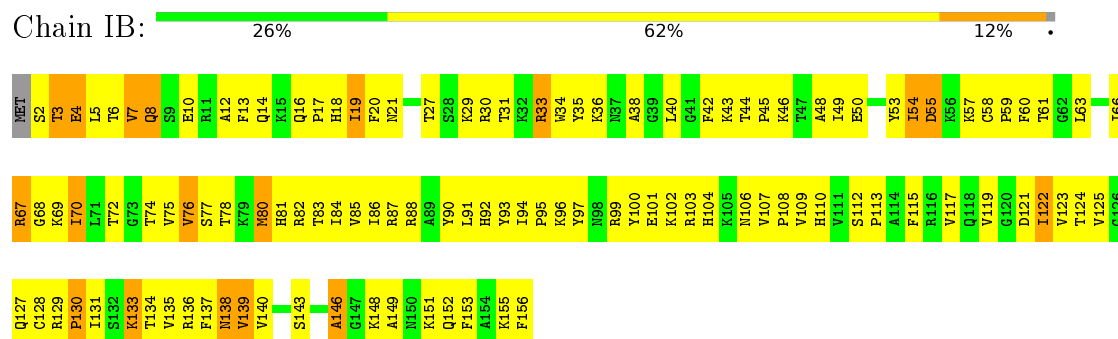
- Molecule 59: uS4 (yeast S9)



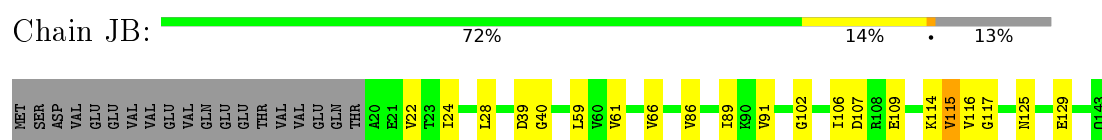
- Molecule 60: eS10 (yeast S10)



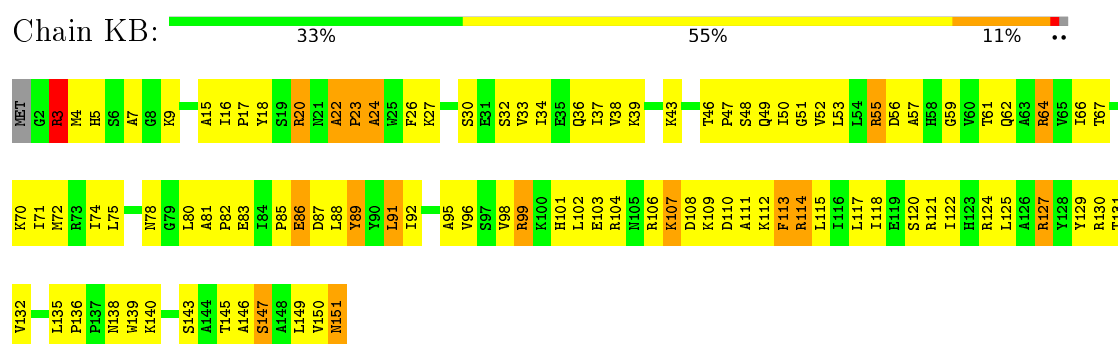
- Molecule 61: uS17 (yeast S11)



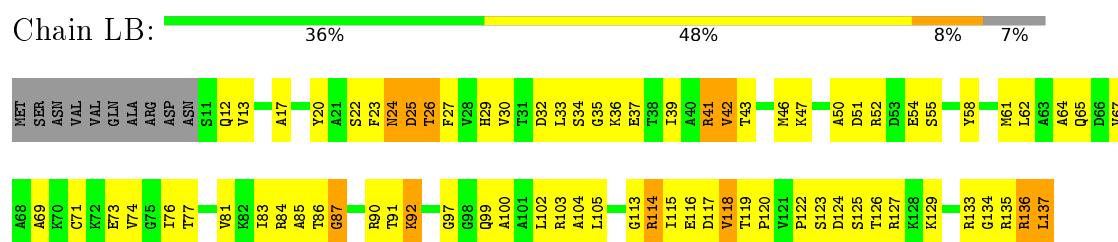
- Molecule 62: eS12 (yeast S12)



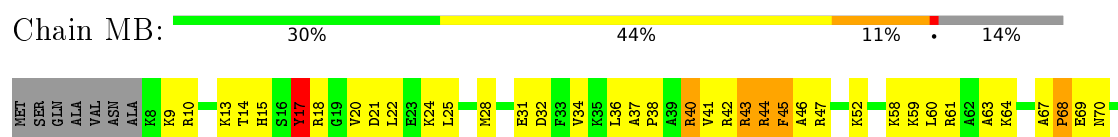
- Molecule 63: uS15 (yeast S13)



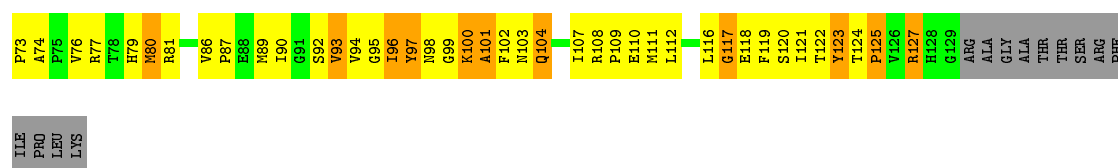
- Molecule 64: uS11 (yeast S14)



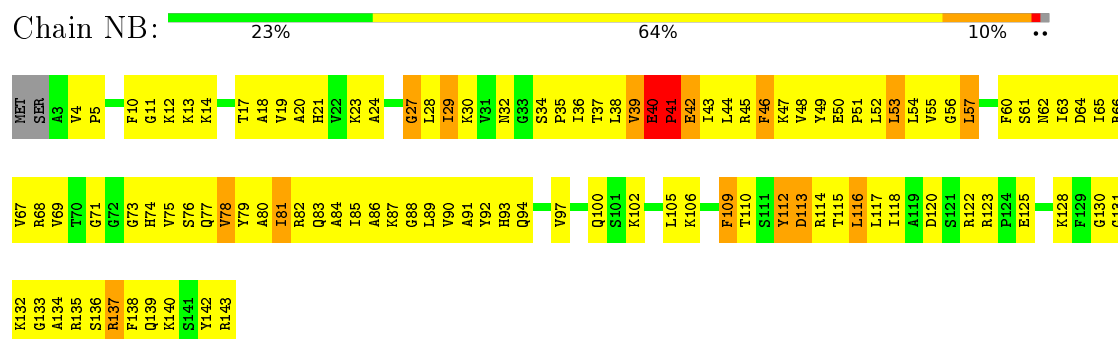
- Molecule 65: uS19 (yeast S15)



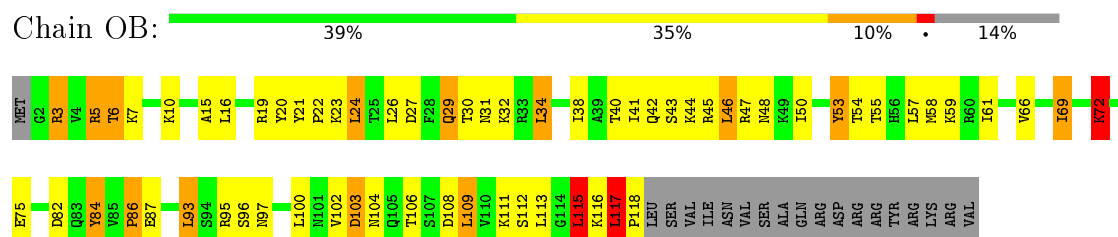




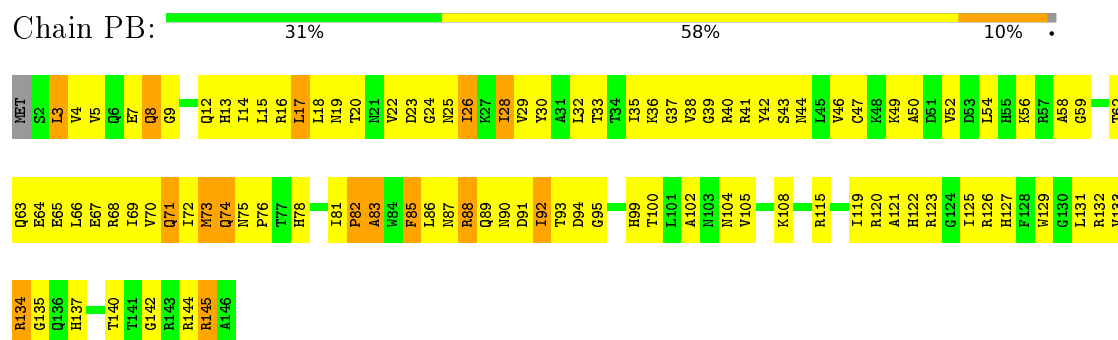
- Molecule 66: uS9 (yeast S16)



- Molecule 67: eS17 (yeast S17)



- Molecule 68: uS13 (yeast S18)



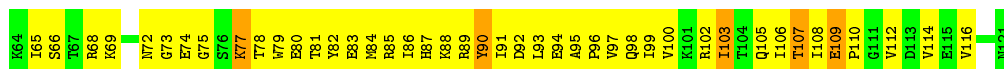
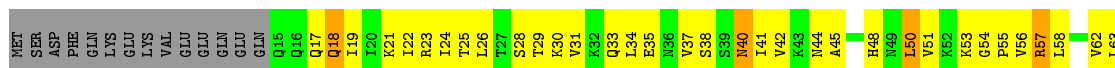
- Molecule 69: eS19 (yeast S19)





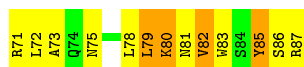
• Molecule 70: uS10 (yeast S20)

Chain RB:



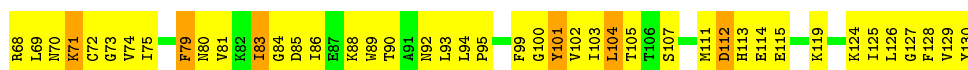
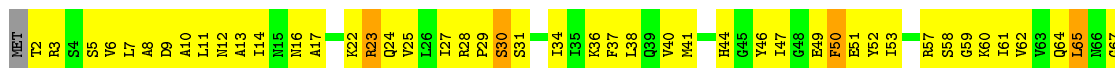
• Molecule 71: eS21 (yeast S21)

Chain SB:



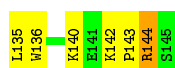
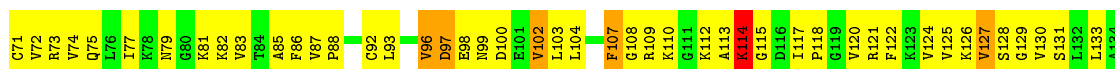
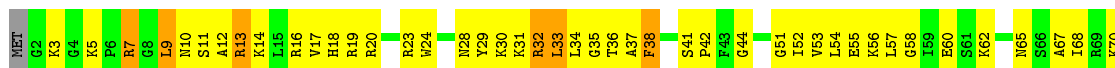
• Molecule 72: uS8 (yeast S22)

Chain TB:



• Molecule 73: uS12 (yeast S23)

Chain UB:



• Molecule 74: eS24 (yeast S24)

Chain VB:

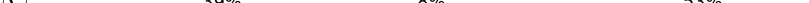


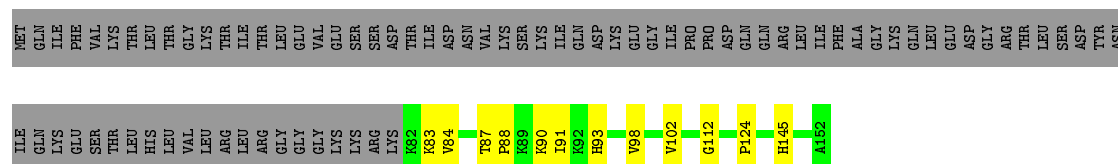
- Molecule 80: eS30 (yeast S30)

Chain BC:  40% 40% 14% 5%



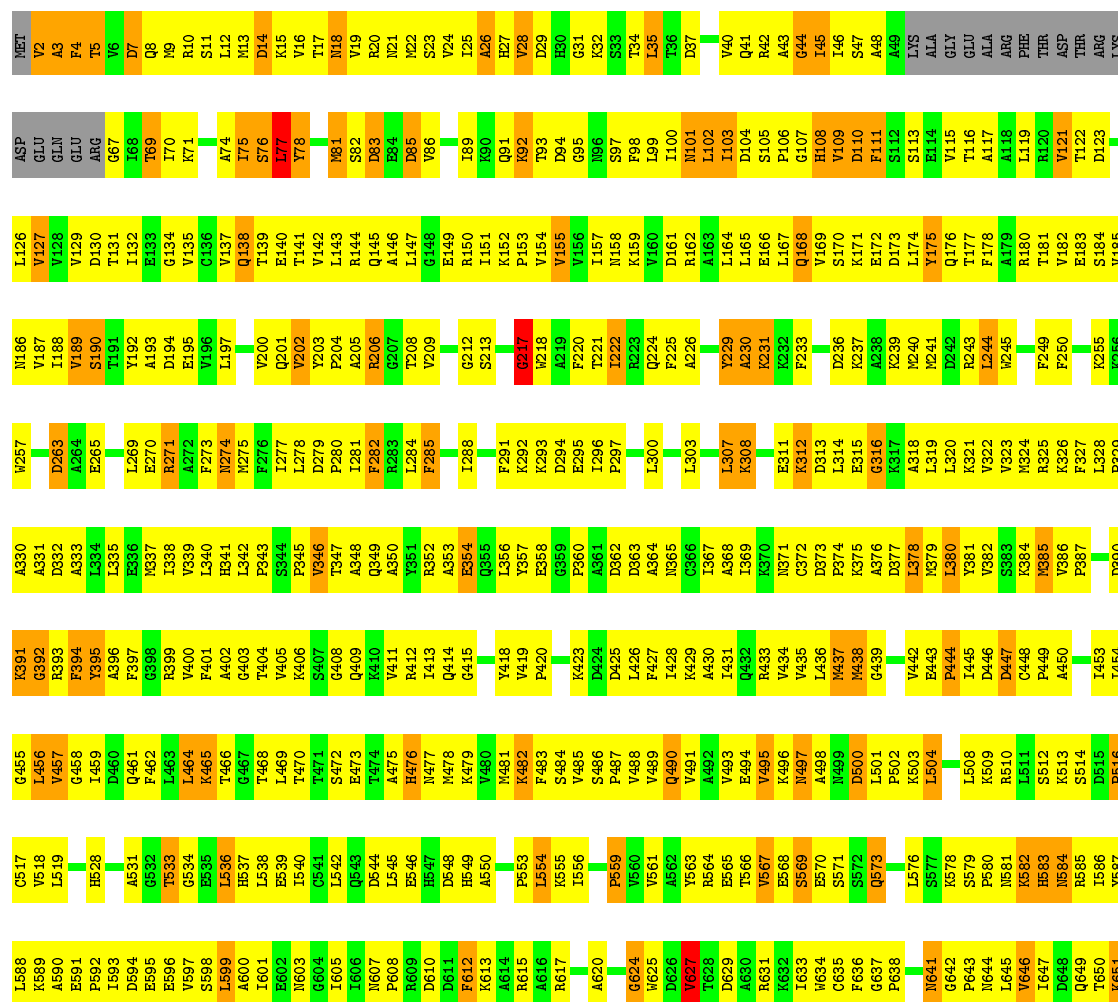
- Molecule 81: eS31 (yeast S31)

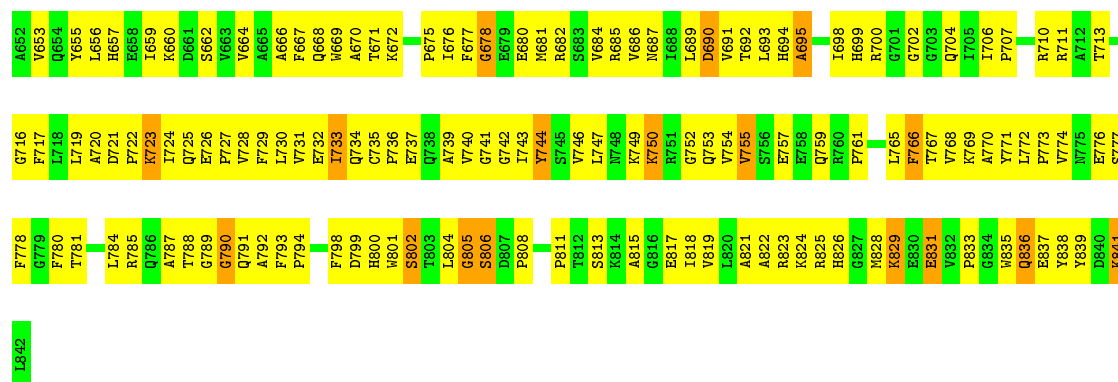
Chain CC: 



- Molecule 82: yeast eEF2

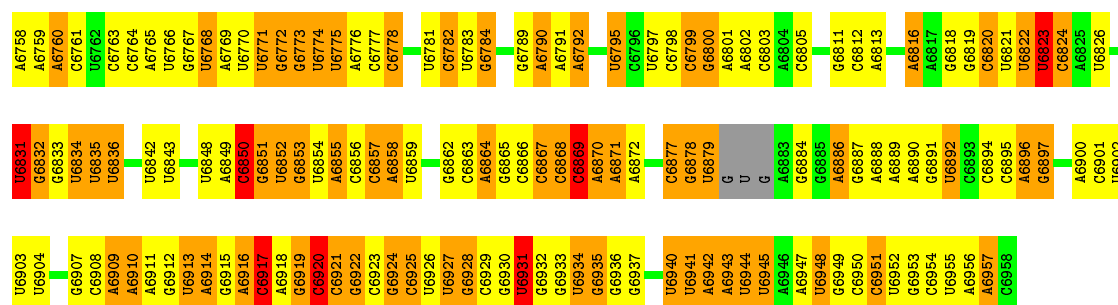
Chain DC: 





### • Molecule 83: IRES

Chain EC: 25% 38% 32% . .



## 4 Experimental information

Property	Value	Source
Reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	Depositor
Number of particles used	31871	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	Not provided	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ( $e^-/\text{\AA}^2$ )	Not provided	Depositor
Minimum defocus (nm)	Not provided	Depositor
Maximum defocus (nm)	Not provided	Depositor
Magnification	Not provided	Depositor
Image detector	Not provided	Depositor

## 5 Model quality ⓘ

### 5.1 Standard geometry ⓘ

Bond lengths and bond angles in the following residue types are not validated in this section: GDP, SO1, MG, DDE

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	$\# Z  > 2$	RMSZ	$\# Z  > 2$
1	A	0.86	1/42096 (0.0%)	0.75	11/65570 (0.0%)
10	J	1.05	0/1425	0.68	2/1912 (0.1%)
11	K	1.14	0/1822	0.66	0/2451
12	L	0.95	0/1850	0.63	0/2495
13	M	1.00	0/1540	0.64	0/2073
14	N	1.07	0/1754	0.65	0/2350
15	O	0.84	0/1375	0.60	0/1842
16	P	1.71	0/728	0.75	0/975
17	Q	1.03	0/1568	0.65	0/2106
18	R	1.13	0/1069	0.64	0/1438
19	S	1.13	0/1758	0.69	0/2354
2	B	1.13	16/78631 (0.0%)	0.77	25/122552 (0.0%)
20	T	1.08	0/1586	0.65	0/2128
21	U	1.06	0/1466	0.66	1/1968 (0.1%)
22	V	1.04	0/1466	0.69	1/1965 (0.1%)
23	W	0.87	0/1539	0.61	0/2050
24	X	1.19	0/1482	0.66	0/1990
25	Y	1.13	0/1301	0.68	0/1743
26	Z	0.78	0/812	0.58	0/1099
27	AA	1.06	0/1019	0.63	0/1369
28	BA	1.10	0/521	0.62	0/691
29	CA	1.09	0/984	0.68	1/1325 (0.1%)
3	C	1.18	1/3747 (0.0%)	0.76	2/5832 (0.0%)
30	DA	1.05	0/1005	0.71	1/1341 (0.1%)
31	EA	0.85	0/1119	0.61	1/1497 (0.1%)
32	FA	1.07	0/1205	0.65	0/1612
33	GA	0.97	0/474	0.68	0/629
34	HA	0.79	0/751	0.63	0/1008
35	IA	0.93	0/904	0.61	0/1213
36	JA	1.10	0/1041	0.62	0/1394
37	KA	1.15	0/869	0.68	0/1168
38	LA	0.99	0/891	0.66	0/1191

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >2	RMSZ	# Z  >2
39	MA	0.95	0/979	0.66	0/1301
4	D	1.08	1/2884 (0.0%)	0.76	0/4491
40	NA	0.92	0/779	0.64	0/1034
41	OA	1.19	0/697	0.66	0/923
42	PA	0.88	0/619	0.60	0/826
43	QA	1.01	0/444	0.68	0/588
44	RA	1.05	0/424	0.60	0/562
45	SA	0.89	0/235	0.67	0/300
46	TA	1.03	0/861	0.67	0/1136
47	UA	1.02	0/702	0.61	0/934
48	VA	1.58	0/1498	0.79	0/2025
49	WA	0.83	0/2498	0.56	0/3398
5	E	1.77	0/1377	0.79	2/1844 (0.1%)
50	XA	0.71	0/1653	0.65	3/2261 (0.1%)
51	YA	0.75	0/1735	0.59	1/2335 (0.0%)
52	ZA	0.74	0/1665	0.59	0/2263
53	AB	0.86	0/1759	0.57	0/2368
54	BB	0.72	0/2110	0.59	0/2839
55	CB	0.79	0/1630	0.58	0/2202
56	DB	0.74	0/1844	0.58	0/2464
57	EB	0.78	0/1506	0.58	0/2028
58	FB	0.88	0/1515	0.58	0/2021
59	GB	0.70	0/1519	0.59	0/2035
6	F	1.01	0/1952	0.72	1/2622 (0.0%)
60	HB	0.93	0/837	0.56	0/1131
61	IB	0.91	0/1273	0.62	0/1712
62	JB	1.02	0/495	0.61	0/617
63	KB	0.83	0/1216	0.61	0/1638
64	LB	0.67	0/953	0.57	0/1279
65	MB	0.97	0/996	0.64	0/1335
66	NB	0.83	0/1126	0.61	0/1510
67	OB	0.80	1/844 (0.1%)	0.82	4/1120 (0.4%)
68	PB	0.87	0/1212	0.59	0/1628
69	QB	0.84	0/1131	0.62	0/1517
7	G	0.98	0/3153	0.66	1/4239 (0.0%)
70	RB	0.86	0/866	0.59	0/1169
71	SB	0.71	0/694	0.57	0/935
72	TB	0.77	0/1039	0.59	0/1395
73	UB	0.90	0/1140	0.60	0/1518
74	VB	0.76	0/1088	0.58	0/1449
75	WB	0.83	0/571	0.65	0/768
76	XB	0.71	0/782	0.57	0/1047
77	YB	0.76	0/621	0.57	0/838



Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >2	RMSZ	# Z  >2
78	ZB	0.75	0/500	0.60	0/670
79	AC	0.98	0/454	0.61	1/602 (0.2%)
8	H	1.09	0/2802	0.67	0/3792
80	BC	0.85	0/483	0.62	0/643
81	CC	0.99	0/283	0.66	0/352
82	DC	1.39	5/6521 (0.1%)	0.71	4/8830 (0.0%)
83	EC	1.96	34/4579 (0.7%)	0.94	10/7119 (0.1%)
9	I	0.91	0/2426	0.63	0/3271
All	All	1.06	59/230768 (0.0%)	0.72	72/338255 (0.0%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	A	0	11
2	B	0	64
3	C	0	2
4	D	0	1
50	XA	0	1
83	EC	0	10
All	All	0	89

All (59) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
82	DC	3	ALA	N-CA	12.70	1.71	1.46
82	DC	4	PHE	CD1-CE1	12.26	1.63	1.39
82	DC	4	PHE	CB-CG	11.48	1.70	1.51
83	EC	6763	C	N1-C2	7.78	1.48	1.40
4	D	1	G	OP3-P	-6.91	1.52	1.61
1	A	1	U	OP3-P	-6.77	1.53	1.61
3	C	1	A	OP3-P	-6.61	1.53	1.61
83	EC	6941	U	N1-C2	6.58	1.44	1.38
2	B	280	U	N1-C2	6.41	1.44	1.38
83	EC	6924	G	C5-C6	6.26	1.48	1.42
83	EC	6831	U	N1-C2	6.19	1.44	1.38
83	EC	6775	U	N1-C2	6.12	1.44	1.38
2	B	1137	C	N1-C2	6.10	1.46	1.40
83	EC	6758	A	OP3-P	-5.97	1.53	1.61
83	EC	6758	A	P-O5'	5.92	1.65	1.59

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
83	EC	6836	U	N1-C2	5.83	1.43	1.38
83	EC	6823	U	N1-C2	5.75	1.43	1.38
83	EC	6764	C	N1-C2	5.74	1.45	1.40
83	EC	6777	C	N1-C2	5.67	1.45	1.40
83	EC	6917	C	N1-C2	5.66	1.45	1.40
83	EC	6857	C	N1-C2	5.64	1.45	1.40
67	OB	103	ASP	C-N	-5.60	1.21	1.34
2	B	1888	U	N1-C2	5.56	1.43	1.38
83	EC	6858	A	C5-C6	5.55	1.46	1.41
83	EC	6925	C	N1-C2	5.54	1.45	1.40
83	EC	6850	C	N1-C2	5.50	1.45	1.40
83	EC	6934	U	N1-C2	5.47	1.43	1.38
83	EC	6774	U	N1-C2	5.47	1.43	1.38
83	EC	6945	U	N1-C2	5.47	1.43	1.38
83	EC	6778	C	N1-C2	5.44	1.45	1.40
83	EC	6944	U	N1-C2	5.37	1.43	1.38
2	B	2726	C	N1-C2	5.36	1.45	1.40
83	EC	6943	A	C5-C6	5.34	1.45	1.41
83	EC	6940	U	N1-C2	5.33	1.43	1.38
2	B	961	C	N1-C2	5.28	1.45	1.40
2	B	2587	U	N1-C2	5.27	1.43	1.38
83	EC	6834	U	N1-C2	5.27	1.43	1.38
83	EC	6920	C	N1-C2	5.27	1.45	1.40
82	DC	3	ALA	CA-C	5.25	1.66	1.52
2	B	2501	U	N1-C2	5.19	1.43	1.38
2	B	2094	C	N1-C2	5.16	1.45	1.40
2	B	2514	U	N1-C2	5.16	1.43	1.38
82	DC	4	PHE	CG-CD2	5.14	1.46	1.38
2	B	2516	U	N1-C2	5.14	1.43	1.38
83	EC	6908	C	N1-C2	5.14	1.45	1.40
83	EC	6819	G	C5-C6	5.12	1.47	1.42
2	B	623	U	N1-C2	5.10	1.43	1.38
2	B	359	U	N1-C2	5.09	1.43	1.38
83	EC	6937	G	C5-C6	5.08	1.47	1.42
83	EC	6865	G	N9-C4	5.05	1.42	1.38
83	EC	6869	C	N1-C2	5.05	1.45	1.40
83	EC	6818	G	C5-C6	5.04	1.47	1.42
2	B	2383	C	N1-C2	5.03	1.45	1.40
2	B	2445	A	C5-C6	5.03	1.45	1.41
83	EC	6820	C	N1-C2	5.03	1.45	1.40
83	EC	6781	U	N1-C2	5.03	1.43	1.38
2	B	2451	G	C5-C6	5.02	1.47	1.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	2093	A	P-O5'	5.02	1.64	1.59
83	EC	6821	U	N1-C2	5.01	1.43	1.38

All (72) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
50	XA	192	THR	O-C-N	-10.45	105.98	122.70
83	EC	6878	G	N9-C1'-C2'	9.91	126.89	114.00
67	OB	97	ASN	N-CA-C	-9.28	85.94	111.00
1	A	103	A	C2'-C3'-O3'	8.12	127.36	109.50
2	B	764	U	N1-C1'-C2'	7.82	124.16	114.00
83	EC	6781	U	N1-C1'-C2'	6.90	122.97	114.00
2	B	2794	G	N9-C1'-C2'	6.82	122.86	114.00
67	OB	96	SER	N-CA-C	6.74	129.21	111.00
83	EC	6878	G	O4'-C1'-N9	6.61	113.48	108.20
2	B	1254	C	N1-C1'-C2'	6.52	122.48	114.00
2	B	223	U	N1-C1'-C2'	6.45	122.38	114.00
31	EA	16	GLY	N-CA-C	6.38	129.05	113.10
83	EC	6920	C	C2'-C3'-O3'	6.32	123.81	113.70
2	B	2324	A	N9-C1'-C2'	6.26	122.14	114.00
50	XA	192	THR	C-N-CA	6.25	137.32	121.70
2	B	882	A	N9-C1'-C2'	6.23	122.10	114.00
2	B	2280	A	N9-C1'-C2'	6.23	122.09	114.00
5	E	128	LEU	CA-CB-CG	6.22	129.60	115.30
83	EC	6945	U	N1-C1'-C2'	6.00	121.80	114.00
7	G	351	LEU	CA-CB-CG	5.98	129.06	115.30
10	J	63	LEU	CA-CB-CG	5.90	128.86	115.30
2	B	1646	G	N9-C1'-C2'	5.86	121.62	114.00
10	J	131	LYS	N-CA-C	-5.86	95.18	111.00
50	XA	192	THR	CA-C-N	5.84	130.05	117.20
6	F	212	GLY	N-CA-C	5.79	127.58	113.10
2	B	2375	G	N9-C1'-C2'	5.79	121.53	114.00
83	EC	6924	G	O4'-C1'-N9	5.76	112.81	108.20
82	DC	3	ALA	CA-C-O	-5.72	108.09	120.10
2	B	1646	G	O4'-C1'-N9	5.71	112.77	108.20
5	E	194	LEU	CA-CB-CG	5.70	128.42	115.30
1	A	1712	A	N9-C1'-C2'	5.70	121.41	114.00
79	AC	36	LEU	CA-CB-CG	5.60	128.19	115.30
2	B	2525	G	C2'-C3'-O3'	5.55	122.58	113.70
67	OB	117	LEU	CA-CB-CG	5.50	127.95	115.30
1	A	829	A	C2'-C3'-O3'	5.47	122.45	113.70
1	A	1339	C	N1-C1'-C2'	5.47	121.11	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
21	U	52	LEU	CA-CB-CG	5.47	127.89	115.30
2	B	705	A	N9-C1'-C2'	5.47	121.11	114.00
1	A	542	A	N9-C1'-C2'	5.45	121.08	114.00
2	B	1565	G	N9-C1'-C2'	5.45	121.08	114.00
2	B	2141	U	N1-C1'-C2'	5.43	121.06	114.00
22	V	49	LEU	CA-CB-CG	5.42	127.77	115.30
83	EC	6927	U	N1-C1'-C2'	5.42	121.05	114.00
1	A	418	G	N9-C1'-C2'	5.41	121.03	114.00
2	B	1657	C	N1-C1'-C2'	5.38	121.00	114.00
1	A	1207	C	N1-C1'-C2'	5.38	120.99	114.00
3	C	131	A	N9-C1'-C2'	-5.35	106.11	112.00
2	B	2393	G	N9-C1'-C2'	5.33	120.93	114.00
3	C	85	G	C2'-C3'-O3'	5.32	122.20	113.70
2	B	2093	A	OP1-P-OP2	-5.29	111.66	119.60
1	A	503	G	C2'-C3'-O3'	5.29	122.16	113.70
51	YA	181	LEU	CA-CB-CG	5.28	127.45	115.30
2	B	365	A	N9-C1'-C2'	5.28	120.86	114.00
1	A	1321	A	N9-C1'-C2'	5.26	120.84	114.00
2	B	3316	A	N9-C1'-C2'	5.23	120.80	114.00
1	A	184	C	N1-C1'-C2'	5.22	120.79	114.00
82	DC	5	THR	N-CA-CB	-5.22	100.39	110.30
2	B	1878	G	N9-C1'-C2'	5.21	120.77	114.00
29	CA	133	LEU	CA-CB-CG	5.16	127.16	115.30
67	OB	75	GLU	N-CA-C	5.16	124.92	111.00
83	EC	6941	U	N1-C1'-C2'	5.15	120.70	114.00
2	B	760	G	O4'-C1'-N9	5.14	112.31	108.20
2	B	2037	G	OP1-P-OP2	-5.12	111.93	119.60
1	A	555	A	C2'-C3'-O3'	5.11	121.88	113.70
2	B	2501	U	C2'-C3'-O3'	5.10	121.86	113.70
2	B	1839	A	N9-C1'-C2'	5.09	120.62	114.00
2	B	1593	A	N9-C1'-C2'	5.08	120.61	114.00
83	EC	6910	A	N9-C1'-C2'	5.06	120.58	114.00
30	DA	76	LEU	CA-CB-CG	5.04	126.88	115.30
83	EC	6758	A	OP1-P-OP2	-5.02	112.07	119.60
82	DC	217	GLY	N-CA-C	5.01	125.63	113.10
82	DC	4	PHE	CB-CG-CD2	5.01	124.31	120.80

There are no chirality outliers.

All (89) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	1034	C	Sidechain

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Mol	Chain	Res	Type	Group
1	A	1122	G	Sidechain
1	A	125	U	Sidechain
1	A	1372	U	Sidechain
1	A	1524	A	Sidechain
1	A	1546	G	Sidechain
1	A	1553	G	Sidechain
1	A	287	G	Sidechain
1	A	322	G	Sidechain
1	A	447	U	Sidechain
1	A	834	G	Sidechain
2	B	1000	C	Sidechain
2	B	112	U	Sidechain
2	B	1190	A	Sidechain
2	B	1218	U	Sidechain
2	B	1254	C	Sidechain
2	B	1262	G	Sidechain
2	B	1288	U	Sidechain
2	B	1297	C	Sidechain
2	B	1301	A	Sidechain
2	B	1308	A	Sidechain
2	B	1310	G	Sidechain
2	B	1318	A	Sidechain
2	B	1376	C	Sidechain
2	B	1432	C	Sidechain
2	B	148	G	Sidechain
2	B	1646	G	Sidechain
2	B	1713	G	Sidechain
2	B	1724	U	Sidechain
2	B	1898	G	Sidechain
2	B	1912	U	Sidechain
2	B	2110	G	Sidechain
2	B	2137	U	Sidechain
2	B	2141	U	Sidechain
2	B	223	U	Sidechain
2	B	2280	A	Sidechain
2	B	2286	U	Sidechain
2	B	2309	A	Sidechain
2	B	2324	A	Sidechain
2	B	2336	U	Sidechain
2	B	2354	C	Sidechain
2	B	2376	G	Sidechain
2	B	2403	G	Sidechain

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Mol	Chain	Res	Type	Group
2	B	2623	G	Sidechain
2	B	2642	A	Sidechain
2	B	2695	A	Sidechain
2	B	2705	A	Sidechain
2	B	2794	G	Sidechain
2	B	2886	U	Sidechain
2	B	2898	G	Sidechain
2	B	2901	G	Sidechain
2	B	2920	U	Sidechain
2	B	3010	U	Sidechain
2	B	3055	U	Sidechain
2	B	3100	U	Sidechain
2	B	3140	G	Sidechain
2	B	3155	U	Sidechain
2	B	319	A	Sidechain
2	B	3280	U	Sidechain
2	B	3334	U	Sidechain
2	B	3377	G	Sidechain
2	B	349	A	Sidechain
2	B	371	G	Sidechain
2	B	383	G	Sidechain
2	B	400	G	Sidechain
2	B	406	G	Sidechain
2	B	44	U	Sidechain
2	B	641	C	Sidechain
2	B	760	G	Sidechain
2	B	769	G	Sidechain
2	B	770	G	Sidechain
2	B	814	U	Sidechain
2	B	835	G	Sidechain
2	B	858	A	Sidechain
2	B	882	A	Sidechain
3	C	39	G	Sidechain
3	C	88	A	Sidechain
4	D	89	G	Sidechain
83	EC	6784	G	Sidechain
83	EC	6850	C	Sidechain
83	EC	6852	U	Sidechain
83	EC	6853	G	Sidechain
83	EC	6879	U	Sidechain
83	EC	6892	U	Sidechain
83	EC	6910	A	Sidechain

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Mol	Chain	Res	Type	Group
83	EC	6916	A	Sidechain
83	EC	6931	U	Sidechain
83	EC	6932	G	Sidechain
50	XA	192	THR	Mainchain

## 5.2 Too-close contacts

In the following table, the Non-H and H(model) columns list the number of non-hydrogen atoms and hydrogen atoms in the chain respectively. The H(added) column lists the number of hydrogen atoms added and optimized by MolProbity. The Clashes column lists the number of clashes within the asymmetric unit, whereas Symm-Clashes lists symmetry related clashes.

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	37658	0	18908	1719	0
2	B	70288	0	35262	3754	0
3	C	3354	0	1695	185	0
4	D	2580	0	1304	138	0
5	E	1359	0	1425	118	0
6	F	1918	0	1987	283	0
7	G	3082	0	3165	394	0
8	H	2750	0	2863	334	0
9	I	2376	0	2325	261	0
10	J	1401	0	1501	141	0
11	K	1785	0	1862	238	0
12	L	1818	0	1908	210	0
13	M	1519	0	1587	173	0
14	N	1718	0	1754	182	0
15	O	1354	0	1383	144	0
16	P	723	0	774	109	0
17	Q	1543	0	1608	181	0
18	R	1054	0	1149	157	0
19	S	1721	0	1779	281	0
20	T	1556	0	1659	184	0
21	U	1443	0	1485	158	0
22	V	1442	0	1543	181	0
23	W	1522	0	1617	171	0
24	X	1446	0	1487	248	0
25	Y	1277	0	1323	195	0
26	Z	796	0	812	54	0
27	AA	1004	0	1048	113	0
28	BA	509	0	537	46	0
29	CA	969	0	1036	132	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
30	DA	994	0	1081	115	0
31	EA	1093	0	1155	135	0
32	FA	1174	0	1215	156	0
33	GA	463	0	491	49	0
34	HA	743	0	797	100	0
35	IA	890	0	938	84	0
36	JA	1020	0	1090	92	0
37	KA	851	0	880	115	0
38	LA	881	0	949	133	0
39	MA	970	0	1078	125	0
40	NA	772	0	849	101	0
41	OA	682	0	687	81	0
42	PA	613	0	682	44	0
43	QA	437	0	475	56	0
44	RA	418	0	459	32	0
45	SA	234	0	284	29	0
46	TA	848	0	918	83	0
47	UA	695	0	738	75	0
48	VA	1473	0	1514	198	0
49	WA	2445	0	2401	191	0
50	XA	1612	0	1623	188	0
51	YA	1709	0	1784	191	0
52	ZA	1635	0	1723	159	0
53	AB	1734	0	1817	120	0
54	BB	2069	0	2154	231	0
55	CB	1610	0	1675	198	0
56	DB	1820	0	1918	177	0
57	EB	1481	0	1572	152	0
58	FB	1490	0	1525	166	0
59	GB	1494	0	1573	165	0
60	HB	817	0	804	78	0
61	IB	1245	0	1314	136	0
62	JB	496	0	141	2	0
63	KB	1193	0	1255	135	0
64	LB	942	0	979	100	0
65	MB	975	0	1017	103	0
66	NB	1106	0	1166	147	0
67	OB	836	0	826	74	0
68	PB	1193	0	1222	133	0
69	QB	1113	0	1124	135	0
70	RB	856	0	917	93	0
71	SB	685	0	672	92	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
72	TB	1022	0	1060	108	0
73	UB	1122	0	1196	109	0
74	VB	1074	0	1132	95	0
75	WB	563	0	603	66	0
76	XB	769	0	818	112	0
77	YB	611	0	633	73	0
78	ZB	498	0	535	51	0
79	AC	444	0	436	50	0
80	BC	475	0	525	41	0
81	CC	284	0	76	0	0
82	DC	6419	0	6493	729	0
83	EC	4105	0	2063	138	0
84	DC	28	0	12	4	0
85	DC	1	0	0	0	0
86	DC	35	0	41	3	0
All	All	215222	0	159891	14740	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 39.

All (14740) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:3:ALA:CA	82:DC:3:ALA:N	1.71	1.50
2:B:1719:G:H4'	2:B:1732:U:H4'	1.22	1.18
1:A:754:A:H3'	1:A:755:A:H5'	1.25	1.14
22:V:54:LEU:HB3	22:V:58:ASN:HB2	1.26	1.14
55:CB:29:ILE:HG21	66:NB:57:LEU:HD11	1.27	1.14
83:EC:6934:U:H2'	83:EC:6935:G:H4'	1.29	1.14
82:DC:564:ARG:HG2	82:DC:682:ARG:HB2	1.29	1.13
2:B:3273:A:H4'	10:J:44:ALA:HB1	1.31	1.13
14:N:46:PHE:HB2	14:N:139:ARG:HG2	1.15	1.13
72:TB:10:ALA:HB1	72:TB:27:ILE:HD12	1.31	1.12
2:B:1235:U:H4'	2:B:1236:G:H5'	1.30	1.12
23:W:105:LEU:HD11	23:W:135:LYS:HG3	1.27	1.12
1:A:980:G:H4'	1:A:1776:A:H4'	1.30	1.11
61:IB:21:ASN:HB3	61:IB:31:THR:HG23	1.32	1.11
21:U:119:VAL:HB	21:U:146:ILE:HG23	1.18	1.11
20:T:61:ALA:HA	20:T:70:PRO:HD2	1.31	1.10
15:O:137:ARG:HG2	15:O:141:ARG:HD3	1.25	1.09
2:B:2765:C:H4'	46:TA:39:GLY:HA3	1.25	1.09

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:T:108:ILE:HB	20:T:160:ARG:HD2	1.35	1.09
2:B:1494:U:H4'	2:B:1495:U:H5'	1.13	1.09
2:B:2957:G:H2'	2:B:2958:A:H5'	1.34	1.08
2:B:2741:C:H4'	46:TA:19:LYS:HA	1.36	1.08
17:Q:47:ALA:HB1	17:Q:48:PRO:HD2	1.36	1.08
2:B:3355:U:H3'	2:B:3356:G:H5''	1.16	1.07
82:DC:116:THR:HG21	82:DC:483:PHE:H	1.15	1.07
50:XA:20:ALA:HB2	50:XA:172:LEU:HD12	1.31	1.07
1:A:1788:G:H2'	1:A:1789:G:H5''	1.33	1.07
65:MB:43:ARG:HH12	65:MB:47:ARG:HD3	1.16	1.07
6:F:32:LEU:HB2	6:F:163:ARG:HE	1.16	1.07
15:O:63:GLU:HA	46:TA:103:ALA:HB2	1.37	1.07
1:A:1435:G:H4'	1:A:1436:A:H5'	1.33	1.07
3:C:27:U:H4'	8:H:51:ALA:HB3	1.36	1.07
11:K:102:VAL:HG13	11:K:126:LEU:HD22	1.36	1.07
65:MB:98:ASN:HA	65:MB:122:THR:HG22	1.32	1.07
7:G:252:ILE:HG23	7:G:264:VAL:HG21	1.15	1.06
16:P:133:LEU:HA	16:P:137:GLN:HG3	1.31	1.06
2:B:62:A:H5''	19:S:164:LEU:HD21	1.38	1.06
1:A:780:A:H1'	74:VB:9:THR:H	1.20	1.05
2:B:2748:A:H1'	9:I:36:LEU:HD23	1.34	1.05
13:M:7:GLU:HB3	13:M:56:ALA:HB2	1.37	1.05
17:Q:16:LYS:H	17:Q:16:LYS:HD2	1.17	1.05
66:NB:42:GLU:HG3	66:NB:45:ARG:HH21	1.18	1.05
11:K:166:ASN:HA	11:K:169:ILE:HD12	1.36	1.04
1:A:1767:G:H4'	1:A:1768:G:H5''	1.39	1.04
64:LB:133:ARG:HG2	64:LB:136:ARG:HE	1.21	1.04
7:G:280:HIS:HB3	7:G:324:VAL:HG11	1.31	1.04
72:TB:14:ILE:HG12	72:TB:25:VAL:HG21	1.40	1.04
2:B:2393:G:H5''	7:G:252:ILE:HD11	1.40	1.04
14:N:174:THR:HG22	14:N:176:LEU:H	1.23	1.04
20:T:73:PHE:HB3	20:T:78:ARG:HB3	1.35	1.03
20:T:34:VAL:HG12	20:T:103:LYS:HB2	1.36	1.03
2:B:3312:U:H5''	7:G:25:ILE:HD12	1.41	1.03
2:B:1604:G:H4'	2:B:1835:A:H4'	1.38	1.03
61:IB:55:ASP:HB3	61:IB:58:CYS:HB2	1.41	1.03
2:B:1604:G:H2'	2:B:1605:A:H5''	1.37	1.02
65:MB:125:PRO:HA	68:PB:126:ARG:HH12	1.20	1.02
1:A:1791:A:H5''	76:XB:8:ASN:HB3	1.38	1.02
2:B:1097:G:H4'	25:Y:129:LYS:HE2	1.36	1.02
11:K:86:VAL:HG13	11:K:136:TYR:HB3	1.40	1.02

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:XA:25:GLY:HA3	50:XA:46:HIS:HB2	1.35	1.02
29:CA:47:ALA:H	39:MA:77:PRO:HG3	1.23	1.02
1:A:71:A:H2'	1:A:72:A:H4'	1.41	1.01
82:DC:143:LEU:HD11	82:DC:185:VAL:HG13	1.40	1.01
2:B:2532:U:H3'	2:B:2533:G:H5''	1.42	1.01
1:A:1429:G:H1'	70:RB:74:GLU:HG2	1.43	1.00
5:E:127:GLN:HA	5:E:130:LYS:HE2	1.43	1.00
53:AB:11:LEU:HD12	70:RB:86:ILE:HG12	1.39	1.00
59:GB:109:LEU:HB2	59:GB:146:PHE:HB3	1.44	1.00
6:F:49:VAL:HG11	6:F:60:LYS:HE3	1.41	1.00
9:I:33:ARG:HE	9:I:37:VAL:HG21	1.26	1.00
25:Y:39:ILE:HD12	25:Y:102:ARG:HB2	1.38	1.00
74:VB:8:ARG:HB2	74:VB:26:ASP:HB3	1.44	1.00
2:B:1054:A:H5''	2:B:2637:A:H61	1.26	1.00
2:B:2674:A:H5''	15:O:105:GLY:HA3	1.44	1.00
63:KB:98:VAL:HB	63:KB:115:LEU:HD23	1.42	1.00
2:B:2465:G:H5''	5:E:105:LYS:HA	1.44	1.00
7:G:58:ARG:HG3	7:G:72:VAL:HG23	1.40	0.99
29:CA:107:VAL:HG11	29:CA:124:VAL:HG12	1.41	0.99
11:K:61:ASN:HA	11:K:64:GLN:HB3	1.44	0.99
13:M:100:ASN:HD22	13:M:115:ARG:HB2	1.24	0.99
23:W:23:TRP:HB3	23:W:51:VAL:HG22	1.44	0.99
32:FA:71:PRO:HB2	32:FA:109:TYR:HA	1.44	0.99
72:TB:6:VAL:HG13	72:TB:29:PRO:HD2	1.45	0.99
2:B:1336:U:H2'	2:B:1337:A:H8	1.27	0.99
2:B:1336:U:H2'	2:B:1337:A:C8	1.98	0.99
3:C:142:C:H4'	19:S:60:VAL:HG21	1.44	0.99
2:B:199:A:H3'	30:DA:60:ARG:HE	1.26	0.98
14:N:159:PHE:HB3	14:N:163:GLN:HE22	1.26	0.98
82:DC:378:LEU:HD22	82:DC:411:VAL:HG21	1.41	0.98
60:HB:86:ILE:HG23	60:HB:87:VAL:H	1.26	0.98
37:KA:17:GLN:HB3	37:KA:24:ASN:HB3	1.46	0.98
26:Z:99:LYS:HB2	26:Z:102:GLU:HB2	1.46	0.98
76:XB:87:ARG:HH22	76:XB:94:ASN:HD22	1.02	0.98
1:A:1749:A:H5''	45:SA:16:LYS:HE3	1.43	0.98
59:GB:110:GLN:HE22	59:GB:125:ALA:HB3	1.29	0.98
49:WA:45:TRP:HB3	49:WA:57:PRO:HA	1.44	0.98
82:DC:728:VAL:HG21	82:DC:802:SER:HB2	1.45	0.98
66:NB:69:VAL:HG13	66:NB:81:ILE:HG23	1.46	0.98
16:P:102:GLY:HA3	16:P:140:GLY:H	1.29	0.98
76:XB:84:VAL:HG13	76:XB:85:ARG:H	1.29	0.98

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
83:EC:6941:U:H3'	83:EC:6942:A:C5'	1.93	0.97
12:L:139:VAL:HA	12:L:142:LEU:HD12	1.46	0.97
83:EC:6934:U:C2'	83:EC:6935:G:H4'	1.94	0.97
34:HA:73:GLY:H	34:HA:76:GLU:HB2	1.29	0.97
58:FB:48:THR:HG21	58:FB:54:LYS:HG3	1.43	0.97
1:A:1485:C:H2'	1:A:1486:G:H4'	1.46	0.97
5:E:207:LYS:HB3	5:E:213:ALA:HA	1.42	0.97
2:B:2922:G:H1'	2:B:2951:G:H21	1.25	0.97
11:K:60:ARG:HA	11:K:60:ARG:HH11	1.30	0.97
11:K:155:LYS:HE3	11:K:158:LYS:H	1.28	0.97
2:B:2611:U:H2'	2:B:2612:U:C6	1.98	0.97
38:LA:54:ILE:HG13	38:LA:78:GLY:HA2	1.45	0.97
2:B:3206:C:H1'	24:X:155:ARG:HH22	1.28	0.97
11:K:179:LEU:HD23	11:K:180:SER:H	1.26	0.97
73:UB:53:VAL:HA	73:UB:74:VAL:HG22	1.47	0.97
48:VA:119:ILE:HG13	48:VA:159:VAL:HG12	1.47	0.97
1:A:1073:G:H2'	1:A:1074:G:H5''	1.44	0.96
2:B:2129:U:H2'	2:B:2130:G:C8	1.99	0.96
82:DC:490:GLN:HB3	82:DC:559:PRO:HG3	1.45	0.96
32:FA:123:VAL:H	32:FA:143:GLY:HA2	1.30	0.96
50:XA:84:ARG:HB3	50:XA:84:ARG:HH11	1.30	0.96
6:F:54:ARG:HE	6:F:58:LEU:HD21	1.30	0.96
2:B:2434:U:H6	2:B:2593:A:HO2'	1.13	0.96
2:B:2775:U:H1'	32:FA:58:MET:SD	2.06	0.96
13:M:41:ILE:HD11	13:M:67:ALA:HB1	1.47	0.96
2:B:1064:A:H62	2:B:1096:U:H3	0.99	0.96
2:B:1934:G:H2'	2:B:1935:G:H5''	1.48	0.96
1:A:754:A:H3'	1:A:755:A:C5'	1.94	0.96
61:IB:2:SER:HB3	61:IB:82:ARG:H	1.30	0.96
15:O:65:ILE:HG23	15:O:66:ALA:H	1.28	0.96
1:A:138:A:N6	1:A:266:A:H61	1.63	0.96
47:UA:38:ASP:HA	47:UA:45:LYS:HA	1.45	0.96
1:A:1214:U:H4'	1:A:1246:C:H4'	1.46	0.96
2:B:1682:U:H3'	26:Z:85:LYS:HE2	1.43	0.95
8:H:346:LYS:HD3	8:H:346:LYS:H	1.27	0.95
50:XA:184:LEU:HA	71:SB:43:GLY:HA2	1.43	0.95
54:BB:238:LEU:HD12	54:BB:238:LEU:H	1.31	0.95
78:ZB:12:VAL:HA	78:ZB:30:VAL:HG12	1.49	0.95
1:A:495:C:H3'	1:A:496:G:H4'	1.45	0.95
59:GB:77:ILE:HA	59:GB:80:LEU:HD12	1.46	0.95
11:K:224:ILE:HD13	24:X:39:SER:HB2	1.45	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:3185:U:H5''	13:M:23:ARG:HH22	1.29	0.95
31:EA:16:GLY:HA2	38:LA:74:ARG:HG3	1.46	0.95
2:B:583:G:H5''	10:J:82:ARG:HH12	1.32	0.95
63:KB:92:ILE:HG12	63:KB:122:ILE:HD13	1.45	0.95
50:XA:189:VAL:HG13	50:XA:190:ASP:H	1.28	0.95
50:XA:50:VAL:HG23	67:OB:109:LEU:HD21	1.49	0.95
6:F:144:ASN:HB3	6:F:160:SER:H	1.32	0.95
2:B:600:G:H21	2:B:603:A:H62	1.15	0.95
2:B:984:G:H22	33:GA:13:THR:HB	1.30	0.95
11:K:88:ARG:HD2	11:K:103:LEU:HD13	1.49	0.95
49:WA:152:SER:H	49:WA:173:GLY:HA2	1.31	0.95
1:A:1792:G:H3'	1:A:1793:G:H5''	1.47	0.95
2:B:1494:U:C4'	2:B:1495:U:H5'	1.97	0.95
61:IB:72:THR:HG22	61:IB:124:THR:HA	1.48	0.95
55:CB:86:GLN:HE22	78:ZB:49:ARG:HH22	1.13	0.94
1:A:515:A:H62	1:A:537:G:H21	1.04	0.94
1:A:1642:G:H5'	45:SA:1:MET:HG3	1.45	0.94
76:XB:36:ILE:HG23	76:XB:73:TYR:HB2	1.48	0.94
1:A:540:G:H4'	1:A:541:A:H2'	1.50	0.94
2:B:1268:G:H21	2:B:1273:A:H62	1.13	0.94
6:F:135:ILE:HD12	6:F:135:ILE:H	1.32	0.94
38:LA:3:GLN:HG2	38:LA:30:LEU:H	1.31	0.94
2:B:1899:G:H5''	27:AA:20:GLY:O	1.65	0.94
30:DA:43:TYR:HA	30:DA:125:LYS:HG2	1.49	0.94
61:IB:133:LYS:HD3	61:IB:134:THR:HG23	1.45	0.94
2:B:2536:A:H3'	2:B:2537:U:H5''	1.48	0.94
1:A:1769:U:O2'	1:A:1770:U:H5'	1.67	0.94
3:C:36:G:H3'	39:MA:86:ARG:HD2	1.49	0.94
21:U:166:VAL:HG22	21:U:168:LEU:HD11	1.49	0.94
2:B:185:C:H5'	30:DA:121:ARG:HE	1.33	0.94
2:B:629:U:H2'	2:B:630:A:C8	2.03	0.94
3:C:81:U:H4'	3:C:82:U:H5'	1.47	0.94
82:DC:203:TYR:HB2	82:DC:206:ARG:HB2	1.50	0.94
11:K:224:ILE:HD11	24:X:35:VAL:HG12	1.50	0.94
2:B:2724:U:H5''	25:Y:54:HIS:ND1	1.82	0.94
2:B:3334:U:H4'	2:B:3335:A:H5''	1.49	0.94
8:H:114:ASN:HB2	8:H:117:GLU:HB3	1.49	0.94
72:TB:24:GLN:HG2	77:YB:5:GLN:H	1.30	0.94
83:EC:6941:U:H3'	83:EC:6942:A:H5''	1.49	0.93
6:F:92:LYS:HG2	6:F:103:PRO:HD2	1.47	0.93
77:YB:33:LEU:HD23	77:YB:79:PHE:HB2	1.50	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1266:U:H2'	1:A:1267:G:H8	1.32	0.93
2:B:1604:G:C2'	2:B:1605:A:H5''	1.98	0.93
16:P:123:ARG:HH22	48:VA:42:ARG:HB2	1.28	0.93
2:B:2503:G:H3'	2:B:2504:U:H5''	1.50	0.93
3:C:40:A:H2'	3:C:41:A:C8	2.04	0.93
49:WA:42:LEU:HD13	49:WA:61:PHE:HB2	1.50	0.93
2:B:1524:A:H5''	29:CA:92:LYS:HZ1	1.31	0.93
38:LA:54:ILE:HD12	38:LA:71:THR:HA	1.49	0.93
48:VA:172:LEU:HA	48:VA:175:LEU:HD12	1.47	0.93
1:A:329:G:H5''	58:FB:98:LYS:HB2	1.48	0.93
34:HA:74:ASN:HD21	47:UA:43:GLY:HA3	1.30	0.93
10:J:79:VAL:HG22	10:J:80:ASN:H	1.33	0.93
7:G:17:LEU:HG	7:G:18:PRO:HA	1.50	0.93
64:LB:24:ASN:H	64:LB:55:SER:HB3	1.32	0.93
20:T:43:ILE:HB	20:T:136:THR:HB	1.49	0.93
2:B:2108:C:H1'	2:B:3344:A:H8	1.34	0.93
2:B:2149:A:H4'	6:F:179:LEU:HB3	1.51	0.93
82:DC:369:ILE:HG23	82:DC:401:PHE:HB3	1.51	0.93
65:MB:118:GLU:HG2	68:PB:122:HIS:HB3	1.48	0.93
77:YB:56:CYS:HB3	77:YB:60:SER:HA	1.51	0.93
7:G:303:LYS:HD2	7:G:361:THR:HG21	1.49	0.93
2:B:40:A:H5''	32:FA:35:ALA:HB1	1.48	0.92
19:S:47:LYS:HG3	19:S:51:LEU:HD11	1.51	0.92
58:FB:37:LYS:HB2	58:FB:59:ARG:HG2	1.52	0.92
50:XA:146:LEU:HA	50:XA:160:ILE:HG13	1.52	0.92
56:DB:81:VAL:HG22	56:DB:82:SER:H	1.35	0.92
2:B:1281:G:H5'	48:VA:55:LYS:HB3	1.47	0.92
2:B:1302:A:H2'	2:B:1303:A:H5''	1.52	0.92
2:B:3355:U:H3'	2:B:3356:G:C5'	1.99	0.92
80:BC:54:ARG:HD3	80:BC:54:ARG:H	1.35	0.92
1:A:975:C:H4'	63:KB:109:LYS:HB3	1.51	0.92
2:B:2915:U:H5''	2:B:2916:U:H5'	1.50	0.92
2:B:352:A:H61	2:B:365:A:H5''	1.31	0.92
40:NA:26:ILE:HD12	40:NA:26:ILE:H	1.33	0.92
73:UB:93:LEU:HA	73:UB:96:VAL:HG22	1.51	0.92
2:B:3120:C:H3'	44:RA:111:ARG:HH21	1.31	0.92
30:DA:32:SER:HA	30:DA:49:PRO:HA	1.51	0.92
43:QA:47:THR:HG22	43:QA:48:LYS:H	1.33	0.92
3:C:75:G:H1'	43:QA:29:LEU:HG	1.49	0.92
61:IB:122:ILE:HB	61:IB:143:SER:HB2	1.52	0.92
12:L:98:ARG:HD3	12:L:189:LEU:HA	1.52	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:R:123:LEU:HB3	20:T:194:LEU:HD21	1.50	0.92
70:RB:45:ALA:HB1	70:RB:50:LEU:HD11	1.50	0.92
51:YA:111:ARG:HB3	76:XB:68:TYR:HB2	1.51	0.92
51:YA:180:THR:HG22	51:YA:181:LEU:HD13	1.52	0.92
6:F:242:ARG:HD3	6:F:243:THR:H	1.34	0.91
24:X:42:TRP:CD1	24:X:53:LYS:HG3	2.05	0.91
2:B:2356:A:H61	2:B:2983:C:H5	1.07	0.91
39:MA:55:LEU:HD23	39:MA:55:LEU:H	1.36	0.91
20:T:136:THR:HG22	20:T:137:THR:H	1.32	0.91
1:A:1291:G:H22	1:A:1324:G:H1	1.17	0.91
2:B:3184:A:H2'	2:B:3185:U:H5'	1.50	0.91
82:DC:143:LEU:HD13	82:DC:188:ILE:HD13	1.50	0.91
46:TA:72:LEU:HD11	46:TA:83:LEU:HD12	1.52	0.91
49:WA:168:THR:HG23	49:WA:181:TRP:O	1.69	0.91
51:YA:127:VAL:HB	51:YA:173:THR:HG22	1.52	0.91
82:DC:171:LYS:HE2	82:DC:279:ASP:HA	1.52	0.91
36:JA:20:HIS:HB2	36:JA:50:ILE:HD11	1.51	0.91
18:R:17:VAL:HG11	18:R:74:ARG:HA	1.53	0.91
19:S:73:ARG:HB2	19:S:92:LEU:HD22	1.53	0.91
2:B:2736:A:H2'	2:B:2737:C:H5''	1.52	0.91
82:DC:400:VAL:HG11	82:DC:403:GLY:O	1.71	0.91
1:A:320:U:H3'	1:A:321:C:H5''	1.53	0.91
2:B:2761:G:H1	2:B:2795:U:H3'	1.35	0.91
2:B:3163:A:H2'	2:B:3164:C:H5''	1.50	0.91
63:KB:4:MET:HG3	63:KB:5:HIS:H	1.36	0.91
18:R:35:ILE:HA	18:R:46:ILE:HA	1.53	0.91
21:U:95:LEU:HD21	21:U:148:LEU:HD21	1.53	0.91
2:B:1447:G:N2	2:B:2355:G:H2'	1.85	0.91
28:BA:1:MET:HB2	28:BA:15:PRO:HG2	1.53	0.91
76:XB:44:ILE:H	76:XB:44:ILE:HD12	1.34	0.91
2:B:2882:U:H2'	2:B:2883:U:C6	2.06	0.91
38:LA:29:ILE:HD13	38:LA:29:ILE:H	1.33	0.91
82:DC:220:PHE:HB3	82:DC:328:LEU:HD13	1.53	0.91
1:A:1558:U:H4'	68:PB:134:ARG:HA	1.52	0.91
1:A:472:U:H2'	1:A:473:A:H8	1.35	0.90
2:B:878:G:H1'	2:B:880:G:H21	1.34	0.90
73:UB:54:LEU:HD11	73:UB:75:GLN:HG3	1.51	0.90
71:SB:34:ILE:HB	71:SB:53:TYR:HB2	1.51	0.90
51:YA:185:THR:HA	51:YA:188:LEU:HB2	1.51	0.90
83:EC:6869:C:H2'	83:EC:6870:A:H5'	1.50	0.90
27:AA:54:LEU:HD11	27:AA:119:GLY:HA3	1.53	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:211:A:H3'	8:H:221:ASN:HD21	1.35	0.90
54:BB:42:LEU:HD21	54:BB:47:PHE:HB2	1.53	0.90
82:DC:725:GLN:HE21	82:DC:801:TRP:HB2	1.35	0.90
8:H:23:PRO:HB3	8:H:259:ASP:HA	1.50	0.90
65:MB:20:VAL:HG13	65:MB:24:LYS:HD2	1.53	0.90
14:N:20:SER:H	14:N:23:ASN:HB3	1.35	0.90
2:B:634:C:H5''	37:KA:21:ARG:HD3	1.54	0.90
6:F:116:VAL:HG22	6:F:117:GLU:H	1.37	0.90
6:F:32:LEU:HB2	6:F:163:ARG:NE	1.87	0.90
36:JA:11:LYS:HD2	36:JA:14:THR:HG22	1.50	0.90
14:N:170:LYS:HA	14:N:177:ASP:HA	1.51	0.90
1:A:1601:G:H1	69:QB:88:VAL:HG22	1.36	0.90
20:T:108:ILE:HD12	20:T:160:ARG:NH1	1.86	0.90
82:DC:230:ALA:HB2	82:DC:237:LYS:HB3	1.54	0.90
2:B:2895:G:H5''	44:RA:102:ARG:HH21	1.35	0.90
6:F:129:ALA:H	6:F:169:ILE:HD12	1.37	0.90
2:B:269:G:N2	2:B:294:U:H2'	1.86	0.90
2:B:707:U:H2'	2:B:708:G:H5''	1.51	0.90
2:B:821:U:H2'	2:B:822:G:C8	2.06	0.90
54:BB:23:LEU:HD22	54:BB:24:SER:H	1.37	0.90
1:A:504:U:H2'	1:A:505:A:H4'	1.53	0.90
6:F:22:LEU:HD12	6:F:22:LEU:H	1.37	0.90
34:HA:51:LEU:HD13	38:LA:91:ARG:HG3	1.53	0.90
2:B:1662:G:H4'	23:W:92:GLN:HE22	1.35	0.90
57:EB:74:GLN:HE21	57:EB:78:THR:HG23	1.36	0.89
2:B:1750:A:H4'	2:B:1751:G:H5'	1.54	0.89
2:B:126:U:H4'	19:S:139:HIS:HE1	1.37	0.89
2:B:39:A:H5''	32:FA:35:ALA:HB2	1.53	0.89
11:K:98:LYS:HB3	11:K:99:PRO:HD3	1.53	0.89
66:NB:93:HIS:HA	66:NB:97:VAL:HB	1.55	0.89
75:WB:83:LEU:HB2	75:WB:89:ILE:HG12	1.54	0.89
9:I:231:ILE:HG21	9:I:239:ILE:HD11	1.53	0.89
14:N:77:THR:HG22	14:N:82:ARG:HB3	1.54	0.89
69:QB:39:THR:HA	69:QB:100:ILE:HG13	1.53	0.89
49:WA:117:LYS:H	49:WA:117:LYS:HD2	1.37	0.89
1:A:386:G:H5''	58:FB:23:LYS:HE2	1.54	0.89
8:H:209:TYR:CE2	8:H:212:ASP:HB2	2.08	0.89
19:S:139:HIS:HB3	19:S:142:ILE:HD13	1.54	0.89
57:EB:185:ILE:HD13	57:EB:185:ILE:H	1.35	0.89
2:B:268:A:H61	2:B:295:A:H3'	1.36	0.89
2:B:700:C:H2'	2:B:701:G:H8	1.38	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:K:44:ILE:HG12	11:K:180:SER:HB3	1.52	0.89
1:A:632:U:H4'	73:UB:11:SER:HB3	1.53	0.89
2:B:155:G:H5'	2:B:157:A:H1'	1.55	0.89
2:B:1952:G:H2'	2:B:1953:G:H4'	1.55	0.89
25:Y:136:ARG:HB2	25:Y:139:ARG:HH22	1.38	0.89
29:CA:90:ALA:HB1	29:CA:95:ILE:HD11	1.54	0.89
10:J:146:ILE:HA	10:J:149:ILE:HD12	1.55	0.89
2:B:1594:A:H1'	2:B:1615:C:H1'	1.54	0.88
2:B:523:A:H2'	2:B:524:U:H5'	1.55	0.88
7:G:73:VAL:HG21	27:AA:90:GLY:HA2	1.54	0.88
12:L:158:ASP:HB3	12:L:159:PRO:HD3	1.55	0.88
14:N:189:GLU:HG2	14:N:200:LEU:HD23	1.55	0.88
74:VB:83:LYS:HE2	74:VB:96:LEU:HD23	1.53	0.88
77:YB:61:THR:HG23	77:YB:62:ILE:H	1.37	0.88
2:B:3369:G:H5''	28:BA:56:ARG:HH21	1.37	0.88
8:H:222:VAL:CG1	8:H:225:VAL:HB	2.03	0.88
26:Z:72:SER:HB2	26:Z:75:TYR:HB2	1.56	0.88
2:B:1460:A:H2'	2:B:1461:A:C8	2.09	0.88
54:BB:161:LYS:HB3	54:BB:171:ASP:HB3	1.54	0.88
82:DC:69:THR:OG1	82:DC:106:PRO:HB3	1.72	0.88
6:F:135:ILE:HD13	6:F:149:ARG:HD2	1.53	0.88
50:XA:76:ILE:HB	50:XA:123:VAL:HG22	1.55	0.88
2:B:1628:C:H5''	2:B:1629:U:H3'	1.54	0.88
36:JA:82:LEU:HD22	36:JA:117:ILE:HD13	1.55	0.88
24:X:24:LEU:HD12	25:Y:146:ASN:HB3	1.53	0.88
1:A:628:G:H21	1:A:971:A:H62	1.17	0.88
2:B:2615:G:H2'	2:B:2616:C:H6	1.39	0.88
82:DC:152:LYS:HD3	82:DC:153:PRO:HD2	1.54	0.88
83:EC:6912:G:H2'	83:EC:6913:U:O4'	1.74	0.88
78:ZB:10:ALA:HA	78:ZB:32:PHE:HA	1.54	0.88
1:A:777:C:H2'	1:A:778:G:H5''	1.54	0.88
2:B:2960:C:H2'	2:B:2961:G:H8	1.38	0.88
2:B:361:A:H5''	41:OA:36:SER:HB2	1.54	0.88
30:DA:28:ARG:O	30:DA:28:ARG:HD3	1.74	0.88
35:IA:79:ARG:HH12	35:IA:81:GLU:HB2	1.37	0.88
63:KB:88:LEU:HD23	63:KB:125:LEU:HD12	1.54	0.88
2:B:685:G:H5''	17:Q:39:ARG:HH12	1.39	0.88
52:ZA:137:ILE:HG13	52:ZA:138:PRO:HD2	1.53	0.88
82:DC:17:THR:HA	82:DC:346:VAL:HG21	1.56	0.88
29:CA:110:VAL:HG22	29:CA:124:VAL:HG13	1.54	0.88
82:DC:126:LEU:HA	82:DC:154:VAL:HB	1.54	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:315:GLU:HA	82:DC:319:LEU:HD13	1.56	0.88
9:I:65:ILE:HG21	9:I:72:ASP:HB3	1.55	0.88
59:GB:36:LEU:HD13	59:GB:42:ILE:HG12	1.52	0.87
70:RB:62:VAL:HG22	70:RB:85:ARG:HG3	1.54	0.87
73:UB:57:LEU:HD11	73:UB:73:ARG:HB2	1.56	0.87
24:X:74:ASN:HA	24:X:95:ARG:HG3	1.56	0.87
1:A:1477:G:H5''	69:QB:45:MET:O	1.73	0.87
2:B:374:A:N3	2:B:376:G:H5''	1.89	0.87
48:VA:145:ILE:HB	82:DC:201:GLN:NE2	1.88	0.87
17:Q:3:ILE:HG12	32:FA:34:MET:HE1	1.56	0.87
1:A:1315:U:H5''	1:A:1329:A:C2	2.10	0.87
2:B:1687:U:H3	26:Z:70:LYS:HD2	1.40	0.87
56:DB:147:LEU:HB3	56:DB:151:ASP:HB2	1.54	0.87
32:FA:74:ASN:HD22	32:FA:115:LYS:HB2	1.39	0.87
2:B:1233:G:H5'	48:VA:36:GLN:HE22	1.38	0.87
1:A:1558:U:H5''	68:PB:134:ARG:HD3	1.55	0.87
1:A:448:C:H5'	54:BB:29:PRO:HG3	1.53	0.87
2:B:2985:C:H2'	2:B:2986:U:C6	2.10	0.87
12:L:154:ALA:HB1	12:L:183:LYS:HB3	1.57	0.87
39:MA:51:ILE:O	39:MA:54:VAL:HB	1.75	0.87
25:Y:124:VAL:HG12	25:Y:125:ALA:H	1.40	0.87
2:B:3006:A:H2'	2:B:3007:U:O4'	1.74	0.87
82:DC:369:ILE:HD11	82:DC:379:MET:HG3	1.56	0.87
82:DC:677:PHE:HB3	82:DC:819:VAL:HG13	1.55	0.87
22:V:132:PRO:HD2	22:V:135:GLN:HE21	1.35	0.87
2:B:2700:G:H5''	25:Y:17:ARG:HD3	1.55	0.87
82:DC:329:PRO:HB2	82:DC:332:ASP:HB2	1.55	0.87
5:E:4:ILE:HD13	5:E:4:ILE:H	1.40	0.87
9:I:103:LEU:HD13	9:I:169:GLY:HA2	1.56	0.87
48:VA:73:PHE:HA	48:VA:76:LEU:HD12	1.56	0.87
82:DC:508:LEU:HD11	82:DC:528:HIS:HB3	1.56	0.87
8:H:205:PRO:HB3	8:H:247:PHE:HB3	1.56	0.87
71:SB:36:VAL:HB	71:SB:51:VAL:HB	1.56	0.87
2:B:1892:G:H2'	2:B:1893:A:H5''	1.54	0.87
2:B:3112:G:O6	2:B:3119:U:H3'	1.75	0.87
5:E:119:GLN:HA	5:E:122:ARG:HB3	1.57	0.87
7:G:106:TRP:HB2	7:G:133:TYR:HE2	1.38	0.87
61:IB:125:VAL:HG12	61:IB:139:VAL:HA	1.56	0.87
2:B:1234:G:N3	16:P:132:ILE:HG12	1.90	0.87
56:DB:2:LYS:O	56:DB:108:VAL:HA	1.73	0.87
41:OA:28:HIS:CE1	41:OA:30:GLN:HB2	2.09	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1501:U:H3	2:B:1515:A:H61	1.21	0.86
2:B:661:G:H4'	2:B:662:U:C6	2.10	0.86
83:EC:6822:U:H3'	83:EC:6823:U:H5''	1.56	0.86
8:H:244:LEU:HD12	8:H:244:LEU:H	1.40	0.86
65:MB:37:ALA:HB1	65:MB:38:PRO:HD2	1.56	0.86
12:L:149:LYS:HG2	12:L:201:THR:HG22	1.57	0.86
17:Q:170:LEU:HG	32:FA:147:LEU:HD13	1.55	0.86
48:VA:56:ASN:HA	48:VA:59:VAL:HG23	1.56	0.86
2:B:2626:A:C4	2:B:2644:C:H5'	2.11	0.86
2:B:931:C:H3'	2:B:932:U:H2'	1.54	0.86
82:DC:342:LEU:HD22	82:DC:343:PRO:HD2	1.55	0.86
1:A:1185:U:H5	65:MB:123:TYR:HB2	1.40	0.86
2:B:637:C:H2'	2:B:638:C:C6	2.10	0.86
55:CB:128:ASN:HD22	55:CB:129:PRO:HD2	1.40	0.86
38:LA:5:VAL:HG21	38:LA:32:ALA:N	1.90	0.86
71:SB:17:CYS:HB3	71:SB:22:ARG:H	1.40	0.86
72:TB:51:GLU:HB3	72:TB:62:VAL:HB	1.56	0.86
49:WA:181:TRP:HA	49:WA:188:ILE:HA	1.57	0.86
2:B:1916:U:H4'	23:W:85:ARG:HD3	1.54	0.86
2:B:2271:A:H2'	2:B:2272:G:H4'	1.58	0.86
6:F:104:LEU:HD21	6:F:136:ILE:HG12	1.57	0.86
13:M:172:ILE:HB	44:RA:90:ASN:HD22	1.38	0.86
27:AA:17:LEU:HB2	27:AA:52:ALA:HB3	1.57	0.86
2:B:3355:U:C3'	2:B:3356:G:H5''	2.05	0.86
3:C:40:A:H2'	3:C:41:A:H8	1.37	0.86
34:HA:77:LEU:HD21	34:HA:90:VAL:HG23	1.54	0.86
66:NB:90:VAL:HB	66:NB:102:LYS:HE3	1.58	0.86
21:U:13:LYS:HB3	21:U:152:GLU:HB2	1.55	0.86
1:A:1473:U:H5''	55:CB:190:ILE:HD11	1.56	0.86
2:B:2490:C:H4'	2:B:2491:A:H5'	1.54	0.86
11:K:224:ILE:HG23	24:X:36:ILE:HG23	1.54	0.86
1:A:1401:A:H3'	1:A:1402:G:H5''	1.55	0.86
55:CB:122:ASN:O	55:CB:126:ASP:HA	1.76	0.86
58:FB:104:ILE:HD13	58:FB:167:ALA:HB2	1.57	0.86
2:B:212:G:H5'	8:H:221:ASN:OD1	1.75	0.86
9:I:200:PHE:HB3	9:I:237:GLU:HG3	1.55	0.86
63:KB:22:ALA:HB1	63:KB:23:PRO:HA	1.55	0.86
65:MB:63:ALA:HB1	65:MB:74:ALA:HB3	1.58	0.86
51:YA:82:ARG:HH22	51:YA:189:ILE:HA	1.41	0.86
2:B:1879:A:H3'	2:B:1880:U:H5'	1.58	0.86
2:B:3037:U:H2'	2:B:3038:U:C6	2.11	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:117:GLU:HA	6:F:125:ALA:HB3	1.58	0.86
58:FB:78:ILE:HD12	58:FB:78:ILE:H	1.39	0.86
15:O:60:ARG:HD2	46:TA:103:ALA:HB1	1.54	0.86
2:B:1805:C:H2'	2:B:1806:A:C8	2.11	0.86
2:B:1110:U:H2'	2:B:1111:U:C6	2.10	0.85
2:B:2738:A:H5''	33:GA:38:LYS:HE3	1.58	0.85
31:EA:92:PHE:HA	31:EA:95:VAL:HB	1.58	0.85
59:GB:171:ARG:NH1	59:GB:174:ARG:HG3	1.91	0.85
41:OA:34:CYS:SG	41:OA:37:CYS:HB3	2.16	0.85
23:W:44:LEU:HA	23:W:47:ASN:HD21	1.39	0.85
14:N:168:SER:HA	25:Y:160:ILE:HG23	1.57	0.85
1:A:330:G:H5'	58:FB:97:THR:HG22	1.58	0.85
1:A:690:G:H2'	1:A:691:C:H5''	1.57	0.85
2:B:1007:U:H3	2:B:1043:C:H42	1.22	0.85
54:BB:89:VAL:HG11	54:BB:119:ALA:HA	1.58	0.85
82:DC:217:GLY:HA3	82:DC:325:ARG:NH1	1.91	0.85
75:WB:93:SER:HB3	75:WB:99:ALA:HA	1.57	0.85
2:B:2774:C:H2'	2:B:2775:U:C6	2.11	0.85
11:K:156:ILE:HG13	11:K:161:VAL:HG21	1.56	0.85
52:ZA:237:VAL:HG22	71:SB:52:THR:HG21	1.59	0.85
1:A:1407:U:H2'	1:A:1408:G:C8	2.12	0.85
7:G:252:ILE:CG2	7:G:264:VAL:HG21	2.03	0.85
40:NA:57:LEU:HA	40:NA:60:LEU:HB2	1.57	0.85
40:NA:60:LEU:HD13	40:NA:68:ARG:HD2	1.58	0.85
2:B:1146:C:H2'	2:B:1147:G:C8	2.10	0.85
5:E:97:LYS:HE2	5:E:101:LYS:HD2	1.59	0.85
2:B:792:G:H5''	32:FA:2:PRO:HG3	1.58	0.85
1:A:980:G:C4'	1:A:1776:A:H4'	2.06	0.85
2:B:2647:A:H1'	14:N:22:TYR:CD2	2.12	0.85
2:B:3313:U:H5'	7:G:175:LYS:HD2	1.58	0.85
5:E:119:GLN:HG3	5:E:122:ARG:HD2	1.57	0.85
34:HA:39:SER:HA	34:HA:93:LEU:HA	1.56	0.85
17:Q:59:ARG:HD3	17:Q:66:ASN:O	1.76	0.85
19:S:49:ARG:HB2	19:S:49:ARG:NH1	1.91	0.85
76:XB:7:SER:HA	76:XB:13:LYS:HE2	1.56	0.85
2:B:1044:U:H2'	2:B:1045:C:H5''	1.58	0.85
2:B:44:U:H3	2:B:94:G:H1	1.25	0.85
13:M:188:THR:OG1	13:M:191:LEU:HB2	1.77	0.85
13:M:115:ARG:HG3	13:M:123:ILE:HG23	1.59	0.85
2:B:19:U:H5''	39:MA:90:ARG:HD2	1.58	0.85
82:DC:437:MET:HA	82:DC:442:VAL:HG12	1.58	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
61:IB:78:THR:HA	61:IB:84:ILE:HG22	1.57	0.85
12:L:190:VAL:HG13	12:L:192:GLN:H	1.41	0.85
74:VB:55:VAL:HG22	74:VB:75:VAL:HG23	1.56	0.85
1:A:885:G:H2'	1:A:886:U:C6	2.10	0.85
7:G:141:GLY:HA2	7:G:144:ILE:HD13	1.59	0.84
12:L:76:ALA:HB1	12:L:234:GLY:HA3	1.59	0.84
1:A:75:U:H3'	1:A:76:A:H5''	1.58	0.84
2:B:279:U:H2'	2:B:280:U:O4'	1.77	0.84
1:A:765:G:C6	59:GB:149:ARG:HB3	2.12	0.84
40:NA:56:ARG:HG2	40:NA:60:LEU:HD23	1.59	0.84
75:WB:71:ILE:HD12	75:WB:71:ILE:H	1.42	0.84
7:G:356:LEU:H	7:G:356:LEU:HD23	1.42	0.84
14:N:150:GLU:O	14:N:154:ARG:HB2	1.77	0.84
41:OA:53:ALA:HA	41:OA:56:ARG:NH1	1.92	0.84
16:P:133:LEU:HA	16:P:137:GLN:CG	2.07	0.84
72:TB:86:ILE:HA	72:TB:89:TRP:HB2	1.60	0.84
2:B:1324:U:H5''	24:X:2:ALA:HA	1.59	0.84
2:B:117:U:H1'	2:B:119:U:OP2	1.77	0.84
2:B:1410:U:H4'	36:JA:75:LEU:HD11	1.58	0.84
2:B:2765:C:H4'	46:TA:39:GLY:CA	2.06	0.84
2:B:584:G:H2'	2:B:585:A:C8	2.12	0.84
57:EB:129:LEU:HD21	57:EB:172:VAL:HG11	1.59	0.84
37:KA:45:LEU:HA	37:KA:71:VAL:HG11	1.59	0.84
11:K:79:ALA:N	25:Y:138:SER:HB3	1.91	0.84
2:B:2655:U:H2'	46:TA:3:ASN:HD22	1.43	0.84
12:L:143:ILE:HG21	12:L:169:LEU:HB3	1.59	0.84
67:OB:41:ILE:HG22	67:OB:42:GLN:H	1.41	0.84
2:B:1282:G:H5'	48:VA:83:ASN:HD22	1.41	0.84
82:DC:569:SER:OG	82:DC:721:ASP:HB3	1.77	0.84
7:G:219:ALA:HB2	7:G:336:VAL:HG13	1.58	0.84
9:I:33:ARG:NE	9:I:37:VAL:HG21	1.91	0.84
39:MA:100:VAL:HG22	39:MA:101:THR:H	1.39	0.84
67:OB:24:LEU:HG	67:OB:34:LEU:HD13	1.57	0.84
43:QA:21:ARG:NH1	43:QA:24:PRO:HG3	1.93	0.84
21:U:117:ILE:HD13	21:U:148:LEU:HB3	1.60	0.84
1:A:1357:A:H2'	1:A:1358:G:C8	2.13	0.84
49:WA:13:LEU:HB2	49:WA:310:ILE:HB	1.59	0.84
2:B:1706:C:H4'	2:B:1787:A:H4'	1.58	0.84
2:B:3298:C:H2'	2:B:3299:A:H8	1.43	0.84
2:B:951:A:N6	2:B:1369:A:H1'	1.93	0.84
6:F:136:ILE:HG13	6:F:148:VAL:HG12	1.58	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:K:83:LEU:HD11	11:K:116:PHE:HB3	1.57	0.84
1:A:710:U:H2'	1:A:711:U:H5'	1.58	0.84
2:B:1338:C:H4'	36:JA:60:ASN:HD22	1.42	0.84
82:DC:408:GLY:HA2	82:DC:431:ILE:O	1.76	0.84
2:B:1254:C:O4'	16:P:135:THR:HG21	1.77	0.84
24:X:42:TRP:HD1	24:X:53:LYS:HG3	1.42	0.84
80:BC:20:LYS:HE2	80:BC:20:LYS:HA	1.59	0.84
6:F:94:ALA:HB3	6:F:102:LEU:HD11	1.60	0.84
7:G:293:ASN:HB2	7:G:305:ILE:H	1.39	0.84
2:B:798:G:H4'	17:Q:15:ARG:HE	1.43	0.84
50:XA:143:VAL:O	50:XA:157:ASP:HB2	1.78	0.84
2:B:2953:U:H2'	2:B:2954:U:H2'	1.58	0.83
82:DC:594:ASP:HB3	82:DC:597:VAL:HG23	1.59	0.83
53:AB:137:VAL:HG13	53:AB:151:LYS:HG2	1.57	0.83
82:DC:353:ALA:HA	82:DC:356:LEU:HB2	1.58	0.83
57:EB:86:GLN:HG2	57:EB:87:ASP:H	1.43	0.83
2:B:2149:A:H5''	6:F:179:LEU:HD23	1.60	0.83
49:WA:112:SER:HB3	49:WA:153:GLN:HA	1.59	0.83
1:A:385:A:H2'	1:A:386:G:C8	2.13	0.83
2:B:3146:G:H4'	7:G:100:ARG:HD2	1.59	0.83
55:CB:208:SER:OG	55:CB:211:ILE:HG12	1.76	0.83
23:W:96:ILE:HG22	23:W:100:ARG:HH12	1.43	0.83
51:YA:196:GLU:HA	51:YA:199:ASN:HD22	1.43	0.83
2:B:2732:G:H5'	2:B:2761:G:H5''	1.60	0.83
82:DC:24:VAL:HG22	82:DC:102:LEU:HD11	1.58	0.83
5:E:65:ILE:HG22	5:E:109:ALA:HB3	1.61	0.83
2:B:1836:C:H41	43:QA:3:ALA:HB2	1.42	0.83
3:C:98:U:H2'	3:C:99:C:H5'	1.61	0.83
6:F:114:SER:HA	6:F:127:ALA:HB1	1.59	0.83
6:F:187:HIS:HA	6:F:190:ARG:HB3	1.61	0.83
11:K:189:ILE:HG23	11:K:190:THR:H	1.42	0.83
42:PA:8:ILE:H	42:PA:8:ILE:HD12	1.43	0.83
19:S:140:LYS:HB3	19:S:144:ARG:NH2	1.93	0.83
1:A:1681:A:H1'	56:DB:66:GLY:HA3	1.59	0.83
2:B:1121:U:H3	2:B:1137:C:H42	1.22	0.83
2:B:3129:A:H2'	2:B:3130:A:H5''	1.58	0.83
2:B:954:U:H1'	33:GA:12:GLN:HE21	1.42	0.83
12:L:75:ILE:HG22	12:L:76:ALA:H	1.42	0.83
65:MB:118:GLU:O	68:PB:122:HIS:HB2	1.78	0.83
68:PB:70:VAL:O	68:PB:74:GLN:HG2	1.78	0.83
2:B:1471:U:H4'	23:W:3:ASN:HA	1.61	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1036:A:H3'	2:B:1037:C:H5''	1.59	0.83
2:B:1494:U:H4'	2:B:1495:U:C5'	2.05	0.83
2:B:3190:C:H2'	2:B:3191:G:C8	2.14	0.83
82:DC:89:ILE:HG12	82:DC:340:LEU:HA	1.61	0.83
22:V:9:GLN:HE21	22:V:10:HIS:H	1.27	0.83
57:EB:126:LEU:HD13	57:EB:129:LEU:HD12	1.58	0.83
14:N:60:LEU:HG	14:N:129:VAL:HG21	1.61	0.83
71:SB:80:LYS:HD3	71:SB:81:ASN:HD22	1.44	0.83
72:TB:8:ALA:HA	72:TB:74:VAL:HG11	1.61	0.83
23:W:40:ALA:O	23:W:44:LEU:HD23	1.78	0.83
49:WA:42:LEU:HG	49:WA:68:VAL:HG11	1.60	0.83
32:FA:6:THR:HG22	32:FA:8:THR:H	1.44	0.83
43:QA:23:LEU:HD23	43:QA:38:ASN:HA	1.60	0.83
48:VA:165:VAL:HG21	48:VA:181:PHE:CE1	2.14	0.83
52:ZA:78:ASP:HA	52:ZA:104:VAL:HG12	1.59	0.83
2:B:1524:A:H5''	29:CA:92:LYS:NZ	1.93	0.83
3:C:139:U:H2'	3:C:140:G:H8	1.44	0.83
16:P:85:LEU:HD11	16:P:106:LEU:HD22	1.60	0.83
70:RB:99:ILE:HD12	70:RB:102:ARG:HD3	1.61	0.83
76:XB:73:TYR:HB3	76:XB:78:ALA:HB2	1.60	0.83
52:ZA:38:VAL:HG22	52:ZA:39:THR:H	1.42	0.83
2:B:1481:A:H61	38:LA:2:ALA:HA	1.41	0.82
56:DB:137:ARG:HD3	56:DB:177:ARG:HD3	1.59	0.82
56:DB:6:SER:HA	56:DB:13:GLN:HB3	1.60	0.82
82:DC:277:ILE:HG22	82:DC:281:ILE:HD11	1.61	0.82
68:PB:30:TYR:O	68:PB:33:THR:HG23	1.79	0.82
76:XB:87:ARG:NH2	76:XB:94:ASN:HD22	1.75	0.82
2:B:1048:A:H2'	14:N:22:TYR:CZ	2.14	0.82
2:B:2662:G:H2'	2:B:2663:G:C8	2.14	0.82
2:B:2730:G:H4'	22:V:184:PHE:CE2	2.14	0.82
80:BC:26:LYS:H	80:BC:26:LYS:HD3	1.44	0.82
82:DC:116:THR:HG21	82:DC:483:PHE:N	1.93	0.82
82:DC:600:ALA:HB1	82:DC:605:ILE:HB	1.61	0.82
32:FA:36:GLY:HA2	32:FA:39:HIS:HB2	1.61	0.82
18:R:123:LEU:HD22	20:T:194:LEU:HG	1.61	0.82
24:X:59:VAL:HG11	25:Y:141:VAL:HG21	1.60	0.82
1:A:1316:G:H4'	67:OB:10:LYS:HE3	1.59	0.82
2:B:79:U:H2'	2:B:80:G:H8	1.43	0.82
82:DC:75:ILE:HG23	82:DC:439:GLY:HA2	1.62	0.82
58:FB:102:VAL:HG11	58:FB:169:ILE:HD11	1.60	0.82
58:FB:8:ARG:HD3	58:FB:21:PHE:HB3	1.60	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:O:90:GLN:HB3	15:O:172:LEU:HD11	1.61	0.82
1:A:1788:G:C2'	1:A:1789:G:H5''	2.09	0.82
2:B:1220:U:H4'	2:B:1222:G:H1'	1.62	0.82
2:B:879:U:H4'	21:U:132:ALA:HB3	1.60	0.82
2:B:501:A:H4'	10:J:28:GLN:HB2	1.61	0.82
65:MB:98:ASN:HB2	65:MB:122:THR:HA	1.61	0.82
18:R:21:VAL:HG12	18:R:65:LEU:HA	1.61	0.82
83:EC:6850:C:H3'	83:EC:6851:G:H5''	1.60	0.82
15:O:19:LEU:HD12	15:O:69:VAL:HG13	1.59	0.82
22:V:68:ALA:HA	22:V:71:LEU:HD12	1.60	0.82
2:B:1818:U:H2'	2:B:1819:U:H4'	1.60	0.82
2:B:805:G:H1'	8:H:73:ARG:HD3	1.60	0.82
68:PB:49:LYS:HB3	68:PB:72:ILE:HD13	1.61	0.82
20:T:32:LYS:HA	20:T:101:ARG:HB3	1.61	0.82
1:A:1196:A:H4'	1:A:1197:C:H5''	1.62	0.82
1:A:839:U:H2'	1:A:840:U:H5''	1.60	0.82
2:B:2532:U:C3'	2:B:2533:G:H5''	2.10	0.82
57:EB:168:SER:O	57:EB:172:VAL:HG23	1.80	0.82
57:EB:26:GLU:HA	57:EB:29:ASN:ND2	1.95	0.82
6:F:84:THR:HG21	47:UA:63:THR:HB	1.61	0.82
2:B:1888:U:H2'	2:B:1889:G:O4'	1.79	0.82
82:DC:12:LEU:HD11	82:DC:97:SER:O	1.79	0.82
82:DC:732:GLU:HG2	82:DC:769:LYS:HG2	1.59	0.82
63:KB:23:PRO:HG2	63:KB:26:PHE:HB2	1.60	0.82
2:B:552:G:H2'	2:B:553:U:O4'	1.80	0.82
3:C:23:U:H4'	30:DA:17:LYS:HB2	1.60	0.82
63:KB:16:ILE:HG23	72:TB:57:ARG:HH21	1.43	0.82
24:X:73:LYS:HG3	24:X:97:VAL:HA	1.61	0.82
2:B:1295:G:H5'	24:X:84:ARG:NH1	1.95	0.82
2:B:1479:U:H2'	2:B:1480:G:H5'	1.61	0.82
2:B:2843:U:H5''	2:B:2844:C:H5	1.44	0.82
3:C:37:A:H4'	3:C:38:U:H5''	1.62	0.82
57:EB:153:LEU:H	57:EB:153:LEU:HD12	1.45	0.82
11:K:47:ARG:HD2	11:K:179:LEU:HD21	1.62	0.82
11:K:43:ILE:O	11:K:46:GLU:HG2	1.80	0.82
17:Q:186:ARG:O	17:Q:190:LYS:HB2	1.78	0.82
17:Q:42:ARG:HG2	17:Q:46:ILE:HG13	1.62	0.82
50:XA:98:ILE:HD11	50:XA:116:LYS:HG3	1.61	0.82
2:B:660:A:H5''	8:H:100:PHE:CD1	2.15	0.81
82:DC:563:TYR:HE2	82:DC:818:ILE:HG21	1.45	0.81
17:Q:46:ILE:HG22	17:Q:49:ARG:HB2	1.62	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
74:VB:41:ARG:HA	74:VB:44:LEU:HB2	1.60	0.81
1:A:1199:G:H5'	1:A:1200:G:H5'	1.62	0.81
53:AB:98:ALA:HA	53:AB:188:ILE:HD12	1.61	0.81
54:BB:201:HIS:HD2	54:BB:207:LEU:H	1.27	0.81
55:CB:96:SER:HB2	55:CB:176:THR:HG21	1.62	0.81
82:DC:164:LEU:HD21	82:DC:174:LEU:HD22	1.61	0.81
9:I:34:LYS:HE2	9:I:38:THR:HG21	1.61	0.81
14:N:115:MET:HG2	14:N:118:ALA:HB2	1.61	0.81
17:Q:119:TYR:O	17:Q:123:ILE:HG23	1.80	0.81
24:X:80:ARG:HG3	25:Y:156:TYR:H	1.44	0.81
1:A:1241:G:H4'	65:MB:79:HIS:H	1.44	0.81
8:H:60:THR:HG21	8:H:77:VAL:HG22	1.61	0.81
2:B:2765:C:C4'	46:TA:39:GLY:HA3	2.08	0.81
1:A:1210:C:H2'	1:A:1211:A:H8	1.45	0.81
2:B:1231:A:H5'	2:B:1232:C:H5'	1.62	0.81
2:B:1480:G:H22	2:B:1871:U:H5''	1.45	0.81
2:B:1709:C:H4'	31:EA:15:ARG:HH12	1.44	0.81
2:B:2438:A:H2'	2:B:2439:A:C8	2.14	0.81
7:G:42:ALA:HB1	7:G:208:VAL:HG22	1.62	0.81
2:B:209:A:H2'	8:H:162:THR:HG21	1.62	0.81
39:MA:28:LEU:HD13	39:MA:29:ALA:N	1.96	0.81
70:RB:40:ASN:HD22	70:RB:107:THR:HG21	1.45	0.81
19:S:35:VAL:HA	19:S:65:ARG:HE	1.45	0.81
7:G:208:VAL:HG12	7:G:340:LYS:HE3	1.63	0.81
7:G:53:MET:HA	7:G:77:THR:HA	1.61	0.81
9:I:296:GLN:HG2	9:I:297:GLN:HG2	1.63	0.81
46:TA:65:THR:HG21	46:TA:89:LYS:HA	1.62	0.81
51:YA:195:LYS:HE2	51:YA:195:LYS:HA	1.60	0.81
2:B:2484:A:H4'	5:E:130:LYS:HD2	1.59	0.81
83:EC:6920:C:H2'	83:EC:6921:C:O4'	1.81	0.81
6:F:8:GLN:HE21	6:F:231:SER:HB3	1.44	0.81
2:B:169:U:H4'	17:Q:128:ARG:HD2	1.61	0.81
11:K:79:ALA:H	25:Y:138:SER:HB3	1.44	0.81
38:LA:91:ARG:HA	38:LA:95:ILE:HD13	1.61	0.81
1:A:915:A:H61	64:LB:41:ARG:HH22	1.29	0.81
39:MA:118:ILE:O	39:MA:119:LYS:HB2	1.80	0.81
20:T:52:LEU:HA	20:T:55:HIS:HD2	1.45	0.81
2:B:1222:G:H5'	48:VA:56:ASN:HB3	1.63	0.81
2:B:2755:C:H1'	25:Y:49:GLN:NE2	1.96	0.81
51:YA:87:ARG:H	51:YA:101:HIS:HB2	1.46	0.81
7:G:133:TYR:HD1	7:G:136:LYS:HD2	1.45	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:GB:129:ILE:HG12	59:GB:134:ILE:HD11	1.61	0.81
52:ZA:162:CYS:HB2	52:ZA:213:ALA:HB2	1.62	0.81
2:B:784:A:C2	22:V:93:ILE:HG22	2.15	0.81
28:BA:33:ASN:ND2	28:BA:35:LYS:HB3	1.96	0.81
6:F:5:ILE:HG21	6:F:210:PRO:HD3	1.63	0.81
35:IA:79:ARG:NH1	35:IA:81:GLU:HB2	1.95	0.81
1:A:1184:A:H61	65:MB:123:TYR:HA	1.46	0.81
2:B:1560:G:H1	2:B:1579:C:H1'	1.45	0.81
2:B:2748:A:H1'	9:I:36:LEU:CD2	2.10	0.81
82:DC:576:LEU:HD23	82:DC:841:LYS:HG3	1.62	0.81
7:G:110:LEU:HD23	7:G:114:VAL:HB	1.63	0.81
13:M:117:PHE:O	13:M:120:ASP:HB2	1.81	0.81
1:A:1651:A:H2'	1:A:1652:C:C6	2.16	0.81
1:A:91:G:H2'	1:A:92:A:O4'	1.81	0.81
2:B:2571:U:H4'	2:B:2572:C:H5'	1.61	0.81
29:CA:103:TYR:HE1	29:CA:139:ILE:HD12	1.44	0.81
82:DC:829:LYS:HE3	82:DC:833:PRO:HG3	1.63	0.81
34:HA:51:LEU:HD22	38:LA:87:GLU:HG3	1.63	0.81
42:PA:42:LYS:HG2	42:PA:55:VAL:HG22	1.61	0.81
71:SB:72:LEU:HA	71:SB:75:ASN:ND2	1.96	0.81
20:T:136:THR:HG22	20:T:137:THR:N	1.96	0.81
49:WA:52:GLN:HG3	49:WA:53:LYS:HG2	1.62	0.81
25:Y:14:MET:HG3	25:Y:15:PHE:CD2	2.15	0.81
1:A:607:G:H5'	1:A:613:G:N2	1.96	0.80
2:B:2775:U:H2'	2:B:2776:C:C6	2.14	0.80
54:BB:19:LEU:HD11	54:BB:108:ARG:HD2	1.63	0.80
55:CB:58:LEU:HA	55:CB:61:TYR:HD2	1.46	0.80
31:EA:62:VAL:HG23	31:EA:63:ALA:H	1.46	0.80
32:FA:139:ARG:HA	32:FA:143:GLY:O	1.81	0.80
9:I:109:THR:HG23	9:I:110:LEU:HD12	1.60	0.80
1:A:373:G:H4'	61:IB:96:LYS:HE3	1.63	0.80
66:NB:28:LEU:HB3	66:NB:64:ASP:HA	1.61	0.80
41:OA:18:LEU:HD11	43:QA:8:ARG:HB3	1.62	0.80
21:U:116:HIS:O	21:U:148:LEU:HA	1.81	0.80
51:YA:159:SER:HA	51:YA:162:ARG:HD2	1.61	0.80
55:CB:71:ALA:HB3	55:CB:111:VAL:HG13	1.61	0.80
4:D:63:A:H5''	9:I:285:ARG:HD2	1.61	0.80
83:EC:6950:C:H2'	83:EC:6951:C:O4'	1.82	0.80
20:T:142:SER:HA	20:T:145:VAL:HG22	1.60	0.80
20:T:73:PHE:CB	20:T:78:ARG:HB3	2.11	0.80
50:XA:179:ARG:HG2	50:XA:183:ARG:HH12	1.46	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:296:A:H3'	2:B:297:G:H21	1.46	0.80
2:B:3176:G:C2	2:B:3213:A:H1'	2.16	0.80
82:DC:204:PRO:HA	82:DC:209:VAL:HB	1.61	0.80
61:IB:2:SER:N	61:IB:82:ARG:HA	1.95	0.80
12:L:133:LYS:HB2	12:L:199:ALA:HB3	1.62	0.80
17:Q:115:ARG:HH12	17:Q:145:PHE:HB3	1.45	0.80
17:Q:67:ARG:HB3	32:FA:105:LEU:HG	1.64	0.80
70:RB:95:ALA:HB1	70:RB:96:PRO:HD2	1.64	0.80
26:Z:43:VAL:HG21	26:Z:54:VAL:HG21	1.64	0.80
1:A:1524:A:H2'	1:A:1525:A:C8	2.17	0.80
2:B:1828:A:H2'	2:B:1829:G:C8	2.16	0.80
2:B:2960:C:H2'	2:B:2961:G:C8	2.17	0.80
2:B:351:A:C2	3:C:53:A:H1'	2.15	0.80
82:DC:835:TRP:O	82:DC:839:TYR:HB2	1.81	0.80
39:MA:66:VAL:HA	39:MA:69:LEU:HG	1.62	0.80
17:Q:162:ASN:HD21	17:Q:164:GLU:HG2	1.47	0.80
69:QB:40:SER:HA	69:QB:96:ALA:HB1	1.62	0.80
21:U:127:ARG:HB3	21:U:139:TYR:O	1.82	0.80
1:A:1073:G:C2'	1:A:1074:G:H5''	2.11	0.80
1:A:622:A:H4'	1:A:623:A:H5'	1.64	0.80
2:B:1647:A:H62	2:B:1808:G:H1'	1.46	0.80
54:BB:234:PRO:HG3	54:BB:238:LEU:HD11	1.62	0.80
82:DC:280:PRO:O	82:DC:284:LEU:HG	1.80	0.80
82:DC:382:VAL:HG11	82:DC:396:ALA:HB1	1.64	0.80
5:E:91:LYS:HA	5:E:123:LEU:HD23	1.63	0.80
83:EC:6831:U:H3'	83:EC:6832:G:H5''	1.63	0.80
6:F:62:VAL:HA	6:F:73:GLU:HA	1.62	0.80
10:J:71:VAL:HG13	10:J:156:LYS:HG3	1.64	0.80
64:LB:86:THR:HG22	64:LB:90:ARG:HG3	1.63	0.80
15:O:8:PRO:HD2	15:O:10:ARG:HD2	1.62	0.80
19:S:136:ASP:OD1	19:S:139:HIS:HB2	1.80	0.80
23:W:115:ILE:HD11	23:W:142:ILE:HD11	1.63	0.80
2:B:310:U:H2'	2:B:311:C:H5''	1.62	0.80
2:B:3237:U:H2'	2:B:3238:G:H8	1.46	0.80
2:B:731:U:H2'	2:B:732:C:C6	2.15	0.80
29:CA:63:ILE:HD12	29:CA:99:VAL:HG22	1.63	0.80
5:E:172:VAL:HG23	5:E:173:GLU:H	1.46	0.80
64:LB:137:LEU:H	64:LB:137:LEU:HD13	1.47	0.80
2:B:1719:G:C4'	2:B:1732:U:H4'	2.08	0.80
2:B:3040:A:H5''	27:AA:12:ARG:HB2	1.62	0.80
2:B:307:A:H2'	2:B:308:A:C8	2.15	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:823:ARG:HB3	82:DC:823:ARG:NH1	1.95	0.80
2:B:2480:A:H5''	5:E:98:LYS:HG3	1.64	0.80
8:H:222:VAL:HG13	8:H:225:VAL:HB	1.60	0.80
2:B:610:G:H21	8:H:313:LEU:HD23	1.47	0.80
11:K:82:LYS:H	11:K:82:LYS:HD2	1.46	0.80
12:L:245:LYS:O	12:L:249:ARG:HB2	1.80	0.80
50:XA:123:VAL:HG12	50:XA:124:THR:H	1.47	0.80
50:XA:179:ARG:HG2	50:XA:183:ARG:NH1	1.97	0.80
1:A:17:C:H2'	1:A:18:C:H6	1.45	0.80
53:AB:141:LYS:HE3	53:AB:179:GLN:HG3	1.62	0.80
2:B:2746:A:H5'	9:I:179:ARG:HG2	1.62	0.80
82:DC:135:VAL:HG21	82:DC:184:SER:HB3	1.63	0.80
82:DC:189:VAL:HG11	82:DC:201:GLN:HA	1.64	0.80
11:K:83:LEU:HD13	11:K:84:VAL:N	1.96	0.80
40:NA:36:ARG:NE	40:NA:36:ARG:HA	1.96	0.80
2:B:825:U:H2'	2:B:826:G:H5''	1.64	0.80
82:DC:40:VAL:HG21	82:DC:75:ILE:HG21	1.64	0.80
82:DC:76:SER:O	82:DC:77:LEU:HB3	1.81	0.80
8:H:76:ARG:HD3	8:H:86:GLY:O	1.82	0.80
34:HA:74:ASN:ND2	47:UA:43:GLY:HA3	1.95	0.80
14:N:23:ASN:HD21	14:N:26:VAL:HG11	1.45	0.80
23:W:134:HIS:ND1	23:W:136:ARG:HB3	1.97	0.80
52:ZA:148:LEU:HD13	52:ZA:149:GLY:H	1.44	0.80
2:B:1302:A:C2'	2:B:1303:A:H5''	2.12	0.80
56:DB:77:LEU:HD13	56:DB:84:TYR:HB2	1.64	0.80
58:FB:185:GLU:HA	58:FB:189:LEU:HD22	1.62	0.80
36:JA:96:ILE:HB	36:JA:121:ASN:HD21	1.47	0.80
2:B:31:C:H5	19:S:188:ARG:HH12	1.29	0.80
21:U:48:LEU:HD13	21:U:88:VAL:HG13	1.63	0.80
2:B:1233:G:C5'	48:VA:36:GLN:HE22	1.95	0.79
2:B:1711:C:H4'	31:EA:37:PRO:HB2	1.64	0.79
2:B:2542:U:H1'	2:B:2543:U:H5	1.46	0.79
2:B:2742:C:H2'	2:B:2743:A:H8	1.48	0.79
2:B:3184:A:C2'	2:B:3185:U:H5'	2.12	0.79
54:BB:147:ILE:HG22	54:BB:148:ARG:H	1.45	0.79
82:DC:823:ARG:HA	82:DC:828:MET:SD	2.22	0.79
8:H:260:GLN:HE22	8:H:268:ALA:HB3	1.47	0.79
49:WA:176:LYS:HB3	49:WA:195:HIS:HB2	1.62	0.79
1:A:20:G:H5'	1:A:571:G:C8	2.17	0.79
82:DC:815:ALA:HA	82:DC:818:ILE:HD12	1.64	0.79
8:H:283:THR:HG22	8:H:285:ASP:H	1.45	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
77:YB:35:VAL:HG22	77:YB:79:PHE:HA	1.62	0.79
2:B:617:G:H4'	21:U:171:ARG:HE	1.47	0.79
2:B:821:U:H2'	2:B:822:G:H8	1.45	0.79
2:B:217:U:H4'	30:DA:100:HIS:CG	2.18	0.79
82:DC:45:ILE:HD12	82:DC:438:MET:HG3	1.64	0.79
57:EB:91:ILE:HG13	57:EB:92:PHE:H	1.45	0.79
2:B:2921:U:H2'	2:B:2923:U:H5''	1.63	0.79
7:G:74:GLU:HG2	7:G:325:LYS:HE3	1.65	0.79
1:A:1379:C:H1'	66:NB:19:VAL:HG22	1.63	0.79
69:QB:11:ALA:HA	69:QB:14:PHE:HB3	1.64	0.79
18:R:72:LEU:HD21	18:R:76:ALA:HB3	1.65	0.79
24:X:106:LEU:O	24:X:110:MET:HG2	1.82	0.79
51:YA:66:VAL:HA	64:LB:33:LEU:HD13	1.63	0.79
27:AA:88:ARG:HB2	27:AA:88:ARG:HH11	1.47	0.79
2:B:2356:A:N6	2:B:2983:C:H5	1.79	0.79
2:B:3185:U:H5''	13:M:23:ARG:NH2	1.98	0.79
31:EA:108:GLU:HG2	31:EA:112:LYS:HE3	1.63	0.79
7:G:144:ILE:HD12	7:G:144:ILE:H	1.48	0.79
38:LA:20:ILE:H	38:LA:20:ILE:HD13	1.47	0.79
54:BB:54:TYR:HB3	74:VB:17:LEU:HD21	1.64	0.79
1:A:1184:A:H3'	1:A:1185:U:H5''	1.65	0.79
2:B:2931:C:H2'	2:B:2932:U:O4'	1.82	0.79
6:F:39:GLY:HA3	12:L:36:ILE:HG21	1.64	0.79
2:B:121:A:H61	12:L:126:SER:HB2	1.46	0.79
13:M:138:THR:HG22	13:M:139:ASN:H	1.46	0.79
50:XA:121:VAL:HG23	50:XA:141:ILE:HG21	1.65	0.79
25:Y:8:ARG:HD2	25:Y:52:MET:HE3	1.64	0.79
2:B:1953:G:H3'	2:B:1954:G:H5''	1.64	0.79
2:B:2615:G:H2'	2:B:2616:C:C6	2.18	0.79
6:F:234:LYS:HD3	6:F:238:ILE:HD13	1.64	0.79
4:D:57:G:H4'	15:O:138:VAL:HG11	1.65	0.79
1:A:1345:A:H1'	70:RB:56:VAL:HG21	1.64	0.79
46:TA:4:VAL:HG23	46:TA:93:LEU:HA	1.63	0.79
2:B:1035:G:H21	83:EC:6927:U:H3	1.30	0.79
1:A:148:A:H61	56:DB:133:LEU:HD11	1.47	0.79
82:DC:147:LEU:HB2	82:DC:192:TYR:O	1.83	0.79
83:EC:6911:A:H2'	83:EC:6912:G:C8	2.16	0.79
13:M:67:ALA:O	13:M:70:THR:HG22	1.83	0.79
1:A:348:U:H4'	58:FB:14:THR:HG22	1.65	0.79
7:G:169:THR:HG22	7:G:171:LEU:HG	1.65	0.79
7:G:41:VAL:HG22	7:G:185:GLY:HA3	1.65	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:K:219:LYS:O	11:K:228:SER:HB2	1.83	0.79
15:O:92:ARG:HA	15:O:92:ARG:HE	1.45	0.79
19:S:140:LYS:HB3	19:S:144:ARG:HH21	1.47	0.79
51:YA:66:VAL:HB	51:YA:86:LEU:HB2	1.63	0.79
1:A:472:U:H2'	1:A:473:A:C8	2.17	0.79
1:A:622:A:O2'	1:A:1032:G:H5'	1.83	0.79
2:B:1257:C:H42	2:B:1261:G:H22	1.30	0.79
2:B:1311:G:O2'	2:B:2381:G:H4'	1.83	0.79
83:EC:6868:C:H3'	83:EC:6869:C:H5''	1.64	0.79
19:S:49:ARG:CB	19:S:49:ARG:HH11	1.96	0.79
82:DC:337:MET:O	82:DC:341:HIS:HB2	1.83	0.78
10:J:110:LYS:HD2	10:J:113:LYS:HD3	1.65	0.78
12:L:183:LYS:O	12:L:186:LEU:HB2	1.83	0.78
15:O:40:LEU:HD23	15:O:114:ILE:HD11	1.64	0.78
20:T:140:LYS:H	20:T:140:LYS:HD2	1.48	0.78
21:U:146:ILE:HD12	21:U:146:ILE:H	1.46	0.78
22:V:80:THR:HG22	22:V:100:THR:OG1	1.84	0.78
49:WA:47:LEU:HA	49:WA:55:GLY:HA2	1.64	0.78
27:AA:79:VAL:HB	27:AA:118:VAL:HG13	1.63	0.78
2:B:3023:U:H4'	82:DC:162:ARG:NH1	1.99	0.78
2:B:1225:A:C2	2:B:3116:G:H2'	2.17	0.78
30:DA:37:LYS:HD3	30:DA:37:LYS:H	1.48	0.78
4:D:7:G:H5'	9:I:33:ARG:HH12	1.46	0.78
11:K:98:LYS:HE2	11:K:129:LEU:HD11	1.66	0.78
2:B:3229:G:H3'	2:B:3230:G:H8	1.47	0.78
1:A:1722:A:H1'	56:DB:67:VAL:HA	1.64	0.78
5:E:102:LYS:HA	5:E:105:LYS:HD2	1.63	0.78
9:I:204:VAL:O	9:I:208:MET:HG3	1.83	0.78
15:O:82:ARG:HG2	15:O:112:LEU:HB2	1.64	0.78
48:VA:41:VAL:HG13	48:VA:103:ASN:HD22	1.49	0.78
1:A:1087:A:H2'	1:A:1088:A:C8	2.18	0.78
1:A:915:A:N6	64:LB:41:ARG:HH22	1.82	0.78
1:A:1217:A:H4'	60:HB:44:LYS:HG3	1.65	0.78
2:B:2513:U:H5'	12:L:242:ALA:HB2	1.64	0.78
40:NA:50:LEU:HD22	40:NA:54:GLU:HB3	1.65	0.78
2:B:1446:A:H5''	21:U:65:SER:HB2	1.65	0.78
48:VA:40:GLU:O	48:VA:44:GLU:HG2	1.84	0.78
1:A:17:C:H2'	1:A:18:C:C6	2.19	0.78
6:F:3:ARG:HG2	6:F:4:VAL:H	1.47	0.78
6:F:64:ARG:HD3	6:F:64:ARG:H	1.47	0.78
32:FA:120:ASN:HA	32:FA:141:ALA:HB1	1.66	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:PA:25:VAL:HG22	42:PA:43:PHE:HA	1.65	0.78
50:XA:188:LEU:HD13	50:XA:189:VAL:HG12	1.64	0.78
71:SB:71:ARG:HG3	77:YB:4:VAL:HG11	1.65	0.78
1:A:1203:A:H5'	1:A:1457:C:H41	1.47	0.78
1:A:749:U:H3	1:A:800:U:H3	1.30	0.78
2:B:1148:G:O2'	2:B:1171:G:H4'	1.84	0.78
2:B:1202:A:C2	2:B:2857:C:H5'	2.18	0.78
82:DC:578:LYS:HB3	82:DC:585:ARG:CG	2.14	0.78
57:EB:96:ARG:HD2	57:EB:121:VAL:HG13	1.66	0.78
13:M:146:LEU:HD11	13:M:158:ALA:HB2	1.65	0.78
65:MB:44:ARG:HH12	65:MB:52:LYS:HE3	1.49	0.78
14:N:42:THR:HG23	14:N:45:GLU:HB2	1.64	0.78
18:R:15:VAL:HG22	24:X:150:PHE:O	1.83	0.78
22:V:71:LEU:HD22	22:V:99:THR:HG21	1.65	0.78
52:ZA:111:VAL:O	52:ZA:136:VAL:HA	1.83	0.78
2:B:132:C:H2'	2:B:133:U:H5''	1.63	0.78
2:B:296:A:O2'	2:B:297:G:H5'	1.84	0.78
2:B:501:A:H2'	2:B:502:U:C6	2.17	0.78
82:DC:755:VAL:H	82:DC:770:ALA:HA	1.49	0.78
83:EC:6834:U:H3'	83:EC:6835:U:C5'	2.14	0.78
12:L:178:ALA:HB2	12:L:218:ILE:HD13	1.64	0.78
13:M:48:VAL:HG13	13:M:49:ASN:H	1.49	0.78
65:MB:123:TYR:HE1	68:PB:122:HIS:HE2	1.30	0.78
15:O:133:ARG:HB3	15:O:152:HIS:CE1	2.19	0.78
20:T:142:SER:HA	20:T:145:VAL:CG2	2.13	0.78
52:ZA:152:HIS:HB3	52:ZA:174:ARG:HG2	1.63	0.78
1:A:320:U:H3'	1:A:321:C:C5'	2.14	0.78
2:B:60:A:H2'	2:B:61:A:C8	2.19	0.78
58:FB:36:THR:HG23	58:FB:96:LEU:H	1.47	0.78
2:B:1439:U:H5''	8:H:87:GLN:HG2	1.63	0.78
4:D:1:G:H4'	9:I:273:ARG:CZ	2.14	0.78
35:IA:49:VAL:HG13	35:IA:91:SER:HB3	1.66	0.78
3:C:43:A:OP2	41:OA:62:GLY:HA2	1.82	0.78
2:B:1234:G:O2'	16:P:132:ILE:HD13	1.83	0.78
48:VA:125:ASN:HA	48:VA:151:GLU:HA	1.64	0.78
23:W:96:ILE:HG22	23:W:100:ARG:HH22	1.47	0.78
23:W:10:LEU:HB3	23:W:41:ILE:HD12	1.65	0.78
2:B:3183:A:H5''	20:T:12:LYS:HE2	1.65	0.78
11:K:90:LYS:HE2	11:K:95:ILE:HD11	1.64	0.78
72:TB:53:ILE:HD11	77:YB:25:VAL:HG23	1.66	0.78
6:F:80:GLU:HB3	47:UA:76:ALA:HB2	1.65	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2415:C:H5''	6:F:2:GLY:HA2	1.65	0.78
2:B:594:U:H2'	2:B:609:G:O6	1.84	0.78
82:DC:143:LEU:HB3	82:DC:188:ILE:HG21	1.65	0.78
5:E:190:PHE:O	5:E:194:LEU:HB2	1.84	0.78
2:B:2177:G:H2'	6:F:128:ARG:HB2	1.64	0.78
7:G:106:TRP:HB2	7:G:133:TYR:CE2	2.18	0.78
8:H:114:ASN:HD22	8:H:114:ASN:H	1.28	0.78
34:HA:100:ILE:HD12	34:HA:101:LEU:HD22	1.64	0.78
12:L:97:TYR:HE1	12:L:203:VAL:HA	1.48	0.78
43:QA:3:ALA:H	43:QA:5:LYS:NZ	1.81	0.78
18:R:36:VAL:HG23	18:R:47:ASP:HB2	1.66	0.78
71:SB:38:LYS:HE3	71:SB:51:VAL:HG22	1.66	0.78
50:XA:17:LEU:HD21	50:XA:176:LEU:HD11	1.66	0.78
1:A:107:C:H5''	1:A:383:G:O2'	1.85	0.77
2:B:1164:G:H2'	2:B:1165:A:C8	2.19	0.77
2:B:1295:G:H2'	2:B:1296:C:C6	2.18	0.77
2:B:2957:G:C2'	2:B:2958:A:H5'	2.12	0.77
55:CB:160:VAL:HG11	78:ZB:43:ASN:HB2	1.65	0.77
2:B:1055:A:H4'	4:D:100:C:O2	1.84	0.77
22:V:173:GLU:HA	32:FA:51:GLY:O	1.85	0.77
8:H:167:ALA:HA	8:H:170:LYS:HD3	1.66	0.77
1:A:1456:C:H3'	1:A:1457:C:H5'	1.66	0.77
2:B:1460:A:H2'	2:B:1461:A:H8	1.47	0.77
2:B:1870:C:OP1	2:B:3077:A:H5'	1.83	0.77
2:B:2873:U:O2'	2:B:2874:G:H5'	1.83	0.77
55:CB:117:THR:HG21	55:CB:194:LEU:HD12	1.66	0.77
55:CB:94:THR:HG22	55:CB:114:ILE:HG13	1.65	0.77
7:G:58:ARG:HG3	7:G:72:VAL:CG2	2.14	0.77
9:I:155:THR:HA	9:I:179:ARG:HA	1.65	0.77
66:NB:42:GLU:HG3	66:NB:45:ARG:NH2	1.97	0.77
2:B:77:A:OP2	17:Q:73:ARG:HD2	1.84	0.77
3:C:113:U:H5''	43:QA:7:PHE:HB2	1.66	0.77
72:TB:81:VAL:HG13	72:TB:85:ASP:HB2	1.64	0.77
21:U:59:PRO:HD3	21:U:76:PHE:CE1	2.19	0.77
2:B:2649:A:O2'	2:B:2650:U:H5'	1.84	0.77
2:B:948:C:H2'	2:B:949:C:H6	1.50	0.77
55:CB:29:ILE:H	55:CB:29:ILE:HD12	1.50	0.77
1:A:398:G:H5''	58:FB:49:ARG:NE	1.98	0.77
60:HB:49:LEU:HD13	60:HB:52:LYS:HD3	1.64	0.77
10:J:154:LEU:HD23	10:J:157:GLN:HG2	1.66	0.77
19:S:47:LYS:O	19:S:51:LEU:HG	1.84	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1682:U:O2'	1:A:1683:C:H5'	1.83	0.77
1:A:629:U:H5'	63:KB:127:ARG:HH12	1.49	0.77
2:B:365:A:H3'	2:B:366:A:H8	1.50	0.77
54:BB:252:ARG:HA	54:BB:255:ARG:HD2	1.65	0.77
63:KB:56:ASP:HB3	77:YB:47:PHE:HB3	1.66	0.77
66:NB:109:PHE:HB3	66:NB:117:LEU:HD11	1.66	0.77
68:PB:100:THR:HB	68:PB:105:VAL:HA	1.66	0.77
21:U:33:ALA:HA	21:U:36:ILE:HG22	1.66	0.77
73:UB:71:CYS:SG	73:UB:86:PHE:HA	2.23	0.77
52:ZA:106:ASP:OD2	52:ZA:110:HIS:HB2	1.84	0.77
52:ZA:87:GLN:HA	52:ZA:96:THR:HA	1.66	0.77
1:A:1592:A:H2'	1:A:1593:A:H8	1.49	0.77
2:B:127:G:H2'	2:B:128:G:O4'	1.84	0.77
2:B:1556:C:H3'	2:B:2169:G:H22	1.49	0.77
2:B:1719:G:H4'	2:B:1732:U:C4'	2.09	0.77
2:B:277:G:H2'	2:B:278:U:C6	2.19	0.77
2:B:3262:U:H2'	2:B:3263:G:H5''	1.66	0.77
2:B:3376:A:H5'	2:B:3377:G:H5''	1.64	0.77
8:H:219:LEU:O	8:H:222:VAL:HG12	1.85	0.77
10:J:47:PHE:CZ	10:J:75:PRO:HD2	2.19	0.77
48:VA:7:LYS:HA	48:VA:10:GLU:HG2	1.67	0.77
1:A:523:G:H5''	74:VB:59:GLY:O	1.84	0.77
2:B:1757:A:H2'	2:B:1758:G:C8	2.20	0.77
2:B:3237:U:H2'	2:B:3238:G:C8	2.19	0.77
7:G:95:THR:HG23	7:G:98:GLY:O	1.85	0.77
12:L:130:TYR:HD1	12:L:202:GLU:HB3	1.49	0.77
13:M:134:ILE:HD11	13:M:157:ASN:HD21	1.48	0.77
20:T:89:SER:O	20:T:95:GLY:HA3	1.84	0.77
22:V:60:PRO:HG2	22:V:142:GLY:HA3	1.64	0.77
2:B:1448:U:H5	2:B:2355:G:N2	1.83	0.77
2:B:1650:G:H2'	2:B:1651:U:H6	1.48	0.77
2:B:824:C:H2'	2:B:825:U:C6	2.20	0.77
56:DB:74:LYS:HZ2	56:DB:94:ARG:HG3	1.50	0.77
82:DC:382:VAL:HG13	82:DC:397:PHE:H	1.48	0.77
5:E:94:ASN:HB2	5:E:123:LEU:HG	1.66	0.77
58:FB:142:LYS:HD2	58:FB:146:ARG:HH12	1.49	0.77
7:G:308:MET:HB2	7:G:363:SER:HB2	1.67	0.77
12:L:43:LYS:HB3	29:CA:28:THR:HG21	1.64	0.77
43:QA:11:GLN:O	43:QA:14:ALA:HB3	1.85	0.77
2:B:3182:G:H5''	20:T:161:LYS:HZ2	1.50	0.77
2:B:412:G:N3	21:U:118:GLN:HG3	2.00	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:VA:172:LEU:O	48:VA:176:LEU:HG	1.84	0.77
2:B:1915:A:O3'	23:W:84:THR:HA	1.85	0.77
1:A:1338:C:H1'	1:A:1410:A:C5	2.20	0.77
1:A:884:A:H2'	1:A:885:G:C8	2.19	0.77
2:B:1840:U:H4'	2:B:1841:A:H5'	1.67	0.77
2:B:1841:A:O2'	2:B:1842:A:H5''	1.84	0.77
82:DC:45:ILE:HD13	82:DC:76:SER:HB2	1.67	0.77
6:F:40:TYR:HA	6:F:91:GLY:HA3	1.67	0.77
12:L:203:VAL:HG11	12:L:211:LEU:HD22	1.66	0.77
4:D:89:G:H5''	24:X:84:ARG:NE	2.00	0.77
82:DC:380:LEU:HD11	82:DC:456:LEU:HD21	1.65	0.77
64:LB:13:VAL:HG13	64:LB:77:THR:H	1.49	0.77
2:B:1007:U:H2'	2:B:1008:U:C5	2.20	0.77
2:B:1233:G:H5'	48:VA:36:GLN:NE2	1.99	0.77
2:B:1236:G:H2'	16:P:60:VAL:HG13	1.65	0.77
2:B:1605:A:H2'	2:B:1606:U:H5''	1.66	0.77
5:E:10:ARG:HD3	5:E:180:VAL:HG23	1.66	0.77
57:EB:46:ILE:HG23	57:EB:60:ILE:HG12	1.67	0.77
15:O:112:LEU:H	15:O:112:LEU:HD23	1.50	0.77
74:VB:124:ARG:O	74:VB:128:LYS:HG2	1.83	0.77
1:A:230:C:H2'	1:A:231:U:H5''	1.67	0.76
1:A:381:C:H2'	1:A:382:C:C6	2.20	0.76
2:B:1436:U:C5	8:H:72:ALA:HA	2.19	0.76
2:B:431:U:H2'	2:B:432:G:C8	2.20	0.76
82:DC:274:ASN:HA	82:DC:278:LEU:HD12	1.67	0.76
8:H:114:ASN:N	8:H:114:ASN:HD22	1.82	0.76
23:W:92:GLN:HG2	23:W:96:ILE:HD11	1.67	0.76
49:WA:244:ALA:HB3	49:WA:253:ALA:HB3	1.67	0.76
50:XA:197:ILE:H	50:XA:197:ILE:HD13	1.49	0.76
1:A:1485:C:C2'	1:A:1486:G:H4'	2.13	0.76
1:A:1495:C:C3'	1:A:1496:U:H5''	2.14	0.76
1:A:1568:C:H4'	1:A:1569:A:H8	1.50	0.76
2:B:1195:A:H2	2:B:1313:G:H22	1.32	0.76
2:B:1497:C:O2'	2:B:1602:A:H1'	1.83	0.76
2:B:546:C:H5'	2:B:547:G:O4'	1.85	0.76
2:B:577:C:O2'	2:B:579:G:H5''	1.85	0.76
6:F:227:ARG:HG2	6:F:239:ALA:CB	2.14	0.76
15:O:23:VAL:HG11	15:O:30:LEU:HA	1.67	0.76
50:XA:200:ASP:HB2	67:OB:86:PRO:CA	2.15	0.76
1:A:614:C:H5	73:UB:5:LYS:HZ1	1.33	0.76
22:V:33:TYR:HA	22:V:36:LEU:HD12	1.66	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:X:129:ILE:HG21	24:X:134:ASP:HB3	1.64	0.76
76:XB:30:ILE:HD11	76:XB:34:LYS:HG2	1.68	0.76
2:B:286:U:H2'	2:B:287:G:C8	2.20	0.76
5:E:120:VAL:HA	5:E:124:LEU:HD12	1.66	0.76
57:EB:93:LEU:HD22	57:EB:125:ILE:HG23	1.65	0.76
7:G:245:GLY:HA3	7:G:248:LYS:HE3	1.65	0.76
2:B:1240:A:N6	16:P:58:VAL:HG22	2.00	0.76
16:P:60:VAL:O	16:P:75:PRO:HD2	1.85	0.76
70:RB:37:VAL:HG21	70:RB:112:VAL:HG21	1.66	0.76
20:T:124:LEU:HB3	20:T:127:LEU:HD12	1.67	0.76
76:XB:87:ARG:HH22	76:XB:94:ASN:ND2	1.82	0.76
2:B:2647:A:H1'	14:N:22:TYR:HD2	1.47	0.76
4:D:4:U:H2'	4:D:5:G:C8	2.20	0.76
9:I:51:LEU:HD22	9:I:144:VAL:HG11	1.67	0.76
11:K:101:LYS:NZ	11:K:105:LEU:HD11	2.01	0.76
12:L:142:LEU:HD13	12:L:148:ALA:HB2	1.68	0.76
14:N:46:PHE:CB	14:N:139:ARG:HG2	2.08	0.76
22:V:27:LYS:O	22:V:30:VAL:HB	1.85	0.76
76:XB:38:ARG:HH21	76:XB:83:ILE:HB	1.50	0.76
2:B:3092:C:H2'	27:AA:12:ARG:NH2	2.00	0.76
2:B:1386:A:H5"	8:H:141:ARG:HH21	1.50	0.76
55:CB:162:VAL:HG23	78:ZB:45:LYS:HB3	1.65	0.76
56:DB:2:LYS:HB3	56:DB:108:VAL:HG22	1.67	0.76
65:MB:64:LYS:HB2	65:MB:73:PRO:HG3	1.66	0.76
47:UA:46:THR:HB	47:UA:58:SER:HB2	1.67	0.76
51:YA:35:PRO:HB3	51:YA:231:LEU:HD13	1.68	0.76
1:A:112:A:H5'	61:IB:68:GLY:HA2	1.65	0.76
1:A:1360:A:H2'	1:A:1361:U:H4'	1.67	0.76
2:B:2611:U:H2'	2:B:2612:U:H6	1.47	0.76
2:B:269:G:H21	2:B:294:U:H2'	1.50	0.76
2:B:1225:A:H2	2:B:3116:G:H2'	1.49	0.76
57:EB:11:GLN:HB3	57:EB:13:PRO:HD2	1.68	0.76
42:PA:28:ASN:HD21	42:PA:42:LYS:HG3	1.50	0.76
68:PB:42:TYR:HA	68:PB:85:PHE:HE1	1.48	0.76
1:A:1368:G:H5"	69:QB:69:LYS:HG2	1.68	0.76
18:R:15:VAL:HG12	18:R:19:ARG:HG2	1.65	0.76
73:UB:32:ARG:HB3	73:UB:32:ARG:HH11	1.51	0.76
22:V:12:ARG:HB2	22:V:12:ARG:NH1	2.00	0.76
48:VA:26:PHE:HB2	48:VA:87:VAL:HB	1.67	0.76
52:ZA:52:THR:HB	52:ZA:54:GLU:HG2	1.67	0.76
1:A:1067:C:H5"	51:YA:150:VAL:HG23	1.68	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1430:U:H2'	32:FA:9:ARG:HH22	1.51	0.76
2:B:2156:C:H2'	2:B:2178:A:H61	1.50	0.76
2:B:3190:C:H2'	2:B:3191:G:H8	1.49	0.76
82:DC:16:VAL:HG23	82:DC:346:VAL:HG22	1.66	0.76
5:E:16:LEU:HD11	5:E:208:SER:HB2	1.67	0.76
7:G:8:ALA:HB1	7:G:9:PRO:HD2	1.68	0.76
11:K:79:ALA:HB2	25:Y:138:SER:H	1.51	0.76
40:NA:60:LEU:HD12	40:NA:69:ALA:HA	1.68	0.76
50:XA:88:LYS:HD3	50:XA:201:LEU:HG	1.65	0.76
2:B:114:A:H4'	19:S:49:ARG:NE	2.01	0.76
2:B:707:U:C2'	2:B:708:G:H5''	2.15	0.76
54:BB:56:LEU:HD11	74:VB:74:LEU:HD11	1.68	0.76
82:DC:378:LEU:CD2	82:DC:411:VAL:HG21	2.16	0.76
2:B:3047:U:H1'	7:G:327:CYS:SG	2.24	0.76
12:L:112:GLU:O	12:L:116:VAL:HG23	1.86	0.76
65:MB:40:ARG:HE	65:MB:40:ARG:HA	1.48	0.76
51:YA:83:LYS:HB2	51:YA:104:ASP:HB3	1.67	0.76
2:B:1203:A:H2'	2:B:1204:A:C8	2.21	0.76
2:B:2814:G:H2'	2:B:2815:G:H8	1.50	0.76
2:B:47:C:H2'	2:B:48:A:C8	2.20	0.76
56:DB:186:ARG:O	56:DB:190:GLN:HG2	1.86	0.76
12:L:248:LYS:HA	12:L:252:ASN:HD22	1.51	0.76
2:B:1371:G:H2'	2:B:1372:C:C6	2.20	0.76
2:B:1915:A:H5'	23:W:82:LYS:O	1.86	0.76
2:B:2369:G:H2'	2:B:2370:G:C8	2.20	0.76
2:B:861:C:H2'	2:B:862:U:C6	2.21	0.76
40:NA:44:VAL:HA	40:NA:47:ILE:HG22	1.67	0.76
41:OA:52:LYS:HA	41:OA:55:ARG:HH12	1.51	0.76
19:S:84:PRO:HA	19:S:87:GLN:HB2	1.68	0.76
25:Y:72:VAL:HG22	25:Y:93:VAL:HG12	1.68	0.76
1:A:1435:G:C4'	1:A:1436:A:H5'	2.16	0.75
2:B:2154:U:H2'	2:B:2155:G:C8	2.21	0.75
2:B:2333:C:H2'	2:B:2334:U:C6	2.21	0.75
2:B:3034:C:N4	13:M:121:LYS:H	1.84	0.75
83:EC:6914:A:H2'	83:EC:6915:G:N7	2.01	0.75
13:M:8:GLN:HG2	13:M:68:LEU:HD11	1.67	0.75
21:U:119:VAL:HB	21:U:146:ILE:CG2	2.08	0.75
48:VA:54:GLY:HA3	48:VA:58:MET:HG3	1.67	0.75
75:WB:96:SER:O	75:WB:97:LYS:HG2	1.86	0.75
2:B:10:C:H3'	2:B:11:A:H5''	1.69	0.75
2:B:2909:U:H3'	2:B:2910:A:H5''	1.68	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:3064:U:H2'	2:B:3065:G:C8	2.21	0.75
1:A:448:C:H5'	54:BB:29:PRO:CG	2.15	0.75
56:DB:121:LEU:HD12	56:DB:124:LEU:HD22	1.67	0.75
82:DC:164:LEU:HA	82:DC:168:GLN:HA	1.66	0.75
9:I:10:SER:HA	9:I:13:SER:HB3	1.65	0.75
38:LA:54:ILE:HG23	38:LA:70:LYS:O	1.87	0.75
18:R:20:VAL:HG13	18:R:66:THR:OG1	1.86	0.75
70:RB:109:GLU:HG3	70:RB:110:PRO:HD2	1.68	0.75
51:YA:70:LEU:HB2	51:YA:84:ILE:HG12	1.69	0.75
71:SB:85:TYR:CD1	77:YB:6:ASP:HB2	2.21	0.75
52:ZA:148:LEU:HD13	52:ZA:149:GLY:N	2.00	0.75
1:A:1032:G:H2'	1:A:1033:C:C6	2.21	0.75
2:B:303:G:H4'	2:B:304:G:H21	1.51	0.75
2:B:3362:A:H2'	2:B:3363:U:O4'	1.87	0.75
2:B:438:A:H2'	2:B:439:C:H4'	1.68	0.75
31:EA:15:ARG:C	31:EA:19:ALA:HB2	2.07	0.75
83:EC:6842:U:H5'	83:EC:6843:U:O4'	1.87	0.75
32:FA:74:ASN:ND2	32:FA:115:LYS:HB2	2.02	0.75
63:KB:33:VAL:HG11	63:KB:66:ILE:HG12	1.67	0.75
23:W:25:ASP:OD2	23:W:49:THR:HA	1.87	0.75
25:Y:58:GLN:O	25:Y:58:GLN:HG3	1.86	0.75
79:AC:31:ILE:HD11	79:AC:40:ARG:HB3	1.69	0.75
2:B:2561:A:H2'	2:B:2562:A:C8	2.21	0.75
2:B:655:C:H2'	2:B:656:A:C8	2.22	0.75
55:CB:187:ILE:HD12	55:CB:187:ILE:H	1.51	0.75
6:F:123:ARG:HA	6:F:163:ARG:HH12	1.52	0.75
39:MA:95:PHE:O	39:MA:99:GLN:HG2	1.86	0.75
52:ZA:101:VAL:HG11	52:ZA:211:LEU:HD12	1.66	0.75
27:AA:62:VAL:HB	27:AA:70:ARG:HG2	1.68	0.75
2:B:1256:G:H4'	16:P:127:SER:HB3	1.69	0.75
2:B:2661:G:H2'	2:B:2662:G:C8	2.21	0.75
82:DC:415:GLY:HA3	82:DC:425:ASP:HB3	1.69	0.75
2:B:2149:A:C5'	6:F:179:LEU:HD23	2.16	0.75
8:H:346:LYS:HD3	8:H:346:LYS:N	1.99	0.75
67:OB:103:ASP:OD1	67:OB:104:ASN:N	2.19	0.75
23:W:70:LYS:HD2	23:W:74:ARG:O	1.85	0.75
49:WA:115:ILE:HG13	49:WA:121:MET:O	1.87	0.75
1:A:1498:G:H2'	1:A:1499:G:H5'	1.68	0.75
1:A:821:U:H3'	1:A:822:U:H5''	1.66	0.75
1:A:927:C:H2'	1:A:928:U:C6	2.21	0.75
2:B:1783:U:H2'	2:B:1784:G:C8	2.22	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:671:U:H2'	2:B:672:A:H8	1.50	0.75
54:BB:34:GLY:HA3	54:BB:83:PRO:HG2	1.67	0.75
31:EA:25:ILE:HA	31:EA:43:VAL:HG12	1.68	0.75
7:G:306:THR:HG21	7:G:316:GLU:HG3	1.68	0.75
51:YA:29:TRP:HZ2	64:LB:74:VAL:HG12	1.50	0.75
8:H:110:ASN:HB2	19:S:201:ARG:O	1.86	0.75
46:TA:68:VAL:HB	46:TA:85:LEU:HB3	1.68	0.75
50:XA:64:ILE:O	50:XA:67:ILE:HG12	1.86	0.75
1:A:1477:G:H2'	1:A:1478:G:C8	2.21	0.75
1:A:249:U:H3'	1:A:250:C:H5'	1.68	0.75
2:B:1535:A:H62	2:B:1586:G:H21	1.31	0.75
2:B:1634:G:O6	31:EA:17:ARG:HD3	1.86	0.75
2:B:444:U:H3	2:B:490:A:H61	1.33	0.75
2:B:674:G:H1'	8:H:117:GLU:HB2	1.69	0.75
55:CB:121:ILE:HD11	55:CB:198:LEU:HD12	1.68	0.75
6:F:206:PRO:HG3	6:F:213:GLY:HA3	1.69	0.75
1:A:385:A:H5'	58:FB:21:PHE:CZ	2.22	0.75
7:G:332:ARG:O	7:G:333:LYS:HB2	1.86	0.75
68:PB:42:TYR:HA	68:PB:85:PHE:CE1	2.22	0.75
73:UB:79:ASN:HB3	73:UB:81:LYS:HG3	1.69	0.75
1:A:1651:A:H2'	1:A:1652:C:H6	1.52	0.75
1:A:629:U:H1'	2:B:846:A:C6	2.22	0.75
53:AB:164:VAL:O	53:AB:168:ILE:HG13	1.86	0.75
2:B:883:A:O4'	21:U:133:HIS:HA	1.87	0.75
1:A:381:C:H5''	54:BB:10:LYS:HD3	1.67	0.75
55:CB:77:TYR:HB3	55:CB:84:LYS:HG2	1.69	0.75
56:DB:135:PRO:HB2	56:DB:141:ILE:HG12	1.69	0.75
82:DC:203:TYR:HD2	82:DC:206:ARG:HD2	1.51	0.75
2:B:1051:U:H5'	9:I:15:ARG:HH22	1.52	0.75
9:I:194:LEU:HD22	9:I:198:TYR:HE2	1.51	0.75
61:IB:5:LEU:HD23	61:IB:6:THR:N	2.01	0.75
11:K:157:ASN:O	11:K:158:LYS:HB2	1.86	0.75
19:S:49:ARG:HB2	19:S:49:ARG:HH11	1.49	0.75
49:WA:136:ILE:H	49:WA:136:ILE:HD13	1.51	0.75
75:WB:77:ARG:HA	75:WB:80:LEU:HG	1.69	0.75
50:XA:147:THR:HB	50:XA:151:SER:HB2	1.68	0.75
25:Y:64:VAL:HG22	25:Y:74:VAL:HG22	1.69	0.75
52:ZA:137:ILE:CG1	52:ZA:138:PRO:HD2	2.17	0.75
2:B:584:G:H2'	2:B:585:A:H8	1.52	0.75
82:DC:635:CYS:HB3	82:DC:668:GLN:HE22	1.51	0.75
31:EA:7:ALA:HB1	31:EA:89:VAL:HG11	1.68	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:188:ARG:HH21	8:H:197:ARG:CB	2.00	0.75
63:KB:145:THR:HB	63:KB:149:LEU:HD22	1.69	0.75
46:TA:64:THR:HB	46:TA:89:LYS:NZ	2.02	0.75
21:U:36:ILE:HD11	21:U:95:LEU:HD11	1.67	0.75
47:UA:49:ARG:HH21	47:UA:52:ALA:HB2	1.52	0.75
48:VA:135:PHE:O	48:VA:139:LEU:HB2	1.87	0.75
49:WA:170:ILE:HD11	49:WA:204:ALA:HB2	1.69	0.75
1:A:1098:U:H1'	72:TB:71:LYS:HG3	1.69	0.74
1:A:1238:A:H2'	1:A:1239:U:H5'	1.69	0.74
1:A:178:U:H4'	1:A:179:A:H5'	1.69	0.74
2:B:1007:U:H2'	2:B:1008:U:C6	2.22	0.74
2:B:1234:G:H2'	2:B:1235:U:C5	2.21	0.74
2:B:1256:G:C5'	16:P:127:SER:HB3	2.17	0.74
2:B:135:C:H2'	39:MA:94:LYS:HE2	1.67	0.74
82:DC:284:LEU:O	82:DC:288:ILE:HG13	1.87	0.74
82:DC:387:PRO:HA	82:DC:394:PHE:HB2	1.69	0.74
57:EB:111:LYS:HD3	57:EB:113:PRO:HD3	1.69	0.74
8:H:84:ARG:HA	8:H:87:GLN:OE1	1.87	0.74
36:JA:112:ALA:HA	36:JA:117:ILE:HB	1.66	0.74
11:K:102:VAL:O	11:K:106:LEU:HB2	1.87	0.74
69:QB:82:GLY:O	69:QB:93:HIS:HA	1.85	0.74
24:X:99:ARG:HH12	24:X:126:VAL:HB	1.52	0.74
50:XA:179:ARG:O	50:XA:183:ARG:HB2	1.86	0.74
1:A:448:C:H2'	1:A:449:C:C6	2.22	0.74
1:A:484:C:H2'	1:A:485:A:H8	1.52	0.74
1:A:639:U:H5''	57:EB:101:LYS:HB2	1.66	0.74
1:A:828:U:H2'	1:A:829:A:H5''	1.67	0.74
1:A:906:A:H2	1:A:998:A:H1'	1.52	0.74
2:B:2662:G:H2'	2:B:2663:G:H8	1.52	0.74
2:B:3148:U:H2'	2:B:3149:G:C8	2.21	0.74
35:IA:80:ASN:N	35:IA:89:LEU:HA	2.02	0.74
10:J:132:ALA:O	10:J:136:GLU:HG2	1.87	0.74
14:N:51:HIS:CD2	14:N:168:SER:HB2	2.22	0.74
14:N:52:LEU:HB2	14:N:152:LEU:HD13	1.69	0.74
69:QB:113:ILE:HG23	69:QB:128:GLY:HA3	1.69	0.74
61:IB:101:GLU:HB3	73:UB:12:ALA:HB3	1.67	0.74
2:B:10:C:H2'	2:B:11:A:H4'	1.69	0.74
2:B:1576:G:H2'	2:B:1577:G:O4'	1.88	0.74
30:DA:121:ARG:NH2	30:DA:121:ARG:HB2	2.01	0.74
31:EA:77:TYR:HB3	34:HA:35:ARG:HE	1.51	0.74
66:NB:32:ASN:H	66:NB:66:ARG:NH2	1.85	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:OB:44:LYS:HG3	67:OB:47:ARG:NH2	2.02	0.74
43:QA:9:ILE:HG22	43:QA:13:MET:CE	2.17	0.74
70:RB:83:GLU:HB2	79:AC:55:PHE:CD2	2.22	0.74
52:ZA:58:LEU:HG	71:SB:12:TYR:CE1	2.22	0.74
48:VA:114:VAL:HG12	48:VA:116:PRO:HD3	1.69	0.74
1:A:1182:U:H4'	65:MB:124:THR:HG21	1.69	0.74
27:AA:67:PRO:HA	27:AA:70:ARG:HB2	1.68	0.74
1:A:1594:G:H5''	79:AC:33:LYS:HD2	1.69	0.74
2:B:2434:U:C5	2:B:2593:A:H1'	2.23	0.74
2:B:361:A:C5'	41:OA:36:SER:HB2	2.18	0.74
60:HB:15:LEU:HD22	60:HB:46:LEU:HD21	1.68	0.74
12:L:178:ALA:HB2	12:L:218:ILE:HG21	1.69	0.74
68:PB:72:ILE:HG22	68:PB:81:ILE:HD11	1.68	0.74
52:ZA:222:TYR:C	52:ZA:224:PHE:H	1.89	0.74
1:A:1682:U:H5''	56:DB:33:GLY:HA3	1.69	0.74
2:B:1235:U:C4'	2:B:1236:G:H5'	2.16	0.74
2:B:3109:G:O2'	2:B:3110:C:H5'	1.87	0.74
2:B:759:U:H2'	2:B:760:G:H5'	1.67	0.74
82:DC:489:VAL:O	82:DC:531:ALA:HA	1.87	0.74
2:B:2948:C:H1'	7:G:242:THR:HG22	1.68	0.74
63:KB:88:LEU:HD23	63:KB:125:LEU:CD1	2.17	0.74
65:MB:81:ARG:HH12	65:MB:120:SER:HB3	1.51	0.74
17:Q:107:GLU:HG3	40:NA:18:THR:HG21	1.70	0.74
18:R:120:VAL:HG13	20:T:194:LEU:HD22	1.70	0.74
21:U:36:ILE:HG23	21:U:117:ILE:HG21	1.70	0.74
23:W:23:TRP:HB3	23:W:51:VAL:CG2	2.17	0.74
51:YA:129:THR:HG21	51:YA:180:THR:HA	1.68	0.74
1:A:1153:G:H5'	76:XB:85:ARG:HG2	1.68	0.74
1:A:1164:G:H2'	1:A:1165:G:C8	2.22	0.74
1:A:1634:C:O2'	1:A:1635:A:H5'	1.87	0.74
2:B:1588:A:H3'	2:B:1589:A:C5'	2.17	0.74
2:B:1785:U:H2'	2:B:1786:G:C8	2.22	0.74
2:B:3121:U:H1'	2:B:3122:A:H5''	1.69	0.74
2:B:3348:G:H22	2:B:3357:U:H3	1.34	0.74
56:DB:50:PHE:HA	56:DB:112:VAL:O	1.87	0.74
58:FB:38:ILE:HG21	58:FB:80:GLY:H	1.50	0.74
8:H:235:LEU:O	8:H:235:LEU:HD12	1.86	0.74
49:WA:133:VAL:HB	49:WA:142:ALA:HB3	1.69	0.74
1:A:1510:U:H2'	1:A:1511:U:H5'	1.68	0.74
1:A:36:C:H2'	1:A:37:U:C6	2.22	0.74
2:B:999:G:H2'	2:B:1000:C:C6	2.22	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:6:C:C2	4:D:7:G:H1'	2.23	0.74
8:H:23:PRO:HG2	8:H:258:LEU:CD2	2.18	0.74
9:I:21:ARG:O	9:I:25:GLU:HG2	1.88	0.74
14:N:53:VAL:H	14:N:165:ILE:HA	1.52	0.74
2:B:71:A:H5'	17:Q:62:THR:HG22	1.69	0.74
19:S:146:ALA:HA	19:S:149:ASN:HB3	1.68	0.74
72:TB:3:ARG:HD2	72:TB:6:VAL:HA	1.70	0.74
2:B:2079:G:H2'	2:B:2080:C:O4'	1.88	0.74
9:I:224:LYS:HA	9:I:227:LEU:HD22	1.70	0.74
13:M:146:LEU:CD1	13:M:158:ALA:HB2	2.18	0.74
39:MA:104:GLN:NE2	39:MA:107:LYS:HD3	2.02	0.74
73:UB:96:VAL:O	73:UB:97:ASP:HB2	1.87	0.74
51:YA:167:VAL:HA	51:YA:170:GLU:HB3	1.68	0.74
2:B:17:G:H1	3:C:142:C:N4	1.84	0.74
4:D:114:U:H2'	4:D:115:G:H8	1.51	0.74
82:DC:147:LEU:HD13	82:DC:193:ALA:HB2	1.68	0.74
14:N:47:PRO:HG2	14:N:48:LEU:HD22	1.70	0.74
66:NB:75:VAL:O	66:NB:78:VAL:HB	1.88	0.74
21:U:51:VAL:HG11	21:U:58:ILE:HG12	1.70	0.74
22:V:86:THR:HG22	22:V:105:ARG:HB2	1.68	0.74
11:K:224:ILE:HG12	24:X:36:ILE:HG12	1.70	0.74
76:XB:79:ILE:HA	76:XB:84:VAL:HG11	1.68	0.74
30:DA:89:LYS:HG3	30:DA:93:ALA:HB3	1.70	0.74
82:DC:666:ALA:HB2	82:DC:706:ILE:HA	1.70	0.74
14:N:189:GLU:HB3	14:N:200:LEU:HB3	1.68	0.74
18:R:58:ILE:HG12	18:R:59:ASN:N	2.01	0.74
71:SB:55:LEU:HD11	71:SB:69:LEU:HG	1.68	0.74
20:T:173:ALA:HA	20:T:176:LYS:HE3	1.69	0.74
2:B:1473:G:H5''	23:W:23:TRP:CD1	2.22	0.74
24:X:169:SER:HB3	24:X:171:PHE:CD1	2.22	0.74
76:XB:4:LYS:HD2	76:XB:92:ARG:HH12	1.52	0.74
25:Y:17:ARG:HE	25:Y:47:SER:HB3	1.52	0.74
1:A:569:C:H2'	1:A:570:A:O4'	1.87	0.73
1:A:967:A:OP1	63:KB:4:MET:HB3	1.88	0.73
1:A:989:U:H2'	1:A:990:C:O4'	1.88	0.73
2:B:2436:U:H2'	2:B:2437:G:H5''	1.68	0.73
2:B:3322:A:H2'	2:B:3323:A:C8	2.23	0.73
2:B:700:C:H2'	2:B:701:G:C8	2.23	0.73
2:B:816:A:N1	2:B:919:U:H1'	2.03	0.73
32:FA:145:VAL:HG12	32:FA:146:GLU:H	1.53	0.73
2:B:608:A:H5'	8:H:322:GLN:HG2	1.69	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:R:21:VAL:HB	18:R:63:VAL:HG22	1.67	0.73
1:A:1057:U:H4'	1:A:1058:U:H3'	1.69	0.73
1:A:1495:C:H2'	1:A:1496:U:H5''	1.69	0.73
2:B:1653:G:H2'	2:B:1654:A:O4'	1.88	0.73
2:B:3120:C:H3'	44:RA:111:ARG:NH2	2.03	0.73
7:G:95:THR:HG21	7:G:100:ARG:HB2	1.70	0.73
2:B:954:U:H1'	33:GA:12:GLN:NE2	2.03	0.73
11:K:170:GLU:HG3	11:K:179:LEU:HA	1.70	0.73
63:KB:150:VAL:HG13	63:KB:151:ASN:H	1.54	0.73
38:LA:57:LEU:HD23	38:LA:57:LEU:H	1.53	0.73
13:M:47:LYS:HE3	18:R:5:SER:HB2	1.70	0.73
23:W:119:LEU:HG	23:W:123:LEU:HD12	1.69	0.73
75:WB:77:ARG:HB2	75:WB:77:ARG:HH11	1.53	0.73
1:A:820:U:H2'	1:A:821:U:H4'	1.70	0.73
2:B:1690:C:H2'	2:B:1691:U:O4'	1.89	0.73
2:B:2076:G:C2'	2:B:2077:U:H5''	2.19	0.73
83:EC:6866:C:H2'	83:EC:6867:C:H5'	1.69	0.73
8:H:23:PRO:HD2	8:H:26:PHE:HE2	1.53	0.73
64:LB:20:TYR:O	64:LB:26:THR:HA	1.89	0.73
2:B:126:U:H4'	19:S:139:HIS:CE1	2.24	0.73
74:VB:19:ALA:HB1	74:VB:77:ASN:HD21	1.52	0.73
49:WA:261:LYS:HB3	49:WA:270:LEU:HD11	1.69	0.73
50:XA:183:ARG:HD3	50:XA:191:ARG:HH21	1.53	0.73
1:A:1266:U:H2'	1:A:1267:G:C8	2.22	0.73
1:A:1495:C:H3'	1:A:1496:U:H5''	1.69	0.73
2:B:1604:G:C3'	2:B:1605:A:H5''	2.16	0.73
2:B:2572:C:H5''	31:EA:59:ALA:HB2	1.70	0.73
2:B:87:U:H5'	22:V:167:SER:HB2	1.69	0.73
7:G:307:PRO:HB3	7:G:362:ALA:O	1.89	0.73
60:HB:86:ILE:HG23	60:HB:87:VAL:N	2.02	0.73
12:L:185:ARG:O	12:L:188:THR:HG22	1.88	0.73
73:UB:19:ARG:HD3	73:UB:23:ARG:HG2	1.71	0.73
74:VB:125:LEU:HA	74:VB:128:LYS:HB2	1.69	0.73
74:VB:27:VAL:HB	74:VB:69:SER:HB2	1.69	0.73
1:A:1135:U:H2'	1:A:1136:U:C6	2.23	0.73
2:B:1019:G:H3'	2:B:1020:G:H5''	1.70	0.73
2:B:1146:C:H2'	2:B:1147:G:H8	1.52	0.73
2:B:2129:U:H2'	2:B:2130:G:H8	1.50	0.73
2:B:2712:U:O2'	2:B:2743:A:H4'	1.87	0.73
2:B:2821:C:H42	2:B:2869:U:H3	1.35	0.73
2:B:3027:A:C8	82:DC:789:GLY:HA2	2.24	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:987:U:H2'	2:B:988:U:C6	2.23	0.73
3:C:19:C:H2'	3:C:20:U:O4'	1.89	0.73
3:C:70:G:H5''	30:DA:28:ARG:NE	2.03	0.73
31:EA:10:VAL:HG12	31:EA:11:ALA:H	1.54	0.73
6:F:144:ASN:O	6:F:159:SER:HA	1.89	0.73
61:IB:33:ARG:HD3	61:IB:34:TRP:N	2.04	0.73
10:J:26:ARG:HB2	10:J:26:ARG:HH11	1.53	0.73
11:K:85:PHE:HE1	11:K:87:VAL:HG13	1.51	0.73
13:M:85:GLY:HA3	13:M:187:ILE:HB	1.70	0.73
14:N:99:ILE:HG12	14:N:101:LYS:H	1.53	0.73
14:N:213:PHE:N	14:N:214:PRO:HD3	2.04	0.73
48:VA:176:LEU:HB2	48:VA:178:ILE:HD13	1.70	0.73
1:A:1488:G:H2'	1:A:1513:G:N2	2.03	0.73
1:A:1789:G:H2'	1:A:1790:A:C8	2.23	0.73
1:A:778:G:H2'	1:A:779:U:H5'	1.68	0.73
1:A:939:A:H2'	1:A:940:A:C8	2.23	0.73
2:B:266:A:C6	40:NA:30:LYS:HA	2.24	0.73
2:B:3353:G:O2'	2:B:3356:G:H4'	1.88	0.73
29:CA:115:ARG:HB2	29:CA:119:THR:C	2.09	0.73
55:CB:131:GLN:O	55:CB:134:VAL:HG12	1.89	0.73
4:D:25:G:H2'	4:D:26:C:C6	2.24	0.73
11:K:155:LYS:HG2	11:K:158:LYS:O	1.88	0.73
12:L:46:LEU:HD12	29:CA:30:ALA:HB2	1.69	0.73
66:NB:102:LYS:O	66:NB:105:LEU:HB3	1.89	0.73
2:B:884:A:OP2	41:OA:4:GLY:HA3	1.88	0.73
16:P:108:GLU:O	16:P:111:GLU:HB3	1.88	0.73
17:Q:28:GLN:O	17:Q:32:LYS:HB2	1.89	0.73
1:A:617:U:H5'	1:A:1031:U:O4'	1.87	0.73
2:B:120:G:H22	12:L:124:ASP:HA	1.53	0.73
2:B:3286:G:H2'	2:B:3287:U:H5''	1.71	0.73
7:G:166:ILE:HG12	7:G:173:GLN:HB3	1.69	0.73
7:G:169:THR:CG2	7:G:171:LEU:HG	2.19	0.73
11:K:102:VAL:HG21	11:K:129:LEU:HD22	1.70	0.73
1:A:1366:U:H4'	69:QB:7:ARG:HD2	1.71	0.73
49:WA:161:LYS:HA	49:WA:161:LYS:HE3	1.69	0.73
53:AB:102:ALA:HB2	53:AB:171:ALA:HB1	1.70	0.73
2:B:1204:A:H61	2:B:1300:G:H1'	1.53	0.73
2:B:2814:G:H2'	2:B:2815:G:C8	2.24	0.73
2:B:2895:G:H2'	2:B:2896:A:H5''	1.70	0.73
54:BB:159:THR:HG22	54:BB:173:ILE:HB	1.69	0.73
82:DC:733:ILE:HD12	82:DC:733:ILE:H	1.52	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:72:PHE:HA	5:E:75:ASP:HB3	1.69	0.73
32:FA:75:LEU:HG	32:FA:114:GLY:HA2	1.71	0.73
9:I:27:LYS:HA	9:I:150:LEU:HD11	1.70	0.73
36:JA:20:HIS:O	36:JA:21:HIS:HB2	1.87	0.73
2:B:2663:G:H5''	15:O:142:LYS:HE2	1.68	0.73
18:R:123:LEU:HD23	20:T:190:VAL:HG23	1.71	0.73
19:S:43:THR:HG23	19:S:63:ARG:HH21	1.54	0.73
53:AB:124:ARG:HA	53:AB:127:MET:HB2	1.70	0.73
2:B:2186:U:O2'	2:B:2187:G:H5'	1.88	0.73
2:B:2904:U:H2'	2:B:2905:U:C6	2.24	0.73
2:B:595:G:H2'	2:B:596:C:C6	2.23	0.73
82:DC:571:SER:HA	82:DC:720:ALA:HA	1.71	0.73
31:EA:13:VAL:HB	31:EA:20:GLY:N	2.03	0.73
35:IA:31:ARG:HH11	35:IA:31:ARG:HB3	1.54	0.73
37:KA:89:LEU:HD12	37:KA:89:LEU:H	1.52	0.73
15:O:19:LEU:HB2	15:O:69:VAL:HG13	1.71	0.73
42:PA:31:LEU:HA	42:PA:37:PRO:HA	1.70	0.73
18:R:45:LEU:HD21	18:R:55:ARG:HG2	1.71	0.73
72:TB:6:VAL:HG12	72:TB:34:ILE:HD11	1.68	0.73
53:AB:208:ILE:HD12	67:OB:16:LEU:HD21	1.71	0.73
2:B:1680:G:H2'	2:B:1681:U:C6	2.23	0.73
2:B:1934:G:C2'	2:B:1935:G:H5''	2.17	0.73
28:BA:33:ASN:HD21	28:BA:35:LYS:HB3	1.51	0.73
55:CB:94:THR:O	55:CB:98:MET:HG2	1.87	0.73
17:Q:16:LYS:N	17:Q:16:LYS:HD2	2.00	0.73
44:RA:79:GLU:OE2	44:RA:80:PRO:HD2	1.89	0.73
20:T:136:THR:CG2	20:T:137:THR:H	2.02	0.73
50:XA:77:SER:O	50:XA:99:ALA:HA	1.88	0.73
2:B:1348:U:H4'	2:B:1349:G:H5''	1.71	0.72
2:B:1456:A:H61	2:B:1477:A:H4'	1.52	0.72
2:B:1725:C:H2'	2:B:1726:C:C6	2.24	0.72
2:B:876:A:H5''	2:B:1890:U:H5''	1.71	0.72
2:B:502:U:H2'	2:B:503:C:H5''	1.71	0.72
2:B:948:C:H2'	2:B:949:C:C6	2.24	0.72
82:DC:590:ALA:HB3	82:DC:720:ALA:HB2	1.71	0.72
82:DC:753:GLN:HB2	82:DC:771:TYR:HB2	1.71	0.72
83:EC:6927:U:H3'	83:EC:6928:G:H5'	1.69	0.72
8:H:126:ILE:HG23	8:H:250:TRP:HH2	1.54	0.72
9:I:166:ALA:HB1	9:I:171:LEU:HD12	1.70	0.72
61:IB:125:VAL:HB	61:IB:138:ASN:O	1.88	0.72
11:K:224:ILE:HD13	24:X:39:SER:CB	2.18	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:R:120:VAL:HG22	20:T:197:LEU:HD13	1.70	0.72
19:S:43:THR:HG23	19:S:63:ARG:NH2	2.04	0.72
22:V:179:ARG:NH1	22:V:179:ARG:HB3	2.03	0.72
74:VB:15:ASN:HD22	74:VB:22:GLN:HB3	1.54	0.72
75:WB:100:ILE:HD13	75:WB:101:TYR:N	2.04	0.72
82:DC:672:LYS:HA	82:DC:680:GLU:HG2	1.69	0.72
6:F:242:ARG:CD	6:F:243:THR:H	2.01	0.72
39:MA:54:VAL:O	39:MA:58:ILE:HG13	1.89	0.72
14:N:174:THR:HG22	14:N:176:LEU:N	2.01	0.72
2:B:148:G:H5'	19:S:55:ALA:HB2	1.71	0.72
23:W:10:LEU:HB3	23:W:41:ILE:CD1	2.19	0.72
2:B:1488:G:H5'	2:B:1838:G:O6	1.88	0.72
2:B:1480:G:N2	2:B:1871:U:H5'	2.03	0.72
2:B:508:U:H2'	2:B:509:U:C6	2.23	0.72
82:DC:147:LEU:HB3	82:DC:193:ALA:HA	1.71	0.72
61:IB:74:THR:H	61:IB:87:ARG:H	1.36	0.72
11:K:173:LEU:HD22	11:K:178:ILE:HD12	1.69	0.72
1:A:1581:C:H5'	66:NB:136:SER:HA	1.70	0.72
73:UB:32:ARG:HB3	73:UB:32:ARG:NH1	2.04	0.72
2:B:1601:U:H2'	2:B:1603:A:OP2	1.89	0.72
2:B:306:A:C2	2:B:2784:G:H1'	2.24	0.72
2:B:80:G:H2'	2:B:81:C:H6	1.54	0.72
2:B:2415:C:H5'	6:F:207:VAL:HG22	1.70	0.72
59:GB:141:VAL:HG12	59:GB:143:ILE:H	1.52	0.72
36:JA:9:ILE:HD12	36:JA:9:ILE:H	1.52	0.72
13:M:100:ASN:ND2	13:M:115:ARG:HB2	2.03	0.72
22:V:158:HIS:H	22:V:186:VAL:HG13	1.55	0.72
1:A:1519:U:H2'	1:A:1520:U:C5	2.24	0.72
2:B:1807:G:H2'	2:B:1808:G:O4'	1.89	0.72
2:B:2858:U:H2'	2:B:2859:U:C6	2.24	0.72
2:B:3129:A:C2'	2:B:3130:A:H5'	2.18	0.72
2:B:968:G:H21	33:GA:15:LYS:HZ2	1.36	0.72
56:DB:88:ARG:HB3	56:DB:91:GLU:HB2	1.70	0.72
1:A:639:U:H3	57:EB:100:PRO:HA	1.54	0.72
39:MA:48:ARG:O	39:MA:51:ILE:HB	1.88	0.72
16:P:135:THR:HG22	16:P:147:ASN:HA	1.71	0.72
17:Q:67:ARG:HB3	32:FA:105:LEU:CG	2.19	0.72
19:S:174:ILE:HG12	19:S:185:ALA:O	1.89	0.72
48:VA:26:PHE:HE1	48:VA:190:VAL:HG12	1.54	0.72
1:A:138:A:H61	1:A:266:A:H61	1.38	0.72
1:A:1767:G:H5'	1:A:1768:G:H21	1.54	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:776:U:H2'	2:B:777:U:H5''	1.71	0.72
54:BB:59:ARG:HE	54:BB:60:GLU:HG3	1.54	0.72
56:DB:137:ARG:HE	56:DB:140:ASN:HB2	1.53	0.72
9:I:236:LEU:HD12	9:I:239:ILE:HD12	1.72	0.72
65:MB:81:ARG:HA	65:MB:116:LEU:HB2	1.71	0.72
2:B:1236:G:N3	16:P:58:VAL:HG12	2.04	0.72
17:Q:57:VAL:HG21	17:Q:147:ILE:HG21	1.69	0.72
17:Q:2:ALA:HA	32:FA:33:GLY:H	1.54	0.72
23:W:17:VAL:HG12	23:W:18:GLY:H	1.54	0.72
1:A:198:A:H2'	1:A:199:G:O4'	1.89	0.72
2:B:1805:C:H2'	2:B:1806:A:H8	1.55	0.72
2:B:1447:G:H22	2:B:2355:G:H2'	1.55	0.72
2:B:2443:A:C2	2:B:2505:U:H1'	2.25	0.72
2:B:661:G:H4'	2:B:662:U:H6	1.54	0.72
4:D:80:G:H2'	4:D:81:U:C6	2.25	0.72
82:DC:496:LYS:HD2	82:DC:553:PRO:HB3	1.72	0.72
58:FB:184:LEU:HB3	58:FB:189:LEU:HD13	1.71	0.72
12:L:132:VAL:HG23	12:L:199:ALA:O	1.90	0.72
14:N:153:ARG:HH21	14:N:154:ARG:HA	1.54	0.72
2:B:2895:G:H5''	44:RA:102:ARG:NH2	2.04	0.72
19:S:54:LYS:HB2	19:S:59:PHE:CE2	2.23	0.72
20:T:7:VAL:HB	20:T:33:ILE:HG12	1.70	0.72
25:Y:27:LEU:O	25:Y:30:TYR:HB2	1.88	0.72
1:A:1003:A:H4'	1:A:1004:U:H5'	1.72	0.72
1:A:1024:U:H2'	1:A:1025:A:H5''	1.70	0.72
1:A:385:A:H2'	1:A:386:G:H8	1.54	0.72
1:A:896:U:H2'	1:A:897:C:C6	2.24	0.72
53:AB:94:ARG:HB2	53:AB:101:GLN:HG2	1.72	0.72
2:B:1616:U:H2'	2:B:1617:G:C8	2.25	0.72
2:B:2163:C:H4'	6:F:8:GLN:HA	1.71	0.72
2:B:293:C:H2'	2:B:294:U:O4'	1.90	0.72
2:B:499:G:H2'	2:B:500:C:C6	2.24	0.72
54:BB:214:LEU:HD13	54:BB:244:ILE:HG21	1.69	0.72
5:E:176:GLU:HA	5:E:179:LEU:HD12	1.71	0.72
83:EC:6832:G:C2'	83:EC:6833:G:H5'	2.20	0.72
83:EC:6926:U:C5	83:EC:6928:G:H1'	2.24	0.72
58:FB:64:ASN:O	58:FB:180:ASP:HA	1.90	0.72
7:G:361:THR:HG22	7:G:371:GLN:OE1	1.90	0.72
8:H:82:THR:HG23	8:H:84:ARG:HB3	1.71	0.72
11:K:88:ARG:HA	11:K:134:VAL:HG12	1.71	0.72
37:KA:18:ARG:HA	37:KA:23:ASN:HA	1.72	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:QA:21:ARG:CZ	43:QA:24:PRO:HG3	2.20	0.72
69:QB:86:ARG:HB3	69:QB:89:ARG:HD2	1.72	0.72
77:YB:55:THR:HG22	77:YB:62:ILE:HA	1.72	0.72
1:A:678:A:H2'	1:A:679:U:H5'	1.72	0.72
2:B:1405:U:H5'	36:JA:57:TYR:O	1.89	0.72
2:B:2193:U:H3	2:B:2313:A:H62	1.37	0.72
2:B:1523:U:H5'	29:CA:113:LEU:HD13	1.72	0.72
29:CA:115:ARG:H	29:CA:120:LYS:HA	1.55	0.72
55:CB:128:ASN:ND2	55:CB:129:PRO:HD2	2.05	0.72
82:DC:510:ARG:HD3	82:DC:549:HIS:HA	1.70	0.72
7:G:295:ALA:HB1	7:G:300:ARG:H	1.54	0.72
38:LA:19:LYS:HD3	38:LA:37:LYS:HA	1.72	0.72
65:MB:43:ARG:NH1	65:MB:47:ARG:HD3	1.98	0.72
17:Q:107:GLU:HG3	40:NA:18:THR:CG2	2.20	0.72
20:T:34:VAL:CG1	20:T:103:LYS:HB2	2.18	0.72
24:X:110:MET:HG3	24:X:121:ILE:HD13	1.71	0.72
1:A:1184:A:H2'	1:A:1185:U:H4'	1.72	0.72
1:A:1544:U:H4'	68:PB:132:ARG:NH1	2.05	0.72
27:AA:33:ASN:H	27:AA:33:ASN:HD22	1.37	0.72
2:B:1221:A:H3'	2:B:1222:G:H5''	1.72	0.72
2:B:1386:A:H5''	8:H:141:ARG:NH2	2.05	0.72
2:B:1827:C:H2'	2:B:1828:A:C8	2.25	0.72
2:B:916:G:OP1	2:B:2957:G:H5''	1.89	0.72
7:G:367:LYS:HA	28:BA:17:ARG:HH22	1.54	0.72
1:A:373:G:H5'	61:IB:96:LYS:HG3	1.72	0.72
8:H:327:LEU:HD11	11:K:165:ASP:HA	1.70	0.72
14:N:96:VAL:HG22	14:N:125:LEU:HD22	1.71	0.72
17:Q:47:ALA:HB1	17:Q:48:PRO:CD	2.19	0.72
1:A:1563:C:H5'	69:QB:84:LYS:HZ1	1.55	0.72
19:S:140:LYS:O	19:S:144:ARG:HG3	1.90	0.72
23:W:7:GLN:HA	23:W:10:LEU:HB2	1.72	0.72
49:WA:170:ILE:HG22	49:WA:180:ALA:HB2	1.71	0.72
13:M:1:MET:SD	24:X:139:TYR:HB3	2.30	0.72
1:A:1241:G:H5'	65:MB:102:PHE:HZ	1.53	0.71
1:A:1344:A:H2	70:RB:56:VAL:HG13	1.53	0.71
1:A:475:A:H3'	1:A:476:U:C6	2.25	0.71
53:AB:137:VAL:CG1	53:AB:151:LYS:HG2	2.20	0.71
2:B:1279:C:H6	2:B:1279:C:O5'	1.71	0.71
2:B:3348:G:H2'	2:B:3349:C:C6	2.24	0.71
30:DA:3:LYS:HG3	30:DA:8:VAL:HG11	1.72	0.71
82:DC:307:LEU:C	82:DC:308:LYS:HD3	2.10	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:387:PRO:HA	82:DC:394:PHE:CB	2.20	0.71
82:DC:414:GLN:HB2	82:DC:468:THR:HB	1.70	0.71
82:DC:559:PRO:HG2	82:DC:778:PHE:HE1	1.54	0.71
2:B:3004:C:H4'	7:G:99:LEU:O	1.90	0.71
34:HA:78:GLY:HA2	34:HA:81:VAL:HG22	1.72	0.71
61:IB:45:PRO:HG2	61:IB:48:ALA:HB2	1.70	0.71
70:RB:21:LYS:HA	70:RB:94:GLU:HG2	1.70	0.71
24:X:141:LYS:HG3	24:X:144:LEU:HD12	1.72	0.71
1:A:189:C:H3'	1:A:190:C:H5''	1.70	0.71
2:B:1364:C:OP1	22:V:3:ILE:HG12	1.90	0.71
54:BB:100:ARG:NH2	54:BB:118:GLU:HG2	2.05	0.71
31:EA:26:VAL:HG23	31:EA:27:LYS:H	1.56	0.71
12:L:97:TYR:OH	12:L:203:VAL:HG23	1.90	0.71
68:PB:17:LEU:HG	68:PB:22:VAL:HG21	1.72	0.71
19:S:68:ARG:HH21	19:S:128:LYS:HB2	1.55	0.71
23:W:28:GLU:O	23:W:32:ILE:HG13	1.89	0.71
52:ZA:58:LEU:HG	71:SB:12:TYR:HE1	1.54	0.71
1:A:1338:C:H1'	1:A:1410:A:C4	2.25	0.71
27:AA:87:ARG:NH2	27:AA:93:LEU:HD11	2.05	0.71
2:B:1567:U:H2'	2:B:1568:U:H5''	1.70	0.71
2:B:1650:G:H2'	2:B:1651:U:C6	2.26	0.71
2:B:2394:G:OP2	2:B:2394:G:H3'	1.90	0.71
2:B:268:A:N6	2:B:295:A:H3'	2.05	0.71
2:B:3060:C:H2'	2:B:3061:G:C8	2.25	0.71
2:B:3330:A:H4'	7:G:366:GLY:HA3	1.71	0.71
2:B:415:G:H2'	2:B:416:A:C8	2.25	0.71
82:DC:615:ARG:NH2	82:DC:633:ILE:HD11	2.05	0.71
8:H:44:LYS:HD2	8:H:111:VAL:CG2	2.20	0.71
34:HA:27:TYR:O	34:HA:31:VAL:HG23	1.90	0.71
61:IB:5:LEU:HD23	61:IB:6:THR:H	1.54	0.71
11:K:136:TYR:CE2	11:K:231:ASN:HB2	2.26	0.71
64:LB:24:ASN:N	64:LB:55:SER:HB3	2.05	0.71
41:OA:54:LYS:O	41:OA:58:THR:HG23	1.90	0.71
68:PB:33:THR:HA	68:PB:39:GLY:HA2	1.72	0.71
43:QA:9:ILE:HG22	43:QA:13:MET:HE2	1.72	0.71
18:R:45:LEU:HD12	18:R:57:ALA:HB2	1.71	0.71
19:S:147:ARG:C	19:S:150:TRP:HE1	1.94	0.71
21:U:168:LEU:HD23	21:U:172:GLN:HG2	1.71	0.71
47:UA:14:TYR:HA	47:UA:17:ARG:HE	1.54	0.71
75:WB:42:LEU:HD12	75:WB:43:ASP:N	2.04	0.71
1:A:885:G:H2'	1:A:886:U:H6	1.54	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:992:A:H2'	1:A:993:A:H5'	1.73	0.71
27:AA:62:VAL:HG12	27:AA:63:LYS:H	1.53	0.71
2:B:1833:G:C2'	2:B:1834:U:H5'	2.21	0.71
2:B:2922:G:H2'	2:B:2923:U:C4'	2.21	0.71
2:B:3153:U:H3	2:B:3293:U:H3	1.36	0.71
2:B:886:C:H2'	2:B:887:G:C8	2.24	0.71
54:BB:101:LEU:HB3	54:BB:109:PHE:CE1	2.25	0.71
82:DC:445:ILE:HG12	82:DC:446:ASP:H	1.55	0.71
82:DC:565:GLU:OE1	82:DC:676:ILE:HB	1.90	0.71
83:EC:6912:G:H2'	83:EC:6913:U:C4'	2.19	0.71
2:B:984:G:N2	33:GA:13:THR:HB	2.04	0.71
8:H:115:HIS:O	8:H:119:ARG:HG3	1.91	0.71
10:J:82:ARG:HB3	37:KA:104:PRO:HB3	1.72	0.71
36:JA:64:LYS:O	36:JA:65:PHE:HB2	1.91	0.71
11:K:47:ARG:NH1	11:K:179:LEU:HD22	2.05	0.71
68:PB:145:ARG:HA	68:PB:145:ARG:HE	1.55	0.71
2:B:269:G:C5	19:S:14:LYS:HD2	2.25	0.71
1:A:1095:U:H1'	72:TB:16:ASN:HD22	1.54	0.71
74:VB:123:LYS:HD2	74:VB:124:ARG:N	2.05	0.71
24:X:82:ASP:HA	24:X:87:THR:HA	1.72	0.71
76:XB:4:LYS:HE3	76:XB:5:ARG:NH2	2.05	0.71
2:B:2358:A:H2'	2:B:2359:C:O4'	1.90	0.71
2:B:3298:C:H2'	2:B:3299:A:C8	2.24	0.71
2:B:514:G:H2'	2:B:515:C:O4'	1.90	0.71
2:B:646:A:H2'	2:B:647:A:O4'	1.91	0.71
54:BB:206:ASP:HB2	54:BB:222:LEU:HB2	1.73	0.71
82:DC:155:VAL:HG21	82:DC:209:VAL:HG22	1.72	0.71
82:DC:322:VAL:HG12	82:DC:326:LYS:HE2	1.73	0.71
82:DC:539:GLU:HA	82:DC:542:LEU:HD12	1.71	0.71
2:B:964:G:N2	32:FA:40:HIS:HB2	2.06	0.71
9:I:286:VAL:HG13	14:N:206:LEU:HD22	1.71	0.71
61:IB:97:TYR:O	61:IB:99:ARG:HG2	1.89	0.71
14:N:46:PHE:HB2	14:N:139:ARG:CG	2.09	0.71
3:C:75:G:C1'	43:QA:29:LEU:HG	2.20	0.71
22:V:132:PRO:HD2	22:V:135:GLN:NE2	2.05	0.71
22:V:65:SER:HA	22:V:93:ILE:HD13	1.72	0.71
48:VA:165:VAL:CG1	48:VA:170:ALA:HB2	2.20	0.71
51:YA:71:ALA:HB2	51:YA:79:HIS:O	1.90	0.71
2:B:219:A:H8	2:B:1390:A:C8	2.09	0.71
2:B:1950:U:H3	2:B:2096:A:H61	1.38	0.71
2:B:2843:U:H5''	2:B:2844:C:C5	2.24	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:3118:C:H2'	2:B:3119:U:H5''	1.70	0.71
2:B:3163:A:C2'	2:B:3164:C:H5''	2.19	0.71
2:B:1886:A:O4'	2:B:3307:A:H5'	1.91	0.71
82:DC:221:THR:HG23	82:DC:333:ALA:HB1	1.73	0.71
5:E:93:LEU:O	5:E:100:ILE:HB	1.91	0.71
2:B:966:U:H4'	32:FA:43:ILE:HG21	1.73	0.71
60:HB:55:VAL:HB	60:HB:68:LEU:HD12	1.73	0.71
10:J:129:GLU:HG3	10:J:130:ILE:H	1.55	0.71
13:M:112:ILE:HD11	13:M:134:ILE:HD13	1.72	0.71
69:QB:74:GLY:HA2	69:QB:77:ASN:ND2	2.06	0.71
1:A:1011:G:H2'	1:A:1012:U:H5	1.56	0.71
1:A:684:A:H2'	1:A:685:A:H5''	1.72	0.71
2:B:1195:A:H1'	2:B:1319:G:H4'	1.72	0.71
2:B:2048:G:H2'	2:B:2049:A:H5'	1.72	0.71
2:B:2771:U:H5''	46:TA:15:LYS:HE2	1.71	0.71
82:DC:369:ILE:HD13	82:DC:402:ALA:HB2	1.72	0.71
5:E:196:LYS:HD3	5:E:200:ASN:HB2	1.72	0.71
83:EC:6934:U:H2'	83:EC:6935:G:C4'	2.16	0.71
7:G:117:ARG:CZ	7:G:175:LYS:HD3	2.21	0.71
9:I:78:ALA:HB3	9:I:105:ILE:HG12	1.72	0.71
35:IA:55:LEU:HG	35:IA:59:ILE:HD11	1.72	0.71
13:M:158:ALA:HA	13:M:161:LEU:HD12	1.72	0.71
66:NB:79:TYR:HA	66:NB:82:ARG:HD3	1.71	0.71
68:PB:46:VAL:HG11	68:PB:69:ILE:HG23	1.73	0.71
17:Q:56:PRO:HB3	17:Q:75:PHE:CD1	2.26	0.71
19:S:138:GLN:HA	19:S:143:ARG:HH11	1.54	0.71
2:B:148:G:C5'	19:S:55:ALA:HB2	2.20	0.71
2:B:289:A:C2	19:S:93:LYS:HD3	2.25	0.71
73:UB:56:LYS:HA	73:UB:72:VAL:HG12	1.73	0.71
74:VB:11:LYS:O	74:VB:23:PHE:HA	1.90	0.71
23:W:105:LEU:HD11	23:W:135:LYS:CG	2.16	0.71
24:X:26:ARG:HH21	24:X:28:ARG:NH2	1.89	0.71
2:B:1392:G:H3'	36:JA:125:ARG:HH21	1.55	0.71
2:B:858:A:H4'	2:B:1791:C:H5'	1.71	0.71
2:B:2284:C:H2'	2:B:2285:C:O4'	1.91	0.71
2:B:713:U:O2'	2:B:754:G:H5''	1.89	0.71
28:BA:60:LYS:HE2	28:BA:60:LYS:HA	1.72	0.71
30:DA:33:ALA:H	30:DA:50:ILE:HG22	1.56	0.71
6:F:104:LEU:HD23	6:F:146:THR:HG21	1.72	0.71
7:G:367:LYS:HA	28:BA:17:ARG:NH2	2.06	0.71
11:K:160:ARG:HG2	11:K:160:ARG:HH11	1.56	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
68:PB:20:THR:HG21	68:PB:35:ILE:HA	1.73	0.71
72:TB:40:VAL:HG11	72:TB:103:ILE:HD12	1.71	0.71
23:W:81:ARG:HG2	23:W:88:ARG:HD2	1.73	0.71
1:A:1789:G:H2'	1:A:1790:A:H8	1.54	0.71
1:A:586:G:H2'	1:A:587:C:C6	2.26	0.71
2:B:1346:G:H2'	2:B:1347:U:O4'	1.90	0.71
2:B:1458:U:H5''	35:IA:34:LYS:NZ	2.06	0.71
2:B:986:U:H2'	2:B:987:U:C6	2.25	0.71
3:C:53:A:H2'	3:C:54:A:C8	2.26	0.71
82:DC:217:GLY:HA3	82:DC:325:ARG:HH12	1.56	0.71
82:DC:699:DDE:HAD1	83:EC:6952:U:H4'	1.54	0.71
12:L:154:ALA:HB2	12:L:186:LEU:HD11	1.72	0.71
13:M:180:TYR:HB2	44:RA:85:LEU:HD12	1.73	0.71
69:QB:101:ASN:O	69:QB:105:LEU:HG	1.90	0.71
74:VB:88:THR:O	74:VB:92:VAL:HG23	1.90	0.71
1:A:1107:G:H3'	1:A:1108:G:H21	1.55	0.71
1:A:625:C:H2'	1:A:626:U:C6	2.25	0.71
53:AB:196:ARG:HB2	53:AB:196:ARG:NH1	2.06	0.71
2:B:1501:U:H3	2:B:1515:A:N6	1.87	0.71
2:B:2162:U:H5''	6:F:238:ILE:HD13	1.73	0.71
2:B:2271:A:H2'	2:B:2272:G:C4'	2.21	0.71
2:B:266:A:N6	40:NA:30:LYS:HA	2.06	0.71
2:B:83:U:H2'	2:B:84:U:O4'	1.91	0.71
82:DC:740:VAL:O	82:DC:743:ILE:HG22	1.90	0.71
2:B:3272:C:H4'	10:J:78:ARG:O	1.91	0.71
67:OB:24:LEU:HD23	67:OB:31:ASN:HA	1.72	0.71
69:QB:114:VAL:HG23	69:QB:123:ARG:O	1.91	0.71
48:VA:186:THR:HG22	48:VA:187:VAL:H	1.54	0.71
1:A:1126:G:H5'	45:SA:11:ARG:NE	2.06	0.70
1:A:1767:G:H4'	1:A:1768:G:C5'	2.17	0.70
1:A:780:A:H1'	74:VB:9:THR:N	2.00	0.70
2:B:1339:C:H2'	2:B:1340:G:C8	2.25	0.70
2:B:1521:G:H4'	2:B:1603:A:N6	2.04	0.70
2:B:3354:U:H4'	2:B:3356:G:H5'	1.73	0.70
83:EC:6934:U:C3'	83:EC:6935:G:H4'	2.20	0.70
70:RB:40:ASN:ND2	70:RB:107:THR:HG21	2.06	0.70
49:WA:26:SER:HB2	49:WA:73:LEU:HD22	1.73	0.70
49:WA:83:ALA:HB2	49:WA:89:LEU:HG	1.73	0.70
1:A:1210:C:H2'	1:A:1211:A:C8	2.26	0.70
1:A:629:U:H2'	1:A:630:A:H5''	1.73	0.70
1:A:94:U:H2'	1:A:95:G:H5'	1.73	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1364:C:H2'	2:B:1365:G:C8	2.25	0.70
2:B:1711:C:H5''	31:EA:38:PHE:HB3	1.71	0.70
2:B:2503:G:H3'	2:B:2504:U:C5'	2.21	0.70
82:DC:358:GLU:HG2	82:DC:479:LYS:HE3	1.72	0.70
82:DC:590:ALA:HB3	82:DC:720:ALA:CB	2.21	0.70
60:HB:58:GLN:HB2	60:HB:65:TYR:HB2	1.71	0.70
38:LA:57:LEU:HG	38:LA:62:TYR:CE2	2.27	0.70
69:QB:123:ARG:HG2	69:QB:124:ILE:H	1.55	0.70
49:WA:42:LEU:HD23	49:WA:71:CYS:HB3	1.73	0.70
50:XA:168:HIS:HD1	50:XA:203:PHE:HE1	1.39	0.70
2:B:1068:C:H5'	25:Y:110:LYS:HE3	1.72	0.70
51:YA:146:GLN:H	51:YA:149:GLN:HB2	1.56	0.70
1:A:410:A:H2'	1:A:411:C:O4'	1.91	0.70
1:A:86:A:H2'	1:A:87:C:C6	2.26	0.70
27:AA:93:LEU:HD23	27:AA:93:LEU:H	1.56	0.70
2:B:1464:G:H1'	2:B:1511:U:H3	1.55	0.70
2:B:352:A:N6	2:B:365:A:H5''	2.05	0.70
30:DA:17:LYS:HG2	30:DA:21:THR:CG2	2.21	0.70
57:EB:9:LEU:HD11	57:EB:11:GLN:O	1.90	0.70
57:EB:117:THR:HG22	57:EB:120:ALA:HB2	1.72	0.70
36:JA:43:ARG:HH11	36:JA:43:ARG:HG2	1.56	0.70
2:B:2561:A:C6	12:L:32:LYS:HB2	2.25	0.70
39:MA:13:SER:OG	39:MA:16:GLN:HG3	1.91	0.70
14:N:85:PHE:HA	14:N:139:ARG:O	1.91	0.70
16:P:123:ARG:NH2	48:VA:42:ARG:HB2	2.03	0.70
69:QB:86:ARG:CB	69:QB:89:ARG:HB2	2.21	0.70
48:VA:58:MET:HE1	48:VA:86:PHE:HZ	1.56	0.70
52:ZA:140:ARG:HH22	52:ZA:226:THR:HG22	1.55	0.70
1:A:195:G:H2'	1:A:196:G:H5''	1.74	0.70
1:A:420:A:H2'	1:A:421:A:O4'	1.92	0.70
2:B:1242:G:C4	82:DC:754:VAL:HB	2.26	0.70
2:B:2709:C:H2'	2:B:2710:C:C6	2.27	0.70
2:B:644:G:H2'	2:B:2372:A:N7	2.07	0.70
55:CB:161:ASP:O	78:ZB:44:VAL:HA	1.91	0.70
8:H:126:ILE:HD11	8:H:233:LEU:HD22	1.72	0.70
39:MA:48:ARG:HA	39:MA:51:ILE:HD12	1.72	0.70
67:OB:117:LEU:HB2	67:OB:118:PRO:HD2	1.74	0.70
16:P:114:ARG:HA	16:P:117:ARG:HD3	1.73	0.70
73:UB:54:LEU:HG	73:UB:74:VAL:HA	1.72	0.70
48:VA:143:THR:HG21	48:VA:150:ILE:HG23	1.71	0.70
23:W:96:ILE:HG22	23:W:100:ARG:NH1	2.04	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:W:10:LEU:O	23:W:13:SER:HB3	1.92	0.70
49:WA:150:TRP:HB2	49:WA:174:ASN:HD22	1.55	0.70
1:A:682:C:H2'	1:A:683:C:H5'	1.73	0.70
1:A:690:G:C2'	1:A:691:C:H5''	2.20	0.70
2:B:1369:A:H2'	2:B:1370:G:H5'	1.74	0.70
2:B:2774:C:H2'	2:B:2775:U:H6	1.56	0.70
2:B:290:G:H2'	2:B:291:C:C6	2.26	0.70
2:B:996:A:H2'	2:B:997:A:O4'	1.90	0.70
54:BB:213:SER:H	54:BB:244:ILE:HD12	1.55	0.70
82:DC:588:LEU:HD11	82:DC:716:GLY:HA3	1.74	0.70
7:G:133:TYR:CD1	7:G:136:LYS:HD2	2.27	0.70
8:H:182:LEU:HD13	8:H:223:PRO:HG2	1.72	0.70
11:K:222:HIS:CE1	11:K:224:ILE:H	2.09	0.70
63:KB:102:LEU:CD1	63:KB:112:LYS:HA	2.22	0.70
66:NB:41:PRO:O	66:NB:42:GLU:HB3	1.91	0.70
15:O:21:ILE:HD11	15:O:37:LEU:HG	1.74	0.70
22:V:64:VAL:O	22:V:67:ILE:HB	1.90	0.70
24:X:42:TRP:CE3	24:X:42:TRP:HA	2.26	0.70
52:ZA:101:VAL:HA	52:ZA:114:GLY:O	1.91	0.70
1:A:16:G:H2'	1:A:17:C:C6	2.26	0.70
27:AA:23:MET:HG3	27:AA:99:ALA:HA	1.74	0.70
2:B:2391:G:H2'	2:B:2392:C:O4'	1.91	0.70
56:DB:182:GLN:O	56:DB:186:ARG:HD3	1.92	0.70
82:DC:576:LEU:HD13	82:DC:587:TYR:CE1	2.26	0.70
82:DC:730:LEU:HB2	82:DC:799:ASP:HB2	1.73	0.70
32:FA:78:LEU:HA	32:FA:81:LEU:CD1	2.22	0.70
9:I:56:THR:C	9:I:58:LYS:H	1.93	0.70
12:L:190:VAL:HG22	12:L:192:GLN:HG2	1.72	0.70
66:NB:30:LYS:HA	66:NB:35:PRO:HA	1.73	0.70
41:OA:45:ARG:HD2	41:OA:47:TYR:HE2	1.56	0.70
17:Q:77:LEU:HD21	17:Q:99:HIS:HA	1.73	0.70
2:B:2715:A:N3	46:TA:85:LEU:HD11	2.05	0.70
2:B:728:G:H5''	22:V:43:PRO:HB3	1.74	0.70
76:XB:28:LYS:HD3	76:XB:74:CYS:HB2	1.72	0.70
52:ZA:69:ILE:HD11	52:ZA:133:LYS:HB3	1.73	0.70
2:B:3064:U:H2'	2:B:3065:G:H8	1.57	0.70
2:B:408:A:H2'	2:B:409:A:O4'	1.91	0.70
2:B:652:G:C2	2:B:2361:A:H1'	2.26	0.70
54:BB:103:TYR:HE2	54:BB:184:THR:HG22	1.57	0.70
59:GB:51:LYS:HG2	59:GB:54:ARG:HH11	1.56	0.70
8:H:154:THR:HA	8:H:251:THR:CG2	2.21	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:I:3:PHE:H	9:I:6:ASP:HB2	1.57	0.70
37:KA:60:ARG:HB3	37:KA:60:ARG:NH2	2.07	0.70
63:KB:34:ILE:HA	63:KB:37:ILE:HD12	1.73	0.70
12:L:208:GLU:O	12:L:211:LEU:HB3	1.90	0.70
2:B:1233:G:H1'	16:P:121:PHE:HA	1.72	0.70
17:Q:31:LYS:HA	17:Q:34:SER:HB2	1.72	0.70
34:HA:86:ARG:HD3	47:UA:44:LYS:NZ	2.07	0.70
23:W:96:ILE:CG2	23:W:100:ARG:HH12	2.05	0.70
2:B:105:C:H2'	2:B:106:A:C8	2.27	0.70
2:B:496:C:H2'	2:B:497:C:C6	2.26	0.70
2:B:675:C:H2'	2:B:676:G:H5'	1.71	0.70
39:MA:29:ALA:O	39:MA:33:VAL:HG23	1.92	0.70
39:MA:57:VAL:O	39:MA:61:GLN:HG3	1.92	0.70
17:Q:74:GLY:HA3	17:Q:98:ASP:N	2.07	0.70
52:ZA:228:ASN:HD22	71:SB:1:MET:HG2	1.55	0.70
21:U:117:ILE:CD1	21:U:148:LEU:HB3	2.21	0.70
21:U:4:TYR:CZ	21:U:16:SER:HB2	2.26	0.70
24:X:66:GLU:HB3	24:X:69:PRO:HG3	1.74	0.70
76:XB:44:ILE:N	76:XB:44:ILE:HD12	2.05	0.70
2:B:132:C:C2'	2:B:133:U:H5''	2.22	0.70
2:B:2660:G:H2'	2:B:2661:G:H8	1.57	0.70
2:B:3194:C:H2'	2:B:3195:U:H2'	1.74	0.70
2:B:379:C:H2'	2:B:380:U:C6	2.27	0.70
2:B:419:G:N2	3:C:5:U:H3	1.90	0.70
82:DC:277:ILE:O	82:DC:281:ILE:HG13	1.90	0.70
82:DC:734:GLN:O	82:DC:793:PHE:HB2	1.91	0.70
31:EA:109:GLU:O	31:EA:113:VAL:HG23	1.92	0.70
20:T:54:TYR:O	20:T:58:LEU:HD13	1.92	0.70
49:WA:31:ASN:HB3	49:WA:47:LEU:O	1.91	0.70
75:WB:92:ILE:HD11	75:WB:100:ILE:HD12	1.74	0.70
52:ZA:140:ARG:HH22	52:ZA:226:THR:CG2	2.04	0.70
1:A:1227:A:H5'	1:A:1228:G:H3'	1.74	0.70
1:A:1202:A:C8	1:A:1456:C:H2'	2.27	0.70
1:A:1463:C:H2'	1:A:1464:G:C8	2.27	0.70
1:A:1477:G:H2'	1:A:1478:G:H8	1.57	0.70
1:A:17:C:H5'	1:A:1109:G:H5'	1.73	0.70
2:B:1556:C:H3'	2:B:2169:G:N2	2.06	0.70
2:B:1573:G:H3'	2:B:1574:C:O4'	1.92	0.70
2:B:2140:U:H3	2:B:2955:U:H3	1.37	0.70
73:UB:70:LYS:HE3	80:BC:8:LEU:HA	1.73	0.70
29:CA:135:ILE:O	29:CA:135:ILE:HD13	1.92	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:369:ILE:CG2	82:DC:401:PHE:HB3	2.22	0.70
6:F:173:GLY:HA2	6:F:176:ASP:OD2	1.91	0.70
58:FB:170:SER:OG	58:FB:181:GLY:HA2	1.92	0.70
43:QA:47:THR:HG22	43:QA:48:LYS:N	2.07	0.70
69:QB:138:GLN:HA	69:QB:141:GLU:HG2	1.74	0.70
25:Y:79:MET:HB2	25:Y:84:TYR:CE2	2.27	0.70
1:A:1163:A:H1'	1:A:1613:U:O2'	1.92	0.69
1:A:796:A:H2'	1:A:797:G:H8	1.57	0.69
2:B:2085:U:H2'	2:B:2086:A:H5'	1.74	0.69
2:B:2148:U:H2'	2:B:2149:A:C8	2.27	0.69
2:B:2266:U:H2'	2:B:2267:C:C6	2.26	0.69
2:B:2567:C:H3'	2:B:2568:C:H5''	1.74	0.69
2:B:2573:G:OP1	31:EA:61:LYS:HG3	1.92	0.69
2:B:807:A:H8	2:B:2812:C:H1'	1.56	0.69
2:B:2916:U:H2'	2:B:2917:G:H8	1.56	0.69
55:CB:112:ARG:HH22	66:NB:46:PHE:HE2	1.40	0.69
82:DC:538:LEU:O	82:DC:542:LEU:HG	1.92	0.69
83:EC:6935:G:N3	83:EC:6935:G:H2'	2.06	0.69
63:KB:7:ALA:O	63:KB:9:LYS:HE3	1.92	0.69
2:B:74:G:H5''	17:Q:104:ARG:NE	2.07	0.69
22:V:174:ARG:HA	22:V:178:ARG:HG3	1.72	0.69
23:W:153:LYS:O	23:W:157:GLU:HG3	1.92	0.69
51:YA:171:ILE:HA	51:YA:174:LYS:HE3	1.72	0.69
1:A:941:A:H4'	1:A:1025:A:N6	2.07	0.69
2:B:2557:A:H61	6:F:64:ARG:NH1	1.89	0.69
54:BB:181:VAL:HG13	54:BB:226:PHE:H	1.56	0.69
55:CB:128:ASN:HB3	55:CB:130:ILE:HG22	1.74	0.69
82:DC:536:LEU:O	82:DC:540:ILE:HG12	1.92	0.69
7:G:239:PRO:HB2	7:G:241:LYS:HB2	1.74	0.69
60:HB:24:LYS:HD3	60:HB:62:GLN:O	1.91	0.69
35:IA:14:ILE:HG12	35:IA:16:LEU:HD12	1.74	0.69
1:A:1365:C:H4'	66:NB:30:LYS:HE2	1.72	0.69
16:P:133:LEU:HD13	16:P:142:ARG:HH21	1.57	0.69
16:P:134:GLY:H	16:P:137:GLN:HB2	1.57	0.69
70:RB:55:PRO:HA	70:RB:91:ILE:HG12	1.72	0.69
49:WA:250:TYR:O	49:WA:265:LEU:HD23	1.92	0.69
50:XA:102:PHE:CZ	50:XA:131:GLN:HB3	2.28	0.69
51:YA:144:ARG:HE	51:YA:206:PRO:HB3	1.56	0.69
1:A:1063:U:H2'	1:A:1064:G:C8	2.27	0.69
1:A:1183:A:H61	65:MB:99:GLY:HA3	1.56	0.69
53:AB:21:LEU:HA	53:AB:24:PHE:HB3	1.74	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1262:G:H2'	2:B:1264:G:O4'	1.91	0.69
2:B:2737:C:OP1	25:Y:69:LYS:HB3	1.92	0.69
2:B:712:G:N2	2:B:755:A:H5'	2.06	0.69
82:DC:595:GLU:O	82:DC:599:LEU:HB3	1.92	0.69
82:DC:649:GLN:HB2	82:DC:689:LEU:HA	1.74	0.69
61:IB:94:ILE:HD12	61:IB:94:ILE:N	2.07	0.69
11:K:44:ILE:HG22	11:K:48:ASN:HD21	1.57	0.69
38:LA:8:ARG:HG3	38:LA:32:ALA:HB3	1.74	0.69
20:T:6:VAL:HG13	20:T:32:LYS:HB2	1.74	0.69
22:V:26:LEU:O	22:V:30:VAL:HG23	1.91	0.69
48:VA:60:ARG:NH1	48:VA:64:ARG:HB2	2.06	0.69
23:W:23:TRP:HB2	23:W:53:LYS:HE3	1.73	0.69
50:XA:78:SER:HA	50:XA:100:GLY:H	1.55	0.69
76:XB:44:ILE:HD11	76:XB:65:PRO:HG2	1.72	0.69
25:Y:8:ARG:HD2	25:Y:52:MET:CE	2.21	0.69
1:A:1724:U:H2'	1:A:1725:U:C5	2.27	0.69
2:B:1108:U:H2'	2:B:1109:U:C6	2.28	0.69
2:B:1194:G:H8	2:B:1194:G:O5'	1.76	0.69
2:B:1254:C:C1'	16:P:135:THR:HG21	2.22	0.69
2:B:2317:A:O2'	2:B:2318:U:H5'	1.92	0.69
2:B:2660:G:H2'	2:B:2661:G:C8	2.27	0.69
2:B:2881:C:H2'	2:B:2882:U:C6	2.27	0.69
2:B:3096:C:H2'	2:B:3097:C:C6	2.28	0.69
2:B:3334:U:H4'	2:B:3335:A:C5'	2.22	0.69
2:B:379:C:H2'	2:B:380:U:H6	1.57	0.69
2:B:351:A:H2	3:C:53:A:H1'	1.55	0.69
5:E:147:LYS:HA	5:E:150:ASP:HB2	1.74	0.69
31:EA:73:LYS:HE2	31:EA:74:VAL:H	1.57	0.69
6:F:219:ILE:HD13	6:F:223:SER:HB3	1.75	0.69
6:F:242:ARG:NH1	6:F:242:ARG:HA	2.07	0.69
58:FB:138:ASN:O	58:FB:142:LYS:HG2	1.92	0.69
2:B:1305:U:C5	7:G:256:HIS:HB3	2.28	0.69
10:J:72:ASN:HB3	10:J:160:SER:HA	1.74	0.69
63:KB:92:ILE:O	63:KB:96:VAL:HG23	1.92	0.69
39:MA:85:THR:O	39:MA:89:ARG:HB2	1.92	0.69
40:NA:58:ILE:HG13	40:NA:59:ASP:N	2.07	0.69
1:A:1609:U:H5"	66:NB:75:VAL:CG2	2.22	0.69
21:U:26:PHE:HB2	21:U:143:PRO:O	1.92	0.69
48:VA:43:LYS:HA	48:VA:46:ARG:HG2	1.74	0.69
51:YA:82:ARG:NH2	51:YA:189:ILE:HA	2.08	0.69
1:A:1230:A:H2	1:A:1258:U:H1'	1.58	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:220:A:H5''	1:A:832:U:H1'	1.75	0.69
1:A:982:U:H2'	1:A:983:A:O4'	1.92	0.69
2:B:3042:U:H5''	27:AA:48:ARG:HH21	1.58	0.69
2:B:1487:G:H2'	2:B:1488:G:H5''	1.75	0.69
2:B:250:U:H5'	2:B:251:G:H5''	1.74	0.69
2:B:568:G:H2'	2:B:569:A:C8	2.27	0.69
54:BB:133:LYS:O	54:BB:134:LYS:HB2	1.90	0.69
56:DB:12:SER:HB3	56:DB:124:LEU:HA	1.73	0.69
12:L:162:LEU:HD21	19:S:45:PRO:HG2	1.75	0.69
23:W:44:LEU:HD12	23:W:49:THR:HG21	1.75	0.69
23:W:96:ILE:HG22	23:W:100:ARG:NH2	2.08	0.69
49:WA:112:SER:CB	49:WA:153:GLN:HA	2.23	0.69
49:WA:248:ASN:HD21	49:WA:298:GLY:HA3	1.56	0.69
24:X:73:LYS:HB2	24:X:96:ASP:O	1.91	0.69
1:A:1148:C:H2'	1:A:1149:G:H8	1.56	0.69
1:A:886:U:H2'	1:A:887:A:C8	2.27	0.69
2:B:1504:A:C2	2:B:1516:C:H5'	2.27	0.69
2:B:255:A:H2'	2:B:256:G:C8	2.27	0.69
2:B:701:G:H2'	2:B:702:C:O4'	1.92	0.69
28:BA:45:ASN:OD1	28:BA:48:ARG:HG3	1.92	0.69
55:CB:93:LEU:HA	55:CB:172:ILE:HG23	1.74	0.69
82:DC:781:THR:HG23	82:DC:794:PRO:HG3	1.74	0.69
7:G:229:VAL:HA	7:G:232:ARG:HB3	1.74	0.69
59:GB:108:ARG:HA	59:GB:147:MET:HA	1.74	0.69
65:MB:94:VAL:HG23	65:MB:107:ILE:HD11	1.74	0.69
70:RB:22:ILE:HG22	70:RB:93:LEU:O	1.93	0.69
1:A:636:A:H5'	72:TB:6:VAL:HG21	1.72	0.69
1:A:1291:G:N2	1:A:1324:G:H1	1.88	0.69
2:B:2434:U:H5	2:B:2593:A:H1'	1.56	0.69
2:B:2777:G:H4'	2:B:2779:A:OP2	1.92	0.69
2:B:713:U:O2	2:B:754:G:H4'	1.93	0.69
2:B:830:A:H2'	2:B:831:G:O4'	1.92	0.69
30:DA:59:VAL:O	30:DA:64:LYS:HD3	1.92	0.69
82:DC:166:GLU:O	82:DC:167:LEU:HD12	1.92	0.69
82:DC:380:LEU:HD21	82:DC:456:LEU:HD11	1.72	0.69
82:DC:81:MET:HE3	82:DC:98:PHE:HB2	1.73	0.69
32:FA:128:ARG:HB2	40:NA:8:ALA:HB2	1.72	0.69
37:KA:18:ARG:HB3	37:KA:23:ASN:HB3	1.75	0.69
65:MB:96:ILE:HG23	65:MB:116:LEU:HB3	1.75	0.69
67:OB:23:LYS:HB3	67:OB:24:LEU:HD12	1.75	0.69
2:B:114:A:H4'	19:S:49:ARG:HE	1.57	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:T:151:ASP:HA	20:T:154:ALA:HB3	1.74	0.69
1:A:388:G:H2'	1:A:389:G:C8	2.27	0.69
1:A:3:U:H5'	52:ZA:179:VAL:HG12	1.75	0.69
2:B:1459:C:H5'	35:IA:33:VAL:HG11	1.74	0.69
2:B:1833:G:H2'	2:B:1834:U:H5'	1.74	0.69
2:B:2735:U:H4'	25:Y:51:GLY:HA2	1.74	0.69
2:B:790:U:H2'	2:B:791:A:H8	1.58	0.69
3:C:136:G:H2'	3:C:137:C:C6	2.27	0.69
56:DB:22:HIS:HA	56:DB:25:ARG:HB2	1.73	0.69
5:E:10:ARG:HD3	5:E:180:VAL:CG2	2.23	0.69
7:G:296:THR:HG22	7:G:297:SER:H	1.58	0.69
37:KA:27:VAL:HG22	37:KA:84:THR:HG22	1.75	0.69
13:M:150:SER:O	13:M:154:VAL:HG23	1.93	0.69
66:NB:69:VAL:CG1	66:NB:81:ILE:HG23	2.22	0.69
18:R:33:ALA:HB2	18:R:53:VAL:HG11	1.74	0.69
20:T:173:ALA:HA	20:T:176:LYS:HB2	1.73	0.69
50:XA:119:ARG:HB3	50:XA:119:ARG:NH1	2.07	0.69
51:YA:87:ARG:N	51:YA:101:HIS:HB2	2.07	0.69
51:YA:68:VAL:HG22	51:YA:69:CYS:H	1.56	0.69
1:A:959:U:H6	63:KB:61:THR:HB	1.57	0.69
2:B:1195:A:H2'	2:B:1309:U:O2	1.93	0.69
2:B:1393:A:H2'	2:B:1394:A:H5'	1.73	0.69
2:B:2291:A:H2'	2:B:2292:U:C6	2.28	0.69
2:B:2624:G:H2'	2:B:2625:C:H5'	1.74	0.69
2:B:2633:U:C2'	2:B:2634:U:H5'	2.23	0.69
2:B:3169:U:H2'	2:B:3170:A:C8	2.28	0.69
2:B:999:G:H5'	4:D:104:A:H1'	1.74	0.69
55:CB:51:VAL:HG11	55:CB:130:ILE:HG12	1.73	0.69
82:DC:593:ILE:HD11	82:DC:685:ARG:HG3	1.75	0.69
57:EB:64:VAL:HA	57:EB:67:LEU:HD12	1.74	0.69
2:B:3047:U:OP1	7:G:222:LYS:HG2	1.93	0.69
25:Y:82:ASN:O	33:GA:21:ILE:HA	1.93	0.69
8:H:20:LEU:HD23	8:H:21:PRO:HD2	1.75	0.69
8:H:351:PRO:HB3	11:K:70:LYS:HG3	1.74	0.69
9:I:88:ILE:HG13	9:I:243:ALA:CB	2.22	0.69
15:O:172:LEU:O	15:O:173:ASP:HB2	1.92	0.69
18:R:55:ARG:HH21	18:R:77:ARG:HA	1.56	0.69
70:RB:28:SER:HB2	70:RB:34:LEU:HD23	1.74	0.69
2:B:44:U:OP1	19:S:84:PRO:HB2	1.93	0.69
20:T:54:TYR:CE2	20:T:58:LEU:HD11	2.28	0.69
75:WB:39:ALA:O	75:WB:75:LEU:HD12	1.92	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:ZA:44:LEU:HD21	52:ZA:247:ALA:HB2	1.73	0.69
52:ZA:64:LYS:O	52:ZA:65:GLU:HB2	1.93	0.69
1:A:1495:C:C2'	1:A:1496:U:H5''	2.23	0.69
1:A:1560:U:H2'	1:A:1561:U:O4'	1.93	0.69
1:A:295:A:H2'	1:A:296:U:C6	2.28	0.69
1:A:34:G:O6	1:A:594:A:H5''	1.92	0.69
1:A:768:C:H1'	59:GB:143:ILE:HG21	1.75	0.69
2:B:1054:A:H5''	2:B:2637:A:N6	2.05	0.69
2:B:1175:C:H2'	2:B:1176:C:C6	2.28	0.69
2:B:1472:U:H5'	23:W:4:LEU:HD12	1.75	0.69
2:B:1585:C:H2'	2:B:1586:G:C8	2.28	0.69
2:B:2709:C:H2'	2:B:2710:C:H6	1.57	0.69
2:B:3083:G:H2'	2:B:3084:C:H6	1.57	0.69
29:CA:90:ALA:HA	29:CA:94:GLN:HE22	1.57	0.69
82:DC:138:GLN:OE1	82:DC:142:VAL:HG21	1.91	0.69
82:DC:443:GLU:CD	82:DC:444:PRO:HD2	2.12	0.69
58:FB:64:ASN:HD21	58:FB:73:SER:HB3	1.58	0.69
7:G:292:ALA:HA	7:G:303:LYS:H	1.57	0.69
61:IB:128:CYS:SG	61:IB:138:ASN:HB2	2.33	0.69
52:ZA:229:LEU:HD11	71:SB:13:VAL:HG13	1.73	0.69
72:TB:30:SER:HB3	72:TB:59:GLY:HA3	1.73	0.69
23:W:21:LYS:C	23:W:53:LYS:HD2	2.12	0.69
50:XA:104:PRO:HA	50:XA:135:GLU:OE2	1.93	0.69
25:Y:89:LEU:HB3	25:Y:91:LEU:CD2	2.22	0.69
26:Z:99:LYS:HD2	26:Z:102:GLU:CB	2.23	0.69
1:A:707:A:H3'	1:A:708:C:H5''	1.75	0.69
2:B:1039:U:H2'	2:B:1040:A:C8	2.28	0.69
2:B:1048:A:OP1	2:B:1049:C:H6	1.76	0.69
2:B:1636:U:H5''	31:EA:73:LYS:NZ	2.08	0.69
2:B:1666:G:O2'	2:B:1743:G:H5'	1.93	0.69
2:B:2233:A:H2'	2:B:2234:G:O4'	1.92	0.69
2:B:2382:G:H2'	2:B:2383:C:O4'	1.91	0.69
2:B:522:A:C2	2:B:523:A:H1'	2.28	0.69
82:DC:15:LYS:O	82:DC:19:VAL:HG23	1.93	0.69
83:EC:6822:U:H3'	83:EC:6823:U:C5'	2.22	0.69
58:FB:43:ILE:HA	58:FB:56:ARG:O	1.93	0.69
59:GB:92:LYS:C	59:GB:93:LEU:HD23	2.12	0.69
2:B:3076:C:OP2	35:IA:65:LYS:HE2	1.93	0.69
39:MA:66:VAL:HG12	39:MA:69:LEU:HD21	1.73	0.69
39:MA:76:GLN:HE21	39:MA:81:ARG:HG3	1.58	0.69
69:QB:113:ILE:O	69:QB:124:ILE:HD12	1.92	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:RA:79:GLU:CD	44:RA:80:PRO:HD2	2.12	0.69
20:T:84:LEU:HD13	20:T:102:LEU:HD21	1.75	0.69
21:U:155:GLU:HG2	21:U:156:ALA:H	1.58	0.69
6:F:84:THR:CG2	47:UA:63:THR:HB	2.23	0.69
24:X:81:TYR:HB2	24:X:120:SER:O	1.93	0.69
25:Y:27:LEU:O	25:Y:27:LEU:HD13	1.93	0.69
52:ZA:238:SER:OG	52:ZA:240:LEU:HD13	1.93	0.69
1:A:1668:G:H2'	1:A:1669:U:O4'	1.94	0.68
2:B:1112:A:H2'	2:B:1113:G:O4'	1.93	0.68
2:B:2338:C:H3'	2:B:2339:C:H2'	1.74	0.68
2:B:585:A:H5''	37:KA:70:LYS:HE2	1.75	0.68
28:BA:22:VAL:HG22	28:BA:28:ILE:HG22	1.76	0.68
54:BB:123:LEU:HD11	54:BB:173:ILE:HD13	1.75	0.68
55:CB:124:LEU:HD11	75:WB:59:TYR:HB2	1.73	0.68
31:EA:41:ALA:HB2	31:EA:77:TYR:CE1	2.28	0.68
11:K:75:TYR:O	25:Y:141:VAL:HG22	1.92	0.68
38:LA:51:LEU:HG	38:LA:52:GLN:H	1.58	0.68
18:R:108:ARG:O	18:R:112:LEU:HG	1.93	0.68
19:S:54:LYS:HB2	19:S:59:PHE:CZ	2.28	0.68
22:V:96:PHE:HE1	22:V:114:ILE:HA	1.59	0.68
48:VA:39:HIS:HA	48:VA:42:ARG:HD2	1.74	0.68
49:WA:20:VAL:HA	49:WA:37:SER:HA	1.75	0.68
76:XB:38:ARG:HH11	76:XB:38:ARG:HG3	1.59	0.68
1:A:1183:A:N6	65:MB:99:GLY:HA3	2.07	0.68
1:A:946:U:H5''	51:YA:165:ARG:HH12	1.57	0.68
53:AB:39:VAL:HG23	53:AB:47:GLU:O	1.93	0.68
2:B:1724:U:H1'	2:B:1725:C:C6	2.28	0.68
2:B:428:A:H2'	2:B:429:U:O4'	1.92	0.68
2:B:60:A:H2'	2:B:61:A:H8	1.55	0.68
54:BB:49:ARG:HE	54:BB:50:ASN:HD21	1.40	0.68
3:C:38:U:C5	39:MA:78:LYS:HB3	2.29	0.68
55:CB:190:ILE:O	55:CB:194:LEU:HB2	1.93	0.68
82:DC:316:GLY:N	82:DC:319:LEU:HB2	2.09	0.68
82:DC:601:ILE:HG21	82:DC:642:GLY:O	1.93	0.68
82:DC:733:ILE:HA	82:DC:793:PHE:O	1.94	0.68
82:DC:77:LEU:CD2	82:DC:100:ILE:HB	2.23	0.68
6:F:91:GLY:C	6:F:102:LEU:HG	2.13	0.68
58:FB:12:SER:HA	58:FB:18:ARG:HE	1.58	0.68
8:H:159:ILE:HG21	8:H:165:ALA:HB2	1.74	0.68
12:L:150:LEU:HD21	12:L:218:ILE:HD12	1.75	0.68
12:L:154:ALA:C	12:L:156:ASP:H	1.96	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:YA:31:ASP:O	51:YA:96:LEU:HG	1.93	0.68
52:ZA:179:VAL:HG21	52:ZA:197:TYR:CD1	2.29	0.68
1:A:1063:U:H2'	1:A:1064:G:H8	1.57	0.68
1:A:1440:C:H2'	1:A:1441:C:O4'	1.92	0.68
2:B:2664:C:H2'	2:B:2665:U:C6	2.28	0.68
2:B:3148:U:H2'	2:B:3149:G:H8	1.56	0.68
2:B:3160:U:H2'	2:B:3161:C:C6	2.27	0.68
3:C:43:A:H4'	41:OA:22:CYS:HA	1.74	0.68
59:GB:64:GLU:O	59:GB:65:LYS:HB2	1.93	0.68
8:H:206:LEU:HD12	8:H:237:GLN:HB3	1.75	0.68
9:I:58:LYS:O	9:I:93:THR:HB	1.94	0.68
13:M:91:ARG:HG2	13:M:143:GLU:HG3	1.75	0.68
69:QB:86:ARG:HB2	69:QB:89:ARG:HB2	1.74	0.68
71:SB:25:LYS:HB2	71:SB:28:ASP:HB2	1.75	0.68
74:VB:92:VAL:HG21	74:VB:99:LYS:HE3	1.74	0.68
50:XA:183:ARG:HA	50:XA:188:LEU:HD12	1.75	0.68
1:A:954:G:H2'	1:A:955:A:H8	1.58	0.68
2:B:145:G:O3'	19:S:55:ALA:HB1	1.94	0.68
2:B:1509:A:H2'	2:B:1510:G:C8	2.29	0.68
2:B:271:C:H1'	2:B:295:A:C6	2.27	0.68
2:B:1201:C:H42	2:B:2857:C:H5''	1.59	0.68
2:B:3060:C:H2'	2:B:3061:G:H8	1.58	0.68
3:C:114:G:H2'	3:C:115:C:H6	1.57	0.68
2:B:2172:A:N3	6:F:11:GLY:HA2	2.09	0.68
6:F:3:ARG:HG2	6:F:4:VAL:N	2.08	0.68
6:F:70:ARG:C	6:F:71:LEU:HD12	2.13	0.68
58:FB:13:ALA:HA	61:IB:133:LYS:NZ	2.09	0.68
61:IB:33:ARG:NH1	61:IB:61:THR:HG21	2.08	0.68
10:J:31:ARG:HG2	10:J:34:LEU:HG	1.74	0.68
8:H:330:TYR:HA	11:K:45:LEU:CD1	2.24	0.68
39:MA:4:VAL:HG21	39:MA:9:LEU:HD21	1.74	0.68
1:A:1556:A:OP1	65:MB:44:ARG:HG3	1.94	0.68
15:O:92:ARG:HB2	15:O:95:ASN:HB2	1.74	0.68
2:B:2755:C:H1'	25:Y:49:GLN:HE21	1.59	0.68
51:YA:180:THR:HG22	51:YA:181:LEU:H	1.58	0.68
1:A:1107:G:H3'	1:A:1108:G:N2	2.08	0.68
53:AB:163:PRO:HA	53:AB:167:PHE:HD2	1.58	0.68
53:AB:42:THR:HG22	70:RB:108:ILE:HD12	1.75	0.68
2:B:1235:U:H4'	2:B:1236:G:C5'	2.19	0.68
2:B:2357:A:H4'	21:U:137:ASN:OD1	1.93	0.68
54:BB:181:VAL:HG11	54:BB:225:VAL:HG13	1.76	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:BB:35:PRO:HB3	54:BB:143:ASP:O	1.93	0.68
2:B:17:G:H1	3:C:142:C:H42	1.39	0.68
4:D:46:A:H2'	4:D:47:C:C6	2.27	0.68
4:D:7:G:H5'	9:I:33:ARG:NH1	2.06	0.68
30:DA:45:ILE:HD11	30:DA:119:ILE:HA	1.75	0.68
82:DC:155:VAL:HG23	82:DC:209:VAL:HA	1.76	0.68
65:MB:77:ARG:HD3	65:MB:102:PHE:CD2	2.28	0.68
15:O:94:ARG:HD3	15:O:94:ARG:H	1.58	0.68
69:QB:98:GLY:O	69:QB:102:ARG:HB2	1.93	0.68
21:U:4:TYR:OH	21:U:18:ARG:HG3	1.93	0.68
74:VB:8:ARG:CB	74:VB:26:ASP:HB3	2.22	0.68
49:WA:178:VAL:HB	49:WA:192:PHE:HB2	1.75	0.68
1:A:1273:G:N7	1:A:1431:C:H5''	2.08	0.68
27:AA:117:PRO:HA	27:AA:135:VAL:O	1.94	0.68
2:B:953:G:O2'	2:B:1115:G:H4'	1.92	0.68
2:B:1722:U:H2'	2:B:1723:A:H5'	1.75	0.68
2:B:2156:C:H2'	2:B:2178:A:N6	2.09	0.68
2:B:2426:U:H2'	2:B:2427:U:C6	2.28	0.68
3:C:106:C:H4'	3:C:107:G:H5''	1.76	0.68
82:DC:420:PRO:HG3	82:DC:476:HIS:HA	1.75	0.68
4:D:117:A:H5'	9:I:74:VAL:O	1.93	0.68
10:J:26:ARG:HB2	10:J:26:ARG:NH1	2.09	0.68
38:LA:85:VAL:O	38:LA:89:ILE:HG13	1.93	0.68
2:B:1129:A:OP1	14:N:13:LYS:HD3	1.92	0.68
23:W:106:LEU:HD11	23:W:138:LEU:HD11	1.76	0.68
49:WA:248:ASN:ND2	49:WA:298:GLY:HA3	2.09	0.68
1:A:1316:G:H5'	67:OB:7:LYS:HB3	1.75	0.68
2:B:1157:G:C2	2:B:1158:A:H1'	2.29	0.68
2:B:1647:A:N6	2:B:1808:G:H1'	2.07	0.68
2:B:2628:A:H5'	2:B:2798:C:H3'	1.75	0.68
2:B:861:C:H2'	2:B:862:U:H6	1.56	0.68
55:CB:85:ALA:HA	55:CB:165:LEU:HD11	1.74	0.68
30:DA:56:VAL:HG21	30:DA:104:LEU:HD13	1.75	0.68
82:DC:172:GLU:O	82:DC:176:GLN:HG2	1.94	0.68
83:EC:6850:C:C3'	83:EC:6851:G:H5''	2.24	0.68
59:GB:110:GLN:NE2	59:GB:125:ALA:HB3	2.05	0.68
37:KA:49:ILE:HG12	37:KA:100:ILE:HG12	1.76	0.68
13:M:34:LEU:HD11	13:M:149:ASN:HB3	1.75	0.68
2:B:1240:A:H61	16:P:58:VAL:HG22	1.59	0.68
2:B:1588:A:C6	43:QA:4:GLN:HB3	2.29	0.68
2:B:3187:A:H5''	18:R:8:LYS:HE2	1.76	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:S:35:VAL:HG22	19:S:65:ARG:NE	2.08	0.68
73:UB:52:ILE:O	73:UB:74:VAL:HG13	1.94	0.68
24:X:29:ILE:HD12	24:X:40:ARG:HB3	1.75	0.68
51:YA:97:LEU:HB3	51:YA:232:HIS:CE1	2.28	0.68
1:A:1015:U:H2'	1:A:1016:C:C6	2.29	0.68
1:A:1784:C:H2'	1:A:1785:U:C6	2.29	0.68
1:A:449:C:H2'	1:A:450:U:C6	2.29	0.68
1:A:5:U:O2'	1:A:553:G:H4'	1.94	0.68
2:B:1496:C:H2'	2:B:1497:C:C6	2.28	0.68
2:B:1916:U:H5''	23:W:85:ARG:HB2	1.76	0.68
2:B:2856:G:H2'	2:B:2857:C:C6	2.29	0.68
54:BB:185:GLY:HA3	54:BB:224:ASN:CG	2.14	0.68
3:C:104:A:OP2	3:C:105:A:H5''	1.93	0.68
2:B:1523:U:H4'	29:CA:112:THR:O	1.94	0.68
31:EA:74:VAL:HG23	31:EA:101:PHE:CE2	2.29	0.68
57:EB:74:GLN:HE21	57:EB:78:THR:CG2	2.04	0.68
5:E:136:THR:HG23	83:EC:6820:C:H42	1.59	0.68
8:H:312:VAL:O	8:H:313:LEU:HB2	1.93	0.68
11:K:99:PRO:HB3	11:K:130:ILE:HG22	1.76	0.68
64:LB:119:THR:HB	64:LB:120:PRO:HD2	1.74	0.68
13:M:4:ILE:HG23	13:M:5:GLN:H	1.59	0.68
13:M:70:THR:O	13:M:74:LEU:HG	1.94	0.68
1:A:521:A:H4'	74:VB:35:VAL:O	1.93	0.68
49:WA:22:SER:HB3	49:WA:36:ALA:HB3	1.74	0.68
51:YA:101:HIS:O	51:YA:217:LEU:HD13	1.93	0.68
1:A:906:A:H61	1:A:997:G:H21	1.41	0.68
27:AA:101:VAL:HG21	27:AA:109:MET:HE2	1.76	0.68
2:B:1044:U:C2'	2:B:1045:C:H5''	2.24	0.68
2:B:1116:G:H3'	2:B:1117:G:H5''	1.76	0.68
2:B:1220:U:H5'	2:B:1221:A:H2'	1.76	0.68
2:B:1478:C:O2'	2:B:1479:U:H5'	1.94	0.68
2:B:207:U:H2'	2:B:208:C:C6	2.29	0.68
2:B:32:U:H1'	2:B:53:G:N2	2.09	0.68
2:B:715:A:C6	2:B:782:U:H5'	2.29	0.68
2:B:975:C:H5''	22:V:58:ASN:ND2	2.09	0.68
3:C:75:G:C2	43:QA:26:TRP:HB2	2.29	0.68
29:CA:115:ARG:HG2	29:CA:120:LYS:C	2.15	0.68
4:D:48:U:OP2	9:I:93:THR:HG23	1.94	0.68
8:H:206:LEU:HD21	8:H:228:ALA:HB3	1.74	0.68
37:KA:17:GLN:CB	37:KA:24:ASN:HB3	2.21	0.68
70:RB:57:ARG:HG3	70:RB:89:ARG:CZ	2.23	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
76:XB:24:VAL:HG12	76:XB:72:HIS:O	1.94	0.68
26:Z:99:LYS:HD2	26:Z:102:GLU:HB3	1.76	0.68
52:ZA:148:LEU:HB3	52:ZA:174:ARG:NH2	2.08	0.68
1:A:1592:A:H2'	1:A:1593:A:C8	2.29	0.68
1:A:376:C:H2'	1:A:377:G:H8	1.58	0.68
2:B:1517:G:H2'	2:B:1518:U:H6	1.59	0.68
2:B:240:U:H4'	2:B:241:G:H5''	1.76	0.68
2:B:79:U:H2'	2:B:80:G:C8	2.27	0.68
2:B:937:G:H22	2:B:960:U:H5''	1.58	0.68
54:BB:46:VAL:O	54:BB:50:ASN:HB2	1.94	0.68
2:B:406:G:H4'	3:C:17:A:H61	1.57	0.68
2:B:998:A:H4'	4:D:103:A:N3	2.08	0.68
56:DB:48:TYR:CE1	56:DB:116:LYS:HG3	2.29	0.68
2:B:3325:G:H5''	35:IA:103:GLY:HA2	1.76	0.68
10:J:28:GLN:OE1	10:J:61:ASN:HA	1.93	0.68
63:KB:114:ARG:O	63:KB:118:ILE:HG13	1.94	0.68
63:KB:75:LEU:HB3	63:KB:81:ALA:HB2	1.75	0.68
64:LB:103:ARG:HD3	76:XB:49:ALA:HB2	1.75	0.68
48:VA:103:ASN:O	48:VA:185:LEU:HD23	1.93	0.68
48:VA:29:GLY:HA2	48:VA:84:VAL:HA	1.76	0.68
1:A:353:A:H2'	1:A:354:C:O4'	1.94	0.67
2:B:1498:A:H1'	2:B:1602:A:H2	1.59	0.67
2:B:1705:U:H5'	2:B:1706:C:OP2	1.94	0.67
2:B:2882:U:H2'	2:B:2883:U:H6	1.55	0.67
2:B:290:G:H5''	19:S:98:LEU:HD22	1.74	0.67
2:B:291:C:H5''	19:S:68:ARG:HD3	1.76	0.67
2:B:627:U:H2'	2:B:628:A:H8	1.59	0.67
54:BB:160:VAL:HA	54:BB:172:PHE:HA	1.76	0.67
1:A:166:C:O2	56:DB:132:ARG:HB3	1.93	0.67
82:DC:728:VAL:CG2	82:DC:802:SER:HB2	2.23	0.67
83:EC:6832:G:H2'	83:EC:6833:G:H5'	1.76	0.67
7:G:216:ASP:HB2	7:G:339:ARG:HE	1.58	0.67
2:B:3386:G:H5'	35:IA:10:ARG:NE	2.09	0.67
61:IB:14:GLN:HB3	61:IB:54:ILE:HG12	1.76	0.67
12:L:187:GLY:HA2	12:L:190:VAL:HG12	1.74	0.67
34:HA:51:LEU:CD1	38:LA:91:ARG:HG3	2.24	0.67
2:B:316:U:O4	40:NA:28:TYR:HA	1.94	0.67
1:A:1126:G:H5'	45:SA:11:ARG:HE	1.59	0.67
52:ZA:167:VAL:HG12	52:ZA:168:ARG:H	1.58	0.67
1:A:1672:G:H2'	1:A:1673:G:C8	2.29	0.67
2:B:1284:C:H2'	2:B:1285:G:H5'	1.75	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2225:U:H2'	2:B:2226:U:C6	2.29	0.67
2:B:2909:U:C3'	2:B:2910:A:H5''	2.25	0.67
2:B:405:U:C2'	2:B:406:G:H5'	2.24	0.67
54:BB:181:VAL:O	54:BB:192:ILE:HA	1.93	0.67
42:PA:46:ARG:HH11	42:PA:46:ARG:HG2	1.59	0.67
17:Q:69:VAL:HG12	17:Q:149:GLN:HB3	1.75	0.67
18:R:127:LYS:HB2	20:T:190:VAL:HG22	1.77	0.67
21:U:117:ILE:HD13	21:U:148:LEU:HD23	1.76	0.67
76:XB:37:LYS:O	76:XB:38:ARG:HG3	1.94	0.67
1:A:1048:G:H5''	77:YB:68:GLY:O	1.94	0.67
2:B:1240:A:C5'	16:P:98:VAL:HG12	2.24	0.67
2:B:2939:G:H2'	2:B:2940:A:O4'	1.94	0.67
2:B:634:C:H2'	2:B:635:G:O4'	1.93	0.67
2:B:872:U:H2'	2:B:873:C:C6	2.29	0.67
80:BC:26:LYS:HD3	80:BC:26:LYS:N	2.09	0.67
55:CB:51:VAL:HG11	55:CB:130:ILE:HG23	1.77	0.67
56:DB:181:PRO:HA	56:DB:184:LEU:HD21	1.77	0.67
2:B:1793:C:OP1	6:F:184:ARG:HD3	1.94	0.67
7:G:177:HIS:NE2	7:G:335:ILE:HG21	2.09	0.67
66:NB:78:VAL:O	66:NB:82:ARG:HG2	1.93	0.67
71:SB:72:LEU:HA	71:SB:75:ASN:HD21	1.58	0.67
75:WB:64:VAL:O	75:WB:68:ARG:HG2	1.94	0.67
51:YA:33:LYS:NZ	51:YA:33:LYS:HB3	2.09	0.67
2:B:1249:G:H2'	2:B:1250:G:C8	2.29	0.67
2:B:211:A:H3'	8:H:221:ASN:ND2	2.09	0.67
2:B:2394:G:H2'	2:B:2395:G:O4'	1.94	0.67
2:B:2736:A:C2'	2:B:2737:C:H5''	2.24	0.67
2:B:2946:A:H2'	2:B:2982:A:N7	2.09	0.67
2:B:954:U:H4'	33:GA:8:THR:O	1.94	0.67
82:DC:204:PRO:O	82:DC:222:ILE:HG13	1.94	0.67
83:EC:6760:A:H2'	83:EC:6761:C:C6	2.30	0.67
6:F:129:ALA:N	6:F:169:ILE:HD12	2.06	0.67
13:M:115:ARG:CG	13:M:123:ILE:HG23	2.23	0.67
68:PB:30:TYR:CE2	68:PB:40:ARG:HB3	2.29	0.67
17:Q:115:ARG:HH22	17:Q:145:PHE:HB2	1.60	0.67
20:T:173:ALA:HA	20:T:176:LYS:CB	2.25	0.67
47:UA:54:ILE:HG23	47:UA:63:THR:HG23	1.76	0.67
8:H:286:VAL:HG21	22:V:28:LEU:HB3	1.77	0.67
49:WA:141:LEU:HD12	49:WA:141:LEU:H	1.58	0.67
49:WA:150:TRP:HH2	67:OB:34:LEU:HG	1.60	0.67
77:YB:73:LEU:HB3	77:YB:77:THR:OG1	1.93	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1504:G:H4'	69:QB:41:SER:HB3	1.76	0.67
53:AB:70:THR:HG22	53:AB:86:LEU:HD13	1.75	0.67
2:B:2434:U:H5''	19:S:24:ARG:HD2	1.76	0.67
2:B:314:U:H2'	2:B:315:C:C6	2.29	0.67
3:C:82:U:H2'	3:C:82:U:O2	1.94	0.67
55:CB:173:ALA:O	55:CB:177:ILE:HG13	1.94	0.67
56:DB:69:LEU:O	56:DB:99:GLY:HA3	1.92	0.67
82:DC:279:ASP:HB3	82:DC:280:PRO:HD3	1.76	0.67
10:J:63:LEU:HB2	10:J:79:VAL:HG12	1.77	0.67
12:L:143:ILE:HD13	12:L:169:LEU:HB3	1.77	0.67
13:M:86:TYR:N	13:M:187:ILE:HG13	2.09	0.67
14:N:159:PHE:HB3	14:N:163:GLN:NE2	2.06	0.67
15:O:46:VAL:O	15:O:67:VAL:HB	1.95	0.67
68:PB:12:GLN:HB2	68:PB:15:LEU:HD13	1.76	0.67
51:YA:139:ALA:HA	51:YA:212:VAL:HA	1.77	0.67
1:A:1609:U:H2'	1:A:1610:G:O4'	1.95	0.67
1:A:291:G:H2'	1:A:292:U:C6	2.29	0.67
1:A:97:C:O4'	1:A:426:G:H4'	1.95	0.67
1:A:740:A:H2'	1:A:741:C:H5''	1.75	0.67
2:B:1056:U:H2'	2:B:1057:A:H8	1.59	0.67
2:B:1231:A:H2'	2:B:1277:C:N4	2.09	0.67
54:BB:65:LEU:CD1	54:BB:80:THR:HA	2.25	0.67
30:DA:17:LYS:O	30:DA:21:THR:HG23	1.94	0.67
82:DC:274:ASN:N	82:DC:274:ASN:HD22	1.93	0.67
82:DC:735:CYS:CB	82:DC:792:ALA:HA	2.25	0.67
6:F:32:LEU:CB	6:F:163:ARG:HE	2.01	0.67
7:G:223:GLY:HA2	7:G:271:GLY:HA3	1.76	0.67
8:H:188:ARG:HH21	8:H:197:ARG:HB3	1.59	0.67
60:HB:58:GLN:CB	60:HB:65:TYR:HB2	2.24	0.67
9:I:231:ILE:CG2	9:I:239:ILE:HD11	2.24	0.67
11:K:98:LYS:HE2	11:K:129:LEU:CD1	2.24	0.67
63:KB:78:ASN:OD1	63:KB:80:LEU:HD23	1.93	0.67
64:LB:84:ARG:HA	64:LB:119:THR:HG22	1.77	0.67
14:N:85:PHE:HB3	14:N:140:THR:HG22	1.76	0.67
19:S:190:THR:O	19:S:194:GLN:HG2	1.94	0.67
22:V:67:ILE:HA	22:V:140:LEU:HD11	1.76	0.67
52:ZA:38:VAL:HG13	52:ZA:39:THR:HG23	1.76	0.67
1:A:63:G:H2'	1:A:64:U:H5'	1.75	0.67
2:B:1748:G:OP1	42:PA:44:LYS:HE3	1.93	0.67
2:B:2744:U:H2'	2:B:2745:G:C8	2.30	0.67
2:B:298:U:H5'	40:NA:31:GLY:O	1.95	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:790:U:H2'	2:B:791:A:C8	2.30	0.67
4:D:112:G:H2'	4:D:113:C:C6	2.30	0.67
82:DC:488:VAL:HG11	82:DC:794:PRO:O	1.93	0.67
82:DC:496:LYS:HG3	82:DC:554:LEU:O	1.94	0.67
31:EA:52:LYS:NZ	31:EA:135:ARG:HH12	1.92	0.67
32:FA:74:ASN:OD1	32:FA:113:LEU:HB2	1.95	0.67
7:G:350:ALA:O	7:G:351:LEU:HB3	1.94	0.67
2:B:2878:G:H5''	7:G:5:LYS:HE2	1.76	0.67
59:GB:30:LEU:HD21	59:GB:102:GLU:HG2	1.77	0.67
59:GB:92:LYS:HE3	59:GB:92:LYS:HA	1.75	0.67
8:H:23:PRO:HD2	8:H:26:PHE:CE2	2.30	0.67
8:H:64:SER:HA	8:H:75:PRO:HA	1.77	0.67
60:HB:32:HIS:CE1	60:HB:35:ILE:HB	2.29	0.67
9:I:40:HIS:HB3	9:I:43:LYS:HG3	1.77	0.67
12:L:190:VAL:HG13	12:L:192:GLN:N	2.10	0.67
39:MA:22:VAL:HG12	39:MA:26:LYS:HE3	1.76	0.67
14:N:191:LYS:C	14:N:197:VAL:HG23	2.15	0.67
66:NB:131:GLY:HA3	66:NB:137:ARG:HA	1.76	0.67
15:O:19:LEU:HB2	15:O:69:VAL:CG1	2.25	0.67
2:B:1236:G:H2'	16:P:60:VAL:CG1	2.24	0.67
48:VA:123:ALA:HA	48:VA:152:ILE:HB	1.75	0.67
1:A:355:G:H2'	1:A:356:G:H8	1.58	0.67
1:A:953:G:H4'	63:KB:114:ARG:HE	1.58	0.67
2:B:2539:C:H4'	2:B:2540:A:O4'	1.95	0.67
2:B:2771:U:H3'	2:B:2772:C:H5''	1.77	0.67
2:B:3294:A:H2'	2:B:3295:A:O4'	1.95	0.67
2:B:3296:A:H2'	2:B:3297:U:C6	2.29	0.67
59:GB:109:LEU:CB	59:GB:146:PHE:HB3	2.23	0.67
8:H:181:VAL:HG11	8:H:224:GLY:HA3	1.75	0.67
11:K:26:VAL:HG23	11:K:27:ALA:H	1.60	0.67
17:Q:170:LEU:HA	17:Q:173:ALA:HB3	1.75	0.67
19:S:68:ARG:HH21	19:S:128:LYS:CB	2.07	0.67
49:WA:73:LEU:HD21	49:WA:77:GLY:HA2	1.76	0.67
1:A:209:U:H2'	1:A:210:A:C8	2.30	0.67
2:B:100:A:H3'	2:B:101:G:N2	2.10	0.67
2:B:1412:G:OP2	36:JA:98:HIS:HB2	1.93	0.67
2:B:1779:C:O2	23:W:90:PRO:HD2	1.95	0.67
2:B:3073:A:H3'	2:B:3074:G:H5''	1.77	0.67
54:BB:238:LEU:N	54:BB:238:LEU:HD12	2.09	0.67
55:CB:36:ALA:O	55:CB:42:LEU:HD22	1.94	0.67
32:FA:12:ARG:HH11	32:FA:12:ARG:HG3	1.60	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:FB:107:THR:HA	58:FB:110:ARG:HG2	1.77	0.67
59:GB:171:ARG:HH11	59:GB:174:ARG:HG3	1.57	0.67
9:I:40:HIS:HB3	9:I:43:LYS:HE2	1.75	0.67
13:M:102:ASN:HA	13:M:136:PHE:CZ	2.30	0.67
2:B:1235:U:OP2	16:P:77:ALA:HA	1.94	0.67
20:T:76:PRO:HA	20:T:138:LEU:HD11	1.77	0.67
51:YA:144:ARG:HE	51:YA:206:PRO:CB	2.07	0.67
1:A:1229:G:H21	1:A:1256:A:H62	1.43	0.67
2:B:1550:C:H2'	2:B:1551:C:C6	2.30	0.67
2:B:2140:U:C2'	2:B:2141:U:H5'	2.24	0.67
2:B:2476:C:H2'	2:B:2477:G:O4'	1.94	0.67
82:DC:212:GLY:HA2	82:DC:218:TRP:CZ3	2.28	0.67
6:F:242:ARG:HH11	6:F:242:ARG:HA	1.60	0.67
7:G:141:GLY:HA2	7:G:144:ILE:CD1	2.24	0.67
60:HB:87:VAL:N	60:HB:88:PRO:HD3	2.10	0.67
10:J:56:LYS:HB2	10:J:98:VAL:CG1	2.24	0.67
37:KA:51:TYR:HA	37:KA:98:VAL:HG23	1.76	0.67
63:KB:30:SER:O	63:KB:33:VAL:HG22	1.95	0.67
3:C:154:C:H5''	12:L:181:LYS:HG2	1.75	0.67
13:M:89:LYS:HG2	13:M:145:VAL:HG22	1.76	0.67
40:NA:45:ARG:HG3	40:NA:45:ARG:HH11	1.58	0.67
40:NA:51:SER:OG	40:NA:54:GLU:HG3	1.95	0.67
72:TB:90:THR:HB	72:TB:94:LEU:HD12	1.77	0.67
48:VA:119:ILE:O	48:VA:157:LYS:HA	1.94	0.67
25:Y:124:VAL:HG12	25:Y:125:ALA:N	2.10	0.67
52:ZA:53:ILE:HG22	52:ZA:56:ILE:HD12	1.77	0.67
1:A:1123:C:H5	1:A:1124:A:C5	2.13	0.66
1:A:1584:G:H22	1:A:1610:G:H3'	1.59	0.66
1:A:564:G:O2'	1:A:577:G:H4'	1.95	0.66
1:A:895:G:H2'	1:A:896:U:C6	2.30	0.66
2:B:1170:A:H2'	2:B:1171:G:O4'	1.95	0.66
2:B:1175:C:H2'	2:B:1176:C:H6	1.60	0.66
2:B:1534:A:H2'	2:B:1535:A:C8	2.30	0.66
2:B:1731:A:H2'	2:B:1732:U:O4'	1.95	0.66
2:B:213:A:H2'	2:B:214:G:O4'	1.94	0.66
2:B:661:G:H5'	8:H:100:PHE:HE1	1.60	0.66
56:DB:179:VAL:HA	56:DB:183:ARG:HD3	1.77	0.66
82:DC:634:TRP:CZ3	82:DC:660:LYS:HA	2.29	0.66
83:EC:6902:U:H2'	83:EC:6903:U:C5	2.29	0.66
2:B:2415:C:C5'	6:F:207:VAL:HG22	2.24	0.66
7:G:35:ASP:OD1	7:G:184:ASN:HA	1.93	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:278:ILE:HG22	7:G:279:ASN:H	1.60	0.66
9:I:152:ARG:HB3	9:I:154:THR:HG23	1.77	0.66
9:I:40:HIS:CG	25:Y:69:LYS:HA	2.30	0.66
37:KA:24:ASN:ND2	37:KA:27:VAL:H	1.93	0.66
12:L:32:LYS:HE2	12:L:34:PHE:CZ	2.30	0.66
38:LA:3:GLN:HG2	38:LA:30:LEU:N	2.09	0.66
2:B:269:G:H5'	19:S:14:LYS:HE2	1.75	0.66
46:TA:106:PHE:HB2	83:EC:6886:A:H1'	1.77	0.66
47:UA:83:ILE:O	47:UA:87:ARG:HB2	1.94	0.66
50:XA:178:ALA:HA	50:XA:181:VAL:HG22	1.78	0.66
51:YA:146:GLN:HG3	51:YA:147:ALA:H	1.60	0.66
1:A:1603:U:H2'	1:A:1604:U:C6	2.29	0.66
1:A:793:A:H5''	1:A:794:U:H5'	1.75	0.66
2:B:1036:A:C3'	2:B:1037:C:H5''	2.26	0.66
2:B:1591:G:H1'	2:B:1798:A:H61	1.60	0.66
2:B:2140:U:O2'	2:B:2141:U:H5'	1.96	0.66
2:B:344:A:H2'	2:B:345:G:C8	2.30	0.66
82:DC:150:ARG:HH12	82:DC:354:GLU:HB3	1.61	0.66
2:B:916:G:C6	6:F:207:VAL:HG21	2.30	0.66
6:F:42:ARG:NE	6:F:87:PHE:HE2	1.93	0.66
9:I:52:VAL:HG13	9:I:54:ARG:NH1	2.10	0.66
19:S:114:ARG:O	19:S:134:LEU:HB3	1.95	0.66
2:B:1098:A:H5'	25:Y:129:LYS:HD3	1.77	0.66
51:YA:193:ILE:HG21	51:YA:212:VAL:HG13	1.75	0.66
52:ZA:104:VAL:HG22	52:ZA:132:ALA:HB1	1.78	0.66
52:ZA:41:LEU:O	52:ZA:45:VAL:HG23	1.95	0.66
2:B:1268:G:N2	2:B:1273:A:H62	1.89	0.66
2:B:153:U:H3'	2:B:154:U:H5''	1.77	0.66
2:B:1900:A:N6	2:B:1908:A:H61	1.94	0.66
2:B:2066:C:C3'	2:B:2067:U:H5''	2.25	0.66
2:B:3191:G:H5''	20:T:176:LYS:HG3	1.76	0.66
1:A:448:C:O3'	54:BB:29:PRO:HA	1.95	0.66
56:DB:122:GLU:O	56:DB:126:ASP:HB3	1.94	0.66
82:DC:379:MET:HA	82:DC:470:THR:HG22	1.78	0.66
83:EC:6765:A:H61	83:EC:6826:U:H3	1.43	0.66
1:A:862:A:N7	63:KB:70:LYS:HE2	2.09	0.66
34:HA:51:LEU:CD2	38:LA:87:GLU:HG3	2.25	0.66
66:NB:113:ASP:HA	66:NB:117:LEU:HD23	1.78	0.66
15:O:37:LEU:HD13	15:O:69:VAL:HG12	1.78	0.66
68:PB:5:VAL:HG23	75:WB:42:LEU:HD22	1.77	0.66
24:X:154:HIS:HA	24:X:170:THR:HG22	1.77	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:X:42:TRP:HA	24:X:42:TRP:HE3	1.59	0.66
25:Y:88:ARG:HH12	33:GA:31:SER:HB2	1.60	0.66
1:A:107:C:H2'	1:A:108:A:H8	1.59	0.66
1:A:1166:A:H5''	55:CB:101:GLY:H	1.60	0.66
79:AC:12:ARG:HG3	79:AC:18:SER:HA	1.77	0.66
2:B:149:U:H2'	2:B:150:A:H5''	1.77	0.66
2:B:1628:C:OP1	2:B:1629:U:H2'	1.95	0.66
2:B:2076:G:H2'	2:B:2077:U:H5''	1.77	0.66
2:B:3042:U:H2'	2:B:3043:C:H6	1.60	0.66
2:B:3159:C:H2'	2:B:3160:U:C6	2.30	0.66
2:B:826:G:H4'	2:B:1590:G:H5'	1.77	0.66
4:D:64:A:H62	14:N:209:ASN:ND2	1.93	0.66
56:DB:159:ARG:NH1	56:DB:172:ALA:HB2	2.11	0.66
7:G:280:HIS:CB	7:G:324:VAL:HG11	2.18	0.66
61:IB:66:ILE:HD12	61:IB:66:ILE:H	1.61	0.66
61:IB:76:VAL:HA	61:IB:119:VAL:HG13	1.78	0.66
10:J:65:ILE:HD11	10:J:77:ARG:HB3	1.77	0.66
11:K:145:ARG:HG2	11:K:149:TYR:CD1	2.31	0.66
14:N:4:ARG:HE	14:N:99:ILE:HG13	1.58	0.66
41:OA:19:CYS:HB2	41:OA:27:PHE:HB2	1.77	0.66
2:B:1240:A:H5''	16:P:98:VAL:HG12	1.76	0.66
20:T:98:ALA:HA	20:T:101:ARG:HH12	1.60	0.66
73:UB:93:LEU:HA	73:UB:96:VAL:CG2	2.24	0.66
49:WA:223:TRP:CZ3	53:AB:222:VAL:HB	2.30	0.66
51:YA:70:LEU:HD11	51:YA:79:HIS:CD2	2.31	0.66
1:A:1466:G:OP1	66:NB:139:GLN:HB3	1.96	0.66
2:B:2609:A:H2'	2:B:2610:G:C8	2.31	0.66
2:B:3002:C:H2'	2:B:3003:G:O4'	1.96	0.66
2:B:3088:G:H2'	2:B:3089:C:O4'	1.95	0.66
2:B:3258:U:O2'	2:B:3259:U:H3'	1.96	0.66
82:DC:735:CYS:HB2	82:DC:792:ALA:HA	1.78	0.66
6:F:34:TYR:HB3	6:F:67:TYR:OH	1.95	0.66
10:J:142:ASP:O	10:J:146:ILE:HG12	1.95	0.66
36:JA:115:LEU:HB2	36:JA:117:ILE:HG13	1.76	0.66
38:LA:57:LEU:HD23	38:LA:57:LEU:N	2.09	0.66
15:O:65:ILE:HG23	15:O:66:ALA:N	2.09	0.66
71:SB:60:ARG:HA	71:SB:65:SER:HB2	1.77	0.66
50:XA:119:ARG:HB3	50:XA:119:ARG:HH11	1.61	0.66
50:XA:171:GLY:HA3	50:XA:203:PHE:CD2	2.30	0.66
52:ZA:107:SER:O	52:ZA:192:GLY:HA2	1.96	0.66
1:A:100:A:H2'	1:A:101:U:H5'	1.76	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1120:U:H2'	1:A:1121:C:C6	2.31	0.66
1:A:147:A:H2'	1:A:148:A:H8	1.59	0.66
7:G:73:VAL:CG2	27:AA:90:GLY:HA2	2.22	0.66
2:B:2381:G:H2'	2:B:2382:G:H5'	1.76	0.66
2:B:2897:A:H2'	2:B:2899:C:H5'	1.76	0.66
2:B:2955:U:H2'	2:B:2956:A:C8	2.31	0.66
2:B:2974:U:O2'	2:B:2975:U:H5'	1.94	0.66
2:B:499:G:H2'	2:B:500:C:H6	1.60	0.66
2:B:666:A:H2'	2:B:667:C:O4'	1.95	0.66
2:B:684:G:H5''	17:Q:35:ARG:HH22	1.61	0.66
73:UB:58:GLY:HA3	80:BC:6:GLY:HA3	1.75	0.66
2:B:1580:A:N6	29:CA:33:ARG:HG2	2.11	0.66
4:D:80:G:H2'	4:D:81:U:H6	1.61	0.66
56:DB:212:LEU:HD23	56:DB:212:LEU:O	1.95	0.66
5:E:175:GLU:O	5:E:179:LEU:HG	1.95	0.66
6:F:45:VAL:HG13	6:F:85:GLY:H	1.59	0.66
53:AB:75:LYS:HD2	60:HB:34:GLU:OE2	1.95	0.66
9:I:107:ARG:HD2	9:I:248:ARG:HH21	1.61	0.66
36:JA:82:LEU:HD21	36:JA:117:ILE:HG21	1.77	0.66
14:N:75:TYR:O	14:N:79:VAL:HG23	1.96	0.66
15:O:163:PHE:HA	15:O:166:LYS:HB3	1.77	0.66
68:PB:8:GLN:HG3	68:PB:9:GLY:H	1.61	0.66
18:R:32:LEU:HD23	18:R:32:LEU:H	1.61	0.66
1:A:1279:C:H2'	1:A:1280:C:C6	2.30	0.66
2:B:2173:U:H2'	2:B:2174:G:N7	2.10	0.66
2:B:2347:U:H2'	2:B:2348:A:O4'	1.95	0.66
2:B:2661:G:H2'	2:B:2662:G:H8	1.58	0.66
2:B:3343:G:H2'	2:B:3361:G:N2	2.11	0.66
2:B:904:A:H2'	2:B:905:U:C6	2.30	0.66
5:E:207:LYS:CB	5:E:213:ALA:HA	2.20	0.66
2:B:714:G:N1	32:FA:72:VAL:HG11	2.10	0.66
8:H:325:LEU:HD23	8:H:331:ALA:HB3	1.77	0.66
68:PB:35:ILE:HB	68:PB:38:VAL:HB	1.77	0.66
17:Q:56:PRO:HD3	17:Q:73:ARG:O	1.95	0.66
70:RB:24:ILE:HD12	70:RB:91:ILE:HB	1.78	0.66
49:WA:198:ASN:O	49:WA:215:GLY:HA3	1.95	0.66
1:A:36:C:H2'	1:A:37:U:H6	1.59	0.66
1:A:396:G:H22	1:A:399:A:H5'	1.59	0.66
1:A:630:A:H3'	1:A:631:G:H8	1.60	0.66
1:A:807:A:H2'	1:A:808:U:O4'	1.96	0.66
2:B:185:C:H2'	2:B:186:U:O4'	1.96	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2186:U:H4'	2:B:2315:G:H5''	1.78	0.66
2:B:268:A:C2	19:S:12:ARG:HA	2.30	0.66
2:B:2904:U:H2'	2:B:2905:U:H6	1.61	0.66
2:B:422:A:C2	2:B:2363:A:H4'	2.31	0.66
2:B:681:U:O2	2:B:696:C:H5	1.79	0.66
54:BB:125:LYS:HA	54:BB:159:THR:HA	1.78	0.66
54:BB:11:ARG:H	54:BB:27:TYR:HA	1.61	0.66
29:CA:61:LYS:NZ	29:CA:89:LYS:HD3	2.11	0.66
82:DC:293:LYS:HA	82:DC:296:ILE:HB	1.78	0.66
82:DC:588:LEU:HA	82:DC:687:ASN:O	1.96	0.66
82:DC:757:GLU:HG2	82:DC:766:PHE:CE1	2.31	0.66
82:DC:781:THR:HG23	82:DC:794:PRO:CG	2.25	0.66
36:JA:71:HIS:HB3	36:JA:93:ALA:HB2	1.78	0.66
12:L:163:VAL:HA	12:L:166:LEU:HD12	1.78	0.66
39:MA:4:VAL:HG11	39:MA:20:GLN:HE22	1.61	0.66
14:N:205:SER:O	14:N:209:ASN:HB2	1.95	0.66
2:B:361:A:H5''	41:OA:36:SER:CB	2.26	0.66
19:S:135:VAL:HG21	19:S:151:ILE:HD13	1.77	0.66
2:B:2796:G:H2'	46:TA:62:ALA:HB3	1.78	0.66
21:U:72:GLN:HB2	21:U:83:TRP:HZ2	1.60	0.66
1:A:478:A:H5'	80:BC:33:ARG:HH21	1.61	0.66
2:B:1232:C:C5	2:B:1261:G:H2'	2.30	0.66
2:B:1517:G:H5''	43:QA:22:PRO:HG2	1.77	0.66
1:A:94:U:H4'	54:BB:6:LYS:HA	1.77	0.66
29:CA:75:LYS:HB3	29:CA:81:ILE:HD12	1.78	0.66
5:E:190:PHE:HA	5:E:194:LEU:HD13	1.78	0.66
31:EA:9:LYS:HD3	31:EA:85:TYR:O	1.96	0.66
8:H:185:LYS:HA	8:H:201:GLN:HB3	1.78	0.66
11:K:134:VAL:O	11:K:229:PHE:HA	1.96	0.66
1:A:1483:A:H4'	66:NB:71:GLY:HA2	1.78	0.66
2:B:87:U:OP2	17:Q:11:LYS:HD2	1.96	0.66
25:Y:12:ARG:HD3	25:Y:13:TYR:CZ	2.31	0.66
1:A:1164:G:H2'	1:A:1165:G:H8	1.60	0.66
1:A:1586:A:H61	1:A:1610:G:H1'	1.60	0.66
1:A:208:U:H2'	1:A:209:U:C6	2.31	0.66
2:B:1308:A:OP2	2:B:2368:A:H4'	1.96	0.66
2:B:1927:G:OP1	47:UA:6:LYS:HB3	1.96	0.66
3:C:106:C:H5''	3:C:108:C:OP2	1.96	0.66
3:C:75:G:C8	43:QA:30:ARG:HB3	2.31	0.66
29:CA:91:ASN:HD21	29:CA:94:GLN:HG3	1.60	0.66
5:E:187:VAL:HG12	5:E:191:VAL:HG23	1.77	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:284:ARG:HB2	7:G:323:MET:HE1	1.78	0.66
59:GB:88:GLU:HA	59:GB:91:LYS:HD3	1.78	0.66
9:I:148:ILE:HG12	9:I:151:GLN:HB2	1.78	0.66
9:I:58:LYS:HB3	9:I:93:THR:CB	2.26	0.66
11:K:95:ILE:HD12	11:K:133:TYR:CE1	2.31	0.66
71:SB:44:ARG:HA	71:SB:44:ARG:HE	1.61	0.66
76:XB:4:LYS:HD2	76:XB:92:ARG:NH1	2.11	0.66
52:ZA:175:GLY:HA3	59:GB:98:ALA:HA	1.77	0.66
1:A:1586:A:N6	1:A:1610:G:H1'	2.10	0.65
2:B:1141:C:H2'	2:B:1142:G:O4'	1.96	0.65
2:B:1584:U:H2'	2:B:1585:C:C6	2.31	0.65
2:B:1768:U:H2'	2:B:1769:G:H5''	1.78	0.65
2:B:2582:C:H2'	2:B:2583:C:C6	2.30	0.65
2:B:1902:G:OP1	2:B:2918:G:H5'	1.96	0.65
2:B:874:U:H5'	2:B:875:G:H5'	1.77	0.65
7:G:162:VAL:HG22	7:G:181:ILE:HD11	1.78	0.65
7:G:292:ALA:HA	7:G:303:LYS:O	1.95	0.65
8:H:34:ILE:O	8:H:38:VAL:HG23	1.96	0.65
38:LA:81:CYS:HB3	38:LA:84:CYS:SG	2.35	0.65
13:M:112:ILE:HD11	13:M:134:ILE:HG21	1.78	0.65
40:NA:9:ILE:HG22	40:NA:10:GLY:H	1.61	0.65
15:O:18:VAL:O	15:O:19:LEU:HD23	1.96	0.65
46:TA:32:LYS:HG2	46:TA:34:SER:H	1.60	0.65
21:U:168:LEU:C	37:KA:60:ARG:HH12	1.98	0.65
2:B:1186:G:H1'	24:X:112:ALA:HB1	1.77	0.65
1:A:1071:U:H2'	1:A:1072:C:C6	2.31	0.65
1:A:871:G:H2'	1:A:872:G:C8	2.32	0.65
2:B:148:G:H1'	2:B:149:U:H5	1.61	0.65
2:B:1504:A:N1	2:B:1516:C:H5'	2.11	0.65
2:B:1581:C:H2'	2:B:1582:C:H5'	1.77	0.65
2:B:265:A:H5'	40:NA:34:SER:HB2	1.77	0.65
2:B:330:G:H1	3:C:33:A:H61	1.42	0.65
11:K:132:PRO:HA	11:K:229:PHE:CG	2.32	0.65
63:KB:102:LEU:HD13	63:KB:112:LYS:HA	1.77	0.65
40:NA:4:LYS:HA	40:NA:12:ASN:HB3	1.77	0.65
2:B:2664:C:P	15:O:142:LYS:HE3	2.36	0.65
68:PB:75:ASN:HB3	68:PB:78:HIS:HB2	1.76	0.65
69:QB:9:VAL:HG21	69:QB:136:ALA:HB1	1.78	0.65
71:SB:86:SER:HB3	77:YB:11:THR:HG23	1.76	0.65
24:X:107:TYR:CE1	24:X:118:PHE:HD1	2.13	0.65
50:XA:179:ARG:CG	50:XA:183:ARG:HH12	2.09	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:YA:26:ARG:O	51:YA:50:LYS:HB2	1.95	0.65
1:A:1643:U:H2'	1:A:1644:C:C6	2.31	0.65
27:AA:19:VAL:HG23	27:AA:50:PRO:O	1.97	0.65
2:B:2801:A:O2'	2:B:2802:A:H2'	1.97	0.65
1:A:448:C:C5'	54:BB:29:PRO:HG3	2.25	0.65
1:A:93:A:H1'	54:BB:3:ARG:HB3	1.77	0.65
30:DA:37:LYS:HA	30:DA:40:ARG:NH1	2.11	0.65
82:DC:587:TYR:HD2	82:DC:690:ASP:HB3	1.60	0.65
5:E:29:LEU:HB3	5:E:152:ARG:HH21	1.61	0.65
57:EB:96:ARG:NH2	57:EB:124:LYS:HB3	2.11	0.65
6:F:37:ARG:HG3	6:F:38:HIS:CD2	2.31	0.65
8:H:233:LEU:HB3	8:H:238:LEU:HD11	1.77	0.65
2:B:430:U:H4'	37:KA:67:MET:HE1	1.78	0.65
38:LA:74:ARG:HH22	38:LA:85:VAL:HG21	1.60	0.65
2:B:2554:A:H2'	38:LA:91:ARG:NH1	2.12	0.65
1:A:990:C:H5''	64:LB:129:LYS:HB3	1.78	0.65
39:MA:85:THR:HG22	39:MA:87:ALA:H	1.61	0.65
40:NA:51:SER:H	40:NA:54:GLU:HB2	1.62	0.65
2:B:1751:G:H5''	42:PA:26:LYS:NZ	2.11	0.65
17:Q:138:VAL:HG12	17:Q:140:SER:H	1.61	0.65
44:RA:95:VAL:HG11	44:RA:122:ARG:NH2	2.10	0.65
44:RA:78:ILE:HG13	44:RA:79:GLU:H	1.61	0.65
20:T:98:ALA:HA	20:T:101:ARG:NH1	2.11	0.65
4:D:89:G:H5'	24:X:84:ARG:HG2	1.77	0.65
78:ZB:19:THR:HG22	78:ZB:20:GLY:H	1.61	0.65
1:A:1681:A:C1'	56:DB:66:GLY:HA3	2.27	0.65
1:A:86:A:H2'	1:A:87:C:H6	1.61	0.65
2:B:3092:C:H2'	27:AA:12:ARG:HH21	1.59	0.65
2:B:12:A:H2'	2:B:13:A:C8	2.31	0.65
2:B:1566:A:H2'	2:B:1567:U:H4'	1.79	0.65
2:B:1631:C:H5''	2:B:1632:A:H5''	1.78	0.65
2:B:2761:G:N1	2:B:2795:U:H3'	2.11	0.65
2:B:3267:A:H4'	21:U:181:ARG:HD3	1.79	0.65
2:B:693:A:H2'	2:B:694:C:O4'	1.97	0.65
2:B:944:C:H4'	36:JA:33:ARG:HD3	1.78	0.65
2:B:953:G:C8	2:B:1117:G:C8	2.85	0.65
55:CB:77:TYR:HB3	55:CB:84:LYS:CG	2.26	0.65
82:DC:44:GLY:O	82:DC:77:LEU:HA	1.97	0.65
31:EA:23:VAL:HB	31:EA:43:VAL:HB	1.78	0.65
6:F:47:GLN:HE22	6:F:49:VAL:HA	1.60	0.65
58:FB:99:ALA:HA	58:FB:168:CYS:SG	2.37	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
61:IB:148:LYS:HB2	61:IB:151:LYS:HB3	1.78	0.65
10:J:67:GLY:N	10:J:68:PRO:HA	2.12	0.65
13:M:84:LYS:HD3	13:M:191:LEU:OXT	1.97	0.65
14:N:48:LEU:HD21	14:N:142:ASP:HA	1.79	0.65
41:OA:22:CYS:SG	41:OA:24:ARG:HG3	2.36	0.65
69:QB:37:VAL:HG22	69:QB:38:LYS:H	1.61	0.65
50:XA:172:LEU:O	50:XA:176:LEU:HG	1.97	0.65
9:I:41:LYS:HE3	25:Y:93:VAL:HG21	1.78	0.65
51:YA:199:ASN:O	51:YA:202:LYS:HG2	1.96	0.65
26:Z:22:PRO:HG3	26:Z:105:LEU:HD22	1.77	0.65
52:ZA:206:THR:HG23	52:ZA:209:ASN:HB2	1.79	0.65
1:A:1148:C:H2'	1:A:1149:G:C8	2.32	0.65
1:A:164:A:H2'	1:A:165:G:C8	2.31	0.65
1:A:376:C:H2'	1:A:377:G:C8	2.31	0.65
53:AB:141:LYS:HB2	53:AB:144:ALA:HB3	1.79	0.65
53:AB:36:GLY:O	53:AB:51:ARG:HB2	1.96	0.65
2:B:112:U:H3'	39:MA:103:LYS:HD3	1.79	0.65
2:B:1902:G:H2'	2:B:1903:U:O4'	1.96	0.65
2:B:2668:U:H2'	2:B:2669:G:C8	2.31	0.65
2:B:528:U:H2'	2:B:529:A:H8	1.61	0.65
29:CA:113:LEU:HD23	29:CA:123:TYR:HE2	1.61	0.65
7:G:281:LYS:HB3	7:G:283:TYR:HE1	1.61	0.65
34:HA:24:THR:HG22	34:HA:91:SER:O	1.96	0.65
9:I:119:TYR:CE1	9:I:135:VAL:HG23	2.30	0.65
12:L:151:VAL:O	12:L:177:TYR:HA	1.96	0.65
12:L:166:LEU:HB2	12:L:167:PRO:HD3	1.77	0.65
14:N:140:THR:HG21	14:N:148:VAL:HG22	1.78	0.65
14:N:61:SER:HB3	14:N:63:GLU:HG2	1.78	0.65
67:OB:100:LEU:H	67:OB:118:PRO:HG3	1.61	0.65
16:P:60:VAL:HG21	16:P:77:ALA:HB2	1.77	0.65
18:R:99:TRP:O	18:R:103:ILE:HG13	1.97	0.65
2:B:1185:C:OP1	18:R:42:LYS:HD3	1.97	0.65
24:X:118:PHE:HA	24:X:121:ILE:HD12	1.78	0.65
20:T:119:VAL:HG11	24:X:167:ARG:HB2	1.78	0.65
24:X:10:ILE:HG12	24:X:26:ARG:HB2	1.77	0.65
2:B:1195:A:H4'	2:B:1320:C:OP1	1.96	0.65
3:C:35:C:OP1	39:MA:85:THR:HG21	1.97	0.65
82:DC:270:GLU:O	82:DC:275:MET:HE2	1.96	0.65
82:DC:348:ALA:HB1	82:DC:352:ARG:HD3	1.79	0.65
82:DC:495:VAL:HG13	82:DC:504:LEU:HD22	1.78	0.65
82:DC:676:ILE:HG12	82:DC:717:PHE:CE2	2.30	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:112:ILE:HG12	6:F:135:ILE:HA	1.78	0.65
59:GB:51:LYS:HG2	59:GB:54:ARG:NH1	2.12	0.65
11:K:131:GLU:HB3	11:K:132:PRO:HD3	1.78	0.65
64:LB:133:ARG:CG	64:LB:136:ARG:HE	2.05	0.65
66:NB:41:PRO:HB2	66:NB:44:LEU:HD23	1.78	0.65
68:PB:33:THR:HG22	68:PB:40:ARG:HA	1.79	0.65
73:UB:53:VAL:CG1	73:UB:98:GLU:HA	2.27	0.65
1:A:1612:U:H2'	1:A:1613:U:O4'	1.97	0.65
2:B:1818:U:H2'	2:B:1819:U:C4'	2.27	0.65
2:B:1845:G:H4'	41:OA:8:PHE:CD2	2.32	0.65
2:B:2565:U:H2'	2:B:2566:C:C6	2.32	0.65
2:B:2922:G:H2'	2:B:2923:U:H4'	1.77	0.65
2:B:953:G:H8	2:B:1117:G:C8	2.14	0.65
7:G:358:TRP:HB2	28:BA:1:MET:HG2	1.78	0.65
56:DB:87:ARG:HB2	56:DB:87:ARG:HH11	1.62	0.65
5:E:94:ASN:ND2	5:E:123:LEU:HB3	2.11	0.65
5:E:65:ILE:HD12	5:E:65:ILE:O	1.97	0.65
57:EB:63:PRO:O	57:EB:64:VAL:HG23	1.96	0.65
1:A:758:U:H5'	59:GB:7:THR:HG21	1.77	0.65
2:B:1051:U:H5'	9:I:15:ARG:NH2	2.11	0.65
13:M:28:VAL:HG22	13:M:33:THR:HG22	1.79	0.65
73:UB:96:VAL:HG23	73:UB:97:ASP:H	1.60	0.65
50:XA:189:VAL:HG13	50:XA:190:ASP:N	2.07	0.65
1:A:1498:G:H2'	1:A:1499:G:C5'	2.27	0.65
1:A:388:G:H2'	1:A:389:G:H8	1.61	0.65
1:A:401:A:H1'	54:BB:3:ARG:HH11	1.62	0.65
53:AB:132:LYS:HB2	53:AB:189:MET:HG3	1.79	0.65
2:B:1441:G:O2'	2:B:1442:U:H5'	1.97	0.65
2:B:576:C:H5''	11:K:142:SER:CB	2.27	0.65
2:B:876:A:H2'	2:B:877:C:O4'	1.97	0.65
3:C:64:U:H5'	39:MA:49:LYS:HG2	1.79	0.65
30:DA:37:LYS:HA	30:DA:40:ARG:HH12	1.60	0.65
7:G:339:ARG:HH12	7:G:342:LEU:HD11	1.62	0.65
2:B:3047:U:O2'	7:G:53:MET:HE3	1.97	0.65
4:D:8:G:H4'	9:I:69:ILE:O	1.97	0.65
2:B:2561:A:C4	12:L:32:LYS:HD3	2.32	0.65
15:O:60:ARG:CD	46:TA:103:ALA:HB1	2.26	0.65
1:A:1563:C:H4'	69:QB:41:SER:HB2	1.79	0.65
1:A:1749:A:O2'	45:SA:17:ARG:HD3	1.96	0.65
71:SB:17:CYS:HB3	71:SB:22:ARG:N	2.12	0.65
2:B:2767:U:H1'	46:TA:28:TYR:OH	1.96	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2763:U:H4'	22:V:176:ARG:HG3	1.77	0.65
24:X:12:ARG:HB3	24:X:24:LEU:CD2	2.26	0.65
51:YA:68:VAL:HG22	51:YA:69:CYS:N	2.11	0.65
26:Z:72:SER:CB	26:Z:75:TYR:HB2	2.26	0.65
1:A:330:G:H3'	58:FB:172:ARG:HH22	1.62	0.65
1:A:4:C:H2'	1:A:5:U:C6	2.32	0.65
53:AB:40:ARG:HG3	53:AB:49:ILE:HD11	1.79	0.65
2:B:1324:U:H2'	2:B:1325:U:O4'	1.96	0.65
2:B:1449:A:H1'	2:B:2983:C:C5	2.32	0.65
2:B:160:G:H2'	2:B:161:G:C8	2.32	0.65
2:B:1892:G:C2'	2:B:1893:A:H5''	2.25	0.65
2:B:3176:G:N2	2:B:3213:A:H1'	2.12	0.65
2:B:962:A:O2'	2:B:963:G:H5'	1.96	0.65
54:BB:9:LEU:HD12	54:BB:30:ARG:HG3	1.79	0.65
4:D:107:C:H2'	4:D:108:A:C8	2.32	0.65
30:DA:34:PRO:O	30:DA:105:VAL:HA	1.96	0.65
56:DB:58:LYS:O	56:DB:59:GLN:HB2	1.97	0.65
6:F:247:ARG:NH2	6:F:248:GLY:HA3	2.12	0.65
58:FB:74:LYS:HB2	58:FB:109:PHE:CE1	2.31	0.65
37:KA:55:ALA:HB2	37:KA:65:ARG:HD2	1.77	0.65
38:LA:90:ILE:HG23	38:LA:94:LEU:HD12	1.77	0.65
19:S:199:LEU:HB3	19:S:203:ARG:CD	2.26	0.65
22:V:9:GLN:NE2	22:V:10:HIS:H	1.95	0.65
48:VA:120:TRP:HB2	48:VA:157:LYS:HE2	1.79	0.65
26:Z:41:ILE:HG22	26:Z:43:VAL:HG23	1.79	0.65
1:A:1213:G:H21	79:AC:7:TRP:HE1	1.44	0.65
1:A:1441:C:H2'	1:A:1442:U:C6	2.31	0.65
1:A:1504:G:H1'	1:A:1563:C:H1'	1.79	0.65
2:B:3095:U:H5''	27:AA:86:ARG:NH1	2.12	0.65
2:B:1654:A:H2'	2:B:1655:G:O4'	1.96	0.65
2:B:1788:C:H2'	2:B:1789:G:C8	2.32	0.65
2:B:3106:A:H2'	2:B:3107:U:O4'	1.96	0.65
2:B:428:A:O2'	37:KA:88:ASN:HB2	1.97	0.65
2:B:946:U:O2'	2:B:947:G:H5'	1.97	0.65
82:DC:578:LYS:HB3	82:DC:585:ARG:HG3	1.78	0.65
31:EA:6:LYS:HA	31:EA:6:LYS:HE2	1.77	0.65
57:EB:51:VAL:HG22	57:EB:55:LYS:O	1.97	0.65
6:F:51:ASP:HB2	6:F:58:LEU:HD11	1.77	0.65
10:J:149:ILE:HG23	10:J:155:LEU:HB3	1.79	0.65
63:KB:64:ARG:HD3	63:KB:64:ARG:O	1.96	0.65
12:L:61:GLN:O	12:L:65:LEU:HD23	1.97	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:M:160:ASP:O	13:M:164:ILE:HB	1.97	0.65
40:NA:53:TYR:HA	40:NA:56:ARG:HB3	1.78	0.65
67:OB:20:TYR:HE1	67:OB:38:ILE:HG21	1.62	0.65
17:Q:64:LYS:HA	32:FA:69:TRP:CE3	2.32	0.65
69:QB:117:SER:OG	69:QB:118:PRO:HD2	1.97	0.65
24:X:77:VAL:HG21	24:X:106:LEU:HD21	1.79	0.65
1:A:872:G:H2'	1:A:873:U:O4'	1.97	0.64
1:A:941:A:H4'	1:A:1025:A:H61	1.63	0.64
53:AB:12:VAL:O	53:AB:16:VAL:HG23	1.97	0.64
2:B:1366:A:H3'	2:B:1367:G:H8	1.62	0.64
2:B:1466:G:H22	2:B:1510:G:H5'	1.62	0.64
2:B:244:G:P	17:Q:131:LYS:HA	2.37	0.64
2:B:2841:G:H1'	2:B:2847:A:N6	2.12	0.64
2:B:413:U:H2'	2:B:414:U:C6	2.33	0.64
2:B:947:G:H2'	2:B:948:C:C6	2.32	0.64
3:C:119:C:H2'	3:C:120:C:C6	2.33	0.64
55:CB:33:VAL:O	55:CB:37:GLN:HB2	1.98	0.64
56:DB:77:LEU:HD12	56:DB:95:LYS:HD3	1.79	0.64
82:DC:578:LYS:HB3	82:DC:585:ARG:HG2	1.78	0.64
31:EA:10:VAL:HG12	31:EA:11:ALA:N	2.12	0.64
7:G:332:ARG:HH11	7:G:332:ARG:HG2	1.62	0.64
1:A:765:G:O6	59:GB:149:ARG:HB3	1.97	0.64
8:H:317:PRO:HB3	8:H:324:LEU:HB2	1.78	0.64
11:K:173:LEU:HB3	11:K:178:ILE:HB	1.79	0.64
11:K:224:ILE:HG12	24:X:36:ILE:HA	1.79	0.64
2:B:1139:G:O2'	11:K:94:LYS:HA	1.97	0.64
16:P:122:GLY:HA2	48:VA:43:LYS:HD2	1.79	0.64
72:TB:81:VAL:HG13	72:TB:85:ASP:CB	2.27	0.64
24:X:103:VAL:HA	24:X:106:LEU:HD12	1.80	0.64
76:XB:71:LEU:HB3	76:XB:73:TYR:CE2	2.32	0.64
1:A:338:C:H1'	58:FB:5:ARG:HG2	1.79	0.64
1:A:74:U:O2'	1:A:75:U:H5''	1.96	0.64
2:B:1221:A:H3'	2:B:1222:G:C5'	2.27	0.64
2:B:1517:G:H2'	2:B:1518:U:C6	2.31	0.64
2:B:2186:U:H2'	2:B:2187:G:O4'	1.97	0.64
2:B:2370:G:H2'	2:B:2371:G:C8	2.32	0.64
2:B:666:A:H2'	2:B:667:C:H5''	1.78	0.64
2:B:858:A:O2'	2:B:859:G:H5'	1.98	0.64
3:C:114:G:H2'	3:C:115:C:C6	2.31	0.64
55:CB:130:ILE:O	55:CB:134:VAL:HB	1.97	0.64
55:CB:62:VAL:HG13	55:CB:89:ILE:HG13	1.76	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:DB:164:LYS:HB3	56:DB:167:LYS:O	1.97	0.64
82:DC:4:PHE:O	82:DC:47:SER:HA	1.97	0.64
58:FB:36:THR:O	58:FB:95:THR:HA	1.96	0.64
59:GB:83:VAL:HG23	59:GB:85:VAL:HG23	1.79	0.64
35:IA:62:ARG:HB3	35:IA:66:GLY:HA3	1.78	0.64
37:KA:17:GLN:HB3	37:KA:24:ASN:CB	2.23	0.64
2:B:146:U:H3	12:L:134:TYR:HD1	1.44	0.64
13:M:172:ILE:H	13:M:172:ILE:HD13	1.62	0.64
13:M:99:ILE:HG21	13:M:179:ILE:HD11	1.79	0.64
43:QA:22:PRO:HG3	43:QA:41:ARG:HH12	1.62	0.64
2:B:145:G:H4'	19:S:55:ALA:HB1	1.79	0.64
76:XB:82:ARG:O	76:XB:84:VAL:HG12	1.96	0.64
26:Z:72:SER:HB2	26:Z:75:TYR:H	1.62	0.64
52:ZA:152:HIS:CB	52:ZA:174:ARG:HG2	2.27	0.64
1:A:1456:C:H3'	1:A:1457:C:C5'	2.26	0.64
1:A:96:G:H4'	1:A:460:A:O3'	1.96	0.64
1:A:504:U:H2'	1:A:505:A:C4'	2.26	0.64
2:B:1328:C:H5''	37:KA:75:HIS:CE1	2.32	0.64
2:B:1508:C:O2'	2:B:2353:G:H1'	1.96	0.64
2:B:904:A:H5''	2:B:1537:A:H5'	1.79	0.64
2:B:240:U:H4'	2:B:241:G:C5'	2.28	0.64
82:DC:657:HIS:HA	82:DC:660:LYS:HB2	1.79	0.64
5:E:93:LEU:HD22	5:E:99:LEU:HB3	1.80	0.64
31:EA:72:ILE:HG12	31:EA:111:LYS:HE2	1.78	0.64
6:F:39:GLY:CA	12:L:36:ILE:HG21	2.27	0.64
58:FB:6:ASP:HB3	58:FB:28:GLU:OE2	1.98	0.64
61:IB:107:VAL:HG13	61:IB:108:PRO:HD2	1.79	0.64
11:K:101:LYS:HG3	11:K:105:LEU:HG	1.78	0.64
15:O:26:SER:HA	15:O:30:LEU:HB2	1.79	0.64
13:M:21:LYS:HA	18:R:8:LYS:HB2	1.79	0.64
72:TB:14:ILE:HG13	72:TB:27:ILE:HG21	1.78	0.64
2:B:1259:A:H62	48:VA:38:MET:HG2	1.62	0.64
76:XB:74:CYS:O	76:XB:75:VAL:HB	1.97	0.64
28:BA:13:ILE:HG23	28:BA:32:GLN:HG2	1.79	0.64
6:F:251:LYS:HA	6:F:251:LYS:HE3	1.78	0.64
2:B:1430:U:O4	32:FA:4:ARG:HA	1.96	0.64
58:FB:72:ILE:HD13	58:FB:74:LYS:HE2	1.79	0.64
59:GB:23:ARG:O	59:GB:27:GLU:HG3	1.97	0.64
61:IB:33:ARG:HH11	61:IB:61:THR:HG21	1.63	0.64
10:J:63:LEU:HB2	10:J:79:VAL:CG1	2.27	0.64
36:JA:86:THR:HG23	36:JA:115:LEU:HD13	1.79	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
68:PB:28:ILE:HA	68:PB:58:ALA:HB2	1.79	0.64
18:R:120:VAL:O	18:R:124:ARG:HB2	1.98	0.64
48:VA:7:LYS:HA	48:VA:10:GLU:CG	2.28	0.64
1:A:344:A:H2'	1:A:345:U:H5'	1.79	0.64
2:B:109:A:H4'	2:B:110:G:H5'	1.78	0.64
2:B:47:C:H3'	2:B:48:A:H2'	1.80	0.64
3:C:5:U:O2'	3:C:6:U:H5'	1.97	0.64
56:DB:2:LYS:HE2	56:DB:17:GLU:HG2	1.77	0.64
31:EA:57:HIS:HE2	31:EA:65:ARG:HD2	1.62	0.64
83:EC:6948:U:H2'	83:EC:6949:G:H8	1.62	0.64
32:FA:19:LYS:HE2	32:FA:19:LYS:HA	1.79	0.64
11:K:136:TYR:CZ	11:K:231:ASN:HB2	2.32	0.64
12:L:73:PRO:HD3	12:L:233:TRP:CZ3	2.33	0.64
38:LA:57:LEU:HD12	38:LA:61:GLN:HB3	1.79	0.64
39:MA:111:PHE:N	39:MA:112:PRO:HD3	2.13	0.64
14:N:60:LEU:HG	14:N:129:VAL:CG2	2.26	0.64
2:B:1125:U:OP1	14:N:15:LYS:HG2	1.98	0.64
66:NB:45:ARG:O	66:NB:48:VAL:HG12	1.97	0.64
15:O:49:LYS:HA	15:O:64:LYS:HA	1.79	0.64
18:R:120:VAL:HG22	20:T:197:LEU:HB3	1.80	0.64
2:B:1259:A:H61	48:VA:33:VAL:HG11	1.61	0.64
49:WA:122:ILE:HB	49:WA:134:TRP:HD1	1.63	0.64
24:X:78:TRP:O	24:X:124:LEU:HG	1.97	0.64
2:B:2736:A:H4'	25:Y:71:SER:OG	1.96	0.64
1:A:1016:C:H2'	1:A:1017:U:C6	2.32	0.64
1:A:1441:C:H2'	1:A:1442:U:H6	1.62	0.64
2:B:229:G:H5'	30:DA:3:LYS:HA	1.79	0.64
2:B:2330:C:H2'	2:B:2331:C:C6	2.33	0.64
2:B:2614:G:H3'	2:B:2615:G:H8	1.63	0.64
82:DC:113:SER:HB3	82:DC:516:PRO:HG2	1.78	0.64
82:DC:445:ILE:HG12	82:DC:446:ASP:N	2.12	0.64
7:G:335:ILE:HD12	7:G:336:VAL:N	2.13	0.64
9:I:33:ARG:HH21	9:I:50:ARG:NH1	1.95	0.64
10:J:54:TYR:CE2	10:J:63:LEU:HD22	2.33	0.64
12:L:146:LYS:HG3	12:L:173:MET:HE3	1.80	0.64
12:L:34:PHE:HA	12:L:39:ALA:HB3	1.80	0.64
67:OB:20:TYR:CE1	67:OB:38:ILE:HD13	2.32	0.64
17:Q:115:ARG:HH11	17:Q:115:ARG:HG3	1.63	0.64
2:B:75:G:OP1	17:Q:58:VAL:HB	1.98	0.64
69:QB:53:TRP:O	69:QB:57:ARG:HB2	1.97	0.64
18:R:38:ILE:HA	18:R:44:VAL:HG22	1.80	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:X:75:PHE:HB2	24:X:94:ILE:O	1.97	0.64
2:B:2728:G:N1	25:Y:80:VAL:HG21	2.12	0.64
52:ZA:81:MET:HB2	52:ZA:101:VAL:O	1.97	0.64
1:A:328:A:H2'	1:A:329:G:H8	1.62	0.64
1:A:72:A:H2'	1:A:73:U:C6	2.31	0.64
53:AB:65:ARG:O	53:AB:69:LEU:HG	1.98	0.64
2:B:127:G:OP1	19:S:140:LYS:HG3	1.98	0.64
2:B:1305:U:C2	7:G:257:PRO:HG3	2.33	0.64
2:B:1680:G:H2'	2:B:1681:U:H6	1.63	0.64
2:B:2655:U:H5'	46:TA:3:ASN:HB3	1.78	0.64
1:A:629:U:H1'	2:B:846:A:N1	2.13	0.64
2:B:871:U:H2'	2:B:872:U:C6	2.33	0.64
54:BB:238:LEU:H	54:BB:238:LEU:CD1	2.09	0.64
6:F:129:ALA:CB	6:F:132:ASN:HD22	2.09	0.64
6:F:135:ILE:CD1	6:F:135:ILE:H	2.08	0.64
36:JA:82:LEU:CD2	36:JA:117:ILE:HD13	2.27	0.64
64:LB:61:MET:O	64:LB:65:GLN:HB2	1.98	0.64
13:M:90:MET:HG2	13:M:181:VAL:HA	1.80	0.64
39:MA:85:THR:HG22	39:MA:87:ALA:N	2.12	0.64
41:OA:37:CYS:SG	41:OA:39:TYR:HB2	2.38	0.64
18:R:45:LEU:HA	18:R:57:ALA:HA	1.78	0.64
12:L:169:LEU:HD11	19:S:6:TYR:CE2	2.32	0.64
45:SA:12:ARG:HG2	45:SA:15:ARG:HH12	1.63	0.64
71:SB:17:CYS:HB2	71:SB:22:ARG:HB2	1.79	0.64
6:F:180:LEU:HD22	47:UA:18:TYR:CD2	2.33	0.64
73:UB:71:CYS:HB3	73:UB:85:ALA:O	1.98	0.64
48:VA:139:LEU:HD21	48:VA:172:LEU:HD21	1.79	0.64
48:VA:145:ILE:HB	82:DC:201:GLN:HE22	1.63	0.64
50:XA:140:ASN:OD1	71:SB:29:HIS:HA	1.98	0.64
51:YA:127:VAL:HG11	51:YA:176:VAL:HG21	1.79	0.64
52:ZA:187:LEU:O	52:ZA:191:ALA:HB2	1.97	0.64
1:A:1365:C:H2'	1:A:1366:U:O4'	1.97	0.64
1:A:381:C:H2'	1:A:382:C:H6	1.61	0.64
2:B:1168:U:O2'	2:B:1169:A:H5'	1.97	0.64
2:B:1334:U:H5'	11:K:207:LEU:O	1.97	0.64
2:B:2366:C:H2'	2:B:2367:A:C8	2.33	0.64
2:B:311:C:H42	2:B:2778:G:H1	1.43	0.64
28:BA:39:LEU:CD1	28:BA:44:LYS:HG3	2.28	0.64
4:D:64:A:H62	14:N:209:ASN:HD21	1.46	0.64
56:DB:207:GLU:O	56:DB:210:GLN:HB2	1.98	0.64
82:DC:131:THR:HG22	82:DC:177:THR:CG2	2.27	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:399:ARG:HD3	82:DC:401:PHE:HE1	1.63	0.64
82:DC:620:ALA:O	82:DC:624:GLY:HA2	1.97	0.64
2:B:2394:G:N3	7:G:259:HIS:HA	2.13	0.64
8:H:288:ARG:HA	8:H:291:ASN:ND2	2.13	0.64
65:MB:125:PRO:HA	68:PB:126:ARG:NH1	2.04	0.64
16:P:130:LYS:HA	16:P:146:LYS:HE3	1.78	0.64
22:V:65:SER:HB3	22:V:90:ASP:OD2	1.98	0.64
24:X:28:ARG:NH1	24:X:64:ILE:HD13	2.13	0.64
52:ZA:179:VAL:HB	52:ZA:197:TYR:HA	1.78	0.64
1:A:606:A:H1'	1:A:609:U:OP1	1.98	0.64
1:A:772:G:H21	1:A:774:A:H1'	1.62	0.64
2:B:1396:C:H2'	2:B:1397:C:C6	2.33	0.64
2:B:1479:U:C2'	2:B:1480:G:H5'	2.26	0.64
2:B:2259:A:H2'	2:B:2260:U:O4'	1.97	0.64
2:B:2739:A:P	33:GA:38:LYS:HE2	2.37	0.64
55:CB:157:ARG:H	55:CB:157:ARG:HD2	1.62	0.64
56:DB:5:ILE:HG22	56:DB:113:ILE:HD11	1.79	0.64
82:DC:629:ASP:CA	82:DC:647:ILE:HG21	2.28	0.64
83:EC:6760:A:H2'	83:EC:6761:C:H6	1.62	0.64
34:HA:52:ARG:O	34:HA:55:GLU:HG2	1.98	0.64
63:KB:91:LEU:HD21	63:KB:121:ARG:HH11	1.63	0.64
38:LA:24:LYS:HA	38:LA:30:LEU:HG	1.78	0.64
40:NA:60:LEU:O	40:NA:63:ASN:HB3	1.98	0.64
69:QB:28:LEU:HD21	69:QB:30:VAL:CG1	2.28	0.64
18:R:100:ALA:HA	18:R:103:ILE:HD12	1.80	0.64
18:R:66:THR:HB	18:R:67:PRO:HD2	1.78	0.64
20:T:128:ARG:CZ	20:T:128:ARG:HA	2.28	0.64
21:U:87:SER:O	21:U:91:VAL:HG23	1.97	0.64
49:WA:12:THR:HB	49:WA:309:VAL:HG13	1.79	0.64
25:Y:66:ASN:HB2	33:GA:35:VAL:HG22	1.79	0.64
77:YB:54:VAL:HB	77:YB:63:LEU:HD12	1.77	0.64
1:A:1189:A:H2'	1:A:1190:C:C6	2.32	0.64
1:A:900:A:O2'	1:A:916:U:H4'	1.98	0.64
2:B:1019:G:C3'	2:B:1020:G:H5''	2.27	0.64
82:DC:158:ASN:ND2	82:DC:159:LYS:H	1.96	0.64
31:EA:12:VAL:HG12	31:EA:20:GLY:HA2	1.79	0.64
9:I:33:ARG:O	9:I:37:VAL:HG23	1.98	0.64
58:FB:13:ALA:HA	61:IB:133:LYS:HZ3	1.61	0.64
36:JA:11:LYS:HB2	36:JA:14:THR:HG23	1.80	0.64
1:A:629:U:H5'	63:KB:127:ARG:HH22	1.63	0.64
1:A:861:U:H5'	63:KB:64:ARG:HH12	1.61	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:O:32:ARG:HB3	15:O:120:ILE:HG23	1.80	0.64
72:TB:3:ARG:HG3	72:TB:9:ASP:OD2	1.98	0.64
49:WA:222:LEU:HB3	49:WA:231:MET:SD	2.38	0.64
1:A:629:U:C3'	1:A:630:A:H5''	2.27	0.63
2:B:1220:U:H3'	2:B:1221:A:C2	2.32	0.63
2:B:1622:U:H2'	2:B:1623:G:C8	2.33	0.63
2:B:1627:U:H4'	2:B:1630:U:H4'	1.78	0.63
2:B:2117:A:H3'	2:B:2118:C:C5	2.33	0.63
2:B:2578:U:H2'	2:B:2579:G:O4'	1.98	0.63
2:B:2841:G:H1'	2:B:2847:A:H61	1.63	0.63
2:B:3066:U:H2'	2:B:3067:C:H6	1.64	0.63
2:B:3385:U:H5''	35:IA:108:VAL:HG23	1.80	0.63
2:B:570:A:H2'	2:B:571:U:C6	2.33	0.63
2:B:726:G:H21	2:B:744:A:H62	1.46	0.63
82:DC:349:GLN:HA	82:DC:352:ARG:HB2	1.81	0.63
82:DC:454:ILE:HG13	82:DC:455:GLY:N	2.13	0.63
57:EB:9:LEU:HD13	57:EB:10:SER:N	2.13	0.63
7:G:50:LYS:O	7:G:332:ARG:HA	1.98	0.63
8:H:321:LYS:HA	8:H:324:LEU:HD23	1.80	0.63
10:J:47:PHE:HZ	10:J:75:PRO:HD2	1.61	0.63
37:KA:26:ASN:HA	37:KA:88:ASN:OD1	1.96	0.63
12:L:55:TYR:CE2	12:L:56:VAL:HG23	2.33	0.63
70:RB:62:VAL:HG13	70:RB:85:ARG:HE	1.62	0.63
19:S:49:ARG:HA	19:S:53:TYR:H	1.63	0.63
46:TA:72:LEU:HD11	46:TA:83:LEU:CD1	2.27	0.63
74:VB:55:VAL:HG22	74:VB:75:VAL:CG2	2.28	0.63
1:A:1535:U:H5''	55:CB:187:ILE:HD11	1.80	0.63
1:A:306:U:H2'	1:A:307:G:H8	1.63	0.63
1:A:600:U:H2'	1:A:601:A:C8	2.33	0.63
1:A:632:U:H2'	1:A:633:U:C6	2.33	0.63
2:B:1659:U:H2'	2:B:1660:C:C6	2.33	0.63
2:B:1741:A:H2'	2:B:1742:U:H5'	1.79	0.63
2:B:1923:C:H2'	2:B:1924:U:H6	1.63	0.63
2:B:2381:G:C2'	2:B:2382:G:H5'	2.27	0.63
2:B:286:U:H5''	19:S:179:LYS:HG2	1.80	0.63
2:B:344:A:H2'	2:B:345:G:O4'	1.97	0.63
2:B:953:G:H2'	2:B:1117:G:H5''	1.80	0.63
29:CA:57:LEU:HD21	29:CA:89:LYS:O	1.99	0.63
82:DC:153:PRO:HD3	82:DC:200:VAL:HG22	1.80	0.63
6:F:247:ARG:HH21	6:F:248:GLY:HA3	1.63	0.63
7:G:337:THR:C	7:G:338:LEU:HD22	2.19	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:GB:66:ASP:HB3	59:GB:69:ARG:HB3	1.80	0.63
34:HA:73:GLY:N	34:HA:76:GLU:HB2	2.09	0.63
1:A:959:U:C6	63:KB:61:THR:HB	2.33	0.63
12:L:186:LEU:HA	12:L:189:LEU:HD11	1.79	0.63
38:LA:54:ILE:CD1	38:LA:71:THR:HA	2.25	0.63
39:MA:78:LYS:HG2	39:MA:81:ARG:NH2	2.13	0.63
39:MA:85:THR:HB	39:MA:88:LEU:HB2	1.80	0.63
14:N:192:ASP:HA	14:N:197:VAL:HB	1.81	0.63
10:J:174:LEU:HD22	18:R:117:ARG:NH2	2.13	0.63
18:R:7:VAL:O	18:R:7:VAL:HG12	1.97	0.63
72:TB:75:ILE:H	72:TB:127:GLY:HA2	1.62	0.63
72:TB:94:LEU:HD22	72:TB:100:GLY:HA3	1.79	0.63
22:V:89:ASP:HB2	22:V:110:ALA:N	2.12	0.63
22:V:54:LEU:HD13	22:V:58:ASN:HB3	1.80	0.63
23:W:129:GLY:O	23:W:130:ASN:HB2	1.98	0.63
76:XB:37:LYS:HD2	76:XB:37:LYS:H	1.63	0.63
25:Y:13:TYR:HB3	25:Y:16:GLN:NE2	2.13	0.63
51:YA:110:LEU:O	51:YA:114:VAL:HG23	1.97	0.63
1:A:1011:G:H2'	1:A:1012:U:C5	2.33	0.63
1:A:401:A:H1'	54:BB:3:ARG:NH1	2.13	0.63
2:B:1033:U:H2'	2:B:1034:U:C6	2.33	0.63
2:B:1357:G:H2'	2:B:1358:C:C6	2.34	0.63
2:B:15:C:H2'	2:B:16:A:H8	1.63	0.63
2:B:1626:U:H2'	2:B:1627:U:C6	2.34	0.63
2:B:3280:U:O2'	2:B:3281:U:H5'	1.97	0.63
2:B:3320:A:H2'	2:B:3321:C:C6	2.33	0.63
2:B:404:G:OP1	2:B:404:G:H3'	1.98	0.63
2:B:587:U:O2'	2:B:588:G:H5'	1.98	0.63
2:B:6:A:H61	3:C:153:U:H3	1.45	0.63
55:CB:98:MET:HB3	55:CB:110:ALA:HB2	1.78	0.63
4:D:8:G:H2'	4:D:9:C:C6	2.34	0.63
5:E:13:VAL:HG11	5:E:179:LEU:HD13	1.80	0.63
2:B:2241:U:H4'	6:F:242:ARG:NH1	2.13	0.63
2:B:2525:G:H2'	6:F:34:TYR:CD1	2.32	0.63
9:I:40:HIS:CD2	9:I:42:ALA:HB3	2.33	0.63
35:IA:46:THR:HG21	35:IA:91:SER:HB2	1.79	0.63
11:K:85:PHE:CE1	11:K:87:VAL:HG13	2.33	0.63
63:KB:135:LEU:HD22	63:KB:136:PRO:HD2	1.80	0.63
65:MB:18:ARG:O	68:PB:95:GLY:HA3	1.98	0.63
2:B:2772:C:OP2	46:TA:15:LYS:HE3	1.99	0.63
22:V:33:TYR:HA	22:V:36:LEU:CD1	2.28	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:YA:126:THR:HG22	51:YA:136:ARG:HE	1.62	0.63
1:A:1502:G:N7	69:QB:99:SER:HB2	2.13	0.63
1:A:684:A:C3'	1:A:685:A:H5''	2.27	0.63
27:AA:79:VAL:HA	27:AA:122:CYS:SG	2.38	0.63
53:AB:11:LEU:HD12	70:RB:86:ILE:CG1	2.22	0.63
2:B:1169:A:H2'	2:B:1170:A:O4'	1.98	0.63
2:B:1381:A:H2'	2:B:1382:G:C8	2.34	0.63
2:B:1690:C:H2'	2:B:1691:U:C1'	2.28	0.63
2:B:1638:A:N3	2:B:1709:C:H1'	2.12	0.63
2:B:26:A:H2'	2:B:27:C:H5'	1.81	0.63
2:B:3118:C:C3'	2:B:3119:U:H5''	2.28	0.63
2:B:939:U:H2'	2:B:940:G:H8	1.63	0.63
82:DC:598:SER:HB3	82:DC:643:PRO:HB2	1.80	0.63
2:B:2154:U:H4'	6:F:240:ALA:CB	2.28	0.63
1:A:1676:U:H5''	58:FB:58:LEU:HD21	1.81	0.63
8:H:8:VAL:HA	8:H:151:VAL:HB	1.80	0.63
36:JA:20:HIS:CG	36:JA:42:VAL:HG21	2.34	0.63
2:B:3174:A:H61	37:KA:54:ARG:NH2	1.97	0.63
64:LB:43:THR:OG1	64:LB:46:MET:HG3	1.98	0.63
1:A:1454:G:H5'	65:MB:81:ARG:HE	1.63	0.63
20:T:110:PRO:HA	20:T:113:ASP:OD1	1.97	0.63
20:T:108:ILE:HD12	20:T:160:ARG:HH11	1.61	0.63
20:T:6:VAL:HA	20:T:32:LYS:O	1.98	0.63
22:V:54:LEU:HB3	22:V:58:ASN:CB	2.16	0.63
48:VA:143:THR:CG2	48:VA:150:ILE:HG23	2.27	0.63
1:A:780:A:C8	74:VB:8:ARG:HB3	2.33	0.63
50:XA:113:ARG:HA	50:XA:113:ARG:HE	1.64	0.63
25:Y:102:ARG:HD2	25:Y:105:PHE:HD1	1.63	0.63
1:A:1434:U:O2'	1:A:1435:G:H3'	1.98	0.63
1:A:324:U:H5''	61:IB:133:LYS:HZ2	1.64	0.63
1:A:690:G:C3'	1:A:691:C:H5''	2.28	0.63
2:B:2111:G:N2	28:BA:39:LEU:HD11	2.14	0.63
2:B:2200:U:H2'	2:B:2201:G:C8	2.34	0.63
2:B:2799:A:H5''	2:B:2800:G:O5'	1.97	0.63
2:B:3156:U:O2'	2:B:3157:U:H5'	1.98	0.63
2:B:404:G:OP1	2:B:405:U:H5	1.81	0.63
29:CA:107:VAL:HG13	29:CA:126:LEU:HA	1.81	0.63
55:CB:100:ASN:HD21	55:CB:180:ARG:HD3	1.63	0.63
30:DA:22:ALA:HB1	30:DA:26:GLN:HB2	1.81	0.63
83:EC:6918:A:H2'	83:EC:6919:G:H8	1.63	0.63
7:G:83:PRO:HG3	7:G:204:ALA:HB2	1.80	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:145:ILE:HD12	8:H:150:LEU:HD13	1.79	0.63
8:H:334:PHE:HA	8:H:339:LEU:HD12	1.80	0.63
9:I:104:LEU:HA	9:I:247:ILE:HG21	1.80	0.63
2:B:1138:U:O3'	11:K:97:PRO:HD3	1.98	0.63
1:A:1241:G:H5'	65:MB:102:PHE:CZ	2.33	0.63
17:Q:123:ILE:HD12	17:Q:125:VAL:HG23	1.80	0.63
49:WA:299:GLN:HG3	49:WA:315:VAL:HB	1.81	0.63
1:A:1532:U:OP2	75:WB:77:ARG:HD2	1.98	0.63
25:Y:78:LYS:CE	25:Y:87:LYS:HE3	2.27	0.63
1:A:1022:C:H1'	1:A:1124:A:H61	1.63	0.63
1:A:1244:A:H1'	79:AC:7:TRP:CD2	2.34	0.63
1:A:343:C:H2'	1:A:344:A:C8	2.33	0.63
2:B:1190:A:H5'	2:B:1191:U:OP1	1.97	0.63
2:B:1422:G:H2'	2:B:1423:C:C6	2.32	0.63
2:B:1636:U:H5''	31:EA:73:LYS:HZ2	1.64	0.63
2:B:2742:C:H2'	2:B:2743:A:C8	2.31	0.63
2:B:661:G:H5'	8:H:100:PHE:CE1	2.33	0.63
2:B:681:U:H2'	2:B:696:C:N4	2.14	0.63
54:BB:71:LYS:HB3	54:BB:76:VAL:O	1.98	0.63
29:CA:58:ASP:O	29:CA:62:VAL:HG23	1.99	0.63
55:CB:133:VAL:HG22	55:CB:198:LEU:HB3	1.81	0.63
56:DB:164:LYS:HD2	56:DB:167:LYS:O	1.99	0.63
82:DC:600:ALA:HA	82:DC:603:ASN:HB2	1.81	0.63
82:DC:607:ASN:HB3	82:DC:610:ASP:HB2	1.81	0.63
2:B:1634:G:H5''	31:EA:107:ARG:NH2	2.13	0.63
7:G:170:PRO:HG3	7:G:315:GLY:HA3	1.81	0.63
34:HA:45:ALA:HB3	34:HA:48:THR:HG23	1.80	0.63
10:J:165:LEU:HD12	37:KA:9:VAL:HG22	1.81	0.63
14:N:208:ASN:O	14:N:212:GLU:HG2	1.99	0.63
41:OA:18:LEU:CD1	43:QA:8:ARG:HB3	2.28	0.63
42:PA:46:ARG:HA	42:PA:51:LEU:HA	1.80	0.63
70:RB:97:VAL:O	70:RB:100:VAL:HB	1.99	0.63
19:S:31:ARG:HA	19:S:65:ARG:NH1	2.13	0.63
20:T:75:ALA:HB3	20:T:78:ARG:HB2	1.79	0.63
48:VA:98:ASN:O	48:VA:102:SER:HB2	1.99	0.63
25:Y:115:LYS:HA	25:Y:118:GLU:HB3	1.79	0.63
25:Y:12:ARG:C	25:Y:14:MET:H	2.01	0.63
25:Y:14:MET:HG3	25:Y:15:PHE:HD2	1.61	0.63
1:A:583:C:H2'	1:A:584:C:C6	2.33	0.63
2:B:135:C:H2'	39:MA:94:LYS:CE	2.28	0.63
2:B:137:G:H2'	2:B:138:U:C6	2.34	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1682:U:H3'	26:Z:85:LYS:CE	2.25	0.63
2:B:860:G:H2'	2:B:2133:U:H1'	1.81	0.63
3:C:38:U:C5	39:MA:78:LYS:HD3	2.34	0.63
82:DC:316:GLY:H	82:DC:319:LEU:HD22	1.63	0.63
82:DC:412:ARG:NE	82:DC:473:GLU:HA	2.13	0.63
31:EA:57:HIS:NE2	31:EA:65:ARG:HD2	2.13	0.63
57:EB:172:VAL:O	57:EB:176:LEU:HG	1.99	0.63
7:G:199:PHE:O	7:G:200:GLU:HB2	1.99	0.63
59:GB:57:ARG:O	59:GB:61:THR:HG23	1.98	0.63
34:HA:45:ALA:CB	34:HA:73:GLY:HA2	2.29	0.63
35:IA:55:LEU:HB2	35:IA:95:PRO:HD3	1.80	0.63
64:LB:87:GLY:HA3	64:LB:120:PRO:HG2	1.81	0.63
20:T:167:TYR:HA	20:T:170:LYS:HD3	1.80	0.63
1:A:1596:C:H5"	79:AC:16:LYS:HG2	1.79	0.63
1:A:1792:G:H3'	1:A:1793:G:C5'	2.24	0.63
2:B:1144:U:O2	2:B:1159:A:N7	2.32	0.63
2:B:1456:A:N1	2:B:1477:A:H4'	2.13	0.63
2:B:1774:C:H3'	2:B:1775:G:H5"	1.79	0.63
2:B:1904:C:H2'	2:B:1905:G:O4'	1.98	0.63
2:B:2683:U:H2'	2:B:2684:C:C6	2.33	0.63
2:B:3188:G:H2'	2:B:3189:G:H8	1.64	0.63
2:B:417:A:H2'	2:B:418:A:C8	2.34	0.63
2:B:39:A:H2'	2:B:42:C:N4	2.12	0.63
2:B:666:A:H2'	2:B:667:C:C4'	2.29	0.63
2:B:817:A:C5	41:OA:14:LYS:HA	2.34	0.63
2:B:927:C:H2'	2:B:928:C:C6	2.33	0.63
1:A:556:A:H5"	80:BC:56:MET:SD	2.39	0.63
29:CA:91:ASN:ND2	29:CA:94:GLN:HG3	2.14	0.63
56:DB:216:LEU:O	56:DB:220:LYS:HB3	1.98	0.63
82:DC:335:LEU:HA	82:DC:338:ILE:CG2	2.29	0.63
31:EA:26:VAL:HG12	31:EA:89:VAL:HG23	1.81	0.63
6:F:129:ALA:HB1	6:F:132:ASN:HD22	1.64	0.63
6:F:209:HIS:CG	6:F:210:PRO:HD2	2.33	0.63
58:FB:4:SER:HA	58:FB:28:GLU:O	1.99	0.63
2:B:2939:G:OP2	7:G:2:SER:HA	1.99	0.63
7:G:358:TRP:CZ2	7:G:360:ASP:HA	2.33	0.63
7:G:86:VAL:HA	7:G:162:VAL:HG12	1.79	0.63
59:GB:116:LEU:O	59:GB:118:LEU:HD12	1.98	0.63
8:H:42:VAL:HG22	8:H:113:VAL:HG21	1.80	0.63
8:H:156:LEU:HD23	8:H:157:GLU:N	2.13	0.63
8:H:181:VAL:HG12	8:H:182:LEU:H	1.64	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:J:165:LEU:CD1	37:KA:9:VAL:HG22	2.29	0.63
39:MA:25:LYS:HA	39:MA:28:LEU:HB3	1.81	0.63
16:P:102:GLY:HA3	16:P:140:GLY:N	2.09	0.63
17:Q:157:ARG:O	32:FA:99:ALA:HB3	1.99	0.63
17:Q:89:TYR:O	17:Q:93:ILE:HG12	1.99	0.63
18:R:102:LYS:HA	18:R:105:GLN:HG3	1.81	0.63
71:SB:15:ARG:HB3	71:SB:24:ILE:HD12	1.81	0.63
46:TA:26:THR:OG1	46:TA:71:ARG:HB3	1.98	0.63
72:TB:79:PHE:O	72:TB:124:LYS:HA	1.99	0.63
73:UB:62:LYS:HG3	73:UB:118:PRO:HD3	1.81	0.63
50:XA:74:VAL:HG23	50:XA:118:PRO:HB3	1.81	0.63
1:A:1268:G:H4'	1:A:1270:G:OP1	1.99	0.63
1:A:1439:C:H2'	1:A:1440:C:C6	2.34	0.63
1:A:331:A:H5'	58:FB:33:PRO:HA	1.80	0.63
1:A:397:A:O2'	58:FB:50:GLY:HA2	1.98	0.63
2:B:1785:U:H5''	38:LA:38:LEU:HD12	1.79	0.63
2:B:19:U:H4'	19:S:138:GLN:OE1	1.98	0.63
2:B:2691:A:H3'	2:B:2692:A:C8	2.34	0.63
2:B:2948:C:H4'	7:G:243:HIS:H	1.62	0.63
2:B:966:U:H2'	2:B:967:A:C8	2.34	0.63
55:CB:213:LYS:HA	55:CB:216:GLU:HB2	1.80	0.63
82:DC:454:ILE:HG13	82:DC:455:GLY:H	1.64	0.63
82:DC:629:ASP:HA	82:DC:647:ILE:HG21	1.79	0.63
57:EB:143:LEU:HD23	57:EB:147:ASN:HB3	1.79	0.63
60:HB:3:MET:HG3	60:HB:8:ARG:HB2	1.81	0.63
38:LA:29:ILE:CD1	38:LA:29:ILE:H	2.08	0.63
14:N:65:LEU:H	14:N:65:LEU:HD12	1.63	0.63
43:QA:42:ARG:HG2	43:QA:42:ARG:HH11	1.64	0.63
69:QB:66:TYR:OH	69:QB:129:GLN:HA	1.99	0.63
69:QB:70:GLN:HA	69:QB:122:ARG:O	1.98	0.63
21:U:114:VAL:HG21	21:U:148:LEU:HD13	1.79	0.63
47:UA:38:ASP:HA	47:UA:45:LYS:CA	2.27	0.63
25:Y:37:GLY:HA2	25:Y:63:VAL:HG12	1.81	0.63
52:ZA:69:ILE:HD12	52:ZA:70:ASP:N	2.14	0.63
78:ZB:33:LEU:HD21	78:ZB:53:ILE:HG23	1.79	0.63
1:A:1163:A:H2'	1:A:1164:G:H4'	1.80	0.62
1:A:139:C:C5	1:A:176:C:H1'	2.34	0.62
1:A:654:C:H3'	1:A:655:G:H4'	1.80	0.62
1:A:825:U:H2'	1:A:826:U:H5'	1.81	0.62
1:A:954:G:H2'	1:A:955:A:C8	2.34	0.62
2:B:1838:G:H4'	2:B:1839:A:N3	2.14	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:3216:G:H2'	2:B:3219:G:H1'	1.81	0.62
2:B:714:G:H4'	2:B:753:C:O3'	1.99	0.62
29:CA:134:ASP:O	29:CA:138:ARG:HB2	1.99	0.62
29:CA:80:ASN:HD21	29:CA:126:LEU:HB2	1.63	0.62
5:E:4:ILE:HD13	5:E:4:ILE:N	2.12	0.62
31:EA:87:LEU:HD13	31:EA:127:ASN:ND2	2.14	0.62
58:FB:72:ILE:HB	58:FB:74:LYS:HE2	1.81	0.62
7:G:51:ALA:HA	7:G:314:TYR:CD2	2.33	0.62
8:H:222:VAL:HG11	8:H:225:VAL:HB	1.80	0.62
8:H:150:LEU:HD23	8:H:249:ILE:HG12	1.81	0.62
14:N:97:LEU:HD21	14:N:126:ALA:HB2	1.81	0.62
40:NA:60:LEU:HD11	40:NA:72:VAL:HG21	1.81	0.62
42:PA:65:LEU:O	42:PA:69:LEU:HD22	1.98	0.62
18:R:39:ILE:HD12	18:R:43:LYS:HB3	1.81	0.62
18:R:58:ILE:HD11	18:R:62:GLN:HB2	1.81	0.62
18:R:22:LEU:HB3	18:R:64:VAL:CG1	2.28	0.62
44:RA:78:ILE:O	44:RA:79:GLU:HB3	1.98	0.62
72:TB:90:THR:HG22	72:TB:102:VAL:CG2	2.29	0.62
75:WB:93:SER:HB2	75:WB:100:ILE:HG22	1.81	0.62
50:XA:13:ASP:HA	50:XA:16:LEU:HD12	1.81	0.62
76:XB:74:CYS:SG	76:XB:77:CYS:HB2	2.39	0.62
51:YA:185:THR:HA	51:YA:188:LEU:HD12	1.81	0.62
51:YA:70:LEU:HA	51:YA:73:LEU:HG	1.80	0.62
77:YB:32:PHE:C	77:YB:33:LEU:HD12	2.19	0.62
1:A:1153:G:H5'	76:XB:85:ARG:CG	2.29	0.62
1:A:703:G:H2'	1:A:704:C:H5'	1.80	0.62
1:A:1422:A:H5''	53:AB:159:HIS:HD2	1.63	0.62
2:B:2433:U:H1'	19:S:125:SER:HB3	1.81	0.62
2:B:256:G:H2'	2:B:257:U:C6	2.34	0.62
2:B:3027:A:H1'	82:DC:790:GLY:H	1.63	0.62
2:B:3320:A:H2'	2:B:3321:C:H6	1.64	0.62
5:E:117:ILE:HG12	83:EC:6768:U:H5''	1.80	0.62
57:EB:140:VAL:HG13	57:EB:150:GLN:HG2	1.80	0.62
57:EB:31:SER:HA	57:EB:35:LYS:HB2	1.81	0.62
57:EB:91:ILE:HG13	57:EB:92:PHE:N	2.14	0.62
7:G:160:VAL:O	7:G:180:GLU:HA	1.98	0.62
8:H:8:VAL:HG22	8:H:151:VAL:HG11	1.81	0.62
34:HA:24:THR:HG23	34:HA:30:THR:HG22	1.81	0.62
2:B:3376:A:H1'	35:IA:18:LYS:O	1.99	0.62
11:K:160:ARG:NH1	11:K:160:ARG:HG2	2.14	0.62
2:B:517:G:H5'	11:K:67:ARG:NH2	2.14	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
64:LB:85:ALA:H	64:LB:119:THR:HG22	1.64	0.62
19:S:61:ILE:HG22	19:S:133:ILE:HA	1.81	0.62
48:VA:108:PRO:HA	48:VA:179:SER:HA	1.81	0.62
2:B:1733:G:H5'	23:W:110:ARG:HH22	1.63	0.62
49:WA:122:ILE:HD11	49:WA:136:ILE:HG22	1.81	0.62
50:XA:123:VAL:HG12	50:XA:124:THR:N	2.12	0.62
71:SB:85:TYR:CG	77:YB:6:ASP:HB2	2.34	0.62
1:A:1584:G:N2	1:A:1610:G:H3'	2.14	0.62
1:A:542:A:H2'	1:A:544:A:H5'	1.81	0.62
1:A:647:G:H2'	1:A:648:G:H8	1.64	0.62
2:B:1378:U:H2'	2:B:1379:G:H8	1.63	0.62
2:B:2776:C:H5''	2:B:2777:G:C5'	2.29	0.62
2:B:3136:G:H2'	2:B:3137:C:C6	2.34	0.62
2:B:546:C:H4'	2:B:547:G:N3	2.14	0.62
56:DB:187:LYS:HE2	56:DB:191:ARG:HE	1.63	0.62
82:DC:367:ILE:HG23	82:DC:371:ASN:ND2	2.13	0.62
82:DC:491:VAL:CG1	82:DC:556:ILE:HG23	2.29	0.62
82:DC:725:GLN:NE2	82:DC:801:TRP:HB2	2.09	0.62
5:E:114:GLU:CD	5:E:137:PRO:HB3	2.19	0.62
31:EA:52:LYS:HZ3	31:EA:135:ARG:HH12	1.46	0.62
6:F:59:ALA:HB1	6:F:61:VAL:HG23	1.81	0.62
59:GB:148:VAL:HG11	59:GB:153:GLU:OE2	1.99	0.62
11:K:103:LEU:HD21	11:K:130:ILE:HD12	1.80	0.62
16:P:57:LYS:HE2	16:P:79:SER:HB3	1.81	0.62
69:QB:5:SER:O	69:QB:9:VAL:HG23	1.98	0.62
2:B:149:U:OP1	19:S:54:LYS:HA	2.00	0.62
1:A:1393:C:H5''	49:WA:285:ALA:HB1	1.79	0.62
20:T:119:VAL:HG21	24:X:167:ARG:N	2.14	0.62
50:XA:39:ASN:HB2	50:XA:47:VAL:HB	1.80	0.62
1:A:1186:U:H1'	1:A:1208:A:C6	2.34	0.62
1:A:1408:G:H2'	1:A:1409:G:O4'	1.99	0.62
1:A:593:U:OP2	59:GB:39:LYS:HE2	2.00	0.62
1:A:868:G:H2'	1:A:869:A:C8	2.35	0.62
2:B:1064:A:N6	2:B:1096:U:H3	1.84	0.62
2:B:1427:U:O2'	2:B:1428:A:H5'	1.98	0.62
2:B:1456:A:H8	35:IA:26:LYS:HB3	1.65	0.62
2:B:1707:A:H2'	2:B:1708:C:C6	2.33	0.62
4:D:38:U:H2'	4:D:40:C:OP2	1.97	0.62
56:DB:67:VAL:H	56:DB:100:ALA:CB	2.12	0.62
83:EC:6894:C:H2'	83:EC:6895:C:H6	1.65	0.62
8:H:314:LYS:HD3	8:H:315:LYS:N	2.14	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:3:ARG:HD3	8:H:21:PRO:HB2	1.80	0.62
60:HB:86:ILE:CG2	60:HB:87:VAL:H	2.06	0.62
61:IB:67:ARG:N	61:IB:67:ARG:HD3	2.13	0.62
11:K:86:VAL:HG12	11:K:134:VAL:HB	1.81	0.62
12:L:46:LEU:HB2	29:CA:28:THR:HA	1.81	0.62
2:B:1857:C:H5'	38:LA:20:ILE:HG13	1.81	0.62
13:M:90:MET:HB3	13:M:179:ILE:HG22	1.79	0.62
1:A:1241:G:H4'	65:MB:79:HIS:N	2.14	0.62
40:NA:60:LEU:CD1	40:NA:68:ARG:HD2	2.28	0.62
68:PB:25:ASN:O	75:WB:40:VAL:HG11	1.98	0.62
19:S:35:VAL:HG13	19:S:65:ARG:HG3	1.82	0.62
21:U:166:VAL:CG2	21:U:168:LEU:HD11	2.28	0.62
2:B:741:U:H4'	22:V:74:GLU:HB2	1.82	0.62
2:B:1949:G:OP1	23:W:104:ARG:HG3	1.98	0.62
50:XA:112:THR:OG1	50:XA:115:PHE:HB2	1.99	0.62
77:YB:50:ALA:O	77:YB:51:GLN:HB2	2.00	0.62
52:ZA:230:TRP:CD2	72:TB:68:ARG:HD3	2.35	0.62
1:A:1214:U:C4'	1:A:1246:C:H4'	2.25	0.62
1:A:138:A:N6	1:A:266:A:N6	2.43	0.62
1:A:395:U:H2'	1:A:396:G:O4'	2.00	0.62
1:A:541:A:O2'	1:A:542:A:H4'	1.98	0.62
1:A:986:G:H1'	1:A:987:G:H5''	1.81	0.62
2:B:1238:C:H5''	16:P:82:ILE:HD13	1.81	0.62
2:B:1906:G:H21	2:B:1909:A:H61	1.45	0.62
2:B:337:G:H4'	8:H:48:GLN:HB2	1.82	0.62
4:D:119:U:H2'	4:D:120:C:C6	2.34	0.62
56:DB:67:VAL:HG23	56:DB:100:ALA:N	2.14	0.62
57:EB:76:LYS:HD3	57:EB:77:LEU:N	2.13	0.62
6:F:187:HIS:HA	6:F:190:ARG:CB	2.29	0.62
8:H:258:LEU:HG	8:H:259:ASP:N	2.13	0.62
34:HA:95:ALA:HB2	34:HA:100:ILE:HD11	1.82	0.62
60:HB:46:LEU:O	60:HB:50:THR:HG23	2.00	0.62
35:IA:10:ARG:HB2	35:IA:12:TYR:CE2	2.34	0.62
61:IB:108:PRO:HG3	61:IB:134:THR:HB	1.82	0.62
61:IB:67:ARG:CZ	61:IB:129:ARG:HA	2.28	0.62
11:K:129:LEU:O	11:K:129:LEU:HD23	1.99	0.62
12:L:130:TYR:HB2	12:L:204:ARG:HH21	1.64	0.62
13:M:148:GLY:HA3	13:M:154:VAL:HG22	1.81	0.62
17:Q:92:THR:HG21	39:MA:111:PHE:O	1.99	0.62
15:O:20:ASN:O	15:O:125:MET:HG3	2.00	0.62
68:PB:17:LEU:HD22	68:PB:66:LEU:HD13	1.81	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:Q:123:ILE:HD12	17:Q:125:VAL:CG2	2.30	0.62
13:M:180:TYR:CD2	44:RA:86:ALA:HA	2.34	0.62
19:S:135:VAL:CG2	19:S:151:ILE:HG21	2.29	0.62
77:YB:48:SER:HB2	77:YB:70:LYS:HG2	1.80	0.62
1:A:1105:C:H2'	1:A:1106:U:H6	1.64	0.62
1:A:1568:C:H41	68:PB:39:GLY:HA3	1.65	0.62
1:A:862:A:H62	63:KB:70:LYS:HE2	1.63	0.62
2:B:2257:C:H2'	2:B:2258:U:O4'	1.98	0.62
2:B:709:A:C8	2:B:2788:C:H4'	2.34	0.62
2:B:3311:C:H2'	2:B:3312:U:H5'	1.81	0.62
54:BB:126:VAL:HG23	54:BB:156:VAL:HA	1.82	0.62
2:B:1609:C:OP1	29:CA:125:ARG:HD2	1.99	0.62
29:CA:67:ILE:HG22	29:CA:69:SER:H	1.65	0.62
29:CA:91:ASN:ND2	29:CA:93:TYR:HB2	2.15	0.62
82:DC:319:LEU:O	82:DC:323:VAL:HG23	1.98	0.62
5:E:187:VAL:HA	5:E:190:PHE:HB2	1.82	0.62
31:EA:14:VAL:C	31:EA:19:ALA:HB1	2.19	0.62
57:EB:154:LEU:HD12	57:EB:183:PHE:HB3	1.81	0.62
83:EC:6913:U:H3'	83:EC:6914:A:C8	2.34	0.62
32:FA:100:PRO:HD2	32:FA:123:VAL:HA	1.81	0.62
58:FB:36:THR:HG23	58:FB:96:LEU:N	2.14	0.62
7:G:70:ARG:NH1	7:G:70:ARG:HB3	2.15	0.62
8:H:23:PRO:C	8:H:25:VAL:H	2.00	0.62
10:J:38:THR:OG1	10:J:90:LYS:HG3	1.99	0.62
64:LB:12:GLN:HB3	64:LB:77:THR:OG1	1.98	0.62
16:P:130:LYS:HD2	16:P:146:LYS:HE3	1.80	0.62
2:B:841:A:H4'	23:W:126:GLU:HA	1.81	0.62
49:WA:203:THR:HG22	49:WA:212:ALA:HB3	1.81	0.62
76:XB:82:ARG:HG3	76:XB:83:ILE:N	2.14	0.62
25:Y:126:VAL:HG23	25:Y:127:GLN:H	1.63	0.62
9:I:40:HIS:HA	25:Y:69:LYS:O	2.00	0.62
1:A:1532:U:H1'	69:QB:48:GLN:HE22	1.63	0.62
1:A:1608:U:H2'	1:A:1609:U:C6	2.34	0.62
1:A:1770:U:H2'	1:A:1771:U:O4'	1.99	0.62
1:A:522:U:H5'	74:VB:36:SER:HA	1.81	0.62
2:B:999:G:H21	2:B:1002:A:H62	1.47	0.62
2:B:2310:U:H2'	2:B:2311:G:C8	2.35	0.62
2:B:2317:A:C2'	2:B:2318:U:H5'	2.30	0.62
2:B:2448:G:H2'	2:B:2449:A:H5'	1.80	0.62
2:B:827:A:H2'	2:B:828:A:C8	2.35	0.62
2:B:955:U:H2'	2:B:956:U:C6	2.35	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:CB:29:ILE:HG12	66:NB:57:LEU:HD21	1.80	0.62
55:CB:51:VAL:HG21	55:CB:130:ILE:CG2	2.30	0.62
4:D:82:G:H2'	4:D:83:U:O4'	1.99	0.62
30:DA:28:ARG:HH12	30:DA:118:LEU:HD22	1.65	0.62
82:DC:594:ASP:HB3	82:DC:597:VAL:CG2	2.29	0.62
57:EB:135:ILE:HD13	57:EB:152:VAL:HG11	1.81	0.62
57:EB:46:ILE:HA	57:EB:60:ILE:HA	1.82	0.62
7:G:356:LEU:HD12	7:G:359:ILE:HD11	1.82	0.62
59:GB:170:GLY:O	59:GB:174:ARG:HG2	1.99	0.62
1:A:1185:U:C5	65:MB:123:TYR:HB2	2.30	0.62
17:Q:47:ALA:CB	17:Q:48:PRO:HD2	2.20	0.62
70:RB:69:LYS:HG2	70:RB:80:GLU:HB2	1.82	0.62
12:L:137:ASN:OD1	19:S:3:ALA:HB3	1.99	0.62
22:V:125:ASP:OD1	22:V:126:GLN:HG3	1.98	0.62
76:XB:82:ARG:CZ	76:XB:82:ARG:HA	2.30	0.62
2:B:2737:C:H4'	25:Y:68:THR:HG21	1.80	0.62
26:Z:77:LYS:HE3	26:Z:81:LYS:HD3	1.81	0.62
2:B:217:U:H4'	30:DA:100:HIS:CD2	2.34	0.62
2:B:2432:A:H2'	2:B:2433:U:O4'	1.98	0.62
2:B:2759:U:H5''	2:B:2760:C:H5'	1.81	0.62
2:B:2982:A:O2'	2:B:2983:C:H5''	1.99	0.62
54:BB:182:TYR:HE2	54:BB:190:GLY:HA2	1.63	0.62
54:BB:211:LYS:HB3	54:BB:217:THR:HG22	1.81	0.62
3:C:49:G:O2'	3:C:50:C:H5'	2.00	0.62
29:CA:92:LYS:HG2	29:CA:110:VAL:CG1	2.30	0.62
30:DA:32:SER:OG	30:DA:49:PRO:HG3	1.99	0.62
82:DC:699:DDE:HAA2	82:DC:699:DDE:HAD2	1.65	0.62
31:EA:26:VAL:HG21	31:EA:96:VAL:HB	1.82	0.62
7:G:56:ILE:HG22	7:G:74:GLU:O	2.00	0.62
59:GB:134:ILE:HA	59:GB:158:PHE:HA	1.81	0.62
8:H:239:ALA:N	8:H:240:PRO:HD3	2.14	0.62
8:H:92:ASN:HA	8:H:98:ARG:O	2.00	0.62
35:IA:16:LEU:HB2	35:IA:69:TYR:O	2.00	0.62
1:A:1454:G:H4'	65:MB:122:THR:HG21	1.82	0.62
19:S:35:VAL:HG22	19:S:65:ARG:HE	1.63	0.62
45:SA:2:ARG:HB3	45:SA:2:ARG:NH1	2.14	0.62
71:SB:1:MET:O	71:SB:8:LEU:HD22	1.99	0.62
73:UB:126:LYS:HA	73:UB:131:SER:HA	1.80	0.62
75:WB:88:ILE:HG23	75:WB:103:ARG:HA	1.81	0.62
1:A:850:A:H2'	1:A:851:U:H4'	1.81	0.62
2:B:1327:C:H2'	2:B:1328:C:H6	1.64	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:3057:U:H5'	2:B:3086:A:H61	1.63	0.62
2:B:3293:U:H5'	7:G:128:LYS:NZ	2.15	0.62
2:B:585:A:H2'	2:B:586:C:C6	2.35	0.62
2:B:80:G:H2'	2:B:81:C:C6	2.34	0.62
82:DC:130:ASP:O	82:DC:134:GLY:HA2	2.00	0.62
82:DC:593:ILE:HG13	82:DC:685:ARG:HB2	1.82	0.62
31:EA:87:LEU:HD13	31:EA:127:ASN:HD22	1.64	0.62
7:G:119:TYR:CE2	7:G:129:ALA:HB2	2.35	0.62
33:GA:23:LYS:HE3	33:GA:24:PRO:HD2	1.81	0.62
8:H:42:VAL:HG13	8:H:45:ASN:ND2	2.15	0.62
11:K:86:VAL:CG1	11:K:136:TYR:HB3	2.23	0.62
12:L:33:ASN:HD21	12:L:38:GLN:HE22	1.45	0.62
12:L:80:TYR:CE1	12:L:229:VAL:HG11	2.34	0.62
18:R:31:LYS:HB3	18:R:51:ALA:HB1	1.82	0.62
20:T:188:SER:O	20:T:192:LYS:HG2	2.00	0.62
18:R:120:VAL:CG2	20:T:197:LEU:HD22	2.29	0.62
21:U:26:PHE:HA	21:U:144:SER:HB3	1.79	0.62
48:VA:79:PHE:CE2	48:VA:189:GLN:HG3	2.35	0.62
24:X:52:LYS:HE2	24:X:54:ALA:HB3	1.82	0.62
24:X:10:ILE:HG21	25:Y:148:PRO:HG2	1.80	0.62
1:A:1501:C:H41	69:QB:102:ARG:CZ	2.13	0.62
1:A:156:A:H5''	74:VB:132:ARG:HH21	1.63	0.62
1:A:355:G:H2'	1:A:356:G:C8	2.35	0.62
2:B:2173:U:H2'	2:B:2174:G:C8	2.34	0.62
2:B:2246:G:H2'	2:B:2247:G:H8	1.65	0.62
2:B:2538:U:H1'	2:B:2541:U:O4	2.00	0.62
2:B:3262:U:C2'	2:B:3263:G:H5''	2.29	0.62
2:B:643:U:HO2'	2:B:1153:A:H2	1.42	0.62
2:B:76:G:C6	17:Q:101:ARG:HA	2.35	0.62
2:B:827:A:H2'	2:B:828:A:H8	1.65	0.62
2:B:949:C:O2'	2:B:971:G:H5''	2.00	0.62
80:BC:30:PRO:HB2	80:BC:34:ALA:CB	2.29	0.62
29:CA:126:LEU:H	29:CA:126:LEU:HD12	1.65	0.62
31:EA:13:VAL:HB	31:EA:20:GLY:H	1.64	0.62
31:EA:60:LYS:O	31:EA:64:LYS:HB2	2.00	0.62
7:G:215:ILE:HG23	7:G:282:ILE:HD11	1.81	0.62
2:B:3049:A:N1	7:G:75:ALA:HB2	2.14	0.62
7:G:83:PRO:HA	7:G:204:ALA:HA	1.81	0.62
33:GA:8:THR:O	33:GA:8:THR:HG23	2.00	0.62
59:GB:109:LEU:HD12	59:GB:146:PHE:CB	2.30	0.62
9:I:95:TRP:CE3	9:I:161:GLY:HA2	2.34	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:I:289:LYS:O	9:I:293:LEU:HB3	1.99	0.62
9:I:290:ILE:HA	9:I:294:ALA:HB3	1.82	0.62
61:IB:77:SER:HB2	61:IB:85:VAL:H	1.65	0.62
38:LA:57:LEU:HD12	38:LA:61:GLN:CB	2.29	0.62
40:NA:76:ARG:HA	40:NA:76:ARG:HE	1.65	0.62
1:A:1035:G:H4'	72:TB:2:THR:HB	1.81	0.62
48:VA:11:TYR:CD2	48:VA:57:THR:HB	2.35	0.62
48:VA:61:ARG:O	48:VA:61:ARG:HD2	2.00	0.62
1:A:780:A:O2'	74:VB:8:ARG:HA	2.00	0.62
50:XA:179:ARG:HD3	50:XA:183:ARG:HH12	1.65	0.62
51:YA:181:LEU:HA	51:YA:184:LEU:HB2	1.81	0.62
1:A:1687:U:H2'	1:A:1688:U:O4'	2.00	0.61
1:A:363:G:O2'	1:A:364:G:H5'	2.00	0.61
1:A:484:C:H2'	1:A:485:A:C8	2.35	0.61
1:A:619:A:H5''	1:A:1141:G:H4'	1.80	0.61
2:B:1305:U:H5	7:G:256:HIS:HB3	1.63	0.61
2:B:21:G:H3'	2:B:22:G:H8	1.63	0.61
2:B:2426:U:H2'	2:B:2427:U:H6	1.63	0.61
2:B:2633:U:H2'	2:B:2634:U:H5'	1.80	0.61
2:B:3158:G:H22	2:B:3292:A:H2	1.48	0.61
2:B:532:A:O2'	2:B:533:A:H5'	2.00	0.61
2:B:768:C:H2'	2:B:769:G:O4'	2.00	0.61
27:AA:94:TYR:OH	28:BA:41:LYS:HE3	1.99	0.61
82:DC:660:LYS:O	82:DC:664:VAL:HG23	2.00	0.61
7:G:293:ASN:H	7:G:304:THR:HA	1.65	0.61
8:H:106:TRP:CE3	17:Q:22:VAL:HG11	2.34	0.61
2:B:120:G:N2	12:L:124:ASP:HA	2.15	0.61
15:O:134:PRO:HD2	15:O:152:HIS:HE1	1.64	0.61
67:OB:44:LYS:O	67:OB:47:ARG:HB3	2.00	0.61
2:B:1257:C:H1'	16:P:123:ARG:HE	1.64	0.61
8:H:105:THR:O	17:Q:24:VAL:HG21	2.00	0.61
69:QB:28:LEU:HD21	69:QB:30:VAL:HG13	1.82	0.61
20:T:137:THR:HG22	20:T:139:GLY:H	1.65	0.61
21:U:51:VAL:HG13	21:U:56:ARG:O	2.00	0.61
48:VA:11:TYR:CE2	48:VA:15:LEU:HD23	2.35	0.61
48:VA:169:GLU:HA	48:VA:172:LEU:HD21	1.82	0.61
1:A:1401:A:H3'	1:A:1402:G:C5'	2.30	0.61
1:A:1432:U:H4'	1:A:1433:G:H5''	1.83	0.61
2:B:999:G:N2	2:B:1002:A:H62	1.98	0.61
2:B:1768:U:C3'	2:B:1769:G:H5''	2.30	0.61
2:B:3028:G:H5''	82:DC:28:VAL:HG21	1.82	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:3308:C:H3'	2:B:3309:G:H21	1.65	0.61
30:DA:27:ARG:HA	30:DA:30:LEU:HB2	1.82	0.61
56:DB:147:LEU:HB3	56:DB:151:ASP:CB	2.26	0.61
82:DC:278:LEU:HA	82:DC:281:ILE:HD12	1.81	0.61
82:DC:288:ILE:O	82:DC:319:LEU:HD23	2.00	0.61
82:DC:2:VAL:C	82:DC:3:ALA:CA	2.66	0.61
82:DC:395:TYR:HD1	82:DC:457:VAL:HB	1.64	0.61
82:DC:559:PRO:HG2	82:DC:778:PHE:CE1	2.34	0.61
2:B:3305:A:H4'	7:G:272:TYR:OH	2.00	0.61
34:HA:41:LEU:HD12	34:HA:92:ILE:HB	1.82	0.61
9:I:41:LYS:HE2	25:Y:30:TYR:O	2.00	0.61
12:L:46:LEU:O	12:L:50:VAL:HG23	2.00	0.61
3:C:36:G:OP2	39:MA:85:THR:HG23	2.00	0.61
16:P:123:ARG:HH22	48:VA:42:ARG:CB	2.09	0.61
69:QB:22:LEU:HD12	69:QB:28:LEU:HB3	1.82	0.61
1:A:1533:C:H5	75:WB:77:ARG:HH21	1.46	0.61
1:A:1269:U:H4'	1:A:1270:G:H5''	1.81	0.61
1:A:63:G:H4'	1:A:170:U:H5	1.64	0.61
1:A:409:C:H4'	1:A:1732:A:O3'	1.99	0.61
2:B:2372:A:H3'	2:B:2373:A:C5'	2.30	0.61
2:B:2587:U:H2'	2:B:2588:U:O4'	2.01	0.61
2:B:3090:U:H2'	2:B:3091:A:C8	2.35	0.61
2:B:754:G:H2'	2:B:755:A:H8	1.65	0.61
2:B:966:U:H4'	32:FA:43:ILE:CG2	2.31	0.61
28:BA:39:LEU:HD12	28:BA:44:LYS:HG3	1.81	0.61
28:BA:7:SER:HB3	28:BA:30:ARG:H	1.64	0.61
56:DB:68:LEU:H	56:DB:100:ALA:HB3	1.65	0.61
82:DC:123:ASP:HB2	82:DC:348:ALA:CB	2.30	0.61
82:DC:536:LEU:HG	82:DC:537:HIS:H	1.65	0.61
83:EC:6914:A:H2'	83:EC:6915:G:C8	2.34	0.61
7:G:56:ILE:HD11	7:G:356:LEU:CD1	2.30	0.61
13:M:10:ILE:CD1	13:M:75:VAL:HG21	2.30	0.61
39:MA:66:VAL:HA	39:MA:69:LEU:CG	2.30	0.61
15:O:14:ILE:N	15:O:14:ILE:HD12	2.14	0.61
42:PA:36:LYS:HB3	42:PA:37:PRO:HD2	1.82	0.61
69:QB:116:ILE:HA	69:QB:122:ARG:HG2	1.82	0.61
2:B:2908:G:H4'	44:RA:114:LYS:NZ	2.15	0.61
70:RB:30:LYS:HB2	70:RB:33:GLN:HB3	1.81	0.61
2:B:29:C:H1'	19:S:162:ARG:HG2	1.83	0.61
2:B:879:U:O2'	21:U:131:ARG:HB3	2.00	0.61
75:WB:47:TYR:HA	75:WB:50:ILE:HD12	1.80	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
75:WB:77:ARG:CB	75:WB:77:ARG:HH11	2.13	0.61
52:ZA:100:ALA:O	52:ZA:115:ILE:HA	2.00	0.61
52:ZA:230:TRP:HB3	72:TB:68:ARG:NH1	2.15	0.61
1:A:121:U:C1'	54:BB:33:ALA:HB3	2.30	0.61
1:A:193:U:H2'	1:A:194:U:H2'	1.81	0.61
1:A:606:A:H4'	1:A:607:G:H3'	1.82	0.61
1:A:1422:A:H5''	53:AB:159:HIS:CD2	2.34	0.61
2:B:1472:U:H2'	2:B:1473:G:C8	2.36	0.61
2:B:1481:A:HO2'	2:B:1858:A:H2	1.44	0.61
2:B:1898:G:H1'	27:AA:18:PRO:CG	2.30	0.61
2:B:1953:G:C3'	2:B:1954:G:H5''	2.31	0.61
2:B:2512:C:H5'	12:L:249:ARG:HH11	1.64	0.61
2:B:306:A:N1	2:B:2784:G:H1'	2.16	0.61
2:B:1304:A:N6	2:B:2860:U:H5''	2.15	0.61
2:B:278:U:H3	2:B:287:G:H1	1.49	0.61
2:B:3016:A:H2'	2:B:3017:A:C8	2.36	0.61
2:B:3073:A:C3'	2:B:3074:G:H5''	2.30	0.61
2:B:3118:C:C2'	2:B:3119:U:H5''	2.29	0.61
54:BB:162:ILE:HG22	54:BB:163:ASP:N	2.15	0.61
31:EA:52:LYS:O	31:EA:65:ARG:HD3	2.00	0.61
31:EA:42:LEU:HD23	31:EA:97:SER:HA	1.83	0.61
83:EC:6927:U:H3'	83:EC:6928:G:C5'	2.28	0.61
7:G:152:LYS:HE2	7:G:189:SER:HA	1.81	0.61
7:G:292:ALA:HB2	7:G:302:LYS:HA	1.82	0.61
59:GB:20:GLU:O	59:GB:24:LEU:HB2	2.00	0.61
8:H:113:VAL:HB	8:H:118:LYS:HZ2	1.65	0.61
36:JA:85:LEU:HA	36:JA:88:HIS:HD2	1.65	0.61
17:Q:85:LEU:HG	17:Q:86:THR:H	1.65	0.61
69:QB:113:ILE:HA	69:QB:128:GLY:HA3	1.82	0.61
19:S:199:LEU:HB3	19:S:203:ARG:NE	2.16	0.61
48:VA:26:PHE:CE1	48:VA:190:VAL:HG12	2.36	0.61
76:XB:84:VAL:HG13	76:XB:85:ARG:N	2.10	0.61
25:Y:12:ARG:HD3	25:Y:13:TYR:CE2	2.36	0.61
77:YB:36:LYS:O	77:YB:38:PRO:HD3	2.01	0.61
26:Z:20:SER:O	26:Z:24:GLU:HG2	2.00	0.61
2:B:1456:A:N6	2:B:1477:A:H4'	2.15	0.61
2:B:1533:U:H2'	2:B:1534:A:H8	1.64	0.61
2:B:186:U:P	30:DA:122:LYS:HD3	2.40	0.61
2:B:2852:C:H2'	14:N:67:ALA:HB2	1.83	0.61
2:B:593:C:C2'	2:B:594:U:H5'	2.31	0.61
2:B:59:G:H4'	2:B:60:A:H4'	1.83	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:BB:59:ARG:HE	54:BB:60:GLU:CG	2.12	0.61
54:BB:63:ALA:O	54:BB:67:GLN:HG3	2.01	0.61
3:C:66:A:C2	3:C:94:C:H1'	2.35	0.61
29:CA:82:LEU:HD22	29:CA:84:PHE:HE2	1.65	0.61
82:DC:169:VAL:HG12	82:DC:170:SER:H	1.66	0.61
82:DC:646:VAL:HG23	82:DC:686:VAL:HB	1.83	0.61
82:DC:821:ALA:HA	82:DC:824:LYS:HB3	1.83	0.61
57:EB:153:LEU:HG	57:EB:184:GLU:HB3	1.82	0.61
59:GB:90:LYS:HB3	59:GB:95:TYR:HB2	1.83	0.61
8:H:288:ARG:HA	8:H:291:ASN:HD22	1.65	0.61
60:HB:37:THR:HB	60:HB:41:TYR:HD1	1.63	0.61
11:K:90:LYS:HD2	11:K:91:GLY:H	1.66	0.61
1:A:916:U:H3	64:LB:41:ARG:NH1	1.98	0.61
64:LB:61:MET:HA	64:LB:104:ALA:HB2	1.81	0.61
14:N:166:ILE:HG22	14:N:167:LEU:N	2.15	0.61
14:N:208:ASN:HA	14:N:211:ARG:CG	2.31	0.61
55:CB:29:ILE:CG2	66:NB:57:LEU:HD11	2.19	0.61
2:B:1256:G:C4'	16:P:127:SER:HB3	2.30	0.61
17:Q:145:PHE:HE2	39:MA:118:ILE:HD13	1.64	0.61
50:XA:179:ARG:CD	50:XA:183:ARG:HH12	2.13	0.61
2:B:2737:C:H4'	25:Y:68:THR:CG2	2.31	0.61
1:A:1035:G:H2'	1:A:1036:A:C8	2.35	0.61
1:A:258:C:H2'	1:A:259:U:C6	2.35	0.61
1:A:684:A:C2'	1:A:685:A:H5''	2.29	0.61
53:AB:121:GLY:O	53:AB:125:TYR:HB2	2.00	0.61
2:B:1683:A:H2'	2:B:1684:U:C6	2.35	0.61
2:B:1786:G:H2'	2:B:1787:A:O4'	2.01	0.61
2:B:3065:G:H2'	2:B:3066:U:C6	2.36	0.61
2:B:3183:A:O2'	2:B:3184:A:H5'	2.01	0.61
2:B:944:C:H2'	2:B:945:C:H6	1.65	0.61
54:BB:194:THR:O	54:BB:195:ILE:HG13	2.00	0.61
3:C:91:C:O4'	30:DA:24:SER:HB3	2.00	0.61
4:D:16:U:H2'	4:D:17:A:C8	2.35	0.61
82:DC:141:THR:HG21	82:DC:793:PHE:CZ	2.36	0.61
82:DC:311:GLU:OE1	82:DC:326:LYS:HE3	2.01	0.61
6:F:5:ILE:HG21	6:F:210:PRO:CD	2.30	0.61
33:GA:28:LYS:HD2	33:GA:29:TYR:CE1	2.35	0.61
8:H:74:ILE:HD11	8:H:76:ARG:HG3	1.82	0.61
61:IB:57:LYS:HD2	61:IB:131:ILE:HG23	1.82	0.61
10:J:33:SER:HB2	10:J:86:ALA:CB	2.31	0.61
63:KB:32:SER:O	63:KB:36:GLN:HG2	2.00	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:Q:124:ILE:HB	39:MA:117:ALA:HB3	1.81	0.61
40:NA:57:LEU:HD23	40:NA:60:LEU:HG	1.83	0.61
2:B:2139:A:N7	41:OA:3:LYS:HG2	2.15	0.61
67:OB:41:ILE:HG22	67:OB:42:GLN:N	2.15	0.61
69:QB:117:SER:HB2	69:QB:123:ARG:HB2	1.82	0.61
18:R:120:VAL:CG2	20:T:197:LEU:HD13	2.29	0.61
72:TB:95:PRO:HB2	72:TB:99:PHE:CZ	2.36	0.61
47:UA:57:CYS:HB3	47:UA:62:LYS:H	1.65	0.61
48:VA:53:MET:SD	48:VA:85:GLY:HA3	2.40	0.61
48:VA:61:ARG:HH12	48:VA:76:LEU:HD13	1.66	0.61
75:WB:93:SER:HB2	75:WB:100:ILE:H	1.64	0.61
24:X:141:LYS:HA	24:X:144:LEU:HG	1.82	0.61
1:A:1352:G:O2'	1:A:1353:U:H5'	2.01	0.61
1:A:1584:G:H5'	66:NB:122:ARG:HB3	1.83	0.61
1:A:1603:U:H2'	1:A:1604:U:H6	1.66	0.61
1:A:1625:C:H2'	1:A:1626:U:C6	2.34	0.61
1:A:485:A:H2'	1:A:486:G:C8	2.36	0.61
2:B:1245:A:C2	2:B:1272:C:H4'	2.35	0.61
2:B:1661:G:H2'	2:B:1662:G:C8	2.35	0.61
2:B:2305:G:N3	2:B:2305:G:H2'	2.16	0.61
2:B:3023:U:H4'	82:DC:162:ARG:HH12	1.62	0.61
2:B:3149:G:H2'	2:B:3150:A:C8	2.35	0.61
2:B:3375:A:H5''	2:B:3378:C:H5	1.65	0.61
2:B:593:C:O2'	2:B:594:U:H5'	2.00	0.61
2:B:807:A:C8	2:B:2812:C:H1'	2.34	0.61
30:DA:39:LEU:HD22	30:DA:106:ILE:O	2.01	0.61
83:EC:6869:C:C2'	83:EC:6870:A:H5'	2.27	0.61
7:G:28:ARG:HB3	7:G:30:LYS:HE3	1.83	0.61
33:GA:43:HIS:HA	33:GA:46:ALA:HB3	1.82	0.61
59:GB:142:ASN:O	59:GB:144:PRO:HD3	2.00	0.61
34:HA:11:ASN:HB2	34:HA:12:GLN:OE1	2.00	0.61
11:K:85:PHE:HA	11:K:115:THR:O	2.01	0.61
63:KB:33:VAL:O	63:KB:37:ILE:HG13	2.00	0.61
66:NB:79:TYR:HA	66:NB:82:ARG:CG	2.30	0.61
15:O:19:LEU:HD12	15:O:69:VAL:CG1	2.31	0.61
2:B:361:A:H4'	41:OA:45:ARG:HH22	1.64	0.61
49:WA:38:ARG:HA	49:WA:67:ILE:HG23	1.82	0.61
2:B:2735:U:H4'	25:Y:51:GLY:CA	2.30	0.61
1:A:1332:C:O2'	53:AB:162:GLN:HB3	1.99	0.61
1:A:1680:G:H1'	1:A:1721:A:N6	2.16	0.61
1:A:697:C:H1'	1:A:733:A:N6	2.15	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:817:A:H61	1:A:854:U:H3	1.49	0.61
2:B:1687:U:H5''	2:B:1688:U:O4'	2.01	0.61
2:B:2923:U:H2'	2:B:2924:U:C6	2.36	0.61
55:CB:164:PRO:HD3	78:ZB:54:LEU:HD11	1.82	0.61
55:CB:51:VAL:HG21	55:CB:130:ILE:HG23	1.81	0.61
2:B:213:A:O4'	30:DA:2:ALA:HA	2.01	0.61
82:DC:45:ILE:O	82:DC:46:ILE:HG13	2.00	0.61
5:E:183:ILE:O	5:E:187:VAL:HG23	2.01	0.61
5:E:34:LEU:HA	5:E:206:VAL:HG12	1.83	0.61
9:I:106:ALA:HA	9:I:171:LEU:HD11	1.83	0.61
61:IB:92:HIS:ND1	61:IB:103:ARG:HD3	2.16	0.61
61:IB:2:SER:HB3	61:IB:82:ARG:N	2.09	0.61
61:IB:58:CYS:SG	61:IB:59:PRO:HD2	2.40	0.61
11:K:84:VAL:HG12	11:K:137:GLY:C	2.20	0.61
38:LA:3:GLN:HG2	38:LA:29:ILE:HB	1.81	0.61
1:A:903:U:H5''	64:LB:135:ARG:HH21	1.65	0.61
73:UB:24:TRP:CH2	73:UB:33:LEU:HB3	2.36	0.61
25:Y:93:VAL:HG22	25:Y:94:GLU:OE1	2.00	0.61
1:A:1485:C:C2	1:A:1486:G:H1'	2.36	0.61
1:A:1659:A:H2'	1:A:1660:A:C8	2.35	0.61
1:A:617:U:H2'	1:A:618:U:C6	2.35	0.61
53:AB:29:LEU:HD13	53:AB:50:ILE:HG21	1.82	0.61
2:B:1220:U:H4'	2:B:1286:A:N6	2.16	0.61
2:B:1639:C:O3'	2:B:1738:C:H5''	2.01	0.61
2:B:2108:C:H1'	2:B:3344:A:C8	2.25	0.61
2:B:310:U:H2'	2:B:311:C:C5'	2.31	0.61
2:B:683:U:H2'	2:B:684:G:O4'	1.99	0.61
2:B:68:C:H2'	2:B:69:C:H6	1.64	0.61
2:B:782:U:H2'	2:B:783:A:O4'	2.01	0.61
2:B:715:A:N6	2:B:782:U:H5'	2.15	0.61
2:B:791:A:H2'	2:B:792:G:C8	2.36	0.61
3:C:32:C:H2'	3:C:33:A:H8	1.66	0.61
3:C:53:A:H2'	3:C:54:A:H8	1.64	0.61
56:DB:19:ASP:O	56:DB:20:ASP:HB2	2.00	0.61
82:DC:322:VAL:HA	82:DC:325:ARG:HD2	1.82	0.61
82:DC:3:ALA:CB	82:DC:3:ALA:N	2.57	0.61
82:DC:593:ILE:HD13	82:DC:645:LEU:HD12	1.81	0.61
82:DC:671:THR:HA	82:DC:681:MET:SD	2.41	0.61
83:EC:6933:G:H2'	83:EC:6934:U:O4'	2.01	0.61
7:G:385:LYS:O	7:G:386:ASP:HB2	2.00	0.61
33:GA:38:LYS:HA	33:GA:41:ARG:HH12	1.66	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:GB:96:VAL:HA	59:GB:99:LEU:HD13	1.83	0.61
35:IA:79:ARG:C	35:IA:89:LEU:HA	2.21	0.61
11:K:95:ILE:HD12	11:K:133:TYR:HE1	1.65	0.61
12:L:74:THR:O	12:L:77:GLN:HG2	2.00	0.61
14:N:9:TYR:HD2	14:N:97:LEU:HD22	1.66	0.61
15:O:149:GLY:O	15:O:153:LYS:HB2	2.01	0.61
2:B:1254:C:C4'	16:P:135:THR:HG21	2.30	0.61
2:B:1263:A:C6	16:P:136:ALA:HB2	2.35	0.61
68:PB:66:LEU:O	68:PB:70:VAL:HG23	2.00	0.61
72:TB:83:ILE:HG23	72:TB:84:GLY:H	1.66	0.61
23:W:99:LEU:C	23:W:101:VAL:H	2.03	0.61
23:W:93:VAL:O	23:W:97:ARG:HG3	2.01	0.61
75:WB:93:SER:CB	75:WB:99:ALA:HA	2.30	0.61
24:X:137:ARG:HG3	24:X:139:TYR:CE1	2.35	0.61
1:A:130:C:C2'	1:A:131:C:H5'	2.31	0.61
1:A:1410:A:H2'	1:A:1411:A:O4'	1.99	0.61
1:A:946:U:H5''	51:YA:165:ARG:NH1	2.15	0.61
2:B:204:A:C2'	2:B:205:C:H5'	2.30	0.61
2:B:365:A:H3'	2:B:366:A:C8	2.34	0.61
1:A:299:A:H4'	54:BB:5:PRO:HA	1.83	0.61
4:D:112:G:H2'	4:D:113:C:H6	1.64	0.61
82:DC:171:LYS:HE2	82:DC:279:ASP:CA	2.27	0.61
82:DC:670:ALA:HB2	82:DC:710:ARG:HG3	1.82	0.61
57:EB:30:SER:O	57:EB:31:SER:HB2	2.00	0.61
7:G:159:ARG:HA	7:G:181:ILE:O	2.00	0.61
7:G:21:ARG:HD3	7:G:269:GLN:HG2	1.83	0.61
63:KB:17:PRO:HD2	63:KB:62:GLN:HE21	1.65	0.61
51:YA:66:VAL:HG13	64:LB:33:LEU:HD13	1.82	0.61
14:N:93:PRO:HB3	14:N:127:ALA:HB2	1.82	0.61
2:B:1256:G:O2'	16:P:123:ARG:HB3	2.00	0.61
19:S:135:VAL:HB	19:S:142:ILE:HG21	1.83	0.61
73:UB:19:ARG:CD	73:UB:23:ARG:HG2	2.31	0.61
48:VA:106:ALA:HB1	48:VA:182:THR:HG23	1.81	0.61
51:YA:32:ILE:N	51:YA:32:ILE:HD12	2.16	0.61
1:A:1655:A:H5'	45:SA:24:SER:HB3	1.83	0.60
27:AA:26:ALA:HB1	27:AA:115:THR:CG2	2.31	0.60
27:AA:69:LEU:HD21	27:AA:110:LYS:HE2	1.82	0.60
2:B:1498:A:H1'	2:B:1602:A:C2	2.36	0.60
2:B:1684:U:H2'	2:B:1685:C:H6	1.65	0.60
2:B:1822:C:H2'	2:B:1823:A:C8	2.36	0.60
2:B:1822:C:H2'	2:B:1823:A:H8	1.66	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2308:C:H3'	2:B:2309:A:C8	2.36	0.60
2:B:3392:U:H2'	2:B:3393:U:C6	2.36	0.60
2:B:347:G:O2'	2:B:348:A:H5'	2.01	0.60
2:B:539:C:H2'	2:B:540:U:C6	2.35	0.60
2:B:627:U:H2'	2:B:628:A:C8	2.36	0.60
1:A:1527:C:H5"	55:CB:109:LYS:HE3	1.82	0.60
82:DC:18:ASN:OD1	82:DC:95:GLY:HA3	2.01	0.60
82:DC:491:VAL:HG21	82:DC:538:LEU:HD21	1.83	0.60
57:EB:32:PRO:HG2	57:EB:34:LEU:HD13	1.82	0.60
9:I:65:ILE:CG2	9:I:72:ASP:HB3	2.29	0.60
61:IB:86:ILE:HG21	61:IB:123:VAL:CG1	2.31	0.60
36:JA:21:HIS:CE1	36:JA:24:ARG:HD2	2.36	0.60
63:KB:150:VAL:HG13	63:KB:151:ASN:N	2.16	0.60
39:MA:78:LYS:HG2	39:MA:81:ARG:HH22	1.66	0.60
15:O:43:GLN:HE22	15:O:71:VAL:HG13	1.66	0.60
70:RB:99:ILE:O	70:RB:103:ILE:HB	2.01	0.60
22:V:81:VAL:HG22	22:V:101:VAL:HA	1.81	0.60
22:V:51:ALA:CB	22:V:84:VAL:HG11	2.30	0.60
55:CB:123:VAL:HG11	75:WB:100:ILE:HD11	1.82	0.60
50:XA:41:ARG:HG3	50:XA:45:VAL:HB	1.83	0.60
51:YA:111:ARG:CB	76:XB:68:TYR:HB2	2.29	0.60
1:A:1207:C:H4'	1:A:1208:A:O5'	2.01	0.60
2:B:1665:C:H2'	2:B:1666:G:C8	2.37	0.60
2:B:1828:A:H2'	2:B:1829:G:H8	1.61	0.60
82:DC:81:MET:SD	82:DC:339:VAL:HG21	2.42	0.60
7:G:17:LEU:CG	7:G:18:PRO:HA	2.29	0.60
7:G:295:ALA:HB1	7:G:300:ARG:N	2.16	0.60
34:HA:16:LEU:HA	34:HA:19:LYS:HB3	1.81	0.60
9:I:244:HIS:O	9:I:248:ARG:HG3	2.01	0.60
10:J:39:VAL:HG12	10:J:159:LEU:HD21	1.82	0.60
10:J:84:VAL:O	10:J:85:ILE:HG13	2.01	0.60
1:A:1175:U:H3'	68:PB:137:HIS:ND1	2.15	0.60
18:R:102:LYS:HA	18:R:105:GLN:CG	2.31	0.60
45:SA:4:LYS:HG2	45:SA:5:TRP:CZ3	2.36	0.60
22:V:80:THR:HG22	22:V:100:THR:CB	2.30	0.60
48:VA:58:MET:HE1	48:VA:86:PHE:CZ	2.36	0.60
49:WA:305:TYR:HE2	49:WA:311:ARG:HB2	1.65	0.60
1:A:1238:A:C2'	1:A:1239:U:H5'	2.31	0.60
1:A:1485:C:C3'	1:A:1486:G:H4'	2.31	0.60
1:A:1724:U:H2'	1:A:1725:U:C6	2.36	0.60
1:A:830:U:H2'	1:A:831:U:C6	2.36	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2275:A:N6	2:B:2311:G:H1'	2.15	0.60
2:B:2899:C:N4	13:M:173:ARG:HD3	2.17	0.60
2:B:3036:G:H2'	2:B:3037:U:H5'	1.83	0.60
2:B:303:G:H4'	2:B:304:G:N2	2.16	0.60
2:B:3094:A:H2'	2:B:3095:U:C6	2.37	0.60
2:B:516:A:H61	2:B:574:U:H3	1.47	0.60
2:B:623:U:H2'	2:B:624:G:O4'	2.01	0.60
2:B:746:A:H2'	2:B:747:A:C8	2.36	0.60
59:GB:28:LEU:HD11	80:BC:40:TYR:HA	1.83	0.60
82:DC:153:PRO:HD3	82:DC:200:VAL:CG2	2.31	0.60
82:DC:491:VAL:CG2	82:DC:538:LEU:HD21	2.31	0.60
82:DC:571:SER:HB3	82:DC:590:ALA:H	1.65	0.60
82:DC:729:PHE:HA	82:DC:798:PHE:HA	1.83	0.60
82:DC:85:ASP:HB3	82:DC:340:LEU:HD21	1.83	0.60
5:E:24:LYS:HD3	5:E:24:LYS:H	1.66	0.60
31:EA:89:VAL:HG22	31:EA:93:LYS:HB2	1.83	0.60
83:EC:6783:U:H2'	83:EC:6784:G:O4'	2.01	0.60
17:Q:64:LYS:HG3	32:FA:69:TRP:CE2	2.37	0.60
59:GB:39:LYS:HA	59:GB:42:ILE:HD12	1.82	0.60
59:GB:49:LEU:O	59:GB:53:ARG:HG3	2.02	0.60
11:K:107:ARG:HH22	11:K:117:VAL:HG13	1.66	0.60
12:L:75:ILE:C	12:L:77:GLN:H	2.03	0.60
65:MB:73:PRO:HG2	65:MB:92:SER:OG	2.00	0.60
14:N:17:TYR:HE1	14:N:23:ASN:HD22	1.47	0.60
55:CB:23:VAL:HG11	66:NB:57:LEU:HD13	1.82	0.60
67:OB:21:TYR:N	67:OB:22:PRO:HD2	2.16	0.60
17:Q:167:PHE:O	17:Q:171:ARG:HB2	2.00	0.60
22:V:33:TYR:HD1	22:V:45:ASN:OD1	1.84	0.60
48:VA:12:PHE:CE2	48:VA:60:ARG:HG3	2.36	0.60
74:VB:29:HIS:HB2	74:VB:32:ARG:HB3	1.82	0.60
23:W:90:PRO:HB2	23:W:93:VAL:HG23	1.83	0.60
49:WA:103:PHE:HZ	49:WA:136:ILE:HA	1.66	0.60
50:XA:39:ASN:HB2	50:XA:47:VAL:CB	2.31	0.60
51:YA:29:TRP:CZ2	64:LB:74:VAL:HG12	2.35	0.60
1:A:1186:U:H2'	1:A:1187:U:O4'	2.01	0.60
1:A:161:U:O2'	1:A:162:A:H5'	2.00	0.60
1:A:381:C:O3'	54:BB:10:LYS:HD2	2.02	0.60
30:DA:34:PRO:HG2	30:DA:105:VAL:HG23	1.82	0.60
82:DC:601:ILE:CD1	82:DC:643:PRO:HA	2.31	0.60
10:J:56:LYS:H	10:J:64:LEU:HB3	1.65	0.60
37:KA:67:MET:HE1	37:KA:90:PRO:HD3	1.82	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:10:C:O2'	12:L:55:TYR:HB3	2.01	0.60
66:NB:79:TYR:HA	66:NB:82:ARG:CD	2.30	0.60
19:S:138:GLN:HA	19:S:143:ARG:NH1	2.15	0.60
20:T:14:HIS:HD2	20:T:19:LEU:HD13	1.66	0.60
21:U:166:VAL:HG22	21:U:168:LEU:CD1	2.26	0.60
24:X:7:TYR:CE1	24:X:34:GLU:HG2	2.36	0.60
1:A:1510:U:C2'	1:A:1511:U:H5'	2.31	0.60
27:AA:65:GLY:O	27:AA:67:PRO:HD3	2.00	0.60
27:AA:85:TRP:HE1	27:AA:87:ARG:HG3	1.67	0.60
2:B:1084:A:H2'	2:B:1085:A:C8	2.37	0.60
2:B:1525:G:H1'	2:B:1829:G:N3	2.16	0.60
2:B:2610:G:H2'	2:B:2611:U:O4'	2.02	0.60
2:B:2883:U:H2'	2:B:2884:C:C6	2.36	0.60
2:B:92:G:OP2	2:B:93:C:H5''	2.00	0.60
3:C:42:G:H21	41:OA:21:ARG:HA	1.67	0.60
30:DA:115:ARG:O	30:DA:119:ILE:HG13	2.02	0.60
56:DB:67:VAL:H	56:DB:100:ALA:HB2	1.65	0.60
82:DC:369:ILE:HD12	82:DC:401:PHE:HB2	1.82	0.60
82:DC:510:ARG:HG2	82:DC:549:HIS:ND1	2.16	0.60
82:DC:496:LYS:HB2	82:DC:553:PRO:HB2	1.82	0.60
82:DC:565:GLU:HB3	82:DC:717:PHE:HZ	1.65	0.60
83:EC:6868:C:C3'	83:EC:6869:C:H5''	2.29	0.60
6:F:135:ILE:O	6:F:136:ILE:HD12	2.01	0.60
8:H:44:LYS:HD2	8:H:111:VAL:HG23	1.83	0.60
9:I:201:GLY:HA2	9:I:203:HIS:CE1	2.36	0.60
10:J:64:LEU:HD12	10:J:77:ARG:O	2.01	0.60
11:K:153:PHE:N	11:K:163:LEU:HG	2.15	0.60
12:L:161:GLU:HB3	19:S:7:LEU:CD2	2.32	0.60
12:L:97:TYR:CE1	12:L:203:VAL:HA	2.33	0.60
13:M:168:ARG:O	13:M:169:ASN:HB2	2.00	0.60
13:M:26:LYS:HG2	13:M:35:THR:HG22	1.83	0.60
15:O:20:ASN:HA	15:O:68:HIS:HB2	1.83	0.60
16:P:114:ARG:NH2	16:P:121:PHE:HB3	2.16	0.60
2:B:1747:G:O3'	42:PA:53:THR:HG21	2.01	0.60
68:PB:12:GLN:O	68:PB:15:LEU:HD22	2.02	0.60
43:QA:23:LEU:HB2	43:QA:38:ASN:HB2	1.84	0.60
20:T:3:VAL:HG13	20:T:4:GLU:HG3	1.83	0.60
22:V:175:ALA:O	22:V:178:ARG:HB2	2.02	0.60
8:H:361:HIS:HB3	24:X:26:ARG:HH12	1.66	0.60
50:XA:59:LEU:O	50:XA:62:ARG:HB2	2.02	0.60
1:A:100:A:C2'	1:A:101:U:H5'	2.31	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1373:C:H2'	1:A:1374:C:C6	2.36	0.60
1:A:619:A:H4'	1:A:1140:G:O2'	2.01	0.60
1:A:841:U:H2'	1:A:842:C:O4'	2.02	0.60
27:AA:109:MET:HG2	27:AA:110:LYS:H	1.66	0.60
53:AB:92:GLN:HE21	53:AB:92:GLN:H	1.49	0.60
2:B:2203:U:H2'	2:B:2204:C:C6	2.36	0.60
2:B:2208:A:H1'	2:B:2209:U:O4'	2.01	0.60
2:B:115:A:H2'	2:B:265:A:N3	2.16	0.60
2:B:2822:U:H2'	2:B:2823:G:C8	2.36	0.60
2:B:3170:A:O2'	2:B:3171:U:H5'	2.02	0.60
2:B:3229:G:H2'	2:B:3230:G:O4'	2.02	0.60
2:B:707:U:C3'	2:B:708:G:H5''	2.30	0.60
54:BB:150:PRO:HD2	56:DB:208:TYR:HE2	1.66	0.60
3:C:92:A:OP1	30:DA:23:PRO:HG2	2.01	0.60
29:CA:68:THR:HG23	39:MA:36:LEU:HD22	1.83	0.60
57:EB:107:ARG:HG2	57:EB:108:GLN:H	1.65	0.60
6:F:76:PHE:HE2	6:F:101:VAL:HG11	1.67	0.60
6:F:90:ALA:HA	6:F:101:VAL:O	2.01	0.60
6:F:116:VAL:HG22	6:F:117:GLU:N	2.15	0.60
33:GA:36:ASP:HB3	33:GA:39:PHE:HB2	1.83	0.60
8:H:32:PRO:HG3	8:H:244:LEU:HD21	1.83	0.60
34:HA:86:ARG:HD3	47:UA:44:LYS:HZ3	1.66	0.60
2:B:1456:A:C8	35:IA:26:LYS:HB3	2.37	0.60
61:IB:78:THR:HA	61:IB:84:ILE:CG2	2.30	0.60
63:KB:56:ASP:CB	77:YB:47:PHE:HB3	2.30	0.60
64:LB:71:CYS:SG	64:LB:76:ILE:HB	2.42	0.60
40:NA:57:LEU:HA	40:NA:60:LEU:CB	2.31	0.60
2:B:361:A:H4'	41:OA:45:ARG:NH2	2.17	0.60
16:P:66:ASN:H	16:P:69:ALA:HB3	1.65	0.60
1:A:1601:G:N1	69:QB:88:VAL:HG22	2.12	0.60
72:TB:68:ARG:HG2	72:TB:68:ARG:HH11	1.65	0.60
23:W:92:GLN:O	23:W:96:ILE:HG13	2.00	0.60
1:A:1015:U:H3'	1:A:1016:C:H5''	1.84	0.60
1:A:1715:G:H3'	1:A:1716:C:H5''	1.83	0.60
1:A:906:A:C2	1:A:998:A:H1'	2.36	0.60
2:B:104:G:H4'	2:B:698:U:O2'	2.02	0.60
2:B:1222:G:H3'	48:VA:56:ASN:CB	2.32	0.60
2:B:1226:G:H2'	2:B:1227:C:C6	2.37	0.60
2:B:1709:C:H4'	31:EA:15:ARG:NH1	2.17	0.60
2:B:1838:G:H4'	2:B:1839:A:C4	2.36	0.60
2:B:2351:U:H2'	2:B:2352:A:C8	2.36	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2456:A:H2	2:B:2483:G:H1'	1.67	0.60
2:B:3377:G:H21	7:G:332:ARG:NH2	1.99	0.60
2:B:682:U:H5	8:H:112:LYS:HE3	1.66	0.60
3:C:93:U:H2'	3:C:94:C:H5'	1.83	0.60
4:D:114:U:H2'	4:D:115:G:C8	2.34	0.60
30:DA:58:VAL:HG23	30:DA:66:GLN:O	2.01	0.60
5:E:82:VAL:HG21	5:E:148:VAL:HG21	1.83	0.60
6:F:227:ARG:HG2	6:F:239:ALA:HB2	1.81	0.60
7:G:205:VAL:HG23	7:G:206:ASP:H	1.66	0.60
8:H:274:TYR:OH	8:H:277:PRO:HD3	2.02	0.60
2:B:658:G:N2	8:H:93:MET:HB2	2.16	0.60
9:I:33:ARG:NH2	9:I:50:ARG:HH12	1.98	0.60
11:K:82:LYS:HA	11:K:119:VAL:HB	1.81	0.60
12:L:54:GLU:O	12:L:58:VAL:HG23	2.02	0.60
12:L:98:ARG:HD3	12:L:189:LEU:CA	2.30	0.60
66:NB:32:ASN:H	66:NB:66:ARG:HH21	1.47	0.60
66:NB:93:HIS:HB3	66:NB:102:LYS:HB2	1.84	0.60
18:R:20:VAL:HG22	18:R:66:THR:HG21	1.84	0.60
19:S:8:GLU:HG3	19:S:50:ARG:NH2	2.16	0.60
47:UA:56:THR:HA	47:UA:63:THR:HA	1.82	0.60
24:X:12:ARG:HB3	24:X:24:LEU:HD23	1.84	0.60
24:X:77:VAL:HG12	24:X:78:TRP:N	2.17	0.60
76:XB:41:ILE:HB	76:XB:68:TYR:CD2	2.36	0.60
1:A:1383:G:H2'	1:A:1384:A:O4'	2.02	0.60
1:A:1729:C:H2'	1:A:1730:A:H5'	1.82	0.60
1:A:206:A:H1'	1:A:262:U:C2	2.36	0.60
1:A:633:U:H2'	1:A:634:G:C8	2.36	0.60
2:B:1003:A:N3	2:B:1003:A:H2'	2.15	0.60
2:B:1393:A:C2'	2:B:1394:A:H5'	2.32	0.60
2:B:1695:U:O4'	38:LA:26:PRO:HG3	2.02	0.60
2:B:185:C:O3'	30:DA:122:LYS:HA	2.01	0.60
2:B:2730:G:H2'	2:B:2731:U:H5'	1.82	0.60
2:B:2730:G:H4'	22:V:184:PHE:CD2	2.35	0.60
2:B:3294:A:H5'	2:B:3294:A:H8	1.66	0.60
2:B:742:G:OP1	22:V:73:GLN:HG2	2.01	0.60
2:B:807:A:H2	2:B:808:A:N9	1.99	0.60
54:BB:181:VAL:CG1	54:BB:226:PHE:H	2.15	0.60
82:DC:135:VAL:CG2	82:DC:184:SER:HB3	2.31	0.60
82:DC:836:GLN:HE21	82:DC:836:GLN:H	1.48	0.60
58:FB:43:ILE:HG21	58:FB:55:TYR:HB3	1.83	0.60
7:G:177:HIS:CD2	7:G:335:ILE:HG21	2.36	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:335:ILE:HD12	7:G:336:VAL:H	1.65	0.60
7:G:56:ILE:HG23	7:G:56:ILE:O	2.02	0.60
59:GB:118:LEU:HD23	59:GB:158:PHE:CE1	2.36	0.60
10:J:170:LYS:HB3	10:J:172:HIS:CE1	2.37	0.60
2:B:500:C:C4'	10:J:80:ASN:HD21	2.15	0.60
66:NB:18:ALA:HB2	66:NB:69:VAL:HG12	1.83	0.60
1:A:1171:A:H4'	68:PB:144:ARG:HH21	1.65	0.60
3:C:75:G:H1'	43:QA:29:LEU:CG	2.25	0.60
18:R:116:GLU:HA	18:R:119:GLN:HE21	1.67	0.60
20:T:55:HIS:HA	20:T:58:LEU:HD22	1.83	0.60
20:T:74:ARG:HG3	20:T:146:GLY:HA3	1.83	0.60
73:UB:128:SER:OG	73:UB:142:LYS:HE2	2.01	0.60
22:V:155:MET:HG2	22:V:162:ALA:O	2.02	0.60
74:VB:110:GLN:HB3	74:VB:114:ARG:HH21	1.65	0.60
49:WA:146:GLY:HA3	49:WA:181:TRP:HZ3	1.66	0.60
24:X:155:ARG:HB2	24:X:172:TYR:CG	2.37	0.60
52:ZA:113:LEU:HB2	52:ZA:215:PHE:CD1	2.37	0.60
1:A:1306:C:H2'	1:A:1306:C:OP2	2.02	0.60
1:A:518:A:H1'	1:A:534:A:H61	1.67	0.60
2:B:1050:U:OP2	25:Y:13:TYR:HE1	1.84	0.60
2:B:1231:A:H5'	2:B:1232:C:C5'	2.30	0.60
2:B:129:U:H2'	2:B:130:A:C8	2.37	0.60
2:B:1636:U:H2'	2:B:1637:A:O4'	2.02	0.60
2:B:2691:A:H3'	2:B:2692:A:H8	1.66	0.60
2:B:3049:A:H2'	2:B:3050:U:O4'	2.01	0.60
2:B:32:U:C4	2:B:33:G:C6	2.90	0.60
2:B:598:A:H2'	2:B:599:C:C6	2.37	0.60
54:BB:160:VAL:HG13	54:BB:171:ASP:O	2.02	0.60
29:CA:76:VAL:HG13	29:CA:81:ILE:O	2.02	0.60
55:CB:36:ALA:HB1	55:CB:42:LEU:CD1	2.32	0.60
7:G:35:ASP:HA	7:G:184:ASN:ND2	2.17	0.60
8:H:181:VAL:HG11	8:H:224:GLY:CA	2.32	0.60
8:H:23:PRO:HA	8:H:259:ASP:OD1	2.01	0.60
9:I:21:ARG:HG3	9:I:24:ARG:HH21	1.67	0.60
4:D:1:G:H4'	9:I:273:ARG:NH1	2.16	0.60
11:K:151:ARG:HB3	11:K:153:PHE:CE1	2.37	0.60
11:K:179:LEU:HD23	11:K:180:SER:N	2.09	0.60
12:L:60:ARG:O	12:L:64:ILE:HG12	2.02	0.60
66:NB:82:ARG:HH11	66:NB:82:ARG:HG3	1.66	0.60
41:OA:53:ALA:HA	41:OA:56:ARG:HH11	1.65	0.60
16:P:123:ARG:CZ	48:VA:46:ARG:HH21	2.15	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:S:174:ILE:HG12	19:S:185:ALA:C	2.22	0.60
47:UA:28:LYS:HG2	47:UA:32:GLN:HE21	1.66	0.60
8:H:29:PRO:HB3	22:V:25:TYR:CE2	2.37	0.60
74:VB:21:LYS:HB2	74:VB:75:VAL:HG13	1.83	0.60
23:W:100:ARG:HG3	23:W:100:ARG:HH11	1.67	0.60
49:WA:305:TYR:HB2	49:WA:309:VAL:O	2.02	0.60
51:YA:168:ILE:O	51:YA:172:LEU:HG	2.02	0.60
51:YA:196:GLU:HA	51:YA:199:ASN:ND2	2.17	0.60
52:ZA:73:LEU:O	52:ZA:76:LEU:HD13	2.00	0.60
1:A:1791:A:H5''	76:XB:8:ASN:CB	2.24	0.60
1:A:804:A:H2'	1:A:805:U:H5'	1.84	0.60
1:A:874:C:H2'	1:A:875:G:C8	2.36	0.60
1:A:98:U:H2'	1:A:99:C:C6	2.36	0.60
2:B:1256:G:H1'	16:P:123:ARG:CB	2.31	0.60
2:B:1294:A:HO2'	2:B:1295:G:H8	1.48	0.60
2:B:227:G:H2'	2:B:228:U:O4'	2.02	0.60
2:B:2356:A:H4'	21:U:138:LYS:O	2.02	0.60
2:B:2544:U:H2'	2:B:2545:C:C6	2.36	0.60
2:B:2831:G:H2'	2:B:2832:C:C6	2.37	0.60
2:B:946:U:H3	2:B:1373:A:H61	1.50	0.60
29:CA:56:ARG:O	29:CA:57:LEU:HB2	2.02	0.60
55:CB:36:ALA:HB1	55:CB:42:LEU:HD11	1.84	0.60
82:DC:117:ALA:O	82:DC:121:VAL:HG22	2.01	0.60
82:DC:188:ILE:HG23	82:DC:192:TYR:HD2	1.66	0.60
7:G:137:TYR:HA	7:G:144:ILE:HD11	1.84	0.60
11:K:47:ARG:HD3	11:K:183:ASP:OD2	2.02	0.60
12:L:169:LEU:HD11	19:S:6:TYR:CZ	2.36	0.60
13:M:52:LEU:C	13:M:53:ILE:HD12	2.22	0.60
66:NB:89:LEU:HD23	66:NB:109:PHE:CZ	2.37	0.60
17:Q:87:ALA:HB1	17:Q:97:VAL:HG11	1.84	0.60
1:A:1564:U:H5''	69:QB:38:LYS:HE2	1.84	0.60
18:R:116:GLU:HG2	20:T:197:LEU:HD21	1.84	0.60
18:R:58:ILE:HG12	18:R:59:ASN:H	1.65	0.60
71:SB:34:ILE:HG22	71:SB:35:ASN:N	2.17	0.60
23:W:47:ASN:OD1	23:W:48:GLY:N	2.34	0.60
49:WA:200:ASN:HB2	49:WA:240:VAL:O	2.02	0.60
75:WB:83:LEU:CB	75:WB:89:ILE:HG12	2.30	0.60
51:YA:33:LYS:HA	51:YA:41:ARG:O	2.02	0.60
51:YA:33:LYS:HZ2	51:YA:33:LYS:HB3	1.67	0.60
1:A:1072:C:H2'	1:A:1073:G:H8	1.66	0.59
1:A:1373:C:H2'	1:A:1374:C:H6	1.66	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:AA:48:ARG:HH11	27:AA:48:ARG:HG3	1.66	0.59
2:B:1289:G:H2'	2:B:1290:A:C8	2.37	0.59
2:B:1298:C:C2'	2:B:1299:U:H5'	2.31	0.59
2:B:148:G:H1'	2:B:149:U:C5	2.37	0.59
2:B:1532:C:H2'	2:B:1533:U:C6	2.37	0.59
2:B:1815:U:H1'	2:B:1816:A:O4'	2.01	0.59
2:B:2892:A:H2'	2:B:2893:C:O4'	2.01	0.59
30:DA:57:LEU:HA	30:DA:67:GLU:HB3	1.83	0.59
56:DB:222:GLU:HA	56:DB:225:GLU:OE2	2.01	0.59
82:DC:413:ILE:HD11	82:DC:459:ILE:HD11	1.82	0.59
82:DC:413:ILE:O	82:DC:426:LEU:HA	2.02	0.59
31:EA:13:VAL:C	31:EA:20:GLY:H	2.05	0.59
57:EB:45:SER:O	57:EB:46:ILE:HD13	2.02	0.59
83:EC:6902:U:H2'	83:EC:6903:U:C6	2.36	0.59
58:FB:46:VAL:HG22	58:FB:54:LYS:O	2.02	0.59
59:GB:85:VAL:HA	59:GB:107:ARG:HG3	1.83	0.59
34:HA:43:ILE:HG23	34:HA:70:PHE:HB2	1.84	0.59
34:HA:48:THR:HB	34:HA:49:PRO:HD2	1.83	0.59
60:HB:55:VAL:HG23	60:HB:67:THR:O	2.02	0.59
37:KA:18:ARG:CA	37:KA:23:ASN:HA	2.31	0.59
2:B:2514:U:H5'	12:L:68:ARG:HD2	1.83	0.59
2:B:1481:A:C2	38:LA:4:ARG:HG2	2.36	0.59
64:LB:123:SER:C	64:LB:125:SER:H	2.04	0.59
68:PB:32:LEU:HB2	68:PB:43:SER:OG	2.02	0.59
2:B:684:G:H5''	17:Q:35:ARG:HH12	1.67	0.59
17:Q:69:VAL:HG22	17:Q:70:ARG:H	1.67	0.59
18:R:20:VAL:HG11	18:R:68:LEU:HB2	1.83	0.59
18:R:55:ARG:CZ	24:X:70:THR:HB	2.31	0.59
2:B:3186:A:H62	20:T:131:PRO:HB2	1.66	0.59
2:B:389:A:H5''	21:U:16:SER:OG	2.01	0.59
8:H:281:ILE:HG13	22:V:125:ASP:HB3	1.84	0.59
48:VA:77:LEU:O	48:VA:77:LEU:HD23	2.02	0.59
18:R:55:ARG:HD3	24:X:70:THR:HG22	1.84	0.59
25:Y:128:LEU:O	25:Y:129:LYS:HG3	2.01	0.59
1:A:1013:A:H2'	1:A:1014:G:O4'	2.01	0.59
1:A:343:C:H2'	1:A:344:A:H8	1.68	0.59
27:AA:48:ARG:NH1	27:AA:48:ARG:HG3	2.17	0.59
2:B:1788:C:H2'	2:B:1789:G:H8	1.66	0.59
2:B:2767:U:H2'	2:B:2768:U:C6	2.36	0.59
2:B:29:C:O2'	19:S:162:ARG:HB3	2.02	0.59
2:B:3042:U:H2'	2:B:3043:C:C6	2.36	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:3313:U:H4'	7:G:173:GLN:HG3	1.83	0.59
54:BB:201:HIS:CD2	54:BB:207:LEU:H	2.16	0.59
56:DB:30:LYS:H	56:DB:102:VAL:HB	1.66	0.59
82:DC:338:ILE:O	82:DC:342:LEU:HB3	2.02	0.59
57:EB:112:ARG:HD3	57:EB:112:ARG:O	2.02	0.59
57:EB:138:LYS:HG2	57:EB:152:VAL:HG13	1.83	0.59
6:F:126:LEU:HD22	6:F:150:LEU:HD21	1.83	0.59
9:I:106:ALA:O	9:I:109:THR:HG22	2.01	0.59
10:J:69:PHE:HB3	10:J:138:GLN:HG2	1.84	0.59
11:K:191:VAL:HG12	11:K:192:GLY:H	1.67	0.59
37:KA:32:ILE:HG21	37:KA:100:ILE:HD12	1.85	0.59
63:KB:101:HIS:HA	63:KB:104:ARG:NH1	2.17	0.59
1:A:1552:U:H5	65:MB:43:ARG:HH21	1.50	0.59
16:P:75:PRO:O	16:P:116:MET:O	2.20	0.59
50:XA:46:HIS:ND1	50:XA:149:LEU:HD13	2.17	0.59
50:XA:163:ASN:C	50:XA:165:ARG:H	2.05	0.59
25:Y:11:THR:C	25:Y:14:MET:HB3	2.22	0.59
52:ZA:154:LEU:HD12	52:ZA:154:LEU:N	2.17	0.59
1:A:1271:G:H2'	1:A:1272:U:C6	2.38	0.59
1:A:1469:A:H2'	1:A:1470:C:C6	2.38	0.59
1:A:148:A:H61	56:DB:133:LEU:CD1	2.14	0.59
1:A:628:G:N2	1:A:971:A:H62	1.94	0.59
2:B:103:G:H4'	17:Q:65:TYR:CD2	2.37	0.59
2:B:1163:A:H2'	2:B:1164:G:H8	1.66	0.59
2:B:1282:G:H2'	2:B:1283:C:O4'	2.02	0.59
2:B:1322:U:H2'	2:B:1323:G:H8	1.66	0.59
2:B:2196:C:H3'	2:B:2242:A:H61	1.66	0.59
2:B:2826:U:O2'	2:B:2827:U:H5'	2.02	0.59
55:CB:112:ARG:HH21	66:NB:43:ILE:HG23	1.67	0.59
56:DB:5:ILE:H	56:DB:5:ILE:HD12	1.67	0.59
82:DC:119:LEU:HD11	82:DC:145:GLN:HB3	1.82	0.59
82:DC:635:CYS:SG	82:DC:664:VAL:HG13	2.42	0.59
82:DC:637:GLY:HA2	82:DC:668:GLN:OE1	2.02	0.59
25:Y:66:ASN:HB2	33:GA:35:VAL:HG13	1.83	0.59
8:H:65:TRP:CZ3	8:H:76:ARG:HD2	2.37	0.59
60:HB:15:LEU:HD13	60:HB:21:VAL:HG23	1.83	0.59
9:I:149:GLY:O	9:I:150:LEU:HG	2.02	0.59
10:J:172:HIS:HB3	37:KA:43:PHE:CD2	2.36	0.59
11:K:140:SER:O	11:K:144:ILE:HG13	2.02	0.59
31:EA:81:LEU:HD21	38:LA:94:LEU:HD21	1.85	0.59
42:PA:39:ARG:HB3	42:PA:59:ALA:HB2	1.85	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:VA:28:VAL:HG12	48:VA:187:VAL:HG13	1.83	0.59
2:B:1282:G:H4'	48:VA:82:GLY:CA	2.32	0.59
74:VB:17:LEU:HD12	74:VB:18:LEU:N	2.17	0.59
50:XA:169:SER:O	50:XA:173:ILE:HG12	2.01	0.59
50:XA:53:THR:OG1	50:XA:161:PRO:HG2	2.02	0.59
1:A:1451:C:H4'	79:AC:7:TRP:O	2.03	0.59
1:A:1788:G:H2'	1:A:1789:G:C5'	2.20	0.59
1:A:431:C:H2'	1:A:432:G:O4'	2.01	0.59
1:A:863:A:O2'	1:A:864:U:H5'	2.03	0.59
1:A:990:C:H2'	1:A:991:G:O4'	2.03	0.59
1:A:1327:C:H4'	53:AB:157:LEU:O	2.03	0.59
2:B:1335:C:O2'	2:B:1336:U:H5'	2.02	0.59
2:B:1466:G:H22	2:B:1510:G:C5'	2.15	0.59
2:B:1640:G:H5'	2:B:1738:C:H5''	1.83	0.59
2:B:2513:U:H2'	2:B:2514:U:H2'	1.84	0.59
2:B:3139:A:H4'	7:G:20:LYS:HB3	1.84	0.59
2:B:873:C:H4'	2:B:1907:C:O2'	2.02	0.59
54:BB:79:ASP:HB2	54:BB:82:TYR:HB2	1.85	0.59
55:CB:77:TYR:O	55:CB:84:LYS:HG3	2.02	0.59
82:DC:596:GLU:HA	82:DC:599:LEU:HD22	1.84	0.59
82:DC:601:ILE:HD12	82:DC:643:PRO:HA	1.83	0.59
7:G:111:SER:O	7:G:114:VAL:HG23	2.02	0.59
7:G:76:VAL:HG12	7:G:325:LYS:HA	1.83	0.59
2:B:3325:G:H5''	35:IA:103:GLY:CA	2.32	0.59
2:B:3176:G:H1'	37:KA:3:GLU:OE1	2.02	0.59
37:KA:59:VAL:HG23	37:KA:60:ARG:H	1.66	0.59
38:LA:57:LEU:HG	38:LA:62:TYR:CD2	2.38	0.59
18:R:60:LEU:HA	18:R:63:VAL:CG1	2.32	0.59
71:SB:32:VAL:HG12	71:SB:55:LEU:O	2.02	0.59
73:UB:57:LEU:O	80:BC:8:LEU:HD21	2.02	0.59
74:VB:20:ARG:O	74:VB:21:LYS:HD2	2.02	0.59
49:WA:45:TRP:HB3	49:WA:57:PRO:CA	2.26	0.59
76:XB:19:LYS:HE3	76:XB:19:LYS:HA	1.85	0.59
25:Y:17:ARG:O	25:Y:18:ASP:HB2	2.01	0.59
1:A:1488:G:H2'	1:A:1513:G:H21	1.66	0.59
1:A:1670:G:N2	1:A:1730:A:H2'	2.17	0.59
1:A:378:A:H2'	1:A:379:U:O4'	2.02	0.59
1:A:766:U:H5''	1:A:768:C:OP2	2.02	0.59
7:G:67:PHE:HE1	27:AA:89:ASP:HB3	1.67	0.59
2:B:1522:U:O2'	29:CA:113:LEU:HD11	2.01	0.59
2:B:1825:G:H5''	42:PA:48:SER:HB2	1.82	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2731:U:H2'	2:B:2732:G:C8	2.37	0.59
2:B:3354:U:C4'	2:B:3356:G:H5'	2.32	0.59
2:B:941:G:H2'	2:B:942:U:O4'	2.01	0.59
54:BB:87:MET:HE2	54:BB:87:MET:HA	1.84	0.59
4:D:107:C:H2'	4:D:108:A:H8	1.67	0.59
7:G:117:ARG:HA	7:G:175:LYS:HG3	1.85	0.59
2:B:2987:A:O2'	7:G:259:HIS:HB3	2.02	0.59
10:J:30:LEU:HB3	10:J:34:LEU:HD12	1.83	0.59
36:JA:11:LYS:HD2	36:JA:14:THR:CG2	2.27	0.59
37:KA:50:ALA:HB2	37:KA:68:TRP:CD2	2.36	0.59
64:LB:76:ILE:N	64:LB:76:ILE:HD12	2.17	0.59
13:M:86:TYR:CD2	13:M:151:VAL:HG22	2.38	0.59
65:MB:40:ARG:NH2	65:MB:43:ARG:HD2	2.17	0.59
65:MB:40:ARG:O	65:MB:44:ARG:HB3	2.02	0.59
65:MB:98:ASN:HD22	65:MB:103:ASN:HD21	1.51	0.59
14:N:52:LEU:HG	14:N:165:ILE:HG22	1.85	0.59
45:SA:9:ARG:HH11	45:SA:9:ARG:HG3	1.66	0.59
71:SB:36:VAL:HG11	71:SB:78:LEU:CD1	2.32	0.59
21:U:37:ASN:HB2	21:U:117:ILE:CG2	2.32	0.59
23:W:166:ASN:O	23:W:170:ARG:HB2	2.02	0.59
50:XA:50:VAL:HG23	67:OB:109:LEU:CD2	2.30	0.59
25:Y:65:TYR:HD1	25:Y:66:ASN:N	2.01	0.59
1:A:1087:A:H5'	1:A:1298:U:C4	2.38	0.59
1:A:1723:U:H2'	1:A:1724:U:O4'	2.02	0.59
1:A:209:U:H5'	58:FB:170:SER:O	2.03	0.59
1:A:772:G:N2	1:A:774:A:H1'	2.18	0.59
2:B:1535:A:H62	2:B:1586:G:N2	2.00	0.59
2:B:1768:U:H2'	2:B:1769:G:C4'	2.33	0.59
2:B:1804:A:H2'	2:B:1805:C:C6	2.38	0.59
2:B:2318:U:H2'	2:B:2319:U:O4'	2.02	0.59
2:B:2746:A:H2'	2:B:2747:A:O4'	2.03	0.59
2:B:2907:G:O2'	2:B:2908:G:H5'	2.02	0.59
2:B:609:G:N7	8:H:308:LYS:HE2	2.18	0.59
2:B:883:A:H3'	2:B:921:A:H2	1.66	0.59
2:B:1523:U:O4'	29:CA:113:LEU:HB2	2.03	0.59
56:DB:178:LEU:HD11	56:DB:180:THR:CG2	2.33	0.59
82:DC:132:ILE:HD11	82:DC:162:ARG:HB3	1.83	0.59
6:F:89:TYR:HB2	6:F:100:ASN:ND2	2.17	0.59
8:H:181:VAL:HG12	8:H:182:LEU:N	2.16	0.59
8:H:29:PRO:HG2	8:H:279:HIS:HA	1.83	0.59
11:K:101:LYS:HD2	11:K:104:GLN:OE1	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:MA:55:LEU:CD2	39:MA:55:LEU:H	2.13	0.59
14:N:23:ASN:HD21	14:N:26:VAL:CG1	2.16	0.59
2:B:2853:A:O2'	14:N:64:ALA:HA	2.03	0.59
40:NA:57:LEU:CA	40:NA:60:LEU:HB2	2.30	0.59
41:OA:26:SER:HB3	41:OA:35:SER:OG	2.03	0.59
18:R:123:LEU:HD22	20:T:194:LEU:CG	2.31	0.59
13:M:47:LYS:HB2	18:R:7:VAL:CG2	2.33	0.59
2:B:126:U:H5'	19:S:141:ALA:HB2	1.84	0.59
71:SB:4:ASP:HB3	71:SB:5:LYS:HD3	1.83	0.59
47:UA:86:LEU:O	47:UA:90:VAL:HG23	2.02	0.59
23:W:41:ILE:HG23	23:W:50:ILE:CD1	2.31	0.59
1:A:1313:A:C4	1:A:1315:U:H5'	2.38	0.59
1:A:304:U:HO2'	61:IB:137:PHE:HZ	1.50	0.59
1:A:629:U:C2'	1:A:630:A:H5''	2.31	0.59
1:A:774:A:H2'	1:A:775:G:H5'	1.84	0.59
2:B:1039:U:H2'	2:B:1040:A:H8	1.66	0.59
2:B:1669:C:H2'	2:B:1670:C:O4'	2.01	0.59
2:B:1805:C:H4'	38:LA:76:TYR:H	1.66	0.59
2:B:1878:G:H3'	2:B:1879:A:H5''	1.85	0.59
2:B:2407:C:H2'	2:B:2408:U:C6	2.38	0.59
2:B:255:A:H2'	2:B:256:G:H8	1.67	0.59
2:B:3083:G:H2'	2:B:3084:C:C6	2.36	0.59
28:BA:1:MET:CB	28:BA:15:PRO:HG2	2.31	0.59
3:C:140:G:H22	19:S:112:ASN:HB3	1.67	0.59
2:B:346:C:N4	3:C:25:G:H4'	2.17	0.59
3:C:32:C:H2'	3:C:33:A:C8	2.38	0.59
29:CA:88:MET:HE1	29:CA:120:LYS:HB2	1.85	0.59
55:CB:99:MET:HG3	55:CB:100:ASN:OD1	2.03	0.59
4:D:32:U:H1'	4:D:33:U:H5	1.68	0.59
82:DC:121:VAL:O	82:DC:122:THR:HG23	2.02	0.59
82:DC:129:VAL:HG12	82:DC:130:ASP:H	1.68	0.59
82:DC:365:ASN:HD21	82:DC:472:SER:HB3	1.66	0.59
82:DC:368:ALA:HB2	82:DC:377:ASP:OD2	2.03	0.59
82:DC:113:SER:HB3	82:DC:516:PRO:CG	2.31	0.59
82:DC:629:ASP:HB3	82:DC:647:ILE:HG21	1.84	0.59
83:EC:6795:U:H3	83:EC:6888:A:H61	1.50	0.59
2:B:824:C:H5''	6:F:21:ARG:NE	2.18	0.59
17:Q:170:LEU:CG	32:FA:147:LEU:HD13	2.28	0.59
34:HA:27:TYR:HB2	34:HA:52:ARG:NH1	2.17	0.59
34:HA:53:LYS:O	34:HA:57:GLU:HG3	2.02	0.59
60:HB:11:ILE:HD13	60:HB:35:ILE:HG21	1.85	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:I:226:TYR:HE2	9:I:236:LEU:HD13	1.67	0.59
37:KA:32:ILE:CD1	37:KA:35:VAL:HG21	2.33	0.59
63:KB:48:SER:O	63:KB:52:VAL:HG23	2.03	0.59
14:N:154:ARG:HH11	14:N:154:ARG:HG2	1.68	0.59
66:NB:53:LEU:HD23	66:NB:53:LEU:H	1.67	0.59
17:Q:58:VAL:CG1	17:Q:101:ARG:HH21	2.16	0.59
52:ZA:222:TYR:O	71:SB:23:ILE:HG21	2.02	0.59
46:TA:68:VAL:HG23	46:TA:86:LYS:O	2.02	0.59
73:UB:112:LYS:O	73:UB:121:ARG:HG2	2.02	0.59
23:W:97:ARG:O	23:W:101:VAL:HG23	2.03	0.59
25:Y:19:PHE:CE1	25:Y:20:ARG:HD3	2.38	0.59
1:A:396:G:H3'	58:FB:47:ARG:HH11	1.68	0.59
1:A:777:C:C2'	1:A:778:G:H5''	2.30	0.59
1:A:811:A:H2	1:A:858:G:H4'	1.68	0.59
2:B:1257:C:H42	2:B:1261:G:N2	1.99	0.59
2:B:1510:G:H2'	2:B:1512:U:C4	2.37	0.59
2:B:1600:U:H3'	23:W:38:ARG:HH21	1.68	0.59
2:B:638:C:H2'	2:B:639:G:C8	2.38	0.59
2:B:996:A:C2	2:B:997:A:H1'	2.37	0.59
54:BB:160:VAL:HG22	54:BB:172:PHE:HB3	1.83	0.59
29:CA:111:ASN:O	29:CA:123:TYR:HB2	2.02	0.59
56:DB:73:ILE:HG13	56:DB:75:LEU:HG	1.83	0.59
82:DC:508:LEU:CD1	82:DC:528:HIS:HB3	2.30	0.59
5:E:206:VAL:O	5:E:206:VAL:HG23	2.02	0.59
5:E:65:ILE:HD13	5:E:144:LEU:HD23	1.85	0.59
8:H:302:ALA:HA	22:V:39:ARG:NH1	2.17	0.59
9:I:40:HIS:HD2	9:I:42:ALA:H	1.51	0.59
10:J:63:LEU:O	10:J:78:ARG:HA	2.02	0.59
13:M:86:TYR:CE1	13:M:151:VAL:HG13	2.37	0.59
13:M:86:TYR:H	13:M:187:ILE:HG13	1.67	0.59
41:OA:25:ARG:HG2	43:QA:51:ILE:HD12	1.84	0.59
17:Q:39:ARG:HB3	17:Q:51:LEU:HD11	1.84	0.59
53:AB:11:LEU:CD1	70:RB:86:ILE:HG12	2.24	0.59
19:S:142:ILE:N	19:S:142:ILE:HD12	2.17	0.59
19:S:47:LYS:O	19:S:50:ARG:HG2	2.02	0.59
23:W:44:LEU:O	23:W:49:THR:HB	2.02	0.59
64:LB:103:ARG:HD3	76:XB:49:ALA:CB	2.33	0.59
1:A:1797:A:C6	76:XB:87:ARG:HD2	2.37	0.59
9:I:17:GLN:HG3	25:Y:20:ARG:HA	1.85	0.59
52:ZA:227:PRO:HA	52:ZA:230:TRP:CE2	2.37	0.59
1:A:1186:U:H1'	1:A:1208:A:N1	2.17	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1753:A:H2'	1:A:1754:A:C8	2.37	0.59
1:A:358:U:O2'	1:A:360:A:H5''	2.03	0.59
1:A:599:A:H2'	1:A:600:U:C6	2.38	0.59
1:A:629:U:H5'	63:KB:127:ARG:NH1	2.18	0.59
1:A:774:A:C2'	1:A:775:G:H5'	2.32	0.59
53:AB:70:THR:HA	53:AB:86:LEU:HD13	1.83	0.59
2:B:1500:G:H2'	2:B:1501:U:C6	2.38	0.59
2:B:153:U:C3'	2:B:154:U:H5''	2.33	0.59
2:B:370:U:H4'	2:B:404:G:H5'	1.83	0.59
2:B:822:G:H4'	6:F:194:ASN:HB2	1.84	0.59
82:DC:723:LYS:HD3	82:DC:808:PRO:HD3	1.85	0.59
2:B:2187:G:O6	6:F:200:ARG:HD3	2.02	0.59
32:FA:73:LEU:HD21	32:FA:81:LEU:CD1	2.32	0.59
7:G:114:VAL:HG22	7:G:163:HIS:CE1	2.38	0.59
7:G:216:ASP:OD2	7:G:341:SER:HA	2.03	0.59
8:H:2:SER:O	8:H:4:PRO:HD3	2.03	0.59
61:IB:46:LYS:O	61:IB:50:GLU:HG3	2.01	0.59
2:B:429:U:H4'	37:KA:88:ASN:O	2.03	0.59
12:L:98:ARG:HB3	12:L:98:ARG:HH11	1.67	0.59
2:B:1805:C:H4'	38:LA:76:TYR:HA	1.84	0.59
64:LB:74:VAL:HB	64:LB:76:ILE:HD13	1.85	0.59
13:M:158:ALA:O	13:M:161:LEU:HB2	2.02	0.59
29:CA:47:ALA:N	39:MA:77:PRO:HG3	2.07	0.59
14:N:98:ARG:HD3	14:N:119:TRP:CH2	2.38	0.59
14:N:99:ILE:HD13	14:N:101:LYS:HB2	1.85	0.59
16:P:128:VAL:HA	16:P:131:GLU:HG2	1.84	0.59
17:Q:31:LYS:HA	17:Q:34:SER:CB	2.32	0.59
69:QB:20:SER:O	69:QB:24:ARG:HG3	2.02	0.59
70:RB:25:THR:HA	70:RB:89:ARG:O	2.02	0.59
46:TA:6:LYS:HA	46:TA:25:VAL:HB	1.84	0.59
2:B:2655:U:OP2	46:TA:2:VAL:HA	2.03	0.59
46:TA:5:PRO:C	46:TA:7:THR:H	2.06	0.59
74:VB:53:ASP:O	74:VB:79:VAL:HG22	2.03	0.59
49:WA:2:ALA:HB1	49:WA:6:VAL:HG22	1.85	0.59
50:XA:55:GLU:HB3	71:SB:79:LEU:HD21	1.83	0.59
26:Z:16:THR:OG1	26:Z:102:GLU:HG2	2.02	0.59
52:ZA:126:ARG:HA	52:ZA:129:ILE:HD12	1.84	0.59
1:A:1211:A:H61	1:A:1452:U:H3	1.50	0.59
1:A:839:U:C2'	1:A:840:U:H5''	2.32	0.59
2:B:1310:G:H2'	2:B:1311:G:H8	1.68	0.59
2:B:1610:G:H2'	2:B:1611:G:C8	2.38	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1887:A:H4'	7:G:227:GLU:HA	1.84	0.59
2:B:2213:A:H61	2:B:2429:G:H1'	1.68	0.59
2:B:2469:G:H2'	2:B:2470:C:O4'	2.02	0.59
2:B:2489:C:OP2	2:B:2490:C:H2'	2.02	0.59
2:B:287:G:H2'	2:B:288:C:O4'	2.03	0.59
55:CB:97:LEU:HG	55:CB:176:THR:HG22	1.85	0.59
82:DC:271:ARG:HB3	82:DC:274:ASN:CG	2.24	0.59
82:DC:369:ILE:HD13	82:DC:402:ALA:CB	2.32	0.59
7:G:350:ALA:O	7:G:351:LEU:CB	2.50	0.59
61:IB:155:LYS:HD2	63:KB:135:LEU:HD23	1.85	0.59
37:KA:32:ILE:HD12	37:KA:35:VAL:HG21	1.85	0.59
12:L:72:PRO:HA	12:L:233:TRP:HZ3	1.68	0.59
44:RA:97:ARG:HE	44:RA:122:ARG:HD3	1.68	0.59
13:M:173:ARG:HH21	44:RA:127:LEU:HD23	1.68	0.59
20:T:140:LYS:N	20:T:140:LYS:HD2	2.17	0.59
48:VA:169:GLU:HA	48:VA:172:LEU:CD2	2.33	0.59
48:VA:33:VAL:HG23	48:VA:37:GLN:NE2	2.17	0.59
49:WA:4:ASN:OD1	49:WA:5:GLU:HG2	2.03	0.59
24:X:28:ARG:HG2	24:X:28:ARG:HH21	1.68	0.59
24:X:3:HIS:HE1	24:X:100:VAL:HG23	1.67	0.59
1:A:1162:C:H5'	55:CB:148:ARG:NH1	2.18	0.58
1:A:1393:C:H2'	1:A:1394:G:C8	2.38	0.58
1:A:1790:A:O2'	1:A:1791:A:H5'	2.03	0.58
2:B:2196:C:H3'	2:B:2242:A:N6	2.18	0.58
2:B:2527:G:H2'	2:B:2528:G:O4'	2.02	0.58
2:B:301:G:H2'	2:B:302:U:C6	2.38	0.58
2:B:3182:G:H5"	20:T:161:LYS:NZ	2.17	0.58
2:B:3300:U:H2'	2:B:3301:U:H5'	1.83	0.58
2:B:911:C:H42	6:F:3:ARG:HD3	1.68	0.58
1:A:126:A:H4'	54:BB:134:LYS:HE3	1.84	0.58
31:EA:13:VAL:CG1	31:EA:19:ALA:HA	2.33	0.58
57:EB:152:VAL:CG2	57:EB:181:ILE:HD11	2.32	0.58
83:EC:6941:U:C3'	83:EC:6942:A:H5"	2.27	0.58
6:F:249:SER:C	6:F:251:LYS:H	2.05	0.58
58:FB:114:GLU:HA	58:FB:118:GLY:HA2	1.84	0.58
2:B:2943:G:C8	7:G:2:SER:HB3	2.38	0.58
7:G:60:LEU:HB2	7:G:72:VAL:HG11	1.84	0.58
33:GA:36:ASP:HB3	33:GA:39:PHE:CB	2.33	0.58
8:H:44:LYS:HD2	8:H:111:VAL:HG21	1.84	0.58
8:H:152:VAL:CG2	8:H:249:ILE:HG22	2.32	0.58
34:HA:73:GLY:O	34:HA:77:LEU:HB3	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:48:U:O4	9:I:58:LYS:HG3	2.03	0.58
61:IB:77:SER:O	61:IB:84:ILE:HA	2.03	0.58
12:L:160:ILE:O	12:L:164:VAL:HG23	2.02	0.58
12:L:156:ASP:HB3	12:L:183:LYS:HD3	1.85	0.58
64:LB:136:ARG:HH11	64:LB:136:ARG:HB2	1.68	0.58
71:SB:15:ARG:HB2	71:SB:24:ILE:HB	1.85	0.58
72:TB:41:MET:HG2	72:TB:129:VAL:HG11	1.83	0.58
21:U:169:THR:HG23	37:KA:60:ARG:CZ	2.32	0.58
73:UB:53:VAL:HB	73:UB:99:ASN:H	1.68	0.58
48:VA:45:LEU:HD11	48:VA:99:VAL:HG11	1.84	0.58
51:YA:69:CYS:SG	64:LB:114:ARG:HG2	2.43	0.58
1:A:1253:U:H2'	1:A:1254:U:C6	2.38	0.58
1:A:170:U:H5'	1:A:267:U:H4'	1.85	0.58
1:A:639:U:N3	57:EB:100:PRO:HA	2.16	0.58
53:AB:156:PHE:O	53:AB:157:LEU:HB2	2.02	0.58
2:B:1513:G:N1	2:B:1515:A:H1'	2.18	0.58
2:B:1768:U:H2'	2:B:1769:G:C5'	2.34	0.58
2:B:1938:U:O2'	2:B:1939:G:H5'	2.02	0.58
2:B:199:A:H3'	30:DA:60:ARG:NE	2.09	0.58
2:B:2536:A:H3'	2:B:2537:U:C5'	2.27	0.58
2:B:348:A:N3	2:B:352:A:O2'	2.34	0.58
2:B:412:G:O2'	2:B:413:U:H5'	2.02	0.58
2:B:692:A:C2'	2:B:693:A:H5'	2.33	0.58
54:BB:11:ARG:HA	54:BB:28:ALA:HB2	1.85	0.58
82:DC:129:VAL:HG21	82:DC:185:VAL:HG21	1.86	0.58
82:DC:395:TYR:CD1	82:DC:457:VAL:HB	2.38	0.58
5:E:100:ILE:HD11	5:E:124:LEU:HD23	1.86	0.58
57:EB:173:TYR:HD2	57:EB:181:ILE:HB	1.68	0.58
7:G:305:ILE:HD12	7:G:306:THR:N	2.18	0.58
60:HB:14:TYR:O	60:HB:18:GLU:HB2	2.03	0.58
9:I:85:ARG:O	9:I:85:ARG:HG2	2.02	0.58
10:J:58:LEU:HB2	10:J:62:THR:OG1	2.03	0.58
12:L:159:PRO:HB2	12:L:162:LEU:HD12	1.84	0.58
16:P:106:LEU:O	16:P:107:ASP:HB2	2.03	0.58
2:B:150:A:P	19:S:147:ARG:HH22	2.26	0.58
21:U:164:LYS:HE3	21:U:166:VAL:HA	1.85	0.58
22:V:12:ARG:CZ	22:V:12:ARG:HB2	2.33	0.58
22:V:32:LEU:O	22:V:36:LEU:HG	2.02	0.58
48:VA:79:PHE:CZ	48:VA:189:GLN:HG3	2.38	0.58
24:X:44:PHE:HE1	24:X:122:HIS:HD2	1.51	0.58
76:XB:86:VAL:O	76:XB:86:VAL:HG13	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:Y:92:ARG:C	25:Y:94:GLU:H	2.05	0.58
51:YA:146:GLN:HG3	51:YA:147:ALA:N	2.19	0.58
78:ZB:26:THR:HB	78:ZB:44:VAL:CG2	2.33	0.58
2:B:1222:G:C5'	48:VA:56:ASN:HB3	2.31	0.58
2:B:2163:C:O2'	2:B:2164:A:H5'	2.03	0.58
2:B:310:U:C2'	2:B:311:C:H5''	2.33	0.58
2:B:3393:U:H2'	2:B:3394:U:C6	2.38	0.58
2:B:496:C:H2'	2:B:497:C:H6	1.66	0.58
2:B:665:A:H5'	19:S:199:LEU:HD21	1.85	0.58
2:B:714:G:H1	32:FA:72:VAL:HG11	1.67	0.58
2:B:825:U:H2'	2:B:826:G:O4'	2.03	0.58
55:CB:172:ILE:O	55:CB:176:THR:HG23	2.03	0.58
82:DC:244:LEU:O	82:DC:273:PHE:HB2	2.03	0.58
82:DC:292:LYS:HE2	82:DC:295:GLU:HB2	1.85	0.58
82:DC:635:CYS:SG	82:DC:664:VAL:HA	2.43	0.58
57:EB:47:ARG:HB2	57:EB:61:PHE:HE2	1.67	0.58
57:EB:7:LYS:O	57:EB:8:ILE:HG22	2.03	0.58
83:EC:6811:G:H2'	83:EC:6812:C:H5'	1.85	0.58
6:F:144:ASN:HB3	6:F:160:SER:N	2.12	0.58
6:F:177:LYS:HD3	47:UA:69:TYR:CZ	2.38	0.58
6:F:64:ARG:O	6:F:65:ASP:HB2	2.01	0.58
32:FA:79:TRP:HE1	32:FA:118:ILE:CG2	2.15	0.58
34:HA:16:LEU:HD21	34:HA:97:ASP:H	1.69	0.58
37:KA:16:TYR:O	37:KA:29:LEU:HG	2.03	0.58
14:N:53:VAL:HB	14:N:164:LYS:O	2.03	0.58
19:S:112:ASN:ND2	19:S:113:LEU:HD22	2.17	0.58
48:VA:133:THR:O	48:VA:137:GLN:HG3	2.04	0.58
48:VA:142:PRO:O	48:VA:153:VAL:HB	2.02	0.58
49:WA:210:LEU:HD12	49:WA:245:PHE:CE2	2.39	0.58
24:X:106:LEU:HB3	24:X:110:MET:HE2	1.84	0.58
50:XA:23:HIS:HA	50:XA:48:ILE:HB	1.84	0.58
51:YA:38:PHE:CE2	51:YA:73:LEU:HD13	2.37	0.58
1:A:1081:A:H5''	1:A:1082:C:OP1	2.03	0.58
1:A:1732:A:H2'	1:A:1733:C:C6	2.37	0.58
1:A:396:G:H22	1:A:399:A:C5'	2.14	0.58
2:B:1555:U:H2'	2:B:1556:C:H5''	1.85	0.58
2:B:1668:G:H2'	2:B:1669:C:C6	2.38	0.58
2:B:208:C:C2'	2:B:209:A:H5'	2.34	0.58
2:B:2370:G:H2'	2:B:2371:G:H8	1.68	0.58
2:B:372:A:H2'	2:B:373:A:C8	2.38	0.58
2:B:659:G:H4'	8:H:92:ASN:O	2.02	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:70:A:H2	2:B:72:C:H42	1.50	0.58
2:B:916:G:O2'	2:B:917:A:H8	1.86	0.58
2:B:3332:U:OP1	28:BA:35:LYS:HD2	2.03	0.58
82:DC:250:PHE:H	82:DC:275:MET:HE3	1.68	0.58
82:DC:496:LYS:HD2	82:DC:553:PRO:CB	2.33	0.58
82:DC:742:GLY:O	82:DC:746:VAL:HG23	2.03	0.58
31:EA:72:ILE:HG12	31:EA:111:LYS:CE	2.34	0.58
6:F:91:GLY:O	6:F:102:LEU:HG	2.03	0.58
7:G:307:PRO:HA	7:G:361:THR:O	2.04	0.58
59:GB:148:VAL:HG12	59:GB:150:LEU:H	1.67	0.58
8:H:114:ASN:ND2	8:H:114:ASN:H	2.00	0.58
61:IB:149:ALA:HA	61:IB:152:GLN:HE21	1.69	0.58
1:A:861:U:H5'	63:KB:64:ARG:NH1	2.18	0.58
38:LA:90:ILE:CG2	38:LA:94:LEU:HD12	2.33	0.58
13:M:31:ARG:HD3	13:M:149:ASN:OD1	2.03	0.58
39:MA:59:ASN:O	39:MA:63:ARG:HG3	2.04	0.58
40:NA:55:ARG:O	40:NA:58:ILE:HG12	2.03	0.58
1:A:1351:G:H4'	66:NB:21:HIS:NE2	2.18	0.58
67:OB:58:MET:HA	67:OB:61:ILE:HD12	1.85	0.58
67:OB:69:ILE:HD13	67:OB:69:ILE:N	2.19	0.58
19:S:44:ARG:NH2	19:S:47:LYS:NZ	2.50	0.58
45:SA:1:MET:HE3	45:SA:6:ARG:HG3	1.84	0.58
71:SB:35:ASN:HB3	71:SB:50:TYR:HB3	1.84	0.58
20:T:157:GLU:O	20:T:161:LYS:HB2	2.04	0.58
22:V:170:ARG:O	22:V:171:LYS:HB2	2.03	0.58
49:WA:102:ARG:H	49:WA:102:ARG:HD3	1.69	0.58
51:YA:87:ARG:HB2	51:YA:101:HIS:ND1	2.18	0.58
51:YA:36:SER:HB2	51:YA:231:LEU:O	2.03	0.58
51:YA:32:ILE:HA	51:YA:96:LEU:HD11	1.85	0.58
26:Z:76:LEU:O	26:Z:80:THR:HG23	2.04	0.58
1:A:1117:U:H2'	1:A:1118:G:C8	2.39	0.58
1:A:1628:U:H4'	76:XB:86:VAL:HG21	1.84	0.58
1:A:138:A:H62	1:A:266:A:H61	1.46	0.58
1:A:306:U:H2'	1:A:307:G:C8	2.38	0.58
1:A:95:G:H3'	1:A:96:G:H8	1.68	0.58
2:B:1211:U:H2'	2:B:1212:A:H8	1.68	0.58
2:B:1580:A:H1'	2:B:1581:C:H5	1.67	0.58
2:B:2541:U:H1'	2:B:2542:U:O5'	2.02	0.58
2:B:2728:G:H1	25:Y:80:VAL:HG21	1.68	0.58
2:B:3180:A:H5''	20:T:116:LYS:HB2	1.84	0.58
57:EB:114:ARG:HA	57:EB:117:THR:HB	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:15:ILE:C	6:F:17:THR:H	2.04	0.58
58:FB:4:SER:OG	58:FB:24:LYS:HD2	2.02	0.58
33:GA:11:ASN:O	33:GA:15:LYS:HG3	2.03	0.58
59:GB:60:LEU:HD13	59:GB:69:ARG:HH22	1.68	0.58
2:B:658:G:H21	8:H:93:MET:HB2	1.68	0.58
35:IA:78:LYS:O	35:IA:89:LEU:HB2	2.04	0.58
10:J:79:VAL:HG22	10:J:80:ASN:N	2.13	0.58
36:JA:112:ALA:CA	36:JA:117:ILE:HB	2.33	0.58
2:B:1169:A:H4'	11:K:219:LYS:NZ	2.19	0.58
1:A:1579:U:O2'	66:NB:139:GLN:HA	2.04	0.58
17:Q:80:VAL:HG11	17:Q:87:ALA:HA	1.85	0.58
70:RB:17:GLN:HA	70:RB:96:PRO:HB3	1.86	0.58
19:S:154:PRO:HA	19:S:157:LYS:CD	2.32	0.58
71:SB:2:GLU:HB3	71:SB:6:GLY:O	2.02	0.58
1:A:1100:G:H2'	72:TB:75:ILE:HD13	1.84	0.58
21:U:169:THR:H	21:U:172:GLN:HB3	1.67	0.58
23:W:123:LEU:HD23	23:W:127:SER:OG	2.03	0.58
49:WA:136:ILE:H	49:WA:136:ILE:CD1	2.16	0.58
1:A:1649:G:H2'	1:A:1650:U:C6	2.39	0.58
1:A:1741:U:H2'	1:A:1742:U:C6	2.38	0.58
1:A:416:A:H5'	1:A:417:A:N7	2.19	0.58
1:A:633:U:H2'	1:A:634:G:O4'	2.04	0.58
2:B:1898:G:O2'	27:AA:18:PRO:HG2	2.03	0.58
79:AC:38:ILE:HG22	79:AC:39:CYS:N	2.19	0.58
2:B:1226:G:H4'	2:B:3117:C:H1'	1.85	0.58
2:B:1245:A:H2'	2:B:1272:C:OP1	2.04	0.58
2:B:1357:G:H2'	2:B:1358:C:H6	1.69	0.58
2:B:1547:G:H2'	2:B:1548:C:C6	2.39	0.58
2:B:188:U:C2	2:B:223:U:H4'	2.38	0.58
2:B:2454:G:N3	2:B:2454:G:H2'	2.18	0.58
2:B:2880:U:H2'	2:B:2881:C:O4'	2.03	0.58
2:B:300:G:H2'	2:B:301:G:H8	1.68	0.58
2:B:405:U:H2'	2:B:406:G:H5'	1.85	0.58
2:B:413:U:O4'	21:U:118:GLN:HB2	2.03	0.58
1:A:298:C:OP1	54:BB:38:LEU:HB2	2.03	0.58
54:BB:31:PRO:HB3	54:BB:83:PRO:HB3	1.85	0.58
6:F:184:ARG:O	6:F:188:LYS:HB2	2.02	0.58
6:F:72:ARG:HH11	6:F:72:ARG:HG3	1.68	0.58
8:H:152:VAL:HG12	8:H:153:SER:H	1.68	0.58
9:I:103:LEU:HD11	9:I:107:ARG:HG3	1.86	0.58
10:J:40:LEU:HB3	10:J:86:ALA:HA	1.84	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1388:U:OP1	36:JA:78:ASN:HB3	2.03	0.58
38:LA:91:ARG:O	38:LA:95:ILE:HB	2.03	0.58
66:NB:106:LYS:HA	66:NB:109:PHE:HB2	1.86	0.58
2:B:1747:G:H4'	42:PA:4:GLU:HG3	1.85	0.58
18:R:103:ILE:HA	18:R:106:ARG:NH1	2.19	0.58
20:T:52:LEU:HA	20:T:55:HIS:CD2	2.34	0.58
20:T:73:PHE:HB3	20:T:78:ARG:CB	2.22	0.58
1:A:851:U:OP2	23:W:172:ARG:HD3	2.04	0.58
76:XB:10:ARG:HD3	76:XB:34:LYS:HA	1.86	0.58
25:Y:54:HIS:ND1	25:Y:56:PHE:HB2	2.18	0.58
1:A:1513:G:H3'	1:A:1514:U:H5''	1.85	0.58
1:A:1568:C:H4'	1:A:1569:A:C8	2.36	0.58
1:A:1634:C:H41	83:EC:6955:U:H5''	1.68	0.58
1:A:1767:G:C4'	1:A:1768:G:H5''	2.24	0.58
1:A:796:A:H2'	1:A:797:G:C8	2.38	0.58
79:AC:19:ARG:NH1	79:AC:30:LEU:HD22	2.18	0.58
2:B:1011:A:H2'	2:B:1012:G:C8	2.39	0.58
2:B:1230:G:H4'	48:VA:34:SER:HA	1.86	0.58
2:B:1774:C:H2'	2:B:1775:G:O4'	2.03	0.58
2:B:1900:A:H61	2:B:1908:A:H61	1.51	0.58
2:B:1933:A:H2'	2:B:1934:G:H5'	1.86	0.58
2:B:507:U:H2'	2:B:508:U:C6	2.38	0.58
2:B:666:A:H2'	2:B:667:C:C5'	2.34	0.58
55:CB:137:ILE:HG21	55:CB:168:VAL:HG13	1.85	0.58
4:D:85:G:H1	4:D:95:A:H61	1.51	0.58
30:DA:51:ARG:HH21	30:DA:52:ARG:HB3	1.68	0.58
56:DB:187:LYS:HE2	56:DB:191:ARG:NE	2.17	0.58
82:DC:329:PRO:HB2	82:DC:332:ASP:CB	2.31	0.58
57:EB:12:ALA:N	57:EB:13:PRO:CD	2.67	0.58
6:F:49:VAL:HG11	6:F:60:LYS:CE	2.25	0.58
58:FB:3:ILE:HD12	58:FB:3:ILE:H	1.68	0.58
7:G:160:VAL:O	7:G:181:ILE:HD12	2.04	0.58
7:G:293:ASN:HB2	7:G:305:ILE:N	2.17	0.58
7:G:70:ARG:HH11	7:G:70:ARG:HB3	1.69	0.58
59:GB:76:LEU:HG	59:GB:80:LEU:HD11	1.85	0.58
10:J:58:LEU:HD21	10:J:64:LEU:HB2	1.85	0.58
10:J:68:PRO:HB3	10:J:138:GLN:NE2	2.18	0.58
11:K:61:ASN:HA	11:K:64:GLN:CB	2.27	0.58
12:L:248:LYS:HA	12:L:252:ASN:HB2	1.85	0.58
14:N:191:LYS:O	14:N:197:VAL:HG23	2.03	0.58
15:O:81:GLU:HB2	15:O:167:TYR:CE1	2.39	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:OB:100:LEU:N	67:OB:118:PRO:HG3	2.19	0.58
20:T:8:VAL:CG1	20:T:117:ARG:HA	2.33	0.58
46:TA:28:TYR:HB2	46:TA:69:VAL:HG11	1.85	0.58
2:B:2994:A:H5'	21:U:77:GLY:O	2.02	0.58
48:VA:78:PRO:HG2	48:VA:79:PHE:CE1	2.39	0.58
11:K:74:SER:HB3	25:Y:141:VAL:O	2.03	0.58
26:Z:17:VAL:HG21	26:Z:76:LEU:HD21	1.84	0.58
1:A:1016:C:H2'	1:A:1017:U:H6	1.69	0.58
1:A:209:U:H2'	1:A:210:A:H8	1.69	0.58
1:A:519:C:H3'	1:A:520:A:H8	1.67	0.58
2:B:100:A:H3'	2:B:101:G:H21	1.67	0.58
2:B:1148:G:O2'	2:B:1171:G:C4'	2.51	0.58
2:B:1463:U:H2'	2:B:1464:G:H5'	1.86	0.58
2:B:1598:G:H2'	2:B:1599:G:C8	2.39	0.58
2:B:1845:G:H3'	2:B:1846:C:H5''	1.85	0.58
2:B:1898:G:C2'	2:B:1899:G:H5'	2.34	0.58
2:B:200:C:H5'	2:B:221:A:N3	2.19	0.58
2:B:2178:A:H5''	6:F:151:PRO:HG2	1.85	0.58
2:B:2651:G:H5''	2:B:2652:U:O4'	2.04	0.58
2:B:3119:U:H2'	2:B:3121:U:P	2.44	0.58
2:B:508:U:H2'	2:B:509:U:H6	1.68	0.58
2:B:767:U:H1'	2:B:768:C:C6	2.38	0.58
54:BB:30:ARG:HH11	54:BB:30:ARG:HB3	1.67	0.58
82:DC:358:GLU:HG2	82:DC:479:LYS:CE	2.33	0.58
5:E:10:ARG:HE	5:E:176:GLU:HB3	1.68	0.58
6:F:103:PRO:HB3	6:F:161:ASP:HA	1.85	0.58
32:FA:138:ILE:CG2	32:FA:139:ARG:N	2.67	0.58
58:FB:73:SER:C	58:FB:74:LYS:HD2	2.24	0.58
59:GB:84:GLY:HA3	59:GB:107:ARG:CZ	2.34	0.58
8:H:244:LEU:H	8:H:244:LEU:CD1	2.15	0.58
36:JA:82:LEU:HD12	36:JA:108:ILE:HG23	1.84	0.58
63:KB:129:TYR:HA	63:KB:132:VAL:HG22	1.85	0.58
38:LA:43:LYS:HB3	38:LA:48:GLY:O	2.03	0.58
64:LB:42:VAL:HG21	64:LB:67:VAL:HB	1.85	0.58
13:M:170:LYS:HB3	13:M:175:PHE:CE2	2.39	0.58
18:R:84:LYS:HD3	18:R:87:ALA:HB3	1.86	0.58
22:V:23:ASN:ND2	22:V:26:LEU:HB2	2.19	0.58
48:VA:26:PHE:HB3	48:VA:28:VAL:HG13	1.85	0.58
24:X:59:VAL:HG13	25:Y:141:VAL:HG11	1.84	0.58
52:ZA:206:THR:CG2	52:ZA:209:ASN:HB2	2.34	0.58
52:ZA:49:LYS:HD3	52:ZA:243:TYR:CG	2.39	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:320:U:C3'	1:A:321:C:H5''	2.32	0.58
2:B:1169:A:H3'	2:B:1170:A:H8	1.69	0.58
2:B:1234:G:H21	16:P:132:ILE:N	2.01	0.58
2:B:1916:U:C5'	23:W:85:ARG:HB2	2.34	0.58
2:B:506:U:H2'	2:B:507:U:O4'	2.04	0.58
2:B:54:C:H1'	2:B:1546:A:H2	1.68	0.58
2:B:996:A:H2	4:D:79:A:H2	1.49	0.58
30:DA:40:ARG:HE	30:DA:46:LYS:HD3	1.69	0.58
82:DC:144:ARG:CG	82:DC:192:TYR:HB3	2.34	0.58
82:DC:667:PHE:O	82:DC:671:THR:HG23	2.04	0.58
5:E:29:LEU:HD13	5:E:152:ARG:HE	1.69	0.58
57:EB:46:ILE:HD12	57:EB:60:ILE:HG12	1.84	0.58
83:EC:6857:C:H2'	83:EC:6858:A:O4'	2.04	0.58
2:B:1074:U:O4'	33:GA:46:ALA:HA	2.03	0.58
60:HB:50:THR:HA	60:HB:55:VAL:HG13	1.85	0.58
11:K:103:LEU:CD2	11:K:130:ILE:HD12	2.33	0.58
11:K:114:GLY:O	11:K:205:PHE:HB2	2.04	0.58
38:LA:82:ALA:HA	38:LA:85:VAL:HB	1.85	0.58
64:LB:113:GLY:O	64:LB:115:ILE:HG23	2.03	0.58
17:Q:57:VAL:HG12	17:Q:69:VAL:HG21	1.85	0.58
18:R:95:ALA:HA	18:R:100:ALA:CB	2.34	0.58
18:R:16:GLU:HG3	18:R:69:THR:HG21	1.86	0.58
19:S:115:VAL:HA	19:S:134:LEU:HD23	1.86	0.58
19:S:16:SER:OG	19:S:18:VAL:HG12	2.04	0.58
76:XB:60:PRO:C	76:XB:62:TYR:H	2.06	0.58
25:Y:79:MET:HB2	25:Y:84:TYR:HE2	1.65	0.58
51:YA:172:LEU:O	51:YA:176:VAL:HG23	2.03	0.58
1:A:147:A:H2'	1:A:148:A:C8	2.38	0.58
1:A:400:A:C6	58:FB:29:LEU:HD12	2.39	0.58
2:B:1119:C:H2'	2:B:1120:A:H8	1.68	0.58
2:B:158:G:H2'	2:B:159:A:C8	2.39	0.58
2:B:2567:C:C3'	2:B:2568:C:H5''	2.33	0.58
2:B:2574:G:OP2	31:EA:56:LYS:HD3	2.04	0.58
2:B:2859:U:H4'	2:B:2860:U:H5'	1.85	0.58
2:B:3273:A:H2'	2:B:3274:A:C8	2.39	0.58
2:B:3279:A:O2'	2:B:3280:U:H5'	2.04	0.58
2:B:354:U:H2'	2:B:355:A:H8	1.69	0.58
2:B:59:G:H2'	3:C:33:A:O2'	2.04	0.58
2:B:999:G:H2'	2:B:1000:C:C5	2.38	0.58
30:DA:35:LEU:HD11	30:DA:45:ILE:HB	1.86	0.58
56:DB:45:PHE:HA	56:DB:48:TYR:HD2	1.69	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:EA:13:VAL:HA	31:EA:80:LEU:HD23	1.84	0.58
57:EB:79:ARG:O	57:EB:83:LYS:HB2	2.03	0.58
83:EC:6894:C:H2'	83:EC:6895:C:C6	2.39	0.58
6:F:209:HIS:ND1	6:F:210:PRO:HD2	2.19	0.58
6:F:87:PHE:HD2	6:F:89:TYR:HH	1.49	0.58
7:G:266:ARG:HB3	7:G:266:ARG:HH11	1.69	0.58
34:HA:73:GLY:H	34:HA:76:GLU:CB	2.11	0.58
2:B:1458:U:H5'	35:IA:30:PRO:HB3	1.85	0.58
61:IB:130:PRO:HA	61:IB:136:ARG:HD3	1.86	0.58
61:IB:110:HIS:HB2	61:IB:135:VAL:HG11	1.86	0.58
2:B:1338:C:C4'	36:JA:60:ASN:HD22	2.14	0.58
13:M:179:ILE:HD12	13:M:179:ILE:H	1.69	0.58
39:MA:77:PRO:HD2	39:MA:80:LEU:HD23	1.85	0.58
49:WA:150:TRP:CH2	67:OB:34:LEU:HG	2.38	0.58
16:P:81:VAL:HG13	16:P:113:ALA:HB1	1.84	0.58
46:TA:10:THR:O	46:TA:20:HIS:HA	2.02	0.58
48:VA:176:LEU:CB	48:VA:178:ILE:HD13	2.33	0.58
48:VA:56:ASN:HA	48:VA:59:VAL:CG2	2.31	0.58
2:B:562:C:H4'	24:X:71:LYS:CE	2.33	0.58
50:XA:22:THR:HG22	50:XA:169:SER:CB	2.33	0.58
51:YA:216:LYS:HE2	51:YA:217:LEU:O	2.03	0.58
1:A:1089:U:H2'	1:A:1090:C:C6	2.39	0.57
1:A:1607:G:O2'	1:A:1608:U:H5'	2.04	0.57
1:A:518:A:H1'	1:A:534:A:N6	2.19	0.57
1:A:91:G:H3'	1:A:92:A:H8	1.68	0.57
2:B:1105:A:H2'	2:B:1106:G:C8	2.39	0.57
2:B:1296:C:H2'	2:B:1297:C:C6	2.39	0.57
2:B:1411:C:O5'	36:JA:98:HIS:HB3	2.04	0.57
2:B:279:U:H2'	2:B:280:U:C4'	2.34	0.57
2:B:353:G:N2	2:B:364:G:H2'	2.19	0.57
4:D:31:U:H2'	4:D:32:U:C6	2.39	0.57
57:EB:60:ILE:O	57:EB:93:LEU:HB2	2.03	0.57
6:F:190:ARG:O	6:F:190:ARG:HG2	2.03	0.57
7:G:56:ILE:HD11	7:G:356:LEU:HD13	1.85	0.57
59:GB:92:LYS:O	59:GB:93:LEU:HD23	2.04	0.57
2:B:610:G:N2	8:H:313:LEU:HD23	2.19	0.57
60:HB:32:HIS:NE2	60:HB:35:ILE:HB	2.19	0.57
61:IB:70:ILE:HD12	61:IB:70:ILE:N	2.19	0.57
10:J:55:LEU:HD12	10:J:64:LEU:HG	1.85	0.57
10:J:33:SER:HB2	10:J:86:ALA:HB3	1.85	0.57
11:K:155:LYS:HE3	11:K:158:LYS:N	2.11	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:N:153:ARG:C	14:N:153:ARG:HE	2.08	0.57
15:O:67:VAL:O	15:O:68:HIS:HB3	2.04	0.57
17:Q:169:THR:HG22	17:Q:170:LEU:HD23	1.86	0.57
18:R:81:VAL:O	18:R:85:TRP:HB2	2.04	0.57
22:V:157:PRO:O	22:V:158:HIS:HB2	2.03	0.57
22:V:26:LEU:HA	22:V:29:LEU:HD12	1.86	0.57
23:W:51:VAL:HG23	23:W:53:LYS:H	1.68	0.57
50:XA:61:ALA:HA	50:XA:64:ILE:CD1	2.34	0.57
51:YA:186:SER:O	51:YA:190:PRO:HG3	2.04	0.57
1:A:1032:G:H2'	1:A:1033:C:H6	1.67	0.57
1:A:344:A:C2'	1:A:345:U:H5'	2.34	0.57
2:B:1295:G:H5'	24:X:84:ARG:HH11	1.70	0.57
2:B:1711:C:H2'	2:B:1712:G:O4'	2.03	0.57
2:B:1958:U:H2'	2:B:1959:G:C8	2.38	0.57
2:B:2112:U:OP1	28:BA:44:LYS:HA	2.04	0.57
2:B:2378:C:H2'	2:B:2379:U:C6	2.39	0.57
2:B:3188:G:H2'	2:B:3189:G:C8	2.39	0.57
82:DC:321:LYS:O	82:DC:325:ARG:HG3	2.04	0.57
82:DC:571:SER:CA	82:DC:720:ALA:HA	2.34	0.57
57:EB:86:GLN:CG	57:EB:87:ASP:H	2.14	0.57
6:F:5:ILE:HD11	6:F:232:GLY:HA2	1.86	0.57
6:F:68:LYS:HE2	6:F:70:ARG:HD3	1.86	0.57
32:FA:3:SER:HA	32:FA:6:THR:OG1	2.04	0.57
8:H:178:LEU:HD11	8:H:222:VAL:HG21	1.85	0.57
34:HA:25:LEU:HB3	34:HA:87:VAL:HG21	1.85	0.57
9:I:33:ARG:HH21	9:I:50:ARG:HH12	1.51	0.57
35:IA:54:GLU:HA	35:IA:57:GLN:HE21	1.69	0.57
36:JA:21:HIS:ND1	36:JA:24:ARG:HD2	2.20	0.57
2:B:1161:G:H2'	36:JA:56:GLY:HA3	1.87	0.57
36:JA:9:ILE:HD12	36:JA:9:ILE:N	2.19	0.57
38:LA:19:LYS:HE2	38:LA:35:VAL:O	2.03	0.57
68:PB:15:LEU:HG	68:PB:22:VAL:HB	1.86	0.57
20:T:108:ILE:HG21	20:T:117:ARG:NH1	2.19	0.57
20:T:141:LEU:O	20:T:145:VAL:HG13	2.05	0.57
1:A:31:C:H5'	73:UB:133:LEU:HD12	1.86	0.57
2:B:1259:A:OP1	48:VA:52:LEU:HG	2.03	0.57
74:VB:57:VAL:HG23	74:VB:73:GLY:HA2	1.86	0.57
24:X:3:HIS:O	24:X:32:SER:HB3	2.04	0.57
25:Y:56:PHE:CE1	25:Y:60:LYS:HE2	2.39	0.57
51:YA:201:THR:HG22	51:YA:205:PHE:O	2.03	0.57
1:A:1360:A:C2'	1:A:1361:U:H4'	2.33	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1456:C:O2	1:A:1457:C:H5'	2.04	0.57
1:A:638:U:H1'	57:EB:112:ARG:NH1	2.19	0.57
1:A:811:A:N7	57:EB:111:LYS:HB2	2.20	0.57
2:B:1310:G:H2'	2:B:1311:G:C8	2.39	0.57
2:B:1547:G:H2'	2:B:1548:C:H6	1.70	0.57
2:B:157:A:H3'	2:B:158:G:H8	1.69	0.57
2:B:1869:C:O3'	2:B:3077:A:H4'	2.04	0.57
2:B:1938:U:H1'	23:W:78:TYR:O	2.03	0.57
2:B:2146:C:H2'	2:B:2147:A:C8	2.39	0.57
2:B:2429:G:H2'	2:B:2430:A:H8	1.69	0.57
2:B:707:U:H5''	2:B:779:G:H1'	1.86	0.57
2:B:785:G:N3	2:B:785:G:H5''	2.19	0.57
54:BB:160:VAL:HG11	54:BB:169:ILE:HG23	1.85	0.57
54:BB:220:THR:HG22	54:BB:224:ASN:HD22	1.69	0.57
82:DC:591:GLU:HG2	82:DC:685:ARG:HB3	1.87	0.57
6:F:133:TYR:HB3	6:F:168:VAL:HG12	1.86	0.57
6:F:41:ILE:HG22	6:F:90:ALA:O	2.05	0.57
7:G:252:ILE:N	7:G:252:ILE:HD12	2.19	0.57
34:HA:61:MET:SD	34:HA:62:LEU:HG	2.44	0.57
9:I:194:LEU:O	9:I:197:SER:HB3	2.03	0.57
61:IB:54:ILE:N	61:IB:54:ILE:HD12	2.19	0.57
13:M:91:ARG:HD3	13:M:143:GLU:HB2	1.85	0.57
39:MA:55:LEU:HA	39:MA:58:ILE:HD12	1.86	0.57
66:NB:86:ALA:HB3	66:NB:116:LEU:HD12	1.86	0.57
15:O:98:ALA:HA	15:O:156:LYS:HB2	1.85	0.57
15:O:6:GLN:HG3	15:O:8:PRO:HD3	1.86	0.57
67:OB:57:LEU:O	67:OB:61:ILE:HG13	2.04	0.57
42:PA:56:ILE:HG21	42:PA:62:ALA:N	2.19	0.57
68:PB:83:ALA:O	68:PB:89:GLN:HB3	2.04	0.57
69:QB:58:ALA:O	69:QB:108:LEU:HD11	2.03	0.57
18:R:127:LYS:O	18:R:131:VAL:HG23	2.04	0.57
19:S:94:TYR:CZ	19:S:96:ARG:HB2	2.39	0.57
46:TA:106:PHE:CB	83:EC:6886:A:H1'	2.34	0.57
72:TB:7:LEU:HB2	72:TB:34:ILE:HG12	1.86	0.57
51:YA:105:PHE:HB3	51:YA:110:LEU:HD11	1.86	0.57
26:Z:99:LYS:CB	26:Z:102:GLU:HB2	2.29	0.57
1:A:121:U:H2'	1:A:122:U:C6	2.39	0.57
1:A:1584:G:N7	66:NB:14:LYS:HE2	2.19	0.57
1:A:1721:A:H2'	1:A:1722:A:C8	2.39	0.57
1:A:1787:C:H2'	1:A:1788:G:C8	2.38	0.57
1:A:469:C:N3	1:A:470:A:H1'	2.20	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:478:A:H5'	80:BC:33:ARG:NH2	2.19	0.57
1:A:70:C:H2'	1:A:71:A:C8	2.39	0.57
2:B:2117:A:H3'	2:B:2118:C:C6	2.39	0.57
2:B:2135:U:H2'	2:B:2136:C:C6	2.39	0.57
2:B:2341:A:H2'	2:B:2342:U:C6	2.39	0.57
2:B:2511:A:H2'	2:B:2512:C:C6	2.40	0.57
2:B:3192:U:H2'	2:B:3193:C:C6	2.39	0.57
54:BB:87:MET:HG3	54:BB:123:LEU:HB3	1.86	0.57
55:CB:206:SER:HA	55:CB:211:ILE:HG21	1.85	0.57
56:DB:137:ARG:NE	56:DB:140:ASN:HB2	2.18	0.57
82:DC:600:ALA:HA	82:DC:605:ILE:HD12	1.87	0.57
58:FB:42:ARG:O	58:FB:43:ILE:HG13	2.04	0.57
7:G:58:ARG:HD2	7:G:283:TYR:HE2	1.69	0.57
8:H:29:PRO:CG	8:H:279:HIS:HA	2.33	0.57
1:A:1219:A:O2'	60:HB:48:SER:HA	2.04	0.57
9:I:223:PHE:O	9:I:227:LEU:HD13	2.05	0.57
2:B:1458:U:H5''	35:IA:34:LYS:HZ1	1.69	0.57
35:IA:51:LEU:HD23	35:IA:93:VAL:HB	1.85	0.57
10:J:22:ARG:HB2	10:J:22:ARG:HH11	1.69	0.57
11:K:101:LYS:HE2	11:K:105:LEU:HD21	1.87	0.57
63:KB:92:ILE:CG1	63:KB:122:ILE:HD13	2.30	0.57
12:L:149:LYS:HB2	12:L:200:LEU:O	2.03	0.57
65:MB:63:ALA:HB1	65:MB:74:ALA:CB	2.32	0.57
66:NB:40:GLU:HA	66:NB:41:PRO:C	2.25	0.57
66:NB:41:PRO:CB	66:NB:44:LEU:HD23	2.33	0.57
1:A:1609:U:H5''	66:NB:75:VAL:HB	1.87	0.57
66:NB:20:ALA:HB2	66:NB:84:ALA:HB1	1.86	0.57
17:Q:74:GLY:H	17:Q:98:ASP:HB2	1.70	0.57
2:B:63:A:H4'	19:S:185:ALA:HB1	1.86	0.57
50:XA:4:PRO:HB3	71:SB:42:GLU:H	1.68	0.57
72:TB:53:ILE:HD11	77:YB:25:VAL:CG2	2.34	0.57
21:U:150:VAL:HG23	21:U:150:VAL:O	2.03	0.57
73:UB:37:ALA:HA	73:UB:41:SER:HB3	1.86	0.57
48:VA:144:LYS:HD3	82:DC:203:TYR:CZ	2.39	0.57
48:VA:130:PRO:HD3	48:VA:148:GLY:O	2.04	0.57
49:WA:47:LEU:HD23	49:WA:55:GLY:HA3	1.86	0.57
75:WB:70:LYS:HG3	75:WB:71:ILE:N	2.20	0.57
50:XA:50:VAL:H	67:OB:109:LEU:HD21	1.70	0.57
1:A:1279:C:H2'	1:A:1280:C:H6	1.68	0.57
1:A:1315:U:H5''	1:A:1329:A:H2	1.64	0.57
1:A:1713:G:H2'	1:A:1713:G:N3	2.18	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:195:G:H2'	1:A:196:G:C5'	2.34	0.57
1:A:96:G:H5'	1:A:460:A:O2'	2.05	0.57
1:A:754:A:C3'	1:A:755:A:H5'	2.17	0.57
2:B:1163:A:H2'	2:B:1164:G:C8	2.39	0.57
2:B:1259:A:O2'	2:B:1280:C:H4'	2.05	0.57
2:B:1315:U:H5'	2:B:1317:A:O4'	2.04	0.57
2:B:1830:G:H2'	2:B:1831:U:O4'	2.05	0.57
2:B:2588:U:H2'	2:B:2589:G:C8	2.40	0.57
2:B:277:G:H2'	2:B:278:U:H6	1.65	0.57
2:B:2991:A:OP1	7:G:20:LYS:HG3	2.05	0.57
2:B:3082:C:H2'	2:B:3083:G:H8	1.70	0.57
2:B:3187:A:H3'	18:R:8:LYS:HE2	1.87	0.57
2:B:3198:U:H4'	2:B:3199:G:OP2	2.05	0.57
2:B:3375:A:H5''	2:B:3378:C:C5	2.39	0.57
2:B:728:G:H5''	22:V:43:PRO:CB	2.34	0.57
2:B:731:U:H2'	2:B:732:C:H6	1.70	0.57
29:CA:108:LEU:HG	29:CA:127:THR:HA	1.87	0.57
4:D:119:U:H2'	4:D:120:C:H6	1.69	0.57
4:D:56:A:H2'	4:D:57:G:H5'	1.85	0.57
56:DB:5:ILE:O	56:DB:13:GLN:HA	2.04	0.57
82:DC:255:LYS:HA	82:DC:255:LYS:HE2	1.85	0.57
82:DC:534:GLY:H	82:DC:537:HIS:HB3	1.70	0.57
82:DC:7:ASP:HA	82:DC:10:ARG:HB3	1.86	0.57
5:E:136:THR:HG23	83:EC:6820:C:N4	2.20	0.57
57:EB:135:ILE:HG23	57:EB:153:LEU:O	2.04	0.57
83:EC:6941:U:H3'	83:EC:6942:A:H5'	1.84	0.57
58:FB:61:GLU:HG3	58:FB:62:THR:H	1.70	0.57
58:FB:84:HIS:CE1	58:FB:86:SER:HB2	2.40	0.57
35:IA:55:LEU:O	35:IA:59:ILE:HG13	2.04	0.57
38:LA:51:LEU:CG	38:LA:52:GLN:H	2.15	0.57
13:M:90:MET:HG2	13:M:181:VAL:CA	2.34	0.57
2:B:1127:G:O6	14:N:13:LYS:HE2	2.05	0.57
14:N:87:LEU:HD23	14:N:88:ARG:N	2.20	0.57
68:PB:33:THR:HG22	68:PB:40:ARG:CA	2.34	0.57
10:J:158:TYR:OH	18:R:114:ASP:HB3	2.03	0.57
17:Q:28:GLN:HE21	19:S:200:TRP:HE3	1.53	0.57
50:XA:45:VAL:HG12	50:XA:46:HIS:H	1.68	0.57
1:A:1789:G:H5'	1:A:1789:G:H8	1.69	0.57
1:A:264:G:H5''	1:A:265:A:H5'	1.86	0.57
1:A:385:A:H5''	58:FB:22:ARG:HB3	1.86	0.57
1:A:644:C:H2'	1:A:645:C:C6	2.40	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:866:G:H2'	1:A:867:G:C8	2.39	0.57
53:AB:25:PHE:HE1	53:AB:69:LEU:HD22	1.70	0.57
2:B:1492:G:H1'	2:B:1843:C:H5'	1.86	0.57
2:B:1513:G:C2	2:B:1515:A:H1'	2.39	0.57
2:B:2186:U:C2'	2:B:2187:G:H5'	2.34	0.57
2:B:2787:G:H2'	2:B:2788:C:C6	2.40	0.57
30:DA:73:VAL:HA	30:DA:80:VAL:HG23	1.86	0.57
82:DC:153:PRO:HG2	82:DC:202:VAL:HG13	1.86	0.57
82:DC:437:MET:CA	82:DC:442:VAL:HG12	2.34	0.57
5:E:98:LYS:O	5:E:102:LYS:HB2	2.04	0.57
57:EB:5:GLN:HG2	57:EB:22:GLN:HB2	1.86	0.57
6:F:100:ASN:O	6:F:166:ILE:HG12	2.04	0.57
8:H:142:VAL:O	8:H:143:GLU:HB2	2.05	0.57
13:M:180:TYR:CE2	44:RA:86:ALA:HA	2.40	0.57
14:N:70:ILE:O	14:N:74:LYS:HB2	2.04	0.57
40:NA:89:GLU:HA	40:NA:92:ASN:ND2	2.19	0.57
17:Q:15:ARG:HG2	17:Q:15:ARG:HH11	1.69	0.57
43:QA:32:ASN:C	43:QA:34:THR:H	2.07	0.57
70:RB:28:SER:HB3	70:RB:34:LEU:HB2	1.86	0.57
19:S:9:GLU:O	19:S:12:ARG:HD2	2.05	0.57
24:X:155:ARG:HB2	24:X:172:TYR:HB2	1.87	0.57
50:XA:89:PHE:HB2	50:XA:202:TYR:HE1	1.69	0.57
2:B:1107:C:H2'	2:B:1108:U:C6	2.39	0.57
2:B:1238:C:H2'	2:B:1239:C:O4'	2.04	0.57
2:B:1491:A:H2	2:B:1843:C:O4'	1.88	0.57
2:B:1580:A:H1'	2:B:1581:C:C5	2.40	0.57
2:B:1747:G:H5'	42:PA:4:GLU:OE2	2.05	0.57
2:B:217:U:O2'	30:DA:102:SER:HB3	2.05	0.57
2:B:2342:U:O2'	2:B:2343:C:H5'	2.04	0.57
2:B:2737:C:H2'	2:B:2738:A:O4'	2.04	0.57
2:B:301:G:H2'	2:B:302:U:H6	1.69	0.57
2:B:3262:U:C3'	2:B:3263:G:H5''	2.34	0.57
2:B:638:C:H2'	2:B:639:G:H8	1.68	0.57
2:B:660:A:H2	2:B:941:G:N3	2.03	0.57
54:BB:213:SER:C	54:BB:215:ASP:H	2.08	0.57
30:DA:54:ASP:O	30:DA:70:ILE:HG13	2.04	0.57
56:DB:32:ILE:HD12	56:DB:65:GLN:HA	1.86	0.57
82:DC:158:ASN:CG	82:DC:159:LYS:H	2.08	0.57
31:EA:10:VAL:HG21	31:EA:87:LEU:HD23	1.87	0.57
57:EB:7:LYS:C	57:EB:9:LEU:H	2.08	0.57
7:G:26:ARG:HG3	7:G:177:HIS:HD2	1.68	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:GB:134:ILE:HA	59:GB:159:ALA:N	2.20	0.57
9:I:40:HIS:CB	9:I:43:LYS:HE2	2.35	0.57
35:IA:62:ARG:O	35:IA:66:GLY:HA3	2.05	0.57
10:J:38:THR:OG1	10:J:90:LYS:HE2	2.05	0.57
37:KA:38:PRO:HA	37:KA:41:ALA:CB	2.34	0.57
63:KB:34:ILE:O	63:KB:38:VAL:HG23	2.03	0.57
14:N:92:HIS:HB3	14:N:94:PHE:CE2	2.40	0.57
66:NB:37:THR:HA	66:NB:49:TYR:OH	2.04	0.57
50:XA:51:GLY:HA3	67:OB:113:LEU:HD13	1.86	0.57
16:P:82:ILE:HG13	16:P:83:THR:HG23	1.86	0.57
70:RB:53:LYS:HB2	70:RB:92:ASP:HB2	1.87	0.57
22:V:124:LEU:HA	22:V:127:LEU:HB3	1.84	0.57
24:X:6:GLU:HG2	24:X:64:ILE:HD12	1.86	0.57
1:A:1024:U:H2'	1:A:1025:A:C5'	2.35	0.57
1:A:1773:C:H2'	1:A:1774:G:C8	2.38	0.57
1:A:54:C:H2'	1:A:55:A:H8	1.70	0.57
1:A:959:U:H5'	63:KB:15:ALA:O	2.05	0.57
2:B:2884:C:H2'	2:B:2885:C:H6	1.70	0.57
2:B:2884:C:H2'	2:B:2885:C:C6	2.40	0.57
2:B:311:C:N4	2:B:2778:G:H1	2.02	0.57
2:B:3135:U:H3'	2:B:3136:G:H8	1.69	0.57
2:B:953:G:H22	32:FA:22:ILE:HG21	1.68	0.57
80:BC:39:LEU:O	80:BC:43:ARG:HB3	2.04	0.57
3:C:20:U:H2'	3:C:21:C:O2	2.05	0.57
3:C:84:C:OP2	3:C:84:C:H6	1.87	0.57
29:CA:115:ARG:HG2	29:CA:121:LYS:N	2.20	0.57
55:CB:42:LEU:HB2	55:CB:47:SER:HA	1.85	0.57
4:D:69:C:H2'	4:D:70:U:C6	2.40	0.57
82:DC:32:LYS:HB3	84:DC:901:GDP:O2B	2.05	0.57
82:DC:3:ALA:O	82:DC:46:ILE:O	2.22	0.57
82:DC:45:ILE:HD12	82:DC:438:MET:CG	2.33	0.57
6:F:41:ILE:HD12	6:F:63:PHE:CE2	2.39	0.57
32:FA:14:HIS:O	32:FA:15:VAL:HB	2.04	0.57
32:FA:74:ASN:HA	32:FA:113:LEU:O	2.05	0.57
2:B:2393:G:H5'	7:G:266:ARG:NH2	2.20	0.57
59:GB:125:ALA:HA	59:GB:128:LEU:HD12	1.85	0.57
2:B:660:A:H5'	8:H:100:PHE:HD1	1.66	0.57
36:JA:20:HIS:CB	36:JA:50:ILE:HD11	2.30	0.57
39:MA:51:ILE:HA	39:MA:54:VAL:CG2	2.34	0.57
68:PB:36:LYS:HB3	68:PB:105:VAL:HG11	1.87	0.57
65:MB:111:MET:HG2	68:PB:119:ILE:HG23	1.85	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
68:PB:17:LEU:HD13	68:PB:66:LEU:HB3	1.86	0.57
18:R:13:ARG:HB3	18:R:65:LEU:HD22	1.85	0.57
21:U:48:LEU:HD22	21:U:88:VAL:HG22	1.86	0.57
73:UB:86:PHE:HB2	73:UB:120:VAL:HG11	1.86	0.57
23:W:127:SER:HA	23:W:132:PHE:CE2	2.40	0.57
49:WA:176:LYS:HA	49:WA:199:ILE:HD11	1.87	0.57
24:X:15:PRO:HG3	24:X:22:PRO:CD	2.34	0.57
24:X:50:LYS:O	24:X:51:VAL:HG13	2.04	0.57
50:XA:20:ALA:HA	50:XA:168:HIS:HB2	1.85	0.57
1:A:1795:U:OP1	76:XB:86:VAL:HG23	2.05	0.57
51:YA:32:ILE:CG2	51:YA:43:VAL:HB	2.35	0.57
71:SB:87:ARG:N	77:YB:5:GLN:HE22	2.03	0.57
78:ZB:32:PHE:CE2	78:ZB:38:ARG:HB3	2.40	0.57
78:ZB:43:ASN:ND2	78:ZB:63:ALA:HB3	2.20	0.57
1:A:1109:G:O2'	1:A:1110:G:H5'	2.05	0.57
1:A:525:A:H4'	74:VB:89:TYR:HB2	1.86	0.57
2:B:1095:U:H5'	2:B:1095:U:H6	1.70	0.57
2:B:1234:G:H2'	2:B:1235:U:H5	1.69	0.57
2:B:1340:G:H2'	2:B:1341:U:C6	2.39	0.57
2:B:245:U:H2'	2:B:246:U:C6	2.40	0.57
2:B:344:A:H2'	2:B:345:G:H8	1.68	0.57
2:B:360:G:H5''	41:OA:26:SER:HA	1.85	0.57
2:B:5:G:H2'	2:B:6:A:O4'	2.05	0.57
2:B:858:A:H2'	2:B:859:G:O4'	2.05	0.57
2:B:993:G:N3	2:B:2637:A:H2'	2.19	0.57
3:C:133:G:H2'	3:C:134:G:O4'	2.04	0.57
3:C:28:C:H4'	17:Q:26:PHE:CD2	2.40	0.57
3:C:41:A:C5'	41:OA:67:LEU:HG	2.35	0.57
3:C:57:C:H4'	3:C:63:G:C8	2.40	0.57
55:CB:200:ASN:HB3	55:CB:207:THR:OG1	2.04	0.57
30:DA:37:LYS:HD3	30:DA:37:LYS:N	2.16	0.57
1:A:161:U:OP2	56:DB:85:ARG:HB3	2.04	0.57
82:DC:489:VAL:CG1	82:DC:538:LEU:HD22	2.35	0.57
8:H:150:LEU:HD22	8:H:247:PHE:CE2	2.40	0.57
2:B:1439:U:H4'	8:H:87:GLN:HE21	1.69	0.57
10:J:166:LYS:HE2	37:KA:4:SER:OG	2.05	0.57
38:LA:74:ARG:HH12	38:LA:85:VAL:HG11	1.70	0.57
2:B:3034:C:H42	13:M:120:ASP:HA	1.68	0.57
14:N:52:LEU:HD12	14:N:152:LEU:HD22	1.87	0.57
2:B:2682:C:H4'	15:O:68:HIS:CD2	2.39	0.57
42:PA:17:ARG:O	42:PA:18:ALA:HB3	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:Q:42:ARG:O	17:Q:46:ILE:HG12	2.05	0.57
21:U:24:VAL:CG1	21:U:87:SER:HA	2.35	0.57
8:H:33:ASP:OD1	22:V:23:ASN:HA	2.05	0.57
49:WA:152:SER:HB2	49:WA:172:ALA:O	2.04	0.57
25:Y:44:ALA:HB2	25:Y:53:PRO:HG2	1.87	0.57
51:YA:30:PHE:CD1	51:YA:96:LEU:HD23	2.40	0.57
26:Z:37:LEU:HB2	26:Z:56:VAL:HG11	1.86	0.57
1:A:1117:U:H2'	1:A:1118:G:H8	1.69	0.57
1:A:1547:A:H1'	68:PB:87:ASN:O	2.05	0.57
1:A:1484:G:H1'	1:A:1606:C:O2'	2.04	0.57
1:A:397:A:H4'	58:FB:51:GLY:N	2.20	0.57
27:AA:83:LYS:HA	27:AA:83:LYS:HE2	1.86	0.57
2:B:1217:A:H2'	2:B:1218:U:C6	2.39	0.57
2:B:1259:A:C8	48:VA:53:MET:HG3	2.40	0.57
2:B:1378:U:H2'	2:B:1379:G:C8	2.39	0.57
2:B:2457:G:H1	2:B:2461:A:N6	2.02	0.57
2:B:1201:C:N4	2:B:2857:C:H5''	2.19	0.57
2:B:415:G:H2'	2:B:416:A:H8	1.69	0.57
2:B:744:A:H2'	2:B:745:C:O4'	2.04	0.57
2:B:891:G:H2'	2:B:892:U:O4'	2.05	0.57
3:C:28:C:O4'	8:H:49:ALA:HB3	2.04	0.57
82:DC:271:ARG:HD2	82:DC:273:PHE:HB3	1.86	0.57
82:DC:412:ARG:HB3	82:DC:426:LEU:HD11	1.87	0.57
82:DC:664:VAL:O	82:DC:668:GLN:HG2	2.05	0.57
83:EC:6923:C:H2'	83:EC:6924:G:C8	2.40	0.57
58:FB:55:TYR:HB2	58:FB:176:SER:C	2.25	0.57
7:G:226:PHE:CE1	7:G:268:GLY:HA2	2.40	0.57
7:G:243:HIS:ND1	7:G:244:ARG:HG2	2.20	0.57
8:H:123:ALA:HB2	8:H:262:TRP:CZ3	2.39	0.57
11:K:53:LYS:HA	11:K:56:GLU:OE1	2.05	0.57
14:N:52:LEU:HA	14:N:165:ILE:HG22	1.87	0.57
42:PA:20:VAL:HG13	42:PA:46:ARG:O	2.05	0.57
20:T:14:HIS:HA	20:T:123:ALA:C	2.26	0.57
48:VA:25:LEU:HG	48:VA:26:PHE:N	2.20	0.57
54:BB:67:GLN:NE2	74:VB:85:PHE:HZ	2.03	0.57
49:WA:210:LEU:HD12	49:WA:245:PHE:HE2	1.70	0.57
75:WB:41:ILE:HG13	75:WB:42:LEU:N	2.20	0.57
51:YA:64:ARG:HE	64:LB:36:LYS:HD2	1.70	0.57
26:Z:43:VAL:O	26:Z:45:GLY:N	2.37	0.57
52:ZA:170:ILE:HD12	52:ZA:170:ILE:N	2.20	0.57
76:XB:51:ARG:HD3	78:ZB:60:GLU:OE2	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1250:U:H2'	1:A:1251:U:H5'	1.86	0.56
1:A:980:G:H2'	1:A:981:U:H5'	1.86	0.56
2:B:1044:U:C3'	2:B:1045:C:H5''	2.35	0.56
2:B:1443:G:H2'	2:B:1444:G:C8	2.40	0.56
2:B:20:A:H2'	2:B:21:G:C8	2.39	0.56
2:B:2277:C:H2'	2:B:2278:C:C6	2.40	0.56
2:B:759:U:C2'	2:B:760:G:H5'	2.34	0.56
55:CB:134:VAL:O	55:CB:138:THR:HG23	2.05	0.56
4:D:18:C:H2'	4:D:19:C:C6	2.40	0.56
4:D:55:A:H2'	4:D:56:A:H8	1.70	0.56
82:DC:67:GLY:HA3	84:DC:901:GDP:O2A	2.05	0.56
57:EB:9:LEU:HD22	57:EB:10:SER:H	1.70	0.56
83:EC:6917:C:H2'	83:EC:6918:A:H5'	1.86	0.56
58:FB:83:TYR:OH	58:FB:195:ARG:HD2	2.04	0.56
7:G:198:HIS:HA	7:G:201:LYS:HB2	1.87	0.56
8:H:326:ARG:HG2	8:H:327:LEU:HD13	1.87	0.56
61:IB:74:THR:O	61:IB:86:ILE:HA	2.04	0.56
36:JA:54:LYS:HG2	36:JA:57:TYR:CD2	2.40	0.56
66:NB:35:PRO:HG2	66:NB:37:THR:OG1	2.05	0.56
67:OB:43:SER:OG	67:OB:46:LEU:HB2	2.05	0.56
69:QB:14:PHE:CE1	69:QB:135:ILE:HD11	2.40	0.56
18:R:115:PHE:O	18:R:119:GLN:HB2	2.03	0.56
18:R:116:GLU:O	18:R:120:VAL:HG23	2.05	0.56
70:RB:72:ASN:ND2	70:RB:73:GLY:H	2.03	0.56
21:U:158:ALA:HB1	21:U:159:LYS:HD3	1.86	0.56
6:F:57:PRO:HG3	47:UA:53:GLY:O	2.05	0.56
22:V:122:ILE:HD13	22:V:130:ARG:HD3	1.85	0.56
49:WA:176:LYS:CB	49:WA:195:HIS:HB2	2.35	0.56
49:WA:255:ALA:HB2	49:WA:260:ILE:HG23	1.86	0.56
75:WB:59:TYR:HD2	75:WB:60:VAL:N	2.02	0.56
50:XA:12:GLU:HG3	50:XA:13:ASP:H	1.70	0.56
51:YA:160:HIS:O	51:YA:164:ILE:HG13	2.05	0.56
71:SB:87:ARG:H	77:YB:5:GLN:HE22	1.51	0.56
1:A:1214:U:H1'	79:AC:7:TRP:CZ2	2.40	0.56
1:A:1280:C:H2'	1:A:1281:G:C8	2.40	0.56
1:A:155:U:H4'	56:DB:59:GLN:H	1.71	0.56
1:A:285:G:H2'	1:A:286:C:C6	2.41	0.56
1:A:296:U:H2'	1:A:297:U:C6	2.40	0.56
1:A:64:U:H2'	1:A:65:A:H5''	1.85	0.56
1:A:682:C:C2'	1:A:683:C:H5'	2.35	0.56
1:A:961:U:H2'	1:A:962:C:C6	2.39	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:AB:37:VAL:HG12	53:AB:50:ILE:HA	1.87	0.56
1:A:1214:U:H1'	79:AC:7:TRP:HZ2	1.69	0.56
2:B:1256:G:H4'	16:P:127:SER:CB	2.33	0.56
2:B:1361:U:H2'	2:B:1362:G:H8	1.69	0.56
2:B:1768:U:C2'	2:B:1769:G:H5''	2.35	0.56
2:B:3119:U:H2'	2:B:3121:U:OP1	2.05	0.56
2:B:3174:A:H61	37:KA:54:ARG:HH21	1.52	0.56
2:B:572:A:H2'	2:B:573:C:O4'	2.05	0.56
2:B:628:A:H2'	2:B:629:U:O4'	2.05	0.56
31:EA:16:GLY:HA2	38:LA:74:ARG:CG	2.27	0.56
31:EA:73:LYS:CE	31:EA:74:VAL:H	2.18	0.56
7:G:230:THR:HG21	7:G:247:ARG:HG2	1.87	0.56
7:G:311:PHE:HB3	7:G:314:TYR:HB3	1.85	0.56
8:H:44:LYS:O	8:H:47:ARG:HB2	2.04	0.56
9:I:245:GLU:HA	9:I:248:ARG:HB2	1.87	0.56
17:Q:119:TYR:CE1	39:MA:118:ILE:HD11	2.39	0.56
65:MB:67:ALA:HB1	65:MB:68:PRO:HD2	1.85	0.56
2:B:294:U:H5''	40:NA:53:TYR:CE2	2.39	0.56
66:NB:10:PHE:HA	66:NB:18:ALA:O	2.05	0.56
15:O:18:VAL:HB	15:O:128:TYR:H	1.69	0.56
69:QB:10:ALA:O	69:QB:14:PHE:HB2	2.05	0.56
70:RB:83:GLU:OE1	79:AC:55:PHE:HB3	2.05	0.56
71:SB:38:LYS:O	71:SB:46:ILE:HD12	2.05	0.56
47:UA:17:ARG:HG3	47:UA:18:TYR:HD1	1.70	0.56
73:UB:23:ARG:HB3	73:UB:29:TYR:CE2	2.39	0.56
23:W:17:VAL:HG12	23:W:18:GLY:N	2.20	0.56
49:WA:216:LYS:HA	49:WA:239:GLU:HG3	1.88	0.56
24:X:28:ARG:HH12	24:X:64:ILE:HG21	1.69	0.56
50:XA:182:LEU:HB3	50:XA:186:GLY:HA3	1.87	0.56
76:XB:41:ILE:HG22	76:XB:68:TYR:HA	1.86	0.56
76:XB:37:LYS:HA	76:XB:71:LEU:O	2.05	0.56
52:ZA:142:GLY:H	52:ZA:154:LEU:HA	1.69	0.56
52:ZA:180:ALA:HB2	52:ZA:198:THR:HG21	1.86	0.56
1:A:1632:C:O2	1:A:1632:C:H2'	2.04	0.56
2:B:1947:G:H1	2:B:2101:C:H42	1.53	0.56
2:B:671:U:H2'	2:B:672:A:C8	2.35	0.56
2:B:707:U:H4'	2:B:779:G:N3	2.20	0.56
54:BB:121:TYR:CD2	54:BB:161:LYS:HG3	2.40	0.56
55:CB:216:GLU:O	55:CB:219:ARG:HG2	2.05	0.56
55:CB:62:VAL:HG13	55:CB:89:ILE:CG1	2.35	0.56
56:DB:121:LEU:HB2	56:DB:124:LEU:HB2	1.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:EB:173:TYR:CD2	57:EB:181:ILE:HB	2.39	0.56
83:EC:6923:C:O2	83:EC:6930:G:N2	2.37	0.56
58:FB:151:LYS:O	58:FB:152:ILE:HD12	2.05	0.56
7:G:246:LEU:HD12	7:G:246:LEU:O	2.06	0.56
7:G:317:ILE:O	7:G:317:ILE:HG22	2.04	0.56
34:HA:52:ARG:O	34:HA:56:LEU:HG	2.06	0.56
11:K:131:GLU:OE2	11:K:230:GLY:HA2	2.04	0.56
37:KA:16:TYR:HB3	37:KA:24:ASN:O	2.04	0.56
12:L:57:ARG:O	12:L:61:GLN:HG3	2.05	0.56
2:B:1655:G:H5'	38:LA:58:ARG:HH12	1.69	0.56
14:N:12:GLN:HG2	14:N:128:ARG:NH2	2.21	0.56
16:P:62:LEU:HD23	16:P:73:VAL:CG1	2.35	0.56
1:A:1565:C:O2	68:PB:87:ASN:HB3	2.05	0.56
17:Q:115:ARG:HA	17:Q:118:GLU:OE2	2.05	0.56
50:XA:59:LEU:HD11	71:SB:79:LEU:HG	1.88	0.56
21:U:163:LYS:NZ	21:U:165:VAL:HB	2.20	0.56
48:VA:104:ARG:HG3	48:VA:184:GLY:O	2.05	0.56
24:X:77:VAL:HB	24:X:92:LYS:HB2	1.87	0.56
78:ZB:50:GLU:O	78:ZB:51:ASN:HB2	2.04	0.56
1:A:1116:A:O2'	1:A:1652:C:H4'	2.05	0.56
1:A:1202:A:H61	68:PB:137:HIS:CE1	2.23	0.56
1:A:1489:U:H5'	1:A:1494:C:C2	2.40	0.56
27:AA:59:MET:HE1	27:AA:75:PRO:HG3	1.86	0.56
79:AC:21:CYS:SG	79:AC:38:ILE:HG23	2.44	0.56
2:B:1298:C:H2'	2:B:1299:U:H5'	1.88	0.56
2:B:1321:G:O2'	24:X:111:ALA:HB1	2.06	0.56
2:B:1465:A:H2'	2:B:1466:G:O4'	2.05	0.56
2:B:2130:G:O4'	2:B:2144:A:H4'	2.06	0.56
2:B:2369:G:C6	2:B:2370:G:C6	2.93	0.56
2:B:2448:G:H1	2:B:2500:A:H1'	1.71	0.56
2:B:993:G:O2'	2:B:2637:A:H1'	2.05	0.56
2:B:2880:U:H2'	2:B:2881:C:C6	2.41	0.56
2:B:3335:A:H5'	2:B:3335:A:C8	2.40	0.56
82:DC:169:VAL:HB	82:DC:174:LEU:HB2	1.87	0.56
82:DC:380:LEU:CD2	82:DC:456:LEU:HD11	2.36	0.56
82:DC:585:ARG:O	82:DC:586:ILE:HD12	2.06	0.56
7:G:114:VAL:HG13	7:G:163:HIS:CG	2.40	0.56
59:GB:53:ARG:O	59:GB:57:ARG:HG3	2.04	0.56
36:JA:25:TYR:HB3	36:JA:27:ARG:HG2	1.87	0.56
37:KA:52:VAL:HG21	37:KA:99:ARG:NE	2.20	0.56
12:L:226:TYR:C	12:L:228:GLU:H	2.08	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:L:75:ILE:HG23	12:L:78:PHE:CE1	2.41	0.56
3:C:66:A:OP1	39:MA:6:ALA:HB3	2.04	0.56
66:NB:27:GLY:HA2	66:NB:60:PHE:O	2.05	0.56
70:RB:83:GLU:HG3	79:AC:55:PHE:HB2	1.88	0.56
19:S:114:ARG:HH21	19:S:158:HIS:HD2	1.52	0.56
48:VA:62:ALA:HB1	48:VA:77:LEU:HG	1.87	0.56
23:W:22:VAL:N	23:W:53:LYS:HD2	2.20	0.56
75:WB:92:ILE:HG13	75:WB:100:ILE:HG23	1.88	0.56
52:ZA:72:LEU:HB3	52:ZA:73:LEU:HD12	1.85	0.56
1:A:1097:U:C6	52:ZA:168:ARG:HD2	2.40	0.56
1:A:1165:G:H2'	1:A:1166:A:H8	1.70	0.56
1:A:1485:C:N3	1:A:1486:G:H1'	2.21	0.56
1:A:1494:C:H2'	1:A:1495:C:C6	2.40	0.56
1:A:189:C:C3'	1:A:190:C:H5''	2.36	0.56
1:A:39:A:H5''	59:GB:3:ARG:HH12	1.70	0.56
1:A:63:G:C2'	1:A:64:U:H5'	2.35	0.56
1:A:1244:A:H1'	79:AC:7:TRP:CE3	2.40	0.56
2:B:1551:C:H2'	2:B:1552:G:O4'	2.04	0.56
2:B:204:A:H2'	2:B:205:C:H5'	1.86	0.56
2:B:2735:U:H5''	25:Y:51:GLY:H	1.71	0.56
2:B:3062:G:H2'	2:B:3063:C:O4'	2.05	0.56
2:B:3066:U:H2'	2:B:3067:C:C6	2.40	0.56
2:B:41:G:H3'	2:B:42:C:H6	1.71	0.56
54:BB:191:ARG:HD2	54:BB:218:PHE:CE2	2.40	0.56
4:D:58:C:O2'	4:D:59:U:H5'	2.06	0.56
30:DA:17:LYS:HG2	30:DA:21:THR:HG21	1.86	0.56
30:DA:22:ALA:HB1	30:DA:26:GLN:CB	2.35	0.56
82:DC:699:DDE:HAD1	83:EC:6952:U:C4'	2.18	0.56
82:DC:747:LEU:HD12	82:DC:752:GLY:HA3	1.86	0.56
31:EA:22:LYS:HD2	31:EA:130:PHE:O	2.05	0.56
6:F:182:ALA:O	6:F:185:ALA:HB3	2.05	0.56
6:F:83:HIS:CE1	6:F:86:GLN:HA	2.40	0.56
2:B:642:U:OP1	32:FA:22:ILE:HG23	2.05	0.56
9:I:108:ARG:O	9:I:111:GLN:HB3	2.05	0.56
35:IA:55:LEU:HD13	35:IA:95:PRO:HB3	1.87	0.56
61:IB:74:THR:H	61:IB:87:ARG:N	2.02	0.56
10:J:31:ARG:HG3	10:J:33:SER:OG	2.05	0.56
21:U:169:THR:HG23	37:KA:60:ARG:NH1	2.20	0.56
69:QB:27:LYS:HB3	69:QB:27:LYS:NZ	2.21	0.56
71:SB:23:ILE:H	71:SB:23:ILE:HD12	1.69	0.56
20:T:175:THR:HA	20:T:178:VAL:HB	1.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
73:UB:52:ILE:C	73:UB:74:VAL:HG13	2.26	0.56
24:X:105:THR:O	24:X:109:ASP:HB2	2.06	0.56
51:YA:205:PHE:CD1	51:YA:207:LEU:HD12	2.40	0.56
1:A:1585:U:H3	1:A:1611:A:H2	1.53	0.56
1:A:337:G:H3'	61:IB:133:LYS:HB2	1.88	0.56
1:A:802:G:H21	72:TB:107:SER:HB3	1.69	0.56
53:AB:113:LEU:HD23	53:AB:114:ALA:H	1.70	0.56
2:B:1147:G:OP1	36:JA:47:ARG:HD3	2.05	0.56
2:B:1289:G:H2'	2:B:1290:A:H8	1.71	0.56
2:B:1768:U:H3'	2:B:1769:G:H5''	1.86	0.56
2:B:1916:U:H2'	2:B:1917:C:H6	1.71	0.56
2:B:2595:A:H2'	2:B:2596:U:H5'	1.87	0.56
2:B:2609:A:H2'	2:B:2610:G:H8	1.70	0.56
2:B:2638:C:H2'	2:B:2639:G:O4'	2.06	0.56
2:B:272:G:H2'	2:B:273:A:H8	1.69	0.56
2:B:2857:C:H2'	2:B:2858:U:C6	2.41	0.56
2:B:3137:C:O5'	2:B:3137:C:H6	1.89	0.56
2:B:3217:C:H6	2:B:3266:G:H21	1.52	0.56
2:B:3369:G:H5''	28:BA:56:ARG:NH2	2.14	0.56
2:B:595:G:H1	2:B:609:G:H5''	1.70	0.56
28:BA:8:PHE:CE1	28:BA:46:PRO:HB3	2.41	0.56
54:BB:57:ASN:O	54:BB:61:VAL:HG23	2.06	0.56
3:C:65:A:H2'	3:C:66:A:O4'	2.05	0.56
55:CB:43:PHE:HD1	55:CB:46:TRP:O	1.88	0.56
56:DB:222:GLU:O	56:DB:225:GLU:HG2	2.06	0.56
56:DB:78:THR:HG22	56:DB:92:ARG:HG2	1.87	0.56
82:DC:244:LEU:HD13	82:DC:277:ILE:HD11	1.86	0.56
57:EB:5:GLN:HG2	57:EB:18:LEU:O	2.05	0.56
7:G:188:ILE:O	7:G:191:LYS:HB2	2.06	0.56
9:I:33:ARG:NH2	9:I:50:ARG:NH1	2.54	0.56
9:I:64:ILE:HD12	9:I:76:ALA:O	2.06	0.56
35:IA:18:LYS:HE3	35:IA:19:ARG:HD2	1.86	0.56
35:IA:70:ARG:HG3	35:IA:70:ARG:HH21	1.70	0.56
61:IB:38:ALA:HB3	61:IB:42:PHE:HB2	1.86	0.56
36:JA:78:ASN:HA	36:JA:108:ILE:HD11	1.86	0.56
13:M:106:LYS:HB3	13:M:111:PHE:CZ	2.41	0.56
68:PB:63:GLN:O	68:PB:67:GLU:HG3	2.04	0.56
2:B:74:G:OP1	17:Q:105:ASN:HB2	2.05	0.56
17:Q:110:ASP:O	17:Q:114:GLN:HB3	2.05	0.56
70:RB:58:LEU:HD12	70:RB:88:LYS:HG2	1.87	0.56
19:S:116:LEU:HB3	19:S:133:ILE:O	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:T:74:ARG:HG2	20:T:74:ARG:HH11	1.69	0.56
46:TA:77:CYS:O	46:TA:78:LYS:HG2	2.05	0.56
72:TB:34:ILE:O	72:TB:38:LEU:HG	2.05	0.56
21:U:119:VAL:HG23	21:U:145:HIS:C	2.25	0.56
47:UA:73:THR:HG23	47:UA:75:ALA:H	1.71	0.56
24:X:3:HIS:CE1	24:X:100:VAL:HG23	2.41	0.56
24:X:51:VAL:HG12	24:X:55:SER:OG	2.06	0.56
1:A:1329:A:H2'	1:A:1330:G:O4'	2.05	0.56
1:A:1752:U:H2'	1:A:1753:A:C8	2.41	0.56
1:A:213:A:H2'	1:A:214:G:O4'	2.06	0.56
1:A:872:G:C2	1:A:873:U:H1'	2.41	0.56
2:B:1326:A:H2'	2:B:1327:C:C6	2.41	0.56
2:B:1396:C:H2'	2:B:1397:C:H6	1.70	0.56
2:B:215:G:H2'	2:B:216:G:C8	2.41	0.56
2:B:2909:U:C2'	2:B:2910:A:H5''	2.36	0.56
2:B:290:G:H5''	19:S:98:LEU:CD2	2.35	0.56
2:B:432:G:H2'	2:B:433:A:C8	2.41	0.56
2:B:634:C:O2'	2:B:635:G:H5'	2.06	0.56
2:B:655:C:H2'	2:B:656:A:H8	1.71	0.56
54:BB:51:ARG:HH21	54:BB:111:VAL:HG23	1.71	0.56
54:BB:49:ARG:HE	54:BB:50:ASN:ND2	2.03	0.56
30:DA:59:VAL:HG12	30:DA:103:LYS:C	2.25	0.56
82:DC:205:ALA:HB2	82:DC:245:TRP:HB3	1.87	0.56
82:DC:382:VAL:HG13	82:DC:397:PHE:N	2.20	0.56
82:DC:629:ASP:CB	82:DC:647:ILE:HG21	2.35	0.56
82:DC:823:ARG:HB3	82:DC:823:ARG:CZ	2.36	0.56
82:DC:77:LEU:O	82:DC:99:LEU:HD12	2.06	0.56
32:FA:149:ALA:O	40:NA:15:LYS:HB2	2.06	0.56
7:G:45:SER:HA	7:G:339:ARG:HA	1.88	0.56
59:GB:64:GLU:HA	59:GB:69:ARG:HD2	1.86	0.56
34:HA:77:LEU:HD23	34:HA:88:GLY:HA2	1.87	0.56
9:I:94:ASN:ND2	9:I:97:ALA:HB2	2.21	0.56
36:JA:112:ALA:HA	36:JA:117:ILE:HD12	1.88	0.56
36:JA:85:LEU:HD13	36:JA:92:TYR:HB3	1.88	0.56
37:KA:51:TYR:CE2	37:KA:53:TYR:HB3	2.41	0.56
12:L:82:LEU:HD21	12:L:90:THR:OG1	2.06	0.56
1:A:1454:G:H5'	65:MB:81:ARG:NE	2.21	0.56
15:O:18:VAL:O	15:O:127:PHE:HA	2.06	0.56
68:PB:104:ASN:O	68:PB:108:LYS:HB2	2.06	0.56
71:SB:21:ASN:HB2	72:TB:67:GLY:HA3	1.87	0.56
47:UA:55:TRP:HH2	47:UA:69:TYR:O	1.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:W:92:GLN:CG	23:W:96:ILE:HD11	2.35	0.56
25:Y:11:THR:HA	25:Y:14:MET:CG	2.36	0.56
25:Y:56:PHE:HE1	25:Y:60:LYS:HE2	1.70	0.56
26:Z:17:VAL:HG22	26:Z:103:TYR:HB2	1.86	0.56
1:A:1280:C:H2'	1:A:1281:G:H8	1.70	0.56
1:A:1315:U:H5''	1:A:1329:A:N3	2.21	0.56
1:A:1344:A:H2'	1:A:1345:A:C8	2.41	0.56
1:A:167:U:H1'	56:DB:133:LEU:HD22	1.88	0.56
1:A:1766:A:H61	76:XB:80:HIS:HA	1.70	0.56
1:A:328:A:H2'	1:A:329:G:C8	2.40	0.56
1:A:81:G:H2'	1:A:82:U:C6	2.41	0.56
2:B:1188:U:O2'	2:B:1189:C:H5'	2.05	0.56
2:B:11:A:H61	3:C:147:U:H3	1.52	0.56
2:B:1301:A:H4'	2:B:1302:A:O5'	2.06	0.56
2:B:1849:C:H6	2:B:1849:C:H5'	1.70	0.56
2:B:1922:A:H2'	2:B:1923:C:H5'	1.88	0.56
2:B:2726:C:HO2'	2:B:2729:U:H5	1.53	0.56
2:B:2732:G:H2'	2:B:2733:A:C8	2.40	0.56
2:B:3092:C:H5'	2:B:3093:C:OP1	2.05	0.56
2:B:3187:A:H4'	13:M:23:ARG:NH1	2.21	0.56
2:B:3311:C:C2'	2:B:3312:U:H5'	2.36	0.56
2:B:360:G:H2'	2:B:361:A:C8	2.40	0.56
2:B:589:A:H62	2:B:610:G:H1'	1.71	0.56
2:B:692:A:H2'	2:B:693:A:O4'	2.05	0.56
2:B:812:G:H2'	2:B:813:G:H8	1.71	0.56
2:B:878:G:H1'	2:B:880:G:N2	2.14	0.56
54:BB:161:LYS:HD3	54:BB:171:ASP:HB2	1.87	0.56
3:C:41:A:H5'	41:OA:67:LEU:HG	1.87	0.56
55:CB:117:THR:O	55:CB:121:ILE:HG13	2.04	0.56
56:DB:74:LYS:HE2	56:DB:96:SER:OG	2.05	0.56
82:DC:131:THR:HG22	82:DC:177:THR:HG22	1.88	0.56
82:DC:635:CYS:SG	82:DC:664:VAL:HG22	2.46	0.56
82:DC:739:ALA:HA	82:DC:788:THR:HG21	1.88	0.56
58:FB:5:ARG:HH11	58:FB:5:ARG:HG3	1.70	0.56
7:G:252:ILE:HG21	7:G:260:VAL:HG13	1.87	0.56
7:G:44:THR:O	7:G:339:ARG:HA	2.06	0.56
8:H:359:LEU:HG	24:X:8:GLN:NE2	2.21	0.56
9:I:80:SER:HA	9:I:83:LEU:HG	1.88	0.56
37:KA:50:ALA:HB2	37:KA:68:TRP:CE2	2.41	0.56
37:KA:85:PHE:CE2	37:KA:89:LEU:HD11	2.40	0.56
12:L:121:SER:C	12:L:123:GLN:H	2.09	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1655:G:H4'	38:LA:59:PRO:HG2	1.88	0.56
13:M:90:MET:HE2	13:M:181:VAL:N	2.21	0.56
15:O:91:LEU:O	15:O:92:ARG:HG2	2.05	0.56
68:PB:121:ALA:O	68:PB:125:ILE:HG13	2.04	0.56
2:B:74:G:H5''	17:Q:104:ARG:HE	1.69	0.56
70:RB:56:VAL:O	70:RB:89:ARG:HG3	2.06	0.56
19:S:58:GLY:HA3	19:S:142:ILE:HG12	1.87	0.56
20:T:149:TYR:HD1	20:T:152:VAL:HG21	1.71	0.56
48:VA:12:PHE:HE1	48:VA:57:THR:HG22	1.71	0.56
74:VB:21:LYS:HB2	74:VB:75:VAL:CG1	2.35	0.56
75:WB:70:LYS:HB3	75:WB:71:ILE:HD12	1.87	0.56
1:A:1057:U:H4'	1:A:1058:U:C3'	2.35	0.56
1:A:1291:G:H21	1:A:1324:G:H22	1.52	0.56
1:A:1504:G:H5''	69:QB:97:SER:HB2	1.88	0.56
1:A:606:A:C8	1:A:608:U:H2'	2.40	0.56
1:A:75:U:C3'	1:A:76:A:H5''	2.34	0.56
1:A:1213:G:N2	79:AC:7:TRP:HE1	2.04	0.56
2:B:1348:U:C4'	2:B:1349:G:H5''	2.34	0.56
2:B:1497:C:H6	2:B:1497:C:O5'	1.89	0.56
2:B:1897:G:H1'	27:AA:83:LYS:HD2	1.88	0.56
2:B:2352:A:H8	2:B:2352:A:O5'	1.89	0.56
2:B:2616:C:H3'	2:B:2617:U:O2	2.06	0.56
2:B:289:A:H2'	2:B:290:G:H8	1.71	0.56
2:B:400:G:H4'	2:B:403:C:O2	2.06	0.56
55:CB:121:ILE:HD11	55:CB:198:LEU:CD1	2.36	0.56
83:EC:6831:U:C3'	83:EC:6832:G:H5''	2.35	0.56
2:B:911:C:H5''	6:F:15:ILE:HD13	1.86	0.56
7:G:67:PHE:CE1	27:AA:89:ASP:HB3	2.41	0.56
8:H:181:VAL:O	8:H:182:LEU:HB3	2.06	0.56
34:HA:43:ILE:CG2	34:HA:70:PHE:HB2	2.36	0.56
61:IB:80:MET:HB3	61:IB:83:THR:HG23	1.88	0.56
10:J:54:TYR:CZ	10:J:63:LEU:HD22	2.40	0.56
37:KA:51:TYR:CA	37:KA:98:VAL:HG23	2.36	0.56
13:M:36:LYS:HD3	13:M:74:LEU:HD13	1.88	0.56
13:M:71:VAL:HA	13:M:74:LEU:HB2	1.88	0.56
65:MB:58:LYS:HA	65:MB:61:ARG:HH21	1.70	0.56
65:MB:64:LYS:CB	65:MB:73:PRO:HG3	2.34	0.56
68:PB:89:GLN:C	68:PB:91:ASP:H	2.08	0.56
68:PB:86:LEU:HG	68:PB:99:HIS:HB2	1.88	0.56
69:QB:47:PRO:HG2	69:QB:53:TRP:HB2	1.88	0.56
2:B:29:C:O2	19:S:162:ARG:HG2	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:T:126:VAL:HG22	20:T:126:VAL:O	2.05	0.56
46:TA:64:THR:HB	46:TA:89:LYS:HZ3	1.71	0.56
1:A:522:U:H5''	74:VB:37:LYS:NZ	2.20	0.56
74:VB:76:TYR:CD2	74:VB:81:GLU:HB3	2.41	0.56
23:W:42:ARG:O	23:W:45:VAL:HG12	2.06	0.56
24:X:44:PHE:CD1	25:Y:153:PRO:HB3	2.40	0.56
24:X:69:PRO:HA	24:X:73:LYS:NZ	2.20	0.56
26:Z:33:TYR:HE2	26:Z:63:VAL:HG11	1.70	0.56
1:A:107:C:H2'	1:A:108:A:C8	2.39	0.56
1:A:1184:A:H3'	1:A:1185:U:C5'	2.35	0.56
1:A:1480:G:H1'	66:NB:40:GLU:HG2	1.87	0.56
1:A:179:A:H61	56:DB:202:ARG:HH22	1.53	0.56
1:A:429:G:OP1	1:A:439:U:H5''	2.06	0.56
1:A:629:U:H3'	1:A:630:A:H5''	1.87	0.56
2:B:1083:G:H2'	2:B:1084:A:C8	2.41	0.56
2:B:10:C:H2'	2:B:11:A:C4'	2.35	0.56
2:B:110:G:H5''	17:Q:91:ARG:HD3	1.88	0.56
2:B:204:A:O2'	2:B:205:C:H5'	2.05	0.56
2:B:2247:G:N2	2:B:2248:C:H1'	2.21	0.56
2:B:3206:C:H1'	24:X:155:ARG:NH2	2.11	0.56
2:B:3382:U:H2'	2:B:3382:U:O2	2.04	0.56
82:DC:231:LYS:C	82:DC:233:PHE:H	2.08	0.56
82:DC:412:ARG:CZ	82:DC:473:GLU:HA	2.36	0.56
82:DC:578:LYS:HE3	82:DC:582:LYS:HE3	1.87	0.56
57:EB:5:GLN:HB3	57:EB:21:ALA:HB3	1.87	0.56
58:FB:159:GLN:OE1	58:FB:165:LEU:HD22	2.05	0.56
7:G:46:PHE:CZ	7:G:84:VAL:HG23	2.41	0.56
59:GB:55:ALA:O	59:GB:59:LEU:HG	2.05	0.56
59:GB:96:VAL:HG23	59:GB:97:LEU:N	2.21	0.56
35:IA:14:ILE:HG23	35:IA:16:LEU:HD11	1.88	0.56
11:K:236:ILE:HA	11:K:239:LEU:HB2	1.88	0.56
63:KB:120:SER:O	63:KB:124:ARG:HG3	2.05	0.56
38:LA:3:GLN:CG	38:LA:30:LEU:H	2.11	0.56
38:LA:9:ARG:HG3	38:LA:34:HIS:CD2	2.41	0.56
15:O:10:ARG:HD3	15:O:10:ARG:O	2.06	0.56
17:Q:170:LEU:HB3	40:NA:9:ILE:HD12	1.87	0.56
70:RB:19:ILE:HG12	70:RB:95:ALA:HA	1.87	0.56
20:T:130:LYS:HB3	20:T:133:ARG:HG3	1.88	0.56
49:WA:2:ALA:HA	49:WA:272:ASP:OD1	2.05	0.56
76:XB:4:LYS:HE3	76:XB:5:ARG:HH22	1.71	0.56
25:Y:135:PRO:O	25:Y:136:ARG:HG2	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1688:U:H1'	26:Z:78:TYR:CZ	2.40	0.56
1:A:1077:C:H2'	1:A:1078:C:H6	1.71	0.56
1:A:1105:C:H2'	1:A:1106:U:C6	2.40	0.56
1:A:1315:U:H2'	1:A:1316:G:O4'	2.06	0.56
1:A:178:U:O4	56:DB:191:ARG:HG2	2.05	0.56
1:A:361:C:H2'	1:A:362:G:C8	2.41	0.56
79:AC:38:ILE:HG22	79:AC:39:CYS:H	1.71	0.56
2:B:1366:A:H3'	2:B:1367:G:C8	2.40	0.56
2:B:1494:U:H1'	2:B:1496:C:C5	2.41	0.56
2:B:1523:U:O5'	2:B:1523:U:H6	1.89	0.56
2:B:2631:U:H2'	2:B:2632:G:C8	2.41	0.56
2:B:2775:U:H2'	2:B:2776:C:H6	1.67	0.56
2:B:2828:G:H4'	14:N:4:ARG:NH2	2.21	0.56
2:B:2947:G:C2	7:G:250:ALA:HB1	2.41	0.56
2:B:3096:C:H2'	2:B:3097:C:H6	1.71	0.56
54:BB:12:LEU:HD11	59:GB:4:ALA:CB	2.36	0.56
56:DB:28:PHE:O	56:DB:29:ASP:HB2	2.06	0.56
82:DC:144:ARG:HG3	82:DC:192:TYR:CG	2.41	0.56
7:G:229:VAL:HG13	7:G:230:THR:N	2.20	0.56
7:G:59:ASP:HA	7:G:70:ARG:O	2.06	0.56
36:JA:77:ALA:HB3	36:JA:81:ASP:OD2	2.05	0.56
36:JA:76:VAL:HG23	36:JA:96:ILE:HA	1.86	0.56
11:K:107:ARG:HH12	11:K:117:VAL:HG13	1.71	0.56
11:K:160:ARG:HG3	11:K:203:TRP:CD2	2.41	0.56
41:OA:52:LYS:HA	41:OA:55:ARG:NH1	2.20	0.56
67:OB:54:THR:HA	67:OB:57:LEU:HD12	1.88	0.56
20:T:108:ILE:HB	20:T:160:ARG:CD	2.23	0.56
21:U:15:ALA:O	21:U:150:VAL:HG22	2.06	0.56
48:VA:53:MET:HA	48:VA:85:GLY:CA	2.36	0.56
23:W:67:ALA:O	23:W:71:ARG:HG3	2.06	0.56
25:Y:78:LYS:HE3	25:Y:87:LYS:HE3	1.87	0.56
51:YA:189:ILE:N	51:YA:190:PRO:HD2	2.20	0.56
51:YA:225:VAL:HA	51:YA:228:LEU:HB3	1.87	0.56
51:YA:70:LEU:CD1	51:YA:79:HIS:HB3	2.35	0.56
52:ZA:79:GLU:O	52:ZA:102:VAL:HG13	2.06	0.56
52:ZA:138:PRO:HB2	52:ZA:222:TYR:HE2	1.70	0.56
1:A:1119:G:H2'	1:A:1120:U:C6	2.41	0.55
1:A:128:U:H5'	1:A:178:U:O2'	2.06	0.55
2:B:1088:U:H5'	33:GA:54:LEU:HD13	1.88	0.55
2:B:824:C:H1'	2:B:1534:A:H2	1.71	0.55
2:B:1702:U:H2'	2:B:1703:U:O4'	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2279:A:O5'	2:B:2280:A:H5'	2.06	0.55
2:B:2768:U:H2'	2:B:2769:A:H8	1.71	0.55
2:B:629:U:H2'	2:B:630:A:H8	1.65	0.55
2:B:62:A:H5''	19:S:164:LEU:CD2	2.24	0.55
2:B:62:A:H2'	2:B:63:A:H5'	1.88	0.55
2:B:676:G:N2	22:V:61:PRO:HG3	2.21	0.55
2:B:6:A:N6	3:C:153:U:H3	2.03	0.55
3:C:37:A:H2'	3:C:37:A:N3	2.20	0.55
55:CB:123:VAL:HG21	75:WB:100:ILE:HD12	1.87	0.55
30:DA:125:LYS:HG3	30:DA:126:LEU:H	1.70	0.55
30:DA:89:LYS:CG	30:DA:93:ALA:HB3	2.35	0.55
82:DC:503:LYS:HE2	82:DC:550:ALA:O	2.06	0.55
6:F:179:LEU:HD21	6:F:185:ALA:HA	1.88	0.55
32:FA:128:ARG:O	40:NA:8:ALA:HB3	2.06	0.55
32:FA:37:GLY:HA3	32:FA:53:PHE:HZ	1.70	0.55
7:G:54:THR:CG2	7:G:76:VAL:HG23	2.36	0.55
8:H:130:ALA:HA	8:H:148:ILE:HG22	1.86	0.55
8:H:181:VAL:HG22	8:H:202:ARG:HB2	1.88	0.55
34:HA:80:ALA:C	34:HA:82:GLY:H	2.08	0.55
36:JA:61:LYS:HE2	36:JA:61:LYS:HA	1.87	0.55
12:L:97:TYR:HB3	12:L:131:ALA:HA	1.88	0.55
66:NB:114:ARG:O	66:NB:116:LEU:HD22	2.06	0.55
1:A:1582:U:H5''	66:NB:135:ARG:HH11	1.71	0.55
66:NB:34:SER:HB3	66:NB:38:LEU:HD12	1.87	0.55
17:Q:103:ASN:HB3	40:NA:20:MET:HE1	1.88	0.55
3:C:75:G:N2	43:QA:26:TRP:HB2	2.21	0.55
18:R:14:LEU:H	18:R:14:LEU:HD12	1.71	0.55
46:TA:68:VAL:CB	46:TA:85:LEU:HB3	2.35	0.55
1:A:864:U:H3	72:TB:60:LYS:HE2	1.70	0.55
21:U:30:ARG:C	21:U:30:ARG:HD3	2.27	0.55
22:V:147:ARG:HG2	22:V:149:ALA:H	1.70	0.55
22:V:82:VAL:HG21	22:V:137:THR:HB	1.87	0.55
16:P:123:ARG:NH2	48:VA:42:ARG:HD3	2.20	0.55
4:D:77:G:O4'	24:X:50:LYS:HD2	2.06	0.55
24:X:50:LYS:HB3	24:X:50:LYS:NZ	2.20	0.55
50:XA:23:HIS:CE1	67:OB:106:THR:HG21	2.41	0.55
51:YA:70:LEU:HA	51:YA:73:LEU:CG	2.36	0.55
2:B:1687:U:N3	26:Z:70:LYS:HD2	2.16	0.55
1:A:1079:U:H2'	1:A:1080:U:C6	2.42	0.55
1:A:1473:U:H5''	55:CB:190:ILE:CD1	2.31	0.55
1:A:1480:G:H2'	1:A:1481:C:H5'	1.86	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:165:G:H21	56:DB:132:ARG:HB2	1.70	0.55
1:A:353:A:C2	1:A:354:C:H1'	2.41	0.55
1:A:632:U:H2'	1:A:633:U:H6	1.71	0.55
1:A:950:C:H2'	1:A:951:A:O4'	2.07	0.55
2:B:1725:C:H2'	2:B:1726:C:H6	1.69	0.55
2:B:2715:A:C2	46:TA:85:LEU:HD21	2.42	0.55
2:B:2766:U:H2'	2:B:2767:U:C6	2.42	0.55
2:B:3229:G:H3'	2:B:3230:G:C8	2.36	0.55
2:B:3308:C:H3'	2:B:3309:G:N2	2.21	0.55
2:B:674:G:H2'	2:B:675:C:O4'	2.05	0.55
2:B:761:A:H61	2:B:770:G:H4'	1.71	0.55
2:B:887:G:H2'	2:B:888:A:H8	1.72	0.55
54:BB:100:ARG:NH1	54:BB:236:ILE:HG22	2.20	0.55
55:CB:144:GLU:O	55:CB:144:GLU:HG3	2.07	0.55
2:B:186:U:OP2	30:DA:122:LYS:HD3	2.06	0.55
30:DA:125:LYS:HG3	30:DA:126:LEU:N	2.21	0.55
56:DB:137:ARG:CD	56:DB:177:ARG:HD3	2.34	0.55
82:DC:150:ARG:O	82:DC:197:LEU:HD21	2.06	0.55
82:DC:798:PHE:H	86:DC:903:SO1:H53	1.71	0.55
83:EC:6834:U:H3'	83:EC:6835:U:H5''	1.89	0.55
6:F:32:LEU:CB	6:F:163:ARG:HH21	2.19	0.55
32:FA:75:LEU:CD1	32:FA:137:LYS:HD2	2.35	0.55
7:G:19:ARG:HG2	7:G:232:ARG:HH12	1.71	0.55
7:G:368:GLY:O	7:G:369:ARG:HG3	2.06	0.55
34:HA:72:GLY:HA2	34:HA:76:GLU:OE2	2.06	0.55
10:J:42:LEU:HD13	10:J:47:PHE:CB	2.36	0.55
36:JA:64:LYS:HG2	36:JA:65:PHE:HD2	1.71	0.55
11:K:44:ILE:CG2	11:K:48:ASN:HD21	2.19	0.55
66:NB:132:LYS:HG3	66:NB:133:GLY:N	2.21	0.55
17:Q:42:ARG:HD3	17:Q:51:LEU:HD23	1.87	0.55
17:Q:48:PRO:HA	17:Q:137:GLN:CD	2.27	0.55
70:RB:96:PRO:HG2	70:RB:99:ILE:CG2	2.35	0.55
12:L:58:VAL:HG22	19:S:32:GLN:OE1	2.06	0.55
2:B:149:U:H5''	19:S:54:LYS:HB3	1.87	0.55
46:TA:28:TYR:CB	46:TA:69:VAL:HG11	2.36	0.55
73:UB:19:ARG:HG2	73:UB:19:ARG:HH21	1.71	0.55
48:VA:119:ILE:HG21	48:VA:158:VAL:HB	1.87	0.55
49:WA:152:SER:N	49:WA:173:GLY:HA2	2.12	0.55
50:XA:103:THR:O	50:XA:106:SER:HB2	2.06	0.55
50:XA:20:ALA:CB	50:XA:172:LEU:HD12	2.22	0.55
51:YA:156:ALA:CB	51:YA:161:ILE:HG13	2.36	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1615:C:C5	55:CB:81:ARG:HA	2.40	0.55
1:A:190:C:O2'	1:A:191:C:H5'	2.06	0.55
1:A:400:A:N6	58:FB:29:LEU:HD12	2.20	0.55
1:A:822:U:H5'	1:A:822:U:H6	1.72	0.55
1:A:852:C:H5''	1:A:853:G:H5'	1.86	0.55
1:A:969:C:O2'	1:A:1104:U:H4'	2.06	0.55
27:AA:33:ASN:HD22	27:AA:33:ASN:N	2.00	0.55
2:B:120:G:H4'	2:B:121:A:O4'	2.06	0.55
2:B:1218:U:H1'	2:B:1219:C:O5'	2.05	0.55
2:B:146:U:O5'	2:B:148:G:H5'	2.06	0.55
2:B:1487:G:C3'	2:B:1488:G:H5''	2.37	0.55
2:B:2135:U:H2'	2:B:2136:C:H6	1.70	0.55
2:B:2149:A:H2'	2:B:2150:G:H5'	1.88	0.55
2:B:2372:A:C3'	2:B:2373:A:C5'	2.84	0.55
2:B:244:G:OP1	17:Q:131:LYS:HA	2.07	0.55
2:B:2525:G:O3'	6:F:37:ARG:HD2	2.07	0.55
2:B:2555:G:N3	38:LA:92:ALA:HA	2.21	0.55
2:B:303:G:H5''	2:B:304:G:H5''	1.88	0.55
2:B:41:G:H3'	2:B:42:C:C6	2.42	0.55
3:C:82:U:C1'	3:C:87:G:H4'	2.36	0.55
29:CA:59:SER:HB3	29:CA:102:LEU:HD11	1.88	0.55
55:CB:184:PHE:CE2	55:CB:185:ARG:HG3	2.42	0.55
4:D:65:G:H4'	14:N:205:SER:N	2.21	0.55
30:DA:28:ARG:HH12	30:DA:118:LEU:CD2	2.19	0.55
30:DA:3:LYS:HG2	30:DA:4:GLN:N	2.22	0.55
56:DB:76:LEU:HD21	56:DB:78:THR:HG23	1.88	0.55
82:DC:153:PRO:CG	82:DC:202:VAL:HG13	2.36	0.55
82:DC:184:SER:O	82:DC:187:VAL:HG12	2.06	0.55
82:DC:391:LYS:HG3	82:DC:392:GLY:H	1.70	0.55
82:DC:510:ARG:CD	82:DC:549:HIS:HA	2.35	0.55
5:E:65:ILE:HG22	5:E:109:ALA:CB	2.33	0.55
7:G:181:ILE:N	7:G:181:ILE:HD12	2.21	0.55
7:G:58:ARG:HB2	7:G:58:ARG:HH11	1.71	0.55
59:GB:66:ASP:HB3	59:GB:69:ARG:CB	2.36	0.55
9:I:101:THR:HG23	9:I:104:LEU:HD23	1.87	0.55
9:I:3:PHE:HB2	9:I:6:ASP:OD2	2.06	0.55
8:H:330:TYR:HA	11:K:45:LEU:HD12	1.87	0.55
39:MA:58:ILE:HA	39:MA:61:GLN:OE1	2.06	0.55
14:N:170:LYS:HB3	14:N:176:LEU:O	2.07	0.55
15:O:171:VAL:O	15:O:172:LEU:HB2	2.04	0.55
16:P:133:LEU:CA	16:P:137:GLN:HG3	2.20	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:RA:93:LYS:HG3	44:RA:102:ARG:HG2	1.88	0.55
47:UA:54:ILE:HG23	47:UA:63:THR:CG2	2.36	0.55
73:UB:131:SER:O	73:UB:135:LEU:HG	2.07	0.55
73:UB:37:ALA:O	73:UB:44:GLY:HA2	2.05	0.55
11:K:110:ARG:CZ	22:V:3:ILE:HD11	2.36	0.55
48:VA:93:LEU:HD23	48:VA:97:LYS:HB2	1.87	0.55
2:B:1720:U:H2'	23:W:124:TYR:OH	2.06	0.55
24:X:27:MET:CE	24:X:45:LEU:HD22	2.36	0.55
76:XB:10:ARG:CD	76:XB:34:LYS:HG3	2.36	0.55
76:XB:71:LEU:HB3	76:XB:73:TYR:HE2	1.71	0.55
25:Y:92:ARG:HB3	25:Y:94:GLU:OE2	2.05	0.55
77:YB:81:ARG:O	77:YB:82:LYS:HB2	2.06	0.55
26:Z:50:LEU:HA	26:Z:54:VAL:CG2	2.37	0.55
1:A:1072:C:H2'	1:A:1073:G:C8	2.41	0.55
1:A:1363:U:O2'	1:A:1364:G:H5'	2.07	0.55
1:A:1530:C:OP2	75:WB:95:HIS:HB3	2.05	0.55
1:A:488:G:H2'	1:A:489:C:H5'	1.87	0.55
1:A:624:G:H2'	1:A:625:C:C6	2.41	0.55
1:A:986:G:H1'	1:A:987:G:OP1	2.07	0.55
2:B:1140:G:H2'	2:B:1141:C:C6	2.41	0.55
2:B:1438:U:H2'	2:B:1439:U:C6	2.42	0.55
2:B:1711:C:H5'	31:EA:38:PHE:CD1	2.41	0.55
2:B:1704:A:C5	2:B:1741:A:H2	2.25	0.55
2:B:2343:C:H2'	2:B:2344:U:C6	2.42	0.55
2:B:2604:U:H2'	2:B:2605:G:O4'	2.07	0.55
2:B:3113:A:H3'	2:B:3114:A:H8	1.71	0.55
2:B:3217:C:O2	21:U:182:ILE:HA	2.06	0.55
3:C:28:C:H2'	3:C:29:U:C6	2.41	0.55
29:CA:80:ASN:OD1	29:CA:126:LEU:HD13	2.06	0.55
30:DA:39:LEU:HD21	30:DA:107:THR:O	2.07	0.55
56:DB:178:LEU:HD11	56:DB:180:THR:HG22	1.88	0.55
82:DC:413:ILE:CD1	82:DC:459:ILE:HD11	2.37	0.55
82:DC:815:ALA:HA	82:DC:818:ILE:CD1	2.36	0.55
5:E:67:ILE:HD11	5:E:144:LEU:HD22	1.88	0.55
6:F:202:VAL:HG13	6:F:218:HIS:N	2.21	0.55
32:FA:123:VAL:N	32:FA:143:GLY:HA2	2.12	0.55
32:FA:79:TRP:CZ2	32:FA:118:ILE:HB	2.41	0.55
34:HA:77:LEU:HD11	34:HA:90:VAL:HG21	1.89	0.55
9:I:196:ARG:HG2	9:I:200:PHE:CE2	2.42	0.55
10:J:26:ARG:CG	10:J:27:PRO:HD2	2.37	0.55
11:K:210:PRO:HG3	11:K:214:TRP:CZ2	2.41	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:M:152:GLU:O	13:M:156:GLN:HB2	2.05	0.55
1:A:1552:U:H5	65:MB:43:ARG:NH2	2.05	0.55
40:NA:61:ILE:C	40:NA:63:ASN:H	2.09	0.55
17:Q:158:ALA:O	32:FA:124:ILE:HD11	2.06	0.55
1:A:1504:G:O3'	69:QB:41:SER:HB3	2.07	0.55
48:VA:79:PHE:CD2	48:VA:189:GLN:HB2	2.41	0.55
48:VA:25:LEU:HD12	48:VA:87:VAL:O	2.07	0.55
48:VA:30:VAL:HG23	48:VA:185:LEU:H	1.71	0.55
48:VA:84:VAL:HG22	48:VA:188:VAL:HG21	1.89	0.55
76:XB:10:ARG:HD3	76:XB:34:LYS:HG3	1.87	0.55
2:B:2735:U:O3'	25:Y:51:GLY:HA2	2.07	0.55
51:YA:59:ASP:HA	51:YA:62:LYS:NZ	2.20	0.55
1:A:43:A:H1'	1:A:378:A:N3	2.22	0.55
1:A:642:G:H2'	1:A:643:G:H8	1.72	0.55
2:B:1162:U:H4'	36:JA:57:TYR:CE1	2.41	0.55
2:B:158:G:H2'	2:B:159:A:H8	1.71	0.55
2:B:1623:G:C2	2:B:1624:G:H1'	2.42	0.55
2:B:2060:A:H2'	2:B:2061:G:H5'	1.88	0.55
2:B:2165:G:O2'	2:B:2167:A:N6	2.36	0.55
2:B:2684:C:H2'	2:B:2685:C:C6	2.41	0.55
2:B:269:G:O6	19:S:14:LYS:HB2	2.05	0.55
2:B:2796:G:O6	46:TA:64:THR:HG23	2.06	0.55
2:B:367:A:H2'	2:B:368:G:H5'	1.89	0.55
82:DC:331:ALA:O	82:DC:335:LEU:HG	2.07	0.55
82:DC:677:PHE:HB2	82:DC:823:ARG:HG2	1.89	0.55
82:DC:836:GLN:H	82:DC:836:GLN:NE2	2.05	0.55
5:E:150:ASP:O	5:E:182:GLN:HG3	2.07	0.55
7:G:203:VAL:HG22	7:G:207:SER:OG	2.06	0.55
60:HB:8:ARG:HH11	60:HB:8:ARG:HG2	1.71	0.55
14:N:60:LEU:HD13	14:N:159:PHE:CE1	2.41	0.55
66:NB:131:GLY:HA3	66:NB:137:ARG:CA	2.36	0.55
15:O:13:LYS:NZ	15:O:13:LYS:HB2	2.21	0.55
2:B:1234:G:H5''	16:P:118:ASP:HB2	1.89	0.55
65:MB:110:GLU:HG3	68:PB:119:ILE:HG13	1.87	0.55
17:Q:94:GLY:HA3	39:MA:116:TYR:OH	2.06	0.55
43:QA:3:ALA:N	43:QA:5:LYS:NZ	2.54	0.55
69:QB:18:TYR:HA	69:QB:21:PHE:HB2	1.89	0.55
71:SB:36:VAL:HB	71:SB:51:VAL:CB	2.34	0.55
46:TA:21:THR:HG22	46:TA:76:LYS:HD3	1.88	0.55
72:TB:79:PHE:HB2	72:TB:125:ILE:HG22	1.88	0.55
23:W:74:ARG:O	23:W:75:HIS:HB2	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:X:29:ILE:HD11	24:X:41:TYR:HA	1.89	0.55
50:XA:41:ARG:HB2	50:XA:45:VAL:O	2.07	0.55
1:A:1149:G:H1'	1:A:1765:A:C4	2.41	0.55
1:A:1579:U:H4'	66:NB:140:LYS:O	2.06	0.55
1:A:190:C:O2'	1:A:191:C:H2'	2.07	0.55
1:A:257:A:H1'	58:FB:73:SER:HB2	1.88	0.55
1:A:90:C:O2'	1:A:91:G:H5'	2.07	0.55
53:AB:171:ALA:HB3	53:AB:186:VAL:HB	1.89	0.55
2:B:1078:U:H2'	2:B:1080:A:OP2	2.06	0.55
2:B:115:A:H3'	2:B:116:A:C5'	2.36	0.55
2:B:1633:C:H2'	2:B:1634:G:C8	2.41	0.55
2:B:2469:G:H1'	2:B:2488:A:N1	2.21	0.55
2:B:3092:C:H4'	2:B:3094:A:OP2	2.07	0.55
2:B:3109:G:H1'	13:M:163:GLN:CD	2.27	0.55
2:B:3362:A:H2'	2:B:3363:U:C4'	2.36	0.55
2:B:561:C:H2'	2:B:562:C:H6	1.70	0.55
2:B:727:G:H2'	2:B:728:G:O4'	2.06	0.55
54:BB:192:ILE:HD12	54:BB:242:LYS:O	2.07	0.55
29:CA:67:ILE:HD11	29:CA:115:ARG:HE	1.71	0.55
82:DC:777:SER:HA	82:DC:780:PHE:HB2	1.89	0.55
31:EA:109:GLU:HA	31:EA:112:LYS:HD2	1.89	0.55
57:EB:46:ILE:HD13	57:EB:60:ILE:HG23	1.87	0.55
6:F:128:ARG:HA	6:F:169:ILE:CD1	2.37	0.55
7:G:316:GLU:O	7:G:317:ILE:HB	2.06	0.55
7:G:312:VAL:HG22	7:G:365:PHE:HB2	1.87	0.55
59:GB:81:VAL:C	59:GB:83:VAL:H	2.07	0.55
34:HA:45:ALA:HB1	34:HA:73:GLY:HA2	1.87	0.55
63:KB:99:ARG:HD3	63:KB:143:SER:OG	2.06	0.55
63:KB:17:PRO:HD2	63:KB:62:GLN:NE2	2.22	0.55
12:L:122:LYS:CE	12:L:124:ASP:HB2	2.37	0.55
12:L:203:VAL:HG21	12:L:208:GLU:HA	1.88	0.55
64:LB:64:ALA:HB3	64:LB:104:ALA:HB3	1.87	0.55
65:MB:86:VAL:HG23	65:MB:87:PRO:HD2	1.88	0.55
40:NA:57:LEU:HD21	40:NA:72:VAL:CG1	2.36	0.55
15:O:65:ILE:CG2	15:O:66:ALA:H	2.11	0.55
41:OA:70:VAL:HA	41:OA:73:ARG:HB3	1.87	0.55
2:B:286:U:O3'	19:S:179:LYS:HB3	2.07	0.55
20:T:12:LYS:HA	20:T:40:GLU:O	2.07	0.55
46:TA:5:PRO:O	46:TA:25:VAL:HG21	2.07	0.55
72:TB:93:LEU:HD12	72:TB:128:PHE:HB3	1.86	0.55
22:V:153:PHE:O	22:V:161:LYS:HD3	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:V:9:GLN:HE21	22:V:10:HIS:N	2.00	0.55
74:VB:24:VAL:HG22	74:VB:72:PHE:CE1	2.41	0.55
24:X:34:GLU:HB3	24:X:61:ILE:HG12	1.86	0.55
1:A:1165:G:H2'	1:A:1166:A:C8	2.41	0.55
1:A:1407:U:H2'	1:A:1408:G:H8	1.68	0.55
1:A:1637:C:H5'	83:EC:6952:U:C4	2.42	0.55
53:AB:162:GLN:N	53:AB:163:PRO:CD	2.69	0.55
2:B:101:G:H2'	2:B:102:C:O4'	2.07	0.55
2:B:1044:U:H2'	2:B:1045:C:C5'	2.33	0.55
2:B:1169:A:H3'	2:B:1170:A:C8	2.41	0.55
2:B:1184:A:H2'	2:B:1185:C:C6	2.41	0.55
2:B:1327:C:H2'	2:B:1328:C:C6	2.41	0.55
2:B:2631:U:OP2	25:Y:4:SER:HB2	2.06	0.55
2:B:2992:U:H2'	2:B:2993:G:O4'	2.07	0.55
2:B:1869:C:H4'	2:B:3077:A:O2'	2.07	0.55
2:B:536:U:H2'	2:B:537:A:O4'	2.06	0.55
2:B:768:C:C2'	2:B:769:G:H5'	2.35	0.55
3:C:131:A:O2'	3:C:132:G:H5'	2.06	0.55
3:C:20:U:H2'	3:C:21:C:C2	2.41	0.55
29:CA:92:LYS:HG3	29:CA:112:THR:HG23	1.88	0.55
82:DC:281:ILE:HA	82:DC:284:LEU:HD12	1.89	0.55
82:DC:491:VAL:HA	82:DC:559:PRO:HD3	1.89	0.55
83:EC:6934:U:H3'	83:EC:6935:G:H4'	1.89	0.55
2:B:3150:A:H4'	7:G:128:LYS:O	2.06	0.55
7:G:218:ILE:HG13	7:G:276:THR:HG23	1.88	0.55
9:I:144:VAL:HG22	9:I:145:PHE:H	1.72	0.55
61:IB:55:ASP:CB	61:IB:58:CYS:HB2	2.26	0.55
10:J:36:PRO:HB3	10:J:55:LEU:O	2.07	0.55
11:K:43:ILE:HA	11:K:46:GLU:OE1	2.06	0.55
37:KA:32:ILE:HG13	37:KA:35:VAL:HG21	1.87	0.55
12:L:160:ILE:HD12	19:S:22:LEU:HD11	1.89	0.55
2:B:1822:C:OP1	38:LA:66:SER:HA	2.05	0.55
1:A:1479:A:O2'	69:QB:15:ILE:HD11	2.07	0.55
19:S:100:ALA:O	19:S:104:GLU:HG3	2.06	0.55
19:S:154:PRO:HA	19:S:157:LYS:HG3	1.89	0.55
19:S:49:ARG:CB	19:S:49:ARG:NH1	2.61	0.55
71:SB:9:VAL:HG22	71:SB:10:GLU:N	2.21	0.55
46:TA:11:TYR:HE1	46:TA:13:LYS:HA	1.71	0.55
72:TB:81:VAL:HG11	72:TB:86:ILE:HG23	1.88	0.55
21:U:30:ARG:NH1	21:U:62:ARG:HB2	2.21	0.55
48:VA:33:VAL:HG21	48:VA:38:MET:SD	2.47	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:X:23:LYS:O	24:X:24:LEU:HB2	2.06	0.55
50:XA:139:VAL:HG22	50:XA:139:VAL:O	2.06	0.55
50:XA:31:VAL:HG23	50:XA:150:ASP:HA	1.88	0.55
11:K:77:VAL:HG22	25:Y:139:ARG:O	2.06	0.55
51:YA:167:VAL:HA	51:YA:170:GLU:CB	2.37	0.55
52:ZA:225:LEU:HD21	52:ZA:230:TRP:CD1	2.42	0.55
1:A:1351:G:H2'	1:A:1352:G:O4'	2.06	0.55
1:A:991:G:O2'	1:A:992:A:H5''	2.06	0.55
53:AB:31:GLU:HA	53:AB:107:PHE:HZ	1.72	0.55
53:AB:163:PRO:CA	53:AB:167:PHE:HD2	2.19	0.55
2:B:1487:G:C2'	2:B:1488:G:H5''	2.36	0.55
2:B:149:U:C3'	2:B:150:A:H5''	2.37	0.55
2:B:1666:G:H2'	2:B:1667:A:H8	1.71	0.55
2:B:271:C:H1'	2:B:295:A:N6	2.21	0.55
2:B:3183:A:C2'	2:B:3184:A:H5'	2.37	0.55
2:B:64:G:H22	2:B:322:U:H2'	1.72	0.55
2:B:534:U:O2'	24:X:146:LYS:HD3	2.07	0.55
2:B:582:G:H2'	2:B:583:G:H8	1.72	0.55
2:B:757:C:H2'	2:B:758:C:H5''	1.89	0.55
2:B:807:A:H2	2:B:808:A:C8	2.25	0.55
2:B:839:C:H4'	2:B:1724:U:O2'	2.06	0.55
28:BA:6:ASP:O	28:BA:8:PHE:N	2.40	0.55
54:BB:124:GLY:HA2	54:BB:142:HIS:CE1	2.42	0.55
55:CB:100:ASN:ND2	55:CB:180:ARG:HD3	2.22	0.55
55:CB:197:GLU:HG3	55:CB:208:SER:HA	1.87	0.55
30:DA:89:LYS:HB2	30:DA:93:ALA:HB3	1.88	0.55
82:DC:239:LYS:O	82:DC:243:ARG:HG3	2.07	0.55
82:DC:412:ARG:HH11	82:DC:426:LEU:HD11	1.71	0.55
82:DC:754:VAL:HA	82:DC:770:ALA:CB	2.37	0.55
82:DC:789:GLY:O	82:DC:791:GLN:N	2.34	0.55
57:EB:64:VAL:N	57:EB:65:PRO:HD2	2.22	0.55
6:F:72:ARG:HG3	6:F:72:ARG:NH1	2.21	0.55
7:G:285:VAL:HA	7:G:322:ILE:HD13	1.88	0.55
59:GB:86:LEU:HD11	59:GB:90:LYS:O	2.06	0.55
8:H:215:ILE:HD11	8:H:219:LEU:HD11	1.88	0.55
11:K:48:ASN:HB3	11:K:182:ASP:OD2	2.07	0.55
11:K:91:GLY:O	11:K:92:ILE:HD12	2.07	0.55
38:LA:10:ARG:O	38:LA:12:PRO:HD3	2.06	0.55
43:QA:27:ILE:HA	43:QA:30:ARG:CG	2.36	0.55
1:A:1383:G:H5'	70:RB:31:VAL:HB	1.89	0.55
2:B:32:U:H5''	19:S:71:ARG:NH1	2.21	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:T:186:ALA:HA	20:T:191:ALA:CB	2.36	0.55
74:VB:110:GLN:O	74:VB:114:ARG:HB2	2.07	0.55
74:VB:12:VAL:HA	74:VB:23:PHE:HB3	1.87	0.55
24:X:52:LYS:HG2	24:X:54:ALA:H	1.72	0.55
24:X:9:VAL:HG13	24:X:61:ILE:HD12	1.88	0.55
50:XA:59:LEU:HA	50:XA:62:ARG:HG3	1.89	0.55
50:XA:84:ARG:NH1	50:XA:84:ARG:HB3	2.11	0.55
51:YA:113:MET:HE3	51:YA:209:ASN:HB3	1.89	0.55
52:ZA:144:TRP:CE2	52:ZA:173:PRO:HG3	2.42	0.55
52:ZA:178:ILE:HD12	52:ZA:178:ILE:H	1.72	0.55
1:A:1480:G:C5'	69:QB:11:ALA:HB3	2.36	0.55
1:A:148:A:H2'	1:A:149:C:H5'	1.86	0.55
1:A:1628:U:H2'	1:A:1629:G:C8	2.42	0.55
1:A:586:G:H5''	80:BC:22:GLU:O	2.06	0.55
53:AB:25:PHE:HA	53:AB:28:GLU:HB3	1.89	0.55
2:B:1309:U:H5''	2:B:1311:G:OP1	2.07	0.55
2:B:149:U:C2'	2:B:150:A:H5''	2.37	0.55
2:B:150:A:H2'	2:B:151:A:O4'	2.06	0.55
2:B:1648:A:H2'	2:B:1649:U:H5'	1.87	0.55
2:B:1764:U:H3'	2:B:1765:U:C5'	2.37	0.55
2:B:1956:A:H2'	2:B:1957:G:H8	1.71	0.55
2:B:215:G:H2'	2:B:216:G:H8	1.72	0.55
2:B:2646:C:H2'	2:B:2647:A:H8	1.71	0.55
2:B:2819:A:H5''	2:B:2866:U:C4	2.41	0.55
54:BB:51:ARG:NH2	54:BB:111:VAL:HG23	2.22	0.55
54:BB:183:VAL:HG13	54:BB:224:ASN:HB3	1.89	0.55
3:C:153:U:O2'	3:C:154:C:H5'	2.07	0.55
82:DC:155:VAL:CG2	82:DC:209:VAL:HG22	2.35	0.55
82:DC:757:GLU:HG3	82:DC:768:VAL:HG22	1.89	0.55
6:F:135:ILE:C	6:F:136:ILE:HD12	2.27	0.55
6:F:64:ARG:HA	6:F:71:LEU:HA	1.89	0.55
2:B:1079:A:H4'	9:I:140:ARG:O	2.07	0.55
9:I:18:THR:HB	9:I:24:ARG:HD3	1.88	0.55
9:I:208:MET:HA	9:I:211:LEU:HD12	1.89	0.55
10:J:22:ARG:HH11	10:J:22:ARG:CB	2.20	0.55
11:K:154:GLY:O	11:K:203:TRP:HB2	2.07	0.55
11:K:240:VAL:HG22	11:K:243:MET:HE1	1.89	0.55
12:L:75:ILE:HA	12:L:78:PHE:HE1	1.72	0.55
14:N:36:LEU:HD21	14:N:69:ARG:HD3	1.89	0.55
18:R:47:ASP:OD1	18:R:81:VAL:HG21	2.07	0.55
70:RB:98:GLN:HA	70:RB:98:GLN:HE21	1.70	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:S:174:ILE:CG2	19:S:185:ALA:HA	2.37	0.55
20:T:189:ASP:O	20:T:193:GLN:HB2	2.07	0.55
21:U:168:LEU:N	21:U:168:LEU:HD12	2.22	0.55
22:V:33:TYR:OH	22:V:124:LEU:HB3	2.06	0.55
48:VA:15:LEU:C	48:VA:15:LEU:HD12	2.27	0.55
2:B:1322:U:H1'	24:X:108:GLN:HE22	1.72	0.55
24:X:49:HIS:O	24:X:51:VAL:HG22	2.07	0.55
25:Y:118:GLU:O	25:Y:122:GLN:HB2	2.07	0.55
51:YA:220:GLN:HB2	51:YA:221:PRO:HD2	1.89	0.55
52:ZA:53:ILE:CG2	52:ZA:56:ILE:HD12	2.35	0.55
1:A:1205:C:H2'	1:A:1206:U:C5'	2.36	0.55
1:A:1563:C:H5'	69:QB:84:LYS:NZ	2.21	0.55
53:AB:103:GLU:OE2	53:AB:106:LYS:HD3	2.07	0.55
2:B:1383:G:H2'	2:B:1384:U:C6	2.42	0.55
2:B:143:G:H2'	2:B:144:A:C8	2.41	0.55
2:B:1628:C:H5''	2:B:1629:U:C3'	2.32	0.55
2:B:1774:C:C3'	2:B:1775:G:H5''	2.37	0.55
2:B:1831:U:H3'	2:B:1832:C:C6	2.42	0.55
2:B:2561:A:C5	12:L:32:LYS:HD3	2.42	0.55
2:B:2765:C:O2'	2:B:2766:U:H5'	2.07	0.55
2:B:2844:C:C2'	2:B:2845:A:H5'	2.37	0.55
2:B:2902:A:H2'	2:B:2903:A:C8	2.42	0.55
2:B:576:C:H5''	11:K:142:SER:HB2	1.89	0.55
2:B:694:C:OP1	8:H:118:LYS:HD3	2.07	0.55
2:B:75:G:H3'	2:B:76:G:H8	1.72	0.55
2:B:877:C:O2'	2:B:880:G:H1'	2.07	0.55
2:B:16:A:H61	3:C:143:U:H3	1.54	0.55
3:C:82:U:H1'	3:C:87:G:H4'	1.88	0.55
2:B:225:C:OP1	30:DA:47:ALA:HB2	2.07	0.55
56:DB:2:LYS:CB	56:DB:108:VAL:HG22	2.37	0.55
56:DB:190:GLN:O	56:DB:194:LYS:HG3	2.07	0.55
82:DC:203:TYR:CD2	82:DC:206:ARG:HD2	2.39	0.55
82:DC:443:GLU:OE2	82:DC:444:PRO:HD2	2.07	0.55
82:DC:806:SER:HB3	82:DC:813:SER:OG	2.07	0.55
57:EB:56:LYS:HB2	57:EB:88:ARG:HD2	1.88	0.55
83:EC:6935:G:C4	83:EC:6935:G:H5'	2.42	0.55
6:F:32:LEU:HB2	6:F:163:ARG:CZ	2.36	0.55
2:B:1887:A:H4'	7:G:227:GLU:CA	2.37	0.55
59:GB:80:LEU:HD13	59:GB:96:VAL:HG11	1.89	0.55
60:HB:82:LEU:HB3	60:HB:86:ILE:HG12	1.89	0.55
9:I:55:PHE:HE2	9:I:159:VAL:HG22	1.72	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:KA:32:ILE:CG1	37:KA:35:VAL:HG21	2.37	0.55
63:KB:16:ILE:HG13	63:KB:62:GLN:NE2	2.23	0.55
12:L:134:TYR:HB3	12:L:190:VAL:HG23	1.89	0.55
38:LA:86:LYS:O	38:LA:90:ILE:HG12	2.07	0.55
13:M:101:VAL:HA	13:M:113:GLU:O	2.07	0.55
14:N:174:THR:HG21	14:N:181:TYR:CD1	2.42	0.55
66:NB:41:PRO:HD3	66:NB:74:HIS:ND1	2.21	0.55
42:PA:31:LEU:H	42:PA:31:LEU:HD23	1.70	0.55
43:QA:3:ALA:H	43:QA:5:LYS:HZ2	1.53	0.55
71:SB:1:MET:CE	71:SB:13:VAL:HG22	2.37	0.55
49:WA:255:ALA:CB	49:WA:260:ILE:HG23	2.37	0.55
49:WA:59:ARG:HG3	49:WA:59:ARG:HH11	1.73	0.55
50:XA:59:LEU:H	50:XA:59:LEU:HD12	1.72	0.55
1:A:1643:U:H2'	1:A:1644:C:H6	1.72	0.54
1:A:1721:A:H2'	1:A:1722:A:H8	1.72	0.54
1:A:30:G:H2'	1:A:31:C:C6	2.42	0.54
1:A:325:G:O2'	1:A:326:G:H5'	2.08	0.54
1:A:580:A:OP1	1:A:580:A:H8	1.91	0.54
1:A:697:C:H1'	1:A:733:A:H61	1.72	0.54
1:A:834:G:H2'	1:A:835:U:C6	2.42	0.54
27:AA:12:ARG:HG3	27:AA:12:ARG:HH11	1.72	0.54
53:AB:40:ARG:HG3	53:AB:49:ILE:CD1	2.37	0.54
2:B:1100:U:H2'	2:B:1101:G:C8	2.42	0.54
2:B:1108:U:H2'	2:B:1109:U:H6	1.71	0.54
2:B:1240:A:C3'	2:B:1241:U:H5''	2.38	0.54
2:B:1321:G:H2'	2:B:1322:U:O4'	2.07	0.54
2:B:1348:U:H4'	2:B:1349:G:C5'	2.36	0.54
2:B:1829:G:H5''	2:B:1830:G:H5'	1.88	0.54
2:B:2420:C:O2'	2:B:2421:U:H5'	2.06	0.54
2:B:2528:G:H2'	2:B:2529:A:C8	2.41	0.54
2:B:2582:C:H2'	2:B:2583:C:H6	1.70	0.54
2:B:2909:U:H2'	2:B:2910:A:H5''	1.89	0.54
2:B:3123:A:H5''	20:T:134:LYS:HD2	1.89	0.54
2:B:342:A:C6	2:B:349:A:C8	2.94	0.54
54:BB:100:ARG:HH22	54:BB:118:GLU:HG2	1.73	0.54
54:BB:234:PRO:CG	54:BB:238:LEU:HD11	2.35	0.54
56:DB:81:VAL:HG22	56:DB:82:SER:N	2.14	0.54
82:DC:589:LYS:HB2	82:DC:689:LEU:HD21	1.88	0.54
82:DC:750:LYS:HA	82:DC:776:GLU:OE1	2.07	0.54
57:EB:89:HIS:ND1	57:EB:168:SER:HB3	2.22	0.54
6:F:53:GLY:O	6:F:192:LYS:HE2	2.06	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:FB:188:GLU:HG2	61:IB:13:PHE:CD2	2.42	0.54
59:GB:60:LEU:HD21	59:GB:93:LEU:HD12	1.89	0.54
8:H:167:ALA:O	8:H:170:LYS:HB2	2.06	0.54
8:H:186:LYS:O	8:H:200:THR:HG22	2.07	0.54
8:H:200:THR:HG23	8:H:200:THR:O	2.08	0.54
8:H:65:TRP:HB3	8:H:69:ARG:HG3	1.88	0.54
9:I:22:ARG:HG2	9:I:28:THR:HB	1.90	0.54
61:IB:54:ILE:O	61:IB:55:ASP:CB	2.55	0.54
1:A:975:C:H5''	63:KB:109:LYS:HD2	1.89	0.54
13:M:12:VAL:CG1	13:M:16:VAL:HB	2.37	0.54
39:MA:9:LEU:HD22	39:MA:17:LEU:HD22	1.88	0.54
14:N:61:SER:CB	14:N:63:GLU:HG2	2.37	0.54
14:N:74:LYS:HE3	14:N:74:LYS:HA	1.87	0.54
66:NB:73:GLY:O	66:NB:77:GLN:HG3	2.07	0.54
67:OB:45:ARG:HA	67:OB:48:ASN:HD22	1.72	0.54
68:PB:37:GLY:HA3	68:PB:100:THR:O	2.07	0.54
17:Q:80:VAL:HG11	17:Q:87:ALA:CA	2.37	0.54
70:RB:58:LEU:HG	70:RB:89:ARG:HA	1.88	0.54
19:S:115:VAL:HG21	19:S:160:GLU:HB3	1.89	0.54
46:TA:45:ARG:HH11	46:TA:45:ARG:HG2	1.72	0.54
21:U:57:ALA:HB3	21:U:73:GLY:CA	2.37	0.54
73:UB:51:GLY:HA2	73:UB:77:ILE:HG13	1.90	0.54
49:WA:131:ILE:HD12	49:WA:181:TRP:NE1	2.23	0.54
50:XA:51:GLY:O	50:XA:55:GLU:HG3	2.07	0.54
51:YA:81:PHE:CD2	51:YA:109:LYS:HG2	2.41	0.54
51:YA:94:LYS:HD2	51:YA:94:LYS:O	2.07	0.54
78:ZB:17:GLY:O	78:ZB:26:THR:HG23	2.06	0.54
1:A:56:U:H4'	1:A:57:G:H5'	1.89	0.54
1:A:611:U:H5''	73:UB:5:LYS:HD3	1.87	0.54
1:A:678:A:C2'	1:A:679:U:H5'	2.36	0.54
1:A:961:U:H2'	1:A:962:C:H6	1.71	0.54
27:AA:23:MET:SD	27:AA:78:VAL:HG22	2.48	0.54
49:WA:223:TRP:HZ3	53:AB:222:VAL:HB	1.72	0.54
2:B:1853:U:H5'	41:OA:10:LYS:HG2	1.89	0.54
2:B:2304:C:H2'	2:B:2305:G:H5'	1.88	0.54
2:B:232:G:H2'	2:B:233:C:C6	2.43	0.54
2:B:2547:A:H2'	2:B:2548:C:H5'	1.89	0.54
2:B:2651:G:H5''	2:B:2652:U:C1'	2.36	0.54
2:B:527:A:H2'	2:B:528:U:O4'	2.07	0.54
54:BB:185:GLY:HA3	54:BB:224:ASN:ND2	2.22	0.54
29:CA:113:LEU:HD12	29:CA:114:VAL:N	2.21	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DA:56:VAL:HG11	30:DA:104:LEU:HD13	1.88	0.54
82:DC:143:LEU:HD11	82:DC:185:VAL:CG1	2.27	0.54
82:DC:164:LEU:O	82:DC:168:GLN:HG2	2.08	0.54
82:DC:394:PHE:CZ	82:DC:513:LYS:HB3	2.41	0.54
82:DC:545:LEU:HD12	82:DC:549:HIS:HB2	1.89	0.54
6:F:177:LYS:HD3	47:UA:69:TYR:CE1	2.42	0.54
2:B:824:C:H5''	6:F:21:ARG:HD3	1.88	0.54
58:FB:78:ILE:HA	58:FB:103:GLN:O	2.06	0.54
2:B:2879:C:OP2	7:G:5:LYS:HG2	2.07	0.54
8:H:236:LEU:O	8:H:240:PRO:HG3	2.08	0.54
9:I:115:LEU:HD13	9:I:118:THR:HG23	1.88	0.54
9:I:65:ILE:CG1	9:I:74:VAL:HG22	2.37	0.54
35:IA:62:ARG:HB3	35:IA:66:GLY:CA	2.37	0.54
10:J:118:GLU:HG2	10:J:121:LEU:HD12	1.89	0.54
1:A:960:U:P	63:KB:55:ARG:HE	2.29	0.54
17:Q:47:ALA:CB	39:MA:115:LYS:HG3	2.37	0.54
39:MA:83:LYS:HE3	41:OA:66:TYR:OH	2.06	0.54
65:MB:20:VAL:HG21	65:MB:36:LEU:HD22	1.89	0.54
17:Q:162:ASN:ND2	17:Q:164:GLU:HG2	2.20	0.54
17:Q:56:PRO:O	17:Q:71:ALA:HA	2.06	0.54
70:RB:38:SER:O	70:RB:42:VAL:HG23	2.08	0.54
19:S:35:VAL:HA	19:S:65:ARG:NE	2.19	0.54
20:T:125:ARG:C	20:T:127:LEU:H	2.10	0.54
48:VA:42:ARG:HB3	48:VA:46:ARG:NH2	2.22	0.54
75:WB:36:ALA:N	75:WB:40:VAL:HG21	2.22	0.54
25:Y:13:TYR:HB3	25:Y:16:GLN:HE21	1.70	0.54
25:Y:56:PHE:O	25:Y:60:LYS:HD2	2.07	0.54
51:YA:135:LEU:HD23	51:YA:181:LEU:HD12	1.89	0.54
1:A:1230:A:N6	1:A:1255:G:H1'	2.21	0.54
1:A:1620:C:H2'	1:A:1621:U:C6	2.42	0.54
1:A:1680:G:C1'	1:A:1721:A:N6	2.71	0.54
1:A:108:A:H4'	1:A:363:G:O2'	2.07	0.54
1:A:632:U:H5''	73:UB:10:ASN:O	2.08	0.54
1:A:633:U:H2'	1:A:634:G:H8	1.70	0.54
1:A:677:G:O2'	1:A:678:A:H5'	2.07	0.54
1:A:758:U:C5'	59:GB:7:THR:HG21	2.37	0.54
1:A:776:G:N3	54:BB:261:LEU:HD13	2.22	0.54
1:A:833:U:H5'	1:A:834:G:H5''	1.88	0.54
2:B:1103:A:N6	22:V:9:GLN:HE22	2.05	0.54
2:B:1344:G:H1'	11:K:159:GLN:NE2	2.22	0.54
2:B:1674:G:H2'	2:B:1675:G:O4'	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2137:U:C6	2:B:2141:U:C4	2.96	0.54
2:B:2244:A:H5''	6:F:243:THR:OG1	2.07	0.54
2:B:2732:G:H2'	2:B:2733:A:H8	1.71	0.54
2:B:2883:U:H2'	2:B:2884:C:H6	1.71	0.54
2:B:666:A:C3'	2:B:667:C:H5''	2.37	0.54
2:B:14:U:C5	3:C:137:C:H1'	2.42	0.54
3:C:133:G:H4'	29:CA:55:ASN:ND2	2.22	0.54
4:D:55:A:H2	15:O:134:PRO:HB2	1.72	0.54
30:DA:19:TYR:O	30:DA:22:ALA:HB3	2.06	0.54
82:DC:454:ILE:HG23	82:DC:456:LEU:CD2	2.37	0.54
2:B:2466:G:H5'	5:E:106:LYS:HA	1.89	0.54
58:FB:3:ILE:N	58:FB:3:ILE:HD12	2.23	0.54
7:G:222:LYS:HA	7:G:334:ARG:NH1	2.23	0.54
7:G:305:ILE:HD12	7:G:306:THR:H	1.73	0.54
34:HA:34:LEU:HD23	34:HA:59:TYR:HB3	1.88	0.54
60:HB:18:GLU:O	60:HB:89:GLY:HA3	2.06	0.54
9:I:78:ALA:HB3	9:I:105:ILE:CG1	2.36	0.54
9:I:39:GLN:CD	9:I:43:LYS:HD2	2.27	0.54
37:KA:32:ILE:CG2	37:KA:100:ILE:HD12	2.38	0.54
64:LB:133:ARG:HG2	64:LB:136:ARG:NE	2.06	0.54
13:M:28:VAL:HG13	13:M:33:THR:HG22	1.88	0.54
65:MB:94:VAL:CG2	65:MB:107:ILE:HD11	2.37	0.54
14:N:176:LEU:HD22	14:N:180:GLU:HG3	1.88	0.54
40:NA:56:ARG:HH11	40:NA:60:LEU:HD21	1.70	0.54
15:O:23:VAL:HB	15:O:65:ILE:O	2.08	0.54
70:RB:77:LYS:HD3	70:RB:77:LYS:H	1.72	0.54
19:S:139:HIS:O	19:S:143:ARG:HG3	2.07	0.54
18:R:123:LEU:CD2	20:T:190:VAL:HG23	2.37	0.54
21:U:36:ILE:HG21	21:U:117:ILE:HG12	1.90	0.54
23:W:10:LEU:HA	23:W:13:SER:HB2	1.89	0.54
23:W:45:VAL:HA	23:W:50:ILE:HB	1.88	0.54
50:XA:70:PRO:HA	50:XA:73:VAL:HG21	1.88	0.54
52:ZA:222:TYR:C	52:ZA:224:PHE:N	2.59	0.54
1:A:1042:G:H2'	1:A:1043:A:O4'	2.08	0.54
1:A:1439:C:H2'	1:A:1440:C:H6	1.72	0.54
1:A:1602:C:H2'	1:A:1603:U:C6	2.42	0.54
1:A:1606:C:H2'	1:A:1607:G:C8	2.42	0.54
1:A:407:A:N3	1:A:1671:A:H2	2.05	0.54
27:AA:84:SER:HA	27:AA:94:TYR:HB3	1.89	0.54
2:B:27:C:O2'	2:B:28:C:H5'	2.08	0.54
2:B:357:A:H2'	2:B:358:G:O4'	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:382:U:O4'	21:U:100:ALA:HB1	2.06	0.54
2:B:760:G:H1'	2:B:770:G:N2	2.22	0.54
2:B:903:U:H2'	2:B:904:A:C8	2.41	0.54
28:BA:1:MET:HB2	28:BA:15:PRO:CG	2.30	0.54
29:CA:33:ARG:O	29:CA:35:PRO:HD3	2.07	0.54
4:D:100:C:P	24:X:52:LYS:HG3	2.47	0.54
82:DC:274:ASN:H	82:DC:274:ASN:ND2	2.06	0.54
82:DC:635:CYS:HB3	82:DC:668:GLN:NE2	2.21	0.54
57:EB:51:VAL:HG11	57:EB:168:SER:HA	1.88	0.54
83:EC:6836:U:H4'	83:EC:6877:C:H42	1.72	0.54
32:FA:86:LYS:HB3	32:FA:90:TYR:CE2	2.42	0.54
7:G:166:ILE:HD11	7:G:171:LEU:HD12	1.90	0.54
2:B:3003:G:H4'	7:G:180:GLU:OE2	2.07	0.54
19:S:58:GLY:O	19:S:135:VAL:HA	2.07	0.54
72:TB:36:LYS:O	72:TB:40:VAL:HG23	2.07	0.54
21:U:2:ALA:HB3	21:U:18:ARG:NH1	2.22	0.54
23:W:69:SER:O	23:W:74:ARG:HB2	2.07	0.54
1:A:1222:C:H2'	1:A:1223:A:C8	2.43	0.54
1:A:1316:G:H4'	67:OB:10:LYS:CE	2.34	0.54
1:A:1790:A:H2'	1:A:1791:A:O4'	2.08	0.54
1:A:567:A:OP1	73:UB:68:ILE:HB	2.08	0.54
1:A:633:U:H5''	73:UB:9:LEU:HD13	1.88	0.54
1:A:804:A:N3	72:TB:105:THR:HG22	2.22	0.54
2:B:1105:A:H2'	2:B:1106:G:H8	1.73	0.54
2:B:110:G:C2	2:B:111:C:H1'	2.42	0.54
2:B:1220:U:H3'	2:B:1221:A:N3	2.22	0.54
2:B:1233:G:C1'	16:P:121:PHE:HA	2.38	0.54
2:B:1473:G:H4'	23:W:23:TRP:NE1	2.23	0.54
2:B:148:G:H4'	19:S:55:ALA:HB2	1.90	0.54
2:B:1545:A:H2'	2:B:1547:G:OP2	2.08	0.54
2:B:208:C:H2'	2:B:209:A:H5'	1.88	0.54
2:B:214:G:H2'	2:B:215:G:C8	2.42	0.54
2:B:2512:C:H5'	12:L:249:ARG:NH1	2.23	0.54
2:B:2531:C:H5'	2:B:2531:C:H6	1.72	0.54
2:B:269:G:H4'	2:B:270:U:H6	1.72	0.54
2:B:431:U:H2'	2:B:432:G:H8	1.71	0.54
2:B:729:C:H2'	2:B:730:C:H5'	1.90	0.54
2:B:749:C:OP1	33:GA:32:LEU:HB2	2.06	0.54
80:BC:24:THR:OG1	80:BC:26:LYS:HD2	2.07	0.54
3:C:98:U:C2'	3:C:99:C:H5'	2.36	0.54
55:CB:116:HIS:O	55:CB:120:ILE:HG13	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:DB:155:ASP:C	56:DB:157:VAL:H	2.11	0.54
56:DB:5:ILE:N	56:DB:5:ILE:HD12	2.22	0.54
82:DC:516:PRO:HG2	82:DC:517:CYS:H	1.72	0.54
5:E:16:LEU:HD11	5:E:208:SER:CB	2.36	0.54
31:EA:22:LYS:NZ	31:EA:129:TRP:O	2.41	0.54
31:EA:88:ASP:CG	31:EA:89:VAL:H	2.09	0.54
83:EC:6772:G:H3'	83:EC:6773:G:C5'	2.37	0.54
83:EC:6862:G:N7	83:EC:6864:A:H1'	2.22	0.54
2:B:3379:C:H1'	7:G:309:GLY:O	2.07	0.54
59:GB:60:LEU:HD13	59:GB:69:ARG:NH2	2.22	0.54
8:H:154:THR:HA	8:H:251:THR:HG22	1.89	0.54
60:HB:54:TYR:O	60:HB:68:LEU:HD12	2.08	0.54
61:IB:74:THR:N	61:IB:86:ILE:HB	2.23	0.54
10:J:131:LYS:HD2	10:J:133:GLU:H	1.73	0.54
11:K:98:LYS:HB3	11:K:99:PRO:CD	2.32	0.54
63:KB:16:ILE:HG23	72:TB:57:ARG:NH2	2.17	0.54
2:B:1655:G:H4'	38:LA:59:PRO:CG	2.38	0.54
66:NB:65:ILE:HG21	66:NB:85:ILE:HG23	1.89	0.54
15:O:21:ILE:HG22	15:O:22:SER:N	2.22	0.54
15:O:94:ARG:HD3	15:O:94:ARG:N	2.21	0.54
3:C:103:G:H5''	41:OA:39:TYR:OH	2.06	0.54
68:PB:17:LEU:H	68:PB:22:VAL:CG2	2.20	0.54
68:PB:24:GLY:O	68:PB:26:ILE:HG12	2.08	0.54
68:PB:25:ASN:O	68:PB:26:ILE:HG23	2.07	0.54
19:S:175:ASN:O	19:S:176:LYS:HG3	2.07	0.54
2:B:787:G:OP2	22:V:147:ARG:HG3	2.08	0.54
22:V:151:ARG:O	22:V:161:LYS:HG2	2.08	0.54
23:W:72:GLU:HB3	23:W:74:ARG:NH1	2.21	0.54
23:W:80:LYS:O	23:W:81:ARG:HG3	2.07	0.54
50:XA:183:ARG:HD3	50:XA:191:ARG:NH2	2.19	0.54
25:Y:75:ILE:HA	25:Y:87:LYS:O	2.07	0.54
52:ZA:138:PRO:HB2	52:ZA:222:TYR:CE2	2.42	0.54
1:A:827:C:H2'	1:A:828:U:C6	2.42	0.54
2:B:1048:A:H2	2:B:2646:C:O2	1.90	0.54
2:B:118:U:H2'	2:B:119:U:O4'	2.08	0.54
2:B:1368:U:C2'	2:B:1369:A:H5'	2.38	0.54
2:B:1369:A:C2'	2:B:1370:G:H5'	2.37	0.54
2:B:1655:G:H5''	38:LA:58:ARG:NH1	2.23	0.54
2:B:174:C:H2'	2:B:175:C:C6	2.43	0.54
2:B:1878:G:C3'	2:B:1879:A:H5''	2.38	0.54
2:B:2154:U:H4'	6:F:240:ALA:HB2	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:3111:U:O4	2:B:3121:U:H5	1.90	0.54
2:B:3141:A:H3'	2:B:3142:A:H4'	1.89	0.54
2:B:3215:A:OP1	37:KA:2:ALA:HB2	2.07	0.54
2:B:3335:A:H2'	2:B:3336:A:C8	2.43	0.54
2:B:34:A:H2'	2:B:35:A:C8	2.42	0.54
2:B:528:U:H2'	2:B:529:A:C8	2.41	0.54
2:B:639:G:OP1	36:JA:40:SER:HB2	2.08	0.54
2:B:707:U:H2'	2:B:708:G:C5'	2.31	0.54
2:B:746:A:H2'	2:B:747:A:H8	1.72	0.54
2:B:920:A:H2'	2:B:920:A:OP2	2.08	0.54
28:BA:23:ARG:HG2	28:BA:24:GLY:H	1.73	0.54
54:BB:122:LYS:HD2	54:BB:164:LEU:HD21	1.88	0.54
54:BB:95:THR:HA	74:VB:16:PRO:HB2	1.88	0.54
82:DC:274:ASN:N	82:DC:274:ASN:ND2	2.55	0.54
82:DC:412:ARG:HA	82:DC:428:ILE:HG12	1.89	0.54
6:F:158:ILE:HD12	6:F:162:ALA:CB	2.37	0.54
58:FB:7:SER:O	58:FB:10:LYS:HB3	2.08	0.54
59:GB:81:VAL:HG21	59:GB:91:LYS:HD2	1.88	0.54
8:H:299:ILE:HG22	8:H:300:ARG:N	2.22	0.54
60:HB:77:ARG:NH2	60:HB:88:PRO:HG3	2.22	0.54
61:IB:80:MET:HB3	61:IB:83:THR:O	2.08	0.54
10:J:77:ARG:HG2	10:J:78:ARG:H	1.72	0.54
15:O:8:PRO:HG2	15:O:10:ARG:HG3	1.90	0.54
15:O:109:HIS:CE1	15:O:122:ILE:HA	2.43	0.54
16:P:123:ARG:HH22	48:VA:42:ARG:CD	2.21	0.54
18:R:50:LYS:HG2	18:R:85:TRP:NE1	2.23	0.54
20:T:14:HIS:HB3	20:T:123:ALA:HB1	1.89	0.54
21:U:119:VAL:HA	21:U:145:HIS:O	2.08	0.54
21:U:171:ARG:HG3	21:U:171:ARG:HH11	1.71	0.54
50:XA:110:TYR:HA	50:XA:115:PHE:CE1	2.42	0.54
2:B:2701:U:OP1	25:Y:23:GLY:N	2.40	0.54
72:TB:23:ARG:HB2	77:YB:3:LEU:O	2.08	0.54
1:A:1650:U:H2'	1:A:1651:A:C8	2.42	0.54
1:A:636:A:H2'	1:A:637:C:O4'	2.07	0.54
1:A:94:U:OP1	54:BB:2:ALA:HB1	2.08	0.54
1:A:992:A:C2	1:A:1012:U:N3	2.70	0.54
2:B:1342:C:O2'	2:B:1343:A:H5'	2.07	0.54
2:B:1456:A:C5	35:IA:64:VAL:HG11	2.42	0.54
2:B:1584:U:H2'	2:B:1585:C:H6	1.73	0.54
2:B:1706:C:H2'	2:B:1707:A:O4'	2.08	0.54
2:B:1894:U:H2'	2:B:1895:A:C8	2.43	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2267:C:H2'	2:B:2268:U:O4'	2.08	0.54
2:B:2565:U:H2'	2:B:2566:C:C5	2.43	0.54
2:B:2599:U:H2'	2:B:2600:C:C6	2.41	0.54
2:B:2939:G:O2'	2:B:2940:A:H5'	2.08	0.54
2:B:795:G:H4'	2:B:1111:U:O3'	2.08	0.54
2:B:825:U:C2'	2:B:826:G:H5''	2.36	0.54
2:B:944:C:H2'	2:B:945:C:C6	2.43	0.54
2:B:966:U:C4'	32:FA:43:ILE:HG21	2.38	0.54
54:BB:12:LEU:HD11	59:GB:4:ALA:HA	1.88	0.54
54:BB:10:LYS:HA	54:BB:27:TYR:HA	1.89	0.54
3:C:36:G:C8	39:MA:86:ARG:HD3	2.43	0.54
30:DA:120:GLN:NE2	30:DA:126:LEU:HD23	2.22	0.54
82:DC:587:TYR:CD2	82:DC:690:ASP:HB3	2.39	0.54
31:EA:46:ILE:HA	31:EA:70:PRO:HA	1.89	0.54
57:EB:31:SER:N	57:EB:32:PRO:HD2	2.23	0.54
58:FB:72:ILE:HD12	58:FB:72:ILE:O	2.08	0.54
2:B:3312:U:C5'	7:G:25:ILE:HD12	2.26	0.54
8:H:206:LEU:HD11	8:H:228:ALA:HB2	1.89	0.54
8:H:82:THR:CG2	8:H:84:ARG:HB3	2.37	0.54
9:I:39:GLN:NE2	9:I:43:LYS:HD2	2.22	0.54
35:IA:25:PHE:CD2	35:IA:65:LYS:HB2	2.43	0.54
1:A:1073:G:H5''	63:KB:9:LYS:O	2.07	0.54
12:L:178:ALA:HB2	12:L:218:ILE:CG2	2.38	0.54
12:L:248:LYS:HA	12:L:252:ASN:ND2	2.22	0.54
2:B:3034:C:O2'	13:M:122:LYS:HG3	2.07	0.54
2:B:3110:C:H1'	13:M:156:GLN:OE1	2.08	0.54
68:PB:50:ALA:HB3	68:PB:52:VAL:HG23	1.90	0.54
19:S:88:GLY:O	19:S:89:VAL:HG13	2.08	0.54
45:SA:2:ARG:HD2	45:SA:2:ARG:H	1.72	0.54
71:SB:16:LYS:HA	71:SB:22:ARG:O	2.06	0.54
71:SB:83:TRP:CZ2	77:YB:4:VAL:HG13	2.43	0.54
20:T:36:VAL:HG23	20:T:37:ARG:HG3	1.88	0.54
20:T:61:ALA:HA	20:T:70:PRO:CD	2.21	0.54
23:W:138:LEU:HD21	23:W:142:ILE:HD12	1.88	0.54
23:W:173:ARG:HA	23:W:176:ARG:HD3	1.90	0.54
49:WA:176:LYS:HG2	49:WA:197:SER:O	2.08	0.54
75:WB:84:GLU:HG3	75:WB:91:PRO:HD3	1.88	0.54
1:A:1013:A:H3'	1:A:1014:G:H8	1.72	0.54
1:A:1474:G:H2'	1:A:1475:A:H8	1.71	0.54
1:A:1777:G:H2'	1:A:1778:G:H8	1.73	0.54
27:AA:114:ILE:HD13	27:AA:132:ASN:O	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:AB:98:ALA:CA	53:AB:188:ILE:HD12	2.34	0.54
2:B:105:C:H2'	2:B:106:A:H8	1.70	0.54
2:B:136:G:H2'	2:B:137:G:H8	1.73	0.54
2:B:2111:G:H3'	2:B:2112:U:H5'	1.90	0.54
2:B:2352:A:H5''	21:U:83:TRP:O	2.07	0.54
2:B:2464:U:H2'	2:B:2465:G:H5'	1.89	0.54
2:B:2767:U:H2'	2:B:2768:U:H6	1.73	0.54
2:B:3107:U:H2'	2:B:3108:G:C8	2.43	0.54
2:B:3165:A:H2'	2:B:3166:C:C6	2.43	0.54
2:B:753:C:H2'	2:B:754:G:H8	1.72	0.54
2:B:916:G:C5	6:F:207:VAL:HG21	2.42	0.54
28:BA:8:PHE:HE1	28:BA:46:PRO:HD3	1.73	0.54
3:C:143:U:H2'	3:C:144:G:O4'	2.07	0.54
55:CB:146:THR:HA	55:CB:158:GLN:O	2.08	0.54
55:CB:179:ALA:HB3	55:CB:194:LEU:HD22	1.89	0.54
82:DC:263:ASP:OD2	82:DC:265:GLU:HB2	2.07	0.54
2:B:1711:C:H5'	31:EA:38:PHE:HD1	1.73	0.54
31:EA:54:THR:HG22	31:EA:57:HIS:CD2	2.43	0.54
31:EA:10:VAL:CG2	31:EA:87:LEU:HD23	2.37	0.54
83:EC:6929:C:H2'	83:EC:6930:G:O4'	2.08	0.54
1:A:397:A:H4'	58:FB:50:GLY:C	2.28	0.54
8:H:38:VAL:O	8:H:42:VAL:HG23	2.06	0.54
34:HA:27:TYR:HB2	34:HA:52:ARG:HH12	1.73	0.54
9:I:95:TRP:CZ3	9:I:161:GLY:HA2	2.43	0.54
10:J:40:LEU:HD22	10:J:84:VAL:HB	1.90	0.54
37:KA:45:LEU:HA	37:KA:71:VAL:CG1	2.36	0.54
63:KB:113:PHE:CZ	63:KB:117:LEU:HD11	2.43	0.54
13:M:8:GLN:HG2	13:M:68:LEU:CD1	2.35	0.54
65:MB:73:PRO:HD2	65:MB:92:SER:HA	1.90	0.54
15:O:37:LEU:HB3	15:O:69:VAL:HG11	1.90	0.54
2:B:52:A:H4'	41:OA:49:TRP:HB3	1.89	0.54
19:S:38:ARG:HA	19:S:62:TYR:CD2	2.42	0.54
22:V:51:ALA:HB3	22:V:84:VAL:HG11	1.89	0.54
23:W:96:ILE:HG22	23:W:100:ARG:CZ	2.36	0.54
50:XA:122:ILE:HG12	50:XA:144:ILE:HD12	1.90	0.54
1:A:1447:C:H3'	1:A:1448:G:C5'	2.38	0.54
1:A:161:U:H4'	56:DB:83:CYS:O	2.08	0.54
1:A:1681:A:H1'	56:DB:66:GLY:CA	2.35	0.54
1:A:911:U:H2'	1:A:912:U:H5''	1.90	0.54
2:B:126:U:H2'	2:B:127:G:C8	2.43	0.54
2:B:1306:G:C6	20:T:62:THR:HA	2.43	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:160:G:H2'	2:B:161:G:H8	1.73	0.54
2:B:185:C:H5'	30:DA:121:ARG:NE	2.14	0.54
2:B:1202:A:H2	2:B:2856:G:HO2'	1.52	0.54
2:B:2993:G:C5'	21:U:79:THR:HG21	2.38	0.54
2:B:3080:G:O2'	2:B:3081:C:H5'	2.08	0.54
2:B:561:C:H2'	2:B:562:C:C6	2.42	0.54
2:B:719:U:H1'	22:V:72:LYS:HE3	1.90	0.54
2:B:798:G:O2'	17:Q:15:ARG:HD2	2.08	0.54
55:CB:148:ARG:HA	55:CB:157:ARG:HG3	1.90	0.54
82:DC:249:PHE:CD1	82:DC:269:LEU:HB2	2.43	0.54
82:DC:489:VAL:HG11	82:DC:538:LEU:HD22	1.90	0.54
57:EB:135:ILE:HG21	57:EB:152:VAL:CG1	2.38	0.54
6:F:8:GLN:O	6:F:10:LYS:N	2.40	0.54
7:G:57:VAL:HG22	7:G:73:VAL:HG12	1.88	0.54
59:GB:85:VAL:HG22	59:GB:147:MET:HE1	1.89	0.54
59:GB:36:LEU:CD1	59:GB:42:ILE:HG12	2.31	0.54
9:I:21:ARG:HG3	9:I:24:ARG:NH2	2.23	0.54
11:K:100:ARG:O	11:K:104:GLN:HG3	2.07	0.54
11:K:144:ILE:HA	11:K:147:LEU:HD12	1.89	0.54
12:L:99:PRO:HG3	12:L:134:TYR:CE2	2.43	0.54
38:LA:5:VAL:HG21	38:LA:31:ARG:C	2.27	0.54
13:M:68:LEU:HD13	13:M:69:ARG:N	2.23	0.54
65:MB:86:VAL:CG2	65:MB:87:PRO:HD2	2.37	0.54
15:O:137:ARG:O	15:O:141:ARG:HG2	2.06	0.54
15:O:57:PHE:HD2	15:O:59:ILE:HD11	1.73	0.54
15:O:19:LEU:CD1	15:O:69:VAL:HG13	2.36	0.54
42:PA:31:LEU:CA	42:PA:37:PRO:HA	2.37	0.54
19:S:84:PRO:HB3	46:TA:51:GLY:HA2	1.89	0.54
72:TB:49:GLU:O	72:TB:64:GLN:HB2	2.07	0.54
21:U:117:ILE:O	21:U:117:ILE:HG23	2.08	0.54
21:U:4:TYR:CZ	21:U:18:ARG:HG3	2.42	0.54
49:WA:46:LYS:O	49:WA:56:VAL:HG22	2.08	0.54
50:XA:17:LEU:HD21	50:XA:176:LEU:CD1	2.34	0.54
25:Y:100:LYS:NZ	25:Y:100:LYS:HB3	2.21	0.54
25:Y:14:MET:HG3	25:Y:15:PHE:CE2	2.43	0.54
52:ZA:176:SER:H	52:ZA:195:ASP:CG	2.11	0.54
1:A:1083:G:O2'	1:A:1084:A:H5'	2.07	0.54
1:A:1415:U:H2'	1:A:1416:G:C8	2.43	0.54
1:A:1760:G:H2'	1:A:1761:U:O2	2.08	0.54
1:A:351:C:H3'	1:A:352:A:C5'	2.38	0.54
1:A:491:C:C2'	1:A:492:A:H5'	2.38	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:760:A:H2'	1:A:761:G:O4'	2.07	0.54
27:AA:87:ARG:CZ	27:AA:93:LEU:HD11	2.38	0.54
2:B:1186:G:H1'	24:X:112:ALA:CB	2.37	0.54
2:B:1240:A:H3'	2:B:1241:U:H5''	1.90	0.54
2:B:1247:U:O5'	2:B:1247:U:H6	1.91	0.54
2:B:1322:U:H2'	2:B:1323:G:C8	2.42	0.54
2:B:1471:U:OP1	23:W:5:ARG:HD2	2.08	0.54
2:B:1637:A:OP1	31:EA:73:LYS:HD2	2.08	0.54
2:B:2465:G:H5''	5:E:105:LYS:CA	2.30	0.54
2:B:2831:G:H2'	2:B:2832:C:H6	1.72	0.54
2:B:284:A:OP2	46:TA:41:ARG:NE	2.41	0.54
2:B:70:A:C2	2:B:72:C:N4	2.74	0.54
2:B:748:U:O3'	33:GA:32:LEU:HD23	2.08	0.54
2:B:868:C:H2'	2:B:869:G:H8	1.73	0.54
2:B:886:C:H2'	2:B:887:G:H8	1.69	0.54
54:BB:162:ILE:HG22	54:BB:164:LEU:H	1.73	0.54
54:BB:23:LEU:HD13	54:BB:24:SER:N	2.23	0.54
54:BB:95:THR:HG22	74:VB:16:PRO:HD2	1.90	0.54
3:C:119:C:H2'	3:C:120:C:H6	1.73	0.54
55:CB:64:VAL:HG12	55:CB:64:VAL:O	2.08	0.54
82:DC:497:ASN:HB3	82:DC:500:ASP:OD1	2.08	0.54
82:DC:533:THR:H	82:DC:537:HIS:CD2	2.26	0.54
82:DC:826:HIS:HB2	82:DC:828:MET:SD	2.47	0.54
6:F:32:LEU:HB2	6:F:163:ARG:HH21	1.72	0.54
6:F:42:ARG:HE	6:F:87:PHE:HE2	1.56	0.54
58:FB:8:ARG:HG3	58:FB:8:ARG:HH21	1.73	0.54
7:G:162:VAL:CG2	7:G:181:ILE:HD11	2.38	0.54
8:H:136:LEU:HD12	8:H:137:ALA:N	2.23	0.54
38:LA:74:ARG:NH1	38:LA:75:ALA:O	2.41	0.54
64:LB:52:ARG:NH1	64:LB:52:ARG:HB3	2.22	0.54
2:B:3109:G:H1'	13:M:163:GLN:OE1	2.08	0.54
39:MA:66:VAL:HA	39:MA:69:LEU:CD2	2.38	0.54
15:O:57:PHE:HD2	15:O:59:ILE:CD1	2.20	0.54
67:OB:108:ASP:HA	67:OB:111:LYS:HB3	1.88	0.54
22:V:111:ARG:HH21	22:V:121:CYS:HB3	1.73	0.54
23:W:20:ARG:HG3	23:W:21:LYS:HD3	1.90	0.54
75:WB:61:SER:H	75:WB:64:VAL:HB	1.73	0.54
24:X:106:LEU:HB3	24:X:110:MET:CE	2.38	0.54
24:X:29:ILE:HG21	24:X:37:ALA:O	2.08	0.54
24:X:71:LYS:O	24:X:97:VAL:HG23	2.08	0.54
25:Y:13:TYR:O	25:Y:16:GLN:HB2	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:X:26:ARG:O	25:Y:150:THR:HA	2.08	0.54
25:Y:92:ARG:HB3	25:Y:94:GLU:CD	2.27	0.54
1:A:1097:U:H6	52:ZA:168:ARG:HD2	1.73	0.54
1:A:1085:G:N2	1:A:1087:A:H3'	2.22	0.53
1:A:1334:U:O2'	1:A:1335:U:H5'	2.08	0.53
2:B:2080:C:H2'	2:B:2081:U:O4'	2.07	0.53
2:B:2193:U:O2	2:B:2313:A:N7	2.41	0.53
2:B:2512:C:H2'	2:B:2513:U:C6	2.42	0.53
2:B:2547:A:C2'	2:B:2548:C:H5'	2.38	0.53
2:B:2586:G:H2'	2:B:2586:G:OP1	2.09	0.53
2:B:2889:C:O2'	2:B:2890:A:H5'	2.08	0.53
2:B:3182:G:H2'	2:B:3183:A:O4'	2.08	0.53
2:B:3282:U:H2'	2:B:3283:U:H6	1.73	0.53
2:B:444:U:H2'	2:B:445:G:C8	2.44	0.53
2:B:502:U:C2'	2:B:503:C:H5''	2.37	0.53
2:B:516:A:N6	2:B:574:U:H3	2.06	0.53
54:BB:195:ILE:HA	54:BB:210:ILE:HG22	1.89	0.53
3:C:107:G:O4'	3:C:137:C:H2'	2.08	0.53
3:C:7:U:C2'	3:C:8:C:H5'	2.38	0.53
4:D:103:A:H2'	4:D:104:A:H8	1.73	0.53
58:FB:90:LEU:HD22	58:FB:95:THR:HB	1.89	0.53
7:G:23:ALA:HB3	7:G:28:ARG:CZ	2.39	0.53
8:H:145:ILE:HG21	8:H:247:PHE:CZ	2.43	0.53
8:H:150:LEU:HD22	8:H:247:PHE:HE2	1.73	0.53
8:H:84:ARG:O	8:H:87:GLN:HB2	2.08	0.53
35:IA:80:ASN:OD1	35:IA:85:ALA:HB3	2.08	0.53
11:K:25:GLN:O	11:K:26:VAL:C	2.46	0.53
37:KA:50:ALA:HB1	37:KA:66:VAL:HG11	1.89	0.53
12:L:166:LEU:CB	12:L:167:PRO:HD3	2.37	0.53
12:L:38:GLN:HG3	12:L:39:ALA:H	1.73	0.53
1:A:989:U:H1'	64:LB:126:THR:HG23	1.89	0.53
68:PB:145:ARG:HA	68:PB:145:ARG:NE	2.22	0.53
69:QB:86:ARG:HB3	69:QB:89:ARG:HB2	1.88	0.53
18:R:29:ALA:O	18:R:31:LYS:HG3	2.08	0.53
71:SB:80:LYS:HD2	71:SB:81:ASN:HB2	1.89	0.53
72:TB:23:ARG:HH11	72:TB:23:ARG:HG3	1.73	0.53
22:V:130:ARG:C	22:V:132:PRO:HD3	2.28	0.53
2:B:87:U:H5''	22:V:172:PHE:CE2	2.43	0.53
74:VB:47:VAL:HG23	74:VB:48:TYR:CD2	2.43	0.53
23:W:151:ARG:O	23:W:154:ALA:HB3	2.08	0.53
49:WA:40:LYS:HG2	49:WA:66:HIS:O	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:X:151:PRO:O	24:X:152:LEU:HD23	2.08	0.53
4:D:89:G:H5''	24:X:84:ARG:HE	1.72	0.53
25:Y:12:ARG:HH11	25:Y:12:ARG:HG2	1.73	0.53
25:Y:66:ASN:CB	33:GA:35:VAL:HG13	2.37	0.53
51:YA:156:ALA:HB3	51:YA:161:ILE:HG13	1.90	0.53
52:ZA:97:ARG:HD3	52:ZA:117:THR:OG1	2.08	0.53
1:A:1505:A:C2	1:A:1550:A:H1'	2.43	0.53
1:A:1583:A:H61	1:A:1611:A:H3'	1.73	0.53
1:A:77:U:H4'	1:A:79:C:OP2	2.08	0.53
1:A:861:U:H2'	1:A:862:A:H5'	1.90	0.53
1:A:907:A:H1'	1:A:997:G:O2'	2.09	0.53
27:AA:23:MET:HG3	27:AA:99:ALA:CA	2.37	0.53
2:B:1211:U:H2'	2:B:1212:A:C8	2.44	0.53
2:B:1220:U:C4'	2:B:1222:G:H1'	2.36	0.53
2:B:1441:G:H2'	2:B:1442:U:C6	2.44	0.53
2:B:1605:A:C2'	2:B:1606:U:H5''	2.37	0.53
2:B:1636:U:O2	2:B:1710:C:H4'	2.09	0.53
2:B:2308:C:H3'	2:B:2309:A:H8	1.73	0.53
2:B:2366:C:H2'	2:B:2367:A:H8	1.71	0.53
2:B:2614:G:H3'	2:B:2615:G:C8	2.43	0.53
2:B:2895:G:C2'	2:B:2896:A:H5''	2.36	0.53
2:B:3138:U:H2'	2:B:3139:A:C8	2.43	0.53
2:B:3185:U:O2'	20:T:126:VAL:HG23	2.08	0.53
2:B:952:A:H4'	2:B:968:G:N2	2.23	0.53
29:CA:115:ARG:HD3	29:CA:121:LYS:HB2	1.90	0.53
82:DC:412:ARG:CB	82:DC:428:ILE:HG12	2.38	0.53
82:DC:542:LEU:O	82:DC:546:GLU:HG3	2.08	0.53
2:B:3027:A:C1'	82:DC:790:GLY:H	2.21	0.53
31:EA:108:GLU:O	31:EA:112:LYS:HG3	2.08	0.53
31:EA:68:ILE:H	31:EA:68:ILE:HD12	1.73	0.53
6:F:129:ALA:O	6:F:169:ILE:HB	2.07	0.53
6:F:206:PRO:CG	6:F:213:GLY:HA3	2.36	0.53
32:FA:122:PRO:HA	32:FA:142:GLY:C	2.29	0.53
32:FA:138:ILE:HG22	32:FA:139:ARG:HG3	1.89	0.53
7:G:16:PHE:HD2	7:G:275:ARG:HD2	1.73	0.53
2:B:2402:A:H5''	8:H:67:THR:OG1	2.07	0.53
8:H:60:THR:CG2	8:H:77:VAL:HG22	2.34	0.53
11:K:107:ARG:HE	11:K:115:THR:CB	2.20	0.53
63:KB:95:ALA:HB2	63:KB:118:ILE:CG2	2.37	0.53
12:L:143:ILE:HG23	12:L:173:MET:HG3	1.89	0.53
13:M:114:VAL:O	13:M:123:ILE:HA	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:64:U:H4'	39:MA:49:LYS:HG3	1.91	0.53
39:MA:47:VAL:O	39:MA:51:ILE:HG13	2.08	0.53
39:MA:66:VAL:CA	39:MA:69:LEU:HG	2.35	0.53
14:N:56:GLU:CA	14:N:131:ILE:HG12	2.37	0.53
40:NA:56:ARG:O	40:NA:60:LEU:HB2	2.08	0.53
43:QA:15:LYS:HA	43:QA:18:LYS:HG3	1.90	0.53
18:R:16:GLU:HB3	24:X:149:LYS:HB3	1.90	0.53
18:R:60:LEU:HA	18:R:63:VAL:HG12	1.90	0.53
19:S:73:ARG:HD3	19:S:80:THR:HG23	1.90	0.53
46:TA:2:VAL:HG22	46:TA:90:HIS:O	2.08	0.53
46:TA:98:LYS:HB3	46:TA:98:LYS:NZ	2.23	0.53
48:VA:36:GLN:HA	48:VA:39:HIS:CE1	2.43	0.53
24:X:44:PHE:CE1	25:Y:153:PRO:HB3	2.43	0.53
51:YA:136:ARG:O	51:YA:215:VAL:HG23	2.08	0.53
51:YA:161:ILE:HA	51:YA:164:ILE:HD12	1.88	0.53
77:YB:66:PRO:HA	77:YB:71:ALA:HB2	1.90	0.53
1:A:1231:U:H4'	1:A:1259:U:H4'	1.90	0.53
1:A:1485:C:C4	1:A:1486:G:H1'	2.44	0.53
1:A:384:G:H2'	1:A:385:A:C8	2.43	0.53
1:A:549:G:O2'	1:A:550:A:H5'	2.08	0.53
1:A:964:U:H4'	1:A:965:U:O4'	2.07	0.53
1:A:1419:G:O3'	79:AC:54:LYS:HE2	2.08	0.53
2:B:1381:A:H2'	2:B:1382:G:H8	1.72	0.53
2:B:1670:C:O2'	2:B:1860:G:H5''	2.08	0.53
2:B:1919:G:H2'	2:B:1920:U:H5'	1.89	0.53
2:B:219:A:C8	2:B:1390:A:C8	2.94	0.53
2:B:2468:A:C6	2:B:2478:C:H4'	2.44	0.53
2:B:2646:C:H2'	2:B:2647:A:C8	2.43	0.53
2:B:2851:A:H2'	2:B:2852:C:O4'	2.08	0.53
2:B:3163:A:C3'	2:B:3164:C:H5''	2.39	0.53
2:B:910:G:H2'	2:B:911:C:C6	2.44	0.53
54:BB:129:VAL:HG12	54:BB:156:VAL:HG23	1.91	0.53
3:C:139:U:H2'	3:C:140:G:C8	2.35	0.53
3:C:79:A:H2'	3:C:80:A:C8	2.43	0.53
3:C:8:C:H2'	3:C:9:A:C8	2.43	0.53
4:D:108:A:H2'	4:D:109:G:C8	2.43	0.53
4:D:61:G:H2'	4:D:62:U:C6	2.44	0.53
30:DA:68:GLY:HA3	30:DA:84:LYS:HD2	1.90	0.53
82:DC:270:GLU:O	82:DC:271:ARG:O	2.26	0.53
82:DC:320:LEU:CD2	82:DC:324:MET:HG3	2.39	0.53
82:DC:364:ALA:HA	82:DC:367:ILE:HB	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:589:LYS:HG3	82:DC:689:LEU:HD11	1.90	0.53
7:G:54:THR:HG23	7:G:76:VAL:HG23	1.89	0.53
61:IB:125:VAL:CG1	61:IB:139:VAL:HA	2.32	0.53
11:K:179:LEU:CD2	11:K:180:SER:H	2.11	0.53
38:LA:3:GLN:CG	38:LA:29:ILE:HB	2.39	0.53
39:MA:22:VAL:O	39:MA:26:LYS:HG3	2.08	0.53
16:P:102:GLY:CA	16:P:140:GLY:H	2.11	0.53
42:PA:14:LEU:O	42:PA:17:ARG:HD3	2.08	0.53
68:PB:16:ARG:NH2	68:PB:19:ASN:HA	2.24	0.53
13:M:47:LYS:HB2	18:R:7:VAL:HB	1.91	0.53
70:RB:55:PRO:CA	70:RB:91:ILE:HG12	2.38	0.53
70:RB:29:THR:HA	70:RB:85:ARG:O	2.08	0.53
46:TA:2:VAL:HG23	46:TA:2:VAL:O	2.09	0.53
6:F:96:LEU:HD21	47:UA:83:ILE:HD12	1.89	0.53
74:VB:125:LEU:O	74:VB:129:VAL:HG23	2.08	0.53
23:W:104:ARG:HD3	23:W:105:LEU:N	2.22	0.53
23:W:154:ALA:HA	23:W:157:GLU:HG3	1.90	0.53
49:WA:218:GLY:O	49:WA:236:ALA:HB3	2.08	0.53
24:X:137:ARG:HG3	24:X:139:TYR:HE1	1.72	0.53
24:X:28:ARG:HG2	24:X:28:ARG:NH2	2.24	0.53
24:X:30:PHE:O	24:X:31:ALA:HB2	2.08	0.53
26:Z:36:TYR:O	26:Z:40:HIS:HB2	2.07	0.53
1:A:1715:G:H3'	1:A:1716:C:C5'	2.39	0.53
1:A:628:G:H2'	1:A:629:U:C6	2.42	0.53
1:A:629:U:H2'	1:A:630:A:C5'	2.37	0.53
1:A:971:A:H2'	1:A:972:G:O4'	2.08	0.53
2:B:1100:U:H2'	2:B:1101:G:O4'	2.08	0.53
2:B:1496:C:O5'	2:B:1496:C:H6	1.92	0.53
2:B:1737:U:H2'	2:B:1738:C:C6	2.44	0.53
2:B:2163:C:P	6:F:234:LYS:HD2	2.48	0.53
2:B:2434:U:H5'	19:S:24:ARG:NH1	2.23	0.53
2:B:2527:G:O2'	2:B:2528:G:H5'	2.07	0.53
2:B:2989:U:H2'	2:B:2990:G:O4'	2.08	0.53
2:B:3119:U:H6	2:B:3119:U:C5'	2.21	0.53
2:B:3273:A:H2'	2:B:3274:A:O4'	2.08	0.53
2:B:3393:U:H2'	2:B:3394:U:H6	1.73	0.53
2:B:451:U:H2'	2:B:452:G:C8	2.43	0.53
2:B:995:U:H2'	2:B:996:A:H8	1.73	0.53
54:BB:159:THR:CG2	54:BB:173:ILE:HB	2.37	0.53
3:C:115:C:H2'	3:C:116:G:H4'	1.89	0.53
29:CA:63:ILE:HD11	29:CA:84:PHE:CD1	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:CB:178:GLY:HA2	55:CB:209:TYR:CB	2.38	0.53
56:DB:189:HIS:ND1	56:DB:190:GLN:OE1	2.40	0.53
82:DC:495:VAL:HG13	82:DC:504:LEU:CD2	2.38	0.53
5:E:74:VAL:O	5:E:78:LYS:HG2	2.08	0.53
83:EC:6930:G:H3'	83:EC:6931:U:H5''	1.90	0.53
6:F:22:LEU:CD1	6:F:22:LEU:H	2.12	0.53
1:A:195:G:N7	58:FB:141:ARG:NH1	2.55	0.53
2:B:3148:U:H4'	7:G:104:THR:HB	1.91	0.53
8:H:112:LYS:HA	19:S:202:TYR:HD2	1.72	0.53
34:HA:83:LYS:HD3	34:HA:85:PHE:CE2	2.44	0.53
35:IA:54:GLU:HA	35:IA:57:GLN:NE2	2.24	0.53
37:KA:36:ALA:O	37:KA:38:PRO:HD3	2.08	0.53
12:L:91:PHE:O	12:L:95:ASN:HB2	2.08	0.53
13:M:171:ASP:OD2	13:M:173:ARG:HB2	2.09	0.53
13:M:21:LYS:HG3	18:R:8:LYS:HG3	1.91	0.53
13:M:7:GLU:HB3	13:M:56:ALA:CB	2.25	0.53
42:PA:77:ARG:NH1	42:PA:77:ARG:HB2	2.23	0.53
17:Q:189:GLU:HA	17:Q:192:GLU:HG2	1.90	0.53
2:B:684:G:H5''	17:Q:35:ARG:NH2	2.24	0.53
17:Q:63:VAL:HA	17:Q:66:ASN:ND2	2.23	0.53
17:Q:67:ARG:HD3	17:Q:68:LYS:N	2.24	0.53
70:RB:33:GLN:O	70:RB:37:VAL:HG23	2.07	0.53
19:S:187:ARG:O	19:S:190:THR:HG22	2.08	0.53
19:S:44:ARG:NH2	19:S:47:LYS:HZ1	2.06	0.53
19:S:7:LEU:O	19:S:10:LEU:HB3	2.09	0.53
72:TB:31:SER:OG	72:TB:34:ILE:HG13	2.08	0.53
22:V:81:VAL:CG2	22:V:101:VAL:HA	2.38	0.53
74:VB:35:VAL:HG13	74:VB:36:SER:H	1.72	0.53
50:XA:37:VAL:HG23	50:XA:47:VAL:O	2.09	0.53
50:XA:62:ARG:NH1	71:SB:78:LEU:HD22	2.23	0.53
51:YA:170:GLU:O	51:YA:174:LYS:HG3	2.08	0.53
1:A:1205:C:H2'	1:A:1206:U:H5'	1.89	0.53
1:A:1673:G:H2'	1:A:1674:C:C6	2.43	0.53
1:A:1722:A:H2'	1:A:1723:U:H5'	1.91	0.53
1:A:250:C:H5'	1:A:250:C:H6	1.73	0.53
1:A:312:A:C2	1:A:314:C:H2'	2.44	0.53
1:A:341:A:H2'	1:A:342:C:C6	2.43	0.53
1:A:953:G:H4'	63:KB:114:ARG:NE	2.24	0.53
1:A:981:U:O2'	1:A:982:U:H5'	2.08	0.53
2:B:138:U:H2'	2:B:139:G:C8	2.44	0.53
2:B:1394:A:C2'	2:B:1395:G:H5'	2.38	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1440:G:O2'	2:B:1441:G:H5'	2.09	0.53
2:B:1695:U:H1'	2:B:1749:A:N6	2.23	0.53
2:B:2273:G:N2	2:B:2311:G:H2'	2.23	0.53
2:B:2724:U:H5''	25:Y:54:HIS:CG	2.44	0.53
2:B:2755:C:H6	2:B:2755:C:O5'	1.91	0.53
2:B:2776:C:H5''	2:B:2777:G:O5'	2.09	0.53
2:B:2909:U:H2'	2:B:2910:A:C5'	2.39	0.53
2:B:3072:C:H2'	2:B:3073:A:O4'	2.08	0.53
2:B:3252:G:H2'	2:B:3253:G:O4'	2.08	0.53
2:B:500:C:H4'	10:J:80:ASN:HD21	1.74	0.53
2:B:589:A:N6	2:B:610:G:H1'	2.24	0.53
2:B:600:G:H21	2:B:603:A:N6	1.96	0.53
2:B:702:C:H2'	2:B:703:G:C8	2.44	0.53
2:B:904:A:H5'	2:B:1536:G:O2'	2.09	0.53
2:B:974:G:H2'	2:B:975:C:C6	2.44	0.53
2:B:990:U:H2'	2:B:991:G:H5''	1.89	0.53
54:BB:87:MET:O	54:BB:122:LYS:HE3	2.08	0.53
54:BB:240:LYS:HE2	54:BB:240:LYS:H	1.73	0.53
29:CA:108:LEU:HD12	29:CA:126:LEU:O	2.08	0.53
55:CB:114:ILE:O	55:CB:118:LEU:HG	2.08	0.53
4:D:27:A:H2'	4:D:28:C:O4'	2.08	0.53
30:DA:37:LYS:H	30:DA:37:LYS:CD	2.20	0.53
82:DC:406:LYS:HA	82:DC:446:ASP:O	2.08	0.53
57:EB:117:THR:HG22	57:EB:120:ALA:CB	2.37	0.53
6:F:211:HIS:CD2	6:F:219:ILE:HG23	2.44	0.53
7:G:280:HIS:HB3	7:G:324:VAL:CG1	2.22	0.53
61:IB:90:TYR:O	61:IB:91:LEU:HD23	2.08	0.53
37:KA:49:ILE:CG1	37:KA:100:ILE:HG12	2.38	0.53
2:B:430:U:O4'	37:KA:90:PRO:HB3	2.08	0.53
63:KB:135:LEU:HB3	63:KB:136:PRO:HD2	1.90	0.53
13:M:133:THR:O	13:M:146:LEU:HA	2.09	0.53
14:N:71:CYS:HB2	14:N:158:LYS:NZ	2.24	0.53
15:O:105:GLY:HA2	15:O:125:MET:O	2.09	0.53
15:O:86:VAL:HG13	15:O:111:ASP:HB3	1.88	0.53
15:O:86:VAL:CG1	15:O:111:ASP:HB3	2.38	0.53
67:OB:66:VAL:CG1	67:OB:69:ILE:HD11	2.39	0.53
19:S:12:ARG:HB2	19:S:13:LYS:HE2	1.89	0.53
19:S:144:ARG:HG2	19:S:144:ARG:HH11	1.73	0.53
71:SB:38:LYS:HD2	71:SB:49:GLU:OE1	2.07	0.53
20:T:142:SER:HB3	20:T:147:TRP:HB3	1.90	0.53
21:U:31:GLU:HG3	21:U:60:PHE:CD2	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:VA:116:PRO:O	48:VA:161:ALA:HB1	2.08	0.53
48:VA:45:LEU:HD13	48:VA:49:ALA:HB3	1.89	0.53
24:X:108:GLN:HA	24:X:108:GLN:NE2	2.24	0.53
4:D:99:G:OP1	24:X:53:LYS:HD3	2.08	0.53
76:XB:9:GLY:O	76:XB:10:ARG:HG2	2.09	0.53
25:Y:42:ILE:HD12	25:Y:76:ILE:HD11	1.89	0.53
51:YA:164:ILE:O	51:YA:168:ILE:HG13	2.06	0.53
1:A:94:U:C2'	1:A:95:G:H5'	2.39	0.53
2:B:1024:G:H2'	2:B:1026:A:OP2	2.07	0.53
2:B:106:A:H3'	2:B:107:A:C8	2.44	0.53
2:B:1298:C:O2'	2:B:1299:U:H5'	2.09	0.53
2:B:2130:G:N2	2:B:2132:C:H5''	2.24	0.53
2:B:2422:C:H2'	2:B:2423:U:C6	2.43	0.53
2:B:2867:C:H5'	2:B:2867:C:H6	1.74	0.53
2:B:2943:G:H2'	2:B:2944:U:O4'	2.09	0.53
2:B:3107:U:H2'	2:B:3108:G:H8	1.73	0.53
2:B:3321:C:H2'	2:B:3322:A:O4'	2.08	0.53
2:B:586:C:H2'	2:B:587:U:C6	2.43	0.53
2:B:661:G:C6	32:FA:17:ALA:HB3	2.44	0.53
1:A:454:U:H5'	54:BB:66:MET:HG3	1.91	0.53
4:D:6:C:H2'	4:D:7:G:C4'	2.39	0.53
6:F:137:ILE:HG12	6:F:149:ARG:HH21	1.74	0.53
2:B:937:G:OP1	32:FA:27:LYS:HB2	2.09	0.53
22:V:182:LYS:HG3	32:FA:56:VAL:HG22	1.89	0.53
7:G:148:LEU:HD11	7:G:192:VAL:HG21	1.89	0.53
7:G:76:VAL:HB	7:G:323:MET:HG2	1.91	0.53
2:B:1073:U:C1'	33:GA:50:THR:HG1	2.21	0.53
59:GB:106:GLU:O	59:GB:107:ARG:HG2	2.08	0.53
1:A:474:A:H5''	59:GB:144:PRO:HD2	1.90	0.53
8:H:48:GLN:HG3	8:H:49:ALA:H	1.74	0.53
34:HA:46:ALA:HA	34:HA:53:LYS:NZ	2.24	0.53
60:HB:50:THR:HG22	60:HB:55:VAL:HG13	1.91	0.53
9:I:107:ARG:NH2	9:I:120:LYS:HA	2.23	0.53
35:IA:12:TYR:N	35:IA:12:TYR:CD2	2.77	0.53
11:K:84:VAL:HA	11:K:139:PRO:HD2	1.89	0.53
11:K:173:LEU:HD13	11:K:178:ILE:HD12	1.91	0.53
11:K:189:ILE:HG23	11:K:190:THR:N	2.18	0.53
11:K:236:ILE:HG13	11:K:239:LEU:HD13	1.90	0.53
63:KB:53:LEU:O	63:KB:57:ALA:HB3	2.08	0.53
13:M:138:THR:HG22	13:M:139:ASN:N	2.20	0.53
65:MB:81:ARG:HB3	65:MB:117:GLY:CA	2.38	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:I:294:ALA:HB2	14:N:210:ILE:HD13	1.91	0.53
15:O:55:ARG:C	15:O:58:GLY:H	2.11	0.53
15:O:43:GLN:NE2	15:O:71:VAL:HG13	2.23	0.53
67:OB:3:ARG:HD3	67:OB:3:ARG:N	2.24	0.53
17:Q:86:THR:HB	17:Q:89:TYR:HB2	1.89	0.53
18:R:125:LYS:HA	18:R:128:ARG:HB3	1.91	0.53
18:R:13:ARG:HB3	18:R:65:LEU:CD2	2.39	0.53
70:RB:96:PRO:HG2	70:RB:99:ILE:HG22	1.91	0.53
19:S:66:VAL:HG21	19:S:98:LEU:HB3	1.91	0.53
21:U:2:ALA:HB3	21:U:18:ARG:HH12	1.73	0.53
47:UA:60:CYS:HB3	47:UA:62:LYS:HG2	1.90	0.53
24:X:63:GLN:C	24:X:64:ILE:HG13	2.28	0.53
24:X:89:ASN:HD21	25:Y:155:PRO:HB3	1.74	0.53
25:Y:89:LEU:HB3	25:Y:91:LEU:HD21	1.90	0.53
78:ZB:40:ILE:HG22	78:ZB:41:VAL:N	2.22	0.53
1:A:1013:A:H3'	1:A:1014:G:C8	2.44	0.53
1:A:121:U:H1'	54:BB:33:ALA:O	2.09	0.53
1:A:14:C:H5'	52:ZA:164:SER:HB2	1.90	0.53
1:A:1559:A:H5'	1:A:1561:U:OP2	2.08	0.53
1:A:1637:C:H5'	83:EC:6952:U:N3	2.23	0.53
1:A:138:A:H62	1:A:266:A:N6	2.05	0.53
1:A:495:C:H5'	1:A:496:G:C1'	2.39	0.53
2:B:1459:C:O2'	2:B:1460:A:H5'	2.09	0.53
2:B:1508:C:H2'	2:B:1509:A:O4'	2.09	0.53
2:B:1856:C:H5''	38:LA:14:ASN:HB2	1.90	0.53
2:B:289:A:H2	19:S:93:LYS:HD3	1.71	0.53
2:B:3092:C:C2'	27:AA:12:ARG:HH21	2.22	0.53
2:B:8:C:H2'	2:B:9:U:C6	2.43	0.53
1:A:152:U:O2'	56:DB:15:THR:HG23	2.09	0.53
82:DC:204:PRO:HA	82:DC:209:VAL:CB	2.37	0.53
7:G:116:ARG:HA	7:G:122:TRP:CE3	2.43	0.53
7:G:173:GLN:C	7:G:175:LYS:H	2.12	0.53
7:G:385:LYS:HG3	7:G:386:ASP:N	2.23	0.53
2:B:1388:U:O4	8:H:186:LYS:HD2	2.08	0.53
8:H:321:LYS:HA	8:H:324:LEU:HB3	1.90	0.53
61:IB:93:TYR:CE2	61:IB:95:PRO:HA	2.44	0.53
11:K:155:LYS:HE2	11:K:155:LYS:C	2.29	0.53
11:K:67:ARG:O	11:K:70:LYS:HB3	2.09	0.53
2:B:157:A:C8	40:NA:26:ILE:HG12	2.42	0.53
15:O:155:THR:HG22	15:O:156:LYS:N	2.24	0.53
69:QB:42:GLY:HA3	69:QB:84:LYS:HA	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
69:QB:40:SER:HB3	69:QB:43:ASN:HB2	1.90	0.53
18:R:45:LEU:HD11	18:R:55:ARG:O	2.09	0.53
2:B:665:A:C5'	19:S:199:LEU:HD21	2.39	0.53
2:B:841:A:H4'	23:W:126:GLU:HG2	1.90	0.53
24:X:138:GLN:HA	24:X:141:LYS:HB3	1.90	0.53
24:X:80:ARG:HG3	25:Y:156:TYR:N	2.20	0.53
50:XA:135:GLU:HA	50:XA:138:TYR:HD2	1.73	0.53
50:XA:197:ILE:N	50:XA:197:ILE:HD13	2.22	0.53
25:Y:86:GLU:HG2	25:Y:87:LYS:N	2.23	0.53
55:CB:225:ARG:HG3	78:ZB:61:ARG:HD2	1.91	0.53
1:A:1163:A:H2'	1:A:1164:G:C4'	2.39	0.53
1:A:1213:G:H1'	1:A:1244:A:H62	1.74	0.53
1:A:1557:U:O2'	1:A:1558:U:H2'	2.09	0.53
1:A:1712:A:H3'	1:A:1713:G:H5"	1.91	0.53
1:A:1741:U:H2'	1:A:1742:U:H6	1.73	0.53
1:A:495:C:C3'	1:A:496:G:H4'	2.30	0.53
1:A:505:A:N3	1:A:505:A:H2'	2.23	0.53
27:AA:19:VAL:HG22	27:AA:36:ILE:HG22	1.91	0.53
27:AA:85:TRP:HE1	27:AA:87:ARG:CG	2.21	0.53
2:B:1231:A:C5'	2:B:1232:C:H5'	2.35	0.53
2:B:1472:U:H2'	2:B:1473:G:H8	1.70	0.53
2:B:1480:G:H21	2:B:1872:C:H5	1.56	0.53
2:B:200:C:H41	2:B:217:U:H2'	1.74	0.53
2:B:2296:A:H2'	2:B:2297:U:H5'	1.91	0.53
2:B:2747:A:H2'	2:B:2748:A:C8	2.43	0.53
2:B:2748:A:N3	9:I:36:LEU:HG	2.24	0.53
2:B:428:A:H1'	37:KA:25:PRO:HB3	1.90	0.53
54:BB:31:PRO:HB2	54:BB:38:LEU:HD21	1.91	0.53
80:BC:46:ASN:O	80:BC:47:VAL:HG12	2.09	0.53
55:CB:183:ALA:HB1	55:CB:190:ILE:HD13	1.91	0.53
55:CB:42:LEU:HB2	55:CB:46:TRP:C	2.29	0.53
82:DC:374:PRO:HG3	82:DC:450:ALA:HB3	1.91	0.53
83:EC:6772:G:H3'	83:EC:6773:G:H5"	1.89	0.53
17:Q:67:ARG:CB	32:FA:105:LEU:HG	2.37	0.53
7:G:167:ARG:HG3	7:G:167:ARG:HH11	1.74	0.53
8:H:206:LEU:HD21	8:H:228:ALA:CB	2.37	0.53
60:HB:15:LEU:HD12	60:HB:19:GLY:HA2	1.90	0.53
9:I:103:LEU:CD1	9:I:107:ARG:HG3	2.39	0.53
9:I:33:ARG:CD	9:I:37:VAL:HG21	2.39	0.53
61:IB:3:THR:C	61:IB:4:GLU:HG2	2.30	0.53
61:IB:54:ILE:H	61:IB:82:ARG:HH22	1.55	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:J:70:LYS:HG3	10:J:71:VAL:N	2.24	0.53
12:L:178:ALA:CB	12:L:218:ILE:HD13	2.37	0.53
15:O:84:LEU:HD12	15:O:167:TYR:HD1	1.73	0.53
67:OB:30:THR:HG23	67:OB:31:ASN:N	2.24	0.53
42:PA:28:ASN:HB2	42:PA:40:GLN:HB3	1.90	0.53
68:PB:17:LEU:HD12	68:PB:18:LEU:HD23	1.89	0.53
68:PB:88:ARG:HG2	68:PB:88:ARG:HH21	1.73	0.53
69:QB:31:PRO:HG2	69:QB:103:LYS:HD3	1.91	0.53
1:A:1358:G:H4'	69:QB:130:ARG:HB2	1.90	0.53
69:QB:30:VAL:HG12	69:QB:54:PHE:CD2	2.43	0.53
69:QB:34:VAL:HG23	69:QB:54:PHE:HB2	1.90	0.53
47:UA:48:LYS:O	47:UA:55:TRP:HA	2.09	0.53
24:X:43:TYR:O	24:X:46:GLN:HB2	2.09	0.53
76:XB:18:VAL:HG21	76:XB:31:PRO:HB3	1.90	0.53
77:YB:29:ARG:HH11	77:YB:29:ARG:HG3	1.72	0.53
52:ZA:152:HIS:O	52:ZA:194:GLU:HB2	2.09	0.53
1:A:1039:A:H62	1:A:1091:A:H2'	1.74	0.53
1:A:14:C:H4'	1:A:1086:A:O4'	2.09	0.53
1:A:1099:U:H2'	1:A:1100:G:H21	1.74	0.53
1:A:1417:A:H2'	1:A:1418:G:C8	2.44	0.53
2:B:1105:A:H2'	2:B:1106:G:O4'	2.09	0.53
2:B:1259:A:H1'	2:B:1280:C:O2'	2.09	0.53
2:B:1783:U:H2'	2:B:1784:G:H8	1.74	0.53
2:B:1799:A:H2'	2:B:1800:A:C8	2.44	0.53
2:B:2430:A:H2'	2:B:2431:C:H6	1.74	0.53
2:B:3133:C:H2'	2:B:3134:A:H5''	1.90	0.53
2:B:989:A:H2'	2:B:990:U:C6	2.44	0.53
54:BB:107:GLY:HA2	54:BB:189:LEU:HB3	1.89	0.53
55:CB:34:GLN:HA	55:CB:38:THR:HG23	1.91	0.53
4:D:118:A:H2'	4:D:119:U:O4'	2.09	0.53
4:D:55:A:H2'	4:D:56:A:C8	2.43	0.53
82:DC:345:PRO:HG3	82:DC:399:ARG:HH21	1.73	0.53
82:DC:91:GLN:HE21	82:DC:347:THR:HB	1.72	0.53
5:E:124:LEU:HD23	5:E:128:LEU:HD11	1.91	0.53
5:E:172:VAL:HG23	5:E:173:GLU:N	2.18	0.53
6:F:234:LYS:HB3	6:F:238:ILE:HD11	1.90	0.53
7:G:169:THR:HG23	7:G:170:PRO:HD2	1.89	0.53
59:GB:28:LEU:O	59:GB:31:ALA:HB3	2.08	0.53
61:IB:66:ILE:HG13	61:IB:128:CYS:SG	2.49	0.53
61:IB:67:ARG:H	61:IB:67:ARG:HD3	1.73	0.53
63:KB:23:PRO:HG2	63:KB:26:PHE:CB	2.34	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:L:77:GLN:HA	12:L:80:TYR:HE1	1.74	0.53
13:M:92:TYR:HB3	13:M:99:ILE:HD12	1.91	0.53
66:NB:74:HIS:O	66:NB:78:VAL:HG23	2.09	0.53
69:QB:74:GLY:HA2	69:QB:77:ASN:HD22	1.74	0.53
18:R:45:LEU:HD12	18:R:57:ALA:N	2.24	0.53
71:SB:9:VAL:HG22	71:SB:10:GLU:H	1.74	0.53
20:T:48:PHE:O	20:T:51:LYS:HB3	2.09	0.53
2:B:1222:G:H3'	48:VA:56:ASN:CG	2.29	0.53
23:W:147:ALA:O	23:W:151:ARG:HG3	2.08	0.53
2:B:1722:U:H1'	23:W:96:ILE:HG12	1.91	0.53
24:X:73:LYS:HB3	24:X:75:PHE:CE1	2.44	0.53
26:Z:77:LYS:O	26:Z:81:LYS:HG3	2.09	0.53
55:CB:160:VAL:HB	78:ZB:43:ASN:O	2.09	0.53
1:A:1434:U:H2'	1:A:1435:G:H5''	1.90	0.53
1:A:1512:G:O2'	1:A:1513:G:H5'	2.08	0.53
1:A:336:G:O2'	1:A:337:G:H5'	2.09	0.53
1:A:820:U:C2'	1:A:821:U:H4'	2.39	0.53
2:B:1101:G:H2'	2:B:1102:A:O4'	2.09	0.53
2:B:1586:G:O5'	2:B:1586:G:H8	1.91	0.53
2:B:1714:A:H61	2:B:1730:G:H1'	1.73	0.53
2:B:1917:C:H2'	2:B:1918:C:O4'	2.09	0.53
2:B:2108:C:H2'	2:B:2109:U:C6	2.44	0.53
2:B:2327:U:H2'	2:B:2328:U:C6	2.44	0.53
2:B:2777:G:H22	32:FA:58:MET:CE	2.22	0.53
2:B:2854:U:H2'	2:B:2855:U:C6	2.44	0.53
2:B:2878:G:H5''	7:G:5:LYS:CE	2.38	0.53
2:B:27:C:C2'	2:B:28:C:H5'	2.39	0.53
2:B:374:A:C2	2:B:376:G:H5''	2.43	0.53
2:B:659:G:H1'	2:B:1435:A:N6	2.24	0.53
2:B:686:G:H2'	2:B:687:U:O4'	2.09	0.53
2:B:945:C:H1'	2:B:1407:A:H1'	1.91	0.53
54:BB:58:GLY:HA2	54:BB:61:VAL:CG2	2.39	0.53
4:D:24:A:H2'	4:D:25:G:O4'	2.09	0.53
3:C:74:U:H2'	30:DA:74:TYR:OH	2.09	0.53
82:DC:185:VAL:O	82:DC:189:VAL:HG23	2.08	0.53
82:DC:561:VAL:HG21	82:DC:774:VAL:HG12	1.89	0.53
82:DC:713:THR:O	82:DC:717:PHE:HB2	2.08	0.53
82:DC:743:ILE:HG23	82:DC:744:TYR:N	2.23	0.53
6:F:242:ARG:CG	6:F:243:THR:H	2.22	0.53
32:FA:131:SER:HB3	32:FA:134:ALA:HB2	1.91	0.53
2:B:1427:U:H5	32:FA:4:ARG:CZ	2.21	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:GB:119:ALA:HA	59:GB:124:HIS:HD2	1.74	0.53
10:J:137:ASP:O	10:J:141:VAL:HG23	2.09	0.53
37:KA:42:GLN:HA	37:KA:45:LEU:HG	1.89	0.53
13:M:90:MET:HA	13:M:181:VAL:HA	1.91	0.53
13:M:84:LYS:O	13:M:186:PHE:HB3	2.09	0.53
3:C:38:U:H5	39:MA:78:LYS:HD3	1.74	0.53
65:MB:15:HIS:O	65:MB:22:LEU:HB2	2.08	0.53
14:N:9:TYR:CD2	14:N:97:LEU:HD22	2.44	0.53
16:P:114:ARG:O	16:P:114:ARG:HD3	2.08	0.53
42:PA:38:PHE:HE1	42:PA:40:GLN:HB2	1.74	0.53
68:PB:100:THR:HG22	68:PB:108:LYS:HG2	1.90	0.53
17:Q:75:PHE:O	17:Q:79:GLU:HB2	2.09	0.53
69:QB:117:SER:H	69:QB:122:ARG:HA	1.74	0.53
69:QB:130:ARG:HD3	69:QB:131:ASP:N	2.23	0.53
18:R:20:VAL:HG22	18:R:66:THR:CG2	2.38	0.53
19:S:145:ASP:C	19:S:147:ARG:H	2.11	0.53
2:B:2715:A:C2	46:TA:85:LEU:HD11	2.44	0.53
48:VA:77:LEU:N	48:VA:78:PRO:HD2	2.24	0.53
23:W:23:TRP:HB2	23:W:53:LYS:CE	2.38	0.53
49:WA:59:ARG:HH11	49:WA:96:THR:HA	1.72	0.53
50:XA:181:VAL:HG23	50:XA:182:LEU:N	2.24	0.53
50:XA:20:ALA:HB2	50:XA:172:LEU:CD1	2.22	0.53
76:XB:44:ILE:H	76:XB:44:ILE:CD1	2.14	0.53
24:X:89:ASN:HD21	25:Y:155:PRO:CB	2.22	0.53
1:A:333:A:OP1	58:FB:49:ARG:N	2.41	0.52
1:A:504:U:C2'	1:A:505:A:H4'	2.34	0.52
1:A:514:G:O2'	1:A:515:A:H5'	2.09	0.52
1:A:915:A:H3'	1:A:916:U:C6	2.44	0.52
53:AB:196:ARG:HB2	53:AB:196:ARG:HH11	1.72	0.52
53:AB:76:ARG:HD2	53:AB:77:PHE:CE1	2.44	0.52
2:B:1062:A:H5''	2:B:1063:G:H5'	1.91	0.52
2:B:1119:C:H2'	2:B:1120:A:C8	2.45	0.52
2:B:2163:C:OP1	6:F:234:LYS:HD2	2.10	0.52
2:B:2528:G:H2'	2:B:2529:A:O4'	2.09	0.52
2:B:275:U:H2'	2:B:276:U:C6	2.43	0.52
2:B:2907:G:H1'	44:RA:100:TYR:HE2	1.74	0.52
2:B:3282:U:H2'	2:B:3283:U:C6	2.44	0.52
2:B:43:A:H5''	19:S:83:LYS:NZ	2.24	0.52
2:B:86:G:N2	2:B:98:G:H2'	2.24	0.52
3:C:114:G:O2'	3:C:115:C:H5'	2.09	0.52
55:CB:32:GLU:HB2	55:CB:45:LYS:HD2	1.90	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:144:ARG:HG3	82:DC:192:TYR:HB3	1.91	0.52
82:DC:226:ALA:HA	82:DC:240:MET:CE	2.39	0.52
82:DC:273:PHE:CE1	82:DC:277:ILE:HD12	2.43	0.52
82:DC:586:ILE:HD11	82:DC:691:VAL:HG13	1.90	0.52
82:DC:726:GLU:HB2	82:DC:727:PRO:HD2	1.91	0.52
58:FB:54:LYS:NZ	58:FB:175:GLN:HE22	2.06	0.52
2:B:3044:G:O2'	7:G:13:HIS:HB2	2.08	0.52
7:G:91:GLY:HA3	7:G:151:ILE:HG23	1.90	0.52
7:G:27:ALA:HB1	7:G:218:ILE:HG22	1.90	0.52
7:G:303:LYS:CD	7:G:361:THR:HG21	2.31	0.52
9:I:107:ARG:HD2	9:I:248:ARG:HE	1.74	0.52
37:KA:49:ILE:HG23	37:KA:99:ARG:O	2.10	0.52
12:L:82:LEU:CD2	12:L:87:ALA:HA	2.39	0.52
32:FA:149:ALA:HB3	40:NA:15:LYS:N	2.25	0.52
66:NB:39:VAL:HG21	66:NB:45:ARG:HA	1.92	0.52
2:B:2674:A:C5'	15:O:105:GLY:HA3	2.28	0.52
15:O:35:LYS:O	15:O:38:GLU:HB3	2.09	0.52
2:B:684:G:C5'	17:Q:35:ARG:HH22	2.21	0.52
69:QB:47:PRO:HG2	69:QB:53:TRP:CB	2.39	0.52
18:R:36:VAL:HG11	18:R:55:ARG:NH2	2.23	0.52
70:RB:102:ARG:O	70:RB:105:GLN:HG3	2.09	0.52
46:TA:8:ARG:HG2	46:TA:72:LEU:HD22	1.91	0.52
72:TB:11:LEU:HD21	72:TB:73:GLY:HA2	1.91	0.52
48:VA:32:ASN:HB2	48:VA:182:THR:OG1	2.09	0.52
74:VB:15:ASN:ND2	74:VB:22:GLN:HB3	2.24	0.52
74:VB:8:ARG:HE	74:VB:28:LEU:CD1	2.22	0.52
50:XA:72:ASP:O	50:XA:118:PRO:HA	2.09	0.52
50:XA:122:ILE:HG12	50:XA:144:ILE:HB	1.90	0.52
76:XB:41:ILE:HD13	76:XB:41:ILE:H	1.74	0.52
1:A:981:U:C2'	1:A:982:U:H5'	2.38	0.52
2:B:1037:C:O2'	2:B:1038:C:H5'	2.09	0.52
2:B:1245:A:H3'	2:B:1246:G:H5''	1.92	0.52
2:B:1623:G:N2	2:B:1624:G:H1'	2.24	0.52
2:B:1756:C:C2'	2:B:1757:A:H5'	2.40	0.52
2:B:1940:G:H21	2:B:3362:A:H1'	1.74	0.52
2:B:48:A:H4'	2:B:49:A:H5'	1.90	0.52
54:BB:128:LYS:HG2	54:BB:140:VAL:HB	1.92	0.52
3:C:76:C:H2'	3:C:77:A:O4'	2.10	0.52
1:A:1527:C:O2'	55:CB:108:LEU:HD13	2.08	0.52
4:D:100:C:H3'	4:D:101:G:H8	1.73	0.52
4:D:69:C:H2'	4:D:70:U:H6	1.74	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DA:27:ARG:HD2	30:DA:75:ARG:HB3	1.91	0.52
56:DB:209:ALA:O	56:DB:213:ALA:HB2	2.08	0.52
82:DC:315:GLU:HG2	82:DC:316:GLY:N	2.23	0.52
5:E:112:ALA:HB2	5:E:135:PRO:HB2	1.91	0.52
5:E:9:VAL:HG23	5:E:216:LEU:HD21	1.91	0.52
57:EB:114:ARG:HH11	57:EB:114:ARG:HG3	1.73	0.52
6:F:135:ILE:HD13	6:F:149:ARG:CD	2.35	0.52
7:G:188:ILE:HA	7:G:191:LYS:HD2	1.92	0.52
9:I:146:LEU:HD11	9:I:148:ILE:HA	1.90	0.52
9:I:194:LEU:HD22	9:I:198:TYR:CE2	2.38	0.52
11:K:81:HIS:O	11:K:119:VAL:HG21	2.10	0.52
63:KB:98:VAL:CG1	63:KB:115:LEU:HB2	2.39	0.52
1:A:959:U:H1'	63:KB:61:THR:HB	1.91	0.52
14:N:164:LYS:O	14:N:164:LYS:HG3	2.09	0.52
66:NB:125:GLU:HG2	66:NB:134:ALA:HB1	1.91	0.52
17:Q:50:PRO:HG2	17:Q:52:ASP:O	2.08	0.52
21:U:27:LYS:HG2	21:U:63:PHE:CZ	2.44	0.52
73:UB:13:ARG:HA	73:UB:16:ARG:HG3	1.92	0.52
2:B:1473:G:H4'	23:W:23:TRP:HE1	1.75	0.52
77:YB:73:LEU:HD11	77:YB:79:PHE:CG	2.44	0.52
55:CB:159:ALA:HB3	78:ZB:61:ARG:NH2	2.23	0.52
1:A:1042:G:H3'	1:A:1043:A:H5''	1.92	0.52
1:A:1209:C:H2'	1:A:1210:C:C6	2.43	0.52
1:A:1779:U:H2'	1:A:1781:A:OP2	2.09	0.52
1:A:175:G:H1'	1:A:266:A:N6	2.23	0.52
1:A:396:G:O6	58:FB:26:LYS:HE3	2.09	0.52
1:A:576:G:O6	73:UB:65:ASN:HB3	2.10	0.52
1:A:759:U:O2'	1:A:760:A:H5'	2.09	0.52
2:B:1203:A:H2'	2:B:1204:A:H8	1.68	0.52
2:B:138:U:H2'	2:B:139:G:H8	1.74	0.52
2:B:1724:U:H1'	2:B:1725:C:C5	2.44	0.52
2:B:2146:C:H2'	2:B:2147:A:H8	1.73	0.52
2:B:2561:A:H2'	2:B:2562:A:H8	1.73	0.52
2:B:271:C:H2'	2:B:272:G:O4'	2.09	0.52
2:B:2922:G:H2'	2:B:2923:U:O4'	2.09	0.52
2:B:3073:A:H2'	2:B:3074:G:H5''	1.91	0.52
2:B:310:U:H2'	2:B:311:C:O4'	2.10	0.52
2:B:3241:G:H2'	2:B:3245:A:C2	2.44	0.52
2:B:608:A:H5'	8:H:322:GLN:CG	2.38	0.52
2:B:916:G:O2'	2:B:917:A:C8	2.63	0.52
3:C:43:A:H2'	3:C:44:A:O4'	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:CB:187:ILE:CD1	55:CB:187:ILE:H	2.19	0.52
82:DC:307:LEU:O	82:DC:312:LYS:HE3	2.09	0.52
82:DC:634:TRP:CD2	82:DC:660:LYS:HG3	2.44	0.52
82:DC:634:TRP:CE3	82:DC:660:LYS:HG3	2.45	0.52
82:DC:749:LYS:NZ	82:DC:749:LYS:HB2	2.24	0.52
2:B:824:C:H5''	6:F:21:ARG:CD	2.39	0.52
22:V:175:ALA:O	32:FA:51:GLY:HA2	2.09	0.52
2:B:3049:A:C2	7:G:75:ALA:HB2	2.44	0.52
8:H:49:ALA:HA	8:H:109:TRP:NE1	2.25	0.52
8:H:179:LEU:HD22	8:H:179:LEU:O	2.10	0.52
60:HB:23:ALA:HB1	60:HB:39:ASN:OD1	2.10	0.52
61:IB:85:VAL:HG22	61:IB:108:PRO:HB3	1.90	0.52
37:KA:51:TYR:O	37:KA:66:VAL:HG13	2.09	0.52
64:LB:29:HIS:CB	64:LB:41:ARG:HA	2.39	0.52
13:M:122:LYS:HE2	13:M:124:ARG:HG2	1.90	0.52
66:NB:117:LEU:HD22	66:NB:117:LEU:N	2.25	0.52
67:OB:66:VAL:HG12	67:OB:69:ILE:HD11	1.91	0.52
19:S:38:ARG:NH1	19:S:60:VAL:HG13	2.24	0.52
20:T:129:LEU:HG	20:T:130:LYS:N	2.24	0.52
21:U:70:THR:OG1	21:U:83:TRP:CH2	2.61	0.52
48:VA:109:ALA:HA	48:VA:181:PHE:CD1	2.45	0.52
24:X:80:ARG:HD3	24:X:122:HIS:ND1	2.25	0.52
24:X:42:TRP:O	24:X:46:GLN:HG3	2.08	0.52
2:B:2723:U:H5''	25:Y:89:LEU:HD12	1.91	0.52
51:YA:70:LEU:HD11	51:YA:79:HIS:HD2	1.72	0.52
71:SB:71:ARG:HG3	77:YB:4:VAL:CG1	2.36	0.52
26:Z:90:ARG:O	26:Z:91:ASP:HB3	2.08	0.52
1:A:1166:A:O2'	1:A:1587:A:H4'	2.10	0.52
1:A:1579:U:H2'	1:A:1580:C:C6	2.43	0.52
1:A:201:G:H2'	1:A:202:A:C8	2.44	0.52
1:A:372:G:H1'	1:A:612:U:O2	2.10	0.52
1:A:69:G:H2'	1:A:70:C:C6	2.45	0.52
2:B:1513:G:C6	2:B:1515:A:H1'	2.44	0.52
2:B:1594:A:C1'	2:B:1615:C:H1'	2.34	0.52
2:B:2865:U:C2'	2:B:2866:U:H5'	2.40	0.52
2:B:2884:C:O2'	2:B:2885:C:H5'	2.09	0.52
2:B:3132:C:H2'	2:B:3133:C:C6	2.44	0.52
2:B:3375:A:H2'	2:B:3378:C:C6	2.44	0.52
2:B:754:G:H2'	2:B:755:A:C8	2.45	0.52
2:B:882:A:H2'	2:B:883:A:H5''	1.92	0.52
28:BA:49:ILE:O	28:BA:51:TRP:N	2.43	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:BB:184:THR:HA	54:BB:189:LEU:HD12	1.90	0.52
54:BB:199:GLU:HB2	54:BB:207:LEU:O	2.10	0.52
82:DC:288:ILE:HG22	82:DC:319:LEU:HB3	1.91	0.52
57:EB:22:GLN:O	57:EB:26:GLU:HG3	2.10	0.52
83:EC:6791:A:N3	83:EC:6792:A:H4'	2.25	0.52
6:F:135:ILE:HD12	6:F:135:ILE:N	2.15	0.52
58:FB:57:ALA:HB2	58:FB:177:GLY:HA2	1.91	0.52
7:G:292:ALA:HA	7:G:303:LYS:C	2.30	0.52
8:H:209:TYR:HE2	8:H:212:ASP:HB2	1.69	0.52
8:H:346:LYS:H	8:H:346:LYS:CD	2.06	0.52
9:I:235:SER:O	9:I:239:ILE:HG13	2.09	0.52
10:J:165:LEU:HD23	10:J:165:LEU:N	2.25	0.52
36:JA:118:LYS:HD3	36:JA:118:LYS:C	2.30	0.52
11:K:79:ALA:HB2	25:Y:138:SER:N	2.23	0.52
64:LB:100:ALA:O	64:LB:104:ALA:HB2	2.08	0.52
39:MA:38:ARG:C	39:MA:40:SER:H	2.12	0.52
66:NB:39:VAL:CG2	66:NB:45:ARG:HD3	2.39	0.52
69:QB:130:ARG:HH12	69:QB:134:ARG:HB2	1.73	0.52
18:R:40:ASP:HA	24:X:143:PHE:CE2	2.44	0.52
19:S:38:ARG:HH12	19:S:60:VAL:HG13	1.73	0.52
52:ZA:58:LEU:HD23	71:SB:15:ARG:HG3	1.89	0.52
72:TB:7:LEU:HD11	72:TB:37:PHE:CD2	2.44	0.52
47:UA:55:TRP:HB2	47:UA:64:VAL:HB	1.91	0.52
47:UA:87:ARG:HA	47:UA:90:VAL:CG2	2.40	0.52
48:VA:130:PRO:HB3	48:VA:145:ILE:HD11	1.90	0.52
48:VA:37:GLN:O	48:VA:41:VAL:HG23	2.09	0.52
2:B:3068:U:OP1	23:W:58:HIS:HA	2.09	0.52
49:WA:45:TRP:CZ2	49:WA:310:ILE:HD12	2.45	0.52
24:X:8:GLN:HB3	24:X:62:ASN:HB3	1.91	0.52
52:ZA:120:GLU:HG3	52:ZA:123:GLY:H	1.73	0.52
1:A:1046:G:H2'	1:A:1047:G:C8	2.44	0.52
1:A:330:G:H2'	1:A:331:A:H8	1.73	0.52
1:A:752:A:H2	1:A:797:G:H1	1.54	0.52
2:B:1157:G:H4'	2:B:1169:A:O2'	2.09	0.52
2:B:1624:G:H2'	2:B:1625:A:H5'	1.91	0.52
2:B:2344:U:H2'	2:B:2345:A:C8	2.44	0.52
2:B:3024:A:H4'	13:M:96:HIS:CE1	2.45	0.52
2:B:3133:C:H2'	2:B:3134:A:O4'	2.10	0.52
2:B:595:G:H2'	2:B:596:C:H6	1.69	0.52
2:B:764:U:O2	2:B:764:U:H2'	2.08	0.52
2:B:816:A:C1'	2:B:818:C:H41	2.21	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:BB:179:LYS:O	54:BB:181:VAL:HG23	2.08	0.52
54:BB:16:HIS:C	54:BB:18:TRP:H	2.13	0.52
29:CA:63:ILE:HA	29:CA:86:VAL:HG23	1.91	0.52
30:DA:27:ARG:HG2	30:DA:78:PHE:CE1	2.45	0.52
32:FA:73:LEU:HD13	32:FA:109:TYR:CE2	2.44	0.52
31:EA:4:PHE:HE2	34:HA:63:SER:HB3	1.74	0.52
9:I:33:ARG:NE	9:I:50:ARG:HH12	2.06	0.52
9:I:56:THR:C	9:I:58:LYS:N	2.61	0.52
36:JA:120:THR:O	36:JA:122:PRO:HD2	2.10	0.52
11:K:222:HIS:HA	11:K:229:PHE:O	2.10	0.52
10:J:165:LEU:C	37:KA:6:ARG:HH21	2.13	0.52
2:B:2512:C:H5''	12:L:245:LYS:HE2	1.92	0.52
38:LA:88:ARG:O	38:LA:92:ALA:HB2	2.09	0.52
66:NB:28:LEU:C	66:NB:29:ILE:HD12	2.29	0.52
20:T:91:LYS:O	20:T:96:LYS:HE3	2.09	0.52
47:UA:10:ILE:HG12	47:UA:10:ILE:O	2.08	0.52
74:VB:57:VAL:HG23	74:VB:72:PHE:O	2.09	0.52
24:X:9:VAL:HG12	24:X:58:ILE:HG21	1.90	0.52
25:Y:55:LYS:C	25:Y:57:TYR:H	2.12	0.52
1:A:1134:C:H2'	1:A:1135:U:C6	2.45	0.52
1:A:1591:C:H2'	1:A:1592:A:H8	1.74	0.52
1:A:1593:A:H61	1:A:1603:U:H3	1.57	0.52
1:A:762:A:H2'	1:A:763:G:C8	2.44	0.52
53:AB:78:LYS:N	53:AB:78:LYS:HD2	2.25	0.52
2:B:2275:A:H61	2:B:2311:G:H1'	1.74	0.52
2:B:2658:G:H4'	2:B:2753:G:H21	1.74	0.52
2:B:2849:C:H2'	2:B:2850:G:O4'	2.09	0.52
2:B:529:A:H2'	2:B:530:G:C8	2.45	0.52
2:B:757:C:C3'	2:B:758:C:H5''	2.40	0.52
3:C:130:C:H2'	3:C:131:A:O4'	2.09	0.52
3:C:7:U:H2'	3:C:8:C:H5'	1.90	0.52
55:CB:58:LEU:HA	55:CB:61:TYR:CD2	2.36	0.52
56:DB:158:ILE:O	56:DB:158:ILE:HG23	2.10	0.52
2:B:1709:C:H4'	31:EA:15:ARG:HH22	1.75	0.52
6:F:32:LEU:HB2	6:F:163:ARG:NH2	2.25	0.52
8:H:151:VAL:HG22	8:H:255:PHE:CD2	2.45	0.52
34:HA:67:VAL:HG12	34:HA:68:TYR:H	1.74	0.52
63:KB:136:PRO:HB2	63:KB:138:ASN:ND2	2.24	0.52
40:NA:56:ARG:HG2	40:NA:60:LEU:CD2	2.37	0.52
15:O:55:ARG:HA	15:O:58:GLY:HA2	1.92	0.52
68:PB:17:LEU:HD13	68:PB:66:LEU:HD13	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:Q:75:PHE:CD1	17:Q:75:PHE:N	2.77	0.52
69:QB:34:VAL:HG22	69:QB:34:VAL:O	2.10	0.52
46:TA:43:TYR:HD1	46:TA:47:GLN:NE2	2.08	0.52
46:TA:87:ARG:HH11	46:TA:87:ARG:HB3	1.75	0.52
73:UB:142:LYS:HG2	73:UB:143:PRO:HD2	1.91	0.52
48:VA:130:PRO:HA	48:VA:150:ILE:HD11	1.92	0.52
48:VA:15:LEU:HD12	48:VA:19:LEU:HD12	1.92	0.52
49:WA:188:ILE:HG13	49:WA:189:GLU:N	2.24	0.52
75:WB:59:TYR:CE2	75:WB:64:VAL:HG21	2.45	0.52
76:XB:38:ARG:NH1	76:XB:38:ARG:HG3	2.22	0.52
52:ZA:227:PRO:HG3	52:ZA:230:TRP:CZ2	2.45	0.52
1:A:1434:U:C2'	1:A:1435:G:H3'	2.39	0.52
1:A:1639:C:H2'	1:A:1640:C:O4'	2.10	0.52
1:A:1716:C:HO2'	1:A:1717:G:H8	1.57	0.52
1:A:856:A:C6	57:EB:116:ARG:HG3	2.44	0.52
27:AA:62:VAL:HG12	27:AA:63:LYS:N	2.24	0.52
7:G:71:GLU:O	27:AA:89:ASP:HA	2.10	0.52
2:B:1189:C:O4'	2:B:1190:A:N7	2.42	0.52
2:B:1623:G:H2'	2:B:1624:G:O4'	2.09	0.52
2:B:2936:A:H2'	2:B:2937:G:C8	2.45	0.52
2:B:3041:U:H2'	2:B:3042:U:C6	2.45	0.52
2:B:3270:U:H5	21:U:178:ALA:HB2	1.75	0.52
2:B:3350:C:H2'	2:B:3352:U:OP2	2.10	0.52
2:B:3354:U:H5'	2:B:3356:G:C5'	2.40	0.52
2:B:413:U:H2'	2:B:414:U:H6	1.74	0.52
2:B:868:C:H2'	2:B:869:G:C8	2.45	0.52
28:BA:6:ASP:OD1	28:BA:31:PHE:HA	2.09	0.52
54:BB:102:VAL:HG21	54:BB:182:TYR:CE1	2.45	0.52
80:BC:14:VAL:O	80:BC:18:THR:HG23	2.09	0.52
3:C:38:U:C6	39:MA:78:LYS:HB3	2.45	0.52
4:D:33:U:H2'	4:D:34:C:C5	2.45	0.52
82:DC:129:VAL:HG12	82:DC:130:ASP:N	2.24	0.52
82:DC:702:GLY:O	82:DC:706:ILE:HD13	2.08	0.52
6:F:51:ASP:HB2	6:F:58:LEU:CD1	2.40	0.52
32:FA:8:THR:O	32:FA:11:HIS:HB2	2.09	0.52
7:G:166:ILE:HG21	7:G:174:LYS:C	2.29	0.52
8:H:152:VAL:HG23	8:H:250:TRP:O	2.10	0.52
8:H:145:ILE:HG21	8:H:247:PHE:HZ	1.73	0.52
11:K:225:GLN:HG3	11:K:225:GLN:O	2.10	0.52
1:A:975:C:C4'	63:KB:109:LYS:HB3	2.34	0.52
63:KB:91:LEU:HD21	63:KB:121:ARG:HD2	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
63:KB:46:THR:O	63:KB:50:ILE:HG13	2.10	0.52
12:L:148:ALA:HA	12:L:201:THR:CG2	2.39	0.52
13:M:102:ASN:HA	13:M:136:PHE:HZ	1.73	0.52
49:WA:57:PRO:HG2	66:NB:100:GLN:HB2	1.92	0.52
1:A:1581:C:H5'	66:NB:136:SER:CA	2.37	0.52
3:C:43:A:C4'	41:OA:22:CYS:HA	2.40	0.52
70:RB:62:VAL:HG13	70:RB:85:ARG:NE	2.25	0.52
19:S:65:ARG:HB3	19:S:129:TYR:HD1	1.74	0.52
71:SB:60:ARG:HG2	71:SB:65:SER:HB2	1.92	0.52
21:U:17:ALA:HB1	21:U:94:LEU:HG	1.91	0.52
75:WB:76:ALA:O	75:WB:80:LEU:HG	2.10	0.52
24:X:132:THR:HG22	24:X:144:LEU:HD13	1.91	0.52
24:X:27:MET:SD	24:X:44:PHE:HB3	2.49	0.52
50:XA:178:ALA:HA	50:XA:181:VAL:CG2	2.39	0.52
50:XA:41:ARG:HB3	50:XA:41:ARG:NH2	2.24	0.52
76:XB:5:ARG:HB2	76:XB:8:ASN:O	2.09	0.52
2:B:2700:G:OP1	25:Y:17:ARG:HB2	2.09	0.52
1:A:1066:C:O2'	51:YA:146:GLN:HG2	2.09	0.52
51:YA:73:LEU:HD21	51:YA:84:ILE:HB	1.92	0.52
78:ZB:44:VAL:HG11	78:ZB:48:VAL:HG21	1.90	0.52
1:A:130:C:H2'	1:A:131:C:H5'	1.91	0.52
1:A:1628:U:OP1	76:XB:89:ARG:N	2.42	0.52
1:A:1715:G:H2'	1:A:1716:C:H4'	1.92	0.52
27:AA:112:SER:O	27:AA:113:ALA:HB2	2.09	0.52
2:B:1233:G:N2	16:P:128:VAL:HG13	2.24	0.52
2:B:1441:G:H2'	2:B:1442:U:H6	1.74	0.52
2:B:1806:A:H2'	2:B:1807:G:O4'	2.10	0.52
2:B:2933:A:H2'	2:B:2934:A:O4'	2.09	0.52
2:B:994:G:N2	2:B:1053:A:H2'	2.25	0.52
2:B:996:A:O2'	4:D:80:G:H4'	2.09	0.52
3:C:75:G:O2'	43:QA:29:LEU:HD21	2.08	0.52
55:CB:174:LEU:HB3	55:CB:210:ALA:CB	2.40	0.52
82:DC:468:THR:HG23	82:DC:478:MET:SD	2.50	0.52
82:DC:420:PRO:CG	82:DC:476:HIS:HA	2.40	0.52
82:DC:588:LEU:CD1	82:DC:716:GLY:HA3	2.40	0.52
82:DC:823:ARG:HB3	82:DC:823:ARG:HH11	1.72	0.52
5:E:152:ARG:C	5:E:174:MET:HG2	2.29	0.52
83:EC:6953:G:O2'	83:EC:6954:C:H5'	2.09	0.52
1:A:1634:C:N4	83:EC:6955:U:H5''	2.24	0.52
2:B:2178:A:OP2	6:F:151:PRO:HG2	2.09	0.52
7:G:102:LEU:HD12	7:G:103:THR:N	2.25	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:GB:112:GLN:HG3	59:GB:148:VAL:HG21	1.91	0.52
34:HA:42:ILE:O	34:HA:42:ILE:HG13	2.09	0.52
12:L:98:ARG:HD3	12:L:188:THR:O	2.10	0.52
39:MA:101:THR:C	39:MA:103:LYS:H	2.13	0.52
66:NB:131:GLY:HA3	66:NB:137:ARG:C	2.30	0.52
15:O:47:GLN:HA	15:O:67:VAL:HG12	1.92	0.52
2:B:1263:A:C5	16:P:136:ALA:HB2	2.44	0.52
2:B:1747:G:H4'	42:PA:4:GLU:CG	2.40	0.52
17:Q:41:THR:O	17:Q:44:ALA:HB3	2.10	0.52
1:A:1280:C:H4'	70:RB:69:LYS:O	2.09	0.52
71:SB:80:LYS:HD2	71:SB:80:LYS:C	2.30	0.52
21:U:52:LEU:HD13	21:U:52:LEU:O	2.09	0.52
22:V:165:ILE:HG12	22:V:166:LEU:N	2.25	0.52
48:VA:120:TRP:HB2	48:VA:157:LYS:HG2	1.92	0.52
48:VA:61:ARG:HA	48:VA:64:ARG:HB3	1.90	0.52
23:W:110:ARG:C	23:W:112:ALA:H	2.13	0.52
49:WA:136:ILE:N	49:WA:136:ILE:HD13	2.24	0.52
24:X:9:VAL:HG23	24:X:27:MET:O	2.10	0.52
11:K:224:ILE:CG1	24:X:36:ILE:HG12	2.39	0.52
50:XA:50:VAL:N	67:OB:109:LEU:HD11	2.24	0.52
51:YA:152:ARG:O	51:YA:152:ARG:HG2	2.09	0.52
51:YA:62:LYS:HA	51:YA:88:VAL:HB	1.91	0.52
77:YB:30:SER:HB2	77:YB:48:SER:OG	2.10	0.52
1:A:1358:G:H2'	1:A:1359:C:O4'	2.09	0.52
1:A:164:A:N3	56:DB:13:GLN:NE2	2.58	0.52
1:A:980:G:C2'	1:A:981:U:H5'	2.40	0.52
27:AA:34:LEU:HA	27:AA:61:THR:O	2.09	0.52
2:B:116:A:H4'	2:B:117:U:OP1	2.10	0.52
2:B:1248:C:H2'	2:B:1249:G:H5'	1.92	0.52
2:B:1395:G:H2'	2:B:1396:C:O4'	2.09	0.52
2:B:1506:A:H1'	2:B:1848:G:O6	2.08	0.52
2:B:1751:G:H5''	42:PA:26:LYS:HZ1	1.74	0.52
2:B:2172:A:C2'	2:B:2173:U:H5'	2.39	0.52
2:B:2200:U:H2'	2:B:2201:G:O4'	2.10	0.52
2:B:2293:C:C5	2:B:2294:U:C5	2.98	0.52
2:B:1508:C:H4'	2:B:2354:C:O4'	2.10	0.52
2:B:2372:A:H4'	2:B:2373:A:H8	1.74	0.52
2:B:2571:U:H4'	2:B:2572:C:C5'	2.38	0.52
2:B:3109:G:C2'	2:B:3110:C:H5'	2.39	0.52
2:B:3345:G:H5''	58:FB:92:ARG:HG2	1.92	0.52
2:B:640:U:H4'	2:B:941:G:OP1	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:796:U:H2'	2:B:797:U:C6	2.45	0.52
54:BB:11:ARG:HB2	54:BB:11:ARG:HH21	1.74	0.52
3:C:21:C:H5	3:C:22:U:C4	2.27	0.52
29:CA:59:SER:O	29:CA:63:ILE:HG22	2.09	0.52
55:CB:146:THR:HG22	55:CB:159:ALA:HB2	1.92	0.52
82:DC:178:PHE:O	82:DC:182:VAL:HG23	2.09	0.52
82:DC:482:LYS:HE3	82:DC:484:SER:HB2	1.92	0.52
82:DC:821:ALA:HA	82:DC:824:LYS:HE3	1.91	0.52
57:EB:135:ILE:HD13	57:EB:152:VAL:CG1	2.39	0.52
58:FB:74:LYS:N	58:FB:74:LYS:HD2	2.24	0.52
7:G:119:TYR:CZ	7:G:129:ALA:HB2	2.45	0.52
7:G:139:GLN:NE2	7:G:143:GLY:H	2.08	0.52
59:GB:134:ILE:HG22	59:GB:158:PHE:HA	1.92	0.52
2:B:516:A:H5''	8:H:344:ALA:CB	2.40	0.52
8:H:49:ALA:HA	8:H:109:TRP:HE1	1.74	0.52
2:B:364:G:OP1	8:H:60:THR:HG23	2.09	0.52
61:IB:17:PRO:HG3	61:IB:63:LEU:HG	1.92	0.52
12:L:130:TYR:CD1	12:L:202:GLU:HB3	2.38	0.52
12:L:65:LEU:HA	12:L:68:ARG:HB2	1.92	0.52
13:M:28:VAL:HG22	13:M:33:THR:CG2	2.39	0.52
39:MA:105:ARG:HG2	39:MA:106:LYS:N	2.24	0.52
17:Q:48:PRO:HG2	39:MA:115:LYS:HG2	1.92	0.52
16:P:81:VAL:HG21	16:P:117:ARG:HD2	1.91	0.52
17:Q:57:VAL:HG12	17:Q:69:VAL:CG2	2.39	0.52
43:QA:27:ILE:HA	43:QA:30:ARG:HG3	1.91	0.52
18:R:35:ILE:HG22	18:R:46:ILE:HG22	1.91	0.52
70:RB:26:LEU:O	70:RB:88:LYS:HA	2.10	0.52
20:T:30:GLY:HA2	20:T:101:ARG:NE	2.25	0.52
3:C:5:U:P	21:U:62:ARG:HG2	2.50	0.52
54:BB:95:THR:CA	74:VB:16:PRO:HB2	2.40	0.52
49:WA:115:ILE:O	49:WA:156:VAL:HG21	2.09	0.52
24:X:30:PHE:HE1	24:X:100:VAL:HG12	1.75	0.52
24:X:83:SER:C	24:X:85:SER:H	2.13	0.52
50:XA:139:VAL:HG13	50:XA:141:ILE:HG13	1.91	0.52
50:XA:184:LEU:HA	71:SB:43:GLY:CA	2.29	0.52
51:YA:67:GLU:HA	51:YA:84:ILE:O	2.10	0.52
26:Z:37:LEU:O	26:Z:41:ILE:HG13	2.10	0.52
52:ZA:72:LEU:C	52:ZA:73:LEU:HD12	2.29	0.52
78:ZB:26:THR:HB	78:ZB:44:VAL:HG22	1.92	0.52
1:A:992:A:H2	1:A:1012:U:H3	1.53	0.52
1:A:1242:A:H2'	1:A:1243:G:H3'	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:153:G:H2'	1:A:154:G:C8	2.44	0.52
1:A:1568:C:H41	68:PB:40:ARG:H	1.58	0.52
1:A:176:C:O2	1:A:176:C:H2'	2.09	0.52
1:A:1772:C:H2'	1:A:1773:C:H5'	1.91	0.52
1:A:214:G:OP1	1:A:215:A:H1'	2.09	0.52
1:A:2:A:H3'	52:ZA:179:VAL:HG11	1.92	0.52
1:A:354:C:H2'	1:A:355:G:C8	2.44	0.52
1:A:685:A:H2'	1:A:686:C:O4'	2.10	0.52
53:AB:60:GLY:HA3	53:AB:64:ARG:HB3	1.91	0.52
53:AB:62:ASN:HB2	60:HB:92:ILE:HB	1.92	0.52
2:B:1088:U:H2'	2:B:1089:G:O4'	2.10	0.52
2:B:1245:A:H3'	2:B:1246:G:C5'	2.40	0.52
2:B:1636:U:H5''	31:EA:74:VAL:O	2.10	0.52
2:B:1677:G:H2'	2:B:1678:G:C8	2.45	0.52
2:B:1683:A:H2'	2:B:1684:U:H6	1.75	0.52
2:B:1934:G:C3'	2:B:1935:G:H5''	2.39	0.52
2:B:3191:G:H2'	2:B:3192:U:O4'	2.09	0.52
2:B:51:A:H2'	2:B:52:A:O4'	2.10	0.52
54:BB:123:LEU:HG	54:BB:159:THR:OG1	2.09	0.52
54:BB:248:ILE:HG13	54:BB:249:ALA:N	2.25	0.52
54:BB:95:THR:HG22	74:VB:16:PRO:HB2	1.92	0.52
55:CB:93:LEU:HA	55:CB:172:ILE:CG2	2.40	0.52
56:DB:67:VAL:HG22	56:DB:100:ALA:HB2	1.91	0.52
56:DB:39:GLU:HG2	56:DB:47:GLY:H	1.74	0.52
6:F:180:LEU:HD22	47:UA:18:TYR:HD2	1.75	0.52
6:F:187:HIS:CA	6:F:190:ARG:HB3	2.36	0.52
58:FB:171:SER:O	58:FB:173:PRO:HD3	2.10	0.52
7:G:5:LYS:HG3	7:G:6:TYR:CE1	2.45	0.52
33:GA:38:LYS:HA	33:GA:41:ARG:NH1	2.25	0.52
1:A:768:C:N1	59:GB:143:ILE:HD13	2.25	0.52
59:GB:175:ARG:O	59:GB:179:ARG:HG3	2.10	0.52
8:H:6:VAL:HG21	8:H:149:PRO:HD2	1.92	0.52
8:H:295:ILE:O	8:H:299:ILE:HG12	2.10	0.52
8:H:359:LEU:CD2	24:X:64:ILE:HG12	2.40	0.52
9:I:37:VAL:HG12	25:Y:27:LEU:HD11	1.91	0.52
10:J:76:LEU:O	10:J:77:ARG:HB2	2.10	0.52
38:LA:25:THR:HG23	38:LA:30:LEU:HA	1.91	0.52
16:P:76:SER:HA	16:P:80:LEU:HG	1.92	0.52
2:B:1825:G:H5''	42:PA:48:SER:CB	2.39	0.52
69:QB:84:LYS:HE2	69:QB:94:ILE:HG21	1.92	0.52
19:S:110:ALA:HB1	19:S:113:LEU:HD23	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:U:108:ASP:O	21:U:110:THR:N	2.40	0.52
24:X:154:HIS:CD2	24:X:170:THR:HG22	2.45	0.52
24:X:73:LYS:HE2	24:X:97:VAL:C	2.30	0.52
2:B:990:U:O2'	25:Y:100:LYS:HB2	2.10	0.52
1:A:1118:G:H2'	1:A:1119:G:C8	2.45	0.51
1:A:1279:C:H4'	79:AC:44:ARG:HH22	1.75	0.51
1:A:273:G:H2'	1:A:274:G:O4'	2.10	0.51
1:A:421:A:O2'	1:A:422:G:H5'	2.09	0.51
1:A:478:A:C2'	1:A:479:C:H5'	2.39	0.51
53:AB:172:THR:HG22	53:AB:185:LYS:HG2	1.92	0.51
2:B:114:A:H2'	2:B:115:A:O4'	2.10	0.51
2:B:1389:G:OP1	36:JA:100:ILE:HA	2.09	0.51
2:B:1525:G:H3'	2:B:1526:U:C5	2.45	0.51
2:B:1652:G:O2'	2:B:1653:G:H5'	2.09	0.51
2:B:225:C:O2'	2:B:226:C:H5'	2.10	0.51
2:B:2865:U:O2'	2:B:2866:U:H5'	2.10	0.51
2:B:3186:A:H1'	13:M:43:VAL:O	2.10	0.51
2:B:33:G:P	19:S:71:ARG:HH22	2.33	0.51
2:B:521:A:H2'	2:B:522:A:H8	1.75	0.51
2:B:559:A:H3'	2:B:560:G:H5'	1.91	0.51
2:B:661:G:H3'	2:B:662:U:H5'	1.91	0.51
2:B:664:U:H5'	8:H:107:ARG:HA	1.92	0.51
2:B:842:G:H2'	2:B:843:A:C8	2.45	0.51
3:C:3:A:H2'	3:C:4:C:O4'	2.09	0.51
29:CA:86:VAL:HG22	29:CA:87:SER:H	1.74	0.51
56:DB:57:ASP:HB2	56:DB:105:ASP:O	2.11	0.51
56:DB:29:ASP:O	56:DB:30:LYS:HD2	2.10	0.51
82:DC:675:PRO:HB2	82:DC:717:PHE:HD2	1.74	0.51
31:EA:22:LYS:HD3	31:EA:130:PHE:HA	1.92	0.51
83:EC:6917:C:C2'	83:EC:6918:A:H5'	2.40	0.51
58:FB:105:ASP:O	58:FB:106:ALA:HB3	2.09	0.51
58:FB:98:LYS:CE	58:FB:172:ARG:HG2	2.39	0.51
7:G:266:ARG:NH1	7:G:266:ARG:HA	2.26	0.51
7:G:368:GLY:C	7:G:369:ARG:HG3	2.30	0.51
59:GB:60:LEU:CD2	59:GB:93:LEU:HD12	2.40	0.51
2:B:1382:G:H21	8:H:241:GLY:HA2	1.75	0.51
61:IB:74:THR:OG1	61:IB:87:ARG:HB3	2.11	0.51
11:K:101:LYS:HZ1	11:K:105:LEU:HD11	1.74	0.51
11:K:84:VAL:HA	11:K:139:PRO:CD	2.40	0.51
12:L:45:ASN:OD1	29:CA:26:VAL:HG23	2.10	0.51
13:M:90:MET:SD	13:M:158:ALA:HB1	2.50	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
68:PB:14:ILE:O	68:PB:14:ILE:HG23	2.10	0.51
70:RB:66:SER:OG	70:RB:79:TRP:HB3	2.09	0.51
19:S:145:ASP:HB3	19:S:147:ARG:HD3	1.91	0.51
71:SB:69:LEU:O	71:SB:73:ALA:HB2	2.10	0.51
20:T:119:VAL:O	24:X:164:SER:HB3	2.10	0.51
20:T:129:LEU:HG	20:T:130:LYS:H	1.74	0.51
2:B:2770:G:H4'	46:TA:13:LYS:CE	2.40	0.51
1:A:1136:U:OP1	73:UB:118:PRO:HA	2.10	0.51
73:UB:53:VAL:HG11	73:UB:98:GLU:HA	1.92	0.51
49:WA:122:ILE:HD11	49:WA:136:ILE:CG2	2.40	0.51
49:WA:45:TRP:HZ2	49:WA:310:ILE:HD12	1.75	0.51
8:H:361:HIS:HB3	24:X:26:ARG:NH1	2.25	0.51
51:YA:86:LEU:CD1	51:YA:100:PHE:HA	2.40	0.51
77:YB:73:LEU:HD21	77:YB:79:PHE:HB3	1.92	0.51
52:ZA:139:ILE:HG22	52:ZA:221:THR:HG21	1.93	0.51
52:ZA:99:LYS:HG2	52:ZA:117:THR:HB	1.92	0.51
1:A:135:A:H2'	1:A:135:A:N3	2.23	0.51
1:A:488:G:C2'	1:A:489:C:H5'	2.41	0.51
1:A:793:A:C5'	1:A:794:U:H5'	2.41	0.51
27:AA:114:ILE:N	27:AA:114:ILE:HD12	2.25	0.51
53:AB:108:LYS:HE2	53:AB:118:ALA:HA	1.91	0.51
2:B:1048:A:OP1	2:B:1049:C:H5'	2.11	0.51
2:B:107:A:N1	2:B:108:A:C6	2.79	0.51
2:B:1145:G:H22	2:B:1160:C:H5''	1.76	0.51
2:B:1270:A:H5'	82:DC:741:GLY:HA2	1.91	0.51
2:B:154:U:OP1	2:B:158:G:H5'	2.10	0.51
2:B:1684:U:H2'	2:B:1685:C:C6	2.43	0.51
2:B:21:G:H3'	2:B:22:G:C8	2.44	0.51
2:B:2256:A:H4'	82:DC:707:PRO:HG3	1.91	0.51
2:B:23:A:OP1	41:OA:44:THR:HB	2.10	0.51
2:B:3082:C:H2'	2:B:3083:G:C8	2.44	0.51
2:B:3238:G:C2	2:B:3250:U:H1'	2.44	0.51
2:B:35:A:H2'	2:B:36:C:H6	1.75	0.51
2:B:374:A:O2'	2:B:376:G:H8	1.93	0.51
2:B:666:A:C2'	2:B:667:C:H5''	2.40	0.51
3:C:37:A:H2	39:MA:86:ARG:HH21	1.58	0.51
55:CB:69:PHE:CE2	66:NB:53:LEU:HD12	2.44	0.51
4:D:6:C:H2'	4:D:7:G:H4'	1.92	0.51
1:A:159:U:C2	56:DB:87:ARG:HD3	2.45	0.51
82:DC:12:LEU:HD23	82:DC:99:LEU:HB2	1.92	0.51
82:DC:378:LEU:HD22	82:DC:409:GLN:HE22	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:381:TYR:HB2	82:DC:478:MET:CE	2.39	0.51
82:DC:731:VAL:HG22	82:DC:733:ILE:HG13	1.92	0.51
82:DC:18:ASN:ND2	82:DC:93:THR:HG23	2.25	0.51
5:E:100:ILE:HD12	5:E:103:LEU:HD12	1.91	0.51
58:FB:12:SER:HB3	58:FB:16:ALA:H	1.76	0.51
2:B:3331:U:OP1	7:G:367:LYS:HB2	2.10	0.51
7:G:73:VAL:HG23	7:G:73:VAL:O	2.11	0.51
8:H:230:VAL:HA	8:H:233:LEU:HD11	1.90	0.51
8:H:308:LYS:O	8:H:309:ARG:HB2	2.11	0.51
35:IA:62:ARG:HB3	35:IA:66:GLY:C	2.31	0.51
35:IA:62:ARG:HB3	35:IA:67:VAL:N	2.26	0.51
36:JA:17:PHE:O	36:JA:32:TRP:HB2	2.10	0.51
8:H:327:LEU:CD1	11:K:165:ASP:HA	2.39	0.51
63:KB:95:ALA:HB2	63:KB:118:ILE:HG21	1.92	0.51
38:LA:98:GLN:O	38:LA:101:VAL:HB	2.10	0.51
14:N:170:LYS:HD3	14:N:177:ASP:OD2	2.11	0.51
14:N:176:LEU:HB3	14:N:180:GLU:HB3	1.92	0.51
14:N:24:ARG:O	14:N:26:VAL:HG22	2.10	0.51
2:B:2853:A:H5'	14:N:63:GLU:HB2	1.91	0.51
15:O:21:ILE:HG22	15:O:22:SER:H	1.75	0.51
53:AB:209:ILE:HG22	67:OB:38:ILE:HG23	1.92	0.51
17:Q:48:PRO:HD2	39:MA:115:LYS:HD3	1.91	0.51
71:SB:3:ASN:OD1	71:SB:7:GLN:HG3	2.10	0.51
21:U:94:LEU:C	21:U:94:LEU:HD23	2.31	0.51
8:H:31:ARG:HH21	22:V:23:ASN:HB2	1.75	0.51
48:VA:143:THR:HG23	48:VA:151:GLU:O	2.10	0.51
48:VA:93:LEU:HA	48:VA:96:ILE:HG13	1.92	0.51
49:WA:126:SER:HB3	49:WA:128:ASP:OD1	2.09	0.51
49:WA:73:LEU:CD2	49:WA:77:GLY:HA2	2.39	0.51
50:XA:67:ILE:HD11	50:XA:120:LEU:HD22	1.92	0.51
25:Y:104:GLU:HA	25:Y:107:GLU:HB2	1.92	0.51
77:YB:79:PHE:HD2	77:YB:79:PHE:H	1.57	0.51
26:Z:38:ILE:HG13	26:Z:50:LEU:CD1	2.40	0.51
1:A:1142:A:H2'	1:A:1143:A:C8	2.45	0.51
1:A:1235:C:OP2	1:A:1245:G:H2'	2.09	0.51
1:A:164:A:H1'	56:DB:13:GLN:HE22	1.75	0.51
1:A:1795:U:H3	76:XB:10:ARG:HD2	1.74	0.51
1:A:579:A:H5'	1:A:580:A:OP2	2.11	0.51
1:A:710:U:C2'	1:A:711:U:H5'	2.34	0.51
1:A:71:A:C2	1:A:72:A:H1'	2.46	0.51
2:B:2338:C:H5'	27:AA:47:ASN:O	2.09	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:AB:18:TYR:O	53:AB:22:ASN:HB2	2.10	0.51
2:B:1439:U:H2'	2:B:1440:G:C8	2.44	0.51
2:B:1749:A:OP1	2:B:1749:A:H8	1.92	0.51
2:B:2554:A:N6	47:UA:62:LYS:HD3	2.25	0.51
2:B:2632:G:H2'	2:B:2633:U:C6	2.45	0.51
2:B:3042:U:H5''	27:AA:48:ARG:NH2	2.25	0.51
2:B:692:A:H2'	2:B:693:A:C5'	2.40	0.51
82:DC:281:ILE:HA	82:DC:284:LEU:CD1	2.40	0.51
82:DC:335:LEU:HA	82:DC:338:ILE:HG22	1.91	0.51
82:DC:377:ASP:O	82:DC:379:MET:HG2	2.09	0.51
82:DC:382:VAL:CG1	82:DC:397:PHE:H	2.21	0.51
82:DC:571:SER:CB	82:DC:590:ALA:H	2.22	0.51
82:DC:785:ARG:HG2	82:DC:785:ARG:HH11	1.74	0.51
82:DC:808:PRO:HA	82:DC:813:SER:HB3	1.93	0.51
57:EB:30:SER:HB2	57:EB:34:LEU:HD22	1.92	0.51
6:F:242:ARG:CG	6:F:243:THR:N	2.74	0.51
6:F:54:ARG:HG3	6:F:54:ARG:HH11	1.75	0.51
32:FA:78:LEU:HD13	32:FA:81:LEU:HD12	1.92	0.51
7:G:305:ILE:HD13	7:G:317:ILE:HD12	1.92	0.51
60:HB:69:THR:O	60:HB:73:VAL:HG23	2.10	0.51
10:J:146:ILE:HA	10:J:149:ILE:CD1	2.33	0.51
12:L:76:ALA:CB	12:L:234:GLY:HA3	2.38	0.51
40:NA:93:ILE:O	40:NA:97:SER:HB3	2.10	0.51
66:NB:66:ARG:HH12	66:NB:68:ARG:HD2	1.75	0.51
69:QB:123:ARG:CG	69:QB:124:ILE:H	2.21	0.51
22:V:9:GLN:HE21	22:V:10:HIS:HD2	1.58	0.51
48:VA:143:THR:HG21	48:VA:150:ILE:CG2	2.38	0.51
23:W:106:LEU:HD11	23:W:138:LEU:CD1	2.39	0.51
50:XA:10:THR:HB	50:XA:12:GLU:HG2	1.93	0.51
50:XA:146:LEU:HD23	50:XA:146:LEU:H	1.74	0.51
51:YA:113:MET:HG2	51:YA:209:ASN:ND2	2.26	0.51
51:YA:70:LEU:HD22	51:YA:70:LEU:O	2.09	0.51
78:ZB:32:PHE:CZ	78:ZB:38:ARG:HB3	2.45	0.51
1:A:1010:C:H2'	1:A:1011:G:C8	2.46	0.51
1:A:288:A:H2'	1:A:289:U:C6	2.45	0.51
1:A:345:U:O2	1:A:346:G:H1'	2.11	0.51
2:B:1117:G:H2'	2:B:1118:C:C6	2.44	0.51
2:B:118:U:H2'	2:B:119:U:H5'	1.92	0.51
2:B:1240:A:H5'	16:P:98:VAL:HG12	1.93	0.51
2:B:1550:C:H2'	2:B:1551:C:H6	1.75	0.51
2:B:1732:U:H3'	2:B:1733:G:H8	1.76	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1887:A:O3'	7:G:228:GLY:N	2.44	0.51
2:B:2349:U:O2'	2:B:3307:A:H1'	2.11	0.51
2:B:2357:A:H2'	2:B:2358:A:H8	1.76	0.51
2:B:2407:C:H2'	2:B:2408:U:H6	1.75	0.51
2:B:3060:C:H1'	2:B:3332:U:O2'	2.10	0.51
2:B:430:U:H2'	2:B:431:U:O4'	2.09	0.51
2:B:707:U:H2'	2:B:708:G:O4'	2.10	0.51
2:B:771:A:H2'	2:B:772:U:O4'	2.10	0.51
2:B:877:C:H2'	2:B:878:G:O4'	2.11	0.51
54:BB:181:VAL:HG22	54:BB:227:VAL:HG12	1.92	0.51
3:C:52:A:H2'	3:C:53:A:H5'	1.92	0.51
82:DC:537:HIS:O	82:DC:540:ILE:HB	2.10	0.51
82:DC:567:VAL:HG22	82:DC:684:VAL:HG13	1.92	0.51
31:EA:102:GLU:O	31:EA:103:GLN:HB2	2.11	0.51
32:FA:143:GLY:O	32:FA:144:VAL:HG13	2.11	0.51
32:FA:78:LEU:HA	32:FA:81:LEU:HD11	1.92	0.51
58:FB:110:ARG:HB3	58:FB:160:PHE:CE1	2.45	0.51
58:FB:43:ILE:HG23	58:FB:56:ARG:N	2.25	0.51
7:G:88:GLY:O	7:G:160:VAL:HG13	2.09	0.51
8:H:163:LYS:O	8:H:166:VAL:HB	2.11	0.51
34:HA:22:LYS:HB2	34:HA:93:LEU:HB2	1.92	0.51
9:I:151:GLN:HE21	9:I:151:GLN:HA	1.75	0.51
10:J:42:LEU:HD13	10:J:47:PHE:HB3	1.93	0.51
10:J:52:VAL:HG23	10:J:66:SER:C	2.31	0.51
37:KA:50:ALA:HB1	37:KA:66:VAL:CG1	2.40	0.51
14:N:51:HIS:NE2	14:N:168:SER:HB2	2.24	0.51
44:RA:93:LYS:CG	44:RA:102:ARG:HG2	2.41	0.51
72:TB:84:GLY:O	72:TB:88:LYS:HE2	2.11	0.51
47:UA:88:GLU:O	47:UA:92:ALA:HB3	2.10	0.51
73:UB:31:LYS:HA	73:UB:36:THR:OG1	2.09	0.51
2:B:841:A:H5''	23:W:126:GLU:HG2	1.91	0.51
49:WA:22:SER:CB	49:WA:36:ALA:HB3	2.40	0.51
76:XB:97:PRO:HB2	76:XB:98:PRO:HD3	1.91	0.51
51:YA:26:ARG:HG2	51:YA:50:LYS:HB3	1.93	0.51
1:A:124:A:H2'	1:A:125:U:O4'	2.10	0.51
1:A:63:G:C4'	1:A:170:U:H5	2.23	0.51
1:A:330:G:H2'	1:A:331:A:C8	2.45	0.51
1:A:386:G:H2'	1:A:387:A:C8	2.45	0.51
1:A:743:U:H2'	1:A:744:U:C6	2.46	0.51
1:A:828:U:C2'	1:A:829:A:H5''	2.37	0.51
1:A:881:A:H2'	1:A:882:U:O4'	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:890:C:H2'	1:A:891:A:H8	1.76	0.51
27:AA:121:GLU:O	27:AA:125:LEU:HB2	2.10	0.51
2:B:1633:C:H2'	2:B:1634:G:H8	1.74	0.51
2:B:175:C:H2'	2:B:176:G:H8	1.74	0.51
2:B:1818:U:H3'	2:B:1819:U:H5''	1.92	0.51
2:B:2159:U:O4	2:B:2591:A:H4'	2.10	0.51
2:B:3127:A:H2'	2:B:3128:G:C8	2.46	0.51
2:B:3281:U:H2'	2:B:3282:U:O4'	2.10	0.51
2:B:3300:U:C2'	2:B:3301:U:H5'	2.41	0.51
2:B:45:A:H2'	2:B:46:U:O4'	2.10	0.51
2:B:595:G:N1	2:B:609:G:H5''	2.25	0.51
2:B:675:C:C2'	2:B:676:G:H5'	2.38	0.51
2:B:716:A:N6	32:FA:117:ARG:HB3	2.26	0.51
80:BC:30:PRO:HB2	80:BC:34:ALA:HB1	1.92	0.51
55:CB:119:ASP:O	55:CB:123:VAL:HG23	2.09	0.51
55:CB:171:ALA:HA	55:CB:174:LEU:HD12	1.92	0.51
55:CB:215:ASP:O	55:CB:219:ARG:HB3	2.11	0.51
55:CB:59:VAL:O	55:CB:60:ASP:HB2	2.10	0.51
82:DC:466:THR:HG21	82:DC:481:MET:SD	2.51	0.51
82:DC:545:LEU:HD12	82:DC:550:ALA:N	2.26	0.51
82:DC:544:ASP:O	82:DC:548:ASP:HB3	2.10	0.51
83:EC:6922:G:H2'	83:EC:6923:C:O4'	2.10	0.51
2:B:2148:U:H5'	6:F:197:PRO:HB3	1.93	0.51
32:FA:79:TRP:HE1	32:FA:118:ILE:HG22	1.76	0.51
7:G:215:ILE:O	7:G:280:HIS:HB2	2.10	0.51
60:HB:25:LYS:HE3	60:HB:59:PHE:HE2	1.75	0.51
60:HB:93:GLN:HG3	60:HB:94:GLU:H	1.76	0.51
9:I:50:ARG:O	9:I:64:ILE:HA	2.10	0.51
11:K:101:LYS:CE	11:K:105:LEU:HD11	2.41	0.51
2:B:1362:G:H1'	11:K:159:GLN:HG2	1.93	0.51
63:KB:91:LEU:HD22	63:KB:122:ILE:HG13	1.92	0.51
38:LA:65:VAL:HG12	38:LA:66:SER:H	1.75	0.51
64:LB:64:ALA:HA	64:LB:67:VAL:HG12	1.93	0.51
39:MA:100:VAL:HG22	39:MA:101:THR:N	2.19	0.51
14:N:145:LYS:HA	14:N:148:VAL:HG23	1.91	0.51
66:NB:12:LYS:HG2	66:NB:17:THR:HG22	1.91	0.51
2:B:2675:C:H42	15:O:22:SER:CB	2.24	0.51
1:A:1316:G:C4'	67:OB:10:LYS:HE3	2.37	0.51
69:QB:114:VAL:HG22	69:QB:115:GLU:N	2.26	0.51
70:RB:57:ARG:HG3	70:RB:89:ARG:NH2	2.26	0.51
19:S:114:ARG:HB2	19:S:137:PRO:HD3	1.91	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:T:37:ARG:HD3	20:T:108:ILE:HG13	1.93	0.51
20:T:53:LYS:O	20:T:56:ASP:HB2	2.10	0.51
21:U:51:VAL:HG22	21:U:56:ARG:HG3	1.92	0.51
48:VA:58:MET:HA	48:VA:61:ARG:HB2	1.92	0.51
74:VB:35:VAL:HG13	74:VB:36:SER:N	2.26	0.51
74:VB:55:VAL:HG12	74:VB:56:SER:N	2.25	0.51
49:WA:27:ALA:HB2	49:WA:296:ALA:HB3	1.92	0.51
2:B:1213:G:H4'	24:X:90:MET:HG3	1.92	0.51
25:Y:102:ARG:HH11	25:Y:102:ARG:HG2	1.74	0.51
51:YA:157:GLN:HB2	51:YA:160:HIS:CG	2.44	0.51
51:YA:26:ARG:HD3	51:YA:52:THR:HG21	1.91	0.51
1:A:121:U:H1'	54:BB:33:ALA:HB3	1.92	0.51
1:A:1675:C:H2'	1:A:1676:U:C6	2.46	0.51
27:AA:19:VAL:HG13	27:AA:37:ILE:HA	1.91	0.51
49:WA:221:MET:HE1	53:AB:220:PRO:HG3	1.93	0.51
2:B:1080:A:C6	2:B:1082:U:H1'	2.46	0.51
2:B:1139:G:O2'	11:K:94:LYS:HD3	2.10	0.51
2:B:1326:A:H2'	2:B:1327:C:H6	1.75	0.51
2:B:1925:U:H1'	47:UA:20:SER:HB3	1.92	0.51
2:B:200:C:H5	30:DA:103:LYS:HZ1	1.59	0.51
2:B:2389:C:H1'	21:U:69:ARG:NH1	2.26	0.51
2:B:2430:A:O2'	2:B:2431:C:H5'	2.09	0.51
2:B:3060:C:O2'	2:B:3061:G:H5'	2.11	0.51
2:B:3118:C:H3'	2:B:3119:U:H5''	1.93	0.51
2:B:3099:C:H42	2:B:3135:U:H3	1.57	0.51
2:B:3353:G:H1'	2:B:3356:G:O2'	2.11	0.51
2:B:811:U:H2'	2:B:812:G:C8	2.46	0.51
2:B:87:U:H5'	22:V:167:SER:CB	2.39	0.51
55:CB:92:ARG:HB3	55:CB:172:ILE:HD13	1.92	0.51
30:DA:56:VAL:HG11	30:DA:104:LEU:CD1	2.40	0.51
56:DB:51:LYS:HB3	56:DB:112:VAL:HB	1.93	0.51
56:DB:31:ARG:HB2	56:DB:34:GLN:NE2	2.25	0.51
82:DC:345:PRO:HG3	82:DC:399:ARG:NH2	2.25	0.51
82:DC:561:VAL:HG23	82:DC:778:PHE:HZ	1.76	0.51
82:DC:579:SER:HB2	82:DC:704:GLN:OE1	2.10	0.51
31:EA:76:ASN:HB3	31:EA:79:HIS:HB2	1.92	0.51
57:EB:141:ARG:O	57:EB:149:ILE:HG13	2.10	0.51
57:EB:140:VAL:HG22	57:EB:150:GLN:HG2	1.92	0.51
83:EC:6912:G:H3'	83:EC:6913:U:H5''	1.93	0.51
32:FA:105:LEU:HD13	32:FA:128:ARG:CZ	2.40	0.51
32:FA:145:VAL:HG12	32:FA:146:GLU:N	2.23	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:FA:73:LEU:HD11	32:FA:81:LEU:HD21	1.91	0.51
58:FB:58:LEU:O	58:FB:59:ARG:HB2	2.10	0.51
7:G:222:LYS:O	7:G:271:GLY:HA3	2.11	0.51
7:G:376:LYS:O	7:G:380:MET:HG2	2.11	0.51
8:H:82:THR:HG23	8:H:84:ARG:H	1.75	0.51
9:I:211:LEU:O	9:I:216:GLU:HA	2.10	0.51
10:J:70:LYS:CE	10:J:146:ILE:HG13	2.39	0.51
38:LA:86:LYS:HA	38:LA:89:ILE:HD12	1.91	0.51
13:M:166:ARG:HB3	13:M:166:ARG:NH1	2.26	0.51
13:M:4:ILE:O	13:M:58:HIS:HA	2.10	0.51
13:M:68:LEU:HD22	13:M:68:LEU:O	2.10	0.51
16:P:110:ILE:HG21	16:P:142:ARG:NH2	2.25	0.51
69:QB:70:GLN:HB2	69:QB:121:GLY:HA3	1.93	0.51
20:T:72:HIS:O	20:T:74:ARG:NH1	2.44	0.51
21:U:17:ALA:O	21:U:147:GLU:HB2	2.11	0.51
1:A:609:U:O2'	73:UB:23:ARG:HD2	2.10	0.51
73:UB:96:VAL:HG23	73:UB:97:ASP:N	2.25	0.51
22:V:140:LEU:O	22:V:141:ARG:HG3	2.10	0.51
22:V:179:ARG:HB3	22:V:179:ARG:HH11	1.74	0.51
48:VA:54:GLY:HA3	48:VA:58:MET:CG	2.36	0.51
24:X:75:PHE:CE2	24:X:99:ARG:HA	2.46	0.51
50:XA:181:VAL:HG23	50:XA:182:LEU:H	1.75	0.51
2:B:2724:U:C5'	25:Y:54:HIS:ND1	2.67	0.51
25:Y:75:ILE:HD13	25:Y:75:ILE:C	2.31	0.51
51:YA:120:LEU:C	51:YA:121:ILE:HD12	2.30	0.51
52:ZA:129:ILE:O	52:ZA:133:LYS:HG2	2.10	0.51
52:ZA:182:PRO:O	52:ZA:186:LYS:HD3	2.10	0.51
52:ZA:139:ILE:HG23	52:ZA:218:ILE:HB	1.91	0.51
52:ZA:35:TRP:O	52:ZA:36:VAL:HB	2.11	0.51
78:ZB:40:ILE:HG23	78:ZB:62:GLU:OE1	2.10	0.51
78:ZB:9:LEU:HD12	78:ZB:33:LEU:HG	1.92	0.51
1:A:1020:A:H3'	1:A:1021:C:H5''	1.93	0.51
1:A:139:C:C4	1:A:176:C:H1'	2.45	0.51
1:A:740:A:C2'	1:A:741:C:H5''	2.41	0.51
1:A:829:A:O2'	1:A:830:U:OP2	2.27	0.51
1:A:924:A:H2'	1:A:925:G:C8	2.45	0.51
27:AA:30:GLY:HA3	27:AA:66:LYS:CD	2.40	0.51
27:AA:7:GLN:HG2	27:AA:7:GLN:O	2.11	0.51
2:B:1222:G:H5'	48:VA:56:ASN:CB	2.39	0.51
2:B:1446:A:H61	2:B:2356:A:H3'	1.75	0.51
2:B:1495:U:O3'	2:B:1514:G:H4'	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1537:A:H2'	2:B:1538:G:O4'	2.11	0.51
2:B:1614:C:H2'	2:B:1615:C:H6	1.75	0.51
2:B:1663:C:H2'	2:B:1664:G:C8	2.46	0.51
2:B:1915:A:H2'	2:B:1916:U:C6	2.45	0.51
2:B:211:A:O4'	2:B:229:G:H1'	2.10	0.51
2:B:2732:G:H5'	2:B:2761:G:C5'	2.37	0.51
2:B:2948:C:O2'	7:G:242:THR:HA	2.10	0.51
2:B:35:A:H2'	2:B:36:C:C6	2.45	0.51
2:B:4:U:H3	3:C:155:A:H2	1.59	0.51
54:BB:36:HIS:CD2	54:BB:85:GLY:HA3	2.44	0.51
54:BB:65:LEU:HD12	54:BB:80:THR:HA	1.91	0.51
56:DB:57:ASP:HA	56:DB:106:LEU:HA	1.92	0.51
82:DC:166:GLU:C	82:DC:167:LEU:HD12	2.31	0.51
82:DC:296:ILE:O	82:DC:300:LEU:HB2	2.11	0.51
57:EB:152:VAL:HG23	57:EB:181:ILE:HD11	1.93	0.51
83:EC:6836:U:H4'	83:EC:6877:C:N4	2.26	0.51
32:FA:37:GLY:HA3	32:FA:53:PHE:CZ	2.46	0.51
7:G:229:VAL:HG13	7:G:230:THR:H	1.76	0.51
59:GB:108:ARG:O	59:GB:112:GLN:HG2	2.11	0.51
59:GB:110:GLN:OE1	59:GB:126:ARG:HG2	2.11	0.51
8:H:109:TRP:CE3	8:H:109:TRP:HA	2.46	0.51
8:H:312:VAL:O	8:H:312:VAL:HG23	2.11	0.51
8:H:39:PHE:HE1	8:H:236:LEU:HA	1.75	0.51
9:I:49:TYR:CE1	9:I:66:SER:HB3	2.46	0.51
11:K:96:PRO:HB2	11:K:99:PRO:HD2	1.92	0.51
2:B:430:U:H4'	37:KA:67:MET:CE	2.41	0.51
63:KB:18:TYR:HA	72:TB:57:ARG:HH12	1.75	0.51
63:KB:23:PRO:O	63:KB:24:ALA:HB3	2.10	0.51
64:LB:133:ARG:HH11	64:LB:133:ARG:HG2	1.76	0.51
64:LB:29:HIS:O	64:LB:29:HIS:CG	2.63	0.51
64:LB:64:ALA:HB3	64:LB:104:ALA:CB	2.40	0.51
39:MA:20:GLN:HG2	39:MA:24:LEU:CD1	2.40	0.51
39:MA:93:THR:HG23	39:MA:96:GLU:OE1	2.11	0.51
17:Q:107:GLU:OE1	40:NA:17:VAL:HG22	2.10	0.51
1:A:1558:U:H5'	68:PB:133:VAL:HG22	1.93	0.51
69:QB:113:ILE:HG23	69:QB:128:GLY:CA	2.39	0.51
69:QB:132:LEU:HD12	69:QB:132:LEU:N	2.25	0.51
69:QB:138:GLN:HA	69:QB:141:GLU:CG	2.40	0.51
18:R:15:VAL:HG23	18:R:15:VAL:O	2.10	0.51
19:S:44:ARG:HH21	19:S:47:LYS:HZ3	1.58	0.51
19:S:8:GLU:HG3	19:S:50:ARG:HH22	1.76	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:S:63:ARG:HA	19:S:130:PHE:O	2.11	0.51
20:T:75:ALA:HA	20:T:147:TRP:CD1	2.46	0.51
21:U:175:ARG:O	21:U:179:GLN:HG3	2.09	0.51
73:UB:53:VAL:HB	73:UB:99:ASN:N	2.26	0.51
22:V:179:ARG:HH11	22:V:179:ARG:CB	2.23	0.51
48:VA:33:VAL:HG22	48:VA:34:SER:N	2.26	0.51
49:WA:251:TRP:HA	49:WA:264:SER:HA	1.93	0.51
50:XA:113:ARG:HA	50:XA:113:ARG:NE	2.26	0.51
76:XB:55:GLU:C	76:XB:57:SER:H	2.14	0.51
52:ZA:144:TRP:CD2	52:ZA:173:PRO:HG3	2.46	0.51
1:A:1788:G:P	64:LB:127:ARG:HH22	2.33	0.51
1:A:514:G:H1'	1:A:515:A:H5'	1.92	0.51
2:B:2338:C:H4'	27:AA:48:ARG:HA	1.93	0.51
2:B:1135:A:O2'	2:B:1136:A:H5'	2.10	0.51
2:B:1144:U:H3	2:B:1159:A:H62	1.57	0.51
2:B:1497:C:O2'	2:B:1498:A:H5'	2.11	0.51
2:B:1719:G:H5''	23:W:110:ARG:NH1	2.26	0.51
2:B:1731:A:H8	2:B:1731:A:O5'	1.94	0.51
2:B:1886:A:O2'	2:B:1887:A:H5'	2.10	0.51
2:B:2179:C:N3	6:F:131:GLY:HA3	2.25	0.51
2:B:2247:G:O2'	2:B:2248:C:H5'	2.11	0.51
2:B:2277:C:H2'	2:B:2278:C:H6	1.75	0.51
2:B:2551:U:H3'	2:B:2551:U:OP1	2.11	0.51
2:B:3028:G:C5'	82:DC:28:VAL:HG11	2.40	0.51
2:B:3029:A:H2'	2:B:3030:G:O4'	2.10	0.51
2:B:45:A:O2'	2:B:46:U:H5'	2.11	0.51
2:B:578:A:H4'	8:H:324:LEU:HD21	1.92	0.51
2:B:645:A:N1	2:B:2372:A:C2	2.79	0.51
2:B:70:A:H3'	2:B:71:A:H8	1.76	0.51
55:CB:107:LYS:HG2	55:CB:111:VAL:HG23	1.93	0.51
55:CB:51:VAL:CG1	55:CB:130:ILE:HG12	2.41	0.51
30:DA:55:GLU:HA	30:DA:69:LYS:HA	1.91	0.51
82:DC:420:PRO:HB3	82:DC:475:ALA:O	2.11	0.51
82:DC:42:ARG:HH22	82:DC:325:ARG:HH11	1.58	0.51
82:DC:82:SER:O	82:DC:86:VAL:HG23	2.11	0.51
5:E:100:ILE:HG13	5:E:128:LEU:HD12	1.93	0.51
57:EB:50:ASP:HA	57:EB:56:LYS:HA	1.91	0.51
2:B:748:U:H5''	33:GA:30:PRO:O	2.11	0.51
60:HB:73:VAL:O	60:HB:77:ARG:HB2	2.10	0.51
36:JA:43:ARG:NH1	36:JA:43:ARG:HG2	2.20	0.51
6:F:39:GLY:N	12:L:36:ILE:HG21	2.26	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:LA:42:PRO:O	38:LA:51:LEU:HD22	2.10	0.51
64:LB:61:MET:SD	64:LB:104:ALA:HA	2.51	0.51
39:MA:38:ARG:NH1	39:MA:41:LEU:HD22	2.25	0.51
14:N:17:TYR:HD1	14:N:96:VAL:HB	1.76	0.51
40:NA:15:LYS:C	40:NA:17:VAL:H	2.13	0.51
15:O:93:ASP:HA	15:O:171:VAL:HG22	1.93	0.51
15:O:88:GLU:O	15:O:90:GLN:HG3	2.10	0.51
43:QA:27:ILE:C	43:QA:29:LEU:H	2.14	0.51
18:R:24:LYS:HE2	18:R:64:VAL:HB	1.93	0.51
19:S:11:GLN:HB3	19:S:12:ARG:HH21	1.76	0.51
20:T:26:GLN:HG3	24:X:163:PHE:HZ	1.76	0.51
22:V:71:LEU:HD13	22:V:97:PRO:HG2	1.93	0.51
22:V:70:ALA:HA	22:V:73:GLN:NE2	2.25	0.51
49:WA:274:LEU:HD22	49:WA:276:PRO:HD3	1.92	0.51
50:XA:177:LEU:O	50:XA:181:VAL:HG13	2.10	0.51
51:YA:185:THR:CA	51:YA:188:LEU:HD12	2.40	0.51
51:YA:61:LEU:HD13	51:YA:61:LEU:N	2.25	0.51
77:YB:13:ALA:C	77:YB:15:GLU:H	2.13	0.51
1:A:1230:A:C2	1:A:1258:U:H1'	2.42	0.51
1:A:373:G:C5'	61:IB:96:LYS:HG3	2.39	0.51
1:A:638:U:H1'	57:EB:112:ARG:HH12	1.76	0.51
53:AB:48:VAL:HB	53:AB:86:LEU:HA	1.93	0.51
2:B:1010:G:H1	2:B:1040:A:H61	1.58	0.51
2:B:10:C:C3'	2:B:11:A:H5''	2.40	0.51
2:B:1218:U:O2'	2:B:1219:C:H6	1.93	0.51
2:B:1340:G:H2'	2:B:1341:U:H6	1.76	0.51
2:B:1487:G:H2'	2:B:1488:G:C5'	2.40	0.51
2:B:900:G:H1'	2:B:1589:A:H61	1.76	0.51
2:B:1497:C:HO2'	2:B:1602:A:H1'	1.73	0.51
2:B:1942:U:OP2	23:W:74:ARG:NE	2.44	0.51
2:B:2149:A:C2'	2:B:2150:G:H5'	2.41	0.51
2:B:2632:G:H2'	2:B:2633:U:H6	1.76	0.51
2:B:2643:A:H2'	2:B:2645:G:O5'	2.10	0.51
2:B:3121:U:H4'	2:B:3122:A:OP1	2.10	0.51
2:B:623:U:H2'	2:B:624:G:C8	2.46	0.51
2:B:637:C:H2'	2:B:638:C:C5	2.45	0.51
3:C:9:A:H2'	3:C:10:A:C8	2.46	0.51
3:C:73:U:H3'	3:C:74:U:C6	2.46	0.51
2:B:1524:A:C5'	29:CA:92:LYS:HZ1	2.14	0.51
56:DB:163:THR:HA	56:DB:168:THR:HG22	1.92	0.51
82:DC:633:ILE:HA	82:DC:647:ILE:HG13	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:784:LEU:HD22	82:DC:794:PRO:HB3	1.92	0.51
83:EC:6850:C:H2'	83:EC:6851:G:C4'	2.41	0.51
58:FB:25:ARG:HB3	58:FB:27:PHE:CD2	2.46	0.51
58:FB:78:ILE:CD1	58:FB:78:ILE:H	2.14	0.51
7:G:27:ALA:HB2	7:G:219:ALA:HA	1.93	0.51
7:G:5:LYS:HG3	7:G:6:TYR:CD1	2.46	0.51
60:HB:3:MET:HB2	60:HB:7:ASP:HB2	1.92	0.51
60:HB:15:LEU:HG	60:HB:68:LEU:HD22	1.93	0.51
35:IA:80:ASN:HB2	35:IA:89:LEU:N	2.25	0.51
10:J:92:SER:OG	10:J:94:GLU:HG2	2.11	0.51
11:K:194:HIS:HA	11:K:197:GLN:HE22	1.76	0.51
12:L:161:GLU:HB3	19:S:7:LEU:HD22	1.93	0.51
14:N:71:CYS:HB2	14:N:158:LYS:HZ2	1.76	0.51
40:NA:36:ARG:HA	40:NA:36:ARG:HE	1.72	0.51
3:C:111:A:OP1	41:OA:32:LYS:HE3	2.10	0.51
68:PB:38:VAL:HG11	68:PB:73:MET:HE1	1.92	0.51
43:QA:36:ARG:HH11	43:QA:36:ARG:HG2	1.76	0.51
1:A:1480:G:H5'	69:QB:11:ALA:HB3	1.91	0.51
44:RA:102:ARG:O	44:RA:103:LEU:HD23	2.10	0.51
23:W:104:ARG:HH12	23:W:135:LYS:HD3	1.76	0.51
23:W:136:ARG:HA	23:W:139:VAL:HG23	1.92	0.51
23:W:29:THR:HG23	23:W:30:SER:N	2.26	0.51
24:X:75:PHE:HE2	24:X:99:ARG:HA	1.75	0.51
50:XA:146:LEU:HD23	50:XA:146:LEU:N	2.26	0.51
76:XB:41:ILE:HG12	76:XB:41:ILE:O	2.10	0.51
51:YA:32:ILE:HA	51:YA:96:LEU:CD1	2.41	0.51
51:YA:86:LEU:HB3	51:YA:98:THR:OG1	2.10	0.51
52:ZA:140:ARG:HH21	52:ZA:229:LEU:HD22	1.76	0.51
78:ZB:36:THR:HG23	78:ZB:37:SER:N	2.25	0.51
1:A:1434:U:H2'	1:A:1435:G:H3'	1.93	0.51
1:A:152:U:H3'	1:A:153:G:H5''	1.93	0.51
1:A:1725:U:H2'	1:A:1726:G:C8	2.46	0.51
1:A:416:A:H5'	1:A:417:A:C8	2.46	0.51
1:A:564:G:H4'	1:A:566:C:C2	2.46	0.51
1:A:608:U:H5''	1:A:610:G:N7	2.25	0.51
1:A:896:U:O2'	1:A:897:C:H5'	2.10	0.51
53:AB:167:PHE:CZ	53:AB:203:PRO:HD3	2.46	0.51
2:B:103:G:H4'	17:Q:65:TYR:CE2	2.46	0.51
2:B:1427:U:C2'	2:B:1428:A:H5'	2.41	0.51
2:B:1912:U:H2'	2:B:1913:A:O4'	2.11	0.51
2:B:2137:U:H5	2:B:2957:G:H1'	1.76	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2626:A:N3	2:B:2644:C:H5'	2.26	0.51
2:B:3149:G:H2'	2:B:3150:A:H8	1.74	0.51
2:B:345:G:N2	2:B:349:A:OP2	2.42	0.51
2:B:44:U:H2'	2:B:45:A:O4'	2.11	0.51
2:B:730:C:O2'	2:B:731:U:H5'	2.11	0.51
3:C:39:G:H1'	3:C:105:A:N1	2.27	0.51
29:CA:66:PRO:HG3	29:CA:84:PHE:CE1	2.46	0.51
29:CA:90:ALA:CB	29:CA:95:ILE:HD11	2.36	0.51
4:D:12:U:H1'	4:D:111:U:H4'	1.93	0.51
82:DC:508:LEU:HD11	82:DC:528:HIS:CB	2.36	0.51
82:DC:567:VAL:HG12	82:DC:717:PHE:CD1	2.46	0.51
31:EA:22:LYS:HE2	31:EA:129:TRP:CH2	2.46	0.51
83:EC:6913:U:H2'	83:EC:6914:A:C1'	2.40	0.51
2:B:715:A:OP2	32:FA:113:LEU:HB3	2.11	0.51
7:G:372:THR:C	7:G:374:ALA:H	2.12	0.51
59:GB:28:LEU:O	59:GB:28:LEU:HD13	2.11	0.51
8:H:239:ALA:N	8:H:240:PRO:CD	2.74	0.51
8:H:339:LEU:C	8:H:341:SER:H	2.13	0.51
9:I:8:LYS:HD3	9:I:12:TYR:HE1	1.76	0.51
61:IB:67:ARG:NH2	61:IB:129:ARG:HA	2.26	0.51
11:K:221:LYS:HB3	11:K:227:GLY:HA3	1.91	0.51
37:KA:98:VAL:HG22	37:KA:99:ARG:H	1.76	0.51
63:KB:114:ARG:HG2	63:KB:114:ARG:HH11	1.74	0.51
12:L:154:ALA:O	12:L:156:ASP:N	2.44	0.51
14:N:46:PHE:HB3	14:N:140:THR:N	2.26	0.51
14:N:36:LEU:HD11	14:N:69:ARG:HD3	1.92	0.51
69:QB:135:ILE:HG13	69:QB:136:ALA:N	2.25	0.51
19:S:44:ARG:HH21	19:S:47:LYS:NZ	2.08	0.51
20:T:186:ALA:C	20:T:188:SER:H	2.13	0.51
72:TB:94:LEU:HD11	72:TB:102:VAL:HG23	1.93	0.51
21:U:29:THR:O	21:U:32:THR:HB	2.11	0.51
22:V:25:TYR:O	22:V:29:LEU:HG	2.11	0.51
25:Y:11:THR:HA	25:Y:14:MET:HB3	1.93	0.51
51:YA:135:LEU:CD2	51:YA:181:LEU:HD12	2.41	0.51
26:Z:33:TYR:C	26:Z:35:LYS:H	2.12	0.51
1:A:1102:G:H2'	1:A:1103:U:O4'	2.10	0.50
1:A:1392:U:H2'	1:A:1393:C:C6	2.46	0.50
1:A:1752:U:H2'	1:A:1753:A:H8	1.75	0.50
1:A:291:G:H2'	1:A:292:U:C5	2.45	0.50
1:A:385:A:C5'	58:FB:22:ARG:HB3	2.41	0.50
1:A:629:U:H2'	1:A:630:A:C4'	2.40	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:861:U:C2'	1:A:862:A:H5'	2.40	0.50
1:A:878:G:H2'	1:A:879:G:H8	1.76	0.50
53:AB:163:PRO:O	53:AB:167:PHE:HB2	2.11	0.50
2:B:118:U:C2'	2:B:119:U:H5'	2.41	0.50
2:B:1774:C:H2'	2:B:1775:G:C4'	2.40	0.50
2:B:1794:G:H1'	6:F:190:ARG:NH2	2.26	0.50
2:B:1799:A:H2'	2:B:1800:A:H8	1.76	0.50
2:B:1646:G:H1'	2:B:1808:G:N2	2.25	0.50
2:B:1859:A:H8	2:B:1859:A:O5'	1.94	0.50
2:B:1896:A:H61	2:B:2339:C:H42	1.59	0.50
2:B:2549:G:H5''	12:L:35:GLY:HA3	1.93	0.50
2:B:2631:U:H4'	2:B:2697:A:C2	2.46	0.50
2:B:2633:U:H2'	2:B:2634:U:C5'	2.41	0.50
2:B:3035:A:H1'	13:M:121:LYS:O	2.11	0.50
2:B:3037:U:H2'	2:B:3038:U:C5	2.45	0.50
2:B:449:U:H2'	2:B:450:G:C8	2.46	0.50
2:B:580:C:H2'	2:B:581:U:O4'	2.11	0.50
2:B:645:A:H1'	2:B:647:A:OP2	2.11	0.50
2:B:5:G:N3	2:B:6:A:H1'	2.26	0.50
30:DA:121:ARG:HB2	30:DA:121:ARG:HH21	1.73	0.50
56:DB:139:ASN:HA	56:DB:142:ARG:HG3	1.92	0.50
82:DC:694:HIS:CG	82:DC:695:ALA:N	2.78	0.50
2:B:964:G:H21	32:FA:40:HIS:HB2	1.76	0.50
22:V:170:ARG:NH2	32:FA:59:ARG:HG2	2.26	0.50
58:FB:42:ARG:HH11	58:FB:42:ARG:HB3	1.76	0.50
7:G:229:VAL:HG23	7:G:265:ALA:CB	2.41	0.50
7:G:332:ARG:NH1	7:G:332:ARG:HG2	2.26	0.50
60:HB:58:GLN:HB2	60:HB:65:TYR:O	2.11	0.50
10:J:3:ALA:H	36:JA:77:ALA:HB2	1.76	0.50
15:O:9:MET:SD	15:O:134:PRO:HG2	2.52	0.50
69:QB:14:PHE:CE2	69:QB:63:ARG:HD3	2.46	0.50
18:R:23:ILE:H	18:R:23:ILE:HD12	1.76	0.50
18:R:39:ILE:HB	18:R:43:LYS:O	2.11	0.50
70:RB:65:ILE:O	70:RB:81:THR:HA	2.11	0.50
21:U:64:ASN:ND2	21:U:80:LYS:HD2	2.25	0.50
48:VA:145:ILE:HB	82:DC:201:GLN:CD	2.31	0.50
59:GB:142:ASN:ND2	74:VB:64:PHE:CZ	2.79	0.50
49:WA:128:ASP:O	49:WA:129:LYS:HG2	2.12	0.50
49:WA:182:ASN:HB3	49:WA:187:GLN:HG3	1.93	0.50
11:K:224:ILE:HG21	24:X:39:SER:OG	2.10	0.50
50:XA:111:ILE:HG23	50:XA:111:ILE:O	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:XA:146:LEU:HB3	50:XA:160:ILE:HD12	1.92	0.50
2:B:1098:A:O2'	25:Y:132:PRO:HD3	2.11	0.50
2:B:2724:U:C5'	25:Y:54:HIS:CG	2.94	0.50
2:B:1059:G:O2'	25:Y:61:THR:HB	2.11	0.50
51:YA:228:LEU:HD11	51:YA:232:HIS:CE1	2.45	0.50
78:ZB:58:GLU:OE2	78:ZB:61:ARG:HB3	2.11	0.50
1:A:1066:C:H4'	51:YA:146:GLN:HB2	1.93	0.50
1:A:1043:A:H61	1:A:1075:C:H42	1.59	0.50
1:A:1641:C:O3'	45:SA:1:MET:HB2	2.12	0.50
1:A:804:A:C2'	1:A:805:U:H5'	2.41	0.50
1:A:867:G:H2'	1:A:868:G:H5'	1.93	0.50
1:A:887:A:H2'	1:A:888:U:C6	2.46	0.50
53:AB:71:LEU:HA	53:AB:74:GLN:HB3	1.92	0.50
2:B:1360:C:H2'	2:B:1361:U:C6	2.46	0.50
2:B:1448:U:H2'	2:B:1449:A:C8	2.46	0.50
2:B:2213:A:H2'	2:B:2214:A:O4'	2.10	0.50
2:B:2490:C:H4'	2:B:2491:A:C5'	2.36	0.50
2:B:2727:A:N1	32:FA:43:ILE:HG12	2.27	0.50
2:B:2969:A:H62	6:F:215:ASN:ND2	2.09	0.50
2:B:375:A:H2'	2:B:376:G:OP1	2.12	0.50
2:B:617:G:O2'	2:B:618:C:H5'	2.10	0.50
54:BB:198:LYS:HG2	54:BB:208:VAL:HG22	1.92	0.50
55:CB:42:LEU:HB2	55:CB:46:TRP:O	2.11	0.50
56:DB:6:SER:CA	56:DB:13:GLN:HB3	2.36	0.50
5:E:207:LYS:HD3	5:E:213:ALA:HB2	1.93	0.50
31:EA:13:VAL:HB	31:EA:19:ALA:HA	1.92	0.50
31:EA:60:LYS:HB3	31:EA:64:LYS:NZ	2.26	0.50
31:EA:89:VAL:HA	31:EA:92:PHE:CE2	2.46	0.50
57:EB:130:VAL:HB	57:EB:133:THR:OG1	2.10	0.50
6:F:123:ARG:HA	6:F:163:ARG:NH1	2.24	0.50
2:B:2948:C:C1'	7:G:242:THR:HG22	2.37	0.50
35:IA:79:ARG:N	35:IA:79:ARG:HD3	2.27	0.50
61:IB:66:ILE:HD12	61:IB:66:ILE:N	2.24	0.50
11:K:194:HIS:HA	11:K:197:GLN:NE2	2.26	0.50
11:K:98:LYS:CB	11:K:99:PRO:HD3	2.34	0.50
2:B:1177:G:H5'	37:KA:18:ARG:CZ	2.42	0.50
63:KB:131:THR:HG22	63:KB:131:THR:O	2.11	0.50
63:KB:22:ALA:HB1	63:KB:23:PRO:CA	2.37	0.50
63:KB:91:LEU:HD11	63:KB:121:ARG:CD	2.41	0.50
12:L:32:LYS:HE2	12:L:34:PHE:HZ	1.76	0.50
12:L:92:LYS:O	12:L:96:LYS:HG3	2.10	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
64:LB:74:VAL:HB	64:LB:76:ILE:CD1	2.40	0.50
14:N:113:GLN:HB2	14:N:116:ARG:HD3	1.92	0.50
14:N:99:ILE:HD12	14:N:123:HIS:NE2	2.27	0.50
40:NA:60:LEU:HD12	40:NA:69:ALA:CA	2.37	0.50
55:CB:69:PHE:CZ	66:NB:53:LEU:HD12	2.46	0.50
66:NB:79:TYR:HA	66:NB:82:ARG:HG3	1.92	0.50
15:O:63:GLU:O	15:O:64:LYS:HB2	2.09	0.50
68:PB:36:LYS:HB3	68:PB:105:VAL:CG1	2.41	0.50
69:QB:73:VAL:HG11	69:QB:102:ARG:HH22	1.77	0.50
2:B:56:G:H1'	19:S:161:ALA:HB1	1.93	0.50
73:UB:144:ARG:HB2	82:DC:464:LEU:HD22	1.94	0.50
74:VB:109:LYS:HA	74:VB:112:LYS:HE2	1.93	0.50
23:W:119:LEU:O	23:W:123:LEU:HB2	2.11	0.50
24:X:94:ILE:HD13	24:X:105:THR:HB	1.93	0.50
50:XA:147:THR:HB	50:XA:151:SER:CB	2.39	0.50
25:Y:12:ARG:C	25:Y:14:MET:N	2.64	0.50
77:YB:20:LYS:N	77:YB:20:LYS:HD3	2.27	0.50
1:A:1609:U:H5''	66:NB:75:VAL:CB	2.41	0.50
1:A:551:G:H2'	1:A:552:G:H8	1.76	0.50
1:A:890:C:H2'	1:A:891:A:C8	2.47	0.50
1:A:939:A:H2'	1:A:940:A:H8	1.73	0.50
2:B:1008:U:H2'	2:B:1009:A:C8	2.46	0.50
2:B:1073:U:H1'	33:GA:50:THR:OG1	2.11	0.50
2:B:1256:G:H1'	16:P:123:ARG:HG3	1.93	0.50
2:B:1361:U:H2'	2:B:1362:G:C8	2.44	0.50
2:B:2302:G:H2'	2:B:2303:A:O4'	2.11	0.50
2:B:3302:U:H3	2:B:3312:U:H3	1.57	0.50
2:B:519:A:H4'	11:K:70:LYS:NZ	2.26	0.50
2:B:649:A:H2'	2:B:650:C:C6	2.47	0.50
54:BB:246:LEU:HD12	54:BB:246:LEU:H	1.76	0.50
1:A:567:A:H4'	80:BC:10:ARG:O	2.10	0.50
29:CA:87:SER:C	29:CA:89:LYS:H	2.13	0.50
55:CB:121:ILE:HA	55:CB:199:ILE:HD11	1.92	0.50
56:DB:135:PRO:CB	56:DB:141:ILE:HG12	2.40	0.50
82:DC:404:THR:HG22	82:DC:449:PRO:HB3	1.91	0.50
82:DC:494:GLU:HB3	82:DC:555:LYS:HB3	1.93	0.50
82:DC:815:ALA:O	82:DC:819:VAL:HG23	2.12	0.50
1:A:803:A:C5	57:EB:104:ARG:HB2	2.47	0.50
7:G:23:ALA:HB3	7:G:28:ARG:NH2	2.25	0.50
8:H:351:PRO:CB	11:K:70:LYS:HG3	2.39	0.50
38:LA:3:GLN:HG3	38:LA:30:LEU:HB2	1.92	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:3186:A:C8	13:M:42:ASP:HB3	2.45	0.50
17:Q:103:ASN:HB3	40:NA:20:MET:CE	2.42	0.50
15:O:22:SER:HA	15:O:66:ALA:HB2	1.93	0.50
18:R:45:LEU:HD12	18:R:57:ALA:CB	2.39	0.50
74:VB:11:LYS:HB2	74:VB:24:VAL:HG23	1.93	0.50
23:W:25:ASP:HB2	23:W:28:GLU:HB2	1.93	0.50
23:W:70:LYS:NZ	23:W:76:SER:HB2	2.26	0.50
23:W:98:ARG:O	23:W:101:VAL:HB	2.10	0.50
25:Y:64:VAL:HA	25:Y:74:VAL:HA	1.93	0.50
25:Y:75:ILE:HD13	25:Y:76:ILE:N	2.26	0.50
25:Y:42:ILE:CD1	25:Y:76:ILE:HD11	2.41	0.50
1:A:301:A:HO2'	1:A:334:G:H1	1.59	0.50
1:A:589:C:H2'	1:A:590:C:H6	1.76	0.50
1:A:955:A:H4'	1:A:1073:G:O2'	2.11	0.50
27:AA:45:ARG:HB3	27:AA:48:ARG:HB3	1.92	0.50
2:B:1380:G:O2'	2:B:1381:A:H5'	2.11	0.50
2:B:1541:G:H1'	2:B:1557:A:C4	2.47	0.50
2:B:1448:U:C5	2:B:2355:G:N2	2.73	0.50
2:B:2684:C:H2'	2:B:2685:C:H6	1.77	0.50
2:B:2880:U:H2'	2:B:2881:C:H6	1.76	0.50
2:B:716:A:N7	32:FA:117:ARG:HB2	2.26	0.50
3:C:125:U:H3'	3:C:125:U:O2	2.11	0.50
55:CB:160:VAL:HG21	78:ZB:43:ASN:HB2	1.93	0.50
82:DC:627:VAL:HG22	82:DC:631:ARG:HG3	1.92	0.50
82:DC:591:GLU:CG	82:DC:685:ARG:HB3	2.41	0.50
5:E:100:ILE:HG13	5:E:128:LEU:CD1	2.42	0.50
31:EA:26:VAL:HG23	31:EA:27:LYS:N	2.24	0.50
57:EB:159:VAL:O	57:EB:163:ASP:HB2	2.11	0.50
2:B:2178:A:H5''	6:F:151:PRO:CG	2.42	0.50
2:B:942:U:H3'	32:FA:15:VAL:O	2.10	0.50
7:G:107:ALA:HB3	7:G:110:LEU:CD1	2.42	0.50
59:GB:108:ARG:O	59:GB:111:THR:HG22	2.12	0.50
2:B:661:G:C5'	8:H:100:PHE:HE1	2.22	0.50
34:HA:83:LYS:HD3	34:HA:85:PHE:CZ	2.46	0.50
9:I:207:TYR:O	9:I:211:LEU:HG	2.11	0.50
9:I:269:SER:O	9:I:273:ARG:HB2	2.11	0.50
10:J:9:TRP:CH2	10:J:11:PRO:HA	2.47	0.50
2:B:147:U:OP1	12:L:195:SER:HA	2.11	0.50
12:L:75:ILE:C	12:L:77:GLN:N	2.65	0.50
2:B:1805:C:H4'	38:LA:76:TYR:N	2.27	0.50
38:LA:44:CYS:SG	38:LA:81:CYS:HB2	2.51	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
64:LB:120:PRO:O	64:LB:122:PRO:HD3	2.11	0.50
39:MA:105:ARG:HH21	39:MA:105:ARG:HG3	1.76	0.50
14:N:17:TYR:CD1	14:N:96:VAL:HB	2.46	0.50
40:NA:34:SER:OG	40:NA:37:THR:HG23	2.11	0.50
66:NB:60:PHE:C	66:NB:62:ASN:H	2.14	0.50
16:P:125:LEU:HD12	16:P:125:LEU:H	1.76	0.50
17:Q:114:GLN:NE2	17:Q:115:ARG:N	2.60	0.50
19:S:27:VAL:HG23	19:S:129:TYR:HE2	1.75	0.50
20:T:142:SER:CA	20:T:145:VAL:HG22	2.34	0.50
2:B:277:G:C5'	46:TA:49:GLY:HA2	2.41	0.50
46:TA:65:THR:HG23	46:TA:89:LYS:HD3	1.94	0.50
21:U:128:ARG:HA	21:U:139:TYR:N	2.26	0.50
73:UB:12:ALA:O	73:UB:16:ARG:HG3	2.11	0.50
73:UB:5:LYS:HG3	73:UB:7:ARG:HD2	1.91	0.50
49:WA:41:THR:HG22	49:WA:62:LYS:HG2	1.92	0.50
75:WB:89:ILE:HG13	75:WB:89:ILE:O	2.12	0.50
52:ZA:38:VAL:C	52:ZA:43:ARG:HG3	2.32	0.50
1:A:1118:G:H2'	1:A:1119:G:H8	1.77	0.50
1:A:1238:A:H2'	1:A:1239:U:C5'	2.39	0.50
1:A:1290:U:H2'	1:A:1291:G:C8	2.46	0.50
1:A:313:U:H5''	1:A:314:C:H5''	1.94	0.50
1:A:460:A:H5'	1:A:461:G:OP2	2.11	0.50
1:A:623:A:H3'	1:A:624:G:H5''	1.94	0.50
1:A:888:U:O2'	1:A:989:U:H4'	2.11	0.50
2:B:1580:A:H62	29:CA:33:ARG:HG2	1.75	0.50
2:B:1916:U:H2'	2:B:1917:C:C6	2.45	0.50
2:B:1941:C:H42	2:B:2107:A:N6	2.09	0.50
2:B:2131:A:H2'	2:B:2132:C:H5'	1.92	0.50
2:B:2395:G:H4'	7:G:258:ALA:HB1	1.92	0.50
2:B:2536:A:C3'	2:B:2537:U:H5''	2.29	0.50
2:B:3386:G:H2'	2:B:3387:U:C6	2.47	0.50
2:B:878:G:H5'	2:B:880:G:O4'	2.12	0.50
54:BB:147:ILE:HG22	54:BB:148:ARG:N	2.22	0.50
3:C:115:C:H3'	3:C:116:G:H5''	1.93	0.50
2:B:1618:G:H4'	3:C:129:C:H1'	1.92	0.50
2:B:1420:C:OP1	3:C:20:U:H5''	2.12	0.50
55:CB:174:LEU:HB3	55:CB:210:ALA:HB1	1.93	0.50
4:D:55:A:O2'	15:O:152:HIS:HB2	2.12	0.50
30:DA:35:LEU:HD12	30:DA:45:ILE:O	2.11	0.50
56:DB:219:ARG:HA	56:DB:222:GLU:HB2	1.93	0.50
82:DC:155:VAL:CG1	82:DC:185:VAL:HG11	2.41	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:672:LYS:CA	82:DC:680:GLU:HG2	2.39	0.50
57:EB:47:ARG:HB2	57:EB:61:PHE:CE2	2.45	0.50
83:EC:6896:A:H4'	83:EC:6897:G:OP1	2.11	0.50
83:EC:6914:A:C2	83:EC:6915:G:O6	2.64	0.50
32:FA:73:LEU:HD21	32:FA:81:LEU:HD13	1.93	0.50
58:FB:81:VAL:HG22	58:FB:102:VAL:HG12	1.93	0.50
7:G:28:ARG:NH1	7:G:28:ARG:HB2	2.27	0.50
7:G:76:VAL:HG12	7:G:325:LYS:CA	2.41	0.50
8:H:38:VAL:HG21	8:H:121:ALA:HB2	1.92	0.50
8:H:3:ARG:HD3	8:H:21:PRO:CB	2.41	0.50
11:K:148:VAL:HG13	11:K:152:GLY:HA2	1.93	0.50
1:A:628:G:OP1	63:KB:120:SER:HB3	2.12	0.50
65:MB:118:GLU:OE2	68:PB:123:ARG:HB2	2.11	0.50
40:NA:26:ILE:CD1	40:NA:26:ILE:H	2.06	0.50
19:S:116:LEU:HD23	19:S:133:ILE:HG13	1.94	0.50
19:S:135:VAL:HG23	19:S:151:ILE:HG21	1.93	0.50
19:S:150:TRP:CE3	19:S:156:HIS:NE2	2.78	0.50
19:S:33:LYS:HB3	19:S:37:HIS:CD2	2.47	0.50
19:S:71:ARG:HH21	19:S:92:LEU:HD23	1.77	0.50
20:T:141:LEU:HG	20:T:145:VAL:HG11	1.93	0.50
72:TB:94:LEU:HD23	72:TB:130:TYR:CD1	2.47	0.50
21:U:155:GLU:HG2	21:U:156:ALA:N	2.26	0.50
21:U:27:LYS:HA	21:U:63:PHE:CE2	2.46	0.50
73:UB:53:VAL:HB	73:UB:98:GLU:HA	1.94	0.50
48:VA:45:LEU:HD11	48:VA:99:VAL:CG1	2.42	0.50
16:P:123:ARG:NH1	48:VA:46:ARG:HE	2.08	0.50
48:VA:61:ARG:HH22	48:VA:76:LEU:HB3	1.75	0.50
23:W:75:HIS:HB3	23:W:80:LYS:HG3	1.94	0.50
24:X:1:MET:HE3	24:X:31:ALA:HA	1.94	0.50
52:ZA:95:ARG:HD2	83:EC:6957:A:H62	1.77	0.50
1:A:1662:G:H2'	1:A:1663:G:H8	1.77	0.50
1:A:463:U:H2'	1:A:464:A:C8	2.47	0.50
1:A:821:U:H3'	1:A:822:U:C5'	2.37	0.50
27:AA:26:ALA:HB1	27:AA:115:THR:HG22	1.94	0.50
27:AA:28:ASN:OD1	27:AA:113:ALA:HB3	2.12	0.50
53:AB:29:LEU:O	53:AB:34:TYR:HB2	2.10	0.50
2:B:1240:A:H2'	2:B:1241:U:H5''	1.93	0.50
2:B:1411:C:O2'	2:B:1412:G:H5'	2.11	0.50
2:B:1794:G:H1'	6:F:190:ARG:HH21	1.75	0.50
2:B:1916:U:H6	2:B:1916:U:O5'	1.94	0.50
2:B:2754:G:C3'	2:B:2755:C:H5''	2.42	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2995:A:H2'	2:B:2996:U:H5''	1.93	0.50
2:B:3241:G:H2'	2:B:3245:A:N3	2.27	0.50
2:B:600:G:N2	2:B:603:A:H62	1.97	0.50
2:B:637:C:H4'	2:B:638:C:OP1	2.12	0.50
2:B:904:A:H2'	2:B:905:U:H6	1.76	0.50
54:BB:31:PRO:HG3	54:BB:43:PRO:HG3	1.94	0.50
55:CB:96:SER:CB	55:CB:176:THR:HG21	2.38	0.50
4:D:65:G:H2'	4:D:66:A:C8	2.46	0.50
82:DC:26:ALA:N	82:DC:32:LYS:HZ3	2.10	0.50
82:DC:465:LYS:HE3	82:DC:512:SER:O	2.11	0.50
82:DC:567:VAL:HG21	82:DC:590:ALA:HB1	1.92	0.50
2:B:1634:G:H5''	31:EA:107:ARG:HH22	1.76	0.50
31:EA:13:VAL:HG23	31:EA:21:LYS:H	1.75	0.50
57:EB:49:ILE:HG21	57:EB:175:LYS:HG2	1.94	0.50
2:B:2182:A:OP1	6:F:193:ARG:HD2	2.11	0.50
9:I:14:SER:O	25:Y:20:ARG:HD2	2.12	0.50
10:J:18:LEU:N	10:J:18:LEU:HD22	2.27	0.50
11:K:51:TYR:O	11:K:54:GLU:HB3	2.10	0.50
1:A:960:U:H4'	63:KB:51:GLY:O	2.12	0.50
2:B:1822:C:H5''	38:LA:66:SER:OG	2.11	0.50
64:LB:24:ASN:H	64:LB:55:SER:CB	2.15	0.50
39:MA:21:LEU:HD23	39:MA:25:LYS:HD3	1.92	0.50
66:NB:128:LYS:HB2	66:NB:137:ARG:NH1	2.26	0.50
1:A:1498:G:H4'	69:QB:120:GLY:C	2.32	0.50
18:R:120:VAL:HG23	20:T:197:LEU:HD22	1.93	0.50
18:R:32:LEU:CD1	18:R:91:CYS:HA	2.42	0.50
19:S:101:THR:HA	19:S:104:GLU:CD	2.32	0.50
2:B:62:A:H2	19:S:189:LYS:HD2	1.77	0.50
71:SB:36:VAL:HG11	71:SB:78:LEU:HD11	1.93	0.50
20:T:108:ILE:HG21	20:T:117:ARG:HH11	1.76	0.50
2:B:3243:A:N7	20:T:156:LEU:HB3	2.26	0.50
2:B:2786:G:H5''	46:TA:38:GLN:HB2	1.93	0.50
2:B:2803:A:OP1	46:TA:60:LYS:HB2	2.11	0.50
72:TB:53:ILE:CG2	72:TB:60:LYS:HB2	2.41	0.50
21:U:24:VAL:O	21:U:25:SER:C	2.50	0.50
48:VA:120:TRP:CG	48:VA:157:LYS:HE2	2.47	0.50
2:B:1222:G:H3'	48:VA:56:ASN:HB3	1.94	0.50
23:W:18:GLY:O	23:W:22:VAL:HG23	2.11	0.50
23:W:29:THR:HA	23:W:32:ILE:HD12	1.93	0.50
23:W:8:LYS:O	23:W:11:ALA:HB3	2.11	0.50
49:WA:129:LYS:HB3	49:WA:149:ASP:O	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:XA:76:ILE:HD13	50:XA:98:ILE:HB	1.93	0.50
51:YA:153:HIS:O	51:YA:154:SER:HB3	2.12	0.50
77:YB:19:HIS:C	77:YB:21:LEU:H	2.15	0.50
52:ZA:167:VAL:HG12	52:ZA:168:ARG:N	2.24	0.50
1:A:1171:A:H2'	1:A:1172:G:H8	1.76	0.50
1:A:1420:C:H2'	1:A:1421:A:H5'	1.92	0.50
1:A:154:G:H21	56:DB:60:GLY:HA3	1.77	0.50
1:A:1629:G:O2'	1:A:1630:U:H5'	2.12	0.50
1:A:370:A:H2'	1:A:371:G:O4'	2.10	0.50
1:A:443:C:H2'	1:A:444:C:O4'	2.11	0.50
1:A:449:C:H2'	1:A:450:U:H6	1.73	0.50
1:A:68:A:OP2	1:A:69:G:H8	1.94	0.50
1:A:776:G:H21	54:BB:261:LEU:HD13	1.77	0.50
1:A:942:G:O2'	1:A:943:C:H5'	2.11	0.50
2:B:1200:A:C6	2:B:2370:G:H5''	2.46	0.50
2:B:1649:U:H2'	2:B:1650:G:C8	2.46	0.50
2:B:1525:G:H1'	2:B:1829:G:C2	2.47	0.50
2:B:1886:A:N6	2:B:2349:U:O4'	2.45	0.50
2:B:210:U:O2'	2:B:230:U:H5'	2.11	0.50
2:B:2217:U:O2'	2:B:2218:G:H5'	2.11	0.50
2:B:269:G:N2	2:B:294:U:C2'	2.68	0.50
2:B:3295:A:H2'	2:B:3296:A:C8	2.47	0.50
2:B:3364:C:O2'	2:B:3365:U:H5'	2.11	0.50
2:B:3386:G:C5'	35:IA:10:ARG:NE	2.74	0.50
2:B:511:G:H2'	2:B:512:U:C6	2.47	0.50
2:B:650:C:H2'	2:B:651:G:C8	2.47	0.50
2:B:735:A:H2'	2:B:736:A:O4'	2.12	0.50
2:B:825:U:H2'	2:B:826:G:C5'	2.38	0.50
2:B:976:U:H2'	2:B:977:C:O4'	2.12	0.50
3:C:105:A:O3'	3:C:106:C:H2'	2.11	0.50
29:CA:82:LEU:HB2	29:CA:124:VAL:HB	1.94	0.50
55:CB:112:ARG:HD3	55:CB:115:LYS:HD2	1.94	0.50
1:A:1610:G:H4'	55:CB:98:MET:HE1	1.94	0.50
48:VA:144:LYS:HD3	82:DC:203:TYR:CE1	2.47	0.50
82:DC:369:ILE:HD11	82:DC:379:MET:CG	2.38	0.50
82:DC:491:VAL:HG11	82:DC:556:ILE:HG23	1.92	0.50
7:G:358:TRP:CB	28:BA:1:MET:HG2	2.41	0.50
9:I:289:LYS:HG2	9:I:293:LEU:HD22	1.93	0.50
11:K:240:VAL:HA	11:K:243:MET:CE	2.42	0.50
12:L:33:ASN:ND2	12:L:38:GLN:OE1	2.45	0.50
64:LB:24:ASN:O	64:LB:25:ASP:HB2	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:M:36:LYS:HE2	13:M:78:MET:HG3	1.92	0.50
39:MA:31:LEU:HA	39:MA:34:GLN:HE21	1.77	0.50
66:NB:36:ILE:HD11	66:NB:48:VAL:O	2.12	0.50
68:PB:115:ARG:O	68:PB:119:ILE:HD13	2.12	0.50
68:PB:71:GLN:O	68:PB:75:ASN:HB2	2.12	0.50
17:Q:140:SER:HB3	17:Q:143:ALA:HB3	1.94	0.50
69:QB:20:SER:HA	69:QB:23:GLN:HB2	1.94	0.50
69:QB:65:ILE:HG12	69:QB:71:VAL:HG21	1.92	0.50
18:R:19:ARG:HA	18:R:69:THR:HG23	1.92	0.50
1:A:1773:C:OP2	45:SA:4:LYS:HB2	2.11	0.50
6:F:96:LEU:CD2	47:UA:83:ILE:HD12	2.41	0.50
73:UB:127:VAL:O	73:UB:130:VAL:HG22	2.12	0.50
22:V:126:GLN:HA	22:V:129:VAL:CG2	2.42	0.50
2:B:562:C:H4'	24:X:71:LYS:HE3	1.94	0.50
1:A:1173:C:H2'	1:A:1174:C:C6	2.47	0.50
1:A:627:C:H4'	63:KB:117:LEU:CD2	2.42	0.50
1:A:959:U:O2	1:A:959:U:H2'	2.11	0.50
53:AB:168:ILE:HA	53:AB:188:ILE:O	2.12	0.50
2:B:1672:U:O2'	2:B:1673:G:H5'	2.11	0.50
2:B:2174:G:OP1	2:B:2174:G:H8	1.94	0.50
2:B:2228:A:H2'	2:B:2229:A:O4'	2.12	0.50
2:B:2355:G:H4'	21:U:139:TYR:CE2	2.47	0.50
2:B:3245:A:H5'	2:B:3246:G:C8	2.47	0.50
2:B:842:G:H2'	2:B:843:A:H8	1.77	0.50
29:CA:77:GLU:HG2	29:CA:133:LEU:HB2	1.94	0.50
82:DC:428:ILE:C	82:DC:429:LYS:HD2	2.32	0.50
82:DC:493:VAL:HG12	82:DC:494:GLU:H	1.77	0.50
82:DC:647:ILE:N	82:DC:647:ILE:HD12	2.27	0.50
31:EA:36:HIS:HB2	31:EA:40:HIS:CE1	2.46	0.50
57:EB:153:LEU:CD1	57:EB:153:LEU:H	2.21	0.50
57:EB:93:LEU:HD21	57:EB:129:LEU:HD23	1.94	0.50
83:EC:6913:U:H3'	83:EC:6914:A:H8	1.77	0.50
2:B:1794:G:H4'	6:F:191:LEU:HD12	1.92	0.50
7:G:214:MET:HA	7:G:280:HIS:O	2.11	0.50
59:GB:129:ILE:HG22	59:GB:142:ASN:HA	1.93	0.50
60:HB:13:GLN:HA	60:HB:80:LEU:HD11	1.94	0.50
9:I:109:THR:C	9:I:111:GLN:N	2.64	0.50
11:K:107:ARG:HH12	11:K:117:VAL:CG1	2.25	0.50
37:KA:11:GLY:O	37:KA:98:VAL:HG12	2.11	0.50
12:L:143:ILE:HD13	12:L:169:LEU:CB	2.41	0.50
12:L:73:PRO:HD3	12:L:233:TRP:HZ3	1.77	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:L:62:LYS:HE2	12:L:63:LYS:N	2.27	0.50
38:LA:75:ALA:O	38:LA:76:TYR:HB2	2.12	0.50
65:MB:81:ARG:NH1	65:MB:120:SER:HB3	2.25	0.50
1:A:1454:G:C5'	65:MB:81:ARG:HE	2.23	0.50
40:NA:9:ILE:HG22	40:NA:10:GLY:N	2.26	0.50
15:O:101:ASN:HB3	15:O:128:TYR:HE1	1.76	0.50
41:OA:37:CYS:C	41:OA:45:ARG:HB2	2.32	0.50
68:PB:100:THR:HG22	68:PB:108:LYS:CB	2.41	0.50
69:QB:11:ALA:CA	69:QB:14:PHE:HB3	2.39	0.50
70:RB:56:VAL:HB	70:RB:90:TYR:CE1	2.46	0.50
19:S:164:LEU:O	19:S:169:LYS:HE3	2.12	0.50
19:S:35:VAL:CA	19:S:65:ARG:HE	2.20	0.50
48:VA:84:VAL:CG2	48:VA:188:VAL:HG21	2.42	0.50
25:Y:20:ARG:HB2	25:Y:20:ARG:HH11	1.77	0.50
51:YA:59:ASP:HA	51:YA:62:LYS:HZ2	1.77	0.50
1:A:1073:G:C3'	1:A:1074:G:H5''	2.41	0.50
1:A:1360:A:C3'	1:A:1361:U:H4'	2.42	0.50
1:A:1484:G:N2	1:A:1605:G:N2	2.60	0.50
1:A:1680:G:C1'	1:A:1721:A:H61	2.24	0.50
1:A:432:G:H2'	1:A:433:C:C6	2.47	0.50
1:A:642:G:H2'	1:A:643:G:C8	2.47	0.50
27:AA:109:MET:HG2	27:AA:110:LYS:N	2.25	0.50
2:B:1018:G:H1'	83:EC:6927:U:C6	2.46	0.50
2:B:1109:U:H2'	2:B:1110:U:O4'	2.12	0.50
2:B:1380:G:H5'	8:H:191:LYS:HB2	1.94	0.50
2:B:1621:A:H2'	2:B:1622:U:C6	2.47	0.50
2:B:1647:A:N6	2:B:1808:G:O2'	2.45	0.50
2:B:1662:G:O2'	2:B:1663:C:H5'	2.11	0.50
2:B:208:C:H2'	2:B:209:A:C5'	2.42	0.50
2:B:217:U:H2'	30:DA:103:LYS:HZ3	1.77	0.50
2:B:2468:A:H4'	2:B:2469:G:O5'	2.12	0.50
2:B:254:A:H2'	2:B:255:A:C8	2.47	0.50
2:B:2562:A:H62	2:B:2579:G:H21	1.60	0.50
2:B:2876:C:O2'	2:B:2877:G:H5'	2.12	0.50
2:B:2919:A:H2'	2:B:2920:U:O4'	2.12	0.50
2:B:3009:G:N2	2:B:3137:C:O2	2.38	0.50
2:B:692:A:H2'	2:B:693:A:H5'	1.94	0.50
2:B:70:A:H2	2:B:72:C:N4	2.09	0.50
2:B:808:A:C4	2:B:809:G:C8	2.99	0.50
29:CA:65:GLN:O	29:CA:85:GLN:HB3	2.11	0.50
4:D:11:A:H4'	4:D:13:A:C8	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:47:C:OP1	9:I:94:ASN:HA	2.11	0.50
1:A:127:G:C6	56:DB:195:VAL:HG22	2.47	0.50
56:DB:25:ARG:NH1	56:DB:25:ARG:HB3	2.27	0.50
48:VA:145:ILE:HG21	82:DC:190:SER:HB3	1.93	0.50
82:DC:566:THR:CG2	82:DC:682:ARG:HB3	2.42	0.50
82:DC:822:ALA:HA	82:DC:825:ARG:HB2	1.94	0.50
5:E:16:LEU:HD21	5:E:208:SER:CB	2.42	0.50
32:FA:27:LYS:HB3	32:FA:28:HIS:ND1	2.26	0.50
58:FB:160:PHE:HA	58:FB:165:LEU:HD21	1.94	0.50
58:FB:42:ARG:HB3	58:FB:58:LEU:O	2.12	0.50
7:G:365:PHE:HD2	7:G:365:PHE:C	2.15	0.50
2:B:1086:C:H1'	33:GA:47:LEU:HD21	1.93	0.50
59:GB:120:LYS:HB3	59:GB:120:LYS:NZ	2.27	0.50
8:H:98:ARG:HG2	8:H:99:MET:HE2	1.94	0.50
34:HA:52:ARG:HG3	34:HA:52:ARG:HH11	1.77	0.50
9:I:48:LYS:HB3	9:I:145:PHE:CE2	2.46	0.50
9:I:95:TRP:CZ2	9:I:156:GLY:HA2	2.46	0.50
4:D:1:G:O2'	9:I:273:ARG:HD2	2.12	0.50
9:I:290:ILE:HA	9:I:294:ALA:CB	2.40	0.50
9:I:34:LYS:C	9:I:36:LEU:H	2.15	0.50
1:A:112:A:C5'	61:IB:68:GLY:HA2	2.40	0.50
64:LB:97:GLY:C	64:LB:99:GLN:H	2.15	0.50
14:N:12:GLN:HG2	14:N:128:ARG:HH22	1.75	0.50
14:N:51:HIS:HB3	14:N:134:ILE:HG23	1.93	0.50
14:N:99:ILE:HG12	14:N:101:LYS:N	2.24	0.50
40:NA:20:MET:HG2	40:NA:21:THR:H	1.77	0.50
67:OB:29:GLN:H	67:OB:29:GLN:HE21	1.59	0.50
18:R:37:GLU:OE2	18:R:74:ARG:HG3	2.12	0.50
70:RB:83:GLU:HB2	79:AC:55:PHE:HD2	1.77	0.50
19:S:31:ARG:HA	19:S:65:ARG:HH12	1.76	0.50
52:ZA:62:PRO:HA	71:SB:29:HIS:CE1	2.47	0.50
22:V:123:THR:O	22:V:125:ASP:N	2.45	0.50
2:B:787:G:OP1	22:V:148:GLU:N	2.42	0.50
49:WA:188:ILE:HG13	49:WA:189:GLU:H	1.77	0.50
49:WA:201:THR:HG21	49:WA:240:VAL:HG12	1.92	0.50
77:YB:66:PRO:HA	77:YB:71:ALA:CB	2.42	0.50
55:CB:86:GLN:NE2	78:ZB:49:ARG:HH22	1.96	0.50
1:A:619:A:H5'	1:A:1141:G:C4'	2.42	0.49
1:A:1281:G:H2'	1:A:1282:U:C6	2.47	0.49
1:A:187:G:H3'	58:FB:138:ASN:ND2	2.27	0.49
1:A:966:A:O2'	1:A:967:A:H5'	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:100:A:H2'	2:B:101:G:N3	2.26	0.49
2:B:954:U:O4	2:B:1115:G:H1'	2.12	0.49
2:B:1605:A:H1'	2:B:1607:U:H2'	1.93	0.49
2:B:1686:U:O2'	2:B:1688:U:H4'	2.12	0.49
2:B:2123:G:H2'	2:B:2124:G:H8	1.75	0.49
2:B:2262:A:H2'	2:B:2263:C:H5'	1.94	0.49
2:B:2330:C:H2'	2:B:2331:C:H6	1.75	0.49
2:B:2494:A:C5	5:E:194:LEU:HG	2.47	0.49
2:B:2645:G:H4'	2:B:2645:G:OP2	2.12	0.49
2:B:2650:U:H2'	2:B:2651:G:C8	2.47	0.49
2:B:3004:C:H2'	2:B:3005:A:O4'	2.12	0.49
2:B:3104:U:O2'	2:B:3105:U:H5'	2.12	0.49
2:B:3257:C:H2'	2:B:3258:U:C6	2.47	0.49
2:B:3306:U:H2'	2:B:3307:A:H5''	1.93	0.49
2:B:887:G:H2'	2:B:888:A:C8	2.46	0.49
29:CA:85:GLN:HA	29:CA:120:LYS:O	2.12	0.49
55:CB:197:GLU:HG3	55:CB:208:SER:HB2	1.94	0.49
82:DC:226:ALA:O	82:DC:237:LYS:HB2	2.12	0.49
82:DC:634:TRP:HB2	82:DC:646:VAL:HG13	1.93	0.49
82:DC:637:GLY:O	82:DC:644:ASN:HB2	2.11	0.49
5:E:64:SER:HB2	5:E:151:VAL:CG1	2.41	0.49
57:EB:21:ALA:O	57:EB:25:VAL:HG23	2.11	0.49
6:F:91:GLY:O	6:F:93:LYS:N	2.45	0.49
22:V:175:ALA:HB2	32:FA:56:VAL:HG23	1.93	0.49
7:G:213:GLU:O	7:G:282:ILE:HD12	2.10	0.49
59:GB:34:PHE:CD1	59:GB:105:LEU:HB3	2.47	0.49
59:GB:48:GLN:O	59:GB:52:ILE:HG13	2.12	0.49
8:H:98:ARG:HD2	8:H:99:MET:O	2.12	0.49
9:I:55:PHE:CE2	9:I:159:VAL:HG22	2.46	0.49
10:J:9:TRP:CZ2	10:J:11:PRO:HA	2.46	0.49
11:K:143:THR:C	11:K:147:LEU:HG	2.31	0.49
11:K:91:GLY:C	11:K:92:ILE:HD12	2.32	0.49
38:LA:45:GLY:HA3	38:LA:79:SER:O	2.11	0.49
13:M:10:ILE:HD11	13:M:75:VAL:HG21	1.94	0.49
14:N:135:ILE:HG22	14:N:136:PHE:HD1	1.77	0.49
40:NA:73:ALA:HA	40:NA:76:ARG:HB3	1.93	0.49
16:P:109:ILE:O	16:P:112:ILE:HG12	2.12	0.49
42:PA:28:ASN:ND2	42:PA:42:LYS:HG3	2.22	0.49
17:Q:54:LEU:HD12	17:Q:75:PHE:CZ	2.47	0.49
17:Q:14:PHE:HE2	19:S:197:LEU:HD22	1.77	0.49
19:S:61:ILE:O	19:S:62:TYR:HD2	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:V:102:ALA:HA	22:V:122:ILE:O	2.11	0.49
22:V:126:GLN:HA	22:V:129:VAL:HG23	1.94	0.49
22:V:67:ILE:HG23	22:V:81:VAL:HG11	1.93	0.49
49:WA:150:TRP:HE3	49:WA:174:ASN:ND2	2.10	0.49
49:WA:261:LYS:HB3	49:WA:270:LEU:CD1	2.40	0.49
24:X:77:VAL:HG12	24:X:78:TRP:H	1.76	0.49
51:YA:187:LYS:HA	51:YA:190:PRO:HG2	1.94	0.49
52:ZA:69:ILE:HD11	52:ZA:133:LYS:HD2	1.92	0.49
1:A:1586:A:H1'	1:A:1611:A:C6	2.47	0.49
1:A:1787:C:H2'	1:A:1788:G:H8	1.75	0.49
1:A:200:A:H2'	1:A:201:G:O4'	2.13	0.49
1:A:249:U:H5	61:IB:34:TRP:CE2	2.30	0.49
1:A:377:G:H4'	1:A:379:U:O4	2.12	0.49
1:A:421:A:H2'	1:A:422:G:O4'	2.12	0.49
53:AB:105:MET:SD	53:AB:122:VAL:HG21	2.53	0.49
79:AC:24:CYS:O	79:AC:25:SER:HB2	2.11	0.49
2:B:1231:A:H1'	2:B:1278:A:N6	2.27	0.49
2:B:1493:G:H8	2:B:1835:A:H61	1.61	0.49
2:B:207:U:H2'	2:B:208:C:C5	2.47	0.49
2:B:2197:C:N4	2:B:2241:U:H2'	2.27	0.49
2:B:2457:G:H22	2:B:2461:A:H61	1.60	0.49
2:B:2594:C:H2'	2:B:2595:A:N3	2.27	0.49
2:B:2948:C:H2'	2:B:2949:U:C6	2.47	0.49
2:B:296:A:H3'	2:B:297:G:N2	2.21	0.49
2:B:413:U:O2'	2:B:414:U:H5'	2.11	0.49
2:B:970:A:H2'	2:B:971:G:C8	2.48	0.49
54:BB:45:ILE:HG13	54:BB:61:VAL:HG21	1.94	0.49
80:BC:24:THR:H	80:BC:26:LYS:HZ2	1.59	0.49
29:CA:63:ILE:HD12	29:CA:99:VAL:CG2	2.37	0.49
29:CA:67:ILE:CD1	29:CA:115:ARG:HE	2.25	0.49
29:CA:82:LEU:HD22	29:CA:84:PHE:CE2	2.46	0.49
2:B:188:U:OP2	30:DA:46:LYS:HE3	2.13	0.49
56:DB:181:PRO:O	56:DB:184:LEU:HG	2.12	0.49
56:DB:73:ILE:O	56:DB:73:ILE:HG13	2.12	0.49
82:DC:315:GLU:C	82:DC:319:LEU:HB2	2.32	0.49
82:DC:563:TYR:CD1	82:DC:726:GLU:HB2	2.47	0.49
1:A:743:U:OP1	57:EB:108:GLN:HB3	2.10	0.49
57:EB:27:LEU:CD2	57:EB:80:GLU:HB3	2.42	0.49
58:FB:172:ARG:HD3	58:FB:175:GLN:HG3	1.92	0.49
58:FB:192:TYR:O	58:FB:196:LEU:HD13	2.13	0.49
58:FB:74:LYS:HB2	58:FB:109:PHE:CZ	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:76:VAL:HB	7:G:323:MET:CG	2.42	0.49
33:GA:36:ASP:O	33:GA:39:PHE:HB3	2.12	0.49
59:GB:8:TYR:CD1	59:GB:8:TYR:C	2.85	0.49
34:HA:41:LEU:HB3	34:HA:92:ILE:HB	1.93	0.49
34:HA:49:PRO:O	34:HA:53:LYS:HG3	2.12	0.49
60:HB:16:PHE:CE2	60:HB:77:ARG:HA	2.47	0.49
9:I:107:ARG:HD2	9:I:248:ARG:NH2	2.26	0.49
35:IA:29:ALA:HB1	35:IA:60:TRP:CE2	2.47	0.49
10:J:56:LYS:HD2	10:J:98:VAL:HG12	1.93	0.49
36:JA:3:SER:O	36:JA:4:LEU:HD12	2.12	0.49
37:KA:38:PRO:HA	37:KA:41:ALA:HB2	1.93	0.49
3:C:36:G:P	39:MA:86:ARG:H	2.35	0.49
14:N:46:PHE:HD2	14:N:139:ARG:HB3	1.78	0.49
66:NB:18:ALA:HB1	66:NB:67:VAL:CG1	2.42	0.49
16:P:57:LYS:N	16:P:57:LYS:HD3	2.27	0.49
68:PB:13:HIS:O	68:PB:14:ILE:HG22	2.13	0.49
70:RB:28:SER:CB	70:RB:34:LEU:HD23	2.42	0.49
19:S:190:THR:HG23	19:S:191:TRP:N	2.27	0.49
21:U:57:ALA:HA	21:U:83:TRP:HE1	1.77	0.49
74:VB:8:ARG:HH21	74:VB:28:LEU:CD1	2.25	0.49
49:WA:241:PHE:HB3	49:WA:290:VAL:HA	1.94	0.49
49:WA:57:PRO:O	66:NB:100:GLN:HB2	2.12	0.49
24:X:154:HIS:HA	24:X:170:THR:CG2	2.41	0.49
24:X:99:ARG:HH12	24:X:126:VAL:CB	2.24	0.49
26:Z:35:LYS:O	26:Z:38:ILE:HG22	2.12	0.49
1:A:1223:A:H2'	1:A:1224:A:O4'	2.11	0.49
1:A:1525:A:H2'	1:A:1526:A:O4'	2.12	0.49
1:A:1572:G:H5''	1:A:1574:G:N2	2.28	0.49
1:A:1627:U:O3'	76:XB:88:SER:HA	2.13	0.49
1:A:182:A:H2'	1:A:183:U:C6	2.47	0.49
1:A:740:A:H2'	1:A:741:C:C5'	2.42	0.49
1:A:790:U:O2'	1:A:791:A:H5'	2.12	0.49
1:A:879:G:H2'	1:A:880:C:C6	2.47	0.49
2:B:1344:G:H1'	11:K:159:GLN:HE21	1.78	0.49
2:B:1359:C:H2'	2:B:1360:C:H6	1.77	0.49
2:B:1517:G:O2'	2:B:1518:U:H5'	2.13	0.49
2:B:1838:G:H4'	2:B:1839:A:C2	2.47	0.49
2:B:2135:U:O2'	2:B:2136:C:H5'	2.13	0.49
2:B:2160:G:H2'	2:B:2161:G:H8	1.77	0.49
2:B:2628:A:C5'	2:B:2798:C:H3'	2.42	0.49
54:BB:94:ALA:C	54:BB:96:ASN:H	2.16	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:CB:160:VAL:HA	78:ZB:42:ARG:NH2	2.27	0.49
82:DC:225:PHE:O	82:DC:229:TYR:HB2	2.12	0.49
82:DC:493:VAL:HG13	82:DC:556:ILE:HD13	1.94	0.49
32:FA:79:TRP:HZ2	32:FA:118:ILE:HB	1.75	0.49
7:G:166:ILE:CD1	7:G:171:LEU:HD12	2.43	0.49
7:G:284:ARG:HB2	7:G:323:MET:CE	2.41	0.49
60:HB:57:THR:O	60:HB:58:GLN:HG2	2.11	0.49
9:I:109:THR:HG23	9:I:110:LEU:N	2.27	0.49
9:I:33:ARG:CZ	9:I:50:ARG:HH12	2.25	0.49
35:IA:72:ARG:HH22	35:IA:107:VAL:HG13	1.76	0.49
35:IA:75:ILE:HG23	35:IA:93:VAL:HG22	1.94	0.49
61:IB:16:GLN:HE22	61:IB:33:ARG:HE	1.60	0.49
11:K:137:GLY:O	11:K:139:PRO:HD3	2.11	0.49
12:L:142:LEU:HB3	12:L:148:ALA:HB2	1.95	0.49
12:L:75:ILE:HG22	12:L:76:ALA:N	2.20	0.49
13:M:16:VAL:O	13:M:17:THR:HG23	2.12	0.49
13:M:21:LYS:O	13:M:22:SER:HB3	2.12	0.49
14:N:66:GLU:O	14:N:70:ILE:HG13	2.12	0.49
15:O:20:ASN:HB3	15:O:126:ASP:HB2	1.94	0.49
67:OB:109:LEU:O	67:OB:112:SER:HB3	2.12	0.49
16:P:135:THR:CG2	16:P:147:ASN:HA	2.40	0.49
16:P:60:VAL:CG2	16:P:77:ALA:HB2	2.42	0.49
17:Q:58:VAL:HG11	17:Q:101:ARG:HE	1.76	0.49
43:QA:23:LEU:HD23	43:QA:38:ASN:CA	2.38	0.49
19:S:14:LYS:HA	19:S:19:LEU:HD23	1.93	0.49
19:S:151:ILE:HA	19:S:156:HIS:CD2	2.47	0.49
45:SA:2:ARG:HH11	45:SA:2:ARG:HB3	1.76	0.49
8:H:299:ILE:HG23	22:V:39:ARG:HB3	1.92	0.49
74:VB:60:PHE:H	74:VB:71:GLY:HA2	1.76	0.49
49:WA:134:TRP:HB3	49:WA:140:CYS:HB2	1.93	0.49
2:B:1324:U:C5'	24:X:2:ALA:HA	2.34	0.49
24:X:68:HIS:N	24:X:69:PRO:HD3	2.27	0.49
24:X:79:VAL:HG13	24:X:123:ILE:HA	1.94	0.49
1:A:1087:A:O2'	1:A:1088:A:H5'	2.11	0.49
1:A:1551:U:H5	65:MB:40:ARG:HH22	1.60	0.49
1:A:381:C:H5''	54:BB:10:LYS:CD	2.40	0.49
1:A:533:U:H4'	74:VB:33:ALA:HB2	1.93	0.49
1:A:624:G:H1'	1:A:1027:A:C2	2.47	0.49
53:AB:40:ARG:HD2	53:AB:47:GLU:OE1	2.11	0.49
2:B:1060:U:O2'	2:B:1061:A:H5'	2.12	0.49
2:B:1107:C:H2'	2:B:1108:U:H6	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1174:G:C6	2:B:1175:C:C4	3.00	0.49
2:B:1237:G:H4'	16:P:78:SER:OG	2.12	0.49
2:B:1481:A:H61	38:LA:2:ALA:CA	2.19	0.49
2:B:1652:G:C4'	38:LA:80:ARG:HH12	2.25	0.49
2:B:1901:A:OP2	2:B:1903:U:O4	2.29	0.49
2:B:1910:A:O2'	2:B:2334:U:H4'	2.12	0.49
2:B:2430:A:H2'	2:B:2431:C:C6	2.47	0.49
2:B:26:A:H61	2:B:59:G:H1	1.59	0.49
2:B:3034:C:N4	13:M:121:LYS:N	2.56	0.49
2:B:3160:U:H2'	2:B:3161:C:C5	2.46	0.49
2:B:3210:A:H2'	2:B:3211:C:C6	2.47	0.49
2:B:342:A:N1	2:B:349:A:C8	2.81	0.49
2:B:552:G:C2	2:B:553:U:H1'	2.47	0.49
2:B:10:C:O2	3:C:149:A:H2	1.95	0.49
3:C:70:G:H5''	30:DA:28:ARG:CD	2.41	0.49
55:CB:129:PRO:O	55:CB:133:VAL:HB	2.13	0.49
4:D:68:C:O2'	4:D:69:C:H5'	2.12	0.49
5:E:24:LYS:HG2	5:E:25:LYS:N	2.27	0.49
57:EB:96:ARG:HD2	57:EB:121:VAL:HA	1.94	0.49
7:G:137:TYR:CE2	7:G:144:ILE:HG21	2.47	0.49
9:I:231:ILE:HG21	9:I:239:ILE:CD1	2.36	0.49
2:B:3376:A:O4'	35:IA:18:LYS:HG3	2.12	0.49
61:IB:45:PRO:HG2	61:IB:48:ALA:CB	2.40	0.49
11:K:85:PHE:CZ	11:K:114:GLY:HA3	2.48	0.49
63:KB:64:ARG:HA	63:KB:67:THR:O	2.12	0.49
64:LB:85:ALA:H	64:LB:119:THR:CG2	2.25	0.49
2:B:2853:A:H4'	14:N:63:GLU:O	2.11	0.49
55:CB:112:ARG:NH2	66:NB:43:ILE:HG23	2.27	0.49
15:O:29:ARG:HH11	15:O:123:PHE:HE1	1.60	0.49
15:O:85:LYS:HG2	15:O:89:TYR:CE2	2.48	0.49
67:OB:5:ARG:O	67:OB:10:LYS:HE2	2.12	0.49
44:RA:99:CYS:HB3	44:RA:114:LYS:HE2	1.94	0.49
70:RB:26:LEU:HD22	70:RB:38:SER:HB2	1.93	0.49
19:S:21:PHE:O	19:S:25:VAL:HG23	2.13	0.49
2:B:2767:U:H1'	46:TA:28:TYR:HH	1.75	0.49
72:TB:44:HIS:HE1	72:TB:112:ASP:HB3	1.76	0.49
72:TB:83:ILE:HG13	72:TB:84:GLY:N	2.28	0.49
49:WA:113:VAL:HG22	49:WA:114:ASP:N	2.27	0.49
75:WB:60:VAL:O	75:WB:101:TYR:HB2	2.12	0.49
25:Y:39:ILE:CD1	25:Y:102:ARG:HD3	2.42	0.49
77:YB:33:LEU:HA	77:YB:80:ARG:O	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:Z:73:GLY:O	26:Z:76:LEU:HB3	2.13	0.49
1:A:1089:U:H2'	1:A:1090:C:H6	1.77	0.49
1:A:1096:C:O4'	1:A:1099:U:H4'	2.13	0.49
1:A:1489:U:H5'	1:A:1494:C:N1	2.27	0.49
1:A:1546:G:H2'	1:A:1547:A:C8	2.47	0.49
1:A:361:C:H2'	1:A:362:G:H8	1.76	0.49
1:A:7:G:H4'	1:A:573:C:H4'	1.94	0.49
2:B:1093:A:N3	2:B:1094:U:H1'	2.27	0.49
2:B:1261:G:H4'	2:B:1278:A:C2	2.48	0.49
2:B:2298:U:O2'	2:B:2299:A:H5'	2.13	0.49
2:B:2331:C:O2'	2:B:2332:A:H5'	2.13	0.49
2:B:2459:A:N1	2:B:2487:U:H5'	2.27	0.49
2:B:2897:A:H2'	2:B:2899:C:C5'	2.41	0.49
2:B:2888:U:C5	2:B:2910:A:N7	2.80	0.49
2:B:2948:C:H2'	2:B:2949:U:H6	1.78	0.49
2:B:2985:C:H2'	2:B:2986:U:H6	1.68	0.49
2:B:3197:G:O2'	2:B:3198:U:H3'	2.12	0.49
2:B:3278:C:H3'	2:B:3279:A:H5''	1.94	0.49
54:BB:195:ILE:CG2	54:BB:196:VAL:N	2.76	0.49
1:A:799:A:H4'	54:BB:201:HIS:CE1	2.47	0.49
29:CA:86:VAL:HG13	29:CA:120:LYS:HD3	1.94	0.49
2:B:378:A:H4'	30:DA:91:ASN:HB3	1.94	0.49
56:DB:157:VAL:HG22	56:DB:159:ARG:HG3	1.95	0.49
82:DC:755:VAL:HG23	82:DC:770:ALA:HA	1.93	0.49
5:E:65:ILE:CD1	5:E:144:LEU:HD23	2.43	0.49
31:EA:74:VAL:HG23	31:EA:101:PHE:CD2	2.47	0.49
57:EB:152:VAL:HG21	57:EB:181:ILE:HD11	1.94	0.49
6:F:115:ASN:N	6:F:127:ALA:HB3	2.27	0.49
6:F:251:LYS:CE	6:F:251:LYS:HA	2.42	0.49
6:F:49:VAL:CG1	6:F:60:LYS:HE3	2.29	0.49
58:FB:56:ARG:HG2	58:FB:58:LEU:HD21	1.94	0.49
7:G:114:VAL:HG22	7:G:163:HIS:NE2	2.28	0.49
7:G:215:ILE:HD12	7:G:338:LEU:HD12	1.94	0.49
59:GB:36:LEU:HD13	59:GB:42:ILE:CG1	2.33	0.49
1:A:39:A:H5''	59:GB:3:ARG:NH1	2.26	0.49
8:H:38:VAL:HG11	8:H:121:ALA:HB3	1.94	0.49
60:HB:30:ALA:O	60:HB:38:LYS:HA	2.11	0.49
2:B:3324:C:O2'	35:IA:105:GLN:HA	2.11	0.49
61:IB:57:LYS:CD	61:IB:131:ILE:HG23	2.42	0.49
37:KA:60:ARG:HB3	37:KA:60:ARG:HH21	1.78	0.49
12:L:190:VAL:CG1	12:L:192:GLN:H	2.20	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:918:U:H4'	64:LB:29:HIS:CE1	2.48	0.49
12:L:168:ALA:HB2	40:NA:47:ILE:CD1	2.43	0.49
42:PA:17:ARG:O	42:PA:18:ALA:CB	2.61	0.49
18:R:112:LEU:HD22	18:R:116:GLU:OE1	2.11	0.49
19:S:22:LEU:HB3	19:S:26:ARG:NH1	2.28	0.49
20:T:8:VAL:O	20:T:118:VAL:HG22	2.12	0.49
20:T:6:VAL:HG22	20:T:32:LYS:HD2	1.94	0.49
2:B:277:G:O5'	46:TA:49:GLY:HA2	2.12	0.49
21:U:167:ARG:C	21:U:168:LEU:HD12	2.33	0.49
73:UB:75:GLN:CG	73:UB:82:LYS:HG3	2.43	0.49
2:B:1916:U:OP1	23:W:84:THR:HB	2.13	0.49
49:WA:134:TRP:HB3	49:WA:140:CYS:CB	2.43	0.49
49:WA:224:ASN:ND2	49:WA:231:MET:HG2	2.28	0.49
75:WB:41:ILE:O	75:WB:42:LEU:HB3	2.12	0.49
50:XA:30:GLN:HB2	50:XA:46:HIS:CE1	2.47	0.49
51:YA:96:LEU:O	51:YA:96:LEU:HD12	2.12	0.49
52:ZA:142:GLY:HA3	52:ZA:155:ALA:HB2	1.94	0.49
1:A:1042:G:C3'	1:A:1043:A:H5''	2.43	0.49
1:A:1203:A:H5''	1:A:1456:C:N4	2.27	0.49
1:A:187:G:OP1	58:FB:139:ALA:HB2	2.13	0.49
1:A:401:A:C4'	54:BB:3:ARG:HD3	2.41	0.49
1:A:460:A:H3'	1:A:461:G:H8	1.77	0.49
1:A:629:U:H5'	63:KB:127:ARG:NH2	2.28	0.49
1:A:877:G:H4'	1:A:942:G:N2	2.27	0.49
79:AC:31:ILE:HD11	79:AC:40:ARG:CB	2.39	0.49
2:B:110:G:H2'	2:B:111:C:O4'	2.13	0.49
2:B:1322:U:OP1	24:X:117:ARG:HD2	2.12	0.49
2:B:1363:A:OP1	11:K:160:ARG:HD3	2.13	0.49
2:B:1379:G:N3	2:B:1379:G:H2'	2.27	0.49
2:B:146:U:P	2:B:148:G:H5'	2.53	0.49
2:B:2289:U:H2'	2:B:2290:C:C6	2.48	0.49
2:B:645:A:C2	2:B:2372:A:C2	3.01	0.49
2:B:2434:U:C4	2:B:2515:A:H2	2.31	0.49
2:B:2667:A:H2'	2:B:2668:U:O4'	2.13	0.49
2:B:3037:U:OP1	7:G:348:ARG:HD2	2.12	0.49
2:B:571:U:O2'	2:B:572:A:H5'	2.13	0.49
2:B:637:C:H2'	2:B:638:C:H6	1.69	0.49
2:B:680:G:C4'	2:B:789:A:H4'	2.43	0.49
2:B:837:A:N6	2:B:856:G:H1'	2.28	0.49
2:B:888:A:H2'	2:B:889:U:O4'	2.12	0.49
2:B:967:A:H2'	2:B:968:G:H8	1.78	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:BB:145:ARG:NH1	54:BB:162:ILE:HD13	2.28	0.49
54:BB:178:GLY:H	54:BB:195:ILE:CG2	2.26	0.49
29:CA:126:LEU:HD13	29:CA:132:ALA:HB2	1.95	0.49
29:CA:90:ALA:HB1	29:CA:95:ILE:CD1	2.37	0.49
82:DC:667:PHE:HD2	82:DC:668:GLN:NE2	2.10	0.49
82:DC:666:ALA:CB	82:DC:706:ILE:HA	2.41	0.49
82:DC:565:GLU:HB3	82:DC:717:PHE:CZ	2.46	0.49
7:G:316:GLU:O	7:G:317:ILE:CB	2.60	0.49
7:G:222:LYS:HA	7:G:334:ARG:HH12	1.77	0.49
7:G:279:ASN:ND2	7:G:343:TYR:OH	2.45	0.49
59:GB:133:HIS:O	59:GB:134:ILE:O	2.30	0.49
59:GB:175:ARG:HH11	59:GB:175:ARG:HG3	1.77	0.49
8:H:191:LYS:HG2	8:H:194:TYR:OH	2.13	0.49
8:H:22:LEU:HB3	8:H:26:PHE:HD2	1.77	0.49
8:H:210:ALA:HA	8:H:257:LYS:NZ	2.26	0.49
34:HA:27:TYR:CD1	34:HA:52:ARG:NH1	2.81	0.49
58:FB:85:PRO:HB3	61:IB:12:ALA:HA	1.95	0.49
61:IB:75:VAL:HG13	61:IB:84:ILE:HD12	1.94	0.49
10:J:65:ILE:O	10:J:76:LEU:HA	2.13	0.49
63:KB:106:ARG:HH21	63:KB:106:ARG:HG2	1.77	0.49
12:L:154:ALA:HB2	12:L:186:LEU:CD1	2.41	0.49
12:L:61:GLN:HB3	19:S:28:TRP:CH2	2.47	0.49
66:NB:28:LEU:HB3	66:NB:64:ASP:CA	2.37	0.49
15:O:109:HIS:HE1	15:O:122:ILE:HA	1.76	0.49
17:Q:105:ASN:CG	17:Q:108:ILE:HG12	2.32	0.49
70:RB:55:PRO:HB3	70:RB:91:ILE:CD1	2.43	0.49
20:T:174:PHE:O	20:T:178:VAL:HG23	2.11	0.49
20:T:27:LEU:HD13	20:T:27:LEU:C	2.32	0.49
21:U:159:LYS:O	21:U:160:ALA:HB3	2.13	0.49
73:UB:87:VAL:HG22	73:UB:124:VAL:HG21	1.94	0.49
73:UB:55:GLU:HA	73:UB:98:GLU:OE2	2.13	0.49
48:VA:107:ALA:HB1	48:VA:108:PRO:HD2	1.93	0.49
48:VA:5:ARG:HA	48:VA:8:LYS:HD3	1.95	0.49
23:W:119:LEU:CG	23:W:123:LEU:HD12	2.39	0.49
24:X:20:PRO:O	24:X:21:GLU:HB3	2.13	0.49
24:X:38:LYS:HG2	24:X:61:ILE:HD13	1.94	0.49
76:XB:10:ARG:HG3	76:XB:34:LYS:HD2	1.94	0.49
25:Y:17:ARG:HG2	25:Y:22:HIS:HA	1.95	0.49
25:Y:62:GLY:HA2	25:Y:75:ILE:O	2.12	0.49
51:YA:127:VAL:HG22	51:YA:176:VAL:HG11	1.95	0.49
77:YB:73:LEU:HD13	77:YB:77:THR:O	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
77:YB:8:LEU:C	77:YB:10:PRO:HD3	2.33	0.49
26:Z:94:ARG:O	26:Z:96:VAL:HG23	2.13	0.49
52:ZA:53:ILE:HB	52:ZA:57:PHE:CE2	2.47	0.49
1:A:1184:A:C2	1:A:1455:G:O4'	2.66	0.49
1:A:1379:C:H2'	1:A:1380:U:H5'	1.95	0.49
1:A:1767:G:H5'	1:A:1768:G:N2	2.26	0.49
1:A:650:U:H2'	1:A:651:G:O4'	2.13	0.49
1:A:889:U:O2'	1:A:890:C:H5'	2.13	0.49
27:AA:109:MET:HE3	27:AA:129:VAL:HG13	1.94	0.49
79:AC:10:HIS:ND1	79:AC:11:PRO:HD2	2.27	0.49
2:B:1029:G:H2'	2:B:1030:A:C8	2.47	0.49
2:B:1953:G:H3'	2:B:1954:G:C5'	2.37	0.49
2:B:2215:A:H2'	2:B:2216:G:H8	1.78	0.49
2:B:2241:U:H4'	6:F:242:ARG:CZ	2.43	0.49
2:B:2430:A:H2'	2:B:2431:C:O4'	2.12	0.49
2:B:2436:U:C2'	2:B:2437:G:H5''	2.40	0.49
2:B:2812:C:H2'	2:B:2813:A:H8	1.76	0.49
2:B:879:U:OP2	2:B:2981:U:H4'	2.12	0.49
2:B:3100:U:H3	2:B:3134:A:H61	1.60	0.49
2:B:3242:G:O4'	2:B:3245:A:H1'	2.13	0.49
2:B:583:G:H5''	10:J:82:ARG:NH1	2.15	0.49
28:BA:38:SER:O	28:BA:42:GLN:HG3	2.12	0.49
2:B:1052:U:O2	4:D:103:A:H4'	2.13	0.49
30:DA:31:LEU:HD22	30:DA:101:PRO:HD2	1.93	0.49
56:DB:139:ASN:HD22	56:DB:139:ASN:N	2.09	0.49
82:DC:213:SER:HB3	82:DC:218:TRP:NE1	2.28	0.49
82:DC:277:ILE:O	82:DC:280:PRO:HD2	2.13	0.49
82:DC:335:LEU:HD22	82:DC:338:ILE:HG21	1.94	0.49
82:DC:159:LYS:HE3	84:DC:901:GDP:C2	2.47	0.49
5:E:24:LYS:HG2	5:E:25:LYS:H	1.78	0.49
83:EC:6765:A:H2'	83:EC:6766:U:O4'	2.13	0.49
58:FB:136:SER:HB3	58:FB:139:ALA:HB3	1.94	0.49
58:FB:38:ILE:HD12	58:FB:94:ASN:HB3	1.95	0.49
7:G:50:LYS:HB3	7:G:331:ASN:O	2.13	0.49
8:H:292:SER:O	8:H:293:SER:HB2	2.12	0.49
61:IB:53:TYR:HB2	61:IB:113:PRO:HG3	1.95	0.49
2:B:588:G:H22	10:J:23:LYS:HZ3	1.60	0.49
10:J:26:ARG:HG3	10:J:27:PRO:HD2	1.95	0.49
2:B:3268:A:O4'	10:J:75:PRO:HG3	2.12	0.49
2:B:1162:U:O2'	36:JA:12:LYS:HG2	2.13	0.49
37:KA:18:ARG:HB3	37:KA:23:ASN:CB	2.43	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:M:9:GLN:HB3	13:M:52:LEU:HD11	1.95	0.49
65:MB:24:LYS:O	65:MB:28:MET:HB2	2.11	0.49
14:N:95:HIS:HD2	14:N:126:ALA:HB3	1.77	0.49
66:NB:24:ALA:HB2	66:NB:92:TYR:OH	2.13	0.49
67:OB:30:THR:HG23	67:OB:31:ASN:H	1.77	0.49
68:PB:123:ARG:O	68:PB:127:HIS:HB2	2.13	0.49
17:Q:119:TYR:HE1	39:MA:118:ILE:HD11	1.78	0.49
2:B:684:G:H5''	17:Q:35:ARG:NH1	2.28	0.49
18:R:36:VAL:HG23	18:R:47:ASP:CB	2.41	0.49
19:S:153:ASP:HB2	19:S:155:VAL:HG22	1.93	0.49
46:TA:68:VAL:HB	46:TA:85:LEU:CB	2.39	0.49
47:UA:47:VAL:HA	47:UA:56:THR:O	2.13	0.49
73:UB:83:VAL:HG11	73:UB:122:PHE:CE2	2.48	0.49
48:VA:106:ALA:HB1	48:VA:182:THR:CG2	2.43	0.49
76:XB:44:ILE:CD1	76:XB:65:PRO:HG2	2.41	0.49
25:Y:100:LYS:O	25:Y:103:GLN:HB3	2.12	0.49
25:Y:91:LEU:HD23	25:Y:91:LEU:N	2.27	0.49
72:TB:62:VAL:HG13	77:YB:7:LEU:HD12	1.95	0.49
1:A:1087:A:C2	1:A:1142:A:H4'	2.47	0.49
1:A:1273:G:H5''	1:A:1431:C:H5	1.78	0.49
1:A:1485:C:N3	1:A:1592:A:H1'	2.27	0.49
1:A:1758:U:H2'	1:A:1759:C:C6	2.47	0.49
1:A:495:C:H5'	1:A:496:G:O4'	2.13	0.49
2:B:1043:C:H2'	2:B:1044:U:C6	2.48	0.49
2:B:1185:C:H3'	2:B:1186:G:H5''	1.94	0.49
2:B:1374:G:H2'	2:B:1375:G:O4'	2.13	0.49
2:B:2154:U:H4'	6:F:240:ALA:HB1	1.95	0.49
2:B:2181:C:H2'	2:B:2182:A:O4'	2.13	0.49
2:B:2261:G:H21	2:B:2262:A:N6	2.11	0.49
2:B:2437:G:C2	2:B:2511:A:H1'	2.47	0.49
2:B:2899:C:H42	13:M:173:ARG:HD3	1.76	0.49
2:B:3283:U:H2'	2:B:3284:G:C8	2.47	0.49
2:B:3300:U:H2'	2:B:3301:U:C5'	2.42	0.49
2:B:374:A:H4'	2:B:375:A:H5'	1.94	0.49
28:BA:13:ILE:HG12	28:BA:32:GLN:HB2	1.95	0.49
54:BB:178:GLY:H	54:BB:195:ILE:HB	1.78	0.49
54:BB:191:ARG:HD2	54:BB:218:PHE:CZ	2.48	0.49
54:BB:87:MET:CE	54:BB:87:MET:HA	2.42	0.49
82:DC:150:ARG:HH12	82:DC:354:GLU:CB	2.26	0.49
82:DC:182:VAL:O	82:DC:186:ASN:HB2	2.12	0.49
82:DC:353:ALA:HA	82:DC:356:LEU:CB	2.38	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:411:VAL:HG13	82:DC:470:THR:C	2.33	0.49
82:DC:610:ASP:OD2	82:DC:615:ARG:HB2	2.13	0.49
82:DC:141:THR:HG21	82:DC:793:PHE:HZ	1.78	0.49
5:E:136:THR:HA	83:EC:6820:C:H41	1.77	0.49
5:E:13:VAL:O	5:E:16:LEU:HB3	2.13	0.49
5:E:89:ASP:HB2	5:E:92:LYS:HB2	1.94	0.49
83:EC:6941:U:C3'	83:EC:6942:A:C5'	2.81	0.49
6:F:29:LEU:HD11	6:F:115:ASN:O	2.12	0.49
6:F:142:ASP:O	6:F:143:GLU:HB2	2.12	0.49
32:FA:75:LEU:HD11	32:FA:137:LYS:HD2	1.95	0.49
7:G:148:LEU:HD11	7:G:192:VAL:CG2	2.43	0.49
7:G:221:THR:HG22	7:G:222:LYS:N	2.28	0.49
7:G:80:ASP:OD1	7:G:82:PRO:HD3	2.13	0.49
2:B:803:C:H5'	8:H:100:PHE:CE2	2.48	0.49
8:H:126:ILE:HA	8:H:129:THR:HG23	1.95	0.49
8:H:238:LEU:O	8:H:246:ARG:HG3	2.13	0.49
34:HA:45:ALA:HB2	34:HA:73:GLY:HA2	1.94	0.49
9:I:289:LYS:HE3	9:I:293:LEU:HD13	1.95	0.49
9:I:95:TRP:HZ2	9:I:156:GLY:HA2	1.78	0.49
61:IB:75:VAL:N	61:IB:86:ILE:HG22	2.28	0.49
10:J:65:ILE:CD1	10:J:77:ARG:HB3	2.42	0.49
11:K:147:LEU:HB3	11:K:205:PHE:HE1	1.77	0.49
11:K:228:SER:HA	11:K:232:ARG:HH22	1.78	0.49
63:KB:91:LEU:HD11	63:KB:121:ARG:HD2	1.94	0.49
12:L:154:ALA:C	12:L:156:ASP:N	2.64	0.49
12:L:150:LEU:HA	12:L:176:PRO:HG2	1.95	0.49
65:MB:37:ALA:HB1	65:MB:38:PRO:CD	2.36	0.49
40:NA:64:SER:HB3	40:NA:68:ARG:HG3	1.93	0.49
41:OA:17:THR:HG22	41:OA:18:LEU:H	1.77	0.49
19:S:116:LEU:O	19:S:165:THR:HG22	2.11	0.49
21:U:26:PHE:CA	21:U:144:SER:HB3	2.43	0.49
21:U:26:PHE:CB	21:U:144:SER:HB3	2.43	0.49
23:W:169:ALA:O	23:W:173:ARG:HB2	2.13	0.49
2:B:1938:U:H1'	23:W:78:TYR:HB2	1.95	0.49
49:WA:19:TRP:CE3	49:WA:306:THR:HB	2.47	0.49
75:WB:59:TYR:CD2	75:WB:60:VAL:N	2.81	0.49
51:YA:38:PHE:HZ	51:YA:84:ILE:HG21	1.78	0.49
52:ZA:52:THR:CB	52:ZA:54:GLU:HG2	2.38	0.49
1:A:510:G:H8	1:A:510:G:OP2	1.96	0.49
1:A:589:C:H2'	1:A:590:C:C6	2.48	0.49
1:A:877:G:H4'	1:A:942:G:H22	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:AA:27:ASP:HB2	27:AA:111:GLY:O	2.13	0.49
53:AB:17:PHE:HE1	53:AB:77:PHE:CE2	2.31	0.49
2:B:1182:A:H2'	2:B:1183:C:C6	2.48	0.49
2:B:626:U:H1'	2:B:1401:A:OP1	2.12	0.49
2:B:145:G:C4'	19:S:55:ALA:HB1	2.42	0.49
2:B:1643:A:H2'	2:B:1644:C:C2	2.48	0.49
2:B:2082:U:H5	2:B:2086:A:H1'	1.77	0.49
2:B:2218:G:H2'	2:B:2219:A:C8	2.46	0.49
2:B:226:C:H2'	2:B:227:G:O4'	2.13	0.49
2:B:2916:U:H2'	2:B:2917:G:C8	2.44	0.49
2:B:3152:U:O2'	2:B:3153:U:H5'	2.12	0.49
2:B:339:C:H5'	2:B:339:C:H6	1.76	0.49
2:B:347:G:C2'	2:B:348:A:H5'	2.42	0.49
2:B:48:A:H8	2:B:48:A:OP1	1.95	0.49
2:B:547:G:H4'	2:B:548:G:OP1	2.12	0.49
2:B:651:G:H2'	2:B:652:G:O4'	2.13	0.49
54:BB:113:ARG:HG3	54:BB:113:ARG:HH11	1.77	0.49
54:BB:11:ARG:N	54:BB:27:TYR:HA	2.27	0.49
54:BB:202:ASP:HB3	61:IB:40:LEU:HD12	1.95	0.49
1:A:567:A:N3	80:BC:14:VAL:HB	2.28	0.49
3:C:104:A:H2'	3:C:106:C:N4	2.28	0.49
29:CA:92:LYS:HG2	29:CA:110:VAL:HG12	1.94	0.49
82:DC:412:ARG:HH11	82:DC:426:LEU:CD1	2.26	0.49
82:DC:454:ILE:CG1	82:DC:455:GLY:H	2.26	0.49
82:DC:545:LEU:HA	82:DC:549:HIS:HB2	1.93	0.49
82:DC:798:PHE:CE2	86:DC:903:SO1:H22	2.47	0.49
31:EA:23:VAL:HG12	31:EA:45:GLY:HA3	1.94	0.49
6:F:101:VAL:O	6:F:102:LEU:HD12	2.12	0.49
6:F:114:SER:CA	6:F:127:ALA:HB1	2.36	0.49
8:H:286:VAL:HA	8:H:289:ILE:HD12	1.94	0.49
35:IA:109:VAL:HG12	35:IA:110:GLU:H	1.78	0.49
10:J:62:THR:HG21	10:J:78:ARG:NH1	2.27	0.49
12:L:182:GLY:O	12:L:186:LEU:HG	2.13	0.49
66:NB:47:LYS:O	66:NB:50:GLU:HG3	2.11	0.49
2:B:1255:C:O2	16:P:131:GLU:HG3	2.13	0.49
17:Q:180:ARG:HG2	17:Q:180:ARG:HH11	1.76	0.49
69:QB:33:TYR:HA	69:QB:36:ILE:HG12	1.95	0.49
19:S:16:SER:O	19:S:20:ARG:HB3	2.13	0.49
20:T:37:ARG:NH1	20:T:161:LYS:NZ	2.60	0.49
20:T:76:PRO:O	20:T:79:ILE:HG22	2.12	0.49
47:UA:29:LEU:O	47:UA:32:GLN:HB2	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
73:UB:20:ARG:HG3	73:UB:20:ARG:HH11	1.77	0.49
73:UB:20:ARG:O	73:UB:23:ARG:HB2	2.13	0.49
22:V:19:PRO:C	22:V:21:SER:H	2.16	0.49
50:XA:21:ASN:O	50:XA:24:LEU:HB2	2.12	0.49
1:A:1022:C:H5'	1:A:1122:G:H4'	1.94	0.49
1:A:168:A:O2'	1:A:169:A:H5'	2.13	0.49
1:A:320:U:O4	1:A:1665:U:H5''	2.13	0.49
1:A:445:A:H4'	74:VB:89:TYR:CE2	2.48	0.49
1:A:918:U:H2'	1:A:919:A:C8	2.47	0.49
2:B:1052:U:H2'	2:B:1053:A:H5'	1.95	0.49
2:B:1090:G:H2'	2:B:1091:A:H8	1.78	0.49
2:B:1387:G:HO2'	10:J:2:SER:N	2.11	0.49
2:B:1758:G:H2'	2:B:1759:C:C6	2.47	0.49
2:B:1890:U:H2'	2:B:1891:A:C8	2.48	0.49
2:B:2608:G:O2'	2:B:2609:A:H5'	2.13	0.49
2:B:2837:A:H2'	2:B:2845:A:N1	2.28	0.49
2:B:3313:U:O2'	2:B:3314:A:H5'	2.12	0.49
2:B:337:G:H21	8:H:50:TYR:HB2	1.78	0.49
2:B:3391:A:H2'	2:B:3392:U:C6	2.48	0.49
2:B:389:A:H2'	2:B:390:G:H5''	1.95	0.49
2:B:992:A:H2'	2:B:993:G:H5'	1.94	0.49
29:CA:115:ARG:HB3	29:CA:115:ARG:NH1	2.28	0.49
82:DC:363:ASP:OD2	82:DC:365:ASN:HB2	2.13	0.49
82:DC:464:LEU:O	82:DC:465:LYS:HB2	2.12	0.49
31:EA:63:ALA:HA	31:EA:66:THR:OG1	2.12	0.49
57:EB:30:SER:C	57:EB:32:PRO:HD2	2.33	0.49
6:F:46:LYS:O	6:F:47:GLN:HB2	2.12	0.49
6:F:77:ILE:HG22	6:F:78:ALA:N	2.27	0.49
7:G:128:LYS:HA	7:G:131:THR:HG21	1.95	0.49
7:G:160:VAL:HG12	7:G:162:VAL:HG13	1.94	0.49
60:HB:14:TYR:CD2	60:HB:35:ILE:HD11	2.48	0.49
9:I:50:ARG:HB2	9:I:65:ILE:CD1	2.43	0.49
10:J:171:PRO:HB2	37:KA:43:PHE:CE2	2.47	0.49
63:KB:86:GLU:O	63:KB:89:TYR:HB3	2.12	0.49
63:KB:95:ALA:O	63:KB:99:ARG:HB2	2.12	0.49
13:M:79:ILE:O	13:M:82:VAL:HG12	2.13	0.49
2:B:2856:G:H5''	14:N:7:ARG:HD3	1.94	0.49
15:O:21:ILE:HD11	15:O:37:LEU:CG	2.42	0.49
68:PB:19:ASN:HD22	68:PB:102:ALA:HB1	1.77	0.49
17:Q:9:ILE:HG13	32:FA:49:HIS:CE1	2.48	0.49
19:S:114:ARG:HG2	19:S:137:PRO:HG3	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:S:47:LYS:HD3	19:S:50:ARG:HE	1.77	0.49
45:SA:9:ARG:NH1	45:SA:9:ARG:HG3	2.28	0.49
20:T:15:LEU:HD12	20:T:128:ARG:HB2	1.95	0.49
21:U:168:LEU:HA	21:U:172:GLN:OE1	2.13	0.49
73:UB:32:ARG:HH11	73:UB:32:ARG:CB	2.22	0.49
2:B:720:A:H3'	22:V:69:ARG:HH22	1.76	0.49
49:WA:123:ILE:HD12	49:WA:123:ILE:O	2.12	0.49
24:X:137:ARG:CG	24:X:139:TYR:CE1	2.95	0.49
18:R:45:LEU:HD13	24:X:97:VAL:HG11	1.94	0.49
50:XA:110:TYR:HA	50:XA:115:PHE:CD1	2.48	0.49
50:XA:71:GLU:HG3	50:XA:72:ASP:H	1.77	0.49
25:Y:57:TYR:O	25:Y:59:GLY:N	2.44	0.49
26:Z:100:THR:O	26:Z:101:ASN:HB2	2.11	0.49
52:ZA:101:VAL:CG1	52:ZA:211:LEU:HD12	2.40	0.49
55:CB:82:PHE:CE2	78:ZB:49:ARG:HB3	2.48	0.49
1:A:1084:A:H2'	1:A:1085:G:O4'	2.13	0.48
1:A:1107:G:O2'	1:A:1108:G:H5'	2.12	0.48
1:A:1171:A:H2'	1:A:1172:G:C8	2.49	0.48
1:A:1391:A:H2'	1:A:1392:U:C6	2.48	0.48
1:A:1649:G:H2'	1:A:1650:U:H6	1.77	0.48
1:A:480:G:H2'	1:A:481:A:O4'	2.13	0.48
53:AB:43:PRO:O	53:AB:44:THR:HB	2.13	0.48
2:B:156:G:O2'	2:B:157:A:H4'	2.12	0.48
2:B:1919:G:H1'	2:B:1934:G:C2	2.47	0.48
2:B:2393:G:H5'	7:G:266:ARG:HH21	1.79	0.48
2:B:3139:A:C2'	2:B:3140:G:H5'	2.43	0.48
2:B:3354:U:C5'	2:B:3356:G:H5'	2.43	0.48
2:B:3380:U:H2'	2:B:3381:U:O4'	2.12	0.48
2:B:432:G:H2'	2:B:433:A:H8	1.77	0.48
2:B:492:U:H3'	2:B:493:G:H5'	1.95	0.48
2:B:65:A:H5''	2:B:66:A:H4'	1.94	0.48
2:B:709:A:H8	2:B:709:A:OP1	1.95	0.48
2:B:739:G:H2'	2:B:740:G:H8	1.78	0.48
3:C:142:C:H2'	3:C:143:U:C6	2.48	0.48
3:C:41:A:H61	3:C:103:G:H1'	1.78	0.48
29:CA:106:ASP:O	29:CA:127:THR:HG23	2.12	0.48
1:A:1527:C:H5''	55:CB:109:LYS:CE	2.42	0.48
56:DB:74:LYS:NZ	56:DB:94:ARG:HG3	2.22	0.48
82:DC:16:VAL:HG23	82:DC:346:VAL:CG2	2.42	0.48
82:DC:143:LEU:CD1	82:DC:185:VAL:HG13	2.28	0.48
82:DC:603:ASN:HB3	82:DC:605:ILE:HG13	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:EA:7:ALA:CB	31:EA:89:VAL:HG11	2.41	0.48
57:EB:153:LEU:HA	57:EB:184:GLU:H	1.78	0.48
7:G:24:SER:H	7:G:28:ARG:NH2	2.10	0.48
8:H:271:LYS:O	8:H:274:TYR:HB3	2.13	0.48
9:I:22:ARG:HG2	9:I:28:THR:CB	2.43	0.48
61:IB:69:LYS:H	61:IB:127:GLN:HB3	1.77	0.48
10:J:139:LYS:C	10:J:141:VAL:H	2.16	0.48
10:J:81:ALA:O	10:J:84:VAL:HG22	2.13	0.48
11:K:122:ALA:HB2	25:Y:132:PRO:HB3	1.95	0.48
11:K:24:GLU:C	11:K:26:VAL:H	2.17	0.48
11:K:83:LEU:N	11:K:119:VAL:HG23	2.27	0.48
38:LA:74:ARG:NH2	38:LA:85:VAL:HG21	2.28	0.48
14:N:145:LYS:HA	14:N:148:VAL:CG2	2.43	0.48
15:O:104:PHE:CE1	15:O:106:ILE:HG23	2.48	0.48
15:O:97:SER:O	15:O:156:LYS:HB2	2.13	0.48
68:PB:49:LYS:CB	68:PB:72:ILE:HD13	2.39	0.48
18:R:3:THR:HG22	18:R:4:ASP:N	2.27	0.48
48:VA:130:PRO:HA	48:VA:150:ILE:CD1	2.42	0.48
48:VA:58:MET:HE1	48:VA:61:ARG:HG3	1.95	0.48
24:X:106:LEU:HD22	24:X:110:MET:HE1	1.95	0.48
50:XA:121:VAL:HG23	50:XA:141:ILE:CG2	2.41	0.48
78:ZB:36:THR:HG23	78:ZB:37:SER:H	1.78	0.48
1:A:1113:A:H4'	1:A:1114:G:OP1	2.13	0.48
1:A:1119:G:H2'	1:A:1120:U:O4'	2.12	0.48
1:A:1454:G:H1'	65:MB:99:GLY:HA2	1.95	0.48
1:A:1591:C:H2'	1:A:1592:A:C8	2.47	0.48
1:A:1712:A:H3'	1:A:1713:G:C5'	2.43	0.48
1:A:189:C:H3'	1:A:190:C:C5'	2.41	0.48
1:A:771:A:H2'	1:A:772:G:O4'	2.14	0.48
53:AB:105:MET:HE2	53:AB:118:ALA:HB1	1.95	0.48
53:AB:16:VAL:HG22	79:AC:50:ILE:HD13	1.94	0.48
2:B:1164:G:H2'	2:B:1165:A:H8	1.73	0.48
2:B:130:A:H2'	2:B:131:C:O4'	2.13	0.48
2:B:145:G:N7	12:L:193:LYS:HE2	2.27	0.48
2:B:1833:G:H2'	2:B:1834:U:C5'	2.41	0.48
2:B:2433:U:H2'	2:B:2434:U:O2	2.14	0.48
2:B:254:A:H2'	2:B:255:A:H8	1.78	0.48
2:B:28:C:O2'	2:B:29:C:H5'	2.13	0.48
2:B:699:A:H2'	2:B:700:C:O4'	2.13	0.48
54:BB:113:ARG:NH1	54:BB:113:ARG:HG3	2.28	0.48
54:BB:11:ARG:HB2	54:BB:11:ARG:NH2	2.28	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:BB:86:PHE:O	54:BB:87:MET:HB2	2.12	0.48
3:C:104:A:H4'	41:OA:42:ALA:O	2.13	0.48
29:CA:73:MET:HE3	29:CA:76:VAL:HB	1.95	0.48
4:D:11:A:H4'	4:D:13:A:C4	2.47	0.48
82:DC:727:PRO:HD3	82:DC:801:TRP:CZ3	2.47	0.48
82:DC:733:ILE:HD12	82:DC:733:ILE:N	2.25	0.48
5:E:101:LYS:HA	5:E:101:LYS:HE3	1.94	0.48
57:EB:121:VAL:O	57:EB:125:ILE:HG13	2.13	0.48
57:EB:129:LEU:CD2	57:EB:172:VAL:HG11	2.39	0.48
57:EB:68:ALA:O	57:EB:72:LYS:HG3	2.13	0.48
83:EC:6790:A:H2	83:EC:6801:A:H62	1.61	0.48
83:EC:6947:A:H2'	83:EC:6948:U:H4'	1.95	0.48
1:A:380:U:H1'	59:GB:3:ARG:O	2.12	0.48
8:H:152:VAL:HG12	8:H:153:SER:N	2.28	0.48
34:HA:40:LYS:C	34:HA:65:THR:HG23	2.33	0.48
9:I:243:ALA:HA	9:I:246:ALA:CB	2.43	0.48
61:IB:35:TYR:CE1	61:IB:49:ILE:HG12	2.49	0.48
61:IB:6:THR:O	61:IB:7:VAL:HG12	2.13	0.48
10:J:138:GLN:O	10:J:141:VAL:HB	2.14	0.48
12:L:94:PHE:CZ	12:L:150:LEU:HD12	2.47	0.48
64:LB:20:TYR:HE1	64:LB:84:ARG:HH11	1.57	0.48
14:N:54:SER:HA	14:N:163:GLN:HG2	1.94	0.48
40:NA:45:ARG:HG3	40:NA:45:ARG:NH1	2.27	0.48
40:NA:78:GLY:HA3	40:NA:82:ARG:CD	2.43	0.48
2:B:361:A:C4'	41:OA:45:ARG:HH22	2.26	0.48
42:PA:8:ILE:H	42:PA:8:ILE:CD1	2.20	0.48
17:Q:42:ARG:HG2	17:Q:46:ILE:CG1	2.37	0.48
17:Q:85:LEU:CG	17:Q:86:THR:H	2.25	0.48
1:A:1477:G:O2'	69:QB:47:PRO:HA	2.13	0.48
19:S:155:VAL:HG23	19:S:156:HIS:ND1	2.28	0.48
19:S:58:GLY:HA3	19:S:142:ILE:CG1	2.42	0.48
21:U:57:ALA:HB3	21:U:73:GLY:N	2.27	0.48
48:VA:29:GLY:HA3	48:VA:188:VAL:HG23	1.94	0.48
74:VB:27:VAL:HG21	74:VB:60:PHE:CE1	2.48	0.48
49:WA:274:LEU:CD2	49:WA:276:PRO:HD3	2.43	0.48
24:X:107:TYR:CE1	24:X:121:ILE:HB	2.48	0.48
50:XA:108:THR:HG22	50:XA:109:ASN:H	1.78	0.48
25:Y:52:MET:HA	25:Y:95:HIS:CE1	2.47	0.48
51:YA:121:ILE:HD12	51:YA:121:ILE:N	2.29	0.48
77:YB:13:ALA:O	77:YB:17:ARG:HG2	2.14	0.48
52:ZA:108:ASN:HA	52:ZA:192:GLY:HA3	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1542:G:H22	1:A:1568:C:C1'	2.26	0.48
1:A:1568:C:H5''	1:A:1569:A:O4'	2.12	0.48
1:A:36:C:H5''	1:A:530:C:H4'	1.95	0.48
1:A:390:G:H2'	1:A:391:A:C8	2.49	0.48
1:A:509:G:H2'	1:A:510:G:C8	2.47	0.48
1:A:82:U:H2'	1:A:83:G:H5'	1.95	0.48
1:A:891:A:H2'	1:A:892:A:H8	1.79	0.48
27:AA:102:ILE:HD11	27:AA:110:LYS:HG2	1.95	0.48
27:AA:63:LYS:HB3	27:AA:64:LYS:HD2	1.95	0.48
2:B:1524:A:O2'	2:B:1525:G:H5''	2.13	0.48
2:B:1695:U:O3'	2:B:1696:A:H8	1.95	0.48
2:B:1717:U:H2'	2:B:1718:G:C8	2.49	0.48
2:B:1860:G:O2'	2:B:1861:G:H5'	2.13	0.48
2:B:2148:U:H2'	2:B:2149:A:N7	2.27	0.48
2:B:2532:U:H3'	2:B:2533:G:C5'	2.28	0.48
2:B:2971:A:H5''	2:B:2972:G:H5'	1.95	0.48
2:B:2946:A:H2'	2:B:2982:A:C8	2.48	0.48
2:B:3335:A:H5'	2:B:3335:A:H8	1.78	0.48
2:B:346:C:OP1	3:C:26:U:H4'	2.12	0.48
2:B:451:U:H2'	2:B:452:G:H8	1.78	0.48
2:B:492:U:H3'	2:B:493:G:C5'	2.44	0.48
2:B:853:G:H2'	2:B:854:G:O4'	2.12	0.48
2:B:872:U:H2'	2:B:873:C:H6	1.77	0.48
2:B:900:G:H2'	2:B:901:G:C8	2.48	0.48
3:C:106:C:H3'	3:C:106:C:OP2	2.14	0.48
3:C:129:C:H2'	3:C:130:C:C6	2.48	0.48
3:C:93:U:C2'	3:C:94:C:H5'	2.43	0.48
4:D:61:G:H2'	4:D:62:U:C5	2.48	0.48
56:DB:64:LYS:O	56:DB:67:VAL:HG22	2.13	0.48
82:DC:239:LYS:HE2	82:DC:243:ARG:NH1	2.29	0.48
82:DC:491:VAL:HG21	82:DC:538:LEU:CD2	2.43	0.48
5:E:34:LEU:HD22	5:E:183:ILE:HD11	1.95	0.48
83:EC:6855:A:H2'	83:EC:6856:C:O4'	2.12	0.48
83:EC:6917:C:H2'	83:EC:6918:A:O4'	2.13	0.48
7:G:252:ILE:O	7:G:264:VAL:HG11	2.13	0.48
2:B:3086:A:HO2'	7:G:365:PHE:HE2	1.60	0.48
59:GB:25:ASP:O	59:GB:29:LYS:HB2	2.13	0.48
8:H:23:PRO:HD3	8:H:255:PHE:HE1	1.76	0.48
9:I:284:ALA:HA	9:I:287:ALA:HB3	1.94	0.48
12:L:214:LEU:HA	12:L:217:THR:HB	1.94	0.48
13:M:26:LYS:CG	13:M:35:THR:HG22	2.42	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:M:36:LYS:HE2	13:M:78:MET:HE2	1.94	0.48
40:NA:98:ARG:HG2	40:NA:98:ARG:HH11	1.78	0.48
2:B:818:C:H5'	41:OA:10:LYS:HB2	1.94	0.48
41:OA:8:PHE:HA	41:OA:11:ARG:HG3	1.94	0.48
68:PB:16:ARG:HH22	68:PB:19:ASN:HA	1.77	0.48
19:S:30:TYR:C	19:S:32:GLN:H	2.16	0.48
71:SB:34:ILE:HG22	71:SB:35:ASN:H	1.79	0.48
48:VA:44:GLU:O	48:VA:45:LEU:HG	2.12	0.48
48:VA:60:ARG:O	48:VA:60:ARG:HD2	2.13	0.48
48:VA:63:ILE:O	48:VA:66:PHE:HB3	2.13	0.48
24:X:161:LYS:HD3	24:X:162:THR:H	1.78	0.48
50:XA:70:PRO:HA	50:XA:73:VAL:CG2	2.43	0.48
51:YA:97:LEU:HB3	51:YA:232:HIS:ND1	2.27	0.48
51:YA:64:ARG:HB3	64:LB:34:SER:OG	2.14	0.48
1:A:463:U:H2'	1:A:464:A:H8	1.77	0.48
1:A:998:A:H2'	1:A:999:U:O4'	2.12	0.48
27:AA:26:ALA:HB1	27:AA:115:THR:HG23	1.94	0.48
2:B:1060:U:H4'	25:Y:61:THR:CG2	2.43	0.48
2:B:1282:G:H4'	48:VA:82:GLY:HA2	1.94	0.48
2:B:1456:A:C6	2:B:1477:A:H4'	2.47	0.48
2:B:1707:A:H2'	2:B:1708:C:H6	1.79	0.48
2:B:1910:A:H2'	2:B:1911:A:C8	2.48	0.48
2:B:272:G:H2'	2:B:273:A:C8	2.47	0.48
2:B:2949:U:C5	2:B:2950:G:C6	3.01	0.48
2:B:3139:A:H2'	2:B:3140:G:H5'	1.95	0.48
2:B:371:G:C4	2:B:373:A:OP2	2.66	0.48
2:B:501:A:H4'	10:J:28:GLN:CB	2.39	0.48
2:B:744:A:C2'	2:B:745:C:H5'	2.43	0.48
4:D:28:C:H2'	4:D:29:C:O4'	2.13	0.48
82:DC:348:ALA:HB1	82:DC:352:ARG:CD	2.42	0.48
82:DC:468:THR:HG22	82:DC:469:LEU:N	2.27	0.48
82:DC:581:ASN:O	82:DC:582:LYS:HB2	2.14	0.48
82:DC:759:GLN:HG2	82:DC:766:PHE:CE2	2.47	0.48
32:FA:111:LYS:HA	32:FA:129:PHE:O	2.14	0.48
32:FA:79:TRP:CZ2	32:FA:119:PRO:HG2	2.48	0.48
58:FB:169:ILE:HD12	58:FB:179:CYS:SG	2.52	0.48
7:G:98:GLY:HA2	20:T:149:TYR:CE1	2.48	0.48
8:H:268:ALA:O	8:H:269:SER:HB2	2.13	0.48
9:I:215:ASP:HB3	9:I:218:ARG:HD3	1.96	0.48
10:J:64:LEU:HA	10:J:77:ARG:O	2.14	0.48
12:L:241:LYS:O	12:L:245:LYS:HB2	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:LA:71:THR:HG22	38:LA:72:VAL:N	2.29	0.48
64:LB:20:TYR:CE2	64:LB:22:SER:HB3	2.48	0.48
64:LB:51:ASP:O	64:LB:54:GLU:HG3	2.12	0.48
17:Q:124:ILE:HD11	39:MA:120:ALA:O	2.13	0.48
66:NB:132:LYS:HG3	66:NB:133:GLY:H	1.79	0.48
66:NB:78:VAL:HG12	66:NB:79:TYR:N	2.28	0.48
15:O:47:GLN:HB3	15:O:64:LYS:HE3	1.96	0.48
41:OA:45:ARG:HD2	41:OA:47:TYR:CE2	2.41	0.48
17:Q:68:LYS:NZ	32:FA:106:ALA:HB1	2.29	0.48
19:S:114:ARG:CZ	19:S:157:LYS:HA	2.43	0.48
19:S:136:ASP:O	19:S:142:ILE:HB	2.13	0.48
71:SB:80:LYS:HB3	71:SB:80:LYS:NZ	2.29	0.48
73:UB:126:LYS:O	73:UB:127:VAL:HG13	2.13	0.48
22:V:33:TYR:CD1	22:V:45:ASN:OD1	2.66	0.48
23:W:176:ARG:O	23:W:180:LYS:HB2	2.13	0.48
23:W:25:ASP:OD2	23:W:28:GLU:HG3	2.13	0.48
23:W:92:GLN:HG2	23:W:96:ILE:CD1	2.40	0.48
49:WA:208:GLY:O	49:WA:225:LEU:HD23	2.13	0.48
49:WA:9:LEU:HA	49:WA:312:VAL:O	2.14	0.48
4:D:89:G:H5'	24:X:84:ARG:CZ	2.43	0.48
25:Y:39:ILE:HD12	25:Y:102:ARG:CB	2.28	0.48
1:A:100:A:H2'	1:A:101:U:C5'	2.42	0.48
1:A:1039:A:HO2'	1:A:1040:G:H8	1.60	0.48
53:AB:105:MET:CE	53:AB:118:ALA:HB1	2.43	0.48
53:AB:34:TYR:OH	53:AB:37:VAL:HG22	2.13	0.48
2:B:1063:G:N3	2:B:1066:G:H1'	2.29	0.48
2:B:1121:U:H2'	2:B:1122:U:C6	2.49	0.48
2:B:1286:A:O3'	2:B:1287:A:H4'	2.13	0.48
2:B:1673:G:O2'	2:B:1674:G:H5'	2.13	0.48
2:B:1727:G:H1'	2:B:1731:A:O4'	2.12	0.48
2:B:1760:A:C8	2:B:1761:C:C5	3.02	0.48
2:B:186:U:H2'	2:B:229:G:O6	2.13	0.48
2:B:1896:A:N3	2:B:1896:A:H2'	2.28	0.48
2:B:2155:G:H5'	6:F:239:ALA:O	2.13	0.48
2:B:2172:A:H2'	2:B:2173:U:H5'	1.96	0.48
2:B:2271:A:H3'	2:B:2272:G:H5''	1.96	0.48
2:B:2421:U:H2'	2:B:2422:C:O4'	2.14	0.48
2:B:2655:U:H1'	2:B:2656:A:C2	2.49	0.48
2:B:2948:C:O2'	2:B:2949:U:H5'	2.13	0.48
2:B:3001:C:O2'	2:B:3002:C:H5'	2.13	0.48
2:B:3165:A:H2'	2:B:3166:C:H6	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:412:G:C2'	2:B:413:U:H5'	2.43	0.48
54:BB:178:GLY:C	54:BB:179:LYS:HD2	2.33	0.48
80:BC:30:PRO:HD2	80:BC:38:LEU:HD12	1.96	0.48
29:CA:136:ALA:O	29:CA:139:ILE:HG22	2.13	0.48
12:L:43:LYS:CB	29:CA:28:THR:HG21	2.41	0.48
55:CB:95:ASN:HA	55:CB:98:MET:CG	2.43	0.48
4:D:74:C:O2'	4:D:75:G:H5'	2.13	0.48
56:DB:218:GLU:O	56:DB:222:GLU:HB2	2.14	0.48
82:DC:110:ASP:OD2	82:DC:534:GLY:HA3	2.14	0.48
82:DC:250:PHE:HB3	82:DC:275:MET:HE3	1.96	0.48
82:DC:390:ASP:O	82:DC:392:GLY:N	2.47	0.48
5:E:99:LEU:O	5:E:103:LEU:HG	2.13	0.48
31:EA:36:HIS:HB2	31:EA:40:HIS:ND1	2.29	0.48
32:FA:96:LYS:O	32:FA:97:GLU:HB2	2.13	0.48
58:FB:38:ILE:CG2	58:FB:79:ALA:HA	2.43	0.48
7:G:317:ILE:C	7:G:319:ASN:H	2.17	0.48
7:G:365:PHE:CD2	7:G:365:PHE:C	2.87	0.48
59:GB:137:GLY:O	59:GB:138:LYS:HB3	2.14	0.48
59:GB:109:LEU:HD12	59:GB:146:PHE:CG	2.47	0.48
8:H:74:ILE:CD1	8:H:76:ARG:HG3	2.43	0.48
9:I:195:LEU:HD23	9:I:199:ILE:HD12	1.94	0.48
9:I:33:ARG:HE	9:I:50:ARG:HH12	1.59	0.48
9:I:68:THR:HB	9:I:71:GLY:O	2.13	0.48
61:IB:17:PRO:C	61:IB:19:ILE:H	2.16	0.48
63:KB:50:ILE:HG22	63:KB:71:ILE:HD13	1.96	0.48
38:LA:90:ILE:HG23	38:LA:94:LEU:CD1	2.44	0.48
64:LB:42:VAL:HA	64:LB:46:MET:SD	2.53	0.48
13:M:10:ILE:CG2	13:M:75:VAL:HG11	2.44	0.48
14:N:97:LEU:H	14:N:97:LEU:HD12	1.78	0.48
2:B:265:A:H4'	40:NA:37:THR:CG2	2.44	0.48
41:OA:56:ARG:HA	41:OA:61:THR:HG21	1.95	0.48
16:P:130:LYS:HA	16:P:146:LYS:CE	2.43	0.48
42:PA:61:LYS:O	42:PA:64:LYS:HB3	2.13	0.48
17:Q:14:PHE:CE2	19:S:197:LEU:HD22	2.48	0.48
68:PB:41:ARG:CZ	69:QB:46:PRO:HD2	2.43	0.48
21:U:36:ILE:CG2	21:U:117:ILE:HG21	2.42	0.48
50:XA:129:ASP:HB3	50:XA:132:ALA:HB3	1.95	0.48
76:XB:36:ILE:HG13	76:XB:38:ARG:HH12	1.78	0.48
26:Z:30:PRO:O	26:Z:33:TYR:HB3	2.14	0.48
1:A:1452:U:H2'	1:A:1453:G:C8	2.48	0.48
1:A:1347:U:O2	1:A:1516:A:H5'	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1544:U:H4'	68:PB:132:ARG:HH12	1.78	0.48
1:A:862:A:H62	63:KB:70:LYS:CE	2.27	0.48
79:AC:36:LEU:O	79:AC:38:ILE:HG12	2.13	0.48
2:B:1288:U:H1'	2:B:1289:G:C8	2.48	0.48
2:B:1446:A:N1	2:B:2356:A:H5''	2.28	0.48
2:B:1689:U:C2'	2:B:1690:C:H5'	2.43	0.48
2:B:1870:C:H1'	2:B:3066:U:O2'	2.13	0.48
2:B:1941:C:H42	2:B:2107:A:H61	1.61	0.48
73:UB:70:LYS:CE	80:BC:8:LEU:HA	2.43	0.48
29:CA:68:THR:CG2	39:MA:36:LEU:HD22	2.42	0.48
4:D:57:G:OP2	4:D:58:C:H5	1.97	0.48
30:DA:45:ILE:CD1	30:DA:119:ILE:HA	2.43	0.48
56:DB:184:LEU:HD23	56:DB:184:LEU:H	1.77	0.48
82:DC:662:SER:HB3	82:DC:702:GLY:HA2	1.94	0.48
82:DC:682:ARG:O	82:DC:684:VAL:HG23	2.13	0.48
82:DC:798:PHE:CZ	86:DC:903:SO1:H22	2.49	0.48
5:E:118:LYS:O	5:E:122:ARG:HB2	2.13	0.48
5:E:34:LEU:HD13	5:E:179:LEU:HB3	1.96	0.48
31:EA:4:PHE:CZ	34:HA:35:ARG:HA	2.48	0.48
31:EA:68:ILE:O	31:EA:70:PRO:HD3	2.14	0.48
6:F:112:ILE:CG1	6:F:135:ILE:HG23	2.43	0.48
58:FB:43:ILE:HG22	58:FB:44:HIS:N	2.28	0.48
7:G:162:VAL:O	7:G:178:LEU:HD12	2.13	0.48
59:GB:69:ARG:HG3	59:GB:69:ARG:HH11	1.79	0.48
35:IA:41:LYS:HD2	35:IA:47:ASP:OD1	2.13	0.48
10:J:174:LEU:HB3	10:J:176:PHE:CZ	2.48	0.48
2:B:1412:G:OP1	36:JA:105:ARG:NH2	2.47	0.48
63:KB:108:ASP:CG	63:KB:111:ALA:HB3	2.34	0.48
64:LB:61:MET:HA	64:LB:104:ALA:CB	2.44	0.48
64:LB:117:ASP:O	64:LB:118:VAL:HG13	2.13	0.48
51:YA:29:TRP:CZ3	64:LB:13:VAL:HG21	2.49	0.48
65:MB:64:LYS:HB2	65:MB:73:PRO:CG	2.42	0.48
14:N:52:LEU:CD1	14:N:152:LEU:HD22	2.42	0.48
66:NB:45:ARG:HG2	66:NB:45:ARG:HH11	1.78	0.48
15:O:21:ILE:O	15:O:66:ALA:HB1	2.13	0.48
17:Q:147:ILE:HD13	17:Q:147:ILE:N	2.28	0.48
44:RA:88:LYS:HA	44:RA:92:ASP:HB2	1.96	0.48
70:RB:44:ASN:ND2	70:RB:106:ILE:HG21	2.29	0.48
19:S:99:ARG:O	19:S:102:ALA:HB3	2.14	0.48
20:T:113:ASP:HA	20:T:117:ARG:NH1	2.29	0.48
20:T:173:ALA:CA	20:T:176:LYS:HE3	2.42	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:U:135:ARG:O	21:U:136:ILE:HD13	2.13	0.48
21:U:169:THR:HG23	37:KA:60:ARG:NH2	2.28	0.48
47:UA:23:ARG:HA	47:UA:26:VAL:CG2	2.44	0.48
47:UA:11:THR:OG1	47:UA:23:ARG:HB3	2.13	0.48
47:UA:57:CYS:HB3	47:UA:62:LYS:HB2	1.95	0.48
22:V:79:LYS:HA	22:V:136:ASN:CG	2.33	0.48
48:VA:107:ALA:HB3	48:VA:182:THR:HG21	1.95	0.48
23:W:38:ARG:O	23:W:42:ARG:HB2	2.12	0.48
49:WA:42:LEU:N	49:WA:42:LEU:HD12	2.28	0.48
18:R:15:VAL:O	24:X:149:LYS:HA	2.13	0.48
51:YA:179:SER:HB2	51:YA:183:GLN:HB2	1.94	0.48
1:A:1292:G:H2'	1:A:1293:U:C6	2.49	0.48
1:A:1087:A:H5'	1:A:1298:U:C5	2.48	0.48
1:A:1348:A:H2'	1:A:1349:G:C8	2.49	0.48
1:A:1463:C:H2'	1:A:1464:G:H8	1.74	0.48
1:A:1498:G:C2'	1:A:1499:G:C5'	2.92	0.48
1:A:1676:U:H5''	58:FB:58:LEU:CD2	2.43	0.48
1:A:216:U:O3'	1:A:217:A:H2'	2.14	0.48
1:A:431:C:H2'	1:A:432:G:C8	2.48	0.48
1:A:487:G:H2'	1:A:488:G:H5''	1.96	0.48
1:A:95:G:H3'	1:A:96:G:C8	2.49	0.48
27:AA:34:LEU:HD23	27:AA:61:THR:O	2.14	0.48
53:AB:29:LEU:HD13	53:AB:50:ILE:CG2	2.42	0.48
2:B:1007:U:H3	2:B:1043:C:N4	2.00	0.48
2:B:1028:U:C3'	2:B:1029:G:H5''	2.44	0.48
2:B:1085:A:H2'	2:B:1086:C:O4'	2.13	0.48
2:B:1166:G:O2'	2:B:1167:U:H5'	2.13	0.48
2:B:1500:G:H2'	2:B:1501:U:O4'	2.13	0.48
2:B:1956:A:H2'	2:B:1957:G:C8	2.48	0.48
2:B:2319:U:H5'	2:B:2320:A:OP1	2.13	0.48
2:B:2476:C:H2'	2:B:2477:G:C4'	2.43	0.48
2:B:2689:A:N1	2:B:2702:A:H2'	2.28	0.48
2:B:287:G:O2'	2:B:288:C:H5'	2.12	0.48
2:B:688:G:H1'	2:B:692:A:N6	2.28	0.48
2:B:692:A:O2'	2:B:693:A:H5'	2.13	0.48
3:C:113:U:H5''	43:QA:7:PHE:CB	2.41	0.48
55:CB:44:ASN:OD1	55:CB:70:VAL:HA	2.13	0.48
30:DA:60:ARG:HH11	30:DA:60:ARG:HG3	1.78	0.48
82:DC:636:PHE:CE1	82:DC:645:LEU:HD21	2.48	0.48
5:E:112:ALA:HB2	5:E:135:PRO:CB	2.44	0.48
5:E:150:ASP:HA	5:E:178:VAL:HB	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:70:ASP:HB2	5:E:115:VAL:HG21	1.96	0.48
6:F:77:ILE:CD1	6:F:128:ARG:HG2	2.44	0.48
59:GB:37:LYS:HE2	59:GB:38:ASN:HD21	1.79	0.48
8:H:179:LEU:HD23	8:H:183:LYS:HD2	1.94	0.48
34:HA:51:LEU:HD11	38:LA:90:ILE:HB	1.95	0.48
10:J:129:GLU:CG	10:J:130:ILE:H	2.25	0.48
10:J:4:GLN:HB3	36:JA:74:PHE:CE1	2.48	0.48
37:KA:45:LEU:HD21	37:KA:74:THR:HG23	1.94	0.48
12:L:173:MET:C	12:L:175:VAL:H	2.17	0.48
12:L:26:LEU:CD1	12:L:27:THR:HG23	2.42	0.48
14:N:217:PHE:O	14:N:218:ALA:HB2	2.13	0.48
14:N:36:LEU:HD21	14:N:69:ARG:HH11	1.79	0.48
42:PA:46:ARG:NH1	42:PA:46:ARG:HG2	2.27	0.48
69:QB:28:LEU:HD13	69:QB:29:GLU:N	2.29	0.48
18:R:102:LYS:HA	18:R:105:GLN:HB2	1.95	0.48
70:RB:18:GLN:O	70:RB:96:PRO:HA	2.13	0.48
19:S:135:VAL:HG21	19:S:151:ILE:HG21	1.95	0.48
20:T:8:VAL:HG12	20:T:9:ILE:N	2.29	0.48
73:UB:57:LEU:HD22	80:BC:4:VAL:CG1	2.44	0.48
23:W:44:LEU:CA	23:W:47:ASN:HD21	2.19	0.48
24:X:1:MET:HG2	24:X:32:SER:OG	2.14	0.48
4:D:89:G:H5'	24:X:84:ARG:CG	2.44	0.48
52:ZA:111:VAL:CG2	52:ZA:139:ILE:HD11	2.44	0.48
1:A:1242:A:N1	1:A:1452:U:H5'	2.29	0.48
1:A:1472:C:H2'	1:A:1535:U:O4	2.14	0.48
1:A:167:U:H4'	56:DB:134:GLY:O	2.13	0.48
1:A:1727:G:H2'	1:A:1728:A:C8	2.48	0.48
1:A:188:A:N6	1:A:197:A:H1'	2.28	0.48
1:A:201:G:H2'	1:A:202:A:H8	1.77	0.48
1:A:867:G:H5'	63:KB:4:MET:CE	2.44	0.48
2:B:1653:G:O2'	2:B:1654:A:H5'	2.13	0.48
2:B:2570:U:O3'	2:B:2571:U:H2'	2.13	0.48
2:B:2736:A:H2'	2:B:2737:C:C5'	2.35	0.48
2:B:2746:A:C8	9:I:153:THR:HG23	2.49	0.48
2:B:2837:A:H2'	2:B:2845:A:C2	2.49	0.48
2:B:3002:C:H1'	2:B:3147:G:N2	2.29	0.48
2:B:3187:A:H5'	13:M:22:SER:HA	1.96	0.48
2:B:391:A:H2'	2:B:392:G:O4'	2.13	0.48
2:B:514:G:H3'	2:B:515:C:H5''	1.95	0.48
2:B:634:C:H5''	37:KA:21:ARG:CD	2.37	0.48
2:B:659:G:H2'	2:B:1432:C:H42	1.79	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:BB:145:ARG:HB3	54:BB:145:ARG:NH1	2.29	0.48
55:CB:170:GLN:O	55:CB:174:LEU:HG	2.13	0.48
82:DC:578:LYS:HA	82:DC:584:ASN:O	2.13	0.48
57:EB:74:GLN:HG2	57:EB:131:PHE:CE1	2.49	0.48
32:FA:49:HIS:N	32:FA:50:PRO:CD	2.77	0.48
58:FB:184:LEU:HD23	58:FB:189:LEU:HD12	1.95	0.48
7:G:188:ILE:HG13	7:G:189:SER:N	2.29	0.48
2:B:2641:U:H4'	33:GA:7:HIS:NE2	2.29	0.48
8:H:179:LEU:O	8:H:183:LYS:HB2	2.14	0.48
8:H:210:ALA:HA	8:H:257:LYS:HZ1	1.79	0.48
8:H:23:PRO:HG2	8:H:258:LEU:HD21	1.93	0.48
2:B:505:G:H4'	8:H:313:LEU:HD11	1.95	0.48
8:H:328:ASN:CG	8:H:328:ASN:O	2.51	0.48
2:B:338:A:N6	8:H:43:ASN:HD22	2.11	0.48
9:I:155:THR:O	9:I:155:THR:HG23	2.13	0.48
9:I:94:ASN:HB2	9:I:203:HIS:HE2	1.79	0.48
35:IA:24:SER:HB2	35:IA:27:LYS:HB2	1.94	0.48
36:JA:44:ARG:HD2	36:JA:46:PHE:CZ	2.49	0.48
11:K:184:LEU:HD23	11:K:184:LEU:O	2.14	0.48
11:K:55:TYR:HE1	11:K:189:ILE:HG21	1.78	0.48
64:LB:26:THR:HG21	64:LB:97:GLY:HA3	1.94	0.48
39:MA:6:ALA:O	39:MA:10:ARG:HG3	2.14	0.48
39:MA:70:TYR:HA	39:MA:73:LYS:HD2	1.95	0.48
14:N:145:LYS:HE3	14:N:149:VAL:HG21	1.96	0.48
15:O:130:VAL:HG13	15:O:130:VAL:O	2.13	0.48
67:OB:115:LEU:O	67:OB:116:LYS:HE2	2.13	0.48
67:OB:117:LEU:HD22	67:OB:118:PRO:O	2.14	0.48
67:OB:93:LEU:C	67:OB:95:ARG:H	2.17	0.48
16:P:79:SER:O	16:P:82:ILE:HG12	2.12	0.48
68:PB:133:VAL:HG13	68:PB:134:ARG:N	2.29	0.48
68:PB:17:LEU:CG	68:PB:22:VAL:HG21	2.41	0.48
2:B:77:A:H5'	17:Q:100:ARG:NH1	2.29	0.48
17:Q:15:ARG:HG2	17:Q:15:ARG:NH1	2.29	0.48
21:U:32:THR:HG21	21:U:91:VAL:HG21	1.95	0.48
6:F:80:GLU:CB	47:UA:76:ALA:HB2	2.41	0.48
74:VB:94:TYR:HB2	74:VB:96:LEU:HD13	1.94	0.48
1:A:930:A:H5''	76:XB:70:LYS:HD2	1.96	0.48
77:YB:61:THR:HG23	77:YB:62:ILE:N	2.18	0.48
52:ZA:120:GLU:HG3	52:ZA:123:GLY:HA3	1.96	0.48
1:A:1040:G:O2'	1:A:1041:G:H5'	2.14	0.48
1:A:1181:U:O2'	1:A:1182:U:H5'	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:123:G:H21	54:BB:146:THR:HG21	1.78	0.48
1:A:464:A:H2'	1:A:465:G:H8	1.78	0.48
1:A:595:G:H2'	1:A:596:C:C6	2.49	0.48
1:A:629:U:H2'	1:A:630:A:O4'	2.13	0.48
1:A:855:A:H3'	1:A:856:A:H5''	1.96	0.48
53:AB:222:VAL:HG22	53:AB:223:LYS:N	2.28	0.48
53:AB:69:LEU:HA	53:AB:72:LEU:HD12	1.95	0.48
79:AC:12:ARG:HG2	79:AC:12:ARG:HH11	1.79	0.48
79:AC:33:LYS:O	79:AC:36:LEU:HD23	2.14	0.48
2:B:1041:U:H2'	2:B:1042:U:H5'	1.96	0.48
2:B:1150:A:N3	2:B:1310:G:H1'	2.29	0.48
2:B:1436:U:OP1	2:B:1437:C:H4'	2.14	0.48
2:B:1498:A:C1'	2:B:1602:A:H2	2.25	0.48
2:B:1668:G:H2'	2:B:1669:C:H6	1.78	0.48
2:B:1706:C:C4'	2:B:1787:A:H4'	2.35	0.48
2:B:1480:G:H1'	2:B:1872:C:N4	2.29	0.48
2:B:1941:C:N4	2:B:2107:A:H61	2.11	0.48
2:B:2258:U:H2'	2:B:2259:A:H8	1.79	0.48
2:B:2622:C:H2'	2:B:2623:G:O4'	2.14	0.48
2:B:2899:C:H3'	2:B:2899:C:O2	2.14	0.48
2:B:3106:A:H61	2:B:3128:G:H1'	1.78	0.48
2:B:31:C:H2'	2:B:32:U:O4'	2.14	0.48
2:B:419:G:N2	3:C:5:U:N3	2.59	0.48
2:B:588:G:H4'	2:B:589:A:C4	2.49	0.48
2:B:957:C:H2'	2:B:958:C:C6	2.49	0.48
54:BB:220:THR:CG2	54:BB:224:ASN:HD22	2.27	0.48
1:A:1471:A:H5'	55:CB:184:PHE:HE2	1.79	0.48
30:DA:3:LYS:N	30:DA:3:LYS:HD3	2.29	0.48
30:DA:27:ARG:HD3	30:DA:75:ARG:O	2.13	0.48
82:DC:419:VAL:HG13	82:DC:420:PRO:HD2	1.95	0.48
6:F:83:HIS:O	6:F:86:GLN:HB2	2.14	0.48
7:G:123:TYR:CZ	7:G:124:LYS:HG3	2.48	0.48
7:G:173:GLN:HG2	7:G:175:LYS:O	2.12	0.48
7:G:238:LEU:HD23	7:G:248:LYS:H	1.78	0.48
2:B:1088:U:H5'	33:GA:54:LEU:CD1	2.44	0.48
35:IA:11:GLU:HB2	35:IA:107:VAL:CG2	2.44	0.48
10:J:39:VAL:HG22	10:J:89:THR:O	2.14	0.48
1:A:867:G:OP1	63:KB:3:ARG:HD3	2.13	0.48
12:L:71:VAL:HB	12:L:76:ALA:HB2	1.94	0.48
38:LA:76:TYR:HD1	38:LA:79:SER:HB3	1.79	0.48
13:M:16:VAL:HG22	13:M:83:THR:HG21	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
65:MB:97:TYR:CZ	65:MB:100:LYS:HA	2.49	0.48
40:NA:86:LYS:O	40:NA:89:GLU:HB3	2.14	0.48
66:NB:42:GLU:CG	66:NB:45:ARG:HH21	2.08	0.48
66:NB:81:ILE:O	66:NB:85:ILE:HG13	2.14	0.48
66:NB:94:GLN:HB2	66:NB:102:LYS:NZ	2.29	0.48
3:C:94:C:OP2	41:OA:72:ARG:HD2	2.14	0.48
67:OB:34:LEU:O	67:OB:38:ILE:HG13	2.13	0.48
68:PB:17:LEU:H	68:PB:22:VAL:HG23	1.79	0.48
17:Q:103:ASN:HD22	17:Q:103:ASN:HA	1.55	0.48
69:QB:28:LEU:HD13	69:QB:29:GLU:H	1.79	0.48
70:RB:51:VAL:HG13	70:RB:51:VAL:O	2.14	0.48
2:B:49:A:H5''	19:S:191:TRP:NE1	2.29	0.48
19:S:28:TRP:O	19:S:32:GLN:HB2	2.13	0.48
48:VA:33:VAL:HG23	48:VA:37:GLN:HE22	1.78	0.48
24:X:128:GLU:HG2	24:X:129:ILE:N	2.29	0.48
50:XA:71:GLU:HG3	50:XA:72:ASP:N	2.29	0.48
64:LB:83:ILE:HD12	76:XB:44:ILE:CG2	2.44	0.48
24:X:26:ARG:NH1	25:Y:150:THR:OG1	2.47	0.48
51:YA:193:ILE:HG21	51:YA:212:VAL:CG1	2.41	0.48
1:A:1204:A:N3	79:AC:10:HIS:NE2	2.62	0.48
1:A:1342:C:H2'	1:A:1343:U:O4'	2.12	0.48
1:A:324:U:H5''	61:IB:133:LYS:NZ	2.28	0.48
1:A:865:A:OP2	1:A:1036:A:H5'	2.14	0.48
1:A:93:A:H4'	1:A:94:U:OP2	2.12	0.48
27:AA:59:MET:HE2	27:AA:75:PRO:HA	1.96	0.48
2:B:1067:U:H2'	2:B:1068:C:C6	2.49	0.48
2:B:669:U:H4'	2:B:1110:U:H5'	1.96	0.48
2:B:112:U:H3'	39:MA:103:LYS:CD	2.43	0.48
2:B:1295:G:C5	2:B:1296:C:C4	3.02	0.48
2:B:1750:A:C4'	2:B:1751:G:H5'	2.37	0.48
2:B:2353:G:H2'	2:B:2354:C:O4'	2.14	0.48
2:B:2372:A:H4'	2:B:2373:A:C8	2.49	0.48
2:B:238:A:H2'	2:B:239:G:O4'	2.14	0.48
2:B:2459:A:H62	2:B:2461:A:H2	1.61	0.48
2:B:2525:G:H2'	6:F:34:TYR:HD1	1.77	0.48
2:B:3038:U:H2'	2:B:3039:C:C6	2.49	0.48
2:B:3106:A:C2'	2:B:3107:U:H5'	2.44	0.48
2:B:894:G:N1	2:B:1660:C:OP1	2.47	0.48
3:C:58:G:H3'	3:C:99:C:H4'	1.96	0.48
55:CB:64:VAL:CG1	55:CB:130:ILE:HD11	2.44	0.48
82:DC:139:THR:O	82:DC:143:LEU:HB2	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:143:LEU:HD22	82:DC:188:ILE:HB	1.95	0.48
82:DC:19:VAL:HG12	82:DC:21:ASN:ND2	2.29	0.48
82:DC:203:TYR:N	82:DC:208:THR:OG1	2.47	0.48
82:DC:573:GLN:CD	82:DC:719:LEU:HD13	2.34	0.48
5:E:180:VAL:HA	5:E:183:ILE:HD12	1.96	0.48
31:EA:21:LYS:HA	31:EA:49:TYR:OH	2.14	0.48
57:EB:5:GLN:CG	57:EB:22:GLN:HB2	2.43	0.48
8:H:291:ASN:O	8:H:292:SER:C	2.52	0.48
34:HA:32:LYS:O	34:HA:36:GLN:HG3	2.14	0.48
60:HB:92:ILE:HG23	60:HB:92:ILE:O	2.14	0.48
10:J:39:VAL:CG2	10:J:89:THR:O	2.62	0.48
36:JA:47:ARG:NH2	37:KA:21:ARG:HD2	2.29	0.48
36:JA:3:SER:HA	36:JA:90:LYS:O	2.14	0.48
40:NA:57:LEU:O	40:NA:61:ILE:HG13	2.14	0.48
68:PB:52:VAL:HG13	68:PB:56:LYS:HD2	1.95	0.48
68:PB:92:ILE:HG23	68:PB:93:THR:HG23	1.96	0.48
17:Q:164:GLU:O	17:Q:165:SER:HB3	2.14	0.48
70:RB:24:ILE:HB	70:RB:91:ILE:HB	1.95	0.48
20:T:77:SER:HB3	20:T:106:GLU:OE1	2.14	0.48
2:B:1507:G:H1'	21:U:139:TYR:CE1	2.48	0.48
22:V:127:LEU:HD13	22:V:127:LEU:C	2.33	0.48
2:B:786:A:C8	22:V:61:PRO:HG2	2.49	0.48
23:W:99:LEU:C	23:W:101:VAL:N	2.67	0.48
49:WA:210:LEU:HD22	49:WA:231:MET:SD	2.53	0.48
24:X:63:GLN:HG3	24:X:64:ILE:H	1.79	0.48
4:D:89:G:C5'	24:X:84:ARG:NE	2.74	0.48
50:XA:83:GLN:O	50:XA:86:VAL:HG22	2.14	0.48
51:YA:206:PRO:O	51:YA:207:LEU:HB2	2.14	0.48
52:ZA:222:TYR:O	52:ZA:224:PHE:N	2.46	0.48
52:ZA:53:ILE:HA	52:ZA:56:ILE:HG13	1.95	0.48
52:ZA:79:GLU:HG3	52:ZA:81:MET:SD	2.54	0.48
1:A:138:A:O2'	1:A:139:C:H5'	2.14	0.47
1:A:1472:C:H2'	1:A:1535:U:C4	2.49	0.47
1:A:1493:A:H4'	1:A:1494:C:C6	2.48	0.47
1:A:1505:A:H2'	1:A:1506:G:O4'	2.14	0.47
1:A:163:G:O2'	1:A:164:A:H5'	2.14	0.47
1:A:219:A:C6	1:A:843:U:H1'	2.49	0.47
27:AA:104:ASN:OD1	27:AA:108:GLU:HB2	2.13	0.47
2:B:1832:C:O2'	2:B:1833:G:H5'	2.14	0.47
2:B:283:G:C5	32:FA:61:PHE:HD1	2.32	0.47
2:B:2930:A:H2'	2:B:2931:C:C6	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:3073:A:C2'	2:B:3074:G:H5''	2.44	0.47
2:B:3270:U:C5	21:U:178:ALA:HB2	2.49	0.47
2:B:381:U:H2'	2:B:382:U:C6	2.48	0.47
2:B:49:A:H2'	19:S:187:ARG:NH2	2.29	0.47
2:B:805:G:H1'	8:H:73:ARG:CD	2.37	0.47
2:B:8:C:H2'	2:B:9:U:H6	1.79	0.47
28:BA:35:LYS:HE3	28:BA:51:TRP:NE1	2.29	0.47
80:BC:43:ARG:HG3	80:BC:44:PHE:CD1	2.49	0.47
3:C:72:A:H1'	3:C:88:A:N3	2.29	0.47
29:CA:107:VAL:HG11	29:CA:124:VAL:CG1	2.29	0.47
4:D:67:G:H2'	4:D:68:C:H5'	1.94	0.47
4:D:81:U:H2'	4:D:82:G:H8	1.79	0.47
56:DB:63:MET:HA	56:DB:98:ARG:O	2.14	0.47
82:DC:76:SER:HA	82:DC:101:ASN:ND2	2.29	0.47
82:DC:157:ILE:HG23	82:DC:181:THR:HG21	1.95	0.47
82:DC:669:TRP:HB3	82:DC:710:ARG:HH12	1.78	0.47
5:E:34:LEU:CD1	5:E:179:LEU:HB3	2.44	0.47
57:EB:107:ARG:HG2	57:EB:108:GLN:N	2.27	0.47
57:EB:32:PRO:HG2	57:EB:34:LEU:CD1	2.44	0.47
83:EC:6853:G:C2	83:EC:6854:U:H1'	2.50	0.47
32:FA:42:ARG:HG3	32:FA:43:ILE:N	2.29	0.47
58:FB:55:TYR:HB2	58:FB:176:SER:CA	2.43	0.47
8:H:39:PHE:CE1	8:H:236:LEU:HD23	2.48	0.47
1:A:1217:A:OP1	60:HB:1:MET:HA	2.12	0.47
60:HB:24:LYS:HA	60:HB:63:TYR:HA	1.95	0.47
60:HB:54:TYR:HB3	60:HB:72:GLY:CA	2.44	0.47
36:JA:32:TRP:HZ3	36:JA:50:ILE:HD12	1.79	0.47
4:D:85:G:N2	11:K:225:GLN:NE2	2.62	0.47
11:K:77:VAL:CG1	24:X:59:VAL:HG13	2.43	0.47
2:B:1178:G:C4	37:KA:19:SER:HA	2.49	0.47
13:M:3:TYR:O	13:M:59:ASN:HA	2.14	0.47
14:N:57:LEU:HG	14:N:129:VAL:O	2.14	0.47
14:N:145:LYS:HD2	14:N:145:LYS:O	2.14	0.47
14:N:49:CYS:HA	14:N:138:VAL:O	2.14	0.47
3:C:103:G:H4'	41:OA:21:ARG:HD3	1.95	0.47
41:OA:25:ARG:O	41:OA:25:ARG:HD2	2.14	0.47
16:P:117:ARG:NH2	16:P:132:ILE:HB	2.28	0.47
17:Q:3:ILE:HD12	32:FA:41:HIS:HB3	1.95	0.47
69:QB:102:ARG:HH11	69:QB:102:ARG:HB2	1.79	0.47
18:R:119:GLN:O	18:R:123:LEU:HB2	2.14	0.47
71:SB:15:ARG:NH2	71:SB:24:ILE:HG21	2.29	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:80:GLU:HG3	47:UA:66:GLY:O	2.14	0.47
73:UB:19:ARG:HD3	73:UB:19:ARG:O	2.13	0.47
22:V:26:LEU:HA	22:V:29:LEU:CD1	2.44	0.47
48:VA:5:ARG:CA	48:VA:8:LYS:HD3	2.44	0.47
23:W:28:GLU:C	23:W:32:ILE:HG13	2.34	0.47
23:W:72:GLU:HB3	23:W:74:ARG:HH11	1.77	0.47
49:WA:150:TRP:O	49:WA:173:GLY:HA3	2.13	0.47
49:WA:305:TYR:CE2	49:WA:311:ARG:HB2	2.48	0.47
49:WA:34:LEU:HG	49:WA:71:CYS:SG	2.53	0.47
50:XA:163:ASN:O	50:XA:165:ARG:N	2.46	0.47
26:Z:72:SER:HB2	26:Z:75:TYR:N	2.29	0.47
1:A:1095:U:H1'	72:TB:16:ASN:ND2	2.24	0.47
1:A:1189:A:H2'	1:A:1190:C:C5	2.50	0.47
1:A:1199:G:C5	79:AC:40:ARG:HD2	2.49	0.47
1:A:1330:G:H3'	1:A:1331:A:H8	1.79	0.47
1:A:1424:A:OP1	53:AB:151:LYS:HD2	2.14	0.47
1:A:1654:G:N2	1:A:1745:G:H2'	2.30	0.47
1:A:353:A:C2'	1:A:354:C:H5'	2.44	0.47
1:A:517:U:H2'	1:A:518:A:O4'	2.14	0.47
1:A:374:U:O2'	1:A:603:U:H5''	2.14	0.47
1:A:605:A:H3'	1:A:606:A:H2'	1.95	0.47
1:A:748:U:OP1	72:TB:80:ASN:HB3	2.13	0.47
2:B:1347:U:H2'	2:B:1355:A:H61	1.79	0.47
2:B:1802:C:H2'	2:B:1803:C:H6	1.79	0.47
2:B:1813:A:H3'	2:B:1813:A:N3	2.29	0.47
2:B:204:A:H2'	2:B:205:C:C5'	2.44	0.47
2:B:2857:C:H2'	2:B:2858:U:H6	1.79	0.47
2:B:2919:A:O2'	2:B:2920:U:H5'	2.14	0.47
2:B:3111:U:O4	2:B:3120:C:H4'	2.15	0.47
2:B:502:U:C3'	2:B:503:C:H5''	2.43	0.47
2:B:52:A:C4	2:B:53:G:C8	3.02	0.47
2:B:561:C:O2'	2:B:562:C:H5'	2.14	0.47
2:B:982:C:O2'	2:B:983:A:H5'	2.14	0.47
80:BC:43:ARG:HG3	80:BC:44:PHE:CG	2.49	0.47
4:D:59:U:H2'	4:D:60:G:O4'	2.15	0.47
30:DA:121:ARG:CZ	30:DA:121:ARG:HB2	2.44	0.47
82:DC:67:GLY:O	82:DC:108:HIS:HE1	1.96	0.47
82:DC:20:ARG:HB2	82:DC:100:ILE:HG13	1.96	0.47
8:H:205:PRO:O	8:H:225:VAL:HG13	2.14	0.47
34:HA:27:TYR:CE1	34:HA:31:VAL:HG21	2.49	0.47
34:HA:77:LEU:O	34:HA:81:VAL:HG13	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:IA:44:MET:HG3	35:IA:45:GLY:H	1.79	0.47
35:IA:86:LYS:N	35:IA:86:LYS:HD2	2.29	0.47
10:J:5:LYS:O	10:J:6:ALA:HB3	2.14	0.47
12:L:163:VAL:HA	12:L:166:LEU:CD1	2.44	0.47
12:L:161:GLU:HA	12:L:164:VAL:HG23	1.96	0.47
64:LB:22:SER:OG	64:LB:25:ASP:HB3	2.15	0.47
39:MA:4:VAL:CG2	39:MA:9:LEU:HD21	2.43	0.47
14:N:51:HIS:O	14:N:165:ILE:HB	2.14	0.47
14:N:53:VAL:HG21	14:N:166:ILE:HD12	1.96	0.47
41:OA:25:ARG:CG	43:QA:51:ILE:HD12	2.44	0.47
41:OA:21:ARG:CZ	41:OA:39:TYR:HD2	2.26	0.47
41:OA:87:SER:O	41:OA:88:ALA:HB3	2.13	0.47
67:OB:50:ILE:O	67:OB:54:THR:HG23	2.15	0.47
68:PB:33:THR:HG22	68:PB:40:ARG:N	2.28	0.47
17:Q:16:LYS:H	17:Q:16:LYS:CD	2.01	0.47
17:Q:59:ARG:HH12	17:Q:68:LYS:C	2.18	0.47
1:A:1358:G:H4'	69:QB:130:ARG:CA	2.45	0.47
69:QB:57:ARG:O	69:QB:61:VAL:HG23	2.14	0.47
70:RB:44:ASN:HD22	70:RB:106:ILE:HG12	1.78	0.47
46:TA:3:ASN:HA	46:TA:92:GLU:HG3	1.95	0.47
46:TA:58:PHE:HE2	46:TA:61:LYS:HB2	1.78	0.47
72:TB:11:LEU:HD23	72:TB:11:LEU:C	2.34	0.47
21:U:21:TYR:CD1	21:U:123:PRO:HD2	2.48	0.47
73:UB:57:LEU:H	73:UB:72:VAL:HA	1.79	0.47
2:B:742:G:P	22:V:73:GLN:HG2	2.54	0.47
49:WA:131:ILE:HD12	49:WA:181:TRP:HE1	1.79	0.47
50:XA:120:LEU:HD11	50:XA:144:ILE:HD11	1.95	0.47
50:XA:21:ASN:HB3	50:XA:24:LEU:HD22	1.96	0.47
50:XA:79:ARG:O	50:XA:83:GLN:HG3	2.14	0.47
76:XB:89:ARG:O	76:XB:92:ARG:HG3	2.14	0.47
52:ZA:53:ILE:HA	52:ZA:56:ILE:CG1	2.44	0.47
1:A:1267:G:N3	1:A:1267:G:H2'	2.29	0.47
1:A:1338:C:H1'	1:A:1410:A:C6	2.48	0.47
1:A:1414:U:O2'	1:A:1415:U:H3'	2.14	0.47
1:A:1471:A:H2'	1:A:1472:C:H5'	1.95	0.47
1:A:1588:G:O2'	1:A:1589:C:H5'	2.14	0.47
1:A:405:C:O2'	1:A:406:U:H5'	2.14	0.47
1:A:554:C:H1'	1:A:555:A:N7	2.29	0.47
1:A:590:C:H2'	1:A:591:A:C8	2.49	0.47
1:A:625:C:H4'	1:A:940:A:C4'	2.45	0.47
1:A:711:U:H4'	1:A:712:G:H5''	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:AA:104:ASN:HB2	27:AA:105:PRO:HD2	1.95	0.47
53:AB:70:THR:HG22	53:AB:86:LEU:HB2	1.96	0.47
2:B:1079:A:H2'	2:B:1080:A:O4'	2.14	0.47
2:B:1625:A:H5'	2:B:1643:A:N1	2.30	0.47
2:B:1850:A:O2'	2:B:1851:G:H5'	2.14	0.47
2:B:2184:U:H2'	2:B:2185:G:H8	1.79	0.47
2:B:2268:U:H2'	2:B:2269:U:C6	2.49	0.47
2:B:3159:C:H2'	2:B:3160:U:H6	1.75	0.47
2:B:3303:G:N2	2:B:3312:U:H1'	2.29	0.47
2:B:577:C:HO2'	2:B:579:G:H5''	1.77	0.47
2:B:632:G:H2'	2:B:633:C:O4'	2.13	0.47
2:B:959:C:H5	2:B:2801:A:H5''	1.80	0.47
2:B:965:A:H4'	32:FA:41:HIS:HD2	1.79	0.47
2:B:996:A:H3'	2:B:997:A:H8	1.79	0.47
3:C:36:G:N7	39:MA:86:ARG:HD3	2.29	0.47
48:VA:137:GLN:HB3	82:DC:180:ARG:HG3	1.96	0.47
82:DC:743:ILE:HG12	82:DC:747:LEU:HD23	1.96	0.47
82:DC:755:VAL:HG23	82:DC:770:ALA:CA	2.44	0.47
82:DC:784:LEU:O	82:DC:787:ALA:HB3	2.15	0.47
5:E:144:LEU:HA	5:E:147:LYS:HD2	1.96	0.47
5:E:32:VAL:HA	5:E:207:LYS:O	2.14	0.47
57:EB:61:PHE:HB3	57:EB:95:GLU:HB2	1.96	0.47
6:F:189:TYR:HA	6:F:192:LYS:HB2	1.96	0.47
6:F:83:HIS:NE2	6:F:86:GLN:HA	2.29	0.47
32:FA:79:TRP:CH2	32:FA:119:PRO:HG2	2.49	0.47
32:FA:9:ARG:C	32:FA:11:HIS:H	2.18	0.47
32:FA:138:ILE:HG22	32:FA:139:ARG:N	2.29	0.47
7:G:266:ARG:CB	7:G:266:ARG:HH11	2.26	0.47
7:G:386:ASP:HB3	7:G:387:LEU:HD12	1.96	0.47
7:G:4:ARG:NH1	7:G:4:ARG:HB3	2.29	0.47
59:GB:109:LEU:O	59:GB:113:VAL:HG23	2.14	0.47
59:GB:124:HIS:O	59:GB:128:LEU:HG	2.13	0.47
59:GB:81:VAL:C	59:GB:83:VAL:N	2.68	0.47
8:H:23:PRO:C	8:H:25:VAL:N	2.68	0.47
9:I:78:ALA:CB	9:I:105:ILE:HG12	2.43	0.47
9:I:51:LEU:HB2	9:I:144:VAL:HG21	1.96	0.47
35:IA:13:THR:HA	35:IA:71:LEU:O	2.14	0.47
36:JA:54:LYS:HG2	36:JA:57:TYR:CE2	2.49	0.47
37:KA:47:LYS:O	37:KA:71:VAL:HG23	2.14	0.47
37:KA:98:VAL:HG22	37:KA:99:ARG:N	2.28	0.47
63:KB:91:LEU:HD22	63:KB:122:ILE:CG1	2.45	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:154:C:OP1	12:L:181:LYS:HD2	2.14	0.47
2:B:1805:C:H4'	38:LA:76:TYR:CA	2.43	0.47
1:A:900:A:H4'	64:LB:27:PHE:HZ	1.79	0.47
13:M:43:VAL:HG23	13:M:44:THR:N	2.29	0.47
14:N:75:TYR:CE2	14:N:79:VAL:HG21	2.50	0.47
40:NA:78:GLY:HA3	40:NA:82:ARG:HD2	1.95	0.47
66:NB:11:GLY:HA3	66:NB:80:ALA:O	2.14	0.47
15:O:87:LYS:HG2	15:O:91:LEU:HD23	1.96	0.47
2:B:1256:G:H5''	16:P:127:SER:HB3	1.94	0.47
68:PB:17:LEU:HD21	68:PB:22:VAL:HG11	1.97	0.47
18:R:94:TRP:NE1	18:R:100:ALA:HB2	2.29	0.47
71:SB:35:ASN:OD1	71:SB:52:THR:HG22	2.13	0.47
21:U:131:ARG:CG	21:U:137:ASN:HB2	2.45	0.47
21:U:59:PRO:HD3	21:U:76:PHE:CD1	2.47	0.47
47:UA:22:LEU:O	47:UA:26:VAL:HG23	2.14	0.47
47:UA:57:CYS:O	47:UA:61:LYS:HA	2.13	0.47
73:UB:107:PHE:O	73:UB:109:ARG:HG2	2.14	0.47
73:UB:60:GLU:HA	73:UB:67:ALA:O	2.14	0.47
2:B:841:A:C5'	23:W:126:GLU:HG2	2.44	0.47
49:WA:223:TRP:HA	49:WA:230:ALA:HA	1.96	0.47
75:WB:70:LYS:HG3	75:WB:71:ILE:H	1.79	0.47
24:X:38:LYS:HB3	24:X:58:ILE:HD12	1.97	0.47
24:X:50:LYS:HZ2	24:X:50:LYS:HB3	1.79	0.47
50:XA:48:ILE:CG2	50:XA:161:PRO:HB2	2.44	0.47
77:YB:31:TYR:CE2	77:YB:81:ARG:HG3	2.49	0.47
78:ZB:12:VAL:O	78:ZB:51:ASN:HA	2.14	0.47
1:A:101:U:H2'	1:A:102:U:O4'	2.15	0.47
1:A:1066:C:H2'	1:A:1067:C:C6	2.49	0.47
1:A:1075:C:H2'	1:A:1076:A:O4'	2.14	0.47
1:A:1080:U:O4	1:A:1091:A:H2	1.96	0.47
1:A:140:A:C3'	1:A:141:U:H5'	2.45	0.47
1:A:1512:G:H2'	1:A:1513:G:C8	2.49	0.47
1:A:1782:A:N7	1:A:1783:C:H1'	2.30	0.47
27:AA:45:ARG:HB3	27:AA:48:ARG:CB	2.45	0.47
1:A:1424:A:P	53:AB:151:LYS:HD2	2.55	0.47
53:AB:163:PRO:HA	53:AB:167:PHE:CD2	2.43	0.47
2:B:1109:U:H4'	22:V:153:PHE:CE1	2.49	0.47
2:B:1938:U:C1'	23:W:78:TYR:HB2	2.44	0.47
2:B:2081:U:H2'	2:B:2082:U:O4'	2.14	0.47
2:B:2147:A:H2'	2:B:2148:U:H6	1.80	0.47
2:B:232:G:H2'	2:B:233:C:H6	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:915:A:H5''	2:B:2957:G:O3'	2.13	0.47
2:B:3039:C:H2'	2:B:3040:A:O4'	2.14	0.47
4:D:13:A:OP1	4:D:111:U:H1'	2.14	0.47
82:DC:132:ILE:CD1	82:DC:162:ARG:HB3	2.44	0.47
82:DC:25:ILE:HD12	82:DC:142:VAL:HG12	1.97	0.47
82:DC:401:PHE:HE2	82:DC:478:MET:HE3	1.79	0.47
82:DC:727:PRO:HG2	82:DC:774:VAL:HG21	1.97	0.47
57:EB:126:LEU:O	57:EB:130:VAL:HG22	2.15	0.47
57:EB:185:ILE:H	57:EB:185:ILE:CD1	2.12	0.47
83:EC:6791:A:H3'	83:EC:6791:A:N3	2.29	0.47
6:F:108:PRO:HB2	6:F:109:GLU:OE1	2.14	0.47
6:F:116:VAL:CG2	6:F:117:GLU:H	2.19	0.47
7:G:282:ILE:CG2	7:G:322:ILE:HG23	2.44	0.47
2:B:969:C:O3'	33:GA:18:ARG:HB3	2.14	0.47
8:H:304:GLN:O	8:H:305:ALA:HB3	2.14	0.47
9:I:33:ARG:C	9:I:33:ARG:HD3	2.35	0.47
9:I:65:ILE:HG12	9:I:74:VAL:HG22	1.94	0.47
11:K:44:ILE:HG22	11:K:48:ASN:ND2	2.28	0.47
11:K:86:VAL:HG13	11:K:136:TYR:CB	2.29	0.47
12:L:157:VAL:HG12	12:L:159:PRO:HD2	1.95	0.47
12:L:188:THR:HG23	12:L:189:LEU:N	2.30	0.47
12:L:226:TYR:C	12:L:228:GLU:N	2.67	0.47
65:MB:90:ILE:HA	65:MB:107:ILE:CG2	2.44	0.47
14:N:151:GLY:O	14:N:154:ARG:HB3	2.14	0.47
66:NB:67:VAL:CG1	66:NB:81:ILE:HG22	2.44	0.47
16:P:122:GLY:CA	48:VA:43:LYS:HD2	2.44	0.47
68:PB:120:ARG:HG3	68:PB:120:ARG:HH21	1.79	0.47
69:QB:34:VAL:O	69:QB:35:ASP:HB3	2.15	0.47
18:R:50:LYS:HG2	18:R:85:TRP:CE2	2.49	0.47
19:S:58:GLY:HA3	19:S:142:ILE:CD1	2.44	0.47
71:SB:20:THR:OG1	71:SB:22:ARG:HG3	2.14	0.47
20:T:124:LEU:HD21	24:X:167:ARG:HG3	1.97	0.47
46:TA:12:CYS:C	46:TA:14:GLY:H	2.18	0.47
72:TB:75:ILE:O	72:TB:75:ILE:HG22	2.12	0.47
6:F:82:VAL:HG22	47:UA:65:ALA:HB3	1.97	0.47
22:V:67:ILE:HG12	22:V:140:LEU:CD1	2.43	0.47
22:V:32:LEU:HD22	22:V:36:LEU:HD11	1.96	0.47
48:VA:53:MET:HA	48:VA:85:GLY:HA2	1.95	0.47
50:XA:102:PHE:HD2	50:XA:107:PHE:HE1	1.63	0.47
50:XA:22:THR:HG22	50:XA:169:SER:HA	1.97	0.47
76:XB:30:ILE:CD1	76:XB:34:LYS:HG2	2.42	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:Y:39:ILE:HD12	25:Y:102:ARG:HD3	1.96	0.47
77:YB:56:CYS:HB3	77:YB:60:SER:CA	2.35	0.47
52:ZA:140:ARG:HB2	52:ZA:222:TYR:CE1	2.48	0.47
78:ZB:58:GLU:HG2	78:ZB:61:ARG:HD3	1.95	0.47
1:A:1314:U:H4'	1:A:1315:U:H5	1.79	0.47
1:A:545:A:H61	1:A:593:U:H2'	1.80	0.47
1:A:734:A:H2	1:A:735:C:C5	2.32	0.47
1:A:931:C:P	76:XB:70:LYS:HE3	2.55	0.47
2:B:1070:U:H2'	2:B:1071:U:O4'	2.14	0.47
2:B:1115:G:N3	2:B:1115:G:H3'	2.29	0.47
2:B:1220:U:C5'	2:B:1221:A:H2'	2.44	0.47
2:B:1368:U:O2'	2:B:1369:A:H5'	2.14	0.47
2:B:1377:G:H2'	2:B:1378:U:H6	1.78	0.47
2:B:1405:U:H2'	2:B:1406:A:O4'	2.14	0.47
2:B:1446:A:OP1	2:B:2984:C:H5'	2.14	0.47
2:B:1623:G:H2'	2:B:1624:G:H8	1.79	0.47
2:B:1867:A:C2	2:B:2119:A:H4'	2.49	0.47
2:B:1900:A:H61	2:B:1908:A:N6	2.11	0.47
2:B:2415:C:H5''	6:F:2:GLY:CA	2.39	0.47
2:B:268:A:H2'	19:S:12:ARG:NH2	2.28	0.47
2:B:2741:C:H4'	46:TA:19:LYS:CA	2.27	0.47
2:B:2766:U:H2'	2:B:2767:U:H6	1.79	0.47
2:B:2805:G:H2'	2:B:2806:U:C6	2.50	0.47
2:B:3167:A:C2	2:B:3168:A:H1'	2.49	0.47
2:B:3356:G:H2'	2:B:3357:U:C5	2.50	0.47
2:B:691:A:H61	3:C:28:C:H1'	1.79	0.47
2:B:940:G:O2'	2:B:941:G:H5'	2.15	0.47
2:B:992:A:C2'	2:B:993:G:H5'	2.44	0.47
54:BB:106:LYS:HG3	54:BB:108:ARG:CZ	2.45	0.47
54:BB:43:PRO:HA	54:BB:82:TYR:O	2.14	0.47
80:BC:20:LYS:HA	80:BC:20:LYS:CE	2.39	0.47
29:CA:115:ARG:CD	29:CA:121:LYS:HB2	2.45	0.47
29:CA:73:MET:HA	29:CA:76:VAL:HG23	1.97	0.47
55:CB:93:LEU:CA	55:CB:172:ILE:HG23	2.44	0.47
55:CB:120:ILE:CD1	55:CB:191:ALA:HB1	2.45	0.47
4:D:4:U:H2'	4:D:5:G:H8	1.74	0.47
30:DA:110:HIS:C	30:DA:111:LEU:HD12	2.34	0.47
56:DB:1:MET:HB2	56:DB:107:ALA:O	2.14	0.47
82:DC:74:ALA:HA	82:DC:103:ILE:HA	1.96	0.47
82:DC:314:LEU:HB3	82:DC:318:ALA:CB	2.44	0.47
82:DC:314:LEU:HB3	82:DC:318:ALA:HB1	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:44:ILE:N	6:F:44:ILE:HD12	2.29	0.47
1:A:765:G:N7	59:GB:82:ARG:NH1	2.62	0.47
8:H:359:LEU:C	8:H:361:HIS:H	2.18	0.47
8:H:71:VAL:HG22	8:H:76:ARG:NH2	2.29	0.47
8:H:79:GLY:C	8:H:85:SER:HB2	2.35	0.47
34:HA:78:GLY:HA2	34:HA:81:VAL:CG2	2.42	0.47
60:HB:5:LYS:O	60:HB:9:ASN:HB2	2.14	0.47
9:I:183:TRP:N	9:I:190:ILE:HD12	2.30	0.47
61:IB:85:VAL:HG22	61:IB:108:PRO:HA	1.97	0.47
62:JB:114:LYS:O	62:JB:115:VAL:C	2.53	0.47
6:F:39:GLY:H	12:L:36:ILE:HG21	1.78	0.47
38:LA:8:ARG:HG2	38:LA:8:ARG:HH11	1.78	0.47
17:Q:50:PRO:HG3	39:MA:118:ILE:HD12	1.97	0.47
39:MA:60:GLU:O	39:MA:64:GLU:HG2	2.14	0.47
66:NB:35:PRO:C	66:NB:37:THR:H	2.18	0.47
2:B:1239:C:H5'	16:P:99:LYS:HD2	1.96	0.47
68:PB:85:PHE:C	68:PB:86:LEU:HD12	2.35	0.47
43:QA:21:ARG:HH12	43:QA:24:PRO:HG3	1.71	0.47
69:QB:130:ARG:HH12	69:QB:134:ARG:CB	2.28	0.47
18:R:58:ILE:HD11	18:R:62:GLN:CB	2.44	0.47
18:R:66:THR:HB	18:R:67:PRO:CD	2.43	0.47
44:RA:102:ARG:C	44:RA:103:LEU:HD23	2.34	0.47
19:S:35:VAL:HG22	19:S:65:ARG:CZ	2.44	0.47
50:XA:4:PRO:HB3	71:SB:41:GLU:HA	1.97	0.47
71:SB:71:ARG:HG2	71:SB:83:TRP:CZ3	2.49	0.47
20:T:97:ALA:O	20:T:100:GLU:HB2	2.14	0.47
20:T:9:ILE:HG22	20:T:35:VAL:HG13	1.96	0.47
1:A:1035:G:C4'	72:TB:2:THR:HB	2.44	0.47
22:V:30:VAL:O	22:V:34:THR:HG23	2.15	0.47
24:X:107:TYR:HE1	24:X:121:ILE:HB	1.79	0.47
76:XB:85:ARG:N	76:XB:85:ARG:HD2	2.29	0.47
51:YA:26:ARG:HA	51:YA:50:LYS:HD2	1.95	0.47
52:ZA:206:THR:O	52:ZA:208:GLU:N	2.47	0.47
1:A:1202:A:H1'	1:A:1207:C:N4	2.30	0.47
1:A:1420:C:C2'	1:A:1421:A:H5'	2.44	0.47
1:A:1450:U:H2'	1:A:1451:C:C6	2.49	0.47
1:A:295:A:H2'	1:A:296:U:H6	1.79	0.47
1:A:329:G:H2'	1:A:330:G:C8	2.50	0.47
1:A:644:C:H2'	1:A:645:C:H6	1.78	0.47
1:A:843:U:H2'	1:A:844:A:H8	1.80	0.47
2:B:1394:A:O2'	2:B:1395:G:H5'	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:303:G:H5''	2:B:304:G:C5'	2.45	0.47
2:B:56:G:H1'	19:S:161:ALA:CB	2.45	0.47
2:B:639:G:OP1	36:JA:37:GLY:HA3	2.14	0.47
2:B:757:C:H3'	2:B:758:C:H5''	1.96	0.47
2:B:988:U:O2'	2:B:989:A:H5'	2.14	0.47
54:BB:118:GLU:C	54:BB:120:SER:H	2.18	0.47
54:BB:129:VAL:HG12	54:BB:156:VAL:CG2	2.44	0.47
54:BB:9:LEU:HB2	54:BB:30:ARG:CG	2.45	0.47
56:DB:189:HIS:O	56:DB:193:LEU:HB2	2.15	0.47
56:DB:207:GLU:O	56:DB:211:LEU:HD23	2.13	0.47
82:DC:135:VAL:HB	82:DC:184:SER:OG	2.15	0.47
82:DC:147:LEU:HB3	82:DC:193:ALA:CA	2.42	0.47
82:DC:374:PRO:O	82:DC:403:GLY:HA2	2.15	0.47
82:DC:404:THR:HG22	82:DC:449:PRO:CA	2.44	0.47
82:DC:766:PHE:O	82:DC:768:VAL:HG23	2.14	0.47
58:FB:96:LEU:O	58:FB:173:PRO:HG2	2.14	0.47
8:H:69:ARG:O	8:H:70:ALA:HB3	2.15	0.47
60:HB:63:TYR:O	60:HB:64:TYR:HB2	2.14	0.47
1:A:211:U:OP1	61:IB:20:PHE:HB2	2.15	0.47
10:J:97:ASN:HD21	10:J:100:LYS:HB2	1.79	0.47
11:K:124:LEU:HA	11:K:127:LEU:HD12	1.97	0.47
11:K:75:TYR:HB2	24:X:59:VAL:HG11	1.95	0.47
66:NB:18:ALA:CB	66:NB:69:VAL:HG12	2.45	0.47
66:NB:32:ASN:O	69:QB:7:ARG:HD3	2.14	0.47
17:Q:148:ALA:O	17:Q:149:GLN:HG2	2.14	0.47
43:QA:26:TRP:CZ3	43:QA:27:ILE:HG12	2.49	0.47
18:R:89:ALA:HB1	18:R:92:GLU:HG2	1.97	0.47
20:T:124:LEU:CD2	24:X:167:ARG:HG3	2.45	0.47
20:T:31:GLN:OE1	20:T:33:ILE:HD11	2.15	0.47
2:B:1721:U:O4	23:W:128:LYS:HE2	2.15	0.47
49:WA:42:LEU:HD22	49:WA:61:PHE:HD2	1.78	0.47
50:XA:126:PRO:HA	50:XA:133:ILE:HD13	1.96	0.47
51:YA:109:LYS:HE3	51:YA:113:MET:HG3	1.96	0.47
52:ZA:121:VAL:HG23	52:ZA:122:ALA:N	2.29	0.47
1:A:1161:C:H2'	1:A:1162:C:C6	2.50	0.47
1:A:1227:A:H5'	1:A:1228:G:C3'	2.42	0.47
1:A:1575:G:H2'	1:A:1576:A:C8	2.49	0.47
1:A:387:A:H4'	1:A:388:G:H5''	1.96	0.47
1:A:57:G:H2'	1:A:58:U:C6	2.50	0.47
1:A:683:C:H2'	1:A:684:A:C8	2.50	0.47
1:A:703:G:C2'	1:A:704:C:H5'	2.45	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:839:U:H2'	1:A:840:U:C5'	2.38	0.47
27:AA:87:ARG:HD2	27:AA:91:VAL:HG21	1.96	0.47
53:AB:67:ASN:O	53:AB:71:LEU:HG	2.14	0.47
53:AB:21:LEU:HD11	53:AB:73:VAL:HG13	1.97	0.47
2:B:1806:A:H3'	2:B:1807:G:C8	2.50	0.47
2:B:1491:A:C2	2:B:1843:C:O4'	2.68	0.47
2:B:1941:C:H2'	2:B:1942:U:C6	2.49	0.47
2:B:2174:G:OP1	2:B:2174:G:C8	2.67	0.47
2:B:3228:C:H4'	2:B:3229:G:O5'	2.14	0.47
2:B:651:G:H4'	2:B:1436:U:C4'	2.44	0.47
2:B:704:U:H3'	2:B:705:A:C5'	2.44	0.47
2:B:871:U:H2'	2:B:872:U:H6	1.80	0.47
2:B:1524:A:OP1	29:CA:112:THR:N	2.47	0.47
29:CA:121:LYS:HG2	29:CA:122:ALA:N	2.29	0.47
29:CA:99:VAL:HG13	29:CA:103:TYR:CE2	2.50	0.47
55:CB:124:LEU:HB2	55:CB:199:ILE:HD13	1.97	0.47
55:CB:29:ILE:HB	55:CB:34:GLN:NE2	2.29	0.47
4:D:12:U:O2	4:D:111:U:H5'	2.15	0.47
3:C:72:A:OP1	30:DA:52:ARG:N	2.47	0.47
82:DC:37:ASP:O	82:DC:41:GLN:HG3	2.15	0.47
82:DC:401:PHE:CE2	82:DC:478:MET:HE3	2.49	0.47
82:DC:493:VAL:HG13	82:DC:556:ILE:CD1	2.44	0.47
82:DC:70:ILE:HG23	82:DC:70:ILE:O	2.15	0.47
31:EA:4:PHE:CE2	34:HA:63:SER:HB3	2.50	0.47
32:FA:20:GLY:O	32:FA:24:LYS:HA	2.15	0.47
2:B:964:G:O2'	32:FA:30:GLY:HA3	2.14	0.47
32:FA:61:PHE:O	32:FA:62:HIS:HB3	2.14	0.47
7:G:95:THR:CG2	7:G:100:ARG:H	2.27	0.47
7:G:165:GLN:H	7:G:165:GLN:HG2	1.32	0.47
7:G:211:GLN:HE22	7:G:283:TYR:C	2.17	0.47
59:GB:149:ARG:O	59:GB:150:LEU:HB3	2.15	0.47
8:H:129:THR:HB	8:H:248:VAL:CG2	2.44	0.47
2:B:3057:U:H4'	35:IA:21:HIS:NE2	2.29	0.47
10:J:39:VAL:CG1	10:J:159:LEU:HD21	2.45	0.47
37:KA:38:PRO:HA	37:KA:41:ALA:HB3	1.96	0.47
63:KB:39:LYS:O	63:KB:43:LYS:HB2	2.15	0.47
12:L:139:VAL:HG11	12:L:151:VAL:HG11	1.97	0.47
38:LA:3:GLN:CD	38:LA:29:ILE:HB	2.34	0.47
13:M:12:VAL:HG13	13:M:16:VAL:HB	1.94	0.47
13:M:10:ILE:HD13	13:M:75:VAL:HG21	1.96	0.47
14:N:53:VAL:HG21	14:N:166:ILE:CG1	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:N:53:VAL:HG21	14:N:166:ILE:HG13	1.97	0.47
15:O:14:ILE:HD11	15:O:162:TRP:CH2	2.49	0.47
68:PB:100:THR:HG22	68:PB:108:LYS:HB3	1.96	0.47
17:Q:5:LYS:H	32:FA:44:ASN:HD21	1.63	0.47
18:R:65:LEU:HD23	18:R:66:THR:N	2.30	0.47
2:B:2432:A:H2	19:S:125:SER:CB	2.27	0.47
19:S:154:PRO:HA	19:S:157:LYS:CG	2.44	0.47
1:A:1750:A:OP1	45:SA:13:LEU:HD22	2.15	0.47
20:T:88:VAL:HG12	20:T:89:SER:N	2.30	0.47
22:V:173:GLU:HA	32:FA:51:GLY:C	2.34	0.47
22:V:24:VAL:HA	22:V:27:LYS:HE2	1.97	0.47
22:V:64:VAL:HA	22:V:67:ILE:HD12	1.96	0.47
48:VA:73:PHE:HA	48:VA:76:LEU:CD1	2.37	0.47
48:VA:77:LEU:O	48:VA:80:VAL:HG23	2.15	0.47
49:WA:248:ASN:HD21	49:WA:298:GLY:CA	2.26	0.47
24:X:30:PHE:O	24:X:31:ALA:CB	2.63	0.47
24:X:91:TYR:CZ	24:X:136:LYS:HD3	2.50	0.47
50:XA:12:GLU:HG3	50:XA:13:ASP:N	2.29	0.47
50:XA:178:ALA:CA	50:XA:181:VAL:HG22	2.44	0.47
51:YA:28:GLU:O	51:YA:48:VAL:HG23	2.14	0.47
77:YB:2:VAL:HG22	77:YB:3:LEU:N	2.30	0.47
26:Z:100:THR:HG23	26:Z:100:THR:O	2.15	0.47
1:A:1789:G:OP1	76:XB:17:HIS:NE2	2.47	0.47
1:A:216:U:O3'	1:A:217:A:H3'	2.15	0.47
2:B:1070:U:O2'	2:B:1071:U:H5'	2.14	0.47
2:B:131:C:O2'	2:B:132:C:H5'	2.14	0.47
2:B:1381:A:C2	2:B:1426:C:C2	3.03	0.47
2:B:1471:U:H2'	2:B:1472:U:C6	2.49	0.47
2:B:1715:A:H4'	2:B:1716:U:H3'	1.96	0.47
2:B:1804:A:H2'	2:B:1805:C:H6	1.78	0.47
2:B:1556:C:H2'	2:B:2169:G:H1	1.79	0.47
2:B:2274:U:H2'	2:B:2275:A:H8	1.80	0.47
2:B:2414:G:H1'	2:B:2809:C:N4	2.29	0.47
2:B:3000:A:H2'	2:B:3001:C:C6	2.50	0.47
2:B:3206:C:H5''	2:B:3207:U:H5''	1.96	0.47
2:B:3216:G:C2'	2:B:3219:G:H1'	2.44	0.47
54:BB:19:LEU:HD21	54:BB:108:ARG:HD2	1.97	0.47
56:DB:81:VAL:CG2	56:DB:82:SER:H	2.16	0.47
5:E:147:LYS:HA	5:E:150:ASP:CB	2.43	0.47
57:EB:11:GLN:CB	57:EB:13:PRO:HD2	2.39	0.47
2:B:914:A:H2	6:F:208:ASP:HB3	1.78	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:278:ILE:HG22	7:G:279:ASN:N	2.26	0.47
59:GB:129:ILE:HD13	59:GB:144:PRO:HA	1.95	0.47
8:H:178:LEU:HD11	8:H:222:VAL:CG2	2.45	0.47
60:HB:25:LYS:HD3	60:HB:62:GLN:HE22	1.80	0.47
9:I:58:LYS:HB3	9:I:93:THR:OG1	2.14	0.47
36:JA:41:VAL:HA	36:JA:46:PHE:HD2	1.80	0.47
11:K:222:HIS:HB2	11:K:229:PHE:CE1	2.49	0.47
12:L:161:GLU:OE1	19:S:22:LEU:HD23	2.14	0.47
2:B:1126:G:OP1	14:N:98:ARG:NH2	2.48	0.47
15:O:107:ASP:HA	15:O:124:GLY:HA2	1.95	0.47
19:S:112:ASN:CG	19:S:113:LEU:HD22	2.35	0.47
2:B:286:U:C5'	19:S:179:LYS:HG2	2.45	0.47
19:S:18:VAL:O	19:S:21:PHE:HB3	2.15	0.47
21:U:126:ARG:HD3	21:U:140:GLU:HG2	1.97	0.47
73:UB:24:TRP:HZ3	73:UB:30:LYS:HA	1.80	0.47
8:H:299:ILE:HG23	22:V:39:ARG:CB	2.44	0.47
48:VA:111:ALA:HB1	48:VA:167:GLN:NE2	2.30	0.47
48:VA:119:ILE:HG13	48:VA:159:VAL:CG1	2.31	0.47
48:VA:95:GLU:O	48:VA:98:ASN:HB3	2.15	0.47
74:VB:14:SER:C	74:VB:16:PRO:HD3	2.34	0.47
23:W:136:ARG:HA	23:W:139:VAL:CG2	2.45	0.47
23:W:154:ALA:HA	23:W:157:GLU:CG	2.44	0.47
49:WA:42:LEU:CG	49:WA:68:VAL:HG11	2.39	0.47
75:WB:62:VAL:O	75:WB:66:VAL:HG23	2.15	0.47
24:X:10:ILE:HG22	24:X:24:LEU:HD22	1.97	0.47
25:Y:11:THR:CA	25:Y:14:MET:HB3	2.45	0.47
1:A:1769:U:HO2'	1:A:1770:U:H5'	1.71	0.47
1:A:218:A:C8	1:A:830:U:H1'	2.50	0.47
1:A:603:U:H2'	1:A:604:A:O4'	2.15	0.47
2:B:1186:G:H2'	2:B:1187:C:C6	2.49	0.47
2:B:1306:G:O5'	2:B:1306:G:H8	1.98	0.47
2:B:1600:U:H3'	23:W:38:ARG:NH2	2.28	0.47
2:B:2317:A:H2'	2:B:2318:U:O4'	2.15	0.47
2:B:2523:A:H2'	12:L:51:LYS:HB2	1.97	0.47
2:B:2529:A:H2'	2:B:2530:G:O4'	2.15	0.47
2:B:916:G:P	2:B:2957:G:H5''	2.55	0.47
2:B:29:C:OP1	19:S:189:LYS:HB2	2.14	0.47
2:B:354:U:H2'	2:B:355:A:C8	2.49	0.47
2:B:680:G:H4'	2:B:789:A:H4'	1.97	0.47
2:B:929:A:H2'	2:B:930:U:C6	2.50	0.47
55:CB:203:LYS:HE3	55:CB:203:LYS:HA	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:CB:197:GLU:HG3	55:CB:208:SER:CB	2.45	0.47
4:D:70:U:H2'	4:D:71:G:O4'	2.14	0.47
30:DA:111:LEU:HD12	30:DA:111:LEU:N	2.30	0.47
56:DB:181:PRO:O	56:DB:185:GLN:HG3	2.15	0.47
82:DC:206:ARG:HB3	82:DC:208:THR:HG23	1.97	0.47
82:DC:435:VAL:HB	82:DC:442:VAL:HB	1.97	0.47
82:DC:536:LEU:HG	82:DC:537:HIS:N	2.30	0.47
82:DC:682:ARG:NH1	82:DC:725:GLN:HE22	2.13	0.47
5:E:5:THR:OG1	5:E:8:GLN:HB2	2.15	0.47
83:EC:6799:C:H2'	83:EC:6800:G:O3'	2.15	0.47
83:EC:6914:A:H2	83:EC:6915:G:O6	1.98	0.47
6:F:144:ASN:HB3	6:F:160:SER:HB2	1.97	0.47
6:F:130:SER:CB	6:F:174:ARG:HE	2.27	0.47
32:FA:12:ARG:HH11	32:FA:12:ARG:CG	2.25	0.47
2:B:2787:G:H4'	32:FA:57:GLY:C	2.35	0.47
58:FB:65:PHE:CE1	58:FB:167:ALA:HB1	2.50	0.47
2:B:2947:G:C4	7:G:250:ALA:HB1	2.50	0.47
8:H:251:THR:HG22	8:H:252:GLU:N	2.30	0.47
34:HA:24:THR:OG1	34:HA:29:SER:HB2	2.14	0.47
9:I:54:ARG:CZ	9:I:149:GLY:HA2	2.45	0.47
9:I:35:ARG:HH11	9:I:35:ARG:HG2	1.80	0.47
2:B:3276:G:H3'	10:J:48:ARG:HH22	1.79	0.47
10:J:68:PRO:HB3	10:J:138:GLN:HE22	1.78	0.47
36:JA:50:ILE:HG13	36:JA:50:ILE:O	2.14	0.47
11:K:193:PRO:HG2	11:K:194:HIS:NE2	2.30	0.47
11:K:24:GLU:O	11:K:25:GLN:HB3	2.14	0.47
63:KB:99:ARG:O	63:KB:103:GLU:HG2	2.15	0.47
63:KB:16:ILE:O	72:TB:57:ARG:NH2	2.48	0.47
38:LA:72:VAL:HG23	38:LA:74:ARG:H	1.79	0.47
13:M:52:LEU:HG	13:M:53:ILE:N	2.30	0.47
40:NA:47:ILE:O	40:NA:47:ILE:HG23	2.13	0.47
66:NB:41:PRO:O	66:NB:42:GLU:CB	2.59	0.47
67:OB:27:ASP:HB3	67:OB:30:THR:HG22	1.97	0.47
17:Q:115:ARG:NH1	17:Q:145:PHE:HB3	2.24	0.47
69:QB:109:GLU:HB2	69:QB:122:ARG:HH22	1.80	0.47
18:R:19:ARG:CA	18:R:69:THR:HG23	2.44	0.47
18:R:42:LYS:HE2	18:R:59:ASN:OD1	2.15	0.47
18:R:63:VAL:HG13	18:R:63:VAL:O	2.15	0.47
19:S:118:SER:CB	19:S:132:VAL:HG22	2.45	0.47
19:S:73:ARG:HB3	19:S:89:VAL:HG12	1.96	0.47
45:SA:11:ARG:NH1	45:SA:11:ARG:HG2	2.30	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:T:120:VAL:HG12	20:T:122:GLN:HG2	1.95	0.47
20:T:38:ALA:HB3	20:T:106:GLU:OE1	2.15	0.47
20:T:78:ARG:HG3	20:T:78:ARG:NH1	2.30	0.47
21:U:51:VAL:CG1	21:U:83:TRP:HD1	2.28	0.47
49:WA:181:TRP:HB3	49:WA:187:GLN:O	2.15	0.47
50:XA:129:ASP:O	50:XA:132:ALA:HB3	2.14	0.47
51:YA:86:LEU:HD12	51:YA:100:PHE:HA	1.96	0.47
51:YA:87:ARG:HB2	51:YA:101:HIS:CE1	2.49	0.47
1:A:1684:U:H2'	1:A:1685:G:O4'	2.14	0.47
1:A:359:A:H1'	73:UB:38:PHE:CD1	2.49	0.47
1:A:573:C:H2'	1:A:574:G:O4'	2.15	0.47
1:A:878:G:H2'	1:A:879:G:C8	2.50	0.47
53:AB:118:ALA:O	53:AB:122:VAL:HG23	2.15	0.47
2:B:1232:C:H5	2:B:1261:G:H2'	1.76	0.47
2:B:1487:G:H3'	2:B:1488:G:H5''	1.96	0.47
2:B:2118:C:O5'	2:B:2118:C:H6	1.97	0.47
2:B:2123:G:H2'	2:B:2124:G:C8	2.50	0.47
2:B:2185:G:H2'	2:B:2186:U:C6	2.50	0.47
2:B:808:A:O2'	2:B:2413:A:H5'	2.15	0.47
2:B:2842:U:H3'	2:B:2844:C:H41	1.79	0.47
2:B:287:G:H2'	2:B:288:C:C6	2.50	0.47
2:B:3095:U:H2'	2:B:3096:C:C6	2.50	0.47
2:B:3148:U:C5'	7:G:104:THR:HB	2.45	0.47
2:B:47:C:H2'	2:B:48:A:H8	1.75	0.47
2:B:735:A:H2'	2:B:736:A:C8	2.50	0.47
28:BA:38:SER:HB3	28:BA:42:GLN:HE21	1.78	0.47
1:A:401:A:H4'	54:BB:3:ARG:HD3	1.96	0.47
3:C:51:G:H4'	43:QA:21:ARG:NH1	2.30	0.47
55:CB:178:GLY:HA2	55:CB:209:TYR:HB3	1.97	0.47
82:DC:150:ARG:HA	82:DC:197:LEU:HD11	1.97	0.47
82:DC:413:ILE:HD11	82:DC:459:ILE:CD1	2.44	0.47
82:DC:404:THR:HA	82:DC:448:CYS:O	2.14	0.47
82:DC:584:ASN:HA	82:DC:692:THR:O	2.15	0.47
82:DC:588:LEU:HD22	82:DC:686:VAL:HG13	1.97	0.47
82:DC:743:ILE:CG2	82:DC:744:TYR:N	2.78	0.47
31:EA:72:ILE:HD11	31:EA:107:ARG:HG2	1.97	0.47
31:EA:84:ARG:HG3	31:EA:85:TYR:CD2	2.50	0.47
57:EB:98:ILE:O	57:EB:99:LEU:HG	2.15	0.47
1:A:1012:U:H5'	6:F:247:ARG:HG3	1.97	0.47
32:FA:125:VAL:HB	32:FA:138:ILE:HD11	1.96	0.47
7:G:75:ALA:O	7:G:325:LYS:HA	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:112:LYS:HA	19:S:202:TYR:CD2	2.50	0.47
35:IA:109:VAL:HG12	35:IA:110:GLU:N	2.30	0.47
35:IA:7:VAL:HA	35:IA:77:ARG:O	2.15	0.47
61:IB:87:ARG:HG3	61:IB:104:HIS:HD2	1.80	0.47
11:K:150:LYS:HG2	11:K:244:ASN:HD21	1.79	0.47
37:KA:16:TYR:HB2	37:KA:23:ASN:HB2	1.96	0.47
12:L:146:LYS:HD3	12:L:173:MET:SD	2.54	0.47
12:L:68:ARG:HB3	12:L:69:LEU:HD12	1.97	0.47
38:LA:62:TYR:H	38:LA:62:TYR:HD2	1.61	0.47
64:LB:114:ARG:N	76:XB:59:TYR:HE2	2.13	0.47
64:LB:69:ALA:O	64:LB:73:GLU:HG2	2.14	0.47
13:M:106:LYS:HB3	13:M:111:PHE:HZ	1.80	0.47
13:M:99:ILE:HD13	13:M:179:ILE:CD1	2.45	0.47
39:MA:110:ALA:C	39:MA:112:PRO:HD3	2.34	0.47
66:NB:65:ILE:HG22	66:NB:67:VAL:HG23	1.97	0.47
2:B:884:A:P	41:OA:4:GLY:HA3	2.53	0.47
68:PB:62:THR:OG1	68:PB:65:GLU:HG3	2.14	0.47
43:QA:47:THR:CG2	43:QA:48:LYS:H	2.16	0.47
18:R:101:LYS:O	18:R:105:GLN:HG2	2.14	0.47
18:R:102:LYS:HD3	18:R:105:GLN:HB2	1.96	0.47
2:B:58:G:H5''	19:S:154:PRO:HB2	1.97	0.47
19:S:58:GLY:HA3	19:S:142:ILE:HD11	1.96	0.47
47:UA:76:ALA:O	47:UA:80:ARG:HB2	2.14	0.47
22:V:44:PHE:O	22:V:47:VAL:HB	2.14	0.47
48:VA:62:ALA:CB	48:VA:77:LEU:HG	2.44	0.47
76:XB:44:ILE:N	76:XB:44:ILE:CD1	2.74	0.47
25:Y:57:TYR:CD2	25:Y:89:LEU:HD21	2.50	0.47
51:YA:129:THR:CG2	51:YA:180:THR:HA	2.41	0.47
26:Z:12:ALA:HA	26:Z:68:THR:HA	1.96	0.47
52:ZA:110:HIS:HB3	52:ZA:136:VAL:CG1	2.45	0.47
1:A:1081:A:H4'	1:A:1082:C:O5'	2.15	0.47
1:A:1588:G:C2'	1:A:1589:C:H5'	2.45	0.47
1:A:478:A:O2'	1:A:479:C:H5'	2.15	0.47
1:A:825:U:C2'	1:A:826:U:H5'	2.45	0.47
1:A:913:G:N2	2:B:2208:A:H4'	2.30	0.47
1:A:988:A:H2'	1:A:989:U:C6	2.49	0.47
2:B:118:U:H2'	2:B:119:U:C5'	2.45	0.47
2:B:119:U:H4'	2:B:120:G:O5'	2.15	0.47
2:B:136:G:O5'	39:MA:95:PHE:HB2	2.15	0.47
2:B:1721:U:C2	2:B:1723:A:OP2	2.68	0.47
2:B:1915:A:H4'	23:W:83:GLY:C	2.34	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2922:G:H1'	2:B:2951:G:N2	2.09	0.47
2:B:2937:G:H2'	2:B:2938:G:O4'	2.14	0.47
2:B:351:A:H1'	3:C:54:A:O4'	2.14	0.47
2:B:417:A:H2'	2:B:418:A:H8	1.77	0.47
2:B:49:A:H2'	19:S:187:ARG:HH21	1.80	0.47
2:B:54:C:H1'	2:B:1546:A:C2	2.49	0.47
3:C:64:U:H2'	3:C:65:A:H8	1.80	0.47
29:CA:92:LYS:HG3	29:CA:112:THR:CG2	2.45	0.47
4:D:62:U:C2'	4:D:63:A:H5'	2.44	0.47
82:DC:137:VAL:HG23	82:DC:138:GLN:N	2.30	0.47
82:DC:213:SER:HB3	82:DC:218:TRP:CE2	2.50	0.47
82:DC:243:ARG:HB3	82:DC:257:TRP:CZ3	2.50	0.47
82:DC:634:TRP:HB2	82:DC:646:VAL:CG1	2.45	0.47
82:DC:759:GLN:HE22	82:DC:761:PRO:HA	1.79	0.47
57:EB:98:ILE:HG22	57:EB:99:LEU:N	2.30	0.47
83:EC:6858:A:H5''	83:EC:6859:U:O4'	2.15	0.47
6:F:107:VAL:HB	6:F:111:THR:HG21	1.96	0.47
6:F:5:ILE:HD12	6:F:7:ASN:HD21	1.79	0.47
32:FA:21:ARG:O	32:FA:24:LYS:HG2	2.15	0.47
32:FA:85:ASP:OD1	32:FA:86:LYS:HG2	2.15	0.47
58:FB:159:GLN:HE22	58:FB:166:TYR:H	1.63	0.47
7:G:35:ASP:HA	7:G:184:ASN:HD22	1.79	0.47
8:H:120:TYR:CD1	8:H:120:TYR:C	2.88	0.47
8:H:26:PHE:HA	8:H:127:ALA:HA	1.95	0.47
8:H:131:VAL:O	8:H:135:VAL:HG23	2.15	0.47
8:H:185:LYS:HE2	8:H:199:TRP:CE3	2.50	0.47
8:H:309:ARG:CZ	8:H:312:VAL:HG11	2.45	0.47
60:HB:54:TYR:HD1	60:HB:71:GLU:HG3	1.77	0.47
9:I:107:ARG:HH22	9:I:120:LYS:HA	1.80	0.47
61:IB:36:LYS:HG2	61:IB:60:PHE:O	2.14	0.47
61:IB:54:ILE:O	61:IB:55:ASP:HB3	2.15	0.47
2:B:591:G:N3	10:J:19:LYS:HG3	2.30	0.47
11:K:83:LEU:HD13	11:K:84:VAL:H	1.79	0.47
64:LB:58:TYR:O	64:LB:62:LEU:HD13	2.15	0.47
64:LB:86:THR:CG2	64:LB:90:ARG:HG3	2.39	0.47
39:MA:76:GLN:O	39:MA:81:ARG:NH1	2.47	0.47
14:N:154:ARG:HG2	14:N:154:ARG:NH1	2.30	0.47
66:NB:18:ALA:HB2	66:NB:69:VAL:CG1	2.43	0.47
17:Q:4:SER:O	17:Q:5:LYS:HB2	2.15	0.47
17:Q:67:ARG:HB3	32:FA:105:LEU:CD1	2.45	0.47
69:QB:113:ILE:HA	69:QB:128:GLY:CA	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:R:100:ALA:O	18:R:103:ILE:HB	2.15	0.47
18:R:13:ARG:HD2	24:X:172:TYR:C	2.35	0.47
19:S:75:VAL:HG21	19:S:80:THR:HA	1.96	0.47
20:T:15:LEU:HG	20:T:123:ALA:O	2.15	0.47
72:TB:90:THR:HG22	72:TB:102:VAL:HB	1.97	0.47
48:VA:165:VAL:HG21	48:VA:181:PHE:HE1	1.74	0.47
49:WA:72:THR:O	49:WA:80:ALA:HA	2.15	0.47
24:X:92:LYS:HD2	24:X:106:LEU:HD23	1.97	0.47
50:XA:18:LEU:HB3	67:OB:100:LEU:HD13	1.97	0.47
76:XB:36:ILE:CG2	76:XB:73:TYR:HB2	2.33	0.47
2:B:2736:A:H1'	25:Y:90:ASN:OD1	2.15	0.47
52:ZA:57:PHE:CE1	52:ZA:138:PRO:HD3	2.49	0.47
1:A:1675:C:H2'	1:A:1676:U:H6	1.80	0.46
1:A:1783:C:O2'	1:A:1784:C:H5'	2.15	0.46
1:A:864:U:H3'	72:TB:28:ARG:NH1	2.30	0.46
1:A:942:G:C8	76:XB:17:HIS:HB3	2.51	0.46
1:A:94:U:H2'	1:A:95:G:C5'	2.45	0.46
27:AA:101:VAL:HG21	27:AA:109:MET:CE	2.44	0.46
2:B:1422:G:H2'	2:B:1423:C:H6	1.80	0.46
2:B:222:A:H2'	2:B:223:U:O4'	2.15	0.46
2:B:268:A:H1'	2:B:270:U:C6	2.50	0.46
2:B:2696:A:H2'	2:B:2697:A:N9	2.30	0.46
2:B:281:G:C6	2:B:282:G:C5	3.03	0.46
2:B:2950:G:N2	2:B:2979:U:H2'	2.30	0.46
2:B:3187:A:H5''	18:R:8:LYS:CE	2.43	0.46
2:B:628:A:O2'	2:B:629:U:H5'	2.15	0.46
29:CA:94:GLN:HG3	29:CA:94:GLN:H	1.54	0.46
55:CB:135:ASP:HA	55:CB:138:THR:OG1	2.14	0.46
30:DA:74:TYR:CD1	30:DA:77:LYS:HB2	2.50	0.46
1:A:143:G:OP1	56:DB:139:ASN:HB3	2.15	0.46
56:DB:77:LEU:CD1	56:DB:95:LYS:HD3	2.44	0.46
82:DC:724:ILE:HD11	82:DC:804:LEU:HD12	1.96	0.46
6:F:204:MET:CE	6:F:209:HIS:HB2	2.45	0.46
58:FB:21:PHE:O	58:FB:22:ARG:HG2	2.15	0.46
1:A:1675:C:H1'	58:FB:32:GLN:NE2	2.30	0.46
58:FB:65:PHE:CE2	58:FB:78:ILE:HG12	2.50	0.46
59:GB:56:ALA:O	59:GB:60:LEU:HD23	2.14	0.46
8:H:251:THR:HG22	8:H:252:GLU:H	1.80	0.46
9:I:74:VAL:HG12	9:I:76:ALA:H	1.79	0.46
61:IB:66:ILE:CD1	61:IB:66:ILE:H	2.26	0.46
10:J:76:LEU:HD12	10:J:76:LEU:O	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:K:166:ASN:HA	11:K:169:ILE:CD1	2.26	0.46
63:KB:99:ARG:HA	63:KB:99:ARG:NE	2.31	0.46
64:LB:25:ASP:O	64:LB:26:THR:HG23	2.15	0.46
13:M:109:ALA:HB3	13:M:111:PHE:CE1	2.50	0.46
17:Q:92:THR:HA	39:MA:113:GLN:OE1	2.15	0.46
39:MA:93:THR:OG1	39:MA:96:GLU:HG3	2.15	0.46
65:MB:17:TYR:HA	65:MB:17:TYR:HD2	1.67	0.46
65:MB:64:LYS:CG	65:MB:73:PRO:HG3	2.45	0.46
65:MB:77:ARG:HA	65:MB:95:GLY:H	1.80	0.46
14:N:17:TYR:HE1	14:N:23:ASN:ND2	2.12	0.46
14:N:191:LYS:HB2	14:N:213:PHE:CE2	2.50	0.46
66:NB:36:ILE:HG23	66:NB:49:TYR:CE1	2.51	0.46
43:QA:32:ASN:HD22	43:QA:32:ASN:N	2.13	0.46
18:R:22:LEU:O	18:R:64:VAL:HG12	2.15	0.46
72:TB:69:LEU:HD12	72:TB:70:ASN:H	1.79	0.46
22:V:51:ALA:HB1	22:V:84:VAL:HG11	1.95	0.46
48:VA:136:PHE:CE1	48:VA:172:LEU:HD13	2.50	0.46
48:VA:29:GLY:HA3	48:VA:188:VAL:CG2	2.45	0.46
1:A:159:U:H5'	74:VB:117:LYS:HD3	1.97	0.46
74:VB:20:ARG:C	74:VB:21:LYS:HD2	2.35	0.46
49:WA:59:ARG:NH1	49:WA:96:THR:HA	2.29	0.46
50:XA:89:PHE:HB2	50:XA:202:TYR:CE1	2.50	0.46
52:ZA:227:PRO:HA	52:ZA:230:TRP:CD2	2.50	0.46
52:ZA:44:LEU:HD22	52:ZA:49:LYS:HD2	1.98	0.46
1:A:1026:A:OP2	1:A:1027:A:H8	1.97	0.46
1:A:159:U:O4'	74:VB:117:LYS:HG2	2.15	0.46
1:A:532:U:H2'	1:A:533:U:O4'	2.15	0.46
1:A:76:A:O2'	1:A:77:U:H5'	2.15	0.46
1:A:771:A:C2	1:A:772:G:H1'	2.50	0.46
1:A:804:A:C4	72:TB:107:SER:HA	2.50	0.46
1:A:966:A:H2'	1:A:967:A:H8	1.80	0.46
27:AA:120:LYS:H	27:AA:137:VAL:HG22	1.80	0.46
53:AB:115:ILE:O	53:AB:115:ILE:HG13	2.15	0.46
2:B:1244:A:H4'	2:B:1245:A:C8	2.50	0.46
2:B:1448:U:H2'	2:B:1449:A:H8	1.80	0.46
2:B:1781:C:H2'	2:B:1782:U:O4'	2.15	0.46
2:B:1911:A:N7	2:B:1912:U:C5	2.84	0.46
2:B:2347:U:H3'	2:B:2348:A:H8	1.79	0.46
2:B:2357:A:OP1	21:U:138:LYS:HE2	2.15	0.46
2:B:2780:A:O2'	2:B:2781:U:H5'	2.15	0.46
2:B:3235:C:H2'	2:B:3236:U:O4'	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:BB:121:TYR:HD2	54:BB:161:LYS:HG3	1.81	0.46
80:BC:7:SER:C	80:BC:9:ALA:H	2.19	0.46
55:CB:132:VAL:HG13	55:CB:202:ALA:HA	1.97	0.46
82:DC:734:GLN:HA	82:DC:767:THR:HA	1.96	0.46
82:DC:804:LEU:HB3	82:DC:805:GLY:H	1.60	0.46
57:EB:153:LEU:N	57:EB:153:LEU:HD12	2.23	0.46
83:EC:6858:A:H5''	83:EC:6859:U:C6	2.51	0.46
2:B:3304:U:H4'	7:G:331:ASN:HD21	1.81	0.46
9:I:20:PHE:HD1	9:I:30:TYR:CE1	2.33	0.46
9:I:82:GLU:HB3	9:I:254:LYS:HG3	1.96	0.46
11:K:102:VAL:HG13	11:K:126:LEU:CD2	2.25	0.46
61:IB:156:PHE:HE1	63:KB:83:GLU:HG2	1.80	0.46
12:L:132:VAL:HG22	12:L:133:LYS:N	2.29	0.46
13:M:150:SER:C	13:M:154:VAL:HG23	2.35	0.46
13:M:90:MET:HE2	13:M:181:VAL:H	1.80	0.46
13:M:17:THR:OG1	13:M:28:VAL:HB	2.14	0.46
65:MB:123:TYR:HE1	68:PB:122:HIS:NE2	2.08	0.46
65:MB:60:LEU:HA	65:MB:76:VAL:HG21	1.96	0.46
65:MB:80:MET:O	65:MB:116:LEU:HD12	2.14	0.46
14:N:210:ILE:HA	14:N:217:PHE:CE2	2.50	0.46
40:NA:9:ILE:CG2	40:NA:10:GLY:H	2.27	0.46
15:O:57:PHE:HB2	15:O:59:ILE:HG12	1.96	0.46
41:OA:27:PHE:HA	41:OA:34:CYS:HA	1.98	0.46
1:A:1390:U:OP1	67:OB:5:ARG:HD2	2.15	0.46
17:Q:63:VAL:HA	17:Q:66:ASN:HD21	1.80	0.46
19:S:153:ASP:CB	19:S:155:VAL:HG22	2.45	0.46
19:S:9:GLU:CD	40:NA:41:ARG:HG2	2.35	0.46
20:T:147:TRP:CZ3	20:T:150:GLU:HA	2.50	0.46
21:U:33:ALA:HA	21:U:36:ILE:CG2	2.42	0.46
48:VA:64:ARG:O	48:VA:67:LEU:HB3	2.15	0.46
23:W:123:LEU:O	23:W:127:SER:CB	2.63	0.46
49:WA:211:ILE:HB	49:WA:223:TRP:HB2	1.96	0.46
25:Y:62:GLY:HA3	25:Y:74:VAL:CG1	2.45	0.46
51:YA:107:THR:HA	51:YA:110:LEU:HD13	1.98	0.46
52:ZA:99:LYS:CG	52:ZA:117:THR:HB	2.46	0.46
78:ZB:32:PHE:CE2	78:ZB:36:THR:HA	2.49	0.46
1:A:121:U:O2'	1:A:122:U:H5'	2.15	0.46
1:A:1641:C:H2'	1:A:1642:G:C8	2.50	0.46
1:A:1714:A:H2'	1:A:1715:G:N7	2.30	0.46
1:A:198:A:C2'	1:A:199:G:H5'	2.45	0.46
1:A:253:A:H2'	1:A:254:A:O4'	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:318:U:H4'	58:FB:11:ARG:HE	1.80	0.46
1:A:811:A:C2	1:A:858:G:H4'	2.50	0.46
1:A:935:U:O2'	1:A:936:G:H5'	2.15	0.46
2:B:1052:U:C2'	2:B:1053:A:H5'	2.45	0.46
2:B:1069:C:O2'	2:B:1070:U:H5'	2.16	0.46
2:B:1718:G:H2'	2:B:1719:G:C8	2.50	0.46
2:B:1758:G:H2'	2:B:1759:C:H6	1.79	0.46
2:B:1845:G:H5''	2:B:1846:C:H5''	1.97	0.46
2:B:1892:G:C3'	2:B:1893:A:H5''	2.46	0.46
2:B:17:G:C2	2:B:18:G:C4	3.03	0.46
2:B:2370:G:C6	2:B:2371:G:C6	3.03	0.46
2:B:90:C:H4'	2:B:282:G:OP1	2.15	0.46
2:B:2879:C:OP1	7:G:6:TYR:HE1	1.98	0.46
2:B:2895:G:C3'	2:B:2896:A:H5''	2.45	0.46
2:B:3023:U:O5'	2:B:3023:U:H6	1.98	0.46
2:B:836:A:H2'	2:B:837:A:C8	2.50	0.46
2:B:915:A:C5	2:B:917:A:H1'	2.50	0.46
82:DC:140:GLU:HA	82:DC:188:ILE:CD1	2.46	0.46
82:DC:171:LYS:HB3	82:DC:274:ASN:HB3	1.97	0.46
82:DC:590:ALA:HB3	82:DC:720:ALA:HB1	1.98	0.46
5:E:89:ASP:O	5:E:93:LEU:HG	2.15	0.46
22:V:182:LYS:HE2	32:FA:55:LYS:O	2.15	0.46
58:FB:10:LYS:HG3	58:FB:11:ARG:N	2.31	0.46
7:G:339:ARG:NH1	7:G:342:LEU:HD21	2.30	0.46
7:G:356:LEU:CD1	7:G:359:ILE:HD11	2.45	0.46
7:G:54:THR:HG22	7:G:76:VAL:O	2.14	0.46
59:GB:53:ARG:HB3	59:GB:53:ARG:HH21	1.81	0.46
8:H:145:ILE:HB	8:H:146:PRO:HD2	1.97	0.46
8:H:98:ARG:HG2	8:H:99:MET:CE	2.45	0.46
2:B:1728:G:H8	34:HA:25:LEU:O	1.99	0.46
34:HA:44:ILE:CG2	34:HA:53:LYS:HG2	2.46	0.46
34:HA:55:GLU:HG3	34:HA:56:LEU:HD23	1.97	0.46
4:D:5:G:H5''	9:I:27:LYS:NZ	2.30	0.46
9:I:40:HIS:CD2	25:Y:69:LYS:H	2.34	0.46
61:IB:124:THR:O	61:IB:140:VAL:HG12	2.16	0.46
63:KB:23:PRO:O	63:KB:24:ALA:CB	2.63	0.46
12:L:98:ARG:CD	12:L:189:LEU:HA	2.34	0.46
2:B:1481:A:N6	38:LA:2:ALA:HA	2.20	0.46
65:MB:42:ARG:O	65:MB:46:ALA:HB2	2.16	0.46
40:NA:30:LYS:C	40:NA:30:LYS:HD3	2.35	0.46
2:B:1257:C:C1'	16:P:123:ARG:HE	2.28	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
68:PB:20:THR:HG22	68:PB:36:LYS:HG2	1.96	0.46
17:Q:59:ARG:NH1	17:Q:68:LYS:C	2.69	0.46
19:S:39:ALA:HB2	19:S:63:ARG:HD2	1.96	0.46
45:SA:11:ARG:HG2	45:SA:11:ARG:HH11	1.79	0.46
46:TA:21:THR:CG2	46:TA:76:LYS:HD3	2.45	0.46
48:VA:120:TRP:CB	48:VA:157:LYS:HE2	2.45	0.46
23:W:134:HIS:CE1	23:W:136:ARG:HE	2.34	0.46
49:WA:125:GLY:HA2	49:WA:131:ILE:HG12	1.98	0.46
24:X:78:TRP:HB3	24:X:124:LEU:CD1	2.45	0.46
24:X:34:GLU:O	24:X:37:ALA:HB3	2.15	0.46
25:Y:56:PHE:CZ	25:Y:78:LYS:HG3	2.51	0.46
1:A:1232:U:H2'	1:A:1233:G:C8	2.50	0.46
1:A:1436:A:H2'	1:A:1437:U:H5'	1.97	0.46
1:A:198:A:H2'	1:A:199:G:C4'	2.46	0.46
1:A:249:U:H3'	1:A:250:C:C5'	2.40	0.46
1:A:72:A:H3'	1:A:73:U:H5''	1.97	0.46
1:A:871:G:C1'	77:YB:51:GLN:HG2	2.46	0.46
1:A:898:A:H62	1:A:914:G:H21	1.62	0.46
53:AB:136:VAL:HG13	53:AB:186:VAL:HG22	1.98	0.46
2:B:1238:C:O5'	2:B:1238:C:H6	1.98	0.46
2:B:136:G:H2'	2:B:137:G:C8	2.50	0.46
2:B:1456:A:N6	35:IA:64:VAL:HG21	2.30	0.46
2:B:1481:A:H1'	2:B:1483:G:C6	2.51	0.46
2:B:1578:C:H2'	2:B:1579:C:O2	2.15	0.46
2:B:1598:G:H2'	2:B:1599:G:H8	1.80	0.46
2:B:2105:G:O2'	2:B:2106:A:H5'	2.15	0.46
2:B:2147:A:H2'	2:B:2148:U:C6	2.51	0.46
2:B:214:G:H2'	2:B:215:G:H8	1.79	0.46
2:B:2269:U:O2	2:B:2271:A:H8	1.98	0.46
2:B:2485:A:H5''	5:E:131:ALA:HB2	1.97	0.46
2:B:2733:A:H2'	2:B:2734:A:O4'	2.16	0.46
2:B:287:G:C2	2:B:288:C:C2	3.03	0.46
2:B:2356:A:N6	2:B:2983:C:C5	2.64	0.46
2:B:3158:G:C2'	2:B:3159:C:H5'	2.46	0.46
2:B:3251:U:H2'	2:B:3252:G:C8	2.50	0.46
2:B:53:G:H4'	2:B:812:G:H4'	1.96	0.46
2:B:833:G:H2'	2:B:834:U:H5'	1.98	0.46
2:B:916:G:HO2'	2:B:917:A:H8	1.62	0.46
2:B:953:G:H21	2:B:1115:G:P	2.38	0.46
2:B:970:A:H2'	2:B:971:G:H8	1.81	0.46
29:CA:131:ASP:HB3	29:CA:134:ASP:OD2	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:CA:77:GLU:HG2	29:CA:133:LEU:CB	2.45	0.46
82:DC:409:GLN:HE21	82:DC:411:VAL:HG23	1.80	0.46
82:DC:409:GLN:O	82:DC:430:ALA:HA	2.15	0.46
82:DC:789:GLY:C	82:DC:791:GLN:H	2.15	0.46
2:B:1636:U:H5'	31:EA:36:HIS:CE1	2.51	0.46
57:EB:39:ARG:N	57:EB:40:PRO:HD2	2.31	0.46
57:EB:86:GLN:O	57:EB:87:ASP:HB3	2.16	0.46
6:F:144:ASN:CB	6:F:160:SER:H	2.15	0.46
7:G:173:GLN:NE2	7:G:177:HIS:HE1	2.14	0.46
7:G:173:GLN:HE22	7:G:177:HIS:HE1	1.63	0.46
9:I:224:LYS:O	9:I:227:LEU:HB2	2.15	0.46
61:IB:72:THR:HG22	61:IB:124:THR:CA	2.33	0.46
12:L:69:LEU:HD12	12:L:69:LEU:N	2.30	0.46
38:LA:20:ILE:HD13	38:LA:20:ILE:N	2.22	0.46
64:LB:102:LEU:C	64:LB:102:LEU:HD13	2.35	0.46
64:LB:137:LEU:H	64:LB:137:LEU:CD1	2.23	0.46
13:M:179:ILE:HD12	13:M:179:ILE:N	2.31	0.46
13:M:44:THR:O	13:M:55:VAL:HA	2.15	0.46
13:M:90:MET:HE2	13:M:181:VAL:HG23	1.98	0.46
39:MA:4:VAL:HG11	39:MA:20:GLN:NE2	2.28	0.46
14:N:115:MET:CG	14:N:118:ALA:HB2	2.37	0.46
66:NB:82:ARG:NH1	66:NB:82:ARG:HG3	2.31	0.46
68:PB:35:ILE:HG22	68:PB:36:LYS:N	2.30	0.46
1:A:1478:G:O5'	69:QB:47:PRO:HG3	2.16	0.46
19:S:150:TRP:HE3	19:S:156:HIS:HE2	1.63	0.46
20:T:149:TYR:CD1	20:T:152:VAL:HG21	2.50	0.46
46:TA:43:TYR:CD1	46:TA:47:GLN:NE2	2.83	0.46
21:U:128:ARG:HD2	21:U:136:ILE:CG2	2.45	0.46
21:U:163:LYS:HZ2	21:U:165:VAL:HB	1.79	0.46
2:B:2188:A:H2	47:UA:19:GLY:HA2	1.80	0.46
47:UA:27:LYS:O	47:UA:31:ILE:HB	2.14	0.46
73:UB:104:LEU:HD13	73:UB:122:PHE:HB3	1.96	0.46
22:V:111:ARG:NH2	22:V:121:CYS:HB3	2.29	0.46
74:VB:5:VAL:HG12	74:VB:6:THR:N	2.30	0.46
23:W:52:LYS:NZ	23:W:52:LYS:HB2	2.30	0.46
49:WA:112:SER:O	49:WA:154:VAL:HG22	2.15	0.46
49:WA:36:ALA:HB1	49:WA:68:VAL:CG1	2.45	0.46
52:ZA:53:ILE:HD12	52:ZA:57:PHE:CE2	2.51	0.46
1:A:1291:G:N2	1:A:1324:G:H22	2.13	0.46
1:A:1474:G:O6	75:WB:97:LYS:HE2	2.16	0.46
1:A:1524:A:C2	1:A:1590:G:H1'	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1327:C:O3'	53:AB:158:ILE:HA	2.16	0.46
49:WA:188:ILE:HG23	53:AB:225:TYR:CD2	2.50	0.46
70:RB:80:GLU:OE1	79:AC:44:ARG:HG2	2.16	0.46
2:B:1501:U:O2'	2:B:1502:C:H5'	2.15	0.46
2:B:2055:U:H2'	2:B:2056:U:O4'	2.16	0.46
2:B:2184:U:H2'	2:B:2185:G:C8	2.51	0.46
2:B:2365:C:OP1	2:B:2365:C:H6	1.99	0.46
2:B:256:G:H2'	2:B:257:U:H6	1.81	0.46
2:B:268:A:N1	2:B:295:A:H5'	2.30	0.46
2:B:3014:U:H6	2:B:3014:U:O5'	1.99	0.46
2:B:3218:A:H4'	2:B:3219:G:O5'	2.16	0.46
2:B:824:C:H5"	6:F:21:ARG:HE	1.78	0.46
2:B:946:U:H2'	2:B:947:G:H8	1.81	0.46
2:B:951:A:H2'	2:B:952:A:C8	2.51	0.46
2:B:971:G:H2'	2:B:972:A:C8	2.50	0.46
2:B:998:A:H2'	2:B:999:G:C8	2.51	0.46
3:C:84:C:OP2	3:C:84:C:C6	2.66	0.46
55:CB:187:ILE:HD12	55:CB:187:ILE:N	2.26	0.46
4:D:15:C:O2'	4:D:16:U:H5'	2.14	0.46
4:D:2:G:H1'	4:D:23:A:N1	2.30	0.46
4:D:3:U:H2'	4:D:4:U:C6	2.50	0.46
82:DC:108:HIS:HB3	82:DC:109:VAL:H	1.62	0.46
82:DC:170:SER:HB2	82:DC:173:ASP:HB2	1.97	0.46
48:VA:130:PRO:HB2	82:DC:187:VAL:HG23	1.98	0.46
82:DC:27:HIS:CD2	82:DC:28:VAL:HG13	2.50	0.46
82:DC:414:GLN:OE1	82:DC:468:THR:HG21	2.15	0.46
82:DC:583:HIS:HE1	83:EC:6907:G:H4'	1.80	0.46
82:DC:74:ALA:CB	82:DC:103:ILE:HA	2.46	0.46
82:DC:773:PRO:HB2	82:DC:776:GLU:HG3	1.97	0.46
31:EA:10:VAL:CG1	31:EA:11:ALA:H	2.27	0.46
31:EA:5:LEU:HD13	31:EA:77:TYR:CZ	2.50	0.46
83:EC:6903:U:H6	83:EC:6903:U:O5'	1.99	0.46
2:B:2148:U:O2'	6:F:182:ALA:HB2	2.16	0.46
7:G:116:ARG:HD3	7:G:122:TRP:CG	2.50	0.46
7:G:225:GLY:O	7:G:269:GLN:HA	2.15	0.46
7:G:271:GLY:O	7:G:272:TYR:HB2	2.15	0.46
59:GB:28:LEU:HD22	59:GB:31:ALA:HB3	1.98	0.46
2:B:681:U:OP1	8:H:115:HIS:HB2	2.15	0.46
8:H:179:LEU:CD2	8:H:183:LYS:HD2	2.46	0.46
8:H:38:VAL:HG11	8:H:121:ALA:CB	2.44	0.46
34:HA:20:SER:HB2	34:HA:96:GLY:HA3	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:IA:6:ASP:HB2	35:IA:77:ARG:NH2	2.31	0.46
12:L:149:LYS:CG	12:L:201:THR:HA	2.46	0.46
2:B:1668:G:O3'	38:LA:30:LEU:HD21	2.15	0.46
39:MA:51:ILE:HA	39:MA:54:VAL:HG21	1.96	0.46
39:MA:54:VAL:HB	39:MA:55:LEU:HD23	1.98	0.46
14:N:182:LEU:O	14:N:186:GLU:HG3	2.16	0.46
14:N:97:LEU:HD12	14:N:124:GLY:O	2.15	0.46
16:P:87:GLU:HB2	16:P:88:PRO:HD2	1.97	0.46
2:B:1751:G:H5''	42:PA:26:LYS:HZ2	1.78	0.46
17:Q:167:PHE:CZ	32:FA:132:LYS:HB2	2.51	0.46
18:R:20:VAL:CG1	18:R:68:LEU:HB2	2.45	0.46
70:RB:19:ILE:HA	70:RB:95:ALA:O	2.16	0.46
19:S:11:GLN:OE1	19:S:11:GLN:HA	2.16	0.46
19:S:61:ILE:HA	19:S:132:VAL:O	2.16	0.46
19:S:135:VAL:HG21	19:S:151:ILE:CD1	2.45	0.46
19:S:142:ILE:H	19:S:142:ILE:HD12	1.80	0.46
71:SB:15:ARG:CB	71:SB:24:ILE:HD12	2.44	0.46
71:SB:31:SER:HA	71:SB:57:GLY:N	2.30	0.46
71:SB:80:LYS:HD3	71:SB:81:ASN:ND2	2.22	0.46
20:T:84:LEU:HD13	20:T:102:LEU:CD2	2.45	0.46
46:TA:64:THR:OG1	46:TA:65:THR:N	2.47	0.46
72:TB:24:GLN:HG2	77:YB:5:GLN:N	2.12	0.46
73:UB:114:LYS:HE2	73:UB:115:GLY:H	1.79	0.46
48:VA:43:LYS:HA	48:VA:46:ARG:CG	2.44	0.46
23:W:11:ALA:C	23:W:13:SER:H	2.18	0.46
49:WA:192:PHE:HB3	49:WA:223:TRP:CE2	2.51	0.46
76:XB:82:ARG:HG3	76:XB:83:ILE:H	1.80	0.46
51:YA:87:ARG:HB2	51:YA:101:HIS:CG	2.50	0.46
52:ZA:72:LEU:CB	52:ZA:73:LEU:HD12	2.46	0.46
78:ZB:29:ARG:HH11	78:ZB:29:ARG:HG3	1.80	0.46
1:A:1066:C:H2'	1:A:1067:C:H6	1.80	0.46
1:A:127:G:O6	56:DB:195:VAL:HG13	2.15	0.46
1:A:1453:G:H2'	1:A:1454:G:C8	2.51	0.46
1:A:1523:G:H2'	1:A:1523:G:OP1	2.16	0.46
2:B:1509:A:H2'	2:B:1510:G:N9	2.30	0.46
2:B:1556:C:H2'	2:B:2169:G:N1	2.30	0.46
2:B:1719:G:H1'	2:B:1731:A:O2'	2.16	0.46
2:B:1919:G:H1'	2:B:1934:G:N2	2.31	0.46
2:B:2213:A:O2'	2:B:2602:G:H5'	2.14	0.46
2:B:2464:U:C2'	2:B:2465:G:H5'	2.45	0.46
2:B:3001:C:H2'	2:B:3002:C:O4'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:341:G:H21	2:B:349:A:H61	1.64	0.46
2:B:381:U:H2'	2:B:382:U:C5	2.51	0.46
2:B:405:U:C3'	2:B:406:G:H5'	2.46	0.46
2:B:415:G:C2	2:B:416:A:C5	3.04	0.46
2:B:504:A:H1'	2:B:611:A:OP1	2.16	0.46
2:B:680:G:H2'	2:B:681:U:H5'	1.97	0.46
2:B:955:U:H2'	2:B:956:U:H6	1.80	0.46
54:BB:31:PRO:CD	54:BB:38:LEU:HD11	2.46	0.46
4:D:103:A:H2'	4:D:104:A:C8	2.51	0.46
30:DA:125:LYS:O	30:DA:126:LEU:HB3	2.16	0.46
82:DC:175:TYR:CE2	82:DC:271:ARG:NH2	2.84	0.46
82:DC:275:MET:O	82:DC:279:ASP:HB3	2.16	0.46
82:DC:360:PRO:HB2	82:DC:363:ASP:HB2	1.97	0.46
82:DC:369:ILE:HD12	82:DC:401:PHE:CB	2.45	0.46
82:DC:459:ILE:HD12	82:DC:462:PHE:HB2	1.97	0.46
82:DC:493:VAL:HG12	82:DC:494:GLU:N	2.30	0.46
82:DC:162:ARG:HD3	84:DC:901:GDP:N2	2.31	0.46
5:E:120:VAL:HG13	5:E:124:LEU:HD13	1.96	0.46
6:F:245:LEU:HD22	6:F:245:LEU:O	2.16	0.46
6:F:39:GLY:HA3	12:L:36:ILE:CG2	2.41	0.46
6:F:56:ALA:CB	6:F:170:ALA:O	2.63	0.46
58:FB:42:ARG:NH1	58:FB:42:ARG:HB3	2.30	0.46
7:G:348:ARG:HG3	7:G:348:ARG:HH11	1.81	0.46
7:G:50:LYS:HG2	7:G:331:ASN:C	2.36	0.46
59:GB:79:ARG:HH11	59:GB:79:ARG:HG3	1.80	0.46
8:H:206:LEU:HD21	8:H:228:ALA:N	2.30	0.46
9:I:65:ILE:HG23	9:I:73:VAL:C	2.36	0.46
11:K:88:ARG:CD	11:K:103:LEU:HD13	2.35	0.46
11:K:158:LYS:O	11:K:159:GLN:C	2.54	0.46
63:KB:135:LEU:CD2	63:KB:136:PRO:HD2	2.45	0.46
2:B:1805:C:OP1	38:LA:71:THR:HG21	2.15	0.46
13:M:90:MET:HG2	13:M:181:VAL:N	2.31	0.46
66:NB:4:VAL:HB	66:NB:5:PRO:HD2	1.97	0.46
66:NB:53:LEU:HD23	66:NB:53:LEU:N	2.30	0.46
41:OA:17:THR:CG2	41:OA:18:LEU:H	2.29	0.46
17:Q:115:ARG:HG3	17:Q:115:ARG:NH1	2.29	0.46
17:Q:31:LYS:CA	17:Q:34:SER:HB2	2.44	0.46
69:QB:94:ILE:HD12	69:QB:95:ASP:H	1.81	0.46
71:SB:72:LEU:HD23	71:SB:75:ASN:HD21	1.80	0.46
72:TB:104:LEU:N	72:TB:104:LEU:HD13	2.30	0.46
72:TB:111:MET:HB2	72:TB:115:GLU:OE2	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
73:UB:75:GLN:HA	73:UB:81:LYS:O	2.16	0.46
48:VA:106:ALA:CB	48:VA:182:THR:HG23	2.45	0.46
48:VA:41:VAL:HA	48:VA:44:GLU:HG2	1.97	0.46
23:W:142:ILE:O	23:W:146:LYS:HG3	2.15	0.46
49:WA:56:VAL:HG23	49:WA:56:VAL:O	2.16	0.46
75:WB:50:ILE:C	75:WB:52:LYS:H	2.18	0.46
24:X:21:GLU:N	24:X:22:PRO:HD3	2.31	0.46
50:XA:175:TYR:CZ	50:XA:199:PRO:HG3	2.51	0.46
25:Y:11:THR:HA	25:Y:14:MET:HG2	1.97	0.46
25:Y:63:VAL:O	25:Y:75:ILE:HG22	2.14	0.46
51:YA:65:VAL:HA	51:YA:86:LEU:O	2.14	0.46
1:A:1323:C:H2'	1:A:1324:G:C8	2.51	0.46
1:A:1608:U:H5''	66:NB:73:GLY:N	2.31	0.46
1:A:1648:A:H2'	1:A:1649:G:O4'	2.16	0.46
53:AB:23:GLU:HA	53:AB:26:THR:OG1	2.15	0.46
53:AB:76:ARG:HG2	60:HB:63:TYR:CE1	2.50	0.46
2:B:1308:A:N6	2:B:2367:A:N3	2.63	0.46
2:B:1510:G:H2'	2:B:1512:U:C5	2.50	0.46
2:B:1730:G:O6	34:HA:29:SER:N	2.48	0.46
2:B:175:C:H2'	2:B:176:G:C8	2.51	0.46
2:B:2510:U:O2'	2:B:2511:A:H8	1.97	0.46
2:B:2683:U:H2'	2:B:2684:C:H6	1.80	0.46
2:B:649:A:H2'	2:B:650:C:H6	1.81	0.46
54:BB:169:ILE:HG22	54:BB:169:ILE:O	2.15	0.46
80:BC:23:LYS:HB3	80:BC:26:LYS:NZ	2.30	0.46
29:CA:79:GLY:O	29:CA:80:ASN:HB3	2.15	0.46
55:CB:99:MET:O	55:CB:100:ASN:HB2	2.16	0.46
56:DB:38:GLY:O	56:DB:45:PHE:HB2	2.16	0.46
56:DB:68:LEU:HA	56:DB:101:ILE:HG13	1.98	0.46
56:DB:77:LEU:HD12	56:DB:95:LYS:HB2	1.97	0.46
82:DC:149:GLU:O	82:DC:150:ARG:HB2	2.16	0.46
5:E:209:SER:O	5:E:210:MET:HB3	2.14	0.46
57:EB:89:HIS:CE1	57:EB:165:LYS:HA	2.50	0.46
57:EB:27:LEU:HD21	57:EB:80:GLU:HB3	1.96	0.46
6:F:221:LYS:O	6:F:222:ALA:C	2.54	0.46
58:FB:38:ILE:HG21	58:FB:80:GLY:N	2.23	0.46
7:G:169:THR:HG23	7:G:314:TYR:OH	2.15	0.46
2:B:2393:G:C5'	7:G:252:ILE:HD11	2.29	0.46
7:G:299:ASP:O	7:G:300:ARG:HB2	2.15	0.46
7:G:50:LYS:HD3	7:G:330:GLY:O	2.15	0.46
2:B:2739:A:OP1	33:GA:38:LYS:HE2	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:GB:53:ARG:HB3	59:GB:53:ARG:NH2	2.31	0.46
8:H:115:HIS:CD2	8:H:119:ARG:HD2	2.51	0.46
8:H:150:LEU:CD2	8:H:249:ILE:HG12	2.44	0.46
34:HA:46:ALA:HA	34:HA:53:LYS:HZ2	1.79	0.46
9:I:266:ALA:HA	9:I:269:SER:HB2	1.97	0.46
9:I:51:LEU:HB2	9:I:144:VAL:CG2	2.45	0.46
10:J:42:LEU:C	10:J:43:LEU:HD12	2.36	0.46
11:K:30:ARG:O	11:K:34:LYS:HB2	2.16	0.46
13:M:146:LEU:HD12	13:M:158:ALA:HB2	1.98	0.46
9:I:295:GLY:HA2	14:N:218:ALA:HA	1.97	0.46
67:OB:32:LYS:HD2	67:OB:47:ARG:HD3	1.96	0.46
67:OB:26:LEU:HD22	67:OB:59:LYS:HA	1.97	0.46
17:Q:80:VAL:HG11	17:Q:87:ALA:N	2.31	0.46
18:R:106:ARG:HG3	18:R:107:GLU:N	2.31	0.46
18:R:89:ALA:O	18:R:92:GLU:HG3	2.15	0.46
45:SA:4:LYS:HE3	45:SA:5:TRP:CH2	2.50	0.46
46:TA:58:PHE:CE2	46:TA:61:LYS:HB2	2.50	0.46
46:TA:22:GLN:O	46:TA:75:VAL:HG22	2.16	0.46
72:TB:90:THR:C	72:TB:92:ASN:H	2.19	0.46
47:UA:28:LYS:HG2	47:UA:32:GLN:NE2	2.30	0.46
48:VA:169:GLU:O	48:VA:172:LEU:HG	2.16	0.46
48:VA:53:MET:HA	48:VA:85:GLY:HA3	1.98	0.46
49:WA:240:VAL:HG22	49:WA:256:THR:HG22	1.97	0.46
2:B:523:A:H4'	24:X:67:ALA:O	2.16	0.46
24:X:94:ILE:HG21	24:X:105:THR:OG1	2.16	0.46
51:YA:167:VAL:HG12	51:YA:171:ILE:HG13	1.98	0.46
72:TB:57:ARG:NH2	77:YB:26:GLN:HG3	2.29	0.46
1:A:1028:C:H4'	1:A:1029:U:H2'	1.96	0.46
1:A:1112:G:H1'	1:A:1133:A:H61	1.79	0.46
1:A:117:U:H2'	1:A:118:U:C6	2.49	0.46
1:A:1186:U:H2'	1:A:1187:U:C6	2.51	0.46
1:A:1268:G:O3'	1:A:1269:U:H3'	2.16	0.46
1:A:1495:C:H2'	1:A:1496:U:C5'	2.42	0.46
1:A:1572:G:H2'	1:A:1572:G:N3	2.31	0.46
1:A:1601:G:H1	69:QB:88:VAL:CG2	2.19	0.46
1:A:1772:C:H2'	1:A:1773:C:C5'	2.46	0.46
1:A:228:G:H8	1:A:228:G:H5'	1.81	0.46
1:A:85:A:H2'	1:A:86:A:O4'	2.16	0.46
79:AC:34:TYR:HB2	79:AC:36:LEU:HD23	1.97	0.46
2:B:1280:C:H2'	2:B:1281:G:H8	1.81	0.46
2:B:1337:A:H2'	2:B:1338:C:C6	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:15:C:H3'	2:B:15:C:OP1	2.16	0.46
2:B:2085:U:C2'	2:B:2086:A:H5'	2.45	0.46
2:B:208:C:O2'	2:B:209:A:H5'	2.16	0.46
2:B:2280:A:N7	2:B:2282:U:H2'	2.31	0.46
2:B:2468:A:C5	2:B:2478:C:H4'	2.51	0.46
2:B:2832:C:O2'	2:B:2833:A:H5'	2.15	0.46
2:B:290:G:H2'	2:B:291:C:H6	1.77	0.46
2:B:3080:G:H2'	2:B:3081:C:H6	1.81	0.46
2:B:3089:C:OP1	7:G:222:LYS:HE2	2.16	0.46
2:B:310:U:H2'	2:B:311:C:C4'	2.45	0.46
2:B:3111:U:O4	2:B:3121:U:C5	2.69	0.46
2:B:346:C:C4	3:C:25:G:H4'	2.51	0.46
2:B:365:A:H2'	2:B:366:A:O4'	2.16	0.46
2:B:44:U:O2	2:B:44:U:H2'	2.16	0.46
2:B:588:G:N2	10:J:23:LYS:NZ	2.63	0.46
2:B:816:A:O4'	2:B:818:C:N4	2.49	0.46
54:BB:12:LEU:HD11	59:GB:4:ALA:HB2	1.97	0.46
3:C:142:C:H4'	19:S:60:VAL:CG2	2.32	0.46
3:C:27:U:H2'	3:C:28:C:H6	1.81	0.46
3:C:36:G:N2	3:C:37:A:N1	2.64	0.46
3:C:5:U:OP1	21:U:62:ARG:HG2	2.16	0.46
29:CA:61:LYS:O	29:CA:61:LYS:HD2	2.16	0.46
30:DA:17:LYS:HG2	30:DA:21:THR:HG23	1.97	0.46
82:DC:89:ILE:HD11	82:DC:340:LEU:HD12	1.97	0.46
83:EC:6768:U:H3	83:EC:6822:U:H3	1.62	0.46
83:EC:6900:A:O2'	83:EC:6901:C:H5'	2.16	0.46
83:EC:6924:G:N2	83:EC:6929:C:O2	2.48	0.46
83:EC:6930:G:C3'	83:EC:6931:U:H5''	2.45	0.46
83:EC:6935:G:C2'	83:EC:6935:G:N3	2.78	0.46
58:FB:10:LYS:HG3	58:FB:11:ARG:H	1.80	0.46
7:G:43:LEU:H	7:G:208:VAL:HG21	1.80	0.46
8:H:258:LEU:O	8:H:259:ASP:C	2.55	0.46
34:HA:74:ASN:HB2	34:HA:86:ARG:HB2	1.98	0.46
9:I:119:TYR:CZ	9:I:135:VAL:HG23	2.51	0.46
9:I:58:LYS:HB3	9:I:93:THR:HB	1.98	0.46
9:I:2:ALA:HA	9:I:7:ALA:HB2	1.98	0.46
35:IA:14:ILE:HG23	35:IA:16:LEU:CD1	2.45	0.46
61:IB:43:LYS:HA	61:IB:43:LYS:HE2	1.96	0.46
11:K:108:LEU:HD22	11:K:113:SER:O	2.16	0.46
11:K:27:ALA:HA	11:K:30:ARG:HB3	1.98	0.46
63:KB:88:LEU:HD13	63:KB:88:LEU:O	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:N:166:ILE:HG22	14:N:167:LEU:H	1.79	0.46
66:NB:125:GLU:OE1	66:NB:135:ARG:HG3	2.16	0.46
15:O:22:SER:HA	15:O:66:ALA:CB	2.45	0.46
16:P:78:SER:HB2	16:P:137:GLN:NE2	2.30	0.46
18:R:16:GLU:O	18:R:17:VAL:C	2.53	0.46
19:S:163:GLY:C	19:S:165:THR:H	2.19	0.46
19:S:49:ARG:HB3	19:S:49:ARG:HH11	1.78	0.46
20:T:34:VAL:HG21	20:T:112:TYR:CE1	2.51	0.46
47:UA:82:THR:O	47:UA:86:LEU:HG	2.16	0.46
22:V:48:VAL:HA	22:V:51:ALA:HB3	1.96	0.46
48:VA:9:ALA:O	48:VA:12:PHE:HB2	2.15	0.46
74:VB:29:HIS:N	74:VB:30:PRO:HD3	2.31	0.46
75:WB:83:LEU:HD22	75:WB:87:GLY:HA3	1.98	0.46
24:X:161:LYS:HD3	24:X:162:THR:N	2.31	0.46
24:X:66:GLU:HG2	24:X:73:LYS:HE3	1.98	0.46
2:B:1097:G:H8	25:Y:112:ASN:OD1	1.99	0.46
26:Z:97:SER:HA	26:Z:103:TYR:HA	1.97	0.46
52:ZA:85:PRO:HG3	52:ZA:98:PHE:CD1	2.50	0.46
1:A:1160:A:H2'	1:A:1161:C:C6	2.51	0.46
1:A:1182:U:H4'	65:MB:124:THR:CG2	2.40	0.46
1:A:167:U:H1'	56:DB:133:LEU:CD2	2.46	0.46
1:A:195:G:H2'	1:A:196:G:C4'	2.46	0.46
1:A:48:G:O2'	1:A:49:C:H5'	2.15	0.46
1:A:522:U:H5''	74:VB:37:LYS:HZ2	1.81	0.46
1:A:68:A:OP2	1:A:69:G:H5'	2.16	0.46
1:A:79:C:OP1	56:DB:172:ALA:HB3	2.16	0.46
1:A:831:U:H2'	1:A:832:U:C6	2.51	0.46
1:A:968:U:H5''	1:A:1033:C:O2'	2.16	0.46
27:AA:39:VAL:HG21	27:AA:51:ALA:O	2.16	0.46
53:AB:114:ALA:C	53:AB:116:ARG:H	2.19	0.46
53:AB:163:PRO:HB3	53:AB:167:PHE:CD2	2.51	0.46
2:B:1604:G:C3'	2:B:1605:A:C5'	2.90	0.46
2:B:1650:G:H4'	6:F:69:TYR:O	2.16	0.46
2:B:856:G:H5'	2:B:1723:A:H4'	1.98	0.46
2:B:1857:C:O2	38:LA:4:ARG:HB2	2.15	0.46
2:B:2108:C:H2'	2:B:2109:U:H6	1.80	0.46
2:B:2311:G:H4'	2:B:2316:G:H4'	1.97	0.46
2:B:2580:A:OP1	2:B:2580:A:H8	1.99	0.46
2:B:2876:C:C2'	2:B:2877:G:H5'	2.46	0.46
2:B:3210:A:C5	2:B:3211:C:C4	3.03	0.46
2:B:330:G:H2'	2:B:331:G:O4'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1942:U:O2'	2:B:3345:G:H1'	2.15	0.46
3:C:138:A:H2'	3:C:139:U:O4'	2.15	0.46
29:CA:110:VAL:O	29:CA:111:ASN:ND2	2.49	0.46
4:D:26:C:H42	4:D:57:G:H22	1.63	0.46
56:DB:191:ARG:O	56:DB:195:VAL:HG23	2.15	0.46
82:DC:76:SER:O	82:DC:100:ILE:O	2.34	0.46
82:DC:171:LYS:CE	82:DC:279:ASP:HA	2.36	0.46
82:DC:374:PRO:HG3	82:DC:450:ALA:H	1.80	0.46
82:DC:643:PRO:HG3	82:DC:682:ARG:HG3	1.97	0.46
82:DC:671:THR:O	82:DC:680:GLU:HA	2.16	0.46
82:DC:694:HIS:ND1	82:DC:695:ALA:N	2.64	0.46
82:DC:707:PRO:O	82:DC:711:ARG:HB2	2.16	0.46
32:FA:36:GLY:HA3	32:FA:41:HIS:HB2	1.97	0.46
7:G:245:GLY:CA	7:G:248:LYS:HE3	2.40	0.46
59:GB:129:ILE:HG22	59:GB:142:ASN:CA	2.46	0.46
54:BB:12:LEU:HD11	59:GB:4:ALA:CA	2.46	0.46
8:H:167:ALA:HA	8:H:170:LYS:HB2	1.98	0.46
8:H:317:PRO:HB3	8:H:324:LEU:HD13	1.97	0.46
60:HB:74:GLU:HA	60:HB:77:ARG:HB2	1.97	0.46
9:I:78:ALA:HB3	9:I:105:ILE:CD1	2.46	0.46
35:IA:51:LEU:CD2	35:IA:93:VAL:HB	2.46	0.46
61:IB:125:VAL:HA	61:IB:140:VAL:HG12	1.98	0.46
61:IB:27:THR:CG2	61:IB:29:LYS:HG2	2.46	0.46
10:J:42:LEU:HD13	10:J:47:PHE:HB2	1.97	0.46
1:A:629:U:C5'	63:KB:127:ARG:HH12	2.24	0.46
12:L:161:GLU:HA	12:L:164:VAL:CG2	2.45	0.46
2:B:1652:G:H4'	38:LA:80:ARG:HH12	1.80	0.46
38:LA:94:LEU:O	38:LA:98:GLN:HB2	2.15	0.46
39:MA:106:LYS:HA	39:MA:109:ILE:HD12	1.97	0.46
65:MB:77:ARG:HB3	65:MB:102:PHE:CE1	2.51	0.46
15:O:23:VAL:O	15:O:65:ILE:HD12	2.15	0.46
68:PB:29:VAL:HG22	68:PB:47:CYS:SG	2.56	0.46
70:RB:26:LEU:HG	70:RB:114:VAL:HG22	1.97	0.46
19:S:48:ALA:HB2	19:S:119:TYR:HE1	1.80	0.46
19:S:120:TRP:CZ3	19:S:122:ASN:HA	2.51	0.46
72:TB:37:PHE:O	72:TB:40:VAL:HB	2.16	0.46
22:V:178:ARG:HG2	22:V:178:ARG:NH2	2.30	0.46
48:VA:11:TYR:HD2	48:VA:57:THR:HB	1.79	0.46
49:WA:255:ALA:HB1	49:WA:260:ILE:HG12	1.97	0.46
49:WA:61:PHE:HZ	49:WA:94:VAL:HA	1.81	0.46
24:X:12:ARG:HB3	24:X:24:LEU:HG	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:Y:102:ARG:HD2	25:Y:105:PHE:CD1	2.49	0.46
1:A:1170:G:N3	1:A:1170:G:H2'	2.31	0.46
1:A:1402:G:H2'	1:A:1403:C:O4'	2.16	0.46
1:A:140:A:C4'	1:A:141:U:H5'	2.46	0.46
1:A:1588:G:OP2	66:NB:132:LYS:HE3	2.14	0.46
1:A:1199:G:N2	1:A:1595:U:H5'	2.31	0.46
1:A:1695:G:N2	1:A:1707:A:N6	2.64	0.46
1:A:237:C:H5''	1:A:238:U:H5'	1.97	0.46
1:A:368:U:H2'	1:A:369:A:O4'	2.16	0.46
1:A:398:G:H2'	1:A:399:A:H5''	1.98	0.46
1:A:109:G:H5''	1:A:755:A:OP2	2.15	0.46
27:AA:79:VAL:CB	27:AA:118:VAL:HG13	2.42	0.46
2:B:1129:A:H2'	2:B:1130:A:C8	2.50	0.46
2:B:1144:U:H3	2:B:1159:A:N6	2.13	0.46
2:B:1145:G:N7	2:B:1146:C:C5	2.84	0.46
2:B:1145:G:N2	2:B:1160:C:C6	2.84	0.46
2:B:1678:G:OP1	26:Z:96:VAL:HA	2.16	0.46
2:B:1699:A:H61	2:B:1746:U:H3	1.64	0.46
2:B:1898:G:H2'	2:B:1899:G:O4'	2.16	0.46
2:B:2102:U:H5'	23:W:88:ARG:NH2	2.31	0.46
2:B:241:G:H5'	2:B:242:C:H5	1.80	0.46
2:B:2439:A:H2'	2:B:2440:G:H8	1.81	0.46
2:B:2515:A:H5''	19:S:28:TRP:CD1	2.51	0.46
2:B:2597:U:H2'	2:B:2598:G:C8	2.51	0.46
2:B:2663:G:H5''	15:O:142:LYS:CE	2.43	0.46
2:B:2698:G:H2'	2:B:2699:G:O4'	2.15	0.46
2:B:2745:G:N2	2:B:2748:A:OP2	2.49	0.46
2:B:2927:C:H2'	2:B:2928:C:C6	2.51	0.46
2:B:540:U:H2'	2:B:541:U:O4'	2.15	0.46
54:BB:114:ILE:HD13	54:BB:119:ALA:HB2	1.98	0.46
54:BB:159:THR:HG23	54:BB:173:ILE:HD13	1.98	0.46
29:CA:103:TYR:CE1	29:CA:139:ILE:HD12	2.36	0.46
55:CB:179:ALA:CB	55:CB:194:LEU:HD22	2.44	0.46
56:DB:219:ARG:HD2	56:DB:219:ARG:C	2.36	0.46
82:DC:100:ILE:HG21	82:DC:338:ILE:HD13	1.98	0.46
82:DC:501:LEU:HB3	82:DC:502:PRO:HD3	1.97	0.46
82:DC:726:GLU:O	82:DC:801:TRP:HA	2.16	0.46
31:EA:100:THR:CG2	31:EA:110:ALA:HB2	2.45	0.46
31:EA:44:ALA:CB	31:EA:72:ILE:HG22	2.46	0.46
32:FA:78:LEU:HA	32:FA:81:LEU:HD12	1.97	0.46
58:FB:114:GLU:HG2	58:FB:120:THR:HA	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:478:A:O2'	59:GB:124:HIS:HA	2.16	0.46
60:HB:40:LEU:O	60:HB:40:LEU:HD13	2.15	0.46
4:D:120:C:H2'	9:I:265:TYR:CE1	2.51	0.46
10:J:126:GLN:O	10:J:127:ASN:HB2	2.15	0.46
10:J:41:ILE:O	10:J:84:VAL:HA	2.16	0.46
36:JA:66:LEU:HD23	36:JA:72:LYS:HG3	1.98	0.46
11:K:124:LEU:HA	11:K:127:LEU:CD1	2.46	0.46
11:K:180:SER:OG	11:K:183:ASP:HB2	2.16	0.46
63:KB:49:GLN:O	63:KB:52:VAL:HB	2.16	0.46
2:B:1668:G:H5'	38:LA:22:VAL:O	2.16	0.46
38:LA:76:TYR:HB3	38:LA:80:ARG:HG2	1.98	0.46
39:MA:89:ARG:HG2	39:MA:89:ARG:HH11	1.80	0.46
14:N:159:PHE:CB	14:N:163:GLN:HE22	2.12	0.46
66:NB:116:LEU:HB2	66:NB:117:LEU:HD22	1.98	0.46
67:OB:46:LEU:O	67:OB:50:ILE:HG13	2.16	0.46
68:PB:17:LEU:CD2	68:PB:22:VAL:HG11	2.45	0.46
68:PB:64:GLU:O	68:PB:68:ARG:HG2	2.15	0.46
17:Q:60:ALA:HB3	17:Q:65:TYR:O	2.16	0.46
18:R:23:ILE:HD12	18:R:31:LYS:O	2.16	0.46
19:S:61:ILE:HD13	19:S:61:ILE:N	2.31	0.46
71:SB:55:LEU:HD11	71:SB:69:LEU:CG	2.44	0.46
2:B:3180:A:C5'	20:T:116:LYS:HB2	2.46	0.46
2:B:1191:U:OP2	20:T:49:ARG:HD2	2.16	0.46
47:UA:17:ARG:HG3	47:UA:18:TYR:CD1	2.50	0.46
47:UA:46:THR:HB	47:UA:58:SER:CB	2.42	0.46
74:VB:3:ASP:O	74:VB:5:VAL:HG23	2.15	0.46
23:W:45:VAL:HG13	23:W:46:LYS:N	2.31	0.46
2:B:1872:C:OP1	23:W:56:THR:HG21	2.16	0.46
49:WA:25:THR:HG21	49:WA:295:SER:HA	1.97	0.46
50:XA:153:SER:O	50:XA:156:VAL:HG22	2.16	0.46
64:LB:103:ARG:NH2	76:XB:52:ASP:HB3	2.31	0.46
25:Y:27:LEU:HA	25:Y:30:TYR:HD2	1.81	0.46
51:YA:176:VAL:HA	51:YA:184:LEU:HD21	1.97	0.46
52:ZA:139:ILE:CG2	52:ZA:221:THR:HG21	2.45	0.46
78:ZB:40:ILE:HG22	78:ZB:41:VAL:H	1.80	0.46
1:A:1070:C:H2'	1:A:1071:U:O4'	2.16	0.45
1:A:1235:C:H2'	1:A:1236:A:H8	1.81	0.45
1:A:1556:A:H4'	1:A:1557:U:C5	2.50	0.45
1:A:774:A:H2'	1:A:775:G:C5'	2.45	0.45
2:B:1195:A:H1'	2:B:1319:G:C4'	2.45	0.45
2:B:1617:G:H2'	2:B:1618:G:C8	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1623:G:H2'	2:B:1624:G:C8	2.51	0.45
2:B:16:A:N6	2:B:17:G:C6	2.84	0.45
2:B:2133:U:C2'	2:B:2134:G:H5'	2.46	0.45
2:B:422:A:H61	2:B:2362:C:C2'	2.29	0.45
2:B:3118:C:H2'	2:B:3119:U:O4'	2.16	0.45
2:B:3270:U:H5'	21:U:174:GLY:HA3	1.97	0.45
2:B:3348:G:N2	2:B:3357:U:H3	2.08	0.45
2:B:389:A:H2'	2:B:390:G:O4'	2.16	0.45
2:B:435:C:H2'	2:B:436:A:C8	2.50	0.45
2:B:651:G:C6	2:B:652:G:C5	3.05	0.45
2:B:793:C:H2'	2:B:794:U:O4'	2.17	0.45
27:AA:135:VAL:HG11	28:BA:25:ASP:O	2.15	0.45
80:BC:33:ARG:NH1	80:BC:33:ARG:HB3	2.31	0.45
80:BC:42:ARG:HH11	80:BC:42:ARG:HB3	1.81	0.45
55:CB:86:GLN:HE22	78:ZB:49:ARG:NH2	1.96	0.45
82:DC:31:GLY:O	82:DC:35:LEU:HB3	2.15	0.45
82:DC:91:GLN:HG2	82:DC:92:LYS:H	1.81	0.45
57:EB:111:LYS:O	57:EB:112:ARG:HB3	2.16	0.45
7:G:347:SER:O	7:G:349:LYS:N	2.44	0.45
33:GA:35:VAL:HG12	33:GA:36:ASP:N	2.31	0.45
8:H:43:ASN:HA	8:H:236:LEU:HD21	1.98	0.45
2:B:578:A:H2'	8:H:334:PHE:CD2	2.52	0.45
9:I:80:SER:HB3	9:I:101:THR:OG1	2.16	0.45
35:IA:75:ILE:HG12	35:IA:93:VAL:HG22	1.98	0.45
10:J:98:VAL:C	10:J:100:LYS:H	2.20	0.45
63:KB:102:LEU:HD11	63:KB:112:LYS:HA	1.94	0.45
38:LA:3:GLN:HB3	38:LA:30:LEU:HD13	1.98	0.45
38:LA:62:TYR:CD2	38:LA:62:TYR:N	2.83	0.45
13:M:189:GLU:O	13:M:190:ASP:HB2	2.16	0.45
65:MB:81:ARG:CZ	65:MB:117:GLY:HA2	2.46	0.45
40:NA:74:LYS:HB3	40:NA:75:LYS:HD2	1.99	0.45
15:O:110:ILE:HD12	15:O:111:ASP:N	2.31	0.45
17:Q:179:PHE:O	17:Q:183:ARG:HG3	2.15	0.45
69:QB:52:GLY:C	69:QB:54:PHE:H	2.19	0.45
69:QB:94:ILE:HG13	69:QB:95:ASP:N	2.31	0.45
2:B:3181:C:OP2	20:T:171:LYS:HE3	2.15	0.45
21:U:9:THR:OG1	21:U:151:THR:HG21	2.16	0.45
47:UA:51:ALA:HB3	47:UA:54:ILE:HB	1.98	0.45
47:UA:39:CYS:SG	47:UA:57:CYS:SG	3.08	0.45
73:UB:114:LYS:HE2	73:UB:115:GLY:N	2.31	0.45
22:V:158:HIS:H	22:V:186:VAL:CG1	2.26	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:VA:45:LEU:HB2	48:VA:49:ALA:HB3	1.97	0.45
48:VA:93:LEU:CD2	48:VA:97:LYS:HB2	2.46	0.45
74:VB:8:ARG:HH21	74:VB:28:LEU:HD11	1.81	0.45
49:WA:27:ALA:HB2	49:WA:296:ALA:CB	2.46	0.45
24:X:107:TYR:CE1	24:X:118:PHE:HA	2.51	0.45
24:X:155:ARG:HD2	24:X:172:TYR:CD1	2.51	0.45
11:K:119:VAL:HG12	25:Y:135:PRO:HB3	1.98	0.45
51:YA:126:THR:HG22	51:YA:136:ARG:NE	2.30	0.45
51:YA:113:MET:HE3	51:YA:211:HIS:CD2	2.51	0.45
52:ZA:121:VAL:HG23	52:ZA:122:ALA:H	1.81	0.45
52:ZA:185:LYS:O	52:ZA:189:GLN:HG3	2.17	0.45
52:ZA:57:PHE:CZ	52:ZA:138:PRO:HD3	2.51	0.45
52:ZA:68:ILE:O	52:ZA:72:LEU:HB2	2.16	0.45
1:A:1342:C:O2'	1:A:1343:U:H5'	2.16	0.45
1:A:296:U:H2'	1:A:297:U:H6	1.82	0.45
1:A:388:G:H2'	1:A:389:G:O4'	2.16	0.45
1:A:426:G:H2'	1:A:427:C:O4'	2.16	0.45
1:A:4:C:H2'	1:A:5:U:H6	1.80	0.45
1:A:778:G:C6	1:A:780:A:H5'	2.51	0.45
27:AA:75:PRO:HG2	27:AA:105:PRO:HD3	1.99	0.45
53:AB:162:GLN:N	53:AB:163:PRO:HD2	2.31	0.45
79:AC:44:ARG:HH11	79:AC:44:ARG:HG2	1.81	0.45
2:B:1028:U:H3'	2:B:1029:G:H5''	1.97	0.45
2:B:1049:C:H2'	2:B:1050:U:O4'	2.16	0.45
2:B:108:A:H4'	2:B:323:A:C2	2.52	0.45
2:B:1090:G:H2'	2:B:1091:A:C8	2.51	0.45
2:B:1160:C:C5	2:B:1366:A:H1'	2.51	0.45
2:B:1319:G:H2'	2:B:1320:C:C6	2.52	0.45
2:B:1326:A:C6	2:B:1327:C:C4	3.04	0.45
2:B:1482:A:H5''	2:B:1858:A:C2	2.51	0.45
2:B:1936:A:H2'	2:B:1937:U:C6	2.51	0.45
2:B:1951:C:N3	2:B:2095:G:C2	2.84	0.45
2:B:2376:G:H2'	2:B:2377:G:C8	2.51	0.45
2:B:2428:U:H2'	2:B:2429:G:C8	2.51	0.45
2:B:2510:U:HO2'	2:B:2511:A:H8	1.63	0.45
2:B:1047:A:H2	2:B:2645:G:H22	1.62	0.45
2:B:308:A:H1'	2:B:2222:A:C2	2.50	0.45
2:B:582:G:H2'	2:B:583:G:C8	2.51	0.45
3:C:42:G:O5'	41:OA:62:GLY:HA3	2.16	0.45
55:CB:70:VAL:HG23	55:CB:72:HIS:H	1.81	0.45
56:DB:116:LYS:HG2	56:DB:117:GLY:N	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:DB:158:ILE:HG23	56:DB:173:PRO:HG2	1.98	0.45
82:DC:131:THR:HG21	82:DC:178:PHE:CE2	2.51	0.45
82:DC:188:ILE:HG23	82:DC:192:TYR:CD2	2.50	0.45
82:DC:580:PRO:HD2	82:DC:704:GLN:CD	2.36	0.45
6:F:148:VAL:HG22	6:F:156:LYS:O	2.15	0.45
17:Q:167:PHE:CE1	32:FA:132:LYS:HE2	2.52	0.45
59:GB:125:ALA:O	59:GB:128:LEU:HB2	2.16	0.45
8:H:22:LEU:O	8:H:24:ALA:N	2.41	0.45
34:HA:71:GLN:HG2	34:HA:71:GLN:O	2.16	0.45
9:I:247:ILE:O	9:I:251:PRO:HD3	2.17	0.45
11:K:95:ILE:CD1	11:K:133:TYR:HE1	2.29	0.45
11:K:222:HIS:ND1	11:K:224:ILE:N	2.55	0.45
38:LA:57:LEU:CD2	38:LA:57:LEU:N	2.78	0.45
13:M:123:ILE:H	13:M:123:ILE:HD12	1.81	0.45
13:M:7:GLU:CB	13:M:56:ALA:HB2	2.28	0.45
40:NA:75:LYS:N	40:NA:75:LYS:HD2	2.31	0.45
66:NB:55:VAL:HG13	66:NB:56:GLY:N	2.31	0.45
66:NB:83:GLN:HG2	66:NB:87:LYS:HG3	1.98	0.45
15:O:12:LEU:HD13	15:O:133:ARG:CZ	2.47	0.45
15:O:141:ARG:NH1	15:O:144:CYS:HB3	2.32	0.45
15:O:23:VAL:HG12	15:O:25:GLU:O	2.17	0.45
2:B:2673:A:H5''	15:O:95:ASN:CG	2.36	0.45
16:P:114:ARG:HA	16:P:117:ARG:CD	2.44	0.45
16:P:128:VAL:O	16:P:131:GLU:HG2	2.16	0.45
68:PB:29:VAL:HG13	68:PB:44:ASN:HA	1.98	0.45
17:Q:174:ARG:HH11	17:Q:174:ARG:HG3	1.82	0.45
69:QB:70:GLN:OE1	69:QB:119:LYS:HB2	2.16	0.45
2:B:149:U:C5'	19:S:54:LYS:HB3	2.46	0.45
21:U:57:ALA:HA	21:U:83:TRP:NE1	2.31	0.45
48:VA:165:VAL:HG21	48:VA:181:PHE:CZ	2.51	0.45
48:VA:29:GLY:HA3	48:VA:84:VAL:HG22	1.99	0.45
48:VA:58:MET:CE	48:VA:86:PHE:CZ	2.99	0.45
23:W:84:THR:OG1	23:W:87:ALA:N	2.44	0.45
49:WA:176:LYS:CA	49:WA:199:ILE:HD11	2.45	0.45
75:WB:95:HIS:CE1	75:WB:98:GLN:HB2	2.52	0.45
50:XA:146:LEU:HD21	50:XA:174:TRP:HE1	1.81	0.45
51:YA:41:ARG:O	51:YA:43:VAL:HG23	2.16	0.45
1:A:1068:C:O2'	1:A:1069:A:H5'	2.16	0.45
1:A:1415:U:H2'	1:A:1416:G:H8	1.82	0.45
1:A:1431:C:H6	1:A:1431:C:H5'	1.81	0.45
1:A:1583:A:N1	1:A:1611:A:H5''	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1765:A:H8	1:A:1768:G:H22	1.61	0.45
1:A:515:A:N6	1:A:537:G:H21	1.89	0.45
2:B:1048:A:H2'	14:N:22:TYR:CE2	2.50	0.45
2:B:1145:G:H1	2:B:1159:A:H1'	1.80	0.45
2:B:1601:U:OP2	23:W:38:ARG:HB2	2.16	0.45
2:B:185:C:C2'	2:B:186:U:H5'	2.46	0.45
2:B:185:C:H2'	2:B:186:U:H5'	1.98	0.45
2:B:2202:C:H2'	2:B:2203:U:C6	2.51	0.45
2:B:2388:U:O2'	21:U:80:LYS:HD3	2.16	0.45
2:B:2394:G:C2	7:G:259:HIS:HA	2.51	0.45
2:B:2562:A:H2'	2:B:2563:G:O4'	2.17	0.45
2:B:2724:U:H5'	25:Y:54:HIS:HB2	1.98	0.45
2:B:2826:U:C2'	2:B:2827:U:H5'	2.46	0.45
2:B:2309:A:H1'	2:B:2962:U:H5'	1.98	0.45
2:B:2968:G:H2'	2:B:2969:A:H8	1.80	0.45
2:B:32:U:H2'	2:B:33:G:C8	2.51	0.45
2:B:562:C:H5''	24:X:71:LYS:CG	2.47	0.45
29:CA:29:SER:C	29:CA:31:THR:H	2.20	0.45
29:CA:87:SER:O	29:CA:120:LYS:HD3	2.16	0.45
29:CA:92:LYS:HE2	29:CA:111:ASN:HA	1.97	0.45
55:CB:63:GLN:HB2	55:CB:88:PRO:CA	2.46	0.45
4:D:22:A:H2'	4:D:23:A:C8	2.51	0.45
4:D:79:A:H1'	4:D:102:A:N6	2.32	0.45
56:DB:191:ARG:HA	56:DB:194:LYS:HD2	1.98	0.45
82:DC:16:VAL:HA	82:DC:19:VAL:CG2	2.47	0.45
82:DC:204:PRO:HD3	82:DC:209:VAL:HG21	1.98	0.45
82:DC:405:VAL:O	82:DC:447:ASP:HA	2.16	0.45
5:E:90:LEU:HD13	5:E:116:LEU:HD12	1.98	0.45
31:EA:87:LEU:HB3	31:EA:88:ASP:H	1.56	0.45
31:EA:92:PHE:HA	31:EA:95:VAL:CB	2.40	0.45
57:EB:77:LEU:HD22	57:EB:81:LEU:HD11	1.98	0.45
83:EC:6832:G:O2'	83:EC:6833:G:H5'	2.16	0.45
6:F:112:ILE:HG12	6:F:135:ILE:HG23	1.98	0.45
58:FB:42:ARG:C	58:FB:43:ILE:HG13	2.37	0.45
59:GB:112:GLN:HG3	59:GB:148:VAL:CG2	2.47	0.45
8:H:30:ILE:HG12	8:H:127:ALA:CB	2.46	0.45
60:HB:57:THR:HG22	60:HB:58:GLN:H	1.81	0.45
9:I:75:LEU:H	9:I:75:LEU:HD23	1.81	0.45
9:I:92:LEU:HD12	9:I:93:THR:HG22	1.98	0.45
10:J:163:PHE:O	37:KA:7:LEU:HD21	2.17	0.45
11:K:156:ILE:HG22	11:K:157:ASN:ND2	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:KA:58:GLU:HB2	37:KA:63:LYS:NZ	2.31	0.45
12:L:90:THR:HG21	12:L:152:LEU:HD21	1.98	0.45
13:M:48:VAL:HG13	13:M:49:ASN:N	2.24	0.45
40:NA:89:GLU:HA	40:NA:92:ASN:HD22	1.81	0.45
66:NB:37:THR:C	66:NB:45:ARG:HD2	2.36	0.45
67:OB:15:ALA:O	67:OB:19:ARG:HG2	2.17	0.45
67:OB:21:TYR:N	67:OB:22:PRO:CD	2.80	0.45
16:P:124:THR:HB	16:P:127:SER:HB2	1.98	0.45
68:PB:46:VAL:CG1	68:PB:69:ILE:HG23	2.44	0.45
2:B:62:A:C5'	19:S:164:LEU:HD21	2.28	0.45
22:V:62:VAL:HG22	22:V:142:GLY:N	2.31	0.45
48:VA:107:ALA:H	48:VA:182:THR:HG21	1.81	0.45
2:B:1230:G:O2'	48:VA:35:SER:N	2.49	0.45
74:VB:129:VAL:C	74:VB:131:ARG:H	2.18	0.45
49:WA:34:LEU:HD21	49:WA:80:ALA:HB1	1.96	0.45
75:WB:77:ARG:NH1	75:WB:77:ARG:HB2	2.26	0.45
9:I:37:VAL:HG11	25:Y:27:LEU:HG	1.97	0.45
77:YB:20:LYS:CD	77:YB:20:LYS:H	2.29	0.45
1:A:1268:G:O2'	1:A:1269:U:H5''	2.16	0.45
1:A:1483:A:C2	1:A:1607:G:H1'	2.52	0.45
1:A:15:U:H2'	1:A:16:G:C5'	2.46	0.45
1:A:1628:U:H2'	1:A:1629:G:H8	1.81	0.45
1:A:754:A:H5'	1:A:755:A:H4'	1.99	0.45
1:A:968:U:H2'	1:A:969:C:O4'	2.15	0.45
2:B:1328:C:H2'	2:B:1329:U:C5	2.52	0.45
2:B:1348:U:H5'	2:B:1355:A:N6	2.30	0.45
2:B:1408:G:O2'	2:B:1409:G:H5'	2.17	0.45
2:B:1485:G:H2'	2:B:1486:G:O4'	2.17	0.45
2:B:1923:C:H2'	2:B:1924:U:C6	2.47	0.45
2:B:3005:A:C5'	7:G:98:GLY:HA3	2.46	0.45
2:B:750:G:H2'	2:B:751:A:C8	2.52	0.45
2:B:826:G:P	2:B:1590:G:H4'	2.57	0.45
54:BB:202:ASP:HB3	61:IB:40:LEU:CD1	2.46	0.45
54:BB:233:LYS:HD2	54:BB:234:PRO:HD2	1.99	0.45
54:BB:71:LYS:HE2	54:BB:76:VAL:HA	1.98	0.45
4:D:74:C:C2'	4:D:75:G:H5'	2.47	0.45
82:DC:323:VAL:HG12	82:DC:324:MET:HE2	1.97	0.45
82:DC:650:THR:HG21	82:DC:691:VAL:HG23	1.99	0.45
82:DC:735:CYS:C	82:DC:765:LEU:HD12	2.37	0.45
5:E:90:LEU:HD23	5:E:94:ASN:HD21	1.81	0.45
83:EC:6897:G:N3	83:EC:6897:G:H2'	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2184:U:O4'	6:F:236:GLY:HA2	2.15	0.45
6:F:56:ALA:HB1	6:F:169:ILE:HG22	1.98	0.45
6:F:7:ASN:ND2	6:F:209:HIS:HE1	2.15	0.45
32:FA:131:SER:HB3	32:FA:134:ALA:CB	2.46	0.45
32:FA:138:ILE:HG22	32:FA:139:ARG:H	1.81	0.45
2:B:1886:A:O2'	7:G:226:PHE:HB3	2.15	0.45
7:G:239:PRO:C	7:G:241:LYS:N	2.70	0.45
2:B:1436:U:C6	8:H:72:ALA:HA	2.50	0.45
9:I:198:TYR:N	9:I:198:TYR:CD2	2.84	0.45
9:I:264:GLN:HA	9:I:267:ALA:HB2	1.99	0.45
61:IB:53:TYR:HB2	61:IB:82:ARG:HH21	1.81	0.45
10:J:31:ARG:CG	10:J:34:LEU:HG	2.44	0.45
11:K:30:ARG:HH21	11:K:33:ARG:HH12	1.64	0.45
37:KA:46:GLY:N	37:KA:71:VAL:HB	2.32	0.45
63:KB:70:LYS:O	63:KB:74:ILE:HG13	2.16	0.45
12:L:134:TYR:CD2	12:L:134:TYR:N	2.81	0.45
12:L:248:LYS:CA	12:L:252:ASN:HB2	2.46	0.45
38:LA:97:GLU:O	38:LA:101:VAL:HG23	2.15	0.45
38:LA:69:HIS:C	38:LA:71:THR:H	2.17	0.45
14:N:166:ILE:CG2	14:N:167:LEU:N	2.79	0.45
66:NB:130:GLY:HA3	66:NB:137:ARG:HG3	1.98	0.45
15:O:14:ILE:H	15:O:14:ILE:HD12	1.80	0.45
18:R:22:LEU:HB3	18:R:64:VAL:HG13	1.98	0.45
18:R:80:THR:HG22	18:R:84:LYS:HB2	1.98	0.45
21:U:14:SER:HA	21:U:150:VAL:O	2.17	0.45
2:B:837:A:H4'	47:UA:10:ILE:HB	1.99	0.45
22:V:126:GLN:O	22:V:129:VAL:HB	2.17	0.45
22:V:82:VAL:HB	22:V:139:ILE:HA	1.99	0.45
48:VA:158:VAL:HG21	48:VA:173:LEU:HD21	1.98	0.45
74:VB:76:TYR:HE1	74:VB:86:GLU:OE2	1.99	0.45
49:WA:117:LYS:H	49:WA:117:LYS:CD	2.16	0.45
49:WA:170:ILE:HD11	49:WA:204:ALA:CB	2.42	0.45
50:XA:188:LEU:HD21	50:XA:195:TRP:HD1	1.82	0.45
76:XB:19:LYS:HA	76:XB:19:LYS:CE	2.46	0.45
24:X:59:VAL:CG1	25:Y:141:VAL:HG11	2.45	0.45
51:YA:225:VAL:HG12	51:YA:228:LEU:HD23	1.98	0.45
77:YB:20:LYS:H	77:YB:20:LYS:HD3	1.81	0.45
1:A:108:A:H2'	1:A:109:G:O4'	2.16	0.45
1:A:401:A:O4'	54:BB:3:ARG:HD3	2.16	0.45
1:A:503:G:H2'	1:A:504:U:C6	2.51	0.45
53:AB:49:ILE:HD12	53:AB:49:ILE:N	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1129:A:O2'	2:B:1130:A:H5'	2.16	0.45
2:B:1141:C:H2'	2:B:1142:G:C8	2.51	0.45
2:B:1394:A:C8	2:B:1395:G:C8	3.05	0.45
2:B:1565:G:H2'	2:B:1565:G:N3	2.31	0.45
2:B:1648:A:H2'	2:B:1649:U:C5'	2.46	0.45
2:B:1918:C:H2'	2:B:1919:G:C8	2.51	0.45
2:B:2200:U:H2'	2:B:2201:G:H8	1.81	0.45
2:B:2649:A:C2'	2:B:2650:U:H5'	2.46	0.45
2:B:2779:A:H5'	2:B:2780:A:P	2.56	0.45
2:B:2812:C:H2'	2:B:2813:A:C8	2.51	0.45
2:B:3190:C:H2'	2:B:3191:G:O4'	2.16	0.45
2:B:375:A:O2'	2:B:393:U:O2'	2.34	0.45
2:B:430:U:H2'	2:B:431:U:C6	2.52	0.45
2:B:880:G:H2'	2:B:882:A:N7	2.31	0.45
80:BC:30:PRO:HD2	80:BC:38:LEU:CD1	2.47	0.45
30:DA:27:ARG:C	30:DA:29:VAL:H	2.19	0.45
56:DB:72:ARG:HA	56:DB:97:VAL:O	2.16	0.45
82:DC:633:ILE:O	82:DC:634:TRP:HD1	1.99	0.45
82:DC:653:VAL:HG22	82:DC:691:VAL:HB	1.98	0.45
82:DC:757:GLU:C	82:DC:766:PHE:HE1	2.19	0.45
6:F:10:LYS:HD3	6:F:16:PHE:CG	2.50	0.45
58:FB:98:LYS:HG2	58:FB:171:SER:O	2.16	0.45
7:G:372:THR:HG22	7:G:374:ALA:H	1.81	0.45
7:G:92:TYR:HB2	7:G:157:VAL:HG22	1.99	0.45
2:B:1438:U:H1'	8:H:93:MET:O	2.17	0.45
34:HA:16:LEU:HD22	34:HA:98:SER:HB2	1.97	0.45
9:I:37:VAL:HG12	9:I:37:VAL:O	2.16	0.45
11:K:131:GLU:CB	11:K:132:PRO:HD3	2.45	0.45
11:K:35:ALA:O	11:K:38:LYS:HB3	2.15	0.45
2:B:3275:U:H3	37:KA:64:ILE:HB	1.81	0.45
39:MA:77:PRO:HD2	39:MA:80:LEU:CD2	2.46	0.45
66:NB:11:GLY:HA3	66:NB:18:ALA:HB3	1.98	0.45
15:O:92:ARG:HA	15:O:92:ARG:NE	2.23	0.45
16:P:123:ARG:HA	16:P:123:ARG:HD3	1.56	0.45
43:QA:48:LYS:HA	43:QA:48:LYS:HD2	1.84	0.45
2:B:3215:A:N6	18:R:122:VAL:HG13	2.30	0.45
19:S:34:ASN:H	19:S:37:HIS:CD2	2.35	0.45
19:S:44:ARG:HB3	19:S:46:ASP:OD2	2.16	0.45
48:VA:28:VAL:C	48:VA:84:VAL:HG13	2.37	0.45
16:P:123:ARG:NH1	48:VA:46:ARG:NE	2.65	0.45
75:WB:84:GLU:OE2	75:WB:91:PRO:HB3	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:X:92:LYS:HD2	24:X:106:LEU:CD2	2.46	0.45
25:Y:11:THR:HA	25:Y:14:MET:CB	2.46	0.45
77:YB:17:ARG:HG3	77:YB:18:LYS:N	2.31	0.45
77:YB:29:ARG:HG3	77:YB:29:ARG:NH1	2.31	0.45
52:ZA:83:ILE:O	52:ZA:85:PRO:HD3	2.16	0.45
1:A:1025:A:C5	1:A:1027:A:H1'	2.51	0.45
1:A:1316:G:H2'	1:A:1317:C:C6	2.50	0.45
1:A:1448:G:H2'	1:A:1449:U:O4'	2.15	0.45
1:A:1486:G:C8	1:A:1592:A:O2'	2.69	0.45
1:A:1513:G:H2'	1:A:1515:A:N3	2.32	0.45
1:A:606:A:H4'	1:A:607:G:C5'	2.46	0.45
1:A:904:G:H2'	1:A:905:A:O4'	2.15	0.45
2:B:1190:A:H2'	2:B:1190:A:N3	2.31	0.45
2:B:136:G:O2'	2:B:137:G:H5'	2.16	0.45
2:B:1463:U:C2'	2:B:1464:G:H5'	2.45	0.45
2:B:1497:C:C6	2:B:1497:C:O5'	2.70	0.45
2:B:1565:G:H3'	2:B:1566:A:C8	2.51	0.45
2:B:1734:G:H2'	2:B:1735:G:C8	2.52	0.45
2:B:1670:C:H4'	2:B:1859:A:O3'	2.16	0.45
2:B:1874:A:O2'	2:B:1875:G:H5'	2.16	0.45
2:B:1881:A:H2'	2:B:1882:G:H8	1.81	0.45
2:B:1941:C:H2'	2:B:1942:U:H6	1.81	0.45
2:B:2145:A:C4	2:B:2146:C:C6	3.05	0.45
2:B:2434:U:H2'	2:B:2434:U:O2	2.16	0.45
2:B:2694:A:H2'	2:B:2695:A:O4'	2.16	0.45
2:B:3325:G:H5''	35:IA:103:GLY:C	2.36	0.45
2:B:355:A:H2'	2:B:356:C:O4'	2.17	0.45
2:B:681:U:O2	2:B:696:C:C5	2.65	0.45
2:B:750:G:H2'	2:B:751:A:O4'	2.17	0.45
2:B:3085:G:OP1	28:BA:34:SER:HB2	2.16	0.45
54:BB:162:ILE:HG22	54:BB:163:ASP:H	1.79	0.45
54:BB:160:VAL:CG1	54:BB:169:ILE:HG23	2.47	0.45
3:C:136:G:O2'	3:C:137:C:H5'	2.17	0.45
55:CB:114:ILE:HG23	55:CB:118:LEU:HG	1.99	0.45
55:CB:168:VAL:O	55:CB:172:ILE:HG13	2.16	0.45
55:CB:175:LEU:HD13	55:CB:198:LEU:CD2	2.47	0.45
82:DC:22:MET:HE1	82:DC:102:LEU:HD13	1.99	0.45
82:DC:406:LYS:HB2	82:DC:409:GLN:HB2	1.97	0.45
82:DC:677:PHE:CD1	82:DC:678:GLY:N	2.85	0.45
31:EA:41:ALA:HB2	31:EA:77:TYR:CZ	2.52	0.45
31:EA:77:TYR:HB2	34:HA:35:ARG:HH21	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
83:EC:6824:C:O5'	83:EC:6824:C:H6	2.00	0.45
6:F:190:ARG:CZ	6:F:191:LEU:HD11	2.47	0.45
58:FB:46:VAL:HG23	58:FB:48:THR:HG23	1.99	0.45
7:G:58:ARG:HB2	7:G:58:ARG:NH1	2.31	0.45
33:GA:23:LYS:HE3	33:GA:24:PRO:CD	2.45	0.45
25:Y:88:ARG:NH1	33:GA:31:SER:HB2	2.30	0.45
59:GB:83:VAL:CG2	59:GB:85:VAL:HG23	2.46	0.45
8:H:162:THR:O	8:H:166:VAL:HG23	2.17	0.45
9:I:131:LEU:H	9:I:131:LEU:HD22	1.82	0.45
4:D:1:G:H1'	9:I:266:ALA:HB1	1.98	0.45
11:K:219:LYS:HA	11:K:228:SER:OG	2.16	0.45
13:M:131:GLY:O	13:M:148:GLY:HA2	2.16	0.45
13:M:75:VAL:CG1	13:M:79:ILE:HD12	2.46	0.45
40:NA:53:TYR:O	40:NA:56:ARG:HB3	2.16	0.45
66:NB:42:GLU:O	66:NB:45:ARG:HB2	2.17	0.45
15:O:20:ASN:HA	15:O:68:HIS:CB	2.46	0.45
68:PB:119:ILE:HD12	68:PB:119:ILE:N	2.31	0.45
68:PB:3:LEU:HD13	68:PB:3:LEU:H	1.80	0.45
17:Q:48:PRO:HA	17:Q:137:GLN:OE1	2.17	0.45
69:QB:28:LEU:HD21	69:QB:30:VAL:HG12	1.98	0.45
1:A:1344:A:C2	70:RB:56:VAL:HG13	2.43	0.45
19:S:114:ARG:NE	19:S:114:ARG:HA	2.31	0.45
19:S:121:VAL:HG11	19:S:131:GLU:HB2	1.99	0.45
72:TB:70:ASN:O	72:TB:71:LYS:HB2	2.17	0.45
21:U:131:ARG:HG3	21:U:137:ASN:OD1	2.17	0.45
22:V:133:LYS:HB2	22:V:133:LYS:NZ	2.31	0.45
22:V:165:ILE:HD13	22:V:168:THR:HG22	1.99	0.45
2:B:2103:U:P	23:W:88:ARG:HH21	2.39	0.45
24:X:78:TRP:HB3	24:X:124:LEU:HD11	1.98	0.45
24:X:155:ARG:HB2	24:X:172:TYR:CB	2.45	0.45
24:X:52:LYS:HG2	24:X:54:ALA:HB3	1.99	0.45
24:X:69:PRO:HA	24:X:73:LYS:HZ1	1.80	0.45
50:XA:193:GLN:C	50:XA:195:TRP:H	2.19	0.45
50:XA:203:PHE:HB3	50:XA:204:TYR:H	1.55	0.45
76:XB:87:ARG:NH2	76:XB:94:ASN:HB3	2.32	0.45
51:YA:48:VAL:HG12	51:YA:49:ASN:H	1.81	0.45
52:ZA:35:TRP:HZ2	52:ZA:67:GLN:HG2	1.81	0.45
1:A:1092:A:O2'	1:A:1093:A:H3'	2.17	0.45
1:A:1096:C:C4'	1:A:1099:U:H4'	2.47	0.45
1:A:1186:U:H1'	1:A:1208:A:C2	2.51	0.45
1:A:1479:A:C1'	69:QB:15:ILE:HD11	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1505:A:H2'	1:A:1506:G:H5'	1.99	0.45
1:A:605:A:H2'	1:A:606:A:C2	2.52	0.45
1:A:825:U:H2'	1:A:826:U:C5'	2.45	0.45
1:A:98:U:O2'	1:A:99:C:H5'	2.16	0.45
53:AB:7:LYS:HE3	53:AB:7:LYS:HA	1.99	0.45
2:B:1062:A:H1'	25:Y:130:ARG:HH22	1.82	0.45
2:B:116:A:OP2	19:S:2:GLY:N	2.49	0.45
2:B:409:A:H2	2:B:1441:G:N3	2.14	0.45
2:B:1448:U:H5	2:B:2355:G:C2	2.35	0.45
2:B:2166:A:C6	2:B:2167:A:C2	3.04	0.45
2:B:2242:A:H5''	6:F:244:GLY:HA3	1.99	0.45
2:B:2353:G:O2'	2:B:2354:C:H5'	2.16	0.45
2:B:2612:U:H2'	2:B:2613:U:O4'	2.17	0.45
2:B:2614:G:C3'	2:B:2615:G:H8	2.29	0.45
2:B:3333:G:O2'	28:BA:50:ALA:HB3	2.17	0.45
2:B:3369:G:OP1	28:BA:61:LYS:HD2	2.17	0.45
2:B:715:A:H3'	32:FA:114:GLY:O	2.17	0.45
2:B:707:U:O2'	2:B:754:G:N3	2.46	0.45
2:B:714:G:H5'	2:B:754:G:OP1	2.17	0.45
29:CA:91:ASN:HD22	29:CA:93:TYR:HB2	1.81	0.45
82:DC:18:ASN:HA	82:DC:98:PHE:CD1	2.51	0.45
82:DC:28:VAL:HG23	82:DC:29:ASP:N	2.31	0.45
82:DC:408:GLY:CA	82:DC:431:ILE:O	2.58	0.45
82:DC:580:PRO:HD2	82:DC:704:GLN:OE1	2.17	0.45
2:B:1709:C:C4'	31:EA:15:ARG:HH12	2.21	0.45
57:EB:69:GLY:HA2	57:EB:72:LYS:HD2	1.98	0.45
57:EB:7:LYS:O	57:EB:9:LEU:N	2.50	0.45
2:B:2178:A:H3'	6:F:151:PRO:HB3	1.98	0.45
58:FB:193:LEU:O	58:FB:193:LEU:HD23	2.16	0.45
7:G:122:TRP:HA	7:G:125:SER:OG	2.16	0.45
7:G:173:GLN:O	7:G:174:LYS:HB2	2.16	0.45
7:G:19:ARG:HG2	7:G:232:ARG:NH1	2.31	0.45
2:B:3139:A:O3'	7:G:20:LYS:HD3	2.17	0.45
2:B:3379:C:O3'	7:G:315:GLY:HA2	2.17	0.45
59:GB:112:GLN:O	59:GB:116:LEU:HD13	2.17	0.45
8:H:107:ARG:HB3	8:H:109:TRP:CZ3	2.52	0.45
8:H:166:VAL:HG12	8:H:167:ALA:N	2.32	0.45
8:H:208:VAL:CG1	8:H:230:VAL:HG22	2.47	0.45
61:IB:108:PRO:HG3	61:IB:134:THR:CB	2.47	0.45
10:J:56:LYS:HB2	10:J:98:VAL:HG11	1.96	0.45
36:JA:76:VAL:HG11	36:JA:94:ALA:HB1	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:K:88:ARG:HD3	11:K:103:LEU:HD22	1.97	0.45
12:L:142:LEU:HD22	12:L:148:ALA:N	2.32	0.45
64:LB:23:PHE:O	64:LB:24:ASN:HB2	2.17	0.45
64:LB:76:ILE:CD1	64:LB:76:ILE:N	2.80	0.45
13:M:53:ILE:HG22	13:M:54:LYS:N	2.31	0.45
66:NB:110:THR:C	66:NB:112:TYR:H	2.20	0.45
15:O:114:ILE:N	15:O:114:ILE:HD12	2.32	0.45
15:O:13:LYS:HZ3	15:O:13:LYS:HB2	1.81	0.45
50:XA:51:GLY:HA3	67:OB:113:LEU:CD1	2.46	0.45
67:OB:27:ASP:HB3	67:OB:30:THR:CG2	2.47	0.45
67:OB:20:TYR:CE1	67:OB:38:ILE:HG21	2.46	0.45
2:B:1239:C:OP1	16:P:57:LYS:HE3	2.16	0.45
68:PB:72:ILE:CG2	68:PB:81:ILE:HD11	2.44	0.45
17:Q:165:SER:C	17:Q:167:PHE:H	2.20	0.45
69:QB:11:ALA:O	69:QB:15:ILE:HG13	2.17	0.45
19:S:65:ARG:HB3	19:S:129:TYR:CD1	2.52	0.45
19:S:27:VAL:HG23	19:S:129:TYR:CE2	2.51	0.45
19:S:138:GLN:O	19:S:143:ARG:HD2	2.17	0.45
20:T:76:PRO:HB3	20:T:138:LEU:HG	1.98	0.45
22:V:32:LEU:CD2	22:V:36:LEU:HD21	2.47	0.45
22:V:3:ILE:N	22:V:3:ILE:HD12	2.31	0.45
48:VA:55:LYS:O	48:VA:58:MET:HB2	2.16	0.45
74:VB:82:ALA:O	74:VB:86:GLU:HB2	2.17	0.45
2:B:833:G:H5'	23:W:84:THR:HG21	1.99	0.45
24:X:80:ARG:HD2	25:Y:154:VAL:O	2.17	0.45
50:XA:107:PHE:N	50:XA:107:PHE:CD1	2.84	0.45
50:XA:69:ASN:HB2	52:ZA:244:SER:OG	2.16	0.45
50:XA:82:GLY:HA2	50:XA:85:ALA:HB3	1.98	0.45
76:XB:20:PRO:HA	76:XB:31:PRO:HA	1.97	0.45
25:Y:142:SER:O	25:Y:143:THR:HB	2.16	0.45
25:Y:57:TYR:CZ	25:Y:89:LEU:HD11	2.51	0.45
51:YA:34:ALA:HA	51:YA:98:THR:CG2	2.47	0.45
52:ZA:157:LYS:HG2	52:ZA:170:ILE:HG23	1.99	0.45
52:ZA:59:HIS:CD2	52:ZA:239:PRO:HD3	2.52	0.45
78:ZB:10:ALA:O	78:ZB:53:ILE:HA	2.17	0.45
1:A:1654:G:H2'	1:A:1745:G:N2	2.32	0.45
1:A:1782:A:H3'	1:A:1783:C:C5'	2.47	0.45
1:A:262:U:H2'	1:A:263:C:C6	2.51	0.45
1:A:170:U:H3	1:A:289:U:H1'	1.81	0.45
27:AA:10:LYS:HD2	27:AA:13:ILE:CD1	2.47	0.45
27:AA:87:ARG:NE	27:AA:93:LEU:HD21	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:AC:12:ARG:CG	79:AC:18:SER:HA	2.46	0.45
2:B:1275:C:OP1	48:VA:110:ARG:HG3	2.17	0.45
2:B:1461:A:H2'	2:B:1462:A:C8	2.52	0.45
2:B:1510:G:H2'	2:B:1512:U:O4	2.15	0.45
2:B:177:U:O5'	2:B:177:U:H6	2.00	0.45
2:B:1741:A:O2'	2:B:1785:U:H4'	2.17	0.45
2:B:187:A:H2'	2:B:188:U:H5'	1.97	0.45
2:B:2084:C:H5	2:B:2085:U:C2	2.34	0.45
2:B:2133:U:H2'	2:B:2134:G:H5'	1.98	0.45
1:A:1758:U:H5'	2:B:2255:A:O2'	2.17	0.45
2:B:2297:U:H2'	2:B:2299:A:N7	2.32	0.45
2:B:2413:A:O2'	2:B:2414:G:H5'	2.17	0.45
2:B:2415:C:H4'	6:F:207:VAL:HG22	1.99	0.45
2:B:2696:A:H2'	2:B:2697:A:C1'	2.46	0.45
2:B:2712:U:O2'	2:B:2713:U:H5'	2.17	0.45
2:B:2736:A:C3'	2:B:2737:C:H5''	2.47	0.45
2:B:3000:A:H2'	2:B:3001:C:H6	1.81	0.45
2:B:3256:G:H2'	2:B:3257:C:O4'	2.16	0.45
2:B:360:G:H5''	41:OA:26:SER:CA	2.47	0.45
2:B:642:U:H2'	2:B:644:G:OP2	2.17	0.45
2:B:712:G:H22	2:B:755:A:H5'	1.78	0.45
2:B:994:G:H22	2:B:1053:A:H2'	1.81	0.45
55:CB:109:LYS:O	55:CB:113:ILE:HG13	2.16	0.45
55:CB:124:LEU:HD11	75:WB:59:TYR:CB	2.45	0.45
55:CB:44:ASN:O	55:CB:45:LYS:CB	2.65	0.45
4:D:31:U:H2'	4:D:32:U:H6	1.80	0.45
56:DB:161:GLU:HG2	56:DB:170:THR:CB	2.46	0.45
82:DC:115:VAL:O	82:DC:119:LEU:HG	2.17	0.45
82:DC:11:SER:O	82:DC:14:ASP:OD1	2.34	0.45
82:DC:728:VAL:CG2	82:DC:802:SER:H	2.30	0.45
82:DC:823:ARG:CB	82:DC:823:ARG:HH11	2.30	0.45
57:EB:131:PHE:HD1	57:EB:132:PRO:HD3	1.82	0.45
7:G:306:THR:HG23	7:G:316:GLU:HA	1.98	0.45
59:GB:134:ILE:O	59:GB:159:ALA:HB2	2.17	0.45
8:H:317:PRO:O	8:H:319:LYS:HD3	2.17	0.45
60:HB:57:THR:HG22	60:HB:58:GLN:N	2.31	0.45
53:AB:76:ARG:HA	60:HB:63:TYR:OH	2.17	0.45
9:I:109:THR:CG2	9:I:110:LEU:HD12	2.39	0.45
61:IB:7:VAL:HG13	61:IB:8:GLN:HE21	1.81	0.45
11:K:156:ILE:CG1	11:K:161:VAL:HG21	2.38	0.45
11:K:83:LEU:HD22	11:K:117:VAL:O	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:L:221:ASN:HA	12:L:225:LYS:HD3	1.98	0.45
12:L:24:ASN:N	12:L:25:PRO:HD2	2.31	0.45
1:A:1241:G:H1'	65:MB:79:HIS:HB2	1.98	0.45
14:N:63:GLU:O	14:N:66:GLU:HB3	2.16	0.45
15:O:173:ASP:HB3	15:O:174:LYS:H	1.66	0.45
16:P:106:LEU:H	16:P:142:ARG:HG3	1.81	0.45
17:Q:50:PRO:CG	17:Q:141:ALA:HB2	2.47	0.45
69:QB:11:ALA:HA	69:QB:14:PHE:CB	2.41	0.45
69:QB:66:TYR:CZ	69:QB:129:GLN:HA	2.51	0.45
18:R:36:VAL:HG11	18:R:55:ARG:HH22	1.81	0.45
2:B:2598:G:H5'	19:S:126:THR:HG23	1.98	0.45
19:S:56:LYS:O	19:S:59:PHE:HD2	2.00	0.45
20:T:124:LEU:HG	20:T:126:VAL:HG12	1.99	0.45
46:TA:14:GLY:O	46:TA:18:ARG:HG2	2.17	0.45
21:U:92:GLN:HG3	21:U:93:GLY:N	2.31	0.45
1:A:351:C:H4'	73:UB:13:ARG:NE	2.32	0.45
2:B:672:A:H5'	22:V:20:LYS:HB3	1.99	0.45
2:B:1471:U:C4'	23:W:3:ASN:HA	2.38	0.45
50:XA:158:VAL:O	50:XA:158:VAL:HG13	2.16	0.45
51:YA:128:LYS:HG3	51:YA:133:TYR:O	2.16	0.45
51:YA:68:VAL:CG2	51:YA:69:CYS:H	2.25	0.45
26:Z:33:TYR:O	26:Z:37:LEU:HD13	2.17	0.45
1:A:1087:A:H2'	1:A:1088:A:H8	1.76	0.45
1:A:1199:G:N7	79:AC:40:ARG:HD2	2.32	0.45
1:A:1648:A:O2'	1:A:1649:G:H5'	2.16	0.45
1:A:980:G:C5'	1:A:1776:A:H4'	2.46	0.45
1:A:258:C:H4'	58:FB:64:ASN:HB2	1.99	0.45
1:A:461:G:H2'	1:A:462:G:H8	1.82	0.45
2:B:1018:G:O2'	2:B:1019:G:H5'	2.16	0.45
2:B:2148:U:C2'	2:B:2149:A:C8	3.00	0.45
2:B:2437:G:N2	2:B:2511:A:H1'	2.32	0.45
2:B:271:C:H3'	2:B:272:G:C8	2.52	0.45
2:B:2812:C:N4	2:B:2813:A:H62	2.15	0.45
2:B:2878:G:H5''	7:G:5:LYS:NZ	2.32	0.45
2:B:68:C:H2'	2:B:69:C:C6	2.48	0.45
2:B:710:A:H2'	2:B:711:A:C8	2.52	0.45
2:B:896:A:H2	2:B:913:A:N3	2.15	0.45
3:C:133:G:H4'	29:CA:55:ASN:HD21	1.81	0.45
29:CA:85:GLN:HG3	29:CA:120:LYS:O	2.17	0.45
30:DA:39:LEU:HA	30:DA:42:GLN:HG3	1.99	0.45
82:DC:152:LYS:HB2	82:DC:343:PRO:HG3	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:387:PRO:HA	82:DC:394:PHE:HB3	1.96	0.45
82:DC:394:PHE:N	82:DC:394:PHE:CD2	2.85	0.45
82:DC:374:PRO:CB	82:DC:450:ALA:H	2.30	0.45
83:EC:6850:C:H2'	83:EC:6851:G:O4'	2.17	0.45
7:G:85:VAL:HG13	7:G:163:HIS:O	2.17	0.45
7:G:169:THR:HG21	7:G:171:LEU:HG	1.98	0.45
59:GB:14:THR:OG1	59:GB:15:PRO:HD2	2.16	0.45
60:HB:1:MET:HG2	60:HB:2:LEU:H	1.82	0.45
35:IA:98:VAL:HG22	35:IA:99:ALA:H	1.82	0.45
10:J:139:LYS:O	10:J:143:LYS:HG3	2.16	0.45
10:J:142:ASP:HA	10:J:145:LEU:HB2	1.99	0.45
10:J:52:VAL:HG23	10:J:66:SER:O	2.17	0.45
36:JA:38:ILE:H	36:JA:38:ILE:HG12	1.52	0.45
11:K:48:ASN:OD1	11:K:182:ASP:HB3	2.17	0.45
37:KA:52:VAL:HG23	37:KA:99:ARG:HG3	1.99	0.45
2:B:1597:C:P	38:LA:8:ARG:HH21	2.40	0.45
15:O:162:TRP:O	15:O:165:GLN:HB3	2.17	0.45
41:OA:28:HIS:HE1	41:OA:30:GLN:HB2	1.73	0.45
41:OA:2:GLY:O	41:OA:7:SER:HB3	2.17	0.45
43:QA:21:ARG:NH2	43:QA:24:PRO:HG3	2.32	0.45
69:QB:109:GLU:HB2	69:QB:122:ARG:NH2	2.31	0.45
71:SB:10:GLU:OE2	71:SB:10:GLU:HA	2.16	0.45
50:XA:184:LEU:HD23	71:SB:43:GLY:O	2.17	0.45
1:A:1100:G:O2'	72:TB:75:ILE:HA	2.17	0.45
22:V:54:LEU:CB	22:V:58:ASN:HB2	2.18	0.45
1:A:777:C:H41	74:VB:10:ARG:HB3	1.82	0.45
23:W:153:LYS:NZ	23:W:153:LYS:HB3	2.31	0.45
49:WA:21:THR:HG22	49:WA:290:VAL:HB	1.99	0.45
49:WA:61:PHE:CZ	49:WA:94:VAL:HA	2.52	0.45
75:WB:100:ILE:HD13	75:WB:100:ILE:C	2.37	0.45
24:X:66:GLU:CB	24:X:69:PRO:HG3	2.45	0.45
50:XA:102:PHE:CE1	50:XA:131:GLN:HB3	2.52	0.45
50:XA:74:VAL:HA	50:XA:96:THR:O	2.17	0.45
1:A:1711:C:H2'	1:A:1712:A:O4'	2.17	0.45
1:A:365:G:H4'	1:A:757:A:N1	2.31	0.45
1:A:495:C:H5'	1:A:496:G:H1'	1.97	0.45
1:A:519:C:H5''	1:A:520:A:C8	2.51	0.45
1:A:684:A:H3'	1:A:685:A:H5''	1.99	0.45
1:A:685:A:H5'	1:A:685:A:H8	1.82	0.45
27:AA:10:LYS:HB2	27:AA:125:LEU:HD13	1.97	0.45
53:AB:146:ARG:HG3	53:AB:147:ALA:H	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:AB:102:ALA:CB	53:AB:171:ALA:HB1	2.44	0.45
2:B:1099:A:O2'	2:B:1100:U:H5'	2.17	0.45
2:B:126:U:C1'	19:S:57:GLN:HE22	2.30	0.45
2:B:1364:C:H4'	22:V:9:GLN:OE1	2.17	0.45
2:B:1494:U:H5'	2:B:1495:U:C2	2.52	0.45
2:B:1782:U:C2'	2:B:1783:U:H5'	2.46	0.45
2:B:2779:A:C6	2:B:2780:A:N6	2.85	0.45
2:B:3164:C:N4	2:B:3287:U:C4	2.84	0.45
2:B:3354:U:H5'	2:B:3356:G:H5'	1.98	0.45
2:B:727:G:C6	2:B:743:C:C5	3.05	0.45
2:B:815:G:OP1	41:OA:28:HIS:HB2	2.17	0.45
2:B:88:A:H2'	2:B:89:A:O4'	2.17	0.45
54:BB:145:ARG:CB	54:BB:145:ARG:HH11	2.29	0.45
3:C:55:U:H2'	3:C:56:G:H8	1.82	0.45
30:DA:105:VAL:HG12	30:DA:105:VAL:O	2.16	0.45
82:DC:231:LYS:HD2	82:DC:231:LYS:H	1.82	0.45
82:DC:672:LYS:HG3	82:DC:680:GLU:OE1	2.17	0.45
82:DC:83:ASP:O	82:DC:86:VAL:HB	2.17	0.45
31:EA:42:LEU:HD12	31:EA:42:LEU:N	2.32	0.45
1:A:860:U:C1'	57:EB:114:ARG:HE	2.30	0.45
57:EB:130:VAL:HA	57:EB:162:ILE:CD1	2.47	0.45
57:EB:5:GLN:CD	57:EB:18:LEU:HB3	2.37	0.45
83:EC:6782:C:O2	83:EC:6782:C:H2'	2.17	0.45
6:F:97:ASN:O	6:F:100:ASN:HB2	2.17	0.45
6:F:21:ARG:HB3	6:F:22:LEU:HD12	1.98	0.45
2:B:3010:U:H5''	7:G:14:LEU:HB2	1.99	0.45
7:G:86:VAL:HG13	7:G:160:VAL:CG1	2.47	0.45
59:GB:125:ALA:HA	59:GB:128:LEU:CD1	2.47	0.45
8:H:181:VAL:C	8:H:183:LYS:H	2.18	0.45
2:B:505:G:C4'	8:H:313:LEU:HD11	2.47	0.45
60:HB:89:GLY:HA2	60:HB:91:TYR:CZ	2.52	0.45
9:I:102:GLY:HA3	9:I:165:GLY:HA3	1.99	0.45
9:I:182:GLY:HA3	9:I:191:ASP:O	2.17	0.45
9:I:94:ASN:OD1	9:I:97:ALA:N	2.45	0.45
2:B:2527:G:O4'	12:L:241:LYS:HE2	2.17	0.45
64:LB:17:ALA:HA	64:LB:30:VAL:HA	1.98	0.45
13:M:121:LYS:NZ	13:M:121:LYS:HA	2.32	0.45
13:M:172:ILE:HB	44:RA:90:ASN:ND2	2.20	0.45
39:MA:3:GLY:HA3	39:MA:50:SER:OG	2.17	0.45
1:A:1458:G:H4'	65:MB:123:TYR:HE2	1.82	0.45
15:O:53:THR:OG1	15:O:61:ARG:HB2	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
65:MB:121:ILE:HD11	68:PB:125:ILE:HD12	1.98	0.45
18:R:81:VAL:O	18:R:85:TRP:CB	2.65	0.45
70:RB:26:LEU:CD2	70:RB:38:SER:HB2	2.47	0.45
70:RB:48:HIS:HD2	70:RB:50:LEU:HD23	1.81	0.45
70:RB:55:PRO:HB3	70:RB:91:ILE:HD11	1.98	0.45
20:T:82:LYS:C	20:T:84:LEU:H	2.19	0.45
46:TA:33:ALA:O	46:TA:34:SER:HB3	2.17	0.45
52:ZA:230:TRP:HZ2	72:TB:46:TYR:CE1	2.35	0.45
72:TB:65:LEU:N	72:TB:65:LEU:HD13	2.32	0.45
21:U:146:ILE:O	21:U:147:GLU:HB3	2.17	0.45
73:UB:56:LYS:HD3	73:UB:72:VAL:HG12	1.98	0.45
22:V:80:THR:HA	22:V:100:THR:O	2.17	0.45
48:VA:11:TYR:CE2	48:VA:15:LEU:CD2	3.00	0.45
23:W:84:THR:O	23:W:87:ALA:HB3	2.16	0.45
49:WA:87:LYS:HE3	49:WA:108:SER:N	2.32	0.45
49:WA:146:GLY:HA3	49:WA:181:TRP:CZ3	2.48	0.45
50:XA:109:ASN:HD21	50:XA:111:ILE:CG2	2.30	0.45
76:XB:7:SER:HB2	76:XB:11:ASN:HA	1.99	0.45
76:XB:71:LEU:HD12	76:XB:73:TYR:OH	2.17	0.45
25:Y:102:ARG:HG2	25:Y:102:ARG:NH1	2.32	0.45
52:ZA:125:ILE:O	52:ZA:129:ILE:HG13	2.17	0.45
52:ZA:148:LEU:HB3	52:ZA:174:ARG:CZ	2.46	0.45
52:ZA:85:PRO:HG3	52:ZA:98:PHE:CE1	2.51	0.45
1:A:1258:U:H2'	1:A:1259:U:H6	1.82	0.44
1:A:1274:C:H2'	1:A:1274:C:O2	2.17	0.44
1:A:1334:U:H4'	70:RB:85:ARG:HH22	1.81	0.44
1:A:1483:A:H61	1:A:1591:C:C1'	2.30	0.44
1:A:1764:C:H2'	1:A:1767:G:N7	2.32	0.44
1:A:1798:U:H3'	51:YA:116:LYS:NZ	2.32	0.44
1:A:754:A:N3	1:A:793:A:H2'	2.30	0.44
1:A:78:A:H2'	1:A:79:C:C6	2.53	0.44
1:A:820:U:H2'	1:A:821:U:C4'	2.45	0.44
1:A:628:G:O6	1:A:969:C:H5''	2.17	0.44
1:A:993:A:H2'	1:A:994:G:O4'	2.16	0.44
27:AA:54:LEU:HG	27:AA:122:CYS:SG	2.57	0.44
2:B:1008:U:H2'	2:B:1009:A:H8	1.82	0.44
2:B:219:A:H1'	2:B:1390:A:C5	2.52	0.44
2:B:1413:G:H2'	2:B:1414:G:H8	1.81	0.44
2:B:1446:A:H5''	21:U:65:SER:CB	2.42	0.44
2:B:1485:G:H2'	2:B:1486:G:C8	2.52	0.44
2:B:1714:A:N6	2:B:1730:G:H1'	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2429:G:H2'	2:B:2430:A:C8	2.50	0.44
2:B:3305:A:H5''	7:G:272:TYR:CE2	2.52	0.44
54:BB:131:LEU:N	54:BB:131:LEU:HD22	2.32	0.44
54:BB:175:PHE:CE1	54:BB:195:ILE:HD11	2.51	0.44
54:BB:86:PHE:CE1	54:BB:87:MET:HG2	2.52	0.44
3:C:109:A:C2'	3:C:110:C:H5'	2.47	0.44
3:C:37:A:N7	3:C:104:A:N7	2.66	0.44
82:DC:454:ILE:CG1	82:DC:455:GLY:N	2.79	0.44
82:DC:468:THR:HG22	82:DC:469:LEU:H	1.82	0.44
6:F:30:ARG:HB2	6:F:76:PHE:CZ	2.52	0.44
32:FA:99:ALA:HA	32:FA:100:PRO:HD3	1.82	0.44
32:FA:38:GLN:HG3	32:FA:53:PHE:CE2	2.52	0.44
7:G:166:ILE:HD11	7:G:171:LEU:HB2	1.99	0.44
7:G:190:GLU:HA	7:G:193:ASP:HB2	1.98	0.44
7:G:245:GLY:HA3	7:G:248:LYS:CE	2.43	0.44
59:GB:128:LEU:O	59:GB:129:ILE:C	2.55	0.44
35:IA:13:THR:OG1	35:IA:72:ARG:HD3	2.17	0.44
61:IB:33:ARG:HD3	61:IB:33:ARG:C	2.36	0.44
11:K:222:HIS:ND1	11:K:223:PHE:N	2.65	0.44
37:KA:39:GLN:HG3	37:KA:40:ASP:H	1.82	0.44
37:KA:53:TYR:HD1	37:KA:53:TYR:H	1.65	0.44
38:LA:9:ARG:HG3	38:LA:34:HIS:NE2	2.33	0.44
68:PB:16:ARG:HG2	68:PB:16:ARG:HH11	1.82	0.44
17:Q:56:PRO:CD	17:Q:73:ARG:O	2.64	0.44
70:RB:34:LEU:HG	70:RB:87:HIS:HB2	1.99	0.44
72:TB:75:ILE:HG12	72:TB:128:PHE:HD1	1.82	0.44
21:U:71:ALA:O	21:U:73:GLY:N	2.50	0.44
49:WA:57:PRO:HD2	66:NB:100:GLN:NE2	2.32	0.44
24:X:29:ILE:HG21	24:X:37:ALA:HA	1.99	0.44
25:Y:124:VAL:CG1	25:Y:125:ALA:H	2.15	0.44
78:ZB:9:LEU:CD2	78:ZB:55:VAL:HG22	2.47	0.44
1:A:122:U:H4'	54:BB:82:TYR:OH	2.17	0.44
1:A:1309:C:H2'	1:A:1310:U:H6	1.82	0.44
1:A:1466:G:O2'	1:A:1467:C:H5'	2.17	0.44
1:A:1483:A:H61	1:A:1591:C:H1'	1.82	0.44
1:A:313:U:H4'	1:A:314:C:C5'	2.47	0.44
1:A:353:A:H2'	1:A:354:C:H5'	1.99	0.44
1:A:388:G:C4	1:A:389:G:C8	3.05	0.44
1:A:491:C:O2'	1:A:492:A:H5'	2.17	0.44
1:A:646:C:H2'	1:A:647:G:C8	2.52	0.44
1:A:959:U:C6	63:KB:17:PRO:HG2	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:AA:104:ASN:HD21	27:AA:108:GLU:HB2	1.82	0.44
27:AA:120:LYS:HB2	27:AA:137:VAL:HG21	1.99	0.44
53:AB:6:SER:O	53:AB:10:LYS:HB2	2.18	0.44
2:B:1201:C:H2'	2:B:1202:A:O5'	2.18	0.44
2:B:1231:A:H1'	2:B:1278:A:H62	1.81	0.44
2:B:1907:C:H2'	2:B:1908:A:O4'	2.17	0.44
2:B:220:G:N2	2:B:1390:A:C2	2.86	0.44
2:B:2571:U:C4'	2:B:2572:C:H5'	2.40	0.44
2:B:2932:U:O2	2:B:2934:A:C8	2.71	0.44
2:B:3011:A:O3'	2:B:3012:A:H4'	2.18	0.44
2:B:3309:G:H3'	2:B:3310:A:H8	1.82	0.44
2:B:3336:A:H2'	2:B:3337:G:O4'	2.16	0.44
2:B:388:G:O2'	21:U:17:ALA:HA	2.18	0.44
2:B:834:U:C2'	2:B:835:G:H5'	2.48	0.44
2:B:999:G:H21	2:B:1002:A:N6	2.13	0.44
54:BB:235:TYR:O	54:BB:236:ILE:HG23	2.16	0.44
1:A:556:A:C5'	80:BC:56:MET:SD	3.05	0.44
55:CB:107:LYS:HG2	55:CB:111:VAL:CG2	2.46	0.44
55:CB:42:LEU:CB	55:CB:47:SER:HA	2.48	0.44
4:D:11:A:H4'	4:D:13:A:C5	2.51	0.44
4:D:88:G:H4'	24:X:117:ARG:NH1	2.32	0.44
30:DA:45:ILE:HG22	30:DA:47:ALA:H	1.81	0.44
30:DA:3:LYS:CG	30:DA:8:VAL:HG11	2.44	0.44
82:DC:784:LEU:CD2	82:DC:794:PRO:HB3	2.47	0.44
1:A:856:A:N6	57:EB:116:ARG:HG3	2.31	0.44
57:EB:12:ALA:N	57:EB:13:PRO:HD3	2.32	0.44
83:EC:6930:G:H2'	83:EC:6931:U:C5'	2.47	0.44
6:F:202:VAL:HG12	6:F:217:GLN:HB3	1.97	0.44
32:FA:139:ARG:HG2	32:FA:144:VAL:HG12	1.97	0.44
32:FA:139:ARG:C	32:FA:141:ALA:H	2.21	0.44
32:FA:145:VAL:O	32:FA:146:GLU:HB2	2.17	0.44
2:B:937:G:H5'	32:FA:26:ARG:HB3	1.99	0.44
58:FB:142:LYS:HD2	58:FB:146:ARG:NH1	2.26	0.44
1:A:396:G:H3'	58:FB:47:ARG:NH1	2.31	0.44
2:B:3304:U:H1'	7:G:334:ARG:HH21	1.81	0.44
59:GB:54:ARG:HA	59:GB:57:ARG:HE	1.82	0.44
8:H:109:TRP:HE3	8:H:109:TRP:HA	1.81	0.44
2:B:357:A:O4'	8:H:81:GLY:HA3	2.18	0.44
9:I:75:LEU:HD12	9:I:112:LYS:HD2	1.99	0.44
10:J:41:ILE:N	10:J:41:ILE:HD12	2.32	0.44
10:J:42:LEU:HB3	10:J:47:PHE:O	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:JA:27:ARG:HG3	36:JA:28:VAL:HG23	1.99	0.44
11:K:221:LYS:CB	11:K:227:GLY:HA3	2.47	0.44
1:A:866:G:H5''	63:KB:3:ARG:H	1.82	0.44
64:LB:39:ILE:HD12	64:LB:39:ILE:N	2.33	0.44
65:MB:22:LEU:O	65:MB:22:LEU:HD13	2.16	0.44
14:N:47:PRO:HG2	14:N:48:LEU:CD2	2.44	0.44
14:N:62:SER:HA	14:N:65:LEU:HD13	1.99	0.44
40:NA:5:THR:HB	40:NA:7:ILE:HG12	1.99	0.44
15:O:141:ARG:HG3	15:O:143:ARG:O	2.16	0.44
68:PB:12:GLN:CB	68:PB:15:LEU:HD13	2.44	0.44
17:Q:76:THR:O	17:Q:80:VAL:HG23	2.17	0.44
12:L:160:ILE:HD12	19:S:22:LEU:CD1	2.46	0.44
20:T:37:ARG:HD3	20:T:108:ILE:HD11	1.99	0.44
21:U:37:ASN:HB2	21:U:117:ILE:HG22	2.00	0.44
47:UA:10:ILE:HD13	47:UA:30:GLU:HG2	1.99	0.44
48:VA:33:VAL:HG22	48:VA:34:SER:H	1.82	0.44
2:B:562:C:H5''	24:X:71:LYS:HG3	1.99	0.44
4:D:89:G:C4'	24:X:84:ARG:HB3	2.47	0.44
51:YA:119:THR:HG21	51:YA:161:ILE:HD11	1.99	0.44
1:A:1125:A:C5	1:A:1126:G:H1'	2.52	0.44
1:A:1139:A:H2'	1:A:1140:G:O4'	2.16	0.44
1:A:1282:U:H2'	1:A:1283:U:C6	2.52	0.44
1:A:1512:G:H2'	1:A:1513:G:H8	1.82	0.44
1:A:1590:G:O2'	1:A:1591:C:H5'	2.17	0.44
1:A:1593:A:H2'	1:A:1594:G:H5'	1.99	0.44
1:A:1673:G:H2'	1:A:1674:C:H6	1.82	0.44
1:A:177:U:C3'	1:A:178:U:H5''	2.48	0.44
1:A:304:U:H2'	1:A:305:C:O4'	2.17	0.44
1:A:448:C:H2'	1:A:449:C:H6	1.80	0.44
1:A:460:A:H2'	54:BB:27:TYR:OH	2.17	0.44
1:A:461:G:H4'	54:BB:26:CYS:SG	2.58	0.44
27:AA:85:TRP:HZ2	27:AA:87:ARG:HH21	1.65	0.44
53:AB:171:ALA:HA	53:AB:173:ARG:HH21	1.82	0.44
2:B:1760:A:H5'	2:B:1761:C:OP2	2.18	0.44
2:B:819:U:H5'	2:B:2138:A:C2	2.53	0.44
2:B:2162:U:H5''	6:F:238:ILE:CD1	2.45	0.44
2:B:2249:G:H1'	2:B:2272:G:C5	2.52	0.44
2:B:230:U:H2'	2:B:231:G:N9	2.33	0.44
2:B:2581:U:H2'	2:B:2582:C:C6	2.52	0.44
2:B:2724:U:H5''	25:Y:54:HIS:CE1	2.50	0.44
2:B:2777:G:H22	32:FA:58:MET:HE1	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2855:U:OP2	14:N:6:ALA:HB3	2.17	0.44
2:B:2894:C:H2'	2:B:2895:G:H8	1.82	0.44
2:B:1902:G:P	2:B:2918:G:H5'	2.56	0.44
2:B:3187:A:H5''	18:R:8:LYS:CD	2.48	0.44
2:B:3197:G:O2'	2:B:3198:U:H5''	2.17	0.44
2:B:3281:U:H2'	2:B:3282:U:C6	2.52	0.44
2:B:3354:U:H5'	2:B:3356:G:H4'	1.99	0.44
2:B:588:G:H22	10:J:23:LYS:NZ	2.14	0.44
2:B:826:G:H2'	2:B:827:A:H5'	1.99	0.44
2:B:829:U:H1'	2:B:866:A:C2	2.52	0.44
2:B:88:A:H3'	2:B:89:A:H8	1.82	0.44
2:B:985:U:O2'	2:B:986:U:H5'	2.18	0.44
3:C:19:C:C4	3:C:20:U:C4	3.06	0.44
55:CB:48:PHE:HE2	55:CB:68:ILE:H	1.65	0.44
4:D:49:G:H4'	4:D:50:U:O4'	2.17	0.44
56:DB:199:GLN:O	56:DB:203:GLU:HG2	2.17	0.44
82:DC:249:PHE:HD1	82:DC:269:LEU:HB2	1.80	0.44
82:DC:27:HIS:CD2	82:DC:28:VAL:HG22	2.52	0.44
82:DC:338:ILE:HG13	82:DC:342:LEU:HG	2.00	0.44
82:DC:374:PRO:HB3	82:DC:449:PRO:CB	2.47	0.44
82:DC:567:VAL:HA	82:DC:722:PRO:HB3	1.99	0.44
5:E:197:ASN:HD22	5:E:197:ASN:HA	1.65	0.44
83:EC:6772:G:C2	83:EC:6822:U:H5''	2.52	0.44
83:EC:6835:U:C2	83:EC:6850:C:H5	2.35	0.44
58:FB:6:ASP:C	58:FB:8:ARG:H	2.21	0.44
2:B:3005:A:H5''	7:G:98:GLY:HA3	1.99	0.44
33:GA:36:ASP:OD2	33:GA:39:PHE:HB2	2.17	0.44
8:H:119:ARG:NH2	8:H:271:LYS:HG2	2.33	0.44
8:H:338:LYS:C	8:H:340:GLY:H	2.20	0.44
9:I:148:ILE:O	9:I:151:GLN:HG2	2.17	0.44
9:I:196:ARG:HE	9:I:200:PHE:HE2	1.65	0.44
9:I:198:TYR:HD2	9:I:198:TYR:H	1.65	0.44
9:I:49:TYR:O	9:I:145:PHE:CE2	2.70	0.44
36:JA:9:ILE:CD1	36:JA:9:ILE:H	2.26	0.44
11:K:102:VAL:CG1	11:K:130:ILE:HD13	2.47	0.44
11:K:155:LYS:CE	11:K:158:LYS:H	2.15	0.44
2:B:1178:G:N3	37:KA:19:SER:HA	2.32	0.44
64:LB:29:HIS:O	64:LB:29:HIS:ND1	2.50	0.44
13:M:99:ILE:HG22	13:M:101:VAL:HG22	1.98	0.44
39:MA:51:ILE:HA	39:MA:54:VAL:HG23	1.99	0.44
65:MB:89:MET:HG3	65:MB:107:ILE:HG21	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:NA:8:ALA:C	40:NA:9:ILE:HG13	2.37	0.44
66:NB:64:ASP:O	66:NB:65:ILE:HD13	2.16	0.44
50:XA:50:VAL:H	67:OB:109:LEU:HD11	1.82	0.44
50:XA:198:MET:HG3	67:OB:87:GLU:CA	2.47	0.44
16:P:92:ARG:HH22	16:P:95:ASP:HB3	1.82	0.44
68:PB:32:LEU:HD12	68:PB:43:SER:OG	2.16	0.44
17:Q:79:GLU:O	17:Q:82:ALA:HB3	2.17	0.44
69:QB:70:GLN:HE22	69:QB:119:LYS:HD2	1.81	0.44
18:R:123:LEU:HD11	20:T:193:GLN:HB3	1.99	0.44
2:B:786:A:C5'	22:V:146:SER:HB3	2.47	0.44
22:V:55:SER:C	22:V:57:ILE:H	2.21	0.44
48:VA:19:LEU:HG	48:VA:88:PHE:HZ	1.81	0.44
48:VA:32:ASN:H	48:VA:32:ASN:ND2	2.15	0.44
23:W:164:LEU:O	23:W:168:ALA:HB3	2.18	0.44
24:X:169:SER:HB3	24:X:171:PHE:HD1	1.75	0.44
11:K:223:PHE:HE2	24:X:35:VAL:HB	1.83	0.44
50:XA:134:LYS:HG2	50:XA:138:TYR:CE2	2.53	0.44
50:XA:185:ARG:HB2	71:SB:45:ALA:H	1.81	0.44
51:YA:70:LEU:HD12	51:YA:82:ARG:HB2	1.99	0.44
52:ZA:53:ILE:HG23	52:ZA:72:LEU:CD2	2.47	0.44
1:A:1085:G:N2	1:A:1088:A:OP2	2.46	0.44
1:A:1484:G:N2	1:A:1605:G:H22	2.16	0.44
1:A:1670:G:H22	1:A:1730:A:H2'	1.81	0.44
1:A:179:A:H61	56:DB:202:ARG:NH2	2.15	0.44
1:A:271:A:H5'	1:A:272:U:OP2	2.18	0.44
1:A:684:A:H3'	1:A:685:A:C5'	2.47	0.44
53:AB:153:ALA:O	53:AB:154:ASP:HB2	2.18	0.44
2:B:1077:U:H1'	2:B:1083:G:N2	2.33	0.44
2:B:107:A:H8	2:B:107:A:O5'	2.00	0.44
2:B:1135:A:OP2	33:GA:5:LYS:HG3	2.18	0.44
2:B:1200:A:H5'	2:B:1201:C:O5'	2.17	0.44
2:B:1245:A:N3	2:B:1272:C:H4'	2.33	0.44
2:B:1204:A:N6	2:B:1300:G:H1'	2.25	0.44
2:B:1435:A:N1	8:H:93:MET:CE	2.80	0.44
2:B:1636:U:H5'	31:EA:36:HIS:HE1	1.83	0.44
2:B:1643:A:H5''	2:B:1644:C:C4	2.52	0.44
2:B:1685:C:H2'	2:B:1686:U:C6	2.52	0.44
2:B:16:A:N6	3:C:143:U:H3	2.14	0.44
2:B:185:C:C4	2:B:186:U:C2	3.05	0.44
2:B:2143:A:N1	2:B:2145:A:H1'	2.32	0.44
2:B:234:G:O2'	2:B:235:A:H5'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2432:A:C2	19:S:125:SER:HB3	2.51	0.44
2:B:2645:G:O2'	2:B:2646:C:H5'	2.18	0.44
2:B:2696:A:H2'	2:B:2697:A:C8	2.53	0.44
2:B:3061:G:H2'	2:B:3062:G:H8	1.82	0.44
2:B:939:U:H2'	2:B:940:G:C8	2.49	0.44
54:BB:9:LEU:HB2	54:BB:30:ARG:CD	2.47	0.44
4:D:13:A:H5'	4:D:14:U:C5	2.52	0.44
56:DB:22:HIS:CD2	56:DB:25:ARG:HD3	2.53	0.44
82:DC:725:GLN:HG2	82:DC:801:TRP:HB3	2.00	0.44
5:E:121:PRO:HB3	83:EC:6773:G:OP2	2.17	0.44
2:B:2563:G:OP1	31:EA:55:LYS:HB2	2.16	0.44
83:EC:6832:G:H2'	83:EC:6833:G:C5'	2.43	0.44
6:F:181:LYS:NZ	6:F:181:LYS:HB2	2.33	0.44
32:FA:73:LEU:HD13	32:FA:109:TYR:CZ	2.52	0.44
2:B:965:A:O3'	32:FA:44:ASN:ND2	2.50	0.44
1:A:187:G:H5''	58:FB:138:ASN:HB2	1.98	0.44
7:G:74:GLU:CG	7:G:325:LYS:HE3	2.43	0.44
2:B:3004:C:H5'	7:G:92:TYR:HE2	1.81	0.44
59:GB:181:ALA:HA	59:GB:185:GLY:HA3	2.00	0.44
1:A:381:C:OP1	59:GB:2:PRO:HB3	2.18	0.44
59:GB:80:LEU:O	59:GB:83:VAL:HG22	2.17	0.44
60:HB:76:LEU:H	60:HB:76:LEU:HD22	1.82	0.44
9:I:17:GLN:HG3	25:Y:20:ARG:CA	2.48	0.44
1:A:373:G:OP1	61:IB:96:LYS:HA	2.17	0.44
61:IB:96:LYS:HE2	61:IB:97:TYR:CE1	2.51	0.44
11:K:121:LYS:HA	11:K:124:LEU:HB3	1.98	0.44
65:MB:13:LYS:HG3	65:MB:14:THR:H	1.82	0.44
40:NA:53:TYR:CA	40:NA:56:ARG:HB3	2.46	0.44
15:O:125:MET:HB3	15:O:127:PHE:HE1	1.82	0.44
17:Q:56:PRO:HD3	17:Q:75:PHE:CE1	2.52	0.44
69:QB:49:ASP:O	69:QB:50:ALA:HB3	2.17	0.44
18:R:39:ILE:HG13	18:R:44:VAL:HA	1.99	0.44
19:S:61:ILE:CG2	19:S:133:ILE:HA	2.47	0.44
72:TB:79:PHE:HB2	72:TB:125:ILE:CG2	2.46	0.44
22:V:108:ALA:O	22:V:111:ARG:HB3	2.17	0.44
23:W:134:HIS:CD2	23:W:137:ALA:HB2	2.53	0.44
49:WA:122:ILE:HB	49:WA:134:TRP:CD1	2.49	0.44
50:XA:74:VAL:HG21	50:XA:116:LYS:HB3	1.99	0.44
64:LB:114:ARG:HD2	76:XB:59:TYR:CE2	2.51	0.44
51:YA:125:VAL:HG21	51:YA:169:SER:HB3	1.99	0.44
77:YB:40:CYS:SG	77:YB:41:LEU:N	2.90	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1029:U:OP2	76:XB:12:LYS:HD2	2.17	0.44
1:A:1480:G:C2'	1:A:1481:C:H5'	2.47	0.44
1:A:165:G:H2'	1:A:166:C:O4'	2.18	0.44
1:A:625:C:H4'	1:A:940:A:H4'	1.99	0.44
1:A:952:A:H2'	1:A:953:G:O4'	2.17	0.44
27:AA:95:PHE:CD1	28:BA:22:VAL:HB	2.53	0.44
79:AC:21:CYS:HB3	79:AC:26:SER:H	1.82	0.44
2:B:1782:U:H2'	2:B:1783:U:H5'	1.99	0.44
2:B:1827:C:H2'	2:B:1828:A:H8	1.79	0.44
2:B:1945:A:H2'	2:B:1946:A:C8	2.53	0.44
2:B:2081:U:H2'	2:B:2082:U:C4'	2.48	0.44
2:B:217:U:H4'	30:DA:100:HIS:CB	2.48	0.44
2:B:2291:A:H2'	2:B:2292:U:H6	1.82	0.44
2:B:2633:U:O2'	2:B:2634:U:H5'	2.17	0.44
2:B:2675:C:H2'	2:B:2676:A:C8	2.53	0.44
2:B:2736:A:H4'	25:Y:71:SER:CB	2.47	0.44
2:B:2894:C:H2'	2:B:2895:G:C8	2.53	0.44
2:B:296:A:C2'	2:B:297:G:H5'	2.47	0.44
2:B:299:G:H2'	2:B:300:G:C8	2.52	0.44
2:B:3045:G:H2'	2:B:3046:A:O4'	2.17	0.44
2:B:3053:G:H2'	2:B:3054:U:O4'	2.18	0.44
2:B:3113:A:C2	2:B:3122:A:C4	3.05	0.44
2:B:437:G:H1	2:B:622:A:H61	1.66	0.44
2:B:686:G:C2	2:B:695:C:C2	3.05	0.44
2:B:68:C:O3'	19:S:177:GLY:HA2	2.18	0.44
2:B:768:C:H2'	2:B:769:G:H5'	1.98	0.44
4:D:67:G:C2'	4:D:68:C:H5'	2.47	0.44
4:D:9:C:H2'	4:D:10:C:H5'	1.99	0.44
2:B:215:G:H5''	30:DA:12:ARG:HG3	2.00	0.44
82:DC:384:LYS:HB3	82:DC:397:PHE:HB3	2.00	0.44
82:DC:571:SER:HB2	82:DC:720:ALA:HB2	1.98	0.44
6:F:89:TYR:HB2	6:F:100:ASN:HD22	1.81	0.44
58:FB:143:TRP:O	58:FB:147:ALA:HB3	2.18	0.44
58:FB:172:ARG:HB3	58:FB:175:GLN:HB2	2.00	0.44
1:A:397:A:H5''	58:FB:47:ARG:NH1	2.32	0.44
7:G:8:ALA:HB1	7:G:9:PRO:CD	2.45	0.44
8:H:351:PRO:CA	11:K:70:LYS:HG3	2.48	0.44
34:HA:89:VAL:O	34:HA:89:VAL:HG13	2.17	0.44
61:IB:86:ILE:HG21	61:IB:123:VAL:HG11	1.98	0.44
12:L:183:LYS:HA	12:L:186:LEU:CD1	2.47	0.44
2:B:1485:G:H21	38:LA:4:ARG:HE	1.64	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:LA:8:ARG:NH1	38:LA:8:ARG:HG2	2.33	0.44
14:N:174:THR:CG2	14:N:176:LEU:HB2	2.48	0.44
14:N:178:ARG:HB2	14:N:179:PRO:HD3	1.99	0.44
66:NB:110:THR:C	66:NB:112:TYR:N	2.71	0.44
1:A:1192:C:H4'	66:NB:142:TYR:HD1	1.82	0.44
66:NB:14:LYS:HB3	66:NB:76:SER:OG	2.17	0.44
66:NB:79:TYR:HB3	66:NB:115:THR:HG21	1.99	0.44
69:QB:98:GLY:O	69:QB:102:ARG:CB	2.62	0.44
69:QB:57:ARG:HD3	69:QB:104:VAL:HG21	2.00	0.44
20:T:84:LEU:CD1	20:T:102:LEU:HD21	2.45	0.44
20:T:9:ILE:O	20:T:36:VAL:HG22	2.18	0.44
72:TB:101:TYR:HB3	72:TB:112:ASP:HB2	1.98	0.44
72:TB:93:LEU:H	72:TB:93:LEU:HD23	1.83	0.44
21:U:168:LEU:HB3	21:U:172:GLN:HG2	1.99	0.44
21:U:38:GLY:HA2	21:U:113:TYR:HE1	1.83	0.44
22:V:170:ARG:O	22:V:171:LYS:CB	2.66	0.44
48:VA:32:ASN:ND2	48:VA:184:GLY:HA3	2.31	0.44
74:VB:123:LYS:HD2	74:VB:124:ARG:H	1.82	0.44
75:WB:80:LEU:HD22	75:WB:101:TYR:CE2	2.52	0.44
4:D:100:C:OP1	24:X:52:LYS:HE3	2.17	0.44
76:XB:81:ALA:O	76:XB:82:ARG:O	2.36	0.44
51:YA:121:ILE:HG23	51:YA:165:ARG:HD3	1.99	0.44
26:Z:37:LEU:HB2	26:Z:56:VAL:CG1	2.47	0.44
1:A:1010:C:H2'	1:A:1011:G:O4'	2.17	0.44
1:A:1460:A:H2'	1:A:1461:C:H5'	1.99	0.44
1:A:152:U:C3'	1:A:153:G:H5''	2.47	0.44
1:A:1557:U:H3'	1:A:1559:A:O2'	2.17	0.44
1:A:317:C:O4'	1:A:353:A:H2	2.01	0.44
1:A:330:G:H3'	58:FB:172:ARG:NH2	2.30	0.44
1:A:740:A:C3'	1:A:741:C:H5''	2.48	0.44
53:AB:167:PHE:CE1	53:AB:202:LEU:HD13	2.52	0.44
2:B:1049:C:H2'	2:B:1050:U:C6	2.53	0.44
2:B:1235:U:H4'	2:B:1236:G:H3'	2.00	0.44
2:B:1332:A:H2'	2:B:1333:C:C6	2.52	0.44
2:B:1350:A:N7	2:B:1352:A:H3'	2.32	0.44
2:B:1377:G:H2'	2:B:1378:U:C6	2.53	0.44
2:B:1508:C:H5''	2:B:2354:C:H1'	1.99	0.44
2:B:1639:C:H5'	38:LA:52:GLN:OE1	2.16	0.44
2:B:1756:C:O2'	2:B:1757:A:H5'	2.17	0.44
2:B:2157:G:N2	2:B:2177:G:H1'	2.32	0.44
2:B:2434:U:H6	2:B:2593:A:O2'	1.88	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2828:G:H4'	14:N:4:ARG:HH21	1.82	0.44
2:B:28:C:C2	2:B:57:A:N1	2.86	0.44
2:B:3018:C:H2'	2:B:3019:U:O4'	2.18	0.44
2:B:3051:U:H2'	2:B:3052:G:O4'	2.18	0.44
2:B:637:C:HO2'	2:B:638:C:C5'	2.30	0.44
2:B:822:G:H2'	2:B:823:C:C6	2.52	0.44
2:B:830:A:H62	2:B:864:G:H21	1.66	0.44
28:BA:59:HIS:O	28:BA:61:LYS:HE2	2.18	0.44
54:BB:206:ASP:O	54:BB:222:LEU:HB2	2.17	0.44
80:BC:30:PRO:HB2	80:BC:34:ALA:HB3	1.99	0.44
29:CA:82:LEU:HB3	29:CA:84:PHE:CD2	2.53	0.44
55:CB:44:ASN:O	55:CB:45:LYS:HG2	2.17	0.44
4:D:11:A:N7	9:I:18:THR:HG23	2.32	0.44
1:A:155:U:H4'	56:DB:59:GLN:N	2.32	0.44
82:DC:74:ALA:HB2	82:DC:103:ILE:HB	1.98	0.44
82:DC:236:ASP:OD2	82:DC:239:LYS:HB3	2.17	0.44
82:DC:42:ARG:NH2	82:DC:325:ARG:HH11	2.15	0.44
82:DC:412:ARG:CA	82:DC:428:ILE:HG12	2.47	0.44
82:DC:518:VAL:O	82:DC:518:VAL:HG13	2.17	0.44
2:B:2483:G:O6	5:E:97:LYS:NZ	2.50	0.44
31:EA:27:LYS:O	31:EA:42:LEU:HD13	2.18	0.44
57:EB:97:ARG:HG3	57:EB:97:ARG:HH11	1.82	0.44
83:EC:6951:C:H2'	83:EC:6952:U:O4'	2.18	0.44
32:FA:24:LYS:HG3	32:FA:26:ARG:HH21	1.83	0.44
58:FB:156:VAL:O	58:FB:160:PHE:HB2	2.17	0.44
58:FB:84:HIS:CD2	58:FB:90:LEU:HD12	2.52	0.44
7:G:211:GLN:HG2	7:G:285:VAL:HG23	2.00	0.44
2:B:3304:U:H5''	7:G:332:ARG:NH1	2.33	0.44
7:G:354:VAL:HG23	7:G:354:VAL:O	2.18	0.44
7:G:49:TYR:CD1	7:G:171:LEU:HD11	2.53	0.44
9:I:48:LYS:HB3	9:I:145:PHE:CZ	2.53	0.44
63:KB:85:PRO:HB2	63:KB:87:ASP:OD2	2.17	0.44
39:MA:45:LYS:HA	39:MA:48:ARG:HG2	1.98	0.44
1:A:1330:G:H21	67:OB:6:THR:HG21	1.83	0.44
67:OB:72:LYS:HG2	67:OB:72:LYS:O	2.16	0.44
68:PB:54:LEU:HD22	68:PB:54:LEU:N	2.33	0.44
68:PB:89:GLN:C	68:PB:91:ASP:N	2.70	0.44
2:B:73:C:C6	17:Q:59:ARG:HD2	2.53	0.44
69:QB:117:SER:CB	69:QB:123:ARG:HB2	2.47	0.44
19:S:122:ASN:HB3	19:S:129:TYR:CD2	2.52	0.44
19:S:169:LYS:HA	19:S:172:ARG:HH11	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:S:42:PRO:HG2	19:S:53:TYR:CE2	2.52	0.44
71:SB:5:LYS:N	71:SB:5:LYS:HD3	2.32	0.44
20:T:87:MET:O	20:T:88:VAL:HG23	2.17	0.44
21:U:44:ALA:HA	21:U:47:TYR:HB3	2.00	0.44
22:V:96:PHE:CE1	22:V:114:ILE:HA	2.47	0.44
22:V:174:ARG:HG2	22:V:174:ARG:HH11	1.82	0.44
74:VB:62:THR:HG22	74:VB:69:SER:OG	2.18	0.44
2:B:1915:A:H4'	23:W:83:GLY:O	2.16	0.44
49:WA:129:LYS:O	49:WA:147:HIS:HB2	2.17	0.44
49:WA:21:THR:C	49:WA:291:SER:HB3	2.37	0.44
49:WA:290:VAL:HG23	49:WA:306:THR:CG2	2.48	0.44
49:WA:58:VAL:HG23	49:WA:59:ARG:H	1.83	0.44
50:XA:123:VAL:CG1	50:XA:124:THR:H	2.24	0.44
76:XB:11:ASN:O	76:XB:33:ASP:HB2	2.17	0.44
51:YA:208:GLN:O	51:YA:209:ASN:HB2	2.17	0.44
52:ZA:66:PHE:HD1	52:ZA:66:PHE:H	1.66	0.44
1:A:1030:A:OP1	76:XB:3:LYS:HE3	2.18	0.44
1:A:1194:A:H2'	1:A:1195:C:O4'	2.18	0.44
1:A:159:U:H5''	74:VB:117:LYS:CD	2.48	0.44
1:A:176:C:H3'	1:A:177:U:C6	2.53	0.44
1:A:702:G:H4'	1:A:703:G:OP1	2.17	0.44
2:B:1256:G:H1'	16:P:123:ARG:CG	2.47	0.44
2:B:1715:A:H2	2:B:1728:G:H1	1.63	0.44
2:B:1853:U:H2'	2:B:1854:C:C5	2.53	0.44
2:B:1873:U:C5	2:B:1874:A:N7	2.86	0.44
2:B:1898:G:O2'	2:B:1899:G:H5'	2.16	0.44
2:B:2554:A:H2'	38:LA:91:ARG:HH12	1.81	0.44
2:B:2615:G:C4	2:B:2616:C:C5	3.06	0.44
2:B:2765:C:C3'	46:TA:39:GLY:HA3	2.48	0.44
2:B:2939:G:H3'	7:G:2:SER:N	2.33	0.44
2:B:3353:G:N9	2:B:3356:G:H1'	2.33	0.44
2:B:641:C:H3'	2:B:641:C:C6	2.53	0.44
2:B:947:G:C6	2:B:1373:A:C6	3.06	0.44
54:BB:162:ILE:CG2	54:BB:163:ASP:N	2.81	0.44
54:BB:173:ILE:N	54:BB:173:ILE:HD12	2.33	0.44
54:BB:9:LEU:CD1	54:BB:30:ARG:HG3	2.47	0.44
2:B:1522:U:H3'	29:CA:113:LEU:CD2	2.48	0.44
29:CA:27:ARG:N	29:CA:27:ARG:HD2	2.33	0.44
1:A:395:U:H1'	56:DB:89:ASP:HB3	1.99	0.44
82:DC:126:LEU:HD23	82:DC:126:LEU:C	2.38	0.44
82:DC:308:LYS:N	82:DC:308:LYS:HD3	2.33	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:567:VAL:HA	82:DC:722:PRO:HA	2.00	0.44
82:DC:633:ILE:C	82:DC:633:ILE:HD12	2.38	0.44
82:DC:633:ILE:O	82:DC:633:ILE:HD12	2.18	0.44
5:E:64:SER:HB2	5:E:151:VAL:HG13	1.99	0.44
31:EA:46:ILE:HD11	31:EA:49:TYR:CD1	2.52	0.44
6:F:181:LYS:HD3	6:F:184:ARG:NE	2.33	0.44
2:B:3138:U:H5''	7:G:274:SER:O	2.17	0.44
59:GB:127:VAL:O	59:GB:131:GLN:HG3	2.17	0.44
9:I:242:SER:C	9:I:244:HIS:H	2.21	0.44
36:JA:96:ILE:HB	36:JA:121:ASN:ND2	2.25	0.44
37:KA:69:GLY:HA2	37:KA:85:PHE:HA	1.99	0.44
38:LA:22:VAL:HG12	38:LA:30:LEU:HD23	2.00	0.44
13:M:20:ILE:N	13:M:20:ILE:HD12	2.33	0.44
14:N:174:THR:HG21	14:N:176:LEU:HB2	1.99	0.44
14:N:3:ARG:NH1	14:N:63:GLU:OE2	2.50	0.44
15:O:82:ARG:HG2	15:O:112:LEU:CB	2.42	0.44
16:P:123:ARG:HH11	48:VA:46:ARG:HE	1.64	0.44
68:PB:89:GLN:O	68:PB:90:ASN:HB3	2.18	0.44
70:RB:53:LYS:HD2	70:RB:92:ASP:HB2	1.99	0.44
19:S:145:ASP:O	19:S:149:ASN:N	2.51	0.44
45:SA:12:ARG:HG2	45:SA:15:ARG:NH1	2.30	0.44
20:T:125:ARG:HE	20:T:125:ARG:HB3	1.70	0.44
47:UA:36:ARG:HD3	47:UA:45:LYS:O	2.18	0.44
22:V:33:TYR:OH	22:V:127:LEU:HD12	2.18	0.44
48:VA:41:VAL:O	48:VA:44:GLU:HB2	2.18	0.44
2:B:1724:U:C5	23:W:125:LYS:HE3	2.53	0.44
23:W:128:LYS:O	23:W:128:LYS:HG2	2.18	0.44
23:W:134:HIS:HE1	23:W:136:ARG:HE	1.66	0.44
49:WA:191:ASP:C	53:AB:222:VAL:HG23	2.38	0.44
75:WB:54:VAL:N	75:WB:55:PRO:CD	2.81	0.44
50:XA:152:PRO:C	50:XA:154:GLU:H	2.20	0.44
50:XA:84:ARG:HD3	50:XA:88:LYS:CE	2.47	0.44
77:YB:14:SER:HA	77:YB:17:ARG:HD2	2.00	0.44
78:ZB:13:ILE:HG12	78:ZB:30:VAL:HA	1.98	0.44
78:ZB:9:LEU:HD22	78:ZB:55:VAL:HG22	1.99	0.44
1:A:1020:A:C3'	1:A:1021:C:H5''	2.48	0.44
1:A:1058:U:C5	1:A:1061:A:N1	2.85	0.44
1:A:1077:C:H2'	1:A:1078:C:C6	2.52	0.44
1:A:202:A:H2'	1:A:203:U:O4'	2.17	0.44
1:A:945:U:O2'	1:A:946:U:H5'	2.18	0.44
53:AB:36:GLY:C	53:AB:51:ARG:HD3	2.38	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
79:AC:19:ARG:HG3	79:AC:19:ARG:HH11	1.83	0.44
2:B:1294:A:O2'	2:B:1295:G:H8	2.00	0.44
2:B:1920:U:H5'	2:B:1933:A:N6	2.33	0.44
2:B:2107:A:H3'	2:B:2108:C:H6	1.83	0.44
2:B:2258:U:H2'	2:B:2259:A:C8	2.53	0.44
2:B:3007:U:H2'	2:B:3008:A:C8	2.53	0.44
2:B:3024:A:HO2'	13:M:97:PHE:HE2	1.64	0.44
2:B:3278:C:H3'	2:B:3279:A:C5'	2.48	0.44
2:B:503:C:H1'	10:J:23:LYS:HD2	1.99	0.44
2:B:572:A:H2'	2:B:573:C:C6	2.53	0.44
2:B:719:U:O2'	2:B:720:A:H4'	2.18	0.44
2:B:726:G:H5'	2:B:727:G:OP1	2.18	0.44
2:B:946:U:H3	2:B:1373:A:N6	2.14	0.44
54:BB:106:LYS:HG3	54:BB:108:ARG:NH1	2.33	0.44
29:CA:54:TYR:CD1	29:CA:54:TYR:N	2.85	0.44
30:DA:89:LYS:CB	30:DA:93:ALA:HB3	2.47	0.44
82:DC:105:SER:HA	82:DC:106:PRO:HD2	1.82	0.44
82:DC:126:LEU:HD23	82:DC:127:VAL:N	2.32	0.44
5:E:65:ILE:HG13	5:E:148:VAL:HA	2.00	0.44
57:EB:117:THR:CG2	57:EB:120:ALA:H	2.29	0.44
6:F:94:ALA:O	6:F:102:LEU:HD21	2.18	0.44
2:B:2425:G:H1'	6:F:230:VAL:HG11	2.00	0.44
32:FA:47:LYS:HG3	32:FA:48:TYR:CG	2.53	0.44
32:FA:47:LYS:HE2	32:FA:48:TYR:CZ	2.52	0.44
1:A:348:U:H4'	58:FB:14:THR:HA	2.00	0.44
58:FB:98:LYS:HE2	58:FB:172:ARG:HG2	1.98	0.44
7:G:167:ARG:HG3	7:G:167:ARG:NH1	2.32	0.44
7:G:22:ALA:O	7:G:23:ALA:C	2.55	0.44
7:G:56:ILE:HD11	7:G:356:LEU:HB2	1.99	0.44
7:G:68:HIS:O	7:G:70:ARG:HG2	2.18	0.44
59:GB:5:PRO:O	59:GB:7:THR:HG23	2.18	0.44
35:IA:72:ARG:NH2	35:IA:107:VAL:HG13	2.33	0.44
35:IA:26:LYS:HD2	35:IA:26:LYS:H	1.82	0.44
36:JA:76:VAL:CG2	36:JA:96:ILE:HA	2.48	0.44
11:K:203:TRP:CD1	11:K:204:PRO:HD2	2.53	0.44
11:K:228:SER:HA	11:K:232:ARG:NH2	2.32	0.44
37:KA:55:ALA:CB	37:KA:65:ARG:HD2	2.47	0.44
12:L:85:ASN:O	12:L:88:ALA:HB3	2.18	0.44
64:LB:91:THR:O	64:LB:92:LYS:HB3	2.18	0.44
39:MA:76:GLN:NE2	39:MA:81:ARG:HG3	2.28	0.44
14:N:68:ALA:O	14:N:72:ALA:HB2	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:NA:53:TYR:HA	40:NA:56:ARG:CB	2.45	0.44
40:NA:61:ILE:HA	40:NA:65:GLY:O	2.18	0.44
15:O:113:GLY:O	15:O:114:ILE:HB	2.17	0.44
4:D:55:A:H4'	15:O:151:SER:OG	2.18	0.44
2:B:362:U:OP1	41:OA:53:ALA:HB1	2.17	0.44
68:PB:88:ARG:HH21	68:PB:108:LYS:HE2	1.82	0.44
68:PB:28:ILE:O	68:PB:28:ILE:HD13	2.18	0.44
2:B:99:A:OP1	19:S:194:GLN:HB2	2.18	0.44
50:XA:62:ARG:HD2	71:SB:37:ALA:O	2.17	0.44
20:T:136:THR:CG2	20:T:137:THR:N	2.65	0.44
47:UA:39:CYS:HB2	47:UA:47:VAL:HB	1.98	0.44
22:V:44:PHE:CE1	22:V:82:VAL:HG11	2.53	0.44
48:VA:64:ARG:HD2	48:VA:67:LEU:HD13	2.00	0.44
49:WA:23:LEU:HD22	49:WA:33:LEU:HD21	2.00	0.44
24:X:108:GLN:HE21	24:X:108:GLN:HA	1.82	0.44
24:X:79:VAL:CG1	24:X:123:ILE:HD13	2.47	0.44
50:XA:189:VAL:HG22	50:XA:190:ASP:N	2.33	0.44
77:YB:14:SER:HA	77:YB:17:ARG:HG2	1.99	0.44
77:YB:19:HIS:O	77:YB:23:THR:HG23	2.18	0.44
26:Z:38:ILE:HA	26:Z:56:VAL:HG21	2.00	0.44
52:ZA:234:PRO:O	52:ZA:235:LEU:HB2	2.18	0.44
1:A:1144:U:H2'	1:A:1145:U:C6	2.53	0.44
1:A:1230:A:O2'	1:A:1259:U:H1'	2.17	0.44
1:A:1586:A:H1'	1:A:1611:A:C5	2.52	0.44
1:A:15:U:C2'	1:A:16:G:H5'	2.48	0.44
1:A:1730:A:O3'	1:A:1731:A:H8	2.01	0.44
1:A:329:G:H2'	1:A:330:G:H8	1.82	0.44
1:A:404:G:H2'	1:A:405:C:H6	1.83	0.44
1:A:696:C:H42	1:A:818:C:H4'	1.83	0.44
1:A:872:G:N3	1:A:873:U:H1'	2.33	0.44
53:AB:191:ASP:OD2	53:AB:192:PRO:HD2	2.18	0.44
53:AB:36:GLY:O	53:AB:37:VAL:HG13	2.17	0.44
2:B:1007:U:O2	2:B:1043:C:N3	2.51	0.44
2:B:1311:G:C8	2:B:1311:G:O5'	2.71	0.44
2:B:1648:A:C2'	2:B:1649:U:H5'	2.46	0.44
2:B:1764:U:H3'	2:B:1765:U:H4'	1.99	0.44
2:B:1867:A:H2	2:B:2119:A:HO2'	1.62	0.44
2:B:2139:A:C8	41:OA:3:LYS:HE2	2.53	0.44
2:B:2155:G:C6	2:B:2156:C:N4	2.86	0.44
2:B:2177:G:H3'	6:F:128:ARG:O	2.17	0.44
2:B:652:G:N2	2:B:2361:A:H1'	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2950:G:H22	2:B:2979:U:H2'	1.83	0.44
2:B:3183:A:H2'	2:B:3184:A:H5'	1.98	0.44
2:B:3239:G:O2'	2:B:3240:C:H5'	2.18	0.44
2:B:353:G:H22	2:B:364:G:H2'	1.81	0.44
2:B:486:U:H2'	2:B:487:U:O4'	2.18	0.44
2:B:586:C:H2'	2:B:587:U:H6	1.82	0.44
2:B:618:C:H2'	2:B:619:A:O4'	2.18	0.44
2:B:677:A:H4'	2:B:678:G:O5'	2.17	0.44
2:B:757:C:C2'	2:B:758:C:H5''	2.48	0.44
2:B:774:G:H2'	2:B:775:A:H5'	2.00	0.44
59:GB:28:LEU:HG	80:BC:39:LEU:HD12	1.99	0.44
3:C:24:G:H2'	3:C:25:G:O4'	2.18	0.44
29:CA:86:VAL:HG22	29:CA:87:SER:N	2.32	0.44
55:CB:140:THR:HA	55:CB:214:LYS:HD2	1.99	0.44
55:CB:192:GLU:O	55:CB:196:GLU:HB2	2.17	0.44
82:DC:20:ARG:O	82:DC:100:ILE:HG23	2.17	0.44
82:DC:250:PHE:HB3	82:DC:275:MET:SD	2.58	0.44
82:DC:27:HIS:O	82:DC:29:ASP:N	2.51	0.44
82:DC:434:VAL:HG12	82:DC:445:ILE:CG2	2.47	0.44
82:DC:607:ASN:HA	82:DC:608:PRO:HD3	1.75	0.44
82:DC:719:LEU:HD11	82:DC:835:TRP:CE2	2.52	0.44
1:A:811:A:C4	57:EB:111:LYS:HD2	2.53	0.44
6:F:109:GLU:HA	6:F:136:ILE:O	2.18	0.44
6:F:133:TYR:HB3	6:F:168:VAL:CG1	2.48	0.44
6:F:137:ILE:HD12	6:F:155:LYS:HZ2	1.82	0.44
6:F:189:TYR:CE1	6:F:196:TRP:CD1	3.05	0.44
58:FB:38:ILE:HG21	58:FB:79:ALA:HA	2.00	0.44
7:G:89:VAL:HG21	7:G:192:VAL:HG23	2.00	0.44
7:G:196:ARG:HA	7:G:199:PHE:CE1	2.52	0.44
7:G:238:LEU:HB2	7:G:246:LEU:O	2.18	0.44
7:G:286:GLY:HA3	7:G:321:PHE:CE2	2.53	0.44
7:G:338:LEU:O	7:G:339:ARG:HB3	2.18	0.44
59:GB:39:LYS:HB3	59:GB:43:TYR:CZ	2.53	0.44
8:H:138:ARG:HD3	8:H:139:GLY:N	2.33	0.44
8:H:142:VAL:O	8:H:143:GLU:CB	2.66	0.44
34:HA:74:ASN:OD1	34:HA:75:ASN:N	2.51	0.44
60:HB:75:TYR:HD2	60:HB:76:LEU:HD13	1.83	0.44
35:IA:46:THR:HG23	35:IA:49:VAL:HG22	1.99	0.44
10:J:97:ASN:O	10:J:98:VAL:HB	2.17	0.44
36:JA:82:LEU:C	36:JA:84:THR:H	2.22	0.44
36:JA:4:LEU:HD13	36:JA:91:THR:OG1	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:350:LYS:O	11:K:71:ALA:HA	2.18	0.44
63:KB:106:ARG:NH2	63:KB:106:ARG:HG2	2.32	0.44
13:M:47:LYS:HB2	18:R:7:VAL:CB	2.48	0.44
13:M:41:ILE:CD1	13:M:67:ALA:HB1	2.33	0.44
65:MB:81:ARG:HB3	65:MB:117:GLY:HA2	2.00	0.44
14:N:176:LEU:HD22	14:N:180:GLU:CG	2.47	0.44
2:B:1237:G:N3	16:P:136:ALA:HB1	2.33	0.44
42:PA:6:THR:HA	42:PA:54:LEU:HD13	2.00	0.44
65:MB:17:TYR:CA	68:PB:93:THR:HA	2.47	0.44
44:RA:96:CYS:O	44:RA:100:TYR:HA	2.18	0.44
19:S:163:GLY:C	19:S:165:THR:N	2.71	0.44
45:SA:7:LYS:O	45:SA:11:ARG:HB2	2.17	0.44
71:SB:36:VAL:HG11	71:SB:78:LEU:HD13	1.99	0.44
20:T:37:ARG:HD3	20:T:108:ILE:CD1	2.48	0.44
3:C:12:A:OP1	21:U:3:ARG:HD3	2.18	0.44
1:A:159:U:H5'	74:VB:117:LYS:HE3	1.99	0.44
23:W:161:ALA:O	23:W:165:LYS:HB2	2.17	0.44
49:WA:41:THR:CG2	49:WA:62:LYS:HE2	2.48	0.44
8:H:359:LEU:HD22	24:X:64:ILE:HG12	2.00	0.44
50:XA:84:ARG:HH22	50:XA:204:TYR:C	2.21	0.44
76:XB:12:LYS:NZ	76:XB:16:GLY:HA2	2.33	0.44
51:YA:64:ARG:NE	64:LB:36:LYS:HD2	2.32	0.44
77:YB:31:TYR:HE2	77:YB:81:ARG:HA	1.83	0.44
52:ZA:64:LYS:O	52:ZA:65:GLU:CB	2.64	0.44
1:A:1419:G:O2'	79:AC:54:LYS:HE3	2.17	0.43
1:A:1793:G:N7	1:A:1795:U:O4	2.50	0.43
1:A:234:G:N2	1:A:235:G:H1'	2.33	0.43
1:A:301:A:H1'	1:A:334:G:H22	1.83	0.43
1:A:336:G:C2'	1:A:337:G:H5'	2.48	0.43
1:A:38:C:N4	1:A:39:A:H62	2.16	0.43
1:A:845:G:H2'	1:A:846:G:H5''	1.99	0.43
27:AA:80:ARG:HB2	27:AA:99:ALA:N	2.33	0.43
2:B:1145:G:N2	2:B:1160:C:O4'	2.51	0.43
2:B:142:C:H2'	2:B:143:G:C8	2.53	0.43
2:B:1553:U:H4'	2:B:1554:U:H5'	1.99	0.43
2:B:1606:U:O4	38:LA:8:ARG:HB3	2.18	0.43
2:B:839:C:H1'	2:B:1724:U:OP1	2.18	0.43
2:B:1801:U:H2'	2:B:1802:C:C6	2.53	0.43
2:B:1862:U:H6	2:B:1862:U:O5'	2.00	0.43
2:B:1874:A:C2'	2:B:1875:G:H5'	2.48	0.43
2:B:1875:G:H2'	2:B:1876:U:O4'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2131:A:C2'	2:B:2132:C:H5'	2.48	0.43
2:B:2173:U:H3'	2:B:2174:G:C8	2.53	0.43
2:B:2516:U:OP1	19:S:31:ARG:HG2	2.18	0.43
2:B:2745:G:H2'	2:B:2747:A:OP2	2.18	0.43
2:B:2774:C:C2	2:B:2775:U:C5	3.06	0.43
2:B:2838:A:N6	2:B:2850:G:O2'	2.40	0.43
2:B:3310:A:H2'	2:B:3311:C:H6	1.83	0.43
2:B:3072:C:H4'	2:B:3336:A:H4'	2.00	0.43
2:B:3358:U:H2'	2:B:3359:A:O4'	2.18	0.43
2:B:34:A:H3'	2:B:48:A:H61	1.83	0.43
2:B:374:A:C4'	2:B:375:A:H5'	2.48	0.43
2:B:531:G:H2'	2:B:532:A:C8	2.53	0.43
2:B:582:G:H2'	2:B:583:G:O4'	2.18	0.43
2:B:707:U:H1'	2:B:754:G:H1'	2.00	0.43
54:BB:144:GLY:O	54:BB:145:ARG:C	2.56	0.43
54:BB:155:LYS:O	54:BB:158:ASP:HB2	2.17	0.43
54:BB:195:ILE:HG23	54:BB:196:VAL:N	2.33	0.43
54:BB:30:ARG:HA	54:BB:31:PRO:HD3	1.88	0.43
3:C:138:A:O5'	3:C:138:A:H8	2.00	0.43
56:DB:30:LYS:O	56:DB:101:ILE:HA	2.18	0.43
82:DC:9:MET:O	82:DC:13:MET:HG3	2.18	0.43
82:DC:164:LEU:HD11	82:DC:174:LEU:CD2	2.48	0.43
82:DC:221:THR:OG1	82:DC:224:GLN:HB2	2.18	0.43
82:DC:292:LYS:C	82:DC:294:ASP:H	2.21	0.43
5:E:4:ILE:HD12	5:E:198:TRP:CZ2	2.52	0.43
57:EB:142:TYR:C	57:EB:143:LEU:HD22	2.37	0.43
2:B:2678:A:H2	83:EC:6924:G:H4'	1.83	0.43
6:F:128:ARG:O	6:F:129:ALA:HB2	2.18	0.43
32:FA:122:PRO:HA	32:FA:143:GLY:N	2.33	0.43
58:FB:110:ARG:HG3	58:FB:111:GLN:N	2.33	0.43
58:FB:69:SER:HB2	58:FB:185:GLU:OE1	2.18	0.43
7:G:230:THR:HB	7:G:247:ARG:HD3	1.99	0.43
7:G:249:VAL:HG12	7:G:251:CYS:O	2.18	0.43
7:G:4:ARG:O	7:G:5:LYS:HB2	2.17	0.43
59:GB:11:THR:O	59:GB:44:ARG:HA	2.18	0.43
59:GB:47:PHE:O	59:GB:50:SER:HB3	2.17	0.43
8:H:186:LYS:O	8:H:187:LEU:C	2.55	0.43
8:H:260:GLN:CA	8:H:260:GLN:HE21	2.31	0.43
60:HB:25:LYS:HB3	60:HB:62:GLN:HE21	1.82	0.43
2:B:1079:A:C2	9:I:113:LEU:HG	2.53	0.43
9:I:229:ASP:O	9:I:230:ASP:HB3	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:FB:85:PRO:HB2	61:IB:12:ALA:HB2	1.99	0.43
36:JA:100:ILE:HG22	36:JA:105:ARG:HD2	2.00	0.43
36:JA:32:TRP:CD1	36:JA:53:PRO:HG3	2.52	0.43
11:K:151:ARG:HB3	11:K:153:PHE:CZ	2.52	0.43
11:K:187:GLU:O	11:K:191:VAL:HA	2.18	0.43
63:KB:34:ILE:HG23	63:KB:74:ILE:HG21	2.00	0.43
63:KB:55:ARG:HG2	63:KB:56:ASP:N	2.33	0.43
12:L:163:VAL:HA	12:L:166:LEU:CG	2.48	0.43
13:M:92:TYR:CE1	13:M:144:ILE:HG13	2.53	0.43
15:O:18:VAL:HB	15:O:128:TYR:N	2.32	0.43
15:O:96:PHE:HB3	15:O:97:SER:H	1.73	0.43
42:PA:12:LEU:O	42:PA:16:ARG:HG3	2.18	0.43
17:Q:118:GLU:O	17:Q:122:LYS:CG	2.66	0.43
2:B:3229:G:C2	18:R:129:TYR:HE1	2.36	0.43
18:R:73:PRO:HD2	18:R:80:THR:HG21	2.00	0.43
70:RB:90:TYR:HD1	70:RB:90:TYR:O	2.00	0.43
19:S:204:LYS:HE2	19:S:204:LYS:HA	1.99	0.43
19:S:34:ASN:H	19:S:37:HIS:HD2	1.66	0.43
71:SB:81:ASN:HB3	71:SB:82:VAL:H	1.61	0.43
20:T:173:ALA:HA	20:T:176:LYS:HB3	1.98	0.43
21:U:98:ALA:HB1	21:U:150:VAL:HG11	1.99	0.43
73:UB:52:ILE:HA	73:UB:100:ASP:O	2.18	0.43
48:VA:17:GLU:O	48:VA:21:GLU:HG2	2.18	0.43
74:VB:28:LEU:HD23	74:VB:68:LYS:HG3	2.00	0.43
74:VB:84:LYS:O	74:VB:84:LYS:HD3	2.18	0.43
23:W:99:LEU:HD11	23:W:103:ARG:NH1	2.33	0.43
49:WA:154:VAL:HG23	49:WA:154:VAL:O	2.18	0.43
24:X:169:SER:HB3	24:X:171:PHE:CE1	2.53	0.43
76:XB:79:ILE:C	76:XB:81:ALA:H	2.20	0.43
1:A:1177:C:H2'	1:A:1178:G:H8	1.83	0.43
1:A:1300:A:H5''	52:ZA:99:LYS:HE2	2.00	0.43
1:A:1350:U:H5'	66:NB:19:VAL:HG11	2.00	0.43
1:A:1753:A:H2'	1:A:1754:A:H8	1.83	0.43
1:A:373:G:H5'	61:IB:96:LYS:CG	2.46	0.43
1:A:505:A:H3'	1:A:506:A:C5'	2.48	0.43
1:A:531:C:H3'	1:A:532:U:H5''	1.99	0.43
1:A:581:U:H3'	1:A:581:U:O2	2.18	0.43
27:AA:17:LEU:HB2	27:AA:52:ALA:CB	2.40	0.43
2:B:1525:G:H2'	2:B:1525:G:N3	2.32	0.43
2:B:1666:G:H2'	2:B:1667:A:C8	2.53	0.43
2:B:206:G:N2	2:B:207:U:H1'	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2265:C:H2'	2:B:2266:U:O4'	2.18	0.43
2:B:2412:G:H2'	2:B:2413:A:C8	2.53	0.43
2:B:2520:A:O2'	2:B:2521:U:H5'	2.17	0.43
2:B:2838:A:OP1	14:N:154:ARG:NH1	2.51	0.43
2:B:2844:C:H2'	2:B:2845:A:H5'	1.99	0.43
2:B:2880:U:O2'	2:B:2881:C:H5'	2.18	0.43
2:B:3120:C:O2'	2:B:3121:U:H2'	2.18	0.43
2:B:68:C:O2'	2:B:69:C:H5'	2.19	0.43
2:B:800:G:H1'	2:B:933:A:C5	2.53	0.43
2:B:812:G:H2'	2:B:813:G:C8	2.50	0.43
2:B:894:G:H4'	2:B:895:A:O4'	2.17	0.43
2:B:959:C:H5	2:B:2801:A:C5'	2.32	0.43
29:CA:55:ASN:O	29:CA:57:LEU:N	2.40	0.43
55:CB:157:ARG:N	55:CB:157:ARG:HD2	2.31	0.43
55:CB:218:GLU:HA	55:CB:221:ALA:HB3	2.00	0.43
55:CB:219:ARG:HG3	55:CB:220:VAL:N	2.33	0.43
56:DB:185:GLN:HA	56:DB:188:ARG:HD2	2.00	0.43
56:DB:84:TYR:CE1	56:DB:86:PRO:HG3	2.54	0.43
82:DC:221:THR:HG21	82:DC:333:ALA:O	2.18	0.43
82:DC:243:ARG:HB3	82:DC:257:TRP:HZ3	1.83	0.43
82:DC:296:ILE:HB	82:DC:297:PRO:HD3	1.99	0.43
2:B:2495:C:H41	83:EC:6816:A:H5'	1.84	0.43
83:EC:6850:C:C2'	83:EC:6851:G:H5''	2.48	0.43
6:F:147:ARG:NH2	6:F:155:LYS:HZ3	2.16	0.43
6:F:87:PHE:HD2	6:F:89:TYR:OH	2.00	0.43
58:FB:25:ARG:HD3	58:FB:25:ARG:HA	1.82	0.43
59:GB:133:HIS:C	59:GB:134:ILE:HG12	2.39	0.43
59:GB:34:PHE:CD2	59:GB:105:LEU:HD23	2.53	0.43
8:H:30:ILE:HG12	8:H:127:ALA:HB1	2.00	0.43
8:H:156:LEU:O	8:H:159:ILE:HG13	2.17	0.43
8:H:235:LEU:C	8:H:235:LEU:HD12	2.37	0.43
8:H:157:GLU:HG3	8:H:251:THR:HG21	2.00	0.43
8:H:80:GLY:N	8:H:85:SER:HB2	2.33	0.43
60:HB:8:ARG:HG2	60:HB:8:ARG:NH1	2.33	0.43
9:I:49:TYR:O	9:I:144:VAL:HG23	2.18	0.43
35:IA:29:ALA:HB2	35:IA:64:VAL:O	2.17	0.43
63:KB:4:MET:CG	63:KB:5:HIS:H	2.11	0.43
13:M:69:ARG:CD	13:M:72:LYS:HD2	2.48	0.43
13:M:36:LYS:CE	13:M:78:MET:HG3	2.48	0.43
65:MB:118:GLU:C	65:MB:120:SER:H	2.21	0.43
1:A:1240:U:H5	65:MB:59:LYS:HZ1	1.63	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:N:12:GLN:OE1	14:N:58:GLU:HA	2.18	0.43
40:NA:58:ILE:CG1	40:NA:59:ASP:N	2.80	0.43
66:NB:48:VAL:HG23	66:NB:82:ARG:HD2	2.00	0.43
15:O:150:ASN:C	15:O:152:HIS:H	2.21	0.43
41:OA:33:THR:HA	41:OA:39:TYR:O	2.19	0.43
67:OB:21:TYR:H	67:OB:22:PRO:HD2	1.81	0.43
42:PA:10:GLN:O	42:PA:14:LEU:HB2	2.18	0.43
68:PB:24:GLY:HA3	68:PB:58:ALA:HB3	1.99	0.43
68:PB:69:ILE:O	68:PB:73:MET:HB2	2.19	0.43
2:B:86:G:O2'	17:Q:11:LYS:HD3	2.18	0.43
17:Q:126:PHE:CD2	17:Q:132:ALA:HB1	2.53	0.43
69:QB:39:THR:HB	69:QB:57:ARG:NH2	2.33	0.43
18:R:35:ILE:CG2	18:R:46:ILE:HG22	2.49	0.43
18:R:28:SER:HB2	18:R:53:VAL:HG23	2.00	0.43
18:R:95:ALA:HA	18:R:100:ALA:HB3	2.00	0.43
70:RB:108:ILE:O	70:RB:108:ILE:HG13	2.18	0.43
1:A:1383:G:O2'	70:RB:35:GLU:HG2	2.17	0.43
70:RB:66:SER:HG	70:RB:79:TRP:HE3	1.65	0.43
71:SB:34:ILE:HB	71:SB:53:TYR:CB	2.37	0.43
47:UA:87:ARG:HA	47:UA:90:VAL:HG21	2.00	0.43
73:UB:53:VAL:CB	73:UB:98:GLU:HA	2.47	0.43
73:UB:70:LYS:HA	80:BC:8:LEU:HD23	2.00	0.43
2:B:719:U:C1'	22:V:72:LYS:HE3	2.47	0.43
74:VB:102:LYS:HD2	74:VB:102:LYS:O	2.17	0.43
23:W:154:ALA:HA	23:W:157:GLU:CD	2.38	0.43
49:WA:179:LYS:HG2	49:WA:191:ASP:OD1	2.18	0.43
20:T:119:VAL:CG1	24:X:167:ARG:HD2	2.48	0.43
51:YA:52:THR:HB	51:YA:53:GLY:H	1.64	0.43
52:ZA:179:VAL:O	52:ZA:198:THR:HG23	2.17	0.43
1:A:1205:C:C2'	1:A:1206:U:H5'	2.47	0.43
1:A:1538:U:O2'	1:A:1539:G:H5'	2.18	0.43
1:A:1713:G:C2'	1:A:1713:G:N3	2.81	0.43
1:A:390:G:H2'	1:A:391:A:H8	1.83	0.43
53:AB:12:VAL:HG11	79:AC:34:TYR:O	2.19	0.43
2:B:200:C:H4'	2:B:201:A:OP1	2.19	0.43
2:B:2184:U:H4'	6:F:211:HIS:CE1	2.54	0.43
2:B:2342:U:H2'	2:B:2343:C:H6	1.84	0.43
2:B:2372:A:H3'	2:B:2373:A:H5''	2.00	0.43
2:B:2380:U:H6	2:B:2380:U:O5'	2.01	0.43
2:B:2577:C:H2'	2:B:2578:U:C6	2.54	0.43
2:B:2607:G:O2'	2:B:2608:G:H5'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2611:U:H2'	2:B:2612:U:C5	2.48	0.43
2:B:2618:G:H5'	14:N:116:ARG:HG3	2.00	0.43
2:B:268:A:O4'	2:B:270:U:H1'	2.18	0.43
2:B:2968:G:H2'	2:B:2969:A:C8	2.53	0.43
2:B:3135:U:H3'	2:B:3136:G:C8	2.52	0.43
2:B:836:A:H2'	2:B:837:A:H8	1.82	0.43
80:BC:21:VAL:HG22	80:BC:22:GLU:N	2.34	0.43
3:C:115:C:H3'	3:C:116:G:C5'	2.48	0.43
55:CB:170:GLN:HG2	55:CB:174:LEU:HG	2.00	0.43
55:CB:197:GLU:HG3	55:CB:208:SER:CA	2.48	0.43
30:DA:56:VAL:HG22	30:DA:104:LEU:HD22	1.99	0.43
1:A:66:U:C5	56:DB:173:PRO:HB3	2.53	0.43
82:DC:282:PHE:HA	82:DC:285:PHE:HD2	1.83	0.43
82:DC:593:ILE:HD11	82:DC:645:LEU:HB2	2.00	0.43
31:EA:77:TYR:C	31:EA:79:HIS:H	2.21	0.43
31:EA:83:THR:HA	34:HA:58:TYR:OH	2.18	0.43
57:EB:46:ILE:CD1	57:EB:60:ILE:HG23	2.47	0.43
6:F:234:LYS:HD3	6:F:238:ILE:CD1	2.40	0.43
6:F:8:GLN:C	6:F:10:LYS:N	2.72	0.43
58:FB:85:PRO:HB3	61:IB:12:ALA:CA	2.49	0.43
59:GB:28:LEU:HD13	80:BC:40:TYR:HD2	1.84	0.43
8:H:281:ILE:HD12	22:V:29:LEU:HD23	2.00	0.43
60:HB:77:ARG:HG3	60:HB:82:LEU:O	2.18	0.43
9:I:12:TYR:O	9:I:16:PHE:N	2.50	0.43
9:I:27:LYS:CA	9:I:150:LEU:HD11	2.45	0.43
9:I:32:GLN:HG2	9:I:36:LEU:HD11	2.00	0.43
61:IB:14:GLN:HB3	61:IB:54:ILE:CG1	2.46	0.43
11:K:85:PHE:CE1	11:K:114:GLY:HA3	2.54	0.43
11:K:184:LEU:O	11:K:188:ILE:HG12	2.18	0.43
11:K:224:ILE:HG21	24:X:39:SER:CB	2.48	0.43
37:KA:101:PHE:HB3	37:KA:103:TYR:CE1	2.53	0.43
37:KA:46:GLY:H	37:KA:71:VAL:CG1	2.31	0.43
37:KA:80:VAL:HG12	37:KA:81:VAL:N	2.33	0.43
63:KB:59:GLY:HA2	77:YB:32:PHE:HE1	1.82	0.43
12:L:105:LYS:O	12:L:108:ARG:HB3	2.18	0.43
65:MB:31:GLU:O	65:MB:34:VAL:HG22	2.18	0.43
65:MB:38:PRO:O	65:MB:42:ARG:HG3	2.18	0.43
40:NA:57:LEU:HD21	40:NA:72:VAL:HG11	2.00	0.43
40:NA:90:MET:HA	40:NA:93:ILE:HG12	2.01	0.43
68:PB:36:LYS:C	68:PB:38:VAL:H	2.22	0.43
17:Q:47:ALA:HB3	39:MA:115:LYS:HG3	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
69:QB:116:ILE:HG12	69:QB:122:ARG:HG2	1.99	0.43
69:QB:77:ASN:HB3	69:QB:95:ASP:C	2.38	0.43
18:R:127:LYS:HD2	20:T:191:ALA:HA	2.00	0.43
70:RB:23:ARG:HD2	70:RB:92:ASP:OD1	2.18	0.43
19:S:47:LYS:HA	19:S:50:ARG:HG2	2.00	0.43
20:T:164:SER:O	20:T:167:TYR:HD1	2.01	0.43
46:TA:58:PHE:CZ	46:TA:61:LYS:HA	2.53	0.43
21:U:165:VAL:HG13	21:U:165:VAL:O	2.18	0.43
3:C:4:C:OP1	21:U:62:ARG:HG3	2.18	0.43
47:UA:28:LYS:O	47:UA:32:GLN:HG3	2.18	0.43
47:UA:29:LEU:HD22	47:UA:69:TYR:CB	2.48	0.43
73:UB:130:VAL:O	73:UB:131:SER:HB3	2.17	0.43
73:UB:130:VAL:HG12	73:UB:140:LYS:HE2	2.01	0.43
22:V:16:ARG:HH22	22:V:55:SER:HB3	1.83	0.43
22:V:29:LEU:O	22:V:33:TYR:HD2	2.01	0.43
22:V:65:SER:HA	22:V:93:ILE:CD1	2.46	0.43
22:V:80:THR:HG22	22:V:100:THR:HB	2.01	0.43
23:W:138:LEU:C	23:W:138:LEU:HD23	2.38	0.43
49:WA:115:ILE:HG12	49:WA:119:ALA:HA	2.00	0.43
49:WA:169:ILE:O	49:WA:180:ALA:HA	2.18	0.43
49:WA:90:ARG:HB2	49:WA:92:TRP:HE1	1.82	0.43
24:X:93:GLU:HB2	24:X:140:VAL:HG21	1.99	0.43
50:XA:182:LEU:HA	50:XA:185:ARG:O	2.18	0.43
24:X:44:PHE:CZ	25:Y:153:PRO:HG3	2.54	0.43
51:YA:66:VAL:HA	64:LB:33:LEU:CD1	2.41	0.43
1:A:1034:C:O2'	1:A:1035:G:H5'	2.17	0.43
1:A:1288:G:OP2	1:A:1314:U:H2'	2.19	0.43
1:A:1470:C:OP1	1:A:1471:A:H1'	2.18	0.43
1:A:284:G:OP2	56:DB:188:ARG:HG3	2.18	0.43
1:A:998:A:O2'	1:A:999:U:H5'	2.19	0.43
2:B:1237:G:H2'	2:B:1237:G:N3	2.32	0.43
2:B:1394:A:H2'	2:B:1395:G:O4'	2.18	0.43
2:B:153:U:C5	2:B:154:U:C5	3.05	0.43
2:B:1566:A:H3'	2:B:1567:U:H5''	2.00	0.43
2:B:1588:A:H3'	2:B:1589:A:H5'	1.99	0.43
2:B:1709:C:C5'	31:EA:15:ARG:HH22	2.32	0.43
2:B:1807:G:C6	2:B:1808:G:C2	3.07	0.43
2:B:1480:G:C2	2:B:1871:U:H5''	2.52	0.43
2:B:2149:A:O2'	6:F:180:LEU:N	2.52	0.43
2:B:2223:A:O3'	40:NA:74:LYS:HE3	2.18	0.43
2:B:2232:A:H8	2:B:2232:A:O5'	2.02	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2513:U:H5'	12:L:242:ALA:CB	2.44	0.43
2:B:2576:G:H2'	2:B:2577:C:C6	2.53	0.43
2:B:915:A:O3'	2:B:2957:G:H4'	2.19	0.43
2:B:3094:A:H8	2:B:3094:A:O5'	2.01	0.43
2:B:3295:A:H2'	2:B:3296:A:H8	1.83	0.43
2:B:3338:C:H2'	2:B:3339:A:C8	2.53	0.43
2:B:702:C:H2'	2:B:703:G:H8	1.82	0.43
3:C:104:A:O3'	41:OA:42:ALA:HA	2.19	0.43
29:CA:133:LEU:HD22	29:CA:133:LEU:C	2.39	0.43
55:CB:40:ILE:HG12	55:CB:41:LYS:N	2.33	0.43
56:DB:49:VAL:HG21	56:DB:115:LYS:HE2	2.01	0.43
82:DC:147:LEU:CB	82:DC:193:ALA:HA	2.44	0.43
5:E:127:GLN:HA	5:E:130:LYS:CE	2.31	0.43
31:EA:13:VAL:HG12	31:EA:14:VAL:H	1.82	0.43
57:EB:17:GLU:HG3	57:EB:46:ILE:H	1.82	0.43
57:EB:7:LYS:C	57:EB:9:LEU:N	2.72	0.43
83:EC:6871:A:N3	83:EC:6871:A:H2'	2.33	0.43
1:A:1012:U:C5'	6:F:247:ARG:HG3	2.49	0.43
32:FA:128:ARG:HB2	40:NA:8:ALA:CB	2.42	0.43
2:B:3297:U:H5	7:G:121:ASN:HD21	1.67	0.43
7:G:229:VAL:HG23	7:G:265:ALA:HB1	1.99	0.43
7:G:291:GLU:O	7:G:292:ALA:HB3	2.18	0.43
7:G:53:MET:CA	7:G:77:THR:HA	2.42	0.43
59:GB:123:HIS:O	59:GB:127:VAL:HG23	2.17	0.43
8:H:136:LEU:C	8:H:138:ARG:H	2.21	0.43
9:I:110:LEU:HD12	9:I:110:LEU:H	1.83	0.43
9:I:84:PRO:HA	9:I:88:ILE:O	2.17	0.43
11:K:55:TYR:CD2	11:K:141:TYR:HE2	2.37	0.43
63:KB:145:THR:O	63:KB:149:LEU:HB2	2.18	0.43
13:M:92:TYR:HE1	13:M:144:ILE:HG13	1.82	0.43
39:MA:86:ARG:HG2	39:MA:86:ARG:HH11	1.84	0.43
2:B:294:U:H5''	40:NA:53:TYR:CZ	2.54	0.43
66:NB:75:VAL:HA	66:NB:78:VAL:CG2	2.48	0.43
68:PB:38:VAL:HG21	68:PB:73:MET:SD	2.59	0.43
18:R:69:THR:HG22	18:R:70:PHE:H	1.83	0.43
44:RA:111:ARG:HD2	44:RA:112:LYS:NZ	2.33	0.43
44:RA:122:ARG:O	44:RA:122:ARG:HG3	2.19	0.43
19:S:11:GLN:CB	19:S:12:ARG:HH21	2.30	0.43
19:S:120:TRP:CZ2	19:S:123:GLN:HG2	2.53	0.43
2:B:114:A:H5''	19:S:49:ARG:NH2	2.33	0.43
71:SB:45:ALA:O	71:SB:46:ILE:HB	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:T:159:LYS:HG2	20:T:160:ARG:N	2.32	0.43
2:B:1307:G:H5''	20:T:60:LYS:HE3	2.01	0.43
20:T:76:PRO:HA	20:T:138:LEU:CD1	2.45	0.43
72:TB:50:PHE:N	72:TB:50:PHE:CD1	2.87	0.43
22:V:12:ARG:HH11	22:V:12:ARG:HB2	1.81	0.43
49:WA:264:SER:HB2	49:WA:271:VAL:CG2	2.47	0.43
24:X:111:ALA:HA	24:X:116:ALA:H	1.83	0.43
50:XA:10:THR:C	50:XA:12:GLU:H	2.22	0.43
25:Y:37:GLY:HA2	25:Y:63:VAL:CG1	2.49	0.43
51:YA:141:ALA:HB1	51:YA:207:LEU:HD23	2.01	0.43
26:Z:38:ILE:HA	26:Z:50:LEU:HD11	1.99	0.43
52:ZA:165:VAL:HG11	52:ZA:210:THR:HA	2.00	0.43
1:A:1002:G:O2'	1:A:1003:A:H5'	2.19	0.43
1:A:1041:G:H2'	1:A:1042:G:O4'	2.19	0.43
1:A:1533:C:H5'	1:A:1539:G:O6	2.17	0.43
1:A:177:U:H3'	1:A:178:U:H5''	2.00	0.43
1:A:208:U:H2'	1:A:209:U:H6	1.82	0.43
1:A:618:U:H4'	1:A:1030:A:N6	2.33	0.43
1:A:843:U:H2'	1:A:844:A:C8	2.53	0.43
1:A:941:A:H2'	1:A:942:G:H5'	2.01	0.43
79:AC:40:ARG:HG3	79:AC:41:GLN:N	2.33	0.43
2:B:338:A:O4'	2:B:1381:A:H4'	2.19	0.43
2:B:1523:U:O2'	2:B:1608:C:H5'	2.19	0.43
2:B:1814:A:H4'	2:B:1815:U:O4'	2.18	0.43
2:B:2116:G:H5'	2:B:2118:C:N4	2.33	0.43
2:B:2197:C:N4	2:B:2241:U:C3'	2.81	0.43
2:B:2196:C:C3'	2:B:2242:A:H61	2.30	0.43
2:B:2360:C:H2'	2:B:2362:C:OP2	2.17	0.43
2:B:2655:U:H1'	2:B:2656:A:N1	2.33	0.43
2:B:2701:U:C4'	2:B:2705:A:N6	2.81	0.43
2:B:2822:U:H2'	2:B:2823:G:O4'	2.18	0.43
2:B:2991:A:P	7:G:20:LYS:HG3	2.58	0.43
2:B:3102:G:O2'	2:B:3103:A:H5'	2.18	0.43
2:B:3257:C:O2'	2:B:3258:U:H5'	2.18	0.43
2:B:521:A:H2'	2:B:522:A:C8	2.53	0.43
2:B:577:C:C2'	2:B:579:G:H5''	2.49	0.43
2:B:684:G:H2'	2:B:685:G:H8	1.84	0.43
2:B:744:A:H4'	22:V:142:GLY:O	2.18	0.43
2:B:892:U:H2'	2:B:893:C:O4'	2.17	0.43
2:B:936:A:H5''	2:B:937:G:OP1	2.18	0.43
2:B:988:U:C2'	2:B:989:A:H5'	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:BB:11:ARG:HB3	54:BB:26:CYS:O	2.18	0.43
29:CA:92:LYS:HE2	29:CA:112:THR:H	1.82	0.43
30:DA:127:GLU:HG3	30:DA:127:GLU:O	2.18	0.43
82:DC:226:ALA:HA	82:DC:240:MET:HE1	1.98	0.43
82:DC:728:VAL:HG23	82:DC:800:HIS:O	2.18	0.43
5:E:124:LEU:O	5:E:128:LEU:HB2	2.17	0.43
31:EA:129:TRP:CZ2	38:LA:93:PHE:HE1	2.36	0.43
31:EA:129:TRP:HZ2	38:LA:93:PHE:HE1	1.66	0.43
6:F:138:GLY:HA3	6:F:147:ARG:HD3	1.99	0.43
58:FB:22:ARG:HD2	58:FB:25:ARG:CZ	2.49	0.43
59:GB:44:ARG:O	59:GB:48:GLN:HG3	2.18	0.43
59:GB:76:LEU:O	59:GB:80:LEU:HG	2.19	0.43
8:H:52:VAL:HG12	8:H:103:THR:OG1	2.18	0.43
31:EA:84:ARG:HE	34:HA:61:MET:CE	2.32	0.43
60:HB:50:THR:HG22	60:HB:55:VAL:HG22	2.00	0.43
9:I:128:GLU:HG3	9:I:129:TYR:H	1.82	0.43
2:B:2746:A:H5''	9:I:178:ASN:HD21	1.82	0.43
9:I:57:ASN:CG	9:I:57:ASN:O	2.57	0.43
11:K:131:GLU:OE2	11:K:136:TYR:HE1	2.01	0.43
63:KB:66:ILE:HG23	63:KB:67:THR:N	2.33	0.43
64:LB:81:VAL:O	64:LB:81:VAL:HG23	2.19	0.43
13:M:84:LYS:HG2	13:M:191:LEU:HB3	2.01	0.43
13:M:189:GLU:C	13:M:191:LEU:H	2.21	0.43
40:NA:87:VAL:O	40:NA:90:MET:HB2	2.18	0.43
15:O:37:LEU:HB3	15:O:69:VAL:CG1	2.49	0.43
41:OA:87:SER:O	41:OA:88:ALA:CB	2.66	0.43
67:OB:30:THR:O	67:OB:34:LEU:HD12	2.19	0.43
16:P:66:ASN:N	16:P:69:ALA:HB3	2.33	0.43
68:PB:100:THR:HB	68:PB:105:VAL:HG23	2.01	0.43
17:Q:76:THR:HG23	17:Q:101:ARG:HH12	1.82	0.43
17:Q:54:LEU:HD23	17:Q:119:TYR:CD1	2.54	0.43
43:QA:16:ALA:C	43:QA:42:ARG:HH21	2.21	0.43
18:R:91:CYS:O	18:R:94:TRP:HB3	2.18	0.43
19:S:35:VAL:HG12	19:S:36:ILE:HG13	2.00	0.43
20:T:19:LEU:O	20:T:23:VAL:HG23	2.18	0.43
47:UA:23:ARG:HA	47:UA:26:VAL:HG23	2.01	0.43
73:UB:92:CYS:SG	73:UB:136:TRP:CD1	3.11	0.43
73:UB:34:LEU:O	73:UB:35:GLY:C	2.57	0.43
2:B:975:C:H4'	22:V:58:ASN:OD1	2.18	0.43
2:B:1259:A:N7	48:VA:53:MET:HG3	2.33	0.43
2:B:1719:G:OP2	23:W:121:HIS:HB2	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:534:U:H1'	24:X:146:LYS:HD3	2.01	0.43
24:X:29:ILE:HD12	24:X:40:ARG:CB	2.47	0.43
25:Y:54:HIS:CD2	25:Y:55:LYS:H	2.37	0.43
51:YA:101:HIS:HA	51:YA:217:LEU:HD22	2.01	0.43
1:A:992:A:H2	1:A:1012:U:N3	2.13	0.43
1:A:1118:G:H2'	1:A:1119:G:O4'	2.19	0.43
1:A:1293:U:H2'	1:A:1294:G:H8	1.84	0.43
1:A:1327:C:O2'	1:A:1328:G:H5'	2.18	0.43
1:A:1581:C:O2'	1:A:1582:U:H5'	2.18	0.43
1:A:1609:U:H5''	66:NB:75:VAL:HG23	1.98	0.43
1:A:367:A:O2'	1:A:368:U:H5'	2.19	0.43
1:A:55:A:N1	1:A:403:G:H1'	2.33	0.43
1:A:466:U:H2'	1:A:467:G:O4'	2.18	0.43
1:A:635:A:O2'	1:A:636:A:H5'	2.17	0.43
1:A:639:U:C2	57:EB:100:PRO:HA	2.54	0.43
1:A:777:C:H41	74:VB:10:ARG:HD3	1.83	0.43
1:A:824:G:H2'	1:A:825:U:C6	2.53	0.43
53:AB:76:ARG:HD2	53:AB:77:PHE:CZ	2.52	0.43
2:B:1665:C:H2'	2:B:1666:G:H8	1.83	0.43
2:B:1720:U:O2'	2:B:1721:U:H5'	2.18	0.43
2:B:2082:U:C5	2:B:2086:A:H1'	2.54	0.43
2:B:2094:C:O2	2:B:2094:C:O4'	2.36	0.43
2:B:2566:C:H2'	2:B:2567:C:C6	2.53	0.43
2:B:2771:U:H5''	46:TA:15:LYS:CE	2.43	0.43
2:B:2901:G:H2'	2:B:2902:A:O4'	2.18	0.43
2:B:3158:G:H2'	2:B:3159:C:H5'	2.00	0.43
2:B:3165:A:C2	2:B:3286:G:N1	2.87	0.43
2:B:662:U:H2'	2:B:663:C:C6	2.53	0.43
54:BB:67:GLN:HB2	54:BB:69:HIS:CD2	2.54	0.43
29:CA:73:MET:CE	29:CA:76:VAL:HB	2.48	0.43
55:CB:53:VAL:C	55:CB:55:ASP:H	2.20	0.43
4:D:100:C:H3'	4:D:101:G:C8	2.52	0.43
4:D:33:U:H2'	4:D:34:C:C6	2.53	0.43
56:DB:88:ARG:HH11	56:DB:88:ARG:HB2	1.82	0.43
82:DC:335:LEU:O	82:DC:338:ILE:HG22	2.18	0.43
82:DC:399:ARG:HD3	82:DC:401:PHE:CE1	2.47	0.43
82:DC:729:PHE:O	82:DC:771:TYR:HA	2.19	0.43
5:E:24:LYS:H	5:E:24:LYS:CD	2.30	0.43
57:EB:114:ARG:NH1	57:EB:114:ARG:HG3	2.33	0.43
83:EC:6811:G:C2'	83:EC:6812:C:H5'	2.49	0.43
6:F:115:ASN:N	6:F:127:ALA:CB	2.82	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:FA:135:GLU:HG2	32:FA:135:GLU:O	2.18	0.43
32:FA:27:LYS:HB3	32:FA:28:HIS:CE1	2.54	0.43
58:FB:64:ASN:ND2	58:FB:73:SER:HB3	2.31	0.43
7:G:57:VAL:HG23	7:G:358:TRP:HE3	1.84	0.43
7:G:372:THR:C	7:G:374:ALA:N	2.72	0.43
7:G:85:VAL:HG22	7:G:85:VAL:O	2.17	0.43
7:G:87:VAL:HG11	7:G:110:LEU:HG	2.01	0.43
59:GB:126:ARG:O	59:GB:130:THR:HG22	2.18	0.43
8:H:187:LEU:HA	8:H:199:TRP:HA	1.99	0.43
8:H:154:THR:HG23	8:H:253:ALA:HB2	2.00	0.43
34:HA:14:LEU:HA	34:HA:14:LEU:HD23	1.94	0.43
60:HB:74:GLU:O	60:HB:77:ARG:HB3	2.18	0.43
9:I:219:PHE:HA	9:I:219:PHE:HD2	1.71	0.43
11:K:162:PRO:O	11:K:163:LEU:O	2.37	0.43
11:K:221:LYS:O	11:K:228:SER:N	2.51	0.43
11:K:52:GLN:O	11:K:56:GLU:HG2	2.17	0.43
63:KB:9:LYS:HA	63:KB:9:LYS:HE2	2.01	0.43
2:B:2561:A:N1	12:L:32:LYS:HB2	2.33	0.43
3:C:97:A:O2'	39:MA:59:ASN:ND2	2.50	0.43
14:N:139:ARG:HB2	14:N:173:PHE:CE1	2.53	0.43
14:N:96:VAL:HG13	14:N:125:LEU:HD23	1.99	0.43
2:B:817:A:C6	41:OA:14:LYS:HA	2.54	0.43
3:C:41:A:O3'	41:OA:59:THR:HA	2.19	0.43
2:B:75:G:H5''	17:Q:58:VAL:CG2	2.49	0.43
2:B:3230:G:H4'	18:R:132:LYS:CE	2.48	0.43
70:RB:63:LEU:HD12	70:RB:84:MET:SD	2.59	0.43
19:S:154:PRO:HA	19:S:157:LYS:HD2	1.99	0.43
2:B:321:C:OP1	19:S:164:LEU:HD12	2.18	0.43
45:SA:9:ARG:O	45:SA:13:LEU:HG	2.18	0.43
71:SB:7:GLN:HE21	71:SB:7:GLN:HB2	1.60	0.43
20:T:129:LEU:HD21	20:T:133:ARG:O	2.17	0.43
20:T:27:LEU:HD11	20:T:99:LEU:HA	2.01	0.43
48:VA:123:ALA:HA	48:VA:152:ILE:CB	2.46	0.43
74:VB:10:ARG:O	74:VB:11:LYS:C	2.57	0.43
23:W:140:GLU:O	23:W:144:GLN:HG2	2.19	0.43
23:W:23:TRP:CB	23:W:51:VAL:HG22	2.32	0.43
24:X:10:ILE:HG12	24:X:26:ARG:CB	2.48	0.43
24:X:28:ARG:HH12	24:X:64:ILE:HD13	1.80	0.43
76:XB:61:GLU:O	76:XB:62:TYR:HB3	2.19	0.43
9:I:69:ILE:HD13	25:Y:32:LYS:HG2	2.00	0.43
1:A:112:A:H4'	61:IB:67:ARG:O	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1149:G:O3'	1:A:1150:G:H3'	2.18	0.43
1:A:1191:U:H5'	66:NB:143:ARG:NH2	2.34	0.43
1:A:139:C:N4	1:A:176:C:H1'	2.33	0.43
1:A:140:A:N3	56:DB:179:VAL:HG21	2.33	0.43
1:A:238:U:OP1	1:A:834:G:H4'	2.19	0.43
27:AA:102:ILE:HG13	27:AA:110:LYS:HB3	2.01	0.43
2:B:1003:A:C2	2:B:1004:U:O4'	2.72	0.43
2:B:106:A:H2'	2:B:107:A:O4'	2.18	0.43
2:B:1117:G:H2'	2:B:1118:C:H6	1.84	0.43
2:B:1828:A:H2'	2:B:1829:G:O4'	2.19	0.43
2:B:2103:U:O2'	2:B:2104:A:H5'	2.19	0.43
2:B:2109:U:H1'	2:B:3362:A:H8	1.83	0.43
2:B:2128:C:H2'	2:B:2129:U:O4'	2.18	0.43
2:B:2182:A:H2'	2:B:2183:A:H8	1.83	0.43
2:B:2932:U:O2	2:B:2934:A:H8	2.02	0.43
2:B:3382:U:H3'	2:B:3383:G:H8	1.84	0.43
2:B:360:G:H5''	41:OA:26:SER:CB	2.49	0.43
2:B:720:A:H3'	22:V:69:ARG:NH2	2.34	0.43
2:B:837:A:H61	2:B:856:G:H1'	1.84	0.43
3:C:82:U:C2'	3:C:82:U:O2	2.63	0.43
4:D:22:A:H2'	4:D:23:A:H8	1.84	0.43
56:DB:206:ALA:O	56:DB:210:GLN:HG3	2.18	0.43
82:DC:22:MET:HE1	82:DC:23:SER:C	2.39	0.43
31:EA:75:VAL:HG22	31:EA:76:ASN:O	2.18	0.43
57:EB:64:VAL:H	57:EB:65:PRO:HD2	1.83	0.43
6:F:204:MET:HE2	6:F:209:HIS:HB2	2.00	0.43
58:FB:114:GLU:CA	58:FB:118:GLY:HA2	2.49	0.43
7:G:135:ALA:C	7:G:137:TYR:N	2.72	0.43
7:G:92:TYR:HB2	7:G:157:VAL:CG2	2.48	0.43
33:GA:28:LYS:HB3	33:GA:29:TYR:CD1	2.54	0.43
59:GB:132:ARG:HG3	59:GB:132:ARG:HH11	1.84	0.43
9:I:185:PHE:HD2	9:I:185:PHE:HA	1.74	0.43
9:I:74:VAL:HG12	9:I:76:ALA:N	2.34	0.43
9:I:79:TYR:CD2	9:I:79:TYR:N	2.87	0.43
61:IB:70:ILE:HA	61:IB:125:VAL:O	2.18	0.43
11:K:224:ILE:HG12	24:X:36:ILE:CA	2.48	0.43
11:K:136:TYR:CD2	11:K:231:ASN:HB2	2.54	0.43
10:J:82:ARG:CB	37:KA:104:PRO:HB3	2.45	0.43
37:KA:87:ASN:HD22	37:KA:87:ASN:HA	1.63	0.43
63:KB:109:LYS:O	63:KB:112:LYS:HB3	2.17	0.43
1:A:868:G:H4'	63:KB:87:ASP:HB2	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:L:156:ASP:HB3	12:L:157:VAL:H	1.41	0.43
12:L:162:LEU:HG	19:S:7:LEU:HD11	2.01	0.43
2:B:3108:G:H2'	13:M:163:GLN:HE21	1.84	0.43
65:MB:98:ASN:HD21	65:MB:101:ALA:HB3	1.82	0.43
14:N:53:VAL:HG21	14:N:166:ILE:CD1	2.49	0.43
40:NA:66:GLU:O	40:NA:70:ARG:HG3	2.18	0.43
2:B:1256:G:H1'	16:P:123:ARG:HB3	2.01	0.43
68:PB:72:ILE:O	68:PB:75:ASN:O	2.36	0.43
1:A:1357:A:H4'	69:QB:126:GLU:HB3	1.99	0.43
19:S:53:TYR:O	19:S:54:LYS:HD2	2.17	0.43
21:U:95:LEU:HD23	21:U:95:LEU:HA	1.68	0.43
73:UB:29:TYR:O	73:UB:33:LEU:HB2	2.19	0.43
22:V:170:ARG:HA	22:V:174:ARG:HD2	2.00	0.43
23:W:106:LEU:N	23:W:106:LEU:HD12	2.32	0.43
49:WA:147:HIS:CD2	49:WA:151:VAL:HG22	2.53	0.43
24:X:10:ILE:HG21	25:Y:148:PRO:CG	2.46	0.43
2:B:1321:G:N2	24:X:112:ALA:HB2	2.34	0.43
2:B:1097:G:O3'	25:Y:129:LYS:HG2	2.19	0.43
51:YA:61:LEU:HD23	51:YA:62:LYS:H	1.83	0.43
26:Z:21:SER:N	26:Z:22:PRO:HD2	2.33	0.43
1:A:1144:U:H2'	1:A:1145:U:H6	1.82	0.43
1:A:1596:C:H2'	1:A:1598:U:OP2	2.18	0.43
1:A:1643:U:H2'	1:A:1644:C:O4'	2.19	0.43
1:A:407:A:H2'	1:A:408:C:H6	1.83	0.43
1:A:758:U:H5'	59:GB:7:THR:CG2	2.48	0.43
1:A:865:A:H2'	1:A:866:G:O4'	2.19	0.43
27:AA:54:LEU:CD2	27:AA:121:GLU:HB2	2.49	0.43
2:B:1186:G:O2'	24:X:112:ALA:HB1	2.19	0.43
2:B:1222:G:N2	2:B:1285:G:H1'	2.34	0.43
2:B:1238:C:H5''	16:P:82:ILE:CD1	2.47	0.43
2:B:1293:U:O2'	2:B:1294:A:H5'	2.19	0.43
2:B:1476:G:H4'	35:IA:60:TRP:HB3	2.01	0.43
2:B:1690:C:H2'	2:B:1691:U:H1'	2.00	0.43
2:B:1802:C:O2'	2:B:1803:C:H5'	2.18	0.43
2:B:1481:A:O2'	2:B:1858:A:C2	2.65	0.43
2:B:1896:A:H2	27:AA:83:LYS:CD	2.32	0.43
2:B:2679:A:O2'	2:B:2680:A:H5'	2.19	0.43
2:B:3174:A:O2'	2:B:3175:U:H5'	2.19	0.43
2:B:559:A:H2'	2:B:560:G:C4'	2.48	0.43
2:B:869:G:O2'	2:B:870:G:H5'	2.18	0.43
2:B:982:C:H2'	2:B:983:A:C8	2.52	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:22:U:H2'	3:C:22:U:OP2	2.19	0.43
4:D:9:C:C2'	4:D:10:C:H5'	2.49	0.43
4:D:35:C:H2'	4:D:36:C:H5'	2.00	0.43
4:D:58:C:H2'	4:D:59:U:H6	1.84	0.43
82:DC:146:ALA:O	82:DC:151:ILE:HB	2.19	0.43
82:DC:747:LEU:HB3	82:DC:752:GLY:HA3	2.00	0.43
82:DC:563:TYR:CE2	82:DC:818:ILE:HG21	2.37	0.43
57:EB:148:LYS:O	57:EB:149:ILE:HG23	2.19	0.43
83:EC:6933:G:H2'	83:EC:6934:U:C1'	2.48	0.43
6:F:242:ARG:HG3	6:F:243:THR:N	2.33	0.43
59:GB:45:ILE:HG21	59:GB:105:LEU:CD1	2.48	0.43
59:GB:78:ARG:O	59:GB:82:ARG:HB2	2.19	0.43
8:H:71:VAL:HG22	8:H:72:ALA:N	2.34	0.43
8:H:99:MET:H	8:H:99:MET:CE	2.31	0.43
60:HB:87:VAL:O	60:HB:87:VAL:HG22	2.18	0.43
9:I:196:ARG:NE	9:I:200:PHE:HE2	2.17	0.43
9:I:95:TRP:HZ2	9:I:157:ALA:N	2.16	0.43
35:IA:6:ASP:O	35:IA:7:VAL:HB	2.18	0.43
10:J:157:GLN:CD	10:J:157:GLN:H	2.22	0.43
11:K:114:GLY:O	11:K:115:THR:HG23	2.19	0.43
11:K:126:LEU:O	11:K:130:ILE:HG12	2.19	0.43
63:KB:146:ALA:O	63:KB:147:SER:C	2.57	0.43
38:LA:51:LEU:CG	38:LA:52:GLN:N	2.81	0.43
64:LB:27:PHE:HE1	64:LB:43:THR:HB	1.84	0.43
64:LB:30:VAL:O	64:LB:39:ILE:HB	2.19	0.43
13:M:4:ILE:HG23	13:M:5:GLN:N	2.29	0.43
14:N:42:THR:CG2	14:N:45:GLU:HB2	2.41	0.43
14:N:65:LEU:H	14:N:65:LEU:CD1	2.31	0.43
14:N:99:ILE:CG2	14:N:101:LYS:HB2	2.49	0.43
15:O:60:ARG:HG3	15:O:63:GLU:OE1	2.19	0.43
68:PB:15:LEU:HD21	68:PB:22:VAL:HG12	2.00	0.43
44:RA:88:LYS:HB2	44:RA:88:LYS:HE3	1.84	0.43
19:S:173:GLY:C	19:S:174:ILE:HD12	2.39	0.43
20:T:125:ARG:O	20:T:127:LEU:N	2.51	0.43
20:T:78:ARG:HG3	20:T:78:ARG:HH11	1.84	0.43
52:ZA:230:TRP:CE2	72:TB:68:ARG:HD3	2.53	0.43
21:U:112:LEU:HD11	21:U:150:VAL:HG23	2.01	0.43
22:V:126:GLN:O	22:V:130:ARG:HD2	2.18	0.43
74:VB:91:LEU:HD22	74:VB:96:LEU:HD22	2.00	0.43
24:X:1:MET:HA	24:X:33:ASN:OD1	2.19	0.43
24:X:52:LYS:CE	24:X:54:ALA:HB3	2.47	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:XA:189:VAL:HG11	50:XA:193:GLN:CB	2.49	0.43
25:Y:26:HIS:CE1	25:Y:29:THR:HG23	2.54	0.43
51:YA:38:PHE:CZ	51:YA:84:ILE:HG21	2.54	0.43
26:Z:50:LEU:HA	26:Z:54:VAL:HG23	1.99	0.43
1:A:1450:U:H2'	1:A:1451:C:H6	1.83	0.43
1:A:1696:G:H2'	1:A:1697:G:C8	2.53	0.43
1:A:1780:G:H2'	1:A:1781:A:O4'	2.18	0.43
1:A:170:U:H3	1:A:289:U:HO2'	1.66	0.43
1:A:569:C:H2'	1:A:570:A:C5'	2.48	0.43
1:A:617:U:H4'	1:A:1030:A:H2'	2.00	0.43
1:A:736:C:H2'	1:A:737:A:H5''	2.01	0.43
1:A:891:A:H2'	1:A:892:A:C8	2.54	0.43
1:A:895:G:N2	1:A:917:U:N3	2.67	0.43
2:B:110:G:N3	2:B:111:C:H1'	2.34	0.43
2:B:1190:A:N6	2:B:1193:A:C2	2.87	0.43
2:B:1329:U:H1'	2:B:1330:A:OP1	2.19	0.43
2:B:143:G:H2'	2:B:144:A:H8	1.82	0.43
2:B:1457:U:C4	2:B:1476:G:N2	2.86	0.43
2:B:1496:C:H3'	2:B:1496:C:P	2.59	0.43
2:B:1803:C:O2'	2:B:1804:A:H5'	2.18	0.43
2:B:2246:G:H2'	2:B:2247:G:C8	2.49	0.43
2:B:2950:G:N3	2:B:2950:G:H2'	2.34	0.43
2:B:36:C:H41	2:B:47:C:H1'	1.82	0.43
2:B:666:A:H3'	2:B:667:C:H5''	2.00	0.43
3:C:78:G:C2'	3:C:79:A:H5'	2.48	0.43
3:C:83:C:H4'	3:C:84:C:C5'	2.49	0.43
55:CB:124:LEU:N	55:CB:124:LEU:HD12	2.34	0.43
56:DB:136:LYS:HE2	56:DB:176:GLN:HB2	2.00	0.43
56:DB:153:VAL:CG1	56:DB:156:PHE:HB2	2.49	0.43
56:DB:18:ILE:HG21	56:DB:24:ILE:CG2	2.48	0.43
82:DC:225:PHE:HZ	82:DC:328:LEU:HD21	1.84	0.43
82:DC:347:THR:O	82:DC:350:ALA:HB3	2.19	0.43
82:DC:427:PHE:CD2	82:DC:427:PHE:N	2.87	0.43
82:DC:578:LYS:HE3	82:DC:582:LYS:HG2	2.00	0.43
57:EB:143:LEU:N	57:EB:143:LEU:HD22	2.33	0.43
6:F:144:ASN:HB3	6:F:160:SER:CB	2.49	0.43
6:F:41:ILE:HD13	6:F:42:ARG:C	2.39	0.43
7:G:148:LEU:CD1	7:G:192:VAL:HG21	2.49	0.43
8:H:193:LYS:HG2	8:H:198:ARG:HA	2.00	0.43
8:H:51:ALA:HB2	8:H:105:THR:HG23	2.01	0.43
2:B:2401:A:O3'	8:H:68:GLY:HA2	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:HB:50:THR:HG22	60:HB:55:VAL:CG1	2.49	0.43
9:I:128:GLU:OE1	9:I:192:PRO:HG3	2.18	0.43
11:K:223:PHE:CE2	24:X:35:VAL:HB	2.54	0.43
1:A:867:G:H5'	63:KB:4:MET:HE1	2.01	0.43
1:A:960:U:O2'	63:KB:51:GLY:HA3	2.19	0.43
38:LA:81:CYS:C	38:LA:83:ASN:H	2.22	0.43
13:M:28:VAL:HG13	13:M:33:THR:CG2	2.48	0.43
13:M:8:GLN:CD	13:M:69:ARG:HG2	2.39	0.43
1:A:1181:U:H4'	65:MB:127:ARG:O	2.18	0.43
19:S:14:LYS:C	19:S:16:SER:H	2.21	0.43
19:S:24:ARG:HH11	19:S:24:ARG:HG2	1.83	0.43
2:B:284:A:N7	46:TA:41:ARG:NH1	2.67	0.43
21:U:141:SER:O	21:U:143:PRO:HD3	2.18	0.43
21:U:159:LYS:N	21:U:159:LYS:HD3	2.33	0.43
22:V:5:HIS:CE1	22:V:9:GLN:HB2	2.54	0.43
48:VA:165:VAL:HG11	48:VA:170:ALA:HB2	1.97	0.43
48:VA:67:LEU:HD23	48:VA:67:LEU:O	2.19	0.43
48:VA:19:LEU:HA	48:VA:88:PHE:HE1	1.83	0.43
74:VB:4:ALA:O	74:VB:5:VAL:HB	2.19	0.43
49:WA:133:VAL:HB	49:WA:142:ALA:CB	2.44	0.43
49:WA:134:TRP:HA	49:WA:140:CYS:HA	2.01	0.43
24:X:79:VAL:HG13	24:X:123:ILE:HD13	2.01	0.43
20:T:119:VAL:CG1	24:X:167:ARG:HB2	2.48	0.43
50:XA:64:ILE:C	50:XA:67:ILE:HG12	2.39	0.43
51:YA:176:VAL:HA	51:YA:184:LEU:CD2	2.49	0.43
52:ZA:120:GLU:HG3	52:ZA:123:GLY:N	2.34	0.43
1:A:1225:U:H2'	1:A:1226:A:H5'	2.00	0.43
1:A:1246:C:H2'	1:A:1247:U:C6	2.54	0.43
1:A:1616:G:O2'	78:ZB:18:ARG:HD2	2.18	0.43
1:A:210:A:H2'	1:A:211:U:C6	2.54	0.43
1:A:213:A:H2'	1:A:214:G:C8	2.54	0.43
1:A:36:C:H5''	1:A:530:C:C5'	2.49	0.43
1:A:791:A:C2'	1:A:792:U:H5'	2.49	0.43
1:A:811:A:C5	57:EB:111:LYS:HD2	2.53	0.43
1:A:829:A:O4'	1:A:830:U:H5'	2.19	0.43
1:A:961:U:H4'	63:KB:47:PRO:HB3	2.01	0.43
53:AB:23:GLU:HA	53:AB:26:THR:CB	2.49	0.43
2:B:1084:A:H2'	2:B:1085:A:H8	1.82	0.43
2:B:953:G:N3	2:B:1115:G:H5'	2.34	0.43
2:B:1212:A:H2'	2:B:1213:G:O4'	2.19	0.43
2:B:1230:G:H4'	48:VA:33:VAL:O	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1253:U:OP1	16:P:147:ASN:HB3	2.19	0.43
2:B:1501:U:C2	2:B:1502:C:C5	3.07	0.43
2:B:1571:A:H2'	2:B:1572:U:O4'	2.19	0.43
2:B:1575:A:C6	2:B:1576:G:N7	2.87	0.43
2:B:1677:G:H2'	2:B:1678:G:H8	1.84	0.43
2:B:1745:C:H2'	2:B:1746:U:C6	2.54	0.43
2:B:2178:A:H5'	6:F:132:ASN:OD1	2.19	0.43
2:B:2144:A:C2	2:B:2281:A:C5	3.06	0.43
2:B:2628:A:C4'	2:B:2798:C:H3'	2.49	0.43
2:B:2724:U:H5''	25:Y:54:HIS:HD1	1.73	0.43
2:B:2861:U:H2'	2:B:2862:U:C6	2.54	0.43
2:B:2908:G:H4'	44:RA:114:LYS:HZ2	1.84	0.43
2:B:3029:A:O5'	2:B:3029:A:H8	2.01	0.43
2:B:3162:C:H2'	2:B:3163:A:H8	1.84	0.43
2:B:416:A:H2'	2:B:417:A:C8	2.53	0.43
2:B:637:C:C2'	2:B:638:C:C6	2.92	0.43
2:B:656:A:P	36:JA:27:ARG:HA	2.59	0.43
2:B:694:C:P	8:H:118:LYS:HD3	2.59	0.43
28:BA:52:THR:C	28:BA:54:LEU:H	2.22	0.43
54:BB:105:VAL:CG1	54:BB:245:LYS:HA	2.49	0.43
54:BB:126:VAL:CG2	54:BB:156:VAL:HA	2.46	0.43
54:BB:23:LEU:HD22	54:BB:24:SER:N	2.19	0.43
3:C:10:A:H2'	3:C:11:C:C6	2.54	0.43
3:C:18:U:C5	3:C:19:C:N4	2.87	0.43
4:D:11:A:O2'	4:D:13:A:H5''	2.19	0.43
30:DA:18:ALA:O	30:DA:22:ALA:HB2	2.19	0.43
82:DC:457:VAL:HG23	82:DC:458:GLY:N	2.34	0.43
82:DC:431:ILE:HG23	82:DC:457:VAL:O	2.19	0.43
82:DC:578:LYS:HA	82:DC:585:ARG:HA	2.01	0.43
5:E:67:ILE:CD1	5:E:144:LEU:HD22	2.49	0.43
31:EA:4:PHE:CE1	34:HA:35:ARG:HA	2.54	0.43
31:EA:60:LYS:O	31:EA:64:LYS:HE2	2.19	0.43
57:EB:181:ILE:HG13	57:EB:182:VAL:H	1.83	0.43
2:B:2550:U:H3'	6:F:40:TYR:OH	2.19	0.43
32:FA:68:PHE:HA	32:FA:68:PHE:HD2	1.74	0.43
1:A:386:G:P	58:FB:25:ARG:HH21	2.42	0.43
7:G:328:ILE:HG23	7:G:329:PRO:HD2	2.00	0.43
8:H:181:VAL:CG1	8:H:182:LEU:H	2.32	0.43
8:H:274:TYR:CE1	8:H:276:LEU:HA	2.54	0.43
8:H:316:ASN:OD1	8:H:317:PRO:HD2	2.19	0.43
34:HA:16:LEU:CD2	34:HA:97:ASP:H	2.31	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:I:152:ARG:CB	9:I:154:THR:HG23	2.46	0.43
2:B:3323:A:H2	35:IA:106:THR:HG21	1.83	0.43
35:IA:77:ARG:HG3	35:IA:89:LEU:HD13	2.00	0.43
11:K:90:LYS:CD	11:K:91:GLY:H	2.30	0.43
37:KA:35:VAL:HG12	37:KA:79:GLY:CA	2.48	0.43
37:KA:8:TYR:CE1	37:KA:99:ARG:HD3	2.54	0.43
12:L:94:PHE:HZ	12:L:150:LEU:HD12	1.83	0.43
2:B:2549:G:H2'	12:L:33:ASN:HD21	1.84	0.43
38:LA:95:ILE:O	38:LA:99:LYS:HB2	2.19	0.43
13:M:117:PHE:O	13:M:118:LEU:HB2	2.19	0.43
13:M:99:ILE:HD13	13:M:179:ILE:HD11	1.99	0.43
13:M:92:TYR:N	13:M:92:TYR:CD1	2.87	0.43
65:MB:44:ARG:HD3	65:MB:45:PHE:N	2.34	0.43
40:NA:29:LYS:O	40:NA:32:ALA:HB2	2.18	0.43
17:Q:77:LEU:N	17:Q:77:LEU:HD23	2.33	0.43
69:QB:123:ARG:HG2	69:QB:124:ILE:N	2.27	0.43
18:R:39:ILE:HB	18:R:43:LYS:HB2	2.01	0.43
19:S:10:LEU:C	19:S:10:LEU:HD13	2.39	0.43
19:S:138:GLN:CA	19:S:143:ARG:HH11	2.26	0.43
19:S:146:ALA:HA	19:S:149:ASN:CB	2.42	0.43
19:S:150:TRP:HE3	19:S:156:HIS:NE2	2.16	0.43
45:SA:12:ARG:HA	45:SA:15:ARG:NH1	2.34	0.43
20:T:76:PRO:HG3	20:T:142:SER:OG	2.19	0.43
72:TB:94:LEU:CD1	72:TB:102:VAL:HG23	2.48	0.43
74:VB:45:ALA:HB1	74:VB:50:ALA:O	2.19	0.43
74:VB:22:GLN:HA	74:VB:74:LEU:HD23	2.01	0.43
23:W:106:LEU:CD1	23:W:106:LEU:H	2.32	0.43
23:W:154:ALA:HA	23:W:157:GLU:OE1	2.19	0.43
49:WA:265:LEU:HD22	49:WA:265:LEU:N	2.34	0.43
9:I:17:GLN:CG	25:Y:20:ARG:HA	2.48	0.43
52:ZA:76:LEU:HG	52:ZA:105:GLY:HA2	2.00	0.43
78:ZB:19:THR:OG1	78:ZB:27:GLN:HG3	2.19	0.43
1:A:1292:G:H2'	1:A:1293:U:H6	1.84	0.42
1:A:1493:A:H4'	1:A:1494:C:C5	2.53	0.42
1:A:172:C:H2'	1:A:173:A:C8	2.54	0.42
1:A:1776:A:C6	1:A:1777:G:C6	3.07	0.42
1:A:1785:U:H2'	1:A:1786:G:H8	1.82	0.42
1:A:707:A:C3'	1:A:708:C:H5''	2.48	0.42
1:A:803:A:C4	57:EB:104:ARG:HB2	2.54	0.42
1:A:826:U:H6	1:A:826:U:H3'	1.84	0.42
1:A:828:U:C3'	1:A:829:A:H5''	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:962:C:H2'	1:A:963:A:O4'	2.19	0.42
1:A:992:A:H4'	1:A:1786:G:O4'	2.19	0.42
2:B:1131:G:C4	2:B:2373:A:C2	3.07	0.42
2:B:1173:U:H2'	2:B:1180:A:C8	2.53	0.42
2:B:1258:U:O2	2:B:1260:A:N7	2.52	0.42
2:B:1231:A:C2'	2:B:1277:C:N4	2.80	0.42
2:B:1463:U:H2'	2:B:1464:G:C5'	2.48	0.42
2:B:1498:A:C1'	2:B:1602:A:C2	3.02	0.42
2:B:1581:C:C2'	2:B:1582:C:H5'	2.48	0.42
2:B:1867:A:H2	2:B:2119:A:H4'	1.84	0.42
2:B:2131:A:H5''	2:B:2131:A:H8	1.84	0.42
2:B:2206:G:N3	2:B:2206:G:H3'	2.34	0.42
2:B:2684:C:H5'	15:O:130:VAL:HG21	2.00	0.42
2:B:3049:A:H4'	7:G:364:LYS:HG3	2.01	0.42
2:B:3061:G:O2'	2:B:3062:G:H5'	2.19	0.42
2:B:660:A:H2'	2:B:661:G:N2	2.34	0.42
2:B:998:A:H5'	4:D:102:A:N1	2.33	0.42
28:BA:13:ILE:HG23	28:BA:32:GLN:CG	2.45	0.42
54:BB:114:ILE:HD12	54:BB:114:ILE:C	2.40	0.42
29:CA:86:VAL:O	29:CA:120:LYS:HB3	2.19	0.42
55:CB:92:ARG:HH11	55:CB:92:ARG:HG2	1.84	0.42
56:DB:76:LEU:CD2	56:DB:78:THR:HG23	2.48	0.42
82:DC:129:VAL:HG11	82:DC:135:VAL:HG22	2.01	0.42
82:DC:183:GLU:HA	82:DC:186:ASN:HB3	2.01	0.42
82:DC:566:THR:HG21	82:DC:682:ARG:HB3	2.00	0.42
82:DC:601:ILE:HD13	82:DC:643:PRO:HA	2.01	0.42
2:B:1242:G:N3	82:DC:754:VAL:HB	2.34	0.42
82:DC:772:LEU:HD21	82:DC:777:SER:HB3	2.00	0.42
83:EC:6909:A:H61	83:EC:6948:U:H3	1.67	0.42
58:FB:160:PHE:CE2	58:FB:165:LEU:HD11	2.54	0.42
58:FB:25:ARG:HG3	58:FB:25:ARG:HH11	1.84	0.42
7:G:135:ALA:C	7:G:137:TYR:H	2.22	0.42
7:G:251:CYS:C	7:G:252:ILE:HD12	2.39	0.42
7:G:356:LEU:H	7:G:356:LEU:CD2	2.19	0.42
7:G:383:LEU:C	7:G:385:LYS:H	2.21	0.42
33:GA:9:ALA:O	33:GA:12:GLN:HG2	2.19	0.42
1:A:21:U:O2'	59:GB:18:PRO:HD3	2.19	0.42
34:HA:27:TYR:CB	34:HA:52:ARG:HH12	2.32	0.42
9:I:160:PHE:O	9:I:180:PHE:HE1	2.01	0.42
9:I:20:PHE:CD1	9:I:30:TYR:CE1	3.07	0.42
10:J:58:LEU:CD2	10:J:64:LEU:HB2	2.48	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:K:236:ILE:HG12	11:K:240:VAL:HG23	2.00	0.42
37:KA:44:TYR:O	37:KA:71:VAL:HG21	2.19	0.42
12:L:229:VAL:HG12	12:L:229:VAL:O	2.19	0.42
39:MA:92:LEU:HB3	39:MA:97:ALA:HB2	2.00	0.42
14:N:60:LEU:HD13	14:N:159:PHE:HE1	1.82	0.42
40:NA:61:ILE:C	40:NA:63:ASN:N	2.71	0.42
66:NB:23:LYS:HG3	66:NB:64:ASP:HB2	2.01	0.42
15:O:60:ARG:HD3	46:TA:104:LEU:H	1.83	0.42
16:P:62:LEU:HD23	16:P:73:VAL:HG11	2.00	0.42
16:P:80:LEU:O	16:P:84:ALA:HB2	2.19	0.42
19:S:15:GLN:HB3	40:NA:51:SER:HB2	2.01	0.42
20:T:27:LEU:HD11	20:T:98:ALA:C	2.39	0.42
72:TB:13:ALA:HB3	72:TB:27:ILE:HG22	2.00	0.42
1:A:359:A:H1'	73:UB:38:PHE:CG	2.54	0.42
22:V:179:ARG:HB3	22:V:179:ARG:CZ	2.49	0.42
1:A:851:U:C5	23:W:173:ARG:HD2	2.53	0.42
49:WA:2:ALA:HB1	49:WA:6:VAL:CG2	2.49	0.42
51:YA:111:ARG:HH11	51:YA:111:ARG:HG3	1.84	0.42
51:YA:100:PHE:HD1	51:YA:181:LEU:HG	1.83	0.42
51:YA:133:TYR:OH	51:YA:217:LEU:HD23	2.19	0.42
77:YB:33:LEU:HD12	77:YB:33:LEU:N	2.34	0.42
26:Z:78:TYR:HA	26:Z:81:LYS:HE2	1.99	0.42
52:ZA:227:PRO:C	52:ZA:229:LEU:H	2.21	0.42
1:A:127:G:H1'	1:A:178:U:H6	1.84	0.42
1:A:1483:A:N3	1:A:1607:G:H1'	2.35	0.42
1:A:1734:U:O2'	1:A:1735:U:H5'	2.19	0.42
1:A:320:U:H2'	1:A:321:C:C6	2.54	0.42
1:A:70:C:N4	1:A:71:A:H62	2.17	0.42
1:A:995:A:H2'	1:A:996:U:O4'	2.19	0.42
53:AB:176:LEU:N	53:AB:176:LEU:HD12	2.33	0.42
53:AB:190:ARG:HG2	53:AB:190:ARG:H	1.54	0.42
53:AB:46:THR:HB	53:AB:84:ILE:HG12	2.00	0.42
53:AB:92:GLN:H	53:AB:92:GLN:NE2	2.15	0.42
2:B:1240:A:C2'	2:B:1241:U:H5''	2.49	0.42
2:B:1283:C:O2'	2:B:1284:C:H5'	2.19	0.42
2:B:1310:G:O2'	2:B:1311:G:H5'	2.19	0.42
2:B:1490:A:H2'	2:B:1491:A:O4'	2.19	0.42
2:B:2076:G:O2'	2:B:2077:U:H5''	2.19	0.42
2:B:212:G:H5'	8:H:221:ASN:CG	2.37	0.42
2:B:2276:G:N2	2:B:2277:C:H1'	2.34	0.42
2:B:2724:U:OP1	25:Y:78:LYS:HE2	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2917:G:OP1	27:AA:47:ASN:N	2.41	0.42
2:B:2874:G:H2'	2:B:2945:G:O6	2.19	0.42
2:B:3057:U:C2	2:B:3086:A:C6	3.07	0.42
2:B:3342:A:N3	2:B:3342:A:H2'	2.33	0.42
2:B:40:A:N7	2:B:937:G:C5	2.87	0.42
2:B:651:G:H5'	2:B:2871:G:C2	2.54	0.42
2:B:797:U:H2'	2:B:798:G:C8	2.53	0.42
2:B:842:G:N2	2:B:843:A:H1'	2.34	0.42
2:B:892:U:H2'	2:B:893:C:C6	2.54	0.42
54:BB:248:ILE:HG13	54:BB:249:ALA:H	1.84	0.42
29:CA:115:ARG:HH11	29:CA:115:ARG:HB3	1.84	0.42
55:CB:166:ARG:NH1	55:CB:166:ARG:HG2	2.34	0.42
4:D:96:U:O2'	4:D:97:A:H5'	2.19	0.42
56:DB:98:ARG:HH12	56:DB:103:GLY:HA3	1.84	0.42
82:DC:161:ASP:O	82:DC:165:LEU:CB	2.67	0.42
82:DC:412:ARG:NH1	82:DC:426:LEU:HD13	2.34	0.42
82:DC:91:GLN:HG2	82:DC:92:LYS:N	2.34	0.42
82:DC:78:TYR:HB2	82:DC:99:LEU:HA	2.01	0.42
57:EB:96:ARG:HB2	57:EB:121:VAL:HG13	2.01	0.42
6:F:126:LEU:HD22	6:F:150:LEU:CD2	2.47	0.42
6:F:205:ASN:O	6:F:208:ASP:HB2	2.19	0.42
8:H:188:ARG:HB3	8:H:193:LYS:HG2	2.00	0.42
8:H:327:LEU:N	8:H:327:LEU:HD22	2.33	0.42
34:HA:41:LEU:HD13	34:HA:41:LEU:C	2.39	0.42
9:I:236:LEU:HA	9:I:239:ILE:CD1	2.49	0.42
9:I:278:SER:O	9:I:282:ARG:HG3	2.18	0.42
9:I:290:ILE:CA	9:I:294:ALA:HB3	2.47	0.42
9:I:60:ILE:HG22	9:I:62:CYS:SG	2.58	0.42
35:IA:31:ARG:HB3	35:IA:31:ARG:NH1	2.27	0.42
2:B:1162:U:O3'	36:JA:57:TYR:HE1	2.02	0.42
10:J:10:TYR:HB3	36:JA:88:HIS:CE1	2.53	0.42
37:KA:90:PRO:O	37:KA:91:ALA:HB3	2.18	0.42
2:B:3173:G:C2	37:KA:96:ALA:HB2	2.53	0.42
12:L:49:TYR:N	12:L:49:TYR:CD1	2.87	0.42
38:LA:40:THR:HB	38:LA:43:LYS:HE2	2.01	0.42
13:M:115:ARG:C	13:M:117:PHE:H	2.22	0.42
13:M:172:ILE:H	13:M:172:ILE:CD1	2.31	0.42
14:N:52:LEU:HA	14:N:165:ILE:CB	2.48	0.42
14:N:84:ALA:O	14:N:85:PHE:HB3	2.19	0.42
15:O:28:ASP:O	15:O:32:ARG:HG3	2.19	0.42
67:OB:58:MET:SD	67:OB:61:ILE:HD12	2.59	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:OB:82:ASP:C	67:OB:84:TYR:H	2.22	0.42
68:PB:17:LEU:CD1	68:PB:66:LEU:HD22	2.50	0.42
17:Q:103:ASN:O	40:NA:20:MET:HE2	2.19	0.42
69:QB:128:GLY:O	69:QB:131:ASP:HB2	2.19	0.42
19:S:80:THR:O	19:S:81:TYR:C	2.57	0.42
71:SB:6:GLY:O	71:SB:7:GLN:C	2.57	0.42
21:U:31:GLU:OE2	21:U:31:GLU:HA	2.19	0.42
47:UA:14:TYR:HA	47:UA:17:ARG:NE	2.28	0.42
47:UA:34:HIS:O	47:UA:48:LYS:HE2	2.19	0.42
2:B:975:C:C5'	22:V:58:ASN:HD21	2.33	0.42
74:VB:59:GLY:O	74:VB:60:PHE:HB2	2.19	0.42
24:X:120:SER:C	24:X:121:ILE:HG13	2.39	0.42
2:B:562:C:O3'	24:X:71:LYS:HD2	2.19	0.42
76:XB:60:PRO:O	76:XB:61:GLU:HB3	2.19	0.42
76:XB:62:TYR:CG	76:XB:63:ALA:N	2.87	0.42
52:ZA:154:LEU:HD11	52:ZA:193:VAL:HG11	2.00	0.42
52:ZA:86:VAL:O	52:ZA:86:VAL:HG23	2.19	0.42
1:A:1058:U:C6	1:A:1061:A:N1	2.87	0.42
1:A:1162:C:H1'	78:ZB:22:ARG:HB3	2.01	0.42
1:A:1240:U:H1'	1:A:1244:A:C2	2.55	0.42
1:A:1247:U:H2'	1:A:1248:C:C6	2.54	0.42
1:A:1304:G:H5'	1:A:1322:A:OP2	2.20	0.42
1:A:1389:C:H3'	1:A:1389:C:O2	2.19	0.42
1:A:1693:A:H2	1:A:1709:C:H42	1.66	0.42
1:A:218:A:H5'	1:A:219:A:OP2	2.19	0.42
1:A:313:U:H4'	1:A:314:C:H5'	2.01	0.42
1:A:485:A:H2'	1:A:486:G:H8	1.80	0.42
1:A:519:C:H3'	1:A:520:A:C8	2.52	0.42
1:A:611:U:H2'	1:A:612:U:H5'	2.00	0.42
1:A:691:C:H2'	1:A:692:C:O4'	2.20	0.42
1:A:749:U:H2'	1:A:750:U:C6	2.55	0.42
1:A:218:A:N7	1:A:830:U:H1'	2.33	0.42
2:B:1495:U:O2	43:QA:44:TRP:CE3	2.72	0.42
2:B:1656:A:H1'	2:B:1657:C:C5	2.54	0.42
2:B:1695:U:H5'	38:LA:24:LYS:O	2.20	0.42
2:B:1713:G:H1'	2:B:1714:A:C8	2.54	0.42
2:B:1881:A:H2'	2:B:1882:G:C8	2.54	0.42
2:B:2197:C:N4	2:B:2241:U:H3'	2.35	0.42
2:B:2301:U:O2'	2:B:2302:G:H5'	2.19	0.42
2:B:2381:G:O2'	2:B:2382:G:H5'	2.19	0.42
2:B:2679:A:C2'	2:B:2680:A:H5'	2.48	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2730:G:C2'	2:B:2731:U:H5'	2.48	0.42
2:B:2937:G:H3'	2:B:2938:G:H5''	2.00	0.42
2:B:3164:C:O2'	2:B:3165:A:H8	2.02	0.42
2:B:3329:U:H2'	2:B:3330:A:C8	2.54	0.42
2:B:522:A:O2'	24:X:67:ALA:HA	2.19	0.42
2:B:750:G:C4	2:B:751:A:C8	3.07	0.42
2:B:791:A:H2'	2:B:792:G:H8	1.80	0.42
2:B:806:A:H1'	2:B:2813:A:H5'	2.01	0.42
2:B:945:C:C2	2:B:946:U:C5	3.08	0.42
54:BB:14:ALA:HB1	54:BB:18:TRP:CZ3	2.54	0.42
54:BB:43:PRO:HB2	54:BB:46:VAL:HG23	2.01	0.42
3:C:42:G:OP2	41:OA:64:MET:N	2.44	0.42
29:CA:121:LYS:HG2	29:CA:122:ALA:H	1.84	0.42
29:CA:66:PRO:HG3	29:CA:84:PHE:CD1	2.55	0.42
1:A:1527:C:H5''	55:CB:109:LYS:NZ	2.33	0.42
55:CB:166:ARG:HH11	55:CB:166:ARG:HG2	1.85	0.42
55:CB:88:PRO:O	55:CB:90:ILE:N	2.52	0.42
55:CB:96:SER:O	55:CB:99:MET:HG2	2.18	0.42
56:DB:184:LEU:O	56:DB:188:ARG:HB3	2.19	0.42
56:DB:4:ASN:HB3	56:DB:109:LEU:O	2.20	0.42
82:DC:18:ASN:N	82:DC:18:ASN:HD22	2.18	0.42
82:DC:218:TRP:CE3	82:DC:328:LEU:HD12	2.54	0.42
82:DC:303:LEU:HD13	82:DC:327:PHE:CE1	2.54	0.42
82:DC:324:MET:HA	82:DC:327:PHE:HB3	2.02	0.42
82:DC:353:ALA:CA	82:DC:356:LEU:HB2	2.39	0.42
82:DC:456:LEU:HD23	82:DC:456:LEU:N	2.35	0.42
31:EA:37:PRO:HD2	31:EA:38:PHE:CE1	2.54	0.42
31:EA:26:VAL:HG21	31:EA:96:VAL:CG1	2.49	0.42
57:EB:141:ARG:HG2	57:EB:141:ARG:H	1.66	0.42
6:F:117:GLU:HG2	6:F:122:ASP:H	1.83	0.42
6:F:104:LEU:CD2	6:F:146:THR:HG21	2.46	0.42
6:F:249:SER:O	6:F:251:LYS:N	2.51	0.42
32:FA:8:THR:HA	32:FA:11:HIS:ND1	2.34	0.42
1:A:333:A:H5'	58:FB:48:THR:HB	2.02	0.42
7:G:114:VAL:O	7:G:117:ARG:HB3	2.19	0.42
7:G:125:SER:O	7:G:127:LYS:HD2	2.19	0.42
7:G:90:VAL:O	7:G:158:VAL:HG13	2.19	0.42
2:B:3139:A:OP1	7:G:22:ALA:HB2	2.18	0.42
7:G:331:ASN:HD22	7:G:332:ARG:HD3	1.84	0.42
33:GA:28:LYS:O	33:GA:29:TYR:HB2	2.19	0.42
34:HA:16:LEU:HD23	34:HA:16:LEU:C	2.40	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:HA:52:ARG:HG3	34:HA:52:ARG:NH1	2.34	0.42
34:HA:60:ALA:HB1	34:HA:67:VAL:HG22	2.00	0.42
34:HA:86:ARG:HD3	47:UA:44:LYS:HZ2	1.79	0.42
9:I:290:ILE:HD12	9:I:290:ILE:C	2.39	0.42
10:J:79:VAL:CG2	10:J:80:ASN:H	2.13	0.42
11:K:86:VAL:O	11:K:114:GLY:HA2	2.19	0.42
63:KB:98:VAL:HG12	63:KB:115:LEU:HB2	2.01	0.42
38:LA:59:PRO:O	38:LA:62:TYR:CD2	2.72	0.42
64:LB:123:SER:O	64:LB:124:ASP:HB3	2.19	0.42
13:M:16:VAL:HG12	13:M:17:THR:N	2.35	0.42
3:C:64:U:C5'	39:MA:49:LYS:HG2	2.47	0.42
65:MB:81:ARG:HH11	65:MB:96:ILE:HG22	1.83	0.42
14:N:145:LYS:HE3	14:N:149:VAL:CG2	2.48	0.42
14:N:57:LEU:C	14:N:57:LEU:HD23	2.39	0.42
15:O:18:VAL:HB	15:O:128:TYR:O	2.20	0.42
15:O:94:ARG:C	15:O:96:PHE:H	2.22	0.42
41:OA:5:THR:N	41:OA:6:PRO:HD2	2.35	0.42
67:OB:55:THR:O	67:OB:59:LYS:HB2	2.19	0.42
17:Q:74:GLY:HA3	17:Q:98:ASP:H	1.81	0.42
44:RA:110:CYS:SG	44:RA:112:LYS:HB2	2.58	0.42
2:B:149:U:P	19:S:54:LYS:HG3	2.59	0.42
20:T:108:ILE:CB	20:T:160:ARG:HD2	2.26	0.42
2:B:2772:C:P	46:TA:15:LYS:HE3	2.60	0.42
21:U:111:LYS:NZ	21:U:111:LYS:HB3	2.34	0.42
47:UA:14:TYR:HB2	47:UA:23:ARG:HD2	2.02	0.42
47:UA:73:THR:OG1	47:UA:74:ALA:N	2.52	0.42
22:V:54:LEU:HD22	22:V:58:ASN:CB	2.49	0.42
23:W:123:LEU:O	23:W:127:SER:OG	2.35	0.42
23:W:78:TYR:CD2	23:W:78:TYR:N	2.86	0.42
50:XA:59:LEU:N	50:XA:59:LEU:HD12	2.33	0.42
76:XB:17:HIS:CD2	76:XB:18:VAL:N	2.87	0.42
51:YA:225:VAL:O	51:YA:229:MET:HG2	2.19	0.42
1:A:1024:U:C2'	1:A:1025:A:H5''	2.44	0.42
1:A:1474:G:H2'	1:A:1475:A:C8	2.52	0.42
1:A:127:G:H1'	1:A:178:U:C6	2.55	0.42
1:A:407:A:H2'	1:A:408:C:C6	2.54	0.42
1:A:452:A:O2'	1:A:453:U:H5'	2.18	0.42
1:A:456:A:H2'	1:A:457:G:O4'	2.19	0.42
1:A:599:A:H2'	1:A:600:U:H6	1.84	0.42
53:AB:29:LEU:HD11	53:AB:69:LEU:HD13	2.01	0.42
2:B:1575:A:C5	2:B:1576:G:N7	2.87	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1610:G:C6	2:B:1611:G:C6	3.07	0.42
2:B:2680:A:H3'	2:B:2681:U:C6	2.55	0.42
2:B:2838:A:H3'	2:B:2839:G:H8	1.84	0.42
2:B:27:C:H2'	2:B:28:C:H5'	1.99	0.42
2:B:3036:G:C2'	2:B:3037:U:H5'	2.49	0.42
2:B:3070:A:H2'	2:B:3071:U:O4'	2.18	0.42
2:B:3094:A:H2'	2:B:3095:U:H6	1.81	0.42
2:B:3250:U:O2'	2:B:3251:U:H5'	2.20	0.42
2:B:3294:A:H5'	2:B:3294:A:C8	2.52	0.42
2:B:351:A:H61	43:QA:39:ALA:H	1.67	0.42
2:B:428:A:H1'	37:KA:25:PRO:CB	2.50	0.42
2:B:36:C:N4	2:B:47:C:H1'	2.35	0.42
2:B:651:G:O5'	2:B:651:G:H8	2.02	0.42
2:B:761:A:H61	2:B:770:G:C4'	2.31	0.42
2:B:772:U:H2'	2:B:773:G:O4'	2.20	0.42
2:B:822:G:H2'	2:B:823:C:H6	1.85	0.42
2:B:885:U:OP1	41:OA:6:PRO:HG3	2.19	0.42
54:BB:103:TYR:HE2	54:BB:184:THR:CG2	2.30	0.42
54:BB:47:PHE:HD2	54:BB:48:LEU:HD12	1.85	0.42
54:BB:75:LYS:O	54:BB:77:ARG:HD2	2.18	0.42
82:DC:399:ARG:HB2	82:DC:453:ILE:HG13	2.02	0.42
82:DC:437:MET:HE1	82:DC:455:GLY:HA3	2.01	0.42
82:DC:464:LEU:O	82:DC:465:LYS:CB	2.67	0.42
82:DC:509:LYS:O	82:DC:512:SER:HB2	2.19	0.42
82:DC:612:PHE:N	82:DC:612:PHE:CD2	2.88	0.42
82:DC:737:GLU:O	82:DC:740:VAL:HB	2.19	0.42
5:E:215:ARG:C	5:E:216:LEU:HD12	2.39	0.42
2:B:2470:C:C5'	5:E:26:ARG:HG3	2.49	0.42
31:EA:107:ARG:HA	31:EA:110:ALA:HB3	2.01	0.42
32:FA:74:ASN:HD22	32:FA:115:LYS:CB	2.20	0.42
7:G:116:ARG:HD3	7:G:122:TRP:CD2	2.54	0.42
7:G:139:GLN:HE21	7:G:144:ILE:HD12	1.83	0.42
1:A:478:A:O2'	59:GB:124:HIS:ND1	2.45	0.42
59:GB:23:ARG:O	59:GB:23:ARG:HG2	2.19	0.42
8:H:45:ASN:HA	8:H:110:ASN:HD22	1.83	0.42
8:H:23:PRO:HG2	8:H:258:LEU:HD23	1.99	0.42
9:I:230:ASP:O	9:I:231:ILE:HG13	2.19	0.42
9:I:34:LYS:HD3	9:I:35:ARG:N	2.34	0.42
9:I:52:VAL:CG1	9:I:54:ARG:HG2	2.49	0.42
9:I:70:THR:HG22	9:I:70:THR:O	2.19	0.42
11:K:60:ARG:CA	11:K:60:ARG:HH11	2.17	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:L:146:LYS:HG2	12:L:173:MET:HB3	2.02	0.42
12:L:173:MET:O	12:L:175:VAL:N	2.53	0.42
39:MA:77:PRO:O	39:MA:81:ARG:HB2	2.18	0.42
65:MB:22:LEU:HA	65:MB:25:LEU:HD12	2.01	0.42
40:NA:70:ARG:C	40:NA:72:VAL:H	2.22	0.42
66:NB:28:LEU:O	66:NB:65:ILE:HG12	2.20	0.42
41:OA:35:SER:O	41:OA:45:ARG:CZ	2.66	0.42
41:OA:64:MET:HB2	41:OA:68:LYS:HE2	2.01	0.42
42:PA:26:LYS:HD2	42:PA:78:LEU:HD11	2.00	0.42
68:PB:30:TYR:CZ	68:PB:40:ARG:HB3	2.54	0.42
69:QB:66:TYR:CE2	69:QB:129:GLN:HA	2.54	0.42
18:R:32:LEU:O	18:R:32:LEU:HG	2.20	0.42
2:B:269:G:H5''	19:S:14:LYS:NZ	2.35	0.42
19:S:201:ARG:NH1	19:S:201:ARG:HB3	2.35	0.42
45:SA:15:ARG:O	45:SA:19:LYS:HG2	2.19	0.42
71:SB:85:TYR:HD2	71:SB:85:TYR:HA	1.77	0.42
72:TB:17:ALA:HB1	72:TB:22:LYS:HB3	2.02	0.42
22:V:61:PRO:HB2	22:V:88:THR:CG2	2.50	0.42
48:VA:7:LYS:CA	48:VA:10:GLU:HG2	2.45	0.42
23:W:138:LEU:O	23:W:142:ILE:HB	2.19	0.42
50:XA:22:THR:HG21	50:XA:173:ILE:HD11	2.01	0.42
50:XA:188:LEU:HD13	50:XA:189:VAL:CG1	2.41	0.42
50:XA:76:ILE:O	50:XA:77:SER:HB2	2.19	0.42
1:A:1797:A:H61	76:XB:84:VAL:HA	1.84	0.42
51:YA:23:PRO:O	51:YA:27:LYS:HG2	2.19	0.42
72:TB:53:ILE:CD1	77:YB:25:VAL:HG23	2.44	0.42
77:YB:32:PHE:CE1	77:YB:47:PHE:HB2	2.53	0.42
1:A:160:C:H2'	1:A:161:U:O4'	2.19	0.42
1:A:1712:A:H2'	1:A:1713:G:H5''	2.00	0.42
1:A:234:G:H21	1:A:235:G:H1'	1.84	0.42
1:A:64:U:C2'	1:A:65:A:H5''	2.49	0.42
2:B:1299:U:H2'	2:B:1300:G:O4'	2.19	0.42
2:B:1639:C:O3'	2:B:1738:C:C5'	2.67	0.42
2:B:1722:U:C2'	2:B:1723:A:H5'	2.45	0.42
2:B:2244:A:O2'	2:B:2245:C:H5'	2.19	0.42
2:B:2264:U:O2'	2:B:2265:C:H5'	2.19	0.42
2:B:2372:A:C3'	2:B:2373:A:H5'	2.50	0.42
2:B:2444:C:O2	2:B:2503:G:O6	2.37	0.42
2:B:2651:G:C2	2:B:2796:G:C2	3.07	0.42
2:B:2682:C:H4'	15:O:68:HIS:CG	2.54	0.42
2:B:2733:A:C2	2:B:2734:A:H1'	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2770:G:H4'	46:TA:13:LYS:NZ	2.34	0.42
2:B:2973:G:H2'	2:B:2974:U:O4'	2.19	0.42
2:B:3159:C:H2'	2:B:3160:U:O4'	2.19	0.42
2:B:640:U:P	36:JA:38:ILE:HG12	2.59	0.42
2:B:744:A:H2'	2:B:745:C:H5'	2.01	0.42
2:B:777:U:H2'	2:B:778:U:O4'	2.19	0.42
2:B:784:A:C5'	22:V:69:ARG:HH21	2.33	0.42
2:B:879:U:OP1	2:B:2981:U:H5'	2.19	0.42
54:BB:121:TYR:HA	54:BB:162:ILE:O	2.19	0.42
3:C:107:G:C8	3:C:137:C:C4	3.07	0.42
3:C:140:G:H2'	3:C:141:C:O4'	2.19	0.42
55:CB:124:LEU:O	55:CB:125:THR:OG1	2.31	0.42
82:DC:123:ASP:HB2	82:DC:348:ALA:HB1	1.99	0.42
82:DC:144:ARG:CB	82:DC:192:TYR:HB3	2.49	0.42
82:DC:412:ARG:HG2	82:DC:428:ILE:HD13	2.01	0.42
82:DC:414:GLN:CB	82:DC:468:THR:HB	2.45	0.42
31:EA:9:LYS:HA	31:EA:86:THR:HA	2.00	0.42
6:F:134:VAL:HG23	6:F:134:VAL:O	2.19	0.42
6:F:42:ARG:NE	6:F:87:PHE:CE2	2.81	0.42
58:FB:105:ASP:O	58:FB:106:ALA:CB	2.67	0.42
59:GB:92:LYS:O	59:GB:94:ASP:N	2.52	0.42
8:H:32:PRO:CG	8:H:244:LEU:HD21	2.47	0.42
8:H:82:THR:C	8:H:84:ARG:H	2.22	0.42
34:HA:24:THR:O	34:HA:24:THR:HG23	2.19	0.42
9:I:83:LEU:N	9:I:84:PRO:CD	2.83	0.42
37:KA:46:GLY:H	37:KA:71:VAL:HG12	1.83	0.42
2:B:1327:C:H1'	37:KA:77:ASN:HD21	1.84	0.42
12:L:91:PHE:CE1	12:L:185:ARG:HB3	2.53	0.42
2:B:1593:A:C1'	38:LA:60:ARG:HD3	2.49	0.42
13:M:12:VAL:HG11	13:M:16:VAL:HB	2.00	0.42
66:NB:39:VAL:CG2	66:NB:48:VAL:HG11	2.49	0.42
66:NB:75:VAL:HA	66:NB:78:VAL:HG23	2.01	0.42
15:O:89:TYR:CE1	15:O:167:TYR:HB3	2.53	0.42
15:O:32:ARG:HB3	15:O:120:ILE:CG2	2.48	0.42
67:OB:41:ILE:CG2	67:OB:42:GLN:H	2.23	0.42
19:S:148:TYR:HA	19:S:151:ILE:HG13	2.00	0.42
2:B:149:U:OP1	19:S:54:LYS:HG3	2.20	0.42
1:A:1126:G:OP1	45:SA:11:ARG:HG3	2.19	0.42
71:SB:15:ARG:CZ	71:SB:24:ILE:HG21	2.50	0.42
20:T:108:ILE:O	20:T:160:ARG:HG3	2.20	0.42
22:V:66:ARG:NH1	22:V:66:ARG:HB2	2.35	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
74:VB:20:ARG:HD3	74:VB:76:TYR:CZ	2.55	0.42
23:W:175:GLN:O	23:W:179:GLU:HG3	2.19	0.42
75:WB:60:VAL:HA	75:WB:64:VAL:HG11	2.02	0.42
24:X:12:ARG:HB3	24:X:24:LEU:CG	2.50	0.42
24:X:149:LYS:O	24:X:150:PHE:HB3	2.18	0.42
51:YA:70:LEU:HD13	51:YA:70:LEU:C	2.40	0.42
77:YB:36:LYS:HB2	77:YB:78:SER:OG	2.19	0.42
52:ZA:109:GLY:O	52:ZA:138:PRO:HA	2.20	0.42
1:A:1583:A:N1	1:A:1611:A:C5'	2.82	0.42
1:A:1593:A:C2'	1:A:1594:G:H5'	2.50	0.42
1:A:1687:U:O2	1:A:1714:A:H2	2.01	0.42
1:A:1777:G:H2'	1:A:1778:G:C8	2.52	0.42
1:A:367:A:C2'	1:A:368:U:H5'	2.49	0.42
1:A:373:G:H2'	1:A:374:U:O4'	2.19	0.42
1:A:404:G:H2'	1:A:405:C:C6	2.54	0.42
1:A:42:G:C8	1:A:437:A:H2'	2.55	0.42
1:A:864:U:C5	77:YB:22:LYS:HA	2.54	0.42
53:AB:171:ALA:HB3	53:AB:186:VAL:O	2.19	0.42
79:AC:33:LYS:HG2	79:AC:34:TYR:N	2.34	0.42
2:B:1073:U:C1'	33:GA:50:THR:OG1	2.67	0.42
2:B:1162:U:H4'	36:JA:57:TYR:CD1	2.54	0.42
2:B:1342:C:H2'	2:B:1343:A:O4'	2.19	0.42
2:B:1673:G:C2'	2:B:1674:G:H5'	2.49	0.42
2:B:16:A:C6	2:B:17:G:C5	3.08	0.42
2:B:2178:A:H1'	2:B:2180:G:C6	2.54	0.42
2:B:2310:U:C4	2:B:2311:G:C6	3.08	0.42
2:B:257:U:H5'	17:Q:86:THR:HG23	2.01	0.42
2:B:3308:C:C5	2:B:3309:G:C6	3.08	0.42
2:B:539:C:H2'	2:B:540:U:H6	1.81	0.42
2:B:729:C:C2'	2:B:730:C:H5'	2.49	0.42
2:B:749:C:H2'	2:B:750:G:H8	1.84	0.42
2:B:810:A:O2'	2:B:811:U:H5'	2.19	0.42
1:A:788:A:P	54:BB:108:ARG:HH22	2.42	0.42
2:B:1520:G:H5''	29:CA:69:SER:OG	2.20	0.42
55:CB:161:ASP:HB3	78:ZB:54:LEU:HD23	2.02	0.42
55:CB:212:LYS:HD3	55:CB:213:LYS:HE3	2.02	0.42
55:CB:33:VAL:HG13	55:CB:37:GLN:OE1	2.19	0.42
82:DC:155:VAL:HG22	82:DC:202:VAL:HG11	2.01	0.42
82:DC:568:GLU:HA	82:DC:592:PRO:HB3	2.01	0.42
83:EC:6933:G:H2'	83:EC:6934:U:C4'	2.50	0.42
2:B:2153:U:OP1	6:F:246:LEU:HB2	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:257:A:H4'	58:FB:73:SER:O	2.19	0.42
33:GA:10:HIS:O	33:GA:11:ASN:CB	2.68	0.42
34:HA:30:THR:HB	34:HA:91:SER:HB2	2.01	0.42
9:I:8:LYS:HD3	9:I:12:TYR:CE1	2.54	0.42
35:IA:31:ARG:HH11	35:IA:31:ARG:CB	2.29	0.42
36:JA:115:LEU:HD23	36:JA:115:LEU:N	2.35	0.42
63:KB:9:LYS:CA	63:KB:9:LYS:HE2	2.50	0.42
12:L:42:PRO:HG2	12:L:43:LYS:H	1.85	0.42
12:L:50:VAL:HB	12:L:52:TRP:CZ2	2.55	0.42
38:LA:98:GLN:HA	38:LA:101:VAL:CG2	2.50	0.42
38:LA:65:VAL:HG12	38:LA:66:SER:N	2.33	0.42
1:A:901:G:OP2	64:LB:25:ASP:HB2	2.20	0.42
13:M:117:PHE:CE1	13:M:177:ASP:HB3	2.54	0.42
39:MA:104:GLN:HE22	39:MA:107:LYS:HD3	1.81	0.42
66:NB:49:TYR:HB3	66:NB:53:LEU:HD21	2.00	0.42
55:CB:37:GLN:HB3	66:NB:53:LEU:HD13	2.01	0.42
15:O:155:THR:HG22	15:O:156:LYS:H	1.85	0.42
15:O:60:ARG:HB2	15:O:63:GLU:HB2	2.01	0.42
17:Q:99:HIS:C	17:Q:99:HIS:ND1	2.73	0.42
43:QA:42:ARG:HH11	43:QA:42:ARG:CG	2.32	0.42
69:QB:12:GLN:C	69:QB:14:PHE:N	2.73	0.42
18:R:20:VAL:HG22	18:R:66:THR:OG1	2.19	0.42
71:SB:38:LYS:HD2	71:SB:49:GLU:HG3	2.00	0.42
71:SB:38:LYS:HB2	71:SB:49:GLU:HG2	2.01	0.42
2:B:2655:U:C2'	46:TA:3:ASN:HD22	2.22	0.42
72:TB:101:TYR:HA	72:TB:113:HIS:ND1	2.34	0.42
72:TB:3:ARG:HB2	72:TB:3:ARG:CZ	2.50	0.42
21:U:120:ASN:O	21:U:145:HIS:HB2	2.19	0.42
73:UB:53:VAL:HG22	73:UB:102:VAL:HG11	2.02	0.42
22:V:9:GLN:NE2	22:V:10:HIS:HD2	2.17	0.42
22:V:70:ALA:HA	22:V:73:GLN:HE21	1.83	0.42
2:B:1282:G:C5'	48:VA:83:ASN:HD22	2.23	0.42
74:VB:125:LEU:HD12	74:VB:125:LEU:N	2.35	0.42
49:WA:130:THR:HB	49:WA:144:LEU:O	2.19	0.42
49:WA:123:ILE:HG22	49:WA:133:VAL:HG22	2.02	0.42
2:B:2723:U:O2'	25:Y:54:HIS:HB2	2.20	0.42
25:Y:60:LYS:HB3	25:Y:76:ILE:HG21	2.00	0.42
51:YA:157:GLN:HB2	51:YA:160:HIS:ND1	2.34	0.42
77:YB:11:THR:O	77:YB:15:GLU:HB2	2.20	0.42
1:A:1060:U:H3'	1:A:1060:U:O2	2.20	0.42
1:A:1144:U:H2'	1:A:1145:U:O4'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1737:G:H4'	2:B:1933:A:H2	1.85	0.42
1:A:1738:U:H2'	1:A:1739:C:C6	2.55	0.42
1:A:202:A:O2'	1:A:203:U:H5'	2.20	0.42
1:A:447:U:C4	1:A:448:C:C4	3.08	0.42
1:A:61:A:H2'	1:A:62:A:O4'	2.19	0.42
1:A:884:A:H2'	1:A:885:G:H8	1.75	0.42
27:AA:87:ARG:HD2	27:AA:91:VAL:CG2	2.50	0.42
2:B:1096:U:H4'	2:B:1097:G:O4'	2.19	0.42
2:B:639:G:O4'	2:B:1434:G:N1	2.52	0.42
2:B:825:U:H4'	2:B:1587:A:N1	2.35	0.42
2:B:1618:G:N2	2:B:1619:A:H1'	2.35	0.42
2:B:1636:U:OP2	31:EA:73:LYS:NZ	2.51	0.42
2:B:1951:C:N4	2:B:2095:G:C4	2.88	0.42
2:B:2164:A:H2'	2:B:2165:G:O4'	2.20	0.42
2:B:2350:C:O2'	2:B:2351:U:H5'	2.20	0.42
2:B:240:U:H4'	2:B:241:G:H5'	2.00	0.42
2:B:241:G:N3	2:B:241:G:H2'	2.34	0.42
2:B:3354:U:H5''	2:B:3355:U:O5'	2.19	0.42
2:B:337:G:O2'	2:B:338:A:H5''	2.20	0.42
2:B:3392:U:H2'	2:B:3393:U:H6	1.81	0.42
2:B:631:U:H2'	2:B:632:G:C8	2.55	0.42
2:B:802:C:H2'	2:B:803:C:H6	1.84	0.42
2:B:830:A:C8	2:B:831:G:C8	3.08	0.42
2:B:879:U:H4'	21:U:132:ALA:CB	2.41	0.42
2:B:96:G:O2'	2:B:97:U:H5'	2.20	0.42
54:BB:183:VAL:HG13	54:BB:224:ASN:CB	2.49	0.42
54:BB:246:LEU:HD22	54:BB:251:GLU:HG2	2.01	0.42
54:BB:36:HIS:CG	54:BB:85:GLY:HA3	2.54	0.42
3:C:5:U:OP2	21:U:62:ARG:HG2	2.19	0.42
55:CB:55:ASP:HB2	55:CB:138:THR:HB	2.02	0.42
4:D:77:G:N2	4:D:101:G:H2'	2.34	0.42
30:DA:20:PHE:N	30:DA:20:PHE:HD2	2.18	0.42
30:DA:27:ARG:CD	30:DA:75:ARG:HB3	2.50	0.42
56:DB:74:LYS:HB3	56:DB:74:LYS:NZ	2.35	0.42
82:DC:129:VAL:CG1	82:DC:135:VAL:HG22	2.50	0.42
82:DC:292:LYS:O	82:DC:296:ILE:HG13	2.19	0.42
82:DC:288:ILE:HG21	82:DC:320:LEU:HA	2.02	0.42
82:DC:374:PRO:HB3	82:DC:450:ALA:H	1.83	0.42
82:DC:404:THR:HG22	82:DC:449:PRO:HA	2.02	0.42
82:DC:411:VAL:HG13	82:DC:470:THR:O	2.19	0.42
82:DC:44:GLY:HA2	82:DC:77:LEU:HB2	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:EB:30:SER:CB	57:EB:34:LEU:HD22	2.50	0.42
6:F:219:ILE:CD1	6:F:223:SER:HB3	2.48	0.42
6:F:29:LEU:HD12	6:F:124:GLY:H	1.85	0.42
32:FA:73:LEU:HD21	32:FA:81:LEU:HD11	2.01	0.42
58:FB:159:GLN:NE2	58:FB:166:TYR:H	2.17	0.42
7:G:137:TYR:HA	7:G:144:ILE:CD1	2.49	0.42
7:G:339:ARG:NH1	7:G:342:LEU:HD11	2.30	0.42
2:B:1065:A:C4	33:GA:28:LYS:HG2	2.54	0.42
59:GB:68:LYS:HE2	59:GB:72:GLU:OE1	2.19	0.42
8:H:275:THR:O	8:H:276:LEU:C	2.58	0.42
2:B:1347:U:H4'	8:H:305:ALA:HA	2.02	0.42
9:I:251:PRO:C	9:I:253:PHE:H	2.23	0.42
9:I:64:ILE:HD11	9:I:105:ILE:HD13	2.02	0.42
10:J:47:PHE:CE2	10:J:75:PRO:HD2	2.53	0.42
11:K:55:TYR:CE1	11:K:189:ILE:HD13	2.54	0.42
37:KA:75:HIS:O	37:KA:80:VAL:HB	2.19	0.42
39:MA:98:SER:O	39:MA:99:GLN:C	2.57	0.42
14:N:139:ARG:HG3	14:N:172:GLY:HA2	2.02	0.42
14:N:152:LEU:C	14:N:154:ARG:N	2.73	0.42
66:NB:48:VAL:O	66:NB:51:PRO:HD2	2.19	0.42
43:QA:43:ASN:O	43:QA:45:ARG:N	2.53	0.42
18:R:39:ILE:HD12	18:R:43:LYS:CB	2.49	0.42
20:T:119:VAL:HG23	20:T:119:VAL:O	2.19	0.42
72:TB:5:SER:HB3	72:TB:8:ALA:CB	2.49	0.42
72:TB:93:LEU:HG	72:TB:93:LEU:O	2.20	0.42
22:V:30:VAL:HG22	22:V:52:LEU:HD12	2.02	0.42
2:B:975:C:C5'	22:V:58:ASN:ND2	2.81	0.42
49:WA:168:THR:HG22	49:WA:169:ILE:N	2.34	0.42
26:Z:107:PHE:CG	26:Z:108:TYR:N	2.87	0.42
1:A:1041:G:N2	1:A:1078:C:C2	2.87	0.42
1:A:1341:A:N1	1:A:1384:A:H2	2.17	0.42
1:A:1425:A:O2'	1:A:1426:C:H5'	2.20	0.42
1:A:1505:A:H2'	1:A:1506:G:C4'	2.49	0.42
1:A:310:C:H2'	1:A:311:U:O4'	2.20	0.42
1:A:479:C:H5'	59:GB:124:HIS:ND1	2.34	0.42
1:A:567:A:H61	1:A:580:A:H61	1.68	0.42
1:A:750:U:O2'	1:A:751:G:H5'	2.19	0.42
1:A:783:G:HO2'	1:A:784:C:H5	1.65	0.42
53:AB:207:THR:HB	67:OB:40:THR:OG1	2.19	0.42
53:AB:92:GLN:N	53:AB:92:GLN:HE21	2.17	0.42
2:B:1066:G:H2'	2:B:1067:U:C6	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1258:U:H2'	2:B:1260:A:OP2	2.19	0.42
2:B:1257:C:N4	2:B:1261:G:H22	2.07	0.42
2:B:1392:G:H3'	36:JA:125:ARG:NH2	2.28	0.42
2:B:1517:G:H5''	43:QA:22:PRO:CG	2.46	0.42
2:B:1653:G:C4	2:B:1654:A:C8	3.08	0.42
2:B:2196:C:H4'	2:B:2271:A:C4'	2.50	0.42
2:B:2470:C:H5''	5:E:26:ARG:HG3	2.00	0.42
2:B:2606:G:H5''	2:B:2606:G:N3	2.35	0.42
2:B:2638:C:H2'	2:B:2639:G:H8	1.85	0.42
2:B:3158:G:O2'	2:B:3159:C:H5'	2.20	0.42
2:B:330:G:H1	3:C:33:A:N6	2.14	0.42
2:B:3338:C:H2'	2:B:3339:A:H8	1.85	0.42
2:B:385:A:O2'	2:B:386:A:H5'	2.20	0.42
2:B:39:A:O5'	2:B:40:A:H4'	2.20	0.42
2:B:426:G:H2'	2:B:427:C:C6	2.55	0.42
2:B:611:A:H1'	2:B:612:U:C6	2.55	0.42
54:BB:105:VAL:HG11	54:BB:245:LYS:HA	2.01	0.42
55:CB:120:ILE:HD11	55:CB:191:ALA:HB1	2.01	0.42
30:DA:64:LYS:HD2	30:DA:65:GLY:N	2.35	0.42
56:DB:120:GLU:HB3	56:DB:125:THR:HB	2.02	0.42
56:DB:129:VAL:CG2	56:DB:130:PRO:HD2	2.49	0.42
56:DB:74:LYS:HZ2	56:DB:74:LYS:HB3	1.85	0.42
82:DC:573:GLN:NE2	82:DC:719:LEU:HD13	2.34	0.42
5:E:172:VAL:CG2	5:E:173:GLU:H	2.23	0.42
5:E:206:VAL:HG22	5:E:216:LEU:HD11	2.01	0.42
57:EB:38:LEU:H	57:EB:40:PRO:HD2	1.84	0.42
83:EC:6799:C:H2'	83:EC:6800:G:H4'	2.02	0.42
2:B:2149:A:H1'	6:F:180:LEU:O	2.19	0.42
32:FA:138:ILE:CG2	32:FA:139:ARG:HG3	2.49	0.42
32:FA:40:HIS:C	32:FA:42:ARG:H	2.23	0.42
58:FB:63:GLY:O	58:FB:75:LYS:HA	2.19	0.42
8:H:276:LEU:O	8:H:277:PRO:O	2.37	0.42
8:H:69:ARG:HB3	8:H:71:VAL:HG12	2.01	0.42
60:HB:31:LYS:HD3	60:HB:36:ASP:OD1	2.20	0.42
60:HB:3:MET:HB3	60:HB:41:TYR:CE2	2.55	0.42
9:I:281:GLU:HA	9:I:284:ALA:HB3	2.02	0.42
35:IA:46:THR:O	35:IA:46:THR:HG23	2.20	0.42
11:K:51:TYR:HB3	11:K:55:TYR:CE2	2.55	0.42
61:IB:155:LYS:CE	63:KB:135:LEU:HD23	2.50	0.42
12:L:158:ASP:HB3	12:L:159:PRO:CD	2.37	0.42
12:L:34:PHE:N	12:L:34:PHE:CD1	2.88	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
65:MB:9:LYS:HB3	65:MB:10:ARG:H	1.62	0.42
14:N:50:VAL:HB	14:N:148:VAL:CG1	2.49	0.42
14:N:174:THR:HG21	14:N:181:TYR:HD1	1.83	0.42
14:N:66:GLU:OE1	14:N:66:GLU:HA	2.20	0.42
15:O:40:LEU:C	15:O:40:LEU:HD13	2.40	0.42
15:O:49:LYS:HG2	15:O:64:LYS:HG3	2.02	0.42
17:Q:159:VAL:HG11	32:FA:96:LYS:HZ3	1.85	0.42
70:RB:41:ILE:HG23	70:RB:103:ILE:CD1	2.50	0.42
20:T:27:LEU:C	20:T:29:ASN:H	2.22	0.42
72:TB:112:ASP:OD1	72:TB:114:GLU:N	2.50	0.42
72:TB:11:LEU:HD22	72:TB:12:ASN:ND2	2.35	0.42
72:TB:68:ARG:HG2	72:TB:68:ARG:NH1	2.33	0.42
2:B:728:G:N2	22:V:138:LEU:HD22	2.34	0.42
22:V:29:LEU:HB2	22:V:52:LEU:HD13	2.01	0.42
49:WA:23:LEU:HD11	49:WA:304:GLY:N	2.35	0.42
68:PB:4:VAL:HB	75:WB:47:TYR:HE2	1.85	0.42
2:B:1214:U:OP1	24:X:91:TYR:HB3	2.19	0.42
50:XA:10:THR:O	50:XA:12:GLU:N	2.52	0.42
50:XA:6:THR:HG23	50:XA:8:ASP:OD2	2.19	0.42
76:XB:41:ILE:CD1	76:XB:41:ILE:H	2.32	0.42
25:Y:56:PHE:HD1	25:Y:56:PHE:O	2.03	0.42
51:YA:228:LEU:HG	51:YA:228:LEU:O	2.19	0.42
26:Z:33:TYR:C	26:Z:35:LYS:N	2.73	0.42
1:A:1277:G:H2'	1:A:1278:G:O4'	2.19	0.42
1:A:140:A:H4'	1:A:141:U:H5'	2.00	0.42
1:A:64:U:C3'	1:A:65:A:H5''	2.49	0.42
1:A:684:A:C3'	1:A:685:A:C5'	2.97	0.42
1:A:690:G:H2'	1:A:691:C:C5'	2.39	0.42
1:A:775:G:H2'	1:A:776:G:O4'	2.20	0.42
1:A:784:C:H2'	1:A:785:U:O4'	2.20	0.42
1:A:889:U:H2'	1:A:890:C:O4'	2.20	0.42
27:AA:13:ILE:HD12	27:AA:54:LEU:O	2.19	0.42
2:B:1897:G:C1'	27:AA:83:LYS:HD2	2.50	0.42
27:AA:85:TRP:O	27:AA:92:PHE:HA	2.19	0.42
53:AB:202:LEU:HD22	53:AB:202:LEU:N	2.35	0.42
53:AB:79:TYR:CD2	53:AB:84:ILE:HG13	2.55	0.42
2:B:1002:A:N1	2:B:1050:U:O2'	2.52	0.42
2:B:1496:C:O5'	2:B:1496:C:C6	2.70	0.42
2:B:1532:C:H2'	2:B:1533:U:O4'	2.18	0.42
2:B:1918:C:H2'	2:B:1919:G:H8	1.84	0.42
2:B:2291:A:H2'	2:B:2292:U:O4'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2322:C:C2'	2:B:2323:G:H5'	2.50	0.42
2:B:2325:G:H2'	2:B:2326:A:O4'	2.20	0.42
2:B:1308:A:H8	2:B:2368:A:HO2'	1.66	0.42
2:B:2654:C:OP2	46:TA:2:VAL:HG13	2.19	0.42
2:B:2339:C:H41	2:B:3093:C:H5'	1.84	0.42
2:B:310:U:C3'	2:B:311:C:H5''	2.50	0.42
2:B:3148:U:H5'	7:G:104:THR:HB	2.02	0.42
2:B:520:U:H5	8:H:349:THR:O	2.03	0.42
2:B:593:C:H2'	2:B:594:U:O4'	2.19	0.42
2:B:826:G:O5'	2:B:1590:G:H4'	2.20	0.42
2:B:898:U:C4	2:B:899:U:C5	3.07	0.42
28:BA:49:ILE:C	28:BA:51:TRP:H	2.23	0.42
54:BB:211:LYS:CB	54:BB:217:THR:HG22	2.48	0.42
55:CB:61:TYR:HH	78:ZB:52:ASP:CG	2.23	0.42
4:D:2:G:O2'	4:D:3:U:H5'	2.20	0.42
30:DA:3:LYS:HG2	30:DA:4:GLN:H	1.85	0.42
30:DA:58:VAL:O	30:DA:64:LYS:HD2	2.20	0.42
1:A:144:U:H5	56:DB:137:ARG:HH12	1.67	0.42
82:DC:734:GLN:NE2	82:DC:767:THR:HB	2.35	0.42
57:EB:49:ILE:O	57:EB:56:LYS:HB3	2.20	0.42
7:G:72:VAL:HA	27:AA:88:ARG:O	2.20	0.42
2:B:364:G:H5''	8:H:84:ARG:HG3	2.02	0.42
34:HA:16:LEU:HD21	34:HA:97:ASP:HB2	2.01	0.42
9:I:196:ARG:HA	9:I:199:ILE:HB	2.01	0.42
9:I:87:GLY:C	9:I:243:ALA:HB2	2.40	0.42
9:I:50:ARG:HB2	9:I:65:ILE:HD13	2.01	0.42
10:J:159:LEU:C	10:J:161:ALA:H	2.23	0.42
11:K:107:ARG:O	11:K:109:THR:N	2.53	0.42
12:L:152:LEU:N	12:L:152:LEU:HD12	2.35	0.42
38:LA:7:PHE:CZ	38:LA:18:ASN:HB3	2.54	0.42
51:YA:66:VAL:CA	64:LB:33:LEU:HD13	2.43	0.42
39:MA:33:VAL:O	39:MA:33:VAL:HG12	2.20	0.42
14:N:99:ILE:HG23	14:N:101:LYS:HB2	2.01	0.42
14:N:86:HIS:O	14:N:138:VAL:HA	2.20	0.42
14:N:33:ILE:HD11	14:N:35:ASP:O	2.20	0.42
40:NA:53:TYR:CE1	40:NA:76:ARG:HG2	2.55	0.42
66:NB:88:GLY:HA2	66:NB:91:ALA:HB3	2.00	0.42
15:O:106:ILE:HD11	15:O:127:PHE:HE1	1.85	0.42
15:O:86:VAL:CG2	15:O:111:ASP:HB3	2.50	0.42
67:OB:53:TYR:O	67:OB:57:LEU:HG	2.18	0.42
42:PA:46:ARG:HB2	42:PA:51:LEU:HD12	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:Q:9:ILE:HD11	32:FA:49:HIS:CG	2.54	0.42
20:T:126:VAL:HG13	20:T:127:LEU:HG	2.01	0.42
2:B:277:G:H5''	46:TA:49:GLY:HA2	2.02	0.42
46:TA:12:CYS:SG	46:TA:77:CYS:SG	3.12	0.42
72:TB:11:LEU:HD22	72:TB:12:ASN:HD22	1.84	0.42
72:TB:89:TRP:CZ3	72:TB:125:ILE:HD13	2.55	0.42
21:U:24:VAL:HG11	21:U:87:SER:HA	2.01	0.42
23:W:135:LYS:O	23:W:139:VAL:HG23	2.19	0.42
50:XA:86:VAL:HG12	50:XA:174:TRP:CZ3	2.55	0.42
51:YA:111:ARG:HB3	76:XB:68:TYR:CB	2.35	0.42
26:Z:90:ARG:O	26:Z:91:ASP:CB	2.67	0.42
1:A:1218:G:P	1:A:1265:G:H22	2.42	0.42
1:A:1314:U:H4'	1:A:1315:U:C5	2.54	0.42
1:A:139:C:H1'	1:A:140:A:OP2	2.19	0.42
1:A:1500:C:H5''	69:QB:102:ARG:HD3	2.02	0.42
1:A:1541:G:C6	1:A:1542:G:C2	3.07	0.42
1:A:320:U:O5'	1:A:321:C:H5''	2.20	0.42
1:A:410:A:H2'	1:A:411:C:C6	2.55	0.42
1:A:457:G:O2'	1:A:458:G:H5'	2.20	0.42
1:A:612:U:H2'	1:A:613:G:C8	2.55	0.42
1:A:923:A:O2'	1:A:924:A:H5'	2.20	0.42
27:AA:33:ASN:ND2	27:AA:33:ASN:N	2.67	0.42
2:B:1010:G:N2	14:N:193:ASP:OD2	2.53	0.42
2:B:129:U:H2'	2:B:130:A:N7	2.34	0.42
2:B:136:G:C4	2:B:137:G:C8	3.07	0.42
2:B:1430:U:H2'	32:FA:9:ARG:NH2	2.25	0.42
2:B:1460:A:C6	2:B:1461:A:C6	3.08	0.42
2:B:1624:G:H2'	2:B:1643:A:N1	2.34	0.42
2:B:1689:U:O2'	2:B:1690:C:H5'	2.20	0.42
2:B:1727:G:O4'	2:B:1731:A:H5'	2.20	0.42
2:B:1913:A:H1'	2:B:2120:A:O2'	2.20	0.42
2:B:220:G:N7	2:B:1389:G:N1	2.68	0.42
2:B:23:A:H2'	2:B:24:G:O4'	2.20	0.42
2:B:2907:G:H2'	2:B:2908:G:H8	1.84	0.42
2:B:2993:G:C6	2:B:3142:A:C4	3.08	0.42
2:B:307:A:H2'	2:B:308:A:H8	1.80	0.42
2:B:3229:G:N3	18:R:129:TYR:HE1	2.18	0.42
2:B:3278:C:H2'	2:B:3278:C:O2	2.20	0.42
2:B:527:A:H2'	2:B:528:U:C6	2.55	0.42
54:BB:104:ASP:OD1	54:BB:110:ALA:HB2	2.19	0.42
29:CA:109:LYS:HE3	29:CA:111:ASN:HD21	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:CA:72:ALA:O	29:CA:76:VAL:HG23	2.20	0.42
55:CB:165:LEU:HG	55:CB:169:ASN:OD1	2.20	0.42
4:D:75:G:H1'	4:D:104:A:N6	2.35	0.42
30:DA:20:PHE:N	30:DA:20:PHE:CD2	2.87	0.42
30:DA:52:ARG:O	30:DA:70:ILE:HB	2.20	0.42
1:A:161:U:H5'	56:DB:84:TYR:C	2.41	0.42
82:DC:10:ARG:O	82:DC:13:MET:HB2	2.19	0.42
82:DC:164:LEU:HD11	82:DC:174:LEU:HD22	2.02	0.42
82:DC:655:TYR:HD2	82:DC:693:LEU:CD1	2.32	0.42
82:DC:831:GLU:O	82:DC:833:PRO:HD3	2.20	0.42
5:E:102:LYS:HA	5:E:105:LYS:HB2	2.02	0.42
7:G:87:VAL:HB	7:G:110:LEU:HD11	2.02	0.42
8:H:303:GLY:O	8:H:304:GLN:HB2	2.20	0.42
34:HA:30:THR:HG21	34:HA:89:VAL:HG22	2.01	0.42
34:HA:77:LEU:HD23	34:HA:88:GLY:CA	2.48	0.42
9:I:247:ILE:C	9:I:249:ALA:H	2.22	0.42
36:JA:104:ASN:HD22	36:JA:104:ASN:N	2.18	0.42
36:JA:82:LEU:CD1	36:JA:108:ILE:HG23	2.50	0.42
1:A:961:U:H5'	63:KB:47:PRO:O	2.20	0.42
12:L:240:ASN:O	12:L:243:GLN:HB3	2.19	0.42
12:L:82:LEU:HD11	12:L:86:THR:CG2	2.49	0.42
64:LB:35:GLY:C	64:LB:37:GLU:N	2.72	0.42
39:MA:31:LEU:HA	39:MA:34:GLN:NE2	2.35	0.42
16:P:107:ASP:HB3	16:P:108:GLU:H	1.67	0.42
2:B:1824:U:H5''	42:PA:3:ARG:HH22	1.84	0.42
68:PB:52:VAL:CG1	68:PB:56:LYS:HD2	2.50	0.42
17:Q:46:ILE:CG2	17:Q:49:ARG:HB2	2.43	0.42
18:R:48:GLY:O	18:R:53:VAL:HG12	2.20	0.42
18:R:93:LYS:O	18:R:96:ALA:HB3	2.20	0.42
19:S:65:ARG:HD3	19:S:129:TYR:HE1	1.85	0.42
71:SB:41:GLU:H	71:SB:41:GLU:CD	2.24	0.42
20:T:65:ASN:C	20:T:67:THR:N	2.73	0.42
72:TB:53:ILE:HG22	72:TB:60:LYS:O	2.19	0.42
21:U:26:PHE:HB2	21:U:144:SER:HB3	2.01	0.42
21:U:45:GLN:O	21:U:48:LEU:HB2	2.20	0.42
73:UB:74:VAL:HG12	73:UB:75:GLN:N	2.35	0.42
23:W:138:LEU:HD21	23:W:142:ILE:CD1	2.49	0.42
49:WA:203:THR:CG2	49:WA:212:ALA:HB3	2.48	0.42
24:X:129:ILE:CG2	24:X:134:ASP:HB3	2.41	0.42
50:XA:110:TYR:HA	50:XA:115:PHE:CZ	2.55	0.42
50:XA:133:ILE:HD12	50:XA:133:ILE:N	2.35	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:XA:163:ASN:HA	50:XA:163:ASN:HD22	1.55	0.42
2:B:994:G:OP2	25:Y:14:MET:HA	2.19	0.42
2:B:2735:U:C4'	25:Y:51:GLY:HA2	2.47	0.42
1:A:931:C:H1'	51:YA:120:LEU:HB3	2.01	0.42
51:YA:120:LEU:C	51:YA:120:LEU:HD23	2.41	0.42
77:YB:49:HIS:HA	77:YB:69:GLY:O	2.19	0.42
26:Z:10:LYS:HB3	26:Z:68:THR:OG1	2.20	0.42
1:A:1160:A:H2'	1:A:1161:C:H6	1.85	0.41
1:A:1177:C:H4'	1:A:1189:A:H61	1.83	0.41
1:A:1393:C:H2'	1:A:1394:G:H8	1.83	0.41
1:A:1712:A:C3'	1:A:1713:G:H5''	2.50	0.41
1:A:398:G:H5''	58:FB:49:ARG:HE	1.84	0.41
1:A:877:G:H5'	1:A:937:C:H1'	2.01	0.41
1:A:956:C:H2'	1:A:957:G:C8	2.55	0.41
1:A:959:U:H5'	63:KB:15:ALA:C	2.40	0.41
27:AA:33:ASN:HD21	27:AA:63:LYS:CB	2.33	0.41
2:B:1116:G:H3'	2:B:1117:G:C5'	2.48	0.41
2:B:1157:G:H2'	2:B:1158:A:O4'	2.20	0.41
2:B:1260:A:H4'	2:B:1279:C:O2'	2.20	0.41
2:B:1377:G:C6	2:B:1378:U:C4	3.08	0.41
2:B:1864:A:N7	2:B:1865:A:C5	2.88	0.41
2:B:198:A:N3	2:B:218:G:O2'	2.53	0.41
2:B:2227:C:O2'	2:B:2228:A:H5'	2.20	0.41
2:B:2269:U:H1'	2:B:2271:A:N7	2.35	0.41
2:B:1308:A:N6	2:B:2367:A:C2	2.88	0.41
2:B:271:C:O2	40:NA:82:ARG:NH2	2.53	0.41
2:B:286:U:H2'	2:B:287:G:O4'	2.20	0.41
2:B:299:G:H2'	2:B:300:G:O4'	2.20	0.41
2:B:3004:C:C2'	2:B:3005:A:H5'	2.49	0.41
2:B:3080:G:H2'	2:B:3081:C:C6	2.55	0.41
2:B:3241:G:H2'	2:B:3242:G:H5'	2.01	0.41
2:B:3284:G:H2'	2:B:3285:C:C6	2.54	0.41
2:B:416:A:H2'	2:B:417:A:H8	1.85	0.41
2:B:523:A:C2'	2:B:524:U:H5'	2.38	0.41
2:B:633:C:H2'	2:B:634:C:H6	1.85	0.41
2:B:726:G:N2	2:B:744:A:H62	2.13	0.41
2:B:80:G:H4'	2:B:326:U:O2'	2.19	0.41
28:BA:5:ILE:HD12	28:BA:5:ILE:C	2.40	0.41
54:BB:246:LEU:N	54:BB:246:LEU:HD12	2.35	0.41
80:BC:41:THR:HA	80:BC:45:VAL:HB	2.02	0.41
29:CA:109:LYS:HE2	29:CA:111:ASN:OD1	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:CB:47:SER:OG	55:CB:49:GLU:HG3	2.20	0.41
2:B:335:G:OP1	30:DA:9:SER:HB2	2.20	0.41
56:DB:162:VAL:HG22	56:DB:163:THR:N	2.35	0.41
56:DB:188:ARG:NH1	56:DB:188:ARG:HB2	2.35	0.41
56:DB:18:ILE:HG21	56:DB:24:ILE:HG23	2.02	0.41
56:DB:82:SER:C	56:DB:84:TYR:H	2.23	0.41
82:DC:144:ARG:HG3	82:DC:192:TYR:CB	2.48	0.41
82:DC:419:VAL:CG1	82:DC:420:PRO:HD2	2.50	0.41
82:DC:423:LYS:O	82:DC:426:LEU:HB3	2.19	0.41
82:DC:498:ALA:O	82:DC:501:LEU:HB2	2.20	0.41
82:DC:566:THR:HG22	82:DC:682:ARG:H	1.83	0.41
31:EA:10:VAL:CG1	31:EA:11:ALA:N	2.82	0.41
57:EB:91:ILE:CG1	57:EB:92:PHE:H	2.25	0.41
1:A:758:U:O3'	59:GB:7:THR:HB	2.19	0.41
8:H:120:TYR:C	8:H:120:TYR:HD1	2.22	0.41
2:B:1380:G:C5'	8:H:191:LYS:HB2	2.50	0.41
8:H:281:ILE:HG13	22:V:125:ASP:CB	2.49	0.41
8:H:299:ILE:HG22	8:H:300:ARG:O	2.19	0.41
9:I:34:LYS:C	9:I:36:LEU:N	2.73	0.41
35:IA:11:GLU:HG3	35:IA:74:ARG:HG3	2.02	0.41
61:IB:109:VAL:HA	61:IB:135:VAL:HG13	2.02	0.41
61:IB:123:VAL:HG22	61:IB:125:VAL:HG13	2.01	0.41
61:IB:5:LEU:O	61:IB:6:THR:OG1	2.30	0.41
61:IB:2:SER:CB	61:IB:82:ARG:H	2.16	0.41
10:J:171:PRO:HB2	37:KA:43:PHE:HE2	1.83	0.41
1:A:628:G:P	63:KB:120:SER:HB3	2.60	0.41
63:KB:98:VAL:HG11	63:KB:115:LEU:HB2	2.01	0.41
2:B:1802:C:H1'	38:LA:60:ARG:HA	2.02	0.41
64:LB:52:ARG:CZ	64:LB:52:ARG:HB3	2.50	0.41
13:M:49:ASN:O	13:M:51:GLN:N	2.53	0.41
39:MA:101:THR:O	39:MA:103:LYS:N	2.50	0.41
17:Q:145:PHE:CE2	39:MA:118:ILE:HD13	2.50	0.41
14:N:80:SER:HB2	14:N:144:ASN:HD21	1.83	0.41
14:N:43:VAL:HG23	14:N:192:ASP:OD1	2.20	0.41
40:NA:30:LYS:C	40:NA:32:ALA:H	2.22	0.41
68:PB:4:VAL:HG13	75:WB:78:ILE:HG22	2.02	0.41
13:M:47:LYS:CE	18:R:5:SER:HB2	2.47	0.41
20:T:62:THR:HG22	20:T:65:ASN:H	1.84	0.41
72:TB:52:TYR:HA	72:TB:61:ILE:HA	2.01	0.41
2:B:412:G:C2	21:U:118:GLN:HG3	2.55	0.41
73:UB:86:PHE:HD2	73:UB:117:ILE:CD1	2.33	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:351:C:H4'	73:UB:13:ARG:CZ	2.50	0.41
2:B:786:A:H5'	22:V:146:SER:O	2.19	0.41
23:W:45:VAL:CA	23:W:50:ILE:HB	2.50	0.41
49:WA:317:THR:HG22	49:WA:318:ALA:N	2.35	0.41
75:WB:60:VAL:HG12	75:WB:68:ARG:HH12	1.85	0.41
24:X:27:MET:SD	24:X:44:PHE:CB	3.08	0.41
50:XA:109:ASN:O	50:XA:115:PHE:CD2	2.72	0.41
50:XA:189:VAL:CG1	50:XA:190:ASP:N	2.77	0.41
50:XA:98:ILE:HD11	50:XA:116:LYS:HE3	2.01	0.41
76:XB:10:ARG:O	76:XB:11:ASN:C	2.58	0.41
76:XB:75:VAL:O	76:XB:79:ILE:HG13	2.20	0.41
76:XB:84:VAL:CG1	76:XB:85:ARG:H	2.11	0.41
77:YB:36:LYS:HA	77:YB:43:ILE:HG22	2.02	0.41
1:A:1051:G:O2'	1:A:1052:U:OP1	2.35	0.41
1:A:1051:G:H2'	1:A:1053:G:C8	2.55	0.41
1:A:1053:G:H2'	1:A:1053:G:N3	2.35	0.41
1:A:1128:C:C2'	1:A:1129:U:H5'	2.50	0.41
1:A:1189:A:H2'	1:A:1190:C:H6	1.81	0.41
1:A:1542:G:N2	1:A:1568:C:O4'	2.52	0.41
1:A:1586:A:H2'	1:A:1587:A:O4'	2.20	0.41
1:A:1736:G:H2'	1:A:1737:G:C8	2.55	0.41
1:A:1751:C:H2'	1:A:1752:U:C6	2.55	0.41
1:A:119:A:H1'	1:A:397:A:C5	2.55	0.41
2:B:1064:A:H4'	2:B:1065:A:H5''	2.01	0.41
2:B:1158:A:H2'	2:B:1159:A:C4'	2.51	0.41
2:B:1218:U:H1'	2:B:1219:C:C5'	2.50	0.41
2:B:1236:G:O4'	2:B:1245:A:H1'	2.21	0.41
2:B:1337:A:H2'	2:B:1338:C:H6	1.85	0.41
2:B:1509:A:H3'	2:B:1510:G:C8	2.55	0.41
2:B:1718:G:H1'	2:B:1731:A:N3	2.35	0.41
2:B:2349:U:C4	2:B:2350:C:N4	2.88	0.41
2:B:2351:U:H2'	2:B:2352:A:H8	1.82	0.41
2:B:2424:A:H4'	19:S:72:LYS:HE3	2.02	0.41
2:B:2443:A:H2	2:B:2505:U:H1'	1.78	0.41
2:B:2528:G:C6	2:B:2529:A:C6	3.08	0.41
2:B:269:G:C6	19:S:14:LYS:HB2	2.54	0.41
2:B:2899:C:C6	13:M:171:ASP:HB2	2.55	0.41
2:B:26:A:O2'	2:B:329:U:H5''	2.20	0.41
2:B:903:U:O4'	2:B:1535:A:C2	2.74	0.41
54:BB:119:ALA:O	54:BB:164:LEU:HD12	2.20	0.41
55:CB:133:VAL:O	55:CB:136:ALA:HB3	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:50:U:C2	9:I:222:LEU:HD23	2.55	0.41
56:DB:132:ARG:HG3	56:DB:133:LEU:HD12	2.01	0.41
56:DB:67:VAL:C	56:DB:68:LEU:HD22	2.41	0.41
82:DC:231:LYS:CD	82:DC:231:LYS:H	2.32	0.41
82:DC:412:ARG:NH1	82:DC:426:LEU:CD1	2.83	0.41
82:DC:487:PRO:HG2	82:DC:519:LEU:HB2	2.02	0.41
82:DC:601:ILE:HG22	82:DC:641:ASN:O	2.19	0.41
82:DC:659:ILE:HG21	82:DC:700:ARG:HG2	2.01	0.41
31:EA:86:THR:O	31:EA:87:LEU:HD22	2.20	0.41
31:EA:94:SER:HA	31:EA:97:SER:OG	2.20	0.41
57:EB:5:GLN:HB2	57:EB:18:LEU:HD22	2.01	0.41
83:EC:6891:G:H2'	83:EC:6891:G:N3	2.35	0.41
6:F:113:VAL:O	6:F:134:VAL:HG22	2.20	0.41
6:F:136:ILE:HG13	6:F:148:VAL:CG1	2.41	0.41
32:FA:23:GLY:O	32:FA:24:LYS:O	2.38	0.41
32:FA:77:LYS:O	32:FA:79:TRP:HD1	2.02	0.41
7:G:93:VAL:HG13	7:G:95:THR:HG22	2.02	0.41
59:GB:135:ALA:CB	59:GB:159:ALA:HA	2.50	0.41
59:GB:162:SER:OG	59:GB:163:PRO:HD2	2.19	0.41
59:GB:28:LEU:HD22	59:GB:31:ALA:CB	2.50	0.41
8:H:165:ALA:O	8:H:169:LEU:HG	2.20	0.41
9:I:236:LEU:HA	9:I:239:ILE:HD12	2.02	0.41
61:IB:110:HIS:HD2	61:IB:131:ILE:HG21	1.84	0.41
61:IB:31:THR:O	61:IB:33:ARG:N	2.47	0.41
10:J:54:TYR:CD2	10:J:55:LEU:N	2.88	0.41
12:L:122:LYS:O	12:L:123:GLN:HB3	2.20	0.41
65:MB:63:ALA:CB	65:MB:74:ALA:HB3	2.39	0.41
14:N:52:LEU:HA	14:N:165:ILE:CG2	2.48	0.41
16:P:106:LEU:O	16:P:107:ASP:CB	2.67	0.41
1:A:1479:A:H1'	69:QB:15:ILE:HD11	2.02	0.41
69:QB:30:VAL:HG12	69:QB:54:PHE:HD2	1.85	0.41
69:QB:76:LEU:HD11	69:QB:105:LEU:HD21	2.03	0.41
18:R:58:ILE:CG1	18:R:59:ASN:N	2.78	0.41
19:S:190:THR:CG2	19:S:191:TRP:N	2.83	0.41
21:U:131:ARG:N	21:U:131:ARG:HD2	2.35	0.41
22:V:131:ALA:N	22:V:132:PRO:HD3	2.34	0.41
23:W:32:ILE:O	23:W:35:ALA:HB3	2.19	0.41
49:WA:239:GLU:O	49:WA:256:THR:HA	2.20	0.41
49:WA:43:ILE:HD13	49:WA:60:SER:OG	2.19	0.41
75:WB:60:VAL:CG1	75:WB:68:ARG:HH12	2.34	0.41
24:X:157:GLN:OE1	24:X:171:PHE:HE2	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:X:77:VAL:CG1	24:X:78:TRP:N	2.82	0.41
50:XA:109:ASN:HD21	50:XA:111:ILE:HG22	1.85	0.41
50:XA:30:GLN:HB2	50:XA:46:HIS:HE1	1.85	0.41
24:X:10:ILE:HG23	25:Y:148:PRO:HB3	2.02	0.41
25:Y:14:MET:SD	25:Y:58:GLN:HG2	2.61	0.41
51:YA:180:THR:HG22	51:YA:181:LEU:N	2.30	0.41
51:YA:32:ILE:N	51:YA:32:ILE:CD1	2.82	0.41
77:YB:31:TYR:CD2	77:YB:81:ARG:HG3	2.55	0.41
52:ZA:148:LEU:HB3	52:ZA:174:ARG:HH22	1.83	0.41
78:ZB:22:ARG:HH11	78:ZB:22:ARG:HG3	1.85	0.41
1:A:1542:G:H1'	1:A:1569:A:H62	1.85	0.41
1:A:1653:C:O2'	45:SA:21:ARG:HG3	2.20	0.41
1:A:346:G:N3	1:A:346:G:H2'	2.35	0.41
1:A:593:U:H4'	1:A:595:G:H4'	2.02	0.41
1:A:883:C:H2'	1:A:884:A:O4'	2.21	0.41
2:B:1320:C:H6	2:B:1320:C:O5'	2.03	0.41
2:B:1327:C:C1'	37:KA:77:ASN:HD21	2.33	0.41
2:B:1857:C:N4	2:B:1858:A:C6	2.87	0.41
2:B:1863:G:H1'	2:B:1867:A:N6	2.35	0.41
2:B:200:C:H5'	2:B:221:A:C4	2.56	0.41
2:B:2215:A:H2'	2:B:2216:G:C8	2.54	0.41
2:B:2223:A:O5'	40:NA:80:PHE:HE2	2.04	0.41
2:B:2285:C:H2'	2:B:2286:U:C5	2.56	0.41
2:B:2638:C:H2'	2:B:2639:G:C8	2.55	0.41
2:B:2717:U:O2'	2:B:2718:U:H5'	2.19	0.41
2:B:45:A:OP1	19:S:85:THR:HG23	2.21	0.41
2:B:577:C:H1'	8:H:340:GLY:O	2.20	0.41
2:B:578:A:O4'	8:H:324:LEU:HD11	2.20	0.41
2:B:70:A:H1'	2:B:74:G:N2	2.35	0.41
2:B:855:U:C4	2:B:856:G:C6	3.08	0.41
2:B:907:G:C5	2:B:926:A:C5	3.08	0.41
2:B:921:A:C8	41:OA:8:PHE:HZ	2.37	0.41
2:B:925:A:C3'	2:B:926:A:H5'	2.49	0.41
2:B:965:A:O2'	32:FA:44:ASN:HB2	2.20	0.41
54:BB:226:PHE:C	54:BB:226:PHE:CD1	2.94	0.41
29:CA:103:TYR:HE1	29:CA:139:ILE:CD1	2.24	0.41
55:CB:139:ASN:O	55:CB:140:THR:HG23	2.20	0.41
55:CB:142:PRO:O	55:CB:167:ARG:HD3	2.20	0.41
55:CB:63:GLN:HB2	55:CB:88:PRO:HA	2.02	0.41
56:DB:136:LYS:C	56:DB:136:LYS:HD3	2.41	0.41
1:A:155:U:H4'	56:DB:59:GLN:CA	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:34:THR:O	82:DC:37:ASP:HB2	2.19	0.41
82:DC:723:LYS:HB3	82:DC:724:ILE:H	1.70	0.41
5:E:152:ARG:HD3	5:E:174:MET:CE	2.50	0.41
31:EA:85:TYR:CD2	31:EA:85:TYR:N	2.88	0.41
83:EC:6934:U:H2'	83:EC:6935:G:O3'	2.21	0.41
83:EC:6934:U:H3'	83:EC:6935:G:C4'	2.49	0.41
6:F:29:LEU:HB2	6:F:123:ARG:HA	2.02	0.41
6:F:49:VAL:HG12	6:F:60:LYS:HG2	2.01	0.41
32:FA:2:PRO:C	32:FA:4:ARG:H	2.24	0.41
58:FB:90:LEU:CD2	58:FB:95:THR:HB	2.50	0.41
7:G:281:LYS:O	7:G:324:VAL:HG13	2.20	0.41
7:G:299:ASP:OD2	7:G:358:TRP:HD1	2.03	0.41
59:GB:86:LEU:HD22	59:GB:96:VAL:CG1	2.51	0.41
8:H:188:ARG:H	8:H:199:TRP:HA	1.86	0.41
8:H:308:LYS:HD3	8:H:310:THR:CG2	2.49	0.41
8:H:59:GLN:OE1	8:H:59:GLN:HA	2.20	0.41
8:H:73:ARG:O	8:H:74:ILE:O	2.37	0.41
60:HB:86:ILE:C	60:HB:88:PRO:HD3	2.41	0.41
9:I:33:ARG:HD3	9:I:37:VAL:HG21	2.02	0.41
9:I:88:ILE:HG13	9:I:243:ALA:HB3	1.98	0.41
37:KA:31:LYS:HD2	37:KA:32:ILE:H	1.85	0.41
38:LA:30:LEU:HD12	38:LA:30:LEU:N	2.35	0.41
64:LB:32:ASP:OD1	64:LB:34:SER:HB3	2.20	0.41
13:M:16:VAL:HG22	13:M:83:THR:CG2	2.51	0.41
13:M:89:LYS:O	13:M:181:VAL:HA	2.19	0.41
40:NA:34:SER:HB3	40:NA:37:THR:OG1	2.20	0.41
40:NA:89:GLU:O	40:NA:92:ASN:HB2	2.19	0.41
17:Q:58:VAL:HG12	17:Q:101:ARG:HH21	1.85	0.41
17:Q:85:LEU:HG	17:Q:86:THR:N	2.34	0.41
69:QB:9:VAL:CG2	69:QB:136:ALA:HB1	2.45	0.41
69:QB:30:VAL:O	69:QB:30:VAL:HG23	2.20	0.41
18:R:34:ALA:HB2	18:R:70:PHE:CZ	2.55	0.41
19:S:35:VAL:HG23	19:S:65:ARG:HH21	1.85	0.41
20:T:52:LEU:O	20:T:55:HIS:HB2	2.20	0.41
72:TB:103:ILE:HG13	72:TB:111:MET:O	2.20	0.41
72:TB:101:TYR:CB	72:TB:112:ASP:HB2	2.49	0.41
47:UA:55:TRP:HH2	47:UA:69:TYR:C	2.23	0.41
73:UB:86:PHE:HB3	73:UB:107:PHE:HE2	1.84	0.41
22:V:107:THR:C	22:V:109:GLY:N	2.73	0.41
22:V:14:GLY:O	22:V:15:HIS:C	2.59	0.41
22:V:178:ARG:HG2	22:V:178:ARG:HH21	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:V:54:LEU:HD13	22:V:58:ASN:CB	2.49	0.41
49:WA:303:ALA:O	49:WA:310:ILE:HG23	2.20	0.41
24:X:155:ARG:NE	24:X:157:GLN:HG2	2.35	0.41
24:X:19:VAL:HG12	24:X:22:PRO:HG3	2.01	0.41
24:X:58:ILE:HG22	24:X:60:SER:O	2.21	0.41
24:X:77:VAL:CG1	24:X:78:TRP:H	2.33	0.41
4:D:89:G:C5'	24:X:84:ARG:HE	2.33	0.41
50:XA:123:VAL:O	50:XA:145:ALA:HA	2.20	0.41
50:XA:175:TYR:CE1	50:XA:195:TRP:HE3	2.37	0.41
50:XA:62:ARG:O	50:XA:65:ALA:HB3	2.20	0.41
51:YA:127:VAL:CB	51:YA:173:THR:HG22	2.36	0.41
77:YB:32:PHE:HA	77:YB:46:VAL:O	2.19	0.41
77:YB:79:PHE:CD2	77:YB:79:PHE:N	2.88	0.41
52:ZA:120:GLU:HG3	52:ZA:123:GLY:CA	2.49	0.41
1:A:1064:G:H2'	1:A:1065:A:H8	1.86	0.41
1:A:1086:A:H2'	1:A:1087:A:C8	2.56	0.41
1:A:1087:A:H2	1:A:1142:A:H4'	1.85	0.41
1:A:1162:C:H1'	78:ZB:22:ARG:CB	2.50	0.41
1:A:1349:G:N2	1:A:1376:C:O2	2.49	0.41
1:A:1443:U:H5''	1:A:1446:A:O4'	2.20	0.41
1:A:1775:U:H2'	1:A:1776:A:C8	2.54	0.41
1:A:334:G:C8	1:A:335:U:H5	2.39	0.41
1:A:507:U:O2	1:A:507:U:H3'	2.21	0.41
1:A:95:G:H2'	1:A:96:G:O4'	2.20	0.41
27:AA:86:ARG:HB2	27:AA:92:PHE:CE1	2.55	0.41
53:AB:33:GLY:O	53:AB:52:ALA:HA	2.20	0.41
79:AC:20:GLN:NE2	79:AC:25:SER:HA	2.35	0.41
2:B:1002:A:H2'	2:B:1003:A:H8	1.86	0.41
2:B:1019:G:C2'	2:B:1020:G:H5''	2.50	0.41
2:B:1146:C:C2'	2:B:1147:G:H8	2.29	0.41
2:B:1202:A:H2'	2:B:1203:A:H8	1.85	0.41
2:B:135:C:H5''	2:B:136:G:O4'	2.20	0.41
2:B:1504:A:H61	2:B:1515:A:H2'	1.85	0.41
2:B:1617:G:H2'	2:B:1618:G:H8	1.85	0.41
2:B:1650:G:H2'	2:B:1651:U:O4'	2.20	0.41
2:B:1794:G:O3'	6:F:190:ARG:NH2	2.53	0.41
2:B:1840:U:C2	2:B:1850:A:H4'	2.55	0.41
2:B:1853:U:O3'	2:B:1854:C:H6	2.04	0.41
2:B:1904:C:C5	2:B:1905:G:C5	3.09	0.41
2:B:192:C:H2'	2:B:193:C:H6	1.85	0.41
2:B:2348:A:C8	2:B:2349:U:C5	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:3071:U:C4	2:B:3072:C:N4	2.88	0.41
2:B:3185:U:H5''	13:M:23:ARG:CZ	2.50	0.41
2:B:403:C:H2'	2:B:404:G:C5'	2.49	0.41
2:B:44:U:H3'	2:B:45:A:H8	1.85	0.41
2:B:604:G:H2'	2:B:605:U:O4'	2.19	0.41
2:B:980:A:H1'	2:B:1104:G:H21	1.85	0.41
28:BA:50:ALA:HA	28:BA:55:PHE:CD1	2.55	0.41
3:C:51:G:H8	3:C:52:A:N7	2.18	0.41
55:CB:63:GLN:HA	55:CB:63:GLN:OE1	2.19	0.41
82:DC:157:ILE:HG12	82:DC:181:THR:HG21	2.02	0.41
82:DC:772:LEU:HD12	82:DC:773:PRO:HD2	2.01	0.41
31:EA:26:VAL:HG21	31:EA:96:VAL:CB	2.50	0.41
31:EA:89:VAL:HG22	31:EA:89:VAL:O	2.20	0.41
57:EB:58:LEU:HD12	57:EB:90:VAL:HG22	2.02	0.41
83:EC:6852:U:H2'	83:EC:6853:G:C8	2.55	0.41
6:F:181:LYS:C	6:F:183:GLY:N	2.72	0.41
32:FA:39:HIS:O	32:FA:42:ARG:HB3	2.19	0.41
58:FB:184:LEU:HD23	58:FB:189:LEU:HA	2.01	0.41
59:GB:109:LEU:HD22	59:GB:113:VAL:HG23	2.02	0.41
8:H:32:PRO:CA	8:H:244:LEU:HD21	2.50	0.41
60:HB:87:VAL:N	60:HB:88:PRO:CD	2.82	0.41
9:I:209:GLU:C	9:I:211:LEU:H	2.22	0.41
61:IB:91:LEU:CD2	61:IB:102:LYS:HD3	2.50	0.41
10:J:136:GLU:O	10:J:140:VAL:HG23	2.20	0.41
10:J:22:ARG:HH11	10:J:22:ARG:CG	2.33	0.41
10:J:29:LYS:C	10:J:30:LEU:HD23	2.41	0.41
11:K:90:LYS:HA	11:K:220:PHE:HE1	1.85	0.41
37:KA:49:ILE:HG12	37:KA:100:ILE:HG23	2.01	0.41
2:B:122:A:OP1	12:L:105:LYS:HD2	2.21	0.41
38:LA:57:LEU:HD11	38:LA:62:TYR:HA	2.03	0.41
38:LA:58:ARG:HG3	38:LA:59:PRO:HD2	2.03	0.41
2:B:1597:C:OP2	38:LA:8:ARG:NH2	2.54	0.41
13:M:27:VAL:HG12	13:M:28:VAL:N	2.36	0.41
41:OA:47:TYR:HB3	41:OA:49:TRP:NE1	2.35	0.41
2:B:1844:C:H1'	41:OA:8:PHE:O	2.20	0.41
16:P:122:GLY:HA2	48:VA:43:LYS:CD	2.49	0.41
16:P:123:ARG:NH2	48:VA:42:ARG:CD	2.81	0.41
68:PB:88:ARG:HG2	68:PB:88:ARG:NH2	2.35	0.41
69:QB:35:ASP:N	69:QB:53:TRP:HZ2	2.18	0.41
19:S:183:THR:HG23	19:S:183:THR:O	2.20	0.41
2:B:289:A:H5'	19:S:95:GLN:O	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
71:SB:34:ILE:CG2	71:SB:35:ASN:N	2.82	0.41
20:T:65:ASN:C	20:T:67:THR:H	2.23	0.41
72:TB:64:GLN:C	72:TB:65:LEU:HD13	2.39	0.41
21:U:155:GLU:O	21:U:156:ALA:HB3	2.19	0.41
21:U:172:GLN:OE1	37:KA:60:ARG:NH2	2.49	0.41
21:U:41:LEU:HD13	21:U:41:LEU:C	2.40	0.41
73:UB:56:LYS:NZ	73:UB:93:LEU:HD23	2.34	0.41
48:VA:79:PHE:CD2	48:VA:189:GLN:HG3	2.55	0.41
48:VA:15:LEU:CD1	48:VA:19:LEU:HD12	2.51	0.41
48:VA:27:VAL:HG12	48:VA:84:VAL:HG11	2.01	0.41
49:WA:109:ASP:OD1	49:WA:127:ARG:HB2	2.20	0.41
49:WA:149:ASP:HB2	49:WA:175:ASP:HB3	2.03	0.41
75:WB:38:HIS:O	75:WB:39:ALA:HB3	2.20	0.41
24:X:4:PHE:HD1	24:X:31:ALA:HA	1.86	0.41
11:K:75:TYR:HB2	24:X:59:VAL:CG1	2.50	0.41
50:XA:172:LEU:HA	50:XA:175:TYR:HB3	2.01	0.41
50:XA:84:ARG:HH11	50:XA:84:ARG:CB	2.16	0.41
25:Y:51:GLY:HA3	25:Y:92:ARG:CD	2.51	0.41
25:Y:55:LYS:C	25:Y:57:TYR:N	2.74	0.41
2:B:1060:U:H4'	25:Y:61:THR:HG21	2.02	0.41
25:Y:92:ARG:C	25:Y:94:GLU:N	2.72	0.41
51:YA:30:PHE:HZ	51:YA:91:VAL:HG21	1.84	0.41
51:YA:33:LYS:HG3	51:YA:95:ASN:HD21	1.85	0.41
51:YA:32:ILE:HG23	51:YA:96:LEU:HD11	2.02	0.41
52:ZA:103:VAL:HG11	52:ZA:187:LEU:HA	2.03	0.41
52:ZA:178:ILE:HD12	52:ZA:178:ILE:N	2.35	0.41
52:ZA:235:LEU:HD22	71:SB:15:ARG:HD2	2.02	0.41
1:A:1354:G:H2'	1:A:1355:C:O4'	2.21	0.41
1:A:1211:A:N6	1:A:1452:U:H3	2.16	0.41
1:A:1485:C:H2'	1:A:1486:G:C4'	2.33	0.41
1:A:1504:G:N2	1:A:1562:G:N2	2.68	0.41
1:A:381:C:O2'	1:A:382:C:H5'	2.21	0.41
1:A:40:A:H1'	1:A:469:C:C5	2.56	0.41
1:A:569:C:C2'	1:A:570:A:H5'	2.50	0.41
1:A:768:C:H2'	1:A:769:A:O4'	2.21	0.41
1:A:790:U:H2'	1:A:791:A:O4'	2.20	0.41
2:B:1019:G:H2'	2:B:1020:G:H5''	2.02	0.41
2:B:1094:U:O2'	2:B:1096:U:H2'	2.20	0.41
2:B:1103:A:H1'	2:B:1104:G:OP2	2.21	0.41
2:B:1194:G:O5'	2:B:1194:G:C8	2.65	0.41
2:B:123:A:H5'	2:B:124:U:OP2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1492:G:P	2:B:1493:G:H22	2.43	0.41
2:B:2284:C:C2	2:B:2308:C:H1'	2.56	0.41
2:B:2360:C:H3'	2:B:2360:C:H6	1.85	0.41
2:B:2511:A:H2'	2:B:2512:C:C5	2.55	0.41
2:B:2785:A:H2'	2:B:2786:G:C8	2.55	0.41
2:B:2978:U:O2'	2:B:2979:U:H5'	2.19	0.41
2:B:637:C:O2'	2:B:638:C:O5'	2.39	0.41
2:B:64:G:H1'	2:B:77:A:C2	2.56	0.41
27:AA:94:TYR:CE1	28:BA:41:LYS:HE3	2.55	0.41
28:BA:6:ASP:C	28:BA:8:PHE:N	2.74	0.41
54:BB:179:LYS:O	54:BB:180:LEU:C	2.59	0.41
29:CA:99:VAL:HG13	29:CA:103:TYR:CD2	2.55	0.41
55:CB:211:ILE:HA	55:CB:214:LYS:HB3	2.01	0.41
55:CB:73:THR:HB	55:CB:91:GLU:HG3	2.03	0.41
30:DA:3:LYS:CG	30:DA:4:GLN:N	2.82	0.41
30:DA:53:ASP:HB3	30:DA:69:LYS:HE3	2.02	0.41
56:DB:219:ARG:HA	56:DB:222:GLU:CB	2.51	0.41
1:A:395:U:H1'	56:DB:89:ASP:CB	2.50	0.41
82:DC:638:PRO:HG2	82:DC:680:GLU:OE1	2.20	0.41
82:DC:772:LEU:CD2	82:DC:777:SER:HB3	2.51	0.41
31:EA:129:TRP:O	31:EA:131:PHE:N	2.53	0.41
1:A:856:A:N6	57:EB:96:ARG:HB3	2.35	0.41
2:B:2678:A:C2	83:EC:6924:G:H4'	2.55	0.41
17:Q:64:LYS:HE3	32:FA:69:TRP:HE1	1.85	0.41
58:FB:4:SER:HB2	58:FB:24:LYS:NZ	2.36	0.41
1:A:513:U:H4'	59:GB:131:GLN:HE21	1.84	0.41
8:H:206:LEU:HD23	8:H:207:VAL:N	2.35	0.41
9:I:226:TYR:CE2	9:I:236:LEU:HD13	2.52	0.41
11:K:145:ARG:O	11:K:149:TYR:HB2	2.20	0.41
11:K:30:ARG:HD3	11:K:33:ARG:HH22	1.85	0.41
37:KA:30:ILE:HG22	37:KA:31:LYS:N	2.35	0.41
12:L:212:ALA:O	12:L:215:VAL:HB	2.20	0.41
38:LA:91:ARG:CA	38:LA:95:ILE:HD13	2.40	0.41
13:M:49:ASN:OD1	13:M:49:ASN:O	2.38	0.41
13:M:89:LYS:O	13:M:181:VAL:HG13	2.19	0.41
65:MB:21:ASP:O	65:MB:25:LEU:HG	2.20	0.41
14:N:27:PRO:O	14:N:125:LEU:HD11	2.19	0.41
14:N:56:GLU:HA	14:N:131:ILE:HG12	2.02	0.41
40:NA:46:GLU:C	40:NA:48:ALA:H	2.23	0.41
66:NB:79:TYR:HA	66:NB:82:ARG:HH11	1.86	0.41
2:B:1747:G:O2'	42:PA:4:GLU:HB2	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
69:QB:95:ASP:O	69:QB:96:ALA:O	2.39	0.41
18:R:120:VAL:HG11	20:T:199:TYR:HB2	2.03	0.41
21:U:75:GLU:HG2	21:U:76:PHE:CE1	2.56	0.41
48:VA:120:TRP:HB2	48:VA:157:LYS:CE	2.50	0.41
48:VA:41:VAL:HA	48:VA:44:GLU:CG	2.50	0.41
74:VB:78:SER:C	74:VB:80:ALA:H	2.23	0.41
24:X:29:ILE:HG22	24:X:30:PHE:N	2.35	0.41
76:XB:23:CYS:SG	76:XB:74:CYS:HB3	2.61	0.41
25:Y:48:ILE:O	25:Y:49:GLN:C	2.58	0.41
25:Y:53:PRO:HB3	25:Y:91:LEU:HD13	2.02	0.41
51:YA:157:GLN:O	51:YA:159:SER:N	2.54	0.41
51:YA:30:PHE:CZ	51:YA:91:VAL:HG21	2.55	0.41
51:YA:35:PRO:HA	51:YA:232:HIS:CD2	2.56	0.41
51:YA:68:VAL:CG2	51:YA:69:CYS:N	2.80	0.41
51:YA:74:GLN:OE1	51:YA:74:GLN:HA	2.20	0.41
26:Z:17:VAL:HG22	26:Z:103:TYR:CD2	2.55	0.41
78:ZB:36:THR:C	78:ZB:38:ARG:H	2.24	0.41
1:A:1350:U:H1'	1:A:1378:U:H3	1.84	0.41
1:A:1429:G:H1'	70:RB:74:GLU:CG	2.30	0.41
1:A:1563:C:OP1	69:QB:84:LYS:HD3	2.20	0.41
1:A:1796:C:C4	76:XB:93:LYS:HG2	2.56	0.41
1:A:1796:C:O2	1:A:1796:C:O4'	2.39	0.41
1:A:339:C:O2'	1:A:340:U:H5'	2.21	0.41
1:A:314:C:O2	1:A:354:C:N3	2.54	0.41
1:A:373:G:N2	1:A:604:A:H5'	2.36	0.41
1:A:769:A:O2'	1:A:770:A:H5'	2.21	0.41
1:A:986:G:O2'	1:A:987:G:C5'	2.69	0.41
27:AA:62:VAL:CB	27:AA:70:ARG:HG2	2.43	0.41
79:AC:15:GLY:C	79:AC:17:GLY:H	2.24	0.41
2:B:1106:G:H2'	2:B:1107:C:O4'	2.20	0.41
2:B:128:G:H2'	2:B:129:U:O4'	2.21	0.41
2:B:1305:U:C4	7:G:257:PRO:HA	2.55	0.41
2:B:1326:A:C2	2:B:1327:C:C2	3.08	0.41
2:B:1370:G:H2'	2:B:1371:G:C8	2.55	0.41
2:B:1650:G:O2'	2:B:1651:U:H5'	2.20	0.41
2:B:1913:A:N3	2:B:2120:A:H2'	2.35	0.41
1:A:1755:A:H2'	2:B:2256:A:C6	2.56	0.41
2:B:2277:C:C4'	2:B:2317:A:H4'	2.51	0.41
2:B:2838:A:H61	2:B:2850:G:C2'	2.33	0.41
2:B:2846:U:C1'	2:B:2849:C:H41	2.34	0.41
2:B:3233:C:H6	2:B:3233:C:O5'	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:3312:U:H2'	2:B:3313:U:C6	2.56	0.41
2:B:3387:U:O5'	2:B:3387:U:H6	2.03	0.41
2:B:424:G:C6	2:B:635:G:N2	2.89	0.41
2:B:611:A:C5	2:B:612:U:C4	3.08	0.41
2:B:750:G:H2'	2:B:751:A:H8	1.85	0.41
2:B:802:C:H2'	2:B:803:C:C6	2.55	0.41
54:BB:151:ASP:HB3	54:BB:154:ILE:HG13	2.01	0.41
29:CA:113:LEU:HD23	29:CA:123:TYR:CE2	2.49	0.41
29:CA:80:ASN:ND2	29:CA:126:LEU:HB2	2.30	0.41
55:CB:147:THR:O	55:CB:157:ARG:HB3	2.20	0.41
4:D:41:G:H4'	4:D:44:C:N4	2.36	0.41
82:DC:129:VAL:HG11	82:DC:181:THR:HG23	2.02	0.41
82:DC:646:VAL:C	82:DC:647:ILE:HD12	2.40	0.41
31:EA:100:THR:O	31:EA:106:GLN:HB3	2.21	0.41
31:EA:73:LYS:NZ	31:EA:74:VAL:O	2.48	0.41
57:EB:135:ILE:HG21	57:EB:152:VAL:HG12	2.01	0.41
6:F:180:LEU:HD23	6:F:180:LEU:HA	1.92	0.41
58:FB:160:PHE:CZ	58:FB:165:LEU:HD11	2.56	0.41
58:FB:65:PHE:HE2	58:FB:78:ILE:HG12	1.85	0.41
7:G:110:LEU:HG	7:G:114:VAL:HG21	2.03	0.41
7:G:128:LYS:HE2	7:G:131:THR:OG1	2.21	0.41
7:G:232:ARG:HG2	7:G:233:TRP:CD1	2.55	0.41
33:GA:12:GLN:NE2	33:GA:15:LYS:NZ	2.68	0.41
59:GB:23:ARG:HG2	59:GB:23:ARG:HH11	1.86	0.41
8:H:140:HIS:ND1	8:H:247:PHE:HB2	2.36	0.41
2:B:1386:A:C6	8:H:179:LEU:HD11	2.55	0.41
4:D:47:C:N4	9:I:58:LYS:HE2	2.36	0.41
4:D:116:C:O2'	9:I:74:VAL:N	2.54	0.41
61:IB:110:HIS:CD2	61:IB:131:ILE:HG21	2.56	0.41
61:IB:134:THR:O	61:IB:136:ARG:HG2	2.20	0.41
61:IB:81:HIS:O	61:IB:83:THR:HG22	2.20	0.41
10:J:40:LEU:CB	10:J:85:ILE:O	2.69	0.41
11:K:39:GLU:O	11:K:43:ILE:HG13	2.20	0.41
11:K:90:LYS:CD	11:K:91:GLY:N	2.83	0.41
12:L:122:LYS:HD2	12:L:124:ASP:HB2	2.03	0.41
64:LB:30:VAL:O	64:LB:39:ILE:O	2.39	0.41
13:M:24:ILE:HG13	13:M:39:LYS:HD2	2.03	0.41
39:MA:66:VAL:O	39:MA:69:LEU:HG	2.21	0.41
65:MB:44:ARG:NH1	65:MB:52:LYS:HE3	2.27	0.41
40:NA:17:VAL:HG13	40:NA:18:THR:N	2.36	0.41
66:NB:29:ILE:HG12	66:NB:52:LEU:HD21	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:O:103:GLY:HA2	15:O:127:PHE:O	2.21	0.41
42:PA:5:ILE:C	42:PA:7:ASP:H	2.24	0.41
17:Q:46:ILE:HG22	17:Q:46:ILE:O	2.21	0.41
43:QA:30:ARG:H	43:QA:30:ARG:HG3	1.65	0.41
69:QB:12:GLN:C	69:QB:14:PHE:H	2.24	0.41
69:QB:65:ILE:HG21	69:QB:114:VAL:HG21	2.02	0.41
70:RB:68:ARG:HD2	70:RB:78:THR:O	2.20	0.41
3:C:140:G:N2	19:S:112:ASN:HB3	2.34	0.41
2:B:290:G:C4	19:S:93:LYS:NZ	2.89	0.41
71:SB:4:ASP:CB	71:SB:5:LYS:HD3	2.50	0.41
20:T:44:SER:HA	20:T:135:TYR:HA	2.02	0.41
22:V:174:ARG:CA	22:V:178:ARG:HG3	2.47	0.41
49:WA:209:THR:HA	49:WA:225:LEU:HB3	2.02	0.41
49:WA:232:TYR:OH	49:WA:265:LEU:HD12	2.20	0.41
75:WB:93:SER:CB	75:WB:100:ILE:H	2.29	0.41
68:PB:7:GLU:HB3	75:WB:42:LEU:HD11	2.03	0.41
50:XA:78:SER:HB3	50:XA:100:GLY:O	2.20	0.41
25:Y:25:VAL:CG2	25:Y:30:TYR:HE2	2.34	0.41
51:YA:115:ARG:O	51:YA:118:GLN:HG2	2.20	0.41
51:YA:218:LEU:HD22	51:YA:219:LYS:N	2.35	0.41
52:ZA:207:LEU:HD23	52:ZA:207:LEU:H	1.84	0.41
1:A:1000:C:H5	1:A:1003:A:OP2	2.04	0.41
1:A:1105:C:O2'	1:A:1106:U:H5'	2.20	0.41
1:A:1316:G:O3'	67:OB:10:LYS:HD3	2.20	0.41
1:A:1377:U:H1'	1:A:1378:U:H5	1.86	0.41
1:A:250:C:O2'	1:A:251:A:H5'	2.21	0.41
1:A:469:C:C2	1:A:470:A:H1'	2.56	0.41
1:A:743:U:H2'	1:A:744:U:N1	2.36	0.41
1:A:774:A:N3	1:A:774:A:H3'	2.36	0.41
27:AA:34:LEU:HD22	27:AA:60:ALA:HB3	2.03	0.41
2:B:1017:C:H2'	2:B:1017:C:O2	2.20	0.41
2:B:1261:G:H3'	2:B:1261:G:N3	2.35	0.41
2:B:1364:C:H2'	2:B:1365:G:H8	1.83	0.41
2:B:1415:U:H2'	2:B:1416:C:O4'	2.21	0.41
2:B:1512:U:O2'	2:B:1513:G:H5'	2.19	0.41
2:B:1647:A:H1'	2:B:1809:A:N1	2.36	0.41
2:B:1689:U:H2'	2:B:1690:C:H5'	2.02	0.41
2:B:1940:G:H2'	2:B:1941:C:C6	2.55	0.41
2:B:2181:C:C4	2:B:2182:A:N7	2.89	0.41
2:B:2353:G:C2'	2:B:2354:C:H5'	2.51	0.41
2:B:2525:G:C8	6:F:34:TYR:HB2	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2554:A:H5''	38:LA:91:ARG:CZ	2.50	0.41
2:B:2597:U:H2'	2:B:2598:G:H8	1.86	0.41
2:B:2632:G:O3'	25:Y:12:ARG:HD2	2.20	0.41
2:B:2741:C:H2'	2:B:2742:C:O4'	2.20	0.41
2:B:275:U:H2'	2:B:276:U:H6	1.83	0.41
2:B:3215:A:H1'	10:J:161:ALA:HB2	2.03	0.41
2:B:3216:G:H3'	2:B:3219:G:N3	2.35	0.41
2:B:582:G:C4	2:B:583:G:C8	3.09	0.41
54:BB:101:LEU:HB3	54:BB:109:PHE:HE1	1.82	0.41
54:BB:16:HIS:C	54:BB:18:TRP:N	2.74	0.41
29:CA:55:ASN:C	29:CA:57:LEU:H	2.21	0.41
56:DB:163:THR:CA	56:DB:168:THR:HG22	2.50	0.41
82:DC:282:PHE:O	82:DC:285:PHE:HB2	2.20	0.41
31:EA:62:VAL:C	31:EA:64:LYS:H	2.24	0.41
57:EB:44:LYS:CG	57:EB:63:PRO:HD3	2.50	0.41
83:EC:6850:C:H42	83:EC:6878:G:H1	1.69	0.41
83:EC:6896:A:N3	83:EC:6896:A:H2'	2.36	0.41
32:FA:102:ILE:HD12	32:FA:125:VAL:HG22	2.03	0.41
58:FB:90:LEU:HD13	58:FB:97:THR:OG1	2.20	0.41
7:G:43:LEU:HB3	7:G:181:ILE:HG21	2.02	0.41
59:GB:85:VAL:HA	59:GB:107:ARG:CG	2.48	0.41
59:GB:86:LEU:HD21	59:GB:91:LYS:HA	2.01	0.41
8:H:212:ASP:OD1	8:H:215:ILE:CG2	2.69	0.41
8:H:234:ASN:O	8:H:238:LEU:HG	2.21	0.41
9:I:221:GLU:HG3	9:I:222:LEU:N	2.34	0.41
9:I:95:TRP:CE3	9:I:161:GLY:CA	3.03	0.41
35:IA:29:ALA:HA	35:IA:67:VAL:HG11	2.01	0.41
63:KB:127:ARG:HA	63:KB:130:ARG:NH2	2.35	0.41
63:KB:16:ILE:HA	63:KB:17:PRO:HD3	1.94	0.41
63:KB:99:ARG:HE	63:KB:115:LEU:HD11	1.85	0.41
12:L:210:ALA:O	12:L:213:LYS:HB3	2.21	0.41
38:LA:42:PRO:HD2	38:LA:56:THR:HG22	2.01	0.41
65:MB:123:TYR:HD1	65:MB:123:TYR:H	1.68	0.41
14:N:166:ILE:CG2	14:N:167:LEU:H	2.34	0.41
40:NA:92:ASN:O	40:NA:96:ALA:HB3	2.20	0.41
66:NB:60:PHE:HA	66:NB:63:ILE:HG12	2.03	0.41
15:O:112:LEU:N	15:O:112:LEU:HD23	2.28	0.41
2:B:360:G:C5'	41:OA:26:SER:HA	2.49	0.41
1:A:1499:G:OP2	69:QB:73:VAL:HG23	2.21	0.41
18:R:42:LYS:HG2	18:R:59:ASN:ND2	2.36	0.41
18:R:13:ARG:CB	18:R:65:LEU:HD22	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
70:RB:74:GLU:HG3	70:RB:75:GLY:N	2.36	0.41
70:RB:99:ILE:O	70:RB:99:ILE:HG13	2.20	0.41
19:S:124:ASP:OD2	19:S:127:TYR:HB2	2.20	0.41
19:S:13:LYS:O	19:S:19:LEU:HD22	2.19	0.41
2:B:56:G:O2'	19:S:158:HIS:HB2	2.20	0.41
20:T:147:TRP:CZ2	20:T:149:TYR:HB2	2.56	0.41
73:UB:114:LYS:HB3	73:UB:115:GLY:H	1.59	0.41
73:UB:126:LYS:HB3	73:UB:126:LYS:HE2	1.90	0.41
73:UB:54:LEU:HB2	73:UB:73:ARG:O	2.20	0.41
48:VA:52:LEU:O	48:VA:86:PHE:HB2	2.20	0.41
49:WA:300:THR:HB	49:WA:302:PHE:CZ	2.55	0.41
49:WA:28:GLY:HA3	49:WA:76:ASP:HA	2.03	0.41
55:CB:191:ALA:HB2	75:WB:98:GLN:OE1	2.20	0.41
24:X:30:PHE:CE1	24:X:100:VAL:HG12	2.54	0.41
2:B:3185:U:O2	24:X:169:SER:HA	2.21	0.41
24:X:66:GLU:HG2	24:X:73:LYS:HZ1	1.86	0.41
50:XA:123:VAL:CG1	50:XA:124:THR:N	2.82	0.41
25:Y:54:HIS:NE2	25:Y:55:LYS:HE2	2.35	0.41
51:YA:120:LEU:HD21	51:YA:122:GLU:HG3	2.03	0.41
52:ZA:143:TYR:HA	52:ZA:152:HIS:NE2	2.36	0.41
52:ZA:58:LEU:HG	71:SB:12:TYR:CD1	2.56	0.41
1:A:1133:A:H2'	1:A:1134:C:O4'	2.21	0.41
1:A:11:A:H2'	1:A:12:U:O4'	2.20	0.41
1:A:1394:G:OP1	49:WA:282:SER:HB2	2.20	0.41
1:A:1662:G:H2'	1:A:1663:G:C8	2.54	0.41
1:A:1671:A:N6	1:A:1730:A:O2'	2.54	0.41
1:A:778:G:C2'	1:A:779:U:H5'	2.45	0.41
1:A:956:C:H2'	1:A:957:G:O4'	2.20	0.41
27:AA:112:SER:O	27:AA:113:ALA:CB	2.69	0.41
27:AA:114:ILE:HG22	27:AA:115:THR:N	2.36	0.41
53:AB:40:ARG:HB2	53:AB:47:GLU:HB2	2.03	0.41
2:B:1145:G:H2'	2:B:1146:C:H5'	2.02	0.41
2:B:2103:U:H5''	23:W:85:ARG:CG	2.50	0.41
2:B:2137:U:C5	2:B:2141:U:C4	3.09	0.41
2:B:2370:G:N2	2:B:2375:G:N7	2.58	0.41
2:B:2380:U:H2'	2:B:2381:G:O4'	2.20	0.41
2:B:2785:A:H2'	2:B:2786:G:H8	1.85	0.41
2:B:2853:A:C5'	14:N:63:GLU:HB2	2.50	0.41
2:B:269:G:H22	2:B:294:U:H2'	1.80	0.41
2:B:3229:G:C2	2:B:3230:G:H1'	2.56	0.41
2:B:329:U:C2'	2:B:329:U:O2	2.68	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:3373:U:O2'	2:B:3374:U:H5'	2.21	0.41
2:B:631:U:H5''	20:T:93:ALA:CB	2.51	0.41
2:B:790:U:O2'	2:B:791:A:H5'	2.21	0.41
2:B:834:U:H2'	2:B:835:G:H5'	2.03	0.41
54:BB:122:LYS:HD2	54:BB:164:LEU:CD2	2.50	0.41
54:BB:150:PRO:HD2	56:DB:208:TYR:CE2	2.51	0.41
54:BB:240:LYS:CE	54:BB:240:LYS:H	2.33	0.41
54:BB:51:ARG:HG2	54:BB:51:ARG:HH11	1.85	0.41
29:CA:96:LYS:O	29:CA:100:LYS:HB2	2.20	0.41
4:D:99:G:OP2	24:X:53:LYS:HD2	2.20	0.41
2:B:217:U:HO2'	30:DA:102:SER:HB3	1.84	0.41
56:DB:7:TYR:HB3	56:DB:12:SER:N	2.36	0.41
56:DB:139:ASN:HA	56:DB:142:ARG:CG	2.49	0.41
56:DB:30:LYS:HB2	56:DB:102:VAL:HG21	2.03	0.41
82:DC:161:ASP:O	82:DC:165:LEU:HB3	2.20	0.41
82:DC:75:ILE:HG12	82:DC:75:ILE:H	1.66	0.41
82:DC:781:THR:HG23	82:DC:794:PRO:HG2	2.02	0.41
5:E:180:VAL:O	5:E:183:ILE:HB	2.19	0.41
31:EA:134:LEU:HD11	38:LA:93:PHE:HB2	2.02	0.41
57:EB:37:GLU:O	57:EB:37:GLU:HG3	2.21	0.41
6:F:101:VAL:C	6:F:102:LEU:HD12	2.40	0.41
6:F:68:LYS:CE	6:F:70:ARG:HD3	2.50	0.41
32:FA:4:ARG:HB3	32:FA:4:ARG:HE	1.65	0.41
58:FB:55:TYR:HB2	58:FB:176:SER:HA	2.01	0.41
58:FB:46:VAL:O	58:FB:46:VAL:HG23	2.21	0.41
2:B:2943:G:H8	7:G:2:SER:HB3	1.82	0.41
7:G:304:THR:O	7:G:306:THR:N	2.53	0.41
33:GA:9:ALA:O	33:GA:10:HIS:C	2.59	0.41
59:GB:134:ILE:HA	59:GB:158:PHE:CA	2.50	0.41
59:GB:142:ASN:ND2	74:VB:64:PHE:HZ	2.17	0.41
59:GB:171:ARG:NE	59:GB:171:ARG:HA	2.36	0.41
8:H:173:GLY:C	8:H:175:HIS:H	2.24	0.41
8:H:261:VAL:O	8:H:262:TRP:HB2	2.20	0.41
34:HA:24:THR:O	34:HA:30:THR:HG22	2.20	0.41
9:I:120:LYS:N	9:I:120:LYS:HD3	2.36	0.41
4:D:11:A:C8	9:I:18:THR:HG23	2.56	0.41
10:J:122:PHE:HA	10:J:123:PRO:HA	1.74	0.41
36:JA:2:ALA:O	36:JA:3:SER:HB3	2.21	0.41
11:K:121:LYS:HB2	25:Y:133:ALA:HB3	2.02	0.41
11:K:85:PHE:O	11:K:136:TYR:HA	2.21	0.41
11:K:87:VAL:HA	11:K:113:SER:O	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:629:U:OP1	63:KB:124:ARG:HG2	2.20	0.41
12:L:183:LYS:HA	12:L:186:LEU:HD12	2.03	0.41
12:L:34:PHE:CA	12:L:39:ALA:HB3	2.48	0.41
64:LB:12:GLN:OE1	64:LB:77:THR:HG21	2.21	0.41
2:B:3198:U:N3	13:M:26:LYS:HD2	2.36	0.41
65:MB:38:PRO:HG2	65:MB:41:VAL:HG23	2.01	0.41
14:N:99:ILE:O	14:N:120:GLY:HA3	2.21	0.41
40:NA:77:LEU:HB3	40:NA:78:GLY:H	1.77	0.41
55:CB:70:VAL:HG22	66:NB:47:LYS:HD3	2.02	0.41
66:NB:82:ARG:NH2	66:NB:116:LEU:HD11	2.36	0.41
15:O:54:VAL:HG12	15:O:56:THR:HG23	2.03	0.41
2:B:1256:G:C1'	16:P:123:ARG:HG3	2.51	0.41
16:P:107:ASP:H	16:P:142:ARG:HD3	1.85	0.41
68:PB:54:LEU:C	68:PB:56:LYS:H	2.24	0.41
17:Q:48:PRO:CD	39:MA:115:LYS:HD3	2.50	0.41
17:Q:56:PRO:HB3	17:Q:75:PHE:HD1	1.82	0.41
43:QA:16:ALA:HB1	43:QA:42:ARG:HH21	1.85	0.41
1:A:1358:G:H4'	69:QB:130:ARG:HA	2.03	0.41
19:S:106:VAL:HA	19:S:109:ARG:HB3	2.03	0.41
19:S:118:SER:HB2	19:S:132:VAL:HG22	2.02	0.41
2:B:2168:A:H5''	19:S:67:ARG:HH12	1.85	0.41
2:B:3243:A:OP2	20:T:159:LYS:NZ	2.54	0.41
20:T:37:ARG:NH1	20:T:161:LYS:HZ3	2.18	0.41
20:T:74:ARG:HG2	20:T:74:ARG:NH1	2.35	0.41
72:TB:11:LEU:CD2	72:TB:73:GLY:HA2	2.50	0.41
21:U:96:GLN:HE21	21:U:96:GLN:HB3	1.52	0.41
73:UB:127:VAL:C	73:UB:129:GLY:H	2.24	0.41
22:V:110:ALA:O	22:V:114:ILE:HG13	2.21	0.41
22:V:165:ILE:HD13	22:V:168:THR:CG2	2.51	0.41
22:V:24:VAL:O	22:V:25:TYR:C	2.58	0.41
74:VB:114:ARG:O	74:VB:118:ILE:HG12	2.20	0.41
23:W:104:ARG:NH1	23:W:135:LYS:HD3	2.36	0.41
23:W:186:LYS:CE	23:W:186:LYS:HA	2.51	0.41
75:WB:95:HIS:O	75:WB:99:ALA:HB2	2.21	0.41
76:XB:10:ARG:HH22	76:XB:36:ILE:HB	1.86	0.41
51:YA:142:PHE:O	51:YA:207:LEU:HG	2.20	0.41
52:ZA:69:ILE:CD1	52:ZA:133:LYS:HD2	2.51	0.41
78:ZB:14:LYS:HG3	78:ZB:15:VAL:H	1.84	0.41
1:A:1227:A:H3'	62:JB:117:GLY:O	2.20	0.41
1:A:1306:C:H6	1:A:1306:C:O5'	2.03	0.41
1:A:1572:G:C2'	1:A:1572:G:N3	2.84	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:15:U:H2'	1:A:16:G:H5'	2.02	0.41
1:A:1735:U:H2'	1:A:1736:G:C8	2.55	0.41
1:A:358:U:H2'	1:A:360:A:C5'	2.51	0.41
1:A:551:G:O2'	1:A:552:G:H5'	2.21	0.41
1:A:604:A:H2'	1:A:605:A:O4'	2.21	0.41
27:AA:30:GLY:HA3	27:AA:66:LYS:HD2	2.02	0.41
2:B:115:A:H3'	2:B:116:A:H5'	2.02	0.41
2:B:1239:C:C5'	16:P:99:LYS:HD2	2.51	0.41
2:B:1302:A:C3'	2:B:1303:A:H5''	2.51	0.41
2:B:1400:G:C6	2:B:1412:G:C6	3.09	0.41
2:B:1405:U:N3	36:JA:55:ILE:HD13	2.35	0.41
2:B:1508:C:H5''	2:B:2354:C:C1'	2.50	0.41
2:B:1815:U:O3'	2:B:1816:A:H4'	2.20	0.41
2:B:1888:U:H2'	2:B:1889:G:C1'	2.49	0.41
2:B:1910:A:O2'	2:B:1911:A:H5'	2.20	0.41
2:B:2347:U:H3'	2:B:2348:A:C8	2.56	0.41
2:B:2390:A:C2	2:B:2990:G:C2	3.09	0.41
2:B:2448:G:C2'	2:B:2449:A:H5'	2.48	0.41
2:B:2435:G:N7	2:B:2593:A:H2'	2.36	0.41
2:B:2642:A:O2'	2:B:2643:A:H5'	2.20	0.41
2:B:2682:C:O2'	2:B:2683:U:H5'	2.21	0.41
2:B:2859:U:H4'	2:B:2860:U:C5'	2.48	0.41
2:B:292:U:C2'	2:B:293:C:H5'	2.50	0.41
2:B:313:A:H2'	2:B:314:U:O4'	2.21	0.41
2:B:3305:A:O3'	7:G:272:TYR:HE2	2.04	0.41
2:B:3379:C:H4'	7:G:315:GLY:O	2.20	0.41
2:B:639:G:O4'	2:B:1434:G:C6	2.74	0.41
2:B:858:A:C2'	2:B:859:G:H5'	2.51	0.41
2:B:86:G:H22	2:B:99:A:P	2.43	0.41
2:B:932:U:O4'	2:B:934:G:H5'	2.20	0.41
2:B:92:G:C2	2:B:94:G:N2	2.88	0.41
2:B:989:A:H2'	2:B:990:U:H6	1.85	0.41
54:BB:31:PRO:HG2	54:BB:38:LEU:HD11	2.01	0.41
73:UB:57:LEU:HD22	80:BC:4:VAL:HG12	2.03	0.41
80:BC:55:ARG:NE	80:BC:58:PRO:HB3	2.36	0.41
3:C:104:A:OP2	3:C:105:A:H2'	2.21	0.41
29:CA:47:ALA:HB3	39:MA:77:PRO:HG2	2.03	0.41
1:A:1162:C:H5'	55:CB:148:ARG:HH11	1.84	0.41
30:DA:60:ARG:HG3	30:DA:60:ARG:NH1	2.36	0.41
82:DC:384:LYS:C	82:DC:385:MET:HG3	2.41	0.41
82:DC:7:ASP:N	82:DC:7:ASP:OD1	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:EB:93:LEU:HD21	57:EB:129:LEU:CD2	2.51	0.41
83:EC:6930:G:H2'	83:EC:6931:U:H5''	2.03	0.41
6:F:6:ARG:HG3	6:F:10:LYS:HZ1	1.86	0.41
7:G:282:ILE:HA	7:G:324:VAL:HG22	2.03	0.41
25:Y:66:ASN:OD1	33:GA:35:VAL:HG13	2.21	0.41
8:H:60:THR:HG22	8:H:62:ALA:H	1.86	0.41
34:HA:44:ILE:CG2	34:HA:53:LYS:HE3	2.50	0.41
9:I:34:LYS:C	9:I:34:LYS:HD3	2.41	0.41
9:I:88:ILE:HG13	9:I:243:ALA:HB2	2.01	0.41
9:I:99:TYR:CD1	9:I:99:TYR:C	2.93	0.41
61:IB:6:THR:C	61:IB:8:GLN:H	2.24	0.41
36:JA:105:ARG:NH1	36:JA:125:ARG:NH1	2.69	0.41
11:K:84:VAL:O	11:K:116:PHE:HA	2.20	0.41
4:D:84:A:H2	11:K:225:GLN:HE21	1.69	0.41
11:K:95:ILE:HG23	11:K:133:TYR:CE1	2.56	0.41
12:L:132:VAL:CG2	12:L:133:LYS:N	2.84	0.41
12:L:195:SER:C	12:L:197:VAL:H	2.25	0.41
12:L:82:LEU:HD23	12:L:87:ALA:HA	2.03	0.41
38:LA:42:PRO:HD2	38:LA:56:THR:CG2	2.50	0.41
66:NB:39:VAL:HG23	66:NB:45:ARG:HD3	2.01	0.41
15:O:94:ARG:C	15:O:96:PHE:N	2.74	0.41
43:QA:27:ILE:HA	43:QA:30:ARG:CD	2.51	0.41
69:QB:89:ARG:HA	69:QB:90:PRO:HD2	1.77	0.41
1:A:1504:G:C5'	69:QB:97:SER:HB2	2.51	0.41
70:RB:26:LEU:N	70:RB:26:LEU:HD12	2.35	0.41
19:S:46:ASP:OD1	19:S:47:LYS:N	2.54	0.41
20:T:33:ILE:O	20:T:102:LEU:HD12	2.20	0.41
20:T:47:PHE:CD2	20:T:47:PHE:C	2.94	0.41
46:TA:55:LYS:HA	46:TA:56:PRO:HD3	1.88	0.41
46:TA:4:VAL:CG2	46:TA:93:LEU:HA	2.42	0.41
72:TB:90:THR:HG22	72:TB:102:VAL:CB	2.51	0.41
21:U:14:SER:HB3	21:U:149:VAL:HG12	2.02	0.41
21:U:51:VAL:CG2	21:U:56:ARG:HG3	2.51	0.41
22:V:174:ARG:O	22:V:178:ARG:HB3	2.21	0.41
54:BB:67:GLN:HE22	74:VB:85:PHE:HZ	1.67	0.41
23:W:122:VAL:O	23:W:126:GLU:HG3	2.20	0.41
23:W:20:ARG:HG3	23:W:21:LYS:N	2.35	0.41
25:Y:125:ALA:O	25:Y:126:VAL:HG13	2.21	0.41
51:YA:174:LYS:CB	51:YA:174:LYS:NZ	2.84	0.41
52:ZA:218:ILE:O	52:ZA:221:THR:HG23	2.21	0.41
1:A:1178:G:H3'	1:A:1179:G:C8	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:196:G:O2'	1:A:197:A:O5'	2.39	0.41
1:A:745:U:H2'	1:A:746:A:H8	1.85	0.41
1:A:871:G:H1'	77:YB:51:GLN:HG2	2.02	0.41
1:A:955:A:O2'	1:A:956:C:H5'	2.21	0.41
27:AA:48:ARG:HH11	27:AA:48:ARG:CG	2.33	0.41
53:AB:210:GLU:HA	53:AB:211:PRO:HD3	1.67	0.41
2:B:1209:G:C5	2:B:1210:U:C4	3.09	0.41
2:B:1565:G:H3'	2:B:1566:A:N7	2.36	0.41
2:B:1729:A:N1	47:UA:42:CYS:HA	2.36	0.41
2:B:1867:A:H2'	2:B:1868:G:O4'	2.20	0.41
2:B:1896:A:H61	2:B:2339:C:N4	2.19	0.41
2:B:2154:U:H2'	2:B:2155:G:H8	1.81	0.41
2:B:2181:C:C2	2:B:2182:A:C8	3.09	0.41
2:B:2382:G:H2'	2:B:2383:C:C4'	2.50	0.41
2:B:2394:G:O5'	7:G:252:ILE:HD13	2.20	0.41
2:B:260:C:H2'	2:B:261:U:O4'	2.20	0.41
2:B:3137:C:H2'	2:B:3138:U:C6	2.56	0.41
2:B:3228:C:O2'	2:B:3229:G:OP2	2.37	0.41
2:B:3262:U:H2'	2:B:3263:G:C5'	2.42	0.41
2:B:428:A:O4'	37:KA:25:PRO:HB2	2.21	0.41
2:B:33:G:H1'	2:B:51:A:N6	2.36	0.41
2:B:72:C:C2	2:B:74:G:H1'	2.56	0.41
54:BB:70:VAL:HG22	54:BB:71:LYS:N	2.36	0.41
4:D:43:U:C5	4:D:44:C:C4	3.09	0.41
30:DA:113:LYS:O	30:DA:116:LYS:HB3	2.20	0.41
82:DC:375:LYS:HB3	82:DC:375:LYS:HE3	1.86	0.41
82:DC:404:THR:HG22	82:DC:449:PRO:CB	2.51	0.41
83:EC:6917:C:H2'	83:EC:6918:A:C5'	2.50	0.41
6:F:229:ALA:O	6:F:233:GLN:HB2	2.20	0.41
6:F:40:TYR:N	6:F:40:TYR:CD1	2.89	0.41
6:F:80:GLU:HG3	47:UA:66:GLY:C	2.41	0.41
17:Q:170:LEU:CD1	32:FA:147:LEU:HD13	2.50	0.41
58:FB:57:ALA:HB1	58:FB:60:ILE:HD12	2.02	0.41
7:G:112:ASP:O	7:G:116:ARG:HB2	2.21	0.41
7:G:84:VAL:HG13	7:G:163:HIS:O	2.21	0.41
7:G:232:ARG:HG2	7:G:233:TRP:NE1	2.36	0.41
7:G:240:ARG:HH11	7:G:240:ARG:HG2	1.85	0.41
7:G:57:VAL:O	7:G:357:LYS:HB2	2.21	0.41
59:GB:174:ARG:N	59:GB:174:ARG:HE	2.19	0.41
59:GB:30:LEU:HD13	59:GB:105:LEU:CD2	2.51	0.41
8:H:91:GLY:O	8:H:93:MET:N	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:HA:25:LEU:HD22	34:HA:87:VAL:HG21	2.03	0.41
34:HA:50:VAL:HA	34:HA:53:LYS:HB2	2.01	0.41
2:B:1715:A:N6	34:HA:85:PHE:HB3	2.36	0.41
60:HB:43:ILE:HG12	60:HB:64:TYR:CE2	2.56	0.41
9:I:219:PHE:HE2	9:I:223:PHE:CG	2.39	0.41
1:A:815:G:C6	61:IB:146:ALA:HB3	2.56	0.41
61:IB:3:THR:O	61:IB:4:GLU:HG2	2.21	0.41
11:K:236:ILE:O	11:K:236:ILE:HG12	2.21	0.41
11:K:98:LYS:HE2	11:K:129:LEU:CG	2.50	0.41
12:L:68:ARG:O	12:L:236:GLY:HA2	2.20	0.41
2:B:2553:U:C4	38:LA:95:ILE:HG13	2.56	0.41
64:LB:85:ALA:N	64:LB:119:THR:HG22	2.32	0.41
51:YA:66:VAL:HG13	64:LB:33:LEU:HD22	2.03	0.41
13:M:94:TYR:HA	13:M:177:ASP:CG	2.41	0.41
65:MB:36:LEU:HD12	65:MB:36:LEU:O	2.21	0.41
14:N:75:TYR:CD1	14:N:76:MET:N	2.88	0.41
68:PB:129:TRP:HB2	68:PB:131:LEU:HG	2.02	0.41
17:Q:111:ALA:O	17:Q:115:ARG:HB2	2.21	0.41
43:QA:19:GLN:HG2	43:QA:19:GLN:O	2.21	0.41
44:RA:95:VAL:HG11	44:RA:122:ARG:CZ	2.51	0.41
70:RB:25:THR:HG23	70:RB:88:LYS:HG3	2.02	0.41
19:S:58:GLY:HA2	19:S:136:ASP:HB2	2.02	0.41
19:S:35:VAL:CG2	19:S:65:ARG:HE	2.29	0.41
46:TA:29:LYS:O	46:TA:31:GLY:N	2.54	0.41
73:UB:17:VAL:O	73:UB:18:HIS:C	2.59	0.41
73:UB:28:ASN:HD21	73:UB:110:LYS:HE3	1.86	0.41
8:H:302:ALA:HB2	22:V:39:ARG:HH22	1.85	0.41
23:W:100:ARG:HG3	23:W:100:ARG:NH1	2.33	0.41
49:WA:260:ILE:HD13	49:WA:313:TRP:HH2	1.85	0.41
49:WA:41:THR:O	49:WA:68:VAL:HG21	2.21	0.41
49:WA:69:GLN:HG2	49:WA:110:VAL:O	2.21	0.41
24:X:10:ILE:CG2	24:X:24:LEU:HD22	2.51	0.41
24:X:148:LEU:HG	24:X:149:LYS:N	2.35	0.41
50:XA:121:VAL:HB	50:XA:142:PRO:O	2.21	0.41
50:XA:189:VAL:HG11	50:XA:193:GLN:CD	2.42	0.41
1:A:942:G:H8	76:XB:17:HIS:HB3	1.84	0.41
76:XB:23:CYS:HG	76:XB:74:CYS:HB3	1.85	0.41
76:XB:41:ILE:N	76:XB:41:ILE:HD13	2.35	0.41
25:Y:19:PHE:HA	25:Y:22:HIS:CE1	2.56	0.41
9:I:69:ILE:HG22	25:Y:28:SER:HA	2.03	0.41
51:YA:83:LYS:HD3	51:YA:104:ASP:OD2	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:YA:145:LYS:HB3	51:YA:149:GLN:HG2	2.03	0.41
51:YA:97:LEU:HD12	51:YA:232:HIS:CG	2.55	0.41
1:A:1289:U:H4'	1:A:1423:U:O2	2.20	0.41
1:A:1383:G:O2'	1:A:1384:A:H5'	2.21	0.41
1:A:142:G:H5''	56:DB:139:ASN:OD1	2.20	0.41
1:A:1785:U:O2'	1:A:1786:G:H5'	2.21	0.41
1:A:330:G:O5'	58:FB:172:ARG:NH2	2.54	0.41
1:A:445:A:H61	1:A:462:G:H1'	1.86	0.41
2:B:1163:A:C2	2:B:1164:G:C5	3.10	0.41
2:B:1174:G:C4	2:B:1318:A:C6	3.09	0.41
2:B:1283:C:OP1	48:VA:81:LYS:HA	2.21	0.41
2:B:1290:A:H2'	2:B:1291:A:H8	1.86	0.41
2:B:1628:C:C5'	2:B:1629:U:H3'	2.38	0.41
2:B:1652:G:H2'	2:B:1653:G:H8	1.85	0.41
2:B:2107:A:H3'	2:B:2108:C:C6	2.56	0.41
2:B:2369:G:C5	2:B:2370:G:C6	3.08	0.41
2:B:2776:C:H5''	2:B:2777:G:H5'	2.02	0.41
2:B:2883:U:O2'	2:B:2884:C:H5'	2.20	0.41
2:B:2892:A:C4	2:B:2893:C:C6	3.09	0.41
2:B:407:A:O5'	2:B:407:A:H8	2.04	0.41
2:B:543:C:H2'	2:B:544:C:O4'	2.21	0.41
2:B:882:A:C2'	2:B:883:A:H5''	2.51	0.41
2:B:995:U:C1'	2:B:2637:A:H5'	2.51	0.41
2:B:3369:G:C5'	28:BA:56:ARG:HH21	2.20	0.41
3:C:132:G:H2'	3:C:133:G:H5'	2.03	0.41
3:C:5:U:C2'	3:C:6:U:H5'	2.51	0.41
29:CA:92:LYS:CE	29:CA:112:THR:H	2.33	0.41
29:CA:88:MET:CE	29:CA:120:LYS:HB2	2.51	0.41
55:CB:120:ILE:O	55:CB:124:LEU:HD13	2.21	0.41
55:CB:163:SER:O	55:CB:167:ARG:HG3	2.21	0.41
4:D:28:C:H1'	4:D:56:A:H61	1.85	0.41
56:DB:132:ARG:HG3	56:DB:133:LEU:CD1	2.51	0.41
56:DB:137:ARG:HE	56:DB:140:ASN:CB	2.28	0.41
56:DB:184:LEU:HB2	56:DB:188:ARG:HH12	1.85	0.41
82:DC:271:ARG:HB3	82:DC:274:ASN:ND2	2.36	0.41
82:DC:637:GLY:HA2	82:DC:638:PRO:HA	1.78	0.41
5:E:65:ILE:HD11	5:E:148:VAL:HG22	2.01	0.41
31:EA:13:VAL:CB	31:EA:19:ALA:HA	2.51	0.41
57:EB:7:LYS:O	57:EB:8:ILE:CG2	2.67	0.41
83:EC:6859:U:C4	83:EC:6871:A:N6	2.89	0.41
2:B:911:C:N4	6:F:3:ARG:HD3	2.33	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:60:LYS:HB3	6:F:73:GLU:OE2	2.21	0.41
58:FB:65:PHE:O	58:FB:73:SER:HA	2.21	0.41
7:G:119:TYR:CD2	7:G:119:TYR:N	2.89	0.41
7:G:91:GLY:C	7:G:155:ALA:HB1	2.42	0.41
9:I:131:LEU:HD13	9:I:131:LEU:N	2.36	0.41
9:I:32:GLN:HG2	9:I:36:LEU:CD1	2.51	0.41
9:I:52:VAL:O	9:I:62:CYS:HA	2.21	0.41
9:I:65:ILE:HG13	9:I:74:VAL:HG22	2.03	0.41
9:I:85:ARG:NH1	9:I:86:TYR:OH	2.54	0.41
61:IB:112:SER:HB3	61:IB:115:PHE:CD1	2.56	0.41
61:IB:123:VAL:HG21	61:IB:139:VAL:HG22	2.02	0.41
2:B:3267:A:C2	10:J:73:GLY:HA3	2.56	0.41
63:KB:107:LYS:HD2	63:KB:107:LYS:H	1.85	0.41
63:KB:4:MET:H	63:KB:4:MET:HG2	1.73	0.41
12:L:75:ILE:HA	12:L:78:PHE:CE1	2.54	0.41
12:L:77:GLN:O	12:L:80:TYR:HD1	2.03	0.41
39:MA:34:GLN:HB3	39:MA:38:ARG:HH12	1.86	0.41
65:MB:90:ILE:HA	65:MB:107:ILE:HB	2.03	0.41
14:N:168:SER:HA	25:Y:160:ILE:CG2	2.40	0.41
66:NB:45:ARG:HG2	66:NB:45:ARG:NH1	2.35	0.41
68:PB:100:THR:HG22	68:PB:108:LYS:CG	2.51	0.41
69:QB:48:GLN:HB3	69:QB:48:GLN:HE21	1.70	0.41
18:R:98:SER:HA	18:R:101:LYS:HD2	2.02	0.41
45:SA:10:THR:O	45:SA:14:LYS:HB2	2.21	0.41
18:R:123:LEU:HD13	20:T:194:LEU:HD23	2.02	0.41
21:U:114:VAL:CG2	21:U:148:LEU:HD13	2.48	0.41
6:F:82:VAL:HG22	47:UA:65:ALA:CB	2.51	0.41
49:WA:182:ASN:O	49:WA:186:PHE:HA	2.21	0.41
49:WA:19:TRP:CD2	49:WA:306:THR:HB	2.55	0.41
49:WA:36:ALA:HB1	49:WA:68:VAL:HG12	2.03	0.41
75:WB:62:VAL:HG22	75:WB:80:LEU:HD11	2.03	0.41
75:WB:63:SER:HA	75:WB:66:VAL:CG2	2.50	0.41
75:WB:96:SER:C	75:WB:98:GLN:H	2.24	0.41
76:XB:38:ARG:CD	76:XB:82:ARG:HD3	2.51	0.41
51:YA:144:ARG:HG2	51:YA:207:LEU:N	2.35	0.41
51:YA:34:ALA:HA	51:YA:98:THR:HG22	2.02	0.41
77:YB:31:TYR:CE2	77:YB:81:ARG:HA	2.56	0.41
1:A:1077:C:C2	1:A:1078:C:C5	3.09	0.40
1:A:1124:A:H2'	1:A:1125:A:C8	2.56	0.40
1:A:1184:A:O2'	1:A:1209:C:H1'	2.21	0.40
1:A:1246:C:H5'	79:AC:7:TRP:CH2	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1426:C:H3'	1:A:1427:A:H5''	2.01	0.40
1:A:1473:U:H5''	55:CB:190:ILE:CG1	2.51	0.40
1:A:1505:A:C2'	1:A:1506:G:H5'	2.51	0.40
1:A:1524:A:C2	1:A:1607:G:N2	2.85	0.40
1:A:1526:A:H2'	1:A:1527:C:H5'	2.03	0.40
1:A:257:A:H1'	58:FB:73:SER:CB	2.51	0.40
1:A:478:A:H2'	1:A:479:C:H5'	2.02	0.40
1:A:654:C:H5'	1:A:655:G:OP2	2.22	0.40
27:AA:87:ARG:C	27:AA:89:ASP:H	2.25	0.40
79:AC:39:CYS:SG	79:AC:42:CYS:HB2	2.61	0.40
2:B:1231:A:H2'	2:B:1277:C:H41	1.81	0.40
2:B:1438:U:H4'	8:H:88:GLY:HA3	2.02	0.40
2:B:1494:U:OP1	43:QA:44:TRP:HB3	2.21	0.40
2:B:1496:C:OP1	2:B:1514:G:H5''	2.21	0.40
2:B:1639:C:O5'	2:B:1639:C:H6	2.04	0.40
2:B:1742:U:H2'	2:B:1743:G:O4'	2.21	0.40
2:B:1748:G:H4'	42:PA:2:ALA:N	2.36	0.40
2:B:1860:G:H2'	2:B:1861:G:O4'	2.21	0.40
2:B:2127:U:H2'	2:B:2128:C:C6	2.56	0.40
2:B:2406:C:H1'	2:B:2819:A:C2	2.56	0.40
2:B:2466:G:OP1	5:E:105:LYS:HB3	2.21	0.40
2:B:2527:G:H2'	2:B:2528:G:C8	2.56	0.40
2:B:2762:A:H2'	2:B:2763:U:C6	2.57	0.40
2:B:2865:U:H2'	2:B:2866:U:H5'	2.02	0.40
2:B:3061:G:C4	2:B:3062:G:C8	3.09	0.40
2:B:3280:U:C2	2:B:3281:U:C5	3.10	0.40
2:B:852:U:H2'	2:B:853:G:H8	1.86	0.40
2:B:952:A:N3	2:B:1114:U:O2'	2.46	0.40
2:B:956:U:H2'	2:B:957:C:C6	2.57	0.40
54:BB:62:LYS:HB3	54:BB:62:LYS:HE2	1.90	0.40
3:C:60:U:C5	39:MA:55:LEU:HD12	2.56	0.40
29:CA:27:ARG:HD2	29:CA:27:ARG:H	1.86	0.40
29:CA:35:PRO:O	29:CA:36:LYS:C	2.59	0.40
29:CA:61:LYS:O	29:CA:87:SER:HB2	2.20	0.40
55:CB:176:THR:O	55:CB:180:ARG:HB2	2.22	0.40
55:CB:57:SER:CB	78:ZB:53:ILE:HB	2.50	0.40
4:D:30:G:H2'	4:D:31:U:C6	2.56	0.40
4:D:57:G:C8	4:D:58:C:C5	3.09	0.40
4:D:69:C:O2'	4:D:70:U:H5'	2.21	0.40
30:DA:76:LEU:HD13	30:DA:76:LEU:C	2.42	0.40
82:DC:106:PRO:O	82:DC:115:VAL:HG23	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:171:LYS:HG2	82:DC:278:LEU:HB3	2.02	0.40
82:DC:433:ARG:NH1	82:DC:433:ARG:HB3	2.36	0.40
82:DC:585:ARG:O	82:DC:692:THR:OG1	2.29	0.40
6:F:206:PRO:CD	6:F:213:GLY:HA3	2.50	0.40
2:B:95:A:H5"	32:FA:34:MET:CB	2.51	0.40
7:G:169:THR:CG2	7:G:170:PRO:HD2	2.51	0.40
7:G:41:VAL:CG2	7:G:185:GLY:HA3	2.44	0.40
59:GB:37:LYS:HE2	59:GB:38:ASN:ND2	2.35	0.40
59:GB:37:LYS:HG3	59:GB:38:ASN:N	2.36	0.40
8:H:69:ARG:CB	8:H:71:VAL:HG12	2.50	0.40
8:H:73:ARG:HB3	8:H:74:ILE:H	1.65	0.40
60:HB:31:LYS:HA	60:HB:37:THR:O	2.21	0.40
9:I:243:ALA:HA	9:I:246:ALA:HB3	2.03	0.40
61:IB:35:TYR:CE2	61:IB:49:ILE:HG23	2.56	0.40
61:IB:75:VAL:HG11	61:IB:117:VAL:HG12	2.03	0.40
10:J:38:THR:HG23	10:J:90:LYS:CB	2.51	0.40
10:J:72:ASN:ND2	10:J:159:LEU:HB3	2.36	0.40
37:KA:6:ARG:HG3	37:KA:8:TYR:CE1	2.56	0.40
2:B:1785:U:C5'	38:LA:38:LEU:HD12	2.48	0.40
64:LB:83:ILE:HD12	76:XB:44:ILE:HG21	2.02	0.40
39:MA:85:THR:HG22	39:MA:88:LEU:H	1.86	0.40
2:B:1126:G:OP2	14:N:14:ASN:HA	2.21	0.40
66:NB:87:LYS:O	66:NB:91:ALA:HB2	2.21	0.40
15:O:140:ARG:O	15:O:145:LYS:HE2	2.21	0.40
15:O:82:ARG:O	15:O:86:VAL:HG23	2.21	0.40
42:PA:3:ARG:HH21	42:PA:50:SER:HB2	1.86	0.40
68:PB:50:ALA:CB	68:PB:52:VAL:HG23	2.51	0.40
68:PB:73:MET:O	68:PB:75:ASN:N	2.54	0.40
17:Q:131:LYS:HB3	17:Q:131:LYS:NZ	2.36	0.40
18:R:102:LYS:O	18:R:105:GLN:HB2	2.20	0.40
18:R:67:PRO:HD3	18:R:99:TRP:CZ3	2.55	0.40
18:R:94:TRP:C	18:R:96:ALA:N	2.73	0.40
70:RB:35:GLU:OE2	70:RB:57:ARG:HD2	2.21	0.40
1:A:1382:A:H2	70:RB:57:ARG:NH1	2.19	0.40
20:T:7:VAL:HG12	20:T:8:VAL:N	2.35	0.40
1:A:632:U:C4'	73:UB:11:SER:HB3	2.38	0.40
22:V:127:LEU:HD13	22:V:128:ALA:N	2.35	0.40
74:VB:14:SER:O	74:VB:16:PRO:HD3	2.21	0.40
49:WA:193:ILE:HG22	49:WA:194:GLY:H	1.85	0.40
49:WA:23:LEU:HG	49:WA:291:SER:OG	2.21	0.40
75:WB:41:ILE:O	75:WB:42:LEU:CB	2.69	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:X:43:TYR:HA	24:X:46:GLN:OE1	2.20	0.40
50:XA:163:ASN:C	50:XA:165:ARG:N	2.73	0.40
25:Y:94:GLU:OE1	25:Y:94:GLU:N	2.55	0.40
52:ZA:76:LEU:HG	52:ZA:105:GLY:C	2.42	0.40
52:ZA:146:THR:HG21	59:GB:94:ASP:OD2	2.21	0.40
52:ZA:179:VAL:HG21	52:ZA:197:TYR:CE1	2.57	0.40
52:ZA:49:LYS:NZ	52:ZA:243:TYR:HB3	2.36	0.40
1:A:1085:G:H22	1:A:1087:A:H3'	1.86	0.40
1:A:1360:A:H5'	1:A:1361:U:OP2	2.21	0.40
1:A:15:U:O2'	1:A:16:G:H5'	2.21	0.40
1:A:1613:U:H5''	55:CB:169:ASN:HB3	2.03	0.40
1:A:1675:C:H2'	1:A:1676:U:O4'	2.21	0.40
1:A:268:C:O2'	1:A:269:G:H5'	2.21	0.40
27:AA:80:ARG:HB2	27:AA:99:ALA:HB3	2.02	0.40
27:AA:85:TRP:CD1	27:AA:85:TRP:C	2.95	0.40
49:WA:221:MET:HE1	53:AB:220:PRO:HA	2.03	0.40
2:B:1051:U:H2'	2:B:1052:U:H5'	2.02	0.40
2:B:1133:A:H5'	2:B:2866:U:OP1	2.20	0.40
2:B:825:U:H5''	2:B:1797:A:C5	2.57	0.40
2:B:1874:A:H2'	2:B:1875:G:H5'	2.03	0.40
2:B:214:G:H2'	2:B:215:G:O4'	2.21	0.40
2:B:228:U:H2'	2:B:229:G:H8	1.85	0.40
2:B:247:C:H2'	2:B:248:U:O4'	2.21	0.40
2:B:2562:A:H2'	2:B:2563:G:H8	1.86	0.40
2:B:2709:C:O2'	2:B:2710:C:H5'	2.21	0.40
2:B:2743:A:H2'	2:B:2744:U:C6	2.57	0.40
2:B:277:G:N3	19:S:93:LYS:HG3	2.37	0.40
2:B:3049:A:C2'	2:B:3050:U:H5'	2.52	0.40
2:B:306:A:N6	2:B:2784:G:C2	2.89	0.40
2:B:835:G:C2	2:B:857:G:C4	3.08	0.40
3:C:41:A:H5''	41:OA:67:LEU:HG	2.01	0.40
3:C:65:A:C4	3:C:66:A:C8	3.09	0.40
29:CA:92:LYS:HE2	29:CA:111:ASN:CA	2.52	0.40
55:CB:112:ARG:HH21	66:NB:43:ILE:CG2	2.32	0.40
55:CB:193:THR:O	55:CB:196:GLU:HB3	2.21	0.40
4:D:108:A:H2'	4:D:109:G:H8	1.85	0.40
82:DC:545:LEU:CD1	82:DC:549:HIS:HB2	2.50	0.40
82:DC:608:PRO:HG3	82:DC:636:PHE:CD1	2.56	0.40
82:DC:613:LYS:O	82:DC:617:ARG:HG2	2.22	0.40
5:E:94:ASN:CB	5:E:123:LEU:HG	2.44	0.40
5:E:65:ILE:HB	5:E:144:LEU:HD23	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:EA:83:THR:OG1	31:EA:84:ARG:N	2.54	0.40
57:EB:135:ILE:CG2	57:EB:152:VAL:HG12	2.51	0.40
57:EB:96:ARG:HD2	57:EB:121:VAL:CG1	2.46	0.40
6:F:104:LEU:C	6:F:106:SER:H	2.24	0.40
7:G:49:TYR:C	7:G:79:VAL:HG23	2.42	0.40
59:GB:163:PRO:O	59:GB:164:PHE:HB2	2.22	0.40
8:H:181:VAL:CG1	8:H:182:LEU:N	2.84	0.40
8:H:352:ALA:C	8:H:354:VAL:N	2.74	0.40
60:HB:59:PHE:CD1	60:HB:60:SER:N	2.89	0.40
10:J:141:VAL:HG12	10:J:145:LEU:HD12	2.04	0.40
36:JA:44:ARG:HD2	36:JA:46:PHE:CE2	2.56	0.40
11:K:90:LYS:HE2	11:K:95:ILE:CD1	2.44	0.40
37:KA:42:GLN:CG	37:KA:45:LEU:HD12	2.52	0.40
12:L:245:LYS:NZ	12:L:249:ARG:HD3	2.36	0.40
12:L:248:LYS:O	12:L:252:ASN:HB2	2.21	0.40
12:L:33:ASN:ND2	12:L:38:GLN:HE22	2.14	0.40
1:A:927:C:H1'	64:LB:125:SER:OG	2.21	0.40
19:S:149:ASN:OD1	39:MA:92:LEU:HD22	2.21	0.40
14:N:61:SER:HB3	14:N:63:GLU:CG	2.49	0.40
66:NB:116:LEU:C	66:NB:117:LEU:HD22	2.42	0.40
15:O:158:ASP:HA	15:O:161:SER:HB2	2.03	0.40
67:OB:46:LEU:HD12	67:OB:50:ILE:HD11	2.02	0.40
17:Q:58:VAL:HG11	17:Q:101:ARG:HH21	1.86	0.40
17:Q:75:PHE:CE1	17:Q:96:ALA:HB3	2.57	0.40
18:R:102:LYS:HG3	18:R:106:ARG:NH2	2.36	0.40
18:R:21:VAL:HB	18:R:63:VAL:CG2	2.43	0.40
18:R:93:LYS:HA	18:R:96:ALA:HB3	2.02	0.40
1:A:1642:G:OP1	45:SA:1:MET:HB2	2.21	0.40
20:T:180:SER:O	20:T:184:THR:HG22	2.22	0.40
20:T:37:ARG:HD3	20:T:108:ILE:CG1	2.51	0.40
47:UA:55:TRP:CZ2	47:UA:70:THR:C	2.95	0.40
73:UB:113:ALA:HB1	73:UB:117:ILE:O	2.21	0.40
73:UB:87:VAL:HA	73:UB:88:PRO:HD3	1.88	0.40
49:WA:116:ASP:HB2	49:WA:117:LYS:HD2	2.04	0.40
24:X:81:TYR:CE1	24:X:88:HIS:HB2	2.55	0.40
50:XA:122:ILE:HG12	50:XA:144:ILE:CD1	2.51	0.40
51:YA:215:VAL:HG22	51:YA:216:LYS:N	2.36	0.40
77:YB:34:ASP:HB3	77:YB:43:ILE:HD12	2.02	0.40
52:ZA:126:ARG:O	52:ZA:130:ILE:HD13	2.21	0.40
52:ZA:203:LYS:O	52:ZA:206:THR:HG22	2.21	0.40
1:A:1203:A:H5'	1:A:1457:C:N4	2.23	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1349:G:H2'	1:A:1350:U:C6	2.57	0.40
1:A:1610:G:H5''	55:CB:107:LYS:HB2	2.03	0.40
1:A:476:U:O5'	1:A:476:U:H6	2.05	0.40
1:A:558:U:H1'	1:A:581:U:O4'	2.22	0.40
1:A:778:G:H5'	1:A:778:G:N3	2.36	0.40
1:A:785:U:O2'	1:A:786:C:H5'	2.20	0.40
1:A:962:C:H3'	1:A:963:A:H8	1.87	0.40
70:RB:83:GLU:CG	79:AC:55:PHE:HB2	2.50	0.40
2:B:1220:U:C5'	2:B:1222:G:H1'	2.51	0.40
2:B:1564:U:H3	2:B:1575:A:H2	1.68	0.40
2:B:1590:G:H8	2:B:1590:G:O5'	2.04	0.40
2:B:1635:G:N1	2:B:1638:A:OP2	2.40	0.40
2:B:1718:G:H2'	2:B:1719:G:O4'	2.22	0.40
2:B:1812:G:O2'	2:B:1818:U:H4'	2.21	0.40
2:B:1939:G:H1'	2:B:2114:C:H1'	2.03	0.40
2:B:2127:U:H2'	2:B:2128:C:H6	1.86	0.40
1:A:1758:U:H1'	2:B:2262:A:C2	2.57	0.40
2:B:2420:C:H2'	2:B:2421:U:C6	2.56	0.40
2:B:2424:A:H4'	19:S:72:LYS:CE	2.51	0.40
2:B:2480:A:H2'	2:B:2481:G:H5'	2.02	0.40
2:B:2550:U:O4	6:F:40:TYR:N	2.38	0.40
2:B:2555:G:H2'	2:B:2556:C:C6	2.56	0.40
2:B:268:A:C4'	2:B:270:U:H1'	2.52	0.40
2:B:2145:A:C5'	2:B:2959:C:H5'	2.52	0.40
2:B:3162:C:H2'	2:B:3163:A:C8	2.56	0.40
2:B:3185:U:H5''	13:M:23:ARG:HH12	1.87	0.40
2:B:3353:G:C8	2:B:3356:G:H1'	2.56	0.40
2:B:651:G:O3'	2:B:1436:U:H4'	2.21	0.40
2:B:69:C:O3'	2:B:101:G:H4'	2.22	0.40
2:B:75:G:H3'	2:B:76:G:C8	2.53	0.40
54:BB:126:VAL:HA	54:BB:141:THR:HA	2.02	0.40
54:BB:42:LEU:O	54:BB:42:LEU:HD23	2.20	0.40
54:BB:45:ILE:HA	54:BB:61:VAL:HG11	2.03	0.40
54:BB:52:LEU:HB3	54:BB:54:TYR:CD2	2.56	0.40
29:CA:73:MET:O	29:CA:73:MET:HE3	2.21	0.40
55:CB:173:ALA:HA	55:CB:176:THR:OG1	2.21	0.40
55:CB:43:PHE:HB2	55:CB:46:TRP:HB2	2.02	0.40
30:DA:43:TYR:HA	30:DA:125:LYS:CG	2.36	0.40
82:DC:382:VAL:HA	82:DC:397:PHE:O	2.21	0.40
82:DC:534:GLY:O	82:DC:537:HIS:HB3	2.22	0.40
82:DC:77:LEU:HD23	82:DC:77:LEU:C	2.42	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:180:VAL:HG22	5:E:183:ILE:HD12	2.03	0.40
31:EA:52:LYS:HZ3	31:EA:135:ARG:NH1	2.17	0.40
57:EB:143:LEU:HD23	57:EB:147:ASN:O	2.21	0.40
6:F:129:ALA:HB3	6:F:132:ASN:HD22	1.82	0.40
6:F:32:LEU:HA	6:F:36:GLU:HG3	2.03	0.40
6:F:92:LYS:HG2	6:F:103:PRO:CD	2.34	0.40
32:FA:12:ARG:CG	32:FA:12:ARG:NH1	2.83	0.40
58:FB:43:ILE:HG12	58:FB:56:ARG:O	2.21	0.40
1:A:341:A:H4'	58:FB:87:ASN:OD1	2.22	0.40
7:G:114:VAL:HG13	7:G:163:HIS:CD2	2.56	0.40
7:G:25:ILE:C	7:G:220:VAL:HG21	2.42	0.40
7:G:58:ARG:CD	7:G:283:TYR:HE2	2.33	0.40
7:G:76:VAL:CG1	7:G:325:LYS:HA	2.50	0.40
8:H:193:LYS:HA	8:H:198:ARG:HA	2.02	0.40
8:H:206:LEU:HD11	8:H:228:ALA:CB	2.51	0.40
8:H:64:SER:CA	8:H:75:PRO:HA	2.47	0.40
9:I:119:TYR:CE2	9:I:141:PRO:HD3	2.57	0.40
4:D:50:U:O2	9:I:222:LEU:HD23	2.22	0.40
9:I:29:ASP:O	9:I:33:ARG:HB2	2.21	0.40
35:IA:10:ARG:HB2	35:IA:12:TYR:CZ	2.56	0.40
61:IB:87:ARG:HB2	61:IB:106:ASN:HD21	1.85	0.40
61:IB:129:ARG:O	61:IB:131:ILE:N	2.55	0.40
37:KA:8:TYR:CD2	37:KA:99:ARG:HA	2.56	0.40
12:L:203:VAL:HG13	12:L:208:GLU:OE1	2.21	0.40
64:LB:137:LEU:OXT	64:LB:137:LEU:HD22	2.21	0.40
65:MB:108:ARG:HA	65:MB:109:PRO:HD3	1.88	0.40
40:NA:11:LEU:HD22	40:NA:11:LEU:N	2.36	0.40
41:OA:21:ARG:HG3	41:OA:39:TYR:CD2	2.56	0.40
16:P:81:VAL:HG21	16:P:117:ARG:CD	2.51	0.40
68:PB:88:ARG:HG2	68:PB:91:ASP:OD1	2.21	0.40
18:R:49:PRO:HD2	18:R:81:VAL:HG11	2.02	0.40
19:S:174:ILE:HG21	19:S:185:ALA:HA	2.02	0.40
72:TB:6:VAL:HG12	72:TB:34:ILE:CD1	2.46	0.40
61:IB:100:TYR:O	73:UB:10:ASN:HA	2.22	0.40
73:UB:14:LYS:O	73:UB:18:HIS:HB2	2.21	0.40
73:UB:57:LEU:CD1	73:UB:73:ARG:HB2	2.39	0.40
22:V:111:ARG:HH21	22:V:121:CYS:CB	2.32	0.40
22:V:71:LEU:O	22:V:76:ALA:HB3	2.21	0.40
49:WA:252:LEU:O	49:WA:263:PHE:HB2	2.22	0.40
49:WA:267:PRO:HG2	49:WA:269:TYR:CD1	2.56	0.40
50:XA:200:ASP:O	50:XA:201:LEU:C	2.60	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:XA:90:ALA:HB1	50:XA:97:PRO:HD3	2.03	0.40
51:YA:90:GLU:HB2	51:YA:225:VAL:HG11	2.04	0.40
26:Z:78:TYR:O	26:Z:81:LYS:HB2	2.21	0.40
52:ZA:102:VAL:O	52:ZA:114:GLY:N	2.54	0.40
1:A:1199:G:C8	79:AC:40:ARG:HD2	2.56	0.40
1:A:122:U:O2'	1:A:123:G:H5'	2.21	0.40
1:A:1309:C:H2'	1:A:1310:U:C6	2.56	0.40
1:A:1419:G:H1'	79:AC:55:PHE:O	2.22	0.40
1:A:1476:C:O2'	1:A:1477:G:H5'	2.22	0.40
1:A:1592:A:O2'	1:A:1593:A:H5'	2.21	0.40
1:A:279:G:H2'	1:A:281:G:H5'	2.01	0.40
1:A:300:A:H2'	1:A:301:A:C8	2.57	0.40
1:A:916:U:H2'	1:A:917:U:O4'	2.21	0.40
2:B:122:A:O5'	12:L:105:LYS:NZ	2.49	0.40
2:B:1231:A:H2'	2:B:1277:C:H42	1.86	0.40
2:B:1455:U:H5	2:B:1478:C:H4'	1.87	0.40
2:B:1472:U:O2'	23:W:26:PRO:HB3	2.22	0.40
2:B:1553:U:C4'	2:B:1554:U:H5'	2.52	0.40
2:B:1591:G:C2'	2:B:1592:G:H5'	2.52	0.40
2:B:2124:G:O2'	2:B:2125:A:H5'	2.22	0.40
2:B:2250:G:H2'	2:B:2251:G:H8	1.87	0.40
2:B:2260:U:H2'	2:B:2261:G:C8	2.56	0.40
2:B:2298:U:O2	2:B:2298:U:O4'	2.40	0.40
2:B:2317:A:HO2'	2:B:2318:U:H5'	1.85	0.40
2:B:2689:A:N6	2:B:2702:A:O2'	2.52	0.40
2:B:2771:U:H3'	2:B:2772:C:C5'	2.48	0.40
2:B:609:G:N3	2:B:609:G:H3'	2.36	0.40
2:B:753:C:H2'	2:B:754:G:C8	2.54	0.40
54:BB:192:ILE:HG13	54:BB:243:GLY:HA3	2.02	0.40
55:CB:220:VAL:O	55:CB:224:ASN:HB2	2.20	0.40
55:CB:88:PRO:C	55:CB:90:ILE:N	2.74	0.40
4:D:56:A:H2	15:O:138:VAL:HG21	1.86	0.40
3:C:91:C:C4'	30:DA:24:SER:HB3	2.51	0.40
3:C:71:A:H5'	30:DA:75:ARG:NH2	2.36	0.40
82:DC:239:LYS:HG2	82:DC:243:ARG:HD2	2.02	0.40
82:DC:646:VAL:HB	82:DC:667:PHE:CE1	2.56	0.40
2:B:1270:A:H5'	82:DC:741:GLY:CA	2.51	0.40
82:DC:773:PRO:HB2	82:DC:776:GLU:CG	2.51	0.40
5:E:147:LYS:CA	5:E:150:ASP:HB2	2.48	0.40
83:EC:6834:U:H3'	83:EC:6835:U:H5'	1.97	0.40
58:FB:43:ILE:CG2	58:FB:44:HIS:N	2.83	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:98:GLY:HA2	20:T:149:TYR:HE1	1.87	0.40
8:H:213:ASN:HA	8:H:213:ASN:HD22	1.71	0.40
34:HA:86:ARG:HG2	34:HA:86:ARG:H	1.62	0.40
60:HB:57:THR:HG23	60:HB:66:TYR:CE1	2.56	0.40
35:IA:70:ARG:HG3	35:IA:70:ARG:NH2	2.35	0.40
36:JA:16:LYS:HB2	36:JA:16:LYS:HE2	1.79	0.40
11:K:175:LYS:HD2	11:K:176:TYR:CE1	2.56	0.40
11:K:82:LYS:CD	11:K:82:LYS:H	2.23	0.40
21:U:172:GLN:NE2	37:KA:60:ARG:O	2.52	0.40
12:L:143:ILE:HG23	12:L:173:MET:CG	2.51	0.40
12:L:97:TYR:N	12:L:97:TYR:CD2	2.88	0.40
38:LA:43:LYS:HD2	38:LA:48:GLY:O	2.21	0.40
13:M:166:ARG:HH21	13:M:168:ARG:HG2	1.87	0.40
39:MA:100:VAL:CG2	39:MA:101:THR:H	2.20	0.40
65:MB:22:LEU:HD21	65:MB:109:PRO:HB3	2.03	0.40
65:MB:17:TYR:O	65:MB:18:ARG:HD3	2.22	0.40
66:NB:39:VAL:HG21	66:NB:48:VAL:HG11	2.03	0.40
66:NB:92:TYR:C	66:NB:94:GLN:H	2.24	0.40
41:OA:24:ARG:NH1	41:OA:24:ARG:HB3	2.35	0.40
68:PB:28:ILE:HD12	68:PB:47:CYS:SG	2.61	0.40
43:QA:15:LYS:O	43:QA:18:LYS:HB2	2.21	0.40
69:QB:60:SER:O	69:QB:64:HIS:HB2	2.21	0.40
44:RA:94:SER:HA	44:RA:123:PRO:HA	2.02	0.40
12:L:61:GLN:HB3	19:S:28:TRP:CZ2	2.56	0.40
20:T:52:LEU:HD23	20:T:52:LEU:O	2.21	0.40
46:TA:64:THR:HB	46:TA:89:LYS:CE	2.51	0.40
21:U:49:GLU:HA	21:U:52:LEU:HB3	2.03	0.40
73:UB:85:ALA:HB2	73:UB:104:LEU:CD1	2.52	0.40
73:UB:30:LYS:HE3	73:UB:30:LYS:HB2	1.96	0.40
22:V:177:GLY:HA2	22:V:184:PHE:O	2.21	0.40
23:W:106:LEU:HD12	23:W:106:LEU:H	1.86	0.40
23:W:180:LYS:NZ	23:W:184:LEU:HD12	2.36	0.40
1:A:1797:A:N6	76:XB:87:ARG:HD2	2.36	0.40
51:YA:81:PHE:CZ	51:YA:109:LYS:HE2	2.57	0.40
1:A:1097:U:O4	52:ZA:201:ASN:HB2	2.21	0.40
52:ZA:240:LEU:O	52:ZA:244:SER:HB2	2.21	0.40
52:ZA:53:ILE:HD12	52:ZA:57:PHE:CZ	2.56	0.40
1:A:1070:C:O2'	1:A:1071:U:H5'	2.21	0.40
1:A:1223:A:O2'	1:A:1224:A:H5'	2.21	0.40
1:A:1325:A:H2'	1:A:1326:A:C8	2.57	0.40
1:A:1568:C:H3'	1:A:1569:A:H5'	2.04	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1589:C:H2'	1:A:1590:G:O4'	2.21	0.40
1:A:1761:U:O2	1:A:1761:U:O4'	2.39	0.40
1:A:1762:A:H4'	1:A:1783:C:H4'	2.04	0.40
1:A:365:G:N3	1:A:365:G:H2'	2.37	0.40
1:A:751:G:H2'	1:A:752:A:C8	2.57	0.40
1:A:753:A:OP1	54:BB:186:GLY:HA3	2.22	0.40
1:A:82:U:C2'	1:A:83:G:H5'	2.51	0.40
1:A:98:U:C4	1:A:99:C:N4	2.89	0.40
79:AC:12:ARG:HG2	79:AC:12:ARG:NH1	2.35	0.40
70:RB:82:TYR:CB	79:AC:52:PHE:HB3	2.51	0.40
2:B:1244:A:H4'	2:B:1245:A:H8	1.85	0.40
2:B:1411:C:P	36:JA:98:HIS:HB3	2.61	0.40
2:B:1878:G:C6	2:B:1879:A:N1	2.90	0.40
2:B:1921:A:H1'	2:B:1932:A:N6	2.36	0.40
2:B:2156:C:H2'	2:B:2178:A:C6	2.57	0.40
2:B:2700:G:H5''	25:Y:17:ARG:CD	2.40	0.40
2:B:2801:A:HO2'	2:B:2802:A:H2'	1.82	0.40
2:B:2892:A:C5	2:B:2893:C:C5	3.09	0.40
2:B:3100:U:H3	2:B:3134:A:N6	2.19	0.40
2:B:3243:A:C5	20:T:156:LEU:HB3	2.57	0.40
2:B:3313:U:O2'	7:G:173:GLN:HA	2.22	0.40
2:B:596:C:C2	2:B:597:G:C8	3.10	0.40
2:B:640:U:P	36:JA:37:GLY:HA2	2.62	0.40
2:B:669:U:H2'	2:B:670:C:O4'	2.21	0.40
2:B:825:U:C3'	2:B:826:G:H5''	2.51	0.40
54:BB:123:LEU:HD21	54:BB:228:ILE:HA	2.03	0.40
54:BB:212:ASP:HB2	54:BB:244:ILE:CD1	2.51	0.40
54:BB:256:ARG:HH11	54:BB:256:ARG:HG2	1.87	0.40
82:DC:158:ASN:ND2	82:DC:159:LYS:N	2.66	0.40
82:DC:157:ILE:CG2	82:DC:181:THR:HG21	2.51	0.40
82:DC:24:VAL:HG12	82:DC:126:LEU:HD22	2.03	0.40
82:DC:608:PRO:HA	82:DC:636:PHE:CE2	2.57	0.40
82:DC:563:TYR:HD1	82:DC:726:GLU:HB2	1.86	0.40
82:DC:759:GLN:HB3	82:DC:766:PHE:CD1	2.56	0.40
83:EC:6771:U:C4	83:EC:6772:G:H1'	2.56	0.40
6:F:139:HIS:O	6:F:141:PRO:HD3	2.21	0.40
6:F:22:LEU:HD12	6:F:22:LEU:N	2.19	0.40
32:FA:62:HIS:CG	32:FA:62:HIS:O	2.74	0.40
7:G:303:LYS:NZ	7:G:371:GLN:HB3	2.37	0.40
59:GB:49:LEU:HD13	59:GB:49:LEU:C	2.41	0.40
8:H:269:SER:O	8:H:270:SER:HB2	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:276:LEU:HA	8:H:276:LEU:HD23	1.93	0.40
8:H:329:PRO:HD3	11:K:41:ARG:HH22	1.87	0.40
34:HA:41:LEU:HB3	34:HA:92:ILE:CG2	2.52	0.40
34:HA:49:PRO:HG2	34:HA:52:ARG:HB3	2.04	0.40
60:HB:41:TYR:O	60:HB:45:ALA:CB	2.69	0.40
9:I:184:ASP:OD1	9:I:186:GLU:HB2	2.22	0.40
9:I:259:LYS:HE2	9:I:260:PHE:CE2	2.57	0.40
35:IA:74:ARG:HG3	35:IA:109:VAL:HG21	2.04	0.40
2:B:1161:G:C2'	36:JA:56:GLY:HA3	2.51	0.40
11:K:143:THR:O	11:K:147:LEU:HG	2.21	0.40
11:K:242:SER:C	11:K:244:ASN:N	2.75	0.40
37:KA:23:ASN:O	37:KA:25:PRO:HD3	2.22	0.40
37:KA:69:GLY:HA3	37:KA:85:PHE:CD1	2.57	0.40
1:A:629:U:C5'	63:KB:127:ARG:HH22	2.33	0.40
63:KB:20:ARG:H	63:KB:20:ARG:HD2	1.86	0.40
12:L:142:LEU:O	12:L:146:LYS:N	2.55	0.40
12:L:185:ARG:O	12:L:189:LEU:HG	2.21	0.40
39:MA:9:LEU:HD12	39:MA:53:CYS:SG	2.61	0.40
39:MA:90:ARG:O	39:MA:91:ALA:HB3	2.22	0.40
65:MB:93:VAL:HB	65:MB:104:GLN:HG3	2.03	0.40
14:N:74:LYS:HE3	14:N:74:LYS:CA	2.52	0.40
41:OA:8:PHE:O	41:OA:11:ARG:HG3	2.22	0.40
16:P:127:SER:O	16:P:131:GLU:OE1	2.40	0.40
68:PB:20:THR:CG2	68:PB:36:LYS:HG2	2.51	0.40
70:RB:106:ILE:HG23	70:RB:106:ILE:O	2.21	0.40
70:RB:85:ARG:HD2	70:RB:85:ARG:N	2.37	0.40
19:S:186:GLY:O	19:S:190:THR:HG22	2.21	0.40
72:TB:6:VAL:HG13	72:TB:29:PRO:CD	2.33	0.40
72:TB:81:VAL:CG1	72:TB:85:ASP:HB2	2.44	0.40
21:U:26:PHE:HA	21:U:144:SER:CB	2.49	0.40
21:U:51:VAL:HG22	21:U:56:ARG:O	2.21	0.40
21:U:69:ARG:O	21:U:70:THR:HB	2.21	0.40
22:V:176:ARG:HA	22:V:182:LYS:O	2.22	0.40
22:V:88:THR:HA	22:V:107:THR:CG2	2.52	0.40
48:VA:42:ARG:HG2	48:VA:42:ARG:HH11	1.86	0.40
23:W:23:TRP:CB	23:W:53:LYS:HE3	2.48	0.40
49:WA:10:ARG:HG2	49:WA:54:PHE:CD1	2.56	0.40
49:WA:20:VAL:CG1	49:WA:35:SER:HB2	2.52	0.40
24:X:132:THR:O	24:X:135:VAL:HG23	2.21	0.40
24:X:1:MET:SD	24:X:31:ALA:HB1	2.61	0.40
50:XA:89:PHE:CZ	50:XA:177:LEU:HD13	2.57	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1629:G:P	76:XB:92:ARG:HH22	2.44	0.40
25:Y:87:LYS:HB3	25:Y:89:LEU:HD13	2.02	0.40
51:YA:21:VAL:HG21	51:YA:26:ARG:NH2	2.36	0.40

There are no symmetry-related clashes.

## 5.3 Torsion angles [i](#)

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

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all EM entries.

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	
5	E	165/217 (76%)	124 (75%)	28 (17%)	13 (8%)	1	19
6	F	250/254 (98%)	159 (64%)	61 (24%)	30 (12%)	0	8
7	G	384/387 (99%)	280 (73%)	84 (22%)	20 (5%)	2	31
8	H	359/362 (99%)	241 (67%)	77 (21%)	41 (11%)	0	9
9	I	294/297 (99%)	210 (71%)	64 (22%)	20 (7%)	1	24
10	J	173/176 (98%)	124 (72%)	35 (20%)	14 (8%)	1	19
11	K	220/244 (90%)	160 (73%)	37 (17%)	23 (10%)	1	11
12	L	231/256 (90%)	162 (70%)	50 (22%)	19 (8%)	1	18
13	M	189/191 (99%)	143 (76%)	32 (17%)	14 (7%)	1	21
14	N	207/221 (94%)	157 (76%)	35 (17%)	15 (7%)	1	23
15	O	167/174 (96%)	121 (72%)	30 (18%)	16 (10%)	1	14
16	P	92/165 (56%)	64 (70%)	14 (15%)	14 (15%)	0	5
17	Q	191/199 (96%)	141 (74%)	33 (17%)	17 (9%)	1	17
18	R	134/138 (97%)	103 (77%)	24 (18%)	7 (5%)	2	31
19	S	201/204 (98%)	148 (74%)	39 (19%)	14 (7%)	1	23
20	T	195/199 (98%)	152 (78%)	37 (19%)	6 (3%)	5	45
21	U	181/184 (98%)	127 (70%)	39 (22%)	15 (8%)	1	18

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
22	V	183/186 (98%)	120 (66%)	47 (26%)	16 (9%)	1	17
23	W	186/189 (98%)	142 (76%)	35 (19%)	9 (5%)	3	32
24	X	170/172 (99%)	119 (70%)	41 (24%)	10 (6%)	2	28
25	Y	157/160 (98%)	105 (67%)	31 (20%)	21 (13%)	0	6
26	Z	98/121 (81%)	64 (65%)	28 (29%)	6 (6%)	2	27
27	AA	134/137 (98%)	97 (72%)	32 (24%)	5 (4%)	4	40
28	BA	59/155 (38%)	41 (70%)	10 (17%)	8 (14%)	0	6
29	CA	119/142 (84%)	79 (66%)	24 (20%)	16 (13%)	0	6
30	DA	124/127 (98%)	96 (77%)	19 (15%)	9 (7%)	1	22
31	EA	133/136 (98%)	95 (71%)	21 (16%)	17 (13%)	0	7
32	FA	146/149 (98%)	95 (65%)	39 (27%)	12 (8%)	1	18
33	GA	56/59 (95%)	44 (79%)	7 (12%)	5 (9%)	1	17
34	HA	95/105 (90%)	70 (74%)	19 (20%)	6 (6%)	2	27
35	IA	107/113 (95%)	79 (74%)	24 (22%)	4 (4%)	4	40
36	JA	125/130 (96%)	87 (70%)	30 (24%)	8 (6%)	2	26
37	KA	104/107 (97%)	77 (74%)	24 (23%)	3 (3%)	6	46
38	LA	110/121 (91%)	69 (63%)	30 (27%)	11 (10%)	1	13
39	MA	117/120 (98%)	87 (74%)	23 (20%)	7 (6%)	2	27
40	NA	97/100 (97%)	69 (71%)	18 (19%)	10 (10%)	1	12
41	OA	85/88 (97%)	58 (68%)	23 (27%)	4 (5%)	3	33
42	PA	75/78 (96%)	58 (77%)	14 (19%)	3 (4%)	4	37
43	QA	48/51 (94%)	35 (73%)	9 (19%)	4 (8%)	1	18
44	RA	50/128 (39%)	36 (72%)	10 (20%)	4 (8%)	1	19
45	SA	23/25 (92%)	22 (96%)	1 (4%)	0	100	100
46	TA	103/106 (97%)	66 (64%)	25 (24%)	12 (12%)	0	9
47	UA	89/92 (97%)	68 (76%)	17 (19%)	4 (4%)	3	34
48	VA	187/312 (60%)	138 (74%)	37 (20%)	12 (6%)	2	26
49	WA	316/319 (99%)	243 (77%)	60 (19%)	13 (4%)	3	37
50	XA	204/252 (81%)	147 (72%)	41 (20%)	16 (8%)	1	20
51	YA	212/255 (83%)	154 (73%)	41 (19%)	17 (8%)	1	19
52	ZA	215/254 (85%)	155 (72%)	45 (21%)	15 (7%)	1	23

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
53	AB	221/240 (92%)	170 (77%)	37 (17%)	14 (6%)	2	27
54	BB	258/261 (99%)	173 (67%)	64 (25%)	21 (8%)	1	19
55	CB	204/225 (91%)	152 (74%)	35 (17%)	17 (8%)	1	18
56	DB	224/236 (95%)	174 (78%)	36 (16%)	14 (6%)	2	27
57	EB	182/190 (96%)	128 (70%)	43 (24%)	11 (6%)	2	27
58	FB	184/200 (92%)	136 (74%)	36 (20%)	12 (6%)	1	26
59	GB	183/197 (93%)	143 (78%)	26 (14%)	14 (8%)	1	20
60	HB	94/105 (90%)	66 (70%)	20 (21%)	8 (8%)	1	17
61	IB	153/156 (98%)	109 (71%)	31 (20%)	13 (8%)	1	17
62	JB	122/143 (85%)	74 (61%)	29 (24%)	19 (16%)	0	5
63	KB	148/151 (98%)	113 (76%)	28 (19%)	7 (5%)	3	33
64	LB	125/137 (91%)	87 (70%)	29 (23%)	9 (7%)	1	23
65	MB	120/142 (84%)	83 (69%)	27 (22%)	10 (8%)	1	18
66	NB	139/143 (97%)	102 (73%)	27 (19%)	10 (7%)	1	23
67	OB	115/136 (85%)	79 (69%)	29 (25%)	7 (6%)	2	27
68	PB	143/146 (98%)	101 (71%)	27 (19%)	15 (10%)	1	11
69	QB	141/144 (98%)	99 (70%)	28 (20%)	14 (10%)	1	13
70	RB	105/121 (87%)	81 (77%)	22 (21%)	2 (2%)	10	54
71	SB	85/87 (98%)	55 (65%)	19 (22%)	11 (13%)	0	7
72	TB	127/130 (98%)	95 (75%)	25 (20%)	7 (6%)	2	30
73	UB	142/145 (98%)	94 (66%)	41 (29%)	7 (5%)	3	32
74	VB	132/135 (98%)	93 (70%)	32 (24%)	7 (5%)	2	31
75	WB	68/108 (63%)	42 (62%)	14 (21%)	12 (18%)	0	3
76	XB	95/119 (80%)	57 (60%)	24 (25%)	14 (15%)	0	5
77	YB	79/82 (96%)	41 (52%)	27 (34%)	11 (14%)	0	6
78	ZB	61/67 (91%)	44 (72%)	12 (20%)	5 (8%)	1	18
79	AC	51/56 (91%)	37 (72%)	10 (20%)	4 (8%)	1	20
80	BC	58/63 (92%)	40 (69%)	14 (24%)	4 (7%)	1	24
81	CC	69/152 (45%)	37 (54%)	20 (29%)	12 (17%)	0	3
82	DC	819/842 (97%)	592 (72%)	171 (21%)	56 (7%)	1	24
All	All	12207/13416 (91%)	8728 (72%)	2527 (21%)	952 (8%)	2	20

All (952) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
5	E	35	GLN
5	E	127	GLN
5	E	140	HIS
5	E	174	MET
6	F	65	ASP
6	F	144	ASN
6	F	212	GLY
7	G	23	ALA
7	G	279	ASN
7	G	317	ILE
8	H	23	PRO
8	H	47	ARG
8	H	73	ARG
8	H	74	ILE
8	H	188	ARG
8	H	262	TRP
8	H	268	ALA
8	H	269	SER
8	H	277	PRO
8	H	292	SER
8	H	293	SER
8	H	304	GLN
8	H	313	LEU
8	H	341	SER
9	I	106	ALA
10	J	79	VAL
10	J	91	VAL
10	J	97	ASN
10	J	141	VAL
11	K	26	VAL
11	K	108	LEU
11	K	163	LEU
11	K	191	VAL
11	K	229	PHE
11	K	233	GLU
12	L	81	THR
12	L	163	VAL
13	M	31	ARG
14	N	7	ARG
14	N	41	ALA
14	N	101	LYS
14	N	196	PHE

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Mol	Chain	Res	Type
14	N	207	GLU
14	N	218	ALA
15	O	8	PRO
15	O	10	ARG
15	O	114	ILE
15	O	173	ASP
16	P	104	ILE
16	P	107	ASP
16	P	118	ASP
17	Q	6	ASN
18	R	9	ALA
18	R	17	VAL
19	S	35	VAL
19	S	145	ASP
19	S	153	ASP
19	S	161	ALA
20	T	16	VAL
20	T	126	VAL
21	U	70	THR
22	V	54	LEU
22	V	124	LEU
23	W	130	ASN
24	X	2	ALA
24	X	31	ALA
24	X	162	THR
25	Y	12	ARG
25	Y	25	VAL
25	Y	49	GLN
25	Y	82	ASN
25	Y	126	VAL
25	Y	136	ARG
25	Y	143	THR
26	Z	44	GLU
27	AA	108	GLU
27	AA	113	ALA
28	BA	25	ASP
28	BA	50	ALA
29	CA	54	TYR
29	CA	57	LEU
29	CA	78	ASP
30	DA	52	ARG
31	EA	16	GLY

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Mol	Chain	Res	Type
31	EA	30	ASP
31	EA	35	SER
31	EA	89	VAL
31	EA	128	GLN
32	FA	24	LYS
32	FA	27	LYS
32	FA	146	GLU
33	GA	11	ASN
33	GA	30	PRO
35	IA	67	VAL
36	JA	3	SER
36	JA	40	SER
37	KA	16	TYR
38	LA	37	LYS
38	LA	53	GLY
38	LA	59	PRO
39	MA	54	VAL
39	MA	119	LYS
40	NA	77	LEU
41	OA	37	CYS
43	QA	36	ARG
43	QA	44	TRP
46	TA	30	ALA
46	TA	38	GLN
46	TA	60	LYS
47	UA	6	LYS
47	UA	15	GLY
48	VA	158	VAL
49	WA	94	VAL
49	WA	165	ASP
50	XA	189	VAL
51	YA	35	PRO
51	YA	39	GLU
52	ZA	65	GLU
52	ZA	106	ASP
52	ZA	115	ILE
52	ZA	207	LEU
54	BB	20	LEU
54	BB	76	VAL
54	BB	104	ASP
54	BB	150	PRO
54	BB	236	ILE

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Mol	Chain	Res	Type
54	BB	259	GLN
55	CB	45	LYS
55	CB	63	GLN
55	CB	69	PHE
55	CB	74	ALA
55	CB	75	GLY
56	DB	81	VAL
56	DB	165	GLY
57	EB	8	ILE
57	EB	31	SER
57	EB	32	PRO
57	EB	64	VAL
57	EB	98	ILE
58	FB	117	TYR
58	FB	118	GLY
58	FB	152	ILE
58	FB	162	ALA
59	GB	93	LEU
59	GB	128	LEU
59	GB	129	ILE
59	GB	134	ILE
59	GB	138	LYS
59	GB	169	PRO
60	HB	32	HIS
60	HB	60	SER
61	IB	4	GLU
61	IB	7	VAL
61	IB	76	VAL
62	JB	28	LEU
62	JB	39	ASP
62	JB	91	VAL
62	JB	106	ILE
62	JB	109	GLU
62	JB	115	VAL
62	JB	116	VAL
62	JB	125	ASN
64	LB	42	VAL
65	MB	112	LEU
66	NB	41	PRO
66	NB	78	VAL
68	PB	26	ILE
68	PB	73	MET

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Mol	Chain	Res	Type
68	PB	76	PRO
68	PB	82	PRO
69	QB	35	ASP
69	QB	90	PRO
69	QB	96	ALA
70	RB	54	GLY
71	SB	15	ARG
71	SB	44	ARG
73	UB	3	LYS
73	UB	114	LYS
74	VB	36	SER
74	VB	103	ALA
75	WB	42	LEU
75	WB	62	VAL
75	WB	70	LYS
75	WB	86	GLU
76	XB	82	ARG
76	XB	84	VAL
76	XB	86	VAL
78	ZB	36	THR
80	BC	45	VAL
80	BC	47	VAL
81	CC	87	THR
81	CC	88	PRO
81	CC	91	ILE
81	CC	124	PRO
82	DC	26	ALA
82	DC	28	VAL
82	DC	76	SER
82	DC	108	HIS
82	DC	168	GLN
82	DC	230	ALA
82	DC	271	ARG
82	DC	330	ALA
82	DC	372	CYS
82	DC	391	LYS
82	DC	476	HIS
82	DC	516	PRO
82	DC	570	GLU
82	DC	624	GLY
82	DC	656	LEU
82	DC	841	LYS

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Mol	Chain	Res	Type
5	E	20	SER
5	E	30	GLU
5	E	34	LEU
5	E	83	ASP
6	F	9	ARG
6	F	92	LYS
6	F	120	PRO
6	F	125	ALA
6	F	215	ASN
6	F	222	ALA
6	F	230	VAL
6	F	234	LYS
7	G	5	LYS
7	G	50	LYS
7	G	187	SER
7	G	229	VAL
7	G	286	GLY
7	G	298	PHE
7	G	333	LYS
7	G	351	LEU
7	G	362	ALA
8	H	5	GLN
8	H	36	HIS
8	H	82	THR
8	H	232	SER
9	I	28	THR
9	I	114	GLY
9	I	128	GLU
9	I	133	GLU
9	I	150	LEU
10	J	98	VAL
10	J	140	VAL
11	K	60	ARG
11	K	82	LYS
11	K	111	ILE
11	K	143	THR
11	K	158	LYS
11	K	169	ILE
12	L	36	ILE
12	L	38	GLN
12	L	42	PRO
12	L	45	ASN

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Mol	Chain	Res	Type
12	L	50	VAL
12	L	79	GLN
12	L	84	ARG
12	L	155	ASN
12	L	174	GLY
13	M	15	GLY
13	M	50	ASN
13	M	96	HIS
13	M	140	VAL
14	N	6	ALA
14	N	197	VAL
15	O	28	ASP
15	O	38	GLU
15	O	67	VAL
15	O	109	HIS
16	P	57	LYS
16	P	77	ALA
17	Q	47	ALA
17	Q	76	THR
18	R	8	LYS
18	R	10	SER
19	S	3	ALA
19	S	57	GLN
19	S	89	VAL
19	S	157	LYS
19	S	183	THR
20	T	123	ALA
21	U	8	SER
21	U	25	SER
21	U	109	ALA
21	U	124	LYS
21	U	147	GLU
22	V	176	ARG
23	W	53	LYS
23	W	56	THR
24	X	51	VAL
24	X	96	ASP
25	Y	142	SER
26	Z	52	ASN
28	BA	7	SER
28	BA	43	ARG
28	BA	60	LYS

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Mol	Chain	Res	Type
29	CA	36	LYS
29	CA	56	ARG
29	CA	70	GLU
29	CA	108	LEU
30	DA	3	LYS
30	DA	4	GLN
30	DA	105	VAL
31	EA	17	ARG
31	EA	103	GLN
31	EA	125	GLY
32	FA	14	HIS
32	FA	15	VAL
32	FA	20	GLY
32	FA	120	ASN
33	GA	10	HIS
34	HA	28	LYS
35	IA	44	MET
36	JA	21	HIS
36	JA	79	VAL
38	LA	14	ASN
38	LA	29	ILE
38	LA	50	ALA
38	LA	52	GLN
39	MA	93	THR
39	MA	113	GLN
40	NA	3	VAL
40	NA	9	ILE
40	NA	97	SER
42	PA	18	ALA
43	QA	31	THR
44	RA	80	PRO
46	TA	105	GLN
47	UA	75	ALA
48	VA	68	SER
48	VA	102	SER
48	VA	111	ALA
48	VA	122	ARG
48	VA	180	PRO
49	WA	64	HIS
49	WA	98	GLU
49	WA	163	ASP
49	WA	187	GLN

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Mol	Chain	Res	Type
49	WA	257	ALA
50	XA	77	SER
50	XA	103	THR
50	XA	139	VAL
50	XA	148	ASP
50	XA	158	VAL
50	XA	164	ASN
50	XA	190	ASP
50	XA	202	TYR
51	YA	23	PRO
51	YA	132	ASP
51	YA	215	VAL
52	ZA	38	VAL
52	ZA	39	THR
52	ZA	145	GLY
52	ZA	248	SER
53	AB	154	ASP
53	AB	157	LEU
53	AB	179	GLN
53	AB	211	PRO
53	AB	220	PRO
54	BB	195	ILE
55	CB	43	PHE
55	CB	90	ILE
56	DB	29	ASP
56	DB	68	LEU
56	DB	153	VAL
56	DB	154	ARG
59	GB	89	ASP
59	GB	107	ARG
59	GB	132	ARG
60	HB	27	PHE
60	HB	28	ASN
61	IB	54	ILE
61	IB	55	ASP
61	IB	153	PHE
62	JB	24	ILE
62	JB	59	LEU
63	KB	22	ALA
63	KB	24	ALA
63	KB	147	SER
64	LB	87	GLY

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Mol	Chain	Res	Type
64	LB	118	VAL
66	NB	27	GLY
66	NB	42	GLU
66	NB	113	ASP
66	NB	120	ASP
67	OB	24	LEU
67	OB	115	LEU
68	PB	23	ASP
68	PB	74	GLN
68	PB	83	ALA
68	PB	94	ASP
68	PB	140	THR
69	QB	28	LEU
69	QB	34	VAL
69	QB	52	GLY
71	SB	82	VAL
72	TB	71	LYS
72	TB	79	PHE
72	TB	83	ILE
72	TB	119	LYS
73	UB	97	ASP
74	VB	4	ALA
74	VB	5	VAL
74	VB	34	ASN
75	WB	43	ASP
75	WB	94	LYS
76	XB	18	VAL
76	XB	48	ALA
76	XB	63	ALA
76	XB	81	ALA
77	YB	24	LEU
77	YB	53	ALA
77	YB	60	SER
77	YB	71	ALA
78	ZB	61	ARG
79	AC	11	PRO
79	AC	25	SER
80	BC	58	PRO
81	CC	83	LYS
81	CC	84	VAL
81	CC	145	HIS
82	DC	71	LYS

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Mol	Chain	Res	Type
82	DC	107	GLY
82	DC	109	VAL
82	DC	111	PHE
82	DC	217	GLY
82	DC	418	TYR
82	DC	465	LYS
82	DC	482	LYS
82	DC	514	SER
82	DC	651	LYS
82	DC	695	ALA
5	E	132	GLY
6	F	64	ARG
6	F	69	TYR
6	F	142	ASP
6	F	151	PRO
6	F	171	GLY
6	F	180	LEU
6	F	248	GLY
7	G	206	ASP
7	G	246	LEU
7	G	250	ALA
8	H	14	GLU
8	H	140	HIS
8	H	143	GLU
8	H	166	VAL
8	H	280	ILE
8	H	298	ALA
8	H	309	ARG
8	H	317	PRO
9	I	11	ALA
9	I	13	SER
9	I	21	ARG
9	I	40	HIS
9	I	87	GLY
9	I	115	LEU
10	J	109	GLU
10	J	122	PHE
11	K	81	HIS
11	K	144	ILE
11	K	159	GLN
11	K	162	PRO
11	K	189	ILE

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Mol	Chain	Res	Type
12	L	116	VAL
12	L	179	ILE
12	L	211	LEU
13	M	14	GLU
13	M	40	HIS
13	M	95	ALA
13	M	116	ASN
13	M	141	LYS
14	N	39	LYS
14	N	195	ALA
15	O	168	ASP
16	P	56	ILE
16	P	67	ARG
16	P	123	ARG
16	P	144	ASP
17	Q	62	THR
17	Q	136	GLU
17	Q	150	PRO
17	Q	153	ASP
18	R	108	ARG
19	S	15	GLN
19	S	68	ARG
20	T	5	PRO
21	U	3	ARG
21	U	54	HIS
21	U	72	GLN
22	V	160	GLY
22	V	172	PHE
23	W	111	ASP
23	W	124	TYR
25	Y	22	HIS
25	Y	56	PHE
25	Y	103	GLN
25	Y	124	VAL
26	Z	71	PHE
27	AA	14	SER
28	BA	27	LYS
29	CA	55	ASN
29	CA	72	ALA
30	DA	123	GLY
31	EA	9	LYS
31	EA	32	GLY

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Mol	Chain	Res	Type
31	EA	47	GLU
31	EA	59	ALA
31	EA	92	PHE
34	HA	81	VAL
35	IA	21	HIS
36	JA	37	GLY
36	JA	89	THR
38	LA	42	PRO
39	MA	99	GLN
39	MA	102	GLU
40	NA	17	VAL
40	NA	28	TYR
40	NA	62	ARG
41	OA	14	LYS
41	OA	65	ARG
42	PA	6	THR
42	PA	33	LYS
43	QA	33	ASN
44	RA	101	ALA
46	TA	6	LYS
46	TA	13	LYS
46	TA	83	LEU
48	VA	30	VAL
48	VA	87	VAL
48	VA	108	PRO
49	WA	51	ASP
49	WA	105	GLY
50	XA	4	PRO
50	XA	82	GLY
50	XA	185	ARG
50	XA	193	GLN
51	YA	209	ASN
51	YA	222	LYS
52	ZA	177	GLY
53	AB	196	ARG
53	AB	218	LEU
53	AB	221	SER
54	BB	164	LEU
54	BB	177	ALA
54	BB	214	LEU
54	BB	245	LYS
55	CB	140	THR

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Mol	Chain	Res	Type
56	DB	173	PRO
58	FB	31	ARG
58	FB	120	THR
58	FB	150	ALA
61	IB	3	THR
61	IB	30	ARG
61	IB	130	PRO
61	IB	146	ALA
62	JB	40	GLY
62	JB	66	VAL
63	KB	3	ARG
63	KB	82	PRO
64	LB	24	ASN
64	LB	41	ARG
64	LB	114	ARG
65	MB	69	GLU
65	MB	80	MET
65	MB	101	ALA
65	MB	127	ARG
66	NB	39	VAL
67	OB	93	LEU
67	OB	102	VAL
68	PB	8	GLN
68	PB	134	ARG
69	QB	50	ALA
69	QB	53	TRP
69	QB	113	ILE
69	QB	118	PRO
71	SB	7	GLN
71	SB	12	TYR
71	SB	16	LYS
71	SB	42	GLU
71	SB	52	THR
72	TB	30	SER
74	VB	121	THR
76	XB	11	ASN
77	YB	20	LYS
78	ZB	33	LEU
82	DC	44	GLY
82	DC	77	LEU
82	DC	376	ALA
82	DC	444	PRO

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Mol	Chain	Res	Type
82	DC	461	GLN
82	DC	582	LYS
82	DC	678	GLY
5	E	197	ASN
6	F	7	ASN
6	F	16	PHE
6	F	80	GLU
6	F	108	PRO
6	F	231	SER
7	G	244	ARG
7	G	339	ARG
8	H	81	GLY
8	H	187	LEU
8	H	258	LEU
8	H	360	LYS
9	I	10	SER
9	I	19	PRO
9	I	45	ASN
9	I	252	ALA
9	I	259	LYS
10	J	45	GLY
10	J	85	ILE
10	J	92	SER
11	K	107	ARG
12	L	119	GLY
13	M	151	VAL
14	N	84	ALA
14	N	142	ASP
15	O	135	GLY
15	O	172	LEU
16	P	68	GLN
17	Q	85	LEU
17	Q	193	ALA
18	R	6	ILE
19	S	81	TYR
19	S	124	ASP
21	U	158	ALA
22	V	13	SER
22	V	15	HIS
22	V	98	LYS
22	V	99	THR
23	W	105	LEU

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Mol	Chain	Res	Type
24	X	120	SER
24	X	154	HIS
25	Y	16	GLN
25	Y	44	ALA
25	Y	69	LYS
26	Z	11	ILE
26	Z	104	ARG
26	Z	107	PHE
29	CA	50	ALA
29	CA	119	THR
30	DA	23	PRO
30	DA	116	LYS
31	EA	90	GLU
32	FA	12	ARG
32	FA	39	HIS
32	FA	62	HIS
34	HA	11	ASN
34	HA	21	GLY
38	LA	8	ARG
40	NA	16	LYS
46	TA	8	ARG
46	TA	17	CYS
46	TA	39	GLY
48	VA	81	LYS
49	WA	3	SER
50	XA	45	VAL
51	YA	36	SER
51	YA	139	ALA
51	YA	154	SER
51	YA	218	LEU
52	ZA	36	VAL
52	ZA	109	GLY
53	AB	217	ILE
54	BB	149	TYR
54	BB	180	LEU
54	BB	194	THR
54	BB	201	HIS
55	CB	51	VAL
55	CB	89	ILE
56	DB	80	ASN
57	EB	38	LEU
57	EB	63	PRO

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
57	EB	75	THR
57	EB	166	LEU
58	FB	52	ASN
58	FB	173	PRO
60	HB	34	GLU
61	IB	18	HIS
61	IB	133	LYS
62	JB	22	VAL
63	KB	139	TRP
64	LB	25	ASP
64	LB	50	ALA
65	MB	17	TYR
65	MB	119	PHE
65	MB	125	PRO
66	NB	29	ILE
66	NB	40	GLU
67	OB	72	LYS
68	PB	59	GLY
68	PB	145	ARG
69	QB	82	GLY
69	QB	119	LYS
70	RB	107	THR
71	SB	4	ASP
71	SB	46	ILE
72	TB	58	SER
73	UB	96	VAL
74	VB	11	LYS
76	XB	8	ASN
76	XB	27	SER
76	XB	41	ILE
76	XB	56	ALA
76	XB	62	TYR
77	YB	41	LEU
77	YB	48	SER
77	YB	75	GLU
78	ZB	34	GLU
78	ZB	51	ASN
79	AC	51	GLY
81	CC	90	LYS
81	CC	93	HIS
81	CC	98	VAL
81	CC	102	VAL

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Mol	Chain	Res	Type
82	DC	43	ALA
82	DC	48	ALA
82	DC	190	SER
82	DC	559	PRO
82	DC	569	SER
82	DC	641	ASN
5	E	23	THR
6	F	24	GLN
6	F	137	ILE
6	F	243	THR
7	G	3	HIS
8	H	92	ASN
8	H	131	VAL
8	H	202	ARG
8	H	338	LYS
9	I	117	GLU
9	I	244	HIS
10	J	6	ALA
12	L	157	VAL
15	O	68	HIS
15	O	115	LYS
15	O	134	PRO
16	P	58	VAL
16	P	76	SER
17	Q	149	GLN
19	S	52	GLY
21	U	26	PHE
21	U	123	PRO
22	V	37	ALA
23	W	17	VAL
23	W	29	THR
25	Y	125	ALA
27	AA	32	ARG
28	BA	32	GLN
29	CA	38	LEU
29	CA	141	TYR
31	EA	62	VAL
31	EA	130	PHE
34	HA	46	ALA
34	HA	64	LYS
36	JA	47	ARG
37	KA	106	ASN

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Mol	Chain	Res	Type
38	LA	51	LEU
39	MA	76	GLN
40	NA	27	SER
41	OA	51	ALA
46	TA	94	GLY
47	UA	14	TYR
50	XA	11	PRO
50	XA	109	ASN
51	YA	100	PHE
51	YA	177	GLN
52	ZA	35	TRP
52	ZA	37	PRO
52	ZA	235	LEU
53	AB	53	THR
54	BB	77	ARG
54	BB	129	VAL
54	BB	169	ILE
54	BB	212	ASP
55	CB	204	GLY
56	DB	20	ASP
56	DB	24	ILE
56	DB	122	GLU
57	EB	111	LYS
57	EB	186	PRO
59	GB	22	SER
59	GB	65	LYS
60	HB	63	TYR
62	JB	107	ASP
62	JB	129	GLU
67	OB	84	TYR
69	QB	47	PRO
73	UB	42	PRO
75	WB	39	ALA
75	WB	56	THR
75	WB	61	SER
76	XB	64	LEU
77	YB	18	LYS
77	YB	25	VAL
82	DC	285	PHE
82	DC	755	VAL
82	DC	831	GLU
5	E	6	SER

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Mol	Chain	Res	Type
5	E	22	GLU
8	H	66	GLY
8	H	80	GLY
8	H	108	LYS
8	H	146	PRO
8	H	259	ASP
10	J	99	GLU
11	K	145	ARG
12	L	67	ILE
13	M	42	ASP
13	M	43	VAL
13	M	176	LEU
14	N	148	VAL
17	Q	5	LYS
17	Q	132	ALA
17	Q	154	VAL
20	T	43	ILE
20	T	145	VAL
21	U	160	ALA
21	U	161	ALA
22	V	162	ALA
22	V	170	ARG
24	X	50	LYS
24	X	97	VAL
24	X	168	PRO
25	Y	18	ASP
25	Y	96	ILE
25	Y	154	VAL
27	AA	19	VAL
29	CA	30	ALA
29	CA	41	ALA
30	DA	29	VAL
30	DA	44	GLY
32	FA	49	HIS
33	GA	34	GLY
36	JA	124	GLY
40	NA	34	SER
51	YA	48	VAL
51	YA	68	VAL
54	BB	107	GLY
55	CB	100	ASN
55	CB	106	LYS

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Mol	Chain	Res	Type
56	DB	59	GLN
58	FB	59	ARG
58	FB	86	SER
59	GB	98	ALA
62	JB	86	VAL
64	LB	134	GLY
66	NB	61	SER
77	YB	62	ILE
80	BC	46	ASN
82	DC	485	VAL
82	DC	486	SER
82	DC	554	LEU
7	G	305	ILE
8	H	261	VAL
11	K	91	GLY
14	N	16	PRO
17	Q	48	PRO
23	W	16	GLY
25	Y	36	VAL
28	BA	15	PRO
49	WA	287	PRO
53	AB	115	ILE
55	CB	22	PRO
55	CB	153	GLY
56	DB	99	GLY
60	HB	4	PRO
62	JB	89	ILE
67	OB	86	PRO
72	TB	47	ILE
75	WB	71	ILE
75	WB	91	PRO
82	DC	392	GLY
82	DC	627	VAL
82	DC	736	PRO
6	F	41	ILE
6	F	61	VAL
9	I	37	VAL
11	K	43	ILE
18	R	63	VAL
22	V	30	VAL
22	V	75	GLY
22	V	114	ILE

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Mol	Chain	Res	Type
29	CA	62	VAL
35	IA	7	VAL
44	RA	78	ILE
48	VA	130	PRO
49	WA	30	PRO
62	JB	102	GLY
65	MB	117	GLY
68	PB	142	GLY
79	AC	23	VAL
81	CC	112	GLY
82	DC	121	VAL
82	DC	790	GLY
82	DC	805	GLY
6	F	53	GLY
7	G	63	PRO
11	K	98	LYS
17	Q	72	GLY
31	EA	14	VAL
32	FA	144	VAL
46	TA	49	GLY
48	VA	116	PRO
49	WA	136	ILE
51	YA	206	PRO
51	YA	210	ILE
53	AB	37	VAL
54	BB	248	ILE
55	CB	152	GLY
62	JB	61	VAL
65	MB	68	PRO
73	UB	108	GLY
75	WB	41	ILE
82	DC	189	VAL
82	DC	346	VAL
8	H	173	GLY
11	K	134	VAL
14	N	114	GLY
15	O	65	ILE
15	O	110	ILE
16	P	88	PRO
16	P	132	ILE
17	Q	63	VAL
17	Q	127	PRO

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Mol	Chain	Res	Type
22	V	163	PRO
37	KA	59	VAL
55	CB	64	VAL
56	DB	69	LEU
59	GB	35	GLY
59	GB	165	GLY
68	PB	135	GLY
71	SB	24	ILE
73	UB	125	VAL
82	DC	316	GLY
82	DC	811	PRO
6	F	138	GLY
12	L	75	ILE
12	L	203	VAL
21	U	182	ILE
25	Y	132	PRO
33	GA	29	TYR
38	LA	12	PRO
44	RA	79	GLU
52	ZA	234	PRO
53	AB	33	GLY
53	AB	163	PRO
58	FB	82	VAL
60	HB	89	GLY
61	IB	139	VAL
69	QB	32	GLY
10	J	123	PRO
63	KB	23	PRO

### 5.3.2 Protein sidechains ⓘ

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all EM entries.

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	
5	E	157/198 (79%)	137 (87%)	20 (13%)	5	31
6	F	194/196 (99%)	171 (88%)	23 (12%)	6	34
7	G	322/323 (100%)	288 (89%)	34 (11%)	8	39

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
8	H	288/289 (100%)	255 (88%)	33 (12%)	7	36
9	I	244/245 (100%)	211 (86%)	33 (14%)	5	30
10	J	152/153 (99%)	143 (94%)	9 (6%)	24	64
11	K	186/205 (91%)	163 (88%)	23 (12%)	6	32
12	L	191/208 (92%)	174 (91%)	17 (9%)	12	48
13	M	171/171 (100%)	155 (91%)	16 (9%)	11	45
14	N	180/187 (96%)	162 (90%)	18 (10%)	9	42
15	O	147/150 (98%)	134 (91%)	13 (9%)	12	48
16	P	81/136 (60%)	69 (85%)	12 (15%)	4	26
17	Q	154/159 (97%)	134 (87%)	20 (13%)	5	31
18	R	107/109 (98%)	91 (85%)	16 (15%)	3	25
19	S	175/176 (99%)	150 (86%)	25 (14%)	4	28
20	T	160/162 (99%)	142 (89%)	18 (11%)	7	37
21	U	145/146 (99%)	130 (90%)	15 (10%)	9	40
22	V	150/151 (99%)	141 (94%)	9 (6%)	24	63
23	W	153/154 (99%)	139 (91%)	14 (9%)	11	46
24	X	156/156 (100%)	137 (88%)	19 (12%)	6	33
25	Y	136/137 (99%)	117 (86%)	19 (14%)	4	29
26	Z	87/107 (81%)	85 (98%)	2 (2%)	58	83
27	AA	104/105 (99%)	95 (91%)	9 (9%)	13	48
28	BA	54/129 (42%)	47 (87%)	7 (13%)	5	31
29	CA	105/118 (89%)	94 (90%)	11 (10%)	8	40
30	DA	109/110 (99%)	94 (86%)	15 (14%)	4	29
31	EA	115/116 (99%)	107 (93%)	8 (7%)	19	58
32	FA	118/119 (99%)	112 (95%)	6 (5%)	29	68
33	GA	46/47 (98%)	41 (89%)	5 (11%)	8	38
34	HA	81/88 (92%)	74 (91%)	7 (9%)	13	50
35	IA	96/97 (99%)	83 (86%)	13 (14%)	5	30
36	JA	109/111 (98%)	97 (89%)	12 (11%)	8	38
37	KA	90/91 (99%)	83 (92%)	7 (8%)	16	54
38	LA	95/103 (92%)	84 (88%)	11 (12%)	7	36

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
39	MA	104/105 (99%)	96 (92%)	8 (8%)	16	55
40	NA	81/82 (99%)	69 (85%)	12 (15%)	4	26
41	OA	70/71 (99%)	62 (89%)	8 (11%)	7	36
42	PA	68/69 (99%)	63 (93%)	5 (7%)	17	56
43	QA	45/46 (98%)	42 (93%)	3 (7%)	20	60
44	RA	47/116 (40%)	43 (92%)	4 (8%)	13	51
45	SA	23/23 (100%)	19 (83%)	4 (17%)	2	18
46	TA	90/91 (99%)	82 (91%)	8 (9%)	12	48
47	UA	71/72 (99%)	66 (93%)	5 (7%)	19	58
48	VA	160/254 (63%)	143 (89%)	17 (11%)	8	39
49	WA	261/262 (100%)	237 (91%)	24 (9%)	11	46
50	XA	173/210 (82%)	151 (87%)	22 (13%)	5	31
51	YA	191/224 (85%)	173 (91%)	18 (9%)	11	45
52	ZA	176/205 (86%)	168 (96%)	8 (4%)	34	71
53	AB	182/195 (93%)	164 (90%)	18 (10%)	10	43
54	BB	221/222 (100%)	199 (90%)	22 (10%)	9	42
55	CB	173/191 (91%)	160 (92%)	13 (8%)	17	56
56	DB	193/201 (96%)	174 (90%)	19 (10%)	10	43
57	EB	165/170 (97%)	146 (88%)	19 (12%)	7	36
58	FB	150/161 (93%)	137 (91%)	13 (9%)	13	48
59	GB	158/166 (95%)	141 (89%)	17 (11%)	8	39
60	HB	89/98 (91%)	82 (92%)	7 (8%)	15	54
61	IB	136/137 (99%)	124 (91%)	12 (9%)	12	48
63	KB	127/128 (99%)	110 (87%)	17 (13%)	5	30
64	LB	96/105 (91%)	89 (93%)	7 (7%)	17	57
65	MB	103/118 (87%)	90 (87%)	13 (13%)	5	31
66	NB	117/119 (98%)	102 (87%)	15 (13%)	5	31
67	OB	82/124 (66%)	70 (85%)	12 (15%)	4	26
68	PB	128/129 (99%)	120 (94%)	8 (6%)	22	61
69	QB	115/116 (99%)	104 (90%)	11 (10%)	10	44
70	RB	100/114 (88%)	91 (91%)	9 (9%)	12	47

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
71	SB	74/74 (100%)	64 (86%)	10 (14%)	5	30
72	TB	110/111 (99%)	102 (93%)	8 (7%)	17	57
73	UB	119/120 (99%)	107 (90%)	12 (10%)	9	41
74	VB	112/113 (99%)	101 (90%)	11 (10%)	10	43
75	WB	61/89 (68%)	53 (87%)	8 (13%)	5	30
76	XB	83/101 (82%)	76 (92%)	7 (8%)	14	51
77	YB	70/71 (99%)	66 (94%)	4 (6%)	25	65
78	ZB	56/60 (93%)	53 (95%)	3 (5%)	27	67
79	AC	47/49 (96%)	42 (89%)	5 (11%)	8	39
80	BC	51/54 (94%)	40 (78%)	11 (22%)	1	10
82	DC	699/714 (98%)	605 (87%)	94 (13%)	5	30
All	All	10235/11032 (93%)	9165 (90%)	1070 (10%)	13	40

All (1070) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
5	E	1	MET
5	E	4	ILE
5	E	17	LEU
5	E	24	LYS
5	E	26	ARG
5	E	28	PHE
5	E	34	LEU
5	E	68	PHE
5	E	70	ASP
5	E	123	LEU
5	E	127	GLN
5	E	134	PHE
5	E	145	TYR
5	E	149	THR
5	E	174	MET
5	E	190	PHE
5	E	195	LYS
5	E	197	ASN
5	E	204	LEU
5	E	210	MET
6	F	30	ARG
6	F	36	GLU

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Mol	Chain	Res	Type
6	F	40	TYR
6	F	41	ILE
6	F	64	ARG
6	F	76	PHE
6	F	79	ASN
6	F	108	PRO
6	F	118	GLU
6	F	135	ILE
6	F	151	PRO
6	F	166	ILE
6	F	181	LYS
6	F	190	ARG
6	F	204	MET
6	F	218	HIS
6	F	227	ARG
6	F	230	VAL
6	F	242	ARG
6	F	243	THR
6	F	245	LEU
6	F	247	ARG
6	F	251	LYS
7	G	3	HIS
7	G	10	ARG
7	G	19	ARG
7	G	25	ILE
7	G	28	ARG
7	G	30	LYS
7	G	58	ARG
7	G	61	ASP
7	G	74	GLU
7	G	85	VAL
7	G	95	THR
7	G	114	VAL
7	G	118	PHE
7	G	137	TYR
7	G	164	THR
7	G	165	GLN
7	G	182	GLN
7	G	216	ASP
7	G	222	LYS
7	G	226	PHE
7	G	241	LYS

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Mol	Chain	Res	Type
7	G	246	LEU
7	G	247	ARG
7	G	266	ARG
7	G	272	TYR
7	G	311	PHE
7	G	332	ARG
7	G	335	ILE
7	G	343	TYR
7	G	351	LEU
7	G	356	LEU
7	G	365	PHE
7	G	370	PHE
7	G	379	PHE
8	H	20	LEU
8	H	36	HIS
8	H	48	GLN
8	H	54	GLU
8	H	58	HIS
8	H	95	ARG
8	H	99	MET
8	H	109	TRP
8	H	113	VAL
8	H	114	ASN
8	H	117	GLU
8	H	120	TYR
8	H	138	ARG
8	H	156	LEU
8	H	177	ASP
8	H	178	LEU
8	H	179	LEU
8	H	194	TYR
8	H	197	ARG
8	H	201	GLN
8	H	213	ASN
8	H	235	LEU
8	H	244	LEU
8	H	250	TRP
8	H	255	PHE
8	H	258	LEU
8	H	260	GLN
8	H	262	TRP
8	H	285	ASP

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Mol	Chain	Res	Type
8	H	316	ASN
8	H	319	LYS
8	H	327	LEU
8	H	346	LYS
9	I	8	LYS
9	I	12	TYR
9	I	23	ARG
9	I	33	ARG
9	I	35	ARG
9	I	45	ASN
9	I	57	ASN
9	I	64	ILE
9	I	65	ILE
9	I	72	ASP
9	I	75	LEU
9	I	79	TYR
9	I	85	ARG
9	I	92	LEU
9	I	101	THR
9	I	105	ILE
9	I	115	LEU
9	I	120	LYS
9	I	131	LEU
9	I	142	PHE
9	I	145	PHE
9	I	146	LEU
9	I	151	GLN
9	I	185	PHE
9	I	198	TYR
9	I	199	ILE
9	I	204	VAL
9	I	207	TYR
9	I	216	GLU
9	I	219	PHE
9	I	244	HIS
9	I	265	TYR
9	I	285	ARG
10	J	20	LYS
10	J	22	ARG
10	J	26	ARG
10	J	39	VAL
10	J	40	LEU

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Mol	Chain	Res	Type
10	J	42	LEU
10	J	65	ILE
10	J	122	PHE
10	J	130	ILE
11	K	24	GLU
11	K	25	GLN
11	K	41	ARG
11	K	60	ARG
11	K	82	LYS
11	K	84	VAL
11	K	86	VAL
11	K	87	VAL
11	K	88	ARG
11	K	106	LEU
11	K	117	VAL
11	K	118	LYS
11	K	123	THR
11	K	141	TYR
11	K	144	ILE
11	K	149	TYR
11	K	153	PHE
11	K	178	ILE
11	K	179	LEU
11	K	181	ILE
11	K	197	GLN
11	K	229	PHE
11	K	244	ASN
12	L	26	LEU
12	L	49	TYR
12	L	52	TRP
12	L	55	TYR
12	L	77	GLN
12	L	97	TYR
12	L	98	ARG
12	L	109	LEU
12	L	122	LYS
12	L	134	TYR
12	L	156	ASP
12	L	189	LEU
12	L	204	ARG
12	L	224	ASP
12	L	233	TRP

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Mol	Chain	Res	Type
12	L	241	LYS
12	L	243	GLN
13	M	20	ILE
13	M	23	ARG
13	M	59	ASN
13	M	68	LEU
13	M	69	ARG
13	M	72	LYS
13	M	86	TYR
13	M	103	ILE
13	M	111	PHE
13	M	121	LYS
13	M	122	LYS
13	M	123	ILE
13	M	164	ILE
13	M	168	ARG
13	M	172	ILE
13	M	177	ASP
14	N	9	TYR
14	N	12	GLN
14	N	14	ASN
14	N	26	VAL
14	N	33	ILE
14	N	34	TYR
14	N	35	ASP
14	N	56	GLU
14	N	74	LYS
14	N	97	LEU
14	N	130	ASP
14	N	145	LYS
14	N	150	GLU
14	N	153	ARG
14	N	162	GLN
14	N	165	ILE
14	N	192	ASP
14	N	197	VAL
15	O	9	MET
15	O	10	ARG
15	O	11	ASP
15	O	13	LYS
15	O	88	GLU
15	O	92	ARG

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Mol	Chain	Res	Type
15	O	94	ARG
15	O	109	HIS
15	O	115	LYS
15	O	116	TYR
15	O	140	ARG
15	O	142	LYS
15	O	143	ARG
16	P	57	LYS
16	P	58	VAL
16	P	60	VAL
16	P	61	GLN
16	P	85	LEU
16	P	88	PRO
16	P	95	ASP
16	P	104	ILE
16	P	114	ARG
16	P	125	LEU
16	P	131	GLU
16	P	144	ASP
17	Q	15	ARG
17	Q	16	LYS
17	Q	35	ARG
17	Q	36	ARG
17	Q	59	ARG
17	Q	67	ARG
17	Q	70	ARG
17	Q	75	PHE
17	Q	77	LEU
17	Q	99	HIS
17	Q	102	GLN
17	Q	103	ASN
17	Q	114	GLN
17	Q	131	LYS
17	Q	137	GLN
17	Q	147	ILE
17	Q	149	GLN
17	Q	150	PRO
17	Q	171	ARG
17	Q	192	GLU
18	R	14	LEU
18	R	17	VAL
18	R	20	VAL

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Mol	Chain	Res	Type
18	R	21	VAL
18	R	22	LEU
18	R	45	LEU
18	R	70	PHE
18	R	72	LEU
18	R	74	ARG
18	R	90	VAL
18	R	92	GLU
18	R	107	GLU
18	R	121	MET
18	R	128	ARG
18	R	129	TYR
18	R	135	LEU
19	S	5	LYS
19	S	12	ARG
19	S	22	LEU
19	S	31	ARG
19	S	32	GLN
19	S	47	LYS
19	S	49	ARG
19	S	50	ARG
19	S	61	ILE
19	S	71	ARG
19	S	81	TYR
19	S	89	VAL
19	S	109	ARG
19	S	114	ARG
19	S	115	VAL
19	S	122	ASN
19	S	126	THR
19	S	133	ILE
19	S	135	VAL
19	S	138	GLN
19	S	162	ARG
19	S	164	LEU
19	S	167	THR
19	S	182	ASN
19	S	188	ARG
20	T	28	LEU
20	T	29	ASN
20	T	47	PHE
20	T	65	ASN

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Mol	Chain	Res	Type
20	T	72	HIS
20	T	78	ARG
20	T	82	LYS
20	T	90	HIS
20	T	99	LEU
20	T	117	ARG
20	T	128	ARG
20	T	138	LEU
20	T	148	LYS
20	T	160	ARG
20	T	167	TYR
20	T	174	PHE
20	T	187	GLU
20	T	197	LEU
21	U	52	LEU
21	U	55	GLN
21	U	61	ARG
21	U	92	GLN
21	U	96	GLN
21	U	111	LYS
21	U	118	GLN
21	U	121	GLN
21	U	125	GLN
21	U	135	ARG
21	U	145	HIS
21	U	146	ILE
21	U	159	LYS
21	U	171	ARG
21	U	181	ARG
22	V	49	LEU
22	V	127	LEU
22	V	130	ARG
22	V	138	LEU
22	V	155	MET
22	V	163	PRO
22	V	176	ARG
22	V	178	ARG
22	V	179	ARG
23	W	14	VAL
23	W	99	LEU
23	W	103	ARG
23	W	104	ARG

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Mol	Chain	Res	Type
23	W	123	LEU
23	W	130	ASN
23	W	133	LYS
23	W	143	ILE
23	W	152	GLU
23	W	160	GLU
23	W	163	ARG
23	W	167	ARG
23	W	170	ARG
23	W	186	LYS
24	X	9	VAL
24	X	42	TRP
24	X	50	LYS
24	X	52	LYS
24	X	68	HIS
24	X	78	TRP
24	X	80	ARG
24	X	81	TYR
24	X	87	THR
24	X	96	ASP
24	X	105	THR
24	X	115	ARG
24	X	117	ARG
24	X	118	PHE
24	X	124	LEU
24	X	149	LYS
24	X	150	PHE
24	X	162	THR
24	X	166	LYS
25	Y	13	TYR
25	Y	19	PHE
25	Y	41	ASP
25	Y	50	LYS
25	Y	65	TYR
25	Y	72	VAL
25	Y	75	ILE
25	Y	84	TYR
25	Y	85	LEU
25	Y	91	LEU
25	Y	94	GLU
25	Y	98	HIS
25	Y	105	PHE

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Mol	Chain	Res	Type
25	Y	122	GLN
25	Y	126	VAL
25	Y	127	GLN
25	Y	128	LEU
25	Y	139	ARG
25	Y	149	GLN
26	Z	75	TYR
26	Z	88	GLN
27	AA	33	ASN
27	AA	45	ARG
27	AA	48	ARG
27	AA	64	LYS
27	AA	74	MET
27	AA	83	LYS
27	AA	88	ARG
27	AA	92	PHE
27	AA	98	ASN
28	BA	1	MET
28	BA	13	ILE
28	BA	20	LEU
28	BA	45	ASN
28	BA	47	ARG
28	BA	49	ILE
28	BA	60	LYS
29	CA	27	ARG
29	CA	32	PHE
29	CA	33	ARG
29	CA	46	TYR
29	CA	58	ASP
29	CA	61	LYS
29	CA	78	ASP
29	CA	94	GLN
29	CA	133	LEU
29	CA	135	ILE
29	CA	142	ILE
30	DA	3	LYS
30	DA	4	GLN
30	DA	19	TYR
30	DA	24	SER
30	DA	28	ARG
30	DA	37	LYS
30	DA	50	ILE

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Mol	Chain	Res	Type
30	DA	55	GLU
30	DA	57	LEU
30	DA	59	VAL
30	DA	74	TYR
30	DA	76	LEU
30	DA	105	VAL
30	DA	115	ARG
30	DA	121	ARG
31	EA	4	PHE
31	EA	14	VAL
31	EA	30	ASP
31	EA	48	ARG
31	EA	49	TYR
31	EA	68	ILE
31	EA	73	LYS
31	EA	134	LEU
32	FA	42	ARG
32	FA	68	PHE
32	FA	78	LEU
32	FA	91	LEU
32	FA	135	GLU
32	FA	144	VAL
33	GA	14	ARG
33	GA	18	ARG
33	GA	22	LYS
33	GA	27	TYR
33	GA	50	THR
34	HA	22	LYS
34	HA	40	LYS
34	HA	66	LYS
34	HA	75	ASN
34	HA	92	ILE
34	HA	94	GLU
34	HA	104	LEU
35	IA	12	TYR
35	IA	17	HIS
35	IA	19	ARG
35	IA	31	ARG
35	IA	62	ARG
35	IA	64	VAL
35	IA	79	ARG
35	IA	80	ASN

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Mol	Chain	Res	Type
35	IA	81	GLU
35	IA	84	ASP
35	IA	91	SER
35	IA	105	GLN
35	IA	112	ASP
36	JA	33	ARG
36	JA	38	ILE
36	JA	45	ARG
36	JA	61	LYS
36	JA	73	THR
36	JA	82	LEU
36	JA	87	MET
36	JA	91	THR
36	JA	92	TYR
36	JA	115	LEU
36	JA	118	LYS
36	JA	128	LEU
37	KA	9	VAL
37	KA	21	ARG
37	KA	32	ILE
37	KA	53	TYR
37	KA	86	ARG
37	KA	87	ASN
37	KA	89	LEU
38	LA	4	ARG
38	LA	7	PHE
38	LA	8	ARG
38	LA	20	ILE
38	LA	29	ILE
38	LA	31	ARG
38	LA	33	GLN
38	LA	51	LEU
38	LA	57	LEU
38	LA	59	PRO
38	LA	62	TYR
39	MA	27	GLU
39	MA	28	LEU
39	MA	36	LEU
39	MA	48	ARG
39	MA	55	LEU
39	MA	75	TYR
39	MA	86	ARG

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Mol	Chain	Res	Type
39	MA	102	GLU
40	NA	18	THR
40	NA	21	THR
40	NA	26	ILE
40	NA	28	TYR
40	NA	36	ARG
40	NA	56	ARG
40	NA	60	LEU
40	NA	76	ARG
40	NA	80	PHE
40	NA	94	ILE
40	NA	98	ARG
40	NA	99	ARG
41	OA	12	HIS
41	OA	17	THR
41	OA	19	CYS
41	OA	21	ARG
41	OA	25	ARG
41	OA	37	CYS
41	OA	45	ARG
41	OA	64	MET
42	PA	4	GLU
42	PA	19	ASP
42	PA	31	LEU
42	PA	38	PHE
42	PA	77	ARG
43	QA	23	LEU
43	QA	30	ARG
43	QA	32	ASN
44	RA	99	CYS
44	RA	109	ASN
44	RA	111	ARG
44	RA	113	ARG
45	SA	1	MET
45	SA	2	ARG
45	SA	5	TRP
45	SA	11	ARG
46	TA	4	VAL
46	TA	21	THR
46	TA	43	TYR
46	TA	45	ARG
46	TA	60	LYS

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Mol	Chain	Res	Type
46	TA	80	ARG
46	TA	87	ARG
46	TA	96	GLU
47	UA	4	ARG
47	UA	25	GLN
47	UA	31	ILE
47	UA	36	ARG
47	UA	41	PHE
48	VA	6	GLU
48	VA	17	GLU
48	VA	20	GLU
48	VA	26	PHE
48	VA	32	ASN
48	VA	37	GLN
48	VA	42	ARG
48	VA	46	ARG
48	VA	60	ARG
48	VA	64	ARG
48	VA	95	GLU
48	VA	128	MET
48	VA	139	LEU
48	VA	180	PRO
48	VA	182	THR
48	VA	187	VAL
48	VA	188	VAL
49	WA	17	ASN
49	WA	39	ASP
49	WA	45	TRP
49	WA	46	LYS
49	WA	50	ASP
49	WA	54	PHE
49	WA	86	ASP
49	WA	102	ARG
49	WA	106	HIS
49	WA	111	MET
49	WA	117	LYS
49	WA	134	TRP
49	WA	136	ILE
49	WA	141	LEU
49	WA	161	LYS
49	WA	175	ASP
49	WA	181	TRP

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Mol	Chain	Res	Type
49	WA	199	ILE
49	WA	202	LEU
49	WA	232	TYR
49	WA	250	TYR
49	WA	268	GLN
49	WA	274	LEU
49	WA	300	THR
50	XA	23	HIS
50	XA	32	HIS
50	XA	38	PHE
50	XA	54	TRP
50	XA	64	ILE
50	XA	69	ASN
50	XA	84	ARG
50	XA	92	HIS
50	XA	102	PHE
50	XA	109	ASN
50	XA	112	THR
50	XA	146	LEU
50	XA	155	PHE
50	XA	157	ASP
50	XA	160	ILE
50	XA	163	ASN
50	XA	177	LEU
50	XA	185	ARG
50	XA	188	LEU
50	XA	191	ARG
50	XA	193	GLN
50	XA	197	ILE
51	YA	20	VAL
51	YA	30	PHE
51	YA	31	ASP
51	YA	59	ASP
51	YA	61	LEU
51	YA	70	LEU
51	YA	89	ASP
51	YA	94	LYS
51	YA	105	PHE
51	YA	111	ARG
51	YA	133	TYR
51	YA	181	LEU
51	YA	184	LEU

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Mol	Chain	Res	Type
51	YA	212	VAL
51	YA	216	LYS
51	YA	218	LEU
51	YA	222	LYS
51	YA	223	PHE
52	ZA	41	LEU
52	ZA	58	LEU
52	ZA	84	LYS
52	ZA	106	ASP
52	ZA	111	VAL
52	ZA	117	THR
52	ZA	154	LEU
52	ZA	156	THR
53	AB	14	ASP
53	AB	57	ASP
53	AB	76	ARG
53	AB	84	ILE
53	AB	92	GLN
53	AB	94	ARG
53	AB	111	ASN
53	AB	113	LEU
53	AB	125	TYR
53	AB	127	MET
53	AB	158	ILE
53	AB	163	PRO
53	AB	174	HIS
53	AB	176	LEU
53	AB	177	MET
53	AB	190	ARG
53	AB	211	PRO
53	AB	215	GLU
54	BB	27	TYR
54	BB	30	ARG
54	BB	38	LEU
54	BB	53	LYS
54	BB	59	ARG
54	BB	77	ARG
54	BB	78	THR
54	BB	98	ASN
54	BB	109	PHE
54	BB	117	GLU
54	BB	133	LYS

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Mol	Chain	Res	Type
54	BB	158	ASP
54	BB	163	ASP
54	BB	174	LYS
54	BB	182	TYR
54	BB	195	ILE
54	BB	206	ASP
54	BB	212	ASP
54	BB	226	PHE
54	BB	238	LEU
54	BB	240	LYS
54	BB	246	LEU
55	CB	25	LEU
55	CB	42	LEU
55	CB	45	LYS
55	CB	86	GLN
55	CB	89	ILE
55	CB	128	ASN
55	CB	140	THR
55	CB	156	ARG
55	CB	157	ARG
55	CB	194	LEU
55	CB	197	GLU
55	CB	203	LYS
55	CB	224	ASN
56	DB	1	MET
56	DB	2	LYS
56	DB	16	PHE
56	DB	21	GLU
56	DB	68	LEU
56	DB	71	THR
56	DB	74	LYS
56	DB	87	ARG
56	DB	88	ARG
56	DB	98	ARG
56	DB	143	LYS
56	DB	150	GLU
56	DB	164	LYS
56	DB	169	TYR
56	DB	178	LEU
56	DB	184	LEU
56	DB	186	ARG
56	DB	190	GLN

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Mol	Chain	Res	Type
56	DB	220	LYS
57	EB	17	GLU
57	EB	24	PHE
57	EB	73	VAL
57	EB	76	LYS
57	EB	77	LEU
57	EB	80	GLU
57	EB	85	PHE
57	EB	92	PHE
57	EB	97	ARG
57	EB	116	ARG
57	EB	117	THR
57	EB	141	ARG
57	EB	149	ILE
57	EB	158	ASP
57	EB	167	GLU
57	EB	170	GLN
57	EB	173	TYR
57	EB	177	THR
57	EB	185	ILE
58	FB	11	ARG
58	FB	20	GLN
58	FB	29	LEU
58	FB	56	ARG
58	FB	64	ASN
58	FB	65	PHE
58	FB	70	GLU
58	FB	78	ILE
58	FB	89	GLU
58	FB	160	PHE
58	FB	172	ARG
58	FB	180	ASP
58	FB	196	LEU
59	GB	3	ARG
59	GB	8	TYR
59	GB	24	LEU
59	GB	39	LYS
59	GB	49	LEU
59	GB	58	ASP
59	GB	69	ARG
59	GB	78	ARG
59	GB	79	ARG

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Mol	Chain	Res	Type
59	GB	89	ASP
59	GB	92	LYS
59	GB	94	ASP
59	GB	95	TYR
59	GB	109	LEU
59	GB	147	MET
59	GB	149	ARG
59	GB	171	ARG
60	HB	41	TYR
60	HB	46	LEU
60	HB	49	LEU
60	HB	56	LYS
60	HB	59	PHE
60	HB	91	TYR
60	HB	95	ARG
61	IB	8	GLN
61	IB	10	GLU
61	IB	19	ILE
61	IB	33	ARG
61	IB	44	THR
61	IB	67	ARG
61	IB	70	ILE
61	IB	80	MET
61	IB	88	ARG
61	IB	121	ASP
61	IB	122	ILE
61	IB	138	ASN
63	KB	3	ARG
63	KB	20	ARG
63	KB	27	LYS
63	KB	55	ARG
63	KB	64	ARG
63	KB	72	MET
63	KB	86	GLU
63	KB	89	TYR
63	KB	91	LEU
63	KB	99	ARG
63	KB	107	LYS
63	KB	110	ASP
63	KB	113	PHE
63	KB	114	ARG
63	KB	127	ARG

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Mol	Chain	Res	Type
63	KB	140	LYS
63	KB	151	ASN
64	LB	26	THR
64	LB	47	LYS
64	LB	92	LYS
64	LB	105	LEU
64	LB	116	GLU
64	LB	136	ARG
64	LB	137	LEU
65	MB	17	TYR
65	MB	32	ASP
65	MB	40	ARG
65	MB	43	ARG
65	MB	44	ARG
65	MB	45	PHE
65	MB	70	ASN
65	MB	93	VAL
65	MB	96	ILE
65	MB	97	TYR
65	MB	100	LYS
65	MB	104	GLN
65	MB	123	TYR
66	NB	13	LYS
66	NB	40	GLU
66	NB	41	PRO
66	NB	46	PHE
66	NB	53	LEU
66	NB	54	LEU
66	NB	57	LEU
66	NB	81	ILE
66	NB	109	PHE
66	NB	112	TYR
66	NB	116	LEU
66	NB	118	ILE
66	NB	123	ARG
66	NB	137	ARG
66	NB	138	PHE
67	OB	3	ARG
67	OB	5	ARG
67	OB	6	THR
67	OB	29	GLN
67	OB	34	LEU

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Mol	Chain	Res	Type
67	OB	46	LEU
67	OB	53	TYR
67	OB	69	ILE
67	OB	72	LYS
67	OB	109	LEU
67	OB	115	LEU
67	OB	117	LEU
68	PB	3	LEU
68	PB	17	LEU
68	PB	28	ILE
68	PB	71	GLN
68	PB	82	PRO
68	PB	85	PHE
68	PB	88	ARG
68	PB	92	ILE
69	QB	13	ASP
69	QB	21	PHE
69	QB	28	LEU
69	QB	33	TYR
69	QB	57	ARG
69	QB	63	ARG
69	QB	101	ASN
69	QB	129	GLN
69	QB	130	ARG
69	QB	131	ASP
69	QB	135	ILE
70	RB	18	GLN
70	RB	40	ASN
70	RB	50	LEU
70	RB	57	ARG
70	RB	77	LYS
70	RB	90	TYR
70	RB	103	ILE
70	RB	109	GLU
70	RB	116	VAL
71	SB	5	LYS
71	SB	7	GLN
71	SB	11	LEU
71	SB	23	ILE
71	SB	41	GLU
71	SB	44	ARG
71	SB	50	TYR

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Mol	Chain	Res	Type
71	SB	79	LEU
71	SB	80	LYS
71	SB	85	TYR
72	TB	23	ARG
72	TB	50	PHE
72	TB	65	LEU
72	TB	72	CYS
72	TB	101	TYR
72	TB	104	LEU
72	TB	112	ASP
72	TB	126	LEU
73	UB	7	ARG
73	UB	9	LEU
73	UB	13	ARG
73	UB	32	ARG
73	UB	33	LEU
73	UB	38	PHE
73	UB	102	VAL
73	UB	103	LEU
73	UB	107	PHE
73	UB	114	LYS
73	UB	127	VAL
73	UB	144	ARG
74	VB	7	ILE
74	VB	8	ARG
74	VB	22	GLN
74	VB	58	PHE
74	VB	81	GLU
74	VB	84	LYS
74	VB	102	LYS
74	VB	115	ASP
74	VB	119	PHE
74	VB	123	LYS
74	VB	132	ARG
75	WB	41	ILE
75	WB	54	VAL
75	WB	59	TYR
75	WB	60	VAL
75	WB	69	LEU
75	WB	77	ARG
75	WB	100	ILE
75	WB	102	THR

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Mol	Chain	Res	Type
76	XB	36	ILE
76	XB	37	LYS
76	XB	41	ILE
76	XB	44	ILE
76	XB	82	ARG
76	XB	85	ARG
76	XB	90	GLU
77	YB	3	LEU
77	YB	20	LYS
77	YB	79	PHE
77	YB	81	ARG
78	ZB	32	PHE
78	ZB	58	GLU
78	ZB	66	LEU
79	AC	8	PHE
79	AC	22	ARG
79	AC	30	LEU
79	AC	36	LEU
79	AC	39	CYS
80	BC	8	LEU
80	BC	20	LYS
80	BC	26	LYS
80	BC	28	LYS
80	BC	35	TYR
80	BC	36	LYS
80	BC	39	LEU
80	BC	47	VAL
80	BC	51	ASN
80	BC	54	ARG
80	BC	56	MET
82	DC	2	VAL
82	DC	5	THR
82	DC	7	ASP
82	DC	8	GLN
82	DC	14	ASP
82	DC	18	ASN
82	DC	35	LEU
82	DC	45	ILE
82	DC	69	THR
82	DC	75	ILE
82	DC	77	LEU
82	DC	78	TYR

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Mol	Chain	Res	Type
82	DC	81	MET
82	DC	83	ASP
82	DC	85	ASP
82	DC	92	LYS
82	DC	94	ASP
82	DC	101	ASN
82	DC	102	LEU
82	DC	103	ILE
82	DC	104	ASP
82	DC	110	ASP
82	DC	111	PHE
82	DC	127	VAL
82	DC	138	GLN
82	DC	155	VAL
82	DC	175	TYR
82	DC	194	ASP
82	DC	195	GLU
82	DC	202	VAL
82	DC	206	ARG
82	DC	222	ILE
82	DC	229	TYR
82	DC	231	LYS
82	DC	241	MET
82	DC	244	LEU
82	DC	263	ASP
82	DC	274	ASN
82	DC	282	PHE
82	DC	291	PHE
82	DC	307	LEU
82	DC	308	LYS
82	DC	312	LYS
82	DC	313	ASP
82	DC	354	GLU
82	DC	357	TYR
82	DC	362	ASP
82	DC	373	ASP
82	DC	378	LEU
82	DC	380	LEU
82	DC	385	MET
82	DC	386	VAL
82	DC	393	ARG
82	DC	394	PHE

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Mol	Chain	Res	Type
82	DC	395	TYR
82	DC	436	LEU
82	DC	437	MET
82	DC	438	MET
82	DC	447	ASP
82	DC	456	LEU
82	DC	457	VAL
82	DC	464	LEU
82	DC	477	ASN
82	DC	490	GLN
82	DC	495	VAL
82	DC	497	ASN
82	DC	500	ASP
82	DC	504	LEU
82	DC	533	THR
82	DC	536	LEU
82	DC	567	VAL
82	DC	573	GLN
82	DC	583	HIS
82	DC	584	ASN
82	DC	599	LEU
82	DC	612	PHE
82	DC	625	TRP
82	DC	627	VAL
82	DC	646	VAL
82	DC	651	LYS
82	DC	690	ASP
82	DC	698	ILE
82	DC	723	LYS
82	DC	733	ILE
82	DC	744	TYR
82	DC	750	LYS
82	DC	766	PHE
82	DC	802	SER
82	DC	806	SER
82	DC	817	GLU
82	DC	829	LYS
82	DC	836	GLN
82	DC	837	GLU
82	DC	838	TYR

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (287) such sidechains are listed below:

Mol	Chain	Res	Type
5	E	197	ASN
5	E	200	ASN
6	F	8	GLN
6	F	38	HIS
6	F	47	GLN
6	F	132	ASN
6	F	140	ASN
6	F	211	HIS
6	F	215	ASN
7	G	3	HIS
7	G	139	GLN
7	G	177	HIS
7	G	211	GLN
7	G	231	HIS
7	G	279	ASN
7	G	313	HIS
7	G	331	ASN
8	H	5	GLN
8	H	9	HIS
8	H	43	ASN
8	H	48	GLN
8	H	110	ASN
8	H	114	ASN
8	H	213	ASN
8	H	260	GLN
8	H	291	ASN
8	H	296	GLN
9	I	45	ASN
9	I	151	GLN
10	J	4	GLN
10	J	61	ASN
10	J	72	ASN
10	J	97	ASN
10	J	138	GLN
10	J	167	ASN
11	K	25	GLN
11	K	48	ASN
11	K	112	ASN
11	K	157	ASN
11	K	159	GLN
11	K	172	ASN
11	K	197	GLN
11	K	209	ASN

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Mol	Chain	Res	Type
11	K	244	ASN
12	L	24	ASN
12	L	33	ASN
12	L	38	GLN
12	L	41	GLN
12	L	79	GLN
12	L	138	HIS
12	L	252	ASN
13	M	49	ASN
13	M	50	ASN
13	M	77	ASN
13	M	100	ASN
13	M	125	ASN
13	M	157	ASN
13	M	163	GLN
13	M	183	HIS
14	N	95	HIS
14	N	100	ASN
14	N	144	ASN
14	N	163	GLN
14	N	209	ASN
15	O	43	GLN
15	O	152	HIS
16	P	65	GLN
17	Q	6	ASN
17	Q	103	ASN
17	Q	112	ASN
17	Q	114	GLN
17	Q	162	ASN
18	R	62	GLN
18	R	119	GLN
20	T	50	ASN
20	T	55	HIS
20	T	65	ASN
21	U	28	ASN
21	U	54	HIS
21	U	64	ASN
22	V	5	HIS
22	V	9	GLN
22	V	73	GLN
22	V	135	GLN
22	V	145	ASN

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Mol	Chain	Res	Type
23	W	34	GLN
23	W	39	ASN
23	W	92	GLN
23	W	118	HIS
23	W	130	ASN
24	X	3	HIS
24	X	8	GLN
24	X	89	ASN
24	X	108	GLN
25	Y	16	GLN
25	Y	49	GLN
27	AA	33	ASN
28	BA	32	GLN
28	BA	42	GLN
29	CA	55	ASN
29	CA	91	ASN
29	CA	137	ASN
30	DA	26	GLN
31	EA	127	ASN
32	FA	44	ASN
32	FA	74	ASN
33	GA	11	ASN
33	GA	12	GLN
35	IA	57	GLN
35	IA	80	ASN
36	JA	31	ASN
36	JA	60	ASN
36	JA	88	HIS
36	JA	104	ASN
37	KA	17	GLN
37	KA	24	ASN
37	KA	75	HIS
37	KA	87	ASN
37	KA	106	ASN
38	LA	98	GLN
39	MA	59	ASN
39	MA	62	GLN
39	MA	68	GLN
39	MA	76	GLN
39	MA	104	GLN
40	NA	92	ASN
41	OA	13	ASN

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Mol	Chain	Res	Type
41	OA	28	HIS
42	PA	28	ASN
42	PA	40	GLN
42	PA	76	ASN
43	QA	4	GLN
43	QA	11	GLN
43	QA	20	ASN
43	QA	32	ASN
43	QA	50	ASN
44	RA	90	ASN
46	TA	3	ASN
46	TA	47	GLN
46	TA	99	GLN
46	TA	105	GLN
47	UA	32	GLN
48	VA	32	ASN
48	VA	36	GLN
48	VA	37	GLN
48	VA	39	HIS
48	VA	83	ASN
48	VA	103	ASN
48	VA	167	GLN
49	WA	17	ASN
49	WA	174	ASN
49	WA	198	ASN
49	WA	224	ASN
49	WA	248	ASN
50	XA	15	GLN
50	XA	49	ASN
50	XA	92	HIS
50	XA	109	ASN
50	XA	163	ASN
50	XA	193	GLN
51	YA	79	HIS
51	YA	95	ASN
51	YA	146	GLN
51	YA	177	GLN
51	YA	199	ASN
51	YA	209	ASN
52	ZA	59	HIS
52	ZA	82	ASN
52	ZA	87	GLN

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Mol	Chain	Res	Type
52	ZA	89	GLN
52	ZA	228	ASN
53	AB	62	ASN
53	AB	92	GLN
53	AB	111	ASN
53	AB	159	HIS
54	BB	50	ASN
54	BB	67	GLN
54	BB	69	HIS
54	BB	201	HIS
54	BB	224	ASN
54	BB	259	GLN
55	CB	34	GLN
55	CB	79	ASN
55	CB	103	ASN
55	CB	128	ASN
55	CB	224	ASN
56	DB	13	GLN
56	DB	34	GLN
56	DB	65	GLN
56	DB	140	ASN
57	EB	5	GLN
57	EB	22	GLN
57	EB	29	ASN
57	EB	74	GLN
57	EB	170	GLN
57	EB	174	ASN
57	EB	180	GLN
58	FB	32	GLN
58	FB	64	ASN
58	FB	138	ASN
58	FB	175	GLN
59	GB	38	ASN
59	GB	74	ASN
59	GB	110	GLN
59	GB	123	HIS
59	GB	131	GLN
60	HB	32	HIS
60	HB	62	GLN
60	HB	96	ASN
61	IB	8	GLN
61	IB	14	GLN

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Mol	Chain	Res	Type
61	IB	16	GLN
61	IB	21	ASN
61	IB	104	HIS
61	IB	110	HIS
61	IB	152	GLN
63	KB	21	ASN
63	KB	62	GLN
63	KB	123	HIS
64	LB	80	HIS
65	MB	98	ASN
65	MB	103	ASN
66	NB	83	GLN
66	NB	100	GLN
67	OB	29	GLN
67	OB	48	ASN
68	PB	19	ASN
68	PB	75	ASN
68	PB	89	GLN
68	PB	103	ASN
69	QB	48	GLN
69	QB	138	GLN
70	RB	40	ASN
70	RB	44	ASN
70	RB	48	HIS
70	RB	72	ASN
70	RB	98	GLN
71	SB	7	GLN
71	SB	21	ASN
71	SB	29	HIS
71	SB	33	GLN
71	SB	74	GLN
71	SB	81	ASN
72	TB	12	ASN
72	TB	16	ASN
72	TB	64	GLN
72	TB	70	ASN
72	TB	98	GLN
73	UB	27	ASN
73	UB	28	ASN
73	UB	99	ASN
74	VB	31	ASN
74	VB	77	ASN

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Mol	Chain	Res	Type
74	VB	106	GLN
75	WB	38	HIS
76	XB	69	ASN
76	XB	94	ASN
77	YB	5	GLN
77	YB	26	GLN
78	ZB	43	ASN
79	AC	20	GLN
80	BC	17	GLN
82	DC	21	ASN
82	DC	41	GLN
82	DC	96	ASN
82	DC	101	ASN
82	DC	108	HIS
82	DC	138	GLN
82	DC	224	GLN
82	DC	259	ASN
82	DC	274	ASN
82	DC	355	GLN
82	DC	365	ASN
82	DC	371	ASN
82	DC	409	GLN
82	DC	477	ASN
82	DC	537	HIS
82	DC	583	HIS
82	DC	603	ASN
82	DC	668	GLN
82	DC	687	ASN
82	DC	725	GLN
82	DC	734	GLN
82	DC	753	GLN
82	DC	759	GLN
82	DC	791	GLN
82	DC	836	GLN

### 5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	A	1755/1798 (97%)	378 (21%)	18 (1%)
2	B	3267/3396 (96%)	613 (18%)	27 (0%)
3	C	157/158 (99%)	31 (19%)	2 (1%)

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Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
4	D	120/121 (99%)	14 (11%)	0
83	EC	187/201 (93%)	77 (41%)	3 (1%)
All	All	5486/5674 (96%)	1113 (20%)	50 (0%)

All (1113) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	A	2	A
1	A	4	C
1	A	25	C
1	A	26	A
1	A	34	G
1	A	42	G
1	A	45	U
1	A	47	A
1	A	57	G
1	A	60	U
1	A	66	U
1	A	68	A
1	A	69	G
1	A	72	A
1	A	73	U
1	A	76	A
1	A	77	U
1	A	81	G
1	A	104	A
1	A	114	C
1	A	115	G
1	A	116	U
1	A	131	C
1	A	132	U
1	A	133	U
1	A	134	U
1	A	135	A
1	A	136	C
1	A	137	U
1	A	138	A
1	A	140	A
1	A	141	U
1	A	145	A
1	A	153	G
1	A	159	U

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Mol	Chain	Res	Type
1	A	166	C
1	A	170	U
1	A	178	U
1	A	186	C
1	A	187	G
1	A	188	A
1	A	191	C
1	A	192	U
1	A	195	G
1	A	197	A
1	A	200	A
1	A	216	U
1	A	217	A
1	A	219	A
1	A	228	G
1	A	233	C
1	A	238	U
1	A	240	U
1	A	241	U
1	A	250	C
1	A	261	U
1	A	262	U
1	A	265	A
1	A	272	U
1	A	277	U
1	A	278	U
1	A	280	U
1	A	288	A
1	A	302	U
1	A	309	C
1	A	314	C
1	A	316	A
1	A	320	U
1	A	321	C
1	A	322	G
1	A	337	G
1	A	338	C
1	A	352	A
1	A	359	A
1	A	360	A
1	A	361	C
1	A	378	A

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Mol	Chain	Res	Type
1	A	381	C
1	A	400	A
1	A	402	C
1	A	404	G
1	A	416	A
1	A	417	A
1	A	418	G
1	A	423	G
1	A	424	C
1	A	425	A
1	A	426	G
1	A	427	C
1	A	434	G
1	A	435	C
1	A	439	U
1	A	444	C
1	A	445	A
1	A	475	A
1	A	477	A
1	A	488	G
1	A	490	C
1	A	493	U
1	A	495	C
1	A	496	G
1	A	497	G
1	A	498	G
1	A	500	C
1	A	502	U
1	A	504	U
1	A	506	A
1	A	507	U
1	A	508	U
1	A	510	G
1	A	515	A
1	A	532	U
1	A	539	G
1	A	540	G
1	A	541	A
1	A	542	A
1	A	544	A
1	A	545	A
1	A	554	C

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Mol	Chain	Res	Type
1	A	555	A
1	A	556	A
1	A	557	G
1	A	558	U
1	A	559	C
1	A	565	C
1	A	577	G
1	A	579	A
1	A	580	A
1	A	582	U
1	A	591	A
1	A	594	A
1	A	606	A
1	A	611	U
1	A	619	A
1	A	620	A
1	A	622	A
1	A	624	G
1	A	628	G
1	A	629	U
1	A	630	A
1	A	639	U
1	A	648	G
1	A	654	C
1	A	655	G
1	A	656	G
1	A	657	U
1	A	677	G
1	A	684	A
1	A	685	A
1	A	687	G
1	A	691	C
1	A	694	U
1	A	696	C
1	A	697	C
1	A	703	G
1	A	705	U
1	A	707	A
1	A	709	C
1	A	710	U
1	A	729	G
1	A	731	C

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Mol	Chain	Res	Type
1	A	732	G
1	A	733	A
1	A	738	G
1	A	742	U
1	A	744	U
1	A	754	A
1	A	755	A
1	A	765	G
1	A	766	U
1	A	774	A
1	A	777	C
1	A	778	G
1	A	781	U
1	A	783	G
1	A	789	A
1	A	794	U
1	A	814	A
1	A	815	G
1	A	816	G
1	A	817	A
1	A	819	G
1	A	820	U
1	A	821	U
1	A	822	U
1	A	823	G
1	A	824	G
1	A	830	U
1	A	831	U
1	A	841	U
1	A	846	G
1	A	850	A
1	A	851	U
1	A	853	G
1	A	854	U
1	A	855	A
1	A	856	A
1	A	857	U
1	A	860	U
1	A	863	A
1	A	865	A
1	A	876	G
1	A	898	A

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Mol	Chain	Res	Type
1	A	911	U
1	A	912	U
1	A	913	G
1	A	915	A
1	A	933	A
1	A	935	U
1	A	942	G
1	A	944	A
1	A	960	U
1	A	966	A
1	A	970	A
1	A	982	U
1	A	987	G
1	A	988	A
1	A	992	A
1	A	993	A
1	A	996	U
1	A	1004	U
1	A	1005	A
1	A	1016	C
1	A	1021	C
1	A	1023	A
1	A	1025	A
1	A	1028	C
1	A	1032	G
1	A	1043	A
1	A	1052	U
1	A	1053	G
1	A	1057	U
1	A	1058	U
1	A	1059	U
1	A	1061	A
1	A	1072	C
1	A	1074	G
1	A	1076	A
1	A	1080	U
1	A	1082	C
1	A	1092	A
1	A	1096	C
1	A	1097	U
1	A	1098	U
1	A	1100	G

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Mol	Chain	Res	Type
1	A	1109	G
1	A	1114	G
1	A	1150	G
1	A	1151	A
1	A	1158	C
1	A	1159	C
1	A	1160	A
1	A	1163	A
1	A	1164	G
1	A	1185	U
1	A	1188	G
1	A	1194	A
1	A	1196	A
1	A	1197	C
1	A	1199	G
1	A	1200	G
1	A	1202	A
1	A	1207	C
1	A	1217	A
1	A	1218	G
1	A	1228	G
1	A	1229	G
1	A	1230	A
1	A	1243	G
1	A	1244	A
1	A	1245	G
1	A	1246	C
1	A	1256	A
1	A	1258	U
1	A	1268	G
1	A	1273	G
1	A	1274	C
1	A	1275	A
1	A	1287	A
1	A	1288	G
1	A	1306	C
1	A	1314	U
1	A	1315	U
1	A	1321	A
1	A	1340	U
1	A	1344	A
1	A	1345	A

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Mol	Chain	Res	Type
1	A	1360	A
1	A	1361	U
1	A	1362	U
1	A	1363	U
1	A	1364	G
1	A	1367	G
1	A	1370	U
1	A	1371	A
1	A	1378	U
1	A	1390	U
1	A	1398	U
1	A	1399	C
1	A	1400	A
1	A	1402	G
1	A	1413	U
1	A	1415	U
1	A	1416	G
1	A	1418	G
1	A	1427	A
1	A	1428	G
1	A	1432	U
1	A	1435	G
1	A	1436	A
1	A	1445	G
1	A	1448	G
1	A	1457	C
1	A	1460	A
1	A	1461	C
1	A	1466	G
1	A	1469	A
1	A	1471	A
1	A	1473	U
1	A	1474	G
1	A	1482	C
1	A	1486	G
1	A	1491	U
1	A	1492	A
1	A	1496	U
1	A	1499	G
1	A	1516	A
1	A	1520	U
1	A	1521	G

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Mol	Chain	Res	Type
1	A	1523	G
1	A	1524	A
1	A	1534	G
1	A	1535	U
1	A	1536	G
1	A	1537	C
1	A	1540	G
1	A	1557	U
1	A	1559	A
1	A	1568	C
1	A	1569	A
1	A	1584	G
1	A	1585	U
1	A	1601	G
1	A	1602	C
1	A	1616	G
1	A	1619	C
1	A	1633	A
1	A	1634	C
1	A	1657	U
1	A	1658	G
1	A	1683	C
1	A	1684	U
1	A	1686	C
1	A	1690	G
1	A	1693	A
1	A	1696	G
1	A	1697	G
1	A	1713	G
1	A	1714	A
1	A	1715	G
1	A	1716	C
1	A	1717	G
1	A	1736	G
1	A	1746	A
1	A	1755	A
1	A	1756	A
1	A	1762	A
1	A	1766	A
1	A	1768	G
1	A	1771	U
1	A	1772	C

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Mol	Chain	Res	Type
1	A	1773	C
1	A	1780	G
1	A	1789	G
1	A	1792	G
1	A	1793	G
1	A	1796	C
1	A	1798	U
2	B	6	A
2	B	11	A
2	B	13	A
2	B	14	U
2	B	40	A
2	B	49	A
2	B	60	A
2	B	66	A
2	B	77	A
2	B	85	A
2	B	92	G
2	B	111	C
2	B	113	C
2	B	121	A
2	B	122	A
2	B	133	U
2	B	135	C
2	B	136	G
2	B	148	G
2	B	150	A
2	B	154	U
2	B	155	G
2	B	156	G
2	B	157	A
2	B	161	G
2	B	170	G
2	B	182	U
2	B	187	A
2	B	189	G
2	B	190	U
2	B	191	U
2	B	196	G
2	B	200	C
2	B	201	A
2	B	210	U

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Mol	Chain	Res	Type
2	B	218	G
2	B	219	A
2	B	231	G
2	B	241	G
2	B	242	C
2	B	248	U
2	B	249	U
2	B	250	U
2	B	252	U
2	B	253	A
2	B	266	A
2	B	269	G
2	B	280	U
2	B	281	G
2	B	286	U
2	B	288	C
2	B	295	A
2	B	299	G
2	B	305	U
2	B	311	C
2	B	315	C
2	B	323	A
2	B	329	U
2	B	337	G
2	B	338	A
2	B	339	C
2	B	344	A
2	B	346	C
2	B	350	C
2	B	351	A
2	B	376	G
2	B	390	G
2	B	397	A
2	B	398	A
2	B	401	U
2	B	402	A
2	B	403	C
2	B	406	G
2	B	421	G
2	B	422	A
2	B	439	C
2	B	441	U

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Mol	Chain	Res	Type
2	B	442	G
2	B	489	C
2	B	493	G
2	B	494	G
2	B	495	G
2	B	503	C
2	B	510	G
2	B	515	C
2	B	520	U
2	B	521	A
2	B	524	U
2	B	535	G
2	B	543	C
2	B	546	C
2	B	548	G
2	B	557	A
2	B	559	A
2	B	560	G
2	B	569	A
2	B	578	A
2	B	579	G
2	B	604	G
2	B	609	G
2	B	610	G
2	B	611	A
2	B	620	U
2	B	621	A
2	B	636	C
2	B	637	C
2	B	638	C
2	B	647	A
2	B	648	C
2	B	649	A
2	B	662	U
2	B	665	A
2	B	667	C
2	B	677	A
2	B	681	U
2	B	690	A
2	B	691	A
2	B	705	A
2	B	708	G

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Mol	Chain	Res	Type
2	B	712	G
2	B	718	G
2	B	758	C
2	B	764	U
2	B	765	C
2	B	766	U
2	B	767	U
2	B	776	U
2	B	777	U
2	B	780	A
2	B	781	G
2	B	784	A
2	B	785	G
2	B	786	A
2	B	799	G
2	B	802	C
2	B	806	A
2	B	808	A
2	B	817	A
2	B	818	C
2	B	826	G
2	B	830	A
2	B	837	A
2	B	847	A
2	B	849	C
2	B	857	G
2	B	861	C
2	B	874	U
2	B	879	U
2	B	882	A
2	B	896	A
2	B	897	U
2	B	907	G
2	B	908	G
2	B	914	A
2	B	916	G
2	B	917	A
2	B	920	A
2	B	921	A
2	B	925	A
2	B	926	A
2	B	932	U

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Mol	Chain	Res	Type
2	B	934	G
2	B	937	G
2	B	944	C
2	B	959	C
2	B	960	U
2	B	962	A
2	B	974	G
2	B	979	U
2	B	981	U
2	B	984	G
2	B	991	G
2	B	1000	C
2	B	1002	A
2	B	1010	G
2	B	1020	G
2	B	1028	U
2	B	1029	G
2	B	1037	C
2	B	1045	C
2	B	1047	A
2	B	1049	C
2	B	1063	G
2	B	1064	A
2	B	1066	G
2	B	1081	U
2	B	1094	U
2	B	1095	U
2	B	1097	G
2	B	1098	A
2	B	1103	A
2	B	1104	G
2	B	1112	A
2	B	1117	G
2	B	1131	G
2	B	1143	A
2	B	1153	A
2	B	1159	A
2	B	1174	G
2	B	1178	G
2	B	1180	A
2	B	1181	U
2	B	1186	G

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Mol	Chain	Res	Type
2	B	1196	C
2	B	1199	C
2	B	1201	C
2	B	1209	G
2	B	1218	U
2	B	1219	C
2	B	1220	U
2	B	1222	G
2	B	1229	G
2	B	1232	C
2	B	1235	U
2	B	1236	G
2	B	1237	G
2	B	1239	C
2	B	1242	G
2	B	1243	G
2	B	1244	A
2	B	1245	A
2	B	1246	G
2	B	1256	G
2	B	1258	U
2	B	1259	A
2	B	1263	A
2	B	1265	U
2	B	1287	A
2	B	1292	C
2	B	1294	A
2	B	1305	U
2	B	1306	G
2	B	1308	A
2	B	1309	U
2	B	1319	G
2	B	1325	U
2	B	1330	A
2	B	1348	U
2	B	1349	G
2	B	1350	A
2	B	1351	U
2	B	1352	A
2	B	1353	U
2	B	1355	A
2	B	1357	G

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Mol	Chain	Res	Type
2	B	1375	G
2	B	1386	A
2	B	1392	G
2	B	1399	A
2	B	1400	G
2	B	1417	G
2	B	1419	A
2	B	1434	G
2	B	1435	A
2	B	1436	U
2	B	1437	C
2	B	1446	A
2	B	1452	A
2	B	1455	U
2	B	1469	C
2	B	1477	A
2	B	1481	A
2	B	1482	A
2	B	1484	U
2	B	1488	G
2	B	1496	C
2	B	1507	G
2	B	1508	C
2	B	1514	G
2	B	1516	C
2	B	1525	G
2	B	1526	U
2	B	1527	C
2	B	1546	A
2	B	1549	U
2	B	1556	C
2	B	1557	A
2	B	1558	A
2	B	1562	C
2	B	1565	G
2	B	1566	A
2	B	1567	U
2	B	1569	U
2	B	1574	C
2	B	1580	A
2	B	1583	A
2	B	1588	A

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Mol	Chain	Res	Type
2	B	1589	A
2	B	1593	A
2	B	1605	A
2	B	1606	U
2	B	1607	U
2	B	1614	C
2	B	1620	U
2	B	1631	C
2	B	1642	A
2	B	1643	A
2	B	1645	U
2	B	1658	G
2	B	1683	A
2	B	1692	U
2	B	1704	A
2	B	1714	A
2	B	1717	U
2	B	1741	A
2	B	1742	U
2	B	1750	A
2	B	1751	G
2	B	1763	U
2	B	1765	U
2	B	1766	G
2	B	1769	G
2	B	1773	C
2	B	1775	G
2	B	1780	G
2	B	1793	C
2	B	1797	A
2	B	1813	A
2	B	1816	A
2	B	1819	U
2	B	1821	U
2	B	1822	C
2	B	1840	U
2	B	1841	A
2	B	1842	A
2	B	1846	C
2	B	1849	C
2	B	1850	A
2	B	1866	C

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Mol	Chain	Res	Type
2	B	1869	C
2	B	1871	U
2	B	1880	U
2	B	1893	A
2	B	1895	A
2	B	1896	A
2	B	1899	G
2	B	1906	G
2	B	1931	U
2	B	1935	G
2	B	1948	G
2	B	1951	C
2	B	1952	G
2	B	1954	G
2	B	1955	U
2	B	2048	G
2	B	2059	U
2	B	2082	U
2	B	2083	G
2	B	2088	A
2	B	2094	C
2	B	2095	G
2	B	2096	A
2	B	2101	C
2	B	2102	U
2	B	2111	G
2	B	2112	U
2	B	2116	G
2	B	2117	A
2	B	2121	G
2	B	2122	G
2	B	2126	A
2	B	2131	A
2	B	2140	U
2	B	2141	U
2	B	2157	G
2	B	2158	A
2	B	2169	G
2	B	2178	A
2	B	2188	A
2	B	2192	C
2	B	2194	G

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Mol	Chain	Res	Type
2	B	2201	G
2	B	2205	U
2	B	2206	G
2	B	2207	A
2	B	2209	U
2	B	2210	G
2	B	2242	A
2	B	2249	G
2	B	2255	A
2	B	2256	A
2	B	2273	G
2	B	2280	A
2	B	2281	A
2	B	2282	U
2	B	2287	C
2	B	2303	A
2	B	2307	G
2	B	2314	U
2	B	2315	G
2	B	2319	U
2	B	2320	A
2	B	2325	G
2	B	2336	U
2	B	2365	C
2	B	2372	A
2	B	2373	A
2	B	2374	C
2	B	2375	G
2	B	2393	G
2	B	2394	G
2	B	2397	A
2	B	2402	A
2	B	2403	G
2	B	2411	U
2	B	2418	G
2	B	2434	U
2	B	2437	G
2	B	2452	G
2	B	2458	A
2	B	2459	A
2	B	2461	A
2	B	2462	A

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Mol	Chain	Res	Type
2	B	2463	G
2	B	2472	U
2	B	2473	C
2	B	2474	G
2	B	2484	A
2	B	2486	A
2	B	2488	A
2	B	2492	C
2	B	2493	U
2	B	2494	A
2	B	2496	C
2	B	2502	A
2	B	2503	G
2	B	2504	U
2	B	2511	A
2	B	2514	U
2	B	2522	G
2	B	2523	A
2	B	2524	A
2	B	2526	C
2	B	2531	C
2	B	2533	G
2	B	2537	U
2	B	2538	U
2	B	2540	A
2	B	2541	U
2	B	2542	U
2	B	2543	U
2	B	2544	U
2	B	2547	A
2	B	2549	G
2	B	2553	U
2	B	2555	G
2	B	2561	A
2	B	2562	A
2	B	2569	A
2	B	2570	U
2	B	2571	U
2	B	2572	C
2	B	2573	G
2	B	2576	G
2	B	2585	G

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Mol	Chain	Res	Type
2	B	2586	G
2	B	2587	U
2	B	2589	G
2	B	2593	A
2	B	2600	C
2	B	2606	G
2	B	2607	G
2	B	2614	G
2	B	2615	G
2	B	2626	A
2	B	2628	A
2	B	2637	A
2	B	2638	C
2	B	2652	U
2	B	2656	A
2	B	2657	A
2	B	2666	C
2	B	2674	A
2	B	2677	G
2	B	2689	A
2	B	2690	G
2	B	2691	A
2	B	2696	A
2	B	2714	G
2	B	2719	U
2	B	2728	G
2	B	2729	U
2	B	2737	C
2	B	2753	G
2	B	2755	C
2	B	2762	A
2	B	2772	C
2	B	2777	G
2	B	2778	G
2	B	2780	A
2	B	2794	G
2	B	2796	G
2	B	2799	A
2	B	2800	G
2	B	2801	A
2	B	2803	A
2	B	2804	A

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Mol	Chain	Res	Type
2	B	2808	A
2	B	2810	C
2	B	2816	G
2	B	2817	A
2	B	2837	A
2	B	2839	G
2	B	2840	C
2	B	2842	U
2	B	2844	C
2	B	2845	A
2	B	2853	A
2	B	2855	U
2	B	2867	C
2	B	2871	G
2	B	2872	A
2	B	2873	U
2	B	2887	A
2	B	2889	C
2	B	2896	A
2	B	2899	C
2	B	2910	A
2	B	2919	A
2	B	2923	U
2	B	2928	C
2	B	2933	A
2	B	2935	U
2	B	2936	A
2	B	2938	G
2	B	2947	G
2	B	2954	U
2	B	2983	C
2	B	2990	G
2	B	2997	G
2	B	3003	G
2	B	3012	A
2	B	3021	A
2	B	3022	G
2	B	3046	A
2	B	3049	A
2	B	3056	U
2	B	3057	U
2	B	3058	U

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Mol	Chain	Res	Type
2	B	3059	G
2	B	3074	G
2	B	3078	U
2	B	3080	G
2	B	3086	A
2	B	3092	C
2	B	3101	G
2	B	3115	C
2	B	3119	U
2	B	3122	A
2	B	3125	U
2	B	3128	G
2	B	3130	A
2	B	3131	U
2	B	3134	A
2	B	3142	A
2	B	3143	C
2	B	3144	G
2	B	3154	C
2	B	3155	U
2	B	3156	U
2	B	3157	U
2	B	3165	A
2	B	3168	A
2	B	3170	A
2	B	3173	G
2	B	3174	A
2	B	3176	G
2	B	3179	U
2	B	3181	C
2	B	3187	A
2	B	3196	U
2	B	3207	U
2	B	3214	U
2	B	3217	C
2	B	3218	A
2	B	3219	G
2	B	3229	G
2	B	3230	G
2	B	3245	A
2	B	3246	G
2	B	3247	G

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Mol	Chain	Res	Type
2	B	3259	U
2	B	3263	G
2	B	3273	A
2	B	3276	G
2	B	3279	A
2	B	3281	U
2	B	3287	U
2	B	3289	G
2	B	3294	A
2	B	3304	U
2	B	3307	A
2	B	3313	U
2	B	3316	A
2	B	3319	U
2	B	3320	A
2	B	3335	A
2	B	3336	A
2	B	3341	U
2	B	3343	G
2	B	3350	C
2	B	3352	U
2	B	3355	U
2	B	3356	G
2	B	3362	A
2	B	3369	G
2	B	3370	A
2	B	3375	A
2	B	3378	C
2	B	3382	U
2	B	3389	U
2	B	3390	G
2	B	3395	G
3	C	21	C
3	C	22	U
3	C	23	U
3	C	34	U
3	C	37	A
3	C	39	G
3	C	49	G
3	C	51	G
3	C	59	A
3	C	62	C

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Mol	Chain	Res	Type
3	C	63	G
3	C	80	A
3	C	83	C
3	C	86	U
3	C	87	G
3	C	90	U
3	C	95	G
3	C	100	U
3	C	105	A
3	C	106	C
3	C	109	A
3	C	111	A
3	C	113	U
3	C	114	G
3	C	116	G
3	C	125	U
3	C	126	A
3	C	127	U
3	C	138	A
3	C	151	C
3	C	152	G
4	D	11	A
4	D	13	A
4	D	18	C
4	D	26	C
4	D	54	U
4	D	55	A
4	D	65	G
4	D	74	C
4	D	76	A
4	D	87	G
4	D	99	G
4	D	102	A
4	D	112	G
4	D	121	U
83	EC	6759	A
83	EC	6760	A
83	EC	6767	G
83	EC	6768	U
83	EC	6769	A
83	EC	6770	U
83	EC	6771	U

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Mol	Chain	Res	Type
83	EC	6772	G
83	EC	6773	G
83	EC	6774	U
83	EC	6775	U
83	EC	6776	A
83	EC	6778	C
83	EC	6782	C
83	EC	6789	G
83	EC	6790	A
83	EC	6792	A
83	EC	6795	U
83	EC	6797	U
83	EC	6798	C
83	EC	6799	C
83	EC	6800	G
83	EC	6802	A
83	EC	6803	C
83	EC	6805	C
83	EC	6813	A
83	EC	6816	A
83	EC	6822	U
83	EC	6823	U
83	EC	6824	C
83	EC	6831	U
83	EC	6832	G
83	EC	6835	U
83	EC	6848	U
83	EC	6849	A
83	EC	6851	G
83	EC	6855	A
83	EC	6863	C
83	EC	6864	A
83	EC	6867	C
83	EC	6868	C
83	EC	6869	C
83	EC	6870	A
83	EC	6871	A
83	EC	6872	A
83	EC	6877	C
83	EC	6879	U
83	EC	6884	G
83	EC	6886	A

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Mol	Chain	Res	Type
83	EC	6887	G
83	EC	6889	A
83	EC	6890	A
83	EC	6892	U
83	EC	6897	G
83	EC	6904	U
83	EC	6909	A
83	EC	6913	U
83	EC	6914	A
83	EC	6916	A
83	EC	6917	C
83	EC	6919	G
83	EC	6921	C
83	EC	6922	G
83	EC	6925	C
83	EC	6928	G
83	EC	6931	U
83	EC	6935	G
83	EC	6936	G
83	EC	6940	U
83	EC	6942	A
83	EC	6943	A
83	EC	6944	U
83	EC	6945	U
83	EC	6948	U
83	EC	6951	C
83	EC	6956	A
83	EC	6957	A

All (50) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	A	103	A
1	A	139	C
1	A	240	U
1	A	501	U
1	A	503	G
1	A	555	A
1	A	571	G
1	A	794	U
1	A	829	A
1	A	830	U

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Mol	Chain	Res	Type
1	A	986	G
1	A	1051	G
1	A	1081	A
1	A	1113	A
1	A	1344	A
1	A	1615	C
1	A	1696	G
1	A	1761	U
2	B	65	A
2	B	169	U
2	B	406	G
2	B	518	G
2	B	547	G
2	B	637	C
2	B	780	A
2	B	1103	A
2	B	1218	U
2	B	1287	A
2	B	1307	G
2	B	1329	U
2	B	1352	A
2	B	1481	A
2	B	1556	C
2	B	2101	C
2	B	2208	A
2	B	2501	U
2	B	2513	U
2	B	2525	G
2	B	2541	U
2	B	3056	U
2	B	3121	U
2	B	3218	A
2	B	3228	C
2	B	3242	G
2	B	3335	A
3	C	85	G
3	C	131	A
83	EC	6896	A
83	EC	6920	C
83	EC	6935	G

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

1 non-standard protein/DNA/RNA residue is modelled in this entry.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\# Z  > 2$	Counts	RMSZ	$\# Z  > 2$
82	DDE	DC	699	82	13,20,21	1.75	2 (15%)	12,28,30	2.44	4 (33%)

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
82	DDE	DC	699	82	-	0/19/21/23	0/1/1/1

All (2) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
82	DC	699	DDE	OAG-CBI	2.04	1.27	1.23
82	DC	699	DDE	CBW-CBI	4.80	1.61	1.53

All (4) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
82	DC	699	DDE	CAU-CBW-CBI	-5.15	100.34	110.72
82	DC	699	DDE	CG-CD2-NE2	-2.05	104.67	109.20
82	DC	699	DDE	OAG-CBI-NAD	2.58	127.32	123.06
82	DC	699	DDE	CAU-CAT-CE1	5.25	140.92	112.58

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

1 monomer is involved in 3 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
82	DC	699	DDE	3	0

## 5.5 Carbohydrates [i](#)

There are no carbohydrates in this entry.

## 5.6 Ligand geometry [i](#)

Of 3 ligands modelled in this entry, 1 is monoatomic - leaving 2 for Mogul analysis.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\# Z  > 2$	Counts	RMSZ	$\# Z  > 2$
84	GDP	DC	901	85	24,30,30	1.92	6 (25%)	26,47,47	2.12	7 (26%)
86	SO1	DC	903	-	36,39,39	2.80	18 (50%)	36,64,64	1.63	8 (22%)

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
84	GDP	DC	901	85	-	0/12/32/32	0/3/3/3
86	SO1	DC	903	-	-	0/15/104/104	0/2/5/5

All (24) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
86	DC	903	SO1	O56-C52	-4.42	1.30	1.41
86	DC	903	SO1	C24-C18	2.06	1.59	1.54
86	DC	903	SO1	C53-C54	2.11	1.57	1.52
84	DC	901	GDP	PB-O3B	2.27	1.62	1.54
86	DC	903	SO1	C52-C53	2.49	1.59	1.52
86	DC	903	SO1	C3-C9	2.64	1.62	1.56
84	DC	901	GDP	C2-N1	2.65	1.40	1.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
86	DC	903	SO1	C8-C2	2.84	1.58	1.53
86	DC	903	SO1	C4-C13	2.85	1.61	1.54
86	DC	903	SO1	C10-C3	2.94	1.60	1.55
86	DC	903	SO1	C12-C4	3.03	1.61	1.54
84	DC	901	GDP	PA-O1A	3.11	1.62	1.51
84	DC	901	GDP	O4'-C1'	3.36	1.46	1.41
86	DC	903	SO1	C7-C2	3.57	1.59	1.54
86	DC	903	SO1	C10-C6	3.60	1.60	1.53
84	DC	901	GDP	PB-O1B	3.60	1.62	1.50
86	DC	903	SO1	C55-C56	3.64	1.59	1.52
86	DC	903	SO1	O17-C52	3.75	1.47	1.40
86	DC	903	SO1	C3-C11	3.98	1.58	1.51
84	DC	901	GDP	C6-N1	4.09	1.40	1.33
86	DC	903	SO1	C12-C6	4.11	1.63	1.53
86	DC	903	SO1	C3-C1	4.72	1.66	1.57
86	DC	903	SO1	C1-C5	5.35	1.60	1.50
86	DC	903	SO1	C1-C4	6.37	1.67	1.55

All (15) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
84	DC	901	GDP	N3-C2-N1	-5.84	119.62	127.56
84	DC	901	GDP	C5-C6-N1	-4.22	118.01	123.52
86	DC	903	SO1	C7-C2-C8	-3.16	104.45	110.16
86	DC	903	SO1	C18-C9-C16	-3.08	99.09	103.42
86	DC	903	SO1	C12-C6-C10	-2.58	103.23	107.47
84	DC	901	GDP	C6-C5-C4	-2.33	118.20	120.86
86	DC	903	SO1	C65-O64-C55	-2.27	108.22	114.58
86	DC	903	SO1	C61-C56-C55	-2.24	109.69	113.38
84	DC	901	GDP	O5'-PA-O1A	-2.24	100.06	109.21
86	DC	903	SO1	C10-C6-C2	2.18	108.29	103.68
84	DC	901	GDP	N2-C2-N1	2.29	120.97	117.20
84	DC	901	GDP	O2A-PA-O1A	2.68	126.50	112.56
86	DC	903	SO1	C1-C4-C13	3.03	121.92	118.52
86	DC	903	SO1	C25-C22-C24	4.56	128.70	113.33
84	DC	901	GDP	C6-N1-C2	5.17	121.94	115.88

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

2 monomers are involved in 7 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
84	DC	901	GDP	4	0
86	DC	903	SO1	3	0

## 5.7 Other polymers [i](#)

There are no such residues in this entry.

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

There are no chain breaks in this entry.