



Full wwPDB/EMDatabank EM Map/Model Validation Report ⓘ

Sep 3, 2017 – 05:23 PM EDT

PDB ID : 5JUS
EMDB ID: : EMD-6645
Title : Saccharomyces cerevisiae 80S ribosome bound with elongation factor eEF2-GDP-sordarin and Taura Syndrome Virus IRES, Structure III (mid-rotated 40S subunit)
Authors : Abeyrathne, P.; Koh, C.S.; Grant, T.; Grigorieff, N.; Korostelev, A.A.
Deposited on : unknown
Resolution : 4.20 Å(reported)

This is a Full wwPDB/EMDatabank EM Map/Model Validation Report
for a publicly released PDB/EMDB entry.

We welcome your comments at validation@mail.wwpdb.org
A user guide is available at
<http://wwpdb.org/validation/2016/EMValidationReportHelp>
with specific help available everywhere you see the ⓘ symbol.

MolProbity : 4.02b-467
Mogul : 1.7.2 (RC1), CSD as538be (2017)
Percentile statistics : 20161228.v01 (using entries in the PDB archive December 28th 2016)
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et. al. (1996)
Validation Pipeline (wwPDB-VP) : rb-20029824

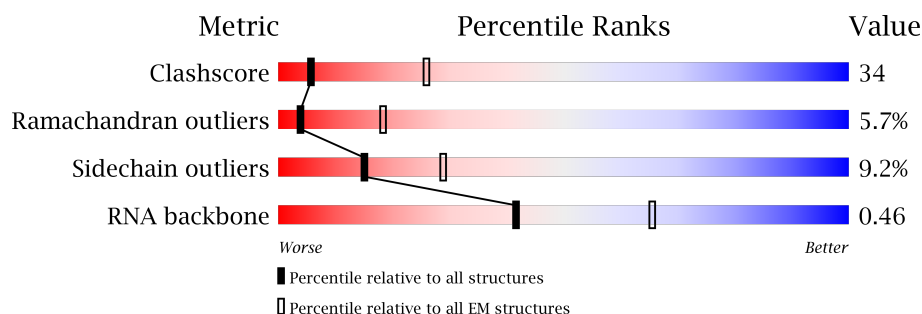
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 4.20 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.






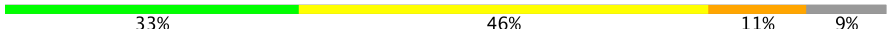
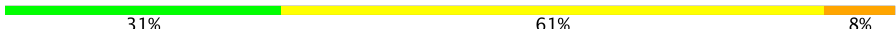
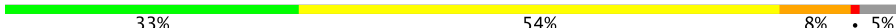
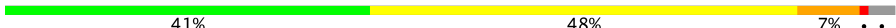


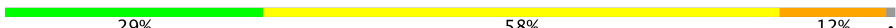
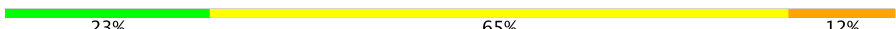
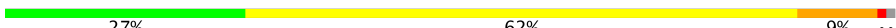




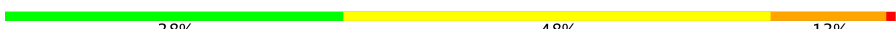
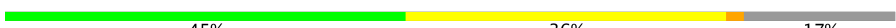


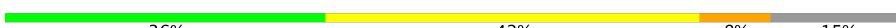

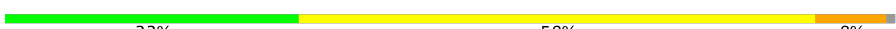


Metric	Whole archive (#Entries)	EM structures (#Entries)
Clashscore	125131	1336
Ramachandran outliers	121729	1120
Sidechain outliers	121581	1026
RNA backbone	3398	335

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 ≥ 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	30% 57% 12% .
2	B	3396	21% 56% 19% . .
3	C	158	20% 62% 18% .
4	D	121	26% 63% 11% .
5	E	217	30% 40% 8% 21%
6	F	254	26% 62% 10% ..
7	G	387	29% 61% 9%
8	H	362	34% 56% 9% .


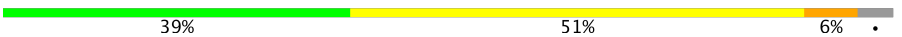



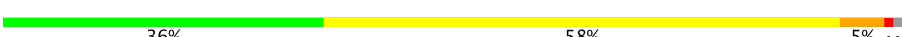
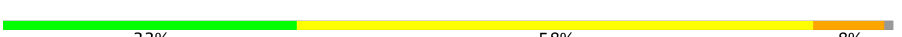
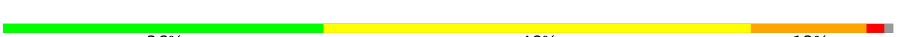





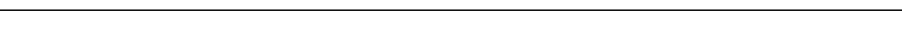
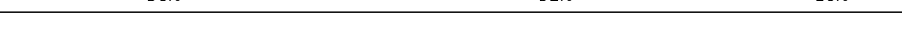
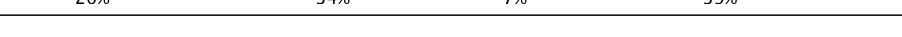

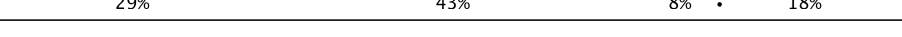

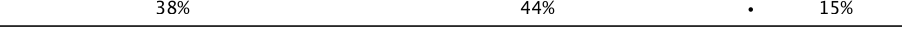


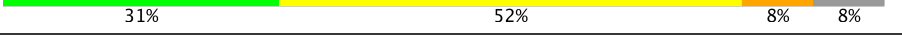


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Mol	Chain	Length	Quality of chain
9	I	297	
10	J	176	
11	K	244	
12	L	256	
13	M	191	
14	N	221	
15	O	174	
16	P	165	
17	Q	199	
18	R	138	
19	S	204	
20	T	199	
21	U	184	
22	V	186	
23	W	189	
24	X	172	
25	Y	160	
26	Z	121	
27	AA	137	
28	BA	155	
29	CA	142	
30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


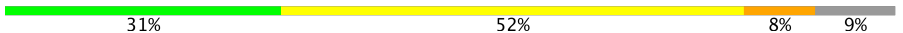
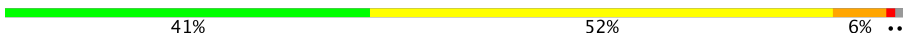



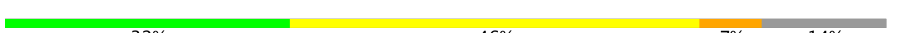




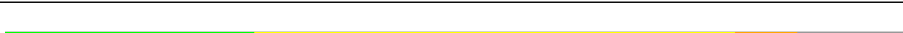













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Mol	Chain	Length	Quality of chain
34	HA	105	
35	IA	113	
36	JA	130	
37	KA	107	
38	LA	121	
39	MA	120	
40	NA	100	
41	OA	88	
42	PA	78	
43	QA	51	
44	RA	128	
45	SA	25	
46	TA	106	
47	UA	92	
48	VA	312	
49	WA	319	
50	XA	252	
51	YA	255	
52	ZA	254	
53	AB	240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

There are 86 unique types of molecules in this entry. The entry contains 212680 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
			36760	16335	6359	12285	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		0	0
			856	428	214	214			

- 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		0	0
			508	254	127	127			

- 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	0	0
			388	194	97	97		

- 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		

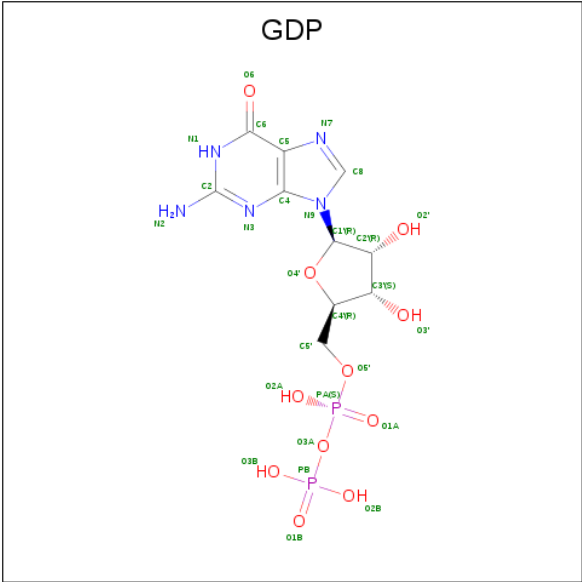
- Molecule 82 is a protein called yeast eEF2.

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
			4129	1839	725	1367	198		

- Molecule 84 is GUANOSINE-5'-DIPHOSPHATE (three-letter code: GDP) (formula: C₁₀H₁₅N₅O₁₁P₂).

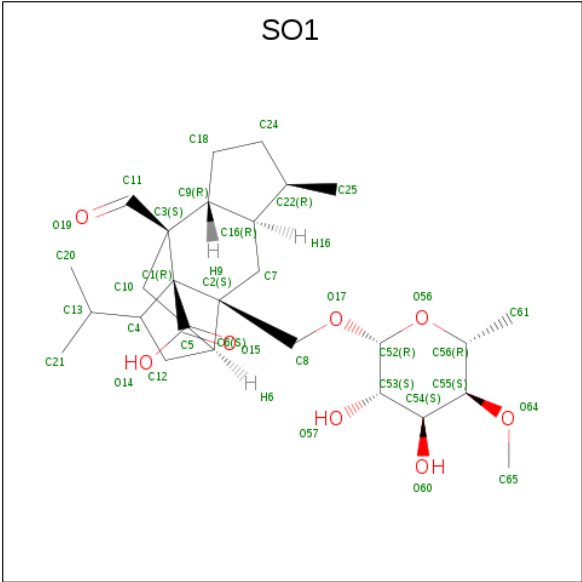


Mol	Chain	Residues	Atoms					AltConf
84	DC	1	Total	C	N	O	P	0
			28	10	5	11	2	

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

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

- Molecule 86 is [1R-(1.ALPHA.,3A.BETA.,4.BETA.,4A.BETA.,7.BETA.,7A.ALPHA.,8A.B ETA.)]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-M ETHANO-S-INDACENE-3A(1H)-CARBOXYLIC ACID (three-letter code: SO1) (formula: C₂₇H₄₂O₈).

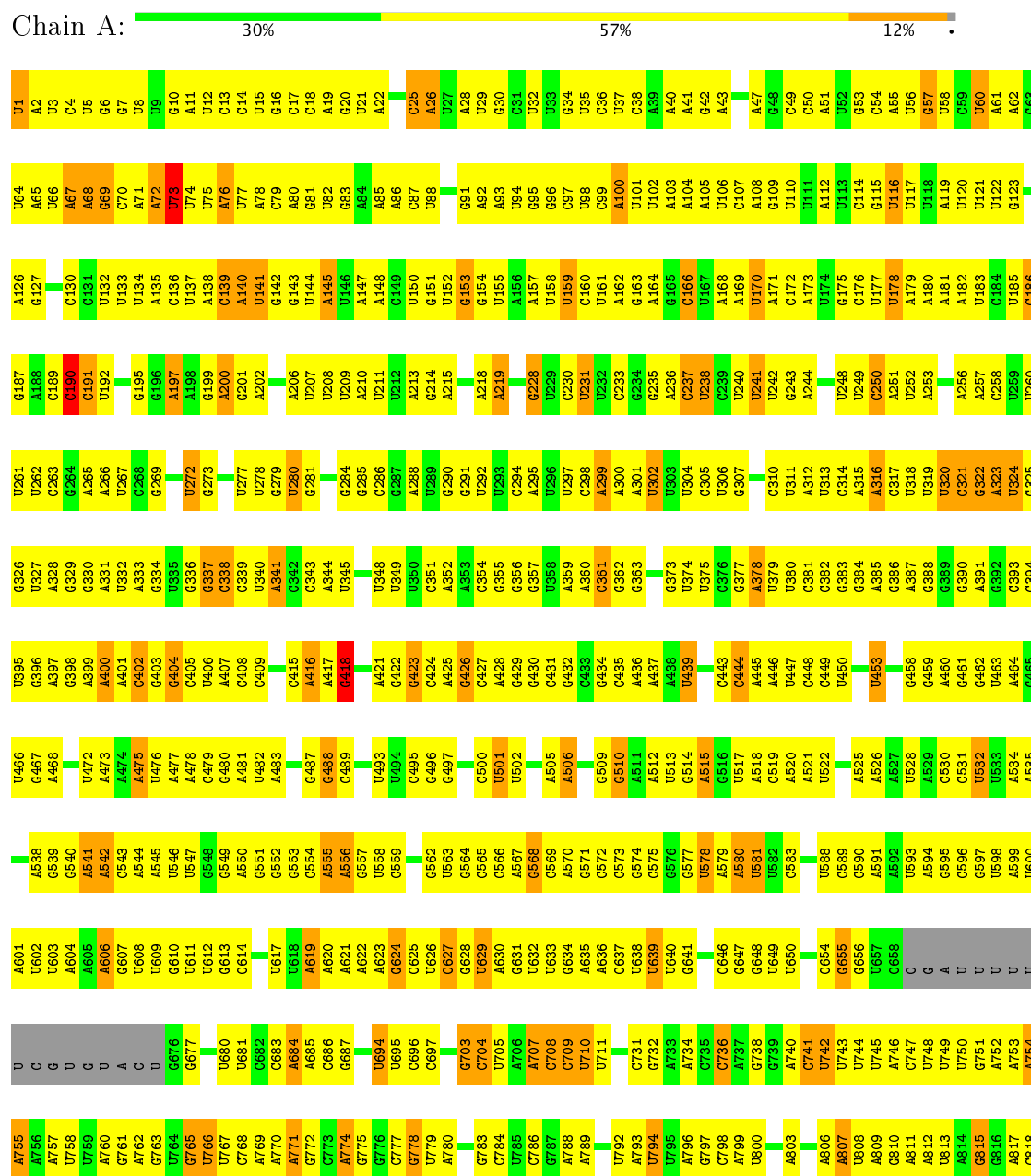


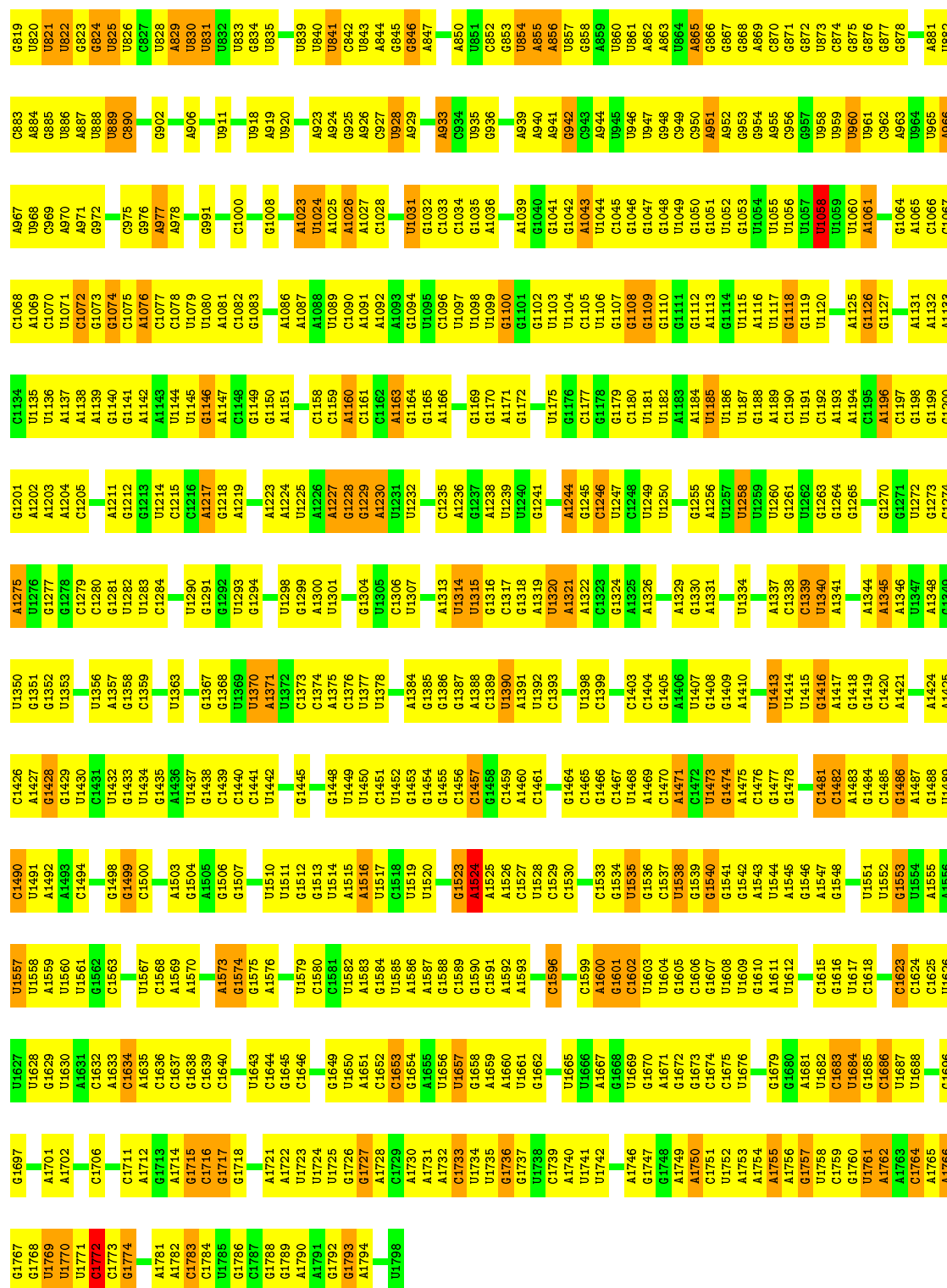
Mol	Chain	Residues	Atoms			AltConf
86	DC	1	Total	C	O	0
			35	27	8	

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 the various outlier classes 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





- Molecule 2: 25S ribosomal RNA

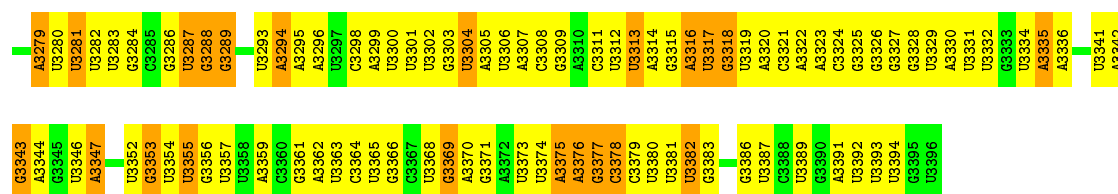
Chain B: 21% 56% 19% . .



U1109	G1045	A973	A913	G853	G727	U654	G600	U536	G	A396	A327	C259	U194	G125	A65
U1110	A1046	G974	A914	G854	G728	A655	A603	A537	U	A397	U328	U259	U195	U126	A66
U1111	A1047	G975	A915	G855	G729	A656	A604	A538	G	A398	U329	U260	G197	G127	A67
U1112	A1048	U976	G916	G856	C730	C667	G603	G539	G	A399	U329	C263	G198	G128	C68
U1113	G1049	C977	G917	G857	U731	G668	C606	G542	U	G400	G335	A268	A199	U129	C69
U1114	U1050	G978	C918	G858	C732	U669	U607	C546	A	U401	A336	G269	C200	A130	A70
U1115	U1051	U979	U919	G859	C733	C670	A607	C547	A	A402	G337	U270	C201	C131	A71
U1116	U1052	A980	A920	G860	C734	U671	A608	G548	G	C403	A338	G271	A202	C132	C72
U1117	U1053	U981	A921	G861	C735	U672	G609	G549	G	C404	A339	C272	G202	U133	C73
U1118	A1054	C982	U922	U862	U736	U673	G610	U549	G	G405	C340	G273	U134	U134	G74
U1119	A1055	A983	C923	G863	U737	G674	A611	U550	G	G406	G341	A273	A204	C135	G75
U1120	U1056	G984	G924	G864	A738	C675	U612	A551	A	A407	A342	G274	C205	G136	G76
U1121	A1057	U985	A925	U865	C739	G676	G613	G552	A	A408	U343	G275	C206	G137	A77
U1122	U1058	U986	A926	A866	G740	A677	G614	U553	U	A409	A344	U276	C207	U138	U78
U1123	G1059	U987	C927	G867	U741	U678	U615	A554	C	U410	G345	U277	A208	G139	U79
U1124	U1124	U988	C928	C868	G742	U679	U616	U555	U	U411	G346	U278	A209	C140	G80
U1125	G1063	A989	A929	G869	C743	U680	U617	U556	G	G412	G347	U279	A210	G141	C81
U1126	G1064	U990	G930	G870	A744	U681	U618	U557	G	U413	A348	U280	A211	C142	C82
U1127	A1064	G991	C931	U871	C745	U682	U620	U558	U	U414	A349	G281	A212	G143	U83
U1128	A1065	A992	U932	U872	A746	U683	A621	A559	G	G415	C350	G282	G215	A144	U84
U1129	G1066	G993	A933	C873	A747	U684	A622	U560	G	U416	A351	G283	G216	G145	A85
A1130	U1067	G994	G934	U874	U748	G685	U623	C561	G	G417	G352	A284	G217	C146	G86
A1131	C1068	U995	U935	G875	C749	U686	U624	C562	G	U418	G353	A285	G218	G147	U87
C1132	C1069	A996	A936	A876	G750	U689	U625	U563	G	G421	U354	U286	A219	U149	A88
A1133	U1070	A997	G937	C877	U751	U690	U626	U564	G	A422	U355	G287	G220	A150	A89
G1134	U1071	A998	C938	G878	C753	A691	U627	U565	G	G423	C356	C288	A221	A151	C90
A1135	G1072	U1001	U939	U879	G754	A692	A628	U566	G	G424	U359	A289	A222	U152	G91
A1136	U1073	A1002	G940	G880	A755	A693	U629	U567	G	G425	U360	G290	U223	U153	G92
C1137	U1074	U1003	C941	C881	U756	C694	U630	U568	G	G426	A361	C291	C224	U154	G93
A1138	A1075	U1004	U942	A882	C757	C695	U631	A569	G	G427	U362	U292	C225	G155	G94
G1139	C1076	U1005	U943	C883	U758	C696	G632	A570	G	A428	U363	C293	C226	G156	A95
G1140	U1077	A1006	C944	A884	U759	A697	C633	U571	G	U429	G364	U294	G227	A157	G96
A1143	U1078	U1007	C945	U885	G760	U698	C634	A572	G	U430	U365	A295	U228	G158	G97
U1144	U1081	U1008	U946	C886	A761	A699	G635	C573	G	U431	A366	A296	G230	A159	G98
G1145	U1082	U1009	U947	G887	U762	C700	C636	U574	G	U432	A367	G297	U230	G160	A99
G1146	G1083	C1009	C948	A888	C763	G701	C637	G575	G	G433	U368	U298	G231	G161	A100
G1147	A1084	G1010	C949	C824	U764	C702	C638	G576	G	G434	A369	G300	G232	G162	G101
G1148	A1085	U1011	G950	C825	C765	G703	G639	C577	G	A435	U370	G301	C233	C163	G102
G1149	U1088	C1016	A951	U891	U766	U704	U640	A578	G	A438	U371	G302	G237	A164	G103
A1150	U1089	C1017	A952	U892	U767	A705	C641	G579	G	A439	G372	U305	A238	A165	G104
A1153	U1092	G1018	G953	C893	C768	U706	U642	C580	G	U440	A373	A306	G239	U169	C105
A1154	C1093	G1019	U954	G894	G769	U707	U643	U581	G	U441	A374	A307	U240	G170	A106
C1155	U1094	U1022	U955	A895	G770	A708	G644	U582	G	U442	A375	A308	G241	G171	A107
C1156	U1095	C1023	U956	A896	A771	U710	A645	U583	G	U443	G376	U311	G242	A108	A108
G1157	U1096	A1025	C958	U898	C773	A711	A646	G584	G	U444	A377	U312	G243	G175	G110
A1158	U1097	U1026	C959	U899	G774	U712	C648	A585	G	U445	A378	U313	G244	C176	C111
A1159	G1097	G1029	U960	G900	A775	U713	A649	U586	G	U446	A379	U314	G245	U181	C113
C1160	A1098	A1030	C961	G901	U776	G714	C650	U587	G	C453	U380	U315	U246	U182	C114
G1161	A1099	U1033	A962	G902	U777	A715	G651	A589	G	C	U381	U316	U247	C185	A115
A1162	U1100	U1034	G963	U903	U778	A716	G652	G590	G	C	U382	A317	U248	C186	A116
A1163	G1101	U1035	A964	A904	G779	C717	A653	G591	G	C	U383	A318	U249	U186	U117
G1164	A1102	U1036	A965	U905	A780	G718	C654	A592	G	U	A384	A319	G250	A187	U118
A1165	A1103	U1037	U966	A906	G781	U719	C655	C593	G	U	A385	G320	U251	U188	U119
G1166	A1104	U1038	A967	G907	U782	A720	A656	U594	G	U	G388	C321	A252	U189	G120
U1167	A1105	U1040	G968	G908	A783	G721	U657	G595	G	U	A389	U322	A253	G189	A121
U1168	C1106	U1041	C969	G909	A784	U724	A660	C596	G	U	G390	A323	A254	U190	A122
A1169	C1107	U1042	A970	U885	A785	U725	U661	G597	G	U	G391	A324	G255	U191	A123
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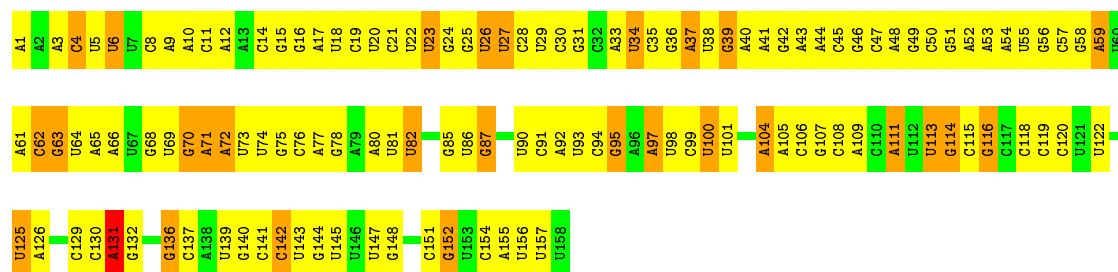
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A2182	C2118	U1880	U1819	A1752	U1616	A1546	G1483	G1422	C1359	C1238	G1172
A2183	A2119	A1881	U1820	G1753	U1629	G1547	U1494	C1423	C1360	C1239	U1173
G2184	A2120	G1882	U1821	G1754	U1630	C1548	U1495	C1424	U1361	C1240	G1174
G2185	G2121	A1883	A1822	C1755	C1631	U1549	G1486	U1425	G1362	U1241	C1175
U2186	G2122	A1884	A1823	C1756	G1631	C1550	G1487	C1426	A1363	U1242	C1176
G2187	G2123	U1885	U1824	A1757	A1632	C1551	G1488	U1427	C1364	G1177	
A2188	G2124	A1886	G1825	C1758	C1633	G1552	A1489	A1428	G1365	A1245	
U2189		A1887	C1826	C1759	G1634	G1553	A1490	G1429	A1366	G1246	G1178
C2192	U2127	U1888	C1827	U1765	G1700	U1554	A1491	U1430	G1367	U1247	U1180
U2193	C2128	U1889	A1828	G1766	G1701	U1555	G1492	U1368	G1307	U1248	U1181
G2194	U2129	G1889	G1829	C1767	U1702	G1556	G1493	A1369	U1309	G1249	U1182
C2195	G2130	U1890	G1830	U1768	U1703	A1557	U1494	G1370	G1310	G1250	C1183
C2196	A2131	U1894	U1831	U1769	A1704	A1558	U1495	G1371	G1311	A1251	A1184
C2197	C2132	A1895	C1832	G1769	U1705	C1562	C1496	C1372	G1312	A1252	C1185
C2198	U2133	A1896	G1833	G1770	A1641	C1563	C1497	C1373	G1313	U1253	G1186
G2199	G2134	G1897	U1834	A1773	A1642	U1564	U1500	U1438	C1314	C1254	C1187
G2200	U2135	U1898	A1835	C1774	C1644	G1565	U1501	G1440	C1315	G1255	U1188
U2201	C2136	G1899	C1836	G1775	U1645	A1566	C1502	G1441	C1316	G1256	C1189
G2202	U2137	A1900	U1837	U1776	G1646	U1567	U1503	U1442	A1318	C1257	U1190
C2203	A2138	G1901	G1838	C1779	G1647	U1568	A1504	G1443	G1379	U1258	C1192
U2204	U2139	G1902	A1839	G1780	A1648	U1569	C1505	G1444	G1380	A1260	A1193
C2205	G2140	U1903	U1840	G1781	A1649	U1570	A1506	G1445	A1381	G1261	G1194
G2206	U2141	G1904	A1841	A1774	G1650	A1571	G1507	U1446	G1382	G1262	A1195
A2207	A2142	G1905	A1842	U1782	U1651	U1572	U1508	G1447	U1383	A1263	
A2208	A2143	G1906	C1843	U1783	U1652	G1573	U1509	U1448	C1323	G1264	C1198
U2209	U2144	C1907	U1844	G1784	G1653	U1574	A1510	A1449	U1324	G1265	C1199
C2210	C2145	A1908	G1845	U1785	G1654	U1575	C1511	G1450	U1325	G1266	A1200
G2211	C2146	G1909	C1846	G1786	G1655	G1576	U1512	U1451	A1326	U1267	C1201
U2212	A2147	U1910	A1847	U1787	U1656	C1577	G1513	U1452	C1327	G1268	A1202
C2213	U2148	A1911	G1848	U1788	A1657	C1578	G1514	A1453	G1328	U1269	A1203
G2214	U2149	U1912	C1849	G1789	G1658	C1579	A1515	A1454	A1329	A1270	A1204
A2215	G2150	A1913	A1850	U1790	U1659	C1580	U1516	U1455	C1331	A1271	U1208
C2216	C2151	G1914	G1851	U1791	C1724	C1581	G1517	A1456	A1332	C1272	G1209
U2217	A2152	U1915	C1852	C1792	G1660	C1582	U1518	A1457	A1333	A1273	U1210
G2218	U2153	G1916	U1853	C1793	G1661	A1583	U1519	U1458	U1334	G1274	U1211
U2219	C2154	C1917	C1854	G1794	G1662	U1584	G1520	C1459	C1335	C1275	A1212
C2220	G2155	U1918	U1855	U1795	C1663	C1585	G1521	A1460	U1336	U1276	G1213
A2221	C2156	U1919	C1856	G1796	G1664	G1586	U1522	A1461	A1337	C1277	U1214
U2222	U2157	U1920	C1857	A1797	C1665	A1587	U1523	U1462	C1338	A1278	U1215
A2223	A2158	A1921	A1858	U1798	G1666	A1588	A1524	G1463	C1339	C1279	
G2224	U2159	G1922	A1859	C1799	A1667	A1589	G1525	G1464	A1401	G1280	U1218
U2225	G2160	C1923	G1860	A1800	G1668	G1590	U1526	A1465	C1402	G1281	C1219
C2226	A2162	U1924	G1861	U1801	C1669	G1591	C1527	G1466	C1403	C1282	A1220
G2227	U2163	U1925	U1862	C1802	C1671	G1592	G1528	A1467	G1404	C1283	A1221
A2228	C2164	C1926	A1863	C1803	U1672	A1593	A1529	A1468	A1405	G1284	G1222
U2229	A2164	G1927	A1864	A1804	U1673	U1594	U1529	A1469	A1406	G1285	A1223
C2230	G2165	C1928	C1865	C1805	C1674	U1595	C1532	U1470	A1407	A1286	A1224
G2231	A2166	G1929	C1866	C1806	U1675	C1596	U1533	U1471	G1408	U1287	A1225
A2232	A2167	U1930	A1867	G1807	U1676	C1597	U1534	U1472	G1409	U1288	
C2233	U2168	U1931	G1868	U1808	G1678	U1598	A1535	U1473	U1410	G1289	G1230
U2234	A2169	A1932	C1869	U1809	U1680	A1602	U1536	A1474	C1411	A1290	A1231
G2235	U2170	G1933	U1870	G1742	U1681	G1603	A1537	A1475	U1351	A1291	C1232
C2236	C2171	U1934	U1871	G1743	A1683	G1604	U1538	G1476	U1352	U1292	G1233
U2237	G2172	G1935	C1872	C1744	U1684	A1605	A1539	A1477	U1353	U1293	A1234
A2238	U2173	A1936		U1745	C1685	U1606	U1540	C1478	G1354	G1294	U1235
U2239	C2174	U1937	G1875	A1814	U1686	U1607	U1541	U1479	A1418	G1295	
A2240	U2175	U1938	U1876	U1815	U1687	A1612	G1544	U1480	U1355	U1296	
C2241	U2176	G1939	U1877	A1816	U1688			A1481	U1356	C1297	G1236
A2242	G2177	G1940	G1878	G1817	U1689				C1420		

C3212	G3147	G3083	U3020	U2954	U2891	G2831	G2770	A2704	U2641	G2576	U2510	A2439	G2376	U2314	C2245
A3213	U3148	C3084	A3021	C2955	A2892	C2832	U2771	A2705	A2642	C2577	A2511	G2440	G2377	G2315	G2246
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G3220	U3155	A3091	G3031	U2962	C2900	G2839	C2778	U2718	U2649	U2588	A2519	G2451	G2386	C2322	A2256
A3223	C3159	C3092	A3032	G2964	G2901	G2841	A2779	U2719	G2651	G2589	G2522	G2452	A2386	A2324	G2261
G3224	U3160	U2965	A3033	G2965	U2905	U2842	U2782	U2722	U2652	A2590	G2523	U2455	A2389	U2327	A2262
C3225	C3161	A3094	C3034	A2967	C2906	U2843	U2783	U2723	C2653	A2591	A2524	G2457	G2391	U2328	
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U3231	A3167	A3103	A3040	U2975	C2911	C2849	C2788	G2728	G2660	C2600	G2530	G2463	C2397	U2340	A2271
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A3245	A3180	C3115	G3052	U2989	G2922	U2861	G2800	G2740	G2672	U2611	U2542	C2476	G2413	U2352	U2289
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G3255	A3187	A3122	G3059	U2996	C2931	U2868	U2807	U2747	U2681	G2618	G2549	A2484	C2416	C2353	A2291
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C3262	U3131	U3131	U3066	G3003	U2938	U2875	G2814	G2754	U2688	C2625	U2556	C2492	C2422	C2361	U2298
G3263	G3197	C3132	C3067	C3004	G2939	C2876	G2815	C2755	A2689	A2626	U2558	C2493	U2423	A2361	A2299
C3264	U3198	C3133	U3068	A3005	A2940	G2877	G2816	C2756	G2690	C2627	A2561	C2495	A2424	C2362	A2300
G3265	G3199	A3134	G3069	A3006	A2941	U2878	A2817	U2757	A2691	C2628	A2562	C2496	G2425	A2363	U2301
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A3267	G3202	G3136	C3072	A3008	G2943	U2880	A2819	U2759	C2693	C2630	G2563	U2498	U2427	C2365	A2303
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G3276	U3210	A3145	G3081	G2952	G2952	U2889	U2828	U2768	A2702	C2639	G2574	C2507	U2435	C2374	A2312
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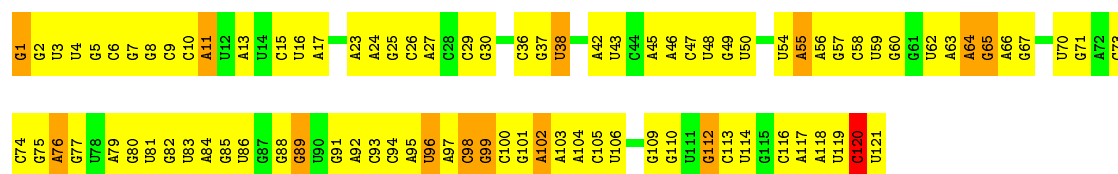
• Molecule 3: 5.8S ribosomal RNA

Chain C: 20% 62% 18%



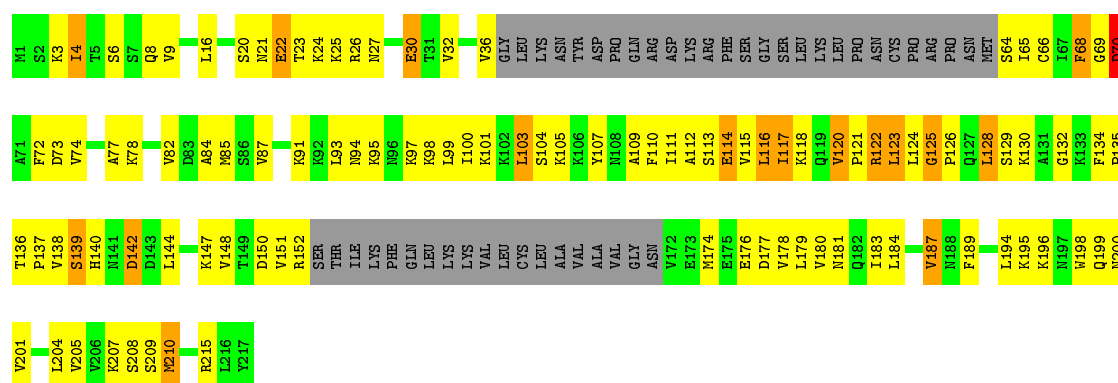
• Molecule 4: 5S ribosomal RNA

Chain D: 26% 63% 11%



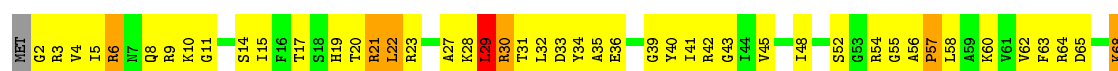
• Molecule 5: uL1 (yeast L1)

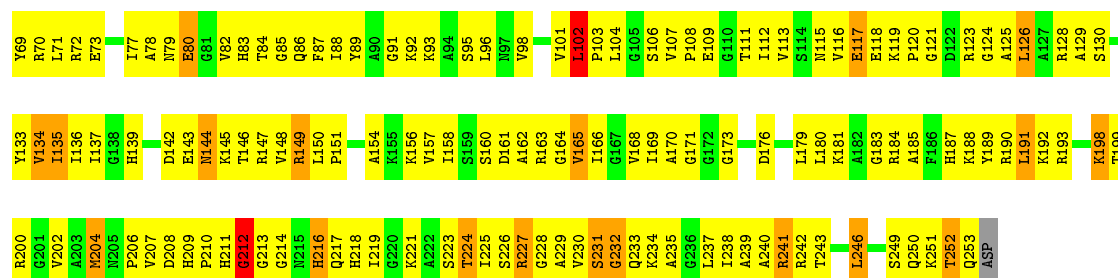
Chain E: 30% 40% 8% 21%



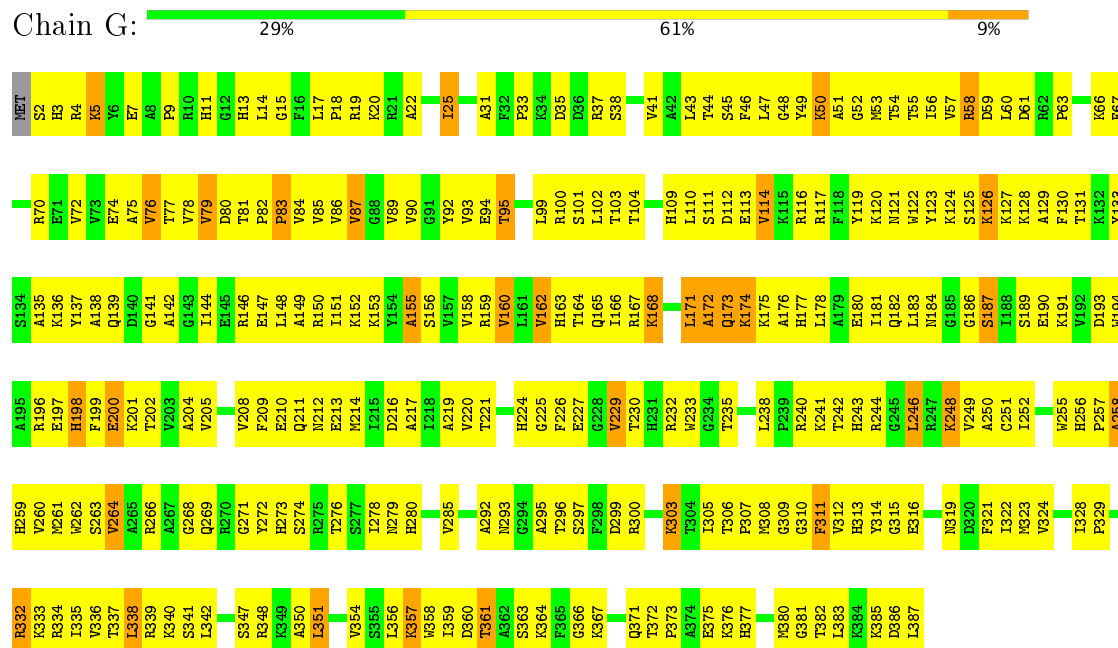
• Molecule 6: uL2 (yeast L2)

Chain F: 26% 62% 10%

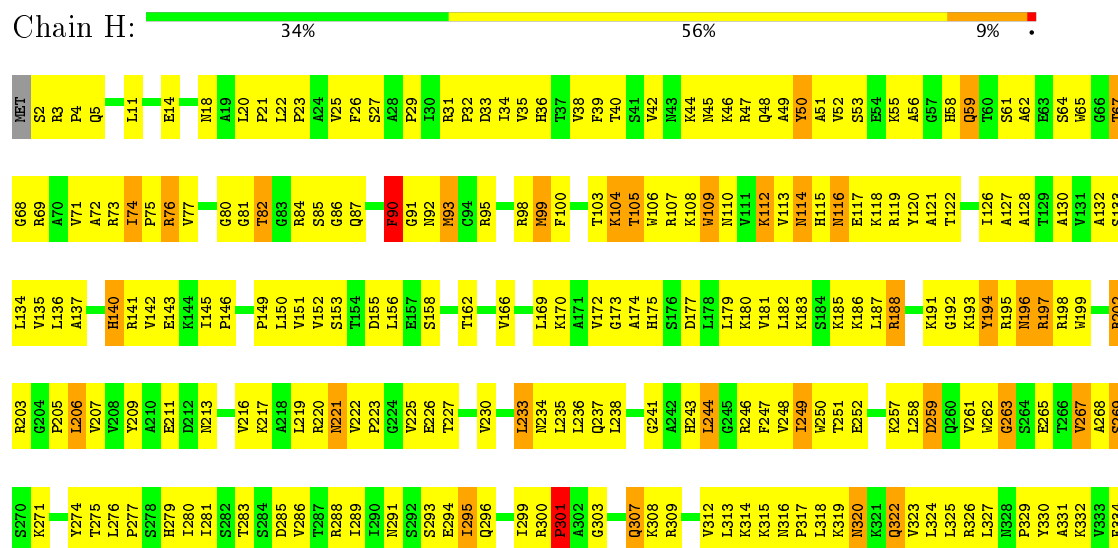




• Molecule 7: uL3 (yeast L3)



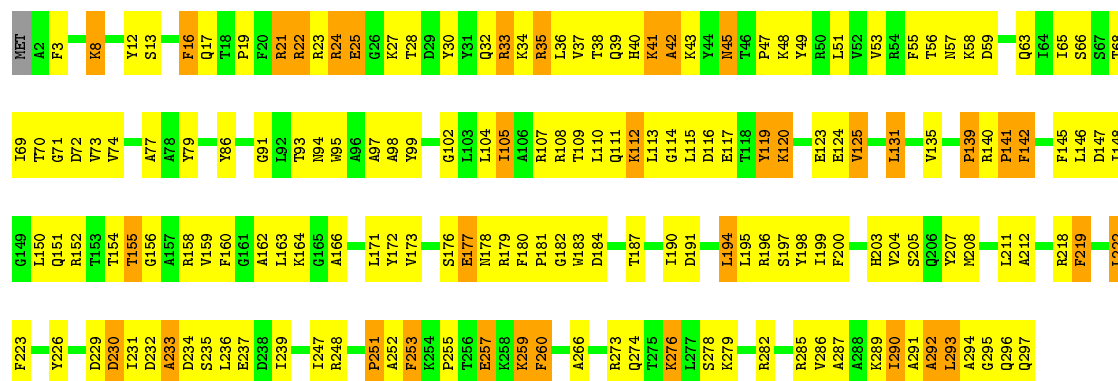
• Molecule 8: uL4 (yeast L4)





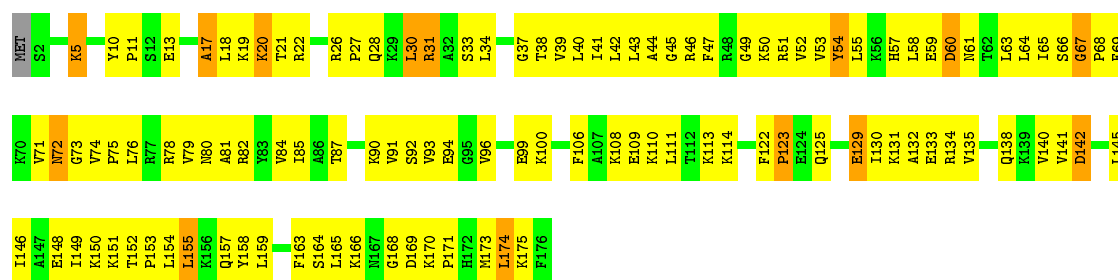
• Molecule 9: uL18 (yeast L5)

Chain I: 42% 46% 12%



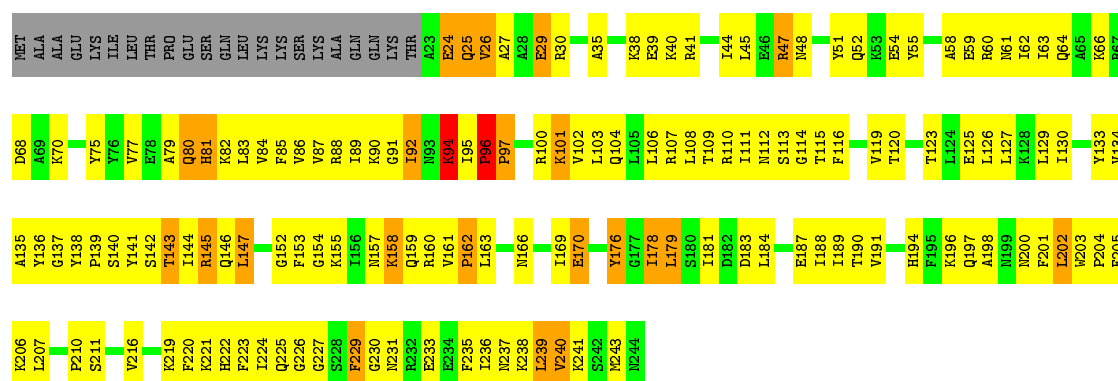
• Molecule 10: eL6 (yeast L6)

Chain J: 35% 57% 8%



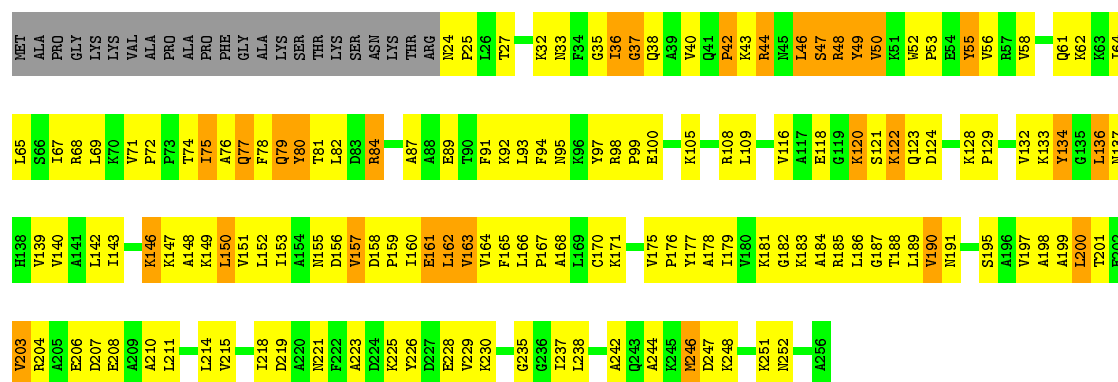
• Molecule 11: uL30 (yeast L7)

Chain K: 30% 51% 9% 9%



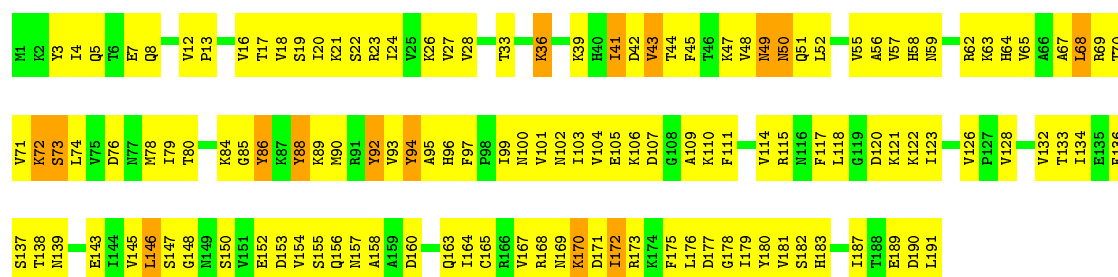
• Molecule 12: eL8 (yeast L8)

Chain L: 33% 46% 11% 9%



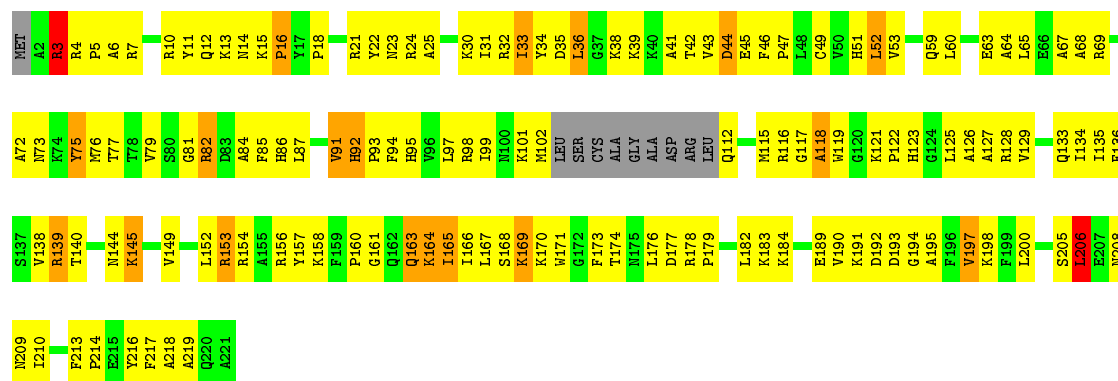
• Molecule 13: uL6 (yeast L9)

Chain M: 31% 61% 8%



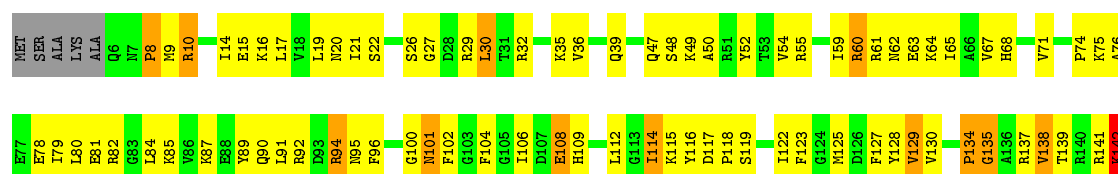
• Molecule 14: uL16 (yeast L10)

Chain N: 33% 54% 8% 5%



• Molecule 15: uL5 (yeast L11)

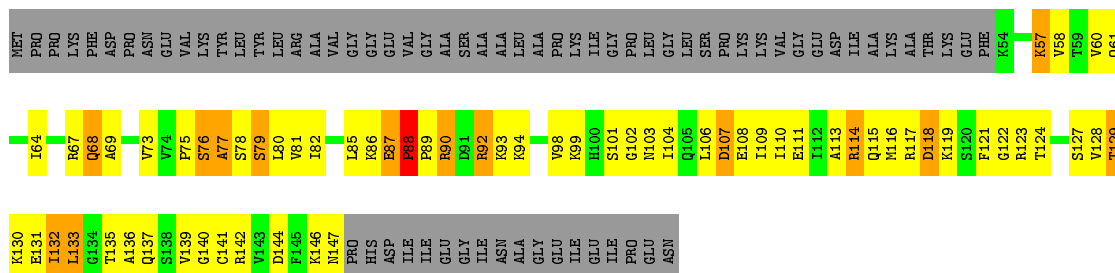
Chain O: 41% 48% 7%





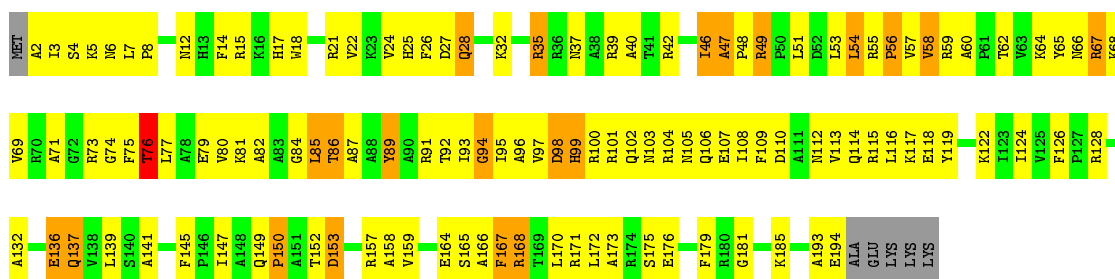
• Molecule 16: uL11 (yeast L12)

Chain P: 17% 31% 8% 43%



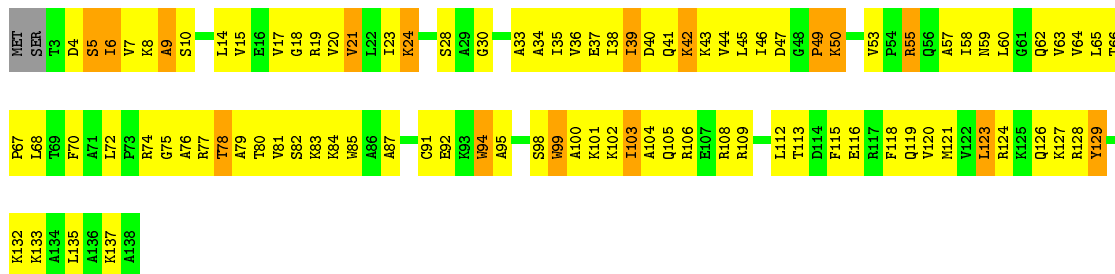
• Molecule 17: eL13 (yeast L13)

Chain Q: 36% 50% 11%



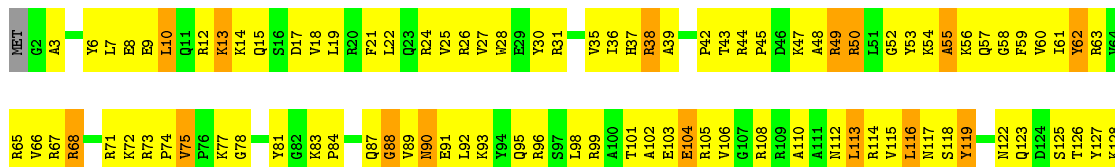
• Molecule 18: eL14 (yeast L14)

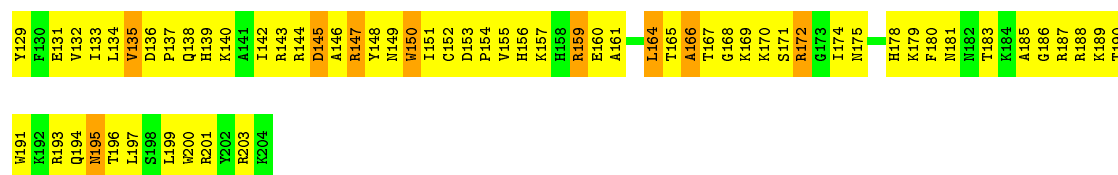
Chain R: 29% 58% 12%



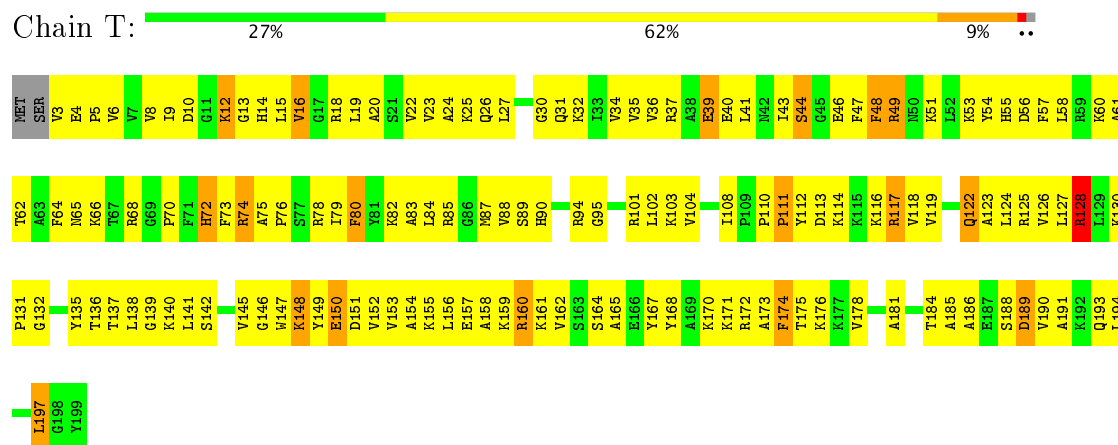
• Molecule 19: eL15 (yeast L15)

Chain S: 23% 65% 12%





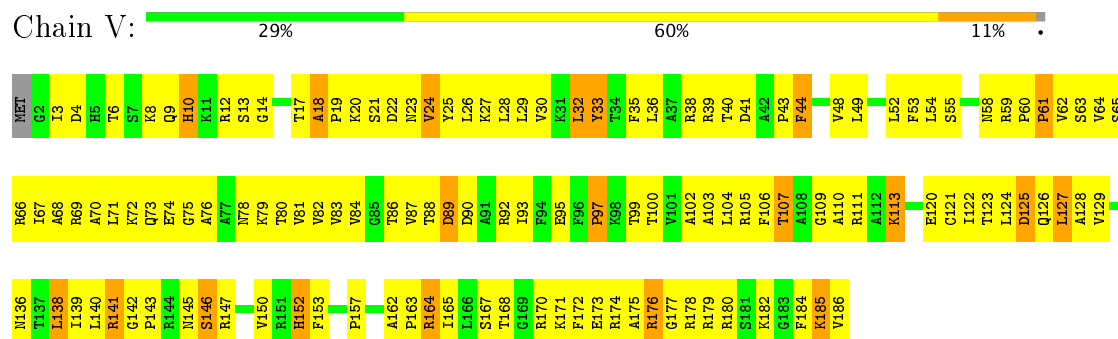
• Molecule 20: uL13 (yeast L16)



• Molecule 21: uL22 (yeast L17)

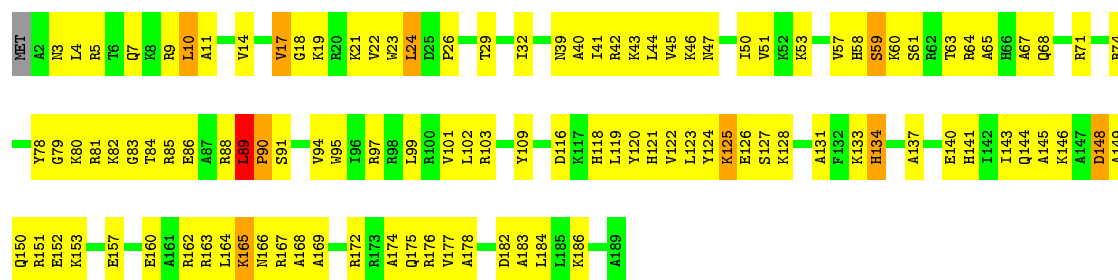


• Molecule 22: eL18 (yeast L18)



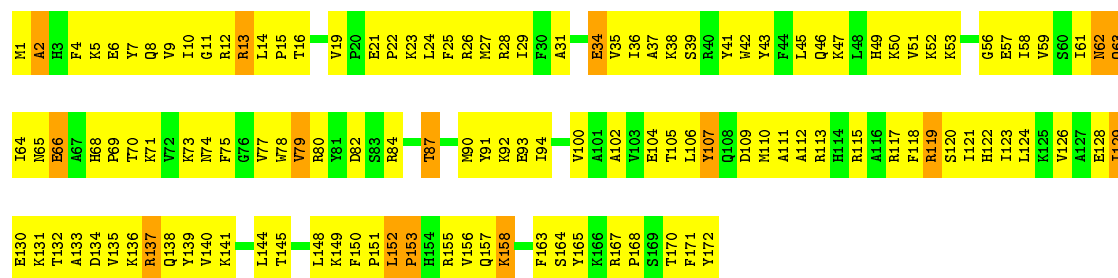
• Molecule 23: eL19 (yeast L19)





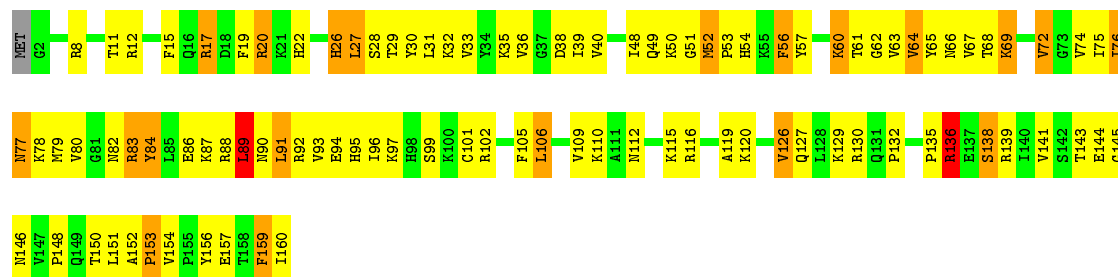
• Molecule 24: eL20 (yeast L20)

Chain X: 26% 65% 9%



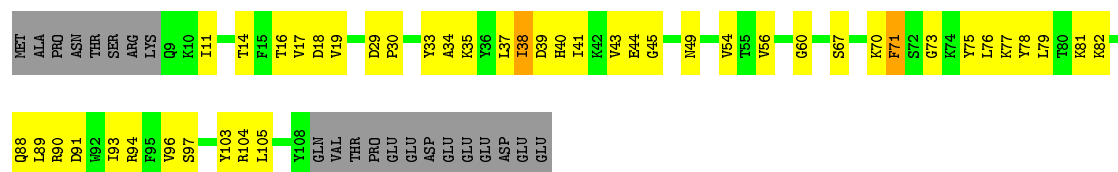
• Molecule 25: eL21 (yeast L21)

Chain Y: 38% 48% 13% ..



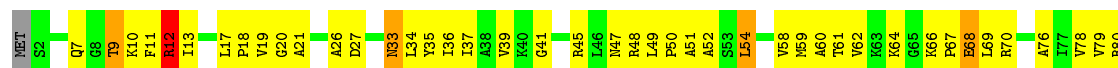
• Molecule 26: eL22 (yeast L22)

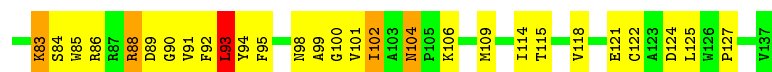
Chain Z: 45% 36% 17%



• Molecule 27: uL14 (yeast L23)

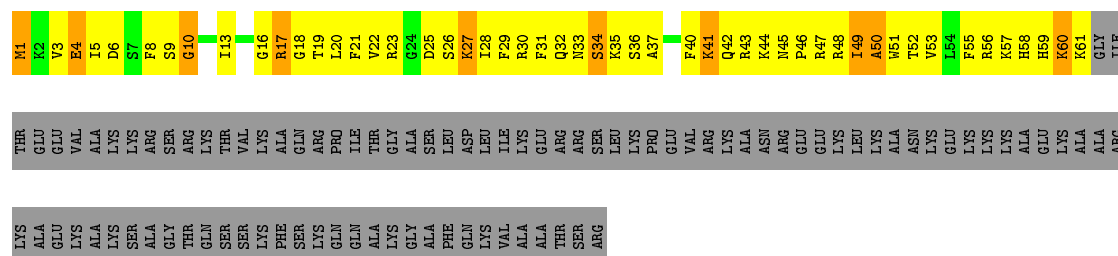
Chain AA: 47% 45% 6% ..





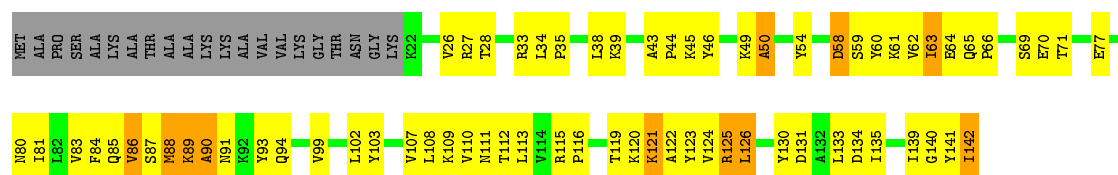
• Molecule 28: eL24 (yeast L24)

Chain BA: 6% 26% 6% 61%



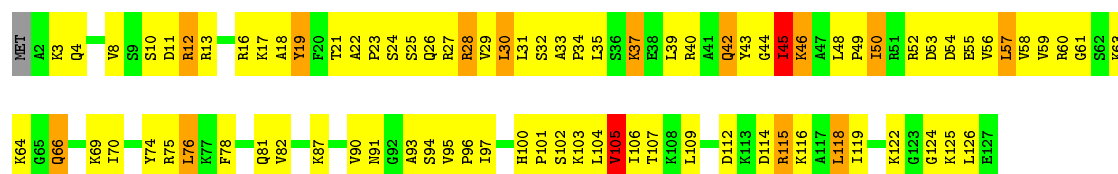
• Molecule 29: uL23 (yeast L25)

Chain CA: 36% 42% 8% 15%



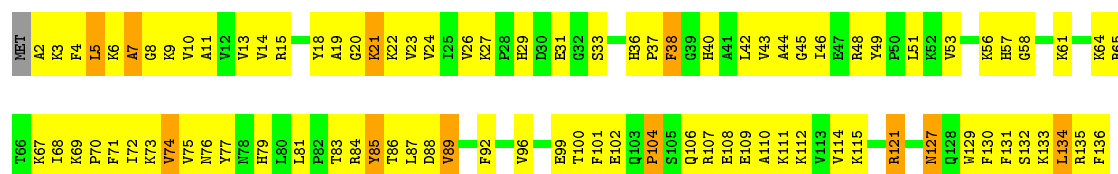
• Molecule 30: uL24 (yeast L26)

Chain DA: 32% 55% 10% ..



• Molecule 31: eL27 (yeast L27)

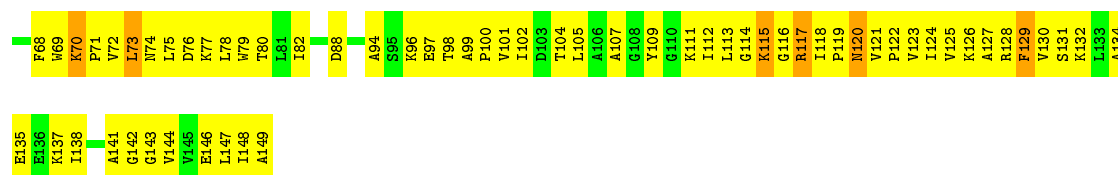
Chain EA: 33% 58% 8% .



• Molecule 32: uL15 (yeast L28)

Chain FA: 27% 61% 11% .





- Molecule 33: eL29 (yeast L29)

Chain GA: 49% 46%



- Molecule 34: eL30 (yeast L30)

Chain HA: 29% 60% 8%



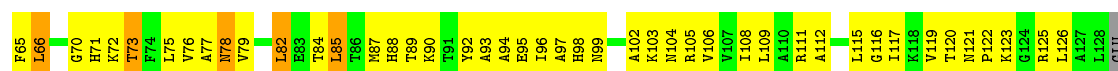
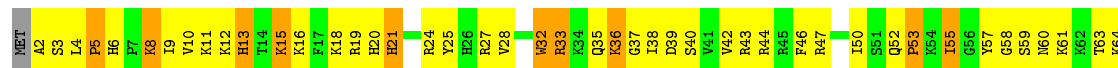
- Molecule 35: eL31 (yeast L31)

Chain IA: 39% 51% 6%



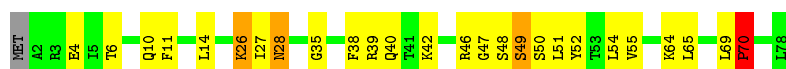
- Molecule 36: eL32 (yeast L32)

Chain JA: 28% 58% 12%



- Molecule 37: eL33 (yeast L33)

Chain KA: 33% 59% 7%



- Molecule 43: eL39 (yeast L39)

Chain QA: 39% 47% 12%



- Molecule 44: eL40 (yeast L40)

Chain RA: 15% 21% 59%



- Molecule 45: eL41 (yeast L41)

Chain SA: 68% 20% 12%



- Molecule 46: eL42 (yeast L42)

Chain TA: 21% 70% 8%

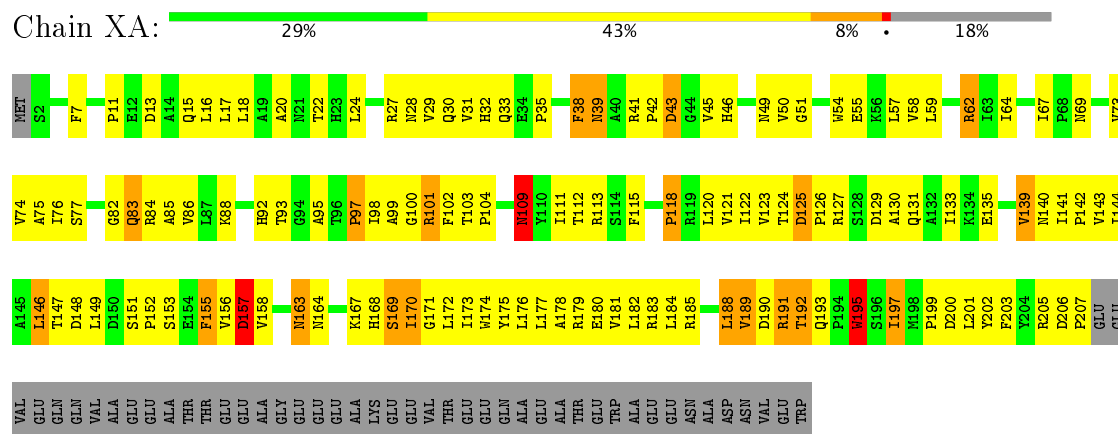


- Molecule 47: eL43 (yeast L43)

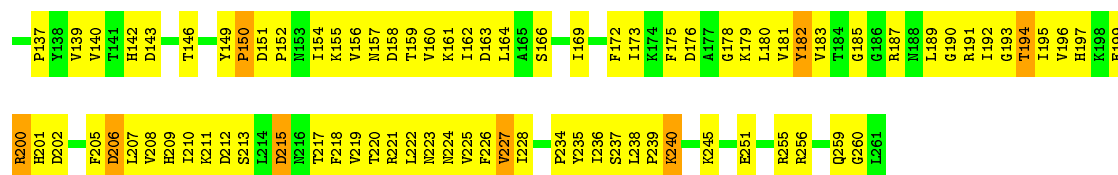
Chain UA: 36% 52% 10%



- Molecule 48: uL10 (yeast P0)

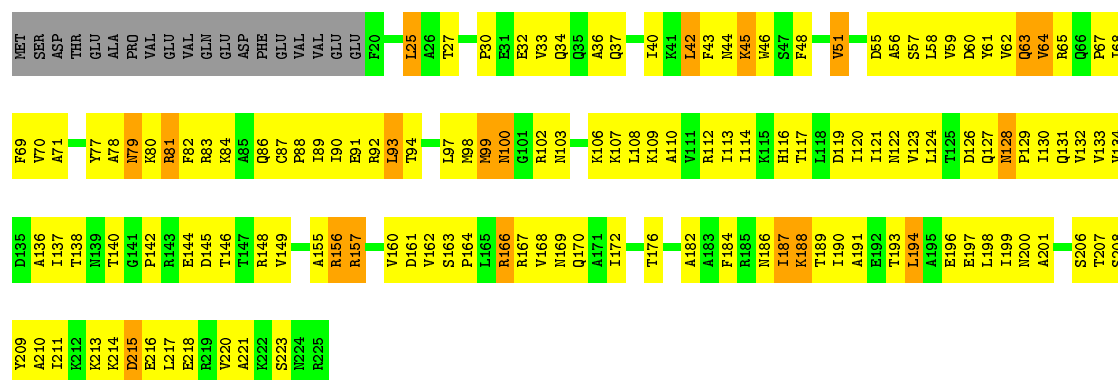


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| Q67 | R68 | H69 | V70 | K71 | V72 | D73 | G74 | K75 | V76 | K77 | P15 | H16 | H17 | M18 | L19 | L20 | D21 | K22 | L23 | C26 | Y27 | A28 | P29 | R30 | P31 | S32 | A33 | G34 | P35 | H36 | K37 | L38 | R39 | E40 | S41 | L42 | P43 | L44 | I45 | V46 | F47 | L48 | R49 | I50 | R51 | L52 | K53 | G54 | A55 | L56 | V61 | K62 | A63 | I64 | L65 | V66 | K67 | L68 | R69 | I70 | K71 | L72 | P73 | H74 | M75 | L76 | D77 | K78 | L79 | C80 | Y81 | A82 | P83 | R84 | P85 | S86 | A87 | G88 | P89 | E90 | S91 | L92 | P93 | L94 | I95 | V96 | F97 | L98 | R99 | I00 | R01 | L02 | K03 | G04 | A05 | L06 | V07 | F08 | L09 | R10 | I11 | E18 | S120 | I121 | K122 | L123 | L126 | K127 | K128 | V129 | Q130 | L131 | G132 | K133 | L134 | R135 | I136 | E137 | S138 | I139 | K140 | L141 | V142 | F143 | L144 | R145 | I146 | E147 | S148 | I149 | K150 | L151 | V152 | F153 | L154 | R155 | I156 | E157 | S158 | I159 | K160 | L161 | V162 | F163 | L164 | R165 | I166 | E167 | S168 | I169 | K170 | L171 | V172 | F173 | L174 | R175 | I176 | E177 | S178 | I179 | K180 | L181 | V182 | F183 | L184 | R185 | I186 | E187 | S188 | I189 | K190 | L191 | V192 | F193 | L194 | R195 | I196 | E197 | S198 | I199 | K200 | L201 | V202 | F203 | L204 | R205 | I206 | E207 | S208 | I209 | K210 | L211 | V212 | F213 | L214 | R215 | I216 | E217 | S218 | I219 | K220 | L221 | V222 | F223 | L224 | R225 | I226 | E227 | S228 | I229 | K230 | L231 | V232 | F233 | L234 | R235 | I236 | E237 | S238 | I239 | K240 | L241 | V242 | F243 | L244 | R245 | I246 | E247 | S248 | I249 | K250 | L251 | V252 | F253 | L254 | R255 | I256 | E257 | S258 | I259 | K260 | L261 | V262 | F263 | L264 | R265 | I266 | E267 | S268 | I269 | K270 | L271 | V272 | F273 | L274 | R275 | I276 | E277 | S278 | I279 | K280 | L281 | V282 | F283 | L284 | R285 | I286 | E287 | S288 | I289 | K290 | L291 | V292 | F293 | L294 | R295 | I296 | E297 | S298 | I299 | K300 | L301 | V302 | F303 | L304 | R305 | I306 | E307 | S308 | I309 | K310 | L311 | V312 | F313 | L314 | R315 | I316 | E317 | S318 | I319 | K320 | L321 | V322 | F323 | L324 | R325 | I326 | E327 | S328 | I329 | K330 | L331 | V332 | F333 | L334 | R335 | I336 | E337 | S338 | I339 | K340 | L341 | V342 | F343 | L344 | R345 | I346 | E347 | S348 | I349 | K350 | L351 | V352 | F353 | L354 | R355 | I356 | E357 | S358 | I359 | K360 | L361 | V362 | F363 | L364 | R365 | I366 | E367 | S368 | I369 | K370 | L371 | V372 | F373 | L374 | R375 | I376 | E377 | S378 | I379 | K380 | L381 | V382 | F383 | L384 | R385 | I386 | E387 | S388 | I389 | K390 | L391 | V392 | F393 | L394 | R395 | I396 | E397 | S398 | I399 | K400 | L401 | V402 | F403 | L404 | R405 | I406 | E407 | S408 | I409 | K410 | L411 | V412 | F413 | L414 | R415 | I416 | E417 | S418 | I419 | K420 | L421 | V422 | F423 | L424 | R425 | I426 | E427 | S428 | I429 | K430 | L431 | V432 | F433 | L434 | R435 | I436 | E437 | S438 | I439 | K440 | L441 | V442 | F443 | L444 | R445 | I446 | E447 | S448 | I449 | K450 | L451 | V452 | F453 | L454 | R455 | I456 | E457 | S458 | I459 | K460 | L461 | V462 | F463 | L464 | R465 | I466 | E467 | S468 | I469 | K470 | L471 | V472 | F473 | L474 | R475 | I476 | E477 | S478 | I479 | K480 | L481 | V482 | F483 | L484 | R485 | I486 | E487 | S488 | I489 | K490 | L491 | V492 | F493 | L494 | R495 | I496 | E497 | S498 | I499 | K500 | L501 | V502 | F503 | L504 | R505 | I506 | E507 | S508 | I509 | K510 | L511 | V512 | F513 | L514 | R515 | I516 | E517 | S518 | I519 | K520 | L521 | V522 | F523 | L524 | R525 | I526 | E527 | S528 | I529 | K530 | L531 | V532 | F533 | L534 | R535 | I536 | E537 | S538 | I539 | K540 | L541 | V |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|---|



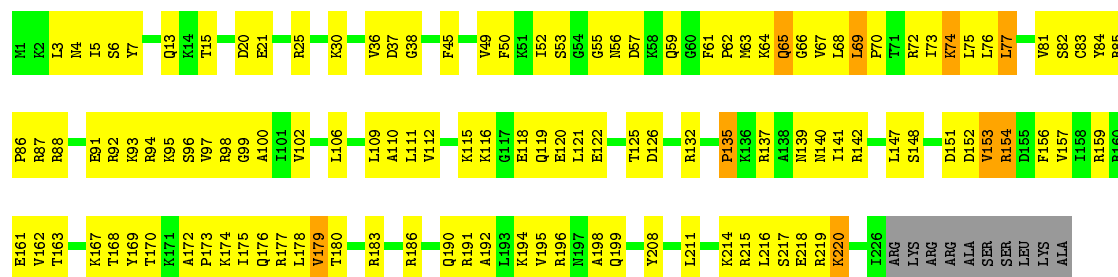
• Molecule 55: uS7 (yeast S5)

Chain CB: 31% 52% 8% 8%



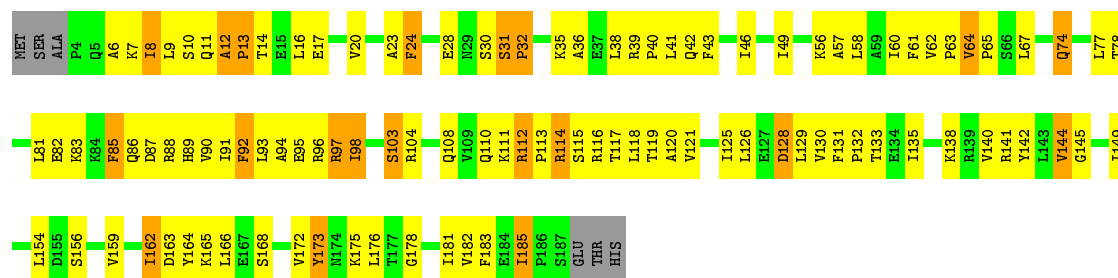
• Molecule 56: eS6 (yeast S6)

Chain DB: 44% 48%



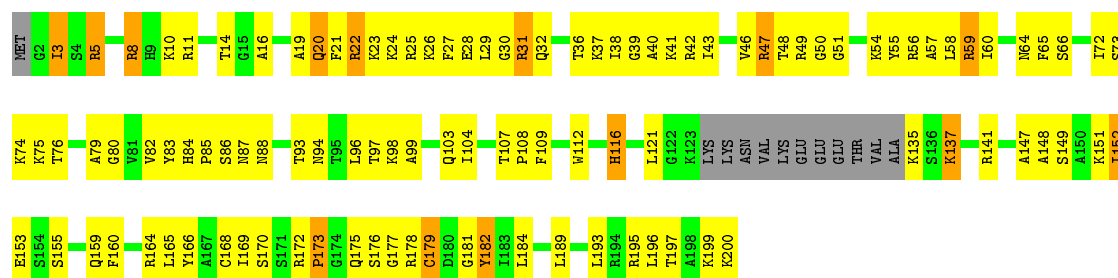
• Molecule 57: eS7 (yeast S7)

Chain EB: 41% 46% 11%



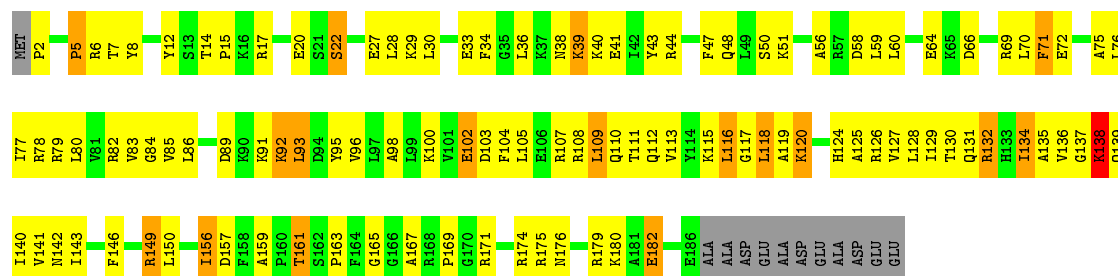
• Molecule 58: eS8 (yeast S8)

Chain FB: 40% 47% 7% 6%



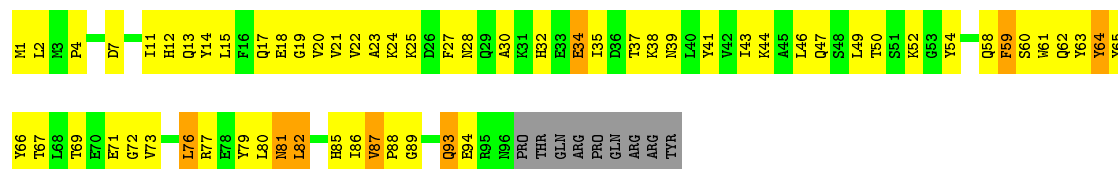
• Molecule 59: uS4 (yeast S9)

Chain GB: 38% 47% 9% 6%



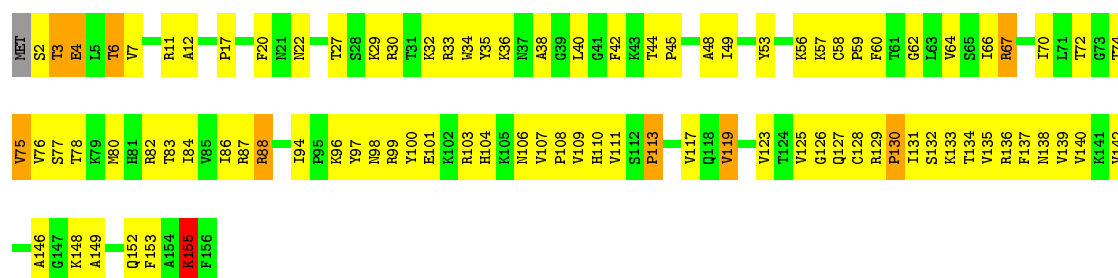
• Molecule 60: eS10 (yeast S10)

Chain HB: 31% 52% 8% 9%



• Molecule 61: uS17 (yeast S11)

Chain IB: 41% 52% 6% 2%



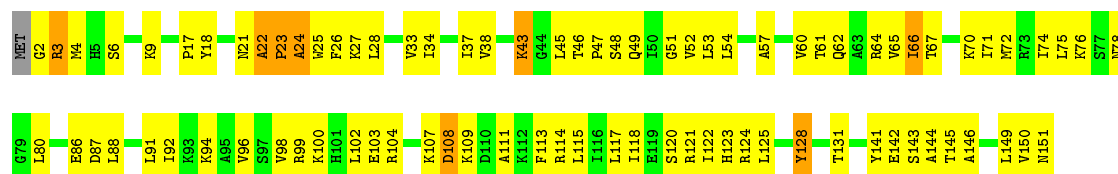
• Molecule 62: eS12 (yeast S12)

Chain JB: 79% 8% 13%




- Molecule 63: uS15 (yeast S13)

Chain KB: 



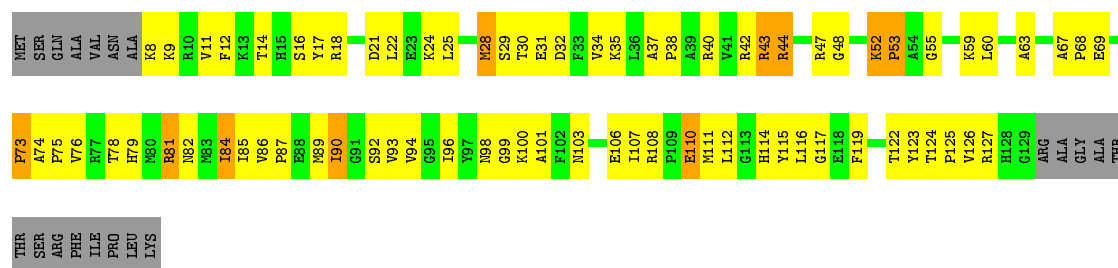
- Molecule 64: uS11 (yeast S14)

Chain LB: 



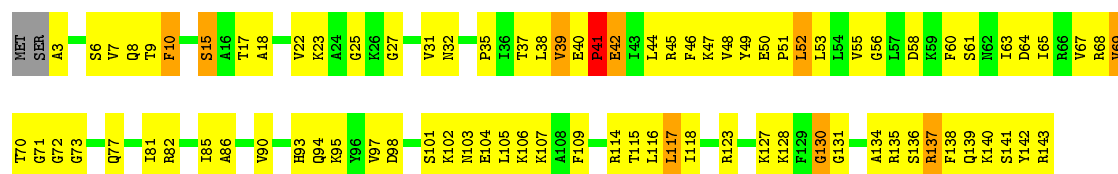
- Molecule 65: uS19 (yeast S15)

Chain MB: 



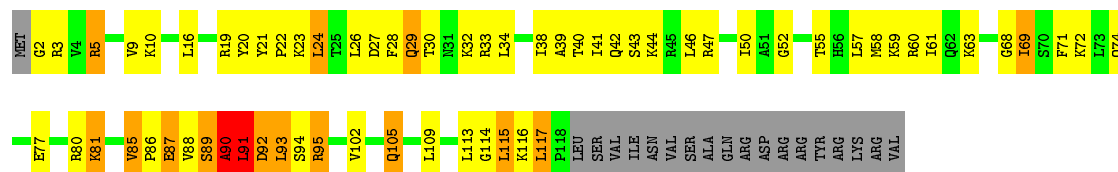
- Molecule 66: uS9 (yeast S16)

Chain NB: 

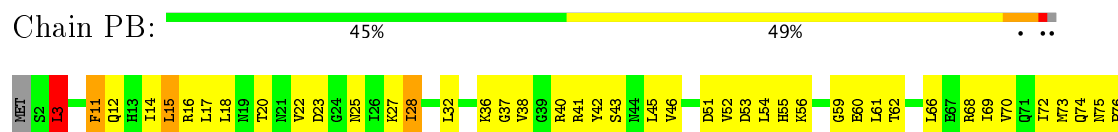


- Molecule 67: eS17 (yeast S17)

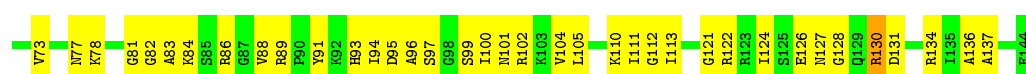
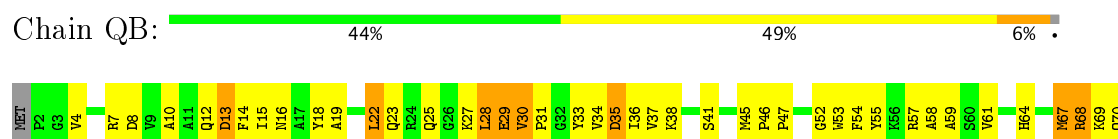
Chain OB: 



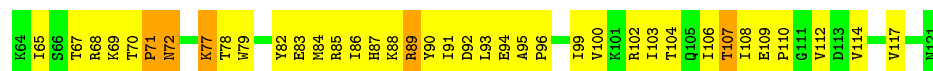
- Molecule 68: uS13 (yeast S18)



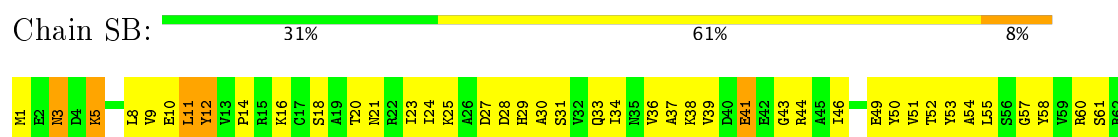
- Molecule 69: eS19 (yeast S19)



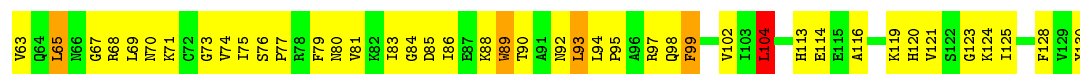
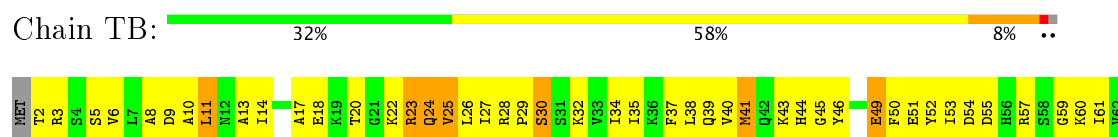
- Molecule 70: uS10 (yeast S20)



- Molecule 71: eS21 (yeast S21)

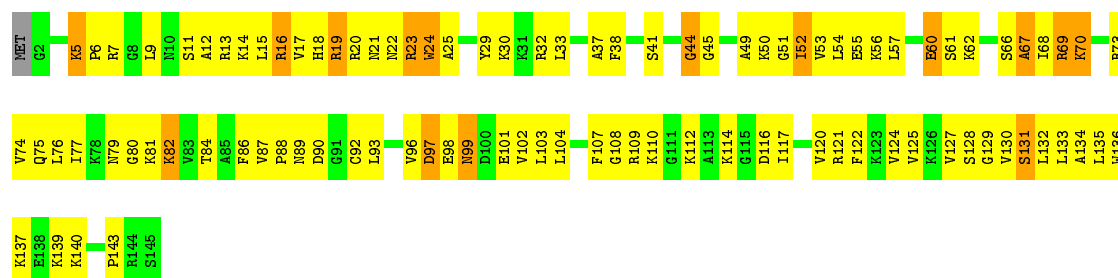


- Molecule 72: uS8 (yeast S22)



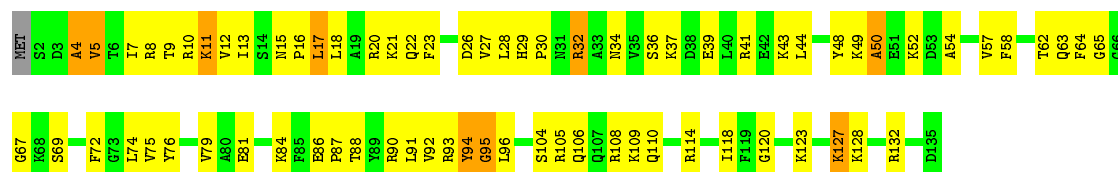
- Molecule 73: uS12 (yeast S23)





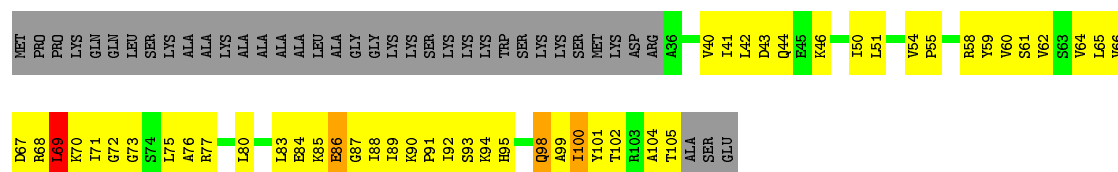
- Molecule 74: eS24 (yeast S24)

Chain VB: 45% 47% 7% .



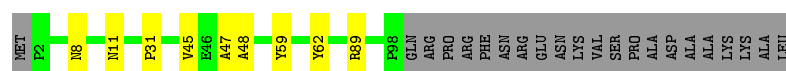
- Molecule 75: eS25 (yeast S25)

Chain WB: 19% 42% 35% . .



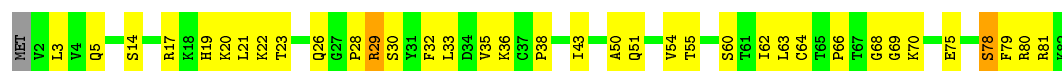
- Molecule 76: eS26 (yeast S26)

Chain XB: 74% 8% 18%



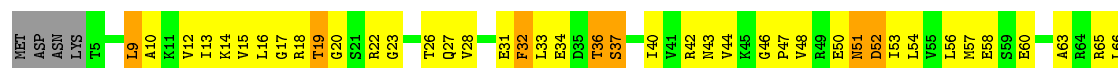
- Molecule 77: eS27 (yeast S27)

Chain YB: 55% 41% . .



- Molecule 78: eS28 (yeast S28)

Chain ZB: 33% 51% 10% 6%



R67

- Molecule 79: uS14 (yeast S29)

Chain AC:  48% 45% 5%



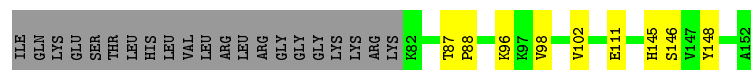
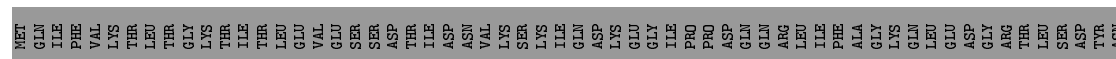
- Molecule 80: eS30 (yeast S30)

Chain BC:  48% 38% 8% 5%

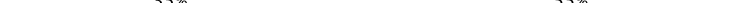


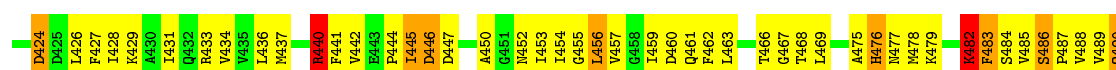
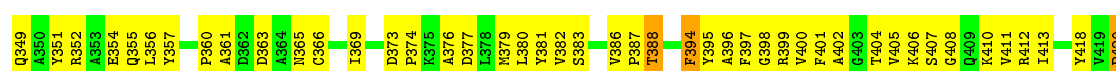
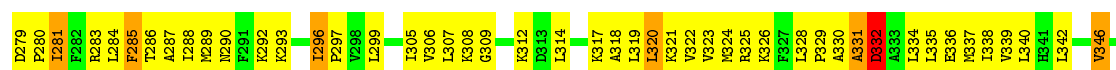
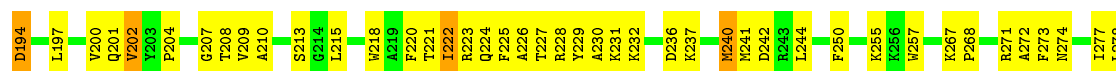
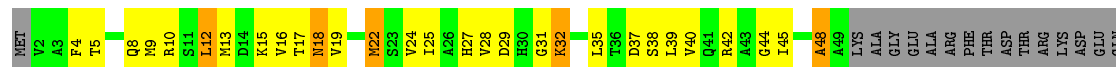
- Molecule 81: eS31 (yeast S31)

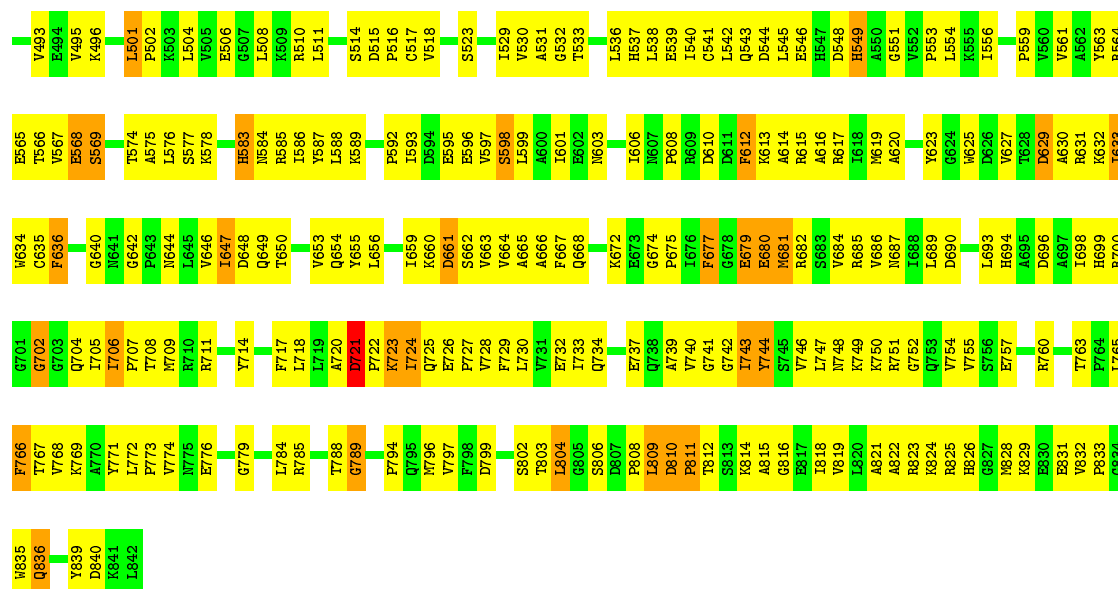
Chain CC: 



- Molecule 82: yeast eEF2

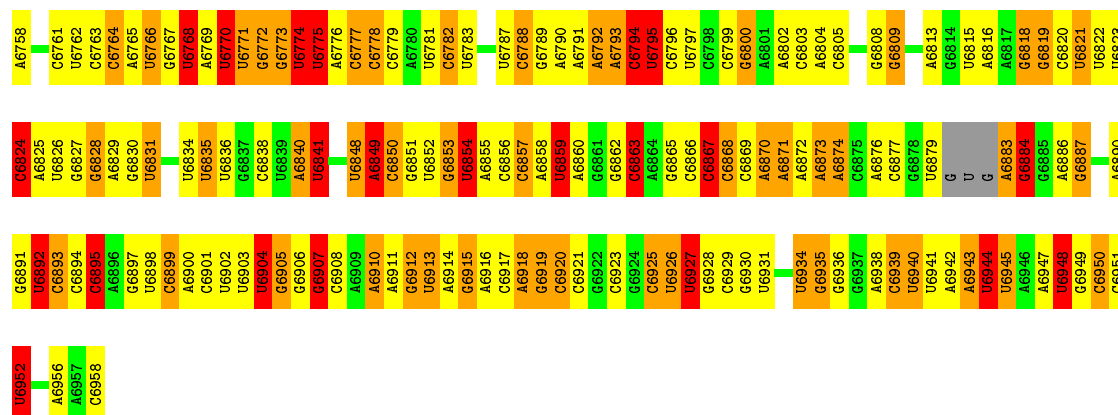
Chain DC:  35% 55% 7%





• Molecule 83: IRES

Chain EC: 22% 41% 25% 11% .



4 Experimental information

Property	Value	Source
Reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	Depositor
Number of particles used	38054	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	1.4	Depositor
Minimum defocus (nm)	Not provided	Depositor
Maximum defocus (nm)	Not provided	Depositor
Magnification	Not provided	Depositor
Image detector	GATAN K2 SUMMIT (4k x 4k)	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	1.15	8/41014 (0.0%)	0.77	15/63809 (0.0%)
10	J	1.34	0/1425	0.66	0/1912
11	K	1.49	1/1822 (0.1%)	0.68	0/2451
12	L	1.15	0/1850	0.65	0/2495
13	M	1.27	0/1540	0.65	0/2073
14	N	1.32	0/1754	0.65	1/2350 (0.0%)
15	O	1.03	0/1375	0.57	0/1842
16	P	1.82	0/728	0.73	0/975
17	Q	1.32	0/1568	0.68	0/2106
18	R	1.40	1/1069 (0.1%)	0.67	0/1438
19	S	1.43	0/1758	0.70	0/2354
2	B	1.62	229/78631 (0.3%)	0.82	50/122552 (0.0%)
20	T	1.45	0/1586	0.67	0/2128
21	U	1.46	0/1466	0.70	1/1968 (0.1%)
22	V	1.43	0/1466	0.70	0/1965
23	W	1.13	0/1539	0.65	0/2050
24	X	1.54	0/1482	0.67	0/1990
25	Y	1.47	0/1301	0.64	1/1743 (0.1%)
26	Z	0.99	0/812	0.54	0/1099
27	AA	1.37	0/1019	0.66	1/1369 (0.1%)
28	BA	1.50	0/521	0.66	0/691
29	CA	1.33	0/984	0.65	0/1325
3	C	1.60	10/3747 (0.3%)	0.79	0/5832
30	DA	1.34	0/1005	0.73	3/1341 (0.2%)
31	EA	1.06	0/1119	0.54	0/1497
32	FA	1.41	0/1205	0.67	0/1612
33	GA	1.28	0/474	0.68	0/629
34	HA	1.02	0/751	0.60	0/1008
35	IA	1.23	0/904	0.63	0/1213
36	JA	1.47	0/1041	0.67	1/1394 (0.1%)
37	KA	1.56	0/869	0.70	0/1168
38	LA	1.22	0/891	0.65	0/1191

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >2	RMSZ	# Z >2
39	MA	1.22	0/979	0.64	0/1301
4	D	1.44	6/2884 (0.2%)	0.77	2/4491 (0.0%)
40	NA	1.17	0/779	0.63	0/1034
41	OA	1.53	0/697	0.70	1/923 (0.1%)
42	PA	1.06	0/619	0.61	0/826
43	QA	1.38	0/444	0.77	0/588
44	RA	1.31	0/424	0.66	0/562
45	SA	1.57	0/235	0.71	0/300
46	TA	1.30	0/861	0.70	0/1136
47	UA	1.30	0/702	0.65	0/934
48	VA	1.78	0/1498	0.83	3/2025 (0.1%)
49	WA	0.92	0/2498	0.56	0/3398
5	E	1.93	0/1377	0.71	0/1844
50	XA	0.78	0/1653	0.58	0/2261
51	YA	1.13	0/855	0.51	0/1067
52	ZA	0.91	0/1665	0.59	0/2263
53	AB	0.97	0/1759	0.56	0/2368
54	BB	0.89	0/2110	0.59	0/2839
55	CB	0.85	0/1630	0.56	0/2202
56	DB	0.89	0/1844	0.57	0/2464
57	EB	0.92	0/1506	0.58	0/2028
58	FB	1.07	0/1515	0.61	0/2021
59	GB	0.84	0/1519	0.59	0/2035
6	F	1.35	0/1952	0.67	2/2622 (0.1%)
60	HB	1.03	0/837	0.57	0/1131
61	IB	1.16	0/1273	0.62	0/1712
62	JB	1.06	0/495	0.56	0/617
63	KB	1.01	0/1216	0.59	0/1638
64	LB	1.02	0/507	0.53	0/632
65	MB	1.03	0/996	0.60	0/1335
66	NB	0.94	0/1126	0.55	0/1510
67	OB	1.04	2/844 (0.2%)	0.90	4/1120 (0.4%)
68	PB	0.93	0/1212	0.59	2/1628 (0.1%)
69	QB	0.89	0/1131	0.58	0/1517
7	G	1.35	0/3153	0.65	0/4239
70	RB	0.97	0/866	0.56	0/1169
71	SB	0.85	0/694	0.55	0/935
72	TB	0.95	0/1039	0.62	2/1395 (0.1%)
73	UB	1.12	0/1140	0.62	0/1518
74	VB	0.89	0/1088	0.54	0/1449
75	WB	0.87	0/571	0.57	0/768
76	XB	1.09	0/387	0.62	0/482
77	YB	0.87	0/621	0.55	0/838

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >2	RMSZ	# Z >2
78	ZB	0.85	0/500	0.56	0/670
79	AC	1.09	0/454	0.57	0/602
8	H	1.45	0/2802	0.70	0/3792
80	BC	0.96	0/483	0.59	0/643
81	CC	0.97	0/283	0.59	0/352
82	DC	1.63	0/6521	0.69	1/8830 (0.0%)
83	EC	2.33	88/4608 (1.9%)	0.94	11/7166 (0.2%)
9	I	1.15	0/2426	0.60	0/3271
All	All	1.41	345/227994 (0.2%)	0.75	101/334061 (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	14
2	B	0	72
3	C	0	6
4	D	0	2
50	XA	0	1
83	EC	0	5
All	All	0	100

All (345) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	627	C	O3'-P	-14.02	1.44	1.61
2	B	1285	G	O3'-P	-9.98	1.49	1.61
2	B	3318	G	O3'-P	8.71	1.71	1.61
2	B	493	G	P-OP2	-8.52	1.34	1.49
67	OB	91	LEU	C-O	8.41	1.39	1.23
83	EC	6925	C	N1-C2	8.09	1.48	1.40
83	EC	6893	C	N1-C2	8.09	1.48	1.40
83	EC	6797	U	N1-C2	7.60	1.45	1.38
83	EC	6913	U	N1-C2	7.35	1.45	1.38
83	EC	6795	U	N1-C2	7.34	1.45	1.38
83	EC	6921	C	N1-C2	7.14	1.47	1.40
1	A	1	U	OP3-P	-6.87	1.52	1.61
4	D	1	G	OP3-P	-6.86	1.52	1.61
83	EC	6848	U	N1-C2	6.86	1.44	1.38
83	EC	6758	A	P-O5'	6.81	1.66	1.59

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	1888	U	N1-C2	6.79	1.44	1.38
83	EC	6803	C	N1-C2	6.76	1.47	1.40
83	EC	6867	C	N1-C2	6.76	1.47	1.40
2	B	2347	U	N1-C2	6.66	1.44	1.38
83	EC	6869	C	N1-C2	6.65	1.46	1.40
2	B	503	C	N1-C2	6.62	1.46	1.40
83	EC	6763	C	N1-C2	6.56	1.46	1.40
3	C	1	A	OP3-P	-6.51	1.53	1.61
83	EC	6779	C	N1-C2	6.50	1.46	1.40
83	EC	6934	U	N1-C2	6.49	1.44	1.38
83	EC	6951	C	N1-C2	6.47	1.46	1.40
83	EC	6796	C	N1-C2	6.46	1.46	1.40
2	B	2306	C	N1-C2	6.42	1.46	1.40
2	B	292	U	N1-C2	6.41	1.44	1.38
83	EC	6782	C	N1-C2	6.36	1.46	1.40
2	B	496	C	O3'-P	-6.35	1.53	1.61
2	B	2506	U	N1-C2	6.31	1.44	1.38
83	EC	6901	C	N1-C2	6.29	1.46	1.40
2	B	280	U	N1-C2	6.28	1.44	1.38
83	EC	6770	U	N1-C2	6.28	1.44	1.38
83	EC	6783	U	N1-C2	6.28	1.44	1.38
83	EC	6892	U	N1-C2	6.28	1.44	1.38
2	B	2861	U	N1-C2	6.26	1.44	1.38
2	B	1890	U	N1-C2	6.23	1.44	1.38
2	B	865	U	N1-C2	6.22	1.44	1.38
2	B	2416	U	N1-C2	6.19	1.44	1.38
83	EC	6948	U	N1-C2	6.19	1.44	1.38
83	EC	6871	A	C5-C6	6.14	1.46	1.41
83	EC	6950	C	N1-C2	6.12	1.46	1.40
83	EC	6857	C	N1-C2	6.12	1.46	1.40
2	B	28	C	N1-C2	6.11	1.46	1.40
2	B	2955	U	N1-C2	6.11	1.44	1.38
2	B	2434	U	N1-C2	6.08	1.44	1.38
2	B	2889	C	N1-C2	6.08	1.46	1.40
83	EC	6899	C	N1-C2	6.07	1.46	1.40
83	EC	6931	U	N1-C2	6.07	1.44	1.38
2	B	3272	C	N1-C2	6.07	1.46	1.40
83	EC	6920	C	N1-C2	6.06	1.46	1.40
18	R	99	TRP	CB-CG	6.04	1.61	1.50
83	EC	6831	U	N1-C2	6.04	1.44	1.38
2	B	1134	G	C5-C6	6.03	1.48	1.42
2	B	2359	C	N1-C2	6.02	1.46	1.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	2141	U	N1-C2	6.01	1.44	1.38
2	B	2303	A	C5-C6	6.01	1.46	1.41
2	B	2992	U	N1-C2	6.01	1.44	1.38
83	EC	6854	U	N1-C2	5.99	1.44	1.38
2	B	2726	C	N1-C2	5.98	1.46	1.40
2	B	200	C	N1-C2	5.95	1.46	1.40
3	C	139	U	N1-C2	5.93	1.43	1.38
2	B	2162	U	N1-C2	5.92	1.43	1.38
1	A	1772	C	N1-C2	5.92	1.46	1.40
2	B	2504	U	N1-C2	5.91	1.43	1.38
2	B	889	U	N1-C2	5.88	1.43	1.38
83	EC	6838	C	N1-C2	5.88	1.46	1.40
2	B	822	G	C5-C6	5.88	1.48	1.42
2	B	1425	U	N1-C2	5.86	1.43	1.38
2	B	410	U	N1-C2	5.86	1.43	1.38
2	B	2298	U	N1-C2	5.86	1.43	1.38
2	B	675	C	N1-C2	5.85	1.46	1.40
83	EC	6771	U	N1-C2	5.84	1.43	1.38
2	B	1137	C	N1-C2	5.83	1.46	1.40
83	EC	6945	U	N1-C2	5.83	1.43	1.38
3	C	4	C	N1-C2	5.82	1.46	1.40
2	B	961	C	N1-C2	5.82	1.46	1.40
2	B	2906	C	N1-C2	5.82	1.46	1.40
83	EC	6941	U	N1-C2	5.82	1.43	1.38
2	B	354	U	N1-C2	5.80	1.43	1.38
2	B	340	C	N1-C2	5.80	1.46	1.40
83	EC	6853	G	C5-C6	5.79	1.48	1.42
2	B	3181	C	N1-C2	5.79	1.46	1.40
83	EC	6907	G	C5-C6	5.78	1.48	1.42
2	B	2985	C	N1-C2	5.76	1.46	1.40
83	EC	6897	G	C5-C6	5.76	1.48	1.42
2	B	1342	C	N1-C2	5.75	1.46	1.40
2	B	2416	U	N1-C6	5.75	1.43	1.38
83	EC	6758	A	OP3-P	-5.74	1.54	1.61
83	EC	6762	U	N1-C2	5.74	1.43	1.38
2	B	2137	U	N1-C2	5.73	1.43	1.38
2	B	87	U	N1-C2	5.72	1.43	1.38
2	B	2617	U	N1-C2	5.72	1.43	1.38
2	B	343	U	N1-C2	5.72	1.43	1.38
83	EC	6774	U	N1-C2	5.71	1.43	1.38
2	B	3099	C	N1-C2	5.71	1.45	1.40
2	B	2392	C	N1-C2	5.71	1.45	1.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	1052	U	N1-C2	5.70	1.43	1.38
2	B	3144	G	C5-C6	5.70	1.48	1.42
2	B	1310	G	C5-C6	5.69	1.48	1.42
2	B	427	C	N1-C2	5.69	1.45	1.40
67	OB	90	ALA	C-O	5.69	1.34	1.23
2	B	612	U	N1-C2	5.69	1.43	1.38
83	EC	6821	U	N1-C2	5.69	1.43	1.38
83	EC	6764	C	N1-C2	5.68	1.45	1.40
83	EC	6926	U	N1-C2	5.67	1.43	1.38
2	B	21	G	C5-C6	5.66	1.48	1.42
83	EC	6923	C	N1-C2	5.66	1.45	1.40
2	B	2920	U	N1-C2	5.65	1.43	1.38
2	B	3007	U	N1-C2	5.64	1.43	1.38
2	B	3143	C	N1-C2	5.64	1.45	1.40
83	EC	6766	U	N1-C2	5.64	1.43	1.38
83	EC	6775	U	N1-C2	5.64	1.43	1.38
2	B	29	C	N1-C2	5.63	1.45	1.40
83	EC	6898	U	N1-C2	5.63	1.43	1.38
2	B	2891	U	N1-C2	5.62	1.43	1.38
2	B	288	C	N1-C2	5.62	1.45	1.40
2	B	2942	C	N1-C2	5.60	1.45	1.40
83	EC	6940	U	N1-C2	5.59	1.43	1.38
2	B	665	A	C5-C6	5.59	1.46	1.41
2	B	1659	U	N1-C2	5.58	1.43	1.38
2	B	1385	C	N1-C2	5.58	1.45	1.40
2	B	2501	U	N1-C2	5.58	1.43	1.38
83	EC	6866	C	N1-C2	5.57	1.45	1.40
83	EC	6944	U	N1-C2	5.57	1.43	1.38
2	B	633	C	N1-C2	5.57	1.45	1.40
2	B	1836	C	N1-C2	5.56	1.45	1.40
2	B	36	C	N1-C2	5.55	1.45	1.40
3	C	6	U	N1-C2	5.55	1.43	1.38
2	B	1125	U	N1-C2	5.55	1.43	1.38
83	EC	6761	C	N1-C2	5.54	1.45	1.40
2	B	886	C	N1-C2	5.54	1.45	1.40
2	B	3058	U	N1-C2	5.53	1.43	1.38
2	B	2908	G	C5-C6	5.53	1.47	1.42
2	B	3306	U	N1-C2	5.53	1.43	1.38
3	C	100	U	N1-C2	5.52	1.43	1.38
2	B	2189	U	N1-C2	5.51	1.43	1.38
83	EC	6834	U	N1-C2	5.50	1.43	1.38
2	B	794	U	N1-C2	5.50	1.43	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	C	27	U	N1-C2	5.50	1.43	1.38
2	B	2127	U	N1-C2	5.50	1.43	1.38
2	B	1470	U	N1-C2	5.47	1.43	1.38
83	EC	6768	U	N1-C2	5.47	1.43	1.38
83	EC	6874	A	C5-C6	5.47	1.46	1.41
83	EC	6792	A	C5-C6	5.46	1.46	1.41
83	EC	6778	C	N1-C2	5.46	1.45	1.40
2	B	1331	U	N1-C2	5.46	1.43	1.38
4	D	94	C	N1-C2	5.45	1.45	1.40
3	C	21	C	N1-C2	5.44	1.45	1.40
2	B	2146	C	N1-C2	5.44	1.45	1.40
83	EC	6797	U	N1-C6	5.44	1.42	1.38
2	B	1341	U	N1-C2	5.44	1.43	1.38
2	B	897	U	N1-C2	5.43	1.43	1.38
2	B	2633	U	N1-C2	5.43	1.43	1.38
2	B	667	C	N1-C2	5.42	1.45	1.40
2	B	626	U	N1-C2	5.41	1.43	1.38
2	B	873	C	N1-C2	5.41	1.45	1.40
2	B	834	U	N1-C2	5.41	1.43	1.38
2	B	966	U	N1-C2	5.40	1.43	1.38
2	B	927	C	N1-C2	5.40	1.45	1.40
2	B	898	U	N1-C2	5.40	1.43	1.38
83	EC	6826	U	N1-C2	5.40	1.43	1.38
2	B	655	C	N1-C2	5.39	1.45	1.40
2	B	3145	C	N1-C2	5.39	1.45	1.40
2	B	1384	U	N1-C2	5.39	1.43	1.38
2	B	78	U	N1-C2	5.38	1.43	1.38
2	B	2344	U	N1-C2	5.38	1.43	1.38
3	C	26	U	N1-C2	5.38	1.43	1.38
2	B	868	C	N1-C2	5.38	1.45	1.40
2	B	1479	U	N1-C2	5.37	1.43	1.38
2	B	190	U	N1-C2	5.37	1.43	1.38
2	B	2379	U	N1-C2	5.36	1.43	1.38
2	B	21	G	N9-C4	5.36	1.42	1.38
2	B	2282	U	N1-C2	5.36	1.43	1.38
2	B	938	C	N1-C2	5.35	1.45	1.40
4	D	96	U	N1-C2	5.35	1.43	1.38
2	B	2621	G	C5-C6	5.35	1.47	1.42
2	B	796	U	N1-C2	5.35	1.43	1.38
2	B	2408	U	N1-C2	5.35	1.43	1.38
2	B	291	C	N1-C2	5.34	1.45	1.40
2	B	2318	U	N1-C2	5.33	1.43	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	1440	G	C5-C6	5.32	1.47	1.42
2	B	2804	A	C5-C6	5.32	1.45	1.41
83	EC	6870	A	C5-C6	5.32	1.45	1.41
2	B	3133	C	N1-C2	5.32	1.45	1.40
2	B	2133	U	N1-C2	5.32	1.43	1.38
2	B	1871	U	N1-C2	5.31	1.43	1.38
2	B	2118	C	N1-C2	5.31	1.45	1.40
2	B	1907	C	N1-C2	5.31	1.45	1.40
2	B	885	U	N1-C2	5.30	1.43	1.38
2	B	2471	U	N1-C2	5.30	1.43	1.38
2	B	2905	U	N1-C2	5.30	1.43	1.38
2	B	2829	U	N1-C2	5.30	1.43	1.38
2	B	627	U	N1-C2	5.30	1.43	1.38
2	B	789	A	C5-C6	5.29	1.45	1.41
2	B	871	U	N1-C2	5.29	1.43	1.38
83	EC	6877	C	N1-C2	5.29	1.45	1.40
2	B	2875	U	N1-C2	5.29	1.43	1.38
2	B	958	C	N1-C2	5.29	1.45	1.40
83	EC	6820	C	N1-C2	5.29	1.45	1.40
3	C	1	A	P-O5'	5.28	1.65	1.59
83	EC	6851	G	C5-C6	5.28	1.47	1.42
2	B	795	G	C5-C6	5.28	1.47	1.42
2	B	1049	C	N1-C2	5.28	1.45	1.40
2	B	1198	C	N1-C2	5.27	1.45	1.40
2	B	1185	C	N1-C2	5.27	1.45	1.40
2	B	2866	U	N1-C2	5.27	1.43	1.38
2	B	793	C	N1-C2	5.27	1.45	1.40
83	EC	6781	U	N1-C2	5.27	1.43	1.38
83	EC	6863	C	N1-C2	5.27	1.45	1.40
2	B	859	G	C5-C6	5.27	1.47	1.42
83	EC	6824	C	N1-C2	5.27	1.45	1.40
2	B	2415	C	N1-C2	5.26	1.45	1.40
2	B	681	U	N1-C2	5.25	1.43	1.38
1	A	1653	C	N1-C2	5.25	1.45	1.40
2	B	279	U	N1-C2	5.25	1.43	1.38
83	EC	6912	G	C5-C6	5.25	1.47	1.42
2	B	1372	C	N1-C2	5.25	1.45	1.40
2	B	321	C	N1-C2	5.25	1.45	1.40
2	B	874	U	N1-C2	5.24	1.43	1.38
2	B	2427	U	N1-C2	5.24	1.43	1.38
2	B	2517	U	N1-C2	5.24	1.43	1.38
83	EC	6849	A	C5-C6	5.24	1.45	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	2290	C	N1-C2	5.24	1.45	1.40
2	B	2846	U	N1-C2	5.24	1.43	1.38
83	EC	6789	G	C5-C6	5.24	1.47	1.42
83	EC	6929	C	N1-C2	5.23	1.45	1.40
2	B	3211	C	N1-C2	5.23	1.45	1.40
4	D	98	C	N1-C2	5.22	1.45	1.40
2	B	1442	U	N1-C2	5.22	1.43	1.38
2	B	2176	U	N1-C2	5.22	1.43	1.38
2	B	2795	U	N1-C2	5.22	1.43	1.38
4	D	93	C	N1-C2	5.22	1.45	1.40
2	B	1333	C	N1-C2	5.22	1.45	1.40
2	B	2184	U	N1-C2	5.22	1.43	1.38
2	B	2764	C	N1-C2	5.22	1.45	1.40
2	B	863	C	N1-C2	5.21	1.45	1.40
2	B	2163	C	N1-C2	5.21	1.45	1.40
2	B	652	G	C5-C6	5.21	1.47	1.42
2	B	1424	C	N1-C2	5.21	1.45	1.40
83	EC	6836	U	N1-C2	5.21	1.43	1.38
2	B	691	A	C5-C6	5.20	1.45	1.41
83	EC	6834	U	N1-C6	5.20	1.42	1.38
83	EC	6860	A	C5-C6	5.20	1.45	1.41
2	B	1164	G	C5-C6	5.20	1.47	1.42
2	B	2442	G	C5-C6	5.20	1.47	1.42
2	B	2136	C	N1-C2	5.20	1.45	1.40
2	B	2550	U	N1-C2	5.19	1.43	1.38
2	B	366	A	C5-C6	5.18	1.45	1.41
2	B	2444	C	N1-C2	5.18	1.45	1.40
2	B	2899	C	N1-C2	5.18	1.45	1.40
2	B	276	U	N1-C2	5.17	1.43	1.38
2	B	1548	C	N1-C2	5.17	1.45	1.40
2	B	2735	U	N1-C2	5.17	1.43	1.38
83	EC	6850	C	N1-C2	5.17	1.45	1.40
2	B	2722	U	N1-C2	5.17	1.43	1.38
2	B	995	U	N1-C2	5.16	1.43	1.38
2	B	2701	U	N1-C2	5.16	1.43	1.38
2	B	2437	G	C5-C6	5.16	1.47	1.42
2	B	2195	C	N1-C2	5.16	1.45	1.40
2	B	2641	U	N1-C2	5.16	1.43	1.38
83	EC	6828	G	C5-C6	5.15	1.47	1.42
2	B	1188	U	N1-C2	5.15	1.43	1.38
2	B	717	C	N1-C2	5.15	1.45	1.40
2	B	1168	U	N1-C2	5.15	1.43	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	2292	U	N1-C2	5.15	1.43	1.38
2	B	2507	C	N1-C2	5.14	1.45	1.40
83	EC	6773	G	C5-C6	5.14	1.47	1.42
2	B	2514	U	N1-C2	5.14	1.43	1.38
2	B	2707	C	N1-C2	5.13	1.45	1.40
83	EC	6895	C	N1-C2	5.13	1.45	1.40
2	B	969	C	N1-C2	5.13	1.45	1.40
2	B	328	U	N1-C2	5.13	1.43	1.38
2	B	1877	U	N1-C2	5.13	1.43	1.38
2	B	2646	C	N1-C2	5.13	1.45	1.40
83	EC	6827	G	C5-C6	5.13	1.47	1.42
83	EC	6904	U	N1-C2	5.12	1.43	1.38
2	B	577	C	N1-C2	5.12	1.45	1.40
2	B	673	U	N1-C2	5.12	1.43	1.38
2	B	1382	G	C5-C6	5.12	1.47	1.42
2	B	2294	U	N1-C2	5.11	1.43	1.38
2	B	1505	C	N1-C2	5.11	1.45	1.40
2	B	2289	U	N1-C2	5.11	1.43	1.38
2	B	1438	U	N1-C2	5.11	1.43	1.38
3	C	47	C	N1-C2	5.11	1.45	1.40
83	EC	6868	C	N1-C2	5.11	1.45	1.40
2	B	2756	C	N1-C2	5.10	1.45	1.40
4	D	1	G	P-O5'	5.10	1.64	1.59
2	B	1427	U	N1-C2	5.10	1.43	1.38
2	B	694	C	N1-C2	5.10	1.45	1.40
2	B	2737	C	N1-C2	5.10	1.45	1.40
2	B	1388	U	N1-C2	5.10	1.43	1.38
2	B	2654	C	N1-C2	5.10	1.45	1.40
2	B	695	C	N1-C2	5.09	1.45	1.40
2	B	1402	C	N1-C2	5.09	1.45	1.40
2	B	3192	U	N1-C2	5.09	1.43	1.38
2	B	362	U	N1-C2	5.09	1.43	1.38
2	B	939	U	N1-C2	5.09	1.43	1.38
2	B	2849	C	N1-C2	5.08	1.45	1.40
2	B	573	C	N1-C2	5.08	1.45	1.40
83	EC	6856	C	N1-C2	5.08	1.45	1.40
2	B	3265	C	N1-C2	5.08	1.45	1.40
2	B	413	U	N1-C2	5.07	1.43	1.38
2	B	1050	U	N1-C2	5.07	1.43	1.38
2	B	1866	C	N1-C2	5.07	1.45	1.40
83	EC	6884	G	C5-C6	5.07	1.47	1.42
2	B	586	C	N1-C2	5.07	1.45	1.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	B	2952	G	C5-C6	5.07	1.47	1.42
1	A	1733	C	N1-C2	5.06	1.45	1.40
2	B	1058	U	N1-C2	5.06	1.43	1.38
2	B	2928	C	N1-C2	5.06	1.45	1.40
83	EC	6905	G	N9-C4	5.06	1.42	1.38
83	EC	6952	U	N1-C2	5.06	1.43	1.38
2	B	956	U	N1-C2	5.05	1.43	1.38
2	B	2625	C	N1-C2	5.05	1.45	1.40
2	B	829	U	N1-C2	5.05	1.43	1.38
11	K	96	PRO	CA-C	5.05	1.62	1.52
2	B	275	U	N1-C2	5.05	1.43	1.38
2	B	1876	U	N1-C2	5.05	1.43	1.38
2	B	3084	C	N1-C2	5.05	1.45	1.40
2	B	1855	U	N1-C2	5.04	1.43	1.38
2	B	1430	U	N1-C2	5.04	1.43	1.38
2	B	2822	U	N1-C2	5.04	1.43	1.38
2	B	2989	U	N1-C2	5.04	1.43	1.38
83	EC	6794	C	N1-C2	5.04	1.45	1.40
2	B	2302	G	C5-C6	5.03	1.47	1.42
1	A	1	U	P-O5'	5.03	1.64	1.59
2	B	2810	C	N1-C2	5.03	1.45	1.40
1	A	1758	U	N1-C2	5.02	1.43	1.38
2	B	1124	U	N1-C2	5.02	1.43	1.38
2	B	1549	U	N1-C2	5.02	1.43	1.38
2	B	606	C	N1-C2	5.02	1.45	1.40
83	EC	6948	U	N1-C6	5.02	1.42	1.38
2	B	1041	U	N1-C2	5.01	1.43	1.38
2	B	1336	U	N1-C2	5.01	1.43	1.38
83	EC	6859	U	N1-C2	5.01	1.43	1.38
1	A	1596	C	N1-C2	5.01	1.45	1.40
2	B	943	U	N1-C2	5.01	1.43	1.38
2	B	2336	U	N1-C2	5.01	1.43	1.38
83	EC	6830	G	C5-C6	5.01	1.47	1.42
2	B	2297	U	N1-C2	5.01	1.43	1.38
83	EC	6934	U	N1-C6	5.00	1.42	1.38
2	B	2037	G	P-O5'	5.00	1.64	1.59

All (101) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	493	G	O5'-P-OP1	-40.69	61.87	110.70
2	B	493	G	O5'-P-OP2	19.84	134.51	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	487	U	P-O3'-C3'	16.13	139.06	119.70
1	A	627	C	O3'-P-O5'	9.79	122.59	104.00
67	OB	93	LEU	C-N-CA	-8.61	100.19	121.70
6	F	102	LEU	CA-CB-CG	8.34	134.48	115.30
2	B	2434	U	N1-C1'-C2'	8.09	124.52	114.00
83	EC	6919	G	N9-C1'-C2'	7.73	124.05	114.00
2	B	1144	U	N1-C1'-C2'	7.51	123.77	114.00
83	EC	6893	C	N1-C1'-C2'	7.20	123.36	114.00
2	B	850	U	N1-C1'-C2'	7.04	123.16	114.00
41	OA	18	LEU	CA-CB-CG	6.96	131.32	115.30
67	OB	91	LEU	CA-C-N	-6.94	101.94	117.20
2	B	1657	C	N1-C1'-C2'	6.69	122.69	114.00
2	B	2375	G	N9-C1'-C2'	6.51	122.47	114.00
2	B	906	A	N9-C1'-C2'	6.46	122.39	114.00
1	A	1339	C	N1-C1'-C2'	6.44	122.38	114.00
68	PB	3	LEU	CA-CB-CG	6.42	130.06	115.30
2	B	2502	A	N9-C1'-C2'	6.35	122.26	114.00
2	B	201	A	N9-C1'-C2'	6.32	122.21	114.00
2	B	2323	G	N9-C1'-C2'	6.30	122.19	114.00
2	B	1285	G	OP1-P-O3'	6.29	119.05	105.20
1	A	610	G	N9-C1'-C2'	6.28	122.16	114.00
2	B	1285	G	P-O3'-C3'	-6.19	112.27	119.70
67	OB	93	LEU	N-CA-C	6.18	127.69	111.00
25	Y	89	LEU	CA-CB-CG	6.16	129.46	115.30
2	B	3317	U	C2'-C3'-O3'	6.13	123.52	113.70
30	DA	30	LEU	CA-CB-CG	6.13	129.40	115.30
2	B	764	U	N1-C1'-C2'	6.11	121.95	114.00
83	EC	6871	A	N9-C1'-C2'	6.10	121.93	114.00
2	B	2306	C	N1-C1'-C2'	6.10	121.93	114.00
2	B	496	C	OP2-P-O3'	6.03	118.47	105.20
2	B	2506	U	N1-C1'-C2'	6.00	121.80	114.00
2	B	2798	C	N1-C1'-C2'	5.94	121.72	114.00
2	B	487	U	O3'-P-O5'	5.93	115.26	104.00
2	B	632	G	N9-C1'-C2'	5.93	121.70	114.00
2	B	1724	U	N1-C1'-C2'	5.90	121.67	114.00
2	B	3218	A	C2'-C3'-O3'	5.89	123.13	113.70
48	VA	15	LEU	CA-CB-CG	5.88	128.81	115.30
1	A	1024	U	N1-C1'-C2'	5.87	121.63	114.00
21	U	41	LEU	CA-CB-CG	5.86	128.78	115.30
1	A	1031	U	N1-C1'-C2'	5.86	121.61	114.00
1	A	73	U	N1-C1'-C2'	5.85	121.61	114.00
2	B	3167	A	N9-C1'-C2'	5.85	121.61	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	B	400	G	N9-C1'-C2'	5.78	121.52	114.00
1	A	1757	G	N9-C1'-C2'	5.77	121.50	114.00
83	EC	6927	U	N1-C1'-C2'	5.77	121.50	114.00
2	B	1549	U	N1-C1'-C2'	5.72	121.44	114.00
30	DA	76	LEU	CA-CB-CG	5.64	128.28	115.30
2	B	2525	G	C2'-C3'-O3'	5.64	122.72	113.70
2	B	280	U	N1-C1'-C2'	5.57	121.24	114.00
4	D	120	C	N1-C1'-C2'	5.56	121.23	114.00
2	B	640	U	N1-C1'-C2'	5.55	121.22	114.00
2	B	1307	G	C2'-C3'-O3'	5.53	122.54	113.70
27	AA	93	LEU	CA-CB-CG	5.52	128.00	115.30
2	B	3318	G	P-O3'-C3'	5.49	126.28	119.70
83	EC	6939	C	N1-C1'-C2'	5.47	121.11	114.00
2	B	2288	G	N9-C1'-C2'	5.46	121.11	114.00
1	A	1772	C	N1-C1'-C2'	5.44	121.07	114.00
48	VA	77	LEU	CA-CB-CG	5.42	127.77	115.30
36	JA	66	LEU	CA-CB-CG	5.42	127.76	115.30
14	N	206	LEU	CA-CB-CG	5.39	127.69	115.30
30	DA	118	LEU	CA-CB-CG	5.36	127.63	115.30
2	B	922	U	N1-C1'-C2'	5.32	120.92	114.00
82	DC	809	LEU	CA-CB-CG	5.29	127.48	115.30
72	TB	93	LEU	CA-CB-CG	5.28	127.45	115.30
6	F	212	GLY	N-CA-C	5.28	126.29	113.10
1	A	824	G	N9-C1'-C2'	5.28	120.86	114.00
2	B	1134	G	O4'-C1'-N9	5.27	112.42	108.20
4	D	1	G	OP1-P-OP2	-5.27	111.69	119.60
83	EC	6859	U	N1-C1'-C2'	5.26	120.83	114.00
83	EC	6808	G	N9-C1'-C2'	5.24	120.81	114.00
83	EC	6758	A	OP1-P-OP2	-5.24	111.75	119.60
1	A	1600	A	N9-C1'-C2'	5.22	120.78	114.00
67	OB	92	ASP	C-N-CA	-5.21	108.66	121.70
83	EC	6944	U	N1-C1'-C2'	5.21	120.77	114.00
2	B	2763	U	O4'-C1'-N1	5.20	112.36	108.20
2	B	1254	C	N1-C1'-C2'	5.17	120.72	114.00
72	TB	104	LEU	CA-CB-CG	5.15	127.15	115.30
2	B	1843	C	N1-C1'-C2'	5.15	120.69	114.00
2	B	1556	C	N1-C1'-C2'	5.15	120.69	114.00
1	A	554	C	N1-C1'-C2'	5.14	120.68	114.00
48	VA	103	ASN	N-CA-C	5.13	124.85	111.00
83	EC	6913	U	N1-C1'-C2'	5.12	120.65	114.00
68	PB	116	LEU	CA-CB-CG	5.12	127.07	115.30
1	A	418	G	N9-C1'-C2'	5.10	120.64	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
83	EC	6883	A	N9-C1'-C2'	5.10	120.63	114.00
2	B	3272	C	N1-C1'-C2'	5.09	120.61	114.00
2	B	854	G	N9-C1'-C2'	5.07	120.59	114.00
2	B	1262	G	N9-C1'-C2'	5.07	120.59	114.00
2	B	3217	C	N1-C1'-C2'	5.07	120.59	114.00
2	B	609	G	N9-C1'-C2'	5.07	120.58	114.00
1	A	453	U	N1-C1'-C2'	5.06	120.58	114.00
2	B	2268	U	N1-C1'-C2'	5.05	120.56	114.00
2	B	648	C	N1-C1'-C2'	5.04	120.56	114.00
1	A	1761	U	N1-C1'-C2'	5.04	120.56	114.00
1	A	190	C	N1-C1'-C2'	5.03	120.53	114.00
2	B	343	U	N1-C1'-C2'	5.03	120.53	114.00
2	B	496	C	P-O3'-C3'	5.03	125.73	119.70
2	B	3	U	OP1-P-OP2	-5.02	112.07	119.60
2	B	2037	G	OP1-P-OP2	-5.01	112.08	119.60

There are no chirality outliers.

All (100) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	1058	U	Sidechain
1	A	1094	G	Sidechain
1	A	1108	G	Sidechain
1	A	1126	G	Sidechain
1	A	1147	A	Sidechain
1	A	1255	G	Sidechain
1	A	1524	A	Sidechain
1	A	1553	G	Sidechain
1	A	1727	G	Sidechain
1	A	313	U	Sidechain
1	A	324	U	Sidechain
1	A	447	U	Sidechain
1	A	53	G	Sidechain
1	A	568	G	Sidechain
2	B	1128	U	Sidechain
2	B	1143	A	Sidechain
2	B	1144	U	Sidechain
2	B	1159	A	Sidechain
2	B	1163	A	Sidechain
2	B	1194	G	Sidechain
2	B	1218	U	Sidechain
2	B	1258	U	Sidechain

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Mol	Chain	Res	Type	Group
2	B	1262	G	Sidechain
2	B	1318	A	Sidechain
2	B	1382	G	Sidechain
2	B	1438	U	Sidechain
2	B	1520	G	Sidechain
2	B	1646	G	Sidechain
2	B	1695	U	Sidechain
2	B	1713	G	Sidechain
2	B	1880	U	Sidechain
2	B	1904	C	Sidechain
2	B	1905	G	Sidechain
2	B	1912	U	Sidechain
2	B	1921	A	Sidechain
2	B	1930	A	Sidechain
2	B	1932	A	Sidechain
2	B	2137	U	Sidechain
2	B	2141	U	Sidechain
2	B	217	U	Sidechain
2	B	2192	C	Sidechain
2	B	22	G	Sidechain
2	B	2243	A	Sidechain
2	B	2339	C	Sidechain
2	B	2368	A	Sidechain
2	B	2395	G	Sidechain
2	B	2403	G	Sidechain
2	B	2434	U	Sidechain
2	B	2506	U	Sidechain
2	B	2510	U	Sidechain
2	B	2511	A	Sidechain
2	B	2642	A	Sidechain
2	B	2725	U	Sidechain
2	B	2749	G	Sidechain
2	B	2778	G	Sidechain
2	B	2790	A	Sidechain
2	B	2798	C	Sidechain
2	B	2869	U	Sidechain
2	B	2886	U	Sidechain
2	B	2888	U	Sidechain
2	B	2910	A	Sidechain
2	B	2921	U	Sidechain
2	B	3006	A	Sidechain
2	B	3084	C	Sidechain

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Mol	Chain	Res	Type	Group
2	B	3140	G	Sidechain
2	B	3151	U	Sidechain
2	B	322	U	Sidechain
2	B	325	A	Sidechain
2	B	3270	U	Sidechain
2	B	3288	G	Sidechain
2	B	406	G	Sidechain
2	B	424	G	Sidechain
2	B	553	U	Sidechain
2	B	563	U	Sidechain
2	B	640	U	Sidechain
2	B	808	A	Sidechain
2	B	833	G	Sidechain
2	B	850	U	Sidechain
2	B	869	G	Sidechain
2	B	889	U	Sidechain
2	B	902	G	Sidechain
2	B	91	G	Sidechain
2	B	932	U	Sidechain
2	B	980	A	Sidechain
2	B	987	U	Sidechain
2	B	998	A	Sidechain
3	C	131	A	Sidechain
3	C	18	U	Sidechain
3	C	39	G	Sidechain
3	C	70	G	Sidechain
3	C	71	A	Sidechain
3	C	87	G	Sidechain
4	D	120	C	Sidechain
4	D	89	G	Sidechain
83	EC	6841	U	Sidechain
83	EC	6859	U	Sidechain
83	EC	6892	U	Sidechain
83	EC	6907	G	Sidechain
83	EC	6930	G	Sidechain
50	XA	167	LYS	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	36760	0	18348	1356	0
2	B	70288	0	35262	3569	0
3	C	3354	0	1695	188	0
4	D	2580	0	1304	125	0
5	E	1359	0	1425	98	0
6	F	1918	0	1987	258	0
7	G	3082	0	3165	358	0
8	H	2750	0	2863	326	0
9	I	2376	0	2325	219	0
10	J	1401	0	1501	144	0
11	K	1785	0	1862	193	0
12	L	1818	0	1908	192	0
13	M	1519	0	1587	156	0
14	N	1718	0	1754	166	0
15	O	1354	0	1383	86	0
16	P	723	0	774	98	0
17	Q	1543	0	1608	208	0
18	R	1054	0	1149	157	0
19	S	1721	0	1779	241	0
20	T	1556	0	1659	203	0
21	U	1443	0	1485	146	0
22	V	1442	0	1543	197	0
23	W	1522	0	1617	117	0
24	X	1446	0	1487	196	0
25	Y	1277	0	1323	148	0
26	Z	796	0	812	45	0
27	AA	1004	0	1048	93	0
28	BA	509	0	537	68	0
29	CA	969	0	1036	71	0
30	DA	994	0	1081	114	0
31	EA	1093	0	1155	116	0
32	FA	1174	0	1215	163	0
33	GA	463	0	491	45	0
34	HA	743	0	797	88	0
35	IA	890	0	938	78	0
36	JA	1020	0	1090	117	0
37	KA	851	0	880	95	0
38	LA	881	0	949	103	0
39	MA	970	0	1078	112	0
40	NA	772	0	849	83	0
41	OA	682	0	687	96	0
42	PA	613	0	682	20	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
43	QA	437	0	475	46	0
44	RA	418	0	459	48	0
45	SA	234	0	284	16	0
46	TA	848	0	918	110	0
47	UA	695	0	738	72	0
48	VA	1473	0	1514	177	0
49	WA	2445	0	2401	155	0
50	XA	1612	0	1623	146	0
51	YA	856	0	226	2	0
52	ZA	1635	0	1723	137	0
53	AB	1734	0	1817	122	0
54	BB	2069	0	2154	223	0
55	CB	1610	0	1675	162	0
56	DB	1820	0	1918	118	0
57	EB	1481	0	1572	129	0
58	FB	1490	0	1525	152	0
59	GB	1494	0	1573	121	0
60	HB	817	0	804	61	0
61	IB	1245	0	1314	104	0
62	JB	496	0	141	0	0
63	KB	1193	0	1255	99	0
64	LB	508	0	151	4	0
65	MB	975	0	1017	68	0
66	NB	1106	0	1166	121	0
67	OB	836	0	827	84	0
68	PB	1193	0	1222	80	0
69	QB	1113	0	1124	90	0
70	RB	856	0	917	75	0
71	SB	685	0	672	74	0
72	TB	1022	0	1060	107	0
73	UB	1122	0	1196	123	0
74	VB	1074	0	1132	76	0
75	WB	563	0	603	55	0
76	XB	388	0	96	0	0
77	YB	611	0	633	38	0
78	ZB	498	0	535	48	0
79	AC	444	0	436	30	0
80	BC	475	0	525	27	0
81	CC	284	0	76	0	0
82	DC	6419	0	6493	587	0
83	EC	4129	0	2078	97	0
84	DC	28	0	12	2	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
85	DC	1	0	0	0	0
86	DC	35	0	41	2	0
All	All	212680	0	156239	12389	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 34.

All (12389) 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)
37:KA:67:MET:CE	37:KA:67:MET:SD	2.03	1.47
66:NB:93:HIS:HA	66:NB:97:VAL:HB	1.20	1.19
2:B:1494:U:H4'	2:B:1495:U:H5'	1.24	1.14
2:B:2954:U:H4'	2:B:2955:U:H5'	1.26	1.13
2:B:1719:G:H4'	2:B:1732:U:H4'	1.30	1.11
2:B:2442:G:H2'	2:B:2443:A:H5''	1.32	1.11
2:B:1818:U:H2'	2:B:1819:U:H5''	1.32	1.11
2:B:786:A:H5'	22:V:147:ARG:HA	1.28	1.11
71:SB:34:ILE:HB	71:SB:53:TYR:HB2	1.32	1.11
2:B:1231:A:H5''	2:B:1232:C:H5'	1.33	1.10
19:S:71:ARG:HB3	19:S:92:LEU:HD23	1.30	1.10
2:B:1887:A:H4'	7:G:227:GLU:HA	1.26	1.10
1:A:1227:A:H4'	1:A:1228:G:H5''	1.34	1.09
32:FA:79:TRP:HA	32:FA:82:ILE:HD13	1.33	1.08
74:VB:91:LEU:HD22	74:VB:96:LEU:HD22	1.36	1.08
2:B:874:U:H5'	2:B:875:G:H5'	1.32	1.08
82:DC:204:PRO:HG3	82:DC:209:VAL:HB	1.26	1.07
5:E:132:GLY:HA3	83:EC:6818:G:H1'	1.37	1.07
49:WA:41:THR:HG21	49:WA:62:LYS:HG2	1.33	1.07
40:NA:60:LEU:HD11	40:NA:68:ARG:HD2	1.33	1.07
30:DA:39:LEU:HA	30:DA:42:GLN:HB2	1.34	1.07
82:DC:593:ILE:HG12	82:DC:685:ARG:HB2	1.37	1.06
21:U:71:ALA:HA	21:U:74:LYS:HG3	1.36	1.06
2:B:546:C:H5'	2:B:547:G:H5'	1.36	1.06
27:AA:90:GLY:HA3	28:BA:16:GLY:HA2	1.30	1.06
19:S:115:VAL:HG11	19:S:160:GLU:HB3	1.34	1.06
82:DC:632:LYS:HB3	82:DC:648:ASP:HB3	1.37	1.06
1:A:332:U:H5'	58:FB:30:GLY:HA2	1.37	1.06
38:LA:57:LEU:HD13	38:LA:62:TYR:HA	1.38	1.05
18:R:21:VAL:HG13	18:R:65:LEU:HD23	1.39	1.04
3:C:41:A:H4'	41:OA:59:THR:HG22	1.36	1.04

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:J:41:ILE:HB	10:J:85:ILE:HB	1.38	1.04
1:A:71:A:H2'	1:A:72:A:H4'	1.40	1.04
6:F:227:ARG:HB2	6:F:239:ALA:HB2	1.35	1.04
1:A:1035:G:H4'	72:TB:2:THR:HG23	1.39	1.04
35:IA:72:ARG:HB3	35:IA:96:VAL:HG21	1.40	1.03
60:HB:21:VAL:HB	60:HB:66:TYR:HB2	1.40	1.03
48:VA:5:ARG:HA	48:VA:8:LYS:HD3	1.40	1.03
2:B:2990:G:H5'	7:G:20:LYS:HB3	1.39	1.03
82:DC:106:PRO:HG3	82:DC:114:GLU:HB2	1.41	1.03
2:B:1317:A:H4'	20:T:18:ARG:HH22	1.24	1.03
17:Q:105:ASN:HD21	40:NA:17:VAL:HB	1.22	1.03
8:H:222:VAL:HG13	8:H:225:VAL:HB	1.40	1.02
8:H:32:PRO:HD2	22:V:24:VAL:HG21	1.37	1.02
2:B:364:G:H5''	8:H:84:ARG:HG2	1.41	1.02
2:B:1235:U:H4'	2:B:1236:G:H5'	1.39	1.02
1:A:478:A:H5'	59:GB:127:VAL:HG21	1.39	1.02
24:X:13:ARG:HA	24:X:56:GLY:HA2	1.39	1.02
1:A:1685:G:H2'	1:A:1686:C:H5''	1.37	1.02
16:P:133:LEU:HA	16:P:137:GLN:HG3	1.42	1.02
17:Q:59:ARG:HA	17:Q:69:VAL:HA	1.36	1.01
63:KB:33:VAL:HG11	63:KB:66:ILE:HG12	1.39	1.01
38:LA:58:ARG:HE	38:LA:59:PRO:HD2	1.24	1.01
2:B:1830:G:H22	3:C:114:G:H5'	1.21	1.01
18:R:55:ARG:HH21	18:R:77:ARG:HA	1.24	1.01
82:DC:154:VAL:HA	82:DC:202:VAL:HG11	1.42	1.01
25:Y:89:LEU:HD11	25:Y:91:LEU:HD12	1.39	1.01
82:DC:220:PHE:HB3	82:DC:328:LEU:HD13	1.43	1.00
4:D:64:A:H5'	4:D:65:G:H5''	1.41	1.00
14:N:42:THR:HG22	14:N:45:GLU:HG3	1.43	1.00
73:UB:51:GLY:HA2	73:UB:77:ILE:HG13	1.42	1.00
2:B:1485:G:H22	2:B:1857:C:H42	1.06	1.00
37:KA:59:VAL:HG23	37:KA:60:ARG:H	1.25	1.00
49:WA:13:LEU:HB2	49:WA:310:ILE:HB	1.42	1.00
18:R:98:SER:HA	18:R:101:LYS:HB2	1.44	0.99
6:F:3:ARG:HG2	6:F:4:VAL:H	1.25	0.99
19:S:58:GLY:HA3	19:S:142:ILE:HD11	1.44	0.99
30:DA:60:ARG:HG3	30:DA:103:LYS:HD2	1.38	0.99
20:T:35:VAL:HB	20:T:104:VAL:HG13	1.45	0.99
82:DC:809:LEU:HD13	82:DC:832:VAL:HB	1.41	0.99
8:H:276:LEU:HD22	8:H:277:PRO:HD2	1.44	0.99
2:B:509:U:H2'	2:B:510:G:H5''	1.43	0.99

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:62:A:H4'	1:A:269:G:H4'	1.43	0.99
2:B:211:A:H5'	2:B:229:G:H1'	1.40	0.99
82:DC:289:MET:HG2	82:DC:320:LEU:HD12	1.45	0.99
2:B:1380:G:H5''	8:H:191:LYS:HB2	1.41	0.99
82:DC:79:SER:HB3	82:DC:98:PHE:HB2	1.44	0.99
2:B:1604:G:H2'	2:B:1605:A:H5''	1.42	0.98
21:U:23:ARG:HA	21:U:143:PRO:HB3	1.44	0.98
22:V:177:GLY:HA2	22:V:184:PHE:HB2	1.45	0.98
82:DC:747:LEU:HD12	82:DC:752:GLY:HA3	1.46	0.98
82:DC:164:LEU:HD21	82:DC:174:LEU:HD22	1.42	0.98
82:DC:45:ILE:H	82:DC:77:LEU:HA	1.24	0.98
82:DC:296:ILE:HB	82:DC:297:PRO:HD3	1.46	0.98
49:WA:18:GLY:HA3	49:WA:38:ARG:HB2	1.45	0.98
1:A:991:G:H4'	1:A:1786:G:H4'	1.44	0.98
82:DC:335:LEU:HA	82:DC:338:ILE:HD12	1.44	0.98
82:DC:445:ILE:HG12	82:DC:446:ASP:H	1.29	0.98
1:A:56:U:H4'	1:A:57:G:H5'	1.44	0.98
2:B:2439:A:H2'	2:B:2440:G:C8	1.98	0.98
82:DC:207:GLY:HA2	82:DC:222:ILE:HD11	1.44	0.98
11:K:86:VAL:HG22	11:K:136:TYR:HB3	1.46	0.98
2:B:1301:A:H4'	2:B:1302:A:H5''	1.45	0.98
2:B:3343:G:H4'	2:B:3362:A:H61	1.26	0.97
65:MB:60:LEU:HA	65:MB:76:VAL:HG21	1.46	0.97
1:A:806:A:H3'	1:A:807:A:H5''	1.45	0.97
2:B:3312:U:H5''	7:G:25:ILE:HD12	1.43	0.97
2:B:2853:A:H5'	14:N:3:ARG:HH21	1.28	0.97
2:B:1138:U:H4'	11:K:97:PRO:HG3	1.45	0.97
43:QA:24:PRO:HB2	43:QA:27:ILE:HD13	1.46	0.97
82:DC:578:LYS:HB3	82:DC:585:ARG:HG2	1.46	0.97
50:XA:76:ILE:HB	50:XA:123:VAL:HG12	1.47	0.97
1:A:1291:G:H1	1:A:1324:G:H22	1.11	0.97
5:E:126:PRO:HA	5:E:130:LYS:HD3	1.46	0.97
2:B:1694:U:H1'	38:LA:26:PRO:HA	1.45	0.97
1:A:866:G:H5''	63:KB:3:ARG:H	1.29	0.97
22:V:30:VAL:HG13	22:V:49:LEU:HD21	1.44	0.97
19:S:35:VAL:HA	19:S:65:ARG:HE	1.30	0.96
52:ZA:41:LEU:HD11	52:ZA:63:VAL:HG12	1.46	0.96
2:B:3191:G:H5''	20:T:176:LYS:HG3	1.45	0.96
2:B:1234:G:H5''	16:P:118:ASP:HB2	1.47	0.96
50:XA:49:ASN:HA	67:OB:109:LEU:HD11	1.47	0.96
30:DA:27:ARG:HA	30:DA:30:LEU:HB3	1.47	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:64:SER:HA	8:H:75:PRO:HA	1.48	0.96
2:B:995:U:H1'	2:B:2637:A:H5'	1.44	0.96
10:J:55:LEU:HG	10:J:65:ILE:HA	1.44	0.96
2:B:3187:A:H5'	13:M:22:SER:HA	1.48	0.95
17:Q:47:ALA:HB1	17:Q:48:PRO:HD3	1.47	0.95
2:B:181:U:H2'	2:B:182:U:H4'	1.48	0.95
48:VA:61:ARG:HA	48:VA:64:ARG:HB3	1.46	0.95
2:B:790:U:H5''	8:H:112:LYS:HB3	1.48	0.95
39:MA:86:ARG:HA	39:MA:89:ARG:HH12	1.28	0.95
49:WA:89:LEU:HD21	49:WA:110:VAL:HG11	1.48	0.95
24:X:79:VAL:HG12	24:X:123:ILE:HA	1.49	0.95
24:X:26:ARG:HH12	24:X:28:ARG:HH21	0.96	0.95
25:Y:152:ALA:HB1	25:Y:153:PRO:HD2	1.49	0.95
1:A:310:C:H4'	73:UB:33:LEU:HD11	1.46	0.95
82:DC:773:PRO:HG2	82:DC:776:GLU:HB2	1.47	0.95
2:B:984:G:H2'	11:K:101:LYS:HG3	1.47	0.95
78:ZB:42:ARG:HD2	78:ZB:63:ALA:H	1.30	0.95
82:DC:495:VAL:HG13	82:DC:504:LEU:HD22	1.45	0.94
22:V:122:ILE:HD11	22:V:126:GLN:HB2	1.47	0.94
1:A:330:G:H3'	58:FB:172:ARG:HH21	1.33	0.94
1:A:540:G:H4'	1:A:541:A:H2'	1.46	0.94
57:EB:8:ILE:HD13	57:EB:42:GLN:HA	1.47	0.94
2:B:1177:G:H5'	37:KA:18:ARG:HH11	1.30	0.94
2:B:2369:G:H2'	2:B:2370:G:C8	2.01	0.94
82:DC:564:ARG:HB3	82:DC:682:ARG:HB2	1.48	0.94
2:B:2611:U:H2'	2:B:2612:U:C6	2.01	0.94
22:V:179:ARG:HH22	32:FA:56:VAL:HA	1.30	0.94
2:B:3329:U:H5''	7:G:308:MET:HB3	1.49	0.94
13:M:44:THR:HB	13:M:56:ALA:H	1.30	0.94
36:JA:19:ARG:HH11	36:JA:28:VAL:HG13	1.30	0.94
2:B:3243:A:HO2'	2:B:3244:A:H8	1.08	0.94
4:D:75:G:H2'	4:D:76:A:H2'	1.49	0.94
2:B:2693:C:H5''	2:B:2694:A:H5''	1.47	0.94
2:B:2922:G:H2'	2:B:2923:U:H4'	1.47	0.94
2:B:2953:U:H2'	2:B:2954:U:H2'	1.50	0.93
1:A:770:A:H3'	1:A:771:A:H5''	1.50	0.93
2:B:1538:G:H21	2:B:1583:A:H62	1.16	0.93
61:IB:56:LYS:HE3	61:IB:57:LYS:HE3	1.48	0.93
63:KB:98:VAL:HB	63:KB:115:LEU:HD23	1.47	0.93
3:C:94:C:H5''	41:OA:76:ASN:HD21	1.31	0.93
6:F:78:ALA:HB1	6:F:170:ALA:HB3	1.50	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:144:ARG:HA	82:DC:147:LEU:HD12	1.48	0.93
83:EC:6840:A:H2'	83:EC:6841:U:O4'	1.67	0.93
2:B:99:A:H5'	19:S:194:GLN:HB2	1.48	0.93
4:D:36:C:H4'	9:I:155:THR:HG23	1.49	0.93
82:DC:10:ARG:HE	82:DC:447:ASP:HB2	1.33	0.93
7:G:37:ARG:HA	7:G:186:GLY:HA2	1.49	0.93
52:ZA:237:VAL:HA	71:SB:33:GLN:HE22	1.34	0.93
74:VB:50:ALA:HB1	74:VB:54:ALA:HB3	1.48	0.93
58:FB:137:LYS:H	58:FB:137:LYS:HD3	1.33	0.93
48:VA:76:LEU:HA	48:VA:189:GLN:HE22	1.30	0.93
11:K:224:ILE:HG23	24:X:36:ILE:HG23	1.50	0.93
27:AA:80:ARG:HH21	27:AA:95:PHE:HB3	1.33	0.93
2:B:1841:A:H3'	2:B:1842:A:H5''	1.47	0.93
83:EC:6886:A:H2'	83:EC:6887:G:H5'	1.50	0.93
50:XA:22:THR:HG22	50:XA:169:SER:HA	1.48	0.93
11:K:75:TYR:HB2	25:Y:141:VAL:HB	1.52	0.92
12:L:84:ARG:H	12:L:84:ARG:HE	1.10	0.92
2:B:1336:U:H2'	2:B:1337:A:C8	2.05	0.92
2:B:2960:C:H2'	2:B:2961:G:C8	2.04	0.92
1:A:1681:A:H1'	56:DB:66:GLY:HA3	1.50	0.92
41:OA:8:PHE:HA	41:OA:11:ARG:HD3	1.48	0.92
17:Q:168:ARG:HH21	17:Q:171:ARG:HB3	1.33	0.92
2:B:382:U:H4'	21:U:100:ALA:HB1	1.50	0.92
2:B:2647:A:H1'	14:N:22:TYR:HD2	1.32	0.92
2:B:834:U:H2'	2:B:835:G:H5'	1.52	0.92
30:DA:59:VAL:HG13	30:DA:60:ARG:HG2	1.50	0.92
2:B:665:A:H5'	19:S:197:LEU:HD21	1.51	0.92
54:BB:19:LEU:HD21	54:BB:108:ARG:HD2	1.51	0.92
36:JA:85:LEU:HA	36:JA:88:HIS:HD2	1.34	0.92
46:TA:67:LYS:HG3	46:TA:87:ARG:HG3	1.47	0.92
9:I:69:ILE:HA	25:Y:31:LEU:HD13	1.48	0.92
2:B:1059:G:H5''	25:Y:84:TYR:OH	1.68	0.92
2:B:29:C:H2'	2:B:30:G:H5''	1.48	0.92
54:BB:206:ASP:HB2	54:BB:222:LEU:HG	1.52	0.92
82:DC:369:ILE:HD11	82:DC:379:MET:HG3	1.48	0.92
50:XA:122:ILE:HG12	50:XA:144:ILE:HB	1.51	0.92
2:B:2424:A:H62	2:B:2605:G:H21	1.15	0.92
59:GB:110:GLN:HE22	59:GB:125:ALA:HB3	1.34	0.92
2:B:1494:U:C4'	2:B:1495:U:H5'	1.99	0.92
2:B:316:U:H4'	2:B:317:A:H5'	1.53	0.92
83:EC:6787:U:H2'	83:EC:6788:C:H4'	1.52	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:WA:229:LYS:HA	53:AB:222:VAL:HG11	1.52	0.91
2:B:2775:U:H2'	2:B:2776:C:C6	2.04	0.91
2:B:430:U:H1'	37:KA:90:PRO:HB3	1.51	0.91
54:BB:31:PRO:HB2	54:BB:38:LEU:HD22	1.53	0.91
82:DC:147:LEU:HD13	82:DC:192:TYR:HB2	1.53	0.91
1:A:754:A:H3'	1:A:755:A:H5'	1.52	0.91
54:BB:89:VAL:HG11	54:BB:119:ALA:HA	1.53	0.91
1:A:1386:G:H3'	67:OB:44:LYS:HZ1	1.33	0.91
48:VA:30:VAL:HG22	48:VA:31:ASP:H	1.34	0.91
1:A:845:G:H2'	1:A:846:G:H5''	1.51	0.91
2:B:676:G:H22	22:V:61:PRO:HG3	1.35	0.91
2:B:879:U:H4'	21:U:132:ALA:HB3	1.52	0.91
18:R:120:VAL:HG22	20:T:197:LEU:HD13	1.53	0.91
2:B:428:A:O2'	37:KA:88:ASN:HB2	1.68	0.91
47:UA:51:ALA:HB3	47:UA:54:ILE:HD12	1.50	0.91
13:M:89:LYS:HG2	13:M:145:VAL:HG22	1.51	0.91
40:NA:60:LEU:HA	40:NA:63:ASN:HD22	1.36	0.91
17:Q:67:ARG:HB3	32:FA:105:LEU:HG	1.53	0.91
83:EC:6872:A:H3'	83:EC:6873:A:H5''	1.52	0.91
2:B:2746:A:H5'	9:I:179:ARG:HG2	1.52	0.91
50:XA:184:LEU:HG	71:SB:43:GLY:HA2	1.50	0.91
2:B:2103:U:H5''	23:W:85:ARG:NH1	1.85	0.91
63:KB:22:ALA:HB1	63:KB:23:PRO:HA	1.52	0.91
17:Q:170:LEU:HA	17:Q:173:ALA:HB3	1.52	0.91
52:ZA:111:VAL:HG13	52:ZA:139:ILE:HD11	1.52	0.91
2:B:886:C:H2'	2:B:887:G:C8	2.06	0.90
55:CB:187:ILE:H	55:CB:187:ILE:HD12	1.34	0.90
46:TA:68:VAL:HB	46:TA:85:LEU:HB3	1.50	0.90
2:B:2342:U:H2'	2:B:2343:C:C6	2.07	0.90
2:B:2723:U:H2'	2:B:2724:U:H5'	1.51	0.90
20:T:26:GLN:HB3	20:T:31:GLN:HB3	1.51	0.90
47:UA:24:ARG:O	47:UA:27:LYS:HG2	1.70	0.90
48:VA:33:VAL:HG22	48:VA:34:SER:H	1.36	0.90
2:B:1121:U:H3	2:B:1137:C:H42	1.19	0.90
5:E:120:VAL:HB	5:E:121:PRO:HD3	1.51	0.90
58:FB:85:PRO:HB2	61:IB:12:ALA:HB2	1.49	0.90
9:I:65:ILE:HG21	9:I:72:ASP:HB3	1.52	0.90
82:DC:349:GLN:HA	82:DC:352:ARG:HB2	1.51	0.90
2:B:501:A:H4'	10:J:28:GLN:HG3	1.53	0.90
2:B:672:A:H4'	22:V:21:SER:HB2	1.53	0.90
1:A:874:C:H4'	1:A:1046:G:H4'	1.50	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:522:U:H5'	74:VB:36:SER:HA	1.53	0.90
2:B:2511:A:H2'	2:B:2512:C:C6	2.06	0.90
22:V:49:LEU:HA	22:V:52:LEU:HD12	1.51	0.90
8:H:35:VAL:HG13	8:H:235:LEU:HD11	1.54	0.90
18:R:38:ILE:HD12	18:R:44:VAL:HG12	1.53	0.90
32:FA:79:TRP:HE1	32:FA:118:ILE:HB	1.37	0.90
65:MB:98:ASN:HB3	65:MB:103:ASN:HD21	1.35	0.90
67:OB:26:LEU:HD23	67:OB:58:MET:HB3	1.52	0.90
20:T:34:VAL:HG12	20:T:103:LYS:HB2	1.54	0.90
22:V:143:PRO:HB2	22:V:146:SER:HB3	1.54	0.90
2:B:830:A:N6	2:B:864:G:H21	1.69	0.89
2:B:1177:G:H5'	37:KA:18:ARG:NH1	1.87	0.89
12:L:116:VAL:HA	12:L:121:SER:H	1.37	0.89
2:B:2395:G:H4'	7:G:258:ALA:HB1	1.53	0.89
2:B:3000:A:H5'	2:B:3296:A:H5''	1.53	0.89
6:F:136:ILE:HG13	6:F:148:VAL:HG12	1.53	0.89
2:B:1651:U:H5''	6:F:71:LEU:HB2	1.54	0.89
16:P:101:SER:H	16:P:139:VAL:HG12	1.37	0.89
82:DC:81:MET:HB2	82:DC:96:ASN:HD22	1.33	0.89
14:N:51:HIS:HB3	14:N:134:ILE:HG23	1.55	0.89
43:QA:28:ARG:HG3	43:QA:36:ARG:HA	1.55	0.89
70:RB:82:TYR:HB3	79:AC:52:PHE:HB3	1.54	0.89
2:B:815:G:H2'	2:B:906:A:H62	1.37	0.89
1:A:1469:A:H4'	1:A:1541:G:H4'	1.51	0.89
27:AA:18:PRO:HA	27:AA:51:ALA:HA	1.52	0.89
82:DC:750:LYS:HB3	82:DC:776:GLU:HB3	1.55	0.89
59:GB:83:VAL:HA	59:GB:149:ARG:HA	1.52	0.89
2:B:522:A:H3'	2:B:523:A:H5''	1.52	0.89
53:AB:98:ALA:HA	53:AB:188:ILE:HD12	1.52	0.89
2:B:1203:A:H2'	2:B:1204:A:C8	2.08	0.89
2:B:3108:G:H21	13:M:163:GLN:HE22	1.18	0.89
1:A:1171:A:H2'	1:A:1172:G:C8	2.08	0.89
82:DC:155:VAL:HB	82:DC:209:VAL:HG22	1.53	0.89
9:I:115:LEU:HD11	9:I:139:PRO:HB2	1.55	0.89
11:K:233:GLU:HB2	24:X:35:VAL:HG22	1.53	0.89
23:W:81:ARG:HG2	23:W:88:ARG:HD2	1.54	0.89
55:CB:128:ASN:ND2	55:CB:129:PRO:HD2	1.88	0.89
2:B:1347:U:H5''	8:H:303:GLY:HA2	1.54	0.89
35:IA:17:HIS:HB2	35:IA:69:TYR:HB3	1.54	0.89
70:RB:52:LYS:HB3	70:RB:93:LEU:HD23	1.55	0.89
2:B:830:A:H62	2:B:864:G:N2	1.71	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1186:G:H1'	24:X:112:ALA:HB1	1.53	0.88
2:B:825:U:H4'	2:B:1587:A:N1	1.89	0.88
1:A:505:A:H3'	1:A:506:A:H5''	1.55	0.88
34:HA:39:SER:HA	34:HA:93:LEU:HA	1.54	0.88
10:J:38:THR:H	10:J:54:TYR:HB3	1.38	0.88
2:B:2852:C:N3	14:N:158:LYS:HE3	1.87	0.88
2:B:2967:A:H5''	6:F:213:GLY:HA3	1.54	0.88
82:DC:153:PRO:HD2	82:DC:200:VAL:HG22	1.55	0.88
31:EA:27:LYS:HB3	31:EA:42:LEU:HD22	1.53	0.88
2:B:3305:A:H4'	7:G:272:TYR:CZ	2.08	0.88
2:B:431:U:H2'	2:B:432:G:C8	2.09	0.88
34:HA:25:LEU:HB3	34:HA:87:VAL:HG21	1.53	0.88
13:M:12:VAL:HG13	13:M:16:VAL:HB	1.56	0.88
66:NB:115:THR:HA	66:NB:118:ILE:HG23	1.54	0.88
15:O:47:GLN:HA	15:O:67:VAL:HG12	1.55	0.88
1:A:476:U:H5''	1:A:538:A:H61	1.38	0.88
2:B:1788:C:H2'	2:B:1789:G:H8	1.37	0.88
2:B:39:A:H2'	2:B:42:C:N4	1.89	0.88
57:EB:114:ARG:HH11	57:EB:114:ARG:HB2	1.37	0.88
61:IB:125:VAL:HG12	61:IB:139:VAL:HA	1.54	0.88
63:KB:107:LYS:HE2	63:KB:109:LYS:HD3	1.56	0.88
17:Q:67:ARG:HE	17:Q:68:LYS:HG2	1.36	0.88
2:B:1294:A:HO2'	2:B:1295:G:H8	1.19	0.88
15:O:75:LYS:HE3	15:O:79:ILE:HD11	1.54	0.88
3:C:142:C:H5'	19:S:113:LEU:HD21	1.56	0.88
25:Y:67:VAL:HG12	25:Y:72:VAL:HA	1.57	0.87
2:B:351:A:H61	43:QA:39:ALA:H	1.21	0.87
2:B:524:U:H5	2:B:568:G:H22	1.18	0.87
82:DC:194:ASP:HB2	82:DC:197:LEU:HD13	1.55	0.87
47:UA:24:ARG:HH11	47:UA:24:ARG:HB3	1.39	0.87
16:P:103:ASN:HA	16:P:141:CYS:HB2	1.56	0.87
21:U:126:ARG:HD3	21:U:140:GLU:HB3	1.57	0.87
2:B:1940:G:H21	2:B:3362:A:H1'	1.37	0.87
29:CA:86:VAL:HG11	29:CA:90:ALA:HB3	1.56	0.87
1:A:1650:U:H2'	1:A:1651:A:C8	2.10	0.87
60:HB:82:LEU:HB2	60:HB:86:ILE:HG21	1.55	0.87
2:B:818:C:H5''	41:OA:10:LYS:HB2	1.57	0.87
19:S:137:PRO:HG2	19:S:138:GLN:HE21	1.38	0.87
2:B:1923:C:H5''	45:SA:25:LYS:HA	1.56	0.87
82:DC:338:ILE:O	82:DC:342:LEU:HB2	1.74	0.87
21:U:114:VAL:HB	21:U:150:VAL:HG12	1.55	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:108:A:H4'	1:A:363:G:O2'	1.74	0.87
34:HA:77:LEU:HD23	34:HA:88:GLY:HA2	1.55	0.87
52:ZA:180:ALA:HB1	52:ZA:184:VAL:HB	1.54	0.87
2:B:62:A:H5''	19:S:164:LEU:HD21	1.55	0.87
65:MB:52:LYS:HB2	65:MB:53:PRO:HD3	1.55	0.87
19:S:91:GLU:HB2	46:TA:50:PHE:HZ	1.39	0.87
2:B:627:U:H2'	2:B:628:A:C8	2.10	0.87
2:B:91:G:H2'	2:B:93:C:H5''	1.57	0.87
82:DC:634:TRP:HB2	82:DC:646:VAL:HB	1.57	0.87
2:B:3260:G:H4'	18:R:126:GLN:HA	1.57	0.86
2:B:39:A:H2'	2:B:42:C:H41	1.40	0.86
18:R:123:LEU:HD22	20:T:194:LEU:HG	1.56	0.86
2:B:885:U:H5''	2:B:1851:G:H4'	1.57	0.86
10:J:13:GLU:HG3	36:JA:87:MET:O	1.75	0.86
23:W:10:LEU:HD22	23:W:41:ILE:HD12	1.56	0.86
11:K:120:THR:HB	25:Y:132:PRO:HB2	1.54	0.86
1:A:1184:A:H2'	1:A:1185:U:H4'	1.55	0.86
82:DC:677:PHE:HB3	82:DC:819:VAL:HG13	1.58	0.86
16:P:123:ARG:NH2	48:VA:39:HIS:HB2	1.90	0.86
14:N:102:MET:HB3	14:N:112:GLN:N	1.91	0.86
18:R:45:LEU:HD21	18:R:55:ARG:HH11	1.41	0.86
1:A:86:A:H2'	1:A:87:C:C6	2.11	0.86
2:B:1304:A:H2'	2:B:2939:G:H1'	1.56	0.86
2:B:2392:C:H1'	7:G:266:ARG:HH21	1.41	0.86
34:HA:48:THR:HB	34:HA:49:PRO:HD2	1.57	0.86
1:A:830:U:H2'	1:A:831:U:H6	1.39	0.86
2:B:1240:A:H3'	2:B:1241:U:H5''	1.55	0.86
2:B:1311:G:O2'	2:B:2381:G:H4'	1.76	0.86
2:B:1546:A:H4'	19:S:101:THR:HG23	1.56	0.86
49:WA:270:LEU:HD11	49:WA:273:ASP:HB2	1.58	0.86
2:B:2567:C:H3'	2:B:2568:C:H5''	1.57	0.86
11:K:107:ARG:HD2	11:K:204:PRO:HG3	1.58	0.86
54:BB:95:THR:HG22	74:VB:16:PRO:HD2	1.58	0.86
2:B:1593:A:H2	2:B:1616:U:H4'	1.39	0.86
1:A:294:C:H5'	54:BB:133:LYS:HD3	1.58	0.86
8:H:329:PRO:HG2	11:K:45:LEU:HD13	1.57	0.86
66:NB:51:PRO:HG2	66:NB:52:LEU:HD23	1.57	0.86
63:KB:108:ASP:HB3	63:KB:111:ALA:HB3	1.56	0.85
23:W:162:ARG:O	23:W:166:ASN:HB2	1.76	0.85
24:X:93:GLU:HB3	24:X:140:VAL:HG21	1.57	0.85
5:E:65:ILE:HG21	5:E:148:VAL:HG13	1.58	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1898:G:H1'	27:AA:18:PRO:HD2	1.56	0.85
2:B:1221:A:H4'	48:VA:60:ARG:HB2	1.58	0.85
82:DC:285:PHE:HA	82:DC:320:LEU:HD11	1.58	0.85
39:MA:48:ARG:HA	39:MA:51:ILE:HD12	1.58	0.85
14:N:174:THR:HG22	14:N:176:LEU:H	1.40	0.85
49:WA:38:ARG:HA	49:WA:67:ILE:HG23	1.57	0.85
2:B:352:A:H62	2:B:366:A:H62	1.24	0.85
3:C:94:C:H5''	41:OA:76:ASN:ND2	1.91	0.85
39:MA:100:VAL:HG22	39:MA:101:THR:H	1.41	0.85
15:O:9:MET:HG3	15:O:134:PRO:HB2	1.59	0.85
68:PB:53:ASP:HB2	68:PB:56:LYS:HB2	1.58	0.85
2:B:59:G:H4'	2:B:60:A:H4'	1.59	0.85
2:B:815:G:H2'	2:B:906:A:N6	1.90	0.85
19:S:73:ARG:HB2	19:S:89:VAL:HG13	1.59	0.85
1:A:821:U:H3'	1:A:822:U:H5''	1.58	0.85
2:B:1593:A:C2	2:B:1616:U:H4'	2.12	0.85
2:B:2130:G:H2'	2:B:2131:A:H4'	1.57	0.85
2:B:2732:G:H2'	2:B:2733:A:H8	1.41	0.85
2:B:286:U:H2'	2:B:287:G:C8	2.12	0.85
61:IB:3:THR:HG21	61:IB:7:VAL:HG23	1.56	0.85
1:A:1087:A:H5'	1:A:1298:U:C5	2.11	0.85
28:BA:5:ILE:HB	28:BA:10:GLY:HA2	1.57	0.85
30:DA:115:ARG:HB3	30:DA:115:ARG:HH11	1.41	0.85
38:LA:20:ILE:H	38:LA:20:ILE:HD13	1.42	0.85
2:B:1324:U:H5'	24:X:2:ALA:H	1.41	0.85
2:B:818:C:H5'	41:OA:11:ARG:HG3	1.57	0.85
35:IA:98:VAL:HG11	35:IA:101:ALA:HB2	1.59	0.85
22:V:64:VAL:HG12	22:V:90:ASP:H	1.40	0.85
1:A:385:A:H2'	1:A:386:G:C8	2.12	0.85
2:B:2198:A:H2'	2:B:2199:G:H5'	1.59	0.85
2:B:2698:G:H2'	2:B:2699:G:H5''	1.57	0.85
2:B:3321:C:H5''	7:G:172:ALA:HB1	1.59	0.85
8:H:244:LEU:H	8:H:244:LEU:HD23	1.38	0.85
66:NB:128:LYS:HB2	66:NB:137:ARG:HH22	1.39	0.85
69:QB:28:LEU:HD21	69:QB:30:VAL:HG13	1.57	0.85
24:X:11:GLY:HA2	24:X:59:VAL:HG23	1.58	0.85
26:Z:89:LEU:HB3	26:Z:93:ILE:HD12	1.58	0.85
82:DC:44:GLY:HA2	82:DC:77:LEU:HG	1.58	0.84
13:M:147:SER:HB2	13:M:187:ILE:HG12	1.57	0.84
73:UB:61:SER:HB2	73:UB:116:ASP:HB2	1.56	0.84
2:B:1788:C:H2'	2:B:1789:G:C8	2.12	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2261:G:H21	2:B:2262:A:H62	1.20	0.84
8:H:259:ASP:HB2	8:H:267:VAL:HG21	1.57	0.84
17:Q:42:ARG:HG2	17:Q:51:LEU:HD22	1.58	0.84
73:UB:60:GLU:HA	73:UB:68:ILE:HA	1.59	0.84
2:B:584:G:H4'	37:KA:46:GLY:HA3	1.58	0.84
2:B:904:A:H5''	2:B:1537:A:H5'	1.57	0.84
2:B:1520:G:H5''	29:CA:69:SER:HB2	1.58	0.84
82:DC:619:MET:HA	82:DC:623:TYR:HD2	1.41	0.84
48:VA:76:LEU:HA	48:VA:189:GLN:NE2	1.91	0.84
50:XA:189:VAL:HG13	50:XA:190:ASP:H	1.40	0.84
1:A:830:U:H2'	1:A:831:U:C6	2.12	0.84
2:B:2361:A:H61	2:B:2377:G:H1	1.24	0.84
7:G:211:GLN:HE21	7:G:285:VAL:HG23	1.40	0.84
72:TB:86:ILE:HA	72:TB:89:TRP:HB2	1.59	0.84
73:UB:56:LYS:HD3	73:UB:98:GLU:HG3	1.59	0.84
52:ZA:56:ILE:HG23	52:ZA:61:LEU:HB2	1.58	0.84
2:B:2554:A:O4'	6:F:85:GLY:HA3	1.78	0.84
2:B:3311:C:H2'	2:B:3312:U:H5'	1.60	0.84
36:JA:89:THR:HG22	36:JA:117:ILE:HG23	1.56	0.84
2:B:837:A:H1'	47:UA:10:ILE:HD13	1.60	0.84
52:ZA:188:LEU:HD13	52:ZA:196:VAL:HG11	1.59	0.84
2:B:669:U:H4'	2:B:1110:U:H5''	1.59	0.84
7:G:296:THR:HG22	7:G:297:SER:H	1.43	0.84
52:ZA:229:LEU:HD11	71:SB:14:PRO:HD2	1.58	0.84
73:UB:24:TRP:CE3	73:UB:30:LYS:HG2	2.13	0.84
11:K:224:ILE:HG12	24:X:36:ILE:HA	1.58	0.84
1:A:1393:C:H5''	49:WA:285:ALA:HB1	1.59	0.84
2:B:1535:A:H62	2:B:1586:G:H21	1.24	0.84
2:B:2197:C:H5''	2:B:2242:A:H61	1.43	0.84
2:B:242:C:O2'	2:B:243:G:H5'	1.76	0.84
2:B:438:A:H2'	2:B:439:C:H4'	1.57	0.84
2:B:896:A:C8	2:B:2134:G:H1'	2.12	0.84
1:A:332:U:C5'	58:FB:30:GLY:HA2	2.07	0.84
2:B:2650:U:H2'	2:B:2651:G:C8	2.13	0.84
7:G:25:ILE:H	7:G:25:ILE:HD13	1.43	0.84
53:AB:32:GLU:HG3	53:AB:57:ASP:HB2	1.60	0.84
54:BB:49:ARG:HG3	54:BB:61:VAL:HG21	1.60	0.84
2:B:308:A:H5''	40:NA:80:PHE:HD1	1.43	0.84
17:Q:22:VAL:HG22	19:S:197:LEU:HB3	1.60	0.84
1:A:628:G:O2'	2:B:846:A:N6	2.09	0.83
82:DC:202:VAL:HG12	82:DC:208:THR:HB	1.60	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:154:C:H5''	12:L:181:LYS:HB3	1.58	0.83
39:MA:25:LYS:HE3	39:MA:51:ILE:HD13	1.57	0.83
1:A:1498:G:H2'	1:A:1499:G:H5''	1.59	0.83
56:DB:159:ARG:HG2	56:DB:172:ALA:HB2	1.60	0.83
5:E:114:GLU:HA	5:E:137:PRO:HB3	1.57	0.83
13:M:28:VAL:HG22	13:M:33:THR:HG23	1.60	0.83
2:B:2954:U:H4'	2:B:2955:U:C5'	2.07	0.83
61:IB:75:VAL:HA	61:IB:86:ILE:HG22	1.58	0.83
10:J:63:LEU:HD12	10:J:84:VAL:HG21	1.61	0.83
3:C:43:A:H4'	41:OA:22:CYS:HA	1.58	0.83
18:R:78:THR:HA	18:R:81:VAL:HB	1.59	0.83
71:SB:21:ASN:HB2	72:TB:67:GLY:HA3	1.59	0.83
2:B:1459:C:H2'	2:B:1460:A:C8	2.13	0.83
36:JA:66:LEU:HD23	36:JA:72:LYS:HG3	1.58	0.83
1:A:1036:A:H5'	72:TB:3:ARG:HH22	1.43	0.83
2:B:830:A:H62	2:B:864:G:H21	0.87	0.83
2:B:692:A:H4'	8:H:46:LYS:HG2	1.59	0.83
16:P:123:ARG:HH12	48:VA:42:ARG:HD2	1.42	0.83
43:QA:26:TRP:O	43:QA:30:ARG:HG3	1.79	0.83
3:C:12:A:H5''	21:U:3:ARG:HB3	1.59	0.83
2:B:2960:C:H2'	2:B:2961:G:H8	1.44	0.83
82:DC:706:ILE:HB	82:DC:707:PRO:HD3	1.61	0.83
6:F:104:LEU:HB3	6:F:146:THR:HG21	1.60	0.83
32:FA:124:ILE:HA	32:FA:144:VAL:HG23	1.60	0.83
18:R:35:ILE:HG13	18:R:46:ILE:HG22	1.60	0.83
50:XA:170:ILE:H	50:XA:170:ILE:HD12	1.43	0.83
82:DC:77:LEU:HB2	82:DC:100:ILE:HB	1.61	0.83
10:J:47:PHE:HA	10:J:50:LYS:HE3	1.58	0.83
18:R:49:PRO:HG3	18:R:81:VAL:HG12	1.60	0.83
1:A:871:G:H2'	1:A:872:G:C8	2.13	0.83
2:B:3150:A:H5'	7:G:130:PHE:H	1.44	0.83
2:B:914:A:H2	6:F:208:ASP:HB3	1.44	0.83
80:BC:20:LYS:HE2	80:BC:20:LYS:HA	1.60	0.83
83:EC:6934:U:H2'	83:EC:6935:G:H4'	1.59	0.83
14:N:53:VAL:HG21	14:N:166:ILE:HD12	1.60	0.83
22:V:33:TYR:HB3	22:V:49:LEU:HD23	1.60	0.83
7:G:160:VAL:HG23	7:G:183:LEU:HD11	1.59	0.83
75:WB:62:VAL:HA	75:WB:76:ALA:HB1	1.61	0.83
2:B:590:G:H2'	2:B:591:G:H5'	1.61	0.82
7:G:43:LEU:HB3	7:G:181:ILE:HG21	1.59	0.82
11:K:161:VAL:HG12	11:K:162:PRO:HD2	1.61	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
63:KB:143:SER:HA	63:KB:146:ALA:HB3	1.61	0.82
19:S:135:VAL:HG12	19:S:142:ILE:HG21	1.59	0.82
1:A:1766:A:H5'	1:A:1794:A:H5''	1.60	0.82
2:B:1231:A:H5'	48:VA:35:SER:HB2	1.60	0.82
2:B:346:C:N3	3:C:25:G:H4'	1.95	0.82
2:B:581:U:O2'	2:B:582:G:H5'	1.79	0.82
2:B:665:A:H5''	19:S:199:LEU:HD21	1.61	0.82
57:EB:11:GLN:HG3	57:EB:13:PRO:HD2	1.59	0.82
10:J:67:GLY:HA2	10:J:74:VAL:HB	1.59	0.82
19:S:116:LEU:HB3	19:S:133:ILE:O	1.79	0.82
1:A:1203:A:H5'	1:A:1457:C:H41	1.44	0.82
82:DC:171:LYS:HB3	82:DC:274:ASN:HB3	1.61	0.82
58:FB:46:VAL:HG11	58:FB:56:ARG:HE	1.43	0.82
13:M:41:ILE:HG23	13:M:43:VAL:HG13	1.60	0.82
24:X:26:ARG:NH1	24:X:28:ARG:HH21	1.76	0.82
2:B:1295:G:H2'	2:B:1296:C:C6	2.14	0.82
36:JA:102:ALA:HB2	36:JA:125:ARG:HB3	1.61	0.82
11:K:110:ARG:HD3	11:K:206:LYS:HE3	1.61	0.82
1:A:478:A:C5'	59:GB:127:VAL:HG21	2.10	0.82
6:F:117:GLU:HA	6:F:125:ALA:HB3	1.61	0.82
24:X:26:ARG:HH22	24:X:64:ILE:HD11	1.42	0.82
11:K:145:ARG:NH1	11:K:145:ARG:HB3	1.94	0.82
2:B:1263:A:H4'	2:B:1264:G:H8	1.43	0.82
31:EA:83:THR:HG23	31:EA:85:TYR:H	1.41	0.82
37:KA:17:GLN:HB3	37:KA:24:ASN:HB3	1.59	0.82
1:A:632:U:H4'	73:UB:11:SER:HB3	1.62	0.82
40:NA:60:LEU:CD1	40:NA:68:ARG:HD2	2.10	0.82
21:U:98:ALA:HB2	21:U:148:LEU:HD21	1.60	0.82
22:V:30:VAL:HG22	22:V:52:LEU:HD13	1.61	0.82
49:WA:136:ILE:H	49:WA:136:ILE:HD13	1.43	0.82
52:ZA:38:VAL:HG13	52:ZA:39:THR:HG23	1.62	0.82
2:B:1380:G:H5'	8:H:191:LYS:HE2	1.62	0.82
54:BB:183:VAL:HG13	54:BB:224:ASN:HB3	1.62	0.82
82:DC:601:ILE:HG23	82:DC:636:PHE:HD1	1.44	0.82
6:F:22:LEU:HD21	6:F:191:LEU:HD21	1.62	0.82
41:OA:52:LYS:HA	41:OA:55:ARG:HH12	1.44	0.82
18:R:45:LEU:HD21	18:R:55:ARG:HD3	1.60	0.82
70:RB:50:LEU:HD22	70:RB:95:ALA:HB2	1.62	0.82
20:T:153:VAL:HA	20:T:156:LEU:HD12	1.62	0.82
2:B:1281:G:H5'	48:VA:55:LYS:HB3	1.62	0.82
1:A:1319:A:H3'	1:A:1320:U:H5''	1.61	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1420:C:H2'	1:A:1421:A:H5'	1.60	0.82
27:AA:62:VAL:HB	27:AA:70:ARG:HG3	1.59	0.82
31:EA:33:SER:HB3	31:EA:36:HIS:HB2	1.62	0.82
6:F:6:ARG:HB3	6:F:10:LYS:HE2	1.60	0.82
63:KB:27:LYS:HG3	63:KB:28:LEU:HG	1.60	0.82
22:V:138:LEU:HD22	22:V:139:ILE:H	1.44	0.82
2:B:2995:A:H2'	2:B:2996:U:H5''	1.62	0.81
2:B:3090:U:H2'	2:B:3091:A:C8	2.15	0.81
2:B:355:A:H2'	2:B:356:C:O4'	1.80	0.81
7:G:260:VAL:HG11	7:G:266:ARG:NH1	1.94	0.81
12:L:158:ASP:HB2	12:L:159:PRO:HD3	1.62	0.81
1:A:143:G:H2'	1:A:144:U:H5''	1.59	0.81
82:DC:772:LEU:HD12	82:DC:773:PRO:HD2	1.60	0.81
18:R:113:THR:HB	18:R:116:GLU:HB2	1.60	0.81
1:A:911:U:H5''	2:B:2207:A:H5'	1.62	0.81
2:B:1779:C:H5'	23:W:97:ARG:HH22	1.44	0.81
2:B:2922:G:H3'	2:B:2923:U:H5''	1.62	0.81
2:B:296:A:O2'	2:B:297:G:H5'	1.80	0.81
17:Q:85:LEU:HD12	17:Q:89:TYR:HB3	1.61	0.81
2:B:802:C:H5	32:FA:25:HIS:HB3	1.46	0.81
27:AA:66:LYS:HE2	27:AA:68:GLU:HB2	1.62	0.81
38:LA:54:ILE:HG12	38:LA:71:THR:HG22	1.61	0.81
15:O:29:ARG:HA	15:O:32:ARG:HD3	1.62	0.81
2:B:2424:A:H5''	19:S:90:ASN:HB2	1.63	0.81
74:VB:20:ARG:HA	74:VB:76:TYR:HA	1.62	0.81
1:A:780:A:H1'	74:VB:9:THR:H	1.46	0.81
49:WA:120:SER:HA	49:WA:136:ILE:HD12	1.59	0.81
52:ZA:82:ASN:HB2	52:ZA:207:LEU:HD12	1.61	0.81
2:B:1261:G:H4'	2:B:1278:A:N1	1.95	0.81
39:MA:59:ASN:O	39:MA:63:ARG:HG3	1.81	0.81
2:B:20:A:H1'	19:S:112:ASN:HB3	1.59	0.81
2:B:1230:G:H4'	48:VA:34:SER:HA	1.62	0.81
49:WA:25:THR:HG21	49:WA:295:SER:HA	1.60	0.81
2:B:2985:C:H2'	2:B:2986:U:C6	2.14	0.81
2:B:2908:G:H4'	44:RA:114:LYS:NZ	1.94	0.81
46:TA:9:LYS:HA	46:TA:21:THR:O	1.81	0.81
20:T:119:VAL:HG11	24:X:167:ARG:HG3	1.62	0.81
2:B:1546:A:H5''	19:S:105:ARG:HH21	1.45	0.81
2:B:3273:A:H4'	10:J:44:ALA:HB3	1.63	0.81
2:B:631:U:H2'	2:B:632:G:C8	2.15	0.81
38:LA:42:PRO:HB2	38:LA:51:LEU:HD13	1.61	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:M:100:ASN:O	13:M:114:VAL:HA	1.81	0.81
2:B:2656:A:H4'	46:TA:98:LYS:HE2	1.61	0.81
2:B:1448:U:H4'	21:U:66:SER:HB3	1.60	0.81
73:UB:76:LEU:HD13	73:UB:79:ASN:HB2	1.61	0.81
24:X:59:VAL:HG13	25:Y:141:VAL:HG21	1.63	0.81
1:A:1169:G:H21	1:A:1576:A:H62	1.25	0.81
82:DC:493:VAL:HG22	82:DC:556:ILE:HD12	1.63	0.81
9:I:17:GLN:HG3	25:Y:22:HIS:H	1.45	0.81
2:B:1448:U:H4'	21:U:66:SER:CB	2.10	0.81
2:B:13:A:H2	29:CA:39:LYS:HA	1.46	0.81
7:G:224:HIS:H	7:G:271:GLY:HA3	1.43	0.81
1:A:398:G:H5''	58:FB:49:ARG:HG3	1.63	0.81
56:DB:178:LEU:HG	56:DB:180:THR:HG23	1.62	0.81
2:B:2242:A:H5'	6:F:243:THR:HG23	1.63	0.81
8:H:134:LEU:HA	8:H:137:ALA:HB3	1.63	0.81
61:IB:38:ALA:HB2	61:IB:60:PHE:CE1	2.16	0.81
10:J:146:ILE:HA	10:J:149:ILE:HD12	1.63	0.81
2:B:1888:U:H2'	2:B:1889:G:O4'	1.81	0.80
2:B:70:A:H2	2:B:72:C:H42	1.25	0.80
16:P:106:LEU:H	16:P:142:ARG:HG3	1.45	0.80
73:UB:114:LYS:H	73:UB:117:ILE:HD11	1.44	0.80
24:X:75:PHE:HB2	24:X:94:ILE:O	1.81	0.80
2:B:2393:G:H4'	7:G:252:ILE:HG13	1.63	0.80
2:B:2571:U:H4'	2:B:2572:C:H5'	1.60	0.80
2:B:3232:G:H2'	2:B:3233:C:C6	2.15	0.80
8:H:216:VAL:HA	8:H:227:THR:HG21	1.63	0.80
11:K:88:ARG:HA	11:K:134:VAL:HG12	1.63	0.80
67:OB:89:SER:O	67:OB:90:ALA:C	2.18	0.80
2:B:109:A:H4'	2:B:110:G:H5'	1.61	0.80
2:B:2817:A:H3'	2:B:2818:U:H5'	1.62	0.80
82:DC:577:SER:HA	82:DC:840:ASP:HB2	1.63	0.80
19:S:84:PRO:HA	19:S:87:GLN:HG3	1.61	0.80
24:X:12:ARG:HB3	24:X:24:LEU:HG	1.61	0.80
1:A:1229:G:H21	1:A:1256:A:H62	1.29	0.80
2:B:74:G:H5''	17:Q:104:ARG:HD2	1.62	0.80
80:BC:14:VAL:HA	80:BC:17:GLN:HG2	1.64	0.80
2:B:1270:A:H5'	82:DC:741:GLY:HA2	1.63	0.80
11:K:222:HIS:HB3	11:K:225:GLN:HB2	1.62	0.80
41:OA:52:LYS:HA	41:OA:55:ARG:NH1	1.96	0.80
2:B:351:A:N6	43:QA:39:ALA:H	1.79	0.80
50:XA:84:ARG:HH21	50:XA:205:ARG:H	1.28	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1232:C:C5	2:B:1261:G:H2'	2.17	0.80
31:EA:22:LYS:HE2	31:EA:129:TRP:HB3	1.63	0.80
7:G:261:MET:HG2	20:T:64:PHE:HA	1.63	0.80
2:B:1380:G:C5'	8:H:191:LYS:HB2	2.10	0.80
75:WB:83:LEU:HA	75:WB:87:GLY:HA3	1.63	0.80
1:A:115:G:H5'	61:IB:129:ARG:HE	1.46	0.80
2:B:1828:A:H2'	2:B:1829:G:H8	1.45	0.80
2:B:912:G:H2'	2:B:914:A:N7	1.97	0.80
54:BB:62:LYS:HA	54:BB:65:LEU:HD12	1.64	0.80
30:DA:39:LEU:HD23	30:DA:42:GLN:HG3	1.64	0.80
8:H:113:VAL:HB	8:H:118:LYS:HE2	1.62	0.80
61:IB:125:VAL:HA	61:IB:140:VAL:HG12	1.62	0.80
66:NB:39:VAL:HG21	66:NB:45:ARG:HD3	1.63	0.80
43:QA:21:ARG:NH1	43:QA:24:PRO:HG3	1.95	0.80
1:A:1036:A:H5''	72:TB:28:ARG:HH22	1.46	0.80
1:A:1198:G:H3'	1:A:1199:G:H5'	1.60	0.80
28:BA:48:ARG:HH21	28:BA:58:HIS:HE1	1.30	0.80
7:G:117:ARG:HH21	7:G:177:HIS:HA	1.47	0.80
21:U:126:ARG:HA	21:U:140:GLU:HA	1.63	0.80
54:BB:183:VAL:HA	54:BB:224:ASN:O	1.82	0.80
72:TB:81:VAL:HG13	72:TB:85:ASP:HB2	1.61	0.80
47:UA:24:ARG:HB3	47:UA:24:ARG:NH1	1.95	0.80
2:B:1064:A:H62	2:B:1096:U:H3	1.30	0.80
55:CB:124:LEU:HD11	75:WB:59:TYR:HB2	1.64	0.80
2:B:185:C:H5''	30:DA:122:LYS:HE2	1.63	0.80
8:H:110:ASN:HB2	19:S:201:ARG:O	1.81	0.80
16:P:87:GLU:HB2	16:P:88:PRO:HD2	1.64	0.80
50:XA:20:ALA:HA	50:XA:168:HIS:HB2	1.63	0.80
26:Z:75:TYR:O	26:Z:79:LEU:HG	1.82	0.80
2:B:2095:G:H2'	2:B:2096:A:H8	1.46	0.80
2:B:2982:A:O2'	2:B:2983:C:H5''	1.82	0.80
2:B:671:U:H2'	2:B:672:A:H8	1.47	0.80
54:BB:100:ARG:HB2	54:BB:114:ILE:HD13	1.63	0.80
82:DC:360:PRO:HB2	82:DC:363:ASP:HB2	1.63	0.80
50:XA:157:ASP:O	71:SB:66:ASP:HB3	1.81	0.80
1:A:462:G:H2'	1:A:463:U:C6	2.17	0.79
2:B:1340:G:H2'	2:B:1341:U:C6	2.17	0.79
2:B:95:A:H2'	2:B:96:G:O4'	1.82	0.79
82:DC:15:LYS:HB3	82:DC:18:ASN:HB2	1.63	0.79
82:DC:220:PHE:CB	82:DC:328:LEU:HD13	2.13	0.79
57:EB:141:ARG:HB2	57:EB:149:ILE:HB	1.63	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:126:LEU:HD12	6:F:126:LEU:H	1.48	0.79
67:OB:19:ARG:HG3	67:OB:20:TYR:HD1	1.47	0.79
17:Q:77:LEU:HA	17:Q:80:VAL:HG22	1.64	0.79
1:A:1519:U:H2'	1:A:1520:U:C5	2.18	0.79
1:A:256:A:H1'	58:FB:72:ILE:HA	1.64	0.79
2:B:2212:C:H1'	2:B:2233:A:H61	1.48	0.79
2:B:3182:G:H4'	20:T:161:LYS:HD3	1.64	0.79
30:DA:31:LEU:HB3	30:DA:101:PRO:HG3	1.63	0.79
60:HB:15:LEU:HD13	60:HB:21:VAL:HG23	1.65	0.79
12:L:203:VAL:HG21	12:L:208:GLU:HA	1.62	0.79
12:L:48:ARG:NH2	12:L:49:TYR:HB3	1.98	0.79
2:B:1792:C:H5''	6:F:184:ARG:HD3	1.62	0.79
54:BB:150:PRO:HG2	54:BB:151:ASP:H	1.47	0.79
34:HA:24:THR:OG1	34:HA:91:SER:HB3	1.83	0.79
68:PB:36:LYS:HB2	68:PB:102:ALA:HA	1.64	0.79
25:Y:52:MET:HG2	25:Y:53:PRO:HD2	1.62	0.79
2:B:2356:A:H61	2:B:2983:C:H41	1.26	0.79
2:B:3065:G:H2'	2:B:3066:U:C6	2.17	0.79
32:FA:100:PRO:HB2	32:FA:123:VAL:HG13	1.64	0.79
52:ZA:55:GLU:HA	52:ZA:58:LEU:HD12	1.62	0.79
1:A:5:U:H2'	1:A:6:G:C8	2.18	0.79
2:B:1472:U:H2'	2:B:1473:G:C8	2.18	0.79
2:B:3202:G:H2'	2:B:3203:U:O4'	1.83	0.79
2:B:3327:G:H2'	2:B:3328:G:H8	1.44	0.79
82:DC:711:ARG:HA	82:DC:714:TYR:HD2	1.47	0.79
72:TB:81:VAL:HG11	72:TB:86:ILE:HG23	1.64	0.79
2:B:29:C:C2'	2:B:30:G:H5''	2.12	0.79
3:C:45:C:H5''	43:QA:15:LYS:HG3	1.64	0.79
6:F:82:VAL:H	47:UA:65:ALA:HB3	1.46	0.79
43:QA:22:PRO:HA	43:QA:41:ARG:HH22	1.48	0.79
2:B:1828:A:H2'	2:B:1829:G:C8	2.17	0.79
82:DC:730:LEU:HB2	82:DC:799:ASP:HB2	1.62	0.79
22:V:173:GLU:HG2	32:FA:52:TYR:HA	1.62	0.79
1:A:589:C:H2'	1:A:590:C:C6	2.17	0.79
2:B:3312:U:H2'	2:B:3313:U:H5''	1.63	0.79
82:DC:225:PHE:HA	82:DC:228:ARG:HB3	1.63	0.79
22:V:64:VAL:HA	22:V:67:ILE:HD12	1.65	0.79
1:A:1158:C:H1'	1:A:1161:C:H41	1.46	0.79
54:BB:193:GLY:HA3	54:BB:212:ASP:HA	1.64	0.79
82:DC:653:VAL:HG11	82:DC:659:ILE:HD11	1.64	0.79
6:F:3:ARG:HB2	6:F:207:VAL:HG23	1.65	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
63:KB:128:TYR:HA	63:KB:131:THR:HB	1.65	0.79
25:Y:36:VAL:HG13	25:Y:65:TYR:HA	1.65	0.79
1:A:1352:G:H4'	66:NB:3:ALA:HB3	1.64	0.79
2:B:1138:U:H2'	2:B:1139:G:C8	2.18	0.79
2:B:422:A:C2	2:B:2363:A:H4'	2.18	0.79
2:B:83:U:H2'	2:B:84:U:O4'	1.82	0.79
7:G:126:LYS:HA	7:G:126:LYS:HE3	1.65	0.79
19:S:8:GLU:HG3	19:S:50:ARG:HH22	1.48	0.79
2:B:1259:A:H61	48:VA:33:VAL:HG11	1.48	0.78
2:B:1655:G:H1'	2:B:1800:A:H61	1.46	0.78
2:B:2662:G:H2'	2:B:2663:G:C8	2.19	0.78
82:DC:711:ARG:HA	82:DC:714:TYR:CD2	2.18	0.78
5:E:3:LYS:HB3	5:E:8:GLN:HG3	1.65	0.78
57:EB:61:PHE:HB3	57:EB:95:GLU:HB2	1.65	0.78
8:H:145:ILE:HG22	8:H:173:GLY:HA3	1.63	0.78
11:K:163:LEU:HD13	11:K:181:ILE:HD13	1.63	0.78
1:A:1685:G:C2'	1:A:1686:C:H5''	2.12	0.78
28:BA:42:GLN:HB3	28:BA:44:LYS:HE2	1.64	0.78
1:A:94:U:H4'	54:BB:6:LYS:HA	1.65	0.78
1:A:638:U:H1'	57:EB:112:ARG:HH22	1.47	0.78
73:UB:57:LEU:H	73:UB:57:LEU:HD23	1.48	0.78
22:V:30:VAL:HA	22:V:33:TYR:HB2	1.65	0.78
75:WB:50:ILE:O	75:WB:54:VAL:HG23	1.82	0.78
2:B:1668:G:H2'	2:B:1669:C:C6	2.19	0.78
2:B:1838:G:H5''	2:B:1839:A:O4'	1.83	0.78
82:DC:27:HIS:HA	82:DC:138:GLN:HB3	1.65	0.78
1:A:330:G:H3'	58:FB:172:ARG:NH2	1.98	0.78
22:V:71:LEU:HD13	22:V:97:PRO:HG2	1.64	0.78
49:WA:46:LYS:HB2	49:WA:58:VAL:HG13	1.64	0.78
2:B:1794:G:H5'	6:F:188:LYS:HA	1.62	0.78
2:B:1797:A:H4'	6:F:22:LEU:HA	1.66	0.78
2:B:2896:A:H5''	44:RA:124:LYS:NZ	1.98	0.78
2:B:409:A:H61	3:C:15:G:H1'	1.49	0.78
6:F:104:LEU:HD22	6:F:158:ILE:HD11	1.63	0.78
32:FA:75:LEU:H	32:FA:114:GLY:HA2	1.48	0.78
73:UB:55:GLU:HG3	73:UB:57:LEU:HD22	1.65	0.78
1:A:1106:U:H2'	1:A:1107:G:H8	1.47	0.78
2:B:947:G:H2'	2:B:948:C:C6	2.19	0.78
67:OB:89:SER:O	67:OB:90:ALA:O	2.01	0.78
2:B:2439:A:H2'	2:B:2440:G:H8	1.48	0.78
2:B:740:G:H2'	2:B:741:U:C6	2.19	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:BB:129:VAL:HA	54:BB:139:VAL:HG12	1.65	0.78
31:EA:111:LYS:HA	31:EA:114:VAL:HG22	1.66	0.78
1:A:777:C:H2'	1:A:778:G:H5''	1.65	0.78
2:B:1706:C:H4'	2:B:1787:A:H4'	1.63	0.78
2:B:363:G:H4'	8:H:61:SER:HB3	1.64	0.78
83:EC:6902:U:H2'	83:EC:6903:U:C5	2.19	0.78
8:H:32:PRO:HG3	8:H:244:LEU:HD11	1.66	0.78
46:TA:35:LEU:HD23	46:TA:36:PHE:N	1.97	0.78
21:U:48:LEU:HD22	21:U:88:VAL:HG11	1.66	0.78
48:VA:145:ILE:HG21	82:DC:201:GLN:HE22	1.48	0.78
2:B:1359:C:H2'	2:B:1360:C:C6	2.19	0.78
2:B:2724:U:H5''	25:Y:54:HIS:CG	2.19	0.78
2:B:2742:C:H2'	2:B:2743:A:H8	1.47	0.78
54:BB:155:LYS:HA	54:BB:155:LYS:HE2	1.65	0.78
4:D:8:G:H5''	25:Y:31:LEU:HD11	1.65	0.78
2:B:121:A:H2'	12:L:108:ARG:HH11	1.48	0.78
2:B:1256:G:H4'	16:P:127:SER:HB3	1.66	0.78
1:A:748:U:H4'	72:TB:123:GLY:HA2	1.66	0.78
74:VB:86:GLU:HB3	74:VB:91:LEU:HD21	1.65	0.78
24:X:138:GLN:NE2	24:X:141:LYS:HD3	1.98	0.78
1:A:40:A:H62	1:A:467:G:H21	1.29	0.78
1:A:1275:A:H2	53:AB:180:GLY:HA2	1.48	0.78
53:AB:58:VAL:HA	53:AB:65:ARG:HD3	1.65	0.78
2:B:2200:U:H2'	2:B:2201:G:C8	2.19	0.78
2:B:2505:U:H2'	2:B:2506:U:H6	1.48	0.78
2:B:3366:G:H5''	28:BA:61:LYS:HE3	1.63	0.78
56:DB:67:VAL:H	56:DB:100:ALA:HB2	1.47	0.78
82:DC:222:ILE:H	82:DC:222:ILE:HD13	1.48	0.78
82:DC:308:LYS:HA	82:DC:312:LYS:HE3	1.66	0.78
82:DC:566:THR:HG21	82:DC:803:THR:HG22	1.64	0.78
7:G:235:THR:HG21	7:G:249:VAL:HG22	1.65	0.78
9:I:218:ARG:HH12	9:I:222:LEU:HD12	1.48	0.78
10:J:43:LEU:HD21	10:J:85:ILE:HD11	1.66	0.78
39:MA:89:ARG:HB3	39:MA:89:ARG:HH11	1.48	0.78
2:B:784:A:C4	22:V:93:ILE:HG22	2.19	0.78
2:B:1324:U:H3'	2:B:1325:U:H5''	1.66	0.78
2:B:2767:U:H4'	46:TA:31:GLY:HA3	1.65	0.78
54:BB:49:ARG:HA	54:BB:55:ALA:HB3	1.66	0.78
8:H:49:ALA:HA	8:H:109:TRP:NE1	1.99	0.78
37:KA:90:PRO:HB2	37:KA:92:LYS:HG2	1.64	0.78
67:OB:41:ILE:HG23	67:OB:46:LEU:HD22	1.66	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1887:A:H4'	7:G:227:GLU:CA	2.10	0.77
2:B:199:A:H3'	30:DA:60:ARG:HH11	1.49	0.77
2:B:2366:C:H2'	2:B:2367:A:C8	2.19	0.77
54:BB:45:ILE:HB	54:BB:80:THR:HG22	1.65	0.77
66:NB:137:ARG:HA	66:NB:137:ARG:HE	1.49	0.77
43:QA:28:ARG:HH11	43:QA:28:ARG:HB3	1.48	0.77
18:R:66:THR:HB	18:R:67:PRO:HD2	1.66	0.77
73:UB:54:LEU:HD11	73:UB:75:GLN:HB2	1.65	0.77
2:B:2730:G:H4'	22:V:184:PHE:HD1	1.49	0.77
1:A:5:U:H2'	1:A:6:G:H8	1.50	0.77
2:B:3006:A:H2'	2:B:3007:U:O4'	1.84	0.77
2:B:406:G:H1'	3:C:17:A:H61	1.49	0.77
55:CB:145:ASP:HB2	55:CB:162:VAL:HB	1.66	0.77
68:PB:15:LEU:HD23	68:PB:15:LEU:H	1.50	0.77
21:U:59:PRO:HA	21:U:81:ALA:HA	1.66	0.77
73:UB:76:LEU:HD12	73:UB:81:LYS:HB2	1.66	0.77
1:A:126:A:H62	1:A:291:G:H21	1.33	0.77
2:B:1259:A:H5'	48:VA:53:MET:O	1.85	0.77
2:B:1822:C:H5"	38:LA:66:SER:HB2	1.66	0.77
2:B:2103:U:H5"	23:W:85:ARG:HH11	1.48	0.77
2:B:2746:A:H5"	9:I:178:ASN:HB3	1.66	0.77
1:A:1386:G:H3'	67:OB:44:LYS:NZ	1.99	0.77
2:B:3182:G:H5'	20:T:160:ARG:HH22	1.48	0.77
16:P:122:GLY:HA2	48:VA:43:LYS:HD2	1.65	0.77
49:WA:133:VAL:HB	49:WA:142:ALA:HB3	1.66	0.77
6:F:54:ARG:HG2	6:F:55:GLY:H	1.49	0.77
58:FB:38:ILE:CD1	58:FB:80:GLY:HA2	2.14	0.77
8:H:158:SER:HA	8:H:213:ASN:HB2	1.66	0.77
34:HA:51:LEU:HD21	38:LA:91:ARG:HB2	1.66	0.77
61:IB:64:VAL:HA	61:IB:129:ARG:HD3	1.66	0.77
40:NA:95:ALA:HA	40:NA:99:ARG:HD3	1.66	0.77
16:P:133:LEU:HA	16:P:137:GLN:CG	2.15	0.77
1:A:189:C:H3'	1:A:190:C:H5"	1.66	0.77
1:A:338:C:H1'	58:FB:5:ARG:HB3	1.65	0.77
1:A:889:U:H2'	1:A:890:C:H4'	1.66	0.77
2:B:882:A:H2'	2:B:883:A:H5"	1.66	0.77
8:H:234:ASN:HD22	8:H:236:LEU:HB2	1.50	0.77
15:O:82:ARG:HA	15:O:85:LYS:HE2	1.66	0.77
19:S:73:ARG:HG3	19:S:92:LEU:HD13	1.67	0.77
71:SB:5:LYS:HD3	71:SB:5:LYS:H	1.49	0.77
1:A:443:C:OP2	74:VB:105:ARG:HB2	1.84	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1727:G:H21	58:FB:32:GLN:HE22	1.32	0.77
30:DA:70:ILE:HD13	30:DA:82:VAL:HG22	1.65	0.77
82:DC:629:ASP:HB3	82:DC:647:ILE:HG23	1.66	0.77
2:B:3272:C:H5'	10:J:78:ARG:HB2	1.66	0.77
66:NB:35:PRO:HG2	66:NB:38:LEU:HG	1.67	0.77
67:OB:57:LEU:O	67:OB:61:ILE:HG13	1.85	0.77
73:UB:73:ARG:HA	73:UB:84:THR:HA	1.64	0.77
2:B:2766:U:H2'	2:B:2767:U:C6	2.20	0.77
55:CB:92:ARG:HH22	55:CB:169:ASN:HA	1.49	0.77
61:IB:80:MET:HG2	61:IB:83:THR:HG23	1.67	0.77
43:QA:24:PRO:CB	43:QA:27:ILE:HD13	2.14	0.77
1:A:1:U:H5	59:GB:50:SER:HB3	1.49	0.77
59:GB:60:LEU:HD11	59:GB:93:LEU:HD21	1.65	0.77
2:B:2770:G:H5''	46:TA:79:THR:HB	1.66	0.77
2:B:841:A:H4'	23:W:126:GLU:HA	1.64	0.77
1:A:138:A:N6	1:A:266:A:H61	1.83	0.77
2:B:1725:C:H2'	2:B:1726:C:C6	2.20	0.77
2:B:2732:G:H2'	2:B:2733:A:C8	2.19	0.77
44:RA:93:LYS:HD2	44:RA:102:ARG:HG2	1.67	0.77
1:A:155:U:H4'	56:DB:59:GLN:H	1.49	0.77
1:A:593:U:H4'	1:A:595:G:H4'	1.67	0.77
2:B:1221:A:H4'	48:VA:60:ARG:CB	2.15	0.77
2:B:1301:A:H4'	2:B:1302:A:C5'	2.15	0.77
2:B:1494:U:H4'	2:B:1495:U:C5'	2.10	0.77
2:B:2210:G:N2	2:B:2236:G:H1'	2.00	0.77
58:FB:107:THR:OG1	58:FB:108:PRO:HD3	1.85	0.77
11:K:86:VAL:HG22	11:K:136:TYR:CB	2.14	0.77
70:RB:40:ASN:HD21	70:RB:107:THR:HG21	1.49	0.77
21:U:88:VAL:HA	21:U:91:VAL:HB	1.67	0.77
23:W:45:VAL:HG22	23:W:50:ILE:HB	1.67	0.77
7:G:307:PRO:HA	7:G:361:THR:O	1.83	0.76
1:A:1260:U:H2'	1:A:1261:G:H8	1.49	0.76
2:B:2890:A:H61	2:B:2913:C:H42	1.32	0.76
56:DB:163:THR:HA	56:DB:168:THR:HG22	1.67	0.76
83:EC:6947:A:H2'	83:EC:6948:U:H4'	1.66	0.76
2:B:610:G:H4'	8:H:315:LYS:HZ1	1.49	0.76
34:HA:30:THR:HG21	34:HA:89:VAL:HG22	1.65	0.76
36:JA:73:THR:HA	36:JA:93:ALA:HB3	1.65	0.76
36:JA:98:HIS:HA	36:JA:125:ARG:HH12	1.49	0.76
37:KA:75:HIS:HB2	37:KA:82:ARG:HG3	1.66	0.76
48:VA:42:ARG:NH1	48:VA:51:VAL:HB	1.99	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1429:G:H2'	1:A:1430:U:C6	2.19	0.76
2:B:1324:U:H5'	24:X:2:ALA:N	1.98	0.76
2:B:2334:U:H2'	2:B:2335:G:H5''	1.67	0.76
9:I:13:SER:HA	9:I:16:PHE:HB2	1.67	0.76
63:KB:37:ILE:HG12	63:KB:54:LEU:HD11	1.67	0.76
39:MA:82:ALA:HB1	39:MA:84:LYS:HE3	1.68	0.76
3:C:29:U:H5''	17:Q:27:ASP:HB3	1.67	0.76
1:A:1727:G:H21	58:FB:32:GLN:NE2	1.82	0.76
2:B:1594:A:H1'	2:B:1615:C:H1'	1.67	0.76
54:BB:199:GLU:HB2	54:BB:207:LEU:O	1.84	0.76
82:DC:25:ILE:HG12	82:DC:125:ALA:HB1	1.68	0.76
6:F:250:GLN:HG3	6:F:251:LYS:H	1.50	0.76
42:PA:42:LYS:HG2	42:PA:55:VAL:HG22	1.66	0.76
22:V:180:ARG:HH11	22:V:185:LYS:HG3	1.49	0.76
2:B:1009:A:H2'	2:B:1010:G:C8	2.21	0.76
2:B:1719:G:C4'	2:B:1732:U:H4'	2.15	0.76
2:B:705:A:H4'	2:B:706:A:H5'	1.67	0.76
5:E:95:LYS:HE2	5:E:123:LEU:HG	1.67	0.76
8:H:205:PRO:HD2	8:H:225:VAL:HG22	1.66	0.76
60:HB:11:ILE:HB	60:HB:46:LEU:HD21	1.67	0.76
61:IB:125:VAL:HB	61:IB:138:ASN:O	1.86	0.76
1:A:1106:U:H2'	1:A:1107:G:C8	2.21	0.76
1:A:680:U:H2'	1:A:681:U:H5'	1.67	0.76
53:AB:69:LEU:HA	53:AB:72:LEU:HD12	1.65	0.76
38:LA:58:ARG:HE	38:LA:59:PRO:CD	1.99	0.76
20:T:30:GLY:HA2	20:T:101:ARG:CZ	2.14	0.76
2:B:1785:U:H2'	2:B:1786:G:C8	2.20	0.76
2:B:2549:G:H2'	12:L:33:ASN:ND2	2.01	0.76
2:B:2660:G:H2'	2:B:2661:G:C8	2.21	0.76
82:DC:739:ALA:HB1	82:DC:788:THR:HB	1.67	0.76
83:EC:6799:C:H2'	83:EC:6800:G:H4'	1.67	0.76
35:IA:23:VAL:HB	35:IA:28:ARG:HG3	1.68	0.76
12:L:148:ALA:HA	12:L:201:THR:HG22	1.68	0.76
19:S:191:TRP:HA	19:S:194:GLN:HG2	1.68	0.76
1:A:21:U:H2'	1:A:22:A:C8	2.21	0.76
1:A:939:A:H2'	1:A:940:A:C8	2.21	0.76
27:AA:80:ARG:HB2	27:AA:99:ALA:N	2.01	0.76
2:B:952:A:H62	2:B:1143:A:H62	1.34	0.76
2:B:1157:G:H5''	11:K:220:PHE:CE2	2.21	0.76
2:B:2290:C:H2'	2:B:2291:A:O4'	1.85	0.76
2:B:2587:U:H4'	12:L:48:ARG:HH21	1.49	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:140:GLU:HA	82:DC:143:LEU:HB3	1.66	0.76
9:I:182:GLY:HA3	9:I:191:ASP:HB3	1.67	0.76
19:S:68:ARG:HH21	19:S:128:LYS:HE3	1.51	0.76
73:UB:37:ALA:O	73:UB:44:GLY:HA2	1.86	0.76
2:B:1827:C:H2'	2:B:1828:A:C8	2.21	0.76
2:B:2390:A:H2'	2:B:2391:G:O4'	1.86	0.76
2:B:985:U:H2'	2:B:986:U:C6	2.20	0.76
2:B:991:G:H2'	2:B:992:A:O4'	1.86	0.76
59:GB:29:LYS:HA	80:BC:40:TYR:CE2	2.21	0.76
2:B:1830:G:N2	3:C:114:G:H5'	2.00	0.76
30:DA:97:ILE:HD12	30:DA:97:ILE:H	1.49	0.76
82:DC:501:LEU:HD23	82:DC:504:LEU:HD23	1.68	0.76
82:DC:565:GLU:HB3	82:DC:717:PHE:CZ	2.20	0.76
10:J:30:LEU:HD23	10:J:30:LEU:H	1.51	0.76
12:L:84:ARG:N	12:L:84:ARG:HE	1.83	0.76
20:T:188:SER:H	20:T:191:ALA:HB3	1.51	0.76
74:VB:41:ARG:HH21	74:VB:52:LYS:HB3	1.49	0.76
1:A:1762:A:H1'	1:A:1783:C:H4'	1.68	0.76
2:B:1234:G:N3	16:P:132:ILE:HG12	2.00	0.76
2:B:199:A:H3'	30:DA:60:ARG:NH1	2.01	0.76
12:L:149:LYS:H	12:L:201:THR:HA	1.51	0.76
14:N:43:VAL:HA	14:N:139:ARG:NH2	2.01	0.76
48:VA:11:TYR:HA	48:VA:14:LYS:HE3	1.68	0.76
1:A:479:C:H5'	59:GB:124:HIS:HB2	1.67	0.75
2:B:2921:U:H2'	2:B:2923:U:C5'	2.16	0.75
2:B:3159:C:H2'	2:B:3160:U:C6	2.22	0.75
2:B:7:C:H2'	2:B:8:C:H6	1.50	0.75
2:B:578:A:H4'	8:H:324:LEU:HD21	1.68	0.75
17:Q:98:ASP:OD2	17:Q:101:ARG:HD3	1.86	0.75
18:R:68:LEU:HD11	18:R:94:TRP:HB2	1.68	0.75
24:X:138:GLN:HE22	24:X:141:LYS:HD3	1.51	0.75
52:ZA:162:CYS:HB3	52:ZA:213:ALA:HB2	1.68	0.75
1:A:185:U:H2'	1:A:186:C:H5''	1.66	0.75
2:B:3111:U:H1'	13:M:152:GLU:OE2	1.86	0.75
2:B:3286:G:H2'	2:B:3287:U:H5''	1.66	0.75
82:DC:454:ILE:HG13	82:DC:455:GLY:H	1.51	0.75
7:G:168:LYS:HA	7:G:168:LYS:HE3	1.67	0.75
12:L:84:ARG:H	12:L:84:ARG:NE	1.84	0.75
71:SB:51:VAL:HG21	71:SB:78:LEU:HD21	1.66	0.75
71:SB:20:THR:HA	72:TB:23:ARG:CZ	2.16	0.75
22:V:102:ALA:HB1	22:V:127:LEU:HG	1.69	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:X:14:LEU:HD11	25:Y:136:ARG:NH2	2.00	0.75
1:A:1132:A:H2'	1:A:1133:A:C8	2.21	0.75
61:IB:125:VAL:CG1	61:IB:139:VAL:HA	2.15	0.75
12:L:99:PRO:HD2	12:L:190:VAL:HA	1.67	0.75
73:UB:134:ALA:HB1	73:UB:140:LYS:HB2	1.68	0.75
1:A:1260:U:H2'	1:A:1261:G:C8	2.21	0.75
27:AA:62:VAL:HB	27:AA:70:ARG:CG	2.16	0.75
2:B:1362:G:H5'	11:K:161:VAL:HG22	1.68	0.75
2:B:1818:U:C2'	2:B:1819:U:H5''	2.15	0.75
2:B:2156:C:H2'	2:B:2178:A:N6	2.01	0.75
3:C:81:U:H4'	3:C:82:U:H5'	1.67	0.75
29:CA:110:VAL:HG13	29:CA:124:VAL:HG22	1.67	0.75
55:CB:64:VAL:HG13	55:CB:130:ILE:HD11	1.69	0.75
82:DC:387:PRO:HA	82:DC:394:PHE:HB3	1.69	0.75
7:G:144:ILE:HD12	7:G:144:ILE:H	1.50	0.75
11:K:160:ARG:NH2	11:K:206:LYS:HD3	2.02	0.75
17:Q:91:ARG:HH11	17:Q:91:ARG:HB2	1.52	0.75
18:R:113:THR:HG22	18:R:115:PHE:H	1.52	0.75
70:RB:48:HIS:NE2	70:RB:99:ILE:HG12	2.01	0.75
20:T:127:LEU:HD23	24:X:156:VAL:HG12	1.68	0.75
21:U:116:HIS:HB3	21:U:149:VAL:HB	1.66	0.75
21:U:23:ARG:HA	21:U:143:PRO:CB	2.15	0.75
2:B:741:U:H4'	22:V:74:GLU:HG2	1.67	0.75
2:B:1073:U:H1'	33:GA:50:THR:OG1	1.85	0.75
8:H:222:VAL:CG1	8:H:225:VAL:HB	2.15	0.75
8:H:72:ALA:HB3	8:H:76:ARG:NH2	2.01	0.75
2:B:2372:A:H4'	2:B:2373:A:H8	1.50	0.75
2:B:2882:U:H2'	2:B:2883:U:C6	2.21	0.75
2:B:2907:G:H1'	44:RA:100:TYR:HE2	1.52	0.75
2:B:3113:A:H1'	13:M:70:THR:OG1	1.87	0.75
2:B:3288:G:HO2'	2:B:3289:G:H8	1.31	0.75
37:KA:85:PHE:CD2	37:KA:88:ASN:HA	2.22	0.75
2:B:1336:U:H2'	2:B:1337:A:H8	1.49	0.75
2:B:1731:A:O5'	2:B:1731:A:H8	1.69	0.75
2:B:314:U:H2'	2:B:315:C:C6	2.21	0.75
2:B:3302:U:H2'	2:B:3303:G:C8	2.22	0.75
82:DC:809:LEU:CD1	82:DC:832:VAL:HB	2.17	0.75
5:E:117:ILE:O	5:E:121:PRO:HD2	1.87	0.75
31:EA:83:THR:HA	34:HA:62:LEU:HD11	1.67	0.75
19:S:135:VAL:HG11	19:S:151:ILE:HG21	1.68	0.75
20:T:79:ILE:HG21	20:T:138:LEU:HD11	1.67	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2095:G:H2'	2:B:2096:A:C8	2.20	0.75
2:B:3365:U:H5''	28:BA:59:HIS:CE1	2.22	0.75
2:B:783:A:H5''	2:B:784:A:H5''	1.66	0.75
2:B:970:A:H2'	2:B:971:G:C8	2.22	0.75
82:DC:361:ALA:HA	82:DC:366:CYS:SG	2.27	0.75
8:H:334:PHE:HA	8:H:339:LEU:HD12	1.66	0.75
37:KA:54:ARG:HG2	37:KA:64:ILE:HG12	1.68	0.75
49:WA:42:LEU:HD13	49:WA:61:PHE:HB2	1.69	0.75
1:A:1227:A:C4'	1:A:1228:G:H5''	2.16	0.75
1:A:401:A:O2'	1:A:402:C:H4'	1.87	0.75
2:B:305:U:O4	2:B:2786:G:H1'	1.87	0.75
2:B:3108:G:H2'	2:B:3109:G:H5''	1.67	0.75
82:DC:147:LEU:HD21	82:DC:189:VAL:HA	1.69	0.75
9:I:108:ARG:HA	9:I:251:PRO:O	1.87	0.75
2:B:500:C:H5''	10:J:82:ARG:HG3	1.68	0.75
13:M:137:SER:HB2	13:M:145:VAL:HG23	1.68	0.75
53:AB:36:GLY:O	53:AB:51:ARG:HB2	1.87	0.74
2:B:2102:U:H5'	23:W:88:ARG:HH21	1.52	0.74
2:B:904:A:C5'	2:B:1537:A:H5'	2.16	0.74
54:BB:9:LEU:HD13	54:BB:30:ARG:HH12	1.49	0.74
4:D:16:U:H2'	4:D:17:A:C8	2.21	0.74
82:DC:18:ASN:HA	82:DC:98:PHE:CD1	2.22	0.74
82:DC:644:ASN:HD22	82:DC:684:VAL:HB	1.50	0.74
9:I:104:LEU:HA	9:I:247:ILE:HG21	1.66	0.74
11:K:61:ASN:HA	11:K:64:GLN:HB3	1.66	0.74
38:LA:58:ARG:NE	38:LA:59:PRO:HD2	2.01	0.74
14:N:30:LYS:HG2	14:N:63:GLU:HG2	1.69	0.74
40:NA:60:LEU:HB3	40:NA:69:ALA:HB2	1.69	0.74
1:A:1316:G:H4'	67:OB:10:LYS:HE3	1.69	0.74
19:S:136:ASP:HB3	19:S:142:ILE:HD13	1.68	0.74
79:AC:36:LEU:HD12	79:AC:38:ILE:H	1.52	0.74
2:B:2356:A:H61	2:B:2983:C:N4	1.85	0.74
2:B:3279:A:H2'	2:B:3280:U:H5'	1.68	0.74
82:DC:17:THR:HB	82:DC:93:THR:HA	1.69	0.74
83:EC:6774:U:H3'	83:EC:6775:U:H5''	1.68	0.74
32:FA:113:LEU:HD22	32:FA:131:SER:HB2	1.67	0.74
7:G:307:PRO:HB3	7:G:363:SER:HA	1.69	0.74
60:HB:87:VAL:N	60:HB:88:PRO:HD3	2.01	0.74
39:MA:25:LYS:HG2	39:MA:51:ILE:HG12	1.66	0.74
16:P:76:SER:HA	16:P:80:LEU:HG	1.67	0.74
23:W:23:TRP:HB3	23:W:51:VAL:HG22	1.68	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:Y:130:ARG:NH1	25:Y:130:ARG:HB2	2.01	0.74
2:B:104:G:H2'	2:B:105:C:O4'	1.88	0.74
2:B:78:U:H3	2:B:325:A:H61	1.35	0.74
82:DC:826:HIS:HB2	82:DC:828:MET:HG3	1.69	0.74
35:IA:49:VAL:HG13	35:IA:91:SER:HB2	1.70	0.74
67:OB:21:TYR:N	67:OB:22:PRO:HD2	2.03	0.74
16:P:102:GLY:HA3	16:P:140:GLY:N	2.02	0.74
69:QB:124:ILE:HD11	69:QB:128:GLY:HA3	1.69	0.74
69:QB:28:LEU:HG	69:QB:55:TYR:CE1	2.21	0.74
72:TB:94:LEU:HG	72:TB:102:VAL:HG23	1.69	0.74
2:B:676:G:N2	22:V:61:PRO:HG3	2.01	0.74
1:A:1042:G:H3'	1:A:1043:A:H5''	1.69	0.74
1:A:1558:U:H4'	68:PB:135:GLY:HA3	1.67	0.74
2:B:1836:C:H2'	2:B:1837:U:H6	1.51	0.74
54:BB:182:TYR:HE2	54:BB:190:GLY:HA2	1.50	0.74
54:BB:87:MET:HB3	54:BB:122:LYS:HE3	1.68	0.74
6:F:27:ALA:HB3	6:F:128:ARG:NH2	2.02	0.74
7:G:293:ASN:HB2	7:G:305:ILE:HG23	1.70	0.74
35:IA:25:PHE:HB3	35:IA:65:LYS:HB3	1.69	0.74
68:PB:52:VAL:HG21	68:PB:69:ILE:HD11	1.68	0.74
17:Q:54:LEU:HD12	17:Q:75:PHE:HZ	1.52	0.74
44:RA:97:ARG:HB2	44:RA:120:GLN:HB3	1.70	0.74
1:A:778:G:H2'	1:A:779:U:H5'	1.68	0.74
2:B:505:G:H5''	8:H:315:LYS:HA	1.68	0.74
2:B:810:A:H2'	2:B:811:U:C6	2.22	0.74
54:BB:99:PHE:CE1	54:BB:113:ARG:HG2	2.22	0.74
7:G:199:PHE:O	7:G:200:GLU:HB2	1.87	0.74
16:P:109:ILE:HG23	16:P:110:ILE:HD12	1.68	0.74
50:XA:62:ARG:HD2	71:SB:36:VAL:HG12	1.69	0.74
2:B:628:A:H5'	2:B:1399:A:C2	2.23	0.74
1:A:122:U:H4'	54:BB:82:TYR:OH	1.87	0.74
10:J:110:LYS:HD2	10:J:113:LYS:HD3	1.69	0.74
2:B:2558:U:H5'	12:L:40:VAL:HG21	1.69	0.74
22:V:88:THR:HG22	22:V:107:THR:HG21	1.70	0.74
30:DA:33:ALA:HB2	30:DA:50:ILE:HB	1.69	0.74
82:DC:386:VAL:HG13	82:DC:395:TYR:HB2	1.68	0.74
8:H:49:ALA:HA	8:H:109:TRP:HE1	1.50	0.74
1:A:1144:U:H2'	1:A:1145:U:C6	2.22	0.74
1:A:569:C:H5	73:UB:69:ARG:HH12	1.33	0.74
53:AB:191:ASP:HB3	53:AB:194:LYS:HB2	1.69	0.74
2:B:1721:U:H3'	23:W:103:ARG:HH22	1.51	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2649:A:H4'	2:B:2696:A:O4'	1.87	0.74
2:B:372:A:H2'	2:B:373:A:C8	2.23	0.74
2:B:685:G:H5''	17:Q:39:ARG:HH12	1.53	0.74
29:CA:59:SER:HB3	29:CA:102:LEU:HD11	1.67	0.74
29:CA:77:GLU:HA	29:CA:133:LEU:HD21	1.70	0.74
5:E:194:LEU:HD22	5:E:196:LYS:HG3	1.68	0.74
31:EA:8:GLY:HA2	31:EA:24:VAL:HG13	1.70	0.74
34:HA:41:LEU:HD12	34:HA:92:ILE:HD12	1.70	0.74
61:IB:133:LYS:HD3	61:IB:134:THR:HG23	1.69	0.74
12:L:203:VAL:HG22	12:L:204:ARG:H	1.53	0.74
13:M:49:ASN:HD21	13:M:52:LEU:HB3	1.52	0.74
39:MA:92:LEU:HD22	39:MA:97:ALA:HA	1.68	0.74
66:NB:41:PRO:O	66:NB:42:GLU:HB3	1.88	0.74
1:A:532:U:H4'	74:VB:62:THR:HG21	1.70	0.74
49:WA:170:ILE:HD13	49:WA:211:ILE:HD13	1.69	0.74
52:ZA:38:VAL:HG22	52:ZA:39:THR:H	1.52	0.74
1:A:1715:G:H2'	1:A:1716:C:H4'	1.70	0.74
2:B:2271:A:H3'	2:B:2272:G:H5'	1.70	0.74
2:B:3273:A:H4'	10:J:44:ALA:CB	2.17	0.74
2:B:1167:U:O3'	11:K:211:SER:HA	1.88	0.74
12:L:166:LEU:HB2	12:L:167:PRO:HD3	1.70	0.74
20:T:124:LEU:HG	20:T:126:VAL:HG12	1.70	0.74
22:V:19:PRO:HD2	22:V:27:LYS:HE3	1.69	0.74
49:WA:137:LYS:HE3	49:WA:137:LYS:HA	1.69	0.74
52:ZA:53:ILE:HD11	52:ZA:73:LEU:HB2	1.70	0.74
1:A:317:C:H4'	1:A:354:C:H1'	1.70	0.74
2:B:2407:C:O3'	2:B:2620:G:H4'	1.87	0.74
2:B:3392:U:H2'	2:B:3393:U:C6	2.23	0.74
2:B:893:C:H5''	2:B:894:G:H5'	1.69	0.74
30:DA:32:SER:HA	30:DA:49:PRO:HA	1.70	0.74
5:E:174:MET:HE2	5:E:179:LEU:HD21	1.70	0.74
71:SB:38:LYS:HD2	71:SB:49:GLU:HG3	1.70	0.74
1:A:736:C:OP1	54:BB:197:HIS:HB2	1.88	0.73
2:B:1245:A:H3'	2:B:1246:G:H5''	1.69	0.73
2:B:1529:A:H5'	2:B:1588:A:O4'	1.87	0.73
54:BB:94:ALA:HB3	74:VB:17:LEU:HB3	1.70	0.73
6:F:115:ASN:HA	6:F:128:ARG:HG3	1.67	0.73
59:GB:108:ARG:O	59:GB:112:GLN:HG2	1.86	0.73
34:HA:30:THR:HG21	34:HA:89:VAL:CG2	2.18	0.73
61:IB:107:VAL:HG13	61:IB:108:PRO:HD2	1.70	0.73
17:Q:28:GLN:HG2	19:S:201:ARG:HG3	1.70	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
71:SB:60:ARG:HA	71:SB:65:SER:HB2	1.68	0.73
50:XA:109:ASN:O	50:XA:112:THR:HG22	1.87	0.73
2:B:1097:G:H4'	25:Y:129:LYS:HE2	1.68	0.73
55:CB:144:GLU:OE1	78:ZB:57:MET:HB3	1.87	0.73
1:A:94:U:H2'	1:A:95:G:O4'	1.88	0.73
2:B:1553:U:H4'	2:B:1554:U:H5'	1.70	0.73
2:B:2491:A:H2'	2:B:2492:C:H4'	1.69	0.73
2:B:2838:A:H62	2:B:2850:G:H21	1.36	0.73
57:EB:114:ARG:NH1	57:EB:114:ARG:HB2	2.02	0.73
8:H:132:ALA:HA	8:H:135:VAL:HB	1.68	0.73
60:HB:58:GLN:HB2	60:HB:65:TYR:HB2	1.69	0.73
12:L:178:ALA:HB2	12:L:218:ILE:HG23	1.70	0.73
13:M:90:MET:HG2	13:M:181:VAL:HA	1.69	0.73
13:M:8:GLN:HG2	13:M:68:LEU:HD12	1.70	0.73
14:N:169:LYS:HB2	25:Y:159:PHE:HB2	1.70	0.73
66:NB:90:VAL:HB	66:NB:102:LYS:HE3	1.68	0.73
1:A:1086:A:H5'	52:ZA:164:SER:HB2	1.69	0.73
1:A:29:U:H2'	1:A:30:G:C8	2.23	0.73
2:B:1476:G:H4'	35:IA:60:TRP:HB3	1.68	0.73
2:B:1838:G:H4'	2:B:1839:A:C4	2.23	0.73
59:GB:28:LEU:HD12	80:BC:44:PHE:CE2	2.23	0.73
58:FB:55:TYR:HB3	58:FB:177:GLY:HA3	1.68	0.73
2:B:3010:U:H5''	7:G:14:LEU:HD13	1.70	0.73
59:GB:85:VAL:HG22	59:GB:107:ARG:HG3	1.70	0.73
61:IB:155:LYS:H	61:IB:155:LYS:HD3	1.51	0.73
50:XA:22:THR:CG2	50:XA:169:SER:HA	2.18	0.73
1:A:628:G:HO2'	2:B:846:A:N6	1.85	0.73
1:A:1737:G:H4'	2:B:1933:A:H2	1.54	0.73
2:B:3072:C:H4'	2:B:3336:A:H5''	1.71	0.73
82:DC:22:MET:HA	82:DC:122:THR:HB	1.70	0.73
59:GB:93:LEU:O	59:GB:96:VAL:HG22	1.87	0.73
8:H:152:VAL:HG12	8:H:153:SER:H	1.52	0.73
12:L:74:THR:HG21	19:S:18:VAL:HB	1.69	0.73
17:Q:75:PHE:O	17:Q:79:GLU:HB2	1.87	0.73
17:Q:91:ARG:NH1	17:Q:91:ARG:HB2	2.03	0.73
2:B:3001:C:H2'	2:B:3002:C:C6	2.24	0.73
2:B:3099:C:H42	2:B:3135:U:H3	1.34	0.73
2:B:516:A:H2'	2:B:517:G:O4'	1.88	0.73
31:EA:26:VAL:HG12	31:EA:89:VAL:HG21	1.70	0.73
8:H:198:ARG:HH11	30:DA:12:ARG:HH21	1.34	0.73
14:N:16:PRO:O	14:N:18:PRO:HD3	1.88	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:142:C:H5''	19:S:60:VAL:CG2	2.19	0.73
25:Y:17:ARG:HB3	25:Y:22:HIS:CD2	2.23	0.73
1:A:1041:G:H2'	1:A:1042:G:C8	2.23	0.73
2:B:1845:G:H4'	41:OA:8:PHE:CE2	2.23	0.73
2:B:1853:U:H2'	2:B:1854:C:C5	2.23	0.73
2:B:2198:A:C2'	2:B:2199:G:H5'	2.17	0.73
2:B:394:G:H2'	2:B:396:A:OP2	1.88	0.73
2:B:925:A:H4'	2:B:926:A:H5'	1.71	0.73
38:LA:25:THR:HG23	38:LA:30:LEU:HA	1.68	0.73
14:N:205:SER:HB3	14:N:208:ASN:OD1	1.89	0.73
14:N:39:LYS:HA	14:N:86:HIS:CE1	2.23	0.73
2:B:282:G:H22	19:S:179:LYS:HA	1.54	0.73
2:B:1715:A:H4'	2:B:1716:U:H3'	1.69	0.73
2:B:3163:A:H3'	2:B:3164:C:H5''	1.70	0.73
2:B:704:U:H3'	2:B:705:A:H5''	1.69	0.73
82:DC:25:ILE:HD12	82:DC:142:VAL:HG12	1.71	0.73
83:EC:6794:C:H2'	83:EC:6795:U:H5	1.51	0.73
12:L:116:VAL:O	12:L:120:LYS:HA	1.88	0.73
15:O:91:LEU:HD11	15:O:104:PHE:HB3	1.69	0.73
17:Q:105:ASN:ND2	40:NA:17:VAL:HB	1.99	0.73
17:Q:74:GLY:HA3	17:Q:98:ASP:N	2.04	0.73
2:B:672:A:OP2	22:V:55:SER:HA	1.89	0.73
48:VA:42:ARG:HB3	48:VA:46:ARG:HH21	1.52	0.73
24:X:77:VAL:HG22	24:X:126:VAL:HG13	1.69	0.73
2:B:2338:C:H4'	27:AA:49:LEU:HG	1.71	0.73
27:AA:80:ARG:HB2	27:AA:99:ALA:H	1.53	0.73
2:B:1552:G:H5'	2:B:2171:G:H4'	1.71	0.73
30:DA:112:ASP:HB2	30:DA:115:ARG:HB2	1.70	0.73
83:EC:6912:G:H2'	83:EC:6913:U:H4'	1.70	0.73
11:K:176:TYR:HB3	11:K:194:HIS:ND1	2.04	0.73
52:ZA:65:GLU:N	52:ZA:134:LEU:HD11	2.03	0.73
78:ZB:36:THR:HG23	78:ZB:37:SER:H	1.54	0.73
1:A:86:A:H2'	1:A:87:C:H6	1.54	0.73
2:B:1923:C:H5''	45:SA:25:LYS:CA	2.18	0.73
55:CB:123:VAL:HG13	75:WB:102:THR:HG22	1.71	0.73
82:DC:407:SER:HA	82:DC:434:VAL:HG23	1.70	0.73
83:EC:6768:U:H2'	83:EC:6769:A:H5'	1.69	0.73
83:EC:6768:U:C2'	83:EC:6769:A:H5'	2.18	0.73
10:J:55:LEU:H	10:J:65:ILE:HG22	1.53	0.73
37:KA:46:GLY:H	37:KA:71:VAL:HG12	1.53	0.73
12:L:94:PHE:HA	12:L:97:TYR:HD2	1.54	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
83:EC:6903:U:H3'	83:EC:6904:U:C5'	2.19	0.73
39:MA:20:GLN:O	39:MA:24:LEU:HG	1.89	0.73
66:NB:39:VAL:HG12	66:NB:42:GLU:H	1.54	0.73
17:Q:102:GLN:H	17:Q:104:ARG:HH22	1.37	0.73
43:QA:9:ILE:HG23	43:QA:51:ILE:HG23	1.70	0.73
23:W:137:ALA:O	23:W:141:HIS:HB2	1.89	0.73
8:H:359:LEU:HG	24:X:64:ILE:HG12	1.70	0.73
1:A:1477:G:O2'	69:QB:47:PRO:HA	1.89	0.72
35:IA:72:ARG:HG3	35:IA:96:VAL:HG11	1.71	0.72
2:B:1177:G:H4'	37:KA:18:ARG:HD3	1.71	0.72
12:L:75:ILE:HG22	12:L:76:ALA:H	1.53	0.72
67:OB:88:VAL:O	67:OB:89:SER:O	2.07	0.72
43:QA:27:ILE:HG13	43:QA:30:ARG:HE	1.54	0.72
1:A:13:C:H5''	52:ZA:209:ASN:HD21	1.54	0.72
2:B:1256:G:O2'	16:P:123:ARG:HB2	1.88	0.72
2:B:1742:U:H2'	2:B:1743:G:C8	2.24	0.72
30:DA:28:ARG:HH22	30:DA:29:VAL:HG22	1.55	0.72
11:K:59:GLU:O	11:K:62:ILE:HG12	1.89	0.72
49:WA:103:PHE:HE1	49:WA:138:GLY:HA2	1.54	0.72
1:A:1099:U:H2'	1:A:1100:G:N2	2.03	0.72
2:B:2954:U:C4'	2:B:2955:U:H5'	2.14	0.72
2:B:2891:U:O2'	2:B:3014:U:H5''	1.89	0.72
2:B:3148:U:H2'	2:B:3149:G:C8	2.24	0.72
2:B:3191:G:H2'	2:B:3192:U:O4'	1.90	0.72
2:B:3326:G:H2'	2:B:3327:G:C8	2.24	0.72
54:BB:194:THR:O	54:BB:195:ILE:HG13	1.89	0.72
82:DC:659:ILE:HG23	82:DC:700:ARG:HD2	1.70	0.72
8:H:263:GLY:CA	8:H:269:SER:HA	2.19	0.72
63:KB:43:LYS:HA	63:KB:43:LYS:HE3	1.71	0.72
66:NB:47:LYS:HE2	66:NB:114:ARG:HH21	1.55	0.72
66:NB:7:VAL:HG12	66:NB:95:LYS:HE2	1.71	0.72
19:S:35:VAL:HG13	19:S:65:ARG:HG3	1.70	0.72
21:U:15:ALA:HB3	21:U:150:VAL:HG23	1.71	0.72
1:A:1414:U:H5''	67:OB:3:ARG:HE	1.52	0.72
2:B:1249:G:H2'	2:B:1250:G:C8	2.24	0.72
2:B:2241:U:O2'	6:F:243:THR:HG22	1.89	0.72
2:B:2422:C:H2'	2:B:2423:U:C6	2.23	0.72
2:B:3054:U:H2'	2:B:3055:U:C6	2.24	0.72
2:B:584:G:H2'	2:B:585:A:C8	2.23	0.72
2:B:689:U:O2'	2:B:690:A:H5'	1.88	0.72
56:DB:5:ILE:HA	56:DB:111:LEU:O	1.89	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:135:VAL:HG11	82:DC:185:VAL:HG22	1.70	0.72
82:DC:588:LEU:HD13	82:DC:686:VAL:HG13	1.71	0.72
82:DC:593:ILE:CG1	82:DC:685:ARG:HB2	2.18	0.72
21:U:24:VAL:HG11	21:U:87:SER:HA	1.69	0.72
77:YB:54:VAL:HB	77:YB:63:LEU:HD12	1.71	0.72
2:B:121:A:H2'	12:L:108:ARG:NH1	2.04	0.72
2:B:1234:G:O2'	16:P:132:ILE:HD13	1.89	0.72
2:B:2510:U:O2'	2:B:2511:A:H5'	1.89	0.72
2:B:250:U:H5'	2:B:251:G:H5''	1.69	0.72
3:C:114:G:H2'	3:C:115:C:C6	2.24	0.72
82:DC:19:VAL:HG22	82:DC:99:LEU:HB3	1.69	0.72
82:DC:724:ILE:HG23	82:DC:815:ALA:HB1	1.72	0.72
9:I:125:VAL:HG12	9:I:196:ARG:HG3	1.72	0.72
10:J:42:LEU:HD12	10:J:50:LYS:HB2	1.70	0.72
10:J:72:ASN:HD22	10:J:72:ASN:H	1.37	0.72
11:K:108:LEU:HD13	11:K:134:VAL:HG11	1.71	0.72
72:TB:65:LEU:H	72:TB:65:LEU:HD13	1.54	0.72
70:RB:69:LYS:O	79:AC:44:ARG:HD2	1.90	0.72
2:B:1508:C:H3'	2:B:1509:A:C8	2.24	0.72
2:B:3089:C:H2'	2:B:3090:U:C6	2.24	0.72
2:B:3153:U:H3	2:B:3293:U:H3	1.36	0.72
2:B:711:A:C8	2:B:712:G:H1'	2.24	0.72
4:D:80:G:H2'	4:D:81:U:C6	2.24	0.72
82:DC:171:LYS:HD3	82:DC:279:ASP:HA	1.70	0.72
7:G:219:ALA:HB2	7:G:336:VAL:HG13	1.71	0.72
12:L:162:LEU:HD11	19:S:45:PRO:HG2	1.72	0.72
12:L:64:ILE:O	12:L:68:ARG:HG2	1.90	0.72
39:MA:10:ARG:HD3	39:MA:57:VAL:HG13	1.72	0.72
48:VA:52:LEU:HB2	48:VA:86:PHE:HB2	1.71	0.72
2:B:1779:C:H5'	23:W:97:ARG:NH2	2.03	0.72
1:A:1545:A:H2'	1:A:1546:G:C8	2.25	0.72
1:A:843:U:H2'	1:A:844:A:C8	2.24	0.72
2:B:1805:C:H2'	2:B:1806:A:H8	1.55	0.72
2:B:2343:C:H2'	2:B:2344:U:H6	1.53	0.72
2:B:2857:C:H2'	2:B:2858:U:C6	2.24	0.72
2:B:2888:U:O4	2:B:2910:A:H2'	1.89	0.72
80:BC:14:VAL:O	80:BC:18:THR:HG23	1.89	0.72
82:DC:561:VAL:HG11	82:DC:774:VAL:HG21	1.70	0.72
6:F:77:ILE:HG22	6:F:78:ALA:H	1.54	0.72
8:H:65:TRP:CZ3	8:H:76:ARG:HD2	2.24	0.72
35:IA:56:ASN:HA	35:IA:59:ILE:CD1	2.20	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:37:A:H2	39:MA:86:ARG:HE	1.36	0.72
66:NB:52:LEU:HD23	66:NB:52:LEU:H	1.53	0.72
22:V:23:ASN:HB3	22:V:27:LYS:HG3	1.71	0.72
48:VA:58:MET:HA	48:VA:61:ARG:HB2	1.70	0.72
2:B:1928:G:H2'	2:B:1929:G:O4'	1.90	0.72
2:B:2975:U:H2'	2:B:2976:A:C8	2.25	0.72
2:B:509:U:C2'	2:B:510:G:H5''	2.19	0.72
2:B:217:U:H4'	30:DA:100:HIS:CD2	2.24	0.72
82:DC:634:TRP:HE3	82:DC:664:VAL:HG23	1.54	0.72
19:S:38:ARG:HH12	19:S:60:VAL:HG22	1.55	0.72
72:TB:44:HIS:HB2	72:TB:46:TYR:CE2	2.25	0.72
1:A:381:C:H2'	1:A:382:C:C6	2.24	0.72
1:A:646:C:H2'	1:A:647:G:C8	2.25	0.72
53:AB:95:GLY:HA3	53:AB:129:SER:HB2	1.71	0.72
70:RB:71:PRO:HA	79:AC:40:ARG:HH22	1.55	0.72
2:B:1054:A:H5''	2:B:2637:A:H61	1.54	0.72
2:B:286:U:H2'	2:B:287:G:H8	1.51	0.72
2:B:63:A:H4'	19:S:185:ALA:HA	1.72	0.72
2:B:661:G:N7	32:FA:19:LYS:HG2	2.04	0.72
54:BB:160:VAL:HG13	54:BB:169:ILE:HG23	1.72	0.72
29:CA:59:SER:O	29:CA:63:ILE:HG22	1.89	0.72
57:EB:111:LYS:O	57:EB:112:ARG:HB3	1.89	0.72
2:B:2244:A:O2'	6:F:223:SER:HB3	1.90	0.72
58:FB:103:GLN:HG2	58:FB:164:ARG:HB3	1.72	0.72
59:GB:29:LYS:O	59:GB:33:GLU:HG3	1.90	0.72
34:HA:27:TYR:O	34:HA:31:VAL:HG23	1.89	0.72
11:K:95:ILE:HG23	11:K:133:TYR:HE1	1.54	0.72
13:M:71:VAL:HA	13:M:74:LEU:HB2	1.71	0.72
16:P:133:LEU:HB3	16:P:142:ARG:HH22	1.55	0.72
18:R:44:VAL:HG22	18:R:60:LEU:HD21	1.69	0.72
2:B:1647:A:H62	2:B:1808:G:H1'	1.55	0.72
2:B:1919:G:H2'	2:B:1933:A:N6	2.04	0.72
2:B:2182:A:H2'	2:B:2183:A:H8	1.52	0.72
2:B:984:G:C5	33:GA:17:HIS:HB2	2.24	0.72
54:BB:182:TYR:HB2	54:BB:228:ILE:HD13	1.71	0.72
6:F:113:VAL:HG12	6:F:166:ILE:HD13	1.72	0.72
7:G:311:PHE:HB3	7:G:314:TYR:HB3	1.70	0.72
7:G:58:ARG:HA	7:G:357:LYS:HG2	1.72	0.72
8:H:197:ARG:HD3	8:H:197:ARG:H	1.55	0.72
8:H:281:ILE:HD12	22:V:29:LEU:HG	1.70	0.72
36:JA:19:ARG:HB2	36:JA:32:TRP:HA	1.70	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:TA:4:VAL:HG22	46:TA:93:LEU:HA	1.71	0.72
75:WB:88:ILE:HG23	75:WB:104:ALA:HB2	1.71	0.72
1:A:542:A:C2	80:BC:28:LYS:HD3	2.25	0.71
55:CB:70:VAL:HG21	66:NB:44:LEU:HD12	1.71	0.71
83:EC:6771:U:H5'	83:EC:6819:G:H22	1.55	0.71
7:G:90:VAL:HG13	7:G:103:THR:O	1.90	0.71
61:IB:38:ALA:HB2	61:IB:60:PHE:HE1	1.52	0.71
17:Q:67:ARG:NE	17:Q:68:LYS:HG2	2.04	0.71
20:T:37:ARG:HB3	20:T:40:GLU:HB2	1.72	0.71
47:UA:33:GLN:HB2	47:UA:49:ARG:HG3	1.72	0.71
48:VA:56:ASN:HA	48:VA:59:VAL:HG23	1.72	0.71
1:A:1466:G:H2'	1:A:1467:C:C6	2.25	0.71
1:A:821:U:H3'	1:A:822:U:C5'	2.20	0.71
2:B:257:U:H5''	17:Q:86:THR:HG21	1.72	0.71
2:B:2628:A:H4'	2:B:2799:A:OP2	1.89	0.71
28:BA:9:SER:O	28:BA:53:VAL:HB	1.90	0.71
56:DB:137:ARG:HB3	56:DB:140:ASN:HB2	1.70	0.71
82:DC:225:PHE:CZ	82:DC:328:LEU:HD21	2.25	0.71
82:DC:515:ASP:HB3	82:DC:518:VAL:HB	1.72	0.71
5:E:112:ALA:HB2	5:E:135:PRO:HB2	1.70	0.71
6:F:68:LYS:HG2	6:F:69:TYR:N	2.05	0.71
36:JA:103:LYS:O	36:JA:106:VAL:HG12	1.90	0.71
1:A:144:U:O2'	1:A:145:A:H5'	1.91	0.71
1:A:1646:C:H42	1:A:1754:A:H61	1.37	0.71
2:B:1234:G:H2'	2:B:1235:U:C5	2.25	0.71
2:B:1804:A:H5''	38:LA:67:LYS:HE3	1.71	0.71
2:B:2731:U:H2'	2:B:2732:G:C8	2.25	0.71
2:B:641:C:H5	36:JA:38:ILE:HD12	1.55	0.71
80:BC:3:LYS:HE2	80:BC:5:HIS:HB2	1.70	0.71
3:C:9:A:H2'	3:C:10:A:C8	2.25	0.71
22:V:179:ARG:NH2	32:FA:56:VAL:HA	2.05	0.71
2:B:1887:A:C4'	7:G:227:GLU:HA	2.15	0.71
34:HA:15:ALA:O	34:HA:19:LYS:HG2	1.90	0.71
9:I:107:ARG:HD2	9:I:248:ARG:HD3	1.71	0.71
63:KB:45:LEU:O	63:KB:49:GLN:HB2	1.90	0.71
1:A:201:G:H2'	1:A:202:A:H8	1.56	0.71
2:B:1919:G:H2'	2:B:1933:A:H61	1.56	0.71
2:B:2637:A:O2'	2:B:2638:C:H5''	1.90	0.71
2:B:2921:U:H2'	2:B:2923:U:H5'	1.73	0.71
2:B:418:A:H4'	2:B:629:U:O3'	1.90	0.71
6:F:211:HIS:ND1	6:F:219:ILE:HG23	2.05	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:FA:105:LEU:HD13	32:FA:128:ARG:HD2	1.70	0.71
9:I:236:LEU:HD12	9:I:239:ILE:HD12	1.72	0.71
61:IB:34:TRP:HH2	61:IB:36:LYS:HD3	1.53	0.71
2:B:2647:A:H1'	14:N:22:TYR:CD2	2.20	0.71
47:UA:46:THR:HB	47:UA:58:SER:H	1.56	0.71
1:A:1315:U:H5''	1:A:1329:A:C2	2.25	0.71
1:A:138:A:H61	1:A:266:A:H61	1.36	0.71
1:A:709:C:H3'	1:A:710:U:H5''	1.72	0.71
2:B:1898:G:H5'	27:AA:17:LEU:HD22	1.72	0.71
2:B:1458:U:H2'	2:B:1459:C:C6	2.25	0.71
2:B:2480:A:H5''	5:E:98:LYS:HG3	1.72	0.71
2:B:381:U:H2'	2:B:382:U:C6	2.25	0.71
2:B:726:G:H21	2:B:744:A:H62	1.36	0.71
3:C:59:A:N3	3:C:59:A:H5'	2.04	0.71
83:EC:6904:U:H2'	83:EC:6906:G:OP2	1.90	0.71
63:KB:145:THR:O	63:KB:149:LEU:HB2	1.91	0.71
66:NB:40:GLU:HA	66:NB:41:PRO:C	2.11	0.71
71:SB:67:ASP:HA	71:SB:70:ASN:HD22	1.54	0.71
2:B:254:A:H2'	2:B:255:A:C8	2.26	0.71
2:B:3112:G:O6	2:B:3119:U:H3'	1.91	0.71
3:C:10:A:H2'	3:C:11:C:C6	2.25	0.71
29:CA:131:ASP:HB3	29:CA:134:ASP:HB2	1.73	0.71
57:EB:168:SER:O	57:EB:172:VAL:HG23	1.91	0.71
1:A:338:C:O2'	58:FB:5:ARG:HA	1.90	0.71
59:GB:179:ARG:HA	59:GB:182:GLU:HG2	1.72	0.71
11:K:25:GLN:HG2	11:K:29:GLU:HB2	1.73	0.71
2:B:388:G:O2'	21:U:17:ALA:HA	1.90	0.71
1:A:310:C:H4'	73:UB:33:LEU:CD1	2.21	0.71
2:B:428:A:H2'	2:B:429:U:O4'	1.90	0.71
2:B:793:C:H2'	2:B:794:U:C6	2.25	0.71
3:C:14:C:H5''	21:U:123:PRO:HD3	1.73	0.71
82:DC:653:VAL:HG13	82:DC:693:LEU:HD11	1.71	0.71
58:FB:26:LYS:NZ	58:FB:49:ARG:HB2	2.06	0.71
34:HA:78:GLY:HA2	34:HA:81:VAL:HG22	1.73	0.71
36:JA:123:LYS:HA	36:JA:126:LEU:HD11	1.72	0.71
40:NA:57:LEU:HA	40:NA:60:LEU:HB2	1.71	0.71
48:VA:124:VAL:HG12	48:VA:125:ASN:H	1.54	0.71
50:XA:77:SER:HB2	50:XA:86:VAL:HG11	1.72	0.71
2:B:1218:U:H3'	2:B:1219:C:H5''	1.69	0.71
2:B:388:G:H4'	21:U:18:ARG:H	1.54	0.71
7:G:33:PRO:HG2	7:G:44:THR:HB	1.73	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:HB:30:ALA:O	60:HB:38:LYS:HA	1.91	0.71
10:J:82:ARG:HD2	37:KA:104:PRO:HB3	1.73	0.71
11:K:160:ARG:HG3	11:K:203:TRP:CD2	2.26	0.71
12:L:146:LYS:HG3	12:L:175:VAL:HG22	1.72	0.71
18:R:15:VAL:HG12	24:X:150:PHE:O	1.90	0.71
2:B:149:U:H5''	19:S:54:LYS:HB3	1.72	0.71
52:ZA:177:GLY:O	52:ZA:195:ASP:HA	1.90	0.71
1:A:902:G:H4'	1:A:1008:G:H4'	1.71	0.71
53:AB:24:PHE:HZ	53:AB:72:LEU:HD13	1.56	0.71
2:B:1138:U:H2'	2:B:1139:G:H8	1.55	0.71
2:B:2402:A:H3'	8:H:67:THR:HG23	1.71	0.71
2:B:3011:A:O3'	2:B:3012:A:H4'	1.91	0.71
5:E:177:ASP:HA	5:E:180:VAL:HB	1.71	0.71
61:IB:70:ILE:HA	61:IB:126:GLY:HA2	1.72	0.71
11:K:110:ARG:HG2	22:V:3:ILE:HG13	1.73	0.71
1:A:1227:A:H4'	1:A:1228:G:C5'	2.19	0.71
1:A:209:U:H2'	1:A:210:A:C8	2.26	0.71
1:A:479:C:H4'	59:GB:120:LYS:NZ	2.06	0.71
2:B:1525:G:H3'	2:B:1526:U:C5	2.25	0.71
2:B:891:G:H1'	2:B:2324:A:C6	2.26	0.71
27:AA:90:GLY:CA	28:BA:16:GLY:HA2	2.16	0.71
3:C:43:A:H4'	41:OA:22:CYS:CA	2.20	0.71
4:D:24:A:O2'	4:D:120:C:H4'	1.91	0.71
82:DC:410:LYS:HG2	82:DC:428:ILE:HG22	1.72	0.71
5:E:194:LEU:HD23	5:E:195:LYS:H	1.54	0.71
61:IB:3:THR:O	61:IB:4:GLU:HG3	1.90	0.71
36:JA:95:GLU:HA	36:JA:121:ASN:OD1	1.89	0.71
37:KA:11:GLY:HA2	37:KA:32:ILE:HG22	1.73	0.71
2:B:1129:A:H5''	14:N:13:LYS:NZ	2.06	0.71
2:B:308:A:H5''	40:NA:80:PHE:CD1	2.25	0.71
49:WA:117:LYS:H	49:WA:117:LYS:HD2	1.55	0.71
2:B:2102:U:H5'	23:W:88:ARG:NH2	2.06	0.70
2:B:546:C:H5'	2:B:547:G:C5'	2.18	0.70
2:B:561:C:H5''	18:R:76:ALA:HA	1.73	0.70
2:B:641:C:H2'	2:B:642:U:O4'	1.91	0.70
2:B:726:G:C6	2:B:742:G:H2'	2.25	0.70
55:CB:161:ASP:O	78:ZB:44:VAL:HA	1.91	0.70
8:H:196:ASN:HD21	30:DA:10:SER:HB2	1.57	0.70
82:DC:156:VAL:HG22	82:DC:210:ALA:HB3	1.73	0.70
6:F:125:ALA:O	6:F:128:ARG:HD3	1.90	0.70
39:MA:38:ARG:HH11	39:MA:38:ARG:HB2	1.54	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:QA:27:ILE:HA	43:QA:30:ARG:NE	2.05	0.70
20:T:3:VAL:HG13	20:T:4:GLU:HG2	1.71	0.70
2:B:632:G:H5''	20:T:94:ARG:HD2	1.73	0.70
2:B:2182:A:H2'	2:B:2183:A:C8	2.26	0.70
83:EC:6913:U:H5''	83:EC:6935:G:C8	2.26	0.70
8:H:313:LEU:HD13	8:H:315:LYS:HZ1	1.54	0.70
68:PB:126:ARG:HB3	68:PB:133:VAL:HB	1.71	0.70
19:S:118:SER:HB2	19:S:132:VAL:HG22	1.73	0.70
48:VA:45:LEU:HB2	48:VA:49:ALA:O	1.92	0.70
1:A:142:G:P	56:DB:139:ASN:HD21	2.14	0.70
1:A:201:G:H2'	1:A:202:A:C8	2.25	0.70
2:B:1237:G:H5'	16:P:58:VAL:HG11	1.73	0.70
2:B:1240:A:H5'	16:P:98:VAL:HG12	1.72	0.70
2:B:904:A:H2'	2:B:905:U:C6	2.26	0.70
28:BA:13:ILE:HG13	28:BA:32:GLN:HE21	1.56	0.70
82:DC:804:LEU:HD11	82:DC:814:LYS:HB2	1.73	0.70
2:B:1711:C:H5''	31:EA:38:PHE:HB3	1.72	0.70
34:HA:25:LEU:HD21	34:HA:81:VAL:HG11	1.71	0.70
15:O:137:ARG:HG2	15:O:141:ARG:HH11	1.54	0.70
24:X:8:GLN:HB3	24:X:62:ASN:HB3	1.73	0.70
25:Y:136:ARG:H	25:Y:136:ARG:HH11	1.39	0.70
2:B:1220:U:H3'	2:B:1221:A:C2	2.27	0.70
2:B:2394:G:C2'	2:B:2395:G:H5'	2.22	0.70
2:B:2482:U:H3	2:B:2486:A:H62	1.37	0.70
2:B:2536:A:H3'	2:B:2537:U:H5''	1.71	0.70
2:B:3281:U:H2'	2:B:3282:U:C6	2.27	0.70
29:CA:113:LEU:HG	29:CA:123:TYR:HE2	1.56	0.70
82:DC:412:ARG:HA	82:DC:428:ILE:HG13	1.72	0.70
57:EB:49:ILE:HG22	57:EB:175:LYS:HG2	1.74	0.70
83:EC:6794:C:H2'	83:EC:6795:U:C5	2.26	0.70
2:B:3314:A:H5''	7:G:116:ARG:HH21	1.55	0.70
10:J:55:LEU:CG	10:J:65:ILE:HA	2.20	0.70
11:K:108:LEU:HD22	11:K:113:SER:O	1.92	0.70
13:M:4:ILE:O	13:M:58:HIS:HA	1.91	0.70
20:T:15:LEU:HD21	20:T:125:ARG:HA	1.71	0.70
48:VA:121:VAL:O	48:VA:155:ASP:HA	1.90	0.70
1:A:1280:C:H4'	70:RB:69:LYS:HB3	1.74	0.70
1:A:1651:A:H2'	1:A:1652:C:C6	2.25	0.70
1:A:1752:U:H2'	1:A:1753:A:C8	2.26	0.70
1:A:531:C:H2'	1:A:532:U:H5''	1.73	0.70
2:B:2805:G:H2'	2:B:2806:U:C6	2.27	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:398:A:N6	3:C:11:C:H5''	2.06	0.70
3:C:119:C:H2'	3:C:120:C:C6	2.26	0.70
6:F:101:VAL:HB	6:F:165:VAL:HB	1.71	0.70
34:HA:23:TYR:HB3	34:HA:92:ILE:HG12	1.71	0.70
1:A:887:A:H4'	64:LB:88:GLY:HA3	1.72	0.70
1:A:1241:G:H1'	65:MB:79:HIS:H	1.57	0.70
14:N:36:LEU:HD21	14:N:69:ARG:HD3	1.73	0.70
19:S:191:TRP:HA	19:S:194:GLN:CG	2.22	0.70
1:A:762:A:H4'	59:GB:71:PHE:HE1	1.56	0.70
2:B:269:G:OP1	19:S:47:LYS:HE3	1.92	0.70
2:B:2742:C:H2'	2:B:2743:A:C8	2.26	0.70
2:B:2775:U:H4'	2:B:2777:G:N1	2.05	0.70
82:DC:9:MET:O	82:DC:13:MET:HG3	1.91	0.70
59:GB:140:ILE:HD11	59:GB:161:THR:OG1	1.91	0.70
65:MB:126:VAL:HG13	65:MB:127:ARG:H	1.57	0.70
68:PB:14:ILE:HA	68:PB:22:VAL:O	1.92	0.70
17:Q:46:ILE:HG23	17:Q:49:ARG:HB2	1.73	0.70
24:X:29:ILE:HG21	24:X:37:ALA:HA	1.74	0.70
2:B:3060:C:H2'	2:B:3061:G:C8	2.27	0.70
57:EB:46:ILE:HD12	57:EB:60:ILE:HG12	1.72	0.70
58:FB:96:LEU:HD13	58:FB:179:CYS:SG	2.32	0.70
8:H:206:LEU:HD21	8:H:237:GLN:OE1	1.92	0.70
1:A:514:G:H1	1:A:543:C:H5	1.38	0.70
2:B:1147:G:H2'	2:B:1148:G:O4'	1.89	0.70
2:B:823:C:H2'	2:B:824:C:C6	2.27	0.70
82:DC:5:THR:HA	82:DC:48:ALA:HA	1.72	0.70
82:DC:89:ILE:HG12	82:DC:340:LEU:HA	1.73	0.70
31:EA:23:VAL:HB	31:EA:43:VAL:HB	1.74	0.70
59:GB:29:LYS:HA	80:BC:40:TYR:HE2	1.56	0.70
8:H:169:LEU:O	8:H:172:VAL:HG12	1.92	0.70
35:IA:71:LEU:HD22	35:IA:73:LEU:HD23	1.74	0.70
2:B:1145:G:H5'	36:JA:46:PHE:CE2	2.26	0.70
15:O:141:ARG:HG3	15:O:143:ARG:O	1.92	0.70
18:R:66:THR:HA	18:R:99:TRP:CZ3	2.26	0.70
2:B:2166:A:H4'	19:S:72:LYS:HD2	1.73	0.70
45:SA:11:ARG:HB3	45:SA:11:ARG:HH11	1.56	0.70
75:WB:71:ILE:HD12	75:WB:76:ALA:HA	1.74	0.70
1:A:625:C:H2'	1:A:626:U:C6	2.27	0.70
2:B:2145:A:H5''	2:B:2959:C:H5'	1.74	0.70
2:B:994:G:H5'	2:B:2637:A:O2'	1.92	0.70
55:CB:57:SER:CB	78:ZB:53:ILE:HB	2.22	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
83:EC:6767:G:H3'	83:EC:6768:U:H5''	1.74	0.70
8:H:98:ARG:HD2	8:H:99:MET:O	1.91	0.70
35:IA:56:ASN:HA	35:IA:59:ILE:HD12	1.72	0.70
11:K:77:VAL:O	25:Y:138:SER:HA	1.92	0.70
17:Q:18:TRP:O	17:Q:22:VAL:HG23	1.91	0.70
23:W:99:LEU:HA	23:W:102:LEU:HB2	1.73	0.70
24:X:77:VAL:HG11	24:X:106:LEU:HG	1.73	0.70
1:A:1773:C:H5'	45:SA:4:LYS:HB3	1.73	0.70
1:A:521:A:H2'	1:A:522:U:C6	2.26	0.70
2:B:105:C:H2'	2:B:106:A:C8	2.26	0.70
2:B:120:G:H5'	12:L:129:PRO:HG3	1.71	0.70
2:B:824:C:H1'	2:B:1535:A:H1'	1.74	0.70
2:B:1695:U:O4'	38:LA:26:PRO:HG3	1.92	0.70
2:B:1894:U:H2'	2:B:1895:A:O4'	1.92	0.70
2:B:2333:C:H2'	2:B:2334:U:C6	2.27	0.70
2:B:834:U:C2'	2:B:835:G:H5'	2.22	0.70
82:DC:69:THR:HG21	82:DC:106:PRO:HA	1.72	0.70
2:B:1636:U:H4'	31:EA:75:VAL:HA	1.74	0.70
3:C:28:C:H4'	8:H:49:ALA:HB3	1.74	0.70
11:K:45:LEU:HD12	11:K:48:ASN:HD22	1.56	0.70
66:NB:7:VAL:HG22	66:NB:22:VAL:HB	1.74	0.70
47:UA:57:CYS:HB3	47:UA:62:LYS:HB2	1.73	0.70
2:B:10:C:H2'	2:B:11:A:C4'	2.21	0.69
2:B:1245:A:H3'	2:B:1246:G:C5'	2.21	0.69
2:B:1364:C:H2'	2:B:1365:G:C8	2.27	0.69
2:B:1650:G:H2'	2:B:1651:U:C6	2.26	0.69
2:B:1789:G:H2'	2:B:1790:G:H8	1.57	0.69
2:B:2943:G:H2'	2:B:2944:U:O4'	1.92	0.69
82:DC:231:LYS:HG3	82:DC:232:LYS:N	2.07	0.69
6:F:62:VAL:HB	6:F:73:GLU:HG2	1.74	0.69
61:IB:94:ILE:HD11	61:IB:101:GLU:HG2	1.73	0.69
63:KB:113:PHE:CZ	63:KB:117:LEU:HD11	2.27	0.69
15:O:21:ILE:HD11	15:O:125:MET:HG2	1.73	0.69
18:R:55:ARG:NH2	18:R:77:ARG:HA	2.05	0.69
70:RB:20:ILE:HD11	70:RB:100:VAL:HG21	1.74	0.69
18:R:123:LEU:HB3	20:T:194:LEU:HD21	1.74	0.69
48:VA:107:ALA:H	48:VA:182:THR:HG21	1.57	0.69
1:A:1116:A:O2'	1:A:1652:C:H4'	1.91	0.69
1:A:14:C:HO2'	1:A:619:A:H2	1.40	0.69
79:AC:21:CYS:HB2	79:AC:30:LEU:HD21	1.73	0.69
2:B:1324:U:H2'	2:B:1325:U:O4'	1.92	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1485:G:H22	2:B:1857:C:N4	1.86	0.69
2:B:348:A:H4'	2:B:367:A:H61	1.57	0.69
2:B:916:G:H5'	2:B:917:A:OP1	1.92	0.69
82:DC:576:LEU:HD11	82:DC:585:ARG:CZ	2.22	0.69
7:G:122:TRP:NE1	7:G:127:LYS:HE3	2.07	0.69
7:G:165:GLN:HB3	7:G:168:LYS:HG2	1.72	0.69
1:A:869:A:H1'	63:KB:48:SER:HB3	1.73	0.69
66:NB:44:LEU:HB3	66:NB:47:LYS:HB3	1.74	0.69
66:NB:93:HIS:HB3	66:NB:102:LYS:HB2	1.74	0.69
19:S:58:GLY:HA3	19:S:142:ILE:CD1	2.21	0.69
1:A:12:U:H2'	1:A:13:C:C6	2.27	0.69
2:B:2873:U:O2'	2:B:2874:G:H5'	1.91	0.69
2:B:580:C:H2'	2:B:581:U:C6	2.27	0.69
1:A:448:C:H5'	54:BB:29:PRO:HG3	1.74	0.69
35:IA:5:LYS:HG2	35:IA:89:LEU:HD11	1.73	0.69
11:K:89:ILE:HG12	11:K:134:VAL:HA	1.72	0.69
11:K:224:ILE:HD13	24:X:39:SER:HB2	1.75	0.69
15:O:81:GLU:HA	15:O:84:LEU:HD12	1.74	0.69
48:VA:37:GLN:O	48:VA:41:VAL:HG23	1.90	0.69
25:Y:116:ARG:O	25:Y:120:LYS:HB2	1.92	0.69
1:A:1573:A:H4'	1:A:1574:G:H5'	1.75	0.69
1:A:25:C:H1'	1:A:26:A:OP2	1.92	0.69
2:B:1180:A:O2'	2:B:1182:A:H5''	1.91	0.69
2:B:2615:G:H2'	2:B:2616:C:C6	2.27	0.69
2:B:623:U:H4'	37:KA:86:ARG:HH21	1.58	0.69
55:CB:57:SER:HB3	78:ZB:53:ILE:HB	1.74	0.69
56:DB:161:GLU:HA	56:DB:170:THR:HA	1.73	0.69
7:G:260:VAL:HG11	7:G:266:ARG:HH11	1.55	0.69
38:LA:5:VAL:HG13	38:LA:32:ALA:HB2	1.73	0.69
14:N:5:PRO:HG3	14:N:7:ARG:HH12	1.57	0.69
49:WA:34:LEU:HD22	49:WA:73:LEU:HG	1.74	0.69
24:X:4:PHE:HE2	24:X:104:GLU:HG3	1.57	0.69
1:A:1126:G:H5''	45:SA:11:ARG:HE	1.55	0.69
1:A:1643:U:O4'	1:A:1781:A:H4'	1.92	0.69
1:A:683:C:H2'	1:A:684:A:C8	2.26	0.69
1:A:770:A:H3'	1:A:771:A:C5'	2.20	0.69
2:B:229:G:H4'	8:H:220:ARG:HH22	1.57	0.69
2:B:874:U:H5'	2:B:875:G:C5'	2.16	0.69
70:RB:99:ILE:HD12	70:RB:102:ARG:HD3	1.74	0.69
20:T:61:ALA:HA	20:T:70:PRO:HG2	1.74	0.69
49:WA:170:ILE:HG21	49:WA:211:ILE:HD13	1.74	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:ZB:44:VAL:HG21	78:ZB:48:VAL:HG21	1.74	0.69
1:A:1649:G:H2'	1:A:1650:U:C6	2.28	0.69
2:B:1232:C:H5	2:B:1261:G:H2'	1.57	0.69
2:B:3121:U:C4'	2:B:3122:A:H5'	2.22	0.69
2:B:374:A:H4'	2:B:375:A:H5'	1.74	0.69
30:DA:55:GLU:HA	30:DA:69:LYS:HA	1.74	0.69
82:DC:155:VAL:HG23	82:DC:202:VAL:CG2	2.23	0.69
5:E:36:VAL:HB	5:E:183:ILE:HG21	1.74	0.69
9:I:17:GLN:HG3	25:Y:22:HIS:HB2	1.73	0.69
40:NA:50:LEU:HG	40:NA:54:GLU:HB3	1.75	0.69
66:NB:39:VAL:HG12	66:NB:41:PRO:HB2	1.74	0.69
69:QB:30:VAL:HB	69:QB:34:VAL:HG11	1.74	0.69
74:VB:127:LYS:HE2	74:VB:128:LYS:HD2	1.74	0.69
53:AB:73:VAL:HG12	53:AB:79:TYR:HE2	1.56	0.69
2:B:1861:G:H2'	2:B:1862:U:C6	2.28	0.69
2:B:1226:G:H5''	2:B:3117:C:H1'	1.74	0.69
2:B:361:A:H4'	41:OA:35:SER:O	1.91	0.69
82:DC:322:VAL:HA	82:DC:325:ARG:HD2	1.75	0.69
8:H:313:LEU:HD13	8:H:315:LYS:NZ	2.08	0.69
2:B:1178:G:H4'	37:KA:29:LEU:CD1	2.22	0.69
67:OB:93:LEU:C	67:OB:95:ARG:N	2.43	0.69
2:B:351:A:H61	43:QA:39:ALA:N	1.90	0.69
2:B:55:G:H21	19:S:161:ALA:HB1	1.57	0.69
72:TB:98:GLN:HG3	72:TB:99:PHE:HD1	1.58	0.69
22:V:106:PHE:HB2	22:V:111:ARG:HH21	1.58	0.69
48:VA:104:ARG:CB	48:VA:184:GLY:HA3	2.21	0.69
1:A:767:U:C6	59:GB:141:VAL:HA	2.27	0.69
2:B:1077:U:H2'	2:B:1078:U:C6	2.27	0.69
2:B:1799:A:H2'	2:B:1800:A:C8	2.28	0.69
2:B:2854:U:O3'	14:N:160:PRO:HB3	1.91	0.69
2:B:3262:U:H2'	2:B:3263:G:H5''	1.75	0.69
2:B:930:U:H5'	41:OA:49:TRP:O	1.93	0.69
2:B:2967:A:H5''	6:F:213:GLY:CA	2.23	0.69
11:K:51:TYR:HE2	11:K:183:ASP:HA	1.58	0.69
11:K:95:ILE:HG23	11:K:133:TYR:CE1	2.28	0.69
3:C:36:G:OP2	39:MA:85:THR:HG23	1.92	0.69
41:OA:64:MET:HB3	41:OA:67:LEU:HB3	1.74	0.69
70:RB:24:ILE:O	70:RB:90:TYR:HA	1.93	0.69
50:XA:172:LEU:O	50:XA:175:TYR:HB3	1.92	0.69
26:Z:35:LYS:O	26:Z:39:ASP:HB2	1.93	0.69
1:A:1315:U:H2'	1:A:1316:G:O4'	1.93	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:AB:132:LYS:HG3	53:AB:156:PHE:HB3	1.75	0.69
82:DC:296:ILE:CB	82:DC:297:PRO:HD3	2.21	0.69
31:EA:101:PHE:O	31:EA:102:GLU:HB3	1.92	0.69
7:G:119:TYR:HE2	7:G:129:ALA:HB2	1.58	0.69
10:J:146:ILE:HD13	10:J:149:ILE:HD12	1.75	0.69
11:K:88:ARG:HG2	11:K:111:ILE:HA	1.74	0.69
39:MA:104:GLN:HA	39:MA:107:LYS:HD3	1.74	0.69
42:PA:10:GLN:O	42:PA:14:LEU:HG	1.93	0.69
25:Y:28:SER:HA	25:Y:31:LEU:HD12	1.74	0.69
2:B:122:A:H62	2:B:148:G:H21	1.39	0.69
2:B:1604:G:H2'	2:B:1605:A:C5'	2.21	0.69
2:B:2280:A:H2'	2:B:2281:A:H5'	1.75	0.69
2:B:3121:U:H4'	2:B:3122:A:H5'	1.73	0.69
56:DB:75:LEU:HB2	56:DB:97:VAL:HG21	1.73	0.69
82:DC:757:GLU:HG3	82:DC:768:VAL:HG13	1.74	0.69
2:B:1636:U:H1'	31:EA:76:ASN:HB2	1.74	0.69
32:FA:76:ASP:HB2	32:FA:115:LYS:HB3	1.75	0.69
8:H:205:PRO:HG2	8:H:225:VAL:HG13	1.75	0.69
34:HA:25:LEU:HD13	34:HA:87:VAL:HG11	1.74	0.69
4:D:11:A:N6	9:I:16:PHE:HB3	2.08	0.69
36:JA:85:LEU:HA	36:JA:88:HIS:CD2	2.24	0.69
11:K:145:ARG:HH11	11:K:145:ARG:HB3	1.55	0.69
68:PB:66:LEU:O	68:PB:70:VAL:HG23	1.92	0.69
70:RB:95:ALA:HB1	70:RB:96:PRO:HD2	1.75	0.69
1:A:1036:A:H5"	72:TB:28:ARG:NH2	2.07	0.69
48:VA:16:ARG:O	48:VA:20:GLU:HG3	1.92	0.69
26:Z:71:PHE:HA	26:Z:75:TYR:CD2	2.28	0.69
1:A:766:U:H5'	1:A:767:U:H5"	1.75	0.69
53:AB:17:PHE:HB2	53:AB:77:PHE:CE1	2.28	0.69
2:B:1348:U:H4'	2:B:1349:G:C5'	2.23	0.69
2:B:1765:U:C5	23:W:43:LYS:HB3	2.28	0.69
2:B:2242:A:H5"	6:F:243:THR:O	1.91	0.69
2:B:3007:U:H5'	20:T:73:PHE:HD1	1.57	0.69
54:BB:209:HIS:HA	54:BB:219:VAL:HG22	1.75	0.69
55:CB:89:ILE:HD12	55:CB:137:ILE:HG13	1.75	0.69
82:DC:160:VAL:HG13	82:DC:178:PHE:HZ	1.58	0.69
82:DC:426:LEU:HG	82:DC:428:ILE:HD11	1.74	0.69
31:EA:127:ASN:HB3	31:EA:131:PHE:CD1	2.28	0.69
2:B:805:G:H1'	8:H:73:ARG:HD3	1.73	0.69
38:LA:82:ALA:HA	38:LA:85:VAL:HB	1.73	0.69
22:V:63:SER:HB2	22:V:90:ASP:HB2	1.74	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3:U:H5'	52:ZA:179:VAL:HG12	1.74	0.68
1:A:617:U:H5'	1:A:1031:U:O4'	1.93	0.68
1:A:771:A:H2'	1:A:772:G:O4'	1.92	0.68
2:B:241:G:H2'	2:B:242:C:H5'	1.75	0.68
28:BA:8:PHE:CE1	28:BA:46:PRO:HG3	2.28	0.68
1:A:298:C:H5''	54:BB:38:LEU:HD23	1.74	0.68
7:G:114:VAL:HG13	7:G:163:HIS:HB3	1.74	0.68
11:K:153:PHE:HA	11:K:162:PRO:HA	1.75	0.68
12:L:139:VAL:HA	12:L:142:LEU:HD12	1.73	0.68
14:N:38:LYS:HG2	14:N:41:ALA:HB2	1.74	0.68
14:N:68:ALA:HB2	14:N:158:LYS:HB2	1.75	0.68
2:B:137:G:H2'	2:B:138:U:C6	2.28	0.68
2:B:3106:A:H2'	2:B:3107:U:O4'	1.93	0.68
31:EA:72:ILE:HD12	31:EA:100:THR:HG21	1.75	0.68
8:H:72:ALA:HB3	8:H:76:ARG:HH21	1.56	0.68
10:J:58:LEU:HG	10:J:64:LEU:HB2	1.74	0.68
36:JA:2:ALA:HB1	36:JA:90:LYS:HG2	1.74	0.68
37:KA:49:ILE:HG23	37:KA:71:VAL:HG23	1.74	0.68
12:L:186:LEU:HD22	12:L:198:ALA:HB2	1.75	0.68
46:TA:36:PHE:HA	46:TA:41:ARG:HD3	1.75	0.68
74:VB:12:VAL:HG22	74:VB:23:PHE:HB3	1.74	0.68
50:XA:143:VAL:HB	50:XA:157:ASP:H	1.58	0.68
27:AA:19:VAL:HG13	27:AA:37:ILE:HA	1.75	0.68
2:B:149:U:C3'	2:B:150:A:H5''	2.23	0.68
2:B:2617:U:H4'	2:B:2644:C:C5	2.28	0.68
2:B:939:U:H2'	2:B:940:G:H8	1.57	0.68
57:EB:35:LYS:HG2	57:EB:36:ALA:H	1.57	0.68
7:G:133:TYR:CD1	7:G:136:LYS:HG3	2.28	0.68
34:HA:25:LEU:CB	34:HA:87:VAL:HG21	2.23	0.68
9:I:65:ILE:CG2	9:I:72:ASP:HB3	2.24	0.68
61:IB:64:VAL:HB	61:IB:129:ARG:HG2	1.76	0.68
12:L:58:VAL:O	12:L:62:LYS:HB2	1.94	0.68
39:MA:107:LYS:O	39:MA:111:PHE:HB2	1.93	0.68
39:MA:21:LEU:HD11	39:MA:55:LEU:HD23	1.76	0.68
19:S:21:PHE:O	19:S:25:VAL:HG23	1.93	0.68
72:TB:26:LEU:HD21	72:TB:60:LYS:HD3	1.74	0.68
1:A:1023:A:H4'	1:A:1024:U:O4'	1.94	0.68
1:A:1066:C:H2'	1:A:1067:C:C6	2.29	0.68
1:A:170:U:H5'	1:A:267:U:H4'	1.75	0.68
2:B:669:U:H4'	2:B:1110:U:C5'	2.22	0.68
2:B:1910:A:H2'	2:B:1911:A:H8	1.58	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2085:U:H3'	2:B:2086:A:H5'	1.73	0.68
2:B:1420:C:OP1	3:C:20:U:H5''	1.92	0.68
32:FA:75:LEU:HB2	32:FA:115:LYS:H	1.58	0.68
8:H:300:ARG:HB2	8:H:301:PRO:HD2	1.74	0.68
36:JA:97:ALA:HB1	36:JA:99:ASN:OD1	1.94	0.68
12:L:149:LYS:HB2	12:L:200:LEU:O	1.91	0.68
12:L:159:PRO:HB2	12:L:162:LEU:HB2	1.74	0.68
16:P:124:THR:O	16:P:128:VAL:HG23	1.92	0.68
18:R:36:VAL:HB	18:R:45:LEU:HD23	1.76	0.68
18:R:17:VAL:HG12	18:R:72:LEU:HD22	1.74	0.68
20:T:24:ALA:HA	20:T:27:LEU:HD12	1.74	0.68
2:B:1791:C:H5''	47:UA:13:LYS:NZ	2.08	0.68
77:YB:29:ARG:HB3	77:YB:29:ARG:HH11	1.55	0.68
1:A:1773:C:H4'	45:SA:4:LYS:HD3	1.76	0.68
1:A:237:C:H5''	1:A:238:U:H5'	1.75	0.68
2:B:1200:A:H5'	2:B:1201:C:H4'	1.75	0.68
2:B:1468:A:C5	2:B:1881:A:H4'	2.27	0.68
2:B:634:C:H2'	2:B:635:G:O4'	1.94	0.68
2:B:907:G:H21	2:B:925:A:H1'	1.58	0.68
2:B:8:C:H1'	3:C:152:G:C2	2.29	0.68
4:D:117:A:O4'	9:I:74:VAL:HB	1.93	0.68
82:DC:810:ASP:O	82:DC:816:GLY:HA3	1.94	0.68
32:FA:15:VAL:HB	32:FA:21:ARG:NH2	2.09	0.68
9:I:141:PRO:HB2	9:I:172:TYR:HB2	1.74	0.68
74:VB:11:LYS:O	74:VB:23:PHE:HA	1.94	0.68
2:B:1779:C:C2	23:W:89:LEU:HG	2.29	0.68
52:ZA:69:ILE:HA	52:ZA:72:LEU:HB3	1.76	0.68
1:A:1044:U:H2'	1:A:1045:C:C6	2.29	0.68
2:B:2261:G:N2	2:B:2262:A:H62	1.91	0.68
2:B:3108:G:C3'	2:B:3109:G:H5''	2.23	0.68
2:B:3104:U:H3'	2:B:3128:G:H1	1.59	0.68
2:B:671:U:H2'	2:B:672:A:C8	2.29	0.68
54:BB:163:ASP:HB3	54:BB:166:SER:O	1.94	0.68
82:DC:273:PHE:HD1	82:DC:277:ILE:HD12	1.57	0.68
32:FA:75:LEU:HD13	32:FA:137:LYS:HD2	1.75	0.68
58:FB:36:THR:HG23	58:FB:96:LEU:HB2	1.74	0.68
38:LA:11:ASN:HB3	38:LA:18:ASN:ND2	2.08	0.68
38:LA:5:VAL:HG21	38:LA:32:ALA:H	1.57	0.68
13:M:110:LYS:HB3	13:M:128:VAL:HB	1.74	0.68
15:O:52:TYR:HB2	15:O:59:ILE:HD12	1.76	0.68
18:R:45:LEU:CD2	18:R:55:ARG:HH11	2.06	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:431:U:H2'	2:B:432:G:H8	1.59	0.68
54:BB:89:VAL:HG11	54:BB:119:ALA:CA	2.23	0.68
29:CA:88:MET:O	29:CA:89:LYS:HG3	1.93	0.68
5:E:120:VAL:HG13	5:E:124:LEU:HD23	1.76	0.68
59:GB:109:LEU:HB2	59:GB:146:PHE:HB3	1.76	0.68
1:A:1258:U:H4'	60:HB:2:LEU:HD13	1.74	0.68
35:IA:82:GLU:O	35:IA:83:GLU:HB2	1.93	0.68
14:N:191:LYS:HE3	14:N:198:LYS:HG3	1.74	0.68
14:N:189:GLU:HA	14:N:200:LEU:HB3	1.76	0.68
44:RA:79:GLU:OE1	44:RA:80:PRO:HD2	1.94	0.68
21:U:127:ARG:HG2	21:U:128:ARG:H	1.59	0.68
23:W:40:ALA:O	23:W:44:LEU:HD23	1.93	0.68
24:X:9:VAL:HG11	24:X:38:LYS:HA	1.74	0.68
1:A:333:A:N7	58:FB:49:ARG:HD3	2.09	0.68
2:B:2476:C:H2'	2:B:2477:G:O4'	1.94	0.68
3:C:91:C:O4'	30:DA:24:SER:HB3	1.93	0.68
82:DC:445:ILE:HG12	82:DC:446:ASP:N	2.07	0.68
83:EC:6828:G:H2'	83:EC:6829:A:C8	2.29	0.68
16:P:86:LYS:NZ	16:P:106:LEU:HD21	2.09	0.68
43:QA:27:ILE:HA	43:QA:30:ARG:HE	1.59	0.68
69:QB:83:ALA:HB1	69:QB:91:TYR:HB3	1.75	0.68
70:RB:24:ILE:HB	70:RB:91:ILE:HB	1.74	0.68
19:S:142:ILE:N	19:S:142:ILE:HD12	2.09	0.68
1:A:1749:A:H2'	1:A:1750:A:H5''	1.74	0.68
2:B:126:U:C1'	19:S:57:GLN:HE22	2.06	0.68
54:BB:211:LYS:HB3	54:BB:217:THR:HG22	1.75	0.68
82:DC:405:VAL:O	82:DC:447:ASP:HA	1.94	0.68
82:DC:38:SER:O	82:DC:42:ARG:HB2	1.93	0.68
7:G:293:ASN:CB	7:G:305:ILE:HG23	2.24	0.68
8:H:156:LEU:HD22	8:H:251:THR:HG21	1.76	0.68
10:J:51:ARG:CZ	10:J:163:PHE:HB2	2.24	0.68
20:T:39:GLU:CD	20:T:39:GLU:H	1.98	0.68
1:A:1049:U:H5''	77:YB:70:LYS:HG3	1.76	0.68
1:A:1075:C:H2'	1:A:1076:A:O4'	1.94	0.68
1:A:928:U:H5'	1:A:944:A:H2'	1.75	0.68
2:B:213:A:H2'	2:B:214:G:O4'	1.93	0.68
2:B:2697:A:H2'	2:B:2698:G:C8	2.29	0.68
82:DC:162:ARG:HB3	84:DC:901:GDP:HN21	1.59	0.68
11:K:160:ARG:HG3	11:K:203:TRP:CE3	2.29	0.68
14:N:170:LYS:HA	14:N:177:ASP:HA	1.74	0.68
16:P:110:ILE:O	16:P:129:THR:HG21	1.94	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:T:30:GLY:HA2	20:T:101:ARG:NE	2.09	0.68
1:A:1682:U:O2'	1:A:1683:C:H5'	1.93	0.67
27:AA:39:VAL:HB	27:AA:50:PRO:HB2	1.76	0.67
2:B:282:G:C6	19:S:181:ASN:HB3	2.29	0.67
34:HA:24:THR:HG21	34:HA:33:SER:HB3	1.76	0.67
37:KA:59:VAL:HG23	37:KA:60:ARG:N	2.06	0.67
41:OA:76:ASN:HB3	41:OA:79:GLN:HG3	1.76	0.67
67:OB:85:VAL:O	67:OB:86:PRO:C	2.33	0.67
13:M:22:SER:H	18:R:8:LYS:HG2	1.60	0.67
20:T:76:PRO:HA	20:T:79:ILE:HD12	1.76	0.67
73:UB:130:VAL:HA	73:UB:140:LYS:NZ	2.09	0.67
8:H:280:ILE:HD11	22:V:105:ARG:HG3	1.76	0.67
74:VB:54:ALA:HB2	74:VB:79:VAL:HG22	1.76	0.67
50:XA:7:PHE:HE2	50:XA:184:LEU:HD11	1.60	0.67
77:YB:20:LYS:HG2	77:YB:29:ARG:HG3	1.75	0.67
52:ZA:116:LYS:HB2	52:ZA:131:ILE:HD12	1.76	0.67
1:A:1326:A:H5''	53:AB:156:PHE:HE1	1.58	0.67
2:B:1110:U:H2'	2:B:1111:U:C6	2.29	0.67
2:B:149:U:H3'	2:B:150:A:H5''	1.75	0.67
2:B:1557:A:O2'	2:B:1558:A:H5''	1.94	0.67
2:B:343:U:H3'	2:B:344:A:H8	1.59	0.67
4:D:88:G:H5''	24:X:117:ARG:HH12	1.57	0.67
82:DC:663:VAL:O	82:DC:709:MET:HG2	1.94	0.67
58:FB:168:CYS:HB3	58:FB:182:TYR:CE1	2.29	0.67
40:NA:4:LYS:HA	40:NA:12:ASN:HB3	1.76	0.67
18:R:49:PRO:HB3	18:R:78:THR:HG23	1.76	0.67
73:UB:137:LYS:HD2	73:UB:139:LYS:HE2	1.76	0.67
49:WA:10:ARG:HB3	49:WA:312:VAL:HG23	1.76	0.67
8:H:359:LEU:HD13	24:X:62:ASN:HD22	1.59	0.67
2:B:1039:U:H2'	2:B:1040:A:C8	2.29	0.67
2:B:1805:C:H2'	2:B:1806:A:C8	2.28	0.67
2:B:1857:C:H1'	38:LA:5:VAL:O	1.95	0.67
2:B:2343:C:H2'	2:B:2344:U:C6	2.30	0.67
2:B:2427:U:H2'	2:B:2428:U:C6	2.29	0.67
2:B:526:C:H2'	2:B:527:A:C8	2.29	0.67
28:BA:27:LYS:HE3	28:BA:29:PHE:CZ	2.29	0.67
54:BB:49:ARG:CG	54:BB:61:VAL:HG21	2.24	0.67
55:CB:120:ILE:HG12	75:WB:100:ILE:HG13	1.75	0.67
82:DC:369:ILE:CD1	82:DC:379:MET:HG3	2.22	0.67
59:GB:109:LEU:O	59:GB:113:VAL:HG23	1.94	0.67
17:Q:119:TYR:HH	39:MA:116:TYR:HE1	1.42	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
65:MB:18:ARG:HH21	65:MB:38:PRO:HD3	1.59	0.67
68:PB:102:ALA:O	68:PB:105:VAL:HG12	1.93	0.67
17:Q:58:VAL:C	17:Q:69:VAL:HG23	2.14	0.67
21:U:15:ALA:HB3	21:U:150:VAL:CG2	2.24	0.67
24:X:148:LEU:HG	24:X:150:PHE:CE2	2.29	0.67
1:A:1169:G:N2	1:A:1576:A:H62	1.92	0.67
1:A:1345:A:H2'	1:A:1348:A:H62	1.59	0.67
1:A:340:U:H2'	1:A:341:A:C8	2.29	0.67
1:A:823:G:H5''	1:A:824:G:H8	1.58	0.67
53:AB:177:MET:HB2	53:AB:180:GLY:O	1.94	0.67
2:B:1007:U:H2'	2:B:1008:U:C5	2.29	0.67
2:B:1923:C:H2'	2:B:1924:U:C6	2.28	0.67
2:B:2197:C:H5''	2:B:2242:A:N6	2.09	0.67
2:B:943:U:H3'	32:FA:13:GLY:HA2	1.76	0.67
3:C:142:C:H5''	19:S:60:VAL:HG21	1.75	0.67
82:DC:538:LEU:O	82:DC:542:LEU:HG	1.95	0.67
7:G:121:ASN:O	7:G:125:SER:HB3	1.94	0.67
10:J:5:LYS:HA	10:J:5:LYS:HE3	1.75	0.67
16:P:81:VAL:HG13	16:P:113:ALA:HB1	1.76	0.67
73:UB:98:GLU:O	73:UB:99:ASN:HB2	1.94	0.67
22:V:180:ARG:N	22:V:185:LYS:HE3	2.09	0.67
48:VA:135:PHE:HE1	48:VA:171:SER:HB2	1.60	0.67
26:Z:97:SER:HA	26:Z:103:TYR:HA	1.77	0.67
1:A:1166:A:O2'	1:A:1587:A:H5''	1.93	0.67
1:A:1420:C:C2'	1:A:1421:A:H5'	2.24	0.67
2:B:2894:C:H2'	2:B:2895:G:H8	1.59	0.67
2:B:2922:G:H1'	2:B:2951:G:H21	1.59	0.67
2:B:389:A:H3'	2:B:390:G:H5''	1.76	0.67
55:CB:217:LEU:O	55:CB:221:ALA:HB2	1.94	0.67
82:DC:730:LEU:HD22	82:DC:799:ASP:OD2	1.95	0.67
57:EB:98:ILE:HG21	57:EB:118:LEU:HD23	1.75	0.67
83:EC:6910:A:H2'	83:EC:6947:A:H2	1.59	0.67
7:G:87:VAL:HG21	7:G:114:VAL:HG11	1.76	0.67
1:A:758:U:H5'	59:GB:7:THR:HG21	1.74	0.67
34:HA:17:VAL:HG12	34:HA:100:ILE:HD12	1.75	0.67
12:L:61:GLN:HA	12:L:64:ILE:HB	1.75	0.67
38:LA:99:LYS:O	38:LA:103:LYS:HB2	1.94	0.67
29:CA:46:TYR:HB2	39:MA:77:PRO:HA	1.76	0.67
19:S:137:PRO:HG2	19:S:138:GLN:NE2	2.09	0.67
19:S:44:ARG:HD3	19:S:119:TYR:CE2	2.28	0.67
2:B:1283:C:OP1	48:VA:81:LYS:HA	1.94	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
74:VB:27:VAL:HB	74:VB:69:SER:HB2	1.77	0.67
27:AA:80:ARG:HB3	27:AA:98:ASN:HA	1.77	0.67
2:B:1650:G:H4'	6:F:69:TYR:O	1.94	0.67
2:B:2145:A:H2'	2:B:2146:C:O4'	1.93	0.67
2:B:335:G:H2'	2:B:336:A:C8	2.29	0.67
2:B:731:U:H2'	2:B:732:C:C6	2.28	0.67
34:HA:27:TYR:HB2	34:HA:52:ARG:HH12	1.58	0.67
10:J:31:ARG:NH1	10:J:81:ALA:HB1	2.10	0.67
11:K:238:LYS:HA	11:K:241:LYS:HB3	1.76	0.67
11:K:88:ARG:HB3	11:K:113:SER:H	1.59	0.67
20:T:130:LYS:HD3	20:T:131:PRO:HD2	1.76	0.67
52:ZA:187:LEU:O	52:ZA:191:ALA:HB2	1.94	0.67
2:B:1186:G:H1'	24:X:112:ALA:CB	2.24	0.67
2:B:1714:A:H61	2:B:1730:G:H1'	1.59	0.67
2:B:501:A:H2'	2:B:502:U:C6	2.30	0.67
9:I:184:ASP:HB3	9:I:187:THR:HG22	1.76	0.67
9:I:218:ARG:NH1	9:I:222:LEU:HD12	2.10	0.67
35:IA:72:ARG:HB3	35:IA:96:VAL:CG2	2.22	0.67
14:N:97:LEU:HB2	14:N:123:HIS:HB3	1.76	0.67
40:NA:54:GLU:O	40:NA:58:ILE:HG23	1.95	0.67
66:NB:103:ASN:O	66:NB:107:LYS:HG3	1.95	0.67
19:S:122:ASN:HB2	19:S:129:TYR:HD2	1.60	0.67
21:U:64:ASN:HB2	21:U:80:LYS:HE2	1.76	0.67
47:UA:57:CYS:CB	47:UA:62:LYS:HB2	2.25	0.67
73:UB:96:VAL:HG23	73:UB:97:ASP:H	1.58	0.67
1:A:1546:G:H2'	1:A:1547:A:C8	2.29	0.67
2:B:2347:U:H2'	2:B:2348:A:O4'	1.95	0.67
2:B:2767:U:H2'	2:B:2768:U:H6	1.59	0.67
2:B:3280:U:O2'	2:B:3281:U:H5'	1.94	0.67
2:B:786:A:H3'	22:V:147:ARG:HG2	1.77	0.67
54:BB:99:PHE:HE1	54:BB:113:ARG:HG2	1.59	0.67
80:BC:32:GLY:H	80:BC:35:TYR:HB2	1.60	0.67
29:CA:107:VAL:HG11	29:CA:124:VAL:HG13	1.76	0.67
5:E:129:SER:HA	5:E:134:PHE:HB3	1.75	0.67
31:EA:13:VAL:HB	31:EA:19:ALA:HA	1.77	0.67
59:GB:142:ASN:HD21	74:VB:64:PHE:HE2	1.42	0.67
10:J:37:GLY:HA2	10:J:54:TYR:O	1.95	0.67
38:LA:65:VAL:HB	38:LA:70:LYS:HE2	1.75	0.67
13:M:18:VAL:HG13	13:M:27:VAL:HG22	1.75	0.67
20:T:108:ILE:HG21	20:T:117:ARG:HH11	1.60	0.67
20:T:148:LYS:HE3	20:T:148:LYS:N	2.10	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:TA:68:VAL:HG11	46:TA:85:LEU:HD23	1.77	0.67
72:TB:89:TRP:HA	72:TB:89:TRP:CE3	2.30	0.67
26:Z:81:LYS:HG2	26:Z:90:ARG:HD3	1.77	0.67
1:A:633:U:H2'	1:A:634:G:O4'	1.95	0.67
1:A:872:G:H1	1:A:955:A:H61	1.42	0.67
1:A:977:A:H2	1:A:1788:G:H1'	1.60	0.67
2:B:1508:C:O2'	2:B:2353:G:H1'	1.94	0.67
2:B:2854:U:H2'	2:B:2855:U:C6	2.30	0.67
2:B:3192:U:P	20:T:176:LYS:HD3	2.34	0.67
2:B:77:A:OP2	17:Q:73:ARG:HD2	1.95	0.67
3:C:8:C:H2'	3:C:9:A:C8	2.30	0.67
55:CB:123:VAL:HG21	75:WB:100:ILE:HD11	1.76	0.67
4:D:11:A:H62	25:Y:20:ARG:HD2	1.58	0.67
82:DC:576:LEU:HD13	82:DC:587:TYR:HE1	1.59	0.67
83:EC:6802:A:H4'	83:EC:6883:A:N1	2.10	0.67
7:G:198:HIS:HA	7:G:201:LYS:HB2	1.76	0.67
9:I:155:THR:HB	9:I:179:ARG:HA	1.77	0.67
39:MA:119:LYS:HE2	39:MA:119:LYS:HA	1.76	0.67
65:MB:98:ASN:HB3	65:MB:103:ASN:ND2	2.10	0.67
40:NA:38:LYS:HE3	40:NA:41:ARG:HH11	1.59	0.67
20:T:82:LYS:HA	20:T:85:ARG:HB2	1.77	0.67
26:Z:71:PHE:HE1	26:Z:76:LEU:HD22	1.59	0.67
1:A:355:G:H2'	1:A:356:G:C8	2.28	0.67
2:B:1173:U:H2'	2:B:1180:A:C8	2.30	0.67
2:B:1946:A:H2'	2:B:1947:G:O4'	1.95	0.67
2:B:680:G:H5''	8:H:114:ASN:ND2	2.09	0.67
2:B:805:G:H5'	8:H:74:ILE:HA	1.77	0.67
28:BA:5:ILE:HB	28:BA:10:GLY:CA	2.24	0.67
4:D:6:C:H1'	9:I:65:ILE:HD13	1.77	0.67
82:DC:76:SER:HA	82:DC:100:ILE:O	1.95	0.67
5:E:93:LEU:HD22	5:E:99:LEU:HG	1.77	0.67
58:FB:38:ILE:HD13	58:FB:80:GLY:HA2	1.77	0.67
11:K:85:PHE:HB2	11:K:116:PHE:CE1	2.30	0.67
2:B:1655:G:H5''	38:LA:58:ARG:HH21	1.59	0.67
13:M:44:THR:O	13:M:55:VAL:HA	1.95	0.67
15:O:166:LYS:O	15:O:167:TYR:HB2	1.95	0.67
16:P:57:LYS:H	16:P:57:LYS:HD3	1.60	0.67
19:S:169:LYS:HA	19:S:172:ARG:NH1	2.10	0.67
20:T:22:VAL:HG11	20:T:122:GLN:OE1	1.95	0.67
24:X:80:ARG:HG3	25:Y:156:TYR:HB2	1.76	0.67
1:A:1107:G:H3'	1:A:1108:G:N2	2.09	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1456:A:N7	35:IA:64:VAL:HG11	2.10	0.66
2:B:2207:A:H3'	2:B:2208:A:C5'	2.25	0.66
2:B:2524:A:H1'	2:B:2525:G:N7	2.11	0.66
2:B:3021:A:H61	2:B:3032:A:H3'	1.60	0.66
2:B:353:G:H22	2:B:364:G:H2'	1.60	0.66
2:B:54:C:H2'	2:B:55:G:C8	2.30	0.66
3:C:42:G:H4'	41:OA:57:HIS:HD2	1.59	0.66
30:DA:56:VAL:HG21	30:DA:104:LEU:HB3	1.77	0.66
11:K:129:LEU:HD23	11:K:130:ILE:HG23	1.77	0.66
14:N:77:THR:HG22	14:N:82:ARG:HB3	1.76	0.66
68:PB:101:LEU:H	68:PB:104:ASN:HB2	1.61	0.66
20:T:142:SER:HA	20:T:145:VAL:HG22	1.76	0.66
46:TA:35:LEU:HD23	46:TA:36:PHE:H	1.59	0.66
23:W:41:ILE:O	23:W:45:VAL:HG23	1.95	0.66
1:A:1196:A:H4'	1:A:1197:C:H5''	1.76	0.66
1:A:1282:U:H2'	1:A:1283:U:C6	2.31	0.66
1:A:1651:A:H2'	1:A:1652:C:H6	1.60	0.66
2:B:2156:C:H2'	2:B:2178:A:H61	1.58	0.66
2:B:2356:A:N6	2:B:2983:C:H41	1.94	0.66
2:B:3013:U:H2'	2:B:3014:U:C6	2.30	0.66
2:B:3108:G:C2'	2:B:3109:G:H5''	2.25	0.66
2:B:513:G:H2'	2:B:514:G:H8	1.60	0.66
54:BB:123:LEU:HD21	54:BB:235:TYR:HB2	1.77	0.66
17:Q:3:ILE:HB	32:FA:41:HIS:CE1	2.30	0.66
9:I:294:ALA:HB2	14:N:210:ILE:HG23	1.76	0.66
2:B:1459:C:H5'	35:IA:33:VAL:HG22	1.75	0.66
10:J:26:ARG:HB3	10:J:27:PRO:HD2	1.76	0.66
1:A:961:U:H1'	63:KB:86:GLU:OE2	1.95	0.66
2:B:3108:G:N2	13:M:163:GLN:HE22	1.91	0.66
13:M:36:LYS:HD2	13:M:78:MET:HE2	1.77	0.66
68:PB:32:LEU:HB2	68:PB:43:SER:HB2	1.77	0.66
2:B:290:G:H5''	19:S:98:LEU:CD2	2.25	0.66
21:U:48:LEU:HD22	21:U:88:VAL:CG1	2.25	0.66
20:T:124:LEU:HD23	24:X:168:PRO:CG	2.25	0.66
50:XA:7:PHE:CE2	50:XA:184:LEU:HD11	2.30	0.66
50:XA:182:LEU:O	50:XA:188:LEU:HB2	1.94	0.66
1:A:1573:A:H1'	1:A:1574:G:OP2	1.94	0.66
2:B:1721:U:H2'	2:B:1723:A:OP2	1.96	0.66
2:B:2268:U:H3'	2:B:2269:U:C4'	2.25	0.66
2:B:2798:C:H5''	2:B:2800:G:OP1	1.94	0.66
2:B:296:A:H3'	2:B:297:G:H21	1.60	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:CB:33:VAL:O	55:CB:37:GLN:HG3	1.95	0.66
57:EB:162:ILE:HG22	57:EB:165:LYS:HD2	1.77	0.66
32:FA:7:LYS:HA	32:FA:10:LYS:HB2	1.76	0.66
2:B:655:C:H5''	36:JA:27:ARG:N	2.10	0.66
12:L:183:LYS:HA	12:L:186:LEU:CD1	2.26	0.66
17:Q:42:ARG:HG2	17:Q:46:ILE:HD12	1.78	0.66
17:Q:62:THR:O	17:Q:66:ASN:HB3	1.93	0.66
43:QA:28:ARG:NH1	43:QA:28:ARG:HB3	2.11	0.66
18:R:127:LYS:HB2	20:T:190:VAL:HG22	1.76	0.66
73:UB:69:ARG:HE	73:UB:69:ARG:HA	1.61	0.66
24:X:117:ARG:HB2	24:X:119:ARG:HG2	1.77	0.66
24:X:151:PRO:C	24:X:153:PRO:HD3	2.15	0.66
1:A:1424:A:H2'	1:A:1425:A:O4'	1.96	0.66
1:A:1557:U:H5'	65:MB:115:TYR:CD2	2.30	0.66
2:B:1103:A:H3'	2:B:1104:G:H5'	1.78	0.66
2:B:243:G:H2'	2:B:244:G:O4'	1.94	0.66
2:B:2618:G:OP2	2:B:2644:C:H2'	1.94	0.66
2:B:2698:G:C2'	2:B:2699:G:H5''	2.26	0.66
2:B:796:U:H2'	2:B:797:U:C6	2.31	0.66
31:EA:48:ARG:O	31:EA:68:ILE:HG23	1.95	0.66
58:FB:46:VAL:HG23	58:FB:54:LYS:HB3	1.78	0.66
9:I:286:VAL:O	9:I:290:ILE:HG12	1.94	0.66
36:JA:96:ILE:HG21	36:JA:105:ARG:HG3	1.77	0.66
37:KA:32:ILE:HG13	37:KA:35:VAL:HG13	1.78	0.66
37:KA:31:LYS:HD2	37:KA:35:VAL:HG21	1.77	0.66
3:C:142:C:C5'	19:S:113:LEU:HD21	2.25	0.66
21:U:26:PHE:HE1	21:U:120:ASN:HA	1.58	0.66
73:UB:130:VAL:HB	73:UB:140:LYS:HG2	1.76	0.66
50:XA:143:VAL:HB	50:XA:156:VAL:HA	1.77	0.66
50:XA:197:ILE:H	50:XA:197:ILE:HD13	1.59	0.66
1:A:1171:A:H2'	1:A:1172:G:H8	1.60	0.66
27:AA:54:LEU:HD23	27:AA:54:LEU:H	1.59	0.66
2:B:1661:G:H2'	2:B:1662:G:O4'	1.96	0.66
2:B:2668:U:H2'	2:B:2669:G:C8	2.30	0.66
2:B:2727:A:C2	32:FA:43:ILE:HG23	2.30	0.66
2:B:3159:C:H2'	2:B:3160:U:H6	1.60	0.66
2:B:3344:A:H3'	2:B:3344:A:N3	2.10	0.66
2:B:502:U:H3'	2:B:503:C:H5''	1.76	0.66
2:B:608:A:H5''	8:H:322:GLN:CD	2.15	0.66
2:B:856:G:H4'	2:B:1723:A:H1'	1.76	0.66
30:DA:27:ARG:HG2	30:DA:78:PHE:HE1	1.59	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:943:U:H3'	32:FA:13:GLY:CA	2.25	0.66
32:FA:46:ASP:O	32:FA:47:LYS:HB3	1.95	0.66
7:G:216:ASP:OD2	7:G:341:SER:HA	1.96	0.66
7:G:86:VAL:HG13	7:G:160:VAL:HG13	1.78	0.66
59:GB:44:ARG:O	59:GB:48:GLN:HG3	1.95	0.66
34:HA:42:ILE:HG22	34:HA:91:SER:HA	1.77	0.66
68:PB:92:ILE:HG21	68:PB:115:ARG:NH2	2.11	0.66
20:T:16:VAL:HG22	20:T:41:LEU:HD21	1.76	0.66
2:B:1504:A:H5''	21:U:23:ARG:HH11	1.60	0.66
1:A:1426:C:O2'	1:A:1428:G:H5'	1.95	0.66
1:A:409:C:H4'	1:A:1732:A:O3'	1.95	0.66
2:B:1364:C:H2'	2:B:1365:G:H8	1.61	0.66
2:B:1378:U:H2'	2:B:1379:G:H8	1.61	0.66
2:B:3148:U:H2'	2:B:3149:G:H8	1.58	0.66
2:B:708:G:O2'	2:B:755:A:H4'	1.95	0.66
2:B:769:G:O2'	2:B:770:G:H5'	1.95	0.66
2:B:834:U:H2'	2:B:835:G:C5'	2.25	0.66
28:BA:21:PHE:HD2	28:BA:29:PHE:HB2	1.59	0.66
82:DC:578:LYS:CB	82:DC:585:ARG:HG2	2.23	0.66
82:DC:675:PRO:HB3	82:DC:714:TYR:HD1	1.60	0.66
32:FA:100:PRO:HD2	32:FA:123:VAL:HA	1.78	0.66
18:R:47:ASP:HA	18:R:55:ARG:HA	1.77	0.66
2:B:126:U:H1'	19:S:57:GLN:HE22	1.60	0.66
16:P:123:ARG:HH12	48:VA:42:ARG:CD	2.09	0.66
2:B:1948:G:H5'	23:W:101:VAL:HG11	1.76	0.66
9:I:17:GLN:CG	25:Y:22:HIS:H	2.08	0.66
1:A:143:G:C2'	1:A:144:U:H5''	2.26	0.66
1:A:1454:G:H4'	65:MB:122:THR:HG21	1.76	0.66
1:A:1654:G:H21	1:A:1746:A:H62	1.43	0.66
1:A:569:C:O4'	1:A:583:C:H4'	1.96	0.66
2:B:1799:A:H2'	2:B:1800:A:H8	1.60	0.66
2:B:3369:G:H5''	28:BA:56:ARG:HH12	1.60	0.66
82:DC:804:LEU:HD12	82:DC:806:SER:H	1.60	0.66
57:EB:20:VAL:HA	57:EB:23:ALA:HB3	1.77	0.66
8:H:263:GLY:HA3	8:H:269:SER:HA	1.78	0.66
9:I:146:LEU:HD12	9:I:147:ASP:N	2.11	0.66
36:JA:61:LYS:HA	36:JA:64:LYS:HB2	1.76	0.66
11:K:75:TYR:HE2	25:Y:143:THR:HA	1.60	0.66
37:KA:35:VAL:HB	37:KA:79:GLY:HA3	1.78	0.66
12:L:136:LEU:O	12:L:140:VAL:HG23	1.96	0.66
14:N:135:ILE:HG22	14:N:136:PHE:CD1	2.30	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:W:157:GLU:HA	23:W:160:GLU:HG2	1.76	0.66
52:ZA:111:VAL:HG21	52:ZA:218:ILE:HD13	1.76	0.66
2:B:1010:G:H1	2:B:1040:A:H61	1.43	0.66
2:B:192:C:H2'	2:B:193:C:H6	1.61	0.66
2:B:208:C:C2'	2:B:209:A:H5'	2.25	0.66
2:B:3279:A:H8	2:B:3279:A:H5'	1.61	0.66
3:C:98:U:H2'	3:C:99:C:H5'	1.78	0.66
56:DB:52:ILE:HG12	56:DB:109:LEU:HD21	1.77	0.66
83:EC:6886:A:H2'	83:EC:6887:G:C5'	2.24	0.66
7:G:119:TYR:CE1	7:G:125:SER:HB2	2.31	0.66
9:I:278:SER:O	9:I:282:ARG:HG3	1.95	0.66
13:M:128:VAL:HG13	13:M:134:ILE:HD13	1.77	0.66
17:Q:79:GLU:HA	17:Q:82:ALA:HB3	1.77	0.66
73:UB:117:ILE:HD12	73:UB:120:VAL:HB	1.78	0.66
49:WA:190:ALA:HB2	49:WA:228:LYS:HG2	1.78	0.66
24:X:9:VAL:HG22	24:X:61:ILE:HD12	1.78	0.66
50:XA:13:ASP:HA	50:XA:16:LEU:HD12	1.76	0.66
26:Z:19:VAL:HG12	26:Z:105:LEU:HD13	1.78	0.66
1:A:1169:G:H2'	1:A:1170:G:H5'	1.76	0.66
1:A:1639:C:H2'	1:A:1640:C:O4'	1.95	0.66
2:B:1175:C:H2'	2:B:1176:C:C6	2.31	0.66
2:B:3229:G:H2'	2:B:3230:G:O4'	1.96	0.66
2:B:389:A:H2'	2:B:390:G:C4'	2.26	0.66
2:B:61:A:H2'	2:B:62:A:C8	2.31	0.66
2:B:823:C:H2'	2:B:824:C:H6	1.59	0.66
55:CB:133:VAL:O	55:CB:137:ILE:HG12	1.96	0.66
82:DC:129:VAL:HG11	82:DC:135:VAL:HG12	1.76	0.66
2:B:965:A:H4'	32:FA:44:ASN:HD22	1.60	0.66
8:H:181:VAL:O	8:H:182:LEU:HB3	1.96	0.66
8:H:29:PRO:CG	8:H:279:HIS:HA	2.26	0.66
2:B:10:C:H4'	12:L:55:TYR:HB2	1.77	0.66
67:OB:23:LYS:HB3	67:OB:34:LEU:HD21	1.76	0.66
68:PB:53:ASP:CB	68:PB:56:LYS:HB2	2.24	0.66
2:B:148:G:H5''	19:S:55:ALA:HB3	1.78	0.66
2:B:2652:U:H4'	46:TA:89:LYS:HE3	1.77	0.66
78:ZB:14:LYS:HG3	78:ZB:15:VAL:H	1.60	0.66
1:A:144:U:H6	1:A:144:U:H5'	1.60	0.66
1:A:600:U:H2'	1:A:601:A:H8	1.61	0.66
2:B:1128:U:H2'	2:B:1129:A:O4'	1.96	0.66
2:B:2076:G:H2'	2:B:2077:U:H5''	1.76	0.66
2:B:296:A:C2'	2:B:297:G:H5'	2.24	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:3312:U:C2'	2:B:3313:U:H5''	2.24	0.66
30:DA:56:VAL:HG22	30:DA:57:LEU:H	1.61	0.66
82:DC:100:ILE:HD13	82:DC:335:LEU:HD22	1.77	0.66
57:EB:63:PRO:C	57:EB:65:PRO:HD2	2.16	0.66
6:F:77:ILE:HG21	6:F:169:ILE:HD12	1.78	0.66
6:F:3:ARG:HG2	6:F:4:VAL:N	2.06	0.66
7:G:135:ALA:O	7:G:139:GLN:HG2	1.97	0.66
7:G:151:ILE:HG23	7:G:155:ALA:HB3	1.78	0.66
11:K:166:ASN:HA	11:K:169:ILE:HD12	1.76	0.66
2:B:847:A:H4'	63:KB:123:HIS:CE1	2.31	0.66
18:R:50:LYS:HZ2	18:R:50:LYS:H	1.44	0.66
19:S:118:SER:CB	19:S:132:VAL:HG22	2.27	0.66
46:TA:3:ASN:ND2	46:TA:97:LYS:HD3	2.10	0.66
49:WA:179:LYS:HB3	49:WA:188:ILE:HD13	1.78	0.66
1:A:398:G:OP1	58:FB:49:ARG:HA	1.96	0.65
1:A:96:G:H5'	1:A:460:A:O2'	1.96	0.65
1:A:868:G:H1	1:A:960:U:H3	1.43	0.65
2:B:1692:U:H1'	2:B:1755:C:H4'	1.78	0.65
2:B:502:U:C3'	2:B:503:C:H5''	2.26	0.65
55:CB:130:ILE:O	55:CB:134:VAL:HG23	1.96	0.65
8:H:281:ILE:HG13	22:V:125:ASP:HB2	1.78	0.65
60:HB:69:THR:O	60:HB:73:VAL:HG23	1.97	0.65
11:K:114:GLY:O	11:K:205:PHE:HB2	1.97	0.65
2:B:282:G:N2	19:S:179:LYS:HA	2.11	0.65
22:V:177:GLY:CA	22:V:184:PHE:HB2	2.25	0.65
50:XA:153:SER:O	71:SB:63:GLY:HA2	1.96	0.65
52:ZA:58:LEU:HA	71:SB:12:TYR:HE1	1.60	0.65
1:A:1608:U:H2'	1:A:1609:U:C6	2.31	0.65
1:A:70:C:H2'	1:A:71:A:C8	2.31	0.65
1:A:79:C:H2'	1:A:80:A:O4'	1.96	0.65
2:B:1242:G:C4	82:DC:754:VAL:HB	2.32	0.65
2:B:211:A:H5'	2:B:229:G:C1'	2.21	0.65
2:B:590:G:C2'	2:B:591:G:H5'	2.25	0.65
55:CB:46:TRP:HE1	55:CB:122:ASN:HD22	1.44	0.65
82:DC:575:ALA:O	82:DC:587:TYR:HA	1.95	0.65
12:L:151:VAL:HB	12:L:176:PRO:O	1.97	0.65
14:N:93:PRO:HB2	14:N:125:LEU:HB3	1.77	0.65
17:Q:109:PHE:CE1	17:Q:113:VAL:HG21	2.31	0.65
17:Q:110:ASP:O	17:Q:114:GLN:HG2	1.96	0.65
48:VA:91:GLU:HB3	48:VA:92:PRO:HD2	1.78	0.65
1:A:332:U:H4'	58:FB:29:LEU:O	1.95	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1809:A:H2'	2:B:1810:A:O4'	1.97	0.65
2:B:3019:U:H2'	2:B:3020:U:O4'	1.96	0.65
2:B:355:A:H61	2:B:364:G:H1'	1.61	0.65
2:B:886:C:H2'	2:B:887:G:H8	1.61	0.65
82:DC:163:ALA:O	82:DC:164:LEU:HD23	1.96	0.65
58:FB:74:LYS:HE3	58:FB:112:TRP:CD1	2.31	0.65
8:H:230:VAL:HA	8:H:233:LEU:HG	1.78	0.65
8:H:293:SER:HA	8:H:296:GLN:HG2	1.78	0.65
36:JA:21:HIS:ND1	36:JA:24:ARG:HD2	2.11	0.65
63:KB:118:ILE:O	63:KB:122:ILE:HG13	1.95	0.65
14:N:51:HIS:HB3	14:N:134:ILE:CG2	2.25	0.65
1:A:1533:C:H4'	1:A:1539:G:C6	2.31	0.65
1:A:810:G:H21	57:EB:108:GLN:HG3	1.61	0.65
2:B:1692:U:O2'	2:B:1755:C:H5'	1.97	0.65
2:B:1814:A:H5''	2:B:1816:A:H1'	1.78	0.65
2:B:2129:U:H2'	2:B:2130:G:H8	1.61	0.65
2:B:3171:U:H3	2:B:3279:A:H61	1.45	0.65
2:B:871:U:H2'	2:B:872:U:C6	2.31	0.65
4:D:13:A:H5'	4:D:112:G:O5'	1.95	0.65
56:DB:57:ASP:HB3	56:DB:106:LEU:HD23	1.78	0.65
5:E:114:GLU:H	5:E:139:SER:HB2	1.62	0.65
83:EC:6769:A:N6	83:EC:6772:G:H5'	2.11	0.65
83:EC:6793:A:H3'	83:EC:6794:C:H5''	1.78	0.65
83:EC:6894:C:H2'	83:EC:6895:C:H4'	1.77	0.65
58:FB:98:LYS:HD2	58:FB:172:ARG:HG2	1.79	0.65
7:G:35:ASP:OD1	7:G:184:ASN:HA	1.96	0.65
12:L:61:GLN:HB3	19:S:28:TRP:HH2	1.62	0.65
20:T:13:GLY:O	20:T:124:LEU:HD12	1.96	0.65
48:VA:107:ALA:N	48:VA:182:THR:HG21	2.12	0.65
77:YB:29:ARG:HB3	77:YB:29:ARG:NH1	2.11	0.65
1:A:186:C:H5'	1:A:186:C:H6	1.60	0.65
1:A:186:C:H2'	1:A:187:G:O4'	1.96	0.65
1:A:806:A:C3'	1:A:807:A:H5''	2.23	0.65
2:B:1485:G:H2'	2:B:1486:G:C8	2.32	0.65
2:B:1494:U:H1'	2:B:1496:C:C5	2.32	0.65
2:B:1875:G:H2'	2:B:1876:U:C6	2.31	0.65
2:B:203:G:H2'	2:B:204:A:O4'	1.96	0.65
2:B:2367:A:H2'	2:B:2368:A:O4'	1.96	0.65
2:B:2424:A:O3'	19:S:72:LYS:HE2	1.97	0.65
2:B:2549:G:C6	12:L:33:ASN:HA	2.31	0.65
2:B:2949:U:H2'	2:B:2950:G:H5'	1.79	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:916:G:OP1	2:B:2957:G:H5''	1.96	0.65
82:DC:155:VAL:HG23	82:DC:202:VAL:HG23	1.79	0.65
82:DC:120:ARG:HH21	82:DC:356:LEU:HD23	1.61	0.65
82:DC:698:ILE:HD11	82:DC:699:DDE:HAC3	1.79	0.65
2:B:2469:G:H4'	5:E:27:ASN:HA	1.77	0.65
32:FA:35:ALA:HB3	32:FA:41:HIS:ND1	2.12	0.65
8:H:152:VAL:HG11	8:H:156:LEU:HD12	1.78	0.65
8:H:257:LYS:O	8:H:261:VAL:HG23	1.96	0.65
11:K:210:PRO:HD3	11:K:243:MET:HG2	1.78	0.65
11:K:86:VAL:HG12	11:K:134:VAL:HB	1.78	0.65
37:KA:55:ALA:HB3	37:KA:63:LYS:O	1.96	0.65
17:Q:124:ILE:O	39:MA:116:TYR:HA	1.95	0.65
69:QB:99:SER:HA	69:QB:102:ARG:NH1	2.12	0.65
69:QB:82:GLY:O	69:QB:93:HIS:HA	1.97	0.65
13:M:93:VAL:HG11	44:RA:86:ALA:HB2	1.79	0.65
72:TB:5:SER:HB3	72:TB:8:ALA:HB3	1.78	0.65
48:VA:7:LYS:HA	48:VA:10:GLU:HG2	1.77	0.65
26:Z:96:VAL:HG12	26:Z:97:SER:H	1.61	0.65
2:B:1663:C:H2'	2:B:1664:G:C8	2.31	0.65
2:B:2250:G:H1	2:B:2266:U:H3	1.43	0.65
2:B:995:U:C1'	2:B:2637:A:H5'	2.24	0.65
2:B:797:U:H2'	2:B:798:G:H8	1.61	0.65
28:BA:31:PHE:HB3	28:BA:36:SER:OG	1.96	0.65
3:C:11:C:H2'	3:C:12:A:H8	1.60	0.65
55:CB:33:VAL:HG12	55:CB:37:GLN:CD	2.17	0.65
32:FA:28:HIS:HB3	32:FA:31:GLY:O	1.96	0.65
7:G:78:VAL:HG21	7:G:311:PHE:HZ	1.61	0.65
59:GB:59:LEU:HD22	59:GB:69:ARG:HA	1.78	0.65
8:H:104:LYS:NZ	8:H:104:LYS:HA	2.12	0.65
34:HA:31:VAL:HG12	34:HA:35:ARG:HD3	1.79	0.65
34:HA:42:ILE:HG23	34:HA:65:THR:HG21	1.78	0.65
9:I:111:GLN:HA	9:I:116:ASP:HB2	1.77	0.65
13:M:36:LYS:HD2	13:M:78:MET:CE	2.27	0.65
39:MA:29:ALA:O	39:MA:33:VAL:HG23	1.95	0.65
67:OB:43:SER:HB3	67:OB:46:LEU:HD13	1.78	0.65
20:T:151:ASP:HA	20:T:154:ALA:HB3	1.77	0.65
1:A:476:U:C5'	1:A:538:A:H61	2.07	0.65
1:A:769:A:H2'	1:A:770:A:C8	2.32	0.65
2:B:1186:G:H4'	24:X:113:ARG:NH1	2.11	0.65
2:B:2738:A:H4'	33:GA:37:PRO:HD2	1.78	0.65
2:B:2995:A:C2'	2:B:2996:U:H5''	2.26	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:381:U:H2'	2:B:382:U:C5	2.31	0.65
2:B:595:G:H2'	2:B:596:C:C6	2.32	0.65
54:BB:121:TYR:CD2	54:BB:161:LYS:HE3	2.31	0.65
4:D:16:U:H2'	4:D:17:A:H8	1.62	0.65
82:DC:147:LEU:HD21	82:DC:189:VAL:HG13	1.79	0.65
82:DC:634:TRP:HB3	82:DC:664:VAL:HG21	1.78	0.65
5:E:23:THR:HG22	5:E:24:LYS:H	1.62	0.65
83:EC:6852:U:H2'	83:EC:6853:G:H8	1.60	0.65
61:IB:45:PRO:HG2	61:IB:48:ALA:HB2	1.78	0.65
13:M:72:LYS:HD3	13:M:73:SER:N	2.12	0.65
2:B:1129:A:OP1	14:N:13:LYS:HD3	1.96	0.65
14:N:5:PRO:HG3	14:N:7:ARG:NH1	2.11	0.65
16:P:78:SER:HA	16:P:117:ARG:HE	1.62	0.65
20:T:57:PHE:CE2	20:T:72:HIS:HA	2.32	0.65
48:VA:77:LEU:O	48:VA:80:VAL:HG23	1.97	0.65
1:A:1112:G:H1'	1:A:1133:A:H61	1.62	0.65
1:A:607:G:H5'	1:A:613:G:N2	2.12	0.65
2:B:1348:U:H5'	2:B:1355:A:N6	2.12	0.65
2:B:1640:G:H5'	2:B:1738:C:H5''	1.78	0.65
2:B:650:C:H2'	2:B:651:G:C8	2.32	0.65
2:B:847:A:H4'	63:KB:123:HIS:NE2	2.11	0.65
3:C:118:C:H2'	3:C:119:C:C6	2.31	0.65
31:EA:7:ALA:HA	31:EA:89:VAL:HG12	1.79	0.65
57:EB:91:ILE:HD11	57:EB:129:LEU:HA	1.79	0.65
7:G:159:ARG:HG2	7:G:182:GLN:HA	1.78	0.65
8:H:194:TYR:HA	30:DA:12:ARG:HD3	1.77	0.65
8:H:296:GLN:HA	8:H:299:ILE:HB	1.78	0.65
1:A:959:U:C6	63:KB:61:THR:HB	2.32	0.65
14:N:135:ILE:HG22	14:N:136:PHE:HD1	1.62	0.65
17:Q:47:ALA:CB	17:Q:48:PRO:HD3	2.23	0.65
69:QB:31:PRO:HD2	69:QB:34:VAL:HB	1.78	0.65
46:TA:73:GLU:HA	46:TA:80:ARG:HA	1.79	0.65
48:VA:145:ILE:HG23	48:VA:148:GLY:HA2	1.79	0.65
48:VA:30:VAL:O	48:VA:31:ASP:HB2	1.96	0.65
50:XA:11:PRO:O	50:XA:15:GLN:HG3	1.97	0.65
52:ZA:101:VAL:HG11	52:ZA:211:LEU:HD12	1.79	0.65
1:A:975:C:H5''	63:KB:109:LYS:HE3	1.79	0.65
2:B:1789:G:H2'	2:B:1790:G:C8	2.32	0.65
2:B:3279:A:C2'	2:B:3280:U:H5'	2.27	0.65
2:B:599:C:H3'	2:B:600:G:H5''	1.79	0.65
2:B:88:A:H2'	2:B:89:A:O4'	1.96	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:939:U:H2'	2:B:940:G:C8	2.31	0.65
2:B:973:A:H2'	2:B:974:G:H4'	1.78	0.65
82:DC:564:ARG:CB	82:DC:682:ARG:HB2	2.23	0.65
82:DC:809:LEU:O	82:DC:811:PRO:HD3	1.96	0.65
57:EB:49:ILE:HD11	57:EB:57:ALA:HB3	1.79	0.65
9:I:33:ARG:HG2	9:I:37:VAL:HG21	1.79	0.65
11:K:87:VAL:HG22	11:K:114:GLY:HA3	1.77	0.65
66:NB:6:SER:HB3	66:NB:23:LYS:HB3	1.79	0.65
67:OB:43:SER:HB3	67:OB:46:LEU:CD1	2.26	0.65
43:QA:10:LYS:HA	43:QA:13:MET:SD	2.36	0.65
43:QA:36:ARG:HB2	43:QA:36:ARG:HH11	1.62	0.65
18:R:119:GLN:O	18:R:123:LEU:HB2	1.96	0.65
21:U:19:GLY:N	21:U:94:LEU:HD11	2.10	0.65
22:V:163:PRO:HG2	22:V:165:ILE:HG22	1.79	0.65
1:A:767:U:H6	59:GB:141:VAL:HA	1.60	0.65
1:A:877:G:H4'	1:A:942:G:N2	2.12	0.65
2:B:2210:G:C6	2:B:2236:G:C2	2.85	0.65
2:B:3163:A:C3'	2:B:3164:C:H5"	2.26	0.65
2:B:406:G:H1'	3:C:17:A:N6	2.11	0.65
28:BA:8:PHE:HE2	28:BA:49:ILE:HG13	1.61	0.65
3:C:71:A:H5"	30:DA:75:ARG:HH22	1.62	0.65
82:DC:135:VAL:HG11	82:DC:185:VAL:CG2	2.25	0.65
6:F:20:THR:HA	6:F:23:ARG:HD2	1.79	0.65
7:G:128:LYS:HE2	7:G:131:THR:HG21	1.77	0.65
2:B:2402:A:H3'	8:H:67:THR:CG2	2.27	0.65
12:L:203:VAL:HG11	12:L:208:GLU:OE1	1.97	0.65
38:LA:65:VAL:HG12	38:LA:66:SER:H	1.62	0.65
40:NA:45:ARG:O	40:NA:49:GLY:HA2	1.97	0.65
15:O:61:ARG:HB3	46:TA:103:ALA:CB	2.27	0.65
17:Q:14:PHE:HB3	17:Q:18:TRP:CZ2	2.32	0.65
19:S:42:PRO:HA	19:S:131:GLU:OE2	1.97	0.65
49:WA:127:ARG:HD3	49:WA:150:TRP:CZ3	2.32	0.65
1:A:373:G:H4'	61:IB:96:LYS:HG3	1.77	0.64
1:A:82:U:H2'	1:A:83:G:O4'	1.97	0.64
2:B:1442:U:H2'	2:B:1443:G:O4'	1.97	0.64
2:B:2760:C:H2'	2:B:2761:G:H8	1.62	0.64
2:B:2949:U:C2'	2:B:2950:G:H5'	2.27	0.64
2:B:3138:U:H2'	2:B:3139:A:C8	2.32	0.64
2:B:700:C:H2'	2:B:701:G:C8	2.32	0.64
2:B:979:U:H4'	2:B:980:A:C8	2.32	0.64
30:DA:119:ILE:HG22	30:DA:124:GLY:HA3	1.79	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:32:LYS:CB	82:DC:128:VAL:HG21	2.27	0.64
5:E:110:PHE:HD2	5:E:135:PRO:HG3	1.61	0.64
32:FA:75:LEU:CD1	32:FA:137:LYS:HD2	2.26	0.64
7:G:173:GLN:OE1	7:G:175:LYS:HB3	1.97	0.64
2:B:3049:A:H4'	7:G:364:LYS:HG2	1.79	0.64
13:M:99:ILE:HG12	13:M:117:PHE:CD1	2.32	0.64
2:B:1040:A:H2'	14:N:198:LYS:HE2	1.79	0.64
2:B:929:A:H1'	41:OA:49:TRP:CE3	2.32	0.64
20:T:44:SER:HA	20:T:135:TYR:HA	1.78	0.64
52:ZA:157:LYS:HE2	52:ZA:170:ILE:HG23	1.78	0.64
1:A:1064:G:H2'	1:A:1065:A:C8	2.32	0.64
1:A:1485:C:H2'	1:A:1486:G:H4'	1.78	0.64
1:A:1737:G:H4'	2:B:1933:A:C2	2.33	0.64
2:B:1544:G:H4'	2:B:2168:A:H4'	1.79	0.64
2:B:2993:G:H4'	21:U:79:THR:HG22	1.80	0.64
2:B:3343:G:H2'	2:B:3361:G:N2	2.11	0.64
2:B:704:U:H3'	2:B:705:A:C5'	2.27	0.64
56:DB:67:VAL:HG23	56:DB:100:ALA:N	2.12	0.64
82:DC:332:ASP:O	82:DC:336:GLU:HB2	1.98	0.64
82:DC:835:TRP:O	82:DC:839:TYR:HB2	1.96	0.64
6:F:185:ALA:O	6:F:188:LYS:HG2	1.95	0.64
6:F:33:ASP:H	6:F:36:GLU:HB2	1.62	0.64
61:IB:99:ARG:HH12	73:UB:7:ARG:HA	1.60	0.64
67:OB:16:LEU:HD22	67:OB:38:ILE:HD13	1.80	0.64
1:A:1413:U:H5'	67:OB:3:ARG:NH1	2.12	0.64
2:B:1254:C:H4'	16:P:135:THR:HG21	1.79	0.64
16:P:82:ILE:O	16:P:86:LYS:HB2	1.97	0.64
17:Q:77:LEU:O	17:Q:81:LYS:HB2	1.97	0.64
69:QB:64:HIS:NE2	69:QB:68:ARG:HD2	2.12	0.64
48:VA:112:GLY:HA2	48:VA:165:VAL:O	1.96	0.64
24:X:100:VAL:O	24:X:104:GLU:HB2	1.97	0.64
1:A:1519:U:H2'	1:A:1520:U:H5	1.60	0.64
1:A:505:A:H3'	1:A:506:A:C5'	2.27	0.64
1:A:562:G:H2'	1:A:563:U:O4'	1.98	0.64
2:B:1919:G:H1'	2:B:1934:G:C2	2.32	0.64
2:B:2271:A:H8	2:B:2272:G:H5'	1.62	0.64
2:B:2967:A:H4'	6:F:206:PRO:HG3	1.79	0.64
2:B:3080:G:H2'	2:B:3081:C:C6	2.32	0.64
82:DC:436:LEU:HA	82:DC:454:ILE:HD11	1.78	0.64
32:FA:79:TRP:CA	32:FA:82:ILE:HD13	2.18	0.64
8:H:326:ARG:HB3	8:H:327:LEU:HD12	1.78	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:K:210:PRO:HB3	11:K:243:MET:HG3	1.79	0.64
1:A:1184:A:H2'	1:A:1185:U:C4'	2.27	0.64
1:A:1419:G:O2'	79:AC:54:LYS:HB3	1.98	0.64
2:B:2193:U:H5'	2:B:2194:G:H5'	1.79	0.64
2:B:54:C:H2'	2:B:55:G:H8	1.62	0.64
8:H:220:ARG:NH1	30:DA:4:GLN:HB2	2.12	0.64
31:EA:21:LYS:HA	31:EA:49:TYR:OH	1.97	0.64
61:IB:75:VAL:CA	61:IB:86:ILE:HG22	2.26	0.64
11:K:102:VAL:HG13	11:K:126:LEU:HD22	1.80	0.64
14:N:92:HIS:HB3	14:N:94:PHE:CE2	2.33	0.64
70:RB:27:THR:HA	70:RB:87:HIS:O	1.97	0.64
17:Q:24:VAL:HG22	19:S:199:LEU:HB2	1.79	0.64
19:S:199:LEU:HB3	19:S:203:ARG:CD	2.28	0.64
73:UB:54:LEU:CD1	73:UB:82:LYS:HG3	2.27	0.64
48:VA:30:VAL:HG12	48:VA:83:ASN:O	1.98	0.64
77:YB:36:LYS:HD3	77:YB:43:ILE:HG22	1.79	0.64
1:A:1739:C:H2'	1:A:1740:A:C8	2.32	0.64
1:A:600:U:H2'	1:A:601:A:C8	2.33	0.64
27:AA:85:TRP:CZ3	27:AA:94:TYR:HA	2.31	0.64
2:B:1327:C:H1'	37:KA:77:ASN:HD21	1.62	0.64
2:B:1522:U:H3'	29:CA:113:LEU:HD22	1.79	0.64
2:B:1757:A:H2'	2:B:1758:G:C8	2.33	0.64
2:B:2207:A:H3'	2:B:2208:A:H5''	1.79	0.64
2:B:2275:A:H62	2:B:2311:G:H1'	1.62	0.64
2:B:3060:C:H2'	2:B:3061:G:H8	1.60	0.64
2:B:44:U:H4'	46:TA:54:THR:HG22	1.79	0.64
2:B:681:U:H1'	2:B:696:C:C5	2.33	0.64
3:C:24:G:N7	30:DA:13:ARG:HG2	2.12	0.64
56:DB:73:ILE:HG13	56:DB:75:LEU:HG	1.80	0.64
82:DC:724:ILE:HG23	82:DC:808:PRO:HB3	1.80	0.64
57:EB:30:SER:O	57:EB:31:SER:HB2	1.98	0.64
83:EC:6903:U:H3	83:EC:6910:A:H61	1.43	0.64
2:B:874:U:OP1	7:G:241:LYS:HE3	1.96	0.64
9:I:148:ILE:HG23	9:I:151:GLN:HB2	1.80	0.64
39:MA:71:LYS:HA	39:MA:71:LYS:HE3	1.80	0.64
16:P:101:SER:N	16:P:139:VAL:HG12	2.10	0.64
18:R:108:ARG:HH22	18:R:112:LEU:HA	1.62	0.64
18:R:17:VAL:CG1	18:R:72:LEU:HD22	2.27	0.64
47:UA:14:TYR:HA	47:UA:17:ARG:NH1	2.11	0.64
50:XA:178:ALA:O	50:XA:181:VAL:HG22	1.96	0.64
1:A:509:G:H2'	1:A:510:G:C8	2.33	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1257:C:H1'	16:P:123:ARG:CZ	2.27	0.64
2:B:1294:A:O2'	2:B:1295:G:H8	1.80	0.64
2:B:2251:G:H3'	2:B:2252:A:H8	1.61	0.64
2:B:2248:C:O2'	2:B:2272:G:H4'	1.98	0.64
2:B:2528:G:H2'	2:B:2529:A:O4'	1.98	0.64
2:B:3229:G:C2	2:B:3230:G:H1'	2.33	0.64
54:BB:35:PRO:HB3	54:BB:143:ASP:O	1.96	0.64
54:BB:160:VAL:CG1	54:BB:169:ILE:HG23	2.28	0.64
2:B:198:A:H4'	30:DA:61:GLY:HA2	1.80	0.64
56:DB:68:LEU:H	56:DB:100:ALA:HB3	1.63	0.64
59:GB:40:LYS:HA	59:GB:43:TYR:CD2	2.32	0.64
60:HB:23:ALA:O	60:HB:64:TYR:HB2	1.98	0.64
36:JA:85:LEU:HB2	36:JA:88:HIS:HB2	1.79	0.64
69:QB:73:VAL:HG12	69:QB:77:ASN:HD21	1.61	0.64
18:R:35:ILE:HG13	18:R:46:ILE:CG2	2.27	0.64
21:U:27:LYS:H	21:U:27:LYS:HD2	1.61	0.64
48:VA:107:ALA:HB3	48:VA:182:THR:HB	1.79	0.64
24:X:12:ARG:CZ	24:X:22:PRO:HD2	2.28	0.64
1:A:1475:A:H2'	1:A:1476:C:C6	2.32	0.64
1:A:163:G:O2'	1:A:164:A:H5'	1.98	0.64
1:A:373:G:H2'	1:A:374:U:C6	2.33	0.64
1:A:865:A:H2'	1:A:866:G:O4'	1.97	0.64
1:A:946:U:H2'	1:A:947:U:C6	2.33	0.64
2:B:1898:G:H5'	27:AA:17:LEU:CD2	2.28	0.64
2:B:1523:U:H5'	2:B:1834:U:C4	2.33	0.64
2:B:1843:C:H3'	2:B:1844:C:C6	2.32	0.64
2:B:2268:U:C6	2:B:2269:U:H1'	2.33	0.64
2:B:404:G:OP1	2:B:404:G:H3'	1.97	0.64
82:DC:589:LYS:HD2	82:DC:689:LEU:HD11	1.78	0.64
82:DC:724:ILE:CG2	82:DC:808:PRO:HB3	2.28	0.64
8:H:103:THR:HA	8:H:107:ARG:NH2	2.12	0.64
61:IB:57:LYS:HB3	61:IB:131:ILE:HD12	1.79	0.64
12:L:153:ILE:HG23	12:L:166:LEU:HD12	1.80	0.64
13:M:182:SER:HA	44:RA:85:LEU:HD21	1.79	0.64
13:M:23:ARG:HB2	13:M:39:LYS:HG2	1.80	0.64
66:NB:109:PHE:CD1	66:NB:116:LEU:HG	2.32	0.64
29:CA:116:PRO:O	43:QA:14:ALA:HA	1.97	0.64
18:R:108:ARG:NH2	18:R:112:LEU:HA	2.13	0.64
47:UA:54:ILE:HG23	47:UA:63:THR:HG23	1.79	0.64
22:V:32:LEU:O	22:V:35:PHE:HB3	1.97	0.64
1:A:1529:C:H2'	1:A:1530:C:C6	2.32	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1487:A:H5'	1:A:1593:A:H4'	1.80	0.64
2:B:2154:U:H2'	2:B:2155:G:C8	2.33	0.64
7:G:41:VAL:HG21	7:G:194:TRP:HB2	1.80	0.64
61:IB:74:THR:OG1	61:IB:87:ARG:HB3	1.98	0.64
37:KA:72:THR:OG1	37:KA:82:ARG:HB2	1.98	0.64
12:L:156:ASP:CB	12:L:183:LYS:HD3	2.27	0.64
2:B:1927:G:H4'	47:UA:5:THR:HG22	1.80	0.64
73:UB:24:TRP:O	73:UB:30:LYS:HE3	1.97	0.64
48:VA:111:ALA:HB1	48:VA:167:GLN:HA	1.79	0.64
1:A:1432:U:H4'	1:A:1433:G:H5''	1.80	0.64
1:A:348:U:H4'	58:FB:14:THR:HA	1.80	0.64
1:A:965:U:H3'	1:A:966:A:H5'	1.79	0.64
79:AC:31:ILE:HB	79:AC:36:LEU:HD11	1.79	0.64
2:B:1661:G:O2'	2:B:1662:G:H5'	1.97	0.64
2:B:1702:U:H2'	2:B:1703:U:C6	2.32	0.64
2:B:2225:U:H2'	2:B:2226:U:C6	2.33	0.64
2:B:2261:G:H21	2:B:2262:A:N6	1.96	0.64
2:B:317:A:H3'	2:B:318:A:H8	1.62	0.64
2:B:713:U:O2'	2:B:754:G:H5''	1.97	0.64
2:B:769:G:C2'	2:B:770:G:H5'	2.27	0.64
56:DB:88:ARG:HB3	56:DB:91:GLU:HB2	1.78	0.64
82:DC:224:GLN:NE2	82:DC:328:LEU:HD22	2.12	0.64
82:DC:634:TRP:CZ3	82:DC:660:LYS:HA	2.33	0.64
10:J:28:GLN:HG2	10:J:30:LEU:HD22	1.78	0.64
11:K:207:LEU:HD22	11:K:240:VAL:HG12	1.80	0.64
2:B:2514:U:H5'	12:L:68:ARG:HD2	1.79	0.64
1:A:589:C:H2'	1:A:590:C:H6	1.62	0.64
2:B:1932:A:C2	2:B:2124:G:H5''	2.33	0.64
2:B:2242:A:C5'	6:F:243:THR:HG23	2.28	0.64
2:B:3170:A:H2'	2:B:3171:U:C6	2.33	0.64
2:B:3311:C:C2'	2:B:3312:U:H5'	2.26	0.64
2:B:907:G:O5'	2:B:909:G:H1'	1.98	0.64
55:CB:142:PRO:HG3	55:CB:214:LYS:HG2	1.78	0.64
55:CB:46:TRP:CG	55:CB:129:PRO:HG3	2.33	0.64
82:DC:111:PHE:C	82:DC:113:SER:H	2.01	0.64
31:EA:61:LYS:O	31:EA:65:ARG:HG2	1.97	0.64
8:H:23:PRO:HG3	8:H:258:LEU:HG	1.80	0.64
8:H:309:ARG:NE	8:H:312:VAL:HG11	2.13	0.64
8:H:64:SER:CA	8:H:75:PRO:HA	2.27	0.64
11:K:155:LYS:HD3	11:K:201:PHE:HA	1.79	0.64
14:N:213:PHE:N	14:N:214:PRO:HD3	2.13	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
73:UB:24:TRP:CZ3	73:UB:33:LEU:HD13	2.33	0.64
20:T:126:VAL:HG21	24:X:170:THR:CG2	2.28	0.64
77:YB:35:VAL:HG22	77:YB:79:PHE:HA	1.80	0.64
1:A:56:U:H4'	1:A:57:G:C5'	2.26	0.63
53:AB:53:THR:HG22	53:AB:91:VAL:CG1	2.27	0.63
2:B:211:A:H3'	8:H:221:ASN:OD1	1.98	0.63
6:F:224:THR:HA	6:F:237:LEU:HB2	1.80	0.63
2:B:610:G:H21	8:H:313:LEU:HG	1.63	0.63
8:H:39:PHE:HD1	8:H:235:LEU:HG	1.63	0.63
9:I:40:HIS:HB3	9:I:43:LYS:HG3	1.80	0.63
36:JA:123:LYS:O	36:JA:126:LEU:HG	1.97	0.63
11:K:83:LEU:HD11	11:K:116:PHE:CD1	2.33	0.63
38:LA:54:ILE:HA	38:LA:70:LYS:O	1.98	0.63
13:M:7:GLU:HB3	13:M:56:ALA:HB2	1.79	0.63
39:MA:95:PHE:O	39:MA:99:GLN:HG2	1.97	0.63
15:O:47:GLN:HB3	15:O:64:LYS:HB3	1.81	0.63
73:UB:134:ALA:CB	73:UB:140:LYS:HB2	2.27	0.63
73:UB:76:LEU:HB2	73:UB:80:GLY:H	1.63	0.63
2:B:1434:G:H5'	2:B:1437:C:H41	1.63	0.63
2:B:2675:C:H2'	2:B:2676:A:C8	2.34	0.63
2:B:2723:U:C2'	2:B:2724:U:H5'	2.28	0.63
2:B:524:U:H5	2:B:568:G:N2	1.94	0.63
2:B:750:G:H1	2:B:783:A:H2	1.45	0.63
2:B:811:U:H2'	2:B:812:G:C8	2.33	0.63
2:B:88:A:H3'	2:B:89:A:H8	1.62	0.63
80:BC:46:ASN:O	80:BC:47:VAL:HG12	1.99	0.63
55:CB:36:ALA:HB1	55:CB:42:LEU:HD21	1.81	0.63
7:G:17:LEU:HG	7:G:18:PRO:HA	1.79	0.63
9:I:33:ARG:CZ	9:I:37:VAL:HG21	2.28	0.63
10:J:34:LEU:HD21	10:J:63:LEU:HD11	1.80	0.63
36:JA:111:ARG:HH12	36:JA:115:LEU:HG	1.63	0.63
15:O:60:ARG:HG3	15:O:63:GLU:HB2	1.79	0.63
43:QA:6:SER:HB2	43:QA:9:ILE:HD12	1.80	0.63
2:B:2908:G:H4'	44:RA:114:LYS:HZ2	1.63	0.63
72:TB:113:HIS:CE1	72:TB:114:GLU:HG2	2.33	0.63
21:U:4:TYR:CD1	21:U:147:GLU:HB2	2.33	0.63
73:UB:130:VAL:HA	73:UB:140:LYS:HZ2	1.63	0.63
48:VA:89:THR:HG21	48:VA:96:ILE:HD13	1.79	0.63
23:W:58:HIS:HB3	23:W:60:LYS:NZ	2.13	0.63
1:A:1544:U:H3	1:A:1567:U:H3	1.44	0.63
1:A:382:C:H2'	1:A:383:G:C8	2.33	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:AB:12:VAL:O	53:AB:16:VAL:HG23	1.98	0.63
2:B:28:C:H4'	2:B:61:A:C2	2.32	0.63
2:B:728:G:N2	22:V:138:LEU:HD23	2.13	0.63
2:B:750:G:H4'	33:GA:44:LYS:HG3	1.81	0.63
28:BA:56:ARG:HA	28:BA:56:ARG:HE	1.63	0.63
82:DC:563:TYR:HB2	82:DC:677:PHE:HZ	1.62	0.63
59:GB:163:PRO:HB3	59:GB:169:PRO:HA	1.80	0.63
10:J:76:LEU:HD12	10:J:134:ARG:HG3	1.81	0.63
68:PB:15:LEU:HG	68:PB:22:VAL:HB	1.81	0.63
18:R:133:LYS:O	18:R:137:LYS:HB2	1.97	0.63
71:SB:70:ASN:HB3	71:SB:83:TRP:HB2	1.80	0.63
48:VA:41:VAL:HG21	48:VA:185:LEU:HD12	1.79	0.63
48:VA:33:VAL:HG23	48:VA:185:LEU:HD21	1.81	0.63
2:B:1765:U:H5	23:W:43:LYS:HB3	1.63	0.63
23:W:60:LYS:O	23:W:64:ARG:HG3	1.99	0.63
23:W:86:GLU:HG2	23:W:91:SER:HB2	1.79	0.63
24:X:13:ARG:CA	24:X:56:GLY:HA2	2.24	0.63
50:XA:20:ALA:CA	50:XA:168:HIS:HB2	2.28	0.63
1:A:1636:C:H5''	1:A:1637:C:H2'	1.81	0.63
2:B:1084:A:H2'	2:B:1085:A:C8	2.34	0.63
2:B:1397:C:H2'	2:B:1398:U:O4'	1.99	0.63
2:B:3346:U:H2'	2:B:3347:A:C8	2.34	0.63
2:B:44:U:OP1	19:S:84:PRO:HB2	1.97	0.63
2:B:740:G:H2'	2:B:741:U:H6	1.63	0.63
2:B:3366:G:H5''	28:BA:61:LYS:CE	2.27	0.63
29:CA:80:ASN:O	29:CA:125:ARG:HA	1.99	0.63
55:CB:93:LEU:HG	55:CB:172:ILE:HG23	1.80	0.63
57:EB:12:ALA:HB3	57:EB:13:PRO:HD3	1.78	0.63
17:Q:157:ARG:NH2	32:FA:124:ILE:HG21	2.13	0.63
58:FB:82:VAL:HG21	58:FB:166:TYR:HE1	1.64	0.63
2:B:3370:A:OP2	7:G:383:LEU:HA	1.99	0.63
34:HA:17:VAL:HG12	34:HA:100:ILE:CD1	2.29	0.63
12:L:170:CYS:HB3	12:L:175:VAL:O	1.98	0.63
14:N:25:ALA:O	14:N:122:PRO:HG2	1.99	0.63
15:O:104:PHE:O	15:O:127:PHE:HB2	1.97	0.63
17:Q:87:ALA:HB1	17:Q:97:VAL:HG11	1.79	0.63
72:TB:14:ILE:HG13	72:TB:27:ILE:HG21	1.80	0.63
24:X:82:ASP:HA	24:X:87:THR:HA	1.80	0.63
1:A:11:A:C2'	1:A:12:U:H5'	2.29	0.63
1:A:230:C:H3'	1:A:231:U:H5''	1.79	0.63
1:A:285:G:H2'	1:A:286:C:C6	2.33	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:AA:93:LEU:HB3	28:BA:20:LEU:HB3	1.80	0.63
53:AB:73:VAL:HG12	53:AB:79:TYR:CE2	2.34	0.63
2:B:126:U:H2'	2:B:127:G:O4'	1.99	0.63
2:B:1629:U:O2'	2:B:1630:U:H4'	1.99	0.63
2:B:2271:A:H3'	2:B:2272:G:C5'	2.24	0.63
2:B:2604:U:H2'	2:B:2605:G:O4'	1.97	0.63
54:BB:43:PRO:HB2	54:BB:46:VAL:HG23	1.81	0.63
6:F:96:LEU:HD13	6:F:108:PRO:HD2	1.80	0.63
2:B:2747:A:N1	9:I:36:LEU:HD11	2.13	0.63
37:KA:90:PRO:HD2	37:KA:93:THR:HG23	1.81	0.63
12:L:143:ILE:HG23	12:L:175:VAL:HG21	1.80	0.63
14:N:139:ARG:HD2	14:N:173:PHE:CD2	2.33	0.63
40:NA:23:ALA:HB1	40:NA:24:PRO:HD2	1.79	0.63
70:RB:37:VAL:O	70:RB:41:ILE:HD13	1.98	0.63
1:A:88:U:H4'	1:A:171:A:H4'	1.80	0.63
27:AA:76:ALA:HA	27:AA:102:ILE:HA	1.80	0.63
2:B:1472:U:O2'	23:W:26:PRO:HB3	1.99	0.63
2:B:904:A:H5'	2:B:1536:G:O2'	1.98	0.63
2:B:1881:A:H2'	2:B:1882:G:C8	2.34	0.63
2:B:2085:U:H3'	2:B:2086:A:C5'	2.29	0.63
2:B:2203:U:H2'	2:B:2204:C:C6	2.34	0.63
2:B:258:G:OP1	17:Q:81:LYS:HE3	1.99	0.63
82:DC:157:ILE:HD11	82:DC:181:THR:HB	1.81	0.63
82:DC:463:LEU:HD21	82:DC:467:GLY:HA3	1.81	0.63
82:DC:629:ASP:O	82:DC:647:ILE:HG13	1.98	0.63
82:DC:727:PRO:HD2	82:DC:774:VAL:HG21	1.81	0.63
57:EB:159:VAL:O	57:EB:163:ASP:HB2	1.98	0.63
8:H:122:THR:O	8:H:126:ILE:HG13	1.98	0.63
2:B:1439:U:H4'	8:H:95:ARG:HD3	1.81	0.63
35:IA:14:ILE:O	35:IA:70:ARG:HA	1.98	0.63
35:IA:72:ARG:CG	35:IA:96:VAL:HG11	2.29	0.63
61:IB:97:TYR:O	61:IB:99:ARG:HG3	1.98	0.63
63:KB:54:LEU:HB3	63:KB:60:VAL:HB	1.80	0.63
17:Q:128:ARG:HH22	39:MA:110:ALA:HA	1.63	0.63
18:R:45:LEU:HD21	18:R:55:ARG:CD	2.29	0.63
2:B:2515:A:H5''	19:S:28:TRP:CD1	2.34	0.63
21:U:95:LEU:HD23	21:U:148:LEU:HD22	1.79	0.63
22:V:32:LEU:O	22:V:36:LEU:HG	1.98	0.63
48:VA:26:PHE:HD1	48:VA:187:VAL:HG11	1.63	0.63
23:W:17:VAL:HG23	23:W:18:GLY:H	1.64	0.63
23:W:39:ASN:HA	23:W:42:ARG:HD3	1.81	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:XA:102:PHE:CE1	50:XA:131:GLN:HB3	2.33	0.63
1:A:1413:U:H5'	67:OB:3:ARG:HH12	1.62	0.63
1:A:1498:G:C2'	1:A:1499:G:H5''	2.26	0.63
1:A:606:A:H4'	1:A:607:G:H3'	1.81	0.63
2:B:1129:A:H5''	14:N:13:LYS:HZ3	1.64	0.63
2:B:1649:U:O2'	6:F:68:LYS:HD2	1.98	0.63
2:B:1711:C:C5'	31:EA:38:PHE:HB3	2.28	0.63
2:B:1742:U:H2'	2:B:1743:G:H8	1.61	0.63
2:B:1768:U:H2'	2:B:1769:G:H5''	1.80	0.63
2:B:1868:G:H1'	2:B:2119:A:H5'	1.81	0.63
2:B:2803:A:OP1	46:TA:59:HIS:HB2	1.98	0.63
2:B:80:G:O2'	2:B:326:U:H4'	1.99	0.63
2:B:744:A:O4'	22:V:141:ARG:HB3	1.99	0.63
82:DC:288:ILE:HB	82:DC:320:LEU:HG	1.79	0.63
10:J:53:VAL:HG23	10:J:68:PRO:HD3	1.80	0.63
19:S:146:ALA:HB2	39:MA:100:VAL:HG23	1.80	0.63
14:N:43:VAL:HA	14:N:139:ARG:HH22	1.63	0.63
17:Q:54:LEU:HD12	17:Q:75:PHE:CZ	2.34	0.63
17:Q:66:ASN:ND2	32:FA:105:LEU:HD21	2.12	0.63
44:RA:93:LYS:HA	44:RA:105:PRO:HD3	1.80	0.63
72:TB:13:ALA:HB3	72:TB:27:ILE:HG22	1.80	0.63
22:V:27:LYS:HA	22:V:30:VAL:HB	1.81	0.63
24:X:4:PHE:H	24:X:100:VAL:CG2	2.11	0.63
1:A:1235:C:H2'	1:A:1236:A:H8	1.63	0.63
1:A:1525:A:H2'	1:A:1526:A:C8	2.34	0.63
2:B:1268:G:H21	2:B:1273:A:H62	1.45	0.63
2:B:122:A:H62	2:B:148:G:N2	1.97	0.63
2:B:1642:A:H4'	38:LA:69:HIS:HE1	1.64	0.63
2:B:1729:A:H3'	2:B:1730:G:H5'	1.79	0.63
2:B:175:C:H2'	2:B:176:G:H8	1.63	0.63
2:B:1863:G:H1'	2:B:1867:A:H62	1.63	0.63
2:B:2155:G:H2'	2:B:2156:C:C6	2.33	0.63
2:B:3034:C:N3	13:M:120:ASP:HA	2.14	0.63
2:B:317:A:H2'	2:B:318:A:O4'	1.99	0.63
2:B:3190:C:H2'	2:B:3191:G:C8	2.33	0.63
55:CB:36:ALA:HB3	55:CB:45:LYS:HE2	1.80	0.63
4:D:4:U:H2'	4:D:5:G:C8	2.34	0.63
31:EA:51:LEU:HB2	31:EA:65:ARG:HD2	1.81	0.63
60:HB:24:LYS:HA	60:HB:63:TYR:HA	1.81	0.63
10:J:67:GLY:HA3	10:J:68:PRO:C	2.19	0.63
11:K:224:ILE:HD13	24:X:39:SER:CB	2.28	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:K:58:ALA:O	11:K:62:ILE:HG23	1.98	0.63
37:KA:90:PRO:HD2	37:KA:93:THR:CG2	2.29	0.63
63:KB:91:LEU:HB3	63:KB:122:ILE:HG12	1.80	0.63
14:N:115:MET:HG2	14:N:118:ALA:HA	1.81	0.63
17:Q:102:GLN:HB2	17:Q:104:ARG:HH12	1.63	0.63
49:WA:46:LYS:HB2	49:WA:58:VAL:CG1	2.29	0.63
24:X:12:ARG:NE	24:X:22:PRO:HD2	2.13	0.63
2:B:1403:C:OP1	36:JA:11:LYS:HE3	1.98	0.63
2:B:1856:C:H1'	38:LA:7:PHE:CE2	2.34	0.63
2:B:1913:A:C2	2:B:2120:A:H2'	2.34	0.63
2:B:2951:G:O2'	2:B:2952:G:H5'	1.99	0.63
2:B:3001:C:H2'	2:B:3002:C:H6	1.63	0.63
2:B:3216:G:H2'	2:B:3219:G:H1'	1.80	0.63
2:B:3379:C:H5''	7:G:315:GLY:HA2	1.79	0.63
2:B:973:A:C4	2:B:974:G:H1'	2.34	0.63
5:E:184:LEU:O	5:E:187:VAL:HG12	1.99	0.63
7:G:165:GLN:HE21	7:G:168:LYS:HG3	1.64	0.63
8:H:359:LEU:HD11	24:X:63:GLN:C	2.19	0.63
71:SB:34:ILE:HD11	71:SB:55:LEU:HD12	1.81	0.63
20:T:16:VAL:HG23	20:T:43:ILE:HG12	1.80	0.63
21:U:126:ARG:HD2	21:U:138:LYS:HB2	1.80	0.63
2:B:1729:A:N6	47:UA:42:CYS:HA	2.14	0.63
73:UB:76:LEU:CB	73:UB:80:GLY:H	2.12	0.63
74:VB:105:ARG:HH11	74:VB:105:ARG:HG2	1.64	0.63
75:WB:93:SER:HB2	75:WB:100:ILE:H	1.64	0.63
25:Y:130:ARG:HH11	25:Y:130:ARG:HB2	1.61	0.63
26:Z:73:GLY:HA2	26:Z:103:TYR:OH	1.98	0.63
1:A:1214:U:H2'	1:A:1215:C:C6	2.33	0.62
2:B:1472:U:H2'	2:B:1473:G:H8	1.63	0.62
2:B:3182:G:H5''	20:T:37:ARG:HH22	1.64	0.62
2:B:3211:C:H2'	2:B:3212:C:C6	2.34	0.62
2:B:351:A:N3	3:C:53:A:H1'	2.14	0.62
30:DA:28:ARG:NH2	30:DA:29:VAL:HG22	2.14	0.62
82:DC:222:ILE:H	82:DC:222:ILE:CD1	2.13	0.62
58:FB:55:TYR:HB2	58:FB:176:SER:C	2.18	0.62
58:FB:26:LYS:HZ2	58:FB:49:ARG:HB2	1.63	0.62
7:G:114:VAL:HG22	7:G:163:HIS:CE1	2.33	0.62
2:B:3312:U:C5'	7:G:25:ILE:HG23	2.29	0.62
61:IB:80:MET:HB3	61:IB:83:THR:O	1.98	0.62
10:J:67:GLY:CA	10:J:74:VAL:HB	2.29	0.62
13:M:165:CYS:HB3	13:M:178:GLY:HA2	1.80	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:NA:25:LYS:HE3	40:NA:27:SER:OG	1.99	0.62
40:NA:50:LEU:HD21	40:NA:58:ILE:HG21	1.81	0.62
66:NB:128:LYS:HB2	66:NB:137:ARG:NH2	2.14	0.62
16:P:78:SER:HB2	16:P:137:GLN:OE1	1.99	0.62
42:PA:28:ASN:HD22	42:PA:40:GLN:HB3	1.63	0.62
17:Q:124:ILE:HG22	17:Q:126:PHE:CE1	2.34	0.62
19:S:38:ARG:NH1	19:S:60:VAL:HG13	2.14	0.62
71:SB:64:GLU:OE1	77:YB:3:LEU:HB2	1.98	0.62
72:TB:89:TRP:HA	72:TB:89:TRP:HE3	1.63	0.62
24:X:107:TYR:HE1	24:X:118:PHE:HA	1.64	0.62
24:X:9:VAL:HG22	24:X:61:ILE:CD1	2.29	0.62
78:ZB:16:LEU:HB2	78:ZB:27:GLN:CB	2.29	0.62
78:ZB:16:LEU:HB2	78:ZB:27:GLN:HB3	1.80	0.62
1:A:409:C:H5'	1:A:1732:A:H4'	1.81	0.62
1:A:854:U:H2'	1:A:855:A:O4'	1.98	0.62
2:B:1069:C:O2'	2:B:1070:U:H5'	1.99	0.62
2:B:1463:U:H3	2:B:1467:A:H62	1.45	0.62
2:B:1475:A:H2'	2:B:1476:G:O4'	1.99	0.62
2:B:2788:C:H2'	2:B:2789:U:C6	2.34	0.62
2:B:3040:A:OP1	27:AA:12:ARG:HB2	1.98	0.62
2:B:316:U:C5	40:NA:27:SER:HB2	2.34	0.62
2:B:778:U:H2'	2:B:779:G:C8	2.35	0.62
1:A:381:C:H5''	54:BB:10:LYS:HD3	1.80	0.62
54:BB:179:LYS:HB2	54:BB:195:ILE:HD12	1.81	0.62
29:CA:139:ILE:HD11	39:MA:33:VAL:HG21	1.81	0.62
82:DC:152:LYS:HG3	82:DC:200:VAL:HG23	1.80	0.62
82:DC:17:THR:HG21	82:DC:92:LYS:HD2	1.81	0.62
82:DC:226:ALA:HA	82:DC:240:MET:CE	2.29	0.62
2:B:212:G:C8	8:H:223:PRO:HG3	2.34	0.62
60:HB:72:GLY:O	60:HB:76:LEU:HD23	1.99	0.62
9:I:22:ARG:HG2	9:I:28:THR:OG1	1.99	0.62
61:IB:36:LYS:HG2	61:IB:60:PHE:O	1.99	0.62
61:IB:78:THR:OG1	61:IB:119:VAL:HG22	1.99	0.62
11:K:83:LEU:HD13	11:K:84:VAL:N	2.14	0.62
13:M:27:VAL:HG11	13:M:79:ILE:HG12	1.80	0.62
39:MA:86:ARG:O	39:MA:90:ARG:HG2	1.98	0.62
65:MB:32:ASP:HA	65:MB:35:LYS:HB2	1.79	0.62
14:N:85:PHE:HA	14:N:140:THR:HG22	1.81	0.62
19:S:146:ALA:HA	19:S:149:ASN:HB2	1.81	0.62
71:SB:67:ASP:HA	71:SB:70:ASN:ND2	2.13	0.62
24:X:68:HIS:HB2	24:X:73:LYS:HZ1	1.64	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:ZB:50:GLU:O	78:ZB:51:ASN:HB2	1.98	0.62
1:A:1592:A:H2'	1:A:1593:A:H8	1.64	0.62
2:B:1695:U:H1'	2:B:1749:A:H61	1.65	0.62
2:B:2131:A:H61	47:UA:18:TYR:HA	1.64	0.62
2:B:700:C:H2'	2:B:701:G:H8	1.64	0.62
55:CB:182:ALA:O	55:CB:193:THR:HG21	1.99	0.62
5:E:4:ILE:HG21	5:E:201:VAL:HG21	1.82	0.62
32:FA:102:ILE:HD12	32:FA:125:VAL:HG22	1.80	0.62
32:FA:135:GLU:HA	32:FA:138:ILE:HD12	1.82	0.62
59:GB:84:GLY:O	59:GB:107:ARG:HD3	1.98	0.62
63:KB:26:PHE:CE2	63:KB:66:ILE:HD11	2.35	0.62
13:M:103:ILE:HG13	13:M:136:PHE:CZ	2.34	0.62
39:MA:92:LEU:HB3	39:MA:97:ALA:CB	2.28	0.62
65:MB:90:ILE:HG12	65:MB:107:ILE:HG22	1.81	0.62
2:B:1256:G:O4'	16:P:128:VAL:HG22	1.99	0.62
19:S:66:VAL:HG22	19:S:102:ALA:HB2	1.81	0.62
19:S:57:GLN:O	19:S:142:ILE:HD11	1.98	0.62
2:B:277:G:H1'	19:S:93:LYS:HE3	1.81	0.62
20:T:173:ALA:HA	20:T:176:LYS:HE3	1.81	0.62
2:B:3007:U:H5'	20:T:73:PHE:CD1	2.35	0.62
20:T:74:ARG:HB2	20:T:145:VAL:HG23	1.80	0.62
47:UA:8:VAL:O	47:UA:11:THR:HG22	1.98	0.62
73:UB:76:LEU:HD13	73:UB:79:ASN:CB	2.30	0.62
24:X:79:VAL:HG23	24:X:90:MET:HB2	1.81	0.62
1:A:1740:A:H2'	1:A:1741:U:C6	2.34	0.62
1:A:430:G:H2'	1:A:431:C:C6	2.35	0.62
1:A:545:A:H4'	1:A:546:U:H5'	1.81	0.62
2:B:1287:A:O2'	2:B:1288:U:H5'	2.00	0.62
2:B:153:U:O2'	2:B:154:U:H5'	1.99	0.62
2:B:2588:U:H2'	2:B:2589:G:C8	2.34	0.62
2:B:2674:A:N6	15:O:21:ILE:HG23	2.13	0.62
2:B:370:U:H4'	2:B:404:G:H5'	1.79	0.62
4:D:27:A:H1'	4:D:57:G:N2	2.13	0.62
4:D:89:G:H5'	24:X:84:ARG:HD3	1.80	0.62
30:DA:28:ARG:NH1	30:DA:28:ARG:HB3	2.14	0.62
57:EB:38:LEU:HA	57:EB:41:LEU:HD12	1.80	0.62
57:EB:74:GLN:O	57:EB:78:THR:HG23	1.99	0.62
57:EB:86:GLN:HG2	57:EB:87:ASP:H	1.62	0.62
8:H:295:ILE:O	8:H:299:ILE:HB	1.99	0.62
60:HB:12:HIS:CD2	60:HB:76:LEU:HD13	2.34	0.62
66:NB:101:SER:O	66:NB:105:LEU:HD13	1.99	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:Q:56:PRO:HG3	17:Q:74:GLY:O	2.00	0.62
17:Q:75:PHE:HD2	17:Q:96:ALA:O	1.83	0.62
70:RB:52:LYS:CB	70:RB:93:LEU:HD23	2.29	0.62
46:TA:3:ASN:HA	46:TA:92:GLU:HG3	1.82	0.62
74:VB:91:LEU:HB3	74:VB:96:LEU:HB2	1.82	0.62
25:Y:20:ARG:HB3	25:Y:20:ARG:NH1	2.15	0.62
1:A:488:G:H2'	1:A:489:C:H5'	1.79	0.62
1:A:629:U:H2'	1:A:630:A:H5'	1.82	0.62
2:B:2395:G:H4'	7:G:258:ALA:CB	2.28	0.62
2:B:2628:A:H2'	2:B:2629:U:H5''	1.79	0.62
2:B:2975:U:H2'	2:B:2976:A:H8	1.63	0.62
54:BB:94:ALA:CB	74:VB:17:LEU:HB3	2.29	0.62
56:DB:56:ASN:HA	56:DB:62:PRO:HA	1.81	0.62
82:DC:610:ASP:HB3	82:DC:615:ARG:HD3	1.82	0.62
2:B:3312:U:H5'	7:G:25:ILE:HG23	1.81	0.62
2:B:3305:A:H4'	7:G:272:TYR:OH	1.98	0.62
2:B:3325:G:H1'	35:IA:105:GLN:HG2	1.81	0.62
61:IB:66:ILE:HG12	61:IB:128:CYS:SG	2.38	0.62
12:L:143:ILE:HG12	12:L:175:VAL:HG11	1.80	0.62
41:OA:55:ARG:HB2	41:OA:55:ARG:NH1	2.15	0.62
2:B:156:G:C4	17:Q:99:HIS:HB2	2.34	0.62
20:T:90:HIS:HA	20:T:95:GLY:HA3	1.81	0.62
46:TA:23:HIS:CB	46:TA:72:LEU:HB3	2.30	0.62
1:A:190:C:O2'	1:A:191:C:H5'	1.99	0.62
1:A:466:U:H2'	1:A:467:G:O4'	2.00	0.62
53:AB:164:VAL:O	53:AB:168:ILE:HG13	1.99	0.62
2:B:1077:U:H2'	2:B:1078:U:H6	1.64	0.62
2:B:2585:G:O2'	2:B:2586:G:H5''	2.00	0.62
2:B:805:G:H5''	8:H:75:PRO:HD3	1.80	0.62
28:BA:56:ARG:O	28:BA:60:LYS:HA	2.00	0.62
3:C:64:U:H2'	3:C:65:A:C8	2.34	0.62
55:CB:102:ARG:O	55:CB:106:LYS:HD2	1.99	0.62
30:DA:119:ILE:CG2	30:DA:124:GLY:HA3	2.30	0.62
5:E:36:VAL:HB	5:E:183:ILE:CG2	2.29	0.62
57:EB:185:ILE:H	57:EB:185:ILE:HD13	1.65	0.62
1:A:762:A:H4'	59:GB:71:PHE:CE1	2.35	0.62
9:I:33:ARG:NE	9:I:37:VAL:HG21	2.13	0.62
35:IA:40:ALA:O	35:IA:44:MET:HB2	1.99	0.62
10:J:10:TYR:HB3	36:JA:88:HIS:CE1	2.34	0.62
10:J:38:THR:HG22	10:J:39:VAL:H	1.64	0.62
11:K:143:THR:O	11:K:147:LEU:HG	1.99	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:K:239:LEU:HD13	11:K:240:VAL:HG13	1.79	0.62
2:B:1139:G:O2'	11:K:94:LYS:HG3	1.99	0.62
1:A:629:U:OP1	63:KB:124:ARG:HG2	1.99	0.62
13:M:97:PHE:HB3	13:M:118:LEU:H	1.65	0.62
14:N:206:LEU:O	14:N:210:ILE:HG13	1.99	0.62
40:NA:61:ILE:C	40:NA:63:ASN:H	2.03	0.62
41:OA:37:CYS:SG	41:OA:39:TYR:HB2	2.39	0.62
17:Q:85:LEU:CD1	17:Q:89:TYR:HB3	2.28	0.62
25:Y:35:LYS:HB2	25:Y:38:ASP:OD2	2.00	0.62
1:A:1403:C:H2'	1:A:1404:C:C6	2.35	0.62
1:A:1586:A:H61	1:A:1610:G:H1'	1.64	0.62
2:B:1054:A:H5''	2:B:2637:A:N6	2.15	0.62
2:B:3011:A:N6	7:G:13:HIS:HA	2.14	0.62
2:B:3302:U:H3	2:B:3312:U:H3	1.47	0.62
3:C:115:C:H3'	3:C:116:G:H5''	1.82	0.62
3:C:23:U:H6	3:C:23:U:OP2	1.83	0.62
1:A:127:G:N1	56:DB:195:VAL:HG13	2.14	0.62
56:DB:215:ARG:HA	56:DB:218:GLU:HB2	1.82	0.62
82:DC:286:THR:O	82:DC:290:ASN:HB2	1.99	0.62
82:DC:720:ALA:O	82:DC:721:ASP:HB2	2.00	0.62
57:EB:43:PHE:HB2	57:EB:61:PHE:O	2.00	0.62
83:EC:6852:U:H2'	83:EC:6853:G:C8	2.35	0.62
58:FB:155:SER:O	58:FB:159:GLN:HG3	1.99	0.62
59:GB:38:ASN:HB2	59:GB:41:GLU:HG3	1.79	0.62
37:KA:49:ILE:HG22	37:KA:100:ILE:HG12	1.80	0.62
40:NA:58:ILE:HG13	40:NA:59:ASP:N	2.14	0.62
2:B:813:G:H4'	41:OA:45:ARG:NH2	2.15	0.62
68:PB:52:VAL:HG13	68:PB:61:LEU:HD11	1.82	0.62
46:TA:71:ARG:HD3	46:TA:80:ARG:HD2	1.82	0.62
21:U:86:LYS:HA	21:U:89:LYS:HB2	1.80	0.62
48:VA:186:THR:HG22	48:VA:187:VAL:H	1.65	0.62
74:VB:81:GLU:HA	74:VB:84:LYS:HE3	1.79	0.62
50:XA:57:LEU:HD11	50:XA:176:LEU:HB2	1.81	0.62
78:ZB:32:PHE:HD2	78:ZB:32:PHE:H	1.48	0.62
1:A:1667:A:H4'	2:B:1935:G:O2'	1.99	0.62
1:A:35:U:H2'	1:A:36:C:C6	2.34	0.62
53:AB:25:PHE:HA	53:AB:28:GLU:HB3	1.80	0.62
2:B:528:U:H2'	2:B:529:A:C8	2.34	0.62
2:B:603:A:O5'	2:B:603:A:H8	1.83	0.62
1:A:78:A:C2	56:DB:178:LEU:HD23	2.34	0.62
82:DC:296:ILE:HB	82:DC:297:PRO:CD	2.26	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:617:ARG:HH21	82:DC:627:VAL:HG21	1.63	0.62
83:EC:6818:G:H2'	83:EC:6819:G:C8	2.34	0.62
6:F:68:LYS:HG2	6:F:69:TYR:H	1.63	0.62
7:G:246:LEU:H	7:G:248:LYS:HE3	1.65	0.62
11:K:90:LYS:HD3	11:K:133:TYR:CD1	2.35	0.62
11:K:90:LYS:HG2	11:K:91:GLY:H	1.64	0.62
12:L:46:LEU:HA	12:L:49:TYR:CE1	2.34	0.62
66:NB:102:LYS:HA	66:NB:105:LEU:HD22	1.81	0.62
43:QA:36:ARG:NH1	43:QA:36:ARG:HB2	2.15	0.62
18:R:55:ARG:HD2	24:X:70:THR:HB	1.82	0.62
72:TB:3:ARG:HD3	72:TB:29:PRO:HD3	1.81	0.62
72:TB:55:ASP:OD2	72:TB:59:GLY:HA2	2.00	0.62
22:V:180:ARG:HH11	22:V:185:LYS:CG	2.13	0.62
48:VA:29:GLY:HA2	48:VA:84:VAL:HG22	1.81	0.62
74:VB:114:ARG:O	74:VB:118:ILE:HG12	2.00	0.62
1:A:312:A:C2	1:A:314:C:H2'	2.35	0.62
2:B:1637:A:H2'	2:B:1638:A:C8	2.35	0.62
2:B:1714:A:N6	2:B:1730:G:H1'	2.15	0.62
2:B:2407:C:H4'	2:B:2620:G:C4'	2.30	0.62
2:B:2524:A:H1'	2:B:2525:G:C8	2.34	0.62
2:B:67:A:N6	2:B:271:C:H4'	2.15	0.62
2:B:2393:G:H2'	2:B:2982:A:H61	1.64	0.62
82:DC:634:TRP:HA	82:DC:660:LYS:HE3	1.82	0.62
6:F:58:LEU:HD23	6:F:77:ILE:HA	1.82	0.62
9:I:257:GLU:CD	9:I:257:GLU:H	2.03	0.62
10:J:51:ARG:HG2	10:J:51:ARG:HH11	1.64	0.62
11:K:140:SER:O	11:K:143:THR:HB	1.99	0.62
13:M:49:ASN:ND2	13:M:52:LEU:HB3	2.15	0.62
22:V:124:LEU:HA	22:V:127:LEU:HB3	1.81	0.62
1:A:632:U:O2'	1:A:1103:U:H5''	1.99	0.62
1:A:1525:A:H2'	1:A:1526:A:H8	1.65	0.62
2:B:2533:G:H2'	2:B:2534:G:C8	2.35	0.62
54:BB:192:ILE:HG23	54:BB:228:ILE:HD11	1.82	0.62
54:BB:65:LEU:HD11	54:BB:80:THR:HG23	1.82	0.62
82:DC:288:ILE:HD13	82:DC:323:VAL:HG21	1.82	0.62
31:EA:109:GLU:HA	31:EA:112:LYS:HD2	1.80	0.62
6:F:104:LEU:HD23	6:F:148:VAL:HG11	1.82	0.62
6:F:22:LEU:CD2	6:F:191:LEU:HD21	2.30	0.62
37:KA:18:ARG:HA	37:KA:22:VAL:O	1.99	0.62
2:B:1655:G:H5''	38:LA:58:ARG:NH2	2.15	0.62
15:O:90:GLN:HG2	15:O:170:ASP:HB2	1.82	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:OB:41:ILE:HG22	67:OB:43:SER:H	1.64	0.62
22:V:67:ILE:HA	22:V:140:LEU:CD1	2.30	0.62
24:X:10:ILE:HD13	25:Y:148:PRO:HG2	1.81	0.62
50:XA:197:ILE:HG13	50:XA:201:LEU:HD12	1.80	0.62
50:XA:82:GLY:HA3	50:XA:170:ILE:HG21	1.81	0.62
1:A:1076:A:H2'	1:A:1077:C:C6	2.34	0.61
1:A:1542:G:C2	1:A:1568:C:H1'	2.35	0.61
1:A:185:U:C2'	1:A:186:C:H5''	2.29	0.61
1:A:32:U:H3	1:A:468:A:H62	1.47	0.61
1:A:855:A:H3'	1:A:856:A:H5''	1.82	0.61
2:B:858:A:H4'	2:B:1791:C:H5'	1.82	0.61
2:B:577:C:H2'	2:B:579:G:H5''	1.82	0.61
2:B:681:U:H1'	2:B:696:C:H5	1.65	0.61
2:B:714:G:H22	32:FA:72:VAL:HG11	1.64	0.61
3:C:107:G:H2'	3:C:108:C:C6	2.35	0.61
82:DC:231:LYS:HG3	82:DC:232:LYS:H	1.65	0.61
82:DC:545:LEU:HD12	82:DC:549:HIS:HB2	1.81	0.61
5:E:32:VAL:HG12	5:E:208:SER:HA	1.82	0.61
32:FA:39:HIS:O	32:FA:42:ARG:HG2	2.00	0.61
7:G:114:VAL:HG13	7:G:163:HIS:CB	2.30	0.61
59:GB:110:GLN:HE22	59:GB:125:ALA:CB	2.10	0.61
10:J:155:LEU:O	10:J:159:LEU:HG	1.99	0.61
11:K:138:TYR:CE2	11:K:233:GLU:HG2	2.35	0.61
11:K:239:LEU:CD1	11:K:240:VAL:HG13	2.30	0.61
17:Q:48:PRO:HD2	39:MA:115:LYS:HD3	1.81	0.61
14:N:191:LYS:CE	14:N:198:LYS:HG3	2.30	0.61
14:N:53:VAL:HG21	14:N:166:ILE:CD1	2.29	0.61
40:NA:11:LEU:HD22	40:NA:11:LEU:H	1.64	0.61
67:OB:57:LEU:HA	67:OB:60:ARG:HG2	1.81	0.61
49:WA:26:SER:HB2	49:WA:32:LEU:HD23	1.82	0.61
27:AA:39:VAL:HG22	27:AA:58:VAL:HG12	1.82	0.61
2:B:1108:U:H2'	2:B:1109:U:H6	1.65	0.61
2:B:1410:U:H2'	2:B:1411:C:C6	2.35	0.61
2:B:1517:G:H2'	2:B:1518:U:C6	2.35	0.61
2:B:1590:G:H3'	2:B:1591:G:H8	1.63	0.61
2:B:1922:A:H62	2:B:1929:G:H21	1.47	0.61
2:B:2298:U:H3'	2:B:2299:A:H8	1.66	0.61
2:B:3283:U:H2'	2:B:3284:G:C8	2.35	0.61
82:DC:190:SER:HB3	82:DC:201:GLN:NE2	2.14	0.61
9:I:108:ARG:N	9:I:251:PRO:HB2	2.15	0.61
63:KB:98:VAL:CG1	63:KB:115:LEU:HB2	2.29	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:P:128:VAL:O	16:P:132:ILE:HG13	2.01	0.61
17:Q:12:ASN:HB3	17:Q:14:PHE:CE1	2.35	0.61
13:M:64:HIS:CE1	20:T:132:GLY:HA3	2.36	0.61
21:U:94:LEU:HD23	21:U:148:LEU:HD23	1.82	0.61
22:V:145:ASN:HA	22:V:150:VAL:HG11	1.81	0.61
24:X:6:GLU:CD	24:X:64:ILE:HD12	2.21	0.61
1:A:36:C:H5''	1:A:530:C:H4'	1.81	0.61
27:AA:39:VAL:HG21	27:AA:51:ALA:O	2.01	0.61
2:B:2590:A:H2'	2:B:2591:A:C8	2.35	0.61
2:B:2799:A:H5''	2:B:2800:G:O5'	2.00	0.61
2:B:269:G:N2	2:B:294:U:H2'	2.15	0.61
29:CA:86:VAL:CG1	29:CA:90:ALA:HB3	2.30	0.61
82:DC:77:LEU:HB3	82:DC:100:ILE:HD12	1.83	0.61
5:E:201:VAL:HB	5:E:204:LEU:HD21	1.83	0.61
6:F:28:LYS:HB3	6:F:123:ARG:HD3	1.81	0.61
7:G:162:VAL:HG11	7:G:181:ILE:HD11	1.82	0.61
7:G:57:VAL:HG23	7:G:358:TRP:HE3	1.64	0.61
8:H:29:PRO:HG2	8:H:279:HIS:HA	1.82	0.61
61:IB:53:TYR:CG	61:IB:113:PRO:HG2	2.36	0.61
61:IB:6:THR:O	61:IB:7:VAL:HG12	2.00	0.61
10:J:170:LYS:HB2	10:J:173:MET:HB2	1.82	0.61
11:K:152:GLY:O	11:K:163:LEU:HG	1.99	0.61
14:N:42:THR:HG23	14:N:44:ASP:H	1.66	0.61
40:NA:64:SER:HB3	40:NA:68:ARG:HB2	1.82	0.61
20:T:15:LEU:HD11	20:T:128:ARG:HB3	1.82	0.61
1:A:1000:C:H4'	83:EC:6949:G:H4'	1.82	0.61
1:A:1504:G:O3'	69:QB:41:SER:HB3	2.01	0.61
1:A:320:U:HO2'	1:A:321:C:H6	1.47	0.61
2:B:1078:U:H1'	2:B:1082:U:C2	2.36	0.61
2:B:2587:U:H4'	12:L:48:ARG:NH2	2.14	0.61
2:B:2714:G:H4'	2:B:2715:A:H5''	1.81	0.61
2:B:2922:G:H3'	2:B:2923:U:C5'	2.30	0.61
2:B:29:C:C3'	2:B:30:G:H5''	2.30	0.61
2:B:432:G:H2'	2:B:433:A:O4'	2.01	0.61
2:B:941:G:C2	2:B:942:U:H1'	2.35	0.61
28:BA:56:ARG:HH22	28:BA:61:LYS:HB2	1.64	0.61
6:F:2:GLY:HA2	6:F:207:VAL:HA	1.83	0.61
60:HB:1:MET:SD	60:HB:44:LYS:HB2	2.40	0.61
61:IB:78:THR:HA	61:IB:84:ILE:HG22	1.81	0.61
36:JA:4:LEU:HD23	36:JA:4:LEU:H	1.65	0.61
37:KA:11:GLY:CA	37:KA:32:ILE:HG22	2.30	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:M:153:ASP:O	13:M:157:ASN:HB2	2.01	0.61
19:S:9:GLU:HA	19:S:12:ARG:HE	1.65	0.61
20:T:55:HIS:HA	20:T:58:LEU:HB3	1.82	0.61
2:B:2803:A:OP1	46:TA:60:LYS:HD3	2.00	0.61
2:B:2770:G:H5'	46:TA:80:ARG:O	2.01	0.61
11:K:109:THR:HB	22:V:3:ILE:HG23	1.83	0.61
2:B:1682:U:N3	26:Z:82:LYS:HA	2.15	0.61
52:ZA:184:VAL:HG11	52:ZA:198:THR:HG21	1.82	0.61
1:A:1357:A:H2'	1:A:1358:G:C8	2.35	0.61
2:B:1133:A:C2'	2:B:1134:G:H5'	2.30	0.61
2:B:1666:G:H4'	2:B:1742:U:HO2'	1.65	0.61
2:B:2198:A:H2'	2:B:2199:G:C5'	2.29	0.61
2:B:2235:C:H2'	2:B:2236:G:C8	2.35	0.61
2:B:23:A:O2'	3:C:41:A:H1'	2.01	0.61
2:B:3133:C:H2'	2:B:3134:A:H5''	1.81	0.61
2:B:568:G:H2'	2:B:569:A:C8	2.35	0.61
2:B:86:G:N2	2:B:98:G:H2'	2.15	0.61
31:EA:129:TRP:HZ2	38:LA:100:ILE:HD12	1.65	0.61
6:F:31:THR:HG22	6:F:121:GLY:O	2.00	0.61
59:GB:139:GLN:HE22	74:VB:63:GLN:HG3	1.64	0.61
34:HA:86:ARG:HD2	47:UA:44:LYS:HE2	1.83	0.61
60:HB:13:GLN:HA	60:HB:80:LEU:HD11	1.80	0.61
37:KA:51:TYR:HB2	37:KA:98:VAL:HA	1.81	0.61
12:L:128:LYS:HG3	12:L:129:PRO:HD2	1.83	0.61
17:Q:49:ARG:HH11	39:MA:115:LYS:HZ3	1.47	0.61
15:O:50:ALA:H	15:O:64:LYS:H	1.48	0.61
41:OA:55:ARG:HB2	41:OA:55:ARG:CZ	2.31	0.61
44:RA:103:LEU:HD12	44:RA:121:LEU:HD21	1.81	0.61
19:S:135:VAL:CG1	19:S:151:ILE:HG21	2.30	0.61
19:S:140:LYS:HB3	19:S:144:ARG:NE	2.16	0.61
73:UB:131:SER:O	73:UB:135:LEU:HG	2.00	0.61
22:V:23:ASN:OD1	22:V:26:LEU:HB3	1.99	0.61
1:A:1760:G:O2'	1:A:1761:U:H5'	1.99	0.61
1:A:415:C:C2'	1:A:416:A:H5''	2.31	0.61
1:A:918:U:H2'	1:A:919:A:O4'	2.00	0.61
2:B:1179:A:H5'	2:B:1328:C:H4'	1.83	0.61
2:B:1200:A:C5'	2:B:1201:C:H4'	2.30	0.61
2:B:3327:G:H2'	2:B:3328:G:C8	2.31	0.61
2:B:636:C:C4	2:B:2378:C:H1'	2.35	0.61
4:D:76:A:H3'	4:D:76:A:OP2	2.01	0.61
56:DB:135:PRO:CB	56:DB:141:ILE:HG12	2.30	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:120:VAL:HB	5:E:121:PRO:CD	2.28	0.61
58:FB:170:SER:H	58:FB:181:GLY:HA2	1.64	0.61
7:G:149:ALA:HA	7:G:152:LYS:CD	2.30	0.61
61:IB:67:ARG:HD3	61:IB:67:ARG:N	2.14	0.61
12:L:165:PHE:HZ	19:S:3:ALA:HB1	1.64	0.61
13:M:41:ILE:CG2	13:M:43:VAL:HG13	2.31	0.61
14:N:6:ALA:O	14:N:10:ARG:HB2	2.01	0.61
14:N:42:THR:CG2	14:N:45:GLU:HG3	2.25	0.61
66:NB:128:LYS:CB	66:NB:137:ARG:HH22	2.13	0.61
68:PB:75:ASN:HB3	68:PB:78:HIS:HD2	1.65	0.61
2:B:796:U:H5''	17:Q:4:SER:OG	2.00	0.61
17:Q:42:ARG:CG	17:Q:51:LEU:HD22	2.30	0.61
73:UB:93:LEU:HA	73:UB:96:VAL:HG22	1.83	0.61
50:XA:83:GLN:O	50:XA:86:VAL:HG22	2.00	0.61
25:Y:56:PHE:CE1	25:Y:78:LYS:HD2	2.35	0.61
78:ZB:10:ALA:HA	78:ZB:32:PHE:HA	1.83	0.61
1:A:1674:C:H2'	1:A:1675:C:C6	2.35	0.61
1:A:632:U:H2'	1:A:633:U:C6	2.35	0.61
1:A:707:A:H3'	1:A:708:C:H5''	1.82	0.61
1:A:760:A:H2'	1:A:761:G:O4'	2.01	0.61
1:A:74:U:H1'	1:A:76:A:OP2	2.00	0.61
1:A:877:G:H2'	1:A:878:G:H5'	1.83	0.61
2:B:1460:A:H2'	2:B:1461:A:C8	2.35	0.61
2:B:1532:C:H2'	2:B:1533:U:C6	2.36	0.61
2:B:1896:A:H2	27:AA:83:LYS:HD3	1.65	0.61
2:B:2393:G:O6	2:B:2982:A:H2'	2.01	0.61
2:B:2884:C:H2'	2:B:2885:C:C6	2.35	0.61
2:B:2987:A:H2'	2:B:2988:C:C6	2.36	0.61
2:B:3042:U:H2'	2:B:3043:C:C6	2.35	0.61
3:C:76:C:H2'	3:C:77:A:O4'	2.00	0.61
55:CB:51:VAL:HA	55:CB:131:GLN:OE1	2.00	0.61
82:DC:109:VAL:HG12	82:DC:110:ASP:H	1.65	0.61
31:EA:22:LYS:HD2	31:EA:130:PHE:HA	1.82	0.61
2:B:716:A:N7	32:FA:116:GLY:HA2	2.15	0.61
58:FB:159:GLN:HE22	58:FB:189:LEU:HD11	1.66	0.61
59:GB:130:THR:HA	59:GB:142:ASN:HB2	1.81	0.61
9:I:65:ILE:HG12	9:I:74:VAL:HG22	1.83	0.61
61:IB:27:THR:HG23	61:IB:30:ARG:H	1.65	0.61
11:K:86:VAL:CG2	11:K:136:TYR:HB3	2.28	0.61
11:K:92:ILE:HA	11:K:95:ILE:HD12	1.83	0.61
71:SB:36:VAL:HB	71:SB:51:VAL:HB	1.81	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:T:10:ASP:HA	20:T:36:VAL:HG22	1.82	0.61
73:UB:19:ARG:O	73:UB:23:ARG:HB2	2.00	0.61
22:V:179:ARG:HH21	22:V:182:LYS:HE3	1.65	0.61
49:WA:109:ASP:HB2	49:WA:127:ARG:NE	2.14	0.61
2:B:1063:G:N1	25:Y:109:VAL:HG13	2.15	0.61
77:YB:33:LEU:HD23	77:YB:81:ARG:HA	1.82	0.61
78:ZB:44:VAL:HG21	78:ZB:48:VAL:CG2	2.31	0.61
1:A:1583:A:H5'	66:NB:135:ARG:HH12	1.66	0.61
1:A:1592:A:H2'	1:A:1593:A:C8	2.35	0.61
1:A:460:A:H3'	1:A:461:G:H8	1.66	0.61
2:B:1578:C:H2'	2:B:1579:C:C2	2.35	0.61
2:B:1718:G:H2'	2:B:1719:G:O4'	2.00	0.61
2:B:1796:G:H4'	6:F:22:LEU:HD23	1.83	0.61
2:B:2250:G:H3'	2:B:2251:G:H8	1.65	0.61
2:B:2414:G:H2'	2:B:2415:C:O4'	2.01	0.61
2:B:2443:A:H2'	2:B:2444:C:O4'	2.01	0.61
2:B:2780:A:O2'	17:Q:181:GLY:HA3	2.00	0.61
2:B:353:G:N2	2:B:364:G:H2'	2.15	0.61
2:B:729:C:H2'	2:B:730:C:O4'	2.01	0.61
2:B:77:A:H2'	2:B:78:U:C6	2.35	0.61
2:B:852:U:C5	47:UA:2:ALA:HA	2.35	0.61
54:BB:150:PRO:HB2	54:BB:154:ILE:HD12	1.82	0.61
73:UB:90:ASP:OD2	80:BC:12:GLY:HA2	1.99	0.61
30:DA:48:LEU:HD23	30:DA:122:LYS:HD2	1.81	0.61
1:A:906:A:H5'	83:EC:6943:A:H61	1.65	0.61
22:V:174:ARG:HB2	32:FA:56:VAL:HG11	1.82	0.61
58:FB:3:ILE:HD12	58:FB:31:ARG:HA	1.82	0.61
59:GB:108:ARG:O	59:GB:111:THR:HG22	2.01	0.61
40:NA:60:LEU:O	40:NA:63:ASN:HB2	2.01	0.61
17:Q:4:SER:OG	17:Q:7:LEU:HD11	2.00	0.61
47:UA:82:THR:O	47:UA:86:LEU:HG	2.00	0.61
48:VA:106:ALA:HA	48:VA:182:THR:HG21	1.82	0.61
24:X:27:MET:HB2	24:X:41:TYR:HD2	1.65	0.61
1:A:740:A:H2'	1:A:741:C:H5''	1.82	0.61
1:A:753:A:H2'	1:A:754:A:O4'	2.00	0.61
1:A:78:A:H2'	1:A:79:C:C6	2.34	0.61
2:B:1311:G:H2'	2:B:1312:C:H6	1.66	0.61
2:B:1318:A:OP1	2:B:1318:A:H8	1.84	0.61
2:B:1774:C:H2'	2:B:1775:G:C4'	2.31	0.61
2:B:1932:A:H2	2:B:2124:G:H5''	1.66	0.61
2:B:2356:A:N6	2:B:2983:C:H5	1.99	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:30:G:H2'	2:B:31:C:O4'	2.00	0.61
2:B:3294:A:H2'	2:B:3295:A:O4'	2.00	0.61
2:B:359:U:H4'	2:B:817:A:N6	2.16	0.61
3:C:63:G:H1	3:C:97:A:H61	1.48	0.61
82:DC:314:LEU:HD22	82:DC:318:ALA:HB3	1.82	0.61
82:DC:515:ASP:O	82:DC:518:VAL:HG12	2.00	0.61
82:DC:619:MET:HA	82:DC:623:TYR:CD2	2.30	0.61
82:DC:747:LEU:CD1	82:DC:752:GLY:HA3	2.27	0.61
6:F:144:ASN:HB3	6:F:160:SER:H	1.65	0.61
6:F:22:LEU:HD13	6:F:52:SER:CB	2.31	0.61
58:FB:137:LYS:O	58:FB:141:ARG:HG3	2.00	0.61
58:FB:76:THR:HG22	58:FB:108:PRO:HD2	1.82	0.61
7:G:25:ILE:H	7:G:25:ILE:CD1	2.13	0.61
34:HA:44:ILE:HG21	34:HA:53:LYS:HG3	1.80	0.61
60:HB:85:HIS:HD2	60:HB:88:PRO:HD2	1.65	0.61
13:M:71:VAL:HG22	13:M:74:LEU:HD12	1.81	0.61
16:P:106:LEU:HB3	16:P:110:ILE:HD11	1.83	0.61
69:QB:47:PRO:HG2	69:QB:53:TRP:HB2	1.81	0.61
13:M:176:LEU:HD12	44:RA:78:ILE:HG21	1.82	0.61
2:B:2767:U:OP1	46:TA:37:ALA:HB2	2.00	0.61
2:B:1448:U:H4'	21:U:66:SER:HB2	1.82	0.61
2:B:1927:G:N7	47:UA:16:VAL:HG12	2.16	0.61
54:BB:54:TYR:HA	74:VB:22:GLN:OE1	2.01	0.61
24:X:91:TYR:CZ	24:X:136:LYS:HD3	2.36	0.61
24:X:24:LEU:HD22	25:Y:148:PRO:HG3	1.81	0.61
50:XA:62:ARG:HH21	71:SB:39:VAL:HG22	1.66	0.61
1:A:375:U:O2'	1:A:602:U:H4'	2.01	0.61
1:A:924:A:H2'	1:A:925:G:C8	2.35	0.61
2:B:2562:A:H2'	2:B:2563:G:O4'	2.00	0.61
2:B:2767:U:H2'	2:B:2768:U:C6	2.36	0.61
2:B:3270:U:C5	10:J:46:ARG:HD2	2.36	0.61
2:B:899:U:H2'	2:B:900:G:H8	1.66	0.61
54:BB:90:ILE:HD11	54:BB:101:LEU:HG	1.82	0.61
3:C:43:A:H2'	3:C:44:A:C8	2.36	0.61
82:DC:181:THR:O	82:DC:185:VAL:HG23	2.01	0.61
5:E:111:ILE:HG23	5:E:138:VAL:HG21	1.83	0.61
32:FA:148:ILE:HG22	32:FA:149:ALA:N	2.16	0.61
31:EA:77:TYR:HB3	34:HA:35:ARG:NE	2.16	0.61
9:I:56:THR:OG1	9:I:59:ASP:HB3	2.01	0.61
12:L:187:GLY:HA2	12:L:190:VAL:HG12	1.83	0.61
39:MA:23:ASP:O	39:MA:27:GLU:HG2	2.01	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:OB:41:ILE:HG21	67:OB:46:LEU:HB2	1.81	0.61
18:R:102:LYS:O	18:R:106:ARG:HG2	2.00	0.61
48:VA:11:TYR:HA	48:VA:14:LYS:CE	2.31	0.61
48:VA:30:VAL:HG21	48:VA:33:VAL:HB	1.82	0.61
48:VA:64:ARG:HD3	48:VA:67:LEU:HD13	1.83	0.61
1:A:301:A:H2'	1:A:302:U:C6	2.36	0.60
1:A:513:U:H2'	1:A:514:G:C8	2.36	0.60
1:A:834:G:H2'	1:A:835:U:C5	2.36	0.60
27:AA:18:PRO:HA	27:AA:51:ALA:CA	2.28	0.60
7:G:67:PHE:CD2	27:AA:88:ARG:HD3	2.35	0.60
2:B:1481:A:O2'	2:B:1858:A:H1'	2.00	0.60
2:B:208:C:O2'	2:B:209:A:H5'	2.00	0.60
2:B:2575:G:H2'	2:B:2576:G:C8	2.35	0.60
2:B:2612:U:H2'	2:B:2613:U:O4'	2.01	0.60
2:B:305:U:H2'	2:B:2776:C:O2'	2.00	0.60
2:B:3314:A:H2'	2:B:3315:G:C8	2.36	0.60
54:BB:47:PHE:O	54:BB:51:ARG:HB2	2.01	0.60
54:BB:9:LEU:HD13	54:BB:30:ARG:NH1	2.16	0.60
55:CB:62:VAL:HG13	55:CB:89:ILE:HD13	1.82	0.60
4:D:84:A:H2'	4:D:85:G:C8	2.35	0.60
30:DA:37:LYS:HD3	30:DA:37:LYS:H	1.65	0.60
31:EA:108:GLU:O	31:EA:112:LYS:HG3	2.01	0.60
2:B:3369:G:H2'	7:G:380:MET:CE	2.31	0.60
8:H:34:ILE:HG22	8:H:121:ALA:HB2	1.83	0.60
12:L:143:ILE:HG23	12:L:175:VAL:CG2	2.31	0.60
38:LA:44:CYS:HB3	38:LA:48:GLY:H	1.66	0.60
21:U:177:ALA:HA	21:U:180:LYS:HE2	1.83	0.60
73:UB:12:ALA:HA	73:UB:15:LEU:HD12	1.83	0.60
22:V:83:VAL:O	22:V:103:ALA:HA	2.00	0.60
49:WA:101:GLN:HG2	49:WA:138:GLY:HA3	1.81	0.60
1:A:1459:C:C4	68:PB:139:LYS:HG3	2.36	0.60
2:B:1130:A:H61	14:N:115:MET:HE1	1.65	0.60
2:B:1500:G:H2'	2:B:1501:U:O4'	2.00	0.60
2:B:1591:G:H2'	2:B:1592:G:C8	2.36	0.60
2:B:1711:C:H2'	2:B:1712:G:O4'	2.01	0.60
2:B:2279:A:H62	2:B:2286:U:H3	1.47	0.60
2:B:3275:U:H3'	2:B:3276:G:C5'	2.30	0.60
2:B:336:A:H1'	2:B:691:A:N6	2.16	0.60
2:B:956:U:H2'	2:B:957:C:C6	2.35	0.60
54:BB:127:LYS:HE3	54:BB:142:HIS:HA	1.82	0.60
6:F:6:ARG:O	6:F:10:LYS:HG3	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:43:LEU:HD22	7:G:194:TRP:HH2	1.66	0.60
10:J:108:LYS:NZ	10:J:108:LYS:HB3	2.16	0.60
2:B:362:U:H5'	41:OA:53:ALA:HB2	1.83	0.60
16:P:114:ARG:HE	16:P:132:ILE:HD11	1.66	0.60
17:Q:42:ARG:O	17:Q:46:ILE:HB	2.01	0.60
20:T:147:TRP:CH2	20:T:150:GLU:HA	2.36	0.60
73:UB:125:VAL:O	73:UB:132:LEU:HD23	2.01	0.60
22:V:64:VAL:HA	22:V:67:ILE:CD1	2.31	0.60
23:W:144:GLN:O	23:W:148:ASP:HB2	2.00	0.60
23:W:160:GLU:HA	23:W:163:ARG:HG2	1.83	0.60
50:XA:122:ILE:HA	50:XA:144:ILE:O	2.01	0.60
1:A:1163:A:H2'	1:A:1164:G:O4'	2.01	0.60
1:A:1591:C:H2'	1:A:1592:A:H8	1.65	0.60
27:AA:80:ARG:NH2	27:AA:95:PHE:HB3	2.09	0.60
2:B:1047:A:H1'	2:B:2634:U:H5'	1.83	0.60
2:B:1459:C:H5'	35:IA:33:VAL:CG2	2.30	0.60
2:B:1523:U:O2'	29:CA:111:ASN:HB3	2.02	0.60
2:B:1564:U:H3	2:B:1576:G:H1	1.50	0.60
2:B:2921:U:H2'	2:B:2923:U:H5''	1.83	0.60
2:B:3279:A:H2'	2:B:3280:U:C5'	2.31	0.60
2:B:616:G:H1'	2:B:3274:A:H61	1.67	0.60
54:BB:201:HIS:HB2	54:BB:206:ASP:HA	1.83	0.60
82:DC:77:LEU:CB	82:DC:100:ILE:HD12	2.31	0.60
82:DC:27:HIS:HD1	82:DC:28:VAL:HG12	1.66	0.60
6:F:56:ALA:HB1	6:F:170:ALA:O	2.01	0.60
6:F:5:ILE:HG21	6:F:210:PRO:HD2	1.83	0.60
7:G:160:VAL:HB	7:G:183:LEU:HD21	1.84	0.60
7:G:303:LYS:HZ1	7:G:371:GLN:HG3	1.66	0.60
60:HB:85:HIS:HA	60:HB:88:PRO:HG2	1.83	0.60
40:NA:38:LYS:HE3	40:NA:41:ARG:NH1	2.16	0.60
2:B:2741:C:H4'	46:TA:19:LYS:HA	1.83	0.60
21:U:24:VAL:O	21:U:143:PRO:HA	2.01	0.60
73:UB:108:GLY:C	73:UB:110:LYS:H	2.05	0.60
49:WA:240:VAL:HG11	49:WA:254:ALA:HB1	1.83	0.60
49:WA:85:TRP:HZ3	67:OB:29:GLN:HB3	1.66	0.60
52:ZA:63:VAL:HG23	52:ZA:134:LEU:HD12	1.83	0.60
52:ZA:86:VAL:O	52:ZA:97:ARG:HB2	2.01	0.60
2:B:1473:G:H2'	2:B:1474:A:O4'	2.02	0.60
2:B:1533:U:H2'	2:B:1534:A:H8	1.66	0.60
2:B:2592:G:H4'	2:B:2594:C:N3	2.15	0.60
2:B:965:A:H5'	32:FA:41:HIS:HE2	1.67	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BA:13:ILE:HD12	28:BA:32:GLN:HA	1.83	0.60
55:CB:63:GLN:C	55:CB:65:ARG:H	2.04	0.60
55:CB:97:LEU:CD1	55:CB:114:ILE:HD11	2.30	0.60
82:DC:634:TRP:HE1	82:DC:648:ASP:HB2	1.67	0.60
31:EA:46:ILE:HA	31:EA:70:PRO:HA	1.83	0.60
61:IB:57:LYS:HB3	61:IB:131:ILE:HG23	1.81	0.60
12:L:160:ILE:O	12:L:164:VAL:HG13	2.02	0.60
65:MB:34:VAL:HA	65:MB:37:ALA:CB	2.32	0.60
2:B:31:C:H5''	19:S:95:GLN:HB2	1.84	0.60
46:TA:43:TYR:HA	46:TA:55:LYS:HE3	1.81	0.60
73:UB:52:ILE:O	73:UB:74:VAL:HG13	2.01	0.60
1:A:1113:A:N6	1:A:1131:A:H5''	2.17	0.60
1:A:1290:U:H2'	1:A:1291:G:C8	2.36	0.60
1:A:487:G:H22	1:A:501:U:H1'	1.66	0.60
1:A:590:C:H2'	1:A:591:A:C8	2.37	0.60
1:A:626:U:H2'	1:A:627:C:C6	2.36	0.60
53:AB:37:VAL:HG12	53:AB:50:ILE:HA	1.82	0.60
2:B:994:G:H22	2:B:1053:A:H2'	1.67	0.60
2:B:1308:A:C2	2:B:1311:G:H4'	2.36	0.60
2:B:1642:A:H4'	38:LA:69:HIS:CE1	2.37	0.60
2:B:1794:G:C5'	6:F:188:LYS:HA	2.32	0.60
2:B:1840:U:C4	2:B:1850:A:H4'	2.37	0.60
2:B:220:G:O4'	8:H:187:LEU:HD11	2.00	0.60
2:B:2958:A:H2'	2:B:2959:C:C6	2.36	0.60
2:B:3029:A:H8	2:B:3029:A:O5'	1.83	0.60
2:B:585:A:H2'	2:B:586:C:C5	2.36	0.60
55:CB:93:LEU:O	55:CB:97:LEU:HG	2.02	0.60
82:DC:732:GLU:HA	82:DC:768:VAL:O	2.01	0.60
1:A:1637:C:H5'	83:EC:6905:G:O6	2.02	0.60
2:B:2915:U:OP1	7:G:9:PRO:HD3	2.01	0.60
8:H:116:ASN:HA	8:H:119:ARG:NH1	2.16	0.60
9:I:102:GLY:O	9:I:105:ILE:HG22	2.01	0.60
12:L:211:LEU:O	12:L:215:VAL:HG23	2.02	0.60
2:B:797:U:H5''	17:Q:2:ALA:N	2.15	0.60
17:Q:53:LEU:HD22	17:Q:94:GLY:HA2	1.83	0.60
19:S:116:LEU:HG	19:S:133:ILE:HG23	1.82	0.60
74:VB:12:VAL:HG22	74:VB:23:PHE:CB	2.32	0.60
74:VB:13:ILE:O	74:VB:22:GLN:HG2	2.00	0.60
24:X:38:LYS:HE2	24:X:58:ILE:HG21	1.83	0.60
52:ZA:241:ASP:HA	52:ZA:244:SER:HB2	1.83	0.60
1:A:1407:U:H2'	1:A:1408:G:C8	2.37	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:406:U:H2'	1:A:407:A:C8	2.36	0.60
1:A:626:U:H2'	1:A:627:C:H6	1.65	0.60
2:B:1193:A:H2'	2:B:1194:G:O4'	2.02	0.60
2:B:1311:G:H2'	2:B:1312:C:C6	2.37	0.60
2:B:2076:G:C2'	2:B:2077:U:H5''	2.32	0.60
2:B:2157:G:N2	2:B:2177:G:H1'	2.17	0.60
2:B:2244:A:H5''	6:F:243:THR:OG1	2.00	0.60
2:B:2762:A:O2'	2:B:2763:U:H5'	2.02	0.60
3:C:35:C:H2'	3:C:36:G:C8	2.36	0.60
82:DC:613:LYS:HD3	82:DC:614:ALA:N	2.17	0.60
7:G:336:VAL:HG12	7:G:337:THR:N	2.17	0.60
7:G:48:GLY:CA	7:G:338:LEU:HD21	2.31	0.60
2:B:750:G:H5'	33:GA:44:LYS:HG3	1.82	0.60
2:B:366:A:H5''	8:H:95:ARG:HH22	1.65	0.60
9:I:131:LEU:HD23	9:I:131:LEU:H	1.66	0.60
13:M:100:ASN:HD22	13:M:115:ARG:CG	2.15	0.60
13:M:47:LYS:HE2	18:R:5:SER:HB2	1.83	0.60
20:T:70:PRO:HB2	20:T:72:HIS:HE2	1.67	0.60
21:U:168:LEU:HD21	21:U:176:ILE:HD11	1.82	0.60
17:Q:8:PRO:N	22:V:164:ARG:HG2	2.16	0.60
2:B:1371:G:H2'	2:B:1372:C:C6	2.36	0.60
2:B:871:U:H1'	2:B:2324:A:H1'	1.84	0.60
2:B:2497:U:HO2'	2:B:2498:U:H6	1.48	0.60
2:B:2661:G:H2'	2:B:2662:G:C8	2.36	0.60
2:B:3311:C:H2'	2:B:3312:U:C5'	2.30	0.60
2:B:954:U:O5'	33:GA:8:THR:HB	2.02	0.60
28:BA:28:ILE:HG22	28:BA:30:ARG:HG3	1.82	0.60
28:BA:9:SER:HB2	28:BA:52:THR:HA	1.82	0.60
54:BB:129:VAL:HG12	54:BB:156:VAL:CG2	2.31	0.60
3:C:144:G:H2'	3:C:145:U:C6	2.36	0.60
3:C:37:A:H2	39:MA:86:ARG:NE	2.00	0.60
82:DC:501:LEU:CD2	82:DC:504:LEU:HD23	2.31	0.60
83:EC:6818:G:H2'	83:EC:6819:G:H8	1.65	0.60
83:EC:6824:C:H2'	83:EC:6825:A:C8	2.36	0.60
83:EC:6903:U:H3'	83:EC:6904:U:H5'	1.84	0.60
7:G:126:LYS:HB3	7:G:128:LYS:HG2	1.83	0.60
7:G:220:VAL:HA	7:G:274:SER:HA	1.84	0.60
8:H:76:ARG:NH1	8:H:76:ARG:HB2	2.16	0.60
34:HA:74:ASN:OD1	34:HA:86:ARG:HB2	2.01	0.60
12:L:228:GLU:C	12:L:230:LYS:H	2.05	0.60
13:M:100:ASN:HD22	13:M:115:ARG:HG2	1.66	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:N:39:LYS:HA	14:N:86:HIS:NE2	2.16	0.60
13:M:47:LYS:HB2	18:R:7:VAL:CG2	2.32	0.60
48:VA:112:GLY:H	48:VA:165:VAL:HB	1.67	0.60
48:VA:29:GLY:CA	48:VA:84:VAL:HG22	2.32	0.60
74:VB:87:PRO:HD2	74:VB:90:ARG:HD2	1.84	0.60
50:XA:102:PHE:HE2	50:XA:135:GLU:HG3	1.67	0.60
50:XA:148:ASP:HB2	50:XA:164:ASN:ND2	2.16	0.60
78:ZB:40:ILE:HD13	78:ZB:56:LEU:HD11	1.82	0.60
1:A:1087:A:H5'	1:A:1298:U:C4	2.36	0.60
2:B:1055:A:H2'	2:B:1056:U:O4'	2.01	0.60
2:B:2366:C:H2'	2:B:2367:A:H8	1.65	0.60
2:B:407:A:H61	3:C:15:G:H2'	1.66	0.60
2:B:524:U:H2'	2:B:525:C:H5'	1.84	0.60
3:C:43:A:OP2	41:OA:62:GLY:HA3	2.02	0.60
3:C:8:C:H2'	3:C:9:A:H8	1.65	0.60
82:DC:135:VAL:O	82:DC:135:VAL:HG23	2.01	0.60
5:E:152:ARG:NH1	5:E:178:VAL:HG11	2.17	0.60
58:FB:195:ARG:O	58:FB:199:LYS:HG2	2.02	0.60
7:G:227:GLU:HB3	7:G:232:ARG:HG3	1.82	0.60
7:G:292:ALA:HA	7:G:303:LYS:O	2.02	0.60
9:I:125:VAL:HG21	9:I:199:ILE:HG21	1.83	0.60
61:IB:72:THR:O	61:IB:88:ARG:HG2	2.02	0.60
12:L:95:ASN:O	12:L:98:ARG:HG3	2.00	0.60
65:MB:30:THR:OG1	65:MB:86:VAL:HG21	2.02	0.60
18:R:15:VAL:HG23	18:R:19:ARG:HG2	1.83	0.60
70:RB:50:LEU:HD11	70:RB:93:LEU:HD22	1.84	0.60
20:T:76:PRO:HG3	20:T:142:SER:OG	2.02	0.60
21:U:87:SER:O	21:U:91:VAL:HG23	2.01	0.60
48:VA:61:ARG:NH2	48:VA:77:LEU:HA	2.16	0.60
20:T:119:VAL:HG11	24:X:167:ARG:HA	1.84	0.60
50:XA:197:ILE:N	50:XA:197:ILE:HD13	2.16	0.60
50:XA:98:ILE:HD13	50:XA:102:PHE:HA	1.83	0.60
26:Z:34:ALA:HB1	26:Z:56:VAL:HG12	1.84	0.60
1:A:1217:A:H5''	60:HB:1:MET:HG3	1.82	0.60
2:B:175:C:H2'	2:B:176:G:C8	2.37	0.60
2:B:192:C:H2'	2:B:193:C:C6	2.36	0.60
2:B:2193:U:O2	2:B:2313:A:C8	2.55	0.60
2:B:2939:G:OP2	7:G:2:SER:HA	2.02	0.60
2:B:3094:A:H2'	2:B:3095:U:C6	2.37	0.60
2:B:3132:C:H2'	2:B:3133:C:C6	2.37	0.60
4:D:116:C:H1'	9:I:72:ASP:O	2.02	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2415:C:H5''	6:F:2:GLY:HA2	1.82	0.60
58:FB:189:LEU:O	58:FB:193:LEU:HB2	2.00	0.60
8:H:269:SER:HG	8:H:274:TYR:HD1	1.48	0.60
34:HA:23:TYR:HA	34:HA:92:ILE:HA	1.82	0.60
60:HB:86:ILE:HG23	60:HB:87:VAL:HG12	1.84	0.60
61:IB:110:HIS:CD2	61:IB:131:ILE:HG21	2.36	0.60
2:B:1410:U:O3'	36:JA:75:LEU:HD11	2.02	0.60
11:K:144:ILE:HA	11:K:147:LEU:HD12	1.83	0.60
17:Q:122:LYS:HG3	17:Q:145:PHE:HZ	1.66	0.60
43:QA:24:PRO:HB2	43:QA:27:ILE:CD1	2.28	0.60
18:R:109:ARG:O	18:R:112:LEU:HD12	2.02	0.60
19:S:116:LEU:HD23	19:S:133:ILE:HG13	1.83	0.60
19:S:14:LYS:HA	19:S:19:LEU:HD23	1.82	0.60
20:T:22:VAL:O	20:T:25:LYS:HB2	2.01	0.60
21:U:126:ARG:HB2	21:U:126:ARG:HH21	1.67	0.60
22:V:44:PHE:O	22:V:48:VAL:HG23	2.02	0.60
48:VA:65:GLY:HA2	48:VA:73:PHE:CD2	2.36	0.60
74:VB:29:HIS:HB2	74:VB:32:ARG:HB3	1.83	0.60
50:XA:139:VAL:HG23	52:ZA:62:PRO:HG3	1.83	0.60
11:K:80:GLN:HB2	25:Y:136:ARG:O	2.02	0.60
1:A:1081:A:H2'	1:A:1083:G:N7	2.17	0.60
2:B:1701:C:H2'	2:B:1702:U:O4'	2.01	0.60
2:B:1830:G:H22	3:C:114:G:C5'	2.08	0.60
2:B:2541:U:H1'	2:B:2542:U:O5'	2.01	0.60
2:B:254:A:H2'	2:B:255:A:H8	1.65	0.60
2:B:2922:G:H2'	2:B:2923:U:C4'	2.26	0.60
2:B:3010:U:H5''	7:G:14:LEU:CD1	2.31	0.60
2:B:3084:C:H2'	2:B:3085:G:H5'	1.83	0.60
2:B:3303:G:H1'	2:B:3304:U:C6	2.36	0.60
2:B:3312:U:H4'	7:G:25:ILE:HG21	1.84	0.60
2:B:841:A:H2'	2:B:842:G:O4'	2.02	0.60
30:DA:109:LEU:HD22	30:DA:115:ARG:NH2	2.16	0.60
56:DB:162:VAL:HG12	56:DB:169:TYR:O	2.01	0.60
56:DB:194:LYS:O	56:DB:198:ALA:HB2	2.02	0.60
82:DC:117:ALA:O	82:DC:121:VAL:HG22	2.02	0.60
8:H:246:ARG:HG3	8:H:248:VAL:HG23	1.84	0.60
10:J:30:LEU:HD21	10:J:57:HIS:CE1	2.37	0.60
2:B:2853:A:C5'	14:N:3:ARG:HH21	2.08	0.60
1:A:1583:A:C5'	66:NB:135:ARG:HH22	2.15	0.60
2:B:2139:A:N6	41:OA:3:LYS:HB2	2.17	0.60
2:B:58:G:C5'	19:S:154:PRO:HB2	2.32	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:T:15:LEU:HG	20:T:123:ALA:O	2.02	0.60
6:F:84:THR:HG23	47:UA:63:THR:O	2.02	0.60
22:V:88:THR:HA	22:V:110:ALA:HB2	1.84	0.60
48:VA:115:ALA:O	48:VA:162:GLY:HA2	2.01	0.60
52:ZA:129:ILE:O	52:ZA:133:LYS:HG2	2.01	0.60
1:A:17:C:H2'	1:A:18:C:H6	1.66	0.59
1:A:55:A:N1	1:A:403:G:H1'	2.17	0.59
1:A:828:U:H2'	1:A:829:A:H5''	1.84	0.59
2:B:2356:A:N6	2:B:2983:C:C5	2.70	0.59
2:B:2796:G:H2'	46:TA:62:ALA:HB1	1.82	0.59
2:B:34:A:H2'	2:B:35:A:C8	2.37	0.59
2:B:790:U:H2'	2:B:791:A:C8	2.37	0.59
2:B:818:C:H2'	2:B:819:U:C6	2.37	0.59
54:BB:192:ILE:HD13	54:BB:238:LEU:HD22	1.84	0.59
1:A:162:A:H5'	56:DB:83:CYS:HA	1.83	0.59
82:DC:129:VAL:HG23	82:DC:157:ILE:HG12	1.82	0.59
82:DC:155:VAL:HG12	82:DC:209:VAL:HG13	1.84	0.59
82:DC:489:VAL:HG11	82:DC:538:LEU:HD22	1.83	0.59
57:EB:8:ILE:CD1	57:EB:42:GLN:HA	2.27	0.59
83:EC:6777:C:H41	83:EC:6813:A:H5''	1.67	0.59
2:B:93:C:C2	32:FA:55:LYS:HE2	2.36	0.59
7:G:144:ILE:H	7:G:144:ILE:CD1	2.14	0.59
2:B:3321:C:OP1	7:G:174:LYS:HE2	2.01	0.59
7:G:4:ARG:O	7:G:5:LYS:HB3	2.02	0.59
59:GB:171:ARG:HH11	59:GB:174:ARG:HB2	1.66	0.59
10:J:158:TYR:CE1	18:R:115:PHE:HA	2.36	0.59
36:JA:2:ALA:O	36:JA:90:LYS:HA	2.02	0.59
11:K:160:ARG:HH22	11:K:206:LYS:HD3	1.65	0.59
37:KA:24:ASN:ND2	37:KA:27:VAL:H	1.99	0.59
12:L:242:ALA:O	12:L:246:MET:HB2	2.01	0.59
15:O:114:ILE:HG22	15:O:115:LYS:H	1.67	0.59
68:PB:45:LEU:HD21	68:PB:81:ILE:HD13	1.84	0.59
17:Q:67:ARG:HG2	32:FA:105:LEU:O	2.02	0.59
18:R:19:ARG:HD3	18:R:20:VAL:H	1.65	0.59
19:S:31:ARG:HA	19:S:65:ARG:NH1	2.17	0.59
52:ZA:229:LEU:HD21	71:SB:14:PRO:HG2	1.84	0.59
20:T:61:ALA:HA	20:T:70:PRO:CG	2.32	0.59
22:V:179:ARG:NH2	22:V:182:LYS:HE3	2.17	0.59
75:WB:100:ILE:HD13	75:WB:101:TYR:N	2.17	0.59
52:ZA:69:ILE:HG22	52:ZA:72:LEU:HD23	1.84	0.59
1:A:1553:G:N2	1:A:1555:A:H3'	2.17	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1058:U:H2'	2:B:1059:G:H8	1.67	0.59
2:B:1566:A:H2'	2:B:1567:U:H5''	1.84	0.59
2:B:3174:A:H3'	2:B:3175:U:C6	2.37	0.59
2:B:3312:U:C3'	2:B:3313:U:H5''	2.31	0.59
2:B:665:A:H2'	2:B:666:A:C8	2.37	0.59
2:B:726:G:N2	2:B:744:A:H62	2.00	0.59
2:B:6:A:H2'	2:B:7:C:C6	2.37	0.59
2:B:903:U:H2'	2:B:904:A:C8	2.38	0.59
82:DC:75:ILE:HD12	82:DC:75:ILE:H	1.67	0.59
6:F:45:VAL:HG13	6:F:85:GLY:H	1.67	0.59
32:FA:111:LYS:CE	32:FA:113:LEU:HD21	2.32	0.59
2:B:3146:G:H4'	7:G:100:ARG:NH1	2.17	0.59
8:H:158:SER:HA	8:H:213:ASN:CB	2.31	0.59
8:H:359:LEU:HD21	24:X:64:ILE:HA	1.83	0.59
61:IB:33:ARG:HG2	61:IB:49:ILE:O	2.01	0.59
10:J:31:ARG:HG3	10:J:34:LEU:HB2	1.85	0.59
2:B:1433:A:O4'	36:JA:27:ARG:HD2	2.01	0.59
1:A:959:U:H6	63:KB:61:THR:HB	1.66	0.59
19:S:15:GLN:HG2	40:NA:52:PRO:HD2	1.84	0.59
73:UB:102:VAL:HG12	73:UB:127:VAL:HG12	1.85	0.59
22:V:40:THR:O	22:V:41:ASP:HB3	2.01	0.59
48:VA:119:ILE:HB	48:VA:159:VAL:HG12	1.83	0.59
48:VA:39:HIS:CE1	48:VA:40:GLU:HG3	2.37	0.59
1:A:153:G:C8	74:VB:128:LYS:HD3	2.37	0.59
24:X:4:PHE:H	24:X:100:VAL:HG21	1.66	0.59
2:B:1757:A:H5''	26:Z:94:ARG:HH22	1.67	0.59
1:A:1104:U:H2'	1:A:1105:C:C6	2.37	0.59
1:A:1144:U:H2'	1:A:1145:U:H6	1.67	0.59
1:A:744:U:H2'	1:A:745:U:O4'	2.02	0.59
27:AA:85:TRP:CZ2	27:AA:93:LEU:HG	2.38	0.59
2:B:2407:C:H1'	2:B:2818:U:O2	2.00	0.59
2:B:2656:A:H4'	46:TA:98:LYS:CE	2.31	0.59
2:B:1304:A:N6	2:B:2860:U:H5''	2.17	0.59
2:B:3288:G:O2'	2:B:3289:G:H8	1.85	0.59
2:B:3302:U:H2'	2:B:3303:G:H8	1.66	0.59
2:B:932:U:H4'	2:B:934:G:H5'	1.84	0.59
30:DA:115:ARG:NH1	30:DA:115:ARG:HB3	2.14	0.59
82:DC:352:ARG:NH2	82:DC:356:LEU:HD21	2.17	0.59
82:DC:635:CYS:SG	82:DC:664:VAL:HG13	2.41	0.59
83:EC:6906:G:O2'	83:EC:6907:G:H5'	2.02	0.59
83:EC:6910:A:O5'	83:EC:6910:A:H8	1.85	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:Q:6:ASN:HB2	32:FA:48:TYR:CD1	2.37	0.59
58:FB:64:ASN:HA	58:FB:75:LYS:HA	1.84	0.59
7:G:89:VAL:HG23	7:G:159:ARG:O	2.02	0.59
7:G:367:LYS:HA	28:BA:17:ARG:NH2	2.17	0.59
59:GB:110:GLN:NE2	59:GB:125:ALA:HB3	2.12	0.59
10:J:39:VAL:HB	10:J:87:THR:OG1	2.02	0.59
2:B:120:G:H5'	12:L:129:PRO:CG	2.32	0.59
13:M:41:ILE:HD11	13:M:67:ALA:HB1	1.82	0.59
41:OA:18:LEU:HD11	43:QA:9:ILE:HG12	1.85	0.59
67:OB:21:TYR:H	67:OB:22:PRO:HD2	1.66	0.59
18:R:19:ARG:HB3	18:R:35:ILE:HD13	1.85	0.59
70:RB:26:LEU:HB2	70:RB:89:ARG:HB2	1.84	0.59
2:B:43:A:H5''	19:S:83:LYS:HG2	1.84	0.59
48:VA:120:TRP:HB2	48:VA:157:LYS:NZ	2.17	0.59
54:BB:95:THR:HA	74:VB:16:PRO:HG2	1.84	0.59
52:ZA:125:ILE:O	52:ZA:129:ILE:HG13	2.01	0.59
1:A:1116:A:O2'	1:A:1117:U:H5'	2.02	0.59
1:A:11:A:H2'	1:A:12:U:H5'	1.84	0.59
1:A:1299:G:H2'	1:A:1300:A:C8	2.37	0.59
1:A:966:A:H2'	1:A:967:A:C8	2.36	0.59
27:AA:27:ASP:HB3	27:AA:101:VAL:HG12	1.85	0.59
2:B:1238:C:H2'	2:B:1239:C:O4'	2.02	0.59
2:B:1304:A:C2'	2:B:2939:G:H1'	2.28	0.59
2:B:1451:C:H2'	2:B:1880:U:H5	1.67	0.59
2:B:230:U:H2'	2:B:231:G:C8	2.37	0.59
2:B:340:C:H2'	2:B:341:G:O4'	2.02	0.59
2:B:389:A:H2'	2:B:390:G:O4'	2.02	0.59
2:B:741:U:H4'	22:V:74:GLU:CG	2.32	0.59
2:B:917:A:H2'	2:B:918:C:C6	2.38	0.59
1:A:448:C:H4'	54:BB:28:ALA:C	2.23	0.59
2:B:349:A:H2	3:C:22:U:HO2'	1.50	0.59
82:DC:218:TRP:HZ3	82:DC:220:PHE:HD2	1.50	0.59
5:E:100:ILE:HG13	5:E:128:LEU:HB2	1.84	0.59
31:EA:26:VAL:HG12	31:EA:89:VAL:CG2	2.33	0.59
83:EC:6938:A:H2'	83:EC:6939:C:H5'	1.83	0.59
8:H:263:GLY:O	8:H:276:LEU:HD23	2.03	0.59
39:MA:9:LEU:HD13	39:MA:17:LEU:HD22	1.84	0.59
73:UB:52:ILE:C	73:UB:74:VAL:HG13	2.23	0.59
24:X:77:VAL:HB	24:X:92:LYS:O	2.01	0.59
50:XA:17:LEU:HA	50:XA:172:LEU:HD21	1.84	0.59
50:XA:189:VAL:HG13	50:XA:190:ASP:N	2.15	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:Z:41:ILE:HG23	26:Z:75:TYR:OH	2.01	0.59
1:A:1291:G:H1	1:A:1324:G:N2	1.92	0.59
1:A:478:A:H5'	59:GB:127:VAL:CG2	2.24	0.59
2:B:1458:U:H5'	35:IA:30:PRO:HB3	1.84	0.59
2:B:1662:G:H22	2:B:1787:A:H2	1.50	0.59
2:B:1899:G:H1	2:B:2335:G:H5'	1.66	0.59
2:B:2203:U:H5'	6:F:239:ALA:HA	1.83	0.59
2:B:2331:C:O2'	2:B:2332:A:H5'	2.02	0.59
2:B:3025:C:OP1	13:M:96:HIS:HB2	2.03	0.59
2:B:3275:U:H3'	2:B:3276:G:H5''	1.83	0.59
2:B:884:A:H4'	2:B:885:U:H5'	1.84	0.59
54:BB:34:GLY:HA3	54:BB:83:PRO:HG3	1.83	0.59
3:C:11:C:H2'	3:C:12:A:C8	2.38	0.59
3:C:27:U:H4'	8:H:51:ALA:HB3	1.83	0.59
56:DB:77:LEU:HD23	56:DB:77:LEU:H	1.67	0.59
82:DC:164:LEU:HA	82:DC:168:GLN:HA	1.84	0.59
82:DC:568:GLU:O	82:DC:569:SER:HB3	2.02	0.59
82:DC:629:ASP:HB3	82:DC:647:ILE:CG2	2.32	0.59
82:DC:727:PRO:HB2	82:DC:774:VAL:HG11	1.84	0.59
5:E:65:ILE:HG23	5:E:109:ALA:HB3	1.83	0.59
6:F:104:LEU:HD11	6:F:164:GLY:HA3	1.84	0.59
58:FB:152:ILE:HG22	58:FB:153:GLU:H	1.67	0.59
7:G:144:ILE:HD12	7:G:144:ILE:N	2.15	0.59
9:I:200:PHE:HB3	9:I:237:GLU:HG3	1.83	0.59
10:J:91:VAL:HG21	10:J:145:LEU:HD11	1.82	0.59
36:JA:103:LYS:HG3	36:JA:104:ASN:N	2.17	0.59
11:K:154:GLY:O	11:K:160:ARG:HA	2.03	0.59
37:KA:59:VAL:CG2	37:KA:60:ARG:H	2.08	0.59
2:B:901:G:H5''	41:OA:13:ASN:ND2	2.18	0.59
17:Q:57:VAL:H	17:Q:112:ASN:HD21	1.50	0.59
19:S:12:ARG:HD2	19:S:13:LYS:NZ	2.18	0.59
20:T:185:ALA:O	20:T:191:ALA:HB2	2.02	0.59
21:U:24:VAL:CG1	21:U:87:SER:HA	2.31	0.59
48:VA:130:PRO:HA	48:VA:150:ILE:HD11	1.84	0.59
23:W:172:ARG:O	23:W:176:ARG:HG2	2.01	0.59
24:X:94:ILE:HG21	24:X:105:THR:HB	1.85	0.59
78:ZB:28:VAL:HG21	78:ZB:48:VAL:HG21	1.84	0.59
1:A:1650:U:H2'	1:A:1651:A:H8	1.66	0.59
53:AB:95:GLY:HA3	53:AB:129:SER:CB	2.32	0.59
53:AB:135:GLU:HA	53:AB:152:PHE:O	2.01	0.59
2:B:1133:A:H2'	2:B:1134:G:H5'	1.85	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:10:C:H2'	2:B:11:A:H4'	1.84	0.59
2:B:1470:U:H2'	2:B:1471:U:H6	1.67	0.59
2:B:1851:G:H2'	2:B:1852:G:O4'	2.03	0.59
2:B:3037:U:H2'	2:B:3038:U:C6	2.37	0.59
2:B:3187:A:H3'	18:R:8:LYS:HE3	1.85	0.59
2:B:80:G:H4'	2:B:326:U:O2'	2.01	0.59
3:C:56:G:H2'	3:C:57:C:C6	2.38	0.59
82:DC:222:ILE:N	82:DC:222:ILE:HD13	2.16	0.59
82:DC:357:TYR:HA	82:DC:478:MET:HA	1.84	0.59
82:DC:718:LEU:HA	82:DC:722:PRO:HG3	1.85	0.59
5:E:194:LEU:HD23	5:E:195:LYS:N	2.17	0.59
57:EB:30:SER:C	57:EB:32:PRO:HD2	2.23	0.59
6:F:82:VAL:N	47:UA:65:ALA:HB3	2.18	0.59
2:B:3305:A:H5'	7:G:334:ARG:HH22	1.66	0.59
9:I:152:ARG:HG3	9:I:154:THR:HG23	1.85	0.59
9:I:155:THR:HG22	9:I:179:ARG:HH11	1.67	0.59
10:J:52:VAL:HB	10:J:66:SER:O	2.03	0.59
36:JA:63:THR:HA	36:JA:66:LEU:HD12	1.84	0.59
42:PA:28:ASN:ND2	42:PA:40:GLN:HB3	2.17	0.59
68:PB:115:ARG:O	68:PB:119:ILE:HD13	2.03	0.59
17:Q:168:ARG:HA	17:Q:171:ARG:HB2	1.83	0.59
19:S:136:ASP:HB3	19:S:142:ILE:CD1	2.31	0.59
72:TB:14:ILE:HD11	72:TB:27:ILE:HD13	1.84	0.59
48:VA:27:VAL:CG1	48:VA:84:VAL:HG11	2.33	0.59
2:B:1818:U:H2'	2:B:1819:U:C5'	2.22	0.59
2:B:2116:G:N2	2:B:3064:U:H5'	2.18	0.59
2:B:2853:A:H5'	14:N:3:ARG:NH2	2.10	0.59
2:B:3085:G:OP1	28:BA:34:SER:HB2	2.03	0.59
2:B:3108:G:H5''	44:RA:102:ARG:NH2	2.17	0.59
2:B:8:C:H1'	3:C:152:G:N2	2.18	0.59
55:CB:70:VAL:HG22	66:NB:47:LYS:HD3	1.84	0.59
56:DB:109:LEU:HD22	56:DB:111:LEU:HG	1.84	0.59
1:A:1722:A:H4'	56:DB:75:LEU:HD13	1.85	0.59
5:E:9:VAL:HG11	5:E:180:VAL:HG13	1.85	0.59
2:B:1114:U:H5''	32:FA:22:ILE:HB	1.83	0.59
7:G:58:ARG:HG3	7:G:72:VAL:HG23	1.84	0.59
8:H:23:PRO:HG3	8:H:258:LEU:CD2	2.33	0.59
34:HA:54:SER:OG	38:LA:94:LEU:HD21	2.02	0.59
2:B:1883:A:OP1	35:IA:34:LYS:HD3	2.03	0.59
12:L:24:ASN:N	12:L:25:PRO:HD2	2.17	0.59
39:MA:85:THR:O	39:MA:89:ARG:HB2	2.03	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:CB:70:VAL:CG2	66:NB:47:LYS:HD3	2.32	0.59
44:RA:115:CYS:SG	44:RA:118:THR:HG22	2.43	0.59
2:B:3006:A:OP1	20:T:148:LYS:HD2	2.02	0.59
2:B:2795:U:OP2	46:TA:63:LYS:HG2	2.02	0.59
73:UB:87:VAL:HA	73:UB:124:VAL:HG23	1.83	0.59
1:A:1569:A:H2'	1:A:1570:A:C8	2.38	0.59
53:AB:158:ILE:HG13	53:AB:163:PRO:HB2	1.85	0.59
53:AB:32:GLU:HA	53:AB:54:ARG:HB2	1.84	0.59
2:B:159:A:H61	2:B:262:U:H3	1.50	0.59
2:B:1774:C:H2'	2:B:1775:G:O4'	2.03	0.59
2:B:2127:U:H1'	2:B:2301:U:OP1	2.03	0.59
2:B:2407:C:H2'	2:B:2408:U:C6	2.38	0.59
2:B:3035:A:C4	13:M:121:LYS:HB3	2.38	0.59
3:C:26:U:H2'	3:C:27:U:H6	1.68	0.59
4:D:58:C:H5''	9:I:25:GLU:HG3	1.84	0.59
82:DC:662:SER:HB3	82:DC:705:ILE:HB	1.85	0.59
31:EA:84:ARG:HD2	31:EA:85:TYR:N	2.17	0.59
60:HB:43:ILE:O	60:HB:47:GLN:HB2	2.02	0.59
10:J:51:ARG:NH2	10:J:163:PHE:HB2	2.17	0.59
2:B:1362:G:H4'	11:K:160:ARG:N	2.18	0.59
46:TA:23:HIS:HB3	46:TA:72:LEU:HB3	1.84	0.59
46:TA:24:LYS:O	46:TA:72:LEU:HA	2.03	0.59
8:H:33:ASP:HB2	22:V:22:ASP:HB2	1.84	0.59
74:VB:15:ASN:HB3	74:VB:18:LEU:HB2	1.84	0.59
2:B:1067:U:H5''	25:Y:106:LEU:HD11	1.84	0.59
1:A:686:C:H2'	1:A:687:G:C8	2.37	0.59
27:AA:101:VAL:HB	27:AA:109:MET:CE	2.33	0.59
27:AA:79:VAL:HG12	27:AA:122:CYS:SG	2.43	0.59
2:B:1007:U:H2'	2:B:1008:U:C6	2.37	0.59
2:B:1107:C:H2'	2:B:1108:U:C6	2.38	0.59
2:B:117:U:H1'	2:B:119:U:OP2	2.02	0.59
2:B:1752:A:H2'	2:B:1753:G:C8	2.38	0.59
2:B:255:A:H2'	2:B:256:G:C8	2.38	0.59
2:B:3192:U:H2'	2:B:3193:C:C6	2.37	0.59
2:B:7:C:H2'	2:B:8:C:C6	2.34	0.59
54:BB:169:ILE:HD12	54:BB:169:ILE:H	1.67	0.59
73:UB:56:LYS:O	80:BC:8:LEU:HD11	2.03	0.59
82:DC:320:LEU:O	82:DC:324:MET:HG2	2.03	0.59
58:FB:151:LYS:HD3	58:FB:151:LYS:O	2.02	0.59
7:G:82:PRO:HB2	7:G:168:LYS:HG3	1.83	0.59
34:HA:77:LEU:HD23	34:HA:88:GLY:CA	2.30	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:L:92:LYS:NZ	12:L:92:LYS:HB3	2.17	0.59
40:NA:37:THR:O	40:NA:41:ARG:HB2	2.02	0.59
17:Q:157:ARG:NH2	32:FA:101:VAL:HG13	2.18	0.59
50:XA:155:PHE:CE2	71:SB:61:SER:HB3	2.38	0.59
47:UA:56:THR:HA	47:UA:63:THR:HA	1.84	0.59
73:UB:114:LYS:N	73:UB:117:ILE:HD11	2.17	0.59
22:V:54:LEU:HD13	22:V:58:ASN:HB3	1.85	0.59
49:WA:109:ASP:O	49:WA:127:ARG:HG3	2.02	0.59
75:WB:93:SER:OG	75:WB:99:ALA:HA	2.02	0.59
24:X:26:ARG:NH2	24:X:64:ILE:HD11	2.16	0.59
77:YB:51:GLN:O	77:YB:66:PRO:HB3	2.02	0.59
52:ZA:179:VAL:HB	52:ZA:196:VAL:O	2.03	0.59
1:A:1735:U:H2'	1:A:1736:G:C8	2.37	0.59
1:A:36:C:H2'	1:A:37:U:C6	2.38	0.59
2:B:1127:G:P	14:N:98:ARG:HE	2.26	0.59
2:B:1173:U:H2'	2:B:1180:A:N7	2.17	0.59
2:B:1591:G:O2'	2:B:1592:G:H5'	2.03	0.59
2:B:1919:G:C2'	2:B:1933:A:H61	2.16	0.59
2:B:2477:G:H5''	2:B:2478:C:C5	2.38	0.59
29:CA:142:ILE:HD13	29:CA:142:ILE:OXT	2.02	0.59
4:D:85:G:H1	4:D:95:A:H61	1.50	0.59
30:DA:48:LEU:HD22	30:DA:118:LEU:HG	1.85	0.59
2:B:2202:C:H5''	6:F:226:SER:N	2.18	0.59
7:G:51:ALA:HA	7:G:314:TYR:CD2	2.38	0.59
59:GB:77:ILE:HG21	59:GB:91:LYS:HG3	1.85	0.59
8:H:58:HIS:HA	8:H:90:PHE:CE1	2.38	0.59
35:IA:30:PRO:O	35:IA:33:VAL:HG12	2.03	0.59
61:IB:45:PRO:HD2	61:IB:60:PHE:CE2	2.38	0.59
10:J:40:LEU:HD11	10:J:65:ILE:HG21	1.84	0.59
2:B:594:U:H4'	11:K:30:ARG:HH12	1.66	0.59
12:L:148:ALA:HA	12:L:201:THR:CG2	2.32	0.59
14:N:52:LEU:HD12	14:N:152:LEU:HD22	1.85	0.59
17:Q:57:VAL:HG13	17:Q:147:ILE:HG21	1.84	0.59
46:TA:8:ARG:HD3	46:TA:10:THR:OG1	2.03	0.59
72:TB:11:LEU:HD12	72:TB:74:VAL:HB	1.84	0.59
72:TB:104:LEU:HB2	72:TB:124:LYS:O	2.02	0.59
1:A:1036:A:C5'	72:TB:3:ARG:HH22	2.15	0.59
22:V:88:THR:HA	22:V:107:THR:HG23	1.85	0.59
2:B:1282:G:H4'	48:VA:82:GLY:CA	2.33	0.59
23:W:14:VAL:CG2	23:W:42:ARG:HG3	2.33	0.59
52:ZA:147:ASN:HB3	71:SB:3:ASN:HA	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:130:C:H4'	1:A:176:C:H5'	1.85	0.58
2:B:1319:G:H2'	2:B:1320:C:C6	2.38	0.58
2:B:1426:C:H3'	32:FA:4:ARG:HH12	1.67	0.58
2:B:1504:A:H5''	21:U:23:ARG:NH1	2.18	0.58
2:B:1831:U:H2'	2:B:1832:C:C6	2.37	0.58
2:B:1898:G:H1'	27:AA:18:PRO:CD	2.31	0.58
2:B:2117:A:H2'	2:B:2118:C:O4'	2.03	0.58
2:B:2143:A:O2'	2:B:2144:A:H2'	2.03	0.58
2:B:2536:A:H3'	2:B:2537:U:C5'	2.32	0.58
2:B:965:A:H2'	2:B:966:U:C6	2.38	0.58
54:BB:31:PRO:HB2	54:BB:38:LEU:CD2	2.31	0.58
54:BB:44:LEU:HG	54:BB:82:TYR:HB3	1.85	0.58
55:CB:172:ILE:O	55:CB:176:THR:HG23	2.02	0.58
82:DC:110:ASP:HB3	82:DC:537:HIS:HB2	1.83	0.58
5:E:87:VAL:HG21	5:E:116:LEU:HD13	1.83	0.58
2:B:1651:U:C5'	6:F:71:LEU:HB2	2.31	0.58
7:G:221:THR:HB	7:G:273:HIS:HB2	1.83	0.58
7:G:48:GLY:N	7:G:338:LEU:HD21	2.18	0.58
2:B:1380:G:H4'	8:H:195:ARG:HH22	1.68	0.58
34:HA:52:ARG:O	34:HA:56:LEU:HG	2.03	0.58
10:J:20:LYS:HD2	10:J:22:ARG:HG3	1.85	0.58
37:KA:91:ALA:HA	37:KA:94:PHE:CZ	2.38	0.58
31:EA:81:LEU:HD13	38:LA:93:PHE:HD2	1.68	0.58
66:NB:109:PHE:CD2	66:NB:117:LEU:HD21	2.38	0.58
19:S:99:ARG:HH22	19:S:166:ALA:HB3	1.67	0.58
20:T:62:THR:HG22	20:T:65:ASN:H	1.68	0.58
22:V:30:VAL:HG13	22:V:49:LEU:CD2	2.26	0.58
49:WA:193:ILE:HG22	49:WA:194:GLY:H	1.68	0.58
52:ZA:67:GLN:HA	52:ZA:70:ASP:HB2	1.84	0.58
1:A:1316:G:H2'	1:A:1317:C:C6	2.38	0.58
1:A:1485:C:N3	1:A:1592:A:H1'	2.19	0.58
1:A:1580:C:H4'	66:NB:137:ARG:HB3	1.84	0.58
1:A:401:A:C2'	1:A:402:C:H4'	2.33	0.58
2:B:953:G:O2'	2:B:1115:G:H4'	2.03	0.58
2:B:1186:G:H2'	2:B:1187:C:C6	2.38	0.58
2:B:1348:U:H4'	2:B:1349:G:H5''	1.85	0.58
2:B:1822:C:H2'	2:B:1823:A:C8	2.39	0.58
2:B:1128:U:H3	2:B:2863:G:N2	2.01	0.58
2:B:2948:C:H2'	2:B:2949:U:C6	2.38	0.58
3:C:57:C:H4'	3:C:63:G:C8	2.37	0.58
2:B:1399:A:C2	3:C:8:C:H4'	2.38	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:DB:175:ILE:HG22	56:DB:178:LEU:HB2	1.83	0.58
5:E:125:GLY:HA2	5:E:129:SER:HB2	1.85	0.58
6:F:20:THR:O	6:F:21:ARG:HB3	2.02	0.58
2:B:2201:G:H21	6:F:224:THR:HG21	1.69	0.58
7:G:347:SER:O	7:G:348:ARG:HB2	2.03	0.58
10:J:132:ALA:HA	10:J:135:VAL:HB	1.84	0.58
10:J:76:LEU:HD12	10:J:134:ARG:CG	2.33	0.58
37:KA:50:ALA:HB2	37:KA:68:TRP:CE3	2.38	0.58
6:F:39:GLY:HA3	12:L:36:ILE:HG21	1.85	0.58
39:MA:25:LYS:HE3	39:MA:51:ILE:CD1	2.29	0.58
3:C:34:U:H5'	41:OA:78:PHE:CZ	2.38	0.58
49:WA:85:TRP:CZ3	67:OB:29:GLN:HB3	2.37	0.58
70:RB:20:ILE:HD12	70:RB:21:LYS:N	2.17	0.58
20:T:142:SER:HA	20:T:145:VAL:CG2	2.34	0.58
72:TB:97:ARG:HB2	72:TB:97:ARG:NH1	2.17	0.58
73:UB:107:PHE:HE2	73:UB:120:VAL:HG12	1.68	0.58
48:VA:172:LEU:HA	48:VA:175:LEU:HG	1.85	0.58
74:VB:29:HIS:HB2	74:VB:32:ARG:CB	2.32	0.58
24:X:75:PHE:CD2	24:X:102:ALA:HB2	2.38	0.58
11:K:79:ALA:HA	25:Y:138:SER:H	1.67	0.58
1:A:1352:G:H4'	66:NB:3:ALA:CB	2.33	0.58
1:A:449:C:H2'	1:A:450:U:C6	2.38	0.58
1:A:991:G:H4'	1:A:1786:G:C4'	2.28	0.58
2:B:860:G:N3	2:B:2133:U:H1'	2.17	0.58
2:B:2203:U:H2'	2:B:2204:C:H6	1.68	0.58
2:B:253:A:H2'	2:B:254:A:C8	2.38	0.58
2:B:370:U:H4'	2:B:404:G:C4'	2.32	0.58
54:BB:47:PHE:HA	54:BB:51:ARG:HB2	1.84	0.58
3:C:29:U:H2'	3:C:30:C:C6	2.39	0.58
55:CB:48:PHE:HB3	55:CB:67:PRO:HB3	1.84	0.58
56:DB:137:ARG:HB3	56:DB:140:ASN:CB	2.33	0.58
6:F:103:PRO:HB3	6:F:160:SER:O	2.03	0.58
33:GA:12:GLN:HA	33:GA:15:LYS:HE3	1.85	0.58
59:GB:77:ILE:HG23	59:GB:86:LEU:HD23	1.84	0.58
8:H:76:ARG:HD3	8:H:86:GLY:O	2.03	0.58
8:H:329:PRO:HD3	11:K:41:ARG:HH22	1.68	0.58
12:L:71:VAL:HG12	12:L:75:ILE:HB	1.83	0.58
13:M:167:VAL:HG12	13:M:170:LYS:HG3	1.85	0.58
3:C:28:C:O3'	17:Q:26:PHE:HB2	2.03	0.58
19:S:10:LEU:HD11	19:S:19:LEU:HD11	1.85	0.58
19:S:73:ARG:CB	19:S:89:VAL:HG13	2.33	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:T:74:ARG:HG3	20:T:146:GLY:HA3	1.86	0.58
21:U:126:ARG:HD3	21:U:140:GLU:CB	2.28	0.58
2:B:412:G:H5''	21:U:30:ARG:HD2	1.85	0.58
47:UA:23:ARG:O	47:UA:26:VAL:HB	2.02	0.58
2:B:1832:C:H4'	3:C:113:U:H5'	1.84	0.58
2:B:1480:G:H21	2:B:1872:C:H5	1.51	0.58
2:B:2051:G:H2'	2:B:2052:G:C8	2.38	0.58
2:B:2086:A:H5''	2:B:2087:C:H5'	1.85	0.58
2:B:2130:G:H2'	2:B:2131:A:C4'	2.32	0.58
2:B:2748:A:H4'	9:I:145:PHE:CE1	2.38	0.58
2:B:280:U:H2'	2:B:282:G:OP2	2.04	0.58
2:B:3375:A:O2'	2:B:3378:C:H5'	2.02	0.58
1:A:448:C:O3'	54:BB:29:PRO:HA	2.03	0.58
54:BB:37:LYS:HB2	54:BB:40:GLU:HG2	1.85	0.58
4:D:79:A:H3'	4:D:80:G:H8	1.69	0.58
4:D:96:U:H5''	24:X:43:TYR:CE2	2.38	0.58
4:D:99:G:H2'	4:D:100:C:C6	2.38	0.58
56:DB:77:LEU:HD12	56:DB:84:TYR:CD2	2.38	0.58
82:DC:25:ILE:CD1	82:DC:142:VAL:HG12	2.33	0.58
5:E:94:ASN:CG	5:E:124:LEU:HB2	2.23	0.58
8:H:23:PRO:HD2	8:H:26:PHE:HE2	1.68	0.58
9:I:58:LYS:HD3	9:I:93:THR:HB	1.84	0.58
10:J:42:LEU:O	10:J:49:GLY:HA2	2.03	0.58
11:K:86:VAL:HG13	11:K:135:ALA:C	2.22	0.58
37:KA:18:ARG:HA	37:KA:23:ASN:HA	1.85	0.58
2:B:1822:C:H5''	38:LA:66:SER:CB	2.33	0.58
9:I:293:LEU:HD22	14:N:210:ILE:HD13	1.85	0.58
16:P:60:VAL:O	16:P:75:PRO:HD2	2.03	0.58
68:PB:41:ARG:NE	69:QB:46:PRO:HD3	2.18	0.58
17:Q:167:PHE:CE1	17:Q:168:ARG:HG2	2.39	0.58
19:S:26:ARG:HB3	19:S:30:TYR:CE2	2.38	0.58
72:TB:94:LEU:CG	72:TB:102:VAL:HG23	2.32	0.58
22:V:24:VAL:O	22:V:28:LEU:HG	2.03	0.58
48:VA:11:TYR:CZ	48:VA:15:LEU:HD23	2.38	0.58
23:W:19:LYS:HA	23:W:22:VAL:HG23	1.84	0.58
49:WA:206:PRO:HG3	49:WA:247:PRO:HA	1.84	0.58
50:XA:183:ARG:HH12	50:XA:191:ARG:HA	1.67	0.58
1:A:1186:U:H2'	1:A:1187:U:O4'	2.03	0.58
1:A:1387:G:H1'	1:A:1410:A:H61	1.69	0.58
1:A:555:A:H2'	1:A:556:A:C8	2.39	0.58
1:A:685:A:H2'	1:A:686:C:O4'	2.02	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:AA:33:ASN:HD21	27:AA:64:LYS:N	2.01	0.58
2:B:1083:G:H2'	2:B:1084:A:C8	2.39	0.58
2:B:1073:U:H3	2:B:1085:A:H61	1.52	0.58
2:B:1092:C:H4'	25:Y:120:LYS:NZ	2.18	0.58
2:B:1731:A:H2'	2:B:1732:U:O4'	2.04	0.58
2:B:2197:C:H41	2:B:2241:U:H3'	1.69	0.58
2:B:1910:A:H2	2:B:2333:C:O2	1.87	0.58
2:B:3113:A:H5''	2:B:3118:C:N4	2.18	0.58
2:B:44:U:H2'	2:B:45:A:O4'	2.04	0.58
2:B:960:U:O2'	2:B:961:C:H5'	2.03	0.58
7:G:336:VAL:HG12	7:G:337:THR:H	1.69	0.58
31:EA:83:THR:HB	34:HA:58:TYR:OH	2.04	0.58
11:K:157:ASN:O	11:K:158:LYS:HB3	2.01	0.58
63:KB:113:PHE:CE1	63:KB:117:LEU:HD11	2.38	0.58
12:L:247:ASP:O	12:L:251:LYS:HB3	2.02	0.58
13:M:103:ILE:HG21	13:M:110:LYS:NZ	2.18	0.58
14:N:36:LEU:HD21	14:N:69:ARG:HH11	1.68	0.58
17:Q:106:GLN:HB3	40:NA:18:THR:CG2	2.33	0.58
10:J:158:TYR:HD1	18:R:118:PHE:CD1	2.22	0.58
72:TB:52:TYR:HA	72:TB:61:ILE:HG12	1.84	0.58
21:U:159:LYS:HD3	21:U:159:LYS:H	1.68	0.58
22:V:89:ASP:HB2	22:V:109:GLY:C	2.23	0.58
1:A:1679:G:H21	1:A:1722:A:H62	1.52	0.58
1:A:7:G:H2'	1:A:8:U:H5''	1.86	0.58
1:A:93:A:H8	1:A:399:A:H5''	1.68	0.58
1:A:933:A:N1	1:A:944:A:N1	2.51	0.58
1:A:1326:A:H5''	53:AB:156:PHE:CE1	2.39	0.58
53:AB:47:GLU:HG2	53:AB:49:ILE:HD11	1.86	0.58
1:A:1419:G:H1'	79:AC:55:PHE:O	2.03	0.58
2:B:106:A:H5'	2:B:684:G:O2'	2.03	0.58
2:B:1280:C:H2'	2:B:1281:G:H8	1.68	0.58
2:B:1359:C:H2'	2:B:1360:C:H6	1.67	0.58
2:B:1927:G:OP1	47:UA:6:LYS:HB3	2.03	0.58
2:B:2081:U:H2'	2:B:2082:U:H4'	1.85	0.58
2:B:2367:A:H3'	2:B:2368:A:H8	1.68	0.58
2:B:2213:A:H1'	2:B:2602:G:H5'	1.85	0.58
2:B:2393:G:H2'	2:B:2982:A:N6	2.18	0.58
56:DB:211:LEU:O	56:DB:215:ARG:HB2	2.03	0.58
82:DC:597:VAL:HG11	82:DC:625:TRP:CZ2	2.38	0.58
58:FB:72:ILE:HG12	58:FB:112:TRP:CH2	2.38	0.58
58:FB:121:LEU:HD21	58:FB:160:PHE:HB3	1.86	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:FB:22:ARG:HD2	58:FB:25:ARG:NH2	2.19	0.58
2:B:3148:U:H4'	7:G:104:THR:HB	1.84	0.58
7:G:305:ILE:HG21	7:G:323:MET:HE1	1.85	0.58
9:I:204:VAL:O	9:I:208:MET:HG3	2.04	0.58
11:K:161:VAL:CG1	11:K:162:PRO:HD2	2.31	0.58
12:L:168:ALA:HB3	40:NA:47:ILE:HD11	1.85	0.58
67:OB:69:ILE:HD13	67:OB:69:ILE:N	2.16	0.58
69:QB:86:ARG:HE	69:QB:89:ARG:HE	1.50	0.58
18:R:39:ILE:HB	18:R:43:LYS:O	2.02	0.58
20:T:18:ARG:HB2	20:T:123:ALA:HA	1.84	0.58
20:T:148:LYS:HE3	20:T:148:LYS:H	1.69	0.58
46:TA:78:LYS:NZ	46:TA:78:LYS:HB3	2.19	0.58
21:U:119:VAL:HG23	21:U:145:HIS:O	2.04	0.58
74:VB:41:ARG:HA	74:VB:44:LEU:HD12	1.86	0.58
49:WA:103:PHE:CE1	49:WA:138:GLY:HA2	2.36	0.58
49:WA:13:LEU:HD21	49:WA:55:GLY:H	1.69	0.58
50:XA:153:SER:O	50:XA:156:VAL:HG22	2.03	0.58
50:XA:169:SER:O	50:XA:173:ILE:HG12	2.03	0.58
2:B:2724:U:H5''	25:Y:54:HIS:CD2	2.38	0.58
78:ZB:27:GLN:HG2	78:ZB:43:ASN:OD1	2.04	0.58
1:A:1586:A:H1'	1:A:1611:A:C6	2.39	0.58
1:A:172:C:H2'	1:A:173:A:C8	2.38	0.58
1:A:20:G:H5'	1:A:571:G:C8	2.38	0.58
1:A:829:A:H4'	1:A:830:U:H5'	1.84	0.58
53:AB:171:ALA:HB3	53:AB:186:VAL:HB	1.86	0.58
2:B:1545:A:H2'	2:B:1547:G:OP2	2.03	0.58
2:B:1702:U:H2'	2:B:1703:U:H6	1.69	0.58
2:B:1841:A:C3'	2:B:1842:A:H5''	2.30	0.58
2:B:2102:U:C5'	23:W:88:ARG:HH21	2.16	0.58
2:B:2242:A:H5'	6:F:243:THR:CG2	2.34	0.58
2:B:2752:U:H6	2:B:2752:U:H5'	1.69	0.58
2:B:3205:G:H2'	2:B:3206:C:C5	2.39	0.58
2:B:3206:C:H5''	2:B:3207:U:O4'	2.04	0.58
29:CA:107:VAL:HG13	29:CA:126:LEU:HA	1.84	0.58
56:DB:5:ILE:HD11	56:DB:111:LEU:HD12	1.85	0.58
82:DC:496:LYS:HE3	82:DC:554:LEU:O	2.04	0.58
31:EA:7:ALA:HA	31:EA:89:VAL:CG1	2.33	0.58
6:F:112:ILE:CG1	6:F:135:ILE:HG23	2.33	0.58
58:FB:39:GLY:O	58:FB:59:ARG:HB3	2.04	0.58
7:G:67:PHE:CZ	27:AA:88:ARG:HB2	2.38	0.58
8:H:334:PHE:HZ	8:H:340:GLY:HA3	1.68	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:3269:U:H3	10:J:134:ARG:HH21	1.51	0.58
13:M:64:HIS:HE1	20:T:132:GLY:HA3	1.69	0.58
14:N:99:ILE:HD13	14:N:101:LYS:HE3	1.84	0.58
20:T:14:HIS:HB3	20:T:123:ALA:HB1	1.85	0.58
20:T:62:THR:H	20:T:70:PRO:CD	2.15	0.58
73:UB:128:SER:HB2	73:UB:143:PRO:HG2	1.85	0.58
22:V:177:GLY:O	22:V:186:VAL:HA	2.03	0.58
24:X:155:ARG:HD3	24:X:172:TYR:CE2	2.38	0.58
52:ZA:101:VAL:HG22	52:ZA:115:ILE:HG12	1.85	0.58
1:A:180:A:H2'	1:A:181:A:H5'	1.84	0.58
1:A:73:U:H6	56:DB:167:LYS:HZ1	1.50	0.58
1:A:758:U:H4'	59:GB:7:THR:HB	1.86	0.58
27:AA:20:GLY:HA2	27:AA:35:TYR:CE2	2.39	0.58
53:AB:137:VAL:HG22	53:AB:151:LYS:HA	1.85	0.58
2:B:1145:G:H1'	2:B:1160:C:N3	2.18	0.58
2:B:1585:C:H2'	2:B:1586:G:C8	2.39	0.58
2:B:1655:G:H2'	2:B:1656:A:C8	2.38	0.58
2:B:199:A:C6	2:B:201:A:H1'	2.38	0.58
2:B:2661:G:H2'	2:B:2662:G:H8	1.67	0.58
2:B:3303:G:O2'	2:B:3304:U:H5''	2.02	0.58
2:B:873:C:H2'	2:B:875:G:C1'	2.33	0.58
4:D:74:C:C2'	4:D:75:G:H5'	2.33	0.58
82:DC:22:MET:SD	82:DC:102:LEU:HD13	2.43	0.58
82:DC:279:ASP:HB3	82:DC:280:PRO:HD3	1.85	0.58
1:A:856:A:N6	57:EB:116:ARG:HA	2.19	0.58
1:A:479:C:H5'	59:GB:124:HIS:CB	2.33	0.58
35:IA:71:LEU:HD23	35:IA:72:ARG:N	2.18	0.58
10:J:55:LEU:N	10:J:65:ILE:HG22	2.18	0.58
2:B:1741:A:H4'	38:LA:38:LEU:HD21	1.85	0.58
13:M:36:LYS:HE3	13:M:74:LEU:HD22	1.85	0.58
2:B:2854:U:OP1	14:N:6:ALA:HB2	2.02	0.58
73:UB:88:PRO:HD2	73:UB:124:VAL:HB	1.86	0.58
1:A:1169:G:H21	1:A:1576:A:N6	2.00	0.58
1:A:1440:C:H2'	1:A:1441:C:O4'	2.04	0.58
2:B:1210:U:H2'	2:B:1211:U:C5	2.39	0.58
2:B:1235:U:C4'	2:B:1236:G:H5'	2.25	0.58
2:B:2754:G:C3'	2:B:2755:C:H5''	2.34	0.58
2:B:2937:G:H2'	2:B:2938:G:O4'	2.03	0.58
2:B:647:A:H5'	2:B:650:C:H41	1.69	0.58
2:B:886:C:H4'	2:B:1850:A:N3	2.19	0.58
2:B:996:A:C2	2:B:997:A:H1'	2.38	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:EA:10:VAL:HG11	31:EA:22:LYS:HD3	1.85	0.58
32:FA:71:PRO:HB2	32:FA:109:TYR:HA	1.85	0.58
8:H:107:ARG:HB3	8:H:109:TRP:CZ3	2.39	0.58
2:B:597:G:H4'	8:H:326:ARG:HA	1.86	0.58
10:J:20:LYS:HD3	10:J:21:THR:N	2.18	0.58
12:L:225:LYS:O	12:L:229:VAL:HG23	2.04	0.58
13:M:4:ILE:HG23	13:M:5:GLN:N	2.19	0.58
3:C:42:G:H21	41:OA:21:ARG:HA	1.67	0.58
67:OB:71:PHE:O	67:OB:72:LYS:HB3	2.04	0.58
2:B:1825:G:OP2	42:PA:49:SER:HB3	2.04	0.58
2:B:65:A:HO2'	17:Q:99:HIS:HE2	1.51	0.58
72:TB:98:GLN:HG3	72:TB:99:PHE:CD1	2.38	0.58
47:UA:29:LEU:HD13	47:UA:69:TYR:HD2	1.68	0.58
22:V:26:LEU:O	22:V:30:VAL:HG23	2.03	0.58
48:VA:64:ARG:CD	48:VA:67:LEU:HD13	2.34	0.58
1:A:1109:G:H2'	1:A:1110:G:O4'	2.04	0.58
53:AB:177:MET:SD	53:AB:182:LEU:HD13	2.44	0.58
2:B:2527:G:H2'	2:B:2528:G:O4'	2.04	0.58
2:B:2652:U:H5'	46:TA:65:THR:HG21	1.85	0.58
2:B:2945:G:N3	2:B:2945:G:H5'	2.19	0.58
2:B:3049:A:C6	7:G:75:ALA:HB2	2.39	0.58
54:BB:193:GLY:CA	54:BB:212:ASP:HA	2.33	0.58
54:BB:6:LYS:N	54:BB:6:LYS:HD2	2.19	0.58
3:C:91:C:H2'	3:C:92:A:H8	1.69	0.58
4:D:8:G:H5'	9:I:71:GLY:HA2	1.86	0.58
82:DC:176:GLN:O	82:DC:180:ARG:HG3	2.02	0.58
82:DC:440:ARG:HB3	82:DC:440:ARG:NH1	2.18	0.58
6:F:112:ILE:HG23	6:F:133:TYR:HB2	1.86	0.58
8:H:219:LEU:HD23	8:H:222:VAL:HG11	1.85	0.58
9:I:58:LYS:NZ	9:I:158:ARG:HH12	2.02	0.58
10:J:40:LEU:HD12	10:J:52:VAL:HG23	1.86	0.58
1:A:1605:G:C8	66:NB:127:LYS:HD2	2.39	0.58
2:B:2896:A:H4'	44:RA:95:VAL:CG1	2.34	0.58
19:S:62:TYR:HB2	19:S:134:LEU:HD11	1.84	0.58
63:KB:18:TYR:CE1	72:TB:55:ASP:HA	2.39	0.58
21:U:3:ARG:HA	21:U:3:ARG:HE	1.69	0.58
2:B:3068:U:OP1	23:W:58:HIS:HA	2.04	0.58
77:YB:35:VAL:HG22	77:YB:79:PHE:CB	2.34	0.58
1:A:1345:A:H2'	1:A:1348:A:N6	2.19	0.57
1:A:1490:C:H5	1:A:1514:U:O4	1.86	0.57
1:A:1715:G:C2'	1:A:1716:C:H4'	2.34	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:42:G:C8	1:A:437:A:H2'	2.39	0.57
53:AB:168:ILE:HG22	53:AB:189:MET:HB2	1.86	0.57
2:B:1520:G:H2'	2:B:1521:G:O4'	2.04	0.57
2:B:2394:G:H2'	2:B:2395:G:H5'	1.85	0.57
2:B:2470:C:H5'	5:E:26:ARG:HB3	1.86	0.57
2:B:2765:C:H5''	46:TA:39:GLY:HA3	1.85	0.57
2:B:2861:U:H2'	2:B:2862:U:O4'	2.03	0.57
2:B:733:G:H1'	2:B:736:A:N6	2.19	0.57
2:B:777:U:H2'	2:B:778:U:O4'	2.04	0.57
29:CA:126:LEU:H	29:CA:126:LEU:HD23	1.69	0.57
30:DA:60:ARG:NH2	30:DA:64:LYS:HE3	2.20	0.57
31:EA:129:TRP:CZ2	38:LA:100:ILE:HD12	2.39	0.57
83:EC:6872:A:H3'	83:EC:6873:A:C5'	2.30	0.57
6:F:92:LYS:HA	6:F:103:PRO:HD2	1.86	0.57
6:F:227:ARG:HA	6:F:238:ILE:CG2	2.34	0.57
7:G:133:TYR:HA	7:G:136:LYS:HE2	1.84	0.57
36:JA:96:ILE:CD1	36:JA:109:LEU:HG	2.34	0.57
11:K:85:PHE:HB2	11:K:116:PHE:CD1	2.39	0.57
41:OA:10:LYS:HD2	41:OA:10:LYS:H	1.67	0.57
18:R:80:THR:HA	18:R:83:LYS:HB3	1.85	0.57
72:TB:50:PHE:HB3	72:TB:63:VAL:HG13	1.85	0.57
49:WA:10:ARG:NE	49:WA:10:ARG:HA	2.19	0.57
49:WA:174:ASN:HA	49:WA:198:ASN:HB2	1.85	0.57
49:WA:52:GLN:HG2	49:WA:53:LYS:HG2	1.86	0.57
50:XA:102:PHE:CZ	50:XA:131:GLN:HB3	2.39	0.57
50:XA:54:TRP:HH2	50:XA:191:ARG:HH12	1.52	0.57
2:B:1051:U:H4'	25:Y:19:PHE:HB2	1.86	0.57
1:A:1611:A:H2'	1:A:1612:U:O4'	2.04	0.57
1:A:1711:C:H2'	1:A:1712:A:O4'	2.03	0.57
1:A:344:A:O2'	1:A:345:U:H5'	2.03	0.57
1:A:573:C:C2	1:A:574:G:H1'	2.39	0.57
2:B:1270:A:H4'	82:DC:744:TYR:HD1	1.69	0.57
2:B:1272:C:H2'	2:B:1273:A:O4'	2.04	0.57
2:B:1564:U:H2'	2:B:1565:G:O4'	2.04	0.57
2:B:2271:A:H5''	2:B:2272:G:H21	1.69	0.57
54:BB:35:PRO:HD2	54:BB:83:PRO:HG2	1.86	0.57
1:A:348:U:C4'	58:FB:14:THR:HA	2.34	0.57
2:B:3139:A:O2'	7:G:20:LYS:HD3	2.04	0.57
8:H:65:TRP:HB3	8:H:69:ARG:HG3	1.86	0.57
34:HA:30:THR:O	34:HA:34:LEU:HD13	2.05	0.57
9:I:33:ARG:HG2	9:I:37:VAL:CG2	2.34	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
63:KB:121:ARG:O	63:KB:125:LEU:HD23	2.03	0.57
12:L:143:ILE:HD11	12:L:151:VAL:HG11	1.84	0.57
65:MB:29:SER:OG	65:MB:31:GLU:HG2	2.03	0.57
65:MB:85:ILE:HD12	65:MB:114:HIS:HB2	1.85	0.57
22:V:65:SER:HA	22:V:93:ILE:HD13	1.85	0.57
48:VA:15:LEU:HD12	48:VA:16:ARG:N	2.19	0.57
74:VB:81:GLU:HA	74:VB:84:LYS:HG2	1.85	0.57
26:Z:71:PHE:HA	26:Z:75:TYR:HD2	1.65	0.57
1:A:1232:U:H4'	60:HB:2:LEU:HD21	1.87	0.57
1:A:1589:C:H2'	1:A:1590:G:C8	2.39	0.57
1:A:749:U:H3	1:A:800:U:H3	1.52	0.57
53:AB:40:ARG:HB2	53:AB:47:GLU:HB3	1.86	0.57
2:B:1734:G:H2'	2:B:1735:G:C8	2.39	0.57
2:B:811:U:H2'	2:B:812:G:H8	1.69	0.57
3:C:91:C:OP1	3:C:91:C:H3'	2.03	0.57
55:CB:187:ILE:N	55:CB:187:ILE:HD12	2.15	0.57
6:F:3:ARG:CB	6:F:207:VAL:HG23	2.33	0.57
32:FA:102:ILE:HB	32:FA:125:VAL:HA	1.86	0.57
38:LA:16:ARG:HB3	38:LA:37:LYS:HD3	1.86	0.57
66:NB:104:GLU:HA	66:NB:107:LYS:HD2	1.85	0.57
66:NB:60:PHE:HA	66:NB:63:ILE:HG12	1.85	0.57
13:M:94:TYR:O	44:RA:78:ILE:HG12	2.04	0.57
44:RA:99:CYS:HB2	44:RA:114:LYS:HZ2	1.69	0.57
19:S:56:LYS:HG2	19:S:59:PHE:HE2	1.68	0.57
73:UB:50:LYS:HG3	73:UB:102:VAL:O	2.04	0.57
74:VB:39:GLU:HG2	74:VB:43:LYS:HE2	1.85	0.57
2:B:1940:G:OP1	23:W:80:LYS:HE3	2.04	0.57
50:XA:22:THR:HG22	50:XA:169:SER:CA	2.28	0.57
50:XA:54:TRP:O	50:XA:58:VAL:HG23	2.05	0.57
1:A:968:U:H4'	1:A:1102:G:N2	2.19	0.57
1:A:1357:A:H2'	1:A:1358:G:H8	1.69	0.57
1:A:29:U:H2'	1:A:30:G:H8	1.67	0.57
1:A:839:U:H2'	1:A:840:U:H5''	1.86	0.57
1:A:911:U:H5''	2:B:2207:A:C5'	2.34	0.57
2:B:1284:C:H2'	2:B:1285:G:H5'	1.86	0.57
2:B:1807:G:H2'	2:B:1808:G:O4'	2.04	0.57
2:B:1898:G:H2'	2:B:1899:G:H5'	1.85	0.57
2:B:2776:C:H5'	2:B:2777:G:C4	2.39	0.57
2:B:3030:G:H3'	2:B:3031:G:C8	2.39	0.57
2:B:3362:A:H2'	2:B:3363:U:O4'	2.04	0.57
54:BB:9:LEU:O	54:BB:27:TYR:HB3	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:161:U:H5'	56:DB:84:TYR:HA	1.85	0.57
82:DC:743:ILE:HG22	82:DC:788:THR:HG21	1.85	0.57
58:FB:76:THR:HG22	58:FB:108:PRO:CG	2.34	0.57
7:G:67:PHE:HE1	27:AA:89:ASP:OD1	1.87	0.57
1:A:514:G:OP1	59:GB:132:ARG:HG3	2.04	0.57
8:H:193:LYS:HA	8:H:198:ARG:HA	1.87	0.57
9:I:120:LYS:N	9:I:120:LYS:HD2	2.18	0.57
9:I:39:GLN:O	9:I:41:LYS:HD2	2.04	0.57
37:KA:12:LYS:NZ	37:KA:97:SER:HB2	2.20	0.57
63:KB:18:TYR:HE1	72:TB:55:ASP:HA	1.70	0.57
2:B:1237:G:H5'	16:P:58:VAL:CG1	2.34	0.57
20:T:85:ARG:HH11	20:T:90:HIS:CD2	2.21	0.57
48:VA:45:LEU:HB3	48:VA:49:ALA:H	1.70	0.57
49:WA:88:THR:HG22	49:WA:104:VAL:HG22	1.85	0.57
1:A:1159:C:H4'	1:A:1580:C:OP1	2.04	0.57
1:A:976:G:H3'	1:A:1023:A:C2	2.39	0.57
2:B:1421:G:H2'	2:B:1422:G:H8	1.69	0.57
2:B:1841:A:H1'	2:B:1848:G:O4'	2.05	0.57
2:B:2153:U:OP1	6:F:246:LEU:HB3	2.03	0.57
2:B:189:G:H2'	2:B:224:C:OP2	2.03	0.57
2:B:3334:U:H4'	2:B:3335:A:H5''	1.87	0.57
2:B:366:A:H2'	2:B:367:A:O4'	2.04	0.57
2:B:629:U:H2'	2:B:630:A:C8	2.39	0.57
2:B:700:C:OP1	17:Q:65:TYR:HE2	1.88	0.57
2:B:873:C:H2'	2:B:875:G:O4'	2.04	0.57
2:B:931:C:H3'	2:B:932:U:H2'	1.87	0.57
54:BB:162:ILE:HG22	54:BB:164:LEU:H	1.69	0.57
80:BC:49:LEU:H	80:BC:49:LEU:HD23	1.70	0.57
29:CA:64:GLU:HB2	29:CA:85:GLN:O	2.04	0.57
4:D:59:U:H2'	4:D:60:G:O4'	2.05	0.57
30:DA:28:ARG:HH21	30:DA:49:PRO:HG2	1.70	0.57
2:B:1797:A:H1'	6:F:21:ARG:HD3	1.85	0.57
32:FA:122:PRO:HA	32:FA:142:GLY:C	2.24	0.57
7:G:113:GLU:HB3	7:G:176:ALA:HB2	1.86	0.57
59:GB:125:ALA:O	59:GB:129:ILE:HG13	2.04	0.57
8:H:334:PHE:CZ	8:H:340:GLY:HA3	2.40	0.57
9:I:22:ARG:HB2	9:I:30:TYR:OH	2.04	0.57
63:KB:78:ASN:HB3	63:KB:80:LEU:HD23	1.86	0.57
12:L:67:ILE:HG12	12:L:237:ILE:HB	1.85	0.57
9:I:290:ILE:HG22	14:N:206:LEU:HD13	1.85	0.57
50:XA:11:PRO:HB3	67:OB:117:LEU:HD12	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:Q:47:ALA:HB1	17:Q:48:PRO:CD	2.28	0.57
69:QB:61:VAL:HG21	69:QB:104:VAL:HG11	1.85	0.57
12:L:161:GLU:HG3	19:S:22:LEU:HG	1.86	0.57
2:B:2994:A:H4'	21:U:77:GLY:O	2.05	0.57
2:B:744:A:H4'	22:V:142:GLY:O	2.04	0.57
23:W:4:LEU:HD11	23:W:29:THR:OG1	2.04	0.57
23:W:21:LYS:HD3	23:W:53:LYS:HD3	1.85	0.57
1:A:1223:A:H2'	1:A:1224:A:C8	2.40	0.57
27:AA:102:ILE:HG13	27:AA:102:ILE:O	2.03	0.57
2:B:1305:U:OP1	2:B:1305:U:H2'	2.05	0.57
2:B:1456:A:C6	2:B:1477:A:H4'	2.40	0.57
2:B:118:U:H5'	2:B:151:A:H2	1.69	0.57
2:B:1638:A:N3	2:B:1709:C:H1'	2.19	0.57
2:B:3034:C:H2'	2:B:3035:A:H5'	1.87	0.57
2:B:814:U:H5''	41:OA:35:SER:HB3	1.86	0.57
54:BB:234:PRO:HB3	54:BB:238:LEU:HD11	1.86	0.57
54:BB:8:HIS:N	54:BB:30:ARG:HG3	2.20	0.57
29:CA:113:LEU:HD11	29:CA:121:LYS:NZ	2.20	0.57
82:DC:241:MET:HA	82:DC:244:LEU:HD12	1.86	0.57
1:A:397:A:H4'	58:FB:51:GLY:N	2.20	0.57
7:G:158:VAL:HG12	7:G:159:ARG:H	1.69	0.57
2:B:1076:C:C1'	33:GA:42:ASN:HB2	2.34	0.57
8:H:42:VAL:HA	8:H:45:ASN:ND2	2.20	0.57
2:B:366:A:H5''	8:H:95:ARG:NH2	2.20	0.57
2:B:2514:U:C6	12:L:68:ARG:HB3	2.40	0.57
39:MA:21:LEU:HD11	39:MA:55:LEU:CD2	2.34	0.57
14:N:75:TYR:O	14:N:79:VAL:HG23	2.05	0.57
67:OB:93:LEU:O	67:OB:94:SER:C	2.37	0.57
68:PB:92:ILE:HG21	68:PB:115:ARG:HH21	1.69	0.57
17:Q:152:THR:O	17:Q:153:ASP:HB2	2.04	0.57
2:B:2131:A:H61	47:UA:18:TYR:H	1.51	0.57
73:UB:134:ALA:HA	73:UB:139:LYS:HD2	1.87	0.57
73:UB:96:VAL:HG23	73:UB:97:ASP:N	2.18	0.57
24:X:12:ARG:O	24:X:12:ARG:HG3	2.04	0.57
24:X:10:ILE:HG23	25:Y:148:PRO:HB3	1.86	0.57
1:A:1071:U:H2'	1:A:1072:C:C6	2.40	0.57
1:A:1524:A:H2'	1:A:1525:A:C8	2.40	0.57
1:A:1542:G:N1	1:A:1568:C:H1'	2.20	0.57
1:A:1764:C:H2'	1:A:1767:G:N7	2.20	0.57
1:A:320:U:O2'	1:A:321:C:H5''	2.03	0.57
2:B:3039:C:H1'	27:AA:9:THR:HB	1.85	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2108:C:H1'	2:B:3344:A:H1'	1.87	0.57
2:B:3007:U:H5''	20:T:73:PHE:HA	1.84	0.57
2:B:3298:C:H2'	2:B:3299:A:H8	1.69	0.57
2:B:502:U:H2'	2:B:503:C:H5''	1.87	0.57
2:B:565:U:H2'	2:B:566:G:C8	2.40	0.57
2:B:680:G:H5''	8:H:114:ASN:HD21	1.68	0.57
2:B:772:U:H2'	2:B:773:G:C8	2.39	0.57
54:BB:126:VAL:HG23	54:BB:157:ASN:H	1.68	0.57
3:C:30:C:OP1	17:Q:27:ASP:HB2	2.03	0.57
56:DB:186:ARG:O	56:DB:190:GLN:HG2	2.05	0.57
82:DC:281:ILE:HA	82:DC:284:LEU:HD12	1.86	0.57
82:DC:489:VAL:O	82:DC:531:ALA:HA	2.05	0.57
2:B:3147:G:H4'	7:G:102:LEU:O	2.04	0.57
7:G:59:ASP:HA	7:G:70:ARG:O	2.05	0.57
59:GB:92:LYS:O	59:GB:93:LEU:HB3	2.05	0.57
8:H:5:GLN:HE22	8:H:21:PRO:HB3	1.70	0.57
2:B:337:G:H21	8:H:50:TYR:HB2	1.70	0.57
15:O:87:LYS:HE2	15:O:106:ILE:HA	1.85	0.57
41:OA:17:THR:HG22	41:OA:18:LEU:H	1.70	0.57
18:R:21:VAL:HG23	18:R:33:ALA:HB3	1.87	0.57
70:RB:28:SER:HB2	70:RB:34:LEU:HD23	1.87	0.57
20:T:149:TYR:HB3	20:T:153:VAL:HG23	1.86	0.57
72:TB:53:ILE:HG22	72:TB:60:LYS:O	2.05	0.57
48:VA:5:ARG:CA	48:VA:8:LYS:HD3	2.24	0.57
49:WA:203:THR:OG1	49:WA:245:PHE:HB2	2.05	0.57
49:WA:20:VAL:HB	49:WA:304:GLY:HA3	1.86	0.57
27:AA:93:LEU:CB	28:BA:20:LEU:HD22	2.35	0.57
53:AB:21:LEU:HA	53:AB:24:PHE:HB3	1.87	0.57
2:B:2131:A:H2'	2:B:2132:C:H5'	1.86	0.57
2:B:2456:A:H1'	2:B:2482:U:H1'	1.86	0.57
2:B:2841:G:H22	2:B:2846:U:H5''	1.69	0.57
2:B:649:A:H2'	2:B:650:C:C6	2.40	0.57
55:CB:100:ASN:N	55:CB:103:ASN:HB2	2.20	0.57
55:CB:32:GLU:HG3	55:CB:33:VAL:N	2.20	0.57
82:DC:608:PRO:HG2	82:DC:640:GLY:O	2.05	0.57
1:A:1272:U:H4'	82:DC:655:TYR:OH	2.05	0.57
31:EA:83:THR:O	34:HA:62:LEU:HD21	2.05	0.57
9:I:108:ARG:O	9:I:112:LYS:HG2	2.04	0.57
9:I:226:TYR:HE2	9:I:236:LEU:HD22	1.70	0.57
2:B:129:U:OP2	39:MA:74:LYS:HD3	2.05	0.57
14:N:52:LEU:HA	14:N:165:ILE:HA	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:OA:16:HIS:HB3	41:OA:25:ARG:O	2.04	0.57
17:Q:57:VAL:HG12	17:Q:69:VAL:CG2	2.35	0.57
2:B:2760:C:C4	46:TA:63:LYS:HE3	2.39	0.57
1:A:310:C:C4'	73:UB:33:LEU:HD11	2.27	0.57
74:VB:48:TYR:O	74:VB:49:LYS:HB2	2.04	0.57
78:ZB:32:PHE:HD2	78:ZB:32:PHE:N	2.03	0.57
1:A:1000:C:OP1	83:EC:6947:A:H1'	2.05	0.57
1:A:1099:U:H2'	1:A:1100:G:H21	1.67	0.57
1:A:138:A:H2'	1:A:139:C:H5'	1.86	0.57
1:A:627:C:H4'	63:KB:117:LEU:CD2	2.34	0.57
1:A:109:G:H5''	1:A:755:A:OP1	2.05	0.57
53:AB:162:GLN:N	53:AB:163:PRO:CD	2.68	0.57
2:B:1263:A:C6	16:P:136:ALA:HB2	2.40	0.57
2:B:1510:G:H2'	2:B:1512:U:C4	2.39	0.57
2:B:825:U:H4'	2:B:1587:A:C2	2.40	0.57
2:B:1485:G:N2	2:B:1857:C:H42	1.89	0.57
2:B:2421:U:H4'	46:TA:53:GLN:HB2	1.87	0.57
2:B:2716:U:H2'	2:B:2717:U:C6	2.40	0.57
2:B:314:U:H2'	2:B:315:C:C5	2.40	0.57
2:B:1886:A:O4'	2:B:3307:A:H5'	2.05	0.57
2:B:3330:A:H4'	7:G:366:GLY:HA3	1.85	0.57
2:B:899:U:H2'	2:B:900:G:C8	2.40	0.57
54:BB:180:LEU:HD22	54:BB:192:ILE:HG22	1.87	0.57
55:CB:97:LEU:HD23	55:CB:176:THR:HA	1.87	0.57
82:DC:127:VAL:HB	82:DC:155:VAL:HA	1.86	0.57
82:DC:593:ILE:HB	82:DC:598:SER:OG	2.05	0.57
82:DC:747:LEU:HB3	82:DC:752:GLY:O	2.05	0.57
7:G:168:LYS:HD3	7:G:319:ASN:OD1	2.05	0.57
8:H:317:PRO:O	8:H:318:LEU:HB2	2.04	0.57
8:H:80:GLY:HA2	8:H:85:SER:HB2	1.87	0.57
34:HA:18:ILE:HG13	34:HA:23:TYR:CZ	2.39	0.57
9:I:86:TYR:CE2	9:I:247:ILE:HG12	2.40	0.57
10:J:71:VAL:HG21	10:J:159:LEU:HB3	1.86	0.57
11:K:66:LYS:O	11:K:70:LYS:HG3	2.04	0.57
14:N:68:ALA:HB2	14:N:158:LYS:CB	2.34	0.57
2:B:1040:A:C2'	14:N:198:LYS:HE2	2.34	0.57
17:Q:74:GLY:H	17:Q:98:ASP:CG	2.07	0.57
19:S:114:ARG:HA	19:S:114:ARG:CZ	2.35	0.57
46:TA:65:THR:HB	46:TA:88:CYS:O	2.05	0.57
72:TB:28:ARG:HG3	72:TB:29:PRO:HA	1.87	0.57
2:B:1231:A:C5'	48:VA:35:SER:HB2	2.34	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
74:VB:88:THR:O	74:VB:92:VAL:HG23	2.04	0.57
52:ZA:41:LEU:CD1	52:ZA:63:VAL:HG12	2.27	0.57
2:B:1259:A:O2'	2:B:1280:C:H4'	2.05	0.57
2:B:1467:A:H1'	2:B:1469:C:OP 2	2.05	0.57
2:B:2268:U:H3'	2:B:2269:U:O4'	2.04	0.57
2:B:2754:G:H3'	2:B:2755:C:H5''	1.86	0.57
2:B:924:G:H8	2:B:924:G:O5'	1.87	0.57
82:DC:24:VAL:HG11	82:DC:32:LYS:HB2	1.87	0.57
82:DC:440:ARG:O	82:DC:440:ARG:HG2	2.05	0.57
2:B:2967:A:H4'	6:F:206:PRO:CG	2.34	0.57
1:A:329:G:H5'	58:FB:99:ALA:HB3	1.87	0.57
2:B:749:C:H4'	33:GA:43:HIS:CE1	2.40	0.57
8:H:170:LYS:HG3	8:H:175:HIS:ND1	2.20	0.57
8:H:185:LYS:HD2	8:H:199:TRP:CE3	2.40	0.57
8:H:234:ASN:ND2	8:H:236:LEU:HB2	2.18	0.57
9:I:68:THR:O	25:Y:31:LEU:HD22	2.05	0.57
10:J:54:TYR:HA	10:J:65:ILE:CG2	2.35	0.57
11:K:102:VAL:HG13	11:K:126:LEU:CD2	2.34	0.57
12:L:178:ALA:HB2	12:L:218:ILE:CG2	2.34	0.57
12:L:98:ARG:HB2	12:L:98:ARG:HH11	1.70	0.57
39:MA:5:LYS:O	39:MA:9:LEU:HD23	2.04	0.57
15:O:35:LYS:O	15:O:39:GLN:HG2	2.04	0.57
18:R:23:ILE:HG21	18:R:28:SER:HB2	1.87	0.57
2:B:2897:A:H5''	44:RA:125:LYS:CG	2.34	0.57
19:S:133:ILE:HD12	19:S:134:LEU:H	1.69	0.57
2:B:148:G:H5''	19:S:55:ALA:CB	2.35	0.57
71:SB:34:ILE:CB	71:SB:53:TYR:HB2	2.21	0.57
20:T:136:THR:HG22	20:T:137:THR:N	2.19	0.57
73:UB:13:ARG:NH1	73:UB:13:ARG:HB2	2.20	0.57
2:B:1259:A:N7	48:VA:38:MET:HE3	2.20	0.57
23:W:150:GLN:HA	23:W:153:LYS:HB3	1.86	0.57
1:A:1552:U:H5	65:MB:43:ARG:NE	2.02	0.56
1:A:1596:C:H4'	1:A:1599:C:H41	1.70	0.56
1:A:1770:U:H2'	1:A:1771:U:C6	2.40	0.56
1:A:64:U:H2'	1:A:65:A:H5''	1.86	0.56
2:B:1718:G:H1'	2:B:1731:A:N3	2.20	0.56
2:B:2155:G:H2'	2:B:2156:C:H6	1.69	0.56
2:B:2375:G:H4'	2:B:2376:G:OP 2	2.04	0.56
2:B:250:U:C5'	2:B:251:G:H5''	2.35	0.56
2:B:2878:G:H5''	7:G:5:LYS:HE2	1.86	0.56
2:B:563:U:H2'	2:B:564:G:H8	1.70	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:835:G:H5''	2:B:1928:G:OP1	2.05	0.56
2:B:885:U:C5'	2:B:1851:G:H4'	2.31	0.56
54:BB:201:HIS:HB3	54:BB:205:PHE:O	2.05	0.56
54:BB:240:LYS:H	54:BB:240:LYS:HD3	1.68	0.56
54:BB:251:GLU:O	54:BB:255:ARG:HG3	2.04	0.56
29:CA:115:ARG:HB2	29:CA:119:THR:O	2.05	0.56
30:DA:59:VAL:HG12	30:DA:103:LYS:C	2.26	0.56
30:DA:56:VAL:HG22	30:DA:105:VAL:H	1.70	0.56
7:G:119:TYR:CD1	7:G:125:SER:HB2	2.40	0.56
2:B:3375:A:H5'	35:IA:18:LYS:HB3	1.86	0.56
11:K:154:GLY:HA3	11:K:201:PHE:CZ	2.40	0.56
39:MA:86:ARG:HA	39:MA:89:ARG:NH1	2.09	0.56
66:NB:37:THR:HA	66:NB:49:TYR:OH	2.05	0.56
15:O:80:LEU:CD1	15:O:129:VAL:HG11	2.34	0.56
43:QA:27:ILE:HG23	43:QA:30:ARG:HH21	1.70	0.56
69:QB:22:LEU:HB3	69:QB:55:TYR:CD1	2.40	0.56
20:T:12:LYS:HB2	20:T:37:ARG:HD2	1.86	0.56
20:T:34:VAL:HG21	20:T:112:TYR:CE1	2.40	0.56
22:V:138:LEU:HD22	22:V:139:ILE:N	2.17	0.56
22:V:19:PRO:HD3	22:V:53:PHE:HD1	1.70	0.56
2:B:975:C:H5''	22:V:54:LEU:CD2	2.35	0.56
22:V:64:VAL:CG1	22:V:90:ASP:H	2.15	0.56
2:B:1938:U:O2'	23:W:79:GLY:HA3	2.05	0.56
75:WB:59:TYR:O	75:WB:64:VAL:HG11	2.05	0.56
1:A:873:U:O2'	1:A:1047:G:H5''	2.06	0.56
2:B:1043:C:H2'	2:B:1044:U:C6	2.40	0.56
2:B:1184:A:H2'	2:B:1185:C:C6	2.40	0.56
2:B:1470:U:H2'	2:B:1471:U:C6	2.39	0.56
2:B:148:G:H1'	2:B:149:U:C5	2.41	0.56
2:B:1534:A:H2'	2:B:1535:A:C8	2.40	0.56
2:B:1550:C:O2'	2:B:1551:C:H5'	2.05	0.56
2:B:1646:G:H1'	2:B:1808:G:H22	1.70	0.56
2:B:1670:C:O2'	2:B:1860:G:H5''	2.05	0.56
2:B:185:C:H2'	2:B:186:U:H5'	1.86	0.56
2:B:2476:C:H2'	2:B:2477:G:C4'	2.35	0.56
2:B:2607:G:N2	19:S:78:GLY:HA3	2.20	0.56
2:B:380:U:H2'	2:B:381:U:O4'	2.05	0.56
2:B:582:G:H2'	2:B:583:G:H8	1.69	0.56
2:B:712:G:H2'	2:B:713:U:C6	2.40	0.56
28:BA:20:LEU:HD21	28:BA:28:ILE:HG23	1.87	0.56
56:DB:76:LEU:HD12	56:DB:94:ARG:HB2	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:307:LEU:CD2	82:DC:326:LYS:HZ3	2.18	0.56
82:DC:569:SER:O	82:DC:592:PRO:HD3	2.04	0.56
6:F:115:ASN:HA	6:F:128:ARG:CG	2.35	0.56
2:B:1797:A:H1'	6:F:21:ARG:CD	2.34	0.56
59:GB:12:TYR:CD1	59:GB:40:LYS:HG3	2.40	0.56
8:H:4:PRO:HD2	8:H:22:LEU:HD22	1.85	0.56
8:H:40:THR:O	8:H:44:LYS:HB2	2.05	0.56
2:B:984:G:C2'	11:K:101:LYS:HG3	2.29	0.56
13:M:48:VAL:HG13	13:M:49:ASN:H	1.70	0.56
1:A:1211:A:H1'	65:MB:99:GLY:O	2.06	0.56
14:N:77:THR:HA	14:N:81:GLY:O	2.05	0.56
44:RA:102:ARG:O	44:RA:103:LEU:HD23	2.05	0.56
19:S:136:ASP:OD1	19:S:139:HIS:HB2	2.05	0.56
17:Q:24:VAL:HG11	19:S:203:ARG:HH21	1.71	0.56
48:VA:28:VAL:CG1	48:VA:87:VAL:HG21	2.35	0.56
49:WA:17:ASN:HB3	49:WA:39:ASP:HB3	1.87	0.56
49:WA:245:PHE:CD2	49:WA:252:LEU:HD13	2.40	0.56
50:XA:30:GLN:OE1	50:XA:149:LEU:HB3	2.05	0.56
25:Y:27:LEU:HD13	25:Y:27:LEU:O	2.06	0.56
1:A:866:G:H5'	63:KB:3:ARG:N	2.12	0.56
1:A:927:C:H2'	1:A:928:U:H4'	1.86	0.56
2:B:238:A:H2'	2:B:239:G:H5'	1.87	0.56
2:B:2571:U:H4'	2:B:2572:C:C5'	2.34	0.56
2:B:24:G:H2'	2:B:25:U:H5'	1.87	0.56
2:B:3038:U:H2'	2:B:3039:C:C6	2.41	0.56
2:B:3380:U:H2'	2:B:3381:U:C6	2.40	0.56
29:CA:86:VAL:HG12	29:CA:120:LYS:HD3	1.88	0.56
82:DC:28:VAL:HG13	82:DC:29:ASP:H	1.69	0.56
82:DC:307:LEU:HD23	82:DC:326:LYS:HZ3	1.70	0.56
57:EB:64:VAL:HA	57:EB:67:LEU:HD12	1.87	0.56
2:B:2880:U:H1'	7:G:250:ALA:HB3	1.86	0.56
59:GB:176:ASN:O	59:GB:180:LYS:HB2	2.04	0.56
34:HA:26:GLY:H	34:HA:89:VAL:HG13	1.68	0.56
9:I:104:LEU:HB2	9:I:247:ILE:HD13	1.86	0.56
13:M:132:VAL:HA	13:M:148:GLY:HA3	1.86	0.56
13:M:44:THR:HB	13:M:56:ALA:N	2.12	0.56
39:MA:50:SER:O	39:MA:54:VAL:HG23	2.04	0.56
14:N:183:LYS:HB2	14:N:183:LYS:NZ	2.21	0.56
17:Q:124:ILE:HG22	17:Q:126:PHE:HE1	1.69	0.56
20:T:15:LEU:CD1	20:T:128:ARG:HB3	2.34	0.56
46:TA:31:GLY:C	46:TA:33:ALA:H	2.08	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:U:47:TYR:O	21:U:51:VAL:HG23	2.04	0.56
49:WA:199:ILE:HG21	49:WA:213:SER:HB2	1.86	0.56
1:A:158:U:O2'	1:A:159:U:H3'	2.05	0.56
1:A:88:U:H4'	1:A:171:A:C4'	2.35	0.56
1:A:1765:A:H3'	1:A:1766:A:H5''	1.87	0.56
27:AA:89:ASP:HB2	27:AA:91:VAL:HG22	1.85	0.56
79:AC:23:VAL:HG23	79:AC:38:ILE:HD12	1.87	0.56
2:B:1046:A:O2'	14:N:18:PRO:HG3	2.05	0.56
2:B:1261:G:H4'	2:B:1278:A:C2	2.40	0.56
2:B:1836:C:H2'	2:B:1837:U:C6	2.37	0.56
2:B:2149:A:H2'	2:B:2150:G:H5'	1.87	0.56
2:B:290:G:H2'	2:B:291:C:C6	2.40	0.56
2:B:814:U:H5''	41:OA:35:SER:CB	2.35	0.56
54:BB:185:GLY:N	54:BB:189:LEU:HD13	2.20	0.56
55:CB:113:ILE:HG21	55:CB:190:ILE:HB	1.87	0.56
82:DC:289:MET:CG	82:DC:320:LEU:HD12	2.29	0.56
82:DC:536:LEU:O	82:DC:540:ILE:HG12	2.05	0.56
2:B:1270:A:HO2'	82:DC:744:TYR:HE1	1.53	0.56
82:DC:734:GLN:HG3	82:DC:765:LEU:HG	1.86	0.56
82:DC:18:ASN:O	82:DC:98:PHE:HA	2.05	0.56
75:WB:68:ARG:HD2	83:EC:6867:C:H6	1.70	0.56
6:F:22:LEU:HD13	6:F:52:SER:HB2	1.88	0.56
58:FB:5:ARG:HD3	58:FB:30:GLY:HA3	1.86	0.56
7:G:94:GLU:HG2	7:G:156:SER:HB2	1.87	0.56
33:GA:17:HIS:HA	33:GA:20:GLY:HA2	1.86	0.56
2:B:1458:U:H5''	35:IA:33:VAL:HG11	1.86	0.56
65:MB:37:ALA:HB1	65:MB:38:PRO:HD2	1.87	0.56
14:N:30:LYS:HD2	14:N:30:LYS:N	2.21	0.56
68:PB:72:ILE:HG12	68:PB:79:TYR:CD2	2.40	0.56
18:R:102:LYS:HA	18:R:105:GLN:HB2	1.87	0.56
18:R:45:LEU:HA	18:R:57:ALA:HA	1.88	0.56
71:SB:58:TYR:OH	72:TB:20:THR:HA	2.04	0.56
1:A:343:C:H2'	1:A:344:A:C8	2.41	0.56
1:A:638:U:H1'	57:EB:112:ARG:NH2	2.19	0.56
1:A:884:A:H2'	1:A:885:G:C8	2.41	0.56
53:AB:113:LEU:HD23	53:AB:114:ALA:N	2.21	0.56
2:B:2361:A:C2'	2:B:2362:C:H5'	2.35	0.56
2:B:2389:C:H2'	2:B:2390:A:C8	2.41	0.56
2:B:2716:U:H2'	2:B:2717:U:H6	1.71	0.56
2:B:792:G:H2'	2:B:793:C:C6	2.40	0.56
2:B:39:A:H1'	2:B:94:G:N2	2.19	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:BC:29:LYS:HB2	80:BC:31:LYS:NZ	2.20	0.56
55:CB:186:ASN:HD22	55:CB:188:LYS:HD2	1.70	0.56
4:D:11:A:N6	25:Y:20:ARG:HD2	2.20	0.56
30:DA:56:VAL:CG2	30:DA:104:LEU:HB3	2.36	0.56
82:DC:434:VAL:HG12	82:DC:445:ILE:HG23	1.88	0.56
82:DC:523:SER:HB3	82:DC:529:ILE:HG12	1.88	0.56
5:E:134:PHE:HE1	5:E:137:PRO:HD3	1.70	0.56
59:GB:140:ILE:HG12	59:GB:159:ALA:HB3	1.87	0.56
8:H:23:PRO:HG3	8:H:258:LEU:CG	2.36	0.56
53:AB:75:LYS:CB	60:HB:22:VAL:HG11	2.36	0.56
9:I:69:ILE:HG12	25:Y:31:LEU:CB	2.35	0.56
10:J:148:GLU:HA	10:J:151:LYS:HE2	1.86	0.56
11:K:108:LEU:CD1	11:K:134:VAL:HG11	2.35	0.56
63:KB:22:ALA:HB1	63:KB:23:PRO:CA	2.30	0.56
67:OB:38:ILE:HG23	67:OB:39:ALA:H	1.71	0.56
18:R:116:GLU:HA	18:R:119:GLN:HB2	1.87	0.56
18:R:127:LYS:N	20:T:190:VAL:HG21	2.21	0.56
18:R:36:VAL:HG11	18:R:55:ARG:CZ	2.35	0.56
18:R:17:VAL:O	18:R:72:LEU:HB3	2.05	0.56
1:A:1280:C:H1'	70:RB:70:THR:HB	1.86	0.56
52:ZA:235:LEU:HD22	71:SB:52:THR:HB	1.86	0.56
20:T:27:LEU:CD2	20:T:102:LEU:HB2	2.36	0.56
1:A:602:U:OP1	73:UB:32:ARG:HB2	2.06	0.56
50:XA:191:ARG:HG3	50:XA:192:THR:H	1.71	0.56
52:ZA:169:LEU:HD22	52:ZA:196:VAL:HG21	1.86	0.56
1:A:588:U:H2'	1:A:589:C:O4'	2.05	0.56
1:A:624:G:H2'	1:A:625:C:C6	2.41	0.56
2:B:1289:G:H2'	2:B:1290:A:H8	1.70	0.56
2:B:1634:G:H2'	2:B:1635:G:C8	2.41	0.56
2:B:1705:U:H2'	2:B:1786:G:O2'	2.05	0.56
2:B:195:U:H2'	2:B:196:G:O4'	2.06	0.56
2:B:2144:A:H1'	2:B:2281:A:N6	2.20	0.56
2:B:3259:U:H6	2:B:3259:U:H5'	1.71	0.56
2:B:507:U:H2'	2:B:508:U:C6	2.40	0.56
4:D:62:U:H2'	4:D:63:A:H5'	1.87	0.56
4:D:75:G:C2'	4:D:76:A:H2'	2.27	0.56
30:DA:48:LEU:CD2	30:DA:122:LYS:HD2	2.36	0.56
48:VA:145:ILE:HG21	82:DC:201:GLN:NE2	2.16	0.56
82:DC:653:VAL:HG13	82:DC:693:LEU:CD1	2.35	0.56
2:B:914:A:C2	6:F:208:ASP:HB3	2.33	0.56
6:F:40:TYR:HB3	6:F:91:GLY:HA3	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2949:U:H4'	7:G:241:LYS:HE2	1.88	0.56
7:G:332:ARG:O	7:G:333:LYS:HB2	2.06	0.56
7:G:361:THR:HG22	7:G:371:GLN:OE1	2.05	0.56
33:GA:14:ARG:O	33:GA:18:ARG:HB2	2.06	0.56
25:Y:66:ASN:CG	33:GA:35:VAL:HA	2.26	0.56
59:GB:28:LEU:O	59:GB:28:LEU:HD13	2.05	0.56
34:HA:14:LEU:O	34:HA:17:VAL:HG22	2.06	0.56
60:HB:14:TYR:CE1	60:HB:18:GLU:HG3	2.39	0.56
37:KA:75:HIS:H	37:KA:81:VAL:HA	1.69	0.56
12:L:156:ASP:HB2	12:L:183:LYS:HD3	1.88	0.56
2:B:363:G:OP2	41:OA:52:LYS:HB2	2.06	0.56
70:RB:68:ARG:HA	70:RB:78:THR:O	2.04	0.56
22:V:82:VAL:HG22	22:V:102:ALA:HB3	1.86	0.56
22:V:111:ARG:HA	22:V:121:CYS:SG	2.45	0.56
49:WA:255:ALA:HB2	49:WA:292:LEU:HD22	1.86	0.56
75:WB:85:LYS:O	75:WB:86:GLU:HB2	2.04	0.56
24:X:79:VAL:HA	24:X:124:LEU:HG	1.87	0.56
1:A:1367:G:H2'	1:A:1368:G:H8	1.69	0.56
1:A:199:G:O2'	1:A:200:A:H5'	2.05	0.56
1:A:473:A:H4'	1:A:768:C:O2	2.06	0.56
27:AA:52:ALA:HB2	27:AA:58:VAL:HG11	1.87	0.56
53:AB:212:LYS:HB3	53:AB:212:LYS:NZ	2.20	0.56
2:B:1185:C:OP1	18:R:42:LYS:HB2	2.06	0.56
2:B:1566:A:C3'	2:B:1567:U:H5''	2.36	0.56
2:B:1629:U:H4'	31:EA:115:LYS:HE2	1.86	0.56
2:B:161:G:H2'	2:B:162:G:O4'	2.06	0.56
2:B:1647:A:N6	2:B:1808:G:H1'	2.19	0.56
2:B:2335:G:C1'	2:B:2337:C:H41	2.19	0.56
2:B:2424:A:H1'	19:S:78:GLY:H	1.69	0.56
2:B:2894:C:H2'	2:B:2895:G:C8	2.37	0.56
2:B:3064:U:H2'	2:B:3065:G:C8	2.40	0.56
2:B:637:C:H2'	2:B:638:C:C5	2.41	0.56
2:B:877:C:O2'	2:B:880:G:H1'	2.05	0.56
54:BB:89:VAL:CG1	54:BB:119:ALA:HA	2.30	0.56
82:DC:412:ARG:HG2	82:DC:428:ILE:HG12	1.86	0.56
82:DC:501:LEU:N	82:DC:502:PRO:CD	2.69	0.56
6:F:83:HIS:HB3	47:UA:41:PHE:CZ	2.41	0.56
58:FB:48:THR:HG21	58:FB:54:LYS:HE3	1.87	0.56
7:G:50:LYS:HE3	7:G:328:ILE:O	2.06	0.56
33:GA:28:LYS:O	33:GA:29:TYR:HB2	2.04	0.56
8:H:286:VAL:HA	8:H:289:ILE:HD12	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:52:VAL:H	8:H:103:THR:HB	1.69	0.56
10:J:145:LEU:O	10:J:149:ILE:HG13	2.06	0.56
11:K:86:VAL:HG13	11:K:136:TYR:N	2.20	0.56
37:KA:18:ARG:CA	37:KA:23:ASN:HA	2.35	0.56
37:KA:26:ASN:HA	37:KA:88:ASN:OD1	2.05	0.56
39:MA:6:ALA:O	39:MA:10:ARG:HG2	2.06	0.56
17:Q:49:ARG:HH11	39:MA:115:LYS:NZ	2.03	0.56
65:MB:60:LEU:HA	65:MB:76:VAL:CG2	2.29	0.56
65:MB:75:PRO:HG3	65:MB:93:VAL:HB	1.88	0.56
16:P:94:LYS:CD	16:P:99:LYS:HG2	2.36	0.56
68:PB:92:ILE:HD13	68:PB:92:ILE:O	2.05	0.56
2:B:76:G:N7	17:Q:101:ARG:HG3	2.21	0.56
50:XA:147:THR:HB	50:XA:151:SER:HB2	1.88	0.56
25:Y:89:LEU:HD21	25:Y:91:LEU:HG	1.86	0.56
63:KB:57:ALA:HA	77:YB:54:VAL:HG13	1.87	0.56
2:B:1830:G:H2'	2:B:1831:U:O4'	2.06	0.56
2:B:226:C:H2'	2:B:227:G:O4'	2.05	0.56
2:B:2793:G:H5''	46:TA:66:LYS:HG2	1.87	0.56
2:B:2985:C:H2'	2:B:2986:U:H6	1.69	0.56
2:B:3190:C:H2'	2:B:3191:G:H8	1.69	0.56
2:B:3308:C:H3'	2:B:3309:G:H21	1.71	0.56
2:B:654:C:H2'	2:B:655:C:C6	2.41	0.56
2:B:901:G:H5''	41:OA:13:ASN:HD22	1.71	0.56
2:B:966:U:H2'	2:B:967:A:C8	2.41	0.56
2:B:997:A:H3'	2:B:998:A:H8	1.71	0.56
82:DC:137:VAL:HG13	82:DC:138:GLN:H	1.71	0.56
82:DC:740:VAL:O	82:DC:743:ILE:HG23	2.04	0.56
5:E:124:LEU:HD21	5:E:135:PRO:HD2	1.88	0.56
83:EC:6892:U:O2	83:EC:6892:U:H2'	2.06	0.56
32:FA:75:LEU:HG	32:FA:114:GLY:HA2	1.87	0.56
36:JA:64:LYS:HG2	36:JA:65:PHE:CD2	2.40	0.56
71:SB:37:ALA:HA	71:SB:49:GLU:O	2.06	0.56
20:T:124:LEU:HD23	24:X:168:PRO:HG3	1.88	0.56
25:Y:91:LEU:CD2	25:Y:95:HIS:HB3	2.35	0.56
1:A:1352:G:H2'	1:A:1353:U:C6	2.41	0.56
1:A:1449:U:H2'	1:A:1450:U:C6	2.41	0.56
1:A:329:G:H2'	1:A:330:G:C8	2.41	0.56
2:B:2909:U:H3'	2:B:2910:A:H5''	1.87	0.56
2:B:3377:G:H2'	2:B:3377:G:OP1	2.05	0.56
2:B:78:U:H2'	2:B:79:U:H5'	1.87	0.56
54:BB:178:GLY:CA	54:BB:195:ILE:HB	2.35	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:51:G:H1'	3:C:52:A:N7	2.21	0.56
1:A:127:G:N7	56:DB:198:ALA:HB1	2.19	0.56
82:DC:511:LEU:HD11	82:DC:541:CYS:HB3	1.87	0.56
31:EA:72:ILE:CD1	31:EA:100:THR:HG21	2.36	0.56
2:B:2147:A:OP1	6:F:200:ARG:HG3	2.05	0.56
2:B:1113:G:H5''	32:FA:19:LYS:C	2.26	0.56
58:FB:137:LYS:N	58:FB:137:LYS:HD3	2.13	0.56
7:G:199:PHE:N	7:G:201:LYS:HD3	2.21	0.56
34:HA:98:SER:HB2	34:HA:100:ILE:HG12	1.86	0.56
9:I:104:LEU:HA	9:I:247:ILE:CG2	2.33	0.56
9:I:279:LYS:HA	9:I:282:ARG:HD2	1.88	0.56
11:K:81:HIS:CD2	11:K:138:TYR:HB3	2.39	0.56
63:KB:66:ILE:HG23	63:KB:67:THR:HG23	1.87	0.56
38:LA:5:VAL:HG21	38:LA:31:ARG:HD3	1.86	0.56
65:MB:14:THR:HB	65:MB:22:LEU:HB2	1.87	0.56
14:N:191:LYS:HG2	14:N:198:LYS:HB2	1.86	0.56
2:B:1008:U:H4'	14:N:34:TYR:CD1	2.41	0.56
69:QB:97:SER:OG	69:QB:100:ILE:HB	2.05	0.56
19:S:35:VAL:HA	19:S:65:ARG:NE	2.12	0.56
20:T:74:ARG:CB	20:T:145:VAL:HG23	2.35	0.56
21:U:75:GLU:HG3	21:U:76:PHE:CD1	2.41	0.56
22:V:36:LEU:O	22:V:40:THR:HG23	2.06	0.56
49:WA:201:THR:HB	49:WA:241:PHE:O	2.06	0.56
24:X:66:GLU:HB3	24:X:69:PRO:HG3	1.88	0.56
50:XA:77:SER:HB3	50:XA:99:ALA:HA	1.87	0.56
24:X:26:ARG:HH11	25:Y:150:THR:HG21	1.71	0.56
25:Y:74:VAL:HG12	25:Y:75:ILE:H	1.70	0.56
1:A:633:U:O2'	1:A:1102:G:H4'	2.05	0.56
1:A:1583:A:N6	1:A:1612:U:H5	2.04	0.56
1:A:180:A:C2'	1:A:181:A:H5'	2.36	0.56
2:B:1076:C:O4'	33:GA:42:ASN:HB2	2.06	0.56
2:B:1160:C:C5	2:B:1366:A:H1'	2.41	0.56
2:B:1856:C:H1'	38:LA:7:PHE:HE2	1.70	0.56
2:B:2690:G:N3	2:B:2690:G:H3'	2.21	0.56
2:B:2880:U:H2'	2:B:2881:C:C6	2.41	0.56
2:B:3045:G:H2'	2:B:3046:A:O4'	2.06	0.56
2:B:3206:C:H5''	2:B:3207:U:C4'	2.36	0.56
2:B:336:A:H2'	2:B:337:G:C8	2.41	0.56
2:B:641:C:H5	36:JA:38:ILE:CD1	2.18	0.56
2:B:761:A:O2'	2:B:762:U:H5'	2.05	0.56
2:B:13:A:C2	29:CA:39:LYS:HA	2.34	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:CB:157:ARG:N	55:CB:157:ARG:HD2	2.20	0.56
30:DA:58:VAL:HA	30:DA:104:LEU:HD23	1.87	0.56
3:C:91:C:O2	30:DA:25:SER:HB2	2.06	0.56
82:DC:399:ARG:HG3	82:DC:453:ILE:HG13	1.88	0.56
83:EC:6947:A:C2'	83:EC:6948:U:H4'	2.35	0.56
6:F:22:LEU:HD12	6:F:23:ARG:H	1.71	0.56
6:F:40:TYR:O	12:L:37:GLY:HA3	2.06	0.56
6:F:3:ARG:CG	6:F:4:VAL:H	2.06	0.56
6:F:57:PRO:O	6:F:78:ALA:HB2	2.05	0.56
58:FB:22:ARG:HB2	58:FB:25:ARG:HH21	1.68	0.56
7:G:280:HIS:HB3	7:G:324:VAL:HG21	1.88	0.56
7:G:358:TRP:C	7:G:359:ILE:HD12	2.27	0.56
59:GB:135:ALA:HB2	59:GB:159:ALA:HB2	1.87	0.56
34:HA:18:ILE:HG13	34:HA:23:TYR:OH	2.06	0.56
11:K:35:ALA:O	11:K:39:GLU:HG3	2.05	0.56
40:NA:60:LEU:CA	40:NA:63:ASN:HD22	2.15	0.56
1:A:1583:A:H5''	66:NB:135:ARG:HH22	1.71	0.56
17:Q:98:ASP:CG	17:Q:101:ARG:HB3	2.26	0.56
2:B:2896:A:H5''	44:RA:124:LYS:HZ2	1.68	0.56
19:S:122:ASN:HB2	19:S:129:TYR:CD2	2.41	0.56
19:S:63:ARG:HA	19:S:131:GLU:HA	1.88	0.56
20:T:18:ARG:CZ	20:T:128:ARG:HD2	2.36	0.56
46:TA:36:PHE:HA	46:TA:41:ARG:CD	2.36	0.56
23:W:140:GLU:O	23:W:144:GLN:HB2	2.06	0.56
23:W:23:TRP:CE3	23:W:51:VAL:HG22	2.41	0.56
23:W:9:ARG:HA	23:W:19:LYS:HE2	1.88	0.56
50:XA:148:ASP:HB2	50:XA:164:ASN:HD22	1.70	0.56
1:A:1042:G:C3'	1:A:1043:A:H5''	2.34	0.56
1:A:1025:A:C2	1:A:1789:G:H1'	2.40	0.56
1:A:315:A:H4'	1:A:316:A:H4'	1.88	0.56
1:A:635:A:H5''	72:TB:3:ARG:O	2.05	0.56
1:A:67:A:O5'	1:A:67:A:H8	1.89	0.56
2:B:985:U:O2	2:B:1099:A:H2	1.88	0.56
2:B:1280:C:H2'	2:B:1281:G:C8	2.41	0.56
2:B:199:A:H5''	30:DA:60:ARG:HD3	1.87	0.56
2:B:2128:C:H2'	2:B:2129:U:O4'	2.05	0.56
2:B:2225:U:H2'	2:B:2226:U:H6	1.71	0.56
2:B:2896:A:H4'	44:RA:95:VAL:HG11	1.88	0.56
2:B:571:U:O2'	2:B:572:A:H5'	2.05	0.56
2:B:664:U:H4'	8:H:106:TRP:O	2.06	0.56
2:B:884:A:OP2	41:OA:4:GLY:HA3	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BA:50:ALA:HA	28:BA:55:PHE:CD1	2.41	0.56
29:CA:107:VAL:HG11	29:CA:124:VAL:CG1	2.36	0.56
55:CB:36:ALA:HA	55:CB:40:ILE:CG2	2.36	0.56
4:D:9:C:H3'	4:D:10:C:C6	2.41	0.56
82:DC:210:ALA:HB2	82:DC:337:MET:HE2	1.88	0.56
82:DC:566:THR:HG22	82:DC:725:GLN:HB2	1.88	0.56
82:DC:739:ALA:O	82:DC:788:THR:HG21	2.06	0.56
5:E:6:SER:O	5:E:9:VAL:HG12	2.06	0.56
57:EB:93:LEU:HD13	57:EB:125:ILE:HG23	1.87	0.56
7:G:112:ASP:O	7:G:116:ARG:HG3	2.06	0.56
8:H:198:ARG:HH11	30:DA:12:ARG:NH2	2.01	0.56
2:B:693:A:O2'	8:H:234:ASN:HB3	2.06	0.56
10:J:31:ARG:HH12	10:J:81:ALA:HB1	1.69	0.56
11:K:100:ARG:O	11:K:104:GLN:HG3	2.05	0.56
37:KA:51:TYR:O	37:KA:66:VAL:HG13	2.06	0.56
12:L:78:PHE:O	12:L:79:GLN:CG	2.54	0.56
1:A:1769:U:H5''	64:LB:137:LEU:O	2.05	0.56
55:CB:44:ASN:HA	66:NB:46:PHE:CE2	2.40	0.56
69:QB:111:ILE:HG23	69:QB:113:ILE:HG13	1.87	0.56
69:QB:35:ASP:HA	69:QB:53:TRP:HE1	1.70	0.56
18:R:106:ARG:HA	18:R:109:ARG:HD2	1.88	0.56
44:RA:91:CYS:HB3	44:RA:124:LYS:HD3	1.88	0.56
70:RB:52:LYS:HA	70:RB:92:ASP:O	2.06	0.56
2:B:1317:A:C4'	20:T:18:ARG:HH22	2.09	0.56
72:TB:52:TYR:CZ	72:TB:54:ASP:HA	2.41	0.56
72:TB:50:PHE:HA	72:TB:63:VAL:HA	1.86	0.56
22:V:180:ARG:NH1	22:V:185:LYS:HG3	2.18	0.56
22:V:18:ALA:HA	22:V:53:PHE:CD1	2.41	0.56
23:W:51:VAL:HG23	23:W:53:LYS:H	1.70	0.56
50:XA:74:VAL:HG23	50:XA:118:PRO:HB3	1.87	0.56
1:A:115:G:H5'	61:IB:129:ARG:NE	2.20	0.55
1:A:1755:A:H2'	1:A:1756:A:O4'	2.06	0.55
2:B:114:A:H2'	2:B:115:A:O4'	2.07	0.55
2:B:1355:A:H4'	2:B:1356:U:H5'	1.87	0.55
2:B:1719:G:H1'	2:B:1731:A:O2'	2.06	0.55
2:B:1901:A:H5''	2:B:2919:A:OP1	2.05	0.55
2:B:2153:U:O2'	2:B:2154:U:H5'	2.06	0.55
2:B:2166:A:H5''	19:S:72:LYS:HZ1	1.71	0.55
2:B:316:U:O2'	40:NA:30:LYS:HD3	2.06	0.55
2:B:31:C:H2'	2:B:32:U:O4'	2.05	0.55
2:B:610:G:H4'	8:H:315:LYS:NZ	2.21	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:636:C:O5'	2:B:636:C:H6	1.89	0.55
2:B:638:C:H2'	2:B:639:G:C8	2.41	0.55
30:DA:109:LEU:HD13	30:DA:115:ARG:HH22	1.70	0.55
30:DA:27:ARG:CA	30:DA:30:LEU:HB3	2.27	0.55
82:DC:131:THR:HG23	82:DC:178:PHE:CE1	2.42	0.55
82:DC:453:ILE:HD12	82:DC:453:ILE:N	2.19	0.55
57:EB:125:ILE:HG21	57:EB:176:LEU:HD13	1.88	0.55
83:EC:6771:U:H5'	83:EC:6819:G:N2	2.21	0.55
2:B:2163:C:OP1	6:F:231:SER:HA	2.05	0.55
6:F:56:ALA:HB2	6:F:130:SER:OG	2.06	0.55
6:F:62:VAL:HA	6:F:73:GLU:HA	1.88	0.55
22:V:175:ALA:O	32:FA:51:GLY:HA2	2.05	0.55
9:I:195:LEU:O	9:I:199:ILE:HG13	2.05	0.55
13:M:92:TYR:CZ	13:M:101:VAL:HB	2.41	0.55
13:M:26:LYS:HE2	13:M:33:THR:HG21	1.87	0.55
68:PB:3:LEU:HD22	68:PB:3:LEU:O	2.06	0.55
68:PB:27:LYS:HE2	68:PB:55:HIS:HA	1.87	0.55
70:RB:28:SER:OG	70:RB:112:VAL:HG22	2.05	0.55
20:T:27:LEU:HD21	20:T:102:LEU:HD13	1.87	0.55
24:X:42:TRP:O	24:X:46:GLN:HG2	2.06	0.55
24:X:38:LYS:HD3	24:X:58:ILE:HD13	1.86	0.55
77:YB:33:LEU:HB3	77:YB:35:VAL:HG23	1.88	0.55
1:A:1387:G:H1'	1:A:1410:A:N6	2.21	0.55
1:A:297:U:O2'	54:BB:33:ALA:HA	2.05	0.55
1:A:862:A:H62	63:KB:70:LYS:HZ1	1.53	0.55
1:A:93:A:H61	1:A:396:G:H1'	1.70	0.55
27:AA:78:VAL:HG13	27:AA:99:ALA:O	2.05	0.55
53:AB:24:PHE:CZ	53:AB:72:LEU:HD13	2.39	0.55
2:B:1460:A:H2'	2:B:1461:A:H8	1.69	0.55
2:B:2129:U:H2'	2:B:2130:G:C8	2.41	0.55
2:B:2615:G:H2'	2:B:2616:C:H6	1.70	0.55
2:B:2642:A:H5'	33:GA:7:HIS:CB	2.35	0.55
2:B:3066:U:H2'	2:B:3067:C:C6	2.41	0.55
4:D:36:C:H2'	4:D:37:G:C8	2.41	0.55
82:DC:27:HIS:ND1	82:DC:28:VAL:HG12	2.21	0.55
57:EB:86:GLN:HG2	57:EB:87:ASP:N	2.20	0.55
6:F:112:ILE:HA	6:F:134:VAL:O	2.07	0.55
6:F:40:TYR:CB	6:F:91:GLY:HA3	2.36	0.55
11:K:221:LYS:HB2	11:K:227:GLY:HA3	1.88	0.55
11:K:236:ILE:O	11:K:239:LEU:HB3	2.06	0.55
63:KB:91:LEU:HD21	63:KB:121:ARG:HD2	1.89	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:M:172:ILE:HD13	13:M:172:ILE:H	1.71	0.55
65:MB:34:VAL:O	65:MB:42:ARG:HG2	2.05	0.55
40:NA:50:LEU:HG	40:NA:54:GLU:CB	2.36	0.55
41:OA:28:HIS:CE1	41:OA:30:GLN:HB2	2.42	0.55
2:B:1845:G:H2'	41:OA:5:THR:HG22	1.88	0.55
68:PB:32:LEU:HB2	68:PB:43:SER:CB	2.36	0.55
17:Q:47:ALA:CB	17:Q:48:PRO:CD	2.83	0.55
43:QA:21:ARG:C	43:QA:21:ARG:HD3	2.27	0.55
19:S:65:ARG:HB3	19:S:129:TYR:CD1	2.41	0.55
2:B:1316:C:N4	20:T:131:PRO:HD3	2.21	0.55
20:T:55:HIS:HA	20:T:58:LEU:CB	2.36	0.55
46:TA:35:LEU:O	46:TA:36:PHE:HB2	2.06	0.55
75:WB:59:TYR:CE2	75:WB:100:ILE:HG12	2.41	0.55
2:B:1324:U:C5'	24:X:2:ALA:N	2.67	0.55
52:ZA:188:LEU:CD1	52:ZA:196:VAL:HG11	2.33	0.55
1:A:1198:G:C3'	1:A:1199:G:H5'	2.34	0.55
1:A:189:C:C3'	1:A:190:C:H5''	2.35	0.55
1:A:971:A:H2'	1:A:972:G:O4'	2.06	0.55
27:AA:34:LEU:HD23	27:AA:61:THR:O	2.05	0.55
2:B:1074:U:H2'	2:B:1076:C:C5	2.41	0.55
2:B:1115:G:H5''	2:B:1116:G:H5'	1.88	0.55
2:B:1364:C:H5''	22:V:3:ILE:HB	1.87	0.55
2:B:1393:A:H2'	2:B:1394:A:C8	2.40	0.55
2:B:2330:C:H2'	2:B:2331:C:C6	2.41	0.55
2:B:2930:A:H2'	2:B:2931:C:O4'	2.07	0.55
2:B:3267:A:C5	10:J:73:GLY:HA3	2.41	0.55
2:B:59:G:C4'	2:B:60:A:H4'	2.34	0.55
2:B:795:G:C2'	2:B:796:U:H5'	2.36	0.55
4:D:4:U:H4'	4:D:26:C:H4'	1.88	0.55
82:DC:338:ILE:HA	82:DC:342:LEU:HD12	1.87	0.55
82:DC:418:TYR:HD2	82:DC:477:ASN:HD21	1.54	0.55
57:EB:24:PHE:CZ	57:EB:77:LEU:HD11	2.41	0.55
6:F:65:ASP:HB3	6:F:70:ARG:HB3	1.88	0.55
32:FA:131:SER:HB3	32:FA:134:ALA:HB2	1.87	0.55
1:A:767:U:N3	59:GB:143:ILE:HD11	2.20	0.55
9:I:108:ARG:HG2	9:I:251:PRO:O	2.07	0.55
1:A:249:U:H3	61:IB:17:PRO:HG2	1.71	0.55
37:KA:29:LEU:HD13	37:KA:75:HIS:NE2	2.21	0.55
63:KB:99:ARG:O	63:KB:103:GLU:HG2	2.06	0.55
63:KB:123:HIS:CE1	63:KB:141:TYR:HD2	2.25	0.55
12:L:150:LEU:HD22	12:L:151:VAL:H	1.71	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:L:153:ILE:HG23	12:L:166:LEU:CD1	2.36	0.55
12:L:185:ARG:HA	12:L:188:THR:OG1	2.06	0.55
40:NA:8:ALA:O	40:NA:13:LYS:HG3	2.06	0.55
66:NB:103:ASN:HA	66:NB:106:LYS:NZ	2.21	0.55
2:B:3260:G:O2'	18:R:126:GLN:HG3	2.06	0.55
19:S:114:ARG:HG2	19:S:137:PRO:HG3	1.88	0.55
19:S:44:ARG:NH2	19:S:47:LYS:HD2	2.20	0.55
19:S:54:LYS:HB2	19:S:59:PHE:CZ	2.41	0.55
21:U:41:LEU:HB3	21:U:112:LEU:O	2.06	0.55
1:A:1149:G:H1	1:A:1628:U:H3	1.55	0.55
1:A:1215:C:OP1	1:A:1246:C:H4'	2.05	0.55
1:A:19:A:H4'	1:A:571:G:H2'	1.87	0.55
1:A:654:C:H5'	1:A:655:G:OP2	2.06	0.55
2:B:1666:G:H4'	2:B:1742:U:O2'	2.05	0.55
2:B:1854:C:H2'	2:B:1855:U:O4'	2.06	0.55
2:B:231:G:H2'	2:B:232:G:C8	2.41	0.55
2:B:268:A:OP1	19:S:47:LYS:HE2	2.07	0.55
2:B:2896:A:O3'	44:RA:95:VAL:HG21	2.07	0.55
2:B:693:A:H2'	2:B:694:C:O4'	2.06	0.55
56:DB:69:LEU:O	56:DB:99:GLY:HA3	2.07	0.55
1:A:803:A:O2'	57:EB:103:SER:HB2	2.07	0.55
57:EB:81:LEU:HD13	57:EB:90:VAL:HG11	1.88	0.55
6:F:198:LYS:HE3	6:F:198:LYS:HA	1.86	0.55
6:F:229:ALA:H	6:F:234:LYS:HE3	1.71	0.55
6:F:45:VAL:HB	6:F:88:ILE:HD12	1.87	0.55
32:FA:21:ARG:HA	32:FA:24:LYS:HG2	1.86	0.55
1:A:197:A:N6	58:FB:141:ARG:HH22	2.04	0.55
7:G:303:LYS:HB3	7:G:372:THR:HG22	1.86	0.55
34:HA:53:LYS:O	34:HA:57:GLU:HG3	2.05	0.55
10:J:64:LEU:HD21	10:J:106:PHE:HE2	1.70	0.55
10:J:68:PRO:HB2	10:J:71:VAL:HG22	1.88	0.55
63:KB:114:ARG:O	63:KB:118:ILE:HG13	2.07	0.55
12:L:46:LEU:HA	12:L:49:TYR:HE1	1.71	0.55
3:C:61:A:OP2	39:MA:48:ARG:HD3	2.07	0.55
16:P:124:THR:HB	16:P:127:SER:HB2	1.88	0.55
17:Q:118:GLU:O	17:Q:122:LYS:HG2	2.07	0.55
18:R:81:VAL:O	18:R:85:TRP:HB2	2.06	0.55
46:TA:67:LYS:HG3	46:TA:87:ARG:CG	2.29	0.55
22:V:68:ALA:HA	22:V:71:LEU:HD12	1.87	0.55
22:V:70:ALA:HA	22:V:73:GLN:NE2	2.20	0.55
48:VA:30:VAL:CG2	48:VA:31:ASP:H	2.14	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1861:G:H4'	23:W:63:THR:HG21	1.87	0.55
77:YB:20:LYS:O	77:YB:26:GLN:HA	2.06	0.55
1:A:621:A:N3	1:A:1107:G:H1'	2.21	0.55
1:A:139:C:H42	1:A:175:G:H21	1.54	0.55
1:A:843:U:H2'	1:A:844:A:H8	1.70	0.55
27:AA:10:LYS:HD2	27:AA:13:ILE:CD1	2.36	0.55
27:AA:78:VAL:HA	27:AA:100:GLY:HA2	1.87	0.55
2:B:1317:A:H4'	20:T:18:ARG:NH2	2.07	0.55
2:B:2140:U:O2'	2:B:2141:U:H5'	2.07	0.55
2:B:2748:A:N3	9:I:36:LEU:HG	2.21	0.55
2:B:2968:G:H2'	2:B:2969:A:H8	1.71	0.55
2:B:577:C:C2'	2:B:579:G:H5"	2.35	0.55
2:B:646:A:H2'	2:B:647:A:O4'	2.06	0.55
2:B:965:A:H2'	2:B:966:U:H6	1.70	0.55
54:BB:133:LYS:O	54:BB:134:LYS:HB2	2.06	0.55
3:C:91:C:H4'	30:DA:24:SER:H	1.71	0.55
31:EA:106:GLN:O	31:EA:110:ALA:HB2	2.07	0.55
83:EC:6824:C:H2'	83:EC:6825:A:H8	1.70	0.55
6:F:115:ASN:OD1	6:F:124:GLY:HA2	2.06	0.55
2:B:714:G:C4	32:FA:113:LEU:HD11	2.41	0.55
7:G:66:LYS:HG2	7:G:70:ARG:NH2	2.22	0.55
63:KB:102:LEU:HD23	63:KB:108:ASP:HB2	1.88	0.55
31:EA:14:VAL:HG13	38:LA:89:ILE:HB	1.87	0.55
13:M:133:THR:O	13:M:146:LEU:HA	2.06	0.55
65:MB:60:LEU:HD22	65:MB:76:VAL:HG21	1.89	0.55
4:D:56:A:C2	15:O:138:VAL:HG21	2.41	0.55
15:O:36:VAL:HG11	15:O:109:HIS:CD2	2.41	0.55
68:PB:28:ILE:O	68:PB:28:ILE:HD13	2.06	0.55
48:VA:128:MET:SD	48:VA:150:ILE:HD12	2.46	0.55
24:X:80:ARG:O	24:X:122:HIS:HB2	2.06	0.55
26:Z:34:ALA:O	26:Z:38:ILE:HG22	2.06	0.55
1:A:969:C:H4'	1:A:1104:U:O4'	2.07	0.55
1:A:1219:A:H62	1:A:1264:G:H21	1.54	0.55
1:A:330:G:O2'	1:A:331:A:H5'	2.06	0.55
53:AB:118:ALA:O	53:AB:122:VAL:HG23	2.07	0.55
2:B:1115:G:H5"	2:B:1116:G:C5'	2.37	0.55
2:B:1129:A:H2'	2:B:1130:A:C8	2.41	0.55
2:B:1541:G:H1'	2:B:1557:A:C2	2.40	0.55
2:B:1661:G:C2'	2:B:1662:G:H5'	2.36	0.55
2:B:2249:G:H2'	2:B:2250:G:C8	2.41	0.55
2:B:2895:G:H5'	2:B:3107:U:O2'	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2909:U:H2'	2:B:2910:A:H5''	1.89	0.55
2:B:2922:G:C2'	2:B:2923:U:H4'	2.29	0.55
2:B:3078:U:H4'	2:B:3079:U:H5''	1.86	0.55
2:B:872:U:O2'	2:B:873:C:H5'	2.07	0.55
3:C:141:C:H2'	3:C:142:C:C6	2.42	0.55
30:DA:27:ARG:HG2	30:DA:78:PHE:CE1	2.41	0.55
82:DC:420:PRO:HG2	82:DC:476:HIS:HA	1.88	0.55
82:DC:77:LEU:HB2	82:DC:100:ILE:CB	2.35	0.55
57:EB:97:ARG:O	57:EB:98:ILE:HB	2.06	0.55
6:F:48:ILE:HG13	6:F:48:ILE:O	2.05	0.55
1:A:1676:U:H5''	58:FB:58:LEU:HD22	1.89	0.55
2:B:2394:G:N3	7:G:259:HIS:HA	2.21	0.55
59:GB:78:ARG:O	59:GB:82:ARG:HB2	2.06	0.55
8:H:156:LEU:HD22	8:H:251:THR:CG2	2.36	0.55
60:HB:39:ASN:O	60:HB:43:ILE:HG13	2.06	0.55
2:B:2345:A:H5''	35:IA:24:SER:HB3	1.87	0.55
10:J:72:ASN:ND2	10:J:72:ASN:H	2.05	0.55
8:H:330:TYR:HA	11:K:45:LEU:HD11	1.89	0.55
13:M:90:MET:HG2	13:M:181:VAL:CA	2.35	0.55
13:M:73:SER:HA	13:M:76:ASP:HB3	1.89	0.55
65:MB:34:VAL:HA	65:MB:37:ALA:HB3	1.87	0.55
67:OB:90:ALA:O	67:OB:91:LEU:O	2.24	0.55
2:B:1255:C:H1'	16:P:131:GLU:HG3	1.89	0.55
68:PB:41:ARG:CZ	69:QB:46:PRO:HD3	2.36	0.55
19:S:159:ARG:HD3	19:S:159:ARG:C	2.27	0.55
19:S:18:VAL:O	19:S:22:LEU:HD22	2.05	0.55
2:B:145:G:H5'	19:S:56:LYS:HA	1.87	0.55
32:FA:55:LYS:HE3	46:TA:42:ARG:HH22	1.72	0.55
22:V:19:PRO:C	22:V:21:SER:H	2.09	0.55
74:VB:91:LEU:HA	74:VB:94:TYR:CD2	2.42	0.55
27:AA:37:ILE:HG13	27:AA:59:MET:O	2.07	0.55
53:AB:25:PHE:CD1	53:AB:29:LEU:HG	2.42	0.55
2:B:1112:A:H2'	2:B:1113:G:O4'	2.07	0.55
2:B:1263:A:N6	16:P:136:ALA:HB2	2.22	0.55
2:B:858:A:H5''	2:B:1790:G:N3	2.22	0.55
2:B:2746:A:H61	9:I:32:GLN:NE2	2.04	0.55
2:B:2999:U:H2'	2:B:3000:A:C8	2.41	0.55
2:B:424:G:H2'	2:B:425:G:C8	2.41	0.55
28:BA:21:PHE:CD2	28:BA:29:PHE:HB2	2.41	0.55
3:C:36:G:H2'	3:C:37:A:C2	2.41	0.55
29:CA:109:LYS:HE2	29:CA:111:ASN:HD21	1.71	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:CA:83:VAL:HA	29:CA:122:ALA:O	2.07	0.55
82:DC:335:LEU:HA	82:DC:338:ILE:CD1	2.30	0.55
82:DC:468:THR:HG21	82:DC:478:MET:H	1.71	0.55
82:DC:784:LEU:CD2	82:DC:794:PRO:HB3	2.37	0.55
5:E:104:SER:HB3	5:E:128:LEU:HD21	1.89	0.55
1:A:1727:G:N2	58:FB:32:GLN:HE22	2.03	0.55
7:G:358:TRP:HZ2	7:G:371:GLN:CD	2.10	0.55
7:G:55:THR:HB	7:G:360:ASP:HB2	1.89	0.55
2:B:805:G:C5'	8:H:74:ILE:HA	2.36	0.55
11:K:144:ILE:HA	11:K:147:LEU:CD1	2.36	0.55
2:B:578:A:N6	11:K:52:GLN:HE22	2.05	0.55
14:N:166:ILE:HG21	25:Y:160:ILE:HG22	1.86	0.55
15:O:54:VAL:HG22	15:O:59:ILE:HD11	1.88	0.55
41:OA:17:THR:HG22	41:OA:18:LEU:HD22	1.88	0.55
41:OA:63:ARG:O	41:OA:64:MET:HG3	2.06	0.55
43:QA:21:ARG:HD3	43:QA:22:PRO:N	2.21	0.55
2:B:2897:A:H5''	44:RA:125:LYS:HG3	1.89	0.55
19:S:190:THR:O	19:S:194:GLN:HG2	2.06	0.55
71:SB:20:THR:HA	72:TB:23:ARG:NH1	2.21	0.55
21:U:146:ILE:HD12	21:U:146:ILE:N	2.22	0.55
22:V:82:VAL:O	22:V:139:ILE:HG23	2.07	0.55
74:VB:87:PRO:O	74:VB:91:LEU:HG	2.07	0.55
23:W:41:ILE:HG23	23:W:50:ILE:HD13	1.89	0.55
75:WB:54:VAL:HG11	75:WB:88:ILE:HB	1.89	0.55
24:X:42:TRP:NE1	24:X:53:LYS:HG3	2.22	0.55
1:A:318:U:H5''	58:FB:11:ARG:NH1	2.21	0.55
1:A:336:G:H2'	1:A:338:C:H5	1.71	0.55
1:A:611:U:H2'	1:A:612:U:H5'	1.88	0.55
1:A:969:C:O2'	1:A:1104:U:H4'	2.06	0.55
2:B:1254:C:H1'	16:P:135:THR:OG1	2.07	0.55
2:B:1639:C:OP1	38:LA:52:GLN:HG3	2.07	0.55
2:B:2600:C:H2'	2:B:2601:A:C8	2.41	0.55
2:B:3108:G:H3'	2:B:3109:G:H5''	1.89	0.55
2:B:48:A:OP1	2:B:48:A:H8	1.89	0.55
2:B:905:U:H2'	2:B:910:G:H4'	1.89	0.55
28:BA:31:PHE:CE1	28:BA:37:ALA:HA	2.42	0.55
3:C:140:G:H2'	3:C:141:C:H5'	1.88	0.55
56:DB:135:PRO:HB3	56:DB:141:ILE:HG12	1.87	0.55
82:DC:760:ARG:HD2	82:DC:763:THR:OG1	2.06	0.55
83:EC:6886:A:C2'	83:EC:6887:G:H5'	2.32	0.55
7:G:214:MET:O	7:G:341:SER:HB2	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:60:LEU:HB2	7:G:72:VAL:HG11	1.89	0.55
2:B:2818:U:H5''	33:GA:2:ALA:N	2.22	0.55
2:B:346:C:OP1	8:H:53:SER:HB2	2.07	0.55
34:HA:31:VAL:HG12	34:HA:35:ARG:CD	2.36	0.55
34:HA:42:ILE:HA	34:HA:90:VAL:O	2.05	0.55
1:A:1582:U:H5''	66:NB:135:ARG:HH11	1.72	0.55
17:Q:48:PRO:HB3	17:Q:137:GLN:HB3	1.88	0.55
18:R:46:ILE:HD11	18:R:58:ILE:HG22	1.87	0.55
70:RB:106:ILE:HG13	70:RB:107:THR:N	2.21	0.55
70:RB:34:LEU:CD1	70:RB:89:ARG:HD2	2.36	0.55
20:T:82:LYS:C	20:T:84:LEU:H	2.10	0.55
2:B:2131:A:H61	47:UA:18:TYR:CA	2.20	0.55
23:W:67:ALA:O	23:W:71:ARG:HG3	2.07	0.55
24:X:26:ARG:HH12	24:X:28:ARG:NH2	1.82	0.55
50:XA:73:VAL:O	50:XA:95:ALA:HB1	2.07	0.55
63:KB:61:THR:HG22	77:YB:32:PHE:CE2	2.42	0.55
1:A:1048:G:H5''	77:YB:68:GLY:C	2.27	0.55
1:A:1665:U:H1'	1:A:1737:G:N2	2.21	0.55
1:A:16:G:H2'	1:A:17:C:C6	2.42	0.55
1:A:429:G:OP1	1:A:439:U:H2'	2.06	0.55
27:AA:79:VAL:HB	27:AA:118:VAL:HG13	1.89	0.55
2:B:1146:C:H5''	36:JA:47:ARG:HG3	1.89	0.55
2:B:1383:G:H2'	2:B:1384:U:O4'	2.07	0.55
2:B:2266:U:H2'	2:B:2267:C:O4'	2.07	0.55
2:B:277:G:H5''	46:TA:49:GLY:HA2	1.88	0.55
2:B:374:A:O2'	2:B:376:G:H5'	2.07	0.55
2:B:821:U:H2'	2:B:822:G:C8	2.41	0.55
2:B:829:U:H1'	2:B:866:A:N1	2.22	0.55
82:DC:508:LEU:HD23	82:DC:545:LEU:HD21	1.89	0.55
82:DC:574:THR:HG23	82:DC:689:LEU:HD12	1.88	0.55
31:EA:53:VAL:HG23	31:EA:57:HIS:CD2	2.42	0.55
57:EB:130:VAL:HG21	57:EB:154:LEU:HD21	1.89	0.55
32:FA:60:TYR:CD1	32:FA:63:LYS:HB2	2.41	0.55
7:G:338:LEU:HD22	7:G:338:LEU:N	2.21	0.55
7:G:49:TYR:HB2	7:G:80:ASP:HB3	1.88	0.55
59:GB:92:LYS:HA	59:GB:92:LYS:HE3	1.87	0.55
8:H:2:SER:O	8:H:4:PRO:HD3	2.06	0.55
60:HB:54:TYR:HB3	60:HB:72:GLY:HA3	1.89	0.55
13:M:100:ASN:HB3	13:M:115:ARG:H	1.70	0.55
14:N:43:VAL:HG12	14:N:171:TRP:HD1	1.72	0.55
66:NB:42:GLU:HG3	66:NB:45:ARG:NH2	2.21	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:OA:4:GLY:O	41:OA:8:PHE:HD1	1.90	0.55
67:OB:46:LEU:H	67:OB:46:LEU:HD12	1.72	0.55
69:QB:13:ASP:HA	69:QB:16:ASN:HD22	1.72	0.55
20:T:9:ILE:HA	20:T:118:VAL:HG22	1.89	0.55
21:U:169:THR:H	21:U:172:GLN:HE21	1.53	0.55
47:UA:54:ILE:HG23	47:UA:63:THR:CG2	2.37	0.55
49:WA:164:ASP:O	49:WA:165:ASP:HB3	2.07	0.55
50:XA:139:VAL:HG13	50:XA:141:ILE:HG13	1.87	0.55
1:A:312:A:N3	1:A:314:C:H2'	2.22	0.55
1:A:75:U:H3'	1:A:76:A:H5''	1.89	0.55
53:AB:122:VAL:O	53:AB:126:VAL:HG23	2.07	0.55
49:WA:191:ASP:O	53:AB:222:VAL:HA	2.07	0.55
2:B:1125:U:OP1	14:N:15:LYS:HB2	2.07	0.55
2:B:1306:G:N1	2:B:2367:A:H1'	2.21	0.55
2:B:1317:A:H3'	2:B:1317:A:OP2	2.07	0.55
2:B:1729:A:H3'	2:B:1730:G:C5'	2.37	0.55
2:B:1908:A:H2	2:B:2336:U:H5'	1.72	0.55
2:B:2424:A:H62	2:B:2605:G:N2	1.95	0.55
2:B:2641:U:H4'	33:GA:7:HIS:NE2	2.22	0.55
2:B:2662:G:H2'	2:B:2663:G:H8	1.69	0.55
2:B:2686:A:H2'	2:B:2687:G:O4'	2.07	0.55
2:B:2755:C:O2'	2:B:2756:C:H5'	2.06	0.55
2:B:279:U:H2'	2:B:280:U:C4'	2.37	0.55
2:B:2841:G:H3'	2:B:2842:U:C5'	2.37	0.55
2:B:3055:U:H1'	2:B:3057:U:OP1	2.07	0.55
2:B:3072:C:H2'	2:B:3073:A:O4'	2.07	0.55
2:B:3122:A:O2'	2:B:3123:A:H5'	2.06	0.55
2:B:3314:A:H2'	2:B:3315:G:H8	1.70	0.55
2:B:3354:U:H5''	2:B:3356:G:H5'	1.89	0.55
2:B:47:C:O5'	2:B:48:A:H2'	2.07	0.55
2:B:623:U:H4'	37:KA:86:ARG:NH2	2.22	0.55
2:B:69:C:H2'	2:B:70:A:O4'	2.06	0.55
2:B:797:U:H2'	2:B:798:G:C8	2.41	0.55
2:B:951:A:H2'	2:B:952:A:C8	2.42	0.55
2:B:973:A:H2'	2:B:974:G:C4'	2.36	0.55
28:BA:56:ARG:NE	28:BA:56:ARG:HA	2.22	0.55
55:CB:163:SER:HA	78:ZB:54:LEU:CD1	2.37	0.55
3:C:22:U:H5'	30:DA:16:ARG:CD	2.36	0.55
56:DB:49:VAL:HB	56:DB:115:LYS:HB3	1.89	0.55
82:DC:379:MET:HB2	82:DC:401:PHE:HB2	1.89	0.55
57:EB:56:LYS:HD2	57:EB:88:ARG:HH12	1.71	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:21:ARG:HD2	6:F:22:LEU:N	2.22	0.55
58:FB:21:PHE:O	58:FB:22:ARG:HG2	2.07	0.55
59:GB:129:ILE:O	59:GB:142:ASN:HA	2.07	0.55
8:H:280:ILE:O	22:V:123:THR:HB	2.07	0.55
1:A:373:G:O5'	61:IB:96:LYS:HA	2.06	0.55
38:LA:3:GLN:CG	38:LA:30:LEU:HB3	2.37	0.55
39:MA:101:THR:C	39:MA:103:LYS:H	2.10	0.55
65:MB:25:LEU:HD22	65:MB:87:PRO:HG2	1.89	0.55
15:O:114:ILE:HG22	15:O:115:LYS:N	2.22	0.55
67:OB:91:LEU:O	67:OB:92:ASP:C	2.45	0.55
16:P:122:GLY:O	16:P:123:ARG:HD3	2.07	0.55
19:S:84:PRO:HA	19:S:87:GLN:CG	2.36	0.55
2:B:879:U:O2'	21:U:131:ARG:HB3	2.07	0.55
22:V:84:VAL:HG22	22:V:141:ARG:HH21	1.72	0.55
8:H:31:ARG:HD2	22:V:24:VAL:HB	1.88	0.55
1:A:1080:U:H2'	1:A:1081:A:H5'	1.89	0.54
1:A:1656:U:O5'	1:A:1657:U:H5''	2.07	0.54
1:A:1731:A:H2'	1:A:1732:A:O4'	2.06	0.54
27:AA:104:ASN:HD21	27:AA:106:LYS:HG3	1.72	0.54
2:B:1449:A:H1'	2:B:2983:C:C5	2.42	0.54
2:B:1520:G:H5''	29:CA:69:SER:CB	2.31	0.54
2:B:3030:G:H3'	2:B:3031:G:H8	1.72	0.54
2:B:640:U:H2'	2:B:641:C:C6	2.42	0.54
55:CB:128:ASN:HD22	55:CB:129:PRO:HD2	1.71	0.54
82:DC:28:VAL:HG13	82:DC:29:ASP:N	2.22	0.54
82:DC:728:VAL:HG21	82:DC:802:SER:HB2	1.88	0.54
82:DC:744:TYR:HA	82:DC:747:LEU:HD23	1.89	0.54
82:DC:804:LEU:HD11	82:DC:814:LYS:CB	2.35	0.54
57:EB:17:GLU:HG3	57:EB:43:PHE:CZ	2.41	0.54
83:EC:6912:G:H2'	83:EC:6913:U:C4'	2.37	0.54
7:G:209:PHE:HB3	7:G:213:GLU:OE2	2.05	0.54
59:GB:140:ILE:HG12	59:GB:159:ALA:CB	2.37	0.54
8:H:65:TRP:HE3	8:H:71:VAL:HG11	1.71	0.54
34:HA:53:LYS:HG2	34:HA:57:GLU:OE1	2.06	0.54
60:HB:87:VAL:H	60:HB:88:PRO:HD3	1.69	0.54
68:PB:126:ARG:HE	68:PB:133:VAL:HA	1.72	0.54
17:Q:46:ILE:CG2	17:Q:49:ARG:HB2	2.36	0.54
13:M:22:SER:H	18:R:8:LYS:CG	2.20	0.54
20:T:126:VAL:HG13	20:T:127:LEU:H	1.72	0.54
21:U:94:LEU:HD23	21:U:148:LEU:CD2	2.37	0.54
48:VA:43:LYS:HA	48:VA:46:ARG:HG2	1.88	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:WA:10:ARG:HE	49:WA:10:ARG:HA	1.72	0.54
55:CB:148:ARG:HB3	78:ZB:22:ARG:HH22	1.72	0.54
1:A:230:C:H3'	1:A:231:U:C5'	2.36	0.54
1:A:317:C:H4'	1:A:354:C:O2'	2.07	0.54
1:A:354:C:OP1	58:FB:16:ALA:HB2	2.08	0.54
1:A:680:U:C2'	1:A:681:U:H5'	2.35	0.54
2:B:1052:U:O2	4:D:103:A:H4'	2.06	0.54
2:B:1311:G:H8	2:B:1311:G:O5'	1.90	0.54
2:B:1370:G:P	32:FA:16:SER:HB2	2.46	0.54
2:B:1686:U:H5	26:Z:82:LYS:HE2	1.71	0.54
2:B:1694:U:H4'	38:LA:24:LYS:HG3	1.88	0.54
2:B:2076:G:C3'	2:B:2077:U:H5''	2.37	0.54
2:B:2132:C:H2'	2:B:2133:U:H6	1.70	0.54
2:B:2544:U:H2'	2:B:2545:C:C6	2.42	0.54
2:B:2574:G:C8	31:EA:56:LYS:HD3	2.42	0.54
2:B:2885:C:H2'	2:B:2886:U:C6	2.42	0.54
2:B:3320:A:H2'	2:B:3321:C:O4'	2.08	0.54
29:CA:43:ALA:N	29:CA:44:PRO:HD3	2.23	0.54
4:D:23:A:H2'	4:D:24:A:C8	2.42	0.54
30:DA:23:PRO:HD2	30:DA:26:GLN:NE2	2.22	0.54
56:DB:220:LYS:O	56:DB:220:LYS:HE3	2.08	0.54
82:DC:734:GLN:HE21	82:DC:765:LEU:HG	1.72	0.54
6:F:112:ILE:HG13	6:F:135:ILE:HG23	1.90	0.54
2:B:714:G:N2	32:FA:72:VAL:HG11	2.21	0.54
7:G:122:TRP:HA	7:G:125:SER:HB3	1.90	0.54
8:H:153:SER:HA	8:H:252:GLU:HB2	1.89	0.54
1:A:112:A:O2'	61:IB:67:ARG:HG2	2.07	0.54
38:LA:54:ILE:HD11	38:LA:78:GLY:HA2	1.89	0.54
13:M:117:PHE:O	13:M:118:LEU:HB2	2.08	0.54
39:MA:89:ARG:NH1	39:MA:89:ARG:HB3	2.19	0.54
14:N:87:LEU:HD11	14:N:136:PHE:CE2	2.43	0.54
66:NB:97:VAL:HG12	66:NB:98:ASP:N	2.22	0.54
16:P:106:LEU:N	16:P:142:ARG:HG3	2.20	0.54
20:T:20:ALA:O	20:T:84:LEU:HD21	2.08	0.54
57:EB:138:LYS:HB2	72:TB:54:ASP:HB3	1.88	0.54
2:B:389:A:H1'	21:U:101:ASN:OD1	2.06	0.54
73:UB:52:ILE:HD11	73:UB:77:ILE:HG12	1.89	0.54
22:V:65:SER:HB3	22:V:90:ASP:OD2	2.06	0.54
48:VA:77:LEU:HB3	48:VA:78:PRO:CD	2.38	0.54
24:X:29:ILE:CG2	24:X:37:ALA:HA	2.37	0.54
25:Y:76:ILE:HG22	25:Y:77:ASN:H	1.72	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:Y:57:TYR:OH	25:Y:87:LYS:HD3	2.07	0.54
77:YB:35:VAL:HG22	77:YB:79:PHE:HB2	1.89	0.54
52:ZA:38:VAL:HG22	52:ZA:39:THR:N	2.22	0.54
1:A:1569:A:H2'	1:A:1570:A:H8	1.73	0.54
1:A:445:A:H1'	1:A:525:A:OP1	2.08	0.54
2:B:130:A:H2'	2:B:131:C:O4'	2.08	0.54
2:B:794:U:H4'	2:B:1372:C:OP1	2.07	0.54
2:B:1708:C:H2'	2:B:1709:C:C6	2.42	0.54
2:B:1801:U:H2'	2:B:1802:C:C6	2.42	0.54
2:B:221:A:OP1	8:H:199:TRP:HZ2	1.90	0.54
2:B:2232:A:H1'	2:B:2429:G:O4'	2.08	0.54
2:B:3369:G:H2'	7:G:380:MET:HE3	1.88	0.54
2:B:348:A:H4'	2:B:367:A:N6	2.20	0.54
2:B:421:G:N3	2:B:421:G:H3'	2.23	0.54
2:B:759:U:C2'	2:B:760:G:H5'	2.37	0.54
2:B:839:C:H1'	2:B:1724:U:OP2	2.07	0.54
54:BB:71:LYS:HA	54:BB:76:VAL:O	2.07	0.54
31:EA:4:PHE:O	31:EA:9:LYS:HG2	2.07	0.54
6:F:41:ILE:HG12	6:F:42:ARG:N	2.22	0.54
7:G:102:LEU:O	7:G:103:THR:HG23	2.08	0.54
2:B:2401:A:O3'	8:H:68:GLY:HA2	2.07	0.54
9:I:163:LEU:HD11	9:I:173:VAL:HG11	1.88	0.54
63:KB:146:ALA:O	63:KB:150:VAL:HG12	2.07	0.54
12:L:203:VAL:CG2	12:L:208:GLU:HA	2.35	0.54
14:N:97:LEU:HD21	14:N:126:ALA:HB2	1.88	0.54
66:NB:7:VAL:HG12	66:NB:95:LYS:CE	2.37	0.54
3:C:51:G:H4'	43:QA:21:ARG:NH1	2.22	0.54
2:B:44:U:H4'	46:TA:54:THR:CG2	2.37	0.54
23:W:183:ALA:HA	23:W:186:LYS:HB3	1.88	0.54
49:WA:115:ILE:HG13	49:WA:121:MET:O	2.06	0.54
49:WA:214:ALA:HB2	49:WA:220:ILE:HG12	1.89	0.54
25:Y:27:LEU:HA	25:Y:30:TYR:CD2	2.43	0.54
77:YB:50:ALA:O	77:YB:51:GLN:HB2	2.07	0.54
26:Z:78:TYR:O	26:Z:82:LYS:HB2	2.07	0.54
52:ZA:227:PRO:HA	52:ZA:230:TRP:CG	2.42	0.54
1:A:1340:U:C6	1:A:1378:U:H4'	2.41	0.54
1:A:214:G:H21	1:A:251:A:H62	1.54	0.54
1:A:385:A:H5''	58:FB:22:ARG:CB	2.36	0.54
2:B:123:A:OP1	12:L:105:LYS:HG2	2.08	0.54
2:B:127:G:H2'	2:B:128:G:O4'	2.07	0.54
2:B:1358:C:H2'	2:B:1359:C:H6	1.73	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2628:A:C3'	2:B:2629:U:H5''	2.37	0.54
2:B:3061:G:H2'	2:B:3062:G:O4'	2.07	0.54
2:B:3236:U:H2'	2:B:3237:U:C6	2.42	0.54
2:B:737:G:H2'	2:B:738:A:C8	2.42	0.54
1:A:757:A:H5''	54:BB:22:LYS:HE2	1.88	0.54
1:A:1535:U:N3	55:CB:187:ILE:HA	2.22	0.54
82:DC:86:VAL:HA	82:DC:89:ILE:HD12	1.89	0.54
7:G:172:ALA:O	7:G:174:LYS:HE3	2.08	0.54
7:G:48:GLY:HA3	7:G:338:LEU:HD21	1.89	0.54
8:H:31:ARG:CZ	22:V:23:ASN:HA	2.37	0.54
8:H:39:PHE:HE1	8:H:236:LEU:HA	1.73	0.54
12:L:78:PHE:O	12:L:79:GLN:HG3	2.07	0.54
13:M:86:TYR:N	13:M:187:ILE:HG13	2.22	0.54
39:MA:10:ARG:HD3	39:MA:57:VAL:CG1	2.38	0.54
17:Q:101:ARG:HG2	17:Q:102:GLN:N	2.23	0.54
69:QB:35:ASP:H	69:QB:53:TRP:HZ2	1.54	0.54
2:B:2424:A:H1'	19:S:78:GLY:N	2.22	0.54
46:TA:67:LYS:CG	46:TA:87:ARG:HG3	2.29	0.54
22:V:152:HIS:HB3	22:V:162:ALA:HB3	1.88	0.54
48:VA:165:VAL:CG1	48:VA:170:ALA:HB2	2.37	0.54
74:VB:23:PHE:HE2	74:VB:75:VAL:HG12	1.73	0.54
20:T:126:VAL:HG21	24:X:170:THR:HG22	1.89	0.54
77:YB:14:SER:HA	77:YB:17:ARG:HG2	1.89	0.54
52:ZA:178:ILE:HG23	52:ZA:196:VAL:HG12	1.89	0.54
52:ZA:65:GLU:HB2	52:ZA:68:ILE:HG13	1.88	0.54
1:A:1682:U:H4'	56:DB:65:GLN:CD	2.27	0.54
1:A:310:C:H4'	73:UB:33:LEU:HD21	1.90	0.54
1:A:302:U:H1'	1:A:334:G:H22	1.72	0.54
79:AC:5:ASN:HA	79:AC:7:TRP:CZ3	2.41	0.54
2:B:1344:G:C2	2:B:1345:G:H1'	2.42	0.54
2:B:1383:G:OP1	8:H:203:ARG:HB2	2.07	0.54
2:B:1391:C:O2	36:JA:103:LYS:HB3	2.08	0.54
2:B:208:C:H2'	2:B:209:A:H5'	1.88	0.54
2:B:2128:C:H4'	2:B:2280:A:O2'	2.06	0.54
2:B:2228:A:H2'	2:B:2229:A:C8	2.43	0.54
2:B:2434:U:H5''	19:S:24:ARG:HD2	1.88	0.54
2:B:2533:G:H2'	2:B:2534:G:H8	1.72	0.54
2:B:2842:U:H3'	2:B:2844:C:H41	1.72	0.54
2:B:2895:G:H5''	44:RA:102:ARG:HH21	1.72	0.54
2:B:3054:U:H2'	2:B:3055:U:C5	2.43	0.54
54:BB:123:LEU:HB3	54:BB:159:THR:OG1	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:DB:122:GLU:O	56:DB:126:ASP:HB3	2.08	0.54
82:DC:488:VAL:HG12	82:DC:796:MET:HB2	1.88	0.54
57:EB:172:VAL:O	57:EB:176:LEU:HG	2.07	0.54
7:G:111:SER:HB2	7:G:163:HIS:HE1	1.71	0.54
7:G:339:ARG:NE	7:G:342:LEU:HD21	2.22	0.54
7:G:56:ILE:HG22	7:G:76:VAL:HG22	1.90	0.54
8:H:283:THR:HB	8:H:289:ILE:HD11	1.89	0.54
2:B:365:A:H1'	8:H:82:THR:O	2.08	0.54
11:K:40:LYS:O	11:K:44:ILE:HG13	2.07	0.54
11:K:91:GLY:O	11:K:92:ILE:HG13	2.08	0.54
12:L:153:ILE:CD1	12:L:177:TYR:HB2	2.38	0.54
12:L:72:PRO:HB2	12:L:74:THR:HG22	1.89	0.54
15:O:135:GLY:O	15:O:138:VAL:HG23	2.08	0.54
2:B:818:C:H4'	41:OA:10:LYS:HD3	1.88	0.54
66:NB:35:PRO:CD	69:QB:8:ASP:HA	2.38	0.54
70:RB:71:PRO:CA	79:AC:40:ARG:HH22	2.20	0.54
19:S:102:ALA:O	19:S:106:VAL:HG22	2.07	0.54
19:S:136:ASP:O	19:S:142:ILE:HB	2.07	0.54
2:B:282:G:O6	19:S:181:ASN:HB3	2.07	0.54
12:L:162:LEU:HD23	19:S:7:LEU:HD22	1.90	0.54
72:TB:79:PHE:O	72:TB:125:ILE:HG22	2.06	0.54
21:U:126:ARG:HA	21:U:140:GLU:CA	2.34	0.54
74:VB:106:GLN:O	74:VB:110:GLN:HG3	2.08	0.54
75:WB:41:ILE:HD11	75:WB:43:ASP:HB2	1.89	0.54
50:XA:50:VAL:HG22	67:OB:109:LEU:CD2	2.38	0.54
25:Y:105:PHE:O	25:Y:109:VAL:HG23	2.07	0.54
1:A:1180:C:H2'	1:A:1181:U:O4'	2.07	0.54
1:A:479:C:H4'	59:GB:120:LYS:HZ1	1.73	0.54
1:A:67:A:O2'	1:A:69:G:H5''	2.08	0.54
1:A:788:A:C6	54:BB:19:LEU:HD13	2.42	0.54
27:AA:19:VAL:HG22	27:AA:36:ILE:HG22	1.88	0.54
2:B:1215:U:H3	2:B:1290:A:H61	1.56	0.54
2:B:2416:U:H1'	2:B:2967:A:N3	2.22	0.54
2:B:2754:G:H3'	2:B:2755:C:C5'	2.37	0.54
2:B:2882:U:O4'	7:G:264:VAL:HG12	2.07	0.54
2:B:3343:G:C4'	2:B:3362:A:H61	2.11	0.54
2:B:337:G:H1'	8:H:48:GLN:HB3	1.89	0.54
2:B:588:G:H21	2:B:611:A:H5''	1.71	0.54
2:B:750:G:C5'	33:GA:44:LYS:HG3	2.37	0.54
56:DB:57:ASP:OD2	56:DB:61:PHE:HB2	2.06	0.54
56:DB:6:SER:OG	56:DB:112:VAL:HG22	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:155:VAL:H	82:DC:202:VAL:HG21	1.72	0.54
82:DC:17:THR:HG22	82:DC:346:VAL:HG21	1.88	0.54
82:DC:495:VAL:HG11	82:DC:501:LEU:HA	1.89	0.54
31:EA:14:VAL:O	38:LA:89:ILE:HD12	2.07	0.54
2:B:3150:A:H4'	7:G:129:ALA:HA	1.89	0.54
8:H:3:ARG:HD3	8:H:22:LEU:HD23	1.89	0.54
34:HA:16:LEU:HD21	34:HA:96:GLY:O	2.07	0.54
34:HA:17:VAL:HG23	34:HA:18:ILE:HD12	1.90	0.54
2:B:1456:A:C8	35:IA:26:LYS:HE2	2.43	0.54
2:B:500:C:C5'	10:J:82:ARG:HG3	2.35	0.54
36:JA:66:LEU:CD2	36:JA:72:LYS:HG3	2.32	0.54
63:KB:98:VAL:HG12	63:KB:115:LEU:HB2	1.90	0.54
12:L:185:ARG:O	12:L:189:LEU:HG	2.08	0.54
38:LA:3:GLN:HG2	38:LA:30:LEU:N	2.22	0.54
2:B:1804:A:H1'	38:LA:78:GLY:O	2.07	0.54
13:M:165:CYS:CB	13:M:179:ILE:H	2.21	0.54
40:NA:56:ARG:O	40:NA:60:LEU:HB2	2.07	0.54
40:NA:89:GLU:O	40:NA:93:ILE:HG12	2.07	0.54
41:OA:47:TYR:HD1	41:OA:49:TRP:HE1	1.54	0.54
16:P:86:LYS:HZ2	16:P:106:LEU:HD21	1.72	0.54
17:Q:122:LYS:HG3	17:Q:145:PHE:CZ	2.42	0.54
3:C:45:C:C5'	43:QA:15:LYS:HG3	2.36	0.54
20:T:54:TYR:CE2	20:T:145:VAL:HB	2.42	0.54
72:TB:10:ALA:HB1	72:TB:27:ILE:HD12	1.89	0.54
21:U:20:SER:HA	21:U:145:HIS:CE1	2.42	0.54
73:UB:103:LEU:HD13	73:UB:104:LEU:N	2.23	0.54
24:X:117:ARG:HH21	24:X:119:ARG:HH21	1.53	0.54
50:XA:112:THR:O	50:XA:115:PHE:HB2	2.08	0.54
1:A:140:A:H4'	1:A:141:U:H5'	1.90	0.54
1:A:482:U:H2'	1:A:483:A:C8	2.43	0.54
2:B:1293:U:H2'	2:B:1294:A:C8	2.43	0.54
2:B:1894:U:H2'	2:B:1895:A:H5''	1.89	0.54
2:B:412:G:H2'	2:B:413:U:C6	2.43	0.54
3:C:37:A:H5''	3:C:39:G:C5'	2.38	0.54
55:CB:44:ASN:O	55:CB:45:LYS:HB2	2.07	0.54
4:D:55:A:H2'	4:D:56:A:C8	2.43	0.54
82:DC:545:LEU:HD12	82:DC:549:HIS:CB	2.38	0.54
5:E:110:PHE:HB3	5:E:135:PRO:HA	1.89	0.54
31:EA:22:LYS:CE	31:EA:129:TRP:HB3	2.36	0.54
57:EB:39:ARG:HG3	57:EB:40:PRO:HD3	1.90	0.54
6:F:58:LEU:CD2	6:F:77:ILE:HA	2.37	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:Q:67:ARG:CB	32:FA:105:LEU:HG	2.32	0.54
7:G:232:ARG:HD2	7:G:268:GLY:O	2.07	0.54
8:H:309:ARG:HB3	8:H:312:VAL:CG1	2.38	0.54
8:H:34:ILE:HG12	8:H:120:TYR:CE1	2.42	0.54
9:I:205:SER:HA	9:I:208:MET:SD	2.48	0.54
35:IA:29:ALA:HB3	35:IA:60:TRP:CZ2	2.43	0.54
36:JA:18:LYS:O	36:JA:50:ILE:HD12	2.07	0.54
36:JA:9:ILE:HD12	36:JA:9:ILE:H	1.73	0.54
2:B:1169:A:H4'	11:K:219:LYS:HD3	1.90	0.54
12:L:190:VAL:O	12:L:191:ASN:HB2	2.08	0.54
13:M:85:GLY:HA3	13:M:187:ILE:HB	1.90	0.54
40:NA:15:LYS:HE2	40:NA:17:VAL:HG22	1.90	0.54
55:CB:37:GLN:HB3	66:NB:53:LEU:HD22	1.89	0.54
69:QB:77:ASN:O	69:QB:81:GLY:HA3	2.08	0.54
53:AB:40:ARG:HG2	70:RB:110:PRO:HB3	1.89	0.54
70:RB:52:LYS:HB3	70:RB:93:LEU:CD2	2.34	0.54
19:S:27:VAL:HG23	19:S:129:TYR:HE2	1.73	0.54
19:S:139:HIS:O	19:S:143:ARG:HG3	2.08	0.54
19:S:150:TRP:HE3	19:S:156:HIS:HE1	1.56	0.54
71:SB:25:LYS:HG3	71:SB:27:ASP:OD2	2.08	0.54
21:U:59:PRO:CB	21:U:78:VAL:HG21	2.38	0.54
73:UB:87:VAL:HA	73:UB:124:VAL:CG2	2.37	0.54
22:V:138:LEU:HD11	22:V:140:LEU:HG	1.88	0.54
1:A:532:U:C4'	74:VB:62:THR:HG21	2.37	0.54
78:ZB:26:THR:O	78:ZB:44:VAL:HG22	2.07	0.54
1:A:1542:G:N2	1:A:1568:C:H1'	2.23	0.54
1:A:391:A:H4'	1:A:1730:A:O3'	2.08	0.54
1:A:740:A:C3'	1:A:741:C:H5''	2.38	0.54
1:A:752:A:H2	1:A:797:G:H22	1.55	0.54
1:A:98:U:H2'	1:A:99:C:C6	2.43	0.54
53:AB:92:GLN:NE2	53:AB:92:GLN:H	2.06	0.54
2:B:1315:U:H4'	2:B:1317:A:H5''	1.88	0.54
2:B:1796:G:C1'	6:F:190:ARG:HH12	2.21	0.54
2:B:2927:C:H2'	2:B:2928:C:C6	2.43	0.54
2:B:562:C:H5''	24:X:71:LYS:CG	2.38	0.54
2:B:578:A:C4'	8:H:324:LEU:HD21	2.36	0.54
80:BC:49:LEU:HD21	80:BC:55:ARG:HB2	1.89	0.54
82:DC:319:LEU:O	82:DC:323:VAL:HG23	2.07	0.54
7:G:116:ARG:O	7:G:175:LYS:HE2	2.08	0.54
7:G:149:ALA:HA	7:G:152:LYS:HD2	1.88	0.54
8:H:104:LYS:HA	8:H:104:LYS:HZ3	1.71	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:HB:93:GLN:HG3	60:HB:94:GLU:H	1.72	0.54
10:J:110:LYS:O	10:J:114:LYS:HG2	2.08	0.54
36:JA:21:HIS:CG	36:JA:24:ARG:HD2	2.43	0.54
38:LA:57:LEU:HD22	38:LA:61:GLN:O	2.07	0.54
66:NB:25:GLY:HA3	66:NB:64:ASP:CG	2.27	0.54
15:O:15:GLU:HB3	15:O:130:VAL:O	2.08	0.54
15:O:27:GLY:O	15:O:30:LEU:HB3	2.08	0.54
67:OB:93:LEU:O	67:OB:95:ARG:N	2.41	0.54
17:Q:107:GLU:OE1	17:Q:108:ILE:HD13	2.07	0.54
69:QB:27:LYS:NZ	69:QB:27:LYS:HB3	2.23	0.54
2:B:58:G:H5'	19:S:154:PRO:HB2	1.89	0.54
21:U:26:PHE:CE1	21:U:120:ASN:HA	2.40	0.54
24:X:82:ASP:O	24:X:120:SER:HB3	2.07	0.54
24:X:10:ILE:HG23	24:X:25:PHE:O	2.08	0.54
14:N:166:ILE:CG2	25:Y:160:ILE:HG22	2.38	0.54
52:ZA:226:THR:O	52:ZA:230:TRP:N	2.41	0.54
2:B:1254:C:C4'	16:P:135:THR:HG21	2.38	0.54
2:B:1649:U:H2'	2:B:1650:G:O4'	2.08	0.54
2:B:1666:G:O2'	2:B:1743:G:H5'	2.07	0.54
2:B:1683:A:H2'	2:B:1684:U:H6	1.73	0.54
2:B:1801:U:H2'	2:B:1802:C:H6	1.73	0.54
2:B:1896:A:H61	2:B:2339:C:H42	1.53	0.54
2:B:232:G:H2'	2:B:233:C:C6	2.42	0.54
2:B:2538:U:O2'	2:B:2539:C:H5'	2.07	0.54
2:B:2948:C:O2'	7:G:242:THR:HA	2.07	0.54
2:B:3099:C:N4	2:B:3135:U:H3	2.05	0.54
2:B:3183:A:O2'	2:B:3184:A:H5'	2.08	0.54
2:B:610:G:N3	8:H:313:LEU:HB2	2.23	0.54
54:BB:64:ILE:HG23	54:BB:69:HIS:HD2	1.72	0.54
3:C:131:A:C2'	3:C:132:G:H5'	2.38	0.54
55:CB:92:ARG:NH2	55:CB:169:ASN:HA	2.18	0.54
4:D:56:A:H2	15:O:138:VAL:HG21	1.72	0.54
56:DB:73:ILE:HD12	56:DB:75:LEU:HD21	1.90	0.54
32:FA:75:LEU:HG	32:FA:114:GLY:CA	2.38	0.54
2:B:2641:U:H4'	33:GA:7:HIS:CD2	2.43	0.54
8:H:133:SER:O	8:H:137:ALA:HB2	2.07	0.54
8:H:238:LEU:HD23	8:H:248:VAL:HG21	1.89	0.54
11:K:222:HIS:HE1	11:K:224:ILE:HD12	1.73	0.54
37:KA:52:VAL:HA	37:KA:66:VAL:HG22	1.90	0.54
63:KB:98:VAL:HG21	63:KB:118:ILE:HD12	1.89	0.54
12:L:116:VAL:HG22	12:L:121:SER:HB2	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:L:163:VAL:O	12:L:163:VAL:HG13	2.08	0.54
39:MA:45:LYS:NZ	39:MA:45:LYS:HB3	2.22	0.54
65:MB:87:PRO:HG3	65:MB:112:LEU:HD21	1.90	0.54
14:N:53:VAL:HA	14:N:133:GLN:O	2.08	0.54
40:NA:40:VAL:O	40:NA:44:VAL:HG23	2.08	0.54
18:R:123:LEU:HD13	20:T:194:LEU:HD23	1.88	0.54
19:S:114:ARG:HG3	19:S:151:ILE:HG22	1.88	0.54
71:SB:53:TYR:CE1	71:SB:72:LEU:HB3	2.43	0.54
46:TA:70:LEU:HD23	46:TA:91:PHE:HZ	1.71	0.54
74:VB:94:TYR:HD2	74:VB:96:LEU:HD13	1.73	0.54
23:W:120:TYR:O	23:W:124:TYR:HB2	2.07	0.54
49:WA:152:SER:H	49:WA:173:GLY:HA2	1.73	0.54
49:WA:73:LEU:HD23	49:WA:80:ALA:HB2	1.90	0.54
14:N:168:SER:HA	25:Y:160:ILE:O	2.08	0.54
1:A:241:U:OP1	56:DB:216:LEU:HD21	2.08	0.54
1:A:462:G:H2'	1:A:463:U:H6	1.68	0.54
1:A:648:G:H2'	1:A:649:U:C6	2.43	0.54
1:A:93:A:C8	1:A:399:A:H5''	2.43	0.54
53:AB:138:VAL:HG22	53:AB:184:ILE:HD12	1.90	0.54
2:B:1436:U:O5'	2:B:1437:C:H5''	2.07	0.54
2:B:2442:G:H2'	2:B:2443:A:C5'	2.23	0.54
2:B:2694:A:H2'	2:B:2695:A:O4'	2.07	0.54
2:B:2703:A:H5''	2:B:2704:A:H5'	1.88	0.54
2:B:3099:C:H2'	2:B:3100:U:C6	2.42	0.54
2:B:3013:U:H5''	2:B:3130:A:O2'	2.08	0.54
2:B:3133:C:C3'	2:B:3134:A:H5''	2.38	0.54
2:B:759:U:O2'	2:B:760:G:H5'	2.08	0.54
2:B:905:U:O2	2:B:911:C:H5'	2.07	0.54
28:BA:49:ILE:HG22	28:BA:51:TRP:CD1	2.42	0.54
28:BA:47:ARG:HH11	28:BA:58:HIS:HB2	1.73	0.54
29:CA:139:ILE:HG23	29:CA:140:GLY:H	1.73	0.54
82:DC:143:LEU:HD11	82:DC:189:VAL:CG2	2.37	0.54
82:DC:159:LYS:HG2	84:DC:901:GDP:C6	2.43	0.54
82:DC:797:VAL:HA	86:DC:903:SO1:H54	1.90	0.54
5:E:114:GLU:N	5:E:139:SER:HB2	2.21	0.54
6:F:227:ARG:CB	6:F:239:ALA:HB2	2.25	0.54
58:FB:10:LYS:HG3	58:FB:11:ARG:H	1.71	0.54
7:G:114:VAL:HG13	7:G:163:HIS:CG	2.42	0.54
7:G:382:THR:O	7:G:383:LEU:HD23	2.08	0.54
8:H:11:LEU:HD21	8:H:155:ASP:CB	2.37	0.54
8:H:334:PHE:HA	8:H:339:LEU:CD1	2.36	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:307:G:OP1	61:IB:103:ARG:HD3	2.08	0.54
10:J:66:SER:HB3	10:J:76:LEU:HD23	1.90	0.54
12:L:149:LYS:N	12:L:201:THR:HA	2.20	0.54
38:LA:8:ARG:HD3	38:LA:32:ALA:O	2.07	0.54
13:M:106:LYS:HB3	13:M:111:PHE:HE2	1.72	0.54
15:O:96:PHE:CE1	15:O:159:THR:HB	2.42	0.54
67:OB:19:ARG:HG3	67:OB:20:TYR:CD1	2.35	0.54
67:OB:41:ILE:HG22	67:OB:42:GLN:N	2.23	0.54
46:TA:17:CYS:HA	46:TA:19:LYS:NZ	2.22	0.54
49:WA:41:THR:CG2	49:WA:62:LYS:HA	2.38	0.54
55:CB:116:HIS:HB3	75:WB:98:GLN:HE21	1.73	0.54
9:I:41:LYS:NZ	25:Y:93:VAL:HG11	2.22	0.54
1:A:1048:G:O3'	77:YB:69:GLY:HA3	2.08	0.54
52:ZA:82:ASN:HD22	52:ZA:83:ILE:H	1.56	0.54
2:B:1368:U:C2'	2:B:1369:A:H5'	2.38	0.53
2:B:1731:A:C2'	2:B:1732:U:H5'	2.38	0.53
2:B:210:U:H4'	8:H:217:LYS:O	2.08	0.53
2:B:2350:C:H2'	2:B:2351:U:O4'	2.08	0.53
2:B:2372:A:H4'	2:B:2373:A:H5'	1.90	0.53
2:B:2547:A:H5'	6:F:93:LYS:NZ	2.23	0.53
2:B:3149:G:H2'	2:B:3150:A:C8	2.43	0.53
2:B:3207:U:O2'	2:B:3208:G:H3'	2.07	0.53
2:B:3369:G:H5''	28:BA:56:ARG:NH1	2.23	0.53
2:B:506:U:H2'	2:B:507:U:O4'	2.07	0.53
2:B:60:A:H2'	2:B:61:A:C8	2.42	0.53
2:B:74:G:OP1	17:Q:104:ARG:HB3	2.08	0.53
82:DC:387:PRO:CA	82:DC:394:PHE:HB3	2.38	0.53
82:DC:601:ILE:HG21	82:DC:642:GLY:O	2.08	0.53
57:EB:74:GLN:HE21	57:EB:78:THR:CG2	2.22	0.53
32:FA:149:ALA:HB3	40:NA:15:LYS:N	2.23	0.53
7:G:168:LYS:HB3	7:G:319:ASN:ND2	2.23	0.53
7:G:212:ASN:OD1	7:G:354:VAL:HG22	2.07	0.53
59:GB:117:GLY:O	59:GB:118:LEU:HB2	2.08	0.53
9:I:17:GLN:HG3	25:Y:22:HIS:N	2.17	0.53
37:KA:59:VAL:HG22	37:KA:62:SER:C	2.29	0.53
1:A:1034:C:O3'	63:KB:2:GLY:HA3	2.08	0.53
12:L:210:ALA:O	12:L:214:LEU:HD13	2.08	0.53
13:M:103:ILE:HD11	13:M:134:ILE:HG22	1.89	0.53
2:B:2618:G:H3'	14:N:116:ARG:HH21	1.73	0.53
66:NB:82:ARG:HH22	66:NB:116:LEU:HD13	1.73	0.53
41:OA:25:ARG:HG2	41:OA:25:ARG:O	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
69:QB:10:ALA:O	69:QB:14:PHE:HB2	2.08	0.53
70:RB:23:ARG:HA	70:RB:91:ILE:O	2.08	0.53
17:Q:21:ARG:O	19:S:196:THR:HG23	2.07	0.53
71:SB:16:LYS:HB3	71:SB:21:ASN:O	2.08	0.53
74:VB:91:LEU:CD2	74:VB:96:LEU:HD22	2.25	0.53
49:WA:33:LEU:HD22	49:WA:47:LEU:HD21	1.90	0.53
24:X:105:THR:O	24:X:109:ASP:HB2	2.07	0.53
50:XA:184:LEU:O	50:XA:185:ARG:HB2	2.08	0.53
2:B:2699:G:H1'	25:Y:8:ARG:NH1	2.23	0.53
1:A:1072:C:OP1	77:YB:22:LYS:HD3	2.09	0.53
26:Z:37:LEU:C	26:Z:39:ASP:H	2.10	0.53
52:ZA:37:PRO:CD	52:ZA:46:LYS:HD2	2.37	0.53
78:ZB:32:PHE:CD2	78:ZB:32:PHE:N	2.74	0.53
1:A:977:A:C2	1:A:1788:G:H1'	2.41	0.53
1:A:355:G:H2'	1:A:356:G:H8	1.73	0.53
1:A:373:G:H2'	1:A:374:U:H6	1.74	0.53
1:A:61:A:N3	1:A:61:A:H3'	2.23	0.53
1:A:829:A:H1'	1:A:830:U:OP2	2.08	0.53
1:A:854:U:H2'	1:A:855:A:C4'	2.38	0.53
79:AC:23:VAL:CG2	79:AC:38:ILE:HD12	2.38	0.53
2:B:1123:U:H5'	4:D:81:U:H5''	1.90	0.53
2:B:1456:A:H62	35:IA:64:VAL:HG22	1.74	0.53
2:B:1718:G:H2'	2:B:1719:G:C8	2.43	0.53
2:B:3004:C:H2'	2:B:3005:A:H5'	1.90	0.53
28:BA:9:SER:HA	28:BA:52:THR:HB	1.90	0.53
54:BB:95:THR:HG22	74:VB:16:PRO:CD	2.33	0.53
2:B:1523:U:H4'	29:CA:112:THR:O	2.08	0.53
30:DA:125:LYS:O	30:DA:126:LEU:HB2	2.08	0.53
82:DC:171:LYS:HD3	82:DC:279:ASP:CA	2.37	0.53
82:DC:541:CYS:O	82:DC:545:LEU:HB2	2.09	0.53
5:E:138:VAL:HG11	5:E:144:LEU:HA	1.90	0.53
83:EC:6764:C:H2'	83:EC:6765:A:C8	2.43	0.53
6:F:77:ILE:HD11	6:F:115:ASN:HD22	1.73	0.53
7:G:133:TYR:CE1	7:G:136:LYS:HG3	2.43	0.53
7:G:135:ALA:HA	7:G:138:ALA:HB3	1.89	0.53
7:G:57:VAL:HG12	7:G:357:LYS:HB2	1.90	0.53
7:G:78:VAL:HG11	7:G:311:PHE:HE2	1.72	0.53
60:HB:54:TYR:HA	60:HB:71:GLU:HG3	1.90	0.53
35:IA:20:LEU:HD13	35:IA:28:ARG:HG2	1.89	0.53
12:L:97:TYR:HB3	12:L:132:VAL:H	1.73	0.53
12:L:133:LYS:HB2	12:L:199:ALA:HB3	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:LA:3:GLN:HG2	38:LA:30:LEU:HB3	1.89	0.53
15:O:171:VAL:HG13	15:O:172:LEU:H	1.72	0.53
19:S:44:ARG:HD3	19:S:119:TYR:HE2	1.73	0.53
46:TA:5:PRO:HG3	46:TA:97:LYS:HE2	1.89	0.53
48:VA:8:LYS:H	48:VA:8:LYS:HD2	1.73	0.53
25:Y:27:LEU:HD22	25:Y:30:TYR:CD2	2.42	0.53
1:A:1605:G:H5''	66:NB:127:LYS:HB3	1.90	0.53
1:A:1643:U:H2'	1:A:1644:C:O4'	2.08	0.53
2:B:129:U:H5	39:MA:74:LYS:HD2	1.74	0.53
2:B:1782:U:H2'	2:B:1783:U:O4'	2.08	0.53
2:B:2781:U:H4'	17:Q:185:LYS:HD3	1.90	0.53
2:B:3113:A:H2'	2:B:3114:A:O4'	2.08	0.53
2:B:2995:A:H2	2:B:3143:C:C4	2.26	0.53
2:B:649:A:H2'	2:B:650:C:H6	1.73	0.53
2:B:707:U:H4'	2:B:779:G:H21	1.73	0.53
2:B:916:G:N2	2:B:924:G:H5'	2.24	0.53
2:B:956:U:H2'	2:B:957:C:H6	1.73	0.53
2:B:980:A:H61	2:B:1104:G:H21	1.56	0.53
3:C:26:U:H2'	3:C:27:U:C6	2.43	0.53
55:CB:99:MET:O	55:CB:100:ASN:HB2	2.08	0.53
82:DC:408:GLY:H	82:DC:431:ILE:HB	1.73	0.53
83:EC:6828:G:H2'	83:EC:6829:A:H8	1.72	0.53
6:F:116:VAL:CG1	6:F:126:LEU:HB2	2.38	0.53
22:V:173:GLU:HA	32:FA:51:GLY:O	2.07	0.53
1:A:385:A:H5''	58:FB:22:ARG:HB2	1.90	0.53
7:G:122:TRP:HA	7:G:125:SER:CB	2.38	0.53
60:HB:15:LEU:HD13	60:HB:21:VAL:CG2	2.36	0.53
60:HB:17:GLN:HA	60:HB:89:GLY:H	1.73	0.53
10:J:165:LEU:O	37:KA:6:ARG:HB3	2.08	0.53
36:JA:89:THR:HB	36:JA:116:GLY:O	2.08	0.53
11:K:90:LYS:HE2	11:K:95:ILE:HG12	1.90	0.53
38:LA:20:ILE:H	38:LA:20:ILE:CD1	2.19	0.53
15:O:9:MET:O	15:O:134:PRO:HD2	2.08	0.53
3:C:94:C:C5'	41:OA:76:ASN:HD21	2.15	0.53
19:S:10:LEU:HD11	19:S:19:LEU:CD1	2.38	0.53
20:T:161:LYS:O	20:T:165:ALA:HB2	2.08	0.53
20:T:35:VAL:HG12	20:T:36:VAL:N	2.22	0.53
47:UA:4:ARG:HH11	47:UA:4:ARG:HB2	1.73	0.53
22:V:71:LEU:HD13	22:V:97:PRO:CG	2.38	0.53
2:B:1472:U:H5'	23:W:4:LEU:HB2	1.90	0.53
49:WA:303:ALA:O	49:WA:310:ILE:HA	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:X:129:ILE:HD11	24:X:134:ASP:HB3	1.90	0.53
2:B:1068:C:OP1	25:Y:110:LYS:HE3	2.09	0.53
25:Y:52:MET:HG2	25:Y:53:PRO:CD	2.34	0.53
52:ZA:83:ILE:O	52:ZA:83:ILE:HG22	2.08	0.53
1:A:416:A:H5'	1:A:417:A:C8	2.43	0.53
53:AB:21:LEU:HA	53:AB:24:PHE:CB	2.39	0.53
53:AB:49:ILE:N	53:AB:49:ILE:HD12	2.24	0.53
2:B:1138:U:H4'	11:K:97:PRO:CG	2.30	0.53
2:B:1198:C:H2'	2:B:1199:C:C6	2.43	0.53
2:B:628:A:H4'	2:B:1399:A:C6	2.43	0.53
2:B:1924:U:H2'	2:B:1926:C:C5	2.44	0.53
2:B:2833:A:H2'	2:B:2834:G:C8	2.43	0.53
2:B:3365:U:O2'	2:B:3366:G:H5'	2.09	0.53
2:B:360:G:H2'	2:B:361:A:C8	2.43	0.53
2:B:994:G:N2	2:B:1053:A:H2'	2.23	0.53
54:BB:45:ILE:HD12	54:BB:80:THR:CG2	2.39	0.53
55:CB:119:ASP:O	55:CB:123:VAL:HG23	2.08	0.53
55:CB:55:ASP:HB2	55:CB:138:THR:HB	1.91	0.53
55:CB:57:SER:OG	78:ZB:53:ILE:HB	2.08	0.53
82:DC:155:VAL:O	82:DC:209:VAL:HA	2.07	0.53
82:DC:388:THR:CG2	82:DC:395:TYR:HE2	2.22	0.53
82:DC:4:PHE:HD2	82:DC:45:ILE:HG12	1.73	0.53
7:G:303:LYS:HD3	7:G:372:THR:HG22	1.89	0.53
59:GB:60:LEU:HD21	59:GB:93:LEU:HD21	1.90	0.53
60:HB:52:LYS:HG3	60:HB:54:TYR:CE2	2.44	0.53
1:A:962:C:OP2	63:KB:70:LYS:HD3	2.09	0.53
13:M:17:THR:OG1	13:M:28:VAL:HB	2.09	0.53
65:MB:124:THR:HB	65:MB:127:ARG:HE	1.73	0.53
14:N:189:GLU:CA	14:N:200:LEU:HB3	2.37	0.53
66:NB:35:PRO:HG2	66:NB:38:LEU:CG	2.38	0.53
1:A:1468:U:C1'	69:QB:88:VAL:HG23	2.38	0.53
13:M:19:SER:HA	18:R:6:ILE:HB	1.88	0.53
21:U:116:HIS:HB3	21:U:149:VAL:CB	2.37	0.53
48:VA:15:LEU:HB2	48:VA:86:PHE:CE2	2.43	0.53
24:X:26:ARG:NH1	24:X:28:ARG:HD2	2.24	0.53
24:X:29:ILE:HG13	24:X:37:ALA:O	2.09	0.53
2:B:519:A:H2	24:X:65:ASN:HD22	1.55	0.53
1:A:100:A:O2'	1:A:101:U:H5'	2.07	0.53
1:A:1456:C:H3'	1:A:1457:C:C5'	2.38	0.53
1:A:1460:A:H2'	1:A:1461:C:H5'	1.89	0.53
70:RB:82:TYR:CB	79:AC:52:PHE:HB3	2.32	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1002:A:H61	2:B:1050:U:H1'	1.73	0.53
2:B:2642:A:H5'	33:GA:7:HIS:HB3	1.91	0.53
2:B:2806:U:H2'	2:B:2807:U:O4'	2.08	0.53
2:B:2877:G:H2'	2:B:2878:G:C8	2.43	0.53
2:B:2883:U:H2'	2:B:2884:C:O4'	2.09	0.53
2:B:3111:U:O4	2:B:3121:U:H5	1.92	0.53
2:B:355:A:N6	2:B:364:G:H1'	2.23	0.53
54:BB:113:ARG:HG3	54:BB:113:ARG:HH11	1.73	0.53
54:BB:73:ASP:HA	54:BB:164:LEU:HD22	1.90	0.53
3:C:91:C:O3'	30:DA:23:PRO:HB2	2.07	0.53
82:DC:696:ASP:CG	82:DC:698:ILE:HG22	2.29	0.53
82:DC:815:ALA:HA	82:DC:818:ILE:HD12	1.90	0.53
5:E:70:ASP:H	5:E:73:ASP:HB3	1.73	0.53
32:FA:124:ILE:HG12	32:FA:144:VAL:CG2	2.39	0.53
32:FA:28:HIS:CD2	32:FA:32:ARG:HG3	2.43	0.53
32:FA:77:LYS:HB3	32:FA:80:THR:HG23	1.91	0.53
2:B:1887:A:H1'	7:G:226:PHE:CE2	2.44	0.53
59:GB:119:ALA:HB2	59:GB:128:LEU:HD12	1.91	0.53
60:HB:24:LYS:HG2	60:HB:25:LYS:H	1.72	0.53
60:HB:4:PRO:HG2	60:HB:7:ASP:OD1	2.08	0.53
37:KA:13:HIS:HA	37:KA:30:ILE:HD12	1.90	0.53
63:KB:143:SER:HA	63:KB:146:ALA:CB	2.38	0.53
14:N:99:ILE:HG23	14:N:101:LYS:HZ2	1.74	0.53
14:N:153:ARG:O	14:N:156:ARG:HG2	2.09	0.53
40:NA:50:LEU:HD21	40:NA:58:ILE:CG2	2.38	0.53
67:OB:93:LEU:C	67:OB:95:ARG:H	2.10	0.53
17:Q:37:ASN:HA	17:Q:40:ALA:HB3	1.90	0.53
19:S:99:ARG:HB2	19:S:167:THR:HG21	1.89	0.53
2:B:2796:G:C8	46:TA:62:ALA:HB1	2.43	0.53
72:TB:45:GLY:O	72:TB:68:ARG:HD2	2.08	0.53
22:V:173:GLU:HG2	32:FA:52:TYR:CA	2.37	0.53
22:V:55:SER:H	22:V:58:ASN:HB2	1.73	0.53
50:XA:57:LEU:HG	50:XA:177:LEU:HD23	1.89	0.53
52:ZA:116:LYS:HB2	52:ZA:131:ILE:CD1	2.38	0.53
1:A:126:A:H62	1:A:291:G:N2	2.03	0.53
1:A:1359:C:O2'	69:QB:4:VAL:HG12	2.09	0.53
1:A:1488:G:H3'	1:A:1515:A:H61	1.73	0.53
1:A:318:U:H2'	1:A:319:U:H5'	1.90	0.53
1:A:687:G:H5'	72:TB:119:LYS:HE2	1.90	0.53
2:B:1381:A:H5''	8:H:197:ARG:HH12	1.73	0.53
2:B:1566:A:H3'	2:B:1567:U:H5''	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1741:A:O2'	2:B:1785:U:H4'	2.08	0.53
2:B:19:U:H2'	2:B:20:A:H8	1.74	0.53
2:B:1941:C:H42	2:B:2107:A:H61	1.55	0.53
2:B:2115:G:O5'	2:B:2115:G:H8	1.91	0.53
2:B:860:G:H2'	2:B:2133:U:O2'	2.09	0.53
2:B:2212:C:H1'	2:B:2233:A:N6	2.20	0.53
2:B:2549:G:O2'	2:B:2550:U:H5'	2.08	0.53
2:B:3000:A:H2'	2:B:3001:C:C6	2.43	0.53
2:B:3300:U:H2'	2:B:3301:U:C6	2.44	0.53
2:B:2110:G:H5''	2:B:3364:C:OP1	2.08	0.53
2:B:882:A:H5''	2:B:1847:A:H61	1.72	0.53
2:B:957:C:H2'	2:B:958:C:C6	2.44	0.53
3:C:100:U:H2'	3:C:101:U:O4'	2.09	0.53
55:CB:197:GLU:HG3	55:CB:208:SER:HB2	1.90	0.53
57:EB:24:PHE:HZ	57:EB:77:LEU:HD11	1.73	0.53
83:EC:6910:A:H2'	83:EC:6947:A:C2	2.43	0.53
2:B:916:G:O6	6:F:207:VAL:HG11	2.08	0.53
7:G:116:ARG:NE	7:G:174:LYS:HB3	2.23	0.53
7:G:280:HIS:HB3	7:G:324:VAL:CG2	2.39	0.53
8:H:269:SER:C	8:H:271:LYS:H	2.10	0.53
8:H:76:ARG:HH11	8:H:76:ARG:HB2	1.74	0.53
2:B:365:A:OP1	8:H:84:ARG:HD3	2.09	0.53
9:I:69:ILE:HA	25:Y:31:LEU:CD1	2.32	0.53
10:J:42:LEU:HB2	10:J:50:LYS:H	1.74	0.53
13:M:89:LYS:HE3	13:M:183:HIS:HB3	1.90	0.53
14:N:86:HIS:HB3	14:N:139:ARG:HG2	1.90	0.53
67:OB:23:LYS:HD3	67:OB:34:LEU:HD11	1.89	0.53
67:OB:90:ALA:O	67:OB:91:LEU:C	2.47	0.53
17:Q:76:THR:CG2	17:Q:102:GLN:HA	2.37	0.53
17:Q:53:LEU:HD22	17:Q:94:GLY:CA	2.39	0.53
2:B:3191:G:OP1	20:T:172:ARG:HG2	2.09	0.53
21:U:30:ARG:HB3	21:U:30:ARG:HH11	1.73	0.53
24:X:92:LYS:HB2	24:X:106:LEU:HD23	1.90	0.53
1:A:617:U:H5'	1:A:1031:U:C4'	2.38	0.53
1:A:200:A:H2'	1:A:201:G:O4'	2.08	0.53
1:A:320:U:O2'	1:A:321:C:H6	1.91	0.53
1:A:332:U:H2'	1:A:334:G:OP2	2.09	0.53
1:A:806:A:H3'	1:A:807:A:C5'	2.31	0.53
1:A:845:G:H2'	1:A:846:G:C5'	2.34	0.53
27:AA:19:VAL:HG13	27:AA:37:ILE:CA	2.38	0.53
53:AB:101:GLN:O	53:AB:105:MET:HB2	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:AB:158:ILE:HD13	53:AB:158:ILE:O	2.08	0.53
2:B:651:G:O3'	2:B:1436:U:H4'	2.08	0.53
2:B:149:U:H5''	19:S:54:LYS:CB	2.39	0.53
2:B:2892:A:H2'	2:B:2893:C:O4'	2.08	0.53
2:B:2996:U:O4	2:B:3143:C:H5''	2.09	0.53
2:B:3080:G:H2'	2:B:3081:C:H6	1.73	0.53
2:B:3082:C:O2'	2:B:3083:G:H5'	2.09	0.53
2:B:317:A:H3'	2:B:318:A:C8	2.43	0.53
2:B:34:A:H3'	2:B:48:A:H61	1.73	0.53
2:B:39:A:H1'	2:B:94:G:H21	1.73	0.53
2:B:423:A:H2'	2:B:424:G:H5'	1.89	0.53
2:B:563:U:H2'	2:B:564:G:C8	2.44	0.53
2:B:666:A:H2'	2:B:667:C:O4'	2.09	0.53
2:B:987:U:H2'	2:B:988:U:C6	2.44	0.53
54:BB:196:VAL:HB	54:BB:209:HIS:HB2	1.91	0.53
3:C:115:C:O5'	3:C:115:C:H6	1.92	0.53
3:C:53:A:H2'	3:C:54:A:H8	1.74	0.53
82:DC:244:LEU:HA	82:DC:272:ALA:HB3	1.89	0.53
31:EA:64:LYS:HD3	31:EA:67:LYS:HE2	1.91	0.53
31:EA:68:ILE:HG22	31:EA:69:LYS:N	2.24	0.53
83:EC:6854:U:H2'	83:EC:6855:A:C8	2.44	0.53
32:FA:147:LEU:HB2	40:NA:7:ILE:HG22	1.91	0.53
7:G:126:LYS:CB	7:G:128:LYS:HG2	2.38	0.53
34:HA:66:LYS:HD2	34:HA:66:LYS:N	2.23	0.53
61:IB:111:VAL:HG13	61:IB:111:VAL:O	2.09	0.53
11:K:82:LYS:HA	11:K:119:VAL:HB	1.89	0.53
12:L:152:LEU:HD12	12:L:198:ALA:HB3	1.89	0.53
2:B:155:G:H21	40:NA:26:ILE:CG2	2.21	0.53
40:NA:34:SER:HB3	40:NA:37:THR:OG1	2.08	0.53
15:O:50:ALA:HB2	15:O:63:GLU:HB3	1.91	0.53
3:C:41:A:OP1	41:OA:64:MET:HA	2.09	0.53
67:OB:21:TYR:N	67:OB:22:PRO:CD	2.72	0.53
42:PA:26:LYS:HE2	42:PA:26:LYS:HA	1.89	0.53
68:PB:72:ILE:HG12	68:PB:79:TYR:CG	2.44	0.53
19:S:36:ILE:HG23	19:S:106:VAL:HG12	1.90	0.53
19:S:73:ARG:HD2	19:S:88:GLY:O	2.08	0.53
72:TB:95:PRO:HD3	72:TB:130:TYR:CD1	2.44	0.53
2:B:384:A:H61	21:U:90:PHE:HE2	1.57	0.53
73:UB:14:LYS:O	73:UB:18:HIS:HB2	2.09	0.53
73:UB:52:ILE:HD12	73:UB:52:ILE:N	2.23	0.53
23:W:43:LYS:HA	23:W:46:LYS:HE3	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:W:86:GLU:HA	23:W:90:PRO:HA	1.91	0.53
2:B:1084:A:H5''	25:Y:35:LYS:HE2	1.89	0.53
1:A:390:G:H8	1:A:1731:A:H4'	1.74	0.53
1:A:573:C:H2'	1:A:574:G:O4'	2.09	0.53
1:A:599:A:H2'	1:A:600:U:C6	2.43	0.53
1:A:5:U:O2'	1:A:553:G:H4'	2.09	0.53
2:B:1029:G:H2'	2:B:1030:A:C8	2.44	0.53
2:B:1455:U:O2'	35:IA:26:LYS:HG3	2.07	0.53
2:B:1553:U:C4'	2:B:1554:U:H5'	2.37	0.53
2:B:1712:G:H2'	2:B:1713:G:C8	2.44	0.53
2:B:1947:G:H1	2:B:2101:C:H42	1.55	0.53
2:B:2196:C:O3'	2:B:2270:A:H2'	2.09	0.53
2:B:2335:G:H1'	2:B:2337:C:H41	1.74	0.53
2:B:2737:C:H4'	25:Y:68:THR:HG21	1.90	0.53
2:B:2806:U:H2'	2:B:2807:U:C6	2.43	0.53
2:B:288:C:H2'	2:B:289:A:C8	2.43	0.53
2:B:3262:U:H2'	2:B:3263:G:C5'	2.39	0.53
2:B:413:U:H1'	21:U:118:GLN:HB2	1.90	0.53
2:B:519:A:N1	24:X:65:ASN:HB2	2.24	0.53
2:B:542:G:H22	2:B:549:U:H3	1.56	0.53
2:B:726:G:H21	2:B:744:A:N6	2.06	0.53
2:B:882:A:C2'	2:B:883:A:H5''	2.35	0.53
2:B:929:A:H1'	41:OA:49:TRP:HE3	1.74	0.53
54:BB:121:TYR:CG	54:BB:161:LYS:HE3	2.44	0.53
3:C:40:A:H2'	3:C:41:A:C8	2.44	0.53
2:B:224:C:O2	30:DA:102:SER:HB2	2.08	0.53
82:DC:511:LEU:HD22	82:DC:545:LEU:HD22	1.90	0.53
82:DC:601:ILE:HG23	82:DC:636:PHE:CD1	2.34	0.53
82:DC:566:THR:CG2	82:DC:725:GLN:HB2	2.39	0.53
82:DC:742:GLY:O	82:DC:746:VAL:HG23	2.09	0.53
1:A:807:A:H62	57:EB:104:ARG:CZ	2.22	0.53
7:G:90:VAL:HG22	7:G:104:THR:HA	1.90	0.53
2:B:1422:G:H21	10:J:5:LYS:HB2	1.74	0.53
63:KB:99:ARG:CZ	63:KB:143:SER:HB2	2.39	0.53
2:B:2549:G:H2'	12:L:33:ASN:HD22	1.72	0.53
38:LA:97:GLU:O	38:LA:101:VAL:HG23	2.08	0.53
65:MB:85:ILE:HD13	65:MB:111:MET:SD	2.49	0.53
65:MB:16:SER:HB3	65:MB:21:ASP:HA	1.90	0.53
15:O:96:PHE:HE1	15:O:159:THR:HB	1.74	0.53
17:Q:79:GLU:HG2	17:Q:109:PHE:CE2	2.44	0.53
18:R:99:TRP:O	18:R:103:ILE:HB	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
70:RB:36:ASN:O	70:RB:40:ASN:HB2	2.09	0.53
18:R:127:LYS:HB2	20:T:190:VAL:CG2	2.39	0.53
48:VA:64:ARG:HH11	48:VA:67:LEU:HD22	1.74	0.53
24:X:94:ILE:CD1	24:X:106:LEU:HB2	2.39	0.53
50:XA:139:VAL:CG2	52:ZA:62:PRO:HG3	2.39	0.53
1:A:1107:G:H3'	1:A:1108:G:H21	1.72	0.53
1:A:1459:C:N4	68:PB:139:LYS:HG3	2.24	0.53
1:A:154:G:N7	74:VB:128:LYS:NZ	2.57	0.53
1:A:1591:C:H2'	1:A:1592:A:C8	2.42	0.53
1:A:14:C:O2'	1:A:619:A:H2	1.92	0.53
1:A:950:C:H2'	1:A:951:A:O4'	2.09	0.53
53:AB:113:LEU:HD22	53:AB:118:ALA:HB2	1.90	0.53
2:B:1288:U:H1'	2:B:1289:G:C8	2.43	0.53
2:B:1636:U:H2'	2:B:1637:A:O4'	2.09	0.53
2:B:1814:A:H4'	2:B:1815:U:O4'	2.09	0.53
2:B:1861:G:H2'	2:B:1862:U:C5	2.44	0.53
2:B:277:G:H2'	2:B:278:U:C6	2.43	0.53
2:B:1128:U:H3	2:B:2863:G:H22	1.56	0.53
2:B:2901:G:H8	2:B:2901:G:O5'	1.92	0.53
2:B:522:A:C3'	2:B:523:A:H5"	2.32	0.53
2:B:681:U:O2	2:B:696:C:H5	1.92	0.53
2:B:90:C:H4'	2:B:282:G:OP1	2.09	0.53
4:D:5:G:H2'	4:D:6:C:C6	2.44	0.53
2:B:996:A:H2	4:D:79:A:C2	2.26	0.53
6:F:92:LYS:HA	6:F:102:LEU:HB2	1.90	0.53
32:FA:148:ILE:HG22	32:FA:149:ALA:H	1.72	0.53
58:FB:182:TYR:OH	58:FB:184:LEU:HD12	2.09	0.53
7:G:229:VAL:HG11	7:G:249:VAL:HG23	1.90	0.53
7:G:332:ARG:HG2	7:G:332:ARG:HH11	1.73	0.53
9:I:86:TYR:CZ	9:I:247:ILE:HG12	2.44	0.53
9:I:39:GLN:HE22	9:I:48:LYS:HE3	1.73	0.53
9:I:99:TYR:CD2	9:I:164:LYS:HB3	2.44	0.53
11:K:47:ARG:HH21	11:K:179:LEU:HD11	1.74	0.53
11:K:235:PHE:HE2	24:X:34:GLU:HB3	1.74	0.53
37:KA:42:GLN:HA	37:KA:45:LEU:HG	1.91	0.53
12:L:134:TYR:H	12:L:134:TYR:HD2	1.57	0.53
38:LA:19:LYS:NZ	38:LA:35:VAL:HB	2.23	0.53
15:O:49:LYS:HD3	15:O:62:ASN:HB3	1.90	0.53
16:P:104:ILE:O	16:P:104:ILE:HD12	2.09	0.53
13:M:173:ARG:HA	44:RA:91:CYS:SG	2.49	0.53
20:T:88:VAL:HG12	20:T:89:SER:N	2.23	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:VA:101:VAL:O	48:VA:101:VAL:HG12	2.09	0.53
49:WA:16:HIS:ND1	49:WA:37:SER:HB2	2.24	0.53
24:X:107:TYR:CE1	24:X:118:PHE:HA	2.44	0.53
50:XA:178:ALA:HA	50:XA:181:VAL:HG22	1.91	0.53
52:ZA:39:THR:O	52:ZA:43:ARG:HG3	2.09	0.53
1:A:1102:G:H2'	1:A:1103:U:O4'	2.08	0.53
1:A:147:A:H2'	1:A:148:A:H8	1.74	0.53
1:A:182:A:H2'	1:A:183:U:C6	2.44	0.53
1:A:344:A:C2'	1:A:345:U:H5'	2.39	0.53
1:A:968:U:H4'	1:A:1102:G:H22	1.74	0.53
2:B:1103:A:C3'	2:B:1104:G:H5'	2.38	0.53
2:B:141:C:H2'	2:B:142:C:C6	2.44	0.53
2:B:1689:U:H5''	23:W:61:SER:OG	2.09	0.53
2:B:2156:C:OP2	6:F:250:GLN:HB2	2.09	0.53
2:B:307:A:H2'	2:B:308:A:C8	2.44	0.53
2:B:500:C:H2'	2:B:501:A:H8	1.74	0.53
55:CB:123:VAL:CG1	75:WB:102:THR:HG22	2.37	0.53
4:D:81:U:H2'	4:D:82:G:H8	1.74	0.53
7:G:147:GLU:O	7:G:151:ILE:HG13	2.09	0.53
7:G:227:GLU:HB3	7:G:232:ARG:CG	2.39	0.53
8:H:207:VAL:HG21	8:H:219:LEU:HD13	1.90	0.53
9:I:252:ALA:O	9:I:253:PHE:HB3	2.09	0.53
35:IA:31:ARG:O	35:IA:31:ARG:HD3	2.09	0.53
36:JA:40:SER:O	36:JA:44:ARG:HG3	2.08	0.53
11:K:224:ILE:HG12	24:X:36:ILE:CA	2.35	0.53
12:L:153:ILE:O	12:L:179:ILE:HA	2.08	0.53
13:M:92:TYR:HA	13:M:179:ILE:HG12	1.91	0.53
15:O:15:GLU:HG2	15:O:16:LYS:HG2	1.91	0.53
17:Q:59:ARG:HA	17:Q:69:VAL:CA	2.25	0.53
69:QB:101:ASN:O	69:QB:105:LEU:HG	2.08	0.53
18:R:28:SER:OG	18:R:53:VAL:HG11	2.09	0.53
47:UA:28:LYS:NZ	47:UA:28:LYS:HB2	2.24	0.53
47:UA:38:ASP:HA	47:UA:45:LYS:HB3	1.91	0.53
74:VB:12:VAL:HA	74:VB:22:GLN:O	2.08	0.53
24:X:92:LYS:HD2	24:X:106:LEU:HD22	1.90	0.53
26:Z:38:ILE:HB	26:Z:56:VAL:CG2	2.39	0.53
1:A:304:U:H2'	1:A:305:C:O4'	2.08	0.52
1:A:519:C:H3'	1:A:520:A:H8	1.74	0.52
27:AA:93:LEU:CA	28:BA:20:LEU:HB3	2.39	0.52
2:B:1168:U:O2'	2:B:1169:A:H5'	2.09	0.52
2:B:1863:G:H5''	23:W:82:LYS:HD3	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1923:C:O5'	45:SA:25:LYS:HG3	2.09	0.52
2:B:2394:G:H2'	2:B:2395:G:O4'	2.09	0.52
2:B:2649:A:H2'	2:B:2650:U:H5'	1.91	0.52
2:B:316:U:O4	40:NA:28:TYR:HA	2.09	0.52
2:B:3184:A:H2'	2:B:3185:U:H5'	1.91	0.52
2:B:3236:U:H2'	2:B:3237:U:H6	1.74	0.52
3:C:70:G:H5''	30:DA:28:ARG:NE	2.23	0.52
82:DC:152:LYS:HG3	82:DC:200:VAL:CG2	2.39	0.52
82:DC:436:LEU:O	82:DC:442:VAL:HA	2.09	0.52
6:F:184:ARG:HA	6:F:187:HIS:CD2	2.44	0.52
6:F:48:ILE:HD11	6:F:57:PRO:HB2	1.89	0.52
58:FB:104:ILE:HG12	58:FB:165:LEU:O	2.08	0.52
58:FB:8:ARG:HG2	58:FB:24:LYS:NZ	2.24	0.52
7:G:149:ALA:HA	7:G:152:LYS:CG	2.39	0.52
7:G:41:VAL:HB	7:G:194:TRP:CE3	2.44	0.52
8:H:45:ASN:HA	8:H:110:ASN:HA	1.91	0.52
8:H:82:THR:HG23	8:H:85:SER:H	1.73	0.52
10:J:108:LYS:HZ3	10:J:108:LYS:HB3	1.73	0.52
2:B:578:A:H61	11:K:52:GLN:HE22	1.57	0.52
2:B:1652:G:H1'	38:LA:80:ARG:NH2	2.24	0.52
65:MB:55:GLY:O	65:MB:59:LYS:HG2	2.09	0.52
69:QB:67:MET:HB3	69:QB:68:ARG:HH21	1.74	0.52
18:R:38:ILE:HD12	18:R:44:VAL:CG1	2.33	0.52
70:RB:109:GLU:HG3	70:RB:110:PRO:HD2	1.91	0.52
72:TB:8:ALA:HA	72:TB:74:VAL:HG11	1.91	0.52
2:B:3270:U:H4'	21:U:171:ARG:HA	1.91	0.52
21:U:172:GLN:HE22	37:KA:60:ARG:HD2	1.73	0.52
21:U:60:PHE:CE2	21:U:82:ARG:HB2	2.43	0.52
73:UB:57:LEU:CD2	73:UB:57:LEU:H	2.20	0.52
22:V:64:VAL:HG12	22:V:90:ASP:N	2.17	0.52
48:VA:77:LEU:HB3	48:VA:78:PRO:HD3	1.90	0.52
49:WA:136:ILE:H	49:WA:136:ILE:CD1	2.19	0.52
49:WA:131:ILE:O	49:WA:144:LEU:HB2	2.09	0.52
24:X:158:LYS:C	24:X:158:LYS:HE3	2.29	0.52
24:X:80:ARG:HD2	25:Y:154:VAL:O	2.09	0.52
52:ZA:139:ILE:HG21	52:ZA:193:VAL:HG22	1.90	0.52
52:ZA:144:TRP:CD2	52:ZA:173:PRO:HG3	2.43	0.52
1:A:1075:C:H3'	1:A:1076:A:H5''	1.91	0.52
1:A:1113:A:C6	1:A:1131:A:H5''	2.44	0.52
1:A:1149:G:H21	1:A:1765:A:H1'	1.73	0.52
1:A:1370:U:H1'	1:A:1371:A:OP2	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:60:U:H5'	1:A:61:A:OP2	2.09	0.52
1:A:777:C:N4	74:VB:10:ARG:HB3	2.24	0.52
1:A:778:G:C2'	1:A:779:U:H5'	2.39	0.52
1:A:808:U:H2'	1:A:809:A:C8	2.44	0.52
1:A:887:A:O2'	1:A:888:U:H5'	2.09	0.52
2:B:1058:U:H2'	2:B:1059:G:C8	2.44	0.52
2:B:1768:U:H2'	2:B:1769:G:O4'	2.09	0.52
2:B:1905:G:N2	2:B:1907:C:H5'	2.24	0.52
2:B:2769:A:H4'	46:TA:80:ARG:HB2	1.91	0.52
2:B:3141:A:H3'	2:B:3142:A:H4'	1.92	0.52
2:B:3191:G:C2	2:B:3192:U:H1'	2.44	0.52
2:B:3226:A:H1'	2:B:3260:G:N2	2.24	0.52
2:B:3257:C:H2'	2:B:3258:U:H6	1.74	0.52
2:B:1399:A:N1	3:C:8:C:H4'	2.24	0.52
29:CA:113:LEU:HD11	29:CA:121:LYS:HZ2	1.74	0.52
55:CB:164:PRO:HA	55:CB:167:ARG:HE	1.74	0.52
82:DC:160:VAL:HG13	82:DC:178:PHE:CZ	2.43	0.52
82:DC:433:ARG:O	82:DC:457:VAL:HG12	2.08	0.52
82:DC:565:GLU:N	82:DC:681:MET:HA	2.23	0.52
31:EA:11:ALA:O	31:EA:23:VAL:HG22	2.09	0.52
57:EB:20:VAL:HG22	57:EB:85:PHE:HD1	1.74	0.52
6:F:15:ILE:C	6:F:17:THR:H	2.13	0.52
7:G:116:ARG:CZ	7:G:174:LYS:HB3	2.39	0.52
34:HA:51:LEU:HD11	38:LA:91:ARG:HG3	1.91	0.52
9:I:119:TYR:CE1	9:I:135:VAL:HG23	2.44	0.52
9:I:108:ARG:CA	9:I:251:PRO:HB2	2.39	0.52
61:IB:67:ARG:H	61:IB:67:ARG:HD3	1.74	0.52
10:J:125:GLN:HA	21:U:180:LYS:HE3	1.90	0.52
1:A:961:U:H4'	63:KB:47:PRO:HB3	1.90	0.52
63:KB:71:ILE:O	63:KB:75:LEU:HD13	2.10	0.52
12:L:163:VAL:HG22	12:L:166:LEU:HG	1.91	0.52
13:M:18:VAL:HG22	13:M:27:VAL:HG13	1.92	0.52
3:C:36:G:H3'	39:MA:86:ARG:HD2	1.91	0.52
65:MB:52:LYS:HB2	65:MB:53:PRO:CD	2.35	0.52
67:OB:44:LYS:O	67:OB:47:ARG:HB3	2.09	0.52
69:QB:94:ILE:HG13	69:QB:95:ASP:N	2.24	0.52
18:R:123:LEU:HD13	20:T:194:LEU:CD2	2.40	0.52
18:R:58:ILE:HG12	18:R:59:ASN:H	1.74	0.52
20:T:108:ILE:HB	20:T:160:ARG:HD2	1.92	0.52
46:TA:98:LYS:HG2	46:TA:99:GLN:H	1.75	0.52
21:U:114:VAL:HA	21:U:150:VAL:HA	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:U:57:ALA:HB1	21:U:82:ARG:O	2.09	0.52
47:UA:38:ASP:HA	47:UA:45:LYS:HA	1.92	0.52
73:UB:128:SER:CB	73:UB:143:PRO:HG2	2.38	0.52
24:X:26:ARG:HH12	24:X:28:ARG:HD2	1.74	0.52
25:Y:36:VAL:HG12	25:Y:36:VAL:O	2.08	0.52
77:YB:14:SER:HA	77:YB:17:ARG:CG	2.39	0.52
1:A:1177:C:H41	68:PB:139:LYS:HD2	1.73	0.52
1:A:1319:A:C3'	1:A:1320:U:H5''	2.37	0.52
53:AB:69:LEU:HD23	53:AB:72:LEU:HD12	1.90	0.52
2:B:1447:G:H5''	21:U:67:ILE:HD11	1.91	0.52
2:B:1451:C:H2'	2:B:1880:U:C5	2.43	0.52
2:B:1491:A:H61	2:B:1837:U:H3	1.57	0.52
2:B:1791:C:H5''	47:UA:13:LYS:HZ2	1.73	0.52
2:B:1794:G:H5'	6:F:188:LYS:CA	2.38	0.52
2:B:185:C:C2'	2:B:186:U:H5'	2.39	0.52
2:B:1915:A:H2'	2:B:1916:U:C6	2.45	0.52
2:B:2407:C:H4'	2:B:2620:G:H4'	1.91	0.52
2:B:2672:G:O2'	2:B:2673:A:H5'	2.10	0.52
2:B:2852:C:H2'	14:N:67:ALA:HB2	1.91	0.52
2:B:370:U:H4'	2:B:404:G:C5'	2.39	0.52
2:B:416:A:H2'	2:B:417:A:C8	2.43	0.52
2:B:41:G:OP2	2:B:42:C:H5	1.92	0.52
2:B:947:G:H2'	2:B:948:C:H6	1.69	0.52
54:BB:88:ASP:O	54:BB:100:ARG:HG3	2.09	0.52
2:B:408:A:H62	3:C:15:G:H21	1.57	0.52
3:C:69:U:H2'	3:C:70:G:H5'	1.91	0.52
3:C:74:U:OP1	30:DA:76:LEU:HG	2.09	0.52
29:CA:99:VAL:HG13	29:CA:103:TYR:CD2	2.44	0.52
4:D:27:A:H1'	4:D:57:G:H21	1.73	0.52
30:DA:61:GLY:O	30:DA:64:LYS:HB2	2.08	0.52
31:EA:21:LYS:HE2	31:EA:21:LYS:N	2.25	0.52
2:B:2154:U:H4'	6:F:240:ALA:HB2	1.91	0.52
6:F:42:ARG:HA	6:F:89:TYR:CD1	2.44	0.52
32:FA:105:LEU:C	32:FA:107:ALA:H	2.12	0.52
58:FB:22:ARG:HG3	58:FB:23:LYS:O	2.10	0.52
58:FB:43:ILE:HG12	58:FB:57:ALA:HA	1.90	0.52
2:B:3044:G:O2'	7:G:13:HIS:HB2	2.10	0.52
2:B:1887:A:H1'	7:G:226:PHE:CZ	2.44	0.52
8:H:207:VAL:HG21	8:H:219:LEU:CD1	2.39	0.52
8:H:22:LEU:HD11	8:H:27:SER:OG	2.08	0.52
35:IA:80:ASN:HD22	35:IA:88:PRO:HA	1.73	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:JA:76:VAL:HG12	36:JA:77:ALA:N	2.24	0.52
11:K:140:SER:O	11:K:144:ILE:HG13	2.08	0.52
14:N:82:ARG:NH1	14:N:82:ARG:HB2	2.25	0.52
73:UB:53:VAL:O	73:UB:99:ASN:HA	2.09	0.52
48:VA:49:ALA:HA	48:VA:88:PHE:O	2.10	0.52
24:X:42:TRP:CZ2	24:X:58:ILE:HG13	2.44	0.52
50:XA:143:VAL:O	50:XA:157:ASP:HB2	2.10	0.52
25:Y:156:TYR:O	25:Y:157:GLU:HG3	2.08	0.52
1:A:1179:G:H2'	1:A:1180:C:O4'	2.10	0.52
1:A:139:C:H1'	1:A:140:A:OP2	2.10	0.52
1:A:1538:U:O2'	1:A:1539:G:H5'	2.10	0.52
1:A:1629:G:H2'	1:A:1630:U:C6	2.44	0.52
1:A:400:A:N6	58:FB:29:LEU:HD13	2.25	0.52
1:A:450:U:H5''	54:BB:7:LYS:HE3	1.92	0.52
1:A:740:A:H3'	1:A:741:C:H5''	1.91	0.52
2:B:1100:U:H2'	2:B:1101:G:C8	2.44	0.52
2:B:1121:U:H2'	2:B:1122:U:C6	2.45	0.52
2:B:1180:A:H5''	37:KA:77:ASN:HB2	1.91	0.52
2:B:118:U:H2'	2:B:119:U:O4'	2.10	0.52
2:B:1529:A:H1'	2:B:1588:A:C2	2.44	0.52
2:B:1567:U:H2'	2:B:1570:U:O4	2.09	0.52
2:B:231:G:H2'	2:B:232:G:H8	1.73	0.52
2:B:2506:U:H2'	2:B:2506:U:O2	2.09	0.52
2:B:2714:G:N3	2:B:2751:G:H2'	2.25	0.52
2:B:615:U:H2'	2:B:616:G:C8	2.45	0.52
2:B:728:G:H21	22:V:138:LEU:HD23	1.75	0.52
3:C:147:U:H2'	3:C:148:G:O4'	2.09	0.52
3:C:75:G:H4'	43:QA:29:LEU:HG	1.90	0.52
4:D:74:C:H2'	4:D:75:G:H5'	1.90	0.52
4:D:76:A:H61	4:D:102:A:H3'	1.73	0.52
56:DB:74:LYS:HA	56:DB:95:LYS:O	2.10	0.52
82:DC:225:PHE:HZ	82:DC:328:LEU:HD11	1.73	0.52
82:DC:612:PHE:O	82:DC:631:ARG:HG2	2.09	0.52
5:E:198:TRP:C	5:E:200:ASN:H	2.12	0.52
7:G:189:SER:O	7:G:193:ASP:HB2	2.09	0.52
7:G:315:GLY:O	7:G:316:GLU:HG3	2.09	0.52
2:B:3324:C:H4'	35:IA:13:THR:HB	1.91	0.52
35:IA:62:ARG:HB3	35:IA:66:GLY:O	2.10	0.52
36:JA:3:SER:O	36:JA:5:PRO:HD3	2.10	0.52
37:KA:29:LEU:O	37:KA:30:ILE:HD13	2.08	0.52
65:MB:44:ARG:CZ	65:MB:52:LYS:HD2	2.40	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
66:NB:103:ASN:HA	66:NB:106:LYS:HZ2	1.75	0.52
67:OB:34:LEU:O	67:OB:38:ILE:HG22	2.08	0.52
16:P:102:GLY:HA3	16:P:140:GLY:H	1.72	0.52
17:Q:79:GLU:HG3	17:Q:103:ASN:OD1	2.09	0.52
44:RA:79:GLU:O	44:RA:83:LYS:HG3	2.09	0.52
20:T:8:VAL:HG13	20:T:34:VAL:HG23	1.91	0.52
2:B:87:U:H5''	22:V:172:PHE:CZ	2.45	0.52
2:B:975:C:H5''	22:V:54:LEU:HD22	1.92	0.52
48:VA:33:VAL:CG2	48:VA:34:SER:H	2.18	0.52
75:WB:67:ASP:C	75:WB:69:LEU:H	2.11	0.52
25:Y:27:LEU:HA	25:Y:30:TYR:CE2	2.45	0.52
25:Y:93:VAL:HA	25:Y:96:ILE:HG22	1.92	0.52
52:ZA:145:GLY:O	72:TB:98:GLN:HB3	2.08	0.52
1:A:1392:U:H2'	1:A:1393:C:C6	2.45	0.52
1:A:1474:G:H2'	1:A:1475:A:C8	2.45	0.52
1:A:1721:A:H2'	1:A:1722:A:C8	2.44	0.52
1:A:1723:U:H2'	1:A:1724:U:O4'	2.10	0.52
1:A:213:A:H2'	1:A:214:G:O4'	2.10	0.52
1:A:811:A:H62	57:EB:113:PRO:HD3	1.74	0.52
1:A:219:A:N6	1:A:829:A:H2	2.07	0.52
2:B:1672:U:OP1	23:W:64:ARG:HG2	2.10	0.52
2:B:1711:C:H4'	31:EA:37:PRO:O	2.10	0.52
2:B:181:U:N3	2:B:182:U:H1'	2.24	0.52
2:B:2118:C:H3'	2:B:2119:A:C8	2.44	0.52
2:B:2576:G:H2'	2:B:2577:C:C6	2.45	0.52
2:B:2642:A:O2'	2:B:2643:A:H5'	2.09	0.52
2:B:49:A:N3	2:B:279:U:H4'	2.24	0.52
2:B:3005:A:H5''	20:T:149:TYR:OH	2.09	0.52
2:B:3229:G:H1'	18:R:129:TYR:HE2	1.73	0.52
2:B:3375:A:N3	2:B:3378:C:H5''	2.25	0.52
2:B:3391:A:H2'	2:B:3392:U:C6	2.45	0.52
2:B:660:A:H5''	8:H:100:PHE:CD1	2.44	0.52
54:BB:173:ILE:HD12	54:BB:173:ILE:N	2.23	0.52
3:C:38:U:H1'	39:MA:83:LYS:HG3	1.92	0.52
29:CA:109:LYS:HE2	29:CA:111:ASN:ND2	2.25	0.52
55:CB:102:ARG:HG3	55:CB:103:ASN:ND2	2.24	0.52
56:DB:147:LEU:O	56:DB:151:ASP:HB2	2.10	0.52
82:DC:634:TRP:HZ3	82:DC:663:VAL:HB	1.73	0.52
82:DC:810:ASP:C	82:DC:812:THR:H	2.12	0.52
6:F:209:HIS:ND1	6:F:210:PRO:HD2	2.24	0.52
58:FB:83:TYR:HB2	58:FB:196:LEU:HD13	1.90	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:46:PHE:HB3	7:G:338:LEU:HD23	1.90	0.52
61:IB:133:LYS:HD3	61:IB:134:THR:CG2	2.39	0.52
10:J:38:THR:HG23	10:J:90:LYS:HA	1.89	0.52
11:K:59:GLU:O	11:K:63:ILE:HG12	2.10	0.52
63:KB:98:VAL:HG21	63:KB:118:ILE:CD1	2.39	0.52
12:L:134:TYR:HB3	12:L:190:VAL:HG21	1.92	0.52
38:LA:81:CYS:O	38:LA:82:ALA:HB3	2.09	0.52
13:M:102:ASN:HA	13:M:136:PHE:CZ	2.45	0.52
13:M:49:ASN:HD21	13:M:52:LEU:CB	2.19	0.52
66:NB:17:THR:O	66:NB:69:VAL:HA	2.08	0.52
18:R:101:LYS:O	18:R:105:GLN:HG3	2.09	0.52
19:S:114:ARG:HB2	19:S:135:VAL:HB	1.90	0.52
20:T:8:VAL:O	20:T:118:VAL:HG22	2.08	0.52
20:T:85:ARG:HH11	20:T:90:HIS:HD2	1.55	0.52
21:U:28:ASN:HD21	21:U:84:PRO:HB3	1.75	0.52
21:U:88:VAL:HA	21:U:91:VAL:CB	2.38	0.52
47:UA:79:VAL:O	47:UA:83:ILE:HD13	2.09	0.52
73:UB:66:SER:O	73:UB:67:ALA:HB2	2.09	0.52
49:WA:54:PHE:HE2	49:WA:302:PHE:HE1	1.58	0.52
75:WB:76:ALA:O	75:WB:80:LEU:HG	2.10	0.52
24:X:93:GLU:OE2	24:X:135:VAL:HG13	2.08	0.52
50:XA:179:ARG:O	50:XA:183:ARG:HG3	2.09	0.52
1:A:1048:G:H5''	77:YB:69:GLY:N	2.24	0.52
26:Z:96:VAL:HG12	26:Z:97:SER:N	2.23	0.52
1:A:1069:A:O2'	1:A:1070:C:H5'	2.10	0.52
1:A:1419:G:H2'	1:A:1420:C:H5'	1.90	0.52
1:A:143:G:H2'	1:A:144:U:C5'	2.35	0.52
1:A:157:A:H2'	1:A:158:U:H5''	1.92	0.52
1:A:397:A:H5''	58:FB:47:ARG:HH11	1.74	0.52
1:A:400:A:H61	58:FB:29:LEU:HD22	1.75	0.52
1:A:766:U:H2'	1:A:769:A:N6	2.24	0.52
2:B:1165:A:H2'	2:B:1166:G:C8	2.44	0.52
2:B:971:G:O2'	2:B:1371:G:H1'	2.10	0.52
2:B:1404:G:N2	2:B:1406:A:H3'	2.25	0.52
2:B:1875:G:P	23:W:19:LYS:H	2.33	0.52
2:B:2138:A:H2'	41:OA:3:LYS:HE2	1.92	0.52
2:B:2747:A:C2	9:I:36:LEU:HD11	2.44	0.52
2:B:2909:U:C3'	2:B:2910:A:H5''	2.39	0.52
2:B:3133:C:H3'	2:B:3134:A:H5''	1.92	0.52
2:B:817:A:C6	41:OA:14:LYS:HG2	2.45	0.52
2:B:59:G:H2'	3:C:33:A:H2'	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:CB:84:LYS:HB2	55:CB:84:LYS:NZ	2.25	0.52
4:D:2:G:H2'	4:D:3:U:H5'	1.92	0.52
4:D:76:A:N6	4:D:102:A:H3'	2.24	0.52
82:DC:121:VAL:HG12	82:DC:399:ARG:HB2	1.90	0.52
48:VA:145:ILE:CG1	82:DC:186:ASN:HB3	2.39	0.52
82:DC:388:THR:HG21	82:DC:395:TYR:HE2	1.74	0.52
82:DC:4:PHE:O	82:DC:48:ALA:HA	2.10	0.52
6:F:29:LEU:HB2	6:F:163:ARG:HH22	1.73	0.52
58:FB:25:ARG:HG3	58:FB:27:PHE:CZ	2.43	0.52
8:H:93:MET:O	8:H:93:MET:HG2	2.09	0.52
35:IA:37:LYS:HE3	35:IA:51:LEU:CD1	2.39	0.52
11:K:90:LYS:HB2	11:K:133:TYR:HA	1.91	0.52
63:KB:107:LYS:CE	63:KB:109:LYS:HD3	2.36	0.52
1:A:867:G:H5'	63:KB:4:MET:CE	2.40	0.52
13:M:95:ALA:O	44:RA:77:ILE:HD12	2.10	0.52
39:MA:21:LEU:HB2	39:MA:54:VAL:HG11	1.91	0.52
14:N:193:ASP:HB3	14:N:197:VAL:HA	1.91	0.52
14:N:21:ARG:HG3	14:N:22:TYR:CE1	2.43	0.52
2:B:299:G:N1	40:NA:30:LYS:HB3	2.25	0.52
41:OA:45:ARG:HE	41:OA:47:TYR:HE2	1.56	0.52
17:Q:57:VAL:HG22	17:Q:147:ILE:HG13	1.90	0.52
18:R:23:ILE:HA	18:R:63:VAL:HG23	1.92	0.52
19:S:114:ARG:HG2	19:S:137:PRO:CG	2.39	0.52
45:SA:21:ARG:HG3	45:SA:22:ALA:N	2.25	0.52
72:TB:13:ALA:CB	72:TB:27:ILE:HG22	2.39	0.52
2:B:2131:A:H61	47:UA:18:TYR:N	2.08	0.52
73:UB:70:LYS:HB3	73:UB:93:LEU:HD11	1.92	0.52
22:V:29:LEU:HD23	22:V:32:LEU:HD22	1.91	0.52
23:W:175:GLN:HA	23:W:178:ALA:HB2	1.92	0.52
24:X:10:ILE:HG21	25:Y:148:PRO:CG	2.40	0.52
25:Y:116:ARG:O	25:Y:120:LYS:HE3	2.09	0.52
77:YB:35:VAL:HA	77:YB:78:SER:O	2.09	0.52
1:A:1113:A:H61	1:A:1131:A:H5''	1.75	0.52
2:B:1258:U:H1'	48:VA:42:ARG:CZ	2.40	0.52
2:B:1505:C:P	21:U:127:ARG:HH12	2.33	0.52
2:B:1669:C:H2'	2:B:1670:C:O4'	2.10	0.52
2:B:1758:G:H2'	2:B:1759:C:C6	2.44	0.52
2:B:1604:G:H4'	2:B:1835:A:O2'	2.10	0.52
2:B:2570:U:H4'	2:B:2571:U:H2'	1.91	0.52
2:B:290:G:H5''	19:S:98:LEU:HD21	1.91	0.52
2:B:3072:C:O2'	2:B:3336:A:H4'	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:388:G:H4'	21:U:18:ARG:N	2.23	0.52
2:B:550:A:O2'	2:B:551:A:H5'	2.09	0.52
2:B:627:U:OP2	36:JA:15:LYS:HE3	2.09	0.52
2:B:790:U:C5'	8:H:112:LYS:HD3	2.39	0.52
2:B:858:A:H5''	2:B:1790:G:H21	1.75	0.52
4:D:37:G:H2'	4:D:38:U:C6	2.44	0.52
4:D:6:C:H2'	4:D:7:G:H4'	1.90	0.52
82:DC:102:LEU:HD12	82:DC:103:ILE:N	2.25	0.52
82:DC:106:PRO:HG3	82:DC:114:GLU:CB	2.27	0.52
58:FB:8:ARG:HG2	58:FB:24:LYS:HZ3	1.75	0.52
59:GB:161:THR:HA	59:GB:167:ALA:HB2	1.91	0.52
8:H:220:ARG:HH12	30:DA:4:GLN:HB2	1.73	0.52
61:IB:109:VAL:HG21	61:IB:125:VAL:HG11	1.92	0.52
61:IB:34:TRP:CH2	61:IB:36:LYS:HD3	2.39	0.52
41:OA:8:PHE:O	41:OA:11:ARG:HB2	2.09	0.52
17:Q:57:VAL:HG12	17:Q:69:VAL:HG22	1.90	0.52
19:S:68:ARG:NH2	19:S:128:LYS:HE3	2.20	0.52
71:SB:38:LYS:HD2	71:SB:49:GLU:CG	2.40	0.52
73:UB:92:CYS:O	73:UB:96:VAL:HG13	2.08	0.52
2:B:841:A:H4'	23:W:126:GLU:HG2	1.92	0.52
1:A:1060:U:H3'	1:A:1061:A:C5'	2.40	0.52
1:A:1724:U:H2'	1:A:1725:U:C5	2.45	0.52
2:B:1092:C:H4'	25:Y:120:LYS:HZ2	1.75	0.52
2:B:142:C:H2'	2:B:143:G:C8	2.45	0.52
2:B:1752:A:H2'	2:B:1753:G:H8	1.75	0.52
2:B:1904:C:H2'	2:B:1905:G:C8	2.45	0.52
2:B:2149:A:N1	2:B:2188:A:H4'	2.25	0.52
2:B:2245:C:H3'	2:B:2246:G:O4'	2.10	0.52
2:B:2628:A:C2'	2:B:2629:U:H5''	2.40	0.52
2:B:3315:G:H2'	7:G:123:TYR:CE1	2.45	0.52
2:B:3327:G:N2	2:B:3380:U:H1'	2.25	0.52
2:B:405:U:C2'	2:B:406:G:H5'	2.39	0.52
3:C:41:A:O3'	41:OA:59:THR:HA	2.09	0.52
82:DC:159:LYS:O	82:DC:162:ARG:HG2	2.10	0.52
82:DC:501:LEU:O	82:DC:504:LEU:HB3	2.10	0.52
5:E:68:PHE:HB3	5:E:85:MET:HB2	1.92	0.52
6:F:40:TYR:HA	6:F:91:GLY:HA3	1.91	0.52
7:G:111:SER:HB2	7:G:163:HIS:CE1	2.44	0.52
8:H:313:LEU:HD22	8:H:315:LYS:HD3	1.91	0.52
61:IB:45:PRO:HG2	61:IB:48:ALA:CB	2.40	0.52
10:J:135:VAL:O	10:J:138:GLN:HB3	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:LA:95:ILE:O	38:LA:99:LYS:HB2	2.10	0.52
13:M:48:VAL:HG12	13:M:52:LEU:O	2.10	0.52
65:MB:67:ALA:HB2	65:MB:73:PRO:HA	1.92	0.52
40:NA:9:ILE:HD12	40:NA:10:GLY:N	2.24	0.52
15:O:115:LYS:NZ	15:O:115:LYS:HB2	2.25	0.52
1:A:748:U:C4'	72:TB:123:GLY:HA2	2.37	0.52
47:UA:28:LYS:HZ3	47:UA:28:LYS:HB2	1.75	0.52
22:V:157:PRO:HD3	32:FA:47:LYS:HG3	1.91	0.52
75:WB:95:HIS:CE1	75:WB:98:GLN:HB2	2.45	0.52
24:X:145:THR:OG1	24:X:148:LEU:HB2	2.09	0.52
1:A:1367:G:H2'	1:A:1368:G:C8	2.45	0.52
1:A:925:G:H2'	1:A:926:A:C8	2.44	0.52
53:AB:77:PHE:HB2	53:AB:79:TYR:CE2	2.45	0.52
79:AC:36:LEU:HD12	79:AC:38:ILE:N	2.22	0.52
2:B:116:A:O2'	2:B:117:U:H3'	2.10	0.52
2:B:1478:C:O2'	2:B:1479:U:H5'	2.09	0.52
2:B:1538:G:N2	2:B:1583:A:H62	1.97	0.52
2:B:1910:A:H2'	2:B:1911:A:C8	2.43	0.52
2:B:2103:U:H5''	23:W:85:ARG:HH12	1.73	0.52
2:B:2375:G:H1'	2:B:2377:G:OP2	2.09	0.52
2:B:2215:A:H1'	2:B:2430:A:O2'	2.10	0.52
2:B:2637:A:C2'	2:B:2638:C:H5''	2.40	0.52
2:B:2660:G:H2'	2:B:2661:G:H8	1.72	0.52
2:B:2760:C:H2'	2:B:2761:G:C8	2.44	0.52
2:B:288:C:H4'	19:S:171:SER:O	2.10	0.52
2:B:3231:U:H2'	2:B:3232:G:C8	2.44	0.52
2:B:502:U:C2'	2:B:503:C:H5''	2.40	0.52
2:B:51:A:H2'	2:B:52:A:H8	1.74	0.52
2:B:669:U:O2'	2:B:1110:U:H4'	2.10	0.52
2:B:67:A:H62	2:B:271:C:H4'	1.75	0.52
2:B:791:A:H2'	2:B:792:G:O4'	2.09	0.52
54:BB:178:GLY:HA2	54:BB:195:ILE:HB	1.92	0.52
3:C:75:G:N3	43:QA:26:TRP:HB2	2.25	0.52
82:DC:226:ALA:HA	82:DC:240:MET:HE3	1.91	0.52
82:DC:31:GLY:HA3	82:DC:158:ASN:ND2	2.25	0.52
1:A:639:U:C5	57:EB:118:LEU:HG	2.45	0.52
57:EB:182:VAL:HG12	57:EB:183:PHE:H	1.75	0.52
6:F:225:ILE:HG22	6:F:238:ILE:HA	1.92	0.52
58:FB:3:ILE:CD1	58:FB:31:ARG:HA	2.39	0.52
7:G:79:VAL:HG12	7:G:322:ILE:O	2.08	0.52
2:B:692:A:C4'	8:H:46:LYS:HG2	2.34	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:L:248:LYS:O	12:L:252:ASN:HB2	2.10	0.52
2:B:294:U:H5''	40:NA:53:TYR:CE2	2.44	0.52
66:NB:31:VAL:HG12	66:NB:32:ASN:OD1	2.10	0.52
46:TA:11:TYR:HA	46:TA:19:LYS:O	2.09	0.52
46:TA:70:LEU:HD12	46:TA:83:LEU:HD13	1.91	0.52
72:TB:20:THR:OG1	72:TB:22:LYS:HD3	2.09	0.52
21:U:105:LYS:HD3	21:U:107:LEU:HD22	1.92	0.52
48:VA:64:ARG:O	48:VA:67:LEU:HB2	2.10	0.52
49:WA:197:SER:OG	49:WA:216:LYS:HB3	2.10	0.52
24:X:24:LEU:CD2	25:Y:148:PRO:HG3	2.40	0.52
1:A:1126:G:H5''	45:SA:11:ARG:NE	2.24	0.52
1:A:573:C:OP1	1:A:1137:A:H3'	2.10	0.52
1:A:1249:U:H2'	1:A:1250:U:H5'	1.91	0.52
27:AA:19:VAL:HG23	27:AA:50:PRO:O	2.10	0.52
53:AB:98:ALA:CA	53:AB:188:ILE:HD12	2.34	0.52
2:B:2436:U:H2'	2:B:2437:G:H5'	1.91	0.52
2:B:3040:A:H5''	27:AA:12:ARG:CG	2.40	0.52
2:B:3066:U:H2'	2:B:3067:C:H6	1.74	0.52
2:B:3104:U:H3'	2:B:3128:G:N1	2.24	0.52
2:B:3182:G:H4'	20:T:161:LYS:CD	2.36	0.52
54:BB:68:ARG:HH11	54:BB:76:VAL:CG1	2.23	0.52
82:DC:169:VAL:HB	82:DC:174:LEU:HD13	1.91	0.52
57:EB:126:LEU:HD12	57:EB:173:TYR:CE2	2.45	0.52
6:F:116:VAL:O	6:F:125:ALA:HB3	2.10	0.52
2:B:2967:A:H5''	6:F:213:GLY:C	2.30	0.52
60:HB:46:LEU:O	60:HB:50:THR:HG23	2.10	0.52
61:IB:38:ALA:HB3	61:IB:42:PHE:HB2	1.91	0.52
61:IB:2:SER:N	61:IB:82:ARG:HA	2.24	0.52
10:J:45:GLY:C	10:J:47:PHE:H	2.13	0.52
38:LA:31:ARG:HD3	38:LA:32:ALA:H	1.75	0.52
17:Q:93:ILE:HD11	39:MA:114:ARG:HH21	1.75	0.52
40:NA:57:LEU:HA	40:NA:60:LEU:CB	2.38	0.52
66:NB:51:PRO:O	66:NB:55:VAL:HG12	2.09	0.52
68:PB:72:ILE:HG23	68:PB:79:TYR:HB2	1.92	0.52
10:J:175:LYS:HB3	18:R:112:LEU:O	2.09	0.52
18:R:84:LYS:HA	18:R:87:ALA:HB3	1.92	0.52
48:VA:55:LYS:O	48:VA:58:MET:HB2	2.10	0.52
48:VA:5:ARG:HA	48:VA:8:LYS:CD	2.26	0.52
48:VA:27:VAL:HG12	48:VA:84:VAL:HG11	1.92	0.52
75:WB:90:LYS:NZ	75:WB:105:THR:HG21	2.24	0.52
24:X:132:THR:O	24:X:133:ALA:HB3	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:596:C:H2'	1:A:597:G:H8	1.75	0.51
1:A:780:A:C8	74:VB:8:ARG:HB3	2.45	0.51
2:B:1434:G:O2'	2:B:1435:A:H5'	2.10	0.51
2:B:1592:G:H3'	2:B:1593:A:C5'	2.40	0.51
2:B:2247:G:H21	2:B:2271:A:H2'	1.75	0.51
2:B:282:G:N1	19:S:181:ASN:HB3	2.25	0.51
2:B:2896:A:H5''	44:RA:124:LYS:HZ1	1.74	0.51
2:B:904:A:H5''	2:B:1537:A:C5'	2.34	0.51
30:DA:87:LYS:HB3	30:DA:95:VAL:O	2.11	0.51
82:DC:142:VAL:HA	82:DC:145:GLN:HB2	1.93	0.51
82:DC:829:LYS:HE3	82:DC:831:GLU:HG2	1.91	0.51
5:E:209:SER:O	5:E:210:MET:HB3	2.10	0.51
8:H:42:VAL:HG13	8:H:118:LYS:NZ	2.25	0.51
61:IB:75:VAL:HG21	61:IB:117:VAL:CG1	2.40	0.51
61:IB:83:THR:HA	61:IB:111:VAL:HG12	1.93	0.51
10:J:40:LEU:HB2	10:J:52:VAL:HG23	1.91	0.51
13:M:88:TYR:CD1	13:M:154:VAL:HG12	2.45	0.51
39:MA:5:LYS:HE3	39:MA:7:TYR:CD2	2.45	0.51
40:NA:73:ALA:O	40:NA:77:LEU:HB2	2.09	0.51
18:R:49:PRO:HB3	18:R:78:THR:CG2	2.38	0.51
21:U:32:THR:HA	21:U:58:ILE:HD13	1.92	0.51
48:VA:104:ARG:HB2	48:VA:184:GLY:HA3	1.91	0.51
48:VA:71:PRO:C	48:VA:73:PHE:H	2.14	0.51
75:WB:41:ILE:HG13	75:WB:43:ASP:H	1.74	0.51
25:Y:112:ASN:O	25:Y:116:ARG:HB2	2.10	0.51
1:A:343:C:H2'	1:A:344:A:H8	1.73	0.51
1:A:606:A:H1'	1:A:609:U:OP1	2.11	0.51
1:A:875:G:H4'	1:A:936:G:O2'	2.10	0.51
27:AA:33:ASN:HD21	27:AA:64:LYS:H	1.57	0.51
53:AB:92:GLN:O	53:AB:93:ASP:O	2.27	0.51
2:B:1184:A:O3'	18:R:43:LYS:HE2	2.11	0.51
2:B:1309:U:H5''	2:B:1311:G:OP1	2.10	0.51
2:B:1164:G:N2	2:B:1335:C:O2	2.30	0.51
2:B:1438:U:H2'	2:B:1439:U:O4'	2.10	0.51
2:B:1646:G:H1'	2:B:1808:G:N2	2.25	0.51
2:B:1840:U:C5	2:B:1850:A:H4'	2.45	0.51
2:B:2200:U:H3	2:B:2244:A:H61	1.57	0.51
2:B:2344:U:H2'	2:B:2345:A:C8	2.45	0.51
2:B:2922:G:H1'	2:B:2951:G:N2	2.25	0.51
2:B:371:G:H4'	2:B:396:A:H61	1.76	0.51
2:B:561:C:O2'	2:B:562:C:H5'	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:630:A:H2'	2:B:631:U:O4'	2.10	0.51
2:B:774:G:H2'	2:B:774:G:N3	2.25	0.51
2:B:964:G:H1'	32:FA:40:HIS:CD2	2.45	0.51
54:BB:150:PRO:CG	54:BB:151:ASP:H	2.21	0.51
4:D:15:C:H5'	9:I:16:PHE:HE1	1.73	0.51
30:DA:115:ARG:O	30:DA:119:ILE:HG13	2.10	0.51
56:DB:162:VAL:O	56:DB:168:THR:HA	2.11	0.51
54:BB:152:PRO:HG3	56:DB:208:TYR:OH	2.10	0.51
82:DC:155:VAL:HG23	82:DC:202:VAL:HG21	1.91	0.51
82:DC:309:GLY:H	82:DC:312:LYS:HE3	1.75	0.51
31:EA:36:HIS:C	31:EA:38:PHE:H	2.12	0.51
6:F:103:PRO:HB3	6:F:161:ASP:HA	1.92	0.51
2:B:2727:A:N1	32:FA:43:ILE:HG23	2.26	0.51
58:FB:76:THR:HG22	58:FB:108:PRO:CD	2.40	0.51
9:I:99:TYR:CE2	9:I:164:LYS:HB3	2.45	0.51
4:D:15:C:H5'	9:I:16:PHE:CE1	2.45	0.51
10:J:37:GLY:O	10:J:91:VAL:HG22	2.11	0.51
2:B:1338:C:H5''	36:JA:60:ASN:HD21	1.73	0.51
63:KB:100:LYS:HE2	63:KB:104:ARG:HH11	1.76	0.51
63:KB:70:LYS:O	63:KB:74:ILE:HG13	2.10	0.51
12:L:221:ASN:O	12:L:225:LYS:HE2	2.09	0.51
39:MA:54:VAL:O	39:MA:58:ILE:HG13	2.09	0.51
40:NA:95:ALA:O	40:NA:99:ARG:HB2	2.09	0.51
66:NB:42:GLU:HG3	66:NB:45:ARG:HH21	1.76	0.51
2:B:2138:A:H2'	41:OA:3:LYS:CG	2.40	0.51
68:PB:46:VAL:HG13	68:PB:72:ILE:HB	1.93	0.51
18:R:50:LYS:HE3	18:R:82:SER:OG	2.10	0.51
8:H:280:ILE:HD11	22:V:105:ARG:HA	1.92	0.51
48:VA:64:ARG:HA	48:VA:67:LEU:HD12	1.91	0.51
74:VB:105:ARG:O	74:VB:109:LYS:HG3	2.10	0.51
24:X:38:LYS:HD3	24:X:58:ILE:CD1	2.40	0.51
1:A:1316:G:H4'	67:OB:10:LYS:CE	2.38	0.51
1:A:751:G:H2'	1:A:752:A:O4'	2.11	0.51
2:B:1117:G:O5'	33:GA:5:LYS:HB3	2.11	0.51
2:B:1347:U:H2'	2:B:1355:A:N6	2.26	0.51
2:B:1391:C:C2	36:JA:103:LYS:HB3	2.45	0.51
2:B:14:U:H3'	2:B:14:U:OP2	2.10	0.51
2:B:1669:C:OP1	38:LA:24:LYS:HD3	2.09	0.51
2:B:1768:U:C3'	2:B:1769:G:H5''	2.39	0.51
2:B:2434:U:H4'	2:B:2435:G:O5'	2.10	0.51
2:B:2774:C:H2'	2:B:2775:U:C6	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2778:G:H3'	2:B:2779:A:H5''	1.91	0.51
2:B:2838:A:H62	2:B:2850:G:N2	2.07	0.51
2:B:3160:U:H2'	2:B:3161:C:C6	2.46	0.51
2:B:748:U:OP1	33:GA:31:SER:HB3	2.10	0.51
31:EA:112:LYS:O	31:EA:115:LYS:HB3	2.10	0.51
83:EC:6774:U:H5	83:EC:6775:U:H3	1.57	0.51
6:F:41:ILE:HD11	6:F:64:ARG:HG3	1.91	0.51
2:B:94:G:H4'	32:FA:53:PHE:CE2	2.45	0.51
1:A:397:A:O2'	58:FB:50:GLY:HA2	2.11	0.51
7:G:129:ALA:O	7:G:130:PHE:HB2	2.10	0.51
2:B:3242:G:N7	7:G:150:ARG:HD2	2.25	0.51
8:H:181:VAL:C	8:H:183:LYS:H	2.14	0.51
9:I:234:ASP:O	9:I:237:GLU:HB3	2.10	0.51
35:IA:55:LEU:O	35:IA:59:ILE:HG13	2.11	0.51
61:IB:107:VAL:CG1	61:IB:108:PRO:HD2	2.38	0.51
61:IB:123:VAL:HG23	61:IB:142:VAL:HA	1.91	0.51
36:JA:89:THR:HA	36:JA:117:ILE:HG22	1.92	0.51
11:K:102:VAL:HG12	11:K:130:ILE:HD13	1.91	0.51
11:K:54:GLU:OE2	11:K:190:THR:HG21	2.09	0.51
12:L:150:LEU:HD22	12:L:151:VAL:N	2.26	0.51
13:M:72:LYS:C	13:M:72:LYS:HD3	2.31	0.51
39:MA:6:ALA:HB1	39:MA:10:ARG:HH12	1.74	0.51
15:O:171:VAL:HG13	15:O:172:LEU:N	2.26	0.51
68:PB:54:LEU:HD22	68:PB:54:LEU:H	1.76	0.51
17:Q:56:PRO:HD2	17:Q:73:ARG:O	2.10	0.51
69:QB:121:GLY:O	69:QB:122:ARG:HD2	2.10	0.51
18:R:85:TRP:HE1	18:R:91:CYS:HB2	1.74	0.51
49:WA:16:HIS:CD2	49:WA:20:VAL:HG22	2.46	0.51
49:WA:26:SER:HB2	49:WA:73:LEU:HD13	1.92	0.51
50:XA:174:TRP:HA	50:XA:177:LEU:HD12	1.91	0.51
50:XA:180:GLU:HA	50:XA:183:ARG:HD3	1.93	0.51
26:Z:33:TYR:O	26:Z:37:LEU:HB2	2.10	0.51
1:A:1304:G:H5'	1:A:1322:A:OP2	2.10	0.51
1:A:463:U:H2'	1:A:464:A:O4'	2.10	0.51
2:B:135:C:C5	39:MA:94:LYS:HD2	2.44	0.51
2:B:135:C:O2	39:MA:93:THR:HB	2.11	0.51
2:B:2145:A:H4'	2:B:2958:A:O3'	2.10	0.51
2:B:2407:C:H4'	2:B:2620:G:O4'	2.10	0.51
2:B:2666:C:H1'	2:B:2691:A:C2	2.46	0.51
2:B:3334:U:C5	28:BA:50:ALA:HB3	2.45	0.51
2:B:754:G:H2'	2:B:755:A:C8	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:884:A:H2'	41:OA:2:GLY:N	2.25	0.51
55:CB:132:VAL:HG11	55:CB:199:ILE:HG12	1.93	0.51
4:D:55:A:C4	15:O:9:MET:HB3	2.46	0.51
82:DC:740:VAL:HA	82:DC:743:ILE:CG2	2.41	0.51
31:EA:104:PRO:HA	31:EA:107:ARG:HB2	1.92	0.51
32:FA:96:LYS:C	32:FA:98:THR:H	2.14	0.51
58:FB:176:SER:O	58:FB:178:ARG:HG2	2.11	0.51
58:FB:82:VAL:HB	58:FB:196:LEU:HD21	1.92	0.51
7:G:144:ILE:O	7:G:148:LEU:HB2	2.11	0.51
8:H:23:PRO:HG2	8:H:25:VAL:HG23	1.92	0.51
2:B:2814:G:OP2	8:H:73:ARG:NH2	2.43	0.51
61:IB:149:ALA:O	61:IB:152:GLN:HG3	2.11	0.51
2:B:1210:U:H5'	13:M:63:LYS:HE3	1.92	0.51
41:OA:24:ARG:CZ	41:OA:24:ARG:HA	2.40	0.51
16:P:114:ARG:NH1	16:P:118:ASP:O	2.44	0.51
42:PA:47:GLY:HA3	42:PA:50:SER:O	2.10	0.51
43:QA:15:LYS:O	43:QA:19:GLN:HG3	2.10	0.51
20:T:19:LEU:O	20:T:23:VAL:HG23	2.10	0.51
20:T:61:ALA:HB1	20:T:66:LYS:HG3	1.91	0.51
21:U:30:ARG:O	21:U:34:GLN:HB2	2.10	0.51
23:W:58:HIS:HB3	23:W:60:LYS:HZ3	1.75	0.51
49:WA:176:LYS:HG2	49:WA:197:SER:O	2.11	0.51
75:WB:68:ARG:HA	83:EC:6867:C:O2'	2.10	0.51
24:X:91:TYR:OH	24:X:136:LYS:HD3	2.11	0.51
25:Y:96:ILE:HG13	25:Y:97:LYS:H	1.76	0.51
52:ZA:148:LEU:HB2	52:ZA:174:ARG:NH2	2.24	0.51
1:A:398:G:H5''	58:FB:49:ARG:CG	2.38	0.51
1:A:567:A:H61	1:A:580:A:H61	1.58	0.51
1:A:855:A:H3'	1:A:856:A:C5'	2.41	0.51
2:B:2932:U:H5''	27:AA:41:GLY:HA2	1.92	0.51
53:AB:223:LYS:HE2	53:AB:223:LYS:N	2.26	0.51
2:B:118:U:H3'	2:B:119:U:C6	2.46	0.51
2:B:1268:G:O2'	2:B:1269:U:H5'	2.11	0.51
2:B:1364:C:H5''	22:V:3:ILE:CG1	2.41	0.51
2:B:1535:A:N6	2:B:1586:G:H21	2.02	0.51
2:B:1705:U:N3	2:B:1786:G:H4'	2.25	0.51
2:B:1919:G:H1'	2:B:1934:G:N2	2.25	0.51
2:B:289:A:O2'	2:B:290:G:H5'	2.10	0.51
2:B:2966:G:H5''	6:F:218:HIS:HE1	1.74	0.51
2:B:3040:A:O2'	2:B:3041:U:H5'	2.10	0.51
2:B:3105:U:H2'	2:B:3106:A:O4'	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:351:A:H61	43:QA:38:ASN:HA	1.72	0.51
2:B:705:A:H62	32:FA:74:ASN:HB3	1.75	0.51
1:A:562:G:H21	80:BC:14:VAL:HG11	1.74	0.51
3:C:73:U:H2'	3:C:74:U:O4'	2.10	0.51
4:D:15:C:O3'	9:I:8:LYS:HD3	2.11	0.51
82:DC:504:LEU:O	82:DC:508:LEU:HG	2.11	0.51
82:DC:740:VAL:HA	82:DC:743:ILE:HG23	1.92	0.51
31:EA:134:LEU:HB3	31:EA:136:PHE:CE1	2.46	0.51
57:EB:91:ILE:HD11	57:EB:128:ASP:O	2.10	0.51
6:F:150:LEU:HD12	6:F:154:ALA:HB3	1.92	0.51
7:G:158:VAL:HG12	7:G:159:ARG:N	2.25	0.51
34:HA:16:LEU:HA	34:HA:19:LYS:HB2	1.93	0.51
9:I:146:LEU:HD12	9:I:147:ASP:H	1.73	0.51
10:J:96:VAL:HG11	10:J:141:VAL:HG13	1.93	0.51
36:JA:8:LYS:O	36:JA:10:VAL:HG23	2.10	0.51
37:KA:69:GLY:HA2	37:KA:85:PHE:HA	1.93	0.51
13:M:150:SER:O	13:M:154:VAL:HG23	2.09	0.51
13:M:73:SER:HA	13:M:76:ASP:CB	2.41	0.51
65:MB:85:ILE:HG21	65:MB:111:MET:HG3	1.92	0.51
2:B:155:G:H21	40:NA:26:ILE:HG21	1.75	0.51
40:NA:9:ILE:HG22	40:NA:13:LYS:HD3	1.92	0.51
16:P:94:LYS:HD2	16:P:99:LYS:HG2	1.93	0.51
17:Q:106:GLN:HB3	40:NA:18:THR:HG23	1.92	0.51
69:QB:100:ILE:O	69:QB:104:VAL:HG23	2.11	0.51
69:QB:77:ASN:HB3	69:QB:95:ASP:HA	1.93	0.51
18:R:94:TRP:CD2	18:R:100:ALA:HB2	2.46	0.51
70:RB:51:VAL:CG1	70:RB:94:GLU:HB2	2.40	0.51
19:S:143:ARG:HA	19:S:152:CYS:SG	2.50	0.51
46:TA:65:THR:HG21	46:TA:89:LYS:HG2	1.92	0.51
21:U:126:ARG:CD	21:U:138:LYS:HB2	2.40	0.51
48:VA:58:MET:HA	48:VA:61:ARG:CB	2.37	0.51
2:B:1723:A:OP1	23:W:128:LYS:HE3	2.10	0.51
49:WA:141:LEU:HD23	49:WA:141:LEU:H	1.75	0.51
49:WA:5:GLU:HB2	49:WA:316:MET:O	2.10	0.51
75:WB:62:VAL:O	75:WB:66:VAL:HG23	2.10	0.51
2:B:1682:U:H3	26:Z:82:LYS:HA	1.76	0.51
1:A:11:A:O2'	1:A:12:U:H5'	2.11	0.51
1:A:1390:U:O2'	1:A:1391:A:H8	1.94	0.51
1:A:1753:A:H2'	1:A:1754:A:C8	2.45	0.51
1:A:301:A:H2'	1:A:302:U:H6	1.76	0.51
1:A:569:C:H2'	1:A:570:A:O4'	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2723:U:H5'	25:Y:89:LEU:CB	2.41	0.51
2:B:276:U:H2'	2:B:277:G:O4'	2.10	0.51
2:B:3118:C:H2'	2:B:3119:U:C6	2.45	0.51
2:B:3246:G:H4'	2:B:3247:G:C8	2.45	0.51
2:B:403:C:H2'	2:B:404:G:H5''	1.93	0.51
2:B:886:C:H5'	2:B:1850:A:O2'	2.11	0.51
54:BB:196:VAL:HG12	54:BB:197:HIS:ND1	2.26	0.51
54:BB:123:LEU:HD21	54:BB:235:TYR:CB	2.41	0.51
3:C:35:C:H2'	3:C:36:G:H8	1.76	0.51
82:DC:153:PRO:CD	82:DC:200:VAL:HG22	2.36	0.51
82:DC:586:ILE:CD1	82:DC:708:THR:HG22	2.40	0.51
83:EC:6926:U:H2'	83:EC:6927:U:C5	2.45	0.51
7:G:296:THR:HG22	7:G:297:SER:N	2.20	0.51
64:LB:130:GLY:C	64:LB:134:GLY:HA2	2.30	0.51
13:M:84:LYS:HD3	13:M:191:LEU:OXT	2.10	0.51
3:C:37:A:P	39:MA:86:ARG:HB2	2.50	0.51
15:O:94:ARG:O	15:O:95:ASN:HB2	2.09	0.51
16:P:109:ILE:HG23	16:P:110:ILE:CD1	2.38	0.51
16:P:58:VAL:HB	16:P:79:SER:OG	2.09	0.51
65:MB:110:GLU:HB2	68:PB:119:ILE:HD11	1.92	0.51
69:QB:73:VAL:HG12	69:QB:77:ASN:ND2	2.25	0.51
44:RA:97:ARG:HE	44:RA:122:ARG:HD3	1.76	0.51
2:B:126:U:H1'	19:S:57:GLN:NE2	2.24	0.51
2:B:277:G:O2'	19:S:93:LYS:HE3	2.11	0.51
20:T:47:PHE:CZ	20:T:140:LYS:HG2	2.45	0.51
21:U:127:ARG:HB3	21:U:139:TYR:O	2.10	0.51
22:V:84:VAL:CG2	22:V:141:ARG:HH21	2.24	0.51
50:XA:135:GLU:HA	50:XA:135:GLU:OE1	2.10	0.51
55:CB:148:ARG:HB3	78:ZB:22:ARG:NH2	2.25	0.51
1:A:1753:A:H2'	1:A:1754:A:H8	1.76	0.51
1:A:177:U:O2'	1:A:178:U:H5''	2.11	0.51
1:A:235:G:H2'	1:A:236:A:O4'	2.11	0.51
1:A:608:U:HO2'	1:A:609:U:H5	1.58	0.51
2:B:106:A:H2'	2:B:107:A:O4'	2.11	0.51
2:B:1188:U:O2'	2:B:1189:C:H5'	2.11	0.51
2:B:1230:G:O2'	48:VA:35:SER:N	2.44	0.51
2:B:1242:G:N9	82:DC:754:VAL:HB	2.26	0.51
2:B:2158:A:H4'	2:B:2159:U:H5''	1.93	0.51
2:B:221:A:H1'	2:B:223:U:OP2	2.11	0.51
2:B:2271:A:C3'	2:B:2272:G:H5'	2.41	0.51
2:B:2362:C:H2'	2:B:2363:A:O4'	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2365:C:H5''	2:B:2986:U:H4'	1.92	0.51
2:B:2397:A:N3	2:B:2397:A:H3'	2.25	0.51
2:B:268:A:N1	2:B:295:A:H5'	2.25	0.51
2:B:3365:U:C2'	2:B:3366:G:H5'	2.40	0.51
2:B:3392:U:H2'	2:B:3393:U:H6	1.73	0.51
2:B:858:A:O2'	2:B:859:G:H5'	2.10	0.51
2:B:95:A:C4	2:B:96:G:H1'	2.46	0.51
27:AA:93:LEU:HB2	28:BA:20:LEU:HD22	1.92	0.51
54:BB:129:VAL:HG12	54:BB:156:VAL:HG23	1.93	0.51
54:BB:42:LEU:HD21	54:BB:47:PHE:HB2	1.92	0.51
55:CB:146:THR:HG22	55:CB:157:ARG:HB3	1.91	0.51
55:CB:210:ALA:O	55:CB:214:LYS:HB2	2.11	0.51
82:DC:190:SER:HB3	82:DC:201:GLN:HE21	1.75	0.51
5:E:114:GLU:HG3	5:E:115:VAL:N	2.26	0.51
5:E:64:SER:N	5:E:107:TYR:HA	2.26	0.51
83:EC:6767:G:C3'	83:EC:6768:U:H5''	2.39	0.51
2:B:1117:G:H5'	33:GA:5:LYS:HD3	1.92	0.51
60:HB:73:VAL:O	60:HB:77:ARG:HB2	2.11	0.51
9:I:53:VAL:HG23	9:I:146:LEU:HD13	1.92	0.51
2:B:428:A:H4'	37:KA:88:ASN:HD22	1.76	0.51
63:KB:34:ILE:O	63:KB:38:VAL:HG23	2.11	0.51
12:L:82:LEU:HD21	12:L:87:ALA:HB2	1.93	0.51
13:M:109:ALA:O	13:M:110:LYS:HB2	2.11	0.51
14:N:52:LEU:HB2	14:N:152:LEU:HD13	1.93	0.51
40:NA:50:LEU:HD23	40:NA:55:ARG:HA	1.92	0.51
66:NB:115:THR:HA	66:NB:118:ILE:CG2	2.35	0.51
67:OB:86:PRO:O	67:OB:87:GLU:C	2.48	0.51
68:PB:88:ARG:HH21	68:PB:108:LYS:HG3	1.76	0.51
68:PB:126:ARG:HA	68:PB:129:TRP:CE3	2.46	0.51
69:QB:110:LYS:HE3	69:QB:110:LYS:HA	1.93	0.51
70:RB:21:LYS:HB2	70:RB:94:GLU:HG2	1.93	0.51
71:SB:9:VAL:O	71:SB:10:GLU:HB3	2.11	0.51
72:TB:88:LYS:O	72:TB:92:ASN:HB2	2.10	0.51
21:U:28:ASN:ND2	21:U:84:PRO:HB3	2.26	0.51
47:UA:36:ARG:O	47:UA:45:LYS:HB2	2.11	0.51
48:VA:53:MET:HA	48:VA:85:GLY:HA3	1.93	0.51
23:W:164:LEU:O	23:W:167:ARG:HG3	2.11	0.51
50:XA:45:VAL:HG12	50:XA:46:HIS:N	2.26	0.51
52:ZA:63:VAL:O	52:ZA:134:LEU:HD12	2.10	0.51
1:A:1408:G:H2'	1:A:1409:G:C8	2.46	0.51
1:A:1759:C:H2'	1:A:1760:G:O4'	2.09	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:430:G:H2'	1:A:431:C:H6	1.74	0.51
1:A:449:C:H2'	1:A:450:U:H6	1.76	0.51
1:A:64:U:C3'	1:A:65:A:H5''	2.40	0.51
1:A:869:A:H61	1:A:958:U:H3	1.59	0.51
2:B:1380:G:H5''	8:H:191:LYS:H	1.76	0.51
2:B:1535:A:H62	2:B:1586:G:N2	2.01	0.51
2:B:1639:C:H2'	2:B:1640:G:C8	2.46	0.51
2:B:1688:U:C4	26:Z:78:TYR:HB2	2.45	0.51
2:B:2394:G:O2'	7:G:258:ALA:HA	2.10	0.51
2:B:2624:G:O2'	2:B:2625:C:H5'	2.10	0.51
2:B:2775:U:H4'	2:B:2777:G:H1	1.73	0.51
2:B:2836:C:H2'	2:B:2837:A:H5'	1.92	0.51
2:B:642:U:H2'	2:B:644:G:N7	2.26	0.51
2:B:773:G:C2	2:B:774:G:H1'	2.46	0.51
2:B:878:G:H5'	2:B:880:G:O4'	2.11	0.51
2:B:911:C:O2'	2:B:912:G:H5'	2.11	0.51
2:B:927:C:H2'	2:B:928:C:C6	2.46	0.51
54:BB:128:LYS:O	54:BB:139:VAL:HA	2.11	0.51
54:BB:82:TYR:CD1	54:BB:83:PRO:HD2	2.46	0.51
3:C:125:U:H3'	3:C:125:U:O2	2.11	0.51
7:G:249:VAL:HG12	7:G:251:CYS:O	2.10	0.51
7:G:356:LEU:HD23	7:G:356:LEU:H	1.76	0.51
8:H:38:VAL:HG11	8:H:121:ALA:HB3	1.93	0.51
9:I:183:TRP:HB2	9:I:190:ILE:HD13	1.92	0.51
2:B:3376:A:OP1	35:IA:18:LYS:HD2	2.11	0.51
11:K:179:LEU:HD13	11:K:179:LEU:H	1.75	0.51
12:L:92:LYS:HB3	12:L:92:LYS:HZ2	1.75	0.51
40:NA:39:PHE:O	40:NA:43:LEU:HD23	2.10	0.51
69:QB:37:VAL:HG11	69:QB:100:ILE:HD11	1.92	0.51
44:RA:79:GLU:HG3	44:RA:82:LEU:H	1.75	0.51
70:RB:30:LYS:HD3	70:RB:33:GLN:HB2	1.93	0.51
71:SB:72:LEU:O	71:SB:76:ASP:HB2	2.10	0.51
1:A:1099:U:H5''	72:TB:71:LYS:NZ	2.25	0.51
22:V:163:PRO:HG2	22:V:165:ILE:CG2	2.41	0.51
49:WA:242:SER:HB3	49:WA:292:LEU:HD23	1.92	0.51
50:XA:62:ARG:HD2	71:SB:36:VAL:CG1	2.39	0.51
52:ZA:54:GLU:HA	52:ZA:57:PHE:CD2	2.46	0.51
1:A:1316:G:H2'	1:A:1317:C:H6	1.76	0.51
1:A:1675:C:H2'	1:A:1676:U:O4'	2.10	0.51
1:A:478:A:H2'	1:A:479:C:C6	2.46	0.51
2:B:1186:G:H2'	2:B:1187:C:H6	1.76	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1338:C:H4'	36:JA:60:ASN:ND2	2.26	0.51
2:B:1487:G:H2'	2:B:1488:G:H5''	1.92	0.51
2:B:1525:G:H3'	2:B:1526:U:C6	2.45	0.51
2:B:1533:U:H2'	2:B:1534:A:C8	2.44	0.51
2:B:1640:G:H2'	2:B:1641:U:C6	2.46	0.51
2:B:1665:C:H6	2:B:1665:C:O5'	1.92	0.51
2:B:2744:U:H2'	2:B:2745:G:C8	2.46	0.51
2:B:916:G:O2'	2:B:917:A:H5''	2.11	0.51
54:BB:15:PRO:HG2	54:BB:18:TRP:CD2	2.46	0.51
4:D:24:A:H2'	4:D:25:G:C8	2.46	0.51
56:DB:75:LEU:O	56:DB:94:ARG:HG3	2.10	0.51
82:DC:586:ILE:HD12	82:DC:709:MET:HA	1.93	0.51
31:EA:36:HIS:N	31:EA:37:PRO:HD3	2.26	0.51
7:G:340:LYS:HG2	7:G:341:SER:H	1.76	0.51
7:G:78:VAL:HG21	7:G:311:PHE:CZ	2.44	0.51
2:B:1074:U:H1'	33:GA:46:ALA:HB2	1.93	0.51
59:GB:135:ALA:HA	59:GB:139:GLN:O	2.10	0.51
2:B:209:A:C2	8:H:223:PRO:HD3	2.46	0.51
8:H:359:LEU:CD2	24:X:64:ILE:HA	2.41	0.51
36:JA:78:ASN:HA	36:JA:108:ILE:HD13	1.92	0.51
12:L:187:GLY:HA2	12:L:190:VAL:CG1	2.40	0.51
13:M:49:ASN:H	13:M:49:ASN:HD22	1.58	0.51
15:O:8:PRO:HG2	15:O:10:ARG:HG2	1.92	0.51
67:OB:113:LEU:HD12	67:OB:114:GLY:N	2.26	0.51
17:Q:147:ILE:HG23	17:Q:150:PRO:CD	2.41	0.51
69:QB:28:LEU:HD23	69:QB:54:PHE:HD2	1.76	0.51
68:PB:41:ARG:HD3	69:QB:45:MET:HA	1.92	0.51
19:S:117:ASN:OD1	19:S:165:THR:HB	2.11	0.51
19:S:47:LYS:HA	19:S:50:ARG:HG2	1.93	0.51
19:S:6:TYR:CD2	40:NA:40:VAL:HG13	2.45	0.51
20:T:23:VAL:O	20:T:27:LEU:HG	2.10	0.51
46:TA:61:LYS:HB2	46:TA:61:LYS:NZ	2.26	0.51
21:U:17:ALA:HB2	21:U:98:ALA:HA	1.93	0.51
74:VB:50:ALA:HB1	74:VB:54:ALA:CB	2.32	0.51
11:K:224:ILE:HG21	24:X:39:SER:OG	2.11	0.51
50:XA:62:ARG:NH2	71:SB:39:VAL:HG22	2.26	0.51
25:Y:39:ILE:HD12	25:Y:102:ARG:HB2	1.93	0.51
1:A:1060:U:H3'	1:A:1061:A:H5''	1.92	0.51
1:A:1087:A:H2	1:A:1142:A:H4'	1.76	0.51
1:A:1661:U:H2'	1:A:1662:G:C8	2.46	0.51
1:A:1727:G:H2'	1:A:1728:A:C8	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1765:A:H3'	1:A:1766:A:C5'	2.41	0.51
1:A:740:A:C2'	1:A:741:C:H5''	2.41	0.51
1:A:815:G:N3	1:A:815:G:H2'	2.25	0.51
1:A:219:A:H3'	1:A:831:U:O2	2.11	0.51
53:AB:140:GLY:HA3	53:AB:182:LEU:HG	1.91	0.51
2:B:1084:A:H2'	2:B:1085:A:H8	1.76	0.51
2:B:1256:G:H4'	16:P:127:SER:CB	2.39	0.51
2:B:2968:G:N7	6:F:214:GLY:HA2	2.26	0.51
2:B:3037:U:H5''	7:G:348:ARG:HD2	1.93	0.51
2:B:3113:A:H5''	2:B:3118:C:H41	1.74	0.51
2:B:335:G:H2'	2:B:336:A:H8	1.73	0.51
54:BB:77:ARG:CZ	54:BB:77:ARG:HA	2.41	0.51
2:B:351:A:H1'	3:C:53:A:O2'	2.11	0.51
30:DA:23:PRO:HD2	30:DA:26:GLN:CD	2.31	0.51
82:DC:32:LYS:HB2	82:DC:128:VAL:HG21	1.92	0.51
82:DC:702:GLY:C	82:DC:704:GLN:H	2.14	0.51
5:E:103:LEU:HB3	5:E:110:PHE:HZ	1.76	0.51
31:EA:21:LYS:HG2	31:EA:46:ILE:HD12	1.93	0.51
83:EC:6764:C:H2'	83:EC:6765:A:H8	1.76	0.51
2:B:1372:C:OP2	32:FA:7:LYS:HG2	2.11	0.51
58:FB:46:VAL:CG2	58:FB:54:LYS:HB3	2.40	0.51
1:A:258:C:H4'	58:FB:64:ASN:HB2	1.93	0.51
7:G:141:GLY:HA2	7:G:144:ILE:HB	1.93	0.51
2:B:3321:C:OP1	7:G:172:ALA:HA	2.11	0.51
7:G:93:VAL:HG13	7:G:95:THR:HG22	1.93	0.51
2:B:1076:C:H1'	33:GA:42:ASN:HB2	1.93	0.51
34:HA:44:ILE:HG21	34:HA:53:LYS:HA	1.92	0.51
9:I:152:ARG:CG	9:I:154:THR:HG23	2.41	0.51
10:J:170:LYS:O	10:J:174:LEU:HB2	2.11	0.51
11:K:224:ILE:CG1	24:X:36:ILE:HG12	2.41	0.51
39:MA:63:ARG:O	39:MA:67:ARG:HG3	2.11	0.51
15:O:74:PRO:O	15:O:78:GLU:HG3	2.11	0.51
41:OA:47:TYR:HB3	41:OA:49:TRP:NE1	2.26	0.51
18:R:95:ALA:HA	18:R:100:ALA:CB	2.42	0.51
19:S:114:ARG:HA	19:S:114:ARG:NE	2.26	0.51
20:T:76:PRO:HB3	20:T:138:LEU:HD23	1.93	0.51
47:UA:32:GLN:HA	47:UA:37:TYR:HE2	1.76	0.51
73:UB:74:VAL:O	73:UB:82:LYS:HA	2.10	0.51
2:B:669:U:H5''	22:V:153:PHE:HZ	1.76	0.51
22:V:33:TYR:HA	22:V:36:LEU:HG	1.93	0.51
48:VA:176:LEU:HB2	48:VA:178:ILE:HD13	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:XA:118:PRO:HG2	50:XA:141:ILE:HD13	1.93	0.51
9:I:69:ILE:HD13	25:Y:32:LYS:HG2	1.93	0.51
26:Z:90:ARG:NH1	26:Z:94:ARG:HA	2.26	0.51
52:ZA:237:VAL:HA	71:SB:33:GLN:NE2	2.15	0.51
1:A:158:U:H2'	1:A:160:C:OP2	2.11	0.50
1:A:20:G:H5'	1:A:571:G:N7	2.26	0.50
1:A:318:U:C2'	1:A:319:U:H5'	2.41	0.50
1:A:480:G:H2'	1:A:481:A:O4'	2.11	0.50
1:A:7:G:H4'	1:A:573:C:H4'	1.93	0.50
1:A:613:G:H5'	1:A:1099:U:C2	2.46	0.50
27:AA:21:ALA:O	27:AA:35:TYR:HA	2.11	0.50
53:AB:95:GLY:O	53:AB:126:VAL:HG13	2.11	0.50
2:B:1219:C:OP1	48:VA:8:LYS:HE2	2.11	0.50
2:B:1546:A:H5''	19:S:105:ARG:NH2	2.21	0.50
2:B:1664:G:H2'	2:B:1665:C:C6	2.46	0.50
2:B:1658:G:H1'	2:B:1796:G:C4	2.46	0.50
2:B:181:U:H2'	2:B:182:U:C4'	2.31	0.50
2:B:2363:A:H2'	2:B:2364:G:C8	2.47	0.50
2:B:648:C:N4	2:B:2375:G:H5'	2.26	0.50
2:B:2638:C:H2'	2:B:2639:G:O4'	2.11	0.50
2:B:2818:U:O2'	2:B:2870:C:N4	2.44	0.50
2:B:347:G:H2'	2:B:348:A:H8	1.76	0.50
1:A:629:U:H1'	2:B:846:A:N7	2.26	0.50
54:BB:155:LYS:CA	54:BB:155:LYS:HE2	2.39	0.50
54:BB:67:GLN:NE2	54:BB:69:HIS:NE2	2.59	0.50
54:BB:71:LYS:CB	54:BB:76:VAL:HA	2.40	0.50
82:DC:286:THR:HA	82:DC:290:ASN:OD1	2.11	0.50
57:EB:30:SER:O	57:EB:32:PRO:HD2	2.10	0.50
1:A:856:A:N7	57:EB:97:ARG:HB2	2.25	0.50
6:F:184:ARG:HA	6:F:187:HIS:HB2	1.93	0.50
6:F:187:HIS:O	6:F:190:ARG:HB3	2.10	0.50
2:B:1796:G:H1'	6:F:190:ARG:HH12	1.73	0.50
6:F:5:ILE:HB	6:F:209:HIS:CD2	2.46	0.50
6:F:227:ARG:HA	6:F:238:ILE:HG22	1.93	0.50
7:G:44:THR:HG21	7:G:184:ASN:OD1	2.11	0.50
59:GB:83:VAL:HG23	59:GB:85:VAL:HG23	1.92	0.50
8:H:296:GLN:HA	8:H:299:ILE:CB	2.41	0.50
2:B:804:C:O2'	8:H:74:ILE:HG22	2.10	0.50
60:HB:59:PHE:CE2	60:HB:62:GLN:HA	2.46	0.50
9:I:148:ILE:HG12	9:I:159:VAL:HG11	1.92	0.50
9:I:183:TRP:HA	9:I:190:ILE:HA	1.92	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
61:IB:64:VAL:HA	61:IB:129:ARG:CD	2.39	0.50
36:JA:6:HIS:HE1	36:JA:9:ILE:HD11	1.76	0.50
37:KA:16:TYR:HB2	37:KA:23:ASN:HB2	1.92	0.50
1:A:960:U:H4'	63:KB:51:GLY:C	2.32	0.50
15:O:143:ARG:HG2	15:O:144:CYS:N	2.26	0.50
16:P:106:LEU:HD12	16:P:142:ARG:HE	1.76	0.50
16:P:135:THR:HG22	16:P:147:ASN:HA	1.94	0.50
17:Q:91:ARG:HH11	17:Q:91:ARG:CB	2.21	0.50
1:A:1773:C:H5'	45:SA:4:LYS:CB	2.39	0.50
20:T:119:VAL:O	24:X:164:SER:HB3	2.11	0.50
6:F:82:VAL:HG22	47:UA:65:ALA:CB	2.41	0.50
74:VB:4:ALA:HB3	74:VB:30:PRO:HD2	1.91	0.50
50:XA:181:VAL:HG23	50:XA:182:LEU:HG	1.94	0.50
1:A:1468:U:O4'	69:QB:88:VAL:HG23	2.11	0.50
1:A:1483:A:H2'	1:A:1484:G:O4'	2.10	0.50
1:A:446:A:N6	1:A:461:G:H21	2.10	0.50
1:A:709:C:H3'	1:A:710:U:C5'	2.41	0.50
53:AB:75:LYS:HB2	60:HB:22:VAL:HG11	1.93	0.50
2:B:1257:C:H1'	16:P:123:ARG:NE	2.25	0.50
2:B:128:G:H5''	29:CA:45:LYS:NZ	2.26	0.50
2:B:1566:A:C2'	2:B:1567:U:H5''	2.41	0.50
2:B:1678:G:C8	26:Z:77:LYS:HE2	2.46	0.50
2:B:1768:U:C2'	2:B:1769:G:H5''	2.41	0.50
2:B:1645:U:O2'	2:B:1819:U:H4'	2.11	0.50
2:B:2335:G:N1	2:B:2339:C:O2	2.39	0.50
2:B:2693:C:O2'	2:B:2706:G:H5''	2.12	0.50
2:B:2775:U:H4'	2:B:2777:G:C2	2.47	0.50
2:B:2858:U:H2'	2:B:2859:U:C2	2.47	0.50
2:B:1226:G:C5'	2:B:3117:C:H1'	2.41	0.50
2:B:3325:G:H5'	35:IA:104:LEU:O	2.12	0.50
2:B:36:C:H4'	2:B:808:A:N1	2.26	0.50
2:B:711:A:H3'	2:B:712:G:O4'	2.12	0.50
2:B:81:C:H2'	2:B:82:C:C6	2.46	0.50
2:B:878:G:H5'	2:B:880:G:C1'	2.41	0.50
54:BB:68:ARG:HD3	54:BB:76:VAL:HG11	1.94	0.50
56:DB:219:ARG:HD2	56:DB:219:ARG:O	2.10	0.50
82:DC:42:ARG:HE	82:DC:329:PRO:HB3	1.77	0.50
1:A:817:A:H1'	57:EB:110:GLN:CG	2.41	0.50
7:G:46:PHE:CE2	7:G:81:THR:HB	2.46	0.50
8:H:26:PHE:HD1	8:H:127:ALA:HA	1.75	0.50
34:HA:58:TYR:O	34:HA:61:MET:HG2	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:I:108:ARG:HA	9:I:251:PRO:HB2	1.93	0.50
2:B:428:A:H1'	37:KA:25:PRO:HB3	1.92	0.50
63:KB:43:LYS:HB3	63:KB:45:LEU:HD13	1.94	0.50
31:EA:81:LEU:HD13	38:LA:93:PHE:CD2	2.45	0.50
13:M:88:TYR:CE2	13:M:155:SER:HA	2.46	0.50
14:N:49:CYS:HA	14:N:138:VAL:O	2.12	0.50
69:QB:13:ASP:OD2	69:QB:13:ASP:N	2.45	0.50
18:R:58:ILE:HG12	18:R:59:ASN:N	2.26	0.50
18:R:94:TRP:HZ3	18:R:99:TRP:HB3	1.76	0.50
19:S:140:LYS:HB3	19:S:144:ARG:HE	1.77	0.50
72:TB:40:VAL:HA	72:TB:43:LYS:HB2	1.92	0.50
72:TB:44:HIS:HB2	72:TB:46:TYR:CD2	2.45	0.50
72:TB:65:LEU:CD1	72:TB:65:LEU:H	2.23	0.50
21:U:2:ALA:O	21:U:3:ARG:HB2	2.10	0.50
3:C:4:C:H5'	21:U:61:ARG:HB2	1.93	0.50
73:UB:74:VAL:HG12	73:UB:75:GLN:N	2.26	0.50
48:VA:28:VAL:HG13	48:VA:87:VAL:HG21	1.93	0.50
48:VA:15:LEU:HB2	48:VA:86:PHE:HE2	1.75	0.50
74:VB:20:ARG:NE	74:VB:74:LEU:HD22	2.26	0.50
23:W:23:TRP:HB3	23:W:51:VAL:CG2	2.38	0.50
23:W:58:HIS:O	23:W:60:LYS:HD3	2.10	0.50
49:WA:205:SER:HB2	49:WA:206:PRO:CD	2.40	0.50
49:WA:253:ALA:CB	49:WA:262:VAL:HG22	2.41	0.50
24:X:148:LEU:HG	24:X:150:PHE:CD2	2.46	0.50
52:ZA:122:ALA:HA	52:ZA:125:ILE:HD12	1.93	0.50
52:ZA:40:LYS:O	52:ZA:44:LEU:HG	2.10	0.50
1:A:1329:A:H2'	1:A:1330:G:O4'	2.10	0.50
1:A:1579:U:O2'	66:NB:139:GLN:HA	2.11	0.50
1:A:299:A:O2'	1:A:300:A:H5'	2.12	0.50
1:A:4:C:H41	1:A:606:A:H2	1.59	0.50
2:B:1055:A:H1'	4:D:80:G:H21	1.76	0.50
2:B:1095:U:O2'	25:Y:126:VAL:HB	2.11	0.50
2:B:1123:U:C2'	2:B:1124:U:H5'	2.42	0.50
2:B:1169:A:H2'	2:B:1170:A:O4'	2.11	0.50
2:B:1513:G:N1	2:B:1515:A:H1'	2.26	0.50
2:B:1631:C:H3'	31:EA:48:ARG:NH2	2.25	0.50
2:B:2389:C:H1'	21:U:69:ARG:HH22	1.77	0.50
2:B:2527:G:O2'	12:L:244:ALA:HB3	2.11	0.50
2:B:2577:C:H2'	2:B:2578:U:C6	2.47	0.50
2:B:2664:C:OP2	15:O:142:LYS:HE3	2.11	0.50
2:B:2762:A:C2'	2:B:2763:U:H5'	2.41	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:628:A:H2'	2:B:629:U:O4'	2.11	0.50
2:B:829:U:H1'	2:B:866:A:C6	2.47	0.50
3:C:37:A:H5''	3:C:39:G:H5'	1.92	0.50
55:CB:57:SER:O	55:CB:58:LEU:HB2	2.12	0.50
4:D:1:G:H2'	4:D:1:G:N3	2.25	0.50
4:D:49:G:N7	9:I:58:LYS:HG3	2.25	0.50
82:DC:821:ALA:HA	82:DC:824:LYS:HE2	1.93	0.50
2:B:1793:C:C5	6:F:179:LEU:HB2	2.47	0.50
32:FA:111:LYS:HE3	32:FA:113:LEU:HD21	1.92	0.50
1:A:478:A:O3'	59:GB:124:HIS:HB2	2.11	0.50
13:M:110:LYS:CB	13:M:128:VAL:HB	2.41	0.50
65:MB:47:ARG:HB3	65:MB:47:ARG:NH2	2.27	0.50
16:P:82:ILE:HD13	16:P:137:GLN:NE2	2.25	0.50
68:PB:70:VAL:HA	68:PB:73:MET:HE2	1.93	0.50
17:Q:115:ARG:HH12	17:Q:145:PHE:CB	2.25	0.50
21:U:21:TYR:CE1	21:U:123:PRO:HD2	2.46	0.50
21:U:86:LYS:HA	21:U:89:LYS:CB	2.40	0.50
11:K:224:ILE:HA	24:X:36:ILE:HG12	1.92	0.50
26:Z:54:VAL:HG12	26:Z:67:SER:OG	2.11	0.50
78:ZB:65:ARG:HA	78:ZB:65:ARG:CZ	2.41	0.50
1:A:1450:U:H2'	1:A:1451:C:C6	2.46	0.50
53:AB:105:MET:HG2	53:AB:122:VAL:HG21	1.94	0.50
1:A:1275:A:C2	53:AB:180:GLY:HA2	2.38	0.50
2:B:1474:A:H2'	2:B:1475:A:C8	2.46	0.50
2:B:1523:U:H6	2:B:1523:U:OP2	1.94	0.50
2:B:1727:G:H1'	2:B:1731:A:O4'	2.09	0.50
2:B:2372:A:C4'	2:B:2373:A:H5'	2.42	0.50
2:B:2372:A:H4'	2:B:2373:A:C8	2.39	0.50
2:B:2407:C:H5''	2:B:2620:G:O2'	2.12	0.50
2:B:2406:C:H1'	2:B:2819:A:C4	2.46	0.50
2:B:2849:C:H2'	2:B:2850:G:O4'	2.11	0.50
2:B:604:G:H2'	2:B:605:U:C6	2.47	0.50
2:B:678:G:H2'	2:B:679:U:O4'	2.10	0.50
2:B:86:G:H21	2:B:98:G:H2'	1.76	0.50
54:BB:156:VAL:O	54:BB:157:ASN:HB2	2.12	0.50
4:D:98:C:H3'	4:D:99:G:H5''	1.93	0.50
56:DB:74:LYS:HG2	56:DB:96:SER:HA	1.92	0.50
82:DC:454:ILE:HG13	82:DC:455:GLY:N	2.24	0.50
57:EB:142:TYR:O	72:TB:49:GLU:HB2	2.11	0.50
60:HB:27:PHE:O	60:HB:28:ASN:HB2	2.12	0.50
10:J:131:LYS:C	10:J:133:GLU:H	2.15	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:J:54:TYR:HA	10:J:65:ILE:HG21	1.93	0.50
68:PB:12:GLN:HG2	68:PB:59:GLY:O	2.11	0.50
69:QB:130:ARG:O	69:QB:134:ARG:HG3	2.11	0.50
19:S:38:ARG:HG2	19:S:61:ILE:O	2.12	0.50
21:U:18:ARG:HA	21:U:146:ILE:O	2.12	0.50
22:V:76:ALA:C	22:V:78:ASN:H	2.15	0.50
48:VA:8:LYS:H	48:VA:8:LYS:CD	2.24	0.50
54:BB:56:LEU:HD13	74:VB:58:PHE:HZ	1.76	0.50
49:WA:26:SER:OG	49:WA:77:GLY:HA3	2.10	0.50
11:K:233:GLU:HG3	24:X:35:VAL:HG13	1.93	0.50
1:A:1487:A:C5'	1:A:1593:A:H4'	2.41	0.50
1:A:1514:U:H4'	1:A:1515:A:O4'	2.12	0.50
1:A:453:U:O2	1:A:453:U:H3'	2.10	0.50
2:B:160:G:H2'	2:B:161:G:H5'	1.94	0.50
2:B:1738:C:H2'	2:B:1739:U:C6	2.46	0.50
2:B:1885:U:H4'	2:B:1886:A:H5'	1.93	0.50
2:B:208:C:H2'	2:B:209:A:C5'	2.42	0.50
2:B:2352:A:H5''	21:U:83:TRP:O	2.11	0.50
2:B:582:G:H2'	2:B:583:G:C8	2.47	0.50
2:B:73:C:C2	40:NA:17:VAL:HG21	2.46	0.50
59:GB:126:ARG:HD3	80:BC:33:ARG:HD3	1.93	0.50
82:DC:381:TYR:OH	82:DC:466:THR:HB	2.11	0.50
82:DC:694:HIS:HE1	82:DC:699:DDE:HD2	1.77	0.50
5:E:147:LYS:O	5:E:151:VAL:HG12	2.11	0.50
6:F:5:ILE:HG22	6:F:209:HIS:HA	1.94	0.50
2:B:2966:G:H5''	6:F:218:HIS:CE1	2.47	0.50
6:F:54:ARG:HG2	6:F:55:GLY:N	2.24	0.50
58:FB:46:VAL:HG22	58:FB:54:LYS:O	2.12	0.50
59:GB:85:VAL:HG11	59:GB:104:PHE:CD1	2.47	0.50
34:HA:30:THR:HG22	34:HA:91:SER:HB3	1.92	0.50
9:I:155:THR:N	9:I:179:ARG:HD2	2.26	0.50
61:IB:83:THR:CA	61:IB:111:VAL:HG12	2.40	0.50
14:N:10:ARG:NH2	14:N:161:GLY:HA3	2.27	0.50
66:NB:86:ALA:HB3	66:NB:116:LEU:O	2.11	0.50
67:OB:116:LYS:C	67:OB:117:LEU:HD13	2.32	0.50
17:Q:76:THR:HG21	17:Q:102:GLN:HA	1.93	0.50
18:R:41:GLN:HE22	18:R:42:LYS:NZ	2.09	0.50
70:RB:102:ARG:O	70:RB:106:ILE:HG22	2.12	0.50
2:B:288:C:H5''	19:S:170:LYS:O	2.12	0.50
71:SB:38:LYS:CD	71:SB:49:GLU:HG3	2.39	0.50
1:A:1069:A:C2'	1:A:1070:C:H5'	2.41	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1135:U:H2'	1:A:1136:U:C6	2.47	0.50
1:A:1506:G:H2'	1:A:1507:G:C8	2.46	0.50
1:A:397:A:H4'	58:FB:50:GLY:C	2.32	0.50
1:A:415:C:O2'	1:A:416:A:H5''	2.11	0.50
1:A:54:C:H2'	1:A:55:A:C8	2.47	0.50
1:A:606:A:H4'	1:A:607:G:C5'	2.41	0.50
27:AA:10:LYS:HE3	27:AA:11:PHE:O	2.11	0.50
2:B:1158:A:H2'	2:B:1159:A:H4'	1.94	0.50
2:B:1214:U:H2'	2:B:1215:U:O4'	2.12	0.50
2:B:1247:U:H2'	2:B:1268:G:O6	2.12	0.50
2:B:1354:G:C5	2:B:1357:G:H4'	2.47	0.50
2:B:1362:G:H5''	11:K:160:ARG:O	2.11	0.50
2:B:1422:G:H2'	2:B:1423:C:C6	2.46	0.50
2:B:2730:G:H4'	22:V:184:PHE:CD1	2.39	0.50
2:B:2909:U:C2'	2:B:2910:A:H5''	2.40	0.50
2:B:344:A:H3'	2:B:345:G:H8	1.76	0.50
2:B:795:G:O2'	2:B:796:U:H5'	2.12	0.50
82:DC:129:VAL:CG1	82:DC:135:VAL:HG12	2.42	0.50
5:E:65:ILE:HG23	5:E:109:ALA:CB	2.41	0.50
57:EB:185:ILE:N	57:EB:185:ILE:HD13	2.27	0.50
1:A:694:U:H5	57:EB:95:GLU:HG3	1.77	0.50
22:V:173:GLU:HA	32:FA:51:GLY:C	2.32	0.50
31:EA:83:THR:C	34:HA:62:LEU:HD21	2.32	0.50
9:I:226:TYR:CE2	9:I:236:LEU:HD22	2.46	0.50
10:J:146:ILE:HG23	10:J:150:LYS:NZ	2.26	0.50
11:K:239:LEU:HD13	11:K:240:VAL:N	2.27	0.50
2:B:594:U:H4'	11:K:30:ARG:NH1	2.26	0.50
11:K:64:GLN:HG3	11:K:68:ASP:OD2	2.12	0.50
11:K:86:VAL:HA	11:K:136:TYR:HA	1.93	0.50
37:KA:29:LEU:HD23	37:KA:82:ARG:HG2	1.94	0.50
12:L:139:VAL:HG11	12:L:197:VAL:HB	1.93	0.50
38:LA:5:VAL:HG21	38:LA:32:ALA:N	2.25	0.50
2:B:1738:C:O2'	38:LA:52:GLN:HA	2.12	0.50
39:MA:45:LYS:O	39:MA:48:ARG:HG2	2.11	0.50
3:C:38:U:O2	39:MA:83:LYS:HG3	2.12	0.50
14:N:145:LYS:O	14:N:149:VAL:HG23	2.12	0.50
66:NB:90:VAL:HB	66:NB:102:LYS:CE	2.39	0.50
17:Q:32:LYS:HA	17:Q:35:ARG:NE	2.27	0.50
18:R:18:GLY:HA2	18:R:72:LEU:HD12	1.94	0.50
2:B:269:G:H5''	19:S:14:LYS:NZ	2.26	0.50
19:S:99:ARG:CB	19:S:167:THR:HG21	2.42	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:TA:22:GLN:O	46:TA:75:VAL:HG13	2.12	0.50
23:W:184:LEU:O	23:W:184:LEU:HD13	2.11	0.50
1:A:1490:C:C5	1:A:1514:U:O4	2.65	0.50
1:A:7:G:H4'	1:A:573:C:C4'	2.42	0.50
53:AB:58:VAL:O	53:AB:65:ARG:HB3	2.11	0.50
2:B:1133:A:H2'	2:B:1134:G:C5'	2.42	0.50
2:B:1269:U:H1'	2:B:1272:C:H5	1.77	0.50
2:B:1347:U:H5''	8:H:303:GLY:CA	2.35	0.50
2:B:1584:U:H2'	2:B:1585:C:H6	1.77	0.50
2:B:1786:G:H2'	2:B:1787:A:C8	2.47	0.50
2:B:3009:G:N3	7:G:15:GLY:HA2	2.27	0.50
2:B:3383:G:H21	35:IA:105:GLN:NE2	2.09	0.50
2:B:522:A:H3'	2:B:523:A:C5'	2.35	0.50
2:B:592:A:O2'	2:B:593:C:H5'	2.11	0.50
2:B:604:G:H2'	2:B:605:U:H6	1.77	0.50
2:B:407:A:N6	3:C:15:G:H2'	2.27	0.50
30:DA:28:ARG:HG3	30:DA:75:ARG:CZ	2.42	0.50
82:DC:225:PHE:CE1	82:DC:328:LEU:HD21	2.47	0.50
82:DC:533:THR:H	82:DC:537:HIS:CD2	2.30	0.50
31:EA:49:TYR:HD2	31:EA:133:LYS:HE2	1.76	0.50
32:FA:126:LYS:HA	32:FA:146:GLU:O	2.11	0.50
7:G:43:LEU:CB	7:G:181:ILE:HG21	2.36	0.50
59:GB:39:LYS:N	59:GB:39:LYS:HE2	2.27	0.50
8:H:39:PHE:CD1	8:H:235:LEU:HG	2.46	0.50
9:I:282:ARG:O	9:I:286:VAL:HG23	2.11	0.50
20:T:18:ARG:CB	20:T:123:ALA:HA	2.42	0.50
20:T:37:ARG:NH1	20:T:161:LYS:NZ	2.60	0.50
22:V:55:SER:O	22:V:59:ARG:HG3	2.12	0.50
48:VA:41:VAL:HA	48:VA:44:GLU:HG2	1.94	0.50
23:W:119:LEU:O	23:W:123:LEU:HG	2.11	0.50
49:WA:236:ALA:O	49:WA:237:GLN:HB2	2.12	0.50
75:WB:71:ILE:CD1	75:WB:76:ALA:HA	2.40	0.50
1:A:1045:C:H2'	1:A:1046:G:C8	2.47	0.50
1:A:1177:C:H4'	1:A:1189:A:H61	1.76	0.50
1:A:93:A:N6	1:A:396:G:H1'	2.27	0.50
1:A:746:A:H2'	1:A:747:C:O4'	2.12	0.50
1:A:861:U:H2'	1:A:862:A:H5'	1.92	0.50
1:A:928:U:H5'	1:A:944:A:C2'	2.42	0.50
2:B:1247:U:O2	2:B:1267:U:O4	2.30	0.50
2:B:1299:U:H2'	2:B:1300:G:O4'	2.10	0.50
2:B:1320:C:H1'	24:X:115:ARG:NH2	2.27	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1337:A:H2'	2:B:1338:C:C6	2.46	0.50
2:B:1358:C:H2'	2:B:1359:C:C6	2.46	0.50
2:B:1496:C:H2'	2:B:1497:C:O4'	2.12	0.50
2:B:1723:A:H3'	2:B:1724:U:C5'	2.42	0.50
2:B:2235:C:H2'	2:B:2236:G:H8	1.75	0.50
2:B:2345:A:H5''	35:IA:24:SER:CB	2.42	0.50
2:B:2692:A:H2'	2:B:2693:C:O4'	2.12	0.50
2:B:599:C:H2'	2:B:600:G:O4'	2.11	0.50
54:BB:149:TYR:HB3	56:DB:208:TYR:HB2	1.93	0.50
54:BB:175:PHE:HZ	54:BB:225:VAL:HG11	1.76	0.50
48:VA:142:PRO:HA	82:DC:183:GLU:CD	2.32	0.50
82:DC:823:ARG:HG2	82:DC:828:MET:SD	2.52	0.50
6:F:199:THR:HG22	6:F:200:ARG:H	1.77	0.50
6:F:21:ARG:CZ	6:F:22:LEU:HG	2.42	0.50
32:FA:19:LYS:HB3	32:FA:25:HIS:HB2	1.93	0.50
7:G:216:ASP:HB2	7:G:339:ARG:HE	1.77	0.50
7:G:248:LYS:HD2	7:G:248:LYS:N	2.26	0.50
59:GB:48:GLN:HA	59:GB:51:LYS:CE	2.42	0.50
59:GB:64:GLU:HA	59:GB:69:ARG:HD3	1.94	0.50
60:HB:39:ASN:ND2	60:HB:43:ILE:HD11	2.26	0.50
36:JA:103:LYS:HG3	36:JA:104:ASN:H	1.76	0.50
2:B:1329:U:OP2	37:KA:82:ARG:NH2	2.44	0.50
63:KB:21:ASN:O	63:KB:65:VAL:HG13	2.12	0.50
67:OB:88:VAL:O	67:OB:89:SER:C	2.50	0.50
2:B:290:G:H5''	19:S:98:LEU:HD22	1.93	0.50
20:T:151:ASP:HA	20:T:154:ALA:CB	2.42	0.50
20:T:158:ALA:O	20:T:162:VAL:HG23	2.12	0.50
46:TA:25:VAL:HG12	46:TA:93:LEU:HD12	1.94	0.50
72:TB:79:PHE:HB2	72:TB:125:ILE:CG2	2.41	0.50
22:V:23:ASN:CG	22:V:26:LEU:HB3	2.32	0.50
49:WA:129:LYS:HD2	49:WA:147:HIS:O	2.11	0.50
49:WA:169:ILE:HG13	49:WA:181:TRP:HD1	1.76	0.50
75:WB:54:VAL:HG13	75:WB:89:ILE:HG22	1.92	0.50
25:Y:26:HIS:NE2	25:Y:29:THR:HG23	2.27	0.50
52:ZA:66:PHE:CE2	52:ZA:67:GLN:HG3	2.47	0.50
1:A:1068:C:H2'	1:A:1069:A:C8	2.46	0.50
1:A:1673:G:H22	1:A:1728:A:H2	1.57	0.50
1:A:35:U:H5'	1:A:515:A:H4'	1.94	0.50
1:A:612:U:H2'	1:A:613:G:C8	2.47	0.50
2:B:1653:G:H2'	2:B:1654:A:O4'	2.12	0.50
2:B:2149:A:C2'	2:B:2150:G:H5'	2.42	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2244:A:H5''	6:F:243:THR:HG1	1.75	0.50
2:B:2277:C:H2'	2:B:2278:C:C6	2.47	0.50
2:B:2838:A:H2'	2:B:2839:G:O4'	2.12	0.50
2:B:2853:A:H4'	14:N:64:ALA:HA	1.94	0.50
2:B:321:C:H5''	19:S:156:HIS:NE2	2.27	0.50
2:B:852:U:H2'	2:B:853:G:H8	1.77	0.50
2:B:975:C:H2'	2:B:976:U:C6	2.47	0.50
82:DC:331:ALA:HA	82:DC:335:LEU:HG	1.93	0.50
82:DC:543:GLN:HA	82:DC:546:GLU:HB3	1.94	0.50
31:EA:49:TYR:CD2	31:EA:133:LYS:HE2	2.46	0.50
6:F:19:HIS:HB2	6:F:191:LEU:HA	1.94	0.50
6:F:68:LYS:HZ1	6:F:70:ARG:HD3	1.76	0.50
32:FA:72:VAL:HG23	32:FA:113:LEU:HG	1.93	0.50
7:G:122:TRP:HA	7:G:125:SER:OG	2.12	0.50
2:B:952:A:H5''	33:GA:15:LYS:HD3	1.94	0.50
9:I:293:LEU:HD22	14:N:210:ILE:HG21	1.94	0.50
36:JA:96:ILE:H	36:JA:121:ASN:ND2	2.10	0.50
11:K:163:LEU:HD13	11:K:181:ILE:CD1	2.37	0.50
14:N:60:LEU:CD1	14:N:129:VAL:HG21	2.42	0.50
17:Q:58:VAL:HA	17:Q:108:ILE:HG21	1.93	0.50
18:R:116:GLU:O	18:R:120:VAL:HG23	2.10	0.50
49:WA:150:TRP:HB2	49:WA:174:ASN:HD22	1.77	0.50
52:ZA:58:LEU:HA	71:SB:12:TYR:CE1	2.45	0.50
78:ZB:12:VAL:CG1	78:ZB:50:GLU:HA	2.42	0.50
1:A:1511:U:H2'	1:A:1512:G:C8	2.47	0.49
1:A:373:G:N2	1:A:604:A:H5'	2.26	0.49
2:B:3040:A:H5''	27:AA:12:ARG:CB	2.42	0.49
2:B:1405:U:H5'	36:JA:58:GLY:HA2	1.93	0.49
2:B:1731:A:H2'	2:B:1732:U:C5'	2.42	0.49
2:B:2362:C:C6	2:B:2362:C:OP2	2.65	0.49
2:B:2397:A:OP1	2:B:2398:A:H4'	2.12	0.49
2:B:2561:A:C5	12:L:32:LYS:HD3	2.46	0.49
2:B:503:C:H2'	2:B:504:A:O4'	2.12	0.49
2:B:735:A:H2'	2:B:736:A:O4'	2.12	0.49
2:B:882:A:H5'	2:B:1849:C:O2	2.12	0.49
1:A:1529:C:OP1	55:CB:112:ARG:HD3	2.12	0.49
82:DC:598:SER:HA	82:DC:601:ILE:HD12	1.93	0.49
5:E:94:ASN:HA	5:E:124:LEU:HD13	1.94	0.49
57:EB:182:VAL:HG12	57:EB:183:PHE:N	2.27	0.49
6:F:77:ILE:CG2	6:F:169:ILE:HD12	2.42	0.49
6:F:202:VAL:HG13	6:F:218:HIS:N	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:FB:57:ALA:HB1	58:FB:60:ILE:HD12	1.94	0.49
7:G:35:ASP:HA	7:G:184:ASN:ND2	2.26	0.49
59:GB:102:GLU:HA	59:GB:105:LEU:HD12	1.93	0.49
8:H:116:ASN:HA	8:H:119:ARG:HH12	1.76	0.49
8:H:195:ARG:O	8:H:196:ASN:CB	2.60	0.49
4:D:62:U:H4'	9:I:285:ARG:HH21	1.77	0.49
63:KB:23:PRO:O	63:KB:24:ALA:CB	2.60	0.49
1:A:962:C:OP1	63:KB:72:MET:HB3	2.12	0.49
12:L:139:VAL:HA	12:L:142:LEU:CD1	2.41	0.49
13:M:48:VAL:HG13	13:M:49:ASN:N	2.27	0.49
14:N:190:VAL:HA	14:N:198:LYS:O	2.12	0.49
66:NB:50:GLU:N	66:NB:51:PRO:HD2	2.26	0.49
15:O:100:GLY:HA2	15:O:155:THR:O	2.12	0.49
15:O:109:HIS:CE1	15:O:122:ILE:HA	2.46	0.49
68:PB:104:ASN:O	68:PB:108:LYS:HD3	2.12	0.49
2:B:684:G:H5''	17:Q:35:ARG:CZ	2.42	0.49
69:QB:14:PHE:HE1	69:QB:136:ALA:HB2	1.77	0.49
44:RA:78:ILE:O	44:RA:82:LEU:HB3	2.12	0.49
2:B:2607:G:H21	19:S:78:GLY:HA3	1.77	0.49
20:T:62:THR:H	20:T:70:PRO:HD2	1.77	0.49
2:B:398:A:H5'	21:U:3:ARG:HD2	1.94	0.49
47:UA:33:GLN:HB3	47:UA:69:TYR:O	2.12	0.49
48:VA:33:VAL:CG2	48:VA:185:LEU:HD21	2.42	0.49
4:D:89:G:C5'	24:X:84:ARG:HD3	2.40	0.49
1:A:1293:U:H2'	1:A:1294:G:C8	2.47	0.49
1:A:431:C:H2'	1:A:432:G:O4'	2.13	0.49
1:A:1424:A:OP2	53:AB:151:LYS:HD2	2.12	0.49
2:B:1449:A:C5	2:B:1450:G:H1'	2.47	0.49
2:B:1629:U:HO2'	2:B:1630:U:H4'	1.77	0.49
2:B:2057:G:H5''	2:B:2058:G:H5'	1.95	0.49
2:B:2199:G:H5''	2:B:2200:U:OP2	2.12	0.49
2:B:2275:A:N6	2:B:2311:G:H1'	2.26	0.49
2:B:2736:A:H2'	2:B:2737:C:O4'	2.11	0.49
2:B:2876:C:O2'	2:B:2877:G:H5'	2.12	0.49
2:B:316:U:O2	40:NA:30:LYS:HG2	2.12	0.49
2:B:3241:G:H2'	2:B:3242:G:H5'	1.94	0.49
2:B:3393:U:H2'	2:B:3394:U:C6	2.47	0.49
2:B:584:G:H2'	2:B:585:A:H8	1.74	0.49
2:B:78:U:C2'	2:B:79:U:H5'	2.43	0.49
30:DA:24:SER:C	30:DA:26:GLN:H	2.15	0.49
82:DC:132:ILE:HD12	82:DC:133:GLU:HG3	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:183:GLU:O	82:DC:187:VAL:HG23	2.12	0.49
82:DC:18:ASN:HA	82:DC:98:PHE:CE1	2.47	0.49
5:E:73:ASP:HA	5:E:144:LEU:CD1	2.42	0.49
2:B:1430:U:O4	32:FA:4:ARG:HA	2.12	0.49
7:G:25:ILE:HD13	7:G:25:ILE:N	2.22	0.49
59:GB:100:LYS:HE3	59:GB:102:GLU:HB2	1.94	0.49
34:HA:103:THR:HG22	34:HA:104:LEU:HD12	1.93	0.49
2:B:3325:G:C5'	35:IA:104:LEU:H	2.25	0.49
61:IB:38:ALA:HB3	61:IB:42:PHE:O	2.12	0.49
38:LA:57:LEU:HD11	38:LA:65:VAL:HG21	1.92	0.49
13:M:43:VAL:HA	13:M:57:VAL:HG22	1.94	0.49
13:M:3:TYR:CG	13:M:65:VAL:HG21	2.46	0.49
40:NA:57:LEU:O	40:NA:61:ILE:HG13	2.11	0.49
68:PB:14:ILE:HD12	68:PB:22:VAL:O	2.11	0.49
17:Q:64:LYS:HG3	32:FA:69:TRP:CE2	2.47	0.49
70:RB:38:SER:O	70:RB:42:VAL:HG23	2.13	0.49
46:TA:12:CYS:O	46:TA:18:ARG:HA	2.12	0.49
8:H:280:ILE:HG13	22:V:104:LEU:O	2.12	0.49
23:W:4:LEU:HA	23:W:7:GLN:OE1	2.11	0.49
49:WA:205:SER:HB2	49:WA:206:PRO:HD2	1.95	0.49
49:WA:49:GLY:HA2	49:WA:54:PHE:HD1	1.77	0.49
75:WB:46:LYS:O	75:WB:50:ILE:HG13	2.12	0.49
52:ZA:41:LEU:HD23	52:ZA:61:LEU:HD13	1.95	0.49
78:ZB:12:VAL:HG23	78:ZB:52:ASP:O	2.11	0.49
78:ZB:40:ILE:HD13	78:ZB:56:LEU:CD1	2.42	0.49
1:A:1104:U:H2'	1:A:1105:C:H6	1.76	0.49
1:A:1438:G:H2'	1:A:1439:C:O4'	2.11	0.49
1:A:1485:C:O4'	1:A:1606:C:H4'	2.12	0.49
1:A:1498:G:C3'	1:A:1499:G:H5''	2.42	0.49
1:A:417:A:H4'	1:A:418:G:C4	2.47	0.49
1:A:540:G:H4'	1:A:541:A:C2'	2.31	0.49
53:AB:98:ALA:CB	53:AB:169:ASP:HB3	2.42	0.49
2:B:1140:G:N3	2:B:1140:G:H2'	2.27	0.49
2:B:2750:U:O2'	2:B:2751:G:H5'	2.13	0.49
2:B:2767:U:OP1	46:TA:34:SER:HB3	2.12	0.49
2:B:3133:C:C2'	2:B:3134:A:H5''	2.42	0.49
2:B:325:A:H3'	2:B:326:U:C6	2.47	0.49
2:B:729:C:OP1	22:V:44:PHE:HB2	2.11	0.49
2:B:91:G:C2'	2:B:93:C:H5''	2.38	0.49
3:C:119:C:H2'	3:C:120:C:H6	1.74	0.49
3:C:94:C:HO2'	3:C:95:G:H8	1.58	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:CB:30:PRO:O	55:CB:34:GLN:HG3	2.13	0.49
4:D:65:G:H2'	4:D:66:A:H8	1.78	0.49
57:EB:63:PRO:O	57:EB:64:VAL:HB	2.13	0.49
6:F:136:ILE:HG13	6:F:148:VAL:CG1	2.34	0.49
32:FA:135:GLU:HA	32:FA:138:ILE:CD1	2.41	0.49
7:G:204:ALA:O	7:G:208:VAL:HG23	2.13	0.49
7:G:41:VAL:HG21	7:G:194:TRP:CB	2.42	0.49
33:GA:59:LYS:HD3	33:GA:59:LYS:N	2.28	0.49
8:H:166:VAL:O	8:H:170:LYS:HB2	2.12	0.49
9:I:219:PHE:CE2	9:I:223:PHE:HB2	2.47	0.49
10:J:165:LEU:HB2	37:KA:6:ARG:HG3	1.93	0.49
36:JA:120:THR:C	36:JA:122:PRO:HD3	2.31	0.49
14:N:189:GLU:HA	14:N:200:LEU:HD23	1.93	0.49
15:O:108:GLU:HA	15:O:123:PHE:O	2.12	0.49
41:OA:64:MET:HB2	41:OA:68:LYS:HE3	1.93	0.49
16:P:81:VAL:CG1	16:P:113:ALA:HB1	2.41	0.49
17:Q:56:PRO:O	17:Q:71:ALA:HA	2.11	0.49
18:R:120:VAL:O	18:R:124:ARG:HG3	2.11	0.49
70:RB:53:LYS:CG	70:RB:92:ASP:HB2	2.41	0.49
46:TA:23:HIS:HA	46:TA:73:GLU:O	2.11	0.49
2:B:2320:A:C2	47:UA:16:VAL:HB	2.47	0.49
49:WA:199:ILE:HG22	49:WA:200:ASN:N	2.27	0.49
49:WA:250:TYR:O	49:WA:265:LEU:HD23	2.11	0.49
52:ZA:41:LEU:O	52:ZA:45:VAL:HG23	2.13	0.49
53:AB:113:LEU:HD23	53:AB:114:ALA:H	1.77	0.49
2:B:1172:G:N2	2:B:1179:A:H1'	2.26	0.49
2:B:1538:G:H21	2:B:1583:A:N6	1.98	0.49
2:B:1588:A:C2	43:QA:4:GLN:HG2	2.47	0.49
2:B:2186:U:H2'	2:B:2187:G:O4'	2.13	0.49
2:B:510:G:H2'	2:B:511:G:O4'	2.13	0.49
2:B:603:A:H2'	2:B:604:G:H5'	1.95	0.49
54:BB:122:LYS:HD3	54:BB:164:LEU:HD21	1.94	0.49
3:C:24:G:C8	30:DA:13:ARG:NH1	2.80	0.49
82:DC:773:PRO:HG3	82:DC:776:GLU:OE1	2.13	0.49
1:A:639:U:C6	57:EB:118:LEU:HG	2.46	0.49
8:H:180:LYS:HZ1	8:H:181:VAL:HG22	1.78	0.49
8:H:323:VAL:HA	8:H:326:ARG:HB2	1.94	0.49
9:I:205:SER:HA	9:I:208:MET:HB2	1.95	0.49
1:A:1483:A:H4'	66:NB:71:GLY:HA2	1.93	0.49
17:Q:166:ALA:HB1	32:FA:147:LEU:HD21	1.93	0.49
2:B:796:U:H4'	17:Q:7:LEU:CD1	2.42	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:RA:98:LYS:HZ2	44:RA:115:CYS:HB2	1.77	0.49
44:RA:99:CYS:HB2	44:RA:114:LYS:NZ	2.26	0.49
19:S:138:GLN:O	19:S:143:ARG:HD2	2.13	0.49
19:S:73:ARG:CG	19:S:92:LEU:HD13	2.41	0.49
20:T:13:GLY:HA3	20:T:125:ARG:NH2	2.27	0.49
73:UB:19:ARG:HA	73:UB:19:ARG:CZ	2.42	0.49
1:A:310:C:H4'	73:UB:33:LEU:CG	2.43	0.49
22:V:127:LEU:HD13	22:V:128:ALA:N	2.27	0.49
49:WA:127:ARG:NH1	67:OB:33:ARG:HG3	2.27	0.49
50:XA:126:PRO:HG3	50:XA:147:THR:HG22	1.94	0.49
78:ZB:12:VAL:HG12	78:ZB:50:GLU:HA	1.93	0.49
1:A:1754:A:H5''	73:UB:62:LYS:HB2	1.94	0.49
2:B:1896:A:C2	27:AA:83:LYS:HD3	2.47	0.49
53:AB:210:GLU:CD	53:AB:211:PRO:HD2	2.33	0.49
2:B:1190:A:H5''	2:B:1191:U:OP1	2.13	0.49
2:B:1341:U:O2'	2:B:1342:C:H5'	2.12	0.49
2:B:124:U:O4'	2:B:150:A:H1'	2.12	0.49
2:B:1540:U:H2'	2:B:1541:G:H8	1.78	0.49
2:B:1731:A:H2'	2:B:1732:U:H5'	1.93	0.49
2:B:2691:A:H3'	2:B:2692:A:C8	2.47	0.49
2:B:2787:G:H4'	32:FA:58:MET:N	2.28	0.49
2:B:2941:A:OP2	7:G:256:HIS:HD2	1.95	0.49
2:B:2991:A:OP2	7:G:20:LYS:HE2	2.13	0.49
2:B:3136:G:H2'	2:B:3137:C:C6	2.47	0.49
2:B:3255:U:H2'	2:B:3256:G:C8	2.47	0.49
27:AA:93:LEU:HB3	28:BA:20:LEU:HD22	1.95	0.49
55:CB:36:ALA:HA	55:CB:40:ILE:HG23	1.94	0.49
5:E:137:PRO:HD2	83:EC:6772:G:OP1	2.12	0.49
31:EA:13:VAL:HB	31:EA:18:TYR:O	2.12	0.49
31:EA:89:VAL:HA	31:EA:92:PHE:CE1	2.47	0.49
57:EB:93:LEU:HD22	57:EB:125:ILE:HG23	1.94	0.49
6:F:112:ILE:CG2	6:F:133:TYR:HB2	2.43	0.49
2:B:714:G:H2'	32:FA:113:LEU:HD13	1.94	0.49
58:FB:168:CYS:HB3	58:FB:182:TYR:HE1	1.74	0.49
58:FB:38:ILE:HA	58:FB:60:ILE:O	2.13	0.49
7:G:119:TYR:HE1	7:G:125:SER:HB2	1.76	0.49
7:G:205:VAL:HG21	7:G:322:ILE:HD11	1.93	0.49
59:GB:36:LEU:HD22	59:GB:41:GLU:HB3	1.94	0.49
2:B:674:G:H5''	8:H:120:TYR:CE2	2.48	0.49
9:I:39:GLN:HA	9:I:48:LYS:HD2	1.95	0.49
11:K:222:HIS:CE1	11:K:224:ILE:HD12	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:L:69:LEU:HD21	19:S:24:ARG:NH2	2.27	0.49
12:L:82:LEU:CD2	12:L:87:ALA:HB2	2.42	0.49
13:M:88:TYR:HB2	13:M:154:VAL:HG12	1.93	0.49
40:NA:71:LYS:O	40:NA:75:LYS:HD3	2.13	0.49
2:B:2138:A:H2'	41:OA:3:LYS:HG2	1.94	0.49
19:S:154:PRO:HA	19:S:157:LYS:HD2	1.94	0.49
2:B:3182:G:C5'	20:T:160:ARG:HH22	2.21	0.49
72:TB:3:ARG:CD	72:TB:29:PRO:HD3	2.42	0.49
73:UB:54:LEU:HD12	73:UB:82:LYS:HG3	1.94	0.49
22:V:127:LEU:HD22	22:V:127:LEU:O	2.13	0.49
2:B:730:C:H5'	22:V:136:ASN:HA	1.94	0.49
2:B:669:U:H5''	22:V:153:PHE:CZ	2.47	0.49
48:VA:39:HIS:HA	48:VA:42:ARG:HD2	1.94	0.49
48:VA:55:LYS:HD3	48:VA:56:ASN:H	1.76	0.49
49:WA:41:THR:HG22	49:WA:62:LYS:HA	1.93	0.49
24:X:119:ARG:HH11	24:X:119:ARG:HB3	1.77	0.49
26:Z:43:VAL:O	26:Z:44:GLU:HB3	2.13	0.49
1:A:1625:C:H2'	1:A:1626:U:C6	2.48	0.49
1:A:564:G:H4'	1:A:566:C:C2	2.47	0.49
1:A:856:A:O2'	1:A:857:U:H5'	2.13	0.49
1:A:941:A:H4'	1:A:1027:A:N3	2.27	0.49
27:AA:86:ARG:HB2	27:AA:92:PHE:CZ	2.47	0.49
2:B:980:A:C6	2:B:1105:A:H1'	2.47	0.49
2:B:1126:G:H2'	2:B:1127:G:O4'	2.12	0.49
2:B:1220:U:H4'	2:B:1222:G:H1'	1.95	0.49
2:B:824:C:C1'	2:B:1535:A:H1'	2.42	0.49
2:B:1698:C:H2'	2:B:1699:A:C8	2.47	0.49
2:B:2628:A:H3'	2:B:2629:U:H5''	1.94	0.49
2:B:2664:C:OP1	15:O:142:LYS:HG2	2.12	0.49
2:B:3133:C:H2'	2:B:3134:A:C5'	2.42	0.49
2:B:3270:U:C4'	21:U:171:ARG:HA	2.42	0.49
2:B:821:U:H4'	2:B:912:G:OP1	2.13	0.49
2:B:946:U:O2'	2:B:947:G:H5'	2.12	0.49
54:BB:121:TYR:HA	54:BB:162:ILE:O	2.12	0.49
3:C:53:A:H2'	3:C:54:A:C8	2.48	0.49
55:CB:142:PRO:HD2	55:CB:170:GLN:OE1	2.12	0.49
2:B:3027:A:H4'	82:DC:137:VAL:HG11	1.94	0.49
82:DC:227:THR:HG23	82:DC:237:LYS:HD3	1.94	0.49
82:DC:675:PRO:HB3	82:DC:714:TYR:CD1	2.44	0.49
82:DC:564:ARG:HD2	82:DC:681:MET:O	2.13	0.49
82:DC:746:VAL:HA	82:DC:749:LYS:NZ	2.26	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:739:ALA:O	82:DC:788:THR:CG2	2.61	0.49
57:EB:81:LEU:C	57:EB:83:LYS:H	2.16	0.49
6:F:5:ILE:HG21	6:F:210:PRO:CD	2.42	0.49
2:B:661:G:N1	32:FA:17:ALA:HB3	2.27	0.49
8:H:269:SER:OG	8:H:271:LYS:HB2	2.13	0.49
3:C:28:C:C4'	8:H:49:ALA:HB3	2.41	0.49
9:I:34:LYS:HD3	9:I:35:ARG:N	2.28	0.49
10:J:38:THR:HG22	10:J:39:VAL:N	2.28	0.49
37:KA:51:TYR:CB	37:KA:98:VAL:HA	2.42	0.49
13:M:132:VAL:HA	13:M:148:GLY:CA	2.43	0.49
41:OA:33:THR:HA	41:OA:39:TYR:O	2.12	0.49
43:QA:9:ILE:O	43:QA:12:LYS:HB2	2.12	0.49
18:R:100:ALA:HA	18:R:103:ILE:HB	1.94	0.49
13:M:47:LYS:CE	18:R:5:SER:HB2	2.43	0.49
18:R:94:TRP:CZ3	18:R:99:TRP:HB3	2.47	0.49
19:S:66:VAL:CG2	19:S:102:ALA:HB2	2.42	0.49
48:VA:45:LEU:HB3	48:VA:49:ALA:N	2.28	0.49
24:X:79:VAL:HG11	24:X:106:LEU:HD11	1.95	0.49
24:X:11:GLY:O	24:X:24:LEU:HA	2.12	0.49
24:X:24:LEU:HD21	24:X:59:VAL:HG11	1.95	0.49
50:XA:143:VAL:CB	50:XA:156:VAL:HA	2.43	0.49
52:ZA:35:TRP:CZ2	52:ZA:37:PRO:HB3	2.47	0.49
1:A:872:G:N2	1:A:1047:G:H4'	2.27	0.49
1:A:1070:C:H2'	1:A:1071:U:O4'	2.13	0.49
1:A:244:A:H5'	54:BB:155:LYS:NZ	2.28	0.49
2:B:1123:U:H2'	2:B:1124:U:H5'	1.94	0.49
2:B:1737:U:H2'	2:B:1738:C:C6	2.46	0.49
2:B:1768:U:H2'	2:B:1769:G:C5'	2.42	0.49
2:B:1917:C:H2'	2:B:1918:C:H6	1.78	0.49
2:B:209:A:H2	8:H:223:PRO:HD3	1.76	0.49
2:B:2351:U:H2'	2:B:2352:A:C8	2.47	0.49
2:B:2614:G:H2'	2:B:2615:G:O4'	2.12	0.49
2:B:1048:A:C4'	2:B:2633:U:H4'	2.42	0.49
2:B:2817:A:H3'	2:B:2818:U:C5'	2.39	0.49
2:B:636:C:O2'	2:B:637:C:H5''	2.12	0.49
2:B:674:G:H2'	2:B:675:C:O4'	2.13	0.49
3:C:130:C:H2'	3:C:131:A:O4'	2.13	0.49
3:C:14:C:H2'	3:C:15:G:O4'	2.13	0.49
4:D:45:A:H5'	9:I:154:THR:HG21	1.94	0.49
56:DB:217:SER:HA	56:DB:220:LYS:HB3	1.95	0.49
82:DC:131:THR:HG21	82:DC:163:ALA:CB	2.43	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:436:LEU:HA	82:DC:454:ILE:CD1	2.41	0.49
82:DC:606:ILE:HG23	82:DC:615:ARG:HG3	1.93	0.49
57:EB:16:LEU:O	57:EB:20:VAL:HG23	2.13	0.49
34:HA:14:LEU:HA	34:HA:17:VAL:HG13	1.94	0.49
36:JA:6:HIS:CE1	36:JA:9:ILE:HD11	2.46	0.49
11:K:233:GLU:HB2	24:X:35:VAL:CG2	2.34	0.49
38:LA:76:TYR:HD1	38:LA:79:SER:HB2	1.78	0.49
9:I:290:ILE:HG22	14:N:206:LEU:CD1	2.43	0.49
2:B:1240:A:C5'	16:P:98:VAL:HG12	2.40	0.49
44:RA:93:LYS:HB3	44:RA:103:LEU:O	2.13	0.49
70:RB:44:ASN:OD1	70:RB:103:ILE:HD12	2.12	0.49
21:U:177:ALA:O	21:U:180:LYS:HG2	2.13	0.49
2:B:1689:U:O2'	23:W:57:VAL:HB	2.13	0.49
49:WA:133:VAL:HB	49:WA:142:ALA:CB	2.38	0.49
49:WA:179:LYS:HB3	49:WA:188:ILE:CD1	2.42	0.49
75:WB:80:LEU:O	75:WB:84:GLU:HB2	2.13	0.49
50:XA:51:GLY:O	50:XA:55:GLU:HG3	2.13	0.49
2:B:1687:U:H1'	26:Z:75:TYR:CD1	2.47	0.49
52:ZA:144:TRP:CE2	52:ZA:173:PRO:HG3	2.48	0.49
1:A:1044:U:H3	1:A:1074:G:H1	1.61	0.49
1:A:811:A:N6	57:EB:113:PRO:HD3	2.27	0.49
2:B:2138:A:H2'	41:OA:3:LYS:CE	2.42	0.49
2:B:225:C:H5''	30:DA:34:PRO:HB3	1.95	0.49
2:B:2323:G:H5''	2:B:2324:A:OP2	2.13	0.49
2:B:2652:U:H4'	46:TA:89:LYS:CE	2.42	0.49
2:B:2735:U:H2'	2:B:2736:A:C8	2.48	0.49
2:B:3210:A:H2'	2:B:3211:C:O4'	2.12	0.49
2:B:701:G:H2'	2:B:702:C:C6	2.48	0.49
2:B:947:G:H21	22:V:12:ARG:HH22	1.61	0.49
28:BA:21:PHE:CE1	28:BA:41:LYS:HE3	2.47	0.49
28:BA:50:ALA:HA	28:BA:55:PHE:CG	2.47	0.49
4:D:62:U:C2'	4:D:63:A:H5'	2.42	0.49
56:DB:214:LYS:O	56:DB:218:GLU:HG3	2.13	0.49
82:DC:225:PHE:HZ	82:DC:328:LEU:HD21	1.76	0.49
82:DC:733:ILE:HG13	82:DC:794:PRO:HA	1.94	0.49
31:EA:8:GLY:HA3	31:EA:87:LEU:HB3	1.95	0.49
17:Q:64:LYS:HA	32:FA:69:TRP:CE3	2.48	0.49
58:FB:152:ILE:HG22	58:FB:153:GLU:N	2.27	0.49
7:G:165:GLN:HB3	7:G:168:LYS:CG	2.41	0.49
7:G:198:HIS:CA	7:G:201:LYS:HB2	2.40	0.49
59:GB:83:VAL:HA	59:GB:149:ARG:CA	2.34	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:132:ALA:HA	8:H:135:VAL:CB	2.42	0.49
9:I:296:GLN:NE2	14:N:218:ALA:HB1	2.28	0.49
16:P:76:SER:HB2	16:P:116:MET:HB3	1.94	0.49
68:PB:100:THR:HG22	68:PB:108:LYS:HG2	1.95	0.49
17:Q:77:LEU:HA	17:Q:80:VAL:CG2	2.38	0.49
43:QA:24:PRO:O	43:QA:27:ILE:HB	2.13	0.49
18:R:23:ILE:CG2	18:R:28:SER:HB2	2.42	0.49
20:T:34:VAL:O	20:T:34:VAL:HG23	2.13	0.49
22:V:176:ARG:HA	22:V:182:LYS:O	2.12	0.49
22:V:88:THR:CA	22:V:110:ALA:HB2	2.42	0.49
1:A:969:C:H4'	1:A:1104:U:C4'	2.42	0.49
1:A:11:A:H5'	52:ZA:87:GLN:HB2	1.95	0.49
1:A:1315:U:H5''	1:A:1329:A:N3	2.28	0.49
1:A:1389:C:O2'	67:OB:52:GLY:HA3	2.13	0.49
1:A:150:U:H2'	1:A:151:G:O4'	2.13	0.49
1:A:1672:G:H2'	1:A:1673:G:C8	2.48	0.49
1:A:320:U:C2'	1:A:321:C:H5''	2.43	0.49
1:A:629:U:C1'	2:B:846:A:N7	2.76	0.49
1:A:846:G:H2'	1:A:847:A:O4'	2.13	0.49
2:B:1456:A:N7	35:IA:26:LYS:HE2	2.27	0.49
2:B:1580:A:H1'	2:B:1581:C:C5	2.48	0.49
2:B:1650:G:H2'	2:B:1651:U:H6	1.76	0.49
2:B:2737:C:H2'	2:B:2738:A:O4'	2.13	0.49
2:B:2829:U:OP1	14:N:4:ARG:HA	2.13	0.49
2:B:3066:U:H3	2:B:3075:G:H1	1.61	0.49
2:B:3215:A:H3'	37:KA:2:ALA:HB2	1.95	0.49
2:B:624:G:H2'	2:B:625:G:H8	1.78	0.49
2:B:784:A:H2'	22:V:69:ARG:HE	1.78	0.49
2:B:2111:G:O2'	28:BA:44:LYS:HD2	2.12	0.49
54:BB:99:PHE:CD1	54:BB:113:ARG:HG2	2.47	0.49
80:BC:42:ARG:HA	80:BC:46:ASN:OD1	2.13	0.49
4:D:29:C:OP2	15:O:137:ARG:HD3	2.13	0.49
5:E:21:ASN:O	5:E:22:GLU:HB3	2.13	0.49
57:EB:92:PHE:O	57:EB:128:ASP:HB3	2.13	0.49
57:EB:9:LEU:O	57:EB:10:SER:HB3	2.12	0.49
6:F:123:ARG:HA	6:F:163:ARG:HH21	1.77	0.49
8:H:170:LYS:O	8:H:175:HIS:HB2	2.11	0.49
8:H:23:PRO:HG3	8:H:258:LEU:HD23	1.94	0.49
8:H:71:VAL:HG22	8:H:72:ALA:H	1.77	0.49
34:HA:56:LEU:O	34:HA:60:ALA:HB2	2.13	0.49
35:IA:11:GLU:O	35:IA:106:THR:HA	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:325:G:H4'	61:IB:80:MET:HE3	1.95	0.49
11:K:88:ARG:CA	11:K:134:VAL:HG12	2.38	0.49
39:MA:48:ARG:HA	39:MA:51:ILE:CD1	2.38	0.49
66:NB:55:VAL:HG13	66:NB:56:GLY:N	2.28	0.49
42:PA:46:ARG:HA	42:PA:51:LEU:HD12	1.94	0.49
69:QB:84:LYS:O	69:QB:91:TYR:HA	2.12	0.49
2:B:58:G:H5''	19:S:154:PRO:HB2	1.94	0.49
12:L:160:ILE:HD12	19:S:21:PHE:CE2	2.47	0.49
19:S:18:VAL:O	19:S:21:PHE:HB3	2.13	0.49
71:SB:36:VAL:HG11	71:SB:78:LEU:HD13	1.94	0.49
21:U:148:LEU:O	21:U:148:LEU:HD12	2.13	0.49
47:UA:25:GLN:HA	47:UA:28:LYS:HZ3	1.78	0.49
48:VA:61:ARG:CA	48:VA:64:ARG:HB3	2.32	0.49
49:WA:238:ASP:HB3	49:WA:257:ALA:HB3	1.93	0.49
50:XA:171:GLY:HA3	50:XA:203:PHE:HD2	1.76	0.49
52:ZA:139:ILE:N	52:ZA:139:ILE:HD12	2.28	0.49
52:ZA:227:PRO:HA	52:ZA:230:TRP:CD2	2.47	0.49
1:A:1313:A:N3	1:A:1315:U:H5'	2.28	0.49
1:A:218:A:H3'	1:A:219:A:H5''	1.95	0.49
1:A:517:U:H2'	1:A:518:A:O4'	2.13	0.49
1:A:531:C:C2'	1:A:532:U:H5''	2.40	0.49
1:A:954:G:H2'	1:A:955:A:H8	1.78	0.49
53:AB:191:ASP:OD2	53:AB:192:PRO:HD2	2.13	0.49
79:AC:10:HIS:O	79:AC:12:ARG:HD3	2.13	0.49
2:B:1275:C:H2'	2:B:1276:U:O4'	2.13	0.49
2:B:1612:A:H5''	42:PA:51:LEU:HD13	1.93	0.49
2:B:3056:U:H5'	2:B:3058:U:H1'	1.95	0.49
2:B:325:A:H3'	2:B:326:U:H6	1.77	0.49
2:B:376:G:N2	2:B:401:U:H5''	2.27	0.49
2:B:513:G:H2'	2:B:514:G:C8	2.45	0.49
2:B:645:A:H2'	36:JA:39:ASP:CG	2.33	0.49
2:B:717:C:H3'	2:B:718:G:C8	2.48	0.49
3:C:42:G:O2'	3:C:43:A:H5'	2.13	0.49
4:D:82:G:H2'	4:D:83:U:C6	2.48	0.49
30:DA:18:ALA:O	30:DA:22:ALA:HB2	2.12	0.49
56:DB:57:ASP:HA	56:DB:106:LEU:HA	1.95	0.49
2:B:1793:C:C6	6:F:179:LEU:HD13	2.47	0.49
22:V:170:ARG:NH1	32:FA:59:ARG:HA	2.27	0.49
59:GB:85:VAL:CG2	59:GB:107:ARG:HG3	2.40	0.49
59:GB:14:THR:OG1	59:GB:15:PRO:HD2	2.13	0.49
8:H:192:GLY:O	8:H:197:ARG:HG2	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:I:95:TRP:CH2	9:I:181:PRO:HD3	2.48	0.49
36:JA:78:ASN:HD22	36:JA:78:ASN:H	1.61	0.49
2:B:1138:U:C4'	11:K:97:PRO:HG3	2.31	0.49
37:KA:47:LYS:HD2	37:KA:102:LEU:HA	1.95	0.49
10:J:166:LYS:HE2	37:KA:4:SER:CB	2.43	0.49
2:B:2549:G:C5'	12:L:35:GLY:HA3	2.42	0.49
17:Q:12:ASN:HB3	17:Q:14:PHE:HE1	1.76	0.49
69:QB:19:ALA:O	69:QB:23:GLN:HG3	2.13	0.49
69:QB:22:LEU:HD12	69:QB:28:LEU:HB3	1.94	0.49
18:R:123:LEU:HD13	20:T:194:LEU:HG	1.94	0.49
18:R:95:ALA:HA	18:R:100:ALA:HB1	1.93	0.49
70:RB:23:ARG:HB3	70:RB:117:VAL:CG1	2.43	0.49
70:RB:28:SER:CB	70:RB:112:VAL:HG22	2.43	0.49
2:B:1547:G:H5''	19:S:104:GLU:OE1	2.13	0.49
72:TB:94:LEU:HA	72:TB:130:TYR:CE1	2.48	0.49
72:TB:35:ILE:O	72:TB:39:GLN:HG2	2.12	0.49
2:B:879:U:C4'	21:U:132:ALA:HB3	2.34	0.49
21:U:150:VAL:O	21:U:150:VAL:HG23	2.12	0.49
73:UB:89:ASN:HB3	73:UB:136:TRP:CE2	2.48	0.49
22:V:80:THR:CG2	22:V:100:THR:HB	2.43	0.49
49:WA:263:PHE:HD1	49:WA:270:LEU:HA	1.78	0.49
50:XA:30:GLN:HA	50:XA:149:LEU:O	2.12	0.49
1:A:1110:G:H1	1:A:1135:U:H3	1.61	0.48
1:A:138:A:C2'	1:A:139:C:H5'	2.42	0.48
1:A:487:G:H2'	1:A:488:G:H5''	1.95	0.48
1:A:923:A:H4'	6:F:137:ILE:HB	1.94	0.48
53:AB:72:LEU:HD23	60:HB:20:VAL:HG13	1.95	0.48
2:B:1678:G:H4'	2:B:1756:C:H4'	1.94	0.48
2:B:1483:G:H22	2:B:1872:C:N4	2.10	0.48
2:B:1941:C:H42	2:B:2107:A:N6	2.11	0.48
2:B:3198:U:H1'	13:M:21:LYS:HB2	1.94	0.48
2:B:60:A:H2'	2:B:61:A:H8	1.78	0.48
2:B:409:A:H1'	2:B:655:C:H1'	1.95	0.48
2:B:106:A:H5''	2:B:685:G:H5'	1.95	0.48
54:BB:142:HIS:CG	54:BB:226:PHE:HE2	2.31	0.48
54:BB:70:VAL:HG22	54:BB:71:LYS:N	2.28	0.48
29:CA:58:ASP:OD1	29:CA:61:LYS:HB2	2.13	0.48
55:CB:149:VAL:HG12	55:CB:156:ARG:O	2.13	0.48
82:DC:171:LYS:HG2	82:DC:278:LEU:HB2	1.95	0.48
82:DC:305:ILE:HG22	82:DC:306:VAL:N	2.27	0.48
82:DC:81:MET:HB2	82:DC:96:ASN:ND2	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:107:VAL:HB	6:F:108:PRO:HD2	1.94	0.48
6:F:147:ARG:HA	6:F:157:VAL:HA	1.94	0.48
6:F:209:HIS:CG	6:F:210:PRO:HD2	2.48	0.48
17:Q:159:VAL:HG23	32:FA:99:ALA:HB2	1.94	0.48
7:G:385:LYS:O	7:G:387:LEU:N	2.46	0.48
7:G:54:THR:O	7:G:76:VAL:HG23	2.13	0.48
59:GB:141:VAL:HG11	59:GB:146:PHE:CD2	2.48	0.48
8:H:130:ALA:HB2	8:H:149:PRO:HG3	1.94	0.48
9:I:13:SER:CA	9:I:16:PHE:HB2	2.40	0.48
2:B:3324:C:O2'	35:IA:105:GLN:HA	2.13	0.48
37:KA:91:ALA:HA	37:KA:94:PHE:CE1	2.48	0.48
65:MB:84:ILE:HG22	65:MB:85:ILE:H	1.77	0.48
66:NB:81:ILE:O	66:NB:85:ILE:HG13	2.13	0.48
68:PB:11:PHE:CZ	68:PB:59:GLY:HA3	2.48	0.48
43:QA:16:ALA:HA	43:QA:19:GLN:OE1	2.13	0.48
19:S:56:LYS:HG2	19:S:59:PHE:CE2	2.48	0.48
71:SB:24:ILE:HG21	71:SB:31:SER:CB	2.43	0.48
48:VA:8:LYS:HD2	48:VA:8:LYS:N	2.28	0.48
23:W:86:GLU:O	23:W:90:PRO:HG3	2.13	0.48
49:WA:150:TRP:O	49:WA:173:GLY:HA3	2.13	0.48
75:WB:88:ILE:CG2	75:WB:104:ALA:HB2	2.40	0.48
25:Y:11:THR:HB	25:Y:15:PHE:CE1	2.48	0.48
26:Z:17:VAL:HA	26:Z:103:TYR:HB2	1.95	0.48
1:A:1339:C:H2'	1:A:1339:C:O2	2.13	0.48
1:A:381:C:H5''	54:BB:10:LYS:CD	2.44	0.48
1:A:70:C:H2'	1:A:71:A:H8	1.76	0.48
1:A:710:U:H2'	1:A:711:U:H5'	1.95	0.48
2:B:1692:U:H1'	2:B:1755:C:C4'	2.43	0.48
2:B:279:U:H2'	2:B:280:U:O4'	2.13	0.48
2:B:3072:C:H4'	2:B:3336:A:C5'	2.43	0.48
2:B:3169:U:H3	2:B:3281:U:H3	1.60	0.48
2:B:637:C:H41	2:B:647:A:H4'	1.78	0.48
2:B:790:U:H5''	8:H:112:LYS:HD3	1.94	0.48
2:B:912:G:H2'	2:B:914:A:C8	2.48	0.48
2:B:944:C:H4'	36:JA:33:ARG:HD3	1.95	0.48
7:G:358:TRP:CG	28:BA:1:MET:HG2	2.48	0.48
54:BB:118:GLU:HA	54:BB:121:TYR:CE1	2.47	0.48
54:BB:162:ILE:HG22	54:BB:163:ASP:N	2.29	0.48
54:BB:34:GLY:HA3	54:BB:83:PRO:CG	2.43	0.48
54:BB:92:LEU:HB2	54:BB:97:GLU:O	2.12	0.48
80:BC:39:LEU:O	80:BC:43:ARG:HB3	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:131:A:O2'	3:C:132:G:H5'	2.12	0.48
29:CA:58:ASP:H	29:CA:61:LYS:HB3	1.79	0.48
4:D:74:C:H2'	4:D:75:G:O4'	2.13	0.48
4:D:79:A:H3'	4:D:80:G:C8	2.48	0.48
82:DC:129:VAL:CG2	82:DC:157:ILE:HG12	2.43	0.48
82:DC:215:LEU:O	82:DC:321:LYS:HE2	2.13	0.48
82:DC:599:LEU:O	82:DC:603:ASN:HB2	2.14	0.48
82:DC:82:SER:HB3	82:DC:85:ASP:CG	2.34	0.48
6:F:32:LEU:HD22	6:F:120:PRO:HB2	1.95	0.48
32:FA:94:ALA:HB1	32:FA:121:VAL:HG13	1.95	0.48
7:G:19:ARG:HG2	7:G:273:HIS:CE1	2.48	0.48
8:H:186:LYS:CG	8:H:202:ARG:HH22	2.26	0.48
8:H:205:PRO:HB3	8:H:247:PHE:CD2	2.49	0.48
11:K:83:LEU:HD21	11:K:116:PHE:HB3	1.94	0.48
12:L:74:THR:HG23	12:L:75:ILE:HG13	1.95	0.48
14:N:157:TYR:N	14:N:157:TYR:CD1	2.82	0.48
16:P:110:ILE:N	16:P:110:ILE:HD12	2.28	0.48
17:Q:114:GLN:O	17:Q:118:GLU:HG3	2.13	0.48
18:R:24:LYS:HG2	18:R:62:GLN:O	2.13	0.48
19:S:140:LYS:HB3	19:S:144:ARG:CZ	2.42	0.48
19:S:145:ASP:HB3	19:S:147:ARG:HB2	1.95	0.48
19:S:191:TRP:CA	19:S:194:GLN:HG2	2.41	0.48
20:T:136:THR:HG22	20:T:137:THR:H	1.78	0.48
20:T:186:ALA:HA	20:T:191:ALA:HB1	1.96	0.48
22:V:152:HIS:HD2	22:V:164:ARG:HH21	1.60	0.48
2:B:1364:C:H5''	22:V:3:ILE:HD13	1.94	0.48
44:RA:80:PRO:HG2	48:VA:168:SER:HB3	1.95	0.48
49:WA:23:LEU:HD12	49:WA:292:LEU:HA	1.95	0.48
75:WB:62:VAL:HG13	75:WB:76:ALA:CB	2.43	0.48
50:XA:206:ASP:HA	50:XA:207:PRO:C	2.33	0.48
25:Y:152:ALA:HB1	25:Y:153:PRO:CD	2.35	0.48
52:ZA:162:CYS:CB	52:ZA:213:ALA:HB2	2.40	0.48
52:ZA:237:VAL:HG12	52:ZA:241:ASP:HB2	1.95	0.48
78:ZB:9:LEU:HB2	78:ZB:53:ILE:HG23	1.94	0.48
1:A:1435:G:H4'	1:A:1437:U:OP2	2.13	0.48
1:A:1674:C:H2'	1:A:1675:C:H6	1.79	0.48
1:A:3:U:H5'	52:ZA:179:VAL:CG1	2.43	0.48
1:A:570:A:C6	73:UB:114:LYS:HD3	2.49	0.48
1:A:777:C:H41	74:VB:10:ARG:HB3	1.78	0.48
1:A:817:A:H1'	57:EB:110:GLN:HG2	1.95	0.48
2:B:1092:C:H2'	2:B:1096:U:O4	2.12	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1256:G:C1'	16:P:128:VAL:HG22	2.42	0.48
2:B:1508:C:C6	2:B:1880:U:H1'	2.48	0.48
2:B:1863:G:H1'	2:B:1867:A:N6	2.27	0.48
2:B:1903:U:H2'	2:B:1905:G:OP2	2.13	0.48
2:B:219:A:H8	2:B:1390:A:C5	2.31	0.48
2:B:2267:C:C5	2:B:2269:U:C4	3.01	0.48
2:B:2570:U:H5''	2:B:2571:U:C5	2.49	0.48
2:B:3051:U:H1'	27:AA:92:PHE:CE1	2.48	0.48
2:B:3335:A:H2'	2:B:3336:A:C8	2.49	0.48
2:B:47:C:H3'	2:B:48:A:H2'	1.95	0.48
2:B:511:G:H2'	2:B:512:U:C6	2.48	0.48
2:B:683:U:H2'	2:B:684:G:O4'	2.12	0.48
2:B:715:A:OP2	32:FA:113:LEU:HB3	2.13	0.48
2:B:91:G:C5	2:B:93:C:O4'	2.66	0.48
3:C:55:U:H3	3:C:62:C:H42	1.58	0.48
8:H:196:ASN:ND2	30:DA:10:SER:HB2	2.26	0.48
1:A:66:U:C6	56:DB:173:PRO:HG3	2.48	0.48
82:DC:24:VAL:HG23	82:DC:102:LEU:HD11	1.94	0.48
82:DC:323:VAL:HG12	82:DC:324:MET:CE	2.44	0.48
82:DC:410:LYS:HG2	82:DC:428:ILE:CG2	2.43	0.48
31:EA:2:ALA:HA	34:HA:37:GLY:HA3	1.94	0.48
31:EA:36:HIS:HA	31:EA:38:PHE:CZ	2.48	0.48
83:EC:6891:G:C2	83:EC:6938:A:N6	2.81	0.48
7:G:58:ARG:CA	7:G:357:LYS:HG2	2.41	0.48
59:GB:60:LEU:HD22	59:GB:93:LEU:HD11	1.94	0.48
60:HB:35:ILE:HG22	60:HB:37:THR:HG23	1.95	0.48
36:JA:66:LEU:HA	36:JA:72:LYS:HA	1.95	0.48
2:B:1972:A:OP1	42:PA:64:LYS:HD3	2.12	0.48
70:RB:26:LEU:HD23	70:RB:114:VAL:HG22	1.95	0.48
19:S:65:ARG:HA	19:S:129:TYR:HA	1.94	0.48
20:T:27:LEU:HD11	20:T:102:LEU:HD22	1.96	0.48
18:R:123:LEU:CD2	20:T:194:LEU:HG	2.34	0.48
47:UA:26:VAL:O	47:UA:30:GLU:HB2	2.14	0.48
8:H:280:ILE:HG13	22:V:104:LEU:C	2.34	0.48
22:V:67:ILE:HA	22:V:140:LEU:HD13	1.95	0.48
49:WA:262:VAL:HB	49:WA:272:ASP:HB3	1.95	0.48
1:A:619:A:H5''	1:A:1141:G:H4'	1.94	0.48
1:A:1203:A:H5'	1:A:1457:C:N4	2.21	0.48
1:A:1579:U:H1'	66:NB:139:GLN:HG3	1.94	0.48
1:A:185:U:C3'	1:A:186:C:H5''	2.43	0.48
1:A:694:U:H5'	1:A:695:U:H5	1.79	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:977:A:H3'	1:A:978:A:H8	1.79	0.48
2:B:2338:C:O3'	27:AA:48:ARG:HA	2.13	0.48
53:AB:141:LYS:HB2	53:AB:144:ALA:O	2.13	0.48
2:B:1043:C:H2'	2:B:1044:U:H6	1.79	0.48
2:B:1105:A:H2'	2:B:1106:G:O4'	2.12	0.48
2:B:1182:A:H2'	2:B:1183:C:C6	2.48	0.48
2:B:1579:C:H5	29:CA:33:ARG:CZ	2.26	0.48
2:B:1698:C:H2'	2:B:1699:A:H8	1.77	0.48
2:B:1900:A:H2	2:B:1907:C:H41	1.60	0.48
2:B:2483:G:OP2	5:E:97:LYS:HD3	2.12	0.48
2:B:2549:G:N1	12:L:33:ASN:HA	2.29	0.48
2:B:2558:U:H5'	12:L:40:VAL:CG2	2.41	0.48
2:B:2651:G:H5''	2:B:2652:U:C1'	2.43	0.48
2:B:2698:G:C3'	2:B:2699:G:H5''	2.43	0.48
2:B:2843:U:H5''	2:B:2844:C:C5	2.48	0.48
2:B:880:G:C8	21:U:132:ALA:HB2	2.48	0.48
3:C:145:U:H6	3:C:145:U:O5'	1.95	0.48
29:CA:62:VAL:HG13	29:CA:90:ALA:HB2	1.96	0.48
55:CB:36:ALA:HB1	55:CB:42:LEU:CD2	2.42	0.48
2:B:996:A:C2	4:D:79:A:H2	2.31	0.48
4:D:88:G:H5''	24:X:117:ARG:NH1	2.28	0.48
82:DC:115:VAL:HB	82:DC:145:GLN:HE22	1.78	0.48
82:DC:733:ILE:N	82:DC:733:ILE:HD12	2.28	0.48
5:E:77:ALA:HB1	5:E:82:VAL:HB	1.96	0.48
31:EA:27:LYS:O	31:EA:42:LEU:HD13	2.12	0.48
1:A:856:A:H61	57:EB:116:ARG:HA	1.77	0.48
6:F:126:LEU:H	6:F:126:LEU:CD1	2.24	0.48
7:G:113:GLU:HG2	7:G:166:ILE:HG22	1.95	0.48
7:G:262:TRP:CD1	20:T:65:ASN:HA	2.48	0.48
7:G:372:THR:OG1	7:G:375:GLU:HG3	2.14	0.48
7:G:83:PRO:HB3	7:G:202:THR:OG1	2.13	0.48
8:H:206:LEU:HB3	8:H:248:VAL:HG13	1.95	0.48
8:H:4:PRO:CD	8:H:22:LEU:HD22	2.44	0.48
34:HA:58:TYR:O	34:HA:62:LEU:HD12	2.13	0.48
36:JA:9:ILE:HG23	36:JA:63:THR:HB	1.96	0.48
37:KA:30:ILE:HG22	37:KA:31:LYS:N	2.29	0.48
63:KB:53:LEU:O	63:KB:57:ALA:HB3	2.14	0.48
13:M:165:CYS:HB3	13:M:179:ILE:H	1.78	0.48
13:M:93:VAL:HG13	44:RA:82:LEU:CD1	2.43	0.48
39:MA:32:LYS:HE2	39:MA:44:ILE:HD11	1.96	0.48
2:B:2854:U:H4'	14:N:160:PRO:HD3	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:N:191:LYS:CG	14:N:198:LYS:HB2	2.43	0.48
14:N:206:LEU:O	14:N:206:LEU:HD12	2.14	0.48
1:A:1608:U:OP1	66:NB:72:GLY:HA2	2.12	0.48
66:NB:97:VAL:HG12	66:NB:98:ASP:H	1.78	0.48
68:PB:88:ARG:NH2	68:PB:108:LYS:HG3	2.29	0.48
19:S:27:VAL:HA	19:S:129:TYR:CE2	2.48	0.48
20:T:142:SER:CA	20:T:145:VAL:HG22	2.43	0.48
20:T:142:SER:O	20:T:147:TRP:HB3	2.13	0.48
72:TB:17:ALA:HB2	72:TB:25:VAL:HG11	1.94	0.48
72:TB:30:SER:HA	72:TB:34:ILE:HD12	1.94	0.48
11:K:224:ILE:HG12	24:X:36:ILE:HG12	1.94	0.48
24:X:5:LYS:HD2	24:X:7:TYR:OH	2.12	0.48
4:D:89:G:H5'	24:X:84:ARG:CD	2.43	0.48
9:I:41:LYS:HZ2	25:Y:93:VAL:HG11	1.78	0.48
77:YB:33:LEU:HD23	77:YB:81:ARG:CA	2.43	0.48
2:B:1682:U:O2	26:Z:82:LYS:HG3	2.13	0.48
1:A:1049:U:H4'	77:YB:70:LYS:HE3	1.94	0.48
1:A:122:U:H2'	1:A:123:G:C8	2.47	0.48
1:A:338:C:H1'	58:FB:5:ARG:CB	2.40	0.48
1:A:740:A:H2'	1:A:741:C:C5'	2.43	0.48
2:B:3039:C:O2	27:AA:9:THR:HG21	2.14	0.48
2:B:119:U:H4'	2:B:120:G:H3'	1.96	0.48
2:B:1232:C:O2'	2:B:1233:G:H5'	2.14	0.48
2:B:1456:A:H8	35:IA:26:LYS:HB3	1.78	0.48
2:B:1657:C:N4	2:B:1797:A:H3'	2.29	0.48
2:B:2249:G:OP2	2:B:2273:G:H2'	2.12	0.48
2:B:2351:U:H2'	2:B:2352:A:H8	1.78	0.48
2:B:2358:A:H3'	2:B:2359:C:H6	1.78	0.48
2:B:2417:U:O2'	2:B:2418:G:H5'	2.13	0.48
2:B:2684:C:H2'	2:B:2685:C:C6	2.49	0.48
2:B:293:C:H2'	2:B:294:U:O4'	2.14	0.48
2:B:2968:G:H2'	2:B:2969:A:C8	2.49	0.48
2:B:3185:U:O2	24:X:170:THR:HG23	2.14	0.48
2:B:3198:U:O4	13:M:26:LYS:HD2	2.12	0.48
2:B:3353:G:H1'	2:B:3356:G:C1'	2.44	0.48
2:B:599:C:C3'	2:B:600:G:H5''	2.42	0.48
2:B:795:G:H4'	2:B:1111:U:O3'	2.13	0.48
2:B:867:G:H2'	2:B:868:C:C6	2.48	0.48
2:B:3365:U:H5''	28:BA:59:HIS:NE2	2.27	0.48
3:C:142:C:H5''	19:S:60:VAL:HG22	1.92	0.48
4:D:74:C:H2'	4:D:75:G:C5'	2.44	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:39:LEU:HD21	82:DC:334:LEU:HB2	1.94	0.48
82:DC:646:VAL:HG21	82:DC:664:VAL:HG22	1.95	0.48
57:EB:130:VAL:HB	57:EB:133:THR:OG1	2.13	0.48
83:EC:6857:C:C2'	83:EC:6858:A:H5'	2.44	0.48
83:EC:6862:G:N2	83:EC:6863:C:H41	2.11	0.48
2:B:2967:A:C5'	6:F:213:GLY:HA3	2.35	0.48
32:FA:124:ILE:HG12	32:FA:144:VAL:HG21	1.93	0.48
7:G:77:THR:O	7:G:323:MET:HA	2.13	0.48
8:H:119:ARG:HH11	8:H:119:ARG:HB2	1.77	0.48
61:IB:94:ILE:HD12	61:IB:94:ILE:N	2.28	0.48
11:K:84:VAL:HG12	11:K:138:TYR:HD1	1.78	0.48
12:L:153:ILE:HD12	12:L:177:TYR:HB2	1.94	0.48
12:L:183:LYS:HA	12:L:186:LEU:HD12	1.95	0.48
41:OA:8:PHE:CA	41:OA:11:ARG:HD3	2.33	0.48
17:Q:99:HIS:C	17:Q:99:HIS:ND1	2.67	0.48
70:RB:30:LYS:H	70:RB:30:LYS:HD2	1.79	0.48
20:T:8:VAL:HB	20:T:116:LYS:O	2.13	0.48
46:TA:67:LYS:HA	46:TA:87:ARG:HA	1.95	0.48
73:UB:56:LYS:CD	73:UB:98:GLU:HG3	2.39	0.48
48:VA:38:MET:HA	48:VA:185:LEU:HD11	1.94	0.48
8:H:359:LEU:CG	24:X:64:ILE:HG12	2.42	0.48
50:XA:88:LYS:HD3	50:XA:201:LEU:CD2	2.43	0.48
52:ZA:140:ARG:HB3	52:ZA:221:THR:HB	1.95	0.48
1:A:116:U:H2'	1:A:117:U:C6	2.48	0.48
1:A:1181:U:H2'	1:A:1182:U:O4'	2.14	0.48
1:A:1275:A:H4'	53:AB:145:ALA:HB1	1.95	0.48
1:A:356:G:H2'	1:A:357:G:H8	1.79	0.48
1:A:385:A:H2'	1:A:386:G:H8	1.72	0.48
1:A:445:A:O4'	1:A:525:A:H5'	2.13	0.48
1:A:19:A:HO2'	1:A:571:G:H8	1.60	0.48
1:A:694:U:H3	57:EB:98:ILE:HD12	1.79	0.48
1:A:953:G:H1'	63:KB:114:ARG:HH21	1.78	0.48
1:A:976:G:H3'	1:A:1023:A:H2	1.79	0.48
53:AB:98:ALA:HB3	53:AB:169:ASP:HB3	1.96	0.48
2:B:1046:A:O5'	2:B:1046:A:H8	1.95	0.48
2:B:627:U:O2'	2:B:1399:A:H1'	2.13	0.48
2:B:1463:U:H2'	2:B:1464:G:O4'	2.14	0.48
2:B:1797:A:H2'	2:B:1798:A:H8	1.79	0.48
2:B:185:C:H2'	2:B:186:U:C5'	2.43	0.48
2:B:2162:U:H2'	2:B:2163:C:O4'	2.13	0.48
2:B:2261:G:H5'	2:B:2261:G:H8	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2268:U:H3'	2:B:2269:U:H4'	1.96	0.48
2:B:2482:U:H2'	2:B:2483:G:O4'	2.14	0.48
2:B:2674:A:H2'	2:B:2675:C:O4'	2.13	0.48
2:B:2676:A:H4'	2:B:2677:G:C5'	2.44	0.48
2:B:3108:G:H21	13:M:163:GLN:NE2	1.98	0.48
2:B:570:A:H2'	2:B:571:U:C6	2.48	0.48
2:B:720:A:H3'	22:V:69:ARG:HH12	1.78	0.48
2:B:744:A:H2'	2:B:745:C:H5'	1.96	0.48
2:B:761:A:H2'	2:B:762:U:O4'	2.14	0.48
1:A:1528:U:H5'	55:CB:108:LEU:HB3	1.95	0.48
55:CB:51:VAL:HG13	55:CB:131:GLN:HA	1.95	0.48
56:DB:85:ARG:HH22	56:DB:87:ARG:HG3	1.79	0.48
82:DC:4:PHE:CD2	82:DC:45:ILE:HG12	2.48	0.48
57:EB:11:GLN:HG3	57:EB:13:PRO:CD	2.40	0.48
57:EB:6:ALA:HB3	57:EB:9:LEU:HD13	1.96	0.48
6:F:78:ALA:O	6:F:169:ILE:HA	2.13	0.48
1:A:256:A:H4'	58:FB:72:ILE:HG22	1.95	0.48
2:B:3312:U:H4'	7:G:25:ILE:CG2	2.43	0.48
8:H:141:ARG:HG3	8:H:180:LYS:HG3	1.96	0.48
34:HA:33:SER:HB2	34:HA:93:LEU:HD11	1.95	0.48
9:I:17:GLN:HG2	25:Y:20:ARG:O	2.14	0.48
37:KA:16:TYR:HB3	37:KA:24:ASN:O	2.14	0.48
63:KB:142:GLU:C	63:KB:144:ALA:H	2.17	0.48
2:B:170:G:H5''	39:MA:109:ILE:HG12	1.96	0.48
14:N:192:ASP:HA	14:N:197:VAL:HG23	1.95	0.48
66:NB:49:TYR:O	66:NB:53:LEU:HG	2.14	0.48
68:PB:15:LEU:H	68:PB:15:LEU:CD2	2.24	0.48
17:Q:7:LEU:HB3	17:Q:8:PRO:HD2	1.95	0.48
18:R:123:LEU:HD21	20:T:193:GLN:HB2	1.94	0.48
18:R:47:ASP:HB2	18:R:55:ARG:HG2	1.95	0.48
20:T:53:LYS:HA	20:T:56:ASP:OD2	2.13	0.48
72:TB:70:ASN:HB2	72:TB:130:TYR:O	2.13	0.48
72:TB:24:GLN:HG2	77:YB:5:GLN:O	2.14	0.48
49:WA:34:LEU:HD21	49:WA:80:ALA:HB1	1.95	0.48
50:XA:17:LEU:HA	50:XA:172:LEU:CD2	2.43	0.48
25:Y:75:ILE:HD12	25:Y:88:ARG:HG2	1.95	0.48
1:A:1687:U:H2'	1:A:1688:U:O4'	2.14	0.48
2:B:1116:G:H4'	2:B:1116:G:OP2	2.13	0.48
2:B:1689:U:H2'	2:B:1690:C:O4'	2.13	0.48
2:B:2410:U:H3	2:B:2801:A:H2	1.60	0.48
2:B:2510:U:HO2'	2:B:2511:A:H8	1.60	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2518:C:H2'	2:B:2519:A:C8	2.49	0.48
2:B:2855:U:P	14:N:160:PRO:HB3	2.53	0.48
2:B:3039:C:H1'	27:AA:9:THR:CB	2.44	0.48
2:B:3216:G:C2'	2:B:3219:G:H1'	2.43	0.48
2:B:3308:C:H3'	2:B:3309:G:N2	2.28	0.48
2:B:958:C:H5''	2:B:2800:G:OP1	2.13	0.48
2:B:96:G:OP1	32:FA:34:MET:HB2	2.13	0.48
54:BB:162:ILE:HG22	54:BB:163:ASP:H	1.79	0.48
54:BB:201:HIS:CE1	54:BB:207:LEU:HB2	2.49	0.48
3:C:111:A:N7	41:OA:29:VAL:HG21	2.29	0.48
29:CA:107:VAL:HG12	29:CA:108:LEU:H	1.79	0.48
55:CB:182:ALA:C	55:CB:186:ASN:HD21	2.16	0.48
55:CB:59:VAL:C	55:CB:61:TYR:H	2.17	0.48
4:D:64:A:N6	14:N:200:LEU:HD11	2.29	0.48
31:EA:57:HIS:NE2	31:EA:65:ARG:HG3	2.29	0.48
58:FB:97:THR:HA	58:FB:173:PRO:HG2	1.95	0.48
59:GB:137:GLY:O	59:GB:138:LYS:HB3	2.13	0.48
60:HB:24:LYS:HG2	60:HB:25:LYS:N	2.27	0.48
9:I:177:GLU:HA	9:I:180:PHE:CD2	2.48	0.48
2:B:1363:A:OP1	11:K:160:ARG:HD3	2.13	0.48
37:KA:49:ILE:CG2	37:KA:71:VAL:HG23	2.43	0.48
12:L:37:GLY:O	12:L:38:GLN:HB3	2.14	0.48
12:L:48:ARG:HH21	12:L:49:TYR:HB3	1.74	0.48
13:M:41:ILE:O	13:M:42:ASP:HB2	2.14	0.48
14:N:5:PRO:CG	14:N:7:ARG:NH1	2.77	0.48
2:B:929:A:H1'	41:OA:49:TRP:CZ3	2.48	0.48
17:Q:92:THR:HG21	39:MA:111:PHE:HB3	1.96	0.48
72:TB:75:ILE:HG22	72:TB:79:PHE:HE2	1.78	0.48
48:VA:27:VAL:HG13	48:VA:84:VAL:HG11	1.96	0.48
1:A:522:U:H5''	74:VB:37:LYS:HG3	1.95	0.48
50:XA:191:ARG:HG3	50:XA:192:THR:N	2.28	0.48
25:Y:82:ASN:ND2	25:Y:83:ARG:HD3	2.29	0.48
26:Z:37:LEU:HD23	26:Z:56:VAL:HG11	1.95	0.48
1:A:1112:G:H1'	1:A:1133:A:N6	2.28	0.48
1:A:619:A:H1'	1:A:1140:G:H21	1.79	0.48
1:A:1552:U:H2'	1:A:1553:G:O4'	2.14	0.48
1:A:1715:G:C3'	1:A:1716:C:H4'	2.44	0.48
1:A:391:A:O4'	1:A:1731:A:H5'	2.14	0.48
1:A:408:C:H1'	1:A:1731:A:O2'	2.14	0.48
1:A:754:A:C3'	1:A:755:A:H5'	2.36	0.48
1:A:886:U:H2'	1:A:887:A:C8	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:975:C:H2'	1:A:976:G:C8	2.49	0.48
2:B:126:U:H5''	19:S:140:LYS:HB2	1.96	0.48
2:B:130:A:H61	2:B:138:U:H3	1.60	0.48
2:B:1521:G:H5''	29:CA:71:THR:HG21	1.96	0.48
2:B:1725:C:H2'	2:B:1726:C:C5	2.47	0.48
2:B:2139:A:H62	41:OA:4:GLY:N	2.12	0.48
2:B:2982:A:C2'	2:B:2983:C:H5''	2.43	0.48
2:B:3088:G:H2'	2:B:3089:C:O4'	2.14	0.48
2:B:3141:A:H5''	2:B:3142:A:H4'	1.95	0.48
2:B:663:C:H2'	2:B:664:U:C6	2.48	0.48
27:AA:93:LEU:HA	28:BA:20:LEU:HB3	1.94	0.48
54:BB:234:PRO:C	54:BB:236:ILE:H	2.17	0.48
3:C:73:U:OP1	30:DA:75:ARG:HB2	2.13	0.48
3:C:93:U:H2'	3:C:94:C:O4'	2.14	0.48
82:DC:733:ILE:HD12	82:DC:733:ILE:H	1.78	0.48
31:EA:104:PRO:HA	31:EA:107:ARG:CG	2.43	0.48
6:F:239:ALA:HB1	6:F:241:ARG:NH1	2.29	0.48
6:F:87:PHE:HB3	6:F:89:TYR:CE1	2.49	0.48
32:FA:13:GLY:O	36:JA:36:LYS:HE2	2.14	0.48
7:G:339:ARG:CZ	7:G:342:LEU:HD21	2.44	0.48
7:G:4:ARG:HD3	7:G:7:GLU:HA	1.95	0.48
9:I:164:LYS:HE3	9:I:195:LEU:HD21	1.96	0.48
9:I:63:GLN:HG2	9:I:77:ALA:HB1	1.94	0.48
37:KA:85:PHE:CE2	37:KA:88:ASN:HA	2.47	0.48
12:L:75:ILE:C	12:L:77:GLN:H	2.17	0.48
15:O:115:LYS:HG2	15:O:116:TYR:H	1.79	0.48
68:PB:140:THR:HA	68:PB:143:ARG:HH11	1.78	0.48
52:ZA:230:TRP:HZ2	72:TB:46:TYR:CE1	2.32	0.48
72:TB:75:ILE:HG22	72:TB:79:PHE:CE2	2.49	0.48
73:UB:127:VAL:O	73:UB:130:VAL:HG22	2.14	0.48
22:V:82:VAL:HA	22:V:102:ALA:HB3	1.94	0.48
48:VA:12:PHE:CZ	48:VA:60:ARG:HG3	2.48	0.48
49:WA:8:VAL:HG12	49:WA:9:LEU:N	2.29	0.48
50:XA:127:ARG:HH11	50:XA:127:ARG:HG3	1.79	0.48
50:XA:93:THR:HG22	50:XA:181:VAL:HG21	1.95	0.48
25:Y:74:VAL:HG12	25:Y:75:ILE:N	2.29	0.48
1:A:1293:U:H2'	1:A:1294:G:H8	1.78	0.48
1:A:1523:G:OP1	69:QB:78:LYS:HD3	2.14	0.48
1:A:1752:U:H2'	1:A:1753:A:H8	1.75	0.48
1:A:390:G:H2'	1:A:391:A:O4'	2.14	0.48
1:A:845:G:C2'	1:A:846:G:H5''	2.35	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:954:G:H2'	1:A:955:A:C8	2.49	0.48
7:G:67:PHE:CE2	27:AA:88:ARG:HB2	2.47	0.48
2:B:941:G:H1'	2:B:1435:A:H1'	1.96	0.48
2:B:2122:G:H2'	2:B:2123:G:O4'	2.14	0.48
2:B:2151:C:H2'	2:B:2152:A:O4'	2.14	0.48
2:B:2304:C:H2'	2:B:2305:G:H5'	1.96	0.48
2:B:2392:C:H1'	7:G:266:ARG:NH2	2.21	0.48
2:B:2394:G:H2'	2:B:2395:G:C5'	2.43	0.48
2:B:1054:A:C5'	2:B:2637:A:H61	2.23	0.48
2:B:2746:A:H5'	9:I:179:ARG:CG	2.34	0.48
2:B:878:G:H5'	2:B:880:G:H1'	1.96	0.48
54:BB:31:PRO:HG2	54:BB:38:LEU:HD13	1.96	0.48
3:C:69:U:C2'	3:C:70:G:H5'	2.44	0.48
55:CB:209:TYR:HE1	55:CB:213:LYS:HZ2	1.58	0.48
4:D:27:A:H3'	9:I:57:ASN:HD22	1.79	0.48
30:DA:57:LEU:HD13	30:DA:66:GLN:O	2.13	0.48
30:DA:70:ILE:CD1	30:DA:82:VAL:HG22	2.39	0.48
82:DC:224:GLN:NE2	82:DC:328:LEU:CD2	2.76	0.48
82:DC:578:LYS:HE2	82:DC:583:HIS:N	2.29	0.48
31:EA:72:ILE:HG12	31:EA:111:LYS:HE2	1.94	0.48
1:A:856:A:N6	57:EB:116:ARG:HG3	2.29	0.48
58:FB:135:LYS:HD3	58:FB:135:LYS:C	2.33	0.48
1:A:348:U:H4'	58:FB:14:THR:HG22	1.94	0.48
59:GB:48:GLN:HA	59:GB:51:LYS:HE2	1.96	0.48
34:HA:96:GLY:H	34:HA:100:ILE:HD11	1.76	0.48
9:I:125:VAL:CG1	9:I:196:ARG:HG3	2.44	0.48
4:D:118:A:H4'	9:I:79:TYR:HE2	1.79	0.48
36:JA:20:HIS:CD2	36:JA:42:VAL:HG21	2.49	0.48
11:K:116:PHE:CE1	11:K:139:PRO:HG3	2.48	0.48
63:KB:48:SER:O	63:KB:52:VAL:HG23	2.13	0.48
2:B:1805:C:H4'	38:LA:76:TYR:H	1.77	0.48
66:NB:116:LEU:O	66:NB:117:LEU:HD13	2.14	0.48
66:NB:60:PHE:HA	66:NB:63:ILE:CG1	2.44	0.48
15:O:17:LEU:HG	15:O:19:LEU:HD21	1.96	0.48
67:OB:29:GLN:H	67:OB:29:GLN:HE21	1.62	0.48
69:QB:112:GLY:O	69:QB:127:ASN:HB3	2.14	0.48
69:QB:57:ARG:O	69:QB:61:VAL:HG23	2.14	0.48
1:A:1468:U:H1'	69:QB:88:VAL:HG23	1.95	0.48
19:S:49:ARG:HH11	19:S:49:ARG:HG3	1.79	0.48
46:TA:23:HIS:HD2	46:TA:72:LEU:O	1.96	0.48
21:U:28:ASN:OD1	21:U:84:PRO:HG3	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:87:U:H5''	22:V:172:PHE:CE2	2.49	0.48
1:A:1113:A:N1	1:A:1131:A:H5''	2.28	0.48
1:A:991:G:H4'	1:A:1786:G:C5'	2.44	0.48
1:A:206:A:C2'	1:A:207:U:H5'	2.44	0.48
1:A:208:U:H2'	1:A:209:U:C6	2.49	0.48
1:A:703:G:H2'	1:A:704:C:H5'	1.95	0.48
53:AB:168:ILE:HA	53:AB:189:MET:HA	1.95	0.48
53:AB:172:THR:HA	53:AB:184:ILE:O	2.13	0.48
53:AB:5:ILE:HB	53:AB:10:LYS:HE3	1.96	0.48
2:B:1046:A:O5'	2:B:1046:A:C8	2.67	0.48
2:B:1057:A:H2'	2:B:1058:U:H5'	1.95	0.48
2:B:1078:U:H1'	2:B:1082:U:N3	2.29	0.48
2:B:1084:A:H5''	25:Y:35:LYS:CE	2.43	0.48
2:B:1323:G:H2'	2:B:1324:U:O4'	2.14	0.48
2:B:1438:U:H2'	2:B:1439:U:C6	2.49	0.48
2:B:1508:C:H3'	2:B:1509:A:H8	1.74	0.48
2:B:1768:U:H2'	2:B:1769:G:C4'	2.44	0.48
2:B:1523:U:H5'	2:B:1834:U:N3	2.29	0.48
2:B:2174:G:C8	2:B:2176:U:H1'	2.49	0.48
2:B:2944:U:H2'	2:B:2947:G:O6	2.14	0.48
2:B:2999:U:H2'	2:B:3000:A:H8	1.78	0.48
2:B:3316:A:N1	7:G:124:LYS:HD2	2.29	0.48
2:B:941:G:H2'	2:B:942:U:O4'	2.14	0.48
54:BB:98:ASN:HD22	54:BB:119:ALA:HB2	1.78	0.48
54:BB:98:ASN:ND2	54:BB:119:ALA:HB2	2.28	0.48
30:DA:31:LEU:HD13	30:DA:101:PRO:HG3	1.96	0.48
82:DC:144:ARG:HD3	82:DC:765:LEU:HD22	1.95	0.48
82:DC:82:SER:O	82:DC:85:ASP:HB2	2.14	0.48
82:DC:8:GLN:O	82:DC:12:LEU:HD13	2.13	0.48
57:EB:11:GLN:CG	57:EB:13:PRO:HD2	2.37	0.48
83:EC:6902:U:H3	83:EC:6911:A:H61	1.62	0.48
6:F:145:LYS:HA	6:F:158:ILE:O	2.14	0.48
6:F:243:THR:O	6:F:243:THR:HG23	2.13	0.48
32:FA:79:TRP:HH2	32:FA:121:VAL:HG21	1.78	0.48
32:FA:120:ASN:HA	32:FA:141:ALA:HB1	1.96	0.48
58:FB:38:ILE:HD12	58:FB:94:ASN:HB3	1.95	0.48
58:FB:38:ILE:HD11	58:FB:80:GLY:HA2	1.92	0.48
7:G:92:TYR:CD1	7:G:101:SER:HA	2.49	0.48
2:B:2948:C:H5''	7:G:243:HIS:O	2.14	0.48
61:IB:110:HIS:HB3	61:IB:138:ASN:ND2	2.29	0.48
11:K:103:LEU:HD23	11:K:108:LEU:HD12	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:L:75:ILE:O	12:L:76:ALA:HB3	2.14	0.48
12:L:77:GLN:O	12:L:80:TYR:O	2.32	0.48
38:LA:67:LYS:HZ3	38:LA:67:LYS:HB2	1.77	0.48
13:M:13:PRO:O	13:M:16:VAL:HG23	2.14	0.48
65:MB:93:VAL:HA	65:MB:106:GLU:HA	1.95	0.48
40:NA:53:TYR:HA	40:NA:56:ARG:HB3	1.96	0.48
15:O:14:ILE:N	15:O:14:ILE:HD12	2.29	0.48
16:P:73:VAL:O	16:P:75:PRO:HD3	2.13	0.48
2:B:1235:U:OP2	16:P:77:ALA:HA	2.14	0.48
18:R:14:LEU:HB3	24:X:149:LYS:HB2	1.96	0.48
70:RB:24:ILE:HG21	70:RB:91:ILE:HD12	1.96	0.48
19:S:35:VAL:CA	19:S:65:ARG:HE	2.15	0.48
19:S:91:GLU:HB2	46:TA:50:PHE:CZ	2.31	0.48
20:T:125:ARG:HG2	20:T:126:VAL:H	1.78	0.48
20:T:147:TRP:CZ3	20:T:150:GLU:HA	2.49	0.48
2:B:743:C:O2	22:V:141:ARG:HB2	2.14	0.48
2:B:720:A:H5'	22:V:69:ARG:HH22	1.78	0.48
23:W:65:ALA:HA	23:W:68:GLN:HB2	1.95	0.48
4:D:73:C:O2	24:X:49:HIS:HB3	2.13	0.48
1:A:1048:G:O2'	1:A:1049:U:H5'	2.13	0.47
1:A:1138:A:O2'	1:A:1139:A:H5'	2.13	0.47
1:A:1390:U:OP1	67:OB:5:ARG:HD2	2.14	0.47
1:A:1546:G:H21	68:PB:87:ASN:CB	2.26	0.47
1:A:393:C:H2'	1:A:394:C:C6	2.48	0.47
1:A:762:A:HO2'	59:GB:71:PHE:HZ	1.61	0.47
1:A:792:U:H2'	1:A:793:A:O4'	2.14	0.47
1:A:962:C:H2'	1:A:963:A:O4'	2.14	0.47
27:AA:68:GLU:O	27:AA:69:LEU:HD12	2.14	0.47
2:B:1041:U:H2'	2:B:1042:U:H5'	1.95	0.47
2:B:1115:G:N3	2:B:1115:G:H3'	2.29	0.47
2:B:2830:G:H2'	2:B:2831:G:O4'	2.14	0.47
2:B:609:G:N7	8:H:308:LYS:HE3	2.28	0.47
2:B:680:G:H4'	2:B:789:A:H4'	1.96	0.47
2:B:865:U:H2'	2:B:866:A:H5'	1.96	0.47
54:BB:140:VAL:HG22	54:BB:146:THR:HB	1.96	0.47
80:BC:38:LEU:O	80:BC:42:ARG:HB2	2.14	0.47
29:CA:107:VAL:HA	29:CA:126:LEU:HA	1.96	0.47
55:CB:142:PRO:HA	55:CB:214:LYS:HE2	1.96	0.47
56:DB:135:PRO:HB2	56:DB:141:ILE:HG12	1.95	0.47
56:DB:195:VAL:O	56:DB:199:GLN:HG3	2.14	0.47
82:DC:147:LEU:HD22	82:DC:193:ALA:HB2	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:143:LEU:HD11	82:DC:189:VAL:HG22	1.96	0.47
82:DC:218:TRP:HB2	82:DC:328:LEU:O	2.14	0.47
57:EB:131:PHE:N	57:EB:132:PRO:HD2	2.29	0.47
6:F:126:LEU:HD12	6:F:126:LEU:N	2.24	0.47
32:FA:42:ARG:HG3	32:FA:43:ILE:HD12	1.96	0.47
32:FA:60:TYR:HB3	32:FA:63:LYS:HD2	1.96	0.47
7:G:148:LEU:O	7:G:152:LYS:HG3	2.14	0.47
9:I:229:ASP:O	9:I:230:ASP:HB3	2.13	0.47
61:IB:57:LYS:CB	61:IB:131:ILE:HG23	2.44	0.47
61:IB:108:PRO:HB2	61:IB:135:VAL:HG22	1.96	0.47
36:JA:32:TRP:HH2	36:JA:52:GLN:HE21	1.60	0.47
11:K:223:PHE:CE2	24:X:35:VAL:HB	2.49	0.47
11:K:240:VAL:HA	11:K:243:MET:HB2	1.96	0.47
11:K:25:GLN:C	11:K:27:ALA:H	2.16	0.47
13:M:36:LYS:HE3	13:M:74:LEU:CD2	2.44	0.47
39:MA:38:ARG:NH1	39:MA:38:ARG:HB2	2.28	0.47
39:MA:70:TYR:CD2	39:MA:77:PRO:HD3	2.49	0.47
39:MA:92:LEU:C	39:MA:97:ALA:HB2	2.35	0.47
66:NB:131:GLY:HA3	66:NB:136:SER:O	2.14	0.47
66:NB:7:VAL:HG23	66:NB:7:VAL:O	2.14	0.47
19:S:144:ARG:HH11	19:S:144:ARG:HG2	1.79	0.47
45:SA:11:ARG:HH11	45:SA:11:ARG:CB	2.26	0.47
1:A:636:A:OP1	72:TB:6:VAL:HB	2.13	0.47
2:B:1222:G:H5''	48:VA:56:ASN:HB3	1.95	0.47
23:W:134:HIS:CD2	23:W:137:ALA:HB2	2.49	0.47
23:W:162:ARG:HA	23:W:166:ASN:OD1	2.14	0.47
2:B:1690:C:OP1	23:W:60:LYS:HB2	2.14	0.47
52:ZA:140:ARG:HB3	52:ZA:221:THR:OG1	2.14	0.47
1:A:1455:G:H2'	1:A:1456:C:H5'	1.96	0.47
1:A:15:U:H2'	1:A:16:G:O4'	2.13	0.47
1:A:262:U:H2'	1:A:263:C:C6	2.49	0.47
1:A:569:C:H4'	1:A:583:C:H5''	1.95	0.47
1:A:951:A:H2'	1:A:952:A:O4'	2.14	0.47
1:A:977:A:H61	1:A:1774:G:H1'	1.79	0.47
53:AB:71:LEU:O	53:AB:75:LYS:HG2	2.14	0.47
1:A:1334:U:O2	79:AC:56:ARG:HD3	2.14	0.47
2:B:1062:A:H4'	25:Y:105:PHE:CE2	2.49	0.47
2:B:1456:A:H62	35:IA:64:VAL:CG2	2.27	0.47
2:B:1741:A:H8	2:B:1785:U:HO2'	1.62	0.47
2:B:2165:G:H1'	2:B:2168:A:H62	1.79	0.47
2:B:2197:C:N4	2:B:2241:U:H3'	2.29	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2809:C:C2	2:B:2810:C:H1'	2.48	0.47
2:B:3232:G:H2'	2:B:3233:C:H6	1.74	0.47
2:B:585:A:H2'	2:B:586:C:C6	2.49	0.47
2:B:807:A:H4'	2:B:2811:A:O2'	2.13	0.47
2:B:853:G:H2'	2:B:854:G:O4'	2.14	0.47
2:B:349:A:H2	3:C:22:U:O2'	1.96	0.47
56:DB:153:VAL:HG13	56:DB:156:PHE:HB2	1.96	0.47
7:G:246:LEU:HD12	7:G:246:LEU:O	2.15	0.47
7:G:256:HIS:HA	7:G:257:PRO:C	2.35	0.47
7:G:220:VAL:HG22	7:G:274:SER:OG	2.13	0.47
8:H:156:LEU:C	8:H:156:LEU:HD23	2.34	0.47
8:H:193:LYS:HG3	8:H:198:ARG:HG3	1.96	0.47
8:H:230:VAL:HG23	8:H:233:LEU:HD11	1.96	0.47
60:HB:11:ILE:HD12	60:HB:46:LEU:HD22	1.96	0.47
9:I:205:SER:HA	9:I:208:MET:CG	2.45	0.47
10:J:59:GLU:CD	10:J:59:GLU:H	2.17	0.47
36:JA:94:ALA:O	36:JA:119:VAL:HA	2.15	0.47
37:KA:74:THR:HA	37:KA:81:VAL:HG12	1.94	0.47
12:L:221:ASN:C	12:L:225:LYS:HG3	2.35	0.47
12:L:71:VAL:HG23	12:L:235:GLY:N	2.29	0.47
40:NA:34:SER:O	40:NA:38:LYS:HB2	2.13	0.47
66:NB:90:VAL:HG12	66:NB:102:LYS:HG3	1.96	0.47
16:P:119:LYS:HG3	16:P:121:PHE:CE2	2.48	0.47
69:QB:99:SER:HA	69:QB:102:ARG:HH11	1.79	0.47
18:R:35:ILE:CG1	18:R:46:ILE:HG22	2.40	0.47
13:M:47:LYS:HE2	18:R:5:SER:CB	2.45	0.47
44:RA:98:LYS:HZ1	44:RA:118:THR:HB	1.79	0.47
70:RB:23:ARG:HB3	70:RB:117:VAL:HG13	1.96	0.47
20:T:27:LEU:HD21	20:T:102:LEU:HB2	1.95	0.47
20:T:5:PRO:O	20:T:32:LYS:HB2	2.14	0.47
72:TB:97:ARG:HB2	72:TB:97:ARG:HH11	1.78	0.47
73:UB:125:VAL:C	73:UB:132:LEU:HD23	2.33	0.47
74:VB:5:VAL:HA	74:VB:28:LEU:O	2.14	0.47
49:WA:112:SER:CB	49:WA:153:GLN:HA	2.43	0.47
49:WA:132:LYS:HE2	49:WA:143:THR:HG23	1.94	0.47
52:ZA:76:LEU:HD11	52:ZA:105:GLY:HA2	1.95	0.47
52:ZA:88:LYS:HG2	52:ZA:90:THR:HG23	1.96	0.47
78:ZB:44:VAL:HG11	78:ZB:48:VAL:HG21	1.95	0.47
1:A:1649:G:N2	1:A:1751:C:O2	2.42	0.47
27:AA:80:ARG:HE	27:AA:95:PHE:CB	2.26	0.47
53:AB:132:LYS:HD3	53:AB:192:PRO:HD2	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1194:G:O5'	2:B:1194:G:H8	1.97	0.47
2:B:1296:C:H2'	2:B:1297:C:C6	2.50	0.47
2:B:2369:G:H2'	2:B:2370:G:N9	2.27	0.47
2:B:2652:U:H2'	2:B:2653:C:H6	1.79	0.47
2:B:2687:G:OP1	9:I:8:LYS:HE3	2.14	0.47
2:B:3059:G:H22	2:B:3332:U:H4'	1.79	0.47
2:B:3133:C:H2'	2:B:3134:A:C4'	2.45	0.47
2:B:3329:U:H5'	7:G:309:GLY:CA	2.44	0.47
2:B:592:A:OP2	10:J:17:ALA:N	2.47	0.47
2:B:646:A:O5'	2:B:646:A:H8	1.97	0.47
2:B:852:U:H2'	2:B:853:G:C8	2.49	0.47
2:B:346:C:C4	3:C:25:G:H4'	2.49	0.47
29:CA:139:ILE:HG21	29:CA:141:TYR:CE2	2.49	0.47
4:D:8:G:H2'	4:D:9:C:C6	2.49	0.47
56:DB:4:ASN:HA	56:DB:15:THR:HG22	1.96	0.47
56:DB:82:SER:O	56:DB:83:CYS:HB2	2.14	0.47
2:B:2573:G:OP2	31:EA:58:GLY:HA3	2.14	0.47
32:FA:121:VAL:HG12	32:FA:123:VAL:HG23	1.96	0.47
7:G:78:VAL:HG11	7:G:311:PHE:CE2	2.48	0.47
8:H:34:ILE:CG2	8:H:121:ALA:HB2	2.44	0.47
8:H:219:LEU:HD13	8:H:227:THR:HG22	1.95	0.47
34:HA:26:GLY:O	34:HA:30:THR:HG23	2.14	0.47
9:I:98:ALA:HB1	9:I:162:ALA:HB2	1.96	0.47
10:J:47:PHE:CZ	10:J:75:PRO:HD2	2.49	0.47
12:L:93:LEU:HD21	12:L:207:ASP:HB3	1.96	0.47
38:LA:12:PRO:HG2	38:LA:13:TYR:CD2	2.49	0.47
14:N:171:TRP:HA	14:N:178:ARG:HD2	1.96	0.47
3:C:68:G:OP1	41:OA:86:ALA:HB3	2.13	0.47
68:PB:11:PHE:CE1	68:PB:59:GLY:HA3	2.49	0.47
1:A:1529:C:H1'	69:QB:12:GLN:OE1	2.14	0.47
69:QB:4:VAL:HG11	69:QB:137:ALA:HB2	1.95	0.47
19:S:142:ILE:O	19:S:148:TYR:HB2	2.15	0.47
72:TB:81:VAL:HG11	72:TB:86:ILE:CG2	2.39	0.47
6:F:83:HIS:HA	47:UA:64:VAL:HG12	1.95	0.47
2:B:728:G:OP1	22:V:43:PRO:HB3	2.15	0.47
11:K:104:GLN:HG2	22:V:6:THR:HG22	1.96	0.47
48:VA:122:ARG:HA	48:VA:155:ASP:CG	2.35	0.47
2:B:1915:A:H4'	23:W:84:THR:N	2.29	0.47
75:WB:54:VAL:HB	75:WB:55:PRO:HD3	1.95	0.47
24:X:13:ARG:HG3	24:X:51:VAL:HG11	1.96	0.47
77:YB:62:ILE:HD11	77:YB:64:CYS:O	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1078:C:H2'	1:A:1079:U:C6	2.50	0.47
1:A:1165:G:H2'	1:A:1166:A:C8	2.50	0.47
1:A:1371:A:N3	1:A:1373:C:H5''	2.29	0.47
1:A:1547:A:H2'	1:A:1548:G:O4'	2.14	0.47
1:A:1558:U:H4'	68:PB:135:GLY:CA	2.41	0.47
1:A:1524:A:C2	1:A:1590:G:H1'	2.49	0.47
1:A:525:A:H2'	1:A:526:A:C8	2.49	0.47
2:B:1394:A:H2'	2:B:1395:G:O4'	2.14	0.47
2:B:1402:C:H2'	2:B:1403:C:C6	2.49	0.47
2:B:1646:G:H21	2:B:1809:A:H62	1.63	0.47
2:B:19:U:H2'	2:B:20:A:C8	2.49	0.47
2:B:2146:C:H2'	2:B:2147:A:C8	2.49	0.47
2:B:2442:G:C2'	2:B:2443:A:H5''	2.23	0.47
2:B:2555:G:N2	31:EA:136:PHE:HA	2.29	0.47
2:B:2666:C:H1'	2:B:2691:A:N3	2.29	0.47
2:B:2947:G:C2	7:G:250:ALA:HB1	2.49	0.47
2:B:3133:C:H2'	2:B:3134:A:O4'	2.14	0.47
2:B:3206:C:OP2	2:B:3207:U:H4'	2.14	0.47
2:B:3323:A:H2	35:IA:106:THR:CG2	2.27	0.47
2:B:3356:G:H2'	2:B:3357:U:C6	2.50	0.47
2:B:869:G:H2'	2:B:870:G:C8	2.48	0.47
2:B:980:A:H2'	2:B:981:U:O4'	2.14	0.47
55:CB:164:PRO:HG3	78:ZB:52:ASP:HB3	1.96	0.47
30:DA:48:LEU:CD2	30:DA:118:LEU:HG	2.44	0.47
1:A:407:A:H5'	56:DB:94:ARG:NH2	2.29	0.47
56:DB:75:LEU:H	56:DB:97:VAL:HG23	1.78	0.47
82:DC:250:PHE:HA	82:DC:257:TRP:HA	1.96	0.47
82:DC:322:VAL:HG12	82:DC:326:LYS:HE3	1.97	0.47
82:DC:650:THR:HG22	82:DC:690:ASP:HA	1.95	0.47
83:EC:6883:A:H2'	83:EC:6884:G:C4'	2.45	0.47
2:B:792:G:H5''	32:FA:2:PRO:HG3	1.96	0.47
7:G:49:TYR:N	7:G:79:VAL:HG22	2.29	0.47
8:H:309:ARG:NH2	8:H:312:VAL:HB	2.30	0.47
9:I:232:ASP:H	9:I:235:SER:HB3	1.80	0.47
10:J:13:GLU:CD	36:JA:88:HIS:HA	2.35	0.47
11:K:123:THR:O	11:K:126:LEU:HB2	2.15	0.47
2:B:987:U:OP1	11:K:125:GLU:HG3	2.14	0.47
2:B:430:U:C4'	37:KA:90:PRO:HG3	2.45	0.47
12:L:238:LEU:HB3	12:L:242:ALA:HB3	1.95	0.47
39:MA:9:LEU:HA	39:MA:17:LEU:HD21	1.97	0.47
40:NA:4:LYS:HA	40:NA:12:ASN:CB	2.43	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:P:106:LEU:HB3	16:P:110:ILE:CD1	2.44	0.47
17:Q:42:ARG:HE	17:Q:51:LEU:HB3	1.80	0.47
69:QB:86:ARG:HB2	69:QB:89:ARG:HB2	1.96	0.47
2:B:3187:A:H5''	18:R:8:LYS:HE3	1.95	0.47
52:ZA:223:GLY:HA3	71:SB:25:LYS:NZ	2.30	0.47
50:XA:62:ARG:CD	71:SB:36:VAL:HG12	2.42	0.47
46:TA:26:THR:OG1	46:TA:71:ARG:HB3	2.14	0.47
21:U:60:PHE:HE2	21:U:82:ARG:HB2	1.79	0.47
24:X:24:LEU:CD2	24:X:59:VAL:HG11	2.44	0.47
50:XA:125:ASP:OD2	50:XA:164:ASN:HB2	2.14	0.47
50:XA:175:TYR:CD2	50:XA:199:PRO:HG3	2.50	0.47
25:Y:39:ILE:HA	25:Y:62:GLY:O	2.13	0.47
52:ZA:126:ARG:O	52:ZA:130:ILE:HD13	2.15	0.47
1:A:1617:U:H1'	78:ZB:23:GLY:HA3	1.95	0.47
1:A:1132:A:H2'	1:A:1133:A:H8	1.72	0.47
1:A:1374:C:H2'	1:A:1375:A:C8	2.49	0.47
1:A:1503:A:H2'	1:A:1504:G:O4'	2.15	0.47
1:A:1533:C:H5	75:WB:77:ARG:HH21	1.60	0.47
1:A:1600:A:H4'	1:A:1601:G:OP1	2.13	0.47
1:A:322:G:H4'	1:A:323:A:OP1	2.14	0.47
1:A:62:A:H4'	1:A:269:G:C4'	2.30	0.47
1:A:965:U:H3'	1:A:966:A:C5'	2.42	0.47
53:AB:105:MET:CE	53:AB:118:ALA:HB1	2.44	0.47
53:AB:47:GLU:HG2	53:AB:49:ILE:CD1	2.45	0.47
79:AC:24:CYS:O	79:AC:25:SER:HB2	2.15	0.47
2:B:1797:A:H2'	2:B:1798:A:C8	2.49	0.47
2:B:1879:A:H3'	2:B:1880:U:H5'	1.95	0.47
2:B:2130:G:N2	2:B:2132:C:H5''	2.29	0.47
2:B:2419:A:H2'	2:B:2420:C:C6	2.49	0.47
2:B:2800:G:O2'	2:B:2801:A:H5'	2.15	0.47
2:B:3001:C:H2'	2:B:3002:C:O4'	2.14	0.47
2:B:3116:G:P	2:B:3116:G:H8	2.37	0.47
2:B:3188:G:H2'	2:B:3189:G:C8	2.49	0.47
2:B:3314:A:H5''	7:G:116:ARG:NH2	2.26	0.47
2:B:360:G:H22	2:B:927:C:H1'	1.79	0.47
2:B:361:A:H5''	41:OA:36:SER:CA	2.44	0.47
2:B:757:C:C3'	2:B:758:C:H5''	2.45	0.47
2:B:771:A:H2'	2:B:772:U:O4'	2.14	0.47
2:B:885:U:H5''	2:B:1851:G:C4'	2.39	0.47
54:BB:42:LEU:HD23	54:BB:43:PRO:O	2.15	0.47
4:D:66:A:H2'	4:D:67:G:C8	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:96:U:O2'	4:D:97:A:H5'	2.13	0.47
82:DC:606:ILE:HG21	82:DC:619:MET:HE1	1.97	0.47
82:DC:743:ILE:O	82:DC:747:LEU:HD22	2.14	0.47
2:B:2484:A:H5''	5:E:130:LYS:HD2	1.96	0.47
1:A:639:U:OP1	57:EB:117:THR:HG23	2.14	0.47
32:FA:73:LEU:HD22	32:FA:109:TYR:CB	2.44	0.47
32:FA:19:LYS:O	32:FA:24:LYS:HA	2.14	0.47
58:FB:29:LEU:CD2	58:FB:31:ARG:HH11	2.27	0.47
7:G:194:TRP:HA	7:G:197:GLU:HB2	1.97	0.47
2:B:749:C:H4'	33:GA:43:HIS:HE1	1.77	0.47
59:GB:34:PHE:CD2	59:GB:105:LEU:HD13	2.49	0.47
59:GB:66:ASP:O	59:GB:70:LEU:HG	2.14	0.47
8:H:23:PRO:HB3	8:H:259:ASP:OD1	2.14	0.47
10:J:154:LEU:HA	10:J:157:GLN:OE1	2.14	0.47
10:J:72:ASN:HD22	10:J:72:ASN:N	2.04	0.47
11:K:137:GLY:O	11:K:139:PRO:HD3	2.14	0.47
12:L:128:LYS:CG	12:L:129:PRO:HD2	2.44	0.47
38:LA:22:VAL:HG13	38:LA:30:LEU:HD21	1.96	0.47
13:M:90:MET:SD	13:M:158:ALA:HB1	2.55	0.47
2:B:243:G:OP2	39:MA:115:LYS:HE3	2.15	0.47
14:N:42:THR:HG22	14:N:45:GLU:CG	2.30	0.47
17:Q:113:VAL:O	17:Q:117:LYS:HD3	2.15	0.47
69:QB:52:GLY:HA2	69:QB:55:TYR:CD2	2.49	0.47
19:S:45:PRO:O	19:S:49:ARG:HB2	2.15	0.47
19:S:67:ARG:HA	19:S:126:THR:O	2.14	0.47
71:SB:28:ASP:OD2	71:SB:30:ALA:HB3	2.14	0.47
22:V:62:VAL:O	22:V:87:VAL:HA	2.15	0.47
23:W:175:GLN:HA	23:W:178:ALA:CB	2.45	0.47
25:Y:40:VAL:O	25:Y:61:THR:HG23	2.14	0.47
1:A:919:A:H2'	1:A:920:U:C5	2.49	0.47
53:AB:12:VAL:HG22	70:RB:84:MET:SD	2.54	0.47
2:B:1552:G:H5'	2:B:2171:G:C5'	2.43	0.47
2:B:1708:C:H2'	2:B:1709:C:H6	1.78	0.47
2:B:197:G:H2'	2:B:198:A:O4'	2.15	0.47
2:B:2159:U:O5'	2:B:2159:U:H6	1.97	0.47
2:B:2175:U:C4	6:F:20:THR:HG21	2.50	0.47
2:B:2795:U:H5'	2:B:2796:G:C5'	2.44	0.47
2:B:624:G:O2'	2:B:625:G:H5'	2.15	0.47
2:B:858:A:H2'	2:B:859:G:C8	2.50	0.47
2:B:996:A:C2	4:D:79:A:C2	3.02	0.47
54:BB:42:LEU:HD22	54:BB:101:LEU:HD11	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:37:A:OP1	39:MA:86:ARG:HB2	2.14	0.47
3:C:131:A:H1'	29:CA:93:TYR:CZ	2.50	0.47
55:CB:215:ASP:HA	55:CB:218:GLU:HB2	1.95	0.47
56:DB:121:LEU:H	56:DB:125:THR:HB	1.80	0.47
56:DB:139:ASN:HA	56:DB:142:ARG:HB2	1.96	0.47
82:DC:280:PRO:O	82:DC:284:LEU:HG	2.14	0.47
82:DC:644:ASN:HD22	82:DC:684:VAL:CB	2.25	0.47
82:DC:662:SER:CB	82:DC:705:ILE:HB	2.45	0.47
82:DC:488:VAL:HG12	82:DC:796:MET:CB	2.45	0.47
82:DC:96:ASN:HA	82:DC:98:PHE:CE2	2.49	0.47
83:EC:6835:U:H5'	83:EC:6874:A:N7	2.30	0.47
2:B:2787:G:O3'	32:FA:57:GLY:HA2	2.15	0.47
8:H:114:ASN:HB3	8:H:117:GLU:HB2	1.96	0.47
9:I:184:ASP:HB3	9:I:187:THR:CG2	2.43	0.47
36:JA:84:THR:OG1	36:JA:85:LEU:HD23	2.15	0.47
11:K:55:TYR:CZ	11:K:141:TYR:HE2	2.33	0.47
1:A:961:U:H4'	63:KB:47:PRO:CB	2.45	0.47
63:KB:62:GLN:HB2	63:KB:65:VAL:HG23	1.96	0.47
39:MA:85:THR:HB	39:MA:88:LEU:HD12	1.96	0.47
17:Q:39:ARG:O	17:Q:51:LEU:HD11	2.15	0.47
17:Q:3:ILE:HD11	32:FA:34:MET:SD	2.55	0.47
17:Q:59:ARG:N	17:Q:69:VAL:HG23	2.29	0.47
13:M:180:TYR:CD2	44:RA:86:ALA:HA	2.49	0.47
71:SB:69:LEU:HD23	71:SB:72:LEU:HD12	1.95	0.47
2:B:3248:C:H4'	20:T:114:LYS:HD2	1.97	0.47
73:UB:38:PHE:CZ	73:UB:45:GLY:HA3	2.50	0.47
48:VA:120:TRP:HB2	48:VA:157:LYS:HZ3	1.79	0.47
23:W:163:ARG:O	23:W:167:ARG:HB3	2.14	0.47
50:XA:31:VAL:C	50:XA:33:GLN:H	2.18	0.47
2:B:1757:A:H5''	26:Z:94:ARG:NH2	2.29	0.47
1:A:102:U:H5'	58:FB:20:GLN:O	2.13	0.47
1:A:1629:G:H5''	1:A:1794:A:OP2	2.14	0.47
1:A:1635:A:H5'	1:A:1638:G:H4'	1.97	0.47
1:A:399:A:H4'	54:BB:3:ARG:HG2	1.96	0.47
1:A:862:A:H2	1:A:963:A:O2'	1.98	0.47
1:A:95:G:H3'	1:A:96:G:H8	1.79	0.47
53:AB:75:LYS:HB3	60:HB:22:VAL:HG11	1.96	0.47
2:B:1076:C:H2'	2:B:1077:U:O4'	2.15	0.47
2:B:1544:G:H5'	19:S:67:ARG:CZ	2.44	0.47
2:B:839:C:H4'	2:B:1724:U:H3'	1.97	0.47
2:B:2107:A:H2'	2:B:2108:C:C6	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:277:G:H2'	2:B:278:U:H6	1.79	0.47
2:B:3015:G:H2'	2:B:3016:A:C8	2.50	0.47
2:B:3034:C:C2'	2:B:3035:A:H5'	2.44	0.47
2:B:3000:A:C5'	2:B:3296:A:H5''	2.34	0.47
2:B:48:A:H5'	2:B:50:U:H1'	1.95	0.47
2:B:546:C:C5'	2:B:547:G:H5'	2.27	0.47
2:B:978:G:H1'	2:B:1104:G:N2	2.30	0.47
28:BA:6:ASP:HB3	28:BA:10:GLY:H	1.78	0.47
54:BB:15:PRO:HD3	54:BB:39:ARG:NH2	2.29	0.47
3:C:52:A:OP1	43:QA:21:ARG:HG2	2.14	0.47
29:CA:130:TYR:HB3	29:CA:131:ASP:H	1.62	0.47
29:CA:85:GLN:HA	29:CA:120:LYS:O	2.15	0.47
55:CB:57:SER:HB3	78:ZB:53:ILE:HD12	1.96	0.47
30:DA:27:ARG:HA	30:DA:30:LEU:CB	2.31	0.47
56:DB:116:LYS:HE3	56:DB:125:THR:CG2	2.45	0.47
82:DC:22:MET:C	82:DC:122:THR:HG21	2.35	0.47
82:DC:27:HIS:CD2	82:DC:136:CYS:HB2	2.49	0.47
82:DC:428:ILE:HD12	82:DC:428:ILE:H	1.80	0.47
82:DC:755:VAL:HB	82:DC:769:LYS:HB3	1.97	0.47
57:EB:16:LEU:HD22	57:EB:85:PHE:HZ	1.79	0.47
58:FB:8:ARG:HH21	58:FB:8:ARG:HG3	1.80	0.47
9:I:113:LEU:HD22	9:I:142:PHE:CE1	2.50	0.47
61:IB:44:THR:HA	61:IB:60:PHE:CE1	2.50	0.47
36:JA:82:LEU:HD13	36:JA:82:LEU:C	2.35	0.47
2:B:576:C:H5''	11:K:142:SER:HB3	1.95	0.47
37:KA:85:PHE:HD2	37:KA:88:ASN:HA	1.75	0.47
63:KB:92:ILE:O	63:KB:96:VAL:HG23	2.14	0.47
38:LA:51:LEU:HD11	38:LA:56:THR:HG22	1.95	0.47
38:LA:65:VAL:HG12	38:LA:66:SER:N	2.28	0.47
13:M:132:VAL:CG2	13:M:146:LEU:HB3	2.44	0.47
15:O:32:ARG:O	15:O:36:VAL:HG23	2.14	0.47
2:B:2672:G:O3'	15:O:95:ASN:HA	2.14	0.47
67:OB:91:LEU:O	67:OB:93:LEU:N	2.48	0.47
16:P:57:LYS:HD3	16:P:57:LYS:N	2.29	0.47
18:R:21:VAL:HG21	18:R:46:ILE:HG21	1.96	0.47
71:SB:14:PRO:HB3	71:SB:23:ILE:HG21	1.96	0.47
52:ZA:147:ASN:CB	71:SB:3:ASN:HA	2.44	0.47
46:TA:65:THR:OG1	46:TA:87:ARG:HB3	2.13	0.47
21:U:4:TYR:CE1	21:U:147:GLU:HB2	2.49	0.47
73:UB:132:LEU:HA	73:UB:135:LEU:HD12	1.97	0.47
2:B:89:A:P	22:V:170:ARG:HD3	2.54	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1364:C:H5''	22:V:3:ILE:CB	2.44	0.47
74:VB:94:TYR:HB2	74:VB:95:GLY:H	1.56	0.47
23:W:145:ALA:O	23:W:149:ALA:HB2	2.14	0.47
49:WA:112:SER:HB2	49:WA:153:GLN:HA	1.97	0.47
49:WA:180:ALA:H	49:WA:188:ILE:CD1	2.27	0.47
50:XA:191:ARG:O	50:XA:193:GLN:N	2.48	0.47
1:A:1146:G:H21	1:A:1635:A:H2	1.63	0.47
1:A:168:A:O2'	1:A:169:A:H5'	2.15	0.47
1:A:250:C:H6	1:A:250:C:H5'	1.79	0.47
1:A:302:U:H1'	1:A:334:G:N2	2.29	0.47
1:A:35:U:H2'	1:A:36:C:H6	1.79	0.47
2:B:1940:G:H21	2:B:3362:A:C1'	2.19	0.47
2:B:2177:G:C2	6:F:126:LEU:HG	2.50	0.47
2:B:2334:U:C2'	2:B:2335:G:H5''	2.39	0.47
2:B:2422:C:H2'	2:B:2423:U:H6	1.72	0.47
2:B:2624:G:H1'	2:B:2626:A:N6	2.30	0.47
2:B:2948:C:H2'	2:B:2949:U:H6	1.79	0.47
2:B:3064:U:H2'	2:B:3065:G:H8	1.79	0.47
2:B:3136:G:OP1	7:G:31:ALA:HB1	2.15	0.47
2:B:3213:A:H2'	2:B:3214:U:O4'	2.15	0.47
2:B:938:C:H2'	2:B:939:U:C6	2.49	0.47
55:CB:110:ALA:O	55:CB:114:ILE:HG12	2.14	0.47
55:CB:71:ALA:C	55:CB:91:GLU:HG3	2.35	0.47
4:D:103:A:H2'	4:D:104:A:C8	2.49	0.47
4:D:109:G:H2'	4:D:110:G:O4'	2.14	0.47
4:D:97:A:H1'	11:K:225:GLN:OE1	2.14	0.47
82:DC:402:ALA:HA	82:DC:450:ALA:CB	2.45	0.47
31:EA:87:LEU:HG	31:EA:88:ASP:H	1.79	0.47
1:A:810:G:N2	57:EB:108:GLN:HG3	2.30	0.47
57:EB:64:VAL:CG2	57:EB:96:ARG:HG2	2.44	0.47
2:B:914:A:C2	6:F:204:MET:HB3	2.49	0.47
1:A:1676:U:H5''	58:FB:58:LEU:CD2	2.44	0.47
9:I:289:LYS:HB2	14:N:206:LEU:HD21	1.97	0.47
4:D:118:A:H4'	9:I:79:TYR:CE2	2.49	0.47
2:B:1405:U:P	36:JA:59:SER:H	2.38	0.47
63:KB:37:ILE:HD13	63:KB:71:ILE:HG12	1.95	0.47
14:N:98:ARG:HD3	14:N:119:TRP:CZ2	2.50	0.47
17:Q:47:ALA:HB3	39:MA:115:LYS:HZ2	1.78	0.47
69:QB:35:ASP:OD1	69:QB:36:ILE:HG23	2.15	0.47
18:R:35:ILE:HD12	18:R:35:ILE:H	1.79	0.47
18:R:42:LYS:HB3	18:R:59:ASN:HD21	1.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:M:47:LYS:HE2	18:R:7:VAL:HG23	1.97	0.47
70:RB:106:ILE:HG13	70:RB:107:THR:H	1.79	0.47
70:RB:25:THR:O	70:RB:114:VAL:HA	2.15	0.47
19:S:199:LEU:HB3	19:S:203:ARG:HD2	1.97	0.47
71:SB:51:VAL:HG11	71:SB:76:ASP:OD1	2.14	0.47
48:VA:19:LEU:HA	48:VA:88:PHE:HE1	1.80	0.47
50:XA:121:VAL:HG23	50:XA:141:ILE:HG21	1.95	0.47
1:A:351:C:H4'	73:UB:13:ARG:NE	2.29	0.47
1:A:1419:G:O3'	79:AC:54:LYS:HE2	2.15	0.47
2:B:1106:G:H4'	33:GA:25:LYS:HE2	1.97	0.47
2:B:1282:G:H4'	48:VA:82:GLY:C	2.34	0.47
2:B:1368:U:H2'	2:B:1369:A:H5'	1.97	0.47
2:B:2718:U:H2'	2:B:2719:U:O4'	2.15	0.47
2:B:3343:G:H4'	2:B:3362:A:N6	2.10	0.47
2:B:549:U:H2'	2:B:550:A:O4'	2.14	0.47
2:B:595:G:H1	2:B:609:G:H5"	1.80	0.47
2:B:637:C:H4'	2:B:638:C:OP1	2.14	0.47
2:B:660:A:H5'	8:H:100:PHE:CG	2.50	0.47
2:B:807:A:C8	2:B:2412:G:H1'	2.50	0.47
2:B:1156:C:H4'	4:D:86:U:OP1	2.15	0.47
82:DC:226:ALA:HA	82:DC:240:MET:HE2	1.96	0.47
82:DC:289:MET:SD	82:DC:317:LYS:HA	2.54	0.47
82:DC:595:GLU:O	82:DC:599:LEU:HB2	2.14	0.47
31:EA:121:ARG:HB3	31:EA:131:PHE:CE2	2.50	0.47
6:F:98:VAL:HG22	47:UA:83:ILE:HG21	1.97	0.47
1:A:197:A:H61	58:FB:141:ARG:HH22	1.63	0.47
7:G:122:TRP:HE1	7:G:127:LYS:HE3	1.75	0.47
8:H:31:ARG:CD	22:V:24:VAL:HB	2.45	0.47
8:H:95:ARG:HG2	8:H:95:ARG:HH11	1.79	0.47
34:HA:61:MET:HG3	34:HA:62:LEU:N	2.29	0.47
9:I:194:LEU:HD23	9:I:197:SER:HB3	1.96	0.47
9:I:19:PRO:HG2	9:I:24:ARG:HG2	1.97	0.47
36:JA:75:LEU:HD23	36:JA:95:GLU:HB2	1.97	0.47
37:KA:12:LYS:HD3	37:KA:97:SER:HA	1.96	0.47
12:L:47:SER:HA	29:CA:27:ARG:HG3	1.96	0.47
39:MA:92:LEU:HB3	39:MA:97:ALA:HB2	1.96	0.47
14:N:49:CYS:SG	14:N:51:HIS:CE1	3.08	0.47
14:N:95:HIS:HB3	14:N:126:ALA:HB3	1.95	0.47
66:NB:47:LYS:HD2	66:NB:50:GLU:OE1	2.15	0.47
41:OA:12:HIS:ND1	41:OA:13:ASN:N	2.62	0.47
17:Q:60:ALA:HB3	17:Q:65:TYR:HB3	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:S:154:PRO:HA	19:S:157:LYS:CD	2.45	0.47
19:S:38:ARG:NH2	19:S:60:VAL:HA	2.30	0.47
72:TB:11:LEU:HD11	72:TB:37:PHE:CZ	2.50	0.47
2:B:2389:C:H4'	21:U:67:ILE:O	2.14	0.47
73:UB:21:ASN:O	73:UB:24:TRP:HB2	2.15	0.47
22:V:72:LYS:HB3	22:V:72:LYS:HZ3	1.80	0.47
48:VA:34:SER:HB3	48:VA:37:GLN:HG2	1.96	0.47
74:VB:37:LYS:HE3	74:VB:93:ARG:HD3	1.97	0.47
24:X:117:ARG:HG3	24:X:119:ARG:NE	2.30	0.47
24:X:27:MET:CE	25:Y:152:ALA:HA	2.45	0.47
1:A:106:U:H2'	1:A:107:C:H5'	1.97	0.47
1:A:1089:U:H2'	1:A:1090:C:C6	2.49	0.47
1:A:13:C:H5''	52:ZA:209:ASN:ND2	2.27	0.47
1:A:1434:U:C4'	79:AC:24:CYS:HB2	2.45	0.47
1:A:1435:G:C2	60:HB:59:PHE:HB2	2.50	0.47
1:A:813:U:O2	23:W:163:ARG:HD2	2.14	0.47
1:A:818:C:H2'	1:A:819:G:H5'	1.96	0.47
1:A:867:G:H2'	1:A:868:G:O4'	2.15	0.47
2:B:1155:C:H2'	2:B:1156:C:C6	2.50	0.47
2:B:1347:U:H2'	2:B:1355:A:H61	1.80	0.47
2:B:2213:A:H1'	2:B:2602:G:C5'	2.45	0.47
2:B:2221:G:H1	40:NA:71:LYS:HD3	1.80	0.47
2:B:2389:C:H2'	2:B:2390:A:H8	1.80	0.47
2:B:2555:G:H21	31:EA:136:PHE:HA	1.80	0.47
2:B:2614:G:H2'	2:B:2615:G:C8	2.50	0.47
2:B:5:G:H3'	2:B:6:A:H5''	1.97	0.47
2:B:878:G:H2'	2:B:2980:U:O2'	2.14	0.47
3:C:72:A:H2'	3:C:73:U:O4'	2.14	0.47
29:CA:107:VAL:HG12	29:CA:108:LEU:N	2.29	0.47
30:DA:91:ASN:ND2	30:DA:93:ALA:HB2	2.30	0.47
82:DC:428:ILE:HD12	82:DC:428:ILE:N	2.30	0.47
82:DC:564:ARG:O	82:DC:725:GLN:HB3	2.15	0.47
82:DC:631:ARG:HB3	82:DC:631:ARG:HH11	1.79	0.47
5:E:134:PHE:CE1	5:E:137:PRO:HD3	2.50	0.47
2:B:1372:C:P	32:FA:7:LYS:HG2	2.54	0.47
7:G:166:ILE:HG21	7:G:174:LYS:O	2.15	0.47
8:H:11:LEU:HD21	8:H:155:ASP:HB2	1.96	0.47
9:I:53:VAL:CG2	9:I:146:LEU:HD13	2.45	0.47
2:B:1456:A:C8	35:IA:26:LYS:HB3	2.50	0.47
11:K:90:LYS:HA	11:K:220:PHE:CE1	2.49	0.47
13:M:99:ILE:HG12	13:M:117:PHE:CE1	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:49:G:N9	39:MA:42:PRO:HG3	2.29	0.47
2:B:2838:A:OP1	14:N:154:ARG:NH2	2.48	0.47
14:N:171:TRP:CH2	14:N:182:LEU:HD21	2.49	0.47
41:OA:2:GLY:HA2	41:OA:6:PRO:HG2	1.97	0.47
1:A:1414:U:H5'	67:OB:2:GLY:O	2.15	0.47
17:Q:172:LEU:O	17:Q:176:GLU:HG3	2.15	0.47
18:R:20:VAL:HG11	18:R:68:LEU:HD12	1.97	0.47
44:RA:111:ARG:HG3	44:RA:112:LYS:HE2	1.97	0.47
70:RB:24:ILE:HG22	70:RB:26:LEU:HG	1.96	0.47
70:RB:69:LYS:HD2	70:RB:78:THR:HB	1.96	0.47
19:S:139:HIS:HB3	19:S:142:ILE:HD13	1.96	0.47
20:T:75:ALA:O	20:T:79:ILE:HG13	2.14	0.47
20:T:85:ARG:NH1	20:T:90:HIS:HD2	2.13	0.47
2:B:93:C:C5	46:TA:42:ARG:CZ	2.98	0.47
21:U:138:LYS:HD2	21:U:140:GLU:HG2	1.96	0.47
73:UB:13:ARG:O	73:UB:17:VAL:HG23	2.15	0.47
73:UB:24:TRP:CH2	73:UB:33:LEU:HD13	2.50	0.47
24:X:14:LEU:O	24:X:22:PRO:HG2	2.14	0.47
52:ZA:140:ARG:HB3	52:ZA:221:THR:CB	2.44	0.47
52:ZA:97:ARG:HG2	52:ZA:97:ARG:HH11	1.80	0.47
1:A:11:A:H2'	1:A:12:U:C5'	2.44	0.47
1:A:1263:G:H5''	82:DC:613:LYS:HG3	1.97	0.47
1:A:263:C:H1'	1:A:292:U:O4'	2.15	0.47
1:A:393:C:H2'	1:A:394:C:H6	1.80	0.47
1:A:794:U:O2	1:A:794:U:H2'	2.15	0.47
1:A:796:A:H2'	1:A:797:G:C8	2.50	0.47
1:A:824:G:H2'	1:A:824:G:N3	2.30	0.47
2:B:1187:C:H5''	2:B:1211:U:O2'	2.15	0.47
2:B:128:G:H5''	29:CA:45:LYS:HE3	1.97	0.47
2:B:1509:A:H2'	2:B:1510:G:C8	2.50	0.47
2:B:2497:U:H4'	2:B:2498:U:C5	2.50	0.47
2:B:2740:A:H2'	2:B:2741:C:O4'	2.14	0.47
2:B:2747:A:H2'	2:B:2748:A:O4'	2.15	0.47
2:B:3184:A:C2'	2:B:3185:U:H5'	2.45	0.47
2:B:804:C:H2'	2:B:805:G:C8	2.49	0.47
28:BA:20:LEU:HD23	28:BA:21:PHE:N	2.30	0.47
1:A:1474:G:H5'	55:CB:102:ARG:HH11	1.80	0.47
55:CB:68:ILE:HD12	55:CB:70:VAL:O	2.15	0.47
82:DC:213:SER:HB3	82:DC:218:TRP:NE1	2.30	0.47
82:DC:31:GLY:O	82:DC:35:LEU:HB2	2.15	0.47
82:DC:612:PHE:N	82:DC:612:PHE:CD2	2.81	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:727:PRO:HB2	82:DC:774:VAL:CG1	2.44	0.47
82:DC:45:ILE:N	82:DC:77:LEU:HA	2.09	0.47
82:DC:814:LYS:O	82:DC:818:ILE:HG13	2.14	0.47
57:EB:110:GLN:O	57:EB:111:LYS:HB3	2.15	0.47
57:EB:74:GLN:HG2	57:EB:131:PHE:CE1	2.50	0.47
6:F:28:LYS:HA	6:F:123:ARG:HB3	1.97	0.47
58:FB:76:THR:CG2	58:FB:108:PRO:HD2	2.43	0.47
7:G:303:LYS:HD2	7:G:371:GLN:HB3	1.97	0.47
7:G:340:LYS:HG2	7:G:341:SER:N	2.30	0.47
7:G:60:LEU:HB2	7:G:72:VAL:HG21	1.97	0.47
8:H:107:ARG:HD2	8:H:109:TRP:HZ3	1.80	0.47
8:H:263:GLY:HA2	8:H:269:SER:HA	1.92	0.47
34:HA:30:THR:HG22	34:HA:91:SER:CB	2.45	0.47
9:I:107:ARG:O	9:I:111:GLN:HB2	2.15	0.47
9:I:51:LEU:O	9:I:146:LEU:HA	2.14	0.47
10:J:51:ARG:HG2	10:J:51:ARG:NH1	2.30	0.47
10:J:72:ASN:HB3	10:J:159:LEU:O	2.15	0.47
14:N:77:THR:CG2	14:N:82:ARG:HB3	2.45	0.47
40:NA:6:GLY:HA2	40:NA:15:LYS:HA	1.95	0.47
67:OB:38:ILE:HG23	67:OB:39:ALA:N	2.30	0.47
67:OB:41:ILE:CG2	67:OB:46:LEU:HD22	2.40	0.47
17:Q:167:PHE:CE2	32:FA:132:LYS:HB2	2.50	0.47
18:R:120:VAL:O	18:R:124:ARG:CG	2.63	0.47
71:SB:24:ILE:HG23	71:SB:28:ASP:HB3	1.97	0.47
20:T:141:LEU:O	20:T:145:VAL:HG13	2.15	0.47
18:R:123:LEU:HD13	20:T:194:LEU:CG	2.45	0.47
72:TB:18:GLU:HB2	72:TB:69:LEU:HD23	1.97	0.47
49:WA:37:SER:HB3	49:WA:39:ASP:OD1	2.15	0.47
25:Y:50:LYS:O	25:Y:92:ARG:HD2	2.14	0.47
26:Z:30:PRO:HG2	26:Z:60:GLY:O	2.15	0.47
78:ZB:17:GLY:H	78:ZB:27:GLN:HB2	1.78	0.47
1:A:1340:U:H5	66:NB:9:THR:HA	1.80	0.46
1:A:140:A:O4'	56:DB:179:VAL:HG21	2.16	0.46
1:A:1586:A:H1'	1:A:1611:A:N1	2.29	0.46
1:A:1608:U:P	66:NB:15:SER:HB3	2.54	0.46
1:A:512:A:O2'	59:GB:131:GLN:NE2	2.47	0.46
1:A:606:A:H4'	1:A:607:G:H5''	1.96	0.46
1:A:72:A:H3'	1:A:73:U:H5''	1.97	0.46
1:A:742:U:O2'	1:A:743:U:H5'	2.14	0.46
1:A:88:U:O3'	1:A:171:A:H4'	2.15	0.46
27:AA:101:VAL:HB	27:AA:109:MET:HE1	1.96	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:AA:125:LEU:O	27:AA:127:PRO:HD3	2.15	0.46
53:AB:53:THR:HG22	53:AB:91:VAL:HG11	1.97	0.46
2:B:1259:A:H62	48:VA:38:MET:CE	2.27	0.46
2:B:1220:U:C6	2:B:1286:A:C6	3.04	0.46
2:B:1313:G:H2'	2:B:1314:C:H6	1.79	0.46
2:B:1477:A:OP1	35:IA:64:VAL:HG22	2.14	0.46
2:B:2669:G:H2'	2:B:2670:G:C8	2.50	0.46
2:B:272:G:H2'	2:B:273:A:O4'	2.15	0.46
2:B:2950:G:H4'	2:B:2951:G:N7	2.29	0.46
2:B:3139:A:H3'	2:B:3140:G:H8	1.80	0.46
2:B:401:U:H4'	2:B:403:C:C2	2.49	0.46
2:B:581:U:C2'	2:B:582:G:H5'	2.45	0.46
2:B:680:G:H3'	2:B:681:U:H5''	1.96	0.46
54:BB:176:ASP:HB2	54:BB:179:LYS:HZ2	1.81	0.46
54:BB:48:LEU:HG	54:BB:52:LEU:HD12	1.97	0.46
4:D:100:C:H3'	4:D:101:G:C8	2.50	0.46
82:DC:496:LYS:HB2	82:DC:553:PRO:HB2	1.96	0.46
82:DC:729:PHE:HB2	82:DC:772:LEU:HB3	1.97	0.46
82:DC:819:VAL:HA	82:DC:822:ALA:HB3	1.96	0.46
6:F:101:VAL:HG23	6:F:164:GLY:C	2.35	0.46
2:B:1792:C:C5'	6:F:184:ARG:HD3	2.38	0.46
6:F:29:LEU:HB2	6:F:30:ARG:H	1.57	0.46
7:G:149:ALA:O	7:G:152:LYS:HB2	2.14	0.46
59:GB:136:VAL:HG11	59:GB:149:ARG:HH21	1.81	0.46
8:H:77:VAL:HG21	8:H:84:ARG:HG3	1.97	0.46
61:IB:87:ARG:HG3	61:IB:104:HIS:CD2	2.50	0.46
11:K:222:HIS:HB2	11:K:229:PHE:CE2	2.50	0.46
11:K:40:LYS:HB3	11:K:44:ILE:HD11	1.95	0.46
37:KA:18:ARG:CB	37:KA:23:ASN:HA	2.45	0.46
6:F:35:ALA:HA	12:L:36:ILE:HG23	1.95	0.46
15:O:106:ILE:HD11	15:O:125:MET:H	1.80	0.46
15:O:71:VAL:O	15:O:76:ALA:HB2	2.15	0.46
41:OA:44:THR:HG22	41:OA:45:ARG:N	2.30	0.46
68:PB:68:ARG:O	68:PB:72:ILE:HG13	2.15	0.46
17:Q:119:TYR:HA	17:Q:122:LYS:HB2	1.97	0.46
17:Q:35:ARG:HB3	17:Q:39:ARG:NH2	2.31	0.46
17:Q:42:ARG:CG	17:Q:46:ILE:HD12	2.44	0.46
69:QB:18:TYR:HD2	69:QB:59:ALA:HB1	1.79	0.46
69:QB:34:VAL:HG23	69:QB:53:TRP:CZ2	2.50	0.46
18:R:124:ARG:HG2	20:T:194:LEU:CD2	2.44	0.46
18:R:135:LEU:HD21	20:T:178:VAL:HA	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:R:19:ARG:CD	18:R:20:VAL:H	2.29	0.46
20:T:39:GLU:HB2	20:T:139:GLY:HA3	1.97	0.46
46:TA:65:THR:O	46:TA:66:LYS:HG3	2.16	0.46
22:V:143:PRO:HB2	22:V:146:SER:CB	2.34	0.46
2:B:3069:G:H4'	23:W:59:SER:HB2	1.98	0.46
49:WA:253:ALA:HB2	49:WA:262:VAL:HG22	1.96	0.46
49:WA:301:LEU:HB3	49:WA:313:TRP:O	2.16	0.46
8:H:359:LEU:HD21	24:X:63:GLN:O	2.14	0.46
9:I:69:ILE:HG12	25:Y:31:LEU:HB3	1.97	0.46
77:YB:35:VAL:HG22	77:YB:79:PHE:CA	2.45	0.46
1:A:121:U:H2'	1:A:122:U:C6	2.50	0.46
1:A:1534:G:H1'	1:A:1535:U:O2	2.16	0.46
1:A:1740:A:H2'	1:A:1741:U:H6	1.79	0.46
1:A:73:U:H5	56:DB:167:LYS:HE2	1.80	0.46
1:A:830:U:H3'	1:A:831:U:H5''	1.97	0.46
1:A:887:A:H2'	1:A:888:U:O4'	2.15	0.46
1:A:955:A:H2'	1:A:956:C:O4'	2.15	0.46
1:A:968:U:H4'	1:A:1033:C:O2	2.14	0.46
53:AB:105:MET:HG2	53:AB:122:VAL:CG2	2.45	0.46
53:AB:32:GLU:HG2	53:AB:58:VAL:HG22	1.97	0.46
2:B:1474:A:H2'	2:B:1475:A:H8	1.80	0.46
2:B:1604:G:O2'	2:B:1835:A:H4'	2.15	0.46
2:B:1745:C:H2'	2:B:1746:U:C6	2.50	0.46
2:B:1492:G:O4'	2:B:1843:C:H4'	2.14	0.46
2:B:1863:G:H2'	2:B:1864:A:H3'	1.97	0.46
2:B:1942:U:OP2	23:W:74:ARG:HD2	2.14	0.46
2:B:2134:G:H2'	2:B:2135:U:C6	2.50	0.46
2:B:2511:A:H5'	2:B:2511:A:H8	1.81	0.46
2:B:300:G:H2'	2:B:301:G:H8	1.79	0.46
2:B:3170:A:H2'	2:B:3171:U:C5	2.50	0.46
2:B:374:A:N3	2:B:376:G:H5''	2.30	0.46
2:B:43:A:H4'	19:S:84:PRO:HD2	1.98	0.46
2:B:868:C:H2'	2:B:869:G:H8	1.79	0.46
2:B:904:A:H2'	2:B:905:U:C5	2.50	0.46
28:BA:57:LYS:HA	28:BA:60:LYS:HE2	1.96	0.46
82:DC:124:GLY:HA3	82:DC:342:LEU:CD2	2.46	0.46
2:B:3027:A:H4'	82:DC:137:VAL:CG1	2.45	0.46
82:DC:314:LEU:HD22	82:DC:318:ALA:CB	2.45	0.46
82:DC:440:ARG:HB3	82:DC:440:ARG:CZ	2.45	0.46
57:EB:162:ILE:C	57:EB:164:TYR:H	2.19	0.46
6:F:225:ILE:CG2	6:F:238:ILE:HG12	2.45	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:FB:64:ASN:OD1	58:FB:73:SER:HB3	2.15	0.46
7:G:11:HIS:HB3	7:G:233:TRP:O	2.15	0.46
8:H:152:VAL:HG11	8:H:156:LEU:CD1	2.42	0.46
2:B:343:U:H6	8:H:95:ARG:HD2	1.80	0.46
34:HA:16:LEU:HD22	34:HA:98:SER:OG	2.15	0.46
34:HA:24:THR:HG1	34:HA:91:SER:HB3	1.79	0.46
61:IB:127:GLN:HA	61:IB:137:PHE:CD1	2.49	0.46
10:J:20:LYS:HD3	10:J:20:LYS:C	2.36	0.46
36:JA:35:GLN:HG3	36:JA:42:VAL:HB	1.98	0.46
2:B:576:C:H5'	11:K:142:SER:CB	2.45	0.46
12:L:161:GLU:CG	19:S:22:LEU:HG	2.45	0.46
9:I:294:ALA:HB2	14:N:210:ILE:HG12	1.97	0.46
50:XA:18:LEU:HD23	67:OB:102:VAL:HG11	1.97	0.46
18:R:123:LEU:HB3	20:T:194:LEU:CD2	2.43	0.46
2:B:560:G:H5'	18:R:80:THR:OG1	2.14	0.46
18:R:78:THR:CA	18:R:81:VAL:HB	2.40	0.46
20:T:34:VAL:HB	20:T:103:LYS:O	2.16	0.46
18:R:120:VAL:CG2	20:T:197:LEU:HD13	2.34	0.46
72:TB:38:LEU:HA	72:TB:41:MET:HG3	1.95	0.46
21:U:4:TYR:OH	21:U:16:SER:HB3	2.15	0.46
21:U:71:ALA:HA	21:U:74:LYS:CG	2.24	0.46
73:UB:127:VAL:O	73:UB:127:VAL:HG23	2.15	0.46
73:UB:24:TRP:HA	73:UB:24:TRP:CE3	2.50	0.46
49:WA:267:PRO:HG2	49:WA:269:TYR:CE1	2.50	0.46
20:T:127:LEU:CD2	24:X:156:VAL:HG12	2.42	0.46
24:X:77:VAL:HG11	24:X:106:LEU:CG	2.43	0.46
50:XA:112:THR:HG23	50:XA:115:PHE:HB2	1.96	0.46
52:ZA:106:ASP:C	52:ZA:108:ASN:H	2.17	0.46
52:ZA:228:ASN:HB2	71:SB:1:MET:H3	1.80	0.46
52:ZA:53:ILE:HG23	52:ZA:56:ILE:HD12	1.96	0.46
1:A:1058:U:C5	1:A:1061:A:N1	2.83	0.46
1:A:17:C:H2'	1:A:18:C:C6	2.47	0.46
1:A:395:U:H2'	1:A:396:G:O4'	2.15	0.46
1:A:61:A:H2'	1:A:62:A:H5'	1.98	0.46
1:A:825:U:H2'	1:A:826:U:C6	2.50	0.46
1:A:85:A:H4'	74:VB:120:GLY:O	2.15	0.46
2:B:1004:U:H2'	2:B:1005:G:O4'	2.16	0.46
2:B:1070:U:C2'	2:B:1071:U:H5'	2.46	0.46
2:B:1119:C:H2'	2:B:1120:A:H8	1.79	0.46
2:B:144:A:H2'	2:B:145:G:H5'	1.97	0.46
2:B:2076:G:H3'	2:B:2077:U:H5''	1.96	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:212:G:N7	8:H:182:LEU:HD13	2.31	0.46
2:B:2359:C:H5''	2:B:2399:A:O3'	2.16	0.46
2:B:257:U:H5''	17:Q:86:THR:CG2	2.42	0.46
2:B:1304:A:H62	2:B:2860:U:H5''	1.81	0.46
2:B:2993:G:H2'	2:B:3142:A:N6	2.30	0.46
2:B:3000:A:H5'	2:B:3296:A:C5'	2.35	0.46
2:B:3021:A:N6	2:B:3032:A:H3'	2.29	0.46
2:B:522:A:H62	2:B:570:A:H61	1.64	0.46
2:B:72:C:OP2	40:NA:13:LYS:HE3	2.15	0.46
2:B:737:G:H2'	2:B:738:A:H8	1.80	0.46
54:BB:122:LYS:HG2	54:BB:164:LEU:HD21	1.97	0.46
54:BB:9:LEU:HG	54:BB:10:LYS:H	1.80	0.46
30:DA:112:ASP:OD2	30:DA:115:ARG:HG3	2.16	0.46
30:DA:56:VAL:HG11	30:DA:104:LEU:HD13	1.97	0.46
56:DB:52:ILE:HA	56:DB:110:ALA:O	2.15	0.46
82:DC:244:LEU:HD13	82:DC:277:ILE:HD11	1.97	0.46
2:B:1709:C:H4'	31:EA:15:ARG:NH1	2.31	0.46
31:EA:44:ALA:CB	31:EA:72:ILE:HG22	2.45	0.46
58:FB:74:LYS:O	58:FB:109:PHE:CE1	2.69	0.46
8:H:103:THR:HA	8:H:107:ARG:HH21	1.80	0.46
9:I:109:THR:OG1	9:I:142:PHE:HE1	1.99	0.46
4:D:48:U:C5	9:I:93:THR:HG21	2.50	0.46
11:K:35:ALA:O	11:K:38:LYS:HB3	2.15	0.46
2:B:2558:U:C5'	12:L:40:VAL:HG21	2.39	0.46
55:CB:33:VAL:HG13	66:NB:46:PHE:HE1	1.79	0.46
16:P:108:GLU:O	16:P:111:GLU:HB3	2.16	0.46
16:P:58:VAL:HG12	16:P:58:VAL:O	2.15	0.46
42:PA:14:LEU:HD13	42:PA:52:TYR:CG	2.50	0.46
68:PB:100:THR:HB	68:PB:105:VAL:HA	1.97	0.46
17:Q:60:ALA:HB3	17:Q:65:TYR:O	2.15	0.46
19:S:88:GLY:HA3	46:TA:50:PHE:CE1	2.50	0.46
20:T:108:ILE:HD13	20:T:117:ARG:HH11	1.80	0.46
22:V:18:ALA:HB1	22:V:27:LYS:NZ	2.31	0.46
23:W:10:LEU:HD13	23:W:41:ILE:HD11	1.97	0.46
49:WA:263:PHE:CD1	49:WA:270:LEU:HA	2.50	0.46
2:B:1063:G:C6	25:Y:109:VAL:HG22	2.51	0.46
52:ZA:129:ILE:HG22	52:ZA:133:LYS:HE3	1.97	0.46
1:A:1524:A:H4'	69:QB:93:HIS:CD2	2.51	0.46
1:A:310:C:H2'	1:A:311:U:O4'	2.15	0.46
1:A:64:U:C2'	1:A:65:A:H5''	2.45	0.46
1:A:777:C:H5	74:VB:10:ARG:NH1	2.13	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:97:C:H2'	1:A:98:U:O4'	2.15	0.46
53:AB:217:ILE:HG22	53:AB:218:LEU:N	2.29	0.46
2:B:135:C:C6	39:MA:94:LYS:HD2	2.50	0.46
2:B:1465:A:H2'	2:B:1466:G:O4'	2.16	0.46
2:B:1647:A:H62	2:B:1808:G:C1'	2.25	0.46
2:B:1753:G:O2'	38:LA:27:GLY:HA2	2.16	0.46
2:B:1781:C:H2'	2:B:1782:U:O4'	2.15	0.46
2:B:199:A:N1	2:B:201:A:H1'	2.30	0.46
2:B:2224:A:OP1	40:NA:74:LYS:HD3	2.15	0.46
2:B:2244:A:H1'	6:F:224:THR:OG1	2.16	0.46
2:B:2848:G:H5''	2:B:2906:C:H1'	1.96	0.46
54:BB:90:ILE:CD1	54:BB:101:LEU:HG	2.45	0.46
54:BB:114:ILE:HG22	54:BB:237:SER:OG	2.15	0.46
54:BB:122:LYS:HG3	54:BB:162:ILE:HD12	1.96	0.46
54:BB:213:SER:C	54:BB:215:ASP:H	2.17	0.46
80:BC:41:THR:HA	80:BC:45:VAL:CG2	2.46	0.46
4:D:113:C:H2'	4:D:114:U:O4'	2.15	0.46
30:DA:35:LEU:HD22	30:DA:39:LEU:HB3	1.97	0.46
82:DC:120:ARG:HG2	82:DC:383:SER:OG	2.16	0.46
5:E:64:SER:O	5:E:65:ILE:HG13	2.15	0.46
31:EA:44:ALA:HB2	31:EA:72:ILE:HG22	1.98	0.46
57:EB:86:GLN:O	57:EB:87:ASP:HB3	2.16	0.46
83:EC:6902:U:H2'	83:EC:6903:U:C6	2.48	0.46
83:EC:6910:A:C2'	83:EC:6947:A:H2	2.25	0.46
6:F:111:THR:CG2	6:F:166:ILE:HD12	2.46	0.46
6:F:129:ALA:O	6:F:169:ILE:HG13	2.14	0.46
6:F:229:ALA:HB3	6:F:234:LYS:HG2	1.96	0.46
32:FA:70:LYS:NZ	32:FA:70:LYS:HB2	2.31	0.46
58:FB:85:PRO:HB2	61:IB:12:ALA:CB	2.35	0.46
8:H:82:THR:HG22	8:H:85:SER:HB3	1.96	0.46
9:I:55:PHE:CZ	9:I:158:ARG:HB2	2.51	0.46
9:I:107:ARG:HB3	9:I:251:PRO:HG3	1.97	0.46
9:I:91:GLY:HA2	9:I:94:ASN:HD21	1.80	0.46
1:A:327:U:O2'	61:IB:12:ALA:HB3	2.15	0.46
11:K:107:ARG:HB3	11:K:204:PRO:CG	2.45	0.46
12:L:204:ARG:HB3	12:L:207:ASP:HB2	1.97	0.46
13:M:138:THR:HG22	13:M:139:ASN:H	1.81	0.46
13:M:22:SER:OG	13:M:39:LYS:HE3	2.15	0.46
13:M:97:PHE:CB	13:M:118:LEU:HA	2.46	0.46
65:MB:108:ARG:O	65:MB:111:MET:HG2	2.16	0.46
65:MB:22:LEU:HA	65:MB:25:LEU:HD12	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:P:85:LEU:HD12	16:P:109:ILE:HD13	1.97	0.46
17:Q:68:LYS:HD3	17:Q:149:GLN:OE1	2.16	0.46
17:Q:89:TYR:O	17:Q:93:ILE:HG12	2.15	0.46
1:A:1477:G:H5'	69:QB:45:MET:CB	2.45	0.46
70:RB:100:VAL:O	70:RB:104:THR:HG23	2.14	0.46
71:SB:34:ILE:O	71:SB:52:THR:HA	2.15	0.46
20:T:14:HIS:HD2	20:T:123:ALA:HB3	1.80	0.46
20:T:181:ALA:O	20:T:184:THR:HG22	2.14	0.46
21:U:60:PHE:HB3	21:U:64:ASN:HB3	1.96	0.46
47:UA:14:TYR:HA	47:UA:17:ARG:HH12	1.79	0.46
2:B:3185:U:O2'	24:X:170:THR:HG21	2.15	0.46
50:XA:101:ARG:HG3	50:XA:101:ARG:HH11	1.81	0.46
55:CB:56:ALA:HB1	78:ZB:9:LEU:HD13	1.97	0.46
1:A:144:U:C6	1:A:144:U:H5'	2.45	0.46
2:B:1173:U:C4	2:B:1180:A:N6	2.84	0.46
2:B:1308:A:OP2	2:B:2368:A:H4'	2.15	0.46
2:B:1446:A:H3'	21:U:65:SER:HB3	1.97	0.46
2:B:1724:U:H1'	2:B:1725:C:C6	2.51	0.46
2:B:1727:G:C1'	2:B:1731:A:H5'	2.45	0.46
2:B:1889:G:H2'	2:B:1890:U:C6	2.51	0.46
2:B:2469:G:H22	2:B:2477:G:H1'	1.80	0.46
2:B:2787:G:H4'	32:FA:57:GLY:C	2.36	0.46
2:B:2808:A:H1'	2:B:2969:A:OP1	2.15	0.46
2:B:2821:C:H42	2:B:2869:U:H3	1.63	0.46
2:B:429:U:H2'	2:B:430:U:H6	1.81	0.46
2:B:44:U:H4'	46:TA:54:THR:CB	2.45	0.46
2:B:5:G:H2'	2:B:6:A:H5"	1.98	0.46
2:B:842:G:H2'	2:B:843:A:C8	2.51	0.46
2:B:983:A:H2	2:B:1100:U:O2	1.98	0.46
54:BB:152:PRO:HG3	56:DB:208:TYR:CZ	2.50	0.46
2:B:1832:C:C4'	3:C:113:U:H5'	2.45	0.46
55:CB:97:LEU:CD2	55:CB:176:THR:HA	2.45	0.46
4:D:96:U:H5"	24:X:43:TYR:HE2	1.81	0.46
2:B:185:C:H4'	30:DA:122:LYS:HG2	1.97	0.46
82:DC:293:LYS:HA	82:DC:296:ILE:HD12	1.98	0.46
82:DC:737:GLU:HG2	82:DC:766:PHE:HD2	1.81	0.46
6:F:117:GLU:HA	6:F:125:ALA:CB	2.41	0.46
6:F:158:ILE:HD12	6:F:162:ALA:CB	2.46	0.46
17:Q:3:ILE:HD12	32:FA:41:HIS:CG	2.51	0.46
32:FA:49:HIS:N	32:FA:50:PRO:CD	2.79	0.46
10:J:69:PHE:O	10:J:73:GLY:HA2	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
63:KB:23:PRO:O	63:KB:24:ALA:HB3	2.15	0.46
12:L:171:LYS:HE2	12:L:226:TYR:HD2	1.81	0.46
12:L:75:ILE:HG23	12:L:78:PHE:CD1	2.50	0.46
13:M:23:ARG:HA	13:M:45:PHE:CE2	2.50	0.46
40:NA:60:LEU:HB3	40:NA:69:ALA:CB	2.42	0.46
66:NB:48:VAL:O	66:NB:48:VAL:HG22	2.16	0.46
41:OA:10:LYS:CD	41:OA:10:LYS:H	2.29	0.46
17:Q:175:SER:HG	17:Q:179:PHE:HD2	1.64	0.46
69:QB:57:ARG:HH21	69:QB:101:ASN:HD21	1.64	0.46
12:L:165:PHE:CZ	19:S:3:ALA:HB1	2.47	0.46
19:S:71:ARG:CB	19:S:92:LEU:HD23	2.21	0.46
20:T:37:ARG:HH12	20:T:161:LYS:NZ	2.14	0.46
20:T:51:LYS:HA	20:T:141:LEU:HD11	1.97	0.46
72:TB:34:ILE:O	72:TB:38:LEU:HG	2.15	0.46
72:TB:8:ALA:CA	72:TB:74:VAL:HG11	2.45	0.46
21:U:72:GLN:CD	21:U:83:TRP:HZ2	2.18	0.46
8:H:29:PRO:HA	22:V:25:TYR:CZ	2.51	0.46
48:VA:97:LYS:HE3	48:VA:101:VAL:HG21	1.97	0.46
49:WA:178:VAL:HB	49:WA:192:PHE:HB2	1.98	0.46
75:WB:51:LEU:N	75:WB:51:LEU:HD12	2.31	0.46
20:T:124:LEU:HD23	24:X:168:PRO:HG2	1.96	0.46
1:A:1322:A:O2'	50:XA:104:PRO:HG2	2.16	0.46
50:XA:62:ARG:HD3	71:SB:37:ALA:O	2.15	0.46
50:XA:85:ALA:CB	50:XA:202:TYR:HB3	2.45	0.46
55:CB:163:SER:HA	78:ZB:54:LEU:HD11	1.98	0.46
1:A:1160:A:H2'	1:A:1161:C:C6	2.51	0.46
1:A:1170:G:H2'	1:A:1170:G:N3	2.29	0.46
1:A:1258:U:H3'	1:A:1258:U:O2	2.15	0.46
1:A:1388:A:H4'	1:A:1389:C:O4'	2.16	0.46
1:A:1196:A:H2'	1:A:1465:C:O2	2.15	0.46
1:A:1717:G:H2'	1:A:1718:G:C8	2.50	0.46
1:A:381:C:H2'	1:A:382:C:H6	1.76	0.46
1:A:238:U:OP1	1:A:834:G:H4'	2.16	0.46
1:A:833:U:H5'	1:A:834:G:H5''	1.98	0.46
1:A:875:G:H1	1:A:952:A:H61	1.62	0.46
2:B:3040:A:H5''	27:AA:12:ARG:CA	2.44	0.46
2:B:2150:G:H2'	2:B:2151:C:C6	2.51	0.46
2:B:2450:G:O2'	2:B:2451:G:H5'	2.16	0.46
2:B:2746:A:P	9:I:179:ARG:HE	2.39	0.46
2:B:3029:A:H2'	2:B:3030:G:O4'	2.16	0.46
2:B:3163:A:H2'	2:B:3164:C:H5''	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:757:C:H3'	2:B:758:C:H5''	1.97	0.46
2:B:896:A:C8	2:B:2134:G:C1'	2.93	0.46
54:BB:146:THR:O	54:BB:146:THR:HG23	2.15	0.46
3:C:23:U:OP2	3:C:23:U:C6	2.66	0.46
3:C:65:A:H2'	3:C:66:A:O4'	2.16	0.46
29:CA:34:LEU:HD23	29:CA:35:PRO:O	2.15	0.46
56:DB:72:ARG:HA	56:DB:97:VAL:O	2.16	0.46
82:DC:31:GLY:HA3	82:DC:158:ASN:HD22	1.78	0.46
82:DC:546:GLU:O	82:DC:551:GLY:HA2	2.16	0.46
82:DC:493:VAL:CG1	82:DC:554:LEU:HD22	2.45	0.46
82:DC:620:ALA:HA	82:DC:625:TRP:H	1.80	0.46
31:EA:111:LYS:HA	31:EA:114:VAL:CG2	2.42	0.46
58:FB:47:ARG:HD2	58:FB:47:ARG:C	2.35	0.46
1:A:210:A:H1'	58:FB:66:SER:HB2	1.98	0.46
2:B:3316:A:C6	7:G:124:LYS:HD2	2.50	0.46
2:B:2881:C:C4'	7:G:249:VAL:HG13	2.45	0.46
7:G:66:LYS:HG2	7:G:70:ARG:HH21	1.81	0.46
59:GB:82:ARG:O	59:GB:149:ARG:HB2	2.15	0.46
8:H:334:PHE:CE1	8:H:339:LEU:HB2	2.51	0.46
9:I:120:LYS:H	9:I:120:LYS:HD2	1.80	0.46
9:I:203:HIS:CE1	9:I:204:VAL:HG23	2.51	0.46
61:IB:57:LYS:HA	61:IB:64:VAL:HG13	1.97	0.46
10:J:142:ASP:O	10:J:146:ILE:HG12	2.15	0.46
11:K:59:GLU:HB3	11:K:60:ARG:NH2	2.31	0.46
10:J:165:LEU:HB2	37:KA:6:ARG:CG	2.46	0.46
1:A:1035:G:OP1	63:KB:2:GLY:HA2	2.15	0.46
39:MA:21:LEU:HD12	39:MA:54:VAL:HG12	1.96	0.46
40:NA:50:LEU:HD23	40:NA:55:ARG:HG2	1.97	0.46
66:NB:35:PRO:HG3	69:QB:8:ASP:HA	1.96	0.46
67:OB:55:THR:HA	67:OB:58:MET:HB2	1.97	0.46
69:QB:126:GLU:HG2	69:QB:127:ASN:N	2.30	0.46
22:V:81:VAL:HG12	22:V:138:LEU:HD12	1.98	0.46
1:A:107:C:OP1	1:A:384:G:H5'	2.16	0.46
1:A:1235:C:H2'	1:A:1236:A:C8	2.47	0.46
1:A:138:A:N6	1:A:266:A:N6	2.57	0.46
1:A:590:C:H2'	1:A:591:A:H8	1.78	0.46
79:AC:22:ARG:HG3	79:AC:38:ILE:CD1	2.45	0.46
2:B:1159:A:H2'	2:B:1160:C:C6	2.51	0.46
2:B:1379:G:H2'	2:B:1380:G:C8	2.50	0.46
2:B:1422:G:H2'	2:B:1423:C:H6	1.79	0.46
2:B:1487:G:H2'	2:B:1488:G:C5'	2.46	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:904:A:H5'	2:B:1537:A:H5'	1.96	0.46
2:B:1578:C:H2'	2:B:1579:C:N3	2.29	0.46
2:B:1797:A:H4'	6:F:22:LEU:CA	2.41	0.46
2:B:1887:A:N7	2:B:2348:A:H2	2.13	0.46
2:B:2198:A:C8	2:B:2199:G:C8	3.04	0.46
2:B:221:A:OP1	2:B:221:A:H3'	2.15	0.46
2:B:2356:A:O2'	21:U:137:ASN:HB3	2.16	0.46
2:B:2567:C:C3'	2:B:2568:C:H5''	2.37	0.46
2:B:2942:C:OP1	2:B:2943:G:H5''	2.16	0.46
2:B:429:U:O2'	2:B:430:U:H5'	2.16	0.46
1:A:788:A:OP2	54:BB:108:ARG:NH2	2.48	0.46
54:BB:103:TYR:HA	54:BB:108:ARG:O	2.16	0.46
29:CA:109:LYS:HG3	29:CA:111:ASN:OD1	2.16	0.46
55:CB:186:ASN:ND2	55:CB:188:LYS:HD2	2.31	0.46
55:CB:77:TYR:HA	55:CB:83:ARG:HG3	1.97	0.46
56:DB:64:LYS:O	56:DB:67:VAL:HG22	2.16	0.46
82:DC:109:VAL:HG12	82:DC:110:ASP:N	2.28	0.46
82:DC:729:PHE:O	82:DC:771:TYR:HA	2.16	0.46
82:DC:831:GLU:O	82:DC:833:PRO:HD3	2.15	0.46
5:E:120:VAL:CB	5:E:121:PRO:HD3	2.36	0.46
31:EA:23:VAL:CB	31:EA:43:VAL:HB	2.42	0.46
1:A:858:G:H5'	57:EB:116:ARG:NH2	2.31	0.46
83:EC:6857:C:H2'	83:EC:6858:A:H5'	1.97	0.46
2:B:3329:U:H5'	7:G:309:GLY:HA3	1.97	0.46
2:B:3243:A:H4'	7:G:95:THR:HB	1.98	0.46
8:H:280:ILE:HD11	22:V:105:ARG:CG	2.43	0.46
8:H:74:ILE:HB	8:H:75:PRO:HD2	1.96	0.46
9:I:235:SER:O	9:I:239:ILE:HG13	2.15	0.46
9:I:231:ILE:HD13	9:I:239:ILE:CD1	2.46	0.46
10:J:52:VAL:HG11	10:J:74:VAL:HG11	1.98	0.46
10:J:58:LEU:CG	10:J:64:LEU:HB2	2.43	0.46
12:L:221:ASN:O	12:L:225:LYS:HG3	2.16	0.46
12:L:247:ASP:HA	12:L:251:LYS:HB2	1.97	0.46
13:M:171:ASP:O	13:M:175:PHE:HD2	1.99	0.46
39:MA:5:LYS:HE3	39:MA:7:TYR:HD2	1.80	0.46
65:MB:52:LYS:HE2	65:MB:53:PRO:HD3	1.98	0.46
40:NA:51:SER:HB3	40:NA:54:GLU:HG3	1.97	0.46
1:A:1337:A:H4'	66:NB:123:ARG:NH2	2.31	0.46
66:NB:130:GLY:HA2	66:NB:138:PHE:CE2	2.50	0.46
15:O:9:MET:CG	15:O:134:PRO:HB2	2.38	0.46
4:D:43:U:OP1	15:O:137:ARG:HD2	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:Q:113:VAL:HA	17:Q:116:LEU:HB2	1.98	0.46
17:Q:58:VAL:CA	17:Q:69:VAL:HG23	2.45	0.46
18:R:23:ILE:H	18:R:23:ILE:HD12	1.81	0.46
46:TA:3:ASN:HD21	46:TA:97:LYS:HD3	1.80	0.46
73:UB:127:VAL:C	73:UB:129:GLY:H	2.18	0.46
73:UB:53:VAL:HA	73:UB:74:VAL:HG22	1.98	0.46
22:V:60:PRO:HA	22:V:61:PRO:HD2	1.81	0.46
48:VA:41:VAL:HA	48:VA:44:GLU:CG	2.44	0.46
74:VB:13:ILE:HD12	74:VB:13:ILE:N	2.31	0.46
49:WA:250:TYR:HB3	49:WA:265:LEU:HB2	1.98	0.46
49:WA:34:LEU:HB2	49:WA:73:LEU:HD11	1.98	0.46
49:WA:58:VAL:HG23	49:WA:59:ARG:N	2.31	0.46
75:WB:50:ILE:HB	75:WB:51:LEU:HD12	1.98	0.46
24:X:107:TYR:CE2	24:X:123:ILE:HD11	2.51	0.46
26:Z:19:VAL:CG1	26:Z:105:LEU:HD13	2.44	0.46
52:ZA:65:GLU:H	52:ZA:134:LEU:HD11	1.76	0.46
52:ZA:212:LYS:O	52:ZA:216:VAL:HG23	2.16	0.46
1:A:1539:G:H3'	1:A:1540:G:C5'	2.46	0.46
1:A:297:U:OP1	54:BB:37:LYS:HD3	2.16	0.46
1:A:333:A:H62	58:FB:27:PHE:HB2	1.80	0.46
2:B:1508:C:H2'	2:B:1509:A:O4'	2.16	0.46
2:B:1638:A:H2	2:B:1709:C:C2	2.34	0.46
2:B:1679:A:H2'	2:B:1680:G:H8	1.80	0.46
2:B:1883:A:H2'	2:B:1884:A:H8	1.80	0.46
2:B:2261:G:H5'	2:B:2261:G:C8	2.50	0.46
2:B:2372:A:C3'	2:B:2373:A:C5'	2.94	0.46
2:B:1311:G:H1'	2:B:2381:G:O5'	2.16	0.46
2:B:2771:U:H3'	2:B:2772:C:C5'	2.45	0.46
2:B:874:U:O4	2:B:2950:G:H3'	2.16	0.46
2:B:3201:C:H2'	2:B:3202:G:C8	2.51	0.46
2:B:3321:C:H2'	2:B:3322:A:O4'	2.15	0.46
2:B:578:A:O2'	8:H:331:ALA:HB1	2.15	0.46
2:B:764:U:H2'	2:B:764:U:O2	2.16	0.46
2:B:970:A:OP2	33:GA:19:ASN:HB2	2.16	0.46
2:B:989:A:H2	25:Y:101:CYS:HB2	1.81	0.46
54:BB:68:ARG:HH11	54:BB:76:VAL:HG11	1.81	0.46
3:C:118:C:H2'	3:C:119:C:H6	1.76	0.46
30:DA:43:TYR:O	30:DA:124:GLY:HA2	2.16	0.46
57:EB:144:VAL:HG23	57:EB:144:VAL:O	2.16	0.46
57:EB:82:GLU:HG3	57:EB:90:VAL:HG23	1.98	0.46
6:F:206:PRO:HG3	6:F:213:GLY:HA3	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:293:ASN:HB3	7:G:321:PHE:HZ	1.80	0.46
2:B:364:G:H4'	8:H:84:ARG:HB3	1.96	0.46
35:IA:43:HIS:O	35:IA:44:MET:HG2	2.16	0.46
10:J:34:LEU:HG	10:J:54:TYR:CE1	2.51	0.46
36:JA:19:ARG:NH1	36:JA:28:VAL:HG13	2.14	0.46
12:L:98:ARG:HB2	12:L:98:ARG:NH1	2.29	0.46
1:A:1605:G:N7	66:NB:127:LYS:HD2	2.29	0.46
70:RB:34:LEU:HD13	70:RB:34:LEU:O	2.15	0.46
19:S:139:HIS:HB3	19:S:142:ILE:CD1	2.45	0.46
46:TA:65:THR:CG2	46:TA:89:LYS:HG2	2.46	0.46
46:TA:93:LEU:H	46:TA:93:LEU:HD23	1.80	0.46
21:U:18:ARG:NE	21:U:147:GLU:HB3	2.30	0.46
2:B:841:A:O3'	23:W:126:GLU:HG2	2.16	0.46
23:W:18:GLY:O	23:W:22:VAL:HG23	2.16	0.46
24:X:4:PHE:CE2	24:X:104:GLU:HG3	2.44	0.46
24:X:23:LYS:HG3	25:Y:146:ASN:HD22	1.81	0.46
52:ZA:77:GLN:OE1	52:ZA:190:LEU:HD22	2.16	0.46
1:A:180:A:H2'	1:A:181:A:C5'	2.46	0.46
1:A:428:A:O3'	1:A:439:U:H6	1.99	0.46
1:A:49:C:OP1	1:A:388:G:H1'	2.16	0.46
1:A:774:A:H2'	1:A:775:G:H5'	1.97	0.46
1:A:824:G:H5'	1:A:825:U:OP2	2.16	0.46
53:AB:163:PRO:HB3	53:AB:167:PHE:HD2	1.80	0.46
53:AB:168:ILE:HD13	53:AB:187:LYS:HG3	1.98	0.46
2:B:1116:G:O2'	2:B:1117:G:H4'	2.16	0.46
2:B:1360:C:H2'	2:B:1361:U:H6	1.80	0.46
2:B:1415:U:H2'	2:B:1416:C:O4'	2.15	0.46
2:B:1721:U:H5	23:W:124:TYR:HH	1.64	0.46
2:B:1783:U:H2'	2:B:1784:G:C8	2.51	0.46
2:B:1804:A:H4'	38:LA:71:THR:HG21	1.98	0.46
2:B:245:U:H2'	2:B:246:U:C6	2.51	0.46
2:B:2849:C:H2'	2:B:2850:G:C8	2.50	0.46
2:B:2875:U:H2'	2:B:2875:U:O2	2.15	0.46
2:B:3257:C:H2'	2:B:3258:U:C6	2.51	0.46
2:B:3273:A:H2'	2:B:3274:A:O4'	2.15	0.46
2:B:44:U:H5''	46:TA:54:THR:HG22	1.97	0.46
2:B:739:G:H2'	2:B:740:G:H8	1.81	0.46
2:B:841:A:H4'	23:W:126:GLU:CA	2.42	0.46
2:B:93:C:OP1	2:B:93:C:H3'	2.15	0.46
56:DB:74:LYS:NZ	56:DB:74:LYS:HB3	2.30	0.46
5:E:74:VAL:HB	5:E:84:ALA:HB1	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2201:G:N2	6:F:224:THR:HG21	2.30	0.46
32:FA:6:THR:O	32:FA:10:LYS:HD3	2.15	0.46
7:G:22:ALA:HB3	7:G:274:SER:OG	2.15	0.46
59:GB:17:ARG:HD2	59:GB:20:GLU:OE1	2.15	0.46
4:D:1:G:N3	9:I:266:ALA:HB2	2.30	0.46
2:B:501:A:H4'	10:J:28:GLN:HE21	1.81	0.46
36:JA:123:LYS:HA	36:JA:126:LEU:CD1	2.43	0.46
37:KA:13:HIS:HA	37:KA:30:ILE:CD1	2.46	0.46
63:KB:99:ARG:HG3	63:KB:115:LEU:HD21	1.97	0.46
12:L:46:LEU:HD23	12:L:49:TYR:CD1	2.51	0.46
2:B:1857:C:O2	38:LA:4:ARG:HB3	2.16	0.46
2:B:1655:G:H4'	38:LA:59:PRO:HG2	1.96	0.46
2:B:1486:G:H21	38:LA:6:THR:HG22	1.81	0.46
38:LA:54:ILE:CG1	38:LA:71:THR:HG22	2.39	0.46
13:M:106:LYS:O	13:M:107:ASP:HB2	2.16	0.46
2:B:2138:A:H5'	41:OA:3:LYS:HE2	1.96	0.46
16:P:130:LYS:O	16:P:146:LYS:HG2	2.16	0.46
52:ZA:157:LYS:HG3	72:TB:95:PRO:O	2.16	0.46
21:U:169:THR:O	21:U:173:ARG:HB2	2.15	0.46
48:VA:110:ARG:HB3	48:VA:113:ALA:HB2	1.98	0.46
16:P:123:ARG:HH22	48:VA:39:HIS:HB2	1.72	0.46
49:WA:124:SER:O	49:WA:131:ILE:HA	2.16	0.46
49:WA:216:LYS:HA	49:WA:239:GLU:HB2	1.97	0.46
24:X:14:LEU:HD21	25:Y:136:ARG:CZ	2.46	0.46
25:Y:66:ASN:HB2	33:GA:35:VAL:HG22	1.97	0.46
25:Y:80:VAL:CG1	25:Y:83:ARG:HG2	2.46	0.46
78:ZB:13:ILE:HD13	78:ZB:31:GLU:HB2	1.97	0.46
1:A:1065:A:H2'	1:A:1066:C:O4'	2.16	0.46
1:A:1119:G:H2'	1:A:1120:U:C6	2.51	0.46
1:A:1126:G:H2'	1:A:1127:G:O4'	2.16	0.46
1:A:1471:A:H5'	55:CB:184:PHE:CE2	2.51	0.46
1:A:147:A:OP2	1:A:166:C:H5	1.97	0.46
1:A:1483:A:C2	1:A:1607:G:H1'	2.51	0.46
1:A:314:C:O2	1:A:354:C:N3	2.49	0.46
27:AA:34:LEU:HD22	27:AA:60:ALA:HB1	1.97	0.46
2:B:1123:U:H2'	2:B:1124:U:C5'	2.46	0.46
2:B:1240:A:H3'	2:B:1241:U:C5'	2.38	0.46
2:B:130:A:O5'	2:B:130:A:H8	1.99	0.46
2:B:2177:G:N2	6:F:126:LEU:HG	2.30	0.46
2:B:2320:A:H3'	2:B:2321:A:C8	2.51	0.46
2:B:2917:G:H2'	2:B:2918:G:O4'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2939:G:H2'	2:B:2940:A:O4'	2.16	0.46
2:B:3231:U:H2'	2:B:3232:G:N7	2.30	0.46
2:B:3246:G:OP1	2:B:3247:G:H1'	2.15	0.46
2:B:573:C:H2'	2:B:574:U:C6	2.51	0.46
2:B:941:G:C1'	2:B:1435:A:H1'	2.46	0.46
2:B:660:A:C2	2:B:942:U:H4'	2.51	0.46
28:BA:3:VAL:HA	28:BA:13:ILE:O	2.16	0.46
54:BB:154:ILE:HG12	54:BB:172:PHE:CD2	2.51	0.46
54:BB:35:PRO:CD	54:BB:83:PRO:HG2	2.46	0.46
3:C:154:C:H5"	12:L:181:LYS:CB	2.39	0.46
4:D:4:U:C5'	4:D:26:C:H4'	2.47	0.46
56:DB:192:ALA:O	56:DB:196:ARG:HB2	2.16	0.46
82:DC:77:LEU:HB2	82:DC:100:ILE:HD12	1.98	0.46
82:DC:103:ILE:CD1	82:DC:121:VAL:HG23	2.46	0.46
82:DC:293:LYS:HB3	82:DC:296:ILE:HD12	1.98	0.46
82:DC:677:PHE:N	82:DC:677:PHE:HD2	2.14	0.46
31:EA:26:VAL:HG21	31:EA:96:VAL:O	2.16	0.46
6:F:126:LEU:HD11	6:F:156:LYS:NZ	2.30	0.46
58:FB:41:LYS:HA	58:FB:59:ARG:O	2.16	0.46
58:FB:5:ARG:HH11	58:FB:5:ARG:HG3	1.80	0.46
59:GB:179:ARG:O	59:GB:182:GLU:HG3	2.16	0.46
59:GB:72:GLU:HA	59:GB:75:ALA:HB3	1.97	0.46
8:H:59:GLN:HE21	8:H:59:GLN:HB2	1.64	0.46
34:HA:103:THR:HG22	34:HA:104:LEU:CD1	2.46	0.46
34:HA:82:GLY:O	34:HA:83:LYS:HD3	2.16	0.46
9:I:108:ARG:HG2	9:I:251:PRO:C	2.36	0.46
9:I:58:LYS:HZ1	9:I:158:ARG:HH12	1.63	0.46
9:I:146:LEU:HD21	9:I:159:VAL:HG12	1.98	0.46
10:J:65:ILE:C	10:J:65:ILE:HD12	2.36	0.46
11:K:90:LYS:HD3	11:K:133:TYR:CE1	2.51	0.46
37:KA:87:ASN:HA	37:KA:87:ASN:HD22	1.57	0.46
12:L:153:ILE:HD13	12:L:166:LEU:HB3	1.97	0.46
12:L:77:GLN:HA	12:L:80:TYR:HB3	1.97	0.46
38:LA:66:SER:O	38:LA:70:LYS:HB2	2.16	0.46
13:M:138:THR:O	13:M:139:ASN:HB2	2.16	0.46
13:M:167:VAL:HG12	13:M:170:LYS:CG	2.46	0.46
13:M:168:ARG:O	13:M:170:LYS:HG2	2.16	0.46
13:M:8:GLN:HG2	13:M:68:LEU:CD1	2.45	0.46
40:NA:55:ARG:HA	40:NA:58:ILE:HG12	1.98	0.46
66:NB:60:PHE:HD2	66:NB:65:ILE:HG13	1.81	0.46
41:OA:76:ASN:HB3	41:OA:79:GLN:CG	2.46	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:P:92:ARG:O	16:P:93:LYS:HB2	2.15	0.46
69:QB:78:LYS:HA	69:QB:93:HIS:CE1	2.51	0.46
18:R:24:LYS:HB3	18:R:24:LYS:NZ	2.31	0.46
70:RB:28:SER:CB	70:RB:34:LEU:HD23	2.46	0.46
17:Q:28:GLN:CG	19:S:201:ARG:HG3	2.44	0.46
46:TA:22:GLN:O	46:TA:75:VAL:HG22	2.16	0.46
21:U:31:GLU:HG3	21:U:60:PHE:CD1	2.50	0.46
73:UB:37:ALA:HB1	73:UB:45:GLY:H	1.80	0.46
2:B:742:G:OP1	22:V:73:GLN:HG2	2.16	0.46
48:VA:28:VAL:HG11	48:VA:87:VAL:HG21	1.98	0.46
2:B:1282:G:H5'	48:VA:82:GLY:O	2.16	0.46
2:B:1724:U:O4	23:W:125:LYS:HD2	2.16	0.46
2:B:833:G:OP1	23:W:84:THR:HG21	2.15	0.46
49:WA:91:LEU:O	49:WA:99:THR:HA	2.16	0.46
75:WB:68:ARG:HD2	83:EC:6867:C:H1'	1.97	0.46
50:XA:175:TYR:CE2	50:XA:199:PRO:HG3	2.50	0.46
25:Y:115:LYS:O	25:Y:119:ALA:HB3	2.16	0.46
52:ZA:169:LEU:CD2	52:ZA:188:LEU:HD11	2.46	0.46
1:A:1125:A:H2'	1:A:1126:G:O4'	2.16	0.45
1:A:1468:U:H4'	69:QB:88:VAL:HA	1.98	0.45
1:A:151:G:H21	56:DB:13:GLN:NE2	2.13	0.45
1:A:248:U:H5'	61:IB:36:LYS:HB2	1.99	0.45
1:A:361:C:H2'	1:A:362:G:C8	2.52	0.45
1:A:574:G:N3	1:A:574:G:H2'	2.31	0.45
2:B:148:G:H1'	2:B:149:U:H5	1.80	0.45
2:B:1833:G:H2'	2:B:1834:U:O4'	2.15	0.45
2:B:2195:C:H2'	2:B:2272:G:OP1	2.16	0.45
2:B:2290:C:H2'	2:B:2291:A:C1'	2.45	0.45
2:B:2361:A:O2'	2:B:2362:C:H5'	2.16	0.45
2:B:71:A:C4	2:B:2778:G:H4'	2.52	0.45
2:B:3059:G:H5'	35:IA:17:HIS:CE1	2.51	0.45
2:B:3146:G:O2'	2:B:3147:G:H5'	2.17	0.45
2:B:953:G:H4'	2:B:954:U:H6	1.81	0.45
54:BB:183:VAL:HG12	54:BB:185:GLY:H	1.81	0.45
54:BB:206:ASP:O	54:BB:221:ARG:HA	2.16	0.45
54:BB:207:LEU:HA	54:BB:220:THR:O	2.16	0.45
1:A:449:C:H4'	54:BB:7:LYS:O	2.17	0.45
3:C:30:C:H2'	3:C:31:G:H8	1.81	0.45
56:DB:73:ILE:HG13	56:DB:73:ILE:O	2.15	0.45
82:DC:111:PHE:C	82:DC:113:SER:N	2.69	0.45
82:DC:277:ILE:O	82:DC:280:PRO:HD2	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:334:LEU:O	82:DC:338:ILE:HG13	2.15	0.45
82:DC:45:ILE:HG13	82:DC:78:TYR:HB2	1.97	0.45
31:EA:100:THR:O	31:EA:107:ARG:HG2	2.16	0.45
31:EA:68:ILE:HG22	31:EA:69:LYS:H	1.81	0.45
6:F:77:ILE:CG1	6:F:115:ASN:HD22	2.27	0.45
6:F:117:GLU:CA	6:F:125:ALA:HB3	2.41	0.45
6:F:79:ASN:HD21	6:F:98:VAL:HG12	1.81	0.45
17:Q:66:ASN:HD21	32:FA:105:LEU:HD21	1.81	0.45
32:FA:73:LEU:HD13	32:FA:109:TYR:HB3	1.98	0.45
58:FB:76:THR:HG22	58:FB:108:PRO:HG2	1.98	0.45
7:G:303:LYS:HD3	7:G:372:THR:CG2	2.46	0.45
8:H:29:PRO:HG3	8:H:279:HIS:ND1	2.31	0.45
8:H:288:ARG:HG2	8:H:288:ARG:HH11	1.80	0.45
9:I:8:LYS:N	9:I:8:LYS:HD2	2.31	0.45
11:K:179:LEU:HD13	11:K:179:LEU:N	2.31	0.45
37:KA:17:GLN:HB3	37:KA:24:ASN:CB	2.37	0.45
16:P:85:LEU:HD21	16:P:106:LEU:HD13	1.98	0.45
68:PB:18:LEU:HD21	68:PB:70:VAL:HG13	1.97	0.45
17:Q:46:ILE:HG12	17:Q:49:ARG:HD2	1.97	0.45
71:SB:80:LYS:HB2	71:SB:80:LYS:NZ	2.31	0.45
20:T:148:LYS:H	20:T:148:LYS:CE	2.27	0.45
2:B:44:U:C5'	46:TA:54:THR:HG22	2.46	0.45
72:TB:86:ILE:CA	72:TB:89:TRP:HB2	2.40	0.45
21:U:17:ALA:HB3	21:U:148:LEU:HD21	1.98	0.45
49:WA:115:ILE:HA	49:WA:121:MET:O	2.16	0.45
24:X:10:ILE:CG2	24:X:24:LEU:HD23	2.46	0.45
24:X:9:VAL:HG13	24:X:61:ILE:HD13	1.98	0.45
2:B:519:A:C2	24:X:65:ASN:HB2	2.51	0.45
2:B:1063:G:C2	25:Y:109:VAL:HG13	2.52	0.45
2:B:1097:G:C4'	25:Y:129:LYS:HE2	2.41	0.45
1:A:1358:G:H2'	1:A:1359:C:C6	2.51	0.45
1:A:1750:A:H2'	1:A:1751:C:C6	2.50	0.45
1:A:209:U:H5''	58:FB:170:SER:O	2.15	0.45
1:A:488:G:C2'	1:A:489:C:H5'	2.46	0.45
1:A:534:A:H3'	1:A:535:A:H8	1.81	0.45
1:A:629:U:H2'	1:A:630:A:C5'	2.46	0.45
1:A:889:U:C2'	1:A:890:C:H4'	2.40	0.45
2:B:345:G:H5'	2:B:1429:G:O6	2.16	0.45
2:B:1643:A:H5''	2:B:1644:C:C5	2.52	0.45
2:B:2167:A:O2'	2:B:2168:A:H5'	2.16	0.45
2:B:2403:G:OP1	2:B:2403:G:H4'	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2424:A:HO2'	2:B:2425:G:H5'	1.81	0.45
2:B:27:C:O2'	2:B:28:C:H5'	2.16	0.45
2:B:2994:A:H4'	21:U:77:GLY:C	2.36	0.45
2:B:3262:U:C2'	2:B:3263:G:H5''	2.45	0.45
2:B:994:G:H5'	2:B:2637:A:HO2'	1.78	0.45
54:BB:102:VAL:HG12	54:BB:103:TYR:N	2.31	0.45
54:BB:259:GLN:HG3	54:BB:260:GLY:N	2.30	0.45
80:BC:10:ARG:HG3	80:BC:10:ARG:HH11	1.81	0.45
80:BC:38:LEU:HD21	80:BC:42:ARG:HH21	1.80	0.45
55:CB:133:VAL:HG22	55:CB:198:LEU:HD13	1.98	0.45
1:A:1163:A:H4'	55:CB:166:ARG:HH21	1.81	0.45
55:CB:197:GLU:CG	55:CB:208:SER:HB2	2.45	0.45
82:DC:119:LEU:HD11	82:DC:145:GLN:HB3	1.98	0.45
82:DC:218:TRP:CG	82:DC:324:MET:HB3	2.51	0.45
31:EA:111:LYS:CA	31:EA:114:VAL:HG22	2.43	0.45
57:EB:181:ILE:HD12	57:EB:181:ILE:N	2.31	0.45
57:EB:74:GLN:HE21	57:EB:78:THR:HG22	1.80	0.45
7:G:303:LYS:NZ	7:G:371:GLN:HB3	2.31	0.45
7:G:58:ARG:HH11	7:G:58:ARG:HB2	1.81	0.45
59:GB:119:ALA:HB1	59:GB:124:HIS:HB3	1.98	0.45
59:GB:40:LYS:HA	59:GB:43:TYR:HD2	1.76	0.45
8:H:150:LEU:HD21	8:H:172:VAL:HG22	1.97	0.45
8:H:179:LEU:HD22	8:H:183:LYS:HE3	1.98	0.45
9:I:104:LEU:CA	9:I:247:ILE:HG21	2.40	0.45
61:IB:108:PRO:HG3	61:IB:134:THR:HB	1.97	0.45
12:L:155:ASN:HB3	12:L:179:ILE:CG2	2.46	0.45
31:EA:14:VAL:HG11	38:LA:90:ILE:HG13	1.97	0.45
17:Q:119:TYR:OH	39:MA:116:TYR:HE1	1.95	0.45
39:MA:10:ARG:CD	39:MA:57:VAL:HG13	2.43	0.45
66:NB:67:VAL:HG21	66:NB:85:ILE:HG12	1.98	0.45
2:B:22:G:H4'	41:OA:42:ALA:O	2.16	0.45
67:OB:80:ARG:O	67:OB:81:LYS:C	2.55	0.45
2:B:1826:C:OP2	42:PA:48:SER:HB3	2.15	0.45
17:Q:32:LYS:HA	17:Q:35:ARG:CZ	2.46	0.45
69:QB:113:ILE:O	69:QB:124:ILE:HD12	2.15	0.45
70:RB:99:ILE:O	70:RB:103:ILE:HG12	2.17	0.45
70:RB:67:THR:O	70:RB:79:TRP:HA	2.16	0.45
2:B:1923:C:H5''	45:SA:25:LYS:C	2.36	0.45
46:TA:8:ARG:HD2	46:TA:72:LEU:CD1	2.46	0.45
46:TA:91:PHE:CD2	46:TA:93:LEU:HD22	2.51	0.45
73:UB:107:PHE:CE1	73:UB:114:LYS:HD2	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:VA:109:ALA:HA	48:VA:181:PHE:CE1	2.51	0.45
2:B:1324:U:C5'	24:X:1:MET:HA	2.46	0.45
50:XA:144:ILE:HG12	50:XA:158:VAL:CG1	2.46	0.45
50:XA:59:LEU:HD11	71:SB:78:LEU:HB3	1.96	0.45
26:Z:18:ASP:O	26:Z:104:ARG:HA	2.16	0.45
52:ZA:138:PRO:O	52:ZA:222:TYR:HE2	1.99	0.45
1:A:1225:U:C2	1:A:1230:A:H4'	2.52	0.45
1:A:163:G:H4'	56:DB:53:SER:OG	2.16	0.45
1:A:243:G:H2'	1:A:244:A:O4'	2.16	0.45
1:A:252:U:H2'	1:A:253:A:C8	2.52	0.45
1:A:377:G:H4'	1:A:379:U:O4	2.17	0.45
1:A:606:A:C8	1:A:608:U:H2'	2.51	0.45
53:AB:74:GLN:HA	53:AB:79:TYR:HB2	1.97	0.45
2:B:1022:U:H2'	2:B:1023:C:C6	2.52	0.45
2:B:1184:A:H2'	2:B:1185:C:H6	1.80	0.45
2:B:946:U:H3	2:B:1373:A:H61	1.63	0.45
2:B:1662:G:H1	2:B:1787:A:H2	1.59	0.45
2:B:2277:C:H5'	2:B:2317:A:H4'	1.98	0.45
2:B:2700:G:N2	2:B:2755:C:N4	2.64	0.45
2:B:93:C:OP1	2:B:2764:C:H1'	2.15	0.45
2:B:2771:U:H3'	2:B:2772:C:H5"	1.98	0.45
2:B:3034:C:O2'	13:M:122:LYS:HD2	2.16	0.45
2:B:3321:C:H2'	2:B:3322:A:C8	2.51	0.45
2:B:5:G:C3'	2:B:6:A:H5"	2.46	0.45
2:B:675:C:O2'	2:B:679:U:H5"	2.16	0.45
2:B:837:A:H2'	2:B:838:G:O4'	2.16	0.45
2:B:971:G:H2'	2:B:972:A:O4'	2.16	0.45
3:C:154:C:H2'	3:C:155:A:C8	2.52	0.45
30:DA:27:ARG:HD3	30:DA:75:ARG:O	2.17	0.45
82:DC:485:VAL:HG12	82:DC:533:THR:HG23	1.99	0.45
2:B:1796:G:H4'	6:F:22:LEU:CD2	2.46	0.45
58:FB:42:ARG:C	58:FB:43:ILE:HG13	2.36	0.45
59:GB:110:GLN:OE1	59:GB:129:ILE:HD12	2.16	0.45
8:H:169:LEU:HB3	8:H:174:ALA:HB3	1.98	0.45
11:K:115:THR:HA	11:K:205:PHE:HD2	1.82	0.45
2:B:1010:G:H1'	14:N:195:ALA:HB2	1.97	0.45
17:Q:170:LEU:HD21	40:NA:7:ILE:HB	1.99	0.45
70:RB:28:SER:HB2	70:RB:112:VAL:HG22	1.99	0.45
21:U:149:VAL:O	21:U:149:VAL:HG12	2.15	0.45
21:U:31:GLU:HG3	21:U:60:PHE:CE1	2.52	0.45
22:V:32:LEU:C	22:V:32:LEU:HD23	2.36	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:WA:218:GLY:O	49:WA:236:ALA:HB3	2.16	0.45
50:XA:176:LEU:O	50:XA:179:ARG:HB3	2.16	0.45
52:ZA:82:ASN:CB	52:ZA:207:LEU:HD12	2.39	0.45
78:ZB:33:LEU:H	78:ZB:33:LEU:HD22	1.81	0.45
1:A:1116:A:H2'	1:A:1117:U:O4'	2.16	0.45
1:A:1563:C:OP1	69:QB:84:LYS:HD3	2.16	0.45
1:A:96:G:H1	1:A:387:A:H61	1.63	0.45
1:A:633:U:H1'	1:A:1102:G:O2'	2.17	0.45
27:AA:93:LEU:HD23	27:AA:93:LEU:H	1.81	0.45
2:B:1072:G:H21	33:GA:50:THR:CG2	2.30	0.45
2:B:1133:A:O2'	2:B:1134:G:H5'	2.17	0.45
2:B:1162:U:O2'	36:JA:12:LYS:HD3	2.16	0.45
2:B:1240:A:C3'	2:B:1241:U:H5''	2.38	0.45
2:B:1289:G:H2'	2:B:1290:A:C8	2.49	0.45
2:B:1452:A:N3	2:B:2347:U:H1'	2.32	0.45
2:B:2338:C:H5''	27:AA:47:ASN:O	2.15	0.45
2:B:2908:G:H4'	44:RA:114:LYS:HZ3	1.74	0.45
2:B:3113:A:H3'	2:B:3114:A:C8	2.51	0.45
2:B:3217:C:C5	21:U:182:ILE:HG12	2.52	0.45
2:B:3386:G:H2'	2:B:3387:U:C6	2.50	0.45
2:B:655:C:O5'	36:JA:27:ARG:HB3	2.16	0.45
2:B:885:U:H4'	2:B:1851:G:H4'	1.98	0.45
3:C:140:G:C2'	3:C:141:C:H5'	2.47	0.45
55:CB:42:LEU:HB2	55:CB:46:TRP:O	2.16	0.45
82:DC:32:LYS:HB3	82:DC:128:VAL:HG21	1.97	0.45
82:DC:490:GLN:O	82:DC:559:PRO:HG3	2.16	0.45
82:DC:578:LYS:HA	82:DC:585:ARG:HA	1.98	0.45
2:B:1270:A:O2'	82:DC:744:TYR:HE1	2.00	0.45
82:DC:488:VAL:HG11	82:DC:794:PRO:HB2	1.97	0.45
83:EC:6809:G:H4'	83:EC:6853:G:H4'	1.99	0.45
83:EC:6854:U:H2'	83:EC:6855:A:H8	1.81	0.45
2:B:964:G:H4'	32:FA:30:GLY:CA	2.46	0.45
7:G:219:ALA:HB3	7:G:329:PRO:HG2	1.98	0.45
8:H:177:ASP:OD2	8:H:205:PRO:HD3	2.15	0.45
8:H:82:THR:HG23	8:H:85:SER:N	2.30	0.45
34:HA:30:THR:HG21	34:HA:89:VAL:HG21	1.97	0.45
61:IB:29:LYS:HE2	61:IB:32:LYS:HA	1.97	0.45
11:K:178:ILE:N	11:K:178:ILE:HD12	2.31	0.45
12:L:100:GLU:OE2	12:L:108:ARG:HB2	2.17	0.45
12:L:94:PHE:HA	12:L:97:TYR:CD2	2.43	0.45
13:M:104:VAL:O	13:M:105:GLU:HG3	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:N:216:TYR:O	14:N:217:PHE:HB2	2.16	0.45
66:NB:7:VAL:CG2	66:NB:22:VAL:HB	2.42	0.45
66:NB:40:GLU:CA	66:NB:41:PRO:C	2.84	0.45
67:OB:29:GLN:HA	67:OB:32:LYS:HE2	1.98	0.45
71:SB:18:SER:N	71:SB:54:ALA:HB3	2.31	0.45
46:TA:27:GLN:HB2	46:TA:93:LEU:CD1	2.46	0.45
72:TB:73:GLY:HA3	72:TB:128:PHE:CZ	2.51	0.45
48:VA:134:SER:HA	48:VA:137:GLN:OE1	2.17	0.45
2:B:841:A:C4'	23:W:126:GLU:HA	2.42	0.45
50:XA:120:LEU:HD11	50:XA:144:ILE:CD1	2.46	0.45
50:XA:82:GLY:CA	50:XA:170:ILE:HG21	2.45	0.45
1:A:1345:A:O2'	1:A:1346:A:H5''	2.17	0.45
1:A:381:C:OP1	59:GB:2:PRO:HA	2.17	0.45
1:A:445:A:H1'	1:A:525:A:P	2.57	0.45
1:A:792:U:H3'	1:A:793:A:H8	1.82	0.45
53:AB:69:LEU:HD23	53:AB:72:LEU:CD1	2.47	0.45
2:B:1263:A:C4'	2:B:1264:G:H8	2.23	0.45
2:B:1416:C:H2'	2:B:1417:G:C4	2.50	0.45
2:B:1490:A:H2'	2:B:1491:A:O4'	2.17	0.45
2:B:2196:C:H1'	2:B:2271:A:O2'	2.16	0.45
2:B:2204:C:H2'	2:B:2206:G:H1	1.82	0.45
2:B:2296:A:H2'	2:B:2297:U:H5'	1.99	0.45
2:B:2912:G:H2'	2:B:2913:C:C6	2.52	0.45
2:B:294:U:O2'	2:B:295:A:H5''	2.17	0.45
2:B:3111:U:O4	2:B:3121:U:C5	2.70	0.45
2:B:3343:G:H2'	2:B:3361:G:H21	1.77	0.45
2:B:796:U:H4'	17:Q:7:LEU:HD13	1.97	0.45
2:B:800:G:H3'	2:B:801:A:C8	2.52	0.45
28:BA:16:GLY:C	28:BA:18:GLY:H	2.20	0.45
27:AA:93:LEU:CB	28:BA:20:LEU:HB3	2.45	0.45
28:BA:4:GLU:HG3	28:BA:30:ARG:HD3	1.98	0.45
54:BB:206:ASP:HB2	54:BB:222:LEU:CG	2.36	0.45
3:C:29:U:H5''	17:Q:27:ASP:CB	2.44	0.45
4:D:9:C:H3'	4:D:10:C:H6	1.80	0.45
30:DA:28:ARG:HB3	30:DA:28:ARG:HH11	1.80	0.45
82:DC:650:THR:HG22	82:DC:689:LEU:O	2.17	0.45
82:DC:576:LEU:HG	82:DC:840:ASP:O	2.16	0.45
7:G:109:HIS:C	7:G:110:LEU:HD12	2.37	0.45
7:G:238:LEU:HD11	7:G:250:ALA:HB2	1.98	0.45
7:G:350:ALA:O	7:G:351:LEU:CB	2.64	0.45
7:G:358:TRP:CZ2	7:G:360:ASP:HA	2.50	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:47:LEU:HD12	7:G:84:VAL:HG11	1.99	0.45
8:H:181:VAL:HG12	8:H:182:LEU:H	1.80	0.45
8:H:42:VAL:HG13	8:H:118:LYS:HZ1	1.80	0.45
34:HA:73:GLY:H	34:HA:76:GLU:CG	2.30	0.45
61:IB:35:TYR:CD2	61:IB:49:ILE:HG23	2.51	0.45
36:JA:96:ILE:HB	36:JA:121:ASN:HD21	1.82	0.45
36:JA:35:GLN:HB3	36:JA:43:ARG:HB2	1.96	0.45
11:K:120:THR:HB	25:Y:132:PRO:CB	2.36	0.45
11:K:239:LEU:O	11:K:243:MET:HG3	2.16	0.45
12:L:46:LEU:O	12:L:50:VAL:HG13	2.16	0.45
66:NB:25:GLY:HA3	66:NB:64:ASP:OD2	2.16	0.45
17:Q:173:ALA:HA	17:Q:176:GLU:CD	2.37	0.45
17:Q:75:PHE:CE2	17:Q:96:ALA:HB3	2.51	0.45
18:R:34:ALA:HB1	18:R:70:PHE:HZ	1.81	0.45
2:B:113:C:OP1	19:S:147:ARG:HD3	2.16	0.45
2:B:1923:C:C5'	45:SA:25:LYS:HA	2.38	0.45
72:TB:81:VAL:HA	72:TB:85:ASP:HB2	1.97	0.45
52:ZA:156:THR:CG2	72:TB:99:PHE:CZ	3.00	0.45
22:V:147:ARG:O	22:V:150:VAL:HG22	2.17	0.45
49:WA:227:ALA:O	49:WA:228:LYS:HB2	2.16	0.45
68:PB:25:ASN:HA	75:WB:40:VAL:HG11	1.99	0.45
24:X:10:ILE:HG22	24:X:11:GLY:N	2.32	0.45
50:XA:126:PRO:HG2	50:XA:152:PRO:HD2	1.98	0.45
50:XA:59:LEU:HD22	71:SB:79:LEU:HG	1.98	0.45
1:A:1356:U:H2'	1:A:1357:A:C8	2.51	0.45
1:A:155:U:H4'	56:DB:59:GLN:N	2.26	0.45
1:A:444:C:N4	1:A:458:G:H2'	2.32	0.45
1:A:449:C:H5''	54:BB:30:ARG:HB2	1.96	0.45
1:A:54:C:HO2'	1:A:459:G:H8	1.63	0.45
53:AB:31:GLU:O	53:AB:54:ARG:HD2	2.16	0.45
2:B:1222:G:H2'	2:B:1285:G:N2	2.31	0.45
2:B:1486:G:N3	38:LA:6:THR:HG22	2.32	0.45
2:B:229:G:H4'	8:H:220:ARG:NH2	2.30	0.45
2:B:422:A:H2	2:B:2363:A:H4'	1.74	0.45
2:B:2589:G:H2'	2:B:2590:A:H8	1.81	0.45
2:B:816:A:H1'	2:B:819:U:O4	2.16	0.45
2:B:932:U:C4'	2:B:934:G:H5'	2.46	0.45
55:CB:89:ILE:O	55:CB:93:LEU:HB2	2.17	0.45
56:DB:178:LEU:O	56:DB:183:ARG:HD2	2.16	0.45
56:DB:77:LEU:HD23	56:DB:77:LEU:N	2.32	0.45
56:DB:85:ARG:NH2	56:DB:87:ARG:NH1	2.65	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:40:VAL:C	82:DC:42:ARG:H	2.20	0.45
6:F:60:LYS:HD2	6:F:73:GLU:HB3	1.97	0.45
32:FA:123:VAL:H	32:FA:143:GLY:HA2	1.82	0.45
22:V:176:ARG:HB2	32:FA:53:PHE:O	2.17	0.45
33:GA:5:LYS:HE2	33:GA:8:THR:OG1	2.16	0.45
59:GB:47:PHE:CE2	59:GB:51:LYS:HD3	2.52	0.45
2:B:681:U:P	8:H:115:HIS:HB2	2.56	0.45
2:B:674:G:H4'	8:H:120:TYR:CG	2.52	0.45
4:D:117:A:CI'	9:I:74:VAL:HB	2.46	0.45
2:B:3267:A:C6	10:J:73:GLY:HA3	2.52	0.45
36:JA:2:ALA:CB	36:JA:90:LYS:HG2	2.42	0.45
36:JA:35:GLN:HA	36:JA:35:GLN:HE21	1.81	0.45
36:JA:79:VAL:O	36:JA:82:LEU:HB3	2.17	0.45
65:MB:86:VAL:O	65:MB:89:MET:HG2	2.16	0.45
14:N:102:MET:CB	14:N:112:GLN:N	2.73	0.45
2:B:2828:G:O3'	14:N:4:ARG:HG3	2.16	0.45
15:O:117:ASP:HB2	15:O:118:PRO:CD	2.46	0.45
68:PB:69:ILE:HG22	68:PB:73:MET:HE2	1.98	0.45
17:Q:91:ARG:HE	17:Q:97:VAL:HB	1.81	0.45
69:QB:35:ASP:CA	69:QB:53:TRP:HE1	2.29	0.45
20:T:53:LYS:O	20:T:56:ASP:HB2	2.17	0.45
21:U:51:VAL:HG13	21:U:56:ARG:O	2.17	0.45
73:UB:137:LYS:HB2	73:UB:139:LYS:HG3	1.98	0.45
48:VA:145:ILE:CG2	48:VA:148:GLY:HA2	2.44	0.45
23:W:177:VAL:HG12	23:W:177:VAL:O	2.16	0.45
24:X:137:ARG:HB3	24:X:140:VAL:HG23	1.98	0.45
50:XA:126:PRO:CD	50:XA:147:THR:HG22	2.47	0.45
24:X:87:THR:HG23	25:Y:156:TYR:CZ	2.52	0.45
52:ZA:238:SER:C	52:ZA:240:LEU:H	2.20	0.45
52:ZA:66:PHE:H	52:ZA:66:PHE:HD1	1.65	0.45
1:A:1073:G:H5''	63:KB:9:LYS:O	2.17	0.45
1:A:1263:G:H2'	1:A:1264:G:O4'	2.17	0.45
1:A:514:G:O2'	1:A:515:A:H5'	2.17	0.45
1:A:64:U:H3'	1:A:65:A:H5''	1.98	0.45
2:B:10:C:H2'	2:B:11:A:O4'	2.16	0.45
2:B:1408:G:H2'	2:B:1409:G:C8	2.52	0.45
2:B:2349:U:O2'	2:B:2350:C:H5'	2.16	0.45
2:B:3182:G:H5''	20:T:37:ARG:NH2	2.31	0.45
2:B:3343:G:H1'	2:B:3362:A:N1	2.32	0.45
2:B:3369:G:H2'	7:G:380:MET:HE1	1.99	0.45
2:B:47:C:H2'	2:B:48:A:C8	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:728:G:C2	22:V:138:LEU:HD23	2.52	0.45
2:B:790:U:H4'	8:H:112:LYS:O	2.17	0.45
2:B:79:U:H2'	2:B:80:G:H8	1.82	0.45
2:B:871:U:H2'	2:B:872:U:H6	1.78	0.45
2:B:362:U:O2'	2:B:929:A:H5'	2.16	0.45
54:BB:106:LYS:HB2	54:BB:108:ARG:HG3	1.99	0.45
4:D:64:A:C2	9:I:290:ILE:HG21	2.52	0.45
56:DB:109:LEU:HD23	56:DB:110:ALA:N	2.32	0.45
31:EA:129:TRP:CZ3	38:LA:97:GLU:HG2	2.52	0.45
6:F:189:TYR:HA	6:F:192:LYS:HB2	1.98	0.45
6:F:30:ARG:HG3	6:F:63:PHE:CD2	2.51	0.45
32:FA:100:PRO:CB	32:FA:123:VAL:HG13	2.42	0.45
58:FB:36:THR:CG2	58:FB:96:LEU:HB2	2.43	0.45
7:G:144:ILE:O	7:G:148:LEU:HD13	2.17	0.45
7:G:217:ALA:HB1	7:G:337:THR:O	2.17	0.45
7:G:43:LEU:HD23	7:G:208:VAL:HG22	1.98	0.45
9:I:34:LYS:O	9:I:38:THR:HG23	2.17	0.45
9:I:58:LYS:HD3	9:I:93:THR:CB	2.46	0.45
61:IB:58:CYS:SG	61:IB:59:PRO:HD2	2.57	0.45
11:K:62:ILE:O	11:K:66:LYS:HG3	2.17	0.45
39:MA:48:ARG:HG3	39:MA:49:LYS:CD	2.47	0.45
15:O:55:ARG:HA	15:O:59:ILE:H	1.82	0.45
68:PB:52:VAL:CG1	68:PB:61:LEU:HD11	2.47	0.45
17:Q:115:ARG:NH2	17:Q:145:PHE:HB2	2.32	0.45
44:RA:93:LYS:HD2	44:RA:102:ARG:CG	2.44	0.45
70:RB:68:ARG:HD2	70:RB:78:THR:O	2.16	0.45
21:U:126:ARG:HA	21:U:140:GLU:HB3	1.97	0.45
21:U:86:LYS:HG3	21:U:89:LYS:HD3	1.99	0.45
6:F:180:LEU:HD11	47:UA:23:ARG:HG2	1.98	0.45
48:VA:5:ARG:HG2	48:VA:8:LYS:HB2	1.99	0.45
24:X:12:ARG:O	24:X:13:ARG:HB2	2.16	0.45
52:ZA:165:VAL:HG11	52:ZA:210:THR:HA	1.98	0.45
1:A:1025:A:H2'	1:A:1026:A:H3'	1.98	0.45
1:A:1477:G:H5'	69:QB:45:MET:HB2	1.99	0.45
1:A:1590:G:H2'	1:A:1591:C:C6	2.52	0.45
1:A:472:U:H2'	1:A:473:A:C8	2.52	0.45
1:A:546:U:H2'	1:A:547:U:C6	2.52	0.45
1:A:572:C:H2'	1:A:573:C:C6	2.52	0.45
1:A:614:C:H5	73:UB:5:LYS:HZ1	1.65	0.45
53:AB:5:ILE:CB	53:AB:10:LYS:HE3	2.46	0.45
2:B:1212:A:H2	2:B:1293:U:O2	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1558:A:H8	2:B:1558:A:P	2.40	0.45
2:B:155:G:C5'	2:B:156:G:H2'	2.47	0.45
2:B:1584:U:H2'	2:B:1585:C:C6	2.50	0.45
2:B:1656:A:H4'	2:B:1657:C:H5'	1.99	0.45
2:B:1774:C:H2'	2:B:1775:G:C5'	2.47	0.45
2:B:215:G:H2'	2:B:216:G:C8	2.52	0.45
2:B:2407:C:H2'	2:B:2408:U:H6	1.81	0.45
2:B:2428:U:H2'	2:B:2429:G:H8	1.82	0.45
2:B:2484:A:H5''	5:E:130:LYS:NZ	2.32	0.45
2:B:2642:A:H5'	33:GA:7:HIS:HB2	1.98	0.45
2:B:2768:U:H2'	2:B:2769:A:H8	1.82	0.45
2:B:2844:C:O2'	2:B:2845:A:H5'	2.17	0.45
2:B:3206:C:O2'	18:R:64:VAL:HG11	2.17	0.45
2:B:3305:A:H5'	7:G:334:ARG:NH2	2.31	0.45
2:B:729:C:O2'	2:B:730:C:H5'	2.17	0.45
2:B:796:U:H2'	2:B:797:U:N1	2.32	0.45
2:B:947:G:H5''	36:JA:55:ILE:HB	1.99	0.45
28:BA:9:SER:CB	28:BA:52:THR:HA	2.47	0.45
3:C:38:U:C2	39:MA:83:LYS:HA	2.51	0.45
1:A:1528:U:OP1	55:CB:109:LYS:HA	2.17	0.45
82:DC:108:HIS:HB2	82:DC:109:VAL:H	1.62	0.45
82:DC:632:LYS:CB	82:DC:648:ASP:HB3	2.26	0.45
31:EA:121:ARG:HB3	31:EA:131:PHE:CZ	2.52	0.45
57:EB:89:HIS:CE1	57:EB:165:LYS:HG2	2.52	0.45
6:F:158:ILE:HD12	6:F:162:ALA:HB1	1.98	0.45
2:B:2187:G:N7	6:F:200:ARG:HD3	2.32	0.45
2:B:2967:A:H5''	6:F:214:GLY:N	2.32	0.45
6:F:43:GLY:HA3	6:F:88:ILE:O	2.17	0.45
59:GB:76:LEU:O	59:GB:80:LEU:HG	2.16	0.45
8:H:52:VAL:CG1	8:H:103:THR:H	2.30	0.45
53:AB:76:ARG:HB2	60:HB:65:TYR:OH	2.17	0.45
9:I:160:PHE:HB3	9:I:180:PHE:CE1	2.52	0.45
9:I:212:ALA:HB2	9:I:219:PHE:CE1	2.52	0.45
35:IA:10:ARG:HB2	35:IA:12:TYR:CE2	2.52	0.45
37:KA:32:ILE:O	37:KA:35:VAL:HG22	2.17	0.45
2:B:3109:G:H21	13:M:156:GLN:HE22	1.65	0.45
14:N:36:LEU:HD21	14:N:69:ARG:NH1	2.32	0.45
15:O:135:GLY:O	15:O:139:THR:HG23	2.16	0.45
67:OB:57:LEU:HD22	67:OB:60:ARG:HD3	1.99	0.45
16:P:106:LEU:O	16:P:107:ASP:HB2	2.17	0.45
68:PB:42:TYR:HD1	68:PB:85:PHE:CD1	2.35	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:Q:167:PHE:CD1	17:Q:168:ARG:HG2	2.51	0.45
70:RB:51:VAL:HG13	70:RB:94:GLU:HB2	1.99	0.45
1:A:777:C:H5	74:VB:10:ARG:HH11	1.65	0.45
49:WA:61:PHE:HZ	49:WA:94:VAL:HA	1.82	0.45
1:A:1534:G:C8	75:WB:73:GLY:HA3	2.52	0.45
50:XA:29:VAL:O	50:XA:29:VAL:HG13	2.16	0.45
77:YB:33:LEU:HD23	77:YB:81:ARG:N	2.32	0.45
52:ZA:37:PRO:HD2	52:ZA:46:LYS:HD2	1.99	0.45
1:A:1469:A:H2'	1:A:1470:C:C6	2.52	0.45
1:A:1746:A:H2'	1:A:1747:G:O4'	2.17	0.45
1:A:328:A:H5'	61:IB:12:ALA:HB1	1.99	0.45
1:A:403:G:N3	1:A:403:G:H2'	2.31	0.45
1:A:426:G:N3	1:A:426:G:H2'	2.31	0.45
1:A:627:C:C4	1:A:628:G:C5	3.05	0.45
1:A:967:A:H2'	1:A:968:U:O4'	2.17	0.45
27:AA:26:ALA:O	27:AA:114:ILE:HA	2.16	0.45
2:B:1066:G:H2'	2:B:1067:U:C6	2.52	0.45
2:B:1169:A:H2'	2:B:1170:A:C8	2.52	0.45
2:B:1309:U:C6	2:B:1311:G:OP2	2.70	0.45
2:B:1563:C:H2'	2:B:1564:U:O4'	2.17	0.45
2:B:1838:G:H4'	2:B:1839:A:C5	2.52	0.45
2:B:1894:U:H2'	2:B:1895:A:C4'	2.47	0.45
2:B:2170:U:H2'	2:B:2171:G:H8	1.81	0.45
2:B:2281:A:O2'	2:B:2282:U:H5''	2.17	0.45
2:B:2408:U:O2'	2:B:2409:G:H5'	2.17	0.45
2:B:2424:A:H2'	2:B:2425:G:O4'	2.17	0.45
2:B:2789:U:H2'	2:B:2790:A:O4'	2.16	0.45
2:B:374:A:C4'	2:B:375:A:H5'	2.43	0.45
2:B:716:A:N7	32:FA:117:ARG:HG3	2.32	0.45
2:B:759:U:H2'	2:B:760:G:O4'	2.17	0.45
2:B:95:A:H2'	2:B:96:G:C4'	2.47	0.45
54:BB:181:VAL:HG11	54:BB:225:VAL:HG13	1.98	0.45
54:BB:200:ARG:O	54:BB:201:HIS:HB2	2.16	0.45
80:BC:35:TYR:O	80:BC:39:LEU:HD23	2.16	0.45
55:CB:122:ASN:O	55:CB:126:ASP:HA	2.16	0.45
55:CB:90:ILE:O	55:CB:94:THR:HG23	2.16	0.45
56:DB:85:ARG:NH1	56:DB:86:PRO:O	2.50	0.45
82:DC:436:LEU:HD23	82:DC:437:MET:H	1.82	0.45
82:DC:488:VAL:HG12	82:DC:796:MET:HG3	1.99	0.45
82:DC:664:VAL:HA	82:DC:667:PHE:HB3	1.99	0.45
82:DC:734:GLN:NE2	82:DC:765:LEU:HG	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:FA:131:SER:HB3	32:FA:134:ALA:CB	2.47	0.45
2:B:965:A:C5'	32:FA:41:HIS:HE2	2.30	0.45
1:A:103:A:P	58:FB:19:ALA:HB3	2.57	0.45
58:FB:5:ARG:HH12	58:FB:28:GLU:C	2.20	0.45
59:GB:56:ALA:O	59:GB:60:LEU:HD23	2.17	0.45
36:JA:19:ARG:CB	36:JA:32:TRP:HA	2.44	0.45
2:B:1387:G:O2'	36:JA:77:ALA:CB	2.65	0.45
11:K:119:VAL:O	11:K:119:VAL:HG12	2.16	0.45
17:Q:119:TYR:HE1	39:MA:118:ILE:HD11	1.82	0.45
39:MA:28:LEU:O	39:MA:32:LYS:HB2	2.17	0.45
14:N:43:VAL:HG12	14:N:171:TRP:CD1	2.49	0.45
68:PB:54:LEU:HD22	68:PB:54:LEU:N	2.31	0.45
72:TB:89:TRP:O	72:TB:93:LEU:HD23	2.16	0.45
11:K:104:GLN:CG	22:V:6:THR:HG22	2.47	0.45
48:VA:133:THR:HG23	48:VA:150:ILE:HG12	1.98	0.45
48:VA:15:LEU:CB	48:VA:86:PHE:HE2	2.30	0.45
48:VA:28:VAL:O	48:VA:84:VAL:HA	2.17	0.45
74:VB:105:ARG:NH1	74:VB:105:ARG:HG2	2.31	0.45
23:W:91:SER:HA	23:W:94:VAL:CG2	2.47	0.45
49:WA:251:TRP:CZ2	49:WA:271:VAL:HG11	2.51	0.45
50:XA:121:VAL:HG23	50:XA:141:ILE:CG2	2.46	0.45
50:XA:171:GLY:HA3	50:XA:203:PHE:CD2	2.52	0.45
25:Y:38:ASP:N	25:Y:63:VAL:HG13	2.32	0.45
25:Y:39:ILE:HG22	25:Y:99:SER:CB	2.46	0.45
77:YB:19:HIS:O	77:YB:23:THR:HG23	2.17	0.45
52:ZA:99:LYS:HA	52:ZA:117:THR:HA	1.99	0.45
1:A:1314:U:C5'	1:A:1315:U:H5	2.30	0.45
1:A:1489:U:H5'	1:A:1494:C:H1'	1.99	0.45
1:A:333:A:H8	58:FB:49:ARG:HB3	1.81	0.45
1:A:398:G:OP2	58:FB:47:ARG:NH1	2.49	0.45
1:A:50:C:O2'	1:A:51:A:H5'	2.17	0.45
1:A:629:U:C2'	1:A:630:A:H5'	2.46	0.45
1:A:883:C:H2'	1:A:884:A:C8	2.52	0.45
1:A:948:G:H2'	1:A:949:C:C6	2.52	0.45
27:AA:13:ILE:HD13	27:AA:121:GLU:OE2	2.17	0.45
2:B:101:G:H2'	2:B:102:C:O4'	2.17	0.45
2:B:1195:A:C4	2:B:1309:U:H1'	2.51	0.45
2:B:1352:A:H1'	2:B:1353:U:C5'	2.47	0.45
2:B:138:U:H2'	2:B:139:G:H8	1.81	0.45
2:B:1427:U:O2'	2:B:1428:A:H5'	2.17	0.45
2:B:1494:U:C5'	2:B:1495:U:H5'	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1769:G:H2'	2:B:1770:G:H8	1.82	0.45
2:B:1887:A:H5'	7:G:226:PHE:O	2.17	0.45
2:B:1940:G:H2'	2:B:1941:C:C6	2.52	0.45
2:B:2158:A:H4'	2:B:2159:U:C5'	2.47	0.45
2:B:2224:A:H2'	2:B:2225:U:O4'	2.17	0.45
2:B:1446:A:H61	2:B:2356:A:H3'	1.81	0.45
2:B:2609:A:H2'	2:B:2610:G:C8	2.52	0.45
2:B:2815:G:H8	2:B:2815:G:O5'	2.00	0.45
2:B:3325:G:H4'	35:IA:104:LEU:N	2.32	0.45
2:B:3331:U:H2'	2:B:3332:U:O4'	2.17	0.45
2:B:577:C:O2'	2:B:579:G:H5''	2.15	0.45
2:B:729:C:H1'	22:V:79:LYS:HE3	1.99	0.45
2:B:84:U:O5'	2:B:85:A:H2'	2.16	0.45
2:B:892:U:H2'	2:B:893:C:C6	2.52	0.45
2:B:924:G:C5	2:B:2809:C:H1'	2.52	0.45
2:B:924:G:H8	2:B:924:G:P	2.40	0.45
54:BB:196:VAL:HB	54:BB:209:HIS:CB	2.47	0.45
3:C:129:C:H2'	3:C:130:C:C6	2.52	0.45
55:CB:80:LYS:O	55:CB:83:ARG:HB2	2.16	0.45
4:D:8:G:H2'	4:D:9:C:H6	1.80	0.45
82:DC:147:LEU:CD2	82:DC:189:VAL:HA	2.44	0.45
5:E:111:ILE:HG23	5:E:138:VAL:CG2	2.46	0.45
5:E:64:SER:C	5:E:65:ILE:HG13	2.37	0.45
32:FA:129:PHE:N	32:FA:129:PHE:CD2	2.85	0.45
58:FB:147:ALA:O	58:FB:148:ALA:HB3	2.17	0.45
7:G:153:LYS:NZ	7:G:153:LYS:HB3	2.31	0.45
35:IA:23:VAL:HG21	35:IA:31:ARG:HH11	1.82	0.45
35:IA:29:ALA:HB3	35:IA:60:TRP:CH2	2.52	0.45
10:J:165:LEU:O	10:J:166:LYS:HD3	2.17	0.45
36:JA:25:TYR:HB2	36:JA:28:VAL:HG23	1.99	0.45
11:K:135:ALA:HA	11:K:230:GLY:H	1.82	0.45
37:KA:13:HIS:CE1	37:KA:89:LEU:CD1	3.00	0.45
13:M:103:ILE:HG13	13:M:136:PHE:HZ	1.77	0.45
13:M:170:LYS:HB3	13:M:175:PHE:CE2	2.52	0.45
15:O:71:VAL:HB	15:O:76:ALA:HB2	1.99	0.45
42:PA:14:LEU:HD13	42:PA:52:TYR:CD2	2.52	0.45
68:PB:115:ARG:O	68:PB:119:ILE:HB	2.17	0.45
68:PB:145:ARG:HA	68:PB:145:ARG:HE	1.81	0.45
19:S:168:GLY:O	19:S:172:ARG:HD3	2.17	0.45
19:S:199:LEU:HB3	19:S:203:ARG:NE	2.32	0.45
19:S:73:ARG:O	19:S:75:VAL:N	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
72:TB:44:HIS:HB2	72:TB:46:TYR:HE2	1.76	0.45
47:UA:37:TYR:O	47:UA:47:VAL:HB	2.16	0.45
73:UB:89:ASN:HB2	73:UB:92:CYS:SG	2.57	0.45
48:VA:33:VAL:HG22	48:VA:34:SER:N	2.18	0.45
50:XA:75:ALA:HB1	50:XA:174:TRP:CZ3	2.52	0.45
2:B:1095:U:C2	25:Y:127:GLN:HA	2.52	0.45
78:ZB:17:GLY:O	78:ZB:18:ARG:HG2	2.16	0.45
1:A:1049:U:H5''	77:YB:70:LYS:CG	2.46	0.44
1:A:1279:C:H2'	1:A:1280:C:C6	2.52	0.44
1:A:1387:G:C8	67:OB:44:LYS:NZ	2.84	0.44
1:A:1516:A:O2'	1:A:1517:U:H5'	2.17	0.44
1:A:1588:G:O2'	1:A:1589:C:H5'	2.17	0.44
1:A:1630:U:H2'	1:A:1632:C:H5	1.81	0.44
1:A:279:G:H2'	1:A:280:U:H4'	1.98	0.44
1:A:319:U:H4'	1:A:323:A:H1'	1.99	0.44
1:A:325:G:H2'	1:A:326:G:C8	2.53	0.44
1:A:338:C:H2'	1:A:339:C:C6	2.52	0.44
1:A:448:C:O2'	1:A:449:C:H5'	2.17	0.44
1:A:475:A:H3'	1:A:476:U:C6	2.53	0.44
53:AB:24:PHE:O	53:AB:28:GLU:HB2	2.18	0.44
2:B:69:C:O2'	2:B:101:G:H1'	2.17	0.44
2:B:1308:A:N6	2:B:2367:A:C2	2.85	0.44
2:B:1517:G:H2'	2:B:1518:U:H6	1.81	0.44
2:B:1670:C:H4'	2:B:1859:A:O2'	2.17	0.44
2:B:1867:A:H2'	2:B:1868:G:H8	1.82	0.44
2:B:2184:U:H5'	6:F:211:HIS:HE2	1.82	0.44
2:B:1450:G:H1	2:B:2354:C:H42	1.64	0.44
2:B:421:G:OP1	2:B:2386:A:H5'	2.17	0.44
2:B:2394:G:H2'	2:B:2395:G:C4'	2.47	0.44
2:B:2628:A:H2'	2:B:2629:U:C5'	2.46	0.44
2:B:2889:C:C2'	2:B:2890:A:H5'	2.47	0.44
2:B:3226:A:H1'	2:B:3260:G:H22	1.82	0.44
2:B:714:G:N7	32:FA:111:LYS:HE2	2.32	0.44
2:B:769:G:H2'	2:B:770:G:H5'	1.97	0.44
54:BB:193:GLY:HA3	54:BB:212:ASP:CA	2.41	0.44
29:CA:26:VAL:HG22	29:CA:28:THR:HG23	1.99	0.44
55:CB:201:ALA:HB1	55:CB:211:ILE:HD11	1.99	0.44
2:B:1123:U:C5'	4:D:81:U:H5''	2.47	0.44
30:DA:11:ASP:OD2	30:DA:13:ARG:HB2	2.17	0.44
82:DC:127:VAL:HG12	82:DC:129:VAL:HG13	1.99	0.44
82:DC:674:GLY:HA3	82:DC:679:GLU:O	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:724:ILE:HG12	82:DC:818:ILE:HD12	1.99	0.44
5:E:73:ASP:HA	5:E:144:LEU:HD13	1.99	0.44
31:EA:129:TRP:CH2	38:LA:97:GLU:HG2	2.52	0.44
57:EB:115:SER:C	57:EB:117:THR:H	2.21	0.44
57:EB:17:GLU:HG3	57:EB:43:PHE:CE1	2.52	0.44
57:EB:62:VAL:CG1	57:EB:67:LEU:HG	2.47	0.44
83:EC:6891:G:N2	83:EC:6938:A:N6	2.64	0.44
6:F:80:GLU:HB2	6:F:168:VAL:CG1	2.47	0.44
32:FA:118:ILE:HB	32:FA:119:PRO:HD2	1.99	0.44
7:G:350:ALA:O	7:G:351:LEU:HB2	2.17	0.44
7:G:37:ARG:HA	7:G:186:GLY:CA	2.35	0.44
34:HA:68:TYR:HB2	34:HA:105:ALA:HA	1.98	0.44
61:IB:53:TYR:CD1	61:IB:113:PRO:HG2	2.52	0.44
36:JA:53:PRO:HA	36:JA:57:TYR:CD2	2.53	0.44
12:L:89:GLU:C	12:L:91:PHE:H	2.19	0.44
38:LA:58:ARG:O	38:LA:59:PRO:C	2.56	0.44
13:M:4:ILE:HG23	13:M:5:GLN:H	1.82	0.44
2:B:1125:U:OP1	14:N:15:LYS:CB	2.65	0.44
55:CB:25:LEU:HD12	66:NB:61:SER:OG	2.17	0.44
17:Q:28:GLN:OE1	19:S:200:TRP:HB3	2.17	0.44
17:Q:46:ILE:O	17:Q:49:ARG:NE	2.51	0.44
69:QB:83:ALA:CB	69:QB:91:TYR:HB3	2.46	0.44
18:R:23:ILE:N	18:R:23:ILE:HD12	2.32	0.44
2:B:289:A:OP1	19:S:171:SER:HA	2.17	0.44
19:S:39:ALA:O	19:S:61:ILE:HB	2.17	0.44
20:T:110:PRO:HB2	20:T:111:PRO:HD3	1.99	0.44
20:T:189:ASP:O	20:T:193:GLN:HG2	2.17	0.44
2:B:2320:A:N1	47:UA:16:VAL:HB	2.32	0.44
22:V:33:TYR:HA	22:V:36:LEU:CD1	2.47	0.44
22:V:90:ASP:OD1	22:V:92:ARG:HG3	2.17	0.44
48:VA:75:LYS:O	48:VA:76:LEU:HG	2.17	0.44
23:W:118:HIS:O	23:W:122:VAL:HG23	2.17	0.44
49:WA:203:THR:HB	49:WA:243:LEU:HB3	1.99	0.44
24:X:14:LEU:HD23	24:X:15:PRO:HD3	1.98	0.44
4:D:89:G:H5"	24:X:84:ARG:NH1	2.32	0.44
50:XA:64:ILE:HA	50:XA:67:ILE:HG12	1.98	0.44
52:ZA:160:GLY:HA3	52:ZA:216:VAL:HB	1.99	0.44
52:ZA:162:CYS:SG	52:ZA:212:LYS:HB3	2.56	0.44
52:ZA:76:LEU:CD1	52:ZA:105:GLY:HA2	2.47	0.44
1:A:123:G:H21	54:BB:146:THR:HG21	1.81	0.44
1:A:1574:G:H5"	1:A:1575:G:OP1	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1645:G:H2'	1:A:1646:C:H6	1.83	0.44
1:A:306:U:H2'	1:A:307:G:H8	1.83	0.44
1:A:40:A:H2'	1:A:41:A:O4'	2.17	0.44
1:A:551:G:H2'	1:A:552:G:C8	2.52	0.44
1:A:750:U:H2'	1:A:751:G:O4'	2.18	0.44
2:B:1492:G:P	2:B:1493:G:H22	2.40	0.44
2:B:1690:C:H2'	2:B:1691:U:O4'	2.17	0.44
2:B:1747:G:O2'	2:B:1748:G:H5'	2.18	0.44
2:B:2107:A:H2'	2:B:2108:C:H6	1.82	0.44
2:B:2210:G:H2'	2:B:2211:U:O4'	2.17	0.44
2:B:2844:C:H42	2:B:2898:G:H22	1.65	0.44
2:B:29:C:OP1	19:S:189:LYS:HB3	2.17	0.44
2:B:3223:A:H2'	2:B:3224:G:O4'	2.17	0.44
2:B:3238:G:N2	2:B:3250:U:H1'	2.32	0.44
2:B:3301:U:O2'	2:B:3302:U:H5'	2.17	0.44
2:B:397:A:H4'	2:B:399:A:OP1	2.17	0.44
2:B:705:A:N6	32:FA:113:LEU:HB2	2.32	0.44
2:B:715:A:H5'	2:B:753:C:H4'	1.99	0.44
2:B:948:C:H2'	2:B:949:C:C6	2.52	0.44
1:A:1163:A:H4'	55:CB:166:ARG:NH2	2.31	0.44
4:D:91:G:H2'	4:D:92:A:C8	2.52	0.44
30:DA:81:GLN:CG	30:DA:96:PRO:HB2	2.47	0.44
56:DB:174:LYS:HD2	56:DB:175:ILE:H	1.83	0.44
82:DC:131:THR:HG21	82:DC:163:ALA:HB2	1.98	0.44
31:EA:21:LYS:HG2	31:EA:46:ILE:CD1	2.48	0.44
31:EA:26:VAL:HG23	31:EA:27:LYS:N	2.32	0.44
32:FA:111:LYS:HD2	32:FA:129:PHE:HB2	1.99	0.44
7:G:111:SER:O	7:G:114:VAL:HG23	2.17	0.44
2:B:1887:A:C5'	7:G:227:GLU:HA	2.47	0.44
8:H:26:PHE:CD1	8:H:127:ALA:HA	2.52	0.44
8:H:29:PRO:HD3	8:H:279:HIS:CG	2.53	0.44
8:H:313:LEU:HD23	8:H:314:LYS:N	2.32	0.44
34:HA:40:LYS:C	34:HA:65:THR:HG23	2.37	0.44
60:HB:1:MET:CE	60:HB:41:TYR:HA	2.47	0.44
9:I:166:ALA:HB1	9:I:171:LEU:HD12	1.98	0.44
9:I:194:LEU:HD22	9:I:198:TYR:CD2	2.53	0.44
11:K:184:LEU:O	11:K:188:ILE:HG12	2.17	0.44
12:L:137:ASN:ND2	19:S:3:ALA:HB3	2.31	0.44
38:LA:92:ALA:O	38:LA:96:GLU:HG2	2.17	0.44
39:MA:100:VAL:CG2	39:MA:101:THR:H	2.22	0.44
39:MA:103:LYS:O	39:MA:107:LYS:HG3	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:135:C:O2'	39:MA:94:LYS:HB3	2.16	0.44
68:PB:138:THR:HA	68:PB:141:THR:OG1	2.17	0.44
68:PB:140:THR:O	68:PB:143:ARG:HD3	2.17	0.44
17:Q:24:VAL:HB	17:Q:26:PHE:CZ	2.52	0.44
69:QB:124:ILE:HD11	69:QB:128:GLY:CA	2.45	0.44
18:R:45:LEU:CD2	18:R:55:ARG:HD3	2.38	0.44
71:SB:23:ILE:HG22	71:SB:24:ILE:N	2.33	0.44
73:UB:133:LEU:HD21	73:UB:137:LYS:HE3	1.99	0.44
23:W:45:VAL:HG22	23:W:50:ILE:CB	2.42	0.44
49:WA:16:HIS:HE1	49:WA:43:ILE:HB	1.81	0.44
50:XA:41:ARG:O	50:XA:43:ASP:N	2.50	0.44
1:A:1456:C:H3'	1:A:1457:C:H5'	1.99	0.44
1:A:786:C:OP1	54:BB:240:LYS:HE3	2.18	0.44
1:A:962:C:OP1	63:KB:70:LYS:HB3	2.18	0.44
1:A:962:C:H3'	1:A:963:A:C8	2.52	0.44
1:A:976:G:N2	1:A:1027:A:H61	2.16	0.44
2:B:858:A:H5''	2:B:1790:G:N2	2.32	0.44
2:B:2217:U:H2'	2:B:2218:G:H8	1.83	0.44
2:B:2563:G:H5''	12:L:27:THR:HG23	1.99	0.44
2:B:2745:G:N1	2:B:2747:A:H5''	2.32	0.44
2:B:2774:C:H2'	2:B:2775:U:H6	1.82	0.44
2:B:2909:U:H2'	2:B:2910:A:C5'	2.47	0.44
2:B:320:G:H2'	2:B:321:C:C6	2.52	0.44
2:B:354:U:H2'	2:B:355:A:H8	1.82	0.44
2:B:382:U:O2'	21:U:100:ALA:HB3	2.17	0.44
2:B:637:C:H2'	2:B:638:C:C6	2.52	0.44
2:B:655:C:OP1	36:JA:25:TYR:HB3	2.18	0.44
2:B:757:C:H2'	2:B:758:C:H5''	1.98	0.44
2:B:882:A:H5''	2:B:1847:A:N6	2.33	0.44
2:B:909:G:N7	2:B:925:A:C2	2.85	0.44
28:BA:19:THR:HB	28:BA:31:PHE:HB2	1.98	0.44
3:C:51:G:H1'	3:C:52:A:C8	2.52	0.44
4:D:100:C:H2'	4:D:101:G:O4'	2.16	0.44
4:D:46:A:H2'	4:D:47:C:C6	2.52	0.44
82:DC:463:LEU:HD11	82:DC:467:GLY:HA3	2.00	0.44
82:DC:655:TYR:HB2	82:DC:693:LEU:HD22	1.99	0.44
57:EB:46:ILE:CD1	57:EB:60:ILE:HA	2.47	0.44
7:G:225:GLY:HA2	7:G:269:GLN:HE22	1.83	0.44
59:GB:85:VAL:HG11	59:GB:104:PHE:CE1	2.53	0.44
34:HA:51:LEU:CD1	38:LA:91:ARG:HG3	2.46	0.44
34:HA:89:VAL:HG13	34:HA:89:VAL:O	2.16	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:HB:87:VAL:O	60:HB:87:VAL:HG22	2.16	0.44
61:IB:96:LYS:O	61:IB:98:ASN:OD1	2.34	0.44
10:J:122:PHE:HA	10:J:123:PRO:HA	1.78	0.44
36:JA:11:LYS:O	36:JA:12:LYS:HB2	2.18	0.44
2:B:430:U:H4'	37:KA:90:PRO:HG3	1.99	0.44
12:L:147:LYS:O	12:L:201:THR:HB	2.17	0.44
12:L:226:TYR:HA	12:L:229:VAL:HB	2.00	0.44
13:M:160:ASP:O	13:M:164:ILE:HB	2.18	0.44
65:MB:34:VAL:HA	65:MB:37:ALA:HB2	1.98	0.44
14:N:86:HIS:HB3	14:N:139:ARG:CG	2.47	0.44
66:NB:35:PRO:HD2	69:QB:7:ARG:O	2.17	0.44
41:OA:19:CYS:HB2	41:OA:27:PHE:HB2	2.00	0.44
41:OA:21:ARG:HB2	41:OA:39:TYR:HD2	1.82	0.44
17:Q:47:ALA:HB3	39:MA:115:LYS:NZ	2.32	0.44
69:QB:130:ARG:NH1	69:QB:134:ARG:HD3	2.31	0.44
69:QB:33:TYR:HE1	69:QB:100:ILE:HD13	1.82	0.44
44:RA:93:LYS:HD3	44:RA:103:LEU:N	2.33	0.44
21:U:59:PRO:HB2	21:U:78:VAL:HG21	1.97	0.44
73:UB:29:TYR:CZ	73:UB:33:LEU:HD12	2.52	0.44
2:B:784:A:N3	22:V:93:ILE:HG22	2.32	0.44
48:VA:64:ARG:NH1	48:VA:67:LEU:HD22	2.31	0.44
48:VA:53:MET:HE1	48:VA:83:ASN:HB3	1.98	0.44
74:VB:22:GLN:HA	74:VB:74:LEU:HD23	1.98	0.44
50:XA:126:PRO:CG	50:XA:151:SER:HB3	2.47	0.44
52:ZA:139:ILE:HG21	52:ZA:193:VAL:CG2	2.48	0.44
1:A:152:U:H3'	1:A:153:G:H5''	2.00	0.44
1:A:1632:C:H2'	1:A:1633:A:C8	2.53	0.44
27:AA:34:LEU:HD22	27:AA:60:ALA:CB	2.47	0.44
53:AB:168:ILE:HG22	53:AB:189:MET:CB	2.46	0.44
53:AB:102:ALA:CB	53:AB:171:ALA:HB1	2.48	0.44
2:B:109:A:N6	2:B:323:A:H1'	2.33	0.44
2:B:1453:A:N3	2:B:1453:A:H2'	2.32	0.44
2:B:1635:G:OP2	31:EA:73:LYS:HD2	2.18	0.44
2:B:2300:G:H5''	2:B:2327:U:O2'	2.18	0.44
2:B:2367:A:H3'	2:B:2368:A:C8	2.50	0.44
2:B:2766:U:C5'	46:TA:40:LYS:HB2	2.47	0.44
2:B:2845:A:H2	2:B:2850:G:H1	1.65	0.44
2:B:3110:C:H2'	2:B:3111:U:C6	2.52	0.44
2:B:3163:A:C2'	2:B:3164:C:H5''	2.47	0.44
2:B:3262:U:H2'	2:B:3263:G:O4'	2.18	0.44
2:B:556:U:H5'	2:B:557:A:C4	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:756:U:H2'	2:B:757:C:C6	2.52	0.44
54:BB:29:PRO:O	54:BB:31:PRO:HD3	2.18	0.44
54:BB:66:MET:O	54:BB:67:GLN:HG3	2.16	0.44
56:DB:161:GLU:HG3	56:DB:170:THR:N	2.32	0.44
82:DC:318:ALA:O	82:DC:322:VAL:HG23	2.18	0.44
82:DC:532:GLY:HA3	82:DC:538:LEU:HD13	2.00	0.44
82:DC:749:LYS:HB2	82:DC:749:LYS:HZ2	1.83	0.44
57:EB:133:THR:HG21	57:EB:159:VAL:HG12	1.99	0.44
1:A:256:A:C1'	58:FB:72:ILE:HA	2.43	0.44
7:G:45:SER:HA	7:G:338:LEU:O	2.18	0.44
7:G:303:LYS:CD	7:G:371:GLN:HB3	2.46	0.44
9:I:40:HIS:CD2	9:I:42:ALA:HB3	2.52	0.44
35:IA:25:PHE:O	35:IA:64:VAL:HB	2.17	0.44
10:J:47:PHE:O	10:J:50:LYS:HG3	2.17	0.44
10:J:92:SER:C	10:J:94:GLU:H	2.19	0.44
36:JA:102:ALA:O	36:JA:106:VAL:HB	2.17	0.44
65:MB:126:VAL:HG13	65:MB:127:ARG:N	2.30	0.44
65:MB:44:ARG:HD3	65:MB:44:ARG:O	2.17	0.44
14:N:166:ILE:HG22	14:N:167:LEU:N	2.32	0.44
66:NB:39:VAL:CG1	66:NB:42:GLU:H	2.29	0.44
41:OA:53:ALA:HA	41:OA:56:ARG:HD2	1.99	0.44
68:PB:75:ASN:HB3	68:PB:78:HIS:CD2	2.49	0.44
18:R:98:SER:O	18:R:102:LYS:HB2	2.18	0.44
70:RB:26:LEU:O	70:RB:88:LYS:HA	2.17	0.44
19:S:68:ARG:HH21	19:S:128:LYS:CE	2.23	0.44
71:SB:18:SER:H	71:SB:54:ALA:HB3	1.81	0.44
21:U:126:ARG:NH2	21:U:126:ARG:HB2	2.32	0.44
2:B:975:C:H5	22:V:14:GLY:O	2.00	0.44
74:VB:23:PHE:CE2	74:VB:75:VAL:HG12	2.53	0.44
23:W:81:ARG:C	23:W:83:GLY:H	2.21	0.44
49:WA:75:ALA:HB2	49:WA:117:LYS:HB2	2.00	0.44
24:X:24:LEU:CD2	24:X:59:VAL:HG21	2.47	0.44
50:XA:123:VAL:O	50:XA:146:LEU:HG	2.18	0.44
25:Y:20:ARG:HB3	25:Y:20:ARG:CZ	2.48	0.44
1:A:1387:G:OP2	67:OB:44:LYS:HE3	2.17	0.44
1:A:399:A:OP1	58:FB:27:PHE:HD1	2.01	0.44
1:A:421:A:O2'	1:A:422:G:H5'	2.17	0.44
1:A:941:A:H2'	1:A:942:G:H5'	1.98	0.44
53:AB:137:VAL:HB	53:AB:185:LYS:HB3	1.99	0.44
53:AB:42:THR:HB	53:AB:43:PRO:HD2	1.98	0.44
2:B:132:C:C2'	2:B:133:U:H5''	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1441:G:H4'	3:C:15:G:H4'	1.99	0.44
2:B:1779:C:H3'	2:B:1780:G:C5'	2.48	0.44
2:B:1822:C:H2'	2:B:1823:A:H8	1.80	0.44
2:B:1843:C:H3'	2:B:1844:C:H6	1.78	0.44
2:B:1883:A:H2'	2:B:1884:A:C8	2.52	0.44
2:B:1955:U:H2'	2:B:1956:A:O4'	2.18	0.44
2:B:2480:A:OP2	5:E:105:LYS:HE3	2.17	0.44
2:B:2655:U:H2'	46:TA:3:ASN:O	2.17	0.44
2:B:2947:G:N3	7:G:250:ALA:HB1	2.33	0.44
2:B:3043:C:H4'	7:G:9:PRO:HB2	1.98	0.44
2:B:65:A:HO2'	2:B:66:A:P	2.40	0.44
2:B:726:G:N1	2:B:742:G:H2'	2.32	0.44
2:B:795:G:H2'	2:B:796:U:H5'	1.99	0.44
2:B:99:A:H2'	2:B:100:A:C8	2.52	0.44
3:C:46:G:OP1	43:QA:15:LYS:HG2	2.18	0.44
55:CB:25:LEU:HD22	55:CB:25:LEU:H	1.83	0.44
4:D:3:U:O2'	4:D:4:U:H5'	2.18	0.44
2:B:198:A:H5''	30:DA:61:GLY:O	2.18	0.44
56:DB:21:GLU:N	56:DB:21:GLU:OE1	2.50	0.44
82:DC:155:VAL:N	82:DC:202:VAL:HG21	2.32	0.44
82:DC:411:VAL:O	82:DC:428:ILE:HA	2.18	0.44
82:DC:515:ASP:HB3	82:DC:518:VAL:CB	2.45	0.44
82:DC:668:GLN:O	82:DC:672:LYS:HB3	2.18	0.44
82:DC:677:PHE:N	82:DC:677:PHE:CD2	2.85	0.44
57:EB:117:THR:HB	57:EB:120:ALA:CB	2.47	0.44
6:F:242:ARG:O	6:F:243:THR:HB	2.18	0.44
2:B:912:G:N7	6:F:9:ARG:NH1	2.65	0.44
7:G:167:ARG:HH11	7:G:167:ARG:HG3	1.82	0.44
8:H:126:ILE:HG13	8:H:238:LEU:HD13	1.99	0.44
9:I:140:ARG:HA	9:I:141:PRO:HD2	1.71	0.44
9:I:45:ASN:HD22	9:I:45:ASN:HA	1.61	0.44
2:B:1405:U:C5'	36:JA:58:GLY:HA2	2.47	0.44
6:F:39:GLY:CA	12:L:36:ILE:HG21	2.47	0.44
2:B:10:C:C4'	12:L:55:TYR:HB2	2.46	0.44
14:N:46:PHE:CD1	14:N:140:THR:HA	2.53	0.44
14:N:165:ILE:O	14:N:165:ILE:HD13	2.18	0.44
1:A:1608:U:OP1	66:NB:15:SER:HB3	2.17	0.44
15:O:101:ASN:HB3	15:O:130:VAL:HA	1.99	0.44
16:P:114:ARG:HE	16:P:132:ILE:CD1	2.29	0.44
19:S:175:ASN:HB2	19:S:180:PHE:CE2	2.52	0.44
2:B:29:C:OP1	19:S:189:LYS:CB	2.66	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:T:126:VAL:HG13	20:T:127:LEU:N	2.31	0.44
46:TA:28:TYR:HD1	46:TA:71:ARG:HH21	1.66	0.44
72:TB:80:ASN:ND2	72:TB:124:LYS:HG2	2.32	0.44
72:TB:90:THR:HB	72:TB:94:LEU:HD12	2.00	0.44
21:U:146:ILE:HD12	21:U:146:ILE:H	1.82	0.44
22:V:75:GLY:O	22:V:79:LYS:HD3	2.17	0.44
49:WA:234:LEU:N	49:WA:234:LEU:HD12	2.32	0.44
49:WA:264:SER:O	49:WA:268:GLN:HA	2.17	0.44
52:ZA:138:PRO:C	52:ZA:139:ILE:HD12	2.38	0.44
78:ZB:28:VAL:HG21	78:ZB:48:VAL:HG11	1.99	0.44
1:A:1032:G:H2'	1:A:1033:C:C6	2.52	0.44
1:A:121:U:H2'	1:A:122:U:O4'	2.17	0.44
1:A:1585:U:H3	1:A:1611:A:H2	1.64	0.44
1:A:177:U:H1'	56:DB:191:ARG:NH1	2.32	0.44
1:A:374:U:O2	1:A:603:U:H4'	2.18	0.44
1:A:694:U:H5'	1:A:695:U:C5	2.52	0.44
79:AC:5:ASN:HA	79:AC:7:TRP:CE3	2.53	0.44
2:B:1195:A:H4'	2:B:1320:C:OP1	2.18	0.44
2:B:170:G:H2'	2:B:171:G:O4'	2.17	0.44
2:B:1855:U:H2'	2:B:1856:C:C5	2.52	0.44
2:B:2359:C:H2'	2:B:2359:C:O2	2.18	0.44
2:B:2745:G:C6	2:B:2747:A:H5''	2.52	0.44
2:B:2897:A:O2'	2:B:2898:G:H2'	2.17	0.44
2:B:3053:G:H2'	2:B:3054:U:O4'	2.18	0.44
2:B:3108:G:H2'	2:B:3109:G:C5'	2.42	0.44
2:B:428:A:H4'	37:KA:88:ASN:ND2	2.33	0.44
2:B:868:C:H2'	2:B:869:G:C8	2.52	0.44
2:B:879:U:H3'	2:B:879:U:O2	2.16	0.44
2:B:93:C:O2'	32:FA:55:LYS:HG3	2.17	0.44
3:C:140:G:H2'	3:C:141:C:C5'	2.48	0.44
29:CA:87:SER:O	29:CA:89:LYS:N	2.49	0.44
55:CB:81:ARG:C	55:CB:83:ARG:H	2.20	0.44
30:DA:39:LEU:HD23	30:DA:42:GLN:CG	2.41	0.44
82:DC:223:ARG:HH11	82:DC:223:ARG:HG2	1.82	0.44
82:DC:420:PRO:CG	82:DC:476:HIS:HA	2.48	0.44
82:DC:78:TYR:HE2	82:DC:80:GLU:OE1	2.01	0.44
5:E:136:THR:O	5:E:138:VAL:HG23	2.17	0.44
2:B:1709:C:H4'	31:EA:15:ARG:HH12	1.83	0.44
83:EC:6948:U:H2'	83:EC:6949:G:C8	2.53	0.44
6:F:136:ILE:HG21	6:F:139:HIS:NE2	2.32	0.44
6:F:65:ASP:CB	6:F:70:ARG:HB3	2.48	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:Q:158:ALA:CB	32:FA:97:GLU:HA	2.47	0.44
59:GB:85:VAL:HG22	59:GB:107:ARG:CG	2.45	0.44
8:H:188:ARG:HG2	8:H:193:LYS:N	2.33	0.44
60:HB:11:ILE:HG13	60:HB:12:HIS:N	2.32	0.44
9:I:292:ALA:HA	9:I:297:GLN:HA	1.99	0.44
35:IA:25:PHE:CB	35:IA:65:LYS:HB3	2.41	0.44
35:IA:79:ARG:HG2	35:IA:89:LEU:CD2	2.47	0.44
12:L:160:ILE:HD12	19:S:21:PHE:HE2	1.83	0.44
3:C:154:C:C5'	12:L:181:LYS:HB3	2.38	0.44
13:M:110:LYS:HB3	13:M:128:VAL:CB	2.45	0.44
65:MB:25:LEU:HB3	65:MB:87:PRO:HG2	1.99	0.44
65:MB:48:GLY:O	65:MB:52:LYS:HD3	2.18	0.44
14:N:153:ARG:HE	14:N:153:ARG:C	2.20	0.44
14:N:153:ARG:O	14:N:157:TYR:HE1	2.01	0.44
40:NA:61:ILE:C	40:NA:63:ASN:N	2.69	0.44
69:QB:64:HIS:CD2	69:QB:68:ARG:HD2	2.52	0.44
70:RB:35:GLU:OE1	70:RB:38:SER:HB3	2.16	0.44
19:S:71:ARG:O	19:S:92:LEU:CB	2.66	0.44
20:T:27:LEU:HD22	20:T:102:LEU:HB2	1.99	0.44
22:V:88:THR:HA	22:V:107:THR:CG2	2.47	0.44
23:W:174:ALA:O	23:W:178:ALA:HB2	2.17	0.44
50:XA:126:PRO:HA	50:XA:133:ILE:HD11	1.99	0.44
9:I:40:HIS:ND1	25:Y:69:LYS:HD3	2.33	0.44
1:A:976:G:H1	1:A:1023:A:HO2'	1.65	0.44
1:A:1506:G:H2'	1:A:1507:G:H8	1.81	0.44
1:A:386:G:H2'	1:A:387:A:C8	2.53	0.44
1:A:595:G:H2'	1:A:596:C:O4'	2.17	0.44
1:A:762:A:H2'	1:A:763:G:C8	2.52	0.44
2:B:1119:C:H2'	2:B:1120:A:C8	2.51	0.44
2:B:1209:G:H2'	2:B:1210:U:O4'	2.17	0.44
2:B:1259:A:H1'	2:B:1280:C:O2'	2.17	0.44
2:B:1691:U:O2'	2:B:1692:U:H5'	2.17	0.44
2:B:1741:A:H3'	2:B:1742:U:H6	1.82	0.44
2:B:18:G:H2'	2:B:19:U:O4'	2.17	0.44
2:B:2213:A:H2'	2:B:2214:A:O4'	2.17	0.44
2:B:1910:A:C2	2:B:2333:C:O2	2.68	0.44
2:B:2394:G:O2'	2:B:2395:G:H5'	2.18	0.44
2:B:2681:U:H2'	2:B:2682:C:O4'	2.18	0.44
2:B:2889:C:O2'	2:B:2890:A:H5'	2.16	0.44
2:B:3342:A:H2'	2:B:3342:A:N3	2.33	0.44
2:B:519:A:C6	2:B:522:A:H4'	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:642:U:H2'	2:B:644:G:OP2	2.17	0.44
2:B:692:A:H2'	2:B:693:A:O4'	2.17	0.44
2:B:980:A:H3'	2:B:981:U:C6	2.53	0.44
28:BA:5:ILE:HB	28:BA:10:GLY:C	2.37	0.44
54:BB:191:ARG:HD2	54:BB:218:PHE:CE2	2.53	0.44
3:C:37:A:H5"	3:C:39:G:O5'	2.18	0.44
55:CB:98:MET:SD	55:CB:107:LYS:HG3	2.57	0.44
55:CB:25:LEU:HD13	55:CB:25:LEU:N	2.32	0.44
55:CB:44:ASN:HA	66:NB:46:PHE:HE2	1.82	0.44
55:CB:77:TYR:CD2	55:CB:87:CYS:HB2	2.53	0.44
82:DC:131:THR:CG2	82:DC:177:THR:HG21	2.47	0.44
48:VA:142:PRO:HA	82:DC:183:GLU:OE2	2.17	0.44
5:E:140:HIS:C	5:E:142:ASP:H	2.21	0.44
5:E:176:GLU:O	5:E:180:VAL:HG23	2.18	0.44
5:E:98:LYS:HA	5:E:101:LYS:HD2	1.99	0.44
31:EA:8:GLY:C	31:EA:87:LEU:H	2.20	0.44
2:B:2551:U:C4	6:F:95:SER:HB3	2.52	0.44
7:G:219:ALA:O	7:G:274:SER:HA	2.18	0.44
7:G:49:TYR:CZ	7:G:335:ILE:HD13	2.53	0.44
59:GB:156:ILE:O	59:GB:157:ASP:HB2	2.18	0.44
9:I:279:LYS:HG2	9:I:282:ARG:HD2	1.99	0.44
9:I:39:GLN:HG3	9:I:43:LYS:HB2	1.98	0.44
36:JA:3:SER:HA	36:JA:90:LYS:O	2.17	0.44
63:KB:43:LYS:CE	63:KB:43:LYS:HA	2.45	0.44
14:N:91:VAL:HB	14:N:127:ALA:HB1	2.00	0.44
66:NB:39:VAL:HG22	66:NB:48:VAL:HG11	1.99	0.44
66:NB:90:VAL:HA	66:NB:93:HIS:HB2	1.98	0.44
41:OA:25:ARG:CG	41:OA:25:ARG:O	2.66	0.44
16:P:114:ARG:CZ	16:P:121:PHE:HD2	2.30	0.44
42:PA:69:LEU:HD22	42:PA:70:PRO:HD2	2.00	0.44
43:QA:26:TRP:CD2	43:QA:27:ILE:HD12	2.53	0.44
18:R:123:LEU:HD22	20:T:194:LEU:CG	2.39	0.44
18:R:124:ARG:HG2	20:T:194:LEU:HD21	1.98	0.44
70:RB:70:THR:C	70:RB:72:ASN:H	2.22	0.44
71:SB:41:GLU:H	71:SB:41:GLU:CD	2.21	0.44
20:T:6:VAL:HG22	20:T:32:LYS:HD3	1.98	0.44
46:TA:45:ARG:O	46:TA:48:SER:HB3	2.17	0.44
46:TA:23:HIS:HB2	46:TA:72:LEU:HB3	1.99	0.44
73:UB:69:ARG:O	73:UB:70:LYS:HB2	2.18	0.44
23:W:11:ALA:O	23:W:14:VAL:HG12	2.18	0.44
49:WA:196:ASN:HB2	49:WA:217:ASP:HB3	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:X:14:LEU:HD11	25:Y:136:ARG:HH21	1.81	0.44
24:X:152:LEU:N	24:X:153:PRO:HD3	2.30	0.44
24:X:4:PHE:HB3	24:X:31:ALA:N	2.33	0.44
50:XA:168:HIS:O	50:XA:169:SER:C	2.55	0.44
50:XA:18:LEU:HD11	50:XA:50:VAL:HG11	1.99	0.44
77:YB:36:LYS:HD3	77:YB:43:ILE:CG2	2.47	0.44
1:A:1204:A:H3'	1:A:1205:C:C6	2.52	0.44
1:A:1525:A:OP1	69:QB:82:GLY:HA2	2.18	0.44
1:A:1533:C:H4'	1:A:1539:G:N1	2.31	0.44
1:A:1583:A:H62	1:A:1612:U:H5	1.65	0.44
1:A:1687:U:O2	1:A:1714:A:H2	2.00	0.44
1:A:330:G:N2	1:A:331:A:H1'	2.33	0.44
2:B:1108:U:H2'	2:B:1109:U:C6	2.49	0.44
2:B:1382:G:O2'	2:B:1383:G:H5'	2.18	0.44
2:B:1488:G:H5'	2:B:1838:G:C6	2.53	0.44
2:B:2134:G:H2'	2:B:2135:U:H6	1.82	0.44
2:B:2424:A:O2'	2:B:2425:G:H5'	2.18	0.44
2:B:2571:U:C4'	2:B:2572:C:H5'	2.38	0.44
2:B:2575:G:N7	31:EA:56:LYS:HE3	2.32	0.44
2:B:2681:U:O3'	15:O:48:SER:HB3	2.18	0.44
2:B:2971:A:H3'	2:B:2971:A:N3	2.33	0.44
2:B:3236:U:H3	2:B:3251:U:H3	1.64	0.44
2:B:70:A:H2	2:B:72:C:N4	2.05	0.44
2:B:842:G:H2'	2:B:843:A:O4'	2.18	0.44
2:B:887:G:H2'	2:B:888:A:O4'	2.18	0.44
54:BB:12:LEU:HD11	59:GB:5:PRO:CD	2.48	0.44
54:BB:201:HIS:NE2	54:BB:207:LEU:HD12	2.33	0.44
3:C:141:C:H2'	3:C:142:C:H6	1.82	0.44
3:C:91:C:H2'	3:C:92:A:C8	2.52	0.44
56:DB:50:PHE:HA	56:DB:112:VAL:O	2.18	0.44
82:DC:115:VAL:HG11	82:DC:142:VAL:HG13	2.00	0.44
82:DC:89:ILE:CG1	82:DC:340:LEU:HA	2.44	0.44
82:DC:606:ILE:HG21	82:DC:619:MET:CE	2.48	0.44
82:DC:617:ARG:HH21	82:DC:627:VAL:CG2	2.29	0.44
82:DC:666:ALA:HB3	82:DC:709:MET:HB3	1.99	0.44
82:DC:17:THR:CG2	82:DC:92:LYS:HD2	2.47	0.44
57:EB:49:ILE:CD1	57:EB:172:VAL:HG22	2.48	0.44
83:EC:6770:U:H5	83:EC:6772:G:H5''	1.83	0.44
6:F:77:ILE:HD11	6:F:115:ASN:ND2	2.31	0.44
6:F:143:GLU:O	6:F:145:LYS:HG2	2.17	0.44
58:FB:159:GLN:NE2	58:FB:189:LEU:HD11	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:FB:29:LEU:HG	58:FB:31:ARG:NH1	2.32	0.44
58:FB:88:ASN:HD21	61:IB:11:ARG:HH22	1.65	0.44
58:FB:37:LYS:HD2	58:FB:93:THR:O	2.18	0.44
8:H:49:ALA:HB2	17:Q:26:PHE:CD1	2.53	0.44
8:H:5:GLN:NE2	8:H:21:PRO:HB3	2.31	0.44
61:IB:128:CYS:SG	61:IB:138:ASN:CB	3.05	0.44
2:B:656:A:P	36:JA:27:ARG:HA	2.58	0.44
10:J:13:GLU:OE1	36:JA:88:HIS:HA	2.17	0.44
63:KB:91:LEU:O	63:KB:122:ILE:HD11	2.18	0.44
12:L:136:LEU:HA	12:L:197:VAL:HG21	1.99	0.44
13:M:44:THR:O	13:M:55:VAL:HG12	2.18	0.44
39:MA:25:LYS:HD2	39:MA:51:ILE:HG23	2.00	0.44
14:N:47:PRO:HD2	14:N:140:THR:O	2.18	0.44
14:N:174:THR:HG22	14:N:176:LEU:N	2.21	0.44
15:O:166:LYS:O	15:O:167:TYR:CB	2.66	0.44
41:OA:24:ARG:NE	41:OA:24:ARG:HA	2.32	0.44
41:OA:72:ARG:O	41:OA:75:LYS:HB2	2.18	0.44
42:PA:27:ILE:HD12	42:PA:39:ARG:HG2	2.00	0.44
68:PB:123:ARG:O	68:PB:133:VAL:HG21	2.18	0.44
68:PB:38:VAL:HG13	68:PB:42:TYR:HB3	1.99	0.44
18:R:113:THR:HG22	18:R:116:GLU:H	1.83	0.44
18:R:45:LEU:HD12	18:R:57:ALA:HB2	1.99	0.44
2:B:2766:U:H5'	46:TA:40:LYS:HB2	1.99	0.44
46:TA:95:GLY:O	46:TA:96:GLU:HB2	2.17	0.44
72:TB:17:ALA:CB	72:TB:25:VAL:HG11	2.48	0.44
47:UA:49:ARG:HH21	47:UA:52:ALA:HB2	1.83	0.44
47:UA:56:THR:HG22	47:UA:63:THR:OG1	2.18	0.44
49:WA:180:ALA:HB3	49:WA:190:ALA:HB3	1.98	0.44
1:A:1280:C:H4'	70:RB:69:LYS:CB	2.43	0.44
1:A:1543:A:H1'	1:A:1569:A:C2	2.53	0.44
1:A:393:C:H4'	1:A:1673:G:O2'	2.18	0.44
1:A:290:G:H2'	1:A:291:G:O4'	2.18	0.44
1:A:336:G:O2'	1:A:337:G:H5'	2.18	0.44
2:B:1077:U:H1'	2:B:1083:G:N2	2.32	0.44
2:B:1222:G:N7	48:VA:59:VAL:HG11	2.33	0.44
2:B:1445:U:O3'	2:B:2984:C:H4'	2.18	0.44
2:B:1566:A:C2	2:B:1573:G:N7	2.86	0.44
2:B:1665:C:H2'	2:B:1666:G:C8	2.53	0.44
2:B:1727:G:O3'	2:B:1730:G:H4'	2.18	0.44
2:B:2477:G:N3	2:B:2477:G:H2'	2.33	0.44
2:B:271:C:H2'	2:B:272:G:O4'	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2744:U:H2'	2:B:2745:G:C4	2.53	0.44
2:B:2768:U:H2'	2:B:2769:A:C8	2.53	0.44
2:B:2628:A:O4'	2:B:2798:C:H3'	2.18	0.44
2:B:2836:C:C2'	2:B:2837:A:H5'	2.48	0.44
2:B:2881:C:H4'	7:G:249:VAL:CG1	2.47	0.44
2:B:2914:G:OP1	7:G:9:PRO:HB3	2.17	0.44
2:B:3191:G:H5''	20:T:176:LYS:CG	2.33	0.44
2:B:3378:C:O3'	7:G:313:HIS:HA	2.18	0.44
2:B:708:G:N2	2:B:710:A:H3'	2.33	0.44
2:B:782:U:H2'	2:B:783:A:O4'	2.17	0.44
55:CB:114:ILE:HA	55:CB:114:ILE:HD13	1.91	0.44
55:CB:206:SER:HA	55:CB:211:ILE:HG21	2.00	0.44
55:CB:84:LYS:HD3	55:CB:92:ARG:NH1	2.32	0.44
56:DB:142:ARG:HH21	56:DB:152:ASP:HA	1.83	0.44
82:DC:115:VAL:O	82:DC:119:LEU:HG	2.17	0.44
82:DC:115:VAL:CG1	82:DC:142:VAL:HG13	2.48	0.44
82:DC:218:TRP:CZ3	82:DC:220:PHE:HD2	2.34	0.44
82:DC:257:TRP:HZ3	82:DC:272:ALA:HB1	1.82	0.44
82:DC:576:LEU:HD13	82:DC:587:TYR:CE1	2.46	0.44
82:DC:588:LEU:HD13	82:DC:686:VAL:CG1	2.42	0.44
82:DC:718:LEU:HB3	82:DC:835:TRP:HD1	1.81	0.44
5:E:20:SER:HB3	5:E:30:GLU:OE2	2.18	0.44
31:EA:76:ASN:HB3	31:EA:79:HIS:HB2	1.99	0.44
2:B:2157:G:C5	6:F:150:LEU:HD13	2.53	0.44
32:FA:70:LYS:N	32:FA:71:PRO:HD3	2.33	0.44
32:FA:82:ILE:N	32:FA:82:ILE:HD12	2.32	0.44
58:FB:112:TRP:O	58:FB:116:HIS:HB2	2.18	0.44
7:G:54:THR:HG23	7:G:76:VAL:CG2	2.48	0.44
59:GB:36:LEU:HD22	59:GB:41:GLU:CB	2.48	0.44
54:BB:12:LEU:HD11	59:GB:5:PRO:HD3	1.99	0.44
60:HB:87:VAL:N	60:HB:88:PRO:CD	2.77	0.44
9:I:190:ILE:HG13	9:I:191:ASP:N	2.33	0.44
61:IB:128:CYS:SG	61:IB:138:ASN:HB3	2.58	0.44
36:JA:19:ARG:HD3	36:JA:28:VAL:HG13	2.00	0.44
36:JA:35:GLN:CB	36:JA:43:ARG:HB2	2.48	0.44
11:K:92:ILE:CA	11:K:95:ILE:HD12	2.46	0.44
38:LA:58:ARG:HB3	38:LA:61:GLN:HB2	2.00	0.44
39:MA:57:VAL:O	39:MA:61:GLN:HG3	2.18	0.44
65:MB:37:ALA:O	65:MB:42:ARG:HD2	2.18	0.44
14:N:191:LYS:O	14:N:197:VAL:HG22	2.17	0.44
66:NB:18:ALA:HA	66:NB:68:ARG:O	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:O:100:GLY:HA2	15:O:155:THR:C	2.37	0.44
15:O:20:ASN:HB2	15:O:68:HIS:HB3	2.00	0.44
17:Q:119:TYR:CE1	39:MA:118:ILE:HD11	2.53	0.44
20:T:47:PHE:CE1	20:T:140:LYS:HE2	2.52	0.44
20:T:16:VAL:HG13	20:T:80:PHE:CE1	2.52	0.44
20:T:39:GLU:C	20:T:41:LEU:H	2.20	0.44
46:TA:28:TYR:CZ	46:TA:30:ALA:HA	2.53	0.44
72:TB:95:PRO:HD3	72:TB:130:TYR:CE1	2.53	0.44
21:U:114:VAL:CB	21:U:150:VAL:HA	2.48	0.44
47:UA:23:ARG:HA	47:UA:26:VAL:CG2	2.47	0.44
47:UA:57:CYS:HB3	47:UA:62:LYS:H	1.81	0.44
22:V:153:PHE:HE2	22:V:164:ARG:HH22	1.64	0.44
24:X:45:LEU:C	24:X:47:LYS:H	2.20	0.44
25:Y:60:LYS:N	25:Y:60:LYS:HE3	2.32	0.44
26:Z:70:LYS:O	26:Z:71:PHE:HB2	2.18	0.44
52:ZA:53:ILE:H	52:ZA:53:ILE:HG13	1.52	0.44
1:A:105:A:O2'	1:A:106:U:H5'	2.18	0.43
1:A:1519:U:H2'	1:A:1520:U:C6	2.51	0.43
1:A:43:A:H1'	1:A:378:A:N3	2.33	0.43
1:A:534:A:H3'	1:A:535:A:C8	2.53	0.43
1:A:799:A:O2'	1:A:800:U:H5'	2.18	0.43
1:A:959:U:H2'	1:A:959:U:O2	2.17	0.43
1:A:966:A:H2'	1:A:967:A:H8	1.81	0.43
2:B:1070:U:O2'	2:B:1071:U:H5'	2.18	0.43
2:B:1129:A:H5''	14:N:13:LYS:HZ2	1.78	0.43
2:B:1369:A:H2'	2:B:1370:G:H5'	2.00	0.43
2:B:1755:C:H2'	2:B:1756:C:O4'	2.17	0.43
2:B:1794:G:O2'	2:B:1796:G:N2	2.50	0.43
2:B:1896:A:H1'	2:B:3052:G:O2'	2.18	0.43
2:B:222:A:H2'	2:B:223:U:C6	2.53	0.43
2:B:908:G:H1	2:B:2414:G:H5''	1.83	0.43
2:B:2990:G:O2'	2:B:2991:A:H5'	2.17	0.43
2:B:311:C:N4	2:B:2778:G:H1	2.15	0.43
2:B:388:G:H2'	2:B:389:A:O4'	2.18	0.43
2:B:597:G:H5'	11:K:41:ARG:HD2	2.00	0.43
2:B:680:G:C3'	2:B:681:U:H5''	2.48	0.43
2:B:707:U:C4'	2:B:779:G:H21	2.31	0.43
2:B:88:A:H3'	2:B:89:A:C8	2.49	0.43
2:B:951:A:N6	2:B:1369:A:H1'	2.32	0.43
2:B:953:G:H4'	2:B:954:U:C6	2.53	0.43
2:B:981:U:H2'	2:B:982:C:O4'	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:244:A:OP1	54:BB:155:LYS:HD2	2.17	0.43
54:BB:18:TRP:HE3	54:BB:20:LEU:HD11	1.83	0.43
54:BB:256:ARG:NH2	54:BB:259:GLN:HE22	2.16	0.43
54:BB:64:ILE:HG23	54:BB:69:HIS:CD2	2.51	0.43
3:C:3:A:H2'	3:C:4:C:O4'	2.18	0.43
29:CA:77:GLU:HA	29:CA:133:LEU:CD2	2.44	0.43
55:CB:89:ILE:HD11	55:CB:134:VAL:HG22	2.00	0.43
56:DB:119:GLN:HG3	56:DB:120:GLU:H	1.82	0.43
82:DC:482:LYS:O	82:DC:484:SER:N	2.51	0.43
82:DC:630:ALA:O	82:DC:633:ILE:HG12	2.18	0.43
82:DC:86:VAL:HA	82:DC:89:ILE:CD1	2.48	0.43
6:F:104:LEU:CD2	6:F:148:VAL:HG11	2.47	0.43
32:FA:127:ALA:O	32:FA:147:LEU:HA	2.18	0.43
58:FB:64:ASN:HD21	58:FB:73:SER:C	2.22	0.43
2:B:2881:C:H4'	7:G:249:VAL:HG13	2.00	0.43
7:G:377:HIS:HA	7:G:381:GLY:H	1.83	0.43
7:G:93:VAL:O	7:G:99:LEU:HA	2.18	0.43
2:B:1106:G:H4'	33:GA:25:LYS:CE	2.47	0.43
59:GB:111:THR:O	59:GB:115:LYS:HB2	2.17	0.43
1:A:25:C:H6	59:GB:8:TYR:HH	1.65	0.43
8:H:179:LEU:HD23	8:H:182:LEU:HD23	2.00	0.43
8:H:195:ARG:O	8:H:196:ASN:HB2	2.18	0.43
8:H:296:GLN:HA	8:H:299:ILE:CG2	2.48	0.43
9:I:113:LEU:HD22	9:I:142:PHE:CZ	2.52	0.43
9:I:296:GLN:O	9:I:297:GLN:HB2	2.17	0.43
61:IB:75:VAL:HG13	61:IB:84:ILE:HD12	2.00	0.43
10:J:165:LEU:HD11	10:J:171:PRO:HG3	2.00	0.43
37:KA:85:PHE:HB2	37:KA:87:ASN:O	2.18	0.43
37:KA:90:PRO:HD2	37:KA:93:THR:HG21	2.00	0.43
12:L:75:ILE:HG22	12:L:76:ALA:N	2.29	0.43
12:L:81:THR:OG1	12:L:82:LEU:N	2.52	0.43
38:LA:51:LEU:HD21	38:LA:56:THR:HG21	2.00	0.43
29:CA:65:GLN:HE22	39:MA:35:LYS:HD3	1.82	0.43
65:MB:81:ARG:HB2	65:MB:117:GLY:CA	2.48	0.43
14:N:60:LEU:HD11	14:N:129:VAL:HG21	2.01	0.43
40:NA:96:ALA:O	40:NA:97:SER:HB2	2.18	0.43
66:NB:10:PHE:HA	66:NB:18:ALA:O	2.18	0.43
66:NB:45:ARG:HG3	66:NB:49:TYR:CE2	2.52	0.43
2:B:110:G:H5''	17:Q:91:ARG:HD2	2.00	0.43
44:RA:78:ILE:HG22	44:RA:82:LEU:HD12	2.00	0.43
2:B:44:U:H4'	46:TA:54:THR:HB	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:786:A:C3'	22:V:147:ARG:HG2	2.47	0.43
48:VA:26:PHE:CE2	48:VA:96:ILE:HD11	2.53	0.43
75:WB:100:ILE:HD13	75:WB:100:ILE:C	2.38	0.43
24:X:80:ARG:CG	25:Y:156:TYR:HB2	2.47	0.43
25:Y:82:ASN:O	33:GA:21:ILE:HA	2.18	0.43
77:YB:33:LEU:HA	77:YB:80:ARG:O	2.18	0.43
1:A:1238:A:H2'	1:A:1239:U:H5'	2.00	0.43
1:A:1313:A:C4	1:A:1315:U:H5'	2.53	0.43
1:A:1338:C:H1'	1:A:1410:A:C5	2.53	0.43
1:A:1452:U:H2'	1:A:1453:G:C8	2.54	0.43
1:A:147:A:H2'	1:A:148:A:C8	2.53	0.43
1:A:1535:U:H5''	55:CB:187:ILE:HD11	2.00	0.43
1:A:1623:C:O2'	1:A:1624:C:H5'	2.18	0.43
1:A:611:U:C2'	1:A:612:U:H5'	2.47	0.43
1:A:627:C:N4	1:A:628:G:C6	2.86	0.43
1:A:635:A:O3'	72:TB:6:VAL:HG21	2.19	0.43
1:A:637:C:H2'	1:A:638:U:O2	2.18	0.43
1:A:792:U:H3'	1:A:793:A:C8	2.53	0.43
1:A:955:A:H2	1:A:1047:G:O4'	2.01	0.43
27:AA:37:ILE:HD11	27:AA:59:MET:HB2	2.00	0.43
53:AB:5:ILE:HG22	53:AB:10:LYS:HB2	2.00	0.43
53:AB:19:ALA:O	53:AB:22:ASN:HB2	2.19	0.43
2:B:1008:U:H3	2:B:1042:U:H3	1.65	0.43
2:B:1255:C:O2'	2:B:1256:G:H5'	2.18	0.43
2:B:1424:C:H2'	2:B:1425:U:O4'	2.18	0.43
2:B:1631:C:H5''	2:B:1632:A:H5''	2.00	0.43
2:B:2251:G:H3'	2:B:2252:A:C8	2.48	0.43
2:B:2854:U:H2'	2:B:2855:U:H6	1.82	0.43
2:B:3359:A:N3	2:B:3359:A:H2'	2.33	0.43
2:B:3382:U:O2'	2:B:3383:G:H5'	2.18	0.43
2:B:892:U:H2'	2:B:893:C:H6	1.83	0.43
54:BB:179:LYS:O	54:BB:181:VAL:HG23	2.18	0.43
12:L:47:SER:N	29:CA:27:ARG:HB2	2.33	0.43
29:CA:66:PRO:HG3	29:CA:84:PHE:CD1	2.52	0.43
55:CB:99:MET:N	55:CB:103:ASN:HB3	2.33	0.43
4:D:7:G:OP1	9:I:33:ARG:HD2	2.18	0.43
82:DC:285:PHE:HA	82:DC:320:LEU:CD1	2.40	0.43
82:DC:616:ALA:CB	82:DC:631:ARG:HG3	2.48	0.43
1:A:1638:G:OP2	83:EC:6952:U:H2'	2.17	0.43
6:F:206:PRO:HA	6:F:212:GLY:HA3	2.01	0.43
2:B:798:G:OP1	32:FA:32:ARG:HG2	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:765:G:N1	59:GB:149:ARG:HG3	2.33	0.43
59:GB:76:LEU:HG	59:GB:80:LEU:HD11	1.99	0.43
8:H:11:LEU:HD21	8:H:155:ASP:HB3	2.00	0.43
9:I:68:THR:HG21	9:I:73:VAL:CG2	2.48	0.43
1:A:325:G:H5''	61:IB:132:SER:OG	2.18	0.43
10:J:150:LYS:HD2	10:J:150:LYS:N	2.33	0.43
2:B:1405:U:O4'	36:JA:57:TYR:HB3	2.18	0.43
11:K:198:ALA:O	11:K:202:LEU:N	2.36	0.43
11:K:79:ALA:HA	25:Y:138:SER:N	2.33	0.43
11:K:83:LEU:HD13	11:K:83:LEU:C	2.38	0.43
39:MA:6:ALA:HB1	39:MA:10:ARG:NH1	2.33	0.43
14:N:115:MET:CG	14:N:118:ALA:HA	2.46	0.43
14:N:129:VAL:HA	14:N:133:GLN:OE1	2.18	0.43
41:OA:24:ARG:O	41:OA:25:ARG:HB3	2.18	0.43
16:P:114:ARG:HB2	16:P:129:THR:HG23	1.99	0.43
16:P:87:GLU:HG2	16:P:89:PRO:HD2	2.00	0.43
17:Q:104:ARG:HH11	17:Q:104:ARG:HG3	1.83	0.43
17:Q:2:ALA:C	17:Q:3:ILE:HG13	2.39	0.43
69:QB:25:GLN:NE2	69:QB:111:ILE:HD12	2.33	0.43
70:RB:26:LEU:HD23	70:RB:114:VAL:CG2	2.48	0.43
19:S:140:LYS:O	19:S:144:ARG:HG3	2.18	0.43
19:S:48:ALA:O	19:S:53:TYR:N	2.51	0.43
46:TA:21:THR:HG22	46:TA:22:GLN:H	1.83	0.43
46:TA:68:VAL:CB	46:TA:85:LEU:HB3	2.36	0.43
47:UA:55:TRP:HH2	47:UA:69:TYR:O	2.01	0.43
22:V:38:ARG:HG3	22:V:39:ARG:N	2.34	0.43
74:VB:75:VAL:O	74:VB:75:VAL:HG13	2.18	0.43
2:B:1471:U:H5''	23:W:5:ARG:HB2	2.00	0.43
49:WA:85:TRP:HA	49:WA:109:ASP:HB3	2.00	0.43
24:X:138:GLN:C	24:X:140:VAL:H	2.20	0.43
25:Y:92:ARG:HB3	25:Y:94:GLU:OE1	2.18	0.43
1:A:1025:A:H4'	1:A:1774:G:O5'	2.18	0.43
1:A:1050:G:H2'	1:A:1051:G:O4'	2.19	0.43
1:A:1535:U:C2	55:CB:187:ILE:HA	2.52	0.43
1:A:1603:U:H2'	1:A:1604:U:C6	2.52	0.43
1:A:317:C:H4'	1:A:354:C:C1'	2.44	0.43
1:A:318:U:H2'	1:A:319:U:C5'	2.48	0.43
1:A:513:U:H4'	59:GB:131:GLN:HB3	2.00	0.43
53:AB:161:GLY:C	53:AB:163:PRO:HD2	2.38	0.43
2:B:1033:U:H2'	2:B:1034:U:C6	2.54	0.43
2:B:1252:A:N1	2:B:1263:A:H2'	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1203:A:N6	2:B:1300:G:H2'	2.33	0.43
2:B:1300:G:O5'	2:B:1301:A:H2'	2.18	0.43
2:B:1348:U:H4'	2:B:1349:G:O5'	2.18	0.43
2:B:1348:U:C4'	2:B:1349:G:H5''	2.47	0.43
2:B:2341:A:H2'	2:B:2342:U:C6	2.54	0.43
2:B:2637:A:C2'	2:B:2638:C:C5'	2.97	0.43
2:B:3111:U:C2'	2:B:3112:G:H5'	2.48	0.43
2:B:26:A:H2	2:B:328:U:H1'	1.83	0.43
2:B:338:A:H2	2:B:1380:G:N2	2.16	0.43
2:B:93:C:H5'	2:B:93:C:H6	1.83	0.43
2:B:995:U:H2'	2:B:996:A:H8	1.82	0.43
54:BB:37:LYS:HB2	54:BB:40:GLU:CG	2.47	0.43
56:DB:141:ILE:HG21	56:DB:157:VAL:HB	2.00	0.43
82:DC:18:ASN:O	82:DC:19:VAL:HG23	2.17	0.43
57:EB:91:ILE:CD1	57:EB:129:LEU:HA	2.45	0.43
17:Q:157:ARG:HH21	32:FA:124:ILE:HG21	1.81	0.43
58:FB:11:ARG:HA	58:FB:16:ALA:O	2.18	0.43
58:FB:197:THR:HA	58:FB:200:LYS:HB2	2.00	0.43
7:G:146:ARG:HE	7:G:146:ARG:HA	1.83	0.43
7:G:58:ARG:HA	7:G:357:LYS:H	1.83	0.43
33:GA:51:ALA:O	33:GA:55:ALA:HB2	2.18	0.43
8:H:247:PHE:CE1	8:H:249:ILE:HG23	2.53	0.43
2:B:347:G:OP1	8:H:56:ALA:HA	2.18	0.43
12:L:33:ASN:OD1	12:L:38:GLN:HG3	2.19	0.43
13:M:126:VAL:HG22	13:M:164:ILE:HG13	2.00	0.43
14:N:200:LEU:HD13	14:N:209:ASN:HD22	1.84	0.43
17:Q:3:ILE:HD12	32:FA:41:HIS:ND1	2.33	0.43
17:Q:95:ILE:HD12	17:Q:95:ILE:N	2.33	0.43
43:QA:31:THR:O	43:QA:32:ASN:HB2	2.17	0.43
18:R:49:PRO:HG2	18:R:50:LYS:NZ	2.34	0.43
2:B:126:U:H4'	19:S:139:HIS:CE1	2.54	0.43
46:TA:73:GLU:HG2	46:TA:80:ARG:CG	2.48	0.43
21:U:165:VAL:O	21:U:165:VAL:HG13	2.18	0.43
21:U:64:ASN:HA	21:U:67:ILE:HD12	2.00	0.43
73:UB:69:ARG:HD2	73:UB:116:ASP:OD1	2.18	0.43
73:UB:93:LEU:HA	73:UB:96:VAL:CG2	2.47	0.43
22:V:185:LYS:HE2	22:V:185:LYS:HA	2.00	0.43
22:V:17:THR:O	22:V:18:ALA:HB2	2.18	0.43
75:WB:65:LEU:O	75:WB:70:LYS:HB3	2.19	0.43
77:YB:55:THR:HB	77:YB:60:SER:HA	2.00	0.43
52:ZA:63:VAL:HG23	52:ZA:134:LEU:CD1	2.47	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1182:U:H6	1:A:1182:U:O5'	2.02	0.43
1:A:1244:A:N3	1:A:1244:A:H3'	2.34	0.43
1:A:1318:G:H8	1:A:1318:G:O5'	2.01	0.43
1:A:1793:G:O2'	1:A:1794:A:H3'	2.19	0.43
53:AB:53:THR:HG21	53:AB:100:ALA:HB1	2.00	0.43
2:B:1282:G:H4'	48:VA:82:GLY:HA2	1.99	0.43
2:B:1415:U:C2'	2:B:1416:C:H5'	2.49	0.43
2:B:1785:U:H2'	2:B:1786:G:H8	1.76	0.43
2:B:1845:G:H3'	2:B:1846:C:H5'	2.00	0.43
2:B:885:U:O3'	2:B:1851:G:H5''	2.19	0.43
2:B:2372:A:C3'	2:B:2373:A:H5'	2.48	0.43
2:B:3055:U:O3'	2:B:3056:U:H3'	2.18	0.43
2:B:347:G:H2'	2:B:348:A:C8	2.53	0.43
2:B:517:G:H2'	2:B:518:G:H5'	1.99	0.43
54:BB:207:LEU:HB3	54:BB:219:VAL:HG11	2.00	0.43
3:C:142:C:H2'	3:C:143:U:C6	2.53	0.43
55:CB:25:LEU:HD23	55:CB:27:THR:H	1.83	0.43
30:DA:106:ILE:HG21	30:DA:109:LEU:HD23	1.99	0.43
56:DB:153:VAL:O	56:DB:154:ARG:HB3	2.19	0.43
82:DC:296:ILE:CB	82:DC:297:PRO:CD	2.91	0.43
82:DC:382:VAL:HG21	82:DC:396:ALA:HB1	2.01	0.43
82:DC:434:VAL:HG12	82:DC:445:ILE:CG2	2.47	0.43
82:DC:98:PHE:CZ	82:DC:339:VAL:HG11	2.53	0.43
57:EB:49:ILE:HD11	57:EB:172:VAL:HG22	2.00	0.43
6:F:82:VAL:HG12	6:F:86:GLN:HE22	1.83	0.43
32:FA:112:ILE:HB	32:FA:130:VAL:HG12	1.99	0.43
59:GB:20:GLU:HG2	59:GB:22:SER:OG	2.18	0.43
8:H:300:ARG:HB2	8:H:301:PRO:CD	2.46	0.43
34:HA:73:GLY:H	34:HA:76:GLU:HG3	1.82	0.43
9:I:222:LEU:O	9:I:223:PHE:HB2	2.19	0.43
61:IB:76:VAL:HG11	61:IB:106:ASN:HD21	1.83	0.43
10:J:110:LYS:HB3	10:J:113:LYS:HB3	2.01	0.43
11:K:207:LEU:CD2	11:K:240:VAL:HG12	2.46	0.43
11:K:80:GLN:HB2	11:K:80:GLN:HE21	1.67	0.43
63:KB:120:SER:O	63:KB:124:ARG:HG3	2.18	0.43
12:L:46:LEU:HD23	12:L:49:TYR:HD1	1.82	0.43
2:B:1694:U:H5''	38:LA:24:LYS:CG	2.48	0.43
66:NB:117:LEU:HD22	66:NB:117:LEU:N	2.33	0.43
2:B:817:A:C5	41:OA:14:LYS:HG2	2.52	0.43
41:OA:29:VAL:O	41:OA:32:LYS:HG2	2.18	0.43
17:Q:84:GLY:C	17:Q:85:LEU:HD23	2.38	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
69:QB:28:LEU:HD13	69:QB:29:GLU:H	1.83	0.43
19:S:47:LYS:O	19:S:50:ARG:HG2	2.16	0.43
73:UB:51:GLY:HA2	73:UB:77:ILE:CG1	2.31	0.43
22:V:171:LYS:HA	32:FA:56:VAL:HG13	2.00	0.43
49:WA:22:SER:CB	49:WA:70:ASP:HA	2.48	0.43
49:WA:66:HIS:ND1	49:WA:67:ILE:N	2.66	0.43
52:ZA:156:THR:CG2	72:TB:99:PHE:HZ	2.32	0.43
52:ZA:169:LEU:HD21	52:ZA:188:LEU:HD11	2.00	0.43
1:A:1055:U:O2'	1:A:1056:U:H5'	2.18	0.43
1:A:119:A:H61	54:BB:7:LYS:HD3	1.83	0.43
1:A:1341:A:N1	1:A:1384:A:C2	2.87	0.43
1:A:1783:C:H2'	1:A:1784:C:C6	2.52	0.43
1:A:284:G:O2'	1:A:285:G:H5'	2.19	0.43
1:A:324:U:H2'	1:A:325:G:C8	2.54	0.43
1:A:380:U:O5'	1:A:381:C:H5	2.02	0.43
1:A:54:C:H2'	1:A:55:A:H8	1.84	0.43
27:AA:37:ILE:HG13	27:AA:59:MET:HB2	1.99	0.43
53:AB:72:LEU:HD23	60:HB:20:VAL:CG1	2.48	0.43
2:B:1097:G:O3'	25:Y:129:LYS:HG2	2.18	0.43
2:B:132:C:H2'	2:B:133:U:H5''	2.01	0.43
2:B:149:U:H2'	2:B:150:A:H5''	2.00	0.43
2:B:1937:U:H2'	2:B:1938:U:C6	2.54	0.43
2:B:2354:C:H2'	2:B:2355:G:O4'	2.18	0.43
2:B:2808:A:H4'	2:B:2810:C:OP2	2.19	0.43
2:B:3282:U:H2'	2:B:3283:U:C6	2.53	0.43
2:B:367:A:C2'	2:B:368:G:H5'	2.47	0.43
2:B:442:G:H22	2:B:493:G:H5''	1.84	0.43
2:B:524:U:H3'	2:B:525:C:H6	1.84	0.43
2:B:869:G:O2'	2:B:870:G:H5'	2.18	0.43
2:B:881:C:H2'	2:B:882:A:C8	2.53	0.43
54:BB:208:VAL:O	54:BB:219:VAL:HG13	2.19	0.43
29:CA:113:LEU:HG	29:CA:123:TYR:CE2	2.44	0.43
29:CA:99:VAL:HA	29:CA:103:TYR:HD2	1.83	0.43
30:DA:18:ALA:HA	30:DA:21:THR:OG1	2.19	0.43
2:B:190:U:OP1	30:DA:37:LYS:HB3	2.19	0.43
31:EA:13:VAL:CB	31:EA:19:ALA:HA	2.47	0.43
31:EA:10:VAL:CG1	31:EA:22:LYS:HD3	2.49	0.43
57:EB:135:ILE:HG12	57:EB:154:LEU:HD23	2.01	0.43
17:Q:2:ALA:HB1	32:FA:35:ALA:HB2	2.01	0.43
58:FB:147:ALA:C	58:FB:149:SER:H	2.22	0.43
58:FB:97:THR:O	58:FB:169:ILE:HB	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:113:GLU:HB3	7:G:176:ALA:CB	2.47	0.43
7:G:305:ILE:HG12	7:G:321:PHE:CE2	2.53	0.43
7:G:356:LEU:HB2	7:G:359:ILE:HD11	1.99	0.43
2:B:3004:C:H4'	7:G:99:LEU:C	2.39	0.43
2:B:1715:A:C6	34:HA:85:PHE:HB3	2.53	0.43
53:AB:20:GLU:HA	60:HB:61:TRP:NE1	2.34	0.43
2:B:2703:A:C2	9:I:150:LEU:HD21	2.53	0.43
36:JA:65:PHE:HB2	36:JA:72:LYS:HG2	1.98	0.43
11:K:88:ARG:CG	11:K:112:ASN:H	2.31	0.43
37:KA:32:ILE:HG21	37:KA:100:ILE:HD12	1.99	0.43
12:L:55:TYR:CE2	12:L:56:VAL:HG23	2.54	0.43
13:M:103:ILE:HG21	13:M:110:LYS:HZ1	1.82	0.43
13:M:49:ASN:O	13:M:51:GLN:N	2.51	0.43
14:N:60:LEU:HG	14:N:129:VAL:CG2	2.49	0.43
14:N:193:ASP:HB3	14:N:197:VAL:CA	2.48	0.43
66:NB:139:GLN:HG2	66:NB:140:LYS:N	2.33	0.43
17:Q:56:PRO:HB3	17:Q:75:PHE:CE1	2.54	0.43
1:A:748:U:OP1	72:TB:80:ASN:HB3	2.18	0.43
72:TB:81:VAL:CG1	72:TB:86:ILE:HG13	2.48	0.43
21:U:27:LYS:CD	21:U:27:LYS:H	2.29	0.43
73:UB:137:LYS:CD	73:UB:139:LYS:HE2	2.45	0.43
73:UB:24:TRP:HA	73:UB:24:TRP:HE3	1.83	0.43
73:UB:32:ARG:NH1	73:UB:32:ARG:HB3	2.33	0.43
8:H:289:ILE:HD13	22:V:125:ASP:OD1	2.18	0.43
23:W:165:LYS:HA	23:W:165:LYS:HE3	2.00	0.43
23:W:19:LYS:HA	23:W:22:VAL:CG2	2.48	0.43
49:WA:233:THR:C	49:WA:234:LEU:HD12	2.38	0.43
75:WB:71:ILE:HB	75:WB:75:LEU:HB2	2.01	0.43
2:B:3206:C:H5'	24:X:157:GLN:HE22	1.82	0.43
50:XA:140:ASN:HA	71:SB:31:SER:O	2.19	0.43
50:XA:183:ARG:CB	50:XA:184:LEU:HD12	2.48	0.43
50:XA:20:ALA:HB3	50:XA:22:THR:HG23	1.99	0.43
25:Y:30:TYR:HE1	25:Y:94:GLU:HG3	1.84	0.43
55:CB:161:ASP:HB3	78:ZB:54:LEU:HG	1.99	0.43
1:A:1197:C:H4'	70:RB:77:LYS:HE2	1.99	0.43
1:A:1321:A:H4'	1:A:1322:A:O5'	2.19	0.43
1:A:464:A:H4'	1:A:528:U:H3	1.83	0.43
1:A:607:G:H5'	1:A:613:G:H22	1.82	0.43
1:A:68:A:OP2	1:A:69:G:H5'	2.19	0.43
1:A:67:A:H2'	1:A:69:G:O4'	2.18	0.43
53:AB:116:ARG:O	53:AB:120:TYR:HD2	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:AB:207:THR:HB	67:OB:40:THR:OG1	2.18	0.43
2:B:1108:U:O2'	2:B:1109:U:H5'	2.19	0.43
2:B:1128:U:C4	2:B:1129:A:C6	3.06	0.43
2:B:1220:U:H4'	2:B:1222:G:C1'	2.49	0.43
2:B:1390:A:H5'	2:B:1390:A:N3	2.34	0.43
2:B:1439:U:C4'	8:H:95:ARG:HD3	2.46	0.43
2:B:1490:A:H2'	2:B:1491:A:C8	2.53	0.43
2:B:1552:G:H4'	2:B:2171:G:H5''	2.00	0.43
2:B:1851:G:O2'	41:OA:6:PRO:HG3	2.18	0.43
2:B:1912:U:C4	2:B:1913:A:C6	3.06	0.43
2:B:2079:G:H2'	2:B:2080:C:O4'	2.19	0.43
2:B:2148:U:H5	2:B:2187:G:N3	2.16	0.43
2:B:2155:G:H5''	6:F:241:ARG:NH2	2.32	0.43
2:B:2619:G:H3'	2:B:2620:G:C8	2.53	0.43
2:B:2815:G:H1'	2:B:2818:U:C5	2.53	0.43
2:B:2881:C:H2'	2:B:2882:U:C6	2.54	0.43
2:B:3038:U:H2'	2:B:3039:C:H6	1.83	0.43
2:B:3135:U:C4	2:B:3136:G:C5	3.07	0.43
2:B:3164:C:O2'	2:B:3165:A:H8	2.01	0.43
2:B:39:A:O5'	2:B:40:A:H4'	2.18	0.43
2:B:407:A:H2'	2:B:408:A:C8	2.54	0.43
2:B:408:A:H62	3:C:15:G:N2	2.17	0.43
2:B:677:A:H2'	2:B:785:G:O6	2.18	0.43
54:BB:131:LEU:HD13	54:BB:137:PRO:HB3	2.01	0.43
54:BB:175:PHE:CZ	54:BB:225:VAL:HG11	2.54	0.43
56:DB:3:LEU:HD13	56:DB:111:LEU:CD1	2.49	0.43
56:DB:67:VAL:H	56:DB:100:ALA:CB	2.26	0.43
82:DC:225:PHE:O	82:DC:229:TYR:HB2	2.18	0.43
82:DC:226:ALA:O	82:DC:230:ALA:HB2	2.18	0.43
82:DC:237:LYS:O	82:DC:241:MET:HG2	2.18	0.43
82:DC:365:ASN:ND2	82:DC:377:ASP:HB3	2.34	0.43
5:E:74:VAL:O	5:E:78:LYS:HG3	2.18	0.43
57:EB:74:GLN:HG2	57:EB:131:PHE:CD1	2.53	0.43
6:F:120:PRO:HB3	6:F:161:ASP:O	2.19	0.43
1:A:1675:C:H1'	58:FB:32:GLN:NE2	2.33	0.43
7:G:229:VAL:HA	7:G:232:ARG:HB2	2.00	0.43
7:G:295:ALA:HB1	7:G:300:ARG:N	2.33	0.43
59:GB:30:LEU:CD2	59:GB:102:GLU:HG3	2.48	0.43
34:HA:41:LEU:HD12	34:HA:92:ILE:CD1	2.45	0.43
34:HA:44:ILE:CG2	34:HA:53:LYS:HG3	2.47	0.43
61:IB:83:THR:HA	61:IB:111:VAL:H	1.84	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:JA:25:TYR:HB3	36:JA:27:ARG:HG2	2.00	0.43
2:B:2549:G:H5''	12:L:35:GLY:HA3	1.99	0.43
38:LA:5:VAL:CG1	38:LA:32:ALA:HB2	2.46	0.43
38:LA:42:PRO:CB	38:LA:51:LEU:HD13	2.41	0.43
13:M:189:GLU:HG3	13:M:190:ASP:N	2.34	0.43
39:MA:21:LEU:HD12	39:MA:54:VAL:CG1	2.48	0.43
65:MB:85:ILE:HD11	65:MB:119:PHE:CZ	2.53	0.43
65:MB:94:VAL:HG12	65:MB:96:ILE:HG13	2.00	0.43
14:N:152:LEU:O	14:N:156:ARG:HB3	2.18	0.43
66:NB:93:HIS:ND1	66:NB:97:VAL:HG11	2.34	0.43
15:O:84:LEU:HB3	15:O:89:TYR:CD1	2.53	0.43
67:OB:91:LEU:C	67:OB:93:LEU:N	2.63	0.43
69:QB:15:ILE:HA	69:QB:18:TYR:HB3	2.00	0.43
69:QB:41:SER:O	69:QB:84:LYS:HD2	2.18	0.43
20:T:13:GLY:HA3	20:T:125:ARG:CZ	2.49	0.43
20:T:171:LYS:HA	20:T:174:PHE:HB2	2.00	0.43
2:B:2988:C:OP1	20:T:64:PHE:HE1	2.00	0.43
72:TB:22:LYS:O	72:TB:23:ARG:HD2	2.18	0.43
72:TB:76:SER:OG	72:TB:77:PRO:HA	2.19	0.43
2:B:3309:G:H4'	21:U:70:THR:O	2.19	0.43
47:UA:25:GLN:NE2	47:UA:28:LYS:HD2	2.33	0.43
47:UA:55:TRP:O	47:UA:64:VAL:HG22	2.19	0.43
48:VA:22:TYR:CD2	48:VA:88:PHE:HB3	2.53	0.43
48:VA:26:PHE:HE2	48:VA:96:ILE:HD11	1.82	0.43
49:WA:193:ILE:HG22	49:WA:194:GLY:N	2.32	0.43
50:XA:155:PHE:CZ	71:SB:61:SER:HB3	2.54	0.43
25:Y:130:ARG:HH11	25:Y:130:ARG:CB	2.31	0.43
9:I:69:ILE:HD11	25:Y:32:LYS:HA	1.99	0.43
52:ZA:56:ILE:CG2	52:ZA:61:LEU:HB2	2.40	0.43
1:A:1116:A:C2'	1:A:1117:U:H5'	2.48	0.43
1:A:1441:C:H5''	82:DC:656:LEU:HD13	2.01	0.43
1:A:1484:G:H2'	1:A:1485:C:C6	2.54	0.43
1:A:319:U:H4'	1:A:323:A:C1'	2.48	0.43
27:AA:7:GLN:HE22	27:AA:127:PRO:HG2	1.83	0.43
53:AB:17:PHE:HB2	53:AB:77:PHE:CZ	2.53	0.43
53:AB:215:GLU:N	53:AB:216:PRO:HD3	2.34	0.43
2:B:1234:G:H5''	16:P:118:ASP:CB	2.35	0.43
2:B:1259:A:H62	48:VA:38:MET:HG2	1.83	0.43
2:B:1247:U:H3	2:B:1274:A:H61	1.66	0.43
2:B:1368:U:O2'	2:B:1369:A:H5'	2.19	0.43
2:B:1403:C:H2'	2:B:1404:G:O4'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1769:G:H2'	2:B:1770:G:C8	2.53	0.43
2:B:195:U:H2'	2:B:196:G:C5'	2.49	0.43
2:B:2193:U:C4	2:B:2243:A:N6	2.87	0.43
2:B:188:U:O2	2:B:223:U:H4'	2.18	0.43
2:B:2424:A:O2'	19:S:77:LYS:HA	2.18	0.43
2:B:2471:U:H2'	2:B:2472:U:H5''	2.01	0.43
2:B:2939:G:N7	7:G:3:HIS:HB3	2.33	0.43
2:B:2988:C:H5''	20:T:65:ASN:HB2	2.01	0.43
2:B:786:A:H5''	22:V:147:ARG:HG2	2.00	0.43
2:B:986:U:H2'	2:B:987:U:C6	2.54	0.43
28:BA:33:ASN:OD1	28:BA:35:LYS:HB3	2.19	0.43
54:BB:104:ASP:HB3	54:BB:105:VAL:H	1.69	0.43
3:C:14:C:H5''	21:U:123:PRO:CD	2.45	0.43
2:B:3:U:H3	3:C:156:U:H3	1.67	0.43
29:CA:81:ILE:CG2	29:CA:123:TYR:HB3	2.48	0.43
55:CB:97:LEU:HD23	55:CB:176:THR:CB	2.48	0.43
4:D:9:C:H2'	4:D:10:C:O4'	2.18	0.43
4:D:98:C:C3'	4:D:99:G:H5''	2.49	0.43
82:DC:365:ASN:O	82:DC:369:ILE:HG12	2.18	0.43
82:DC:530:VAL:HG12	82:DC:538:LEU:HD11	1.99	0.43
82:DC:578:LYS:HB3	82:DC:585:ARG:CG	2.33	0.43
5:E:94:ASN:CB	5:E:124:LEU:HB2	2.49	0.43
57:EB:118:LEU:HD13	57:EB:119:THR:N	2.33	0.43
83:EC:6906:G:H2'	83:EC:6907:G:C8	2.54	0.43
32:FA:96:LYS:O	32:FA:97:GLU:HB2	2.18	0.43
7:G:165:GLN:HE21	7:G:168:LYS:CG	2.31	0.43
7:G:46:PHE:HZ	7:G:204:ALA:HA	1.84	0.43
2:B:1305:U:C4	7:G:256:HIS:HB3	2.54	0.43
8:H:103:THR:HG23	8:H:107:ARG:HH21	1.83	0.43
8:H:136:LEU:HD13	8:H:143:GLU:HG3	2.00	0.43
8:H:179:LEU:O	8:H:183:LYS:HB2	2.18	0.43
8:H:219:LEU:HB2	8:H:227:THR:HG23	2.00	0.43
8:H:151:VAL:HA	8:H:250:TRP:O	2.19	0.43
9:I:291:ALA:HA	9:I:295:GLY:HA3	2.00	0.43
9:I:47:PRO:HB2	9:I:49:TYR:CE2	2.54	0.43
2:B:1458:U:C5'	35:IA:30:PRO:HB3	2.49	0.43
35:IA:5:LYS:O	35:IA:8:VAL:HG23	2.19	0.43
11:K:88:ARG:NH1	11:K:103:LEU:HD13	2.34	0.43
11:K:24:GLU:O	11:K:25:GLN:HB3	2.17	0.43
63:KB:26:PHE:CD2	63:KB:66:ILE:HD11	2.54	0.43
63:KB:86:GLU:HG3	63:KB:87:ASP:N	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:LA:101:VAL:O	38:LA:105:VAL:HG23	2.18	0.43
13:M:123:ILE:N	13:M:123:ILE:HD12	2.33	0.43
13:M:71:VAL:CA	13:M:74:LEU:HB2	2.45	0.43
13:M:80:THR:HG22	13:M:84:LYS:HE2	2.00	0.43
13:M:99:ILE:O	13:M:101:VAL:HG23	2.18	0.43
66:NB:49:TYR:C	66:NB:51:PRO:HD2	2.39	0.43
15:O:47:GLN:HA	15:O:67:VAL:CG1	2.39	0.43
15:O:50:ALA:HB3	15:O:63:GLU:H	1.83	0.43
41:OA:64:MET:SD	41:OA:67:LEU:HG	2.59	0.43
67:OB:5:ARG:HG2	67:OB:9:VAL:HG11	2.00	0.43
17:Q:115:ARG:NH1	17:Q:145:PHE:O	2.52	0.43
10:J:158:TYR:CD1	18:R:115:PHE:HD2	2.37	0.43
19:S:68:ARG:CZ	19:S:123:GLN:HB2	2.49	0.43
71:SB:20:THR:O	71:SB:21:ASN:HB2	2.19	0.43
20:T:188:SER:N	20:T:191:ALA:HB3	2.26	0.43
20:T:46:GLU:C	20:T:48:PHE:N	2.72	0.43
47:UA:19:GLY:H	47:UA:22:LEU:HD12	1.84	0.43
23:W:45:VAL:HA	23:W:50:ILE:O	2.19	0.43
49:WA:202:LEU:CA	49:WA:243:LEU:HD12	2.49	0.43
50:XA:174:TRP:O	50:XA:177:LEU:HB2	2.19	0.43
25:Y:143:THR:HG23	25:Y:144:GLU:H	1.83	0.43
25:Y:48:ILE:HG22	25:Y:49:GLN:N	2.34	0.43
1:A:1280:C:H2'	1:A:1281:G:C8	2.54	0.43
1:A:320:U:C3'	1:A:321:C:H5''	2.48	0.43
1:A:531:C:H3'	1:A:532:U:C5'	2.49	0.43
1:A:556:A:H1'	1:A:590:C:H1'	2.01	0.43
1:A:842:C:H2'	1:A:843:U:O4'	2.19	0.43
1:A:952:A:H2'	1:A:953:G:C8	2.53	0.43
2:B:1186:G:O2'	2:B:1187:C:H5'	2.19	0.43
2:B:1282:G:H5'	48:VA:83:ASN:HA	2.00	0.43
2:B:1311:G:C8	2:B:1311:G:O5'	2.70	0.43
2:B:1446:A:H5'	2:B:1448:U:H1'	1.99	0.43
2:B:894:G:N2	2:B:1660:C:H5'	2.34	0.43
2:B:1726:C:H6	2:B:1726:C:O5'	2.01	0.43
2:B:1953:G:H2'	2:B:1953:G:N3	2.34	0.43
2:B:937:G:C6	2:B:2410:U:H5''	2.54	0.43
2:B:924:G:N7	2:B:2809:C:H1'	2.34	0.43
2:B:2888:U:C4'	2:B:2889:C:H5	2.32	0.43
2:B:2964:G:N2	2:B:2966:G:H3'	2.34	0.43
2:B:3058:U:H3'	2:B:3058:U:O2	2.19	0.43
2:B:660:A:H5'	8:H:100:PHE:CB	2.49	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:750:G:OP1	33:GA:40:ARG:HG2	2.19	0.43
2:B:786:A:C5'	22:V:147:ARG:HG2	2.48	0.43
2:B:901:G:H2'	2:B:902:G:O4'	2.19	0.43
2:B:912:G:H5''	2:B:913:A:OP1	2.17	0.43
2:B:924:G:C8	2:B:924:G:O5'	2.70	0.43
2:B:3366:G:OP1	28:BA:59:HIS:HB3	2.19	0.43
54:BB:181:VAL:O	54:BB:192:ILE:HA	2.18	0.43
29:CA:109:LYS:CE	29:CA:111:ASN:HD21	2.32	0.43
55:CB:166:ARG:O	55:CB:166:ARG:HD3	2.19	0.43
55:CB:200:ASN:HB3	55:CB:207:THR:OG1	2.19	0.43
55:CB:220:VAL:HA	55:CB:223:SER:HB2	2.01	0.43
56:DB:36:VAL:HG12	56:DB:37:ASP:N	2.34	0.43
82:DC:224:GLN:HE21	82:DC:328:LEU:CD2	2.32	0.43
82:DC:382:VAL:HG13	82:DC:397:PHE:O	2.18	0.43
82:DC:655:TYR:HD2	82:DC:693:LEU:HD13	1.83	0.43
82:DC:836:GLN:H	82:DC:836:GLN:CD	2.22	0.43
5:E:110:PHE:O	5:E:136:THR:HG22	2.18	0.43
5:E:93:LEU:HD22	5:E:99:LEU:CG	2.45	0.43
31:EA:81:LEU:HD23	34:HA:59:TYR:OH	2.18	0.43
83:EC:6886:A:C2'	83:EC:6887:G:C5'	2.95	0.43
2:B:2163:C:O2'	6:F:11:GLY:HA3	2.19	0.43
6:F:225:ILE:HG22	6:F:238:ILE:HG12	2.01	0.43
6:F:252:THR:O	6:F:252:THR:HG23	2.18	0.43
7:G:196:ARG:HD2	7:G:199:PHE:CE2	2.54	0.43
7:G:358:TRP:O	7:G:359:ILE:HD12	2.19	0.43
2:B:750:G:C4'	33:GA:44:LYS:HG3	2.46	0.43
8:H:34:ILE:HG21	8:H:120:TYR:HD1	1.84	0.43
9:I:273:ARG:HG2	9:I:274:GLN:N	2.32	0.43
11:K:84:VAL:HG12	11:K:138:TYR:CD1	2.54	0.43
13:M:24:ILE:CG1	13:M:39:LYS:HD2	2.49	0.43
16:P:110:ILE:HG22	16:P:129:THR:CG2	2.48	0.43
68:PB:22:VAL:HG12	68:PB:23:ASP:N	2.34	0.43
68:PB:17:LEU:HD22	68:PB:66:LEU:HD22	2.01	0.43
17:Q:168:ARG:HA	17:Q:168:ARG:HE	1.83	0.43
17:Q:57:VAL:O	17:Q:58:VAL:HB	2.18	0.43
17:Q:75:PHE:H	17:Q:97:VAL:HA	1.84	0.43
43:QA:26:TRP:CE3	43:QA:27:ILE:HD12	2.54	0.43
18:R:44:VAL:CG2	18:R:60:LEU:HD21	2.45	0.43
19:S:53:TYR:CE1	19:S:55:ALA:HA	2.53	0.43
19:S:73:ARG:HB2	19:S:89:VAL:CG1	2.40	0.43
71:SB:14:PRO:HB3	71:SB:23:ILE:CG2	2.49	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:U:114:VAL:CB	21:U:150:VAL:HG12	2.39	0.43
21:U:168:LEU:CD2	21:U:176:ILE:HD11	2.48	0.43
22:V:4:ASP:HB3	22:V:6:THR:HG23	2.00	0.43
48:VA:104:ARG:CA	48:VA:184:GLY:HA3	2.48	0.43
48:VA:27:VAL:HG12	48:VA:188:VAL:HB	2.01	0.43
23:W:3:ASN:OD1	23:W:5:ARG:HB3	2.18	0.43
49:WA:264:SER:HB2	49:WA:271:VAL:HG21	1.98	0.43
18:R:55:ARG:CD	24:X:70:THR:HB	2.47	0.43
50:XA:189:VAL:CG1	50:XA:190:ASP:H	2.22	0.43
52:ZA:170:ILE:HB	52:ZA:197:TYR:HB2	2.00	0.43
52:ZA:59:HIS:CD2	52:ZA:239:PRO:HD3	2.53	0.43
1:A:1376:C:O2'	1:A:1377:U:H5'	2.19	0.43
1:A:1483:A:N3	1:A:1607:G:H1'	2.34	0.43
1:A:1586:A:N6	1:A:1610:G:H1'	2.33	0.43
1:A:1739:C:H2'	1:A:1740:A:H8	1.81	0.43
1:A:228:G:H5'	1:A:228:G:H8	1.84	0.43
1:A:404:G:H2'	1:A:405:C:C6	2.54	0.43
1:A:40:A:H62	1:A:467:G:N2	2.07	0.43
1:A:57:G:O2'	1:A:58:U:H5'	2.19	0.43
1:A:567:A:N6	1:A:580:A:H61	2.17	0.43
1:A:629:U:H3	1:A:970:A:H62	1.67	0.43
1:A:870:C:O2'	1:A:871:G:H5'	2.19	0.43
27:AA:95:PHE:CD1	28:BA:22:VAL:HB	2.54	0.43
53:AB:150:MET:N	53:AB:150:MET:SD	2.92	0.43
53:AB:8:LYS:HE2	70:RB:61:LYS:HD3	2.01	0.43
2:B:1082:U:H2'	2:B:1083:G:O4'	2.18	0.43
2:B:1439:U:H2'	2:B:1440:G:C8	2.54	0.43
2:B:1604:G:H4'	2:B:1835:A:O3'	2.19	0.43
2:B:2198:A:C8	2:B:2199:G:H8	2.37	0.43
2:B:2442:G:H21	2:B:2506:U:H1'	1.83	0.43
2:B:2619:G:H3'	2:B:2620:G:H8	1.84	0.43
2:B:299:G:H2'	2:B:300:G:O4'	2.19	0.43
2:B:3114:A:H3'	2:B:3115:C:H6	1.84	0.43
2:B:3154:C:H5''	2:B:3155:U:H5'	1.99	0.43
2:B:3243:A:O5'	2:B:3243:A:H8	2.02	0.43
2:B:415:G:H2'	2:B:416:A:H8	1.84	0.43
2:B:58:G:N2	2:B:60:A:C2	2.87	0.43
2:B:782:U:C2'	2:B:783:A:H5'	2.48	0.43
2:B:997:A:H2'	2:B:998:A:O4'	2.19	0.43
28:BA:31:PHE:CD1	28:BA:37:ALA:HA	2.54	0.43
54:BB:160:VAL:HG22	54:BB:172:PHE:HB3	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:BB:43:PRO:HA	54:BB:82:TYR:O	2.19	0.43
54:BB:86:PHE:CE1	54:BB:87:MET:HG2	2.54	0.43
3:C:136:G:O2'	3:C:137:C:H5'	2.19	0.43
55:CB:97:LEU:HD23	55:CB:176:THR:HG22	2.01	0.43
82:DC:139:THR:O	82:DC:143:LEU:HB2	2.19	0.43
82:DC:281:ILE:O	82:DC:284:LEU:HB2	2.18	0.43
82:DC:413:ILE:HB	82:DC:427:PHE:HB2	2.01	0.43
82:DC:365:ASN:CG	82:DC:475:ALA:HB2	2.39	0.43
82:DC:486:SER:HA	82:DC:487:PRO:HD3	1.82	0.43
5:E:100:ILE:HG13	5:E:128:LEU:CB	2.49	0.43
5:E:103:LEU:HD13	5:E:107:TYR:CD1	2.54	0.43
31:EA:29:HIS:HB3	31:EA:40:HIS:CE1	2.54	0.43
6:F:103:PRO:HB2	6:F:106:SER:HB2	2.00	0.43
7:G:87:VAL:HG12	7:G:110:LEU:HG	2.01	0.43
7:G:149:ALA:HA	7:G:152:LYS:HG3	2.01	0.43
7:G:67:PHE:HA	7:G:70:ARG:HE	1.84	0.43
8:H:39:PHE:CE1	8:H:236:LEU:HD23	2.54	0.43
31:EA:2:ALA:HA	34:HA:37:GLY:CA	2.49	0.43
35:IA:32:ALA:C	35:IA:34:LYS:H	2.22	0.43
10:J:129:GLU:HG3	10:J:130:ILE:H	1.82	0.43
10:J:52:VAL:HA	10:J:67:GLY:O	2.19	0.43
36:JA:112:ALA:HA	36:JA:117:ILE:HD11	1.99	0.43
2:B:3215:A:OP1	37:KA:2:ALA:HB2	2.18	0.43
12:L:52:TRP:HA	12:L:53:PRO:HD3	1.78	0.43
2:B:3188:G:OP1	13:M:22:SER:HB2	2.19	0.43
39:MA:51:ILE:HG22	39:MA:55:LEU:CD1	2.49	0.43
66:NB:67:VAL:HG21	66:NB:85:ILE:CG1	2.48	0.43
15:O:141:ARG:NE	15:O:144:CYS:HB2	2.34	0.43
16:P:122:GLY:HA2	48:VA:43:LYS:CD	2.44	0.43
17:Q:4:SER:O	17:Q:5:LYS:HB2	2.19	0.43
3:C:142:C:C5'	19:S:60:VAL:HG21	2.46	0.43
2:B:289:A:H4'	19:S:96:ARG:O	2.18	0.43
20:T:76:PRO:HD3	20:T:142:SER:HB3	2.00	0.43
21:U:67:ILE:HG22	21:U:68:GLY:N	2.34	0.43
48:VA:119:ILE:HB	48:VA:159:VAL:CG1	2.48	0.43
48:VA:134:SER:HA	48:VA:137:GLN:HB2	2.01	0.43
48:VA:26:PHE:HB2	48:VA:87:VAL:HB	1.99	0.43
74:VB:8:ARG:HB2	74:VB:26:ASP:HB3	2.01	0.43
49:WA:125:GLY:HA3	49:WA:151:VAL:HG11	2.00	0.43
49:WA:17:ASN:CB	49:WA:39:ASP:HB3	2.48	0.43
24:X:8:GLN:HG3	24:X:26:ARG:HE	1.84	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1119:G:H2'	1:A:1120:U:O4'	2.19	0.43
1:A:1482:C:O2	66:NB:73:GLY:HA2	2.18	0.43
53:AB:104:SER:O	53:AB:108:LYS:HG3	2.19	0.43
70:RB:65:ILE:HD11	79:AC:34:TYR:CE2	2.54	0.43
2:B:1088:U:H2'	2:B:1089:G:O4'	2.19	0.43
2:B:1487:G:H2'	2:B:1488:G:C4'	2.49	0.43
2:B:1487:G:H2'	2:B:1488:G:O4'	2.18	0.43
2:B:1660:C:O2'	2:B:1661:G:H5'	2.19	0.43
2:B:1706:C:H2'	2:B:1707:A:O4'	2.19	0.43
2:B:1796:G:H1'	6:F:190:ARG:NH1	2.33	0.43
2:B:1952:G:H2'	2:B:1953:G:H5''	2.01	0.43
2:B:2173:U:H2'	2:B:2174:G:C8	2.54	0.43
2:B:2618:G:OP1	14:N:116:ARG:HG3	2.18	0.43
2:B:2714:G:H5'	2:B:2716:U:C6	2.54	0.43
2:B:2857:C:H2'	2:B:2858:U:H6	1.79	0.43
2:B:307:A:H2'	2:B:308:A:H8	1.83	0.43
2:B:3229:G:H1'	18:R:129:TYR:CE2	2.51	0.43
2:B:537:A:H2'	2:B:538:G:O4'	2.18	0.43
2:B:730:C:H2'	2:B:731:U:C6	2.54	0.43
2:B:78:U:H3	2:B:325:A:N6	2.10	0.43
2:B:876:A:H4'	2:B:1890:U:H5''	2.00	0.43
2:B:975:C:H2'	2:B:976:U:H6	1.84	0.43
29:CA:115:ARG:HB2	29:CA:119:THR:C	2.39	0.43
4:D:77:G:N2	4:D:101:G:H2'	2.34	0.43
4:D:30:G:H1'	4:D:50:U:O4	2.18	0.43
56:DB:214:LYS:O	56:DB:218:GLU:N	2.51	0.43
56:DB:55:GLY:HA3	56:DB:63:MET:HE3	2.01	0.43
56:DB:93:LYS:HG2	56:DB:94:ARG:H	1.84	0.43
82:DC:511:LEU:O	82:DC:518:VAL:HG11	2.19	0.43
82:DC:612:PHE:HB3	82:DC:615:ARG:HH21	1.83	0.43
82:DC:75:ILE:HD11	82:DC:104:ASP:HB2	1.99	0.43
5:E:114:GLU:HG3	5:E:115:VAL:H	1.83	0.43
57:EB:98:ILE:HD11	57:EB:121:VAL:HB	2.00	0.43
32:FA:104:THR:HG21	32:FA:112:ILE:HD11	2.01	0.43
58:FB:65:PHE:O	58:FB:109:PHE:HZ	2.02	0.43
2:B:970:A:OP1	33:GA:18:ARG:HG3	2.19	0.43
8:H:27:SER:O	8:H:279:HIS:HD2	2.02	0.43
9:I:39:GLN:NE2	9:I:48:LYS:HE3	2.34	0.43
9:I:95:TRP:HZ2	9:I:156:GLY:C	2.22	0.43
61:IB:58:CYS:O	61:IB:62:GLY:HA3	2.19	0.43
10:J:60:ASP:O	10:J:61:ASN:HB2	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:JA:13:HIS:CE1	36:JA:15:LYS:HB3	2.54	0.43
12:L:98:ARG:HG2	12:L:189:LEU:HB2	2.00	0.43
13:M:41:ILE:HG13	13:M:71:VAL:HG21	2.01	0.43
66:NB:109:PHE:HD2	66:NB:117:LEU:HD21	1.83	0.43
41:OA:19:CYS:HG	41:OA:37:CYS:HG	1.62	0.43
17:Q:12:ASN:HB3	17:Q:14:PHE:CD1	2.54	0.43
18:R:98:SER:O	18:R:102:LYS:N	2.48	0.43
19:S:103:GLU:HA	19:S:106:VAL:CG2	2.49	0.43
22:V:170:ARG:HH12	32:FA:59:ARG:HA	1.83	0.43
48:VA:186:THR:HG22	48:VA:187:VAL:N	2.30	0.43
23:W:143:ILE:HG23	23:W:146:LYS:HE3	2.00	0.43
24:X:141:LYS:HG3	24:X:144:LEU:HD12	2.01	0.43
24:X:16:THR:HB	24:X:19:VAL:H	1.83	0.43
50:XA:191:ARG:CG	50:XA:192:THR:H	2.30	0.43
52:ZA:162:CYS:SG	52:ZA:209:ASN:HA	2.58	0.43
1:A:1192:C:H3'	1:A:1193:A:C8	2.54	0.42
1:A:1196:A:H1'	1:A:1602:C:O2'	2.18	0.42
1:A:1350:U:H2'	1:A:1351:G:C8	2.54	0.42
1:A:1404:C:H2'	1:A:1405:G:C8	2.53	0.42
1:A:1545:A:H2'	1:A:1546:G:H8	1.79	0.42
1:A:1560:U:H2'	1:A:1561:U:O4'	2.19	0.42
1:A:291:G:H2'	1:A:292:U:C5	2.53	0.42
1:A:317:C:O2'	1:A:354:C:H4'	2.19	0.42
1:A:385:A:H5'	58:FB:21:PHE:CZ	2.54	0.42
1:A:71:A:C2'	1:A:72:A:H4'	2.28	0.42
1:A:882:U:H3	1:A:946:U:H3	1.64	0.42
1:A:1434:U:H4'	79:AC:24:CYS:HB2	2.01	0.42
2:B:1262:G:H2'	2:B:1264:G:O4'	2.19	0.42
2:B:129:U:H2'	2:B:130:A:C8	2.54	0.42
2:B:1337:A:H2'	2:B:1338:C:O4'	2.19	0.42
2:B:1481:A:HO2'	2:B:1858:A:H1'	1.83	0.42
2:B:2149:A:H2'	2:B:2150:G:C5'	2.48	0.42
2:B:2617:U:H4'	2:B:2644:C:H5	1.80	0.42
2:B:2664:C:H2'	2:B:2665:U:C6	2.54	0.42
2:B:2866:U:H4'	2:B:2867:C:H5'	2.00	0.42
2:B:3137:C:H5''	7:G:276:THR:CB	2.48	0.42
2:B:3273:A:H4'	10:J:44:ALA:HB1	1.97	0.42
2:B:3294:A:H5'	2:B:3294:A:H8	1.84	0.42
2:B:2999:U:O3'	2:B:3296:A:H4'	2.19	0.42
2:B:417:A:H2'	2:B:418:A:O4'	2.19	0.42
2:B:527:A:H2'	2:B:528:U:C6	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:697:A:H2'	2:B:698:U:C6	2.54	0.42
2:B:707:U:C5'	2:B:779:G:H21	2.32	0.42
2:B:1831:U:OP1	29:CA:91:ASN:HA	2.19	0.42
55:CB:145:ASP:O	55:CB:160:VAL:HG22	2.18	0.42
55:CB:46:TRP:HE1	55:CB:122:ASN:ND2	2.11	0.42
4:D:49:G:H4'	4:D:50:U:O4'	2.19	0.42
1:A:72:A:N6	56:DB:169:TYR:HB2	2.33	0.42
82:DC:331:ALA:HB1	82:DC:335:LEU:HD12	2.01	0.42
82:DC:380:LEU:O	82:DC:469:LEU:HB2	2.19	0.42
82:DC:655:TYR:H	82:DC:693:LEU:CD1	2.31	0.42
82:DC:746:VAL:HA	82:DC:749:LYS:HZ3	1.83	0.42
2:B:1019:G:O2'	83:EC:6927:U:H2'	2.19	0.42
6:F:149:ARG:HA	6:F:154:ALA:O	2.19	0.42
2:B:1650:G:H5'	6:F:68:LYS:NZ	2.34	0.42
6:F:68:LYS:CE	6:F:70:ARG:HB2	2.49	0.42
32:FA:2:PRO:C	32:FA:4:ARG:H	2.22	0.42
2:B:1072:G:H21	33:GA:50:THR:HG21	1.83	0.42
8:H:325:LEU:HD23	8:H:331:ALA:HB3	2.00	0.42
60:HB:59:PHE:CD2	60:HB:62:GLN:HA	2.54	0.42
9:I:17:GLN:HG3	25:Y:22:HIS:CB	2.47	0.42
9:I:205:SER:HB2	9:I:233:ALA:HB1	2.01	0.42
35:IA:35:GLU:O	35:IA:38:LYS:HB3	2.18	0.42
35:IA:54:GLU:HB2	35:IA:95:PRO:HG3	2.01	0.42
61:IB:76:VAL:CG1	61:IB:106:ASN:HD21	2.32	0.42
10:J:75:PRO:HB2	10:J:134:ARG:HH12	1.84	0.42
10:J:170:LYS:HD2	10:J:173:MET:SD	2.59	0.42
10:J:40:LEU:HD21	10:J:54:TYR:HB2	2.00	0.42
36:JA:8:LYS:HG3	36:JA:10:VAL:HG22	2.00	0.42
36:JA:8:LYS:HE3	36:JA:9:ILE:N	2.34	0.42
11:K:106:LEU:HD12	11:K:130:ILE:HD11	2.00	0.42
65:MB:63:ALA:O	65:MB:73:PRO:HB3	2.18	0.42
55:CB:69:PHE:HB3	66:NB:46:PHE:HB2	2.00	0.42
70:RB:63:LEU:HD11	70:RB:86:ILE:HD11	2.01	0.42
45:SA:1:MET:CE	45:SA:6:ARG:HB2	2.49	0.42
21:U:169:THR:H	21:U:172:GLN:NE2	2.16	0.42
8:H:31:ARG:HD3	22:V:25:TYR:H	1.84	0.42
22:V:26:LEU:HD11	22:V:52:LEU:O	2.19	0.42
22:V:65:SER:HB2	22:V:93:ILE:HG21	2.01	0.42
48:VA:121:VAL:HG12	48:VA:156:VAL:O	2.19	0.42
48:VA:183:PHE:HB3	48:VA:184:GLY:H	1.52	0.42
49:WA:199:ILE:HG22	49:WA:200:ASN:H	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
75:WB:92:ILE:HD11	75:WB:100:ILE:HD12	2.00	0.42
24:X:77:VAL:HG11	24:X:106:LEU:CD2	2.49	0.42
50:XA:184:LEU:HD12	50:XA:184:LEU:N	2.34	0.42
24:X:24:LEU:HD21	25:Y:141:VAL:HG11	2.01	0.42
52:ZA:51:THR:O	52:ZA:72:LEU:HD12	2.19	0.42
78:ZB:26:THR:HB	78:ZB:44:VAL:CG2	2.49	0.42
1:A:1413:U:H4'	1:A:1414:U:OP2	2.19	0.42
1:A:1441:C:H2'	1:A:1442:U:C6	2.54	0.42
1:A:21:U:H2'	1:A:22:A:H8	1.79	0.42
1:A:256:A:H2'	1:A:257:A:O4'	2.19	0.42
1:A:319:U:H4'	1:A:323:A:N9	2.33	0.42
1:A:460:A:C6	1:A:461:G:H1'	2.55	0.42
1:A:606:A:C4'	1:A:607:G:H3'	2.48	0.42
1:A:703:G:C2'	1:A:704:C:H5'	2.49	0.42
1:A:780:A:O2'	74:VB:8:ARG:HA	2.19	0.42
1:A:941:A:H1'	1:A:976:G:O2'	2.18	0.42
27:AA:93:LEU:HA	28:BA:20:LEU:O	2.19	0.42
53:AB:217:ILE:HG22	53:AB:218:LEU:H	1.84	0.42
2:B:1153:A:O2'	2:B:1154:A:H5'	2.20	0.42
2:B:1220:U:H3'	2:B:1221:A:N3	2.33	0.42
2:B:1768:U:H3'	2:B:1769:G:H5"	2.01	0.42
2:B:1870:C:H5"	2:B:3076:C:O2'	2.19	0.42
2:B:199:A:OP1	30:DA:60:ARG:HA	2.20	0.42
2:B:2061:G:O2'	2:B:2062:G:H5'	2.19	0.42
2:B:892:U:H4'	2:B:2134:G:OP1	2.20	0.42
2:B:2339:C:O2	2:B:2340:U:H1'	2.19	0.42
2:B:2376:G:H2'	2:B:2377:G:C8	2.54	0.42
2:B:2469:G:H22	2:B:2477:G:C1'	2.32	0.42
2:B:2624:G:C2'	2:B:2625:C:H5'	2.50	0.42
2:B:2987:A:O2'	7:G:260:VAL:N	2.52	0.42
2:B:3279:A:H5'	2:B:3279:A:C8	2.48	0.42
2:B:3370:A:H2'	2:B:3371:G:O4'	2.19	0.42
2:B:378:A:H4'	30:DA:91:ASN:HB3	2.01	0.42
2:B:524:U:C5	2:B:568:G:N2	2.80	0.42
2:B:635:G:H2'	2:B:636:C:H5"	2.01	0.42
2:B:790:U:H2'	2:B:791:A:H8	1.84	0.42
2:B:821:U:H5'	2:B:912:G:H5'	2.02	0.42
2:B:837:A:H3'	2:B:838:G:H8	1.84	0.42
2:B:978:G:H5"	2:B:979:U:OP1	2.18	0.42
2:B:997:A:H3'	2:B:998:A:C8	2.51	0.42
28:BA:59:HIS:O	28:BA:61:LYS:N	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:140:G:N2	19:S:110:ALA:HA	2.34	0.42
29:CA:135:ILE:O	29:CA:139:ILE:HG22	2.19	0.42
30:DA:28:ARG:HH12	30:DA:29:VAL:HG22	1.82	0.42
82:DC:32:LYS:HB3	82:DC:128:VAL:HG11	2.01	0.42
82:DC:365:ASN:HB3	82:DC:379:MET:CE	2.48	0.42
82:DC:510:ARG:O	82:DC:514:SER:HB2	2.19	0.42
82:DC:662:SER:HB2	82:DC:705:ILE:CD1	2.48	0.42
82:DC:723:LYS:HA	82:DC:808:PRO:HD3	2.00	0.42
5:E:117:ILE:HD13	5:E:117:ILE:O	2.19	0.42
57:EB:125:ILE:O	57:EB:129:LEU:HG	2.19	0.42
6:F:40:TYR:CA	6:F:91:GLY:HA3	2.49	0.42
32:FA:74:ASN:HD22	32:FA:115:LYS:HB2	1.84	0.42
58:FB:104:ILE:HD11	58:FB:165:LEU:HB2	2.00	0.42
7:G:11:HIS:CD2	7:G:235:THR:HA	2.54	0.42
7:G:141:GLY:CA	7:G:144:ILE:HB	2.50	0.42
7:G:52:GLY:HA3	7:G:311:PHE:CE1	2.54	0.42
8:H:99:MET:HG2	8:H:100:PHE:N	2.34	0.42
8:H:187:LEU:O	8:H:188:ARG:C	2.58	0.42
8:H:246:ARG:HD2	8:H:247:PHE:H	1.83	0.42
8:H:296:GLN:CA	8:H:299:ILE:HB	2.47	0.42
8:H:299:ILE:HG23	8:H:300:ARG:N	2.34	0.42
34:HA:25:LEU:CD2	34:HA:81:VAL:HG11	2.46	0.42
9:I:219:PHE:HE2	9:I:223:PHE:HB2	1.82	0.42
36:JA:64:LYS:O	36:JA:65:PHE:HB2	2.19	0.42
1:A:976:G:P	63:KB:109:LYS:HE2	2.59	0.42
2:B:1694:U:H5"	38:LA:24:LYS:HG2	2.00	0.42
13:M:3:TYR:CD2	13:M:65:VAL:HG21	2.54	0.42
65:MB:90:ILE:HA	65:MB:107:ILE:CG2	2.49	0.42
14:N:77:THR:HG22	14:N:82:ARG:CB	2.46	0.42
17:Q:170:LEU:CD2	40:NA:7:ILE:HD12	2.49	0.42
15:O:137:ARG:HG2	15:O:141:ARG:NH1	2.27	0.42
50:XA:39:ASN:HB2	67:OB:105:GLN:CD	2.39	0.42
16:P:133:LEU:HB3	16:P:142:ARG:NH2	2.29	0.42
18:R:98:SER:HA	18:R:101:LYS:CB	2.32	0.42
19:S:106:VAL:C	19:S:108:ARG:H	2.21	0.42
20:T:168:TYR:O	20:T:172:ARG:HB2	2.20	0.42
20:T:70:PRO:HB2	20:T:72:HIS:NE2	2.33	0.42
72:TB:83:ILE:O	72:TB:83:ILE:HG13	2.19	0.42
47:UA:4:ARG:HH11	47:UA:4:ARG:CB	2.31	0.42
61:IB:99:ARG:NH1	73:UB:7:ARG:HA	2.31	0.42
48:VA:135:PHE:HB3	48:VA:172:LEU:HD23	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
75:WB:61:SER:C	75:WB:80:LEU:HD11	2.40	0.42
24:X:14:LEU:HD21	25:Y:136:ARG:HG3	2.02	0.42
25:Y:17:ARG:HH11	25:Y:17:ARG:HG3	1.84	0.42
25:Y:80:VAL:HG11	25:Y:83:ARG:HE	1.83	0.42
26:Z:14:THR:HG22	26:Z:16:THR:HG23	2.00	0.42
52:ZA:162:CYS:HB3	52:ZA:209:ASN:O	2.18	0.42
52:ZA:228:ASN:HD22	71:SB:1:MET:HG2	1.83	0.42
1:A:1263:G:H5'	82:DC:613:LYS:HE2	2.00	0.42
1:A:1263:G:OP1	82:DC:613:LYS:HG2	2.20	0.42
1:A:1510:U:O2'	1:A:1511:U:H5'	2.20	0.42
1:A:461:G:H5'	54:BB:27:TYR:OH	2.20	0.42
1:A:640:U:H2'	1:A:641:G:O4'	2.19	0.42
1:A:867:G:P	63:KB:3:ARG:HD3	2.59	0.42
53:AB:140:GLY:HA3	53:AB:182:LEU:CD1	2.50	0.42
79:AC:22:ARG:HG3	79:AC:38:ILE:HD11	2.01	0.42
2:B:1102:A:C2	2:B:1105:A:H5'	2.54	0.42
2:B:1360:C:H2'	2:B:1361:U:C6	2.54	0.42
2:B:1503:A:H2'	2:B:1504:A:O4'	2.20	0.42
2:B:149:U:C2'	2:B:150:A:H5''	2.48	0.42
2:B:162:G:O2'	2:B:163:C:H5'	2.19	0.42
2:B:1717:U:H2'	2:B:1718:G:C8	2.54	0.42
2:B:1726:C:P	47:UA:36:ARG:HH12	2.41	0.42
2:B:1899:G:H22	2:B:2335:G:C5'	2.32	0.42
2:B:2878:G:OP1	2:B:2924:U:H4'	2.19	0.42
2:B:3383:G:H2'	2:B:3383:G:N3	2.34	0.42
2:B:58:G:N2	2:B:60:A:H2	2.16	0.42
2:B:672:A:H2'	2:B:673:U:C6	2.54	0.42
2:B:855:U:H5''	23:W:95:TRP:CG	2.54	0.42
28:BA:56:ARG:NH2	28:BA:61:LYS:HB2	2.32	0.42
54:BB:159:THR:HB	54:BB:227:VAL:HG23	2.01	0.42
3:C:56:G:H2'	3:C:57:C:O4'	2.19	0.42
55:CB:208:SER:OG	55:CB:211:ILE:HG12	2.20	0.42
4:D:65:G:H2'	4:D:66:A:C8	2.53	0.42
4:D:6:C:OP2	9:I:27:LYS:HE2	2.19	0.42
2:B:217:U:H4'	30:DA:100:HIS:NE2	2.33	0.42
30:DA:116:LYS:HA	30:DA:119:ILE:HD12	2.00	0.42
56:DB:64:LYS:HD2	56:DB:81:VAL:CG2	2.50	0.42
1:A:162:A:C5'	56:DB:83:CYS:HA	2.48	0.42
82:DC:267:LYS:HA	82:DC:268:PRO:HD3	1.72	0.42
82:DC:70:ILE:HD13	82:DC:71:LYS:HG3	2.00	0.42
6:F:123:ARG:HA	6:F:163:ARG:NH2	2.35	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2153:U:O3'	6:F:243:THR:HA	2.19	0.42
6:F:60:LYS:CD	6:F:73:GLU:HB3	2.49	0.42
2:B:2987:A:H4'	7:G:259:HIS:HB3	2.01	0.42
8:H:319:LYS:O	8:H:320:ASN:HB2	2.19	0.42
9:I:37:VAL:O	9:I:37:VAL:HG12	2.20	0.42
35:IA:15:ASN:HB3	35:IA:18:LYS:HG2	2.02	0.42
10:J:152:THR:HA	10:J:153:PRO:HD3	1.81	0.42
10:J:166:LYS:H	10:J:169:ASP:HB2	1.85	0.42
10:J:82:ARG:HD2	37:KA:104:PRO:CB	2.47	0.42
36:JA:61:LYS:HA	36:JA:64:LYS:CB	2.49	0.42
2:B:1387:G:O2'	36:JA:77:ALA:HB1	2.19	0.42
37:KA:49:ILE:HG22	37:KA:100:ILE:HG23	2.01	0.42
38:LA:70:LYS:HB3	38:LA:71:THR:H	1.64	0.42
14:N:163:GLN:O	14:N:164:LYS:HB3	2.19	0.42
14:N:218:ALA:O	14:N:219:ALA:HB3	2.20	0.42
49:WA:60:SER:HB2	66:NB:94:GLN:HE22	1.85	0.42
16:P:110:ILE:HG21	16:P:142:ARG:NH2	2.34	0.42
16:P:78:SER:O	16:P:82:ILE:HG12	2.18	0.42
1:A:1477:G:H5''	69:QB:45:MET:O	2.19	0.42
19:S:84:PRO:HB3	46:TA:51:GLY:CA	2.50	0.42
46:TA:27:GLN:H	46:TA:93:LEU:HD11	1.84	0.42
21:U:14:SER:HA	21:U:151:THR:HA	2.00	0.42
21:U:113:TYR:HB3	21:U:153:LYS:HB2	2.00	0.42
47:UA:24:ARG:HH22	47:UA:28:LYS:HE2	1.84	0.42
47:UA:83:ILE:O	47:UA:87:ARG:HB2	2.19	0.42
73:UB:56:LYS:N	73:UB:98:GLU:HG2	2.34	0.42
2:B:784:A:C5	22:V:93:ILE:HG22	2.55	0.42
74:VB:27:VAL:HG12	74:VB:29:HIS:HD2	1.84	0.42
2:B:1949:G:OP1	23:W:101:VAL:HG13	2.19	0.42
23:W:58:HIS:HB3	23:W:60:LYS:HZ2	1.84	0.42
75:WB:90:LYS:HZ2	75:WB:105:THR:HG21	1.84	0.42
75:WB:80:LEU:HD13	75:WB:101:TYR:CD2	2.54	0.42
24:X:80:ARG:HG3	25:Y:156:TYR:CB	2.48	0.42
52:ZA:109:GLY:C	52:ZA:139:ILE:HD13	2.40	0.42
52:ZA:53:ILE:HG23	52:ZA:72:LEU:HD23	2.00	0.42
1:A:1370:U:H4'	1:A:1371:A:C5'	2.49	0.42
1:A:1586:A:H1'	1:A:1611:A:N6	2.35	0.42
1:A:1653:C:H2'	1:A:1654:G:O4'	2.20	0.42
1:A:211:U:H5''	61:IB:20:PHE:HB2	2.00	0.42
1:A:382:C:O5'	1:A:382:C:H6	2.02	0.42
1:A:798:C:H2'	1:A:799:A:C8	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:AB:13:ALA:O	53:AB:16:VAL:HB	2.19	0.42
2:B:1004:U:N3	2:B:1049:C:H1'	2.34	0.42
2:B:1210:U:H2'	2:B:1211:U:C6	2.54	0.42
2:B:1338:C:H5''	36:JA:60:ASN:ND2	2.34	0.42
2:B:1894:U:H2'	2:B:1895:A:C5'	2.49	0.42
2:B:2057:G:H21	2:B:2077:U:H5	1.67	0.42
2:B:2815:G:O2'	2:B:2817:A:H5''	2.20	0.42
2:B:3107:U:H2'	2:B:3108:G:O4'	2.20	0.42
2:B:2999:U:O2'	2:B:3296:A:H5'	2.18	0.42
2:B:365:A:H3'	2:B:366:A:H8	1.84	0.42
2:B:523:A:H2'	2:B:524:U:H5'	2.00	0.42
2:B:640:U:H2'	2:B:641:C:C5	2.54	0.42
2:B:989:A:O2'	2:B:990:U:H5'	2.20	0.42
54:BB:113:ARG:HG3	54:BB:113:ARG:NH1	2.33	0.42
54:BB:193:GLY:O	54:BB:210:ILE:HG22	2.20	0.42
54:BB:48:LEU:HA	54:BB:52:LEU:HD12	2.01	0.42
54:BB:6:LYS:HD2	54:BB:6:LYS:H	1.83	0.42
4:D:112:G:H2'	4:D:113:C:C6	2.54	0.42
30:DA:26:GLN:O	30:DA:30:LEU:HB2	2.20	0.42
57:EB:36:ALA:HA	57:EB:39:ARG:HD3	2.02	0.42
6:F:118:GLU:HB3	6:F:156:LYS:NZ	2.34	0.42
6:F:39:GLY:HA2	6:F:93:LYS:HB2	2.00	0.42
32:FA:7:LYS:CA	32:FA:10:LYS:HB2	2.46	0.42
7:G:256:HIS:HA	7:G:258:ALA:N	2.34	0.42
7:G:56:ILE:HD11	7:G:356:LEU:HB3	2.00	0.42
7:G:356:LEU:HD12	7:G:359:ILE:CD1	2.49	0.42
8:H:206:LEU:CD1	8:H:237:GLN:HB3	2.50	0.42
8:H:334:PHE:CD1	8:H:339:LEU:HB2	2.55	0.42
60:HB:52:LYS:HG3	60:HB:54:TYR:HE2	1.83	0.42
9:I:212:ALA:HB2	9:I:219:PHE:HE1	1.84	0.42
61:IB:64:VAL:HG12	61:IB:129:ARG:HH11	1.84	0.42
1:A:115:G:OP1	61:IB:67:ARG:HD2	2.20	0.42
61:IB:42:PHE:CZ	61:IB:70:ILE:HD13	2.54	0.42
11:K:90:LYS:HG2	11:K:95:ILE:HD11	2.00	0.42
12:L:134:TYR:CD2	12:L:134:TYR:N	2.88	0.42
2:B:2550:U:O4	12:L:36:ILE:HG22	2.19	0.42
39:MA:9:LEU:HD11	39:MA:54:VAL:HG22	2.00	0.42
2:B:2675:C:N3	15:O:22:SER:HB2	2.34	0.42
67:OB:23:LYS:O	67:OB:24:LEU:HB2	2.20	0.42
17:Q:157:ARG:HE	32:FA:124:ILE:HD12	1.84	0.42
69:QB:47:PRO:CG	69:QB:53:TRP:HB2	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
70:RB:24:ILE:HD11	70:RB:93:LEU:CD1	2.49	0.42
45:SA:21:ARG:O	45:SA:25:LYS:HB3	2.19	0.42
46:TA:53:GLN:NE2	46:TA:57:VAL:HG13	2.35	0.42
47:UA:86:LEU:HA	47:UA:89:MET:HB2	2.01	0.42
48:VA:33:VAL:CG2	48:VA:38:MET:HB2	2.49	0.42
74:VB:104:SER:O	74:VB:108:ARG:HG3	2.19	0.42
49:WA:179:LYS:HG2	49:WA:191:ASP:OD1	2.19	0.42
49:WA:176:LYS:HG2	49:WA:197:SER:C	2.40	0.42
49:WA:245:PHE:HE1	49:WA:250:TYR:HA	1.85	0.42
50:XA:98:ILE:HG22	50:XA:100:GLY:H	1.84	0.42
50:XA:111:ILE:HG13	50:XA:111:ILE:O	2.19	0.42
50:XA:133:ILE:HG23	50:XA:155:PHE:HB3	2.01	0.42
25:Y:63:VAL:O	25:Y:75:ILE:HG22	2.20	0.42
77:YB:28:PRO:C	77:YB:30:SER:H	2.23	0.42
26:Z:37:LEU:HD23	26:Z:56:VAL:CG1	2.49	0.42
78:ZB:28:VAL:CG2	78:ZB:48:VAL:HG11	2.49	0.42
1:A:1715:G:H3'	1:A:1716:C:H4'	2.00	0.42
1:A:1771:U:C2	1:A:1772:C:H1'	2.54	0.42
1:A:20:G:H5''	1:A:571:G:C5	2.54	0.42
1:A:624:G:H2'	1:A:625:C:O4'	2.19	0.42
1:A:867:G:OP1	63:KB:3:ARG:HD3	2.19	0.42
27:AA:37:ILE:CD1	27:AA:59:MET:HB2	2.48	0.42
2:B:1231:A:H2'	2:B:1277:C:H41	1.84	0.42
2:B:1308:A:N1	2:B:2381:G:H1'	2.35	0.42
2:B:1468:A:N1	2:B:1881:A:H5'	2.34	0.42
2:B:1494:U:O2	2:B:1496:C:C4	2.73	0.42
2:B:871:U:OP1	2:B:2142:A:H2'	2.20	0.42
2:B:2302:G:H2'	2:B:2303:A:O4'	2.18	0.42
2:B:258:G:O2'	2:B:259:C:H5'	2.20	0.42
2:B:2595:A:H2'	2:B:2596:U:H5'	2.00	0.42
2:B:2649:A:C2'	2:B:2650:U:H5'	2.50	0.42
2:B:2878:G:O2'	2:B:2879:C:H5'	2.19	0.42
2:B:417:A:H2'	2:B:418:A:C8	2.54	0.42
2:B:498:A:H61	2:B:615:U:H3	1.67	0.42
2:B:685:G:OP1	17:Q:35:ARG:HG2	2.18	0.42
2:B:810:A:H2'	2:B:811:U:H6	1.79	0.42
2:B:932:U:O5'	2:B:932:U:H6	2.03	0.42
2:B:1398:U:H5''	3:C:9:A:OP1	2.19	0.42
55:CB:88:PRO:HG2	55:CB:91:GLU:HB2	2.02	0.42
30:DA:19:TYR:CE2	30:DA:30:LEU:HD21	2.54	0.42
3:C:74:U:P	30:DA:76:LEU:HG	2.59	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:24:VAL:HG22	82:DC:126:LEU:HD23	2.00	0.42
82:DC:539:GLU:HA	82:DC:542:LEU:HD12	2.01	0.42
82:DC:634:TRP:NE1	82:DC:648:ASP:HB2	2.34	0.42
57:EB:39:ARG:CG	57:EB:40:PRO:HD3	2.50	0.42
1:A:856:A:C6	57:EB:96:ARG:HB3	2.55	0.42
58:FB:29:LEU:HG	58:FB:31:ARG:HH11	1.84	0.42
7:G:171:LEU:HD23	7:G:333:LYS:HE2	2.01	0.42
7:G:367:LYS:HD3	28:BA:17:ARG:HH21	1.83	0.42
1:A:768:C:N1	59:GB:143:ILE:HD13	2.34	0.42
8:H:179:LEU:HA	8:H:179:LEU:HD23	1.87	0.42
2:B:3323:A:H2	35:IA:106:THR:HG22	1.84	0.42
36:JA:78:ASN:HA	36:JA:108:ILE:CD1	2.50	0.42
11:K:178:ILE:HD11	11:K:187:GLU:HG2	2.01	0.42
11:K:84:VAL:O	11:K:116:PHE:HA	2.20	0.42
63:KB:113:PHE:O	63:KB:117:LEU:HG	2.20	0.42
17:Q:128:ARG:NH1	39:MA:112:PRO:HG3	2.35	0.42
39:MA:21:LEU:HA	39:MA:24:LEU:HD12	2.01	0.42
39:MA:20:GLN:C	39:MA:24:LEU:HG	2.40	0.42
14:N:33:ILE:HD11	14:N:35:ASP:O	2.19	0.42
68:PB:145:ARG:HA	68:PB:145:ARG:NE	2.35	0.42
69:QB:70:GLN:HA	69:QB:122:ARG:O	2.19	0.42
18:R:66:THR:HB	18:R:67:PRO:CD	2.43	0.42
44:RA:103:LEU:HD13	44:RA:109:ASN:O	2.20	0.42
70:RB:50:LEU:CD1	70:RB:93:LEU:HD22	2.49	0.42
19:S:99:ARG:HE	19:S:118:SER:HB3	1.84	0.42
19:S:8:GLU:HG3	19:S:50:ARG:NH2	2.26	0.42
20:T:152:VAL:O	20:T:155:LYS:HG2	2.20	0.42
20:T:172:ARG:HA	20:T:175:THR:HG23	2.01	0.42
2:B:2655:U:H5'	46:TA:3:ASN:O	2.20	0.42
72:TB:11:LEU:CD1	72:TB:74:VAL:HB	2.50	0.42
73:UB:14:LYS:HB2	73:UB:14:LYS:HE2	1.84	0.42
48:VA:96:ILE:O	48:VA:100:ILE:HG12	2.19	0.42
23:W:86:GLU:CG	23:W:91:SER:HB2	2.47	0.42
49:WA:83:ALA:HB2	49:WA:113:VAL:CG1	2.49	0.42
49:WA:9:LEU:HA	49:WA:313:TRP:CD1	2.54	0.42
75:WB:72:GLY:O	75:WB:76:ALA:HB2	2.19	0.42
24:X:11:GLY:CA	24:X:57:GLU:O	2.67	0.42
24:X:11:GLY:CA	24:X:59:VAL:HG23	2.40	0.42
25:Y:36:VAL:HA	25:Y:64:VAL:HG22	2.01	0.42
27:AA:19:VAL:HA	27:AA:36:ILE:HB	2.00	0.42
2:B:1155:C:H2'	2:B:1156:C:H6	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:20:A:H1'	19:S:112:ASN:CB	2.42	0.42
2:B:2206:G:N3	2:B:2206:G:H2'	2.35	0.42
2:B:2466:G:H2'	2:B:2467:G:H5'	2.00	0.42
2:B:2629:U:H2'	2:B:2630:C:C6	2.55	0.42
2:B:2797:C:C3'	2:B:2798:C:H5'	2.50	0.42
2:B:1202:A:H2	2:B:2856:G:HO2'	1.59	0.42
2:B:2882:U:O3'	7:G:263:SER:HB3	2.18	0.42
2:B:2883:U:O2'	2:B:2884:C:H5'	2.20	0.42
2:B:2934:A:H2'	2:B:2935:U:C4'	2.50	0.42
2:B:3029:A:C8	2:B:3029:A:O5'	2.70	0.42
2:B:3109:G:O2'	2:B:3110:C:H5'	2.19	0.42
2:B:3113:A:H8	2:B:3119:U:H3	1.65	0.42
2:B:590:G:N2	2:B:610:G:H2'	2.34	0.42
8:H:198:ARG:NH1	30:DA:12:ARG:HH21	2.09	0.42
82:DC:277:ILE:C	82:DC:280:PRO:HD2	2.39	0.42
82:DC:632:LYS:HB3	82:DC:648:ASP:CB	2.28	0.42
82:DC:724:ILE:O	82:DC:804:LEU:HB2	2.20	0.42
31:EA:22:LYS:O	31:EA:45:GLY:HA3	2.18	0.42
32:FA:60:TYR:CB	32:FA:63:LYS:HD2	2.49	0.42
7:G:310:GLY:HA2	7:G:315:GLY:O	2.19	0.42
7:G:313:HIS:O	7:G:333:LYS:HE3	2.20	0.42
59:GB:47:PHE:O	59:GB:51:LYS:HG3	2.19	0.42
8:H:219:LEU:CD1	8:H:227:THR:HG22	2.49	0.42
35:IA:29:ALA:HB1	35:IA:60:TRP:CE2	2.54	0.42
10:J:54:TYR:HA	10:J:65:ILE:HG22	2.01	0.42
11:K:88:ARG:HH12	11:K:103:LEU:HD13	1.85	0.42
11:K:129:LEU:CD2	11:K:130:ILE:HG23	2.45	0.42
11:K:170:GLU:HA	11:K:170:GLU:OE1	2.18	0.42
11:K:170:GLU:CD	11:K:179:LEU:HA	2.39	0.42
12:L:228:GLU:C	12:L:230:LYS:N	2.71	0.42
13:M:137:SER:HB3	13:M:143:GLU:HB3	2.00	0.42
65:MB:18:ARG:HB3	68:PB:95:GLY:HA3	2.02	0.42
65:MB:32:ASP:CA	65:MB:35:LYS:HB2	2.49	0.42
14:N:73:ASN:HA	14:N:76:MET:SD	2.59	0.42
68:PB:12:GLN:HG3	68:PB:15:LEU:HD13	2.00	0.42
17:Q:115:ARG:NH1	17:Q:145:PHE:HB2	2.35	0.42
18:R:113:THR:HG22	18:R:115:PHE:N	2.27	0.42
71:SB:71:ARG:HH22	72:TB:23:ARG:HG2	1.85	0.42
7:G:261:MET:HA	20:T:64:PHE:O	2.20	0.42
20:T:57:PHE:HE2	20:T:72:HIS:HA	1.79	0.42
73:UB:86:PHE:O	73:UB:124:VAL:HG23	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:VA:42:ARG:HH12	48:VA:51:VAL:HB	1.79	0.42
49:WA:16:HIS:CE1	49:WA:43:ILE:HB	2.54	0.42
24:X:12:ARG:NH1	24:X:21:GLU:HA	2.35	0.42
50:XA:50:VAL:HG22	67:OB:109:LEU:HD22	2.02	0.42
52:ZA:37:PRO:HD3	52:ZA:46:LYS:HD2	2.01	0.42
1:A:1166:A:H4'	1:A:1587:A:H4'	2.02	0.42
1:A:1634:C:O2'	1:A:1635:A:H5'	2.19	0.42
1:A:1683:C:O2'	1:A:1684:U:O5'	2.34	0.42
1:A:16:G:H2'	1:A:17:C:N1	2.35	0.42
1:A:325:G:H2'	1:A:326:G:H8	1.85	0.42
53:AB:5:ILE:HG21	53:AB:10:LYS:HE3	2.01	0.42
79:AC:21:CYS:C	79:AC:23:VAL:H	2.23	0.42
2:B:1377:G:H5'	2:B:1408:G:O2'	2.20	0.42
2:B:1430:U:H5	32:FA:3:SER:HB2	1.84	0.42
2:B:181:U:C2	2:B:182:U:H1'	2.55	0.42
2:B:2342:U:H2'	2:B:2343:C:C5	2.53	0.42
2:B:2403:G:H5''	2:B:2871:G:H5'	2.01	0.42
2:B:2529:A:H2'	2:B:2530:G:C8	2.54	0.42
2:B:2541:U:C1'	2:B:2542:U:O5'	2.68	0.42
2:B:2549:G:H3'	2:B:2550:U:O2	2.19	0.42
2:B:2581:U:H6	2:B:2581:U:O5'	2.01	0.42
2:B:3328:G:N2	2:B:3379:C:H1'	2.34	0.42
2:B:40:A:H2'	2:B:2410:U:H5	1.84	0.42
2:B:559:A:H2'	2:B:560:G:O4'	2.20	0.42
2:B:934:G:H2'	2:B:935:U:C6	2.55	0.42
54:BB:106:LYS:HG3	54:BB:108:ARG:HD3	2.01	0.42
80:BC:20:LYS:CE	80:BC:20:LYS:HA	2.39	0.42
3:C:122:U:H3	3:C:131:A:H61	1.66	0.42
55:CB:123:VAL:HG21	75:WB:100:ILE:CD1	2.46	0.42
55:CB:77:TYR:HA	55:CB:83:ARG:CG	2.50	0.42
82:DC:225:PHE:HD1	82:DC:228:ARG:HD2	1.84	0.42
82:DC:329:PRO:O	82:DC:332:ASP:HB2	2.19	0.42
82:DC:488:VAL:HG12	82:DC:796:MET:H	1.84	0.42
82:DC:655:TYR:HB2	82:DC:693:LEU:CD2	2.49	0.42
82:DC:649:GLN:CD	82:DC:687:ASN:HB3	2.39	0.42
82:DC:826:HIS:CB	82:DC:828:MET:HG3	2.45	0.42
5:E:120:VAL:CG1	5:E:124:LEU:HD23	2.49	0.42
5:E:113:SER:HA	5:E:139:SER:CA	2.50	0.42
31:EA:134:LEU:HD12	31:EA:136:PHE:CD1	2.55	0.42
83:EC:6771:U:H1'	83:EC:6821:U:OP2	2.19	0.42
6:F:150:LEU:HB3	6:F:151:PRO:CD	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:874:U:P	7:G:241:LYS:HE3	2.59	0.42
7:G:332:ARG:HD3	7:G:332:ARG:H	1.84	0.42
7:G:373:PRO:O	7:G:376:LYS:HB3	2.19	0.42
59:GB:59:LEU:HB3	59:GB:69:ARG:HG3	2.01	0.42
8:H:222:VAL:HA	8:H:223:PRO:HD3	1.78	0.42
8:H:244:LEU:H	8:H:244:LEU:CD2	2.16	0.42
8:H:119:ARG:HD2	8:H:271:LYS:HD3	2.00	0.42
34:HA:58:TYR:HA	34:HA:61:MET:HE2	2.01	0.42
35:IA:33:VAL:O	35:IA:33:VAL:HG13	2.18	0.42
58:FB:85:PRO:CB	61:IB:12:ALA:HB2	2.34	0.42
10:J:55:LEU:HB2	10:J:64:LEU:O	2.19	0.42
10:J:81:ALA:O	10:J:84:VAL:HB	2.19	0.42
11:K:153:PHE:HB2	11:K:203:TRP:HB3	2.02	0.42
11:K:90:LYS:HA	11:K:220:PHE:HE1	1.84	0.42
38:LA:22:VAL:HG12	38:LA:30:LEU:HD11	2.01	0.42
65:MB:92:SER:O	65:MB:107:ILE:HG12	2.19	0.42
65:MB:18:ARG:HB3	68:PB:95:GLY:CA	2.50	0.42
14:N:36:LEU:HD11	14:N:69:ARG:HD3	2.02	0.42
14:N:49:CYS:HG	14:N:173:PHE:HE1	1.66	0.42
40:NA:79:SER:OG	40:NA:81:THR:HG22	2.19	0.42
15:O:161:SER:O	15:O:165:GLN:HG3	2.19	0.42
15:O:96:PHE:CD1	15:O:102:PHE:HB3	2.54	0.42
67:OB:26:LEU:HG	67:OB:58:MET:CE	2.49	0.42
17:Q:115:ARG:NH1	17:Q:145:PHE:CB	2.82	0.42
17:Q:17:HIS:HB2	17:Q:21:ARG:HH12	1.85	0.42
18:R:20:VAL:CG2	18:R:68:LEU:HB2	2.49	0.42
2:B:1547:G:OP1	19:S:104:GLU:HG3	2.20	0.42
19:S:58:GLY:HA2	19:S:136:ASP:OD1	2.19	0.42
2:B:99:A:OP2	19:S:195:ASN:ND2	2.53	0.42
2:B:665:A:C5'	19:S:199:LEU:HD21	2.40	0.42
19:S:27:VAL:HG22	19:S:31:ARG:HH21	1.85	0.42
20:T:108:ILE:HD13	20:T:117:ARG:NH1	2.34	0.42
46:TA:68:VAL:HB	46:TA:85:LEU:CB	2.36	0.42
21:U:126:ARG:HA	21:U:140:GLU:CB	2.50	0.42
1:A:1136:U:H5'	73:UB:62:LYS:NZ	2.35	0.42
22:V:62:VAL:HG13	22:V:66:ARG:HG2	2.01	0.42
22:V:72:LYS:HB3	22:V:72:LYS:NZ	2.34	0.42
48:VA:65:GLY:HA2	48:VA:73:PHE:CG	2.54	0.42
49:WA:61:PHE:HB3	49:WA:92:TRP:CD2	2.55	0.42
50:XA:38:PHE:O	50:XA:39:ASN:HB3	2.19	0.42
1:A:1329:A:H3'	1:A:1330:G:H8	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1555:A:O2'	65:MB:82:ASN:HB2	2.19	0.42
1:A:179:A:H2'	1:A:180:A:O4'	2.19	0.42
1:A:43:A:H4'	1:A:99:C:OP1	2.20	0.42
1:A:556:A:N3	1:A:590:C:H1'	2.35	0.42
53:AB:138:VAL:HG13	53:AB:184:ILE:HD13	2.02	0.42
2:B:1123:U:C4	2:B:1124:U:C5	3.07	0.42
2:B:1191:U:OP2	20:T:49:ARG:HB2	2.20	0.42
2:B:136:G:H2'	2:B:137:G:O4'	2.19	0.42
2:B:1505:C:N3	2:B:1515:A:H1'	2.35	0.42
2:B:1867:A:H2'	2:B:1868:G:C8	2.55	0.42
2:B:2157:G:O2'	6:F:156:LYS:HD2	2.19	0.42
2:B:2210:G:N1	2:B:2236:G:C4	2.88	0.42
2:B:2349:U:H1'	2:B:3307:A:O2'	2.20	0.42
2:B:2384:A:H62	20:T:85:ARG:HH22	1.68	0.42
2:B:2450:G:H21	2:B:2451:G:H1'	1.85	0.42
2:B:2781:U:O3'	17:Q:185:LYS:HE2	2.20	0.42
2:B:284:A:N6	2:B:2785:A:H1'	2.34	0.42
2:B:3035:A:H1'	13:M:121:LYS:C	2.40	0.42
2:B:3373:U:H2'	2:B:3374:U:C6	2.55	0.42
2:B:724:U:O2'	2:B:725:G:H5'	2.20	0.42
2:B:729:C:O2'	22:V:79:LYS:HE3	2.20	0.42
55:CB:113:ILE:HG23	55:CB:191:ALA:HB2	2.02	0.42
55:CB:30:PRO:HB2	55:CB:33:VAL:CG2	2.50	0.42
30:DA:45:ILE:HB	30:DA:46:LYS:H	1.63	0.42
30:DA:60:ARG:HG3	30:DA:103:LYS:CD	2.29	0.42
82:DC:175:TYR:OH	82:DC:271:ARG:NH1	2.52	0.42
82:DC:662:SER:HA	82:DC:665:ALA:HB2	2.02	0.42
83:EC:6859:U:C2	83:EC:6871:A:H2	2.38	0.42
6:F:77:ILE:CD1	6:F:115:ASN:HD22	2.32	0.42
6:F:19:HIS:CB	6:F:191:LEU:HA	2.50	0.42
32:FA:148:ILE:CG2	32:FA:149:ALA:H	2.32	0.42
59:GB:109:LEU:HD12	59:GB:146:PHE:HB2	2.02	0.42
59:GB:116:LEU:O	59:GB:118:LEU:HD13	2.20	0.42
60:HB:19:GLY:O	60:HB:67:THR:HA	2.19	0.42
9:I:114:GLY:C	9:I:115:LEU:HD22	2.40	0.42
9:I:183:TRP:HB2	9:I:190:ILE:CD1	2.50	0.42
35:IA:101:ALA:O	35:IA:102:LYS:HB2	2.20	0.42
36:JA:32:TRP:CH2	36:JA:52:GLN:HG2	2.55	0.42
11:K:166:ASN:HA	11:K:169:ILE:CD1	2.49	0.42
63:KB:64:ARG:HA	63:KB:64:ARG:HD3	1.90	0.42
12:L:36:ILE:HG22	12:L:37:GLY:N	2.35	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:L:40:VAL:O	12:L:42:PRO:HD3	2.20	0.42
2:B:1639:C:H5''	38:LA:52:GLN:O	2.20	0.42
17:Q:128:ARG:HH11	39:MA:112:PRO:HG3	1.85	0.42
1:A:1241:G:O2'	65:MB:78:THR:HA	2.19	0.42
65:MB:8:LYS:HB3	65:MB:8:LYS:NZ	2.35	0.42
14:N:11:TYR:O	14:N:13:LYS:HG3	2.18	0.42
17:Q:103:ASN:HB3	40:NA:20:MET:HE1	2.02	0.42
66:NB:41:PRO:O	66:NB:42:GLU:CB	2.64	0.42
67:OB:26:LEU:HG	67:OB:58:MET:HE2	2.01	0.42
68:PB:126:ARG:HB3	68:PB:133:VAL:CB	2.45	0.42
68:PB:40:ARG:HH11	68:PB:40:ARG:HG2	1.84	0.42
17:Q:126:PHE:HD2	39:MA:115:LYS:HB3	1.84	0.42
17:Q:32:LYS:HD3	17:Q:32:LYS:C	2.40	0.42
2:B:561:C:OP1	18:R:76:ALA:HA	2.20	0.42
70:RB:62:VAL:HG22	70:RB:85:ARG:HG3	2.02	0.42
46:TA:98:LYS:HG2	46:TA:99:GLN:N	2.33	0.42
48:VA:100:ILE:HD12	48:VA:187:VAL:HG21	2.00	0.42
50:XA:199:PRO:C	50:XA:201:LEU:H	2.22	0.42
52:ZA:44:LEU:CD1	52:ZA:50:ILE:HD11	2.49	0.42
1:A:1474:G:H2'	1:A:1475:A:H8	1.84	0.42
1:A:1725:U:H2'	1:A:1726:G:C8	2.55	0.42
1:A:260:U:H5	58:FB:43:ILE:O	2.03	0.42
1:A:774:A:H2'	1:A:775:G:C5'	2.50	0.42
1:A:961:U:H2'	1:A:962:C:C6	2.55	0.42
2:B:1400:G:H2'	2:B:1401:A:O4'	2.20	0.42
2:B:1593:A:H2'	2:B:1594:A:O4'	2.19	0.42
2:B:1860:G:H2'	2:B:1861:G:O4'	2.20	0.42
2:B:1452:A:H1'	2:B:2346:C:O2'	2.20	0.42
2:B:2370:G:H2'	2:B:2371:G:O4'	2.19	0.42
2:B:2746:A:H61	9:I:32:GLN:HE22	1.68	0.42
2:B:399:A:H2'	2:B:400:G:H5'	2.01	0.42
2:B:444:U:H2'	2:B:445:G:C8	2.55	0.42
2:B:786:A:H3'	22:V:147:ARG:CG	2.48	0.42
2:B:898:U:H2'	2:B:899:U:O4'	2.20	0.42
2:B:944:C:H2'	2:B:945:C:H6	1.84	0.42
54:BB:15:PRO:O	54:BB:18:TRP:HB2	2.20	0.42
3:C:58:G:H1'	3:C:59:A:H2	1.85	0.42
55:CB:87:CYS:SG	55:CB:88:PRO:HD2	2.60	0.42
55:CB:92:ARG:HH21	55:CB:168:VAL:HG12	1.85	0.42
82:DC:110:ASP:HB3	82:DC:537:HIS:CB	2.49	0.42
82:DC:355:GLN:O	82:DC:479:LYS:HB2	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:544:ASP:O	82:DC:548:ASP:HB2	2.20	0.42
5:E:112:ALA:HB2	5:E:135:PRO:CB	2.44	0.42
31:EA:104:PRO:HA	31:EA:107:ARG:HG3	2.02	0.42
1:A:858:G:H5'	57:EB:116:ARG:HH21	1.83	0.42
57:EB:96:ARG:O	57:EB:98:ILE:HG13	2.20	0.42
6:F:181:LYS:HG2	6:F:183:GLY:H	1.83	0.42
6:F:19:His:HB2	6:F:191:LEU:C	2.40	0.42
2:B:2961:G:N7	6:F:216:His:HE1	2.18	0.42
6:F:22:LEU:HD13	6:F:52:SER:HB3	2.01	0.42
6:F:230:VAL:HG23	6:F:233:GLN:H	1.84	0.42
32:FA:47:LYS:O	32:FA:48:TYR:CB	2.68	0.42
7:G:85:VAL:HA	7:G:202:THR:HA	2.02	0.42
7:G:94:GLU:HG2	7:G:156:SER:CB	2.49	0.42
59:GB:27:GLU:HA	59:GB:30:LEU:HG	2.02	0.42
8:H:112:LYS:HE3	8:H:113:VAL:N	2.34	0.42
8:H:156:LEU:HD13	8:H:251:THR:HG22	2.02	0.42
8:H:353:ALA:O	8:H:357:GLU:HB2	2.20	0.42
8:H:84:ARG:O	8:H:87:GLN:HB3	2.19	0.42
60:HB:54:TYR:HB3	60:HB:72:GLY:CA	2.48	0.42
9:I:276:LYS:H	9:I:276:LYS:HD2	1.84	0.42
35:IA:27:LYS:C	35:IA:30:PRO:HD2	2.40	0.42
36:JA:43:ARG:HH11	36:JA:43:ARG:HG2	1.84	0.42
38:LA:19:LYS:HE2	38:LA:35:VAL:HB	2.02	0.42
66:NB:116:LEU:CB	66:NB:117:LEU:HD22	2.50	0.42
70:RB:58:LEU:HD12	70:RB:88:LYS:HD2	2.01	0.42
19:S:101:THR:O	19:S:105:ARG:HG3	2.19	0.42
2:B:145:G:C5'	19:S:56:LYS:HA	2.48	0.42
71:SB:28:ASP:C	71:SB:30:ALA:H	2.23	0.42
20:T:142:SER:HB2	20:T:147:TRP:CE3	2.55	0.42
20:T:35:VAL:HB	20:T:104:VAL:CG1	2.32	0.42
46:TA:38:GLN:HA	46:TA:41:ARG:NH1	2.35	0.42
2:B:1103:A:H62	22:V:10:His:CD2	2.38	0.42
48:VA:45:LEU:HD13	48:VA:49:ALA:HB3	2.02	0.42
23:W:168:ALA:O	23:W:172:ARG:HG3	2.20	0.42
52:ZA:141:ARG:HE	52:ZA:151:PRO:HB2	1.85	0.42
1:A:1371:A:H1'	1:A:1373:C:OP2	2.20	0.42
1:A:130:C:H1'	1:A:177:U:OP1	2.20	0.42
1:A:252:U:H5''	54:BB:132:GLY:C	2.40	0.42
1:A:81:G:H2'	1:A:82:U:C6	2.55	0.42
27:AA:101:VAL:HB	27:AA:109:MET:HE2	2.02	0.42
2:B:1123:U:O2'	2:B:1124:U:H5'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1158:A:O2'	2:B:1159:A:H4'	2.19	0.42
2:B:1556:C:H2'	2:B:2169:G:C6	2.54	0.42
2:B:2174:G:OP1	2:B:2174:G:H8	2.03	0.42
2:B:225:C:O4'	30:DA:102:SER:HB3	2.20	0.42
2:B:2319:U:H2'	2:B:2320:A:C8	2.54	0.42
2:B:2685:C:H2'	2:B:2686:A:C8	2.55	0.42
2:B:271:C:H3'	2:B:272:G:C8	2.55	0.42
2:B:3135:U:H3'	2:B:3136:G:H8	1.85	0.42
2:B:3322:A:H2'	2:B:3323:A:H8	1.85	0.42
2:B:3355:U:H3'	2:B:3356:G:H5''	2.02	0.42
2:B:3380:U:H5'	7:G:316:GLU:OE1	2.20	0.42
2:B:389:A:C3'	2:B:390:G:H5''	2.48	0.42
2:B:406:G:N2	3:C:16:G:H1'	2.35	0.42
2:B:509:U:H1'	37:KA:42:GLN:OE1	2.20	0.42
2:B:676:G:OP2	8:H:275:THR:HG21	2.20	0.42
2:B:909:G:N7	2:B:925:A:H2	2.18	0.42
28:BA:23:ARG:HB3	28:BA:25:ASP:OD2	2.20	0.42
55:CB:124:LEU:C	55:CB:126:ASP:H	2.24	0.42
4:D:3:U:H5'	4:D:24:A:H2	1.83	0.42
82:DC:16:VAL:HG23	82:DC:346:VAL:HG22	2.02	0.42
82:DC:483:PHE:CE1	82:DC:517:CYS:HB2	2.55	0.42
82:DC:567:VAL:HG23	82:DC:592:PRO:HB3	2.00	0.42
82:DC:724:ILE:HG12	82:DC:815:ALA:HA	2.01	0.42
57:EB:20:VAL:HG22	57:EB:85:PHE:CD1	2.54	0.42
57:EB:28:GLU:HG2	57:EB:28:GLU:O	2.19	0.42
57:EB:91:ILE:HD11	57:EB:129:LEU:CA	2.48	0.42
2:B:2176:U:H5''	6:F:54:ARG:HH12	1.85	0.42
6:F:68:LYS:HE3	6:F:69:TYR:O	2.20	0.42
59:GB:171:ARG:HE	59:GB:171:ARG:HA	1.85	0.42
9:I:276:LYS:N	9:I:276:LYS:HD2	2.34	0.42
4:D:6:C:O2	9:I:72:ASP:HB2	2.20	0.42
35:IA:32:ALA:O	35:IA:36:ILE:HG13	2.19	0.42
61:IB:77:SER:O	61:IB:84:ILE:HB	2.20	0.42
36:JA:98:HIS:CA	36:JA:125:ARG:HH12	2.26	0.42
11:K:145:ARG:CZ	11:K:145:ARG:HB3	2.49	0.42
11:K:88:ARG:O	11:K:112:ASN:HA	2.18	0.42
10:J:164:SER:HB2	37:KA:6:ARG:H	1.83	0.42
63:KB:33:VAL:O	63:KB:37:ILE:HG13	2.20	0.42
63:KB:94:LYS:O	63:KB:98:VAL:HG23	2.20	0.42
12:L:98:ARG:CB	12:L:98:ARG:HH11	2.33	0.42
39:MA:106:LYS:O	39:MA:109:ILE:HG22	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:N:12:GLN:HA	14:N:59:GLN:OE1	2.20	0.42
14:N:31:ILE:HG13	14:N:69:ARG:HH21	1.84	0.42
66:NB:35:PRO:CG	69:QB:8:ASP:HA	2.50	0.42
18:R:99:TRP:O	18:R:103:ILE:HD13	2.20	0.42
44:RA:82:LEU:HD13	44:RA:82:LEU:O	2.20	0.42
19:S:15:GLN:HE22	40:NA:53:TYR:HD2	1.68	0.42
50:XA:140:ASN:OD1	71:SB:29:HIS:HA	2.20	0.42
71:SB:51:VAL:HG11	71:SB:78:LEU:HD11	2.01	0.42
71:SB:55:LEU:HD11	71:SB:69:LEU:HD11	2.02	0.42
2:B:3172:A:H1'	20:T:101:ARG:NH2	2.35	0.42
20:T:37:ARG:NH1	20:T:157:GLU:OE1	2.52	0.42
46:TA:73:GLU:HG2	46:TA:80:ARG:CB	2.50	0.42
46:TA:73:GLU:HG2	46:TA:80:ARG:HG2	2.02	0.42
2:B:2356:A:OP1	21:U:140:GLU:HG3	2.19	0.42
47:UA:35:ALA:O	47:UA:37:TYR:N	2.44	0.42
47:UA:51:ALA:H	47:UA:54:ILE:HB	1.85	0.42
73:UB:16:ARG:O	73:UB:20:ARG:HG3	2.19	0.42
49:WA:155:ARG:HB2	49:WA:170:ILE:HD11	2.02	0.42
49:WA:155:ARG:HG3	49:WA:202:LEU:HG	2.02	0.42
77:YB:21:LEU:HD22	77:YB:26:GLN:CD	2.40	0.42
52:ZA:126:ARG:HA	52:ZA:129:ILE:HD12	2.02	0.42
1:A:1370:U:H4'	1:A:1371:A:H5''	2.02	0.41
1:A:1500:C:H5''	69:QB:102:ARG:HD3	2.00	0.41
1:A:91:G:H2'	1:A:92:A:C8	2.55	0.41
2:B:1135:A:OP2	33:GA:5:LYS:HG3	2.19	0.41
2:B:1479:U:H3'	2:B:1480:G:C8	2.55	0.41
2:B:1526:U:H6	2:B:1526:U:OP2	2.03	0.41
2:B:155:G:H5''	2:B:156:G:C8	2.55	0.41
2:B:1729:A:C3'	2:B:1730:G:H5'	2.50	0.41
2:B:18:G:H2'	2:B:19:U:C6	2.55	0.41
2:B:1899:G:H22	2:B:2335:G:H4'	1.85	0.41
2:B:1908:A:C2	2:B:2336:U:H5'	2.54	0.41
2:B:2372:A:H3'	2:B:2373:A:C5'	2.50	0.41
2:B:2372:A:H5'	2:B:2373:A:C8	2.55	0.41
2:B:2632:G:H5'	2:B:2698:G:H1'	2.02	0.41
2:B:2677:G:H2'	2:B:2677:G:N3	2.35	0.41
2:B:2795:U:H5'	2:B:2796:G:H5'	2.02	0.41
2:B:2853:A:H4'	14:N:64:ALA:CA	2.49	0.41
2:B:3108:G:H2'	2:B:3109:G:O4'	2.20	0.41
2:B:3127:A:H3'	2:B:3128:G:C8	2.55	0.41
2:B:3180:A:C2	20:T:164:SER:HA	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:58:G:H2'	2:B:59:G:C8	2.54	0.41
2:B:822:G:O2'	2:B:823:C:H5'	2.20	0.41
2:B:96:G:P	32:FA:34:MET:HB2	2.60	0.41
1:A:788:A:OP2	54:BB:106:LYS:HE2	2.19	0.41
3:C:75:G:H1'	43:QA:26:TRP:HB2	2.02	0.41
4:D:4:U:H5''	4:D:26:C:H4'	2.01	0.41
30:DA:28:ARG:NH1	30:DA:29:VAL:HG22	2.35	0.41
56:DB:30:LYS:O	56:DB:102:VAL:HG23	2.20	0.41
82:DC:171:LYS:HG2	82:DC:278:LEU:CB	2.50	0.41
82:DC:287:ALA:HA	82:DC:292:LYS:HD2	2.01	0.41
82:DC:406:LYS:O	82:DC:431:ILE:HD12	2.20	0.41
82:DC:418:TYR:HB2	82:DC:424:ASP:O	2.20	0.41
31:EA:3:LYS:C	31:EA:5:LEU:H	2.23	0.41
83:EC:6768:U:O2'	83:EC:6769:A:H5'	2.19	0.41
83:EC:6857:C:O2'	83:EC:6858:A:H5'	2.20	0.41
83:EC:6918:A:HO2'	83:EC:6919:G:H8	1.65	0.41
83:EC:6943:A:H3'	83:EC:6944:U:H5'	2.02	0.41
7:G:187:SER:HB3	7:G:190:GLU:OE1	2.20	0.41
7:G:238:LEU:HB3	7:G:242:THR:HG21	2.00	0.41
7:G:260:VAL:HG11	7:G:266:ARG:HH12	1.82	0.41
2:B:209:A:H2'	8:H:162:THR:HB	2.02	0.41
60:HB:1:MET:HE3	60:HB:41:TYR:CD2	2.55	0.41
9:I:253:PHE:CZ	9:I:255:PRO:HB3	2.55	0.41
35:IA:37:LYS:HA	35:IA:49:VAL:HG11	2.02	0.41
61:IB:110:HIS:HD2	61:IB:131:ILE:HG21	1.80	0.41
63:KB:21:ASN:O	63:KB:22:ALA:HB3	2.19	0.41
12:L:157:VAL:HG12	12:L:159:PRO:HD2	2.02	0.41
13:M:103:ILE:HG21	13:M:110:LYS:HZ2	1.82	0.41
39:MA:75:TYR:HB3	39:MA:76:GLN:H	1.67	0.41
39:MA:9:LEU:O	39:MA:17:LEU:HD21	2.19	0.41
65:MB:21:ASP:O	65:MB:25:LEU:HG	2.19	0.41
66:NB:109:PHE:CG	66:NB:116:LEU:HG	2.55	0.41
41:OA:17:THR:O	41:OA:25:ARG:HA	2.20	0.41
67:OB:27:ASP:HB3	67:OB:30:THR:HG22	2.02	0.41
16:P:129:THR:C	16:P:131:GLU:H	2.22	0.41
16:P:94:LYS:HD3	16:P:99:LYS:HG2	2.02	0.41
42:PA:11:PHE:HA	42:PA:14:LEU:HD12	2.01	0.41
42:PA:6:THR:HA	42:PA:54:LEU:HD13	2.02	0.41
68:PB:45:LEU:HD22	68:PB:85:PHE:CE2	2.54	0.41
18:R:103:ILE:HG22	18:R:104:ALA:N	2.35	0.41
2:B:3229:G:N2	18:R:128:ARG:HH22	2.17	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:R:68:LEU:CD1	18:R:94:TRP:HB2	2.43	0.41
19:S:142:ILE:N	19:S:142:ILE:CD1	2.82	0.41
71:SB:81:ASN:HB3	71:SB:82:VAL:H	1.70	0.41
46:TA:28:TYR:CB	46:TA:69:VAL:HG11	2.50	0.41
73:UB:121:ARG:HG3	73:UB:122:PHE:CE2	2.55	0.41
48:VA:26:PHE:CD1	48:VA:187:VAL:HG11	2.50	0.41
48:VA:33:VAL:HG21	48:VA:38:MET:HB2	2.02	0.41
48:VA:89:THR:HG21	48:VA:96:ILE:CD1	2.46	0.41
2:B:1321:G:H1'	24:X:111:ALA:O	2.20	0.41
24:X:43:TYR:O	24:X:47:LYS:HD2	2.19	0.41
24:X:45:LEU:O	24:X:45:LEU:HD23	2.20	0.41
50:XA:163:ASN:HB3	50:XA:169:SER:OG	2.20	0.41
50:XA:93:THR:CG2	50:XA:181:VAL:HG21	2.50	0.41
9:I:40:HIS:CD2	25:Y:69:LYS:H	2.37	0.41
52:ZA:138:PRO:HG2	52:ZA:222:TYR:CE2	2.55	0.41
1:A:16:G:O3'	1:A:1109:G:H5'	2.20	0.41
1:A:1319:A:H3'	1:A:1320:U:C5'	2.42	0.41
1:A:1749:A:C2'	1:A:1750:A:H5''	2.46	0.41
1:A:206:A:H2'	1:A:207:U:H5'	2.01	0.41
1:A:416:A:H5'	1:A:417:A:N7	2.35	0.41
1:A:449:C:H5''	54:BB:30:ARG:CB	2.49	0.41
1:A:598:U:H2'	1:A:599:A:C8	2.55	0.41
1:A:92:A:H8	1:A:92:A:O5'	2.02	0.41
2:B:1017:C:O2	2:B:1017:C:H2'	2.20	0.41
2:B:1605:A:H1'	2:B:1607:U:OP1	2.20	0.41
2:B:1887:A:H2'	2:B:1888:U:H5'	2.01	0.41
2:B:1922:A:H62	2:B:1929:G:N2	2.17	0.41
2:B:1938:U:O2'	2:B:1939:G:H5'	2.20	0.41
2:B:1544:G:O2'	2:B:2168:A:H1'	2.21	0.41
2:B:2242:A:H4'	2:B:2244:A:H5'	2.02	0.41
2:B:2621:G:H2'	2:B:2622:C:H5'	2.02	0.41
2:B:2934:A:H2'	2:B:2935:U:H4'	2.01	0.41
2:B:2967:A:O3'	6:F:206:PRO:HG2	2.20	0.41
2:B:502:U:O5'	2:B:502:U:H6	2.03	0.41
2:B:508:U:H2'	2:B:509:U:C6	2.55	0.41
2:B:5:G:H2'	2:B:6:A:C5'	2.50	0.41
2:B:812:G:H2'	2:B:813:G:C8	2.54	0.41
3:C:55:U:H3	3:C:62:C:N4	2.18	0.41
29:CA:91:ASN:N	29:CA:94:GLN:OE1	2.50	0.41
55:CB:129:PRO:HG2	55:CB:130:ILE:H	1.84	0.41
30:DA:3:LYS:HG3	30:DA:8:VAL:CG1	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:179:LEU:O	5:E:183:ILE:HG13	2.20	0.41
5:E:25:LYS:NZ	5:E:30:GLU:HB3	2.35	0.41
1:A:810:G:N3	57:EB:111:LYS:HG3	2.35	0.41
6:F:117:GLU:HG3	6:F:119:LYS:O	2.19	0.41
6:F:202:VAL:HG13	6:F:218:HIS:H	1.86	0.41
6:F:6:ARG:HB3	6:F:10:LYS:CE	2.41	0.41
8:H:285:ASP:O	8:H:289:ILE:HG13	2.20	0.41
34:HA:78:GLY:HA2	34:HA:81:VAL:CG2	2.44	0.41
9:I:113:LEU:HD23	9:I:115:LEU:HD23	2.02	0.41
9:I:155:THR:CB	9:I:179:ARG:HA	2.48	0.41
63:KB:91:LEU:HD22	63:KB:122:ILE:HG13	2.02	0.41
63:KB:37:ILE:CG2	63:KB:71:ILE:HG23	2.50	0.41
12:L:97:TYR:O	12:L:132:VAL:HG12	2.20	0.41
14:N:117:GLY:O	14:N:119:TRP:N	2.53	0.41
41:OA:24:ARG:HG3	41:OA:36:SER:OG	2.20	0.41
69:QB:34:VAL:O	69:QB:35:ASP:OD1	2.38	0.41
20:T:35:VAL:HG12	20:T:36:VAL:H	1.85	0.41
46:TA:58:PHE:HE2	46:TA:61:LYS:HD3	1.86	0.41
46:TA:7:THR:HB	46:TA:22:GLN:HG3	2.01	0.41
2:B:382:U:C4'	21:U:100:ALA:HB1	2.35	0.41
47:UA:59:CYS:C	47:UA:61:LYS:H	2.22	0.41
49:WA:123:ILE:HG22	49:WA:133:VAL:HG22	2.02	0.41
49:WA:170:ILE:HD13	49:WA:211:ILE:CD1	2.45	0.41
49:WA:240:VAL:CG1	49:WA:254:ALA:HB1	2.47	0.41
24:X:74:ASN:HB3	24:X:129:ILE:HG23	2.03	0.41
52:ZA:35:TRP:CE3	52:ZA:37:PRO:HD3	2.55	0.41
78:ZB:65:ARG:O	78:ZB:66:LEU:HG	2.20	0.41
1:A:1330:G:H2'	1:A:1331:A:O4'	2.20	0.41
1:A:1524:A:H4'	69:QB:93:HIS:CG	2.55	0.41
1:A:1669:U:H2'	1:A:1670:G:O4'	2.20	0.41
1:A:1671:A:N6	1:A:1730:A:O2'	2.53	0.41
1:A:1784:C:O5'	1:A:1784:C:H6	2.04	0.41
1:A:320:U:O2'	1:A:321:C:C6	2.70	0.41
1:A:443:C:H2'	1:A:444:C:O4'	2.20	0.41
1:A:568:G:O2'	1:A:569:C:H5'	2.19	0.41
2:B:1552:G:H5'	2:B:2171:G:H5''	2.02	0.41
2:B:1652:G:H2'	2:B:1653:G:O4'	2.20	0.41
2:B:1710:C:H5'	31:EA:79:HIS:NE2	2.34	0.41
2:B:1813:A:H2'	2:B:1814:A:H5'	2.02	0.41
2:B:1913:A:N6	2:B:2120:A:C2	2.89	0.41
2:B:1915:A:O3'	23:W:84:THR:HB	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2118:C:H2'	2:B:2119:A:H5'	2.01	0.41
2:B:2131:A:C2'	2:B:2132:C:H5'	2.50	0.41
2:B:884:A:OP2	2:B:2139:A:N6	2.53	0.41
2:B:2162:U:O2'	2:B:2163:C:H5'	2.20	0.41
2:B:2467:G:O6	5:E:105:LYS:HG2	2.19	0.41
2:B:2637:A:H2'	2:B:2638:C:H5'	2.01	0.41
2:B:3028:G:H5''	82:DC:28:VAL:HG11	2.02	0.41
2:B:3049:A:O4'	7:G:53:MET:HB2	2.19	0.41
2:B:3200:G:C2'	2:B:3201:C:H5'	2.50	0.41
2:B:562:C:H5''	24:X:71:LYS:HG3	2.01	0.41
2:B:675:C:H2'	2:B:676:G:O4'	2.20	0.41
2:B:87:U:OP1	22:V:167:SER:HB3	2.20	0.41
54:BB:129:VAL:HG12	54:BB:156:VAL:HG22	2.01	0.41
54:BB:18:TRP:CB	54:BB:20:LEU:HG	2.50	0.41
54:BB:68:ARG:HB3	54:BB:76:VAL:HG11	2.02	0.41
3:C:113:U:H5''	43:QA:7:PHE:HB2	2.02	0.41
29:CA:49:LYS:O	29:CA:50:ALA:HB3	2.20	0.41
4:D:70:U:H2'	4:D:71:G:O4'	2.20	0.41
82:DC:153:PRO:O	82:DC:202:VAL:HG13	2.20	0.41
82:DC:176:GLN:HA	82:DC:179:ALA:HB3	2.01	0.41
82:DC:402:ALA:HA	82:DC:450:ALA:HB2	2.02	0.41
82:DC:576:LEU:CD1	82:DC:587:TYR:HE1	2.27	0.41
31:EA:14:VAL:HG11	38:LA:90:ILE:CD1	2.50	0.41
31:EA:9:LYS:NZ	31:EA:86:THR:HB	2.36	0.41
83:EC:6891:G:N2	83:EC:6938:A:H62	2.18	0.41
6:F:142:ASP:O	6:F:143:GLU:HB2	2.19	0.41
2:B:911:C:N4	6:F:3:ARG:HD3	2.36	0.41
7:G:133:TYR:HD1	7:G:136:LYS:HE3	1.86	0.41
7:G:160:VAL:O	7:G:180:GLU:HA	2.20	0.41
7:G:198:HIS:HA	7:G:201:LYS:CB	2.47	0.41
7:G:261:MET:HG2	20:T:64:PHE:CA	2.43	0.41
8:H:209:TYR:HD2	8:H:211:GLU:H	1.67	0.41
9:I:125:VAL:CG2	9:I:199:ILE:HG21	2.49	0.41
9:I:24:ARG:HB3	9:I:24:ARG:HH11	1.84	0.41
61:IB:78:THR:HA	61:IB:84:ILE:CG2	2.49	0.41
12:L:97:TYR:HB3	12:L:132:VAL:N	2.35	0.41
13:M:189:GLU:HG3	13:M:190:ASP:H	1.85	0.41
39:MA:45:LYS:HA	39:MA:48:ARG:HG2	2.02	0.41
65:MB:98:ASN:OD1	65:MB:100:LYS:HG3	2.20	0.41
14:N:139:ARG:HD2	14:N:173:PHE:CE2	2.54	0.41
14:N:72:ALA:O	14:N:76:MET:HG2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:NA:58:ILE:HG13	40:NA:59:ASP:H	1.80	0.41
15:O:80:LEU:HD23	15:O:80:LEU:O	2.21	0.41
68:PB:70:VAL:HA	68:PB:73:MET:CE	2.50	0.41
2:B:351:A:N6	43:QA:38:ASN:HA	2.35	0.41
18:R:21:VAL:HB	18:R:63:VAL:CG2	2.50	0.41
18:R:85:TRP:NE1	18:R:91:CYS:HB2	2.35	0.41
2:B:282:G:N2	19:S:178:HIS:O	2.53	0.41
19:S:48:ALA:O	19:S:52:GLY:N	2.53	0.41
46:TA:17:CYS:O	46:TA:18:ARG:HB2	2.20	0.41
73:UB:117:ILE:HB	73:UB:120:VAL:HB	2.03	0.41
73:UB:86:PHE:N	73:UB:122:PHE:O	2.52	0.41
22:V:125:ASP:O	22:V:129:VAL:HG23	2.19	0.41
2:B:741:U:O2'	22:V:73:GLN:HB3	2.20	0.41
48:VA:104:ARG:H	48:VA:104:ARG:HG3	1.56	0.41
48:VA:154:SER:C	48:VA:156:VAL:H	2.23	0.41
49:WA:238:ASP:HB2	49:WA:256:THR:HB	2.02	0.41
49:WA:28:GLY:HA3	49:WA:76:ASP:HA	2.03	0.41
75:WB:71:ILE:HD12	75:WB:76:ALA:CA	2.48	0.41
50:XA:77:SER:HA	50:XA:124:THR:HG23	2.02	0.41
1:A:1464:G:H5''	66:NB:141:SER:OG	2.20	0.41
1:A:1659:A:H2'	1:A:1660:A:C8	2.55	0.41
1:A:251:A:H2'	1:A:252:U:H5'	2.03	0.41
1:A:840:U:HO2'	1:A:841:U:H6	1.68	0.41
1:A:881:A:C2'	1:A:882:U:H5'	2.51	0.41
27:AA:45:ARG:HB3	27:AA:48:ARG:HB3	2.02	0.41
2:B:1164:G:H2'	2:B:1165:A:H8	1.84	0.41
2:B:1175:C:H2'	2:B:1176:C:H6	1.83	0.41
2:B:1263:A:H4'	2:B:1264:G:C8	2.36	0.41
2:B:1773:C:O5'	2:B:1773:C:H6	2.03	0.41
2:B:2170:U:O2'	2:B:2171:G:H5'	2.21	0.41
2:B:2350:C:H2'	2:B:2351:U:C6	2.56	0.41
2:B:2470:C:O2	2:B:2489:C:H5'	2.21	0.41
2:B:2524:A:H2	12:L:44:ARG:HG2	1.85	0.41
2:B:2875:U:C6	2:B:2945:G:O6	2.73	0.41
2:B:3013:U:H2'	2:B:3014:U:H6	1.85	0.41
2:B:31:C:H2'	2:B:32:U:C6	2.55	0.41
2:B:3206:C:P	2:B:3207:U:H4'	2.60	0.41
2:B:3329:U:H5'	7:G:309:GLY:N	2.35	0.41
2:B:3334:U:O4'	2:B:3370:A:C2	2.73	0.41
2:B:360:G:H2'	2:B:361:A:N7	2.35	0.41
2:B:389:A:H5'	21:U:16:SER:O	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:570:A:H2'	2:B:571:U:O4'	2.20	0.41
2:B:603:A:C2'	2:B:604:G:H5'	2.51	0.41
2:B:959:C:H2'	2:B:2801:A:N1	2.36	0.41
2:B:938:C:H5''	2:B:962:A:C4	2.55	0.41
54:BB:67:GLN:HB3	54:BB:69:HIS:NE2	2.35	0.41
59:GB:28:LEU:HD13	80:BC:40:TYR:HD2	1.86	0.41
3:C:75:G:N3	43:QA:26:TRP:CB	2.83	0.41
55:CB:121:ILE:HD11	55:CB:198:LEU:CD1	2.51	0.41
56:DB:38:GLY:O	56:DB:45:PHE:HB2	2.20	0.41
82:DC:436:LEU:HD23	82:DC:437:MET:N	2.36	0.41
82:DC:515:ASP:HB3	82:DC:518:VAL:CG1	2.50	0.41
5:E:111:ILE:HD11	5:E:148:VAL:HA	2.01	0.41
31:EA:6:LYS:HA	31:EA:6:LYS:HE2	2.02	0.41
57:EB:81:LEU:HD23	57:EB:81:LEU:O	2.20	0.41
83:EC:6910:A:O5'	83:EC:6910:A:C8	2.70	0.41
6:F:249:SER:HA	6:F:253:GLN:NE2	2.34	0.41
6:F:8:GLN:OE1	6:F:232:GLY:HA2	2.21	0.41
32:FA:94:ALA:CB	32:FA:121:VAL:HG22	2.50	0.41
7:G:295:ALA:HA	7:G:299:ASP:HB3	2.01	0.41
8:H:52:VAL:N	8:H:103:THR:HB	2.34	0.41
8:H:329:PRO:HD3	11:K:41:ARG:NH2	2.35	0.41
34:HA:31:VAL:O	34:HA:35:ARG:HD3	2.21	0.41
34:HA:41:LEU:O	34:HA:92:ILE:N	2.53	0.41
60:HB:79:TYR:C	60:HB:81:ASN:H	2.24	0.41
60:HB:82:LEU:HB2	60:HB:86:ILE:CG2	2.37	0.41
9:I:125:VAL:HG13	9:I:199:ILE:HD12	2.02	0.41
4:D:15:C:O2'	9:I:8:LYS:HB2	2.20	0.41
9:I:94:ASN:OD1	9:I:97:ALA:HB2	2.21	0.41
12:L:122:LYS:O	12:L:123:GLN:HB3	2.20	0.41
12:L:69:LEU:HD21	19:S:24:ARG:HH21	1.84	0.41
12:L:78:PHE:O	12:L:79:GLN:CB	2.68	0.41
12:L:91:PHE:HA	12:L:94:PHE:HB2	2.03	0.41
14:N:178:ARG:HB2	14:N:179:PRO:HD3	2.02	0.41
40:NA:61:ILE:O	40:NA:63:ASN:N	2.53	0.41
66:NB:82:ARG:HG3	66:NB:82:ARG:HH11	1.85	0.41
15:O:32:ARG:HG2	15:O:119:SER:O	2.20	0.41
18:R:37:GLU:OE1	18:R:74:ARG:HG3	2.21	0.41
18:R:79:ALA:O	18:R:83:LYS:HB2	2.20	0.41
71:SB:16:LYS:HG2	71:SB:23:ILE:HG12	2.01	0.41
20:T:34:VAL:HG21	20:T:112:TYR:CD1	2.55	0.41
20:T:58:LEU:HA	20:T:72:HIS:ND1	2.34	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
72:TB:90:THR:HG21	72:TB:113:HIS:CD2	2.55	0.41
73:UB:76:LEU:HB2	73:UB:80:GLY:N	2.31	0.41
73:UB:76:LEU:HB2	73:UB:81:LYS:H	1.86	0.41
74:VB:21:LYS:HB2	74:VB:75:VAL:HG13	2.01	0.41
74:VB:7:ILE:HG22	74:VB:8:ARG:N	2.36	0.41
49:WA:83:ALA:HA	49:WA:89:LEU:HD23	2.01	0.41
75:WB:62:VAL:N	75:WB:80:LEU:HD11	2.35	0.41
50:XA:120:LEU:HD12	50:XA:121:VAL:H	1.85	0.41
50:XA:143:VAL:HB	50:XA:157:ASP:N	2.32	0.41
50:XA:27:ARG:HB3	50:XA:28:ASN:H	1.66	0.41
63:KB:17:PRO:HG3	77:YB:28:PRO:HD3	2.02	0.41
52:ZA:54:GLU:O	52:ZA:58:LEU:HG	2.20	0.41
1:A:1201:G:N2	1:A:1600:A:OP2	2.53	0.41
1:A:1219:A:N6	1:A:1265:G:H1'	2.35	0.41
1:A:1279:C:H2'	1:A:1280:C:O4'	2.21	0.41
1:A:1301:U:OP1	52:ZA:88:LYS:HB2	2.20	0.41
1:A:1460:A:N7	83:EC:6915:G:H4'	2.35	0.41
1:A:1527:C:H5'	55:CB:106:LYS:CB	2.50	0.41
1:A:1701:A:C3'	1:A:1702:A:H5''	2.51	0.41
1:A:427:C:H5'	1:A:460:A:OP2	2.20	0.41
1:A:542:A:O2'	1:A:543:C:H2'	2.20	0.41
1:A:769:A:H2'	1:A:770:A:H8	1.83	0.41
1:A:1277:G:H21	53:AB:174:HIS:HE1	1.67	0.41
53:AB:53:THR:HG21	53:AB:94:ARG:HG2	2.01	0.41
2:B:1144:U:O2	2:B:1159:A:C8	2.73	0.41
2:B:1200:A:C5	2:B:2370:G:H5''	2.56	0.41
2:B:128:G:H2'	2:B:129:U:C6	2.56	0.41
2:B:1440:G:O2'	2:B:1441:G:H5'	2.21	0.41
2:B:1485:G:H2'	2:B:1486:G:H8	1.81	0.41
2:B:1569:U:H5''	2:B:1570:U:H5	1.86	0.41
2:B:1587:A:O2'	2:B:1588:A:H5''	2.20	0.41
2:B:2198:A:N7	2:B:2270:A:C8	2.89	0.41
2:B:2274:U:H2'	2:B:2275:A:H8	1.86	0.41
2:B:2317:A:H2'	2:B:2318:U:H5'	2.02	0.41
2:B:2358:A:H3'	2:B:2359:C:C6	2.55	0.41
2:B:2797:C:H3'	2:B:2798:C:H5'	2.02	0.41
2:B:2824:G:H2'	2:B:2825:C:C6	2.55	0.41
2:B:721:G:H2'	2:B:721:G:N3	2.36	0.41
2:B:754:G:H2'	2:B:755:A:H8	1.85	0.41
28:BA:19:THR:HG22	28:BA:31:PHE:HD2	1.86	0.41
54:BB:122:LYS:CD	54:BB:164:LEU:HD21	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
80:BC:14:VAL:HG12	80:BC:18:THR:HG23	2.01	0.41
3:C:97:A:H2'	3:C:98:U:H5'	2.02	0.41
29:CA:63:ILE:HD11	29:CA:84:PHE:CD1	2.55	0.41
55:CB:51:VAL:CG1	55:CB:134:VAL:HG21	2.50	0.41
82:DC:523:SER:HB2	86:DC:903:SO1:C21	2.50	0.41
82:DC:598:SER:HB3	82:DC:682:ARG:NH1	2.35	0.41
5:E:110:PHE:CD2	5:E:135:PRO:HG3	2.47	0.41
2:B:1709:C:C4'	31:EA:15:ARG:HH12	2.33	0.41
57:EB:64:VAL:HA	57:EB:67:LEU:CD1	2.50	0.41
6:F:116:VAL:HG12	6:F:126:LEU:HB2	2.01	0.41
6:F:173:GLY:HA2	6:F:176:ASP:OD1	2.20	0.41
32:FA:26:ARG:O	32:FA:28:HIS:N	2.54	0.41
32:FA:27:LYS:HB3	32:FA:28:HIS:CE1	2.56	0.41
7:G:305:ILE:HG12	7:G:321:PHE:CZ	2.55	0.41
59:GB:100:LYS:O	59:GB:103:ASP:HB2	2.21	0.41
9:I:110:LEU:HB3	9:I:116:ASP:HA	2.03	0.41
35:IA:102:LYS:C	35:IA:102:LYS:HD3	2.41	0.41
61:IB:75:VAL:HG21	61:IB:117:VAL:HG11	2.02	0.41
10:J:69:PHE:HA	10:J:74:VAL:N	2.35	0.41
11:K:97:PRO:O	11:K:100:ARG:HB3	2.20	0.41
63:KB:66:ILE:HA	63:KB:66:ILE:HD12	1.97	0.41
12:L:184:ALA:O	12:L:188:THR:HG23	2.20	0.41
13:M:132:VAL:HG21	13:M:146:LEU:HB3	2.03	0.41
2:B:1126:G:OP2	14:N:14:ASN:HA	2.21	0.41
66:NB:48:VAL:HG13	66:NB:49:TYR:CD1	2.55	0.41
41:OA:31:LYS:O	41:OA:32:LYS:HB2	2.20	0.41
41:OA:63:ARG:HB3	41:OA:64:MET:H	1.60	0.41
67:OB:9:VAL:HG13	67:OB:50:ILE:HA	2.02	0.41
16:P:90:ARG:NH1	16:P:139:VAL:HG21	2.36	0.41
42:PA:42:LYS:HE2	42:PA:55:VAL:HG21	2.03	0.41
68:PB:70:VAL:O	68:PB:74:GLN:HG2	2.20	0.41
18:R:94:TRP:CE2	18:R:100:ALA:HB2	2.55	0.41
18:R:17:VAL:HG12	18:R:72:LEU:HB3	2.02	0.41
18:R:39:ILE:HG22	18:R:40:ASP:N	2.35	0.41
71:SB:11:LEU:O	71:SB:12:TYR:HB3	2.20	0.41
20:T:62:THR:H	20:T:70:PRO:HD3	1.83	0.41
20:T:74:ARG:HG3	20:T:146:GLY:CA	2.49	0.41
2:B:2355:G:OP1	21:U:141:SER:HA	2.20	0.41
21:U:26:PHE:CZ	21:U:121:GLN:HG2	2.56	0.41
21:U:30:ARG:HB3	21:U:30:ARG:NH1	2.36	0.41
73:UB:22:ASN:O	73:UB:25:ALA:HB3	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
73:UB:76:LEU:HD12	73:UB:81:LYS:CB	2.44	0.41
74:VB:81:GLU:CA	74:VB:84:LYS:HG2	2.49	0.41
23:W:143:ILE:HA	23:W:146:LYS:HB3	2.03	0.41
49:WA:192:PHE:HB3	49:WA:223:TRP:CD2	2.55	0.41
49:WA:16:HIS:HD1	49:WA:43:ILE:HG13	1.86	0.41
24:X:11:GLY:HA2	24:X:57:GLU:O	2.21	0.41
11:K:119:VAL:CG1	25:Y:135:PRO:HG3	2.50	0.41
51:YA:39:GLU:O	51:YA:40:ASN:C	2.59	0.41
26:Z:54:VAL:HG23	26:Z:54:VAL:O	2.20	0.41
52:ZA:138:PRO:HG2	52:ZA:222:TYR:CZ	2.55	0.41
1:A:106:U:C2'	1:A:107:C:H5'	2.50	0.41
1:A:10:G:H1'	52:ZA:89:GLN:HB2	2.02	0.41
1:A:157:A:N6	56:DB:59:GLN:HB3	2.34	0.41
1:A:1608:U:H2'	1:A:1609:U:C5	2.55	0.41
1:A:1640:C:H42	83:EC:6952:U:H5''	1.86	0.41
1:A:169:A:HO2'	1:A:171:A:H8	1.63	0.41
1:A:272:U:H2'	1:A:273:G:C8	2.56	0.41
1:A:28:A:O2'	1:A:29:U:H5'	2.21	0.41
1:A:306:U:H2'	1:A:307:G:C8	2.55	0.41
1:A:30:G:H4'	73:UB:131:SER:HB2	2.01	0.41
1:A:344:A:H2'	1:A:345:U:H5'	2.02	0.41
2:B:1180:A:O2'	2:B:1181:U:H4'	2.21	0.41
2:B:1470:U:O2'	2:B:1471:U:H5'	2.21	0.41
2:B:1494:U:C3'	2:B:1495:U:H5'	2.51	0.41
2:B:1823:A:H2'	2:B:1824:U:O4'	2.20	0.41
2:B:1904:C:H2'	2:B:1905:G:O4'	2.21	0.41
2:B:214:G:H2'	2:B:215:G:C8	2.56	0.41
2:B:2372:A:H5''	2:B:2373:A:H5''	2.02	0.41
2:B:1310:G:H1'	2:B:2380:U:H4'	2.03	0.41
2:B:2397:A:HO2'	7:G:255:TRP:HZ2	1.60	0.41
2:B:2569:A:H1'	2:B:2570:U:H5	1.85	0.41
2:B:994:G:C2	2:B:2637:A:H2	2.39	0.41
2:B:2685:C:H2'	2:B:2686:A:H8	1.86	0.41
2:B:2754:G:H5''	2:B:2755:C:H5''	2.01	0.41
2:B:2950:G:H4'	2:B:2951:G:C8	2.55	0.41
2:B:3092:C:O3'	2:B:3093:C:H3'	2.20	0.41
2:B:367:A:H2'	2:B:368:G:H5'	2.02	0.41
2:B:32:U:H1'	2:B:53:G:N2	2.35	0.41
2:B:792:G:H2'	2:B:793:C:H6	1.85	0.41
2:B:90:C:H6	2:B:90:C:O5'	2.04	0.41
2:B:95:A:C5	2:B:96:G:H1'	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BA:48:ARG:NH2	28:BA:58:HIS:HE1	2.09	0.41
54:BB:176:ASP:HB2	54:BB:179:LYS:NZ	2.36	0.41
54:BB:201:HIS:CB	54:BB:206:ASP:HA	2.50	0.41
54:BB:54:TYR:O	74:VB:20:ARG:NH1	2.53	0.41
3:C:77:A:H2'	3:C:78:G:H8	1.86	0.41
55:CB:128:ASN:HA	55:CB:128:ASN:HD22	1.72	0.41
4:D:118:A:H2'	4:D:119:U:C6	2.55	0.41
4:D:11:A:H5''	4:D:13:A:C6	2.56	0.41
30:DA:63:LYS:O	30:DA:66:GLN:HB2	2.21	0.41
82:DC:138:GLN:O	82:DC:142:VAL:HG23	2.20	0.41
82:DC:223:ARG:NH1	82:DC:223:ARG:HG2	2.36	0.41
82:DC:399:ARG:HA	82:DC:453:ILE:HG13	2.03	0.41
82:DC:747:LEU:C	82:DC:749:LYS:H	2.23	0.41
31:EA:37:PRO:HD2	31:EA:38:PHE:CE1	2.55	0.41
57:EB:63:PRO:O	57:EB:64:VAL:CB	2.67	0.41
32:FA:121:VAL:HA	32:FA:122:PRO:HD3	1.89	0.41
32:FA:138:ILE:HG22	32:FA:143:GLY:HA3	2.03	0.41
32:FA:79:TRP:HE1	32:FA:118:ILE:CB	2.20	0.41
7:G:137:TYR:CD2	7:G:144:ILE:HG12	2.56	0.41
8:H:126:ILE:C	8:H:128:ALA:H	2.24	0.41
8:H:334:PHE:CD1	8:H:339:LEU:HD12	2.55	0.41
2:B:933:A:C8	8:H:90:PHE:HE2	2.38	0.41
34:HA:42:ILE:HG22	34:HA:91:SER:CA	2.47	0.41
9:I:34:LYS:HD3	9:I:35:ARG:HG3	2.02	0.41
2:B:2748:A:C2	9:I:35:ARG:HB2	2.55	0.41
10:J:58:LEU:CD1	10:J:64:LEU:HB2	2.51	0.41
36:JA:66:LEU:HD22	36:JA:70:GLY:O	2.20	0.41
37:KA:42:GLN:HE21	37:KA:42:GLN:HB3	1.73	0.41
12:L:156:ASP:HB3	12:L:183:LYS:HD3	2.01	0.41
12:L:72:PRO:HG2	12:L:75:ILE:HG13	2.01	0.41
13:M:20:ILE:O	18:R:8:LYS:N	2.53	0.41
13:M:57:VAL:HG23	13:M:68:LEU:HD23	2.03	0.41
13:M:88:TYR:HD2	13:M:158:ALA:CB	2.34	0.41
14:N:43:VAL:CA	14:N:139:ARG:HH22	2.29	0.41
15:O:116:TYR:HB3	15:O:122:ILE:HD11	2.03	0.41
41:OA:87:SER:O	41:OA:88:ALA:HB3	2.21	0.41
1:A:1316:G:H4'	67:OB:10:LYS:CD	2.50	0.41
16:P:127:SER:O	16:P:131:GLU:OE1	2.37	0.41
43:QA:12:LYS:O	43:QA:16:ALA:HB2	2.20	0.41
70:RB:69:LYS:HB2	70:RB:78:THR:HB	2.01	0.41
19:S:30:TYR:HB2	19:S:129:TYR:CE1	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:T:15:LEU:HB2	20:T:18:ARG:HG2	2.03	0.41
57:EB:140:VAL:O	72:TB:51:GLU:HA	2.21	0.41
73:UB:117:ILE:HB	73:UB:120:VAL:CG2	2.50	0.41
22:V:113:LYS:C	22:V:113:LYS:HD3	2.41	0.41
22:V:54:LEU:HB3	22:V:58:ASN:HB3	2.01	0.41
48:VA:107:ALA:HA	48:VA:108:PRO:HD2	1.77	0.41
23:W:24:LEU:HA	23:W:50:ILE:HA	2.01	0.41
49:WA:221:MET:HG2	49:WA:233:THR:HG23	2.02	0.41
49:WA:47:LEU:HD22	49:WA:54:PHE:CD2	2.55	0.41
75:WB:60:VAL:O	75:WB:101:TYR:HB2	2.21	0.41
75:WB:68:ARG:HA	75:WB:68:ARG:HD3	1.87	0.41
25:Y:80:VAL:HG12	25:Y:83:ARG:HG2	2.02	0.41
52:ZA:82:ASN:ND2	52:ZA:83:ILE:H	2.17	0.41
1:A:1025:A:N1	1:A:1789:G:H1'	2.35	0.41
1:A:1762:A:C4	1:A:1782:A:H2'	2.55	0.41
1:A:796:A:H2'	1:A:797:G:H8	1.85	0.41
79:AC:38:ILE:HG22	79:AC:39:CYS:N	2.36	0.41
2:B:1212:A:H5'	24:X:113:ARG:NE	2.36	0.41
2:B:1399:A:N1	3:C:8:C:C4'	2.83	0.41
2:B:1457:U:O2'	2:B:1458:U:H5'	2.21	0.41
2:B:1548:C:H3'	2:B:1549:U:O4'	2.21	0.41
2:B:155:G:H5''	2:B:156:G:H2'	2.03	0.41
2:B:2111:G:H1'	28:BA:44:LYS:HD2	2.03	0.41
2:B:2118:C:H2'	2:B:2119:A:O4'	2.20	0.41
2:B:219:A:O2'	2:B:220:G:H5'	2.19	0.41
2:B:2250:G:O6	2:B:2266:U:O4	2.39	0.41
2:B:2361:A:H2'	2:B:2362:C:H5'	2.02	0.41
2:B:776:U:H3	2:B:2737:C:H42	1.69	0.41
2:B:2743:A:H2'	2:B:2744:U:C6	2.56	0.41
2:B:2987:A:H2'	2:B:2988:C:H6	1.83	0.41
2:B:3113:A:H5'	2:B:3117:C:OP2	2.21	0.41
2:B:3335:A:H2'	2:B:3336:A:H8	1.85	0.41
2:B:336:A:H1'	2:B:691:A:H62	1.82	0.41
2:B:612:U:O2'	2:B:613:G:H5'	2.21	0.41
2:B:638:C:H5	2:B:647:A:OP1	2.03	0.41
2:B:640:U:OP2	36:JA:37:GLY:HA2	2.20	0.41
2:B:926:A:H2'	2:B:927:C:H5'	2.03	0.41
2:B:973:A:C5	2:B:974:G:H1'	2.55	0.41
54:BB:94:ALA:C	54:BB:95:THR:HG23	2.41	0.41
3:C:93:U:O2'	3:C:94:C:H5'	2.20	0.41
55:CB:149:VAL:O	55:CB:155:ALA:HB1	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:CB:187:ILE:H	55:CB:187:ILE:CD1	2.10	0.41
56:DB:63:MET:HE1	56:DB:106:LEU:HD13	2.02	0.41
56:DB:176:GLN:O	56:DB:177:ARG:HB2	2.21	0.41
56:DB:57:ASP:OD1	56:DB:72:ARG:HD3	2.21	0.41
82:DC:127:VAL:HG23	82:DC:154:VAL:H	1.86	0.41
82:DC:429:LYS:HE2	82:DC:462:PHE:CE1	2.55	0.41
31:EA:20:GLY:HA2	31:EA:136:PHE:HZ	1.85	0.41
31:EA:22:LYS:HD2	31:EA:130:PHE:CA	2.48	0.41
83:EC:6835:U:H4'	83:EC:6874:A:N6	2.35	0.41
6:F:104:LEU:HD23	6:F:148:VAL:CG1	2.49	0.41
32:FA:100:PRO:HD2	32:FA:123:VAL:HG22	2.02	0.41
58:FB:79:ALA:HB3	58:FB:103:GLN:HB3	2.01	0.41
58:FB:137:LYS:H	58:FB:137:LYS:CD	2.13	0.41
58:FB:3:ILE:H	58:FB:3:ILE:HG13	1.76	0.41
7:G:89:VAL:HG22	7:G:158:VAL:HG11	2.03	0.41
59:GB:134:ILE:O	59:GB:140:ILE:HA	2.21	0.41
8:H:47:ARG:HD2	8:H:109:TRP:HA	2.02	0.41
8:H:325:LEU:CD2	8:H:331:ALA:HB3	2.51	0.41
2:B:346:C:H5'	8:H:56:ALA:HB2	2.01	0.41
34:HA:99:ASP:C	34:HA:101:LEU:H	2.24	0.41
61:IB:82:ARG:HG2	61:IB:113:PRO:HD3	2.02	0.41
2:B:1405:U:H5'	36:JA:57:TYR:O	2.21	0.41
38:LA:21:LYS:HB3	38:LA:33:GLN:HB3	2.03	0.41
14:N:121:LYS:HB3	14:N:121:LYS:HE2	1.92	0.41
14:N:82:ARG:CB	14:N:82:ARG:HH11	2.33	0.41
15:O:106:ILE:CD1	15:O:125:MET:H	2.33	0.41
41:OA:63:ARG:O	41:OA:64:MET:CB	2.68	0.41
16:P:114:ARG:HG2	16:P:129:THR:HG23	2.03	0.41
68:PB:16:ARG:HA	68:PB:20:THR:O	2.21	0.41
17:Q:164:GLU:O	17:Q:165:SER:HB3	2.20	0.41
17:Q:59:ARG:CA	17:Q:69:VAL:HA	2.27	0.41
19:S:12:ARG:HD2	19:S:13:LYS:HZ1	1.86	0.41
19:S:174:ILE:HG12	19:S:183:THR:OG1	2.21	0.41
19:S:71:ARG:O	19:S:92:LEU:HB3	2.21	0.41
19:S:9:GLU:HA	19:S:12:ARG:NE	2.34	0.41
20:T:122:GLN:HB3	20:T:122:GLN:HE21	1.68	0.41
52:ZA:156:THR:HB	72:TB:95:PRO:HB3	2.02	0.41
47:UA:24:ARG:NH2	47:UA:28:LYS:HE2	2.35	0.41
22:V:122:ILE:CD1	22:V:126:GLN:HB2	2.35	0.41
22:V:126:GLN:HA	22:V:129:VAL:CG2	2.50	0.41
23:W:166:ASN:HA	23:W:169:ALA:CB	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:W:21:LYS:HA	23:W:53:LYS:HD3	2.03	0.41
49:WA:41:THR:HB	49:WA:61:PHE:O	2.20	0.41
4:D:76:A:O2'	24:X:50:LYS:HD3	2.20	0.41
50:XA:130:ALA:HA	50:XA:133:ILE:HD13	2.01	0.41
9:I:69:ILE:HG12	25:Y:31:LEU:HB2	2.01	0.41
1:A:1416:G:H2'	1:A:1417:A:O4'	2.21	0.41
1:A:1473:U:OP1	55:CB:189:THR:HA	2.20	0.41
1:A:1512:G:O2'	1:A:1513:G:H5'	2.21	0.41
1:A:1557:U:OP1	65:MB:40:ARG:HD3	2.21	0.41
1:A:1284:C:OP2	1:A:1623:C:H4'	2.20	0.41
1:A:1673:G:H4'	56:DB:92:ARG:HH22	1.85	0.41
1:A:1685:G:C3'	1:A:1686:C:H5''	2.51	0.41
1:A:333:A:H5'	58:FB:48:THR:HB	2.02	0.41
27:AA:66:LYS:HA	27:AA:67:PRO:HD3	1.85	0.41
79:AC:33:LYS:HE2	79:AC:34:TYR:CE2	2.56	0.41
2:B:1362:G:H4'	11:K:160:ARG:H	1.86	0.41
2:B:1554:U:H4'	2:B:1555:U:OP1	2.20	0.41
2:B:1581:C:H2'	2:B:1582:C:H5'	2.03	0.41
2:B:160:G:H2'	2:B:161:G:C5'	2.50	0.41
2:B:189:G:H8	2:B:224:C:OP2	2.03	0.41
2:B:2797:C:H3'	2:B:2798:C:C5'	2.51	0.41
2:B:3078:U:OP1	2:B:3080:G:H4'	2.21	0.41
2:B:3190:C:H2'	2:B:3191:G:O4'	2.21	0.41
2:B:3217:C:H2'	2:B:3217:C:O2	2.20	0.41
2:B:3334:U:H4'	2:B:3335:A:C5'	2.51	0.41
2:B:595:G:O6	10:J:22:ARG:NH1	2.54	0.41
2:B:786:A:H5'	22:V:147:ARG:CA	2.20	0.41
2:B:806:A:N3	2:B:2812:C:O2'	2.42	0.41
2:B:926:A:C2'	2:B:927:C:H5'	2.51	0.41
54:BB:44:LEU:CG	54:BB:82:TYR:HB3	2.50	0.41
55:CB:136:ALA:O	55:CB:140:THR:HG23	2.20	0.41
55:CB:63:GLN:C	55:CB:65:ARG:N	2.73	0.41
56:DB:74:LYS:HG2	56:DB:96:SER:CA	2.50	0.41
82:DC:568:GLU:O	82:DC:569:SER:CB	2.68	0.41
82:DC:694:HIS:CE1	82:DC:699:DDE:HD2	2.56	0.41
5:E:118:LYS:HD2	83:EC:6767:G:OP1	2.20	0.41
57:EB:17:GLU:HG3	57:EB:43:PHE:HZ	1.86	0.41
83:EC:6766:U:H2'	83:EC:6767:G:H8	1.86	0.41
6:F:227:ARG:HA	6:F:238:ILE:HG23	2.01	0.41
58:FB:84:HIS:CE1	58:FB:86:SER:HB2	2.55	0.41
7:G:303:LYS:HZ1	7:G:358:TRP:HE1	1.68	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:309:ARG:HB3	8:H:312:VAL:HG11	2.01	0.41
34:HA:25:LEU:HD22	34:HA:87:VAL:HG21	2.01	0.41
34:HA:42:ILE:HG22	34:HA:91:SER:CB	2.51	0.41
53:AB:20:GLU:HA	60:HB:61:TRP:CE2	2.56	0.41
9:I:207:TYR:O	9:I:211:LEU:HG	2.21	0.41
10:J:71:VAL:HG23	10:J:72:ASN:H	1.85	0.41
2:B:3268:A:N3	10:J:75:PRO:HB3	2.35	0.41
13:M:86:TYR:H	13:M:187:ILE:HG13	1.84	0.41
65:MB:81:ARG:HA	65:MB:116:LEU:HB2	2.03	0.41
14:N:68:ALA:O	14:N:72:ALA:N	2.54	0.41
15:O:154:THR:HG22	15:O:155:THR:N	2.35	0.41
67:OB:116:LYS:O	67:OB:117:LEU:HD13	2.21	0.41
67:OB:29:GLN:H	67:OB:29:GLN:NE2	2.19	0.41
16:P:114:ARG:HG2	16:P:132:ILE:HD12	2.02	0.41
8:H:105:THR:O	17:Q:26:PHE:HZ	2.04	0.41
46:TA:52:GLY:O	46:TA:54:THR:HG23	2.20	0.41
73:UB:108:GLY:C	73:UB:110:LYS:N	2.73	0.41
17:Q:8:PRO:CA	22:V:164:ARG:HG2	2.50	0.41
48:VA:104:ARG:HB3	48:VA:185:LEU:H	1.86	0.41
74:VB:81:GLU:O	74:VB:84:LYS:HG2	2.20	0.41
50:XA:13:ASP:O	50:XA:17:LEU:HD13	2.20	0.41
2:B:1097:G:N7	25:Y:112:ASN:HB3	2.36	0.41
1:A:1044:U:H2'	1:A:1045:C:H6	1.81	0.41
1:A:1279:C:H2'	1:A:1280:C:H6	1.86	0.41
1:A:1282:U:H2'	1:A:1283:U:C5	2.56	0.41
1:A:257:A:O2'	1:A:258:C:H5'	2.21	0.41
1:A:388:G:C8	1:A:423:G:C2	3.08	0.41
1:A:435:C:H2'	1:A:436:A:O4'	2.20	0.41
1:A:549:G:O2'	1:A:550:A:H5'	2.21	0.41
1:A:551:G:H4'	1:A:581:U:C4	2.56	0.41
1:A:630:A:H2'	1:A:631:G:O4'	2.20	0.41
53:AB:41:VAL:O	53:AB:41:VAL:HG13	2.21	0.41
2:B:980:A:N6	2:B:1105:A:C1'	2.84	0.41
2:B:1146:C:H2'	2:B:1147:G:H8	1.86	0.41
2:B:1224:C:H2'	2:B:1225:A:H8	1.85	0.41
2:B:1404:G:N2	2:B:1407:A:OP2	2.45	0.41
2:B:1409:G:H2'	2:B:1410:U:H6	1.86	0.41
2:B:1544:G:N3	2:B:1544:G:H2'	2.35	0.41
2:B:1879:A:H3'	2:B:1880:U:C5'	2.51	0.41
2:B:200:C:O3'	2:B:221:A:H5'	2.21	0.41
2:B:2210:G:C2	2:B:2236:G:N3	2.88	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:994:G:C2	2:B:2637:A:C2	3.08	0.41
2:B:262:U:H2'	2:B:263:C:O4'	2.20	0.41
2:B:2783:U:H2'	2:B:2784:G:H5'	2.02	0.41
2:B:3009:G:H2'	2:B:3010:U:H5'	2.01	0.41
2:B:3258:U:O2'	2:B:3259:U:H3'	2.21	0.41
2:B:366:A:H5''	8:H:95:ARG:HH12	1.86	0.41
2:B:432:G:H2'	2:B:433:A:C8	2.55	0.41
2:B:491:C:OP1	10:J:110:LYS:HG2	2.21	0.41
2:B:733:G:H1'	2:B:736:A:H62	1.83	0.41
2:B:763:G:C2	2:B:764:U:H1'	2.56	0.41
54:BB:126:VAL:HG23	54:BB:157:ASN:N	2.34	0.41
54:BB:43:PRO:HD2	54:BB:46:VAL:HG21	2.03	0.41
3:C:111:A:C8	41:OA:29:VAL:HG11	2.56	0.41
55:CB:59:VAL:O	55:CB:60:ASP:HB2	2.20	0.41
30:DA:39:LEU:HD12	30:DA:106:ILE:O	2.21	0.41
30:DA:87:LYS:O	30:DA:94:SER:HA	2.21	0.41
56:DB:174:LYS:HD2	56:DB:175:ILE:N	2.35	0.41
82:DC:129:VAL:HG12	82:DC:139:THR:HG21	2.02	0.41
82:DC:152:LYS:CG	82:DC:200:VAL:HG23	2.48	0.41
82:DC:374:PRO:O	82:DC:404:THR:HG23	2.21	0.41
82:DC:460:ASP:C	82:DC:462:PHE:H	2.25	0.41
82:DC:785:ARG:HA	82:DC:789:GLY:O	2.21	0.41
31:EA:72:ILE:CG1	31:EA:111:LYS:HE2	2.51	0.41
31:EA:14:VAL:CG1	38:LA:90:ILE:HG13	2.51	0.41
2:B:2575:G:N7	31:EA:56:LYS:CE	2.84	0.41
58:FB:98:LYS:CD	58:FB:172:ARG:HG2	2.48	0.41
7:G:187:SER:O	7:G:191:LYS:HG3	2.21	0.41
35:IA:14:ILE:HG23	35:IA:16:LEU:HD11	2.03	0.41
63:KB:64:ARG:NH2	63:KB:70:LYS:HZ1	2.19	0.41
12:L:183:LYS:HA	12:L:186:LEU:HG	2.03	0.41
12:L:42:PRO:HB2	12:L:43:LYS:H	1.64	0.41
38:LA:25:THR:HA	38:LA:26:PRO:HD3	1.82	0.41
13:M:170:LYS:HB3	13:M:175:PHE:CD2	2.56	0.41
3:C:49:G:C8	39:MA:42:PRO:HG3	2.56	0.41
39:MA:5:LYS:HD3	39:MA:7:TYR:CE2	2.56	0.41
14:N:184:LYS:O	14:N:190:VAL:HG12	2.20	0.41
15:O:91:LEU:HD21	15:O:104:PHE:HB3	2.03	0.41
67:OB:59:LYS:O	67:OB:63:LYS:HG2	2.21	0.41
67:OB:89:SER:O	67:OB:91:LEU:N	2.53	0.41
16:P:114:ARG:NH2	16:P:121:PHE:HB3	2.36	0.41
16:P:67:ARG:O	16:P:68:GLN:CB	2.69	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:Q:76:THR:O	17:Q:80:VAL:HG13	2.20	0.41
17:Q:74:GLY:HA3	17:Q:97:VAL:C	2.40	0.41
2:B:2792:A:H4'	46:TA:69:VAL:HG22	2.03	0.41
23:W:121:HIS:NE2	23:W:125:LYS:HE2	2.36	0.41
23:W:23:TRP:HE3	23:W:51:VAL:HG22	1.86	0.41
49:WA:61:PHE:HB3	49:WA:92:TRP:CE3	2.56	0.41
75:WB:91:PRO:HA	75:WB:101:TYR:HD1	1.85	0.41
24:X:10:ILE:O	24:X:59:VAL:N	2.53	0.41
24:X:10:ILE:CG2	25:Y:148:PRO:HB3	2.50	0.41
2:B:2735:U:H5''	25:Y:51:GLY:H	1.86	0.41
26:Z:38:ILE:HB	26:Z:56:VAL:HB	2.03	0.41
52:ZA:44:LEU:HD13	52:ZA:50:ILE:HD11	2.03	0.41
1:A:1756:A:H2'	1:A:1757:G:O5'	2.21	0.41
1:A:177:U:H1'	56:DB:191:ARG:HH11	1.86	0.41
1:A:1026:A:H1'	1:A:1790:A:H1'	2.03	0.41
1:A:244:A:H4'	54:BB:129:VAL:CG1	2.51	0.41
1:A:606:A:C5'	1:A:607:G:H3'	2.51	0.41
1:A:79:C:C2'	1:A:80:A:H5'	2.51	0.41
1:A:861:U:H3'	1:A:862:A:C8	2.56	0.41
1:A:94:U:O5'	1:A:94:U:H6	2.04	0.41
2:B:1352:A:H1'	2:B:1353:U:H5'	2.02	0.41
2:B:1634:G:H2'	2:B:1635:G:H8	1.84	0.41
2:B:2163:C:O2'	2:B:2164:A:H5'	2.21	0.41
2:B:2849:C:OP2	2:B:2906:C:H4'	2.20	0.41
2:B:287:G:H2'	2:B:288:C:O4'	2.21	0.41
2:B:879:U:OP1	2:B:2981:U:H5''	2.21	0.41
2:B:3229:G:C2'	2:B:3230:G:H5'	2.50	0.41
2:B:617:G:OP2	10:J:111:LEU:HD11	2.19	0.41
2:B:960:U:H4'	2:B:963:G:C2	2.56	0.41
54:BB:173:ILE:HG12	54:BB:235:TYR:CE2	2.54	0.41
3:C:48:A:H2'	3:C:50:C:OP2	2.21	0.41
55:CB:213:LYS:O	55:CB:216:GLU:HB3	2.21	0.41
55:CB:42:LEU:HB2	55:CB:46:TRP:C	2.41	0.41
55:CB:48:PHE:CE1	55:CB:130:ILE:HD12	2.56	0.41
4:D:103:A:H2'	4:D:104:A:H8	1.86	0.41
56:DB:64:LYS:HD2	56:DB:81:VAL:HG21	2.02	0.41
82:DC:163:ALA:O	82:DC:169:VAL:HG23	2.21	0.41
48:VA:145:ILE:HG13	82:DC:186:ASN:HB3	2.01	0.41
82:DC:373:ASP:HB2	82:DC:376:ALA:HB3	2.03	0.41
82:DC:426:LEU:HG	82:DC:428:ILE:CD1	2.45	0.41
57:EB:93:LEU:HD21	57:EB:129:LEU:HD23	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:EB:16:LEU:HD22	57:EB:85:PHE:CZ	2.56	0.41
57:EB:94:ALA:HB3	57:EB:96:ARG:NH1	2.35	0.41
32:FA:148:ILE:CG2	32:FA:149:ALA:N	2.82	0.41
1:A:400:A:H61	58:FB:29:LEU:HD13	1.86	0.41
58:FB:83:TYR:HD1	58:FB:84:HIS:N	2.18	0.41
7:G:164:THR:HG22	7:G:165:GLN:N	2.36	0.41
9:I:21:ARG:HA	9:I:24:ARG:HG3	2.03	0.41
35:IA:23:VAL:HG21	35:IA:31:ARG:NH1	2.36	0.41
36:JA:96:ILE:CB	36:JA:121:ASN:HD21	2.34	0.41
13:M:169:ASN:O	13:M:170:LYS:HE3	2.20	0.41
32:FA:147:LEU:HD12	40:NA:7:ILE:HG22	2.03	0.41
66:NB:77:GLN:O	66:NB:81:ILE:HG23	2.19	0.41
15:O:9:MET:HG3	15:O:134:PRO:CB	2.40	0.41
17:Q:173:ALA:HA	17:Q:176:GLU:HB2	2.03	0.41
69:QB:58:ALA:HA	69:QB:104:VAL:CG1	2.51	0.41
20:T:113:ASP:HA	20:T:117:ARG:NH1	2.35	0.41
46:TA:17:CYS:HA	46:TA:19:LYS:HZ2	1.85	0.41
21:U:130:TYR:CD1	21:U:130:TYR:N	2.88	0.41
47:UA:46:THR:CB	47:UA:58:SER:H	2.30	0.41
47:UA:83:ILE:HD12	47:UA:83:ILE:N	2.36	0.41
22:V:106:PHE:CB	22:V:111:ARG:HE	2.34	0.41
22:V:33:TYR:CD1	22:V:36:LEU:HD12	2.56	0.41
23:W:24:LEU:HD22	23:W:32:ILE:HG21	2.02	0.41
49:WA:152:SER:HB2	49:WA:200:ASN:HA	2.02	0.41
24:X:94:ILE:HD13	24:X:102:ALA:O	2.20	0.41
1:A:109:G:H2'	1:A:110:U:C6	2.55	0.41
1:A:1113:A:OP1	1:A:1115:U:H1'	2.21	0.41
1:A:1117:U:H2'	1:A:1118:G:O4'	2.21	0.41
1:A:1199:G:O6	79:AC:40:ARG:HB3	2.20	0.41
1:A:1246:C:H2'	1:A:1247:U:O4'	2.21	0.41
1:A:1488:G:H3'	1:A:1515:A:N6	2.35	0.41
1:A:654:C:H3'	1:A:655:G:H5''	2.02	0.41
2:B:1230:G:H2'	2:B:1231:A:H5'	2.03	0.41
2:B:1348:U:H5'	2:B:1355:A:H61	1.84	0.41
2:B:152:U:H2'	2:B:153:U:C6	2.56	0.41
2:B:1657:C:C5	2:B:1797:A:H5''	2.56	0.41
2:B:1791:C:H5''	47:UA:13:LYS:HZ1	1.84	0.41
2:B:1843:C:H5''	2:B:1844:C:OP2	2.20	0.41
2:B:1920:U:H1'	2:B:1933:A:N7	2.36	0.41
2:B:896:A:H8	2:B:2134:G:H1'	1.79	0.41
2:B:2215:A:O2'	2:B:2431:C:H5'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2230:C:H2'	2:B:2231:C:H5'	2.02	0.41
2:B:2635:A:H4'	2:B:2636:A:O5'	2.21	0.41
2:B:2792:A:H2'	2:B:2793:G:C8	2.56	0.41
2:B:2813:A:H2'	2:B:2814:G:O4'	2.20	0.41
2:B:2841:G:H1'	2:B:2847:A:H61	1.85	0.41
2:B:3101:G:N2	2:B:3134:A:H1'	2.36	0.41
2:B:3270:U:C4	10:J:46:ARG:HD2	2.55	0.41
2:B:528:U:H2'	2:B:529:A:H8	1.81	0.41
2:B:637:C:N4	2:B:647:A:H4'	2.36	0.41
2:B:682:U:H5''	2:B:683:U:H5	1.86	0.41
54:BB:180:LEU:HD23	54:BB:194:THR:H	1.86	0.41
54:BB:191:ARG:NH1	54:BB:218:PHE:CD2	2.89	0.41
3:C:5:U:C2'	3:C:6:U:H5'	2.51	0.41
55:CB:25:LEU:HB2	66:NB:27:GLY:HA3	2.03	0.41
82:DC:287:ALA:HA	82:DC:292:LYS:HB2	2.02	0.41
82:DC:325:ARG:HA	82:DC:329:PRO:HG3	2.02	0.41
82:DC:456:LEU:HD23	82:DC:456:LEU:N	2.35	0.41
82:DC:757:GLU:HG2	82:DC:766:PHE:CE1	2.56	0.41
2:B:2482:U:C5	5:E:101:LYS:HE2	2.55	0.41
5:E:100:ILE:HD11	5:E:124:LEU:HD12	2.03	0.41
83:EC:6840:A:H2'	83:EC:6841:U:C4'	2.49	0.41
83:EC:6899:C:H2'	83:EC:6900:A:H5'	2.02	0.41
58:FB:42:ARG:HB3	58:FB:58:LEU:O	2.21	0.41
2:B:3010:U:H5'	7:G:14:LEU:HB3	2.01	0.41
7:G:196:ARG:HA	7:G:199:PHE:CZ	2.56	0.41
2:B:2880:U:O2	7:G:251:CYS:HB2	2.21	0.41
59:GB:112:GLN:HA	59:GB:112:GLN:HE21	1.86	0.41
8:H:115:HIS:CE1	8:H:119:ARG:HE	2.39	0.41
2:B:363:G:N2	8:H:82:THR:HB	2.36	0.41
9:I:259:LYS:HG2	9:I:260:PHE:CD2	2.56	0.41
9:I:66:SER:HB3	9:I:73:VAL:HB	2.03	0.41
2:B:3325:G:C1'	35:IA:105:GLN:HG2	2.49	0.41
10:J:10:TYR:HB3	36:JA:88:HIS:HE1	1.84	0.41
10:J:47:PHE:HD1	10:J:50:LYS:HD2	1.86	0.41
36:JA:2:ALA:O	36:JA:71:HIS:NE2	2.54	0.41
11:K:196:LYS:O	11:K:200:ASN:HB3	2.21	0.41
37:KA:103:TYR:HA	37:KA:104:PRO:C	2.41	0.41
12:L:105:LYS:O	12:L:109:LEU:HG	2.21	0.41
2:B:1643:A:P	38:LA:68:THR:HG1	2.44	0.41
39:MA:16:GLN:O	39:MA:20:GLN:HG2	2.20	0.41
39:MA:27:GLU:O	39:MA:31:LEU:HD13	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:N:36:LEU:CD1	14:N:87:LEU:HD13	2.50	0.41
40:NA:41:ARG:O	40:NA:44:VAL:HB	2.21	0.41
67:OB:32:LYS:HG3	67:OB:47:ARG:HD3	2.02	0.41
17:Q:193:ALA:O	17:Q:194:GLU:HB3	2.21	0.41
18:R:4:ASP:HB3	18:R:5:SER:H	1.74	0.41
18:R:36:VAL:HG12	18:R:75:GLY:HA2	2.03	0.41
18:R:8:LYS:HB3	18:R:9:ALA:H	1.70	0.41
44:RA:125:LYS:HD3	44:RA:125:LYS:HA	1.94	0.41
70:RB:55:PRO:HB3	70:RB:91:ILE:HD11	2.03	0.41
19:S:199:LEU:HD22	19:S:203:ARG:HD2	2.03	0.41
2:B:1307:G:C5	20:T:60:LYS:HD3	2.56	0.41
72:TB:116:ALA:HB1	72:TB:121:VAL:O	2.21	0.41
21:U:114:VAL:CA	21:U:150:VAL:HA	2.51	0.41
48:VA:91:GLU:CB	48:VA:92:PRO:HD2	2.47	0.41
49:WA:144:LEU:N	49:WA:144:LEU:HD22	2.36	0.41
75:WB:77:ARG:NH1	75:WB:77:ARG:HB2	2.35	0.41
24:X:13:ARG:HB3	24:X:14:LEU:H	1.64	0.41
50:XA:183:ARG:HB2	50:XA:184:LEU:HD12	2.03	0.41
25:Y:136:ARG:H	25:Y:136:ARG:HD2	1.85	0.41
26:Z:37:LEU:O	26:Z:41:ILE:HG13	2.21	0.41
1:A:1227:A:O5'	1:A:1228:G:H2'	2.21	0.40
1:A:1507:G:H5'	1:A:1551:U:C5'	2.50	0.40
1:A:38:C:H4'	59:GB:6:ARG:NH2	2.36	0.40
1:A:810:G:C2	57:EB:111:LYS:HG3	2.56	0.40
1:A:862:A:N6	63:KB:70:LYS:NZ	2.69	0.40
27:AA:85:TRP:CE2	27:AA:93:LEU:HG	2.56	0.40
2:B:1174:G:C6	2:B:1318:A:C2	3.09	0.40
2:B:1348:U:OP2	22:V:38:ARG:NH2	2.54	0.40
2:B:1504:A:N1	2:B:1516:C:H5'	2.37	0.40
2:B:1568:U:H4'	2:B:1570:U:O4	2.21	0.40
2:B:67:A:H2'	2:B:301:G:H1'	2.03	0.40
2:B:376:G:H22	2:B:401:U:H5''	1.85	0.40
2:B:717:C:H3'	2:B:718:G:H8	1.85	0.40
1:A:461:G:H4'	54:BB:26:CYS:SG	2.61	0.40
55:CB:196:GLU:HG2	55:CB:200:ASN:HD21	1.86	0.40
4:D:105:C:H2'	4:D:106:U:C6	2.56	0.40
4:D:9:C:OP1	25:Y:28:SER:N	2.45	0.40
56:DB:92:ARG:O	56:DB:93:LYS:HB2	2.22	0.40
82:DC:307:LEU:HA	82:DC:326:LYS:NZ	2.37	0.40
82:DC:387:PRO:HA	82:DC:394:PHE:CB	2.45	0.40
82:DC:515:ASP:HA	82:DC:516:PRO:HD3	1.92	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:82:SER:HB3	82:DC:85:ASP:OD2	2.21	0.40
2:B:2482:U:H5	5:E:101:LYS:HE2	1.85	0.40
57:EB:126:LEU:HD23	57:EB:126:LEU:O	2.21	0.40
6:F:181:LYS:HE2	6:F:183:GLY:HA3	2.03	0.40
1:A:400:A:C5'	58:FB:25:ARG:HD2	2.51	0.40
2:B:1117:G:H5'	33:GA:5:LYS:CD	2.51	0.40
8:H:150:LEU:HB3	8:H:249:ILE:HG22	2.03	0.40
9:I:294:ALA:CB	14:N:210:ILE:HG12	2.52	0.40
37:KA:32:ILE:CG1	37:KA:35:VAL:HG13	2.47	0.40
37:KA:49:ILE:O	37:KA:50:ALA:HB2	2.21	0.40
37:KA:46:GLY:N	37:KA:71:VAL:HG12	2.28	0.40
2:B:430:U:O4'	37:KA:90:PRO:HG3	2.20	0.40
38:LA:25:THR:OG1	38:LA:29:ILE:HG13	2.21	0.40
38:LA:82:ALA:CA	38:LA:85:VAL:HB	2.49	0.40
13:M:47:LYS:HB2	18:R:7:VAL:HG21	2.02	0.40
55:CB:70:VAL:HG21	66:NB:47:LYS:HB2	2.03	0.40
17:Q:4:SER:HG	17:Q:7:LEU:HD11	1.84	0.40
18:R:128:ARG:HH11	18:R:132:LYS:HG3	1.87	0.40
19:S:67:ARG:HA	19:S:127:TYR:HA	2.02	0.40
20:T:49:ARG:HH11	20:T:49:ARG:HG2	1.86	0.40
21:U:59:PRO:HG3	21:U:76:PHE:HB2	2.02	0.40
22:V:179:ARG:CZ	22:V:182:LYS:HG3	2.51	0.40
48:VA:95:GLU:O	48:VA:99:VAL:HG23	2.21	0.40
25:Y:60:LYS:HB3	25:Y:76:ILE:HG21	2.02	0.40
78:ZB:46:GLY:HA3	78:ZB:47:PRO:HD3	1.82	0.40
1:A:1608:U:H5''	66:NB:72:GLY:C	2.42	0.40
1:A:1617:U:O2'	1:A:1618:C:H5'	2.21	0.40
1:A:1741:U:H2'	1:A:1742:U:C6	2.56	0.40
1:A:219:A:N6	1:A:829:A:C2	2.88	0.40
1:A:249:U:H3'	1:A:250:C:C5'	2.51	0.40
1:A:614:C:H5	73:UB:5:LYS:NZ	2.20	0.40
53:AB:58:VAL:HA	53:AB:65:ARG:CD	2.44	0.40
53:AB:75:LYS:HB3	60:HB:22:VAL:HG21	2.03	0.40
2:B:153:U:H2'	2:B:154:U:H6	1.86	0.40
2:B:2210:G:N1	2:B:2236:G:N3	2.69	0.40
2:B:2322:C:O2'	2:B:2323:G:H5'	2.21	0.40
2:B:2534:G:H2'	2:B:2535:A:C8	2.56	0.40
2:B:2561:A:N1	12:L:32:LYS:HB3	2.36	0.40
2:B:2676:A:H4'	2:B:2677:G:O5'	2.21	0.40
2:B:2853:A:H2'	2:B:2854:U:C6	2.56	0.40
2:B:3083:G:H2'	2:B:3084:C:C6	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:3093:C:H1'	27:AA:83:LYS:NZ	2.36	0.40
2:B:3102:G:O2'	2:B:3103:A:H5'	2.21	0.40
2:B:577:C:H2'	2:B:579:G:C5'	2.50	0.40
2:B:684:G:H5''	17:Q:35:ARG:NH2	2.36	0.40
2:B:684:G:H2'	2:B:685:G:H8	1.86	0.40
2:B:897:U:H2'	2:B:898:U:O4'	2.21	0.40
2:B:929:A:H2'	2:B:930:U:C6	2.56	0.40
54:BB:10:LYS:HA	54:BB:27:TYR:HA	2.02	0.40
55:CB:88:PRO:HG2	55:CB:91:GLU:CB	2.50	0.40
30:DA:112:ASP:HB2	30:DA:115:ARG:CB	2.46	0.40
82:DC:119:LEU:HD22	82:DC:151:ILE:HD12	2.03	0.40
82:DC:306:VAL:O	82:DC:326:LYS:HD3	2.22	0.40
82:DC:398:GLY:C	82:DC:453:ILE:HG23	2.41	0.40
82:DC:4:PHE:HB3	82:DC:9:MET:SD	2.61	0.40
82:DC:672:LYS:HA	82:DC:680:GLU:HG2	2.02	0.40
5:E:118:LYS:O	5:E:122:ARG:HB2	2.20	0.40
5:E:100:ILE:CG1	5:E:128:LEU:HB2	2.49	0.40
31:EA:74:VAL:HG22	31:EA:101:PHE:CE2	2.56	0.40
57:EB:16:LEU:HD13	57:EB:58:LEU:HD22	2.03	0.40
83:EC:6883:A:H2'	83:EC:6884:G:H4'	2.04	0.40
6:F:78:ALA:HB1	6:F:170:ALA:CB	2.36	0.40
7:G:306:THR:HG21	7:G:316:GLU:HA	2.02	0.40
7:G:57:VAL:CG2	7:G:358:TRP:HE3	2.31	0.40
8:H:181:VAL:HG12	8:H:182:LEU:N	2.36	0.40
8:H:241:GLY:C	8:H:243:HIS:H	2.23	0.40
9:I:123:GLU:HG2	9:I:123:GLU:H	1.75	0.40
9:I:155:THR:HA	9:I:179:ARG:CA	2.50	0.40
9:I:287:ALA:O	9:I:291:ALA:HB3	2.20	0.40
9:I:296:GLN:HG2	9:I:296:GLN:O	2.20	0.40
12:L:203:VAL:HG22	12:L:204:ARG:N	2.30	0.40
12:L:219:ASP:O	12:L:223:ALA:HB3	2.21	0.40
12:L:69:LEU:N	12:L:69:LEU:HD12	2.36	0.40
2:B:1597:C:OP1	38:LA:31:ARG:HG2	2.21	0.40
13:M:36:LYS:HD2	13:M:78:MET:HE1	2.00	0.40
41:OA:21:ARG:HD2	41:OA:37:CYS:SG	2.62	0.40
3:C:104:A:O2'	41:OA:42:ALA:HB1	2.21	0.40
67:OB:28:PHE:CZ	67:OB:32:LYS:HD3	2.56	0.40
16:P:107:ASP:HB3	16:P:108:GLU:H	1.61	0.40
17:Q:137:GLN:HB2	17:Q:137:GLN:HE21	1.74	0.40
18:R:123:LEU:HD23	20:T:190:VAL:HG23	2.02	0.40
19:S:140:LYS:HB3	19:S:144:ARG:NH2	2.36	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
72:TB:93:LEU:HD21	72:TB:102:VAL:HG21	2.02	0.40
72:TB:32:LYS:O	72:TB:35:ILE:HB	2.21	0.40
1:A:750:U:OP1	72:TB:83:ILE:HG21	2.21	0.40
73:UB:96:VAL:CG2	73:UB:97:ASP:H	2.31	0.40
22:V:61:PRO:HA	22:V:86:THR:OG1	2.20	0.40
2:B:1678:G:OP2	26:Z:77:LYS:HD2	2.22	0.40
52:ZA:130:ILE:HD12	52:ZA:130:ILE:N	2.35	0.40
52:ZA:237:VAL:CG1	52:ZA:241:ASP:HB2	2.51	0.40
78:ZB:19:THR:HB	78:ZB:20:GLY:H	1.69	0.40
1:A:1175:U:H4'	1:A:1196:A:N6	2.37	0.40
1:A:119:A:H2'	1:A:120:U:H5'	2.02	0.40
1:A:1586:A:H2'	1:A:1587:A:O4'	2.21	0.40
1:A:1609:U:H2'	1:A:1610:G:O4'	2.21	0.40
1:A:291:G:H2'	1:A:292:U:H5	1.86	0.40
1:A:294:C:H2'	1:A:295:A:O4'	2.21	0.40
1:A:400:A:OP2	58:FB:27:PHE:HE1	2.05	0.40
1:A:482:U:C2'	1:A:483:A:C8	3.04	0.40
1:A:564:G:O2'	1:A:578:U:H5'	2.21	0.40
1:A:4:C:H2'	1:A:5:U:C6	2.56	0.40
1:A:1331:A:H61	53:AB:161:GLY:N	2.19	0.40
2:B:1048:A:H4'	2:B:2633:U:H4'	2.04	0.40
2:B:1602:A:N6	29:CA:70:GLU:HB2	2.37	0.40
2:B:1774:C:H2'	2:B:1775:G:H5''	2.03	0.40
2:B:2132:C:H4'	2:B:2322:C:H1'	2.02	0.40
2:B:2649:A:H2'	2:B:2650:U:C5'	2.50	0.40
2:B:3187:A:H2'	2:B:3188:G:O4'	2.22	0.40
2:B:3238:G:C2	2:B:3250:U:H1'	2.56	0.40
2:B:361:A:H4'	41:OA:35:SER:C	2.42	0.40
2:B:501:A:C4'	10:J:28:GLN:HE21	2.34	0.40
2:B:787:G:O2'	2:B:788:C:H5'	2.21	0.40
3:C:92:A:O5'	30:DA:23:PRO:HG3	2.20	0.40
3:C:97:A:C2'	3:C:98:U:H5'	2.51	0.40
55:CB:78:ALA:O	55:CB:79:ASN:C	2.60	0.40
4:D:116:C:N4	4:D:117:A:H62	2.18	0.40
4:D:3:U:H5'	4:D:24:A:C2	2.55	0.40
82:DC:283:ARG:HB3	82:DC:299:LEU:HD21	2.03	0.40
82:DC:608:PRO:HA	82:DC:636:PHE:CE2	2.56	0.40
82:DC:821:ALA:HA	82:DC:824:LYS:CE	2.51	0.40
2:B:802:C:C5	32:FA:25:HIS:HB3	2.38	0.40
7:G:162:VAL:O	7:G:178:LEU:HD12	2.22	0.40
7:G:360:ASP:OD2	7:G:371:GLN:NE2	2.50	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:67:PHE:CE1	27:AA:89:ASP:OD1	2.70	0.40
59:GB:60:LEU:CD1	59:GB:93:LEU:HD21	2.43	0.40
2:B:593:C:OP1	10:J:20:LYS:HB2	2.21	0.40
63:KB:142:GLU:C	63:KB:144:ALA:N	2.74	0.40
63:KB:22:ALA:CB	63:KB:23:PRO:HA	2.37	0.40
2:B:2555:G:H21	38:LA:92:ALA:HB1	1.86	0.40
39:MA:76:GLN:HB2	39:MA:77:PRO:CD	2.51	0.40
65:MB:24:LYS:O	65:MB:28:MET:HB2	2.21	0.40
65:MB:63:ALA:HB1	65:MB:74:ALA:O	2.20	0.40
40:NA:15:LYS:CE	40:NA:17:VAL:HG22	2.50	0.40
15:O:50:ALA:H	15:O:63:GLU:H	1.70	0.40
67:OB:71:PHE:O	67:OB:72:LYS:CB	2.70	0.40
65:MB:18:ARG:NH1	68:PB:92:ILE:HA	2.36	0.40
68:PB:86:LEU:HD23	68:PB:98:TYR:O	2.21	0.40
17:Q:108:ILE:HG12	17:Q:108:ILE:H	1.71	0.40
69:QB:105:LEU:HD22	69:QB:122:ARG:HG2	2.02	0.40
70:RB:83:GLU:HG3	79:AC:55:PHE:HD2	1.87	0.40
19:S:22:LEU:HD12	19:S:26:ARG:CZ	2.52	0.40
46:TA:77:CYS:O	46:TA:79:THR:HG23	2.21	0.40
21:U:88:VAL:HA	21:U:91:VAL:CG2	2.52	0.40
22:V:52:LEU:HD23	22:V:104:LEU:HD11	2.04	0.40
2:B:741:U:H4'	22:V:74:GLU:HB2	2.03	0.40
48:VA:130:PRO:HA	48:VA:150:ILE:CD1	2.51	0.40
23:W:123:LEU:O	23:W:127:SER:HB2	2.21	0.40
49:WA:158:PRO:HD2	49:WA:208:GLY:HA3	2.03	0.40
2:B:1212:A:H5'	24:X:113:ARG:HE	1.86	0.40
24:X:117:ARG:O	24:X:121:ILE:HG13	2.20	0.40
24:X:13:ARG:HE	24:X:51:VAL:HG22	1.86	0.40
20:T:26:GLN:HG3	24:X:163:PHE:CZ	2.56	0.40
20:T:126:VAL:CG2	24:X:170:THR:HG22	2.51	0.40
50:XA:175:TYR:CE1	50:XA:195:TRP:HE3	2.39	0.40
4:D:9:C:OP1	25:Y:26:HIS:HB2	2.20	0.40
25:Y:91:LEU:HD23	25:Y:95:HIS:HB3	2.03	0.40
26:Z:29:ASP:HA	26:Z:30:PRO:HD3	1.84	0.40
26:Z:75:TYR:CZ	26:Z:79:LEU:HD11	2.57	0.40
52:ZA:59:HIS:CD2	52:ZA:238:SER:HA	2.56	0.40
1:A:1373:C:H2'	1:A:1374:C:C6	2.56	0.40
1:A:1454:G:H4'	65:MB:122:THR:CG2	2.49	0.40
1:A:1477:G:H2'	1:A:1478:G:C8	2.56	0.40
1:A:348:U:H2'	1:A:349:U:H5'	2.04	0.40
1:A:889:U:H2'	1:A:890:C:C4'	2.44	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:7:G:C2'	1:A:8:U:H5''	2.50	0.40
1:A:929:A:H1'	64:LB:123:SER:CA	2.51	0.40
2:B:1056:U:H6	2:B:1056:U:O5'	2.04	0.40
2:B:644:G:H1'	2:B:1153:A:C6	2.57	0.40
2:B:118:U:H3'	2:B:119:U:C5	2.56	0.40
2:B:1376:C:H2'	2:B:1377:G:H8	1.85	0.40
2:B:164:A:H2'	2:B:165:A:O4'	2.22	0.40
2:B:1747:G:C4'	42:PA:4:GLU:HG3	2.52	0.40
2:B:1752:A:O5'	2:B:1752:A:H8	2.04	0.40
2:B:1842:A:H3'	2:B:1843:C:C6	2.57	0.40
2:B:2170:U:H2'	2:B:2171:G:C8	2.57	0.40
2:B:1508:C:HO2'	2:B:2353:G:H1'	1.84	0.40
2:B:2653:C:H1'	2:B:2694:A:C2	2.56	0.40
2:B:2847:A:H2'	2:B:2848:G:O4'	2.22	0.40
2:B:2942:C:H5''	2:B:2943:G:H5''	2.03	0.40
2:B:3216:G:H1	2:B:3258:U:H5''	1.85	0.40
2:B:3305:A:H4'	7:G:272:TYR:CE2	2.54	0.40
2:B:611:A:H1'	2:B:612:U:C6	2.56	0.40
2:B:641:C:H42	2:B:645:A:H8	1.66	0.40
2:B:664:U:H2'	2:B:665:A:C8	2.56	0.40
2:B:745:C:H2'	2:B:746:A:H8	1.87	0.40
2:B:777:U:O2'	2:B:778:U:H5'	2.21	0.40
2:B:907:G:N2	2:B:925:A:H1'	2.31	0.40
54:BB:45:ILE:HD12	54:BB:80:THR:HG21	2.03	0.40
3:C:71:A:H5''	30:DA:75:ARG:NH2	2.32	0.40
82:DC:400:VAL:O	82:DC:450:ALA:HA	2.22	0.40
82:DC:584:ASN:OD1	82:DC:694:HIS:HB2	2.22	0.40
6:F:150:LEU:HB3	6:F:151:PRO:HD2	2.04	0.40
32:FA:59:ARG:NH2	32:FA:61:PHE:HZ	2.20	0.40
32:FA:77:LYS:HB3	32:FA:80:THR:CG2	2.51	0.40
1:A:332:U:H5	58:FB:175:GLN:NE2	2.20	0.40
58:FB:196:LEU:O	58:FB:200:LYS:HB2	2.22	0.40
2:B:952:A:C5'	33:GA:15:LYS:HD3	2.51	0.40
33:GA:18:ARG:NE	33:GA:18:ARG:HA	2.36	0.40
1:A:767:U:C2	59:GB:143:ILE:HD11	2.57	0.40
8:H:295:ILE:HG13	8:H:295:ILE:H	1.64	0.40
8:H:34:ILE:HG21	8:H:120:TYR:CD1	2.56	0.40
9:I:110:LEU:HG	9:I:115:LEU:C	2.41	0.40
9:I:155:THR:HA	9:I:179:ARG:HA	2.03	0.40
61:IB:33:ARG:NH1	61:IB:53:TYR:O	2.55	0.40
10:J:41:ILE:HD12	10:J:85:ILE:HG22	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:J:72:ASN:N	10:J:72:ASN:ND2	2.68	0.40
11:K:75:TYR:HE2	25:Y:143:THR:CA	2.30	0.40
12:L:136:LEU:HD23	12:L:140:VAL:CG2	2.52	0.40
38:LA:10:ARG:H	38:LA:10:ARG:HG2	1.76	0.40
14:N:87:LEU:HD11	14:N:136:PHE:CD2	2.55	0.40
40:NA:57:LEU:HD23	40:NA:60:LEU:HG	2.03	0.40
67:OB:115:LEU:HD13	67:OB:115:LEU:C	2.42	0.40
16:P:86:LYS:HZ1	16:P:106:LEU:HD21	1.81	0.40
44:RA:99:CYS:SG	44:RA:114:LYS:HE3	2.61	0.40
45:SA:5:TRP:HA	45:SA:5:TRP:CE3	2.57	0.40
71:SB:30:ALA:O	71:SB:57:GLY:HA2	2.21	0.40
72:TB:32:LYS:HA	72:TB:35:ILE:CG1	2.52	0.40
73:UB:108:GLY:O	73:UB:110:LYS:N	2.51	0.40
48:VA:28:VAL:HG12	48:VA:186:THR:O	2.21	0.40
2:B:1281:G:H21	48:VA:83:ASN:HD21	1.70	0.40
23:W:61:SER:HA	23:W:64:ARG:HD2	2.02	0.40
49:WA:169:ILE:HD13	49:WA:183:LEU:HD21	2.03	0.40
49:WA:196:ASN:OD1	53:AB:217:ILE:HG12	2.21	0.40
24:X:10:ILE:HG22	24:X:24:LEU:HD23	2.04	0.40
50:XA:141:ILE:HG23	50:XA:142:PRO:HD2	2.04	0.40
9:I:40:HIS:CG	25:Y:69:LYS:HA	2.56	0.40
25:Y:89:LEU:HD22	25:Y:90:ASN:N	2.36	0.40
1:A:1378:U:O2	66:NB:8:GLN:HB3	2.22	0.40
1:A:1481:C:O2'	1:A:1482:C:H5	2.05	0.40
1:A:1733:C:H2'	1:A:1734:U:O4'	2.20	0.40
1:A:244:A:H4'	54:BB:129:VAL:HG13	2.02	0.40
1:A:298:C:OP1	54:BB:38:LEU:HB2	2.22	0.40
1:A:322:G:H1'	1:A:323:A:H5''	2.02	0.40
1:A:941:A:H2'	1:A:942:G:C4'	2.52	0.40
53:AB:74:GLN:HA	53:AB:79:TYR:CD2	2.56	0.40
1:A:1199:G:N2	79:AC:29:GLY:HA2	2.36	0.40
2:B:1007:U:O2	2:B:1043:C:N3	2.55	0.40
2:B:1132:C:H4'	2:B:2865:U:O2'	2.21	0.40
2:B:1174:G:C6	2:B:1175:C:C4	3.10	0.40
2:B:1295:G:H2'	2:B:1296:C:H6	1.80	0.40
2:B:1449:A:H1'	2:B:2983:C:C4	2.56	0.40
2:B:122:A:N6	2:B:148:G:H21	2.14	0.40
2:B:1784:G:H2'	2:B:1785:U:O4'	2.22	0.40
2:B:1646:G:N2	2:B:1809:A:H62	2.20	0.40
2:B:1630:U:H2'	2:B:1812:G:N1	2.36	0.40
2:B:1929:G:H3'	2:B:1930:A:H2'	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2505:U:H2'	2:B:2506:U:C6	2.39	0.40
2:B:2764:C:N4	2:B:2794:G:N1	2.70	0.40
2:B:2908:G:C6	2:B:2909:U:O4	2.74	0.40
2:B:3048:A:N6	2:B:3091:A:OP2	2.45	0.40
2:B:3094:A:O5'	2:B:3094:A:H8	2.04	0.40
2:B:415:G:H2'	2:B:416:A:C8	2.57	0.40
2:B:588:G:H21	2:B:611:A:C5'	2.34	0.40
2:B:738:A:N6	2:B:739:G:C6	2.90	0.40
2:B:798:G:H4'	17:Q:15:ARG:HE	1.86	0.40
2:B:946:U:H2'	2:B:947:G:H8	1.86	0.40
3:C:22:U:H5'	30:DA:16:ARG:HD3	2.03	0.40
3:C:95:G:OP1	41:OA:76:ASN:HB2	2.21	0.40
2:B:1521:G:OP1	29:CA:71:THR:HB	2.21	0.40
55:CB:117:THR:HG21	55:CB:194:LEU:HD12	2.03	0.40
55:CB:126:ASP:O	55:CB:128:ASN:N	2.54	0.40
55:CB:162:VAL:HG22	55:CB:166:ARG:HB3	2.03	0.40
55:CB:93:LEU:HA	55:CB:172:ILE:HG21	2.04	0.40
30:DA:37:LYS:HA	30:DA:40:ARG:NH1	2.37	0.40
30:DA:40:ARG:O	30:DA:44:GLY:HA2	2.21	0.40
82:DC:222:ILE:HG12	82:DC:223:ARG:N	2.36	0.40
82:DC:413:ILE:HG12	82:DC:459:ILE:HG23	2.02	0.40
82:DC:19:VAL:HG11	82:DC:452:ASN:OD1	2.22	0.40
82:DC:493:VAL:HG13	82:DC:556:ILE:CD1	2.51	0.40
57:EB:111:LYS:NZ	57:EB:113:PRO:HA	2.37	0.40
57:EB:132:PRO:HG2	57:EB:162:ILE:HD13	2.04	0.40
57:EB:30:SER:O	57:EB:31:SER:CB	2.68	0.40
5:E:115:VAL:HG12	83:EC:6769:A:OP1	2.21	0.40
83:EC:6849:A:H2'	83:EC:6850:C:C6	2.56	0.40
58:FB:74:LYS:N	58:FB:74:LYS:HD2	2.36	0.40
8:H:122:THR:HG21	8:H:262:TRP:CH2	2.57	0.40
9:I:177:GLU:HG3	9:I:183:TRP:CE3	2.57	0.40
61:IB:58:CYS:O	61:IB:64:VAL:HG22	2.20	0.40
11:K:85:PHE:HE2	11:K:115:THR:HA	1.87	0.40
11:K:24:GLU:C	11:K:26:VAL:H	2.25	0.40
63:KB:3:ARG:HG3	63:KB:6:SER:OG	2.21	0.40
12:L:67:ILE:CG1	12:L:237:ILE:HB	2.51	0.40
39:MA:78:LYS:O	39:MA:81:ARG:HB2	2.21	0.40
66:NB:31:VAL:O	66:NB:32:ASN:HB2	2.21	0.40
55:CB:70:VAL:HG11	66:NB:44:LEU:HA	2.03	0.40
66:NB:69:VAL:HG13	66:NB:81:ILE:HG22	2.04	0.40
15:O:156:LYS:O	15:O:160:VAL:HG23	2.20	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:P:85:LEU:CD2	16:P:106:LEU:HD13	2.51	0.40
2:B:1747:G:H4'	42:PA:4:GLU:HG3	2.03	0.40
2:B:2424:A:H4'	19:S:72:LYS:HE2	2.03	0.40
20:T:14:HIS:CE1	20:T:124:LEU:HD13	2.57	0.40
72:TB:41:MET:O	72:TB:46:TYR:HB2	2.22	0.40
72:TB:74:VAL:O	72:TB:74:VAL:HG13	2.21	0.40
73:UB:49:ALA:O	73:UB:104:LEU:HB2	2.22	0.40
22:V:17:THR:HA	22:V:53:PHE:CD2	2.56	0.40
48:VA:60:ARG:NH1	48:VA:64:ARG:HB2	2.36	0.40
23:W:24:LEU:HB3	23:W:50:ILE:HG12	2.04	0.40
50:XA:129:ASP:C	50:XA:131:GLN:H	2.23	0.40
50:XA:144:ILE:HG12	50:XA:158:VAL:HG12	2.04	0.40
50:XA:31:VAL:O	50:XA:33:GLN:N	2.45	0.40
25:Y:36:VAL:HG13	25:Y:65:TYR:CA	2.46	0.40
51:YA:26:ARG:O	51:YA:50:LYS:N	2.55	0.40
52:ZA:138:PRO:HB2	52:ZA:222:TYR:OH	2.21	0.40
78:ZB:9:LEU:O	78:ZB:32:PHE:HA	2.20	0.40

There are no symmetry-related clashes.

5.3 Torsion angles ⓘ

5.3.1 Protein backbone ⓘ

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all 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%)	129 (78%)	26 (16%)	10 (6%)	2	24
6	F	250/254 (98%)	177 (71%)	56 (22%)	17 (7%)	1	21
7	G	384/387 (99%)	293 (76%)	70 (18%)	21 (6%)	2	26
8	H	359/362 (99%)	259 (72%)	77 (21%)	23 (6%)	1	23
9	I	294/297 (99%)	226 (77%)	49 (17%)	19 (6%)	1	23
10	J	173/176 (98%)	125 (72%)	33 (19%)	15 (9%)	1	16
11	K	220/244 (90%)	165 (75%)	39 (18%)	16 (7%)	1	19

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
12	L	231/256 (90%)	180 (78%)	38 (16%)	13 (6%)	2	26
13	M	189/191 (99%)	150 (79%)	36 (19%)	3 (2%)	11	52
14	N	207/221 (94%)	169 (82%)	28 (14%)	10 (5%)	2	29
15	O	167/174 (96%)	128 (77%)	31 (19%)	8 (5%)	2	29
16	P	92/165 (56%)	62 (67%)	20 (22%)	10 (11%)	0	10
17	Q	191/199 (96%)	144 (75%)	35 (18%)	12 (6%)	1	23
18	R	134/138 (97%)	103 (77%)	23 (17%)	8 (6%)	2	24
19	S	201/204 (98%)	144 (72%)	46 (23%)	11 (6%)	2	26
20	T	195/199 (98%)	160 (82%)	27 (14%)	8 (4%)	3	32
21	U	181/184 (98%)	133 (74%)	35 (19%)	13 (7%)	1	20
22	V	183/186 (98%)	131 (72%)	39 (21%)	13 (7%)	1	20
23	W	186/189 (98%)	162 (87%)	19 (10%)	5 (3%)	6	42
24	X	170/172 (99%)	130 (76%)	31 (18%)	9 (5%)	2	27
25	Y	157/160 (98%)	124 (79%)	25 (16%)	8 (5%)	2	27
26	Z	98/121 (81%)	69 (70%)	23 (24%)	6 (6%)	2	24
27	AA	134/137 (98%)	107 (80%)	24 (18%)	3 (2%)	8	46
28	BA	59/155 (38%)	43 (73%)	11 (19%)	5 (8%)	1	16
29	CA	119/142 (84%)	84 (71%)	29 (24%)	6 (5%)	2	28
30	DA	124/127 (98%)	89 (72%)	28 (23%)	7 (6%)	2	26
31	EA	133/136 (98%)	108 (81%)	19 (14%)	6 (4%)	3	30
32	FA	146/149 (98%)	106 (73%)	31 (21%)	9 (6%)	2	24
33	GA	56/59 (95%)	48 (86%)	8 (14%)	0	100	100
34	HA	95/105 (90%)	80 (84%)	13 (14%)	2 (2%)	8	47
35	IA	107/113 (95%)	87 (81%)	17 (16%)	3 (3%)	6	41
36	JA	125/130 (96%)	95 (76%)	23 (18%)	7 (6%)	2	26
37	KA	104/107 (97%)	81 (78%)	17 (16%)	6 (6%)	2	25
38	LA	110/121 (91%)	76 (69%)	26 (24%)	8 (7%)	1	19
39	MA	117/120 (98%)	93 (80%)	20 (17%)	4 (3%)	4	37
40	NA	97/100 (97%)	80 (82%)	10 (10%)	7 (7%)	1	20
41	OA	85/88 (97%)	62 (73%)	18 (21%)	5 (6%)	2	24
42	PA	75/78 (96%)	64 (85%)	8 (11%)	3 (4%)	3	32

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
43	QA	48/51 (94%)	35 (73%)	9 (19%)	4 (8%)	1	16
44	RA	50/128 (39%)	32 (64%)	10 (20%)	8 (16%)	0	4
45	SA	23/25 (92%)	23 (100%)	0	0	100	100
46	TA	103/106 (97%)	75 (73%)	22 (21%)	6 (6%)	2	25
47	UA	89/92 (97%)	63 (71%)	18 (20%)	8 (9%)	1	15
48	VA	187/312 (60%)	132 (71%)	39 (21%)	16 (9%)	1	16
49	WA	316/319 (99%)	247 (78%)	63 (20%)	6 (2%)	9	49
50	XA	204/252 (81%)	146 (72%)	40 (20%)	18 (9%)	1	15
51	YA	212/255 (83%)	159 (75%)	36 (17%)	17 (8%)	1	17
52	ZA	215/254 (85%)	169 (79%)	37 (17%)	9 (4%)	3	31
53	AB	221/240 (92%)	191 (86%)	24 (11%)	6 (3%)	6	42
54	BB	258/261 (99%)	185 (72%)	60 (23%)	13 (5%)	2	28
55	CB	204/225 (91%)	159 (78%)	33 (16%)	12 (6%)	2	24
56	DB	224/236 (95%)	192 (86%)	21 (9%)	11 (5%)	2	28
57	EB	182/190 (96%)	130 (71%)	34 (19%)	18 (10%)	1	12
58	FB	184/200 (92%)	141 (77%)	36 (20%)	7 (4%)	4	34
59	GB	183/197 (93%)	144 (79%)	27 (15%)	12 (7%)	1	22
60	HB	94/105 (90%)	73 (78%)	15 (16%)	6 (6%)	1	23
61	IB	153/156 (98%)	113 (74%)	30 (20%)	10 (6%)	1	23
62	JB	122/143 (85%)	90 (74%)	21 (17%)	11 (9%)	1	15
63	KB	148/151 (98%)	124 (84%)	19 (13%)	5 (3%)	4	37
64	LB	125/137 (91%)	88 (70%)	26 (21%)	11 (9%)	1	15
65	MB	120/142 (84%)	91 (76%)	15 (12%)	14 (12%)	0	8
66	NB	139/143 (97%)	108 (78%)	24 (17%)	7 (5%)	2	28
67	OB	115/136 (85%)	79 (69%)	24 (21%)	12 (10%)	0	11
68	PB	143/146 (98%)	111 (78%)	24 (17%)	8 (6%)	2	26
69	QB	141/144 (98%)	122 (86%)	16 (11%)	3 (2%)	8	47
70	RB	105/121 (87%)	85 (81%)	15 (14%)	5 (5%)	2	29
71	SB	85/87 (98%)	63 (74%)	17 (20%)	5 (6%)	2	24
72	TB	127/130 (98%)	99 (78%)	24 (19%)	4 (3%)	5	39
73	UB	142/145 (98%)	108 (76%)	22 (16%)	12 (8%)	1	16

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
74	VB	132/135 (98%)	105 (80%)	20 (15%)	7 (5%)	2	27
75	WB	68/108 (63%)	47 (69%)	17 (25%)	4 (6%)	2	24
76	XB	95/119 (80%)	54 (57%)	32 (34%)	9 (10%)	1	14
77	YB	79/82 (96%)	59 (75%)	17 (22%)	3 (4%)	4	34
78	ZB	61/67 (91%)	43 (70%)	15 (25%)	3 (5%)	2	28
79	AC	51/56 (91%)	39 (76%)	11 (22%)	1 (2%)	9	48
80	BC	58/63 (92%)	38 (66%)	16 (28%)	4 (7%)	1	20
81	CC	69/152 (45%)	42 (61%)	18 (26%)	9 (13%)	0	6
82	DC	819/842 (97%)	646 (79%)	137 (17%)	36 (4%)	3	31
All	All	12207/13416 (91%)	9316 (76%)	2192 (18%)	699 (6%)	4	25

All (699) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
5	E	70	ASP
6	F	29	LEU
6	F	34	TYR
6	F	68	LYS
7	G	187	SER
8	H	196	ASN
8	H	263	GLY
8	H	268	ALA
8	H	320	ASN
8	H	341	SER
9	I	124	GLU
9	I	141	PRO
9	I	176	SER
9	I	177	GLU
9	I	251	PRO
10	J	17	ALA
10	J	31	ARG
10	J	129	GLU
11	K	237	ASN
12	L	36	ILE
12	L	42	PRO
12	L	203	VAL
14	N	118	ALA
15	O	8	PRO
15	O	114	ILE

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Mol	Chain	Res	Type
17	Q	28	GLN
17	Q	47	ALA
17	Q	136	GLU
18	R	5	SER
18	R	9	ALA
19	S	187	ARG
20	T	150	GLU
21	U	85	ALA
21	U	117	ILE
22	V	97	PRO
22	V	176	ARG
24	X	130	GLU
25	Y	12	ARG
25	Y	69	LYS
25	Y	159	PHE
26	Z	49	ASN
27	AA	84	SER
28	BA	26	SER
29	CA	88	MET
31	EA	7	ALA
32	FA	27	LYS
32	FA	36	GLY
37	KA	50	ALA
38	LA	37	LYS
40	NA	4	LYS
41	OA	64	MET
43	QA	34	THR
44	RA	100	TYR
46	TA	38	GLN
46	TA	60	LYS
48	VA	30	VAL
48	VA	71	PRO
48	VA	106	ALA
51	YA	40	ASN
51	YA	55	LYS
51	YA	154	SER
51	YA	222	LYS
53	AB	93	ASP
53	AB	211	PRO
53	AB	221	SER
54	BB	76	VAL
54	BB	150	PRO

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Mol	Chain	Res	Type
54	BB	194	THR
54	BB	200	ARG
55	CB	51	VAL
55	CB	63	GLN
55	CB	64	VAL
55	CB	81	ARG
55	CB	100	ASN
57	EB	12	ALA
57	EB	31	SER
57	EB	32	PRO
57	EB	64	VAL
57	EB	97	ARG
57	EB	103	SER
58	FB	31	ARG
59	GB	132	ARG
59	GB	134	ILE
59	GB	138	LYS
61	IB	130	PRO
61	IB	155	LYS
62	JB	91	VAL
64	LB	18	ARG
64	LB	42	VAL
65	MB	17	TYR
65	MB	101	ALA
65	MB	125	PRO
66	NB	41	PRO
67	OB	90	ALA
67	OB	91	LEU
67	OB	95	ARG
68	PB	82	PRO
69	QB	96	ALA
71	SB	44	ARG
73	UB	67	ALA
73	UB	99	ASN
74	VB	50	ALA
75	WB	44	GLN
75	WB	86	GLU
76	XB	11	ASN
76	XB	47	ALA
78	ZB	36	THR
80	BC	43	ARG
80	BC	47	VAL

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Mol	Chain	Res	Type
80	BC	58	PRO
81	CC	146	SER
82	DC	296	ILE
82	DC	330	ALA
82	DC	332	ASP
82	DC	482	LYS
82	DC	483	PHE
82	DC	486	SER
82	DC	569	SER
5	E	22	GLU
6	F	6	ARG
6	F	14	SER
6	F	144	ASN
6	F	212	GLY
6	F	252	THR
7	G	142	ALA
7	G	244	ARG
7	G	258	ALA
7	G	312	VAL
7	G	351	LEU
7	G	357	LYS
8	H	14	GLU
8	H	62	ALA
8	H	81	GLY
8	H	82	THR
8	H	91	GLY
8	H	108	LYS
8	H	188	ARG
8	H	269	SER
9	I	21	ARG
9	I	42	ALA
9	I	117	GLU
9	I	233	ALA
9	I	259	LYS
10	J	67	GLY
10	J	99	GLU
10	J	109	GLU
11	K	92	ILE
11	K	143	THR
11	K	158	LYS
11	K	162	PRO
11	K	202	LEU

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Mol	Chain	Res	Type
12	L	37	GLY
12	L	79	GLN
12	L	120	LYS
12	L	182	GLY
13	M	50	ASN
14	N	164	LYS
14	N	194	GLY
16	P	68	GLN
16	P	69	ALA
16	P	77	ALA
16	P	88	PRO
16	P	107	ASP
16	P	144	ASP
17	Q	25	HIS
17	Q	58	VAL
17	Q	76	THR
17	Q	153	ASP
18	R	6	ILE
19	S	55	ALA
19	S	88	GLY
19	S	125	SER
19	S	145	ASP
21	U	5	GLY
22	V	8	LYS
22	V	24	VAL
22	V	61	PRO
22	V	168	THR
23	W	131	ALA
24	X	62	ASN
24	X	171	PHE
25	Y	136	ARG
25	Y	145	GLY
26	Z	38	ILE
26	Z	71	PHE
26	Z	91	ASP
27	AA	12	ARG
28	BA	50	ALA
28	BA	60	LYS
29	CA	89	LYS
29	CA	126	LEU
30	DA	45	ILE
30	DA	52	ARG

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Mol	Chain	Res	Type
30	DA	105	VAL
31	EA	89	VAL
32	FA	48	TYR
32	FA	117	ARG
32	FA	120	ASN
36	JA	55	ILE
38	LA	53	GLY
38	LA	63	ALA
38	LA	70	LYS
39	MA	93	THR
40	NA	18	THR
40	NA	34	SER
40	NA	62	ARG
40	NA	97	SER
41	OA	37	CYS
42	PA	49	SER
44	RA	124	LYS
46	TA	15	LYS
47	UA	28	LYS
47	UA	52	ALA
47	UA	68	ALA
48	VA	31	ASP
48	VA	111	ALA
48	VA	116	PRO
49	WA	120	SER
50	XA	32	HIS
50	XA	139	VAL
50	XA	157	ASP
50	XA	170	ILE
50	XA	191	ARG
50	XA	192	THR
51	YA	48	VAL
51	YA	180	THR
53	AB	216	PRO
54	BB	32	SER
55	CB	43	PHE
55	CB	79	ASN
55	CB	82	PHE
57	EB	14	THR
57	EB	162	ILE
58	FB	22	ARG
58	FB	59	ARG

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Mol	Chain	Res	Type
59	GB	150	LEU
60	HB	60	SER
60	HB	81	ASN
60	HB	93	GLN
61	IB	75	VAL
61	IB	146	ALA
62	JB	86	VAL
62	JB	106	ILE
62	JB	125	ASN
63	KB	24	ALA
63	KB	66	ILE
66	NB	15	SER
67	OB	74	GLN
67	OB	77	GLU
67	OB	89	SER
67	OB	115	LEU
68	PB	92	ILE
69	QB	69	LYS
71	SB	82	VAL
72	TB	57	ARG
73	UB	60	GLU
75	WB	94	LYS
82	DC	48	ALA
82	DC	108	HIS
82	DC	134	GLY
82	DC	285	PHE
82	DC	354	GLU
82	DC	424	ASP
82	DC	702	GLY
82	DC	789	GLY
82	DC	804	LEU
5	E	69	GLY
7	G	83	PRO
7	G	229	VAL
7	G	279	ASN
7	G	361	THR
7	G	386	ASP
8	H	55	LYS
8	H	90	PHE
8	H	92	ASN
8	H	140	HIS
8	H	146	PRO

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Mol	Chain	Res	Type
9	I	292	ALA
10	J	11	PRO
11	K	81	HIS
11	K	159	GLN
12	L	136	LEU
12	L	206	GLU
13	M	59	ASN
14	N	3	ARG
14	N	84	ALA
14	N	145	LYS
15	O	108	GLU
15	O	165	GLN
16	P	118	ASP
17	Q	150	PRO
18	R	10	SER
18	R	49	PRO
18	R	78	THR
19	S	166	ALA
20	T	12	LYS
20	T	128	ARG
21	U	20	SER
21	U	121	GLN
21	U	134	GLY
21	U	143	PRO
21	U	154	GLU
21	U	164	LYS
22	V	10	HIS
22	V	44	PHE
22	V	125	ASP
23	W	59	SER
24	X	66	GLU
25	Y	126	VAL
25	Y	138	SER
26	Z	45	GLY
29	CA	50	ALA
30	DA	46	LYS
32	FA	56	VAL
34	HA	20	SER
35	IA	102	LYS
36	JA	13	HIS
37	KA	8	TYR
37	KA	16	TYR

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Mol	Chain	Res	Type
38	LA	4	ARG
38	LA	59	PRO
41	OA	51	ALA
43	QA	22	PRO
43	QA	33	ASN
44	RA	125	LYS
46	TA	16	THR
48	VA	47	GLY
48	VA	55	LYS
48	VA	76	LEU
48	VA	183	PHE
49	WA	98	GLU
49	WA	146	GLY
51	YA	82	ARG
51	YA	103	MET
51	YA	206	PRO
51	YA	221	PRO
51	YA	224	ASP
52	ZA	39	THR
52	ZA	109	GLY
54	BB	245	LYS
56	DB	20	ASP
56	DB	154	ARG
57	EB	112	ARG
57	EB	156	SER
57	EB	166	LEU
58	FB	152	ILE
59	GB	98	ALA
59	GB	116	LEU
60	HB	64	TYR
62	JB	84	ASN
62	JB	119	SER
64	LB	22	SER
64	LB	45	GLY
64	LB	127	ARG
65	MB	53	PRO
65	MB	73	PRO
66	NB	39	VAL
66	NB	134	ALA
67	OB	87	GLU
68	PB	37	GLY
68	PB	83	ALA

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Mol	Chain	Res	Type
68	PB	102	ALA
70	RB	17	GLN
72	TB	99	PHE
73	UB	109	ARG
73	UB	112	LYS
74	VB	5	VAL
74	VB	95	GLY
76	XB	8	ASN
76	XB	31	PRO
76	XB	62	TYR
77	YB	75	GLU
77	YB	78	SER
78	ZB	37	SER
78	ZB	51	ASN
80	BC	53	LYS
81	CC	87	THR
81	CC	96	LYS
81	CC	111	GLU
82	DC	331	ALA
82	DC	351	TYR
82	DC	440	ARG
82	DC	549	HIS
5	E	128	LEU
5	E	139	SER
6	F	21	ARG
6	F	80	GLU
6	F	171	GLY
6	F	235	ALA
7	G	5	LYS
7	G	38	SER
7	G	50	LYS
7	G	155	ALA
7	G	171	LEU
7	G	200	GLU
8	H	36	HIS
8	H	233	LEU
8	H	301	PRO
8	H	307	GLN
8	H	338	LYS
10	J	33	SER
10	J	142	ASP
11	K	94	LYS

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Mol	Chain	Res	Type
11	K	97	PRO
11	K	147	LEU
11	K	197	GLN
11	K	226	GLY
12	L	157	VAL
14	N	16	PRO
14	N	24	ARG
14	N	75	TYR
15	O	26	SER
17	Q	132	ALA
17	Q	141	ALA
19	S	74	PRO
19	S	81	TYR
20	T	44	SER
20	T	189	ASP
21	U	3	ARG
21	U	70	THR
22	V	13	SER
22	V	18	ALA
22	V	20	LYS
24	X	2	ALA
24	X	13	ARG
24	X	153	PRO
26	Z	11	ILE
29	CA	90	ALA
30	DA	53	ASP
31	EA	31	GLU
32	FA	15	VAL
32	FA	115	LYS
35	IA	44	MET
35	IA	83	GLU
36	JA	5	PRO
36	JA	16	LYS
38	LA	29	ILE
39	MA	102	GLU
40	NA	3	VAL
41	OA	21	ARG
42	PA	35	GLY
43	QA	32	ASN
44	RA	79	GLU
44	RA	126	LYS
47	UA	6	LYS

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Mol	Chain	Res	Type
48	VA	130	PRO
49	WA	63	GLY
49	WA	185	GLN
50	XA	43	ASP
50	XA	103	THR
50	XA	169	SER
53	AB	196	ARG
53	AB	217	ILE
54	BB	74	GLY
55	CB	45	LYS
55	CB	127	GLN
56	DB	65	GLN
56	DB	118	GLU
57	EB	13	PRO
57	EB	74	GLN
59	GB	5	PRO
59	GB	22	SER
59	GB	71	PHE
60	HB	34	GLU
61	IB	6	THR
61	IB	40	LEU
61	IB	148	LYS
61	IB	153	PHE
62	JB	23	THR
63	KB	22	ALA
65	MB	9	LYS
65	MB	52	LYS
65	MB	69	GLU
66	NB	42	GLU
66	NB	130	GLY
67	OB	85	VAL
68	PB	62	THR
69	QB	29	GLU
70	RB	49	ASN
70	RB	71	PRO
71	SB	12	TYR
72	TB	30	SER
73	UB	5	LYS
73	UB	41	SER
73	UB	97	ASP
74	VB	4	ALA
75	WB	69	LEU

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Mol	Chain	Res	Type
81	CC	145	HIS
82	DC	190	SER
82	DC	346	VAL
82	DC	461	GLN
82	DC	680	GLU
82	DC	721	ASP
82	DC	751	ARG
82	DC	779	GLY
5	E	199	GLN
5	E	210	MET
6	F	217	GLN
6	F	231	SER
6	F	232	GLY
7	G	172	ALA
9	I	119	TYR
9	I	125	VAL
9	I	139	PRO
9	I	260	PHE
10	J	93	VAL
10	J	100	LYS
11	K	178	ILE
12	L	75	ILE
12	L	146	LYS
15	O	135	GLY
15	O	142	LYS
16	P	76	SER
17	Q	56	PRO
19	S	188	ARG
20	T	16	VAL
20	T	83	ALA
21	U	71	ALA
23	W	17	VAL
24	X	129	ILE
28	BA	27	LYS
29	CA	54	TYR
30	DA	17	LYS
31	EA	127	ASN
31	EA	132	SER
32	FA	23	GLY
36	JA	15	LYS
36	JA	21	HIS
37	KA	14	LEU

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Mol	Chain	Res	Type
39	MA	119	LYS
42	PA	70	PRO
44	RA	98	LYS
44	RA	123	PRO
47	UA	36	ARG
47	UA	37	TYR
47	UA	40	SER
47	UA	60	CYS
48	VA	83	ASN
48	VA	87	VAL
48	VA	180	PRO
50	XA	35	PRO
50	XA	83	GLN
50	XA	97	PRO
50	XA	118	PRO
50	XA	189	VAL
50	XA	195	TRP
51	YA	74	GLN
51	YA	207	LEU
51	YA	210	ILE
52	ZA	60	SER
54	BB	77	ARG
54	BB	202	ASP
55	CB	187	ILE
55	CB	188	LYS
56	DB	74	LYS
56	DB	135	PRO
56	DB	148	SER
57	EB	7	LYS
57	EB	98	ILE
58	FB	40	ALA
59	GB	118	LEU
59	GB	165	GLY
61	IB	3	THR
62	JB	131	ASP
64	LB	87	GLY
65	MB	28	MET
66	NB	142	TYR
67	OB	81	LYS
68	PB	60	GLU
68	PB	76	PRO
70	RB	54	GLY

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Mol	Chain	Res	Type
71	SB	46	ILE
71	SB	75	ASN
73	UB	70	LYS
73	UB	131	SER
74	VB	65	GLY
76	XB	45	VAL
76	XB	48	ALA
76	XB	59	TYR
76	XB	89	ARG
81	CC	88	PRO
81	CC	98	VAL
81	CC	102	VAL
82	DC	255	LYS
82	DC	420	PRO
82	DC	476	HIS
82	DC	661	ASP
5	E	30	GLU
7	G	63	PRO
7	G	303	LYS
9	I	112	LYS
9	I	230	ASP
9	I	253	PHE
12	L	47	SER
15	O	134	PRO
17	Q	94	GLY
19	S	68	ARG
22	V	146	SER
23	W	89	LEU
24	X	63	GLN
27	AA	88	ARG
37	KA	59	VAL
39	MA	117	ALA
40	NA	78	GLY
41	OA	32	LYS
44	RA	104	PRO
49	WA	227	ALA
50	XA	39	ASN
50	XA	109	ASN
51	YA	54	LEU
54	BB	49	ARG
54	BB	67	GLN
61	IB	113	PRO

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Mol	Chain	Res	Type
62	JB	93	ASP
64	LB	114	ARG
65	MB	12	PHE
65	MB	84	ILE
67	OB	24	LEU
67	OB	68	GLY
70	RB	107	THR
73	UB	44	GLY
74	VB	11	LYS
79	AC	11	PRO
81	CC	148	TYR
82	DC	811	PRO
5	E	120	VAL
5	E	125	GLY
9	I	290	ILE
10	J	79	VAL
10	J	168	GLY
11	K	96	PRO
18	R	39	ILE
20	T	111	PRO
21	U	78	VAL
25	Y	153	PRO
30	DA	90	VAL
38	LA	48	GLY
54	BB	239	PRO
56	DB	179	VAL
58	FB	3	ILE
58	FB	173	PRO
59	GB	156	ILE
62	JB	82	PRO
63	KB	46	THR
64	LB	130	GLY
11	K	26	VAL
13	M	43	VAL
23	W	90	PRO
34	HA	87	VAL
46	TA	52	GLY
46	TA	101	GLY
51	YA	35	PRO
52	ZA	75	GLY
52	ZA	150	GLN
57	EB	178	GLY

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Mol	Chain	Res	Type
62	JB	115	VAL
72	TB	84	GLY
77	YB	38	PRO
82	DC	445	ILE
6	F	228	GLY
14	N	197	VAL
16	P	87	GLU
19	S	186	GLY
28	BA	10	GLY
31	EA	104	PRO
36	JA	53	PRO
37	KA	81	VAL
51	YA	21	VAL
52	ZA	74	PRO
52	ZA	86	VAL
56	DB	69	LEU
56	DB	70	PRO
57	EB	144	VAL
60	HB	87	VAL
64	LB	88	GLY
65	MB	11	VAL
82	DC	121	VAL
82	DC	706	ILE
10	J	140	VAL
16	P	132	ILE
18	R	30	GLY
48	VA	33	VAL
52	ZA	125	ILE
54	BB	35	PRO
56	DB	153	VAL
64	LB	16	VAL
65	MB	68	PRO
65	MB	90	ILE
73	UB	6	PRO
74	VB	67	GLY
82	DC	444	PRO
6	F	57	PRO
48	VA	121	VAL
50	XA	42	PRO
52	ZA	36	VAL
57	EB	145	GLY
64	LB	95	GLY

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Mol	Chain	Res	Type
63	KB	23	PRO
10	J	123	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%)	136 (87%)	21 (13%)	4	27
6	F	194/196 (99%)	172 (89%)	22 (11%)	7	32
7	G	322/323 (100%)	295 (92%)	27 (8%)	13	46
8	H	288/289 (100%)	249 (86%)	39 (14%)	4	26
9	I	244/245 (100%)	220 (90%)	24 (10%)	9	38
10	J	152/153 (99%)	141 (93%)	11 (7%)	17	52
11	K	186/205 (91%)	165 (89%)	21 (11%)	7	32
12	L	191/208 (92%)	169 (88%)	22 (12%)	6	31
13	M	171/171 (100%)	154 (90%)	17 (10%)	9	37
14	N	180/187 (96%)	161 (89%)	19 (11%)	8	35
15	O	147/150 (98%)	134 (91%)	13 (9%)	12	43
16	P	81/136 (60%)	70 (86%)	11 (14%)	4	26
17	Q	154/159 (97%)	136 (88%)	18 (12%)	6	31
18	R	107/109 (98%)	96 (90%)	11 (10%)	8	36
19	S	175/176 (99%)	150 (86%)	25 (14%)	4	25
20	T	160/162 (99%)	141 (88%)	19 (12%)	6	30
21	U	145/146 (99%)	122 (84%)	23 (16%)	3	20
22	V	150/151 (99%)	134 (89%)	16 (11%)	8	35
23	W	153/154 (99%)	138 (90%)	15 (10%)	9	38
24	X	156/156 (100%)	141 (90%)	15 (10%)	10	39
25	Y	136/137 (99%)	114 (84%)	22 (16%)	3	20
26	Z	87/107 (81%)	85 (98%)	2 (2%)	56	79

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
27	AA	104/105 (99%)	93 (89%)	11 (11%)	8	35
28	BA	54/129 (42%)	45 (83%)	9 (17%)	2	18
29	CA	105/118 (89%)	97 (92%)	8 (8%)	15	50
30	DA	109/110 (99%)	94 (86%)	15 (14%)	4	26
31	EA	115/116 (99%)	105 (91%)	10 (9%)	12	43
32	FA	118/119 (99%)	105 (89%)	13 (11%)	7	33
33	GA	46/47 (98%)	42 (91%)	4 (9%)	12	43
34	HA	81/88 (92%)	75 (93%)	6 (7%)	16	51
35	IA	96/97 (99%)	89 (93%)	7 (7%)	16	51
36	JA	109/111 (98%)	100 (92%)	9 (8%)	13	46
37	KA	90/91 (99%)	80 (89%)	10 (11%)	7	33
38	LA	95/103 (92%)	90 (95%)	5 (5%)	26	61
39	MA	104/105 (99%)	96 (92%)	8 (8%)	15	50
40	NA	81/82 (99%)	75 (93%)	6 (7%)	16	51
41	OA	70/71 (99%)	60 (86%)	10 (14%)	4	25
42	PA	68/69 (99%)	63 (93%)	5 (7%)	16	51
43	QA	45/46 (98%)	39 (87%)	6 (13%)	4	27
44	RA	47/116 (40%)	44 (94%)	3 (6%)	20	55
45	SA	23/23 (100%)	20 (87%)	3 (13%)	5	28
46	TA	90/91 (99%)	80 (89%)	10 (11%)	7	33
47	UA	71/72 (99%)	65 (92%)	6 (8%)	12	46
48	VA	160/254 (63%)	147 (92%)	13 (8%)	14	47
49	WA	261/262 (100%)	246 (94%)	15 (6%)	24	59
50	XA	173/210 (82%)	155 (90%)	18 (10%)	8	35
52	ZA	176/205 (86%)	170 (97%)	6 (3%)	42	72
53	AB	182/195 (93%)	167 (92%)	15 (8%)	13	47
54	BB	221/222 (100%)	202 (91%)	19 (9%)	12	45
55	CB	173/191 (91%)	162 (94%)	11 (6%)	20	55
56	DB	193/201 (96%)	187 (97%)	6 (3%)	45	73
57	EB	165/170 (97%)	157 (95%)	8 (5%)	30	64
58	FB	150/161 (93%)	141 (94%)	9 (6%)	22	58

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
59	GB	158/166 (95%)	143 (90%)	15 (10%)	10	39
60	HB	89/98 (91%)	83 (93%)	6 (7%)	19	54
61	IB	136/137 (99%)	127 (93%)	9 (7%)	19	54
63	KB	127/128 (99%)	119 (94%)	8 (6%)	21	56
65	MB	103/118 (87%)	98 (95%)	5 (5%)	29	63
66	NB	117/119 (98%)	108 (92%)	9 (8%)	15	50
67	OB	82/124 (66%)	77 (94%)	5 (6%)	22	57
68	PB	128/129 (99%)	116 (91%)	12 (9%)	10	40
69	QB	115/116 (99%)	105 (91%)	10 (9%)	12	43
70	RB	100/114 (88%)	90 (90%)	10 (10%)	9	37
71	SB	74/74 (100%)	66 (89%)	8 (11%)	7	34
72	TB	110/111 (99%)	99 (90%)	11 (10%)	9	37
73	UB	119/120 (99%)	110 (92%)	9 (8%)	15	50
74	VB	112/113 (99%)	103 (92%)	9 (8%)	14	48
75	WB	61/89 (68%)	56 (92%)	5 (8%)	13	47
77	YB	70/71 (99%)	69 (99%)	1 (1%)	71	87
78	ZB	56/60 (93%)	49 (88%)	7 (12%)	5	29
79	AC	47/49 (96%)	44 (94%)	3 (6%)	20	55
80	BC	51/54 (94%)	45 (88%)	6 (12%)	6	31
82	DC	699/714 (98%)	641 (92%)	58 (8%)	13	46
All	All	9865/10602 (93%)	8962 (91%)	903 (9%)	15	41

All (903) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
5	E	4	ILE
5	E	16	LEU
5	E	66	CYS
5	E	68	PHE
5	E	70	ASP
5	E	72	PHE
5	E	91	LYS
5	E	103	LEU
5	E	114	GLU
5	E	116	LEU

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Mol	Chain	Res	Type
5	E	117	ILE
5	E	122	ARG
5	E	123	LEU
5	E	142	ASP
5	E	150	ASP
5	E	181	ASN
5	E	187	VAL
5	E	189	PHE
5	E	205	VAL
5	E	207	LYS
5	E	215	ARG
6	F	22	LEU
6	F	29	LEU
6	F	30	ARG
6	F	72	ARG
6	F	102	LEU
6	F	109	GLU
6	F	117	GLU
6	F	126	LEU
6	F	134	VAL
6	F	135	ILE
6	F	149	ARG
6	F	165	VAL
6	F	191	LEU
6	F	193	ARG
6	F	198	LYS
6	F	204	MET
6	F	216	HIS
6	F	221	LYS
6	F	224	THR
6	F	227	ARG
6	F	241	ARG
6	F	246	LEU
7	G	25	ILE
7	G	58	ARG
7	G	61	ASP
7	G	74	GLU
7	G	76	VAL
7	G	79	VAL
7	G	87	VAL
7	G	95	THR
7	G	114	VAL

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Mol	Chain	Res	Type
7	G	120	LYS
7	G	126	LYS
7	G	160	VAL
7	G	162	VAL
7	G	168	LYS
7	G	173	GLN
7	G	174	LYS
7	G	198	HIS
7	G	210	GLU
7	G	230	THR
7	G	240	ARG
7	G	246	LEU
7	G	248	LYS
7	G	264	VAL
7	G	278	ILE
7	G	311	PHE
7	G	332	ARG
7	G	338	LEU
8	H	18	ASN
8	H	20	LEU
8	H	50	TYR
8	H	59	GLN
8	H	67	THR
8	H	74	ILE
8	H	76	ARG
8	H	90	PHE
8	H	93	MET
8	H	99	MET
8	H	104	LYS
8	H	105	THR
8	H	109	TRP
8	H	112	LYS
8	H	114	ASN
8	H	116	ASN
8	H	140	HIS
8	H	142	VAL
8	H	194	TYR
8	H	197	ARG
8	H	202	ARG
8	H	206	LEU
8	H	221	ASN
8	H	226	GLU

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Mol	Chain	Res	Type
8	H	244	LEU
8	H	249	ILE
8	H	259	ASP
8	H	265	GLU
8	H	267	VAL
8	H	291	ASN
8	H	294	GLU
8	H	295	ILE
8	H	301	PRO
8	H	307	GLN
8	H	316	ASN
8	H	322	GLN
8	H	332	LYS
8	H	349	THR
8	H	355	PHE
9	I	3	PHE
9	I	8	LYS
9	I	12	TYR
9	I	16	PHE
9	I	22	ARG
9	I	23	ARG
9	I	24	ARG
9	I	25	GLU
9	I	33	ARG
9	I	35	ARG
9	I	41	LYS
9	I	45	ASN
9	I	70	THR
9	I	105	ILE
9	I	120	LYS
9	I	131	LEU
9	I	142	PHE
9	I	155	THR
9	I	194	LEU
9	I	219	PHE
9	I	222	LEU
9	I	257	GLU
9	I	276	LYS
9	I	293	LEU
10	J	5	LYS
10	J	18	LEU
10	J	19	LYS

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Mol	Chain	Res	Type
10	J	20	LYS
10	J	30	LEU
10	J	54	TYR
10	J	60	ASP
10	J	72	ASN
10	J	80	ASN
10	J	155	LEU
10	J	174	LEU
11	K	24	GLU
11	K	25	GLN
11	K	29	GLU
11	K	47	ARG
11	K	80	GLN
11	K	94	LYS
11	K	96	PRO
11	K	101	LYS
11	K	127	LEU
11	K	145	ARG
11	K	146	GLN
11	K	170	GLU
11	K	176	TYR
11	K	179	LEU
11	K	189	ILE
11	K	191	VAL
11	K	216	VAL
11	K	229	PHE
11	K	231	ASN
11	K	239	LEU
11	K	240	VAL
12	L	44	ARG
12	L	46	LEU
12	L	48	ARG
12	L	49	TYR
12	L	50	VAL
12	L	55	TYR
12	L	65	LEU
12	L	77	GLN
12	L	80	TYR
12	L	84	ARG
12	L	118	GLU
12	L	122	LYS
12	L	124	ASP

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Mol	Chain	Res	Type
12	L	134	TYR
12	L	150	LEU
12	L	161	GLU
12	L	162	LEU
12	L	163	VAL
12	L	190	VAL
12	L	195	SER
12	L	200	LEU
12	L	246	MET
13	M	36	LYS
13	M	41	ILE
13	M	49	ASN
13	M	50	ASN
13	M	62	ARG
13	M	68	LEU
13	M	69	ARG
13	M	72	LYS
13	M	73	SER
13	M	86	TYR
13	M	88	TYR
13	M	92	TYR
13	M	94	TYR
13	M	146	LEU
13	M	170	LYS
13	M	172	ILE
13	M	177	ASP
14	N	3	ARG
14	N	23	ASN
14	N	32	ARG
14	N	33	ILE
14	N	36	LEU
14	N	44	ASP
14	N	52	LEU
14	N	65	LEU
14	N	82	ARG
14	N	91	VAL
14	N	92	HIS
14	N	128	ARG
14	N	139	ARG
14	N	144	ASN
14	N	153	ARG
14	N	163	GLN

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Mol	Chain	Res	Type
14	N	165	ILE
14	N	169	LYS
14	N	206	LEU
15	O	10	ARG
15	O	30	LEU
15	O	60	ARG
15	O	65	ILE
15	O	92	ARG
15	O	94	ARG
15	O	101	ASN
15	O	112	LEU
15	O	128	TYR
15	O	129	VAL
15	O	138	VAL
15	O	142	LYS
15	O	163	PHE
16	P	57	LYS
16	P	61	GLN
16	P	64	ILE
16	P	79	SER
16	P	88	PRO
16	P	90	ARG
16	P	92	ARG
16	P	114	ARG
16	P	115	GLN
16	P	129	THR
16	P	133	LEU
17	Q	35	ARG
17	Q	46	ILE
17	Q	49	ARG
17	Q	54	LEU
17	Q	55	ARG
17	Q	67	ARG
17	Q	76	THR
17	Q	85	LEU
17	Q	86	THR
17	Q	89	TYR
17	Q	98	ASP
17	Q	99	HIS
17	Q	100	ARG
17	Q	136	GLU
17	Q	137	GLN

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Mol	Chain	Res	Type
17	Q	139	LEU
17	Q	167	PHE
17	Q	168	ARG
18	R	21	VAL
18	R	24	LYS
18	R	42	LYS
18	R	50	LYS
18	R	55	ARG
18	R	92	GLU
18	R	94	TRP
18	R	103	ILE
18	R	121	MET
18	R	123	LEU
18	R	129	TYR
19	S	10	LEU
19	S	13	LYS
19	S	17	ASP
19	S	37	HIS
19	S	38	ARG
19	S	43	THR
19	S	49	ARG
19	S	50	ARG
19	S	62	TYR
19	S	75	VAL
19	S	90	ASN
19	S	104	GLU
19	S	113	LEU
19	S	116	LEU
19	S	119	TYR
19	S	135	VAL
19	S	147	ARG
19	S	150	TRP
19	S	153	ASP
19	S	155	VAL
19	S	159	ARG
19	S	164	LEU
19	S	172	ARG
19	S	193	ARG
19	S	195	ASN
20	T	39	GLU
20	T	48	PHE
20	T	49	ARG

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Mol	Chain	Res	Type
20	T	68	ARG
20	T	72	HIS
20	T	74	ARG
20	T	78	ARG
20	T	80	PHE
20	T	87	MET
20	T	117	ARG
20	T	122	GLN
20	T	128	ARG
20	T	148	LYS
20	T	159	LYS
20	T	160	ARG
20	T	167	TYR
20	T	170	LYS
20	T	174	PHE
20	T	197	LEU
21	U	3	ARG
21	U	53	ASP
21	U	72	GLN
21	U	92	GLN
21	U	94	LEU
21	U	96	GLN
21	U	101	ASN
21	U	111	LYS
21	U	121	GLN
21	U	124	LYS
21	U	125	GLN
21	U	126	ARG
21	U	129	THR
21	U	130	TYR
21	U	131	ARG
21	U	139	TYR
21	U	140	GLU
21	U	145	HIS
21	U	146	ILE
21	U	147	GLU
21	U	159	LYS
21	U	168	LEU
21	U	180	LYS
22	V	9	GLN
22	V	32	LEU
22	V	33	TYR

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Mol	Chain	Res	Type
22	V	89	ASP
22	V	95	GLU
22	V	99	THR
22	V	107	THR
22	V	113	LYS
22	V	120	GLU
22	V	127	LEU
22	V	138	LEU
22	V	141	ARG
22	V	152	HIS
22	V	164	ARG
22	V	178	ARG
22	V	185	LYS
23	W	10	LEU
23	W	24	LEU
23	W	47	ASN
23	W	78	TYR
23	W	89	LEU
23	W	109	TYR
23	W	116	ASP
23	W	125	LYS
23	W	133	LYS
23	W	134	HIS
23	W	148	ASP
23	W	151	ARG
23	W	152	GLU
23	W	165	LYS
23	W	182	ASP
24	X	34	GLU
24	X	52	LYS
24	X	78	TRP
24	X	79	VAL
24	X	87	THR
24	X	107	TYR
24	X	110	MET
24	X	119	ARG
24	X	128	GLU
24	X	131	LYS
24	X	137	ARG
24	X	139	TYR
24	X	152	LEU
24	X	158	LYS

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Mol	Chain	Res	Type
24	X	165	TYR
25	Y	17	ARG
25	Y	20	ARG
25	Y	26	HIS
25	Y	27	LEU
25	Y	33	VAL
25	Y	52	MET
25	Y	56	PHE
25	Y	60	LYS
25	Y	64	VAL
25	Y	72	VAL
25	Y	76	ILE
25	Y	77	ASN
25	Y	79	MET
25	Y	83	ARG
25	Y	84	TYR
25	Y	86	GLU
25	Y	89	LEU
25	Y	91	LEU
25	Y	106	LEU
25	Y	136	ARG
25	Y	139	ARG
25	Y	151	LEU
26	Z	40	HIS
26	Z	88	GLN
27	AA	9	THR
27	AA	12	ARG
27	AA	33	ASN
27	AA	54	LEU
27	AA	68	GLU
27	AA	83	LYS
27	AA	93	LEU
27	AA	102	ILE
27	AA	104	ASN
27	AA	115	THR
27	AA	124	ASP
28	BA	1	MET
28	BA	4	GLU
28	BA	17	ARG
28	BA	34	SER
28	BA	40	PHE
28	BA	41	LYS

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Mol	Chain	Res	Type
28	BA	43	ARG
28	BA	45	ASN
28	BA	49	ILE
29	CA	38	LEU
29	CA	58	ASP
29	CA	60	TYR
29	CA	63	ILE
29	CA	86	VAL
29	CA	121	LYS
29	CA	125	ARG
29	CA	142	ILE
30	DA	12	ARG
30	DA	19	TYR
30	DA	28	ARG
30	DA	37	LYS
30	DA	42	GLN
30	DA	45	ILE
30	DA	50	ILE
30	DA	54	ASP
30	DA	57	LEU
30	DA	66	GLN
30	DA	74	TYR
30	DA	105	VAL
30	DA	107	THR
30	DA	114	ASP
30	DA	115	ARG
31	EA	5	LEU
31	EA	21	LYS
31	EA	38	PHE
31	EA	71	PHE
31	EA	74	VAL
31	EA	85	TYR
31	EA	99	GLU
31	EA	121	ARG
31	EA	134	LEU
31	EA	135	ARG
32	FA	7	LYS
32	FA	10	LYS
32	FA	34	MET
32	FA	39	HIS
32	FA	41	HIS
32	FA	46	ASP

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Mol	Chain	Res	Type
32	FA	60	TYR
32	FA	68	PHE
32	FA	70	LYS
32	FA	73	LEU
32	FA	78	LEU
32	FA	88	ASP
32	FA	129	PHE
33	GA	14	ARG
33	GA	36	ASP
33	GA	41	ARG
33	GA	59	LYS
34	HA	38	LYS
34	HA	55	GLU
34	HA	62	LEU
34	HA	66	LYS
34	HA	84	LEU
34	HA	86	ARG
35	IA	19	ARG
35	IA	31	ARG
35	IA	33	VAL
35	IA	39	PHE
35	IA	59	ILE
35	IA	64	VAL
35	IA	112	ASP
36	JA	8	LYS
36	JA	32	TRP
36	JA	33	ARG
36	JA	36	LYS
36	JA	73	THR
36	JA	78	ASN
36	JA	82	LEU
36	JA	85	LEU
36	JA	92	TYR
37	KA	42	GLN
37	KA	43	PHE
37	KA	44	TYR
37	KA	57	LYS
37	KA	78	SER
37	KA	80	VAL
37	KA	85	PHE
37	KA	86	ARG
37	KA	87	ASN

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Mol	Chain	Res	Type
37	KA	106	ASN
38	LA	20	ILE
38	LA	23	VAL
38	LA	59	PRO
38	LA	67	LYS
38	LA	97	GLU
39	MA	49	LYS
39	MA	64	GLU
39	MA	71	LYS
39	MA	75	TYR
39	MA	79	ASP
39	MA	89	ARG
39	MA	104	GLN
39	MA	119	LYS
40	NA	21	THR
40	NA	53	TYR
40	NA	60	LEU
40	NA	76	ARG
40	NA	80	PHE
40	NA	99	ARG
41	OA	10	LYS
41	OA	13	ASN
41	OA	17	THR
41	OA	18	LEU
41	OA	25	ARG
41	OA	37	CYS
41	OA	49	TRP
41	OA	55	ARG
41	OA	57	HIS
41	OA	67	LEU
42	PA	26	LYS
42	PA	28	ASN
42	PA	38	PHE
42	PA	65	LEU
42	PA	70	PRO
43	QA	21	ARG
43	QA	33	ASN
43	QA	35	ILE
43	QA	38	ASN
43	QA	41	ARG
43	QA	48	LYS
44	RA	89	TYR

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Mol	Chain	Res	Type
44	RA	91	CYS
44	RA	100	TYR
45	SA	5	TRP
45	SA	11	ARG
45	SA	21	ARG
46	TA	19	LYS
46	TA	20	HIS
46	TA	43	TYR
46	TA	46	LYS
46	TA	60	LYS
46	TA	61	LYS
46	TA	78	LYS
46	TA	80	ARG
46	TA	99	GLN
46	TA	106	PHE
47	UA	4	ARG
47	UA	24	ARG
47	UA	28	LYS
47	UA	30	GLU
47	UA	45	LYS
47	UA	59	CYS
48	VA	6	GLU
48	VA	23	LYS
48	VA	45	LEU
48	VA	55	LYS
48	VA	67	LEU
48	VA	70	LEU
48	VA	104	ARG
48	VA	117	GLU
48	VA	120	TRP
48	VA	126	THR
48	VA	135	PHE
48	VA	155	ASP
48	VA	189	GLN
49	WA	53	LYS
49	WA	59	ARG
49	WA	114	ASP
49	WA	117	LYS
49	WA	136	ILE
49	WA	137	LYS
49	WA	147	HIS
49	WA	175	ASP

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Mol	Chain	Res	Type
49	WA	181	TRP
49	WA	207	ASP
49	WA	217	ASP
49	WA	225	LEU
49	WA	232	TYR
49	WA	268	GLN
49	WA	269	TYR
50	XA	24	LEU
50	XA	38	PHE
50	XA	62	ARG
50	XA	69	ASN
50	XA	92	HIS
50	XA	97	PRO
50	XA	101	ARG
50	XA	109	ASN
50	XA	113	ARG
50	XA	125	ASP
50	XA	146	LEU
50	XA	155	PHE
50	XA	157	ASP
50	XA	163	ASN
50	XA	188	LEU
50	XA	195	TRP
50	XA	197	ILE
50	XA	200	ASP
52	ZA	53	ILE
52	ZA	82	ASN
52	ZA	99	LYS
52	ZA	106	ASP
52	ZA	113	LEU
52	ZA	117	THR
53	AB	17	PHE
53	AB	57	ASP
53	AB	84	ILE
53	AB	92	GLN
53	AB	105	MET
53	AB	107	PHE
53	AB	115	ILE
53	AB	127	MET
53	AB	146	ARG
53	AB	150	MET
53	AB	158	ILE

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Mol	Chain	Res	Type
53	AB	169	ASP
53	AB	213	GLU
53	AB	215	GLU
53	AB	223	LYS
54	BB	6	LYS
54	BB	11	ARG
54	BB	17	HIS
54	BB	23	LEU
54	BB	30	ARG
54	BB	38	LEU
54	BB	77	ARG
54	BB	92	LEU
54	BB	106	LYS
54	BB	108	ARG
54	BB	133	LYS
54	BB	158	ASP
54	BB	182	TYR
54	BB	187	ARG
54	BB	206	ASP
54	BB	215	ASP
54	BB	223	ASN
54	BB	227	VAL
54	BB	240	LYS
55	CB	25	LEU
55	CB	42	LEU
55	CB	86	GLN
55	CB	93	LEU
55	CB	99	MET
55	CB	128	ASN
55	CB	156	ARG
55	CB	157	ARG
55	CB	166	ARG
55	CB	194	LEU
55	CB	215	ASP
56	DB	7	TYR
56	DB	25	ARG
56	DB	77	LEU
56	DB	98	ARG
56	DB	132	ARG
56	DB	220	LYS
57	EB	8	ILE
57	EB	24	PHE

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Mol	Chain	Res	Type
57	EB	85	PHE
57	EB	92	PHE
57	EB	114	ARG
57	EB	128	ASP
57	EB	173	TYR
57	EB	185	ILE
58	FB	5	ARG
58	FB	8	ARG
58	FB	20	GLN
58	FB	47	ARG
58	FB	87	ASN
58	FB	116	HIS
58	FB	137	LYS
58	FB	179	CYS
58	FB	182	TYR
59	GB	39	LYS
59	GB	58	ASP
59	GB	79	ARG
59	GB	89	ASP
59	GB	92	LYS
59	GB	93	LEU
59	GB	95	TYR
59	GB	102	GLU
59	GB	109	LEU
59	GB	120	LYS
59	GB	138	LYS
59	GB	149	ARG
59	GB	161	THR
59	GB	175	ARG
59	GB	182	GLU
60	HB	32	HIS
60	HB	34	GLU
60	HB	49	LEU
60	HB	59	PHE
60	HB	76	LEU
60	HB	82	LEU
61	IB	4	GLU
61	IB	22	ASN
61	IB	67	ARG
61	IB	88	ARG
61	IB	100	TYR
61	IB	119	VAL

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Mol	Chain	Res	Type
61	IB	130	PRO
61	IB	136	ARG
61	IB	155	LYS
63	KB	3	ARG
63	KB	25	TRP
63	KB	43	LYS
63	KB	76	LYS
63	KB	88	LEU
63	KB	108	ASP
63	KB	128	TYR
63	KB	151	ASN
65	MB	43	ARG
65	MB	44	ARG
65	MB	81	ARG
65	MB	110	GLU
65	MB	123	TYR
66	NB	10	PHE
66	NB	41	PRO
66	NB	52	LEU
66	NB	58	ASP
66	NB	69	VAL
66	NB	70	THR
66	NB	117	LEU
66	NB	137	ARG
66	NB	143	ARG
67	OB	5	ARG
67	OB	29	GLN
67	OB	69	ILE
67	OB	105	GLN
67	OB	117	LEU
68	PB	3	LEU
68	PB	11	PHE
68	PB	15	LEU
68	PB	28	ILE
68	PB	51	ASP
68	PB	82	PRO
68	PB	85	PHE
68	PB	90	ASN
68	PB	92	ILE
68	PB	128	PHE
68	PB	132	ARG
68	PB	136	GLN

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Mol	Chain	Res	Type
69	QB	13	ASP
69	QB	22	LEU
69	QB	28	LEU
69	QB	30	VAL
69	QB	35	ASP
69	QB	38	LYS
69	QB	67	MET
69	QB	68	ARG
69	QB	130	ARG
69	QB	131	ASP
70	RB	15	GLN
70	RB	33	GLN
70	RB	46	GLU
70	RB	48	HIS
70	RB	57	ARG
70	RB	61	LYS
70	RB	72	ASN
70	RB	77	LYS
70	RB	89	ARG
70	RB	108	ILE
71	SB	3	ASN
71	SB	5	LYS
71	SB	8	LEU
71	SB	11	LEU
71	SB	41	GLU
71	SB	50	TYR
71	SB	66	ASP
71	SB	85	TYR
72	TB	9	ASP
72	TB	11	LEU
72	TB	23	ARG
72	TB	24	GLN
72	TB	25	VAL
72	TB	41	MET
72	TB	49	GLU
72	TB	65	LEU
72	TB	89	TRP
72	TB	104	LEU
72	TB	120	HIS
73	UB	9	LEU
73	UB	16	ARG
73	UB	19	ARG

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Mol	Chain	Res	Type
73	UB	23	ARG
73	UB	24	TRP
73	UB	52	ILE
73	UB	69	ARG
73	UB	82	LYS
73	UB	101	GLU
74	VB	17	LEU
74	VB	32	ARG
74	VB	34	ASN
74	VB	57	VAL
74	VB	72	PHE
74	VB	94	TYR
74	VB	123	LYS
74	VB	127	LYS
74	VB	132	ARG
75	WB	42	LEU
75	WB	58	ARG
75	WB	69	LEU
75	WB	98	GLN
75	WB	100	ILE
77	YB	29	ARG
78	ZB	9	LEU
78	ZB	19	THR
78	ZB	32	PHE
78	ZB	34	GLU
78	ZB	52	ASP
78	ZB	58	GLU
78	ZB	60	GLU
79	AC	10	HIS
79	AC	19	ARG
79	AC	32	ARG
80	BC	8	LEU
80	BC	20	LYS
80	BC	26	LYS
80	BC	39	LEU
80	BC	47	VAL
80	BC	53	LYS
82	DC	12	LEU
82	DC	18	ASN
82	DC	22	MET
82	DC	32	LYS
82	DC	37	ASP

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Mol	Chain	Res	Type
82	DC	70	ILE
82	DC	90	LYS
82	DC	94	ASP
82	DC	108	HIS
82	DC	120	ARG
82	DC	121	VAL
82	DC	138	GLN
82	DC	194	ASP
82	DC	202	VAL
82	DC	221	THR
82	DC	222	ILE
82	DC	236	ASP
82	DC	240	MET
82	DC	242	ASP
82	DC	281	ILE
82	DC	320	LEU
82	DC	332	ASP
82	DC	388	THR
82	DC	394	PHE
82	DC	440	ARG
82	DC	441	PHE
82	DC	446	ASP
82	DC	456	LEU
82	DC	482	LYS
82	DC	490	GLN
82	DC	501	LEU
82	DC	506	GLU
82	DC	568	GLU
82	DC	583	HIS
82	DC	596	GLU
82	DC	598	SER
82	DC	612	PHE
82	DC	629	ASP
82	DC	633	ILE
82	DC	636	PHE
82	DC	647	ILE
82	DC	654	GLN
82	DC	661	ASP
82	DC	677	PHE
82	DC	679	GLU
82	DC	681	MET
82	DC	721	ASP

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Mol	Chain	Res	Type
82	DC	723	LYS
82	DC	724	ILE
82	DC	726	GLU
82	DC	743	ILE
82	DC	744	TYR
82	DC	748	ASN
82	DC	766	PHE
82	DC	767	THR
82	DC	810	ASP
82	DC	825	ARG
82	DC	836	GLN

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (283) such sidechains are listed below:

Mol	Chain	Res	Type
5	E	8	GLN
5	E	27	ASN
5	E	94	ASN
5	E	119	GLN
5	E	127	GLN
5	E	197	ASN
6	F	79	ASN
6	F	115	ASN
6	F	132	ASN
6	F	187	HIS
6	F	216	HIS
6	F	217	GLN
6	F	253	GLN
7	G	11	HIS
7	G	163	HIS
7	G	165	GLN
7	G	198	HIS
7	G	211	GLN
7	G	256	HIS
7	G	279	ASN
7	G	345	ASN
8	H	5	GLN
8	H	45	ASN
8	H	59	GLN
8	H	114	ASN
8	H	116	ASN
8	H	196	ASN

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Mol	Chain	Res	Type
8	H	234	ASN
8	H	279	HIS
8	H	291	ASN
8	H	307	GLN
8	H	320	ASN
8	H	322	GLN
9	I	32	GLN
9	I	45	ASN
9	I	57	ASN
9	I	244	HIS
9	I	264	GLN
9	I	296	GLN
10	J	28	GLN
10	J	72	ASN
10	J	126	GLN
10	J	138	GLN
10	J	172	HIS
11	K	25	GLN
11	K	48	ASN
11	K	52	GLN
11	K	64	GLN
11	K	80	GLN
11	K	146	GLN
11	K	159	GLN
11	K	172	ASN
11	K	231	ASN
11	K	244	ASN
12	L	24	ASN
12	L	137	ASN
12	L	138	HIS
12	L	252	ASN
13	M	49	ASN
13	M	50	ASN
13	M	64	HIS
13	M	100	ASN
13	M	163	GLN
14	N	12	GLN
14	N	51	HIS
14	N	144	ASN
14	N	209	ASN
14	N	220	GLN
16	P	65	GLN

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Mol	Chain	Res	Type
16	P	115	GLN
17	Q	105	ASN
17	Q	112	ASN
17	Q	137	GLN
18	R	41	GLN
18	R	62	GLN
18	R	126	GLN
19	S	11	GLN
19	S	15	GLN
19	S	37	HIS
19	S	57	GLN
19	S	86	ASN
19	S	90	ASN
19	S	138	GLN
19	S	139	HIS
19	S	182	ASN
19	S	195	ASN
20	T	14	HIS
20	T	65	ASN
20	T	90	HIS
21	U	121	GLN
21	U	145	HIS
21	U	172	GLN
22	V	73	GLN
22	V	152	HIS
23	W	34	GLN
23	W	68	GLN
23	W	134	HIS
24	X	3	HIS
24	X	49	HIS
24	X	62	ASN
24	X	63	GLN
24	X	65	ASN
24	X	138	GLN
25	Y	22	HIS
25	Y	77	ASN
25	Y	82	ASN
25	Y	134	GLN
25	Y	146	ASN
26	Z	88	GLN
27	AA	33	ASN
27	AA	132	ASN

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Mol	Chain	Res	Type
28	BA	32	GLN
28	BA	42	GLN
28	BA	45	ASN
28	BA	58	HIS
29	CA	53	HIS
30	DA	4	GLN
30	DA	26	GLN
30	DA	66	GLN
31	EA	78	ASN
32	FA	38	GLN
32	FA	44	ASN
32	FA	64	GLN
32	FA	74	ASN
33	GA	12	GLN
33	GA	42	ASN
33	GA	43	HIS
35	IA	17	HIS
35	IA	56	ASN
35	IA	80	ASN
35	IA	105	GLN
36	JA	13	HIS
36	JA	20	HIS
36	JA	26	HIS
36	JA	31	ASN
36	JA	35	GLN
36	JA	52	GLN
36	JA	60	ASN
36	JA	78	ASN
36	JA	88	HIS
36	JA	104	ASN
36	JA	121	ASN
37	KA	13	HIS
37	KA	24	ASN
37	KA	77	ASN
37	KA	87	ASN
37	KA	106	ASN
38	LA	14	ASN
38	LA	18	ASN
38	LA	33	GLN
38	LA	69	HIS
39	MA	59	ASN
39	MA	104	GLN

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Mol	Chain	Res	Type
40	NA	35	ASN
40	NA	63	ASN
41	OA	13	ASN
41	OA	16	HIS
41	OA	28	HIS
41	OA	30	GLN
41	OA	48	ASN
41	OA	76	ASN
42	PA	28	ASN
42	PA	40	GLN
43	QA	32	ASN
43	QA	50	ASN
44	RA	90	ASN
46	TA	3	ASN
46	TA	22	GLN
46	TA	23	HIS
46	TA	47	GLN
46	TA	53	GLN
46	TA	99	GLN
47	UA	25	GLN
48	VA	83	ASN
48	VA	103	ASN
48	VA	167	GLN
48	VA	189	GLN
49	WA	31	ASN
49	WA	69	GLN
49	WA	174	ASN
49	WA	308	ASN
50	XA	15	GLN
50	XA	21	ASN
50	XA	46	HIS
50	XA	109	ASN
50	XA	163	ASN
50	XA	164	ASN
52	ZA	59	HIS
52	ZA	82	ASN
53	AB	22	ASN
53	AB	56	GLN
53	AB	92	GLN
53	AB	101	GLN
53	AB	174	HIS
54	BB	67	GLN

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Mol	Chain	Res	Type
54	BB	98	ASN
54	BB	216	ASN
54	BB	258	GLN
54	BB	259	GLN
55	CB	79	ASN
55	CB	103	ASN
55	CB	122	ASN
55	CB	128	ASN
55	CB	186	ASN
55	CB	200	ASN
56	DB	13	GLN
56	DB	139	ASN
57	EB	22	GLN
57	EB	42	GLN
57	EB	74	GLN
57	EB	180	GLN
58	FB	32	GLN
58	FB	88	ASN
58	FB	175	GLN
59	GB	38	ASN
59	GB	112	GLN
59	GB	131	GLN
59	GB	139	GLN
59	GB	142	ASN
60	HB	85	HIS
60	HB	96	ASN
61	IB	16	GLN
61	IB	18	HIS
61	IB	106	ASN
61	IB	110	HIS
61	IB	150	ASN
63	KB	5	HIS
63	KB	49	GLN
63	KB	105	ASN
63	KB	151	ASN
65	MB	79	HIS
65	MB	98	ASN
65	MB	103	ASN
65	MB	104	GLN
65	MB	114	HIS
65	MB	128	HIS
66	NB	83	GLN

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Mol	Chain	Res	Type
66	NB	94	GLN
67	OB	29	GLN
67	OB	56	HIS
68	PB	74	GLN
68	PB	75	ASN
68	PB	78	HIS
68	PB	136	GLN
69	QB	16	ASN
69	QB	25	GLN
69	QB	43	ASN
69	QB	77	ASN
69	QB	93	HIS
69	QB	101	ASN
69	QB	138	GLN
70	RB	40	ASN
70	RB	98	GLN
71	SB	7	GLN
71	SB	33	GLN
71	SB	35	ASN
71	SB	70	ASN
71	SB	74	GLN
72	TB	42	GLN
72	TB	64	GLN
72	TB	80	ASN
72	TB	98	GLN
72	TB	113	HIS
73	UB	75	GLN
73	UB	79	ASN
74	VB	77	ASN
74	VB	107	GLN
74	VB	133	ASN
75	WB	38	HIS
75	WB	98	GLN
82	DC	91	GLN
82	DC	96	ASN
82	DC	201	GLN
82	DC	224	GLN
82	DC	259	ASN
82	DC	537	HIS
82	DC	583	HIS
82	DC	644	ASN
82	DC	687	ASN

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Mol	Chain	Res	Type
82	DC	734	GLN
82	DC	748	ASN
82	DC	753	GLN
82	DC	836	GLN

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	A	1682/1798 (93%)	312 (18%)	11 (0%)
2	B	3267/3396 (96%)	632 (19%)	27 (0%)
3	C	157/158 (99%)	32 (20%)	0
4	D	120/121 (99%)	12 (10%)	0
83	EC	189/201 (94%)	74 (39%)	2 (1%)
All	All	5415/5674 (95%)	1062 (19%)	40 (0%)

All (1062) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	A	2	A
1	A	25	C
1	A	26	A
1	A	34	G
1	A	47	A
1	A	57	G
1	A	60	U
1	A	67	A
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	100	A
1	A	104	A
1	A	114	C
1	A	116	U
1	A	132	U
1	A	133	U
1	A	134	U
1	A	135	A
1	A	136	C

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Mol	Chain	Res	Type
1	A	137	U
1	A	140	A
1	A	141	U
1	A	145	A
1	A	153	G
1	A	159	U
1	A	166	C
1	A	170	U
1	A	178	U
1	A	186	C
1	A	190	C
1	A	191	C
1	A	192	U
1	A	195	G
1	A	197	A
1	A	200	A
1	A	215	A
1	A	219	A
1	A	228	G
1	A	231	U
1	A	233	C
1	A	237	C
1	A	238	U
1	A	240	U
1	A	241	U
1	A	242	U
1	A	250	C
1	A	261	U
1	A	265	A
1	A	272	U
1	A	277	U
1	A	278	U
1	A	280	U
1	A	281	G
1	A	288	A
1	A	299	A
1	A	302	U
1	A	316	A
1	A	320	U
1	A	321	C
1	A	322	G
1	A	323	A

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Mol	Chain	Res	Type
1	A	337	G
1	A	338	C
1	A	341	A
1	A	352	A
1	A	359	A
1	A	360	A
1	A	361	C
1	A	378	A
1	A	400	A
1	A	402	C
1	A	404	G
1	A	416	A
1	A	418	G
1	A	423	G
1	A	424	C
1	A	425	A
1	A	426	G
1	A	434	G
1	A	439	U
1	A	444	C
1	A	475	A
1	A	477	A
1	A	488	G
1	A	493	U
1	A	495	C
1	A	496	G
1	A	497	G
1	A	500	C
1	A	502	U
1	A	506	A
1	A	510	G
1	A	515	A
1	A	532	U
1	A	539	G
1	A	541	A
1	A	542	A
1	A	544	A
1	A	555	A
1	A	556	A
1	A	557	G
1	A	558	U
1	A	559	C

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Mol	Chain	Res	Type
1	A	565	C
1	A	575	C
1	A	577	G
1	A	578	U
1	A	579	A
1	A	580	A
1	A	581	U
1	A	594	A
1	A	606	A
1	A	619	A
1	A	620	A
1	A	622	A
1	A	623	A
1	A	624	G
1	A	629	U
1	A	639	U
1	A	650	U
1	A	655	G
1	A	656	G
1	A	677	G
1	A	684	A
1	A	694	U
1	A	696	C
1	A	697	C
1	A	703	G
1	A	704	C
1	A	705	U
1	A	707	A
1	A	708	C
1	A	709	C
1	A	710	U
1	A	731	C
1	A	732	G
1	A	734	A
1	A	736	C
1	A	738	G
1	A	741	C
1	A	742	U
1	A	754	A
1	A	755	A
1	A	765	G
1	A	766	U

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Mol	Chain	Res	Type
1	A	771	A
1	A	774	A
1	A	778	G
1	A	783	G
1	A	784	C
1	A	789	A
1	A	794	U
1	A	807	A
1	A	812	A
1	A	815	G
1	A	820	U
1	A	821	U
1	A	822	U
1	A	825	U
1	A	830	U
1	A	831	U
1	A	841	U
1	A	846	G
1	A	850	A
1	A	852	C
1	A	853	G
1	A	854	U
1	A	855	A
1	A	856	A
1	A	860	U
1	A	863	A
1	A	865	A
1	A	876	G
1	A	889	U
1	A	890	C
1	A	928	U
1	A	933	A
1	A	935	U
1	A	942	G
1	A	951	A
1	A	960	U
1	A	966	A
1	A	977	A
1	A	1023	A
1	A	1026	A
1	A	1028	C
1	A	1039	A

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Mol	Chain	Res	Type
1	A	1043	A
1	A	1052	U
1	A	1053	G
1	A	1058	U
1	A	1061	A
1	A	1072	C
1	A	1074	G
1	A	1076	A
1	A	1082	C
1	A	1091	A
1	A	1092	A
1	A	1096	C
1	A	1097	U
1	A	1098	U
1	A	1100	G
1	A	1109	G
1	A	1118	G
1	A	1146	G
1	A	1150	G
1	A	1151	A
1	A	1160	A
1	A	1163	A
1	A	1185	U
1	A	1188	G
1	A	1190	C
1	A	1191	U
1	A	1194	A
1	A	1196	A
1	A	1200	G
1	A	1202	A
1	A	1212	G
1	A	1217	A
1	A	1218	G
1	A	1227	A
1	A	1228	G
1	A	1229	G
1	A	1230	A
1	A	1244	A
1	A	1245	G
1	A	1246	C
1	A	1258	U
1	A	1270	G

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Mol	Chain	Res	Type
1	A	1273	G
1	A	1274	C
1	A	1275	A
1	A	1306	C
1	A	1307	U
1	A	1314	U
1	A	1315	U
1	A	1320	U
1	A	1321	A
1	A	1340	U
1	A	1345	A
1	A	1363	U
1	A	1370	U
1	A	1371	A
1	A	1385	G
1	A	1390	U
1	A	1398	U
1	A	1399	C
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	1445	G
1	A	1448	G
1	A	1457	C
1	A	1471	A
1	A	1473	U
1	A	1474	G
1	A	1481	C
1	A	1482	C
1	A	1486	G
1	A	1490	C
1	A	1491	U
1	A	1492	A
1	A	1499	G
1	A	1516	A
1	A	1523	G
1	A	1524	A
1	A	1535	U
1	A	1536	G

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Mol	Chain	Res	Type
1	A	1537	C
1	A	1538	U
1	A	1540	G
1	A	1557	U
1	A	1559	A
1	A	1573	A
1	A	1574	G
1	A	1584	G
1	A	1601	G
1	A	1602	C
1	A	1616	G
1	A	1623	C
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	1697	G
1	A	1706	C
1	A	1715	G
1	A	1716	C
1	A	1717	G
1	A	1736	G
1	A	1750	A
1	A	1755	A
1	A	1762	A
1	A	1764	C
1	A	1766	A
1	A	1768	G
1	A	1769	U
1	A	1770	U
1	A	1772	C
1	A	1774	G
1	A	1783	C
1	A	1792	G
1	A	1793	G
2	B	6	A
2	B	11	A
2	B	13	A
2	B	14	U
2	B	22	G

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Mol	Chain	Res	Type
2	B	30	G
2	B	40	A
2	B	49	A
2	B	60	A
2	B	66	A
2	B	68	C
2	B	75	G
2	B	92	G
2	B	93	C
2	B	95	A
2	B	108	A
2	B	110	G
2	B	111	C
2	B	121	A
2	B	122	A
2	B	133	U
2	B	136	G
2	B	148	G
2	B	150	A
2	B	154	U
2	B	156	G
2	B	157	A
2	B	161	G
2	B	169	U
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	200	C
2	B	201	A
2	B	210	U
2	B	212	G
2	B	218	G
2	B	219	A
2	B	231	G
2	B	237	G
2	B	243	G
2	B	249	U
2	B	251	G
2	B	252	U

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Mol	Chain	Res	Type
2	B	253	A
2	B	269	G
2	B	280	U
2	B	281	G
2	B	286	U
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	346	C
2	B	349	A
2	B	350	C
2	B	352	A
2	B	364	G
2	B	370	U
2	B	375	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	429	U
2	B	439	C
2	B	441	U
2	B	442	G
2	B	493	G
2	B	494	G
2	B	495	G
2	B	503	C
2	B	510	G
2	B	515	C

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Mol	Chain	Res	Type
2	B	520	U
2	B	521	A
2	B	523	A
2	B	535	G
2	B	546	C
2	B	548	G
2	B	555	U
2	B	557	A
2	B	559	A
2	B	569	A
2	B	578	A
2	B	579	G
2	B	600	G
2	B	609	G
2	B	620	U
2	B	621	A
2	B	636	C
2	B	637	C
2	B	638	C
2	B	640	U
2	B	647	A
2	B	649	A
2	B	665	A
2	B	667	C
2	B	677	A
2	B	705	A
2	B	706	A
2	B	712	G
2	B	758	C
2	B	763	G
2	B	765	C
2	B	766	U
2	B	767	U
2	B	771	A
2	B	775	A
2	B	776	U
2	B	777	U
2	B	780	A
2	B	781	G
2	B	785	G
2	B	786	A
2	B	799	G

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Mol	Chain	Res	Type
2	B	806	A
2	B	808	A
2	B	813	G
2	B	816	A
2	B	817	A
2	B	818	C
2	B	830	A
2	B	837	A
2	B	846	A
2	B	847	A
2	B	861	C
2	B	864	G
2	B	874	U
2	B	875	G
2	B	879	U
2	B	880	G
2	B	890	C
2	B	894	G
2	B	895	A
2	B	896	A
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	923	C
2	B	924	G
2	B	926	A
2	B	932	U
2	B	933	A
2	B	934	G
2	B	937	G
2	B	944	C
2	B	959	C
2	B	960	U
2	B	974	G
2	B	979	U
2	B	980	A
2	B	984	G
2	B	991	G
2	B	1001	G

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Mol	Chain	Res	Type
2	B	1002	A
2	B	1010	G
2	B	1016	C
2	B	1018	G
2	B	1024	G
2	B	1025	A
2	B	1047	A
2	B	1049	C
2	B	1053	A
2	B	1064	A
2	B	1075	A
2	B	1081	U
2	B	1082	U
2	B	1093	A
2	B	1095	U
2	B	1096	U
2	B	1097	G
2	B	1098	A
2	B	1103	A
2	B	1104	G
2	B	1116	G
2	B	1117	G
2	B	1131	G
2	B	1140	G
2	B	1143	A
2	B	1150	A
2	B	1155	C
2	B	1159	A
2	B	1160	C
2	B	1168	U
2	B	1178	G
2	B	1180	A
2	B	1181	U
2	B	1182	A
2	B	1190	A
2	B	1191	U
2	B	1193	A
2	B	1199	C
2	B	1201	C
2	B	1208	U
2	B	1209	G
2	B	1218	U

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Mol	Chain	Res	Type
2	B	1219	C
2	B	1220	U
2	B	1221	A
2	B	1222	G
2	B	1223	A
2	B	1230	G
2	B	1236	G
2	B	1239	C
2	B	1241	U
2	B	1242	G
2	B	1245	A
2	B	1246	G
2	B	1254	C
2	B	1256	G
2	B	1263	A
2	B	1265	U
2	B	1287	A
2	B	1288	U
2	B	1292	C
2	B	1305	U
2	B	1306	G
2	B	1307	G
2	B	1308	A
2	B	1309	U
2	B	1315	U
2	B	1318	A
2	B	1319	G
2	B	1325	U
2	B	1330	A
2	B	1332	A
2	B	1348	U
2	B	1351	U
2	B	1352	A
2	B	1353	U
2	B	1355	A
2	B	1357	G
2	B	1386	A
2	B	1399	A
2	B	1400	G
2	B	1408	G
2	B	1417	G
2	B	1419	A

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Mol	Chain	Res	Type
2	B	1425	U
2	B	1434	G
2	B	1437	C
2	B	1447	G
2	B	1450	G
2	B	1452	A
2	B	1455	U
2	B	1456	A
2	B	1457	U
2	B	1470	U
2	B	1481	A
2	B	1482	A
2	B	1488	G
2	B	1495	U
2	B	1496	C
2	B	1507	G
2	B	1508	C
2	B	1511	U
2	B	1523	U
2	B	1525	G
2	B	1526	U
2	B	1527	C
2	B	1536	G
2	B	1549	U
2	B	1556	C
2	B	1557	A
2	B	1558	A
2	B	1562	C
2	B	1563	C
2	B	1567	U
2	B	1569	U
2	B	1572	U
2	B	1576	G
2	B	1580	A
2	B	1583	A
2	B	1589	A
2	B	1591	G
2	B	1593	A
2	B	1595	U
2	B	1607	U
2	B	1629	U
2	B	1639	C

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Mol	Chain	Res	Type
2	B	1642	A
2	B	1643	A
2	B	1644	C
2	B	1645	U
2	B	1646	G
2	B	1658	G
2	B	1683	A
2	B	1694	U
2	B	1717	U
2	B	1724	U
2	B	1730	G
2	B	1741	A
2	B	1742	U
2	B	1749	A
2	B	1750	A
2	B	1751	G
2	B	1765	U
2	B	1766	G
2	B	1769	G
2	B	1775	G
2	B	1780	G
2	B	1795	U
2	B	1797	A
2	B	1810	A
2	B	1816	A
2	B	1819	U
2	B	1820	U
2	B	1821	U
2	B	1822	C
2	B	1834	U
2	B	1835	A
2	B	1839	A
2	B	1841	A
2	B	1842	A
2	B	1845	G
2	B	1846	C
2	B	1847	A
2	B	1849	C
2	B	1850	A
2	B	1864	A
2	B	1876	U
2	B	1879	A

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Mol	Chain	Res	Type
2	B	1884	A
2	B	1886	A
2	B	1895	A
2	B	1906	G
2	B	1931	U
2	B	1933	A
2	B	1952	G
2	B	1954	G
2	B	2048	G
2	B	2059	U
2	B	2078	C
2	B	2082	U
2	B	2083	G
2	B	2086	A
2	B	2094	C
2	B	2102	U
2	B	2107	A
2	B	2111	G
2	B	2112	U
2	B	2115	G
2	B	2117	A
2	B	2121	G
2	B	2122	G
2	B	2131	A
2	B	2138	A
2	B	2139	A
2	B	2140	U
2	B	2141	U
2	B	2144	A
2	B	2145	A
2	B	2157	G
2	B	2158	A
2	B	2160	G
2	B	2169	G
2	B	2187	G
2	B	2188	A
2	B	2198	A
2	B	2201	G
2	B	2205	U
2	B	2206	G
2	B	2208	A
2	B	2210	G

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Mol	Chain	Res	Type
2	B	2223	A
2	B	2231	C
2	B	2232	A
2	B	2244	A
2	B	2246	G
2	B	2247	G
2	B	2250	G
2	B	2251	G
2	B	2252	A
2	B	2256	A
2	B	2262	A
2	B	2269	U
2	B	2270	A
2	B	2271	A
2	B	2272	G
2	B	2273	G
2	B	2279	A
2	B	2281	A
2	B	2288	G
2	B	2289	U
2	B	2303	A
2	B	2307	G
2	B	2308	C
2	B	2310	U
2	B	2313	A
2	B	2314	U
2	B	2315	G
2	B	2324	A
2	B	2335	G
2	B	2336	U
2	B	2339	C
2	B	2362	C
2	B	2365	C
2	B	2372	A
2	B	2373	A
2	B	2374	C
2	B	2375	G
2	B	2376	G
2	B	2391	G
2	B	2395	G
2	B	2397	A
2	B	2398	A

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Mol	Chain	Res	Type
2	B	2402	A
2	B	2403	G
2	B	2405	C
2	B	2411	U
2	B	2418	G
2	B	2434	U
2	B	2435	G
2	B	2437	G
2	B	2443	A
2	B	2452	G
2	B	2455	U
2	B	2458	A
2	B	2459	A
2	B	2462	A
2	B	2472	U
2	B	2473	C
2	B	2474	G
2	B	2490	C
2	B	2495	C
2	B	2496	C
2	B	2497	U
2	B	2498	U
2	B	2499	U
2	B	2500	A
2	B	2502	A
2	B	2503	G
2	B	2507	C
2	B	2511	A
2	B	2514	U
2	B	2515	A
2	B	2522	G
2	B	2523	A
2	B	2526	C
2	B	2537	U
2	B	2538	U
2	B	2540	A
2	B	2541	U
2	B	2542	U
2	B	2549	G
2	B	2553	U
2	B	2554	A
2	B	2555	G

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Mol	Chain	Res	Type
2	B	2561	A
2	B	2562	A
2	B	2569	A
2	B	2571	U
2	B	2572	C
2	B	2573	G
2	B	2576	G
2	B	2585	G
2	B	2587	U
2	B	2589	G
2	B	2593	A
2	B	2606	G
2	B	2607	G
2	B	2614	G
2	B	2626	A
2	B	2628	A
2	B	2629	U
2	B	2638	C
2	B	2645	G
2	B	2651	G
2	B	2652	U
2	B	2656	A
2	B	2657	A
2	B	2674	A
2	B	2677	G
2	B	2689	A
2	B	2694	A
2	B	2696	A
2	B	2699	G
2	B	2703	A
2	B	2714	G
2	B	2728	G
2	B	2729	U
2	B	2734	A
2	B	2742	C
2	B	2747	A
2	B	2753	G
2	B	2755	C
2	B	2758	A
2	B	2772	C
2	B	2777	G
2	B	2778	G

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Mol	Chain	Res	Type
2	B	2779	A
2	B	2794	G
2	B	2796	G
2	B	2799	A
2	B	2800	G
2	B	2801	A
2	B	2802	A
2	B	2803	A
2	B	2808	A
2	B	2810	C
2	B	2816	G
2	B	2817	A
2	B	2828	G
2	B	2834	G
2	B	2842	U
2	B	2844	C
2	B	2845	A
2	B	2856	G
2	B	2859	U
2	B	2861	U
2	B	2867	C
2	B	2871	G
2	B	2872	A
2	B	2887	A
2	B	2898	G
2	B	2899	C
2	B	2910	A
2	B	2914	G
2	B	2918	G
2	B	2923	U
2	B	2928	C
2	B	2935	U
2	B	2936	A
2	B	2938	G
2	B	2945	G
2	B	2947	G
2	B	2950	G
2	B	2951	G
2	B	2955	U
2	B	2971	A
2	B	2980	U
2	B	2983	C

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Mol	Chain	Res	Type
2	B	2990	G
2	B	2997	G
2	B	3012	A
2	B	3046	A
2	B	3054	U
2	B	3057	U
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	3094	A
2	B	3101	G
2	B	3104	U
2	B	3109	G
2	B	3116	G
2	B	3122	A
2	B	3129	A
2	B	3130	A
2	B	3131	U
2	B	3134	A
2	B	3139	A
2	B	3142	A
2	B	3143	C
2	B	3155	U
2	B	3165	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	3197	G
2	B	3198	U
2	B	3205	G
2	B	3206	C
2	B	3207	U
2	B	3210	A
2	B	3217	C
2	B	3218	A
2	B	3219	G

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Mol	Chain	Res	Type
2	B	3220	G
2	B	3229	G
2	B	3242	G
2	B	3243	A
2	B	3244	A
2	B	3245	A
2	B	3246	G
2	B	3259	U
2	B	3263	G
2	B	3270	U
2	B	3271	G
2	B	3272	C
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	3313	U
2	B	3316	A
2	B	3318	G
2	B	3319	U
2	B	3335	A
2	B	3341	U
2	B	3343	G
2	B	3347	A
2	B	3352	U
2	B	3353	G
2	B	3355	U
2	B	3368	U
2	B	3369	G
2	B	3375	A
2	B	3376	A
2	B	3377	G
2	B	3378	C
2	B	3382	U
2	B	3389	U
3	C	19	C
3	C	23	U
3	C	34	U

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Mol	Chain	Res	Type
3	C	37	A
3	C	59	A
3	C	62	C
3	C	63	G
3	C	72	A
3	C	80	A
3	C	82	U
3	C	85	G
3	C	86	U
3	C	87	G
3	C	90	U
3	C	95	G
3	C	97	A
3	C	104	A
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	131	A
3	C	136	G
3	C	142	C
3	C	151	C
3	C	152	G
3	C	157	U
4	D	11	A
4	D	38	U
4	D	42	A
4	D	54	U
4	D	55	A
4	D	64	A
4	D	65	G
4	D	76	A
4	D	99	G
4	D	102	A
4	D	112	G
4	D	121	U
83	EC	6768	U

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Mol	Chain	Res	Type
83	EC	6770	U
83	EC	6772	G
83	EC	6773	G
83	EC	6774	U
83	EC	6775	U
83	EC	6776	A
83	EC	6777	C
83	EC	6778	C
83	EC	6782	C
83	EC	6788	C
83	EC	6790	A
83	EC	6791	A
83	EC	6792	A
83	EC	6793	A
83	EC	6794	C
83	EC	6795	U
83	EC	6800	G
83	EC	6804	A
83	EC	6805	C
83	EC	6809	G
83	EC	6815	U
83	EC	6816	A
83	EC	6818	G
83	EC	6819	G
83	EC	6822	U
83	EC	6823	U
83	EC	6824	C
83	EC	6831	U
83	EC	6835	U
83	EC	6840	A
83	EC	6841	U
83	EC	6848	U
83	EC	6849	A
83	EC	6854	U
83	EC	6859	U
83	EC	6863	C
83	EC	6865	G
83	EC	6867	C
83	EC	6868	C
83	EC	6870	A
83	EC	6873	A
83	EC	6876	A

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Mol	Chain	Res	Type
83	EC	6879	U
83	EC	6884	G
83	EC	6887	G
83	EC	6890	A
83	EC	6892	U
83	EC	6893	C
83	EC	6895	C
83	EC	6904	U
83	EC	6908	C
83	EC	6910	A
83	EC	6914	A
83	EC	6915	G
83	EC	6916	A
83	EC	6917	C
83	EC	6918	A
83	EC	6920	C
83	EC	6925	C
83	EC	6927	U
83	EC	6928	G
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	6950	C
83	EC	6952	U
83	EC	6956	A
83	EC	6958	C

All (40) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	A	25	C
1	A	139	C
1	A	322	G
1	A	501	U
1	A	555	A
1	A	829	A
1	A	1344	A

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Mol	Chain	Res	Type
1	A	1370	U
1	A	1573	A
1	A	1615	C
1	A	1696	G
2	B	65	A
2	B	169	U
2	B	637	C
2	B	770	G
2	B	835	G
2	B	916	G
2	B	961	C
2	B	1144	U
2	B	1287	A
2	B	1307	G
2	B	1352	A
2	B	1456	A
2	B	1815	U
2	B	2101	C
2	B	2281	A
2	B	2323	G
2	B	2375	G
2	B	2513	U
2	B	2525	G
2	B	2541	U
2	B	2950	G
2	B	3218	A
2	B	3228	C
2	B	3242	G
2	B	3269	U
2	B	3317	U
2	B	3375	A
83	EC	6859	U
83	EC	6876	A

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	15,20,21	2.73	7 (46%)	15,28,30	1.82	5 (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 (7) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
82	DC	699	DDE	CB-CA	2.08	1.58	1.53
82	DC	699	DDE	CD2-NE2	2.11	1.39	1.36
82	DC	699	DDE	OAG-CBI	2.25	1.28	1.23
82	DC	699	DDE	CB-CG	2.28	1.59	1.51
82	DC	699	DDE	CAT-CE1	4.33	1.55	1.50
82	DC	699	DDE	CBW-CBI	4.51	1.60	1.53
82	DC	699	DDE	CA-C	6.56	1.58	1.50

All (5) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
82	DC	699	DDE	OAG-CBI-CBW	-4.00	115.72	120.64
82	DC	699	DDE	CAU-CBW-CBI	-2.78	105.65	111.12
82	DC	699	DDE	CG-CD2-NE2	-2.13	104.86	109.25
82	DC	699	DDE	CB-CA-C	2.20	115.65	111.41
82	DC	699	DDE	OAG-CBI-NAD	2.44	126.80	123.06

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	25,30,30	2.31	9 (36%)	26,47,47	2.03	6 (23%)
86	SO1	DC	903	-	34,39,39	2.94	21 (61%)	35,64,64	2.00	7 (20%)

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 (30) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
86	DC	903	SO1	O56-C52	-3.79	1.32	1.41
86	DC	903	SO1	C61-C56	2.02	1.56	1.51
86	DC	903	SO1	C24-C18	2.05	1.59	1.54
86	DC	903	SO1	C7-C16	2.11	1.56	1.53
86	DC	903	SO1	C54-C55	2.13	1.58	1.52
84	DC	901	GDP	PB-O3B	2.22	1.63	1.54
86	DC	903	SO1	C53-C54	2.47	1.58	1.52
84	DC	901	GDP	C2-N2	2.50	1.39	1.34
86	DC	903	SO1	C2-C6	2.63	1.60	1.55
84	DC	901	GDP	C6-C5	2.68	1.46	1.41
86	DC	903	SO1	C52-C53	2.74	1.60	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
86	DC	903	SO1	C4-C13	2.92	1.61	1.54
86	DC	903	SO1	O56-C56	2.92	1.51	1.44
84	DC	901	GDP	C2-N1	3.05	1.40	1.35
84	DC	901	GDP	PA-O1A	3.32	1.63	1.50
86	DC	903	SO1	C3-C9	3.34	1.64	1.56
84	DC	901	GDP	PB-O1B	3.35	1.62	1.50
86	DC	903	SO1	C10-C3	3.47	1.61	1.55
86	DC	903	SO1	C12-C4	3.54	1.62	1.54
86	DC	903	SO1	C10-C6	3.72	1.61	1.53
86	DC	903	SO1	C3-C11	3.85	1.60	1.51
84	DC	901	GDP	C6-N1	3.86	1.40	1.33
86	DC	903	SO1	C7-C2	3.92	1.60	1.54
84	DC	901	GDP	PB-O3A	4.07	1.66	1.60
86	DC	903	SO1	C8-C2	4.14	1.61	1.53
86	DC	903	SO1	C55-C56	4.17	1.60	1.52
86	DC	903	SO1	C12-C6	4.59	1.64	1.53
86	DC	903	SO1	O17-C52	5.01	1.49	1.40
84	DC	901	GDP	O4'-C1'	5.47	1.48	1.41
86	DC	903	SO1	C1-C5	5.79	1.60	1.50

All (13) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
86	DC	903	SO1	C12-C6-C10	-6.82	102.42	107.70
84	DC	901	GDP	N3-C2-N1	-4.58	120.76	127.46
84	DC	901	GDP	C5-C6-N1	-3.50	118.50	123.48
86	DC	903	SO1	C18-C9-C16	-3.36	98.83	103.64
86	DC	903	SO1	C7-C2-C8	-3.35	103.97	110.09
86	DC	903	SO1	C61-C56-C55	-2.85	108.97	113.36
84	DC	901	GDP	C6-C5-C4	-2.83	118.03	120.84
86	DC	903	SO1	C65-O64-C55	-2.42	107.92	114.54
84	DC	901	GDP	C4-C5-N7	-2.22	107.26	109.41
86	DC	903	SO1	O56-C56-C61	2.10	111.13	106.69
84	DC	901	GDP	C6-N1-C2	3.39	120.93	116.06
86	DC	903	SO1	C25-C22-C24	4.99	129.42	113.54
84	DC	901	GDP	C2-N3-C4	5.89	122.04	115.16

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

2 monomers are involved in 4 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
84	DC	901	GDP	2	0
86	DC	903	SO1	2	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.