Full wwPDB EM Validation Report ⓘ

Nov 26, 2022 – 11:36 PM EST

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

This is a Full wwPDB EM Validation Report for a publicly released PDB entry.

We welcome your comments at *validation@mail.wwpdb.org*
A user guide is available at
https://www.wwpdb.org/validation/2017/EMValidationReportHelp
with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at
http://www.wwpdb.org/validation/2017/FAQs#types.

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

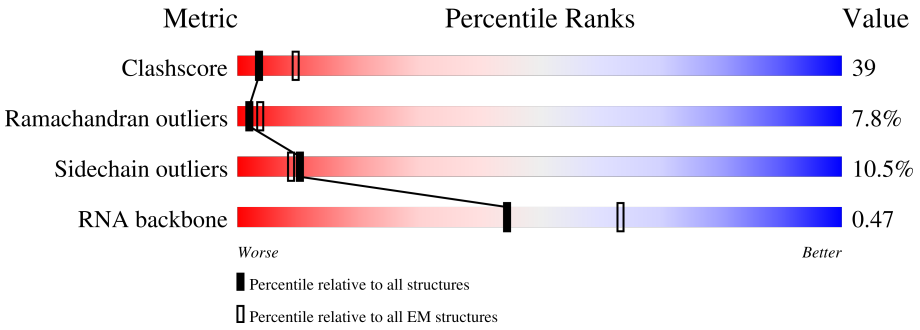
EMDB validation analysis	:	0.0.1.dev43
Mogul	:	1.8.5 (274361), CSD as541be (2020)
MolProbity	:	4.02b-467
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ	:	1.9.9
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.31.3

1 Overall quality at a glance (i)

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

The reported resolution of this entry is 4.00 Å.

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



Metric	Whole archive (#Entries)	EM structures (#Entries)
Clashscore	158937	4297
Ramachandran outliers	154571	4023
Sidechain outliers	154315	3826
RNA backbone	4643	859

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the bar indicate the fraction of residues that contain outliers for >=3, 2, 1 and 0 types of geometric quality criteria respectively. 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 <=5% The upper red bar (where present) indicates the fraction of residues that have poor fit to the EM map (all-atom inclusion < 40%). The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	A	1798	22% 23% 60% 16%
2	B	3396	9% 19% 63% 15%
3	C	158	10% 22% 63% 13%
4	D	121	18% 72% 10%
5	E	217	76% 29% 43% 21%
6	F	254	26% 24% 59% 14%
7	G	387	25% 27% 62% 10%

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Mol	Chain	Length	Quality of chain
8	H	362	19% 32% 51% 16%
9	I	297	29% 32% 54% 13%
10	J	176	34% 36% 52% 10%
11	K	244	25% 27% 49% 14% 9%
12	L	256	46% 32% 49% 10% 9%
13	M	191	38% 31% 58% 10%
14	N	221	24% 30% 56% 10% 5%
15	O	174	32% 31% 53% 11%
16	P	165	41% 19% 27% 8% 43%
17	Q	199	16% 35% 49% 13%
18	R	138	30% 25% 62% 11%
19	S	204	33% 20% 64% 15%
20	T	199	28% 31% 59% 9%
21	U	184	16% 32% 57% 11%
22	V	186	6% 30% 60% 9%
23	W	189	46% 35% 57% 6%
24	X	172	30% 22% 65% 12%
25	Y	160	22% 32% 48% 19%
26	Z	121	45% 40% 41% 17%
27	AA	137	38% 40% 52% 7%
28	BA	155	11% 13% 20% 6% 61%
29	CA	142	54% 25% 48% 12% 15%
30	DA	127	17% 32% 52% 12%
31	EA	136	51% 29% 58% 10%
32	FA	149	15% 34% 55% 10%

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Mol	Chain	Length	Quality of chain
33	GA	59	29% 44% 44% 10%
34	HA	105	14% 19% 67% 7% 8%
35	IA	113	17% 38% 46% 12%
36	JA	130	12% 39% 48% 10%
37	KA	107	43% 29% 63% 7%
38	LA	121	31% 31% 50% 9% 7%
39	MA	120	43% 28% 61% 10%
40	NA	100	27% 29% 55% 14%
41	OA	88	28% 38% 52% 8%
42	PA	78	87% 42% 49% 8%
43	QA	51	18% 27% 61% 10%
44	RA	128	20% 17% 59%
45	SA	25	76% 28% 56% 16%
46	TA	106	35% 52% 11%
47	UA	92	28% 32% 62% 5%
48	VA	312	42% 20% 33% 7% 39%
49	WA	319	96% 34% 60% 5%
50	XA	252	60% 23% 47% 10% 18%
51	YA	255	48% 26% 47% 9% 16%
52	ZA	254	37% 30% 49% 6% 15%
53	AB	240	71% 41% 43% 8% 7%
54	BB	261	22% 30% 58% 11%
55	CB	225	76% 21% 63% 7% 8%
56	DB	236	57% 28% 58% 9%
57	EB	190	81% 32% 54% 11%

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Mol	Chain	Length	Quality of chain
58	FB	200	50% 30% 56% 8% 6%
59	GB	197	27% 29% 52% 13% 6%
60	HB	105	27% 22% 60% 10% 9%
61	IB	156	55% 26% 62% 12%
62	JB	143	81% 72% 14% 13%
63	KB	151	52% 33% 55% 11%
64	LB	137	38% 36% 48% 8% 7%
65	MB	142	71% 30% 44% 11% 14%
66	NB	143	80% 23% 64% 10%
67	OB	136	66% 39% 35% 10% 14%
68	PB	146	86% 31% 58% 10%
69	QB	144	81% 30% 54% 15%
70	RB	121	77% 25% 56% 7% 12%
71	SB	87	56% 31% 48% 18%
72	TB	130	56% 31% 61% 8%
73	UB	145	72% 33% 57% 8%
74	VB	135	64% 33% 59% 8%
75	WB	108	59% 20% 31% 12% 35%
76	XB	119	29% 24% 45% 10% 18%
77	YB	82	40% 24% 61% 12%
78	ZB	67	49% 33% 52% 9% 6%
79	AC	56	62% 36% 50% 7% 5%
80	BC	63	67% 40% 40% 14% 5%
81	CC	152	46% 39% 8% 53%
82	DC	842	45% 26% 58% 13%

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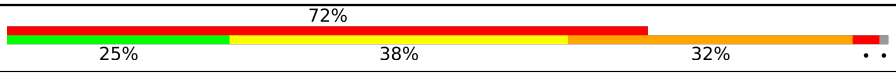
Mol	Chain	Length	Quality of chain
83	EC	201	

2 Entry composition

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

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

- Molecule 1 is a RNA chain called 18S ribosomal RNA.

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

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

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

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

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

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

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

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

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

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

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

- 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 613	C 391	N 115	O 107	0	0

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Mol	Chain	Residues	Atoms				AltConf	Trace
57	EB	184	Total	C	N	O	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	0	0
			496	248	124	124		

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

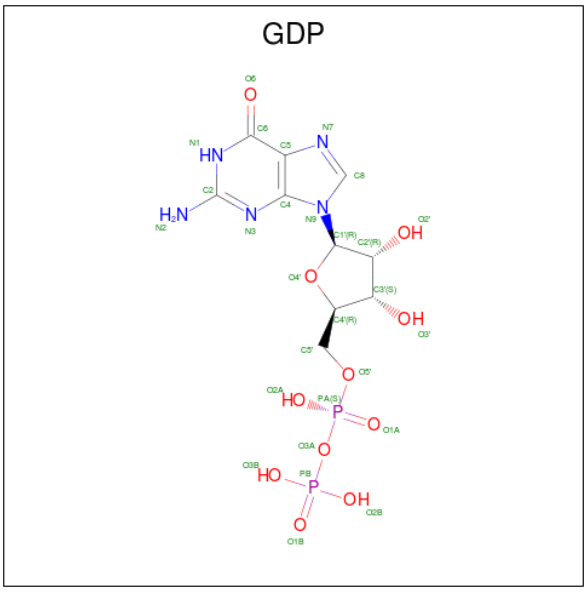
- Molecule 82 is a protein called yeast eEF2.

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

- Molecule 83 is a RNA chain called IRES.

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

- Molecule 84 is GUANOSINE-5'-DIPHOSPHATE (three-letter code: GDP) (formula: $C_{10}H_{15}N_5O_{11}P_2$).

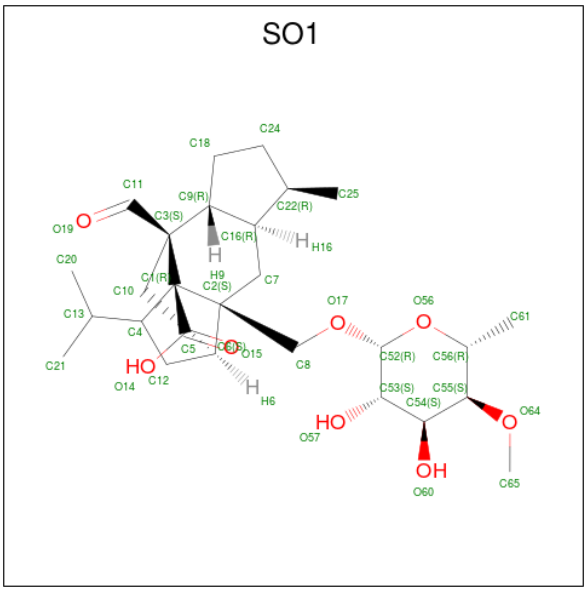


Mol	Chain	Residues	Atoms					AltConf
84	DC	1	Total	C	N	O	P	0
			28	10	5	11	2	

- 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.BETA.)]8A-[(6-DEOXY-4-O-METHYL-BETA-D-ALTROPYRANOSYLOXY)METHYL]-4-FORMYL-4,4A,5,6,7,7A,8,8A-OCTAHYDRO-7-METHYL-3-(1-METHYLETHYL)-1,4-METHANO-S-INDACENE-3A(1H)-CARBOXYLIC ACID (three-letter code: SO1) (formula: $C_{27}H_{42}O_8$).



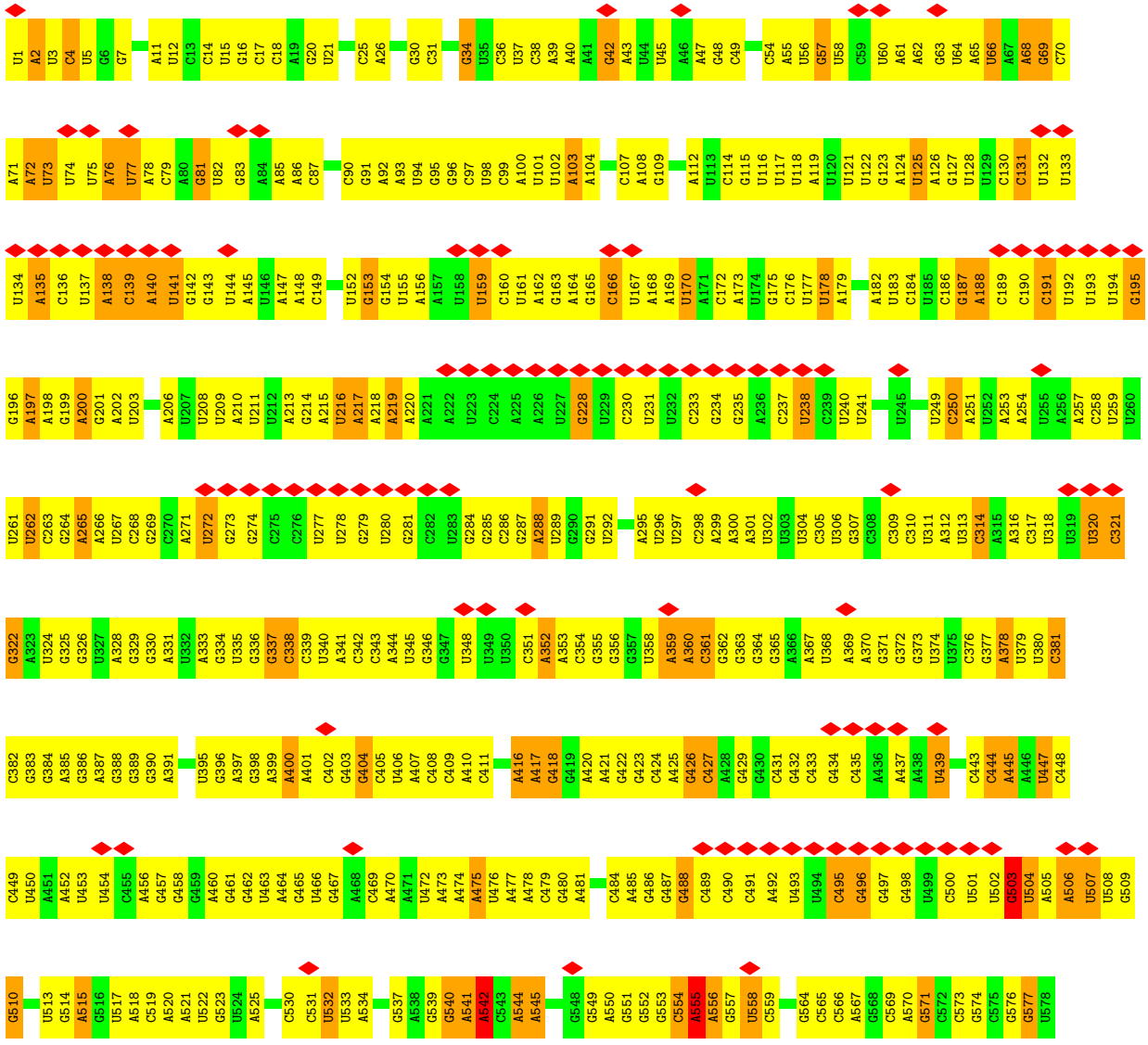
Mol	Chain	Residues	Atoms			AltConf
86	DC	1	Total	C	O	0
			35	27	8	

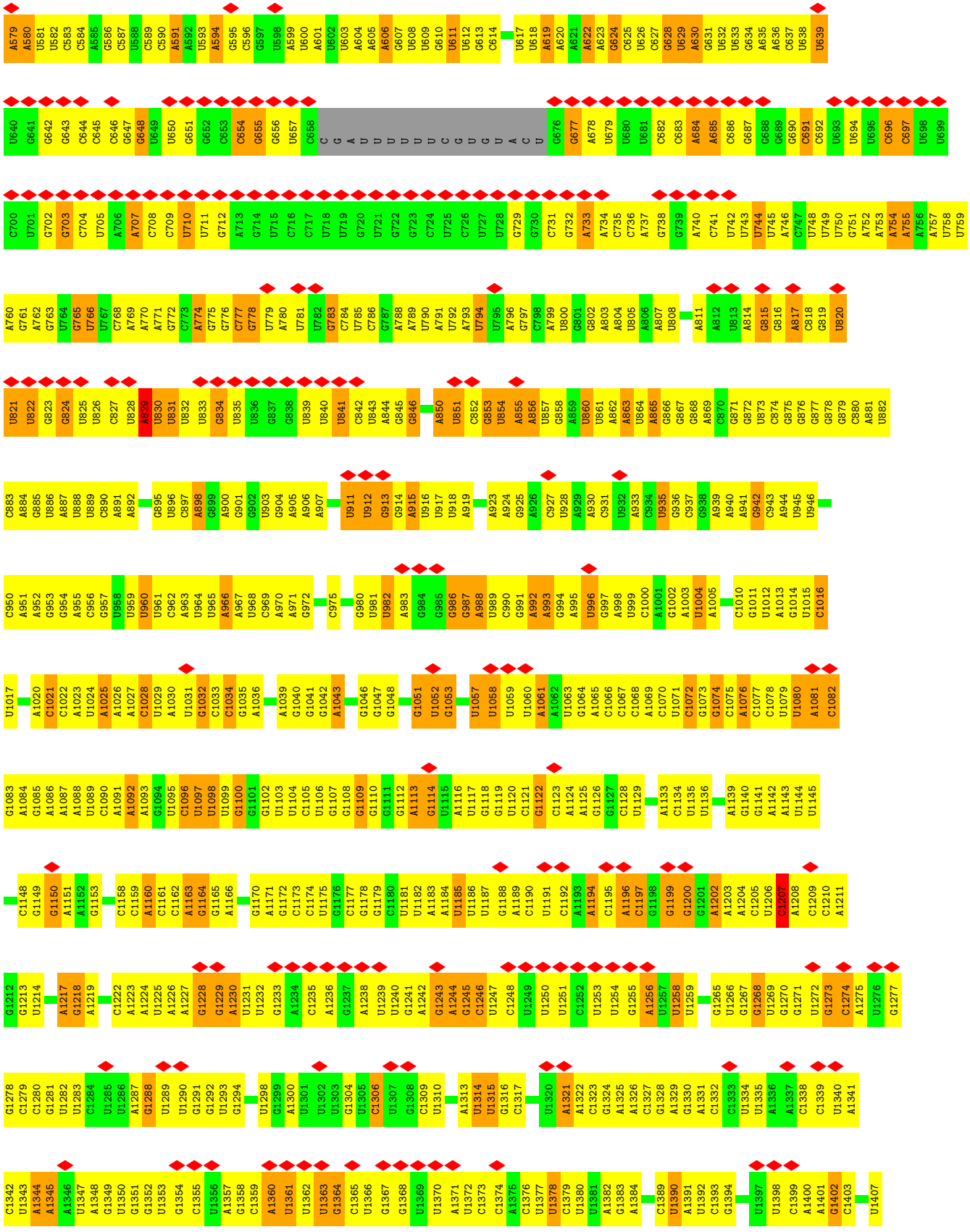
3 Residue-property plots (i)

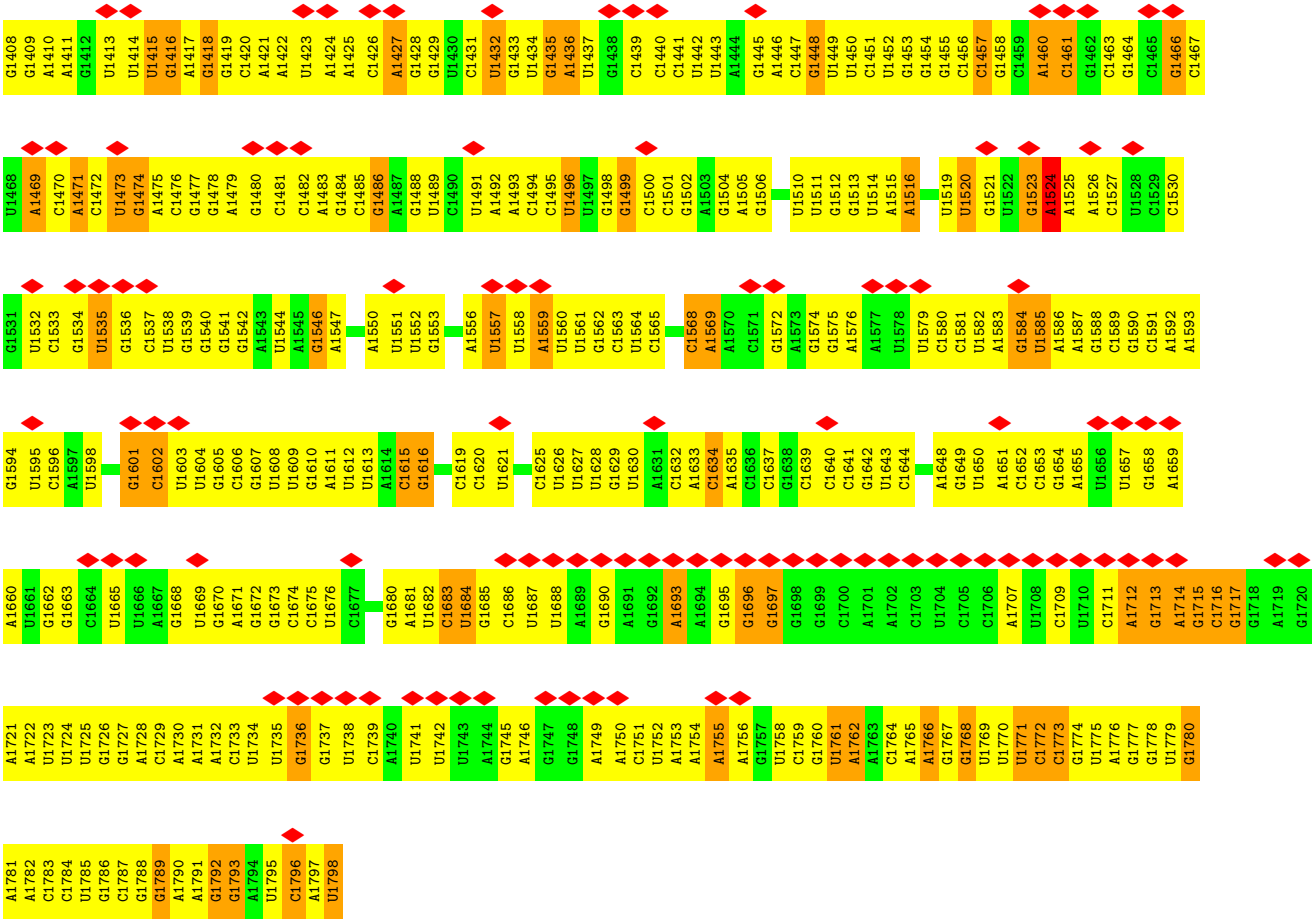
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion in map density. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. A red diamond above a residue indicates a poor fit to the EM map for this residue (all-atom inclusion < 40%). 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

Chain A:

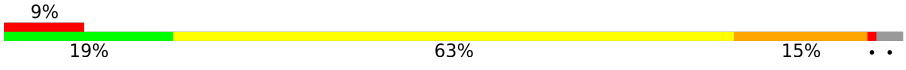


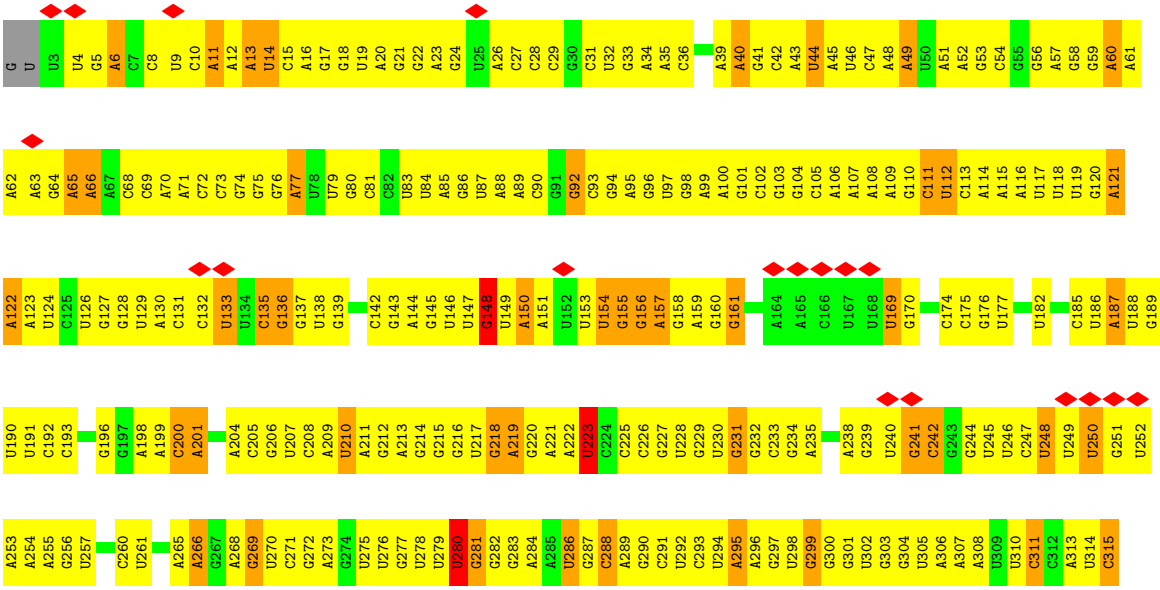


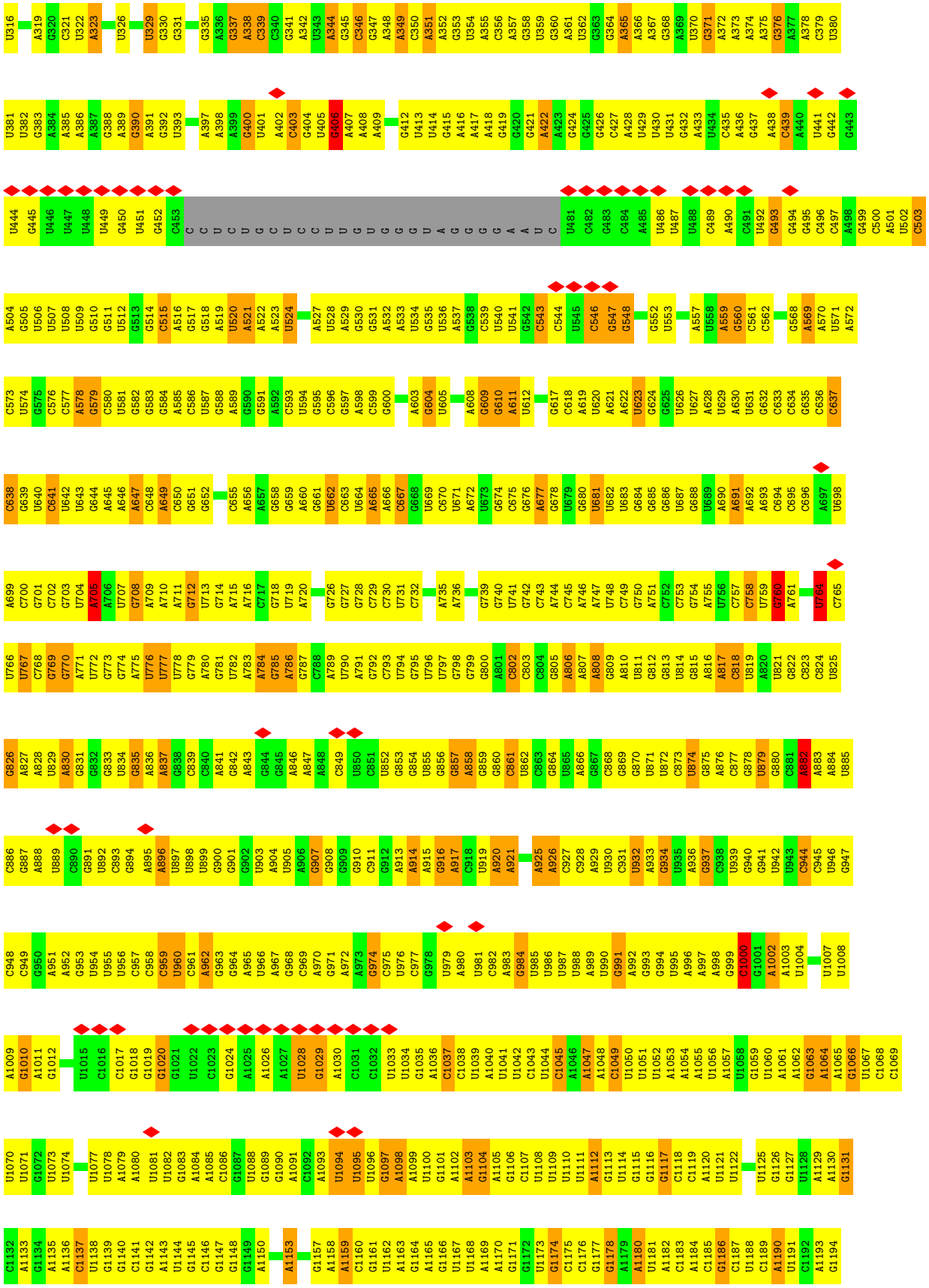


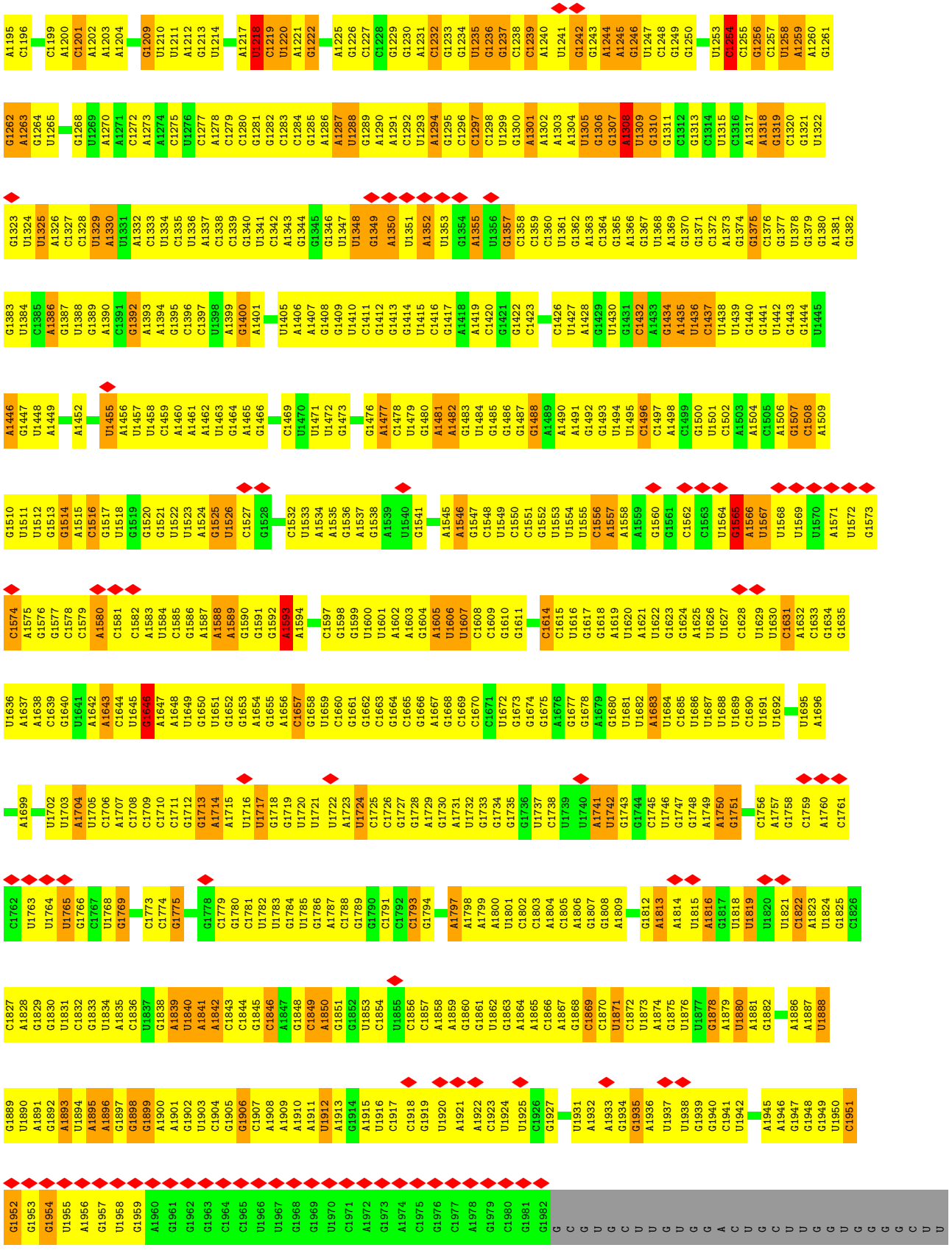
• Molecule 2: 25S ribosomal RNA

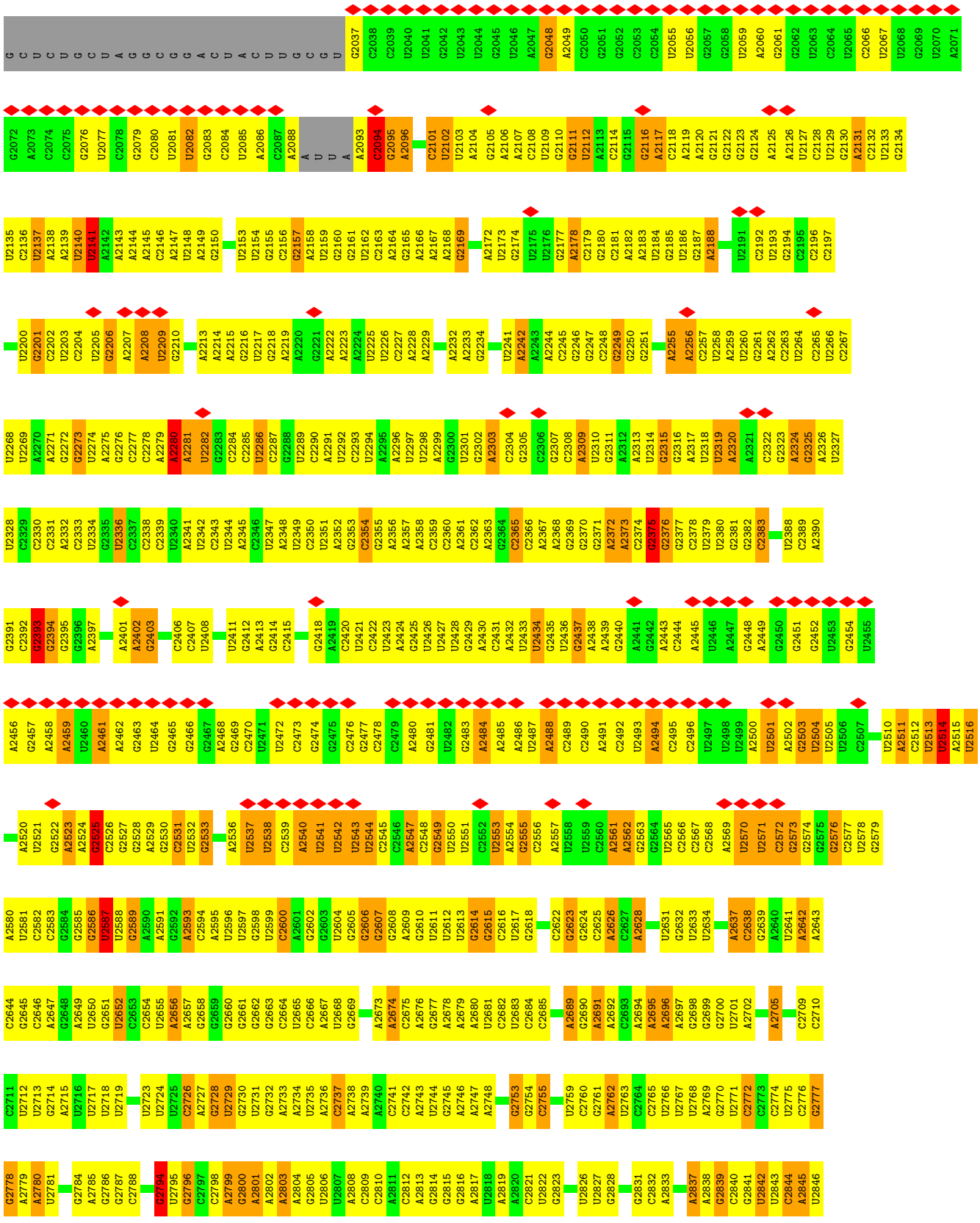
Chain B:

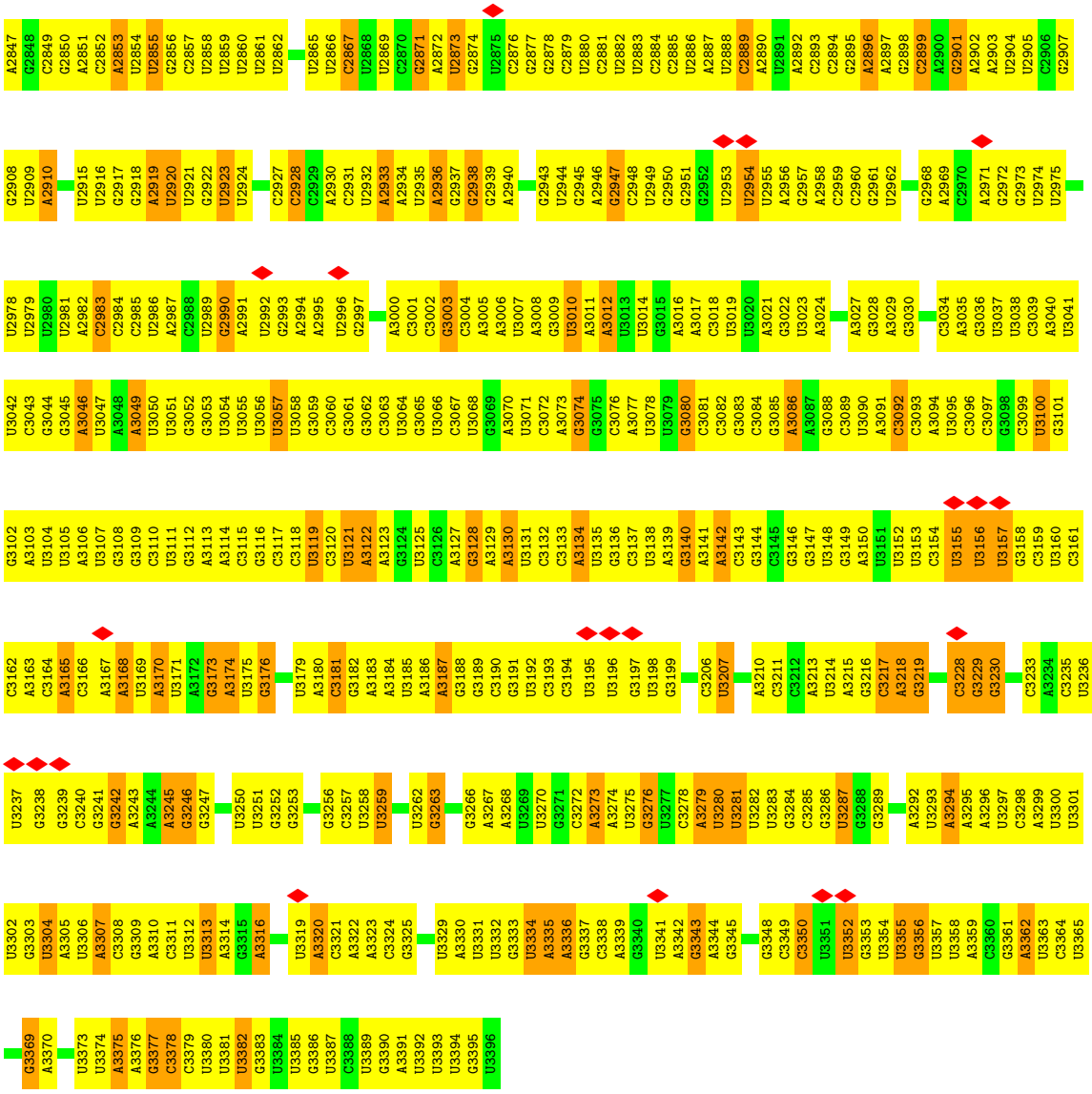




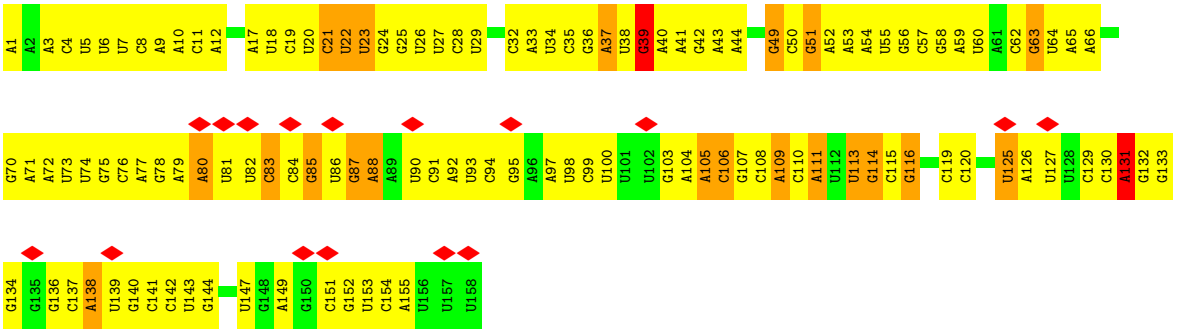




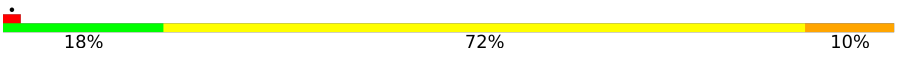


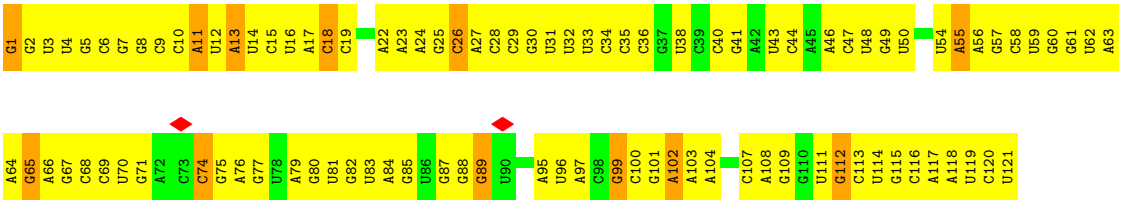


• Molecule 3: 5.8S ribosomal RNA



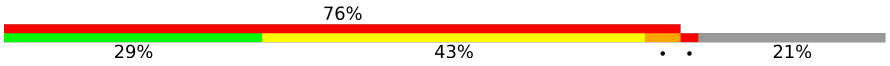
• Molecule 4: 5S ribosomal RNA

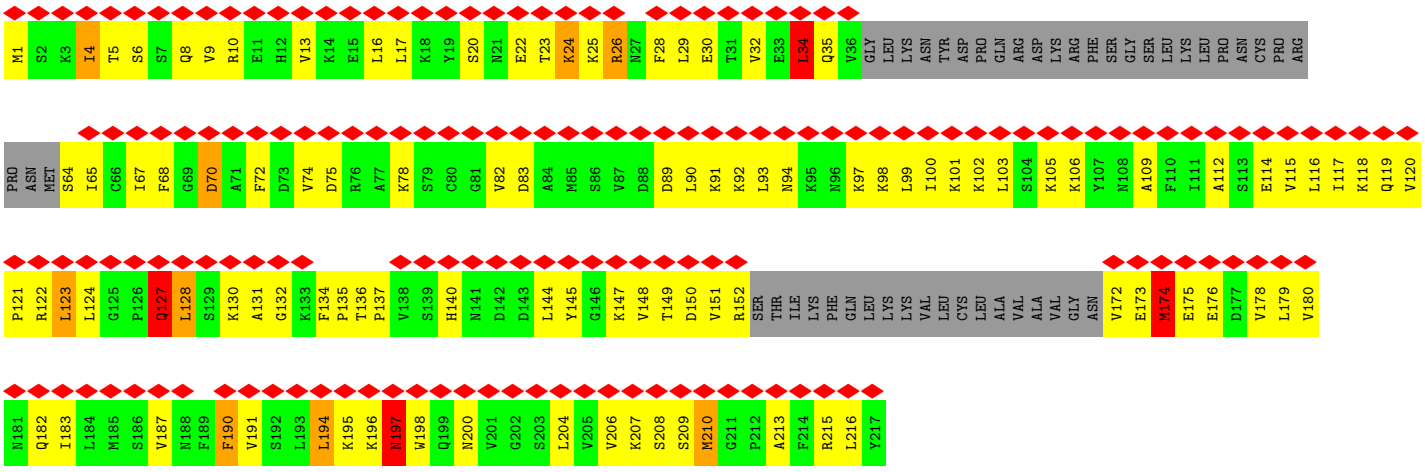




• Molecule 5: uL1 (yeast L1)

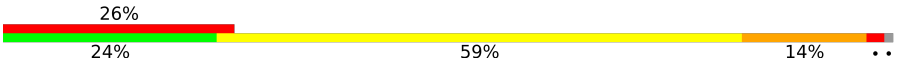
Chain E:

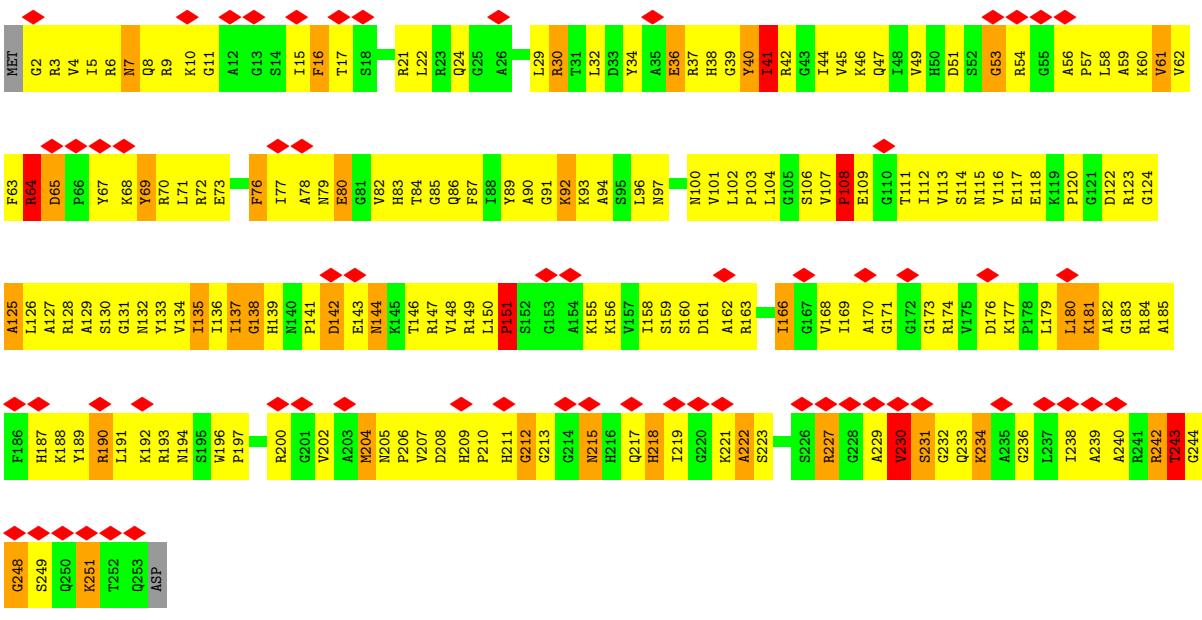




• Molecule 6: uL2 (yeast L2)

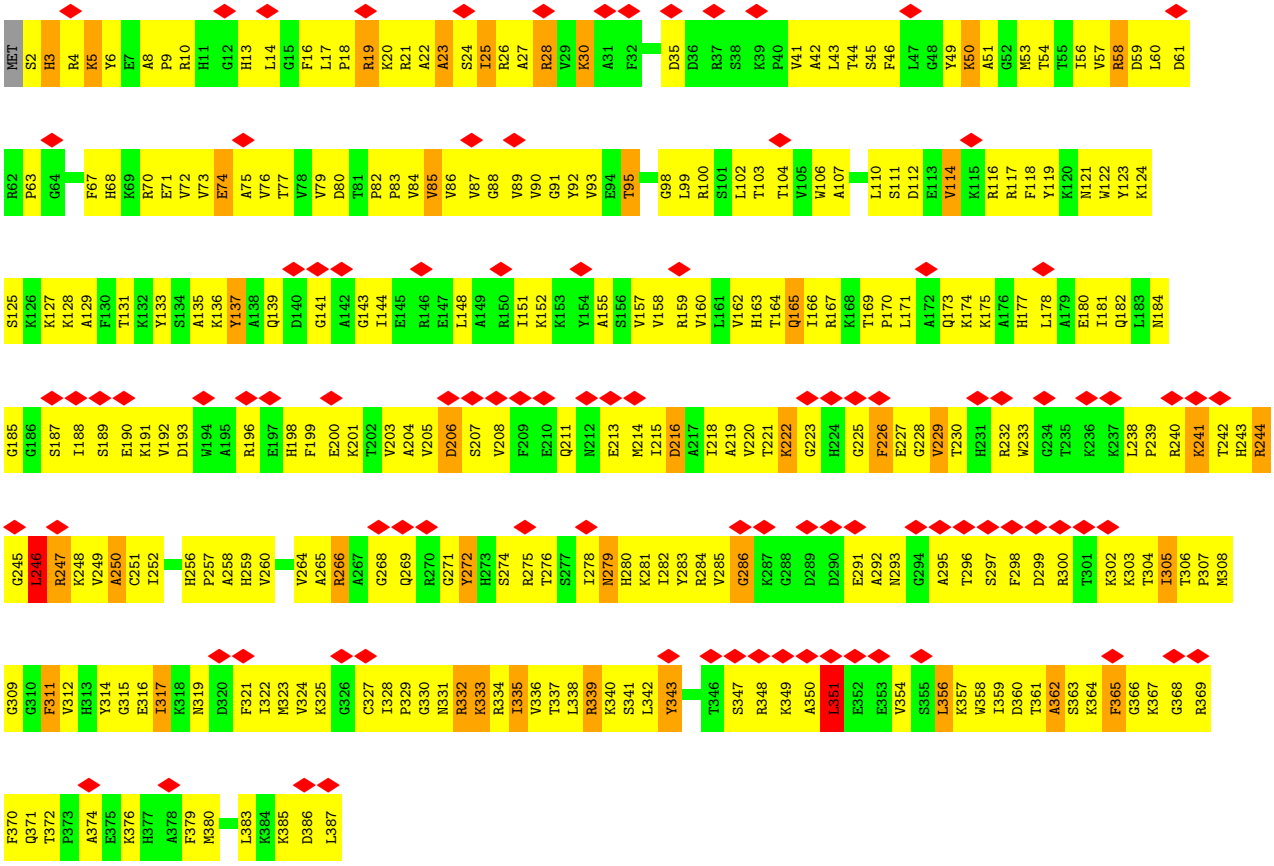
Chain F:





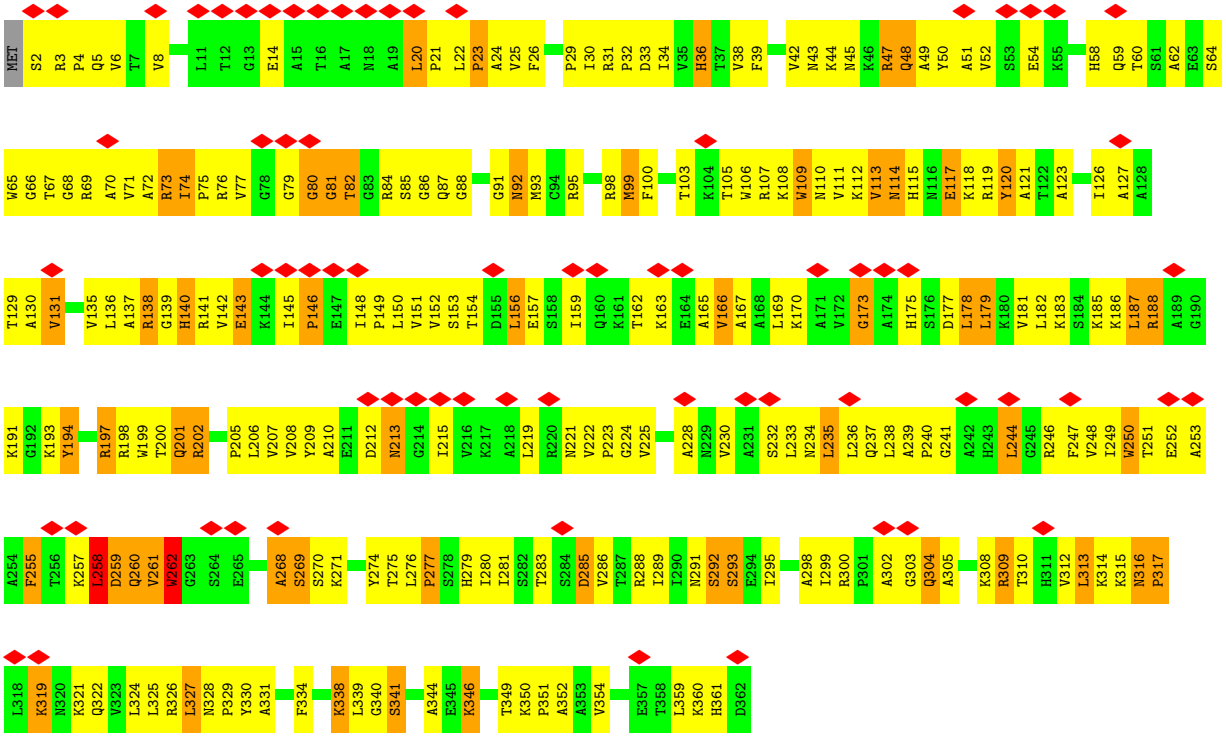
• Molecule 7: uL3 (yeast L3)

Chain G:



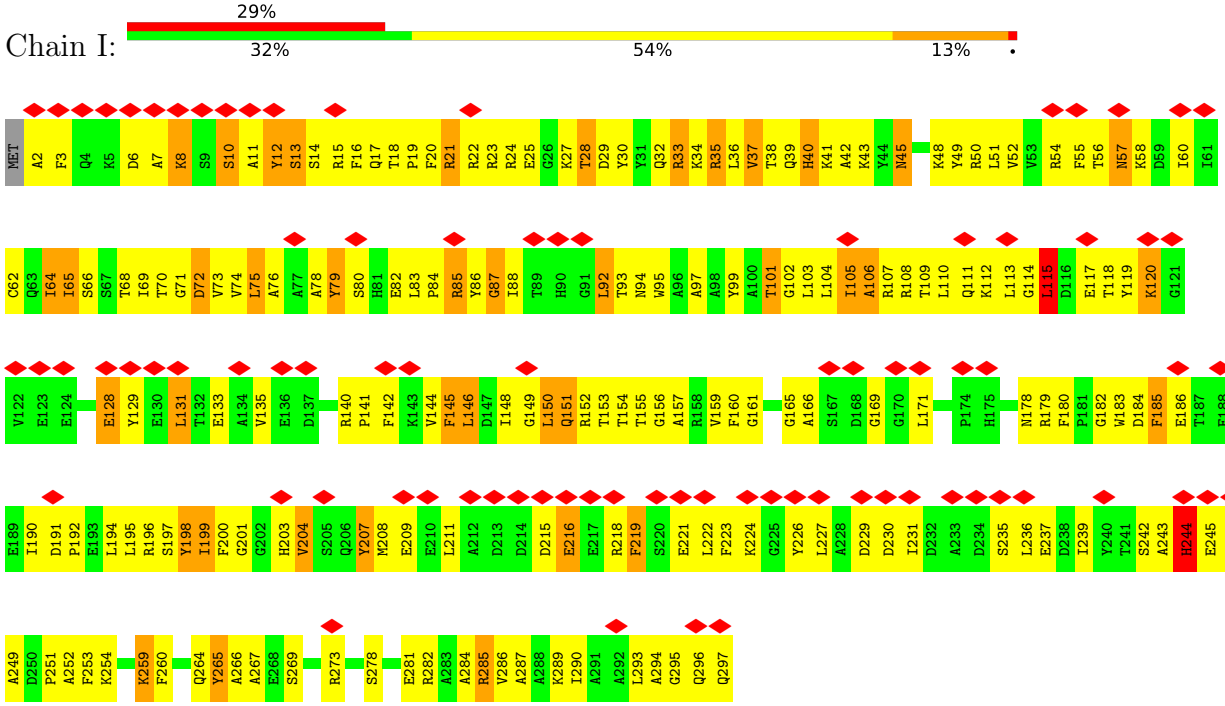
• Molecule 8: uL4 (yeast L4)

Chain H:



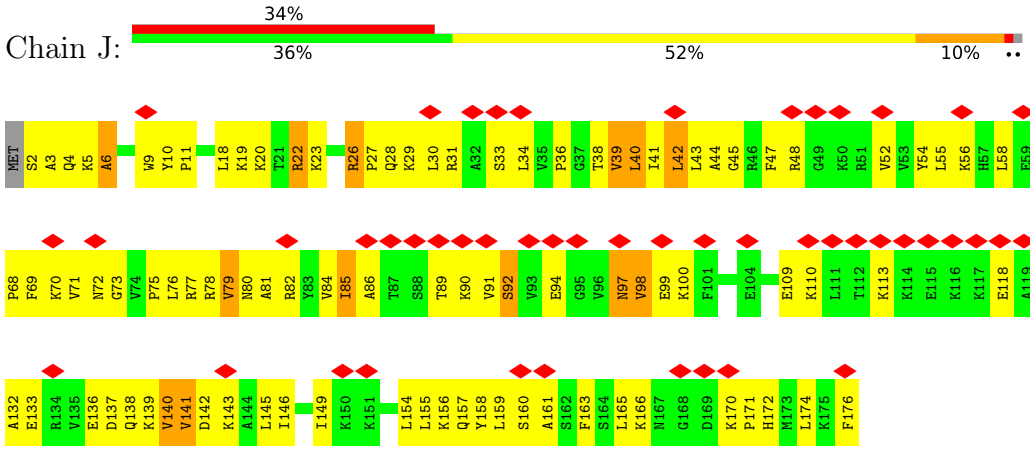
• Molecule 9: uL18 (yeast L5)

Chain I:



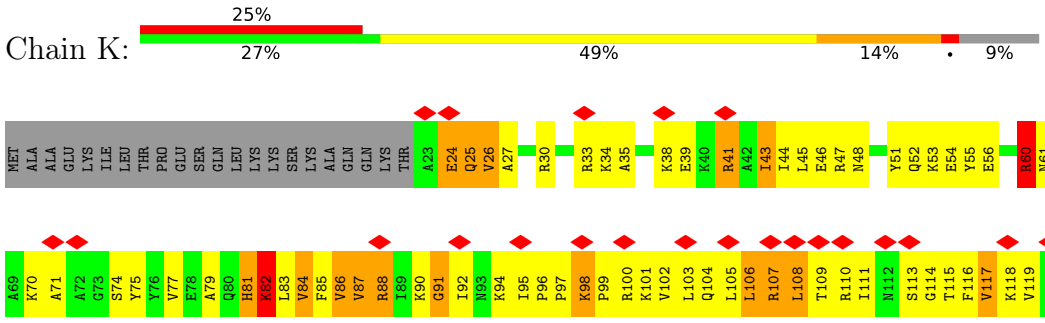
• Molecule 10: eL6 (yeast L6)

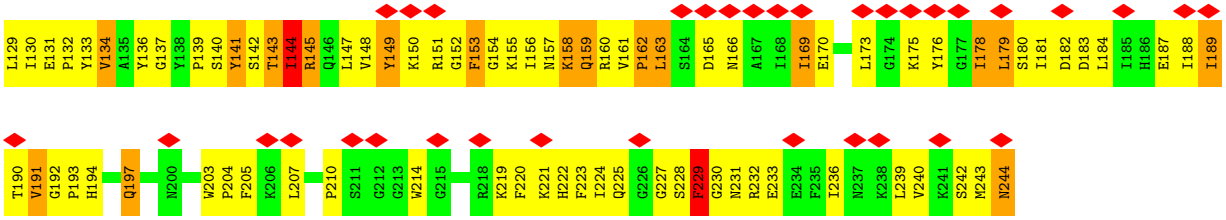
Chain J:



• Molecule 11: uL30 (yeast L7)

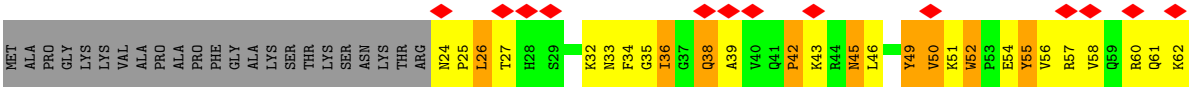
Chain K:

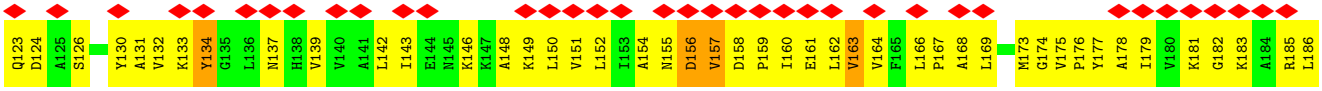


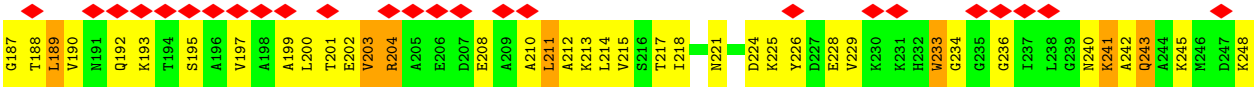


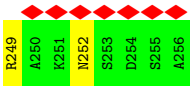
• Molecule 12: eL8 (yeast L8)

Chain L:



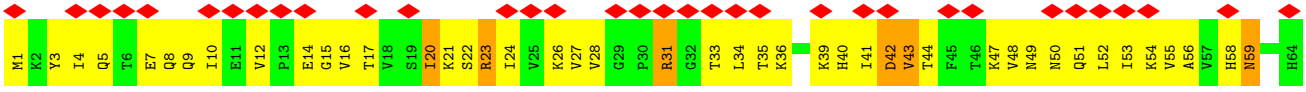


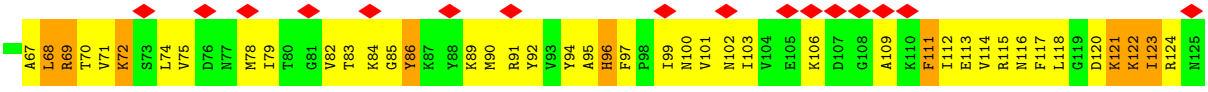


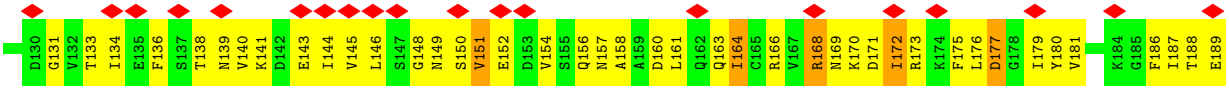


• Molecule 13: uL6 (yeast L9)

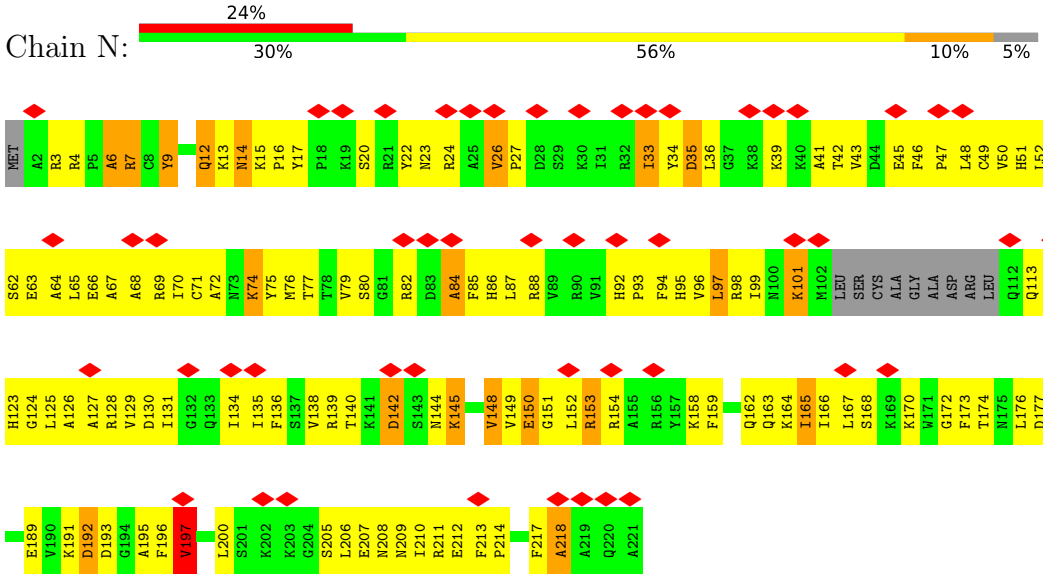
Chain M:



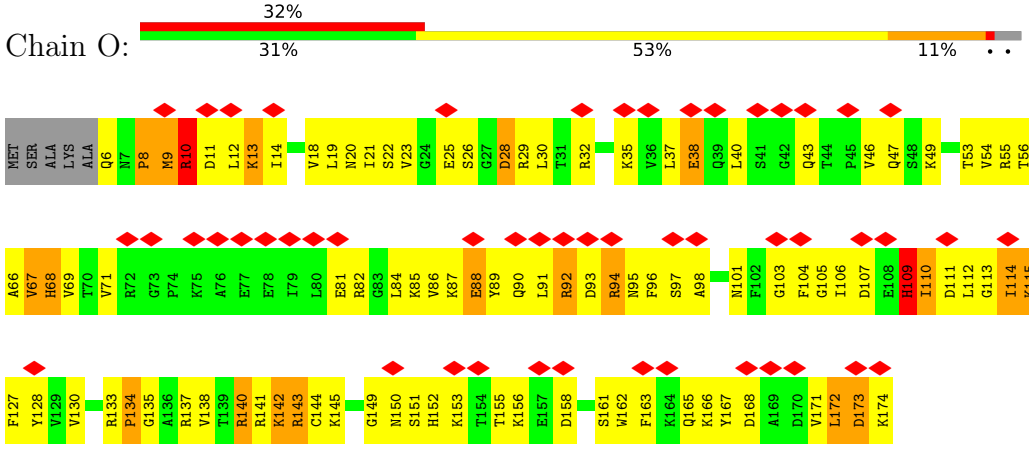




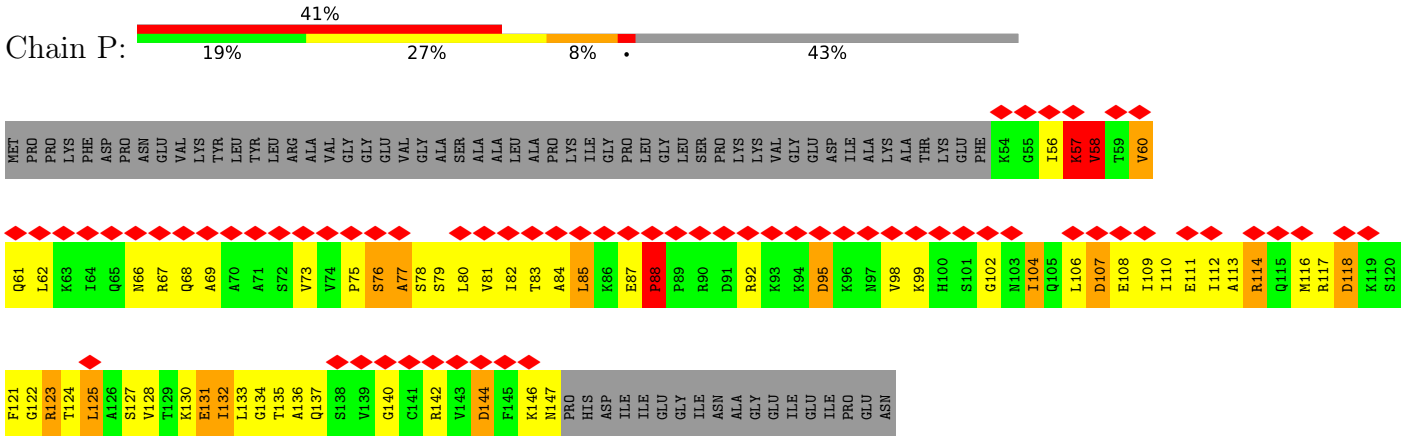
• Molecule 14: uL16 (yeast L10)



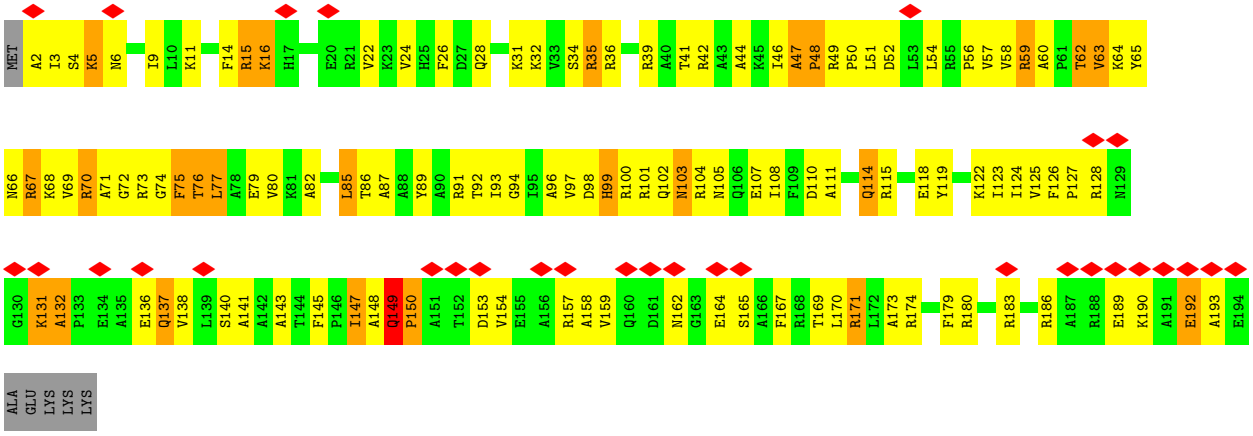
• Molecule 15: uL5 (yeast L11)



• Molecule 16: uL11 (yeast L12)

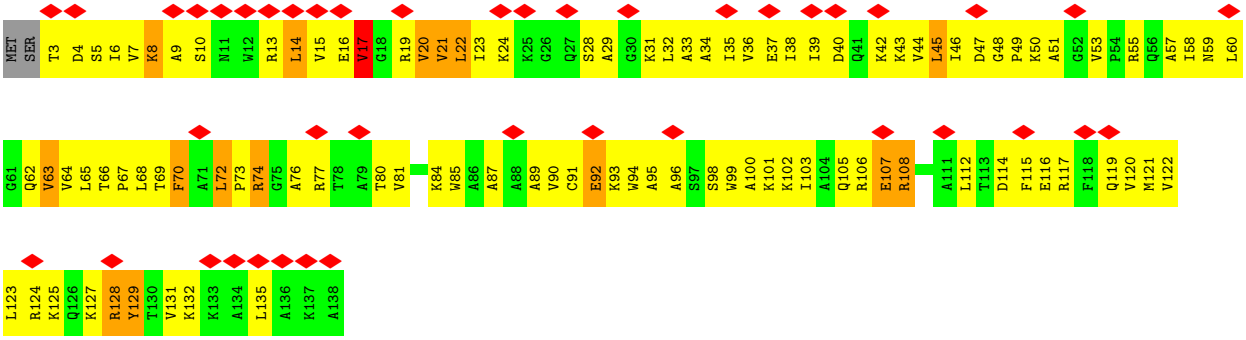


• Molecule 17: eL13 (yeast L13)



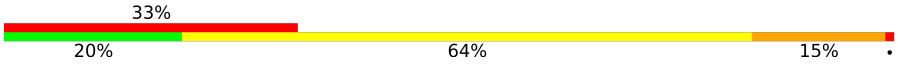
• Molecule 18: eL14 (yeast L14)

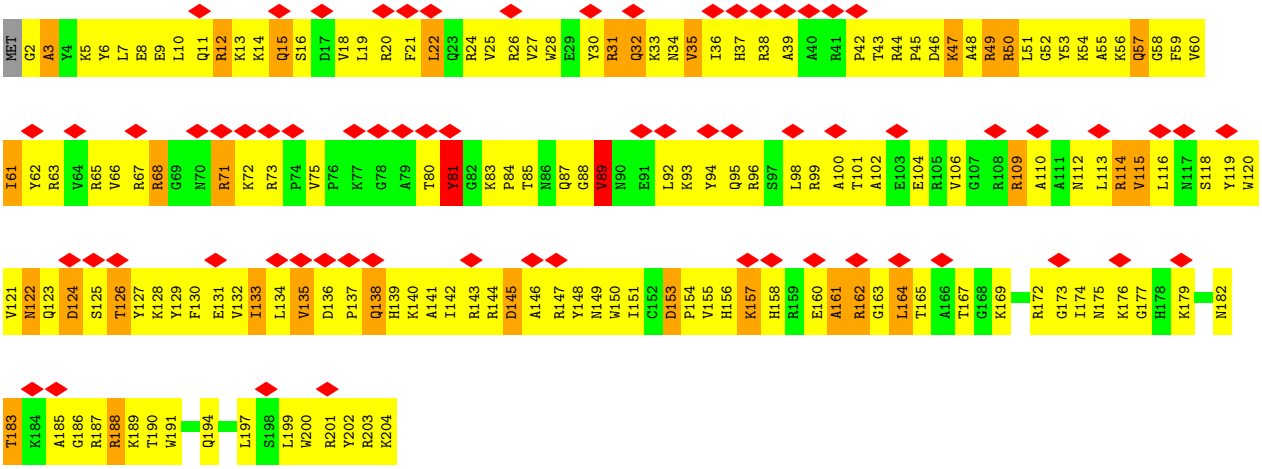
Chain R:



• Molecule 19: eL15 (yeast L15)

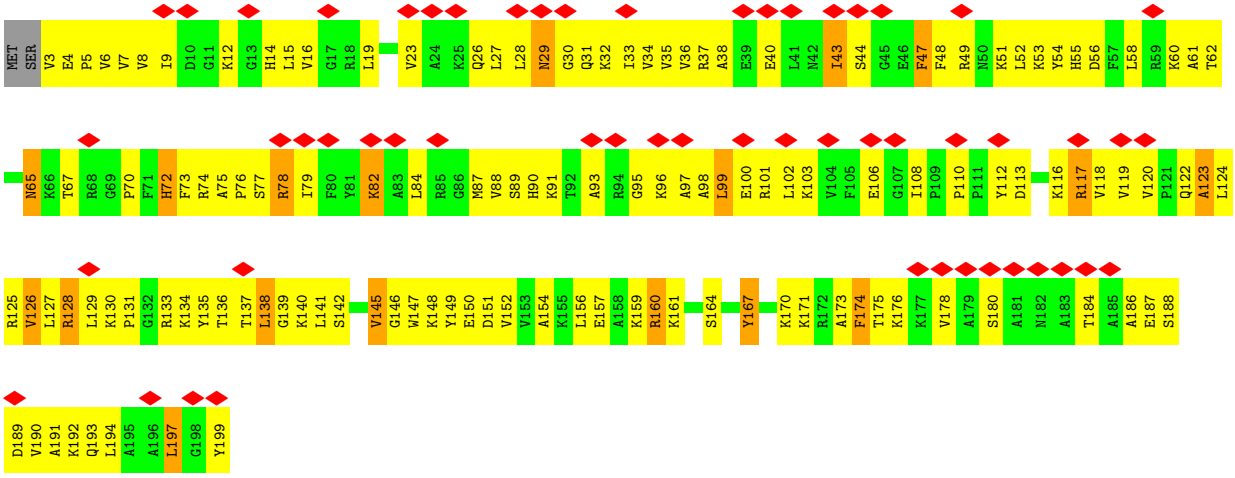
Chain S:





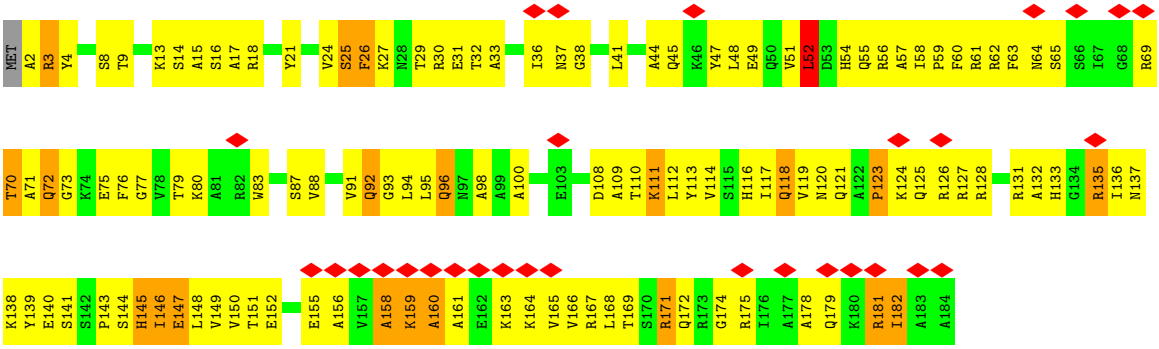
• Molecule 20: uL13 (yeast L16)

Chain T:



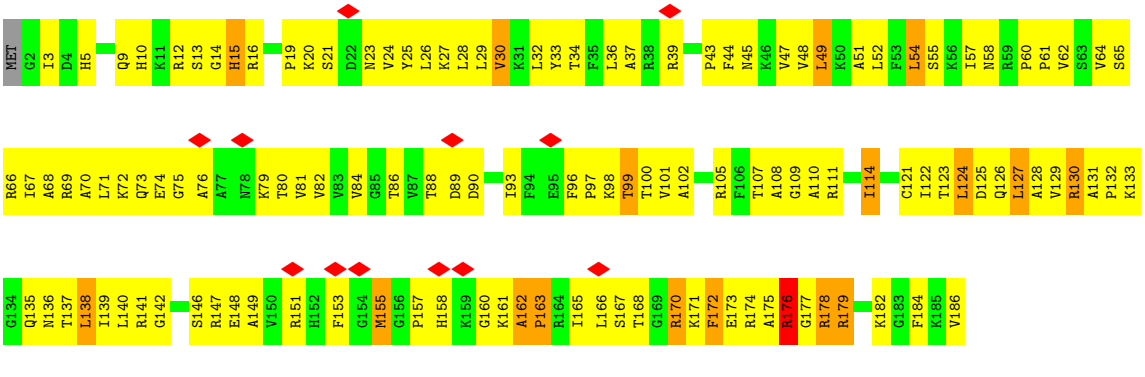
• Molecule 21: uL22 (yeast L17)

Chain U:



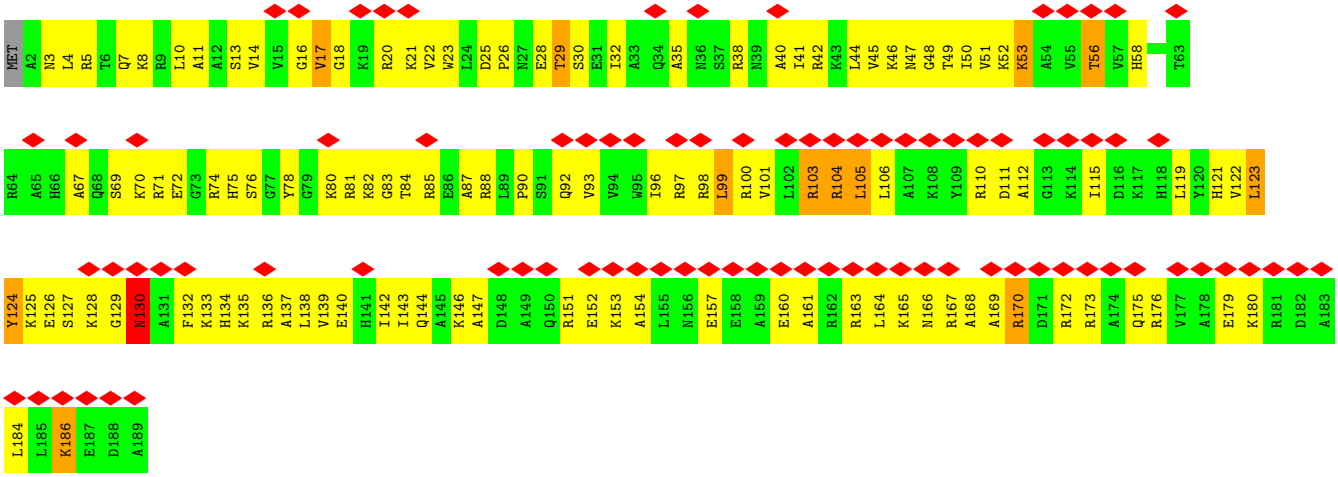
• Molecule 22: eL18 (yeast L18)

Chain V:



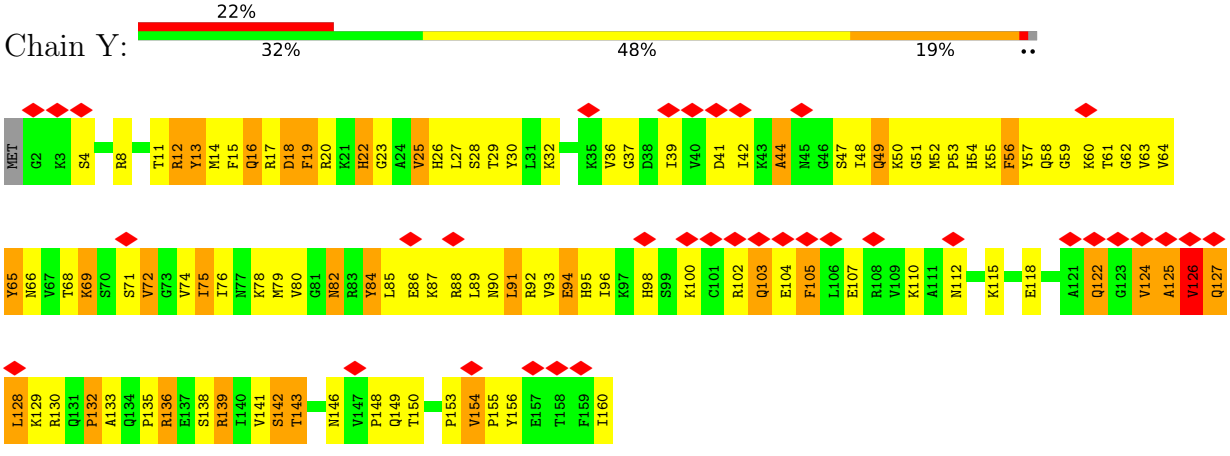
• Molecule 23: eL19 (yeast L19)

Chain W:

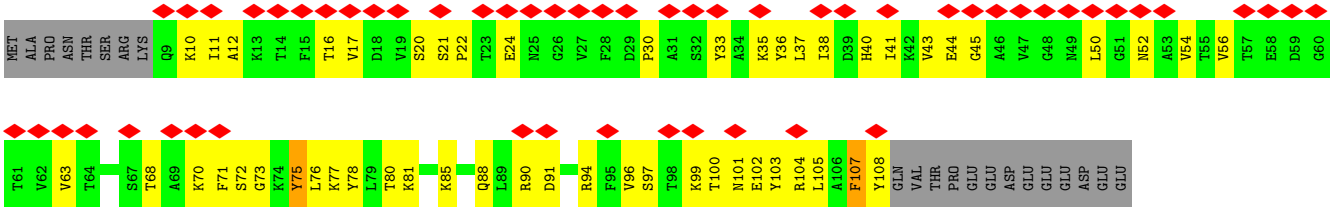


• Molecule 24: eL20 (yeast L20)

• Molecule 25: eL21 (yeast L21)

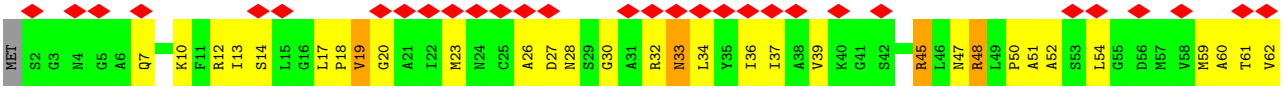


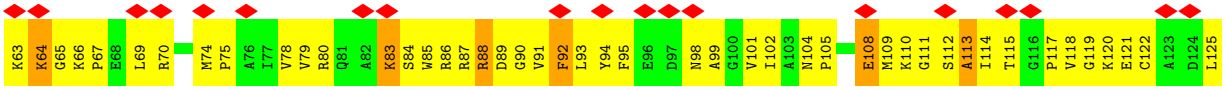
• Molecule 26: eL22 (yeast L22)

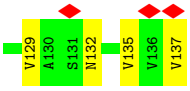


• Molecule 27: uL14 (yeast L23)

Chain AA:

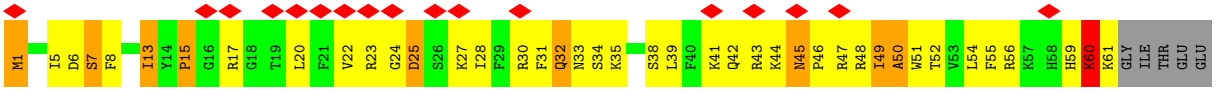


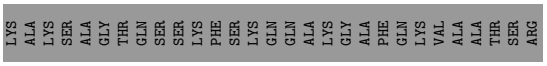




• Molecule 28: eL24 (yeast L24)

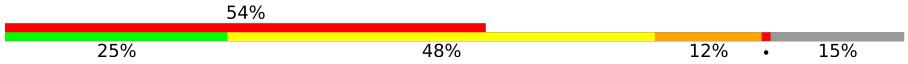
Chain BA:

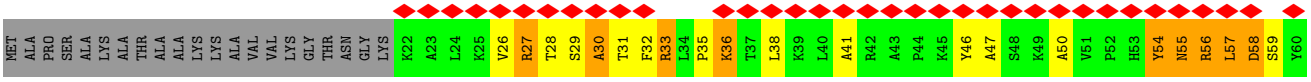


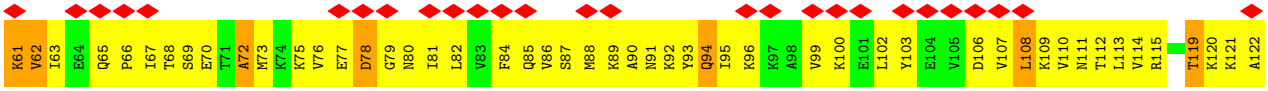


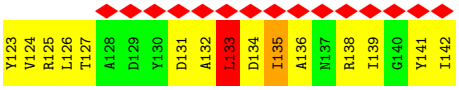
• Molecule 29: uL23 (yeast L25)

Chain CA:



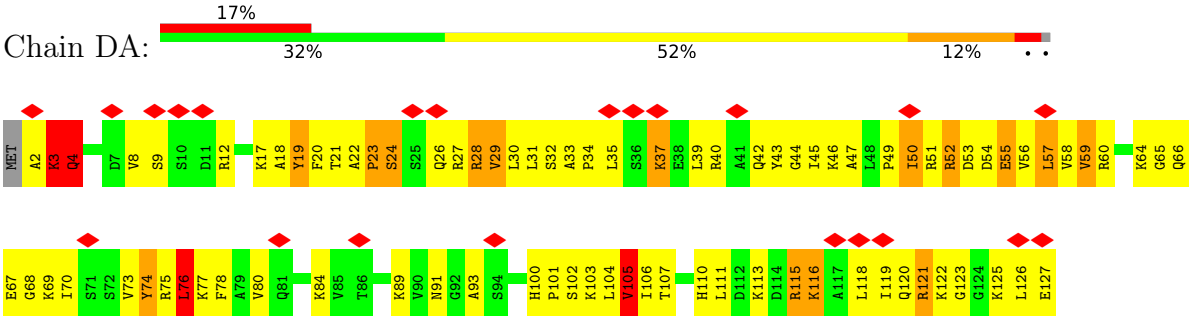






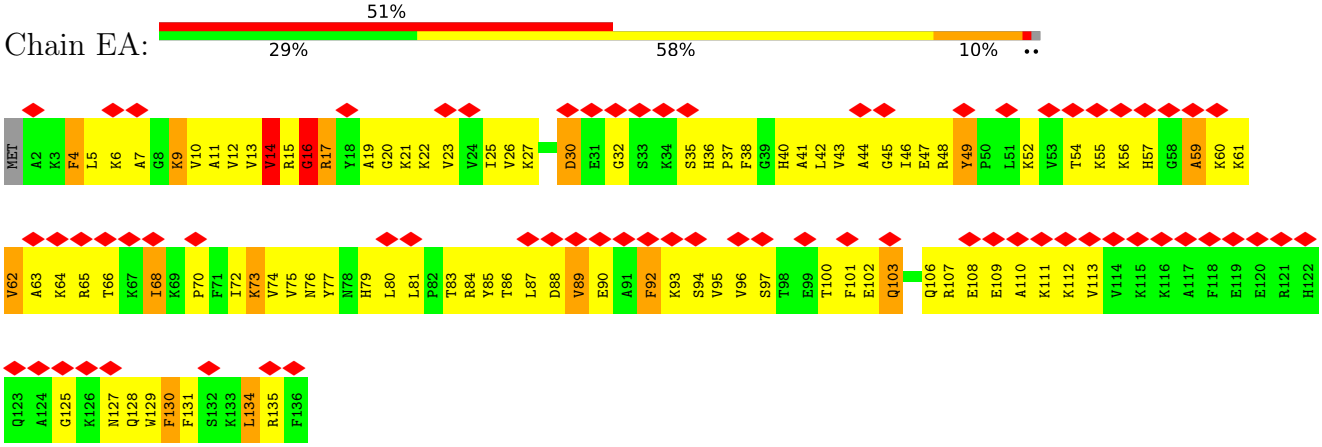
• Molecule 30: uL24 (yeast L26)

Chain DA:



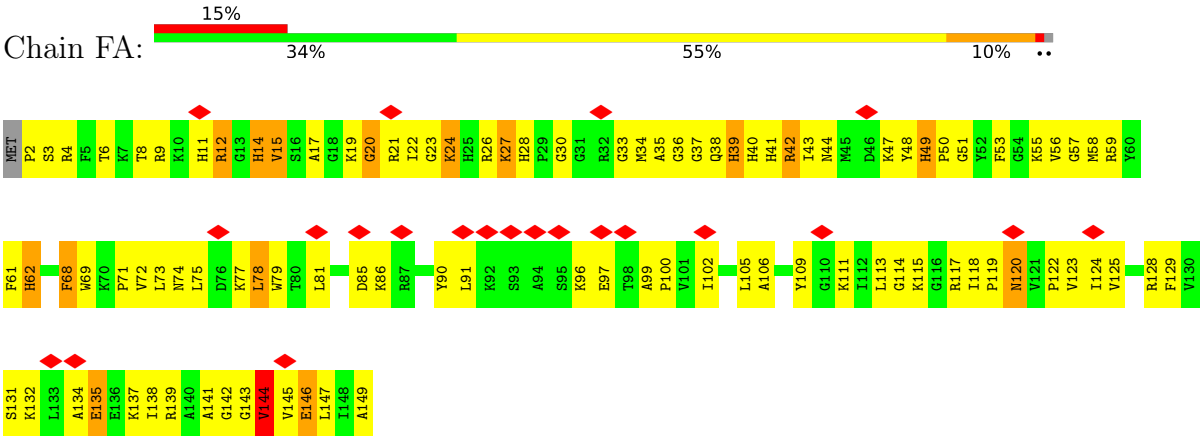
- Molecule 31: eL27 (yeast L27)

Chain EA:



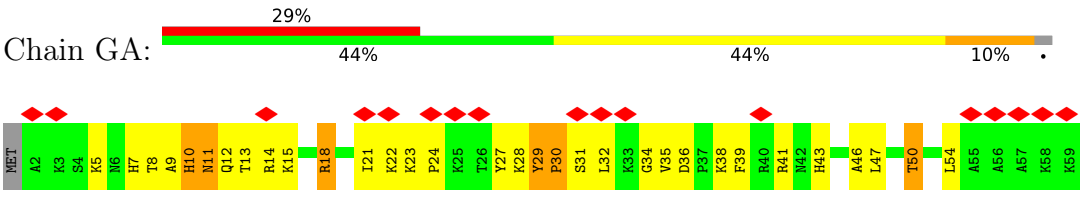
- Molecule 32: uL15 (yeast L28)

Chain FA:



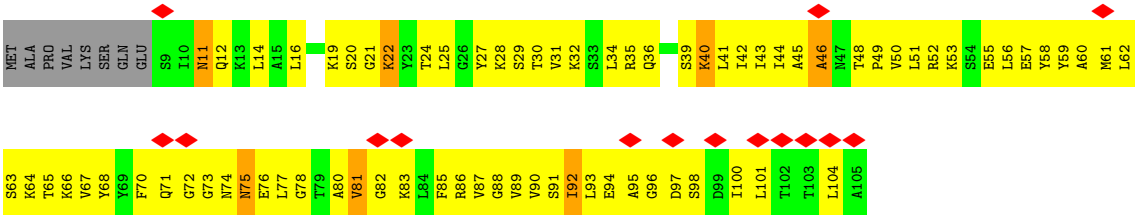
- Molecule 33: eL29 (yeast L29)

Chain GA:

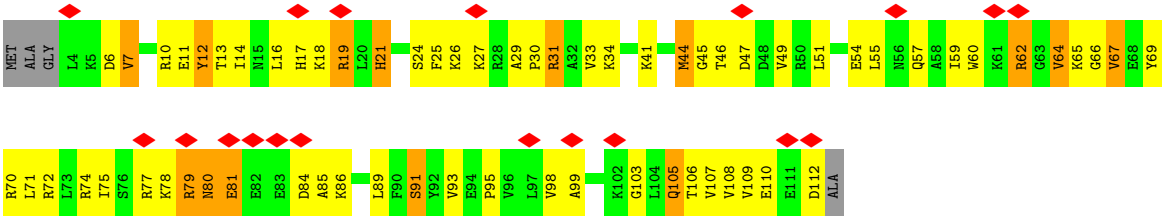


- Molecule 34: eL30 (yeast L30)

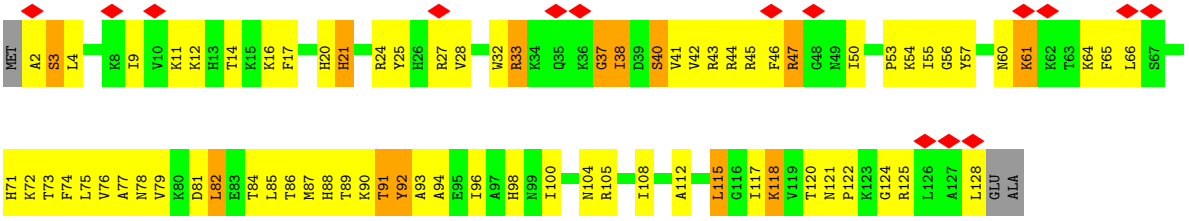
Chain HA:



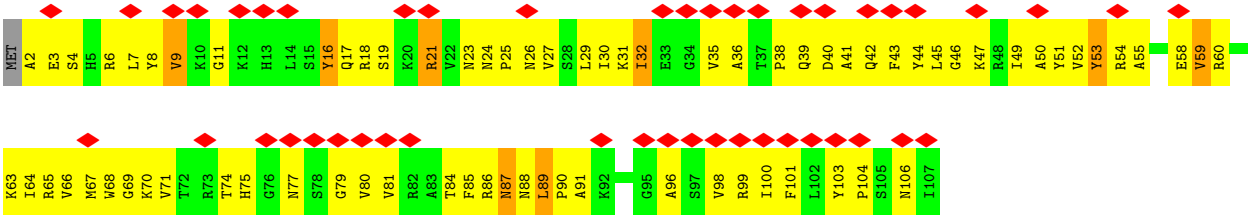
• Molecule 35: eL31 (yeast L31)



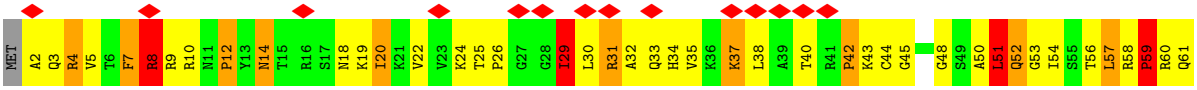
• Molecule 36: eL32 (yeast L32)

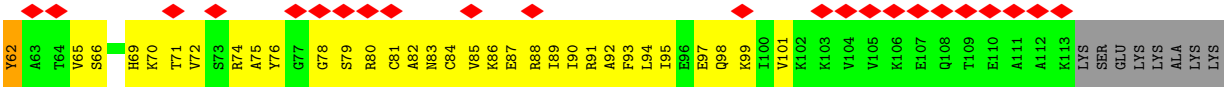


• Molecule 37: eL33 (yeast L33)

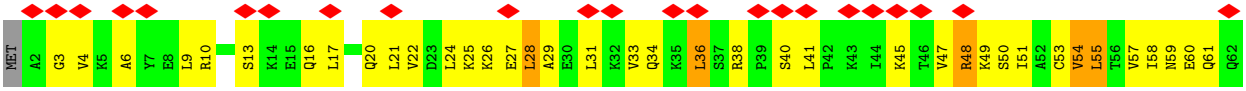


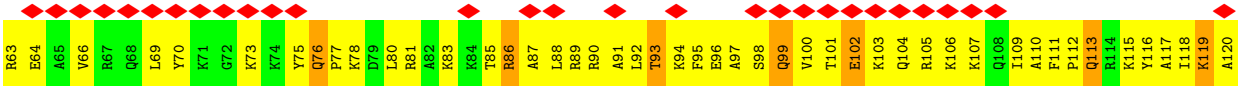
• Molecule 38: eL34 (yeast L34)



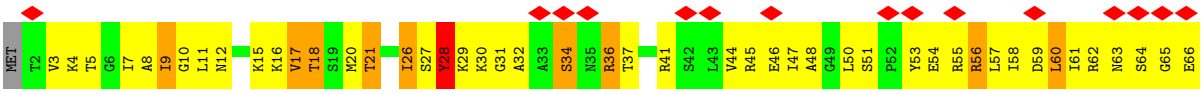


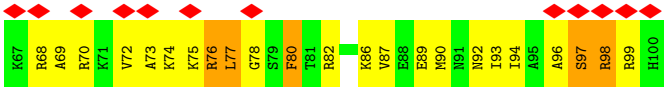
• Molecule 39: uL29 (yeast L35)



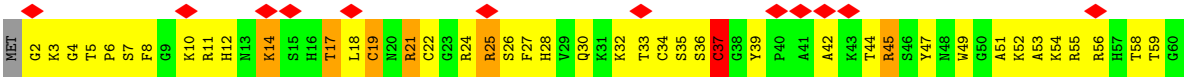


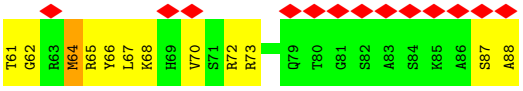
• Molecule 40: eL36 (yeast L36)



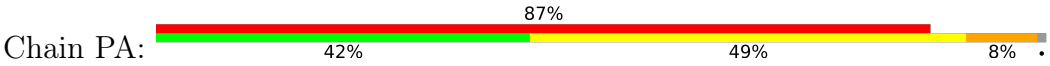


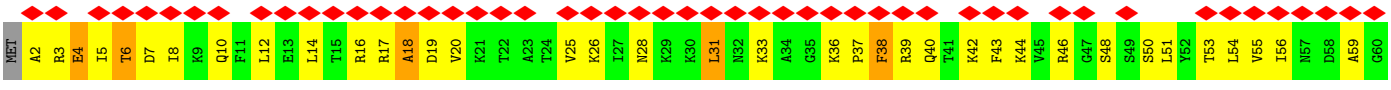
• Molecule 41: eL37 (yeast L37)

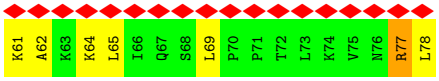




• Molecule 42: eL38 (yeast L38)

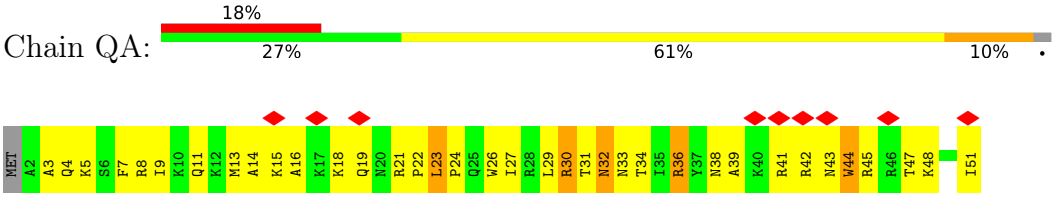






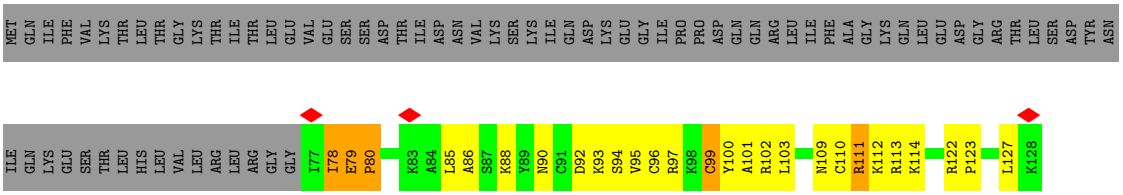
• Molecule 43: eL39 (yeast L39)

Chain QA:



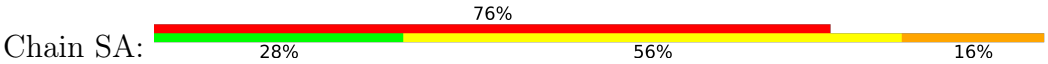
• Molecule 44: eL40 (yeast L40)

Chain RA:



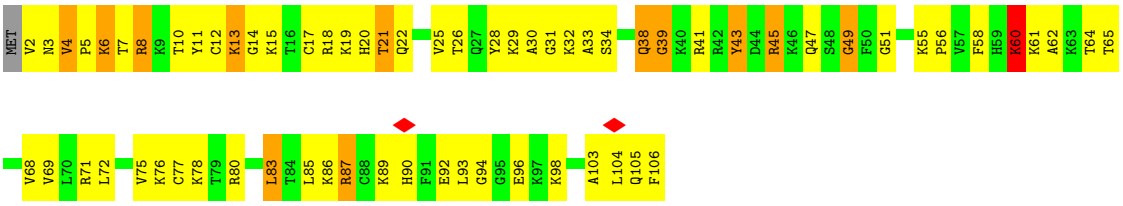
• Molecule 45: eL41 (yeast L41)

Chain SA:



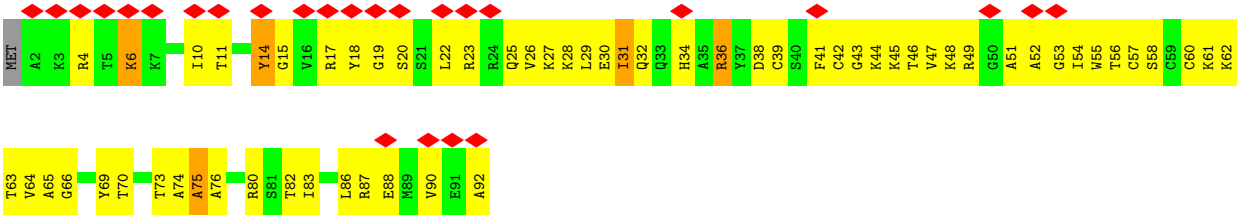
• Molecule 46: eL42 (yeast L42)

Chain TA:



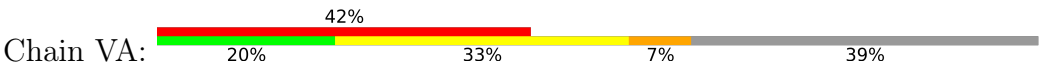
• Molecule 47: eL43 (yeast L43)

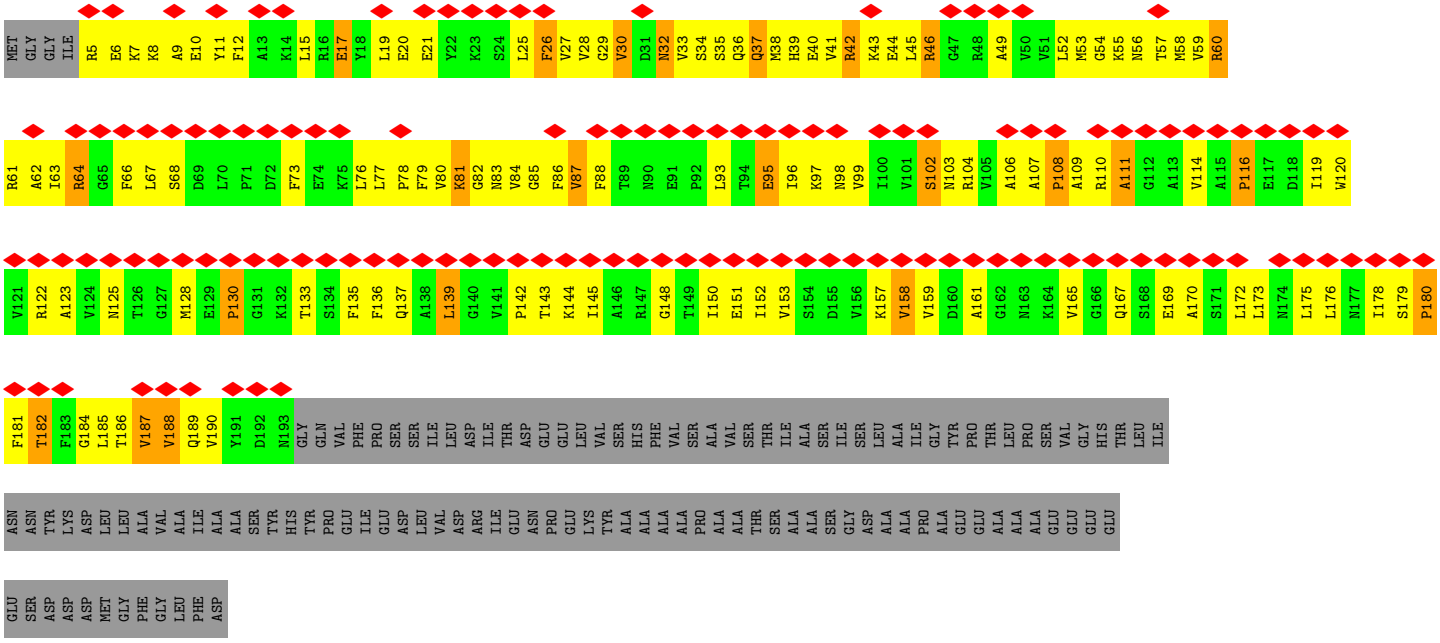
Chain UA:



• Molecule 48: uL10 (yeast P0)

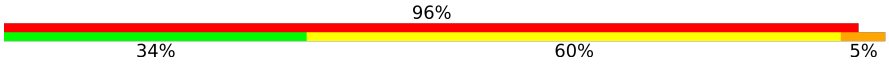
Chain VA:

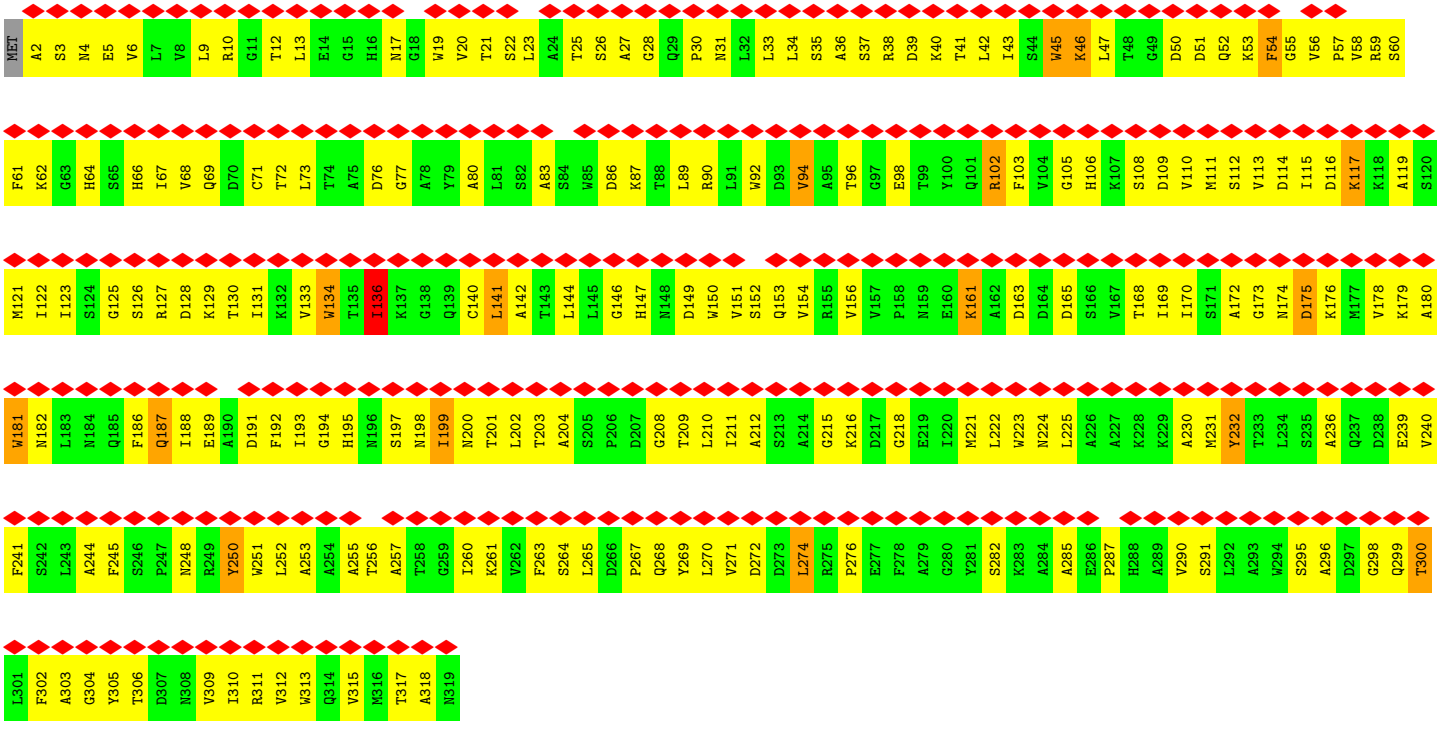




• Molecule 49: RACK1 (yeast Asc1)

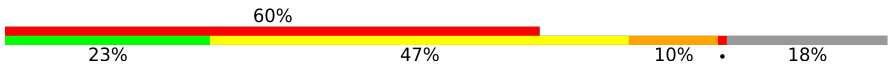
Chain WA:

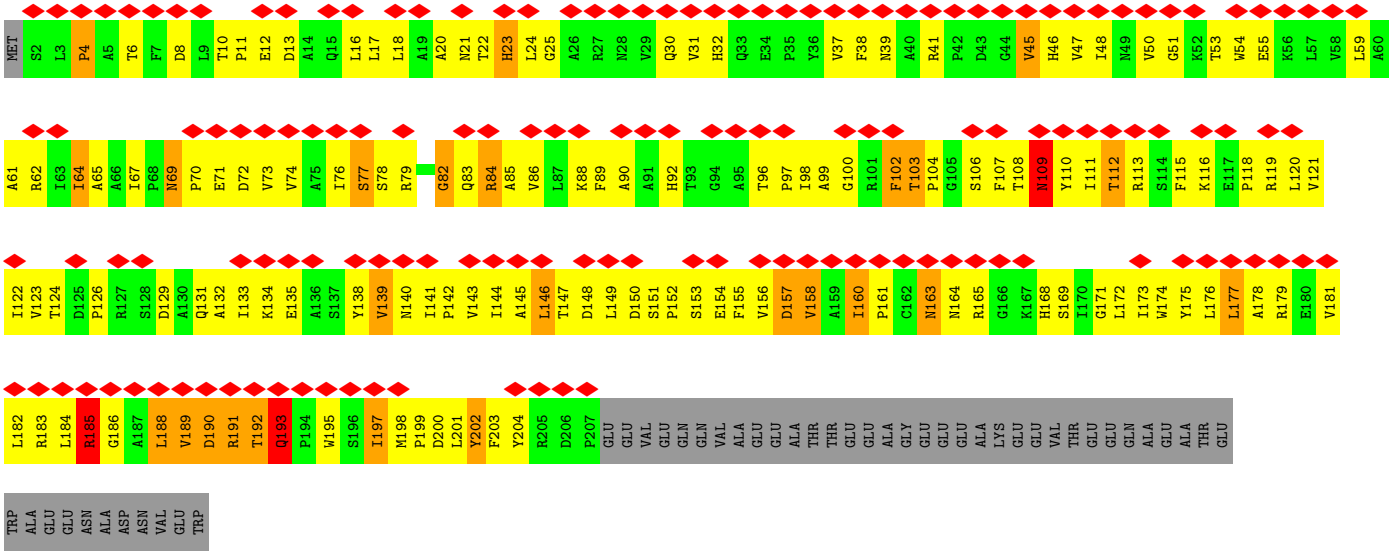




• Molecule 50: uS2 (yeast S0)

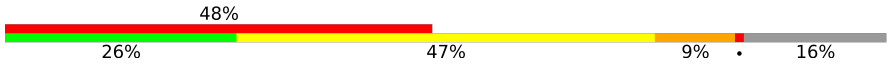
Chain XA:

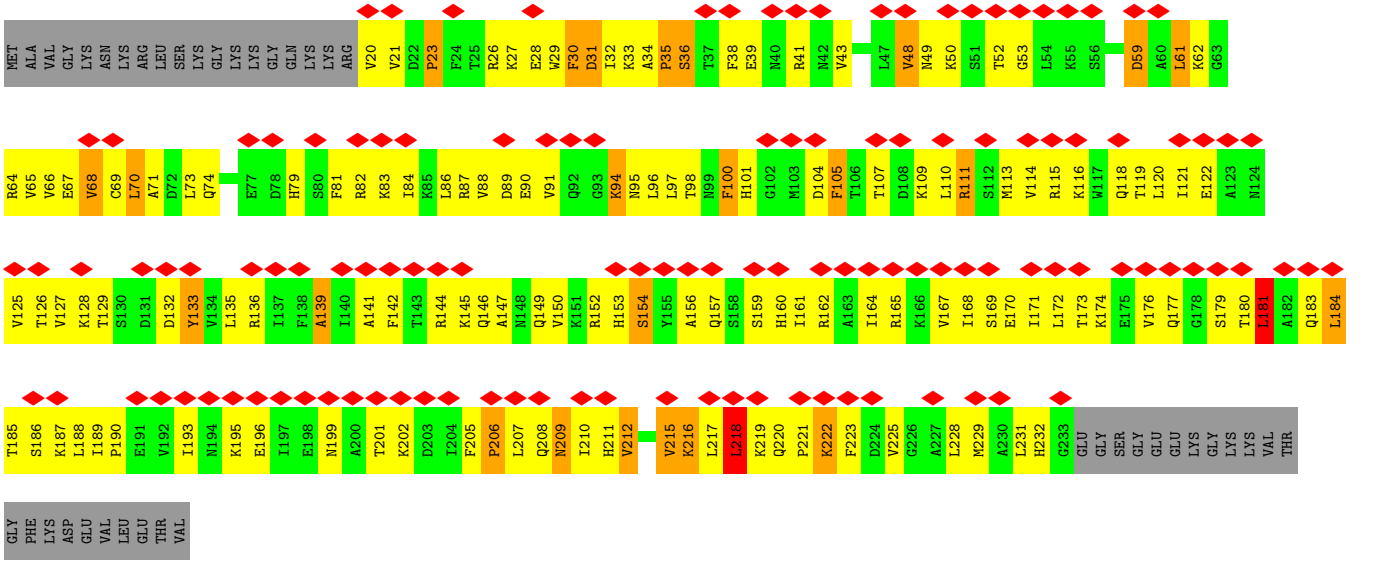




• Molecule 51: eS1 (yeast S1)

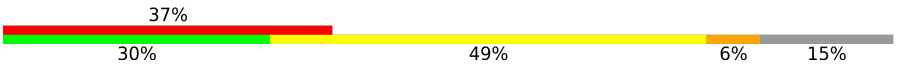
Chain YA:

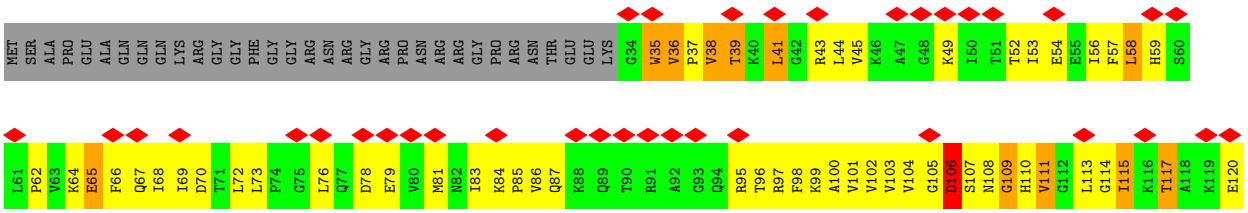


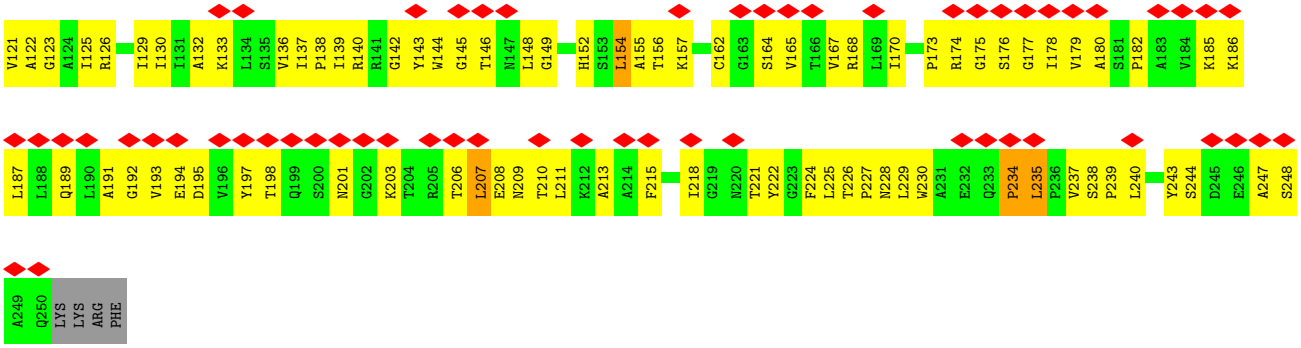


• Molecule 52: uS5 (yeast S2)

Chain ZA:

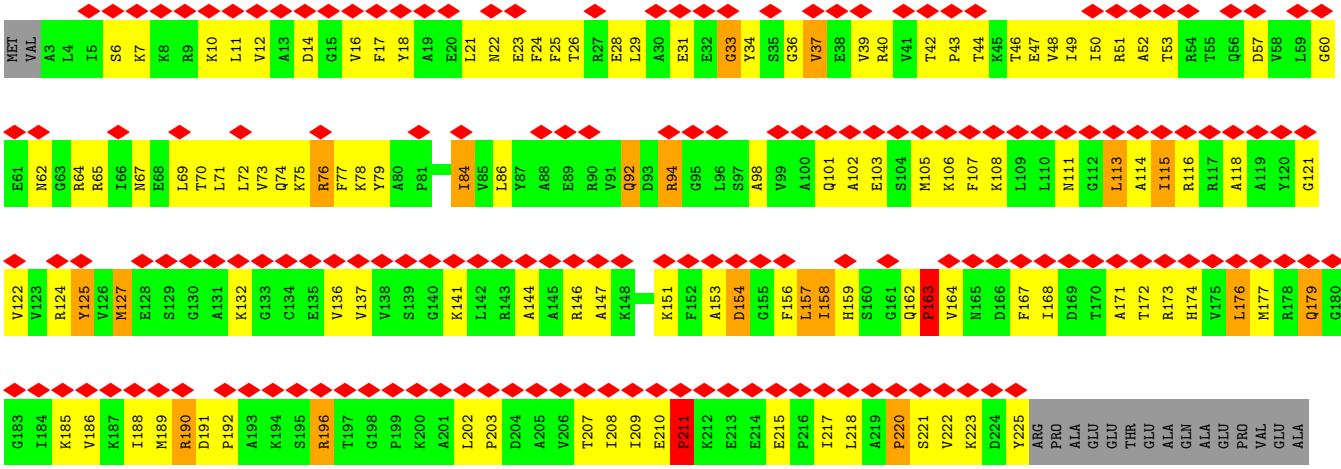






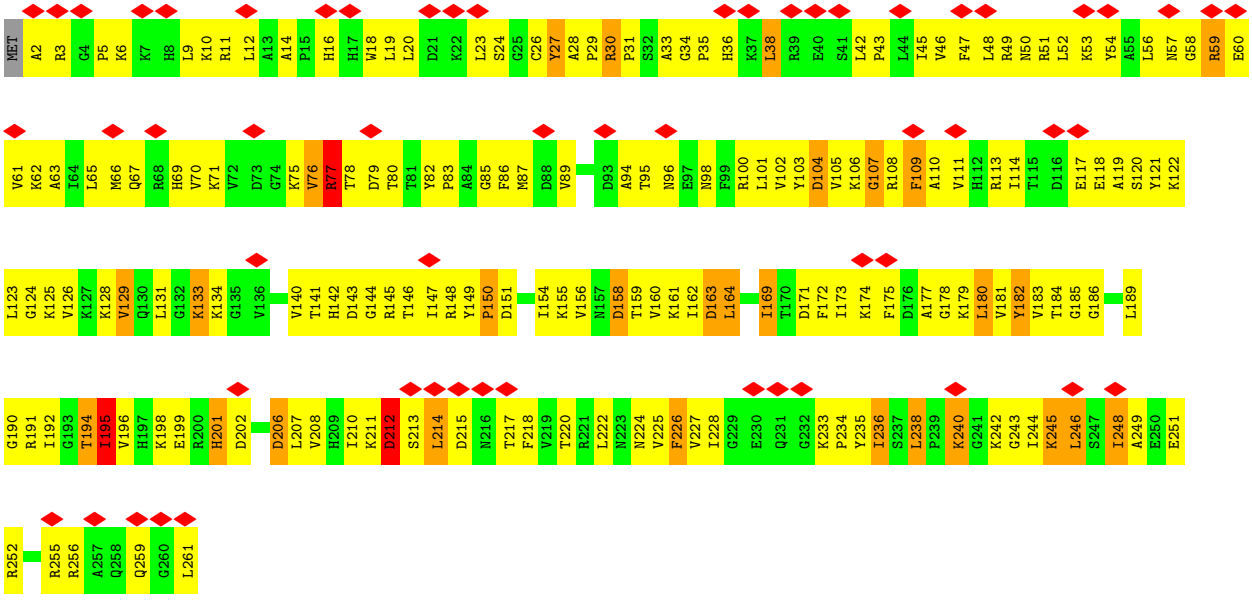
• Molecule 53: uS3 (yeast S3)

Chain AB:



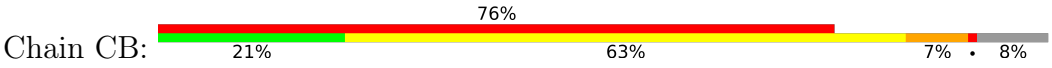
• Molecule 54: eS4 (yeast S4)

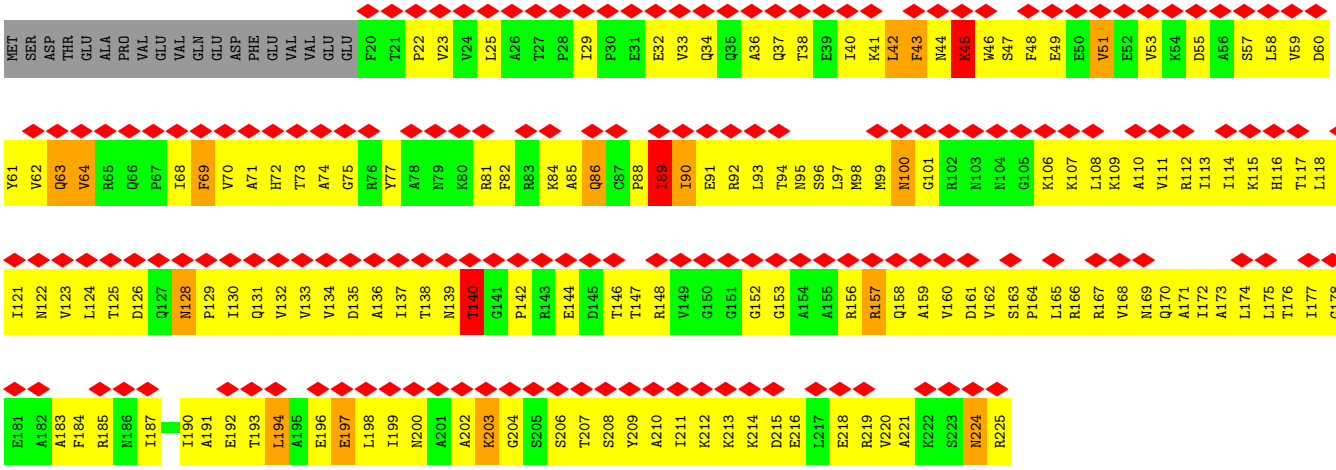
Chain BB:



- Molecule 55: uS7 (yeast S5)

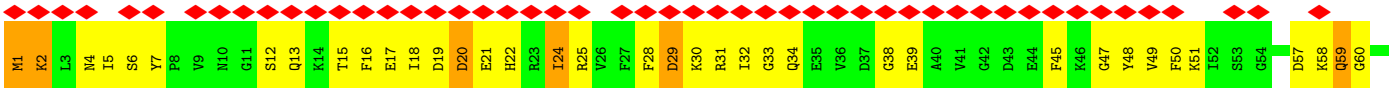
Chain CB:

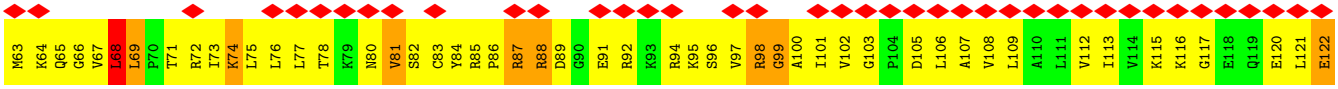


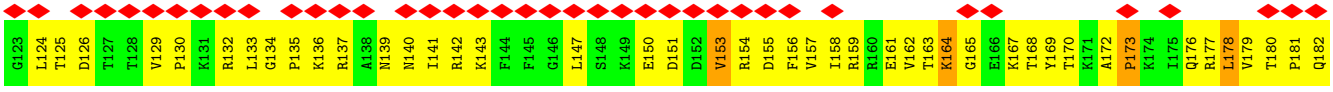


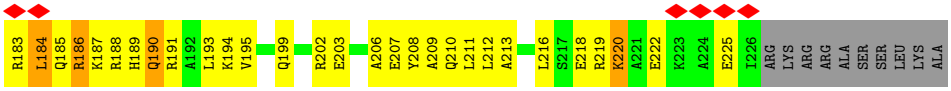
- Molecule 56: eS6 (yeast S6)

Chain DB:



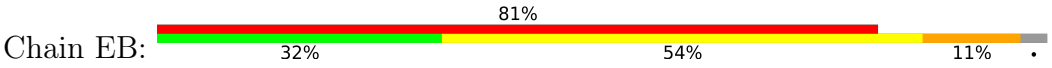


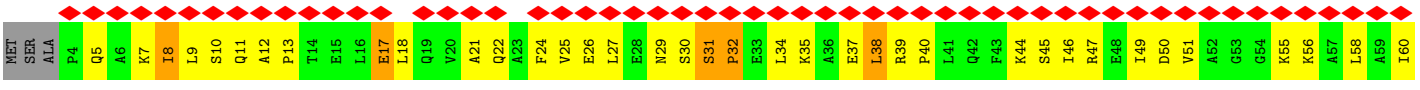


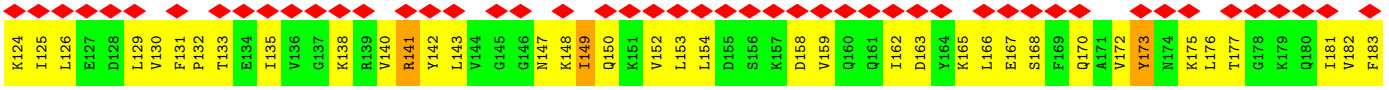


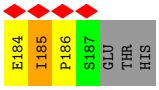
- Molecule 57: eS7 (yeast S7)

Chain EB:



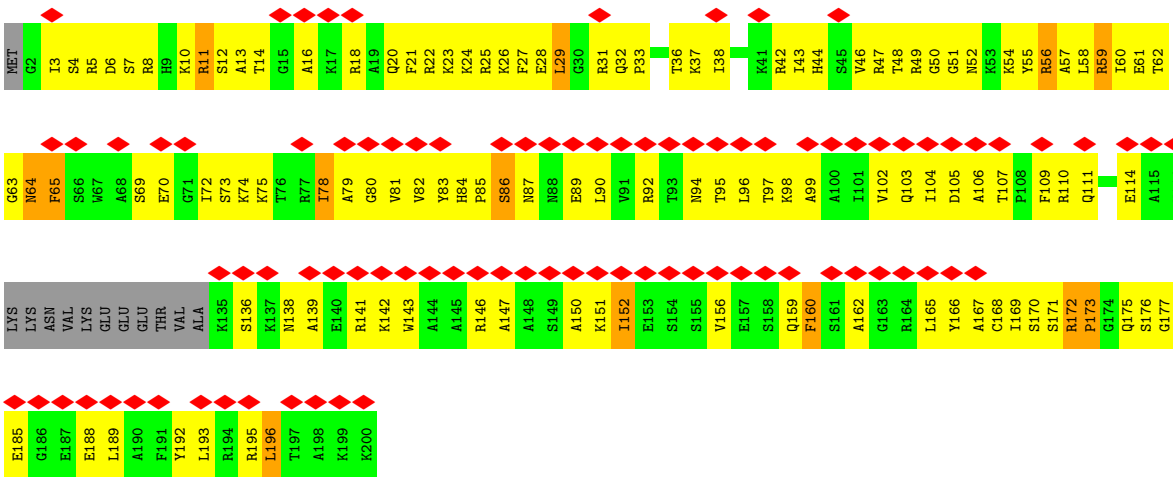






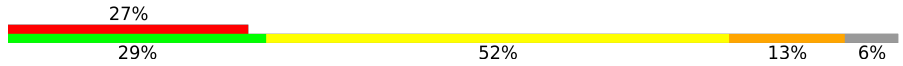
• Molecule 58: eS8 (yeast S8)

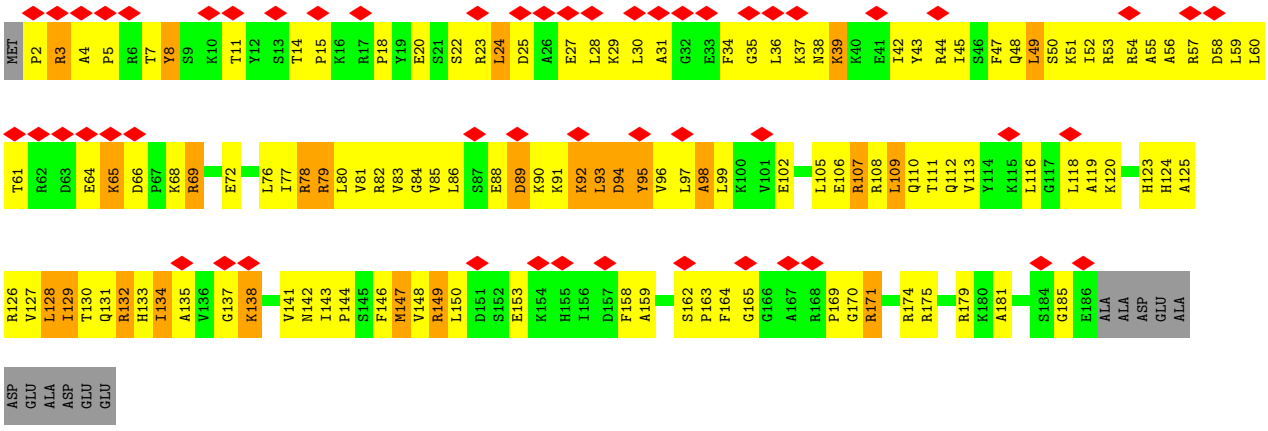
Chain FB:



• Molecule 59: uS4 (yeast S9)

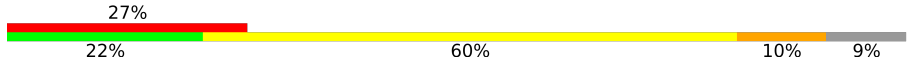
Chain GB:

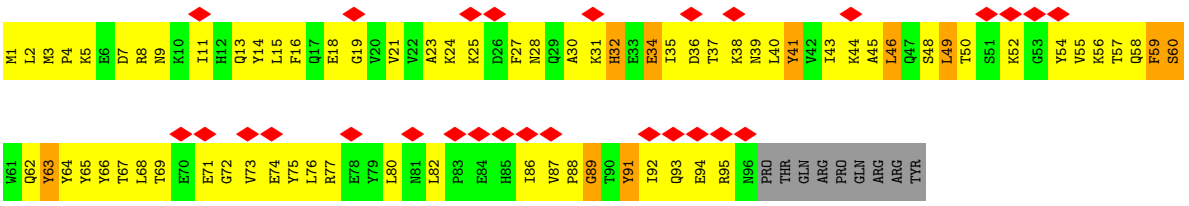




• Molecule 60: eS10 (yeast S10)

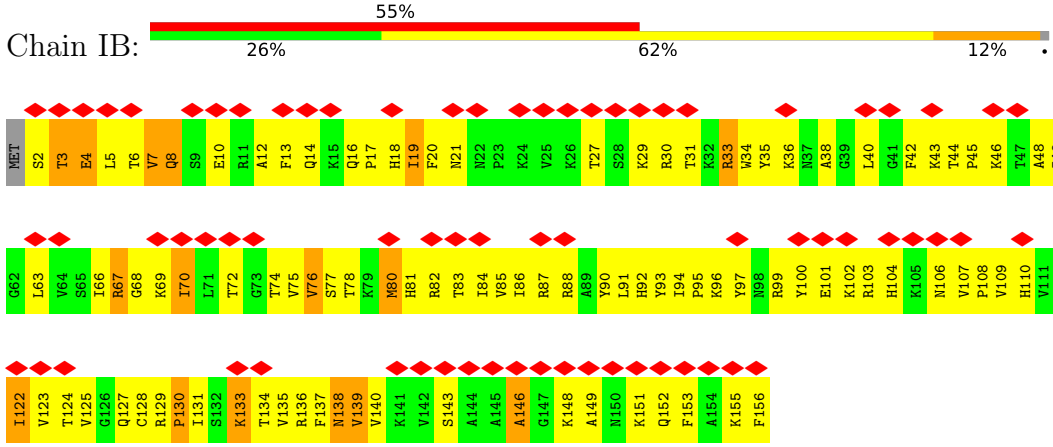
Chain HB:





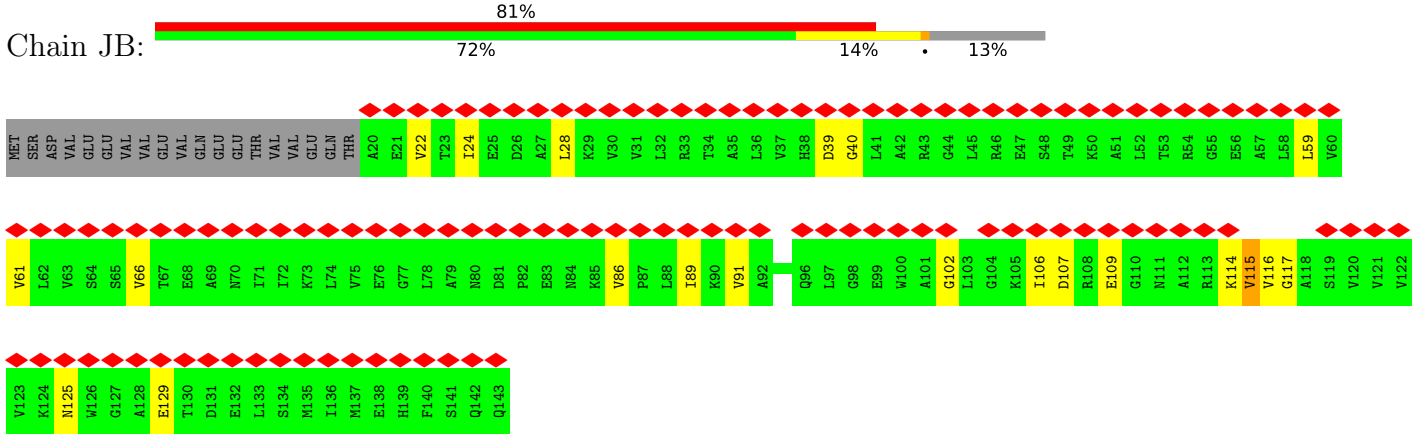
• Molecule 61: uS17 (yeast S11)

Chain IB:



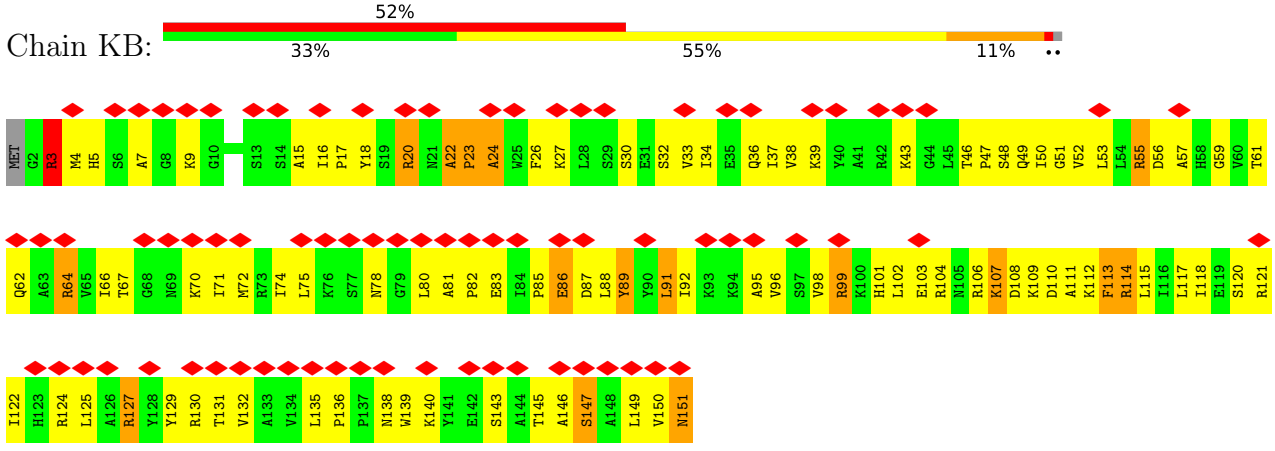
• Molecule 62: eS12 (yeast S12)

Chain JB:



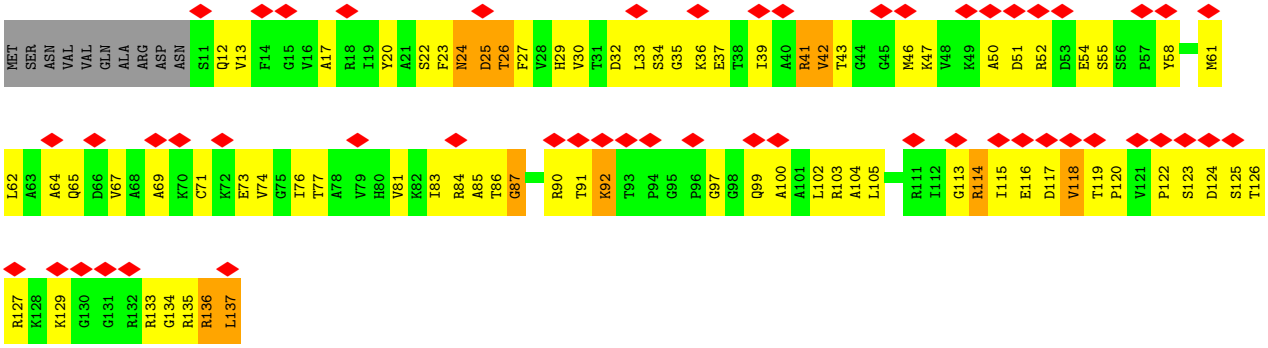
• Molecule 63: uS15 (yeast S13)

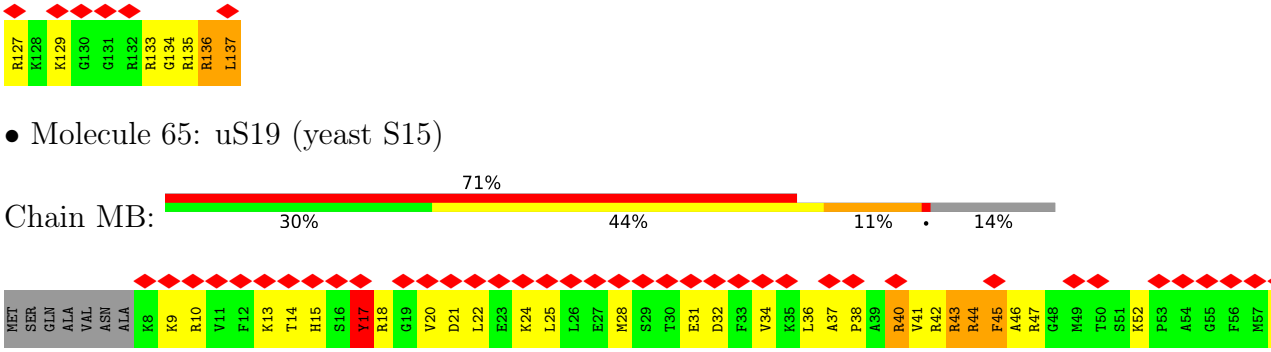
Chain KB:

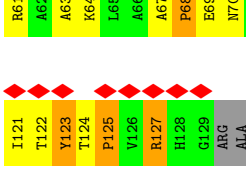


• Molecule 64: uS11 (yeast S14)

Chain LB:

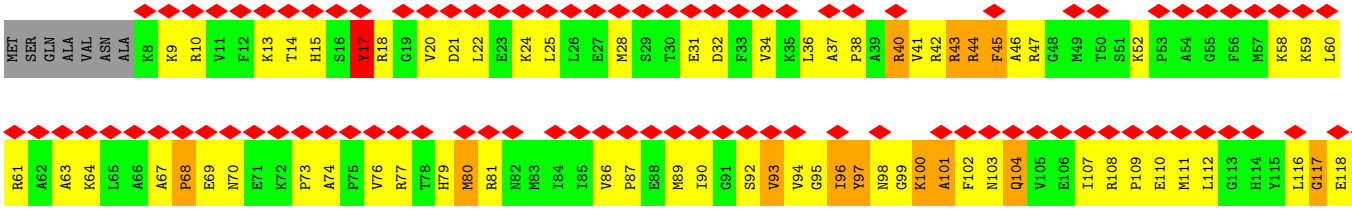






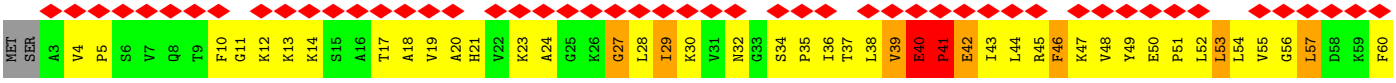
• Molecule 65: uS19 (yeast S15)

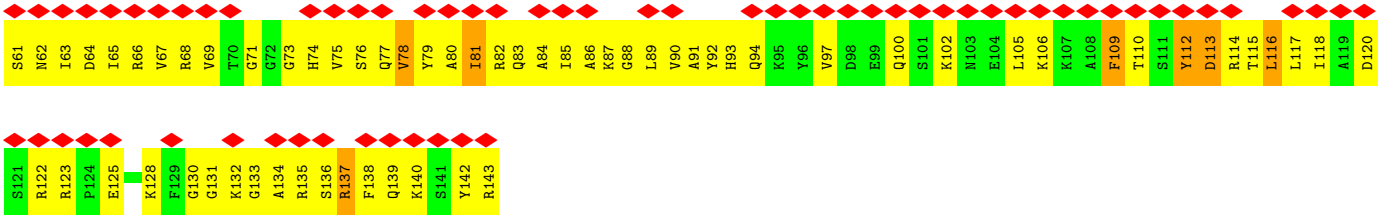
Chain MB:



• Molecule 66: uS9 (yeast S16)

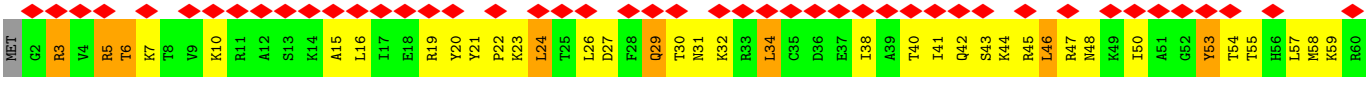
Chain NB:

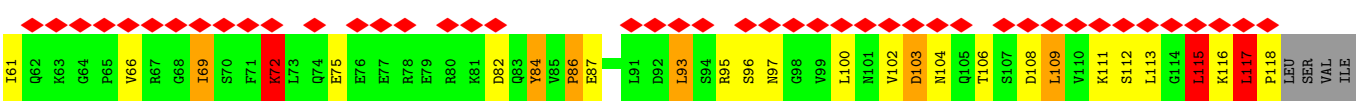




• Molecule 67: eS17 (yeast S17)

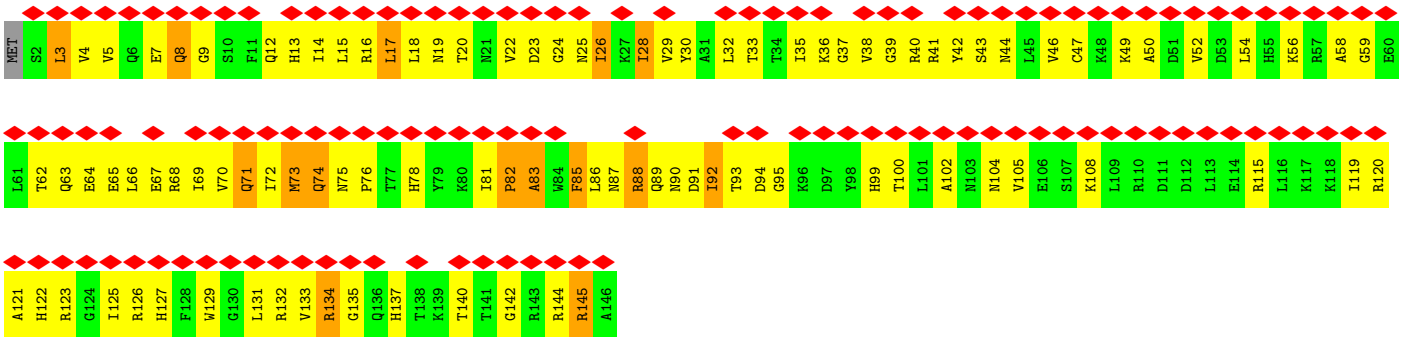
Chain OB:





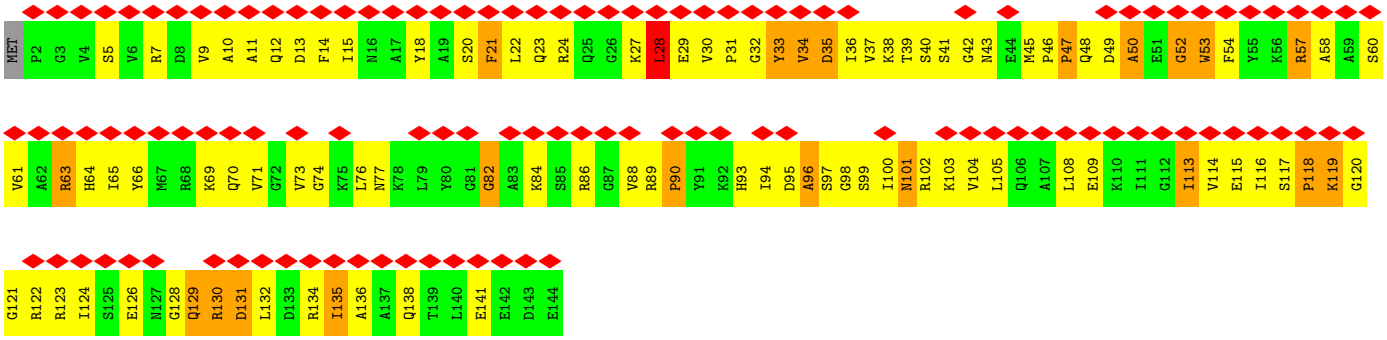
• Molecule 68: uS13 (yeast S18)

Chain PB:



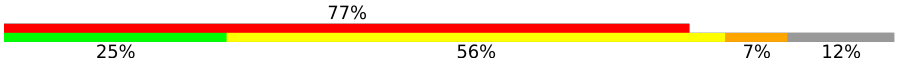
• Molecule 69: eS19 (yeast S19)

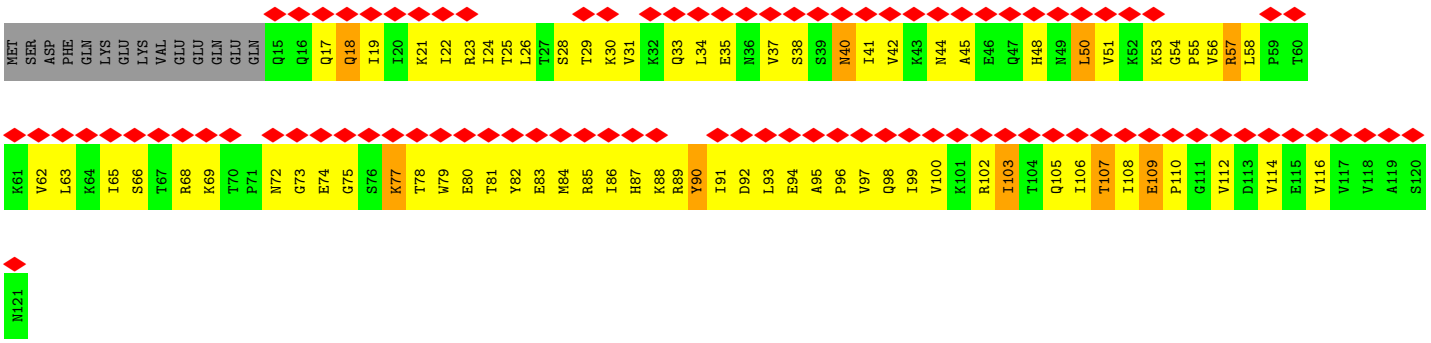
Chain QB:



• Molecule 70: uS10 (yeast S20)

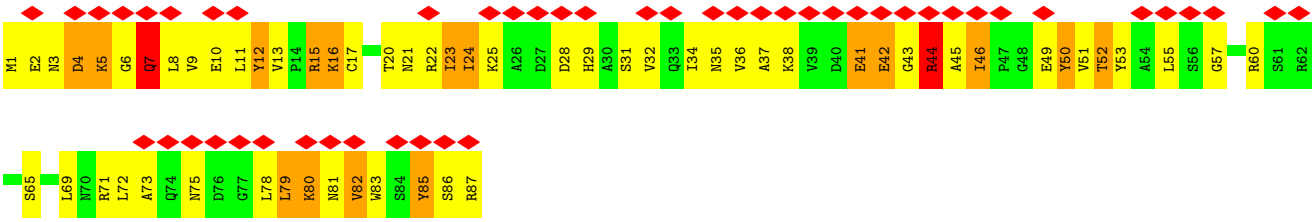
Chain RB:



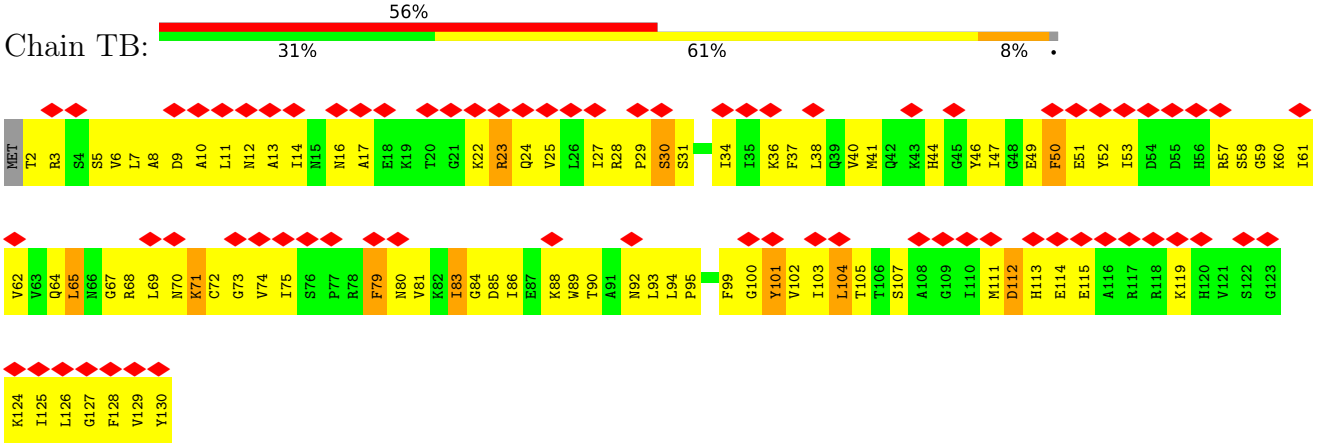


• Molecule 71: eS21 (yeast S21)

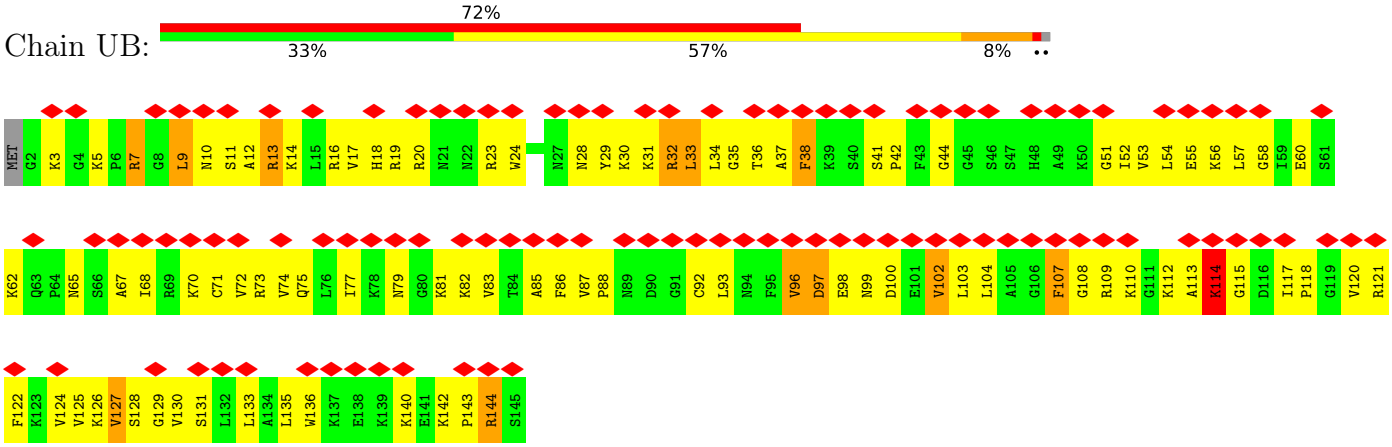
Chain SB:



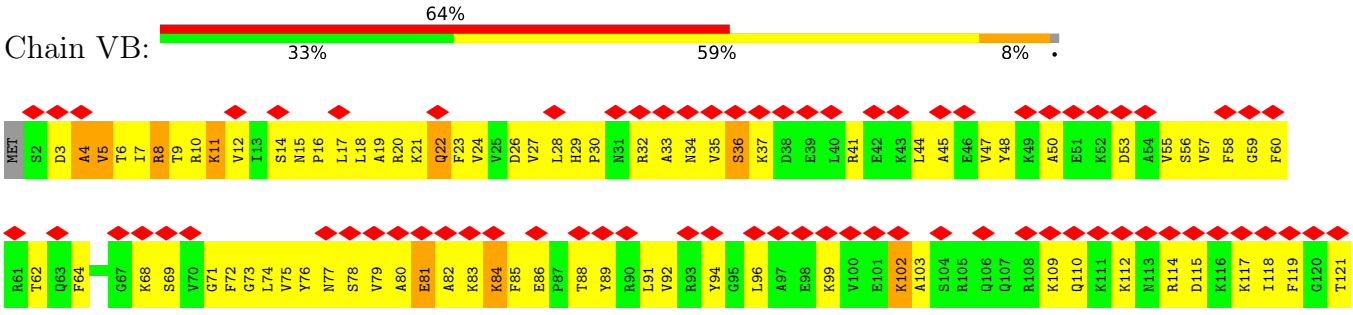
• Molecule 72: uS8 (yeast S22)

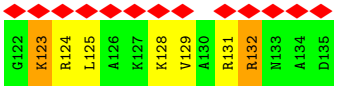


• Molecule 73: uS12 (yeast S23)



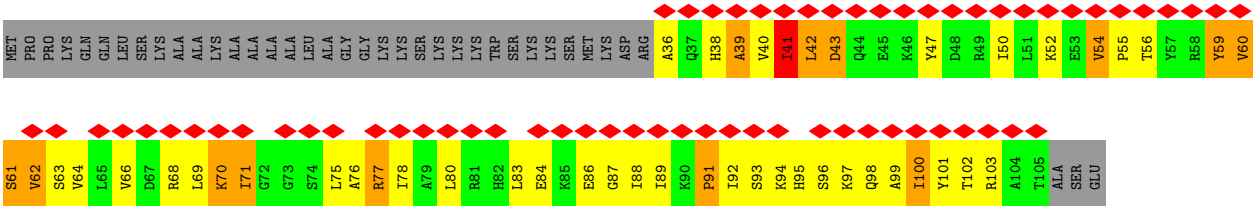
• Molecule 74: eS24 (yeast S24)





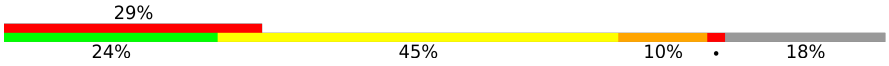
• Molecule 75: eS25 (yeast S25)

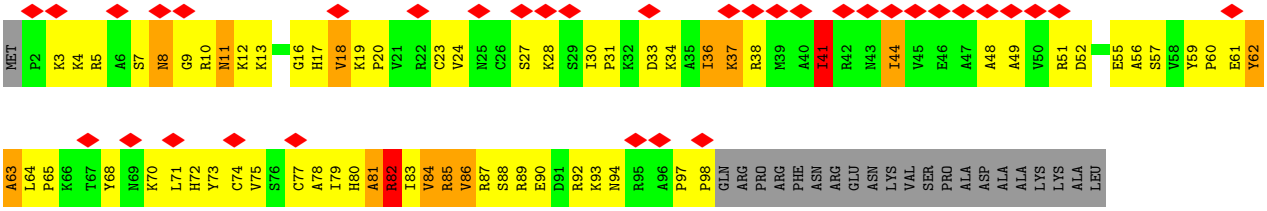
Chain WB:



• Molecule 76: eS26 (yeast S26)

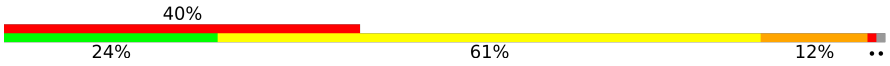
Chain XB:

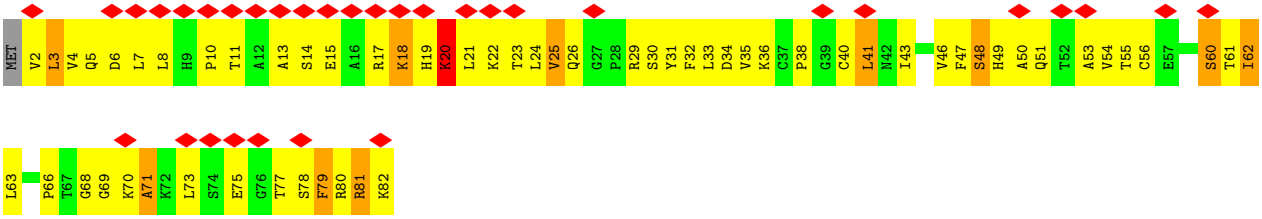




• Molecule 77: eS27 (yeast S27)

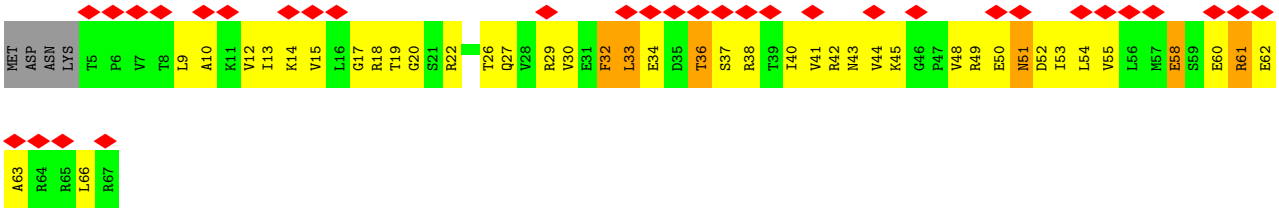
Chain YB:





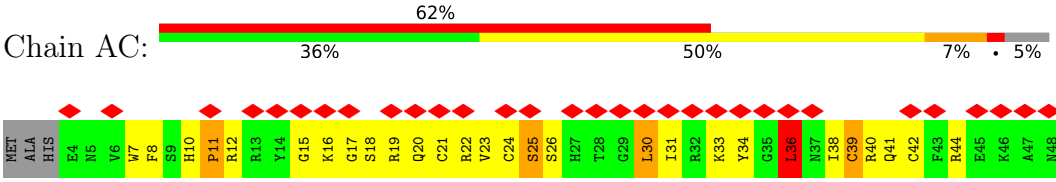
• Molecule 78: eS28 (yeast S28)

Chain ZB:



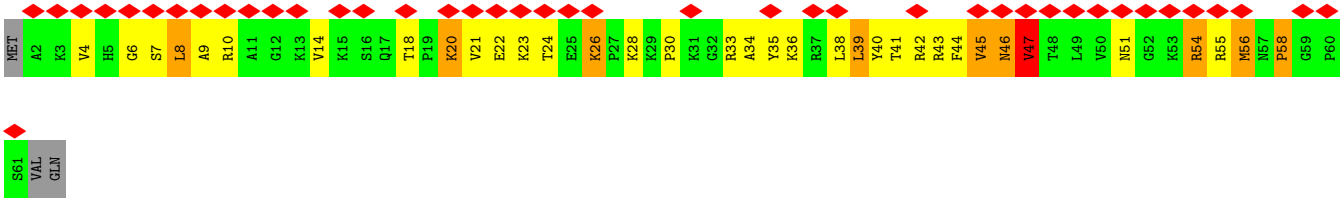
• Molecule 79: uS14 (yeast S29)

Chain AC:



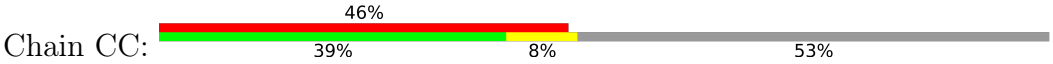
• Molecule 80: eS30 (yeast S30)

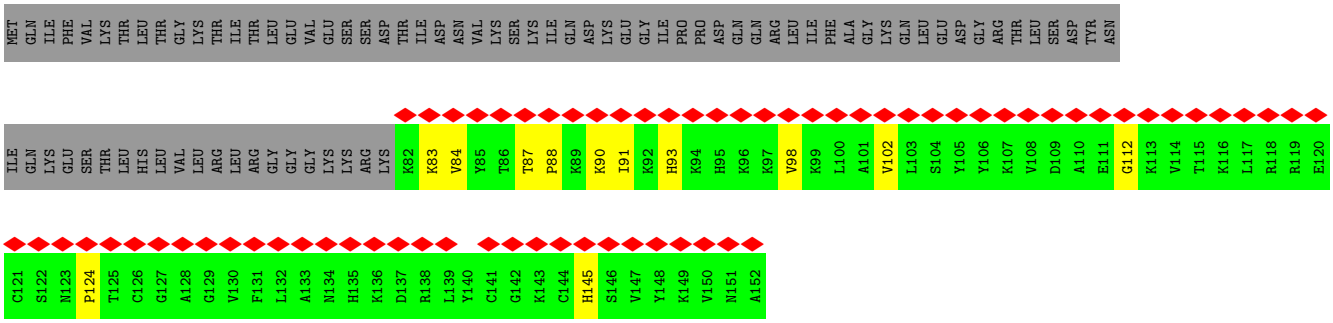
Chain BC:



• Molecule 81: eS31 (yeast S31)

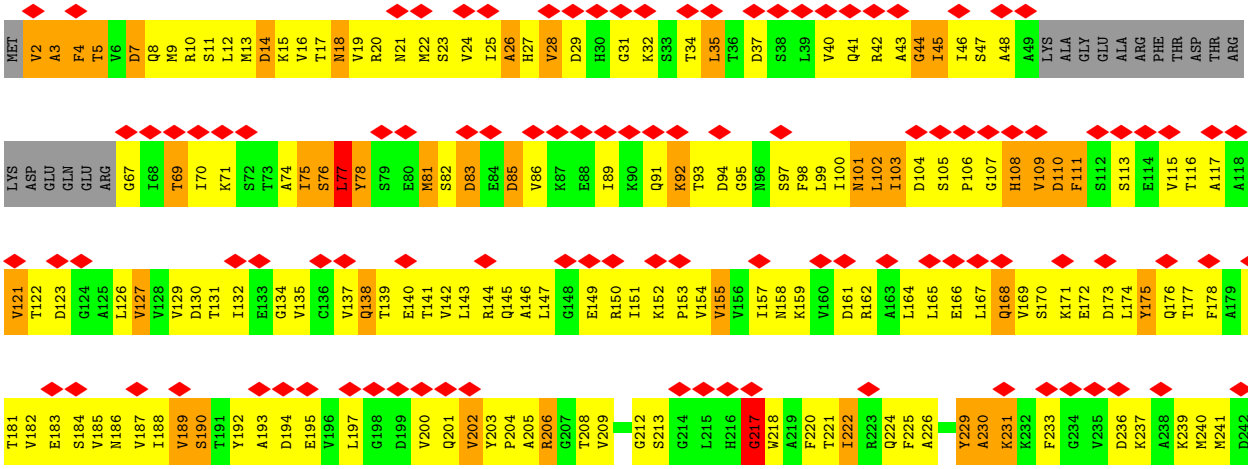
Chain CC:

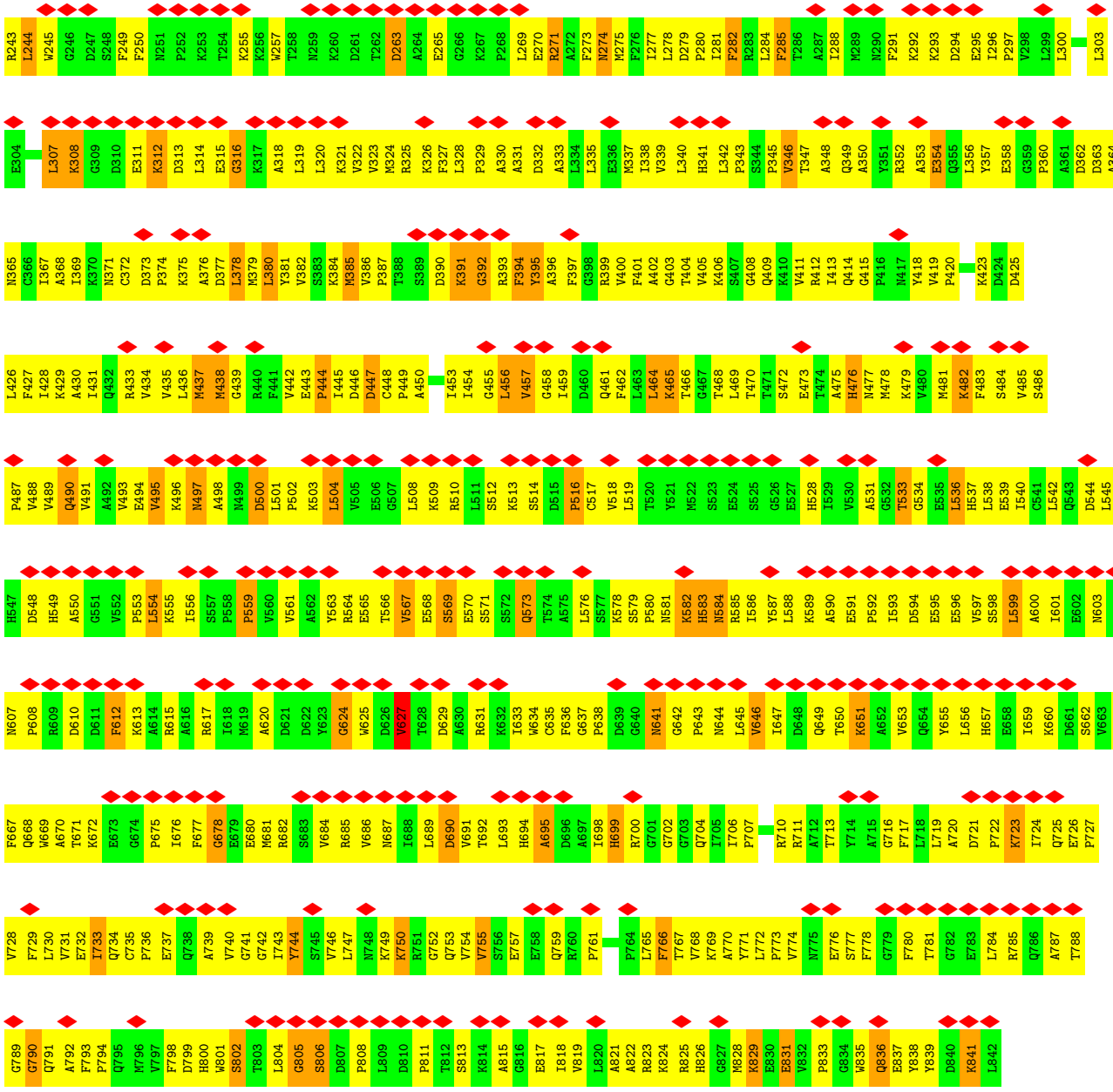




• Molecule 82: yeast eEF2

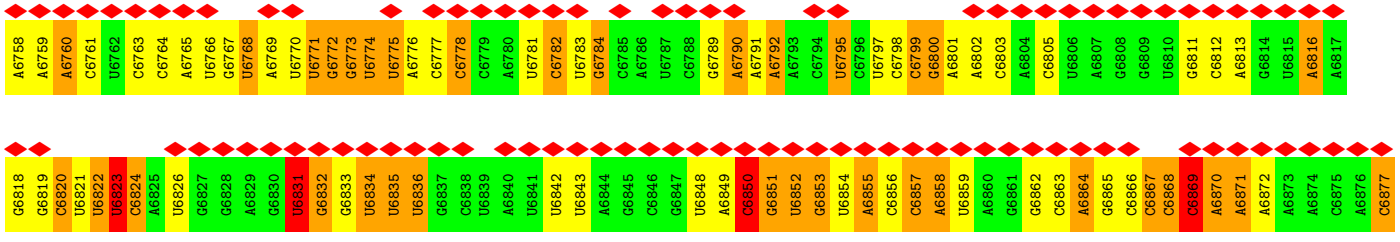
Chain DC:

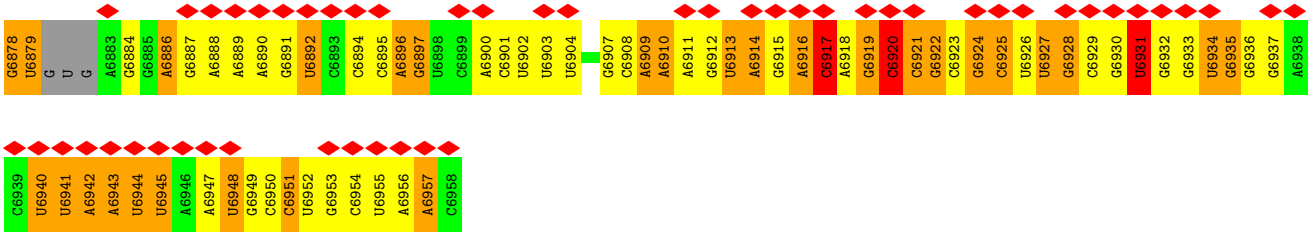




- Molecule 83: IRES

Chain EC:




G6878 U6879 G U U G A6883 G6884 G6885 A6886 G6887 A6888 A6889 A6890 G6891 U6892 C6893 C6894 C6895 A6896 G6897 U6898 C6899 A6900 C6901 U6902 U6903 U6904 G6907 C6908 A6909 A6910 A6911 G6912 U6913 A6914 G6915 A6916 C6917 A6918 G6919 C6920 C6921 G6922 C6923 G6924 C6925 U6926 U6927 G6928 C6929 G6930 U6931 G6932 G6933 U6934 G6935 G6936 G6937 A6938

C6939 U6940 U6941 A6942 A6943 U6944 U6945 A6946 A6947 U6948 G6949 C6950 C6951 U6952 G6953 C6954 U6955 A6956 A6957 C6958

4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	31871	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 ($e^-/Å^2$)	1.4	Depositor
Minimum defocus (nm)	Not provided	
Maximum defocus (nm)	Not provided	
Magnification	Not provided	
Image detector	GATAN K2 SUMMIT (4k x 4k)	Depositor
Maximum map value	0.064	Depositor
Minimum map value	-0.026	Depositor
Average map value	-0.002	Depositor
Map value standard deviation	0.005	Depositor
Recommended contour level	0.017	Depositor
Map size (Å)	419.84, 419.84, 419.84	wwPDB
Map dimensions	512, 512, 512	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	0.82, 0.82, 0.82	Depositor

5 Model quality

5.1 Standard geometry

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

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#$\|Z\|>5$	RMSZ	#$\|Z\|>5$
1	A	0.86	1/42096 (0.0%)	0.75	11/65570 (0.0%)
2	B	1.13	16/78631 (0.0%)	0.77	25/122552 (0.0%)
3	C	1.18	1/3747 (0.0%)	0.76	2/5832 (0.0%)
4	D	1.08	1/2884 (0.0%)	0.76	0/4491
5	E	1.77	0/1377	0.79	2/1844 (0.1%)
6	F	1.01	0/1952	0.72	1/2622 (0.0%)
7	G	0.98	0/3153	0.66	1/4239 (0.0%)
8	H	1.09	0/2802	0.67	0/3792
9	I	0.91	0/2426	0.63	0/3271
10	J	1.05	0/1425	0.68	2/1912 (0.1%)
11	K	1.14	0/1822	0.66	0/2451
12	L	0.95	0/1850	0.63	0/2495
13	M	1.00	0/1540	0.64	0/2073
14	N	1.07	0/1754	0.65	0/2350
15	O	0.84	0/1375	0.60	0/1842
16	P	1.71	0/728	0.75	0/975
17	Q	1.03	0/1568	0.65	0/2106
18	R	1.13	0/1069	0.64	0/1438
19	S	1.13	0/1758	0.69	0/2354
20	T	1.08	0/1586	0.65	0/2128
21	U	1.06	0/1466	0.66	1/1968 (0.1%)
22	V	1.04	0/1466	0.69	1/1965 (0.1%)
23	W	0.87	0/1539	0.61	0/2050
24	X	1.19	0/1482	0.66	0/1990
25	Y	1.13	0/1301	0.68	0/1743
26	Z	0.78	0/812	0.58	0/1099
27	AA	1.06	0/1019	0.63	0/1369
28	BA	1.10	0/521	0.62	0/691
29	CA	1.09	0/984	0.68	1/1325 (0.1%)
30	DA	1.05	0/1005	0.71	1/1341 (0.1%)
31	EA	0.85	0/1119	0.61	1/1497 (0.1%)
32	FA	1.07	0/1205	0.65	0/1612

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
33	GA	0.97	0/474	0.68	0/629
34	HA	0.79	0/751	0.63	0/1008
35	IA	0.93	0/904	0.61	0/1213
36	JA	1.10	0/1041	0.62	0/1394
37	KA	1.15	0/869	0.68	0/1168
38	LA	0.99	0/891	0.66	0/1191
39	MA	0.95	0/979	0.66	0/1301
40	NA	0.92	0/779	0.64	0/1034
41	OA	1.19	0/697	0.66	0/923
42	PA	0.88	0/619	0.60	0/826
43	QA	1.01	0/444	0.68	0/588
44	RA	1.05	0/424	0.60	0/562
45	SA	0.89	0/235	0.67	0/300
46	TA	1.03	0/861	0.67	0/1136
47	UA	1.02	0/702	0.61	0/934
48	VA	1.58	0/1498	0.79	0/2025
49	WA	0.83	0/2498	0.56	0/3398
50	XA	0.71	0/1653	0.65	3/2261 (0.1%)
51	YA	0.75	0/1735	0.59	1/2335 (0.0%)
52	ZA	0.74	0/1665	0.59	0/2263
53	AB	0.86	0/1759	0.57	0/2368
54	BB	0.72	0/2110	0.59	0/2839
55	CB	0.79	0/1630	0.58	0/2202
56	DB	0.74	0/1844	0.58	0/2464
57	EB	0.78	0/1506	0.58	0/2028
58	FB	0.88	0/1515	0.58	0/2021
59	GB	0.70	0/1519	0.59	0/2035
60	HB	0.93	0/837	0.56	0/1131
61	IB	0.91	0/1273	0.62	0/1712
62	JB	1.02	0/495	0.61	0/617
63	KB	0.83	0/1216	0.61	0/1638
64	LB	0.67	0/953	0.57	0/1279
65	MB	0.97	0/996	0.64	0/1335
66	NB	0.83	0/1126	0.61	0/1510
67	OB	0.80	1/844 (0.1%)	0.82	4/1120 (0.4%)
68	PB	0.87	0/1212	0.59	0/1628
69	QB	0.84	0/1131	0.62	0/1517
70	RB	0.86	0/866	0.59	0/1169
71	SB	0.71	0/694	0.57	0/935
72	TB	0.77	0/1039	0.59	0/1395
73	UB	0.90	0/1140	0.60	0/1518
74	VB	0.76	0/1088	0.58	0/1449
75	WB	0.83	0/571	0.65	0/768

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
76	XB	0.71	0/782	0.57	0/1047
77	YB	0.76	0/621	0.57	0/838
78	ZB	0.75	0/500	0.60	0/670
79	AC	0.98	0/454	0.61	1/602 (0.2%)
80	BC	0.85	0/483	0.62	0/643
81	CC	0.99	0/283	0.66	0/352
82	DC	1.39	5/6521 (0.1%)	0.71	4/8830 (0.0%)
83	EC	1.96	34/4579 (0.7%)	0.94	10/7119 (0.1%)
All	All	1.06	59/230768 (0.0%)	0.72	72/338255 (0.0%)

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

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

All (59) bond length outliers are listed below:

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

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

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

All (72) bond angle outliers are listed below:

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

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

There are no chirality outliers.

All (89) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	1034	C	Sidechain

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

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

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

5.2 Too-close contacts (i)

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

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

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

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

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

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

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

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

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

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

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

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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:R:123:LEU:HB3	20:T:194:LEU:HD21	1.50	0.92
51:YA:111:ARG:HB3	76:XB:68:TYR:HB2	1.51	0.92
51:YA:180:THR:HG22	51:YA:181:LEU:HD13	1.52	0.92
70:RB:45:ALA:HB1	70:RB:50:LEU:HD11	1.50	0.92
6:F:242:ARG:HD3	6:F:243:THR:H	1.34	0.91
24:X:42:TRP:CD1	24:X:53:LYS:HG3	2.05	0.91
2:B:2356:A:H61	2:B:2983:C:H5	1.07	0.91
20:T:136:THR:HG22	20:T:137:THR:H	1.32	0.91
39:MA:55:LEU:H	39:MA:55:LEU:HD23	1.36	0.91
1:A:1291:G:H22	1:A:1324:G:H1	1.17	0.91
2:B:3184:A:H2'	2:B:3185:U:H5'	1.50	0.91
46:TA:72:LEU:HD11	46:TA:83:LEU:HD12	1.52	0.91
49:WA:168:THR:HG23	49:WA:181:TRP:O	1.69	0.91
51:YA:127:VAL:HB	51:YA:173:THR:HG22	1.52	0.91
82:DC:143:LEU:HD13	82:DC:188:ILE:HD13	1.50	0.91
36:JA:20:HIS:HB2	36:JA:50:ILE:HD11	1.51	0.91
82:DC:171:LYS:HE2	82:DC:279:ASP:HA	1.52	0.91
18:R:17:VAL:HG11	18:R:74:ARG:HA	1.53	0.91
19:S:73:ARG:HB2	19:S:92:LEU:HD22	1.53	0.91
2:B:2736:A:H2'	2:B:2737:C:H5"	1.52	0.91
82:DC:400:VAL:HG11	82:DC:403:GLY:O	1.71	0.91
1:A:320:U:H3'	1:A:321:C:H5"	1.53	0.91
2:B:2761:G:H1	2:B:2795:U:H3'	1.35	0.91
2:B:3163:A:H2'	2:B:3164:C:H5"	1.50	0.91
18:R:35:ILE:HA	18:R:46:ILE:HA	1.53	0.91
21:U:95:LEU:HD21	21:U:148:LEU:HD21	1.53	0.91
63:KB:4:MET:HG3	63:KB:5:HIS:H	1.36	0.91
2:B:1447:G:N2	2:B:2355:G:H2'	1.85	0.91
28:BA:1:MET:HB2	28:BA:15:PRO:HG2	1.53	0.91
76:XB:44:ILE:H	76:XB:44:ILE:HD12	1.34	0.91
2:B:2882:U:H2'	2:B:2883:U:C6	2.06	0.91
38:LA:29:ILE:HD13	38:LA:29:ILE:H	1.33	0.91
1:A:1558:U:H4'	68:PB:134:ARG:HA	1.52	0.91
82:DC:220:PHE:HB3	82:DC:328:LEU:HD13	1.53	0.91
1:A:472:U:H2'	1:A:473:A:H8	1.35	0.90
2:B:878:G:H1'	2:B:880:G:H21	1.34	0.90
73:UB:54:LEU:HD11	73:UB:75:GLN:HG3	1.51	0.90
51:YA:185:THR:HA	51:YA:188:LEU:HB2	1.51	0.90
71:SB:34:ILE:HB	71:SB:53:TYR:HB2	1.51	0.90
83:EC:6869:C:H2'	83:EC:6870:A:H5'	1.50	0.90
2:B:211:A:H3'	8:H:221:ASN:HD21	1.35	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:23:PRO:HB3	8:H:259:ASP:HA	1.50	0.90
14:N:20:SER:H	14:N:23:ASN:HB3	1.35	0.90
27:AA:54:LEU:HD11	27:AA:119:GLY:HA3	1.53	0.90
54:BB:42:LEU:HD21	54:BB:47:PHE:HB2	1.53	0.90
65:MB:20:VAL:HG13	65:MB:24:LYS:HD2	1.53	0.90
82:DC:725:GLN:HE21	82:DC:801:TRP:HB2	1.35	0.90
1:A:1601:G:H1	69:QB:88:VAL:HG22	1.36	0.90
2:B:634:C:H5"	37:KA:21:ARG:HD3	1.54	0.90
6:F:32:LEU:HB2	6:F:163:ARG:NE	1.87	0.90
6:F:116:VAL:HG22	6:F:117:GLU:H	1.37	0.90
14:N:170:LYS:HA	14:N:177:ASP:HA	1.51	0.90
20:T:108:ILE:HD12	20:T:160:ARG:NH1	1.86	0.90
36:JA:11:LYS:HD2	36:JA:14:THR:HG22	1.50	0.90
82:DC:230:ALA:HB2	82:DC:237:LYS:HB3	1.54	0.90
2:B:2895:G:H5"	44:RA:102:ARG:HH21	1.35	0.90
6:F:129:ALA:H	6:F:169:ILE:HD12	1.37	0.90
2:B:269:G:N2	2:B:294:U:H2'	1.86	0.90
2:B:707:U:H2'	2:B:708:G:H5"	1.51	0.90
2:B:821:U:H2'	2:B:822:G:C8	2.06	0.90
54:BB:23:LEU:HD22	54:BB:24:SER:H	1.37	0.90
1:A:504:U:H2'	1:A:505:A:H4'	1.53	0.90
2:B:1662:G:H4'	23:W:92:GLN:HE22	1.35	0.90
6:F:22:LEU:H	6:F:22:LEU:HD12	1.37	0.90
34:HA:51:LEU:HD13	38:LA:91:ARG:HG3	1.53	0.90
57:EB:74:GLN:HE21	57:EB:78:THR:HG23	1.36	0.89
2:B:1750:A:H4'	2:B:1751:G:H5'	1.54	0.89
2:B:39:A:H5"	32:FA:35:ALA:HB2	1.53	0.89
2:B:126:U:H4'	19:S:139:HIS:HE1	1.37	0.89
11:K:98:LYS:HB3	11:K:99:PRO:HD3	1.53	0.89
66:NB:93:HIS:HA	66:NB:97:VAL:HB	1.55	0.89
75:WB:83:LEU:HB2	75:WB:89:ILE:HG12	1.54	0.89
9:I:231:ILE:HG21	9:I:239:ILE:HD11	1.53	0.89
14:N:77:THR:HG22	14:N:82:ARG:HB3	1.54	0.89
49:WA:117:LYS:HD2	49:WA:117:LYS:H	1.37	0.89
69:QB:39:THR:HA	69:QB:100:ILE:HG13	1.53	0.89
1:A:386:G:H5"	58:FB:23:LYS:HE2	1.54	0.89
8:H:209:TYR:CE2	8:H:212:ASP:HB2	2.08	0.89
19:S:139:HIS:HB3	19:S:142:ILE:HD13	1.54	0.89
57:EB:185:ILE:H	57:EB:185:ILE:HD13	1.35	0.89
2:B:268:A:H61	2:B:295:A:H3'	1.36	0.89
2:B:700:C:H2'	2:B:701:G:H8	1.38	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:K:44:ILE:HG12	11:K:180:SER:HB3	1.52	0.89
1:A:632:U:H4'	73:UB:11:SER:HB3	1.53	0.89
2:B:155:G:H5'	2:B:157:A:H1'	1.55	0.89
2:B:1952:G:H2'	2:B:1953:G:H4'	1.55	0.89
25:Y:136:ARG:HB2	25:Y:139:ARG:HH22	1.38	0.89
10:J:146:ILE:HA	10:J:149:ILE:HD12	1.55	0.89
29:CA:90:ALA:HB1	29:CA:95:ILE:HD11	1.54	0.89
2:B:523:A:H2'	2:B:524:U:H5'	1.55	0.88
2:B:1594:A:H1'	2:B:1615:C:H1'	1.54	0.88
7:G:73:VAL:HG21	27:AA:90:GLY:HA2	1.54	0.88
12:L:158:ASP:HB3	12:L:159:PRO:HD3	1.55	0.88
14:N:189:GLU:HG2	14:N:200:LEU:HD23	1.55	0.88
74:VB:83:LYS:HE2	74:VB:96:LEU:HD23	1.53	0.88
77:YB:61:THR:HG23	77:YB:62:ILE:H	1.37	0.88
2:B:3369:G:H5"	28:BA:56:ARG:HH21	1.37	0.88
8:H:222:VAL:CG1	8:H:225:VAL:HB	2.03	0.88
26:Z:72:SER:HB2	26:Z:75:TYR:HB2	1.56	0.88
2:B:1460:A:H2'	2:B:1461:A:C8	2.09	0.88
6:F:135:ILE:HD13	6:F:149:ARG:HD2	1.53	0.88
50:XA:76:ILE:HB	50:XA:123:VAL:HG22	1.55	0.88
54:BB:161:LYS:HB3	54:BB:171:ASP:HB3	1.54	0.88
82:DC:69:THR:OG1	82:DC:106:PRO:HB3	1.72	0.88
2:B:1628:C:H5"	2:B:1629:U:H3'	1.54	0.88
24:X:24:LEU:HD12	25:Y:146:ASN:HB3	1.53	0.88
36:JA:82:LEU:HD22	36:JA:117:ILE:HD13	1.55	0.88
1:A:628:G:H21	1:A:971:A:H62	1.17	0.88
2:B:2615:G:H2'	2:B:2616:C:H6	1.39	0.88
78:ZB:10:ALA:HA	78:ZB:32:PHE:HA	1.54	0.88
82:DC:152:LYS:HD3	82:DC:153:PRO:HD2	1.54	0.88
83:EC:6912:G:H2'	83:EC:6913:U:O4'	1.74	0.88
1:A:777:C:H2'	1:A:778:G:H5"	1.54	0.88
2:B:361:A:H5"	41:OA:36:SER:HB2	1.54	0.88
2:B:685:G:H5"	17:Q:39:ARG:HH12	1.39	0.88
2:B:2960:C:H2'	2:B:2961:G:H8	1.38	0.88
30:DA:28:ARG:O	30:DA:28:ARG:HD3	1.74	0.88
35:IA:79:ARG:HH12	35:IA:81:GLU:HB2	1.37	0.88
52:ZA:137:ILE:HG13	52:ZA:138:PRO:HD2	1.53	0.88
63:KB:88:LEU:HD23	63:KB:125:LEU:HD12	1.54	0.88
82:DC:17:THR:HA	82:DC:346:VAL:HG21	1.56	0.88
9:I:65:ILE:HG21	9:I:72:ASP:HB3	1.55	0.88
29:CA:110:VAL:HG22	29:CA:124:VAL:HG13	1.54	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:126:LEU:HA	82:DC:154:VAL:HB	1.54	0.88
82:DC:315:GLU:HA	82:DC:319:LEU:HD13	1.56	0.88
24:X:74:ASN:HA	24:X:95:ARG:HG3	1.56	0.87
59:GB:36:LEU:HD13	59:GB:42:ILE:HG12	1.52	0.87
70:RB:62:VAL:HG22	70:RB:85:ARG:HG3	1.54	0.87
73:UB:57:LEU:HD11	73:UB:73:ARG:HB2	1.56	0.87
1:A:1477:G:H5"	69:QB:45:MET:O	1.73	0.87
2:B:374:A:N3	2:B:376:G:H5"	1.89	0.87
17:Q:3:ILE:HG12	32:FA:34:MET:HE1	1.56	0.87
48:VA:145:ILE:HB	82:DC:201:GLN:NE2	1.88	0.87
1:A:1315:U:H5"	1:A:1329:A:C2	2.10	0.87
2:B:1233:G:H5'	48:VA:36:GLN:HE22	1.38	0.87
2:B:1687:U:H3	26:Z:70:LYS:HD2	1.40	0.87
32:FA:74:ASN:HD22	32:FA:115:LYS:HB2	1.39	0.87
56:DB:147:LEU:HB3	56:DB:151:ASP:HB2	1.54	0.87
1:A:448:C:H5'	54:BB:29:PRO:HG3	1.53	0.87
1:A:1558:U:H5"	68:PB:134:ARG:HD3	1.55	0.87
2:B:2985:C:H2'	2:B:2986:U:C6	2.10	0.87
12:L:154:ALA:HB1	12:L:183:LYS:HB3	1.57	0.87
25:Y:124:VAL:HG12	25:Y:125:ALA:H	1.40	0.87
39:MA:51:ILE:O	39:MA:54:VAL:HB	1.75	0.87
2:B:2700:G:H5"	25:Y:17:ARG:HD3	1.55	0.87
2:B:3006:A:H2'	2:B:3007:U:O4'	1.74	0.87
22:V:132:PRO:HD2	22:V:135:GLN:HE21	1.35	0.87
82:DC:369:ILE:HD11	82:DC:379:MET:HG3	1.56	0.87
82:DC:677:PHE:HB3	82:DC:819:VAL:HG13	1.55	0.87
5:E:4:ILE:H	5:E:4:ILE:HD13	1.40	0.87
9:I:103:LEU:HD13	9:I:169:GLY:HA2	1.56	0.87
48:VA:73:PHE:HA	48:VA:76:LEU:HD12	1.56	0.87
82:DC:329:PRO:HB2	82:DC:332:ASP:HB2	1.55	0.87
8:H:205:PRO:HB3	8:H:247:PHE:HB3	1.56	0.87
71:SB:36:VAL:HB	71:SB:51:VAL:HB	1.56	0.87
82:DC:508:LEU:HD11	82:DC:528:HIS:HB3	1.56	0.87
2:B:1892:G:H2'	2:B:1893:A:H5"	1.54	0.87
2:B:3112:G:O6	2:B:3119:U:H3'	1.75	0.87
5:E:119:GLN:HA	5:E:122:ARG:HB3	1.57	0.87
7:G:106:TRP:HB2	7:G:133:TYR:HE2	1.38	0.87
61:IB:125:VAL:HG12	61:IB:139:VAL:HA	1.56	0.87
2:B:1234:G:N3	16:P:132:ILE:HG12	1.90	0.87
41:OA:28:HIS:CE1	41:OA:30:GLN:HB2	2.09	0.87
56:DB:2:LYS:O	56:DB:108:VAL:HA	1.73	0.87

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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:117:GLU:HA	6:F:125:ALA:HB3	1.58	0.86
15:O:60:ARG:HD2	46:TA:103:ALA:HB1	1.54	0.86
58:FB:78:ILE:H	58:FB:78:ILE:HD12	1.39	0.86
2:B:1805:C:H2'	2:B:1806:A:C8	2.11	0.86
2:B:1110:U:H2'	2:B:1111:U:C6	2.10	0.85
2:B:2738:A:H5"	33:GA:38:LYS:HE3	1.58	0.85
14:N:168:SER:HA	25:Y:160:ILE:HG23	1.57	0.85
23:W:44:LEU:HA	23:W:47:ASN:HD21	1.39	0.85
31:EA:92:PHE:HA	31:EA:95:VAL:HB	1.58	0.85
41:OA:34:CYS:SG	41:OA:37:CYS:HB3	2.16	0.85
59:GB:171:ARG:NH1	59:GB:174:ARG:HG3	1.91	0.85
1:A:330:G:H5'	58:FB:97:THR:HG22	1.58	0.85
1:A:690:G:H2'	1:A:691:C:H5"	1.57	0.85
2:B:1007:U:H3	2:B:1043:C:H42	1.22	0.85
54:BB:89:VAL:HG11	54:BB:119:ALA:HA	1.58	0.85
75:WB:93:SER:HB3	75:WB:99:ALA:HA	1.57	0.85
82:DC:217:GLY:HA3	82:DC:325:ARG:NH1	1.91	0.85
2:B:2774:C:H2'	2:B:2775:U:C6	2.11	0.85
11:K:156:ILE:HG13	11:K:161:VAL:HG21	1.56	0.85
52:ZA:237:VAL:HG22	71:SB:52:THR:HG21	1.59	0.85
1:A:1407:U:H2'	1:A:1408:G:C8	2.12	0.85
7:G:252:ILE:CG2	7:G:264:VAL:HG21	2.03	0.85
40:NA:57:LEU:HA	40:NA:60:LEU:HB2	1.57	0.85
40:NA:60:LEU:HD13	40:NA:68:ARG:HD2	1.58	0.85
2:B:792:G:H5"	32:FA:2:PRO:HG3	1.58	0.85
2:B:1146:C:H2'	2:B:1147:G:C8	2.10	0.85
5:E:97:LYS:HE2	5:E:101:LYS:HD2	1.59	0.85
1:A:980:G:C4'	1:A:1776:A:H4'	2.06	0.85
2:B:2647:A:H1'	14:N:22:TYR:CD2	2.12	0.85
2:B:3313:U:H5'	7:G:175:LYS:HD2	1.58	0.85
5:E:119:GLN:HG3	5:E:122:ARG:HD2	1.57	0.85
17:Q:59:ARG:HD3	17:Q:66:ASN:O	1.76	0.85
19:S:49:ARG:NH1	19:S:49:ARG:HB2	1.91	0.85
34:HA:39:SER:HA	34:HA:93:LEU:HA	1.56	0.85
76:XB:7:SER:HA	76:XB:13:LYS:HE2	1.56	0.85
2:B:44:U:H3	2:B:94:G:H1	1.25	0.85
2:B:1044:U:H2'	2:B:1045:C:H5"	1.58	0.85
13:M:188:THR:OG1	13:M:191:LEU:HB2	1.77	0.85
2:B:19:U:H5"	39:MA:90:ARG:HD2	1.58	0.85
13:M:115:ARG:HG3	13:M:123:ILE:HG23	1.59	0.85
12:L:190:VAL:HG13	12:L:192:GLN:H	1.41	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
61:IB:78:THR:HA	61:IB:84:ILE:HG22	1.57	0.85
74:VB:55:VAL:HG22	74:VB:75:VAL:HG23	1.56	0.85
82:DC:437:MET:HA	82:DC:442:VAL:HG12	1.58	0.85
1:A:885:G:H2'	1:A:886:U:C6	2.10	0.85
7:G:141:GLY:HA2	7:G:144:ILE:HD13	1.59	0.84
12:L:76:ALA:HB1	12:L:234:GLY:HA3	1.59	0.84
1:A:75:U:H3'	1:A:76:A:H5"	1.58	0.84
1:A:765:G:C6	59:GB:149:ARG:HB3	2.12	0.84
2:B:279:U:H2'	2:B:280:U:O4'	1.77	0.84
40:NA:56:ARG:HG2	40:NA:60:LEU:HD23	1.59	0.84
75:WB:71:ILE:H	75:WB:71:ILE:HD12	1.42	0.84
2:B:1324:U:H5"	24:X:2:ALA:HA	1.59	0.84
7:G:356:LEU:HD23	7:G:356:LEU:H	1.42	0.84
14:N:150:GLU:O	14:N:154:ARG:HB2	1.77	0.84
16:P:133:LEU:HA	16:P:137:GLN:CG	2.07	0.84
41:OA:53:ALA:HA	41:OA:56:ARG:NH1	1.92	0.84
72:TB:86:ILE:HA	72:TB:89:TRP:HB2	1.60	0.84
2:B:117:U:H1'	2:B:119:U:OP2	1.77	0.84
2:B:584:G:H2'	2:B:585:A:C8	2.12	0.84
2:B:1410:U:H4'	36:JA:75:LEU:HD11	1.58	0.84
2:B:2765:C:H4'	46:TA:39:GLY:CA	2.06	0.84
11:K:79:ALA:N	25:Y:138:SER:HB3	1.91	0.84
37:KA:45:LEU:HA	37:KA:71:VAL:HG11	1.59	0.84
57:EB:129:LEU:HD21	57:EB:172:VAL:HG11	1.59	0.84
2:B:2655:U:H2'	46:TA:3:ASN:HD22	1.43	0.84
12:L:143:ILE:HG21	12:L:169:LEU:HB3	1.59	0.84
67:OB:41:ILE:HG22	67:OB:42:GLN:H	1.41	0.84
2:B:1282:G:H5'	48:VA:83:ASN:HD22	1.41	0.84
7:G:219:ALA:HB2	7:G:336:VAL:HG13	1.58	0.84
9:I:33:ARG:NE	9:I:37:VAL:HG21	1.91	0.84
21:U:117:ILE:HD13	21:U:148:LEU:HB3	1.60	0.84
39:MA:100:VAL:HG22	39:MA:101:THR:H	1.39	0.84
43:QA:21:ARG:NH1	43:QA:24:PRO:HG3	1.93	0.84
67:OB:24:LEU:HG	67:OB:34:LEU:HD13	1.57	0.84
82:DC:569:SER:OG	82:DC:721:ASP:HB3	1.77	0.84
1:A:1357:A:H2'	1:A:1358:G:C8	2.13	0.84
49:WA:13:LEU:HB2	49:WA:310:ILE:HB	1.59	0.84
2:B:951:A:N6	2:B:1369:A:H1'	1.93	0.84
2:B:1706:C:H4'	2:B:1787:A:H4'	1.58	0.84
2:B:3298:C:H2'	2:B:3299:A:H8	1.43	0.84
6:F:136:ILE:HG13	6:F:148:VAL:HG12	1.58	0.84

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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1036:A:H3'	2:B:1037:C:H5"	1.59	0.83
2:B:1494:U:H4'	2:B:1495:U:C5'	2.05	0.83
2:B:3190:C:H2'	2:B:3191:G:C8	2.14	0.83
22:V:9:GLN:HE21	22:V:10:HIS:H	1.27	0.83
82:DC:89:ILE:HG12	82:DC:340:LEU:HA	1.61	0.83
14:N:60:LEU:HG	14:N:129:VAL:HG21	1.61	0.83
23:W:40:ALA:O	23:W:44:LEU:HD23	1.78	0.83
49:WA:42:LEU:HG	49:WA:68:VAL:HG11	1.60	0.83
57:EB:126:LEU:HD13	57:EB:129:LEU:HD12	1.58	0.83
71:SB:80:LYS:HD3	71:SB:81:ASN:HD22	1.44	0.83
72:TB:8:ALA:HA	72:TB:74:VAL:HG11	1.61	0.83
32:FA:6:THR:HG22	32:FA:8:THR:H	1.44	0.83
43:QA:23:LEU:HD23	43:QA:38:ASN:HA	1.60	0.83
48:VA:165:VAL:HG21	48:VA:181:PHE:CE1	2.14	0.83
52:ZA:78:ASP:HA	52:ZA:104:VAL:HG12	1.59	0.83
2:B:1524:A:H5"	29:CA:92:LYS:NZ	1.93	0.83
3:C:139:U:H2'	3:C:140:G:H8	1.44	0.83
16:P:85:LEU:HD11	16:P:106:LEU:HD22	1.60	0.83
52:ZA:38:VAL:HG22	52:ZA:39:THR:H	1.42	0.83
70:RB:99:ILE:HD12	70:RB:102:ARG:HD3	1.61	0.83
76:XB:73:TYR:HB3	76:XB:78:ALA:HB2	1.60	0.83
2:B:1481:A:H61	38:LA:2:ALA:HA	1.41	0.82
56:DB:6:SER:HA	56:DB:13:GLN:HB3	1.60	0.82
56:DB:137:ARG:HD3	56:DB:177:ARG:HD3	1.59	0.82
68:PB:30:TYR:O	68:PB:33:THR:HG23	1.79	0.82
76:XB:87:ARG:NH2	76:XB:94:ASN:HD22	1.75	0.82
82:DC:277:ILE:HG22	82:DC:281:ILE:HD11	1.61	0.82
2:B:1048:A:H2'	14:N:22:TYR:CZ	2.14	0.82
2:B:2662:G:H2'	2:B:2663:G:C8	2.14	0.82
2:B:2730:G:H4'	22:V:184:PHE:CE2	2.14	0.82
18:R:123:LEU:HD22	20:T:194:LEU:HG	1.61	0.82
24:X:59:VAL:HG11	25:Y:141:VAL:HG21	1.60	0.82
32:FA:36:GLY:HA2	32:FA:39:HIS:HB2	1.61	0.82
80:BC:26:LYS:HD3	80:BC:26:LYS:H	1.44	0.82
82:DC:116:THR:HG21	82:DC:483:PHE:N	1.93	0.82
82:DC:600:ALA:HB1	82:DC:605:ILE:HB	1.61	0.82
1:A:1316:G:H4'	67:OB:10:LYS:HE3	1.59	0.82
2:B:79:U:H2'	2:B:80:G:H8	1.43	0.82
15:O:90:GLN:HB3	15:O:172:LEU:HD11	1.61	0.82
58:FB:8:ARG:HD3	58:FB:21:PHE:HB3	1.60	0.82
58:FB:102:VAL:HG11	58:FB:169:ILE:HD11	1.60	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:75:ILE:HG23	82:DC:439:GLY:HA2	1.62	0.82
1:A:1788:G:C2'	1:A:1789:G:H5"	2.09	0.82
2:B:501:A:H4'	10:J:28:GLN:HB2	1.61	0.82
2:B:879:U:H4'	21:U:132:ALA:HB3	1.60	0.82
2:B:1220:U:H4'	2:B:1222:G:H1'	1.62	0.82
18:R:21:VAL:HG12	18:R:65:LEU:HA	1.61	0.82
65:MB:98:ASN:HB2	65:MB:122:THR:HA	1.61	0.82
15:O:19:LEU:HD12	15:O:69:VAL:HG13	1.59	0.82
22:V:68:ALA:HA	22:V:71:LEU:HD12	1.60	0.82
83:EC:6850:C:H3'	83:EC:6851:G:H5"	1.60	0.82
2:B:805:G:H1'	8:H:73:ARG:HD3	1.60	0.82
2:B:1818:U:H2'	2:B:1819:U:H4'	1.60	0.82
20:T:32:LYS:HA	20:T:101:ARG:HB3	1.61	0.82
68:PB:49:LYS:HB3	68:PB:72:ILE:HD13	1.61	0.82
1:A:839:U:H2'	1:A:840:U:H5"	1.60	0.82
1:A:1196:A:H4'	1:A:1197:C:H5"	1.62	0.82
2:B:2532:U:C3'	2:B:2533:G:H5"	2.10	0.82
6:F:84:THR:HG21	47:UA:63:THR:HB	1.61	0.82
57:EB:26:GLU:HA	57:EB:29:ASN:ND2	1.95	0.82
57:EB:168:SER:O	57:EB:172:VAL:HG23	1.80	0.82
2:B:1888:U:H2'	2:B:1889:G:O4'	1.79	0.82
63:KB:23:PRO:HG2	63:KB:26:PHE:HB2	1.60	0.82
82:DC:12:LEU:HD11	82:DC:97:SER:O	1.79	0.82
82:DC:732:GLU:HG2	82:DC:769:LYS:HG2	1.59	0.82
2:B:552:G:H2'	2:B:553:U:O4'	1.80	0.82
3:C:23:U:H4'	30:DA:17:LYS:HB2	1.60	0.82
24:X:73:LYS:HG3	24:X:97:VAL:HA	1.61	0.82
63:KB:16:ILE:HG23	72:TB:57:ARG:HH21	1.43	0.82
2:B:1295:G:H5'	24:X:84:ARG:NH1	1.95	0.82
2:B:1479:U:H2'	2:B:1480:G:H5'	1.61	0.82
2:B:2843:U:H5"	2:B:2844:C:H5	1.44	0.82
3:C:37:A:H4'	3:C:38:U:H5"	1.62	0.82
11:K:43:ILE:O	11:K:46:GLU:HG2	1.80	0.82
11:K:47:ARG:HD2	11:K:179:LEU:HD21	1.62	0.82
17:Q:42:ARG:HG2	17:Q:46:ILE:HG13	1.62	0.82
17:Q:186:ARG:O	17:Q:190:LYS:HB2	1.78	0.82
50:XA:98:ILE:HD11	50:XA:116:LYS:HG3	1.61	0.82
57:EB:153:LEU:H	57:EB:153:LEU:HD12	1.45	0.82
2:B:660:A:H5"	8:H:100:PHE:CD1	2.15	0.81
17:Q:46:ILE:HG22	17:Q:49:ARG:HB2	1.62	0.81
74:VB:41:ARG:HA	74:VB:44:LEU:HB2	1.60	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:563:TYR:HE2	82:DC:818:ILE:HG21	1.45	0.81
1:A:1199:G:H5'	1:A:1200:G:H5'	1.62	0.81
9:I:34:LYS:HE2	9:I:38:THR:HG21	1.61	0.81
14:N:115:MET:HG2	14:N:118:ALA:HB2	1.61	0.81
17:Q:119:TYR:O	17:Q:123:ILE:HG23	1.80	0.81
24:X:80:ARG:HG3	25:Y:156:TYR:H	1.44	0.81
53:AB:98:ALA:HA	53:AB:188:ILE:HD12	1.61	0.81
54:BB:201:HIS:HD2	54:BB:207:LEU:H	1.27	0.81
55:CB:96:SER:HB2	55:CB:176:THR:HG21	1.62	0.81
82:DC:164:LEU:HD21	82:DC:174:LEU:HD22	1.61	0.81
1:A:1210:C:H2'	1:A:1211:A:H8	1.45	0.81
1:A:1241:G:H4'	65:MB:79:HIS:H	1.44	0.81
2:B:209:A:H2'	8:H:162:THR:HG21	1.62	0.81
2:B:1231:A:H5'	2:B:1232:C:H5'	1.62	0.81
2:B:1480:G:H22	2:B:1871:U:H5"	1.45	0.81
2:B:1709:C:H4'	31:EA:15:ARG:HH12	1.44	0.81
2:B:2438:A:H2'	2:B:2439:A:C8	2.14	0.81
2:B:2765:C:C4'	46:TA:39:GLY:HA3	2.08	0.81
7:G:42:ALA:HB1	7:G:208:VAL:HG22	1.62	0.81
8:H:60:THR:HG21	8:H:77:VAL:HG22	1.61	0.81
19:S:35:VAL:HA	19:S:65:ARG:HE	1.45	0.81
39:MA:28:LEU:HD13	39:MA:29:ALA:N	1.96	0.81
70:RB:40:ASN:HD22	70:RB:107:THR:HG21	1.45	0.81
7:G:53:MET:HA	7:G:77:THR:HA	1.61	0.81
7:G:208:VAL:HG12	7:G:340:LYS:HE3	1.63	0.81
9:I:296:GLN:HG2	9:I:297:GLN:HG2	1.63	0.81
46:TA:65:THR:HG21	46:TA:89:LYS:HA	1.62	0.81
51:YA:195:LYS:HE2	51:YA:195:LYS:HA	1.60	0.81
2:B:169:U:H4'	17:Q:128:ARG:HD2	1.61	0.81
2:B:2484:A:H4'	5:E:130:LYS:HD2	1.59	0.81
6:F:8:GLN:HE21	6:F:231:SER:HB3	1.44	0.81
11:K:79:ALA:H	25:Y:138:SER:HB3	1.44	0.81
83:EC:6920:C:H2'	83:EC:6921:C:O4'	1.81	0.81
1:A:915:A:H61	64:LB:41:ARG:HH22	1.29	0.81
2:B:1222:G:H5'	48:VA:56:ASN:HB3	1.63	0.81
2:B:2755:C:H1'	25:Y:49:GLN:NE2	1.96	0.81
20:T:52:LEU:HA	20:T:55:HIS:HD2	1.45	0.81
38:LA:91:ARG:HA	38:LA:95:ILE:HD13	1.61	0.81
39:MA:118:ILE:O	39:MA:119:LYS:HB2	1.80	0.81
51:YA:87:ARG:H	51:YA:101:HIS:HB2	1.46	0.81
7:G:133:TYR:HD1	7:G:136:LYS:HD2	1.45	0.81

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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:296:A:H3'	2:B:297:G:H21	1.46	0.80
2:B:3176:G:C2	2:B:3213:A:H1'	2.16	0.80
12:L:133:LYS:HB2	12:L:199:ALA:HB3	1.62	0.80
17:Q:67:ARG:HB3	32:FA:105:LEU:HG	1.64	0.80
17:Q:115:ARG:HH12	17:Q:145:PHE:HB3	1.45	0.80
26:Z:43:VAL:HG21	26:Z:54:VAL:HG21	1.64	0.80
61:IB:2:SER:N	61:IB:82:ARG:HA	1.95	0.80
70:RB:95:ALA:HB1	70:RB:96:PRO:HD2	1.64	0.80
82:DC:204:PRO:HA	82:DC:209:VAL:HB	1.61	0.80
1:A:1524:A:H2'	1:A:1525:A:C8	2.17	0.80
2:B:351:A:C2	3:C:53:A:H1'	2.15	0.80
2:B:1828:A:H2'	2:B:1829:G:C8	2.16	0.80
2:B:2960:C:H2'	2:B:2961:G:C8	2.17	0.80
17:Q:162:ASN:HD21	17:Q:164:GLU:HG2	1.47	0.80
21:U:127:ARG:HB3	21:U:139:TYR:O	1.82	0.80
39:MA:66:VAL:HA	39:MA:69:LEU:HG	1.62	0.80
69:QB:40:SER:HA	69:QB:96:ALA:HB1	1.62	0.80
82:DC:835:TRP:O	82:DC:839:TYR:HB2	1.81	0.80
1:A:622:A:H4'	1:A:623:A:H5'	1.64	0.80
1:A:1073:G:C2'	1:A:1074:G:H5"	2.11	0.80
2:B:1647:A:H62	2:B:1808:G:H1'	1.46	0.80
5:E:91:LYS:HA	5:E:123:LEU:HD23	1.63	0.80
6:F:62:VAL:HA	6:F:73:GLU:HA	1.62	0.80
10:J:71:VAL:HG13	10:J:156:LYS:HG3	1.64	0.80
15:O:8:PRO:HD2	15:O:10:ARG:HD2	1.62	0.80
19:S:136:ASP:OD1	19:S:139:HIS:HB2	1.80	0.80
23:W:115:ILE:HD11	23:W:142:ILE:HD11	1.63	0.80
54:BB:234:PRO:HG3	54:BB:238:LEU:HD11	1.62	0.80
64:LB:86:THR:HG22	64:LB:90:ARG:HG3	1.63	0.80
82:DC:280:PRO:O	82:DC:284:LEU:HG	1.80	0.80
82:DC:382:VAL:HG11	82:DC:396:ALA:HB1	1.64	0.80
83:EC:6831:U:H3'	83:EC:6832:G:H5"	1.63	0.80
2:B:310:U:H2'	2:B:311:C:H5"	1.62	0.80
2:B:731:U:H2'	2:B:732:C:C6	2.15	0.80
2:B:3237:U:H2'	2:B:3238:G:H8	1.46	0.80
5:E:172:VAL:HG23	5:E:173:GLU:H	1.46	0.80
29:CA:63:ILE:HD12	29:CA:99:VAL:HG22	1.63	0.80
64:LB:137:LEU:HD13	64:LB:137:LEU:H	1.47	0.80
2:B:307:A:H2'	2:B:308:A:C8	2.15	0.80
2:B:610:G:H21	8:H:313:LEU:HD23	1.47	0.80
2:B:1719:G:C4'	2:B:1732:U:H4'	2.08	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2480:A:H5”	5:E:98:LYS:HG3	1.64	0.80
2:B:3040:A:H5”	27:AA:12:ARG:HB2	1.62	0.80
8:H:222:VAL:HG13	8:H:225:VAL:HB	1.60	0.80
11:K:82:LYS:HD2	11:K:82:LYS:H	1.46	0.80
12:L:245:LYS:O	12:L:249:ARG:HB2	1.80	0.80
50:XA:123:VAL:HG12	50:XA:124:THR:H	1.47	0.80
50:XA:179:ARG:HG2	50:XA:183:ARG:NH1	1.97	0.80
82:DC:823:ARG:HB3	82:DC:823:ARG:NH1	1.95	0.80
1:A:17:C:H2’	1:A:18:C:H6	1.45	0.80
2:B:2746:A:H5’	9:I:179:ARG:HG2	1.62	0.80
11:K:83:LEU:HD13	11:K:84:VAL:N	1.96	0.80
40:NA:36:ARG:HA	40:NA:36:ARG:NE	1.96	0.80
53:AB:141:LYS:HE3	53:AB:179:GLN:HG3	1.62	0.80
82:DC:135:VAL:HG21	82:DC:184:SER:HB3	1.63	0.80
82:DC:189:VAL:HG11	82:DC:201:GLN:HA	1.64	0.80
2:B:825:U:H2’	2:B:826:G:H5”	1.64	0.80
8:H:76:ARG:HD3	8:H:86:GLY:O	1.82	0.80
14:N:23:ASN:HD21	14:N:26:VAL:HG11	1.45	0.80
23:W:134:HIS:ND1	23:W:136:ARG:HB3	1.97	0.80
34:HA:74:ASN:ND2	47:UA:43:GLY:HA3	1.95	0.80
52:ZA:148:LEU:HD13	52:ZA:149:GLY:H	1.44	0.80
82:DC:40:VAL:HG21	82:DC:75:ILE:HG21	1.64	0.80
82:DC:76:SER:O	82:DC:77:LEU:HB3	1.81	0.80
2:B:31:C:H5	19:S:188:ARG:HH12	1.29	0.80
2:B:1302:A:C2’	2:B:1303:A:H5”	2.12	0.80
21:U:48:LEU:HD13	21:U:88:VAL:HG13	1.63	0.80
36:JA:96:ILE:HB	36:JA:121:ASN:HD21	1.47	0.80
56:DB:77:LEU:HD13	56:DB:84:TYR:HB2	1.64	0.80
58:FB:185:GLU:HA	58:FB:189:LEU:HD22	1.62	0.80
2:B:1233:G:C5’	48:VA:36:GLN:HE22	1.95	0.79
2:B:1711:C:H4’	31:EA:37:PRO:HB2	1.64	0.79
2:B:2542:U:H1’	2:B:2543:U:H5	1.46	0.79
2:B:2742:C:H2’	2:B:2743:A:H8	1.48	0.79
2:B:3184:A:C2’	2:B:3185:U:H5’	2.12	0.79
8:H:260:GLN:HE22	8:H:268:ALA:HB3	1.47	0.79
49:WA:176:LYS:HB3	49:WA:195:HIS:HB2	1.62	0.79
54:BB:147:ILE:HG22	54:BB:148:ARG:H	1.45	0.79
82:DC:823:ARG:HA	82:DC:828:MET:SD	2.22	0.79
1:A:20:G:H5’	1:A:571:G:C8	2.17	0.79
8:H:283:THR:HG22	8:H:285:ASP:H	1.45	0.79
77:YB:35:VAL:HG22	77:YB:79:PHE:HA	1.62	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:815:ALA:HA	82:DC:818:ILE:HD12	1.64	0.79
2:B:217:U:H4'	30:DA:100:HIS:CG	2.18	0.79
2:B:617:G:H4'	21:U:171:ARG:HE	1.47	0.79
2:B:821:U:H2'	2:B:822:G:H8	1.45	0.79
57:EB:91:ILE:HG13	57:EB:92:PHE:H	1.45	0.79
82:DC:45:ILE:HD12	82:DC:438:MET:HG3	1.64	0.79
1:A:1379:C:H1'	66:NB:19:VAL:HG22	1.63	0.79
2:B:2921:U:H2'	2:B:2923:U:H5"	1.63	0.79
7:G:74:GLU:HG2	7:G:325:LYS:HE3	1.65	0.79
18:R:72:LEU:HD21	18:R:76:ALA:HB3	1.65	0.79
24:X:106:LEU:O	24:X:110:MET:HG2	1.82	0.79
51:YA:66:VAL:HA	64:LB:33:LEU:HD13	1.63	0.79
69:QB:11:ALA:HA	69:QB:14:PHE:HB3	1.64	0.79
2:B:2356:A:N6	2:B:2983:C:H5	1.79	0.79
2:B:3185:U:H5"	13:M:23:ARG:NH2	1.98	0.79
7:G:144:ILE:H	7:G:144:ILE:HD12	1.48	0.79
27:AA:88:ARG:HB2	27:AA:88:ARG:HH11	1.47	0.79
31:EA:108:GLU:HG2	31:EA:112:LYS:HE3	1.63	0.79
38:LA:20:ILE:H	38:LA:20:ILE:HD13	1.47	0.79
54:BB:54:TYR:HB3	74:VB:17:LEU:HD21	1.64	0.79
1:A:1184:A:H3'	1:A:1185:U:H5"	1.65	0.79
2:B:121:A:H61	12:L:126:SER:HB2	1.46	0.79
2:B:2931:C:H2'	2:B:2932:U:O4'	1.82	0.79
6:F:39:GLY:HA3	12:L:36:ILE:HG21	1.64	0.79
13:M:138:THR:HG22	13:M:139:ASN:H	1.46	0.79
25:Y:8:ARG:HD2	25:Y:52:MET:HE3	1.64	0.79
50:XA:121:VAL:HG23	50:XA:141:ILE:HG21	1.65	0.79
1:A:1345:A:H1'	70:RB:56:VAL:HG21	1.64	0.79
2:B:1953:G:H3'	2:B:1954:G:H5"	1.64	0.79
2:B:2615:G:H2'	2:B:2616:C:C6	2.18	0.79
4:D:57:G:H4'	15:O:138:VAL:HG11	1.65	0.79
6:F:234:LYS:HD3	6:F:238:ILE:HD13	1.64	0.79
46:TA:4:VAL:HG23	46:TA:93:LEU:HA	1.63	0.79
1:A:148:A:H61	56:DB:133:LEU:HD11	1.47	0.79
2:B:1035:G:H21	83:EC:6927:U:H3	1.30	0.79
13:M:67:ALA:O	13:M:70:THR:HG22	1.83	0.79
82:DC:147:LEU:HB2	82:DC:192:TYR:O	1.83	0.79
83:EC:6911:A:H2'	83:EC:6912:G:C8	2.16	0.79
1:A:348:U:H4'	58:FB:14:THR:HG22	1.65	0.79
7:G:41:VAL:HG22	7:G:185:GLY:HA3	1.65	0.79
7:G:169:THR:HG22	7:G:171:LEU:HG	1.65	0.79

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

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

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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:629:U:H5'	63:KB:127:ARG:HH12	1.49	0.77
1:A:1682:U:O2'	1:A:1683:C:H5'	1.83	0.77
2:B:365:A:H3'	2:B:366:A:H8	1.50	0.77
21:U:33:ALA:HA	21:U:36:ILE:HG22	1.66	0.77
52:ZA:87:GLN:HA	52:ZA:96:THR:HA	1.66	0.77
52:ZA:106:ASP:OD2	52:ZA:110:HIS:HB2	1.84	0.77
54:BB:252:ARG:HA	54:BB:255:ARG:HD2	1.65	0.77
63:KB:56:ASP:HB3	77:YB:47:PHE:HB3	1.66	0.77
66:NB:109:PHE:HB3	66:NB:117:LEU:HD11	1.66	0.77
68:PB:100:THR:HB	68:PB:105:VAL:HA	1.66	0.77
73:UB:71:CYS:SG	73:UB:86:PHE:HA	2.23	0.77
1:A:1592:A:H2'	1:A:1593:A:H8	1.49	0.77
2:B:127:G:H2'	2:B:128:G:O4'	1.84	0.77
2:B:277:G:H2'	2:B:278:U:C6	2.19	0.77
2:B:1556:C:H3'	2:B:2169:G:H22	1.49	0.77
2:B:1719:G:H4'	2:B:1732:U:C4'	2.09	0.77
2:B:3262:U:H2'	2:B:3263:G:H5"	1.66	0.77
2:B:3376:A:H5'	2:B:3377:G:H5"	1.64	0.77
8:H:219:LEU:O	8:H:222:VAL:HG12	1.85	0.77
10:J:47:PHE:CZ	10:J:75:PRO:HD2	2.19	0.77
48:VA:7:LYS:HA	48:VA:10:GLU:HG2	1.67	0.77
1:A:523:G:H5"	74:VB:59:GLY:O	1.84	0.77
2:B:1757:A:H2'	2:B:1758:G:C8	2.20	0.77
2:B:3237:U:H2'	2:B:3238:G:C8	2.19	0.77
7:G:95:THR:HG23	7:G:98:GLY:O	1.85	0.77
12:L:130:TYR:HD1	12:L:202:GLU:HB3	1.49	0.77
13:M:134:ILE:HD11	13:M:157:ASN:HD21	1.48	0.77
20:T:89:SER:O	20:T:95:GLY:HA3	1.84	0.77
22:V:60:PRO:HG2	22:V:142:GLY:HA3	1.64	0.77
2:B:412:G:N3	21:U:118:GLN:HG3	2.00	0.77
2:B:824:C:H2'	2:B:825:U:C6	2.20	0.77
2:B:1448:U:H5	2:B:2355:G:N2	1.83	0.77
2:B:1650:G:H2'	2:B:1651:U:H6	1.48	0.77
2:B:1915:A:O3'	23:W:84:THR:HA	1.85	0.77
2:B:3182:G:H5"	20:T:161:LYS:HZ2	1.50	0.77
5:E:94:ASN:HB2	5:E:123:LEU:HG	1.66	0.77
7:G:308:MET:HB2	7:G:363:SER:HB2	1.67	0.77
12:L:43:LYS:HB3	29:CA:28:THR:HG21	1.64	0.77
43:QA:11:GLN:O	43:QA:14:ALA:HB3	1.85	0.77
48:VA:172:LEU:O	48:VA:176:LEU:HG	1.84	0.77
56:DB:74:LYS:HZ2	56:DB:94:ARG:HG3	1.50	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:FB:142:LYS:HD2	58:FB:146:ARG:HH12	1.49	0.77
82:DC:382:VAL:HG13	82:DC:397:PHE:H	1.48	0.77
1:A:884:A:H2'	1:A:885:G:C8	2.19	0.77
1:A:1338:C:H1'	1:A:1410:A:C5	2.20	0.77
2:B:1840:U:H4'	2:B:1841:A:H5'	1.67	0.77
2:B:1841:A:O2'	2:B:1842:A:H5"	1.84	0.77
6:F:40:TYR:HA	6:F:91:GLY:HA3	1.67	0.77
12:L:203:VAL:HG11	12:L:211:LEU:HD22	1.66	0.77
82:DC:45:ILE:HD13	82:DC:76:SER:HB2	1.67	0.77
4:D:89:G:H5"	24:X:84:ARG:NE	2.00	0.77
64:LB:13:VAL:HG13	64:LB:77:THR:H	1.49	0.77
82:DC:380:LEU:HD11	82:DC:456:LEU:HD21	1.65	0.77
2:B:1007:U:H2'	2:B:1008:U:C5	2.20	0.77
2:B:1233:G:H5'	48:VA:36:GLN:NE2	1.99	0.77
2:B:1236:G:H2'	16:P:60:VAL:HG13	1.65	0.77
2:B:1605:A:H2'	2:B:1606:U:H5"	1.66	0.77
5:E:10:ARG:HD3	5:E:180:VAL:HG23	1.66	0.77
15:O:112:LEU:HD23	15:O:112:LEU:H	1.50	0.77
57:EB:46:ILE:HG23	57:EB:60:ILE:HG12	1.67	0.77
74:VB:124:ARG:O	74:VB:128:LYS:HG2	1.83	0.77
1:A:230:C:H2'	1:A:231:U:H5"	1.67	0.76
1:A:381:C:H2'	1:A:382:C:C6	2.20	0.76
2:B:431:U:H2'	2:B:432:G:C8	2.20	0.76
2:B:1436:U:C5	8:H:72:ALA:HA	2.19	0.76
8:H:114:ASN:HD22	8:H:114:ASN:N	1.82	0.76
23:W:92:GLN:HG2	23:W:96:ILE:HD11	1.67	0.76
49:WA:244:ALA:HB3	49:WA:253:ALA:HB3	1.67	0.76
50:XA:197:ILE:HD13	50:XA:197:ILE:H	1.49	0.76
82:DC:274:ASN:HA	82:DC:278:LEU:HD12	1.67	0.76
1:A:614:C:H5	73:UB:5:LYS:HZ1	1.33	0.76
1:A:1485:C:C2'	1:A:1486:G:H4'	2.13	0.76
1:A:1495:C:C3'	1:A:1496:U:H5"	2.14	0.76
1:A:1568:C:H4'	1:A:1569:A:H8	1.50	0.76
2:B:546:C:H5'	2:B:547:G:O4'	1.85	0.76
2:B:577:C:O2'	2:B:579:G:H5"	1.85	0.76
2:B:1195:A:H2	2:B:1313:G:H22	1.32	0.76
2:B:1497:C:O2'	2:B:1602:A:H1'	1.83	0.76
6:F:227:ARG:HG2	6:F:239:ALA:CB	2.14	0.76
15:O:23:VAL:HG11	15:O:30:LEU:HA	1.67	0.76
22:V:33:TYR:HA	22:V:36:LEU:HD12	1.66	0.76
24:X:129:ILE:HG21	24:X:134:ASP:HB3	1.64	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:XA:200:ASP:HB2	67:OB:86:PRO:CA	2.15	0.76
76:XB:30:ILE:HD11	76:XB:34:LYS:HG2	1.68	0.76
2:B:286:U:H2'	2:B:287:G:C8	2.20	0.76
2:B:1240:A:N6	16:P:58:VAL:HG22	2.00	0.76
5:E:120:VAL:HA	5:E:124:LEU:HD12	1.66	0.76
7:G:245:GLY:HA3	7:G:248:LYS:HE3	1.65	0.76
16:P:60:VAL:O	16:P:75:PRO:HD2	1.85	0.76
20:T:124:LEU:HB3	20:T:127:LEU:HD12	1.67	0.76
57:EB:93:LEU:HD22	57:EB:125:ILE:HG23	1.65	0.76
70:RB:37:VAL:HG21	70:RB:112:VAL:HG21	1.66	0.76
76:XB:87:ARG:HH22	76:XB:94:ASN:ND2	1.82	0.76
2:B:2647:A:H1'	14:N:22:TYR:HD2	1.47	0.76
4:D:4:U:H2'	4:D:5:G:C8	2.20	0.76
9:I:51:LEU:HD22	9:I:144:VAL:HG11	1.67	0.76
11:K:101:LYS:NZ	11:K:105:LEU:HD11	2.01	0.76
12:L:142:LEU:HD13	12:L:148:ALA:HB2	1.68	0.76
14:N:46:PHE:CB	14:N:139:ARG:HG2	2.08	0.76
22:V:27:LYS:O	22:V:30:VAL:HB	1.85	0.76
76:XB:38:ARG:HH21	76:XB:83:ILE:HB	1.50	0.76
2:B:1386:A:H5"	8:H:141:ARG:HH21	1.50	0.76
2:B:3092:C:H2'	27:AA:12:ARG:NH2	2.00	0.76
47:UA:46:THR:HB	47:UA:58:SER:HB2	1.67	0.76
51:YA:35:PRO:HB3	51:YA:231:LEU:HD13	1.68	0.76
55:CB:162:VAL:HG23	78:ZB:45:LYS:HB3	1.65	0.76
56:DB:2:LYS:HB3	56:DB:108:VAL:HG22	1.67	0.76
65:MB:64:LYS:HB2	65:MB:73:PRO:HG3	1.66	0.76
1:A:112:A:H5'	61:IB:68:GLY:HA2	1.65	0.76
1:A:1360:A:H2'	1:A:1361:U:H4'	1.67	0.76
1:A:1368:G:H5"	69:QB:69:LYS:HG2	1.68	0.76
2:B:269:G:H21	2:B:294:U:H2'	1.50	0.76
2:B:1225:A:H2	2:B:3116:G:H2'	1.49	0.76
2:B:2611:U:H2'	2:B:2612:U:H6	1.47	0.76
18:R:15:VAL:HG12	18:R:19:ARG:HG2	1.65	0.76
22:V:12:ARG:NH1	22:V:12:ARG:HB2	2.00	0.76
42:PA:28:ASN:HD21	42:PA:42:LYS:HG3	1.50	0.76
48:VA:26:PHE:HB2	48:VA:87:VAL:HB	1.67	0.76
52:ZA:52:THR:HB	52:ZA:54:GLU:HG2	1.67	0.76
57:EB:11:GLN:HB3	57:EB:13:PRO:HD2	1.68	0.76
68:PB:42:TYR:HA	68:PB:85:PHE:HE1	1.48	0.76
73:UB:32:ARG:HH11	73:UB:32:ARG:HB3	1.51	0.76
1:A:1067:C:H5"	51:YA:150:VAL:HG23	1.68	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1430:U:H2'	32:FA:9:ARG:HH22	1.51	0.76
2:B:2156:C:H2'	2:B:2178:A:H61	1.50	0.76
2:B:3190:C:H2'	2:B:3191:G:H8	1.49	0.76
5:E:16:LEU:HD11	5:E:208:SER:HB2	1.67	0.76
7:G:8:ALA:HB1	7:G:9:PRO:HD2	1.68	0.76
11:K:79:ALA:HB2	25:Y:138:SER:H	1.51	0.76
40:NA:60:LEU:HD12	40:NA:69:ALA:HA	1.68	0.76
50:XA:88:LYS:HD3	50:XA:201:LEU:HG	1.65	0.76
82:DC:16:VAL:HG23	82:DC:346:VAL:HG22	1.66	0.76
2:B:114:A:H4'	19:S:49:ARG:NE	2.01	0.76
2:B:707:U:C2'	2:B:708:G:H5"	2.15	0.76
2:B:3047:U:H1'	7:G:327:CYS:SG	2.24	0.76
12:L:112:GLU:O	12:L:116:VAL:HG23	1.86	0.76
51:YA:83:LYS:HB2	51:YA:104:ASP:HB3	1.67	0.76
54:BB:56:LEU:HD11	74:VB:74:LEU:HD11	1.68	0.76
65:MB:40:ARG:HA	65:MB:40:ARG:HE	1.48	0.76
82:DC:378:LEU:CD2	82:DC:411:VAL:HG21	2.16	0.76
2:B:47:C:H2'	2:B:48:A:C8	2.20	0.76
2:B:1203:A:H2'	2:B:1204:A:C8	2.21	0.76
2:B:2814:G:H2'	2:B:2815:G:H8	1.50	0.76
12:L:248:LYS:HA	12:L:252:ASN:HD22	1.51	0.76
56:DB:186:ARG:O	56:DB:190:GLN:HG2	1.86	0.76
2:B:861:C:H2'	2:B:862:U:C6	2.21	0.76
2:B:1371:G:H2'	2:B:1372:C:C6	2.20	0.76
2:B:1915:A:H5'	23:W:82:LYS:O	1.86	0.76
2:B:2369:G:H2'	2:B:2370:G:C8	2.20	0.76
19:S:84:PRO:HA	19:S:87:GLN:HB2	1.68	0.76
25:Y:72:VAL:HG22	25:Y:93:VAL:HG12	1.68	0.76
40:NA:44:VAL:HA	40:NA:47:ILE:HG22	1.67	0.76
41:OA:52:LYS:HA	41:OA:55:ARG:HH12	1.51	0.76
1:A:1435:G:C4'	1:A:1436:A:H5'	2.16	0.75
2:B:2154:U:H2'	2:B:2155:G:C8	2.21	0.75
2:B:2333:C:H2'	2:B:2334:U:C6	2.21	0.75
2:B:3034:C:N4	13:M:121:LYS:H	1.84	0.75
13:M:8:GLN:HG2	13:M:68:LEU:HD11	1.67	0.75
21:U:119:VAL:HB	21:U:146:ILE:CG2	2.08	0.75
48:VA:54:GLY:HA3	48:VA:58:MET:HG3	1.67	0.75
75:WB:96:SER:O	75:WB:97:LYS:HG2	1.86	0.75
83:EC:6914:A:H2'	83:EC:6915:G:N7	2.01	0.75
1:A:448:C:H5'	54:BB:29:PRO:CG	2.15	0.75
2:B:10:C:H3'	2:B:11:A:H5"	1.69	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2909:U:H3'	2:B:2910:A:H5"	1.68	0.75
2:B:3064:U:H2'	2:B:3065:G:C8	2.21	0.75
9:I:10:SER:HA	9:I:13:SER:HB3	1.65	0.75
18:R:20:VAL:HG13	18:R:66:THR:OG1	1.86	0.75
38:LA:54:ILE:HG23	38:LA:70:LYS:O	1.87	0.75
51:YA:70:LEU:HB2	51:YA:84:ILE:HG12	1.69	0.75
52:ZA:148:LEU:HD13	52:ZA:149:GLY:N	2.00	0.75
56:DB:121:LEU:HD12	56:DB:124:LEU:HD22	1.67	0.75
70:RB:109:GLU:HG3	70:RB:110:PRO:HD2	1.68	0.75
71:SB:85:TYR:CD1	77:YB:6:ASP:HB2	2.21	0.75
82:DC:164:LEU:HA	82:DC:168:GLN:HA	1.66	0.75
1:A:1032:G:H2'	1:A:1033:C:C6	2.21	0.75
2:B:303:G:H4'	2:B:304:G:H21	1.51	0.75
2:B:438:A:H2'	2:B:439:C:H4'	1.68	0.75
2:B:3362:A:H2'	2:B:3363:U:O4'	1.87	0.75
23:W:25:ASP:OD2	23:W:49:THR:HA	1.87	0.75
25:Y:58:GLN:O	25:Y:58:GLN:HG3	1.86	0.75
31:EA:15:ARG:C	31:EA:19:ALA:HB2	2.07	0.75
32:FA:74:ASN:ND2	32:FA:115:LYS:HB2	2.02	0.75
63:KB:33:VAL:HG11	63:KB:66:ILE:HG12	1.67	0.75
83:EC:6842:U:H5'	83:EC:6843:U:O4'	1.87	0.75
2:B:655:C:H2'	2:B:656:A:C8	2.22	0.75
2:B:2561:A:H2'	2:B:2562:A:C8	2.21	0.75
6:F:123:ARG:HA	6:F:163:ARG:HH12	1.52	0.75
39:MA:95:PHE:O	39:MA:99:GLN:HG2	1.86	0.75
52:ZA:101:VAL:HG11	52:ZA:211:LEU:HD12	1.66	0.75
55:CB:187:ILE:H	55:CB:187:ILE:HD12	1.51	0.75
79:AC:31:ILE:HD11	79:AC:40:ARG:HB3	1.69	0.75
2:B:1256:G:H4'	16:P:127:SER:HB3	1.69	0.75
2:B:2149:A:C5'	6:F:179:LEU:HD23	2.16	0.75
2:B:2661:G:H2'	2:B:2662:G:C8	2.21	0.75
8:H:346:LYS:HD3	8:H:346:LYS:N	1.99	0.75
23:W:70:LYS:HD2	23:W:74:ARG:O	1.85	0.75
27:AA:62:VAL:HB	27:AA:70:ARG:HG2	1.68	0.75
49:WA:115:ILE:HG13	49:WA:121:MET:O	1.87	0.75
67:OB:103:ASP:OD1	67:OB:104:ASN:N	2.19	0.75
82:DC:415:GLY:HA3	82:DC:425:ASP:HB3	1.69	0.75
1:A:821:U:H3'	1:A:822:U:H5"	1.66	0.75
1:A:927:C:H2'	1:A:928:U:C6	2.21	0.75
1:A:1498:G:H2'	1:A:1499:G:H5'	1.68	0.75
2:B:671:U:H2'	2:B:672:A:H8	1.50	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1783:U:H2'	2:B:1784:G:C8	2.22	0.75
7:G:306:THR:HG21	7:G:316:GLU:HG3	1.68	0.75
8:H:110:ASN:HB2	19:S:201:ARG:O	1.86	0.75
31:EA:25:ILE:HA	31:EA:43:VAL:HG12	1.68	0.75
46:TA:68:VAL:HB	46:TA:85:LEU:HB3	1.68	0.75
50:XA:64:ILE:O	50:XA:67:ILE:HG12	1.86	0.75
51:YA:29:TRP:HZ2	64:LB:74:VAL:HG12	1.50	0.75
54:BB:34:GLY:HA3	54:BB:83:PRO:HG2	1.67	0.75
1:A:249:U:H3'	1:A:250:C:H5'	1.68	0.75
1:A:385:A:H5'	58:FB:21:PHE:CZ	2.22	0.75
1:A:1477:G:H2'	1:A:1478:G:C8	2.21	0.75
2:B:444:U:H3	2:B:490:A:H61	1.33	0.75
2:B:674:G:H1'	8:H:117:GLU:HB2	1.69	0.75
2:B:1535:A:H62	2:B:1586:G:H21	1.31	0.75
2:B:1634:G:O6	31:EA:17:ARG:HD3	1.86	0.75
6:F:206:PRO:HG3	6:F:213:GLY:HA3	1.69	0.75
7:G:332:ARG:O	7:G:333:LYS:HB2	1.86	0.75
55:CB:121:ILE:HD11	55:CB:198:LEU:HD12	1.68	0.75
68:PB:42:TYR:HA	68:PB:85:PHE:CE1	2.22	0.75
73:UB:79:ASN:HB3	73:UB:81:LYS:HG3	1.69	0.75
1:A:381:C:H5"	54:BB:10:LYS:HD3	1.67	0.75
1:A:629:U:H1'	2:B:846:A:C6	2.22	0.75
1:A:1651:A:H2'	1:A:1652:C:H6	1.52	0.75
2:B:883:A:O4'	21:U:133:HIS:HA	1.87	0.75
2:B:1051:U:H5'	9:I:15:ARG:HH22	1.52	0.75
9:I:194:LEU:HD22	9:I:198:TYR:HE2	1.51	0.75
11:K:157:ASN:O	11:K:158:LYS:HB2	1.86	0.75
19:S:49:ARG:HB2	19:S:49:ARG:HH11	1.49	0.75
25:Y:64:VAL:HG22	25:Y:74:VAL:HG22	1.69	0.75
49:WA:136:ILE:HD13	49:WA:136:ILE:H	1.51	0.75
50:XA:147:THR:HB	50:XA:151:SER:HB2	1.68	0.75
52:ZA:137:ILE:CG1	52:ZA:138:PRO:HD2	2.17	0.75
53:AB:164:VAL:O	53:AB:168:ILE:HG13	1.86	0.75
55:CB:77:TYR:HB3	55:CB:84:LYS:HG2	1.69	0.75
56:DB:135:PRO:HB2	56:DB:141:ILE:HG12	1.69	0.75
61:IB:5:LEU:HD23	61:IB:6:THR:N	2.01	0.75
75:WB:77:ARG:HA	75:WB:80:LEU:HG	1.69	0.75
82:DC:203:TYR:HD2	82:DC:206:ARG:HD2	1.51	0.75
2:B:584:G:H2'	2:B:585:A:H8	1.52	0.75
8:H:188:ARG:HH21	8:H:197:ARG:CB	2.00	0.75
21:U:36:ILE:HD11	21:U:95:LEU:HD11	1.67	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:EA:7:ALA:HB1	31:EA:89:VAL:HG11	1.68	0.75
46:TA:64:THR:HB	46:TA:89:LYS:NZ	2.02	0.75
47:UA:49:ARG:HH21	47:UA:52:ALA:HB2	1.52	0.75
48:VA:135:PHE:O	48:VA:139:LEU:HB2	1.87	0.75
49:WA:170:ILE:HD11	49:WA:204:ALA:HB2	1.69	0.75
63:KB:145:THR:HB	63:KB:149:LEU:HD22	1.69	0.75
82:DC:635:CYS:HB3	82:DC:668:GLN:HE22	1.51	0.75
1:A:178:U:H4'	1:A:179:A:H5'	1.69	0.74
1:A:1098:U:H1'	72:TB:71:LYS:HG3	1.69	0.74
1:A:1238:A:H2'	1:A:1239:U:H5'	1.69	0.74
2:B:135:C:H2'	39:MA:94:LYS:HE2	1.67	0.74
2:B:1007:U:H2'	2:B:1008:U:C6	2.22	0.74
2:B:1234:G:H2'	2:B:1235:U:C5	2.21	0.74
2:B:1256:G:C5'	16:P:127:SER:HB3	2.17	0.74
8:H:84:ARG:HA	8:H:87:GLN:OE1	1.87	0.74
11:K:102:VAL:O	11:K:106:LEU:HB2	1.87	0.74
24:X:99:ARG:HH12	24:X:126:VAL:HB	1.52	0.74
36:JA:112:ALA:HA	36:JA:117:ILE:HB	1.66	0.74
50:XA:179:ARG:O	50:XA:183:ARG:HB2	1.86	0.74
57:EB:111:LYS:HD3	57:EB:113:PRO:HD3	1.69	0.74
69:QB:82:GLY:O	69:QB:93:HIS:HA	1.85	0.74
82:DC:284:LEU:O	82:DC:288:ILE:HG13	1.87	0.74
82:DC:387:PRO:HA	82:DC:394:PHE:HB2	1.69	0.74
1:A:448:C:H2'	1:A:449:C:C6	2.22	0.74
1:A:484:C:H2'	1:A:485:A:H8	1.52	0.74
1:A:639:U:H5"	57:EB:101:LYS:HB2	1.66	0.74
1:A:828:U:H2'	1:A:829:A:H5"	1.67	0.74
1:A:906:A:H2	1:A:998:A:H1'	1.52	0.74
2:B:2662:G:H2'	2:B:2663:G:H8	1.52	0.74
2:B:3148:U:H2'	2:B:3149:G:C8	2.21	0.74
10:J:132:ALA:O	10:J:136:GLU:HG2	1.87	0.74
14:N:51:HIS:CD2	14:N:168:SER:HB2	2.22	0.74
14:N:52:LEU:HB2	14:N:152:LEU:HD13	1.69	0.74
35:IA:80:ASN:N	35:IA:89:LEU:HA	2.02	0.74
61:IB:101:GLU:HB3	73:UB:12:ALA:HB3	1.67	0.74
69:QB:113:ILE:HG23	69:QB:128:GLY:HA3	1.69	0.74
2:B:10:C:H2'	2:B:11:A:H4'	1.69	0.74
2:B:1576:G:H2'	2:B:1577:G:O4'	1.88	0.74
30:DA:121:ARG:NH2	30:DA:121:ARG:HB2	2.01	0.74
31:EA:77:TYR:HB3	34:HA:35:ARG:HE	1.51	0.74
43:QA:9:ILE:HG22	43:QA:13:MET:CE	2.17	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:VA:114:VAL:HG12	48:VA:116:PRO:HD3	1.69	0.74
52:ZA:58:LEU:HG	71:SB:12:TYR:CE1	2.22	0.74
66:NB:32:ASN:H	66:NB:66:ARG:NH2	1.85	0.74
67:OB:44:LYS:HG3	67:OB:47:ARG:NH2	2.02	0.74
70:RB:83:GLU:HB2	79:AC:55:PHE:CD2	2.22	0.74
1:A:1182:U:H4'	65:MB:124:THR:HG21	1.69	0.74
1:A:1594:G:H5"	79:AC:33:LYS:HD2	1.69	0.74
2:B:361:A:C5'	41:OA:36:SER:HB2	2.18	0.74
2:B:2434:U:C5	2:B:2593:A:H1'	2.23	0.74
12:L:178:ALA:HB2	12:L:218:ILE:HG21	1.69	0.74
27:AA:67:PRO:HA	27:AA:70:ARG:HB2	1.68	0.74
52:ZA:222:TYR:C	52:ZA:224:PHE:H	1.89	0.74
60:HB:15:LEU:HD22	60:HB:46:LEU:HD21	1.68	0.74
68:PB:72:ILE:HG22	68:PB:81:ILE:HD11	1.68	0.74
1:A:1682:U:H5"	56:DB:33:GLY:HA3	1.69	0.74
2:B:759:U:H2'	2:B:760:G:H5'	1.67	0.74
2:B:1235:U:C4'	2:B:1236:G:H5'	2.16	0.74
2:B:2948:C:H1'	7:G:242:THR:HG22	1.68	0.74
2:B:3109:G:O2'	2:B:3110:C:H5'	1.87	0.74
17:Q:107:GLU:HG3	40:NA:18:THR:HG21	1.70	0.74
18:R:120:VAL:HG13	20:T:194:LEU:HD22	1.70	0.74
21:U:36:ILE:HG23	21:U:117:ILE:HG21	1.70	0.74
23:W:23:TRP:HB3	23:W:51:VAL:CG2	2.17	0.74
51:YA:129:THR:HG21	51:YA:180:THR:HA	1.68	0.74
63:KB:88:LEU:HD23	63:KB:125:LEU:CD1	2.17	0.74
65:MB:81:ARG:HH12	65:MB:120:SER:HB3	1.51	0.74
82:DC:489:VAL:O	82:DC:531:ALA:HA	1.87	0.74
1:A:1153:G:H5'	76:XB:85:ARG:HG2	1.68	0.74
1:A:1164:G:H2'	1:A:1165:G:C8	2.22	0.74
1:A:1634:C:O2'	1:A:1635:A:H5'	1.87	0.74
2:B:1588:A:H3'	2:B:1589:A:C5'	2.17	0.74
2:B:1785:U:H2'	2:B:1786:G:C8	2.22	0.74
2:B:3121:U:H1'	2:B:3122:A:H5"	1.69	0.74
2:B:3348:G:H22	2:B:3357:U:H3	1.34	0.74
8:H:235:LEU:HD12	8:H:235:LEU:O	1.86	0.74
49:WA:133:VAL:HB	49:WA:142:ALA:HB3	1.69	0.74
56:DB:50:PHE:HA	56:DB:112:VAL:O	1.87	0.74
58:FB:38:ILE:HG21	58:FB:80:GLY:H	1.50	0.74
1:A:36:C:H2'	1:A:37:U:C6	2.22	0.74
1:A:1510:U:H2'	1:A:1511:U:H5'	1.68	0.74
2:B:71:A:H5'	17:Q:62:THR:HG22	1.69	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:999:G:H2'	2:B:1000:C:C6	2.22	0.74
4:D:6:C:C2	4:D:7:G:H1'	2.23	0.74
8:H:23:PRO:HG2	8:H:258:LEU:CD2	2.18	0.74
9:I:21:ARG:O	9:I:25:GLU:HG2	1.88	0.74
14:N:53:VAL:H	14:N:165:ILE:HA	1.52	0.74
19:S:146:ALA:HA	19:S:149:ASN:HB3	1.68	0.74
72:TB:3:ARG:HD2	72:TB:6:VAL:HA	1.70	0.74
2:B:2079:G:H2'	2:B:2080:C:O4'	1.88	0.74
9:I:224:LYS:HA	9:I:227:LEU:HD22	1.70	0.74
13:M:146:LEU:CD1	13:M:158:ALA:HB2	2.18	0.74
39:MA:104:GLN:NE2	39:MA:107:LYS:HD3	2.02	0.74
51:YA:167:VAL:HA	51:YA:170:GLU:HB3	1.68	0.74
73:UB:96:VAL:O	73:UB:97:ASP:HB2	1.87	0.74
2:B:17:G:H1	3:C:142:C:N4	1.84	0.74
4:D:114:U:H2'	4:D:115:G:H8	1.51	0.74
11:K:224:ILE:HG12	24:X:36:ILE:HG12	1.70	0.74
14:N:47:PRO:HG2	14:N:48:LEU:HD22	1.70	0.74
21:U:51:VAL:HG11	21:U:58:ILE:HG12	1.70	0.74
22:V:86:THR:HG22	22:V:105:ARG:HB2	1.68	0.74
66:NB:75:VAL:O	66:NB:78:VAL:HB	1.88	0.74
76:XB:79:ILE:HA	76:XB:84:VAL:HG11	1.68	0.74
82:DC:147:LEU:HD13	82:DC:193:ALA:HB2	1.68	0.74
2:B:1473:G:H5"	23:W:23:TRP:CD1	2.22	0.74
14:N:189:GLU:HB3	14:N:200:LEU:HB3	1.68	0.74
18:R:58:ILE:HG12	18:R:59:ASN:N	2.01	0.74
20:T:173:ALA:HA	20:T:176:LYS:HE3	1.69	0.74
24:X:169:SER:HB3	24:X:171:PHE:CD1	2.22	0.74
25:Y:17:ARG:HE	25:Y:47:SER:HB3	1.52	0.74
30:DA:89:LYS:HG3	30:DA:93:ALA:HB3	1.70	0.74
71:SB:55:LEU:HD11	71:SB:69:LEU:HG	1.68	0.74
76:XB:4:LYS:HD2	76:XB:92:ARG:HH12	1.52	0.74
82:DC:666:ALA:HB2	82:DC:706:ILE:HA	1.70	0.74
1:A:569:C:H2'	1:A:570:A:O4'	1.87	0.73
1:A:967:A:OP1	63:KB:4:MET:HB3	1.88	0.73
1:A:989:U:H2'	1:A:990:C:O4'	1.88	0.73
2:B:608:A:H5'	8:H:322:GLN:HG2	1.69	0.73
2:B:700:C:H2'	2:B:701:G:C8	2.23	0.73
2:B:816:A:N1	2:B:919:U:H1'	2.03	0.73
2:B:2436:U:H2'	2:B:2437:G:H5"	1.68	0.73
2:B:3322:A:H2'	2:B:3323:A:C8	2.23	0.73
18:R:21:VAL:HB	18:R:63:VAL:HG22	1.67	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:FA:145:VAL:HG12	32:FA:146:GLU:H	1.53	0.73
1:A:1057:U:H4'	1:A:1058:U:H3'	1.69	0.73
1:A:1495:C:H2'	1:A:1496:U:H5"	1.69	0.73
2:B:954:U:H1'	33:GA:12:GLN:NE2	2.03	0.73
2:B:1653:G:H2'	2:B:1654:A:O4'	1.88	0.73
2:B:3120:C:H3'	44:RA:111:ARG:NH2	2.03	0.73
7:G:95:THR:HG21	7:G:100:ARG:HB2	1.70	0.73
11:K:170:GLU:HG3	11:K:179:LEU:HA	1.70	0.73
13:M:47:LYS:HE3	18:R:5:SER:HB2	1.70	0.73
23:W:119:LEU:HG	23:W:123:LEU:HD12	1.69	0.73
38:LA:57:LEU:HD23	38:LA:57:LEU:H	1.53	0.73
63:KB:150:VAL:HG13	63:KB:151:ASN:H	1.54	0.73
75:WB:77:ARG:HH11	75:WB:77:ARG:HB2	1.53	0.73
1:A:820:U:H2'	1:A:821:U:H4'	1.70	0.73
2:B:126:U:H4'	19:S:139:HIS:CE1	2.24	0.73
2:B:1690:C:H2'	2:B:1691:U:O4'	1.89	0.73
2:B:2076:G:C2'	2:B:2077:U:H5"	2.19	0.73
8:H:23:PRO:HD2	8:H:26:PHE:HE2	1.53	0.73
49:WA:261:LYS:HB3	49:WA:270:LEU:HD11	1.69	0.73
50:XA:183:ARG:HD3	50:XA:191:ARG:HH21	1.53	0.73
64:LB:20:TYR:O	64:LB:26:THR:HA	1.89	0.73
74:VB:19:ALA:HB1	74:VB:77:ASN:HD21	1.52	0.73
83:EC:6866:C:H2'	83:EC:6867:C:H5'	1.69	0.73
1:A:1266:U:H2'	1:A:1267:G:C8	2.22	0.73
1:A:1495:C:H3'	1:A:1496:U:H5"	1.69	0.73
2:B:87:U:H5'	22:V:167:SER:HB2	1.69	0.73
2:B:1604:G:C3'	2:B:1605:A:H5"	2.16	0.73
2:B:2572:C:H5"	31:EA:59:ALA:HB2	1.70	0.73
7:G:307:PRO:HB3	7:G:362:ALA:O	1.89	0.73
12:L:185:ARG:O	12:L:188:THR:HG22	1.88	0.73
60:HB:86:ILE:HG23	60:HB:87:VAL:N	2.02	0.73
73:UB:19:ARG:HD3	73:UB:23:ARG:HG2	1.71	0.73
74:VB:27:VAL:HB	74:VB:69:SER:HB2	1.69	0.73
74:VB:125:LEU:HA	74:VB:128:LYS:HB2	1.69	0.73
1:A:1135:U:H2'	1:A:1136:U:C6	2.23	0.73
2:B:987:U:H2'	2:B:988:U:C6	2.23	0.73
2:B:1019:G:H3'	2:B:1020:G:H5"	1.70	0.73
2:B:1146:C:H2'	2:B:1147:G:H8	1.52	0.73
2:B:2129:U:H2'	2:B:2130:G:H8	1.50	0.73
2:B:2712:U:O2'	2:B:2743:A:H4'	1.87	0.73
2:B:2821:C:H42	2:B:2869:U:H3	1.35	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:3027:A:C8	82:DC:789:GLY:HA2	2.24	0.73
3:C:19:C:H2'	3:C:20:U:O4'	1.89	0.73
3:C:70:G:H5"	30:DA:28:ARG:NE	2.03	0.73
6:F:144:ASN:O	6:F:159:SER:HA	1.89	0.73
10:J:26:ARG:HB2	10:J:26:ARG:HH11	1.53	0.73
11:K:85:PHE:HE1	11:K:87:VAL:HG13	1.51	0.73
13:M:85:GLY:HA3	13:M:187:ILE:HB	1.70	0.73
14:N:99:ILE:HG12	14:N:101:LYS:H	1.53	0.73
14:N:213:PHE:N	14:N:214:PRO:HD3	2.04	0.73
31:EA:10:VAL:HG12	31:EA:11:ALA:H	1.54	0.73
48:VA:176:LEU:HB2	48:VA:178:ILE:HD13	1.70	0.73
61:IB:33:ARG:HD3	61:IB:34:TRP:N	2.04	0.73
1:A:778:G:H2'	1:A:779:U:H5'	1.68	0.73
1:A:939:A:H2'	1:A:940:A:C8	2.23	0.73
1:A:1488:G:H2'	1:A:1513:G:N2	2.03	0.73
1:A:1789:G:H2'	1:A:1790:A:C8	2.23	0.73
2:B:266:A:C6	40:NA:30:LYS:HA	2.24	0.73
2:B:884:A:OP2	41:OA:4:GLY:HA3	1.88	0.73
2:B:3353:G:O2'	2:B:3356:G:H4'	1.88	0.73
4:D:25:G:H2'	4:D:26:C:C6	2.24	0.73
11:K:155:LYS:HG2	11:K:158:LYS:O	1.88	0.73
12:L:46:LEU:HD12	29:CA:30:ALA:HB2	1.69	0.73
16:P:108:GLU:O	16:P:111:GLU:HB3	1.88	0.73
17:Q:28:GLN:O	17:Q:32:LYS:HB2	1.89	0.73
29:CA:115:ARG:HB2	29:CA:119:THR:C	2.09	0.73
55:CB:131:GLN:O	55:CB:134:VAL:HG12	1.89	0.73
66:NB:102:LYS:O	66:NB:105:LEU:HB3	1.89	0.73
1:A:617:U:H5'	1:A:1031:U:O4'	1.87	0.73
1:A:1366:U:H4'	69:QB:7:ARG:HD2	1.71	0.73
2:B:120:G:H22	12:L:124:ASP:HA	1.53	0.73
2:B:3286:G:H2'	2:B:3287:U:H5"	1.71	0.73
7:G:166:ILE:HG12	7:G:173:GLN:HB3	1.69	0.73
7:G:169:THR:CG2	7:G:171:LEU:HG	2.19	0.73
11:K:102:VAL:HG21	11:K:129:LEU:HD22	1.70	0.73
49:WA:161:LYS:HA	49:WA:161:LYS:HE3	1.69	0.73
2:B:1204:A:H61	2:B:1300:G:H1'	1.53	0.73
2:B:2663:G:H5"	15:O:142:LYS:HE2	1.68	0.73
2:B:2814:G:H2'	2:B:2815:G:C8	2.24	0.73
2:B:2895:G:H2'	2:B:2896:A:H5"	1.70	0.73
5:E:72:PHE:HA	5:E:75:ASP:HB3	1.69	0.73
9:I:27:LYS:HA	9:I:150:LEU:HD11	1.70	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:R:123:LEU:HD23	20:T:190:VAL:HG23	1.71	0.73
19:S:43:THR:HG23	19:S:63:ARG:HH21	1.54	0.73
32:FA:75:LEU:HG	32:FA:114:GLY:HA2	1.71	0.73
36:JA:20:HIS:O	36:JA:21:HIS:HB2	1.87	0.73
53:AB:102:ALA:HB2	53:AB:171:ALA:HB1	1.70	0.73
54:BB:159:THR:HG22	54:BB:173:ILE:HB	1.69	0.73
82:DC:733:ILE:H	82:DC:733:ILE:HD12	1.52	0.73
2:B:595:G:H2'	2:B:596:C:C6	2.23	0.73
2:B:2186:U:O2'	2:B:2187:G:H5'	1.88	0.73
2:B:2904:U:H2'	2:B:2905:U:C6	2.24	0.73
15:O:19:LEU:HB2	15:O:69:VAL:HG13	1.71	0.73
18:R:45:LEU:HD21	18:R:55:ARG:HG2	1.71	0.73
31:EA:13:VAL:HB	31:EA:20:GLY:N	2.03	0.73
35:IA:31:ARG:HH11	35:IA:31:ARG:HB3	1.54	0.73
37:KA:89:LEU:HD12	37:KA:89:LEU:H	1.52	0.73
42:PA:31:LEU:HA	42:PA:37:PRO:HA	1.70	0.73
53:AB:124:ARG:HA	53:AB:127:MET:HB2	1.70	0.73
72:TB:6:VAL:HG12	72:TB:34:ILE:HD11	1.68	0.73
82:DC:571:SER:HA	82:DC:720:ALA:HA	1.71	0.73
2:B:1680:G:H2'	2:B:1681:U:C6	2.23	0.73
2:B:1934:G:C2'	2:B:1935:G:H5"	2.17	0.73
17:Q:16:LYS:HD2	17:Q:16:LYS:N	2.00	0.73
20:T:136:THR:CG2	20:T:137:THR:H	2.02	0.73
28:BA:33:ASN:HD21	28:BA:35:LYS:HB3	1.51	0.73
44:RA:79:GLU:OE2	44:RA:80:PRO:HD2	1.89	0.73
50:XA:77:SER:O	50:XA:99:ALA:HA	1.88	0.73
53:AB:208:ILE:HD12	67:OB:16:LEU:HD21	1.71	0.73
55:CB:94:THR:O	55:CB:98:MET:HG2	1.87	0.73
2:B:502:U:H2'	2:B:503:C:H5"	1.71	0.72
2:B:876:A:H5"	2:B:1890:U:H5"	1.71	0.72
2:B:948:C:H2'	2:B:949:C:C6	2.24	0.72
2:B:1348:U:H4'	2:B:1349:G:H5"	1.71	0.72
2:B:1456:A:H61	2:B:1477:A:H4'	1.52	0.72
2:B:1725:C:H2'	2:B:1726:C:C6	2.24	0.72
8:H:126:ILE:HG23	8:H:250:TRP:HH2	1.54	0.72
9:I:166:ALA:HB1	9:I:171:LEU:HD12	1.70	0.72
11:K:224:ILE:HD13	24:X:39:SER:CB	2.18	0.72
18:R:120:VAL:HG22	20:T:197:LEU:HD13	1.70	0.72
19:S:43:THR:HG23	19:S:63:ARG:NH2	2.04	0.72
22:V:179:ARG:HB3	22:V:179:ARG:NH1	2.03	0.72
61:IB:125:VAL:HB	61:IB:138:ASN:O	1.88	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
74:VB:15:ASN:HD22	74:VB:22:GLN:HB3	1.54	0.72
75:WB:100:ILE:HD13	75:WB:101:TYR:N	2.04	0.72
82:DC:590:ALA:HB3	82:DC:720:ALA:HB2	1.71	0.72
82:DC:753:GLN:HB2	82:DC:771:TYR:HB2	1.71	0.72
83:EC:6927:U:H3'	83:EC:6928:G:H5'	1.69	0.72
2:B:148:G:H5"	19:S:55:ALA:HB2	1.71	0.72
6:F:242:ARG:CD	6:F:243:THR:H	2.01	0.72
14:N:174:THR:HG22	14:N:176:LEU:N	2.01	0.72
23:W:10:LEU:HB3	23:W:41:ILE:CD1	2.19	0.72
39:MA:54:VAL:O	39:MA:58:ILE:HG13	1.89	0.72
82:DC:672:LYS:HA	82:DC:680:GLU:HG2	1.69	0.72
1:A:1581:C:H5'	66:NB:136:SER:HA	1.70	0.72
2:B:508:U:H2'	2:B:509:U:C6	2.23	0.72
2:B:1480:G:N2	2:B:1871:U:H5"	2.03	0.72
2:B:1488:G:H5'	2:B:1838:G:O6	1.88	0.72
11:K:173:LEU:HD22	11:K:178:ILE:HD12	1.69	0.72
61:IB:74:THR:H	61:IB:87:ARG:H	1.36	0.72
73:UB:32:ARG:HB3	73:UB:32:ARG:NH1	2.04	0.72
82:DC:147:LEU:HB3	82:DC:193:ALA:HA	1.71	0.72
2:B:80:G:H2'	2:B:81:C:H6	1.54	0.72
2:B:306:A:C2	2:B:2784:G:H1'	2.24	0.72
2:B:1601:U:H2'	2:B:1603:A:OP2	1.89	0.72
2:B:2415:C:H5'	6:F:207:VAL:HG22	1.70	0.72
13:M:100:ASN:ND2	13:M:115:ARG:HB2	2.03	0.72
22:V:158:HIS:H	22:V:186:VAL:HG13	1.55	0.72
36:JA:9:ILE:H	36:JA:9:ILE:HD12	1.52	0.72
59:GB:141:VAL:HG12	59:GB:143:ILE:H	1.52	0.72
1:A:639:U:H3	57:EB:100:PRO:HA	1.54	0.72
1:A:1519:U:H2'	1:A:1520:U:C5	2.24	0.72
2:B:968:G:H21	33:GA:15:LYS:HZ2	1.36	0.72
2:B:1807:G:H2'	2:B:1808:G:O4'	1.89	0.72
2:B:2858:U:H2'	2:B:2859:U:C6	2.24	0.72
2:B:3129:A:C2'	2:B:3130:A:H5"	2.18	0.72
16:P:135:THR:HG22	16:P:147:ASN:HA	1.71	0.72
17:Q:67:ARG:HB3	32:FA:105:LEU:CG	2.19	0.72
19:S:174:ILE:HG12	19:S:185:ALA:O	1.89	0.72
39:MA:48:ARG:O	39:MA:51:ILE:HB	1.88	0.72
48:VA:26:PHE:HE1	48:VA:190:VAL:HG12	1.54	0.72
56:DB:88:ARG:HB3	56:DB:91:GLU:HB2	1.70	0.72
1:A:138:A:H61	1:A:266:A:H61	1.38	0.72
1:A:1767:G:H5'	1:A:1768:G:H21	1.54	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:776:U:H2'	2:B:777:U:H5"	1.71	0.72
2:B:1236:G:N3	16:P:58:VAL:HG12	2.04	0.72
9:I:236:LEU:HD12	9:I:239:ILE:HD12	1.72	0.72
17:Q:2:ALA:HA	32:FA:33:GLY:H	1.54	0.72
17:Q:57:VAL:HG21	17:Q:147:ILE:HG21	1.69	0.72
23:W:17:VAL:HG12	23:W:18:GLY:H	1.54	0.72
54:BB:59:ARG:HE	54:BB:60:GLU:HG3	1.54	0.72
56:DB:137:ARG:HE	56:DB:140:ASN:HB2	1.53	0.72
65:MB:81:ARG:HA	65:MB:116:LEU:HB2	1.71	0.72
1:A:198:A:H2'	1:A:199:G:O4'	1.89	0.72
2:B:661:G:H4'	2:B:662:U:H6	1.54	0.72
2:B:1447:G:H22	2:B:2355:G:H2'	1.55	0.72
2:B:1805:C:H2'	2:B:1806:A:H8	1.55	0.72
2:B:2443:A:C2	2:B:2505:U:H1'	2.25	0.72
2:B:2895:G:H5"	44:RA:102:ARG:NH2	2.04	0.72
4:D:80:G:H2'	4:D:81:U:C6	2.25	0.72
12:L:132:VAL:HG23	12:L:199:ALA:O	1.90	0.72
14:N:153:ARG:HH21	14:N:154:ARG:HA	1.54	0.72
19:S:54:LYS:HB2	19:S:59:PHE:CE2	2.23	0.72
20:T:7:VAL:HB	20:T:33:ILE:HG12	1.70	0.72
25:Y:27:LEU:O	25:Y:30:TYR:HB2	1.88	0.72
58:FB:184:LEU:HB3	58:FB:189:LEU:HD13	1.71	0.72
82:DC:496:LYS:HD2	82:DC:553:PRO:HB3	1.72	0.72
1:A:385:A:H2'	1:A:386:G:H8	1.54	0.72
1:A:896:U:H2'	1:A:897:C:C6	2.24	0.72
1:A:1003:A:H4'	1:A:1004:U:H5'	1.72	0.72
1:A:1024:U:H2'	1:A:1025:A:H5"	1.70	0.72
2:B:293:C:H2'	2:B:294:U:O4'	1.90	0.72
2:B:499:G:H2'	2:B:500:C:C6	2.24	0.72
2:B:1616:U:H2'	2:B:1617:G:C8	2.25	0.72
2:B:2163:C:H4'	6:F:8:GLN:HA	1.71	0.72
5:E:176:GLU:HA	5:E:179:LEU:HD12	1.71	0.72
7:G:361:THR:HG22	7:G:371:GLN:OE1	1.90	0.72
8:H:82:THR:HG23	8:H:84:ARG:HB3	1.71	0.72
11:K:88:ARG:HA	11:K:134:VAL:HG12	1.71	0.72
37:KA:18:ARG:HA	37:KA:23:ASN:HA	1.72	0.72
43:QA:21:ARG:CZ	43:QA:24:PRO:HG3	2.20	0.72
53:AB:94:ARG:HB2	53:AB:101:GLN:HG2	1.72	0.72
54:BB:214:LEU:HD13	54:BB:244:ILE:HG21	1.69	0.72
58:FB:64:ASN:O	58:FB:180:ASP:HA	1.90	0.72
69:QB:86:ARG:HB3	69:QB:89:ARG:HD2	1.72	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
77:YB:55:THR:HG22	77:YB:62:ILE:HA	1.72	0.72
83:EC:6832:G:C2'	83:EC:6833:G:H5'	2.20	0.72
83:EC:6926:U:C5	83:EC:6928:G:H1'	2.24	0.72
1:A:678:A:H2'	1:A:679:U:H5'	1.72	0.72
2:B:1405:U:H5'	36:JA:57:TYR:O	1.89	0.72
2:B:1523:U:H5'	29:CA:113:LEU:HD13	1.72	0.72
2:B:2193:U:H3	2:B:2313:A:H62	1.37	0.72
7:G:295:ALA:HB1	7:G:300:ARG:H	1.54	0.72
17:Q:107:GLU:HG3	40:NA:18:THR:CG2	2.20	0.72
20:T:34:VAL:CG1	20:T:103:LYS:HB2	2.18	0.72
24:X:110:MET:HG3	24:X:121:ILE:HD13	1.71	0.72
29:CA:115:ARG:H	29:CA:120:LYS:HA	1.55	0.72
38:LA:19:LYS:HD3	38:LA:37:LYS:HA	1.72	0.72
55:CB:128:ASN:ND2	55:CB:129:PRO:HD2	2.05	0.72
65:MB:43:ARG:NH1	65:MB:47:ARG:HD3	1.98	0.72
82:DC:510:ARG:HD3	82:DC:549:HIS:HA	1.70	0.72
1:A:373:G:H5'	61:IB:96:LYS:HG3	1.72	0.72
1:A:1184:A:H2'	1:A:1185:U:H4'	1.72	0.72
1:A:1544:U:H4'	68:PB:132:ARG:NH1	2.05	0.72
1:A:1563:C:H5'	69:QB:84:LYS:HZ1	1.55	0.72
2:B:916:G:OP1	2:B:2957:G:H5"	1.89	0.72
2:B:1221:A:H3'	2:B:1222:G:H5"	1.72	0.72
2:B:1386:A:H5"	8:H:141:ARG:NH2	2.05	0.72
2:B:1827:C:H2'	2:B:1828:A:C8	2.25	0.72
7:G:367:LYS:HA	28:BA:17:ARG:HH22	1.54	0.72
8:H:327:LEU:HD11	11:K:165:ASP:HA	1.70	0.72
13:M:1:MET:SD	24:X:139:TYR:HB3	2.30	0.72
14:N:96:VAL:HG22	14:N:125:LEU:HD22	1.71	0.72
17:Q:47:ALA:HB1	17:Q:48:PRO:CD	2.19	0.72
19:S:140:LYS:O	19:S:144:ARG:HG3	1.90	0.72
23:W:7:GLN:HA	23:W:10:LEU:HB2	1.72	0.72
27:AA:33:ASN:HD22	27:AA:33:ASN:H	1.37	0.72
49:WA:170:ILE:HG22	49:WA:180:ALA:HB2	1.71	0.72
1:A:475:A:H3'	1:A:476:U:C6	2.25	0.71
1:A:1241:G:H5'	65:MB:102:PHE:HZ	1.53	0.71
1:A:1344:A:H2	70:RB:56:VAL:HG13	1.53	0.71
2:B:1279:C:O5'	2:B:1279:C:H6	1.71	0.71
2:B:3004:C:H4'	7:G:99:LEU:O	1.90	0.71
2:B:3348:G:H2'	2:B:3349:C:C6	2.24	0.71
24:X:141:LYS:HG3	24:X:144:LEU:HD12	1.72	0.71
30:DA:3:LYS:HG3	30:DA:8:VAL:HG11	1.72	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:HA:78:GLY:HA2	34:HA:81:VAL:HG22	1.72	0.71
53:AB:137:VAL:CG1	53:AB:151:LYS:HG2	2.20	0.71
61:IB:45:PRO:HG2	61:IB:48:ALA:HB2	1.70	0.71
70:RB:21:LYS:HA	70:RB:94:GLU:HG2	1.70	0.71
82:DC:307:LEU:C	82:DC:308:LYS:HD3	2.10	0.71
82:DC:387:PRO:HA	82:DC:394:PHE:CB	2.20	0.71
82:DC:414:GLN:HB2	82:DC:468:THR:HB	1.70	0.71
82:DC:559:PRO:HG2	82:DC:778:PHE:HE1	1.54	0.71
1:A:189:C:H3'	1:A:190:C:H5"	1.70	0.71
2:B:1364:C:OP1	22:V:3:ILE:HG12	1.90	0.71
12:L:97:TYR:OH	12:L:203:VAL:HG23	1.90	0.71
19:S:68:ARG:HH21	19:S:128:LYS:HB2	1.55	0.71
23:W:28:GLU:O	23:W:32:ILE:HG13	1.89	0.71
31:EA:26:VAL:HG23	31:EA:27:LYS:H	1.56	0.71
52:ZA:58:LEU:HG	71:SB:12:TYR:HE1	1.54	0.71
54:BB:100:ARG:NH2	54:BB:118:GLU:HG2	2.05	0.71
68:PB:17:LEU:HG	68:PB:22:VAL:HG21	1.72	0.71
1:A:1338:C:H1'	1:A:1410:A:C4	2.25	0.71
2:B:268:A:N6	2:B:295:A:H3'	2.05	0.71
2:B:415:G:H2'	2:B:416:A:C8	2.25	0.71
2:B:1567:U:H2'	2:B:1568:U:H5"	1.70	0.71
2:B:1650:G:H2'	2:B:1651:U:C6	2.26	0.71
2:B:2394:G:H3'	2:B:2394:G:OP2	1.90	0.71
2:B:3060:C:H2'	2:B:3061:G:C8	2.25	0.71
2:B:3330:A:H4'	7:G:366:GLY:HA3	1.71	0.71
8:H:44:LYS:HD2	8:H:111:VAL:CG2	2.20	0.71
11:K:136:TYR:CE2	11:K:231:ASN:HB2	2.26	0.71
18:R:45:LEU:HD12	18:R:57:ALA:HB2	1.71	0.71
19:S:147:ARG:C	19:S:150:TRP:HE1	1.94	0.71
21:U:168:LEU:HD23	21:U:172:GLN:HG2	1.71	0.71
27:AA:87:ARG:NH2	27:AA:93:LEU:HD11	2.05	0.71
34:HA:27:TYR:O	34:HA:31:VAL:HG23	1.90	0.71
41:OA:54:LYS:O	41:OA:58:THR:HG23	1.90	0.71
43:QA:9:ILE:HG22	43:QA:13:MET:HE2	1.72	0.71
47:UA:14:TYR:HA	47:UA:17:ARG:HE	1.54	0.71
61:IB:5:LEU:HD23	61:IB:6:THR:H	1.54	0.71
64:LB:24:ASN:N	64:LB:55:SER:HB3	2.05	0.71
68:PB:33:THR:HA	68:PB:39:GLY:HA2	1.72	0.71
75:WB:42:LEU:HD12	75:WB:43:ASP:N	2.04	0.71
82:DC:615:ARG:NH2	82:DC:633:ILE:HD11	2.05	0.71
1:A:885:G:H2'	1:A:886:U:H6	1.54	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:992:A:H2'	1:A:993:A:H5'	1.73	0.71
1:A:1095:U:H1'	72:TB:16:ASN:HD22	1.54	0.71
2:B:269:G:C5	19:S:14:LYS:HD2	2.25	0.71
2:B:886:C:H2'	2:B:887:G:C8	2.24	0.71
2:B:984:G:N2	33:GA:13:THR:HB	2.04	0.71
2:B:1833:G:C2'	2:B:1834:U:H5'	2.21	0.71
2:B:2922:G:H2'	2:B:2923:U:C4'	2.21	0.71
2:B:3153:U:H3	2:B:3293:U:H3	1.36	0.71
8:H:115:HIS:O	8:H:119:ARG:HG3	1.91	0.71
10:J:82:ARG:HB3	37:KA:104:PRO:HB3	1.72	0.71
11:K:47:ARG:NH1	11:K:179:LEU:HD22	2.05	0.71
24:X:82:ASP:HA	24:X:87:THR:HA	1.72	0.71
27:AA:62:VAL:HG12	27:AA:63:LYS:H	1.53	0.71
36:JA:64:LYS:O	36:JA:65:PHE:HB2	1.91	0.71
54:BB:101:LEU:HB3	54:BB:109:PHE:CE1	2.25	0.71
68:PB:145:ARG:HE	68:PB:145:ARG:HA	1.55	0.71
74:VB:123:LYS:HD2	74:VB:124:ARG:N	2.05	0.71
76:XB:4:LYS:HE3	76:XB:5:ARG:NH2	2.05	0.71
82:DC:445:ILE:HG12	82:DC:446:ASP:H	1.55	0.71
82:DC:565:GLU:OE1	82:DC:676:ILE:HB	1.90	0.71
83:EC:6912:G:H2'	83:EC:6913:U:C4'	2.19	0.71
2:B:514:G:H2'	2:B:515:C:O4'	1.90	0.71
2:B:646:A:H2'	2:B:647:A:O4'	1.91	0.71
2:B:964:G:N2	32:FA:40:HIS:HB2	2.06	0.71
2:B:2358:A:H2'	2:B:2359:C:O4'	1.90	0.71
2:B:3298:C:H2'	2:B:3299:A:C8	2.24	0.71
3:C:75:G:C1'	43:QA:29:LEU:HG	2.20	0.71
9:I:286:VAL:HG13	14:N:206:LEU:HD22	1.71	0.71
14:N:46:PHE:HB2	14:N:139:ARG:CG	2.09	0.71
22:V:65:SER:HA	22:V:93:ILE:HD13	1.72	0.71
22:V:132:PRO:HD2	22:V:135:GLN:NE2	2.05	0.71
48:VA:165:VAL:CG1	48:VA:170:ALA:HB2	2.20	0.71
51:YA:71:ALA:HB2	51:YA:79:HIS:O	1.90	0.71
54:BB:206:ASP:HB2	54:BB:222:LEU:HB2	1.73	0.71
61:IB:97:TYR:O	61:IB:99:ARG:HG2	1.89	0.71
82:DC:155:VAL:HG21	82:DC:209:VAL:HG22	1.72	0.71
82:DC:322:VAL:HG12	82:DC:326:LYS:HE2	1.73	0.71
82:DC:539:GLU:HA	82:DC:542:LEU:HD12	1.71	0.71
2:B:219:A:H8	2:B:1390:A:C8	2.09	0.71
2:B:966:U:H4'	32:FA:43:ILE:HG21	1.73	0.71
2:B:1886:A:O4'	2:B:3307:A:H5'	1.91	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1950:U:H3	2:B:2096:A:H61	1.38	0.71
2:B:2843:U:H5"	2:B:2844:C:C5	2.24	0.71
2:B:3118:C:H2'	2:B:3119:U:H5"	1.70	0.71
2:B:3163:A:C2'	2:B:3164:C:H5"	2.19	0.71
5:E:93:LEU:O	5:E:100:ILE:HB	1.91	0.71
10:J:129:GLU:HG3	10:J:130:ILE:H	1.55	0.71
13:M:112:ILE:HD11	13:M:134:ILE:HD13	1.72	0.71
60:HB:55:VAL:HB	60:HB:68:LEU:HD12	1.73	0.71
69:QB:74:GLY:HA2	69:QB:77:ASN:ND2	2.06	0.71
82:DC:221:THR:HG23	82:DC:333:ALA:HB1	1.73	0.71
1:A:684:A:H2'	1:A:685:A:H5"	1.72	0.71
1:A:1011:G:H2'	1:A:1012:U:H5	1.56	0.71
2:B:148:G:C5'	19:S:55:ALA:HB2	2.20	0.71
2:B:289:A:C2	19:S:93:LYS:HD3	2.25	0.71
2:B:1195:A:H1'	2:B:1319:G:H4'	1.72	0.71
2:B:2048:G:H2'	2:B:2049:A:H5'	1.72	0.71
2:B:2771:U:H5"	46:TA:15:LYS:HE2	1.71	0.71
5:E:196:LYS:HD3	5:E:200:ASN:HB2	1.72	0.71
7:G:117:ARG:CZ	7:G:175:LYS:HD3	2.21	0.71
9:I:78:ALA:HB3	9:I:105:ILE:HG12	1.72	0.71
13:M:158:ALA:HA	13:M:161:LEU:HD12	1.72	0.71
17:Q:56:PRO:HB3	17:Q:75:PHE:CD1	2.26	0.71
19:S:138:GLN:HA	19:S:143:ARG:HH11	1.54	0.71
23:W:105:LEU:HD11	23:W:135:LYS:CG	2.16	0.71
24:X:26:ARG:HH21	24:X:28:ARG:NH2	1.89	0.71
35:IA:55:LEU:HG	35:IA:59:ILE:HD11	1.72	0.71
66:NB:79:TYR:HA	66:NB:82:ARG:HD3	1.71	0.71
68:PB:46:VAL:HG11	68:PB:69:ILE:HG23	1.73	0.71
73:UB:56:LYS:HA	73:UB:72:VAL:HG12	1.73	0.71
74:VB:11:LYS:O	74:VB:23:PHE:HA	1.90	0.71
82:DC:369:ILE:HD13	82:DC:402:ALA:HB2	1.72	0.71
83:EC:6934:U:H2'	83:EC:6935:G:C4'	2.16	0.71
2:B:713:U:O2'	2:B:754:G:H5"	1.89	0.71
2:B:858:A:H4'	2:B:1791:C:H5'	1.71	0.71
2:B:1392:G:H3'	36:JA:125:ARG:HH21	1.55	0.71
2:B:2284:C:H2'	2:B:2285:C:O4'	1.91	0.71
6:F:104:LEU:HD23	6:F:146:THR:HG21	1.72	0.71
7:G:367:LYS:HA	28:BA:17:ARG:NH2	2.06	0.71
11:K:160:ARG:HH11	11:K:160:ARG:HG2	1.56	0.71
23:W:81:ARG:HG2	23:W:88:ARG:HD2	1.73	0.71
28:BA:60:LYS:HE2	28:BA:60:LYS:HA	1.72	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DA:33:ALA:H	30:DA:50:ILE:HG22	1.56	0.71
68:PB:20:THR:HG21	68:PB:35:ILE:HA	1.73	0.71
72:TB:40:VAL:HG11	72:TB:103:ILE:HD12	1.71	0.71
1:A:586:G:H2'	1:A:587:C:C6	2.26	0.71
1:A:1789:G:H2'	1:A:1790:A:H8	1.54	0.71
2:B:986:U:H2'	2:B:987:U:C6	2.25	0.71
2:B:1346:G:H2'	2:B:1347:U:O4'	1.90	0.71
2:B:1458:U:H5"	35:IA:34:LYS:NZ	2.06	0.71
3:C:53:A:H2'	3:C:54:A:C8	2.26	0.71
12:L:154:ALA:HB2	12:L:186:LEU:HD11	1.72	0.71
13:M:180:TYR:HB2	44:RA:85:LEU:HD12	1.73	0.71
69:QB:101:ASN:O	69:QB:105:LEU:HG	1.90	0.71
74:VB:88:THR:O	74:VB:92:VAL:HG23	1.90	0.71
82:DC:217:GLY:HA3	82:DC:325:ARG:HH12	1.56	0.71
82:DC:699:DDE:HAD1	83:EC:6952:U:H4'	1.54	0.71
1:A:625:C:H2'	1:A:626:U:C6	2.25	0.71
1:A:1107:G:H3'	1:A:1108:G:H21	1.55	0.71
2:B:83:U:H2'	2:B:84:U:O4'	1.91	0.71
2:B:266:A:N6	40:NA:30:LYS:HA	2.06	0.71
2:B:1501:U:H3	2:B:1515:A:N6	1.87	0.71
2:B:2162:U:H5"	6:F:238:ILE:HD13	1.73	0.71
2:B:2271:A:H2'	2:B:2272:G:C4'	2.21	0.71
2:B:3272:C:H4'	10:J:78:ARG:O	1.91	0.71
48:VA:186:THR:HG22	48:VA:187:VAL:H	1.54	0.71
53:AB:196:ARG:NH1	53:AB:196:ARG:HB2	2.06	0.71
67:OB:24:LEU:HD23	67:OB:31:ASN:HA	1.72	0.71
69:QB:114:VAL:HG23	69:QB:123:ARG:O	1.91	0.71
82:DC:740:VAL:O	82:DC:743:ILE:HG22	1.90	0.71
1:A:780:A:H1'	74:VB:9:THR:N	2.00	0.70
1:A:1126:G:H5'	45:SA:11:ARG:NE	2.06	0.70
1:A:1767:G:H4'	1:A:1768:G:C5'	2.17	0.70
2:B:1339:C:H2'	2:B:1340:G:C8	2.25	0.70
2:B:1521:G:H4'	2:B:1603:A:N6	2.04	0.70
2:B:3354:U:H4'	2:B:3356:G:H5'	1.73	0.70
49:WA:26:SER:HB2	49:WA:73:LEU:HD22	1.73	0.70
49:WA:83:ALA:HB2	49:WA:89:LEU:HG	1.73	0.70
70:RB:40:ASN:ND2	70:RB:107:THR:HG21	2.06	0.70
83:EC:6934:U:C3'	83:EC:6935:G:H4'	2.20	0.70
1:A:94:U:H2'	1:A:95:G:H5'	1.73	0.70
1:A:629:U:H2'	1:A:630:A:H5"	1.73	0.70
1:A:1210:C:H2'	1:A:1211:A:C8	2.26	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1068:C:H5'	25:Y:110:LYS:HE3	1.72	0.70
2:B:1364:C:H2'	2:B:1365:G:C8	2.25	0.70
2:B:1711:C:H5"	31:EA:38:PHE:HB3	1.71	0.70
2:B:2503:G:H3'	2:B:2504:U:C5'	2.21	0.70
38:LA:57:LEU:HG	38:LA:62:TYR:CE2	2.27	0.70
49:WA:42:LEU:HD23	49:WA:71:CYS:HB3	1.73	0.70
50:XA:168:HIS:HD1	50:XA:203:PHE:HE1	1.39	0.70
51:YA:146:GLN:H	51:YA:149:GLN:HB2	1.56	0.70
60:HB:58:GLN:HB2	60:HB:65:TYR:HB2	1.71	0.70
69:QB:123:ARG:HG2	69:QB:124:ILE:H	1.55	0.70
82:DC:358:GLU:HG2	82:DC:479:LYS:HE3	1.72	0.70
82:DC:590:ALA:HB3	82:DC:720:ALA:CB	2.21	0.70
1:A:86:A:H2'	1:A:87:C:C6	2.26	0.70
1:A:410:A:H2'	1:A:411:C:O4'	1.91	0.70
2:B:352:A:N6	2:B:365:A:H5"	2.05	0.70
2:B:1464:G:H1'	2:B:1511:U:H3	1.55	0.70
2:B:2561:A:C6	12:L:32:LYS:HB2	2.25	0.70
14:N:85:PHE:HA	14:N:139:ARG:O	1.91	0.70
16:P:123:ARG:NH2	48:VA:42:ARG:HB2	2.03	0.70
27:AA:93:LEU:H	27:AA:93:LEU:HD23	1.56	0.70
30:DA:17:LYS:HG2	30:DA:21:THR:CG2	2.21	0.70
36:JA:43:ARG:HH11	36:JA:43:ARG:HG2	1.56	0.70
39:MA:13:SER:OG	39:MA:16:GLN:HG3	1.91	0.70
48:VA:58:MET:HE1	48:VA:86:PHE:HZ	1.56	0.70
52:ZA:140:ARG:HH22	52:ZA:226:THR:HG22	1.55	0.70
57:EB:9:LEU:HD11	57:EB:11:GLN:O	1.90	0.70
57:EB:117:THR:HG22	57:EB:120:ALA:HB2	1.72	0.70
69:QB:86:ARG:CB	69:QB:89:ARG:HB2	2.21	0.70
1:A:195:G:H2'	1:A:196:G:H5"	1.74	0.70
1:A:420:A:H2'	1:A:421:A:O4'	1.92	0.70
2:B:644:G:H2'	2:B:2372:A:N7	2.07	0.70
2:B:1242:G:C4	82:DC:754:VAL:HB	2.26	0.70
2:B:2709:C:H2'	2:B:2710:C:C6	2.27	0.70
8:H:126:ILE:HD11	8:H:233:LEU:HD22	1.72	0.70
16:P:114:ARG:HA	16:P:117:ARG:HD3	1.73	0.70
23:W:10:LEU:O	23:W:13:SER:HB3	1.92	0.70
23:W:96:ILE:HG22	23:W:100:ARG:NH1	2.04	0.70
39:MA:48:ARG:HA	39:MA:51:ILE:HD12	1.72	0.70
48:VA:143:THR:HG21	48:VA:150:ILE:HG23	1.71	0.70
49:WA:150:TRP:HB2	49:WA:174:ASN:HD22	1.55	0.70
55:CB:161:ASP:O	78:ZB:44:VAL:HA	1.91	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:OB:117:LEU:HB2	67:OB:118:PRO:HD2	1.74	0.70
73:UB:54:LEU:HG	73:UB:74:VAL:HA	1.72	0.70
1:A:682:C:H2'	1:A:683:C:H5'	1.73	0.70
1:A:690:G:C2'	1:A:691:C:H5"	2.20	0.70
2:B:290:G:H2'	2:B:291:C:C6	2.26	0.70
2:B:996:A:H2'	2:B:997:A:O4'	1.90	0.70
2:B:1369:A:H2'	2:B:1370:G:H5'	1.74	0.70
2:B:2774:C:H2'	2:B:2775:U:H6	1.56	0.70
7:G:133:TYR:CD1	7:G:136:LYS:HD2	2.27	0.70
8:H:182:LEU:HD13	8:H:223:PRO:HG2	1.72	0.70
11:K:222:HIS:CE1	11:K:224:ILE:H	2.09	0.70
15:O:21:ILE:HD11	15:O:37:LEU:HG	1.74	0.70
22:V:64:VAL:O	22:V:67:ILE:HB	1.90	0.70
24:X:42:TRP:HA	24:X:42:TRP:CE3	2.26	0.70
52:ZA:101:VAL:HA	52:ZA:114:GLY:O	1.91	0.70
54:BB:213:SER:H	54:BB:244:ILE:HD12	1.55	0.70
63:KB:102:LEU:CD1	63:KB:112:LYS:HA	2.22	0.70
66:NB:41:PRO:O	66:NB:42:GLU:HB3	1.91	0.70
82:DC:588:LEU:HD11	82:DC:716:GLY:HA3	1.74	0.70
1:A:16:G:H2'	1:A:17:C:C6	2.26	0.70
2:B:728:G:H5"	22:V:43:PRO:HB3	1.74	0.70
2:B:2391:G:H2'	2:B:2392:C:O4'	1.91	0.70
2:B:2715:A:N3	46:TA:85:LEU:HD11	2.05	0.70
9:I:56:THR:C	9:I:58:LYS:H	1.93	0.70
12:L:190:VAL:HG22	12:L:192:GLN:HG2	1.72	0.70
17:Q:77:LEU:HD21	17:Q:99:HIS:HA	1.73	0.70
27:AA:23:MET:HG3	27:AA:99:ALA:HA	1.74	0.70
32:FA:78:LEU:HA	32:FA:81:LEU:CD1	2.22	0.70
41:OA:45:ARG:HD2	41:OA:47:TYR:HE2	1.56	0.70
52:ZA:69:ILE:HD11	52:ZA:133:LYS:HB3	1.73	0.70
56:DB:182:GLN:O	56:DB:186:ARG:HD3	1.92	0.70
66:NB:30:LYS:HA	66:NB:35:PRO:HA	1.73	0.70
76:XB:28:LYS:HD3	76:XB:74:CYS:HB2	1.72	0.70
82:DC:576:LEU:HD13	82:DC:587:TYR:CE1	2.26	0.70
82:DC:730:LEU:HB2	82:DC:799:ASP:HB2	1.73	0.70
2:B:408:A:H2'	2:B:409:A:O4'	1.91	0.70
2:B:652:G:C2	2:B:2361:A:H1'	2.26	0.70
2:B:1233:G:H1'	16:P:121:PHE:HA	1.72	0.70
2:B:3064:U:H2'	2:B:3065:G:H8	1.57	0.70
8:H:154:THR:HA	8:H:251:THR:CG2	2.21	0.70
9:I:3:PHE:H	9:I:6:ASP:HB2	1.57	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:L:208:GLU:O	12:L:211:LEU:HB3	1.90	0.70
17:Q:31:LYS:HA	17:Q:34:SER:HB2	1.72	0.70
23:W:96:ILE:CG2	23:W:100:ARG:HH12	2.05	0.70
34:HA:86:ARG:HD3	47:UA:44:LYS:NZ	2.07	0.70
37:KA:60:ARG:HB3	37:KA:60:ARG:NH2	2.07	0.70
54:BB:103:TYR:HE2	54:BB:184:THR:HG22	1.57	0.70
59:GB:51:LYS:HG2	59:GB:54:ARG:HH11	1.56	0.70
63:KB:34:ILE:HA	63:KB:37:ILE:HD12	1.73	0.70
2:B:105:C:H2'	2:B:106:A:C8	2.27	0.70
2:B:496:C:H2'	2:B:497:C:C6	2.26	0.70
2:B:675:C:H2'	2:B:676:G:H5'	1.71	0.70
17:Q:74:GLY:HA3	17:Q:98:ASP:N	2.07	0.70
21:U:4:TYR:CZ	21:U:16:SER:HB2	2.26	0.70
21:U:117:ILE:CD1	21:U:148:LEU:HB3	2.21	0.70
24:X:66:GLU:HB3	24:X:69:PRO:HG3	1.74	0.70
39:MA:29:ALA:O	39:MA:33:VAL:HG23	1.92	0.70
39:MA:57:VAL:O	39:MA:61:GLN:HG3	1.92	0.70
52:ZA:228:ASN:HD22	71:SB:1:MET:HG2	1.55	0.70
76:XB:44:ILE:HD12	76:XB:44:ILE:N	2.05	0.70
2:B:132:C:C2'	2:B:133:U:H5"	2.22	0.70
2:B:379:C:H2'	2:B:380:U:C6	2.27	0.70
2:B:419:G:N2	3:C:5:U:H3	1.90	0.70
2:B:2660:G:H2'	2:B:2661:G:H8	1.57	0.70
2:B:3194:C:H2'	2:B:3195:U:H2'	1.74	0.70
20:T:54:TYR:O	20:T:58:LEU:HD13	1.92	0.70
31:EA:109:GLU:O	31:EA:113:VAL:HG23	1.92	0.70
49:WA:31:ASN:HB3	49:WA:47:LEU:O	1.91	0.70
52:ZA:140:ARG:HH22	52:ZA:226:THR:CG2	2.04	0.70
75:WB:92:ILE:HD11	75:WB:100:ILE:HD12	1.74	0.70
82:DC:277:ILE:O	82:DC:281:ILE:HG13	1.90	0.70
82:DC:734:GLN:O	82:DC:793:PHE:HB2	1.91	0.70
1:A:17:C:H5'	1:A:1109:G:H5'	1.73	0.70
1:A:1202:A:C8	1:A:1456:C:H2'	2.27	0.70
1:A:1227:A:H5'	1:A:1228:G:H3'	1.74	0.70
1:A:1463:C:H2'	1:A:1464:G:C8	2.27	0.70
1:A:1477:G:H2'	1:A:1478:G:H8	1.57	0.70
2:B:1556:C:H3'	2:B:2169:G:N2	2.06	0.70
2:B:1573:G:H3'	2:B:1574:C:O4'	1.92	0.70
2:B:2140:U:H3	2:B:2955:U:H3	1.37	0.70
6:F:173:GLY:HA2	6:F:176:ASP:OD2	1.91	0.70
25:Y:79:MET:HB2	25:Y:84:TYR:CE2	2.27	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:CA:135:ILE:HD13	29:CA:135:ILE:O	1.92	0.70
43:QA:47:THR:HG22	43:QA:48:LYS:N	2.07	0.70
58:FB:170:SER:OG	58:FB:181:GLY:HA2	1.92	0.70
69:QB:138:GLN:HA	69:QB:141:GLU:HG2	1.74	0.70
73:UB:70:LYS:HE3	80:BC:8:LEU:HA	1.73	0.70
82:DC:369:ILE:CG2	82:DC:401:PHE:HB3	2.22	0.70
1:A:796:A:H2'	1:A:797:G:H8	1.57	0.69
1:A:1163:A:H1'	1:A:1613:U:O2'	1.92	0.69
2:B:74:G:H5"	17:Q:104:ARG:NE	2.07	0.69
2:B:807:A:H8	2:B:2812:C:H1'	1.56	0.69
2:B:2085:U:H2'	2:B:2086:A:H5'	1.74	0.69
2:B:2148:U:H2'	2:B:2149:A:C8	2.27	0.69
2:B:2266:U:H2'	2:B:2267:C:C6	2.26	0.69
2:B:2567:C:H3'	2:B:2568:C:H5"	1.74	0.69
2:B:2573:G:OP1	31:EA:61:LYS:HG3	1.92	0.69
2:B:2916:U:H2'	2:B:2917:G:H8	1.56	0.69
22:V:174:ARG:HA	22:V:178:ARG:HG3	1.72	0.69
23:W:153:LYS:O	23:W:157:GLU:HG3	1.92	0.69
51:YA:171:ILE:HA	51:YA:174:LYS:HE3	1.72	0.69
55:CB:112:ARG:HH22	66:NB:46:PHE:HE2	1.40	0.69
63:KB:7:ALA:O	63:KB:9:LYS:HE3	1.92	0.69
82:DC:538:LEU:O	82:DC:542:LEU:HG	1.92	0.69
83:EC:6935:G:H2'	83:EC:6935:G:N3	2.06	0.69
1:A:941:A:H4'	1:A:1025:A:N6	2.07	0.69
1:A:1365:C:H4'	66:NB:30:LYS:HE2	1.72	0.69
2:B:2557:A:H61	6:F:64:ARG:NH1	1.89	0.69
7:G:239:PRO:HB2	7:G:241:LYS:HB2	1.74	0.69
16:P:133:LEU:HD13	16:P:142:ARG:HH21	1.57	0.69
16:P:134:GLY:H	16:P:137:GLN:HB2	1.57	0.69
35:IA:14:ILE:HG12	35:IA:16:LEU:HD12	1.74	0.69
49:WA:250:TYR:O	49:WA:265:LEU:HD23	1.92	0.69
50:XA:102:PHE:CZ	50:XA:131:GLN:HB3	2.28	0.69
51:YA:144:ARG:HE	51:YA:206:PRO:HB3	1.56	0.69
54:BB:181:VAL:HG13	54:BB:226:PHE:H	1.56	0.69
55:CB:128:ASN:HB3	55:CB:130:ILE:HG22	1.74	0.69
60:HB:24:LYS:HD3	60:HB:62:GLN:O	1.91	0.69
70:RB:55:PRO:HA	70:RB:91:ILE:HG12	1.72	0.69
82:DC:536:LEU:O	82:DC:540:ILE:HG12	1.92	0.69
1:A:1063:U:H2'	1:A:1064:G:C8	2.27	0.69
1:A:1183:A:H61	65:MB:99:GLY:HA3	1.56	0.69
2:B:712:G:N2	2:B:755:A:H5'	2.06	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1262:G:H2'	2:B:1264:G:O4'	1.91	0.69
2:B:2737:C:OP1	25:Y:69:LYS:HB3	1.92	0.69
11:K:44:ILE:HG22	11:K:48:ASN:HD21	1.57	0.69
20:T:6:VAL:HG13	20:T:32:LYS:HB2	1.74	0.69
22:V:26:LEU:O	22:V:30:VAL:HG23	1.91	0.69
23:W:23:TRP:HB2	23:W:53:LYS:HE3	1.73	0.69
25:Y:8:ARG:HD2	25:Y:52:MET:CE	2.21	0.69
38:LA:8:ARG:HG3	38:LA:32:ALA:HB3	1.74	0.69
48:VA:60:ARG:NH1	48:VA:64:ARG:HB2	2.06	0.69
50:XA:78:SER:HA	50:XA:100:GLY:H	1.55	0.69
53:AB:21:LEU:HA	53:AB:24:PHE:HB3	1.74	0.69
61:IB:94:ILE:HD12	61:IB:94:ILE:N	2.07	0.69
76:XB:44:ILE:HD11	76:XB:65:PRO:HG2	1.72	0.69
82:DC:595:GLU:O	82:DC:599:LEU:HB3	1.92	0.69
82:DC:649:GLN:HB2	82:DC:689:LEU:HA	1.74	0.69
1:A:1609:U:H5"	66:NB:75:VAL:CG2	2.22	0.69
1:A:1724:U:H2'	1:A:1725:U:C5	2.27	0.69
2:B:351:A:H2	3:C:53:A:H1'	1.55	0.69
2:B:379:C:H2'	2:B:380:U:H6	1.57	0.69
2:B:1108:U:H2'	2:B:1109:U:C6	2.28	0.69
2:B:1194:G:H8	2:B:1194:G:O5'	1.76	0.69
2:B:1254:C:C1'	16:P:135:THR:HG21	2.22	0.69
2:B:1305:U:C5	7:G:256:HIS:HB3	2.28	0.69
2:B:2317:A:O2'	2:B:2318:U:H5'	1.92	0.69
2:B:2660:G:H2'	2:B:2661:G:C8	2.27	0.69
2:B:2881:C:H2'	2:B:2882:U:C6	2.27	0.69
2:B:3096:C:H2'	2:B:3097:C:C6	2.28	0.69
2:B:3334:U:H4'	2:B:3335:A:C5'	2.22	0.69
5:E:147:LYS:HA	5:E:150:ASP:HB2	1.74	0.69
6:F:219:ILE:HD13	6:F:223:SER:HB3	1.75	0.69
6:F:242:ARG:NH1	6:F:242:ARG:HA	2.07	0.69
10:J:72:ASN:HB3	10:J:160:SER:HA	1.74	0.69
21:U:26:PHE:HB2	21:U:143:PRO:O	1.92	0.69
31:EA:73:LYS:HE2	31:EA:74:VAL:H	1.57	0.69
39:MA:85:THR:O	39:MA:89:ARG:HB2	1.92	0.69
40:NA:58:ILE:HG13	40:NA:59:ASP:N	2.07	0.69
48:VA:43:LYS:HA	48:VA:46:ARG:HG2	1.74	0.69
51:YA:82:ARG:NH2	51:YA:189:ILE:HA	2.08	0.69
58:FB:138:ASN:O	58:FB:142:LYS:HG2	1.92	0.69
63:KB:92:ILE:O	63:KB:96:VAL:HG23	1.92	0.69
1:A:220:A:H5"	1:A:832:U:H1'	1.75	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:982:U:H2'	1:A:983:A:O4'	1.92	0.69
1:A:1230:A:H2	1:A:1258:U:H1'	1.58	0.69
2:B:250:U:H5'	2:B:251:G:H5"	1.74	0.69
2:B:568:G:H2'	2:B:569:A:C8	2.27	0.69
2:B:1487:G:H2'	2:B:1488:G:H5"	1.75	0.69
2:B:3042:U:H5"	27:AA:48:ARG:HH21	1.58	0.69
12:L:162:LEU:HD21	19:S:45:PRO:HG2	1.75	0.69
23:W:44:LEU:HD12	23:W:49:THR:HG21	1.75	0.69
23:W:96:ILE:HG22	23:W:100:ARG:NH2	2.08	0.69
24:X:73:LYS:HB2	24:X:96:ASP:O	1.91	0.69
49:WA:112:SER:CB	49:WA:153:GLN:HA	2.23	0.69
49:WA:248:ASN:HD21	49:WA:298:GLY:HA3	1.56	0.69
54:BB:133:LYS:O	54:BB:134:LYS:HB2	1.90	0.69
56:DB:12:SER:HB3	56:DB:124:LEU:HA	1.73	0.69
1:A:636:A:H5'	72:TB:6:VAL:HG21	1.72	0.69
1:A:886:U:H2'	1:A:887:A:C8	2.27	0.69
1:A:1148:C:H2'	1:A:1149:G:H8	1.56	0.69
2:B:255:A:H2'	2:B:256:G:C8	2.27	0.69
2:B:701:G:H2'	2:B:702:C:O4'	1.92	0.69
2:B:1504:A:C2	2:B:1516:C:H5'	2.27	0.69
7:G:229:VAL:HA	7:G:232:ARG:HB3	1.74	0.69
28:BA:45:ASN:OD1	28:BA:48:ARG:HG3	1.92	0.69
55:CB:93:LEU:HA	55:CB:172:ILE:HG23	1.74	0.69
59:GB:108:ARG:HA	59:GB:147:MET:HA	1.74	0.69
65:MB:94:VAL:HG23	65:MB:107:ILE:HD11	1.74	0.69
70:RB:22:ILE:HG22	70:RB:93:LEU:O	1.93	0.69
82:DC:781:THR:HG23	82:DC:794:PRO:HG3	1.74	0.69
1:A:1291:G:N2	1:A:1324:G:H1	1.88	0.69
2:B:114:A:H4'	19:S:49:ARG:HE	1.57	0.69
2:B:713:U:O2	2:B:754:G:H4'	1.93	0.69
2:B:830:A:H2'	2:B:831:G:O4'	1.92	0.69
2:B:2434:U:H5	2:B:2593:A:H1'	1.56	0.69
2:B:2777:G:H4'	2:B:2779:A:OP2	1.92	0.69
20:T:151:ASP:HA	20:T:154:ALA:HB3	1.74	0.69
30:DA:59:VAL:O	30:DA:64:LYS:HD3	1.92	0.69
32:FA:128:ARG:HB2	40:NA:8:ALA:HB2	1.72	0.69
37:KA:18:ARG:HB3	37:KA:23:ASN:HB3	1.75	0.69
65:MB:96:ILE:HG23	65:MB:116:LEU:HB3	1.75	0.69
67:OB:23:LYS:HB3	67:OB:24:LEU:HD12	1.75	0.69
82:DC:81:MET:HE3	82:DC:98:PHE:HB2	1.73	0.69
82:DC:166:GLU:O	82:DC:167:LEU:HD12	1.92	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:380:LEU:HD21	82:DC:456:LEU:HD11	1.72	0.69
1:A:3:U:H5'	52:ZA:179:VAL:HG12	1.75	0.69
1:A:388:G:H2'	1:A:389:G:C8	2.27	0.69
1:A:959:U:H6	63:KB:61:THR:HB	1.57	0.69
2:B:44:U:OP1	19:S:84:PRO:HB2	1.93	0.69
2:B:790:U:H2'	2:B:791:A:H8	1.58	0.69
2:B:999:G:H5'	4:D:104:A:H1'	1.74	0.69
2:B:1195:A:H2'	2:B:1309:U:O2	1.93	0.69
2:B:1393:A:H2'	2:B:1394:A:H5'	1.73	0.69
2:B:1459:C:H5'	35:IA:33:VAL:HG11	1.74	0.69
2:B:1833:G:H2'	2:B:1834:U:H5'	1.74	0.69
2:B:2291:A:H2'	2:B:2292:U:C6	2.28	0.69
2:B:2624:G:H2'	2:B:2625:C:H5'	1.74	0.69
2:B:2633:U:C2'	2:B:2634:U:H5'	2.23	0.69
2:B:2735:U:H4'	25:Y:51:GLY:HA2	1.74	0.69
2:B:3047:U:OP1	7:G:222:LYS:HG2	1.93	0.69
2:B:3169:U:H2'	2:B:3170:A:C8	2.28	0.69
3:C:136:G:H2'	3:C:137:C:C6	2.27	0.69
5:E:10:ARG:HD3	5:E:180:VAL:CG2	2.23	0.69
7:G:296:THR:HG22	7:G:297:SER:H	1.58	0.69
8:H:20:LEU:HD23	8:H:21:PRO:HD2	1.75	0.69
8:H:351:PRO:HB3	11:K:70:LYS:HG3	1.74	0.69
9:I:88:ILE:HG13	9:I:243:ALA:CB	2.22	0.69
13:M:150:SER:O	13:M:154:VAL:HG23	1.93	0.69
15:O:172:LEU:O	15:O:173:ASP:HB2	1.92	0.69
18:R:33:ALA:HB2	18:R:53:VAL:HG11	1.74	0.69
18:R:55:ARG:HH21	18:R:77:ARG:HA	1.56	0.69
20:T:54:TYR:CE2	20:T:58:LEU:HD11	2.28	0.69
20:T:173:ALA:HA	20:T:176:LYS:HB2	1.73	0.69
25:Y:82:ASN:O	33:GA:21:ILE:HA	1.93	0.69
37:KA:27:VAL:HG22	37:KA:84:THR:HG22	1.75	0.69
50:XA:119:ARG:HB3	50:XA:119:ARG:NH1	2.07	0.69
51:YA:68:VAL:HG22	51:YA:69:CYS:H	1.56	0.69
51:YA:87:ARG:N	51:YA:101:HIS:HB2	2.07	0.69
52:ZA:44:LEU:HD21	52:ZA:247:ALA:HB2	1.73	0.69
52:ZA:64:LYS:O	52:ZA:65:GLU:HB2	1.93	0.69
55:CB:51:VAL:HG11	55:CB:130:ILE:HG12	1.73	0.69
56:DB:22:HIS:HA	56:DB:25:ARG:HB2	1.73	0.69
57:EB:64:VAL:HA	57:EB:67:LEU:HD12	1.74	0.69
66:NB:69:VAL:CG1	66:NB:81:ILE:HG23	2.22	0.69
70:RB:28:SER:HB2	70:RB:34:LEU:HD23	1.74	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
75:WB:39:ALA:O	75:WB:75:LEU:HD12	1.92	0.69
82:DC:593:ILE:HD11	82:DC:685:ARG:HG3	1.75	0.69
1:A:34:G:O6	1:A:594:A:H5"	1.92	0.69
1:A:295:A:H2'	1:A:296:U:C6	2.28	0.69
1:A:768:C:H1'	59:GB:143:ILE:HG21	1.75	0.69
1:A:1495:C:C2'	1:A:1496:U:H5"	2.23	0.69
1:A:1560:U:H2'	1:A:1561:U:O4'	1.93	0.69
2:B:1054:A:H5"	2:B:2637:A:N6	2.05	0.69
2:B:1175:C:H2'	2:B:1176:C:C6	2.28	0.69
2:B:1472:U:H5'	23:W:4:LEU:HD12	1.75	0.69
2:B:1585:C:H2'	2:B:1586:G:C8	2.28	0.69
2:B:2709:C:H2'	2:B:2710:C:H6	1.57	0.69
2:B:3083:G:H2'	2:B:3084:C:H6	1.57	0.69
7:G:292:ALA:HA	7:G:303:LYS:H	1.57	0.69
23:W:21:LYS:C	23:W:53:LYS:HD2	2.12	0.69
25:Y:89:LEU:HB3	25:Y:91:LEU:CD2	2.22	0.69
26:Z:99:LYS:HD2	26:Z:102:GLU:CB	2.23	0.69
29:CA:90:ALA:HA	29:CA:94:GLN:HE22	1.57	0.69
50:XA:104:PRO:HA	50:XA:135:GLU:OE2	1.93	0.69
52:ZA:229:LEU:HD11	71:SB:13:VAL:HG13	1.73	0.69
58:FB:64:ASN:HD21	58:FB:73:SER:HB3	1.58	0.69
61:IB:128:CYS:SG	61:IB:138:ASN:HB2	2.33	0.69
72:TB:30:SER:HB3	72:TB:59:GLY:HA3	1.73	0.69
82:DC:138:GLN:OE1	82:DC:142:VAL:HG21	1.91	0.69
82:DC:443:GLU:CD	82:DC:444:PRO:HD2	2.12	0.69
1:A:707:A:H3'	1:A:708:C:H5"	1.75	0.69
2:B:522:A:C2	2:B:523:A:H1'	2.28	0.69
2:B:1039:U:H2'	2:B:1040:A:C8	2.28	0.69
2:B:1048:A:OP1	2:B:1049:C:H6	1.76	0.69
2:B:1636:U:H5"	31:EA:73:LYS:NZ	2.08	0.69
2:B:1666:G:O2'	2:B:1743:G:H5'	1.93	0.69
2:B:2233:A:H2'	2:B:2234:G:O4'	1.92	0.69
2:B:2382:G:H2'	2:B:2383:C:O4'	1.91	0.69
2:B:3076:C:OP2	35:IA:65:LYS:HE2	1.93	0.69
6:F:84:THR:CG2	47:UA:63:THR:HB	2.23	0.69
20:T:84:LEU:HD13	20:T:102:LEU:HD21	1.75	0.69
21:U:155:GLU:HG2	21:U:156:ALA:H	1.58	0.69
24:X:81:TYR:HB2	24:X:120:SER:O	1.93	0.69
25:Y:27:LEU:O	25:Y:27:LEU:HD13	1.93	0.69
39:MA:66:VAL:HG12	39:MA:69:LEU:HD21	1.73	0.69
39:MA:76:GLN:HE21	39:MA:81:ARG:HG3	1.58	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:RA:79:GLU:CD	44:RA:80:PRO:HD2	2.12	0.69
52:ZA:238:SER:OG	52:ZA:240:LEU:HD13	1.93	0.69
58:FB:43:ILE:HA	58:FB:56:ARG:O	1.93	0.69
59:GB:92:LYS:C	59:GB:93:LEU:HD23	2.12	0.69
69:QB:113:ILE:O	69:QB:124:ILE:HD12	1.92	0.69
82:DC:15:LYS:O	82:DC:19:VAL:HG23	1.93	0.69
83:EC:6822:U:H3'	83:EC:6823:U:C5'	2.22	0.69
1:A:1668:G:H2'	1:A:1669:U:O4'	1.94	0.68
2:B:585:A:H5"	37:KA:70:LYS:HE2	1.75	0.68
2:B:1112:A:H2'	2:B:1113:G:O4'	1.93	0.68
2:B:2338:C:H3'	2:B:2339:C:H2'	1.74	0.68
11:K:75:TYR:O	25:Y:141:VAL:HG22	1.92	0.68
18:R:108:ARG:O	18:R:112:LEU:HG	1.93	0.68
19:S:54:LYS:HB2	19:S:59:PHE:CZ	2.28	0.68
22:V:96:PHE:HE1	22:V:114:ILE:HA	1.59	0.68
28:BA:22:VAL:HG22	28:BA:28:ILE:HG22	1.76	0.68
31:EA:41:ALA:HB2	31:EA:77:TYR:CE1	2.28	0.68
38:LA:51:LEU:HG	38:LA:52:GLN:H	1.58	0.68
48:VA:39:HIS:HA	48:VA:42:ARG:HD2	1.74	0.68
49:WA:20:VAL:HA	49:WA:37:SER:HA	1.75	0.68
54:BB:123:LEU:HD11	54:BB:173:ILE:HD13	1.75	0.68
55:CB:124:LEU:HD11	75:WB:59:TYR:HB2	1.73	0.68
76:XB:38:ARG:HG3	76:XB:38:ARG:HH11	1.59	0.68
1:A:946:U:H5"	51:YA:165:ARG:HH12	1.57	0.68
1:A:1183:A:N6	65:MB:99:GLY:HA3	2.07	0.68
2:B:60:A:H2'	2:B:61:A:H8	1.55	0.68
2:B:428:A:H2'	2:B:429:U:O4'	1.92	0.68
2:B:1724:U:H1'	2:B:1725:C:C6	2.28	0.68
3:C:38:U:C5	39:MA:78:LYS:HB3	2.29	0.68
6:F:91:GLY:C	6:F:102:LEU:HG	2.13	0.68
8:H:159:ILE:HG21	8:H:165:ALA:HB2	1.74	0.68
12:L:150:LEU:HD21	12:L:218:ILE:HD12	1.75	0.68
12:L:154:ALA:C	12:L:156:ASP:H	1.96	0.68
51:YA:31:ASP:O	51:YA:96:LEU:HG	1.93	0.68
52:ZA:179:VAL:HG21	52:ZA:197:TYR:CD1	2.29	0.68
53:AB:39:VAL:HG23	53:AB:47:GLU:O	1.93	0.68
54:BB:49:ARG:HE	54:BB:50:ASN:HD21	1.40	0.68
55:CB:190:ILE:O	55:CB:194:LEU:HB2	1.93	0.68
58:FB:12:SER:HA	58:FB:18:ARG:HE	1.58	0.68
82:DC:77:LEU:CD2	82:DC:100:ILE:HB	2.23	0.68
82:DC:316:GLY:N	82:DC:319:LEU:HB2	2.09	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:601:ILE:HG21	82:DC:642:GLY:O	1.93	0.68
82:DC:733:ILE:HA	82:DC:793:PHE:O	1.94	0.68
1:A:1063:U:H2'	1:A:1064:G:H8	1.57	0.68
1:A:1440:C:H2'	1:A:1441:C:O4'	1.92	0.68
2:B:2664:C:H2'	2:B:2665:U:C6	2.28	0.68
2:B:3148:U:H2'	2:B:3149:G:H8	1.56	0.68
2:B:3160:U:H2'	2:B:3161:C:C6	2.27	0.68
3:C:43:A:H4'	41:OA:22:CYS:HA	1.74	0.68
8:H:206:LEU:HD12	8:H:237:GLN:HB3	1.75	0.68
9:I:58:LYS:O	9:I:93:THR:HB	1.94	0.68
13:M:91:ARG:HG2	13:M:143:GLU:HG3	1.75	0.68
50:XA:183:ARG:HA	50:XA:188:LEU:HD12	1.75	0.68
59:GB:64:GLU:O	59:GB:65:LYS:HB2	1.93	0.68
69:QB:86:ARG:HB2	69:QB:89:ARG:HB2	1.74	0.68
71:SB:25:LYS:HB2	71:SB:28:ASP:HB2	1.75	0.68
74:VB:92:VAL:HG21	74:VB:99:LYS:HE3	1.74	0.68
1:A:954:G:H2'	1:A:955:A:H8	1.58	0.68
1:A:1556:A:OP1	65:MB:44:ARG:HG3	1.94	0.68
2:B:145:G:O3'	19:S:55:ALA:HB1	1.94	0.68
2:B:271:C:H1'	2:B:295:A:C6	2.27	0.68
2:B:1201:C:H42	2:B:2857:C:H5"	1.59	0.68
2:B:1509:A:H2'	2:B:1510:G:C8	2.29	0.68
2:B:2172:A:N3	6:F:11:GLY:HA2	2.09	0.68
2:B:2755:C:H1'	25:Y:49:GLN:HE21	1.59	0.68
2:B:3060:C:H2'	2:B:3061:G:H8	1.58	0.68
3:C:114:G:H2'	3:C:115:C:H6	1.57	0.68
6:F:3:ARG:HG2	6:F:4:VAL:N	2.08	0.68
6:F:70:ARG:C	6:F:71:LEU:HD12	2.13	0.68
8:H:330:TYR:HA	11:K:45:LEU:CD1	2.24	0.68
10:J:31:ARG:HG2	10:J:34:LEU:HG	1.74	0.68
15:O:92:ARG:HB2	15:O:95:ASN:HB2	1.74	0.68
39:MA:4:VAL:HG21	39:MA:9:LEU:HD21	1.74	0.68
51:YA:180:THR:HG22	51:YA:181:LEU:H	1.58	0.68
58:FB:13:ALA:HA	61:IB:133:LYS:NZ	2.09	0.68
61:IB:33:ARG:NH1	61:IB:61:THR:HG21	2.08	0.68
1:A:1107:G:H3'	1:A:1108:G:N2	2.08	0.68
2:B:17:G:H1	3:C:142:C:H42	1.39	0.68
2:B:1235:U:H4'	2:B:1236:G:C5'	2.19	0.68
2:B:2357:A:H4'	21:U:137:ASN:OD1	1.93	0.68
4:D:7:G:H5'	9:I:33:ARG:NH1	2.06	0.68
4:D:46:A:H2'	4:D:47:C:C6	2.27	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:O:94:ARG:HD3	15:O:94:ARG:H	1.58	0.68
21:U:4:TYR:OH	21:U:18:ARG:HG3	1.93	0.68
30:DA:45:ILE:HD11	30:DA:119:ILE:HA	1.75	0.68
49:WA:178:VAL:HB	49:WA:192:PHE:HB2	1.75	0.68
53:AB:42:THR:HG22	70:RB:108:ILE:HD12	1.75	0.68
53:AB:163:PRO:HA	53:AB:167:PHE:HD2	1.58	0.68
54:BB:35:PRO:HB3	54:BB:143:ASP:O	1.93	0.68
54:BB:181:VAL:HG11	54:BB:225:VAL:HG13	1.76	0.68
65:MB:77:ARG:HD3	65:MB:102:PHE:CD2	2.28	0.68
69:QB:98:GLY:O	69:QB:102:ARG:HB2	1.93	0.68
74:VB:8:ARG:CB	74:VB:26:ASP:HB3	2.22	0.68
82:DC:155:VAL:HG23	82:DC:209:VAL:HA	1.76	0.68
1:A:1273:G:N7	1:A:1431:C:H5"	2.08	0.68
2:B:953:G:O2'	2:B:1115:G:H4'	1.92	0.68
2:B:1129:A:OP1	14:N:13:LYS:HD3	1.92	0.68
2:B:1722:U:H2'	2:B:1723:A:H5'	1.75	0.68
2:B:2156:C:H2'	2:B:2178:A:N6	2.09	0.68
2:B:2426:U:H2'	2:B:2427:U:C6	2.28	0.68
3:C:106:C:H4'	3:C:107:G:H5"	1.76	0.68
4:D:117:A:H5'	9:I:74:VAL:O	1.93	0.68
10:J:26:ARG:HB2	10:J:26:ARG:NH1	2.09	0.68
23:W:106:LEU:HD11	23:W:138:LEU:HD11	1.76	0.68
27:AA:117:PRO:HA	27:AA:135:VAL:O	1.94	0.68
38:LA:85:VAL:O	38:LA:89:ILE:HG13	1.93	0.68
49:WA:248:ASN:ND2	49:WA:298:GLY:HA3	2.09	0.68
82:DC:420:PRO:HG3	82:DC:476:HIS:HA	1.75	0.68
1:A:1316:G:H5'	67:OB:7:LYS:HB3	1.75	0.68
2:B:861:C:H2'	2:B:862:U:H6	1.56	0.68
2:B:1157:G:C2	2:B:1158:A:H1'	2.29	0.68
2:B:1240:A:H61	16:P:58:VAL:HG22	1.59	0.68
2:B:1588:A:C6	43:QA:4:GLN:HB3	2.29	0.68
2:B:1647:A:N6	2:B:1808:G:H1'	2.07	0.68
2:B:2628:A:H5'	2:B:2798:C:H3'	1.75	0.68
2:B:3187:A:H5"	18:R:8:LYS:HE2	1.76	0.68
13:M:34:LEU:HD11	13:M:149:ASN:HB3	1.75	0.68
19:S:35:VAL:HG22	19:S:65:ARG:NE	2.08	0.68
24:X:29:ILE:HD12	24:X:40:ARG:HB3	1.75	0.68
30:DA:56:VAL:HG21	30:DA:104:LEU:HD13	1.75	0.68
37:KA:49:ILE:HG12	37:KA:100:ILE:HG12	1.76	0.68
51:YA:97:LEU:HB3	51:YA:232:HIS:CE1	2.28	0.68
55:CB:85:ALA:HA	55:CB:165:LEU:HD11	1.74	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:GB:110:GLN:NE2	59:GB:125:ALA:HB3	2.05	0.68
73:UB:52:ILE:O	73:UB:74:VAL:HG13	1.94	0.68
82:DC:172:GLU:O	82:DC:176:GLN:HG2	1.94	0.68
83:EC:6850:C:C3'	83:EC:6851:G:H5"	2.24	0.68
1:A:5:U:O2'	1:A:553:G:H4'	1.94	0.68
1:A:449:C:H2'	1:A:450:U:C6	2.29	0.68
1:A:521:A:H4'	74:VB:35:VAL:O	1.93	0.68
1:A:1015:U:H2'	1:A:1016:C:C6	2.29	0.68
1:A:1784:C:H2'	1:A:1785:U:C6	2.29	0.68
2:B:1496:C:H2'	2:B:1497:C:C6	2.28	0.68
2:B:1523:U:H4'	29:CA:112:THR:O	1.94	0.68
2:B:1916:U:H5"	23:W:85:ARG:HB2	1.76	0.68
2:B:2856:G:H2'	2:B:2857:C:C6	2.29	0.68
3:C:104:A:OP2	3:C:105:A:H5"	1.93	0.68
5:E:136:THR:HG23	83:EC:6820:C:H42	1.59	0.68
8:H:312:VAL:O	8:H:313:LEU:HB2	1.93	0.68
11:K:99:PRO:HB3	11:K:130:ILE:HG22	1.76	0.68
13:M:4:ILE:HG23	13:M:5:GLN:H	1.59	0.68
13:M:70:THR:O	13:M:74:LEU:HG	1.94	0.68
31:EA:74:VAL:HG23	31:EA:101:PHE:CE2	2.29	0.68
49:WA:22:SER:HB3	49:WA:36:ALA:HB3	1.74	0.68
51:YA:101:HIS:O	51:YA:217:LEU:HD13	1.93	0.68
54:BB:185:GLY:HA3	54:BB:224:ASN:CG	2.14	0.68
57:EB:74:GLN:HE21	57:EB:78:THR:CG2	2.04	0.68
64:LB:119:THR:HB	64:LB:120:PRO:HD2	1.74	0.68
1:A:906:A:H61	1:A:997:G:H21	1.41	0.68
2:B:32:U:H1'	2:B:53:G:N2	2.09	0.68
2:B:207:U:H2'	2:B:208:C:C6	2.29	0.68
2:B:715:A:C6	2:B:782:U:H5'	2.29	0.68
2:B:975:C:H5"	22:V:58:ASN:ND2	2.09	0.68
2:B:1044:U:C2'	2:B:1045:C:H5"	2.24	0.68
2:B:1116:G:H3'	2:B:1117:G:H5"	1.76	0.68
2:B:1220:U:H5'	2:B:1221:A:H2'	1.76	0.68
2:B:1478:C:O2'	2:B:1479:U:H5'	1.94	0.68
3:C:75:G:C2	43:QA:26:TRP:HB2	2.29	0.68
4:D:48:U:OP2	9:I:93:THR:HG23	1.94	0.68
8:H:206:LEU:HD21	8:H:228:ALA:HB3	1.74	0.68
26:Z:99:LYS:HD2	26:Z:102:GLU:HB3	1.76	0.68
27:AA:101:VAL:HG21	27:AA:109:MET:HE2	1.76	0.68
29:CA:115:ARG:HG2	29:CA:120:LYS:C	2.15	0.68
37:KA:17:GLN:CB	37:KA:24:ASN:HB3	2.21	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:ZA:148:LEU:HB3	52:ZA:174:ARG:NH2	2.08	0.68
70:RB:57:ARG:HG3	70:RB:89:ARG:CZ	2.23	0.68
76:XB:24:VAL:HG12	76:XB:72:HIS:O	1.94	0.68
1:A:376:C:H2'	1:A:377:G:H8	1.58	0.68
1:A:1592:A:H2'	1:A:1593:A:C8	2.29	0.68
2:B:79:U:H2'	2:B:80:G:C8	2.27	0.68
2:B:240:U:H4'	2:B:241:G:H5"	1.76	0.68
2:B:406:G:H4'	3:C:17:A:H61	1.57	0.68
2:B:937:G:H22	2:B:960:U:H5"	1.58	0.68
2:B:998:A:H4'	4:D:103:A:N3	2.08	0.68
2:B:1517:G:H2'	2:B:1518:U:H6	1.59	0.68
2:B:3325:G:H5"	35:IA:103:GLY:HA2	1.76	0.68
10:J:28:GLN:OE1	10:J:61:ASN:HA	1.93	0.68
48:VA:29:GLY:HA2	48:VA:84:VAL:HA	1.76	0.68
48:VA:103:ASN:O	48:VA:185:LEU:HD23	1.93	0.68
54:BB:46:VAL:O	54:BB:50:ASN:HB2	1.94	0.68
56:DB:48:TYR:CE1	56:DB:116:LYS:HG3	2.29	0.68
63:KB:75:LEU:HB3	63:KB:81:ALA:HB2	1.75	0.68
63:KB:114:ARG:O	63:KB:118:ILE:HG13	1.94	0.68
64:LB:103:ARG:HD3	76:XB:49:ALA:HB2	1.75	0.68
1:A:166:C:O2	56:DB:132:ARG:HB3	1.93	0.67
1:A:353:A:H2'	1:A:354:C:O4'	1.94	0.67
1:A:1126:G:H5'	45:SA:11:ARG:HE	1.59	0.67
2:B:290:G:H5"	19:S:98:LEU:HD22	1.74	0.67
2:B:291:C:H5"	19:S:68:ARG:HD3	1.76	0.67
2:B:316:U:O4	40:NA:28:TYR:HA	1.94	0.67
2:B:627:U:H2'	2:B:628:A:H8	1.59	0.67
2:B:1498:A:H1'	2:B:1602:A:H2	1.59	0.67
2:B:1705:U:H5'	2:B:1706:C:OP2	1.94	0.67
2:B:2882:U:H2'	2:B:2883:U:H6	1.55	0.67
2:B:3386:G:H5'	35:IA:10:ARG:NE	2.09	0.67
7:G:216:ASP:HB2	7:G:339:ARG:HE	1.58	0.67
12:L:187:GLY:HA2	12:L:190:VAL:HG12	1.74	0.67
34:HA:51:LEU:CD1	38:LA:91:ARG:HG3	2.24	0.67
52:ZA:167:VAL:HG12	52:ZA:168:ARG:H	1.58	0.67
54:BB:160:VAL:HA	54:BB:172:PHE:HA	1.76	0.67
61:IB:14:GLN:HB3	61:IB:54:ILE:HG12	1.76	0.67
82:DC:728:VAL:CG2	82:DC:802:SER:HB2	2.23	0.67
83:EC:6832:G:H2'	83:EC:6833:G:H5'	1.76	0.67
1:A:1048:G:H5"	77:YB:68:GLY:O	1.94	0.67
1:A:1672:G:H2'	1:A:1673:G:C8	2.29	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:405:U:C2'	2:B:406:G:H5'	2.24	0.67
2:B:1284:C:H2'	2:B:1285:G:H5'	1.75	0.67
2:B:2225:U:H2'	2:B:2226:U:C6	2.29	0.67
2:B:2909:U:C3'	2:B:2910:A:H5"	2.25	0.67
17:Q:69:VAL:HG12	17:Q:149:GLN:HB3	1.75	0.67
18:R:127:LYS:HB2	20:T:190:VAL:HG22	1.77	0.67
21:U:117:ILE:HD13	21:U:148:LEU:HD23	1.76	0.67
42:PA:46:ARG:HH11	42:PA:46:ARG:HG2	1.59	0.67
54:BB:181:VAL:O	54:BB:192:ILE:HA	1.93	0.67
76:XB:37:LYS:O	76:XB:38:ARG:HG3	1.94	0.67
2:B:634:C:H2'	2:B:635:G:O4'	1.93	0.67
2:B:872:U:H2'	2:B:873:C:C6	2.29	0.67
2:B:1240:A:C5'	16:P:98:VAL:HG12	2.24	0.67
2:B:1793:C:OP1	6:F:184:ARG:HD3	1.94	0.67
2:B:2939:G:H2'	2:B:2940:A:O4'	1.94	0.67
7:G:177:HIS:NE2	7:G:335:ILE:HG21	2.09	0.67
51:YA:33:LYS:NZ	51:YA:33:LYS:HB3	2.09	0.67
55:CB:51:VAL:HG11	55:CB:130:ILE:HG23	1.77	0.67
56:DB:181:PRO:HA	56:DB:184:LEU:HD21	1.77	0.67
66:NB:78:VAL:O	66:NB:82:ARG:HG2	1.93	0.67
71:SB:72:LEU:HA	71:SB:75:ASN:HD21	1.58	0.67
75:WB:64:VAL:O	75:WB:68:ARG:HG2	1.94	0.67
80:BC:26:LYS:HD3	80:BC:26:LYS:N	2.09	0.67
2:B:211:A:H3'	8:H:221:ASN:ND2	2.09	0.67
2:B:954:U:H4'	33:GA:8:THR:O	1.94	0.67
2:B:1249:G:H2'	2:B:1250:G:C8	2.29	0.67
2:B:2394:G:H2'	2:B:2395:G:O4'	1.94	0.67
2:B:2736:A:C2'	2:B:2737:C:H5"	2.24	0.67
2:B:2946:A:H2'	2:B:2982:A:N7	2.09	0.67
6:F:129:ALA:N	6:F:169:ILE:HD12	2.06	0.67
8:H:286:VAL:HG21	22:V:28:LEU:HB3	1.77	0.67
13:M:115:ARG:CG	13:M:123:ILE:HG23	2.23	0.67
17:Q:115:ARG:HH22	17:Q:145:PHE:HB2	1.60	0.67
20:T:173:ALA:HA	20:T:176:LYS:CB	2.25	0.67
47:UA:54:ILE:HG23	47:UA:63:THR:HG23	1.76	0.67
49:WA:141:LEU:H	49:WA:141:LEU:HD12	1.58	0.67
49:WA:150:TRP:HH2	67:OB:34:LEU:HG	1.60	0.67
68:PB:30:TYR:CE2	68:PB:40:ARG:HB3	2.29	0.67
77:YB:73:LEU:HB3	77:YB:77:THR:OG1	1.93	0.67
82:DC:204:PRO:O	82:DC:222:ILE:HG13	1.94	0.67
83:EC:6760:A:H2'	83:EC:6761:C:C6	2.30	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1504:G:H4'	69:QB:41:SER:HB3	1.76	0.67
2:B:314:U:H2'	2:B:315:C:C6	2.29	0.67
2:B:2434:U:H5"	19:S:24:ARG:HD2	1.76	0.67
3:C:82:U:H2'	3:C:82:U:O2	1.94	0.67
10:J:63:LEU:HB2	10:J:79:VAL:HG12	1.77	0.67
12:L:143:ILE:HD13	12:L:169:LEU:HB3	1.77	0.67
13:M:86:TYR:N	13:M:187:ILE:HG13	2.09	0.67
14:N:159:PHE:HB3	14:N:163:GLN:NE2	2.06	0.67
15:O:46:VAL:O	15:O:67:VAL:HB	1.95	0.67
51:YA:139:ALA:HA	51:YA:212:VAL:HA	1.77	0.67
53:AB:70:THR:HG22	53:AB:86:LEU:HD13	1.75	0.67
55:CB:173:ALA:O	55:CB:177:ILE:HG13	1.94	0.67
56:DB:69:LEU:O	56:DB:99:GLY:HA3	1.92	0.67
68:PB:12:GLN:HB2	68:PB:15:LEU:HD13	1.76	0.67
82:DC:279:ASP:HB3	82:DC:280:PRO:HD3	1.76	0.67
1:A:97:C:O4'	1:A:426:G:H4'	1.95	0.67
1:A:291:G:H2'	1:A:292:U:C6	2.29	0.67
1:A:740:A:H2'	1:A:741:C:H5"	1.75	0.67
1:A:1609:U:H2'	1:A:1610:G:O4'	1.95	0.67
2:B:1056:U:H2'	2:B:1057:A:H8	1.59	0.67
2:B:1231:A:H2'	2:B:1277:C:N4	2.09	0.67
6:F:32:LEU:CB	6:F:163:ARG:HE	2.01	0.67
7:G:223:GLY:HA2	7:G:271:GLY:HA3	1.76	0.67
8:H:188:ARG:HH21	8:H:197:ARG:HB3	1.59	0.67
9:I:231:ILE:CG2	9:I:239:ILE:HD11	2.24	0.67
11:K:98:LYS:HE2	11:K:129:LEU:CD1	2.24	0.67
14:N:85:PHE:HB3	14:N:140:THR:HG22	1.76	0.67
19:S:190:THR:O	19:S:194:GLN:HG2	1.94	0.67
22:V:67:ILE:HA	22:V:140:LEU:HD11	1.76	0.67
30:DA:17:LYS:O	30:DA:21:THR:HG23	1.94	0.67
52:ZA:38:VAL:HG13	52:ZA:39:THR:HG23	1.76	0.67
54:BB:65:LEU:CD1	54:BB:80:THR:HA	2.25	0.67
60:HB:58:GLN:CB	60:HB:65:TYR:HB2	2.24	0.67
63:KB:78:ASN:OD1	63:KB:80:LEU:HD23	1.93	0.67
64:LB:84:ARG:HA	64:LB:119:THR:HG22	1.77	0.67
82:DC:274:ASN:N	82:DC:274:ASN:HD22	1.93	0.67
82:DC:735:CYS:CB	82:DC:792:ALA:HA	2.25	0.67
1:A:63:G:H2'	1:A:64:U:H5'	1.75	0.67
2:B:298:U:H5'	40:NA:31:GLY:O	1.95	0.67
2:B:790:U:H2'	2:B:791:A:C8	2.30	0.67
2:B:1236:G:H2'	16:P:60:VAL:CG1	2.24	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1748:G:OP1	42:PA:44:LYS:HE3	1.93	0.67
2:B:2744:U:H2'	2:B:2745:G:C8	2.30	0.67
2:B:2878:G:H5"	7:G:5:LYS:HE2	1.76	0.67
4:D:112:G:H2'	4:D:113:C:C6	2.30	0.67
7:G:350:ALA:O	7:G:351:LEU:HB3	1.94	0.67
8:H:23:PRO:HD2	8:H:26:PHE:CE2	2.30	0.67
8:H:64:SER:HA	8:H:75:PRO:HA	1.77	0.67
9:I:40:HIS:HB3	9:I:43:LYS:HG3	1.77	0.67
12:L:190:VAL:HG13	12:L:192:GLN:N	2.10	0.67
14:N:191:LYS:C	14:N:197:VAL:HG23	2.15	0.67
15:O:19:LEU:HB2	15:O:69:VAL:CG1	2.25	0.67
31:EA:52:LYS:NZ	31:EA:135:ARG:HH12	1.92	0.67
32:FA:74:ASN:OD1	32:FA:113:LEU:HB2	1.95	0.67
39:MA:22:VAL:HG12	39:MA:26:LYS:HE3	1.76	0.67
48:VA:123:ALA:HA	48:VA:152:ILE:HB	1.75	0.67
59:GB:30:LEU:HD21	59:GB:102:GLU:HG2	1.77	0.67
59:GB:92:LYS:HE3	59:GB:92:LYS:HA	1.75	0.67
60:HB:32:HIS:CE1	60:HB:35:ILE:HB	2.29	0.67
66:NB:131:GLY:HA3	66:NB:137:ARG:HA	1.76	0.67
82:DC:488:VAL:HG11	82:DC:794:PRO:O	1.93	0.67
82:DC:496:LYS:HG3	82:DC:554:LEU:O	1.94	0.67
1:A:355:G:H2'	1:A:356:G:H8	1.58	0.67
1:A:953:G:H4'	63:KB:114:ARG:HE	1.58	0.67
2:B:2539:C:H4'	2:B:2540:A:O4'	1.95	0.67
2:B:2771:U:H3'	2:B:2772:C:H5"	1.77	0.67
2:B:3294:A:H2'	2:B:3295:A:O4'	1.95	0.67
2:B:3296:A:H2'	2:B:3297:U:C6	2.29	0.67
8:H:181:VAL:HG11	8:H:224:GLY:HA3	1.75	0.67
11:K:26:VAL:HG23	11:K:27:ALA:H	1.60	0.67
17:Q:170:LEU:HA	17:Q:173:ALA:HB3	1.75	0.67
19:S:68:ARG:HH21	19:S:128:LYS:CB	2.07	0.67
49:WA:73:LEU:HD21	49:WA:77:GLY:HA2	1.76	0.67
59:GB:109:LEU:CB	59:GB:146:PHE:HB3	2.23	0.67
1:A:209:U:H2'	1:A:210:A:C8	2.30	0.67
2:B:100:A:H3'	2:B:101:G:N2	2.10	0.67
2:B:1235:U:OP2	16:P:77:ALA:HA	1.94	0.67
2:B:1412:G:OP2	36:JA:98:HIS:HB2	1.93	0.67
2:B:1779:C:O2	23:W:90:PRO:HD2	1.95	0.67
2:B:3073:A:H3'	2:B:3074:G:H5"	1.77	0.67
9:I:40:HIS:HB3	9:I:43:LYS:HE2	1.75	0.67
13:M:102:ASN:HA	13:M:136:PHE:CZ	2.30	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:T:76:PRO:HA	20:T:138:LEU:HD11	1.77	0.67
32:FA:12:ARG:HH11	32:FA:12:ARG:HG3	1.60	0.67
51:YA:144:ARG:HE	51:YA:206:PRO:CB	2.07	0.67
54:BB:238:LEU:HD12	54:BB:238:LEU:N	2.09	0.67
55:CB:36:ALA:O	55:CB:42:LEU:HD22	1.94	0.67
58:FB:107:THR:HA	58:FB:110:ARG:HG2	1.77	0.67
59:GB:171:ARG:HH11	59:GB:174:ARG:HG3	1.57	0.67
1:A:1229:G:H21	1:A:1256:A:H62	1.43	0.67
2:B:1550:C:H2'	2:B:1551:C:C6	2.30	0.67
2:B:2140:U:C2'	2:B:2141:U:H5'	2.24	0.67
2:B:2476:C:H2'	2:B:2477:G:O4'	1.94	0.67
3:C:154:C:H5"	12:L:181:LYS:HG2	1.75	0.67
6:F:242:ARG:HA	6:F:242:ARG:HH11	1.60	0.67
7:G:141:GLY:HA2	7:G:144:ILE:CD1	2.24	0.67
10:J:56:LYS:HB2	10:J:98:VAL:CG1	2.24	0.67
13:M:89:LYS:HG2	13:M:145:VAL:HG22	1.76	0.67
25:Y:124:VAL:HG12	25:Y:125:ALA:N	2.10	0.67
37:KA:51:TYR:HA	37:KA:98:VAL:HG23	1.76	0.67
40:NA:45:ARG:HH11	40:NA:45:ARG:HG3	1.58	0.67
40:NA:51:SER:OG	40:NA:54:GLU:HG3	1.95	0.67
48:VA:119:ILE:O	48:VA:157:LYS:HA	1.94	0.67
52:ZA:53:ILE:HG22	52:ZA:56:ILE:HD12	1.77	0.67
60:HB:87:VAL:N	60:HB:88:PRO:HD3	2.10	0.67
63:KB:30:SER:O	63:KB:33:VAL:HG22	1.95	0.67
72:TB:90:THR:HB	72:TB:94:LEU:HD12	1.77	0.67
82:DC:212:GLY:HA2	82:DC:218:TRP:CZ3	2.28	0.67
1:A:564:G:O2'	1:A:577:G:H4'	1.95	0.66
1:A:895:G:H2'	1:A:896:U:C6	2.30	0.66
1:A:1123:C:H5	1:A:1124:A:C5	2.13	0.66
1:A:1584:G:H22	1:A:1610:G:H3'	1.59	0.66
2:B:213:A:H2'	2:B:214:G:O4'	1.94	0.66
2:B:269:G:H5'	19:S:14:LYS:HE2	1.75	0.66
2:B:661:G:H5'	8:H:100:PHE:HE1	1.60	0.66
2:B:1170:A:H2'	2:B:1171:G:O4'	1.95	0.66
2:B:1175:C:H2'	2:B:1176:C:H6	1.60	0.66
2:B:1534:A:H2'	2:B:1535:A:C8	2.30	0.66
2:B:1731:A:H2'	2:B:1732:U:O4'	1.95	0.66
2:B:2415:C:C5'	6:F:207:VAL:HG22	2.24	0.66
7:G:35:ASP:OD1	7:G:184:ASN:HA	1.93	0.66
7:G:278:ILE:HG22	7:G:279:ASN:H	1.60	0.66
9:I:40:HIS:CG	25:Y:69:LYS:HA	2.30	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:I:152:ARG:HB3	9:I:154:THR:HG23	1.77	0.66
12:L:32:LYS:HE2	12:L:34:PHE:CZ	2.30	0.66
37:KA:24:ASN:ND2	37:KA:27:VAL:H	1.93	0.66
38:LA:3:GLN:HG2	38:LA:30:LEU:N	2.09	0.66
46:TA:106:PHE:HB2	83:EC:6886:A:H1'	1.77	0.66
47:UA:83:ILE:O	47:UA:87:ARG:HB2	1.94	0.66
50:XA:178:ALA:HA	50:XA:181:VAL:HG22	1.78	0.66
51:YA:146:GLN:HG3	51:YA:147:ALA:H	1.60	0.66
56:DB:179:VAL:HA	56:DB:183:ARG:HD3	1.77	0.66
82:DC:634:TRP:CZ3	82:DC:660:LYS:HA	2.29	0.66
83:EC:6902:U:H2'	83:EC:6903:U:C5	2.29	0.66
1:A:793:A:H5"	1:A:794:U:H5'	1.75	0.66
1:A:1603:U:H2'	1:A:1604:U:C6	2.29	0.66
2:B:344:A:H2'	2:B:345:G:C8	2.30	0.66
2:B:916:G:C6	6:F:207:VAL:HG21	2.30	0.66
2:B:1036:A:C3'	2:B:1037:C:H5"	2.26	0.66
2:B:1098:A:H5'	25:Y:129:LYS:HD3	1.77	0.66
2:B:1591:G:H1'	2:B:1798:A:H61	1.60	0.66
2:B:2140:U:O2'	2:B:2141:U:H5'	1.96	0.66
6:F:42:ARG:NE	6:F:87:PHE:HE2	1.93	0.66
9:I:52:VAL:HG13	9:I:54:ARG:NH1	2.10	0.66
19:S:114:ARG:O	19:S:134:LEU:HB3	1.95	0.66
51:YA:193:ILE:HG21	51:YA:212:VAL:HG13	1.75	0.66
52:ZA:41:LEU:O	52:ZA:45:VAL:HG23	1.95	0.66
52:ZA:104:VAL:HG22	52:ZA:132:ALA:HB1	1.78	0.66
82:DC:150:ARG:HH12	82:DC:354:GLU:HB3	1.61	0.66
1:A:448:C:O3'	54:BB:29:PRO:HA	1.95	0.66
1:A:862:A:N7	63:KB:70:LYS:HE2	2.09	0.66
2:B:153:U:H3'	2:B:154:U:H5"	1.77	0.66
2:B:1268:G:N2	2:B:1273:A:H62	1.89	0.66
2:B:1900:A:N6	2:B:1908:A:H61	1.94	0.66
2:B:2066:C:C3'	2:B:2067:U:H5"	2.25	0.66
2:B:3191:G:H5"	20:T:176:LYS:HG3	1.76	0.66
15:O:37:LEU:HD13	15:O:69:VAL:HG12	1.78	0.66
24:X:42:TRP:HA	24:X:42:TRP:HE3	1.59	0.66
24:X:154:HIS:HA	24:X:170:THR:HG22	1.77	0.66
25:Y:88:ARG:HH12	33:GA:31:SER:HB2	1.60	0.66
34:HA:51:LEU:CD2	38:LA:87:GLU:HG3	2.25	0.66
56:DB:122:GLU:O	56:DB:126:ASP:HB3	1.94	0.66
66:NB:113:ASP:HA	66:NB:117:LEU:HD23	1.78	0.66
68:PB:5:VAL:HG23	75:WB:42:LEU:HD22	1.77	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:379:MET:HA	82:DC:470:THR:HG22	1.78	0.66
83:EC:6765:A:H61	83:EC:6826:U:H3	1.43	0.66
1:A:107:C:H2'	1:A:108:A:H8	1.59	0.66
1:A:1166:A:H5"	55:CB:101:GLY:H	1.60	0.66
2:B:149:U:H2'	2:B:150:A:H5"	1.77	0.66
2:B:826:G:H4'	2:B:1590:G:H5'	1.77	0.66
2:B:1240:A:H5"	16:P:98:VAL:HG12	1.76	0.66
2:B:1628:C:OP1	2:B:1629:U:H2'	1.95	0.66
2:B:2076:G:H2'	2:B:2077:U:H5"	1.77	0.66
2:B:3042:U:H2'	2:B:3043:C:H6	1.60	0.66
2:B:3159:C:H2'	2:B:3160:U:C6	2.30	0.66
4:D:64:A:H62	14:N:209:ASN:ND2	1.93	0.66
7:G:280:HIS:CB	7:G:324:VAL:HG11	2.18	0.66
10:J:65:ILE:HD11	10:J:77:ARG:HB3	1.77	0.66
11:K:145:ARG:HG2	11:K:149:TYR:CD1	2.31	0.66
14:N:4:ARG:HE	14:N:99:ILE:HG13	1.58	0.66
20:T:98:ALA:HA	20:T:101:ARG:HH12	1.60	0.66
41:OA:19:CYS:HB2	41:OA:27:PHE:HB2	1.77	0.66
49:WA:223:TRP:CZ3	53:AB:222:VAL:HB	2.30	0.66
51:YA:70:LEU:HD11	51:YA:79:HIS:CD2	2.31	0.66
56:DB:159:ARG:NH1	56:DB:172:ALA:HB2	2.11	0.66
61:IB:66:ILE:HD12	61:IB:66:ILE:H	1.61	0.66
61:IB:76:VAL:HA	61:IB:119:VAL:HG13	1.78	0.66
73:UB:93:LEU:HA	73:UB:96:VAL:CG2	2.24	0.66
79:AC:12:ARG:HG3	79:AC:18:SER:HA	1.77	0.66
1:A:1466:G:OP1	66:NB:139:GLN:HB3	1.96	0.66
2:B:2609:A:H2'	2:B:2610:G:C8	2.31	0.66
2:B:3002:C:H2'	2:B:3003:G:O4'	1.96	0.66
2:B:3088:G:H2'	2:B:3089:C:O4'	1.95	0.66
2:B:3258:U:O2'	2:B:3259:U:H3'	1.96	0.66
6:F:34:TYR:HB3	6:F:67:TYR:OH	1.95	0.66
10:J:142:ASP:O	10:J:146:ILE:HG12	1.95	0.66
15:O:65:ILE:HG23	15:O:66:ALA:N	2.09	0.66
36:JA:115:LEU:HB2	36:JA:117:ILE:HG13	1.76	0.66
38:LA:57:LEU:HD23	38:LA:57:LEU:N	2.09	0.66
50:XA:119:ARG:HB3	50:XA:119:ARG:HH11	1.61	0.66
50:XA:171:GLY:HA3	50:XA:203:PHE:CD2	2.30	0.66
52:ZA:107:SER:O	52:ZA:192:GLY:HA2	1.96	0.66
71:SB:60:ARG:HA	71:SB:65:SER:HB2	1.77	0.66
82:DC:735:CYS:HB2	82:DC:792:ALA:HA	1.78	0.66
1:A:100:A:H2'	1:A:101:U:H5'	1.76	0.66

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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:268:A:C2	19:S:12:ARG:HA	2.30	0.66
2:B:361:A:H5"	41:OA:36:SER:CB	2.26	0.66
2:B:422:A:C2	2:B:2363:A:H4'	2.31	0.66
2:B:681:U:O2	2:B:696:C:H5	1.79	0.66
2:B:2186:U:H4'	2:B:2315:G:H5"	1.78	0.66
2:B:2796:G:H2'	46:TA:62:ALA:HB3	1.78	0.66
2:B:2904:U:H2'	2:B:2905:U:H6	1.61	0.66
12:L:163:VAL:HA	12:L:166:LEU:HD12	1.78	0.66
14:N:205:SER:O	14:N:209:ASN:HB2	1.95	0.66
19:S:135:VAL:HG21	19:S:151:ILE:HD13	1.77	0.66
21:U:72:GLN:HB2	21:U:83:TRP:HZ2	1.60	0.66
29:CA:61:LYS:NZ	29:CA:89:LYS:HD3	2.11	0.66
36:JA:71:HIS:HB3	36:JA:93:ALA:HB2	1.78	0.66
39:MA:4:VAL:HG11	39:MA:20:GLN:HE22	1.61	0.66
54:BB:11:ARG:H	54:BB:27:TYR:HA	1.61	0.66
54:BB:125:LYS:HA	54:BB:159:THR:HA	1.78	0.66
82:DC:293:LYS:HA	82:DC:296:ILE:HB	1.78	0.66
82:DC:588:LEU:HA	82:DC:687:ASN:O	1.96	0.66
82:DC:757:GLU:HG2	82:DC:766:PHE:CE1	2.31	0.66
82:DC:781:THR:HG23	82:DC:794:PRO:CG	2.25	0.66
1:A:94:U:H4'	54:BB:6:LYS:HA	1.77	0.66
1:A:478:A:H5'	80:BC:33:ARG:HH21	1.61	0.66
1:A:1483:A:H4'	66:NB:71:GLY:HA2	1.78	0.66
2:B:87:U:OP2	17:Q:11:LYS:HD2	1.96	0.66
2:B:1232:C:C5	2:B:1261:G:H2'	2.30	0.66
2:B:1517:G:H5"	43:QA:22:PRO:HG2	1.77	0.66
5:E:190:PHE:HA	5:E:194:LEU:HD13	1.78	0.66
8:H:185:LYS:HA	8:H:201:GLN:HB3	1.78	0.66
11:K:134:VAL:O	11:K:229:PHE:HA	1.96	0.66
25:Y:12:ARG:HD3	25:Y:13:TYR:CZ	2.31	0.66
29:CA:75:LYS:HB3	29:CA:81:ILE:HD12	1.78	0.66
31:EA:9:LYS:HD3	31:EA:85:TYR:O	1.96	0.66
1:A:208:U:H2'	1:A:209:U:C6	2.31	0.66
1:A:1164:G:H2'	1:A:1165:G:H8	1.60	0.66
1:A:1586:A:H61	1:A:1610:G:H1'	1.60	0.66
2:B:1308:A:OP2	2:B:2368:A:H4'	1.96	0.66
2:B:1927:G:OP1	47:UA:6:LYS:HB3	1.96	0.66
3:C:75:G:C8	43:QA:30:ARG:HB3	2.31	0.66
3:C:106:C:H5"	3:C:108:C:OP2	1.96	0.66
5:E:187:VAL:HG12	5:E:191:VAL:HG23	1.77	0.66
7:G:284:ARG:HB2	7:G:323:MET:HE1	1.78	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:I:58:LYS:HB3	9:I:93:THR:CB	2.26	0.66
9:I:148:ILE:HG12	9:I:151:GLN:HB2	1.78	0.66
11:K:95:ILE:HD12	11:K:133:TYR:CE1	2.31	0.66
29:CA:91:ASN:HD21	29:CA:94:GLN:HG3	1.60	0.66
52:ZA:175:GLY:HA3	59:GB:98:ALA:HA	1.77	0.66
59:GB:88:GLU:HA	59:GB:91:LYS:HD3	1.78	0.66
71:SB:44:ARG:HA	71:SB:44:ARG:HE	1.61	0.66
76:XB:4:LYS:HD2	76:XB:92:ARG:NH1	2.11	0.66
1:A:1586:A:N6	1:A:1610:G:H1'	2.10	0.65
2:B:874:U:H5'	2:B:875:G:H5'	1.77	0.65
2:B:1141:C:H2'	2:B:1142:G:O4'	1.96	0.65
2:B:1186:G:H1'	24:X:112:ALA:HB1	1.77	0.65
2:B:1584:U:H2'	2:B:1585:C:C6	2.31	0.65
2:B:1768:U:H2'	2:B:1769:G:H5"	1.78	0.65
2:B:1902:G:OP1	2:B:2918:G:H5'	1.96	0.65
2:B:2582:C:H2'	2:B:2583:C:C6	2.30	0.65
7:G:162:VAL:HG22	7:G:181:ILE:HD11	1.78	0.65
7:G:292:ALA:HA	7:G:303:LYS:O	1.95	0.65
8:H:34:ILE:O	8:H:38:VAL:HG23	1.96	0.65
13:M:112:ILE:HD11	13:M:134:ILE:HG21	1.78	0.65
15:O:18:VAL:O	15:O:19:LEU:HD23	1.96	0.65
21:U:168:LEU:C	37:KA:60:ARG:HH12	1.98	0.65
38:LA:81:CYS:HB3	38:LA:84:CYS:SG	2.35	0.65
40:NA:9:ILE:HG22	40:NA:10:GLY:H	1.61	0.65
46:TA:32:LYS:HG2	46:TA:34:SER:H	1.60	0.65
1:A:871:G:H2'	1:A:872:G:C8	2.32	0.65
1:A:1071:U:H2'	1:A:1072:C:C6	2.31	0.65
2:B:148:G:H1'	2:B:149:U:H5	1.61	0.65
2:B:265:A:H5'	40:NA:34:SER:HB2	1.77	0.65
2:B:330:G:H1	3:C:33:A:H61	1.42	0.65
2:B:1504:A:N1	2:B:1516:C:H5'	2.11	0.65
2:B:1581:C:H2'	2:B:1582:C:H5'	1.77	0.65
2:B:2664:C:P	15:O:142:LYS:HE3	2.36	0.65
11:K:132:PRO:HA	11:K:229:PHE:CG	2.32	0.65
24:X:107:TYR:CE1	24:X:118:PHE:HD1	2.13	0.65
40:NA:4:LYS:HA	40:NA:12:ASN:HB3	1.77	0.65
50:XA:179:ARG:CG	50:XA:183:ARG:HH12	2.09	0.65
51:YA:26:ARG:O	51:YA:50:LYS:HB2	1.95	0.65
63:KB:102:LEU:HD13	63:KB:112:LYS:HA	1.77	0.65
68:PB:75:ASN:HB3	68:PB:78:HIS:HB2	1.76	0.65
69:QB:9:VAL:HG21	69:QB:136:ALA:HB1	1.78	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
71:SB:86:SER:HB3	77:YB:11:THR:HG23	1.76	0.65
1:A:93:A:H1'	54:BB:3:ARG:HB3	1.77	0.65
1:A:448:C:C5'	54:BB:29:PRO:HG3	2.25	0.65
1:A:990:C:H5"	64:LB:129:LYS:HB3	1.78	0.65
1:A:1643:U:H2'	1:A:1644:C:C6	2.31	0.65
2:B:430:U:H4'	37:KA:67:MET:HE1	1.78	0.65
2:B:1751:G:H5"	42:PA:26:LYS:NZ	2.11	0.65
2:B:2554:A:H2'	38:LA:91:ARG:NH1	2.12	0.65
2:B:2801:A:O2'	2:B:2802:A:H2'	1.97	0.65
4:D:89:G:H5'	24:X:84:ARG:HG2	1.77	0.65
5:E:29:LEU:HB3	5:E:152:ARG:HH21	1.61	0.65
6:F:37:ARG:HG3	6:F:38:HIS:CD2	2.31	0.65
8:H:233:LEU:HB3	8:H:238:LEU:HD11	1.77	0.65
17:Q:138:VAL:HG12	17:Q:140:SER:H	1.61	0.65
20:T:98:ALA:HA	20:T:101:ARG:NH1	2.11	0.65
27:AA:19:VAL:HG23	27:AA:50:PRO:O	1.97	0.65
30:DA:37:LYS:HA	30:DA:40:ARG:NH1	2.11	0.65
38:LA:74:ARG:HH22	38:LA:85:VAL:HG21	1.60	0.65
39:MA:85:THR:HG22	39:MA:87:ALA:H	1.61	0.65
40:NA:51:SER:H	40:NA:54:GLU:HB2	1.62	0.65
44:RA:78:ILE:HG13	44:RA:79:GLU:H	1.61	0.65
44:RA:95:VAL:HG11	44:RA:122:ARG:NH2	2.10	0.65
57:EB:96:ARG:NH2	57:EB:124:LYS:HB3	2.11	0.65
78:ZB:19:THR:HG22	78:ZB:20:GLY:H	1.61	0.65
82:DC:587:TYR:HD2	82:DC:690:ASP:HB3	1.60	0.65
1:A:86:A:H2'	1:A:87:C:H6	1.61	0.65
1:A:1681:A:C1'	56:DB:66:GLY:HA3	2.27	0.65
2:B:12:A:H2'	2:B:13:A:C8	2.31	0.65
2:B:693:A:H2'	2:B:694:C:O4'	1.97	0.65
2:B:944:C:H4'	36:JA:33:ARG:HD3	1.78	0.65
2:B:953:G:C8	2:B:1117:G:C8	2.85	0.65
2:B:1566:A:H2'	2:B:1567:U:H4'	1.79	0.65
2:B:1631:C:H5"	2:B:1632:A:H5"	1.78	0.65
2:B:2761:G:N1	2:B:2795:U:H3'	2.11	0.65
2:B:3092:C:H2'	27:AA:12:ARG:HH21	1.59	0.65
2:B:3267:A:H4'	21:U:181:ARG:HD3	1.79	0.65
6:F:47:GLN:HE22	6:F:49:VAL:HA	1.60	0.65
9:I:41:LYS:HE3	25:Y:93:VAL:HG21	1.78	0.65
10:J:67:GLY:N	10:J:68:PRO:HA	2.12	0.65
13:M:84:LYS:HD3	13:M:191:LEU:OXT	1.97	0.65
14:N:48:LEU:HD21	14:N:142:ASP:HA	1.79	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:Z:22:PRO:HG3	26:Z:105:LEU:HD22	1.77	0.65
31:EA:23:VAL:HB	31:EA:43:VAL:HB	1.78	0.65
41:OA:22:CYS:SG	41:OA:24:ARG:HG3	2.36	0.65
50:XA:172:LEU:O	50:XA:176:LEU:HG	1.97	0.65
51:YA:199:ASN:O	51:YA:202:LYS:HG2	1.96	0.65
52:ZA:206:THR:HG23	52:ZA:209:ASN:HB2	1.79	0.65
55:CB:77:TYR:HB3	55:CB:84:LYS:CG	2.26	0.65
58:FB:99:ALA:HA	58:FB:168:CYS:SG	2.37	0.65
61:IB:148:LYS:HB2	61:IB:151:LYS:HB3	1.78	0.65
69:QB:37:VAL:HG22	69:QB:38:LYS:H	1.61	0.65
82:DC:44:GLY:O	82:DC:77:LEU:HA	1.97	0.65
1:A:164:A:H2'	1:A:165:G:C8	2.31	0.65
1:A:376:C:H2'	1:A:377:G:C8	2.31	0.65
1:A:1148:C:H2'	1:A:1149:G:C8	2.32	0.65
2:B:112:U:H3'	39:MA:103:LYS:HD3	1.79	0.65
2:B:528:U:H2'	2:B:529:A:H8	1.61	0.65
2:B:1185:C:OP1	18:R:42:LYS:HD3	1.97	0.65
2:B:1902:G:H2'	2:B:1903:U:O4'	1.96	0.65
2:B:2668:U:H2'	2:B:2669:G:C8	2.31	0.65
7:G:281:LYS:HB3	7:G:283:TYR:HE1	1.61	0.65
9:I:119:TYR:CE1	9:I:135:VAL:HG23	2.30	0.65
12:L:151:VAL:O	12:L:177:TYR:HA	1.96	0.65
12:L:166:LEU:HB2	12:L:167:PRO:HD3	1.77	0.65
14:N:61:SER:HB3	14:N:63:GLU:HG2	1.78	0.65
14:N:140:THR:HG21	14:N:148:VAL:HG22	1.78	0.65
16:P:60:VAL:HG21	16:P:77:ALA:HB2	1.77	0.65
18:R:99:TRP:O	18:R:103:ILE:HG13	1.97	0.65
20:T:119:VAL:HG11	24:X:167:ARG:HB2	1.78	0.65
24:X:10:ILE:HG12	24:X:26:ARG:HB2	1.77	0.65
24:X:118:PHE:HA	24:X:121:ILE:HD12	1.78	0.65
29:CA:113:LEU:HD23	29:CA:123:TYR:HE2	1.61	0.65
34:HA:24:THR:HG22	34:HA:91:SER:O	1.96	0.65
53:AB:36:GLY:O	53:AB:51:ARG:HB2	1.96	0.65
53:AB:141:LYS:HB2	53:AB:144:ALA:HB3	1.79	0.65
67:OB:100:LEU:H	67:OB:118:PRO:HG3	1.61	0.65
2:B:1195:A:H4'	2:B:1320:C:OP1	1.96	0.65
3:C:35:C:OP1	39:MA:85:THR:HG21	1.97	0.65
6:F:112:ILE:HG12	6:F:135:ILE:HA	1.78	0.65
11:K:131:GLU:HB3	11:K:132:PRO:HD3	1.78	0.65
59:GB:51:LYS:HG2	59:GB:54:ARG:NH1	2.12	0.65
64:LB:133:ARG:CG	64:LB:136:ARG:HE	2.05	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
66:NB:41:PRO:HB2	66:NB:44:LEU:HD23	1.78	0.65
68:PB:33:THR:HG22	68:PB:40:ARG:HA	1.79	0.65
73:UB:53:VAL:CG1	73:UB:98:GLU:HA	2.27	0.65
82:DC:270:GLU:O	82:DC:275:MET:HE2	1.96	0.65
82:DC:348:ALA:HB1	82:DC:352:ARG:HD3	1.79	0.65
82:DC:495:VAL:HG13	82:DC:504:LEU:HD22	1.78	0.65
82:DC:676:ILE:HG12	82:DC:717:PHE:CE2	2.30	0.65
1:A:758:U:H5'	59:GB:7:THR:HG21	1.77	0.65
1:A:1612:U:H2'	1:A:1613:U:O4'	1.97	0.65
2:B:953:G:H8	2:B:1117:G:C8	2.14	0.65
2:B:1051:U:H5'	9:I:15:ARG:NH2	2.11	0.65
2:B:1818:U:H2'	2:B:1819:U:C4'	2.27	0.65
2:B:1845:G:H4'	41:OA:8:PHE:CD2	2.32	0.65
2:B:2565:U:H2'	2:B:2566:C:C6	2.32	0.65
2:B:2922:G:H2'	2:B:2923:U:H4'	1.77	0.65
5:E:65:ILE:HD12	5:E:65:ILE:O	1.97	0.65
5:E:94:ASN:ND2	5:E:123:LEU:HB3	2.11	0.65
7:G:358:TRP:HB2	28:BA:1:MET:HG2	1.78	0.65
13:M:28:VAL:HG22	13:M:33:THR:HG22	1.79	0.65
50:XA:189:VAL:HG13	50:XA:190:ASP:N	2.07	0.65
56:DB:87:ARG:HB2	56:DB:87:ARG:HH11	1.62	0.65
57:EB:63:PRO:O	57:EB:64:VAL:HG23	1.96	0.65
73:UB:96:VAL:HG23	73:UB:97:ASP:H	1.60	0.65
1:A:388:G:H2'	1:A:389:G:H8	1.61	0.65
1:A:401:A:H1'	54:BB:3:ARG:HH11	1.62	0.65
1:A:1498:G:H2'	1:A:1499:G:C5'	2.27	0.65
1:A:1563:C:H4'	69:QB:41:SER:HB2	1.79	0.65
1:A:1749:A:O2'	45:SA:17:ARG:HD3	1.96	0.65
2:B:576:C:H5"	11:K:142:SER:CB	2.27	0.65
2:B:876:A:H2'	2:B:877:C:O4'	1.97	0.65
2:B:1441:G:O2'	2:B:1442:U:H5'	1.97	0.65
2:B:2561:A:C4	12:L:32:LYS:HD3	2.32	0.65
2:B:2763:U:H4'	22:V:176:ARG:HG3	1.77	0.65
2:B:2767:U:H1'	46:TA:28:TYR:OH	1.96	0.65
2:B:3047:U:O2'	7:G:53:MET:HE3	1.97	0.65
3:C:64:U:H5'	39:MA:49:LYS:HG2	1.79	0.65
4:D:8:G:H4'	9:I:69:ILE:O	1.97	0.65
7:G:339:ARG:HH12	7:G:342:LEU:HD11	1.62	0.65
15:O:60:ARG:CD	46:TA:103:ALA:HB1	2.26	0.65
24:X:12:ARG:HB3	24:X:24:LEU:CD2	2.26	0.65
26:Z:72:SER:CB	26:Z:75:TYR:HB2	2.26	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DA:37:LYS:HA	30:DA:40:ARG:HH12	1.60	0.65
51:YA:68:VAL:HG22	51:YA:69:CYS:N	2.11	0.65
53:AB:132:LYS:HB2	53:AB:189:MET:HG3	1.79	0.65
71:SB:17:CYS:HB3	71:SB:22:ARG:N	2.12	0.65
1:A:4:C:H2'	1:A:5:U:C6	2.32	0.65
1:A:330:G:H3'	58:FB:172:ARG:HH22	1.62	0.65
2:B:160:G:H2'	2:B:161:G:C8	2.32	0.65
2:B:962:A:O2'	2:B:963:G:H5'	1.96	0.65
2:B:1324:U:H2'	2:B:1325:U:O4'	1.96	0.65
2:B:1449:A:H1'	2:B:2983:C:C5	2.32	0.65
2:B:1892:G:C2'	2:B:1893:A:H5"	2.25	0.65
2:B:3176:G:N2	2:B:3213:A:H1'	2.12	0.65
4:D:107:C:H2'	4:D:108:A:C8	2.32	0.65
6:F:247:ARG:NH2	6:F:248:GLY:HA3	2.12	0.65
19:S:199:LEU:HB3	19:S:203:ARG:CD	2.26	0.65
22:V:9:GLN:NE2	22:V:10:HIS:H	1.95	0.65
26:Z:41:ILE:HG22	26:Z:43:VAL:HG23	1.79	0.65
30:DA:34:PRO:O	30:DA:105:VAL:HA	1.96	0.65
37:KA:55:ALA:HB2	37:KA:65:ARG:HD2	1.77	0.65
38:LA:90:ILE:HG23	38:LA:94:LEU:HD12	1.77	0.65
48:VA:120:TRP:HB2	48:VA:157:LYS:HE2	1.79	0.65
53:AB:40:ARG:HG3	53:AB:49:ILE:HD11	1.79	0.65
54:BB:9:LEU:HD12	54:BB:30:ARG:HG3	1.79	0.65
56:DB:58:LYS:O	56:DB:59:GLN:HB2	1.97	0.65
58:FB:74:LYS:HB2	58:FB:109:PHE:CE1	2.31	0.65
1:A:1213:G:H21	79:AC:7:TRP:HE1	1.44	0.65
1:A:1441:C:H2'	1:A:1442:U:C6	2.31	0.65
1:A:1504:G:H1'	1:A:1563:C:H1'	1.79	0.65
2:B:428:A:O2'	37:KA:88:ASN:HB2	1.97	0.65
2:B:946:U:O2'	2:B:947:G:H5'	1.97	0.65
2:B:1654:A:H2'	2:B:1655:G:O4'	1.96	0.65
2:B:1788:C:H2'	2:B:1789:G:C8	2.32	0.65
2:B:3095:U:H5"	27:AA:86:ARG:NH1	2.12	0.65
2:B:3106:A:H2'	2:B:3107:U:O4'	1.96	0.65
6:F:51:ASP:HB2	6:F:58:LEU:HD11	1.77	0.65
10:J:149:ILE:HG23	10:J:155:LEU:HB3	1.79	0.65
12:L:61:GLN:O	12:L:65:LEU:HD23	1.97	0.65
13:M:160:ASP:O	13:M:164:ILE:HB	1.97	0.65
17:Q:64:LYS:HA	32:FA:69:TRP:CE3	2.32	0.65
24:X:77:VAL:HG21	24:X:106:LEU:HD21	1.79	0.65
31:EA:6:LYS:HE2	31:EA:6:LYS:HA	1.77	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:NA:53:TYR:HA	40:NA:56:ARG:HB3	1.78	0.65
57:EB:51:VAL:HG22	57:EB:55:LYS:O	1.97	0.65
63:KB:64:ARG:O	63:KB:64:ARG:HD3	1.96	0.65
67:OB:20:TYR:HE1	67:OB:38:ILE:HG21	1.62	0.65
69:QB:117:SER:OG	69:QB:118:PRO:HD2	1.97	0.65
82:DC:578:LYS:HB3	82:DC:585:ARG:HG3	1.78	0.65
1:A:765:G:O6	59:GB:149:ARG:HB3	1.97	0.64
1:A:872:G:H2'	1:A:873:U:O4'	1.97	0.64
1:A:941:A:H4'	1:A:1025:A:H61	1.63	0.64
2:B:244:G:P	17:Q:131:LYS:HA	2.37	0.64
2:B:413:U:H2'	2:B:414:U:C6	2.33	0.64
2:B:947:G:H2'	2:B:948:C:C6	2.32	0.64
2:B:1139:G:O2'	11:K:94:LYS:HA	1.97	0.64
2:B:1366:A:H3'	2:B:1367:G:H8	1.62	0.64
2:B:1466:G:H22	2:B:1510:G:H5'	1.62	0.64
2:B:2841:G:H1'	2:B:2847:A:N6	2.12	0.64
3:C:119:C:H2'	3:C:120:C:C6	2.33	0.64
7:G:332:ARG:HH11	7:G:332:ARG:HG2	1.62	0.64
8:H:317:PRO:HB3	8:H:324:LEU:HB2	1.78	0.64
11:K:173:LEU:HB3	11:K:178:ILE:HB	1.79	0.64
11:K:224:ILE:HG12	24:X:36:ILE:HA	1.79	0.64
16:P:122:GLY:HA2	48:VA:43:LYS:HD2	1.79	0.64
24:X:103:VAL:HA	24:X:106:LEU:HD12	1.80	0.64
31:EA:10:VAL:HG12	31:EA:11:ALA:N	2.12	0.64
53:AB:12:VAL:O	53:AB:16:VAL:HG23	1.97	0.64
55:CB:33:VAL:O	55:CB:37:GLN:HB2	1.98	0.64
56:DB:77:LEU:HD12	56:DB:95:LYS:HD3	1.79	0.64
72:TB:81:VAL:HG13	72:TB:85:ASP:CB	2.27	0.64
76:XB:71:LEU:HB3	76:XB:73:TYR:CE2	2.32	0.64
82:DC:578:LYS:HB3	82:DC:585:ARG:HG2	1.78	0.64
1:A:74:U:O2'	1:A:75:U:H5"	1.96	0.64
1:A:338:C:H1'	58:FB:5:ARG:HG2	1.79	0.64
2:B:145:G:H4'	19:S:55:ALA:HB1	1.79	0.64
2:B:146:U:H3	12:L:134:TYR:HD1	1.44	0.64
2:B:666:A:H2'	2:B:667:C:H5"	1.78	0.64
2:B:858:A:O2'	2:B:859:G:H5'	1.98	0.64
2:B:1221:A:H3'	2:B:1222:G:C5'	2.27	0.64
2:B:1517:G:H2'	2:B:1518:U:C6	2.31	0.64
2:B:2186:U:H2'	2:B:2187:G:O4'	1.97	0.64
2:B:2370:G:H2'	2:B:2371:G:C8	2.32	0.64
3:C:114:G:H2'	3:C:115:C:C6	2.31	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:M:99:ILE:HG21	13:M:179:ILE:HD11	1.79	0.64
13:M:172:ILE:H	13:M:172:ILE:HD13	1.62	0.64
26:Z:72:SER:HB2	26:Z:75:TYR:H	1.62	0.64
35:IA:62:ARG:HB3	35:IA:66:GLY:HA3	1.78	0.64
37:KA:17:GLN:HB3	37:KA:24:ASN:CB	2.23	0.64
43:QA:22:PRO:HG3	43:QA:41:ARG:HH12	1.62	0.64
52:ZA:152:HIS:CB	52:ZA:174:ARG:HG2	2.27	0.64
55:CB:62:VAL:HG13	55:CB:89:ILE:HG13	1.76	0.64
55:CB:130:ILE:O	55:CB:134:VAL:HB	1.97	0.64
56:DB:164:LYS:HB3	56:DB:167:LYS:O	1.97	0.64
58:FB:36:THR:O	58:FB:95:THR:HA	1.96	0.64
59:GB:83:VAL:HG23	59:GB:85:VAL:HG23	1.79	0.64
76:XB:82:ARG:O	76:XB:84:VAL:HG12	1.96	0.64
82:DC:4:PHE:O	82:DC:47:SER:HA	1.97	0.64
1:A:96:G:H4'	1:A:460:A:O3'	1.96	0.64
1:A:504:U:H2'	1:A:505:A:C4'	2.26	0.64
1:A:1456:C:H3'	1:A:1457:C:C5'	2.26	0.64
2:B:240:U:H4'	2:B:241:G:C5'	2.28	0.64
2:B:904:A:H5"	2:B:1537:A:H5'	1.79	0.64
2:B:1259:A:H62	48:VA:38:MET:HG2	1.62	0.64
2:B:1328:C:H5"	37:KA:75:HIS:CE1	2.32	0.64
2:B:1508:C:O2'	2:B:2353:G:H1'	1.96	0.64
5:E:93:LEU:HD22	5:E:99:LEU:HB3	1.80	0.64
6:F:39:GLY:CA	12:L:36:ILE:HG21	2.27	0.64
11:K:101:LYS:HG3	11:K:105:LEU:HG	1.78	0.64
13:M:21:LYS:HA	18:R:8:LYS:HB2	1.79	0.64
15:O:26:SER:HA	15:O:30:LEU:HB2	1.79	0.64
31:EA:72:ILE:HG12	31:EA:111:LYS:HE2	1.78	0.64
58:FB:6:ASP:HB3	58:FB:28:GLU:OE2	1.98	0.64
61:IB:107:VAL:HG13	61:IB:108:PRO:HD2	1.79	0.64
72:TB:14:ILE:HG13	72:TB:27:ILE:HG21	1.78	0.64
76:XB:74:CYS:O	76:XB:75:VAL:HB	1.97	0.64
82:DC:657:HIS:HA	82:DC:660:LYS:HB2	1.79	0.64
2:B:1430:U:O4	32:FA:4:ARG:HA	1.96	0.64
6:F:251:LYS:HA	6:F:251:LYS:HE3	1.78	0.64
10:J:63:LEU:HB2	10:J:79:VAL:CG1	2.27	0.64
18:R:120:VAL:O	18:R:124:ARG:HB2	1.98	0.64
28:BA:13:ILE:HG23	28:BA:32:GLN:HG2	1.79	0.64
36:JA:86:THR:HG23	36:JA:115:LEU:HD13	1.79	0.64
48:VA:7:LYS:HA	48:VA:10:GLU:CG	2.28	0.64
58:FB:72:ILE:HD13	58:FB:74:LYS:HE2	1.79	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:GB:23:ARG:O	59:GB:27:GLU:HG3	1.97	0.64
61:IB:33:ARG:HH11	61:IB:61:THR:HG21	1.63	0.64
68:PB:28:ILE:HA	68:PB:58:ALA:HB2	1.79	0.64
1:A:344:A:H2'	1:A:345:U:H5'	1.79	0.64
2:B:47:C:H3'	2:B:48:A:H2'	1.80	0.64
2:B:109:A:H4'	2:B:110:G:H5'	1.78	0.64
2:B:1125:U:OP1	14:N:15:LYS:HG2	1.98	0.64
2:B:1259:A:H61	48:VA:33:VAL:HG11	1.61	0.64
2:B:2736:A:H4'	25:Y:71:SER:OG	1.96	0.64
3:C:5:U:O2'	3:C:6:U:H5'	1.97	0.64
11:K:136:TYR:CZ	11:K:231:ASN:HB2	2.32	0.64
12:L:73:PRO:HD3	12:L:233:TRP:CZ3	2.33	0.64
14:N:60:LEU:HG	14:N:129:VAL:CG2	2.26	0.64
15:O:49:LYS:HA	15:O:64:LYS:HA	1.79	0.64
18:R:120:VAL:HG22	20:T:197:LEU:HB3	1.80	0.64
24:X:78:TRP:O	24:X:124:LEU:HG	1.97	0.64
31:EA:57:HIS:HE2	31:EA:65:ARG:HD2	1.62	0.64
32:FA:19:LYS:HE2	32:FA:19:LYS:HA	1.79	0.64
38:LA:57:LEU:HD12	38:LA:61:GLN:HB3	1.79	0.64
39:MA:111:PHE:N	39:MA:112:PRO:HD3	2.13	0.64
49:WA:122:ILE:HB	49:WA:134:TRP:HD1	1.63	0.64
56:DB:2:LYS:HE2	56:DB:17:GLU:HG2	1.77	0.64
66:NB:45:ARG:O	66:NB:48:VAL:HG12	1.97	0.64
83:EC:6948:U:H2'	83:EC:6949:G:H8	1.62	0.64
1:A:1016:C:H2'	1:A:1017:U:C6	2.32	0.64
1:A:1441:C:H2'	1:A:1442:U:H6	1.62	0.64
2:B:75:G:OP1	17:Q:58:VAL:HB	1.98	0.64
2:B:229:G:H5'	30:DA:3:LYS:HA	1.79	0.64
2:B:2330:C:H2'	2:B:2331:C:C6	2.33	0.64
2:B:2614:G:H3'	2:B:2615:G:H8	1.63	0.64
2:B:2728:G:N1	25:Y:80:VAL:HG21	2.12	0.64
7:G:335:ILE:HD12	7:G:336:VAL:N	2.13	0.64
9:I:33:ARG:HH21	9:I:50:ARG:NH1	1.95	0.64
10:J:54:TYR:CE2	10:J:63:LEU:HD22	2.33	0.64
12:L:34:PHE:HA	12:L:39:ALA:HB3	1.80	0.64
12:L:146:LYS:HG3	12:L:173:MET:HE3	1.80	0.64
17:Q:115:ARG:HH11	17:Q:115:ARG:HG3	1.63	0.64
18:R:38:ILE:HA	18:R:44:VAL:HG22	1.80	0.64
24:X:75:PHE:HB2	24:X:94:ILE:O	1.97	0.64
52:ZA:81:MET:HB2	52:ZA:101:VAL:O	1.97	0.64
67:OB:20:TYR:CE1	67:OB:38:ILE:HD13	2.32	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
69:QB:53:TRP:O	69:QB:57:ARG:HB2	1.97	0.64
82:DC:113:SER:HB3	82:DC:516:PRO:HG2	1.78	0.64
82:DC:445:ILE:HG12	82:DC:446:ASP:N	2.12	0.64
1:A:72:A:H2'	1:A:73:U:C6	2.31	0.64
1:A:328:A:H2'	1:A:329:G:H8	1.62	0.64
1:A:629:U:H1'	2:B:846:A:N1	2.13	0.64
2:B:127:G:OP1	19:S:140:LYS:HG3	1.98	0.64
2:B:871:U:H2'	2:B:872:U:C6	2.33	0.64
2:B:1305:U:C2	7:G:257:PRO:HG3	2.33	0.64
2:B:1680:G:H2'	2:B:1681:U:H6	1.63	0.64
2:B:2655:U:H5'	46:TA:3:ASN:HB3	1.78	0.64
6:F:129:ALA:CB	6:F:132:ASN:HD22	2.09	0.64
6:F:135:ILE:H	6:F:135:ILE:CD1	2.08	0.64
6:F:180:LEU:HD22	47:UA:18:TYR:CD2	2.33	0.64
12:L:169:LEU:HD11	19:S:6:TYR:CE2	2.32	0.64
13:M:90:MET:HG2	13:M:181:VAL:HA	1.80	0.64
18:R:45:LEU:HA	18:R:57:ALA:HA	1.78	0.64
36:JA:82:LEU:CD2	36:JA:117:ILE:HD13	2.27	0.64
39:MA:85:THR:HG22	39:MA:87:ALA:N	2.12	0.64
41:OA:37:CYS:SG	41:OA:39:TYR:HB2	2.38	0.64
45:SA:12:ARG:HG2	45:SA:15:ARG:HH12	1.63	0.64
48:VA:139:LEU:HD21	48:VA:172:LEU:HD21	1.79	0.64
48:VA:145:ILE:HB	82:DC:201:GLN:HE22	1.63	0.64
50:XA:140:ASN:OD1	71:SB:29:HIS:HA	1.98	0.64
51:YA:127:VAL:HG11	51:YA:176:VAL:HG21	1.79	0.64
52:ZA:187:LEU:O	52:ZA:191:ALA:HB2	1.97	0.64
53:AB:65:ARG:O	53:AB:69:LEU:HG	1.98	0.64
54:BB:238:LEU:H	54:BB:238:LEU:CD1	2.09	0.64
64:LB:61:MET:O	64:LB:65:GLN:HB2	1.98	0.64
71:SB:17:CYS:HB2	71:SB:22:ARG:HB2	1.79	0.64
73:UB:71:CYS:HB3	73:UB:85:ALA:O	1.98	0.64
1:A:381:C:H2'	1:A:382:C:H6	1.61	0.64
1:A:1365:C:H2'	1:A:1366:U:O4'	1.97	0.64
2:B:311:C:H42	2:B:2778:G:H1	1.43	0.64
2:B:1168:U:O2'	2:B:1169:A:H5'	1.97	0.64
2:B:1334:U:H5'	11:K:207:LEU:O	1.97	0.64
2:B:2366:C:H2'	2:B:2367:A:C8	2.33	0.64
2:B:2394:G:N3	7:G:259:HIS:HA	2.13	0.64
4:D:64:A:H62	14:N:209:ASN:HD21	1.46	0.64
8:H:288:ARG:HA	8:H:291:ASN:ND2	2.13	0.64
16:P:130:LYS:HA	16:P:146:LYS:HE3	1.78	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:V:65:SER:HB3	22:V:90:ASP:OD2	1.98	0.64
24:X:28:ARG:NH1	24:X:64:ILE:HD13	2.13	0.64
28:BA:39:LEU:CD1	28:BA:44:LYS:HG3	2.28	0.64
52:ZA:179:VAL:HB	52:ZA:197:TYR:HA	1.78	0.64
56:DB:207:GLU:O	56:DB:210:GLN:HB2	1.98	0.64
65:MB:125:PRO:HA	68:PB:126:ARG:NH1	2.04	0.64
82:DC:131:THR:HG22	82:DC:177:THR:CG2	2.27	0.64
82:DC:399:ARG:HD3	82:DC:401:PHE:HE1	1.63	0.64
82:DC:620:ALA:O	82:DC:624:GLY:HA2	1.97	0.64
1:A:606:A:H1'	1:A:609:U:OP1	1.98	0.64
1:A:772:G:H21	1:A:774:A:H1'	1.62	0.64
2:B:1396:C:H2'	2:B:1397:C:C6	2.33	0.64
2:B:1479:U:C2'	2:B:1480:G:H5'	2.26	0.64
2:B:2259:A:H2'	2:B:2260:U:O4'	1.97	0.64
2:B:2739:A:P	33:GA:38:LYS:HE2	2.37	0.64
18:R:66:THR:HB	18:R:67:PRO:HD2	1.78	0.64
18:R:100:ALA:HA	18:R:103:ILE:HD12	1.80	0.64
20:T:128:ARG:CZ	20:T:128:ARG:HA	2.28	0.64
21:U:87:SER:O	21:U:91:VAL:HG23	1.97	0.64
25:Y:66:ASN:HB2	33:GA:35:VAL:HG22	1.79	0.64
34:HA:52:ARG:O	34:HA:55:GLU:HG2	1.98	0.64
38:LA:24:LYS:HA	38:LA:30:LEU:HG	1.78	0.64
40:NA:60:LEU:O	40:NA:63:ASN:HB3	1.98	0.64
49:WA:12:THR:HB	49:WA:309:VAL:HG13	1.79	0.64
55:CB:157:ARG:HD2	55:CB:157:ARG:H	1.62	0.64
56:DB:5:ILE:HG22	56:DB:113:ILE:HD11	1.79	0.64
63:KB:91:LEU:HD21	63:KB:121:ARG:HH11	1.63	0.64
69:QB:28:LEU:HD21	69:QB:30:VAL:CG1	2.28	0.64
77:YB:54:VAL:HB	77:YB:63:LEU:HD12	1.77	0.64
82:DC:629:ASP:CA	82:DC:647:ILE:HG21	2.28	0.64
83:EC:6760:A:H2'	83:EC:6761:C:H6	1.62	0.64
1:A:629:U:H5'	63:KB:127:ARG:HH22	1.63	0.64
1:A:861:U:H5'	63:KB:64:ARG:HH12	1.61	0.64
1:A:900:A:O2'	1:A:916:U:H4'	1.98	0.64
1:A:1189:A:H2'	1:A:1190:C:C6	2.32	0.64
2:B:1019:G:C3'	2:B:1020:G:H5"	2.27	0.64
9:I:33:ARG:O	9:I:37:VAL:HG23	1.98	0.64
15:O:32:ARG:HB3	15:O:120:ILE:HG23	1.80	0.64
31:EA:12:VAL:HG12	31:EA:20:GLY:HA2	1.79	0.64
36:JA:11:LYS:HB2	36:JA:14:THR:HG23	1.80	0.64
49:WA:222:LEU:HB3	49:WA:231:MET:SD	2.38	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:FB:13:ALA:HA	61:IB:133:LYS:HZ3	1.61	0.64
72:TB:3:ARG:HG3	72:TB:9:ASP:OD2	1.98	0.64
82:DC:158:ASN:ND2	82:DC:159:LYS:H	1.96	0.64
1:A:629:U:C3'	1:A:630:A:H5"	2.27	0.63
2:B:570:A:H2'	2:B:571:U:C6	2.33	0.63
2:B:726:G:H21	2:B:744:A:H62	1.46	0.63
2:B:1220:U:H3'	2:B:1221:A:C2	2.32	0.63
2:B:1622:U:H2'	2:B:1623:G:C8	2.33	0.63
2:B:1627:U:H4'	2:B:1630:U:H4'	1.78	0.63
2:B:2117:A:H3'	2:B:2118:C:C5	2.33	0.63
2:B:2578:U:H2'	2:B:2579:G:O4'	1.98	0.63
2:B:2841:G:H1'	2:B:2847:A:H61	1.63	0.63
2:B:3066:U:H2'	2:B:3067:C:H6	1.64	0.63
2:B:3385:U:H5"	35:IA:108:VAL:HG23	1.80	0.63
7:G:50:LYS:O	7:G:332:ARG:HA	1.98	0.63
8:H:321:LYS:HA	8:H:324:LEU:HD23	1.80	0.63
10:J:47:PHE:HZ	10:J:75:PRO:HD2	1.61	0.63
12:L:55:TYR:CE2	12:L:56:VAL:HG23	2.33	0.63
19:S:49:ARG:HA	19:S:53:TYR:H	1.63	0.63
37:KA:26:ASN:HA	37:KA:88:ASN:OD1	1.96	0.63
46:TA:72:LEU:HD11	46:TA:83:LEU:CD1	2.27	0.63
57:EB:9:LEU:HD13	57:EB:10:SER:N	2.13	0.63
70:RB:62:VAL:HG13	70:RB:85:ARG:HE	1.62	0.63
74:VB:55:VAL:HG22	74:VB:75:VAL:CG2	2.28	0.63
82:DC:349:GLN:HA	82:DC:352:ARG:HB2	1.81	0.63
82:DC:454:ILE:HG13	82:DC:455:GLY:N	2.13	0.63
1:A:306:U:H2'	1:A:307:G:H8	1.63	0.63
1:A:600:U:H2'	1:A:601:A:C8	2.33	0.63
1:A:632:U:H2'	1:A:633:U:C6	2.33	0.63
1:A:959:U:C6	63:KB:61:THR:HB	2.33	0.63
1:A:1535:U:H5"	55:CB:187:ILE:HD11	1.80	0.63
2:B:286:U:H5"	19:S:179:LYS:HG2	1.80	0.63
2:B:344:A:H2'	2:B:345:G:O4'	1.97	0.63
2:B:953:G:H2'	2:B:1117:G:H5"	1.80	0.63
2:B:1659:U:H2'	2:B:1660:C:C6	2.33	0.63
2:B:1741:A:H2'	2:B:1742:U:H5'	1.79	0.63
2:B:1923:C:H2'	2:B:1924:U:H6	1.63	0.63
2:B:2381:G:C2'	2:B:2382:G:H5'	2.27	0.63
6:F:247:ARG:HH21	6:F:248:GLY:HA3	1.63	0.63
7:G:337:THR:C	7:G:338:LEU:HD22	2.19	0.63
10:J:174:LEU:HD22	18:R:117:ARG:NH2	2.13	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:L:186:LEU:HA	12:L:189:LEU:HD11	1.79	0.63
14:N:192:ASP:HA	14:N:197:VAL:HB	1.81	0.63
18:R:7:VAL:HG12	18:R:7:VAL:O	1.97	0.63
22:V:54:LEU:HD13	22:V:58:ASN:HB3	1.80	0.63
22:V:89:ASP:HB2	22:V:110:ALA:N	2.12	0.63
23:W:129:GLY:O	23:W:130:ASN:HB2	1.98	0.63
25:Y:13:TYR:HB3	25:Y:16:GLN:NE2	2.13	0.63
29:CA:57:LEU:HD21	29:CA:89:LYS:O	1.99	0.63
34:HA:73:GLY:N	34:HA:76:GLU:HB2	2.09	0.63
38:LA:54:ILE:CD1	38:LA:71:THR:HA	2.25	0.63
39:MA:78:LYS:HG2	39:MA:81:ARG:NH2	2.13	0.63
39:MA:85:THR:HB	39:MA:88:LEU:HB2	1.80	0.63
51:YA:110:LEU:O	51:YA:114:VAL:HG23	1.97	0.63
59:GB:66:ASP:HB3	59:GB:69:ARG:HB3	1.80	0.63
72:TB:75:ILE:H	72:TB:127:GLY:HA2	1.62	0.63
72:TB:94:LEU:HD22	72:TB:100:GLY:HA3	1.79	0.63
76:XB:37:LYS:HD2	76:XB:37:LYS:H	1.63	0.63
82:DC:153:PRO:HD3	82:DC:200:VAL:HG22	1.80	0.63
1:A:401:A:H1'	54:BB:3:ARG:NH1	2.13	0.63
1:A:1011:G:H2'	1:A:1012:U:C5	2.33	0.63
2:B:6:A:H61	3:C:153:U:H3	1.45	0.63
2:B:15:C:H2'	2:B:16:A:H8	1.63	0.63
2:B:404:G:OP1	2:B:404:G:H3'	1.98	0.63
2:B:587:U:O2'	2:B:588:G:H5'	1.98	0.63
2:B:1033:U:H2'	2:B:1034:U:C6	2.33	0.63
2:B:1357:G:H2'	2:B:1358:C:C6	2.34	0.63
2:B:1626:U:H2'	2:B:1627:U:C6	2.34	0.63
2:B:2241:U:H4'	6:F:242:ARG:NH1	2.13	0.63
2:B:2525:G:H2'	6:F:34:TYR:CD1	2.32	0.63
2:B:2772:C:OP2	46:TA:15:LYS:HE3	1.99	0.63
2:B:3280:U:O2'	2:B:3281:U:H5'	1.97	0.63
2:B:3320:A:H2'	2:B:3321:C:C6	2.33	0.63
4:D:8:G:H2'	4:D:9:C:C6	2.34	0.63
5:E:13:VAL:HG11	5:E:179:LEU:HD13	1.80	0.63
9:I:40:HIS:CD2	9:I:42:ALA:HB3	2.33	0.63
11:K:85:PHE:CE1	11:K:87:VAL:HG13	2.33	0.63
22:V:33:TYR:HA	22:V:36:LEU:CD1	2.28	0.63
35:IA:46:THR:HG21	35:IA:91:SER:HB2	1.79	0.63
51:YA:126:THR:HG22	51:YA:136:ARG:HE	1.62	0.63
55:CB:98:MET:HB3	55:CB:110:ALA:HB2	1.78	0.63
63:KB:135:LEU:HD22	63:KB:136:PRO:HD2	1.80	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
65:MB:18:ARG:O	68:PB:95:GLY:HA3	1.98	0.63
1:A:684:A:C3'	1:A:685:A:H5"	2.27	0.63
1:A:780:A:C8	74:VB:8:ARG:HB3	2.33	0.63
1:A:1454:G:H5'	65:MB:81:ARG:HE	1.63	0.63
1:A:1502:G:N7	69:QB:99:SER:HB2	2.13	0.63
1:A:1676:U:H5"	58:FB:58:LEU:HD21	1.81	0.63
2:B:26:A:H2'	2:B:27:C:H5'	1.81	0.63
2:B:939:U:H2'	2:B:940:G:H8	1.63	0.63
2:B:1169:A:H2'	2:B:1170:A:O4'	1.98	0.63
2:B:1381:A:H2'	2:B:1382:G:C8	2.34	0.63
2:B:1638:A:N3	2:B:1709:C:H1'	2.12	0.63
2:B:1690:C:H2'	2:B:1691:U:C1'	2.28	0.63
2:B:2154:U:H4'	6:F:240:ALA:CB	2.28	0.63
2:B:3118:C:C3'	2:B:3119:U:H5"	2.28	0.63
2:B:3174:A:H61	37:KA:54:ARG:NH2	1.97	0.63
8:H:8:VAL:HA	8:H:151:VAL:HB	1.80	0.63
20:T:6:VAL:HA	20:T:32:LYS:O	1.98	0.63
20:T:108:ILE:HD12	20:T:160:ARG:HH11	1.61	0.63
20:T:110:PRO:HA	20:T:113:ASP:OD1	1.97	0.63
22:V:54:LEU:HB3	22:V:58:ASN:CB	2.16	0.63
25:Y:102:ARG:HD2	25:Y:105:PHE:HD1	1.63	0.63
27:AA:79:VAL:HA	27:AA:122:CYS:SG	2.38	0.63
36:JA:20:HIS:CG	36:JA:42:VAL:HG21	2.34	0.63
48:VA:143:THR:CG2	48:VA:150:ILE:HG23	2.27	0.63
50:XA:113:ARG:HA	50:XA:113:ARG:HE	1.64	0.63
53:AB:11:LEU:HD12	70:RB:86:ILE:CG1	2.22	0.63
64:LB:43:THR:OG1	64:LB:46:MET:HG3	1.98	0.63
82:DC:598:SER:HB3	82:DC:643:PRO:HB2	1.80	0.63
1:A:324:U:H5"	61:IB:133:LYS:HZ2	1.64	0.63
1:A:690:G:C3'	1:A:691:C:H5"	2.28	0.63
1:A:1241:G:H5'	65:MB:102:PHE:CZ	2.33	0.63
1:A:1434:U:O2'	1:A:1435:G:H3'	1.98	0.63
1:A:1532:U:OP2	75:WB:77:ARG:HD2	1.98	0.63
2:B:404:G:OP1	2:B:405:U:H5	1.81	0.63
2:B:1138:U:O3'	11:K:97:PRO:HD3	1.98	0.63
2:B:2111:G:N2	28:BA:39:LEU:HD11	2.14	0.63
2:B:2200:U:H2'	2:B:2201:G:C8	2.34	0.63
2:B:2799:A:H5"	2:B:2800:G:O5'	1.97	0.63
2:B:3156:U:O2'	2:B:3157:U:H5'	1.98	0.63
7:G:83:PRO:HG3	7:G:204:ALA:HB2	1.80	0.63
8:H:145:ILE:HD12	8:H:150:LEU:HD13	1.79	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:334:PHE:HA	8:H:339:LEU:HD12	1.80	0.63
9:I:104:LEU:HA	9:I:247:ILE:HG21	1.80	0.63
17:Q:123:ILE:HD12	17:Q:125:VAL:HG23	1.80	0.63
25:Y:78:LYS:CE	25:Y:87:LYS:HE3	2.27	0.63
29:CA:107:VAL:HG13	29:CA:126:LEU:HA	1.81	0.63
30:DA:22:ALA:HB1	30:DA:26:GLN:HB2	1.81	0.63
49:WA:299:GLN:HG3	49:WA:315:VAL:HB	1.81	0.63
55:CB:100:ASN:HD21	55:CB:180:ARG:HD3	1.63	0.63
83:EC:6918:A:H2'	83:EC:6919:G:H8	1.63	0.63
1:A:343:C:H2'	1:A:344:A:C8	2.33	0.63
1:A:1022:C:H1'	1:A:1124:A:H61	1.63	0.63
1:A:1244:A:H1'	79:AC:7:TRP:CD2	2.34	0.63
2:B:661:G:H5'	8:H:100:PHE:CE1	2.33	0.63
2:B:681:U:H2'	2:B:696:C:N4	2.14	0.63
2:B:1190:A:H5'	2:B:1191:U:OP1	1.97	0.63
2:B:1422:G:H2'	2:B:1423:C:C6	2.32	0.63
2:B:1634:G:H5"	31:EA:107:ARG:NH2	2.13	0.63
2:B:1636:U:H5"	31:EA:73:LYS:HZ2	1.64	0.63
2:B:2742:C:H2'	2:B:2743:A:C8	2.31	0.63
7:G:170:PRO:HG3	7:G:315:GLY:HA3	1.81	0.63
10:J:165:LEU:HD12	37:KA:9:VAL:HG22	1.81	0.63
14:N:208:ASN:O	14:N:212:GLU:HG2	1.99	0.63
19:S:31:ARG:HA	19:S:65:ARG:NH1	2.13	0.63
20:T:75:ALA:HB3	20:T:78:ARG:HB2	1.79	0.63
25:Y:12:ARG:C	25:Y:14:MET:H	2.01	0.63
25:Y:14:MET:HG3	25:Y:15:PHE:HD2	1.61	0.63
25:Y:115:LYS:HA	25:Y:118:GLU:HB3	1.79	0.63
29:CA:58:ASP:O	29:CA:62:VAL:HG23	1.99	0.63
34:HA:45:ALA:HB3	34:HA:48:THR:HG23	1.80	0.63
41:OA:18:LEU:CD1	43:QA:8:ARG:HB3	2.28	0.63
42:PA:46:ARG:HA	42:PA:51:LEU:HA	1.80	0.63
48:VA:98:ASN:O	48:VA:102:SER:HB2	1.99	0.63
54:BB:71:LYS:HB3	54:BB:76:VAL:O	1.98	0.63
55:CB:133:VAL:HG22	55:CB:198:LEU:HB3	1.81	0.63
56:DB:164:LYS:HD2	56:DB:167:LYS:O	1.99	0.63
70:RB:97:VAL:O	70:RB:100:VAL:HB	1.99	0.63
82:DC:600:ALA:HA	82:DC:603:ASN:HB2	1.81	0.63
82:DC:607:ASN:HB3	82:DC:610:ASP:HB2	1.81	0.63
1:A:583:C:H2'	1:A:584:C:C6	2.33	0.63
2:B:135:C:H2'	39:MA:94:LYS:CE	2.28	0.63
2:B:137:G:H2'	2:B:138:U:C6	2.34	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:860:G:H2'	2:B:2133:U:H1'	1.81	0.63
2:B:1682:U:H3'	26:Z:85:LYS:CE	2.25	0.63
3:C:38:U:C5	39:MA:78:LYS:HD3	2.34	0.63
7:G:199:PHE:O	7:G:200:GLU:HB2	1.99	0.63
20:T:167:TYR:HA	20:T:170:LYS:HD3	1.80	0.63
31:EA:57:HIS:NE2	31:EA:65:ARG:HD2	2.13	0.63
34:HA:45:ALA:CB	34:HA:73:GLY:HA2	2.29	0.63
35:IA:55:LEU:HB2	35:IA:95:PRO:HD3	1.80	0.63
57:EB:172:VAL:O	57:EB:176:LEU:HG	1.99	0.63
59:GB:57:ARG:O	59:GB:61:THR:HG23	1.98	0.63
64:LB:87:GLY:HA3	64:LB:120:PRO:HG2	1.81	0.63
82:DC:316:GLY:H	82:DC:319:LEU:HD22	1.63	0.63
82:DC:412:ARG:NE	82:DC:473:GLU:HA	2.13	0.63
1:A:556:A:H5"	80:BC:56:MET:SD	2.39	0.63
1:A:1596:C:H5"	79:AC:16:LYS:HG2	1.79	0.63
1:A:1792:G:H3'	1:A:1793:G:C5'	2.24	0.63
2:B:39:A:H2'	2:B:42:C:N4	2.12	0.63
2:B:417:A:H2'	2:B:418:A:C8	2.34	0.63
2:B:666:A:H2'	2:B:667:C:C4'	2.29	0.63
2:B:817:A:C5	41:OA:14:LYS:HA	2.34	0.63
2:B:927:C:H2'	2:B:928:C:C6	2.33	0.63
2:B:1144:U:O2	2:B:1159:A:N7	2.32	0.63
2:B:1456:A:N1	2:B:1477:A:H4'	2.13	0.63
2:B:1774:C:H3'	2:B:1775:G:H5"	1.79	0.63
2:B:1904:C:H2'	2:B:1905:G:O4'	1.98	0.63
2:B:2683:U:H2'	2:B:2684:C:C6	2.33	0.63
2:B:2939:G:OP2	7:G:2:SER:HA	1.99	0.63
2:B:3188:G:H2'	2:B:3189:G:H8	1.64	0.63
6:F:129:ALA:HB1	6:F:132:ASN:HD22	1.64	0.63
6:F:209:HIS:CG	6:F:210:PRO:HD2	2.33	0.63
7:G:86:VAL:HA	7:G:162:VAL:HG12	1.79	0.63
7:G:358:TRP:CZ2	7:G:360:ASP:HA	2.33	0.63
8:H:42:VAL:HG22	8:H:113:VAL:HG21	1.80	0.63
8:H:156:LEU:HD23	8:H:157:GLU:N	2.13	0.63
8:H:181:VAL:HG12	8:H:182:LEU:H	1.64	0.63
10:J:165:LEU:CD1	37:KA:9:VAL:HG22	2.29	0.63
16:P:102:GLY:HA3	16:P:140:GLY:N	2.09	0.63
17:Q:89:TYR:O	17:Q:93:ILE:HG12	1.99	0.63
17:Q:157:ARG:O	32:FA:99:ALA:HB3	1.99	0.63
18:R:102:LYS:HA	18:R:105:GLN:HG3	1.81	0.63
29:CA:91:ASN:ND2	29:CA:94:GLN:HG3	2.14	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:EA:26:VAL:HG12	31:EA:89:VAL:HG23	1.81	0.63
39:MA:25:LYS:HA	39:MA:28:LEU:HB3	1.81	0.63
46:TA:26:THR:OG1	46:TA:71:ARG:HB3	1.98	0.63
50:XA:74:VAL:HG23	50:XA:118:PRO:HB3	1.81	0.63
56:DB:216:LEU:O	56:DB:220:LYS:HB3	1.98	0.63
58:FB:4:SER:HA	58:FB:28:GLU:O	1.99	0.63
59:GB:116:LEU:O	59:GB:118:LEU:HD12	1.98	0.63
71:SB:15:ARG:HB3	71:SB:24:ILE:HD12	1.81	0.63
72:TB:79:PHE:O	72:TB:124:LYS:HA	1.99	0.63
73:UB:62:LYS:HG3	73:UB:118:PRO:HD3	1.81	0.63
82:DC:335:LEU:HA	82:DC:338:ILE:CG2	2.29	0.63
1:A:331:A:H5'	58:FB:33:PRO:HA	1.80	0.63
1:A:397:A:O2'	58:FB:50:GLY:HA2	1.98	0.63
1:A:1268:G:H4'	1:A:1270:G:OP1	1.99	0.63
1:A:1439:C:H2'	1:A:1440:C:C6	2.34	0.63
2:B:19:U:H4'	19:S:138:GLN:OE1	1.98	0.63
2:B:966:U:H2'	2:B:967:A:C8	2.34	0.63
2:B:1785:U:H5"	38:LA:38:LEU:HD12	1.79	0.63
2:B:2691:A:H3'	2:B:2692:A:C8	2.34	0.63
2:B:2948:C:H4'	7:G:243:HIS:H	1.62	0.63
14:N:65:LEU:H	14:N:65:LEU:HD12	1.63	0.63
21:U:114:VAL:HG21	21:U:148:LEU:HD13	1.79	0.63
25:Y:37:GLY:HA2	25:Y:63:VAL:HG12	1.81	0.63
38:LA:29:ILE:H	38:LA:29:ILE:CD1	2.08	0.63
43:QA:42:ARG:HH11	43:QA:42:ARG:HG2	1.64	0.63
47:UA:38:ASP:HA	47:UA:45:LYS:CA	2.27	0.63
52:ZA:69:ILE:HD12	52:ZA:70:ASP:N	2.14	0.63
55:CB:213:LYS:HA	55:CB:216:GLU:HB2	1.80	0.63
57:EB:143:LEU:HD23	57:EB:147:ASN:HB3	1.79	0.63
60:HB:3:MET:HG3	60:HB:8:ARG:HB2	1.81	0.63
69:QB:66:TYR:OH	69:QB:129:GLN:HA	1.99	0.63
69:QB:70:GLN:HA	69:QB:122:ARG:O	1.98	0.63
78:ZB:33:LEU:HD21	78:ZB:53:ILE:HG23	1.79	0.63
82:DC:454:ILE:HG13	82:DC:455:GLY:H	1.64	0.63
82:DC:629:ASP:HA	82:DC:647:ILE:HG21	1.79	0.63
1:A:139:C:C5	1:A:176:C:H1'	2.34	0.62
1:A:654:C:H3'	1:A:655:G:H4'	1.80	0.62
1:A:825:U:H2'	1:A:826:U:H5'	1.81	0.62
1:A:954:G:H2'	1:A:955:A:C8	2.34	0.62
1:A:1163:A:H2'	1:A:1164:G:H4'	1.80	0.62
2:B:714:G:H4'	2:B:753:C:O3'	1.99	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1838:G:H4'	2:B:1839:A:N3	2.14	0.62
2:B:3216:G:H2'	2:B:3219:G:H1'	1.81	0.62
5:E:4:ILE:HD13	5:E:4:ILE:N	2.12	0.62
7:G:51:ALA:HA	7:G:314:TYR:CD2	2.33	0.62
8:H:150:LEU:HD23	8:H:249:ILE:HG12	1.81	0.62
8:H:222:VAL:HG11	8:H:225:VAL:HB	1.80	0.62
14:N:97:LEU:HD21	14:N:126:ALA:HB2	1.81	0.62
18:R:22:LEU:HB3	18:R:64:VAL:CG1	2.28	0.62
18:R:39:ILE:HD12	18:R:43:LYS:HB3	1.81	0.62
18:R:58:ILE:HD11	18:R:62:GLN:HB2	1.81	0.62
29:CA:80:ASN:HD21	29:CA:126:LEU:HB2	1.63	0.62
29:CA:134:ASP:O	29:CA:138:ARG:HB2	1.99	0.62
31:EA:87:LEU:HD13	31:EA:127:ASN:ND2	2.14	0.62
40:NA:60:LEU:HD11	40:NA:72:VAL:HG21	1.81	0.62
42:PA:65:LEU:O	42:PA:69:LEU:HD22	1.98	0.62
44:RA:78:ILE:O	44:RA:79:GLU:HB3	1.98	0.62
50:XA:13:ASP:HA	50:XA:16:LEU:HD12	1.81	0.62
51:YA:70:LEU:HA	51:YA:73:LEU:HG	1.80	0.62
51:YA:185:THR:HA	51:YA:188:LEU:HD12	1.81	0.62
58:FB:72:ILE:HB	58:FB:74:LYS:HE2	1.81	0.62
72:TB:90:THR:HG22	72:TB:102:VAL:CG2	2.29	0.62
75:WB:93:SER:HB2	75:WB:100:ILE:HG22	1.81	0.62
76:XB:74:CYS:SG	76:XB:77:CYS:HB2	2.39	0.62
77:YB:32:PHE:C	77:YB:33:LEU:HD12	2.19	0.62
1:A:703:G:H2'	1:A:704:C:H5'	1.80	0.62
1:A:1153:G:H5'	76:XB:85:ARG:CG	2.29	0.62
1:A:1422:A:H5"	53:AB:159:HIS:HD2	1.63	0.62
2:B:256:G:H2'	2:B:257:U:C6	2.34	0.62
2:B:517:G:H5'	11:K:67:ARG:NH2	2.14	0.62
2:B:1733:G:H5'	23:W:110:ARG:HH22	1.63	0.62
2:B:2433:U:H1'	19:S:125:SER:HB3	1.81	0.62
2:B:3027:A:H1'	82:DC:790:GLY:H	1.63	0.62
2:B:3320:A:H2'	2:B:3321:C:H6	1.64	0.62
2:B:3376:A:H1'	35:IA:18:LYS:O	1.99	0.62
5:E:117:ILE:HG12	83:EC:6768:U:H5"	1.80	0.62
7:G:160:VAL:O	7:G:180:GLU:HA	1.98	0.62
8:H:8:VAL:HG22	8:H:151:VAL:HG11	1.81	0.62
11:K:160:ARG:HG2	11:K:160:ARG:NH1	2.14	0.62
19:S:61:ILE:HG22	19:S:133:ILE:HA	1.81	0.62
34:HA:24:THR:HG23	34:HA:30:THR:HG22	1.81	0.62
48:VA:108:PRO:HA	48:VA:179:SER:HA	1.81	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:WA:122:ILE:HD11	49:WA:136:ILE:HG22	1.81	0.62
50:XA:123:VAL:HG12	50:XA:124:THR:N	2.12	0.62
57:EB:31:SER:HA	57:EB:35:LYS:HB2	1.81	0.62
57:EB:91:ILE:HG13	57:EB:92:PHE:N	2.14	0.62
57:EB:140:VAL:HG13	57:EB:150:GLN:HG2	1.80	0.62
64:LB:85:ALA:H	64:LB:119:THR:HG22	1.64	0.62
71:SB:85:TYR:CG	77:YB:6:ASP:HB2	2.34	0.62
1:A:542:A:H2'	1:A:544:A:H5'	1.81	0.62
1:A:647:G:H2'	1:A:648:G:H8	1.64	0.62
1:A:1393:C:H5"	49:WA:285:ALA:HB1	1.79	0.62
1:A:1584:G:N2	1:A:1610:G:H3'	2.14	0.62
2:B:149:U:OP1	19:S:54:LYS:HA	2.00	0.62
2:B:546:C:H4'	2:B:547:G:N3	2.14	0.62
2:B:1378:U:H2'	2:B:1379:G:H8	1.63	0.62
2:B:2776:C:H5"	2:B:2777:G:C5'	2.29	0.62
2:B:3136:G:H2'	2:B:3137:C:C6	2.34	0.62
5:E:114:GLU:CD	5:E:137:PRO:HB3	2.19	0.62
6:F:59:ALA:HB1	6:F:61:VAL:HG23	1.81	0.62
11:K:103:LEU:HD21	11:K:130:ILE:HD12	1.80	0.62
16:P:57:LYS:HE2	16:P:79:SER:HB3	1.81	0.62
20:T:119:VAL:HG21	24:X:167:ARG:N	2.14	0.62
31:EA:52:LYS:HZ3	31:EA:135:ARG:HH12	1.46	0.62
50:XA:39:ASN:HB2	50:XA:47:VAL:HB	1.80	0.62
56:DB:187:LYS:HE2	56:DB:191:ARG:HE	1.63	0.62
59:GB:148:VAL:HG11	59:GB:153:GLU:OE2	1.99	0.62
69:QB:5:SER:O	69:QB:9:VAL:HG23	1.98	0.62
82:DC:367:ILE:HG23	82:DC:371:ASN:ND2	2.13	0.62
82:DC:491:VAL:CG1	82:DC:556:ILE:HG23	2.29	0.62
82:DC:725:GLN:NE2	82:DC:801:TRP:HB2	2.09	0.62
1:A:593:U:OP2	59:GB:39:LYS:HE2	2.00	0.62
1:A:868:G:H2'	1:A:869:A:C8	2.35	0.62
1:A:1186:U:H1'	1:A:1208:A:C6	2.34	0.62
1:A:1241:G:H4'	65:MB:79:HIS:N	2.14	0.62
1:A:1408:G:H2'	1:A:1409:G:O4'	1.99	0.62
2:B:741:U:H4'	22:V:74:GLU:HB2	1.82	0.62
2:B:1064:A:N6	2:B:1096:U:H3	1.84	0.62
2:B:1427:U:O2'	2:B:1428:A:H5'	1.98	0.62
2:B:1456:A:H8	35:IA:26:LYS:HB3	1.65	0.62
2:B:1707:A:H2'	2:B:1708:C:C6	2.33	0.62
2:B:1857:C:H5'	38:LA:20:ILE:HG13	1.81	0.62
2:B:1949:G:OP1	23:W:104:ARG:HG3	1.98	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:38:U:H2'	4:D:40:C:OP2	1.97	0.62
8:H:3:ARG:HD3	8:H:21:PRO:HB2	1.80	0.62
8:H:314:LYS:HD3	8:H:315:LYS:N	2.14	0.62
11:K:86:VAL:HG12	11:K:134:VAL:HB	1.81	0.62
12:L:46:LEU:HB2	29:CA:28:THR:HA	1.81	0.62
13:M:90:MET:HB3	13:M:179:ILE:HG22	1.79	0.62
19:S:35:VAL:HG13	19:S:65:ARG:HG3	1.82	0.62
21:U:166:VAL:CG2	21:U:168:LEU:HD11	2.28	0.62
40:NA:60:LEU:CD1	40:NA:68:ARG:HD2	2.28	0.62
50:XA:112:THR:OG1	50:XA:115:PHE:HB2	1.99	0.62
52:ZA:230:TRP:CD2	72:TB:68:ARG:HD3	2.35	0.62
56:DB:67:VAL:H	56:DB:100:ALA:CB	2.12	0.62
60:HB:86:ILE:CG2	60:HB:87:VAL:H	2.06	0.62
61:IB:67:ARG:HD3	61:IB:67:ARG:N	2.13	0.62
68:PB:25:ASN:O	75:WB:40:VAL:HG11	1.98	0.62
77:YB:50:ALA:O	77:YB:51:GLN:HB2	2.00	0.62
83:EC:6894:C:H2'	83:EC:6895:C:H6	1.65	0.62
1:A:138:A:N6	1:A:266:A:N6	2.43	0.62
1:A:395:U:H2'	1:A:396:G:O4'	2.00	0.62
1:A:541:A:O2'	1:A:542:A:H4'	1.98	0.62
1:A:986:G:H1'	1:A:987:G:H5"	1.81	0.62
1:A:1214:U:C4'	1:A:1246:C:H4'	2.25	0.62
2:B:337:G:H4'	8:H:48:GLN:HB2	1.82	0.62
2:B:1238:C:H5"	16:P:82:ILE:HD13	1.81	0.62
2:B:1906:G:H21	2:B:1909:A:H61	1.45	0.62
4:D:119:U:H2'	4:D:120:C:C6	2.34	0.62
6:F:187:HIS:HA	6:F:190:ARG:CB	2.29	0.62
8:H:258:LEU:HG	8:H:259:ASP:N	2.13	0.62
11:K:129:LEU:HD23	11:K:129:LEU:O	1.99	0.62
12:L:130:TYR:HB2	12:L:204:ARG:HH21	1.64	0.62
13:M:148:GLY:HA3	13:M:154:VAL:HG22	1.81	0.62
13:M:180:TYR:CD2	44:RA:86:ALA:HA	2.34	0.62
15:O:20:ASN:O	15:O:125:MET:HG3	2.00	0.62
17:Q:92:THR:HG21	39:MA:111:PHE:O	1.99	0.62
17:Q:123:ILE:HD12	17:Q:125:VAL:CG2	2.30	0.62
19:S:135:VAL:CG2	19:S:151:ILE:HG21	2.29	0.62
34:HA:95:ALA:HB2	34:HA:100:ILE:HD11	1.82	0.62
35:IA:10:ARG:HB2	35:IA:12:TYR:CE2	2.34	0.62
56:DB:67:VAL:HG23	56:DB:100:ALA:N	2.14	0.62
57:EB:76:LYS:HD3	57:EB:77:LEU:N	2.13	0.62
60:HB:46:LEU:O	60:HB:50:THR:HG23	2.00	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
61:IB:67:ARG:CZ	61:IB:129:ARG:HA	2.28	0.62
61:IB:108:PRO:HG3	61:IB:134:THR:HB	1.82	0.62
68:PB:17:LEU:HD22	68:PB:66:LEU:HD13	1.81	0.62
77:YB:48:SER:HB2	77:YB:70:LYS:HG2	1.80	0.62
1:A:862:A:H62	63:KB:70:LYS:HE2	1.63	0.62
1:A:1105:C:H2'	1:A:1106:U:H6	1.64	0.62
1:A:1568:C:H41	68:PB:39:GLY:HA3	1.65	0.62
2:B:709:A:C8	2:B:2788:C:H4'	2.34	0.62
2:B:841:A:H4'	23:W:126:GLU:HA	1.81	0.62
2:B:1609:C:OP1	29:CA:125:ARG:HD2	1.99	0.62
2:B:2257:C:H2'	2:B:2258:U:O4'	1.98	0.62
2:B:3311:C:H2'	2:B:3312:U:H5'	1.81	0.62
5:E:187:VAL:HA	5:E:190:PHE:HB2	1.82	0.62
7:G:70:ARG:HB3	7:G:70:ARG:NH1	2.15	0.62
8:H:23:PRO:C	8:H:25:VAL:H	2.00	0.62
9:I:40:HIS:HA	25:Y:69:LYS:O	2.00	0.62
10:J:38:THR:OG1	10:J:90:LYS:HG3	1.99	0.62
16:P:130:LYS:HD2	16:P:146:LYS:HE3	1.80	0.62
25:Y:126:VAL:HG23	25:Y:127:GLN:H	1.63	0.62
29:CA:67:ILE:HG22	29:CA:69:SER:H	1.65	0.62
29:CA:91:ASN:ND2	29:CA:93:TYR:HB2	2.15	0.62
31:EA:14:VAL:C	31:EA:19:ALA:HB1	2.19	0.62
32:FA:100:PRO:HD2	32:FA:123:VAL:HA	1.81	0.62
49:WA:203:THR:HG22	49:WA:212:ALA:HB3	1.81	0.62
54:BB:126:VAL:HG23	54:BB:156:VAL:HA	1.82	0.62
57:EB:154:LEU:HD12	57:EB:183:PHE:HB3	1.81	0.62
58:FB:36:THR:HG23	58:FB:96:LEU:N	2.14	0.62
64:LB:12:GLN:HB3	64:LB:77:THR:OG1	1.98	0.62
76:XB:82:ARG:HG3	76:XB:83:ILE:N	2.14	0.62
82:DC:319:LEU:O	82:DC:323:VAL:HG23	1.98	0.62
83:EC:6913:U:H3'	83:EC:6914:A:C8	2.34	0.62
1:A:522:U:H5'	74:VB:36:SER:HA	1.81	0.62
1:A:1185:U:C5	65:MB:123:TYR:HB2	2.30	0.62
1:A:1532:U:H1'	69:QB:48:GLN:HE22	1.63	0.62
1:A:1608:U:H2'	1:A:1609:U:C6	2.34	0.62
1:A:1770:U:H2'	1:A:1771:U:O4'	1.99	0.62
2:B:827:A:H2'	2:B:828:A:C8	2.35	0.62
2:B:955:U:H2'	2:B:956:U:C6	2.35	0.62
2:B:999:G:H21	2:B:1002:A:H62	1.47	0.62
2:B:2310:U:H2'	2:B:2311:G:C8	2.35	0.62
2:B:2317:A:C2'	2:B:2318:U:H5'	2.30	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2448:G:H2'	2:B:2449:A:H5'	1.80	0.62
2:B:2737:C:H4'	25:Y:68:THR:HG21	1.80	0.62
4:D:82:G:H2'	4:D:83:U:O4'	1.99	0.62
7:G:356:LEU:HD12	7:G:359:ILE:HD11	1.82	0.62
12:L:137:ASN:OD1	19:S:3:ALA:HB3	1.99	0.62
17:Q:47:ALA:CB	17:Q:48:PRO:HD2	2.20	0.62
22:V:125:ASP:OD1	22:V:126:GLN:HG3	1.98	0.62
26:Z:77:LYS:HE3	26:Z:81:LYS:HD3	1.81	0.62
30:DA:28:ARG:HH12	30:DA:118:LEU:HD22	1.65	0.62
55:CB:29:ILE:HG12	66:NB:57:LEU:HD21	1.80	0.62
55:CB:51:VAL:HG21	55:CB:130:ILE:CG2	2.30	0.62
57:EB:46:ILE:HA	57:EB:60:ILE:HA	1.82	0.62
57:EB:135:ILE:HD13	57:EB:152:VAL:HG11	1.81	0.62
59:GB:170:GLY:O	59:GB:174:ARG:HG2	1.99	0.62
70:RB:69:LYS:HG2	70:RB:80:GLU:HB2	1.82	0.62
76:XB:82:ARG:CZ	76:XB:82:ARG:HA	2.30	0.62
82:DC:594:ASP:HB3	82:DC:597:VAL:CG2	2.29	0.62
1:A:1454:G:H4'	65:MB:122:THR:HG21	1.82	0.62
2:B:217:U:H4'	30:DA:100:HIS:CD2	2.34	0.62
2:B:2432:A:H2'	2:B:2433:U:O4'	1.98	0.62
2:B:2759:U:H5"	2:B:2760:C:H5'	1.81	0.62
2:B:2982:A:O2'	2:B:2983:C:H5"	1.99	0.62
3:C:49:G:O2'	3:C:50:C:H5'	2.00	0.62
7:G:56:ILE:HG22	7:G:74:GLU:O	2.00	0.62
8:H:92:ASN:HA	8:H:98:ARG:O	2.00	0.62
8:H:239:ALA:N	8:H:240:PRO:HD3	2.14	0.62
19:S:35:VAL:HG22	19:S:65:ARG:HE	1.63	0.62
29:CA:92:LYS:HG2	29:CA:110:VAL:CG1	2.30	0.62
30:DA:32:SER:OG	30:DA:49:PRO:HG3	1.99	0.62
31:EA:26:VAL:HG21	31:EA:96:VAL:HB	1.82	0.62
35:IA:16:LEU:HB2	35:IA:69:TYR:O	2.00	0.62
45:SA:2:ARG:HB3	45:SA:2:ARG:NH1	2.14	0.62
54:BB:182:TYR:HE2	54:BB:190:GLY:HA2	1.63	0.62
54:BB:211:LYS:HB3	54:BB:217:THR:HG22	1.81	0.62
59:GB:134:ILE:HA	59:GB:158:PHE:HA	1.81	0.62
71:SB:1:MET:O	71:SB:8:LEU:HD22	1.99	0.62
73:UB:126:LYS:HA	73:UB:131:SER:HA	1.80	0.62
75:WB:88:ILE:HG23	75:WB:103:ARG:HA	1.81	0.62
82:DC:699:DDE:HAD2	82:DC:699:DDE:HAA2	1.65	0.62
1:A:850:A:H2'	1:A:851:U:H4'	1.81	0.62
2:B:80:G:H2'	2:B:81:C:C6	2.34	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:585:A:H2'	2:B:586:C:C6	2.35	0.62
2:B:1327:C:H2'	2:B:1328:C:H6	1.64	0.62
2:B:3057:U:H5'	2:B:3086:A:H61	1.63	0.62
2:B:3293:U:H5'	7:G:128:LYS:NZ	2.15	0.62
7:G:119:TYR:CE2	7:G:129:ALA:HB2	2.35	0.62
8:H:42:VAL:HG13	8:H:45:ASN:ND2	2.15	0.62
11:K:86:VAL:CG1	11:K:136:TYR:HB3	2.23	0.62
12:L:33:ASN:HD21	12:L:38:GLN:HE22	1.45	0.62
12:L:80:TYR:CE1	12:L:229:VAL:HG11	2.34	0.62
18:R:31:LYS:HB3	18:R:51:ALA:HB1	1.82	0.62
18:R:120:VAL:CG2	20:T:197:LEU:HD22	2.29	0.62
20:T:188:SER:O	20:T:192:LYS:HG2	2.00	0.62
21:U:26:PHE:HA	21:U:144:SER:HB3	1.79	0.62
24:X:10:ILE:HG21	25:Y:148:PRO:HG2	1.80	0.62
24:X:52:LYS:HE2	24:X:54:ALA:HB3	1.82	0.62
31:EA:87:LEU:HD13	31:EA:127:ASN:HD22	1.64	0.62
33:GA:23:LYS:HE3	33:GA:24:PRO:HD2	1.81	0.62
48:VA:79:PHE:CE2	48:VA:189:GLN:HG3	2.35	0.62
82:DC:130:ASP:O	82:DC:134:GLY:HA2	2.00	0.62
82:DC:593:ILE:HG13	82:DC:685:ARG:HB2	1.82	0.62
1:A:156:A:H5"	74:VB:132:ARG:HH21	1.63	0.62
1:A:355:G:H2'	1:A:356:G:C8	2.35	0.62
1:A:780:A:O2'	74:VB:8:ARG:HA	2.00	0.62
1:A:1035:G:H4'	72:TB:2:THR:HB	1.81	0.62
1:A:1501:C:H41	69:QB:102:ARG:CZ	2.13	0.62
2:B:76:G:C6	17:Q:101:ARG:HA	2.35	0.62
2:B:643:U:HO2'	2:B:1153:A:H2	1.42	0.62
2:B:827:A:H2'	2:B:828:A:H8	1.65	0.62
2:B:949:C:O2'	2:B:971:G:H5"	2.00	0.62
2:B:2173:U:H2'	2:B:2174:G:C8	2.34	0.62
2:B:2246:G:H2'	2:B:2247:G:H8	1.65	0.62
2:B:2538:U:H1'	2:B:2541:U:O4	2.00	0.62
2:B:3049:A:N1	7:G:75:ALA:HB2	2.14	0.62
2:B:3262:U:C2'	2:B:3263:G:H5"	2.29	0.62
7:G:83:PRO:HA	7:G:204:ALA:HA	1.81	0.62
7:G:215:ILE:HG23	7:G:282:ILE:HD11	1.81	0.62
9:I:95:TRP:CE3	9:I:161:GLY:HA2	2.34	0.62
9:I:289:LYS:O	9:I:293:LEU:HB3	1.99	0.62
9:I:290:ILE:HA	9:I:294:ALA:HB3	1.82	0.62
29:CA:126:LEU:H	29:CA:126:LEU:HD12	1.65	0.62
31:EA:13:VAL:HB	31:EA:20:GLY:H	1.64	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:EA:60:LYS:O	31:EA:64:LYS:HB2	2.00	0.62
33:GA:8:THR:O	33:GA:8:THR:HG23	2.00	0.62
38:LA:57:LEU:HD12	38:LA:61:GLN:CB	2.29	0.62
40:NA:76:ARG:HA	40:NA:76:ARG:HE	1.65	0.62
48:VA:11:TYR:CD2	48:VA:57:THR:HB	2.35	0.62
48:VA:61:ARG:O	48:VA:61:ARG:HD2	2.00	0.62
50:XA:179:ARG:HD3	50:XA:183:ARG:HH12	1.65	0.62
51:YA:181:LEU:HA	51:YA:184:LEU:HB2	1.81	0.62
59:GB:109:LEU:HD12	59:GB:146:PHE:CB	2.30	0.62
61:IB:77:SER:HB2	61:IB:85:VAL:H	1.65	0.62
80:BC:30:PRO:HB2	80:BC:34:ALA:CB	2.29	0.62
1:A:363:G:O2'	1:A:364:G:H5'	2.00	0.61
1:A:484:C:H2'	1:A:485:A:C8	2.35	0.61
1:A:619:A:H5"	1:A:1141:G:H4'	1.80	0.61
1:A:1687:U:H2'	1:A:1688:U:O4'	2.00	0.61
2:B:21:G:H3'	2:B:22:G:H8	1.63	0.61
2:B:120:G:N2	12:L:124:ASP:HA	2.15	0.61
2:B:532:A:O2'	2:B:533:A:H5'	2.00	0.61
2:B:768:C:H2'	2:B:769:G:O4'	2.00	0.61
2:B:1257:C:H1'	16:P:123:ARG:HE	1.64	0.61
2:B:1305:U:H5	7:G:256:HIS:HB3	1.63	0.61
2:B:2426:U:H2'	2:B:2427:U:H6	1.63	0.61
2:B:2633:U:H2'	2:B:2634:U:H5'	1.80	0.61
2:B:3158:G:H22	2:B:3292:A:H2	1.48	0.61
7:G:293:ASN:H	7:G:304:THR:HA	1.65	0.61
8:H:105:THR:O	17:Q:24:VAL:HG21	2.00	0.61
8:H:106:TRP:CE3	17:Q:22:VAL:HG11	2.34	0.61
15:O:134:PRO:HD2	15:O:152:HIS:HE1	1.64	0.61
20:T:137:THR:HG22	20:T:139:GLY:H	1.65	0.61
21:U:51:VAL:HG13	21:U:56:ARG:O	2.00	0.61
27:AA:94:TYR:OH	28:BA:41:LYS:HE3	1.99	0.61
48:VA:11:TYR:CE2	48:VA:15:LEU:HD23	2.35	0.61
48:VA:169:GLU:HA	48:VA:172:LEU:HD21	1.82	0.61
67:OB:44:LYS:O	67:OB:47:ARG:HB3	2.00	0.61
69:QB:28:LEU:HD21	69:QB:30:VAL:HG13	1.82	0.61
82:DC:660:LYS:O	82:DC:664:VAL:HG23	2.00	0.61
1:A:1401:A:H3'	1:A:1402:G:C5'	2.30	0.61
1:A:1432:U:H4'	1:A:1433:G:H5"	1.83	0.61
1:A:1533:C:H5	75:WB:77:ARG:HH21	1.46	0.61
2:B:999:G:N2	2:B:1002:A:H62	1.98	0.61
2:B:1768:U:C3'	2:B:1769:G:H5"	2.30	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:3028:G:H5”	82:DC:28:VAL:HG21	1.82	0.61
2:B:3305:A:H4’	7:G:272:TYR:OH	2.00	0.61
2:B:3308:C:H3’	2:B:3309:G:H21	1.65	0.61
3:C:36:G:OP2	39:MA:85:THR:HG23	2.00	0.61
9:I:41:LYS:HE2	25:Y:30:TYR:O	2.00	0.61
12:L:46:LEU:O	12:L:50:VAL:HG23	2.00	0.61
16:P:123:ARG:HH22	48:VA:42:ARG:CB	2.09	0.61
30:DA:27:ARG:HA	30:DA:30:LEU:HB2	1.82	0.61
34:HA:41:LEU:HD12	34:HA:92:ILE:HB	1.82	0.61
56:DB:147:LEU:HB3	56:DB:151:ASP:CB	2.26	0.61
69:QB:22:LEU:HD12	69:QB:28:LEU:HB3	1.82	0.61
82:DC:2:VAL:C	82:DC:3:ALA:CA	2.66	0.61
82:DC:278:LEU:HA	82:DC:281:ILE:HD12	1.81	0.61
82:DC:288:ILE:O	82:DC:319:LEU:HD23	2.00	0.61
82:DC:395:TYR:HD1	82:DC:457:VAL:HB	1.64	0.61
82:DC:559:PRO:HG2	82:DC:778:PHE:CE1	2.34	0.61
1:A:63:G:H4’	1:A:170:U:H5	1.64	0.61
1:A:409:C:H4’	1:A:1732:A:O3’	1.99	0.61
1:A:1269:U:H4’	1:A:1270:G:H5”	1.81	0.61
2:B:29:C:H1’	19:S:162:ARG:HG2	1.83	0.61
2:B:754:G:H2’	2:B:755:A:H8	1.65	0.61
2:B:879:U:O2’	21:U:131:ARG:HB3	2.00	0.61
2:B:966:U:H4’	32:FA:43:ILE:CG2	2.31	0.61
2:B:2372:A:H3’	2:B:2373:A:C5’	2.30	0.61
2:B:2587:U:H2’	2:B:2588:U:O4’	2.01	0.61
2:B:2908:G:H4’	44:RA:114:LYS:NZ	2.15	0.61
2:B:3090:U:H2’	2:B:3091:A:C8	2.35	0.61
7:G:56:ILE:HD11	7:G:356:LEU:CD1	2.30	0.61
13:M:10:ILE:CD1	13:M:75:VAL:HG21	2.30	0.61
15:O:14:ILE:HD12	15:O:14:ILE:N	2.14	0.61
28:BA:7:SER:HB3	28:BA:30:ARG:H	1.64	0.61
28:BA:39:LEU:HD12	28:BA:44:LYS:HG3	1.81	0.61
39:MA:66:VAL:HA	39:MA:69:LEU:CG	2.30	0.61
42:PA:36:LYS:HB3	42:PA:37:PRO:HD2	1.82	0.61
52:ZA:100:ALA:O	52:ZA:115:ILE:HA	2.00	0.61
52:ZA:230:TRP:HB3	72:TB:68:ARG:NH1	2.15	0.61
56:DB:68:LEU:H	56:DB:100:ALA:HB3	1.65	0.61
69:QB:116:ILE:HA	69:QB:122:ARG:HG2	1.82	0.61
70:RB:30:LYS:HB2	70:RB:33:GLN:HB3	1.81	0.61
75:WB:47:TYR:HA	75:WB:50:ILE:HD12	1.80	0.61
75:WB:77:ARG:HH11	75:WB:77:ARG:CB	2.13	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:123:ASP:HB2	82:DC:348:ALA:CB	2.30	0.61
82:DC:536:LEU:HG	82:DC:537:HIS:H	1.65	0.61
83:EC:6914:A:H2'	83:EC:6915:G:C8	2.34	0.61
1:A:121:U:C1'	54:BB:33:ALA:HB3	2.30	0.61
1:A:193:U:H2'	1:A:194:U:H2'	1.81	0.61
1:A:606:A:H4'	1:A:607:G:H3'	1.82	0.61
1:A:1422:A:H5"	53:AB:159:HIS:CD2	2.34	0.61
2:B:278:U:H3	2:B:287:G:H1	1.49	0.61
2:B:306:A:N1	2:B:2784:G:H1'	2.16	0.61
2:B:1304:A:N6	2:B:2860:U:H5"	2.15	0.61
2:B:1472:U:H2'	2:B:1473:G:C8	2.36	0.61
2:B:1481:A:HO2'	2:B:1858:A:H2	1.44	0.61
2:B:1898:G:H1'	27:AA:18:PRO:CG	2.30	0.61
2:B:1953:G:C3'	2:B:1954:G:H5"	2.31	0.61
2:B:2512:C:H5'	12:L:249:ARG:HH11	1.64	0.61
2:B:3016:A:H2'	2:B:3017:A:C8	2.36	0.61
2:B:3073:A:C3'	2:B:3074:G:H5"	2.30	0.61
2:B:3118:C:C2'	2:B:3119:U:H5"	2.29	0.61
7:G:152:LYS:HE2	7:G:189:SER:HA	1.81	0.61
7:G:292:ALA:HB2	7:G:302:LYS:HA	1.82	0.61
8:H:113:VAL:HB	8:H:118:LYS:HZ2	1.65	0.61
17:Q:85:LEU:HG	17:Q:86:THR:H	1.65	0.61
19:S:199:LEU:HB3	19:S:203:ARG:NE	2.16	0.61
25:Y:12:ARG:HD3	25:Y:13:TYR:CE2	2.36	0.61
26:Z:20:SER:O	26:Z:24:GLU:HG2	2.00	0.61
31:EA:42:LEU:HD23	31:EA:97:SER:HA	1.83	0.61
31:EA:52:LYS:O	31:EA:65:ARG:HD3	2.00	0.61
36:JA:85:LEU:HA	36:JA:88:HIS:HD2	1.65	0.61
48:VA:26:PHE:CE1	48:VA:190:VAL:HG12	2.36	0.61
54:BB:162:ILE:HG22	54:BB:163:ASP:N	2.15	0.61
59:GB:20:GLU:O	59:GB:24:LEU:HB2	2.00	0.61
69:QB:113:ILE:HA	69:QB:128:GLY:HA3	1.82	0.61
76:XB:84:VAL:HG13	76:XB:85:ARG:N	2.10	0.61
77:YB:36:LYS:O	77:YB:38:PRO:HD3	2.01	0.61
83:EC:6927:U:H3'	83:EC:6928:G:C5'	2.28	0.61
1:A:916:U:H3	64:LB:41:ARG:NH1	1.98	0.61
2:B:59:G:H4'	2:B:60:A:H4'	1.83	0.61
2:B:186:U:P	30:DA:122:LYS:HD3	2.40	0.61
2:B:593:C:C2'	2:B:594:U:H5'	2.31	0.61
2:B:1256:G:C4'	16:P:127:SER:HB3	2.30	0.61
2:B:1456:A:N6	2:B:1477:A:H4'	2.15	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1533:U:H2'	2:B:1534:A:H8	1.64	0.61
2:B:2737:C:H4'	25:Y:68:THR:CG2	2.31	0.61
2:B:2852:C:H2'	14:N:67:ALA:HB2	1.83	0.61
3:C:66:A:C2	3:C:94:C:H1'	2.35	0.61
8:H:288:ARG:HA	8:H:291:ASN:HD22	1.65	0.61
11:K:90:LYS:HD2	11:K:91:GLY:H	1.66	0.61
14:N:166:ILE:HG22	14:N:167:LEU:N	2.15	0.61
14:N:208:ASN:HA	14:N:211:ARG:CG	2.31	0.61
17:Q:145:PHE:HE2	39:MA:118:ILE:HD13	1.64	0.61
29:CA:82:LEU:HD22	29:CA:84:PHE:HE2	1.65	0.61
50:XA:179:ARG:CD	50:XA:183:ARG:HH12	2.13	0.61
54:BB:59:ARG:HE	54:BB:60:GLU:CG	2.12	0.61
54:BB:63:ALA:O	54:BB:67:GLN:HG3	2.01	0.61
55:CB:29:ILE:CG2	66:NB:57:LEU:HD11	2.19	0.61
57:EB:153:LEU:HG	57:EB:184:GLU:HB3	1.82	0.61
59:GB:90:LYS:HB3	59:GB:95:TYR:HB2	1.83	0.61
60:HB:37:THR:HB	60:HB:41:TYR:HD1	1.63	0.61
64:LB:61:MET:HA	64:LB:104:ALA:HB2	1.81	0.61
82:DC:169:VAL:HG12	82:DC:170:SER:H	1.66	0.61
82:DC:646:VAL:HG23	82:DC:686:VAL:HB	1.83	0.61
82:DC:821:ALA:HA	82:DC:824:LYS:HB3	1.83	0.61
1:A:258:C:H2'	1:A:259:U:C6	2.35	0.61
1:A:684:A:C2'	1:A:685:A:H5"	2.29	0.61
1:A:1035:G:H2'	1:A:1036:A:C8	2.35	0.61
2:B:944:C:H2'	2:B:945:C:H6	1.65	0.61
2:B:1683:A:H2'	2:B:1684:U:C6	2.35	0.61
2:B:1786:G:H2'	2:B:1787:A:O4'	2.01	0.61
2:B:2139:A:N7	41:OA:3:LYS:HG2	2.15	0.61
2:B:3065:G:H2'	2:B:3066:U:C6	2.36	0.61
2:B:3183:A:O2'	2:B:3184:A:H5'	2.01	0.61
3:C:91:C:O4'	30:DA:24:SER:HB3	2.00	0.61
4:D:16:U:H2'	4:D:17:A:C8	2.35	0.61
6:F:5:ILE:HG21	6:F:210:PRO:CD	2.30	0.61
8:H:74:ILE:HD11	8:H:76:ARG:HG3	1.82	0.61
10:J:33:SER:HB2	10:J:86:ALA:CB	2.31	0.61
17:Q:124:ILE:HB	39:MA:117:ALA:HB3	1.81	0.61
18:R:120:VAL:CG2	20:T:197:LEU:HD13	2.29	0.61
24:X:141:LYS:HA	24:X:144:LEU:HG	1.82	0.61
33:GA:28:LYS:HD2	33:GA:29:TYR:CE1	2.35	0.61
40:NA:57:LEU:HD23	40:NA:60:LEU:HG	1.83	0.61
47:UA:57:CYS:HB3	47:UA:62:LYS:H	1.65	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:VA:53:MET:SD	48:VA:85:GLY:HA3	2.40	0.61
48:VA:61:ARG:HH12	48:VA:76:LEU:HD13	1.66	0.61
53:AB:121:GLY:O	53:AB:125:TYR:HB2	2.00	0.61
54:BB:194:THR:O	54:BB:195:ILE:HG13	2.00	0.61
61:IB:57:LYS:HD2	61:IB:131:ILE:HG23	1.82	0.61
63:KB:32:SER:O	63:KB:36:GLN:HG2	2.00	0.61
67:OB:41:ILE:HG22	67:OB:42:GLN:N	2.15	0.61
69:QB:117:SER:HB2	69:QB:123:ARG:HB2	1.82	0.61
72:TB:95:PRO:HB2	72:TB:99:PHE:CZ	2.36	0.61
75:WB:93:SER:HB2	75:WB:100:ILE:H	1.64	0.61
82:DC:141:THR:HG21	82:DC:793:PHE:CZ	2.36	0.61
82:DC:311:GLU:OE1	82:DC:326:LYS:HE3	2.01	0.61
1:A:485:A:H2'	1:A:486:G:C8	2.36	0.61
1:A:1352:G:O2'	1:A:1353:U:H5'	2.01	0.61
1:A:1584:G:H5'	66:NB:122:ARG:HB3	1.83	0.61
1:A:1603:U:H2'	1:A:1604:U:H6	1.66	0.61
1:A:1625:C:H2'	1:A:1626:U:C6	2.34	0.61
2:B:361:A:H4'	41:OA:45:ARG:HH22	1.64	0.61
2:B:593:C:O2'	2:B:594:U:H5'	2.00	0.61
2:B:807:A:C8	2:B:2812:C:H1'	2.34	0.61
2:B:1245:A:C2	2:B:1272:C:H4'	2.35	0.61
2:B:1661:G:H2'	2:B:1662:G:C8	2.35	0.61
2:B:2305:G:N3	2:B:2305:G:H2'	2.16	0.61
2:B:2735:U:H4'	25:Y:51:GLY:CA	2.30	0.61
2:B:3023:U:H4'	82:DC:162:ARG:HH12	1.62	0.61
2:B:3149:G:H2'	2:B:3150:A:C8	2.35	0.61
2:B:3375:A:H5"	2:B:3378:C:H5	1.65	0.61
7:G:28:ARG:HB3	7:G:30:LYS:HE3	1.83	0.61
11:K:85:PHE:HA	11:K:115:THR:O	2.01	0.61
15:O:19:LEU:HD12	15:O:69:VAL:CG1	2.31	0.61
30:DA:39:LEU:HD22	30:DA:106:ILE:O	2.01	0.61
33:GA:43:HIS:HA	33:GA:46:ALA:HB3	1.82	0.61
34:HA:11:ASN:HB2	34:HA:12:GLN:OE1	2.00	0.61
49:WA:38:ARG:HA	49:WA:67:ILE:HG23	1.82	0.61
59:GB:142:ASN:O	59:GB:144:PRO:HD3	2.00	0.61
63:KB:33:VAL:O	63:KB:37:ILE:HG13	2.00	0.61
66:NB:79:TYR:HA	66:NB:82:ARG:CG	2.30	0.61
83:EC:6869:C:C2'	83:EC:6870:A:H5'	2.27	0.61
1:A:697:C:H1'	1:A:733:A:N6	2.15	0.61
1:A:817:A:H61	1:A:854:U:H3	1.49	0.61
1:A:903:U:H5"	64:LB:135:ARG:HH21	1.65	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1332:C:O2'	53:AB:162:GLN:HB3	1.99	0.61
1:A:1680:G:H1'	1:A:1721:A:N6	2.16	0.61
2:B:213:A:O4'	30:DA:2:ALA:HA	2.01	0.61
2:B:1687:U:H5"	2:B:1688:U:O4'	2.01	0.61
2:B:2923:U:H2'	2:B:2924:U:C6	2.36	0.61
5:E:34:LEU:HA	5:E:206:VAL:HG12	1.83	0.61
5:E:183:ILE:O	5:E:187:VAL:HG23	2.01	0.61
9:I:106:ALA:HA	9:I:171:LEU:HD11	1.83	0.61
11:K:84:VAL:HG12	11:K:137:GLY:C	2.20	0.61
25:Y:93:VAL:HG22	25:Y:94:GLU:OE1	2.00	0.61
38:LA:3:GLN:HG2	38:LA:29:ILE:HB	1.81	0.61
55:CB:51:VAL:HG21	55:CB:130:ILE:HG23	1.81	0.61
55:CB:164:PRO:HD3	78:ZB:54:LEU:HD11	1.82	0.61
61:IB:2:SER:HB3	61:IB:82:ARG:N	2.09	0.61
61:IB:58:CYS:SG	61:IB:59:PRO:HD2	2.40	0.61
61:IB:92:HIS:ND1	61:IB:103:ARG:HD3	2.16	0.61
73:UB:24:TRP:CH2	73:UB:33:LEU:HB3	2.36	0.61
82:DC:45:ILE:O	82:DC:46:ILE:HG13	2.00	0.61
1:A:617:U:H2'	1:A:618:U:C6	2.35	0.61
1:A:1485:C:C2	1:A:1486:G:H1'	2.36	0.61
1:A:1659:A:H2'	1:A:1660:A:C8	2.35	0.61
2:B:68:C:H2'	2:B:69:C:H6	1.64	0.61
2:B:310:U:H2'	2:B:311:C:C5'	2.31	0.61
2:B:683:U:H2'	2:B:684:G:O4'	1.99	0.61
2:B:715:A:N6	2:B:782:U:H5'	2.15	0.61
2:B:782:U:H2'	2:B:783:A:O4'	2.01	0.61
2:B:791:A:H2'	2:B:792:G:C8	2.36	0.61
2:B:1220:U:H4'	2:B:1286:A:N6	2.16	0.61
2:B:1254:C:C4'	16:P:135:THR:HG21	2.30	0.61
2:B:1263:A:C6	16:P:136:ALA:HB2	2.35	0.61
2:B:1639:C:O3'	2:B:1738:C:H5"	2.01	0.61
2:B:2108:C:H1'	2:B:3344:A:C8	2.25	0.61
3:C:32:C:H2'	3:C:33:A:H8	1.66	0.61
3:C:53:A:H2'	3:C:54:A:H8	1.64	0.61
7:G:385:LYS:O	7:G:386:ASP:HB2	2.00	0.61
11:K:95:ILE:HD12	11:K:133:TYR:HE1	1.65	0.61
12:L:74:THR:O	12:L:77:GLN:HG2	2.00	0.61
14:N:9:TYR:HD2	14:N:97:LEU:HD22	1.66	0.61
15:O:149:GLY:O	15:O:153:LYS:HB2	2.01	0.61
23:W:93:VAL:O	23:W:97:ARG:HG3	2.01	0.61
23:W:99:LEU:C	23:W:101:VAL:H	2.03	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:X:137:ARG:HG3	24:X:139:TYR:CE1	2.35	0.61
33:GA:38:LYS:HA	33:GA:41:ARG:HH12	1.66	0.61
35:IA:79:ARG:C	35:IA:89:LEU:HA	2.21	0.61
53:AB:29:LEU:HD13	53:AB:50:ILE:HG21	1.82	0.61
56:DB:19:ASP:O	56:DB:20:ASP:HB2	2.00	0.61
59:GB:96:VAL:HA	59:GB:99:LEU:HD13	1.83	0.61
68:PB:66:LEU:O	68:PB:70:VAL:HG23	2.00	0.61
72:TB:83:ILE:HG23	72:TB:84:GLY:H	1.66	0.61
75:WB:93:SER:CB	75:WB:99:ALA:HA	2.30	0.61
82:DC:3:ALA:N	82:DC:3:ALA:CB	2.57	0.61
82:DC:322:VAL:HA	82:DC:325:ARG:HD2	1.82	0.61
82:DC:593:ILE:HD13	82:DC:645:LEU:HD12	1.81	0.61
82:DC:671:THR:HA	82:DC:681:MET:SD	2.41	0.61
83:EC:6933:G:H2'	83:EC:6934:U:O4'	2.01	0.61
1:A:130:C:C2'	1:A:131:C:H5'	2.31	0.61
1:A:299:A:H4'	54:BB:5:PRO:HA	1.83	0.61
1:A:946:U:H5"	51:YA:165:ARG:NH1	2.15	0.61
1:A:1410:A:H2'	1:A:1411:A:O4'	1.99	0.61
2:B:204:A:C2'	2:B:205:C:H5'	2.30	0.61
2:B:365:A:H3'	2:B:366:A:C8	2.34	0.61
2:B:1256:G:O2'	16:P:123:ARG:HB3	2.00	0.61
4:D:112:G:H2'	4:D:113:C:H6	1.64	0.61
7:G:21:ARG:HD3	7:G:269:GLN:HG2	1.83	0.61
7:G:159:ARG:HA	7:G:181:ILE:O	2.00	0.61
14:N:93:PRO:HB3	14:N:127:ALA:HB2	1.82	0.61
19:S:135:VAL:HB	19:S:142:ILE:HG21	1.83	0.61
48:VA:106:ALA:HB1	48:VA:182:THR:HG23	1.81	0.61
51:YA:32:ILE:HD12	51:YA:32:ILE:N	2.16	0.61
51:YA:66:VAL:HG13	64:LB:33:LEU:HD13	1.82	0.61
57:EB:30:SER:O	57:EB:31:SER:HB2	2.00	0.61
63:KB:17:PRO:HD2	63:KB:62:GLN:HE21	1.65	0.61
73:UB:19:ARG:CD	73:UB:23:ARG:HG2	2.31	0.61
82:DC:171:LYS:HE2	82:DC:279:ASP:CA	2.27	0.61
82:DC:670:ALA:HB2	82:DC:710:ARG:HG3	1.82	0.61
1:A:1527:C:H5"	55:CB:109:LYS:HE3	1.82	0.60
1:A:1655:A:H5'	45:SA:24:SER:HB3	1.83	0.60
2:B:347:G:O2'	2:B:348:A:H5'	2.01	0.60
2:B:539:C:H2'	2:B:540:U:C6	2.35	0.60
2:B:627:U:H2'	2:B:628:A:C8	2.36	0.60
2:B:1498:A:H1'	2:B:1602:A:C2	2.36	0.60
2:B:1684:U:H2'	2:B:1685:C:H6	1.65	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1822:C:H2'	2:B:1823:A:C8	2.36	0.60
2:B:1822:C:H2'	2:B:1823:A:H8	1.66	0.60
2:B:2308:C:H3'	2:B:2309:A:C8	2.36	0.60
2:B:3392:U:H2'	2:B:3393:U:C6	2.36	0.60
9:I:65:ILE:CG2	9:I:72:ASP:HB3	2.29	0.60
15:O:43:GLN:HE22	15:O:71:VAL:HG13	1.66	0.60
22:V:51:ALA:CB	22:V:84:VAL:HG11	2.30	0.60
22:V:81:VAL:HG22	22:V:101:VAL:HA	1.81	0.60
27:AA:26:ALA:HB1	27:AA:115:THR:CG2	2.31	0.60
27:AA:69:LEU:HD21	27:AA:110:LYS:HE2	1.82	0.60
36:JA:21:HIS:CE1	36:JA:24:ARG:HD2	2.36	0.60
39:MA:78:LYS:HG2	39:MA:81:ARG:HH22	1.66	0.60
50:XA:41:ARG:HG3	50:XA:45:VAL:HB	1.83	0.60
51:YA:111:ARG:CB	76:XB:68:TYR:HB2	2.29	0.60
55:CB:123:VAL:HG11	75:WB:100:ILE:HD11	1.82	0.60
57:EB:32:PRO:HG2	57:EB:34:LEU:HD13	1.82	0.60
61:IB:86:ILE:HG21	61:IB:123:VAL:CG1	2.31	0.60
63:KB:150:VAL:HG13	63:KB:151:ASN:N	2.16	0.60
70:RB:99:ILE:O	70:RB:103:ILE:HB	2.01	0.60
82:DC:18:ASN:OD1	82:DC:95:GLY:HA3	2.01	0.60
82:DC:491:VAL:HG21	82:DC:538:LEU:HD21	1.83	0.60
1:A:1175:U:H3'	68:PB:137:HIS:ND1	2.15	0.60
1:A:1207:C:H4'	1:A:1208:A:O5'	2.01	0.60
2:B:1665:C:H2'	2:B:1666:G:C8	2.37	0.60
2:B:1828:A:H2'	2:B:1829:G:H8	1.61	0.60
7:G:17:LEU:CG	7:G:18:PRO:HA	2.29	0.60
7:G:295:ALA:HB1	7:G:300:ARG:N	2.16	0.60
9:I:244:HIS:O	9:I:248:ARG:HG3	2.01	0.60
10:J:39:VAL:HG12	10:J:159:LEU:HD21	1.82	0.60
10:J:84:VAL:O	10:J:85:ILE:HG13	2.01	0.60
18:R:102:LYS:HA	18:R:105:GLN:CG	2.31	0.60
22:V:80:THR:HG22	22:V:100:THR:CB	2.30	0.60
34:HA:16:LEU:HA	34:HA:19:LYS:HB3	1.81	0.60
45:SA:4:LYS:HG2	45:SA:5:TRP:CZ3	2.36	0.60
48:VA:58:MET:HE1	48:VA:86:PHE:CZ	2.36	0.60
49:WA:305:TYR:HE2	49:WA:311:ARG:HB2	1.65	0.60
82:DC:81:MET:SD	82:DC:339:VAL:HG21	2.42	0.60
1:A:830:U:H2'	1:A:831:U:C6	2.36	0.60
1:A:1238:A:C2'	1:A:1239:U:H5'	2.31	0.60
1:A:1485:C:C3'	1:A:1486:G:H4'	2.31	0.60
1:A:1724:U:H2'	1:A:1725:U:C6	2.36	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:303:G:H4'	2:B:304:G:N2	2.16	0.60
2:B:516:A:H61	2:B:574:U:H3	1.47	0.60
2:B:623:U:H2'	2:B:624:G:O4'	2.01	0.60
2:B:746:A:H2'	2:B:747:A:C8	2.36	0.60
2:B:2275:A:N6	2:B:2311:G:H1'	2.15	0.60
2:B:2899:C:N4	13:M:173:ARG:HD3	2.17	0.60
2:B:3036:G:H2'	2:B:3037:U:H5'	1.83	0.60
2:B:3094:A:H2'	2:B:3095:U:C6	2.37	0.60
5:E:24:LYS:HD3	5:E:24:LYS:H	1.66	0.60
11:K:107:ARG:HH22	11:K:117:VAL:HG13	1.66	0.60
12:L:75:ILE:C	12:L:77:GLN:H	2.03	0.60
14:N:17:TYR:HE1	14:N:23:ASN:HD22	1.47	0.60
17:Q:64:LYS:HG3	32:FA:69:TRP:CE2	2.37	0.60
17:Q:167:PHE:O	17:Q:171:ARG:HB2	2.00	0.60
22:V:33:TYR:HD1	22:V:45:ASN:OD1	1.84	0.60
23:W:90:PRO:HB2	23:W:93:VAL:HG23	1.83	0.60
31:EA:89:VAL:HG22	31:EA:93:LYS:HB2	1.83	0.60
48:VA:12:PHE:CE2	48:VA:60:ARG:HG3	2.36	0.60
49:WA:103:PHE:HZ	49:WA:136:ILE:HA	1.66	0.60
50:XA:39:ASN:HB2	50:XA:47:VAL:CB	2.31	0.60
51:YA:29:TRP:CZ2	64:LB:74:VAL:HG12	2.35	0.60
55:CB:23:VAL:HG11	66:NB:57:LEU:HD13	1.82	0.60
59:GB:28:LEU:HD11	80:BC:40:TYR:HA	1.83	0.60
59:GB:39:LYS:HA	59:GB:42:ILE:HD12	1.82	0.60
59:GB:49:LEU:O	59:GB:53:ARG:HG3	2.02	0.60
65:MB:73:PRO:HG2	65:MB:92:SER:OG	2.00	0.60
67:OB:21:TYR:N	67:OB:22:PRO:HD2	2.16	0.60
74:VB:29:HIS:HB2	74:VB:32:ARG:HB3	1.82	0.60
82:DC:85:ASP:HB3	82:DC:340:LEU:HD21	1.83	0.60
82:DC:153:PRO:HD3	82:DC:200:VAL:CG2	2.31	0.60
82:DC:491:VAL:CG2	82:DC:538:LEU:HD21	2.31	0.60
82:DC:571:SER:HB3	82:DC:590:ALA:H	1.65	0.60
82:DC:729:PHE:HA	82:DC:798:PHE:HA	1.83	0.60
83:EC:6783:U:H2'	83:EC:6784:G:O4'	2.01	0.60
1:A:161:U:O2'	1:A:162:A:H5'	2.00	0.60
1:A:381:C:O3'	54:BB:10:LYS:HD2	2.02	0.60
1:A:1186:U:H2'	1:A:1187:U:O4'	2.01	0.60
2:B:10:C:O2'	12:L:55:TYR:HB3	2.01	0.60
10:J:56:LYS:H	10:J:64:LEU:HB3	1.65	0.60
19:S:138:GLN:HA	19:S:143:ARG:NH1	2.15	0.60
20:T:14:HIS:HD2	20:T:19:LEU:HD13	1.66	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:U:166:VAL:HG22	21:U:168:LEU:CD1	2.26	0.60
24:X:7:TYR:CE1	24:X:34:GLU:HG2	2.36	0.60
30:DA:34:PRO:HG2	30:DA:105:VAL:HG23	1.82	0.60
37:KA:67:MET:HE1	37:KA:90:PRO:HD3	1.82	0.60
66:NB:79:TYR:HA	66:NB:82:ARG:CD	2.30	0.60
82:DC:601:ILE:CD1	82:DC:643:PRO:HA	2.31	0.60
1:A:1510:U:C2'	1:A:1511:U:H5'	2.31	0.60
2:B:92:G:OP2	2:B:93:C:H5"	2.00	0.60
2:B:1084:A:H2'	2:B:1085:A:C8	2.37	0.60
2:B:1525:G:H1'	2:B:1829:G:N3	2.16	0.60
2:B:1747:G:O3'	42:PA:53:THR:HG21	2.01	0.60
2:B:2610:G:H2'	2:B:2611:U:O4'	2.02	0.60
2:B:2883:U:H2'	2:B:2884:C:C6	2.36	0.60
3:C:42:G:H21	41:OA:21:ARG:HA	1.67	0.60
6:F:135:ILE:O	6:F:136:ILE:HD12	2.01	0.60
8:H:44:LYS:HD2	8:H:111:VAL:HG23	1.83	0.60
8:H:361:HIS:HB3	24:X:26:ARG:HH12	1.66	0.60
9:I:201:GLY:HA2	9:I:203:HIS:CE1	2.36	0.60
10:J:64:LEU:HD12	10:J:77:ARG:O	2.01	0.60
11:K:153:PHE:N	11:K:163:LEU:HG	2.15	0.60
12:L:97:TYR:CE1	12:L:203:VAL:HA	2.33	0.60
12:L:161:GLU:HB3	19:S:7:LEU:CD2	2.32	0.60
13:M:26:LYS:HG2	13:M:35:THR:HG22	1.83	0.60
13:M:168:ARG:O	13:M:169:ASN:HB2	2.00	0.60
15:O:20:ASN:HA	15:O:68:HIS:HB2	1.83	0.60
16:P:114:ARG:NH2	16:P:121:PHE:HB3	2.16	0.60
20:T:3:VAL:HG13	20:T:4:GLU:HG3	1.83	0.60
22:V:175:ALA:O	22:V:178:ARG:HB2	2.02	0.60
27:AA:65:GLY:O	27:AA:67:PRO:HD3	2.00	0.60
27:AA:85:TRP:HE1	27:AA:87:ARG:HG3	1.67	0.60
30:DA:115:ARG:O	30:DA:119:ILE:HG13	2.02	0.60
43:QA:23:LEU:HB2	43:QA:38:ASN:HB2	1.84	0.60
50:XA:59:LEU:O	50:XA:62:ARG:HB2	2.02	0.60
56:DB:67:VAL:H	56:DB:100:ALA:HB2	1.65	0.60
68:PB:12:GLN:O	68:PB:15:LEU:HD22	2.02	0.60
82:DC:369:ILE:HD12	82:DC:401:PHE:HB2	1.82	0.60
82:DC:496:LYS:HB2	82:DC:553:PRO:HB2	1.82	0.60
82:DC:510:ARG:HG2	82:DC:549:HIS:ND1	2.16	0.60
82:DC:565:GLU:HB3	82:DC:717:PHE:HZ	1.65	0.60
83:EC:6868:C:C3'	83:EC:6869:C:H5"	2.29	0.60
1:A:100:A:C2'	1:A:101:U:H5'	2.31	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:619:A:H4'	1:A:1140:G:O2'	2.01	0.60
1:A:841:U:H2'	1:A:842:C:O4'	2.02	0.60
1:A:1373:C:H2'	1:A:1374:C:C6	2.36	0.60
1:A:1601:G:N1	69:QB:88:VAL:HG22	2.12	0.60
2:B:115:A:H2'	2:B:265:A:N3	2.16	0.60
2:B:361:A:H4'	41:OA:45:ARG:NH2	2.17	0.60
2:B:707:U:C3'	2:B:708:G:H5"	2.30	0.60
2:B:1456:A:C8	35:IA:26:LYS:HB3	2.37	0.60
2:B:2203:U:H2'	2:B:2204:C:C6	2.36	0.60
2:B:2208:A:H1'	2:B:2209:U:O4'	2.01	0.60
2:B:2822:U:H2'	2:B:2823:G:C8	2.36	0.60
2:B:3170:A:O2'	2:B:3171:U:H5'	2.02	0.60
2:B:3229:G:H2'	2:B:3230:G:O4'	2.02	0.60
3:C:92:A:OP1	30:DA:23:PRO:HG2	2.01	0.60
6:F:76:PHE:HE2	6:F:101:VAL:HG11	1.67	0.60
6:F:90:ALA:HA	6:F:101:VAL:O	2.01	0.60
6:F:116:VAL:HG22	6:F:117:GLU:N	2.15	0.60
8:H:32:PRO:HG3	8:H:244:LEU:HD21	1.83	0.60
16:P:66:ASN:H	16:P:69:ALA:HB3	1.65	0.60
23:W:92:GLN:O	23:W:96:ILE:HG13	2.00	0.60
27:AA:109:MET:HG2	27:AA:110:LYS:H	1.66	0.60
29:CA:68:THR:HG23	39:MA:36:LEU:HD22	1.83	0.60
33:GA:36:ASP:HB3	33:GA:39:PHE:HB2	1.83	0.60
34:HA:86:ARG:HD3	47:UA:44:LYS:HZ3	1.66	0.60
40:NA:57:LEU:HA	40:NA:60:LEU:CB	2.31	0.60
53:AB:92:GLN:H	53:AB:92:GLN:HE21	1.49	0.60
54:BB:150:PRO:HD2	56:DB:208:TYR:HE2	1.66	0.60
57:EB:107:ARG:HG2	57:EB:108:GLN:H	1.65	0.60
61:IB:78:THR:HA	61:IB:84:ILE:CG2	2.30	0.60
63:KB:56:ASP:CB	77:YB:47:PHE:HB3	2.30	0.60
64:LB:71:CYS:SG	64:LB:76:ILE:HB	2.42	0.60
72:TB:68:ARG:HH11	72:TB:68:ARG:HG2	1.65	0.60
1:A:906:A:C2	1:A:998:A:H1'	2.36	0.60
1:A:1015:U:H3'	1:A:1016:C:H5"	1.84	0.60
1:A:1715:G:H3'	1:A:1716:C:H5"	1.83	0.60
2:B:104:G:H4'	2:B:698:U:O2'	2.02	0.60
2:B:658:G:N2	8:H:93:MET:HB2	2.16	0.60
2:B:682:U:H5	8:H:112:LYS:HE3	1.66	0.60
2:B:1222:G:H3'	48:VA:56:ASN:CB	2.32	0.60
2:B:1226:G:H2'	2:B:1227:C:C6	2.37	0.60
2:B:1709:C:H4'	31:EA:15:ARG:NH1	2.17	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1838:G:H4'	2:B:1839:A:C4	2.36	0.60
2:B:2351:U:H2'	2:B:2352:A:C8	2.36	0.60
2:B:2456:A:H2	2:B:2483:G:H1'	1.67	0.60
2:B:3377:G:H21	7:G:332:ARG:NH2	1.99	0.60
3:C:93:U:H2'	3:C:94:C:H5'	1.83	0.60
4:D:114:U:H2'	4:D:115:G:C8	2.34	0.60
5:E:82:VAL:HG21	5:E:148:VAL:HG21	1.83	0.60
6:F:227:ARG:HG2	6:F:239:ALA:HB2	1.81	0.60
7:G:205:VAL:HG23	7:G:206:ASP:H	1.66	0.60
8:H:274:TYR:OH	8:H:277:PRO:HD3	2.02	0.60
9:I:33:ARG:NH2	9:I:50:ARG:HH12	1.98	0.60
11:K:82:LYS:HA	11:K:119:VAL:HB	1.81	0.60
12:L:54:GLU:O	12:L:58:VAL:HG23	2.02	0.60
12:L:98:ARG:HD3	12:L:189:LEU:CA	2.30	0.60
18:R:20:VAL:HG22	18:R:66:THR:HG21	1.84	0.60
19:S:8:GLU:HG3	19:S:50:ARG:NH2	2.16	0.60
24:X:12:ARG:HB3	24:X:24:LEU:HD23	1.84	0.60
24:X:77:VAL:HG12	24:X:78:TRP:N	2.17	0.60
30:DA:58:VAL:HG23	30:DA:66:GLN:O	2.01	0.60
47:UA:56:THR:HA	47:UA:63:THR:HA	1.82	0.60
66:NB:32:ASN:H	66:NB:66:ARG:HH21	1.47	0.60
66:NB:93:HIS:HB3	66:NB:102:LYS:HB2	1.84	0.60
76:XB:41:ILE:HB	76:XB:68:TYR:CD2	2.36	0.60
1:A:206:A:H1'	1:A:262:U:C2	2.36	0.60
1:A:633:U:H2'	1:A:634:G:C8	2.36	0.60
1:A:1171:A:H4'	68:PB:144:ARG:HH21	1.65	0.60
1:A:1383:G:H2'	1:A:1384:A:O4'	2.02	0.60
1:A:1729:C:H2'	1:A:1730:A:H5'	1.82	0.60
2:B:185:C:O3'	30:DA:122:LYS:HA	2.01	0.60
2:B:500:C:C4'	10:J:80:ASN:HD21	2.15	0.60
2:B:742:G:OP1	22:V:73:GLN:HG2	2.01	0.60
2:B:807:A:H2	2:B:808:A:N9	1.99	0.60
2:B:1003:A:N3	2:B:1003:A:H2'	2.15	0.60
2:B:1393:A:C2'	2:B:1394:A:H5'	2.32	0.60
2:B:1695:U:O4'	38:LA:26:PRO:HG3	2.02	0.60
2:B:2730:G:H4'	22:V:184:PHE:CD2	2.35	0.60
2:B:2730:G:H2'	2:B:2731:U:H5'	1.82	0.60
2:B:3294:A:H8	2:B:3294:A:H5'	1.66	0.60
3:C:75:G:H1'	43:QA:29:LEU:CG	2.25	0.60
7:G:56:ILE:O	7:G:56:ILE:HG23	2.02	0.60
7:G:177:HIS:CD2	7:G:335:ILE:HG21	2.36	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:335:ILE:HD12	7:G:336:VAL:H	1.65	0.60
10:J:170:LYS:HB3	10:J:172:HIS:CE1	2.37	0.60
18:R:116:GLU:HA	18:R:119:GLN:HE21	1.67	0.60
20:T:55:HIS:HA	20:T:58:LEU:HD22	1.83	0.60
20:T:74:ARG:HG3	20:T:146:GLY:HA3	1.83	0.60
22:V:155:MET:HG2	22:V:162:ALA:O	2.02	0.60
24:X:155:ARG:HB2	24:X:172:TYR:CG	2.37	0.60
49:WA:146:GLY:HA3	49:WA:181:TRP:HZ3	1.66	0.60
52:ZA:113:LEU:HB2	52:ZA:215:PHE:CD1	2.37	0.60
54:BB:181:VAL:CG1	54:BB:226:PHE:H	2.15	0.60
58:FB:43:ILE:HG21	58:FB:55:TYR:HB3	1.83	0.60
59:GB:118:LEU:HD23	59:GB:158:PHE:CE1	2.36	0.60
66:NB:18:ALA:HB2	66:NB:69:VAL:HG12	1.83	0.60
73:UB:128:SER:OG	73:UB:142:LYS:HE2	2.01	0.60
74:VB:110:GLN:HB3	74:VB:114:ARG:HH21	1.65	0.60
82:DC:135:VAL:CG2	82:DC:184:SER:HB3	2.31	0.60
82:DC:836:GLN:HE21	82:DC:836:GLN:H	1.48	0.60
1:A:518:A:H1'	1:A:534:A:H61	1.67	0.60
1:A:1306:C:OP2	1:A:1306:C:H2'	2.02	0.60
2:B:32:U:C4	2:B:33:G:C6	2.90	0.60
2:B:129:U:H2'	2:B:130:A:C8	2.37	0.60
2:B:598:A:H2'	2:B:599:C:C6	2.37	0.60
2:B:1050:U:OP2	25:Y:13:TYR:HE1	1.84	0.60
2:B:1231:A:H5'	2:B:1232:C:C5'	2.30	0.60
2:B:1636:U:H2'	2:B:1637:A:O4'	2.02	0.60
2:B:2691:A:H3'	2:B:2692:A:H8	1.66	0.60
2:B:3049:A:H2'	2:B:3050:U:O4'	2.01	0.60
4:D:1:G:H4'	9:I:273:ARG:NH1	2.16	0.60
7:G:35:ASP:HA	7:G:184:ASN:ND2	2.17	0.60
8:H:23:PRO:HA	8:H:259:ASP:OD1	2.01	0.60
8:H:29:PRO:HB3	22:V:25:TYR:CE2	2.37	0.60
8:H:181:VAL:HG11	8:H:224:GLY:CA	2.32	0.60
9:I:21:ARG:HG3	9:I:24:ARG:HH21	1.67	0.60
11:K:151:ARG:HB3	11:K:153:PHE:CE1	2.37	0.60
11:K:179:LEU:HD23	11:K:180:SER:N	2.09	0.60
12:L:60:ARG:O	12:L:64:ILE:HG12	2.02	0.60
16:P:123:ARG:CZ	48:VA:46:ARG:HH21	2.15	0.60
19:S:174:ILE:HG12	19:S:185:ALA:C	2.22	0.60
23:W:100:ARG:HH11	23:W:100:ARG:HG3	1.67	0.60
29:CA:76:VAL:HG13	29:CA:81:ILE:O	2.02	0.60
41:OA:53:ALA:HA	41:OA:56:ARG:HH11	1.65	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:UA:28:LYS:HG2	47:UA:32:GLN:HE21	1.66	0.60
49:WA:305:TYR:HB2	49:WA:309:VAL:O	2.02	0.60
51:YA:168:ILE:O	51:YA:172:LEU:HG	2.02	0.60
51:YA:196:GLU:HA	51:YA:199:ASN:ND2	2.17	0.60
52:ZA:73:LEU:O	52:ZA:76:LEU:HD13	2.00	0.60
54:BB:160:VAL:HG13	54:BB:171:ASP:O	2.02	0.60
55:CB:36:ALA:HB1	55:CB:42:LEU:CD1	2.32	0.60
66:NB:82:ARG:HH11	66:NB:82:ARG:HG3	1.66	0.60
74:VB:21:LYS:HB2	74:VB:75:VAL:HG13	1.83	0.60
1:A:98:U:H2'	1:A:99:C:C6	2.36	0.60
1:A:804:A:H2'	1:A:805:U:H5'	1.84	0.60
1:A:874:C:H2'	1:A:875:G:C8	2.36	0.60
1:A:1564:U:H5"	69:QB:38:LYS:HE2	1.84	0.60
1:A:1791:A:H5"	76:XB:8:ASN:CB	2.24	0.60
2:B:227:G:H2'	2:B:228:U:O4'	2.02	0.60
2:B:946:U:H3	2:B:1373:A:H61	1.50	0.60
2:B:1256:G:H1'	16:P:123:ARG:CB	2.31	0.60
2:B:1294:A:HO2'	2:B:1295:G:H8	1.48	0.60
2:B:2356:A:H4'	21:U:138:LYS:O	2.02	0.60
2:B:2544:U:H2'	2:B:2545:C:C6	2.36	0.60
2:B:2831:G:H2'	2:B:2832:C:C6	2.37	0.60
7:G:137:TYR:HA	7:G:144:ILE:HD11	1.84	0.60
11:K:47:ARG:HD3	11:K:183:ASP:OD2	2.02	0.60
12:L:169:LEU:HD11	19:S:6:TYR:CZ	2.36	0.60
13:M:52:LEU:C	13:M:53:ILE:HD12	2.22	0.60
17:Q:87:ALA:HB1	17:Q:97:VAL:HG11	1.84	0.60
18:R:58:ILE:HG12	18:R:59:ASN:H	1.65	0.60
18:R:116:GLU:HG2	20:T:197:LEU:HD21	1.84	0.60
23:W:47:ASN:OD1	23:W:48:GLY:N	2.34	0.60
29:CA:56:ARG:O	29:CA:57:LEU:HB2	2.02	0.60
49:WA:200:ASN:HB2	49:WA:240:VAL:O	2.02	0.60
51:YA:33:LYS:HB3	51:YA:33:LYS:HZ2	1.67	0.60
51:YA:33:LYS:HA	51:YA:41:ARG:O	2.02	0.60
55:CB:36:ALA:HB1	55:CB:42:LEU:HD11	1.84	0.60
66:NB:89:LEU:HD23	66:NB:109:PHE:CZ	2.37	0.60
71:SB:34:ILE:HG22	71:SB:35:ASN:N	2.17	0.60
75:WB:83:LEU:CB	75:WB:89:ILE:HG12	2.30	0.60
82:DC:117:ALA:O	82:DC:121:VAL:HG22	2.01	0.60
82:DC:188:ILE:HG23	82:DC:192:TYR:HD2	1.66	0.60
1:A:1072:C:H2'	1:A:1073:G:H8	1.66	0.59
1:A:1373:C:H2'	1:A:1374:C:H6	1.66	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:148:G:H1'	2:B:149:U:C5	2.37	0.59
2:B:389:A:H5"	21:U:16:SER:OG	2.01	0.59
2:B:684:G:H5"	17:Q:35:ARG:HH12	1.67	0.59
2:B:1289:G:H2'	2:B:1290:A:C8	2.37	0.59
2:B:1298:C:C2'	2:B:1299:U:H5'	2.31	0.59
2:B:1481:A:C2	38:LA:4:ARG:HG2	2.36	0.59
2:B:1532:C:H2'	2:B:1533:U:C6	2.37	0.59
2:B:1815:U:H1'	2:B:1816:A:O4'	2.01	0.59
2:B:2514:U:H5'	12:L:68:ARG:HD2	1.83	0.59
2:B:2892:A:H2'	2:B:2893:C:O4'	2.01	0.59
2:B:3186:A:H62	20:T:131:PRO:HB2	1.66	0.59
8:H:281:ILE:HG13	22:V:125:ASP:HB3	1.84	0.59
17:Q:69:VAL:HG22	17:Q:70:ARG:H	1.67	0.59
18:R:20:VAL:HG11	18:R:68:LEU:HB2	1.83	0.59
18:R:55:ARG:HD3	24:X:70:THR:HG22	1.84	0.59
18:R:55:ARG:CZ	24:X:70:THR:HB	2.31	0.59
25:Y:128:LEU:O	25:Y:129:LYS:HG3	2.01	0.59
27:AA:48:ARG:HH11	27:AA:48:ARG:HG3	1.66	0.59
30:DA:57:LEU:HA	30:DA:67:GLU:HB3	1.83	0.59
31:EA:13:VAL:C	31:EA:20:GLY:H	2.05	0.59
34:HA:43:ILE:HG23	34:HA:70:PHE:HB2	1.84	0.59
34:HA:48:THR:HB	34:HA:49:PRO:HD2	1.83	0.59
37:KA:18:ARG:CA	37:KA:23:ASN:HA	2.31	0.59
48:VA:77:LEU:O	48:VA:77:LEU:HD23	2.02	0.59
56:DB:222:GLU:HA	56:DB:225:GLU:OE2	2.01	0.59
57:EB:45:SER:O	57:EB:46:ILE:HD13	2.02	0.59
58:FB:46:VAL:HG22	58:FB:54:LYS:O	2.02	0.59
59:GB:85:VAL:HA	59:GB:107:ARG:HG3	1.83	0.59
60:HB:55:VAL:HG23	60:HB:67:THR:O	2.02	0.59
64:LB:123:SER:C	64:LB:125:SER:H	2.04	0.59
68:PB:32:LEU:HB2	68:PB:43:SER:OG	2.02	0.59
82:DC:413:ILE:O	82:DC:426:LEU:HA	2.02	0.59
82:DC:413:ILE:HD11	82:DC:459:ILE:HD11	1.82	0.59
83:EC:6902:U:H2'	83:EC:6903:U:C6	2.36	0.59
1:A:343:C:H2'	1:A:344:A:H8	1.68	0.59
1:A:1013:A:H2'	1:A:1014:G:O4'	2.01	0.59
1:A:1552:U:H5	65:MB:43:ARG:HH21	1.50	0.59
2:B:29:C:O2'	19:S:162:ARG:HB3	2.02	0.59
2:B:1788:C:H2'	2:B:1789:G:H8	1.66	0.59
2:B:2767:U:H2'	2:B:2768:U:C6	2.36	0.59
2:B:3042:U:H2'	2:B:3043:C:C6	2.36	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:3313:U:H4'	7:G:173:GLN:HG3	1.83	0.59
6:F:126:LEU:HD22	6:F:150:LEU:HD21	1.83	0.59
9:I:106:ALA:O	9:I:109:THR:HG22	2.01	0.59
10:J:69:PHE:HB3	10:J:138:GLN:HG2	1.84	0.59
11:K:191:VAL:HG12	11:K:192:GLY:H	1.67	0.59
16:P:75:PRO:O	16:P:116:MET:O	2.20	0.59
25:Y:11:THR:C	25:Y:14:MET:HB3	2.22	0.59
27:AA:48:ARG:HG3	27:AA:48:ARG:NH1	2.17	0.59
37:KA:32:ILE:HG21	37:KA:100:ILE:HD12	1.85	0.59
50:XA:46:HIS:ND1	50:XA:149:LEU:HD13	2.17	0.59
50:XA:163:ASN:C	50:XA:165:ARG:H	2.05	0.59
52:ZA:154:LEU:HD12	52:ZA:154:LEU:N	2.17	0.59
54:BB:201:HIS:CD2	54:BB:207:LEU:H	2.16	0.59
56:DB:30:LYS:H	56:DB:102:VAL:HB	1.66	0.59
57:EB:112:ARG:O	57:EB:112:ARG:HD3	2.02	0.59
57:EB:138:LYS:HG2	57:EB:152:VAL:HG13	1.83	0.59
63:KB:101:HIS:HA	63:KB:104:ARG:NH1	2.17	0.59
82:DC:338:ILE:O	82:DC:342:LEU:HB3	2.02	0.59
1:A:148:A:H61	56:DB:133:LEU:CD1	2.14	0.59
1:A:628:G:N2	1:A:971:A:H62	1.94	0.59
1:A:1271:G:H2'	1:A:1272:U:C6	2.38	0.59
1:A:1469:A:H2'	1:A:1470:C:C6	2.38	0.59
2:B:103:G:H4'	17:Q:65:TYR:CD2	2.37	0.59
2:B:1163:A:H2'	2:B:1164:G:H8	1.66	0.59
2:B:1282:G:H4'	48:VA:82:GLY:CA	2.32	0.59
2:B:1282:G:H2'	2:B:1283:C:O4'	2.02	0.59
2:B:1322:U:H2'	2:B:1323:G:H8	1.66	0.59
2:B:2196:C:H3'	2:B:2242:A:H61	1.66	0.59
2:B:2826:U:O2'	2:B:2827:U:H5'	2.02	0.59
8:H:65:TRP:CZ3	8:H:76:ARG:HD2	2.37	0.59
9:I:149:GLY:O	9:I:150:LEU:HG	2.02	0.59
10:J:172:HIS:HB3	37:KA:43:PHE:CD2	2.36	0.59
11:K:140:SER:O	11:K:144:ILE:HG13	2.02	0.59
25:Y:66:ASN:HB2	33:GA:35:VAL:HG13	1.83	0.59
31:EA:81:LEU:HD21	38:LA:94:LEU:HD21	1.85	0.59
42:PA:39:ARG:HB3	42:PA:59:ALA:HB2	1.85	0.59
48:VA:28:VAL:HG12	48:VA:187:VAL:HG13	1.83	0.59
50:XA:53:THR:OG1	50:XA:161:PRO:HG2	2.02	0.59
50:XA:169:SER:O	50:XA:173:ILE:HG12	2.01	0.59
55:CB:112:ARG:HH21	66:NB:43:ILE:HG23	1.67	0.59
56:DB:5:ILE:H	56:DB:5:ILE:HD12	1.67	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:HB:15:LEU:HD13	60:HB:21:VAL:HG23	1.83	0.59
74:VB:17:LEU:HD12	74:VB:18:LEU:N	2.17	0.59
82:DC:119:LEU:HD11	82:DC:145:GLN:HB3	1.82	0.59
82:DC:635:CYS:SG	82:DC:664:VAL:HG13	2.42	0.59
82:DC:637:GLY:HA2	82:DC:668:GLN:OE1	2.02	0.59
1:A:431:C:H2'	1:A:432:G:O4'	2.01	0.59
1:A:863:A:O2'	1:A:864:U:H5'	2.03	0.59
1:A:990:C:H2'	1:A:991:G:O4'	2.03	0.59
1:A:1327:C:H4'	53:AB:157:LEU:O	2.03	0.59
1:A:1451:C:H4'	79:AC:7:TRP:O	2.03	0.59
1:A:1788:G:H2'	1:A:1789:G:C5'	2.20	0.59
2:B:873:C:H4'	2:B:1907:C:O2'	2.02	0.59
2:B:1335:C:O2'	2:B:1336:U:H5'	2.02	0.59
2:B:1466:G:H22	2:B:1510:G:C5'	2.15	0.59
2:B:1640:G:H5'	2:B:1738:C:H5"	1.83	0.59
2:B:2513:U:H2'	2:B:2514:U:H2'	1.84	0.59
2:B:3139:A:H4'	7:G:20:LYS:HB3	1.84	0.59
2:B:3176:G:H1'	37:KA:3:GLU:OE1	2.02	0.59
2:B:3325:G:H5"	35:IA:103:GLY:CA	2.32	0.59
7:G:76:VAL:HG12	7:G:325:LYS:HA	1.83	0.59
7:G:111:SER:O	7:G:114:VAL:HG23	2.02	0.59
18:R:60:LEU:HA	18:R:63:VAL:CG1	2.32	0.59
25:Y:17:ARG:O	25:Y:18:ASP:HB2	2.01	0.59
37:KA:59:VAL:HG23	37:KA:60:ARG:H	1.66	0.59
38:LA:57:LEU:HG	38:LA:62:TYR:CD2	2.38	0.59
49:WA:45:TRP:HB3	49:WA:57:PRO:CA	2.26	0.59
54:BB:79:ASP:HB2	54:BB:82:TYR:HB2	1.85	0.59
55:CB:77:TYR:O	55:CB:84:LYS:HG3	2.02	0.59
71:SB:32:VAL:HG12	71:SB:55:LEU:O	2.02	0.59
73:UB:57:LEU:O	80:BC:8:LEU:HD21	2.02	0.59
74:VB:20:ARG:O	74:VB:21:LYS:HD2	2.02	0.59
76:XB:19:LYS:HA	76:XB:19:LYS:HE3	1.85	0.59
82:DC:596:GLU:HA	82:DC:599:LEU:HD22	1.84	0.59
82:DC:601:ILE:HD12	82:DC:643:PRO:HA	1.83	0.59
1:A:378:A:H2'	1:A:379:U:O4'	2.02	0.59
1:A:766:U:H5"	1:A:768:C:OP2	2.02	0.59
1:A:1488:G:H2'	1:A:1513:G:H21	1.66	0.59
1:A:1670:G:N2	1:A:1730:A:H2'	2.17	0.59
2:B:941:G:H2'	2:B:942:U:O4'	2.01	0.59
2:B:1522:U:O2'	29:CA:113:LEU:HD11	2.01	0.59
2:B:1825:G:H5"	42:PA:48:SER:HB2	1.82	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2731:U:H2'	2:B:2732:G:C8	2.37	0.59
2:B:2987:A:O2'	7:G:259:HIS:HB3	2.02	0.59
2:B:3354:U:C4'	2:B:3356:G:H5'	2.32	0.59
4:D:107:C:H2'	4:D:108:A:H8	1.67	0.59
7:G:67:PHE:HE1	27:AA:89:ASP:HB3	1.67	0.59
7:G:117:ARG:HA	7:G:175:LYS:HG3	1.85	0.59
10:J:30:LEU:HB3	10:J:34:LEU:HD12	1.83	0.59
13:M:86:TYR:CD2	13:M:151:VAL:HG22	2.38	0.59
14:N:52:LEU:HG	14:N:165:ILE:HG22	1.85	0.59
21:U:37:ASN:HB2	21:U:117:ILE:CG2	2.32	0.59
23:W:166:ASN:O	23:W:170:ARG:HB2	2.02	0.59
25:Y:65:TYR:HD1	25:Y:66:ASN:N	2.01	0.59
36:JA:11:LYS:HD2	36:JA:14:THR:CG2	2.27	0.59
37:KA:50:ALA:HB2	37:KA:68:TRP:CD2	2.36	0.59
45:SA:9:ARG:HH11	45:SA:9:ARG:HG3	1.66	0.59
50:XA:50:VAL:HG23	67:OB:109:LEU:CD2	2.30	0.59
54:BB:87:MET:HA	54:BB:87:MET:HE2	1.84	0.59
64:LB:76:ILE:HD12	64:LB:76:ILE:N	2.17	0.59
65:MB:40:ARG:NH2	65:MB:43:ARG:HD2	2.17	0.59
65:MB:40:ARG:O	65:MB:44:ARG:HB3	2.02	0.59
65:MB:98:ASN:HD22	65:MB:103:ASN:HD21	1.51	0.59
71:SB:36:VAL:HG11	71:SB:78:LEU:CD1	2.32	0.59
1:A:209:U:H5"	58:FB:170:SER:O	2.03	0.59
1:A:772:G:N2	1:A:774:A:H1'	2.18	0.59
1:A:1087:A:H5'	1:A:1298:U:C4	2.38	0.59
1:A:1723:U:H2'	1:A:1724:U:O4'	2.02	0.59
2:B:126:U:H5'	19:S:141:ALA:HB2	1.84	0.59
2:B:609:G:N7	8:H:308:LYS:HE2	2.18	0.59
2:B:883:A:H3'	2:B:921:A:H2	1.66	0.59
2:B:1523:U:O4'	29:CA:113:LEU:HB2	2.03	0.59
2:B:1535:A:H62	2:B:1586:G:N2	2.00	0.59
2:B:1768:U:H2'	2:B:1769:G:C4'	2.33	0.59
2:B:1804:A:H2'	2:B:1805:C:C6	2.38	0.59
2:B:2318:U:H2'	2:B:2319:U:O4'	2.02	0.59
2:B:2746:A:H2'	2:B:2747:A:O4'	2.03	0.59
2:B:2853:A:O2'	14:N:64:ALA:HA	2.03	0.59
2:B:2907:G:O2'	2:B:2908:G:H5'	2.02	0.59
6:F:89:TYR:HB2	6:F:100:ASN:ND2	2.17	0.59
8:H:29:PRO:HG2	8:H:279:HIS:HA	1.83	0.59
8:H:181:VAL:HG12	8:H:182:LEU:N	2.16	0.59
11:K:101:LYS:HD2	11:K:104:GLN:OE1	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:M:47:LYS:HB2	18:R:7:VAL:CG2	2.33	0.59
14:N:23:ASN:HD21	14:N:26:VAL:CG1	2.16	0.59
18:R:123:LEU:HD22	20:T:194:LEU:CG	2.31	0.59
23:W:41:ILE:HG23	23:W:50:ILE:CD1	2.31	0.59
39:MA:55:LEU:H	39:MA:55:LEU:CD2	2.13	0.59
40:NA:57:LEU:CA	40:NA:60:LEU:HB2	2.30	0.59
41:OA:26:SER:HB3	41:OA:35:SER:OG	2.03	0.59
47:UA:86:LEU:O	47:UA:90:VAL:HG23	2.02	0.59
56:DB:178:LEU:HD11	56:DB:180:THR:CG2	2.33	0.59
71:SB:4:ASP:HB3	71:SB:5:LYS:HD3	1.83	0.59
82:DC:132:ILE:HD11	82:DC:162:ARG:HB3	1.83	0.59
1:A:304:U:HO2'	61:IB:137:PHE:HZ	1.50	0.59
1:A:629:U:C2'	1:A:630:A:H5"	2.31	0.59
1:A:774:A:H2'	1:A:775:G:H5'	1.84	0.59
1:A:1313:A:C4	1:A:1315:U:H5'	2.38	0.59
2:B:255:A:H2'	2:B:256:G:H8	1.67	0.59
2:B:346:C:N4	3:C:25:G:H4'	2.17	0.59
2:B:824:C:H5"	6:F:21:ARG:NE	2.18	0.59
2:B:1039:U:H2'	2:B:1040:A:H8	1.66	0.59
2:B:1669:C:H2'	2:B:1670:C:O4'	2.01	0.59
2:B:1805:C:H4'	38:LA:76:TYR:H	1.66	0.59
2:B:1878:G:H3'	2:B:1879:A:H5"	1.85	0.59
2:B:2407:C:H2'	2:B:2408:U:C6	2.38	0.59
2:B:3083:G:H2'	2:B:3084:C:C6	2.36	0.59
3:C:32:C:H2'	3:C:33:A:C8	2.38	0.59
3:C:140:G:H22	19:S:112:ASN:HB3	1.67	0.59
4:D:32:U:H1'	4:D:33:U:H5	1.68	0.59
9:I:226:TYR:HE2	9:I:236:LEU:HD13	1.67	0.59
14:N:154:ARG:HH11	14:N:154:ARG:HG2	1.68	0.59
17:Q:58:VAL:CG1	17:Q:101:ARG:HH21	2.16	0.59
17:Q:170:LEU:CG	32:FA:147:LEU:HD13	2.28	0.59
23:W:97:ARG:O	23:W:101:VAL:HG23	2.03	0.59
25:Y:19:PHE:CE1	25:Y:20:ARG:HD3	2.38	0.59
28:BA:1:MET:CB	28:BA:15:PRO:HG2	2.31	0.59
29:CA:88:MET:HE1	29:CA:120:LYS:HB2	1.85	0.59
34:HA:27:TYR:HB2	34:HA:52:ARG:NH1	2.17	0.59
34:HA:53:LYS:O	34:HA:57:GLU:HG3	2.02	0.59
37:KA:32:ILE:CD1	37:KA:35:VAL:HG21	2.33	0.59
46:TA:68:VAL:HG23	46:TA:86:LYS:O	2.02	0.59
52:ZA:222:TYR:O	71:SB:23:ILE:HG21	2.02	0.59
55:CB:99:MET:HG3	55:CB:100:ASN:OD1	2.03	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
60:HB:11:ILE:HD13	60:HB:35:ILE:HG21	1.85	0.59
63:KB:48:SER:O	63:KB:52:VAL:HG23	2.03	0.59
66:NB:53:LEU:HD23	66:NB:53:LEU:H	1.67	0.59
73:UB:112:LYS:O	73:UB:121:ARG:HG2	2.02	0.59
82:DC:113:SER:HB3	82:DC:516:PRO:CG	2.31	0.59
82:DC:121:VAL:O	82:DC:122:THR:HG23	2.02	0.59
82:DC:129:VAL:HG12	82:DC:130:ASP:H	1.68	0.59
82:DC:365:ASN:HD21	82:DC:472:SER:HB3	1.66	0.59
82:DC:368:ALA:HB2	82:DC:377:ASP:OD2	2.03	0.59
82:DC:629:ASP:HB3	82:DC:647:ILE:HG21	1.84	0.59
83:EC:6795:U:H3	83:EC:6888:A:H61	1.50	0.59
1:A:396:G:H3'	58:FB:47:ARG:HH11	1.68	0.59
1:A:777:C:C2'	1:A:778:G:H5"	2.30	0.59
1:A:811:A:H2	1:A:858:G:H4'	1.68	0.59
1:A:1797:A:C6	76:XB:87:ARG:HD2	2.37	0.59
2:B:638:C:H2'	2:B:639:G:C8	2.38	0.59
2:B:996:A:C2	2:B:997:A:H1'	2.37	0.59
2:B:1257:C:H42	2:B:1261:G:N2	1.99	0.59
2:B:1510:G:H2'	2:B:1512:U:C4	2.37	0.59
2:B:1600:U:H3'	23:W:38:ARG:HH21	1.68	0.59
5:E:65:ILE:HD13	5:E:144:LEU:HD23	1.85	0.59
5:E:206:VAL:O	5:E:206:VAL:HG23	2.02	0.59
8:H:302:ALA:HA	22:V:39:ARG:NH1	2.17	0.59
9:I:17:GLN:HG3	25:Y:20:ARG:HA	1.85	0.59
9:I:40:HIS:HD2	9:I:42:ALA:H	1.51	0.59
10:J:63:LEU:O	10:J:78:ARG:HA	2.02	0.59
13:M:86:TYR:CE1	13:M:151:VAL:HG13	2.37	0.59
13:M:86:TYR:H	13:M:187:ILE:HG13	1.67	0.59
17:Q:39:ARG:HB3	17:Q:51:LEU:HD11	1.84	0.59
19:S:47:LYS:O	19:S:50:ARG:HG2	2.02	0.59
19:S:142:ILE:HD12	19:S:142:ILE:N	2.17	0.59
23:W:44:LEU:O	23:W:49:THR:HB	2.02	0.59
29:CA:111:ASN:O	29:CA:123:TYR:HB2	2.02	0.59
41:OA:25:ARG:HG2	43:QA:51:ILE:HD12	1.84	0.59
52:ZA:227:PRO:HA	52:ZA:230:TRP:CE2	2.37	0.59
53:AB:11:LEU:CD1	70:RB:86:ILE:HG12	2.24	0.59
54:BB:160:VAL:HG22	54:BB:172:PHE:HB3	1.83	0.59
56:DB:73:ILE:HG13	56:DB:75:LEU:HG	1.83	0.59
64:LB:103:ARG:HD3	76:XB:49:ALA:CB	2.33	0.59
82:DC:508:LEU:CD1	82:DC:528:HIS:HB3	2.30	0.59
1:A:358:U:O2'	1:A:360:A:H5"	2.03	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:599:A:H2'	1:A:600:U:C6	2.38	0.59
1:A:629:U:H5'	63:KB:127:ARG:NH1	2.18	0.59
1:A:774:A:C2'	1:A:775:G:H5'	2.32	0.59
1:A:1186:U:H1'	1:A:1208:A:N1	2.17	0.59
1:A:1753:A:H2'	1:A:1754:A:C8	2.37	0.59
2:B:153:U:C3'	2:B:154:U:H5"	2.33	0.59
2:B:370:U:H4'	2:B:404:G:H5'	1.83	0.59
2:B:429:U:H4'	37:KA:88:ASN:O	2.03	0.59
2:B:822:G:H4'	6:F:194:ASN:HB2	1.84	0.59
2:B:1500:G:H2'	2:B:1501:U:C6	2.38	0.59
2:B:1805:C:H4'	38:LA:76:TYR:HA	1.84	0.59
2:B:2187:G:O6	6:F:200:ARG:HD3	2.02	0.59
2:B:2655:U:OP2	46:TA:2:VAL:HA	2.03	0.59
7:G:114:VAL:HG22	7:G:163:HIS:CE1	2.38	0.59
7:G:216:ASP:OD2	7:G:341:SER:HA	2.03	0.59
8:H:2:SER:O	8:H:4:PRO:HD3	2.03	0.59
12:L:98:ARG:HH11	12:L:98:ARG:HB3	1.67	0.59
13:M:158:ALA:O	13:M:161:LEU:HB2	2.02	0.59
14:N:98:ARG:HD3	14:N:119:TRP:CH2	2.38	0.59
14:N:99:ILE:HD13	14:N:101:LYS:HB2	1.85	0.59
16:P:128:VAL:HA	16:P:131:GLU:HG2	1.84	0.59
17:Q:31:LYS:HA	17:Q:34:SER:CB	2.32	0.59
26:Z:16:THR:OG1	26:Z:102:GLU:HG2	2.02	0.59
29:CA:47:ALA:N	39:MA:77:PRO:HG3	2.07	0.59
32:FA:73:LEU:HD21	32:FA:81:LEU:CD1	2.32	0.59
46:TA:5:PRO:C	46:TA:7:THR:H	2.06	0.59
46:TA:6:LYS:HA	46:TA:25:VAL:HB	1.84	0.59
49:WA:2:ALA:HB1	49:WA:6:VAL:HG22	1.85	0.59
50:XA:55:GLU:HB3	71:SB:79:LEU:HD21	1.83	0.59
52:ZA:126:ARG:HA	52:ZA:129:ILE:HD12	1.84	0.59
53:AB:70:THR:HA	53:AB:86:LEU:HD13	1.83	0.59
61:IB:46:LYS:O	61:IB:50:GLU:HG3	2.01	0.59
64:LB:74:VAL:HB	64:LB:76:ILE:HD13	1.85	0.59
69:QB:20:SER:O	69:QB:24:ARG:HG3	2.02	0.59
70:RB:25:THR:HA	70:RB:89:ARG:O	2.02	0.59
74:VB:53:ASP:O	74:VB:79:VAL:HG22	2.03	0.59
82:DC:723:LYS:HD3	82:DC:808:PRO:HD3	1.85	0.59
1:A:839:U:C2'	1:A:840:U:H5"	2.32	0.59
1:A:1211:A:H61	1:A:1452:U:H3	1.50	0.59
2:B:287:G:H2'	2:B:288:C:O4'	2.03	0.59
2:B:1310:G:H2'	2:B:1311:G:H8	1.68	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1610:G:H2'	2:B:1611:G:C8	2.38	0.59
2:B:1887:A:H4'	7:G:227:GLU:HA	1.84	0.59
2:B:2213:A:H61	2:B:2429:G:H1'	1.68	0.59
2:B:2469:G:H2'	2:B:2470:C:O4'	2.02	0.59
2:B:2489:C:OP2	2:B:2490:C:H2'	2.02	0.59
7:G:350:ALA:O	7:G:351:LEU:CB	2.50	0.59
12:L:72:PRO:HA	12:L:233:TRP:HZ3	1.68	0.59
13:M:173:ARG:HH21	44:RA:127:LEU:HD23	1.68	0.59
20:T:140:LYS:HD2	20:T:140:LYS:N	2.17	0.59
24:X:3:HIS:HE1	24:X:100:VAL:HG23	1.67	0.59
24:X:28:ARG:HH21	24:X:28:ARG:HG2	1.68	0.59
37:KA:32:ILE:HD12	37:KA:35:VAL:HG21	1.85	0.59
44:RA:97:ARG:HE	44:RA:122:ARG:HD3	1.68	0.59
48:VA:33:VAL:HG23	48:VA:37:GLN:NE2	2.17	0.59
48:VA:169:GLU:HA	48:VA:172:LEU:CD2	2.33	0.59
49:WA:4:ASN:OD1	49:WA:5:GLU:HG2	2.03	0.59
55:CB:97:LEU:HG	55:CB:176:THR:HG22	1.85	0.59
61:IB:155:LYS:HD2	63:KB:135:LEU:HD23	1.85	0.59
82:DC:271:ARG:HB3	82:DC:274:ASN:CG	2.24	0.59
82:DC:369:ILE:HD13	82:DC:402:ALA:CB	2.32	0.59
1:A:126:A:H4'	54:BB:134:LYS:HE3	1.84	0.58
1:A:1162:C:H5'	55:CB:148:ARG:NH1	2.18	0.58
1:A:1393:C:H2'	1:A:1394:G:C8	2.38	0.58
1:A:1790:A:O2'	1:A:1791:A:H5'	2.03	0.58
2:B:301:G:H2'	2:B:302:U:C6	2.38	0.58
2:B:911:C:H42	6:F:3:ARG:HD3	1.68	0.58
2:B:2196:C:H3'	2:B:2242:A:N6	2.18	0.58
2:B:2527:G:H2'	2:B:2528:G:O4'	2.02	0.58
2:B:2943:G:C8	7:G:2:SER:HB3	2.38	0.58
2:B:3182:G:H5"	20:T:161:LYS:NZ	2.17	0.58
2:B:3300:U:H2'	2:B:3301:U:H5'	1.83	0.58
4:D:48:U:O4	9:I:58:LYS:HG3	2.03	0.58
6:F:249:SER:C	6:F:251:LYS:H	2.05	0.58
7:G:60:LEU:HB2	7:G:72:VAL:HG11	1.84	0.58
8:H:44:LYS:HD2	8:H:111:VAL:HG21	1.84	0.58
8:H:152:VAL:CG2	8:H:249:ILE:HG22	2.32	0.58
12:L:156:ASP:HB3	12:L:183:LYS:HD3	1.85	0.58
12:L:160:ILE:O	12:L:164:VAL:HG23	2.02	0.58
21:U:169:THR:HG23	37:KA:60:ARG:CZ	2.32	0.58
31:EA:13:VAL:CG1	31:EA:19:ALA:HA	2.33	0.58
33:GA:36:ASP:HB3	33:GA:39:PHE:CB	2.33	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:HA:73:GLY:O	34:HA:77:LEU:HB3	2.03	0.58
48:VA:45:LEU:HD11	48:VA:99:VAL:HG11	1.84	0.58
51:YA:69:CYS:SG	64:LB:114:ARG:HG2	2.43	0.58
57:EB:152:VAL:CG2	57:EB:181:ILE:HD11	2.32	0.58
58:FB:114:GLU:HA	58:FB:118:GLY:HA2	1.84	0.58
61:IB:77:SER:O	61:IB:84:ILE:HA	2.03	0.58
64:LB:136:ARG:HB2	64:LB:136:ARG:HH11	1.68	0.58
71:SB:15:ARG:HB2	71:SB:24:ILE:HB	1.85	0.58
72:TB:41:MET:HG2	72:TB:129:VAL:HG11	1.83	0.58
73:UB:53:VAL:HB	73:UB:99:ASN:H	1.68	0.58
83:EC:6941:U:C3'	83:EC:6942:A:H5"	2.27	0.58
1:A:170:U:H5'	1:A:267:U:H4'	1.85	0.58
1:A:639:U:N3	57:EB:100:PRO:HA	2.16	0.58
1:A:1253:U:H2'	1:A:1254:U:C6	2.38	0.58
2:B:150:A:P	19:S:147:ARG:HH22	2.26	0.58
2:B:199:A:H3'	30:DA:60:ARG:NE	2.09	0.58
2:B:348:A:N3	2:B:352:A:O2'	2.34	0.58
2:B:412:G:O2'	2:B:413:U:H5'	2.02	0.58
2:B:692:A:C2'	2:B:693:A:H5'	2.33	0.58
2:B:1513:G:N1	2:B:1515:A:H1'	2.18	0.58
2:B:1768:U:H2'	2:B:1769:G:C5'	2.34	0.58
2:B:1938:U:O2'	2:B:1939:G:H5'	2.02	0.58
2:B:2536:A:H3'	2:B:2537:U:C5'	2.27	0.58
5:E:100:ILE:HD11	5:E:124:LEU:HD23	1.86	0.58
7:G:305:ILE:HD12	7:G:306:THR:N	2.18	0.58
9:I:85:ARG:HG2	9:I:85:ARG:O	2.02	0.58
10:J:58:LEU:HB2	10:J:62:THR:OG1	2.03	0.58
12:L:159:PRO:HB2	12:L:162:LEU:HD12	1.84	0.58
16:P:106:LEU:O	16:P:107:ASP:HB2	2.03	0.58
21:U:164:LYS:HE3	21:U:166:VAL:HA	1.85	0.58
22:V:12:ARG:HB2	22:V:12:ARG:CZ	2.33	0.58
22:V:32:LEU:O	22:V:36:LEU:HG	2.02	0.58
24:X:44:PHE:HE1	24:X:122:HIS:HD2	1.51	0.58
25:Y:92:ARG:C	25:Y:94:GLU:H	2.05	0.58
48:VA:79:PHE:CZ	48:VA:189:GLN:HG3	2.38	0.58
51:YA:146:GLN:HG3	51:YA:147:ALA:N	2.19	0.58
53:AB:156:PHE:O	53:AB:157:LEU:HB2	2.02	0.58
54:BB:11:ARG:HA	54:BB:28:ALA:HB2	1.85	0.58
57:EB:173:TYR:HD2	57:EB:181:ILE:HB	1.68	0.58
60:HB:14:TYR:O	60:HB:18:GLU:HB2	2.03	0.58
76:XB:86:VAL:O	76:XB:86:VAL:HG13	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
78:ZB:26:THR:HB	78:ZB:44:VAL:CG2	2.33	0.58
82:DC:129:VAL:HG21	82:DC:185:VAL:HG21	1.86	0.58
82:DC:395:TYR:CD1	82:DC:457:VAL:HB	2.38	0.58
2:B:310:U:C2'	2:B:311:C:H5"	2.33	0.58
2:B:496:C:H2'	2:B:497:C:H6	1.66	0.58
2:B:665:A:H5'	19:S:199:LEU:HD21	1.85	0.58
2:B:714:G:H1	32:FA:72:VAL:HG11	1.67	0.58
2:B:825:U:H2'	2:B:826:G:O4'	2.03	0.58
2:B:1222:G:C5'	48:VA:56:ASN:HB3	2.31	0.58
2:B:2163:C:O2'	2:B:2164:A:H5'	2.03	0.58
2:B:3393:U:H2'	2:B:3394:U:C6	2.38	0.58
6:F:64:ARG:O	6:F:65:ASP:HB2	2.01	0.58
6:F:144:ASN:HB3	6:F:160:SER:N	2.12	0.58
6:F:177:LYS:HD3	47:UA:69:TYR:CZ	2.38	0.58
14:N:53:VAL:HB	14:N:164:LYS:O	2.03	0.58
19:S:112:ASN:ND2	19:S:113:LEU:HD22	2.17	0.58
24:X:106:LEU:HB3	24:X:110:MET:HE2	1.84	0.58
32:FA:79:TRP:HE1	32:FA:118:ILE:CG2	2.15	0.58
34:HA:16:LEU:HD21	34:HA:97:ASP:H	1.69	0.58
37:KA:16:TYR:O	37:KA:29:LEU:HG	2.03	0.58
48:VA:133:THR:O	48:VA:137:GLN:HG3	2.04	0.58
48:VA:142:PRO:O	48:VA:153:VAL:HB	2.02	0.58
49:WA:210:LEU:HD12	49:WA:245:PHE:CE2	2.39	0.58
50:XA:23:HIS:HA	50:XA:48:ILE:HB	1.84	0.58
51:YA:38:PHE:CE2	51:YA:73:LEU:HD13	2.37	0.58
55:CB:172:ILE:O	55:CB:176:THR:HG23	2.03	0.58
57:EB:7:LYS:O	57:EB:8:ILE:HG22	2.03	0.58
57:EB:47:ARG:HB2	57:EB:61:PHE:HE2	1.67	0.58
82:DC:244:LEU:O	82:DC:273:PHE:HB2	2.03	0.58
82:DC:292:LYS:HE2	82:DC:295:GLU:HB2	1.85	0.58
82:DC:635:CYS:SG	82:DC:664:VAL:HA	2.43	0.58
83:EC:6811:G:H2'	83:EC:6812:C:H5'	1.85	0.58
1:A:396:G:H22	1:A:399:A:C5'	2.14	0.58
1:A:861:U:H5'	63:KB:64:ARG:NH1	2.18	0.58
1:A:1081:A:H5"	1:A:1082:C:OP1	2.03	0.58
1:A:1351:G:H4'	66:NB:21:HIS:NE2	2.18	0.58
1:A:1732:A:H2'	1:A:1733:C:C6	2.37	0.58
2:B:70:A:H2	2:B:72:C:H42	1.50	0.58
2:B:208:C:C2'	2:B:209:A:H5'	2.34	0.58
2:B:372:A:H2'	2:B:373:A:C8	2.38	0.58
2:B:659:G:H4'	8:H:92:ASN:O	2.02	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:916:G:O2'	2:B:917:A:H8	1.86	0.58
2:B:1555:U:H2'	2:B:1556:C:H5"	1.85	0.58
2:B:1668:G:H2'	2:B:1669:C:C6	2.38	0.58
2:B:2370:G:H2'	2:B:2371:G:H8	1.68	0.58
2:B:3332:U:OP1	28:BA:35:LYS:HD2	2.03	0.58
6:F:91:GLY:O	6:F:102:LEU:HG	2.03	0.58
7:G:307:PRO:HA	7:G:361:THR:O	2.04	0.58
8:H:114:ASN:H	8:H:114:ASN:ND2	2.00	0.58
13:M:31:ARG:HD3	13:M:149:ASN:OD1	2.03	0.58
19:S:44:ARG:NH2	19:S:47:LYS:NZ	2.50	0.58
20:T:157:GLU:O	20:T:161:LYS:HB2	2.04	0.58
22:V:170:ARG:O	22:V:171:LYS:HB2	2.03	0.58
26:Z:76:LEU:O	26:Z:80:THR:HG23	2.04	0.58
31:EA:72:ILE:HG12	31:EA:111:LYS:CE	2.34	0.58
38:LA:90:ILE:CG2	38:LA:94:LEU:HD12	2.33	0.58
39:MA:59:ASN:O	39:MA:63:ARG:HG3	2.04	0.58
40:NA:55:ARG:O	40:NA:58:ILE:HG12	2.03	0.58
45:SA:1:MET:HE3	45:SA:6:ARG:HG3	1.84	0.58
49:WA:102:ARG:HD3	49:WA:102:ARG:H	1.69	0.58
51:YA:32:ILE:HA	51:YA:96:LEU:HD11	1.85	0.58
51:YA:36:SER:HB2	51:YA:231:LEU:O	2.03	0.58
51:YA:87:ARG:HB2	51:YA:101:HIS:ND1	2.18	0.58
59:GB:148:VAL:HG12	59:GB:150:LEU:H	1.67	0.58
61:IB:149:ALA:HA	61:IB:152:GLN:HE21	1.69	0.58
67:OB:58:MET:HA	67:OB:61:ILE:HD12	1.85	0.58
67:OB:69:ILE:HD13	67:OB:69:ILE:N	2.19	0.58
71:SB:35:ASN:HB3	71:SB:50:TYR:HB3	1.84	0.58
82:DC:250:PHE:H	82:DC:275:MET:HE3	1.68	0.58
82:DC:496:LYS:HD2	82:DC:553:PRO:CB	2.33	0.58
82:DC:742:GLY:O	82:DC:746:VAL:HG23	2.03	0.58
1:A:95:G:H3'	1:A:96:G:H8	1.68	0.58
1:A:138:A:H62	1:A:266:A:H61	1.46	0.58
1:A:306:U:H2'	1:A:307:G:C8	2.38	0.58
1:A:1100:G:H2'	72:TB:75:ILE:HD13	1.84	0.58
1:A:1117:U:H2'	1:A:1118:G:C8	2.39	0.58
1:A:1579:U:O2'	66:NB:139:GLN:HA	2.04	0.58
1:A:1628:U:H4'	76:XB:86:VAL:HG21	1.84	0.58
2:B:658:G:H21	8:H:93:MET:HB2	1.68	0.58
2:B:1169:A:H4'	11:K:219:LYS:NZ	2.19	0.58
2:B:1211:U:H2'	2:B:1212:A:H8	1.68	0.58
2:B:1580:A:H1'	2:B:1581:C:H5	1.67	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2541:U:H1'	2:B:2542:U:O5'	2.02	0.58
2:B:2728:G:H1	25:Y:80:VAL:HG21	1.68	0.58
2:B:3180:A:H5"	20:T:116:LYS:HB2	1.84	0.58
6:F:15:ILE:C	6:F:17:THR:H	2.04	0.58
10:J:79:VAL:HG22	10:J:80:ASN:N	2.13	0.58
17:Q:80:VAL:HG11	17:Q:87:ALA:HA	1.85	0.58
19:S:154:PRO:HA	19:S:157:LYS:CD	2.32	0.58
21:U:169:THR:H	21:U:172:GLN:HB3	1.67	0.58
23:W:123:LEU:HD23	23:W:127:SER:OG	2.03	0.58
33:GA:11:ASN:O	33:GA:15:LYS:HG3	2.03	0.58
35:IA:78:LYS:O	35:IA:89:LEU:HB2	2.04	0.58
36:JA:112:ALA:CA	36:JA:117:ILE:HB	2.33	0.58
49:WA:136:ILE:H	49:WA:136:ILE:CD1	2.16	0.58
57:EB:114:ARG:HA	57:EB:117:THR:HB	1.85	0.58
58:FB:4:SER:OG	58:FB:24:LYS:HD2	2.02	0.58
59:GB:60:LEU:HD13	59:GB:69:ARG:HH22	1.68	0.58
70:RB:17:GLN:HA	70:RB:96:PRO:HB3	1.86	0.58
71:SB:2:GLU:HB3	71:SB:6:GLY:O	2.02	0.58
1:A:298:C:OP1	54:BB:38:LEU:HB2	2.03	0.58
1:A:416:A:H5'	1:A:417:A:N7	2.19	0.58
1:A:633:U:H2'	1:A:634:G:O4'	2.04	0.58
1:A:851:U:OP2	23:W:172:ARG:HD3	2.04	0.58
1:A:1649:G:H2'	1:A:1650:U:C6	2.39	0.58
1:A:1741:U:H2'	1:A:1742:U:C6	2.38	0.58
2:B:188:U:C2	2:B:223:U:H4'	2.38	0.58
2:B:300:G:H2'	2:B:301:G:H8	1.68	0.58
2:B:405:U:H2'	2:B:406:G:H5'	1.85	0.58
2:B:413:U:O4'	21:U:118:GLN:HB2	2.03	0.58
2:B:1226:G:H4'	2:B:3117:C:H1'	1.85	0.58
2:B:1245:A:H2'	2:B:1272:C:OP1	2.04	0.58
2:B:1357:G:H2'	2:B:1358:C:H6	1.69	0.58
2:B:1388:U:OP1	36:JA:78:ASN:HB3	2.03	0.58
2:B:1547:G:H2'	2:B:1548:C:C6	2.39	0.58
2:B:1747:G:H4'	42:PA:4:GLU:HG3	1.85	0.58
2:B:1898:G:O2'	27:AA:18:PRO:HG2	2.03	0.58
2:B:2454:G:H2'	2:B:2454:G:N3	2.18	0.58
2:B:2880:U:H2'	2:B:2881:C:O4'	2.03	0.58
6:F:72:ARG:HH11	6:F:72:ARG:HG3	1.68	0.58
6:F:184:ARG:O	6:F:188:LYS:HB2	2.02	0.58
8:H:152:VAL:HG12	8:H:153:SER:H	1.68	0.58
9:I:103:LEU:HD11	9:I:107:ARG:HG3	1.86	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:J:40:LEU:HB3	10:J:86:ALA:HA	1.84	0.58
18:R:103:ILE:HA	18:R:106:ARG:NH1	2.19	0.58
20:T:52:LEU:HA	20:T:55:HIS:CD2	2.34	0.58
20:T:73:PHE:HB3	20:T:78:ARG:CB	2.22	0.58
25:Y:54:HIS:ND1	25:Y:56:PHE:HB2	2.18	0.58
38:LA:91:ARG:O	38:LA:95:ILE:HB	2.03	0.58
54:BB:31:PRO:HB3	54:BB:83:PRO:HB3	1.85	0.58
66:NB:106:LYS:HA	66:NB:109:PHE:HB2	1.86	0.58
76:XB:10:ARG:HD3	76:XB:34:LYS:HA	1.86	0.58
79:AC:38:ILE:HG22	79:AC:39:CYS:N	2.19	0.58
1:A:796:A:H2'	1:A:797:G:C8	2.38	0.58
1:A:1513:G:H3'	1:A:1514:U:H5"	1.85	0.58
1:A:1568:C:H4'	1:A:1569:A:C8	2.36	0.58
1:A:1634:C:H41	83:EC:6955:U:H5"	1.68	0.58
1:A:1767:G:C4'	1:A:1768:G:H5"	2.24	0.58
2:B:507:U:H2'	2:B:508:U:C6	2.38	0.58
2:B:666:A:H2'	2:B:667:C:C5'	2.34	0.58
2:B:1011:A:H2'	2:B:1012:G:C8	2.39	0.58
2:B:1230:G:H4'	48:VA:34:SER:HA	1.86	0.58
2:B:1774:C:H2'	2:B:1775:G:O4'	2.03	0.58
2:B:1900:A:H61	2:B:1908:A:H61	1.51	0.58
2:B:1933:A:H2'	2:B:1934:G:H5'	1.86	0.58
2:B:2994:A:H5'	21:U:77:GLY:O	2.02	0.58
4:D:85:G:H1	4:D:95:A:H61	1.51	0.58
6:F:49:VAL:HG11	6:F:60:LYS:CE	2.25	0.58
7:G:70:ARG:HB3	7:G:70:ARG:HH11	1.69	0.58
7:G:160:VAL:O	7:G:181:ILE:HD12	2.04	0.58
7:G:293:ASN:HB2	7:G:305:ILE:N	2.17	0.58
10:J:58:LEU:HD21	10:J:64:LEU:HB2	1.85	0.58
10:J:68:PRO:HB3	10:J:138:GLN:NE2	2.18	0.58
11:K:61:ASN:HA	11:K:64:GLN:CB	2.27	0.58
11:K:74:SER:HB3	25:Y:141:VAL:O	2.03	0.58
12:L:248:LYS:HA	12:L:252:ASN:HB2	1.85	0.58
14:N:191:LYS:O	14:N:197:VAL:HG23	2.03	0.58
15:O:81:GLU:HB2	15:O:167:TYR:CE1	2.39	0.58
20:T:8:VAL:CG1	20:T:117:ARG:HA	2.33	0.58
26:Z:17:VAL:HG21	26:Z:76:LEU:HD21	1.84	0.58
30:DA:51:ARG:HH21	30:DA:52:ARG:HB3	1.68	0.58
46:TA:28:TYR:HB2	46:TA:69:VAL:HG11	1.85	0.58
48:VA:78:PRO:HG2	48:VA:79:PHE:CE1	2.39	0.58
55:CB:137:ILE:HG21	55:CB:168:VAL:HG13	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:DB:187:LYS:HE2	56:DB:191:ARG:NE	2.17	0.58
57:EB:12:ALA:N	57:EB:13:PRO:CD	2.67	0.58
58:FB:3:ILE:H	58:FB:3:ILE:HD12	1.68	0.58
59:GB:76:LEU:HG	59:GB:80:LEU:HD11	1.85	0.58
67:OB:100:LEU:N	67:OB:118:PRO:HG3	2.19	0.58
79:AC:19:ARG:NH1	79:AC:30:LEU:HD22	2.18	0.58
82:DC:329:PRO:HB2	82:DC:332:ASP:CB	2.31	0.58
1:A:209:U:H2'	1:A:210:A:H8	1.69	0.58
1:A:519:C:H3'	1:A:520:A:H8	1.67	0.58
1:A:1016:C:H2'	1:A:1017:U:H6	1.69	0.58
2:B:100:A:H3'	2:B:101:G:H21	1.67	0.58
2:B:200:C:H5'	2:B:221:A:N3	2.19	0.58
2:B:508:U:H2'	2:B:509:U:H6	1.68	0.58
2:B:767:U:H1'	2:B:768:C:C6	2.38	0.58
2:B:1148:G:O2'	2:B:1171:G:C4'	2.51	0.58
2:B:1463:U:H2'	2:B:1464:G:H5'	1.86	0.58
2:B:1598:G:H2'	2:B:1599:G:C8	2.39	0.58
2:B:1845:G:H3'	2:B:1846:C:H5"	1.85	0.58
2:B:1898:G:C2'	2:B:1899:G:H5'	2.34	0.58
2:B:2178:A:H5"	6:F:151:PRO:HG2	1.85	0.58
2:B:2651:G:H5"	2:B:2652:U:O4'	2.04	0.58
2:B:3119:U:H2'	2:B:3121:U:P	2.44	0.58
5:E:10:ARG:HE	5:E:176:GLU:HB3	1.68	0.58
6:F:103:PRO:HB3	6:F:161:ASP:HA	1.85	0.58
8:H:244:LEU:H	8:H:244:LEU:CD1	2.15	0.58
13:M:170:LYS:HB3	13:M:175:PHE:CE2	2.39	0.58
18:R:84:LYS:HD3	18:R:87:ALA:HB3	1.86	0.58
22:V:23:ASN:ND2	22:V:26:LEU:HB2	2.19	0.58
24:X:59:VAL:HG13	25:Y:141:VAL:HG11	1.84	0.58
32:FA:138:ILE:CG2	32:FA:139:ARG:N	2.67	0.58
36:JA:82:LEU:HD12	36:JA:108:ILE:HG23	1.84	0.58
38:LA:43:LYS:HB3	38:LA:48:GLY:O	2.03	0.58
48:VA:26:PHE:HB3	48:VA:28:VAL:HG13	1.85	0.58
52:ZA:49:LYS:HD3	52:ZA:243:TYR:CG	2.39	0.58
52:ZA:206:THR:CG2	52:ZA:209:ASN:HB2	2.34	0.58
54:BB:30:ARG:HH11	54:BB:30:ARG:HB3	1.67	0.58
58:FB:73:SER:C	58:FB:74:LYS:HD2	2.24	0.58
59:GB:84:GLY:HA3	59:GB:107:ARG:CZ	2.34	0.58
63:KB:129:TYR:HA	63:KB:132:VAL:HG22	1.85	0.58
64:LB:42:VAL:HG21	64:LB:67:VAL:HB	1.85	0.58
82:DC:358:GLU:HG2	82:DC:479:LYS:CE	2.33	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:320:U:C3'	1:A:321:C:H5"	2.32	0.58
2:B:54:C:H1'	2:B:1546:A:H2	1.68	0.58
2:B:506:U:H2'	2:B:507:U:O4'	2.04	0.58
2:B:996:A:H2	4:D:79:A:H2	1.49	0.58
2:B:1074:U:O4'	33:GA:46:ALA:HA	2.03	0.58
2:B:1169:A:H3'	2:B:1170:A:H8	1.69	0.58
2:B:1234:G:H21	16:P:132:ILE:N	2.01	0.58
2:B:1916:U:C5'	23:W:85:ARG:HB2	2.34	0.58
5:E:29:LEU:HD13	5:E:152:ARG:HE	1.69	0.58
11:K:103:LEU:CD2	11:K:130:ILE:HD12	2.33	0.58
11:K:114:GLY:O	11:K:205:PHE:HB2	2.04	0.58
17:Q:57:VAL:HG12	17:Q:69:VAL:HG21	1.85	0.58
18:R:16:GLU:HG3	18:R:69:THR:HG21	1.86	0.58
18:R:95:ALA:HA	18:R:100:ALA:CB	2.34	0.58
19:S:16:SER:OG	19:S:18:VAL:HG12	2.04	0.58
19:S:115:VAL:HA	19:S:134:LEU:HD23	1.86	0.58
25:Y:79:MET:HB2	25:Y:84:TYR:HE2	1.65	0.58
30:DA:40:ARG:HE	30:DA:46:LYS:HD3	1.69	0.58
38:LA:82:ALA:HA	38:LA:85:VAL:HB	1.85	0.58
51:YA:172:LEU:O	51:YA:176:VAL:HG23	2.03	0.58
57:EB:46:ILE:HD12	57:EB:60:ILE:HG12	1.84	0.58
60:HB:50:THR:HA	60:HB:55:VAL:HG13	1.85	0.58
64:LB:113:GLY:O	64:LB:115:ILE:HG23	2.03	0.58
76:XB:60:PRO:C	76:XB:62:TYR:H	2.06	0.58
82:DC:144:ARG:CG	82:DC:192:TYR:HB3	2.34	0.58
82:DC:667:PHE:O	82:DC:671:THR:HG23	2.04	0.58
83:EC:6857:C:H2'	83:EC:6858:A:O4'	2.04	0.58
1:A:147:A:H2'	1:A:148:A:C8	2.38	0.58
1:A:400:A:C6	58:FB:29:LEU:HD12	2.39	0.58
2:B:59:G:H2'	3:C:33:A:O2'	2.04	0.58
2:B:158:G:H2'	2:B:159:A:C8	2.39	0.58
2:B:354:U:H2'	2:B:355:A:H8	1.69	0.58
2:B:562:C:H4'	24:X:71:LYS:CE	2.33	0.58
2:B:999:G:H2'	2:B:1000:C:C5	2.38	0.58
2:B:1119:C:H2'	2:B:1120:A:H8	1.68	0.58
2:B:1338:C:C4'	36:JA:60:ASN:HD22	2.14	0.58
2:B:1458:U:H5'	35:IA:30:PRO:HB3	1.85	0.58
2:B:2567:C:C3'	2:B:2568:C:H5"	2.33	0.58
2:B:2574:G:OP2	31:EA:56:LYS:HD3	2.04	0.58
2:B:2859:U:H4'	2:B:2860:U:H5'	1.85	0.58
2:B:3273:A:H2'	2:B:3274:A:C8	2.39	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:3279:A:O2'	2:B:3280:U:H5'	2.04	0.58
6:F:87:PHE:HD2	6:F:89:TYR:HH	1.49	0.58
6:F:209:HIS:ND1	6:F:210:PRO:HD2	2.19	0.58
7:G:266:ARG:HH11	7:G:266:ARG:HB3	1.69	0.58
13:M:179:ILE:HD12	13:M:179:ILE:H	1.69	0.58
16:P:81:VAL:HG13	16:P:113:ALA:HB1	1.84	0.58
30:DA:35:LEU:HD11	30:DA:45:ILE:HB	1.86	0.58
31:EA:13:VAL:HA	31:EA:80:LEU:HD23	1.84	0.58
34:HA:73:GLY:H	34:HA:76:GLU:CB	2.11	0.58
39:MA:77:PRO:HD2	39:MA:80:LEU:HD23	1.85	0.58
46:TA:10:THR:O	46:TA:20:HIS:HA	2.02	0.58
48:VA:56:ASN:HA	48:VA:59:VAL:CG2	2.31	0.58
48:VA:176:LEU:CB	48:VA:178:ILE:HD13	2.33	0.58
49:WA:150:TRP:CH2	67:OB:34:LEU:HG	2.38	0.58
50:XA:22:THR:HG22	50:XA:169:SER:CB	2.33	0.58
51:YA:216:LYS:HE2	51:YA:217:LEU:O	2.03	0.58
56:DB:45:PHE:HA	56:DB:48:TYR:HD2	1.69	0.58
57:EB:79:ARG:O	57:EB:83:LYS:HB2	2.03	0.58
61:IB:110:HIS:HB2	61:IB:135:VAL:HG11	1.86	0.58
61:IB:130:PRO:HA	61:IB:136:ARG:HD3	1.86	0.58
83:EC:6894:C:H2'	83:EC:6895:C:C6	2.39	0.58
1:A:91:G:H3'	1:A:92:A:H8	1.68	0.57
1:A:518:A:H1'	1:A:534:A:N6	2.19	0.57
1:A:1089:U:H2'	1:A:1090:C:C6	2.39	0.57
1:A:1607:G:O2'	1:A:1608:U:H5'	2.04	0.57
2:B:279:U:H2'	2:B:280:U:C4'	2.34	0.57
2:B:353:G:N2	2:B:364:G:H2'	2.19	0.57
2:B:610:G:N2	8:H:313:LEU:HD23	2.19	0.57
2:B:1105:A:H2'	2:B:1106:G:C8	2.39	0.57
2:B:1296:C:H2'	2:B:1297:C:C6	2.39	0.57
2:B:1411:C:O5'	36:JA:98:HIS:HB3	2.04	0.57
4:D:31:U:H2'	4:D:32:U:C6	2.39	0.57
6:F:190:ARG:HG2	6:F:190:ARG:O	2.03	0.57
7:G:56:ILE:HD11	7:G:356:LEU:HD13	1.85	0.57
10:J:33:SER:HB2	10:J:86:ALA:HB3	1.85	0.57
10:J:55:LEU:HD12	10:J:64:LEU:HG	1.85	0.57
11:K:155:LYS:HE3	11:K:158:LYS:N	2.11	0.57
14:N:153:ARG:C	14:N:153:ARG:HE	2.08	0.57
15:O:67:VAL:O	15:O:68:HIS:HB3	2.04	0.57
17:Q:169:THR:HG22	17:Q:170:LEU:HD23	1.86	0.57
18:R:81:VAL:O	18:R:85:TRP:HB2	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:V:26:LEU:HA	22:V:29:LEU:HD12	1.86	0.57
22:V:157:PRO:O	22:V:158:HIS:HB2	2.03	0.57
23:W:51:VAL:HG23	23:W:53:LYS:H	1.68	0.57
50:XA:61:ALA:HA	50:XA:64:ILE:CD1	2.34	0.57
51:YA:186:SER:O	51:YA:190:PRO:HG3	2.04	0.57
57:EB:60:ILE:O	57:EB:93:LEU:HB2	2.03	0.57
59:GB:92:LYS:O	59:GB:93:LEU:HD23	2.04	0.57
60:HB:32:HIS:NE2	60:HB:35:ILE:HB	2.19	0.57
61:IB:70:ILE:HD12	61:IB:70:ILE:N	2.19	0.57
1:A:31:C:H5'	73:UB:133:LEU:HD12	1.86	0.57
1:A:344:A:C2'	1:A:345:U:H5'	2.34	0.57
1:A:1032:G:H2'	1:A:1033:C:H6	1.67	0.57
2:B:1161:G:H2'	36:JA:56:GLY:HA3	1.87	0.57
2:B:1259:A:OP1	48:VA:52:LEU:HG	2.03	0.57
2:B:1295:G:H5'	24:X:84:ARG:HH11	1.70	0.57
2:B:1711:C:H2'	2:B:1712:G:O4'	2.03	0.57
2:B:1958:U:H2'	2:B:1959:G:C8	2.38	0.57
2:B:2112:U:OP1	28:BA:44:LYS:HA	2.04	0.57
2:B:2378:C:H2'	2:B:2379:U:C6	2.39	0.57
2:B:3188:G:H2'	2:B:3189:G:C8	2.39	0.57
6:F:5:ILE:HD11	6:F:232:GLY:HA2	1.86	0.57
6:F:68:LYS:HE2	6:F:70:ARG:HD3	1.86	0.57
8:H:178:LEU:HD11	8:H:222:VAL:HG21	1.85	0.57
9:I:33:ARG:HH21	9:I:50:ARG:HH12	1.51	0.57
20:T:108:ILE:HG21	20:T:117:ARG:NH1	2.19	0.57
20:T:141:LEU:O	20:T:145:VAL:HG13	2.05	0.57
24:X:3:HIS:O	24:X:32:SER:HB3	2.04	0.57
25:Y:56:PHE:CE1	25:Y:60:LYS:HE2	2.39	0.57
32:FA:3:SER:HA	32:FA:6:THR:OG1	2.04	0.57
34:HA:25:LEU:HB3	34:HA:87:VAL:HG21	1.85	0.57
35:IA:54:GLU:HA	35:IA:57:GLN:HE21	1.69	0.57
36:JA:9:ILE:HD12	36:JA:9:ILE:N	2.19	0.57
36:JA:21:HIS:ND1	36:JA:24:ARG:HD2	2.20	0.57
38:LA:19:LYS:HE2	38:LA:35:VAL:O	2.03	0.57
51:YA:201:THR:HG22	51:YA:205:PHE:O	2.03	0.57
57:EB:86:GLN:CG	57:EB:87:ASP:H	2.14	0.57
68:PB:15:LEU:HG	68:PB:22:VAL:HB	1.86	0.57
74:VB:57:VAL:HG23	74:VB:73:GLY:HA2	1.86	0.57
82:DC:321:LYS:O	82:DC:325:ARG:HG3	2.04	0.57
82:DC:571:SER:CA	82:DC:720:ALA:HA	2.34	0.57
1:A:638:U:H1'	57:EB:112:ARG:NH1	2.19	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:811:A:N7	57:EB:111:LYS:HB2	2.20	0.57
1:A:1360:A:C2'	1:A:1361:U:H4'	2.33	0.57
1:A:1456:C:O2	1:A:1457:C:H5'	2.04	0.57
2:B:157:A:H3'	2:B:158:G:H8	1.69	0.57
2:B:707:U:H5"	2:B:779:G:H1'	1.86	0.57
2:B:785:G:N3	2:B:785:G:H5"	2.19	0.57
2:B:1310:G:H2'	2:B:1311:G:C8	2.39	0.57
2:B:1547:G:H2'	2:B:1548:C:H6	1.70	0.57
2:B:1869:C:O3'	2:B:3077:A:H4'	2.04	0.57
2:B:1938:U:H1'	23:W:78:TYR:O	2.03	0.57
2:B:2146:C:H2'	2:B:2147:A:C8	2.39	0.57
2:B:2429:G:H2'	2:B:2430:A:H8	1.69	0.57
6:F:41:ILE:HG22	6:F:90:ALA:O	2.05	0.57
6:F:133:TYR:HB3	6:F:168:VAL:HG12	1.86	0.57
7:G:252:ILE:N	7:G:252:ILE:HD12	2.19	0.57
9:I:194:LEU:O	9:I:197:SER:HB3	2.03	0.57
13:M:91:ARG:HD3	13:M:143:GLU:HB2	1.85	0.57
15:O:6:GLN:HG3	15:O:8:PRO:HD3	1.86	0.57
15:O:98:ALA:HA	15:O:156:LYS:HB2	1.85	0.57
18:R:127:LYS:O	18:R:131:VAL:HG23	2.04	0.57
19:S:94:TYR:CZ	19:S:96:ARG:HB2	2.39	0.57
26:Z:99:LYS:CB	26:Z:102:GLU:HB2	2.29	0.57
34:HA:61:MET:SD	34:HA:62:LEU:HG	2.44	0.57
39:MA:55:LEU:HA	39:MA:58:ILE:HD12	1.86	0.57
42:PA:56:ILE:HG21	42:PA:62:ALA:N	2.19	0.57
46:TA:106:PHE:CB	83:EC:6886:A:H1'	2.34	0.57
51:YA:105:PHE:HB3	51:YA:110:LEU:HD11	1.86	0.57
54:BB:160:VAL:HG11	54:BB:169:ILE:HG23	1.85	0.57
54:BB:220:THR:HG22	54:BB:224:ASN:HD22	1.69	0.57
61:IB:54:ILE:HD12	61:IB:54:ILE:N	2.19	0.57
66:NB:86:ALA:HB3	66:NB:116:LEU:HD12	1.86	0.57
67:OB:57:LEU:O	67:OB:61:ILE:HG13	2.04	0.57
68:PB:83:ALA:O	68:PB:89:GLN:HB3	2.04	0.57
69:QB:58:ALA:O	69:QB:108:LEU:HD11	2.03	0.57
72:TB:7:LEU:HB2	72:TB:34:ILE:HG12	1.86	0.57
82:DC:591:GLU:HG2	82:DC:685:ARG:HB3	1.87	0.57
1:A:70:C:H2'	1:A:71:A:C8	2.39	0.57
1:A:121:U:H2'	1:A:122:U:C6	2.39	0.57
1:A:469:C:N3	1:A:470:A:H1'	2.20	0.57
1:A:478:A:H5'	80:BC:33:ARG:NH2	2.19	0.57
1:A:1219:A:O2'	60:HB:48:SER:HA	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1584:G:N7	66:NB:14:LYS:HE2	2.19	0.57
1:A:1609:U:H5"	66:NB:75:VAL:HB	1.87	0.57
1:A:1721:A:H2'	1:A:1722:A:C8	2.39	0.57
1:A:1787:C:H2'	1:A:1788:G:C8	2.38	0.57
2:B:63:A:H4'	19:S:185:ALA:HB1	1.86	0.57
2:B:1458:U:H5"	35:IA:34:LYS:HZ1	1.69	0.57
2:B:2117:A:H3'	2:B:2118:C:C6	2.39	0.57
2:B:2135:U:H2'	2:B:2136:C:C6	2.39	0.57
2:B:2341:A:H2'	2:B:2342:U:C6	2.39	0.57
2:B:2511:A:H2'	2:B:2512:C:C6	2.40	0.57
2:B:3192:U:H2'	2:B:3193:C:C6	2.39	0.57
7:G:58:ARG:HD2	7:G:283:TYR:HE2	1.69	0.57
8:H:29:PRO:CG	8:H:279:HIS:HA	2.33	0.57
9:I:223:PHE:O	9:I:227:LEU:HD13	2.05	0.57
10:J:22:ARG:HB2	10:J:22:ARG:HH11	1.69	0.57
11:K:101:LYS:HE2	11:K:105:LEU:HD21	1.87	0.57
12:L:149:LYS:HB2	12:L:200:LEU:O	2.03	0.57
17:Q:74:GLY:H	17:Q:98:ASP:HB2	1.70	0.57
21:U:150:VAL:O	21:U:150:VAL:HG23	2.03	0.57
35:IA:51:LEU:HD23	35:IA:93:VAL:HB	1.85	0.57
48:VA:130:PRO:HD3	48:VA:148:GLY:O	2.04	0.57
48:VA:144:LYS:HD3	82:DC:203:TYR:CZ	2.39	0.57
49:WA:47:LEU:HD23	49:WA:55:GLY:HA3	1.86	0.57
50:XA:4:PRO:HB3	71:SB:42:GLU:H	1.68	0.57
50:XA:50:VAL:H	67:OB:109:LEU:HD21	1.70	0.57
54:BB:87:MET:HG3	54:BB:123:LEU:HB3	1.86	0.57
55:CB:206:SER:HA	55:CB:211:ILE:HG21	1.85	0.57
56:DB:137:ARG:NE	56:DB:140:ASN:HB2	2.18	0.57
58:FB:42:ARG:O	58:FB:43:ILE:HG13	2.04	0.57
63:KB:92:ILE:CG1	63:KB:122:ILE:HD13	2.30	0.57
65:MB:63:ALA:HB1	65:MB:74:ALA:CB	2.32	0.57
66:NB:20:ALA:HB2	66:NB:84:ALA:HB1	1.86	0.57
66:NB:40:GLU:HA	66:NB:41:PRO:C	2.25	0.57
66:NB:41:PRO:CB	66:NB:44:LEU:HD23	2.33	0.57
72:TB:53:ILE:HD11	77:YB:25:VAL:CG2	2.34	0.57
73:UB:37:ALA:HA	73:UB:41:SER:HB3	1.86	0.57
75:WB:70:LYS:HG3	75:WB:71:ILE:N	2.20	0.57
82:DC:600:ALA:HA	82:DC:605:ILE:HD12	1.87	0.57
1:A:96:G:H5'	1:A:460:A:O2'	2.05	0.57
1:A:195:G:H2'	1:A:196:G:C5'	2.34	0.57
1:A:754:A:C3'	1:A:755:A:H5'	2.17	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1279:C:H2'	1:A:1280:C:H6	1.68	0.57
1:A:1315:U:H5"	1:A:1329:A:H2	1.64	0.57
1:A:1713:G:H2'	1:A:1713:G:N3	2.18	0.57
2:B:277:G:H2'	2:B:278:U:H6	1.65	0.57
2:B:728:G:H5"	22:V:43:PRO:CB	2.34	0.57
2:B:731:U:H2'	2:B:732:C:H6	1.70	0.57
2:B:1127:G:O6	14:N:13:LYS:HE2	2.05	0.57
2:B:1163:A:H2'	2:B:1164:G:C8	2.39	0.57
2:B:1259:A:O2'	2:B:1280:C:H4'	2.05	0.57
2:B:1315:U:H5'	2:B:1317:A:O4'	2.04	0.57
2:B:1830:G:H2'	2:B:1831:U:O4'	2.05	0.57
2:B:2588:U:H2'	2:B:2589:G:C8	2.40	0.57
2:B:2991:A:OP1	7:G:20:LYS:HG3	2.05	0.57
2:B:3082:C:H2'	2:B:3083:G:H8	1.70	0.57
2:B:3187:A:H3'	18:R:8:LYS:HE2	1.87	0.57
2:B:3198:U:H4'	2:B:3199:G:OP2	2.05	0.57
2:B:3375:A:H5"	2:B:3378:C:C5	2.39	0.57
4:D:56:A:H2'	4:D:57:G:H5'	1.85	0.57
4:D:119:U:H2'	4:D:120:C:H6	1.69	0.57
5:E:136:THR:HG23	83:EC:6820:C:N4	2.20	0.57
10:J:158:TYR:OH	18:R:114:ASP:HB3	2.03	0.57
13:M:90:MET:HG2	13:M:181:VAL:CA	2.34	0.57
14:N:87:LEU:HD23	14:N:88:ARG:N	2.20	0.57
17:Q:28:GLN:HE21	19:S:200:TRP:HE3	1.53	0.57
29:CA:108:LEU:HG	29:CA:127:THR:HA	1.87	0.57
35:IA:55:LEU:O	35:IA:59:ILE:HG13	2.04	0.57
38:LA:51:LEU:CG	38:LA:52:GLN:H	2.15	0.57
50:XA:45:VAL:HG12	50:XA:46:HIS:H	1.68	0.57
56:DB:5:ILE:O	56:DB:13:GLN:HA	2.04	0.57
57:EB:135:ILE:HG23	57:EB:153:LEU:O	2.04	0.57
58:FB:61:GLU:HG3	58:FB:62:THR:H	1.70	0.57
58:FB:84:HIS:CE1	58:FB:86:SER:HB2	2.40	0.57
68:PB:33:THR:HG22	68:PB:40:ARG:CA	2.34	0.57
82:DC:7:ASP:HA	82:DC:10:ARG:HB3	1.86	0.57
82:DC:255:LYS:HE2	82:DC:255:LYS:HA	1.85	0.57
82:DC:534:GLY:H	82:DC:537:HIS:HB3	1.70	0.57
83:EC:6941:U:H3'	83:EC:6942:A:H5'	1.84	0.57
1:A:264:G:H5"	1:A:265:A:H5'	1.86	0.57
1:A:385:A:H5"	58:FB:22:ARG:HB3	1.86	0.57
1:A:644:C:H2'	1:A:645:C:C6	2.40	0.57
1:A:866:G:H2'	1:A:867:G:C8	2.39	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1789:G:H5'	1:A:1789:G:H8	1.69	0.57
2:B:1492:G:H1'	2:B:1843:C:H5'	1.86	0.57
2:B:1513:G:C2	2:B:1515:A:H1'	2.39	0.57
2:B:2186:U:C2'	2:B:2187:G:H5'	2.34	0.57
2:B:2787:G:H2'	2:B:2788:C:C6	2.40	0.57
5:E:98:LYS:O	5:E:102:LYS:HB2	2.04	0.57
6:F:100:ASN:O	6:F:166:ILE:HG12	2.04	0.57
8:H:142:VAL:O	8:H:143:GLU:HB2	2.05	0.57
13:M:180:TYR:CE2	44:RA:86:ALA:HA	2.40	0.57
14:N:70:ILE:O	14:N:74:LYS:HB2	2.04	0.57
17:Q:15:ARG:HH11	17:Q:15:ARG:HG2	1.69	0.57
19:S:9:GLU:O	19:S:12:ARG:HD2	2.05	0.57
24:X:155:ARG:HB2	24:X:172:TYR:HB2	1.87	0.57
30:DA:73:VAL:HA	30:DA:80:VAL:HG23	1.86	0.57
40:NA:89:GLU:HA	40:NA:92:ASN:ND2	2.19	0.57
43:QA:32:ASN:C	43:QA:34:THR:H	2.07	0.57
50:XA:89:PHE:HB2	50:XA:202:TYR:HE1	1.69	0.57
53:AB:25:PHE:HE1	53:AB:69:LEU:HD22	1.70	0.57
57:EB:5:GLN:HG2	57:EB:22:GLN:HB2	1.86	0.57
70:RB:28:SER:HB3	70:RB:34:LEU:HB2	1.86	0.57
82:DC:153:PRO:HG2	82:DC:202:VAL:HG13	1.86	0.57
82:DC:437:MET:CA	82:DC:442:VAL:HG12	2.34	0.57
2:B:217:U:O2'	30:DA:102:SER:HB3	2.05	0.57
2:B:301:G:H2'	2:B:302:U:H6	1.69	0.57
2:B:638:C:H2'	2:B:639:G:H8	1.68	0.57
2:B:660:A:H2	2:B:941:G:N3	2.03	0.57
2:B:1107:C:H2'	2:B:1108:U:C6	2.39	0.57
2:B:1238:C:H2'	2:B:1239:C:O4'	2.04	0.57
2:B:1491:A:H2	2:B:1843:C:O4'	1.88	0.57
2:B:1580:A:H1'	2:B:1581:C:C5	2.40	0.57
2:B:1747:G:H5'	42:PA:4:GLU:OE2	2.05	0.57
2:B:2342:U:O2'	2:B:2343:C:H5'	2.04	0.57
2:B:2737:C:H2'	2:B:2738:A:O4'	2.04	0.57
2:B:3262:U:C3'	2:B:3263:G:H5"	2.34	0.57
7:G:26:ARG:HG3	7:G:177:HIS:HD2	1.68	0.57
9:I:40:HIS:CB	9:I:43:LYS:HE2	2.35	0.57
10:J:38:THR:OG1	10:J:90:LYS:HE2	2.05	0.57
14:N:92:HIS:HB3	14:N:94:PHE:CE2	2.40	0.57
16:P:82:ILE:HG13	16:P:83:THR:HG23	1.86	0.57
22:V:124:LEU:HA	22:V:127:LEU:HB3	1.84	0.57
24:X:6:GLU:HG2	24:X:64:ILE:HD12	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DA:54:ASP:O	30:DA:70:ILE:HG13	2.04	0.57
31:EA:10:VAL:HG21	31:EA:87:LEU:HD23	1.87	0.57
35:IA:62:ARG:O	35:IA:66:GLY:HA3	2.05	0.57
37:KA:38:PRO:HA	37:KA:41:ALA:CB	2.34	0.57
50:XA:51:GLY:HA3	67:OB:113:LEU:HD13	1.86	0.57
54:BB:213:SER:C	54:BB:215:ASP:H	2.08	0.57
56:DB:32:ILE:HD12	56:DB:65:GLN:HA	1.86	0.57
57:EB:7:LYS:C	57:EB:9:LEU:H	2.08	0.57
59:GB:134:ILE:HA	59:GB:159:ALA:N	2.20	0.57
63:KB:34:ILE:O	63:KB:38:VAL:HG23	2.03	0.57
66:NB:37:THR:HA	66:NB:49:TYR:OH	2.04	0.57
70:RB:53:LYS:HB2	70:RB:92:ASP:HB2	1.87	0.57
82:DC:158:ASN:CG	82:DC:159:LYS:H	2.08	0.57
1:A:54:C:H2'	1:A:55:A:H8	1.70	0.57
1:A:959:U:H5'	63:KB:15:ALA:O	2.05	0.57
1:A:1024:U:H2'	1:A:1025:A:C5'	2.35	0.57
1:A:1773:C:H2'	1:A:1774:G:C8	2.38	0.57
1:A:1795:U:OP1	76:XB:86:VAL:HG23	2.05	0.57
2:B:311:C:N4	2:B:2778:G:H1	2.02	0.57
2:B:660:A:H5"	8:H:100:PHE:HD1	1.66	0.57
2:B:953:G:H22	32:FA:22:ILE:HG21	1.68	0.57
2:B:2393:G:H5'	7:G:266:ARG:NH2	2.20	0.57
2:B:2884:C:H2'	2:B:2885:C:H6	1.70	0.57
2:B:2884:C:H2'	2:B:2885:C:C6	2.40	0.57
2:B:3135:U:H3'	2:B:3136:G:H8	1.69	0.57
3:C:20:U:H2'	3:C:21:C:O2	2.05	0.57
3:C:84:C:H6	3:C:84:C:OP2	1.87	0.57
4:D:69:C:H2'	4:D:70:U:C6	2.40	0.57
6:F:41:ILE:HD12	6:F:63:PHE:CE2	2.39	0.57
18:R:13:ARG:HB3	18:R:65:LEU:HD22	1.85	0.57
21:U:48:LEU:HD22	21:U:88:VAL:HG22	1.86	0.57
23:W:127:SER:HA	23:W:132:PHE:CE2	2.40	0.57
24:X:15:PRO:HG3	24:X:22:PRO:CD	2.34	0.57
24:X:50:LYS:O	24:X:51:VAL:HG13	2.04	0.57
29:CA:115:ARG:HG2	29:CA:121:LYS:N	2.20	0.57
32:FA:14:HIS:O	32:FA:15:VAL:HB	2.04	0.57
32:FA:74:ASN:HA	32:FA:113:LEU:O	2.05	0.57
36:JA:20:HIS:CB	36:JA:50:ILE:HD11	2.30	0.57
39:MA:51:ILE:HA	39:MA:54:VAL:CG2	2.34	0.57
49:WA:176:LYS:HA	49:WA:199:ILE:HD11	1.87	0.57
50:XA:20:ALA:HA	50:XA:168:HIS:HB2	1.85	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:YA:32:ILE:CG2	51:YA:43:VAL:HB	2.35	0.57
55:CB:42:LEU:HB2	55:CB:47:SER:HA	1.85	0.57
59:GB:125:ALA:HA	59:GB:128:LEU:HD12	1.85	0.57
65:MB:111:MET:HG2	68:PB:119:ILE:HG23	1.85	0.57
68:PB:17:LEU:HD13	68:PB:66:LEU:HB3	1.86	0.57
68:PB:36:LYS:HB3	68:PB:105:VAL:HG11	1.87	0.57
71:SB:87:ARG:N	77:YB:5:GLN:HE22	2.03	0.57
73:UB:86:PHE:HB2	73:UB:120:VAL:HG11	1.86	0.57
78:ZB:32:PHE:CE2	78:ZB:38:ARG:HB3	2.40	0.57
78:ZB:43:ASN:ND2	78:ZB:63:ALA:HB3	2.20	0.57
80:BC:39:LEU:O	80:BC:43:ARG:HB3	2.04	0.57
82:DC:3:ALA:O	82:DC:46:ILE:O	2.22	0.57
82:DC:32:LYS:HB3	84:DC:901:GDP:O2B	2.05	0.57
82:DC:45:ILE:HD12	82:DC:438:MET:CG	2.33	0.57
1:A:161:U:OP2	56:DB:85:ARG:HB3	2.04	0.57
1:A:525:A:H4'	74:VB:89:TYR:HB2	1.86	0.57
1:A:1109:G:O2'	1:A:1110:G:H5'	2.05	0.57
2:B:5:G:H2'	2:B:6:A:O4'	2.05	0.57
2:B:245:U:H2'	2:B:246:U:C6	2.40	0.57
2:B:344:A:H2'	2:B:345:G:H8	1.68	0.57
2:B:360:G:H5"	41:OA:26:SER:HA	1.85	0.57
2:B:858:A:H2'	2:B:859:G:O4'	2.05	0.57
2:B:993:G:N3	2:B:2637:A:H2'	2.19	0.57
2:B:1095:U:H5'	2:B:1095:U:H6	1.70	0.57
2:B:1234:G:H2'	2:B:1235:U:H5	1.69	0.57
2:B:1340:G:H2'	2:B:1341:U:C6	2.39	0.57
2:B:1439:U:H4'	8:H:87:GLN:HE21	1.69	0.57
2:B:2682:C:H4'	15:O:68:HIS:CD2	2.39	0.57
2:B:3034:C:H42	13:M:120:ASP:HA	1.68	0.57
3:C:28:C:H4'	17:Q:26:PHE:CD2	2.40	0.57
3:C:41:A:C5'	41:OA:67:LEU:HG	2.35	0.57
3:C:57:C:H4'	3:C:63:G:C8	2.40	0.57
3:C:133:G:H2'	3:C:134:G:O4'	2.04	0.57
8:H:33:ASP:OD1	22:V:23:ASN:HA	2.05	0.57
8:H:150:LEU:HD22	8:H:247:PHE:CE2	2.40	0.57
10:J:166:LYS:HE2	37:KA:4:SER:OG	2.05	0.57
14:N:52:LEU:HD12	14:N:152:LEU:HD22	1.87	0.57
17:Q:42:ARG:O	17:Q:46:ILE:HG12	2.05	0.57
21:U:24:VAL:CG1	21:U:87:SER:HA	2.35	0.57
25:Y:44:ALA:HB2	25:Y:53:PRO:HG2	1.87	0.57
26:Z:37:LEU:HB2	26:Z:56:VAL:HG11	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DA:37:LYS:HD3	30:DA:37:LYS:N	2.16	0.57
38:LA:74:ARG:HH12	38:LA:85:VAL:HG11	1.70	0.57
42:PA:17:ARG:O	42:PA:18:ALA:HB3	2.04	0.57
49:WA:152:SER:HB2	49:WA:172:ALA:O	2.04	0.57
51:YA:30:PHE:CD1	51:YA:96:LEU:HD23	2.40	0.57
55:CB:200:ASN:HB3	55:CB:207:THR:OG1	2.04	0.57
82:DC:489:VAL:CG1	82:DC:538:LEU:HD22	2.35	0.57
1:A:397:A:H4'	58:FB:51:GLY:N	2.20	0.57
1:A:1117:U:H2'	1:A:1118:G:H8	1.69	0.57
1:A:1484:G:H1'	1:A:1606:C:O2'	2.04	0.57
1:A:1547:A:H1'	68:PB:87:ASN:O	2.05	0.57
2:B:415:G:H2'	2:B:416:A:H8	1.69	0.57
2:B:744:A:H2'	2:B:745:C:O4'	2.04	0.57
2:B:891:G:H2'	2:B:892:U:O4'	2.05	0.57
2:B:1201:C:N4	2:B:2857:C:H5"	2.19	0.57
2:B:1217:A:H2'	2:B:1218:U:C6	2.39	0.57
2:B:1259:A:C8	48:VA:53:MET:HG3	2.40	0.57
2:B:1378:U:H2'	2:B:1379:G:C8	2.39	0.57
2:B:2457:G:H1	2:B:2461:A:N6	2.02	0.57
3:C:28:C:O4'	8:H:49:ALA:HB3	2.04	0.57
7:G:226:PHE:CE1	7:G:268:GLY:HA2	2.40	0.57
7:G:243:HIS:ND1	7:G:244:ARG:HG2	2.20	0.57
8:H:123:ALA:HB2	8:H:262:TRP:CZ3	2.39	0.57
11:K:53:LYS:HA	11:K:56:GLU:OE1	2.05	0.57
14:N:52:LEU:HA	14:N:165:ILE:HG22	1.87	0.57
20:T:14:HIS:HA	20:T:123:ALA:C	2.26	0.57
26:Z:43:VAL:O	26:Z:45:GLY:N	2.37	0.57
27:AA:83:LYS:HE2	27:AA:83:LYS:HA	1.86	0.57
42:PA:20:VAL:HG13	42:PA:46:ARG:O	2.05	0.57
48:VA:25:LEU:HG	48:VA:26:PHE:N	2.20	0.57
49:WA:210:LEU:HD12	49:WA:245:PHE:HE2	1.70	0.57
51:YA:64:ARG:HE	64:LB:36:LYS:HD2	1.70	0.57
52:ZA:170:ILE:HD12	52:ZA:170:ILE:N	2.20	0.57
54:BB:67:GLN:NE2	74:VB:85:PHE:HZ	2.03	0.57
58:FB:55:TYR:HB2	58:FB:176:SER:C	2.25	0.57
75:WB:41:ILE:HG13	75:WB:42:LEU:N	2.20	0.57
76:XB:51:ARG:HD3	78:ZB:60:GLU:OE2	2.04	0.57
82:DC:271:ARG:HD2	82:DC:273:PHE:HB3	1.86	0.57
82:DC:412:ARG:HB3	82:DC:426:LEU:HD11	1.87	0.57
82:DC:664:VAL:O	82:DC:668:GLN:HG2	2.05	0.57
83:EC:6923:C:H2'	83:EC:6924:G:C8	2.40	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:980:G:H2'	1:A:981:U:H5'	1.86	0.56
1:A:1250:U:H2'	1:A:1251:U:H5'	1.86	0.56
2:B:20:A:H2'	2:B:21:G:C8	2.39	0.56
2:B:759:U:C2'	2:B:760:G:H5'	2.34	0.56
2:B:1044:U:C3'	2:B:1045:C:H5"	2.35	0.56
2:B:1443:G:H2'	2:B:1444:G:C8	2.40	0.56
2:B:2277:C:H2'	2:B:2278:C:C6	2.40	0.56
4:D:18:C:H2'	4:D:19:C:C6	2.40	0.56
4:D:55:A:H2'	4:D:56:A:H8	1.70	0.56
6:F:57:PRO:HG3	47:UA:53:GLY:O	2.05	0.56
7:G:198:HIS:HA	7:G:201:LYS:HB2	1.87	0.56
8:H:326:ARG:HG2	8:H:327:LEU:HD13	1.87	0.56
18:R:115:PHE:O	18:R:119:GLN:HB2	2.03	0.56
18:R:116:GLU:O	18:R:120:VAL:HG23	2.05	0.56
21:U:158:ALA:HB1	21:U:159:LYS:HD3	1.86	0.56
22:V:122:ILE:HD13	22:V:130:ARG:HD3	1.85	0.56
36:JA:54:LYS:HG2	36:JA:57:TYR:CD2	2.40	0.56
49:WA:176:LYS:CB	49:WA:195:HIS:HB2	2.35	0.56
49:WA:255:ALA:HB2	49:WA:260:ILE:HG23	1.86	0.56
50:XA:12:GLU:HG3	50:XA:13:ASP:H	1.70	0.56
51:YA:160:HIS:O	51:YA:164:ILE:HG13	2.05	0.56
55:CB:134:VAL:O	55:CB:138:THR:HG23	2.05	0.56
57:EB:9:LEU:HD22	57:EB:10:SER:H	1.70	0.56
58:FB:83:TYR:OH	58:FB:195:ARG:HD2	2.04	0.56
61:IB:74:THR:O	61:IB:86:ILE:HA	2.04	0.56
66:NB:35:PRO:HG2	66:NB:37:THR:OG1	2.05	0.56
67:OB:43:SER:OG	67:OB:46:LEU:HB2	2.05	0.56
69:QB:14:PHE:CE1	69:QB:135:ILE:HD11	2.40	0.56
70:RB:72:ASN:ND2	70:RB:73:GLY:H	2.03	0.56
71:SB:87:ARG:H	77:YB:5:GLN:HE22	1.51	0.56
75:WB:59:TYR:HD2	75:WB:60:VAL:N	2.02	0.56
82:DC:67:GLY:HA3	84:DC:901:GDP:O2A	2.05	0.56
83:EC:6917:C:H2'	83:EC:6918:A:H5'	1.86	0.56
1:A:64:U:H2'	1:A:65:A:H5"	1.85	0.56
1:A:155:U:H4'	56:DB:59:GLN:H	1.71	0.56
1:A:285:G:H2'	1:A:286:C:C6	2.41	0.56
1:A:296:U:H2'	1:A:297:U:C6	2.40	0.56
1:A:682:C:C2'	1:A:683:C:H5'	2.35	0.56
1:A:961:U:H2'	1:A:962:C:C6	2.39	0.56
1:A:1214:U:H1'	79:AC:7:TRP:HZ2	1.69	0.56
1:A:1214:U:H1'	79:AC:7:TRP:CZ2	2.40	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1280:C:H2'	1:A:1281:G:C8	2.40	0.56
2:B:294:U:H5"	40:NA:53:TYR:CE2	2.39	0.56
2:B:572:A:H2'	2:B:573:C:O4'	2.05	0.56
2:B:628:A:H2'	2:B:629:U:O4'	2.05	0.56
2:B:1256:G:H4'	16:P:127:SER:CB	2.33	0.56
2:B:1361:U:H2'	2:B:1362:G:H8	1.69	0.56
2:B:1768:U:C2'	2:B:1769:G:H5"	2.35	0.56
2:B:3119:U:H2'	2:B:3121:U:OP1	2.05	0.56
2:B:3174:A:H61	37:KA:54:ARG:HH21	1.52	0.56
7:G:230:THR:HG21	7:G:247:ARG:HG2	1.87	0.56
7:G:311:PHE:HB3	7:G:314:TYR:HB3	1.85	0.56
8:H:44:LYS:O	8:H:47:ARG:HB2	2.04	0.56
9:I:245:GLU:HA	9:I:248:ARG:HB2	1.87	0.56
15:O:18:VAL:HB	15:O:128:TYR:H	1.69	0.56
17:Q:119:TYR:CE1	39:MA:118:ILE:HD11	2.39	0.56
23:W:17:VAL:HG12	23:W:18:GLY:N	2.20	0.56
24:X:28:ARG:HH12	24:X:64:ILE:HG21	1.69	0.56
31:EA:16:GLY:HA2	38:LA:74:ARG:CG	2.27	0.56
31:EA:73:LYS:CE	31:EA:74:VAL:H	2.18	0.56
47:UA:17:ARG:HG3	47:UA:18:TYR:HD1	1.70	0.56
49:WA:216:LYS:HA	49:WA:239:GLU:HG3	1.88	0.56
50:XA:182:LEU:HB3	50:XA:186:GLY:HA3	1.87	0.56
52:ZA:142:GLY:H	52:ZA:154:LEU:HA	1.69	0.56
52:ZA:180:ALA:HB2	52:ZA:198:THR:HG21	1.86	0.56
53:AB:37:VAL:HG12	53:AB:50:ILE:HA	1.87	0.56
65:MB:67:ALA:HB1	65:MB:68:PRO:HD2	1.85	0.56
66:NB:10:PHE:HA	66:NB:18:ALA:O	2.05	0.56
69:QB:10:ALA:O	69:QB:14:PHE:HB2	2.05	0.56
70:RB:83:GLU:OE1	79:AC:55:PHE:HB3	2.05	0.56
71:SB:38:LYS:O	71:SB:46:ILE:HD12	2.05	0.56
73:UB:23:ARG:HB3	73:UB:29:TYR:CE2	2.39	0.56
76:XB:37:LYS:HA	76:XB:71:LEU:O	2.05	0.56
76:XB:41:ILE:HG22	76:XB:68:TYR:HA	1.86	0.56
1:A:1116:A:O2'	1:A:1652:C:H4'	2.05	0.56
1:A:1202:A:H61	68:PB:137:HIS:CE1	2.23	0.56
1:A:1489:U:H5'	1:A:1494:C:C2	2.40	0.56
1:A:1565:C:O2	68:PB:87:ASN:HB3	2.05	0.56
1:A:1632:C:O2	1:A:1632:C:H2'	2.04	0.56
2:B:671:U:H2'	2:B:672:A:C8	2.35	0.56
2:B:707:U:H4'	2:B:779:G:N3	2.20	0.56
2:B:993:G:O2'	2:B:2637:A:H1'	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1298:C:H2'	2:B:1299:U:H5'	1.88	0.56
2:B:1321:G:O2'	24:X:111:ALA:HB1	2.06	0.56
2:B:1465:A:H2'	2:B:1466:G:O4'	2.05	0.56
2:B:1655:G:H5"	38:LA:58:ARG:HH12	1.69	0.56
2:B:1947:G:H1	2:B:2101:C:H42	1.53	0.56
2:B:2130:G:O4'	2:B:2144:A:H4'	2.06	0.56
2:B:2369:G:C6	2:B:2370:G:C6	2.93	0.56
2:B:2448:G:H1	2:B:2500:A:H1'	1.71	0.56
2:B:2880:U:H2'	2:B:2881:C:C6	2.41	0.56
2:B:3335:A:C8	2:B:3335:A:H5'	2.40	0.56
3:C:66:A:OP1	39:MA:6:ALA:HB3	2.04	0.56
7:G:114:VAL:HG13	7:G:163:HIS:CG	2.40	0.56
7:G:246:LEU:O	7:G:246:LEU:HD12	2.06	0.56
7:G:317:ILE:HG22	7:G:317:ILE:O	2.04	0.56
11:K:131:GLU:OE2	11:K:230:GLY:HA2	2.04	0.56
12:L:57:ARG:O	12:L:61:GLN:HG3	2.05	0.56
12:L:75:ILE:HG23	12:L:78:PHE:CE1	2.41	0.56
12:L:226:TYR:C	12:L:228:GLU:H	2.08	0.56
14:N:12:GLN:HG2	14:N:128:ARG:NH2	2.21	0.56
16:P:62:LEU:HD23	16:P:73:VAL:CG1	2.35	0.56
17:Q:115:ARG:HA	17:Q:118:GLU:OE2	2.05	0.56
19:S:114:ARG:HH21	19:S:158:HIS:HD2	1.52	0.56
21:U:163:LYS:NZ	21:U:165:VAL:HB	2.20	0.56
23:W:22:VAL:N	23:W:53:LYS:HD2	2.20	0.56
24:X:77:VAL:HB	24:X:92:LYS:HB2	1.87	0.56
27:AA:59:MET:HE1	27:AA:75:PRO:HG3	1.86	0.56
34:HA:52:ARG:O	34:HA:56:LEU:HG	2.06	0.56
36:JA:25:TYR:HB3	36:JA:27:ARG:HG2	1.87	0.56
37:KA:16:TYR:HB3	37:KA:24:ASN:O	2.04	0.56
37:KA:52:VAL:HG21	37:KA:99:ARG:NE	2.20	0.56
48:VA:62:ALA:HB1	48:VA:77:LEU:HG	1.87	0.56
48:VA:104:ARG:HG3	48:VA:184:GLY:O	2.05	0.56
50:XA:59:LEU:HD11	71:SB:79:LEU:HG	1.88	0.56
52:ZA:72:LEU:HB3	52:ZA:73:LEU:HD12	1.85	0.56
54:BB:121:TYR:CD2	54:BB:161:LYS:HG3	2.40	0.56
55:CB:62:VAL:HG13	55:CB:89:ILE:CG1	2.35	0.56
55:CB:216:GLU:O	55:CB:219:ARG:HG2	2.05	0.56
56:DB:121:LEU:HB2	56:DB:124:LEU:HB2	1.88	0.56
57:EB:173:TYR:CD2	57:EB:181:ILE:HB	2.39	0.56
58:FB:151:LYS:O	58:FB:152:ILE:HD12	2.05	0.56
59:GB:53:ARG:O	59:GB:57:ARG:HG3	2.04	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
66:NB:27:GLY:HA2	66:NB:60:PHE:O	2.05	0.56
70:RB:83:GLU:HG3	79:AC:55:PHE:HB2	1.88	0.56
75:WB:92:ILE:HG13	75:WB:100:ILE:HG23	1.88	0.56
78:ZB:50:GLU:O	78:ZB:51:ASN:HB2	2.04	0.56
79:AC:21:CYS:SG	79:AC:38:ILE:HG23	2.44	0.56
82:DC:169:VAL:HB	82:DC:174:LEU:HB2	1.87	0.56
82:DC:380:LEU:CD2	82:DC:456:LEU:HD11	2.36	0.56
82:DC:585:ARG:O	82:DC:586:ILE:HD12	2.06	0.56
83:EC:6923:C:O2	83:EC:6930:G:N2	2.37	0.56
1:A:39:A:H5"	59:GB:3:ARG:HH12	1.70	0.56
1:A:63:G:C2'	1:A:64:U:H5'	2.35	0.56
1:A:189:C:C3'	1:A:190:C:H5"	2.36	0.56
1:A:1097:U:C6	52:ZA:168:ARG:HD2	2.40	0.56
1:A:1165:G:H2'	1:A:1166:A:H8	1.70	0.56
1:A:1244:A:H1'	79:AC:7:TRP:CE3	2.40	0.56
1:A:1485:C:N3	1:A:1486:G:H1'	2.21	0.56
1:A:1494:C:H2'	1:A:1495:C:C6	2.40	0.56
2:B:41:G:H3'	2:B:42:C:H6	1.71	0.56
2:B:204:A:H2'	2:B:205:C:H5'	1.86	0.56
2:B:642:U:OP1	32:FA:22:ILE:HG23	2.05	0.56
2:B:1551:C:H2'	2:B:1552:G:O4'	2.04	0.56
2:B:2735:U:H5"	25:Y:51:GLY:H	1.71	0.56
2:B:3062:G:H2'	2:B:3063:C:O4'	2.05	0.56
2:B:3066:U:H2'	2:B:3067:C:C6	2.40	0.56
4:D:58:C:O2'	4:D:59:U:H5'	2.06	0.56
6:F:83:HIS:CE1	6:F:86:GLN:HA	2.40	0.56
6:F:182:ALA:O	6:F:185:ALA:HB3	2.05	0.56
9:I:108:ARG:O	9:I:111:GLN:HB3	2.05	0.56
10:J:31:ARG:HG3	10:J:33:SER:OG	2.05	0.56
20:T:175:THR:HA	20:T:178:VAL:HB	1.88	0.56
21:U:169:THR:HG23	37:KA:60:ARG:NH1	2.20	0.56
24:X:105:THR:O	24:X:109:ASP:HB2	2.06	0.56
30:DA:17:LYS:HG2	30:DA:21:THR:HG21	1.86	0.56
30:DA:22:ALA:HB1	30:DA:26:GLN:CB	2.35	0.56
31:EA:22:LYS:HD2	31:EA:130:PHE:O	2.05	0.56
35:IA:55:LEU:HD13	35:IA:95:PRO:HB3	1.87	0.56
51:YA:205:PHE:CD1	51:YA:207:LEU:HD12	2.40	0.56
54:BB:191:ARG:HD2	54:BB:218:PHE:CE2	2.40	0.56
61:IB:74:THR:H	61:IB:87:ARG:N	2.02	0.56
69:QB:27:LYS:HB3	69:QB:27:LYS:NZ	2.21	0.56
71:SB:23:ILE:H	71:SB:23:ILE:HD12	1.69	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
73:UB:52:ILE:C	73:UB:74:VAL:HG13	2.26	0.56
82:DC:699:DDE:HAD1	83:EC:6952:U:C4'	2.18	0.56
82:DC:747:LEU:HD12	82:DC:752:GLY:HA3	1.86	0.56
1:A:337:G:H3'	61:IB:133:LYS:HB2	1.88	0.56
1:A:802:G:H21	72:TB:107:SER:HB3	1.69	0.56
1:A:1585:U:H3	1:A:1611:A:H2	1.53	0.56
2:B:74:G:OP1	17:Q:105:ASN:HB2	2.05	0.56
2:B:272:G:H2'	2:B:273:A:H8	1.69	0.56
2:B:595:G:H1	2:B:609:G:H5"	1.70	0.56
2:B:1147:G:OP1	36:JA:47:ARG:HD3	2.05	0.56
2:B:1289:G:H2'	2:B:1290:A:H8	1.71	0.56
2:B:1768:U:H3'	2:B:1769:G:H5"	1.86	0.56
2:B:1916:U:H2'	2:B:1917:C:H6	1.71	0.56
2:B:2595:A:H2'	2:B:2596:U:H5'	1.87	0.56
2:B:2609:A:H2'	2:B:2610:G:H8	1.70	0.56
2:B:2638:C:H2'	2:B:2639:G:O4'	2.06	0.56
2:B:2857:C:H2'	2:B:2858:U:C6	2.41	0.56
2:B:3137:C:H6	2:B:3137:C:O5'	1.89	0.56
2:B:3217:C:H6	2:B:3266:G:H21	1.52	0.56
2:B:3369:G:H5"	28:BA:56:ARG:NH2	2.14	0.56
3:C:65:A:H2'	3:C:66:A:O4'	2.05	0.56
7:G:188:ILE:O	7:G:191:LYS:HB2	2.06	0.56
9:I:33:ARG:NH2	9:I:50:ARG:NH1	2.54	0.56
9:I:64:ILE:HD12	9:I:76:ALA:O	2.06	0.56
13:M:106:LYS:HB3	13:M:111:PHE:CZ	2.41	0.56
17:Q:110:ASP:O	17:Q:114:GLN:HB3	2.05	0.56
19:S:116:LEU:HB3	19:S:133:ILE:O	2.05	0.56
20:T:74:ARG:HH11	20:T:74:ARG:HG2	1.69	0.56
21:U:119:VAL:HG23	21:U:145:HIS:C	2.25	0.56
24:X:3:HIS:CE1	24:X:100:VAL:HG23	2.41	0.56
24:X:51:VAL:HG12	24:X:55:SER:OG	2.06	0.56
28:BA:8:PHE:CE1	28:BA:46:PRO:HB3	2.41	0.56
35:IA:18:LYS:HE3	35:IA:19:ARG:HD2	1.86	0.56
35:IA:70:ARG:HG3	35:IA:70:ARG:HH21	1.70	0.56
36:JA:78:ASN:HA	36:JA:108:ILE:HD11	1.86	0.56
46:TA:77:CYS:O	46:TA:78:LYS:HG2	2.05	0.56
47:UA:73:THR:HG23	47:UA:75:ALA:H	1.71	0.56
53:AB:113:LEU:HD23	53:AB:114:ALA:H	1.70	0.56
54:BB:57:ASN:O	54:BB:61:VAL:HG23	2.06	0.56
55:CB:43:PHE:HD1	55:CB:46:TRP:O	1.88	0.56
56:DB:78:THR:HG22	56:DB:92:ARG:HG2	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:DB:222:GLU:O	56:DB:225:GLU:HG2	2.06	0.56
57:EB:5:GLN:HG2	57:EB:18:LEU:O	2.05	0.56
61:IB:38:ALA:HB3	61:IB:42:PHE:HB2	1.86	0.56
68:PB:63:GLN:O	68:PB:67:GLU:HG3	2.04	0.56
70:RB:58:LEU:HD12	70:RB:88:LYS:HG2	1.87	0.56
72:TB:34:ILE:O	72:TB:38:LEU:HG	2.05	0.56
82:DC:244:LEU:HD13	82:DC:277:ILE:HD11	1.86	0.56
1:A:213:A:H2'	1:A:214:G:O4'	2.06	0.56
1:A:872:G:C2	1:A:873:U:H1'	2.41	0.56
1:A:1329:A:H2'	1:A:1330:G:O4'	2.05	0.56
1:A:1454:G:H5'	65:MB:81:ARG:NE	2.21	0.56
1:A:1752:U:H2'	1:A:1753:A:C8	2.41	0.56
2:B:215:G:H2'	2:B:216:G:C8	2.41	0.56
2:B:290:G:H5"	19:S:98:LEU:CD2	2.35	0.56
2:B:432:G:H2'	2:B:433:A:C8	2.41	0.56
2:B:634:C:O2'	2:B:635:G:H5'	2.06	0.56
2:B:655:C:H2'	2:B:656:A:H8	1.71	0.56
2:B:1326:A:H2'	2:B:1327:C:C6	2.41	0.56
2:B:1396:C:H2'	2:B:1397:C:H6	1.70	0.56
2:B:2909:U:C2'	2:B:2910:A:H5"	2.36	0.56
7:G:45:SER:HA	7:G:339:ARG:HA	1.88	0.56
9:I:94:ASN:ND2	9:I:97:ALA:HB2	2.21	0.56
12:L:82:LEU:HD21	12:L:90:THR:OG1	2.06	0.56
15:O:18:VAL:O	15:O:127:PHE:HA	2.06	0.56
23:W:92:GLN:CG	23:W:96:ILE:HD11	2.35	0.56
25:Y:11:THR:HA	25:Y:14:MET:CG	2.36	0.56
25:Y:56:PHE:HE1	25:Y:60:LYS:HE2	1.70	0.56
26:Z:17:VAL:HG22	26:Z:103:TYR:HB2	1.86	0.56
30:DA:59:VAL:HG12	30:DA:103:LYS:C	2.25	0.56
32:FA:149:ALA:O	40:NA:15:LYS:HB2	2.06	0.56
34:HA:77:LEU:HD23	34:HA:88:GLY:HA2	1.87	0.56
36:JA:85:LEU:HD13	36:JA:92:TYR:HB3	1.88	0.56
36:JA:112:ALA:HA	36:JA:117:ILE:HD12	1.88	0.56
37:KA:51:TYR:CE2	37:KA:53:TYR:HB3	2.41	0.56
47:UA:55:TRP:HH2	47:UA:69:TYR:O	1.88	0.56
54:BB:49:ARG:HE	54:BB:50:ASN:ND2	2.03	0.56
54:BB:51:ARG:HH21	54:BB:111:VAL:HG23	1.71	0.56
59:GB:64:GLU:HA	59:GB:69:ARG:HD2	1.86	0.56
68:PB:104:ASN:O	68:PB:108:LYS:HB2	2.06	0.56
71:SB:21:ASN:HB2	72:TB:67:GLY:HA3	1.87	0.56
82:DC:77:LEU:O	82:DC:99:LEU:HD12	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:205:ALA:HB2	82:DC:245:TRP:HB3	1.87	0.56
82:DC:382:VAL:HG13	82:DC:397:PHE:N	2.20	0.56
82:DC:629:ASP:CB	82:DC:647:ILE:HG21	2.35	0.56
82:DC:823:ARG:HB3	82:DC:823:ARG:CZ	2.36	0.56
1:A:81:G:H2'	1:A:82:U:C6	2.41	0.56
1:A:167:U:H1'	56:DB:133:LEU:HD22	1.88	0.56
1:A:328:A:H2'	1:A:329:G:C8	2.40	0.56
1:A:1280:C:H2'	1:A:1281:G:H8	1.70	0.56
1:A:1315:U:H5"	1:A:1329:A:N3	2.21	0.56
1:A:1344:A:H2'	1:A:1345:A:C8	2.41	0.56
1:A:1766:A:H61	76:XB:80:HIS:HA	1.70	0.56
2:B:11:A:H61	3:C:147:U:H3	1.52	0.56
2:B:74:G:H5"	17:Q:104:ARG:HE	1.69	0.56
2:B:360:G:H2'	2:B:361:A:C8	2.40	0.56
2:B:589:A:H62	2:B:610:G:H1'	1.71	0.56
2:B:692:A:H2'	2:B:693:A:O4'	2.05	0.56
2:B:812:G:H2'	2:B:813:G:H8	1.71	0.56
2:B:878:G:H1'	2:B:880:G:N2	2.14	0.56
2:B:1188:U:O2'	2:B:1189:C:H5'	2.05	0.56
2:B:1301:A:H4'	2:B:1302:A:O5'	2.06	0.56
2:B:1655:G:H4'	38:LA:59:PRO:HG2	1.88	0.56
2:B:1849:C:H5'	2:B:1849:C:H6	1.70	0.56
2:B:1922:A:H2'	2:B:1923:C:H5'	1.88	0.56
2:B:2726:C:HO2'	2:B:2729:U:H5	1.53	0.56
2:B:2732:G:H2'	2:B:2733:A:C8	2.40	0.56
2:B:3092:C:H5'	2:B:3093:C:OP1	2.05	0.56
2:B:3187:A:H4'	13:M:23:ARG:NH1	2.21	0.56
2:B:3311:C:C2'	2:B:3312:U:H5'	2.36	0.56
3:C:41:A:H5'	41:OA:67:LEU:HG	1.87	0.56
7:G:44:THR:O	7:G:339:ARG:HA	2.06	0.56
7:G:252:ILE:HG21	7:G:260:VAL:HG13	1.87	0.56
8:H:359:LEU:HG	24:X:8:GLN:NE2	2.21	0.56
9:I:80:SER:HA	9:I:83:LEU:HG	1.88	0.56
12:L:121:SER:C	12:L:123:GLN:H	2.09	0.56
13:M:90:MET:HE2	13:M:181:VAL:N	2.21	0.56
15:O:91:LEU:O	15:O:92:ARG:HG2	2.05	0.56
19:S:58:GLY:HA3	19:S:142:ILE:HG12	1.87	0.56
20:T:149:TYR:HD1	20:T:152:VAL:HG21	1.71	0.56
37:KA:50:ALA:HB2	37:KA:68:TRP:CE2	2.41	0.56
37:KA:85:PHE:CE2	37:KA:89:LEU:HD11	2.40	0.56
48:VA:12:PHE:HE1	48:VA:57:THR:HG22	1.71	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:BB:161:LYS:HD3	54:BB:171:ASP:HB2	1.87	0.56
55:CB:117:THR:O	55:CB:121:ILE:HG13	2.04	0.56
56:DB:74:LYS:HE2	56:DB:96:SER:OG	2.05	0.56
58:FB:5:ARG:HH11	58:FB:5:ARG:HG3	1.70	0.56
68:PB:121:ALA:O	68:PB:125:ILE:HG13	2.04	0.56
70:RB:56:VAL:O	70:RB:89:ARG:HG3	2.06	0.56
74:VB:21:LYS:HB2	74:VB:75:VAL:CG1	2.35	0.56
75:WB:70:LYS:HB3	75:WB:71:ILE:HD12	1.87	0.56
82:DC:131:THR:HG22	82:DC:177:THR:HG22	1.88	0.56
82:DC:635:CYS:SG	82:DC:664:VAL:HG22	2.46	0.56
82:DC:739:ALA:HA	82:DC:788:THR:HG21	1.88	0.56
1:A:75:U:C3'	1:A:76:A:H5"	2.34	0.56
1:A:522:U:H5"	74:VB:37:LYS:NZ	2.20	0.56
1:A:606:A:C8	1:A:608:U:H2'	2.40	0.56
1:A:1057:U:H4'	1:A:1058:U:C3'	2.35	0.56
1:A:1213:G:N2	79:AC:7:TRP:HE1	2.04	0.56
1:A:1291:G:H21	1:A:1324:G:H22	1.52	0.56
1:A:1504:G:H5"	69:QB:97:SER:HB2	1.88	0.56
2:B:29:C:O2	19:S:162:ARG:HG2	2.06	0.56
2:B:289:A:H2'	2:B:290:G:H8	1.71	0.56
2:B:400:G:H4'	2:B:403:C:O2	2.06	0.56
2:B:911:C:H5"	6:F:15:ILE:HD13	1.86	0.56
2:B:1348:U:C4'	2:B:1349:G:H5"	2.34	0.56
2:B:1497:C:H6	2:B:1497:C:O5'	1.89	0.56
2:B:1897:G:H1'	27:AA:83:LYS:HD2	1.88	0.56
2:B:2352:A:O5'	2:B:2352:A:H8	1.89	0.56
2:B:2616:C:H3'	2:B:2617:U:O2	2.06	0.56
7:G:67:PHE:CE1	27:AA:89:ASP:HB3	2.41	0.56
8:H:181:VAL:O	8:H:182:LEU:HB3	2.06	0.56
10:J:54:TYR:CZ	10:J:63:LEU:HD22	2.40	0.56
13:M:36:LYS:HD3	13:M:74:LEU:HD13	1.88	0.56
13:M:71:VAL:HA	13:M:74:LEU:HB2	1.88	0.56
20:T:126:VAL:HG22	20:T:126:VAL:O	2.05	0.56
23:W:42:ARG:O	23:W:45:VAL:HG12	2.06	0.56
24:X:44:PHE:CD1	25:Y:153:PRO:HB3	2.40	0.56
24:X:69:PRO:HA	24:X:73:LYS:NZ	2.20	0.56
26:Z:33:TYR:HE2	26:Z:63:VAL:HG11	1.70	0.56
34:HA:43:ILE:CG2	34:HA:70:PHE:HB2	2.36	0.56
37:KA:51:TYR:CA	37:KA:98:VAL:HG23	2.36	0.56
46:TA:64:THR:HB	46:TA:89:LYS:HZ3	1.71	0.56
55:CB:121:ILE:HD11	55:CB:198:LEU:CD1	2.36	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
61:IB:80:MET:HB3	61:IB:83:THR:HG23	1.88	0.56
65:MB:58:LYS:HA	65:MB:61:ARG:HH21	1.70	0.56
65:MB:64:LYS:CB	65:MB:73:PRO:HG3	2.34	0.56
68:PB:86:LEU:HG	68:PB:99:HIS:HB2	1.88	0.56
68:PB:89:GLN:C	68:PB:91:ASP:H	2.08	0.56
69:QB:47:PRO:HG2	69:QB:53:TRP:HB2	1.88	0.56
74:VB:76:TYR:CD2	74:VB:81:GLU:HB3	2.41	0.56
83:EC:6831:U:C3'	83:EC:6832:G:H5"	2.35	0.56
1:A:107:C:H2'	1:A:108:A:C8	2.39	0.56
1:A:179:A:H61	56:DB:202:ARG:HH22	1.53	0.56
1:A:429:G:OP1	1:A:439:U:H5"	2.06	0.56
1:A:629:U:H3'	1:A:630:A:H5"	1.87	0.56
1:A:1184:A:H3'	1:A:1185:U:C5'	2.35	0.56
1:A:1480:G:H1'	66:NB:40:GLU:HG2	1.87	0.56
2:B:10:C:H2'	2:B:11:A:C4'	2.35	0.56
2:B:110:G:H5"	17:Q:91:ARG:HD3	1.88	0.56
2:B:204:A:O2'	2:B:205:C:H5'	2.05	0.56
2:B:1083:G:H2'	2:B:1084:A:C8	2.41	0.56
2:B:1688:U:H1'	26:Z:78:TYR:CZ	2.40	0.56
2:B:2247:G:N2	2:B:2248:C:H1'	2.21	0.56
2:B:3206:C:H1'	24:X:155:ARG:NH2	2.11	0.56
2:B:3382:U:H2'	2:B:3382:U:O2	2.04	0.56
7:G:46:PHE:CZ	7:G:84:VAL:HG23	2.41	0.56
11:K:236:ILE:HA	11:K:239:LEU:HB2	1.88	0.56
15:O:10:ARG:HD3	15:O:10:ARG:O	2.06	0.56
17:Q:170:LEU:HB3	40:NA:9:ILE:HD12	1.87	0.56
20:T:130:LYS:HB3	20:T:133:ARG:HG3	1.88	0.56
25:Y:135:PRO:O	25:Y:136:ARG:HG2	2.06	0.56
35:IA:14:ILE:HG23	35:IA:16:LEU:HD11	1.88	0.56
38:LA:3:GLN:CG	38:LA:30:LEU:H	2.11	0.56
38:LA:9:ARG:HG3	38:LA:34:HIS:CD2	2.41	0.56
49:WA:2:ALA:HA	49:WA:272:ASP:OD1	2.05	0.56
57:EB:5:GLN:HB3	57:EB:21:ALA:HB3	1.87	0.56
58:FB:159:GLN:OE1	58:FB:165:LEU:HD22	2.05	0.56
59:GB:55:ALA:O	59:GB:59:LEU:HG	2.05	0.56
59:GB:96:VAL:HG23	59:GB:97:LEU:N	2.21	0.56
63:KB:120:SER:O	63:KB:124:ARG:HG3	2.05	0.56
70:RB:19:ILE:HG12	70:RB:95:ALA:HA	1.87	0.56
76:XB:4:LYS:HE3	76:XB:5:ARG:HH22	1.71	0.56
82:DC:231:LYS:C	82:DC:233:PHE:H	2.08	0.56
82:DC:412:ARG:CZ	82:DC:473:GLU:HA	2.36	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:578:LYS:HE3	82:DC:582:LYS:HE3	1.87	0.56
1:A:178:U:O4	56:DB:191:ARG:HG2	2.05	0.56
1:A:361:C:H2'	1:A:362:G:C8	2.41	0.56
1:A:1077:C:H2'	1:A:1078:C:H6	1.71	0.56
1:A:1105:C:H2'	1:A:1106:U:C6	2.40	0.56
1:A:1315:U:H2'	1:A:1316:G:O4'	2.06	0.56
2:B:1366:A:H3'	2:B:1367:G:C8	2.40	0.56
2:B:1494:U:H1'	2:B:1496:C:C5	2.41	0.56
2:B:1523:U:H6	2:B:1523:U:O5'	1.89	0.56
2:B:2631:U:H2'	2:B:2632:G:C8	2.41	0.56
2:B:2775:U:H2'	2:B:2776:C:H6	1.67	0.56
2:B:2828:G:H4'	14:N:4:ARG:NH2	2.21	0.56
2:B:2947:G:C2	7:G:250:ALA:HB1	2.41	0.56
2:B:3096:C:H2'	2:B:3097:C:H6	1.71	0.56
7:G:59:ASP:HA	7:G:70:ARG:O	2.06	0.56
7:G:229:VAL:HG13	7:G:230:THR:N	2.20	0.56
11:K:107:ARG:HH12	11:K:117:VAL:HG13	1.71	0.56
11:K:160:ARG:HG3	11:K:203:TRP:CD2	2.41	0.56
20:T:108:ILE:HB	20:T:160:ARG:CD	2.23	0.56
21:U:15:ALA:O	21:U:150:VAL:HG22	2.06	0.56
23:W:67:ALA:O	23:W:71:ARG:HG3	2.06	0.56
25:Y:78:LYS:HE3	25:Y:87:LYS:HE3	1.87	0.56
36:JA:76:VAL:HG23	36:JA:96:ILE:HA	1.86	0.56
36:JA:77:ALA:HB3	36:JA:81:ASP:OD2	2.05	0.56
41:OA:52:LYS:HA	41:OA:55:ARG:NH1	2.20	0.56
48:VA:53:MET:HA	48:VA:85:GLY:CA	2.36	0.56
51:YA:70:LEU:CD1	51:YA:79:HIS:HB3	2.35	0.56
51:YA:189:ILE:N	51:YA:190:PRO:HD2	2.20	0.56
51:YA:225:VAL:HA	51:YA:228:LEU:HB3	1.87	0.56
52:ZA:79:GLU:O	52:ZA:102:VAL:HG13	2.06	0.56
52:ZA:138:PRO:HB2	52:ZA:222:TYR:HE2	1.70	0.56
54:BB:12:LEU:HD11	59:GB:4:ALA:CB	2.36	0.56
56:DB:28:PHE:O	56:DB:29:ASP:HB2	2.06	0.56
67:OB:54:THR:HA	67:OB:57:LEU:HD12	1.88	0.56
79:AC:38:ILE:HG22	79:AC:39:CYS:H	1.71	0.56
82:DC:144:ARG:HG3	82:DC:192:TYR:CG	2.41	0.56
1:A:128:U:H5'	1:A:178:U:O2'	2.06	0.55
1:A:864:U:H3	72:TB:60:LYS:HE2	1.70	0.55
1:A:1119:G:H2'	1:A:1120:U:C6	2.41	0.55
1:A:1582:U:H5"	66:NB:135:ARG:HH11	1.71	0.55
2:B:6:A:N6	3:C:153:U:H3	2.03	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:62:A:H5"	19:S:164:LEU:CD2	2.24	0.55
2:B:62:A:H2'	2:B:63:A:H5'	1.88	0.55
2:B:629:U:H2'	2:B:630:A:H8	1.65	0.55
2:B:676:G:N2	22:V:61:PRO:HG3	2.21	0.55
2:B:824:C:H1'	2:B:1534:A:H2	1.71	0.55
2:B:1088:U:H5'	33:GA:54:LEU:HD13	1.88	0.55
2:B:1687:U:N3	26:Z:70:LYS:HD2	2.16	0.55
2:B:1702:U:H2'	2:B:1703:U:O4'	2.07	0.55
2:B:2279:A:O5'	2:B:2280:A:H5'	2.06	0.55
2:B:2768:U:H2'	2:B:2769:A:H8	1.71	0.55
3:C:37:A:H2'	3:C:37:A:N3	2.20	0.55
3:C:75:G:N2	43:QA:26:TRP:HB2	2.21	0.55
4:D:77:G:O4'	24:X:50:LYS:HD2	2.06	0.55
6:F:179:LEU:HD21	6:F:185:ALA:HA	1.88	0.55
7:G:54:THR:CG2	7:G:76:VAL:HG23	2.36	0.55
8:H:130:ALA:HA	8:H:148:ILE:HG22	1.86	0.55
8:H:181:VAL:HG22	8:H:202:ARG:HB2	1.88	0.55
12:L:97:TYR:HB3	12:L:131:ALA:HA	1.88	0.55
16:P:123:ARG:NH2	48:VA:42:ARG:HD3	2.20	0.55
17:Q:103:ASN:HB3	40:NA:20:MET:HE1	1.88	0.55
18:R:14:LEU:H	18:R:14:LEU:HD12	1.71	0.55
21:U:30:ARG:HD3	21:U:30:ARG:C	2.27	0.55
22:V:82:VAL:HG21	22:V:137:THR:HB	1.87	0.55
22:V:147:ARG:HG2	22:V:149:ALA:H	1.70	0.55
24:X:50:LYS:HB3	24:X:50:LYS:NZ	2.20	0.55
30:DA:89:LYS:CG	30:DA:93:ALA:HB3	2.35	0.55
30:DA:125:LYS:HG3	30:DA:126:LEU:H	1.70	0.55
32:FA:37:GLY:HA3	32:FA:53:PHE:HZ	1.70	0.55
32:FA:128:ARG:O	40:NA:8:ALA:HB3	2.06	0.55
34:HA:80:ALA:C	34:HA:82:GLY:H	2.08	0.55
36:JA:61:LYS:HE2	36:JA:61:LYS:HA	1.87	0.55
46:TA:68:VAL:CB	46:TA:85:LEU:HB3	2.35	0.55
50:XA:23:HIS:CE1	67:OB:106:THR:HG21	2.41	0.55
51:YA:70:LEU:HA	51:YA:73:LEU:CG	2.36	0.55
55:CB:123:VAL:HG21	75:WB:100:ILE:HD12	1.87	0.55
66:NB:34:SER:HB3	66:NB:38:LEU:HD12	1.87	0.55
66:NB:114:ARG:O	66:NB:116:LEU:HD22	2.06	0.55
82:DC:503:LYS:HE2	82:DC:550:ALA:O	2.06	0.55
1:A:165:G:H21	56:DB:132:ARG:HB2	1.70	0.55
1:A:353:A:C2	1:A:354:C:H1'	2.41	0.55
1:A:632:U:H2'	1:A:633:U:H6	1.71	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:950:C:H2'	1:A:951:A:O4'	2.07	0.55
1:A:1079:U:H2'	1:A:1080:U:C6	2.42	0.55
1:A:1473:U:H5"	55:CB:190:ILE:CD1	2.31	0.55
1:A:1480:G:H2'	1:A:1481:C:H5'	1.86	0.55
2:B:149:U:H5"	19:S:54:LYS:HB3	1.87	0.55
2:B:186:U:OP2	30:DA:122:LYS:HD3	2.06	0.55
2:B:674:G:H2'	2:B:675:C:O4'	2.05	0.55
2:B:761:A:H61	2:B:770:G:H4'	1.71	0.55
2:B:887:G:H2'	2:B:888:A:H8	1.72	0.55
2:B:1725:C:H2'	2:B:1726:C:H6	1.69	0.55
2:B:2715:A:C2	46:TA:85:LEU:HD21	2.42	0.55
2:B:2766:U:H2'	2:B:2767:U:C6	2.42	0.55
2:B:3229:G:H3'	2:B:3230:G:C8	2.36	0.55
2:B:3308:C:H3'	2:B:3309:G:N2	2.21	0.55
6:F:32:LEU:CB	6:F:163:ARG:HH21	2.19	0.55
7:G:19:ARG:HG2	7:G:232:ARG:HH12	1.71	0.55
7:G:368:GLY:O	7:G:369:ARG:HG3	2.06	0.55
10:J:42:LEU:HD13	10:J:47:PHE:CB	2.36	0.55
11:K:44:ILE:CG2	11:K:48:ASN:HD21	2.19	0.55
12:L:58:VAL:HG22	19:S:32:GLN:OE1	2.06	0.55
17:Q:42:ARG:HD3	17:Q:51:LEU:HD23	1.87	0.55
17:Q:48:PRO:HA	17:Q:137:GLN:CD	2.27	0.55
30:DA:125:LYS:HG3	30:DA:126:LEU:N	2.21	0.55
32:FA:75:LEU:CD1	32:FA:137:LYS:HD2	2.35	0.55
34:HA:72:GLY:HA2	34:HA:76:GLU:OE2	2.06	0.55
36:JA:64:LYS:HG2	36:JA:65:PHE:HD2	1.71	0.55
46:TA:28:TYR:CB	46:TA:69:VAL:HG11	2.36	0.55
48:VA:119:ILE:HG21	48:VA:158:VAL:HB	1.87	0.55
49:WA:152:SER:N	49:WA:173:GLY:HA2	2.12	0.55
50:XA:20:ALA:CB	50:XA:172:LEU:HD12	2.22	0.55
50:XA:103:THR:O	50:XA:106:SER:HB2	2.06	0.55
51:YA:156:ALA:CB	51:YA:161:ILE:HG13	2.36	0.55
54:BB:100:ARG:NH1	54:BB:236:ILE:HG22	2.20	0.55
55:CB:144:GLU:O	55:CB:144:GLU:HG3	2.07	0.55
56:DB:137:ARG:CD	56:DB:177:ARG:HD3	2.34	0.55
66:NB:132:LYS:HG3	66:NB:133:GLY:N	2.21	0.55
70:RB:96:PRO:HG2	70:RB:99:ILE:CG2	2.35	0.55
73:UB:19:ARG:HG2	73:UB:19:ARG:HH21	1.71	0.55
82:DC:150:ARG:O	82:DC:197:LEU:HD21	2.06	0.55
82:DC:798:PHE:H	86:DC:903:SO1:H53	1.71	0.55
83:EC:6834:U:H3'	83:EC:6835:U:H5"	1.89	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:190:C:O2'	1:A:191:C:H5'	2.06	0.55
1:A:400:A:N6	58:FB:29:LEU:HD12	2.20	0.55
1:A:822:U:H5'	1:A:822:U:H6	1.72	0.55
1:A:852:C:H5"	1:A:853:G:H5'	1.86	0.55
1:A:969:C:O2'	1:A:1104:U:H4'	2.06	0.55
1:A:1615:C:C5	55:CB:81:ARG:HA	2.40	0.55
2:B:41:G:H3'	2:B:42:C:C6	2.42	0.55
2:B:120:G:H4'	2:B:121:A:O4'	2.06	0.55
2:B:146:U:O5'	2:B:148:G:H5'	2.06	0.55
2:B:244:G:OP1	17:Q:131:LYS:HA	2.07	0.55
2:B:303:G:H5"	2:B:304:G:H5"	1.88	0.55
2:B:1218:U:H1'	2:B:1219:C:O5'	2.05	0.55
2:B:1487:G:C3'	2:B:1488:G:H5"	2.37	0.55
2:B:1720:U:H2'	23:W:124:TYR:OH	2.06	0.55
2:B:2135:U:H2'	2:B:2136:C:H6	1.70	0.55
2:B:2149:A:H2'	2:B:2150:G:H5'	1.88	0.55
2:B:2372:A:C3'	2:B:2373:A:C5'	2.84	0.55
2:B:2525:G:O3'	6:F:37:ARG:HD2	2.07	0.55
2:B:2555:G:N3	38:LA:92:ALA:HA	2.21	0.55
3:C:82:U:C1'	3:C:87:G:H4'	2.36	0.55
4:D:65:G:H4'	14:N:205:SER:N	2.21	0.55
5:E:65:ILE:HG22	5:E:109:ALA:CB	2.33	0.55
7:G:58:ARG:HB2	7:G:58:ARG:HH11	1.71	0.55
7:G:181:ILE:HD12	7:G:181:ILE:N	2.21	0.55
8:H:330:TYR:HA	11:K:45:LEU:HD12	1.87	0.55
9:I:3:PHE:HB2	9:I:6:ASP:OD2	2.06	0.55
9:I:101:THR:HG23	9:I:104:LEU:HD23	1.87	0.55
11:K:110:ARG:CZ	22:V:3:ILE:HD11	2.36	0.55
14:N:170:LYS:HB3	14:N:176:LEU:O	2.07	0.55
15:O:171:VAL:O	15:O:172:LEU:HB2	2.04	0.55
16:P:133:LEU:CA	16:P:137:GLN:HG3	2.20	0.55
24:X:27:MET:CE	24:X:45:LEU:HD22	2.36	0.55
25:Y:92:ARG:HB3	25:Y:94:GLU:OE2	2.05	0.55
26:Z:50:LEU:HA	26:Z:54:VAL:CG2	2.37	0.55
27:AA:33:ASN:HD22	27:AA:33:ASN:N	2.00	0.55
29:CA:59:SER:HB3	29:CA:102:LEU:HD11	1.88	0.55
30:DA:3:LYS:HG2	30:DA:4:GLN:N	2.22	0.55
30:DA:28:ARG:HH12	30:DA:118:LEU:CD2	2.19	0.55
39:MA:58:ILE:HA	39:MA:61:GLN:OE1	2.06	0.55
44:RA:93:LYS:HG3	44:RA:102:ARG:HG2	1.88	0.55
47:UA:54:ILE:HG23	47:UA:63:THR:CG2	2.36	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:VA:93:LEU:HD23	48:VA:97:LYS:HB2	1.87	0.55
55:CB:184:PHE:CE2	55:CB:185:ARG:HG3	2.42	0.55
56:DB:76:LEU:HD21	56:DB:78:THR:HG23	1.88	0.55
59:GB:66:ASP:HB3	59:GB:69:ARG:CB	2.36	0.55
73:UB:37:ALA:O	73:UB:44:GLY:HA2	2.05	0.55
73:UB:131:SER:O	73:UB:135:LEU:HG	2.07	0.55
76:XB:10:ARG:CD	76:XB:34:LYS:HG3	2.36	0.55
76:XB:71:LEU:HB3	76:XB:73:TYR:HE2	1.71	0.55
77:YB:81:ARG:O	77:YB:82:LYS:HB2	2.06	0.55
82:DC:153:PRO:CG	82:DC:202:VAL:HG13	2.36	0.55
82:DC:184:SER:O	82:DC:187:VAL:HG12	2.06	0.55
82:DC:391:LYS:HG3	82:DC:392:GLY:H	1.70	0.55
82:DC:510:ARG:CD	82:DC:549:HIS:HA	2.35	0.55
1:A:488:G:H2'	1:A:489:C:H5'	1.87	0.55
1:A:624:G:H2'	1:A:625:C:C6	2.41	0.55
1:A:986:G:H1'	1:A:987:G:OP1	2.07	0.55
1:A:1072:C:H2'	1:A:1073:G:C8	2.41	0.55
1:A:1363:U:O2'	1:A:1364:G:H5'	2.07	0.55
1:A:1504:G:O3'	69:QB:41:SER:HB3	2.07	0.55
1:A:1530:C:OP2	75:WB:95:HIS:HB3	2.05	0.55
1:A:1552:U:H5	65:MB:43:ARG:NH2	2.05	0.55
2:B:1140:G:H2'	2:B:1141:C:C6	2.41	0.55
2:B:1438:U:H2'	2:B:1439:U:C6	2.42	0.55
2:B:1704:A:C5	2:B:1741:A:H2	2.25	0.55
2:B:1711:C:H5'	31:EA:38:PHE:CD1	2.41	0.55
2:B:2343:C:H2'	2:B:2344:U:C6	2.42	0.55
2:B:2604:U:H2'	2:B:2605:G:O4'	2.07	0.55
2:B:2735:U:O3'	25:Y:51:GLY:HA2	2.07	0.55
2:B:3113:A:H3'	2:B:3114:A:H8	1.71	0.55
2:B:3217:C:O2	21:U:182:ILE:HA	2.06	0.55
3:C:28:C:H2'	3:C:29:U:C6	2.41	0.55
5:E:67:ILE:HD11	5:E:144:LEU:HD22	1.88	0.55
6:F:202:VAL:HG13	6:F:218:HIS:N	2.21	0.55
9:I:196:ARG:HG2	9:I:200:PHE:CE2	2.42	0.55
10:J:26:ARG:CG	10:J:27:PRO:HD2	2.37	0.55
11:K:210:PRO:HG3	11:K:214:TRP:CZ2	2.41	0.55
13:M:152:GLU:O	13:M:156:GLN:HB2	2.05	0.55
17:Q:158:ALA:O	32:FA:124:ILE:HD11	2.06	0.55
29:CA:80:ASN:OD1	29:CA:126:LEU:HD13	2.06	0.55
30:DA:39:LEU:HD21	30:DA:107:THR:O	2.07	0.55
32:FA:79:TRP:CZ2	32:FA:118:ILE:HB	2.41	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:FA:123:VAL:N	32:FA:143:GLY:HA2	2.12	0.55
34:HA:77:LEU:HD11	34:HA:90:VAL:HG21	1.89	0.55
40:NA:61:ILE:C	40:NA:63:ASN:H	2.09	0.55
48:VA:25:LEU:HD12	48:VA:87:VAL:O	2.07	0.55
48:VA:30:VAL:HG23	48:VA:185:LEU:H	1.71	0.55
48:VA:79:PHE:CD2	48:VA:189:GLN:HB2	2.41	0.55
48:VA:84:VAL:HG22	48:VA:188:VAL:HG21	1.89	0.55
51:YA:59:ASP:HA	51:YA:62:LYS:NZ	2.20	0.55
56:DB:178:LEU:HD11	56:DB:180:THR:HG22	1.88	0.55
76:XB:10:ARG:HD3	76:XB:34:LYS:HG3	1.87	0.55
82:DC:413:ILE:CD1	82:DC:459:ILE:HD11	2.37	0.55
82:DC:815:ALA:HA	82:DC:818:ILE:CD1	2.36	0.55
1:A:43:A:H1'	1:A:378:A:N3	2.22	0.55
1:A:642:G:H2'	1:A:643:G:H8	1.72	0.55
2:B:158:G:H2'	2:B:159:A:H8	1.71	0.55
2:B:269:G:O6	19:S:14:LYS:HB2	2.05	0.55
2:B:367:A:H2'	2:B:368:G:H5'	1.89	0.55
2:B:1162:U:H4'	36:JA:57:TYR:CE1	2.41	0.55
2:B:1234:G:H5"	16:P:118:ASP:HB2	1.89	0.55
2:B:1623:G:C2	2:B:1624:G:H1'	2.42	0.55
2:B:2060:A:H2'	2:B:2061:G:H5'	1.88	0.55
2:B:2165:G:O2'	2:B:2167:A:N6	2.36	0.55
2:B:2684:C:H2'	2:B:2685:C:C6	2.41	0.55
2:B:2796:G:O6	46:TA:64:THR:HG23	2.06	0.55
5:E:150:ASP:O	5:E:182:GLN:HG3	2.07	0.55
7:G:203:VAL:HG22	7:G:207:SER:OG	2.06	0.55
14:N:60:LEU:HD13	14:N:159:PHE:CE1	2.41	0.55
15:O:13:LYS:HB2	15:O:13:LYS:NZ	2.21	0.55
17:Q:94:GLY:HA3	39:MA:116:TYR:OH	2.06	0.55
23:W:74:ARG:O	23:W:75:HIS:HB2	2.06	0.55
24:X:29:ILE:HD11	24:X:41:TYR:HA	1.89	0.55
43:QA:3:ALA:N	43:QA:5:LYS:NZ	2.54	0.55
46:TA:21:THR:HG22	46:TA:76:LYS:HD3	1.88	0.55
50:XA:41:ARG:HB2	50:XA:45:VAL:O	2.07	0.55
60:HB:8:ARG:HH11	60:HB:8:ARG:HG2	1.71	0.55
65:MB:110:GLU:HG3	68:PB:119:ILE:HG13	1.87	0.55
66:NB:131:GLY:HA3	66:NB:137:ARG:CA	2.36	0.55
69:QB:18:TYR:HA	69:QB:21:PHE:HB2	1.89	0.55
71:SB:36:VAL:HB	71:SB:51:VAL:CB	2.34	0.55
72:TB:79:PHE:HB2	72:TB:125:ILE:HG22	1.88	0.55
82:DC:331:ALA:O	82:DC:335:LEU:HG	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:677:PHE:HB2	82:DC:823:ARG:HG2	1.89	0.55
82:DC:836:GLN:H	82:DC:836:GLN:NE2	2.05	0.55
1:A:90:C:O2'	1:A:91:G:H5'	2.07	0.55
1:A:190:C:O2'	1:A:191:C:H2'	2.07	0.55
1:A:257:A:H1'	58:FB:73:SER:HB2	1.88	0.55
1:A:1149:G:H1'	1:A:1765:A:C4	2.41	0.55
1:A:1579:U:H4'	66:NB:140:LYS:O	2.06	0.55
2:B:115:A:H3'	2:B:116:A:C5'	2.36	0.55
2:B:286:U:O3'	19:S:179:LYS:HB3	2.07	0.55
2:B:561:C:H2'	2:B:562:C:H6	1.70	0.55
2:B:727:G:H2'	2:B:728:G:O4'	2.06	0.55
2:B:1078:U:H2'	2:B:1080:A:OP2	2.06	0.55
2:B:1633:C:H2'	2:B:1634:G:C8	2.41	0.55
2:B:2469:G:H1'	2:B:2488:A:N1	2.21	0.55
2:B:3092:C:H4'	2:B:3094:A:OP2	2.07	0.55
2:B:3109:G:H1'	13:M:163:GLN:CD	2.27	0.55
2:B:3362:A:H2'	2:B:3363:U:C4'	2.36	0.55
6:F:128:ARG:HA	6:F:169:ILE:CD1	2.37	0.55
7:G:312:VAL:HG22	7:G:365:PHE:HB2	1.87	0.55
7:G:316:GLU:O	7:G:317:ILE:HB	2.06	0.55
12:L:122:LYS:CE	12:L:124:ASP:HB2	2.37	0.55
12:L:203:VAL:HG21	12:L:208:GLU:HA	1.88	0.55
15:O:65:ILE:CG2	15:O:66:ALA:H	2.11	0.55
20:T:12:LYS:HA	20:T:40:GLU:O	2.07	0.55
22:V:9:GLN:HE21	22:V:10:HIS:N	2.00	0.55
22:V:153:PHE:O	22:V:161:LYS:HD3	2.06	0.55
24:X:34:GLU:HB3	24:X:61:ILE:HG12	1.86	0.55
29:CA:67:ILE:HD11	29:CA:115:ARG:HE	1.71	0.55
31:EA:109:GLU:HA	31:EA:112:LYS:HD2	1.89	0.55
34:HA:45:ALA:HB1	34:HA:73:GLY:HA2	1.87	0.55
40:NA:57:LEU:HD21	40:NA:72:VAL:CG1	2.36	0.55
41:OA:70:VAL:HA	41:OA:73:ARG:HB3	1.87	0.55
46:TA:5:PRO:O	46:TA:25:VAL:HG21	2.07	0.55
53:AB:171:ALA:HB3	53:AB:186:VAL:HB	1.89	0.55
54:BB:192:ILE:HD12	54:BB:242:LYS:O	2.07	0.55
57:EB:46:ILE:HD13	57:EB:60:ILE:HG23	1.87	0.55
59:GB:81:VAL:C	59:GB:83:VAL:H	2.07	0.55
63:KB:17:PRO:HD2	63:KB:62:GLN:NE2	2.22	0.55
63:KB:99:ARG:HD3	63:KB:143:SER:OG	2.06	0.55
64:LB:64:ALA:HB3	64:LB:104:ALA:HB3	1.87	0.55
65:MB:86:VAL:HG23	65:MB:87:PRO:HD2	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
72:TB:93:LEU:HD12	72:TB:128:PHE:HB3	1.86	0.55
74:VB:24:VAL:HG22	74:VB:72:PHE:CE1	2.41	0.55
82:DC:777:SER:HA	82:DC:780:PHE:HB2	1.89	0.55
1:A:1165:G:H2'	1:A:1166:A:C8	2.41	0.55
1:A:1407:U:H2'	1:A:1408:G:H8	1.68	0.55
1:A:1479:A:O2'	69:QB:15:ILE:HD11	2.07	0.55
1:A:1637:C:H5'	83:EC:6952:U:C4	2.42	0.55
2:B:101:G:H2'	2:B:102:C:O4'	2.07	0.55
2:B:536:U:H2'	2:B:537:A:O4'	2.06	0.55
2:B:768:C:C2'	2:B:769:G:H5'	2.35	0.55
2:B:1044:U:H2'	2:B:1045:C:C5'	2.33	0.55
2:B:1169:A:H3'	2:B:1170:A:C8	2.41	0.55
2:B:1184:A:H2'	2:B:1185:C:C6	2.41	0.55
2:B:1327:C:H2'	2:B:1328:C:C6	2.41	0.55
2:B:1822:C:OP1	38:LA:66:SER:HA	2.05	0.55
2:B:1869:C:H4'	2:B:3077:A:O2'	2.07	0.55
2:B:2631:U:OP2	25:Y:4:SER:HB2	2.06	0.55
2:B:2992:U:H2'	2:B:2993:G:O4'	2.07	0.55
2:B:3150:A:H4'	7:G:128:LYS:O	2.06	0.55
3:C:20:U:H2'	3:C:21:C:C2	2.41	0.55
3:C:131:A:O2'	3:C:132:G:H5'	2.06	0.55
7:G:218:ILE:HG13	7:G:276:THR:HG23	1.88	0.55
9:I:144:VAL:HG22	9:I:145:PHE:H	1.72	0.55
10:J:36:PRO:HB3	10:J:55:LEU:O	2.07	0.55
11:K:43:ILE:HA	11:K:46:GLU:OE1	2.06	0.55
11:K:77:VAL:HG22	25:Y:139:ARG:O	2.06	0.55
12:L:160:ILE:HD12	19:S:22:LEU:HD11	1.89	0.55
19:S:49:ARG:NH1	19:S:49:ARG:CB	2.61	0.55
19:S:100:ALA:O	19:S:104:GLU:HG3	2.06	0.55
19:S:154:PRO:HA	19:S:157:LYS:HG3	1.89	0.55
21:U:30:ARG:NH1	21:U:62:ARG:HB2	2.21	0.55
24:X:23:LYS:O	24:X:24:LEU:HB2	2.06	0.55
29:CA:92:LYS:HG3	29:CA:112:THR:HG23	1.88	0.55
37:KA:32:ILE:HG13	37:KA:35:VAL:HG21	1.87	0.55
46:TA:11:TYR:HE1	46:TA:13:LYS:HA	1.71	0.55
48:VA:33:VAL:HG21	48:VA:38:MET:SD	2.47	0.55
50:XA:31:VAL:HG23	50:XA:150:ASP:HA	1.88	0.55
50:XA:139:VAL:HG22	50:XA:139:VAL:O	2.06	0.55
51:YA:167:VAL:HA	51:YA:170:GLU:CB	2.37	0.55
52:ZA:225:LEU:HD21	52:ZA:230:TRP:CD1	2.42	0.55
53:AB:162:GLN:N	53:AB:163:PRO:CD	2.69	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
61:IB:55:ASP:CB	61:IB:58:CYS:HB2	2.26	0.55
71:SB:9:VAL:HG22	71:SB:10:GLU:N	2.21	0.55
72:TB:81:VAL:HG11	72:TB:86:ILE:HG23	1.88	0.55
82:DC:281:ILE:HA	82:DC:284:LEU:HD12	1.89	0.55
82:DC:491:VAL:HA	82:DC:559:PRO:HD3	1.89	0.55
83:EC:6934:U:H3'	83:EC:6935:G:H4'	1.89	0.55
1:A:991:G:O2'	1:A:992:A:H5"	2.06	0.55
1:A:1351:G:H2'	1:A:1352:G:O4'	2.06	0.55
1:A:1383:G:H5'	70:RB:31:VAL:HB	1.89	0.55
2:B:32:U:H5"	19:S:71:ARG:NH1	2.21	0.55
2:B:64:G:H22	2:B:322:U:H2'	1.72	0.55
2:B:149:U:C3'	2:B:150:A:H5"	2.37	0.55
2:B:271:C:H1'	2:B:295:A:N6	2.21	0.55
2:B:534:U:O2'	24:X:146:LYS:HD3	2.07	0.55
2:B:582:G:H2'	2:B:583:G:H8	1.72	0.55
2:B:757:C:H2'	2:B:758:C:H5"	1.89	0.55
2:B:807:A:H2	2:B:808:A:C8	2.25	0.55
2:B:839:C:H4'	2:B:1724:U:O2'	2.06	0.55
2:B:1487:G:C2'	2:B:1488:G:H5"	2.36	0.55
2:B:1666:G:H2'	2:B:1667:A:H8	1.71	0.55
2:B:3183:A:C2'	2:B:3184:A:H5'	2.37	0.55
6:F:72:ARG:HG3	6:F:72:ARG:NH1	2.21	0.55
7:G:285:VAL:HA	7:G:322:ILE:HD13	1.88	0.55
8:H:215:ILE:HD11	8:H:219:LEU:HD11	1.88	0.55
11:K:48:ASN:HB3	11:K:182:ASP:OD2	2.07	0.55
11:K:91:GLY:O	11:K:92:ILE:HD12	2.07	0.55
20:T:186:ALA:HA	20:T:191:ALA:CB	2.36	0.55
24:X:9:VAL:HG13	24:X:61:ILE:HD12	1.88	0.55
24:X:52:LYS:HG2	24:X:54:ALA:H	1.72	0.55
28:BA:6:ASP:O	28:BA:8:PHE:N	2.40	0.55
30:DA:89:LYS:HB2	30:DA:93:ALA:HB3	1.88	0.55
38:LA:10:ARG:O	38:LA:12:PRO:HD3	2.06	0.55
43:QA:27:ILE:HA	43:QA:30:ARG:CG	2.36	0.55
50:XA:59:LEU:HA	50:XA:62:ARG:HG3	1.89	0.55
50:XA:84:ARG:HB3	50:XA:84:ARG:NH1	2.11	0.55
51:YA:113:MET:HE3	51:YA:209:ASN:HB3	1.89	0.55
52:ZA:144:TRP:CE2	52:ZA:173:PRO:HG3	2.42	0.55
52:ZA:178:ILE:H	52:ZA:178:ILE:HD12	1.72	0.55
53:AB:31:GLU:HA	53:AB:107:PHE:HZ	1.72	0.55
53:AB:163:PRO:CA	53:AB:167:PHE:HD2	2.19	0.55
54:BB:124:GLY:HA2	54:BB:142:HIS:CE1	2.42	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:CB:100:ASN:ND2	55:CB:180:ARG:HD3	2.22	0.55
55:CB:197:GLU:HG3	55:CB:208:SER:HA	1.87	0.55
57:EB:64:VAL:N	57:EB:65:PRO:HD2	2.22	0.55
59:GB:86:LEU:HD11	59:GB:90:LYS:O	2.06	0.55
74:VB:12:VAL:HA	74:VB:23:PHE:HB3	1.87	0.55
74:VB:110:GLN:O	74:VB:114:ARG:HB2	2.07	0.55
82:DC:239:LYS:O	82:DC:243:ARG:HG3	2.07	0.55
82:DC:412:ARG:HH11	82:DC:426:LEU:HD11	1.71	0.55
82:DC:754:VAL:HA	82:DC:770:ALA:CB	2.37	0.55
82:DC:789:GLY:O	82:DC:791:GLN:N	2.34	0.55
1:A:148:A:H2'	1:A:149:C:H5'	1.86	0.55
1:A:586:G:H5"	80:BC:22:GLU:O	2.06	0.55
1:A:1480:G:C5'	69:QB:11:ALA:HB3	2.36	0.55
1:A:1628:U:H2'	1:A:1629:G:C8	2.42	0.55
2:B:149:U:C2'	2:B:150:A:H5"	2.37	0.55
2:B:150:A:H2'	2:B:151:A:O4'	2.06	0.55
2:B:215:G:H2'	2:B:216:G:H8	1.72	0.55
2:B:1079:A:H4'	9:I:140:ARG:O	2.07	0.55
2:B:1309:U:H5"	2:B:1311:G:OP1	2.07	0.55
2:B:1322:U:H1'	24:X:108:GLN:HE22	1.72	0.55
2:B:1648:A:H2'	2:B:1649:U:H5'	1.87	0.55
2:B:1764:U:H3'	2:B:1765:U:C5'	2.37	0.55
2:B:1956:A:H2'	2:B:1957:G:H8	1.71	0.55
2:B:2646:C:H2'	2:B:2647:A:H8	1.71	0.55
2:B:2819:A:H5"	2:B:2866:U:C4	2.41	0.55
3:C:153:U:O2'	3:C:154:C:H5'	2.07	0.55
6:F:64:ARG:HA	6:F:71:LEU:HA	1.89	0.55
6:F:135:ILE:C	6:F:136:ILE:HD12	2.27	0.55
9:I:18:THR:HB	9:I:24:ARG:HD3	1.88	0.55
9:I:208:MET:HA	9:I:211:LEU:HD12	1.89	0.55
10:J:22:ARG:HH11	10:J:22:ARG:CB	2.20	0.55
11:K:154:GLY:O	11:K:203:TRP:HB2	2.07	0.55
11:K:240:VAL:HG22	11:K:243:MET:HE1	1.89	0.55
12:L:75:ILE:HA	12:L:78:PHE:HE1	1.72	0.55
14:N:36:LEU:HD21	14:N:69:ARG:HD3	1.89	0.55
18:R:47:ASP:OD1	18:R:81:VAL:HG21	2.07	0.55
19:S:174:ILE:CG2	19:S:185:ALA:HA	2.37	0.55
20:T:189:ASP:O	20:T:193:GLN:HB2	2.07	0.55
21:U:168:LEU:HD12	21:U:168:LEU:N	2.22	0.55
22:V:33:TYR:OH	22:V:124:LEU:HB3	2.06	0.55
24:X:49:HIS:O	24:X:51:VAL:HG22	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:Y:118:GLU:O	25:Y:122:GLN:HB2	2.07	0.55
48:VA:15:LEU:C	48:VA:15:LEU:HD12	2.27	0.55
51:YA:220:GLN:HB2	51:YA:221:PRO:HD2	1.89	0.55
52:ZA:53:ILE:CG2	52:ZA:56:ILE:HD12	2.35	0.55
53:AB:25:PHE:HA	53:AB:28:GLU:HB3	1.89	0.55
54:BB:51:ARG:NH2	54:BB:111:VAL:HG23	2.22	0.55
54:BB:183:VAL:HG13	54:BB:224:ASN:HB3	1.89	0.55
70:RB:98:GLN:HA	70:RB:98:GLN:HE21	1.70	0.55
82:DC:155:VAL:CG2	82:DC:209:VAL:HG22	2.35	0.55
82:DC:757:GLU:HG3	82:DC:768:VAL:HG22	1.89	0.55
1:A:1205:C:H2'	1:A:1206:U:C5'	2.36	0.55
1:A:1563:C:H5'	69:QB:84:LYS:NZ	2.21	0.55
2:B:16:A:H61	3:C:143:U:H3	1.54	0.55
2:B:75:G:H3'	2:B:76:G:H8	1.72	0.55
2:B:143:G:H2'	2:B:144:A:C8	2.41	0.55
2:B:225:C:OP1	30:DA:47:ALA:HB2	2.07	0.55
2:B:576:C:H5"	11:K:142:SER:HB2	1.89	0.55
2:B:694:C:OP1	8:H:118:LYS:HD3	2.07	0.55
2:B:877:C:O2'	2:B:880:G:H1'	2.07	0.55
2:B:1383:G:H2'	2:B:1384:U:C6	2.42	0.55
2:B:1628:C:H5"	2:B:1629:U:C3'	2.32	0.55
2:B:1774:C:C3'	2:B:1775:G:H5"	2.37	0.55
2:B:1831:U:H3'	2:B:1832:C:C6	2.42	0.55
2:B:1887:A:H4'	7:G:227:GLU:CA	2.37	0.55
2:B:2561:A:C5	12:L:32:LYS:HD3	2.42	0.55
2:B:2765:C:O2'	2:B:2766:U:H5'	2.07	0.55
2:B:2844:C:C2'	2:B:2845:A:H5'	2.37	0.55
2:B:2902:A:H2'	2:B:2903:A:C8	2.42	0.55
3:C:82:U:H1'	3:C:87:G:H4'	1.88	0.55
6:F:32:LEU:HB2	6:F:163:ARG:CZ	2.36	0.55
9:I:55:PHE:HE2	9:I:159:VAL:HG22	1.72	0.55
12:L:134:TYR:HB3	12:L:190:VAL:HG23	1.89	0.55
13:M:101:VAL:HA	13:M:113:GLU:O	2.07	0.55
14:N:174:THR:HG21	14:N:181:TYR:CD1	2.42	0.55
37:KA:32:ILE:CG1	37:KA:35:VAL:HG21	2.37	0.55
38:LA:86:LYS:O	38:LA:90:ILE:HG12	2.07	0.55
42:PA:31:LEU:HD23	42:PA:31:LEU:H	1.70	0.55
43:QA:3:ALA:H	43:QA:5:LYS:HZ2	1.53	0.55
49:WA:59:ARG:HH11	49:WA:59:ARG:HG3	1.73	0.55
49:WA:255:ALA:CB	49:WA:260:ILE:HG23	2.37	0.55
50:XA:59:LEU:H	50:XA:59:LEU:HD12	1.72	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:AB:103:GLU:OE2	53:AB:106:LYS:HD3	2.07	0.55
56:DB:2:LYS:CB	56:DB:108:VAL:HG22	2.37	0.55
56:DB:190:GLN:O	56:DB:194:LYS:HG3	2.07	0.55
57:EB:56:LYS:HB2	57:EB:88:ARG:HD2	1.88	0.55
59:GB:80:LEU:HD13	59:GB:96:VAL:HG11	1.89	0.55
60:HB:82:LEU:HB3	60:HB:86:ILE:HG12	1.89	0.55
63:KB:16:ILE:HG13	63:KB:62:GLN:NE2	2.23	0.55
66:NB:41:PRO:HD3	66:NB:74:HIS:ND1	2.21	0.55
71:SB:1:MET:CE	71:SB:13:VAL:HG22	2.37	0.55
82:DC:203:TYR:CD2	82:DC:206:ARG:HD2	2.39	0.55
82:DC:443:GLU:OE2	82:DC:444:PRO:HD2	2.07	0.55
82:DC:806:SER:HB3	82:DC:813:SER:OG	2.07	0.55
83:EC:6935:G:H5'	83:EC:6935:G:C4	2.42	0.55
1:A:30:G:H2'	1:A:31:C:C6	2.42	0.54
1:A:325:G:O2'	1:A:326:G:H5'	2.08	0.54
1:A:580:A:OP1	1:A:580:A:H8	1.91	0.54
1:A:697:C:H1'	1:A:733:A:H61	1.72	0.54
1:A:834:G:H2'	1:A:835:U:C6	2.42	0.54
1:A:975:C:H5"	63:KB:109:LYS:HD2	1.89	0.54
1:A:1643:U:H2'	1:A:1644:C:H6	1.72	0.54
1:A:1721:A:H2'	1:A:1722:A:H8	1.72	0.54
2:B:342:A:C6	2:B:349:A:C8	2.94	0.54
2:B:1100:U:H2'	2:B:1101:G:C8	2.42	0.54
2:B:1108:U:H2'	2:B:1109:U:H6	1.71	0.54
2:B:1240:A:C3'	2:B:1241:U:H5"	2.38	0.54
2:B:1321:G:H2'	2:B:1322:U:O4'	2.07	0.54
2:B:1348:U:H4'	2:B:1349:G:C5'	2.36	0.54
2:B:1829:G:H5"	2:B:1830:G:H5'	1.88	0.54
2:B:2420:C:O2'	2:B:2421:U:H5'	2.06	0.54
2:B:2528:G:H2'	2:B:2529:A:C8	2.41	0.54
2:B:2582:C:H2'	2:B:2583:C:H6	1.70	0.54
2:B:2909:U:H2'	2:B:2910:A:H5"	1.89	0.54
2:B:3123:A:H5"	20:T:134:LYS:HD2	1.89	0.54
6:F:53:GLY:O	6:F:192:LYS:HE2	2.06	0.54
8:H:65:TRP:HB3	8:H:69:ARG:HG3	1.88	0.54
8:H:167:ALA:O	8:H:170:LYS:HB2	2.06	0.54
8:H:186:LYS:O	8:H:200:THR:HG22	2.07	0.54
8:H:200:THR:O	8:H:200:THR:HG23	2.08	0.54
9:I:22:ARG:HG2	9:I:28:THR:HB	1.90	0.54
13:M:12:VAL:CG1	13:M:16:VAL:HB	2.37	0.54
14:N:61:SER:CB	14:N:63:GLU:HG2	2.37	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:N:74:LYS:HA	14:N:74:LYS:HE3	1.87	0.54
17:Q:80:VAL:HG11	17:Q:87:ALA:CA	2.37	0.54
19:S:115:VAL:HG21	19:S:160:GLU:HB3	1.89	0.54
21:U:57:ALA:HB3	21:U:73:GLY:CA	2.37	0.54
27:AA:12:ARG:HG3	27:AA:12:ARG:HH11	1.72	0.54
39:MA:9:LEU:HD22	39:MA:17:LEU:HD22	1.88	0.54
46:TA:45:ARG:HH11	46:TA:45:ARG:HG2	1.72	0.54
49:WA:131:ILE:HD12	49:WA:181:TRP:NE1	2.23	0.54
50:XA:51:GLY:O	50:XA:55:GLU:HG3	2.07	0.54
51:YA:81:PHE:CD2	51:YA:109:LYS:HG2	2.41	0.54
51:YA:94:LYS:O	51:YA:94:LYS:HD2	2.07	0.54
53:AB:40:ARG:HG3	53:AB:49:ILE:CD1	2.37	0.54
54:BB:100:ARG:HH22	54:BB:118:GLU:HG2	1.73	0.54
54:BB:234:PRO:CG	54:BB:238:LEU:HD11	2.35	0.54
56:DB:81:VAL:HG22	56:DB:82:SER:N	2.14	0.54
57:EB:89:HIS:ND1	57:EB:168:SER:HB3	2.22	0.54
58:FB:188:GLU:HG2	61:IB:13:PHE:CD2	2.42	0.54
59:GB:60:LEU:HD21	59:GB:93:LEU:HD12	1.89	0.54
61:IB:54:ILE:O	61:IB:55:ASP:CB	2.55	0.54
66:NB:73:GLY:O	66:NB:77:GLN:HG3	2.07	0.54
67:OB:45:ARG:HA	67:OB:48:ASN:HD22	1.72	0.54
68:PB:37:GLY:HA3	68:PB:100:THR:O	2.07	0.54
70:RB:58:LEU:HG	70:RB:89:ARG:HA	1.88	0.54
73:UB:51:GLY:HA2	73:UB:77:ILE:HG13	1.90	0.54
78:ZB:17:GLY:O	78:ZB:26:THR:HG23	2.06	0.54
82:DC:589:LYS:HB2	82:DC:689:LEU:HD21	1.88	0.54
82:DC:750:LYS:HA	82:DC:776:GLU:OE1	2.07	0.54
1:A:56:U:H4'	1:A:57:G:H5'	1.89	0.54
1:A:611:U:H5"	73:UB:5:LYS:HD3	1.87	0.54
1:A:678:A:C2'	1:A:679:U:H5'	2.36	0.54
1:A:960:U:P	63:KB:55:ARG:HE	2.29	0.54
1:A:961:U:H2'	1:A:962:C:H6	1.71	0.54
2:B:232:G:H2'	2:B:233:C:C6	2.43	0.54
2:B:527:A:H2'	2:B:528:U:O4'	2.07	0.54
2:B:824:C:H5"	6:F:21:ARG:HD3	1.88	0.54
2:B:1853:U:H5'	41:OA:10:LYS:HG2	1.89	0.54
2:B:2304:C:H2'	2:B:2305:G:H5'	1.88	0.54
2:B:2547:A:H2'	2:B:2548:C:H5'	1.89	0.54
2:B:2651:G:H5"	2:B:2652:U:C1'	2.36	0.54
2:B:2879:C:OP2	7:G:5:LYS:HG2	2.07	0.54
6:F:177:LYS:HD3	47:UA:69:TYR:CE1	2.42	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:236:LEU:O	8:H:240:PRO:HG3	2.08	0.54
9:I:65:ILE:CG1	9:I:74:VAL:HG22	2.37	0.54
9:I:115:LEU:HD13	9:I:118:THR:HG23	1.88	0.54
10:J:118:GLU:HG2	10:J:121:LEU:HD12	1.89	0.54
17:Q:47:ALA:CB	39:MA:115:LYS:HG3	2.37	0.54
17:Q:56:PRO:O	17:Q:71:ALA:HA	2.06	0.54
17:Q:162:ASN:ND2	17:Q:164:GLU:HG2	2.20	0.54
19:S:35:VAL:HA	19:S:65:ARG:NE	2.19	0.54
20:T:125:ARG:C	20:T:127:LEU:H	2.10	0.54
25:Y:13:TYR:HB3	25:Y:16:GLN:HE21	1.70	0.54
25:Y:56:PHE:O	25:Y:60:LYS:HD2	2.07	0.54
27:AA:23:MET:SD	27:AA:78:VAL:HG22	2.48	0.54
29:CA:113:LEU:HD12	29:CA:114:VAL:N	2.21	0.54
30:DA:56:VAL:HG11	30:DA:104:LEU:HD13	1.88	0.54
35:IA:62:ARG:HB3	35:IA:66:GLY:CA	2.37	0.54
39:MA:83:LYS:HE3	41:OA:66:TYR:OH	2.06	0.54
48:VA:42:ARG:HB3	48:VA:46:ARG:NH2	2.22	0.54
49:WA:223:TRP:HZ3	53:AB:222:VAL:HB	1.72	0.54
51:YA:135:LEU:HD23	51:YA:181:LEU:HD12	1.89	0.54
54:BB:185:GLY:HA3	54:BB:224:ASN:ND2	2.22	0.54
58:FB:78:ILE:HA	58:FB:103:GLN:O	2.06	0.54
65:MB:20:VAL:HG21	65:MB:36:LEU:HD22	1.89	0.54
70:RB:38:SER:O	70:RB:42:VAL:HG23	2.08	0.54
75:WB:36:ALA:N	75:WB:40:VAL:HG21	2.22	0.54
82:DC:143:LEU:HD11	82:DC:185:VAL:CG1	2.27	0.54
82:DC:164:LEU:O	82:DC:168:GLN:HG2	2.08	0.54
82:DC:394:PHE:CZ	82:DC:513:LYS:HB3	2.41	0.54
82:DC:545:LEU:HD12	82:DC:549:HIS:HB2	1.89	0.54
1:A:108:A:H4'	1:A:363:G:O2'	2.07	0.54
1:A:632:U:H5"	73:UB:10:ASN:O	2.08	0.54
1:A:633:U:H2'	1:A:634:G:H8	1.70	0.54
1:A:677:G:O2'	1:A:678:A:H5'	2.07	0.54
1:A:758:U:C5'	59:GB:7:THR:HG21	2.37	0.54
1:A:776:G:N3	54:BB:261:LEU:HD13	2.22	0.54
1:A:833:U:H5'	1:A:834:G:H5"	1.88	0.54
1:A:1230:A:N6	1:A:1255:G:H1'	2.21	0.54
1:A:1620:C:H2'	1:A:1621:U:C6	2.42	0.54
1:A:1680:G:C1'	1:A:1721:A:N6	2.71	0.54
2:B:14:U:C5	3:C:137:C:H1'	2.42	0.54
2:B:666:A:C3'	2:B:667:C:H5"	2.37	0.54
2:B:1103:A:N6	22:V:9:GLN:HE22	2.05	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1344:G:H1'	11:K:159:GLN:NE2	2.22	0.54
2:B:1674:G:H2'	2:B:1675:G:O4'	2.07	0.54
2:B:2137:U:C6	2:B:2141:U:C4	2.96	0.54
2:B:2244:A:H5"	6:F:243:THR:OG1	2.07	0.54
2:B:2466:G:H5'	5:E:106:LYS:HA	1.89	0.54
2:B:2732:G:H2'	2:B:2733:A:H8	1.71	0.54
2:B:2883:U:H2'	2:B:2884:C:H6	1.71	0.54
3:C:133:G:H4'	29:CA:55:ASN:ND2	2.22	0.54
4:D:55:A:H2	15:O:134:PRO:HB2	1.72	0.54
7:G:222:LYS:HA	7:G:334:ARG:NH1	2.23	0.54
7:G:305:ILE:HD12	7:G:306:THR:H	1.73	0.54
9:I:39:GLN:CD	9:I:43:LYS:HD2	2.27	0.54
9:I:78:ALA:HB3	9:I:105:ILE:CG1	2.36	0.54
13:M:28:VAL:HG13	13:M:33:THR:HG22	1.88	0.54
14:N:176:LEU:HD22	14:N:180:GLU:HG3	1.88	0.54
15:O:23:VAL:HB	15:O:65:ILE:O	2.08	0.54
18:R:123:LEU:CD2	20:T:190:VAL:HG23	2.37	0.54
19:S:139:HIS:O	19:S:143:ARG:HG3	2.07	0.54
21:U:36:ILE:HG21	21:U:117:ILE:HG12	1.90	0.54
23:W:10:LEU:HA	23:W:13:SER:HB2	1.89	0.54
23:W:45:VAL:HA	23:W:50:ILE:HB	1.88	0.54
30:DA:19:TYR:O	30:DA:22:ALA:HB3	2.06	0.54
34:HA:34:LEU:HD23	34:HA:59:TYR:HB3	1.88	0.54
37:KA:32:ILE:CG2	37:KA:100:ILE:HD12	2.38	0.54
40:NA:56:ARG:HH11	40:NA:60:LEU:HD21	1.70	0.54
50:XA:70:PRO:HA	50:XA:73:VAL:HG21	1.88	0.54
52:ZA:222:TYR:C	52:ZA:224:PHE:N	2.59	0.54
58:FB:3:ILE:HD12	58:FB:3:ILE:N	2.23	0.54
60:HB:18:GLU:O	60:HB:89:GLY:HA3	2.06	0.54
64:LB:133:ARG:HG2	64:LB:136:ARG:NE	2.06	0.54
65:MB:94:VAL:CG2	65:MB:107:ILE:HD11	2.37	0.54
70:RB:77:LYS:HD3	70:RB:77:LYS:H	1.72	0.54
82:DC:454:ILE:HG23	82:DC:456:LEU:CD2	2.37	0.54
1:A:407:A:N3	1:A:1671:A:H2	2.05	0.54
1:A:1042:G:H2'	1:A:1043:A:O4'	2.08	0.54
1:A:1439:C:H2'	1:A:1440:C:H6	1.72	0.54
1:A:1602:C:H2'	1:A:1603:U:C6	2.42	0.54
1:A:1606:C:H2'	1:A:1607:G:C8	2.42	0.54
2:B:27:C:O2'	2:B:28:C:H5'	2.08	0.54
2:B:357:A:H2'	2:B:358:G:O4'	2.08	0.54
2:B:382:U:O4'	21:U:100:ALA:HB1	2.06	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:760:G:H1'	2:B:770:G:N2	2.22	0.54
2:B:903:U:H2'	2:B:904:A:C8	2.41	0.54
2:B:3003:G:H4'	7:G:180:GLU:OE2	2.07	0.54
4:D:100:C:P	24:X:52:LYS:HG3	2.47	0.54
7:G:166:ILE:HD11	7:G:171:LEU:HD12	1.90	0.54
19:S:58:GLY:O	19:S:135:VAL:HA	2.07	0.54
21:U:2:ALA:HB3	21:U:18:ARG:NH1	2.22	0.54
23:W:69:SER:O	23:W:74:ARG:HB2	2.07	0.54
27:AA:84:SER:HA	27:AA:94:TYR:HB3	1.89	0.54
28:BA:1:MET:HB2	28:BA:15:PRO:CG	2.30	0.54
29:CA:33:ARG:O	29:CA:35:PRO:HD3	2.07	0.54
32:FA:86:LYS:HB3	32:FA:90:TYR:CE2	2.42	0.54
57:EB:51:VAL:HG11	57:EB:168:SER:HA	1.88	0.54
72:TB:36:LYS:O	72:TB:40:VAL:HG23	2.07	0.54
82:DC:274:ASN:ND2	82:DC:274:ASN:H	2.06	0.54
82:DC:635:CYS:HB3	82:DC:668:GLN:NE2	2.21	0.54
83:EC:6836:U:H4'	83:EC:6877:C:H42	1.72	0.54
1:A:567:A:OP1	73:UB:68:ILE:HB	2.08	0.54
1:A:633:U:H5"	73:UB:9:LEU:HD13	1.88	0.54
1:A:804:A:N3	72:TB:105:THR:HG22	2.22	0.54
1:A:1222:C:H2'	1:A:1223:A:C8	2.43	0.54
1:A:1316:G:H4'	67:OB:10:LYS:CE	2.34	0.54
1:A:1790:A:H2'	1:A:1791:A:O4'	2.08	0.54
2:B:110:G:C2	2:B:111:C:H1'	2.42	0.54
2:B:148:G:H4'	19:S:55:ALA:HB2	1.90	0.54
2:B:208:C:H2'	2:B:209:A:H5'	1.88	0.54
2:B:214:G:H2'	2:B:215:G:C8	2.42	0.54
2:B:269:G:H4'	2:B:270:U:H6	1.72	0.54
2:B:431:U:H2'	2:B:432:G:H8	1.71	0.54
2:B:729:C:H2'	2:B:730:C:H5'	1.90	0.54
2:B:749:C:OP1	33:GA:32:LEU:HB2	2.06	0.54
2:B:787:G:OP2	22:V:147:ARG:HG3	2.08	0.54
2:B:1105:A:H2'	2:B:1106:G:H8	1.73	0.54
2:B:1220:U:H3'	2:B:1221:A:N3	2.22	0.54
2:B:1233:G:C1'	16:P:121:PHE:HA	2.38	0.54
2:B:1473:G:H4'	23:W:23:TRP:NE1	2.23	0.54
2:B:1545:A:H2'	2:B:1547:G:OP2	2.08	0.54
2:B:1655:G:H4'	38:LA:59:PRO:CG	2.38	0.54
2:B:2512:C:H5'	12:L:249:ARG:NH1	2.23	0.54
2:B:2531:C:H5'	2:B:2531:C:H6	1.72	0.54
2:B:3379:C:H1'	7:G:309:GLY:O	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:98:U:C2'	3:C:99:C:H5'	2.36	0.54
3:C:103:G:H5"	41:OA:39:TYR:OH	2.06	0.54
5:E:16:LEU:HD11	5:E:208:SER:CB	2.36	0.54
8:H:154:THR:HA	8:H:251:THR:HG22	1.89	0.54
10:J:131:LYS:HD2	10:J:133:GLU:H	1.73	0.54
11:K:98:LYS:HB3	11:K:99:PRO:CD	2.32	0.54
15:O:21:ILE:HG22	15:O:22:SER:N	2.22	0.54
15:O:94:ARG:HD3	15:O:94:ARG:N	2.21	0.54
19:S:175:ASN:O	19:S:176:LYS:HG3	2.07	0.54
22:V:151:ARG:O	22:V:161:LYS:HG2	2.08	0.54
23:W:72:GLU:HB3	23:W:74:ARG:NH1	2.21	0.54
23:W:80:LYS:O	23:W:81:ARG:HG3	2.07	0.54
25:Y:75:ILE:HA	25:Y:87:LYS:O	2.07	0.54
31:EA:22:LYS:NZ	31:EA:129:TRP:O	2.41	0.54
31:EA:88:ASP:CG	31:EA:89:VAL:H	2.09	0.54
50:XA:183:ARG:HD3	50:XA:191:ARG:NH2	2.19	0.54
52:ZA:138:PRO:HB2	52:ZA:222:TYR:CE2	2.42	0.54
55:CB:116:HIS:O	55:CB:120:ILE:HG13	2.07	0.54
56:DB:5:ILE:HD12	56:DB:5:ILE:N	2.22	0.54
56:DB:155:ASP:C	56:DB:157:VAL:H	2.11	0.54
59:GB:60:LEU:HD13	59:GB:69:ARG:NH2	2.22	0.54
60:HB:54:TYR:O	60:HB:68:LEU:HD12	2.08	0.54
61:IB:74:THR:N	61:IB:86:ILE:HB	2.23	0.54
63:KB:16:ILE:HG23	72:TB:57:ARG:NH2	2.17	0.54
66:NB:65:ILE:HG21	66:NB:85:ILE:HG23	1.89	0.54
68:PB:17:LEU:H	68:PB:22:VAL:CG2	2.20	0.54
68:PB:24:GLY:O	68:PB:26:ILE:HG12	2.08	0.54
68:PB:25:ASN:O	68:PB:26:ILE:HG23	2.07	0.54
80:BC:24:THR:OG1	80:BC:26:LYS:HD2	2.07	0.54
82:DC:516:PRO:HG2	82:DC:517:CYS:H	1.72	0.54
83:EC:6772:G:H3'	83:EC:6773:G:C5'	2.37	0.54
83:EC:6862:G:N7	83:EC:6864:A:H1'	2.22	0.54
1:A:827:C:H2'	1:A:828:U:C6	2.42	0.54
2:B:34:A:H2'	2:B:35:A:C8	2.42	0.54
2:B:118:U:H2'	2:B:119:U:O4'	2.08	0.54
2:B:174:C:H2'	2:B:175:C:C6	2.43	0.54
2:B:528:U:H2'	2:B:529:A:C8	2.41	0.54
2:B:639:G:OP1	36:JA:40:SER:HB2	2.08	0.54
2:B:707:U:H2'	2:B:708:G:C5'	2.31	0.54
2:B:746:A:H2'	2:B:747:A:H8	1.72	0.54
2:B:920:A:OP2	2:B:920:A:H2'	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1048:A:H2	2:B:2646:C:O2	1.90	0.54
2:B:1368:U:C2'	2:B:1369:A:H5'	2.38	0.54
2:B:1369:A:C2'	2:B:1370:G:H5'	2.37	0.54
2:B:1655:G:H5"	38:LA:58:ARG:NH1	2.23	0.54
2:B:1878:G:C3'	2:B:1879:A:H5"	2.38	0.54
2:B:2154:U:H4'	6:F:240:ALA:HB2	1.90	0.54
2:B:2701:U:OP1	25:Y:23:GLY:N	2.40	0.54
2:B:3111:U:O4	2:B:3121:U:H5	1.90	0.54
2:B:3141:A:H3'	2:B:3142:A:H4'	1.89	0.54
2:B:3215:A:OP1	37:KA:2:ALA:HB2	2.07	0.54
2:B:3335:A:H2'	2:B:3336:A:C8	2.43	0.54
6:F:158:ILE:HD12	6:F:162:ALA:CB	2.37	0.54
8:H:299:ILE:HG22	8:H:300:ARG:N	2.22	0.54
10:J:77:ARG:HG2	10:J:78:ARG:H	1.72	0.54
15:O:8:PRO:HG2	15:O:10:ARG:HG3	1.90	0.54
15:O:109:HIS:CE1	15:O:122:ILE:HA	2.43	0.54
16:P:123:ARG:HH22	48:VA:42:ARG:CD	2.21	0.54
18:R:50:LYS:HG2	18:R:85:TRP:NE1	2.23	0.54
20:T:14:HIS:HB3	20:T:123:ALA:HB1	1.89	0.54
21:U:119:VAL:HA	21:U:145:HIS:O	2.08	0.54
21:U:171:ARG:HH11	21:U:171:ARG:HG3	1.71	0.54
28:BA:23:ARG:HG2	28:BA:24:GLY:H	1.73	0.54
50:XA:110:TYR:HA	50:XA:115:PHE:CE1	2.42	0.54
54:BB:95:THR:HA	74:VB:16:PRO:HB2	1.88	0.54
54:BB:122:LYS:HD2	54:BB:164:LEU:HD21	1.88	0.54
58:FB:7:SER:O	58:FB:10:LYS:HB3	2.08	0.54
59:GB:81:VAL:HG21	59:GB:91:LYS:HD2	1.88	0.54
60:HB:77:ARG:NH2	60:HB:88:PRO:HG3	2.22	0.54
61:IB:80:MET:HB3	61:IB:83:THR:O	2.08	0.54
72:TB:23:ARG:HB2	77:YB:3:LEU:O	2.08	0.54
82:DC:274:ASN:N	82:DC:274:ASN:ND2	2.55	0.54
82:DC:412:ARG:HA	82:DC:428:ILE:HG12	1.89	0.54
1:A:94:U:OP1	54:BB:2:ALA:HB1	2.08	0.54
1:A:636:A:H2'	1:A:637:C:O4'	2.07	0.54
1:A:992:A:C2	1:A:1012:U:N3	2.70	0.54
1:A:1073:G:H5"	63:KB:9:LYS:O	2.07	0.54
1:A:1650:U:H2'	1:A:1651:A:C8	2.42	0.54
2:B:795:G:H4'	2:B:1111:U:O3'	2.08	0.54
2:B:825:U:C2'	2:B:826:G:H5"	2.36	0.54
2:B:944:C:H2'	2:B:945:C:C6	2.43	0.54
2:B:966:U:C4'	32:FA:43:ILE:HG21	2.38	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1342:C:O2'	2:B:1343:A:H5'	2.07	0.54
2:B:1456:A:C5	35:IA:64:VAL:HG11	2.42	0.54
2:B:1584:U:H2'	2:B:1585:C:H6	1.73	0.54
2:B:1706:C:H2'	2:B:1707:A:O4'	2.08	0.54
2:B:1894:U:H2'	2:B:1895:A:C8	2.43	0.54
2:B:2267:C:H2'	2:B:2268:U:O4'	2.08	0.54
2:B:2565:U:H2'	2:B:2566:C:C5	2.43	0.54
2:B:2599:U:H2'	2:B:2600:C:C6	2.41	0.54
2:B:2939:G:O2'	2:B:2940:A:H5'	2.08	0.54
2:B:3034:C:O2'	13:M:122:LYS:HG3	2.07	0.54
2:B:3110:C:H1'	13:M:156:GLN:OE1	2.08	0.54
2:B:3312:U:C5'	7:G:25:ILE:HD12	2.26	0.54
3:C:36:G:C8	39:MA:86:ARG:HD3	2.43	0.54
8:H:82:THR:CG2	8:H:84:ARG:HB3	2.37	0.54
8:H:206:LEU:HD11	8:H:228:ALA:HB2	1.89	0.54
9:I:39:GLN:NE2	9:I:43:LYS:HD2	2.22	0.54
12:L:178:ALA:HB2	12:L:218:ILE:CG2	2.38	0.54
12:L:248:LYS:HA	12:L:252:ASN:ND2	2.22	0.54
19:S:88:GLY:O	19:S:89:VAL:HG13	2.08	0.54
20:T:36:VAL:HG23	20:T:37:ARG:HG3	1.88	0.54
20:T:61:ALA:HA	20:T:70:PRO:CD	2.21	0.54
23:W:138:LEU:HD21	23:W:142:ILE:HD12	1.88	0.54
23:W:173:ARG:HA	23:W:176:ARG:HD3	1.90	0.54
30:DA:120:GLN:NE2	30:DA:126:LEU:HD23	2.22	0.54
31:EA:46:ILE:HA	31:EA:70:PRO:HA	1.89	0.54
35:IA:25:PHE:CD2	35:IA:65:LYS:HB2	2.43	0.54
45:SA:2:ARG:HD2	45:SA:2:ARG:H	1.72	0.54
49:WA:176:LYS:HG2	49:WA:197:SER:O	2.08	0.54
54:BB:10:LYS:HA	54:BB:27:TYR:HA	1.89	0.54
54:BB:12:LEU:HD11	59:GB:4:ALA:HA	1.88	0.54
57:EB:31:SER:N	57:EB:32:PRO:HD2	2.23	0.54
58:FB:72:ILE:HD12	58:FB:72:ILE:O	2.08	0.54
68:PB:50:ALA:HB3	68:PB:52:VAL:HG23	1.90	0.54
71:SB:16:LYS:HA	71:SB:22:ARG:O	2.06	0.54
71:SB:83:TRP:CZ2	77:YB:4:VAL:HG13	2.43	0.54
75:WB:84:GLU:HG3	75:WB:91:PRO:HD3	1.88	0.54
82:DC:587:TYR:CD2	82:DC:690:ASP:HB3	2.39	0.54
1:A:397:A:H4'	58:FB:50:GLY:C	2.28	0.54
1:A:1013:A:H3'	1:A:1014:G:H8	1.72	0.54
1:A:1474:G:H2'	1:A:1475:A:H8	1.71	0.54
1:A:1777:G:H2'	1:A:1778:G:H8	1.73	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:52:A:H4'	41:OA:49:TRP:HB3	1.89	0.54
2:B:105:C:H2'	2:B:106:A:H8	1.70	0.54
2:B:136:G:H2'	2:B:137:G:H8	1.73	0.54
2:B:753:C:H2'	2:B:754:G:H8	1.72	0.54
2:B:916:G:C5	6:F:207:VAL:HG21	2.42	0.54
2:B:1711:C:H5'	31:EA:38:PHE:HD1	1.73	0.54
2:B:2111:G:H3'	2:B:2112:U:H5'	1.90	0.54
2:B:2352:A:H5"	21:U:83:TRP:O	2.07	0.54
2:B:2464:U:H2'	2:B:2465:G:H5'	1.89	0.54
2:B:2767:U:H2'	2:B:2768:U:H6	1.73	0.54
2:B:3107:U:H2'	2:B:3108:G:C8	2.43	0.54
2:B:3165:A:H2'	2:B:3166:C:C6	2.43	0.54
3:C:143:U:H2'	3:C:144:G:O4'	2.07	0.54
8:H:38:VAL:O	8:H:42:VAL:HG23	2.06	0.54
9:I:95:TRP:CZ3	9:I:161:GLY:HA2	2.43	0.54
10:J:40:LEU:HD22	10:J:84:VAL:HB	1.90	0.54
13:M:8:GLN:HG2	13:M:68:LEU:CD1	2.35	0.54
15:O:37:LEU:HB3	15:O:69:VAL:HG11	1.90	0.54
19:S:38:ARG:HA	19:S:62:TYR:CD2	2.42	0.54
22:V:51:ALA:HB3	22:V:84:VAL:HG11	1.89	0.54
23:W:96:ILE:HG22	23:W:100:ARG:CZ	2.36	0.54
27:AA:114:ILE:HD13	27:AA:132:ASN:O	2.08	0.54
28:BA:8:PHE:HE1	28:BA:46:PRO:HD3	1.73	0.54
31:EA:10:VAL:CG2	31:EA:87:LEU:HD23	2.37	0.54
31:EA:54:THR:HG22	31:EA:57:HIS:CD2	2.43	0.54
34:HA:27:TYR:HB2	34:HA:52:ARG:HH12	1.73	0.54
37:KA:45:LEU:HA	37:KA:71:VAL:CG1	2.36	0.54
50:XA:122:ILE:HG12	50:XA:144:ILE:HD12	1.90	0.54
53:AB:98:ALA:CA	53:AB:188:ILE:HD12	2.34	0.54
55:CB:146:THR:HA	55:CB:158:GLN:O	2.08	0.54
55:CB:179:ALA:HB3	55:CB:194:LEU:HD22	1.89	0.54
63:KB:113:PHE:CZ	63:KB:117:LEU:HD11	2.43	0.54
65:MB:73:PRO:HD2	65:MB:92:SER:HA	1.90	0.54
82:DC:263:ASP:OD2	82:DC:265:GLU:HB2	2.07	0.54
83:EC:6929:C:H2'	83:EC:6930:G:O4'	2.08	0.54
1:A:161:U:H4'	56:DB:83:CYS:O	2.08	0.54
1:A:911:U:H2'	1:A:912:U:H5"	1.90	0.54
1:A:1447:C:H3'	1:A:1448:G:C5'	2.38	0.54
1:A:1681:A:H1'	56:DB:66:GLY:CA	2.35	0.54
2:B:126:U:H2'	2:B:127:G:C8	2.43	0.54
2:B:160:G:H2'	2:B:161:G:H8	1.73	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:185:C:H5'	30:DA:121:ARG:NE	2.14	0.54
2:B:561:C:H2'	2:B:562:C:C6	2.42	0.54
2:B:719:U:H1'	22:V:72:LYS:HE3	1.90	0.54
2:B:798:G:O2'	17:Q:15:ARG:HD2	2.08	0.54
2:B:1202:A:H2	2:B:2856:G:HO2'	1.52	0.54
2:B:1306:G:C6	20:T:62:THR:HA	2.43	0.54
2:B:2993:G:C5'	21:U:79:THR:HG21	2.38	0.54
2:B:3080:G:O2'	2:B:3081:C:H5'	2.08	0.54
6:F:8:GLN:O	6:F:10:LYS:N	2.40	0.54
7:G:57:VAL:HG22	7:G:73:VAL:HG12	1.88	0.54
9:I:21:ARG:HG3	9:I:24:ARG:NH2	2.23	0.54
11:K:100:ARG:O	11:K:104:GLN:HG3	2.07	0.54
11:K:144:ILE:HA	11:K:147:LEU:HD12	1.89	0.54
12:L:99:PRO:HG3	12:L:134:TYR:CE2	2.43	0.54
13:M:68:LEU:HD13	13:M:69:ARG:N	2.23	0.54
15:O:19:LEU:CD1	15:O:69:VAL:HG13	2.36	0.54
15:O:57:PHE:HD2	15:O:59:ILE:HD11	1.73	0.54
15:O:137:ARG:O	15:O:141:ARG:HG2	2.06	0.54
19:S:84:PRO:HB3	46:TA:51:GLY:HA2	1.89	0.54
21:U:4:TYR:CZ	21:U:18:ARG:HG3	2.42	0.54
21:U:117:ILE:HG23	21:U:117:ILE:O	2.08	0.54
25:Y:14:MET:HG3	25:Y:15:PHE:CE2	2.43	0.54
25:Y:100:LYS:NZ	25:Y:100:LYS:HB3	2.21	0.54
38:LA:5:VAL:HG21	38:LA:31:ARG:C	2.27	0.54
42:PA:31:LEU:CA	42:PA:37:PRO:HA	2.37	0.54
49:WA:46:LYS:O	49:WA:56:VAL:HG22	2.08	0.54
50:XA:17:LEU:HD21	50:XA:176:LEU:CD1	2.34	0.54
52:ZA:176:SER:H	52:ZA:195:ASP:CG	2.11	0.54
55:CB:148:ARG:HA	55:CB:157:ARG:HG3	1.90	0.54
57:EB:135:ILE:HG21	57:EB:152:VAL:CG1	2.38	0.54
59:GB:36:LEU:CD1	59:GB:42:ILE:HG12	2.31	0.54
59:GB:85:VAL:HG22	59:GB:147:MET:HE1	1.89	0.54
65:MB:86:VAL:CG2	65:MB:87:PRO:HD2	2.37	0.54
72:TB:49:GLU:O	72:TB:64:GLN:HB2	2.07	0.54
82:DC:249:PHE:CD1	82:DC:269:LEU:HB2	2.43	0.54
82:DC:489:VAL:HG11	82:DC:538:LEU:HD22	1.90	0.54
1:A:351:C:H3'	1:A:352:A:C5'	2.38	0.54
1:A:491:C:C2'	1:A:492:A:H5'	2.38	0.54
1:A:760:A:H2'	1:A:761:G:O4'	2.07	0.54
1:A:1083:G:O2'	1:A:1084:A:H5'	2.07	0.54
1:A:1097:U:H6	52:ZA:168:ARG:HD2	1.73	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1415:U:H2'	1:A:1416:G:C8	2.43	0.54
1:A:1760:G:H2'	1:A:1761:U:O2	2.08	0.54
2:B:70:A:C2	2:B:72:C:N4	2.74	0.54
2:B:284:A:OP2	46:TA:41:ARG:NE	2.41	0.54
2:B:748:U:O3'	33:GA:32:LEU:HD23	2.08	0.54
2:B:868:C:H2'	2:B:869:G:H8	1.73	0.54
2:B:886:C:H2'	2:B:887:G:H8	1.69	0.54
2:B:1186:G:H1'	24:X:112:ALA:CB	2.37	0.54
2:B:1240:A:H3'	2:B:1241:U:H5"	1.90	0.54
2:B:1247:U:O5'	2:B:1247:U:H6	1.91	0.54
2:B:1322:U:H2'	2:B:1323:G:C8	2.42	0.54
2:B:1471:U:OP1	23:W:5:ARG:HD2	2.08	0.54
2:B:1637:A:OP1	31:EA:73:LYS:HD2	2.08	0.54
2:B:2465:G:H5"	5:E:105:LYS:CA	2.30	0.54
2:B:2831:G:H2'	2:B:2832:C:H6	1.72	0.54
2:B:3109:G:H1'	13:M:163:GLN:OE1	2.08	0.54
3:C:119:C:H2'	3:C:120:C:H6	1.73	0.54
6:F:32:LEU:HB2	6:F:163:ARG:HH21	1.72	0.54
6:F:42:ARG:HE	6:F:87:PHE:HE2	1.56	0.54
7:G:162:VAL:CG2	7:G:181:ILE:HD11	2.38	0.54
8:H:136:LEU:HD12	8:H:137:ALA:N	2.23	0.54
15:O:57:PHE:HD2	15:O:59:ILE:CD1	2.20	0.54
22:V:111:ARG:HH21	22:V:121:CYS:HB3	1.73	0.54
23:W:20:ARG:HG3	23:W:21:LYS:HD3	1.90	0.54
24:X:26:ARG:O	25:Y:150:THR:HA	2.08	0.54
24:X:29:ILE:HG21	24:X:37:ALA:O	2.08	0.54
24:X:71:LYS:O	24:X:97:VAL:HG23	2.08	0.54
24:X:106:LEU:HB3	24:X:110:MET:CE	2.38	0.54
25:Y:13:TYR:O	25:Y:16:GLN:HB2	2.08	0.54
25:Y:92:ARG:HB3	25:Y:94:GLU:CD	2.27	0.54
27:AA:87:ARG:CZ	27:AA:93:LEU:HD11	2.38	0.54
38:LA:74:ARG:NH1	38:LA:75:ALA:O	2.41	0.54
39:MA:66:VAL:HA	39:MA:69:LEU:CD2	2.38	0.54
54:BB:23:LEU:HD13	54:BB:24:SER:N	2.23	0.54
54:BB:95:THR:HG22	74:VB:16:PRO:HD2	1.90	0.54
54:BB:162:ILE:HG22	54:BB:164:LEU:H	1.73	0.54
55:CB:64:VAL:O	55:CB:64:VAL:HG12	2.08	0.54
58:FB:8:ARG:HH21	58:FB:8:ARG:HG3	1.73	0.54
64:LB:52:ARG:HB3	64:LB:52:ARG:NH1	2.22	0.54
67:OB:108:ASP:HA	67:OB:111:LYS:HB3	1.88	0.54
75:WB:61:SER:H	75:WB:64:VAL:HB	1.73	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:497:ASN:HB3	82:DC:500:ASP:OD1	2.08	0.54
82:DC:533:THR:H	82:DC:537:HIS:CD2	2.26	0.54
82:DC:826:HIS:HB2	82:DC:828:MET:SD	2.47	0.54
1:A:989:U:H1'	64:LB:126:THR:HG23	1.89	0.53
1:A:1085:G:N2	1:A:1087:A:H3'	2.22	0.53
1:A:1334:U:O2'	1:A:1335:U:H5'	2.08	0.53
2:B:87:U:H5"	22:V:172:PHE:CE2	2.43	0.53
2:B:444:U:H2'	2:B:445:G:C8	2.44	0.53
2:B:502:U:C2'	2:B:503:C:H5"	2.37	0.53
2:B:516:A:N6	2:B:574:U:H3	2.06	0.53
2:B:2080:C:H2'	2:B:2081:U:O4'	2.07	0.53
2:B:2193:U:O2	2:B:2313:A:N7	2.41	0.53
2:B:2512:C:H2'	2:B:2513:U:C6	2.42	0.53
2:B:2547:A:C2'	2:B:2548:C:H5'	2.38	0.53
2:B:2586:G:H2'	2:B:2586:G:OP1	2.09	0.53
2:B:2889:C:O2'	2:B:2890:A:H5'	2.08	0.53
2:B:3182:G:H2'	2:B:3183:A:O4'	2.08	0.53
2:B:3282:U:H2'	2:B:3283:U:H6	1.73	0.53
3:C:7:U:C2'	3:C:8:C:H5'	2.38	0.53
3:C:107:G:O4'	3:C:137:C:H2'	2.08	0.53
4:D:89:G:H5"	24:X:84:ARG:HE	1.72	0.53
4:D:103:A:H2'	4:D:104:A:H8	1.73	0.53
7:G:23:ALA:HB3	7:G:28:ARG:CZ	2.39	0.53
8:H:84:ARG:O	8:H:87:GLN:HB2	2.08	0.53
8:H:145:ILE:HG21	8:H:247:PHE:CZ	2.43	0.53
8:H:150:LEU:HD22	8:H:247:PHE:HE2	1.73	0.53
11:K:25:GLN:O	11:K:26:VAL:C	2.46	0.53
12:L:38:GLN:HG3	12:L:39:ALA:H	1.73	0.53
12:L:166:LEU:CB	12:L:167:PRO:HD3	2.37	0.53
18:R:29:ALA:O	18:R:31:LYS:HG3	2.08	0.53
22:V:130:ARG:C	22:V:132:PRO:HD3	2.28	0.53
23:W:151:ARG:O	23:W:154:ALA:HB3	2.08	0.53
24:X:151:PRO:O	24:X:152:LEU:HD23	2.08	0.53
25:Y:12:ARG:HH11	25:Y:12:ARG:HG2	1.73	0.53
25:Y:66:ASN:CB	33:GA:35:VAL:HG13	2.37	0.53
35:IA:80:ASN:OD1	35:IA:85:ALA:HB3	2.08	0.53
37:KA:50:ALA:HB1	37:KA:66:VAL:HG11	1.89	0.53
49:WA:40:LYS:HG2	49:WA:66:HIS:O	2.08	0.53
51:YA:156:ALA:HB3	51:YA:161:ILE:HG13	1.90	0.53
52:ZA:97:ARG:HD3	52:ZA:117:THR:OG1	2.08	0.53
54:BB:195:ILE:HA	54:BB:210:ILE:HG22	1.89	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:FB:90:LEU:HD22	58:FB:95:THR:HB	1.89	0.53
68:PB:145:ARG:HA	68:PB:145:ARG:NE	2.22	0.53
69:QB:86:ARG:HB3	69:QB:89:ARG:HB2	1.88	0.53
71:SB:80:LYS:HD2	71:SB:81:ASN:HB2	1.89	0.53
72:TB:23:ARG:HG3	72:TB:23:ARG:HH11	1.73	0.53
74:VB:47:VAL:HG23	74:VB:48:TYR:CD2	2.43	0.53
1:A:77:U:H4'	1:A:79:C:OP2	2.08	0.53
1:A:861:U:H2'	1:A:862:A:H5'	1.90	0.53
1:A:907:A:H1'	1:A:997:G:O2'	2.09	0.53
1:A:1505:A:C2	1:A:1550:A:H1'	2.43	0.53
1:A:1583:A:H61	1:A:1611:A:H3'	1.73	0.53
2:B:952:A:H4'	2:B:968:G:N2	2.23	0.53
2:B:1211:U:H2'	2:B:1212:A:C8	2.44	0.53
2:B:1220:U:C4'	2:B:1222:G:H1'	2.36	0.53
2:B:1441:G:H2'	2:B:1442:U:C6	2.44	0.53
2:B:1605:A:C2'	2:B:1606:U:H5"	2.37	0.53
2:B:1636:U:O2	2:B:1710:C:H4'	2.09	0.53
2:B:2308:C:H3'	2:B:2309:A:H8	1.73	0.53
2:B:2366:C:H2'	2:B:2367:A:H8	1.71	0.53
2:B:2402:A:H5"	8:H:67:THR:OG1	2.07	0.53
2:B:2614:G:H3'	2:B:2615:G:C8	2.43	0.53
2:B:2895:G:C2'	2:B:2896:A:H5"	2.36	0.53
2:B:3027:A:C1'	82:DC:790:GLY:H	2.21	0.53
2:B:3138:U:H2'	2:B:3139:A:C8	2.43	0.53
2:B:3185:U:O2'	20:T:126:VAL:HG23	2.08	0.53
3:C:64:U:H4'	39:MA:49:LYS:HG3	1.91	0.53
6:F:129:ALA:O	6:F:169:ILE:HB	2.07	0.53
6:F:206:PRO:CG	6:F:213:GLY:HA3	2.36	0.53
7:G:16:PHE:HD2	7:G:275:ARG:HD2	1.73	0.53
8:H:60:THR:CG2	8:H:77:VAL:HG22	2.34	0.53
11:K:107:ARG:HE	11:K:115:THR:CB	2.20	0.53
12:L:143:ILE:HG23	12:L:173:MET:HG3	1.89	0.53
13:M:114:VAL:O	13:M:123:ILE:HA	2.08	0.53
14:N:56:GLU:CA	14:N:131:ILE:HG12	2.37	0.53
18:R:16:GLU:HB3	24:X:149:LYS:HB3	1.90	0.53
18:R:60:LEU:HA	18:R:63:VAL:HG12	1.90	0.53
19:S:73:ARG:HD3	19:S:80:THR:HG23	1.90	0.53
24:X:44:PHE:CE1	25:Y:153:PRO:HB3	2.43	0.53
27:AA:23:MET:HG3	27:AA:99:ALA:CA	2.37	0.53
29:CA:115:ARG:HD3	29:CA:121:LYS:HB2	1.90	0.53
31:EA:68:ILE:H	31:EA:68:ILE:HD12	1.73	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:EA:108:GLU:O	31:EA:112:LYS:HG3	2.08	0.53
32:FA:122:PRO:HA	32:FA:142:GLY:C	2.29	0.53
32:FA:138:ILE:HG22	32:FA:139:ARG:HG3	1.89	0.53
39:MA:47:VAL:O	39:MA:51:ILE:HG13	2.08	0.53
39:MA:66:VAL:CA	39:MA:69:LEU:HG	2.35	0.53
40:NA:56:ARG:O	40:NA:60:LEU:HB2	2.08	0.53
43:QA:15:LYS:HA	43:QA:18:LYS:HG3	1.90	0.53
46:TA:2:VAL:HG22	46:TA:90:HIS:O	2.08	0.53
46:TA:98:LYS:NZ	46:TA:98:LYS:HB3	2.23	0.53
48:VA:36:GLN:HA	48:VA:39:HIS:CE1	2.43	0.53
51:YA:136:ARG:O	51:YA:215:VAL:HG23	2.08	0.53
51:YA:161:ILE:HA	51:YA:164:ILE:HD12	1.88	0.53
63:KB:95:ALA:HB2	63:KB:118:ILE:CG2	2.37	0.53
77:YB:66:PRO:HA	77:YB:71:ALA:HB2	1.90	0.53
82:DC:412:ARG:CB	82:DC:428:ILE:HG12	2.38	0.53
82:DC:542:LEU:O	82:DC:546:GLU:HG3	2.08	0.53
1:A:384:G:H2'	1:A:385:A:C8	2.43	0.53
1:A:549:G:O2'	1:A:550:A:H5'	2.08	0.53
1:A:964:U:H4'	1:A:965:U:O4'	2.07	0.53
1:A:1231:U:H4'	1:A:1259:U:H4'	1.90	0.53
1:A:1419:G:O3'	79:AC:54:LYS:HE2	2.08	0.53
1:A:1485:C:C4	1:A:1486:G:H1'	2.44	0.53
2:B:219:A:C8	2:B:1390:A:C8	2.94	0.53
2:B:910:G:H2'	2:B:911:C:C6	2.44	0.53
2:B:1381:A:H2'	2:B:1382:G:H8	1.72	0.53
2:B:1670:C:O2'	2:B:1860:G:H5"	2.08	0.53
2:B:1919:G:H2'	2:B:1920:U:H5'	1.89	0.53
2:B:2468:A:C6	2:B:2478:C:H4'	2.44	0.53
2:B:2646:C:H2'	2:B:2647:A:C8	2.43	0.53
2:B:2851:A:H2'	2:B:2852:C:O4'	2.08	0.53
2:B:3163:A:C3'	2:B:3164:C:H5"	2.39	0.53
3:C:8:C:H2'	3:C:9:A:C8	2.43	0.53
3:C:79:A:H2'	3:C:80:A:C8	2.43	0.53
3:C:139:U:H2'	3:C:140:G:C8	2.35	0.53
4:D:61:G:H2'	4:D:62:U:C6	2.44	0.53
4:D:108:A:H2'	4:D:109:G:C8	2.43	0.53
6:F:96:LEU:HD21	47:UA:83:ILE:HD12	1.89	0.53
7:G:54:THR:HG23	7:G:76:VAL:HG23	1.89	0.53
11:K:179:LEU:CD2	11:K:180:SER:H	2.11	0.53
13:M:47:LYS:HB2	18:R:7:VAL:HB	1.91	0.53
16:P:102:GLY:CA	16:P:140:GLY:H	2.11	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:W:104:ARG:HD3	23:W:105:LEU:N	2.22	0.53
23:W:154:ALA:HA	23:W:157:GLU:HG3	1.90	0.53
24:X:28:ARG:NH2	24:X:28:ARG:HG2	2.24	0.53
24:X:30:PHE:O	24:X:31:ALA:HB2	2.08	0.53
24:X:137:ARG:HG3	24:X:139:TYR:HE1	1.72	0.53
26:Z:36:TYR:O	26:Z:40:HIS:HB2	2.07	0.53
30:DA:68:GLY:HA3	30:DA:84:LYS:HD2	1.90	0.53
38:LA:3:GLN:CG	38:LA:29:ILE:HB	2.39	0.53
39:MA:22:VAL:O	39:MA:26:LYS:HG3	2.08	0.53
42:PA:14:LEU:O	42:PA:17:ARG:HD3	2.08	0.53
46:TA:2:VAL:O	46:TA:2:VAL:HG23	2.09	0.53
49:WA:218:GLY:O	49:WA:236:ALA:HB3	2.08	0.53
54:BB:129:VAL:HG12	54:BB:156:VAL:HG23	1.91	0.53
61:IB:125:VAL:CG1	61:IB:139:VAL:HA	2.32	0.53
68:PB:16:ARG:NH2	68:PB:19:ASN:HA	2.24	0.53
70:RB:29:THR:HA	70:RB:85:ARG:O	2.08	0.53
70:RB:55:PRO:CA	70:RB:91:ILE:HG12	2.38	0.53
74:VB:125:LEU:O	74:VB:129:VAL:HG23	2.08	0.53
82:DC:270:GLU:O	82:DC:271:ARG:O	2.26	0.53
82:DC:320:LEU:CD2	82:DC:324:MET:HG3	2.39	0.53
82:DC:364:ALA:HA	82:DC:367:ILE:HB	1.90	0.53
82:DC:589:LYS:HG3	82:DC:689:LEU:HD11	1.90	0.53
1:A:195:G:N7	58:FB:141:ARG:NH1	2.55	0.53
1:A:628:G:H2'	1:A:629:U:C6	2.42	0.53
1:A:629:U:H2'	1:A:630:A:C5'	2.37	0.53
1:A:971:A:H2'	1:A:972:G:O4'	2.08	0.53
1:A:1715:G:H3'	1:A:1716:C:C5'	2.39	0.53
2:B:451:U:H2'	2:B:452:G:C8	2.43	0.53
2:B:684:G:H5"	17:Q:35:ARG:NH2	2.24	0.53
2:B:995:U:H2'	2:B:996:A:H8	1.73	0.53
2:B:1100:U:H2'	2:B:1101:G:O4'	2.08	0.53
2:B:1496:C:O5'	2:B:1496:C:H6	1.92	0.53
2:B:1737:U:H2'	2:B:1738:C:C6	2.44	0.53
2:B:2163:C:P	6:F:234:LYS:HD2	2.48	0.53
2:B:2434:U:H5'	19:S:24:ARG:NH1	2.23	0.53
2:B:2527:G:O2'	2:B:2528:G:H5'	2.07	0.53
2:B:2989:U:H2'	2:B:2990:G:O4'	2.08	0.53
2:B:3119:U:H6	2:B:3119:U:C5'	2.21	0.53
2:B:3148:U:H4'	7:G:104:THR:HB	1.91	0.53
2:B:3273:A:H2'	2:B:3274:A:O4'	2.08	0.53
2:B:3393:U:H2'	2:B:3394:U:H6	1.73	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:115:C:H2'	3:C:116:G:H4'	1.89	0.53
5:E:74:VAL:O	5:E:78:LYS:HG2	2.08	0.53
6:F:22:LEU:H	6:F:22:LEU:CD1	2.12	0.53
8:H:112:LYS:HA	19:S:202:TYR:HD2	1.72	0.53
12:L:91:PHE:O	12:L:95:ASN:HB2	2.08	0.53
13:M:7:GLU:HB3	13:M:56:ALA:CB	2.25	0.53
13:M:21:LYS:HG3	18:R:8:LYS:HG3	1.91	0.53
13:M:171:ASP:OD2	13:M:173:ARG:HB2	2.09	0.53
17:Q:63:VAL:HA	17:Q:66:ASN:ND2	2.23	0.53
17:Q:67:ARG:HD3	17:Q:68:LYS:N	2.24	0.53
17:Q:189:GLU:HA	17:Q:192:GLU:HG2	1.90	0.53
19:S:7:LEU:O	19:S:10:LEU:HB3	2.09	0.53
19:S:44:ARG:NH2	19:S:47:LYS:HZ1	2.06	0.53
19:S:187:ARG:O	19:S:190:THR:HG22	2.08	0.53
22:V:81:VAL:CG2	22:V:101:VAL:HA	2.38	0.53
29:CA:63:ILE:HD11	29:CA:84:PHE:CD1	2.43	0.53
34:HA:83:LYS:HD3	34:HA:85:PHE:CE2	2.44	0.53
35:IA:54:GLU:HA	35:IA:57:GLN:NE2	2.24	0.53
37:KA:36:ALA:O	37:KA:38:PRO:HD3	2.08	0.53
42:PA:77:ARG:NH1	42:PA:77:ARG:HB2	2.23	0.53
50:XA:37:VAL:HG23	50:XA:47:VAL:O	2.09	0.53
50:XA:62:ARG:NH1	71:SB:78:LEU:HD22	2.23	0.53
51:YA:170:GLU:O	51:YA:174:LYS:HG3	2.08	0.53
54:BB:159:THR:CG2	54:BB:173:ILE:HB	2.37	0.53
55:CB:178:GLY:HA2	55:CB:209:TYR:CB	2.38	0.53
56:DB:189:HIS:ND1	56:DB:190:GLN:OE1	2.40	0.53
70:RB:33:GLN:O	70:RB:37:VAL:HG23	2.07	0.53
72:TB:31:SER:OG	72:TB:34:ILE:HG13	2.08	0.53
74:VB:35:VAL:HG13	74:VB:36:SER:H	1.72	0.53
82:DC:495:VAL:HG13	82:DC:504:LEU:CD2	2.38	0.53
83:EC:6930:G:H3'	83:EC:6931:U:H5"	1.90	0.53
1:A:250:C:H5'	1:A:250:C:H6	1.73	0.53
1:A:312:A:C2	1:A:314:C:H2'	2.44	0.53
1:A:341:A:H2'	1:A:342:C:C6	2.43	0.53
1:A:953:G:H4'	63:KB:114:ARG:NE	2.24	0.53
1:A:981:U:O2'	1:A:982:U:H5'	2.08	0.53
1:A:1205:C:H2'	1:A:1206:U:H5'	1.89	0.53
1:A:1673:G:H2'	1:A:1674:C:C6	2.43	0.53
1:A:1722:A:H2'	1:A:1723:U:H5'	1.91	0.53
2:B:138:U:H2'	2:B:139:G:C8	2.44	0.53
2:B:430:U:O4'	37:KA:90:PRO:HB3	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:500:C:H4'	10:J:80:ASN:HD21	1.74	0.53
2:B:589:A:N6	2:B:610:G:H1'	2.24	0.53
2:B:600:G:H21	2:B:603:A:N6	1.96	0.53
2:B:702:C:H2'	2:B:703:G:C8	2.44	0.53
2:B:904:A:H5'	2:B:1536:G:O2'	2.09	0.53
2:B:974:G:H2'	2:B:975:C:C6	2.44	0.53
2:B:990:U:H2'	2:B:991:G:H5"	1.89	0.53
2:B:1394:A:C2'	2:B:1395:G:H5'	2.38	0.53
2:B:1440:G:O2'	2:B:1441:G:H5'	2.09	0.53
2:B:1695:U:H1'	2:B:1749:A:N6	2.23	0.53
2:B:2273:G:N2	2:B:2311:G:H2'	2.23	0.53
2:B:2724:U:H5"	25:Y:54:HIS:CG	2.44	0.53
2:B:2755:C:O5'	2:B:2755:C:H6	1.91	0.53
2:B:2776:C:H5"	2:B:2777:G:O5'	2.09	0.53
2:B:2909:U:H2'	2:B:2910:A:C5'	2.39	0.53
2:B:3072:C:H2'	2:B:3073:A:O4'	2.08	0.53
2:B:3252:G:H2'	2:B:3253:G:O4'	2.08	0.53
4:D:27:A:H2'	4:D:28:C:O4'	2.08	0.53
4:D:99:G:OP1	24:X:53:LYS:HD3	2.08	0.53
6:F:211:HIS:CD2	6:F:219:ILE:HG23	2.44	0.53
7:G:280:HIS:HB3	7:G:324:VAL:CG1	2.22	0.53
13:M:133:THR:O	13:M:146:LEU:HA	2.09	0.53
14:N:71:CYS:HB2	14:N:158:LYS:NZ	2.24	0.53
15:O:86:VAL:HG13	15:O:111:ASP:HB3	1.88	0.53
15:O:86:VAL:CG1	15:O:111:ASP:HB3	2.38	0.53
15:O:105:GLY:HA2	15:O:125:MET:O	2.09	0.53
19:S:12:ARG:HB2	19:S:13:LYS:HE2	1.89	0.53
19:S:144:ARG:HH11	19:S:144:ARG:HG2	1.73	0.53
20:T:142:SER:HB3	20:T:147:TRP:HB3	1.90	0.53
21:U:31:GLU:HG3	21:U:60:PHE:CD2	2.43	0.53
24:X:108:GLN:NE2	24:X:108:GLN:HA	2.24	0.53
25:Y:42:ILE:HD12	25:Y:76:ILE:HD11	1.89	0.53
29:CA:108:LEU:HD12	29:CA:126:LEU:O	2.08	0.53
30:DA:37:LYS:H	30:DA:37:LYS:CD	2.20	0.53
37:KA:49:ILE:CG1	37:KA:100:ILE:HG12	2.38	0.53
48:VA:45:LEU:HD13	48:VA:49:ALA:HB3	1.89	0.53
48:VA:116:PRO:O	48:VA:161:ALA:HB1	2.08	0.53
51:YA:164:ILE:O	51:YA:168:ILE:HG13	2.06	0.53
54:BB:87:MET:O	54:BB:122:LYS:HE3	2.08	0.53
54:BB:240:LYS:HE2	54:BB:240:LYS:H	1.73	0.53
55:CB:114:ILE:O	55:CB:118:LEU:HG	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
57:EB:117:THR:HG22	57:EB:120:ALA:CB	2.37	0.53
61:IB:90:TYR:O	61:IB:91:LEU:HD23	2.08	0.53
63:KB:135:LEU:HB3	63:KB:136:PRO:HD2	1.90	0.53
67:OB:66:VAL:CG1	67:OB:69:ILE:HD11	2.39	0.53
71:SB:38:LYS:HD2	71:SB:49:GLU:OE1	2.07	0.53
76:XB:9:GLY:O	76:XB:10:ARG:HG2	2.09	0.53
82:DC:406:LYS:HA	82:DC:446:ASP:O	2.08	0.53
1:A:94:U:C2'	1:A:95:G:H5'	2.39	0.53
1:A:454:U:H5'	54:BB:66:MET:HG3	1.91	0.53
1:A:474:A:H5"	59:GB:144:PRO:HD2	1.90	0.53
2:B:106:A:H3'	2:B:107:A:C8	2.44	0.53
2:B:586:C:H2'	2:B:587:U:C6	2.43	0.53
2:B:661:G:C6	32:FA:17:ALA:HB3	2.44	0.53
2:B:937:G:OP1	32:FA:27:LYS:HB2	2.09	0.53
2:B:1024:G:H2'	2:B:1026:A:OP2	2.07	0.53
2:B:1073:U:C1'	33:GA:50:THR:HG1	2.21	0.53
2:B:1298:C:O2'	2:B:1299:U:H5'	2.09	0.53
2:B:2130:G:N2	2:B:2132:C:H5"	2.24	0.53
2:B:2422:C:H2'	2:B:2423:U:C6	2.43	0.53
2:B:2867:C:H5'	2:B:2867:C:H6	1.74	0.53
2:B:2943:G:H2'	2:B:2944:U:O4'	2.09	0.53
2:B:3107:U:H2'	2:B:3108:G:H8	1.73	0.53
2:B:3321:C:H2'	2:B:3322:A:O4'	2.08	0.53
4:D:6:C:H2'	4:D:7:G:C4'	2.39	0.53
6:F:137:ILE:HG12	6:F:149:ARG:HH21	1.74	0.53
7:G:76:VAL:HB	7:G:323:MET:HG2	1.91	0.53
7:G:148:LEU:HD11	7:G:192:VAL:HG21	1.89	0.53
8:H:48:GLN:HG3	8:H:49:ALA:H	1.74	0.53
9:I:107:ARG:NH2	9:I:120:LYS:HA	2.23	0.53
9:I:294:ALA:HB2	14:N:210:ILE:HD13	1.91	0.53
11:K:84:VAL:HA	11:K:139:PRO:HD2	1.89	0.53
11:K:173:LEU:HD13	11:K:178:ILE:HD12	1.91	0.53
11:K:189:ILE:HG23	11:K:190:THR:N	2.18	0.53
11:K:236:ILE:HG13	11:K:239:LEU:HD13	1.90	0.53
13:M:138:THR:HG22	13:M:139:ASN:N	2.20	0.53
15:O:43:GLN:NE2	15:O:71:VAL:HG13	2.23	0.53
15:O:55:ARG:C	15:O:58:GLY:H	2.11	0.53
17:Q:86:THR:HB	17:Q:89:TYR:HB2	1.89	0.53
18:R:13:ARG:HB3	18:R:65:LEU:CD2	2.39	0.53
18:R:125:LYS:HA	18:R:128:ARG:HB3	1.91	0.53
19:S:66:VAL:HG21	19:S:98:LEU:HB3	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:U:2:ALA:HB3	21:U:18:ARG:HH12	1.73	0.53
22:V:182:LYS:HG3	32:FA:56:VAL:HG22	1.89	0.53
24:X:63:GLN:C	24:X:64:ILE:HG13	2.28	0.53
24:X:89:ASN:HD21	25:Y:155:PRO:HB3	1.74	0.53
25:Y:89:LEU:HB3	25:Y:91:LEU:HD21	1.90	0.53
34:HA:46:ALA:HA	34:HA:53:LYS:NZ	2.24	0.53
35:IA:12:TYR:N	35:IA:12:TYR:CD2	2.77	0.53
47:UA:60:CYS:HB3	47:UA:62:LYS:HG2	1.90	0.53
59:GB:106:GLU:O	59:GB:107:ARG:HG2	2.08	0.53
60:HB:50:THR:HG22	60:HB:55:VAL:HG13	1.91	0.53
63:KB:53:LEU:O	63:KB:57:ALA:HB3	2.08	0.53
65:MB:81:ARG:HB3	65:MB:117:GLY:CA	2.38	0.53
67:OB:3:ARG:N	67:OB:3:ARG:HD3	2.24	0.53
70:RB:96:PRO:HG2	70:RB:99:ILE:HG22	1.91	0.53
78:ZB:40:ILE:HG22	78:ZB:41:VAL:N	2.22	0.53
1:A:14:C:H5'	52:ZA:164:SER:HB2	1.90	0.53
1:A:121:U:H1'	54:BB:33:ALA:O	2.09	0.53
1:A:138:A:H62	1:A:266:A:N6	2.05	0.53
1:A:152:U:O2'	56:DB:15:THR:HG23	2.09	0.53
1:A:495:C:H5'	1:A:496:G:C1'	2.39	0.53
1:A:1013:A:H3'	1:A:1014:G:C8	2.44	0.53
1:A:1559:A:H5'	1:A:1561:U:OP2	2.08	0.53
1:A:1637:C:H5'	83:EC:6952:U:N3	2.23	0.53
2:B:8:C:H2'	2:B:9:U:C6	2.43	0.53
2:B:157:A:C8	40:NA:26:ILE:HG12	2.42	0.53
2:B:289:A:H2	19:S:93:LYS:HD3	1.71	0.53
2:B:665:A:C5'	19:S:199:LEU:HD21	2.39	0.53
2:B:841:A:H4'	23:W:126:GLU:HG2	1.90	0.53
2:B:1388:U:O4	8:H:186:LYS:HD2	2.08	0.53
2:B:1459:C:O2'	2:B:1460:A:H5'	2.09	0.53
2:B:1508:C:H2'	2:B:1509:A:O4'	2.09	0.53
2:B:1856:C:H5"	38:LA:14:ASN:HB2	1.90	0.53
2:B:3092:C:C2'	27:AA:12:ARG:HH21	2.22	0.53
7:G:116:ARG:HA	7:G:122:TRP:CE3	2.43	0.53
7:G:173:GLN:C	7:G:175:LYS:H	2.12	0.53
7:G:385:LYS:HG3	7:G:386:ASP:N	2.23	0.53
8:H:321:LYS:HA	8:H:324:LEU:HB3	1.90	0.53
11:K:67:ARG:O	11:K:70:LYS:HB3	2.09	0.53
11:K:155:LYS:HE2	11:K:155:LYS:C	2.29	0.53
15:O:155:THR:HG22	15:O:156:LYS:N	2.24	0.53
18:R:45:LEU:HD11	18:R:55:ARG:O	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:X:80:ARG:HG3	25:Y:156:TYR:N	2.20	0.53
24:X:138:GLN:HA	24:X:141:LYS:HB3	1.90	0.53
25:Y:86:GLU:HG2	25:Y:87:LYS:N	2.23	0.53
50:XA:135:GLU:HA	50:XA:138:TYR:HD2	1.73	0.53
50:XA:197:ILE:HD13	50:XA:197:ILE:N	2.22	0.53
55:CB:225:ARG:HG3	78:ZB:61:ARG:HD2	1.91	0.53
61:IB:93:TYR:CE2	61:IB:95:PRO:HA	2.44	0.53
69:QB:40:SER:HB3	69:QB:43:ASN:HB2	1.90	0.53
69:QB:42:GLY:HA3	69:QB:84:LYS:HA	1.91	0.53
82:DC:204:PRO:HA	82:DC:209:VAL:CB	2.37	0.53
1:A:495:C:C3'	1:A:496:G:H4'	2.30	0.53
1:A:505:A:N3	1:A:505:A:H2'	2.23	0.53
1:A:1163:A:H2'	1:A:1164:G:C4'	2.39	0.53
1:A:1213:G:H1'	1:A:1244:A:H62	1.74	0.53
1:A:1358:G:H4'	69:QB:130:ARG:HB2	1.90	0.53
1:A:1557:U:O2'	1:A:1558:U:H2'	2.09	0.53
1:A:1712:A:H3'	1:A:1713:G:H5"	1.91	0.53
1:A:1741:U:H2'	1:A:1742:U:H6	1.73	0.53
2:B:200:C:H41	2:B:217:U:H2'	1.74	0.53
2:B:428:A:H1'	37:KA:25:PRO:HB3	1.90	0.53
2:B:1231:A:C5'	2:B:1232:C:H5'	2.35	0.53
2:B:1472:U:H2'	2:B:1473:G:H8	1.70	0.53
2:B:1480:G:H21	2:B:1872:C:H5	1.56	0.53
2:B:2296:A:H2'	2:B:2297:U:H5'	1.91	0.53
2:B:2747:A:H2'	2:B:2748:A:C8	2.43	0.53
2:B:2748:A:N3	9:I:36:LEU:HG	2.24	0.53
7:G:167:ARG:HH11	7:G:167:ARG:HG3	1.74	0.53
8:H:206:LEU:HD21	8:H:228:ALA:CB	2.37	0.53
9:I:33:ARG:CD	9:I:37:VAL:HG21	2.39	0.53
9:I:103:LEU:CD1	9:I:107:ARG:HG3	2.39	0.53
10:J:70:LYS:HG3	10:J:71:VAL:N	2.24	0.53
12:L:178:ALA:CB	12:L:218:ILE:HD13	2.37	0.53
15:O:84:LEU:HD12	15:O:167:TYR:HD1	1.73	0.53
17:Q:67:ARG:CB	32:FA:105:LEU:HG	2.37	0.53
24:X:43:TYR:O	24:X:46:GLN:HB2	2.09	0.53
27:AA:19:VAL:HG22	27:AA:36:ILE:HG22	1.91	0.53
27:AA:85:TRP:HE1	27:AA:87:ARG:CG	2.21	0.53
42:PA:28:ASN:HB2	42:PA:40:GLN:HB3	1.90	0.53
47:UA:48:LYS:O	47:UA:55:TRP:HA	2.09	0.53
52:ZA:152:HIS:O	52:ZA:194:GLU:HB2	2.09	0.53
54:BB:31:PRO:HB2	54:BB:38:LEU:HD21	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:CB:42:LEU:HB2	55:CB:46:TRP:C	2.29	0.53
55:CB:183:ALA:HB1	55:CB:190:ILE:HD13	1.91	0.53
60:HB:15:LEU:HD12	60:HB:19:GLY:HA2	1.90	0.53
61:IB:3:THR:C	61:IB:4:GLU:HG2	2.30	0.53
61:IB:54:ILE:H	61:IB:82:ARG:HH22	1.55	0.53
67:OB:30:THR:HG23	67:OB:31:ASN:N	2.24	0.53
68:PB:17:LEU:HD12	68:PB:18:LEU:HD23	1.89	0.53
68:PB:88:ARG:HG2	68:PB:88:ARG:HH21	1.73	0.53
69:QB:30:VAL:HG12	69:QB:54:PHE:CD2	2.43	0.53
69:QB:31:PRO:HG2	69:QB:103:LYS:HD3	1.91	0.53
69:QB:34:VAL:HG23	69:QB:54:PHE:HB2	1.90	0.53
76:XB:18:VAL:HG21	76:XB:31:PRO:HB3	1.90	0.53
77:YB:29:ARG:HH11	77:YB:29:ARG:HG3	1.72	0.53
80:BC:46:ASN:O	80:BC:47:VAL:HG12	2.09	0.53
82:DC:374:PRO:HG3	82:DC:450:ALA:HB3	1.91	0.53
83:EC:6772:G:H3'	83:EC:6773:G:H5"	1.89	0.53
1:A:14:C:H4'	1:A:1086:A:O4'	2.09	0.53
1:A:1039:A:H62	1:A:1091:A:H2'	1.74	0.53
1:A:1099:U:H2'	1:A:1100:G:H21	1.74	0.53
1:A:1417:A:H2'	1:A:1418:G:C8	2.44	0.53
2:B:989:A:H2'	2:B:990:U:C6	2.44	0.53
2:B:1105:A:H2'	2:B:1106:G:O4'	2.09	0.53
2:B:1222:G:H3'	48:VA:56:ASN:CG	2.29	0.53
2:B:1259:A:H1'	2:B:1280:C:O2'	2.09	0.53
2:B:1722:U:H1'	23:W:96:ILE:HG12	1.91	0.53
2:B:1783:U:H2'	2:B:1784:G:H8	1.74	0.53
2:B:1799:A:H2'	2:B:1800:A:C8	2.44	0.53
2:B:2430:A:H2'	2:B:2431:C:H6	1.74	0.53
2:B:3133:C:H2'	2:B:3134:A:H5"	1.90	0.53
4:D:55:A:H2'	4:D:56:A:C8	2.43	0.53
4:D:118:A:H2'	4:D:119:U:O4'	2.09	0.53
5:E:124:LEU:HD23	5:E:128:LEU:HD11	1.91	0.53
5:E:172:VAL:HG23	5:E:173:GLU:N	2.18	0.53
6:F:234:LYS:HB3	6:F:238:ILE:HD11	1.90	0.53
7:G:169:THR:HG23	7:G:170:PRO:HD2	1.89	0.53
12:L:77:GLN:HA	12:L:80:TYR:HE1	1.74	0.53
13:M:92:TYR:HB3	13:M:99:ILE:HD12	1.91	0.53
18:R:45:LEU:HD12	18:R:57:ALA:N	2.24	0.53
20:T:48:PHE:O	20:T:51:LYS:HB3	2.09	0.53
23:W:147:ALA:O	23:W:151:ARG:HG3	2.08	0.53
24:X:73:LYS:HB3	24:X:75:PHE:CE1	2.44	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:Z:77:LYS:O	26:Z:81:LYS:HG3	2.09	0.53
54:BB:107:GLY:HA2	54:BB:189:LEU:HB3	1.89	0.53
55:CB:34:GLN:HA	55:CB:38:THR:HG23	1.91	0.53
55:CB:160:VAL:HB	78:ZB:43:ASN:O	2.09	0.53
59:GB:28:LEU:O	59:GB:31:ALA:HB3	2.08	0.53
61:IB:66:ILE:HG13	61:IB:128:CYS:SG	2.49	0.53
61:IB:67:ARG:HD3	61:IB:67:ARG:H	1.73	0.53
63:KB:23:PRO:HG2	63:KB:26:PHE:CB	2.34	0.53
66:NB:74:HIS:O	66:NB:78:VAL:HG23	2.09	0.53
69:QB:74:GLY:HA2	69:QB:77:ASN:HD22	1.74	0.53
71:SB:9:VAL:HG22	71:SB:10:GLU:H	1.74	0.53
82:DC:91:GLN:HE21	82:DC:347:THR:HB	1.72	0.53
82:DC:345:PRO:HG3	82:DC:399:ARG:HH21	1.73	0.53
1:A:336:G:O2'	1:A:337:G:H5'	2.09	0.53
1:A:820:U:C2'	1:A:821:U:H4'	2.39	0.53
1:A:1434:U:H2'	1:A:1435:G:H5"	1.90	0.53
1:A:1512:G:O2'	1:A:1513:G:H5'	2.08	0.53
2:B:27:C:C2'	2:B:28:C:H5'	2.39	0.53
2:B:374:A:C2	2:B:376:G:H5"	2.43	0.53
2:B:659:G:H1'	2:B:1435:A:N6	2.24	0.53
2:B:686:G:H2'	2:B:687:U:O4'	2.09	0.53
2:B:945:C:H1'	2:B:1407:A:H1'	1.91	0.53
2:B:1101:G:H2'	2:B:1102:A:O4'	2.09	0.53
2:B:1427:U:H5	32:FA:4:ARG:CZ	2.21	0.53
2:B:1586:G:H8	2:B:1586:G:O5'	1.91	0.53
2:B:1714:A:H61	2:B:1730:G:H1'	1.73	0.53
2:B:1917:C:H2'	2:B:1918:C:O4'	2.09	0.53
2:B:2108:C:H2'	2:B:2109:U:C6	2.44	0.53
2:B:2327:U:H2'	2:B:2328:U:C6	2.44	0.53
2:B:2715:A:C2	46:TA:85:LEU:HD11	2.44	0.53
2:B:2777:G:H22	32:FA:58:MET:CE	2.22	0.53
2:B:2854:U:H2'	2:B:2855:U:C6	2.44	0.53
2:B:2878:G:H5"	7:G:5:LYS:CE	2.38	0.53
3:C:38:U:H5	39:MA:78:LYS:HD3	1.74	0.53
3:C:74:U:H2'	30:DA:74:TYR:OH	2.09	0.53
4:D:24:A:H2'	4:D:25:G:O4'	2.09	0.53
6:F:242:ARG:CG	6:F:243:THR:H	2.22	0.53
10:J:137:ASP:O	10:J:141:VAL:HG23	2.09	0.53
13:M:84:LYS:O	13:M:186:PHE:HB3	2.09	0.53
13:M:90:MET:HA	13:M:181:VAL:HA	1.91	0.53
14:N:9:TYR:CD2	14:N:97:LEU:HD22	2.44	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:P:114:ARG:O	16:P:114:ARG:HD3	2.08	0.53
17:Q:75:PHE:O	17:Q:79:GLU:HB2	2.09	0.53
18:R:20:VAL:HG22	18:R:66:THR:CG2	2.38	0.53
19:S:145:ASP:C	19:S:147:ARG:H	2.11	0.53
23:W:23:TRP:HB2	23:W:53:LYS:CE	2.38	0.53
24:X:89:ASN:HD21	25:Y:155:PRO:CB	2.22	0.53
32:FA:131:SER:HB3	32:FA:134:ALA:HB2	1.91	0.53
37:KA:42:GLN:HA	37:KA:45:LEU:HG	1.89	0.53
42:PA:38:PHE:HE1	42:PA:40:GLN:HB2	1.74	0.53
48:VA:77:LEU:N	48:VA:78:PRO:HD2	2.24	0.53
49:WA:59:ARG:HH11	49:WA:96:THR:HA	1.72	0.53
50:XA:20:ALA:HB2	50:XA:172:LEU:CD1	2.22	0.53
50:XA:181:VAL:HG23	50:XA:182:LEU:N	2.24	0.53
54:BB:58:GLY:HA2	54:BB:61:VAL:CG2	2.39	0.53
59:GB:119:ALA:HA	59:GB:124:HIS:HD2	1.74	0.53
65:MB:15:HIS:O	65:MB:22:LEU:HB2	2.08	0.53
68:PB:100:THR:HG22	68:PB:108:LYS:HG2	1.90	0.53
69:QB:117:SER:H	69:QB:122:ARG:HA	1.74	0.53
69:QB:130:ARG:HD3	69:QB:131:ASP:N	2.23	0.53
76:XB:44:ILE:H	76:XB:44:ILE:CD1	2.14	0.53
82:DC:185:VAL:O	82:DC:189:VAL:HG23	2.08	0.53
82:DC:561:VAL:HG21	82:DC:774:VAL:HG12	1.89	0.53
82:DC:713:THR:O	82:DC:717:PHE:HB2	2.08	0.53
82:DC:743:ILE:HG23	82:DC:744:TYR:N	2.23	0.53
1:A:333:A:OP1	58:FB:49:ARG:N	2.41	0.52
1:A:504:U:C2'	1:A:505:A:H4'	2.34	0.52
1:A:514:G:O2'	1:A:515:A:H5'	2.09	0.52
1:A:915:A:H3'	1:A:916:U:C6	2.44	0.52
2:B:43:A:H5"	19:S:83:LYS:NZ	2.24	0.52
2:B:86:G:N2	2:B:98:G:H2'	2.24	0.52
2:B:275:U:H2'	2:B:276:U:C6	2.43	0.52
2:B:684:G:C5'	17:Q:35:ARG:HH22	2.21	0.52
2:B:1062:A:H5"	2:B:1063:G:H5'	1.91	0.52
2:B:1119:C:H2'	2:B:1120:A:C8	2.45	0.52
2:B:2163:C:OP1	6:F:234:LYS:HD2	2.10	0.52
2:B:2528:G:H2'	2:B:2529:A:O4'	2.09	0.52
2:B:2674:A:C5'	15:O:105:GLY:HA3	2.28	0.52
2:B:2907:G:H1'	44:RA:100:TYR:HE2	1.74	0.52
2:B:3044:G:O2'	7:G:13:HIS:HB2	2.08	0.52
2:B:3282:U:H2'	2:B:3283:U:C6	2.44	0.52
3:C:114:G:O2'	3:C:115:C:H5'	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:27:ALA:HB1	7:G:218:ILE:HG22	1.90	0.52
7:G:91:GLY:HA3	7:G:151:ILE:HG23	1.90	0.52
7:G:303:LYS:CD	7:G:361:THR:HG21	2.31	0.52
9:I:107:ARG:HD2	9:I:248:ARG:HE	1.74	0.52
12:L:82:LEU:CD2	12:L:87:ALA:HA	2.39	0.52
15:O:35:LYS:O	15:O:38:GLU:HB3	2.09	0.52
18:R:36:VAL:HG11	18:R:55:ARG:NH2	2.23	0.52
32:FA:149:ALA:HB3	40:NA:15:LYS:N	2.25	0.52
37:KA:49:ILE:HG23	37:KA:99:ARG:O	2.10	0.52
46:TA:8:ARG:HG2	46:TA:72:LEU:HD22	1.91	0.52
48:VA:32:ASN:HB2	48:VA:182:THR:OG1	2.09	0.52
50:XA:72:ASP:O	50:XA:118:PRO:HA	2.09	0.52
50:XA:122:ILE:HG12	50:XA:144:ILE:HB	1.90	0.52
53:AB:76:ARG:HD2	53:AB:77:PHE:CE1	2.44	0.52
53:AB:196:ARG:HB2	53:AB:196:ARG:HH11	1.72	0.52
55:CB:32:GLU:HB2	55:CB:45:LYS:HD2	1.90	0.52
58:FB:54:LYS:NZ	58:FB:175:GLN:HE22	2.06	0.52
66:NB:39:VAL:HG21	66:NB:45:ARG:HA	1.92	0.52
69:QB:47:PRO:HG2	69:QB:53:TRP:CB	2.39	0.52
70:RB:102:ARG:O	70:RB:105:GLN:HG3	2.09	0.52
72:TB:11:LEU:HD21	72:TB:73:GLY:HA2	1.91	0.52
74:VB:8:ARG:HE	74:VB:28:LEU:CD1	2.22	0.52
74:VB:15:ASN:ND2	74:VB:22:GLN:HB3	2.24	0.52
76:XB:41:ILE:H	76:XB:41:ILE:HD13	1.74	0.52
82:DC:144:ARG:HG3	82:DC:192:TYR:HB3	1.91	0.52
82:DC:226:ALA:HA	82:DC:240:MET:CE	2.39	0.52
82:DC:273:PHE:CE1	82:DC:277:ILE:HD12	2.43	0.52
82:DC:586:ILE:HD11	82:DC:691:VAL:HG13	1.90	0.52
82:DC:726:GLU:HB2	82:DC:727:PRO:HD2	1.91	0.52
1:A:959:U:H1'	63:KB:61:THR:HB	1.91	0.52
1:A:981:U:C2'	1:A:982:U:H5'	2.38	0.52
1:A:1527:C:O2'	55:CB:108:LEU:HD13	2.08	0.52
2:B:48:A:H4'	2:B:49:A:H5'	1.90	0.52
2:B:1037:C:O2'	2:B:1038:C:H5'	2.09	0.52
2:B:1245:A:H3'	2:B:1246:G:H5"	1.92	0.52
2:B:1473:G:H4'	23:W:23:TRP:HE1	1.75	0.52
2:B:1623:G:N2	2:B:1624:G:H1'	2.24	0.52
2:B:1756:C:C2'	2:B:1757:A:H5'	2.40	0.52
2:B:1940:G:H21	2:B:3362:A:H1'	1.74	0.52
3:C:76:C:H2'	3:C:77:A:O4'	2.10	0.52
4:D:69:C:H2'	4:D:70:U:H6	1.74	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:100:C:H3'	4:D:101:G:H8	1.73	0.52
5:E:9:VAL:HG23	5:E:216:LEU:HD21	1.91	0.52
5:E:112:ALA:HB2	5:E:135:PRO:HB2	1.91	0.52
6:F:135:ILE:HD13	6:F:149:ARG:CD	2.35	0.52
7:G:188:ILE:HA	7:G:191:LYS:HD2	1.92	0.52
9:I:146:LEU:HD11	9:I:148:ILE:HA	1.90	0.52
9:I:194:LEU:HD22	9:I:198:TYR:CE2	2.38	0.52
11:K:81:HIS:O	11:K:119:VAL:HG21	2.10	0.52
14:N:164:LYS:O	14:N:164:LYS:HG3	2.09	0.52
17:Q:50:PRO:HG2	17:Q:52:ASP:O	2.08	0.52
21:U:27:LYS:HG2	21:U:63:PHE:CZ	2.44	0.52
30:DA:27:ARG:HD2	30:DA:75:ARG:HB3	1.91	0.52
54:BB:128:LYS:HG2	54:BB:140:VAL:HB	1.92	0.52
55:CB:159:ALA:HB3	78:ZB:61:ARG:NH2	2.23	0.52
56:DB:209:ALA:O	56:DB:213:ALA:HB2	2.08	0.52
57:EB:114:ARG:HH11	57:EB:114:ARG:HG3	1.73	0.52
63:KB:98:VAL:CG1	63:KB:115:LEU:HB2	2.39	0.52
66:NB:125:GLU:HG2	66:NB:134:ALA:HB1	1.91	0.52
73:UB:13:ARG:HA	73:UB:16:ARG:HG3	1.92	0.52
77:YB:73:LEU:HD11	77:YB:79:PHE:CG	2.44	0.52
82:DC:315:GLU:HG2	82:DC:316:GLY:N	2.23	0.52
1:A:175:G:H1'	1:A:266:A:N6	2.23	0.52
1:A:396:G:O6	58:FB:26:LYS:HE3	2.09	0.52
1:A:576:G:O6	73:UB:65:ASN:HB3	2.10	0.52
1:A:759:U:O2'	1:A:760:A:H5'	2.09	0.52
1:A:1042:G:H3'	1:A:1043:A:H5"	1.92	0.52
1:A:1209:C:H2'	1:A:1210:C:C6	2.43	0.52
1:A:1779:U:H2'	1:A:1781:A:OP2	2.09	0.52
2:B:138:U:H2'	2:B:139:G:H8	1.74	0.52
2:B:271:C:H2'	2:B:272:G:O4'	2.09	0.52
2:B:310:U:H2'	2:B:311:C:O4'	2.10	0.52
2:B:608:A:H5'	8:H:322:GLN:CG	2.38	0.52
2:B:824:C:H5"	6:F:21:ARG:CD	2.39	0.52
2:B:916:G:O2'	2:B:917:A:C8	2.63	0.52
2:B:1203:A:H2'	2:B:1204:A:H8	1.68	0.52
2:B:1724:U:H1'	2:B:1725:C:C5	2.44	0.52
2:B:2146:C:H2'	2:B:2147:A:H8	1.73	0.52
2:B:2561:A:H2'	2:B:2562:A:H8	1.73	0.52
2:B:2723:U:H5"	25:Y:89:LEU:HD12	1.91	0.52
2:B:2922:G:H2'	2:B:2923:U:O4'	2.09	0.52
2:B:3049:A:C2	7:G:75:ALA:HB2	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:3073:A:H2'	2:B:3074:G:H5"	1.91	0.52
2:B:3241:G:H2'	2:B:3245:A:C2	2.44	0.52
3:C:43:A:H2'	3:C:44:A:O4'	2.09	0.52
8:H:49:ALA:HA	8:H:109:TRP:NE1	2.25	0.52
8:H:179:LEU:HD22	8:H:179:LEU:O	2.10	0.52
13:M:122:LYS:HE2	13:M:124:ARG:HG2	1.90	0.52
19:S:38:ARG:NH1	19:S:60:VAL:HG13	2.24	0.52
20:T:129:LEU:HG	20:T:130:LYS:N	2.24	0.52
21:U:70:THR:OG1	21:U:83:TRP:CH2	2.61	0.52
22:V:175:ALA:O	32:FA:51:GLY:HA2	2.09	0.52
24:X:42:TRP:O	24:X:46:GLN:HG3	2.08	0.52
24:X:80:ARG:HD3	24:X:122:HIS:ND1	2.25	0.52
26:Z:90:ARG:O	26:Z:91:ASP:HB3	2.08	0.52
37:KA:51:TYR:O	37:KA:66:VAL:HG13	2.09	0.52
48:VA:109:ALA:HA	48:VA:181:PHE:CD1	2.45	0.52
51:YA:70:LEU:HD11	51:YA:79:HIS:HD2	1.72	0.52
55:CB:187:ILE:H	55:CB:187:ILE:CD1	2.19	0.52
60:HB:23:ALA:HB1	60:HB:39:ASN:OD1	2.10	0.52
61:IB:85:VAL:HG22	61:IB:108:PRO:HB3	1.90	0.52
64:LB:29:HIS:CB	64:LB:41:ARG:HA	2.39	0.52
66:NB:117:LEU:N	66:NB:117:LEU:HD22	2.25	0.52
67:OB:66:VAL:HG12	67:OB:69:ILE:HD11	1.91	0.52
71:SB:71:ARG:HG3	77:YB:4:VAL:CG1	2.36	0.52
82:DC:307:LEU:O	82:DC:312:LYS:HE3	2.09	0.52
82:DC:634:TRP:CD2	82:DC:660:LYS:HG3	2.44	0.52
82:DC:634:TRP:CE3	82:DC:660:LYS:HG3	2.45	0.52
82:DC:749:LYS:HB2	82:DC:749:LYS:NZ	2.24	0.52
1:A:69:G:H2'	1:A:70:C:C6	2.45	0.52
1:A:201:G:H2'	1:A:202:A:C8	2.44	0.52
1:A:372:G:H1'	1:A:612:U:O2	2.10	0.52
1:A:1166:A:O2'	1:A:1587:A:H4'	2.10	0.52
1:A:1579:U:H2'	1:A:1580:C:C6	2.43	0.52
2:B:754:G:H2'	2:B:755:A:C8	2.45	0.52
2:B:882:A:H2'	2:B:883:A:H5"	1.92	0.52
2:B:1513:G:C6	2:B:1515:A:H1'	2.44	0.52
2:B:1594:A:C1'	2:B:1615:C:H1'	2.34	0.52
2:B:2865:U:C2'	2:B:2866:U:H5'	2.40	0.52
2:B:2884:C:O2'	2:B:2885:C:H5'	2.09	0.52
2:B:3068:U:OP1	23:W:58:HIS:HA	2.09	0.52
2:B:3132:C:H2'	2:B:3133:C:C6	2.44	0.52
2:B:3375:A:H2'	2:B:3378:C:C6	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:135:ILE:HD12	6:F:135:ILE:N	2.15	0.52
7:G:292:ALA:HA	7:G:303:LYS:C	2.30	0.52
8:H:209:TYR:HE2	8:H:212:ASP:HB2	1.69	0.52
8:H:346:LYS:H	8:H:346:LYS:CD	2.06	0.52
9:I:235:SER:O	9:I:239:ILE:HG13	2.09	0.52
10:J:165:LEU:HD23	10:J:165:LEU:N	2.25	0.52
11:K:79:ALA:HB2	25:Y:138:SER:N	2.23	0.52
18:R:40:ASP:HA	24:X:143:PHE:CE2	2.44	0.52
19:S:38:ARG:HH12	19:S:60:VAL:HG13	1.73	0.52
24:X:8:GLN:HB3	24:X:62:ASN:HB3	1.91	0.52
28:BA:49:ILE:O	28:BA:51:TRP:N	2.43	0.52
36:JA:118:LYS:HD3	36:JA:118:LYS:C	2.30	0.52
39:MA:38:ARG:C	39:MA:40:SER:H	2.12	0.52
47:UA:55:TRP:HB2	47:UA:64:VAL:HB	1.91	0.52
47:UA:87:ARG:HA	47:UA:90:VAL:CG2	2.40	0.52
48:VA:37:GLN:O	48:VA:41:VAL:HG23	2.09	0.52
48:VA:130:PRO:HB3	48:VA:145:ILE:HD11	1.90	0.52
49:WA:45:TRP:CZ2	49:WA:310:ILE:HD12	2.45	0.52
52:ZA:58:LEU:HD23	71:SB:15:ARG:HG3	1.89	0.52
52:ZA:120:GLU:HG3	52:ZA:123:GLY:H	1.73	0.52
54:BB:184:THR:HA	54:BB:189:LEU:HD12	1.90	0.52
54:BB:199:GLU:HB2	54:BB:207:LEU:O	2.10	0.52
57:EB:22:GLN:O	57:EB:26:GLU:HG3	2.10	0.52
58:FB:57:ALA:HB2	58:FB:177:GLY:HA2	1.91	0.52
64:LB:100:ALA:O	64:LB:104:ALA:HB2	2.08	0.52
66:NB:39:VAL:CG2	66:NB:45:ARG:HD3	2.39	0.52
69:QB:130:ARG:HH12	69:QB:134:ARG:HB2	1.73	0.52
72:TB:7:LEU:HD11	72:TB:37:PHE:CD2	2.44	0.52
82:DC:288:ILE:HG22	82:DC:319:LEU:HB3	1.91	0.52
83:EC:6791:A:N3	83:EC:6792:A:H4'	2.25	0.52
1:A:330:G:H2'	1:A:331:A:H8	1.73	0.52
1:A:752:A:H2	1:A:797:G:H1	1.54	0.52
1:A:1046:G:H2'	1:A:1047:G:C8	2.44	0.52
2:B:595:G:H2'	2:B:596:C:H6	1.69	0.52
2:B:764:U:H2'	2:B:764:U:O2	2.08	0.52
2:B:816:A:C1'	2:B:818:C:H41	2.21	0.52
2:B:1157:G:H4'	2:B:1169:A:O2'	2.09	0.52
2:B:1624:G:H2'	2:B:1625:A:H5'	1.91	0.52
2:B:2344:U:H2'	2:B:2345:A:C8	2.44	0.52
2:B:2512:C:H5"	12:L:245:LYS:HE2	1.92	0.52
2:B:3024:A:H4'	13:M:96:HIS:CE1	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:3133:C:H2'	2:B:3134:A:O4'	2.10	0.52
9:I:33:ARG:NE	9:I:50:ARG:HH12	2.06	0.52
9:I:56:THR:C	9:I:58:LYS:N	2.61	0.52
10:J:165:LEU:C	37:KA:6:ARG:HH21	2.13	0.52
11:K:222:HIS:HA	11:K:229:PHE:O	2.10	0.52
20:T:91:LYS:O	20:T:96:LYS:HE3	2.09	0.52
24:X:9:VAL:HG12	24:X:58:ILE:HG21	1.90	0.52
25:Y:55:LYS:C	25:Y:57:TYR:H	2.12	0.52
29:CA:63:ILE:HA	29:CA:86:VAL:HG23	1.91	0.52
30:DA:27:ARG:HG2	30:DA:78:PHE:CE1	2.45	0.52
31:EA:4:PHE:HE2	34:HA:63:SER:HB3	1.74	0.52
32:FA:73:LEU:HD13	32:FA:109:TYR:CE2	2.44	0.52
36:JA:120:THR:O	36:JA:122:PRO:HD2	2.10	0.52
38:LA:88:ARG:O	38:LA:92:ALA:HB2	2.09	0.52
47:UA:10:ILE:HG12	47:UA:10:ILE:O	2.08	0.52
54:BB:16:HIS:C	54:BB:18:TRP:H	2.13	0.52
54:BB:179:LYS:O	54:BB:181:VAL:HG23	2.08	0.52
66:NB:28:LEU:C	66:NB:29:ILE:HD12	2.29	0.52
74:VB:57:VAL:HG23	74:VB:72:PHE:O	2.09	0.52
1:A:762:A:H2'	1:A:763:G:C8	2.44	0.52
1:A:1134:C:H2'	1:A:1135:U:C6	2.45	0.52
1:A:1591:C:H2'	1:A:1592:A:H8	1.74	0.52
1:A:1593:A:H61	1:A:1603:U:H3	1.57	0.52
2:B:529:A:H2'	2:B:530:G:C8	2.45	0.52
2:B:757:C:C3'	2:B:758:C:H5"	2.40	0.52
2:B:1709:C:H4'	31:EA:15:ARG:HH22	1.75	0.52
2:B:2275:A:H61	2:B:2311:G:H1'	1.74	0.52
2:B:2658:G:H4'	2:B:2753:G:H21	1.74	0.52
2:B:2849:C:H2'	2:B:2850:G:O4'	2.09	0.52
3:C:7:U:H2'	3:C:8:C:H5'	1.90	0.52
3:C:130:C:H2'	3:C:131:A:O4'	2.09	0.52
6:F:32:LEU:HB2	6:F:163:ARG:NH2	2.25	0.52
8:H:151:VAL:HG22	8:H:255:PHE:CD2	2.45	0.52
15:O:55:ARG:HA	15:O:58:GLY:HA2	1.92	0.52
17:Q:75:PHE:CD1	17:Q:75:PHE:N	2.77	0.52
34:HA:67:VAL:HG12	34:HA:68:TYR:H	1.74	0.52
40:NA:56:ARG:HG2	40:NA:60:LEU:CD2	2.37	0.52
46:TA:43:TYR:HD1	46:TA:47:GLN:NE2	2.08	0.52
46:TA:87:ARG:HH11	46:TA:87:ARG:HB3	1.75	0.52
48:VA:15:LEU:HD12	48:VA:19:LEU:HD12	1.92	0.52
48:VA:130:PRO:HA	48:VA:150:ILE:HD11	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:WA:188:ILE:HG13	49:WA:189:GLU:N	2.24	0.52
52:ZA:227:PRO:HG3	52:ZA:230:TRP:CZ2	2.45	0.52
53:AB:78:LYS:N	53:AB:78:LYS:HD2	2.25	0.52
55:CB:58:LEU:HA	55:CB:61:TYR:CD2	2.36	0.52
56:DB:158:ILE:O	56:DB:158:ILE:HG23	2.10	0.52
63:KB:136:PRO:HB2	63:KB:138:ASN:ND2	2.24	0.52
68:PB:17:LEU:HD13	68:PB:66:LEU:HD13	1.91	0.52
69:QB:34:VAL:HG22	69:QB:34:VAL:O	2.10	0.52
73:UB:142:LYS:HG2	73:UB:143:PRO:HD2	1.91	0.52
75:WB:59:TYR:CE2	75:WB:64:VAL:HG21	2.45	0.52
76:XB:38:ARG:HG3	76:XB:38:ARG:NH1	2.22	0.52
1:A:856:A:C6	57:EB:116:ARG:HG3	2.44	0.52
1:A:975:C:C4’	63:KB:109:LYS:HB3	2.34	0.52
1:A:1066:C:O2’	51:YA:146:GLN:HG2	2.09	0.52
1:A:1434:U:C2’	1:A:1435:G:H3’	2.39	0.52
1:A:1581:C:H5’	66:NB:136:SER:CA	2.37	0.52
1:A:1639:C:H2’	1:A:1640:C:O4’	2.10	0.52
1:A:1716:C:HO2’	1:A:1717:G:H8	1.57	0.52
2:B:413:U:H2’	2:B:414:U:H6	1.74	0.52
2:B:868:C:H2’	2:B:869:G:C8	2.45	0.52
2:B:1189:C:O4’	2:B:1190:A:N7	2.42	0.52
2:B:1623:G:H2’	2:B:1624:G:O4’	2.09	0.52
2:B:2700:G:OP1	25:Y:17:ARG:HB2	2.09	0.52
2:B:2936:A:H2’	2:B:2937:G:C8	2.45	0.52
2:B:3041:U:H2’	2:B:3042:U:C6	2.45	0.52
2:B:3270:U:H5	21:U:178:ALA:HB2	1.75	0.52
2:B:3350:C:H2’	2:B:3352:U:OP2	2.10	0.52
2:B:3354:U:H5’	2:B:3356:G:C5’	2.40	0.52
3:C:38:U:C6	39:MA:78:LYS:HB3	2.45	0.52
3:C:43:A:C4’	41:OA:22:CYS:HA	2.40	0.52
4:D:33:U:H2’	4:D:34:C:C5	2.45	0.52
6:F:51:ASP:HB2	6:F:58:LEU:CD1	2.40	0.52
7:G:71:GLU:O	27:AA:89:ASP:HA	2.10	0.52
7:G:166:ILE:HG21	7:G:174:LYS:C	2.29	0.52
8:H:145:ILE:HG21	8:H:247:PHE:HZ	1.73	0.52
8:H:152:VAL:HG23	8:H:250:TRP:O	2.10	0.52
11:K:225:GLN:O	11:K:225:GLN:HG3	2.10	0.52
12:L:148:ALA:HA	12:L:201:THR:CG2	2.39	0.52
13:M:102:ASN:HA	13:M:136:PHE:HZ	1.73	0.52
19:S:65:ARG:HB3	19:S:129:TYR:HD1	1.74	0.52
21:U:17:ALA:HB1	21:U:94:LEU:HG	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:X:27:MET:SD	24:X:44:PHE:HB3	2.49	0.52
24:X:132:THR:HG22	24:X:144:LEU:HD13	1.91	0.52
27:AA:62:VAL:HG12	27:AA:63:LYS:N	2.24	0.52
28:BA:6:ASP:OD1	28:BA:31:PHE:HA	2.09	0.52
32:FA:8:THR:O	32:FA:11:HIS:HB2	2.09	0.52
49:WA:57:PRO:HG2	66:NB:100:GLN:HB2	1.92	0.52
50:XA:41:ARG:NH2	50:XA:41:ARG:HB3	2.24	0.52
50:XA:178:ALA:HA	50:XA:181:VAL:CG2	2.39	0.52
51:YA:73:LEU:HD21	51:YA:84:ILE:HB	1.92	0.52
54:BB:102:VAL:HG21	54:BB:182:TYR:CE1	2.45	0.52
63:KB:46:THR:O	63:KB:50:ILE:HG13	2.10	0.52
63:KB:91:LEU:HD21	63:KB:121:ARG:HD2	1.92	0.52
70:RB:62:VAL:HG13	70:RB:85:ARG:NE	2.25	0.52
71:SB:60:ARG:HG2	71:SB:65:SER:HB2	1.92	0.52
75:WB:76:ALA:O	75:WB:80:LEU:HG	2.10	0.52
76:XB:5:ARG:HB2	76:XB:8:ASN:O	2.09	0.52
78:ZB:44:VAL:HG11	78:ZB:48:VAL:HG21	1.90	0.52
80:BC:14:VAL:O	80:BC:18:THR:HG23	2.09	0.52
82:DC:129:VAL:HG12	82:DC:130:ASP:N	2.24	0.52
82:DC:702:GLY:O	82:DC:706:ILE:HD13	2.08	0.52
1:A:130:C:H2'	1:A:131:C:H5'	1.91	0.52
1:A:1280:C:H4'	70:RB:69:LYS:O	2.09	0.52
1:A:1628:U:OP1	76:XB:89:ARG:N	2.42	0.52
1:A:1634:C:N4	83:EC:6955:U:H5"	2.24	0.52
1:A:1715:G:H2'	1:A:1716:C:H4'	1.92	0.52
2:B:994:G:N2	2:B:1053:A:H2'	2.25	0.52
2:B:996:A:O2'	4:D:80:G:H4'	2.09	0.52
2:B:1233:G:N2	16:P:128:VAL:HG13	2.24	0.52
2:B:1263:A:C5	16:P:136:ALA:HB2	2.44	0.52
2:B:1441:G:H2'	2:B:1442:U:H6	1.74	0.52
2:B:1747:G:H4'	42:PA:4:GLU:CG	2.40	0.52
2:B:1806:A:H2'	2:B:1807:G:O4'	2.10	0.52
2:B:2178:A:OP2	6:F:151:PRO:HG2	2.09	0.52
2:B:2933:A:H2'	2:B:2934:A:O4'	2.09	0.52
3:C:75:G:O2'	43:QA:29:LEU:HD21	2.08	0.52
5:E:152:ARG:C	5:E:174:MET:HG2	2.29	0.52
7:G:102:LEU:HD12	7:G:103:THR:N	2.25	0.52
11:K:224:ILE:CG1	24:X:36:ILE:HG12	2.39	0.52
12:L:98:ARG:HD3	12:L:188:THR:O	2.10	0.52
15:O:47:GLN:HA	15:O:67:VAL:HG12	1.92	0.52
17:Q:41:THR:O	17:Q:44:ALA:HB3	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:U:52:LEU:HD13	21:U:52:LEU:O	2.09	0.52
22:V:165:ILE:HG12	22:V:166:LEU:N	2.25	0.52
23:W:110:ARG:C	23:W:112:ALA:H	2.13	0.52
24:X:9:VAL:HG23	24:X:27:MET:O	2.10	0.52
27:AA:112:SER:O	27:AA:113:ALA:HB2	2.09	0.52
34:HA:42:ILE:O	34:HA:42:ILE:HG13	2.09	0.52
39:MA:101:THR:C	39:MA:103:LYS:H	2.13	0.52
48:VA:61:ARG:HA	48:VA:64:ARG:HB3	1.90	0.52
48:VA:120:TRP:HB2	48:VA:157:LYS:HG2	1.92	0.52
49:WA:136:ILE:HD13	49:WA:136:ILE:N	2.24	0.52
50:XA:50:VAL:N	67:OB:109:LEU:HD11	2.24	0.52
51:YA:62:LYS:HA	51:YA:88:VAL:HB	1.91	0.52
51:YA:152:ARG:HG2	51:YA:152:ARG:O	2.09	0.52
55:CB:174:LEU:HB3	55:CB:210:ALA:CB	2.40	0.52
59:GB:112:GLN:HG3	59:GB:148:VAL:HG21	1.91	0.52
66:NB:131:GLY:HA3	66:NB:137:ARG:C	2.30	0.52
71:SB:80:LYS:HD2	71:SB:80:LYS:C	2.30	0.52
77:YB:30:SER:HB2	77:YB:48:SER:OG	2.10	0.52
82:DC:420:PRO:CG	82:DC:476:HIS:HA	2.40	0.52
82:DC:468:THR:HG23	82:DC:478:MET:SD	2.50	0.52
82:DC:588:LEU:CD1	82:DC:716:GLY:HA3	2.40	0.52
82:DC:823:ARG:HB3	82:DC:823:ARG:HH11	1.72	0.52
83:EC:6953:G:O2'	83:EC:6954:C:H5'	2.09	0.52
1:A:164:A:N3	56:DB:13:GLN:NE2	2.58	0.52
1:A:980:G:C2'	1:A:981:U:H5'	2.40	0.52
1:A:1358:G:H2'	1:A:1359:C:O4'	2.09	0.52
2:B:116:A:H4'	2:B:117:U:OP1	2.10	0.52
2:B:364:G:OP1	8:H:60:THR:HG23	2.09	0.52
2:B:516:A:H5"	8:H:344:ALA:CB	2.40	0.52
2:B:640:U:H4'	2:B:941:G:OP1	2.10	0.52
2:B:796:U:H2'	2:B:797:U:C6	2.45	0.52
2:B:1248:C:H2'	2:B:1249:G:H5'	1.92	0.52
2:B:1395:G:H2'	2:B:1396:C:O4'	2.09	0.52
2:B:1506:A:H1'	2:B:1848:G:O6	2.08	0.52
2:B:1508:C:H4'	2:B:2354:C:O4'	2.10	0.52
2:B:1751:G:H5"	42:PA:26:LYS:HZ1	1.74	0.52
2:B:2172:A:C2'	2:B:2173:U:H5'	2.39	0.52
2:B:2200:U:H2'	2:B:2201:G:O4'	2.10	0.52
2:B:2293:C:C5	2:B:2294:U:C5	2.98	0.52
2:B:2372:A:H4'	2:B:2373:A:H8	1.74	0.52
2:B:2571:U:H4'	2:B:2572:C:C5'	2.38	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:3109:G:C2'	2:B:3110:C:H5'	2.39	0.52
2:B:3345:G:H5"	58:FB:92:ARG:HG2	1.92	0.52
3:C:5:U:P	21:U:62:ARG:HG2	2.50	0.52
3:C:21:C:H5	3:C:22:U:C4	2.27	0.52
7:G:119:TYR:CZ	7:G:129:ALA:HB2	2.45	0.52
7:G:139:GLN:NE2	7:G:143:GLY:H	2.08	0.52
8:H:49:ALA:HA	8:H:109:TRP:HE1	1.74	0.52
12:L:65:LEU:HA	12:L:68:ARG:HB2	1.92	0.52
12:L:130:TYR:CD1	12:L:202:GLU:HB3	2.38	0.52
13:M:28:VAL:HG22	13:M:33:THR:CG2	2.39	0.52
16:P:81:VAL:HG21	16:P:117:ARG:HD2	1.91	0.52
17:Q:48:PRO:HG2	39:MA:115:LYS:HG2	1.92	0.52
17:Q:57:VAL:HG12	17:Q:69:VAL:CG2	2.39	0.52
18:R:35:ILE:HG22	18:R:46:ILE:HG22	1.91	0.52
20:T:30:GLY:HA2	20:T:101:ARG:NE	2.25	0.52
24:X:30:PHE:HE1	24:X:100:VAL:HG12	1.75	0.52
24:X:83:SER:C	24:X:85:SER:H	2.13	0.52
26:Z:37:LEU:O	26:Z:41:ILE:HG13	2.10	0.52
27:AA:34:LEU:HA	27:AA:61:THR:O	2.09	0.52
29:CA:59:SER:O	29:CA:63:ILE:HG22	2.09	0.52
39:MA:105:ARG:HG2	39:MA:106:LYS:N	2.24	0.52
43:QA:27:ILE:HA	43:QA:30:ARG:HG3	1.91	0.52
49:WA:115:ILE:O	49:WA:156:VAL:HG21	2.09	0.52
50:XA:139:VAL:HG13	50:XA:141:ILE:HG13	1.91	0.52
50:XA:184:LEU:HA	71:SB:43:GLY:CA	2.29	0.52
51:YA:67:GLU:HA	51:YA:84:ILE:O	2.10	0.52
52:ZA:72:LEU:C	52:ZA:73:LEU:HD12	2.29	0.52
54:BB:11:ARG:HB2	54:BB:11:ARG:HH21	1.74	0.52
54:BB:95:THR:CA	74:VB:16:PRO:HB2	2.40	0.52
55:CB:146:THR:HG22	55:CB:159:ALA:HB2	1.92	0.52
57:EB:135:ILE:HD13	57:EB:152:VAL:CG1	2.39	0.52
58:FB:74:LYS:HD2	58:FB:74:LYS:N	2.24	0.52
59:GB:134:ILE:HG22	59:GB:158:PHE:HA	1.92	0.52
61:IB:17:PRO:HG3	61:IB:63:LEU:HG	1.92	0.52
70:RB:26:LEU:O	70:RB:88:LYS:HA	2.10	0.52
78:ZB:26:THR:HB	78:ZB:44:VAL:HG22	1.92	0.52
82:DC:178:PHE:O	82:DC:182:VAL:HG23	2.09	0.52
82:DC:482:LYS:HE3	82:DC:484:SER:HB2	1.92	0.52
82:DC:821:ALA:HA	82:DC:824:LYS:HE3	1.91	0.52
1:A:2:A:H3'	52:ZA:179:VAL:HG11	1.92	0.52
1:A:153:G:H2'	1:A:154:G:C8	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:176:C:H2'	1:A:176:C:O2	2.09	0.52
1:A:214:G:OP1	1:A:215:A:H1'	2.09	0.52
1:A:354:C:H2'	1:A:355:G:C8	2.44	0.52
1:A:685:A:H2'	1:A:686:C:O4'	2.10	0.52
1:A:768:C:N1	59:GB:143:ILE:HD13	2.25	0.52
1:A:992:A:H2	1:A:1012:U:H3	1.53	0.52
1:A:1242:A:H2'	1:A:1243:G:H3'	1.91	0.52
1:A:1568:C:H41	68:PB:40:ARG:H	1.58	0.52
1:A:1772:C:H2'	1:A:1773:C:H5'	1.91	0.52
2:B:51:A:H2'	2:B:52:A:O4'	2.10	0.52
2:B:990:U:O2'	25:Y:100:LYS:HB2	2.10	0.52
2:B:1088:U:H2'	2:B:1089:G:O4'	2.10	0.52
2:B:1245:A:H3'	2:B:1246:G:C5'	2.40	0.52
2:B:1636:U:H5"	31:EA:74:VAL:O	2.10	0.52
2:B:1677:G:H2'	2:B:1678:G:C8	2.45	0.52
2:B:1683:A:H2'	2:B:1684:U:H6	1.75	0.52
2:B:1825:G:H5"	42:PA:48:SER:CB	2.39	0.52
2:B:1934:G:C3'	2:B:1935:G:H5"	2.39	0.52
2:B:3191:G:H2'	2:B:3192:U:O4'	2.09	0.52
6:F:180:LEU:HD22	47:UA:18:TYR:HD2	1.75	0.52
6:F:187:HIS:CA	6:F:190:ARG:HB3	2.36	0.52
7:G:5:LYS:HG3	7:G:6:TYR:CE1	2.45	0.52
8:H:6:VAL:HG21	8:H:149:PRO:HD2	1.92	0.52
8:H:295:ILE:O	8:H:299:ILE:HG12	2.10	0.52
8:H:359:LEU:CD2	24:X:64:ILE:HG12	2.40	0.52
9:I:37:VAL:HG12	25:Y:27:LEU:HD11	1.91	0.52
10:J:76:LEU:O	10:J:77:ARG:HB2	2.10	0.52
16:P:76:SER:HA	16:P:80:LEU:HG	1.92	0.52
19:S:110:ALA:HB1	19:S:113:LEU:HD23	1.91	0.52
21:U:108:ASP:O	21:U:110:THR:N	2.40	0.52
24:X:73:LYS:HE2	24:X:97:VAL:C	2.30	0.52
24:X:154:HIS:CD2	24:X:170:THR:HG22	2.45	0.52
33:GA:38:LYS:HA	33:GA:41:ARG:NH1	2.25	0.52
38:LA:25:THR:HG23	38:LA:30:LEU:HA	1.91	0.52
53:AB:60:GLY:HA3	53:AB:64:ARG:HB3	1.91	0.52
53:AB:62:ASN:HB2	60:HB:92:ILE:HB	1.92	0.52
54:BB:95:THR:HG22	74:VB:16:PRO:HB2	1.92	0.52
54:BB:123:LEU:HG	54:BB:159:THR:OG1	2.09	0.52
54:BB:248:ILE:HG13	54:BB:249:ALA:N	2.25	0.52
55:CB:93:LEU:HA	55:CB:172:ILE:CG2	2.40	0.52
56:DB:39:GLU:HG2	56:DB:47:GLY:H	1.74	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:DB:67:VAL:HG22	56:DB:100:ALA:HB2	1.91	0.52
58:FB:171:SER:O	58:FB:173:PRO:HD3	2.10	0.52
59:GB:175:ARG:O	59:GB:179:ARG:HG3	2.10	0.52
69:QB:84:LYS:HE2	69:QB:94:ILE:HG21	1.92	0.52
1:A:273:G:H2'	1:A:274:G:O4'	2.10	0.51
1:A:421:A:O2'	1:A:422:G:H5'	2.09	0.51
1:A:478:A:C2'	1:A:479:C:H5'	2.39	0.51
1:A:1118:G:H2'	1:A:1119:G:C8	2.45	0.51
1:A:1136:U:OP1	73:UB:118:PRO:HA	2.10	0.51
1:A:1279:C:H4'	79:AC:44:ARG:HH22	1.75	0.51
2:B:33:G:P	19:S:71:ARG:HH22	2.33	0.51
2:B:114:A:H2'	2:B:115:A:O4'	2.10	0.51
2:B:225:C:O2'	2:B:226:C:H5'	2.10	0.51
2:B:521:A:H2'	2:B:522:A:H8	1.75	0.51
2:B:559:A:H3'	2:B:560:G:H5"	1.91	0.51
2:B:661:G:H3'	2:B:662:U:H5'	1.91	0.51
2:B:664:U:H5'	8:H:107:ARG:HA	1.92	0.51
2:B:842:G:H2'	2:B:843:A:C8	2.45	0.51
2:B:1382:G:H21	8:H:241:GLY:HA2	1.75	0.51
2:B:1389:G:OP1	36:JA:100:ILE:HA	2.09	0.51
2:B:1525:G:H3'	2:B:1526:U:C5	2.45	0.51
2:B:1652:G:O2'	2:B:1653:G:H5'	2.09	0.51
2:B:2770:G:H4'	46:TA:13:LYS:CE	2.40	0.51
2:B:2865:U:O2'	2:B:2866:U:H5'	2.10	0.51
2:B:3186:A:H1'	13:M:43:VAL:O	2.10	0.51
3:C:3:A:H2'	3:C:4:C:O4'	2.09	0.51
7:G:266:ARG:NH1	7:G:266:ARG:HA	2.26	0.51
7:G:368:GLY:C	7:G:369:ARG:HG3	2.30	0.51
8:H:361:HIS:HB3	24:X:26:ARG:NH1	2.25	0.51
11:K:84:VAL:HA	11:K:139:PRO:CD	2.40	0.51
11:K:101:LYS:HZ1	11:K:105:LEU:HD11	1.74	0.51
12:L:45:ASN:OD1	29:CA:26:VAL:HG23	2.10	0.51
13:M:90:MET:SD	13:M:158:ALA:HB1	2.50	0.51
19:S:145:ASP:HB3	19:S:147:ARG:HD3	1.91	0.51
20:T:119:VAL:O	24:X:164:SER:HB3	2.10	0.51
20:T:129:LEU:HG	20:T:130:LYS:H	1.74	0.51
29:CA:86:VAL:HG22	29:CA:87:SER:H	1.74	0.51
31:EA:22:LYS:HD3	31:EA:130:PHE:HA	1.92	0.51
49:WA:45:TRP:HZ2	49:WA:310:ILE:HD12	1.75	0.51
49:WA:122:ILE:HD11	49:WA:136:ILE:CG2	2.40	0.51
51:YA:86:LEU:CD1	51:YA:100:PHE:HA	2.40	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:ZA:99:LYS:HG2	52:ZA:117:THR:HB	1.92	0.51
52:ZA:139:ILE:HG22	52:ZA:221:THR:HG21	1.93	0.51
53:AB:172:THR:HG22	53:AB:185:LYS:HG2	1.92	0.51
56:DB:29:ASP:O	56:DB:30:LYS:HD2	2.10	0.51
56:DB:57:ASP:HB2	56:DB:105:ASP:O	2.11	0.51
58:FB:98:LYS:CE	58:FB:172:ARG:HG2	2.39	0.51
58:FB:105:ASP:O	58:FB:106:ALA:HB3	2.09	0.51
59:GB:60:LEU:CD2	59:GB:93:LEU:HD12	2.40	0.51
61:IB:74:THR:OG1	61:IB:87:ARG:HB3	2.11	0.51
68:PB:14:ILE:O	68:PB:14:ILE:HG23	2.10	0.51
70:RB:66:SER:OG	70:RB:79:TRP:HB3	2.09	0.51
71:SB:69:LEU:O	71:SB:73:ALA:HB2	2.10	0.51
73:UB:53:VAL:HG11	73:UB:98:GLU:HA	1.92	0.51
77:YB:73:LEU:HD21	77:YB:79:PHE:HB3	1.92	0.51
82:DC:675:PRO:HB2	82:DC:717:PHE:HD2	1.74	0.51
83:EC:6917:C:C2'	83:EC:6918:A:H5'	2.40	0.51
1:A:135:A:N3	1:A:135:A:H2'	2.23	0.51
1:A:159:U:C2	56:DB:87:ARG:HD3	2.45	0.51
1:A:488:G:C2'	1:A:489:C:H5'	2.41	0.51
1:A:793:A:C5'	1:A:794:U:H5'	2.41	0.51
2:B:21:G:H3'	2:B:22:G:C8	2.44	0.51
2:B:23:A:OP1	41:OA:44:THR:HB	2.10	0.51
2:B:35:A:H2'	2:B:36:C:H6	1.75	0.51
2:B:107:A:N1	2:B:108:A:C6	2.79	0.51
2:B:154:U:OP1	2:B:158:G:H5'	2.10	0.51
2:B:374:A:O2'	2:B:376:G:H8	1.93	0.51
2:B:666:A:C2'	2:B:667:C:H5"	2.40	0.51
2:B:1048:A:OP1	2:B:1049:C:H5'	2.11	0.51
2:B:1145:G:H22	2:B:1160:C:H5"	1.76	0.51
2:B:1270:A:H5'	82:DC:741:GLY:HA2	1.91	0.51
2:B:1684:U:H2'	2:B:1685:C:C6	2.43	0.51
2:B:2256:A:H4'	82:DC:707:PRO:HG3	1.91	0.51
2:B:2853:A:H5'	14:N:63:GLU:HB2	1.91	0.51
2:B:3082:C:H2'	2:B:3083:G:C8	2.44	0.51
2:B:3238:G:C2	2:B:3250:U:H1'	2.44	0.51
2:B:3331:U:OP1	7:G:367:LYS:HB2	2.10	0.51
3:C:37:A:H2	39:MA:86:ARG:HH21	1.58	0.51
4:D:6:C:H2'	4:D:7:G:H4'	1.92	0.51
5:E:100:ILE:HD12	5:E:103:LEU:HD12	1.91	0.51
7:G:73:VAL:O	7:G:73:VAL:HG23	2.11	0.51
8:H:31:ARG:HH21	22:V:23:ASN:HB2	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:230:VAL:HA	8:H:233:LEU:HD11	1.90	0.51
8:H:308:LYS:O	8:H:309:ARG:HB2	2.11	0.51
8:H:327:LEU:CD1	11:K:165:ASP:HA	2.39	0.51
14:N:24:ARG:O	14:N:26:VAL:HG22	2.10	0.51
14:N:170:LYS:HD3	14:N:177:ASP:OD2	2.11	0.51
14:N:176:LEU:HB3	14:N:180:GLU:HB3	1.92	0.51
15:O:21:ILE:HG22	15:O:22:SER:H	1.75	0.51
17:Q:48:PRO:HD2	39:MA:115:LYS:HD3	1.91	0.51
21:U:94:LEU:HD23	21:U:94:LEU:C	2.31	0.51
25:Y:104:GLU:HA	25:Y:107:GLU:HB2	1.92	0.51
26:Z:38:ILE:HG13	26:Z:50:LEU:CD1	2.40	0.51
27:AA:114:ILE:HD12	27:AA:114:ILE:N	2.25	0.51
35:IA:62:ARG:HB3	35:IA:66:GLY:C	2.31	0.51
35:IA:62:ARG:HB3	35:IA:67:VAL:N	2.26	0.51
36:JA:17:PHE:O	36:JA:32:TRP:HB2	2.10	0.51
38:LA:98:GLN:O	38:LA:101:VAL:HB	2.10	0.51
48:VA:93:LEU:HA	48:VA:96:ILE:HG13	1.92	0.51
48:VA:143:THR:HG23	48:VA:151:GLU:O	2.10	0.51
49:WA:73:LEU:CD2	49:WA:77:GLY:HA2	2.39	0.51
49:WA:126:SER:HB3	49:WA:128:ASP:OD1	2.09	0.51
50:XA:67:ILE:HD11	50:XA:120:LEU:HD22	1.92	0.51
53:AB:108:LYS:HE2	53:AB:118:ALA:HA	1.91	0.51
53:AB:209:ILE:HG22	67:OB:38:ILE:HG23	1.92	0.51
55:CB:69:PHE:CE2	66:NB:53:LEU:HD12	2.44	0.51
58:FB:12:SER:HB3	58:FB:16:ALA:H	1.76	0.51
63:KB:95:ALA:HB2	63:KB:118:ILE:HG21	1.92	0.51
71:SB:3:ASN:OD1	71:SB:7:GLN:HG3	2.10	0.51
77:YB:79:PHE:H	77:YB:79:PHE:HD2	1.57	0.51
82:DC:12:LEU:HD23	82:DC:99:LEU:HB2	1.92	0.51
82:DC:18:ASN:ND2	82:DC:93:THR:HG23	2.25	0.51
82:DC:378:LEU:HD22	82:DC:409:GLN:HE22	1.75	0.51
82:DC:381:TYR:HB2	82:DC:478:MET:CE	2.39	0.51
82:DC:731:VAL:HG22	82:DC:733:ILE:HG13	1.92	0.51
1:A:71:A:C2	1:A:72:A:H1'	2.46	0.51
1:A:164:A:H1'	56:DB:13:GLN:HE22	1.75	0.51
1:A:579:A:H5'	1:A:580:A:OP2	2.11	0.51
1:A:710:U:C2'	1:A:711:U:H5'	2.34	0.51
1:A:1142:A:H2'	1:A:1143:A:C8	2.45	0.51
1:A:1235:C:OP2	1:A:1245:G:H2'	2.09	0.51
1:A:1795:U:H3	76:XB:10:ARG:HD2	1.74	0.51
2:B:692:A:H2'	2:B:693:A:C5'	2.40	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1439:U:H2'	2:B:1440:G:C8	2.44	0.51
2:B:1749:A:H8	2:B:1749:A:OP1	1.92	0.51
2:B:2338:C:H5'	27:AA:47:ASN:O	2.09	0.51
2:B:2554:A:N6	47:UA:62:LYS:HD3	2.25	0.51
2:B:2632:G:H2'	2:B:2633:U:C6	2.45	0.51
2:B:3042:U:H5"	27:AA:48:ARG:NH2	2.25	0.51
6:F:54:ARG:HH11	6:F:54:ARG:HG3	1.75	0.51
6:F:242:ARG:CG	6:F:243:THR:N	2.74	0.51
7:G:305:ILE:HD13	7:G:317:ILE:HD12	1.92	0.51
10:J:146:ILE:HA	10:J:149:ILE:CD1	2.33	0.51
12:L:76:ALA:CB	12:L:234:GLY:HA3	2.38	0.51
22:V:9:GLN:HE21	22:V:10:HIS:HD2	1.58	0.51
23:W:106:LEU:HD11	23:W:138:LEU:CD1	2.39	0.51
32:FA:78:LEU:HD13	32:FA:81:LEU:HD12	1.92	0.51
40:NA:93:ILE:O	40:NA:97:SER:HB3	2.10	0.51
48:VA:143:THR:HG21	48:VA:150:ILE:CG2	2.38	0.51
50:XA:10:THR:HB	50:XA:12:GLU:HG2	1.93	0.51
50:XA:146:LEU:HD23	50:XA:146:LEU:H	1.74	0.51
51:YA:70:LEU:HD22	51:YA:70:LEU:O	2.09	0.51
51:YA:113:MET:HG2	51:YA:209:ASN:ND2	2.26	0.51
53:AB:18:TYR:O	53:AB:22:ASN:HB2	2.10	0.51
57:EB:30:SER:HB2	57:EB:34:LEU:HD22	1.92	0.51
60:HB:69:THR:O	60:HB:73:VAL:HG23	2.10	0.51
66:NB:66:ARG:HH12	66:NB:68:ARG:HD2	1.75	0.51
69:QB:123:ARG:CG	69:QB:124:ILE:H	2.21	0.51
78:ZB:32:PHE:CZ	78:ZB:38:ARG:HB3	2.45	0.51
82:DC:281:ILE:HA	82:DC:284:LEU:CD1	2.40	0.51
82:DC:335:LEU:HA	82:DC:338:ILE:HG22	1.91	0.51
82:DC:377:ASP:O	82:DC:379:MET:HG2	2.09	0.51
82:DC:382:VAL:CG1	82:DC:397:PHE:H	2.21	0.51
82:DC:571:SER:CB	82:DC:590:ALA:H	2.22	0.51
82:DC:785:ARG:HH11	82:DC:785:ARG:HG2	1.74	0.51
82:DC:808:PRO:HA	82:DC:813:SER:HB3	1.93	0.51
1:A:288:A:H2'	1:A:289:U:C6	2.45	0.51
1:A:345:U:O2	1:A:346:G:H1'	2.11	0.51
1:A:1010:C:H2'	1:A:1011:G:C8	2.46	0.51
2:B:118:U:H2'	2:B:119:U:H5'	1.92	0.51
2:B:430:U:H2'	2:B:431:U:O4'	2.09	0.51
2:B:707:U:H2'	2:B:708:G:O4'	2.10	0.51
2:B:771:A:H2'	2:B:772:U:O4'	2.10	0.51
2:B:841:A:H5"	23:W:126:GLU:HG2	1.91	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:877:C:H2'	2:B:878:G:O4'	2.11	0.51
2:B:1117:G:H2'	2:B:1118:C:C6	2.44	0.51
2:B:1240:A:H5'	16:P:98:VAL:HG12	1.93	0.51
2:B:1550:C:H2'	2:B:1551:C:H6	1.75	0.51
2:B:1732:U:H3'	2:B:1733:G:H8	1.76	0.51
2:B:1887:A:O3'	7:G:228:GLY:N	2.44	0.51
2:B:2349:U:O2'	2:B:3307:A:H1'	2.11	0.51
2:B:2357:A:H2'	2:B:2358:A:H8	1.76	0.51
2:B:2407:C:H2'	2:B:2408:U:H6	1.75	0.51
2:B:3060:C:H1'	2:B:3332:U:O2'	2.10	0.51
3:C:52:A:H2'	3:C:53:A:H5'	1.92	0.51
7:G:88:GLY:O	7:G:160:VAL:HG13	2.09	0.51
8:H:163:LYS:O	8:H:166:VAL:HB	2.11	0.51
9:I:151:GLN:HA	9:I:151:GLN:HE21	1.75	0.51
10:J:42:LEU:HD13	10:J:47:PHE:HB3	1.93	0.51
10:J:52:VAL:HG23	10:J:66:SER:C	2.31	0.51
14:N:51:HIS:NE2	14:N:168:SER:HB2	2.24	0.51
31:EA:102:GLU:O	31:EA:103:GLN:HB2	2.11	0.51
32:FA:78:LEU:HA	32:FA:81:LEU:HD11	1.92	0.51
32:FA:143:GLY:O	32:FA:144:VAL:HG13	2.11	0.51
34:HA:22:LYS:HB2	34:HA:93:LEU:HB2	1.92	0.51
37:KA:50:ALA:HB1	37:KA:66:VAL:CG1	2.40	0.51
44:RA:93:LYS:CG	44:RA:102:ARG:HG2	2.41	0.51
47:UA:88:GLU:O	47:UA:92:ALA:HB3	2.10	0.51
49:WA:22:SER:CB	49:WA:36:ALA:HB3	2.40	0.51
51:YA:26:ARG:HG2	51:YA:50:LYS:HB3	1.93	0.51
54:BB:181:VAL:HG22	54:BB:227:VAL:HG12	1.92	0.51
58:FB:43:ILE:HG23	58:FB:56:ARG:N	2.25	0.51
58:FB:110:ARG:HB3	58:FB:160:PHE:CE1	2.45	0.51
72:TB:84:GLY:O	72:TB:88:LYS:HE2	2.11	0.51
73:UB:31:LYS:HA	73:UB:36:THR:OG1	2.09	0.51
76:XB:97:PRO:HB2	76:XB:98:PRO:HD3	1.91	0.51
82:DC:537:HIS:O	82:DC:540:ILE:HB	2.10	0.51
82:DC:567:VAL:HG22	82:DC:684:VAL:HG13	1.92	0.51
1:A:63:G:C4'	1:A:170:U:H5	2.23	0.51
1:A:124:A:H2'	1:A:125:U:O4'	2.10	0.51
1:A:330:G:H2'	1:A:331:A:C8	2.45	0.51
1:A:386:G:H2'	1:A:387:A:C8	2.45	0.51
1:A:743:U:H2'	1:A:744:U:C6	2.46	0.51
1:A:828:U:C2'	1:A:829:A:H5"	2.37	0.51
1:A:881:A:H2'	1:A:882:U:O4'	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:890:C:H2'	1:A:891:A:H8	1.76	0.51
1:A:1316:G:C4'	67:OB:10:LYS:HE3	2.37	0.51
2:B:45:A:H2'	2:B:46:U:O4'	2.10	0.51
2:B:175:C:H2'	2:B:176:G:H8	1.74	0.51
2:B:595:G:N1	2:B:609:G:H5"	2.25	0.51
2:B:675:C:C2'	2:B:676:G:H5'	2.38	0.51
2:B:716:A:N6	32:FA:117:ARG:HB3	2.26	0.51
2:B:1213:G:H4'	24:X:90:MET:HG3	1.92	0.51
2:B:1362:G:H1'	11:K:159:GLN:HG2	1.93	0.51
2:B:1633:C:H2'	2:B:1634:G:H8	1.74	0.51
2:B:1818:U:H3'	2:B:1819:U:H5"	1.92	0.51
2:B:2148:U:H5'	6:F:197:PRO:HB3	1.93	0.51
2:B:2159:U:O4	2:B:2591:A:H4'	2.10	0.51
2:B:2675:C:H42	15:O:22:SER:CB	2.24	0.51
2:B:3127:A:H2'	2:B:3128:G:C8	2.46	0.51
2:B:3281:U:H2'	2:B:3282:U:O4'	2.10	0.51
2:B:3300:U:C2'	2:B:3301:U:H5'	2.41	0.51
7:G:215:ILE:O	7:G:280:HIS:HB2	2.10	0.51
9:I:50:ARG:O	9:I:64:ILE:HA	2.10	0.51
11:K:101:LYS:CE	11:K:105:LEU:HD11	2.41	0.51
14:N:145:LYS:HA	14:N:148:VAL:HG23	1.91	0.51
19:S:114:ARG:HB2	19:S:137:PRO:HD3	1.91	0.51
20:T:37:ARG:HD3	20:T:108:ILE:HG13	1.93	0.51
20:T:53:LYS:O	20:T:56:ASP:HB2	2.10	0.51
21:U:51:VAL:HG22	21:U:56:ARG:HG3	1.92	0.51
25:Y:102:ARG:HH11	25:Y:102:ARG:HG2	1.74	0.51
27:AA:121:GLU:O	27:AA:125:LEU:HB2	2.10	0.51
32:FA:79:TRP:HE1	32:FA:118:ILE:HG22	1.76	0.51
38:LA:65:VAL:HG12	38:LA:66:SER:H	1.75	0.51
39:MA:100:VAL:HG22	39:MA:101:THR:N	2.19	0.51
48:VA:58:MET:HA	48:VA:61:ARG:HB2	1.92	0.51
49:WA:27:ALA:HB2	49:WA:296:ALA:HB3	1.92	0.51
51:YA:26:ARG:HD3	51:YA:52:THR:HG21	1.91	0.51
51:YA:157:GLN:HB2	51:YA:160:HIS:CG	2.44	0.51
55:CB:59:VAL:O	55:CB:60:ASP:HB2	2.10	0.51
55:CB:119:ASP:O	55:CB:123:VAL:HG23	2.09	0.51
55:CB:171:ALA:HA	55:CB:174:LEU:HD12	1.92	0.51
55:CB:215:ASP:O	55:CB:219:ARG:HB3	2.11	0.51
60:HB:25:LYS:HE3	60:HB:59:PHE:HE2	1.75	0.51
60:HB:93:GLN:HG3	60:HB:94:GLU:H	1.76	0.51
63:KB:91:LEU:HD22	63:KB:122:ILE:HG13	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
64:LB:64:ALA:HA	64:LB:67:VAL:HG12	1.93	0.51
66:NB:12:LYS:HG2	66:NB:17:THR:HG22	1.91	0.51
69:QB:114:VAL:HG22	69:QB:115:GLU:N	2.26	0.51
70:RB:57:ARG:HG3	70:RB:89:ARG:NH2	2.26	0.51
74:VB:35:VAL:HG13	74:VB:36:SER:N	2.26	0.51
74:VB:55:VAL:HG12	74:VB:56:SER:N	2.25	0.51
80:BC:30:PRO:HB2	80:BC:34:ALA:HB1	1.92	0.51
82:DC:466:THR:HG21	82:DC:481:MET:SD	2.51	0.51
82:DC:544:ASP:O	82:DC:548:ASP:HB3	2.10	0.51
82:DC:545:LEU:HD12	82:DC:550:ALA:N	2.26	0.51
83:EC:6922:G:H2'	83:EC:6923:C:O4'	2.10	0.51
1:A:121:U:H1'	54:BB:33:ALA:HB3	1.92	0.51
1:A:609:U:O2'	73:UB:23:ARG:HD2	2.10	0.51
1:A:1675:C:H2'	1:A:1676:U:C6	2.46	0.51
2:B:87:U:H5'	22:V:167:SER:CB	2.39	0.51
2:B:200:C:H5	30:DA:103:LYS:HZ1	1.59	0.51
2:B:811:U:H2'	2:B:812:G:C8	2.46	0.51
2:B:1080:A:C6	2:B:1082:U:H1'	2.46	0.51
2:B:1139:G:O2'	11:K:94:LYS:HD3	2.10	0.51
2:B:1326:A:H2'	2:B:1327:C:H6	1.75	0.51
2:B:1925:U:H1'	47:UA:20:SER:HB3	1.92	0.51
2:B:2389:C:H1'	21:U:69:ARG:NH1	2.26	0.51
2:B:2430:A:O2'	2:B:2431:C:H5'	2.09	0.51
2:B:2724:U:C5'	25:Y:54:HIS:ND1	2.67	0.51
2:B:3060:C:O2'	2:B:3061:G:H5'	2.11	0.51
2:B:3099:C:H42	2:B:3135:U:H3	1.57	0.51
2:B:3118:C:H3'	2:B:3119:U:H5"	1.93	0.51
2:B:3353:G:H1'	2:B:3356:G:O2'	2.11	0.51
7:G:222:LYS:O	7:G:271:GLY:HA3	2.11	0.51
7:G:376:LYS:O	7:G:380:MET:HG2	2.11	0.51
8:H:82:THR:HG23	8:H:84:ARG:H	1.75	0.51
9:I:211:LEU:O	9:I:216:GLU:HA	2.10	0.51
10:J:70:LYS:CE	10:J:146:ILE:HG13	2.39	0.51
13:M:4:ILE:O	13:M:58:HIS:HA	2.10	0.51
13:M:68:LEU:HD22	13:M:68:LEU:O	2.10	0.51
13:M:166:ARG:HB3	13:M:166:ARG:NH1	2.26	0.51
16:P:110:ILE:HG21	16:P:142:ARG:NH2	2.25	0.51
20:T:72:HIS:O	20:T:74:ARG:NH1	2.44	0.51
21:U:17:ALA:O	21:U:147:GLU:HB2	2.11	0.51
22:V:140:LEU:O	22:V:141:ARG:HG3	2.10	0.51
22:V:179:ARG:HB3	22:V:179:ARG:HH11	1.74	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:X:75:PHE:CE2	24:X:99:ARG:HA	2.46	0.51
25:Y:75:ILE:C	25:Y:75:ILE:HD13	2.31	0.51
27:AA:19:VAL:HG13	27:AA:37:ILE:HA	1.91	0.51
30:DA:56:VAL:HG11	30:DA:104:LEU:CD1	2.40	0.51
31:EA:76:ASN:HB3	31:EA:79:HIS:HB2	1.92	0.51
32:FA:73:LEU:HD11	32:FA:81:LEU:HD21	1.91	0.51
32:FA:105:LEU:HD13	32:FA:128:ARG:CZ	2.40	0.51
32:FA:145:VAL:HG12	32:FA:146:GLU:N	2.23	0.51
38:LA:86:LYS:HA	38:LA:89:ILE:HD12	1.91	0.51
48:VA:54:GLY:HA3	48:VA:58:MET:CG	2.36	0.51
49:WA:221:MET:HE1	53:AB:220:PRO:HG3	1.93	0.51
50:XA:181:VAL:HG23	50:XA:182:LEU:H	1.75	0.51
51:YA:120:LEU:C	51:YA:121:ILE:HD12	2.30	0.51
52:ZA:35:TRP:O	52:ZA:36:VAL:HB	2.11	0.51
52:ZA:129:ILE:O	52:ZA:133:LYS:HG2	2.10	0.51
52:ZA:139:ILE:HG23	52:ZA:218:ILE:HB	1.91	0.51
52:ZA:182:PRO:O	52:ZA:186:LYS:HD3	2.10	0.51
55:CB:92:ARG:HB3	55:CB:172:ILE:HD13	1.92	0.51
56:DB:31:ARG:HB2	56:DB:34:GLN:NE2	2.25	0.51
56:DB:51:LYS:HB3	56:DB:112:VAL:HB	1.93	0.51
57:EB:140:VAL:HG22	57:EB:150:GLN:HG2	1.92	0.51
57:EB:141:ARG:O	57:EB:149:ILE:HG13	2.10	0.51
58:FB:58:LEU:O	58:FB:59:ARG:HB2	2.10	0.51
69:QB:70:GLN:HB2	69:QB:121:GLY:HA3	1.93	0.51
73:UB:96:VAL:HG23	73:UB:97:ASP:N	2.25	0.51
78:ZB:9:LEU:HD12	78:ZB:33:LEU:HG	1.92	0.51
78:ZB:40:ILE:HG23	78:ZB:62:GLU:OE1	2.10	0.51
82:DC:345:PRO:HG3	82:DC:399:ARG:NH2	2.25	0.51
82:DC:561:VAL:HG23	82:DC:778:PHE:HZ	1.76	0.51
82:DC:579:SER:HB2	82:DC:704:GLN:OE1	2.10	0.51
83:EC:6912:G:H3'	83:EC:6913:U:H5"	1.93	0.51
1:A:139:C:C4	1:A:176:C:H1'	2.45	0.51
1:A:740:A:C2'	1:A:741:C:H5"	2.41	0.51
1:A:829:A:O2'	1:A:830:U:OP2	2.27	0.51
1:A:924:A:H2'	1:A:925:G:C8	2.45	0.51
1:A:1020:A:H3'	1:A:1021:C:H5"	1.93	0.51
1:A:1558:U:H5'	68:PB:133:VAL:HG22	1.93	0.51
2:B:4:U:H3	3:C:155:A:H2	1.59	0.51
2:B:35:A:H2'	2:B:36:C:C6	2.45	0.51
2:B:211:A:O4'	2:B:229:G:H1'	2.10	0.51
2:B:430:U:H4'	37:KA:67:MET:CE	2.41	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1222:G:H5'	48:VA:56:ASN:CB	2.39	0.51
2:B:1446:A:H61	2:B:2356:A:H3'	1.75	0.51
2:B:1495:U:O3'	2:B:1514:G:H4'	2.10	0.51
2:B:1537:A:H2'	2:B:1538:G:O4'	2.11	0.51
2:B:1614:C:H2'	2:B:1615:C:H6	1.75	0.51
2:B:1663:C:H2'	2:B:1664:G:C8	2.46	0.51
2:B:1915:A:H2'	2:B:1916:U:C6	2.45	0.51
2:B:2732:G:H5'	2:B:2761:G:C5'	2.37	0.51
2:B:2948:C:O2'	7:G:242:THR:HA	2.10	0.51
7:G:229:VAL:HG13	7:G:230:THR:H	1.76	0.51
8:H:39:PHE:HE1	8:H:236:LEU:HA	1.75	0.51
8:H:109:TRP:CE3	8:H:109:TRP:HA	2.46	0.51
8:H:312:VAL:O	8:H:312:VAL:HG23	2.11	0.51
9:I:49:TYR:CE1	9:I:66:SER:HB3	2.46	0.51
11:K:96:PRO:HB2	11:K:99:PRO:HD2	1.92	0.51
17:Q:107:GLU:OE1	40:NA:17:VAL:HG22	2.10	0.51
18:R:15:VAL:HG23	18:R:15:VAL:O	2.10	0.51
19:S:8:GLU:HG3	19:S:50:ARG:HH22	1.76	0.51
19:S:44:ARG:HH21	19:S:47:LYS:HZ3	1.58	0.51
19:S:63:ARG:HA	19:S:130:PHE:O	2.11	0.51
20:T:75:ALA:HA	20:T:147:TRP:CD1	2.46	0.51
21:U:175:ARG:O	21:U:179:GLN:HG3	2.09	0.51
22:V:179:ARG:HH11	22:V:179:ARG:CB	2.23	0.51
27:AA:7:GLN:HG2	27:AA:7:GLN:O	2.11	0.51
27:AA:30:GLY:HA3	27:AA:66:LYS:CD	2.40	0.51
32:FA:37:GLY:HA3	32:FA:53:PHE:CZ	2.46	0.51
39:MA:20:GLN:HG2	39:MA:24:LEU:CD1	2.40	0.51
39:MA:93:THR:HG23	39:MA:96:GLU:OE1	2.11	0.51
48:VA:33:VAL:HG22	48:VA:34:SER:N	2.26	0.51
49:WA:251:TRP:HA	49:WA:264:SER:HA	1.93	0.51
50:XA:113:ARG:HA	50:XA:113:ARG:NE	2.26	0.51
52:ZA:144:TRP:CD2	52:ZA:173:PRO:HG3	2.46	0.51
54:BB:36:HIS:CD2	54:BB:85:GLY:HA3	2.44	0.51
54:BB:65:LEU:HD12	54:BB:80:THR:HA	1.91	0.51
56:DB:57:ASP:HA	56:DB:106:LEU:HA	1.92	0.51
57:EB:152:VAL:HG23	57:EB:181:ILE:HD11	1.93	0.51
59:GB:108:ARG:O	59:GB:112:GLN:HG2	2.11	0.51
59:GB:110:GLN:OE1	59:GB:126:ARG:HG2	2.11	0.51
63:KB:18:TYR:HA	72:TB:57:ARG:HH12	1.75	0.51
63:KB:23:PRO:O	63:KB:24:ALA:HB3	2.10	0.51
64:LB:29:HIS:O	64:LB:29:HIS:CG	2.63	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
64:LB:64:ALA:HB3	64:LB:104:ALA:CB	2.40	0.51
64:LB:133:ARG:HG2	64:LB:133:ARG:HH11	1.76	0.51
69:QB:113:ILE:HG23	69:QB:128:GLY:CA	2.39	0.51
69:QB:132:LEU:HD12	69:QB:132:LEU:N	2.25	0.51
69:QB:138:GLN:HA	69:QB:141:GLU:CG	2.40	0.51
73:UB:53:VAL:HB	73:UB:99:ASN:N	2.26	0.51
76:XB:55:GLU:C	76:XB:57:SER:H	2.14	0.51
82:DC:166:GLU:C	82:DC:167:LEU:HD12	2.31	0.51
82:DC:296:ILE:O	82:DC:300:LEU:HB2	2.11	0.51
83:EC:6836:U:H4'	83:EC:6877:C:N4	2.26	0.51
1:A:514:G:H1'	1:A:515:A:H5'	1.92	0.51
1:A:1788:G:P	64:LB:127:ARG:HH22	2.33	0.51
2:B:45:A:O2'	2:B:46:U:H5'	2.11	0.51
2:B:70:A:H3'	2:B:71:A:H8	1.76	0.51
2:B:578:A:H4'	8:H:324:LEU:HD21	1.92	0.51
2:B:645:A:N1	2:B:2372:A:C2	2.79	0.51
2:B:748:U:H5"	33:GA:30:PRO:O	2.11	0.51
2:B:1135:A:O2'	2:B:1136:A:H5'	2.10	0.51
2:B:1144:U:H3	2:B:1159:A:H62	1.57	0.51
2:B:1497:C:O2'	2:B:1498:A:H5'	2.11	0.51
2:B:1719:G:H5"	23:W:110:ARG:NH1	2.26	0.51
2:B:1731:A:H8	2:B:1731:A:O5'	1.94	0.51
2:B:1886:A:O2'	2:B:1887:A:H5'	2.10	0.51
2:B:2179:C:N3	6:F:131:GLY:HA3	2.25	0.51
2:B:2247:G:O2'	2:B:2248:C:H5'	2.11	0.51
2:B:2277:C:H2'	2:B:2278:C:H6	1.75	0.51
2:B:2338:C:H4'	27:AA:48:ARG:HA	1.93	0.51
2:B:2551:U:OP1	2:B:2551:U:H3'	2.11	0.51
2:B:3028:G:C5'	82:DC:28:VAL:HG11	2.40	0.51
2:B:3029:A:H2'	2:B:3030:G:O4'	2.10	0.51
5:E:100:ILE:HG13	5:E:128:LEU:HD12	1.93	0.51
6:F:39:GLY:N	12:L:36:ILE:HG21	2.26	0.51
14:N:17:TYR:HD1	14:N:96:VAL:HB	1.76	0.51
15:O:88:GLU:O	15:O:90:GLN:HG3	2.10	0.51
15:O:93:ASP:HA	15:O:171:VAL:HG22	1.93	0.51
18:R:24:LYS:HE2	18:R:64:VAL:HB	1.93	0.51
19:S:11:GLN:HB3	19:S:12:ARG:HH21	1.76	0.51
20:T:26:GLN:HG3	24:X:163:PHE:HZ	1.76	0.51
22:V:70:ALA:HA	22:V:73:GLN:NE2	2.25	0.51
22:V:71:LEU:HD13	22:V:97:PRO:HG2	1.93	0.51
30:DA:55:GLU:HA	30:DA:69:LYS:HA	1.91	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:JA:43:ARG:HG2	36:JA:43:ARG:NH1	2.20	0.51
38:LA:42:PRO:O	38:LA:51:LEU:HD22	2.10	0.51
39:MA:38:ARG:NH1	39:MA:41:LEU:HD22	2.25	0.51
40:NA:15:LYS:C	40:NA:17:VAL:H	2.13	0.51
43:QA:27:ILE:C	43:QA:29:LEU:H	2.14	0.51
49:WA:274:LEU:HD22	49:WA:276:PRO:HD3	1.92	0.51
50:XA:177:LEU:O	50:XA:181:VAL:HG13	2.10	0.51
51:YA:61:LEU:N	51:YA:61:LEU:HD13	2.25	0.51
51:YA:185:THR:CA	51:YA:188:LEU:HD12	2.40	0.51
55:CB:51:VAL:CG1	55:CB:130:ILE:HG12	2.41	0.51
55:CB:107:LYS:HG2	55:CB:111:VAL:HG23	1.93	0.51
57:EB:50:ASP:HA	57:EB:56:LYS:HA	1.91	0.51
60:HB:73:VAL:O	60:HB:77:ARG:HB2	2.10	0.51
64:LB:61:MET:SD	64:LB:104:ALA:HA	2.51	0.51
77:YB:13:ALA:C	77:YB:15:GLU:H	2.13	0.51
82:DC:42:ARG:HH22	82:DC:325:ARG:HH11	1.58	0.51
82:DC:82:SER:O	82:DC:86:VAL:HG23	2.11	0.51
82:DC:420:PRO:HB3	82:DC:475:ALA:O	2.11	0.51
1:A:373:G:C5'	61:IB:96:LYS:HG3	2.39	0.51
1:A:638:U:H1'	57:EB:112:ARG:HH12	1.76	0.51
1:A:1230:A:C2	1:A:1258:U:H1'	2.42	0.51
1:A:1480:G:H5'	69:QB:11:ALA:HB3	1.91	0.51
2:B:10:C:C3'	2:B:11:A:H5"	2.40	0.51
2:B:623:U:H2'	2:B:624:G:C8	2.46	0.51
2:B:637:C:H2'	2:B:638:C:C5	2.45	0.51
2:B:900:G:H1'	2:B:1589:A:H61	1.76	0.51
2:B:1010:G:H1	2:B:1040:A:H61	1.58	0.51
2:B:1218:U:O2'	2:B:1219:C:H6	1.93	0.51
2:B:1340:G:H2'	2:B:1341:U:H6	1.76	0.51
2:B:1487:G:H2'	2:B:1488:G:C5'	2.40	0.51
2:B:1497:C:HO2'	2:B:1602:A:H1'	1.73	0.51
2:B:1524:A:C5'	29:CA:92:LYS:HZ1	2.14	0.51
2:B:1942:U:OP2	23:W:74:ARG:NE	2.44	0.51
2:B:2149:A:C2'	2:B:2150:G:H5'	2.41	0.51
2:B:2632:G:H2'	2:B:2633:U:H6	1.76	0.51
2:B:2643:A:H2'	2:B:2645:G:O5'	2.10	0.51
2:B:3121:U:H4'	2:B:3122:A:OP1	2.10	0.51
3:C:9:A:H2'	3:C:10:A:C8	2.46	0.51
3:C:73:U:H3'	3:C:74:U:C6	2.46	0.51
3:C:111:A:OP1	41:OA:32:LYS:HE3	2.10	0.51
7:G:5:LYS:HG3	7:G:6:TYR:CD1	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:27:ALA:HB2	7:G:219:ALA:HA	1.93	0.51
10:J:92:SER:OG	10:J:94:GLU:HG2	2.11	0.51
11:K:194:HIS:HA	11:K:197:GLN:HE22	1.76	0.51
12:L:161:GLU:HB3	19:S:7:LEU:HD22	1.93	0.51
14:N:71:CYS:HB2	14:N:158:LYS:HZ2	1.76	0.51
23:W:29:THR:HG23	23:W:30:SER:N	2.26	0.51
23:W:104:ARG:HH12	23:W:135:LYS:HD3	1.76	0.51
23:W:136:ARG:HA	23:W:139:VAL:HG23	1.92	0.51
24:X:75:PHE:HE2	24:X:99:ARG:HA	1.75	0.51
35:IA:80:ASN:HB2	35:IA:89:LEU:N	2.25	0.51
40:NA:36:ARG:HA	40:NA:36:ARG:HE	1.72	0.51
43:QA:36:ARG:HG2	43:QA:36:ARG:HH11	1.76	0.51
44:RA:102:ARG:O	44:RA:103:LEU:HD23	2.10	0.51
50:XA:146:LEU:HD23	50:XA:146:LEU:N	2.26	0.51
51:YA:32:ILE:HA	51:YA:96:LEU:CD1	2.41	0.51
51:YA:86:LEU:HB3	51:YA:98:THR:OG1	2.10	0.51
52:ZA:140:ARG:HH21	52:ZA:229:LEU:HD22	1.76	0.51
53:AB:48:VAL:HB	53:AB:86:LEU:HA	1.93	0.51
56:DB:163:THR:HA	56:DB:168:THR:HG22	1.92	0.51
58:FB:25:ARG:HB3	58:FB:27:PHE:CD2	2.46	0.51
58:FB:78:ILE:H	58:FB:78:ILE:CD1	2.14	0.51
60:HB:3:MET:HB2	60:HB:7:ASP:HB2	1.92	0.51
60:HB:15:LEU:HG	60:HB:68:LEU:HD22	1.93	0.51
68:PB:38:VAL:HG11	68:PB:73:MET:HE1	1.92	0.51
76:XB:41:ILE:HG12	76:XB:41:ILE:O	2.10	0.51
78:ZB:36:THR:HG23	78:ZB:37:SER:N	2.25	0.51
82:DC:633:ILE:HA	82:DC:647:ILE:HG13	1.93	0.51
82:DC:784:LEU:HD22	82:DC:794:PRO:HB3	1.92	0.51
83:EC:6850:C:H2'	83:EC:6851:G:C4'	2.41	0.51
1:A:152:U:H3'	1:A:153:G:H5"	1.93	0.51
1:A:416:A:H5'	1:A:417:A:C8	2.46	0.51
1:A:564:G:H4'	1:A:566:C:C2	2.46	0.51
1:A:608:U:H5"	1:A:610:G:N7	2.25	0.51
1:A:896:U:O2'	1:A:897:C:H5'	2.10	0.51
1:A:1434:U:H2'	1:A:1435:G:H3'	1.93	0.51
1:A:1725:U:H2'	1:A:1726:G:C8	2.46	0.51
2:B:44:U:H2'	2:B:45:A:O4'	2.11	0.51
2:B:103:G:H4'	17:Q:65:TYR:CE2	2.46	0.51
2:B:345:G:N2	2:B:349:A:OP2	2.42	0.51
2:B:715:A:OP2	32:FA:113:LEU:HB3	2.11	0.51
2:B:730:C:O2'	2:B:731:U:H5'	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1427:U:C2'	2:B:1428:A:H5'	2.41	0.51
2:B:1912:U:H2'	2:B:1913:A:O4'	2.11	0.51
2:B:2137:U:H5	2:B:2957:G:H1'	1.76	0.51
2:B:2626:A:N3	2:B:2644:C:H5'	2.26	0.51
2:B:3149:G:H2'	2:B:3150:A:H8	1.74	0.51
3:C:39:G:H1'	3:C:105:A:N1	2.27	0.51
4:D:12:U:H1'	4:D:111:U:H4'	1.93	0.51
7:G:372:THR:C	7:G:374:ALA:H	2.12	0.51
8:H:239:ALA:N	8:H:240:PRO:CD	2.74	0.51
8:H:339:LEU:C	8:H:341:SER:H	2.13	0.51
9:I:8:LYS:HD3	9:I:12:TYR:HE1	1.76	0.51
11:K:221:LYS:HB3	11:K:227:GLY:HA3	1.91	0.51
12:L:154:ALA:O	12:L:156:ASP:N	2.44	0.51
14:N:36:LEU:HD11	14:N:69:ARG:HD3	1.92	0.51
14:N:46:PHE:HB3	14:N:140:THR:N	2.26	0.51
19:S:44:ARG:HH21	19:S:47:LYS:NZ	2.08	0.51
20:T:186:ALA:C	20:T:188:SER:H	2.13	0.51
21:U:29:THR:O	21:U:32:THR:HB	2.11	0.51
22:V:25:TYR:O	22:V:29:LEU:HG	2.11	0.51
25:Y:11:THR:HA	25:Y:14:MET:HB3	1.93	0.51
26:Z:33:TYR:C	26:Z:35:LYS:H	2.12	0.51
29:CA:66:PRO:HG3	29:CA:84:PHE:CE1	2.46	0.51
29:CA:90:ALA:CB	29:CA:95:ILE:HD11	2.36	0.51
31:EA:22:LYS:HE2	31:EA:129:TRP:CH2	2.46	0.51
37:KA:98:VAL:HG22	37:KA:99:ARG:H	1.76	0.51
51:YA:135:LEU:CD2	51:YA:181:LEU:HD12	2.41	0.51
53:AB:167:PHE:CZ	53:AB:203:PRO:HD3	2.46	0.51
59:GB:28:LEU:O	59:GB:28:LEU:HD13	2.11	0.51
61:IB:67:ARG:NH2	61:IB:129:ARG:HA	2.26	0.51
63:KB:114:ARG:HH11	63:KB:114:ARG:HG2	1.74	0.51
69:QB:135:ILE:HG13	69:QB:136:ALA:N	2.25	0.51
72:TB:94:LEU:HD11	72:TB:102:VAL:HG23	1.93	0.51
82:DC:508:LEU:HD11	82:DC:528:HIS:CB	2.36	0.51
82:DC:567:VAL:HG12	82:DC:717:PHE:CD1	2.46	0.51
83:EC:6913:U:H2'	83:EC:6914:A:C1'	2.40	0.51
1:A:291:G:H2'	1:A:292:U:C5	2.45	0.50
1:A:385:A:C5'	58:FB:22:ARG:HB3	2.41	0.50
1:A:629:U:H2'	1:A:630:A:C4'	2.40	0.50
1:A:861:U:C2'	1:A:862:A:H5'	2.40	0.50
1:A:878:G:H2'	1:A:879:G:H8	1.76	0.50
1:A:1102:G:H2'	1:A:1103:U:O4'	2.10	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1392:U:H2'	1:A:1393:C:C6	2.46	0.50
1:A:1752:U:H2'	1:A:1753:A:H8	1.75	0.50
2:B:5:G:N3	2:B:6:A:H1'	2.26	0.50
2:B:118:U:C2'	2:B:119:U:H5'	2.41	0.50
2:B:449:U:H2'	2:B:450:G:C8	2.46	0.50
2:B:580:C:H2'	2:B:581:U:O4'	2.11	0.50
2:B:645:A:H1'	2:B:647:A:OP2	2.11	0.50
2:B:964:G:H21	32:FA:40:HIS:HB2	1.76	0.50
2:B:1059:G:O2'	25:Y:61:THR:HB	2.11	0.50
2:B:1098:A:O2'	25:Y:132:PRO:HD3	2.11	0.50
2:B:1646:G:H1'	2:B:1808:G:N2	2.25	0.50
2:B:1774:C:H2'	2:B:1775:G:C4'	2.40	0.50
2:B:1794:G:H1'	6:F:190:ARG:NH2	2.26	0.50
2:B:1799:A:H2'	2:B:1800:A:H8	1.76	0.50
2:B:1859:A:H8	2:B:1859:A:O5'	1.94	0.50
2:B:1896:A:H61	2:B:2339:C:H42	1.59	0.50
2:B:2549:G:H5"	12:L:35:GLY:HA3	1.93	0.50
2:B:2631:U:H4'	2:B:2697:A:C2	2.46	0.50
2:B:2633:U:H2'	2:B:2634:U:C5'	2.41	0.50
2:B:2724:U:C5'	25:Y:54:HIS:CG	2.94	0.50
2:B:3035:A:H1'	13:M:121:LYS:O	2.11	0.50
2:B:3037:U:H2'	2:B:3038:U:C5	2.45	0.50
7:G:229:VAL:HG23	7:G:265:ALA:CB	2.41	0.50
7:G:332:ARG:HG2	7:G:332:ARG:NH1	2.26	0.50
10:J:3:ALA:H	36:JA:77:ALA:HB2	1.76	0.50
11:K:224:ILE:HG21	24:X:39:SER:OG	2.10	0.50
15:O:9:MET:SD	15:O:134:PRO:HG2	2.52	0.50
18:R:23:ILE:HD12	18:R:23:ILE:H	1.76	0.50
18:R:39:ILE:HB	18:R:43:LYS:O	2.11	0.50
21:U:64:ASN:ND2	21:U:80:LYS:HD2	2.25	0.50
22:V:170:ARG:NH2	32:FA:59:ARG:HG2	2.26	0.50
30:DA:121:ARG:HB2	30:DA:121:ARG:HH21	1.73	0.50
48:VA:145:ILE:HB	82:DC:201:GLN:CD	2.31	0.50
49:WA:128:ASP:O	49:WA:129:LYS:HG2	2.12	0.50
49:WA:182:ASN:HB3	49:WA:187:GLN:HG3	1.93	0.50
50:XA:111:ILE:O	50:XA:111:ILE:HG23	2.11	0.50
50:XA:146:LEU:HB3	50:XA:160:ILE:HD12	1.92	0.50
51:YA:228:LEU:HD11	51:YA:232:HIS:CE1	2.45	0.50
53:AB:163:PRO:O	53:AB:167:PHE:HB2	2.11	0.50
56:DB:139:ASN:HA	56:DB:142:ARG:HG3	1.92	0.50
58:FB:42:ARG:HH11	58:FB:42:ARG:HB3	1.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:GB:142:ASN:ND2	74:VB:64:PHE:CZ	2.79	0.50
60:HB:58:GLN:HB2	60:HB:65:TYR:O	2.11	0.50
69:QB:14:PHE:CE2	69:QB:63:ARG:HD3	2.46	0.50
70:RB:65:ILE:O	70:RB:81:THR:HA	2.11	0.50
78:ZB:58:GLU:OE2	78:ZB:61:ARG:HB3	2.11	0.50
82:DC:694:HIS:CG	82:DC:695:ALA:N	2.78	0.50
1:A:804:A:C2'	1:A:805:U:H5'	2.41	0.50
1:A:867:G:H2'	1:A:868:G:H5'	1.93	0.50
1:A:887:A:H2'	1:A:888:U:C6	2.46	0.50
1:A:1043:A:H61	1:A:1075:C:H42	1.59	0.50
1:A:1066:C:H4'	51:YA:146:GLN:HB2	1.93	0.50
1:A:1641:C:O3'	45:SA:1:MET:HB2	2.12	0.50
2:B:56:G:H1'	19:S:161:ALA:HB1	1.93	0.50
2:B:375:A:H2'	2:B:376:G:OP1	2.12	0.50
2:B:617:G:O2'	2:B:618:C:H5'	2.10	0.50
2:B:1177:G:H5'	37:KA:18:ARG:CZ	2.42	0.50
2:B:1360:C:H2'	2:B:1361:U:C6	2.46	0.50
2:B:1448:U:H2'	2:B:1449:A:C8	2.46	0.50
2:B:2213:A:H2'	2:B:2214:A:O4'	2.10	0.50
2:B:2490:C:H4'	2:B:2491:A:C5'	2.36	0.50
2:B:2727:A:N1	32:FA:43:ILE:HG12	2.27	0.50
2:B:2948:C:C1'	7:G:242:THR:HG22	2.37	0.50
2:B:2969:A:H62	6:F:215:ASN:ND2	2.09	0.50
5:E:207:LYS:HD3	5:E:213:ALA:HB2	1.93	0.50
6:F:123:ARG:HA	6:F:163:ARG:NH1	2.24	0.50
11:K:98:LYS:CB	11:K:99:PRO:HD3	2.34	0.50
11:K:194:HIS:HA	11:K:197:GLN:NE2	2.26	0.50
12:L:32:LYS:HE2	12:L:34:PHE:HZ	1.76	0.50
12:L:92:LYS:O	12:L:96:LYS:HG3	2.10	0.50
14:N:99:ILE:HD12	14:N:123:HIS:NE2	2.27	0.50
14:N:113:GLN:HB2	14:N:116:ARG:HD3	1.92	0.50
15:O:63:GLU:O	15:O:64:LYS:HB2	2.09	0.50
23:W:119:LEU:O	23:W:123:LEU:HB2	2.11	0.50
24:X:94:ILE:HD13	24:X:105:THR:HB	1.93	0.50
25:Y:12:ARG:C	25:Y:14:MET:N	2.64	0.50
31:EA:13:VAL:HB	31:EA:19:ALA:HA	1.92	0.50
31:EA:60:LYS:HB3	31:EA:64:LYS:NZ	2.26	0.50
31:EA:89:VAL:HA	31:EA:92:PHE:CE2	2.46	0.50
35:IA:79:ARG:N	35:IA:79:ARG:HD3	2.27	0.50
40:NA:60:LEU:HD12	40:NA:69:ALA:CA	2.37	0.50
50:XA:147:THR:HB	50:XA:151:SER:CB	2.39	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:AB:71:LEU:HA	53:AB:74:GLN:HB3	1.92	0.50
54:BB:198:LYS:HG2	54:BB:208:VAL:HG22	1.92	0.50
55:CB:42:LEU:HB2	55:CB:46:TRP:O	2.11	0.50
55:CB:69:PHE:CZ	66:NB:53:LEU:HD12	2.46	0.50
56:DB:6:SER:CA	56:DB:13:GLN:HB3	2.36	0.50
57:EB:130:VAL:HB	57:EB:133:THR:OG1	2.10	0.50
61:IB:66:ILE:HD12	61:IB:66:ILE:N	2.24	0.50
63:KB:22:ALA:HB1	63:KB:23:PRO:CA	2.37	0.50
63:KB:91:LEU:HD11	63:KB:121:ARG:CD	2.41	0.50
63:KB:131:THR:HG22	63:KB:131:THR:O	2.11	0.50
64:LB:74:VAL:HB	64:LB:76:ILE:CD1	2.40	0.50
66:NB:79:TYR:HA	66:NB:82:ARG:HG3	1.92	0.50
68:PB:36:LYS:HB3	68:PB:105:VAL:CG1	2.41	0.50
69:QB:73:VAL:HG11	69:QB:102:ARG:HH22	1.77	0.50
73:UB:144:ARG:HB2	82:DC:464:LEU:HD22	1.94	0.50
74:VB:109:LYS:HA	74:VB:112:LYS:HE2	1.93	0.50
77:YB:20:LYS:HD3	77:YB:20:LYS:N	2.27	0.50
1:A:551:G:H2'	1:A:552:G:H8	1.76	0.50
1:A:567:A:H4'	80:BC:10:ARG:O	2.10	0.50
1:A:803:A:C5	57:EB:104:ARG:HB2	2.47	0.50
1:A:890:C:H2'	1:A:891:A:C8	2.47	0.50
1:A:939:A:H2'	1:A:940:A:H8	1.73	0.50
1:A:1609:U:H5"	66:NB:75:VAL:CB	2.41	0.50
2:B:519:A:H4'	11:K:70:LYS:NZ	2.26	0.50
2:B:649:A:H2'	2:B:650:C:C6	2.47	0.50
2:B:1008:U:H2'	2:B:1009:A:C8	2.46	0.50
2:B:1073:U:H1'	33:GA:50:THR:OG1	2.11	0.50
2:B:1256:G:H1'	16:P:123:ARG:HG3	1.93	0.50
2:B:1361:U:H2'	2:B:1362:G:C8	2.44	0.50
2:B:2302:G:H2'	2:B:2303:A:O4'	2.11	0.50
2:B:3186:A:C8	13:M:42:ASP:HB3	2.45	0.50
2:B:3302:U:H3	2:B:3312:U:H3	1.57	0.50
7:G:23:ALA:HB3	7:G:28:ARG:NH2	2.25	0.50
8:H:351:PRO:CB	11:K:70:LYS:HG3	2.39	0.50
15:O:22:SER:HA	15:O:66:ALA:HB2	1.93	0.50
17:Q:103:ASN:HB3	40:NA:20:MET:CE	2.42	0.50
18:R:45:LEU:HD12	18:R:57:ALA:CB	2.39	0.50
23:W:25:ASP:HB2	23:W:28:GLU:HB2	1.93	0.50
23:W:70:LYS:NZ	23:W:76:SER:HB2	2.26	0.50
23:W:98:ARG:O	23:W:101:VAL:HB	2.10	0.50
25:Y:42:ILE:CD1	25:Y:76:ILE:HD11	2.41	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:Y:64:VAL:HA	25:Y:74:VAL:HA	1.93	0.50
25:Y:75:ILE:HD13	25:Y:76:ILE:N	2.26	0.50
29:CA:87:SER:C	29:CA:89:LYS:H	2.13	0.50
38:LA:3:GLN:HG3	38:LA:30:LEU:HB2	1.92	0.50
54:BB:246:LEU:HD12	54:BB:246:LEU:H	1.76	0.50
55:CB:121:ILE:HA	55:CB:199:ILE:HD11	1.92	0.50
56:DB:135:PRO:CB	56:DB:141:ILE:HG12	2.40	0.50
74:VB:11:LYS:HB2	74:VB:24:VAL:HG23	1.93	0.50
82:DC:404:THR:HG22	82:DC:449:PRO:HB3	1.91	0.50
82:DC:494:GLU:HB3	82:DC:555:LYS:HB3	1.93	0.50
82:DC:815:ALA:O	82:DC:819:VAL:HG23	2.12	0.50
1:A:301:A:HO2'	1:A:334:G:H1	1.59	0.50
1:A:589:C:H2'	1:A:590:C:H6	1.76	0.50
1:A:955:A:H4'	1:A:1073:G:O2'	2.11	0.50
2:B:147:U:OP1	12:L:195:SER:HA	2.11	0.50
2:B:277:G:C5'	46:TA:49:GLY:HA2	2.41	0.50
2:B:661:G:C5'	8:H:100:PHE:HE1	2.22	0.50
2:B:716:A:N7	32:FA:117:ARG:HB2	2.26	0.50
2:B:942:U:H3'	32:FA:15:VAL:O	2.10	0.50
2:B:1380:G:O2'	2:B:1381:A:H5'	2.11	0.50
2:B:1448:U:C5	2:B:2355:G:N2	2.73	0.50
2:B:1541:G:H1'	2:B:1557:A:C4	2.47	0.50
2:B:1805:C:H4'	38:LA:76:TYR:N	2.27	0.50
2:B:2178:A:H5"	6:F:151:PRO:CG	2.42	0.50
2:B:2684:C:H2'	2:B:2685:C:H6	1.77	0.50
2:B:2880:U:H2'	2:B:2881:C:H6	1.76	0.50
3:C:125:U:H3'	3:C:125:U:O2	2.11	0.50
5:E:100:ILE:HG13	5:E:128:LEU:CD1	2.42	0.50
7:G:107:ALA:HB3	7:G:110:LEU:CD1	2.42	0.50
9:I:207:TYR:O	9:I:211:LEU:HG	2.11	0.50
9:I:269:SER:O	9:I:273:ARG:HB2	2.11	0.50
10:J:9:TRP:CH2	10:J:11:PRO:HA	2.47	0.50
12:L:75:ILE:C	12:L:77:GLN:N	2.65	0.50
14:N:17:TYR:CD1	14:N:96:VAL:HB	2.46	0.50
16:P:125:LEU:H	16:P:125:LEU:HD12	1.76	0.50
17:Q:114:GLN:NE2	17:Q:115:ARG:N	2.60	0.50
19:S:27:VAL:HG23	19:S:129:TYR:HE2	1.75	0.50
20:T:142:SER:CA	20:T:145:VAL:HG22	2.34	0.50
21:U:128:ARG:HA	21:U:139:TYR:N	2.26	0.50
27:AA:45:ARG:HB3	27:AA:48:ARG:HB3	1.92	0.50
31:EA:26:VAL:HG23	31:EA:27:LYS:N	2.24	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:HA:83:LYS:HD3	34:HA:85:PHE:CZ	2.46	0.50
38:LA:44:CYS:SG	38:LA:81:CYS:HB2	2.51	0.50
39:MA:105:ARG:HH21	39:MA:105:ARG:HG3	1.76	0.50
40:NA:34:SER:OG	40:NA:37:THR:HG23	2.11	0.50
46:TA:65:THR:HG23	46:TA:89:LYS:HD3	1.94	0.50
49:WA:41:THR:HG22	49:WA:62:LYS:HG2	1.92	0.50
52:ZA:38:VAL:C	52:ZA:43:ARG:HG3	2.32	0.50
55:CB:160:VAL:HG21	78:ZB:43:ASN:HB2	1.93	0.50
57:EB:159:VAL:O	57:EB:163:ASP:HB2	2.11	0.50
59:GB:108:ARG:O	59:GB:111:THR:HG22	2.12	0.50
64:LB:120:PRO:O	64:LB:122:PRO:HD3	2.11	0.50
66:NB:60:PHE:C	66:NB:62:ASN:H	2.14	0.50
73:UB:5:LYS:HG3	73:UB:7:ARG:HD2	1.91	0.50
73:UB:12:ALA:O	73:UB:16:ARG:HG3	2.11	0.50
75:WB:89:ILE:O	75:WB:89:ILE:HG13	2.12	0.50
82:DC:591:GLU:CG	82:DC:685:ARG:HB3	2.41	0.50
82:DC:627:VAL:HG22	82:DC:631:ARG:HG3	1.92	0.50
1:A:313:U:H5”	1:A:314:C:H5”	1.94	0.50
1:A:460:A:H5’	1:A:461:G:OP2	2.11	0.50
1:A:623:A:H3’	1:A:624:G:H5”	1.94	0.50
1:A:628:G:OP1	63:KB:120:SER:HB3	2.12	0.50
1:A:888:U:O2’	1:A:989:U:H4’	2.11	0.50
1:A:1118:G:H2’	1:A:1119:G:H8	1.77	0.50
1:A:1238:A:H2’	1:A:1239:U:C5’	2.39	0.50
1:A:1290:U:H2’	1:A:1291:G:C8	2.46	0.50
2:B:878:G:H5’	2:B:880:G:O4’	2.12	0.50
2:B:1420:C:OP1	3:C:20:U:H5”	2.12	0.50
2:B:1580:A:H62	29:CA:33:ARG:HG2	1.75	0.50
2:B:1618:G:H4’	3:C:129:C:H1’	1.92	0.50
2:B:1916:U:H2’	2:B:1917:C:C6	2.45	0.50
2:B:1941:C:H42	2:B:2107:A:N6	2.09	0.50
2:B:2131:A:H2’	2:B:2132:C:H5’	1.92	0.50
2:B:2395:G:H4’	7:G:258:ALA:HB1	1.92	0.50
2:B:2536:A:C3’	2:B:2537:U:H5”	2.29	0.50
2:B:3386:G:H2’	2:B:3387:U:C6	2.47	0.50
3:C:115:C:H3’	3:C:116:G:H5”	1.93	0.50
4:D:55:A:O2’	15:O:152:HIS:HB2	2.12	0.50
7:G:28:ARG:NH1	7:G:28:ARG:HB2	2.27	0.50
7:G:76:VAL:HG12	7:G:325:LYS:CA	2.41	0.50
8:H:3:ARG:HD3	8:H:21:PRO:CB	2.41	0.50
8:H:38:VAL:HG21	8:H:121:ALA:HB2	1.92	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:K:148:VAL:HG13	11:K:152:GLY:HA2	1.93	0.50
16:P:123:ARG:NH1	48:VA:46:ARG:HE	2.08	0.50
19:S:33:LYS:HB3	19:S:37:HIS:CD2	2.47	0.50
19:S:71:ARG:HH21	19:S:92:LEU:HD23	1.77	0.50
19:S:116:LEU:HD23	19:S:133:ILE:HG13	1.94	0.50
19:S:135:VAL:HG23	19:S:151:ILE:HG21	1.93	0.50
19:S:150:TRP:CE3	19:S:156:HIS:NE2	2.78	0.50
20:T:141:LEU:HG	20:T:145:VAL:HG11	1.93	0.50
21:U:27:LYS:HA	21:U:63:PHE:CE2	2.46	0.50
21:U:155:GLU:HG2	21:U:156:ALA:N	2.26	0.50
23:W:75:HIS:HB3	23:W:80:LYS:HG3	1.94	0.50
24:X:1:MET:HE3	24:X:31:ALA:HA	1.94	0.50
30:DA:35:LEU:HD12	30:DA:45:ILE:O	2.11	0.50
32:FA:73:LEU:HD21	32:FA:81:LEU:HD13	1.93	0.50
40:NA:26:ILE:H	40:NA:26:ILE:CD1	2.06	0.50
48:VA:45:LEU:HD11	48:VA:99:VAL:CG1	2.42	0.50
48:VA:61:ARG:HH22	48:VA:76:LEU:HB3	1.75	0.50
52:ZA:95:ARG:HD2	83:EC:6957:A:H62	1.77	0.50
54:BB:147:ILE:HG22	54:BB:148:ARG:N	2.22	0.50
55:CB:174:LEU:HB3	55:CB:210:ALA:HB1	1.93	0.50
56:DB:219:ARG:HA	56:DB:222:GLU:HB2	1.93	0.50
57:EB:47:ARG:HB2	57:EB:61:PHE:CE2	2.45	0.50
58:FB:81:VAL:HG22	58:FB:102:VAL:HG12	1.93	0.50
65:MB:118:GLU:OE2	68:PB:123:ARG:HB2	2.11	0.50
72:TB:94:LEU:HD23	72:TB:130:TYR:CD1	2.47	0.50
73:UB:53:VAL:HB	73:UB:98:GLU:HA	1.94	0.50
82:DC:155:VAL:CG1	82:DC:185:VAL:HG11	2.41	0.50
82:DC:672:LYS:CA	82:DC:680:GLU:HG2	2.39	0.50
83:EC:6896:A:H4'	83:EC:6897:G:OP1	2.11	0.50
83:EC:6914:A:C2	83:EC:6915:G:O6	2.64	0.50
1:A:463:U:H2'	1:A:464:A:C8	2.47	0.50
1:A:821:U:H3'	1:A:822:U:C5'	2.37	0.50
1:A:960:U:H4'	63:KB:51:GLY:O	2.12	0.50
1:A:1498:G:H4'	69:QB:120:GLY:C	2.32	0.50
1:A:1662:G:H2'	1:A:1663:G:H8	1.77	0.50
2:B:62:A:H2	19:S:189:LYS:HD2	1.77	0.50
2:B:600:G:N2	2:B:603:A:H62	1.97	0.50
2:B:637:C:H4'	2:B:638:C:OP1	2.12	0.50
2:B:904:A:H2'	2:B:905:U:H6	1.76	0.50
2:B:1222:G:H3'	48:VA:56:ASN:HB3	1.94	0.50
2:B:1240:A:H2'	2:B:1241:U:H5"	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1411:C:O2'	2:B:1412:G:H5'	2.11	0.50
2:B:1634:G:H5"	31:EA:107:ARG:HH22	1.76	0.50
2:B:1794:G:H1'	6:F:190:ARG:HH21	1.75	0.50
2:B:1822:C:H5"	38:LA:66:SER:OG	2.11	0.50
2:B:1916:U:H6	2:B:1916:U:O5'	1.94	0.50
2:B:2182:A:OP1	6:F:193:ARG:HD2	2.11	0.50
2:B:2754:G:C3'	2:B:2755:C:H5"	2.42	0.50
2:B:2786:G:H5"	46:TA:38:GLN:HB2	1.93	0.50
2:B:2803:A:OP1	46:TA:60:LYS:HB2	2.11	0.50
2:B:2995:A:H2'	2:B:2996:U:H5"	1.93	0.50
2:B:3241:G:H2'	2:B:3245:A:N3	2.27	0.50
2:B:3243:A:N7	20:T:156:LEU:HB3	2.26	0.50
4:D:65:G:H2'	4:D:66:A:C8	2.46	0.50
9:I:14:SER:O	25:Y:20:ARG:HD2	2.12	0.50
10:J:18:LEU:N	10:J:18:LEU:HD22	2.27	0.50
11:K:51:TYR:O	11:K:54:GLU:HB3	2.10	0.50
18:R:32:LEU:CD1	18:R:91:CYS:HA	2.42	0.50
18:R:120:VAL:HG23	20:T:197:LEU:HD22	1.93	0.50
19:S:101:THR:HA	19:S:104:GLU:CD	2.32	0.50
20:T:108:ILE:HG21	20:T:117:ARG:HH11	1.76	0.50
21:U:24:VAL:O	21:U:25:SER:C	2.50	0.50
23:W:8:LYS:O	23:W:11:ALA:HB3	2.11	0.50
23:W:18:GLY:O	23:W:22:VAL:HG23	2.11	0.50
23:W:29:THR:HA	23:W:32:ILE:HD12	1.93	0.50
27:AA:26:ALA:HB1	27:AA:115:THR:HG22	1.94	0.50
27:AA:28:ASN:OD1	27:AA:113:ALA:HB3	2.12	0.50
31:EA:13:VAL:HG23	31:EA:21:LYS:H	1.75	0.50
39:MA:21:LEU:HD23	39:MA:25:LYS:HD3	1.92	0.50
48:VA:120:TRP:CG	48:VA:157:LYS:HE2	2.47	0.50
49:WA:129:LYS:HB3	49:WA:149:ASP:O	2.12	0.50
50:XA:76:ILE:HD13	50:XA:98:ILE:HB	1.93	0.50
51:YA:153:HIS:O	51:YA:154:SER:HB3	2.12	0.50
52:ZA:167:VAL:HG12	52:ZA:168:ARG:N	2.24	0.50
53:AB:29:LEU:O	53:AB:34:TYR:HB2	2.10	0.50
54:BB:31:PRO:HG3	54:BB:43:PRO:HG3	1.94	0.50
55:CB:96:SER:CB	55:CB:176:THR:HG21	2.38	0.50
57:EB:49:ILE:HG21	57:EB:175:LYS:HG2	1.94	0.50
64:LB:24:ASN:H	64:LB:55:SER:CB	2.15	0.50
66:NB:128:LYS:HB2	66:NB:137:ARG:NH1	2.26	0.50
71:SB:36:VAL:HG11	71:SB:78:LEU:HD11	1.93	0.50
72:TB:53:ILE:CG2	72:TB:60:LYS:HB2	2.41	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
77:YB:19:HIS:C	77:YB:21:LEU:H	2.15	0.50
82:DC:26:ALA:N	82:DC:32:LYS:HZ3	2.10	0.50
82:DC:465:LYS:HE3	82:DC:512:SER:O	2.11	0.50
82:DC:567:VAL:HG21	82:DC:590:ALA:HB1	1.92	0.50
1:A:68:A:OP2	1:A:69:G:H8	1.94	0.50
1:A:154:G:H21	56:DB:60:GLY:HA3	1.77	0.50
1:A:370:A:H2'	1:A:371:G:O4'	2.10	0.50
1:A:443:C:H2'	1:A:444:C:O4'	2.11	0.50
1:A:449:C:H2'	1:A:450:U:H6	1.73	0.50
1:A:776:G:H21	54:BB:261:LEU:HD13	1.77	0.50
1:A:942:G:O2'	1:A:943:C:H5'	2.11	0.50
1:A:1171:A:H2'	1:A:1172:G:H8	1.76	0.50
1:A:1420:C:H2'	1:A:1421:A:H5'	1.92	0.50
1:A:1610:G:H4'	55:CB:98:MET:HE1	1.94	0.50
1:A:1629:G:O2'	1:A:1630:U:H5'	2.12	0.50
1:A:1773:C:OP2	45:SA:4:LYS:HB2	2.11	0.50
2:B:210:U:O2'	2:B:230:U:H5'	2.11	0.50
2:B:269:G:N2	2:B:294:U:C2'	2.68	0.50
2:B:511:G:H2'	2:B:512:U:C6	2.47	0.50
2:B:562:C:H4'	24:X:71:LYS:HE3	1.94	0.50
2:B:650:C:H2'	2:B:651:G:C8	2.47	0.50
2:B:735:A:H2'	2:B:736:A:O4'	2.12	0.50
2:B:825:U:H2'	2:B:826:G:C5'	2.38	0.50
2:B:976:U:H2'	2:B:977:C:O4'	2.12	0.50
2:B:1200:A:C6	2:B:2370:G:H5"	2.46	0.50
2:B:1525:G:H1'	2:B:1829:G:C2	2.47	0.50
2:B:1649:U:H2'	2:B:1650:G:C8	2.46	0.50
2:B:1886:A:N6	2:B:2349:U:O4'	2.45	0.50
2:B:2217:U:O2'	2:B:2218:G:H5'	2.11	0.50
2:B:3295:A:H2'	2:B:3296:A:C8	2.47	0.50
2:B:3364:C:O2'	2:B:3365:U:H5'	2.11	0.50
2:B:3386:G:C5'	35:IA:10:ARG:NE	2.74	0.50
3:C:105:A:O3'	3:C:106:C:H2'	2.11	0.50
6:F:96:LEU:CD2	47:UA:83:ILE:HD12	2.41	0.50
7:G:358:TRP:CB	28:BA:1:MET:HG2	2.41	0.50
9:I:289:LYS:HG2	9:I:293:LEU:HD22	1.93	0.50
11:K:240:VAL:HA	11:K:243:MET:CE	2.42	0.50
12:L:33:ASN:ND2	12:L:38:GLN:OE1	2.45	0.50
13:M:36:LYS:HE2	13:M:78:MET:HG3	1.92	0.50
17:Q:140:SER:HB3	17:Q:143:ALA:HB3	1.94	0.50
18:R:19:ARG:HA	18:R:69:THR:HG23	1.92	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:V:126:GLN:HA	22:V:129:VAL:CG2	2.42	0.50
29:CA:82:LEU:HB2	29:CA:124:VAL:HB	1.94	0.50
39:MA:31:LEU:HA	39:MA:34:GLN:HE21	1.77	0.50
48:VA:144:LYS:HD3	82:DC:203:TYR:CE1	2.47	0.50
55:CB:112:ARG:HD3	55:CB:115:LYS:HD2	1.94	0.50
64:LB:24:ASN:O	64:LB:25:ASP:HB2	2.11	0.50
66:NB:36:ILE:HD11	66:NB:48:VAL:O	2.12	0.50
68:PB:71:GLN:O	68:PB:75:ASN:HB2	2.12	0.50
68:PB:115:ARG:O	68:PB:119:ILE:HD13	2.12	0.50
69:QB:20:SER:HA	69:QB:23:GLN:HB2	1.94	0.50
69:QB:65:ILE:HG12	69:QB:71:VAL:HG21	1.92	0.50
73:UB:127:VAL:O	73:UB:130:VAL:HG22	2.12	0.50
82:DC:369:ILE:HD11	82:DC:379:MET:CG	2.38	0.50
82:DC:491:VAL:HG11	82:DC:556:ILE:HG23	1.92	0.50
1:A:627:C:H4’	63:KB:117:LEU:CD2	2.42	0.50
1:A:959:U:H2’	1:A:959:U:O2	2.11	0.50
1:A:1173:C:H2’	1:A:1174:C:C6	2.47	0.50
1:A:1454:G:C5’	65:MB:81:ARG:HE	2.23	0.50
2:B:842:G:H2’	2:B:843:A:H8	1.77	0.50
2:B:1672:U:O2’	2:B:1673:G:H5’	2.11	0.50
2:B:1794:G:H4’	6:F:191:LEU:HD12	1.92	0.50
2:B:2174:G:OP1	2:B:2174:G:H8	1.94	0.50
2:B:2228:A:H2’	2:B:2229:A:O4’	2.12	0.50
2:B:2355:G:H4’	21:U:139:TYR:CE2	2.47	0.50
2:B:3245:A:H5’	2:B:3246:G:C8	2.47	0.50
7:G:214:MET:HA	7:G:280:HIS:O	2.11	0.50
9:I:109:THR:C	9:I:111:GLN:N	2.64	0.50
11:K:107:ARG:HH12	11:K:117:VAL:CG1	2.25	0.50
12:L:62:LYS:HE2	12:L:63:LYS:N	2.27	0.50
12:L:73:PRO:HD3	12:L:233:TRP:HZ3	1.77	0.50
12:L:143:ILE:HD13	12:L:169:LEU:CB	2.41	0.50
15:O:101:ASN:HB3	15:O:128:TYR:HE1	1.76	0.50
19:S:35:VAL:CA	19:S:65:ARG:HE	2.20	0.50
19:S:164:LEU:O	19:S:169:LYS:HE3	2.12	0.50
25:Y:20:ARG:HB2	25:Y:20:ARG:HH11	1.77	0.50
29:CA:77:GLU:HG2	29:CA:133:LEU:HB2	1.94	0.50
31:EA:36:HIS:HB2	31:EA:40:HIS:CE1	2.46	0.50
37:KA:11:GLY:O	37:KA:98:VAL:HG12	2.11	0.50
38:LA:75:ALA:O	38:LA:76:TYR:HB2	2.12	0.50
40:NA:9:ILE:HG22	40:NA:10:GLY:N	2.26	0.50
41:OA:37:CYS:C	41:OA:45:ARG:HB2	2.32	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:VA:84:VAL:CG2	48:VA:188:VAL:HG21	2.42	0.50
51:YA:59:ASP:HA	51:YA:62:LYS:HZ2	1.77	0.50
53:AB:168:ILE:HA	53:AB:188:ILE:O	2.12	0.50
57:EB:93:LEU:HD21	57:EB:129:LEU:HD23	1.94	0.50
57:EB:153:LEU:H	57:EB:153:LEU:CD1	2.21	0.50
59:GB:129:ILE:HG22	59:GB:142:ASN:HA	1.93	0.50
60:HB:13:GLN:HA	60:HB:80:LEU:HD11	1.94	0.50
65:MB:81:ARG:NH1	65:MB:120:SER:HB3	2.25	0.50
68:PB:100:THR:HG22	68:PB:108:LYS:CB	2.41	0.50
69:QB:11:ALA:CA	69:QB:14:PHE:HB3	2.39	0.50
70:RB:56:VAL:HB	70:RB:90:TYR:CE1	2.46	0.50
82:DC:428:ILE:C	82:DC:429:LYS:HD2	2.32	0.50
82:DC:493:VAL:HG12	82:DC:494:GLU:H	1.77	0.50
82:DC:647:ILE:HD12	82:DC:647:ILE:N	2.27	0.50
83:EC:6913:U:H3'	83:EC:6914:A:H8	1.77	0.50
1:A:112:A:C5'	61:IB:68:GLY:HA2	2.40	0.50
1:A:127:G:C6	56:DB:195:VAL:HG22	2.47	0.50
1:A:432:G:H2'	1:A:433:C:C6	2.47	0.50
1:A:642:G:H2'	1:A:643:G:C8	2.47	0.50
1:A:1073:G:C3'	1:A:1074:G:H5"	2.41	0.50
1:A:1360:A:C3'	1:A:1361:U:H4'	2.42	0.50
1:A:1484:G:N2	1:A:1605:G:N2	2.60	0.50
1:A:1680:G:C1'	1:A:1721:A:H61	2.24	0.50
2:B:70:A:H2	2:B:72:C:N4	2.09	0.50
2:B:208:C:H2'	2:B:209:A:C5'	2.42	0.50
2:B:217:U:H2'	30:DA:103:LYS:HZ3	1.77	0.50
2:B:254:A:H2'	2:B:255:A:C8	2.47	0.50
2:B:692:A:H2'	2:B:693:A:H5'	1.94	0.50
2:B:787:G:OP1	22:V:148:GLU:N	2.42	0.50
2:B:808:A:C4	2:B:809:G:C8	2.99	0.50
2:B:1018:G:H1'	83:EC:6927:U:C6	2.46	0.50
2:B:1086:C:H1'	33:GA:47:LEU:HD21	1.93	0.50
2:B:1109:U:H2'	2:B:1110:U:O4'	2.12	0.50
2:B:1380:G:H5'	8:H:191:LYS:HB2	1.94	0.50
2:B:1621:A:H2'	2:B:1622:U:C6	2.47	0.50
2:B:1647:A:N6	2:B:1808:G:O2'	2.45	0.50
2:B:1662:G:O2'	2:B:1663:C:H5'	2.11	0.50
2:B:2468:A:H4'	2:B:2469:G:O5'	2.12	0.50
2:B:2562:A:H62	2:B:2579:G:H21	1.60	0.50
2:B:2876:C:O2'	2:B:2877:G:H5'	2.12	0.50
2:B:2919:A:H2'	2:B:2920:U:O4'	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:3009:G:N2	2:B:3137:C:O2	2.38	0.50
4:D:1:G:O2'	9:I:273:ARG:HD2	2.12	0.50
4:D:11:A:H4'	4:D:13:A:C8	2.46	0.50
4:D:47:C:OP1	9:I:94:ASN:HA	2.11	0.50
5:E:16:LEU:HD21	5:E:208:SER:CB	2.42	0.50
7:G:365:PHE:HD2	7:G:365:PHE:C	2.15	0.50
8:H:98:ARG:HG2	8:H:99:MET:HE2	1.94	0.50
9:I:34:LYS:C	9:I:36:LEU:H	2.15	0.50
9:I:48:LYS:HB3	9:I:145:PHE:CE2	2.46	0.50
9:I:95:TRP:CZ2	9:I:156:GLY:HA2	2.46	0.50
9:I:290:ILE:HA	9:I:294:ALA:CB	2.40	0.50
14:N:12:GLN:HG2	14:N:128:ARG:HH22	1.75	0.50
14:N:51:HIS:HB3	14:N:134:ILE:HG23	1.93	0.50
14:N:99:ILE:HG12	14:N:101:LYS:N	2.24	0.50
18:R:37:GLU:OE2	18:R:74:ARG:HG3	2.12	0.50
19:S:31:ARG:HA	19:S:65:ARG:HH12	1.76	0.50
22:V:123:THR:O	22:V:125:ASP:N	2.45	0.50
27:AA:109:MET:HG2	27:AA:110:LYS:N	2.25	0.50
29:CA:65:GLN:O	29:CA:85:GLN:HB3	2.11	0.50
32:FA:27:LYS:HB3	32:FA:28:HIS:ND1	2.26	0.50
34:HA:52:ARG:HH11	34:HA:52:ARG:HG3	1.77	0.50
40:NA:20:MET:HG2	40:NA:21:THR:H	1.77	0.50
48:VA:145:ILE:HG21	82:DC:190:SER:HB3	1.93	0.50
49:WA:188:ILE:HG13	49:WA:189:GLU:H	1.77	0.50
49:WA:201:THR:HG21	49:WA:240:VAL:HG12	1.92	0.50
52:ZA:62:PRO:HA	71:SB:29:HIS:CE1	2.47	0.50
55:CB:86:GLN:NE2	78:ZB:49:ARG:HH22	1.96	0.50
56:DB:25:ARG:HB3	56:DB:25:ARG:NH1	2.27	0.50
58:FB:42:ARG:HB3	58:FB:58:LEU:O	2.12	0.50
58:FB:160:PHE:HA	58:FB:165:LEU:HD21	1.94	0.50
59:GB:120:LYS:NZ	59:GB:120:LYS:HB3	2.27	0.50
64:LB:97:GLY:C	64:LB:99:GLN:H	2.15	0.50
67:OB:29:GLN:HE21	67:OB:29:GLN:H	1.59	0.50
70:RB:83:GLU:HB2	79:AC:55:PHE:HD2	1.77	0.50
77:YB:66:PRO:HA	77:YB:71:ALA:CB	2.42	0.50
82:DC:566:THR:CG2	82:DC:682:ARG:HB3	2.42	0.50
82:DC:822:ALA:HA	82:DC:825:ARG:HB2	1.94	0.50
1:A:187:G:H3'	58:FB:138:ASN:ND2	2.27	0.49
1:A:619:A:H5"	1:A:1141:G:C4'	2.42	0.49
1:A:966:A:O2'	1:A:967:A:H5'	2.12	0.49
1:A:1281:G:H2'	1:A:1282:U:C6	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:100:A:H2'	2:B:101:G:N3	2.26	0.49
2:B:887:G:H2'	2:B:888:A:C8	2.46	0.49
2:B:954:U:O4	2:B:1115:G:H1'	2.12	0.49
2:B:1605:A:H1'	2:B:1607:U:H2'	1.93	0.49
2:B:1686:U:O2'	2:B:1688:U:H4'	2.12	0.49
2:B:2123:G:H2'	2:B:2124:G:H8	1.75	0.49
2:B:2262:A:H2'	2:B:2263:C:H5'	1.94	0.49
2:B:2330:C:H2'	2:B:2331:C:H6	1.75	0.49
2:B:2494:A:C5	5:E:194:LEU:HG	2.47	0.49
2:B:2645:G:OP2	2:B:2645:G:H4'	2.12	0.49
2:B:2650:U:H2'	2:B:2651:G:C8	2.47	0.49
2:B:3004:C:H2'	2:B:3005:A:O4'	2.12	0.49
2:B:3104:U:O2'	2:B:3105:U:H5'	2.12	0.49
2:B:3257:C:H2'	2:B:3258:U:C6	2.47	0.49
2:B:3306:U:H2'	2:B:3307:A:H5"	1.93	0.49
5:E:64:SER:HB2	5:E:151:VAL:CG1	2.41	0.49
6:F:91:GLY:O	6:F:93:LYS:N	2.45	0.49
7:G:213:GLU:O	7:G:282:ILE:HD12	2.10	0.49
8:H:98:ARG:HD2	8:H:99:MET:O	2.12	0.49
9:I:55:PHE:CE2	9:I:159:VAL:HG22	2.46	0.49
10:J:9:TRP:CZ2	10:J:11:PRO:HA	2.46	0.49
11:K:91:GLY:C	11:K:92:ILE:HD12	2.32	0.49
11:K:143:THR:C	11:K:147:LEU:HG	2.31	0.49
13:M:10:ILE:HD11	13:M:75:VAL:HG21	1.94	0.49
14:N:135:ILE:HG22	14:N:136:PHE:HD1	1.77	0.49
16:P:109:ILE:O	16:P:112:ILE:HG12	2.12	0.49
17:Q:14:PHE:HE2	19:S:197:LEU:HD22	1.77	0.49
17:Q:54:LEU:HD12	17:Q:75:PHE:CZ	2.47	0.49
19:S:61:ILE:O	19:S:62:TYR:HD2	1.95	0.49
22:V:67:ILE:HG23	22:V:81:VAL:HG11	1.93	0.49
22:V:102:ALA:HA	22:V:122:ILE:O	2.11	0.49
22:V:126:GLN:HA	22:V:129:VAL:HG23	1.94	0.49
22:V:175:ALA:HB2	32:FA:56:VAL:HG23	1.93	0.49
24:X:77:VAL:HG12	24:X:78:TRP:H	1.76	0.49
29:CA:85:GLN:HA	29:CA:120:LYS:O	2.12	0.49
38:LA:45:GLY:HA3	38:LA:79:SER:O	2.11	0.49
40:NA:73:ALA:HA	40:NA:76:ARG:HB3	1.93	0.49
42:PA:28:ASN:ND2	42:PA:42:LYS:HG3	2.22	0.49
49:WA:150:TRP:HE3	49:WA:174:ASN:ND2	2.10	0.49
49:WA:261:LYS:HB3	49:WA:270:LEU:CD1	2.40	0.49
51:YA:187:LYS:HA	51:YA:190:PRO:HG2	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:ZA:69:ILE:HD11	52:ZA:133:LYS:HD2	1.92	0.49
55:CB:197:GLU:HG3	55:CB:208:SER:HB2	1.94	0.49
57:EB:21:ALA:O	57:EB:25:VAL:HG23	2.11	0.49
59:GB:34:PHE:CD1	59:GB:105:LEU:HB3	2.47	0.49
59:GB:48:GLN:O	59:GB:52:ILE:HG13	2.12	0.49
82:DC:226:ALA:O	82:DC:237:LYS:HB2	2.12	0.49
82:DC:634:TRP:HB2	82:DC:646:VAL:HG13	1.93	0.49
82:DC:637:GLY:O	82:DC:644:ASN:HB2	2.11	0.49
1:A:200:A:H2'	1:A:201:G:O4'	2.13	0.49
1:A:249:U:H5	61:IB:34:TRP:CE2	2.30	0.49
1:A:377:G:H4'	1:A:379:U:O4	2.12	0.49
1:A:421:A:H2'	1:A:422:G:O4'	2.12	0.49
1:A:743:U:OP1	57:EB:108:GLN:HB3	2.10	0.49
1:A:1586:A:H1'	1:A:1611:A:C6	2.47	0.49
1:A:1787:C:H2'	1:A:1788:G:H8	1.75	0.49
2:B:188:U:OP2	30:DA:46:LYS:HE3	2.13	0.49
2:B:207:U:H2'	2:B:208:C:C5	2.47	0.49
2:B:296:A:H3'	2:B:297:G:N2	2.21	0.49
2:B:413:U:O2'	2:B:414:U:H5'	2.11	0.49
2:B:970:A:H2'	2:B:971:G:C8	2.48	0.49
2:B:1231:A:H1'	2:B:1278:A:N6	2.27	0.49
2:B:1493:G:H8	2:B:1835:A:H61	1.61	0.49
2:B:2197:C:N4	2:B:2241:U:H2'	2.27	0.49
2:B:2457:G:H22	2:B:2461:A:H61	1.60	0.49
2:B:2594:C:H2'	2:B:2595:A:N3	2.27	0.49
2:B:2948:C:H2'	2:B:2949:U:C6	2.47	0.49
3:C:36:G:P	39:MA:86:ARG:H	2.35	0.49
7:G:76:VAL:HB	7:G:323:MET:CG	2.42	0.49
9:I:107:ARG:HD2	9:I:248:ARG:NH2	2.26	0.49
10:J:56:LYS:HD2	10:J:98:VAL:HG12	1.93	0.49
14:N:46:PHE:HD2	14:N:139:ARG:HB3	1.78	0.49
16:P:57:LYS:HD3	16:P:57:LYS:N	2.27	0.49
19:S:190:THR:HG23	19:S:191:TRP:N	2.27	0.49
21:U:57:ALA:HA	21:U:83:TRP:HE1	1.77	0.49
24:X:99:ARG:HH12	24:X:126:VAL:CB	2.24	0.49
24:X:154:HIS:HA	24:X:170:THR:CG2	2.41	0.49
26:Z:35:LYS:O	26:Z:38:ILE:HG22	2.12	0.49
29:CA:63:ILE:HD12	29:CA:99:VAL:CG2	2.37	0.49
29:CA:67:ILE:CD1	29:CA:115:ARG:HE	2.25	0.49
29:CA:82:LEU:HD22	29:CA:84:PHE:CE2	2.46	0.49
33:GA:36:ASP:O	33:GA:39:PHE:HB3	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:HA:41:LEU:HB3	34:HA:92:ILE:HB	1.93	0.49
34:HA:49:PRO:O	34:HA:53:LYS:HG3	2.12	0.49
35:IA:29:ALA:HB1	35:IA:60:TRP:CE2	2.47	0.49
36:JA:3:SER:O	36:JA:4:LEU:HD12	2.12	0.49
37:KA:38:PRO:HA	37:KA:41:ALA:HB2	1.93	0.49
49:WA:57:PRO:O	66:NB:100:GLN:HB2	2.12	0.49
49:WA:241:PHE:HB3	49:WA:290:VAL:HA	1.94	0.49
53:AB:105:MET:SD	53:AB:122:VAL:HG21	2.53	0.49
54:BB:45:ILE:HG13	54:BB:61:VAL:HG21	1.94	0.49
56:DB:73:ILE:HG13	56:DB:73:ILE:O	2.12	0.49
56:DB:181:PRO:O	56:DB:184:LEU:HG	2.12	0.49
57:EB:27:LEU:CD2	57:EB:80:GLU:HB3	2.42	0.49
58:FB:74:LYS:HB2	58:FB:109:PHE:CZ	2.48	0.49
58:FB:172:ARG:HD3	58:FB:175:GLN:HG3	1.92	0.49
58:FB:192:TYR:O	58:FB:196:LEU:HD13	2.13	0.49
59:GB:8:TYR:C	59:GB:8:TYR:CD1	2.85	0.49
60:HB:16:PHE:CE2	60:HB:77:ARG:HA	2.47	0.49
66:NB:18:ALA:HB1	66:NB:67:VAL:CG1	2.42	0.49
68:PB:13:HIS:O	68:PB:14:ILE:HG22	2.13	0.49
70:RB:28:SER:CB	70:RB:34:LEU:HD23	2.42	0.49
74:VB:8:ARG:HH21	74:VB:28:LEU:CD1	2.25	0.49
79:AC:24:CYS:O	79:AC:25:SER:HB2	2.11	0.49
80:BC:24:THR:H	80:BC:26:LYS:HZ2	1.59	0.49
82:DC:315:GLU:C	82:DC:319:LEU:HB2	2.32	0.49
82:DC:563:TYR:CD1	82:DC:726:GLU:HB2	2.47	0.49
1:A:182:A:H2'	1:A:183:U:C6	2.47	0.49
1:A:740:A:H2'	1:A:741:C:C5'	2.42	0.49
1:A:790:U:O2'	1:A:791:A:H5'	2.12	0.49
1:A:879:G:H2'	1:A:880:C:C6	2.47	0.49
1:A:1223:A:H2'	1:A:1224:A:O4'	2.11	0.49
1:A:1525:A:H2'	1:A:1526:A:O4'	2.12	0.49
1:A:1572:G:H5"	1:A:1574:G:N2	2.28	0.49
1:A:1627:U:O3'	76:XB:88:SER:HA	2.13	0.49
2:B:1324:U:C5'	24:X:2:ALA:HA	2.34	0.49
2:B:1344:G:H1'	11:K:159:GLN:HE21	1.78	0.49
2:B:1359:C:H2'	2:B:1360:C:H6	1.77	0.49
2:B:1517:G:O2'	2:B:1518:U:H5'	2.13	0.49
2:B:1838:G:H4'	2:B:1839:A:C2	2.47	0.49
2:B:2135:U:O2'	2:B:2136:C:H5'	2.13	0.49
2:B:2160:G:H2'	2:B:2161:G:H8	1.77	0.49
2:B:2628:A:C5'	2:B:2798:C:H3'	2.42	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:166:ILE:CD1	7:G:171:LEU:HD12	2.43	0.49
7:G:284:ARG:HB2	7:G:323:MET:CE	2.41	0.49
8:H:299:ILE:HG23	22:V:39:ARG:HB3	1.92	0.49
9:I:33:ARG:CZ	9:I:50:ARG:HH12	2.25	0.49
9:I:109:THR:HG23	9:I:110:LEU:N	2.27	0.49
11:K:137:GLY:O	11:K:139:PRO:HD3	2.11	0.49
12:L:75:ILE:HG22	12:L:76:ALA:N	2.20	0.49
12:L:142:LEU:HB3	12:L:148:ALA:HB2	1.95	0.49
13:M:16:VAL:O	13:M:17:THR:HG23	2.12	0.49
13:M:21:LYS:O	13:M:22:SER:HB3	2.12	0.49
14:N:66:GLU:O	14:N:70:ILE:HG13	2.12	0.49
15:O:20:ASN:HB3	15:O:126:ASP:HB2	1.94	0.49
16:P:60:VAL:CG2	16:P:77:ALA:HB2	2.42	0.49
16:P:135:THR:CG2	16:P:147:ASN:HA	2.40	0.49
17:Q:58:VAL:HG11	17:Q:101:ARG:HE	1.76	0.49
19:S:14:LYS:HA	19:S:19:LEU:HD23	1.93	0.49
19:S:151:ILE:HA	19:S:156:HIS:CD2	2.47	0.49
24:X:68:HIS:N	24:X:69:PRO:HD3	2.27	0.49
24:X:79:VAL:HG13	24:X:123:ILE:HA	1.94	0.49
32:FA:79:TRP:HZ2	32:FA:118:ILE:HB	1.75	0.49
35:IA:72:ARG:HH22	35:IA:107:VAL:HG13	1.76	0.49
35:IA:75:ILE:HG23	35:IA:93:VAL:HG22	1.94	0.49
43:QA:23:LEU:HD23	43:QA:38:ASN:CA	2.38	0.49
45:SA:2:ARG:HB3	45:SA:2:ARG:HH11	1.76	0.49
49:WA:134:TRP:HB3	49:WA:140:CYS:HB2	1.93	0.49
54:BB:94:ALA:C	54:BB:96:ASN:H	2.16	0.49
55:CB:160:VAL:HA	78:ZB:42:ARG:NH2	2.27	0.49
60:HB:57:THR:O	60:HB:58:GLN:HG2	2.11	0.49
61:IB:16:GLN:HE22	61:IB:33:ARG:HE	1.60	0.49
67:OB:109:LEU:O	67:OB:112:SER:HB3	2.12	0.49
74:VB:60:PHE:H	74:VB:71:GLY:HA2	1.76	0.49
82:DC:225:PHE:O	82:DC:229:TYR:HB2	2.12	0.49
82:DC:493:VAL:HG13	82:DC:556:ILE:HD13	1.94	0.49
1:A:381:C:H5”	54:BB:10:LYS:CD	2.40	0.49
1:A:533:U:H4’	74:VB:33:ALA:HB2	1.93	0.49
1:A:624:G:H1’	1:A:1027:A:C2	2.47	0.49
1:A:1087:A:O2’	1:A:1088:A:H5’	2.11	0.49
1:A:1551:U:H5	65:MB:40:ARG:HH22	1.60	0.49
2:B:10:C:O2	3:C:149:A:H2	1.95	0.49
2:B:26:A:H61	2:B:59:G:H1	1.59	0.49
2:B:342:A:N1	2:B:349:A:C8	2.81	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:552:G:C2	2:B:553:U:H1'	2.47	0.49
2:B:1060:U:O2'	2:B:1061:A:H5'	2.12	0.49
2:B:1107:C:H2'	2:B:1108:U:H6	1.77	0.49
2:B:1174:G:C6	2:B:1175:C:C4	3.00	0.49
2:B:1237:G:H4'	16:P:78:SER:OG	2.12	0.49
2:B:1481:A:H61	38:LA:2:ALA:CA	2.19	0.49
2:B:1652:G:C4'	38:LA:80:ARG:HH12	2.25	0.49
2:B:1901:A:OP2	2:B:1903:U:O4	2.29	0.49
2:B:1910:A:O2'	2:B:2334:U:H4'	2.12	0.49
2:B:2430:A:H2'	2:B:2431:C:C6	2.47	0.49
2:B:2767:U:H1'	46:TA:28:TYR:HH	1.75	0.49
2:B:2853:A:H4'	14:N:63:GLU:O	2.11	0.49
2:B:3034:C:N4	13:M:121:LYS:N	2.56	0.49
2:B:3160:U:H2'	2:B:3161:C:C5	2.46	0.49
2:B:3210:A:H2'	2:B:3211:C:C6	2.47	0.49
2:B:3376:A:O4'	35:IA:18:LYS:HG3	2.12	0.49
3:C:70:G:H5"	30:DA:28:ARG:CD	2.41	0.49
4:D:68:C:O2'	4:D:69:C:H5'	2.12	0.49
5:E:24:LYS:HG2	5:E:25:LYS:N	2.27	0.49
7:G:137:TYR:CE2	7:G:144:ILE:HG21	2.47	0.49
9:I:231:ILE:HG21	9:I:239:ILE:CD1	2.36	0.49
11:K:85:PHE:CZ	11:K:114:GLY:HA3	2.48	0.49
15:O:29:ARG:HH11	15:O:123:PHE:HE1	1.60	0.49
15:O:85:LYS:HG2	15:O:89:TYR:CE2	2.48	0.49
19:S:21:PHE:O	19:S:25:VAL:HG23	2.13	0.49
25:Y:39:ILE:CD1	25:Y:102:ARG:HD3	2.42	0.49
26:Z:73:GLY:O	26:Z:76:LEU:HB3	2.13	0.49
44:RA:99:CYS:HB3	44:RA:114:LYS:HE2	1.94	0.49
49:WA:113:VAL:HG22	49:WA:114:ASP:N	2.27	0.49
53:AB:40:ARG:HD2	53:AB:47:GLU:OE1	2.11	0.49
55:CB:112:ARG:NH2	66:NB:43:ILE:HG23	2.27	0.49
55:CB:129:PRO:O	55:CB:133:VAL:HB	2.13	0.49
57:EB:96:ARG:HD2	57:EB:121:VAL:HA	1.94	0.49
61:IB:45:PRO:HG2	61:IB:48:ALA:CB	2.40	0.49
63:KB:64:ARG:HA	63:KB:67:THR:O	2.12	0.49
64:LB:85:ALA:H	64:LB:119:THR:CG2	2.25	0.49
67:OB:5:ARG:O	67:OB:10:LYS:HE2	2.12	0.49
70:RB:26:LEU:HD22	70:RB:38:SER:HB2	1.93	0.49
72:TB:44:HIS:HE1	72:TB:112:ASP:HB3	1.76	0.49
72:TB:83:ILE:HG13	72:TB:84:GLY:N	2.28	0.49
75:WB:60:VAL:O	75:WB:101:TYR:HB2	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
77:YB:33:LEU:HA	77:YB:80:ARG:O	2.13	0.49
1:A:7:G:H4'	1:A:573:C:H4'	1.94	0.49
1:A:39:A:H5"	59:GB:3:ARG:NH1	2.26	0.49
1:A:361:C:H2'	1:A:362:G:H8	1.76	0.49
1:A:799:A:H4'	54:BB:201:HIS:CE1	2.47	0.49
1:A:918:U:H4'	64:LB:29:HIS:CE1	2.48	0.49
1:A:1089:U:H2'	1:A:1090:C:H6	1.77	0.49
1:A:1096:C:O4'	1:A:1099:U:H4'	2.13	0.49
1:A:1489:U:H5'	1:A:1494:C:N1	2.27	0.49
1:A:1546:G:H2'	1:A:1547:A:C8	2.47	0.49
2:B:277:G:O5'	46:TA:49:GLY:HA2	2.12	0.49
2:B:378:A:H4'	30:DA:91:ASN:HB3	1.94	0.49
2:B:1093:A:N3	2:B:1094:U:H1'	2.27	0.49
2:B:1261:G:H4'	2:B:1278:A:C2	2.48	0.49
2:B:1916:U:OP1	23:W:84:THR:HB	2.13	0.49
2:B:2298:U:O2'	2:B:2299:A:H5'	2.13	0.49
2:B:2331:C:O2'	2:B:2332:A:H5'	2.13	0.49
2:B:2459:A:N1	2:B:2487:U:H5'	2.27	0.49
2:B:2888:U:C5	2:B:2910:A:N7	2.80	0.49
2:B:2897:A:H2'	2:B:2899:C:C5'	2.41	0.49
2:B:2948:C:H2'	2:B:2949:U:H6	1.78	0.49
2:B:2985:C:H2'	2:B:2986:U:H6	1.68	0.49
2:B:3197:G:O2'	2:B:3198:U:H3'	2.12	0.49
2:B:3278:C:H3'	2:B:3279:A:H5"	1.94	0.49
2:B:3324:C:O2'	35:IA:105:GLN:HA	2.11	0.49
5:E:65:ILE:CD1	5:E:144:LEU:HD23	2.43	0.49
6:F:49:VAL:CG1	6:F:60:LYS:HE3	2.29	0.49
6:F:115:ASN:N	6:F:127:ALA:HB3	2.27	0.49
6:F:251:LYS:HA	6:F:251:LYS:CE	2.42	0.49
7:G:114:VAL:HG22	7:G:163:HIS:NE2	2.28	0.49
7:G:215:ILE:HD12	7:G:338:LEU:HD12	1.94	0.49
8:H:38:VAL:HG11	8:H:121:ALA:HB3	1.94	0.49
12:L:168:ALA:HB2	40:NA:47:ILE:CD1	2.43	0.49
12:L:190:VAL:CG1	12:L:192:GLN:H	2.20	0.49
18:R:112:LEU:HD22	18:R:116:GLU:OE1	2.11	0.49
19:S:22:LEU:HB3	19:S:26:ARG:NH1	2.28	0.49
20:T:6:VAL:HG22	20:T:32:LYS:HD2	1.94	0.49
20:T:8:VAL:O	20:T:118:VAL:HG22	2.12	0.49
21:U:167:ARG:C	21:U:168:LEU:HD12	2.33	0.49
29:CA:86:VAL:HG13	29:CA:120:LYS:HD3	1.94	0.49
31:EA:74:VAL:HG23	31:EA:101:PHE:CD2	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:KA:60:ARG:HB3	37:KA:60:ARG:HH21	1.78	0.49
42:PA:17:ARG:O	42:PA:18:ALA:CB	2.61	0.49
49:WA:134:TRP:HB3	49:WA:140:CYS:CB	2.43	0.49
49:WA:224:ASN:ND2	49:WA:231:MET:HG2	2.28	0.49
50:XA:30:GLN:HB2	50:XA:46:HIS:CE1	2.47	0.49
51:YA:96:LEU:HD12	51:YA:96:LEU:O	2.12	0.49
52:ZA:142:GLY:HA3	52:ZA:155:ALA:HB2	1.94	0.49
54:BB:195:ILE:CG2	54:BB:196:VAL:N	2.76	0.49
56:DB:157:VAL:HG22	56:DB:159:ARG:HG3	1.95	0.49
57:EB:152:VAL:HG21	57:EB:181:ILE:HD11	1.94	0.49
58:FB:56:ARG:HG2	58:FB:58:LEU:HD21	1.94	0.49
59:GB:36:LEU:HD13	59:GB:42:ILE:CG1	2.33	0.49
60:HB:30:ALA:O	60:HB:38:LYS:HA	2.11	0.49
61:IB:57:LYS:CD	61:IB:131:ILE:HG23	2.42	0.49
73:UB:75:GLN:CG	73:UB:82:LYS:HG3	2.43	0.49
75:WB:41:ILE:O	75:WB:42:LEU:HB3	2.12	0.49
82:DC:755:VAL:HG23	82:DC:770:ALA:HA	1.93	0.49
1:A:187:G:OP1	58:FB:139:ALA:HB2	2.13	0.49
1:A:401:A:C4’	54:BB:3:ARG:HD3	2.41	0.49
1:A:460:A:H3’	1:A:461:G:H8	1.77	0.49
1:A:629:U:H5’	63:KB:127:ARG:NH2	2.28	0.49
1:A:877:G:H4’	1:A:942:G:N2	2.27	0.49
1:A:1042:G:C3’	1:A:1043:A:H5”	2.43	0.49
1:A:1203:A:H5”	1:A:1456:C:N4	2.27	0.49
2:B:110:G:H2’	2:B:111:C:O4’	2.13	0.49
2:B:146:U:P	2:B:148:G:H5’	2.53	0.49
2:B:571:U:O2’	2:B:572:A:H5’	2.13	0.49
2:B:637:C:H2’	2:B:638:C:H6	1.69	0.49
2:B:645:A:C2	2:B:2372:A:C2	3.01	0.49
2:B:680:G:C4’	2:B:789:A:H4’	2.43	0.49
2:B:837:A:N6	2:B:856:G:H1’	2.28	0.49
2:B:888:A:H2’	2:B:889:U:O4’	2.12	0.49
2:B:967:A:H2’	2:B:968:G:H8	1.78	0.49
2:B:1322:U:OP1	24:X:117:ARG:HD2	2.12	0.49
2:B:1363:A:OP1	11:K:160:ARG:HD3	2.13	0.49
2:B:1379:G:H2’	2:B:1379:G:N3	2.27	0.49
2:B:2289:U:H2’	2:B:2290:C:C6	2.48	0.49
2:B:2434:U:C4	2:B:2515:A:H2	2.31	0.49
2:B:2667:A:H2’	2:B:2668:U:O4’	2.13	0.49
2:B:3037:U:OP1	7:G:348:ARG:HD2	2.12	0.49
7:G:222:LYS:HA	7:G:334:ARG:HH12	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:279:ASN:ND2	7:G:343:TYR:OH	2.45	0.49
7:G:316:GLU:O	7:G:317:ILE:CB	2.60	0.49
8:H:22:LEU:HB3	8:H:26:PHE:HD2	1.77	0.49
8:H:191:LYS:HG2	8:H:194:TYR:OH	2.13	0.49
8:H:210:ALA:HA	8:H:257:LYS:NZ	2.26	0.49
10:J:65:ILE:O	10:J:76:LEU:HA	2.13	0.49
12:L:61:GLN:HB3	19:S:28:TRP:CH2	2.47	0.49
12:L:154:ALA:HB2	12:L:186:LEU:CD1	2.41	0.49
15:O:109:HIS:HE1	15:O:122:ILE:HA	1.76	0.49
17:Q:105:ASN:CG	17:Q:108:ILE:HG12	2.32	0.49
20:T:27:LEU:C	20:T:27:LEU:HD13	2.32	0.49
20:T:174:PHE:O	20:T:178:VAL:HG23	2.11	0.49
21:U:159:LYS:O	21:U:160:ALA:HB3	2.13	0.49
23:W:119:LEU:CG	23:W:123:LEU:HD12	2.39	0.49
24:X:20:PRO:O	24:X:21:GLU:HB3	2.13	0.49
24:X:38:LYS:HG2	24:X:61:ILE:HD13	1.94	0.49
25:Y:17:ARG:HG2	25:Y:22:HIS:HA	1.95	0.49
25:Y:62:GLY:HA2	25:Y:75:ILE:O	2.12	0.49
26:Z:94:ARG:O	26:Z:96:VAL:HG23	2.13	0.49
29:CA:90:ALA:HB1	29:CA:95:ILE:CD1	2.37	0.49
29:CA:126:LEU:HD13	29:CA:132:ALA:HB2	1.95	0.49
34:HA:27:TYR:CD1	34:HA:52:ARG:NH1	2.81	0.49
48:VA:5:ARG:HA	48:VA:8:LYS:HD3	1.95	0.49
48:VA:107:ALA:HB1	48:VA:108:PRO:HD2	1.93	0.49
51:YA:127:VAL:HG22	51:YA:176:VAL:HG11	1.95	0.49
52:ZA:53:ILE:HB	52:ZA:57:PHE:CE2	2.47	0.49
54:BB:145:ARG:NH1	54:BB:162:ILE:HD13	2.28	0.49
54:BB:178:GLY:H	54:BB:195:ILE:CG2	2.26	0.49
58:FB:85:PRO:HB3	61:IB:12:ALA:HA	1.95	0.49
59:GB:133:HIS:O	59:GB:134:ILE:O	2.30	0.49
59:GB:175:ARG:HH11	59:GB:175:ARG:HG3	1.77	0.49
61:IB:75:VAL:HG13	61:IB:84:ILE:HD12	1.94	0.49
63:KB:106:ARG:HG2	63:KB:106:ARG:HH21	1.77	0.49
66:NB:28:LEU:HB3	66:NB:64:ASP:CA	2.37	0.49
70:RB:55:PRO:HB3	70:RB:91:ILE:CD1	2.43	0.49
73:UB:55:GLU:HA	73:UB:98:GLU:OE2	2.13	0.49
73:UB:87:VAL:HG22	73:UB:124:VAL:HG21	1.94	0.49
76:XB:10:ARG:HG3	76:XB:34:LYS:HD2	1.94	0.49
77:YB:8:LEU:C	77:YB:10:PRO:HD3	2.33	0.49
77:YB:73:LEU:HD13	77:YB:77:THR:O	2.12	0.49
79:AC:31:ILE:HD11	79:AC:40:ARG:CB	2.39	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:565:GLU:HB3	82:DC:717:PHE:CZ	2.46	0.49
82:DC:666:ALA:CB	82:DC:706:ILE:HA	2.41	0.49
82:DC:667:PHE:HD2	82:DC:668:GLN:NE2	2.10	0.49
1:A:650:U:H2'	1:A:651:G:O4'	2.13	0.49
1:A:889:U:O2'	1:A:890:C:H5'	2.13	0.49
1:A:1184:A:C2	1:A:1455:G:O4'	2.66	0.49
1:A:1379:C:H2'	1:A:1380:U:H5'	1.95	0.49
1:A:1767:G:H5'	1:A:1768:G:N2	2.26	0.49
2:B:583:G:H5"	10:J:82:ARG:NH1	2.15	0.49
2:B:588:G:H22	10:J:23:LYS:HZ3	1.60	0.49
2:B:684:G:H5"	17:Q:35:ARG:NH1	2.28	0.49
2:B:879:U:OP2	2:B:2981:U:H4'	2.12	0.49
2:B:1029:G:H2'	2:B:1030:A:C8	2.47	0.49
2:B:1052:U:O2	4:D:103:A:H4'	2.13	0.49
2:B:1162:U:O2'	36:JA:12:LYS:HG2	2.13	0.49
2:B:1953:G:H3'	2:B:1954:G:C5'	2.37	0.49
2:B:2215:A:H2'	2:B:2216:G:H8	1.78	0.49
2:B:2241:U:H4'	6:F:242:ARG:CZ	2.43	0.49
2:B:2430:A:H2'	2:B:2431:C:O4'	2.12	0.49
2:B:2436:U:C2'	2:B:2437:G:H5"	2.40	0.49
2:B:2812:C:H2'	2:B:2813:A:H8	1.76	0.49
2:B:3100:U:H3	2:B:3134:A:H61	1.60	0.49
2:B:3242:G:O4'	2:B:3245:A:H1'	2.13	0.49
2:B:3268:A:O4'	10:J:75:PRO:HG3	2.12	0.49
5:E:24:LYS:HG2	5:E:25:LYS:H	1.78	0.49
7:G:50:LYS:HB3	7:G:331:ASN:O	2.13	0.49
8:H:292:SER:O	8:H:293:SER:HB2	2.12	0.49
10:J:26:ARG:HG3	10:J:27:PRO:HD2	1.95	0.49
13:M:9:GLN:HB3	13:M:52:LEU:HD11	1.95	0.49
14:N:95:HIS:HD2	14:N:126:ALA:HB3	1.77	0.49
17:Q:119:TYR:HE1	39:MA:118:ILE:HD11	1.78	0.49
18:R:36:VAL:HG23	18:R:47:ASP:CB	2.41	0.49
19:S:153:ASP:HB2	19:S:155:VAL:HG22	1.93	0.49
25:Y:91:LEU:N	25:Y:91:LEU:HD23	2.27	0.49
25:Y:100:LYS:O	25:Y:103:GLN:HB3	2.12	0.49
27:AA:109:MET:HE3	27:AA:129:VAL:HG13	1.94	0.49
28:BA:38:SER:O	28:BA:42:GLN:HG3	2.12	0.49
30:DA:31:LEU:HD22	30:DA:101:PRO:HD2	1.93	0.49
37:KA:18:ARG:HB3	37:KA:23:ASN:CB	2.43	0.49
46:TA:68:VAL:HB	46:TA:85:LEU:CB	2.39	0.49
47:UA:47:VAL:HA	47:UA:56:THR:O	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:VA:106:ALA:HB1	48:VA:182:THR:CG2	2.43	0.49
56:DB:139:ASN:HD22	56:DB:139:ASN:N	2.09	0.49
58:FB:38:ILE:HD12	58:FB:94:ASN:HB3	1.95	0.49
58:FB:136:SER:HB3	58:FB:139:ALA:HB3	1.94	0.49
61:IB:53:TYR:HB2	61:IB:113:PRO:HG3	1.95	0.49
65:MB:24:LYS:O	65:MB:28:MET:HB2	2.11	0.49
66:NB:24:ALA:HB2	66:NB:92:TYR:OH	2.13	0.49
67:OB:30:THR:HG23	67:OB:31:ASN:H	1.77	0.49
68:PB:123:ARG:O	68:PB:127:HIS:HB2	2.13	0.49
72:TB:62:VAL:HG13	77:YB:7:LEU:HD12	1.95	0.49
73:UB:83:VAL:HG11	73:UB:122:PHE:CE2	2.48	0.49
76:XB:44:ILE:CD1	76:XB:65:PRO:HG2	2.41	0.49
79:AC:10:HIS:ND1	79:AC:11:PRO:HD2	2.27	0.49
82:DC:159:LYS:HE3	84:DC:901:GDP:C2	2.47	0.49
82:DC:213:SER:HB3	82:DC:218:TRP:NE1	2.28	0.49
82:DC:277:ILE:O	82:DC:280:PRO:HD2	2.13	0.49
82:DC:335:LEU:HD22	82:DC:338:ILE:HG21	1.94	0.49
83:EC:6765:A:H2'	83:EC:6766:U:O4'	2.13	0.49
1:A:495:C:H5'	1:A:496:G:O4'	2.13	0.49
1:A:1087:A:C2	1:A:1142:A:H4'	2.47	0.49
1:A:1273:G:H5"	1:A:1431:C:H5	1.78	0.49
1:A:1485:C:N3	1:A:1592:A:H1'	2.27	0.49
1:A:1758:U:H2'	1:A:1759:C:C6	2.47	0.49
2:B:374:A:H4'	2:B:375:A:H5'	1.94	0.49
2:B:803:C:H5'	8:H:100:PHE:CE2	2.48	0.49
2:B:1043:C:H2'	2:B:1044:U:C6	2.48	0.49
2:B:1185:C:H3'	2:B:1186:G:H5"	1.94	0.49
2:B:1374:G:H2'	2:B:1375:G:O4'	2.13	0.49
2:B:1938:U:H1'	23:W:78:TYR:HB2	1.95	0.49
2:B:2154:U:H4'	6:F:240:ALA:HB1	1.95	0.49
2:B:2181:C:H2'	2:B:2182:A:O4'	2.13	0.49
2:B:2261:G:H21	2:B:2262:A:N6	2.11	0.49
2:B:2437:G:C2	2:B:2511:A:H1'	2.47	0.49
2:B:2899:C:H42	13:M:173:ARG:HD3	1.76	0.49
2:B:3283:U:H2'	2:B:3284:G:C8	2.47	0.49
2:B:3300:U:H2'	2:B:3301:U:C5'	2.42	0.49
5:E:13:VAL:O	5:E:16:LEU:HB3	2.13	0.49
5:E:89:ASP:HB2	5:E:92:LYS:HB2	1.94	0.49
5:E:136:THR:HA	83:EC:6820:C:H41	1.77	0.49
6:F:29:LEU:HD11	6:F:115:ASN:O	2.12	0.49
6:F:142:ASP:O	6:F:143:GLU:HB2	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:80:ASP:OD1	7:G:82:PRO:HD3	2.13	0.49
7:G:148:LEU:HD11	7:G:192:VAL:CG2	2.43	0.49
7:G:221:THR:HG22	7:G:222:LYS:N	2.28	0.49
8:H:126:ILE:HA	8:H:129:THR:HG23	1.95	0.49
8:H:238:LEU:O	8:H:246:ARG:HG3	2.13	0.49
9:I:95:TRP:HZ2	9:I:156:GLY:HA2	1.78	0.49
9:I:289:LYS:HE3	9:I:293:LEU:HD13	1.95	0.49
10:J:65:ILE:CD1	10:J:77:ARG:HB3	2.42	0.49
11:K:147:LEU:HB3	11:K:205:PHE:HE1	1.77	0.49
11:K:228:SER:HA	11:K:232:ARG:HH22	1.78	0.49
12:L:150:LEU:HA	12:L:176:PRO:HG2	1.95	0.49
12:L:154:ALA:C	12:L:156:ASP:N	2.64	0.49
19:S:116:LEU:O	19:S:165:THR:HG22	2.11	0.49
21:U:26:PHE:CA	21:U:144:SER:HB3	2.43	0.49
21:U:26:PHE:CB	21:U:144:SER:HB3	2.43	0.49
23:W:169:ALA:O	23:W:173:ARG:HB2	2.13	0.49
28:BA:13:ILE:HG12	28:BA:32:GLN:HB2	1.95	0.49
32:FA:75:LEU:HD11	32:FA:137:LYS:HD2	1.95	0.49
34:HA:45:ALA:HB2	34:HA:73:GLY:HA2	1.94	0.49
40:NA:64:SER:HB3	40:NA:68:ARG:HG3	1.93	0.49
41:OA:17:THR:HG22	41:OA:18:LEU:H	1.77	0.49
49:WA:19:TRP:CE3	49:WA:306:THR:HB	2.47	0.49
51:YA:38:PHE:HZ	51:YA:84:ILE:HG21	1.78	0.49
52:ZA:52:THR:CB	52:ZA:54:GLU:HG2	2.38	0.49
54:BB:87:MET:HA	54:BB:87:MET:CE	2.42	0.49
54:BB:178:GLY:H	54:BB:195:ILE:HB	1.78	0.49
54:BB:191:ARG:HD2	54:BB:218:PHE:CZ	2.48	0.49
61:IB:75:VAL:N	61:IB:86:ILE:HG22	2.28	0.49
63:KB:91:LEU:HD11	63:KB:121:ARG:HD2	1.94	0.49
65:MB:37:ALA:HB1	65:MB:38:PRO:CD	2.36	0.49
75:WB:59:TYR:CD2	75:WB:60:VAL:N	2.81	0.49
82:DC:141:THR:HG21	82:DC:793:PHE:HZ	1.78	0.49
82:DC:150:ARG:HH12	82:DC:354:GLU:CB	2.26	0.49
82:DC:182:VAL:O	82:DC:186:ASN:HB2	2.12	0.49
82:DC:353:ALA:HA	82:DC:356:LEU:CB	2.38	0.49
82:DC:411:VAL:HG13	82:DC:470:THR:C	2.33	0.49
82:DC:610:ASP:OD2	82:DC:615:ARG:HB2	2.13	0.49
83:EC:6941:U:C3'	83:EC:6942:A:C5'	2.81	0.49
1:A:510:G:H8	1:A:510:G:OP2	1.96	0.49
1:A:567:A:N3	80:BC:14:VAL:HB	2.28	0.49
1:A:589:C:H2'	1:A:590:C:C6	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:877:G:H4'	1:A:942:G:H22	1.77	0.49
2:B:48:A:OP1	2:B:48:A:H8	1.95	0.49
2:B:145:G:C4'	19:S:55:ALA:HB1	2.42	0.49
2:B:226:C:H2'	2:B:227:G:O4'	2.13	0.49
2:B:339:C:H5'	2:B:339:C:H6	1.76	0.49
2:B:347:G:C2'	2:B:348:A:H5'	2.42	0.49
2:B:547:G:H4'	2:B:548:G:OP1	2.12	0.49
2:B:626:U:H1'	2:B:1401:A:OP1	2.12	0.49
2:B:651:G:H2'	2:B:652:G:O4'	2.13	0.49
2:B:1182:A:H2'	2:B:1183:C:C6	2.48	0.49
2:B:1255:C:O2	16:P:131:GLU:HG3	2.13	0.49
2:B:1643:A:H2'	2:B:1644:C:C2	2.48	0.49
2:B:2082:U:H5	2:B:2086:A:H1'	1.77	0.49
2:B:2218:G:H2'	2:B:2219:A:C8	2.46	0.49
2:B:2916:U:H2'	2:B:2917:G:C8	2.44	0.49
2:B:3152:U:O2'	2:B:3153:U:H5'	2.12	0.49
3:C:104:A:H2'	3:C:106:C:N4	2.28	0.49
6:F:101:VAL:O	6:F:102:LEU:HD12	2.12	0.49
6:F:114:SER:CA	6:F:127:ALA:HB1	2.36	0.49
8:H:286:VAL:HA	8:H:289:ILE:HD12	1.94	0.49
10:J:62:THR:HG21	10:J:78:ARG:NH1	2.27	0.49
12:L:182:GLY:O	12:L:186:LEU:HG	2.13	0.49
17:Q:180:ARG:HH11	17:Q:180:ARG:HG2	1.76	0.49
19:S:16:SER:O	19:S:20:ARG:HB3	2.13	0.49
20:T:37:ARG:NH1	20:T:161:LYS:NZ	2.60	0.49
20:T:76:PRO:O	20:T:79:ILE:HG22	2.12	0.49
22:V:19:PRO:C	22:V:21:SER:H	2.16	0.49
27:AA:27:ASP:HB2	27:AA:111:GLY:O	2.13	0.49
29:CA:92:LYS:HG2	29:CA:110:VAL:HG12	1.94	0.49
31:EA:23:VAL:HG12	31:EA:45:GLY:HA3	1.94	0.49
35:IA:109:VAL:HG12	35:IA:110:GLU:H	1.78	0.49
47:UA:29:LEU:O	47:UA:32:GLN:HB2	2.13	0.49
50:XA:21:ASN:O	50:XA:24:LEU:HB2	2.12	0.49
53:AB:17:PHE:HE1	53:AB:77:PHE:CE2	2.31	0.49
54:BB:11:ARG:N	54:BB:27:TYR:HA	2.27	0.49
54:BB:113:ARG:HH11	54:BB:113:ARG:HG3	1.77	0.49
54:BB:202:ASP:HB3	61:IB:40:LEU:HD12	1.95	0.49
66:NB:47:LYS:O	66:NB:50:GLU:HG3	2.11	0.49
69:QB:33:TYR:HA	69:QB:36:ILE:HG12	1.95	0.49
73:UB:20:ARG:HG3	73:UB:20:ARG:HH11	1.77	0.49
73:UB:20:ARG:O	73:UB:23:ARG:HB2	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:412:ARG:HH11	82:DC:426:LEU:CD1	2.26	0.49
82:DC:454:ILE:CG1	82:DC:455:GLY:H	2.26	0.49
82:DC:545:LEU:HA	82:DC:549:HIS:HB2	1.93	0.49
82:DC:798:PHE:CE2	86:DC:903:SO1:H22	2.47	0.49
1:A:168:A:O2'	1:A:169:A:H5'	2.13	0.49
1:A:320:U:O4	1:A:1665:U:H5"	2.13	0.49
1:A:445:A:H4'	74:VB:89:TYR:CE2	2.48	0.49
1:A:918:U:H2'	1:A:919:A:C8	2.47	0.49
1:A:1022:C:H5'	1:A:1122:G:H4'	1.94	0.49
2:B:337:G:H21	8:H:50:TYR:HB2	1.78	0.49
2:B:389:A:H2'	2:B:390:G:H5"	1.95	0.49
2:B:720:A:H3'	22:V:69:ARG:HH22	1.76	0.49
2:B:992:A:H2'	2:B:993:G:H5'	1.94	0.49
2:B:1052:U:H2'	2:B:1053:A:H5'	1.95	0.49
2:B:1090:G:H2'	2:B:1091:A:H8	1.78	0.49
2:B:1387:G:HO2'	10:J:2:SER:N	2.11	0.49
2:B:1758:G:H2'	2:B:1759:C:C6	2.47	0.49
2:B:1890:U:H2'	2:B:1891:A:C8	2.48	0.49
2:B:2608:G:O2'	2:B:2609:A:H5'	2.13	0.49
2:B:2837:A:H2'	2:B:2845:A:N1	2.28	0.49
2:B:2856:G:H5"	14:N:7:ARG:HD3	1.94	0.49
2:B:3313:U:O2'	2:B:3314:A:H5'	2.12	0.49
2:B:3391:A:H2'	2:B:3392:U:C6	2.48	0.49
6:F:46:LYS:O	6:F:47:GLN:HB2	2.12	0.49
6:F:77:ILE:HG22	6:F:78:ALA:N	2.27	0.49
7:G:128:LYS:HA	7:G:131:THR:HG21	1.95	0.49
7:G:160:VAL:HG12	7:G:162:VAL:HG13	1.94	0.49
9:I:50:ARG:HB2	9:I:65:ILE:CD1	2.43	0.49
10:J:171:PRO:HB2	37:KA:43:PHE:CE2	2.47	0.49
13:M:79:ILE:O	13:M:82:VAL:HG12	2.13	0.49
15:O:21:ILE:HD11	15:O:37:LEU:CG	2.42	0.49
17:Q:9:ILE:HG13	32:FA:49:HIS:CE1	2.48	0.49
18:R:45:LEU:HD13	24:X:97:VAL:HG11	1.94	0.49
19:S:47:LYS:HD3	19:S:50:ARG:HE	1.77	0.49
19:S:114:ARG:HG2	19:S:137:PRO:HG3	1.95	0.49
20:T:15:LEU:HD12	20:T:128:ARG:HB2	1.95	0.49
21:U:168:LEU:HA	21:U:172:GLN:OE1	2.13	0.49
24:X:137:ARG:CG	24:X:139:TYR:CE1	2.95	0.49
25:Y:57:TYR:O	25:Y:59:GLY:N	2.44	0.49
26:Z:100:THR:O	26:Z:101:ASN:HB2	2.11	0.49
29:CA:115:ARG:HB3	29:CA:115:ARG:NH1	2.28	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:EA:63:ALA:HA	31:EA:66:THR:OG1	2.12	0.49
45:SA:9:ARG:HG3	45:SA:9:ARG:NH1	2.28	0.49
49:WA:123:ILE:HD12	49:WA:123:ILE:O	2.12	0.49
50:XA:71:GLU:HG3	50:XA:72:ASP:H	1.77	0.49
50:XA:110:TYR:HA	50:XA:115:PHE:CD1	2.48	0.49
52:ZA:101:VAL:CG1	52:ZA:211:LEU:HD12	2.40	0.49
55:CB:82:PHE:CE2	78:ZB:49:ARG:HB3	2.48	0.49
57:EB:30:SER:C	57:EB:32:PRO:HD2	2.33	0.49
60:HB:14:TYR:CD2	60:HB:35:ILE:HD11	2.48	0.49
63:KB:86:GLU:O	63:KB:89:TYR:HB3	2.12	0.49
63:KB:95:ALA:O	63:KB:99:ARG:HB2	2.12	0.49
68:PB:19:ASN:HD22	68:PB:102:ALA:HB1	1.77	0.49
73:UB:32:ARG:HH11	73:UB:32:ARG:CB	2.22	0.49
82:DC:363:ASP:OD2	82:DC:365:ASN:HB2	2.13	0.49
82:DC:464:LEU:O	82:DC:465:LYS:HB2	2.12	0.49
1:A:480:G:H2'	1:A:481:A:O4'	2.13	0.48
1:A:1084:A:H2'	1:A:1085:G:O4'	2.13	0.48
1:A:1107:G:O2'	1:A:1108:G:H5'	2.12	0.48
1:A:1171:A:H2'	1:A:1172:G:C8	2.49	0.48
1:A:1391:A:H2'	1:A:1392:U:C6	2.48	0.48
1:A:1527:C:H5"	55:CB:109:LYS:CE	2.42	0.48
1:A:1649:G:H2'	1:A:1650:U:H6	1.77	0.48
2:B:65:A:H5"	2:B:66:A:H4'	1.94	0.48
2:B:156:G:O2'	2:B:157:A:H4'	2.12	0.48
2:B:432:G:H2'	2:B:433:A:H8	1.77	0.48
2:B:492:U:H3'	2:B:493:G:H5'	1.95	0.48
2:B:709:A:H8	2:B:709:A:OP1	1.95	0.48
2:B:739:G:H2'	2:B:740:G:H8	1.78	0.48
2:B:1919:G:H1'	2:B:1934:G:C2	2.47	0.48
2:B:2393:G:H5'	7:G:266:ARG:HH21	1.79	0.48
2:B:3139:A:C2'	2:B:3140:G:H5'	2.43	0.48
2:B:3354:U:C5'	2:B:3356:G:H5'	2.43	0.48
2:B:3380:U:H2'	2:B:3381:U:O4'	2.12	0.48
3:C:41:A:H61	3:C:103:G:H1'	1.78	0.48
3:C:142:C:H2'	3:C:143:U:C6	2.48	0.48
7:G:24:SER:H	7:G:28:ARG:NH2	2.10	0.48
8:H:271:LYS:O	8:H:274:TYR:HB3	2.13	0.48
9:I:22:ARG:HG2	9:I:28:THR:CB	2.43	0.48
10:J:81:ALA:O	10:J:84:VAL:HG22	2.13	0.48
10:J:139:LYS:C	10:J:141:VAL:H	2.16	0.48
11:K:24:GLU:C	11:K:26:VAL:H	2.17	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:K:83:LEU:N	11:K:119:VAL:HG23	2.27	0.48
11:K:122:ALA:HB2	25:Y:132:PRO:HB3	1.95	0.48
14:N:145:LYS:HA	14:N:148:VAL:CG2	2.43	0.48
15:O:97:SER:O	15:O:156:LYS:HB2	2.13	0.48
15:O:104:PHE:CE1	15:O:106:ILE:HG23	2.48	0.48
18:R:3:THR:HG22	18:R:4:ASP:N	2.27	0.48
24:X:106:LEU:HD22	24:X:110:MET:HE1	1.95	0.48
29:CA:106:ASP:O	29:CA:127:THR:HG23	2.12	0.48
31:EA:7:ALA:CB	31:EA:89:VAL:HG11	2.41	0.48
38:LA:74:ARG:NH2	38:LA:85:VAL:HG21	2.28	0.48
48:VA:58:MET:HE1	48:VA:61:ARG:HG3	1.95	0.48
48:VA:130:PRO:HA	48:VA:150:ILE:CD1	2.42	0.48
50:XA:121:VAL:HG23	50:XA:141:ILE:CG2	2.41	0.48
53:AB:43:PRO:O	53:AB:44:THR:HB	2.13	0.48
56:DB:74:LYS:NZ	56:DB:94:ARG:HG3	2.22	0.48
57:EB:153:LEU:HA	57:EB:184:GLU:H	1.78	0.48
61:IB:69:LYS:H	61:IB:127:GLN:HB3	1.77	0.48
68:PB:49:LYS:CB	68:PB:72:ILE:HD13	2.39	0.48
78:ZB:36:THR:HG23	78:ZB:37:SER:H	1.78	0.48
82:DC:16:VAL:HG23	82:DC:346:VAL:CG2	2.42	0.48
82:DC:143:LEU:CD1	82:DC:185:VAL:HG13	2.28	0.48
82:DC:603:ASN:HB3	82:DC:605:ILE:HG13	1.95	0.48
1:A:189:C:H3’	1:A:190:C:C5’	2.41	0.48
1:A:380:U:H1’	59:GB:3:ARG:O	2.12	0.48
1:A:771:A:H2’	1:A:772:G:O4’	2.14	0.48
1:A:1113:A:H4’	1:A:1114:G:OP1	2.13	0.48
1:A:1119:G:H2’	1:A:1120:U:O4’	2.12	0.48
1:A:1454:G:H1’	65:MB:99:GLY:HA2	1.95	0.48
1:A:1477:G:O2’	69:QB:47:PRO:HA	2.13	0.48
1:A:1591:C:H2’	1:A:1592:A:C8	2.47	0.48
1:A:1712:A:H3’	1:A:1713:G:C5’	2.43	0.48
2:B:28:C:O2’	2:B:29:C:H5’	2.13	0.48
2:B:130:A:H2’	2:B:131:C:O4’	2.13	0.48
2:B:145:G:N7	12:L:193:LYS:HE2	2.27	0.48
2:B:254:A:H2’	2:B:255:A:H8	1.78	0.48
2:B:361:A:C4’	41:OA:45:ARG:HH22	2.26	0.48
2:B:699:A:H2’	2:B:700:C:O4’	2.13	0.48
2:B:1164:G:H2’	2:B:1165:A:H8	1.73	0.48
2:B:1833:G:H2’	2:B:1834:U:C5’	2.41	0.48
2:B:2433:U:H2’	2:B:2434:U:O2	2.14	0.48
3:C:104:A:H4’	41:OA:42:ALA:O	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:11:A:H4'	4:D:13:A:C4	2.47	0.48
5:E:101:LYS:HE3	5:E:101:LYS:HA	1.94	0.48
8:H:152:VAL:HG12	8:H:153:SER:N	2.28	0.48
9:I:243:ALA:HA	9:I:246:ALA:CB	2.43	0.48
10:J:138:GLN:O	10:J:141:VAL:HB	2.14	0.48
12:L:94:PHE:CZ	12:L:150:LEU:HD12	2.47	0.48
14:N:54:SER:HA	14:N:163:GLN:HG2	1.94	0.48
17:Q:42:ARG:HG2	17:Q:46:ILE:CG1	2.37	0.48
17:Q:85:LEU:CG	17:Q:86:THR:H	2.25	0.48
19:S:58:GLY:HA3	19:S:142:ILE:CG1	2.42	0.48
19:S:155:VAL:HG23	19:S:156:HIS:ND1	2.28	0.48
21:U:57:ALA:HB3	21:U:73:GLY:N	2.27	0.48
24:X:107:TYR:CE1	24:X:121:ILE:HB	2.48	0.48
25:Y:52:MET:HA	25:Y:95:HIS:CE1	2.47	0.48
29:CA:73:MET:HE3	29:CA:76:VAL:HB	1.95	0.48
34:HA:40:LYS:C	34:HA:65:THR:HG23	2.33	0.48
40:NA:45:ARG:HG3	40:NA:45:ARG:NH1	2.27	0.48
40:NA:78:GLY:HA3	40:NA:82:ARG:CD	2.43	0.48
42:PA:8:ILE:H	42:PA:8:ILE:CD1	2.20	0.48
48:VA:29:GLY:HA3	48:VA:188:VAL:HG23	1.94	0.48
49:WA:274:LEU:CD2	49:WA:276:PRO:HD3	2.43	0.48
50:XA:108:THR:HG22	50:XA:109:ASN:H	1.78	0.48
51:YA:121:ILE:HD12	51:YA:121:ILE:N	2.29	0.48
52:ZA:108:ASN:HA	52:ZA:192:GLY:HA3	1.95	0.48
53:AB:16:VAL:HG22	79:AC:50:ILE:HD13	1.94	0.48
53:AB:105:MET:HE2	53:AB:118:ALA:HB1	1.95	0.48
54:BB:11:ARG:HB2	54:BB:11:ARG:NH2	2.28	0.48
54:BB:86:PHE:O	54:BB:87:MET:HB2	2.12	0.48
54:BB:113:ARG:HG3	54:BB:113:ARG:NH1	2.28	0.48
57:EB:68:ALA:O	57:EB:72:LYS:HG3	2.13	0.48
57:EB:121:VAL:O	57:EB:125:ILE:HG13	2.13	0.48
57:EB:129:LEU:CD2	57:EB:172:VAL:HG11	2.39	0.48
61:IB:6:THR:O	61:IB:7:VAL:HG12	2.13	0.48
61:IB:35:TYR:CE1	61:IB:49:ILE:HG12	2.49	0.48
64:LB:20:TYR:HE1	64:LB:84:ARG:HH11	1.57	0.48
74:VB:27:VAL:HG21	74:VB:60:PHE:CE1	2.48	0.48
77:YB:13:ALA:O	77:YB:17:ARG:HG2	2.14	0.48
82:DC:727:PRO:HD3	82:DC:801:TRP:CZ3	2.47	0.48
82:DC:733:ILE:HD12	82:DC:733:ILE:N	2.25	0.48
83:EC:6790:A:H2	83:EC:6801:A:H62	1.61	0.48
83:EC:6947:A:H2'	83:EC:6948:U:H4'	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:36:C:H5”	1:A:530:C:H4’	1.95	0.48
1:A:82:U:H2’	1:A:83:G:H5’	1.95	0.48
1:A:390:G:H2’	1:A:391:A:C8	2.49	0.48
1:A:509:G:H2’	1:A:510:G:C8	2.47	0.48
1:A:891:A:H2’	1:A:892:A:H8	1.79	0.48
1:A:1542:G:H22	1:A:1568:C:C1’	2.26	0.48
1:A:1568:C:H5”	1:A:1569:A:O4’	2.12	0.48
2:B:346:C:OP1	3:C:26:U:H4’	2.12	0.48
2:B:451:U:H2’	2:B:452:G:H8	1.78	0.48
2:B:492:U:H3’	2:B:493:G:C5’	2.44	0.48
2:B:818:C:H5”	41:OA:10:LYS:HB2	1.94	0.48
2:B:853:G:H2’	2:B:854:G:O4’	2.12	0.48
2:B:872:U:H2’	2:B:873:C:H6	1.77	0.48
2:B:900:G:H2’	2:B:901:G:C8	2.48	0.48
2:B:1524:A:O2’	2:B:1525:G:H5”	2.13	0.48
2:B:1695:U:O3’	2:B:1696:A:H8	1.95	0.48
2:B:1717:U:H2’	2:B:1718:G:C8	2.49	0.48
2:B:1860:G:O2’	2:B:1861:G:H5’	2.13	0.48
2:B:2148:U:H2’	2:B:2149:A:N7	2.27	0.48
2:B:2532:U:H3’	2:B:2533:G:C5’	2.28	0.48
2:B:2946:A:H2’	2:B:2982:A:C8	2.48	0.48
2:B:2971:A:H5”	2:B:2972:G:H5’	1.95	0.48
2:B:3086:A:HO2’	7:G:365:PHE:HE2	1.60	0.48
2:B:3335:A:H5’	2:B:3335:A:H8	1.78	0.48
3:C:93:U:C2’	3:C:94:C:H5’	2.43	0.48
3:C:106:C:H3’	3:C:106:C:OP2	2.14	0.48
3:C:129:C:H2’	3:C:130:C:C6	2.48	0.48
4:D:61:G:H2’	4:D:62:U:C5	2.48	0.48
5:E:34:LEU:HD22	5:E:183:ILE:HD11	1.95	0.48
7:G:252:ILE:O	7:G:264:VAL:HG11	2.13	0.48
8:H:23:PRO:HD3	8:H:255:PHE:HE1	1.76	0.48
9:I:284:ALA:HA	9:I:287:ALA:HB3	1.94	0.48
12:L:214:LEU:HA	12:L:217:THR:HB	1.94	0.48
13:M:26:LYS:CG	13:M:35:THR:HG22	2.42	0.48
13:M:36:LYS:HE2	13:M:78:MET:HE2	1.94	0.48
19:S:30:TYR:C	19:S:32:GLN:H	2.16	0.48
24:X:161:LYS:HD3	24:X:162:THR:H	1.78	0.48
27:AA:63:LYS:HB3	27:AA:64:LYS:HD2	1.95	0.48
27:AA:102:ILE:HD11	27:AA:110:LYS:HG2	1.95	0.48
40:NA:98:ARG:HH11	40:NA:98:ARG:HG2	1.78	0.48
41:OA:8:PHE:HA	41:OA:11:ARG:HG3	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:VA:44:GLU:O	48:VA:45:LEU:HG	2.12	0.48
48:VA:60:ARG:O	48:VA:60:ARG:HD2	2.13	0.48
48:VA:63:ILE:O	48:VA:66:PHE:HB3	2.13	0.48
50:XA:70:PRO:HA	50:XA:73:VAL:CG2	2.43	0.48
51:YA:64:ARG:HB3	64:LB:34:SER:OG	2.14	0.48
51:YA:97:LEU:HB3	51:YA:232:HIS:ND1	2.27	0.48
56:DB:64:LYS:O	56:DB:67:VAL:HG22	2.13	0.48
59:GB:25:ASP:O	59:GB:29:LYS:HB2	2.13	0.48
68:PB:16:ARG:HH22	68:PB:19:ASN:HA	1.77	0.48
71:SB:34:ILE:HG22	71:SB:35:ASN:H	1.79	0.48
82:DC:239:LYS:HE2	82:DC:243:ARG:NH1	2.29	0.48
82:DC:491:VAL:HG21	82:DC:538:LEU:CD2	2.43	0.48
83:EC:6855:A:H2'	83:EC:6856:C:O4'	2.12	0.48
83:EC:6917:C:H2'	83:EC:6918:A:O4'	2.13	0.48
1:A:463:U:H2'	1:A:464:A:H8	1.77	0.48
1:A:998:A:H2'	1:A:999:U:O4'	2.12	0.48
2:B:272:G:H2'	2:B:273:A:C8	2.47	0.48
2:B:371:G:C4	2:B:373:A:OP2	2.66	0.48
2:B:501:A:H4'	10:J:28:GLN:CB	2.39	0.48
2:B:744:A:C2'	2:B:745:C:H5'	2.43	0.48
2:B:1060:U:H4'	25:Y:61:THR:CG2	2.43	0.48
2:B:1282:G:H4'	48:VA:82:GLY:HA2	1.94	0.48
2:B:1456:A:C6	2:B:1477:A:H4'	2.47	0.48
2:B:1707:A:H2'	2:B:1708:C:H6	1.79	0.48
2:B:1910:A:H2'	2:B:1911:A:C8	2.48	0.48
2:B:2949:U:C5	2:B:2950:G:C6	3.01	0.48
2:B:3139:A:H2'	2:B:3140:G:H5'	1.95	0.48
4:D:28:C:H2'	4:D:29:C:O4'	2.13	0.48
4:D:89:G:H5"	24:X:84:ARG:CZ	2.43	0.48
7:G:98:GLY:HA2	20:T:149:TYR:CE1	2.48	0.48
8:H:268:ALA:O	8:H:269:SER:HB2	2.13	0.48
9:I:215:ASP:HB3	9:I:218:ARG:HD3	1.96	0.48
10:J:64:LEU:HA	10:J:77:ARG:O	2.14	0.48
12:L:241:LYS:O	12:L:245:LYS:HB2	2.14	0.48
15:O:47:GLN:HB3	15:O:64:LYS:HE3	1.96	0.48
17:Q:68:LYS:NZ	32:FA:106:ALA:HB1	2.29	0.48
17:Q:124:ILE:HD11	39:MA:120:ALA:O	2.13	0.48
19:S:114:ARG:CZ	19:S:157:LYS:HA	2.43	0.48
19:S:136:ASP:O	19:S:142:ILE:HB	2.13	0.48
22:V:33:TYR:CD1	22:V:45:ASN:OD1	2.66	0.48
23:W:25:ASP:OD2	23:W:28:GLU:HG3	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:W:92:GLN:HG2	23:W:96:ILE:CD1	2.40	0.48
23:W:176:ARG:O	23:W:180:LYS:HB2	2.13	0.48
25:Y:39:ILE:HD12	25:Y:102:ARG:CB	2.28	0.48
27:AA:26:ALA:HB1	27:AA:115:THR:HG23	1.94	0.48
32:FA:79:TRP:CZ2	32:FA:119:PRO:HG2	2.48	0.48
32:FA:111:LYS:HA	32:FA:129:PHE:O	2.14	0.48
38:LA:71:THR:HG22	38:LA:72:VAL:N	2.29	0.48
41:OA:45:ARG:HD2	41:OA:47:TYR:CE2	2.41	0.48
49:WA:9:LEU:HA	49:WA:312:VAL:O	2.14	0.48
49:WA:208:GLY:O	49:WA:225:LEU:HD23	2.13	0.48
58:FB:169:ILE:HD12	58:FB:179:CYS:SG	2.52	0.48
64:LB:20:TYR:CE2	64:LB:22:SER:HB3	2.48	0.48
64:LB:51:ASP:O	64:LB:54:GLU:HG3	2.12	0.48
66:NB:78:VAL:HG12	66:NB:79:TYR:N	2.28	0.48
66:NB:132:LYS:HG3	66:NB:133:GLY:H	1.79	0.48
71:SB:80:LYS:HB3	71:SB:80:LYS:NZ	2.29	0.48
73:UB:126:LYS:O	73:UB:127:VAL:HG13	2.13	0.48
82:DC:348:ALA:HB1	82:DC:352:ARG:CD	2.42	0.48
82:DC:468:THR:HG22	82:DC:469:LEU:N	2.27	0.48
82:DC:581:ASN:O	82:DC:582:LYS:HB2	2.14	0.48
82:DC:759:GLN:HG2	82:DC:766:PHE:CE2	2.47	0.48
1:A:100:A:H2'	1:A:101:U:C5'	2.42	0.48
1:A:1039:A:HO2'	1:A:1040:G:H8	1.60	0.48
2:B:186:U:H2'	2:B:229:G:O6	2.13	0.48
2:B:265:A:H4'	40:NA:37:THR:CG2	2.44	0.48
2:B:412:G:C2'	2:B:413:U:H5'	2.43	0.48
2:B:1063:G:N3	2:B:1066:G:H1'	2.29	0.48
2:B:1121:U:H2'	2:B:1122:U:C6	2.49	0.48
2:B:1286:A:O3'	2:B:1287:A:H4'	2.13	0.48
2:B:1673:G:O2'	2:B:1674:G:H5'	2.13	0.48
2:B:1727:G:H1'	2:B:1731:A:O4'	2.12	0.48
2:B:1760:A:C8	2:B:1761:C:C5	3.02	0.48
2:B:1896:A:N3	2:B:1896:A:H2'	2.28	0.48
2:B:2155:G:H5'	6:F:239:ALA:O	2.13	0.48
2:B:2172:A:H2'	2:B:2173:U:H5'	1.96	0.48
2:B:2271:A:H3'	2:B:2272:G:H5"	1.96	0.48
2:B:2421:U:H2'	2:B:2422:C:O4'	2.14	0.48
2:B:2655:U:H1'	2:B:2656:A:C2	2.49	0.48
2:B:2948:C:O2'	2:B:2949:U:H5'	2.13	0.48
2:B:3001:C:O2'	2:B:3002:C:H5'	2.13	0.48
2:B:3165:A:H2'	2:B:3166:C:H6	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:74:C:O2'	4:D:75:G:H5'	2.13	0.48
5:E:99:LEU:O	5:E:103:LEU:HG	2.13	0.48
7:G:317:ILE:C	7:G:319:ASN:H	2.17	0.48
7:G:365:PHE:C	7:G:365:PHE:CD2	2.87	0.48
8:H:74:ILE:CD1	8:H:76:ARG:HG3	2.43	0.48
9:I:33:ARG:HE	9:I:50:ARG:HH12	1.59	0.48
9:I:68:THR:HB	9:I:71:GLY:O	2.13	0.48
9:I:195:LEU:HD23	9:I:199:ILE:HD12	1.94	0.48
12:L:43:LYS:CB	29:CA:28:THR:HG21	2.41	0.48
13:M:10:ILE:CG2	13:M:75:VAL:HG11	2.44	0.48
14:N:97:LEU:H	14:N:97:LEU:HD12	1.78	0.48
16:P:130:LYS:HA	16:P:146:LYS:CE	2.43	0.48
17:Q:14:PHE:CE2	19:S:197:LEU:HD22	2.48	0.48
21:U:36:ILE:CG2	21:U:117:ILE:HG21	2.42	0.48
26:Z:30:PRO:O	26:Z:33:TYR:HB3	2.14	0.48
29:CA:136:ALA:O	29:CA:139:ILE:HG22	2.13	0.48
31:EA:36:HIS:HB2	31:EA:40:HIS:ND1	2.29	0.48
32:FA:96:LYS:O	32:FA:97:GLU:HB2	2.13	0.48
38:LA:90:ILE:HG23	38:LA:94:LEU:CD1	2.44	0.48
41:OA:56:ARG:HA	41:OA:61:THR:HG21	1.95	0.48
42:PA:61:LYS:O	42:PA:64:LYS:HB3	2.13	0.48
50:XA:129:ASP:HB3	50:XA:132:ALA:HB3	1.95	0.48
53:AB:34:TYR:OH	53:AB:37:VAL:HG22	2.13	0.48
53:AB:105:MET:CE	53:AB:118:ALA:HB1	2.43	0.48
54:BB:178:GLY:C	54:BB:179:LYS:HD2	2.33	0.48
55:CB:95:ASN:HA	55:CB:98:MET:CG	2.43	0.48
56:DB:218:GLU:O	56:DB:222:GLU:HB2	2.14	0.48
58:FB:38:ILE:CG2	58:FB:79:ALA:HA	2.43	0.48
59:GB:109:LEU:HD12	59:GB:146:PHE:CG	2.47	0.48
59:GB:137:GLY:O	59:GB:138:LYS:HB3	2.14	0.48
61:IB:17:PRO:C	61:IB:19:ILE:H	2.16	0.48
63:KB:50:ILE:HG22	63:KB:71:ILE:HD13	1.96	0.48
64:LB:42:VAL:HA	64:LB:46:MET:SD	2.53	0.48
68:PB:41:ARG:CZ	69:QB:46:PRO:HD2	2.43	0.48
76:XB:36:ILE:HG13	76:XB:38:ARG:HH12	1.78	0.48
80:BC:30:PRO:HD2	80:BC:38:LEU:HD12	1.96	0.48
82:DC:110:ASP:OD2	82:DC:534:GLY:HA3	2.14	0.48
82:DC:250:PHE:HB3	82:DC:275:MET:HE3	1.96	0.48
82:DC:390:ASP:O	82:DC:392:GLY:N	2.47	0.48
1:A:862:A:H62	63:KB:70:LYS:CE	2.27	0.48
1:A:1347:U:O2	1:A:1516:A:H5'	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1452:U:H2'	1:A:1453:G:C8	2.48	0.48
1:A:1544:U:H4'	68:PB:132:ARG:HH12	1.78	0.48
2:B:1288:U:H1'	2:B:1289:G:C8	2.48	0.48
2:B:1412:G:OP1	36:JA:105:ARG:NH2	2.47	0.48
2:B:1446:A:N1	2:B:2356:A:H5"	2.28	0.48
2:B:1689:U:C2'	2:B:1690:C:H5'	2.43	0.48
2:B:1870:C:H1'	2:B:3066:U:O2'	2.13	0.48
2:B:1941:C:H42	2:B:2107:A:H61	1.61	0.48
4:D:57:G:OP2	4:D:58:C:H5	1.97	0.48
5:E:34:LEU:HD13	5:E:179:LEU:HB3	1.96	0.48
5:E:118:LYS:O	5:E:122:ARG:HB2	2.13	0.48
6:F:112:ILE:CG1	6:F:135:ILE:HG23	2.43	0.48
7:G:162:VAL:O	7:G:178:LEU:HD12	2.13	0.48
10:J:174:LEU:HB3	10:J:176:PHE:CZ	2.48	0.48
14:N:52:LEU:CD1	14:N:152:LEU:HD22	2.42	0.48
15:O:21:ILE:O	15:O:66:ALA:HB1	2.13	0.48
17:Q:147:ILE:N	17:Q:147:ILE:HD13	2.28	0.48
18:R:15:VAL:O	24:X:149:LYS:HA	2.13	0.48
19:S:99:ARG:O	19:S:102:ALA:HB3	2.14	0.48
20:T:113:ASP:HA	20:T:117:ARG:NH1	2.29	0.48
20:T:173:ALA:CA	20:T:176:LYS:HE3	2.42	0.48
21:U:135:ARG:O	21:U:136:ILE:HD13	2.13	0.48
21:U:169:THR:HG23	37:KA:60:ARG:NH2	2.28	0.48
22:V:79:LYS:HA	22:V:136:ASN:CG	2.33	0.48
23:W:38:ARG:O	23:W:42:ARG:HB2	2.12	0.48
29:CA:68:THR:CG2	39:MA:36:LEU:HD22	2.42	0.48
30:DA:45:ILE:CD1	30:DA:119:ILE:HA	2.43	0.48
31:EA:4:PHE:CZ	34:HA:35:ARG:HA	2.48	0.48
31:EA:68:ILE:O	31:EA:70:PRO:HD3	2.14	0.48
35:IA:41:LYS:HD2	35:IA:47:ASP:OD1	2.13	0.48
44:RA:88:LYS:HA	44:RA:92:ASP:HB2	1.96	0.48
47:UA:11:THR:OG1	47:UA:23:ARG:HB3	2.13	0.48
47:UA:23:ARG:HA	47:UA:26:VAL:CG2	2.44	0.48
47:UA:57:CYS:HB3	47:UA:62:LYS:HB2	1.95	0.48
48:VA:107:ALA:HB3	48:VA:182:THR:HG21	1.95	0.48
49:WA:42:LEU:HD12	49:WA:42:LEU:N	2.28	0.48
51:YA:29:TRP:CZ3	64:LB:13:VAL:HG21	2.49	0.48
51:YA:179:SER:HB2	51:YA:183:GLN:HB2	1.94	0.48
56:DB:184:LEU:HD23	56:DB:184:LEU:H	1.77	0.48
58:FB:43:ILE:HG22	58:FB:44:HIS:N	2.28	0.48
59:GB:69:ARG:HG3	59:GB:69:ARG:HH11	1.79	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
63:KB:108:ASP:CG	63:KB:111:ALA:HB3	2.34	0.48
64:LB:61:MET:HA	64:LB:104:ALA:CB	2.44	0.48
64:LB:117:ASP:O	64:LB:118:VAL:HG13	2.13	0.48
65:MB:64:LYS:HB2	65:MB:73:PRO:CG	2.42	0.48
66:NB:45:ARG:HH11	66:NB:45:ARG:HG2	1.78	0.48
70:RB:44:ASN:ND2	70:RB:106:ILE:HG21	2.29	0.48
73:UB:70:LYS:CE	80:BC:8:LEU:HA	2.43	0.48
79:AC:36:LEU:O	79:AC:38:ILE:HG12	2.13	0.48
82:DC:662:SER:HB3	82:DC:702:GLY:HA2	1.94	0.48
82:DC:682:ARG:O	82:DC:684:VAL:HG23	2.13	0.48
82:DC:798:PHE:CZ	86:DC:903:SO1:H22	2.49	0.48
1:A:95:G:H3'	1:A:96:G:C8	2.49	0.48
1:A:216:U:O3'	1:A:217:A:H2'	2.14	0.48
1:A:431:C:H2'	1:A:432:G:C8	2.48	0.48
1:A:487:G:H2'	1:A:488:G:H5"	1.96	0.48
1:A:1087:A:H5'	1:A:1298:U:C5	2.48	0.48
1:A:1292:G:H2'	1:A:1293:U:C6	2.49	0.48
1:A:1348:A:H2'	1:A:1349:G:C8	2.49	0.48
1:A:1463:C:H2'	1:A:1464:G:H8	1.74	0.48
1:A:1498:G:C2'	1:A:1499:G:C5'	2.92	0.48
1:A:1676:U:H5"	58:FB:58:LEU:CD2	2.43	0.48
2:B:287:G:O2'	2:B:288:C:H5'	2.12	0.48
2:B:688:G:H1'	2:B:692:A:N6	2.28	0.48
2:B:692:A:O2'	2:B:693:A:H5'	2.13	0.48
2:B:1007:U:H3	2:B:1043:C:N4	2.00	0.48
2:B:1028:U:C3'	2:B:1029:G:H5"	2.44	0.48
2:B:1085:A:H2'	2:B:1086:C:O4'	2.13	0.48
2:B:1166:G:O2'	2:B:1167:U:H5'	2.13	0.48
2:B:1500:G:H2'	2:B:1501:U:O4'	2.13	0.48
2:B:1956:A:H2'	2:B:1957:G:C8	2.48	0.48
2:B:2319:U:H5'	2:B:2320:A:OP1	2.13	0.48
2:B:2476:C:H2'	2:B:2477:G:C4'	2.43	0.48
2:B:2689:A:N1	2:B:2702:A:H2'	2.28	0.48
3:C:113:U:H5"	43:QA:7:PHE:CB	2.41	0.48
4:D:89:G:H5'	24:X:84:ARG:CG	2.44	0.48
5:E:70:ASP:HB2	5:E:115:VAL:HG21	1.96	0.48
5:E:112:ALA:HB2	5:E:135:PRO:CB	2.44	0.48
5:E:150:ASP:HA	5:E:178:VAL:HB	1.95	0.48
6:F:77:ILE:CD1	6:F:128:ARG:HG2	2.44	0.48
8:H:179:LEU:HD23	8:H:183:LYS:HD2	1.94	0.48
10:J:4:GLN:HB3	36:JA:74:PHE:CE1	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:J:129:GLU:CG	10:J:130:ILE:H	2.25	0.48
12:L:26:LEU:CD1	12:L:27:THR:HG23	2.42	0.48
12:L:173:MET:C	12:L:175:VAL:H	2.17	0.48
14:N:36:LEU:HD21	14:N:69:ARG:HH11	1.79	0.48
14:N:217:PHE:O	14:N:218:ALA:HB2	2.13	0.48
18:R:102:LYS:HA	18:R:105:GLN:HB2	1.95	0.48
19:S:135:VAL:HG21	19:S:151:ILE:HG21	1.95	0.48
20:T:8:VAL:HG12	20:T:9:ILE:N	2.29	0.48
23:W:44:LEU:CA	23:W:47:ASN:HD21	2.19	0.48
24:X:1:MET:HG2	24:X:32:SER:OG	2.14	0.48
27:AA:34:LEU:HD23	27:AA:61:THR:O	2.14	0.48
30:DA:60:ARG:HH11	30:DA:60:ARG:HG3	1.78	0.48
34:HA:51:LEU:HD11	38:LA:90:ILE:HB	1.95	0.48
37:KA:45:LEU:HD21	37:KA:74:THR:HG23	1.94	0.48
42:PA:46:ARG:HG2	42:PA:46:ARG:NH1	2.27	0.48
52:ZA:111:VAL:CG2	52:ZA:139:ILE:HD11	2.44	0.48
53:AB:29:LEU:HD13	53:AB:50:ILE:CG2	2.42	0.48
55:CB:44:ASN:OD1	55:CB:70:VAL:HA	2.13	0.48
59:GB:37:LYS:HE2	59:GB:38:ASN:HD21	1.79	0.48
69:QB:28:LEU:HD13	69:QB:29:GLU:N	2.29	0.48
70:RB:18:GLN:O	70:RB:96:PRO:HA	2.13	0.48
73:UB:57:LEU:HD22	80:BC:4:VAL:CG1	2.44	0.48
82:DC:636:PHE:CE1	82:DC:645:LEU:HD21	2.48	0.48
1:A:167:U:H4'	56:DB:134:GLY:O	2.13	0.48
1:A:188:A:N6	1:A:197:A:H1'	2.28	0.48
1:A:201:G:H2'	1:A:202:A:H8	1.77	0.48
1:A:867:G:H5'	63:KB:4:MET:CE	2.44	0.48
1:A:930:A:H5"	76:XB:70:LYS:HD2	1.96	0.48
1:A:1242:A:N1	1:A:1452:U:H5'	2.29	0.48
1:A:1472:C:H2'	1:A:1535:U:O4	2.14	0.48
1:A:1727:G:H2'	1:A:1728:A:C8	2.48	0.48
2:B:77:A:H5'	17:Q:100:ARG:NH1	2.29	0.48
2:B:338:A:N6	8:H:43:ASN:HD22	2.11	0.48
2:B:391:A:H2'	2:B:392:G:O4'	2.13	0.48
2:B:505:G:H4'	8:H:313:LEU:HD11	1.95	0.48
2:B:514:G:H3'	2:B:515:C:H5"	1.95	0.48
2:B:634:C:H5"	37:KA:21:ARG:CD	2.37	0.48
2:B:659:G:H2'	2:B:1432:C:H42	1.79	0.48
2:B:1653:G:O2'	2:B:1654:A:H5'	2.13	0.48
2:B:2570:U:O3'	2:B:2571:U:H2'	2.13	0.48
2:B:2641:U:H4'	33:GA:7:HIS:NE2	2.29	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2736:A:H2'	2:B:2737:C:C5'	2.35	0.48
2:B:2746:A:C8	9:I:153:THR:HG23	2.49	0.48
2:B:2837:A:H2'	2:B:2845:A:C2	2.49	0.48
2:B:3002:C:H1'	2:B:3147:G:N2	2.29	0.48
2:B:3187:A:H5'	13:M:22:SER:HA	1.96	0.48
6:F:80:GLU:CB	47:UA:76:ALA:HB2	2.41	0.48
7:G:188:ILE:HG13	7:G:189:SER:N	2.29	0.48
8:H:23:PRO:HG2	8:H:258:LEU:HD21	1.93	0.48
8:H:179:LEU:O	8:H:183:LYS:HB2	2.14	0.48
8:H:210:ALA:HA	8:H:257:LYS:HZ1	1.79	0.48
8:H:328:ASN:O	8:H:328:ASN:CG	2.51	0.48
9:I:94:ASN:HB2	9:I:203:HIS:HE2	1.79	0.48
9:I:155:THR:HG23	9:I:155:THR:O	2.13	0.48
11:K:55:TYR:HE1	11:K:189:ILE:HG21	1.78	0.48
11:K:184:LEU:O	11:K:184:LEU:HD23	2.14	0.48
14:N:145:LYS:HE3	14:N:149:VAL:HG21	1.96	0.48
15:O:130:VAL:O	15:O:130:VAL:HG13	2.13	0.48
16:P:79:SER:O	16:P:82:ILE:HG12	2.12	0.48
17:Q:15:ARG:HG2	17:Q:15:ARG:NH1	2.29	0.48
21:U:32:THR:HG21	21:U:91:VAL:HG21	1.95	0.48
32:FA:49:HIS:N	32:FA:50:PRO:CD	2.77	0.48
35:IA:24:SER:HB2	35:IA:27:LYS:HB2	1.94	0.48
36:JA:44:ARG:HD2	36:JA:46:PHE:CZ	2.49	0.48
39:MA:6:ALA:O	39:MA:10:ARG:HG3	2.14	0.48
39:MA:70:TYR:HA	39:MA:73:LYS:HD2	1.95	0.48
52:ZA:120:GLU:HG3	52:ZA:123:GLY:HA3	1.96	0.48
54:BB:145:ARG:NH1	54:BB:145:ARG:HB3	2.29	0.48
55:CB:170:GLN:O	55:CB:174:LEU:HG	2.13	0.48
57:EB:74:GLN:HG2	57:EB:131:PHE:CE1	2.49	0.48
58:FB:184:LEU:HD23	58:FB:189:LEU:HD12	1.95	0.48
64:LB:26:THR:HG21	64:LB:97:GLY:HA3	1.94	0.48
67:OB:93:LEU:C	67:OB:95:ARG:H	2.17	0.48
67:OB:115:LEU:O	67:OB:116:LYS:HE2	2.13	0.48
67:OB:117:LEU:HD22	67:OB:118:PRO:O	2.14	0.48
68:PB:17:LEU:CG	68:PB:22:VAL:HG21	2.41	0.48
68:PB:133:VAL:HG13	68:PB:134:ARG:N	2.29	0.48
74:VB:94:TYR:HB2	74:VB:96:LEU:HD13	1.94	0.48
77:YB:61:THR:HG23	77:YB:62:ILE:N	2.18	0.48
82:DC:578:LYS:HA	82:DC:584:ASN:O	2.13	0.48
1:A:123:G:H21	54:BB:146:THR:HG21	1.78	0.48
1:A:464:A:H2'	1:A:465:G:H8	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:595:G:H2'	1:A:596:C:C6	2.49	0.48
1:A:629:U:H2'	1:A:630:A:O4'	2.13	0.48
1:A:855:A:H3'	1:A:856:A:H5"	1.96	0.48
1:A:867:G:OP1	63:KB:3:ARG:HD3	2.13	0.48
1:A:1040:G:O2'	1:A:1041:G:H5'	2.14	0.48
1:A:1181:U:O2'	1:A:1182:U:H5'	2.14	0.48
1:A:1471:A:H5'	55:CB:184:PHE:HE2	1.79	0.48
2:B:31:C:H2'	2:B:32:U:O4'	2.14	0.48
2:B:49:A:H5"	19:S:191:TRP:NE1	2.29	0.48
2:B:419:G:N2	3:C:5:U:N3	2.59	0.48
2:B:588:G:H4'	2:B:589:A:C4	2.49	0.48
2:B:957:C:H2'	2:B:958:C:C6	2.49	0.48
2:B:1041:U:H2'	2:B:1042:U:H5'	1.96	0.48
2:B:1088:U:H5'	33:GA:54:LEU:CD1	2.44	0.48
2:B:1150:A:N3	2:B:1310:G:H1'	2.29	0.48
2:B:1436:U:OP1	2:B:1437:C:H4'	2.14	0.48
2:B:1480:G:H1'	2:B:1872:C:N4	2.29	0.48
2:B:1498:A:C1'	2:B:1602:A:H2	2.25	0.48
2:B:1668:G:H2'	2:B:1669:C:H6	1.78	0.48
2:B:1706:C:C4'	2:B:1787:A:H4'	2.35	0.48
2:B:1941:C:N4	2:B:2107:A:H61	2.11	0.48
2:B:2258:U:H2'	2:B:2259:A:H8	1.79	0.48
2:B:2622:C:H2'	2:B:2623:G:O4'	2.14	0.48
2:B:2899:C:H3'	2:B:2899:C:O2	2.14	0.48
2:B:3106:A:H61	2:B:3128:G:H1'	1.78	0.48
3:C:94:C:OP2	41:OA:72:ARG:HD2	2.14	0.48
6:F:83:HIS:O	6:F:86:GLN:HB2	2.14	0.48
7:G:123:TYR:CZ	7:G:124:LYS:HG3	2.48	0.48
7:G:173:GLN:HG2	7:G:175:LYS:O	2.12	0.48
7:G:238:LEU:HD23	7:G:248:LYS:H	1.78	0.48
10:J:39:VAL:HG22	10:J:89:THR:O	2.14	0.48
12:L:71:VAL:HB	12:L:76:ALA:HB2	1.94	0.48
13:M:16:VAL:HG22	13:M:83:THR:HG21	1.95	0.48
17:Q:103:ASN:HD22	17:Q:103:ASN:HA	1.55	0.48
19:S:28:TRP:O	19:S:32:GLN:HB2	2.13	0.48
24:X:26:ARG:NH1	25:Y:150:THR:OG1	2.47	0.48
24:X:128:GLU:HG2	24:X:129:ILE:N	2.29	0.48
30:DA:3:LYS:HD3	30:DA:3:LYS:N	2.29	0.48
30:DA:27:ARG:HD3	30:DA:75:ARG:O	2.13	0.48
35:IA:11:GLU:HB2	35:IA:107:VAL:CG2	2.44	0.48
38:LA:76:TYR:HD1	38:LA:79:SER:HB3	1.79	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:NA:86:LYS:O	40:NA:89:GLU:HB3	2.14	0.48
48:VA:33:VAL:HG23	48:VA:37:GLN:HE22	1.78	0.48
50:XA:71:GLU:HG3	50:XA:72:ASP:N	2.29	0.48
51:YA:193:ILE:HG21	51:YA:212:VAL:CG1	2.41	0.48
53:AB:69:LEU:HA	53:AB:72:LEU:HD12	1.95	0.48
53:AB:222:VAL:HG22	53:AB:223:LYS:N	2.28	0.48
54:BB:220:THR:CG2	54:BB:224:ASN:HD22	2.27	0.48
64:LB:83:ILE:HD12	76:XB:44:ILE:CG2	2.44	0.48
65:MB:97:TYR:CZ	65:MB:100:LYS:HA	2.49	0.48
66:NB:42:GLU:CG	66:NB:45:ARG:HH21	2.08	0.48
66:NB:81:ILE:O	66:NB:85:ILE:HG13	2.14	0.48
66:NB:94:GLN:HB2	66:NB:102:LYS:NZ	2.29	0.48
67:OB:34:LEU:O	67:OB:38:ILE:HG13	2.13	0.48
68:PB:17:LEU:H	68:PB:22:VAL:HG23	1.79	0.48
69:QB:28:LEU:HD13	69:QB:29:GLU:H	1.79	0.48
70:RB:51:VAL:O	70:RB:51:VAL:HG13	2.14	0.48
79:AC:12:ARG:HG2	79:AC:12:ARG:HH11	1.79	0.48
79:AC:33:LYS:O	79:AC:36:LEU:HD23	2.14	0.48
82:DC:419:VAL:HG13	82:DC:420:PRO:HD2	1.95	0.48
1:A:93:A:H4’	1:A:94:U:OP2	2.12	0.48
1:A:324:U:H5”	61:IB:133:LYS:NZ	2.28	0.48
1:A:865:A:OP2	1:A:1036:A:H5’	2.14	0.48
1:A:1204:A:N3	79:AC:10:HIS:NE2	2.62	0.48
1:A:1342:C:H2’	1:A:1343:U:O4’	2.12	0.48
2:B:112:U:H3’	39:MA:103:LYS:CD	2.43	0.48
2:B:238:A:H2’	2:B:239:G:O4’	2.14	0.48
2:B:669:U:H4’	2:B:1110:U:H5’	1.96	0.48
2:B:786:A:C8	22:V:61:PRO:HG2	2.49	0.48
2:B:894:G:N1	2:B:1660:C:OP1	2.47	0.48
2:B:1067:U:H2’	2:B:1068:C:C6	2.49	0.48
2:B:1295:G:C5	2:B:1296:C:C4	3.02	0.48
2:B:1507:G:H1’	21:U:139:TYR:CE1	2.48	0.48
2:B:1750:A:C4’	2:B:1751:G:H5’	2.37	0.48
2:B:2353:G:H2’	2:B:2354:C:O4’	2.14	0.48
2:B:2372:A:H4’	2:B:2373:A:C8	2.49	0.48
2:B:2459:A:H62	2:B:2461:A:H2	1.61	0.48
2:B:2525:G:H2’	6:F:34:TYR:HD1	1.77	0.48
2:B:3038:U:H2’	2:B:3039:C:C6	2.49	0.48
2:B:3106:A:C2’	2:B:3107:U:H5’	2.44	0.48
3:C:58:G:H3’	3:C:99:C:H4’	1.96	0.48
4:D:89:G:C5’	24:X:84:ARG:NE	2.74	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:180:VAL:HA	5:E:183:ILE:HD12	1.96	0.48
8:H:291:ASN:O	8:H:292:SER:C	2.52	0.48
10:J:39:VAL:CG2	10:J:89:THR:O	2.62	0.48
17:Q:164:GLU:O	17:Q:165:SER:HB3	2.14	0.48
20:T:77:SER:HB3	20:T:106:GLU:OE1	2.14	0.48
22:V:127:LEU:C	22:V:127:LEU:HD13	2.33	0.48
23:W:99:LEU:C	23:W:101:VAL:N	2.67	0.48
24:X:63:GLN:HG3	24:X:64:ILE:H	1.79	0.48
27:AA:59:MET:HE2	27:AA:75:PRO:HA	1.96	0.48
31:EA:21:LYS:HA	31:EA:49:TYR:OH	2.14	0.48
34:HA:32:LYS:O	34:HA:36:GLN:HG3	2.14	0.48
36:JA:3:SER:HA	36:JA:90:LYS:O	2.14	0.48
36:JA:47:ARG:NH2	37:KA:21:ARG:HD2	2.29	0.48
40:NA:57:LEU:O	40:NA:61:ILE:HG13	2.14	0.48
49:WA:210:LEU:HD22	49:WA:231:MET:SD	2.53	0.48
50:XA:83:GLN:O	50:XA:86:VAL:HG22	2.14	0.48
51:YA:206:PRO:O	51:YA:207:LEU:HB2	2.14	0.48
52:ZA:53:ILE:HA	52:ZA:56:ILE:HG13	1.95	0.48
52:ZA:79:GLU:HG3	52:ZA:81:MET:SD	2.54	0.48
52:ZA:222:TYR:O	52:ZA:224:PHE:N	2.46	0.48
55:CB:64:VAL:CG1	55:CB:130:ILE:HD11	2.44	0.48
57:EB:5:GLN:CG	57:EB:22:GLN:HB2	2.43	0.48
60:HB:92:ILE:HG23	60:HB:92:ILE:O	2.14	0.48
68:PB:52:VAL:HG13	68:PB:56:LYS:HD2	1.95	0.48
68:PB:92:ILE:HG23	68:PB:93:THR:HG23	1.96	0.48
70:RB:24:ILE:HB	70:RB:91:ILE:HB	1.95	0.48
82:DC:19:VAL:HG12	82:DC:21:ASN:ND2	2.29	0.48
82:DC:139:THR:O	82:DC:143:LEU:HB2	2.13	0.48
82:DC:143:LEU:HD22	82:DC:188:ILE:HB	1.95	0.48
82:DC:203:TYR:N	82:DC:208:THR:OG1	2.47	0.48
82:DC:573:GLN:CD	82:DC:719:LEU:HD13	2.34	0.48
1:A:138:A:O2'	1:A:139:C:H5'	2.14	0.47
1:A:163:G:O2'	1:A:164:A:H5'	2.14	0.47
1:A:219:A:C6	1:A:843:U:H1'	2.49	0.47
1:A:1217:A:OP1	60:HB:1:MET:HA	2.12	0.47
1:A:1472:C:H2'	1:A:1535:U:C4	2.49	0.47
1:A:1493:A:H4'	1:A:1494:C:C6	2.48	0.47
1:A:1505:A:H2'	1:A:1506:G:O4'	2.14	0.47
2:B:8:C:H2'	2:B:9:U:H6	1.79	0.47
2:B:49:A:H2'	19:S:187:ARG:NH2	2.29	0.47
2:B:283:G:C5	32:FA:61:PHE:HD1	2.32	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:381:U:H2'	2:B:382:U:C6	2.48	0.47
2:B:805:G:H1'	8:H:73:ARG:CD	2.37	0.47
2:B:1178:G:C4	37:KA:19:SER:HA	2.49	0.47
2:B:1832:C:O2'	2:B:1833:G:H5'	2.14	0.47
2:B:2930:A:H2'	2:B:2931:C:C6	2.49	0.47
2:B:3073:A:C2'	2:B:3074:G:H5"	2.44	0.47
2:B:3270:U:C5	21:U:178:ALA:HB2	2.49	0.47
3:C:72:A:H1'	3:C:88:A:N3	2.29	0.47
3:C:103:G:H4'	41:OA:21:ARG:HD3	1.95	0.47
4:D:67:G:H2'	4:D:68:C:H5'	1.94	0.47
4:D:81:U:H2'	4:D:82:G:H8	1.79	0.47
4:D:85:G:N2	11:K:225:GLN:NE2	2.62	0.47
5:E:34:LEU:CD1	5:E:179:LEU:HB3	2.44	0.47
6:F:80:GLU:HG3	47:UA:66:GLY:O	2.14	0.47
8:H:39:PHE:CE1	8:H:236:LEU:HD23	2.48	0.47
11:K:77:VAL:CG1	24:X:59:VAL:HG13	2.43	0.47
13:M:3:TYR:O	13:M:59:ASN:HA	2.14	0.47
14:N:49:CYS:HA	14:N:138:VAL:O	2.14	0.47
14:N:57:LEU:HG	14:N:129:VAL:O	2.14	0.47
14:N:145:LYS:O	14:N:145:LYS:HD2	2.14	0.47
16:P:117:ARG:NH2	16:P:132:ILE:HB	2.28	0.47
17:Q:3:ILE:HD12	32:FA:41:HIS:HB3	1.95	0.47
18:R:119:GLN:O	18:R:123:LEU:HB2	2.14	0.47
22:V:26:LEU:HA	22:V:29:LEU:CD1	2.44	0.47
23:W:28:GLU:C	23:W:32:ILE:HG13	2.34	0.47
23:W:72:GLU:HB3	23:W:74:ARG:HH11	1.77	0.47
26:Z:72:SER:HB2	26:Z:75:TYR:N	2.29	0.47
27:AA:104:ASN:OD1	27:AA:108:GLU:HB2	2.13	0.47
28:BA:35:LYS:HE3	28:BA:51:TRP:NE1	2.29	0.47
29:CA:107:VAL:HG11	29:CA:124:VAL:CG1	2.29	0.47
32:FA:42:ARG:HG3	32:FA:43:ILE:N	2.29	0.47
36:JA:32:TRP:HZ3	36:JA:50:ILE:HD12	1.79	0.47
41:OA:25:ARG:O	41:OA:25:ARG:HD2	2.14	0.47
48:VA:5:ARG:CA	48:VA:8:LYS:HD3	2.44	0.47
49:WA:34:LEU:HG	49:WA:71:CYS:SG	2.53	0.47
49:WA:150:TRP:O	49:WA:173:GLY:HA3	2.13	0.47
49:WA:305:TYR:CE2	49:WA:311:ARG:HB2	2.48	0.47
50:XA:163:ASN:O	50:XA:165:ARG:N	2.46	0.47
56:DB:63:MET:HA	56:DB:98:ARG:O	2.14	0.47
57:EB:32:PRO:HG2	57:EB:34:LEU:CD1	2.44	0.47
57:EB:107:ARG:HG2	57:EB:108:GLN:N	2.27	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:FB:55:TYR:HB2	58:FB:176:SER:CA	2.43	0.47
60:HB:24:LYS:HA	60:HB:63:TYR:HA	1.95	0.47
60:HB:54:TYR:HB3	60:HB:72:GLY:CA	2.44	0.47
69:QB:102:ARG:HB2	69:QB:102:ARG:HH11	1.79	0.47
71:SB:15:ARG:NH2	71:SB:24:ILE:HG21	2.29	0.47
73:UB:19:ARG:HD3	73:UB:19:ARG:O	2.13	0.47
80:BC:43:ARG:HG3	80:BC:44:PHE:CD1	2.49	0.47
82:DC:76:SER:HA	82:DC:101:ASN:ND2	2.29	0.47
82:DC:157:ILE:HG23	82:DC:181:THR:HG21	1.95	0.47
82:DC:669:TRP:HB3	82:DC:710:ARG:HH12	1.78	0.47
83:EC:6853:G:C2	83:EC:6854:U:H1'	2.50	0.47
1:A:353:A:C2'	1:A:354:C:H5'	2.44	0.47
1:A:374:U:O2'	1:A:603:U:H5"	2.14	0.47
1:A:517:U:H2'	1:A:518:A:O4'	2.14	0.47
1:A:605:A:H3'	1:A:606:A:H2'	1.95	0.47
1:A:748:U:OP1	72:TB:80:ASN:HB3	2.13	0.47
1:A:1095:U:H1'	72:TB:16:ASN:ND2	2.24	0.47
1:A:1189:A:H2'	1:A:1190:C:C5	2.50	0.47
1:A:1199:G:C5	79:AC:40:ARG:HD2	2.49	0.47
1:A:1330:G:H3'	1:A:1331:A:H8	1.79	0.47
1:A:1358:G:H4'	69:QB:130:ARG:CA	2.45	0.47
1:A:1424:A:OP1	53:AB:151:LYS:HD2	2.14	0.47
1:A:1654:G:N2	1:A:1745:G:H2'	2.30	0.47
2:B:52:A:C4	2:B:53:G:C8	3.02	0.47
2:B:204:A:H2'	2:B:205:C:C5'	2.44	0.47
2:B:502:U:C3'	2:B:503:C:H5"	2.43	0.47
2:B:561:C:O2'	2:B:562:C:H5'	2.14	0.47
2:B:742:G:P	22:V:73:GLN:HG2	2.54	0.47
2:B:982:C:O2'	2:B:983:A:H5'	2.14	0.47
2:B:1347:U:H2'	2:B:1355:A:H61	1.79	0.47
2:B:1802:C:H2'	2:B:1803:C:H6	1.79	0.47
2:B:1813:A:H3'	2:B:1813:A:N3	2.29	0.47
2:B:2857:C:H2'	2:B:2858:U:H6	1.79	0.47
2:B:2919:A:O2'	2:B:2920:U:H5'	2.14	0.47
2:B:3111:U:O4	2:B:3120:C:H4'	2.15	0.47
4:D:59:U:H2'	4:D:60:G:O4'	2.15	0.47
8:H:205:PRO:O	8:H:225:VAL:HG13	2.14	0.47
10:J:5:LYS:O	10:J:6:ALA:HB3	2.14	0.47
12:L:161:GLU:HA	12:L:164:VAL:HG23	1.96	0.47
12:L:163:VAL:HA	12:L:166:LEU:CD1	2.44	0.47
14:N:51:HIS:O	14:N:165:ILE:HB	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:N:53:VAL:HG21	14:N:166:ILE:HD12	1.96	0.47
17:Q:16:LYS:H	17:Q:16:LYS:CD	2.01	0.47
17:Q:59:ARG:HH12	17:Q:68:LYS:C	2.18	0.47
21:U:21:TYR:CD1	21:U:123:PRO:HD2	2.48	0.47
30:DA:121:ARG:HB2	30:DA:121:ARG:CZ	2.44	0.47
34:HA:27:TYR:CE1	34:HA:31:VAL:HG21	2.49	0.47
34:HA:77:LEU:O	34:HA:81:VAL:HG13	2.14	0.47
35:IA:44:MET:HG3	35:IA:45:GLY:H	1.79	0.47
35:IA:86:LYS:N	35:IA:86:LYS:HD2	2.29	0.47
39:MA:4:VAL:CG2	39:MA:9:LEU:HD21	2.43	0.47
41:OA:21:ARG:CZ	41:OA:39:TYR:HD2	2.26	0.47
41:OA:25:ARG:CG	43:QA:51:ILE:HD12	2.44	0.47
41:OA:87:SER:O	41:OA:88:ALA:HB3	2.13	0.47
46:TA:3:ASN:HA	46:TA:92:GLU:HG3	1.95	0.47
46:TA:58:PHE:HE2	46:TA:61:LYS:HB2	1.78	0.47
49:WA:131:ILE:HD12	49:WA:181:TRP:HE1	1.79	0.47
50:XA:21:ASN:HB3	50:XA:24:LEU:HD22	1.96	0.47
50:XA:79:ARG:O	50:XA:83:GLN:HG3	2.14	0.47
50:XA:120:LEU:HD11	50:XA:144:ILE:HD11	1.95	0.47
52:ZA:53:ILE:HA	52:ZA:56:ILE:CG1	2.44	0.47
64:LB:22:SER:OG	64:LB:25:ASP:HB3	2.15	0.47
67:OB:50:ILE:O	67:OB:54:THR:HG23	2.15	0.47
68:PB:33:THR:HG22	68:PB:40:ARG:N	2.28	0.47
69:QB:57:ARG:O	69:QB:61:VAL:HG23	2.14	0.47
70:RB:44:ASN:HD22	70:RB:106:ILE:HG12	1.78	0.47
72:TB:11:LEU:HD23	72:TB:11:LEU:C	2.34	0.47
73:UB:57:LEU:H	73:UB:72:VAL:HA	1.79	0.47
76:XB:89:ARG:O	76:XB:92:ARG:HG3	2.14	0.47
80:BC:43:ARG:HG3	80:BC:44:PHE:CG	2.49	0.47
82:DC:20:ARG:HB2	82:DC:100:ILE:HG13	1.96	0.47
82:DC:67:GLY:O	82:DC:108:HIS:HE1	1.96	0.47
1:A:405:C:O2'	1:A:406:U:H5'	2.14	0.47
1:A:554:C:H1'	1:A:555:A:N7	2.29	0.47
1:A:590:C:H2'	1:A:591:A:C8	2.49	0.47
1:A:625:C:H4'	1:A:940:A:C4'	2.45	0.47
1:A:711:U:H4'	1:A:712:G:H5"	1.96	0.47
1:A:900:A:H4'	64:LB:27:PHE:HZ	1.79	0.47
1:A:1267:G:N3	1:A:1267:G:H2'	2.29	0.47
1:A:1338:C:H1'	1:A:1410:A:C6	2.48	0.47
1:A:1414:U:O2'	1:A:1415:U:H3'	2.14	0.47
1:A:1471:A:H2'	1:A:1472:C:H5'	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1588:G:O2'	1:A:1589:C:H5'	2.14	0.47
2:B:577:C:HO2'	2:B:579:G:H5"	1.77	0.47
2:B:632:G:H2'	2:B:633:C:O4'	2.13	0.47
2:B:841:A:C5'	23:W:126:GLU:HG2	2.44	0.47
2:B:959:C:H5	2:B:2801:A:H5"	1.80	0.47
2:B:965:A:H4'	32:FA:41:HIS:HD2	1.79	0.47
2:B:996:A:H3'	2:B:997:A:H8	1.79	0.47
2:B:1079:A:H2'	2:B:1080:A:O4'	2.14	0.47
2:B:1256:G:H5"	16:P:127:SER:HB3	1.94	0.47
2:B:1625:A:H5'	2:B:1643:A:N1	2.30	0.47
2:B:1805:C:H4'	38:LA:76:TYR:CA	2.43	0.47
2:B:1850:A:O2'	2:B:1851:G:H5'	2.14	0.47
2:B:2184:U:H2'	2:B:2185:G:H8	1.79	0.47
2:B:2268:U:H2'	2:B:2269:U:C6	2.49	0.47
2:B:3159:C:H2'	2:B:3160:U:H6	1.75	0.47
2:B:3303:G:N2	2:B:3312:U:H1'	2.29	0.47
3:C:36:G:N7	39:MA:86:ARG:HD3	2.29	0.47
3:C:154:C:OP1	12:L:181:LYS:HD2	2.14	0.47
5:E:32:VAL:HA	5:E:207:LYS:O	2.14	0.47
5:E:144:LEU:HA	5:E:147:LYS:HD2	1.96	0.47
6:F:83:HIS:NE2	6:F:86:GLN:HA	2.29	0.47
6:F:189:TYR:HA	6:F:192:LYS:HB2	1.96	0.47
7:G:4:ARG:HB3	7:G:4:ARG:NH1	2.29	0.47
7:G:266:ARG:HH11	7:G:266:ARG:CB	2.26	0.47
7:G:386:ASP:HB3	7:G:387:LEU:HD12	1.96	0.47
8:H:23:PRO:C	8:H:25:VAL:N	2.68	0.47
9:I:51:LEU:HB2	9:I:144:VAL:HG21	1.96	0.47
9:I:78:ALA:CB	9:I:105:ILE:HG12	2.43	0.47
13:M:43:VAL:HG23	13:M:44:THR:N	2.29	0.47
14:N:75:TYR:CE2	14:N:79:VAL:HG21	2.50	0.47
15:O:87:LYS:HG2	15:O:91:LEU:HD23	1.96	0.47
18:R:94:TRP:NE1	18:R:100:ALA:HB2	2.29	0.47
21:U:59:PRO:HD3	21:U:76:PHE:CD1	2.47	0.47
21:U:131:ARG:CG	21:U:137:ASN:HB2	2.45	0.47
24:X:38:LYS:HB3	24:X:58:ILE:HD12	1.97	0.47
24:X:50:LYS:HB3	24:X:50:LYS:HZ2	1.79	0.47
27:AA:104:ASN:HB2	27:AA:105:PRO:HD2	1.95	0.47
32:FA:9:ARG:C	32:FA:11:HIS:H	2.18	0.47
32:FA:79:TRP:CH2	32:FA:119:PRO:HG2	2.49	0.47
32:FA:138:ILE:HG22	32:FA:139:ARG:N	2.29	0.47
35:IA:13:THR:HA	35:IA:71:LEU:O	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:JA:54:LYS:HG2	36:JA:57:TYR:CE2	2.49	0.47
37:KA:47:LYS:O	37:KA:71:VAL:HG23	2.14	0.47
37:KA:98:VAL:HG22	37:KA:99:ARG:N	2.28	0.47
40:NA:78:GLY:HA3	40:NA:82:ARG:HD2	1.95	0.47
47:UA:22:LEU:O	47:UA:26:VAL:HG23	2.14	0.47
47:UA:57:CYS:O	47:UA:61:LYS:HA	2.13	0.47
48:VA:137:GLN:HB3	82:DC:180:ARG:HG3	1.96	0.47
49:WA:223:TRP:HA	49:WA:230:ALA:HA	1.96	0.47
50:XA:48:ILE:CG2	50:XA:161:PRO:HB2	2.44	0.47
53:AB:70:THR:HG22	53:AB:86:LEU:HB2	1.96	0.47
57:EB:61:PHE:HB3	57:EB:95:GLU:HB2	1.96	0.47
59:GB:81:VAL:C	59:GB:83:VAL:N	2.68	0.47
59:GB:109:LEU:O	59:GB:113:VAL:HG23	2.14	0.47
59:GB:124:HIS:O	59:GB:128:LEU:HG	2.13	0.47
63:KB:91:LEU:HD22	63:KB:122:ILE:CG1	2.45	0.47
66:NB:11:GLY:HA3	66:NB:80:ALA:O	2.14	0.47
68:PB:17:LEU:HD21	68:PB:22:VAL:HG11	1.97	0.47
71:SB:35:ASN:OD1	71:SB:52:THR:HG22	2.13	0.47
73:UB:60:GLU:HA	73:UB:67:ALA:O	2.14	0.47
73:UB:107:PHE:O	73:UB:109:ARG:HG2	2.14	0.47
75:WB:70:LYS:HG3	75:WB:71:ILE:H	1.79	0.47
77:YB:31:TYR:CE2	77:YB:81:ARG:HG3	2.49	0.47
78:ZB:12:VAL:O	78:ZB:51:ASN:HA	2.14	0.47
82:DC:743:ILE:HG12	82:DC:747:LEU:HD23	1.96	0.47
82:DC:755:VAL:HG23	82:DC:770:ALA:CA	2.44	0.47
82:DC:784:LEU:O	82:DC:787:ALA:HB3	2.15	0.47
1:A:101:U:H2'	1:A:102:U:O4'	2.15	0.47
1:A:140:A:C3'	1:A:141:U:H5'	2.45	0.47
1:A:1066:C:H2'	1:A:1067:C:C6	2.49	0.47
1:A:1075:C:H2'	1:A:1076:A:O4'	2.14	0.47
1:A:1080:U:O4	1:A:1091:A:H2	1.96	0.47
1:A:1424:A:P	53:AB:151:LYS:HD2	2.55	0.47
1:A:1512:G:H2'	1:A:1513:G:C8	2.49	0.47
1:A:1782:A:N7	1:A:1783:C:H1'	2.30	0.47
2:B:232:G:H2'	2:B:233:C:H6	1.79	0.47
2:B:915:A:H5"	2:B:2957:G:O3'	2.13	0.47
2:B:969:C:O3'	33:GA:18:ARG:HB3	2.14	0.47
2:B:1109:U:H4'	22:V:153:PHE:CE1	2.49	0.47
2:B:1938:U:C1'	23:W:78:TYR:HB2	2.44	0.47
2:B:2081:U:H2'	2:B:2082:U:O4'	2.14	0.47
2:B:2147:A:H2'	2:B:2148:U:H6	1.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:3039:C:H2'	2:B:3040:A:O4'	2.14	0.47
4:D:13:A:OP1	4:D:111:U:H1'	2.14	0.47
6:F:82:VAL:HG22	47:UA:65:ALA:HB3	1.97	0.47
6:F:108:PRO:HB2	6:F:109:GLU:OE1	2.14	0.47
6:F:116:VAL:CG2	6:F:117:GLU:H	2.19	0.47
7:G:282:ILE:CG2	7:G:322:ILE:HG23	2.44	0.47
8:H:304:GLN:O	8:H:305:ALA:HB3	2.14	0.47
9:I:33:ARG:HD3	9:I:33:ARG:C	2.35	0.47
9:I:65:ILE:HG12	9:I:74:VAL:HG22	1.94	0.47
11:K:44:ILE:HG22	11:K:48:ASN:ND2	2.28	0.47
11:K:86:VAL:HG13	11:K:136:TYR:CB	2.29	0.47
12:L:157:VAL:HG12	12:L:159:PRO:HD2	1.95	0.47
12:L:188:THR:HG23	12:L:189:LEU:N	2.30	0.47
12:L:226:TYR:C	12:L:228:GLU:N	2.67	0.47
14:N:151:GLY:O	14:N:154:ARG:HB3	2.14	0.47
16:P:122:GLY:CA	48:VA:43:LYS:HD2	2.44	0.47
18:R:50:LYS:HG2	18:R:85:TRP:CE2	2.49	0.47
19:S:58:GLY:HA3	19:S:142:ILE:CD1	2.44	0.47
20:T:124:LEU:HD21	24:X:167:ARG:HG3	1.97	0.47
22:V:32:LEU:HD22	22:V:36:LEU:HD11	1.96	0.47
22:V:67:ILE:HG12	22:V:140:LEU:CD1	2.43	0.47
25:Y:39:ILE:HD12	25:Y:102:ARG:HD3	1.96	0.47
27:AA:45:ARG:HB3	27:AA:48:ARG:CB	2.45	0.47
46:TA:12:CYS:C	46:TA:14:GLY:H	2.18	0.47
48:VA:53:MET:HA	48:VA:85:GLY:HA2	1.95	0.47
50:XA:22:THR:HG22	50:XA:169:SER:HA	1.97	0.47
50:XA:102:PHE:HD2	50:XA:107:PHE:HE1	1.63	0.47
52:ZA:140:ARG:HB2	52:ZA:222:TYR:CE1	2.48	0.47
53:AB:163:PRO:HA	53:AB:167:PHE:CD2	2.43	0.47
57:EB:126:LEU:O	57:EB:130:VAL:HG22	2.15	0.47
57:EB:185:ILE:H	57:EB:185:ILE:CD1	2.12	0.47
65:MB:90:ILE:HA	65:MB:107:ILE:CG2	2.44	0.47
66:NB:67:VAL:CG1	66:NB:81:ILE:HG22	2.44	0.47
68:PB:120:ARG:HH21	68:PB:120:ARG:HG3	1.79	0.47
69:QB:34:VAL:O	69:QB:35:ASP:HB3	2.15	0.47
71:SB:20:THR:OG1	71:SB:22:ARG:HG3	2.14	0.47
72:TB:75:ILE:HG22	72:TB:75:ILE:O	2.12	0.47
76:XB:30:ILE:CD1	76:XB:34:LYS:HG2	2.42	0.47
77:YB:56:CYS:HB3	77:YB:60:SER:CA	2.35	0.47
78:ZB:58:GLU:HG2	78:ZB:61:ARG:HD3	1.95	0.47
82:DC:25:ILE:HD12	82:DC:142:VAL:HG12	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:132:ILE:CD1	82:DC:162:ARG:HB3	2.44	0.47
82:DC:401:PHE:HE2	82:DC:478:MET:HE3	1.79	0.47
82:DC:727:PRO:HG2	82:DC:774:VAL:HG21	1.97	0.47
83:EC:6791:A:N3	83:EC:6791:A:H3'	2.29	0.47
1:A:545:A:H61	1:A:593:U:H2'	1.80	0.47
1:A:734:A:H2	1:A:735:C:C5	2.32	0.47
1:A:765:G:N7	59:GB:82:ARG:NH1	2.62	0.47
1:A:931:C:P	76:XB:70:LYS:HE3	2.55	0.47
1:A:1035:G:C4'	72:TB:2:THR:HB	2.44	0.47
1:A:1314:U:H4'	1:A:1315:U:H5	1.79	0.47
2:B:268:A:H2'	19:S:12:ARG:NH2	2.28	0.47
2:B:691:A:H61	3:C:28:C:H1'	1.79	0.47
2:B:940:G:O2'	2:B:941:G:H5'	2.15	0.47
2:B:992:A:C2'	2:B:993:G:H5'	2.44	0.47
2:B:1070:U:H2'	2:B:1071:U:O4'	2.14	0.47
2:B:1115:G:H3'	2:B:1115:G:N3	2.29	0.47
2:B:1220:U:C5'	2:B:1221:A:H2'	2.44	0.47
2:B:1239:C:H5'	16:P:99:LYS:HD2	1.96	0.47
2:B:1368:U:O2'	2:B:1369:A:H5'	2.14	0.47
2:B:1377:G:H2'	2:B:1378:U:H6	1.78	0.47
2:B:1405:U:H2'	2:B:1406:A:O4'	2.14	0.47
2:B:1446:A:OP1	2:B:2984:C:H5'	2.14	0.47
2:B:1623:G:H2'	2:B:1624:G:H8	1.79	0.47
2:B:1867:A:C2	2:B:2119:A:H4'	2.49	0.47
2:B:1900:A:H61	2:B:1908:A:N6	2.11	0.47
2:B:2415:C:H5"	6:F:2:GLY:CA	2.39	0.47
2:B:2741:C:H4'	46:TA:19:LYS:CA	2.27	0.47
2:B:2766:U:H2'	2:B:2767:U:H6	1.79	0.47
2:B:2805:G:H2'	2:B:2806:U:C6	2.50	0.47
2:B:3167:A:C2	2:B:3168:A:H1'	2.49	0.47
2:B:3356:G:H2'	2:B:3357:U:C5	2.50	0.47
4:D:4:U:H2'	4:D:5:G:H8	1.74	0.47
6:F:39:GLY:H	12:L:36:ILE:HG21	1.78	0.47
6:F:44:ILE:HD12	6:F:44:ILE:N	2.29	0.47
8:H:71:VAL:HG22	8:H:76:ARG:NH2	2.29	0.47
8:H:79:GLY:C	8:H:85:SER:HB2	2.35	0.47
8:H:359:LEU:C	8:H:361:HIS:H	2.18	0.47
9:I:183:TRP:N	9:I:190:ILE:HD12	2.30	0.47
17:Q:50:PRO:HG3	39:MA:118:ILE:HD12	1.97	0.47
18:R:58:ILE:HD11	18:R:62:GLN:CB	2.44	0.47
18:R:66:THR:HB	18:R:67:PRO:CD	2.43	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:S:35:VAL:HG22	19:S:65:ARG:CZ	2.44	0.47
20:T:9:ILE:HG22	20:T:35:VAL:HG13	1.96	0.47
20:T:97:ALA:O	20:T:100:GLU:HB2	2.14	0.47
22:V:30:VAL:O	22:V:34:THR:HG23	2.15	0.47
24:X:107:TYR:HE1	24:X:121:ILE:HB	1.79	0.47
29:CA:73:MET:HA	29:CA:76:VAL:HG23	1.97	0.47
29:CA:115:ARG:CD	29:CA:121:LYS:HB2	2.45	0.47
30:DA:110:HIS:C	30:DA:111:LEU:HD12	2.34	0.47
34:HA:78:GLY:HA2	34:HA:81:VAL:CG2	2.42	0.47
38:LA:8:ARG:HH11	38:LA:8:ARG:HG2	1.78	0.47
39:MA:60:GLU:O	39:MA:64:GLU:HG2	2.14	0.47
43:QA:21:ARG:HH12	43:QA:24:PRO:HG3	1.71	0.47
44:RA:102:ARG:C	44:RA:103:LEU:HD23	2.34	0.47
50:XA:4:PRO:HB3	71:SB:41:GLU:HA	1.97	0.47
51:YA:26:ARG:HA	51:YA:50:LYS:HD2	1.95	0.47
52:ZA:206:THR:O	52:ZA:208:GLU:N	2.47	0.47
54:BB:43:PRO:HA	54:BB:82:TYR:O	2.14	0.47
54:BB:106:LYS:HG3	54:BB:108:ARG:CZ	2.45	0.47
55:CB:93:LEU:CA	55:CB:172:ILE:HG23	2.44	0.47
55:CB:120:ILE:CD1	55:CB:191:ALA:HB1	2.45	0.47
56:DB:1:MET:HB2	56:DB:107:ALA:O	2.14	0.47
60:HB:5:LYS:O	60:HB:9:ASN:HB2	2.14	0.47
61:IB:85:VAL:HG22	61:IB:108:PRO:HA	1.97	0.47
62:JB:114:LYS:O	62:JB:115:VAL:C	2.53	0.47
66:NB:35:PRO:C	66:NB:37:THR:H	2.18	0.47
68:PB:85:PHE:C	68:PB:86:LEU:HD12	2.35	0.47
69:QB:130:ARG:HH12	69:QB:134:ARG:CB	2.28	0.47
71:SB:71:ARG:HG2	71:SB:83:TRP:CZ3	2.49	0.47
76:XB:85:ARG:N	76:XB:85:ARG:HD2	2.29	0.47
80:BC:20:LYS:HA	80:BC:20:LYS:CE	2.39	0.47
82:DC:74:ALA:HA	82:DC:103:ILE:HA	1.96	0.47
82:DC:314:LEU:HB3	82:DC:318:ALA:HB1	1.97	0.47
82:DC:314:LEU:HB3	82:DC:318:ALA:CB	2.44	0.47
1:A:211:U:OP1	61:IB:20:PHE:HB2	2.15	0.47
1:A:295:A:H2'	1:A:296:U:H6	1.79	0.47
1:A:329:G:H2'	1:A:330:G:C8	2.50	0.47
1:A:644:C:H2'	1:A:645:C:H6	1.78	0.47
1:A:843:U:H2'	1:A:844:A:H8	1.80	0.47
1:A:1202:A:H1'	1:A:1207:C:N4	2.30	0.47
1:A:1420:C:C2'	1:A:1421:A:H5'	2.44	0.47
1:A:1450:U:H2'	1:A:1451:C:C6	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:56:G:H1'	19:S:161:ALA:CB	2.45	0.47
2:B:303:G:H5"	2:B:304:G:C5'	2.45	0.47
2:B:639:G:OP1	36:JA:37:GLY:HA3	2.14	0.47
2:B:757:C:H3'	2:B:758:C:H5"	1.96	0.47
2:B:988:U:O2'	2:B:989:A:H5'	2.14	0.47
2:B:1394:A:O2'	2:B:1395:G:H5'	2.15	0.47
2:B:1721:U:O4	23:W:128:LYS:HE2	2.15	0.47
8:H:69:ARG:O	8:H:70:ALA:HB3	2.15	0.47
10:J:97:ASN:HD21	10:J:100:LYS:HB2	1.79	0.47
11:K:75:TYR:HB2	24:X:59:VAL:HG11	1.95	0.47
11:K:124:LEU:HA	11:K:127:LEU:HD12	1.97	0.47
17:Q:148:ALA:O	17:Q:149:GLN:HG2	2.14	0.47
18:R:89:ALA:HB1	18:R:92:GLU:HG2	1.97	0.47
20:T:31:GLN:OE1	20:T:33:ILE:HD11	2.15	0.47
20:T:124:LEU:CD2	24:X:167:ARG:HG3	2.45	0.47
43:QA:26:TRP:CZ3	43:QA:27:ILE:HG12	2.49	0.47
49:WA:42:LEU:HD22	49:WA:61:PHE:HD2	1.78	0.47
50:XA:126:PRO:HA	50:XA:133:ILE:HD13	1.96	0.47
51:YA:109:LYS:HE3	51:YA:113:MET:HG3	1.96	0.47
52:ZA:121:VAL:HG23	52:ZA:122:ALA:N	2.29	0.47
54:BB:9:LEU:HB2	54:BB:30:ARG:CG	2.45	0.47
54:BB:118:GLU:C	54:BB:120:SER:H	2.18	0.47
54:BB:129:VAL:HG12	54:BB:156:VAL:CG2	2.44	0.47
56:DB:189:HIS:O	56:DB:193:LEU:HB2	2.15	0.47
56:DB:207:GLU:O	56:DB:211:LEU:HD23	2.13	0.47
58:FB:96:LEU:O	58:FB:173:PRO:HG2	2.14	0.47
60:HB:63:TYR:O	60:HB:64:TYR:HB2	2.14	0.47
66:NB:18:ALA:CB	66:NB:69:VAL:HG12	2.45	0.47
66:NB:32:ASN:O	69:QB:7:ARG:HD3	2.14	0.47
82:DC:135:VAL:HB	82:DC:184:SER:OG	2.15	0.47
82:DC:147:LEU:HB3	82:DC:193:ALA:CA	2.42	0.47
82:DC:374:PRO:O	82:DC:403:GLY:HA2	2.15	0.47
82:DC:404:THR:HG22	82:DC:449:PRO:CA	2.44	0.47
82:DC:766:PHE:O	82:DC:768:VAL:HG23	2.14	0.47
1:A:57:G:H2'	1:A:58:U:C6	2.50	0.47
1:A:216:U:O3'	1:A:217:A:H3'	2.15	0.47
1:A:387:A:H4'	1:A:388:G:H5"	1.96	0.47
1:A:683:C:H2'	1:A:684:A:C8	2.50	0.47
1:A:703:G:C2'	1:A:704:C:H5'	2.45	0.47
1:A:839:U:H2'	1:A:840:U:C5'	2.38	0.47
1:A:1161:C:H2'	1:A:1162:C:C6	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1227:A:H5'	1:A:1228:G:C3'	2.42	0.47
1:A:1575:G:H2'	1:A:1576:A:C8	2.49	0.47
1:A:1750:A:OP1	45:SA:13:LEU:HD22	2.15	0.47
1:A:1789:G:OP1	76:XB:17:HIS:NE2	2.47	0.47
2:B:131:C:O2'	2:B:132:C:H5'	2.14	0.47
2:B:286:U:C5'	19:S:179:LYS:HG2	2.45	0.47
2:B:651:G:H4'	2:B:1436:U:C4'	2.44	0.47
2:B:704:U:H3'	2:B:705:A:C5'	2.44	0.47
2:B:871:U:H2'	2:B:872:U:H6	1.80	0.47
2:B:914:A:H2	6:F:208:ASP:HB3	1.78	0.47
2:B:964:G:O2'	32:FA:30:GLY:HA3	2.14	0.47
2:B:1070:U:O2'	2:B:1071:U:H5'	2.14	0.47
2:B:1126:G:OP1	14:N:98:ARG:NH2	2.48	0.47
2:B:1381:A:C2	2:B:1426:C:C2	3.03	0.47
2:B:1471:U:H2'	2:B:1472:U:C6	2.49	0.47
2:B:1491:A:C2	2:B:1843:C:O4'	2.68	0.47
2:B:1524:A:OP1	29:CA:112:THR:N	2.47	0.47
2:B:1556:C:H2'	2:B:2169:G:H1	1.79	0.47
2:B:1715:A:H4'	2:B:1716:U:H3'	1.96	0.47
2:B:1804:A:H2'	2:B:1805:C:H6	1.78	0.47
2:B:1806:A:H3'	2:B:1807:G:C8	2.50	0.47
2:B:1941:C:H2'	2:B:1942:U:C6	2.49	0.47
2:B:2174:G:C8	2:B:2174:G:OP1	2.67	0.47
2:B:2274:U:H2'	2:B:2275:A:H8	1.80	0.47
2:B:2414:G:H1'	2:B:2809:C:N4	2.29	0.47
2:B:2432:A:H2	19:S:125:SER:CB	2.27	0.47
2:B:3000:A:H2'	2:B:3001:C:C6	2.50	0.47
2:B:3057:U:H4'	35:IA:21:HIS:NE2	2.29	0.47
2:B:3206:C:H5"	2:B:3207:U:H5"	1.96	0.47
2:B:3216:G:C2'	2:B:3219:G:H1'	2.44	0.47
2:B:3228:C:H4'	2:B:3229:G:O5'	2.14	0.47
3:C:72:A:OP1	30:DA:52:ARG:N	2.47	0.47
4:D:12:U:O2	4:D:111:U:H5'	2.15	0.47
5:E:147:LYS:HA	5:E:150:ASP:CB	2.43	0.47
7:G:95:THR:CG2	7:G:100:ARG:H	2.27	0.47
7:G:165:GLN:H	7:G:165:GLN:HG2	1.32	0.47
7:G:211:GLN:HE22	7:G:283:TYR:C	2.17	0.47
7:G:278:ILE:HG22	7:G:279:ASN:N	2.26	0.47
8:H:129:THR:HB	8:H:248:VAL:CG2	2.44	0.47
8:H:178:LEU:HD11	8:H:222:VAL:CG2	2.45	0.47
8:H:299:ILE:HG23	22:V:39:ARG:CB	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:I:58:LYS:HB3	9:I:93:THR:OG1	2.14	0.47
10:J:39:VAL:CG1	10:J:159:LEU:HD21	2.45	0.47
11:K:222:HIS:HB2	11:K:229:PHE:CE1	2.49	0.47
12:L:139:VAL:HG11	12:L:151:VAL:HG11	1.97	0.47
12:L:161:GLU:OE1	19:S:22:LEU:HD23	2.14	0.47
13:M:10:ILE:HD13	13:M:75:VAL:HG21	1.96	0.47
13:M:12:VAL:HG13	13:M:16:VAL:HB	1.94	0.47
14:N:53:VAL:HG21	14:N:166:ILE:CG1	2.44	0.47
14:N:53:VAL:HG21	14:N:166:ILE:HG13	1.97	0.47
15:O:14:ILE:HD11	15:O:162:TRP:CH2	2.49	0.47
15:O:107:ASP:HA	15:O:124:GLY:HA2	1.95	0.47
17:Q:5:LYS:H	32:FA:44:ASN:HD21	1.63	0.47
18:R:65:LEU:HD23	18:R:66:THR:N	2.30	0.47
19:S:18:VAL:O	19:S:21:PHE:HB3	2.15	0.47
19:S:112:ASN:CG	19:S:113:LEU:HD22	2.35	0.47
19:S:154:PRO:HA	19:S:157:LYS:CG	2.44	0.47
20:T:88:VAL:HG12	20:T:89:SER:N	2.30	0.47
21:U:126:ARG:HD3	21:U:140:GLU:HG2	1.97	0.47
22:V:24:VAL:HA	22:V:27:LYS:HE2	1.97	0.47
22:V:64:VAL:HA	22:V:67:ILE:HD12	1.96	0.47
22:V:173:GLU:HA	32:FA:51:GLY:C	2.34	0.47
23:W:136:ARG:HA	23:W:139:VAL:CG2	2.45	0.47
23:W:154:ALA:HA	23:W:157:GLU:CG	2.44	0.47
24:X:10:ILE:HG22	24:X:24:LEU:HD22	1.97	0.47
24:X:30:PHE:O	24:X:31:ALA:CB	2.63	0.47
24:X:91:TYR:CZ	24:X:136:LYS:HD3	2.50	0.47
25:Y:11:THR:CA	25:Y:14:MET:HB3	2.45	0.47
26:Z:100:THR:O	26:Z:100:THR:HG23	2.15	0.47
27:AA:87:ARG:HD2	27:AA:91:VAL:HG21	1.96	0.47
29:CA:99:VAL:HG13	29:CA:103:TYR:CE2	2.50	0.47
29:CA:121:LYS:HG2	29:CA:122:ALA:N	2.29	0.47
31:EA:4:PHE:CE2	34:HA:63:SER:HB3	2.50	0.47
32:FA:20:GLY:O	32:FA:24:LYS:HA	2.15	0.47
32:FA:61:PHE:O	32:FA:62:HIS:HB3	2.14	0.47
36:JA:41:VAL:HA	36:JA:46:PHE:HD2	1.80	0.47
37:KA:38:PRO:HA	37:KA:41:ALA:HB3	1.96	0.47
38:LA:3:GLN:CD	38:LA:29:ILE:HB	2.34	0.47
48:VA:73:PHE:HA	48:VA:76:LEU:CD1	2.37	0.47
48:VA:77:LEU:O	48:VA:80:VAL:HG23	2.15	0.47
48:VA:95:GLU:O	48:VA:98:ASN:HB3	2.15	0.47
48:VA:111:ALA:HB1	48:VA:167:GLN:NE2	2.30	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:VA:119:ILE:HG13	48:VA:159:VAL:CG1	2.31	0.47
49:WA:42:LEU:CG	49:WA:68:VAL:HG11	2.39	0.47
49:WA:248:ASN:HD21	49:WA:298:GLY:CA	2.26	0.47
50:XA:12:GLU:HG3	50:XA:13:ASP:N	2.29	0.47
50:XA:178:ALA:CA	50:XA:181:VAL:HG22	2.44	0.47
51:YA:28:GLU:O	51:YA:48:VAL:HG23	2.14	0.47
53:AB:21:LEU:HD11	53:AB:73:VAL:HG13	1.97	0.47
53:AB:67:ASN:O	53:AB:71:LEU:HG	2.14	0.47
54:BB:19:LEU:HD21	54:BB:108:ARG:HD2	1.97	0.47
55:CB:29:ILE:HB	55:CB:34:GLN:NE2	2.29	0.47
55:CB:124:LEU:HB2	55:CB:199:ILE:HD13	1.97	0.47
56:DB:81:VAL:CG2	56:DB:82:SER:H	2.16	0.47
57:EB:11:GLN:CB	57:EB:13:PRO:HD2	2.39	0.47
59:GB:129:ILE:HD13	59:GB:144:PRO:HA	1.95	0.47
59:GB:149:ARG:O	59:GB:150:LEU:HB3	2.15	0.47
60:HB:25:LYS:HD3	60:HB:62:GLN:HE22	1.80	0.47
63:KB:39:LYS:O	63:KB:43:LYS:HB2	2.15	0.47
68:PB:100:THR:HG22	68:PB:108:LYS:HB3	1.96	0.47
73:UB:24:TRP:HZ3	73:UB:30:LYS:HA	1.80	0.47
74:VB:14:SER:C	74:VB:16:PRO:HD3	2.34	0.47
75:WB:62:VAL:O	75:WB:66:VAL:HG23	2.15	0.47
77:YB:2:VAL:HG22	77:YB:3:LEU:N	2.30	0.47
82:DC:37:ASP:O	82:DC:41:GLN:HG3	2.15	0.47
82:DC:70:ILE:HG23	82:DC:70:ILE:O	2.15	0.47
82:DC:401:PHE:CE2	82:DC:478:MET:HE3	2.49	0.47
82:DC:493:VAL:HG13	82:DC:556:ILE:CD1	2.44	0.47
1:A:218:A:C8	1:A:830:U:H1’	2.50	0.47
1:A:603:U:H2’	1:A:604:A:O4’	2.15	0.47
1:A:1769:U:HO2’	1:A:1770:U:H5’	1.71	0.47
2:B:29:C:OP1	19:S:189:LYS:HB2	2.14	0.47
2:B:354:U:H2’	2:B:355:A:C8	2.49	0.47
2:B:680:G:H4’	2:B:789:A:H4’	1.97	0.47
2:B:916:G:P	2:B:2957:G:H5”	2.55	0.47
2:B:929:A:H2’	2:B:930:U:C6	2.50	0.47
2:B:1186:G:H2’	2:B:1187:C:C6	2.49	0.47
2:B:1306:G:H8	2:B:1306:G:O5’	1.98	0.47
2:B:1600:U:H3’	23:W:38:ARG:NH2	2.28	0.47
2:B:2317:A:H2’	2:B:2318:U:O4’	2.15	0.47
2:B:2523:A:H2’	12:L:51:LYS:HB2	1.97	0.47
2:B:2529:A:H2’	2:B:2530:G:O4’	2.15	0.47
2:B:2787:G:H4’	32:FA:57:GLY:C	2.35	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2947:G:C4	7:G:250:ALA:HB1	2.50	0.47
2:B:3276:G:H3'	10:J:48:ARG:HH22	1.79	0.47
4:D:70:U:H2'	4:D:71:G:O4'	2.14	0.47
5:E:5:THR:OG1	5:E:8:GLN:HB2	2.15	0.47
6:F:130:SER:CB	6:F:174:ARG:HE	2.27	0.47
6:F:144:ASN:HB3	6:F:160:SER:HB2	1.97	0.47
8:H:251:THR:HG22	8:H:252:GLU:N	2.30	0.47
9:I:35:ARG:HH11	9:I:35:ARG:HG2	1.80	0.47
9:I:54:ARG:CZ	9:I:149:GLY:HA2	2.45	0.47
10:J:68:PRO:HB3	10:J:138:GLN:HE22	1.78	0.47
11:K:24:GLU:O	11:K:25:GLN:HB3	2.14	0.47
11:K:193:PRO:HG2	11:K:194:HIS:NE2	2.30	0.47
13:M:52:LEU:HG	13:M:53:ILE:N	2.30	0.47
17:Q:115:ARG:NH1	17:Q:145:PHE:HB3	2.24	0.47
18:R:19:ARG:CA	18:R:69:THR:HG23	2.44	0.47
18:R:42:LYS:HE2	18:R:59:ASN:OD1	2.15	0.47
18:R:63:VAL:O	18:R:63:VAL:HG13	2.15	0.47
19:S:73:ARG:HB3	19:S:89:VAL:HG12	1.96	0.47
19:S:118:SER:CB	19:S:132:VAL:HG22	2.45	0.47
20:T:38:ALA:HB3	20:T:106:GLU:OE1	2.15	0.47
20:T:78:ARG:NH1	20:T:78:ARG:HG3	2.30	0.47
20:T:120:VAL:HG12	20:T:122:GLN:HG2	1.95	0.47
21:U:51:VAL:CG1	21:U:83:TRP:HD1	2.28	0.47
30:DA:111:LEU:HD12	30:DA:111:LEU:N	2.30	0.47
32:FA:12:ARG:HH11	32:FA:12:ARG:CG	2.25	0.47
34:HA:24:THR:OG1	34:HA:29:SER:HB2	2.14	0.47
36:JA:50:ILE:O	36:JA:50:ILE:HG13	2.14	0.47
38:LA:72:VAL:HG23	38:LA:74:ARG:H	1.79	0.47
40:NA:47:ILE:HG23	40:NA:47:ILE:O	2.13	0.47
45:SA:11:ARG:NH1	45:SA:11:ARG:HG2	2.30	0.47
49:WA:181:TRP:HB3	49:WA:187:GLN:O	2.15	0.47
50:XA:129:ASP:O	50:XA:132:ALA:HB3	2.14	0.47
51:YA:86:LEU:HD12	51:YA:100:PHE:HA	1.96	0.47
51:YA:87:ARG:HB2	51:YA:101:HIS:CE1	2.49	0.47
55:CB:197:GLU:HG3	55:CB:208:SER:CB	2.45	0.47
55:CB:203:LYS:HA	55:CB:203:LYS:HE3	1.96	0.47
56:DB:181:PRO:O	56:DB:185:GLN:HG3	2.15	0.47
58:FB:65:PHE:CE1	58:FB:167:ALA:HB1	2.50	0.47
63:KB:16:ILE:O	72:TB:57:ARG:NH2	2.48	0.47
63:KB:99:ARG:O	63:KB:103:GLU:HG2	2.15	0.47
66:NB:41:PRO:O	66:NB:42:GLU:CB	2.59	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
67:OB:27:ASP:HB3	67:OB:30:THR:HG22	1.97	0.47
69:QB:109:GLU:HB2	69:QB:122:ARG:HH22	1.80	0.47
82:DC:206:ARG:HB3	82:DC:208:THR:HG23	1.97	0.47
82:DC:435:VAL:HB	82:DC:442:VAL:HB	1.97	0.47
82:DC:536:LEU:HG	82:DC:537:HIS:N	2.30	0.47
82:DC:682:ARG:NH1	82:DC:725:GLN:HE22	2.13	0.47
83:EC:6799:C:H2'	83:EC:6800:G:O3'	2.15	0.47
83:EC:6914:A:H2	83:EC:6915:G:O6	1.98	0.47
1:A:359:A:H1'	73:UB:38:PHE:CD1	2.49	0.47
1:A:401:A:H4'	54:BB:3:ARG:HD3	1.96	0.47
1:A:573:C:H2'	1:A:574:G:O4'	2.15	0.47
1:A:878:G:H2'	1:A:879:G:C8	2.50	0.47
1:A:1012:U:H5'	6:F:247:ARG:HG3	1.97	0.47
1:A:1684:U:H2'	1:A:1685:G:O4'	2.14	0.47
2:B:47:C:H2'	2:B:48:A:H8	1.75	0.47
2:B:58:G:H5"	19:S:154:PRO:HB2	1.97	0.47
2:B:287:G:H2'	2:B:288:C:C6	2.50	0.47
2:B:735:A:H2'	2:B:736:A:C8	2.50	0.47
2:B:808:A:O2'	2:B:2413:A:H5'	2.15	0.47
2:B:884:A:P	41:OA:4:GLY:HA3	2.53	0.47
2:B:1232:C:H5	2:B:1261:G:H2'	1.76	0.47
2:B:1487:G:H3'	2:B:1488:G:H5"	1.96	0.47
2:B:2118:C:O5'	2:B:2118:C:H6	1.97	0.47
2:B:2123:G:H2'	2:B:2124:G:C8	2.50	0.47
2:B:2185:G:H2'	2:B:2186:U:C6	2.50	0.47
2:B:2842:U:H3'	2:B:2844:C:H41	1.79	0.47
2:B:3095:U:H2'	2:B:3096:C:C6	2.50	0.47
2:B:3148:U:C5'	7:G:104:THR:HB	2.45	0.47
3:C:51:G:H4'	43:QA:21:ARG:NH1	2.30	0.47
7:G:75:ALA:O	7:G:325:LYS:HA	2.15	0.47
8:H:112:LYS:HA	19:S:202:TYR:CD2	2.50	0.47
11:K:150:LYS:HG2	11:K:244:ASN:HD21	1.79	0.47
12:L:68:ARG:HB3	12:L:69:LEU:HD12	1.97	0.47
12:L:146:LYS:HD3	12:L:173:MET:SD	2.54	0.47
13:M:99:ILE:HD13	13:M:179:ILE:CD1	2.45	0.47
13:M:106:LYS:HB3	13:M:111:PHE:HZ	1.80	0.47
18:R:101:LYS:O	18:R:105:GLN:HG2	2.14	0.47
18:R:102:LYS:HD3	18:R:105:GLN:HB2	1.96	0.47
19:S:58:GLY:HA3	19:S:142:ILE:HD11	1.96	0.47
22:V:44:PHE:O	22:V:47:VAL:HB	2.14	0.47
25:Y:57:TYR:CD2	25:Y:89:LEU:HD21	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:Z:12:ALA:HA	26:Z:68:THR:HA	1.96	0.47
28:BA:38:SER:HB3	28:BA:42:GLN:HE21	1.78	0.47
31:EA:72:ILE:HD11	31:EA:107:ARG:HG2	1.97	0.47
31:EA:84:ARG:HG3	31:EA:85:TYR:CD2	2.50	0.47
32:FA:125:VAL:HB	32:FA:138:ILE:HD11	1.96	0.47
35:IA:7:VAL:HA	35:IA:77:ARG:O	2.15	0.47
35:IA:109:VAL:HG12	35:IA:110:GLU:N	2.30	0.47
37:KA:16:TYR:HB2	37:KA:23:ASN:HB2	1.96	0.47
38:LA:62:TYR:HD2	38:LA:62:TYR:H	1.61	0.47
39:MA:110:ALA:C	39:MA:112:PRO:HD3	2.34	0.47
43:QA:47:THR:CG2	43:QA:48:LYS:H	2.16	0.47
47:UA:76:ALA:O	47:UA:80:ARG:HB2	2.14	0.47
48:VA:62:ALA:CB	48:VA:77:LEU:HG	2.44	0.47
51:YA:129:THR:CG2	51:YA:180:THR:HA	2.41	0.47
52:ZA:110:HIS:HB3	52:ZA:136:VAL:CG1	2.45	0.47
53:AB:118:ALA:O	53:AB:122:VAL:HG23	2.15	0.47
55:CB:178:GLY:HA2	55:CB:209:TYR:HB3	1.97	0.47
57:EB:98:ILE:O	57:EB:99:LEU:HG	2.15	0.47
61:IB:87:ARG:HG3	61:IB:104:HIS:HD2	1.80	0.47
64:LB:69:ALA:O	64:LB:73:GLU:HG2	2.14	0.47
64:LB:114:ARG:N	76:XB:59:TYR:HE2	2.13	0.47
66:NB:65:ILE:HG22	66:NB:67:VAL:HG23	1.97	0.47
68:PB:62:THR:OG1	68:PB:65:GLU:HG3	2.14	0.47
76:XB:44:ILE:N	76:XB:44:ILE:CD1	2.74	0.47
82:DC:150:ARG:HA	82:DC:197:LEU:HD11	1.97	0.47
82:DC:404:THR:HA	82:DC:448:CYS:O	2.14	0.47
82:DC:413:ILE:HD11	82:DC:459:ILE:CD1	2.44	0.47
82:DC:584:ASN:HA	82:DC:692:THR:O	2.15	0.47
82:DC:588:LEU:HD22	82:DC:686:VAL:HG13	1.97	0.47
82:DC:743:ILE:CG2	82:DC:744:TYR:N	2.78	0.47
1:A:478:A:O2'	1:A:479:C:H5'	2.15	0.47
1:A:825:U:C2'	1:A:826:U:H5'	2.45	0.47
1:A:913:G:N2	2:B:2208:A:H4'	2.30	0.47
1:A:988:A:H2'	1:A:989:U:C6	2.49	0.47
1:A:1081:A:H4'	1:A:1082:C:O5'	2.15	0.47
1:A:1588:G:C2'	1:A:1589:C:H5'	2.45	0.47
2:B:49:A:H2'	19:S:187:ARG:HH21	1.80	0.47
2:B:54:C:H1'	2:B:1546:A:C2	2.49	0.47
2:B:118:U:H2'	2:B:119:U:C5'	2.45	0.47
2:B:119:U:H4'	2:B:120:G:O5'	2.15	0.47
2:B:136:G:O5'	39:MA:95:PHE:HB2	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:351:A:H1'	3:C:54:A:O4'	2.14	0.47
2:B:417:A:H2'	2:B:418:A:H8	1.77	0.47
2:B:591:G:N3	10:J:19:LYS:HG3	2.30	0.47
2:B:1721:U:C2	2:B:1723:A:OP2	2.68	0.47
2:B:1915:A:H4'	23:W:83:GLY:C	2.34	0.47
2:B:2736:A:H1'	25:Y:90:ASN:OD1	2.15	0.47
2:B:2922:G:H1'	2:B:2951:G:N2	2.09	0.47
2:B:2937:G:H2'	2:B:2938:G:O4'	2.14	0.47
3:C:64:U:H2'	3:C:65:A:H8	1.80	0.47
4:D:62:U:C2'	4:D:63:A:H5'	2.44	0.47
6:F:5:ILE:HD12	6:F:7:ASN:HD21	1.79	0.47
6:F:107:VAL:HB	6:F:111:THR:HG21	1.96	0.47
7:G:35:ASP:HA	7:G:184:ASN:HD22	1.79	0.47
8:H:26:PHE:HA	8:H:127:ALA:HA	1.95	0.47
8:H:120:TYR:C	8:H:120:TYR:CD1	2.88	0.47
8:H:131:VAL:O	8:H:135:VAL:HG23	2.15	0.47
8:H:185:LYS:HE2	8:H:199:TRP:CE3	2.50	0.47
8:H:309:ARG:CZ	8:H:312:VAL:HG11	2.45	0.47
9:I:107:ARG:HH22	9:I:120:LYS:HA	1.80	0.47
11:K:83:LEU:HD13	11:K:84:VAL:H	1.79	0.47
14:N:154:ARG:HG2	14:N:154:ARG:NH1	2.30	0.47
17:Q:4:SER:O	17:Q:5:LYS:HB2	2.15	0.47
17:Q:67:ARG:HB3	32:FA:105:LEU:CD1	2.45	0.47
18:R:13:ARG:HD2	24:X:172:TYR:C	2.35	0.47
18:R:100:ALA:O	18:R:103:ILE:HB	2.15	0.47
19:S:75:VAL:HG21	19:S:80:THR:HA	1.96	0.47
20:T:15:LEU:HG	20:T:123:ALA:O	2.15	0.47
24:X:92:LYS:HD2	24:X:106:LEU:HD23	1.97	0.47
29:CA:92:LYS:HG3	29:CA:112:THR:CG2	2.45	0.47
32:FA:21:ARG:O	32:FA:24:LYS:HG2	2.15	0.47
32:FA:85:ASP:OD1	32:FA:86:LYS:HG2	2.15	0.47
39:MA:76:GLN:O	39:MA:81:ARG:NH1	2.47	0.47
48:VA:165:VAL:HG21	48:VA:181:PHE:HE1	1.74	0.47
49:WA:72:THR:O	49:WA:80:ALA:HA	2.15	0.47
50:XA:18:LEU:HB3	67:OB:100:LEU:HD13	1.97	0.47
52:ZA:57:PHE:CE1	52:ZA:138:PRO:HD3	2.49	0.47
57:EB:98:ILE:HG22	57:EB:99:LEU:N	2.30	0.47
58:FB:159:GLN:HE22	58:FB:166:TYR:H	1.63	0.47
60:HB:54:TYR:HD1	60:HB:71:GLU:HG3	1.77	0.47
61:IB:36:LYS:HG2	61:IB:60:PHE:O	2.14	0.47
61:IB:54:ILE:O	61:IB:55:ASP:HB3	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
64:LB:58:TYR:O	64:LB:62:LEU:HD13	2.15	0.47
64:LB:86:THR:CG2	64:LB:90:ARG:HG3	2.39	0.47
66:NB:18:ALA:HB2	66:NB:69:VAL:CG1	2.43	0.47
69:QB:113:ILE:HA	69:QB:128:GLY:CA	2.44	0.47
72:TB:90:THR:HG22	72:TB:102:VAL:HB	1.97	0.47
76:XB:36:ILE:CG2	76:XB:73:TYR:HB2	2.33	0.47
82:DC:137:VAL:HG23	82:DC:138:GLN:N	2.30	0.47
82:DC:213:SER:HB3	82:DC:218:TRP:CE2	2.50	0.47
82:DC:243:ARG:HB3	82:DC:257:TRP:CZ3	2.50	0.47
82:DC:634:TRP:HB2	82:DC:646:VAL:CG1	2.45	0.47
82:DC:759:GLN:HE22	82:DC:761:PRO:HA	1.79	0.47
83:EC:6858:A:H5"	83:EC:6859:U:O4'	2.15	0.47
1:A:94:U:H2'	1:A:95:G:C5'	2.45	0.46
1:A:143:G:OP1	56:DB:139:ASN:HB3	2.15	0.46
1:A:159:U:H5"	74:VB:117:LYS:HD3	1.97	0.46
1:A:864:U:H3'	72:TB:28:ARG:NH1	2.30	0.46
1:A:942:G:C8	76:XB:17:HIS:HB3	2.51	0.46
1:A:1675:C:H2'	1:A:1676:U:H6	1.80	0.46
1:A:1675:C:H1'	58:FB:32:GLN:NE2	2.30	0.46
1:A:1783:C:O2'	1:A:1784:C:H5'	2.15	0.46
2:B:222:A:H2'	2:B:223:U:O4'	2.15	0.46
2:B:268:A:H1'	2:B:270:U:C6	2.50	0.46
2:B:281:G:C6	2:B:282:G:C5	3.03	0.46
2:B:628:A:O2'	2:B:629:U:H5'	2.15	0.46
2:B:1422:G:H2'	2:B:1423:C:H6	1.80	0.46
2:B:2696:A:H2'	2:B:2697:A:N9	2.30	0.46
2:B:2950:G:N2	2:B:2979:U:H2'	2.30	0.46
2:B:3187:A:H5"	18:R:8:LYS:CE	2.43	0.46
6:F:204:MET:CE	6:F:209:HIS:HB2	2.45	0.46
8:H:251:THR:HG22	8:H:252:GLU:H	1.80	0.46
9:I:74:VAL:HG12	9:I:76:ALA:H	1.79	0.46
10:J:76:LEU:O	10:J:76:LEU:HD12	2.15	0.46
11:K:166:ASN:HA	11:K:169:ILE:CD1	2.26	0.46
13:M:109:ALA:HB3	13:M:111:PHE:CE1	2.50	0.46
14:N:17:TYR:HE1	14:N:23:ASN:ND2	2.12	0.46
14:N:191:LYS:HB2	14:N:213:PHE:CE2	2.50	0.46
17:Q:92:THR:HA	39:MA:113:GLN:OE1	2.15	0.46
18:R:22:LEU:O	18:R:64:VAL:HG12	2.15	0.46
22:V:51:ALA:HB1	22:V:84:VAL:HG11	1.95	0.46
27:AA:101:VAL:HG21	27:AA:109:MET:CE	2.44	0.46
29:CA:94:GLN:HG3	29:CA:94:GLN:H	1.54	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:DA:74:TYR:CD1	30:DA:77:LYS:HB2	2.50	0.46
39:MA:93:THR:OG1	39:MA:96:GLU:HG3	2.15	0.46
43:QA:32:ASN:HD22	43:QA:32:ASN:N	2.13	0.46
48:VA:29:GLY:HA3	48:VA:188:VAL:CG2	2.45	0.46
48:VA:136:PHE:CE1	48:VA:172:LEU:HD13	2.50	0.46
49:WA:59:ARG:NH1	49:WA:96:THR:HA	2.29	0.46
50:XA:89:PHE:HB2	50:XA:202:TYR:CE1	2.50	0.46
52:ZA:44:LEU:HD22	52:ZA:49:LYS:HD2	1.98	0.46
52:ZA:227:PRO:HA	52:ZA:230:TRP:CD2	2.50	0.46
55:CB:135:ASP:HA	55:CB:138:THR:OG1	2.14	0.46
56:DB:77:LEU:CD1	56:DB:95:LYS:HD3	2.44	0.46
58:FB:21:PHE:O	58:FB:22:ARG:HG2	2.15	0.46
58:FB:65:PHE:CE2	58:FB:78:ILE:HG12	2.50	0.46
59:GB:56:ALA:O	59:GB:60:LEU:HD23	2.14	0.46
61:IB:66:ILE:H	61:IB:66:ILE:CD1	2.26	0.46
63:KB:99:ARG:HA	63:KB:99:ARG:NE	2.31	0.46
64:LB:25:ASP:O	64:LB:26:THR:HG23	2.15	0.46
65:MB:17:TYR:HD2	65:MB:17:TYR:HA	1.67	0.46
65:MB:64:LYS:CG	65:MB:73:PRO:HG3	2.45	0.46
65:MB:77:ARG:HA	65:MB:95:GLY:H	1.80	0.46
66:NB:36:ILE:HG23	66:NB:49:TYR:CE1	2.51	0.46
72:TB:69:LEU:HD12	72:TB:70:ASN:H	1.79	0.46
74:VB:20:ARG:C	74:VB:21:LYS:HD2	2.35	0.46
82:DC:724:ILE:HD11	82:DC:804:LEU:HD12	1.96	0.46
1:A:76:A:O2'	1:A:77:U:H5'	2.15	0.46
1:A:159:U:O4'	74:VB:117:LYS:HG2	2.15	0.46
1:A:532:U:H2'	1:A:533:U:O4'	2.15	0.46
1:A:771:A:C2	1:A:772:G:H1'	2.50	0.46
1:A:804:A:C4	72:TB:107:SER:HA	2.50	0.46
1:A:966:A:H2'	1:A:967:A:H8	1.80	0.46
1:A:1026:A:OP2	1:A:1027:A:H8	1.97	0.46
1:A:1390:U:OP1	67:OB:5:ARG:HD2	2.15	0.46
2:B:1244:A:H4'	2:B:1245:A:C8	2.50	0.46
2:B:1448:U:H2'	2:B:1449:A:H8	1.80	0.46
2:B:1781:C:H2'	2:B:1782:U:O4'	2.15	0.46
2:B:1911:A:N7	2:B:1912:U:C5	2.84	0.46
2:B:2347:U:H3'	2:B:2348:A:H8	1.79	0.46
2:B:2357:A:OP1	21:U:138:LYS:HE2	2.15	0.46
2:B:2780:A:O2'	2:B:2781:U:H5'	2.15	0.46
2:B:3235:C:H2'	2:B:3236:U:O4'	2.15	0.46
2:B:3304:U:H4'	7:G:331:ASN:HD21	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:I:20:PHE:HD1	9:I:30:TYR:CE1	2.33	0.46
9:I:82:GLU:HB3	9:I:254:LYS:HG3	1.96	0.46
11:K:102:VAL:HG13	11:K:126:LEU:CD2	2.25	0.46
12:L:132:VAL:HG22	12:L:133:LYS:N	2.29	0.46
13:M:17:THR:OG1	13:M:28:VAL:HB	2.14	0.46
13:M:90:MET:HE2	13:M:181:VAL:H	1.80	0.46
13:M:150:SER:C	13:M:154:VAL:HG23	2.35	0.46
14:N:210:ILE:HA	14:N:217:PHE:CE2	2.50	0.46
15:O:57:PHE:HB2	15:O:59:ILE:HG12	1.96	0.46
17:Q:63:VAL:HA	17:Q:66:ASN:HD21	1.80	0.46
19:S:9:GLU:CD	40:NA:41:ARG:HG2	2.35	0.46
19:S:153:ASP:CB	19:S:155:VAL:HG22	2.45	0.46
20:T:147:TRP:CZ3	20:T:150:GLU:HA	2.50	0.46
21:U:33:ALA:HA	21:U:36:ILE:CG2	2.42	0.46
23:W:123:LEU:O	23:W:127:SER:CB	2.63	0.46
25:Y:62:GLY:HA3	25:Y:74:VAL:CG1	2.45	0.46
27:AA:120:LYS:H	27:AA:137:VAL:HG22	1.80	0.46
40:NA:9:ILE:CG2	40:NA:10:GLY:H	2.27	0.46
41:OA:27:PHE:HA	41:OA:34:CYS:HA	1.98	0.46
48:VA:64:ARG:O	48:VA:67:LEU:HB3	2.15	0.46
49:WA:211:ILE:HB	49:WA:223:TRP:HB2	1.96	0.46
51:YA:107:THR:HA	51:YA:110:LEU:HD13	1.98	0.46
52:ZA:99:LYS:CG	52:ZA:117:THR:HB	2.46	0.46
53:AB:115:ILE:O	53:AB:115:ILE:HG13	2.15	0.46
54:BB:121:TYR:HD2	54:BB:161:LYS:HG3	1.81	0.46
55:CB:132:VAL:HG13	55:CB:202:ALA:HA	1.97	0.46
57:EB:153:LEU:HD12	57:EB:153:LEU:N	2.23	0.46
61:IB:156:PHE:HE1	63:KB:83:GLU:HG2	1.80	0.46
65:MB:60:LEU:HA	65:MB:76:VAL:HG21	1.96	0.46
65:MB:80:MET:O	65:MB:116:LEU:HD12	2.14	0.46
65:MB:123:TYR:HE1	68:PB:122:HIS:NE2	2.08	0.46
78:ZB:32:PHE:CE2	78:ZB:36:THR:HA	2.49	0.46
80:BC:7:SER:C	80:BC:9:ALA:H	2.19	0.46
82:DC:734:GLN:HA	82:DC:767:THR:HA	1.96	0.46
82:DC:804:LEU:HB3	82:DC:805:GLY:H	1.60	0.46
83:EC:6858:A:H5”	83:EC:6859:U:C6	2.51	0.46
1:A:121:U:O2’	1:A:122:U:H5’	2.15	0.46
1:A:198:A:C2’	1:A:199:G:H5’	2.45	0.46
1:A:253:A:H2’	1:A:254:A:O4’	2.15	0.46
1:A:318:U:H4’	58:FB:11:ARG:HE	1.80	0.46
1:A:811:A:C2	1:A:858:G:H4’	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:935:U:O2'	1:A:936:G:H5'	2.15	0.46
1:A:1641:C:H2'	1:A:1642:G:C8	2.50	0.46
1:A:1714:A:H2'	1:A:1715:G:N7	2.30	0.46
2:B:17:G:C2	2:B:18:G:C4	3.03	0.46
2:B:90:C:H4'	2:B:282:G:OP1	2.15	0.46
2:B:836:A:H2'	2:B:837:A:C8	2.50	0.46
2:B:915:A:C5	2:B:917:A:H1'	2.50	0.46
2:B:1052:U:C2'	2:B:1053:A:H5'	2.45	0.46
2:B:1069:C:O2'	2:B:1070:U:H5'	2.16	0.46
2:B:1257:C:C1'	16:P:123:ARG:HE	2.28	0.46
2:B:1481:A:N6	38:LA:2:ALA:HA	2.20	0.46
2:B:1718:G:H2'	2:B:1719:G:C8	2.50	0.46
2:B:1728:G:H8	34:HA:25:LEU:O	1.99	0.46
2:B:1758:G:H2'	2:B:1759:C:H6	1.79	0.46
2:B:1845:G:H5"	2:B:1846:C:H5"	1.97	0.46
2:B:1892:G:C3'	2:B:1893:A:H5"	2.46	0.46
2:B:2370:G:C6	2:B:2371:G:C6	3.03	0.46
2:B:2879:C:OP1	7:G:6:TYR:HE1	1.98	0.46
2:B:2895:G:C3'	2:B:2896:A:H5"	2.45	0.46
2:B:3023:U:H6	2:B:3023:U:O5'	1.98	0.46
4:D:5:G:H5"	9:I:27:LYS:NZ	2.30	0.46
5:E:89:ASP:O	5:E:93:LEU:HG	2.15	0.46
7:G:54:THR:HG22	7:G:76:VAL:O	2.14	0.46
7:G:339:ARG:NH1	7:G:342:LEU:HD21	2.30	0.46
7:G:356:LEU:CD1	7:G:359:ILE:HD11	2.45	0.46
8:H:98:ARG:HG2	8:H:99:MET:CE	2.45	0.46
8:H:145:ILE:HB	8:H:146:PRO:HD2	1.97	0.46
9:I:40:HIS:CD2	25:Y:69:LYS:H	2.34	0.46
12:L:98:ARG:CD	12:L:189:LEU:HA	2.34	0.46
17:Q:59:ARG:NH1	17:Q:68:LYS:C	2.69	0.46
19:S:39:ALA:HB2	19:S:63:ARG:HD2	1.96	0.46
22:V:182:LYS:HE2	32:FA:55:LYS:O	2.15	0.46
23:W:134:HIS:CE1	23:W:136:ARG:HE	2.34	0.46
24:X:34:GLU:O	24:X:37:ALA:HB3	2.15	0.46
24:X:78:TRP:HB3	24:X:124:LEU:CD1	2.45	0.46
25:Y:56:PHE:CZ	25:Y:78:LYS:HG3	2.51	0.46
34:HA:44:ILE:CG2	34:HA:53:LYS:HG2	2.46	0.46
34:HA:55:GLU:HG3	34:HA:56:LEU:HD23	1.97	0.46
40:NA:30:LYS:HD3	40:NA:30:LYS:C	2.35	0.46
45:SA:11:ARG:HG2	45:SA:11:ARG:HH11	1.79	0.46
46:TA:21:THR:CG2	46:TA:76:LYS:HD3	2.45	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:VA:120:TRP:CB	48:VA:157:LYS:HE2	2.45	0.46
49:WA:125:GLY:HA2	49:WA:131:ILE:HG12	1.98	0.46
58:FB:10:LYS:HG3	58:FB:11:ARG:N	2.31	0.46
59:GB:53:ARG:HB3	59:GB:53:ARG:HH21	1.81	0.46
61:IB:124:THR:O	61:IB:140:VAL:HG12	2.16	0.46
63:KB:23:PRO:O	63:KB:24:ALA:CB	2.63	0.46
65:MB:42:ARG:O	65:MB:46:ALA:HB2	2.16	0.46
68:PB:20:THR:HG22	68:PB:36:LYS:HG2	1.96	0.46
82:DC:140:GLU:HA	82:DC:188:ILE:CD1	2.46	0.46
82:DC:171:LYS:HB3	82:DC:274:ASN:HB3	1.97	0.46
82:DC:590:ALA:HB3	82:DC:720:ALA:HB1	1.98	0.46
1:A:72:A:H3'	1:A:73:U:H5"	1.97	0.46
1:A:198:A:H2'	1:A:199:G:C4'	2.46	0.46
1:A:249:U:H3'	1:A:250:C:C5'	2.40	0.46
1:A:871:G:C1'	77:YB:51:GLN:HG2	2.46	0.46
1:A:898:A:H62	1:A:914:G:H21	1.62	0.46
1:A:1232:U:H2'	1:A:1233:G:C8	2.50	0.46
1:A:1436:A:H2'	1:A:1437:U:H5'	1.97	0.46
1:A:1478:G:O5'	69:QB:47:PRO:HG3	2.16	0.46
2:B:53:G:H4'	2:B:812:G:H4'	1.96	0.46
2:B:136:G:H2'	2:B:137:G:C8	2.50	0.46
2:B:214:G:H2'	2:B:215:G:H8	1.79	0.46
2:B:287:G:C2	2:B:288:C:C2	3.03	0.46
2:B:833:G:H2'	2:B:834:U:H5'	1.98	0.46
2:B:916:G:HO2'	2:B:917:A:H8	1.62	0.46
2:B:953:G:H21	2:B:1115:G:P	2.38	0.46
2:B:970:A:H2'	2:B:971:G:H8	1.81	0.46
2:B:1238:C:H6	2:B:1238:C:O5'	1.98	0.46
2:B:1456:A:N6	35:IA:64:VAL:HG21	2.30	0.46
2:B:1481:A:H1'	2:B:1483:G:C6	2.51	0.46
2:B:1578:C:H2'	2:B:1579:C:O2	2.15	0.46
2:B:1598:G:H2'	2:B:1599:G:H8	1.80	0.46
2:B:1636:U:H5'	31:EA:36:HIS:CE1	2.51	0.46
2:B:2105:G:O2'	2:B:2106:A:H5'	2.15	0.46
2:B:2147:A:H2'	2:B:2148:U:C6	2.51	0.46
2:B:2188:A:H2	47:UA:19:GLY:HA2	1.80	0.46
2:B:2269:U:O2	2:B:2271:A:H8	1.98	0.46
2:B:2356:A:N6	2:B:2983:C:C5	2.64	0.46
2:B:2485:A:H5"	5:E:131:ALA:HB2	1.97	0.46
2:B:2733:A:H2'	2:B:2734:A:O4'	2.16	0.46
2:B:3158:G:C2'	2:B:3159:C:H5'	2.46	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:3251:U:H2'	2:B:3252:G:C8	2.50	0.46
6:F:144:ASN:CB	6:F:160:SER:H	2.15	0.46
7:G:173:GLN:HE22	7:G:177:HIS:HE1	1.63	0.46
7:G:173:GLN:NE2	7:G:177:HIS:HE1	2.14	0.46
9:I:224:LYS:O	9:I:227:LEU:HB2	2.15	0.46
12:L:69:LEU:HD12	12:L:69:LEU:N	2.30	0.46
13:M:44:THR:O	13:M:55:VAL:HA	2.15	0.46
13:M:90:MET:HE2	13:M:181:VAL:HG23	1.98	0.46
13:M:179:ILE:HD12	13:M:179:ILE:N	2.31	0.46
14:N:115:MET:CG	14:N:118:ALA:HB2	2.37	0.46
19:S:150:TRP:HE3	19:S:156:HIS:HE2	1.63	0.46
20:T:149:TYR:CD1	20:T:152:VAL:HG21	2.50	0.46
21:U:128:ARG:HD2	21:U:136:ILE:CG2	2.45	0.46
21:U:163:LYS:HZ2	21:U:165:VAL:HB	1.79	0.46
22:V:111:ARG:NH2	22:V:121:CYS:HB3	2.29	0.46
23:W:52:LYS:HB2	23:W:52:LYS:NZ	2.30	0.46
29:CA:77:GLU:HG2	29:CA:133:LEU:CB	2.45	0.46
29:CA:131:ASP:HB3	29:CA:134:ASP:OD2	2.15	0.46
38:LA:20:ILE:HD13	38:LA:20:ILE:N	2.22	0.46
39:MA:4:VAL:HG11	39:MA:20:GLN:NE2	2.28	0.46
46:TA:43:TYR:CD1	46:TA:47:GLN:NE2	2.83	0.46
47:UA:27:LYS:O	47:UA:31:ILE:HB	2.14	0.46
49:WA:36:ALA:HB1	49:WA:68:VAL:CG1	2.45	0.46
49:WA:112:SER:O	49:WA:154:VAL:HG22	2.15	0.46
52:ZA:53:ILE:HD12	52:ZA:57:PHE:CE2	2.51	0.46
53:AB:136:VAL:HG13	53:AB:186:VAL:HG22	1.98	0.46
57:EB:39:ARG:N	57:EB:40:PRO:HD2	2.31	0.46
57:EB:86:GLN:O	57:EB:87:ASP:HB3	2.16	0.46
61:IB:72:THR:HG22	61:IB:124:THR:CA	2.33	0.46
64:LB:102:LEU:HD13	64:LB:102:LEU:C	2.35	0.46
64:LB:137:LEU:H	64:LB:137:LEU:CD1	2.23	0.46
66:NB:82:ARG:HG3	66:NB:82:ARG:NH1	2.31	0.46
68:PB:35:ILE:HG22	68:PB:36:LYS:N	2.30	0.46
73:UB:104:LEU:HD13	73:UB:122:PHE:HB3	1.96	0.46
74:VB:5:VAL:HG12	74:VB:6:THR:N	2.30	0.46
82:DC:409:GLN:HE21	82:DC:411:VAL:HG23	1.80	0.46
82:DC:409:GLN:O	82:DC:430:ALA:HA	2.15	0.46
82:DC:789:GLY:C	82:DC:791:GLN:H	2.15	0.46
1:A:1291:G:N2	1:A:1324:G:H22	2.13	0.46
1:A:1327:C:O3'	53:AB:158:ILE:HA	2.16	0.46
1:A:1474:G:O6	75:WB:97:LYS:HE2	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1524:A:C2	1:A:1590:G:H1'	2.50	0.46
2:B:256:G:H2'	2:B:257:U:H6	1.81	0.46
2:B:268:A:N1	2:B:295:A:H5'	2.30	0.46
2:B:681:U:OP1	8:H:115:HIS:HB2	2.15	0.46
2:B:824:C:H5"	6:F:21:ARG:HE	1.78	0.46
2:B:946:U:H2'	2:B:947:G:H8	1.81	0.46
2:B:951:A:H2'	2:B:952:A:C8	2.51	0.46
2:B:971:G:H2'	2:B:972:A:C8	2.50	0.46
2:B:998:A:H2'	2:B:999:G:C8	2.51	0.46
2:B:1501:U:O2'	2:B:1502:C:H5'	2.15	0.46
2:B:1668:G:O3'	38:LA:30:LEU:HD21	2.15	0.46
2:B:1751:G:H5"	42:PA:26:LYS:HZ2	1.78	0.46
2:B:2055:U:H2'	2:B:2056:U:O4'	2.16	0.46
2:B:2148:U:O2'	6:F:182:ALA:HB2	2.16	0.46
2:B:2184:U:H2'	2:B:2185:G:C8	2.51	0.46
2:B:2365:C:H6	2:B:2365:C:OP1	1.99	0.46
2:B:3014:U:O5'	2:B:3014:U:H6	1.99	0.46
2:B:3218:A:H4'	2:B:3219:G:O5'	2.16	0.46
3:C:84:C:OP2	3:C:84:C:C6	2.66	0.46
4:D:2:G:H1'	4:D:23:A:N1	2.30	0.46
4:D:3:U:H2'	4:D:4:U:C6	2.50	0.46
4:D:15:C:O2'	4:D:16:U:H5'	2.14	0.46
7:G:116:ARG:HD3	7:G:122:TRP:CG	2.50	0.46
7:G:225:GLY:O	7:G:269:GLN:HA	2.15	0.46
7:G:271:GLY:O	7:G:272:TYR:HB2	2.15	0.46
8:H:38:VAL:HG11	8:H:121:ALA:CB	2.44	0.46
8:H:179:LEU:CD2	8:H:183:LYS:HD2	2.46	0.46
12:L:149:LYS:CG	12:L:201:THR:HA	2.46	0.46
14:N:97:LEU:HD12	14:N:124:GLY:O	2.15	0.46
14:N:182:LEU:O	14:N:186:GLU:HG3	2.16	0.46
16:P:87:GLU:HB2	16:P:88:PRO:HD2	1.97	0.46
17:Q:167:PHE:CZ	32:FA:132:LYS:HB2	2.51	0.46
18:R:20:VAL:CG1	18:R:68:LEU:HB2	2.45	0.46
19:S:11:GLN:HA	19:S:11:GLN:OE1	2.16	0.46
19:S:61:ILE:HA	19:S:132:VAL:O	2.16	0.46
19:S:135:VAL:HG21	19:S:151:ILE:CD1	2.45	0.46
19:S:142:ILE:HD12	19:S:142:ILE:H	1.80	0.46
20:T:84:LEU:HD13	20:T:102:LEU:CD2	2.45	0.46
23:W:11:ALA:C	23:W:13:SER:H	2.18	0.46
31:EA:5:LEU:HD13	31:EA:77:TYR:CZ	2.50	0.46
31:EA:10:VAL:CG1	31:EA:11:ALA:H	2.27	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:HA:20:SER:HB2	34:HA:96:GLY:HA3	1.98	0.46
35:IA:6:ASP:HB2	35:IA:77:ARG:NH2	2.31	0.46
39:MA:51:ILE:HA	39:MA:54:VAL:HG21	1.96	0.46
39:MA:54:VAL:HB	39:MA:55:LEU:HD23	1.98	0.46
46:TA:64:THR:OG1	46:TA:65:THR:N	2.47	0.46
48:VA:43:LYS:HA	48:VA:46:ARG:CG	2.44	0.46
48:VA:130:PRO:HB2	82:DC:187:VAL:HG23	1.98	0.46
49:WA:188:ILE:HG23	53:AB:225:TYR:CD2	2.50	0.46
49:WA:192:PHE:HB3	49:WA:223:TRP:CE2	2.51	0.46
51:YA:87:ARG:HB2	51:YA:101:HIS:CG	2.50	0.46
52:ZA:72:LEU:CB	52:ZA:73:LEU:HD12	2.46	0.46
55:CB:187:ILE:HD12	55:CB:187:ILE:N	2.26	0.46
59:GB:28:LEU:HD22	59:GB:31:ALA:HB3	1.98	0.46
70:RB:19:ILE:HA	70:RB:95:ALA:O	2.16	0.46
70:RB:80:GLU:OE1	79:AC:44:ARG:HG2	2.16	0.46
71:SB:15:ARG:CB	71:SB:24:ILE:HD12	2.44	0.46
71:SB:31:SER:HA	71:SB:57:GLY:N	2.30	0.46
71:SB:80:LYS:HD3	71:SB:81:ASN:ND2	2.22	0.46
72:TB:24:GLN:HG2	77:YB:5:GLN:N	2.12	0.46
73:UB:114:LYS:HE2	73:UB:115:GLY:H	1.79	0.46
76:XB:82:ARG:HG3	76:XB:83:ILE:H	1.80	0.46
78:ZB:29:ARG:HG3	78:ZB:29:ARG:HH11	1.80	0.46
82:DC:27:HIS:CD2	82:DC:28:VAL:HG13	2.50	0.46
82:DC:74:ALA:CB	82:DC:103:ILE:HA	2.46	0.46
82:DC:108:HIS:HB3	82:DC:109:VAL:H	1.62	0.46
82:DC:170:SER:HB2	82:DC:173:ASP:HB2	1.97	0.46
82:DC:414:GLN:OE1	82:DC:468:THR:HG21	2.15	0.46
82:DC:583:HIS:HE1	83:EC:6907:G:H4'	1.80	0.46
82:DC:773:PRO:HB2	82:DC:776:GLU:HG3	1.97	0.46
83:EC:6903:U:H6	83:EC:6903:U:O5'	1.99	0.46
1:A:127:G:O6	56:DB:195:VAL:HG13	2.15	0.46
1:A:1066:C:H2'	1:A:1067:C:H6	1.80	0.46
1:A:1453:G:H2'	1:A:1454:G:C8	2.51	0.46
1:A:1523:G:H2'	1:A:1523:G:OP1	2.16	0.46
2:B:341:G:H21	2:B:349:A:H61	1.64	0.46
2:B:381:U:H2'	2:B:382:U:C5	2.51	0.46
2:B:405:U:C3'	2:B:406:G:H5'	2.46	0.46
2:B:415:G:C2	2:B:416:A:C5	3.04	0.46
2:B:504:A:H1'	2:B:611:A:OP1	2.16	0.46
2:B:680:G:H2'	2:B:681:U:H5'	1.97	0.46
2:B:955:U:H2'	2:B:956:U:H6	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1509:A:H2'	2:B:1510:G:N9	2.30	0.46
2:B:1556:C:H2'	2:B:2169:G:N1	2.30	0.46
2:B:1719:G:H1'	2:B:1731:A:O2'	2.16	0.46
2:B:1805:C:OP1	38:LA:71:THR:HG21	2.15	0.46
2:B:1919:G:H1'	2:B:1934:G:N2	2.31	0.46
2:B:2213:A:O2'	2:B:2602:G:H5'	2.14	0.46
2:B:2464:U:C2'	2:B:2465:G:H5'	2.45	0.46
2:B:3001:C:H2'	2:B:3002:C:O4'	2.16	0.46
4:D:103:A:H2'	4:D:104:A:C8	2.51	0.46
5:E:120:VAL:HG13	5:E:124:LEU:HD13	1.96	0.46
6:F:39:GLY:HA3	12:L:36:ILE:CG2	2.41	0.46
6:F:56:ALA:CB	6:F:170:ALA:O	2.63	0.46
6:F:245:LEU:O	6:F:245:LEU:HD22	2.16	0.46
7:G:50:LYS:HG2	7:G:331:ASN:C	2.36	0.46
7:G:348:ARG:HH11	7:G:348:ARG:HG3	1.81	0.46
8:H:206:LEU:HD21	8:H:228:ALA:N	2.30	0.46
9:I:65:ILE:HG23	9:I:73:VAL:C	2.36	0.46
11:K:88:ARG:CD	11:K:103:LEU:HD13	2.35	0.46
11:K:158:LYS:O	11:K:159:GLN:C	2.54	0.46
13:M:90:MET:HG2	13:M:181:VAL:N	2.31	0.46
17:Q:31:LYS:CA	17:Q:34:SER:HB2	2.44	0.46
17:Q:115:ARG:HG3	17:Q:115:ARG:NH1	2.29	0.46
23:W:142:ILE:O	23:W:146:LYS:HG3	2.15	0.46
24:X:21:GLU:N	24:X:22:PRO:HD3	2.31	0.46
25:Y:11:THR:HA	25:Y:14:MET:HG2	1.97	0.46
25:Y:63:VAL:O	25:Y:75:ILE:HG22	2.14	0.46
30:DA:125:LYS:O	30:DA:126:LEU:HB3	2.16	0.46
41:OA:17:THR:CG2	41:OA:18:LEU:H	2.29	0.46
48:VA:41:VAL:HA	48:VA:44:GLU:HG2	1.97	0.46
48:VA:106:ALA:CB	48:VA:182:THR:HG23	2.45	0.46
49:WA:56:VAL:HG23	49:WA:56:VAL:O	2.16	0.46
50:XA:175:TYR:CZ	50:XA:199:PRO:HG3	2.51	0.46
51:YA:65:VAL:HA	51:YA:86:LEU:O	2.14	0.46
54:BB:31:PRO:CD	54:BB:38:LEU:HD11	2.46	0.46
58:FB:42:ARG:HB3	58:FB:42:ARG:NH1	2.30	0.46
59:GB:79:ARG:HH11	59:GB:79:ARG:HG3	1.80	0.46
63:KB:135:LEU:CD2	63:KB:136:PRO:HD2	2.45	0.46
66:NB:4:VAL:HB	66:NB:5:PRO:HD2	1.97	0.46
66:NB:53:LEU:HD23	66:NB:53:LEU:N	2.30	0.46
69:QB:94:ILE:HD12	69:QB:95:ASP:H	1.81	0.46
71:SB:72:LEU:HD23	71:SB:75:ASN:HD21	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
72:TB:104:LEU:N	72:TB:104:LEU:HD13	2.30	0.46
72:TB:111:MET:HB2	72:TB:115:GLU:OE2	2.16	0.46
73:UB:75:GLN:HA	73:UB:81:LYS:O	2.16	0.46
75:WB:50:ILE:C	75:WB:52:LYS:H	2.18	0.46
82:DC:162:ARG:HD3	84:DC:901:GDP:N2	2.31	0.46
82:DC:175:TYR:CE2	82:DC:271:ARG:NH2	2.84	0.46
82:DC:275:MET:O	82:DC:279:ASP:HB3	2.16	0.46
82:DC:360:PRO:HB2	82:DC:363:ASP:HB2	1.97	0.46
82:DC:369:ILE:HD12	82:DC:401:PHE:CB	2.45	0.46
82:DC:459:ILE:HD12	82:DC:462:PHE:HB2	1.97	0.46
82:DC:493:VAL:HG12	82:DC:494:GLU:N	2.30	0.46
1:A:1323:C:H2'	1:A:1324:G:C8	2.51	0.46
1:A:1608:U:H5"	66:NB:73:GLY:N	2.31	0.46
1:A:1648:A:H2'	1:A:1649:G:O4'	2.16	0.46
2:B:175:C:H2'	2:B:176:G:C8	2.51	0.46
2:B:523:A:H4'	24:X:67:ALA:O	2.16	0.46
2:B:649:A:H2'	2:B:650:C:H6	1.81	0.46
2:B:1308:A:N6	2:B:2367:A:N3	2.63	0.46
2:B:1510:G:H2'	2:B:1512:U:C5	2.50	0.46
2:B:1730:G:O6	34:HA:29:SER:N	2.48	0.46
2:B:2393:G:C5'	7:G:252:ILE:HD11	2.29	0.46
2:B:2510:U:O2'	2:B:2511:A:H8	1.97	0.46
2:B:2683:U:H2'	2:B:2684:C:H6	1.80	0.46
2:B:2739:A:OP1	33:GA:38:LYS:HE2	2.16	0.46
5:E:209:SER:O	5:E:210:MET:HB3	2.14	0.46
6:F:221:LYS:O	6:F:222:ALA:C	2.54	0.46
7:G:50:LYS:HD3	7:G:330:GLY:O	2.15	0.46
7:G:169:THR:HG23	7:G:314:TYR:OH	2.15	0.46
7:G:299:ASP:O	7:G:300:ARG:HB2	2.15	0.46
8:H:115:HIS:CD2	8:H:119:ARG:HD2	2.51	0.46
8:H:150:LEU:CD2	8:H:249:ILE:HG12	2.44	0.46
9:I:51:LEU:HB2	9:I:144:VAL:CG2	2.45	0.46
9:I:266:ALA:HA	9:I:269:SER:HB2	1.97	0.46
9:I:295:GLY:HA2	14:N:218:ALA:HA	1.97	0.46
10:J:42:LEU:C	10:J:43:LEU:HD12	2.36	0.46
11:K:30:ARG:O	11:K:34:LYS:HB2	2.16	0.46
13:M:146:LEU:HD12	13:M:158:ALA:HB2	1.98	0.46
17:Q:80:VAL:HG11	17:Q:87:ALA:N	2.31	0.46
18:R:89:ALA:O	18:R:92:GLU:HG3	2.15	0.46
18:R:106:ARG:HG3	18:R:107:GLU:N	2.31	0.46
24:X:94:ILE:HG21	24:X:105:THR:OG1	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:CA:79:GLY:O	29:CA:80:ASN:HB3	2.15	0.46
34:HA:46:ALA:HA	34:HA:53:LYS:HZ2	1.79	0.46
45:SA:4:LYS:HE3	45:SA:5:TRP:CH2	2.50	0.46
46:TA:22:GLN:O	46:TA:75:VAL:HG22	2.16	0.46
46:TA:58:PHE:CE2	46:TA:61:LYS:HB2	2.50	0.46
47:UA:28:LYS:HG2	47:UA:32:GLN:NE2	2.30	0.46
48:VA:53:MET:HA	48:VA:85:GLY:HA3	1.98	0.46
48:VA:169:GLU:O	48:VA:172:LEU:HG	2.16	0.46
49:WA:240:VAL:HG22	49:WA:256:THR:HG22	1.97	0.46
51:YA:167:VAL:HG12	51:YA:171:ILE:HG13	1.98	0.46
53:AB:23:GLU:HA	53:AB:26:THR:OG1	2.15	0.46
53:AB:76:ARG:HG2	60:HB:63:TYR:CE1	2.50	0.46
54:BB:169:ILE:HG22	54:BB:169:ILE:O	2.15	0.46
55:CB:99:MET:O	55:CB:100:ASN:HB2	2.16	0.46
56:DB:38:GLY:O	56:DB:45:PHE:HB2	2.16	0.46
56:DB:68:LEU:HA	56:DB:101:ILE:HG13	1.98	0.46
56:DB:77:LEU:HD12	56:DB:95:LYS:HB2	1.97	0.46
57:EB:27:LEU:HD21	57:EB:80:GLU:HB3	1.96	0.46
57:EB:89:HIS:CE1	57:EB:165:LYS:HA	2.50	0.46
58:FB:38:ILE:HG21	58:FB:80:GLY:N	2.23	0.46
59:GB:53:ARG:HB3	59:GB:53:ARG:NH2	2.31	0.46
67:OB:26:LEU:HD22	67:OB:59:LYS:HA	1.97	0.46
67:OB:32:LYS:HD2	67:OB:47:ARG:HD3	1.96	0.46
72:TB:57:ARG:NH2	77:YB:26:GLN:HG3	2.29	0.46
72:TB:90:THR:C	72:TB:92:ASN:H	2.19	0.46
80:BC:23:LYS:HB3	80:BC:26:LYS:NZ	2.30	0.46
82:DC:149:GLU:O	82:DC:150:ARG:HB2	2.16	0.46
1:A:85:A:H2'	1:A:86:A:O4'	2.16	0.46
1:A:117:U:H2'	1:A:118:U:C6	2.49	0.46
1:A:228:G:H8	1:A:228:G:H5'	1.81	0.46
1:A:1028:C:H4'	1:A:1029:U:H2'	1.96	0.46
1:A:1112:G:H1'	1:A:1133:A:H61	1.79	0.46
1:A:1186:U:H2'	1:A:1187:U:C6	2.51	0.46
1:A:1268:G:O3'	1:A:1269:U:H3'	2.16	0.46
1:A:1495:C:H2'	1:A:1496:U:C5'	2.42	0.46
1:A:1572:G:H2'	1:A:1572:G:N3	2.31	0.46
1:A:1601:G:H1	69:QB:88:VAL:CG2	2.19	0.46
1:A:1772:C:H2'	1:A:1773:C:C5'	2.46	0.46
2:B:15:C:OP1	2:B:15:C:H3'	2.16	0.46
2:B:44:U:H2'	2:B:44:U:O2	2.16	0.46
2:B:208:C:O2'	2:B:209:A:H5'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:290:G:H2'	2:B:291:C:H6	1.77	0.46
2:B:310:U:H2'	2:B:311:C:C4'	2.45	0.46
2:B:346:C:C4	3:C:25:G:H4'	2.51	0.46
2:B:365:A:H2'	2:B:366:A:O4'	2.16	0.46
2:B:588:G:N2	10:J:23:LYS:NZ	2.63	0.46
2:B:816:A:O4'	2:B:818:C:N4	2.49	0.46
2:B:1097:G:H8	25:Y:112:ASN:OD1	1.99	0.46
2:B:1280:C:H2'	2:B:1281:G:H8	1.81	0.46
2:B:1337:A:H2'	2:B:1338:C:C6	2.50	0.46
2:B:2085:U:C2'	2:B:2086:A:H5'	2.45	0.46
2:B:2280:A:N7	2:B:2282:U:H2'	2.31	0.46
2:B:2468:A:C5	2:B:2478:C:H4'	2.51	0.46
2:B:2832:C:O2'	2:B:2833:A:H5'	2.15	0.46
2:B:3080:G:H2'	2:B:3081:C:H6	1.81	0.46
2:B:3089:C:OP1	7:G:222:LYS:HE2	2.16	0.46
2:B:3111:U:O4	2:B:3121:U:C5	2.69	0.46
3:C:5:U:OP1	21:U:62:ARG:HG2	2.16	0.46
3:C:27:U:H2'	3:C:28:C:H6	1.81	0.46
3:C:36:G:N2	3:C:37:A:N1	2.64	0.46
3:C:142:C:H4'	19:S:60:VAL:CG2	2.32	0.46
7:G:43:LEU:H	7:G:208:VAL:HG21	1.80	0.46
8:H:258:LEU:O	8:H:259:ASP:C	2.55	0.46
9:I:2:ALA:HA	9:I:7:ALA:HB2	1.98	0.46
9:I:58:LYS:HB3	9:I:93:THR:HB	1.98	0.46
9:I:119:TYR:CZ	9:I:135:VAL:HG23	2.51	0.46
11:K:27:ALA:HA	11:K:30:ARG:HB3	1.98	0.46
11:K:108:LEU:HD22	11:K:113:SER:O	2.16	0.46
14:N:166:ILE:HG22	14:N:167:LEU:H	1.79	0.46
15:O:22:SER:HA	15:O:66:ALA:CB	2.45	0.46
16:P:78:SER:HB2	16:P:137:GLN:NE2	2.30	0.46
18:R:16:GLU:O	18:R:17:VAL:C	2.53	0.46
19:S:49:ARG:HH11	19:S:49:ARG:HB3	1.78	0.46
19:S:163:GLY:C	19:S:165:THR:H	2.19	0.46
20:T:34:VAL:HG21	20:T:112:TYR:CE1	2.51	0.46
22:V:48:VAL:HA	22:V:51:ALA:HB3	1.96	0.46
24:X:66:GLU:HG2	24:X:73:LYS:HE3	1.98	0.46
24:X:161:LYS:HD3	24:X:162:THR:N	2.31	0.46
26:Z:97:SER:HA	26:Z:103:TYR:HA	1.97	0.46
29:CA:61:LYS:O	29:CA:61:LYS:HD2	2.16	0.46
30:DA:17:LYS:HG2	30:DA:21:THR:HG23	1.97	0.46
34:HA:74:ASN:HB2	34:HA:86:ARG:HB2	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:IA:14:ILE:HG23	35:IA:16:LEU:CD1	2.45	0.46
47:UA:82:THR:O	47:UA:86:LEU:HG	2.16	0.46
48:VA:9:ALA:O	48:VA:12:PHE:HB2	2.15	0.46
52:ZA:85:PRO:HG3	52:ZA:98:PHE:CD1	2.50	0.46
54:BB:12:LEU:HD11	59:GB:4:ALA:HB2	1.97	0.46
58:FB:10:LYS:HG3	58:FB:11:ARG:H	1.80	0.46
61:IB:43:LYS:HE2	61:IB:43:LYS:HA	1.96	0.46
63:KB:88:LEU:HD13	63:KB:88:LEU:O	2.16	0.46
66:NB:125:GLU:OE1	66:NB:135:ARG:HG3	2.16	0.46
74:VB:29:HIS:N	74:VB:30:PRO:HD3	2.31	0.46
75:WB:83:LEU:HD22	75:WB:87:GLY:HA3	1.98	0.46
79:AC:34:TYR:HB2	79:AC:36:LEU:HD23	1.97	0.46
82:DC:89:ILE:HD11	82:DC:340:LEU:HD12	1.97	0.46
83:EC:6768:U:H3	83:EC:6822:U:H3	1.62	0.46
83:EC:6900:A:O2'	83:EC:6901:C:H5'	2.16	0.46
83:EC:6924:G:N2	83:EC:6929:C:O2	2.48	0.46
83:EC:6930:G:C3'	83:EC:6931:U:H5"	2.45	0.46
83:EC:6935:G:N3	83:EC:6935:G:C2'	2.78	0.46
1:A:48:G:O2'	1:A:49:C:H5'	2.15	0.46
1:A:68:A:OP2	1:A:69:G:H5'	2.16	0.46
1:A:79:C:OP1	56:DB:172:ALA:HB3	2.16	0.46
1:A:167:U:H1'	56:DB:133:LEU:CD2	2.46	0.46
1:A:195:G:H2'	1:A:196:G:C4'	2.46	0.46
1:A:522:U:H5"	74:VB:37:LYS:HZ2	1.81	0.46
1:A:629:U:C5'	63:KB:127:ARG:HH12	2.24	0.46
1:A:831:U:H2'	1:A:832:U:C6	2.51	0.46
1:A:968:U:H5"	1:A:1033:C:O2'	2.16	0.46
1:A:1160:A:H2'	1:A:1161:C:C6	2.51	0.46
1:A:1182:U:H4'	65:MB:124:THR:CG2	2.40	0.46
2:B:330:G:H2'	2:B:331:G:O4'	2.16	0.46
2:B:856:G:H5'	2:B:1723:A:H4'	1.98	0.46
2:B:1604:G:C3'	2:B:1605:A:C5'	2.90	0.46
2:B:1650:G:H4'	6:F:69:TYR:O	2.16	0.46
2:B:1652:G:H4'	38:LA:80:ARG:HH12	1.80	0.46
2:B:1857:C:O2	38:LA:4:ARG:HB2	2.15	0.46
2:B:1942:U:O2'	2:B:3345:G:H1'	2.15	0.46
2:B:2108:C:H2'	2:B:2109:U:H6	1.80	0.46
2:B:2311:G:H4'	2:B:2316:G:H4'	1.97	0.46
2:B:2580:A:OP1	2:B:2580:A:H8	1.99	0.46
2:B:2876:C:C2'	2:B:2877:G:H5'	2.46	0.46
2:B:3210:A:C5	2:B:3211:C:C4	3.03	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:138:A:H2'	3:C:139:U:O4'	2.15	0.46
4:D:26:C:H42	4:D:57:G:H22	1.63	0.46
7:G:245:GLY:CA	7:G:248:LYS:HE3	2.40	0.46
8:H:167:ALA:HA	8:H:170:LYS:HB2	1.98	0.46
8:H:317:PRO:HB3	8:H:324:LEU:HD13	1.97	0.46
9:I:78:ALA:HB3	9:I:105:ILE:CD1	2.46	0.46
10:J:42:LEU:HD13	10:J:47:PHE:HB2	1.97	0.46
12:L:161:GLU:HA	12:L:164:VAL:CG2	2.45	0.46
15:O:23:VAL:O	15:O:65:ILE:HD12	2.15	0.46
19:S:48:ALA:HB2	19:S:119:TYR:HE1	1.80	0.46
19:S:120:TRP:CZ3	19:S:122:ASN:HA	2.51	0.46
22:V:178:ARG:HG2	22:V:178:ARG:NH2	2.30	0.46
24:X:12:ARG:HB3	24:X:24:LEU:HG	1.97	0.46
25:Y:102:ARG:HD2	25:Y:105:PHE:CD1	2.49	0.46
27:AA:39:VAL:HG21	27:AA:51:ALA:O	2.16	0.46
29:CA:110:VAL:O	29:CA:111:ASN:ND2	2.49	0.46
32:FA:36:GLY:HA3	32:FA:41:HIS:HB2	1.97	0.46
35:IA:51:LEU:CD2	35:IA:93:VAL:HB	2.46	0.46
38:LA:94:LEU:O	38:LA:98:GLN:HB2	2.15	0.46
39:MA:106:LYS:HA	39:MA:109:ILE:HD12	1.97	0.46
48:VA:11:TYR:HD2	48:VA:57:THR:HB	1.79	0.46
49:WA:61:PHE:HZ	49:WA:94:VAL:HA	1.81	0.46
49:WA:255:ALA:HB1	49:WA:260:ILE:HG12	1.97	0.46
53:AB:114:ALA:C	53:AB:116:ARG:H	2.19	0.46
53:AB:163:PRO:HB3	53:AB:167:PHE:CD2	2.51	0.46
54:BB:12:LEU:HD11	59:GB:4:ALA:CA	2.46	0.46
56:DB:191:ARG:O	56:DB:195:VAL:HG23	2.15	0.46
59:GB:129:ILE:HG22	59:GB:142:ASN:CA	2.46	0.46
60:HB:74:GLU:HA	60:HB:77:ARG:HB2	1.97	0.46
61:IB:27:THR:CG2	61:IB:29:LYS:HG2	2.46	0.46
61:IB:125:VAL:HA	61:IB:140:VAL:HG12	1.98	0.46
65:MB:77:ARG:HB3	65:MB:102:PHE:CE1	2.51	0.46
68:PB:29:VAL:HG22	68:PB:47:CYS:SG	2.56	0.46
70:RB:26:LEU:HG	70:RB:114:VAL:HG22	1.97	0.46
72:TB:37:PHE:O	72:TB:40:VAL:HB	2.16	0.46
82:DC:76:SER:O	82:DC:100:ILE:O	2.34	0.46
82:DC:171:LYS:CE	82:DC:279:ASP:HA	2.36	0.46
82:DC:374:PRO:HG3	82:DC:450:ALA:H	1.80	0.46
82:DC:643:PRO:HG3	82:DC:682:ARG:HG3	1.97	0.46
82:DC:671:THR:O	82:DC:680:GLU:HA	2.16	0.46
82:DC:694:HIS:ND1	82:DC:695:ALA:N	2.64	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:707:PRO:O	82:DC:711:ARG:HB2	2.16	0.46
1:A:109:G:H5"	1:A:755:A:OP2	2.15	0.46
1:A:140:A:C4'	1:A:141:U:H5'	2.46	0.46
1:A:237:C:H5"	1:A:238:U:H5'	1.97	0.46
1:A:368:U:H2'	1:A:369:A:O4'	2.16	0.46
1:A:398:G:H2'	1:A:399:A:H5"	1.98	0.46
1:A:478:A:O2'	59:GB:124:HIS:HA	2.16	0.46
1:A:1170:G:H2'	1:A:1170:G:N3	2.31	0.46
1:A:1199:G:N2	1:A:1595:U:H5'	2.31	0.46
1:A:1402:G:H2'	1:A:1403:C:O4'	2.16	0.46
1:A:1588:G:OP2	66:NB:132:LYS:HE3	2.14	0.46
1:A:1695:G:N2	1:A:1707:A:N6	2.64	0.46
2:B:241:G:H5'	2:B:242:C:H5	1.80	0.46
2:B:540:U:H2'	2:B:541:U:O4'	2.15	0.46
2:B:1129:A:H2'	2:B:1130:A:C8	2.50	0.46
2:B:1144:U:H3	2:B:1159:A:N6	2.13	0.46
2:B:1145:G:N2	2:B:1160:C:C6	2.84	0.46
2:B:1145:G:N7	2:B:1146:C:C5	2.84	0.46
2:B:1191:U:OP2	20:T:49:ARG:HD2	2.16	0.46
2:B:1668:G:H5'	38:LA:22:VAL:O	2.16	0.46
2:B:1678:G:OP1	26:Z:96:VAL:HA	2.16	0.46
2:B:1699:A:H61	2:B:1746:U:H3	1.64	0.46
2:B:1872:C:OP1	23:W:56:THR:HG21	2.16	0.46
2:B:1898:G:H2'	2:B:1899:G:O4'	2.16	0.46
2:B:2102:U:H5'	23:W:88:ARG:NH2	2.31	0.46
2:B:2439:A:H2'	2:B:2440:G:H8	1.81	0.46
2:B:2515:A:H5"	19:S:28:TRP:CD1	2.51	0.46
2:B:2597:U:H2'	2:B:2598:G:C8	2.51	0.46
2:B:2663:G:H5"	15:O:142:LYS:CE	2.43	0.46
2:B:2698:G:H2'	2:B:2699:G:O4'	2.15	0.46
2:B:2745:G:N2	2:B:2748:A:OP2	2.49	0.46
2:B:2927:C:H2'	2:B:2928:C:C6	2.51	0.46
2:B:3180:A:C5'	20:T:116:LYS:HB2	2.46	0.46
4:D:120:C:H2'	9:I:265:TYR:CE1	2.51	0.46
10:J:41:ILE:O	10:J:84:VAL:HA	2.16	0.46
10:J:126:GLN:O	10:J:127:ASN:HB2	2.15	0.46
11:K:124:LEU:HA	11:K:127:LEU:CD1	2.46	0.46
11:K:180:SER:OG	11:K:183:ASP:HB2	2.16	0.46
14:N:159:PHE:CB	14:N:163:GLN:HE22	2.12	0.46
17:Q:60:ALA:HB3	17:Q:65:TYR:O	2.16	0.46
18:R:23:ILE:HD12	18:R:31:LYS:O	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:S:61:ILE:N	19:S:61:ILE:HD13	2.31	0.46
23:W:45:VAL:HG13	23:W:46:LYS:N	2.31	0.46
25:Y:27:LEU:HA	25:Y:30:TYR:HD2	1.81	0.46
27:AA:79:VAL:CB	27:AA:118:VAL:HG13	2.42	0.46
29:CA:103:TYR:CE1	29:CA:139:ILE:HD12	2.36	0.46
31:EA:44:ALA:CB	31:EA:72:ILE:HG22	2.46	0.46
31:EA:100:THR:CG2	31:EA:110:ALA:HB2	2.45	0.46
32:FA:78:LEU:HA	32:FA:81:LEU:HD12	1.97	0.46
36:JA:66:LEU:HD23	36:JA:72:LYS:HG3	1.98	0.46
38:LA:76:TYR:HB3	38:LA:80:ARG:HG2	1.98	0.46
39:MA:89:ARG:HH11	39:MA:89:ARG:HG2	1.80	0.46
47:UA:17:ARG:HG3	47:UA:18:TYR:CD1	2.50	0.46
47:UA:46:THR:HB	47:UA:58:SER:CB	2.42	0.46
49:WA:25:THR:HG21	49:WA:295:SER:HA	1.97	0.46
50:XA:153:SER:O	50:XA:156:VAL:HG22	2.16	0.46
51:YA:176:VAL:HA	51:YA:184:LEU:HD21	1.97	0.46
52:ZA:139:ILE:CG2	52:ZA:221:THR:HG21	2.45	0.46
54:BB:114:ILE:HD13	54:BB:119:ALA:HB2	1.98	0.46
54:BB:159:THR:HG23	54:BB:173:ILE:HD13	1.98	0.46
55:CB:179:ALA:CB	55:CB:194:LEU:HD22	2.44	0.46
56:DB:219:ARG:HD2	56:DB:219:ARG:C	2.36	0.46
58:FB:114:GLU:HG2	58:FB:120:THR:HA	1.98	0.46
60:HB:40:LEU:HD13	60:HB:40:LEU:O	2.15	0.46
63:KB:49:GLN:O	63:KB:52:VAL:HB	2.16	0.46
64:LB:103:ARG:NH2	76:XB:52:ASP:HB3	2.31	0.46
66:NB:116:LEU:HB2	66:NB:117:LEU:HD22	1.98	0.46
67:OB:46:LEU:O	67:OB:50:ILE:HG13	2.16	0.46
68:PB:17:LEU:CD2	68:PB:22:VAL:HG11	2.45	0.46
68:PB:64:GLU:O	68:PB:68:ARG:HG2	2.15	0.46
71:SB:55:LEU:HD11	71:SB:69:LEU:CG	2.44	0.46
74:VB:3:ASP:O	74:VB:5:VAL:HG23	2.15	0.46
78:ZB:40:ILE:HG22	78:ZB:41:VAL:H	1.80	0.46
82:DC:100:ILE:HG21	82:DC:338:ILE:HD13	1.98	0.46
82:DC:501:LEU:HB3	82:DC:502:PRO:HD3	1.97	0.46
82:DC:726:GLU:O	82:DC:801:TRP:HA	2.16	0.46
1:A:774:A:H2'	1:A:775:G:C5'	2.45	0.45
1:A:1070:C:H2'	1:A:1071:U:O4'	2.16	0.45
1:A:1235:C:H2'	1:A:1236:A:H8	1.81	0.45
1:A:1556:A:H4'	1:A:1557:U:C5	2.50	0.45
2:B:16:A:N6	2:B:17:G:C6	2.84	0.45
2:B:389:A:H2'	2:B:390:G:O4'	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:422:A:H61	2:B:2362:C:C2'	2.29	0.45
2:B:435:C:H2'	2:B:436:A:C8	2.50	0.45
2:B:578:A:H2'	8:H:334:PHE:CD2	2.52	0.45
2:B:651:G:C6	2:B:652:G:C5	3.05	0.45
2:B:793:C:H2'	2:B:794:U:O4'	2.17	0.45
2:B:1195:A:H1'	2:B:1319:G:C4'	2.45	0.45
2:B:1617:G:H2'	2:B:1618:G:C8	2.51	0.45
2:B:1623:G:H2'	2:B:1624:G:C8	2.51	0.45
2:B:2133:U:C2'	2:B:2134:G:H5'	2.46	0.45
2:B:3118:C:H2'	2:B:3119:U:O4'	2.16	0.45
2:B:3181:C:OP2	20:T:171:LYS:HE3	2.15	0.45
2:B:3270:U:H5'	21:U:174:GLY:HA3	1.97	0.45
2:B:3348:G:N2	2:B:3357:U:H3	2.08	0.45
7:G:347:SER:O	7:G:349:LYS:N	2.44	0.45
8:H:43:ASN:HA	8:H:236:LEU:HD21	1.98	0.45
9:I:80:SER:HB3	9:I:101:THR:OG1	2.16	0.45
10:J:98:VAL:C	10:J:100:LYS:H	2.20	0.45
11:K:119:VAL:HG12	25:Y:135:PRO:HB3	1.98	0.45
13:M:189:GLU:O	13:M:190:ASP:HB2	2.16	0.45
15:O:110:ILE:HD12	15:O:111:ASP:N	2.31	0.45
17:Q:179:PHE:O	17:Q:183:ARG:HG3	2.15	0.45
21:U:9:THR:OG1	21:U:151:THR:HG21	2.16	0.45
22:V:158:HIS:H	22:V:186:VAL:CG1	2.26	0.45
24:X:107:TYR:CE1	24:X:118:PHE:HA	2.51	0.45
24:X:155:ARG:HD2	24:X:172:TYR:CD1	2.51	0.45
27:AA:135:VAL:HG11	28:BA:25:ASP:O	2.15	0.45
33:GA:35:VAL:HG12	33:GA:36:ASP:N	2.31	0.45
35:IA:75:ILE:HG12	35:IA:93:VAL:HG22	1.98	0.45
38:LA:3:GLN:HB3	38:LA:30:LEU:HD13	1.98	0.45
38:LA:62:TYR:CD2	38:LA:62:TYR:N	2.83	0.45
40:NA:74:LYS:HB3	40:NA:75:LYS:HD2	1.99	0.45
47:UA:39:CYS:SG	47:UA:57:CYS:SG	3.08	0.45
47:UA:51:ALA:HB3	47:UA:54:ILE:HB	1.98	0.45
48:VA:45:LEU:HB2	48:VA:49:ALA:HB3	1.97	0.45
48:VA:93:LEU:CD2	48:VA:97:LYS:HB2	2.46	0.45
49:WA:27:ALA:HB2	49:WA:296:ALA:CB	2.46	0.45
51:YA:113:MET:HE3	51:YA:211:HIS:CD2	2.51	0.45
51:YA:126:THR:HG22	51:YA:136:ARG:NE	2.30	0.45
52:ZA:57:PHE:CZ	52:ZA:138:PRO:HD3	2.51	0.45
52:ZA:68:ILE:O	52:ZA:72:LEU:HB2	2.16	0.45
52:ZA:121:VAL:HG23	52:ZA:122:ALA:H	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:ZA:185:LYS:O	52:ZA:189:GLN:HG3	2.17	0.45
55:CB:86:GLN:HE22	78:ZB:49:ARG:NH2	1.96	0.45
57:EB:111:LYS:O	57:EB:112:ARG:HB3	2.16	0.45
63:KB:102:LEU:HD11	63:KB:112:LYS:HA	1.94	0.45
65:MB:81:ARG:CZ	65:MB:117:GLY:HA2	2.46	0.45
69:QB:52:GLY:C	69:QB:54:PHE:H	2.19	0.45
69:QB:94:ILE:HG13	69:QB:95:ASP:N	2.31	0.45
73:UB:114:LYS:HE2	73:UB:115:GLY:N	2.31	0.45
74:VB:8:ARG:HH21	74:VB:28:LEU:HD11	1.81	0.45
80:BC:33:ARG:HB3	80:BC:33:ARG:NH1	2.31	0.45
80:BC:42:ARG:HH11	80:BC:42:ARG:HB3	1.81	0.45
82:DC:31:GLY:O	82:DC:35:LEU:HB3	2.15	0.45
82:DC:91:GLN:HG2	82:DC:92:LYS:H	1.81	0.45
1:A:4:C:H2'	1:A:5:U:H6	1.80	0.45
1:A:296:U:H2'	1:A:297:U:H6	1.82	0.45
1:A:388:G:H2'	1:A:389:G:O4'	2.16	0.45
1:A:426:G:H2'	1:A:427:C:O4'	2.16	0.45
1:A:778:G:C6	1:A:780:A:H5'	2.51	0.45
1:A:1342:C:O2'	1:A:1343:U:H5'	2.16	0.45
2:B:108:A:H4'	2:B:323:A:C2	2.52	0.45
2:B:149:U:C5'	19:S:54:LYS:HB3	2.46	0.45
2:B:308:A:H1'	2:B:2222:A:C2	2.50	0.45
2:B:582:G:H2'	2:B:583:G:C8	2.51	0.45
2:B:1028:U:H3'	2:B:1029:G:H5"	1.97	0.45
2:B:1047:A:H2	2:B:2645:G:H22	1.62	0.45
2:B:1049:C:H2'	2:B:1050:U:O4'	2.16	0.45
2:B:1090:G:H2'	2:B:1091:A:C8	2.51	0.45
2:B:1160:C:C5	2:B:1366:A:H1'	2.51	0.45
2:B:1319:G:H2'	2:B:1320:C:C6	2.52	0.45
2:B:1326:A:C6	2:B:1327:C:C4	3.04	0.45
2:B:1482:A:H5"	2:B:1858:A:C2	2.51	0.45
2:B:1936:A:H2'	2:B:1937:U:C6	2.51	0.45
2:B:1951:C:N3	2:B:2095:G:C2	2.84	0.45
2:B:2376:G:H2'	2:B:2377:G:C8	2.51	0.45
2:B:2428:U:H2'	2:B:2429:G:C8	2.51	0.45
2:B:2510:U:HO2'	2:B:2511:A:H8	1.63	0.45
2:B:2673:A:H5"	15:O:95:ASN:CG	2.36	0.45
3:C:42:G:O5'	41:OA:62:GLY:HA3	2.16	0.45
6:F:148:VAL:HG22	6:F:156:LYS:O	2.15	0.45
8:H:22:LEU:O	8:H:24:ALA:N	2.41	0.45
9:I:247:ILE:O	9:I:251:PRO:HD3	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:K:95:ILE:CD1	11:K:133:TYR:HE1	2.29	0.45
11:K:222:HIS:ND1	11:K:224:ILE:N	2.55	0.45
13:M:7:GLU:CB	13:M:56:ALA:HB2	2.28	0.45
13:M:123:ILE:H	13:M:123:ILE:HD12	1.81	0.45
15:O:12:LEU:HD13	15:O:133:ARG:CZ	2.47	0.45
15:O:23:VAL:HG12	15:O:25:GLU:O	2.17	0.45
15:O:141:ARG:NH1	15:O:144:CYS:HB3	2.32	0.45
16:P:114:ARG:HA	16:P:117:ARG:CD	2.44	0.45
16:P:128:VAL:O	16:P:131:GLU:HG2	2.16	0.45
17:Q:167:PHE:CE1	32:FA:132:LYS:HE2	2.52	0.45
17:Q:174:ARG:HH11	17:Q:174:ARG:HG3	1.82	0.45
21:U:57:ALA:HA	21:U:83:TRP:NE1	2.31	0.45
23:W:84:THR:OG1	23:W:87:ALA:N	2.44	0.45
27:AA:75:PRO:HG2	27:AA:105:PRO:HD3	1.99	0.45
34:HA:71:GLN:HG2	34:HA:71:GLN:O	2.16	0.45
38:LA:57:LEU:N	38:LA:57:LEU:CD2	2.78	0.45
40:NA:75:LYS:HD2	40:NA:75:LYS:N	2.31	0.45
48:VA:29:GLY:HA3	48:VA:84:VAL:HG22	1.99	0.45
48:VA:58:MET:CE	48:VA:86:PHE:CZ	2.99	0.45
48:VA:165:VAL:HG21	48:VA:181:PHE:CZ	2.51	0.45
49:WA:176:LYS:CA	49:WA:199:ILE:HD11	2.45	0.45
50:XA:146:LEU:HD21	50:XA:174:TRP:HE1	1.81	0.45
51:YA:41:ARG:O	51:YA:43:VAL:HG23	2.16	0.45
53:AB:162:GLN:N	53:AB:163:PRO:HD2	2.31	0.45
55:CB:70:VAL:HG23	55:CB:72:HIS:H	1.81	0.45
56:DB:116:LYS:HG2	56:DB:117:GLY:N	2.31	0.45
56:DB:158:ILE:HG23	56:DB:173:PRO:HG2	1.98	0.45
59:GB:125:ALA:O	59:GB:128:LEU:HB2	2.16	0.45
66:NB:55:VAL:HG13	66:NB:56:GLY:N	2.31	0.45
66:NB:83:GLN:HG2	66:NB:87:LYS:HG3	1.98	0.45
68:PB:29:VAL:HG13	68:PB:44:ASN:HA	1.98	0.45
69:QB:70:GLN:OE1	69:QB:119:LYS:HB2	2.16	0.45
75:WB:95:HIS:CE1	75:WB:98:GLN:HB2	2.52	0.45
79:AC:44:ARG:HG2	79:AC:44:ARG:HH11	1.81	0.45
82:DC:131:THR:HG21	82:DC:178:PHE:CE2	2.51	0.45
82:DC:188:ILE:HG23	82:DC:192:TYR:CD2	2.50	0.45
82:DC:580:PRO:HD2	82:DC:704:GLN:CD	2.36	0.45
1:A:515:A:N6	1:A:537:G:H21	1.89	0.45
1:A:1068:C:O2'	1:A:1069:A:H5'	2.16	0.45
1:A:1415:U:H2'	1:A:1416:G:H8	1.82	0.45
1:A:1431:C:H5'	1:A:1431:C:H6	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1583:A:N1	1:A:1611:A:H5"	2.32	0.45
1:A:1765:A:H8	1:A:1768:G:H22	1.61	0.45
2:B:32:U:H2'	2:B:33:G:C8	2.51	0.45
2:B:62:A:C5'	19:S:164:LEU:HD21	2.28	0.45
2:B:185:C:H2'	2:B:186:U:H5'	1.98	0.45
2:B:185:C:C2'	2:B:186:U:H5'	2.46	0.45
2:B:562:C:H5"	24:X:71:LYS:CG	2.47	0.45
2:B:1048:A:H2'	14:N:22:TYR:CE2	2.50	0.45
2:B:1145:G:H1	2:B:1159:A:H1'	1.80	0.45
2:B:1230:G:O2'	48:VA:35:SER:N	2.49	0.45
2:B:1601:U:OP2	23:W:38:ARG:HB2	2.16	0.45
2:B:2202:C:H2'	2:B:2203:U:C6	2.51	0.45
2:B:2309:A:H1'	2:B:2962:U:H5'	1.98	0.45
2:B:2388:U:O2'	21:U:80:LYS:HD3	2.16	0.45
2:B:2394:G:C2	7:G:259:HIS:HA	2.51	0.45
2:B:2562:A:H2'	2:B:2563:G:O4'	2.17	0.45
2:B:2724:U:H5'	25:Y:54:HIS:HB2	1.98	0.45
2:B:2826:U:C2'	2:B:2827:U:H5'	2.46	0.45
2:B:2968:G:H2'	2:B:2969:A:H8	1.80	0.45
4:D:22:A:H2'	4:D:23:A:C8	2.51	0.45
4:D:79:A:H1'	4:D:102:A:N6	2.32	0.45
5:E:90:LEU:HD13	5:E:116:LEU:HD12	1.98	0.45
6:F:112:ILE:HG12	6:F:135:ILE:HG23	1.98	0.45
8:H:30:ILE:HG12	8:H:127:ALA:CB	2.46	0.45
9:I:37:VAL:HG11	25:Y:27:LEU:HG	1.97	0.45
9:I:75:LEU:HD23	9:I:75:LEU:H	1.81	0.45
9:I:92:LEU:HD12	9:I:93:THR:HG22	1.98	0.45
10:J:163:PHE:O	37:KA:7:LEU:HD21	2.17	0.45
11:K:156:ILE:HG22	11:K:157:ASN:ND2	2.32	0.45
12:L:90:THR:HG21	12:L:152:LEU:HD21	1.98	0.45
13:M:48:VAL:HG13	13:M:49:ASN:N	2.24	0.45
16:P:124:THR:HB	16:P:127:SER:HB2	1.98	0.45
22:V:62:VAL:HG22	22:V:142:GLY:N	2.31	0.45
29:CA:29:SER:C	29:CA:31:THR:H	2.20	0.45
29:CA:87:SER:O	29:CA:120:LYS:HD3	2.16	0.45
29:CA:92:LYS:HE2	29:CA:111:ASN:HA	1.97	0.45
31:EA:87:LEU:HB3	31:EA:88:ASP:H	1.56	0.45
31:EA:92:PHE:HA	31:EA:95:VAL:CB	2.40	0.45
37:KA:58:GLU:HB2	37:KA:63:LYS:NZ	2.31	0.45
40:NA:89:GLU:HA	40:NA:92:ASN:HD22	1.81	0.45
48:VA:107:ALA:H	48:VA:182:THR:HG21	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:WA:34:LEU:HD21	49:WA:80:ALA:HB1	1.96	0.45
55:CB:63:GLN:HB2	55:CB:88:PRO:CA	2.46	0.45
56:DB:191:ARG:HA	56:DB:194:LYS:HD2	1.98	0.45
57:EB:77:LEU:HD22	57:EB:81:LEU:HD11	1.98	0.45
58:FB:42:ARG:C	58:FB:43:ILE:HG13	2.37	0.45
59:GB:112:GLN:HG3	59:GB:148:VAL:CG2	2.47	0.45
60:HB:57:THR:HG22	60:HB:58:GLN:H	1.81	0.45
66:NB:37:THR:C	66:NB:45:ARG:HD2	2.36	0.45
67:OB:15:ALA:O	67:OB:19:ARG:HG2	2.17	0.45
67:OB:21:TYR:N	67:OB:22:PRO:CD	2.80	0.45
68:PB:46:VAL:CG1	68:PB:69:ILE:HG23	2.44	0.45
74:VB:129:VAL:C	74:VB:131:ARG:H	2.18	0.45
75:WB:77:ARG:HB2	75:WB:77:ARG:NH1	2.26	0.45
77:YB:20:LYS:CD	77:YB:20:LYS:H	2.29	0.45
82:DC:16:VAL:HA	82:DC:19:VAL:CG2	2.47	0.45
82:DC:204:PRO:HD3	82:DC:209:VAL:HG21	1.98	0.45
82:DC:405:VAL:O	82:DC:447:ASP:HA	2.16	0.45
83:EC:6832:G:O2'	83:EC:6833:G:H5'	2.16	0.45
1:A:15:U:H2'	1:A:16:G:C5'	2.46	0.45
1:A:754:A:H5'	1:A:755:A:H4'	1.99	0.45
1:A:968:U:H2'	1:A:969:C:O4'	2.15	0.45
1:A:1268:G:O2'	1:A:1269:U:H5"	2.16	0.45
1:A:1483:A:C2	1:A:1607:G:H1'	2.52	0.45
1:A:1628:U:H2'	1:A:1629:G:H8	1.81	0.45
2:B:750:G:H2'	2:B:751:A:C8	2.52	0.45
2:B:826:G:P	2:B:1590:G:H4'	2.57	0.45
2:B:837:A:H4'	47:UA:10:ILE:HB	1.99	0.45
2:B:1328:C:H2'	2:B:1329:U:C5	2.52	0.45
2:B:1348:U:H5'	2:B:1355:A:N6	2.30	0.45
2:B:1408:G:O2'	2:B:1409:G:H5'	2.17	0.45
2:B:1436:U:C6	8:H:72:ALA:HA	2.50	0.45
2:B:1485:G:H2'	2:B:1486:G:O4'	2.17	0.45
2:B:1886:A:O2'	7:G:226:PHE:HB3	2.15	0.45
2:B:1923:C:H2'	2:B:1924:U:C6	2.47	0.45
2:B:2184:U:O4'	6:F:236:GLY:HA2	2.15	0.45
2:B:3005:A:C5'	7:G:98:GLY:HA3	2.46	0.45
4:D:74:C:C2'	4:D:75:G:H5'	2.47	0.45
5:E:90:LEU:HD23	5:E:94:ASN:HD21	1.81	0.45
6:F:7:ASN:ND2	6:F:209:HIS:HE1	2.15	0.45
6:F:56:ALA:HB1	6:F:169:ILE:HG22	1.98	0.45
7:G:239:PRO:C	7:G:241:LYS:N	2.70	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:I:198:TYR:CD2	9:I:198:TYR:N	2.84	0.45
9:I:264:GLN:HA	9:I:267:ALA:HB2	1.99	0.45
10:J:31:ARG:CG	10:J:34:LEU:HG	2.44	0.45
11:K:30:ARG:HH21	11:K:33:ARG:HH12	1.64	0.45
12:L:134:TYR:CD2	12:L:134:TYR:N	2.81	0.45
12:L:248:LYS:CA	12:L:252:ASN:HB2	2.46	0.45
14:N:166:ILE:CG2	14:N:167:LEU:N	2.79	0.45
15:O:14:ILE:HD12	15:O:14:ILE:H	1.80	0.45
18:R:22:LEU:HB3	18:R:64:VAL:HG13	1.98	0.45
18:R:80:THR:HG22	18:R:84:LYS:HB2	1.98	0.45
21:U:14:SER:HA	21:U:150:VAL:O	2.17	0.45
22:V:82:VAL:HB	22:V:139:ILE:HA	1.99	0.45
22:V:126:GLN:O	22:V:129:VAL:HB	2.17	0.45
24:X:59:VAL:CG1	25:Y:141:VAL:HG11	2.45	0.45
32:FA:131:SER:HB3	32:FA:134:ALA:CB	2.46	0.45
32:FA:138:ILE:HG22	32:FA:139:ARG:H	1.81	0.45
37:KA:46:GLY:N	37:KA:71:VAL:HB	2.32	0.45
38:LA:69:HIS:C	38:LA:71:THR:H	2.17	0.45
38:LA:97:GLU:O	38:LA:101:VAL:HG23	2.15	0.45
48:VA:158:VAL:HG21	48:VA:173:LEU:HD21	1.98	0.45
49:WA:117:LYS:H	49:WA:117:LYS:CD	2.16	0.45
49:WA:170:ILE:HD11	49:WA:204:ALA:CB	2.42	0.45
50:XA:188:LEU:HD21	50:XA:195:TRP:HD1	1.82	0.45
51:YA:225:VAL:HG12	51:YA:228:LEU:HD23	1.98	0.45
54:BB:71:LYS:HE2	54:BB:76:VAL:HA	1.98	0.45
54:BB:202:ASP:HB3	61:IB:40:LEU:CD1	2.46	0.45
54:BB:233:LYS:HD2	54:BB:234:PRO:HD2	1.99	0.45
61:IB:53:TYR:HB2	61:IB:82:ARG:HH21	1.81	0.45
63:KB:70:LYS:O	63:KB:74:ILE:HG13	2.16	0.45
66:NB:130:GLY:HA3	66:NB:137:ARG:HG3	1.98	0.45
74:VB:76:TYR:HE1	74:VB:86:GLU:OE2	1.99	0.45
76:XB:19:LYS:HA	76:XB:19:LYS:CE	2.46	0.45
77:YB:20:LYS:HD3	77:YB:20:LYS:H	1.81	0.45
82:DC:323:VAL:HG12	82:DC:324:MET:HE2	1.97	0.45
82:DC:650:THR:HG21	82:DC:691:VAL:HG23	1.99	0.45
82:DC:735:CYS:C	82:DC:765:LEU:HD12	2.37	0.45
83:EC:6897:G:H2'	83:EC:6897:G:N3	2.32	0.45
1:A:108:A:H2'	1:A:109:G:O4'	2.16	0.45
1:A:401:A:O4'	54:BB:3:ARG:HD3	2.16	0.45
1:A:503:G:H2'	1:A:504:U:C6	2.51	0.45
2:B:375:A:O2'	2:B:393:U:O2'	2.34	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:430:U:H2'	2:B:431:U:C6	2.52	0.45
2:B:880:G:H2'	2:B:882:A:N7	2.31	0.45
2:B:1129:A:O2'	2:B:1130:A:H5'	2.16	0.45
2:B:1141:C:H2'	2:B:1142:G:C8	2.51	0.45
2:B:1394:A:C8	2:B:1395:G:C8	3.05	0.45
2:B:1438:U:H1'	8:H:93:MET:O	2.17	0.45
2:B:1565:G:N3	2:B:1565:G:H2'	2.31	0.45
2:B:1648:A:H2'	2:B:1649:U:C5'	2.46	0.45
2:B:1918:C:H2'	2:B:1919:G:C8	2.51	0.45
2:B:2200:U:H2'	2:B:2201:G:H8	1.81	0.45
2:B:2649:A:C2'	2:B:2650:U:H5'	2.46	0.45
2:B:2779:A:H5'	2:B:2780:A:P	2.56	0.45
2:B:2812:C:H2'	2:B:2813:A:C8	2.51	0.45
2:B:3190:C:H2'	2:B:3191:G:O4'	2.16	0.45
2:B:3215:A:N6	18:R:122:VAL:HG13	2.30	0.45
2:B:3275:U:H3	37:KA:64:ILE:HB	1.81	0.45
6:F:10:LYS:HD3	6:F:16:PHE:CG	2.50	0.45
7:G:92:TYR:HB2	7:G:157:VAL:HG22	1.99	0.45
7:G:372:THR:HG22	7:G:374:ALA:H	1.81	0.45
9:I:37:VAL:HG12	9:I:37:VAL:O	2.16	0.45
11:K:35:ALA:O	11:K:38:LYS:HB3	2.15	0.45
11:K:131:GLU:CB	11:K:132:PRO:HD3	2.45	0.45
15:O:92:ARG:HA	15:O:92:ARG:NE	2.23	0.45
16:P:123:ARG:NH1	48:VA:46:ARG:NE	2.65	0.45
16:P:123:ARG:HD3	16:P:123:ARG:HA	1.56	0.45
19:S:34:ASN:H	19:S:37:HIS:CD2	2.35	0.45
19:S:44:ARG:HB3	19:S:46:ASP:OD2	2.16	0.45
24:X:92:LYS:HD2	24:X:106:LEU:CD2	2.46	0.45
25:Y:11:THR:HA	25:Y:14:MET:CB	2.46	0.45
30:DA:27:ARG:C	30:DA:29:VAL:H	2.19	0.45
34:HA:16:LEU:HD22	34:HA:98:SER:HB2	1.97	0.45
39:MA:77:PRO:HD2	39:MA:80:LEU:CD2	2.46	0.45
43:QA:48:LYS:HD2	43:QA:48:LYS:HA	1.84	0.45
48:VA:28:VAL:C	48:VA:84:VAL:HG13	2.37	0.45
52:ZA:83:ILE:O	52:ZA:85:PRO:HD3	2.16	0.45
53:AB:49:ILE:HD12	53:AB:49:ILE:N	2.31	0.45
56:DB:72:ARG:HA	56:DB:97:VAL:O	2.16	0.45
58:FB:98:LYS:HG2	58:FB:171:SER:O	2.16	0.45
66:NB:11:GLY:HA3	66:NB:18:ALA:HB3	1.98	0.45
75:WB:84:GLU:OE2	75:WB:91:PRO:HB3	2.17	0.45
77:YB:17:ARG:HG3	77:YB:18:LYS:N	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
77:YB:29:ARG:HG3	77:YB:29:ARG:NH1	2.31	0.45
80:BC:30:PRO:HD2	80:BC:38:LEU:CD1	2.47	0.45
82:DC:633:ILE:O	82:DC:634:TRP:HD1	1.99	0.45
82:DC:653:VAL:HG22	82:DC:691:VAL:HB	1.98	0.45
82:DC:757:GLU:C	82:DC:766:PHE:HE1	2.19	0.45
1:A:606:A:H4'	1:A:607:G:C5'	2.46	0.45
1:A:904:G:H2'	1:A:905:A:O4'	2.15	0.45
1:A:1025:A:C5	1:A:1027:A:H1'	2.51	0.45
1:A:1316:G:H2'	1:A:1317:C:C6	2.50	0.45
1:A:1344:A:C2	70:RB:56:VAL:HG13	2.43	0.45
1:A:1448:G:H2'	1:A:1449:U:O4'	2.15	0.45
1:A:1486:G:C8	1:A:1592:A:O2'	2.69	0.45
1:A:1513:G:H2'	1:A:1515:A:N3	2.32	0.45
2:B:136:G:O2'	2:B:137:G:H5'	2.16	0.45
2:B:355:A:H2'	2:B:356:C:O4'	2.17	0.45
2:B:681:U:O2	2:B:696:C:C5	2.65	0.45
2:B:750:G:H2'	2:B:751:A:O4'	2.17	0.45
2:B:1190:A:H2'	2:B:1190:A:N3	2.31	0.45
2:B:1463:U:C2'	2:B:1464:G:H5'	2.45	0.45
2:B:1497:C:C6	2:B:1497:C:O5'	2.70	0.45
2:B:1565:G:H3'	2:B:1566:A:C8	2.51	0.45
2:B:1670:C:H4'	2:B:1859:A:O3'	2.16	0.45
2:B:1734:G:H2'	2:B:1735:G:C8	2.52	0.45
2:B:1874:A:O2'	2:B:1875:G:H5'	2.16	0.45
2:B:1881:A:H2'	2:B:1882:G:H8	1.81	0.45
2:B:1941:C:H2'	2:B:1942:U:H6	1.81	0.45
2:B:2103:U:P	23:W:88:ARG:HH21	2.39	0.45
2:B:2145:A:C4	2:B:2146:C:C6	3.05	0.45
2:B:2434:U:O2	2:B:2434:U:H2'	2.16	0.45
2:B:2694:A:H2'	2:B:2695:A:O4'	2.16	0.45
2:B:3085:G:OP1	28:BA:34:SER:HB2	2.16	0.45
2:B:3325:G:H5"	35:IA:103:GLY:C	2.36	0.45
3:C:136:G:O2'	3:C:137:C:H5'	2.17	0.45
4:D:1:G:H1'	9:I:266:ALA:HB1	1.98	0.45
6:F:190:ARG:CZ	6:F:191:LEU:HD11	2.47	0.45
7:G:58:ARG:HB2	7:G:58:ARG:NH1	2.31	0.45
8:H:162:THR:O	8:H:166:VAL:HG23	2.17	0.45
9:I:131:LEU:H	9:I:131:LEU:HD22	1.82	0.45
11:K:219:LYS:HA	11:K:228:SER:OG	2.16	0.45
13:M:75:VAL:CG1	13:M:79:ILE:HD12	2.46	0.45
13:M:131:GLY:O	13:M:148:GLY:HA2	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:O:20:ASN:HA	15:O:68:HIS:CB	2.46	0.45
17:Q:48:PRO:HA	17:Q:137:GLN:OE1	2.17	0.45
19:S:114:ARG:NE	19:S:114:ARG:HA	2.31	0.45
19:S:121:VAL:HG11	19:S:131:GLU:HB2	1.99	0.45
21:U:131:ARG:HG3	21:U:137:ASN:OD1	2.17	0.45
22:V:133:LYS:HB2	22:V:133:LYS:NZ	2.31	0.45
22:V:165:ILE:HD13	22:V:168:THR:HG22	1.99	0.45
24:X:52:LYS:HG2	24:X:54:ALA:HB3	1.99	0.45
24:X:69:PRO:HA	24:X:73:LYS:HZ1	1.80	0.45
24:X:78:TRP:HB3	24:X:124:LEU:HD11	1.98	0.45
24:X:155:ARG:HB2	24:X:172:TYR:CB	2.45	0.45
25:Y:88:ARG:NH1	33:GA:31:SER:HB2	2.30	0.45
31:EA:41:ALA:HB2	31:EA:77:TYR:CZ	2.52	0.45
31:EA:77:TYR:HB2	34:HA:35:ARG:HH21	1.81	0.45
33:GA:23:LYS:HE3	33:GA:24:PRO:CD	2.45	0.45
40:NA:53:TYR:O	40:NA:56:ARG:HB3	2.16	0.45
50:XA:193:GLN:C	50:XA:195:TRP:H	2.19	0.45
50:XA:203:PHE:HB3	50:XA:204:TYR:H	1.55	0.45
51:YA:48:VAL:HG12	51:YA:49:ASN:H	1.81	0.45
52:ZA:35:TRP:HZ2	52:ZA:67:GLN:HG2	1.81	0.45
54:BB:160:VAL:CG1	54:BB:169:ILE:HG23	2.47	0.45
54:BB:162:ILE:HG22	54:BB:163:ASP:H	1.79	0.45
55:CB:114:ILE:HG23	55:CB:118:LEU:HG	1.99	0.45
55:CB:168:VAL:O	55:CB:172:ILE:HG13	2.16	0.45
55:CB:175:LEU:HD13	55:CB:198:LEU:CD2	2.47	0.45
58:FB:46:VAL:HG23	58:FB:48:THR:HG23	1.99	0.45
59:GB:83:VAL:CG2	59:GB:85:VAL:HG23	2.46	0.45
66:NB:42:GLU:O	66:NB:45:ARG:HB2	2.17	0.45
68:PB:3:LEU:H	68:PB:3:LEU:HD13	1.80	0.45
68:PB:119:ILE:HD12	68:PB:119:ILE:N	2.31	0.45
69:QB:28:LEU:HD21	69:QB:30:VAL:HG12	1.98	0.45
72:TB:70:ASN:O	72:TB:71:LYS:HB2	2.17	0.45
76:XB:87:ARG:NH2	76:XB:94:ASN:HB3	2.32	0.45
82:DC:22:MET:HE1	82:DC:102:LEU:HD13	1.99	0.45
82:DC:406:LYS:HB2	82:DC:409:GLN:HB2	1.97	0.45
82:DC:677:PHE:CD1	82:DC:678:GLY:N	2.85	0.45
83:EC:6824:C:H6	83:EC:6824:C:O5'	2.00	0.45
1:A:98:U:O2'	1:A:99:C:H5'	2.16	0.45
1:A:605:A:H2'	1:A:606:A:C2	2.52	0.45
1:A:825:U:H2'	1:A:826:U:C5'	2.45	0.45
1:A:1092:A:O2'	1:A:1093:A:H3'	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1096:C:C4’	1:A:1099:U:H4’	2.47	0.45
1:A:1186:U:H1’	1:A:1208:A:C2	2.51	0.45
1:A:1479:A:C1’	69:QB:15:ILE:HD11	2.47	0.45
1:A:1505:A:H2’	1:A:1506:G:H5’	1.99	0.45
2:B:116:A:OP2	19:S:2:GLY:N	2.49	0.45
2:B:409:A:H2	2:B:1441:G:N3	2.14	0.45
2:B:707:U:O2’	2:B:754:G:N3	2.46	0.45
2:B:714:G:H5’	2:B:754:G:OP1	2.17	0.45
2:B:715:A:H3’	32:FA:114:GLY:O	2.17	0.45
2:B:833:G:H5”	23:W:84:THR:HG21	1.99	0.45
2:B:1062:A:H1’	25:Y:130:ARG:HH22	1.82	0.45
2:B:1239:C:OP1	16:P:57:LYS:HE3	2.16	0.45
2:B:1448:U:H5	2:B:2355:G:C2	2.35	0.45
2:B:1709:C:C4’	31:EA:15:ARG:HH12	2.21	0.45
2:B:2166:A:C6	2:B:2167:A:C2	3.04	0.45
2:B:2178:A:H3’	6:F:151:PRO:HB3	1.98	0.45
2:B:2242:A:H5”	6:F:244:GLY:HA3	1.99	0.45
2:B:2353:G:O2’	2:B:2354:C:H5’	2.16	0.45
2:B:2612:U:H2’	2:B:2613:U:O4’	2.17	0.45
2:B:2614:G:C3’	2:B:2615:G:H8	2.29	0.45
2:B:3139:A:O3’	7:G:20:LYS:HD3	2.17	0.45
2:B:3333:G:O2’	28:BA:50:ALA:HB3	2.17	0.45
2:B:3369:G:OP1	28:BA:61:LYS:HD2	2.17	0.45
2:B:3379:C:O3’	7:G:315:GLY:HA2	2.17	0.45
7:G:19:ARG:HG2	7:G:232:ARG:NH1	2.31	0.45
7:G:122:TRP:HA	7:G:125:SER:OG	2.16	0.45
7:G:173:GLN:O	7:G:174:LYS:HB2	2.16	0.45
8:H:107:ARG:HB3	8:H:109:TRP:CZ3	2.52	0.45
8:H:166:VAL:HG12	8:H:167:ALA:N	2.32	0.45
8:H:208:VAL:CG1	8:H:230:VAL:HG22	2.47	0.45
10:J:56:LYS:HB2	10:J:98:VAL:HG11	1.96	0.45
11:K:88:ARG:HD3	11:K:103:LEU:HD22	1.97	0.45
12:L:142:LEU:HD22	12:L:148:ALA:N	2.32	0.45
13:M:53:ILE:HG22	13:M:54:LYS:N	2.31	0.45
15:O:13:LYS:HB2	15:O:13:LYS:HZ3	1.81	0.45
15:O:114:ILE:HD12	15:O:114:ILE:N	2.32	0.45
17:Q:165:SER:C	17:Q:167:PHE:H	2.20	0.45
19:S:27:VAL:HG23	19:S:129:TYR:CE2	2.51	0.45
19:S:65:ARG:HB3	19:S:129:TYR:CD1	2.52	0.45
19:S:138:GLN:O	19:S:143:ARG:HD2	2.17	0.45
20:T:76:PRO:HB3	20:T:138:LEU:HG	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:V:3:ILE:HD12	22:V:3:ILE:N	2.31	0.45
22:V:32:LEU:CD2	22:V:36:LEU:HD21	2.47	0.45
24:X:80:ARG:HD2	25:Y:154:VAL:O	2.17	0.45
25:Y:57:TYR:CZ	25:Y:89:LEU:HD11	2.51	0.45
25:Y:142:SER:O	25:Y:143:THR:HB	2.16	0.45
29:CA:91:ASN:HD22	29:CA:93:TYR:HB2	1.81	0.45
36:JA:76:VAL:HG11	36:JA:94:ALA:HB1	1.98	0.45
48:VA:55:LYS:O	48:VA:58:MET:HB2	2.16	0.45
50:XA:51:GLY:HA3	67:OB:113:LEU:CD1	2.46	0.45
50:XA:69:ASN:HB2	52:ZA:244:SER:OG	2.16	0.45
50:XA:82:GLY:HA2	50:XA:85:ALA:HB3	1.98	0.45
50:XA:107:PHE:CD1	50:XA:107:PHE:N	2.84	0.45
51:YA:34:ALA:HA	51:YA:98:THR:CG2	2.47	0.45
52:ZA:59:HIS:CD2	52:ZA:239:PRO:HD3	2.52	0.45
52:ZA:157:LYS:HG2	52:ZA:170:ILE:HG23	1.99	0.45
53:AB:7:LYS:HA	53:AB:7:LYS:HE3	1.99	0.45
57:EB:7:LYS:O	57:EB:9:LEU:N	2.50	0.45
57:EB:69:GLY:HA2	57:EB:72:LYS:HD2	1.98	0.45
58:FB:193:LEU:O	58:FB:193:LEU:HD23	2.16	0.45
59:GB:112:GLN:O	59:GB:116:LEU:HD13	2.17	0.45
61:IB:108:PRO:HG3	61:IB:134:THR:CB	2.47	0.45
64:LB:23:PHE:O	64:LB:24:ASN:HB2	2.17	0.45
64:LB:76:ILE:N	64:LB:76:ILE:CD1	2.80	0.45
66:NB:110:THR:C	66:NB:112:TYR:H	2.20	0.45
67:OB:20:TYR:CE1	67:OB:38:ILE:HG21	2.46	0.45
67:OB:27:ASP:HB3	67:OB:30:THR:CG2	2.47	0.45
68:PB:72:ILE:CG2	68:PB:81:ILE:HD11	2.44	0.45
69:QB:11:ALA:O	69:QB:15:ILE:HG13	2.17	0.45
74:VB:82:ALA:O	74:VB:86:GLU:HB2	2.17	0.45
76:XB:20:PRO:HA	76:XB:31:PRO:HA	1.97	0.45
78:ZB:10:ALA:O	78:ZB:53:ILE:HA	2.17	0.45
82:DC:18:ASN:HA	82:DC:98:PHE:CD1	2.51	0.45
82:DC:28:VAL:HG23	82:DC:29:ASP:N	2.31	0.45
82:DC:408:GLY:CA	82:DC:431:ILE:O	2.58	0.45
82:DC:580:PRO:HD2	82:DC:704:GLN:OE1	2.17	0.45
1:A:170:U:H3	1:A:289:U:H1'	1.81	0.45
1:A:262:U:H2'	1:A:263:C:C6	2.51	0.45
1:A:351:C:H4'	73:UB:13:ARG:NE	2.32	0.45
1:A:1241:G:H1'	65:MB:79:HIS:HB2	1.98	0.45
1:A:1654:G:H2'	1:A:1745:G:N2	2.32	0.45
1:A:1758:U:H5'	2:B:2255:A:O2'	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1782:A:H3'	1:A:1783:C:C5'	2.47	0.45
2:B:177:U:O5'	2:B:177:U:H6	2.00	0.45
2:B:187:A:H2'	2:B:188:U:H5'	1.97	0.45
2:B:360:G:H5"	41:OA:26:SER:CA	2.47	0.45
2:B:642:U:H2'	2:B:644:G:OP2	2.17	0.45
2:B:672:A:H5'	22:V:20:LYS:HB3	1.99	0.45
2:B:712:G:H22	2:B:755:A:H5'	1.78	0.45
2:B:994:G:H22	2:B:1053:A:H2'	1.81	0.45
2:B:1275:C:OP1	48:VA:110:ARG:HG3	2.17	0.45
2:B:1461:A:H2'	2:B:1462:A:C8	2.52	0.45
2:B:1471:U:C4'	23:W:3:ASN:HA	2.38	0.45
2:B:1510:G:H2'	2:B:1512:U:O4	2.15	0.45
2:B:1741:A:O2'	2:B:1785:U:H4'	2.17	0.45
2:B:2084:C:H5	2:B:2085:U:C2	2.34	0.45
2:B:2133:U:H2'	2:B:2134:G:H5'	1.98	0.45
2:B:2297:U:H2'	2:B:2299:A:N7	2.32	0.45
2:B:2413:A:O2'	2:B:2414:G:H5'	2.17	0.45
2:B:2415:C:H4'	6:F:207:VAL:HG22	1.99	0.45
2:B:2598:G:H5'	19:S:126:THR:HG23	1.98	0.45
2:B:2696:A:H2'	2:B:2697:A:C1'	2.46	0.45
2:B:2712:U:O2'	2:B:2713:U:H5'	2.17	0.45
2:B:2736:A:C3'	2:B:2737:C:H5"	2.47	0.45
2:B:3000:A:H2'	2:B:3001:C:H6	1.81	0.45
2:B:3256:G:H2'	2:B:3257:C:O4'	2.16	0.45
4:D:31:U:H2'	4:D:32:U:H6	1.80	0.45
7:G:306:THR:HG23	7:G:316:GLU:HA	1.98	0.45
8:H:317:PRO:O	8:H:319:LYS:HD3	2.17	0.45
9:I:109:THR:CG2	9:I:110:LEU:HD12	2.39	0.45
11:K:83:LEU:HD22	11:K:117:VAL:O	2.17	0.45
11:K:156:ILE:CG1	11:K:161:VAL:HG21	2.38	0.45
12:L:24:ASN:N	12:L:25:PRO:HD2	2.31	0.45
12:L:221:ASN:HA	12:L:225:LYS:HD3	1.98	0.45
14:N:63:GLU:O	14:N:66:GLU:HB3	2.16	0.45
15:O:173:ASP:HB3	15:O:174:LYS:H	1.66	0.45
16:P:106:LEU:H	16:P:142:ARG:HG3	1.81	0.45
17:Q:50:PRO:CG	17:Q:141:ALA:HB2	2.47	0.45
18:R:36:VAL:HG11	18:R:55:ARG:HH22	1.81	0.45
19:S:56:LYS:O	19:S:59:PHE:HD2	2.00	0.45
20:T:124:LEU:HG	20:T:126:VAL:HG12	1.99	0.45
21:U:92:GLN:HG3	21:U:93:GLY:N	2.31	0.45
26:Z:33:TYR:O	26:Z:37:LEU:HD13	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:AA:10:LYS:HD2	27:AA:13:ILE:CD1	2.47	0.45
27:AA:87:ARG:NE	27:AA:93:LEU:HD21	2.31	0.45
46:TA:14:GLY:O	46:TA:18:ARG:HG2	2.17	0.45
50:XA:158:VAL:HG13	50:XA:158:VAL:O	2.16	0.45
51:YA:68:VAL:CG2	51:YA:69:CYS:H	2.25	0.45
51:YA:128:LYS:HG3	51:YA:133:TYR:O	2.16	0.45
53:AB:76:ARG:HA	60:HB:63:TYR:OH	2.17	0.45
55:CB:44:ASN:O	55:CB:45:LYS:CB	2.65	0.45
55:CB:109:LYS:O	55:CB:113:ILE:HG13	2.16	0.45
55:CB:124:LEU:HD11	75:WB:59:TYR:CB	2.45	0.45
56:DB:161:GLU:HG2	56:DB:170:THR:CB	2.46	0.45
57:EB:131:PHE:HD1	57:EB:132:PRO:HD3	1.82	0.45
59:GB:134:ILE:O	59:GB:159:ALA:HB2	2.17	0.45
60:HB:57:THR:HG22	60:HB:58:GLN:N	2.31	0.45
61:IB:7:VAL:HG13	61:IB:8:GLN:HE21	1.81	0.45
69:QB:11:ALA:HA	69:QB:14:PHE:CB	2.41	0.45
69:QB:66:TYR:CZ	69:QB:129:GLN:HA	2.51	0.45
79:AC:12:ARG:CG	79:AC:18:SER:HA	2.46	0.45
82:DC:11:SER:O	82:DC:14:ASP:OD1	2.34	0.45
82:DC:115:VAL:O	82:DC:119:LEU:HG	2.17	0.45
82:DC:728:VAL:CG2	82:DC:802:SER:H	2.30	0.45
82:DC:823:ARG:HH11	82:DC:823:ARG:CB	2.30	0.45
1:A:258:C:H4’	58:FB:64:ASN:HB2	1.99	0.45
1:A:461:G:H2’	1:A:462:G:H8	1.82	0.45
1:A:777:C:H41	74:VB:10:ARG:HB3	1.82	0.45
1:A:980:G:C5’	1:A:1776:A:H4’	2.46	0.45
1:A:1087:A:H2’	1:A:1088:A:H8	1.76	0.45
1:A:1100:G:O2’	72:TB:75:ILE:HA	2.17	0.45
1:A:1199:G:N7	79:AC:40:ARG:HD2	2.32	0.45
1:A:1648:A:O2’	1:A:1649:G:H5’	2.16	0.45
2:B:68:C:H2’	2:B:69:C:C6	2.48	0.45
2:B:271:C:H3’	2:B:272:G:C8	2.52	0.45
2:B:710:A:H2’	2:B:711:A:C8	2.52	0.45
2:B:896:A:H2	2:B:913:A:N3	2.15	0.45
2:B:1018:G:O2’	2:B:1019:G:H5’	2.16	0.45
2:B:1597:C:P	38:LA:8:ARG:HH21	2.40	0.45
2:B:2148:U:C2’	2:B:2149:A:C8	3.00	0.45
2:B:2437:G:N2	2:B:2511:A:H1’	2.32	0.45
2:B:2812:C:N4	2:B:2813:A:H62	2.15	0.45
2:B:2878:G:H5”	7:G:5:LYS:NZ	2.32	0.45
3:C:133:G:H4’	29:CA:55:ASN:HD21	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:85:VAL:HG13	7:G:163:HIS:O	2.17	0.45
7:G:169:THR:HG21	7:G:171:LEU:HG	1.98	0.45
10:J:52:VAL:HG23	10:J:66:SER:O	2.17	0.45
10:J:139:LYS:O	10:J:143:LYS:HG3	2.16	0.45
10:J:142:ASP:HA	10:J:145:LEU:HB2	1.99	0.45
11:K:48:ASN:OD1	11:K:182:ASP:HB3	2.17	0.45
15:O:162:TRP:O	15:O:165:GLN:HB3	2.17	0.45
22:V:54:LEU:CB	22:V:58:ASN:HB2	2.18	0.45
23:W:153:LYS:NZ	23:W:153:LYS:HB3	2.31	0.45
24:X:66:GLU:CB	24:X:69:PRO:HG3	2.45	0.45
29:CA:85:GLN:HG3	29:CA:120:LYS:O	2.17	0.45
30:DA:39:LEU:HA	30:DA:42:GLN:HG3	1.99	0.45
35:IA:98:VAL:HG22	35:IA:99:ALA:H	1.82	0.45
36:JA:38:ILE:H	36:JA:38:ILE:HG12	1.52	0.45
37:KA:52:VAL:HG23	37:KA:99:ARG:HG3	1.99	0.45
41:OA:2:GLY:O	41:OA:7:SER:HB3	2.17	0.45
41:OA:28:HIS:HE1	41:OA:30:GLN:HB2	1.73	0.45
43:QA:21:ARG:NH2	43:QA:24:PRO:HG3	2.32	0.45
49:WA:21:THR:HG22	49:WA:290:VAL:HB	1.99	0.45
49:WA:61:PHE:CZ	49:WA:94:VAL:HA	2.52	0.45
50:XA:74:VAL:HA	50:XA:96:THR:O	2.17	0.45
50:XA:102:PHE:CE1	50:XA:131:GLN:HB3	2.52	0.45
50:XA:184:LEU:HD23	71:SB:43:GLY:O	2.17	0.45
59:GB:14:THR:OG1	59:GB:15:PRO:HD2	2.16	0.45
60:HB:1:MET:HG2	60:HB:2:LEU:H	1.82	0.45
69:QB:109:GLU:HB2	69:QB:122:ARG:NH2	2.31	0.45
71:SB:10:GLU:HA	71:SB:10:GLU:OE2	2.16	0.45
75:WB:100:ILE:HD13	75:WB:100:ILE:C	2.37	0.45
82:DC:152:LYS:HB2	82:DC:343:PRO:HG3	1.99	0.45
82:DC:374:PRO:CB	82:DC:450:ALA:H	2.30	0.45
82:DC:387:PRO:HA	82:DC:394:PHE:HB3	1.96	0.45
82:DC:394:PHE:N	82:DC:394:PHE:CD2	2.85	0.45
83:EC:6850:C:H2'	83:EC:6851:G:O4'	2.17	0.45
1:A:365:G:H4'	1:A:757:A:N1	2.31	0.45
1:A:495:C:H5'	1:A:496:G:H1'	1.97	0.45
1:A:519:C:H5"	1:A:520:A:C8	2.51	0.45
1:A:684:A:H3'	1:A:685:A:H5"	1.99	0.45
1:A:685:A:H8	1:A:685:A:H5'	1.82	0.45
1:A:860:U:C1'	57:EB:114:ARG:HE	2.30	0.45
1:A:1458:G:H4'	65:MB:123:TYR:HE2	1.82	0.45
1:A:1711:C:H2'	1:A:1712:A:O4'	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:88:A:H2'	2:B:89:A:O4'	2.17	0.45
2:B:126:U:C1'	19:S:57:GLN:HE22	2.30	0.45
2:B:505:G:C4'	8:H:313:LEU:HD11	2.47	0.45
2:B:727:G:C6	2:B:743:C:C5	3.05	0.45
2:B:815:G:OP1	41:OA:28:HIS:HB2	2.17	0.45
2:B:1099:A:O2'	2:B:1100:U:H5'	2.17	0.45
2:B:1364:C:H4'	22:V:9:GLN:OE1	2.17	0.45
2:B:1494:U:H5'	2:B:1495:U:C2	2.52	0.45
2:B:1782:U:C2'	2:B:1783:U:H5'	2.46	0.45
2:B:2527:G:O4'	12:L:241:LYS:HE2	2.17	0.45
2:B:2779:A:C6	2:B:2780:A:N6	2.85	0.45
2:B:3010:U:H5"	7:G:14:LEU:HB2	1.99	0.45
2:B:3164:C:N4	2:B:3287:U:C4	2.84	0.45
2:B:3354:U:H5'	2:B:3356:G:H5'	1.98	0.45
3:C:55:U:H2'	3:C:56:G:H8	1.82	0.45
6:F:21:ARG:HB3	6:F:22:LEU:HD12	1.98	0.45
6:F:97:ASN:O	6:F:100:ASN:HB2	2.17	0.45
7:G:86:VAL:HG13	7:G:160:VAL:CG1	2.47	0.45
8:H:181:VAL:C	8:H:183:LYS:H	2.18	0.45
9:I:94:ASN:OD1	9:I:97:ALA:N	2.45	0.45
9:I:102:GLY:HA3	9:I:165:GLY:HA3	1.99	0.45
9:I:182:GLY:HA3	9:I:191:ASP:O	2.17	0.45
13:M:121:LYS:HA	13:M:121:LYS:NZ	2.32	0.45
13:M:172:ILE:HB	44:RA:90:ASN:ND2	2.20	0.45
15:O:53:THR:OG1	15:O:61:ARG:HB2	2.16	0.45
18:R:81:VAL:O	18:R:85:TRP:CB	2.65	0.45
20:T:82:LYS:C	20:T:84:LEU:H	2.19	0.45
21:U:146:ILE:O	21:U:147:GLU:HB3	2.17	0.45
22:V:80:THR:HA	22:V:100:THR:O	2.17	0.45
23:W:84:THR:O	23:W:87:ALA:HB3	2.16	0.45
25:Y:102:ARG:HG2	25:Y:102:ARG:NH1	2.32	0.45
27:AA:10:LYS:HB2	27:AA:125:LEU:HD13	1.97	0.45
30:DA:105:VAL:O	30:DA:105:VAL:HG12	2.16	0.45
31:EA:42:LEU:N	31:EA:42:LEU:HD12	2.32	0.45
39:MA:3:GLY:HA3	39:MA:50:SER:OG	2.17	0.45
46:TA:33:ALA:O	46:TA:34:SER:HB3	2.17	0.45
48:VA:11:TYR:CE2	48:VA:15:LEU:CD2	3.00	0.45
49:WA:87:LYS:HE3	49:WA:108:SER:N	2.32	0.45
49:WA:146:GLY:HA3	49:WA:181:TRP:CZ3	2.48	0.45
50:XA:109:ASN:HD21	50:XA:111:ILE:CG2	2.30	0.45
52:ZA:85:PRO:HG3	52:ZA:98:PHE:CE1	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:ZA:125:ILE:O	52:ZA:129:ILE:HG13	2.17	0.45
52:ZA:148:LEU:HB3	52:ZA:174:ARG:CZ	2.46	0.45
52:ZA:230:TRP:HZ2	72:TB:46:TYR:CE1	2.35	0.45
53:AB:102:ALA:CB	53:AB:171:ALA:HB1	2.44	0.45
53:AB:146:ARG:HG3	53:AB:147:ALA:H	1.82	0.45
54:BB:145:ARG:HH11	54:BB:145:ARG:CB	2.29	0.45
57:EB:5:GLN:CD	57:EB:18:LEU:HB3	2.37	0.45
57:EB:130:VAL:HA	57:EB:162:ILE:CD1	2.47	0.45
59:GB:125:ALA:HA	59:GB:128:LEU:CD1	2.47	0.45
60:HB:89:GLY:HA2	60:HB:91:TYR:CZ	2.52	0.45
64:LB:17:ALA:HA	64:LB:30:VAL:HA	1.98	0.45
65:MB:121:ILE:HD11	68:PB:125:ILE:HD12	1.98	0.45
70:RB:26:LEU:CD2	70:RB:38:SER:HB2	2.47	0.45
70:RB:48:HIS:HD2	70:RB:50:LEU:HD23	1.81	0.45
70:RB:55:PRO:HB3	70:RB:91:ILE:HD11	1.98	0.45
72:TB:65:LEU:N	72:TB:65:LEU:HD13	2.32	0.45
73:UB:56:LYS:HD3	73:UB:72:VAL:HG12	1.98	0.45
76:XB:7:SER:HB2	76:XB:11:ASN:HA	1.99	0.45
76:XB:71:LEU:HD12	76:XB:73:TYR:OH	2.17	0.45
82:DC:83:ASP:O	82:DC:86:VAL:HB	2.17	0.45
82:DC:231:LYS:H	82:DC:231:LYS:HD2	1.82	0.45
82:DC:672:LYS:HG3	82:DC:680:GLU:OE1	2.17	0.45
83:EC:6782:C:H2'	83:EC:6782:C:O2	2.17	0.45
1:A:78:A:H2'	1:A:79:C:C6	2.53	0.44
1:A:628:G:O6	1:A:969:C:H5"	2.17	0.44
1:A:754:A:N3	1:A:793:A:H2'	2.30	0.44
1:A:820:U:H2'	1:A:821:U:C4'	2.45	0.44
1:A:993:A:H2'	1:A:994:G:O4'	2.16	0.44
1:A:1258:U:H2'	1:A:1259:U:H6	1.82	0.44
1:A:1274:C:H2'	1:A:1274:C:O2	2.17	0.44
1:A:1334:U:H4'	70:RB:85:ARG:HH22	1.81	0.44
1:A:1483:A:H61	1:A:1591:C:C1'	2.30	0.44
1:A:1764:C:H2'	1:A:1767:G:N7	2.32	0.44
1:A:1798:U:H3'	51:YA:116:LYS:NZ	2.32	0.44
2:B:219:A:H1'	2:B:1390:A:C5	2.52	0.44
2:B:1008:U:H2'	2:B:1009:A:H8	1.82	0.44
2:B:1413:G:H2'	2:B:1414:G:H8	1.81	0.44
2:B:1446:A:H5"	21:U:65:SER:CB	2.42	0.44
2:B:1485:G:H2'	2:B:1486:G:C8	2.52	0.44
2:B:1714:A:N6	2:B:1730:G:H1'	2.32	0.44
2:B:2429:G:H2'	2:B:2430:A:C8	2.50	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:3305:A:H5”	7:G:272:TYR:CE2	2.52	0.44
3:C:37:A:N7	3:C:104:A:N7	2.66	0.44
3:C:109:A:C2’	3:C:110:C:H5’	2.47	0.44
6:F:30:ARG:HB2	6:F:76:PHE:CZ	2.52	0.44
7:G:166:ILE:HD11	7:G:171:LEU:HB2	1.99	0.44
7:G:190:GLU:HA	7:G:193:ASP:HB2	1.98	0.44
7:G:245:GLY:HA3	7:G:248:LYS:CE	2.43	0.44
11:K:222:HIS:ND1	11:K:223:PHE:N	2.65	0.44
17:Q:56:PRO:CD	17:Q:73:ARG:O	2.64	0.44
21:U:71:ALA:O	21:U:73:GLY:N	2.50	0.44
24:X:29:ILE:HG21	24:X:37:ALA:HA	1.99	0.44
25:Y:124:VAL:CG1	25:Y:125:ALA:H	2.15	0.44
27:AA:54:LEU:HG	27:AA:122:CYS:SG	2.57	0.44
32:FA:38:GLN:HG3	32:FA:53:PHE:CE2	2.52	0.44
32:FA:99:ALA:HA	32:FA:100:PRO:HD3	1.82	0.44
35:IA:13:THR:OG1	35:IA:72:ARG:HD3	2.17	0.44
37:KA:39:GLN:HG3	37:KA:40:ASP:H	1.82	0.44
37:KA:53:TYR:HD1	37:KA:53:TYR:H	1.65	0.44
38:LA:9:ARG:HG3	38:LA:34:HIS:NE2	2.33	0.44
49:WA:57:PRO:HD2	66:NB:100:GLN:NE2	2.32	0.44
54:BB:86:PHE:CE1	54:BB:87:MET:HG2	2.52	0.44
54:BB:131:LEU:N	54:BB:131:LEU:HD22	2.32	0.44
54:BB:175:PHE:CE1	54:BB:195:ILE:HD11	2.51	0.44
59:GB:128:LEU:O	59:GB:129:ILE:C	2.55	0.44
61:IB:33:ARG:HD3	61:IB:33:ARG:C	2.36	0.44
68:PB:16:ARG:HH11	68:PB:16:ARG:HG2	1.82	0.44
70:RB:34:LEU:HG	70:RB:87:HIS:HB2	1.99	0.44
72:TB:75:ILE:HG12	72:TB:128:PHE:HD1	1.82	0.44
78:ZB:9:LEU:CD2	78:ZB:55:VAL:HG22	2.47	0.44
82:DC:454:ILE:CG1	82:DC:455:GLY:N	2.79	0.44
82:DC:468:THR:HG22	82:DC:469:LEU:H	1.82	0.44
1:A:122:U:H4’	54:BB:82:TYR:OH	2.17	0.44
1:A:313:U:H4’	1:A:314:C:C5’	2.47	0.44
1:A:353:A:H2’	1:A:354:C:H5’	1.99	0.44
1:A:388:G:C4	1:A:389:G:C8	3.05	0.44
1:A:396:G:H3’	58:FB:47:ARG:NH1	2.31	0.44
1:A:491:C:O2’	1:A:492:A:H5’	2.17	0.44
1:A:556:A:C5’	80:BC:56:MET:SD	3.05	0.44
1:A:646:C:H2’	1:A:647:G:C8	2.52	0.44
1:A:856:A:N6	57:EB:116:ARG:HG3	2.31	0.44
1:A:866:G:H5”	63:KB:3:ARG:H	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:959:U:C6	63:KB:17:PRO:HG2	2.52	0.44
1:A:1309:C:H2'	1:A:1310:U:H6	1.82	0.44
1:A:1466:G:O2'	1:A:1467:C:H5'	2.17	0.44
1:A:1483:A:H61	1:A:1591:C:H1'	1.82	0.44
2:B:220:G:N2	2:B:1390:A:C2	2.86	0.44
2:B:357:A:O4'	8:H:81:GLY:HA3	2.18	0.44
2:B:388:G:O2'	21:U:17:ALA:HA	2.18	0.44
2:B:562:C:H5"	24:X:71:LYS:HG3	1.99	0.44
2:B:834:U:C2'	2:B:835:G:H5'	2.48	0.44
2:B:937:G:H5"	32:FA:26:ARG:HB3	1.99	0.44
2:B:999:G:H21	2:B:1002:A:N6	2.13	0.44
2:B:1201:C:H2'	2:B:1202:A:O5'	2.18	0.44
2:B:1231:A:H1'	2:B:1278:A:H62	1.81	0.44
2:B:1907:C:H2'	2:B:1908:A:O4'	2.17	0.44
2:B:2571:U:C4'	2:B:2572:C:H5'	2.40	0.44
2:B:2932:U:O2	2:B:2934:A:C8	2.71	0.44
2:B:3011:A:O3'	2:B:3012:A:H4'	2.18	0.44
2:B:3304:U:H1'	7:G:334:ARG:HH21	1.81	0.44
2:B:3309:G:H3'	2:B:3310:A:H8	1.82	0.44
2:B:3336:A:H2'	2:B:3337:G:O4'	2.16	0.44
4:D:11:A:H4'	4:D:13:A:C5	2.51	0.44
4:D:88:G:H4'	24:X:117:ARG:NH1	2.32	0.44
4:D:89:G:C4'	24:X:84:ARG:HB3	2.47	0.44
6:F:202:VAL:HG12	6:F:217:GLN:HB3	1.97	0.44
8:H:109:TRP:HA	8:H:109:TRP:HE3	1.81	0.44
9:I:75:LEU:HD12	9:I:112:LYS:HD2	1.99	0.44
10:J:41:ILE:HD12	10:J:41:ILE:N	2.32	0.44
10:J:42:LEU:HB3	10:J:47:PHE:O	2.17	0.44
11:K:221:LYS:CB	11:K:227:GLY:HA3	2.47	0.44
12:L:160:ILE:HD12	19:S:22:LEU:CD1	2.46	0.44
14:N:47:PRO:HG2	14:N:48:LEU:CD2	2.44	0.44
14:N:62:SER:HA	14:N:65:LEU:HD13	1.99	0.44
15:O:141:ARG:HG3	15:O:143:ARG:O	2.16	0.44
17:Q:76:THR:O	17:Q:80:VAL:HG23	2.17	0.44
20:T:37:ARG:HD3	20:T:108:ILE:HD11	1.99	0.44
21:U:37:ASN:HB2	21:U:117:ILE:HG22	2.00	0.44
27:AA:104:ASN:HD21	27:AA:108:GLU:HB2	1.82	0.44
27:AA:120:LYS:HB2	27:AA:137:VAL:HG21	1.99	0.44
30:DA:3:LYS:CG	30:DA:8:VAL:HG11	2.44	0.44
30:DA:45:ILE:HG22	30:DA:47:ALA:H	1.81	0.44
32:FA:139:ARG:HG2	32:FA:144:VAL:HG12	1.97	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:FA:139:ARG:C	32:FA:141:ALA:H	2.21	0.44
32:FA:145:VAL:O	32:FA:146:GLU:HB2	2.17	0.44
36:JA:27:ARG:HG3	36:JA:28:VAL:HG23	1.99	0.44
40:NA:5:THR:HB	40:NA:7:ILE:HG12	1.99	0.44
47:UA:10:ILE:HD13	47:UA:30:GLU:HG2	1.99	0.44
48:VA:33:VAL:HG22	48:VA:34:SER:H	1.82	0.44
51:YA:119:THR:HG21	51:YA:161:ILE:HD11	1.99	0.44
53:AB:6:SER:O	53:AB:10:LYS:HB2	2.18	0.44
54:BB:235:TYR:O	54:BB:236:ILE:HG23	2.16	0.44
55:CB:42:LEU:CB	55:CB:47:SER:HA	2.48	0.44
55:CB:107:LYS:HG2	55:CB:111:VAL:CG2	2.46	0.44
57:EB:12:ALA:N	57:EB:13:PRO:HD3	2.32	0.44
58:FB:142:LYS:HD2	58:FB:146:ARG:NH1	2.26	0.44
59:GB:54:ARG:HA	59:GB:57:ARG:HE	1.82	0.44
64:LB:39:ILE:HD12	64:LB:39:ILE:N	2.33	0.44
65:MB:22:LEU:HD13	65:MB:22:LEU:O	2.16	0.44
68:PB:12:GLN:CB	68:PB:15:LEU:HD13	2.44	0.44
82:DC:784:LEU:CD2	82:DC:794:PRO:HB3	2.47	0.44
83:EC:6930:G:H2'	83:EC:6931:U:C5'	2.47	0.44
1:A:177:U:C3'	1:A:178:U:H5"	2.48	0.44
1:A:304:U:H2'	1:A:305:C:O4'	2.17	0.44
1:A:448:C:H2'	1:A:449:C:H6	1.80	0.44
1:A:460:A:H2'	54:BB:27:TYR:OH	2.17	0.44
1:A:461:G:H4'	54:BB:26:CYS:SG	2.58	0.44
1:A:1125:A:C5	1:A:1126:G:H1'	2.52	0.44
1:A:1139:A:H2'	1:A:1140:G:O4'	2.16	0.44
1:A:1282:U:H2'	1:A:1283:U:C6	2.52	0.44
1:A:1512:G:H2'	1:A:1513:G:H8	1.82	0.44
1:A:1590:G:O2'	1:A:1591:C:H5'	2.17	0.44
1:A:1593:A:H2'	1:A:1594:G:H5'	1.99	0.44
1:A:1673:G:H2'	1:A:1674:C:H6	1.82	0.44
2:B:88:A:H3'	2:B:89:A:H8	1.82	0.44
2:B:230:U:H2'	2:B:231:G:N9	2.33	0.44
2:B:588:G:H22	10:J:23:LYS:NZ	2.14	0.44
2:B:786:A:C5'	22:V:146:SER:HB3	2.47	0.44
2:B:819:U:H5'	2:B:2138:A:C2	2.53	0.44
2:B:826:G:H2'	2:B:827:A:H5'	1.99	0.44
2:B:829:U:H1'	2:B:866:A:C2	2.52	0.44
2:B:985:U:O2'	2:B:986:U:H5'	2.18	0.44
2:B:1178:G:N3	37:KA:19:SER:HA	2.32	0.44
2:B:1760:A:H5'	2:B:1761:C:OP2	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1902:G:P	2:B:2918:G:H5'	2.56	0.44
2:B:2162:U:H5"	6:F:238:ILE:CD1	2.45	0.44
2:B:2249:G:H1'	2:B:2272:G:C5	2.52	0.44
2:B:2581:U:H2'	2:B:2582:C:C6	2.52	0.44
2:B:2724:U:H5"	25:Y:54:HIS:CE1	2.50	0.44
2:B:2777:G:H22	32:FA:58:MET:HE1	1.82	0.44
2:B:2855:U:OP2	14:N:6:ALA:HB3	2.17	0.44
2:B:2894:C:H2'	2:B:2895:G:H8	1.82	0.44
2:B:3005:A:H5"	7:G:98:GLY:HA3	1.99	0.44
2:B:3187:A:H5"	18:R:8:LYS:CD	2.48	0.44
2:B:3197:G:O2'	2:B:3198:U:H5"	2.17	0.44
2:B:3281:U:H2'	2:B:3282:U:C6	2.52	0.44
2:B:3354:U:H5'	2:B:3356:G:H4'	1.99	0.44
3:C:19:C:C4	3:C:20:U:C4	3.06	0.44
4:D:49:G:H4'	4:D:50:U:O4'	2.17	0.44
5:E:197:ASN:HD22	5:E:197:ASN:HA	1.65	0.44
8:H:119:ARG:NH2	8:H:271:LYS:HG2	2.33	0.44
8:H:338:LYS:C	8:H:340:GLY:H	2.20	0.44
9:I:49:TYR:O	9:I:145:PHE:CE2	2.70	0.44
9:I:148:ILE:O	9:I:151:GLN:HG2	2.17	0.44
9:I:196:ARG:HE	9:I:200:PHE:HE2	1.65	0.44
9:I:198:TYR:HD2	9:I:198:TYR:H	1.65	0.44
11:K:102:VAL:CG1	11:K:130:ILE:HD13	2.47	0.44
11:K:155:LYS:CE	11:K:158:LYS:H	2.15	0.44
11:K:223:PHE:HE2	24:X:35:VAL:HB	1.83	0.44
13:M:99:ILE:HG22	13:M:101:VAL:HG22	1.98	0.44
16:P:92:ARG:HH22	16:P:95:ASP:HB3	1.82	0.44
17:Q:79:GLU:O	17:Q:82:ALA:HB3	2.17	0.44
18:R:123:LEU:HD11	20:T:193:GLN:HB3	1.99	0.44
22:V:55:SER:C	22:V:57:ILE:H	2.21	0.44
23:W:164:LEU:O	23:W:168:ALA:HB3	2.18	0.44
24:X:169:SER:HB3	24:X:171:PHE:HD1	1.75	0.44
27:AA:85:TRP:HZ2	27:AA:87:ARG:HH21	1.65	0.44
33:GA:36:ASP:OD2	33:GA:39:PHE:HB2	2.17	0.44
36:JA:9:ILE:H	36:JA:9:ILE:CD1	2.26	0.44
39:MA:51:ILE:HA	39:MA:54:VAL:HG23	1.99	0.44
40:NA:8:ALA:C	40:NA:9:ILE:HG13	2.37	0.44
48:VA:19:LEU:HG	48:VA:88:PHE:HZ	1.81	0.44
48:VA:32:ASN:ND2	48:VA:32:ASN:H	2.15	0.44
50:XA:50:VAL:H	67:OB:109:LEU:HD11	1.82	0.44
50:XA:134:LYS:HG2	50:XA:138:TYR:CE2	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:XA:185:ARG:HB2	71:SB:45:ALA:H	1.81	0.44
50:XA:198:MET:HG3	67:OB:87:GLU:CA	2.47	0.44
51:YA:70:LEU:HD12	51:YA:82:ARG:HB2	1.99	0.44
52:ZA:53:ILE:HG23	52:ZA:72:LEU:CD2	2.47	0.44
53:AB:171:ALA:HA	53:AB:173:ARG:HH21	1.82	0.44
55:CB:48:PHE:HE2	55:CB:68:ILE:H	1.65	0.44
56:DB:199:GLN:O	56:DB:203:GLU:HG2	2.17	0.44
58:FB:6:ASP:C	58:FB:8:ARG:H	2.21	0.44
64:LB:29:HIS:O	64:LB:29:HIS:ND1	2.50	0.44
65:MB:89:MET:HG3	65:MB:107:ILE:HG21	1.99	0.44
66:NB:64:ASP:O	66:NB:65:ILE:HD13	2.16	0.44
68:PB:32:LEU:HD12	68:PB:43:SER:OG	2.16	0.44
69:QB:70:GLN:HE22	69:QB:119:LYS:HD2	1.81	0.44
82:DC:27:HIS:CD2	82:DC:28:VAL:HG22	2.52	0.44
82:DC:249:PHE:HD1	82:DC:269:LEU:HB2	1.80	0.44
82:DC:338:ILE:HG13	82:DC:342:LEU:HG	2.00	0.44
82:DC:374:PRO:HB3	82:DC:449:PRO:CB	2.47	0.44
82:DC:567:VAL:HA	82:DC:722:PRO:HB3	1.99	0.44
83:EC:6772:G:C2	83:EC:6822:U:H5"	2.52	0.44
83:EC:6835:U:C2	83:EC:6850:C:H5	2.35	0.44
1:A:179:A:H61	56:DB:202:ARG:NH2	2.15	0.44
1:A:187:G:H5"	58:FB:138:ASN:HB2	1.98	0.44
1:A:271:A:H5'	1:A:272:U:OP2	2.18	0.44
1:A:373:G:OP1	61:IB:96:LYS:HA	2.17	0.44
1:A:381:C:OP1	59:GB:2:PRO:HB3	2.18	0.44
1:A:684:A:H3'	1:A:685:A:C5'	2.47	0.44
1:A:1085:G:N2	1:A:1088:A:OP2	2.46	0.44
1:A:1484:G:N2	1:A:1605:G:H22	2.16	0.44
1:A:1670:G:H22	1:A:1730:A:H2'	1.81	0.44
2:B:16:A:N6	3:C:143:U:H3	2.14	0.44
2:B:107:A:H8	2:B:107:A:O5'	2.00	0.44
2:B:185:C:C4	2:B:186:U:C2	3.05	0.44
2:B:234:G:O2'	2:B:235:A:H5'	2.17	0.44
2:B:939:U:H2'	2:B:940:G:C8	2.49	0.44
2:B:965:A:O3'	32:FA:44:ASN:ND2	2.50	0.44
2:B:1077:U:H1'	2:B:1083:G:N2	2.33	0.44
2:B:1135:A:OP2	33:GA:5:LYS:HG3	2.18	0.44
2:B:1200:A:H5'	2:B:1201:C:O5'	2.17	0.44
2:B:1204:A:N6	2:B:1300:G:H1'	2.25	0.44
2:B:1245:A:N3	2:B:1272:C:H4'	2.33	0.44
2:B:1435:A:N1	8:H:93:MET:CE	2.80	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1636:U:H5'	31:EA:36:HIS:HE1	1.83	0.44
2:B:1643:A:H5"	2:B:1644:C:C4	2.52	0.44
2:B:1685:C:H2'	2:B:1686:U:C6	2.52	0.44
2:B:2143:A:N1	2:B:2145:A:H1'	2.32	0.44
2:B:2432:A:C2	19:S:125:SER:HB3	2.51	0.44
2:B:2563:G:OP1	31:EA:55:LYS:HB2	2.16	0.44
2:B:2645:G:O2'	2:B:2646:C:H5'	2.18	0.44
2:B:2696:A:H2'	2:B:2697:A:C8	2.53	0.44
2:B:3004:C:H5'	7:G:92:TYR:HE2	1.81	0.44
2:B:3061:G:H2'	2:B:3062:G:H8	1.82	0.44
4:D:13:A:H5'	4:D:14:U:C5	2.52	0.44
5:E:121:PRO:HB3	83:EC:6773:G:OP2	2.17	0.44
6:F:181:LYS:HB2	6:F:181:LYS:NZ	2.33	0.44
7:G:74:GLU:CG	7:G:325:LYS:HE3	2.43	0.44
9:I:17:GLN:HG3	25:Y:20:ARG:CA	2.48	0.44
11:K:121:LYS:HA	11:K:124:LEU:HB3	1.98	0.44
15:O:125:MET:HB3	15:O:127:PHE:HE1	1.82	0.44
17:Q:56:PRO:HD3	17:Q:75:PHE:CE1	2.52	0.44
18:R:39:ILE:HG13	18:R:44:VAL:HA	1.99	0.44
19:S:61:ILE:CG2	19:S:133:ILE:HA	2.47	0.44
22:V:108:ALA:O	22:V:111:ARG:HB3	2.17	0.44
23:W:134:HIS:CD2	23:W:137:ALA:HB2	2.53	0.44
32:FA:73:LEU:HD13	32:FA:109:TYR:CZ	2.52	0.44
40:NA:53:TYR:CA	40:NA:56:ARG:HB3	2.46	0.44
49:WA:122:ILE:HB	49:WA:134:TRP:CD1	2.49	0.44
50:XA:74:VAL:HG21	50:XA:116:LYS:HB3	1.99	0.44
51:YA:125:VAL:HG21	51:YA:169:SER:HB3	1.99	0.44
53:AB:153:ALA:O	53:AB:154:ASP:HB2	2.18	0.44
54:BB:9:LEU:HB2	54:BB:30:ARG:CD	2.47	0.44
56:DB:22:HIS:CD2	56:DB:25:ARG:HD3	2.53	0.44
59:GB:80:LEU:O	59:GB:83:VAL:HG22	2.17	0.44
59:GB:181:ALA:HA	59:GB:185:GLY:HA3	2.00	0.44
60:HB:76:LEU:HD22	60:HB:76:LEU:H	1.82	0.44
61:IB:96:LYS:HE2	61:IB:97:TYR:CE1	2.51	0.44
64:LB:114:ARG:HD2	76:XB:59:TYR:CE2	2.51	0.44
65:MB:13:LYS:HG3	65:MB:14:THR:H	1.82	0.44
69:QB:49:ASP:O	69:QB:50:ALA:HB3	2.17	0.44
72:TB:79:PHE:HB2	72:TB:125:ILE:CG2	2.46	0.44
77:YB:40:CYS:SG	77:YB:41:LEU:N	2.90	0.44
82:DC:725:GLN:HG2	82:DC:801:TRP:HB3	2.00	0.44
83:EC:6832:G:H2'	83:EC:6833:G:C5'	2.43	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:165:G:H2'	1:A:166:C:O4'	2.18	0.44
1:A:397:A:H5"	58:FB:47:ARG:NH1	2.32	0.44
1:A:625:C:H4'	1:A:940:A:H4'	1.99	0.44
1:A:952:A:H2'	1:A:953:G:O4'	2.17	0.44
1:A:1029:U:OP2	76:XB:12:LYS:HD2	2.17	0.44
1:A:1192:C:H4'	66:NB:142:TYR:HD1	1.82	0.44
1:A:1480:G:C2'	1:A:1481:C:H5'	2.47	0.44
2:B:68:C:O3'	19:S:177:GLY:HA2	2.18	0.44
2:B:215:G:H5"	30:DA:12:ARG:HG3	2.00	0.44
2:B:217:U:H4'	30:DA:100:HIS:CB	2.48	0.44
2:B:296:A:C2'	2:B:297:G:H5'	2.47	0.44
2:B:299:G:H2'	2:B:300:G:C8	2.52	0.44
2:B:437:G:H1	2:B:622:A:H61	1.66	0.44
2:B:686:G:C2	2:B:695:C:C2	3.05	0.44
2:B:768:C:H2'	2:B:769:G:H5'	1.98	0.44
2:B:1485:G:H21	38:LA:4:ARG:HE	1.64	0.44
2:B:1782:U:H2'	2:B:1783:U:H5'	1.99	0.44
2:B:1827:C:H2'	2:B:1828:A:H8	1.79	0.44
2:B:1945:A:H2'	2:B:1946:A:C8	2.53	0.44
2:B:2081:U:H2'	2:B:2082:U:C4'	2.48	0.44
2:B:2291:A:H2'	2:B:2292:U:H6	1.82	0.44
2:B:2633:U:O2'	2:B:2634:U:H5'	2.17	0.44
2:B:2675:C:H2'	2:B:2676:A:C8	2.53	0.44
2:B:2736:A:H4'	25:Y:71:SER:CB	2.47	0.44
2:B:2894:C:H2'	2:B:2895:G:C8	2.53	0.44
2:B:3045:G:H2'	2:B:3046:A:O4'	2.17	0.44
2:B:3053:G:H2'	2:B:3054:U:O4'	2.18	0.44
2:B:3113:A:C2	2:B:3122:A:C4	3.05	0.44
4:D:9:C:H2'	4:D:10:C:H5'	1.99	0.44
4:D:67:G:C2'	4:D:68:C:H5'	2.47	0.44
4:D:100:C:OP1	24:X:52:LYS:HE3	2.17	0.44
6:F:89:TYR:HB2	6:F:100:ASN:HD22	1.81	0.44
7:G:8:ALA:HB1	7:G:9:PRO:CD	2.45	0.44
8:H:351:PRO:CA	11:K:70:LYS:HG3	2.48	0.44
12:L:183:LYS:HA	12:L:186:LEU:CD1	2.47	0.44
14:N:174:THR:CG2	14:N:176:LEU:HB2	2.48	0.44
14:N:178:ARG:HB2	14:N:179:PRO:HD3	1.99	0.44
20:T:9:ILE:O	20:T:36:VAL:HG22	2.18	0.44
20:T:84:LEU:CD1	20:T:102:LEU:HD21	2.45	0.44
21:U:38:GLY:HA2	21:U:113:TYR:HE1	1.83	0.44
21:U:168:LEU:HB3	21:U:172:GLN:HG2	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:V:170:ARG:O	22:V:171:LYS:CB	2.66	0.44
26:Z:37:LEU:HB2	26:Z:56:VAL:CG1	2.47	0.44
27:AA:95:PHE:CD1	28:BA:22:VAL:HB	2.53	0.44
34:HA:89:VAL:O	34:HA:89:VAL:HG13	2.17	0.44
38:LA:8:ARG:HG2	38:LA:8:ARG:NH1	2.33	0.44
48:VA:32:ASN:ND2	48:VA:184:GLY:HA3	2.31	0.44
51:YA:121:ILE:HG23	51:YA:165:ARG:HD3	1.99	0.44
58:FB:143:TRP:O	58:FB:147:ALA:HB3	2.18	0.44
58:FB:172:ARG:HB3	58:FB:175:GLN:HB2	2.00	0.44
61:IB:86:ILE:HG21	61:IB:123:VAL:HG11	1.98	0.44
66:NB:14:LYS:HB3	66:NB:76:SER:OG	2.17	0.44
66:NB:79:TYR:HB3	66:NB:115:THR:HG21	1.99	0.44
66:NB:110:THR:C	66:NB:112:TYR:N	2.71	0.44
69:QB:57:ARG:HD3	69:QB:104:VAL:HG21	2.00	0.44
69:QB:98:GLY:O	69:QB:102:ARG:CB	2.62	0.44
72:TB:93:LEU:H	72:TB:93:LEU:HD23	1.83	0.44
72:TB:101:TYR:HB3	72:TB:112:ASP:HB2	1.98	0.44
74:VB:123:LYS:HD2	74:VB:124:ARG:H	1.82	0.44
75:WB:80:LEU:HD22	75:WB:101:TYR:CE2	2.52	0.44
76:XB:81:ALA:O	76:XB:82:ARG:O	2.36	0.44
79:AC:21:CYS:HB3	79:AC:26:SER:H	1.82	0.44
82:DC:384:LYS:HB3	82:DC:397:PHE:HB3	2.00	0.44
82:DC:571:SER:HB2	82:DC:720:ALA:HB2	1.98	0.44
1:A:152:U:C3’	1:A:153:G:H5”	2.47	0.44
1:A:155:U:H4’	56:DB:59:GLN:N	2.32	0.44
1:A:317:C:O4’	1:A:353:A:H2	2.01	0.44
1:A:330:G:H3’	58:FB:172:ARG:NH2	2.30	0.44
1:A:740:A:C3’	1:A:741:C:H5”	2.48	0.44
1:A:1010:C:H2’	1:A:1011:G:O4’	2.17	0.44
1:A:1330:G:H21	67:OB:6:THR:HG21	1.83	0.44
1:A:1460:A:H2’	1:A:1461:C:H5’	1.99	0.44
1:A:1557:U:H3’	1:A:1559:A:O2’	2.17	0.44
2:B:28:C:C2	2:B:57:A:N1	2.86	0.44
2:B:73:C:C6	17:Q:59:ARG:HD2	2.53	0.44
2:B:637:C:HO2’	2:B:638:C:C5’	2.30	0.44
2:B:822:G:H2’	2:B:823:C:C6	2.52	0.44
2:B:830:A:H62	2:B:864:G:H21	1.66	0.44
2:B:1049:C:H2’	2:B:1050:U:C6	2.53	0.44
2:B:1235:U:H4’	2:B:1236:G:H3’	2.00	0.44
2:B:1332:A:H2’	2:B:1333:C:C6	2.52	0.44
2:B:1350:A:N7	2:B:1352:A:H3’	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1377:G:H2'	2:B:1378:U:C6	2.53	0.44
2:B:1508:C:H5"	2:B:2354:C:H1'	1.99	0.44
2:B:1639:C:H5'	38:LA:52:GLN:OE1	2.16	0.44
2:B:1756:C:O2'	2:B:1757:A:H5'	2.17	0.44
2:B:1915:A:H4'	23:W:83:GLY:O	2.16	0.44
2:B:2157:G:N2	2:B:2177:G:H1'	2.32	0.44
2:B:2434:U:H6	2:B:2593:A:O2'	1.88	0.44
2:B:2483:G:O6	5:E:97:LYS:NZ	2.50	0.44
2:B:2828:G:H4'	14:N:4:ARG:HH21	1.82	0.44
2:B:3018:C:H2'	2:B:3019:U:O4'	2.18	0.44
2:B:3051:U:H2'	2:B:3052:G:O4'	2.18	0.44
2:B:3304:U:H5"	7:G:332:ARG:NH1	2.33	0.44
4:D:11:A:N7	9:I:18:THR:HG23	2.32	0.44
7:G:49:TYR:CD1	7:G:171:LEU:HD11	2.53	0.44
7:G:211:GLN:HG2	7:G:285:VAL:HG23	2.00	0.44
7:G:354:VAL:O	7:G:354:VAL:HG23	2.18	0.44
9:I:48:LYS:HB3	9:I:145:PHE:CZ	2.53	0.44
19:S:42:PRO:HG2	19:S:53:TYR:CE2	2.52	0.44
19:S:122:ASN:HB3	19:S:129:TYR:CD2	2.52	0.44
19:S:169:LYS:HA	19:S:172:ARG:HH11	1.82	0.44
20:T:87:MET:O	20:T:88:VAL:HG23	2.17	0.44
21:U:44:ALA:HA	21:U:47:TYR:HB3	2.00	0.44
22:V:96:PHE:CE1	22:V:114:ILE:HA	2.47	0.44
22:V:174:ARG:HH11	22:V:174:ARG:HG2	1.82	0.44
28:BA:59:HIS:O	28:BA:61:LYS:HE2	2.18	0.44
29:CA:82:LEU:HB3	29:CA:84:PHE:CD2	2.53	0.44
31:EA:27:LYS:O	31:EA:42:LEU:HD13	2.18	0.44
32:FA:24:LYS:HG3	32:FA:26:ARG:HH21	1.83	0.44
39:MA:45:LYS:HA	39:MA:48:ARG:HG2	1.98	0.44
49:WA:21:THR:C	49:WA:291:SER:HB3	2.37	0.44
49:WA:58:VAL:HG23	49:WA:59:ARG:H	1.83	0.44
49:WA:129:LYS:O	49:WA:147:HIS:HB2	2.17	0.44
49:WA:290:VAL:HG23	49:WA:306:THR:CG2	2.48	0.44
50:XA:123:VAL:CG1	50:XA:124:THR:H	2.24	0.44
51:YA:208:GLN:O	51:YA:209:ASN:HB2	2.17	0.44
52:ZA:66:PHE:H	52:ZA:66:PHE:HD1	1.66	0.44
53:AB:167:PHE:CE1	53:AB:202:LEU:HD13	2.52	0.44
54:BB:206:ASP:O	54:BB:222:LEU:HB2	2.17	0.44
55:CB:44:ASN:O	55:CB:45:LYS:HG2	2.17	0.44
57:EB:97:ARG:HH11	57:EB:97:ARG:HG3	1.82	0.44
58:FB:84:HIS:CD2	58:FB:90:LEU:HD12	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
58:FB:156:VAL:O	58:FB:160:PHE:HB2	2.17	0.44
63:KB:85:PRO:HB2	63:KB:87:ASP:OD2	2.17	0.44
67:OB:72:LYS:HG2	67:OB:72:LYS:O	2.16	0.44
68:PB:54:LEU:HD22	68:PB:54:LEU:N	2.33	0.44
68:PB:89:GLN:C	68:PB:91:ASP:N	2.70	0.44
69:QB:117:SER:CB	69:QB:123:ARG:HB2	2.47	0.44
71:SB:5:LYS:HD3	71:SB:5:LYS:N	2.32	0.44
74:VB:62:THR:HG22	74:VB:69:SER:OG	2.18	0.44
76:XB:11:ASN:O	76:XB:33:ASP:HB2	2.17	0.44
80:BC:30:PRO:HB2	80:BC:34:ALA:HB3	1.99	0.44
82:DC:42:ARG:NH2	82:DC:325:ARG:HH11	2.15	0.44
82:DC:74:ALA:HB2	82:DC:103:ILE:HB	1.98	0.44
82:DC:236:ASP:OD2	82:DC:239:LYS:HB3	2.17	0.44
82:DC:412:ARG:CA	82:DC:428:ILE:HG12	2.47	0.44
82:DC:518:VAL:O	82:DC:518:VAL:HG13	2.17	0.44
83:EC:6951:C:H2'	83:EC:6952:U:O4'	2.18	0.44
1:A:159:U:H5"	74:VB:117:LYS:CD	2.48	0.44
1:A:176:C:H3'	1:A:177:U:C6	2.53	0.44
1:A:395:U:H1'	56:DB:89:ASP:HB3	1.99	0.44
1:A:702:G:H4'	1:A:703:G:OP1	2.17	0.44
1:A:1030:A:OP1	76:XB:3:LYS:HE3	2.18	0.44
1:A:1194:A:H2'	1:A:1195:C:O4'	2.18	0.44
2:B:641:C:H3'	2:B:641:C:C6	2.53	0.44
2:B:947:G:C6	2:B:1373:A:C6	3.06	0.44
2:B:1256:G:H1'	16:P:123:ARG:CG	2.47	0.44
2:B:1522:U:H3'	29:CA:113:LEU:CD2	2.48	0.44
2:B:1715:A:H2	2:B:1728:G:H1	1.63	0.44
2:B:1724:U:C5	23:W:125:LYS:HE3	2.53	0.44
2:B:1853:U:H2'	2:B:1854:C:C5	2.53	0.44
2:B:1873:U:C5	2:B:1874:A:N7	2.86	0.44
2:B:1898:G:O2'	2:B:1899:G:H5'	2.16	0.44
2:B:2554:A:H2'	38:LA:91:ARG:HH12	1.81	0.44
2:B:2615:G:C4	2:B:2616:C:C5	3.06	0.44
2:B:2765:C:C3'	46:TA:39:GLY:HA3	2.48	0.44
2:B:2939:G:H3'	7:G:2:SER:N	2.33	0.44
2:B:3138:U:H5"	7:G:274:SER:O	2.17	0.44
2:B:3353:G:N9	2:B:3356:G:H1'	2.33	0.44
5:E:64:SER:HB2	5:E:151:VAL:HG13	1.99	0.44
6:F:181:LYS:HD3	6:F:184:ARG:NE	2.33	0.44
9:I:242:SER:C	9:I:244:HIS:H	2.21	0.44
13:M:20:ILE:HD12	13:M:20:ILE:N	2.33	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:N:3:ARG:NH1	14:N:63:GLU:OE2	2.50	0.44
14:N:174:THR:HG21	14:N:176:LEU:HB2	1.99	0.44
15:O:82:ARG:HG2	15:O:112:LEU:CB	2.42	0.44
16:P:123:ARG:HH11	48:VA:46:ARG:HE	1.64	0.44
19:S:145:ASP:O	19:S:149:ASN:N	2.51	0.44
20:T:125:ARG:HE	20:T:125:ARG:HB3	1.70	0.44
22:V:33:TYR:OH	22:V:127:LEU:HD12	2.18	0.44
23:W:128:LYS:HG2	23:W:128:LYS:O	2.18	0.44
23:W:134:HIS:HE1	23:W:136:ARG:HE	1.66	0.44
29:CA:27:ARG:N	29:CA:27:ARG:HD2	2.33	0.44
31:EA:46:ILE:HD11	31:EA:49:TYR:CD1	2.52	0.44
36:JA:96:ILE:HB	36:JA:121:ASN:ND2	2.25	0.44
37:KA:69:GLY:HA2	37:KA:85:PHE:HA	1.99	0.44
38:LA:22:VAL:HG12	38:LA:30:LEU:HD23	2.00	0.44
45:SA:12:ARG:HG2	45:SA:15:ARG:NH1	2.30	0.44
47:UA:36:ARG:HD3	47:UA:45:LYS:O	2.18	0.44
48:VA:41:VAL:O	48:VA:44:GLU:HB2	2.18	0.44
49:WA:191:ASP:C	53:AB:222:VAL:HG23	2.38	0.44
50:XA:84:ARG:HD3	50:XA:88:LYS:CE	2.47	0.44
50:XA:152:PRO:C	50:XA:154:GLU:H	2.20	0.44
54:BB:9:LEU:CD1	54:BB:30:ARG:HG3	2.47	0.44
54:BB:162:ILE:CG2	54:BB:163:ASP:N	2.81	0.44
54:BB:173:ILE:HD12	54:BB:173:ILE:N	2.33	0.44
59:GB:127:VAL:O	59:GB:131:GLN:HG3	2.17	0.44
68:PB:89:GLN:O	68:PB:90:ASN:HB3	2.18	0.44
70:RB:53:LYS:HD2	70:RB:92:ASP:HB2	1.99	0.44
75:WB:54:VAL:N	75:WB:55:PRO:CD	2.81	0.44
77:YB:14:SER:HA	77:YB:17:ARG:HD2	2.00	0.44
78:ZB:9:LEU:HD22	78:ZB:55:VAL:HG22	1.99	0.44
78:ZB:13:ILE:HG12	78:ZB:30:VAL:HA	1.98	0.44
82:DC:126:LEU:HD23	82:DC:126:LEU:C	2.38	0.44
82:DC:308:LYS:HD3	82:DC:308:LYS:N	2.33	0.44
82:DC:567:VAL:HA	82:DC:722:PRO:HA	2.00	0.44
82:DC:633:ILE:O	82:DC:633:ILE:HD12	2.18	0.44
82:DC:633:ILE:HD12	82:DC:633:ILE:C	2.38	0.44
1:A:202:A:H2'	1:A:203:U:O4'	2.17	0.44
1:A:348:U:H4'	58:FB:14:THR:HA	2.00	0.44
1:A:945:U:O2'	1:A:946:U:H5'	2.18	0.44
1:A:1020:A:C3'	1:A:1021:C:H5"	2.48	0.44
1:A:1058:U:C5	1:A:1061:A:N1	2.85	0.44
1:A:1077:C:H2'	1:A:1078:C:C6	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:99:A:OP1	19:S:194:GLN:HB2	2.18	0.44
2:B:362:U:OP1	41:OA:53:ALA:HB1	2.17	0.44
2:B:503:C:H1'	10:J:23:LYS:HD2	1.99	0.44
2:B:572:A:H2'	2:B:573:C:C6	2.53	0.44
2:B:719:U:O2'	2:B:720:A:H4'	2.18	0.44
2:B:726:G:H5'	2:B:727:G:OP1	2.18	0.44
2:B:946:U:H3	2:B:1373:A:N6	2.14	0.44
2:B:1294:A:O2'	2:B:1295:G:H8	2.00	0.44
2:B:1920:U:H5'	2:B:1933:A:N6	2.33	0.44
2:B:2107:A:H3'	2:B:2108:C:H6	1.83	0.44
2:B:2258:U:H2'	2:B:2259:A:C8	2.53	0.44
2:B:2425:G:H1'	6:F:230:VAL:HG11	2.00	0.44
2:B:3007:U:H2'	2:B:3008:A:C8	2.53	0.44
2:B:3024:A:HO2'	13:M:97:PHE:HE2	1.64	0.44
2:B:3278:C:H3'	2:B:3279:A:C5'	2.48	0.44
4:D:55:A:H4'	15:O:151:SER:OG	2.18	0.44
5:E:65:ILE:HG13	5:E:148:VAL:HA	2.00	0.44
6:F:94:ALA:O	6:F:102:LEU:HD21	2.18	0.44
7:G:22:ALA:O	7:G:23:ALA:C	2.55	0.44
7:G:56:ILE:HD11	7:G:356:LEU:HB2	1.99	0.44
7:G:68:HIS:O	7:G:70:ARG:HG2	2.18	0.44
7:G:167:ARG:HG3	7:G:167:ARG:NH1	2.32	0.44
11:K:203:TRP:CD1	11:K:204:PRO:HD2	2.53	0.44
11:K:228:SER:HA	11:K:232:ARG:NH2	2.32	0.44
12:L:85:ASN:O	12:L:88:ALA:HB3	2.18	0.44
14:N:68:ALA:O	14:N:72:ALA:HB2	2.17	0.44
15:O:113:GLY:O	15:O:114:ILE:HB	2.17	0.44
20:T:136:THR:CG2	20:T:137:THR:N	2.65	0.44
22:V:44:PHE:CE1	22:V:82:VAL:HG11	2.53	0.44
24:X:79:VAL:CG1	24:X:123:ILE:HD13	2.47	0.44
24:X:108:GLN:HA	24:X:108:GLN:HE21	1.82	0.44
26:Z:38:ILE:HA	26:Z:56:VAL:HG21	2.00	0.44
29:CA:54:TYR:N	29:CA:54:TYR:CD1	2.85	0.44
30:DA:89:LYS:CB	30:DA:93:ALA:HB3	2.47	0.44
32:FA:47:LYS:HE2	32:FA:48:TYR:CZ	2.52	0.44
32:FA:47:LYS:HG3	32:FA:48:TYR:CG	2.53	0.44
35:IA:26:LYS:HD2	35:IA:26:LYS:H	1.82	0.44
35:IA:72:ARG:NH2	35:IA:107:VAL:HG13	2.33	0.44
36:JA:76:VAL:CG2	36:JA:96:ILE:HA	2.48	0.44
37:KA:55:ALA:CB	37:KA:65:ARG:HD2	2.47	0.44
39:MA:76:GLN:NE2	39:MA:81:ARG:HG3	2.28	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:NA:53:TYR:HA	40:NA:56:ARG:CB	2.45	0.44
40:NA:61:ILE:HA	40:NA:65:GLY:O	2.18	0.44
47:UA:39:CYS:HB2	47:UA:47:VAL:HB	1.98	0.44
48:VA:64:ARG:HD2	48:VA:67:LEU:HD13	2.00	0.44
49:WA:23:LEU:HD22	49:WA:33:LEU:HD21	2.00	0.44
50:XA:62:ARG:HD2	71:SB:37:ALA:O	2.17	0.44
50:XA:189:VAL:HG22	50:XA:190:ASP:N	2.33	0.44
52:ZA:234:PRO:O	52:ZA:235:LEU:HB2	2.18	0.44
53:AB:36:GLY:C	53:AB:51:ARG:HD3	2.38	0.44
54:BB:106:LYS:HG3	54:BB:108:ARG:NH1	2.33	0.44
57:EB:117:THR:CG2	57:EB:120:ALA:H	2.29	0.44
58:FB:98:LYS:HE2	58:FB:172:ARG:HG2	1.98	0.44
59:GB:5:PRO:O	59:GB:7:THR:HG23	2.18	0.44
64:LB:91:THR:O	64:LB:92:LYS:HB3	2.18	0.44
68:PB:28:ILE:HD13	68:PB:28:ILE:O	2.18	0.44
68:PB:88:ARG:HH21	68:PB:108:LYS:HE2	1.82	0.44
77:YB:14:SER:HA	77:YB:17:ARG:HG2	1.99	0.44
77:YB:19:HIS:O	77:YB:23:THR:HG23	2.18	0.44
79:AC:19:ARG:HG3	79:AC:19:ARG:HH11	1.83	0.44
82:DC:105:SER:HA	82:DC:106:PRO:HD2	1.82	0.44
82:DC:126:LEU:HD23	82:DC:127:VAL:N	2.32	0.44
1:A:15:U:C2'	1:A:16:G:H5'	2.48	0.44
1:A:159:U:H5"	74:VB:117:LYS:HE3	1.99	0.44
1:A:329:G:H2'	1:A:330:G:H8	1.82	0.44
1:A:404:G:H2'	1:A:405:C:H6	1.83	0.44
1:A:696:C:H42	1:A:818:C:H4'	1.83	0.44
1:A:811:A:C4	57:EB:111:LYS:HD2	2.53	0.44
1:A:872:G:N3	1:A:873:U:H1'	2.33	0.44
1:A:1144:U:H2'	1:A:1145:U:C6	2.53	0.44
1:A:1230:A:O2'	1:A:1259:U:H1'	2.17	0.44
1:A:1586:A:H1'	1:A:1611:A:C5	2.52	0.44
1:A:1730:A:O3'	1:A:1731:A:H8	2.01	0.44
2:B:353:G:H22	2:B:364:G:H2'	1.81	0.44
2:B:486:U:H2'	2:B:487:U:O4'	2.18	0.44
2:B:586:C:H2'	2:B:587:U:H6	1.82	0.44
2:B:618:C:H2'	2:B:619:A:O4'	2.18	0.44
2:B:652:G:N2	2:B:2361:A:H1'	2.32	0.44
2:B:677:A:H4'	2:B:678:G:O5'	2.17	0.44
2:B:757:C:C2'	2:B:758:C:H5"	2.48	0.44
2:B:774:G:H2'	2:B:775:A:H5'	2.00	0.44
2:B:1007:U:O2	2:B:1043:C:N3	2.51	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1237:G:N3	16:P:136:ALA:HB1	2.33	0.44
2:B:1311:G:C8	2:B:1311:G:O5'	2.71	0.44
2:B:1648:A:C2'	2:B:1649:U:H5'	2.46	0.44
2:B:1764:U:H3'	2:B:1765:U:H4'	1.99	0.44
2:B:1867:A:H2	2:B:2119:A:HO2'	1.62	0.44
2:B:2139:A:C8	41:OA:3:LYS:HE2	2.53	0.44
2:B:2155:G:C6	2:B:2156:C:N4	2.86	0.44
2:B:2177:G:H3'	6:F:128:ARG:O	2.17	0.44
2:B:2950:G:H22	2:B:2979:U:H2'	1.83	0.44
2:B:3183:A:H2'	2:B:3184:A:H5'	1.98	0.44
2:B:3239:G:O2'	2:B:3240:C:H5'	2.18	0.44
3:C:12:A:OP1	21:U:3:ARG:HD3	2.18	0.44
3:C:24:G:H2'	3:C:25:G:O4'	2.18	0.44
6:F:109:GLU:HA	6:F:136:ILE:O	2.18	0.44
6:F:133:TYR:HB3	6:F:168:VAL:CG1	2.48	0.44
6:F:137:ILE:HD12	6:F:155:LYS:HZ2	1.82	0.44
6:F:189:TYR:CE1	6:F:196:TRP:CD1	3.05	0.44
7:G:89:VAL:HG21	7:G:192:VAL:HG23	2.00	0.44
7:G:196:ARG:HA	7:G:199:PHE:CE1	2.52	0.44
7:G:238:LEU:HB2	7:G:246:LEU:O	2.18	0.44
7:G:286:GLY:HA3	7:G:321:PHE:CE2	2.53	0.44
7:G:338:LEU:O	7:G:339:ARG:HB3	2.18	0.44
8:H:138:ARG:HD3	8:H:139:GLY:N	2.33	0.44
8:H:142:VAL:O	8:H:143:GLU:CB	2.66	0.44
8:H:350:LYS:O	11:K:71:ALA:HA	2.18	0.44
8:H:359:LEU:HD22	24:X:64:ILE:HG12	2.00	0.44
10:J:97:ASN:O	10:J:98:VAL:HB	2.17	0.44
13:M:41:ILE:CD1	13:M:67:ALA:HB1	2.33	0.44
13:M:47:LYS:HB2	18:R:7:VAL:CB	2.48	0.44
14:N:176:LEU:HD22	14:N:180:GLU:CG	2.47	0.44
19:S:163:GLY:C	19:S:165:THR:N	2.71	0.44
20:T:37:ARG:HD3	20:T:108:ILE:CD1	2.48	0.44
23:W:161:ALA:O	23:W:165:LYS:HB2	2.17	0.44
29:CA:86:VAL:HG22	29:CA:87:SER:N	2.32	0.44
34:HA:74:ASN:OD1	34:HA:75:ASN:N	2.51	0.44
35:IA:46:THR:HG23	35:IA:49:VAL:HG22	1.99	0.44
36:JA:4:LEU:HD13	36:JA:91:THR:OG1	2.18	0.44
36:JA:82:LEU:C	36:JA:84:THR:H	2.22	0.44
42:PA:6:THR:HA	42:PA:54:LEU:HD13	2.00	0.44
44:RA:96:CYS:O	44:RA:100:TYR:HA	2.18	0.44
45:SA:7:LYS:O	45:SA:11:ARG:HB2	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:WA:41:THR:CG2	49:WA:62:LYS:HE2	2.48	0.44
50:XA:84:ARG:HH22	50:XA:204:TYR:C	2.21	0.44
51:YA:64:ARG:NE	64:LB:36:LYS:HD2	2.32	0.44
52:ZA:64:LYS:O	52:ZA:65:GLU:CB	2.64	0.44
53:AB:36:GLY:O	53:AB:37:VAL:HG13	2.17	0.44
53:AB:191:ASP:OD2	53:AB:192:PRO:HD2	2.18	0.44
55:CB:140:THR:HA	55:CB:214:LYS:HD2	1.99	0.44
55:CB:192:GLU:O	55:CB:196:GLU:HB2	2.17	0.44
58:FB:38:ILE:HG21	58:FB:79:ALA:HA	2.00	0.44
59:GB:28:LEU:HG	80:BC:39:LEU:HD12	1.99	0.44
59:GB:39:LYS:HB3	59:GB:43:TYR:CZ	2.53	0.44
60:HB:75:TYR:HD2	60:HB:76:LEU:HD13	1.83	0.44
63:KB:106:ARG:HG2	63:KB:106:ARG:NH2	2.32	0.44
65:MB:17:TYR:CA	68:PB:93:THR:HA	2.47	0.44
65:MB:81:ARG:HB3	65:MB:117:GLY:HA2	2.00	0.44
71:SB:36:VAL:HG11	71:SB:78:LEU:HD13	1.99	0.44
76:XB:12:LYS:NZ	76:XB:16:GLY:HA2	2.33	0.44
77:YB:31:TYR:HE2	77:YB:81:ARG:HA	1.83	0.44
82:DC:20:ARG:O	82:DC:100:ILE:HG23	2.17	0.44
82:DC:27:HIS:O	82:DC:29:ASP:N	2.51	0.44
82:DC:250:PHE:HB3	82:DC:275:MET:SD	2.58	0.44
82:DC:434:VAL:HG12	82:DC:445:ILE:CG2	2.47	0.44
82:DC:607:ASN:HA	82:DC:608:PRO:HD3	1.75	0.44
82:DC:719:LEU:HD11	82:DC:835:TRP:CE2	2.52	0.44
1:A:38:C:N4	1:A:39:A:H62	2.16	0.43
1:A:234:G:N2	1:A:235:G:H1'	2.33	0.43
1:A:301:A:H1'	1:A:334:G:H22	1.83	0.43
1:A:336:G:C2'	1:A:337:G:H5'	2.48	0.43
1:A:845:G:H2'	1:A:846:G:H5"	1.99	0.43
1:A:1419:G:O2'	79:AC:54:LYS:HE3	2.17	0.43
1:A:1793:G:N7	1:A:1795:U:O4	2.50	0.43
2:B:34:A:H3'	2:B:48:A:H61	1.83	0.43
2:B:142:C:H2'	2:B:143:G:C8	2.53	0.43
2:B:374:A:C4'	2:B:375:A:H5'	2.48	0.43
2:B:531:G:H2'	2:B:532:A:C8	2.53	0.43
2:B:582:G:H2'	2:B:583:G:O4'	2.18	0.43
2:B:707:U:H1'	2:B:754:G:H1'	2.00	0.43
2:B:839:C:H1'	2:B:1724:U:OP1	2.18	0.43
2:B:1079:A:C2	9:I:113:LEU:HG	2.53	0.43
2:B:1145:G:N2	2:B:1160:C:O4'	2.51	0.43
2:B:1553:U:H4'	2:B:1554:U:H5'	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1606:U:O4	38:LA:8:ARG:HB3	2.18	0.43
2:B:1801:U:H2'	2:B:1802:C:C6	2.53	0.43
2:B:1862:U:O5'	2:B:1862:U:H6	2.00	0.43
2:B:1874:A:C2'	2:B:1875:G:H5'	2.48	0.43
2:B:1875:G:H2'	2:B:1876:U:O4'	2.18	0.43
2:B:2131:A:C2'	2:B:2132:C:H5'	2.48	0.43
2:B:2173:U:H3'	2:B:2174:G:C8	2.53	0.43
2:B:2516:U:OP1	19:S:31:ARG:HG2	2.18	0.43
2:B:2678:A:H2	83:EC:6924:G:H4'	1.83	0.43
2:B:2745:G:H2'	2:B:2747:A:OP2	2.18	0.43
2:B:2774:C:C2	2:B:2775:U:C5	3.06	0.43
2:B:2838:A:N6	2:B:2850:G:O2'	2.40	0.43
2:B:3072:C:H4'	2:B:3336:A:H4'	2.00	0.43
2:B:3229:G:C2	18:R:129:TYR:HE1	2.36	0.43
2:B:3310:A:H2'	2:B:3311:C:H6	1.83	0.43
2:B:3358:U:H2'	2:B:3359:A:O4'	2.18	0.43
3:C:138:A:H8	3:C:138:A:O5'	2.00	0.43
5:E:4:ILE:HD12	5:E:198:TRP:CZ2	2.52	0.43
6:F:128:ARG:O	6:F:129:ALA:HB2	2.18	0.43
7:G:4:ARG:O	7:G:5:LYS:HB2	2.17	0.43
7:G:230:THR:HB	7:G:247:ARG:HD3	1.99	0.43
7:G:249:VAL:HG12	7:G:251:CYS:O	2.18	0.43
8:H:186:LYS:O	8:H:187:LEU:C	2.55	0.43
8:H:260:GLN:CA	8:H:260:GLN:HE21	2.31	0.43
9:I:229:ASP:O	9:I:230:ASP:HB3	2.19	0.43
11:K:151:ARG:HB3	11:K:153:PHE:CZ	2.52	0.43
11:K:187:GLU:O	11:K:191:VAL:HA	2.18	0.43
12:L:163:VAL:HA	12:L:166:LEU:CG	2.48	0.43
13:M:92:TYR:CE1	13:M:144:ILE:HG13	2.53	0.43
15:O:18:VAL:HB	15:O:128:TYR:N	2.32	0.43
15:O:96:PHE:HB3	15:O:97:SER:H	1.73	0.43
17:Q:118:GLU:O	17:Q:122:LYS:CG	2.66	0.43
18:R:73:PRO:HD2	18:R:80:THR:HG21	2.00	0.43
19:S:34:ASN:H	19:S:37:HIS:HD2	1.66	0.43
19:S:204:LYS:HE2	19:S:204:LYS:HA	1.99	0.43
20:T:173:ALA:HA	20:T:176:LYS:HB3	1.98	0.43
21:U:98:ALA:HB1	21:U:150:VAL:HG11	1.99	0.43
23:W:99:LEU:HD11	23:W:103:ARG:NH1	2.33	0.43
24:X:169:SER:HB3	24:X:171:PHE:CE1	2.53	0.43
27:AA:80:ARG:HB2	27:AA:99:ALA:N	2.33	0.43
32:FA:122:PRO:HA	32:FA:143:GLY:N	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:JA:32:TRP:CD1	36:JA:53:PRO:HG3	2.52	0.43
36:JA:100:ILE:HG22	36:JA:105:ARG:HD2	2.00	0.43
42:PA:12:LEU:O	42:PA:16:ARG:HG3	2.18	0.43
48:VA:17:GLU:O	48:VA:21:GLU:HG2	2.18	0.43
49:WA:154:VAL:O	49:WA:154:VAL:HG23	2.18	0.43
54:BB:30:ARG:HA	54:BB:31:PRO:HD3	1.88	0.43
54:BB:144:GLY:O	54:BB:145:ARG:C	2.56	0.43
54:BB:155:LYS:O	54:BB:158:ASP:HB2	2.17	0.43
54:BB:195:ILE:HG23	54:BB:196:VAL:N	2.33	0.43
56:DB:30:LYS:O	56:DB:101:ILE:HA	2.18	0.43
57:EB:142:TYR:C	57:EB:143:LEU:HD22	2.37	0.43
58:FB:69:SER:HB2	58:FB:185:GLU:OE1	2.18	0.43
58:FB:85:PRO:HB2	61:IB:12:ALA:HB2	1.99	0.43
58:FB:110:ARG:HG3	58:FB:111:GLN:N	2.33	0.43
59:GB:11:THR:O	59:GB:44:ARG:HA	2.18	0.43
59:GB:47:PHE:O	59:GB:50:SER:HB3	2.17	0.43
60:HB:25:LYS:HB3	60:HB:62:GLN:HE21	1.82	0.43
63:KB:34:ILE:HG23	63:KB:74:ILE:HG21	2.00	0.43
63:KB:55:ARG:HG2	63:KB:56:ASP:N	2.33	0.43
70:RB:90:TYR:HD1	70:RB:90:TYR:O	2.00	0.43
71:SB:81:ASN:HB3	71:SB:82:VAL:H	1.61	0.43
73:UB:52:ILE:HA	73:UB:100:ASP:O	2.18	0.43
74:VB:28:LEU:HD23	74:VB:68:LYS:HG3	2.00	0.43
74:VB:84:LYS:O	74:VB:84:LYS:HD3	2.18	0.43
76:XB:79:ILE:C	76:XB:81:ALA:H	2.20	0.43
82:DC:9:MET:O	82:DC:13:MET:HG3	2.18	0.43
82:DC:164:LEU:HD11	82:DC:174:LEU:CD2	2.48	0.43
82:DC:221:THR:OG1	82:DC:224:GLN:HB2	2.18	0.43
82:DC:292:LYS:C	82:DC:294:ASP:H	2.21	0.43
1:A:373:G:H5'	61:IB:96:LYS:CG	2.46	0.43
1:A:505:A:H3'	1:A:506:A:C5'	2.48	0.43
1:A:531:C:H3'	1:A:532:U:H5"	1.99	0.43
1:A:581:U:H3'	1:A:581:U:O2	2.18	0.43
1:A:1177:C:H2'	1:A:1178:G:H8	1.83	0.43
1:A:1240:U:H5	65:MB:59:LYS:HZ1	1.63	0.43
1:A:1300:A:H5"	52:ZA:99:LYS:HE2	2.00	0.43
1:A:1350:U:H5'	66:NB:19:VAL:HG11	2.00	0.43
1:A:1383:G:O2'	70:RB:35:GLU:HG2	2.17	0.43
1:A:1753:A:H2'	1:A:1754:A:H8	1.83	0.43
2:B:68:C:O2'	2:B:69:C:H5'	2.19	0.43
2:B:86:G:O2'	17:Q:11:LYS:HD3	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:206:G:N2	2:B:207:U:H1'	2.33	0.43
2:B:719:U:C1'	22:V:72:LYS:HE3	2.47	0.43
2:B:800:G:H1'	2:B:933:A:C5	2.53	0.43
2:B:812:G:H2'	2:B:813:G:C8	2.50	0.43
2:B:894:G:H4'	2:B:895:A:O4'	2.17	0.43
2:B:959:C:H5	2:B:2801:A:C5'	2.32	0.43
2:B:1525:G:H2'	2:B:1525:G:N3	2.32	0.43
2:B:1666:G:H2'	2:B:1667:A:C8	2.53	0.43
2:B:2265:C:H2'	2:B:2266:U:O4'	2.18	0.43
2:B:2412:G:H2'	2:B:2413:A:C8	2.53	0.43
2:B:2495:C:H41	83:EC:6816:A:H5'	1.84	0.43
2:B:2520:A:O2'	2:B:2521:U:H5'	2.17	0.43
2:B:2838:A:OP1	14:N:154:ARG:NH1	2.51	0.43
2:B:2844:C:H2'	2:B:2845:A:H5'	1.99	0.43
2:B:2880:U:O2'	2:B:2881:C:H5'	2.18	0.43
2:B:3120:C:O2'	2:B:3121:U:H2'	2.18	0.43
6:F:87:PHE:HD2	6:F:89:TYR:OH	2.00	0.43
6:F:147:ARG:NH2	6:F:155:LYS:HZ3	2.16	0.43
8:H:30:ILE:HG12	8:H:127:ALA:HB1	2.00	0.43
8:H:80:GLY:N	8:H:85:SER:HB2	2.33	0.43
8:H:156:LEU:O	8:H:159:ILE:HG13	2.17	0.43
8:H:157:GLU:HG3	8:H:251:THR:HG21	2.00	0.43
8:H:235:LEU:HD12	8:H:235:LEU:C	2.37	0.43
9:I:49:TYR:O	9:I:144:VAL:HG23	2.18	0.43
13:M:36:LYS:CE	13:M:78:MET:HG3	2.48	0.43
13:M:69:ARG:CD	13:M:72:LYS:HD2	2.48	0.43
14:N:12:GLN:OE1	14:N:58:GLU:HA	2.18	0.43
15:O:150:ASN:C	15:O:152:HIS:H	2.21	0.43
17:Q:126:PHE:CD2	17:Q:132:ALA:HB1	2.53	0.43
18:R:28:SER:HB2	18:R:53:VAL:HG23	2.00	0.43
18:R:35:ILE:CG2	18:R:46:ILE:HG22	2.49	0.43
18:R:95:ALA:HA	18:R:100:ALA:HB3	2.00	0.43
20:T:119:VAL:CG1	24:X:167:ARG:HD2	2.48	0.43
23:W:154:ALA:HA	23:W:157:GLU:CD	2.38	0.43
27:AA:17:LEU:HB2	27:AA:52:ALA:CB	2.40	0.43
29:CA:55:ASN:O	29:CA:57:LEU:N	2.40	0.43
35:IA:29:ALA:HB2	35:IA:64:VAL:O	2.17	0.43
40:NA:58:ILE:CG1	40:NA:59:ASP:N	2.80	0.43
41:OA:33:THR:HA	41:OA:39:TYR:O	2.19	0.43
42:PA:10:GLN:O	42:PA:14:LEU:HB2	2.18	0.43
47:UA:87:ARG:HA	47:UA:90:VAL:HG21	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:WA:179:LYS:HG2	49:WA:191:ASP:OD1	2.18	0.43
51:YA:52:THR:HB	51:YA:53:GLY:H	1.64	0.43
52:ZA:179:VAL:O	52:ZA:198:THR:HG23	2.17	0.43
55:CB:157:ARG:HD2	55:CB:157:ARG:N	2.31	0.43
55:CB:218:GLU:HA	55:CB:221:ALA:HB3	2.00	0.43
55:CB:219:ARG:HG3	55:CB:220:VAL:N	2.33	0.43
56:DB:84:TYR:CE1	56:DB:86:PRO:HG3	2.54	0.43
56:DB:185:GLN:HA	56:DB:188:ARG:HD2	2.00	0.43
58:FB:25:ARG:HD3	58:FB:25:ARG:HA	1.82	0.43
59:GB:34:PHE:CD2	59:GB:105:LEU:HD23	2.53	0.43
59:GB:133:HIS:C	59:GB:134:ILE:HG12	2.39	0.43
60:HB:8:ARG:HG2	60:HB:8:ARG:NH1	2.33	0.43
63:KB:4:MET:CG	63:KB:5:HIS:H	2.11	0.43
65:MB:118:GLU:C	65:MB:120:SER:H	2.21	0.43
66:NB:48:VAL:HG23	66:NB:82:ARG:HD2	2.00	0.43
67:OB:21:TYR:H	67:OB:22:PRO:HD2	1.81	0.43
68:PB:24:GLY:HA3	68:PB:58:ALA:HB3	1.99	0.43
68:PB:69:ILE:O	68:PB:73:MET:HB2	2.19	0.43
69:QB:39:THR:HB	69:QB:57:ARG:NH2	2.33	0.43
70:RB:66:SER:HG	70:RB:79:TRP:HE3	1.65	0.43
70:RB:108:ILE:O	70:RB:108:ILE:HG13	2.18	0.43
71:SB:34:ILE:HB	71:SB:53:TYR:CB	2.37	0.43
73:UB:53:VAL:CB	73:UB:98:GLU:HA	2.47	0.43
73:UB:70:LYS:HA	80:BC:8:LEU:HD23	2.00	0.43
74:VB:102:LYS:O	74:VB:102:LYS:HD2	2.17	0.43
82:DC:221:THR:HG21	82:DC:333:ALA:O	2.18	0.43
82:DC:243:ARG:HB3	82:DC:257:TRP:HZ3	1.83	0.43
82:DC:296:ILE:HB	82:DC:297:PRO:HD3	1.99	0.43
83:EC:6850:C:C2'	83:EC:6851:G:H5"	2.48	0.43
1:A:66:U:C5	56:DB:173:PRO:HB3	2.53	0.43
1:A:390:G:H2'	1:A:391:A:H8	1.83	0.43
1:A:1205:C:C2'	1:A:1206:U:H5'	2.47	0.43
1:A:1538:U:O2'	1:A:1539:G:H5'	2.18	0.43
1:A:1713:G:N3	1:A:1713:G:C2'	2.81	0.43
2:B:200:C:H4'	2:B:201:A:OP1	2.19	0.43
2:B:268:A:O4'	2:B:270:U:H1'	2.18	0.43
2:B:836:A:H2'	2:B:837:A:H8	1.82	0.43
2:B:2184:U:H4'	6:F:211:HIS:CE1	2.54	0.43
2:B:2342:U:H2'	2:B:2343:C:H6	1.84	0.43
2:B:2372:A:H3'	2:B:2373:A:H5"	2.00	0.43
2:B:2380:U:O5'	2:B:2380:U:H6	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2577:C:H2'	2:B:2578:U:C6	2.54	0.43
2:B:2607:G:O2'	2:B:2608:G:H5'	2.18	0.43
2:B:2611:U:H2'	2:B:2612:U:C5	2.48	0.43
2:B:2618:G:H5'	14:N:116:ARG:HG3	2.00	0.43
2:B:2968:G:H2'	2:B:2969:A:C8	2.53	0.43
2:B:3135:U:H3'	2:B:3136:G:C8	2.52	0.43
3:C:4:C:OP1	21:U:62:ARG:HG3	2.18	0.43
3:C:115:C:H3'	3:C:116:G:C5'	2.48	0.43
6:F:8:GLN:C	6:F:10:LYS:N	2.72	0.43
6:F:234:LYS:HD3	6:F:238:ILE:CD1	2.40	0.43
8:H:281:ILE:HD12	22:V:29:LEU:HD23	2.00	0.43
9:I:12:TYR:O	9:I:16:PHE:N	2.50	0.43
9:I:27:LYS:CA	9:I:150:LEU:HD11	2.45	0.43
9:I:32:GLN:HG2	9:I:36:LEU:HD11	2.00	0.43
11:K:85:PHE:CE1	11:K:114:GLY:HA3	2.54	0.43
11:K:184:LEU:O	11:K:188:ILE:HG12	2.18	0.43
11:K:224:ILE:HG21	24:X:39:SER:CB	2.48	0.43
12:L:105:LYS:O	12:L:108:ARG:HB3	2.18	0.43
17:Q:47:ALA:HB3	39:MA:115:LYS:HG3	2.00	0.43
18:R:127:LYS:HD2	20:T:191:ALA:HA	2.00	0.43
19:S:47:LYS:HA	19:S:50:ARG:HG2	2.00	0.43
20:T:164:SER:O	20:T:167:TYR:HD1	2.01	0.43
21:U:165:VAL:O	21:U:165:VAL:HG13	2.18	0.43
22:V:16:ARG:HH22	22:V:55:SER:HB3	1.83	0.43
22:V:29:LEU:O	22:V:33:TYR:HD2	2.01	0.43
22:V:65:SER:HA	22:V:93:ILE:CD1	2.46	0.43
22:V:80:THR:HG22	22:V:100:THR:HB	2.01	0.43
23:W:138:LEU:HD23	23:W:138:LEU:C	2.38	0.43
24:X:44:PHE:CZ	25:Y:153:PRO:HG3	2.54	0.43
24:X:93:GLU:HB2	24:X:140:VAL:HG21	1.99	0.43
30:DA:56:VAL:HG22	30:DA:104:LEU:HD22	1.99	0.43
31:EA:77:TYR:C	31:EA:79:HIS:H	2.21	0.43
31:EA:83:THR:HA	34:HA:58:TYR:OH	2.18	0.43
37:KA:46:GLY:H	37:KA:71:VAL:CG1	2.31	0.43
37:KA:80:VAL:HG12	37:KA:81:VAL:N	2.33	0.43
37:KA:101:PHE:HB3	37:KA:103:TYR:CE1	2.53	0.43
40:NA:57:LEU:HD21	40:NA:72:VAL:HG11	2.00	0.43
40:NA:90:MET:HA	40:NA:93:ILE:HG12	2.01	0.43
46:TA:58:PHE:CZ	46:TA:61:LYS:HA	2.53	0.43
47:UA:28:LYS:O	47:UA:32:GLN:HG3	2.18	0.43
47:UA:29:LEU:HD22	47:UA:69:TYR:CB	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:WA:90:ARG:HB2	49:WA:92:TRP:HE1	1.82	0.43
49:WA:115:ILE:HG12	49:WA:119:ALA:HA	2.00	0.43
49:WA:169:ILE:O	49:WA:180:ALA:HA	2.18	0.43
50:XA:182:LEU:HA	50:XA:185:ARG:O	2.18	0.43
51:YA:66:VAL:HA	64:LB:33:LEU:CD1	2.41	0.43
53:AB:12:VAL:HG11	79:AC:34:TYR:O	2.19	0.43
55:CB:170:GLN:HG2	55:CB:174:LEU:HG	2.00	0.43
55:CB:197:GLU:HG3	55:CB:208:SER:CA	2.48	0.43
57:EB:46:ILE:CD1	57:EB:60:ILE:HG23	2.47	0.43
58:FB:85:PRO:HB3	61:IB:12:ALA:CA	2.49	0.43
59:GB:28:LEU:HD13	80:BC:40:TYR:HD2	1.84	0.43
60:HB:77:ARG:HG3	60:HB:82:LEU:O	2.18	0.43
61:IB:14:GLN:HB3	61:IB:54:ILE:CG1	2.46	0.43
63:KB:59:GLY:HA2	77:YB:32:PHE:HE1	1.82	0.43
65:MB:31:GLU:O	65:MB:34:VAL:HG22	2.18	0.43
65:MB:38:PRO:O	65:MB:42:ARG:HG3	2.18	0.43
68:PB:36:LYS:C	68:PB:38:VAL:H	2.22	0.43
69:QB:77:ASN:HB3	69:QB:95:ASP:C	2.38	0.43
69:QB:116:ILE:HG12	69:QB:122:ARG:HG2	1.99	0.43
70:RB:23:ARG:HD2	70:RB:92:ASP:OD1	2.18	0.43
73:UB:130:VAL:O	73:UB:131:SER:HB3	2.17	0.43
73:UB:130:VAL:HG12	73:UB:140:LYS:HE2	2.01	0.43
80:BC:21:VAL:HG22	80:BC:22:GLU:N	2.34	0.43
82:DC:282:PHE:HA	82:DC:285:PHE:HD2	1.83	0.43
82:DC:593:ILE:HD11	82:DC:645:LEU:HB2	2.00	0.43
1:A:284:G:OP2	56:DB:188:ARG:HG3	2.18	0.43
1:A:998:A:O2'	1:A:999:U:H5'	2.19	0.43
1:A:1012:U:C5'	6:F:247:ARG:HG3	2.49	0.43
1:A:1034:C:O2'	1:A:1035:G:H5'	2.17	0.43
1:A:1288:G:OP2	1:A:1314:U:H2'	2.19	0.43
1:A:1470:C:OP1	1:A:1471:A:H1'	2.18	0.43
2:B:114:A:H5"	19:S:49:ARG:NH2	2.33	0.43
2:B:153:U:C5	2:B:154:U:C5	3.05	0.43
2:B:294:U:H5"	40:NA:53:TYR:CZ	2.54	0.43
2:B:702:C:H2'	2:B:703:G:H8	1.82	0.43
2:B:915:A:O3'	2:B:2957:G:H4'	2.19	0.43
2:B:1237:G:N3	2:B:1237:G:H2'	2.32	0.43
2:B:1307:G:H5"	20:T:60:LYS:HE3	2.01	0.43
2:B:1394:A:H2'	2:B:1395:G:O4'	2.18	0.43
2:B:1480:G:C2	2:B:1871:U:H5"	2.52	0.43
2:B:1566:A:H3'	2:B:1567:U:H5"	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1588:A:H3'	2:B:1589:A:H5'	1.99	0.43
2:B:1709:C:C5'	31:EA:15:ARG:HH22	2.32	0.43
2:B:1807:G:C6	2:B:1808:G:C2	3.07	0.43
2:B:2149:A:O2'	6:F:180:LEU:N	2.52	0.43
2:B:2223:A:O3'	40:NA:74:LYS:HE3	2.18	0.43
2:B:2232:A:H8	2:B:2232:A:O5'	2.02	0.43
2:B:2513:U:H5'	12:L:242:ALA:CB	2.44	0.43
2:B:2576:G:H2'	2:B:2577:C:C6	2.53	0.43
2:B:3094:A:H8	2:B:3094:A:O5'	2.01	0.43
2:B:3295:A:H2'	2:B:3296:A:H8	1.83	0.43
2:B:3297:U:H5	7:G:121:ASN:HD21	1.67	0.43
2:B:3338:C:H2'	2:B:3339:A:C8	2.53	0.43
3:C:104:A:O3'	41:OA:42:ALA:HA	2.19	0.43
5:E:127:GLN:HA	5:E:130:LYS:CE	2.31	0.43
7:G:53:MET:CA	7:G:77:THR:HA	2.42	0.43
7:G:229:VAL:HG23	7:G:265:ALA:HB1	1.99	0.43
7:G:291:GLU:O	7:G:292:ALA:HB3	2.18	0.43
8:H:136:LEU:C	8:H:138:ARG:H	2.21	0.43
9:I:84:PRO:HA	9:I:88:ILE:O	2.17	0.43
9:I:110:LEU:HD12	9:I:110:LEU:H	1.83	0.43
11:K:55:TYR:CD2	11:K:141:TYR:HE2	2.37	0.43
13:M:92:TYR:HE1	13:M:144:ILE:HG13	1.82	0.43
18:R:69:THR:HG22	18:R:70:PHE:H	1.83	0.43
19:S:11:GLN:CB	19:S:12:ARG:HH21	2.30	0.43
19:S:120:TRP:CZ2	19:S:123:GLN:HG2	2.53	0.43
20:T:76:PRO:HA	20:T:138:LEU:CD1	2.45	0.43
20:T:159:LYS:HG2	20:T:160:ARG:N	2.32	0.43
22:V:12:ARG:HB2	22:V:12:ARG:HH11	1.81	0.43
24:X:111:ALA:HA	24:X:116:ALA:H	1.83	0.43
25:Y:37:GLY:HA2	25:Y:63:VAL:CG1	2.49	0.43
26:Z:38:ILE:HA	26:Z:50:LEU:HD11	1.99	0.43
29:CA:133:LEU:C	29:CA:133:LEU:HD22	2.39	0.43
31:EA:13:VAL:HG12	31:EA:14:VAL:H	1.82	0.43
32:FA:128:ARG:HB2	40:NA:8:ALA:CB	2.42	0.43
39:MA:86:ARG:HH11	39:MA:86:ARG:HG2	1.84	0.43
44:RA:111:ARG:HD2	44:RA:112:LYS:NZ	2.33	0.43
44:RA:122:ARG:O	44:RA:122:ARG:HG3	2.19	0.43
49:WA:264:SER:HB2	49:WA:271:VAL:CG2	2.47	0.43
50:XA:10:THR:C	50:XA:12:GLU:H	2.22	0.43
51:YA:141:ALA:HB1	51:YA:207:LEU:HD23	2.01	0.43
52:ZA:165:VAL:HG11	52:ZA:210:THR:HA	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:CB:40:ILE:HG12	55:CB:41:LYS:N	2.33	0.43
56:DB:49:VAL:HG21	56:DB:115:LYS:HE2	2.01	0.43
57:EB:7:LYS:C	57:EB:9:LEU:N	2.72	0.43
57:EB:17:GLU:HG3	57:EB:46:ILE:H	1.82	0.43
59:GB:123:HIS:O	59:GB:127:VAL:HG23	2.17	0.43
63:KB:145:THR:O	63:KB:149:LEU:HB2	2.18	0.43
66:NB:75:VAL:HA	66:NB:78:VAL:CG2	2.48	0.43
68:PB:38:VAL:HG21	68:PB:73:MET:SD	2.59	0.43
71:SB:45:ALA:O	71:SB:46:ILE:HB	2.18	0.43
72:TB:50:PHE:N	72:TB:50:PHE:CD1	2.87	0.43
82:DC:147:LEU:CB	82:DC:193:ALA:HA	2.44	0.43
83:EC:6871:A:H2'	83:EC:6871:A:N3	2.33	0.43
1:A:177:U:H3'	1:A:178:U:H5"	2.00	0.43
1:A:208:U:H2'	1:A:209:U:H6	1.82	0.43
1:A:618:U:H4'	1:A:1030:A:N6	2.33	0.43
1:A:843:U:H2'	1:A:844:A:C8	2.53	0.43
1:A:941:A:H2'	1:A:942:G:H5'	2.01	0.43
1:A:1002:G:O2'	1:A:1003:A:H5'	2.19	0.43
1:A:1041:G:H2'	1:A:1042:G:O4'	2.19	0.43
1:A:1533:C:H5'	1:A:1539:G:O6	2.17	0.43
2:B:338:A:O4'	2:B:1381:A:H4'	2.19	0.43
2:B:521:A:H2'	2:B:522:A:C8	2.53	0.43
2:B:534:U:H1'	24:X:146:LYS:HD3	2.01	0.43
2:B:577:C:C2'	2:B:579:G:H5"	2.49	0.43
2:B:684:G:H2'	2:B:685:G:H8	1.84	0.43
2:B:744:A:H4'	22:V:142:GLY:O	2.18	0.43
2:B:892:U:H2'	2:B:893:C:O4'	2.17	0.43
2:B:936:A:H5"	2:B:937:G:OP1	2.18	0.43
2:B:975:C:H4'	22:V:58:ASN:OD1	2.18	0.43
2:B:988:U:C2'	2:B:989:A:H5'	2.48	0.43
2:B:1259:A:N7	48:VA:53:MET:HG3	2.33	0.43
2:B:1523:U:O2'	2:B:1608:C:H5'	2.19	0.43
2:B:1719:G:OP2	23:W:121:HIS:HB2	2.18	0.43
2:B:1814:A:H4'	2:B:1815:U:O4'	2.18	0.43
2:B:2116:G:H5'	2:B:2118:C:N4	2.33	0.43
2:B:2196:C:C3'	2:B:2242:A:H61	2.30	0.43
2:B:2197:C:N4	2:B:2241:U:C3'	2.81	0.43
2:B:2360:C:H2'	2:B:2362:C:OP2	2.17	0.43
2:B:2655:U:H1'	2:B:2656:A:N1	2.33	0.43
2:B:2701:U:C4'	2:B:2705:A:N6	2.81	0.43
2:B:2746:A:H5"	9:I:178:ASN:HD21	1.82	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2822:U:H2'	2:B:2823:G:O4'	2.18	0.43
2:B:2991:A:P	7:G:20:LYS:HG3	2.58	0.43
2:B:3102:G:O2'	2:B:3103:A:H5'	2.18	0.43
2:B:3257:C:O2'	2:B:3258:U:H5'	2.18	0.43
5:E:124:LEU:O	5:E:128:LEU:HB2	2.17	0.43
6:F:138:GLY:HA3	6:F:147:ARG:HD3	1.99	0.43
8:H:52:VAL:HG12	8:H:103:THR:OG1	2.18	0.43
9:I:57:ASN:O	9:I:57:ASN:CG	2.57	0.43
9:I:128:GLU:HG3	9:I:129:TYR:H	1.82	0.43
11:K:131:GLU:OE2	11:K:136:TYR:HE1	2.01	0.43
13:M:84:LYS:HG2	13:M:191:LEU:HB3	2.01	0.43
13:M:189:GLU:C	13:M:191:LEU:H	2.21	0.43
15:O:37:LEU:HB3	15:O:69:VAL:CG1	2.49	0.43
16:P:66:ASN:N	16:P:69:ALA:HB3	2.33	0.43
17:Q:54:LEU:HD23	17:Q:119:TYR:CD1	2.54	0.43
17:Q:76:THR:HG23	17:Q:101:ARG:HH12	1.82	0.43
18:R:91:CYS:O	18:R:94:TRP:HB3	2.18	0.43
19:S:35:VAL:HG12	19:S:36:ILE:HG13	2.00	0.43
20:T:19:LEU:O	20:T:23:VAL:HG23	2.18	0.43
24:X:29:ILE:HD12	24:X:40:ARG:CB	2.47	0.43
25:Y:54:HIS:CD2	25:Y:55:LYS:H	2.37	0.43
29:CA:92:LYS:HE2	29:CA:112:THR:H	1.82	0.43
30:DA:127:GLU:O	30:DA:127:GLU:HG3	2.18	0.43
31:EA:84:ARG:HE	34:HA:61:MET:CE	2.32	0.43
31:EA:129:TRP:CZ2	38:LA:93:PHE:HE1	2.36	0.43
31:EA:129:TRP:HZ2	38:LA:93:PHE:HE1	1.66	0.43
40:NA:87:VAL:O	40:NA:90:MET:HB2	2.18	0.43
41:OA:87:SER:O	41:OA:88:ALA:CB	2.66	0.43
43:QA:16:ALA:C	43:QA:42:ARG:HH21	2.21	0.43
47:UA:23:ARG:HA	47:UA:26:VAL:HG23	2.01	0.43
51:YA:101:HIS:HA	51:YA:217:LEU:HD22	2.01	0.43
54:BB:11:ARG:HB3	54:BB:26:CYS:O	2.18	0.43
58:FB:22:ARG:HD2	58:FB:25:ARG:CZ	2.49	0.43
59:GB:44:ARG:O	59:GB:48:GLN:HG3	2.18	0.43
59:GB:76:LEU:O	59:GB:80:LEU:HG	2.19	0.43
60:HB:50:THR:HG22	60:HB:55:VAL:HG22	2.00	0.43
63:KB:66:ILE:HG23	63:KB:67:THR:N	2.33	0.43
64:LB:81:VAL:O	64:LB:81:VAL:HG23	2.19	0.43
67:OB:30:THR:O	67:OB:34:LEU:HD12	2.19	0.43
68:PB:100:THR:HB	68:PB:105:VAL:HG23	2.01	0.43
73:UB:34:LEU:O	73:UB:35:GLY:C	2.57	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
73:UB:92:CYS:SG	73:UB:136:TRP:CD1	3.11	0.43
79:AC:40:ARG:HG3	79:AC:41:GLN:N	2.33	0.43
82:DC:226:ALA:HA	82:DC:240:MET:HE1	1.98	0.43
82:DC:728:VAL:HG23	82:DC:800:HIS:O	2.18	0.43
1:A:55:A:N1	1:A:403:G:H1'	2.33	0.43
1:A:367:A:O2'	1:A:368:U:H5'	2.19	0.43
1:A:466:U:H2'	1:A:467:G:O4'	2.18	0.43
1:A:635:A:O2'	1:A:636:A:H5'	2.17	0.43
1:A:639:U:C2	57:EB:100:PRO:HA	2.54	0.43
1:A:777:C:H41	74:VB:10:ARG:HD3	1.83	0.43
1:A:824:G:H2'	1:A:825:U:C6	2.53	0.43
1:A:992:A:H2	1:A:1012:U:N3	2.13	0.43
1:A:1118:G:H2'	1:A:1119:G:O4'	2.19	0.43
1:A:1293:U:H2'	1:A:1294:G:H8	1.84	0.43
1:A:1327:C:O2'	1:A:1328:G:H5'	2.18	0.43
1:A:1581:C:O2'	1:A:1582:U:H5'	2.18	0.43
1:A:1609:U:H5"	66:NB:75:VAL:HG23	1.98	0.43
2:B:75:G:H5"	17:Q:58:VAL:CG2	2.49	0.43
2:B:321:C:OP1	19:S:164:LEU:HD12	2.18	0.43
2:B:662:U:H2'	2:B:663:C:C6	2.53	0.43
2:B:817:A:C6	41:OA:14:LYS:HA	2.54	0.43
2:B:1665:C:H2'	2:B:1666:G:H8	1.83	0.43
2:B:1720:U:O2'	2:B:1721:U:H5'	2.18	0.43
2:B:2082:U:C5	2:B:2086:A:H1'	2.54	0.43
2:B:2094:C:O2	2:B:2094:C:O4'	2.36	0.43
2:B:2561:A:N1	12:L:32:LYS:HB2	2.33	0.43
2:B:2566:C:H2'	2:B:2567:C:C6	2.53	0.43
2:B:2771:U:H5"	46:TA:15:LYS:CE	2.43	0.43
2:B:2901:G:H2'	2:B:2902:A:O4'	2.18	0.43
2:B:3158:G:H2'	2:B:3159:C:H5'	2.00	0.43
2:B:3165:A:C2	2:B:3286:G:N1	2.87	0.43
2:B:3230:G:H4'	18:R:132:LYS:CE	2.48	0.43
3:C:41:A:O3'	41:OA:59:THR:HA	2.19	0.43
3:C:97:A:O2'	39:MA:59:ASN:ND2	2.50	0.43
4:D:33:U:H2'	4:D:34:C:C6	2.53	0.43
4:D:100:C:H3'	4:D:101:G:C8	2.52	0.43
5:E:24:LYS:H	5:E:24:LYS:CD	2.30	0.43
6:F:115:ASN:N	6:F:127:ALA:CB	2.82	0.43
7:G:57:VAL:HG23	7:G:358:TRP:HE3	1.84	0.43
7:G:85:VAL:O	7:G:85:VAL:HG22	2.17	0.43
7:G:87:VAL:HG11	7:G:110:LEU:HG	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:372:THR:C	7:G:374:ALA:N	2.72	0.43
8:H:154:THR:HG23	8:H:253:ALA:HB2	2.00	0.43
8:H:187:LEU:HA	8:H:199:TRP:HA	1.99	0.43
9:I:69:ILE:HD13	25:Y:32:LYS:HG2	2.00	0.43
9:I:219:PHE:HD2	9:I:219:PHE:HA	1.71	0.43
11:K:52:GLN:O	11:K:56:GLU:HG2	2.17	0.43
11:K:162:PRO:O	11:K:163:LEU:O	2.37	0.43
11:K:221:LYS:O	11:K:228:SER:N	2.51	0.43
14:N:96:VAL:HG13	14:N:125:LEU:HD23	1.99	0.43
14:N:139:ARG:HB2	14:N:173:PHE:CE1	2.53	0.43
19:S:154:PRO:HA	19:S:157:LYS:HD2	1.99	0.43
20:T:27:LEU:HD11	20:T:99:LEU:HA	2.01	0.43
20:T:129:LEU:HD21	20:T:133:ARG:O	2.17	0.43
23:W:23:TRP:CB	23:W:51:VAL:HG22	2.32	0.43
23:W:140:GLU:O	23:W:144:GLN:HG2	2.19	0.43
24:X:10:ILE:HG12	24:X:26:ARG:CB	2.48	0.43
24:X:28:ARG:HH12	24:X:64:ILE:HD13	1.80	0.43
29:CA:73:MET:CE	29:CA:76:VAL:HB	2.48	0.43
32:FA:27:LYS:HB3	32:FA:28:HIS:CE1	2.54	0.43
32:FA:135:GLU:O	32:FA:135:GLU:HG2	2.18	0.43
34:HA:14:LEU:HD23	34:HA:14:LEU:HA	1.94	0.43
45:SA:9:ARG:O	45:SA:13:LEU:HG	2.18	0.43
48:VA:123:ALA:HA	48:VA:152:ILE:CB	2.46	0.43
53:AB:76:ARG:HD2	53:AB:77:PHE:CZ	2.52	0.43
54:BB:67:GLN:HB2	54:BB:69:HIS:CD2	2.54	0.43
55:CB:53:VAL:C	55:CB:55:ASP:H	2.20	0.43
56:DB:88:ARG:HH11	56:DB:88:ARG:HB2	1.82	0.43
57:EB:114:ARG:HG3	57:EB:114:ARG:NH1	2.33	0.43
58:FB:64:ASN:ND2	58:FB:73:SER:HB3	2.31	0.43
59:GB:126:ARG:O	59:GB:130:THR:HG22	2.18	0.43
60:HB:74:GLU:O	60:HB:77:ARG:HB3	2.18	0.43
63:KB:9:LYS:HA	63:KB:9:LYS:HE2	2.01	0.43
70:RB:63:LEU:HD12	70:RB:84:MET:SD	2.59	0.43
71:SB:7:GLN:HE21	71:SB:7:GLN:HB2	1.60	0.43
74:VB:10:ARG:O	74:VB:11:LYS:C	2.57	0.43
76:XB:61:GLU:O	76:XB:62:TYR:HB3	2.19	0.43
82:DC:335:LEU:O	82:DC:338:ILE:HG22	2.18	0.43
82:DC:399:ARG:HD3	82:DC:401:PHE:CE1	2.47	0.43
82:DC:729:PHE:O	82:DC:771:TYR:HA	2.19	0.43
83:EC:6811:G:C2'	83:EC:6812:C:H5'	2.49	0.43
1:A:112:A:H4'	61:IB:67:ARG:O	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:139:C:N4	1:A:176:C:H1'	2.33	0.43
1:A:140:A:N3	56:DB:179:VAL:HG21	2.33	0.43
1:A:238:U:OP1	1:A:834:G:H4'	2.19	0.43
1:A:868:G:H4'	63:KB:87:ASP:HB2	2.01	0.43
1:A:1149:G:O3'	1:A:1150:G:H3'	2.18	0.43
1:A:1191:U:H5'	66:NB:143:ARG:NH2	2.34	0.43
1:A:1357:A:H4'	69:QB:126:GLU:HB3	1.99	0.43
2:B:106:A:H2'	2:B:107:A:O4'	2.18	0.43
2:B:360:G:H5"	41:OA:26:SER:CB	2.49	0.43
2:B:720:A:H3'	22:V:69:ARG:NH2	2.34	0.43
2:B:837:A:H61	2:B:856:G:H1'	1.84	0.43
2:B:1003:A:C2	2:B:1004:U:O4'	2.72	0.43
2:B:1097:G:O3'	25:Y:129:LYS:HG2	2.19	0.43
2:B:1117:G:H2'	2:B:1118:C:H6	1.84	0.43
2:B:1256:G:H1'	16:P:123:ARG:HB3	2.01	0.43
2:B:1321:G:N2	24:X:112:ALA:HB2	2.34	0.43
2:B:1828:A:H2'	2:B:1829:G:O4'	2.19	0.43
2:B:2103:U:O2'	2:B:2104:A:H5'	2.19	0.43
2:B:2109:U:H1'	2:B:3362:A:H8	1.83	0.43
2:B:2128:C:H2'	2:B:2129:U:O4'	2.18	0.43
2:B:2182:A:H2'	2:B:2183:A:H8	1.83	0.43
2:B:2932:U:O2	2:B:2934:A:H8	2.02	0.43
2:B:3108:G:H2'	13:M:163:GLN:HE21	1.84	0.43
2:B:3382:U:H3'	2:B:3383:G:H8	1.84	0.43
3:C:82:U:O2	3:C:82:U:C2'	2.63	0.43
4:D:22:A:H2'	4:D:23:A:H8	1.84	0.43
6:F:204:MET:HE2	6:F:209:HIS:HB2	2.00	0.43
7:G:92:TYR:HB2	7:G:157:VAL:CG2	2.48	0.43
7:G:135:ALA:C	7:G:137:TYR:N	2.72	0.43
9:I:74:VAL:HG12	9:I:76:ALA:N	2.34	0.43
9:I:79:TYR:N	9:I:79:TYR:CD2	2.87	0.43
9:I:185:PHE:HD2	9:I:185:PHE:HA	1.74	0.43
10:J:82:ARG:CB	37:KA:104:PRO:HB3	2.45	0.43
11:K:136:TYR:CD2	11:K:231:ASN:HB2	2.54	0.43
11:K:224:ILE:HG12	24:X:36:ILE:CA	2.48	0.43
12:L:156:ASP:HB3	12:L:157:VAL:H	1.41	0.43
12:L:162:LEU:HG	19:S:7:LEU:HD11	2.01	0.43
14:N:53:VAL:HG21	14:N:166:ILE:CD1	2.49	0.43
19:S:53:TYR:O	19:S:54:LYS:HD2	2.17	0.43
21:U:95:LEU:HA	21:U:95:LEU:HD23	1.68	0.43
22:V:170:ARG:HA	22:V:174:ARG:HD2	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:W:106:LEU:HD12	23:W:106:LEU:N	2.32	0.43
24:X:10:ILE:HG21	25:Y:148:PRO:CG	2.46	0.43
26:Z:21:SER:N	26:Z:22:PRO:HD2	2.33	0.43
27:AA:102:ILE:HG13	27:AA:110:LYS:HB3	2.01	0.43
31:EA:75:VAL:HG22	31:EA:76:ASN:O	2.18	0.43
33:GA:28:LYS:HB3	33:GA:29:TYR:CD1	2.54	0.43
37:KA:87:ASN:HD22	37:KA:87:ASN:HA	1.63	0.43
40:NA:66:GLU:O	40:NA:70:ARG:HG3	2.18	0.43
49:WA:147:HIS:CD2	49:WA:151:VAL:HG22	2.53	0.43
51:YA:61:LEU:HD23	51:YA:62:LYS:H	1.83	0.43
56:DB:206:ALA:O	56:DB:210:GLN:HG3	2.18	0.43
57:EB:64:VAL:H	57:EB:65:PRO:HD2	1.83	0.43
58:FB:114:GLU:CA	58:FB:118:GLY:HA2	2.49	0.43
59:GB:132:ARG:HH11	59:GB:132:ARG:HG3	1.84	0.43
61:IB:70:ILE:HA	61:IB:125:VAL:O	2.18	0.43
63:KB:109:LYS:O	63:KB:112:LYS:HB3	2.17	0.43
65:MB:98:ASN:HD21	65:MB:101:ALA:HB3	1.82	0.43
68:PB:72:ILE:O	68:PB:75:ASN:O	2.36	0.43
73:UB:29:TYR:O	73:UB:33:LEU:HB2	2.19	0.43
82:DC:22:MET:HE1	82:DC:23:SER:C	2.39	0.43
1:A:407:A:H2'	1:A:408:C:H6	1.83	0.43
1:A:758:U:H5'	59:GB:7:THR:CG2	2.48	0.43
1:A:865:A:H2'	1:A:866:G:O4'	2.19	0.43
1:A:1144:U:H2'	1:A:1145:U:H6	1.82	0.43
1:A:1596:C:H2'	1:A:1598:U:OP2	2.18	0.43
1:A:1643:U:H2'	1:A:1644:C:O4'	2.19	0.43
2:B:559:A:H2'	2:B:560:G:C4'	2.48	0.43
2:B:869:G:O2'	2:B:870:G:H5'	2.18	0.43
2:B:982:C:H2'	2:B:983:A:C8	2.52	0.43
2:B:1186:G:O2'	24:X:112:ALA:HB1	2.19	0.43
2:B:1222:G:N2	2:B:1285:G:H1'	2.34	0.43
2:B:1238:C:H5"	16:P:82:ILE:CD1	2.47	0.43
2:B:1293:U:O2'	2:B:1294:A:H5'	2.19	0.43
2:B:1476:G:H4'	35:IA:60:TRP:HB3	2.01	0.43
2:B:1481:A:O2'	2:B:1858:A:C2	2.65	0.43
2:B:1690:C:H2'	2:B:1691:U:H1'	2.00	0.43
2:B:1802:C:O2'	2:B:1803:C:H5'	2.18	0.43
2:B:1896:A:H2	27:AA:83:LYS:CD	2.32	0.43
2:B:2679:A:O2'	2:B:2680:A:H5'	2.19	0.43
2:B:3174:A:O2'	2:B:3175:U:H5'	2.19	0.43
3:C:22:U:H2'	3:C:22:U:OP2	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:9:C:C2'	4:D:10:C:H5'	2.49	0.43
4:D:35:C:H2'	4:D:36:C:H5'	2.00	0.43
4:D:58:C:H2'	4:D:59:U:H6	1.84	0.43
6:F:242:ARG:HG3	6:F:243:THR:N	2.33	0.43
8:H:71:VAL:HG22	8:H:72:ALA:N	2.34	0.43
8:H:99:MET:CE	8:H:99:MET:H	2.31	0.43
9:I:95:TRP:HZ2	9:I:157:ALA:N	2.16	0.43
9:I:196:ARG:NE	9:I:200:PHE:HE2	2.17	0.43
10:J:157:GLN:CD	10:J:157:GLN:H	2.22	0.43
11:K:114:GLY:O	11:K:115:THR:HG23	2.19	0.43
11:K:126:LEU:O	11:K:130:ILE:HG12	2.19	0.43
13:M:4:ILE:HG23	13:M:5:GLN:N	2.29	0.43
14:N:42:THR:CG2	14:N:45:GLU:HB2	2.41	0.43
14:N:65:LEU:H	14:N:65:LEU:CD1	2.31	0.43
14:N:99:ILE:CG2	14:N:101:LYS:HB2	2.49	0.43
15:O:60:ARG:HG3	15:O:63:GLU:OE1	2.19	0.43
19:S:173:GLY:C	19:S:174:ILE:HD12	2.39	0.43
20:T:78:ARG:HG3	20:T:78:ARG:HH11	1.84	0.43
20:T:125:ARG:O	20:T:127:LEU:N	2.51	0.43
21:U:112:LEU:HD11	21:U:150:VAL:HG23	2.01	0.43
22:V:126:GLN:O	22:V:130:ARG:HD2	2.18	0.43
24:X:1:MET:HA	24:X:33:ASN:OD1	2.19	0.43
24:X:52:LYS:CE	24:X:54:ALA:HB3	2.47	0.43
25:Y:26:HIS:CE1	25:Y:29:THR:HG23	2.54	0.43
26:Z:50:LEU:HA	26:Z:54:VAL:HG23	1.99	0.43
27:AA:54:LEU:CD2	27:AA:121:GLU:HB2	2.49	0.43
35:IA:6:ASP:O	35:IA:7:VAL:HB	2.18	0.43
38:LA:51:LEU:CG	38:LA:52:GLN:N	2.81	0.43
44:RA:88:LYS:HB2	44:RA:88:LYS:HE3	1.84	0.43
50:XA:189:VAL:HG11	50:XA:193:GLN:CB	2.49	0.43
51:YA:38:PHE:CZ	51:YA:84:ILE:HG21	2.54	0.43
52:ZA:230:TRP:CE2	72:TB:68:ARG:HD3	2.53	0.43
57:EB:148:LYS:O	57:EB:149:ILE:HG23	2.19	0.43
59:GB:45:ILE:HG21	59:GB:105:LEU:CD1	2.48	0.43
59:GB:78:ARG:O	59:GB:82:ARG:HB2	2.19	0.43
60:HB:87:VAL:HG22	60:HB:87:VAL:O	2.18	0.43
63:KB:146:ALA:O	63:KB:147:SER:C	2.57	0.43
64:LB:27:PHE:HE1	64:LB:43:THR:HB	1.84	0.43
64:LB:30:VAL:O	64:LB:39:ILE:HB	2.19	0.43
68:PB:15:LEU:HD21	68:PB:22:VAL:HG12	2.00	0.43
74:VB:91:LEU:HD22	74:VB:96:LEU:HD22	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:146:ALA:O	82:DC:151:ILE:HB	2.19	0.43
82:DC:563:TYR:CE2	82:DC:818:ILE:HG21	2.37	0.43
82:DC:747:LEU:HB3	82:DC:752:GLY:HA3	2.00	0.43
83:EC:6933:G:H2'	83:EC:6934:U:C1'	2.48	0.43
1:A:170:U:H3	1:A:289:U:HO2'	1.66	0.43
1:A:569:C:H2'	1:A:570:A:C5'	2.48	0.43
1:A:617:U:H4'	1:A:1030:A:H2'	2.00	0.43
1:A:736:C:H2'	1:A:737:A:H5"	2.01	0.43
1:A:867:G:H5'	63:KB:4:MET:HE1	2.01	0.43
1:A:891:A:H2'	1:A:892:A:C8	2.54	0.43
1:A:895:G:N2	1:A:917:U:N3	2.67	0.43
1:A:960:U:O2'	63:KB:51:GLY:HA3	2.19	0.43
1:A:1181:U:H4'	65:MB:127:ARG:O	2.18	0.43
1:A:1450:U:H2'	1:A:1451:C:H6	1.83	0.43
1:A:1696:G:H2'	1:A:1697:G:C8	2.53	0.43
1:A:1780:G:H2'	1:A:1781:A:O4'	2.18	0.43
2:B:36:C:H41	2:B:47:C:H1'	1.82	0.43
2:B:110:G:N3	2:B:111:C:H1'	2.34	0.43
2:B:143:G:H2'	2:B:144:A:H8	1.82	0.43
2:B:284:A:N7	46:TA:41:ARG:NH1	2.67	0.43
2:B:666:A:H3'	2:B:667:C:H5"	2.00	0.43
2:B:1190:A:N6	2:B:1193:A:C2	2.87	0.43
2:B:1329:U:H1'	2:B:1330:A:OP1	2.19	0.43
2:B:1457:U:C4	2:B:1476:G:N2	2.86	0.43
2:B:1496:C:H3'	2:B:1496:C:P	2.59	0.43
2:B:1803:C:O2'	2:B:1804:A:H5'	2.18	0.43
2:B:2246:G:H2'	2:B:2247:G:C8	2.49	0.43
2:B:2401:A:O3'	8:H:68:GLY:HA2	2.19	0.43
2:B:2950:G:N3	2:B:2950:G:H2'	2.34	0.43
3:C:78:G:C2'	3:C:79:A:H5'	2.48	0.43
3:C:83:C:H4'	3:C:84:C:C5'	2.49	0.43
6:F:41:ILE:HD13	6:F:42:ARG:C	2.39	0.43
6:F:144:ASN:HB3	6:F:160:SER:CB	2.49	0.43
7:G:148:LEU:CD1	7:G:192:VAL:HG21	2.49	0.43
8:H:51:ALA:HB2	8:H:105:THR:HG23	2.01	0.43
8:H:193:LYS:HG2	8:H:198:ARG:HA	2.00	0.43
9:I:128:GLU:OE1	9:I:192:PRO:HG3	2.18	0.43
11:K:223:PHE:CE2	24:X:35:VAL:HB	2.54	0.43
13:M:8:GLN:CD	13:M:69:ARG:HG2	2.39	0.43
13:M:28:VAL:HG13	13:M:33:THR:CG2	2.48	0.43
19:S:14:LYS:C	19:S:16:SER:H	2.21	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:S:24:ARG:HH11	19:S:24:ARG:HG2	1.83	0.43
20:T:119:VAL:CG1	24:X:167:ARG:HB2	2.48	0.43
21:U:141:SER:O	21:U:143:PRO:HD3	2.18	0.43
21:U:159:LYS:HD3	21:U:159:LYS:N	2.33	0.43
22:V:5:HIS:CE1	22:V:9:GLN:HB2	2.54	0.43
24:X:79:VAL:HG13	24:X:123:ILE:HD13	2.01	0.43
38:LA:81:CYS:C	38:LA:83:ASN:H	2.22	0.43
48:VA:19:LEU:HA	48:VA:88:PHE:HE1	1.83	0.43
48:VA:67:LEU:O	48:VA:67:LEU:HD23	2.19	0.43
48:VA:165:VAL:HG11	48:VA:170:ALA:HB2	1.97	0.43
49:WA:133:VAL:HB	49:WA:142:ALA:CB	2.44	0.43
49:WA:134:TRP:HA	49:WA:140:CYS:HA	2.01	0.43
50:XA:64:ILE:C	50:XA:67:ILE:HG12	2.39	0.43
51:YA:176:VAL:HA	51:YA:184:LEU:CD2	2.49	0.43
52:ZA:120:GLU:HG3	52:ZA:123:GLY:N	2.34	0.43
55:CB:124:LEU:HD12	55:CB:124:LEU:N	2.34	0.43
56:DB:18:ILE:HG21	56:DB:24:ILE:CG2	2.48	0.43
56:DB:136:LYS:HE2	56:DB:176:GLN:HB2	2.00	0.43
56:DB:153:VAL:CG1	56:DB:156:PHE:HB2	2.49	0.43
57:EB:143:LEU:HD22	57:EB:143:LEU:N	2.33	0.43
60:HB:50:THR:HG22	60:HB:55:VAL:CG1	2.49	0.43
74:VB:4:ALA:O	74:VB:5:VAL:HB	2.19	0.43
82:DC:225:PHE:HZ	82:DC:328:LEU:HD21	1.84	0.43
82:DC:347:THR:O	82:DC:350:ALA:HB3	2.19	0.43
82:DC:427:PHE:CD2	82:DC:427:PHE:N	2.87	0.43
82:DC:578:LYS:HE3	82:DC:582:LYS:HG2	2.00	0.43
1:A:36:C:H5"	1:A:530:C:C5'	2.49	0.43
1:A:210:A:H2'	1:A:211:U:C6	2.54	0.43
1:A:213:A:H2'	1:A:214:G:C8	2.54	0.43
1:A:386:G:P	58:FB:25:ARG:HH21	2.42	0.43
1:A:791:A:C2'	1:A:792:U:H5'	2.49	0.43
1:A:811:A:C5	57:EB:111:LYS:HD2	2.53	0.43
1:A:829:A:O4'	1:A:830:U:H5'	2.19	0.43
1:A:961:U:H4'	63:KB:47:PRO:HB3	2.01	0.43
1:A:1225:U:H2'	1:A:1226:A:H5'	2.00	0.43
1:A:1246:C:H2'	1:A:1247:U:C6	2.54	0.43
1:A:1616:G:O2'	78:ZB:18:ARG:HD2	2.18	0.43
2:B:416:A:H2'	2:B:417:A:C8	2.53	0.43
2:B:637:C:C2'	2:B:638:C:C6	2.92	0.43
2:B:656:A:P	36:JA:27:ARG:HA	2.59	0.43
2:B:694:C:P	8:H:118:LYS:HD3	2.59	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:953:G:N3	2:B:1115:G:H5'	2.34	0.43
2:B:1084:A:H2'	2:B:1085:A:H8	1.82	0.43
2:B:1212:A:H2'	2:B:1213:G:O4'	2.19	0.43
2:B:1230:G:H4'	48:VA:33:VAL:O	2.18	0.43
2:B:1253:U:OP1	16:P:147:ASN:HB3	2.19	0.43
2:B:1501:U:C2	2:B:1502:C:C5	3.07	0.43
2:B:1571:A:H2'	2:B:1572:U:O4'	2.19	0.43
2:B:1575:A:C6	2:B:1576:G:N7	2.87	0.43
2:B:1677:G:H2'	2:B:1678:G:H8	1.84	0.43
2:B:1745:C:H2'	2:B:1746:U:C6	2.54	0.43
2:B:2144:A:C2	2:B:2281:A:C5	3.06	0.43
2:B:2178:A:H5'	6:F:132:ASN:OD1	2.19	0.43
2:B:2549:G:H2'	12:L:33:ASN:HD21	1.84	0.43
2:B:2550:U:H3'	6:F:40:TYR:OH	2.19	0.43
2:B:2628:A:C4'	2:B:2798:C:H3'	2.49	0.43
2:B:2724:U:H5"	25:Y:54:HIS:HD1	1.73	0.43
2:B:2861:U:H2'	2:B:2862:U:C6	2.54	0.43
2:B:2908:G:H4'	44:RA:114:LYS:HZ2	1.84	0.43
2:B:3029:A:H8	2:B:3029:A:O5'	2.01	0.43
2:B:3162:C:H2'	2:B:3163:A:H8	1.84	0.43
2:B:3323:A:H2	35:IA:106:THR:HG21	1.83	0.43
3:C:10:A:H2'	3:C:11:C:C6	2.54	0.43
3:C:18:U:C5	3:C:19:C:N4	2.87	0.43
4:D:11:A:O2'	4:D:13:A:H5"	2.19	0.43
5:E:67:ILE:CD1	5:E:144:LEU:HD22	2.49	0.43
7:G:328:ILE:HG23	7:G:329:PRO:HD2	2.00	0.43
8:H:181:VAL:CG1	8:H:182:LEU:H	2.32	0.43
8:H:274:TYR:CE1	8:H:276:LEU:HA	2.54	0.43
8:H:316:ASN:OD1	8:H:317:PRO:HD2	2.19	0.43
9:I:17:GLN:CG	25:Y:20:ARG:HA	2.48	0.43
9:I:152:ARG:CB	9:I:154:THR:HG23	2.46	0.43
11:K:90:LYS:CD	11:K:91:GLY:H	2.30	0.43
12:L:94:PHE:HZ	12:L:150:LEU:HD12	1.83	0.43
13:M:92:TYR:N	13:M:92:TYR:CD1	2.87	0.43
13:M:99:ILE:HD13	13:M:179:ILE:HD11	1.99	0.43
13:M:117:PHE:O	13:M:118:LEU:HB2	2.19	0.43
17:Q:77:LEU:N	17:Q:77:LEU:HD23	2.33	0.43
18:R:39:ILE:HB	18:R:43:LYS:HB2	2.01	0.43
19:S:10:LEU:C	19:S:10:LEU:HD13	2.39	0.43
19:S:138:GLN:CA	19:S:143:ARG:HH11	2.26	0.43
19:S:146:ALA:HA	19:S:149:ASN:CB	2.42	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:S:150:TRP:HE3	19:S:156:HIS:NE2	2.16	0.43
20:T:76:PRO:HG3	20:T:142:SER:OG	2.19	0.43
23:W:106:LEU:H	23:W:106:LEU:CD1	2.32	0.43
23:W:154:ALA:HA	23:W:157:GLU:OE1	2.19	0.43
28:BA:52:THR:C	28:BA:54:LEU:H	2.22	0.43
30:DA:18:ALA:O	30:DA:22:ALA:HB2	2.19	0.43
31:EA:4:PHE:CE1	34:HA:35:ARG:HA	2.54	0.43
31:EA:60:LYS:O	31:EA:64:LYS:HE2	2.19	0.43
32:FA:68:PHE:HD2	32:FA:68:PHE:HA	1.74	0.43
34:HA:16:LEU:CD2	34:HA:97:ASP:H	2.31	0.43
35:IA:77:ARG:HG3	35:IA:89:LEU:HD13	2.00	0.43
37:KA:8:TYR:CE1	37:KA:99:ARG:HD3	2.54	0.43
37:KA:35:VAL:HG12	37:KA:79:GLY:CA	2.48	0.43
38:LA:95:ILE:O	38:LA:99:LYS:HB2	2.19	0.43
40:NA:29:LYS:O	40:NA:32:ALA:HB2	2.18	0.43
45:SA:12:ARG:HA	45:SA:15:ARG:NH1	2.34	0.43
49:WA:265:LEU:N	49:WA:265:LEU:HD22	2.34	0.43
52:ZA:76:LEU:HG	52:ZA:105:GLY:HA2	2.00	0.43
53:AB:23:GLU:HA	53:AB:26:THR:CB	2.49	0.43
54:BB:23:LEU:HD22	54:BB:24:SER:N	2.19	0.43
54:BB:105:VAL:CG1	54:BB:245:LYS:HA	2.49	0.43
54:BB:126:VAL:CG2	54:BB:156:VAL:HA	2.46	0.43
57:EB:181:ILE:HG13	57:EB:182:VAL:H	1.83	0.43
65:MB:44:ARG:HD3	65:MB:45:PHE:N	2.34	0.43
69:QB:123:ARG:HG2	69:QB:124:ILE:N	2.27	0.43
72:TB:94:LEU:CD1	72:TB:102:VAL:HG23	2.48	0.43
74:VB:22:GLN:HA	74:VB:74:LEU:HD23	2.01	0.43
74:VB:45:ALA:HB1	74:VB:50:ALA:O	2.19	0.43
78:ZB:19:THR:OG1	78:ZB:27:GLN:HG3	2.19	0.43
82:DC:431:ILE:HG23	82:DC:457:VAL:O	2.19	0.43
82:DC:457:VAL:HG23	82:DC:458:GLY:N	2.34	0.43
82:DC:578:LYS:HA	82:DC:585:ARG:HA	2.01	0.43
1:A:21:U:O2'	59:GB:18:PRO:HD3	2.19	0.42
1:A:172:C:H2'	1:A:173:A:C8	2.54	0.42
1:A:359:A:H1'	73:UB:38:PHE:CG	2.54	0.42
1:A:707:A:C3'	1:A:708:C:H5"	2.48	0.42
1:A:803:A:C4	57:EB:104:ARG:HB2	2.54	0.42
1:A:826:U:H6	1:A:826:U:H3'	1.84	0.42
1:A:828:U:C3'	1:A:829:A:H5"	2.49	0.42
1:A:851:U:C5	23:W:173:ARG:HD2	2.53	0.42
1:A:962:C:H2'	1:A:963:A:O4'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:992:A:H4'	1:A:1786:G:O4'	2.19	0.42
1:A:1292:G:H2'	1:A:1293:U:H6	1.84	0.42
1:A:1493:A:H4'	1:A:1494:C:C5	2.53	0.42
1:A:1776:A:C6	1:A:1777:G:C6	3.07	0.42
1:A:1785:U:H2'	1:A:1786:G:H8	1.82	0.42
2:B:660:A:H2'	2:B:661:G:N2	2.34	0.42
2:B:998:A:H5'	4:D:102:A:N1	2.33	0.42
2:B:1131:G:C4	2:B:2373:A:C2	3.07	0.42
2:B:1173:U:H2'	2:B:1180:A:C8	2.53	0.42
2:B:1231:A:C2'	2:B:1277:C:N4	2.80	0.42
2:B:1242:G:N3	82:DC:754:VAL:HB	2.34	0.42
2:B:1258:U:O2	2:B:1260:A:N7	2.52	0.42
2:B:1463:U:H2'	2:B:1464:G:C5'	2.48	0.42
2:B:1498:A:C1'	2:B:1602:A:C2	3.02	0.42
2:B:1581:C:C2'	2:B:1582:C:H5'	2.48	0.42
2:B:1867:A:H2	2:B:2119:A:H4'	1.84	0.42
2:B:2131:A:H5"	2:B:2131:A:H8	1.84	0.42
2:B:2206:G:H3'	2:B:2206:G:N3	2.34	0.42
2:B:2684:C:H5'	15:O:130:VAL:HG21	2.00	0.42
2:B:3049:A:H4'	7:G:364:LYS:HG3	2.01	0.42
2:B:3061:G:O2'	2:B:3062:G:H5'	2.19	0.42
7:G:135:ALA:C	7:G:137:TYR:H	2.22	0.42
7:G:251:CYS:C	7:G:252:ILE:HD12	2.39	0.42
7:G:356:LEU:H	7:G:356:LEU:CD2	2.19	0.42
7:G:383:LEU:C	7:G:385:LYS:H	2.21	0.42
9:I:20:PHE:CD1	9:I:30:TYR:CE1	3.07	0.42
9:I:160:PHE:O	9:I:180:PHE:HE1	2.01	0.42
10:J:58:LEU:CD2	10:J:64:LEU:HB2	2.48	0.42
11:K:236:ILE:HG12	11:K:240:VAL:HG23	2.00	0.42
12:L:229:VAL:HG12	12:L:229:VAL:O	2.19	0.42
14:N:60:LEU:HD13	14:N:159:PHE:HE1	1.82	0.42
15:O:60:ARG:HD3	46:TA:104:LEU:H	1.83	0.42
16:P:62:LEU:HD23	16:P:73:VAL:HG11	2.00	0.42
16:P:80:LEU:O	16:P:84:ALA:HB2	2.19	0.42
19:S:15:GLN:HB3	40:NA:51:SER:HB2	2.01	0.42
20:T:27:LEU:HD11	20:T:98:ALA:C	2.39	0.42
22:V:179:ARG:HB3	22:V:179:ARG:CZ	2.49	0.42
26:Z:78:TYR:HA	26:Z:81:LYS:HE2	1.99	0.42
28:BA:13:ILE:HG23	28:BA:32:GLN:CG	2.45	0.42
29:CA:86:VAL:O	29:CA:120:LYS:HB3	2.19	0.42
33:GA:9:ALA:O	33:GA:12:GLN:HG2	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:HA:27:TYR:CB	34:HA:52:ARG:HH12	2.32	0.42
37:KA:44:TYR:O	37:KA:71:VAL:HG21	2.19	0.42
39:MA:92:LEU:HB3	39:MA:97:ALA:HB2	2.00	0.42
40:NA:61:ILE:C	40:NA:63:ASN:N	2.71	0.42
49:WA:2:ALA:HB1	49:WA:6:VAL:CG2	2.49	0.42
51:YA:100:PHE:HD1	51:YA:181:LEU:HG	1.83	0.42
51:YA:111:ARG:HH11	51:YA:111:ARG:HG3	1.84	0.42
51:YA:133:TYR:OH	51:YA:217:LEU:HD23	2.19	0.42
52:ZA:227:PRO:C	52:ZA:229:LEU:H	2.21	0.42
54:BB:114:ILE:C	54:BB:114:ILE:HD12	2.40	0.42
55:CB:92:ARG:HH11	55:CB:92:ARG:HG2	1.84	0.42
56:DB:76:LEU:CD2	56:DB:78:THR:HG23	2.48	0.42
58:FB:25:ARG:HH11	58:FB:25:ARG:HG3	1.84	0.42
58:FB:160:PHE:CE2	58:FB:165:LEU:HD11	2.54	0.42
66:NB:23:LYS:HG3	66:NB:64:ASP:HB2	2.01	0.42
72:TB:13:ALA:HB3	72:TB:27:ILE:HG22	2.00	0.42
77:YB:33:LEU:HD12	77:YB:33:LEU:N	2.34	0.42
82:DC:129:VAL:HG11	82:DC:135:VAL:HG22	2.01	0.42
82:DC:183:GLU:HA	82:DC:186:ASN:HB3	2.01	0.42
82:DC:566:THR:HG21	82:DC:682:ARG:HB3	2.00	0.42
82:DC:601:ILE:HD13	82:DC:643:PRO:HA	2.01	0.42
82:DC:772:LEU:HD21	82:DC:777:SER:HB3	2.00	0.42
83:EC:6909:A:H61	83:EC:6948:U:H3	1.67	0.42
1:A:70:C:N4	1:A:71:A:H62	2.17	0.42
1:A:127:G:H1'	1:A:178:U:H6	1.84	0.42
1:A:320:U:H2'	1:A:321:C:C6	2.54	0.42
1:A:995:A:H2'	1:A:996:U:O4'	2.19	0.42
1:A:1483:A:N3	1:A:1607:G:H1'	2.35	0.42
1:A:1734:U:O2'	1:A:1735:U:H5'	2.19	0.42
2:B:40:A:N7	2:B:937:G:C5	2.87	0.42
2:B:212:G:H5'	8:H:221:ASN:CG	2.37	0.42
2:B:562:C:O3'	24:X:71:LYS:HD2	2.19	0.42
2:B:651:G:H5'	2:B:2871:G:C2	2.54	0.42
2:B:797:U:H2'	2:B:798:G:C8	2.53	0.42
2:B:842:G:N2	2:B:843:A:H1'	2.34	0.42
2:B:892:U:H2'	2:B:893:C:C6	2.54	0.42
2:B:975:C:C5'	22:V:58:ASN:HD21	2.33	0.42
2:B:1162:U:O3'	36:JA:57:TYR:HE1	2.02	0.42
2:B:1240:A:C2'	2:B:1241:U:H5"	2.49	0.42
2:B:1283:C:O2'	2:B:1284:C:H5'	2.19	0.42
2:B:1310:G:O2'	2:B:1311:G:H5'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1490:A:H2'	2:B:1491:A:O4'	2.19	0.42
2:B:2076:G:O2'	2:B:2077:U:H5"	2.19	0.42
2:B:2276:G:N2	2:B:2277:C:H1'	2.34	0.42
2:B:2724:U:OP1	25:Y:78:LYS:HE2	2.19	0.42
2:B:2874:G:H2'	2:B:2945:G:O6	2.19	0.42
2:B:2917:G:OP1	27:AA:47:ASN:N	2.41	0.42
2:B:3057:U:C2	2:B:3086:A:C6	3.07	0.42
2:B:3173:G:C2	37:KA:96:ALA:HB2	2.53	0.42
2:B:3342:A:H2'	2:B:3342:A:N3	2.33	0.42
4:D:96:U:O2'	4:D:97:A:H5'	2.19	0.42
6:F:126:LEU:HD22	6:F:150:LEU:CD2	2.47	0.42
6:F:205:ASN:O	6:F:208:ASP:HB2	2.19	0.42
8:H:188:ARG:HB3	8:H:193:LYS:HG2	2.00	0.42
8:H:327:LEU:N	8:H:327:LEU:HD22	2.33	0.42
9:I:60:ILE:HG22	9:I:62:CYS:SG	2.58	0.42
9:I:236:LEU:HA	9:I:239:ILE:CD1	2.49	0.42
9:I:278:SER:O	9:I:282:ARG:HG3	2.18	0.42
9:I:290:ILE:CA	9:I:294:ALA:HB3	2.47	0.42
10:J:10:TYR:HB3	36:JA:88:HIS:CE1	2.53	0.42
12:L:49:TYR:CD1	12:L:49:TYR:N	2.87	0.42
13:M:115:ARG:C	13:M:117:PHE:H	2.22	0.42
13:M:172:ILE:H	13:M:172:ILE:CD1	2.31	0.42
14:N:52:LEU:HA	14:N:165:ILE:CB	2.48	0.42
14:N:84:ALA:O	14:N:85:PHE:HB3	2.19	0.42
15:O:28:ASP:O	15:O:32:ARG:HG3	2.19	0.42
17:Q:103:ASN:O	40:NA:20:MET:HE2	2.19	0.42
19:S:80:THR:O	19:S:81:TYR:C	2.57	0.42
21:U:31:GLU:HA	21:U:31:GLU:OE2	2.19	0.42
24:X:120:SER:C	24:X:121:ILE:HG13	2.39	0.42
29:CA:115:ARG:HB3	29:CA:115:ARG:HH11	1.84	0.42
34:HA:41:LEU:C	34:HA:41:LEU:HD13	2.39	0.42
35:IA:31:ARG:HB3	35:IA:31:ARG:NH1	2.27	0.42
37:KA:90:PRO:O	37:KA:91:ALA:HB3	2.18	0.42
38:LA:40:THR:HB	38:LA:43:LYS:HE2	2.01	0.42
47:UA:14:TYR:HA	47:UA:17:ARG:NE	2.28	0.42
47:UA:34:HIS:O	47:UA:48:LYS:HE2	2.19	0.42
52:ZA:86:VAL:O	52:ZA:86:VAL:HG23	2.19	0.42
52:ZA:154:LEU:HD11	52:ZA:193:VAL:HG11	2.00	0.42
53:AB:46:THR:HB	53:AB:84:ILE:HG12	2.00	0.42
53:AB:92:GLN:H	53:AB:92:GLN:NE2	2.15	0.42
53:AB:176:LEU:HD12	53:AB:176:LEU:N	2.33	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:AB:190:ARG:H	53:AB:190:ARG:HG2	1.54	0.42
54:BB:248:ILE:HG13	54:BB:249:ALA:H	1.84	0.42
55:CB:166:ARG:NH1	55:CB:166:ARG:HG2	2.34	0.42
56:DB:98:ARG:HH12	56:DB:103:GLY:HA3	1.84	0.42
57:EB:96:ARG:HB2	57:EB:121:VAL:HG13	2.01	0.42
67:OB:58:MET:SD	67:OB:61:ILE:HD12	2.59	0.42
67:OB:82:ASP:C	67:OB:84:TYR:H	2.22	0.42
68:PB:17:LEU:CD1	68:PB:66:LEU:HD22	2.50	0.42
69:QB:128:GLY:O	69:QB:131:ASP:HB2	2.19	0.42
71:SB:6:GLY:O	71:SB:7:GLN:C	2.57	0.42
74:VB:59:GLY:O	74:VB:60:PHE:HB2	2.19	0.42
76:XB:60:PRO:O	76:XB:61:GLU:HB3	2.19	0.42
76:XB:62:TYR:CG	76:XB:63:ALA:N	2.87	0.42
82:DC:78:TYR:HB2	82:DC:99:LEU:HA	2.01	0.42
82:DC:91:GLN:HG2	82:DC:92:LYS:N	2.34	0.42
82:DC:161:ASP:O	82:DC:165:LEU:CB	2.67	0.42
82:DC:412:ARG:NH1	82:DC:426:LEU:HD13	2.34	0.42
1:A:218:A:H5'	1:A:219:A:OP2	2.19	0.42
1:A:218:A:N7	1:A:830:U:H1'	2.33	0.42
1:A:313:U:H4'	1:A:314:C:H5'	2.01	0.42
1:A:333:A:H5'	58:FB:48:THR:HB	2.02	0.42
1:A:485:A:H2'	1:A:486:G:H8	1.80	0.42
1:A:519:C:H3'	1:A:520:A:C8	2.52	0.42
1:A:611:U:H2'	1:A:612:U:H5'	2.00	0.42
1:A:691:C:H2'	1:A:692:C:O4'	2.20	0.42
1:A:749:U:H2'	1:A:750:U:C6	2.55	0.42
1:A:1058:U:C6	1:A:1061:A:N1	2.87	0.42
1:A:1162:C:H1'	78:ZB:22:ARG:HB3	2.01	0.42
1:A:1240:U:H1'	1:A:1244:A:C2	2.55	0.42
1:A:1247:U:H2'	1:A:1248:C:C6	2.54	0.42
1:A:1304:G:H5'	1:A:1322:A:OP2	2.20	0.42
1:A:1389:C:O2	1:A:1389:C:H3'	2.19	0.42
1:A:1527:C:H5"	55:CB:109:LYS:NZ	2.33	0.42
1:A:1693:A:H2	1:A:1709:C:H42	1.66	0.42
2:B:149:U:P	19:S:54:LYS:HG3	2.59	0.42
2:B:522:A:O2'	24:X:67:ALA:HA	2.19	0.42
2:B:750:G:C4	2:B:751:A:C8	3.07	0.42
2:B:791:A:H2'	2:B:792:G:H8	1.80	0.42
2:B:806:A:H1'	2:B:2813:A:H5'	2.01	0.42
2:B:945:C:C2	2:B:946:U:C5	3.08	0.42
2:B:1495:U:O2	43:QA:44:TRP:CE3	2.72	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1656:A:H1'	2:B:1657:C:C5	2.54	0.42
2:B:1695:U:H5'	38:LA:24:LYS:O	2.20	0.42
2:B:1713:G:H1'	2:B:1714:A:C8	2.54	0.42
2:B:1881:A:H2'	2:B:1882:G:C8	2.54	0.42
2:B:2197:C:N4	2:B:2241:U:H3'	2.35	0.42
2:B:2301:U:O2'	2:B:2302:G:H5'	2.19	0.42
2:B:2381:G:O2'	2:B:2382:G:H5'	2.19	0.42
2:B:2679:A:C2'	2:B:2680:A:H5'	2.48	0.42
2:B:2730:G:C2'	2:B:2731:U:H5'	2.48	0.42
2:B:2772:C:P	46:TA:15:LYS:HE3	2.60	0.42
2:B:2937:G:H3'	2:B:2938:G:H5"	2.00	0.42
2:B:3139:A:OP1	7:G:22:ALA:HB2	2.18	0.42
2:B:3164:C:O2'	2:B:3165:A:H8	2.02	0.42
2:B:3329:U:H2'	2:B:3330:A:C8	2.54	0.42
3:C:42:G:OP2	41:OA:64:MET:N	2.44	0.42
3:C:64:U:C5'	39:MA:49:LYS:HG2	2.47	0.42
6:F:104:LEU:CD2	6:F:146:THR:HG21	2.46	0.42
6:F:117:GLU:HG2	6:F:122:ASP:H	1.83	0.42
6:F:249:SER:O	6:F:251:LYS:N	2.51	0.42
7:G:90:VAL:O	7:G:158:VAL:HG13	2.19	0.42
7:G:114:VAL:O	7:G:117:ARG:HB3	2.19	0.42
7:G:125:SER:O	7:G:127:LYS:HD2	2.19	0.42
7:G:331:ASN:HD22	7:G:332:ARG:HD3	1.84	0.42
9:I:290:ILE:C	9:I:290:ILE:HD12	2.39	0.42
10:J:79:VAL:CG2	10:J:80:ASN:H	2.13	0.42
11:K:86:VAL:O	11:K:114:GLY:HA2	2.19	0.42
13:M:16:VAL:HG12	13:M:17:THR:N	2.35	0.42
14:N:57:LEU:C	14:N:57:LEU:HD23	2.39	0.42
14:N:145:LYS:HE3	14:N:149:VAL:CG2	2.48	0.42
15:O:18:VAL:HB	15:O:128:TYR:O	2.20	0.42
15:O:94:ARG:C	15:O:96:PHE:H	2.22	0.42
17:Q:74:GLY:HA3	17:Q:98:ASP:H	1.81	0.42
20:T:108:ILE:CB	20:T:160:ARG:HD2	2.26	0.42
21:U:111:LYS:NZ	21:U:111:LYS:HB3	2.34	0.42
22:V:54:LEU:HD22	22:V:58:ASN:CB	2.49	0.42
23:W:78:TYR:CD2	23:W:78:TYR:N	2.86	0.42
23:W:123:LEU:O	23:W:127:SER:OG	2.35	0.42
29:CA:66:PRO:HG3	29:CA:84:PHE:CD1	2.55	0.42
29:CA:121:LYS:HG2	29:CA:122:ALA:H	1.84	0.42
31:EA:26:VAL:HG21	31:EA:96:VAL:CG1	2.49	0.42
31:EA:37:PRO:HD2	31:EA:38:PHE:CE1	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:FA:8:THR:HA	32:FA:11:HIS:ND1	2.34	0.42
33:GA:28:LYS:O	33:GA:29:TYR:HB2	2.19	0.42
34:HA:16:LEU:HD23	34:HA:16:LEU:C	2.40	0.42
34:HA:52:ARG:NH1	34:HA:52:ARG:HG3	2.34	0.42
34:HA:60:ALA:HB1	34:HA:67:VAL:HG22	2.00	0.42
34:HA:86:ARG:HD3	47:UA:44:LYS:HZ2	1.79	0.42
38:LA:59:PRO:O	38:LA:62:TYR:CD2	2.72	0.42
41:OA:5:THR:N	41:OA:6:PRO:HD2	2.35	0.42
44:RA:110:CYS:SG	44:RA:112:LYS:HB2	2.58	0.42
47:UA:14:TYR:HB2	47:UA:23:ARG:HD2	2.02	0.42
47:UA:73:THR:OG1	47:UA:74:ALA:N	2.52	0.42
50:XA:59:LEU:HD12	50:XA:59:LEU:N	2.33	0.42
51:YA:225:VAL:O	51:YA:229:MET:HG2	2.19	0.42
54:BB:14:ALA:HB1	54:BB:18:TRP:CZ3	2.54	0.42
54:BB:43:PRO:HB2	54:BB:46:VAL:HG23	2.01	0.42
55:CB:88:PRO:O	55:CB:90:ILE:N	2.52	0.42
55:CB:96:SER:O	55:CB:99:MET:HG2	2.18	0.42
55:CB:166:ARG:HG2	55:CB:166:ARG:HH11	1.85	0.42
56:DB:4:ASN:HB3	56:DB:109:LEU:O	2.20	0.42
56:DB:184:LEU:O	56:DB:188:ARG:HB3	2.19	0.42
57:EB:141:ARG:H	57:EB:141:ARG:HG2	1.66	0.42
63:KB:98:VAL:HG12	63:KB:115:LEU:HB2	2.01	0.42
64:LB:123:SER:O	64:LB:124:ASP:HB3	2.19	0.42
65:MB:81:ARG:HH11	65:MB:96:ILE:HG22	1.83	0.42
67:OB:55:THR:O	67:OB:59:LYS:HB2	2.19	0.42
76:XB:17:HIS:CD2	76:XB:18:VAL:N	2.87	0.42
82:DC:18:ASN:N	82:DC:18:ASN:HD22	2.18	0.42
82:DC:218:TRP:CE3	82:DC:328:LEU:HD12	2.54	0.42
82:DC:303:LEU:HD13	82:DC:327:PHE:CE1	2.54	0.42
82:DC:324:MET:HA	82:DC:327:PHE:HB3	2.02	0.42
82:DC:353:ALA:CA	82:DC:356:LEU:HB2	2.39	0.42
82:DC:456:LEU:HD23	82:DC:456:LEU:N	2.35	0.42
1:A:127:G:H1'	1:A:178:U:C6	2.55	0.42
1:A:407:A:H2'	1:A:408:C:C6	2.54	0.42
1:A:452:A:O2'	1:A:453:U:H5'	2.18	0.42
1:A:456:A:H2'	1:A:457:G:O4'	2.19	0.42
1:A:478:A:O2'	59:GB:124:HIS:ND1	2.45	0.42
1:A:599:A:H2'	1:A:600:U:H6	1.84	0.42
1:A:1024:U:C2'	1:A:1025:A:H5"	2.44	0.42
1:A:1474:G:H2'	1:A:1475:A:C8	2.52	0.42
1:A:1797:A:H61	76:XB:84:VAL:HA	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:27:C:H2'	2:B:28:C:H5'	1.99	0.42
2:B:36:C:N4	2:B:47:C:H1'	2.35	0.42
2:B:269:G:H5"	19:S:14:LYS:NZ	2.35	0.42
2:B:351:A:H61	43:QA:39:ALA:H	1.67	0.42
2:B:428:A:H1'	37:KA:25:PRO:CB	2.50	0.42
2:B:651:G:H8	2:B:651:G:O5'	2.02	0.42
2:B:761:A:H61	2:B:770:G:C4'	2.31	0.42
2:B:772:U:H2'	2:B:773:G:O4'	2.20	0.42
2:B:822:G:H2'	2:B:823:C:H6	1.85	0.42
2:B:885:U:OP1	41:OA:6:PRO:HG3	2.19	0.42
2:B:1575:A:C5	2:B:1576:G:N7	2.87	0.42
2:B:1610:G:C6	2:B:1611:G:C6	3.07	0.42
2:B:2470:C:C5'	5:E:26:ARG:HG3	2.49	0.42
2:B:2680:A:H3'	2:B:2681:U:C6	2.55	0.42
2:B:2838:A:H3'	2:B:2839:G:H8	1.84	0.42
2:B:3036:G:C2'	2:B:3037:U:H5'	2.49	0.42
2:B:3070:A:H2'	2:B:3071:U:O4'	2.18	0.42
2:B:3094:A:H2'	2:B:3095:U:H6	1.81	0.42
2:B:3250:U:O2'	2:B:3251:U:H5'	2.20	0.42
2:B:3294:A:H5'	2:B:3294:A:C8	2.52	0.42
5:E:215:ARG:C	5:E:216:LEU:HD12	2.39	0.42
7:G:116:ARG:HD3	7:G:122:TRP:CD2	2.54	0.42
7:G:139:GLN:HE21	7:G:144:ILE:HD12	1.83	0.42
8:H:23:PRO:HG2	8:H:258:LEU:HD23	1.99	0.42
8:H:45:ASN:HA	8:H:110:ASN:HD22	1.83	0.42
9:I:34:LYS:HD3	9:I:35:ARG:N	2.34	0.42
9:I:52:VAL:CG1	9:I:54:ARG:HG2	2.49	0.42
9:I:70:THR:HG22	9:I:70:THR:O	2.19	0.42
9:I:230:ASP:O	9:I:231:ILE:HG13	2.19	0.42
11:K:60:ARG:HH11	11:K:60:ARG:CA	2.17	0.42
12:L:146:LYS:HG2	12:L:173:MET:HB3	2.02	0.42
12:L:173:MET:O	12:L:175:VAL:N	2.53	0.42
18:R:32:LEU:O	18:R:32:LEU:HG	2.20	0.42
19:S:201:ARG:HB3	19:S:201:ARG:NH1	2.35	0.42
22:V:61:PRO:HB2	22:V:88:THR:CG2	2.50	0.42
23:W:138:LEU:O	23:W:142:ILE:HB	2.19	0.42
31:EA:107:ARG:HA	31:EA:110:ALA:HB3	2.01	0.42
32:FA:74:ASN:HD22	32:FA:115:LYS:CB	2.20	0.42
39:MA:77:PRO:O	39:MA:81:ARG:HB2	2.18	0.42
40:NA:70:ARG:C	40:NA:72:VAL:H	2.22	0.42
41:OA:35:SER:O	41:OA:45:ARG:CZ	2.66	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:OA:64:MET:HB2	41:OA:68:LYS:HE2	2.01	0.42
42:PA:26:LYS:HD2	42:PA:78:LEU:HD11	2.00	0.42
45:SA:15:ARG:O	45:SA:19:LYS:HG2	2.19	0.42
48:VA:7:LYS:CA	48:VA:10:GLU:HG2	2.45	0.42
50:XA:22:THR:HG21	50:XA:173:ILE:HD11	2.01	0.42
50:XA:76:ILE:O	50:XA:77:SER:HB2	2.19	0.42
50:XA:188:LEU:HD13	50:XA:189:VAL:CG1	2.41	0.42
51:YA:23:PRO:O	51:YA:27:LYS:HG2	2.19	0.42
53:AB:29:LEU:HD11	53:AB:69:LEU:HD13	2.01	0.42
54:BB:47:PHE:HD2	54:BB:48:LEU:HD12	1.85	0.42
54:BB:75:LYS:O	54:BB:77:ARG:HD2	2.18	0.42
54:BB:103:TYR:HE2	54:BB:184:THR:CG2	2.30	0.42
59:GB:23:ARG:O	59:GB:23:ARG:HG2	2.19	0.42
65:MB:22:LEU:HA	65:MB:25:LEU:HD12	2.01	0.42
66:NB:28:LEU:O	66:NB:65:ILE:HG12	2.20	0.42
68:PB:30:TYR:CZ	68:PB:40:ARG:HB3	2.54	0.42
69:QB:66:TYR:CE2	69:QB:129:GLN:HA	2.54	0.42
71:SB:85:TYR:HD2	71:SB:85:TYR:HA	1.77	0.42
72:TB:17:ALA:HB1	72:TB:22:LYS:HB3	2.02	0.42
72:TB:53:ILE:CD1	77:YB:25:VAL:HG23	2.44	0.42
77:YB:32:PHE:CE1	77:YB:47:PHE:HB2	2.53	0.42
82:DC:399:ARG:HB2	82:DC:453:ILE:HG13	2.02	0.42
82:DC:437:MET:HE1	82:DC:455:GLY:HA3	2.01	0.42
82:DC:464:LEU:O	82:DC:465:LYS:CB	2.67	0.42
82:DC:509:LYS:O	82:DC:512:SER:HB2	2.19	0.42
82:DC:612:PHE:N	82:DC:612:PHE:CD2	2.88	0.42
82:DC:737:GLU:O	82:DC:740:VAL:HB	2.19	0.42
1:A:64:U:C2'	1:A:65:A:H5"	2.49	0.42
1:A:160:C:H2'	1:A:161:U:O4'	2.19	0.42
1:A:234:G:H21	1:A:235:G:H1'	1.84	0.42
1:A:1126:G:OP1	45:SA:11:ARG:HG3	2.19	0.42
1:A:1712:A:H2'	1:A:1713:G:H5"	2.00	0.42
2:B:149:U:OP1	19:S:54:LYS:HG3	2.20	0.42
2:B:640:U:P	36:JA:38:ILE:HG12	2.59	0.42
2:B:744:A:H2'	2:B:745:C:H5'	2.01	0.42
2:B:777:U:H2'	2:B:778:U:O4'	2.19	0.42
2:B:784:A:C5'	22:V:69:ARG:HH21	2.33	0.42
2:B:879:U:OP1	2:B:2981:U:H5"	2.19	0.42
2:B:1299:U:H2'	2:B:1300:G:O4'	2.19	0.42
2:B:1327:C:H1'	37:KA:77:ASN:HD21	1.84	0.42
2:B:1593:A:C1'	38:LA:60:ARG:HD3	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1639:C:O3'	2:B:1738:C:C5'	2.67	0.42
2:B:1722:U:C2'	2:B:1723:A:H5'	2.45	0.42
2:B:2244:A:O2'	2:B:2245:C:H5'	2.19	0.42
2:B:2264:U:O2'	2:B:2265:C:H5'	2.19	0.42
2:B:2372:A:C3'	2:B:2373:A:H5'	2.50	0.42
2:B:2444:C:O2	2:B:2503:G:O6	2.37	0.42
2:B:2651:G:C2	2:B:2796:G:C2	3.07	0.42
2:B:2682:C:H4'	15:O:68:HIS:CG	2.54	0.42
2:B:2733:A:C2	2:B:2734:A:H1'	2.54	0.42
2:B:2770:G:H4'	46:TA:13:LYS:NZ	2.34	0.42
2:B:2973:G:H2'	2:B:2974:U:O4'	2.19	0.42
2:B:3159:C:H2'	2:B:3160:U:O4'	2.19	0.42
3:C:107:G:C8	3:C:137:C:C4	3.07	0.42
3:C:140:G:H2'	3:C:141:C:O4'	2.19	0.42
6:F:42:ARG:NE	6:F:87:PHE:CE2	2.81	0.42
6:F:134:VAL:O	6:F:134:VAL:HG23	2.19	0.42
8:H:32:PRO:CG	8:H:244:LEU:HD21	2.47	0.42
8:H:82:THR:C	8:H:84:ARG:H	2.22	0.42
9:I:83:LEU:N	9:I:84:PRO:CD	2.83	0.42
12:L:91:PHE:CE1	12:L:185:ARG:HB3	2.53	0.42
13:M:12:VAL:HG11	13:M:16:VAL:HB	2.00	0.42
15:O:32:ARG:HB3	15:O:120:ILE:CG2	2.48	0.42
15:O:89:TYR:CE1	15:O:167:TYR:HB3	2.53	0.42
19:S:148:TYR:HA	19:S:151:ILE:HG13	2.00	0.42
20:T:108:ILE:O	20:T:160:ARG:HG3	2.20	0.42
22:V:66:ARG:NH1	22:V:66:ARG:HB2	2.35	0.42
23:W:175:GLN:O	23:W:179:GLU:HG3	2.19	0.42
24:X:12:ARG:HB3	24:X:24:LEU:CG	2.50	0.42
24:X:149:LYS:O	24:X:150:PHE:HB3	2.18	0.42
31:EA:9:LYS:HA	31:EA:86:THR:HA	2.00	0.42
34:HA:24:THR:HG23	34:HA:24:THR:O	2.19	0.42
37:KA:46:GLY:H	37:KA:71:VAL:HG12	1.83	0.42
51:YA:70:LEU:C	51:YA:70:LEU:HD13	2.40	0.42
52:ZA:109:GLY:O	52:ZA:138:PRO:HA	2.20	0.42
54:BB:121:TYR:HA	54:BB:162:ILE:O	2.19	0.42
55:CB:124:LEU:O	55:CB:125:THR:OG1	2.31	0.42
58:FB:105:ASP:O	58:FB:106:ALA:CB	2.67	0.42
59:GB:92:LYS:O	59:GB:94:ASP:N	2.52	0.42
66:NB:39:VAL:CG2	66:NB:48:VAL:HG11	2.49	0.42
66:NB:75:VAL:HA	66:NB:78:VAL:HG23	2.01	0.42
67:OB:41:ILE:CG2	67:OB:42:GLN:H	2.23	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
71:SB:15:ARG:CZ	71:SB:24:ILE:HG21	2.50	0.42
74:VB:20:ARG:HD3	74:VB:76:TYR:CZ	2.55	0.42
75:WB:60:VAL:HA	75:WB:64:VAL:HG11	2.02	0.42
77:YB:36:LYS:HB2	77:YB:78:SER:OG	2.19	0.42
82:DC:123:ASP:HB2	82:DC:348:ALA:HB1	1.99	0.42
82:DC:144:ARG:CB	82:DC:192:TYR:HB3	2.49	0.42
82:DC:412:ARG:HG2	82:DC:428:ILE:HD13	2.01	0.42
82:DC:414:GLN:CB	82:DC:468:THR:HB	2.45	0.42
1:A:42:G:C8	1:A:437:A:H2'	2.55	0.42
1:A:257:A:H4'	58:FB:73:SER:O	2.19	0.42
1:A:367:A:C2'	1:A:368:U:H5'	2.49	0.42
1:A:373:G:H2'	1:A:374:U:O4'	2.19	0.42
1:A:404:G:H2'	1:A:405:C:C6	2.54	0.42
1:A:788:A:P	54:BB:108:ARG:HH22	2.42	0.42
1:A:864:U:C5	77:YB:22:LYS:HA	2.54	0.42
1:A:901:G:OP2	64:LB:25:ASP:HB2	2.20	0.42
1:A:1583:A:N1	1:A:1611:A:C5'	2.82	0.42
1:A:1593:A:C2'	1:A:1594:G:H5'	2.50	0.42
1:A:1687:U:O2	1:A:1714:A:H2	2.01	0.42
1:A:1777:G:H2'	1:A:1778:G:C8	2.52	0.42
2:B:16:A:C6	2:B:17:G:C5	3.08	0.42
2:B:257:U:H5'	17:Q:86:THR:HG23	2.01	0.42
2:B:539:C:H2'	2:B:540:U:H6	1.81	0.42
2:B:729:C:C2'	2:B:730:C:H5'	2.49	0.42
2:B:749:C:H2'	2:B:750:G:H8	1.84	0.42
2:B:810:A:O2'	2:B:811:U:H5'	2.19	0.42
2:B:1073:U:C1'	33:GA:50:THR:OG1	2.67	0.42
2:B:1162:U:H4'	36:JA:57:TYR:CD1	2.54	0.42
2:B:1282:G:C5'	48:VA:83:ASN:HD22	2.23	0.42
2:B:1342:C:H2'	2:B:1343:A:O4'	2.19	0.42
2:B:1520:G:H5"	29:CA:69:SER:OG	2.20	0.42
2:B:1673:G:C2'	2:B:1674:G:H5'	2.49	0.42
2:B:2153:U:OP1	6:F:246:LEU:HB2	2.19	0.42
2:B:2178:A:H1'	2:B:2180:G:C6	2.54	0.42
2:B:2310:U:C4	2:B:2311:G:C6	3.08	0.42
2:B:2655:U:C2'	46:TA:3:ASN:HD22	2.22	0.42
2:B:2723:U:O2'	25:Y:54:HIS:HB2	2.20	0.42
2:B:3308:C:C5	2:B:3309:G:C6	3.08	0.42
9:I:8:LYS:HD3	9:I:12:TYR:CE1	2.54	0.42
12:L:42:PRO:HG2	12:L:43:LYS:H	1.85	0.42
12:L:50:VAL:HB	12:L:52:TRP:CZ2	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:M:117:PHE:CE1	13:M:177:ASP:HB3	2.54	0.42
15:O:60:ARG:HB2	15:O:63:GLU:HB2	2.01	0.42
15:O:155:THR:HG22	15:O:156:LYS:H	1.85	0.42
17:Q:99:HIS:ND1	17:Q:99:HIS:C	2.73	0.42
18:R:20:VAL:HG22	18:R:66:THR:OG1	2.19	0.42
21:U:120:ASN:O	21:U:145:HIS:HB2	2.19	0.42
22:V:9:GLN:NE2	22:V:10:HIS:HD2	2.17	0.42
22:V:70:ALA:HA	22:V:73:GLN:HE21	1.83	0.42
25:Y:60:LYS:HB3	25:Y:76:ILE:HG21	2.00	0.42
33:GA:10:HIS:O	33:GA:11:ASN:CB	2.68	0.42
34:HA:30:THR:HB	34:HA:91:SER:HB2	2.01	0.42
35:IA:31:ARG:HH11	35:IA:31:ARG:CB	2.29	0.42
36:JA:115:LEU:N	36:JA:115:LEU:HD23	2.35	0.42
38:LA:65:VAL:HG12	38:LA:66:SER:N	2.33	0.42
38:LA:98:GLN:HA	38:LA:101:VAL:CG2	2.50	0.42
39:MA:104:GLN:HE22	39:MA:107:LYS:HD3	1.81	0.42
43:QA:42:ARG:HH11	43:QA:42:ARG:CG	2.32	0.42
49:WA:123:ILE:HG22	49:WA:133:VAL:HG22	2.02	0.42
49:WA:130:THR:HB	49:WA:144:LEU:O	2.19	0.42
51:YA:157:GLN:HB2	51:YA:160:HIS:ND1	2.34	0.42
53:AB:171:ALA:HB3	53:AB:186:VAL:O	2.19	0.42
55:CB:33:VAL:HG13	55:CB:37:GLN:OE1	2.19	0.42
55:CB:37:GLN:HB3	66:NB:53:LEU:HD13	2.01	0.42
55:CB:161:ASP:HB3	78:ZB:54:LEU:HD23	2.02	0.42
55:CB:212:LYS:HD3	55:CB:213:LYS:HE3	2.02	0.42
63:KB:9:LYS:HE2	63:KB:9:LYS:CA	2.50	0.42
66:NB:49:TYR:HB3	66:NB:53:LEU:HD21	2.00	0.42
69:QB:12:GLN:C	69:QB:14:PHE:N	2.73	0.42
71:SB:38:LYS:HD2	71:SB:49:GLU:HG3	2.00	0.42
71:SB:38:LYS:HB2	71:SB:49:GLU:HG2	2.01	0.42
72:TB:3:ARG:CZ	72:TB:3:ARG:HB2	2.50	0.42
72:TB:101:TYR:HA	72:TB:113:HIS:ND1	2.34	0.42
73:UB:53:VAL:HG22	73:UB:102:VAL:HG11	2.02	0.42
74:VB:125:LEU:HD12	74:VB:125:LEU:N	2.35	0.42
77:YB:11:THR:O	77:YB:15:GLU:HB2	2.20	0.42
79:AC:33:LYS:HG2	79:AC:34:TYR:N	2.34	0.42
82:DC:155:VAL:HG22	82:DC:202:VAL:HG11	2.01	0.42
82:DC:568:GLU:HA	82:DC:592:PRO:HB3	2.01	0.42
83:EC:6933:G:H2'	83:EC:6934:U:C4'	2.50	0.42
1:A:61:A:H2'	1:A:62:A:O4'	2.19	0.42
1:A:202:A:O2'	1:A:203:U:H5'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:447:U:C4	1:A:448:C:C4	3.08	0.42
1:A:884:A:H2'	1:A:885:G:H8	1.75	0.42
1:A:1060:U:H3'	1:A:1060:U:O2	2.20	0.42
1:A:1144:U:H2'	1:A:1145:U:O4'	2.19	0.42
1:A:1737:G:H4'	2:B:1933:A:H2	1.85	0.42
1:A:1738:U:H2'	1:A:1739:C:C6	2.55	0.42
2:B:96:G:O2'	2:B:97:U:H5'	2.20	0.42
2:B:240:U:H4'	2:B:241:G:H5'	2.00	0.42
2:B:241:G:H2'	2:B:241:G:N3	2.34	0.42
2:B:337:G:O2'	2:B:338:A:H5"	2.20	0.42
2:B:631:U:H2'	2:B:632:G:C8	2.55	0.42
2:B:639:G:O4'	2:B:1434:G:N1	2.52	0.42
2:B:802:C:H2'	2:B:803:C:H6	1.84	0.42
2:B:825:U:H4'	2:B:1587:A:N1	2.35	0.42
2:B:830:A:C8	2:B:831:G:C8	3.08	0.42
2:B:879:U:H4'	21:U:132:ALA:CB	2.41	0.42
2:B:975:C:C5'	22:V:58:ASN:ND2	2.81	0.42
2:B:1065:A:C4	33:GA:28:LYS:HG2	2.54	0.42
2:B:1096:U:H4'	2:B:1097:G:O4'	2.19	0.42
2:B:1347:U:H4'	8:H:305:ALA:HA	2.02	0.42
2:B:1618:G:N2	2:B:1619:A:H1'	2.35	0.42
2:B:1636:U:OP2	31:EA:73:LYS:NZ	2.51	0.42
2:B:1951:C:N4	2:B:2095:G:C4	2.88	0.42
2:B:2164:A:H2'	2:B:2165:G:O4'	2.20	0.42
2:B:2350:C:O2'	2:B:2351:U:H5'	2.20	0.42
2:B:3354:U:H5"	2:B:3355:U:O5'	2.19	0.42
2:B:3392:U:H2'	2:B:3393:U:H6	1.81	0.42
3:C:5:U:OP2	21:U:62:ARG:HG2	2.19	0.42
4:D:77:G:N2	4:D:101:G:H2'	2.34	0.42
6:F:29:LEU:HD12	6:F:124:GLY:H	1.85	0.42
6:F:219:ILE:CD1	6:F:223:SER:HB3	2.48	0.42
7:G:137:TYR:HA	7:G:144:ILE:CD1	2.49	0.42
7:G:339:ARG:NH1	7:G:342:LEU:HD11	2.30	0.42
8:H:275:THR:O	8:H:276:LEU:C	2.58	0.42
9:I:64:ILE:HD11	9:I:105:ILE:HD13	2.02	0.42
9:I:251:PRO:C	9:I:253:PHE:H	2.23	0.42
10:J:47:PHE:CE2	10:J:75:PRO:HD2	2.53	0.42
11:K:55:TYR:CE1	11:K:189:ILE:HD13	2.54	0.42
14:N:139:ARG:HG3	14:N:172:GLY:HA2	2.02	0.42
14:N:152:LEU:C	14:N:154:ARG:N	2.73	0.42
18:R:39:ILE:HD12	18:R:43:LYS:CB	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:T:119:VAL:O	20:T:119:VAL:HG23	2.19	0.42
22:V:30:VAL:HG22	22:V:52:LEU:HD12	2.02	0.42
26:Z:107:PHE:CG	26:Z:108:TYR:N	2.87	0.42
27:AA:87:ARG:HD2	27:AA:91:VAL:CG2	2.50	0.42
30:DA:20:PHE:HD2	30:DA:20:PHE:N	2.18	0.42
30:DA:27:ARG:CD	30:DA:75:ARG:HB3	2.50	0.42
32:FA:73:LEU:HD21	32:FA:81:LEU:HD11	2.01	0.42
37:KA:75:HIS:O	37:KA:80:VAL:HB	2.19	0.42
39:MA:98:SER:O	39:MA:99:GLN:C	2.57	0.42
43:QA:43:ASN:O	43:QA:45:ARG:N	2.53	0.42
49:WA:168:THR:HG22	49:WA:169:ILE:N	2.34	0.42
54:BB:36:HIS:CG	54:BB:85:GLY:HA3	2.54	0.42
54:BB:183:VAL:HG13	54:BB:224:ASN:CB	2.49	0.42
54:BB:246:LEU:HD22	54:BB:251:GLU:HG2	2.01	0.42
55:CB:55:ASP:HB2	55:CB:138:THR:HB	2.02	0.42
56:DB:74:LYS:NZ	56:DB:74:LYS:HB3	2.35	0.42
57:EB:30:SER:CB	57:EB:34:LEU:HD22	2.50	0.42
58:FB:159:GLN:NE2	58:FB:166:TYR:H	2.17	0.42
59:GB:68:LYS:HE2	59:GB:72:GLU:OE1	2.19	0.42
66:NB:48:VAL:O	66:NB:51:PRO:HD2	2.19	0.42
72:TB:5:SER:HB3	72:TB:8:ALA:CB	2.49	0.42
72:TB:93:LEU:O	72:TB:93:LEU:HG	2.20	0.42
82:DC:44:GLY:HA2	82:DC:77:LEU:HB2	2.00	0.42
82:DC:129:VAL:CG1	82:DC:135:VAL:HG22	2.50	0.42
82:DC:288:ILE:HG21	82:DC:320:LEU:HA	2.02	0.42
82:DC:292:LYS:O	82:DC:296:ILE:HG13	2.19	0.42
82:DC:374:PRO:HB3	82:DC:450:ALA:H	1.83	0.42
82:DC:404:THR:HG22	82:DC:449:PRO:HA	2.02	0.42
82:DC:411:VAL:HG13	82:DC:470:THR:O	2.19	0.42
1:A:310:C:H2'	1:A:311:U:O4'	2.20	0.42
1:A:479:C:H5'	59:GB:124:HIS:ND1	2.34	0.42
1:A:567:A:H61	1:A:580:A:H61	1.68	0.42
1:A:750:U:O2'	1:A:751:G:H5'	2.19	0.42
1:A:783:G:HO2'	1:A:784:C:H5	1.65	0.42
1:A:1041:G:N2	1:A:1078:C:C2	2.87	0.42
1:A:1341:A:N1	1:A:1384:A:H2	2.17	0.42
1:A:1425:A:O2'	1:A:1426:C:H5'	2.20	0.42
1:A:1505:A:H2'	1:A:1506:G:C4'	2.49	0.42
2:B:39:A:O5'	2:B:40:A:H4'	2.20	0.42
2:B:330:G:H1	3:C:33:A:N6	2.14	0.42
2:B:385:A:O2'	2:B:386:A:H5'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:426:G:H2'	2:B:427:C:C6	2.55	0.42
2:B:611:A:H1'	2:B:612:U:C6	2.55	0.42
2:B:728:G:N2	22:V:138:LEU:HD22	2.34	0.42
2:B:1066:G:H2'	2:B:1067:U:C6	2.54	0.42
2:B:1214:U:OP1	24:X:91:TYR:HB3	2.19	0.42
2:B:1257:C:N4	2:B:1261:G:H22	2.07	0.42
2:B:1258:U:H2'	2:B:1260:A:OP2	2.19	0.42
2:B:1392:G:H3'	36:JA:125:ARG:NH2	2.28	0.42
2:B:1517:G:H5"	43:QA:22:PRO:CG	2.46	0.42
2:B:1653:G:C4	2:B:1654:A:C8	3.08	0.42
2:B:2149:A:H1'	6:F:180:LEU:O	2.19	0.42
2:B:2196:C:H4'	2:B:2271:A:C4'	2.50	0.42
2:B:2470:C:H5"	5:E:26:ARG:HG3	2.00	0.42
2:B:2606:G:H5"	2:B:2606:G:N3	2.35	0.42
2:B:2638:C:H2'	2:B:2639:G:H8	1.85	0.42
2:B:3158:G:O2'	2:B:3159:C:H5'	2.20	0.42
2:B:3338:C:H2'	2:B:3339:A:H8	1.85	0.42
5:E:172:VAL:CG2	5:E:173:GLU:H	2.23	0.42
5:E:206:VAL:HG22	5:E:216:LEU:HD11	2.01	0.42
8:H:69:ARG:HB3	8:H:71:VAL:HG12	2.01	0.42
8:H:276:LEU:O	8:H:277:PRO:O	2.37	0.42
9:I:281:GLU:HA	9:I:284:ALA:HB3	2.02	0.42
11:K:51:TYR:HB3	11:K:55:TYR:CE2	2.55	0.42
12:L:34:PHE:CD1	12:L:34:PHE:N	2.88	0.42
12:L:158:ASP:HB3	12:L:159:PRO:CD	2.37	0.42
14:N:50:VAL:HB	14:N:148:VAL:CG1	2.49	0.42
14:N:66:GLU:HA	14:N:66:GLU:OE1	2.20	0.42
14:N:174:THR:HG21	14:N:181:TYR:HD1	1.83	0.42
15:O:40:LEU:C	15:O:40:LEU:HD13	2.40	0.42
15:O:49:LYS:HG2	15:O:64:LYS:HG3	2.02	0.42
17:Q:159:VAL:HG11	32:FA:96:LYS:HZ3	1.85	0.42
20:T:27:LEU:C	20:T:29:ASN:H	2.22	0.42
22:V:29:LEU:HB2	22:V:52:LEU:HD13	2.01	0.42
25:Y:56:PHE:O	25:Y:56:PHE:HD1	2.03	0.42
26:Z:33:TYR:C	26:Z:35:LYS:N	2.73	0.42
30:DA:64:LYS:HD2	30:DA:65:GLY:N	2.35	0.42
32:FA:40:HIS:C	32:FA:42:ARG:H	2.23	0.42
32:FA:138:ILE:CG2	32:FA:139:ARG:HG3	2.49	0.42
35:IA:46:THR:HG23	35:IA:46:THR:O	2.20	0.42
49:WA:23:LEU:HD11	49:WA:304:GLY:N	2.35	0.42
50:XA:6:THR:HG23	50:XA:8:ASP:OD2	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:XA:10:THR:O	50:XA:12:GLU:N	2.52	0.42
51:YA:228:LEU:O	51:YA:228:LEU:HG	2.19	0.42
53:AB:92:GLN:HE21	53:AB:92:GLN:N	2.17	0.42
53:AB:207:THR:HB	67:OB:40:THR:OG1	2.19	0.42
54:BB:105:VAL:HG11	54:BB:245:LYS:HA	2.01	0.42
55:CB:120:ILE:HD11	55:CB:191:ALA:HB1	2.01	0.42
56:DB:74:LYS:HZ2	56:DB:74:LYS:HB3	1.85	0.42
56:DB:120:GLU:HB3	56:DB:125:THR:HB	2.02	0.42
56:DB:129:VAL:CG2	56:DB:130:PRO:HD2	2.49	0.42
57:EB:38:LEU:H	57:EB:40:PRO:HD2	1.84	0.42
58:FB:63:GLY:O	58:FB:75:LYS:HA	2.19	0.42
60:HB:3:MET:HB3	60:HB:41:TYR:CE2	2.55	0.42
60:HB:31:LYS:HD3	60:HB:36:ASP:OD1	2.20	0.42
61:IB:155:LYS:CE	63:KB:135:LEU:HD23	2.50	0.42
65:MB:9:LYS:HB3	65:MB:10:ARG:H	1.62	0.42
68:PB:4:VAL:HB	75:WB:47:TYR:HE2	1.85	0.42
70:RB:41:ILE:HG23	70:RB:103:ILE:CD1	2.50	0.42
72:TB:11:LEU:HD22	72:TB:12:ASN:ND2	2.35	0.42
72:TB:68:ARG:NH1	72:TB:68:ARG:HG2	2.33	0.42
72:TB:112:ASP:OD1	72:TB:114:GLU:N	2.50	0.42
76:XB:41:ILE:H	76:XB:41:ILE:CD1	2.32	0.42
82:DC:573:GLN:NE2	82:DC:719:LEU:HD13	2.34	0.42
83:EC:6799:C:H2'	83:EC:6800:G:H4'	2.02	0.42
1:A:64:U:C3'	1:A:65:A:H5"	2.49	0.42
1:A:140:A:H4'	1:A:141:U:H5'	2.00	0.42
1:A:144:U:H5	56:DB:137:ARG:HH12	1.67	0.42
1:A:684:A:C3'	1:A:685:A:C5'	2.97	0.42
1:A:690:G:H2'	1:A:691:C:C5'	2.39	0.42
1:A:775:G:H2'	1:A:776:G:O4'	2.20	0.42
1:A:784:C:H2'	1:A:785:U:O4'	2.20	0.42
1:A:889:U:H2'	1:A:890:C:O4'	2.20	0.42
1:A:1277:G:H2'	1:A:1278:G:O4'	2.19	0.42
2:B:277:G:H5"	46:TA:49:GLY:HA2	2.02	0.42
2:B:310:U:C3'	2:B:311:C:H5"	2.50	0.42
2:B:364:G:H5"	8:H:84:ARG:HG3	2.02	0.42
2:B:520:U:H5	8:H:349:THR:O	2.03	0.42
2:B:593:C:H2'	2:B:594:U:O4'	2.19	0.42
2:B:826:G:O5'	2:B:1590:G:H4'	2.20	0.42
2:B:898:U:C4	2:B:899:U:C5	3.07	0.42
2:B:1002:A:N1	2:B:1050:U:O2'	2.52	0.42
2:B:1308:A:H8	2:B:2368:A:HO2'	1.66	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1496:C:O5'	2:B:1496:C:C6	2.70	0.42
2:B:1532:C:H2'	2:B:1533:U:O4'	2.18	0.42
2:B:1897:G:C1'	27:AA:83:LYS:HD2	2.50	0.42
2:B:1918:C:H2'	2:B:1919:G:H8	1.84	0.42
2:B:2291:A:H2'	2:B:2292:U:O4'	2.20	0.42
2:B:2322:C:C2'	2:B:2323:G:H5'	2.50	0.42
2:B:2325:G:H2'	2:B:2326:A:O4'	2.20	0.42
2:B:2339:C:H41	2:B:3093:C:H5'	1.84	0.42
2:B:2654:C:OP2	46:TA:2:VAL:HG13	2.19	0.42
2:B:3148:U:H5'	7:G:104:THR:HB	2.02	0.42
4:D:2:G:O2'	4:D:3:U:H5'	2.20	0.42
7:G:72:VAL:HA	27:AA:88:ARG:O	2.20	0.42
9:I:50:ARG:HB2	9:I:65:ILE:HD13	2.01	0.42
9:I:87:GLY:C	9:I:243:ALA:HB2	2.40	0.42
9:I:196:ARG:HA	9:I:199:ILE:HB	2.01	0.42
10:J:159:LEU:C	10:J:161:ALA:H	2.23	0.42
11:K:107:ARG:O	11:K:109:THR:N	2.53	0.42
12:L:152:LEU:HD12	12:L:152:LEU:N	2.35	0.42
14:N:33:ILE:HD11	14:N:35:ASP:O	2.20	0.42
14:N:86:HIS:O	14:N:138:VAL:HA	2.20	0.42
14:N:99:ILE:HG23	14:N:101:LYS:HB2	2.01	0.42
15:O:86:VAL:CG2	15:O:111:ASP:HB3	2.50	0.42
15:O:106:ILE:HD11	15:O:127:PHE:HE1	1.85	0.42
17:Q:9:ILE:HD11	32:FA:49:HIS:CG	2.54	0.42
20:T:126:VAL:HG13	20:T:127:LEU:HG	2.01	0.42
21:U:24:VAL:HG11	21:U:87:SER:HA	2.01	0.42
23:W:135:LYS:O	23:W:139:VAL:HG23	2.19	0.42
26:Z:90:ARG:O	26:Z:91:ASP:CB	2.67	0.42
27:AA:13:ILE:HD12	27:AA:54:LEU:O	2.19	0.42
27:AA:85:TRP:O	27:AA:92:PHE:HA	2.19	0.42
28:BA:49:ILE:C	28:BA:51:TRP:H	2.23	0.42
30:DA:3:LYS:HG2	30:DA:4:GLN:H	1.85	0.42
30:DA:58:VAL:O	30:DA:64:LYS:HD2	2.20	0.42
34:HA:16:LEU:HD21	34:HA:97:ASP:HB2	2.01	0.42
38:LA:7:PHE:CZ	38:LA:18:ASN:HB3	2.54	0.42
39:MA:33:VAL:O	39:MA:33:VAL:HG12	2.20	0.42
40:NA:53:TYR:CE1	40:NA:76:ARG:HG2	2.55	0.42
42:PA:46:ARG:HB2	42:PA:51:LEU:HD12	2.02	0.42
46:TA:12:CYS:SG	46:TA:77:CYS:SG	3.12	0.42
50:XA:86:VAL:HG12	50:XA:174:TRP:CZ3	2.55	0.42
51:YA:66:VAL:CA	64:LB:33:LEU:HD13	2.43	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:YA:111:ARG:HB3	76:XB:68:TYR:CB	2.35	0.42
53:AB:79:TYR:CD2	53:AB:84:ILE:HG13	2.55	0.42
53:AB:202:LEU:N	53:AB:202:LEU:HD22	2.35	0.42
54:BB:211:LYS:CB	54:BB:217:THR:HG22	2.48	0.42
55:CB:61:TYR:HH	78:ZB:52:ASP:CG	2.23	0.42
57:EB:49:ILE:O	57:EB:56:LYS:HB3	2.20	0.42
66:NB:88:GLY:HA2	66:NB:91:ALA:HB3	2.00	0.42
67:OB:53:TYR:O	67:OB:57:LEU:HG	2.18	0.42
72:TB:11:LEU:HD22	72:TB:12:ASN:HD22	1.84	0.42
72:TB:89:TRP:CZ3	72:TB:125:ILE:HD13	2.55	0.42
82:DC:734:GLN:NE2	82:DC:767:THR:HB	2.35	0.42
1:A:139:C:H1’	1:A:140:A:OP2	2.19	0.42
1:A:161:U:H5’	56:DB:84:TYR:C	2.41	0.42
1:A:320:U:O5’	1:A:321:C:H5”	2.20	0.42
1:A:410:A:H2’	1:A:411:C:C6	2.55	0.42
1:A:457:G:O2’	1:A:458:G:H5’	2.20	0.42
1:A:612:U:H2’	1:A:613:G:C8	2.55	0.42
1:A:923:A:O2’	1:A:924:A:H5’	2.20	0.42
1:A:931:C:H1’	51:YA:120:LEU:HB3	2.01	0.42
1:A:961:U:H5’	63:KB:47:PRO:O	2.20	0.42
1:A:1218:G:P	1:A:1265:G:H22	2.42	0.42
1:A:1314:U:H4’	1:A:1315:U:C5	2.54	0.42
1:A:1500:C:H5”	69:QB:102:ARG:HD3	2.02	0.42
1:A:1541:G:C6	1:A:1542:G:C2	3.07	0.42
2:B:23:A:H2’	2:B:24:G:O4’	2.20	0.42
2:B:129:U:H2’	2:B:130:A:N7	2.34	0.42
2:B:136:G:C4	2:B:137:G:C8	3.07	0.42
2:B:220:G:N7	2:B:1389:G:N1	2.68	0.42
2:B:307:A:H2’	2:B:308:A:H8	1.80	0.42
2:B:527:A:H2’	2:B:528:U:C6	2.55	0.42
2:B:994:G:OP2	25:Y:14:MET:HA	2.19	0.42
2:B:1010:G:N2	14:N:193:ASP:OD2	2.53	0.42
2:B:1430:U:H2’	32:FA:9:ARG:NH2	2.25	0.42
2:B:1460:A:C6	2:B:1461:A:C6	3.08	0.42
2:B:1624:G:H2’	2:B:1643:A:N1	2.34	0.42
2:B:1689:U:O2’	2:B:1690:C:H5’	2.20	0.42
2:B:1727:G:O4’	2:B:1731:A:H5’	2.20	0.42
2:B:1824:U:H5”	42:PA:3:ARG:HH22	1.84	0.42
2:B:1913:A:H1’	2:B:2120:A:O2’	2.20	0.42
2:B:2735:U:C4’	25:Y:51:GLY:HA2	2.47	0.42
2:B:2907:G:H2’	2:B:2908:G:H8	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2993:G:C6	2:B:3142:A:C4	3.08	0.42
2:B:3229:G:N3	18:R:129:TYR:HE1	2.18	0.42
2:B:3278:C:O2	2:B:3278:C:H2'	2.20	0.42
4:D:75:G:H1'	4:D:104:A:N6	2.35	0.42
5:E:102:LYS:HA	5:E:105:LYS:HB2	2.02	0.42
7:G:87:VAL:HB	7:G:110:LEU:HD11	2.02	0.42
8:H:303:GLY:O	8:H:304:GLN:HB2	2.20	0.42
9:I:247:ILE:C	9:I:249:ALA:H	2.22	0.42
12:L:82:LEU:HD11	12:L:86:THR:CG2	2.49	0.42
12:L:240:ASN:O	12:L:243:GLN:HB3	2.19	0.42
16:P:107:ASP:HB3	16:P:108:GLU:H	1.67	0.42
17:Q:46:ILE:CG2	17:Q:49:ARG:HB2	2.43	0.42
18:R:48:GLY:O	18:R:53:VAL:HG12	2.20	0.42
18:R:93:LYS:O	18:R:96:ALA:HB3	2.20	0.42
19:S:65:ARG:HD3	19:S:129:TYR:HE1	1.85	0.42
20:T:65:ASN:C	20:T:67:THR:N	2.73	0.42
21:U:26:PHE:HB2	21:U:144:SER:HB3	2.01	0.42
21:U:45:GLN:O	21:U:48:LEU:HB2	2.20	0.42
23:W:138:LEU:HD21	23:W:142:ILE:CD1	2.49	0.42
24:X:129:ILE:CG2	24:X:134:ASP:HB3	2.41	0.42
26:Z:10:LYS:HB3	26:Z:68:THR:OG1	2.20	0.42
27:AA:33:ASN:N	27:AA:33:ASN:ND2	2.67	0.42
29:CA:72:ALA:O	29:CA:76:VAL:HG23	2.20	0.42
29:CA:109:LYS:HE3	29:CA:111:ASN:HD21	1.85	0.42
30:DA:20:PHE:N	30:DA:20:PHE:CD2	2.87	0.42
30:DA:52:ARG:O	30:DA:70:ILE:HB	2.20	0.42
34:HA:30:THR:HG21	34:HA:89:VAL:HG22	2.01	0.42
34:HA:77:LEU:HD23	34:HA:88:GLY:CA	2.48	0.42
36:JA:82:LEU:CD1	36:JA:108:ILE:HG23	2.50	0.42
36:JA:104:ASN:N	36:JA:104:ASN:HD22	2.18	0.42
39:MA:31:LEU:HA	39:MA:34:GLN:NE2	2.35	0.42
49:WA:203:THR:CG2	49:WA:212:ALA:HB3	2.48	0.42
50:XA:110:TYR:HA	50:XA:115:PHE:CZ	2.55	0.42
50:XA:133:ILE:HD12	50:XA:133:ILE:N	2.35	0.42
50:XA:163:ASN:HD22	50:XA:163:ASN:HA	1.55	0.42
51:YA:120:LEU:C	51:YA:120:LEU:HD23	2.41	0.42
54:BB:104:ASP:OD1	54:BB:110:ALA:HB2	2.19	0.42
55:CB:165:LEU:HG	55:CB:169:ASN:OD1	2.20	0.42
64:LB:35:GLY:C	64:LB:37:GLU:N	2.72	0.42
68:PB:52:VAL:CG1	68:PB:56:LYS:HD2	2.50	0.42
71:SB:41:GLU:CD	71:SB:41:GLU:H	2.24	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
72:TB:53:ILE:HG22	72:TB:60:LYS:O	2.19	0.42
73:UB:74:VAL:HG12	73:UB:75:GLN:N	2.35	0.42
77:YB:49:HIS:HA	77:YB:69:GLY:O	2.19	0.42
82:DC:10:ARG:O	82:DC:13:MET:HB2	2.19	0.42
82:DC:164:LEU:HD11	82:DC:174:LEU:HD22	2.02	0.42
82:DC:655:TYR:HD2	82:DC:693:LEU:CD1	2.32	0.42
82:DC:831:GLU:O	82:DC:833:PRO:HD3	2.20	0.42
1:A:351:C:H4'	73:UB:13:ARG:CZ	2.50	0.41
1:A:398:G:H5"	58:FB:49:ARG:HE	1.84	0.41
1:A:628:G:P	63:KB:120:SER:HB3	2.60	0.41
1:A:758:U:O3'	59:GB:7:THR:HB	2.19	0.41
1:A:877:G:H5'	1:A:937:C:H1'	2.01	0.41
1:A:956:C:H2'	1:A:957:G:C8	2.55	0.41
1:A:959:U:H5'	63:KB:15:ALA:C	2.40	0.41
1:A:1160:A:H2'	1:A:1161:C:H6	1.85	0.41
1:A:1177:C:H4'	1:A:1189:A:H61	1.83	0.41
1:A:1393:C:H2'	1:A:1394:G:H8	1.83	0.41
1:A:1712:A:C3'	1:A:1713:G:H5"	2.50	0.41
2:B:80:G:H4'	2:B:326:U:O2'	2.19	0.41
2:B:198:A:N3	2:B:218:G:O2'	2.53	0.41
2:B:271:C:O2	40:NA:82:ARG:NH2	2.53	0.41
2:B:286:U:H2'	2:B:287:G:O4'	2.20	0.41
2:B:299:G:H2'	2:B:300:G:O4'	2.20	0.41
2:B:335:G:OP1	30:DA:9:SER:HB2	2.20	0.41
2:B:412:G:C2	21:U:118:GLN:HG3	2.55	0.41
2:B:416:A:H2'	2:B:417:A:H8	1.85	0.41
2:B:523:A:C2'	2:B:524:U:H5'	2.38	0.41
2:B:633:C:H2'	2:B:634:C:H6	1.85	0.41
2:B:726:G:N2	2:B:744:A:H62	2.13	0.41
2:B:786:A:H5'	22:V:146:SER:O	2.19	0.41
2:B:1116:G:H3'	2:B:1117:G:C5'	2.48	0.41
2:B:1157:G:H2'	2:B:1158:A:O4'	2.20	0.41
2:B:1260:A:H4'	2:B:1279:C:O2'	2.20	0.41
2:B:1308:A:N6	2:B:2367:A:C2	2.88	0.41
2:B:1377:G:C6	2:B:1378:U:C4	3.08	0.41
2:B:1380:G:C5'	8:H:191:LYS:HB2	2.50	0.41
2:B:1802:C:H1'	38:LA:60:ARG:HA	2.02	0.41
2:B:1864:A:N7	2:B:1865:A:C5	2.88	0.41
2:B:2227:C:O2'	2:B:2228:A:H5'	2.20	0.41
2:B:2269:U:H1'	2:B:2271:A:N7	2.35	0.41
2:B:3004:C:C2'	2:B:3005:A:H5'	2.49	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:3080:G:H2'	2:B:3081:C:C6	2.55	0.41
2:B:3241:G:H2'	2:B:3242:G:H5'	2.01	0.41
2:B:3284:G:H2'	2:B:3285:C:C6	2.54	0.41
8:H:120:TYR:C	8:H:120:TYR:HD1	2.22	0.41
8:H:281:ILE:HG13	22:V:125:ASP:CB	2.49	0.41
8:H:299:ILE:HG22	8:H:300:ARG:O	2.19	0.41
9:I:34:LYS:C	9:I:36:LEU:N	2.73	0.41
10:J:171:PRO:HB2	37:KA:43:PHE:HE2	1.83	0.41
13:M:47:LYS:CE	18:R:5:SER:HB2	2.47	0.41
13:M:49:ASN:O	13:M:51:GLN:N	2.53	0.41
14:N:43:VAL:HG23	14:N:192:ASP:OD1	2.20	0.41
14:N:80:SER:HB2	14:N:144:ASN:HD21	1.83	0.41
17:Q:145:PHE:CE2	39:MA:118:ILE:HD13	2.50	0.41
20:T:62:THR:HG22	20:T:65:ASN:H	1.84	0.41
23:W:45:VAL:CA	23:W:50:ILE:HB	2.50	0.41
24:X:27:MET:SD	24:X:44:PHE:CB	3.08	0.41
27:AA:33:ASN:HD21	27:AA:63:LYS:CB	2.33	0.41
28:BA:5:ILE:C	28:BA:5:ILE:HD12	2.40	0.41
29:CA:109:LYS:HE2	29:CA:111:ASN:OD1	2.19	0.41
31:EA:10:VAL:CG1	31:EA:11:ALA:N	2.82	0.41
35:IA:11:GLU:HG3	35:IA:74:ARG:HG3	2.02	0.41
39:MA:101:THR:O	39:MA:103:LYS:N	2.50	0.41
40:NA:30:LYS:C	40:NA:32:ALA:H	2.22	0.41
49:WA:317:THR:HG22	49:WA:318:ALA:N	2.35	0.41
50:XA:98:ILE:HD11	50:XA:116:LYS:HE3	2.01	0.41
50:XA:109:ASN:O	50:XA:115:PHE:CD2	2.72	0.41
50:XA:189:VAL:CG1	50:XA:190:ASP:N	2.77	0.41
54:BB:246:LEU:HD12	54:BB:246:LEU:N	2.35	0.41
55:CB:47:SER:OG	55:CB:49:GLU:HG3	2.20	0.41
56:DB:18:ILE:HG21	56:DB:24:ILE:HG23	2.02	0.41
56:DB:82:SER:C	56:DB:84:TYR:H	2.23	0.41
56:DB:162:VAL:HG22	56:DB:163:THR:N	2.35	0.41
56:DB:188:ARG:HB2	56:DB:188:ARG:NH1	2.35	0.41
57:EB:91:ILE:CG1	57:EB:92:PHE:H	2.25	0.41
61:IB:2:SER:CB	61:IB:82:ARG:H	2.16	0.41
61:IB:5:LEU:O	61:IB:6:THR:OG1	2.30	0.41
61:IB:109:VAL:HA	61:IB:135:VAL:HG13	2.02	0.41
61:IB:123:VAL:HG22	61:IB:125:VAL:HG13	2.01	0.41
63:KB:98:VAL:HG11	63:KB:115:LEU:HB2	2.01	0.41
64:LB:52:ARG:HB3	64:LB:52:ARG:CZ	2.50	0.41
68:PB:4:VAL:HG13	75:WB:78:ILE:HG22	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
72:TB:52:TYR:HA	72:TB:61:ILE:HA	2.01	0.41
73:UB:86:PHE:HD2	73:UB:117:ILE:CD1	2.33	0.41
75:WB:60:VAL:HG12	75:WB:68:ARG:HH12	1.85	0.41
76:XB:10:ARG:O	76:XB:11:ASN:C	2.58	0.41
76:XB:75:VAL:O	76:XB:79:ILE:HG13	2.20	0.41
76:XB:84:VAL:CG1	76:XB:85:ARG:H	2.11	0.41
77:YB:36:LYS:HA	77:YB:43:ILE:HG22	2.02	0.41
80:BC:41:THR:HA	80:BC:45:VAL:HB	2.02	0.41
82:DC:144:ARG:HG3	82:DC:192:TYR:CB	2.48	0.41
82:DC:419:VAL:CG1	82:DC:420:PRO:HD2	2.50	0.41
82:DC:423:LYS:O	82:DC:426:LEU:HB3	2.19	0.41
82:DC:498:ALA:O	82:DC:501:LEU:HB2	2.20	0.41
82:DC:566:THR:HG22	82:DC:682:ARG:H	1.83	0.41
1:A:119:A:H1’	1:A:397:A:C5	2.55	0.41
1:A:1051:G:H2’	1:A:1053:G:C8	2.55	0.41
1:A:1051:G:O2’	1:A:1052:U:OP1	2.35	0.41
1:A:1053:G:H2’	1:A:1053:G:N3	2.35	0.41
1:A:1128:C:C2’	1:A:1129:U:H5’	2.50	0.41
1:A:1189:A:H2’	1:A:1190:C:H6	1.81	0.41
1:A:1479:A:H1’	69:QB:15:ILE:HD11	2.02	0.41
1:A:1542:G:N2	1:A:1568:C:O4’	2.52	0.41
1:A:1586:A:H2’	1:A:1587:A:O4’	2.20	0.41
1:A:1736:G:H2’	1:A:1737:G:C8	2.55	0.41
1:A:1751:C:H2’	1:A:1752:U:C6	2.55	0.41
2:B:26:A:O2’	2:B:329:U:H5”	2.20	0.41
2:B:269:G:C6	19:S:14:LYS:HB2	2.54	0.41
2:B:903:U:O4’	2:B:1535:A:C2	2.74	0.41
2:B:1064:A:H4’	2:B:1065:A:H5”	2.01	0.41
2:B:1158:A:H2’	2:B:1159:A:C4’	2.51	0.41
2:B:1218:U:H1’	2:B:1219:C:C5’	2.50	0.41
2:B:1236:G:O4’	2:B:1245:A:H1’	2.21	0.41
2:B:1337:A:H2’	2:B:1338:C:H6	1.85	0.41
2:B:1509:A:H3’	2:B:1510:G:C8	2.55	0.41
2:B:1718:G:H1’	2:B:1731:A:N3	2.35	0.41
2:B:2349:U:C4	2:B:2350:C:N4	2.88	0.41
2:B:2351:U:H2’	2:B:2352:A:H8	1.82	0.41
2:B:2424:A:H4’	19:S:72:LYS:HE3	2.02	0.41
2:B:2443:A:H2	2:B:2505:U:H1’	1.78	0.41
2:B:2528:G:C6	2:B:2529:A:C6	3.08	0.41
2:B:2899:C:C6	13:M:171:ASP:HB2	2.55	0.41
4:D:50:U:C2	9:I:222:LEU:HD23	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:113:VAL:O	6:F:134:VAL:HG22	2.20	0.41
6:F:136:ILE:HG13	6:F:148:VAL:CG1	2.41	0.41
7:G:93:VAL:HG13	7:G:95:THR:HG22	2.02	0.41
8:H:165:ALA:O	8:H:169:LEU:HG	2.20	0.41
9:I:236:LEU:HA	9:I:239:ILE:HD12	2.02	0.41
10:J:54:TYR:CD2	10:J:55:LEU:N	2.88	0.41
12:L:122:LYS:O	12:L:123:GLN:HB3	2.20	0.41
14:N:52:LEU:HA	14:N:165:ILE:CG2	2.48	0.41
16:P:106:LEU:O	16:P:107:ASP:CB	2.67	0.41
18:R:58:ILE:CG1	18:R:59:ASN:N	2.78	0.41
19:S:190:THR:CG2	19:S:191:TRP:N	2.83	0.41
21:U:131:ARG:HD2	21:U:131:ARG:N	2.35	0.41
22:V:131:ALA:N	22:V:132:PRO:HD3	2.34	0.41
23:W:32:ILE:O	23:W:35:ALA:HB3	2.19	0.41
24:X:10:ILE:HG23	25:Y:148:PRO:HB3	2.02	0.41
24:X:77:VAL:CG1	24:X:78:TRP:N	2.82	0.41
24:X:157:GLN:OE1	24:X:171:PHE:HE2	2.03	0.41
25:Y:14:MET:SD	25:Y:58:GLN:HG2	2.61	0.41
31:EA:86:THR:O	31:EA:87:LEU:HD22	2.20	0.41
31:EA:94:SER:HA	31:EA:97:SER:OG	2.20	0.41
32:FA:23:GLY:O	32:FA:24:LYS:O	2.38	0.41
32:FA:77:LYS:O	32:FA:79:TRP:HD1	2.02	0.41
49:WA:43:ILE:HD13	49:WA:60:SER:OG	2.19	0.41
49:WA:239:GLU:O	49:WA:256:THR:HA	2.20	0.41
50:XA:30:GLN:HB2	50:XA:46:HIS:HE1	1.85	0.41
50:XA:109:ASN:HD21	50:XA:111:ILE:HG22	1.85	0.41
51:YA:32:ILE:N	51:YA:32:ILE:CD1	2.82	0.41
51:YA:180:THR:HG22	51:YA:181:LEU:N	2.30	0.41
52:ZA:148:LEU:HB3	52:ZA:174:ARG:HH22	1.83	0.41
54:BB:119:ALA:O	54:BB:164:LEU:HD12	2.20	0.41
55:CB:133:VAL:O	55:CB:136:ALA:HB3	2.21	0.41
56:DB:67:VAL:C	56:DB:68:LEU:HD22	2.41	0.41
56:DB:132:ARG:HG3	56:DB:133:LEU:HD12	2.01	0.41
57:EB:5:GLN:HB2	57:EB:18:LEU:HD22	2.01	0.41
59:GB:28:LEU:HD22	59:GB:31:ALA:CB	2.50	0.41
59:GB:135:ALA:CB	59:GB:159:ALA:HA	2.50	0.41
59:GB:162:SER:OG	59:GB:163:PRO:HD2	2.19	0.41
61:IB:31:THR:O	61:IB:33:ARG:N	2.47	0.41
61:IB:110:HIS:HD2	61:IB:131:ILE:HG21	1.84	0.41
65:MB:63:ALA:CB	65:MB:74:ALA:HB3	2.39	0.41
69:QB:30:VAL:HG12	69:QB:54:PHE:HD2	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
69:QB:76:LEU:HD11	69:QB:105:LEU:HD21	2.03	0.41
75:WB:60:VAL:CG1	75:WB:68:ARG:HH12	2.34	0.41
77:YB:31:TYR:CD2	77:YB:81:ARG:HG3	2.55	0.41
78:ZB:22:ARG:HH11	78:ZB:22:ARG:HG3	1.85	0.41
82:DC:231:LYS:H	82:DC:231:LYS:CD	2.32	0.41
82:DC:412:ARG:NH1	82:DC:426:LEU:CD1	2.83	0.41
82:DC:487:PRO:HG2	82:DC:519:LEU:HB2	2.02	0.41
82:DC:601:ILE:HG22	82:DC:641:ASN:O	2.19	0.41
82:DC:659:ILE:HG21	82:DC:700:ARG:HG2	2.01	0.41
83:EC:6891:G:H2'	83:EC:6891:G:N3	2.35	0.41
1:A:155:U:H4'	56:DB:59:GLN:CA	2.51	0.41
1:A:346:G:H2'	1:A:346:G:N3	2.35	0.41
1:A:593:U:H4'	1:A:595:G:H4'	2.02	0.41
1:A:883:C:H2'	1:A:884:A:O4'	2.21	0.41
1:A:1542:G:H1'	1:A:1569:A:H62	1.85	0.41
1:A:1653:C:O2'	45:SA:21:ARG:HG3	2.20	0.41
2:B:45:A:OP1	19:S:85:THR:HG23	2.21	0.41
2:B:70:A:H1'	2:B:74:G:N2	2.35	0.41
2:B:200:C:H5'	2:B:221:A:C4	2.56	0.41
2:B:577:C:H1'	8:H:340:GLY:O	2.20	0.41
2:B:578:A:O4'	8:H:324:LEU:HD11	2.20	0.41
2:B:855:U:C4	2:B:856:G:C6	3.08	0.41
2:B:907:G:C5	2:B:926:A:C5	3.08	0.41
2:B:921:A:C8	41:OA:8:PHE:HZ	2.37	0.41
2:B:925:A:C3'	2:B:926:A:H5'	2.49	0.41
2:B:965:A:O2'	32:FA:44:ASN:HB2	2.20	0.41
2:B:1320:C:O5'	2:B:1320:C:H6	2.03	0.41
2:B:1327:C:C1'	37:KA:77:ASN:HD21	2.33	0.41
2:B:1857:C:N4	2:B:1858:A:C6	2.87	0.41
2:B:1863:G:H1'	2:B:1867:A:N6	2.35	0.41
2:B:2215:A:H2'	2:B:2216:G:C8	2.54	0.41
2:B:2223:A:O5'	40:NA:80:PHE:HE2	2.04	0.41
2:B:2285:C:H2'	2:B:2286:U:C5	2.56	0.41
2:B:2638:C:H2'	2:B:2639:G:C8	2.55	0.41
2:B:2717:U:O2'	2:B:2718:U:H5'	2.19	0.41
4:D:89:G:C5'	24:X:84:ARG:HE	2.33	0.41
5:E:152:ARG:HD3	5:E:174:MET:CE	2.50	0.41
6:F:29:LEU:HB2	6:F:123:ARG:HA	2.02	0.41
6:F:49:VAL:HG12	6:F:60:LYS:HG2	2.01	0.41
7:G:281:LYS:O	7:G:324:VAL:HG13	2.20	0.41
7:G:299:ASP:OD2	7:G:358:TRP:HD1	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:59:GLN:HA	8:H:59:GLN:OE1	2.20	0.41
8:H:73:ARG:O	8:H:74:ILE:O	2.37	0.41
8:H:188:ARG:H	8:H:199:TRP:HA	1.86	0.41
8:H:308:LYS:HD3	8:H:310:THR:CG2	2.49	0.41
9:I:33:ARG:HD3	9:I:37:VAL:HG21	2.02	0.41
9:I:88:ILE:HG13	9:I:243:ALA:HB3	1.98	0.41
13:M:16:VAL:HG22	13:M:83:THR:CG2	2.51	0.41
13:M:89:LYS:O	13:M:181:VAL:HA	2.19	0.41
17:Q:58:VAL:HG12	17:Q:101:ARG:HH21	1.85	0.41
17:Q:85:LEU:HG	17:Q:86:THR:N	2.34	0.41
18:R:34:ALA:HB2	18:R:70:PHE:CZ	2.55	0.41
19:S:35:VAL:HG23	19:S:65:ARG:HH21	1.85	0.41
20:T:52:LEU:O	20:T:55:HIS:HB2	2.20	0.41
22:V:14:GLY:O	22:V:15:HIS:C	2.59	0.41
22:V:54:LEU:HD13	22:V:58:ASN:CB	2.49	0.41
22:V:107:THR:C	22:V:109:GLY:N	2.73	0.41
22:V:178:ARG:HG2	22:V:178:ARG:HH21	1.85	0.41
24:X:19:VAL:HG12	24:X:22:PRO:HG3	2.01	0.41
24:X:58:ILE:HG22	24:X:60:SER:O	2.21	0.41
24:X:77:VAL:CG1	24:X:78:TRP:H	2.33	0.41
24:X:155:ARG:NE	24:X:157:GLN:HG2	2.35	0.41
29:CA:103:TYR:HE1	29:CA:139:ILE:CD1	2.24	0.41
31:EA:85:TYR:CD2	31:EA:85:TYR:N	2.88	0.41
32:FA:2:PRO:C	32:FA:4:ARG:H	2.24	0.41
37:KA:31:LYS:HD2	37:KA:32:ILE:H	1.85	0.41
38:LA:30:LEU:N	38:LA:30:LEU:HD12	2.35	0.41
40:NA:34:SER:HB3	40:NA:37:THR:OG1	2.20	0.41
40:NA:89:GLU:O	40:NA:92:ASN:HB2	2.19	0.41
47:UA:55:TRP:HH2	47:UA:69:TYR:C	2.23	0.41
49:WA:303:ALA:O	49:WA:310:ILE:HG23	2.20	0.41
50:XA:62:ARG:O	50:XA:65:ALA:HB3	2.20	0.41
50:XA:123:VAL:O	50:XA:145:ALA:HA	2.20	0.41
50:XA:175:TYR:CE1	50:XA:195:TRP:HE3	2.37	0.41
51:YA:127:VAL:CB	51:YA:173:THR:HG22	2.36	0.41
52:ZA:120:GLU:HG3	52:ZA:123:GLY:CA	2.49	0.41
54:BB:226:PHE:CD1	54:BB:226:PHE:C	2.94	0.41
55:CB:63:GLN:HB2	55:CB:88:PRO:HA	2.02	0.41
55:CB:139:ASN:O	55:CB:140:THR:HG23	2.20	0.41
55:CB:142:PRO:O	55:CB:167:ARG:HD3	2.20	0.41
56:DB:136:LYS:HD3	56:DB:136:LYS:C	2.41	0.41
58:FB:90:LEU:CD2	58:FB:95:THR:HB	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:GB:86:LEU:HD22	59:GB:96:VAL:CG1	2.51	0.41
60:HB:86:ILE:C	60:HB:88:PRO:HD3	2.41	0.41
64:LB:32:ASP:OD1	64:LB:34:SER:HB3	2.20	0.41
69:QB:9:VAL:CG2	69:QB:136:ALA:HB1	2.45	0.41
69:QB:30:VAL:O	69:QB:30:VAL:HG23	2.20	0.41
72:TB:101:TYR:CB	72:TB:112:ASP:HB2	2.49	0.41
72:TB:103:ILE:HG13	72:TB:111:MET:O	2.20	0.41
73:UB:86:PHE:HB3	73:UB:107:PHE:HE2	1.84	0.41
77:YB:32:PHE:HA	77:YB:46:VAL:O	2.19	0.41
77:YB:79:PHE:N	77:YB:79:PHE:CD2	2.88	0.41
82:DC:34:THR:O	82:DC:37:ASP:HB2	2.19	0.41
82:DC:723:LYS:HB3	82:DC:724:ILE:H	1.70	0.41
83:EC:6934:U:H2'	83:EC:6935:G:O3'	2.21	0.41
83:EC:6934:U:H3'	83:EC:6935:G:C4'	2.49	0.41
1:A:95:G:H2'	1:A:96:G:O4'	2.20	0.41
1:A:334:G:C8	1:A:335:U:H5	2.39	0.41
1:A:507:U:H3'	1:A:507:U:O2	2.21	0.41
1:A:1064:G:H2'	1:A:1065:A:H8	1.86	0.41
1:A:1086:A:H2'	1:A:1087:A:C8	2.56	0.41
1:A:1087:A:H2	1:A:1142:A:H4'	1.85	0.41
1:A:1162:C:H1'	78:ZB:22:ARG:CB	2.50	0.41
1:A:1349:G:N2	1:A:1376:C:O2	2.49	0.41
1:A:1443:U:H5"	1:A:1446:A:O4'	2.20	0.41
1:A:1775:U:H2'	1:A:1776:A:C8	2.54	0.41
2:B:44:U:H3'	2:B:45:A:H8	1.85	0.41
2:B:122:A:OP1	12:L:105:LYS:HD2	2.21	0.41
2:B:135:C:H5"	2:B:136:G:O4'	2.20	0.41
2:B:192:C:H2'	2:B:193:C:H6	1.85	0.41
2:B:289:A:H5'	19:S:95:GLN:O	2.20	0.41
2:B:403:C:H2'	2:B:404:G:C5'	2.49	0.41
2:B:604:G:H2'	2:B:605:U:O4'	2.19	0.41
2:B:980:A:H1'	2:B:1104:G:H21	1.85	0.41
2:B:1002:A:H2'	2:B:1003:A:H8	1.86	0.41
2:B:1019:G:C2'	2:B:1020:G:H5"	2.50	0.41
2:B:1060:U:H4'	25:Y:61:THR:HG21	2.02	0.41
2:B:1146:C:C2'	2:B:1147:G:H8	2.29	0.41
2:B:1202:A:H2'	2:B:1203:A:H8	1.85	0.41
2:B:1504:A:H61	2:B:1515:A:H2'	1.85	0.41
2:B:1597:C:OP2	38:LA:8:ARG:NH2	2.54	0.41
2:B:1617:G:H2'	2:B:1618:G:H8	1.85	0.41
2:B:1650:G:H2'	2:B:1651:U:O4'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1794:G:O3'	6:F:190:ARG:NH2	2.53	0.41
2:B:1840:U:C2	2:B:1850:A:H4'	2.55	0.41
2:B:1844:C:H1'	41:OA:8:PHE:O	2.20	0.41
2:B:1853:U:O3'	2:B:1854:C:H6	2.04	0.41
2:B:1904:C:C5	2:B:1905:G:C5	3.09	0.41
2:B:2348:A:C8	2:B:2349:U:C5	3.09	0.41
2:B:3071:U:C4	2:B:3072:C:N4	2.88	0.41
2:B:3185:U:H5"	13:M:23:ARG:CZ	2.50	0.41
3:C:51:G:H8	3:C:52:A:N7	2.18	0.41
6:F:181:LYS:C	6:F:183:GLY:N	2.72	0.41
8:H:32:PRO:CA	8:H:244:LEU:HD21	2.50	0.41
9:I:209:GLU:C	9:I:211:LEU:H	2.22	0.41
10:J:22:ARG:HH11	10:J:22:ARG:CG	2.33	0.41
10:J:29:LYS:C	10:J:30:LEU:HD23	2.41	0.41
10:J:136:GLU:O	10:J:140:VAL:HG23	2.20	0.41
11:K:75:TYR:HB2	24:X:59:VAL:CG1	2.50	0.41
11:K:90:LYS:HA	11:K:220:PHE:HE1	1.85	0.41
13:M:27:VAL:HG12	13:M:28:VAL:N	2.36	0.41
16:P:122:GLY:HA2	48:VA:43:LYS:CD	2.49	0.41
16:P:123:ARG:NH2	48:VA:42:ARG:CD	2.81	0.41
19:S:183:THR:O	19:S:183:THR:HG23	2.20	0.41
20:T:65:ASN:C	20:T:67:THR:H	2.23	0.41
21:U:41:LEU:C	21:U:41:LEU:HD13	2.40	0.41
21:U:155:GLU:O	21:U:156:ALA:HB3	2.19	0.41
21:U:172:GLN:OE1	37:KA:60:ARG:NH2	2.49	0.41
24:X:4:PHE:HD1	24:X:31:ALA:HA	1.86	0.41
25:Y:51:GLY:HA3	25:Y:92:ARG:CD	2.51	0.41
25:Y:55:LYS:C	25:Y:57:TYR:N	2.74	0.41
25:Y:92:ARG:C	25:Y:94:GLU:N	2.72	0.41
27:AA:86:ARG:HB2	27:AA:92:PHE:CE1	2.55	0.41
28:BA:50:ALA:HA	28:BA:55:PHE:CD1	2.55	0.41
31:EA:26:VAL:HG21	31:EA:96:VAL:CB	2.50	0.41
31:EA:89:VAL:HG22	31:EA:89:VAL:O	2.20	0.41
32:FA:39:HIS:O	32:FA:42:ARG:HB3	2.19	0.41
37:KA:49:ILE:HG12	37:KA:100:ILE:HG23	2.01	0.41
38:LA:57:LEU:HD11	38:LA:62:TYR:HA	2.03	0.41
38:LA:58:ARG:HG3	38:LA:59:PRO:HD2	2.03	0.41
41:OA:47:TYR:HB3	41:OA:49:TRP:NE1	2.35	0.41
48:VA:15:LEU:CD1	48:VA:19:LEU:HD12	2.51	0.41
48:VA:27:VAL:HG12	48:VA:84:VAL:HG11	2.01	0.41
48:VA:79:PHE:CD2	48:VA:189:GLN:HG3	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:WA:109:ASP:OD1	49:WA:127:ARG:HB2	2.20	0.41
49:WA:149:ASP:HB2	49:WA:175:ASP:HB3	2.03	0.41
50:XA:84:ARG:HH11	50:XA:84:ARG:CB	2.16	0.41
50:XA:172:LEU:HA	50:XA:175:TYR:HB3	2.01	0.41
51:YA:30:PHE:HZ	51:YA:91:VAL:HG21	1.84	0.41
51:YA:32:ILE:HG23	51:YA:96:LEU:HD11	2.02	0.41
51:YA:33:LYS:HG3	51:YA:95:ASN:HD21	1.85	0.41
52:ZA:103:VAL:HG11	52:ZA:187:LEU:HA	2.03	0.41
52:ZA:178:ILE:HD12	52:ZA:178:ILE:N	2.35	0.41
52:ZA:235:LEU:HD22	71:SB:15:ARG:HD2	2.02	0.41
53:AB:33:GLY:O	53:AB:52:ALA:HA	2.20	0.41
55:CB:63:GLN:OE1	55:CB:63:GLN:HA	2.19	0.41
57:EB:58:LEU:HD12	57:EB:90:VAL:HG22	2.02	0.41
58:FB:184:LEU:HD23	58:FB:189:LEU:HA	2.01	0.41
59:GB:109:LEU:HD22	59:GB:113:VAL:HG23	2.02	0.41
60:HB:87:VAL:N	60:HB:88:PRO:CD	2.82	0.41
61:IB:91:LEU:CD2	61:IB:102:LYS:HD3	2.50	0.41
68:PB:88:ARG:HG2	68:PB:88:ARG:NH2	2.35	0.41
69:QB:35:ASP:N	69:QB:53:TRP:HZ2	2.18	0.41
71:SB:34:ILE:CG2	71:SB:35:ASN:N	2.82	0.41
72:TB:64:GLN:C	72:TB:65:LEU:HD13	2.39	0.41
73:UB:56:LYS:NZ	73:UB:93:LEU:HD23	2.34	0.41
75:WB:38:HIS:O	75:WB:39:ALA:HB3	2.20	0.41
79:AC:20:GLN:NE2	79:AC:25:SER:HA	2.35	0.41
82:DC:157:ILE:HG12	82:DC:181:THR:HG21	2.02	0.41
82:DC:772:LEU:HD12	82:DC:773:PRO:HD2	2.01	0.41
83:EC:6852:U:H2'	83:EC:6853:G:C8	2.55	0.41
1:A:40:A:H1'	1:A:469:C:C5	2.56	0.41
1:A:381:C:O2'	1:A:382:C:H5'	2.21	0.41
1:A:395:U:H1'	56:DB:89:ASP:CB	2.50	0.41
1:A:513:U:H4'	59:GB:131:GLN:HE21	1.84	0.41
1:A:569:C:C2'	1:A:570:A:H5'	2.50	0.41
1:A:768:C:H2'	1:A:769:A:O4'	2.21	0.41
1:A:790:U:H2'	1:A:791:A:O4'	2.20	0.41
1:A:856:A:N6	57:EB:96:ARG:HB3	2.35	0.41
1:A:1211:A:N6	1:A:1452:U:H3	2.16	0.41
1:A:1354:G:H2'	1:A:1355:C:O4'	2.21	0.41
1:A:1485:C:H2'	1:A:1486:G:C4'	2.33	0.41
1:A:1504:G:N2	1:A:1562:G:N2	2.68	0.41
2:B:64:G:H1'	2:B:77:A:C2	2.56	0.41
2:B:123:A:H5'	2:B:124:U:OP2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:637:C:O2'	2:B:638:C:O5'	2.39	0.41
2:B:1019:G:H2'	2:B:1020:G:H5"	2.02	0.41
2:B:1094:U:O2'	2:B:1096:U:H2'	2.20	0.41
2:B:1103:A:H1'	2:B:1104:G:OP2	2.21	0.41
2:B:1194:G:O5'	2:B:1194:G:C8	2.65	0.41
2:B:1492:G:P	2:B:1493:G:H22	2.43	0.41
2:B:1747:G:O2'	42:PA:4:GLU:HB2	2.19	0.41
2:B:2284:C:C2	2:B:2308:C:H1'	2.56	0.41
2:B:2360:C:H6	2:B:2360:C:H3'	1.85	0.41
2:B:2511:A:H2'	2:B:2512:C:C5	2.55	0.41
2:B:2678:A:C2	83:EC:6924:G:H4'	2.55	0.41
2:B:2785:A:H2'	2:B:2786:G:C8	2.55	0.41
2:B:2978:U:O2'	2:B:2979:U:H5'	2.19	0.41
8:H:206:LEU:HD23	8:H:207:VAL:N	2.35	0.41
9:I:226:TYR:CE2	9:I:236:LEU:HD13	2.52	0.41
11:K:30:ARG:HD3	11:K:33:ARG:HH22	1.85	0.41
11:K:145:ARG:O	11:K:149:TYR:HB2	2.20	0.41
12:L:212:ALA:O	12:L:215:VAL:HB	2.20	0.41
13:M:49:ASN:O	13:M:49:ASN:OD1	2.38	0.41
13:M:89:LYS:O	13:M:181:VAL:HG13	2.19	0.41
14:N:27:PRO:O	14:N:125:LEU:HD11	2.19	0.41
14:N:56:GLU:HA	14:N:131:ILE:HG12	2.02	0.41
17:Q:64:LYS:HE3	32:FA:69:TRP:HE1	1.85	0.41
18:R:120:VAL:HG11	20:T:199:TYR:HB2	2.03	0.41
21:U:75:GLU:HG2	21:U:76:PHE:CE1	2.56	0.41
24:X:29:ILE:HG22	24:X:30:PHE:N	2.35	0.41
25:Y:48:ILE:O	25:Y:49:GLN:C	2.58	0.41
25:Y:53:PRO:HB3	25:Y:91:LEU:HD13	2.02	0.41
26:Z:17:VAL:HG22	26:Z:103:TYR:CD2	2.55	0.41
27:AA:94:TYR:CE1	28:BA:41:LYS:HE3	2.55	0.41
28:BA:6:ASP:C	28:BA:8:PHE:N	2.74	0.41
29:CA:99:VAL:HG13	29:CA:103:TYR:CD2	2.55	0.41
30:DA:3:LYS:CG	30:DA:4:GLN:N	2.82	0.41
30:DA:53:ASP:HB3	30:DA:69:LYS:HE3	2.02	0.41
31:EA:129:TRP:O	31:EA:131:PHE:N	2.53	0.41
37:KA:30:ILE:HG22	37:KA:31:LYS:N	2.35	0.41
38:LA:91:ARG:CA	38:LA:95:ILE:HD13	2.40	0.41
40:NA:46:GLU:C	40:NA:48:ALA:H	2.23	0.41
48:VA:41:VAL:HA	48:VA:44:GLU:CG	2.50	0.41
48:VA:120:TRP:HB2	48:VA:157:LYS:CE	2.50	0.41
51:YA:30:PHE:CZ	51:YA:91:VAL:HG21	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:YA:35:PRO:HA	51:YA:232:HIS:CD2	2.56	0.41
51:YA:68:VAL:CG2	51:YA:69:CYS:N	2.80	0.41
51:YA:74:GLN:HA	51:YA:74:GLN:OE1	2.20	0.41
51:YA:157:GLN:O	51:YA:159:SER:N	2.54	0.41
54:BB:179:LYS:O	54:BB:180:LEU:C	2.59	0.41
55:CB:73:THR:HB	55:CB:91:GLU:HG3	2.03	0.41
55:CB:211:ILE:HA	55:CB:214:LYS:HB3	2.01	0.41
56:DB:219:ARG:HA	56:DB:222:GLU:CB	2.51	0.41
58:FB:4:SER:HB2	58:FB:24:LYS:NZ	2.36	0.41
65:MB:21:ASP:O	65:MB:25:LEU:HG	2.20	0.41
66:NB:79:TYR:HA	66:NB:82:ARG:HH11	1.86	0.41
69:QB:95:ASP:O	69:QB:96:ALA:O	2.39	0.41
74:VB:78:SER:C	74:VB:80:ALA:H	2.23	0.41
76:XB:23:CYS:SG	76:XB:74:CYS:HB3	2.61	0.41
78:ZB:36:THR:C	78:ZB:38:ARG:H	2.24	0.41
82:DC:638:PRO:HG2	82:DC:680:GLU:OE1	2.20	0.41
82:DC:772:LEU:CD2	82:DC:777:SER:HB3	2.51	0.41
1:A:314:C:O2	1:A:354:C:N3	2.54	0.41
1:A:339:C:O2'	1:A:340:U:H5'	2.21	0.41
1:A:373:G:N2	1:A:604:A:H5'	2.36	0.41
1:A:769:A:O2'	1:A:770:A:H5'	2.21	0.41
1:A:986:G:O2'	1:A:987:G:C5'	2.69	0.41
1:A:1350:U:H1'	1:A:1378:U:H3	1.84	0.41
1:A:1429:G:H1'	70:RB:74:GLU:CG	2.30	0.41
1:A:1563:C:OP1	69:QB:84:LYS:HD3	2.20	0.41
1:A:1755:A:H2'	2:B:2256:A:C6	2.56	0.41
1:A:1796:C:C4	76:XB:93:LYS:HG2	2.56	0.41
1:A:1796:C:O2	1:A:1796:C:O4'	2.39	0.41
2:B:128:G:H2'	2:B:129:U:O4'	2.21	0.41
2:B:290:G:C4	19:S:93:LYS:NZ	2.89	0.41
2:B:424:G:C6	2:B:635:G:N2	2.89	0.41
2:B:611:A:C5	2:B:612:U:C4	3.08	0.41
2:B:750:G:H2'	2:B:751:A:H8	1.85	0.41
2:B:802:C:H2'	2:B:803:C:C6	2.55	0.41
2:B:1106:G:H2'	2:B:1107:C:O4'	2.20	0.41
2:B:1305:U:C4	7:G:257:PRO:HA	2.55	0.41
2:B:1326:A:C2	2:B:1327:C:C2	3.08	0.41
2:B:1370:G:H2'	2:B:1371:G:C8	2.55	0.41
2:B:1386:A:C6	8:H:179:LEU:HD11	2.55	0.41
2:B:1650:G:O2'	2:B:1651:U:H5'	2.20	0.41
2:B:1913:A:N3	2:B:2120:A:H2'	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2277:C:C4’	2:B:2317:A:H4’	2.51	0.41
2:B:2838:A:H61	2:B:2850:G:C2’	2.33	0.41
2:B:2846:U:C1’	2:B:2849:C:H41	2.34	0.41
2:B:3233:C:H6	2:B:3233:C:O5’	2.03	0.41
2:B:3312:U:H2’	2:B:3313:U:C6	2.56	0.41
2:B:3387:U:O5’	2:B:3387:U:H6	2.03	0.41
3:C:140:G:N2	19:S:112:ASN:HB3	2.34	0.41
4:D:41:G:H4’	4:D:44:C:N4	2.36	0.41
4:D:47:C:N4	9:I:58:LYS:HE2	2.36	0.41
4:D:116:C:O2’	9:I:74:VAL:N	2.54	0.41
6:F:180:LEU:HD23	6:F:180:LEU:HA	1.92	0.41
7:G:110:LEU:HG	7:G:114:VAL:HG21	2.03	0.41
7:G:128:LYS:HE2	7:G:131:THR:OG1	2.21	0.41
7:G:232:ARG:HG2	7:G:233:TRP:CD1	2.55	0.41
8:H:140:HIS:ND1	8:H:247:PHE:HB2	2.36	0.41
10:J:40:LEU:CB	10:J:85:ILE:O	2.69	0.41
11:K:39:GLU:O	11:K:43:ILE:HG13	2.20	0.41
11:K:90:LYS:CD	11:K:91:GLY:N	2.83	0.41
12:L:122:LYS:HD2	12:L:124:ASP:HB2	2.03	0.41
13:M:24:ILE:HG13	13:M:39:LYS:HD2	2.03	0.41
15:O:103:GLY:HA2	15:O:127:PHE:O	2.21	0.41
17:Q:46:ILE:HG22	17:Q:46:ILE:O	2.21	0.41
20:T:44:SER:HA	20:T:135:TYR:HA	2.02	0.41
22:V:174:ARG:CA	22:V:178:ARG:HG3	2.47	0.41
25:Y:25:VAL:CG2	25:Y:30:TYR:HE2	2.34	0.41
27:AA:62:VAL:CB	27:AA:70:ARG:HG2	2.43	0.41
29:CA:80:ASN:ND2	29:CA:126:LEU:HB2	2.30	0.41
29:CA:113:LEU:HD23	29:CA:123:TYR:CE2	2.49	0.41
31:EA:73:LYS:NZ	31:EA:74:VAL:O	2.48	0.41
31:EA:100:THR:O	31:EA:106:GLN:HB3	2.21	0.41
33:GA:12:GLN:NE2	33:GA:15:LYS:NZ	2.68	0.41
39:MA:66:VAL:O	39:MA:69:LEU:HG	2.21	0.41
40:NA:17:VAL:HG13	40:NA:18:THR:N	2.36	0.41
42:PA:5:ILE:C	42:PA:7:ASP:H	2.24	0.41
43:QA:30:ARG:HG3	43:QA:30:ARG:H	1.65	0.41
49:WA:209:THR:HA	49:WA:225:LEU:HB3	2.02	0.41
49:WA:232:TYR:OH	49:WA:265:LEU:HD12	2.20	0.41
50:XA:78:SER:HB3	50:XA:100:GLY:O	2.20	0.41
51:YA:115:ARG:O	51:YA:118:GLN:HG2	2.20	0.41
51:YA:218:LEU:HD22	51:YA:219:LYS:N	2.35	0.41
52:ZA:207:LEU:HD23	52:ZA:207:LEU:H	1.84	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:BB:151:ASP:HB3	54:BB:154:ILE:HG13	2.01	0.41
55:CB:147:THR:O	55:CB:157:ARG:HB3	2.20	0.41
57:EB:135:ILE:HG21	57:EB:152:VAL:HG12	2.01	0.41
58:FB:65:PHE:HE2	58:FB:78:ILE:HG12	1.85	0.41
58:FB:160:PHE:CZ	58:FB:165:LEU:HD11	2.56	0.41
59:GB:23:ARG:HG2	59:GB:23:ARG:HH11	1.86	0.41
61:IB:81:HIS:O	61:IB:83:THR:HG22	2.20	0.41
61:IB:110:HIS:CD2	61:IB:131:ILE:HG21	2.56	0.41
61:IB:134:THR:O	61:IB:136:ARG:HG2	2.20	0.41
64:LB:30:VAL:O	64:LB:39:ILE:O	2.39	0.41
65:MB:44:ARG:NH1	65:MB:52:LYS:HE3	2.27	0.41
66:NB:29:ILE:HG12	66:NB:52:LEU:HD21	2.01	0.41
68:PB:7:GLU:HB3	75:WB:42:LEU:HD11	2.03	0.41
69:QB:12:GLN:C	69:QB:14:PHE:H	2.24	0.41
69:QB:65:ILE:HG21	69:QB:114:VAL:HG21	2.02	0.41
70:RB:68:ARG:HD2	70:RB:78:THR:O	2.20	0.41
71:SB:4:ASP:CB	71:SB:5:LYS:HD3	2.50	0.41
75:WB:93:SER:CB	75:WB:100:ILE:H	2.29	0.41
79:AC:15:GLY:C	79:AC:17:GLY:H	2.24	0.41
82:DC:129:VAL:HG11	82:DC:181:THR:HG23	2.02	0.41
82:DC:646:VAL:C	82:DC:647:ILE:HD12	2.40	0.41
1:A:250:C:O2'	1:A:251:A:H5'	2.21	0.41
1:A:469:C:C2	1:A:470:A:H1'	2.56	0.41
1:A:743:U:H2'	1:A:744:U:N1	2.36	0.41
1:A:774:A:H3'	1:A:774:A:N3	2.36	0.41
1:A:1000:C:H5	1:A:1003:A:OP2	2.04	0.41
1:A:1105:C:O2'	1:A:1106:U:H5'	2.20	0.41
1:A:1316:G:O3'	67:OB:10:LYS:HD3	2.20	0.41
1:A:1377:U:H1'	1:A:1378:U:H5	1.86	0.41
1:A:1499:G:OP2	69:QB:73:VAL:HG23	2.21	0.41
2:B:56:G:O2'	19:S:158:HIS:HB2	2.20	0.41
2:B:275:U:H2'	2:B:276:U:H6	1.83	0.41
2:B:360:G:C5'	41:OA:26:SER:HA	2.49	0.41
2:B:582:G:C4	2:B:583:G:C8	3.09	0.41
2:B:1017:C:H2'	2:B:1017:C:O2	2.20	0.41
2:B:1261:G:H3'	2:B:1261:G:N3	2.35	0.41
2:B:1364:C:H2'	2:B:1365:G:H8	1.83	0.41
2:B:1415:U:H2'	2:B:1416:C:O4'	2.21	0.41
2:B:1512:U:O2'	2:B:1513:G:H5'	2.19	0.41
2:B:1647:A:H1'	2:B:1809:A:N1	2.36	0.41
2:B:1689:U:H2'	2:B:1690:C:H5'	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1940:G:H2'	2:B:1941:C:C6	2.55	0.41
2:B:2181:C:C4	2:B:2182:A:N7	2.89	0.41
2:B:2353:G:C2'	2:B:2354:C:H5'	2.51	0.41
2:B:2525:G:C8	6:F:34:TYR:HB2	2.56	0.41
2:B:2554:A:H5"	38:LA:91:ARG:CZ	2.50	0.41
2:B:2597:U:H2'	2:B:2598:G:H8	1.86	0.41
2:B:2632:G:O3'	25:Y:12:ARG:HD2	2.20	0.41
2:B:2741:C:H2'	2:B:2742:C:O4'	2.20	0.41
2:B:3185:U:O2	24:X:169:SER:HA	2.21	0.41
2:B:3215:A:H1'	10:J:161:ALA:HB2	2.03	0.41
2:B:3216:G:H3'	2:B:3219:G:N3	2.35	0.41
7:G:43:LEU:HB3	7:G:181:ILE:HG21	2.02	0.41
8:H:212:ASP:OD1	8:H:215:ILE:CG2	2.69	0.41
8:H:234:ASN:O	8:H:238:LEU:HG	2.21	0.41
9:I:95:TRP:CE3	9:I:161:GLY:CA	3.03	0.41
9:I:221:GLU:HG3	9:I:222:LEU:N	2.34	0.41
12:L:210:ALA:O	12:L:213:LYS:HB3	2.21	0.41
14:N:166:ILE:CG2	14:N:167:LEU:H	2.34	0.41
15:O:112:LEU:HD23	15:O:112:LEU:N	2.28	0.41
18:R:13:ARG:CB	18:R:65:LEU:HD22	2.50	0.41
18:R:42:LYS:HG2	18:R:59:ASN:ND2	2.36	0.41
19:S:13:LYS:O	19:S:19:LEU:HD22	2.19	0.41
19:S:124:ASP:OD2	19:S:127:TYR:HB2	2.20	0.41
20:T:147:TRP:CZ2	20:T:149:TYR:HB2	2.56	0.41
24:X:30:PHE:CE1	24:X:100:VAL:HG12	2.54	0.41
24:X:66:GLU:HG2	24:X:73:LYS:HZ1	1.86	0.41
25:Y:54:HIS:NE2	25:Y:55:LYS:HE2	2.35	0.41
27:AA:34:LEU:HD22	27:AA:60:ALA:HB3	2.03	0.41
29:CA:55:ASN:C	29:CA:57:LEU:H	2.21	0.41
31:EA:62:VAL:C	31:EA:64:LYS:H	2.24	0.41
32:FA:102:ILE:HD12	32:FA:125:VAL:HG22	2.03	0.41
35:IA:29:ALA:HA	35:IA:67:VAL:HG11	2.01	0.41
38:LA:42:PRO:HD2	38:LA:56:THR:HG22	2.01	0.41
40:NA:92:ASN:O	40:NA:96:ALA:HB3	2.20	0.41
48:VA:52:LEU:O	48:VA:86:PHE:HB2	2.20	0.41
49:WA:28:GLY:HA3	49:WA:76:ASP:HA	2.03	0.41
49:WA:300:THR:HB	49:WA:302:PHE:CZ	2.55	0.41
50:XA:123:VAL:CG1	50:XA:124:THR:N	2.82	0.41
51:YA:120:LEU:HD21	51:YA:122:GLU:HG3	2.03	0.41
52:ZA:58:LEU:HG	71:SB:12:TYR:CD1	2.56	0.41
52:ZA:143:TYR:HA	52:ZA:152:HIS:NE2	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:BB:16:HIS:C	54:BB:18:TRP:N	2.74	0.41
54:BB:101:LEU:HB3	54:BB:109:PHE:HE1	1.82	0.41
55:CB:191:ALA:HB2	75:WB:98:GLN:OE1	2.20	0.41
56:DB:163:THR:CA	56:DB:168:THR:HG22	2.50	0.41
57:EB:44:LYS:CG	57:EB:63:PRO:HD3	2.50	0.41
58:FB:90:LEU:HD13	58:FB:97:THR:OG1	2.20	0.41
59:GB:85:VAL:HA	59:GB:107:ARG:CG	2.48	0.41
59:GB:86:LEU:HD21	59:GB:91:LYS:HA	2.01	0.41
63:KB:16:ILE:HA	63:KB:17:PRO:HD3	1.94	0.41
63:KB:99:ARG:HE	63:KB:115:LEU:HD11	1.85	0.41
63:KB:127:ARG:HA	63:KB:130:ARG:NH2	2.35	0.41
65:MB:123:TYR:HD1	65:MB:123:TYR:H	1.68	0.41
66:NB:60:PHE:HA	66:NB:63:ILE:HG12	2.03	0.41
70:RB:74:GLU:HG3	70:RB:75:GLY:N	2.36	0.41
70:RB:99:ILE:O	70:RB:99:ILE:HG13	2.20	0.41
73:UB:54:LEU:HB2	73:UB:73:ARG:O	2.20	0.41
73:UB:114:LYS:HB3	73:UB:115:GLY:H	1.59	0.41
73:UB:126:LYS:HB3	73:UB:126:LYS:HE2	1.90	0.41
82:DC:282:PHE:O	82:DC:285:PHE:HB2	2.20	0.41
83:EC:6850:C:H42	83:EC:6878:G:H1	1.69	0.41
83:EC:6896:A:N3	83:EC:6896:A:H2'	2.36	0.41
1:A:11:A:H2'	1:A:12:U:O4'	2.20	0.41
1:A:629:U:OP1	63:KB:124:ARG:HG2	2.20	0.41
1:A:778:G:C2'	1:A:779:U:H5'	2.45	0.41
1:A:956:C:H2'	1:A:957:G:O4'	2.20	0.41
1:A:1133:A:H2'	1:A:1134:C:O4'	2.21	0.41
1:A:1358:G:H4'	69:QB:130:ARG:HA	2.03	0.41
1:A:1394:G:OP1	49:WA:282:SER:HB2	2.20	0.41
1:A:1662:G:H2'	1:A:1663:G:C8	2.54	0.41
1:A:1671:A:N6	1:A:1730:A:O2'	2.54	0.41
2:B:217:U:HO2'	30:DA:102:SER:HB3	1.84	0.41
2:B:269:G:H22	2:B:294:U:H2'	1.80	0.41
2:B:329:U:O2	2:B:329:U:C2'	2.68	0.41
2:B:631:U:H5"	20:T:93:ALA:CB	2.51	0.41
2:B:790:U:O2'	2:B:791:A:H5'	2.21	0.41
2:B:834:U:H2'	2:B:835:G:H5'	2.03	0.41
2:B:1145:G:H2'	2:B:1146:C:H5'	2.02	0.41
2:B:1256:G:C1'	16:P:123:ARG:HG3	2.51	0.41
2:B:2103:U:H5"	23:W:85:ARG:CG	2.50	0.41
2:B:2137:U:C5	2:B:2141:U:C4	3.09	0.41
2:B:2168:A:H5"	19:S:67:ARG:HH12	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2370:G:N2	2:B:2375:G:N7	2.58	0.41
2:B:2380:U:H2'	2:B:2381:G:O4'	2.20	0.41
2:B:2785:A:H2'	2:B:2786:G:H8	1.85	0.41
2:B:2853:A:C5'	14:N:63:GLU:HB2	2.50	0.41
2:B:2943:G:H8	7:G:2:SER:HB3	1.82	0.41
2:B:3198:U:N3	13:M:26:LYS:HD2	2.36	0.41
2:B:3229:G:C2	2:B:3230:G:H1'	2.56	0.41
2:B:3243:A:OP2	20:T:159:LYS:NZ	2.54	0.41
2:B:3373:U:O2'	2:B:3374:U:H5'	2.21	0.41
4:D:11:A:C8	9:I:18:THR:HG23	2.56	0.41
4:D:99:G:OP2	24:X:53:LYS:HD2	2.20	0.41
5:E:180:VAL:O	5:E:183:ILE:HB	2.19	0.41
6:F:68:LYS:CE	6:F:70:ARG:HD3	2.50	0.41
6:F:101:VAL:C	6:F:102:LEU:HD12	2.40	0.41
7:G:304:THR:O	7:G:306:THR:N	2.53	0.41
8:H:173:GLY:C	8:H:175:HIS:H	2.24	0.41
8:H:261:VAL:O	8:H:262:TRP:HB2	2.20	0.41
9:I:120:LYS:HD3	9:I:120:LYS:N	2.36	0.41
10:J:122:PHE:HA	10:J:123:PRO:HA	1.74	0.41
11:K:85:PHE:O	11:K:136:TYR:HA	2.21	0.41
11:K:87:VAL:HA	11:K:113:SER:O	2.20	0.41
11:K:121:LYS:HB2	25:Y:133:ALA:HB3	2.02	0.41
12:L:34:PHE:CA	12:L:39:ALA:HB3	2.48	0.41
12:L:183:LYS:HA	12:L:186:LEU:HD12	2.03	0.41
14:N:99:ILE:O	14:N:120:GLY:HA3	2.21	0.41
15:O:54:VAL:HG12	15:O:56:THR:HG23	2.03	0.41
16:P:107:ASP:H	16:P:142:ARG:HD3	1.85	0.41
17:Q:48:PRO:CD	39:MA:115:LYS:HD3	2.50	0.41
17:Q:56:PRO:HB3	17:Q:75:PHE:HD1	1.82	0.41
19:S:106:VAL:HA	19:S:109:ARG:HB3	2.03	0.41
19:S:118:SER:HB2	19:S:132:VAL:HG22	2.02	0.41
20:T:37:ARG:NH1	20:T:161:LYS:HZ3	2.18	0.41
20:T:74:ARG:HG2	20:T:74:ARG:NH1	2.35	0.41
21:U:96:GLN:HE21	21:U:96:GLN:HB3	1.52	0.41
22:V:24:VAL:O	22:V:25:TYR:C	2.58	0.41
22:V:110:ALA:O	22:V:114:ILE:HG13	2.21	0.41
22:V:165:ILE:HD13	22:V:168:THR:CG2	2.51	0.41
23:W:104:ARG:NH1	23:W:135:LYS:HD3	2.36	0.41
23:W:186:LYS:HA	23:W:186:LYS:CE	2.51	0.41
27:AA:112:SER:O	27:AA:113:ALA:CB	2.69	0.41
27:AA:114:ILE:HG22	27:AA:115:THR:N	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:CA:96:LYS:O	29:CA:100:LYS:HB2	2.20	0.41
31:EA:134:LEU:HD11	38:LA:93:PHE:HB2	2.02	0.41
32:FA:4:ARG:HE	32:FA:4:ARG:HB3	1.65	0.41
33:GA:9:ALA:O	33:GA:10:HIS:C	2.59	0.41
34:HA:24:THR:O	34:HA:30:THR:HG22	2.20	0.41
36:JA:2:ALA:O	36:JA:3:SER:HB3	2.21	0.41
40:NA:77:LEU:HB3	40:NA:78:GLY:H	1.77	0.41
43:QA:16:ALA:HB1	43:QA:42:ARG:HH21	1.85	0.41
51:YA:142:PHE:O	51:YA:207:LEU:HG	2.20	0.41
52:ZA:69:ILE:CD1	52:ZA:133:LYS:HD2	2.51	0.41
53:AB:40:ARG:HB2	53:AB:47:GLU:HB2	2.03	0.41
54:BB:51:ARG:HH11	54:BB:51:ARG:HG2	1.85	0.41
54:BB:122:LYS:HD2	54:BB:164:LEU:CD2	2.50	0.41
54:BB:150:PRO:HD2	56:DB:208:TYR:CE2	2.51	0.41
54:BB:240:LYS:H	54:BB:240:LYS:CE	2.33	0.41
55:CB:70:VAL:HG22	66:NB:47:LYS:HD3	2.02	0.41
56:DB:7:TYR:HB3	56:DB:12:SER:N	2.36	0.41
56:DB:30:LYS:HB2	56:DB:102:VAL:HG21	2.03	0.41
56:DB:139:ASN:HA	56:DB:142:ARG:CG	2.49	0.41
57:EB:37:GLU:O	57:EB:37:GLU:HG3	2.21	0.41
58:FB:46:VAL:HG23	58:FB:46:VAL:O	2.21	0.41
58:FB:55:TYR:HB2	58:FB:176:SER:HA	2.01	0.41
59:GB:134:ILE:HA	59:GB:158:PHE:CA	2.50	0.41
59:GB:142:ASN:ND2	74:VB:64:PHE:HZ	2.17	0.41
59:GB:171:ARG:NE	59:GB:171:ARG:HA	2.36	0.41
64:LB:12:GLN:OE1	64:LB:77:THR:HG21	2.21	0.41
65:MB:38:PRO:HG2	65:MB:41:VAL:HG23	2.01	0.41
66:NB:82:ARG:NH2	66:NB:116:LEU:HD11	2.36	0.41
68:PB:54:LEU:C	68:PB:56:LYS:H	2.24	0.41
72:TB:11:LEU:CD2	72:TB:73:GLY:HA2	2.50	0.41
73:UB:127:VAL:C	73:UB:129:GLY:H	2.24	0.41
74:VB:114:ARG:O	74:VB:118:ILE:HG12	2.20	0.41
75:WB:95:HIS:O	75:WB:99:ALA:HB2	2.21	0.41
76:XB:10:ARG:HH22	76:XB:36:ILE:HB	1.86	0.41
78:ZB:14:LYS:HG3	78:ZB:15:VAL:H	1.84	0.41
82:DC:75:ILE:H	82:DC:75:ILE:HG12	1.66	0.41
82:DC:161:ASP:O	82:DC:165:LEU:HB3	2.20	0.41
82:DC:781:THR:HG23	82:DC:794:PRO:HG2	2.02	0.41
1:A:15:U:H2'	1:A:16:G:H5'	2.02	0.41
1:A:196:G:O2'	1:A:197:A:O5'	2.39	0.41
1:A:358:U:H2'	1:A:360:A:C5'	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:551:G:O2'	1:A:552:G:H5'	2.21	0.41
1:A:604:A:H2'	1:A:605:A:O4'	2.21	0.41
1:A:745:U:H2'	1:A:746:A:H8	1.85	0.41
1:A:815:G:C6	61:IB:146:ALA:HB3	2.56	0.41
1:A:871:G:H1'	77:YB:51:GLN:HG2	2.02	0.41
1:A:942:G:H8	76:XB:17:HIS:HB3	1.84	0.41
1:A:955:A:O2'	1:A:956:C:H5'	2.21	0.41
1:A:1162:C:H5'	55:CB:148:ARG:HH11	1.84	0.41
1:A:1178:G:H3'	1:A:1179:G:C8	2.56	0.41
1:A:1227:A:H3'	62:JB:117:GLY:O	2.20	0.41
1:A:1306:C:O5'	1:A:1306:C:H6	2.03	0.41
1:A:1504:G:C5'	69:QB:97:SER:HB2	2.51	0.41
1:A:1572:G:N3	1:A:1572:G:C2'	2.84	0.41
1:A:1735:U:H2'	1:A:1736:G:C8	2.55	0.41
2:B:33:G:H1'	2:B:51:A:N6	2.36	0.41
2:B:72:C:C2	2:B:74:G:H1'	2.56	0.41
2:B:86:G:H22	2:B:99:A:P	2.43	0.41
2:B:92:G:C2	2:B:94:G:N2	2.88	0.41
2:B:115:A:H3'	2:B:116:A:H5'	2.02	0.41
2:B:260:C:H2'	2:B:261:U:O4'	2.20	0.41
2:B:292:U:C2'	2:B:293:C:H5'	2.50	0.41
2:B:313:A:H2'	2:B:314:U:O4'	2.21	0.41
2:B:428:A:O4'	37:KA:25:PRO:HB2	2.21	0.41
2:B:639:G:O4'	2:B:1434:G:C6	2.74	0.41
2:B:858:A:C2'	2:B:859:G:H5'	2.51	0.41
2:B:932:U:O4'	2:B:934:G:H5'	2.20	0.41
2:B:989:A:H2'	2:B:990:U:H6	1.85	0.41
2:B:1209:G:C5	2:B:1210:U:C4	3.09	0.41
2:B:1239:C:C5'	16:P:99:LYS:HD2	2.51	0.41
2:B:1302:A:C3'	2:B:1303:A:H5"	2.51	0.41
2:B:1400:G:C6	2:B:1412:G:C6	3.09	0.41
2:B:1405:U:N3	36:JA:55:ILE:HD13	2.35	0.41
2:B:1508:C:H5"	2:B:2354:C:C1'	2.50	0.41
2:B:1565:G:H3'	2:B:1566:A:N7	2.36	0.41
2:B:1715:A:N6	34:HA:85:PHE:HB3	2.36	0.41
2:B:1729:A:N1	47:UA:42:CYS:HA	2.36	0.41
2:B:1815:U:O3'	2:B:1816:A:H4'	2.20	0.41
2:B:1867:A:H2'	2:B:1868:G:O4'	2.20	0.41
2:B:1888:U:H2'	2:B:1889:G:C1'	2.49	0.41
2:B:1896:A:H61	2:B:2339:C:N4	2.19	0.41
2:B:1910:A:O2'	2:B:1911:A:H5'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2154:U:H2'	2:B:2155:G:H8	1.81	0.41
2:B:2181:C:C2	2:B:2182:A:C8	3.09	0.41
2:B:2347:U:H3'	2:B:2348:A:C8	2.56	0.41
2:B:2382:G:H2'	2:B:2383:C:C4'	2.50	0.41
2:B:2390:A:C2	2:B:2990:G:C2	3.09	0.41
2:B:2394:G:O5'	7:G:252:ILE:HD13	2.20	0.41
2:B:2435:G:N7	2:B:2593:A:H2'	2.36	0.41
2:B:2448:G:C2'	2:B:2449:A:H5'	2.48	0.41
2:B:2553:U:C4	38:LA:95:ILE:HG13	2.56	0.41
2:B:2642:A:O2'	2:B:2643:A:H5'	2.20	0.41
2:B:2682:C:O2'	2:B:2683:U:H5'	2.21	0.41
2:B:2859:U:H4'	2:B:2860:U:C5'	2.48	0.41
2:B:3137:C:H2'	2:B:3138:U:C6	2.56	0.41
2:B:3228:C:O2'	2:B:3229:G:OP2	2.37	0.41
2:B:3262:U:H2'	2:B:3263:G:C5'	2.42	0.41
2:B:3305:A:O3'	7:G:272:TYR:HE2	2.04	0.41
2:B:3379:C:H4'	7:G:315:GLY:O	2.20	0.41
3:C:104:A:OP2	3:C:105:A:H2'	2.21	0.41
4:D:43:U:C5	4:D:44:C:C4	3.09	0.41
4:D:84:A:H2	11:K:225:GLN:HE21	1.69	0.41
6:F:6:ARG:HG3	6:F:10:LYS:HZ1	1.86	0.41
6:F:40:TYR:CD1	6:F:40:TYR:N	2.89	0.41
6:F:80:GLU:HG3	47:UA:66:GLY:C	2.41	0.41
6:F:229:ALA:O	6:F:233:GLN:HB2	2.20	0.41
7:G:57:VAL:O	7:G:357:LYS:HB2	2.21	0.41
7:G:84:VAL:HG13	7:G:163:HIS:O	2.21	0.41
7:G:112:ASP:O	7:G:116:ARG:HB2	2.21	0.41
7:G:232:ARG:HG2	7:G:233:TRP:NE1	2.36	0.41
7:G:240:ARG:HH11	7:G:240:ARG:HG2	1.85	0.41
7:G:282:ILE:HA	7:G:324:VAL:HG22	2.03	0.41
8:H:60:THR:HG22	8:H:62:ALA:H	1.86	0.41
8:H:91:GLY:O	8:H:93:MET:N	2.50	0.41
8:H:302:ALA:HB2	22:V:39:ARG:HH22	1.85	0.41
9:I:34:LYS:C	9:I:34:LYS:HD3	2.41	0.41
9:I:69:ILE:HG22	25:Y:28:SER:HA	2.03	0.41
9:I:88:ILE:HG13	9:I:243:ALA:HB2	2.01	0.41
9:I:99:TYR:CD1	9:I:99:TYR:C	2.93	0.41
9:I:219:PHE:HE2	9:I:223:PHE:CG	2.39	0.41
11:K:84:VAL:O	11:K:116:PHE:HA	2.20	0.41
11:K:95:ILE:HG23	11:K:133:TYR:CE1	2.56	0.41
11:K:98:LYS:HE2	11:K:129:LEU:CG	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:K:236:ILE:HG12	11:K:236:ILE:O	2.21	0.41
12:L:68:ARG:O	12:L:236:GLY:HA2	2.20	0.41
12:L:82:LEU:HD23	12:L:87:ALA:HA	2.03	0.41
12:L:132:VAL:CG2	12:L:133:LYS:N	2.84	0.41
12:L:195:SER:C	12:L:197:VAL:H	2.25	0.41
13:M:94:TYR:HA	13:M:177:ASP:CG	2.41	0.41
14:N:75:TYR:CD1	14:N:76:MET:N	2.88	0.41
15:O:94:ARG:C	15:O:96:PHE:N	2.74	0.41
17:Q:111:ALA:O	17:Q:115:ARG:HB2	2.21	0.41
17:Q:170:LEU:CD1	32:FA:147:LEU:HD13	2.50	0.41
19:S:35:VAL:CG2	19:S:65:ARG:HE	2.29	0.41
19:S:46:ASP:OD1	19:S:47:LYS:N	2.54	0.41
19:S:58:GLY:HA2	19:S:136:ASP:HB2	2.02	0.41
20:T:33:ILE:O	20:T:102:LEU:HD12	2.20	0.41
20:T:47:PHE:CD2	20:T:47:PHE:C	2.94	0.41
21:U:14:SER:HB3	21:U:149:VAL:HG12	2.02	0.41
21:U:51:VAL:CG2	21:U:56:ARG:HG3	2.51	0.41
22:V:174:ARG:O	22:V:178:ARG:HB3	2.21	0.41
23:W:20:ARG:HG3	23:W:21:LYS:N	2.35	0.41
23:W:100:ARG:NH1	23:W:100:ARG:HG3	2.33	0.41
23:W:122:VAL:O	23:W:126:GLU:HG3	2.20	0.41
24:X:10:ILE:CG2	24:X:24:LEU:HD22	2.51	0.41
24:X:148:LEU:HG	24:X:149:LYS:N	2.35	0.41
25:Y:19:PHE:HA	25:Y:22:HIS:CE1	2.56	0.41
25:Y:66:ASN:OD1	33:GA:35:VAL:HG13	2.21	0.41
25:Y:125:ALA:O	25:Y:126:VAL:HG13	2.21	0.41
27:AA:30:GLY:HA3	27:AA:66:LYS:HD2	2.02	0.41
27:AA:48:ARG:HH11	27:AA:48:ARG:CG	2.33	0.41
29:CA:47:ALA:HB3	39:MA:77:PRO:HG2	2.03	0.41
30:DA:60:ARG:HG3	30:DA:60:ARG:NH1	2.36	0.41
30:DA:113:LYS:O	30:DA:116:LYS:HB3	2.20	0.41
34:HA:25:LEU:HD22	34:HA:87:VAL:HG21	2.03	0.41
34:HA:44:ILE:CG2	34:HA:53:LYS:HE3	2.50	0.41
34:HA:50:VAL:HA	34:HA:53:LYS:HB2	2.01	0.41
36:JA:105:ARG:NH1	36:JA:125:ARG:NH1	2.69	0.41
38:LA:42:PRO:HD2	38:LA:56:THR:CG2	2.50	0.41
43:QA:19:GLN:HG2	43:QA:19:GLN:O	2.21	0.41
43:QA:27:ILE:HA	43:QA:30:ARG:CD	2.51	0.41
44:RA:95:VAL:HG11	44:RA:122:ARG:CZ	2.51	0.41
46:TA:4:VAL:CG2	46:TA:93:LEU:HA	2.42	0.41
46:TA:29:LYS:O	46:TA:31:GLY:N	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:TA:55:LYS:HA	46:TA:56:PRO:HD3	1.88	0.41
49:WA:41:THR:O	49:WA:68:VAL:HG21	2.21	0.41
49:WA:69:GLN:HG2	49:WA:110:VAL:O	2.21	0.41
49:WA:260:ILE:HD13	49:WA:313:TRP:HH2	1.85	0.41
50:XA:121:VAL:HB	50:XA:142:PRO:O	2.21	0.41
50:XA:189:VAL:HG11	50:XA:193:GLN:CD	2.42	0.41
51:YA:66:VAL:HG13	64:LB:33:LEU:HD22	2.03	0.41
51:YA:83:LYS:HD3	51:YA:104:ASP:OD2	2.21	0.41
51:YA:97:LEU:HD12	51:YA:232:HIS:CG	2.55	0.41
51:YA:145:LYS:HB3	51:YA:149:GLN:HG2	2.03	0.41
51:YA:174:LYS:CB	51:YA:174:LYS:NZ	2.84	0.41
52:ZA:218:ILE:O	52:ZA:221:THR:HG23	2.21	0.41
53:AB:210:GLU:HA	53:AB:211:PRO:HD3	1.67	0.41
54:BB:31:PRO:HG2	54:BB:38:LEU:HD11	2.01	0.41
54:BB:67:GLN:HE22	74:VB:85:PHE:HZ	1.67	0.41
54:BB:70:VAL:HG22	54:BB:71:LYS:N	2.36	0.41
57:EB:93:LEU:HD21	57:EB:129:LEU:CD2	2.51	0.41
58:FB:57:ALA:HB1	58:FB:60:ILE:HD12	2.02	0.41
59:GB:30:LEU:HD13	59:GB:105:LEU:CD2	2.51	0.41
59:GB:174:ARG:HE	59:GB:174:ARG:N	2.19	0.41
60:HB:43:ILE:HG12	60:HB:64:TYR:CE2	2.56	0.41
61:IB:3:THR:O	61:IB:4:GLU:HG2	2.21	0.41
61:IB:6:THR:C	61:IB:8:GLN:H	2.24	0.41
64:LB:85:ALA:N	64:LB:119:THR:HG22	2.32	0.41
65:MB:36:LEU:O	65:MB:36:LEU:HD12	2.21	0.41
66:NB:39:VAL:HG23	66:NB:45:ARG:HD3	2.01	0.41
68:PB:129:TRP:HB2	68:PB:131:LEU:HG	2.02	0.41
69:QB:89:ARG:HA	69:QB:90:PRO:HD2	1.77	0.41
70:RB:25:THR:HG23	70:RB:88:LYS:HG3	2.02	0.41
70:RB:26:LEU:HD12	70:RB:26:LEU:N	2.35	0.41
72:TB:90:THR:HG22	72:TB:102:VAL:CB	2.51	0.41
73:UB:17:VAL:O	73:UB:18:HIS:C	2.59	0.41
73:UB:28:ASN:HD21	73:UB:110:LYS:HE3	1.86	0.41
73:UB:57:LEU:HD22	80:BC:4:VAL:HG12	2.03	0.41
76:XB:23:CYS:HG	76:XB:74:CYS:HB3	1.85	0.41
76:XB:41:ILE:HD13	76:XB:41:ILE:N	2.35	0.41
80:BC:55:ARG:NE	80:BC:58:PRO:HB3	2.36	0.41
82:DC:7:ASP:OD1	82:DC:7:ASP:N	2.53	0.41
82:DC:375:LYS:HE3	82:DC:375:LYS:HB3	1.86	0.41
82:DC:384:LYS:C	82:DC:385:MET:HG3	2.41	0.41
82:DC:404:THR:HG22	82:DC:449:PRO:CB	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
83:EC:6917:C:H2'	83:EC:6918:A:C5'	2.50	0.41
83:EC:6930:G:H2'	83:EC:6931:U:H5"	2.03	0.41
1:A:142:G:H5"	56:DB:139:ASN:OD1	2.20	0.41
1:A:330:G:O5'	58:FB:172:ARG:NH2	2.54	0.41
1:A:445:A:H61	1:A:462:G:H1'	1.86	0.41
1:A:1289:U:H4'	1:A:1423:U:O2	2.20	0.41
1:A:1383:G:O2'	1:A:1384:A:H5'	2.21	0.41
1:A:1785:U:O2'	1:A:1786:G:H5'	2.21	0.41
2:B:407:A:H8	2:B:407:A:O5'	2.04	0.41
2:B:543:C:H2'	2:B:544:C:O4'	2.21	0.41
2:B:882:A:C2'	2:B:883:A:H5"	2.51	0.41
2:B:911:C:N4	6:F:3:ARG:HD3	2.33	0.41
2:B:995:U:C1'	2:B:2637:A:H5'	2.51	0.41
2:B:1163:A:C2	2:B:1164:G:C5	3.10	0.41
2:B:1174:G:C4	2:B:1318:A:C6	3.09	0.41
2:B:1283:C:OP1	48:VA:81:LYS:HA	2.21	0.41
2:B:1290:A:H2'	2:B:1291:A:H8	1.86	0.41
2:B:1628:C:C5'	2:B:1629:U:H3'	2.38	0.41
2:B:1652:G:H2'	2:B:1653:G:H8	1.85	0.41
2:B:2107:A:H3'	2:B:2108:C:C6	2.56	0.41
2:B:2369:G:C5	2:B:2370:G:C6	3.08	0.41
2:B:2776:C:H5"	2:B:2777:G:H5'	2.02	0.41
2:B:2883:U:O2'	2:B:2884:C:H5'	2.20	0.41
2:B:2892:A:C4	2:B:2893:C:C6	3.09	0.41
2:B:3267:A:C2	10:J:73:GLY:HA3	2.56	0.41
2:B:3369:G:C5'	28:BA:56:ARG:HH21	2.20	0.41
3:C:5:U:C2'	3:C:6:U:H5'	2.51	0.41
3:C:132:G:H2'	3:C:133:G:H5'	2.03	0.41
4:D:28:C:H1'	4:D:56:A:H61	1.85	0.41
5:E:65:ILE:HD11	5:E:148:VAL:HG22	2.01	0.41
6:F:60:LYS:HB3	6:F:73:GLU:OE2	2.21	0.41
6:F:82:VAL:HG22	47:UA:65:ALA:CB	2.51	0.41
7:G:91:GLY:C	7:G:155:ALA:HB1	2.42	0.41
7:G:119:TYR:CD2	7:G:119:TYR:N	2.89	0.41
9:I:32:GLN:HG2	9:I:36:LEU:CD1	2.51	0.41
9:I:52:VAL:O	9:I:62:CYS:HA	2.21	0.41
9:I:65:ILE:HG13	9:I:74:VAL:HG22	2.03	0.41
9:I:85:ARG:NH1	9:I:86:TYR:OH	2.54	0.41
9:I:131:LEU:HD13	9:I:131:LEU:N	2.36	0.41
12:L:75:ILE:HA	12:L:78:PHE:CE1	2.54	0.41
12:L:77:GLN:O	12:L:80:TYR:HD1	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:N:168:SER:HA	25:Y:160:ILE:CG2	2.40	0.41
18:R:98:SER:HA	18:R:101:LYS:HD2	2.02	0.41
18:R:123:LEU:HD13	20:T:194:LEU:HD23	2.02	0.41
21:U:114:VAL:CG2	21:U:148:LEU:HD13	2.48	0.41
29:CA:88:MET:CE	29:CA:120:LYS:HB2	2.51	0.41
29:CA:92:LYS:CE	29:CA:112:THR:H	2.33	0.41
31:EA:13:VAL:CB	31:EA:19:ALA:HA	2.51	0.41
39:MA:34:GLN:HB3	39:MA:38:ARG:HH12	1.86	0.41
45:SA:10:THR:O	45:SA:14:LYS:HB2	2.21	0.41
49:WA:19:TRP:CD2	49:WA:306:THR:HB	2.55	0.41
49:WA:36:ALA:HB1	49:WA:68:VAL:HG12	2.03	0.41
49:WA:182:ASN:O	49:WA:186:PHE:HA	2.21	0.41
51:YA:34:ALA:HA	51:YA:98:THR:HG22	2.02	0.41
51:YA:144:ARG:HG2	51:YA:207:LEU:N	2.35	0.41
55:CB:120:ILE:O	55:CB:124:LEU:HD13	2.21	0.41
55:CB:163:SER:O	55:CB:167:ARG:HG3	2.21	0.41
56:DB:132:ARG:HG3	56:DB:133:LEU:CD1	2.51	0.41
56:DB:137:ARG:HE	56:DB:140:ASN:CB	2.28	0.41
56:DB:184:LEU:HB2	56:DB:188:ARG:HH12	1.85	0.41
57:EB:7:LYS:O	57:EB:8:ILE:CG2	2.67	0.41
58:FB:65:PHE:O	58:FB:73:SER:HA	2.21	0.41
61:IB:112:SER:HB3	61:IB:115:PHE:CD1	2.56	0.41
61:IB:123:VAL:HG21	61:IB:139:VAL:HG22	2.02	0.41
63:KB:4:MET:H	63:KB:4:MET:HG2	1.73	0.41
63:KB:107:LYS:HD2	63:KB:107:LYS:H	1.85	0.41
65:MB:90:ILE:HA	65:MB:107:ILE:HB	2.03	0.41
66:NB:45:ARG:HG2	66:NB:45:ARG:NH1	2.35	0.41
68:PB:100:THR:HG22	68:PB:108:LYS:CG	2.51	0.41
69:QB:48:GLN:HE21	69:QB:48:GLN:HB3	1.70	0.41
75:WB:62:VAL:HG22	75:WB:80:LEU:HD11	2.03	0.41
75:WB:63:SER:HA	75:WB:66:VAL:CG2	2.50	0.41
75:WB:96:SER:C	75:WB:98:GLN:H	2.24	0.41
76:XB:38:ARG:CD	76:XB:82:ARG:HD3	2.51	0.41
77:YB:31:TYR:CE2	77:YB:81:ARG:HA	2.56	0.41
82:DC:271:ARG:HB3	82:DC:274:ASN:ND2	2.36	0.41
82:DC:637:GLY:HA2	82:DC:638:PRO:HA	1.78	0.41
83:EC:6859:U:C4	83:EC:6871:A:N6	2.89	0.41
1:A:257:A:H1'	58:FB:73:SER:CB	2.51	0.40
1:A:478:A:H2'	1:A:479:C:H5'	2.02	0.40
1:A:632:U:C4'	73:UB:11:SER:HB3	2.38	0.40
1:A:654:C:H5'	1:A:655:G:OP2	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1077:C:C2	1:A:1078:C:C5	3.09	0.40
1:A:1124:A:H2'	1:A:1125:A:C8	2.56	0.40
1:A:1184:A:O2'	1:A:1209:C:H1'	2.21	0.40
1:A:1246:C:H5'	79:AC:7:TRP:CH2	2.56	0.40
1:A:1382:A:H2	70:RB:57:ARG:NH1	2.19	0.40
1:A:1426:C:H3'	1:A:1427:A:H5"	2.01	0.40
1:A:1473:U:H5"	55:CB:190:ILE:CG1	2.51	0.40
1:A:1505:A:C2'	1:A:1506:G:H5'	2.51	0.40
1:A:1524:A:C2	1:A:1607:G:N2	2.85	0.40
1:A:1526:A:H2'	1:A:1527:C:H5'	2.03	0.40
2:B:95:A:H5"	32:FA:34:MET:CB	2.51	0.40
2:B:852:U:H2'	2:B:853:G:H8	1.86	0.40
2:B:952:A:N3	2:B:1114:U:O2'	2.46	0.40
2:B:956:U:H2'	2:B:957:C:C6	2.57	0.40
2:B:1126:G:OP2	14:N:14:ASN:HA	2.21	0.40
2:B:1231:A:H2'	2:B:1277:C:H41	1.81	0.40
2:B:1438:U:H4'	8:H:88:GLY:HA3	2.02	0.40
2:B:1494:U:OP1	43:QA:44:TRP:HB3	2.21	0.40
2:B:1496:C:OP1	2:B:1514:G:H5"	2.21	0.40
2:B:1639:C:H6	2:B:1639:C:O5'	2.04	0.40
2:B:1742:U:H2'	2:B:1743:G:O4'	2.21	0.40
2:B:1748:G:H4'	42:PA:2:ALA:N	2.36	0.40
2:B:1785:U:C5'	38:LA:38:LEU:HD12	2.48	0.40
2:B:1860:G:H2'	2:B:1861:G:O4'	2.21	0.40
2:B:2127:U:H2'	2:B:2128:C:C6	2.56	0.40
2:B:2406:C:H1'	2:B:2819:A:C2	2.56	0.40
2:B:2466:G:OP1	5:E:105:LYS:HB3	2.21	0.40
2:B:2527:G:H2'	2:B:2528:G:C8	2.56	0.40
2:B:2762:A:H2'	2:B:2763:U:C6	2.57	0.40
2:B:2865:U:H2'	2:B:2866:U:H5'	2.02	0.40
2:B:3061:G:C4	2:B:3062:G:C8	3.09	0.40
2:B:3280:U:C2	2:B:3281:U:C5	3.10	0.40
3:C:60:U:C5	39:MA:55:LEU:HD12	2.56	0.40
4:D:30:G:H2'	4:D:31:U:C6	2.56	0.40
4:D:57:G:C8	4:D:58:C:C5	3.09	0.40
4:D:69:C:O2'	4:D:70:U:H5'	2.21	0.40
6:F:206:PRO:CD	6:F:213:GLY:HA3	2.50	0.40
7:G:41:VAL:CG2	7:G:185:GLY:HA3	2.44	0.40
7:G:169:THR:CG2	7:G:170:PRO:HD2	2.51	0.40
8:H:69:ARG:CB	8:H:71:VAL:HG12	2.50	0.40
8:H:73:ARG:HB3	8:H:74:ILE:H	1.65	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:I:243:ALA:HA	9:I:246:ALA:HB3	2.03	0.40
10:J:38:THR:HG23	10:J:90:LYS:CB	2.51	0.40
10:J:72:ASN:ND2	10:J:159:LEU:HB3	2.36	0.40
15:O:82:ARG:O	15:O:86:VAL:HG23	2.21	0.40
15:O:140:ARG:O	15:O:145:LYS:HE2	2.21	0.40
17:Q:131:LYS:HB3	17:Q:131:LYS:NZ	2.36	0.40
18:R:67:PRO:HD3	18:R:99:TRP:CZ3	2.55	0.40
18:R:94:TRP:C	18:R:96:ALA:N	2.73	0.40
18:R:102:LYS:O	18:R:105:GLN:HB2	2.20	0.40
20:T:7:VAL:HG12	20:T:8:VAL:N	2.35	0.40
22:V:127:LEU:HD13	22:V:128:ALA:N	2.35	0.40
24:X:43:TYR:HA	24:X:46:GLN:OE1	2.20	0.40
25:Y:94:GLU:OE1	25:Y:94:GLU:N	2.55	0.40
27:AA:87:ARG:C	27:AA:89:ASP:H	2.25	0.40
29:CA:27:ARG:HD2	29:CA:27:ARG:H	1.86	0.40
29:CA:35:PRO:O	29:CA:36:LYS:C	2.59	0.40
29:CA:61:LYS:O	29:CA:87:SER:HB2	2.20	0.40
30:DA:76:LEU:C	30:DA:76:LEU:HD13	2.42	0.40
37:KA:6:ARG:HG3	37:KA:8:TYR:CE1	2.56	0.40
39:MA:85:THR:HG22	39:MA:88:LEU:H	1.86	0.40
42:PA:3:ARG:HH21	42:PA:50:SER:HB2	1.86	0.40
49:WA:23:LEU:HG	49:WA:291:SER:OG	2.21	0.40
49:WA:193:ILE:HG22	49:WA:194:GLY:H	1.85	0.40
50:XA:163:ASN:C	50:XA:165:ARG:N	2.73	0.40
52:ZA:49:LYS:NZ	52:ZA:243:TYR:HB3	2.36	0.40
52:ZA:76:LEU:HG	52:ZA:105:GLY:C	2.42	0.40
52:ZA:146:THR:HG21	59:GB:94:ASP:OD2	2.21	0.40
52:ZA:179:VAL:HG21	52:ZA:197:TYR:CE1	2.57	0.40
54:BB:62:LYS:HB3	54:BB:62:LYS:HE2	1.90	0.40
55:CB:57:SER:CB	78:ZB:53:ILE:HB	2.50	0.40
55:CB:176:THR:O	55:CB:180:ARG:HB2	2.22	0.40
59:GB:37:LYS:HE2	59:GB:38:ASN:ND2	2.35	0.40
59:GB:37:LYS:HG3	59:GB:38:ASN:N	2.36	0.40
60:HB:31:LYS:HA	60:HB:37:THR:O	2.21	0.40
61:IB:35:TYR:CE2	61:IB:49:ILE:HG23	2.56	0.40
61:IB:75:VAL:HG11	61:IB:117:VAL:HG12	2.03	0.40
64:LB:83:ILE:HD12	76:XB:44:ILE:HG21	2.02	0.40
66:NB:87:LYS:O	66:NB:91:ALA:HB2	2.21	0.40
68:PB:50:ALA:CB	68:PB:52:VAL:HG23	2.51	0.40
68:PB:73:MET:O	68:PB:75:ASN:N	2.54	0.40
70:RB:35:GLU:OE2	70:RB:57:ARG:HD2	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
74:VB:14:SER:O	74:VB:16:PRO:HD3	2.21	0.40
75:WB:41:ILE:O	75:WB:42:LEU:CB	2.69	0.40
79:AC:39:CYS:SG	79:AC:42:CYS:HB2	2.61	0.40
82:DC:106:PRO:O	82:DC:115:VAL:HG23	2.21	0.40
82:DC:171:LYS:HG2	82:DC:278:LEU:HB3	2.02	0.40
82:DC:433:ARG:NH1	82:DC:433:ARG:HB3	2.36	0.40
82:DC:585:ARG:O	82:DC:692:THR:OG1	2.29	0.40
1:A:15:U:O2'	1:A:16:G:H5'	2.21	0.40
1:A:268:C:O2'	1:A:269:G:H5'	2.21	0.40
1:A:927:C:H1'	64:LB:125:SER:OG	2.21	0.40
1:A:1085:G:H22	1:A:1087:A:H3'	1.86	0.40
1:A:1360:A:H5'	1:A:1361:U:OP2	2.21	0.40
1:A:1613:U:H5"	55:CB:169:ASN:HB3	2.03	0.40
1:A:1642:G:OP1	45:SA:1:MET:HB2	2.21	0.40
1:A:1675:C:H2'	1:A:1676:U:O4'	2.21	0.40
2:B:214:G:H2'	2:B:215:G:O4'	2.21	0.40
2:B:228:U:H2'	2:B:229:G:H8	1.85	0.40
2:B:247:C:H2'	2:B:248:U:O4'	2.21	0.40
2:B:277:G:N3	19:S:93:LYS:HG3	2.37	0.40
2:B:306:A:N6	2:B:2784:G:C2	2.89	0.40
2:B:825:U:H5"	2:B:1797:A:C5	2.57	0.40
2:B:835:G:C2	2:B:857:G:C4	3.08	0.40
2:B:1051:U:H2'	2:B:1052:U:H5'	2.02	0.40
2:B:1133:A:H5'	2:B:2866:U:OP1	2.20	0.40
2:B:1874:A:H2'	2:B:1875:G:H5'	2.03	0.40
2:B:2562:A:H2'	2:B:2563:G:H8	1.86	0.40
2:B:2709:C:O2'	2:B:2710:C:H5'	2.21	0.40
2:B:2743:A:H2'	2:B:2744:U:C6	2.57	0.40
2:B:3049:A:C2'	2:B:3050:U:H5'	2.52	0.40
3:C:41:A:H5"	41:OA:67:LEU:HG	2.01	0.40
3:C:65:A:C4	3:C:66:A:C8	3.09	0.40
4:D:108:A:H2'	4:D:109:G:H8	1.85	0.40
5:E:65:ILE:HB	5:E:144:LEU:HD23	2.03	0.40
5:E:94:ASN:CB	5:E:123:LEU:HG	2.44	0.40
6:F:104:LEU:C	6:F:106:SER:H	2.24	0.40
7:G:49:TYR:C	7:G:79:VAL:HG23	2.42	0.40
8:H:181:VAL:CG1	8:H:182:LEU:N	2.84	0.40
8:H:352:ALA:C	8:H:354:VAL:N	2.74	0.40
10:J:141:VAL:HG12	10:J:145:LEU:HD12	2.04	0.40
11:K:90:LYS:HE2	11:K:95:ILE:CD1	2.44	0.40
12:L:33:ASN:ND2	12:L:38:GLN:HE22	2.14	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:L:245:LYS:NZ	12:L:249:ARG:HD3	2.36	0.40
12:L:248:LYS:O	12:L:252:ASN:HB2	2.21	0.40
14:N:61:SER:HB3	14:N:63:GLU:CG	2.49	0.40
15:O:158:ASP:HA	15:O:161:SER:HB2	2.03	0.40
17:Q:58:VAL:HG11	17:Q:101:ARG:HH21	1.86	0.40
17:Q:75:PHE:CE1	17:Q:96:ALA:HB3	2.57	0.40
18:R:21:VAL:HB	18:R:63:VAL:CG2	2.43	0.40
18:R:93:LYS:HA	18:R:96:ALA:HB3	2.02	0.40
18:R:102:LYS:HG3	18:R:106:ARG:NH2	2.36	0.40
19:S:149:ASN:OD1	39:MA:92:LEU:HD22	2.21	0.40
20:T:37:ARG:HD3	20:T:108:ILE:CG1	2.51	0.40
20:T:180:SER:O	20:T:184:THR:HG22	2.22	0.40
24:X:81:TYR:CE1	24:X:88:HIS:HB2	2.55	0.40
27:AA:80:ARG:HB2	27:AA:99:ALA:HB3	2.02	0.40
27:AA:85:TRP:CD1	27:AA:85:TRP:C	2.95	0.40
29:CA:92:LYS:HE2	29:CA:111:ASN:CA	2.52	0.40
31:EA:83:THR:OG1	31:EA:84:ARG:N	2.54	0.40
36:JA:44:ARG:HD2	36:JA:46:PHE:CE2	2.56	0.40
37:KA:42:GLN:CG	37:KA:45:LEU:HD12	2.52	0.40
47:UA:55:TRP:CZ2	47:UA:70:THR:C	2.95	0.40
49:WA:116:ASP:HB2	49:WA:117:LYS:HD2	2.04	0.40
49:WA:221:MET:HE1	53:AB:220:PRO:HA	2.03	0.40
50:XA:122:ILE:HG12	50:XA:144:ILE:CD1	2.51	0.40
51:YA:215:VAL:HG22	51:YA:216:LYS:N	2.36	0.40
52:ZA:126:ARG:O	52:ZA:130:ILE:HD13	2.21	0.40
52:ZA:203:LYS:O	52:ZA:206:THR:HG22	2.21	0.40
55:CB:112:ARG:HH21	66:NB:43:ILE:CG2	2.32	0.40
55:CB:193:THR:O	55:CB:196:GLU:HB3	2.21	0.40
57:EB:96:ARG:HD2	57:EB:121:VAL:CG1	2.46	0.40
57:EB:135:ILE:CG2	57:EB:152:VAL:HG12	2.51	0.40
59:GB:163:PRO:O	59:GB:164:PHE:HB2	2.22	0.40
60:HB:59:PHE:CD1	60:HB:60:SER:N	2.89	0.40
66:NB:116:LEU:C	66:NB:117:LEU:HD22	2.42	0.40
67:OB:46:LEU:HD12	67:OB:50:ILE:HD11	2.02	0.40
73:UB:87:VAL:HA	73:UB:88:PRO:HD3	1.88	0.40
73:UB:113:ALA:HB1	73:UB:117:ILE:O	2.21	0.40
77:YB:34:ASP:HB3	77:YB:43:ILE:HD12	2.02	0.40
82:DC:545:LEU:CD1	82:DC:549:HIS:HB2	2.50	0.40
82:DC:608:PRO:HG3	82:DC:636:PHE:CD1	2.56	0.40
82:DC:613:LYS:O	82:DC:617:ARG:HG2	2.22	0.40
1:A:341:A:H4'	58:FB:87:ASN:OD1	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:476:U:H6	1:A:476:U:O5'	2.05	0.40
1:A:558:U:H1'	1:A:581:U:O4'	2.22	0.40
1:A:778:G:N3	1:A:778:G:H5'	2.36	0.40
1:A:785:U:O2'	1:A:786:C:H5'	2.20	0.40
1:A:962:C:H3'	1:A:963:A:H8	1.87	0.40
1:A:1203:A:H5'	1:A:1457:C:N4	2.23	0.40
1:A:1349:G:H2'	1:A:1350:U:C6	2.57	0.40
1:A:1610:G:H5"	55:CB:107:LYS:HB2	2.03	0.40
1:A:1758:U:H1'	2:B:2262:A:C2	2.57	0.40
2:B:69:C:O3'	2:B:101:G:H4'	2.22	0.40
2:B:75:G:H3'	2:B:76:G:C8	2.53	0.40
2:B:268:A:C4'	2:B:270:U:H1'	2.52	0.40
2:B:651:G:O3'	2:B:1436:U:H4'	2.21	0.40
2:B:1220:U:C5'	2:B:1222:G:H1'	2.51	0.40
2:B:1564:U:H3	2:B:1575:A:H2	1.68	0.40
2:B:1590:G:H8	2:B:1590:G:O5'	2.04	0.40
2:B:1635:G:N1	2:B:1638:A:OP2	2.40	0.40
2:B:1718:G:H2'	2:B:1719:G:O4'	2.22	0.40
2:B:1812:G:O2'	2:B:1818:U:H4'	2.21	0.40
2:B:1939:G:H1'	2:B:2114:C:H1'	2.03	0.40
2:B:2127:U:H2'	2:B:2128:C:H6	1.86	0.40
2:B:2145:A:C5'	2:B:2959:C:H5'	2.52	0.40
2:B:2420:C:H2'	2:B:2421:U:C6	2.56	0.40
2:B:2424:A:H4'	19:S:72:LYS:CE	2.51	0.40
2:B:2480:A:H2'	2:B:2481:G:H5'	2.02	0.40
2:B:2550:U:O4	6:F:40:TYR:N	2.38	0.40
2:B:2555:G:H2'	2:B:2556:C:C6	2.56	0.40
2:B:3162:C:H2'	2:B:3163:A:C8	2.56	0.40
2:B:3185:U:H5"	13:M:23:ARG:HH12	1.87	0.40
2:B:3353:G:C8	2:B:3356:G:H1'	2.56	0.40
4:D:50:U:O2	9:I:222:LEU:HD23	2.22	0.40
5:E:180:VAL:HG22	5:E:183:ILE:HD12	2.03	0.40
6:F:32:LEU:HA	6:F:36:GLU:HG3	2.03	0.40
6:F:92:LYS:HG2	6:F:103:PRO:CD	2.34	0.40
6:F:129:ALA:HB3	6:F:132:ASN:HD22	1.82	0.40
7:G:25:ILE:C	7:G:220:VAL:HG21	2.42	0.40
7:G:58:ARG:CD	7:G:283:TYR:HE2	2.33	0.40
7:G:76:VAL:CG1	7:G:325:LYS:HA	2.50	0.40
7:G:114:VAL:HG13	7:G:163:HIS:CD2	2.56	0.40
8:H:64:SER:CA	8:H:75:PRO:HA	2.47	0.40
8:H:193:LYS:HA	8:H:198:ARG:HA	2.02	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:206:LEU:HD11	8:H:228:ALA:CB	2.51	0.40
9:I:29:ASP:O	9:I:33:ARG:HB2	2.21	0.40
9:I:119:TYR:CE2	9:I:141:PRO:HD3	2.57	0.40
12:L:203:VAL:HG13	12:L:208:GLU:OE1	2.21	0.40
16:P:81:VAL:HG21	16:P:117:ARG:CD	2.51	0.40
18:R:49:PRO:HD2	18:R:81:VAL:HG11	2.02	0.40
19:S:174:ILE:HG21	19:S:185:ALA:HA	2.02	0.40
22:V:71:LEU:O	22:V:76:ALA:HB3	2.21	0.40
22:V:111:ARG:HH21	22:V:121:CYS:CB	2.32	0.40
26:Z:78:TYR:O	26:Z:81:LYS:HB2	2.21	0.40
29:CA:73:MET:HE3	29:CA:73:MET:O	2.21	0.40
30:DA:43:TYR:HA	30:DA:125:LYS:CG	2.36	0.40
31:EA:52:LYS:HZ3	31:EA:135:ARG:NH1	2.17	0.40
32:FA:12:ARG:CG	32:FA:12:ARG:NH1	2.83	0.40
35:IA:10:ARG:HB2	35:IA:12:TYR:CZ	2.56	0.40
37:KA:8:TYR:CD2	37:KA:99:ARG:HA	2.56	0.40
40:NA:11:LEU:HD22	40:NA:11:LEU:N	2.36	0.40
41:OA:21:ARG:HG3	41:OA:39:TYR:CD2	2.56	0.40
49:WA:252:LEU:O	49:WA:263:PHE:HB2	2.22	0.40
49:WA:267:PRO:HG2	49:WA:269:TYR:CD1	2.56	0.40
50:XA:90:ALA:HB1	50:XA:97:PRO:HD3	2.03	0.40
50:XA:200:ASP:O	50:XA:201:LEU:C	2.60	0.40
51:YA:90:GLU:HB2	51:YA:225:VAL:HG11	2.04	0.40
52:ZA:102:VAL:O	52:ZA:114:GLY:N	2.54	0.40
54:BB:42:LEU:O	54:BB:42:LEU:HD23	2.20	0.40
54:BB:45:ILE:HA	54:BB:61:VAL:HG11	2.03	0.40
54:BB:52:LEU:HB3	54:BB:54:TYR:CD2	2.56	0.40
54:BB:126:VAL:HA	54:BB:141:THR:HA	2.02	0.40
55:CB:43:PHE:HB2	55:CB:46:TRP:HB2	2.02	0.40
55:CB:173:ALA:HA	55:CB:176:THR:OG1	2.21	0.40
57:EB:143:LEU:HD23	57:EB:147:ASN:O	2.21	0.40
58:FB:43:ILE:HG12	58:FB:56:ARG:O	2.21	0.40
61:IB:87:ARG:HB2	61:IB:106:ASN:HD21	1.85	0.40
61:IB:100:TYR:O	73:UB:10:ASN:HA	2.22	0.40
61:IB:129:ARG:O	61:IB:131:ILE:N	2.55	0.40
64:LB:137:LEU:HD22	64:LB:137:LEU:OXT	2.21	0.40
65:MB:108:ARG:HA	65:MB:109:PRO:HD3	1.88	0.40
68:PB:88:ARG:HG2	68:PB:91:ASP:OD1	2.21	0.40
70:RB:83:GLU:CG	79:AC:55:PHE:HB2	2.50	0.40
72:TB:6:VAL:HG12	72:TB:34:ILE:CD1	2.46	0.40
73:UB:14:LYS:O	73:UB:18:HIS:HB2	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
73:UB:57:LEU:CD1	73:UB:73:ARG:HB2	2.39	0.40
82:DC:77:LEU:HD23	82:DC:77:LEU:C	2.42	0.40
82:DC:382:VAL:HA	82:DC:397:PHE:O	2.21	0.40
82:DC:534:GLY:O	82:DC:537:HIS:HB3	2.22	0.40
1:A:122:U:O2'	1:A:123:G:H5'	2.21	0.40
1:A:279:G:H2'	1:A:281:G:H5'	2.01	0.40
1:A:300:A:H2'	1:A:301:A:C8	2.57	0.40
1:A:916:U:H2'	1:A:917:U:O4'	2.21	0.40
1:A:1097:U:O4	52:ZA:201:ASN:HB2	2.21	0.40
1:A:1199:G:C8	79:AC:40:ARG:HD2	2.56	0.40
1:A:1309:C:H2'	1:A:1310:U:C6	2.56	0.40
1:A:1419:G:H1'	79:AC:55:PHE:O	2.22	0.40
1:A:1476:C:O2'	1:A:1477:G:H5'	2.22	0.40
1:A:1592:A:O2'	1:A:1593:A:H5'	2.21	0.40
1:A:1797:A:N6	76:XB:87:ARG:HD2	2.36	0.40
2:B:122:A:O5'	12:L:105:LYS:NZ	2.49	0.40
2:B:609:G:H3'	2:B:609:G:N3	2.36	0.40
2:B:753:C:H2'	2:B:754:G:C8	2.54	0.40
2:B:1231:A:H2'	2:B:1277:C:H42	1.86	0.40
2:B:1270:A:H5'	82:DC:741:GLY:CA	2.51	0.40
2:B:1455:U:H5	2:B:1478:C:H4'	1.87	0.40
2:B:1472:U:O2'	23:W:26:PRO:HB3	2.22	0.40
2:B:1553:U:C4'	2:B:1554:U:H5'	2.52	0.40
2:B:1591:G:C2'	2:B:1592:G:H5'	2.52	0.40
2:B:2124:G:O2'	2:B:2125:A:H5'	2.22	0.40
2:B:2250:G:H2'	2:B:2251:G:H8	1.87	0.40
2:B:2260:U:H2'	2:B:2261:G:C8	2.56	0.40
2:B:2298:U:O2	2:B:2298:U:O4'	2.40	0.40
2:B:2317:A:HO2'	2:B:2318:U:H5'	1.85	0.40
2:B:2689:A:N6	2:B:2702:A:O2'	2.52	0.40
2:B:2771:U:H3'	2:B:2772:C:C5'	2.48	0.40
3:C:71:A:H5'	30:DA:75:ARG:NH2	2.36	0.40
3:C:91:C:C4'	30:DA:24:SER:HB3	2.51	0.40
4:D:56:A:H2	15:O:138:VAL:HG21	1.86	0.40
5:E:147:LYS:CA	5:E:150:ASP:HB2	2.48	0.40
7:G:98:GLY:HA2	20:T:149:TYR:HE1	1.87	0.40
8:H:213:ASN:HD22	8:H:213:ASN:HA	1.71	0.40
11:K:82:LYS:H	11:K:82:LYS:CD	2.23	0.40
11:K:175:LYS:HD2	11:K:176:TYR:CE1	2.56	0.40
12:L:61:GLN:HB3	19:S:28:TRP:CZ2	2.56	0.40
12:L:97:TYR:CD2	12:L:97:TYR:N	2.88	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:L:143:ILE:HG23	12:L:173:MET:CG	2.51	0.40
13:M:166:ARG:HH21	13:M:168:ARG:HG2	1.87	0.40
20:T:52:LEU:O	20:T:52:LEU:HD23	2.21	0.40
21:U:49:GLU:HA	21:U:52:LEU:HB3	2.03	0.40
21:U:172:GLN:NE2	37:KA:60:ARG:O	2.52	0.40
22:V:177:GLY:HA2	22:V:184:PHE:O	2.21	0.40
23:W:106:LEU:HD12	23:W:106:LEU:H	1.86	0.40
23:W:180:LYS:NZ	23:W:184:LEU:HD12	2.36	0.40
34:HA:86:ARG:H	34:HA:86:ARG:HG2	1.62	0.40
35:IA:70:ARG:HG3	35:IA:70:ARG:NH2	2.35	0.40
36:JA:16:LYS:HB2	36:JA:16:LYS:HE2	1.79	0.40
38:LA:43:LYS:HD2	38:LA:48:GLY:O	2.21	0.40
39:MA:100:VAL:CG2	39:MA:101:THR:H	2.20	0.40
41:OA:24:ARG:HB3	41:OA:24:ARG:NH1	2.35	0.40
43:QA:15:LYS:O	43:QA:18:LYS:HB2	2.21	0.40
44:RA:94:SER:HA	44:RA:123:PRO:HA	2.02	0.40
46:TA:64:THR:HB	46:TA:89:LYS:CE	2.51	0.40
51:YA:81:PHE:CZ	51:YA:109:LYS:HE2	2.57	0.40
52:ZA:53:ILE:HD12	52:ZA:57:PHE:CZ	2.56	0.40
52:ZA:240:LEU:O	52:ZA:244:SER:HB2	2.21	0.40
54:BB:192:ILE:HG13	54:BB:243:GLY:HA3	2.02	0.40
55:CB:88:PRO:C	55:CB:90:ILE:N	2.74	0.40
55:CB:220:VAL:O	55:CB:224:ASN:HB2	2.20	0.40
58:FB:43:ILE:CG2	58:FB:44:HIS:N	2.83	0.40
60:HB:57:THR:HG23	60:HB:66:TYR:CE1	2.56	0.40
65:MB:17:TYR:O	65:MB:18:ARG:HD3	2.22	0.40
65:MB:22:LEU:HD21	65:MB:109:PRO:HB3	2.03	0.40
66:NB:39:VAL:HG21	66:NB:48:VAL:HG11	2.03	0.40
66:NB:92:TYR:C	66:NB:94:GLN:H	2.24	0.40
68:PB:28:ILE:HD12	68:PB:47:CYS:SG	2.61	0.40
69:QB:60:SER:O	69:QB:64:HIS:HB2	2.21	0.40
73:UB:30:LYS:HE3	73:UB:30:LYS:HB2	1.96	0.40
73:UB:85:ALA:HB2	73:UB:104:LEU:CD1	2.52	0.40
82:DC:239:LYS:HG2	82:DC:243:ARG:HD2	2.02	0.40
82:DC:646:VAL:HB	82:DC:667:PHE:CE1	2.56	0.40
82:DC:773:PRO:HB2	82:DC:776:GLU:CG	2.51	0.40
83:EC:6834:U:H3'	83:EC:6835:U:H5'	1.97	0.40
1:A:82:U:C2'	1:A:83:G:H5'	2.51	0.40
1:A:98:U:C4	1:A:99:C:N4	2.89	0.40
1:A:365:G:N3	1:A:365:G:H2'	2.37	0.40
1:A:629:U:C5'	63:KB:127:ARG:HH22	2.33	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:751:G:H2'	1:A:752:A:C8	2.57	0.40
1:A:753:A:OP1	54:BB:186:GLY:HA3	2.22	0.40
1:A:1070:C:O2'	1:A:1071:U:H5'	2.21	0.40
1:A:1223:A:O2'	1:A:1224:A:H5'	2.21	0.40
1:A:1325:A:H2'	1:A:1326:A:C8	2.57	0.40
1:A:1568:C:H3'	1:A:1569:A:H5'	2.04	0.40
1:A:1589:C:H2'	1:A:1590:G:O4'	2.21	0.40
1:A:1629:G:P	76:XB:92:ARG:HH22	2.44	0.40
1:A:1761:U:O2	1:A:1761:U:O4'	2.39	0.40
1:A:1762:A:H4'	1:A:1783:C:H4'	2.04	0.40
2:B:596:C:C2	2:B:597:G:C8	3.10	0.40
2:B:640:U:P	36:JA:37:GLY:HA2	2.62	0.40
2:B:669:U:H2'	2:B:670:C:O4'	2.21	0.40
2:B:825:U:C3'	2:B:826:G:H5"	2.51	0.40
2:B:1161:G:C2'	36:JA:56:GLY:HA3	2.51	0.40
2:B:1244:A:H4'	2:B:1245:A:H8	1.85	0.40
2:B:1411:C:P	36:JA:98:HIS:HB3	2.61	0.40
2:B:1878:G:C6	2:B:1879:A:N1	2.90	0.40
2:B:1921:A:H1'	2:B:1932:A:N6	2.36	0.40
2:B:2156:C:H2'	2:B:2178:A:C6	2.57	0.40
2:B:2700:G:H5"	25:Y:17:ARG:CD	2.40	0.40
2:B:2801:A:HO2'	2:B:2802:A:H2'	1.82	0.40
2:B:2892:A:C5	2:B:2893:C:C5	3.09	0.40
2:B:3100:U:H3	2:B:3134:A:N6	2.19	0.40
2:B:3243:A:C5	20:T:156:LEU:HB3	2.57	0.40
2:B:3313:U:O2'	7:G:173:GLN:HA	2.22	0.40
6:F:22:LEU:HD12	6:F:22:LEU:N	2.19	0.40
6:F:139:HIS:O	6:F:141:PRO:HD3	2.21	0.40
7:G:303:LYS:NZ	7:G:371:GLN:HB3	2.37	0.40
8:H:269:SER:O	8:H:270:SER:HB2	2.22	0.40
8:H:276:LEU:HA	8:H:276:LEU:HD23	1.93	0.40
8:H:329:PRO:HD3	11:K:41:ARG:HH22	1.87	0.40
9:I:184:ASP:OD1	9:I:186:GLU:HB2	2.22	0.40
9:I:259:LYS:HE2	9:I:260:PHE:CE2	2.57	0.40
11:K:143:THR:O	11:K:147:LEU:HG	2.21	0.40
11:K:242:SER:C	11:K:244:ASN:N	2.75	0.40
12:L:142:LEU:O	12:L:146:LYS:N	2.55	0.40
12:L:185:ARG:O	12:L:189:LEU:HG	2.21	0.40
14:N:74:LYS:HE3	14:N:74:LYS:CA	2.52	0.40
16:P:127:SER:O	16:P:131:GLU:OE1	2.40	0.40
19:S:186:GLY:O	19:S:190:THR:HG22	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:U:26:PHE:HA	21:U:144:SER:CB	2.49	0.40
21:U:51:VAL:HG22	21:U:56:ARG:O	2.21	0.40
21:U:69:ARG:O	21:U:70:THR:HB	2.21	0.40
22:V:88:THR:HA	22:V:107:THR:CG2	2.52	0.40
22:V:176:ARG:HA	22:V:182:LYS:O	2.22	0.40
23:W:23:TRP:CB	23:W:53:LYS:HE3	2.48	0.40
24:X:1:MET:SD	24:X:31:ALA:HB1	2.61	0.40
24:X:132:THR:O	24:X:135:VAL:HG23	2.21	0.40
25:Y:87:LYS:HB3	25:Y:89:LEU:HD13	2.02	0.40
32:FA:62:HIS:O	32:FA:62:HIS:CG	2.74	0.40
34:HA:41:LEU:HB3	34:HA:92:ILE:CG2	2.52	0.40
34:HA:49:PRO:HG2	34:HA:52:ARG:HB3	2.04	0.40
35:IA:74:ARG:HG3	35:IA:109:VAL:HG21	2.04	0.40
37:KA:23:ASN:O	37:KA:25:PRO:HD3	2.22	0.40
37:KA:69:GLY:HA3	37:KA:85:PHE:CD1	2.57	0.40
39:MA:9:LEU:HD12	39:MA:53:CYS:SG	2.61	0.40
39:MA:90:ARG:O	39:MA:91:ALA:HB3	2.22	0.40
41:OA:8:PHE:O	41:OA:11:ARG:HG3	2.22	0.40
48:VA:42:ARG:HG2	48:VA:42:ARG:HH11	1.86	0.40
49:WA:10:ARG:HG2	49:WA:54:PHE:CD1	2.56	0.40
49:WA:20:VAL:CG1	49:WA:35:SER:HB2	2.52	0.40
50:XA:89:PHE:CZ	50:XA:177:LEU:HD13	2.57	0.40
51:YA:21:VAL:HG21	51:YA:26:ARG:NH2	2.36	0.40
54:BB:123:LEU:HD21	54:BB:228:ILE:HA	2.03	0.40
54:BB:212:ASP:HB2	54:BB:244:ILE:CD1	2.51	0.40
54:BB:256:ARG:HG2	54:BB:256:ARG:HH11	1.87	0.40
59:GB:49:LEU:C	59:GB:49:LEU:HD13	2.41	0.40
60:HB:41:TYR:O	60:HB:45:ALA:CB	2.69	0.40
63:KB:20:ARG:H	63:KB:20:ARG:HD2	1.86	0.40
65:MB:93:VAL:HB	65:MB:104:GLN:HG3	2.03	0.40
68:PB:20:THR:CG2	68:PB:36:LYS:HG2	2.51	0.40
70:RB:82:TYR:CB	79:AC:52:PHE:HB3	2.51	0.40
70:RB:85:ARG:HD2	70:RB:85:ARG:N	2.37	0.40
70:RB:106:ILE:O	70:RB:106:ILE:HG23	2.21	0.40
72:TB:6:VAL:HG13	72:TB:29:PRO:CD	2.33	0.40
72:TB:81:VAL:CG1	72:TB:85:ASP:HB2	2.44	0.40
79:AC:12:ARG:HG2	79:AC:12:ARG:NH1	2.35	0.40
82:DC:24:VAL:HG12	82:DC:126:LEU:HD22	2.03	0.40
82:DC:157:ILE:CG2	82:DC:181:THR:HG21	2.51	0.40
82:DC:158:ASN:ND2	82:DC:159:LYS:N	2.66	0.40
82:DC:563:TYR:HD1	82:DC:726:GLU:HB2	1.86	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
82:DC:608:PRO:HA	82:DC:636:PHE:CE2	2.57	0.40
82:DC:759:GLN:HB3	82:DC:766:PHE:CD1	2.56	0.40
83:EC:6771:U:C4	83:EC:6772:G:H1'	2.56	0.40

There are no symmetry-related clashes.

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
5	E	165/217 (76%)	124 (75%)	28 (17%)	13 (8%)	1 14
6	F	250/254 (98%)	159 (64%)	61 (24%)	30 (12%)	0 5
7	G	384/387 (99%)	280 (73%)	84 (22%)	20 (5%)	2 21
8	H	359/362 (99%)	241 (67%)	77 (21%)	41 (11%)	0 6
9	I	294/297 (99%)	210 (71%)	64 (22%)	20 (7%)	1 17
10	J	173/176 (98%)	124 (72%)	35 (20%)	14 (8%)	1 13
11	K	220/244 (90%)	160 (73%)	37 (17%)	23 (10%)	0 8
12	L	231/256 (90%)	162 (70%)	50 (22%)	19 (8%)	1 13
13	M	189/191 (99%)	143 (76%)	32 (17%)	14 (7%)	1 15
14	N	207/221 (94%)	157 (76%)	35 (17%)	15 (7%)	1 16
15	O	167/174 (96%)	121 (72%)	30 (18%)	16 (10%)	0 10
16	P	92/165 (56%)	64 (70%)	14 (15%)	14 (15%)	0 3
17	Q	191/199 (96%)	141 (74%)	33 (17%)	17 (9%)	1 12
18	R	134/138 (97%)	103 (77%)	24 (18%)	7 (5%)	2 21
19	S	201/204 (98%)	148 (74%)	39 (19%)	14 (7%)	1 16
20	T	195/199 (98%)	152 (78%)	37 (19%)	6 (3%)	4 31
21	U	181/184 (98%)	127 (70%)	39 (22%)	15 (8%)	1 13

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

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

All (952) Ramachandran outliers are listed below:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

5.3.2 Protein sidechains (i)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
5	E	157/198 (79%)	137 (87%)	20 (13%)	4 22
6	F	194/196 (99%)	171 (88%)	23 (12%)	5 24
7	G	322/323 (100%)	288 (89%)	34 (11%)	6 27

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
8	H	288/289 (100%)	255 (88%)	33 (12%)	5 25
9	I	244/245 (100%)	211 (86%)	33 (14%)	4 21
10	J	152/153 (99%)	143 (94%)	9 (6%)	19 48
11	K	186/205 (91%)	163 (88%)	23 (12%)	4 22
12	L	191/208 (92%)	174 (91%)	17 (9%)	9 34
13	M	171/171 (100%)	155 (91%)	16 (9%)	8 31
14	N	180/187 (96%)	162 (90%)	18 (10%)	7 29
15	O	147/150 (98%)	134 (91%)	13 (9%)	10 35
16	P	81/136 (60%)	69 (85%)	12 (15%)	3 17
17	Q	154/159 (97%)	134 (87%)	20 (13%)	4 22
18	R	107/109 (98%)	91 (85%)	16 (15%)	3 17
19	S	175/176 (99%)	150 (86%)	25 (14%)	3 19
20	T	160/162 (99%)	142 (89%)	18 (11%)	6 25
21	U	145/146 (99%)	130 (90%)	15 (10%)	7 28
22	V	150/151 (99%)	141 (94%)	9 (6%)	19 47
23	W	153/154 (99%)	139 (91%)	14 (9%)	9 32
24	X	156/156 (100%)	137 (88%)	19 (12%)	5 23
25	Y	136/137 (99%)	117 (86%)	19 (14%)	3 20
26	Z	87/107 (81%)	85 (98%)	2 (2%)	50 70
27	AA	104/105 (99%)	95 (91%)	9 (9%)	10 35
28	BA	54/129 (42%)	47 (87%)	7 (13%)	4 22
29	CA	105/118 (89%)	94 (90%)	11 (10%)	7 27
30	DA	109/110 (99%)	94 (86%)	15 (14%)	3 20
31	EA	115/116 (99%)	107 (93%)	8 (7%)	15 43
32	FA	118/119 (99%)	112 (95%)	6 (5%)	24 52
33	GA	46/47 (98%)	41 (89%)	5 (11%)	6 26
34	HA	81/88 (92%)	74 (91%)	7 (9%)	10 37
35	IA	96/97 (99%)	83 (86%)	13 (14%)	4 21
36	JA	109/111 (98%)	97 (89%)	12 (11%)	6 26
37	KA	90/91 (99%)	83 (92%)	7 (8%)	12 39
38	LA	95/103 (92%)	84 (88%)	11 (12%)	5 24

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
39	MA	104/105 (99%)	96 (92%)	8 (8%)	13 40
40	NA	81/82 (99%)	69 (85%)	12 (15%)	3 17
41	OA	70/71 (99%)	62 (89%)	8 (11%)	5 25
42	PA	68/69 (99%)	63 (93%)	5 (7%)	13 41
43	QA	45/46 (98%)	42 (93%)	3 (7%)	16 44
44	RA	47/116 (40%)	43 (92%)	4 (8%)	10 37
45	SA	23/23 (100%)	19 (83%)	4 (17%)	2 12
46	TA	90/91 (99%)	82 (91%)	8 (9%)	9 34
47	UA	71/72 (99%)	66 (93%)	5 (7%)	15 43
48	VA	160/254 (63%)	143 (89%)	17 (11%)	6 27
49	WA	261/262 (100%)	237 (91%)	24 (9%)	9 32
50	XA	173/210 (82%)	151 (87%)	22 (13%)	4 22
51	YA	191/224 (85%)	173 (91%)	18 (9%)	8 31
52	ZA	176/205 (86%)	168 (96%)	8 (4%)	27 55
53	AB	182/195 (93%)	164 (90%)	18 (10%)	8 29
54	BB	221/222 (100%)	199 (90%)	22 (10%)	7 29
55	CB	173/191 (91%)	160 (92%)	13 (8%)	13 41
56	DB	193/201 (96%)	174 (90%)	19 (10%)	8 29
57	EB	165/170 (97%)	146 (88%)	19 (12%)	5 25
58	FB	150/161 (93%)	137 (91%)	13 (9%)	10 35
59	GB	158/166 (95%)	141 (89%)	17 (11%)	6 27
60	HB	89/98 (91%)	82 (92%)	7 (8%)	12 39
61	IB	136/137 (99%)	124 (91%)	12 (9%)	10 35
63	KB	127/128 (99%)	110 (87%)	17 (13%)	4 21
64	LB	96/105 (91%)	89 (93%)	7 (7%)	14 42
65	MB	103/118 (87%)	90 (87%)	13 (13%)	4 22
66	NB	117/119 (98%)	102 (87%)	15 (13%)	4 22
67	OB	82/124 (66%)	70 (85%)	12 (15%)	3 18
68	PB	128/129 (99%)	120 (94%)	8 (6%)	18 46
69	QB	115/116 (99%)	104 (90%)	11 (10%)	8 30
70	RB	100/114 (88%)	91 (91%)	9 (9%)	9 34

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
71	SB	74/74 (100%)	64 (86%)	10 (14%)	4 21
72	TB	110/111 (99%)	102 (93%)	8 (7%)	14 42
73	UB	119/120 (99%)	107 (90%)	12 (10%)	7 29
74	VB	112/113 (99%)	101 (90%)	11 (10%)	8 29
75	WB	61/89 (68%)	53 (87%)	8 (13%)	4 21
76	XB	83/101 (82%)	76 (92%)	7 (8%)	11 37
77	YB	70/71 (99%)	66 (94%)	4 (6%)	20 49
78	ZB	56/60 (93%)	53 (95%)	3 (5%)	22 50
79	AC	47/49 (96%)	42 (89%)	5 (11%)	6 27
80	BC	51/54 (94%)	40 (78%)	11 (22%)	1 6
82	DC	699/714 (98%)	605 (87%)	94 (13%)	4 21
All	All	10235/11032 (93%)	9165 (90%)	1070 (10%)	10 27

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

5.3.3 RNA (i)

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

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

All (1113) RNA backbone outliers are listed below:

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

All (50) RNA pucker outliers are listed below:

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

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

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

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	14,20,21	1.98	3 (21%)	14,28,30	2.17	5 (35%)

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	-	3/20/21/23	0/1/1/1

All (3) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
82	DC	699	DDE	CBW-CBI	4.96	1.61	1.53
82	DC	699	DDE	CAT-CE1	3.69	1.55	1.50
82	DC	699	DDE	OAG-CBI	2.03	1.27	1.23

All (5) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
82	DC	699	DDE	CAU-CBW-CBI	-5.47	100.34	111.20
82	DC	699	DDE	OAG-CBI-CBW	-3.66	115.85	120.49
82	DC	699	DDE	OAG-CBI-NAD	2.48	127.32	123.00
82	DC	699	DDE	CG-ND1-CE1	2.35	110.00	103.05
82	DC	699	DDE	CG-CD2-NE2	-2.22	104.67	109.25

There are no chirality outliers.

All (3) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
82	DC	699	DDE	CAU-CAT-CE1-NE2
82	DC	699	DDE	OAG-CBI-CBW-CAU
82	DC	699	DDE	NAD-CBI-CBW-CAU

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 monosaccharides in this entry.

5.6 Ligand geometry (i)

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

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\| > 2$	Counts	RMSZ	$\#\|Z\| > 2$
84	GDP	DC	901	85	24,30,30	1.67	4 (16%)	30,47,47	1.82	7 (23%)
86	SO1	DC	903	-	35,39,39	2.44	15 (42%)	39,64,64	1.94	8 (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	-	-	2/21/104/104	0/7/5/5

All (19) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
86	DC	903	SO1	O56-C52	-4.48	1.30	1.41
86	DC	903	SO1	C12-C6	4.16	1.63	1.53
86	DC	903	SO1	C1-C5	4.15	1.60	1.50
86	DC	903	SO1	O17-C52	3.97	1.47	1.40
86	DC	903	SO1	C55-C56	3.84	1.59	1.52
84	DC	901	GDP	PB-O1B	3.61	1.62	1.50
86	DC	903	SO1	C10-C6	3.57	1.60	1.53
84	DC	901	GDP	O4'-C1'	3.56	1.46	1.41
86	DC	903	SO1	C7-C2	3.54	1.59	1.54
86	DC	903	SO1	C10-C3	3.42	1.60	1.55
84	DC	901	GDP	PA-O1A	3.31	1.62	1.50
86	DC	903	SO1	C12-C4	3.12	1.61	1.54
86	DC	903	SO1	C4-C13	2.97	1.61	1.54
86	DC	903	SO1	C8-C2	2.95	1.58	1.53
86	DC	903	SO1	C3-C9	2.75	1.62	1.56
86	DC	903	SO1	C52-C53	2.56	1.59	1.52
86	DC	903	SO1	C53-C54	2.21	1.57	1.52
86	DC	903	SO1	C24-C18	2.12	1.59	1.54
84	DC	901	GDP	PB-O3B	2.01	1.62	1.54

All (15) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
86	DC	903	SO1	C12-C6-C10	-5.90	103.23	107.91
84	DC	901	GDP	PA-O3A-PB	-5.47	114.04	132.83
86	DC	903	SO1	C25-C22-C24	4.70	128.70	113.56
84	DC	901	GDP	C8-N7-C5	3.58	109.81	102.99
86	DC	903	SO1	C10-C6-C2	3.44	108.29	104.16
86	DC	903	SO1	C1-C4-C13	3.24	121.92	118.44
86	DC	903	SO1	C18-C9-C16	-3.17	99.09	103.64
84	DC	901	GDP	O2A-PA-O1A	2.88	126.50	112.24
84	DC	901	GDP	C3'-C2'-C1'	2.68	105.01	100.98
86	DC	903	SO1	C7-C2-C6	2.64	117.19	112.17
86	DC	903	SO1	C61-C56-C55	-2.44	109.69	113.41
86	DC	903	SO1	C65-O64-C55	-2.40	108.22	114.52
84	DC	901	GDP	O5'-PA-O1A	-2.31	100.06	109.07
84	DC	901	GDP	C5-C6-N1	2.30	118.01	113.95
84	DC	901	GDP	N2-C2-N1	2.00	120.97	116.71

There are no chirality outliers.

All (2) torsion outliers are listed below:

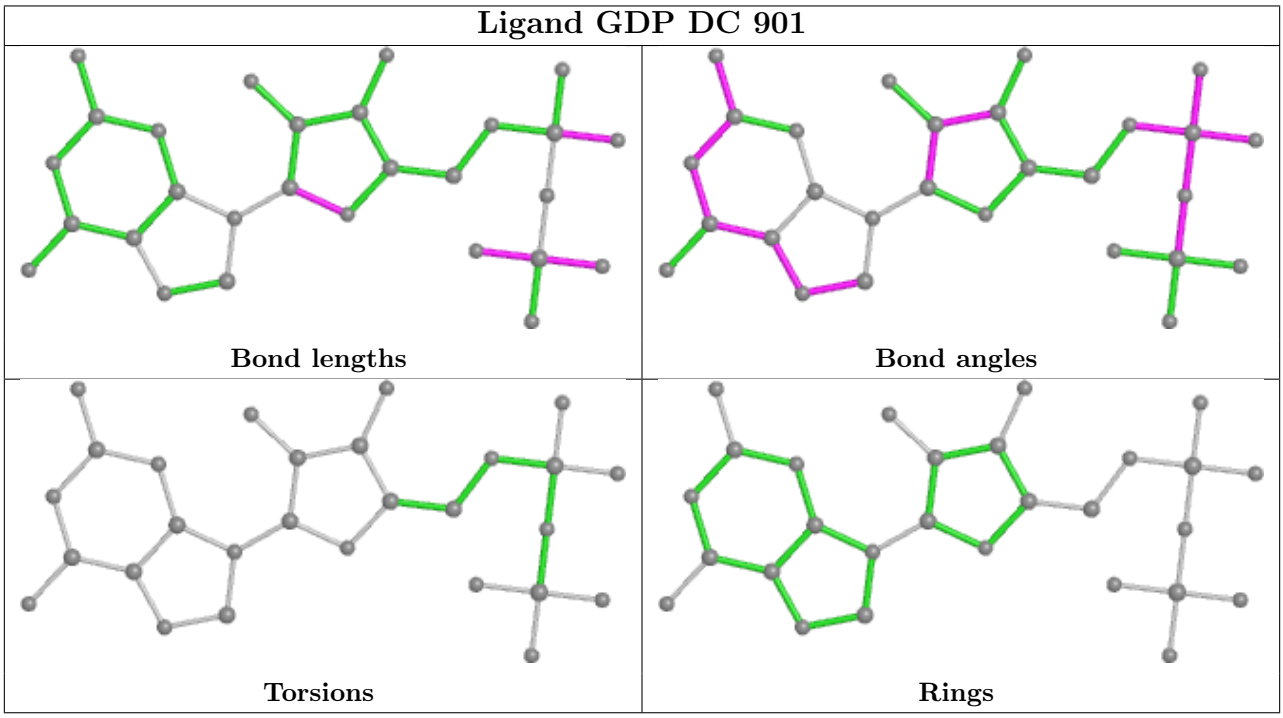
Mol	Chain	Res	Type	Atoms
86	DC	903	SO1	C2-C1-C5-O14
86	DC	903	SO1	C2-C1-C5-O15

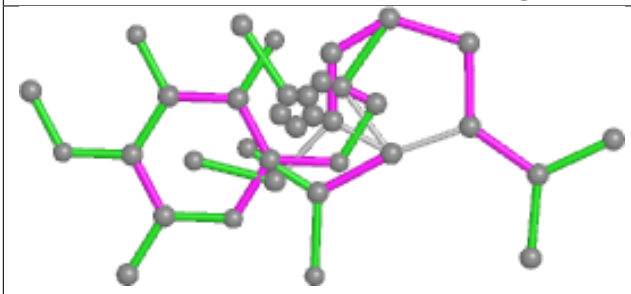
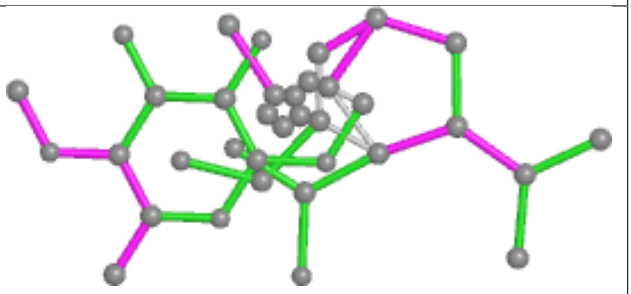
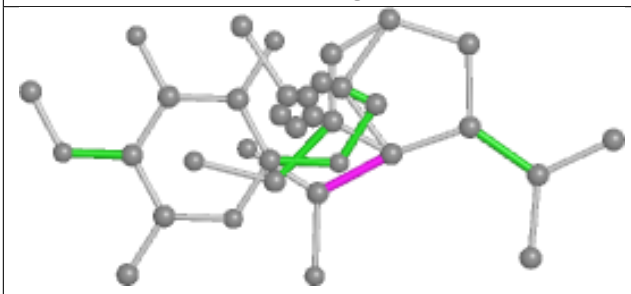
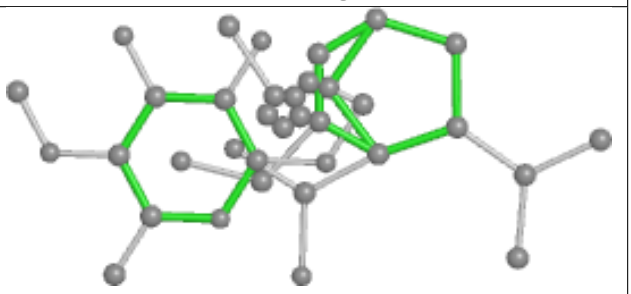
There are no ring outliers.

2 monomers are involved in 7 short contacts:

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

The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less then 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.



Ligand SO1 DC 903	
 Bond lengths	 Bond angles
 Torsions	 Rings

5.7 Other polymers

There are no such residues in this entry.

5.8 Polymer linkage issues

There are no chain breaks in this entry.

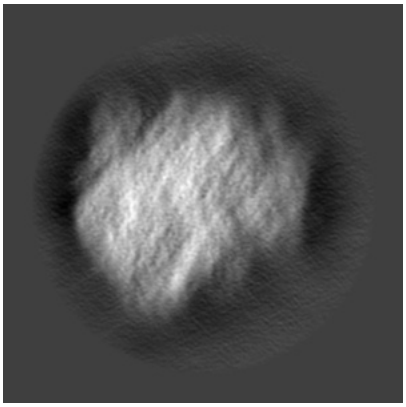
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-6646. These allow visual inspection of the internal detail of the map and identification of artifacts.

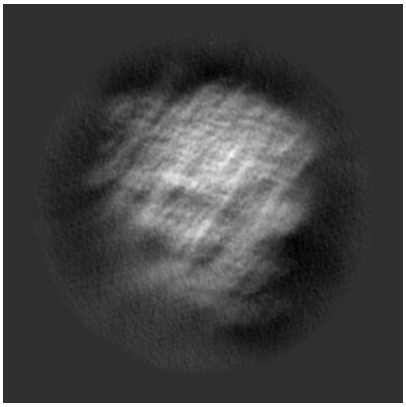
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections

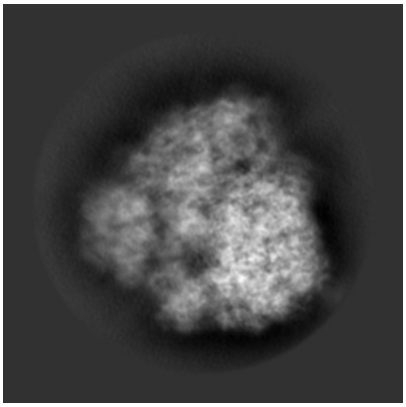
6.1.1 Primary map



X



Y

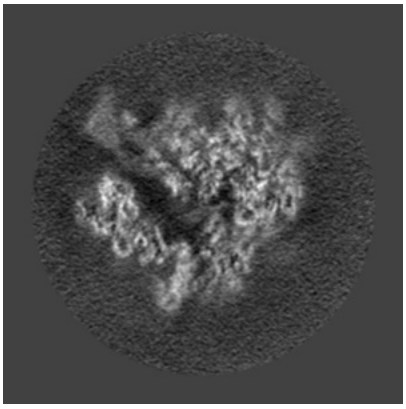


Z

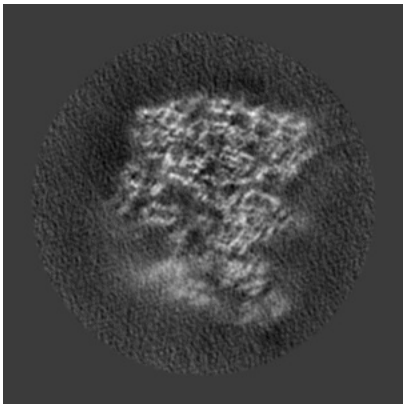
The images above show the map projected in three orthogonal directions.

6.2 Central slices

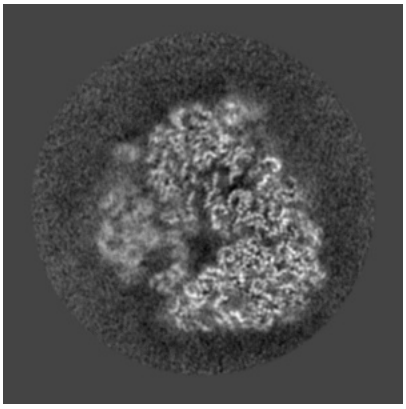
6.2.1 Primary map



X Index: 256



Y Index: 256

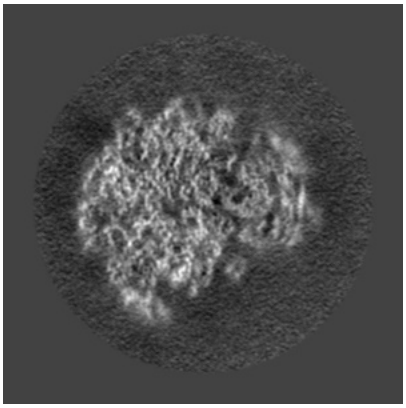


Z Index: 256

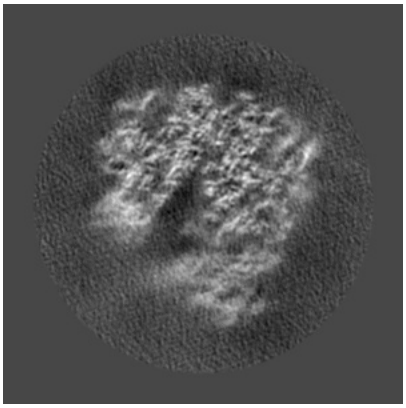
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

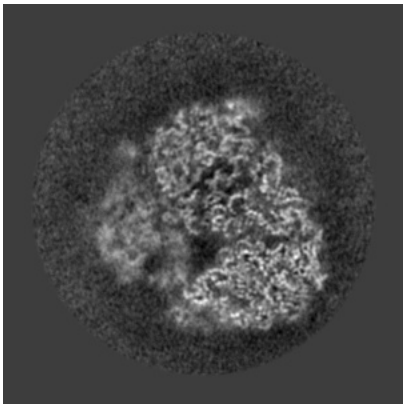
6.3.1 Primary map



X Index: 290



Y Index: 222

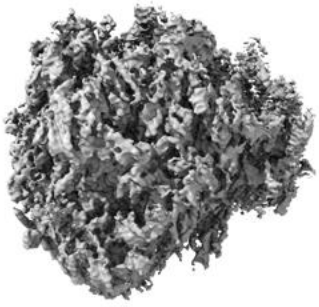


Z Index: 261

The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal surface views (i)

6.4.1 Primary map



X

Y

Z

The images above show the 3D surface view of the map at the recommended contour level 0.017. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

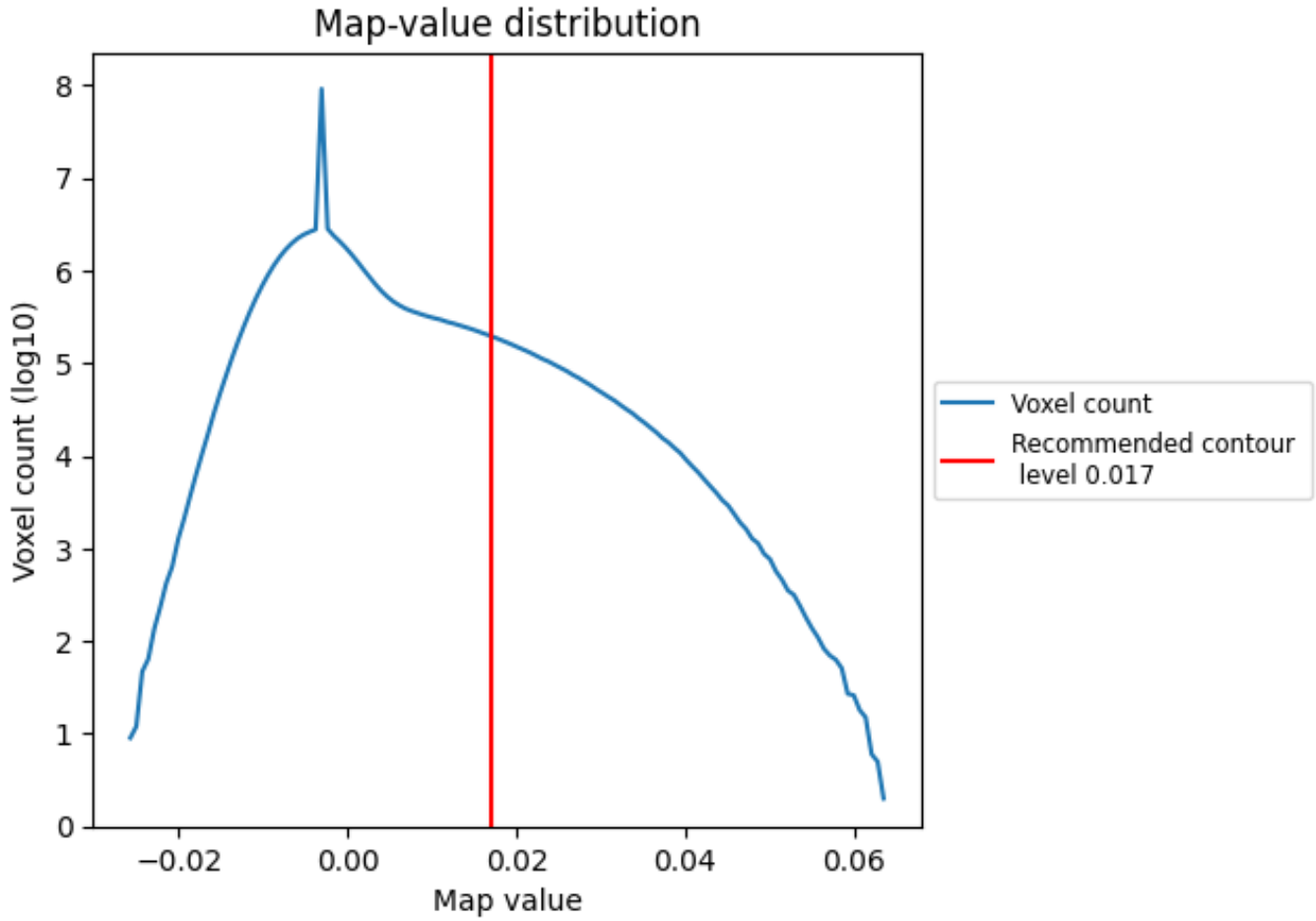
6.5 Mask visualisation (i)

This section was not generated. No masks/segmentation were deposited.

7 Map analysis

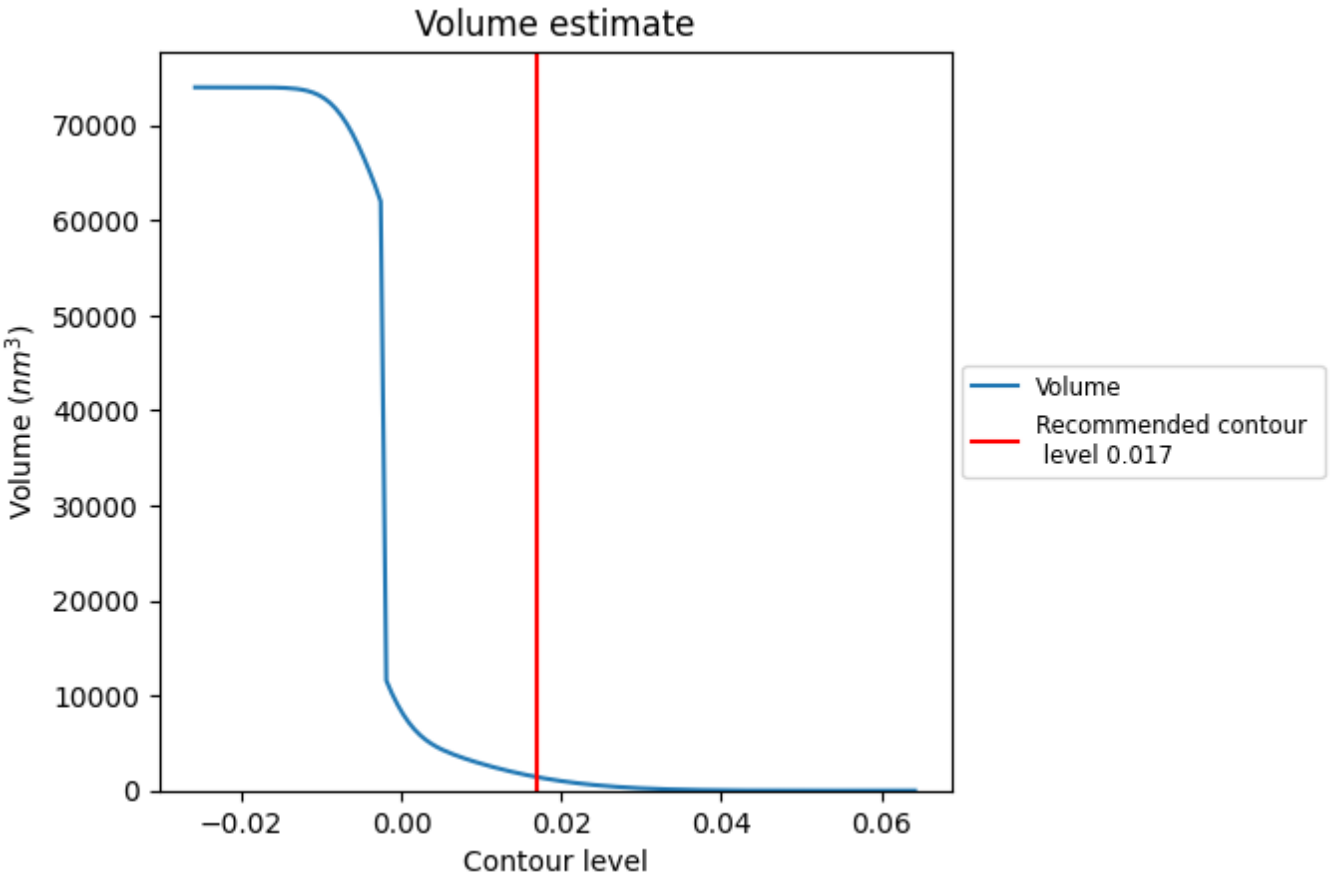
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution



The map-value distribution is plotted in 128 intervals along the x-axis. The y-axis is logarithmic. A spike in this graph at zero usually indicates that the volume has been masked.

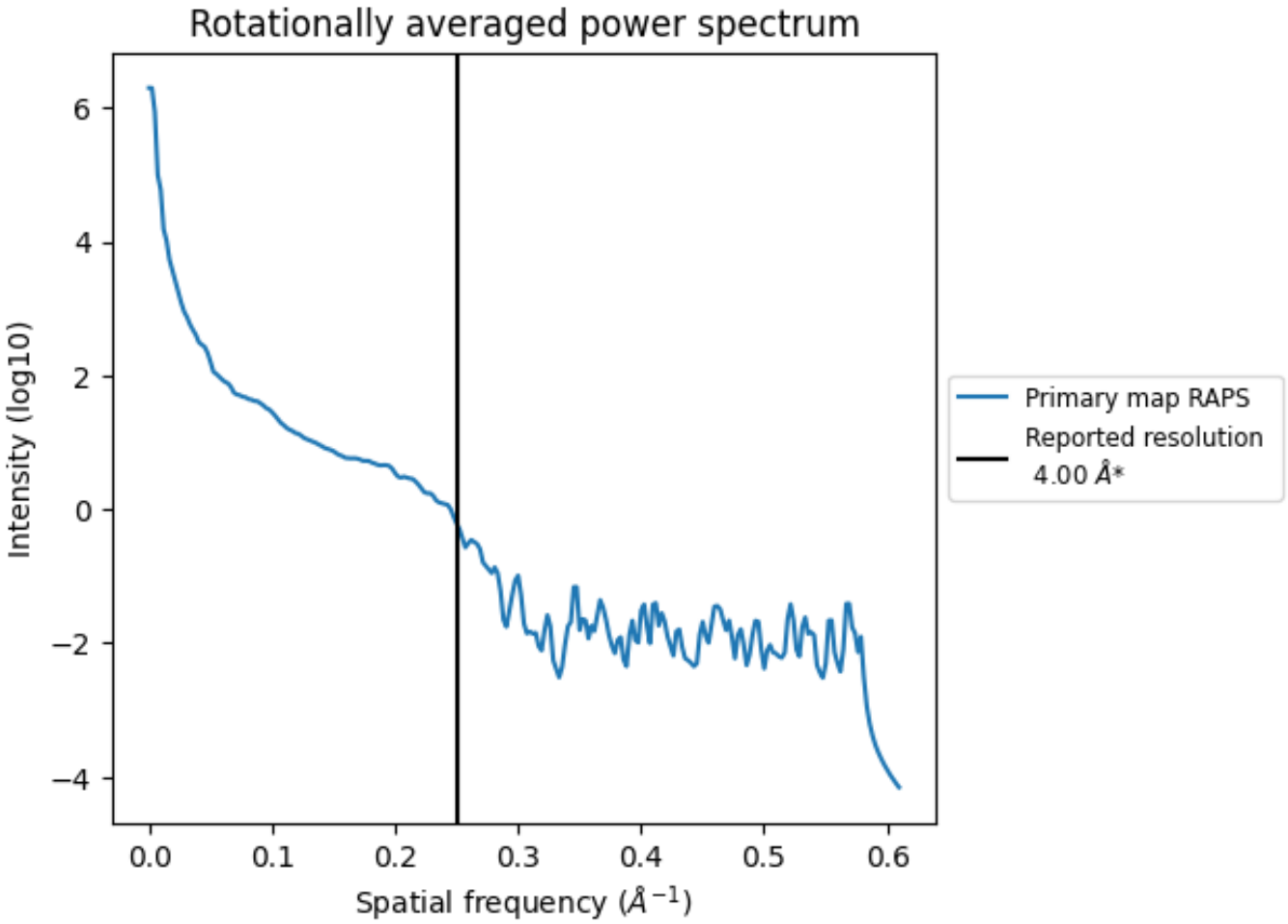
7.2 Volume estimate



The volume at the recommended contour level is 1421 nm^3; this corresponds to an approximate mass of 1283 kDa.

The volume estimate graph shows how the enclosed volume varies with the contour level. The recommended contour level is shown as a vertical line and the intersection between the line and the curve gives the volume of the enclosed surface at the given level.

7.3 Rotationally averaged power spectrum (i)



*Reported resolution corresponds to spatial frequency of 0.250 Å^{-1}

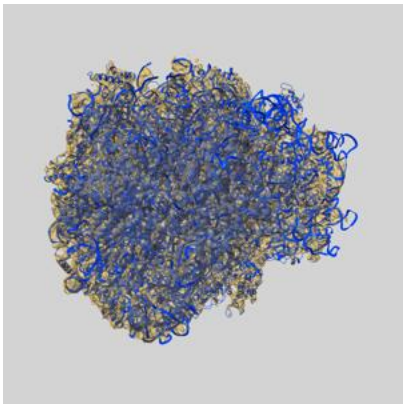
8 Fourier-Shell correlation

This section was not generated. No FSC curve or half-maps provided.

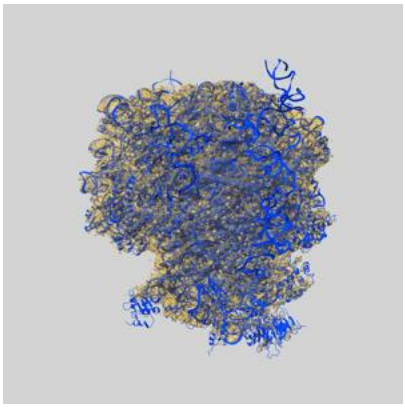
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-6646 and PDB model 5JUT. Per-residue inclusion information can be found in section 3 on page 21.

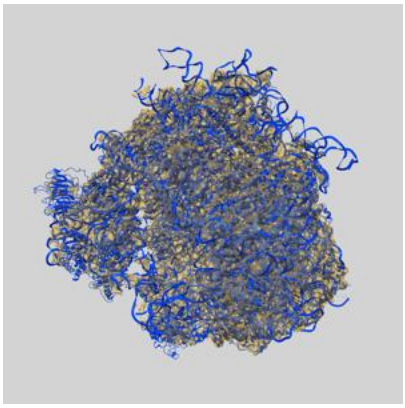
9.1 Map-model overlay



X



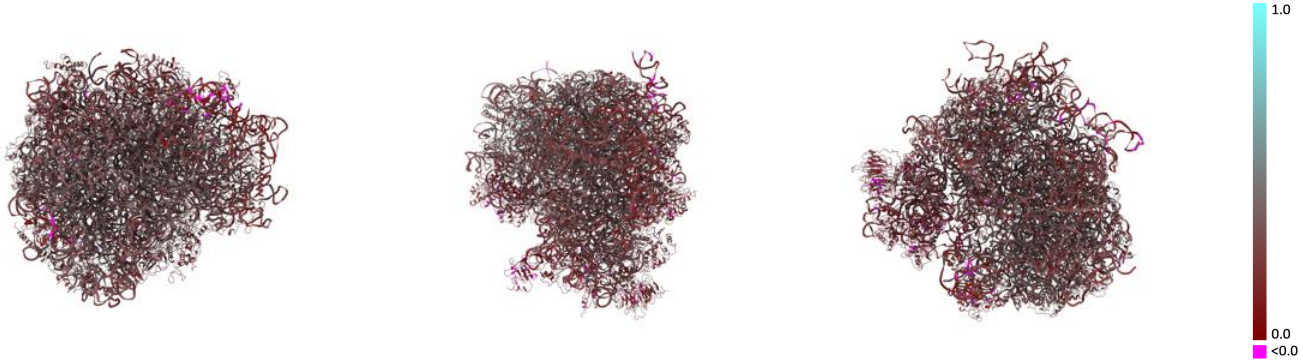
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.017 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

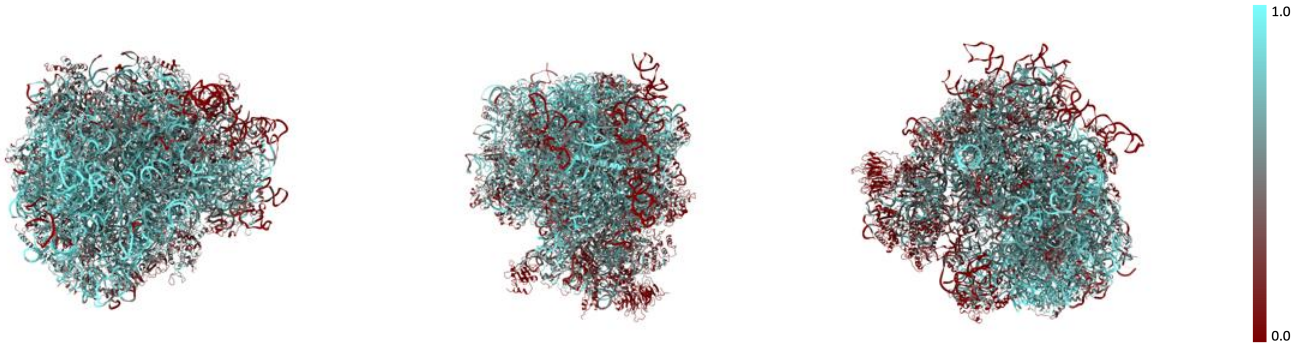
9.2 Q-score mapped to coordinate model (i)



X Y Z

The images above show the model with each residue coloured according its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions at which atoms can be resolved. Low Q-score values may therefore be expected for many entries.

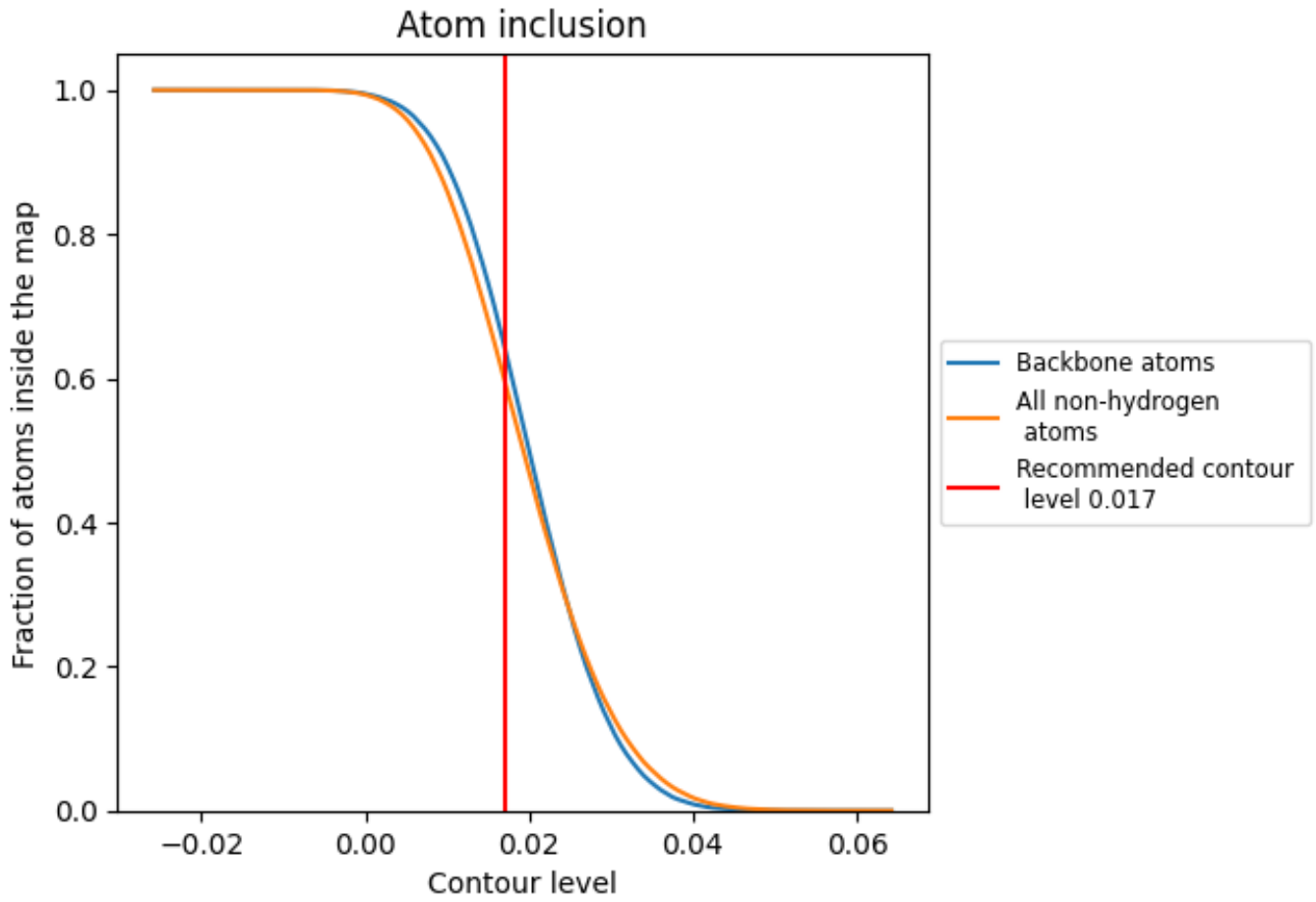
9.3 Atom inclusion mapped to coordinate model (i)



X Y Z

The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.017).

9.4 Atom inclusion (i)



At the recommended contour level, 64% of all backbone atoms, 60% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary

The table lists the average atom inclusion at the recommended contour level (0.017) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.5970	0.3060
A	0.6388	0.2830
AA	0.4571	0.3800
AB	0.2161	0.2380
AC	0.3012	0.2220
B	0.7888	0.3290
BA	0.5578	0.3690
BB	0.6074	0.3230
BC	0.2658	0.2870
C	0.7865	0.3270
CA	0.3041	0.3340
CB	0.1838	0.2300
CC	0.0106	0.1740
D	0.8686	0.3200
DA	0.6319	0.3180
DB	0.3501	0.3030
DC	0.4275	0.2750
E	0.0596	0.2200
EA	0.3993	0.2820
EB	0.1921	0.2860
EC	0.2650	0.2170
F	0.6076	0.3450
FA	0.6973	0.3680
FB	0.4161	0.3150
G	0.5716	0.3680
GA	0.6203	0.3490
GB	0.5430	0.2960
H	0.6328	0.3620
HA	0.6881	0.3020
HB	0.5650	0.2080
I	0.5664	0.2980
IA	0.6169	0.3560
IB	0.3690	0.3360
J	0.4764	0.3230
JA	0.7223	0.3790

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Chain	Atom inclusion	Q-score
JB	0.0484	0.1360
K	0.5433	0.3350
KA	0.4623	0.3680
KB	0.4230	0.2980
L	0.4149	0.2850
LA	0.5176	0.3080
LB	0.4518	0.3190
M	0.4755	0.3330
MA	0.4322	0.3040
MB	0.1595	0.1660
N	0.5544	0.3310
NA	0.5965	0.3350
NB	0.1694	0.2170
O	0.5251	0.2950
OA	0.6006	0.3360
OB	0.1890	0.2680
P	0.2370	0.1390
PA	0.1267	0.2740
PB	0.1264	0.1960
Q	0.6960	0.3410
QA	0.6635	0.3540
QB	0.1728	0.2100
R	0.5385	0.3130
RA	0.6856	0.3510
RB	0.1605	0.2210
S	0.5324	0.3200
SA	0.2911	0.3570
SB	0.3880	0.3130
T	0.5452	0.3480
TA	0.7756	0.3710
TB	0.3714	0.3170
U	0.6521	0.3510
UA	0.5537	0.3260
UB	0.2886	0.3150
V	0.7264	0.3680
VA	0.2860	0.2080
VB	0.3225	0.2910
W	0.4568	0.3020
WA	0.0523	0.2330
WB	0.1005	0.1970
X	0.5502	0.3390
XA	0.2594	0.2870

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Chain	Atom inclusion	Q-score
XB	0.5156	0.3390
Y	0.5907	0.3590
YA	0.3955	0.2850
YB	0.4850	0.3020
Z	0.3696	0.3140
ZA	0.4353	0.3260
ZB	0.3808	0.2640