Full wwPDB EM Validation Report ⓘ

Mar 17, 2024 – 12:15 AM JST

PDB ID	:	8Y6O
EMDB ID	:	EMD-38993
Title	:	Cryo-EM Structure of the human minor pre-B complex (pre-precatalytic spliceosome) U11 and tri-snRNP part
Authors	:	Bai, R.; Yuan, M.; Zhang, P.; Luo, T.; Shi, Y.; Wan, R.
Deposited on	:	2024-02-02
Resolution	:	3.38 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:

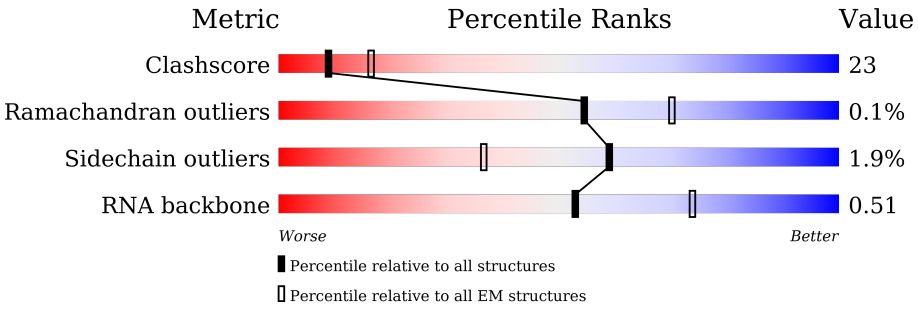
EMDB validation analysis	:	FAILED
Mogul	:	1.8.5 (274361), CSD as541be (2020)
MolProbity	:	4.02b-467
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ	:	FAILED
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.36

1 Overall quality at a glance

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

The reported resolution of this entry is 3.38 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%

Mol	Chain	Length	Quality of chain
1	A	280	95%
2	B	117	27% 42% 15% 9% 7%
3	C	2335	55% 40% 5%
4	D	972	61% 27% 12%
5	E	2136	42% 51% 6%
6	F	357	29% 56% 14%
7	G	941	51% 32% 16%
8	H	149	40% 56%

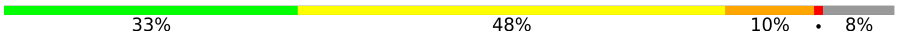
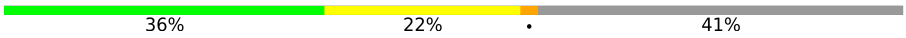
Continued on next page...

Continued from previous page...

Mol	Chain	Length	Quality of chain
9	I	820	39% 33% 27%
10	a	240	30% 70%
10	h	240	32% 66%
10	o	240	32% 64%
11	b	119	67% 32%
11	i	119	66% 32%
11	p	119	66% 31%
12	c	118	80% 17%
12	j	118	75% 22%
12	q	118	83% 5% 12%
13	d	126	67% 33%
13	k	126	63% 34%
13	r	126	63% 35%
14	e	92	82% 16%
14	l	92	76% 7% 17%
14	s	92	85% 12%
15	f	86	80% 5% 15%
15	m	86	81% 16%
15	t	86	83% 14%
16	g	76	92% 5%
16	n	76	95%
16	u	76	92%
17	J	131	43% 34% 7% 17%
18	K	125	16% 8% 8% 65%
19	L	499	45% 18% 36%

Continued on next page...

Continued from previous page...

Mol	Chain	Length	Quality of chain
20	M	522	
21	N	683	
22	O	128	
23	R	332	
24	P	135	
25	V	170	
26	W	246	
27	X	132	
28	Y	339	
29	Z	485	
30	S	800	
31	U	565	
32	Q	1007	

2 Entry composition

There are 36 unique types of molecules in this entry. The entry contains 101504 atoms, of which 12 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 pre-mRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
1	A	13	268	121	41	93	13	0	0

- Molecule 2 is a RNA chain called U5 snRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
2	B	109	2296	1028	383	776	109	0	0

- Molecule 3 is a protein called Pre-mRNA-processing-splicing factor 8.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
3	C	2227	18488	11912	3215	3280	81	0	0

- Molecule 4 is a protein called 116 kDa U5 small nuclear ribonucleoprotein component.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
4	D	855	6747	4313	1130	1270	34	0	0

- Molecule 5 is a protein called U5 small nuclear ribonucleoprotein 200 kDa helicase.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
5	E	2001	16077	10235	2767	2991	84	0	0

- Molecule 6 is a protein called U5 small nuclear ribonucleoprotein 40 kDa protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
6	F	307	2399	1504	423	458	14	0	0

- Molecule 7 is a protein called Pre-mRNA-processing factor 6.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	G	793	Total	C	N	O	S	0	0
			6229	3910	1143	1148	28		

- Molecule 8 is a protein called Thioredoxin-like protein 4B.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	H	143	Total	C	N	O	S	0	0
			1145	742	182	217	4		

- Molecule 9 is a protein called Probable ATP-dependent RNA helicase DDX23.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	I	597	Total	C	N	O	S	0	0
			4819	3033	869	897	20		

- Molecule 10 is a protein called Small nuclear ribonucleoprotein-associated proteins B and B'.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	a	73	Total	C	N	O	S	0	0
			594	376	108	103	7		
10	h	82	Total	C	N	O	S	0	0
			669	423	122	117	7		
10	o	86	Total	C	N	O	S	0	0
			692	435	126	124	7		

- Molecule 11 is a protein called Small nuclear ribonucleoprotein Sm D1.

Mol	Chain	Residues	Atoms					AltConf	Trace
11	b	81	Total	C	N	O	S	0	0
			641	408	112	118	3		
11	i	81	Total	C	N	O	S	0	0
			641	408	112	118	3		
11	p	82	Total	C	N	O	S	0	0
			649	413	113	119	4		

- Molecule 12 is a protein called Small nuclear ribonucleoprotein Sm D2.

Mol	Chain	Residues	Atoms					AltConf	Trace
12	c	98	Total	C	N	O	S	0	0
			796	498	144	148	6		

Continued on next page...

Continued from previous page...

Mol	Chain	Residues	Atoms					AltConf	Trace
12	j	92	Total	C	N	O	S	0	0
			737	463	138	131	5		
12	q	104	Total	C	N	O	S	0	0
			844	528	153	157	6		

- Molecule 13 is a protein called Small nuclear ribonucleoprotein Sm D3.

Mol	Chain	Residues	Atoms					AltConf	Trace
13	d	84	Total	C	N	O	S	0	0
			657	412	116	123	6		
13	k	83	Total	C	N	O	S	0	0
			652	409	115	122	6		
13	r	82	Total	C	N	O	S	0	0
			643	403	113	121	6		

- Molecule 14 is a protein called Small nuclear ribonucleoprotein E.

Mol	Chain	Residues	Atoms					AltConf	Trace
14	e	77	Total	C	N	O	S	0	0
			638	405	113	115	5		
14	l	76	Total	C	N	O	S	0	0
			631	400	112	114	5		
14	s	81	Total	C	N	O	S	0	0
			668	424	119	120	5		

- Molecule 15 is a protein called Small nuclear ribonucleoprotein F.

Mol	Chain	Residues	Atoms					AltConf	Trace
15	f	73	Total	C	N	O	S	0	0
			567	367	94	101	5		
15	m	72	Total	C	N	O	S	0	0
			562	364	93	100	5		
15	t	74	Total	C	N	O	S	0	0
			576	373	95	103	5		

- Molecule 16 is a protein called Small nuclear ribonucleoprotein G.

Mol	Chain	Residues	Atoms					AltConf	Trace
16	g	74	Total	C	N	O	S	0	0
			577	364	104	103	6		
16	n	74	Total	C	N	O	S	0	0
			577	364	104	103	6		

Continued on next page...

Continued from previous page...

Mol	Chain	Residues	Atoms					AltConf	Trace
16	u	73	Total	C	N	O	S	0	0
			568	358	102	102	6		

- Molecule 17 is a RNA chain called U4atac snRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
17	J	109	Total	C	N	O	P	0	0
			2320	1037	399	774	110		

- Molecule 18 is a RNA chain called U6atac snRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
18	K	44	Total	C	N	O	P	0	0
			942	420	172	306	44		

- Molecule 19 is a protein called U4/U6 small nuclear ribonucleoprotein Prp31.

Mol	Chain	Residues	Atoms					AltConf	Trace
19	L	318	Total	C	N	O	S	0	0
			2512	1576	443	478	15		

- Molecule 20 is a protein called U4/U6 small nuclear ribonucleoprotein Prp4.

Mol	Chain	Residues	Atoms					AltConf	Trace
20	M	361	Total	C	N	O	S	0	0
			2863	1807	512	525	19		

- Molecule 21 is a protein called U4/U6 small nuclear ribonucleoprotein Prp3.

Mol	Chain	Residues	Atoms					AltConf	Trace
21	N	228	Total	C	N	O	S	0	0
			1861	1186	334	335	6		

- Molecule 22 is a protein called NHP2-like protein 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
22	O	124	Total	C	N	O	S	0	0
			960	607	171	177	5		

- Molecule 23 is a protein called Centrosomal AT-AC splicing factor.

Mol	Chain	Residues	Atoms					AltConf	Trace
23	R	157	Total	C	N	O	S	0	0
			1285	808	240	225	12		

- Molecule 24 is a RNA chain called U11 snRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
24	P	124	Total	C	N	O	P	0	0
			2647	1181	469	873	124		

- Molecule 25 is a protein called Zinc finger matrin-type protein 5.

Mol	Chain	Residues	Atoms					AltConf	Trace
25	V	101	Total	C	N	O	S	0	0
			857	533	163	153	8		

- Molecule 26 is a protein called U11/U12 small nuclear ribonucleoprotein 35 kDa protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
26	W	167	Total	C	N	O	S	0	0
			1359	866	248	242	3		

- Molecule 27 is a protein called U11/U12 small nuclear ribonucleoprotein 25 kDa protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
27	X	131	Total	C	N	O	S	0	0
			1055	667	184	197	7		

- Molecule 28 is a protein called U11/U12 small nuclear ribonucleoprotein 48 kDa protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
28	Y	229	Total	C	N	O	S	0	0
			1889	1172	333	373	11		

- Molecule 29 is a protein called Programmed cell death protein 7.

Mol	Chain	Residues	Atoms					AltConf	Trace
29	Z	210	Total	C	N	O	S	0	0
			1727	1059	359	305	4		

- Molecule 30 is a protein called U4/U6.U5 tri-snRNP-associated protein 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
30	S	87	Total	C	N	O	S	0	0
			701	441	128	128	4		

- Molecule 31 is a protein called U4/U6.U5 tri-snRNP-associated protein 2.

Mol	Chain	Residues	Atoms					AltConf	Trace
31	U	458	Total	C	N	O	S	0	0
			3765	2435	638	678	14		

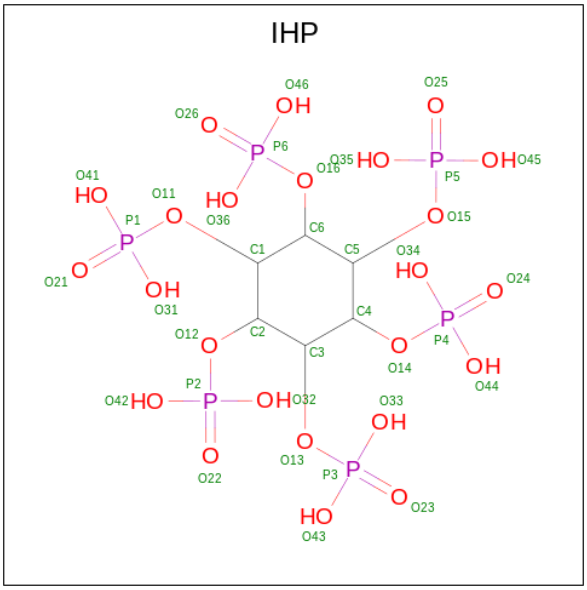
- Molecule 32 is a protein called Serine/threonine-protein kinase PRP4 homolog.

Mol	Chain	Residues	Atoms					AltConf	Trace
32	Q	322	Total	C	N	O	S	0	0
			2626	1682	462	467	15		

- Molecule 33 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

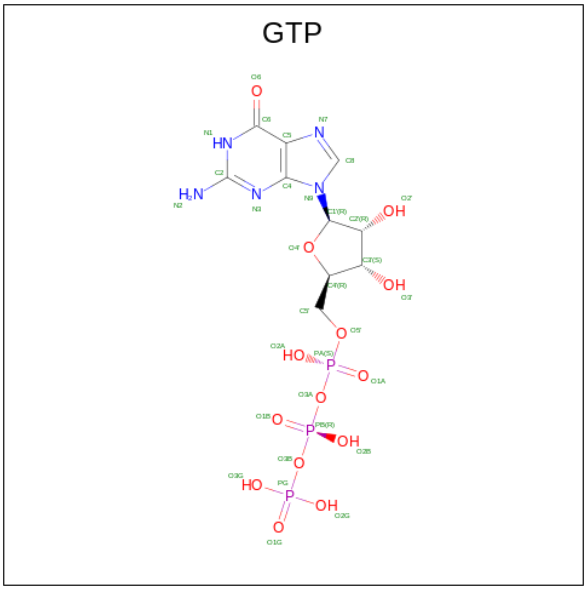
Mol	Chain	Residues	Atoms		AltConf
33	B	1	Total	Mg	0
			1	1	
33	D	1	Total	Mg	0
			1	1	

- Molecule 34 is INOSITOL HEXAKISPHOSPHATE (three-letter code: IHP) (formula: $C_6H_{18}O_{24}P_6$).



Mol	Chain	Residues	Atoms					AltConf
34	C	1	Total	C	H	O	P	0
			48	6	12	24	6	

- Molecule 35 is GUANOSINE-5'-TRIPHOSPHATE (three-letter code: GTP) (formula: $C_{10}H_{16}N_5O_{14}P_3$).



Mol	Chain	Residues	Atoms					AltConf
35	D	1	Total	C	N	O	P	0
			32	10	5	14	3	

- Molecule 36 is ZINC ION (three-letter code: ZN) (formula: Zn).

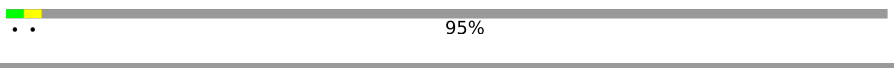
Mol	Chain	Residues	Atoms		AltConf
36	R	2	Total	Zn	0
			2	2	
36	V	2	Total	Zn	0
			2	2	
36	Y	1	Total	Zn	0
			1	1	
36	U	1	Total	Zn	0
			1	1	

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. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

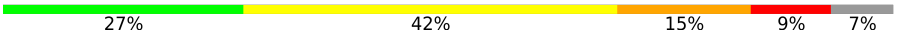
- Molecule 1: pre-mRNA

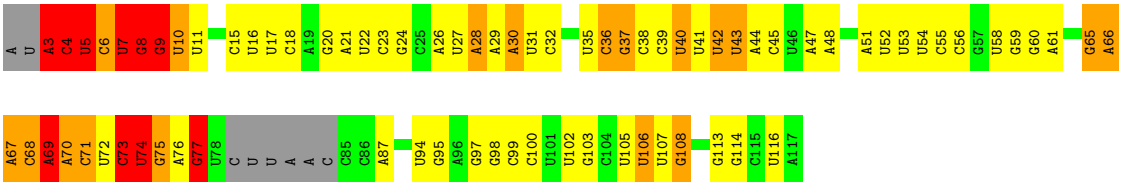
Chain A:



- Molecule 2: U5 snRNA

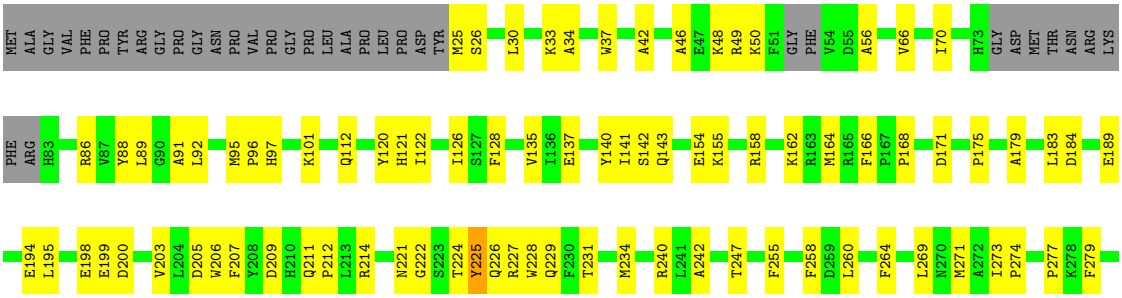
Chain B:

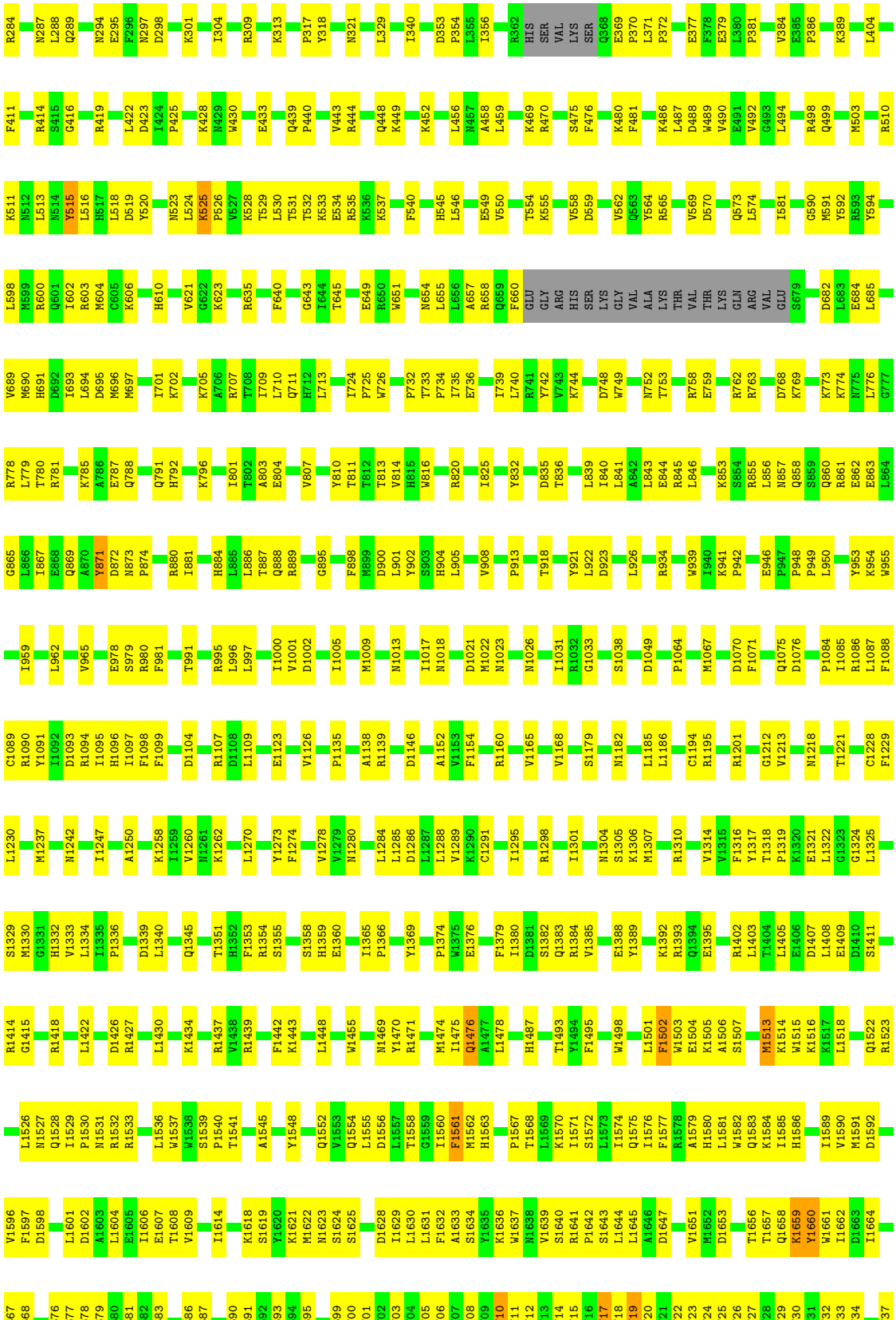


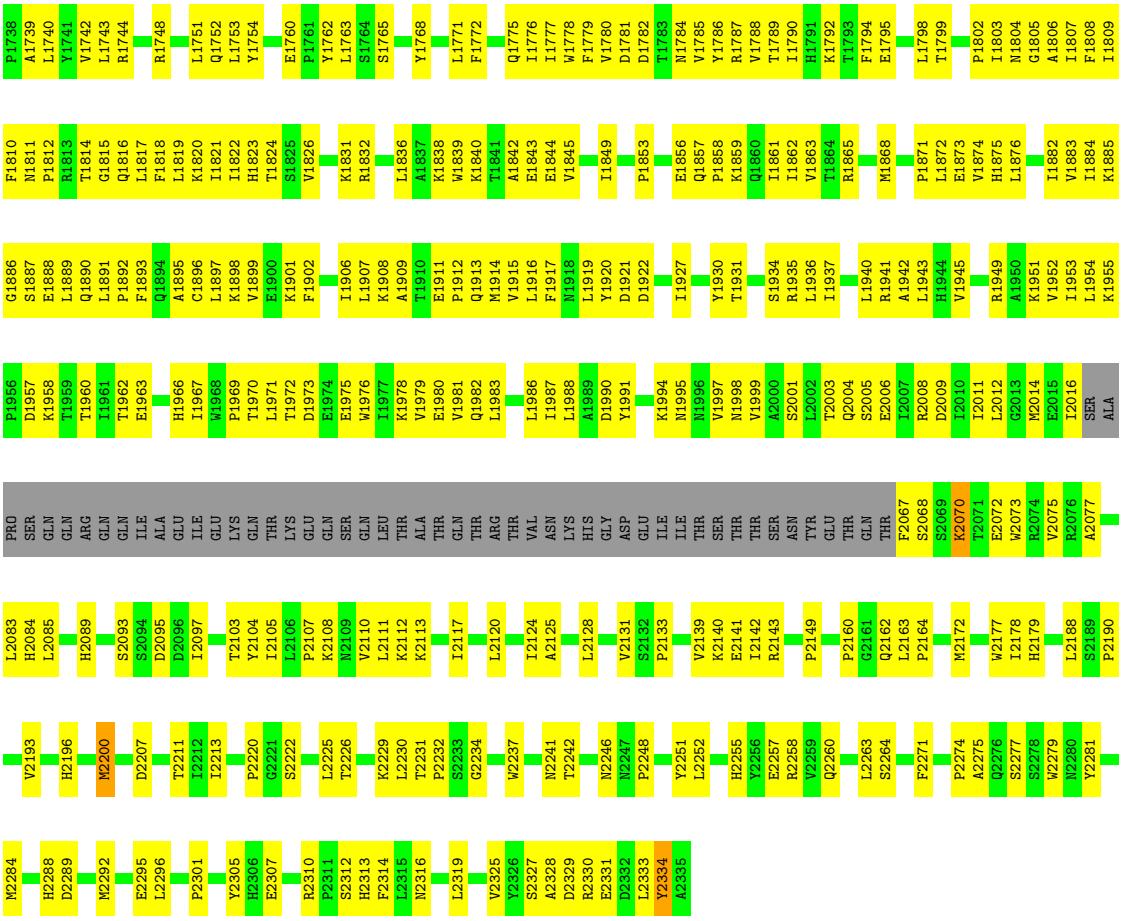


- Molecule 3: Pre-mRNA-processing-splicing factor 8

Chain C:

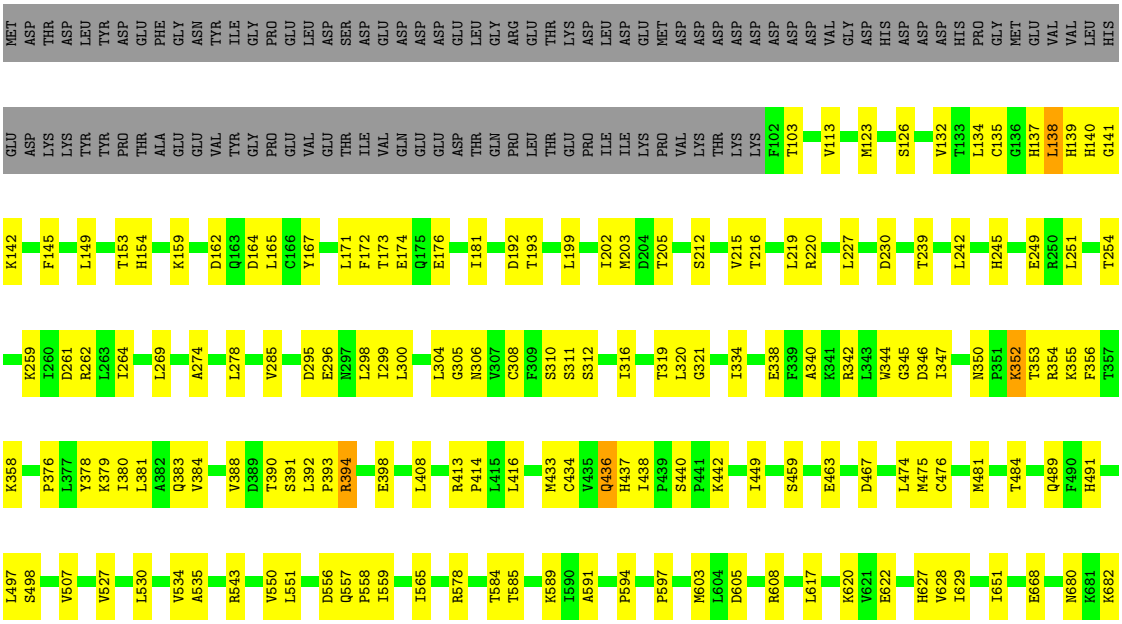






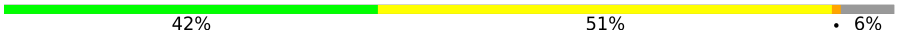
• Molecule 4: 116 kDa U5 small nuclear ribonucleoprotein component

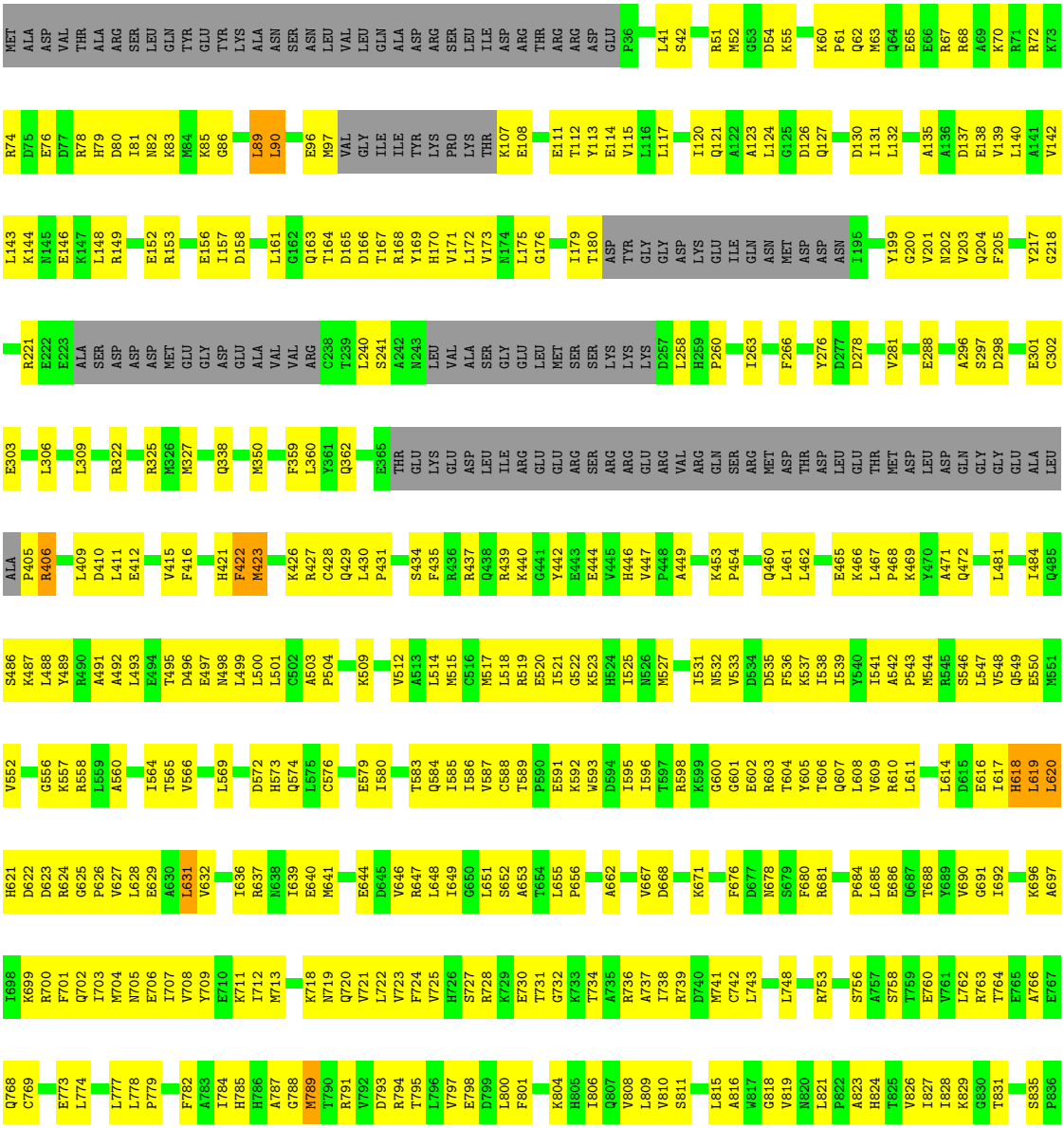
Chain D:

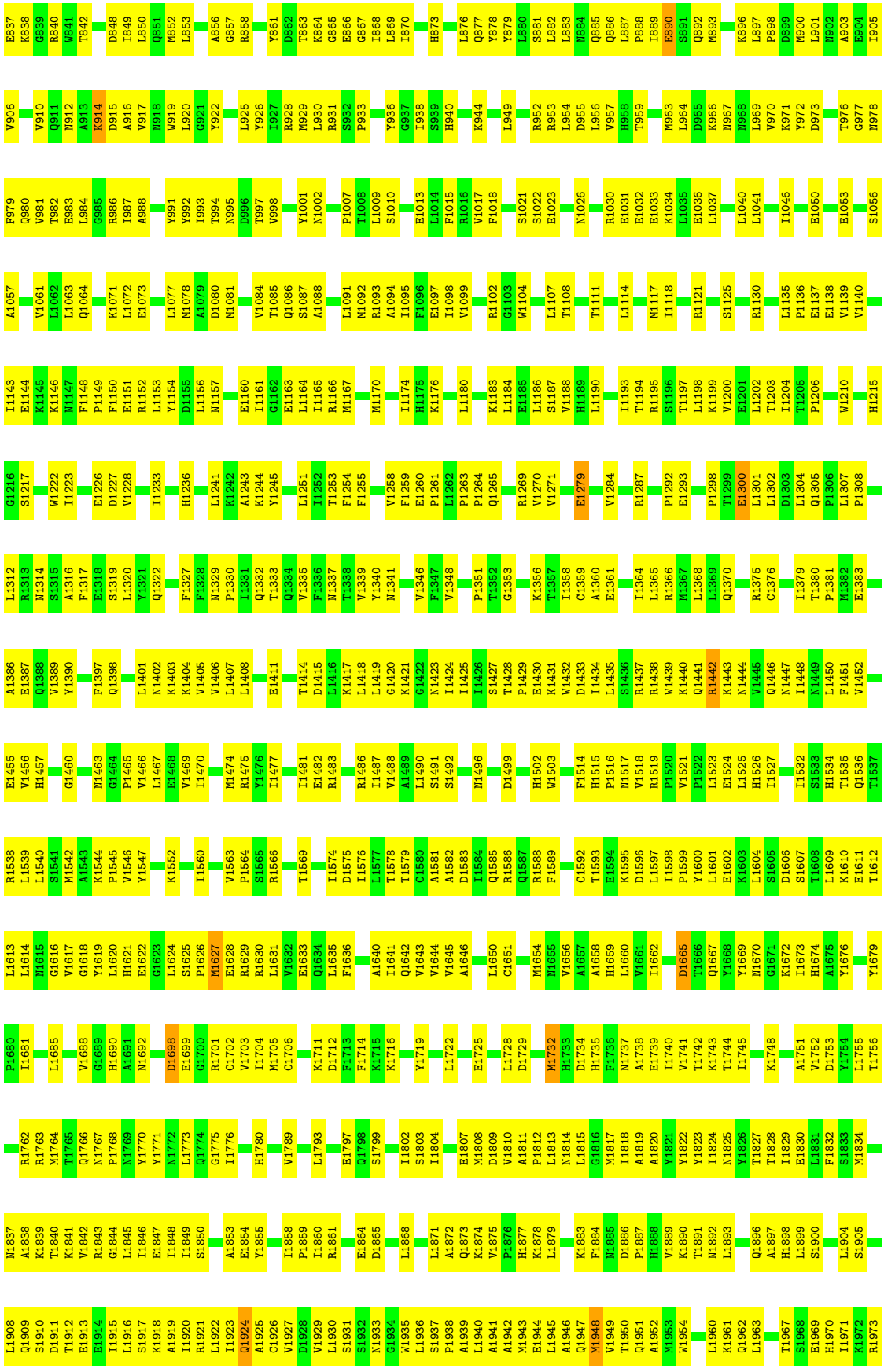


• Molecule 5: U5 small nuclear ribonucleoprotein 200 kDa helicase

Chain E:

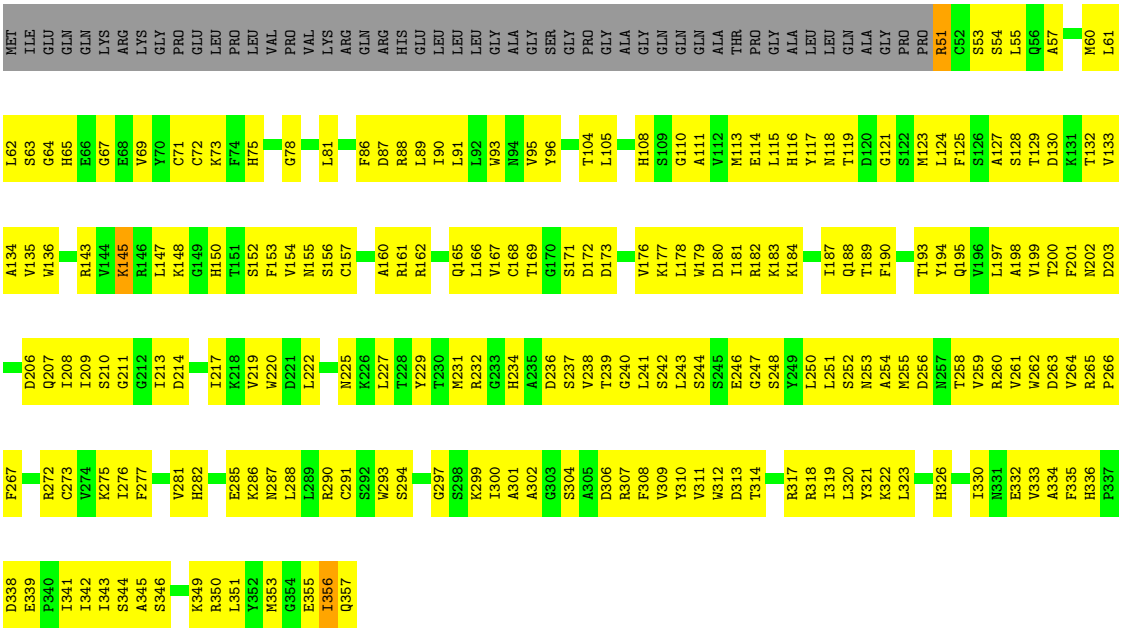






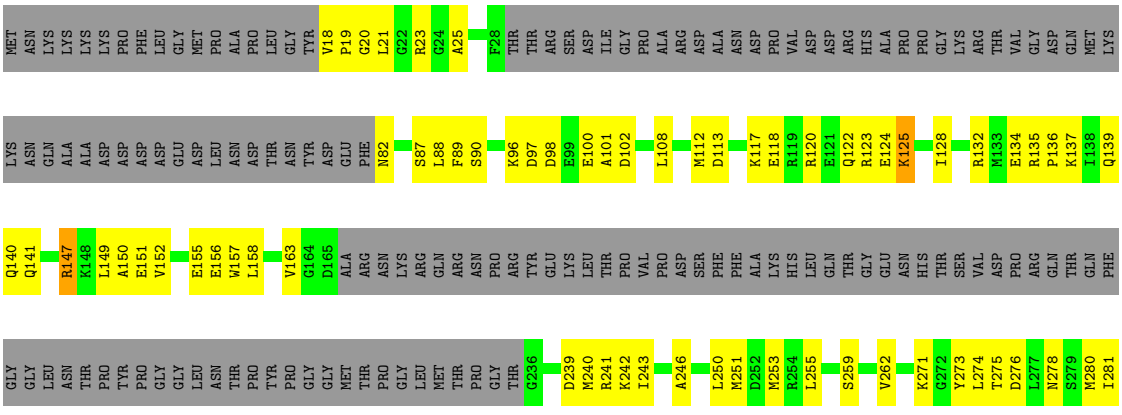
• Molecule 6: U5 small nuclear ribonucleoprotein 40 kDa protein

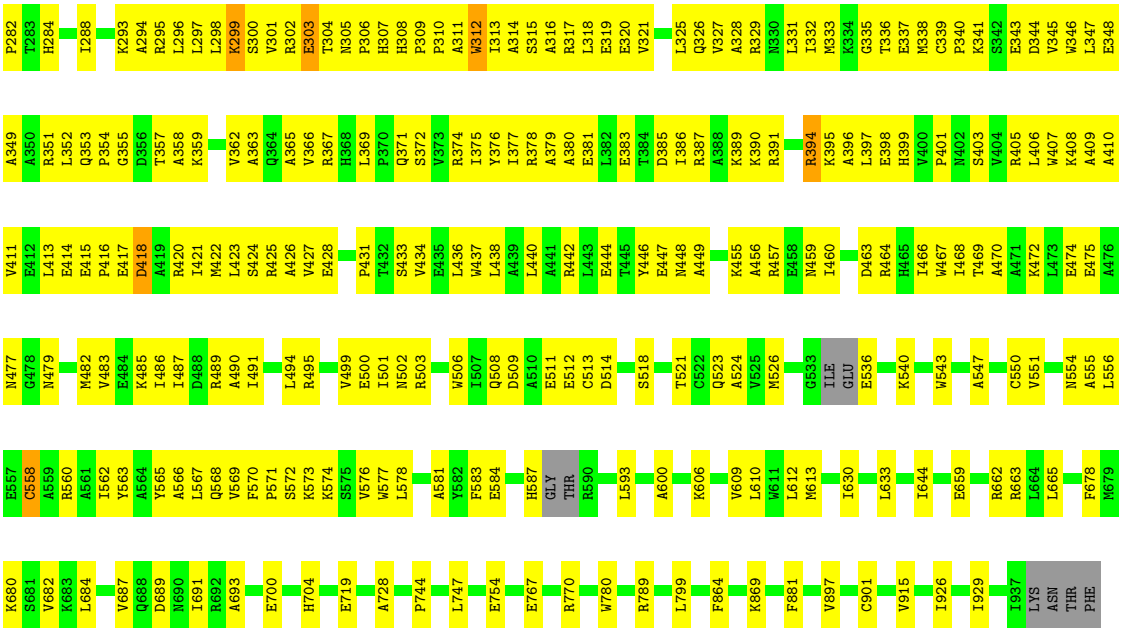
Chain F:



• Molecule 7: Pre-mRNA-processing factor 6

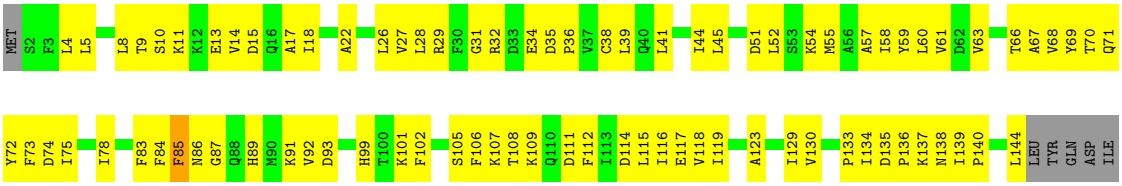
Chain G:





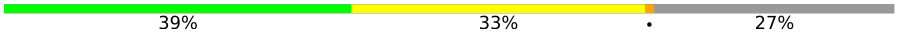
• Molecule 8: Thioredoxin-like protein 4B

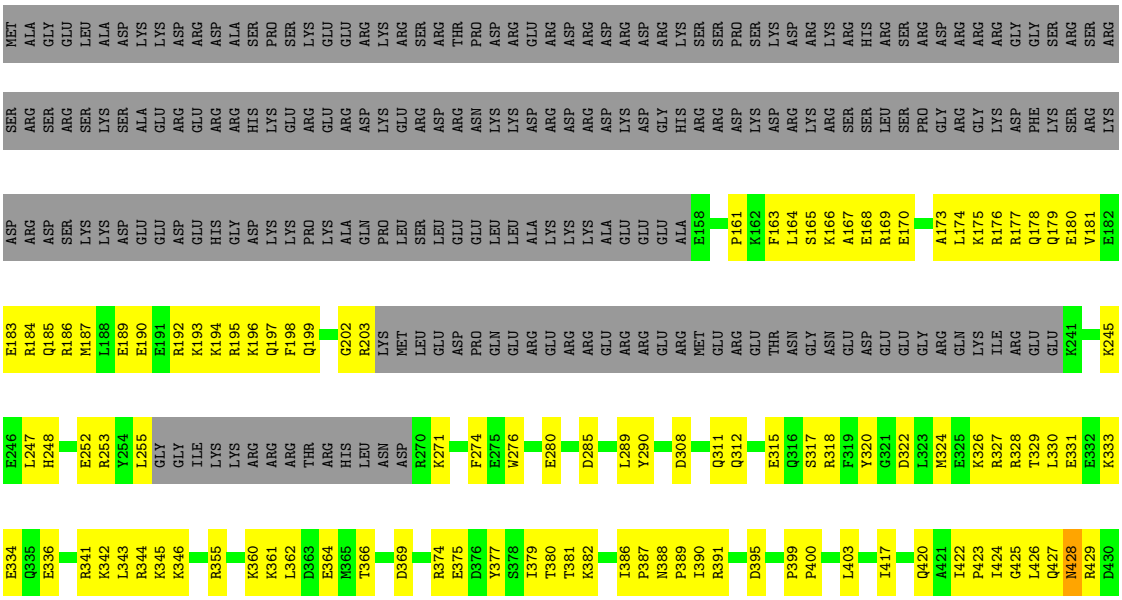
Chain H:

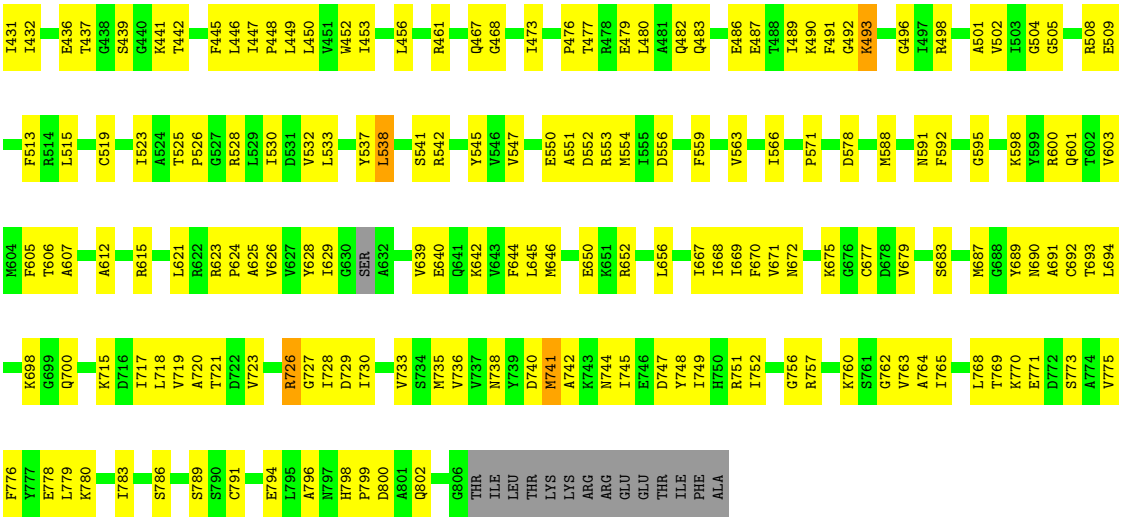


• Molecule 9: Probable ATP-dependent RNA helicase DDX23

Chain I:

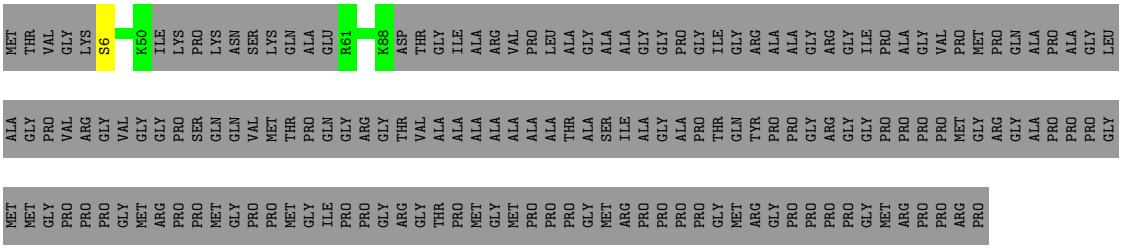






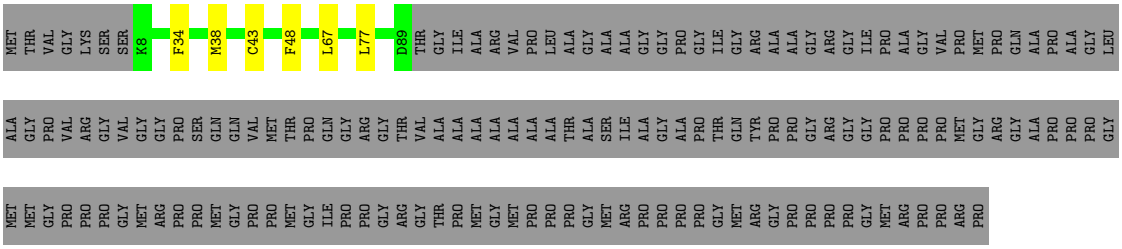
• Molecule 10: Small nuclear ribonucleoprotein-associated proteins B and B'

Chain a:



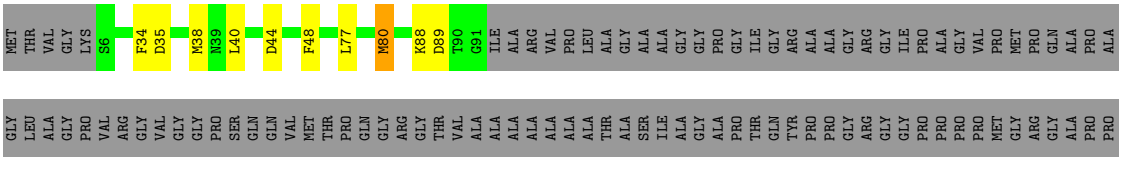
• Molecule 10: Small nuclear ribonucleoprotein-associated proteins B and B'

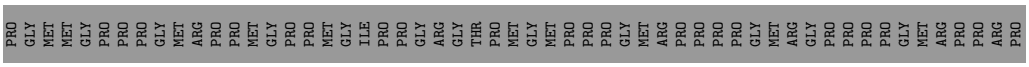
Chain h:



• Molecule 10: Small nuclear ribonucleoprotein-associated proteins B and B'

Chain o:



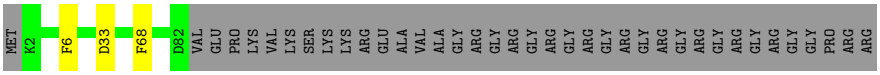


• Molecule 11: Small nuclear ribonucleoprotein Sm D1

Chain b:

• Molecule 11: Small nuclear ribonucleoprotein Sm D1

Chain i:



• Molecule 11: Small nuclear ribonucleoprotein Sm D1

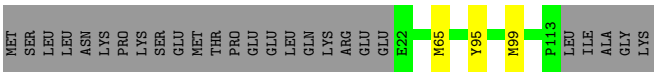
Chain p:

• Molecule 12: Small nuclear ribonucleoprotein Sm D2

Chain c:

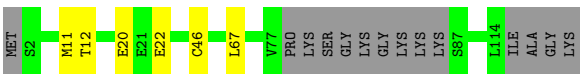
• Molecule 12: Small nuclear ribonucleoprotein Sm D2

Chain j:



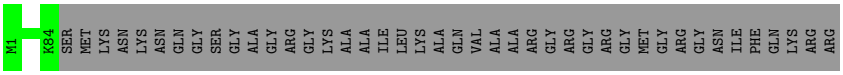
• Molecule 12: Small nuclear ribonucleoprotein Sm D2

Chain q:

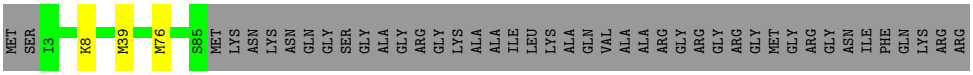


• Molecule 13: Small nuclear ribonucleoprotein Sm D3

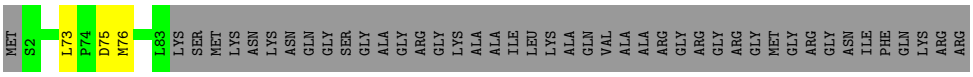
Chain d:



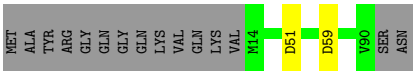
• Molecule 13: Small nuclear ribonucleoprotein Sm D3



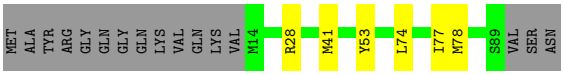
• Molecule 13: Small nuclear ribonucleoprotein Sm D3



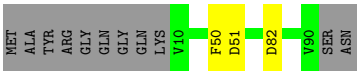
• Molecule 14: Small nuclear ribonucleoprotein E



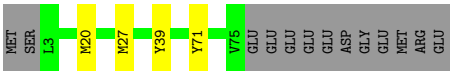
• Molecule 14: Small nuclear ribonucleoprotein E



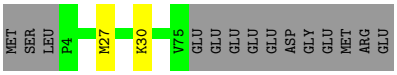
• Molecule 14: Small nuclear ribonucleoprotein E



• Molecule 15: Small nuclear ribonucleoprotein F

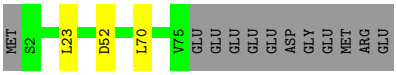


• Molecule 15: Small nuclear ribonucleoprotein F



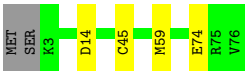
• Molecule 15: Small nuclear ribonucleoprotein F

Chain t:



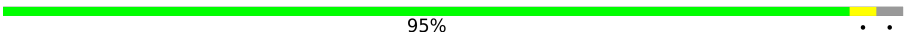
• Molecule 16: Small nuclear ribonucleoprotein G

Chain g:



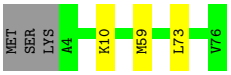
• Molecule 16: Small nuclear ribonucleoprotein G

Chain n:



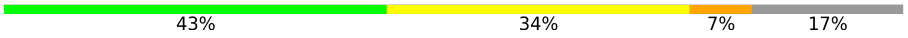
• Molecule 16: Small nuclear ribonucleoprotein G

Chain u:



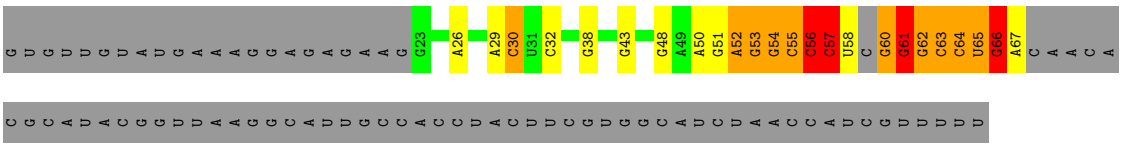
• Molecule 17: U4atac snRNA

Chain J:



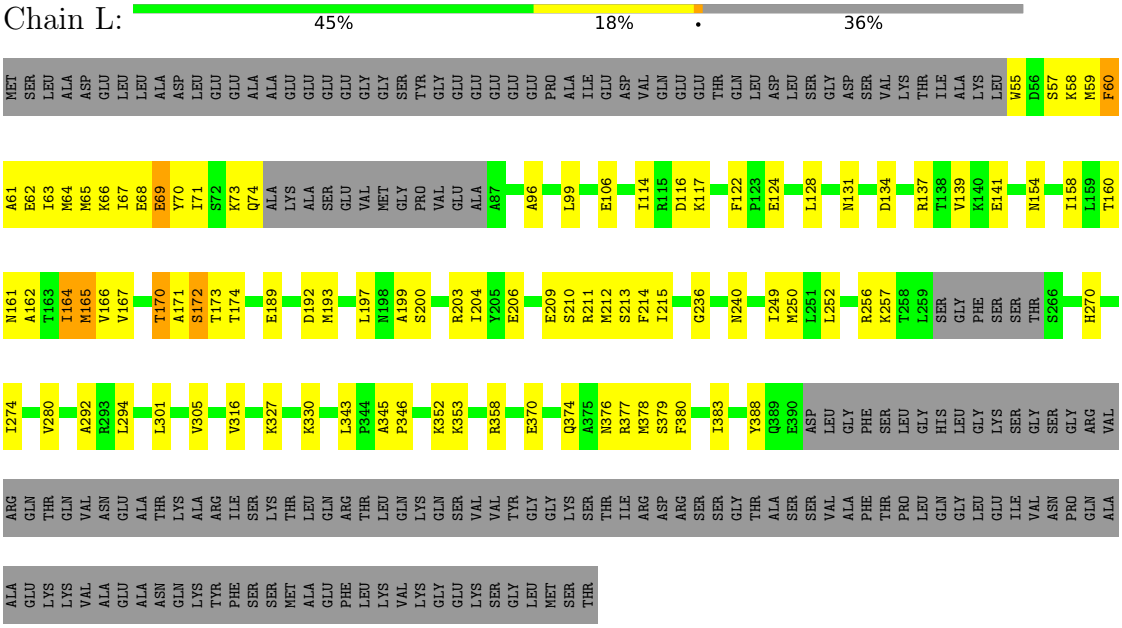
• Molecule 18: U6atac snRNA

Chain K:



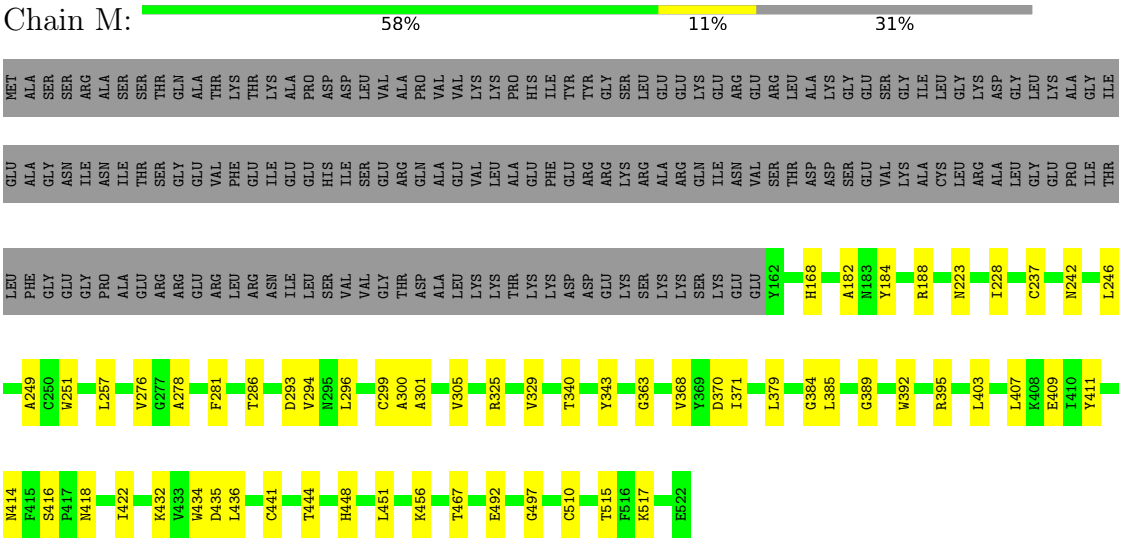
• Molecule 19: U4/U6 small nuclear ribonucleoprotein Prp31

Chain L:



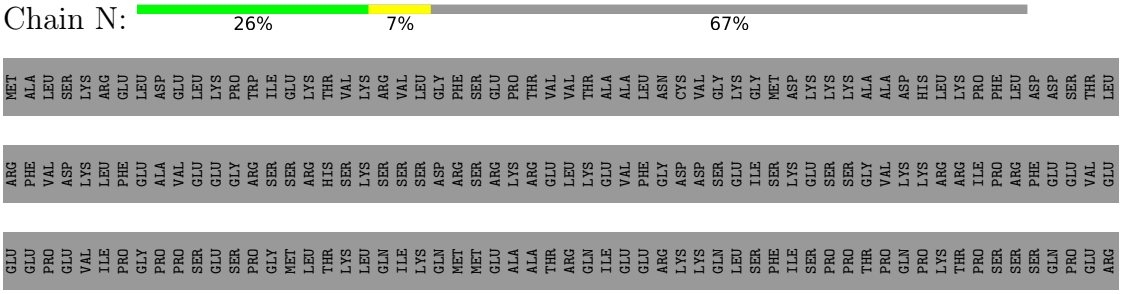
• Molecule 20: U4/U6 small nuclear ribonucleoprotein Prp4

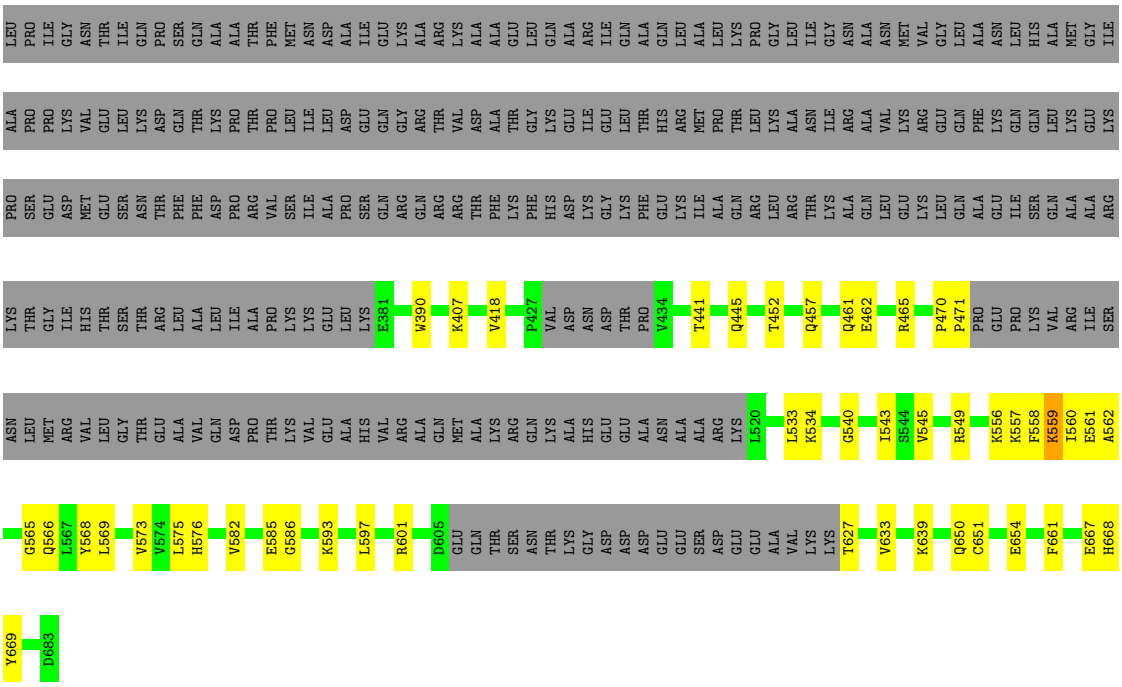
Chain M:



• Molecule 21: U4/U6 small nuclear ribonucleoprotein Prp3

Chain N:



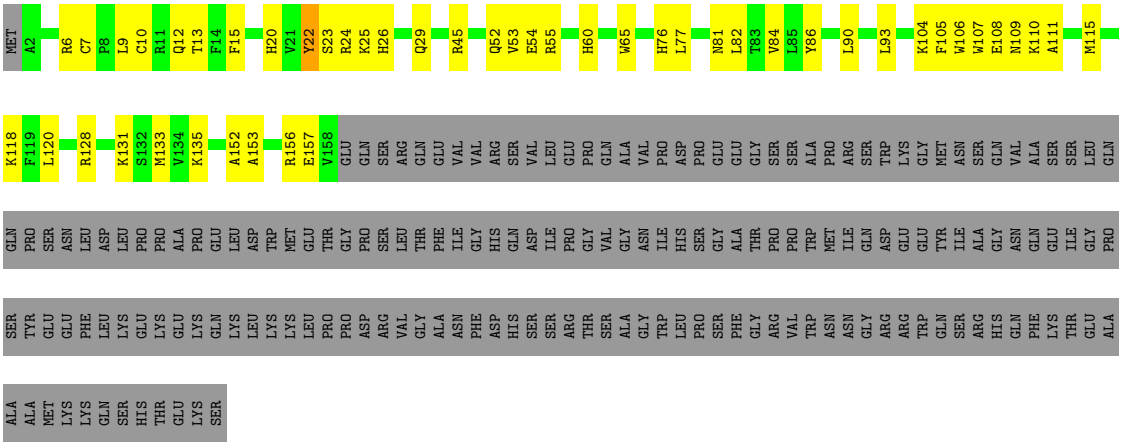


• Molecule 22: NHP2-like protein 1

Chain O:

• Molecule 23: Centrosomal AT-AC splicing factor

Chain R:

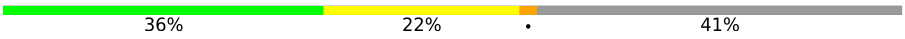


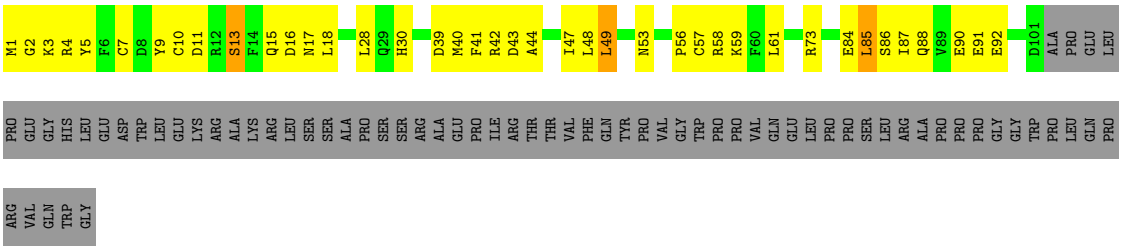
• Molecule 24: U11 snRNA

Chain P:

• Molecule 25: Zinc finger matrin-type protein 5

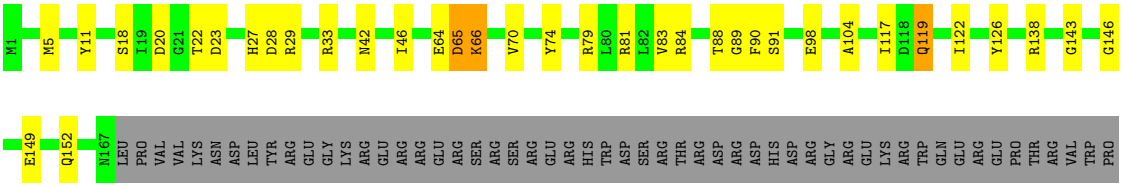
Chain V:

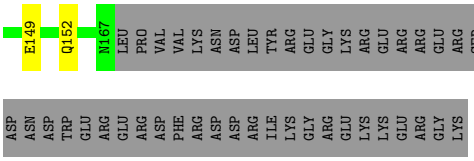




• Molecule 26: U11/U12 small nuclear ribonucleoprotein 35 kDa protein

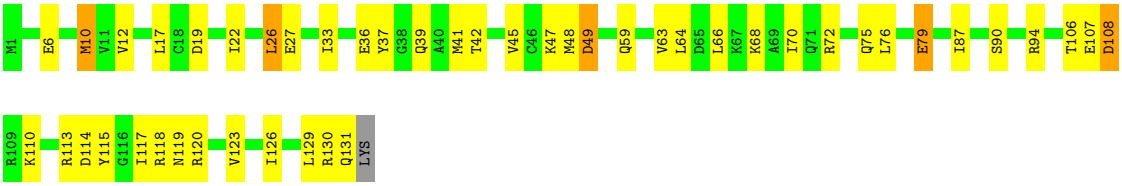
Chain W:





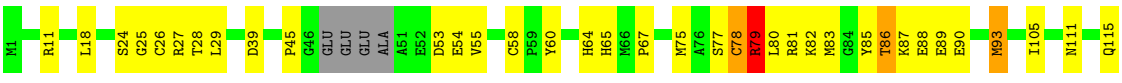
• Molecule 27: U11/U12 small nuclear ribonucleoprotein 25 kDa protein

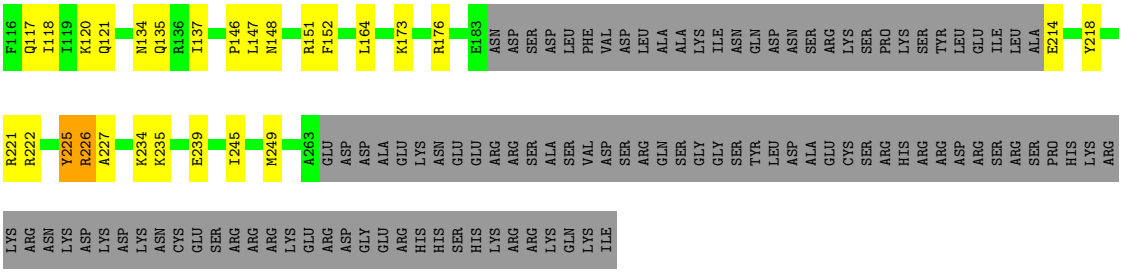
Chain X:



• Molecule 28: U11/U12 small nuclear ribonucleoprotein 48 kDa protein

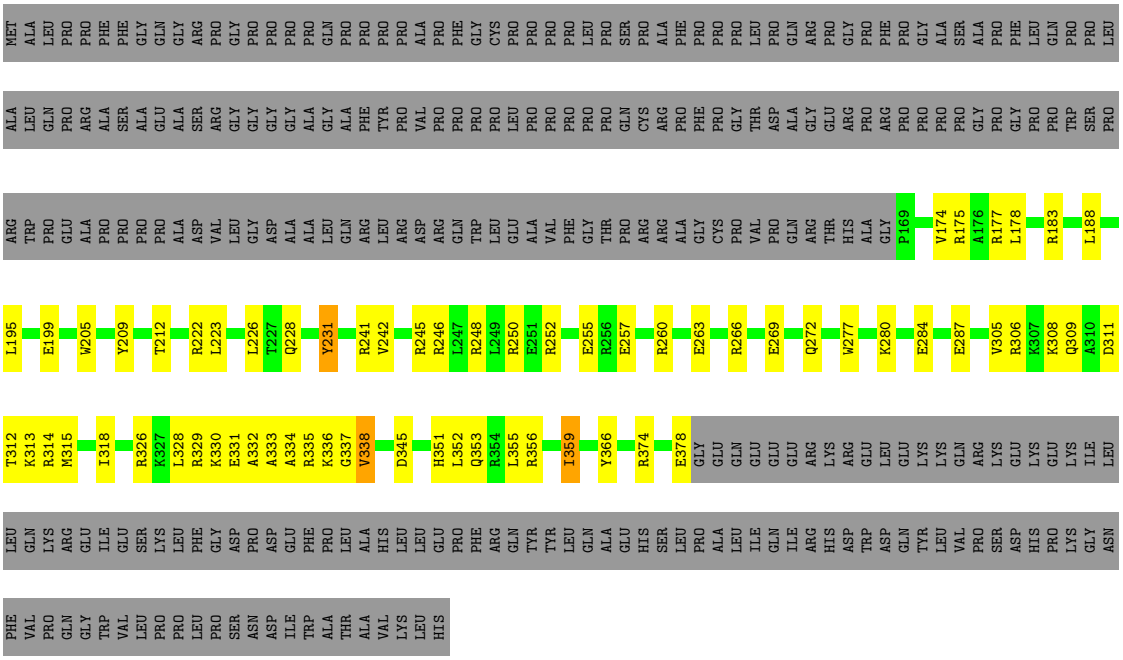
Chain Y:





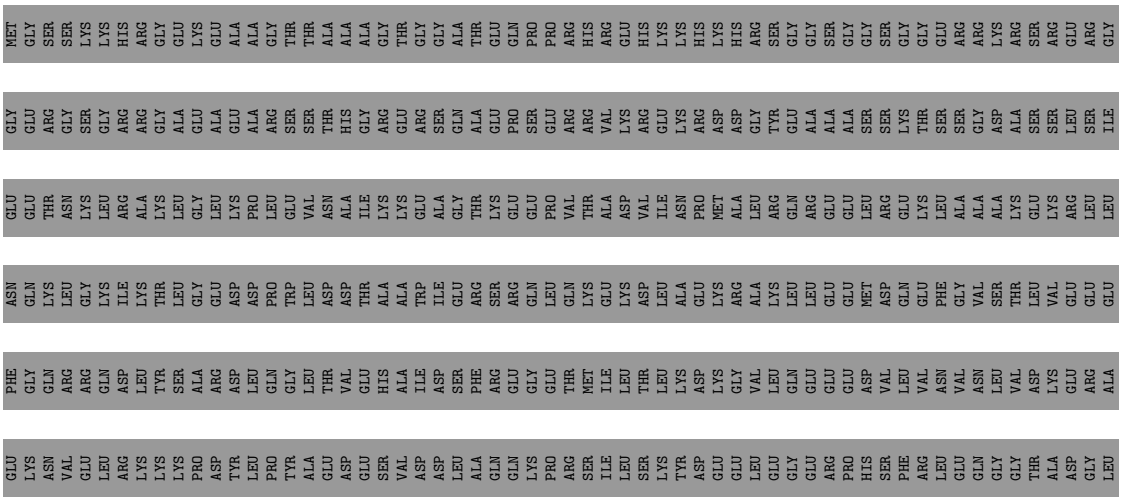
• Molecule 29: Programmed cell death protein 7

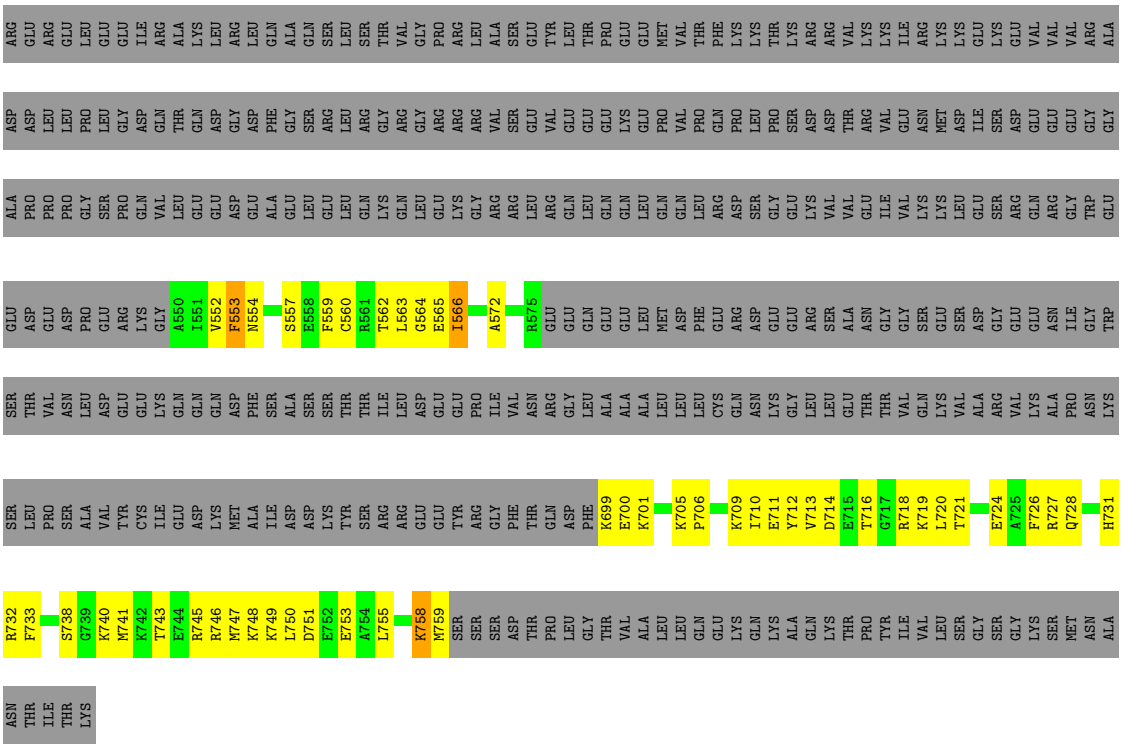
Chain Z: 30% 13% 57%



• Molecule 30: U4/U6.U5 tri-snRNP-associated protein 1

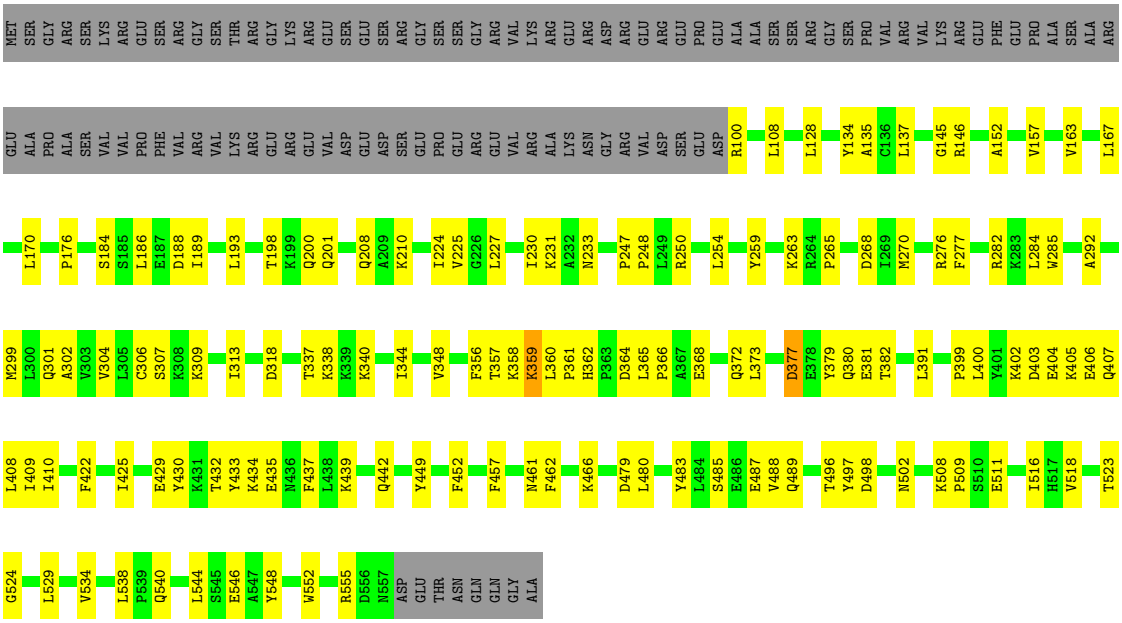
Chain S: 5% 6% 89%





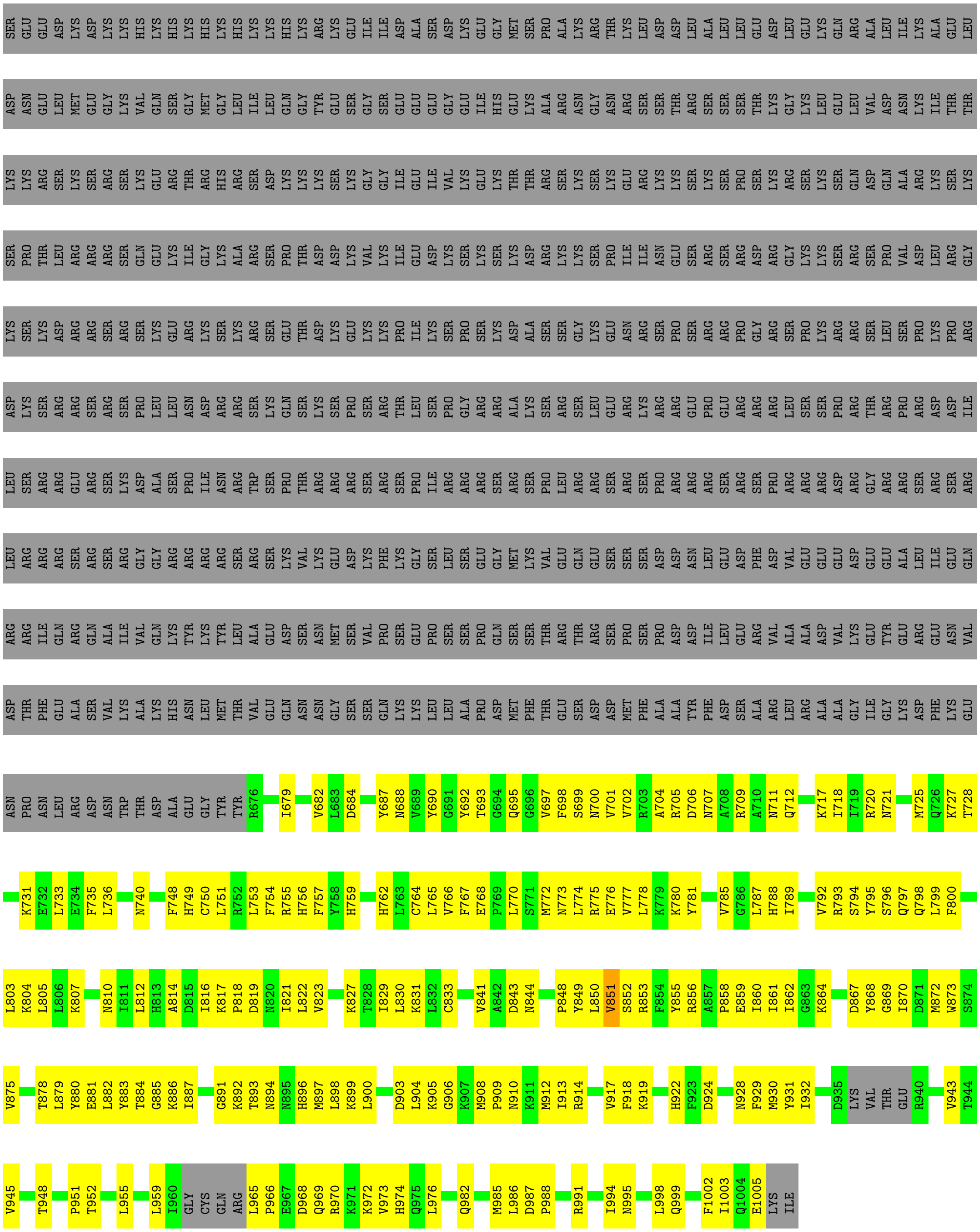
• Molecule 31: U4/U6.U5 tri-snRNP-associated protein 2

Chain U:



• Molecule 32: Serine/threonine-protein kinase PRP4 homolog

Chain Q:


SER GLU GLU ASP LYS ASP LYS LYS HIS LYS HIS LYS HIS LYS HIS LYS LYS HIS LYS ARG LYS GLU ILE ILE ASP ALA SER ASP LYS GLU GLY MET SER PRO ALA LYS ARG THR LYS LEU ASP ASP LEU ALA LEU LEU GLU ASP LEU GLU LYS GLN ARG ALA LEU ILE LYS ALA GLU LEU
ASP ASN GLU LEU MET GLU GLY LYS VAL GLN SER GLY MET GLY LEU ILE LEU GLN GLY TYR GLU SER GLY SER GLU GLU GLY GLU ILE HIS GLU LYS ALA ARG ASN GLY ASN ARG SER SER THR ARG SER SER SER THR LYS GLY LYS LEU GLU LEU VAL ASP ASN LYS ILE THR THR
LYS LYS ARG SER LYS SER ARG SER LYS GLU ARG THR ARG HIS ARG SER ASP LYS LYS SER LYS GLY GLY ILE GLU ILE VAL LYS GLU LYS THR THR ARG SER LYS SER LYS GLU ARG LYS LYS SER LYS SER PRO SER LYS ARG SER LYS SER GLN ASP GLN ALA ARG LYS SER LYS
SER PRO THR LEU ARG ARG ARG SER GLN GLU LYS ILE GLY LYS ALA ARG SER PRO THR ASP ASP LYS VAL LYS ILE GLU ASP LYS SER LYS SER LYS ASP ARG LYS LYS SER PRO ILE ILE ASN GLU SER ARG SER ARG ASP ARG GLY LYS LYS SER ARG SER PRO VAL ASP LEU ARG GLY
LYS SER LYS ASP ARG ARG SER ARG SER LYS GLU ARG LYS SER SER LYS ARG SER GLU THR ASP LYS GLU LYS LYS PRO ILE LYS SER PRO SER LYS ASP ALA SER SER GLY LYS GLU ASN ARG SER PRO SER ARG ARG PRO GLY ARG SER PRO LYS ARG ARG SER LEU SER PRO LYS PRO ARG
ASP LYS SER ARG ARG SER ARG SER PRO LEU LEU ASN ASP ARG ARG SER LYS GLN SER LYS SER PRO SER ARG THR LEU SER PRO GLY ARG ARG ALA LYS SER ARG SER LEU GLU ARG LYS ARG ARG GLU PRO GLU ARG ARG ARG LEU SER SER PRO ARG THR ARG PRO ARG ASP ASP ILE
LEU SER ARG ARG GLU ARG SER LYS ASP ALA SER PRO ILE ASN ARG TRP SER PRO THR ARG ARG ARG SER ARG SER PRO ILE ARG ARG ARG SER ARG SER PRO LEU ARG ARG SER ARG SER PRO ARG ARG SER ARG SER PRO ARG ARG ARG ASP ARG GLY ARG ARG SER ARG SER ARG
LEU ARG ARG ARG SER ARG SER ARG GLY GLY ARG ARG ARG ARG SER ARG SER LYS VAL LYS GLU ASP LYS PHE LYS GLY SER LEU SER GLU GLY MET LYS VAL GLU GLN GLU SER SER SER ASP ASP ASN LEU GLU ASP PHE ASP VAL GLU GLU GLU ASP GLU GLU ALA LEU ILE GLU GLN
ARG ARG ILE GLN ARG GLN ALA ILE VAL GLN LYS TYR LYS TYR LEU ALA GLU ASP SER ASN MET SER VAL PRO SER GLU PRO SER SER PRO GLN SER SER THR ARG THR ARG SER PRO PRO SER PRO ASP ASP ILE LEU GLU ARG VAL ALA ALA ASP VAL LYS GLU TYR GLU ARG GLU ASN VAL
ASP THR PHE GLU ALA SER VAL LYS ALA LYS HIS ASN LEU MET THR VAL GLU GLN ASN ASN GLY SER SER GLN LYS LYS LEU LEU ALA PRO ASP MET PHE THR GLU SER ASP ASP MET PHE ALA ALA TYR PHE ASP SER ALA ARG LEU ARG ALA ALA GLY ILE GLY LYS ASP PHE LYS GLU
ASN PRO ASN LEU ARG ASP ASN TRP THR ASP ALA GLU GLY TYR TYR R676 I679 V682 L683 D684 Y687 N688 V689 Y690 G691 Y692 T693 G694 Q695 G696 V697 F698 S699 N700 V701 V702 R703 A704 R705 D706 N707 A708 R709 A710 N711 Q712 K717 I718 I719 R720 N721 M725 Q726 K727 T728
K731 E732 L733 E734 F735 L736 N740 F748 H749 C750 L751 R752 L753 F754 R755 H756 F757 Y758 H759 H762 L763 C764 L765 V766 F767 E768 P769 L770 S771 M772 N773 L774 R775 E776 V777 L778 K779 K780 Y781 V785 G786 L787 H788 I789 V792 R793 S794 Y795 S796 Q797 Q798 L799 F800
L803 K804 L805 L806 K807 N810 I811 L812 H813 A814 D815 I816 K817 P818 D819 N820 I821 L822 V823 K827 T828 I829 L830 K831 L832 C833 V841 A842 D843 N844 P848 Y849 L850 V851 S852 R853 F854 Y855 R856 A857 P858 E859 I860 I861 I862 G863 K864 D867 Y868 G869 I870 D871 M872 W873 S874
V875 T878 L879 Y880 E881 L882 Y883 T884 G885 K886 I887 G891 K892 T893 N894 N895 H896 M897 L898 K899 L900 D903 L904 K905 G906 K907 M908 P909 N910 K911 M912 I913 R914 V917 F918 K919 H922 F923 D924 N928 F929 M930 Y931 I932 D935 LYS VAL THR GLU R940 V943 T944
V945 T948 P951 T952 L955 L959 I960 GLY CYS GLN ARG L965 P966 E967 D968 Q969 R970 K971 K972 V973 H974 Q975 L976 Q982 M985 L986 D987 P988 R991 I994 N995 L998 Q999 F1002 I1003 Q1004 E1005 LYS ILE

4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	388888	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 ($e^-/Å^2$)	50	Depositor
Minimum defocus (nm)	500	Depositor
Maximum defocus (nm)	3000	Depositor
Magnification	81000	Depositor
Image detector	GATAN K3 (6k x 4k)	Depositor

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: ZN, IHP, M7M, MG, GTP

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	0.53	0/297	0.95	0/458
2	B	0.48	0/2559	1.03	19/3977 (0.5%)
3	C	0.33	0/19000	0.49	1/25777 (0.0%)
4	D	0.35	0/6899	0.50	1/9372 (0.0%)
5	E	0.27	0/16393	0.48	0/22174
6	F	0.31	0/2453	0.52	1/3323 (0.0%)
7	G	0.27	0/6341	0.53	1/8559 (0.0%)
8	H	0.28	0/1169	0.47	0/1580
9	I	0.35	0/4903	0.60	3/6584 (0.0%)
10	a	0.29	0/602	0.66	0/801
10	h	0.33	0/679	0.74	3/905 (0.3%)
10	o	0.43	0/702	0.82	1/936 (0.1%)
11	b	0.27	0/649	0.62	0/878
11	i	0.31	0/649	0.61	0/878
11	p	0.38	0/657	0.76	1/888 (0.1%)
12	c	0.29	0/805	0.68	0/1081
12	j	0.34	0/747	0.57	0/1000
12	q	0.50	0/854	0.78	4/1146 (0.3%)
13	d	0.29	0/665	0.56	0/896
13	k	0.37	0/660	0.71	1/889 (0.1%)
13	r	0.53	0/651	0.90	3/878 (0.3%)
14	e	0.31	0/646	0.77	0/867
14	l	0.35	0/639	0.74	2/857 (0.2%)
14	s	0.56	0/676	0.89	1/907 (0.1%)
15	f	0.33	0/579	0.70	0/783
15	m	0.59	1/574 (0.2%)	0.73	0/775
15	t	0.46	0/588	0.72	1/795 (0.1%)
16	g	0.29	0/584	0.63	0/779
16	n	0.40	0/584	0.63	0/779
16	u	0.51	0/575	0.81	1/768 (0.1%)
17	J	0.41	1/2553 (0.0%)	0.92	7/3966 (0.2%)
18	K	0.50	0/1052	1.16	13/1636 (0.8%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
19	L	0.36	0/2550	0.58	0/3432
20	M	0.30	0/2943	0.59	0/3996
21	N	0.31	0/1898	0.60	0/2550
22	O	0.35	0/972	0.64	0/1312
23	R	0.31	0/1313	0.56	0/1762
24	P	0.68	0/2957	1.02	8/4603 (0.2%)
25	V	0.34	0/874	0.81	5/1166 (0.4%)
26	W	0.44	0/1388	0.72	0/1866
27	X	0.55	0/1069	0.76	2/1441 (0.1%)
28	Y	0.36	0/1923	0.59	0/2588
29	Z	0.32	0/1741	0.67	2/2323 (0.1%)
30	S	0.27	0/711	0.52	0/942
31	U	0.35	0/3861	0.49	1/5230 (0.0%)
32	Q	0.24	0/2673	0.45	0/3593
All	All	0.36	2/104257 (0.0%)	0.62	82/142696 (0.1%)

All (2) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
17	J	1	A	P-O5'	-9.89	1.49	1.59
15	m	30	LYS	CD-CE	-5.45	1.37	1.51

All (82) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	P	64	A	P-O3'-C3'	-11.16	106.30	119.70
18	K	65	U	P-O3'-C3'	-10.69	106.87	119.70
24	P	62	C	P-O3'-C3'	-10.66	106.90	119.70
2	B	67	A	P-O3'-C3'	-10.39	107.23	119.70
2	B	66	A	P-O3'-C3'	-10.21	107.44	119.70
24	P	60	A	P-O3'-C3'	-10.07	107.62	119.70
17	J	87	C	P-O3'-C3'	-10.01	107.69	119.70
2	B	71	C	P-O3'-C3'	-9.84	107.89	119.70
2	B	68	C	P-O3'-C3'	-9.74	108.01	119.70
24	P	61	U	P-O3'-C3'	-9.72	108.03	119.70
18	K	64	C	P-O3'-C3'	-9.59	108.20	119.70
18	K	62	G	P-O3'-C3'	-9.46	108.34	119.70
24	P	63	G	P-O3'-C3'	-9.44	108.37	119.70
18	K	53	G	P-O3'-C3'	-9.36	108.47	119.70
17	J	86	U	P-O3'-C3'	-9.28	108.57	119.70
18	K	60	G	P-O3'-C3'	-9.27	108.57	119.70
2	B	69	A	P-O3'-C3'	-9.23	108.62	119.70

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
18	K	57	C	P-O3'-C3'	-9.18	108.69	119.70
18	K	52	A	P-O3'-C3'	-9.05	108.84	119.70
2	B	75	G	P-O3'-C3'	-9.02	108.88	119.70
18	K	63	C	P-O3'-C3'	-9.00	108.90	119.70
17	J	3	C	P-O3'-C3'	-8.89	109.03	119.70
2	B	74	U	P-O3'-C3'	-8.57	109.42	119.70
2	B	9	G	P-O3'-C3'	-8.51	109.49	119.70
18	K	54	G	P-O3'-C3'	-8.19	109.87	119.70
2	B	73	C	P-O3'-C3'	-8.18	109.88	119.70
2	B	4	C	P-O3'-C3'	-7.71	110.44	119.70
2	B	3	A	P-O3'-C3'	-7.48	110.73	119.70
18	K	61	G	P-O3'-C3'	-7.20	111.06	119.70
2	B	77	G	P-O3'-C3'	-6.95	111.36	119.70
2	B	6	C	P-O3'-C3'	-6.95	111.36	119.70
17	J	85	A	P-O3'-C3'	-6.49	111.91	119.70
24	P	59	A	P-O3'-C3'	-6.31	112.13	119.70
2	B	8	G	P-O3'-C3'	-6.28	112.17	119.70
6	F	51	ARG	NE-CZ-NH1	6.16	123.38	120.30
2	B	7	U	P-O3'-C3'	-6.08	112.40	119.70
14	l	74	LEU	CB-CG-CD2	5.99	121.18	111.00
12	q	22	GLU	OE1-CD-OE2	-5.96	116.14	123.30
3	C	205	ASP	CB-CG-OD1	5.96	123.66	118.30
25	V	85	LEU	CA-CB-CG	5.92	128.91	115.30
17	J	1	A	OP1-P-OP2	-5.91	110.74	119.60
13	r	75	ASP	CB-CG-OD1	5.79	123.51	118.30
18	K	56	C	P-O3'-C3'	-5.73	112.82	119.70
25	V	56	PRO	CA-N-CD	-5.71	103.51	111.50
14	s	82	ASP	CB-CG-OD1	5.71	123.44	118.30
9	I	502	VAL	CA-CB-CG1	5.70	119.44	110.90
27	X	49	ASP	CB-CG-OD1	5.68	123.41	118.30
24	P	92	U	C5-C4-O4	-5.66	122.50	125.90
25	V	18	LEU	CA-CB-CG	5.64	128.28	115.30
24	P	65	C	P-O3'-C3'	-5.64	112.94	119.70
13	r	73	LEU	CA-CB-CG	5.62	128.22	115.30
4	D	138	LEU	CA-CB-CG	5.61	128.21	115.30
31	U	377	ASP	CB-CG-OD1	5.59	123.33	118.30
18	K	66	G	P-O3'-C3'	-5.58	113.01	119.70
12	q	22	GLU	CA-CB-CG	5.57	125.66	113.40
2	B	65	G	P-O3'-C3'	-5.54	113.05	119.70
12	q	20	GLU	OE1-CD-OE2	-5.53	116.67	123.30
13	r	76	MET	CA-CB-CG	5.53	122.70	113.30
2	B	5	U	P-O3'-C3'	-5.50	113.10	119.70

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
13	k	39	MET	CG-SD-CE	-5.45	91.48	100.20
11	p	47	LEU	CA-CB-CG	5.42	127.76	115.30
29	Z	315	MET	CG-SD-CE	5.41	108.86	100.20
27	X	26	LEU	CA-CB-CG	5.41	127.74	115.30
2	B	23	C	C2-N1-C1'	5.41	124.75	118.80
10	h	77	LEU	CB-CG-CD2	-5.40	101.82	111.00
7	G	665	LEU	CA-CB-CG	5.38	127.68	115.30
12	q	67	LEU	CA-CB-CG	5.34	127.58	115.30
10	o	80	MET	CB-CG-SD	5.27	128.20	112.40
2	B	10	U	P-O3'-C3'	-5.26	113.39	119.70
25	V	28	LEU	CA-CB-CG	5.25	127.39	115.30
14	l	41	MET	CA-CB-CG	5.25	122.22	113.30
10	h	38	MET	CA-CB-CG	5.24	122.21	113.30
10	h	67	LEU	CB-CG-CD1	-5.21	102.14	111.00
18	K	55	C	P-O3'-C3'	-5.20	113.46	119.70
17	J	120	U	C5-C4-O4	-5.19	122.78	125.90
25	V	49	LEU	CA-CB-CG	5.16	127.17	115.30
9	I	493	LYS	CD-CE-NZ	-5.13	99.89	111.70
29	Z	359	ILE	CG1-CB-CG2	-5.12	100.13	111.40
9	I	538	LEU	CA-CB-CG	5.12	127.08	115.30
15	t	70	LEU	CA-CB-CG	5.09	127.00	115.30
17	J	4	C	P-O3'-C3'	-5.03	113.67	119.70
16	u	59	MET	CB-CG-SD	5.00	127.40	112.40

There are no chirality outliers.

There are no planarity outliers.

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	268	0	138	10	0
2	B	2296	0	1163	90	0
3	C	18488	0	18369	991	0
4	D	6747	0	6755	205	0
5	E	16077	0	16192	1199	0
6	F	2399	0	2334	276	0

Continued on next page...

Continued from previous page...

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
7	G	6229	0	6163	433	0
8	H	1145	0	1160	132	0
9	I	4819	0	4893	263	0
10	a	594	0	615	0	0
10	h	669	0	697	0	0
10	o	692	0	717	0	0
11	b	641	0	681	0	0
11	i	641	0	681	0	0
11	p	649	0	693	0	0
12	c	796	0	821	0	0
12	j	737	0	780	0	0
12	q	844	0	876	0	0
13	d	657	0	675	0	0
13	k	652	0	670	0	0
13	r	643	0	657	0	0
14	e	638	0	657	0	0
14	l	631	0	648	0	0
14	s	668	0	689	0	0
15	f	567	0	575	0	0
15	m	562	0	574	0	0
15	t	576	0	589	0	0
16	g	577	0	603	0	0
16	n	577	0	603	0	0
16	u	568	0	590	0	0
17	J	2320	0	1178	34	0
18	K	942	0	478	39	0
19	L	2512	0	2526	137	0
20	M	2863	0	2763	39	0
21	N	1861	0	1895	36	0
22	O	960	0	1010	12	0
23	R	1285	0	1282	46	0
24	P	2647	0	1334	62	0
25	V	857	0	829	22	0
26	W	1359	0	1375	32	0
27	X	1055	0	1083	44	0
28	Y	1889	0	1831	57	0
29	Z	1727	0	1827	47	0
30	S	701	0	721	71	0
31	U	3765	0	3777	112	0
32	Q	2626	0	2698	214	0
33	B	1	0	0	0	0
33	D	1	0	0	0	0

Continued on next page...

Continued from previous page...

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
34	C	36	12	6	3	0
35	D	32	0	12	5	0
36	R	2	0	0	0	0
36	U	1	0	0	0	0
36	V	2	0	0	0	0
36	Y	1	0	0	0	0
All	All	101492	12	97883	4242	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 23.

All (4242) 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)
7:G:577:TRP:CE3	7:G:600:ALA:HB2	1.65	1.30
19:L:61:ALA:HA	19:L:64:MET:HB3	1.24	1.16
7:G:577:TRP:CD2	7:G:600:ALA:HB1	1.80	1.15
7:G:577:TRP:CE3	7:G:600:ALA:CB	2.29	1.14
8:H:55:MET:CE	19:L:345:ALA:HB2	1.78	1.14
32:Q:807:LYS:HE3	32:Q:868:TYR:HB3	1.28	1.08
2:B:70:A:H5"	2:B:72:U:H3	1.17	1.06
5:E:146:GLU:HB2	5:E:149:ARG:HB2	1.36	1.05
5:E:1994:ASN:HB3	5:E:1999:LEU:HD13	1.38	1.04
8:H:8:LEU:HB2	8:H:61:VAL:HG22	1.39	1.04
3:C:1832:ARG:HG3	3:C:1836:LEU:HD13	1.40	1.03
7:G:380:ALA:HA	7:G:383:GLU:HG3	1.36	1.03
7:G:577:TRP:CD2	7:G:600:ALA:CB	2.39	1.02
5:E:691:GLY:HA3	5:E:876:LEU:HD11	1.37	1.02
5:E:1601:LEU:HA	5:E:1604:LEU:HD23	1.38	1.02
3:C:1820:LYS:HA	3:C:1914:MET:HA	1.40	1.02
7:G:427:VAL:HG12	7:G:436:LEU:HB3	1.41	1.01
5:E:81:ILE:HD11	7:G:337:GLU:HG3	1.43	1.00
5:E:1825:ASN:HB3	5:E:1828:THR:HG23	1.42	1.00
5:E:430:LEU:HD11	5:E:447:VAL:HG22	1.40	1.00
5:E:204:GLN:HG2	7:G:304:THR:HB	1.43	1.00
17:J:2:A:O2'	21:N:566:GLN:HA	1.60	1.00
3:C:1505:LYS:HG3	19:L:376:ASN:O	1.62	1.00
5:E:1153:LEU:HD13	5:E:1156:LEU:HD12	1.44	0.99
8:H:118:VAL:HG21	8:H:133:PRO:HG3	1.44	0.98
6:F:259:VAL:HB	6:F:277:PHE:HB2	1.44	0.97
31:U:368:GLU:HG3	31:U:372:GLN:HE22	1.28	0.97

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:971:LYS:HB3	5:E:980:GLN:HB2	1.46	0.97
7:G:581:ALA:HB1	7:G:613:MET:HE2	1.47	0.97
24:P:21:G:H21	24:P:22:U:C1'	1.78	0.96
6:F:166:LEU:HD23	6:F:178:LEU:HD11	1.47	0.96
5:E:1626:PRO:HA	5:E:1629:ARG:HD2	1.45	0.96
2:B:69:A:H3'	2:B:70:A:H8	1.29	0.96
5:E:1406:VAL:HG21	5:E:1418:LEU:HB3	1.47	0.95
19:L:63:ILE:HB	19:L:99:LEU:HD11	1.45	0.95
6:F:119:THR:HG23	6:F:161:ARG:HG2	1.48	0.95
4:D:736:GLY:HA2	4:D:743:ASN:HB2	1.47	0.95
3:C:1503:TRP:HB2	19:L:378:MET:HB3	1.49	0.95
3:C:1498:TRP:HA	3:C:1501:LEU:HD13	1.49	0.95
25:V:1:MET:SD	28:Y:234:LYS:NZ	2.40	0.94
7:G:578:LEU:HD12	7:G:613:MET:SD	2.07	0.94
3:C:533:LYS:HG3	3:C:537:LYS:HE3	1.50	0.94
3:C:1503:TRP:NE1	19:L:380:PHE:HD1	1.65	0.94
3:C:696:MET:HE1	7:G:150:ALA:HA	1.48	0.94
5:E:429:GLN:HG2	30:S:552:VAL:HG22	1.49	0.94
5:E:1033:GLU:HG3	5:E:1077:LEU:HD21	1.49	0.94
3:C:1289:VAL:HG11	5:E:42:SER:HA	1.48	0.94
5:E:2076:LEU:HD21	5:E:2079:ILE:HB	1.50	0.94
5:E:668:ASP:HB3	5:E:671:LYS:HB3	1.50	0.93
7:G:391:ARG:HA	7:G:394:ARG:HD3	1.47	0.93
7:G:577:TRP:CZ3	7:G:600:ALA:HB2	2.02	0.93
7:G:581:ALA:HB1	7:G:613:MET:CE	1.97	0.93
7:G:581:ALA:CB	7:G:613:MET:CE	2.46	0.93
7:G:584:GLU:HG2	7:G:593:LEU:HA	1.50	0.93
3:C:1807:ILE:HG13	3:C:1822:ILE:HD11	1.50	0.93
5:E:804:LYS:HD3	5:E:858:ARG:HH12	1.34	0.93
7:G:578:LEU:HD22	7:G:609:VAL:HG11	1.51	0.93
6:F:177:LYS:HG2	6:F:189:THR:HG22	1.52	0.92
6:F:203:ASP:HB3	6:F:247:GLY:HA3	1.49	0.92
8:H:55:MET:HE1	19:L:345:ALA:HB2	1.51	0.92
3:C:1258:LYS:HE3	3:C:1262:LYS:HE3	1.52	0.92
24:P:21:G:N2	24:P:22:U:H1'	1.85	0.91
9:I:690:ASN:HB3	9:I:715:LYS:HD3	1.52	0.91
32:Q:803:LEU:HD11	32:Q:875:VAL:HG21	1.52	0.91
3:C:1471:ARG:CZ	19:L:383:ILE:HG22	2.00	0.91
3:C:600:ARG:HH21	3:C:604:MET:HE1	1.36	0.91
7:G:578:LEU:CD2	7:G:609:VAL:HG11	2.00	0.90
24:P:21:G:N2	24:P:22:U:C1'	2.35	0.90

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:P:66:A:H2'	26:W:138:ARG:CZ	2.01	0.90
24:P:34:G:H1	24:P:48:U:H3	1.17	0.90
5:E:552:VAL:HG23	5:E:566:VAL:HG12	1.54	0.90
5:E:1936:LEU:HD13	5:E:2076:LEU:HD13	1.55	0.89
3:C:1318:THR:HG22	3:C:1478:LEU:HD13	1.54	0.89
5:E:1415:ASP:HB3	5:E:1435:LEU:HD21	1.53	0.89
6:F:243:LEU:HD21	6:F:247:GLY:HA2	1.53	0.89
8:H:26:LEU:HB3	8:H:84:PHE:HB2	1.52	0.89
5:E:938:ILE:HD11	5:E:952:ARG:HG2	1.53	0.88
5:E:1849:ILE:HD12	5:E:1922:LEU:HD22	1.56	0.88
9:I:482:GLN:HE22	9:I:700:GLN:HE22	1.20	0.88
3:C:1776:ILE:HG23	3:C:1858:PRO:HA	1.54	0.88
5:E:158:ASP:HA	5:E:163:GLN:HB3	1.56	0.88
3:C:2193:VAL:HG23	3:C:2230:LEU:HD21	1.55	0.88
5:E:636:ILE:HD11	5:E:922:TYR:HB3	1.55	0.88
19:L:62:GLU:O	19:L:66:LYS:HG2	1.73	0.88
19:L:55:TRP:HA	19:L:60:PHE:CD1	2.08	0.88
19:L:122:PHE:HZ	19:L:170:THR:HG23	1.39	0.88
7:G:581:ALA:CB	7:G:613:MET:HE1	2.04	0.87
5:E:144:LYS:HD2	5:E:180:THR:HB	1.54	0.87
3:C:1471:ARG:HG3	19:L:388:TYR:OH	1.73	0.87
5:E:566:VAL:HG22	5:E:585:ILE:HB	1.55	0.87
3:C:2164:PRO:HB3	3:C:2296:LEU:HD11	1.56	0.87
3:C:1792:LYS:HG2	3:C:1798:LEU:HD13	1.56	0.87
3:C:2328:ALA:H	5:E:1078:MET:HE1	1.38	0.87
9:I:199:GLN:HB3	9:I:203:ARG:HH21	1.38	0.87
5:E:1405:VAL:HG12	5:E:1424:ILE:HB	1.55	0.86
8:H:91:LYS:HB2	8:H:129:ILE:HG13	1.56	0.86
5:E:1951:GLN:HG3	5:E:1962:GLN:HG3	1.56	0.86
5:E:430:LEU:HD21	5:E:447:VAL:HG13	1.57	0.86
5:E:1740:ILE:HD11	5:E:1810:VAL:HB	1.55	0.86
5:E:203:VAL:HG12	7:G:301:VAL:HG12	1.57	0.86
5:E:496:ASP:HB2	5:E:519:ARG:HH21	1.41	0.86
7:G:578:LEU:HD13	7:G:609:VAL:HG12	1.58	0.86
2:B:7:U:H5"	2:B:73:C:H42	1.40	0.85
32:Q:792:VAL:HG21	32:Q:883:TYR:HD1	1.41	0.85
5:E:2042:GLU:HA	5:E:2087:LYS:HB3	1.58	0.85
19:L:122:PHE:CZ	19:L:170:THR:HG23	2.11	0.85
5:E:1950:THR:HG21	5:E:2112:ALA:HB1	1.57	0.85
7:G:20:GLY:HA2	8:H:11:LYS:HE3	1.56	0.85
6:F:265:ARG:HD2	6:F:267:PHE:HB3	1.57	0.85

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:I:482:GLN:HE22	9:I:700:GLN:NE2	1.74	0.85
3:C:1792:LYS:HE3	3:C:1798:LEU:HD22	1.59	0.84
7:G:577:TRP:CG	7:G:600:ALA:HB1	2.12	0.84
2:B:69:A:H3'	2:B:70:A:C8	2.12	0.84
5:E:2053:ALA:HB1	5:E:2056:PHE:HB3	1.59	0.84
3:C:34:ALA:HA	6:F:213:ILE:HD11	1.59	0.84
8:H:51:ASP:O	19:L:343:LEU:CD2	2.25	0.84
3:C:1640:SER:HB2	30:S:699:LYS:HD3	1.58	0.84
5:E:988:ALA:HB2	5:E:998:VAL:HG21	1.58	0.84
9:I:756:GLY:HA2	9:I:760:LYS:HG3	1.60	0.84
31:U:432:THR:HG22	31:U:435:GLU:HB3	1.60	0.84
32:Q:904:LEU:HD21	32:Q:955:LEU:HD11	1.60	0.84
5:E:1842:VAL:HA	5:E:1845:LEU:HD12	1.58	0.84
7:G:329:ARG:HG2	7:G:352:LEU:HB3	1.58	0.84
5:E:1312:LEU:HD13	5:E:1317:PHE:HB3	1.58	0.83
5:E:1227:ASP:OD1	5:E:1228:VAL:N	2.11	0.83
5:E:1899:LEU:HD23	5:E:1952:ALA:HA	1.59	0.83
6:F:166:LEU:HG	6:F:178:LEU:HD21	1.60	0.83
19:L:162:ALA:O	19:L:165:MET:HG3	1.78	0.83
4:D:953:PHE:HB3	4:D:956:PRO:HD2	1.60	0.82
5:E:2026:LYS:HD3	5:E:2124:VAL:HG13	1.60	0.82
8:H:45:LEU:HD12	8:H:58:ILE:HD12	1.60	0.82
4:D:159:LYS:HA	4:D:165:LEU:HD23	1.61	0.82
5:E:1429:PRO:HG3	5:E:1467:LEU:HD13	1.61	0.82
7:G:305:ASN:HB3	7:G:308:HIS:HB2	1.61	0.82
3:C:164:MET:HE2	3:C:569:VAL:HG11	1.61	0.82
3:C:863:GLU:HB3	3:C:913:PRO:HB3	1.59	0.82
23:R:106:TRP:HD1	23:R:109:ASN:HD21	1.28	0.82
5:E:858:ARG:HD2	5:E:861:TYR:HD2	1.43	0.82
8:H:136:PRO:HA	8:H:139:ILE:HD12	1.62	0.81
5:E:1843:ARG:HE	5:E:1877:HIS:HB3	1.44	0.81
31:U:373:LEU:HB3	31:U:379:TYR:HE2	1.45	0.81
19:L:55:TRP:HA	19:L:60:PHE:CG	2.14	0.81
5:E:165:ASP:HB3	5:E:168:ARG:HB2	1.60	0.81
9:I:417:ILE:HG22	9:I:629:ILE:HG13	1.62	0.81
5:E:2052:ILE:HG22	5:E:2054:PRO:HD3	1.63	0.81
32:Q:817:LYS:HE3	32:Q:819:ASP:HB2	1.63	0.81
6:F:231:MET:HG3	6:F:272:ARG:HH11	1.45	0.80
3:C:1636:LYS:HD2	3:C:1656:THR:HG21	1.63	0.80
5:E:471:ALA:HA	5:E:518:LEU:HD13	1.60	0.80
2:B:7:U:H3	2:B:74:U:H3	1.24	0.80

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:370:PRO:HG3	4:D:304:LEU:HD21	1.62	0.80
5:E:462:LEU:HD23	5:E:486:SER:HB3	1.63	0.80
32:Q:770:LEU:HD13	32:Q:822:LEU:HB2	1.62	0.80
8:H:52:LEU:HD23	19:L:343:LEU:CD2	2.11	0.80
5:E:2017:ILE:HG12	5:E:2043:ARG:HA	1.63	0.80
3:C:898:PHE:HD2	3:C:905:LEU:HB3	1.47	0.80
6:F:236:ASP:HB3	6:F:255:MET:HE2	1.64	0.80
3:C:707:ARG:HG2	8:H:4:LEU:HG	1.63	0.80
7:G:347:LEU:HD22	7:G:378:ARG:HG3	1.64	0.79
9:I:780:LYS:HD2	9:I:796:ALA:HA	1.64	0.79
32:Q:908:MET:HE2	32:Q:912:MET:HG2	1.62	0.79
3:C:1863:VAL:HG11	3:C:1868:MET:HG3	1.64	0.79
5:E:1581:ALA:HA	5:E:1586:ARG:HG2	1.63	0.79
3:C:511:LYS:HB2	3:C:513:LEU:HG	1.64	0.79
3:C:701:ILE:HD11	7:G:157:TRP:HB3	1.63	0.79
7:G:577:TRP:CB	7:G:610:LEU:HD21	2.12	0.79
30:S:716:THR:HG23	30:S:718:ARG:HG3	1.65	0.79
5:E:258:LEU:HD12	5:E:263:ILE:HD11	1.64	0.79
5:E:1566:ARG:HG2	5:E:1621:HIS:HB2	1.62	0.79
26:W:119:GLN:HB2	30:S:700:GLU:OE1	1.83	0.79
5:E:614:LEU:HD21	5:E:617:ILE:HG13	1.66	0.78
5:E:1622:GLU:HA	5:E:1629:ARG:HH22	1.48	0.78
6:F:81:LEU:HB3	6:F:93:TRP:HB2	1.66	0.78
7:G:20:GLY:H	8:H:68:VAL:HG11	1.48	0.78
17:J:88:A:H2'	17:J:89:A:H8	1.47	0.78
3:C:1658:GLN:HE21	27:X:131:GLN:HE22	1.31	0.78
5:E:89:LEU:HB2	7:G:363:ALA:HB1	1.66	0.78
5:E:1532:ILE:HB	5:E:1538:ARG:HB2	1.66	0.78
5:E:2000:THR:HG23	5:E:2003:GLN:H	1.49	0.78
28:Y:54:GLU:O	28:Y:67:PRO:HA	1.83	0.78
6:F:336:HIS:HB2	6:F:341:ILE:HB	1.66	0.78
18:K:52:A:H2'	18:K:53:G:C8	2.19	0.78
3:C:1720:PRO:HA	30:S:701:LYS:HB2	1.65	0.77
6:F:115:LEU:HD22	6:F:124:LEU:HD11	1.66	0.77
8:H:55:MET:SD	19:L:345:ALA:HB2	2.24	0.77
30:S:718:ARG:HH12	30:S:750:LEU:HD22	1.49	0.77
3:C:734:PRO:HB2	7:G:149:LEU:HD12	1.66	0.77
5:E:1301:LEU:HD21	5:E:1330:PRO:HB2	1.66	0.77
5:E:1768:PRO:HG3	5:E:1776:ILE:HD11	1.64	0.77
4:D:692:LEU:HD11	4:D:744:ILE:HD12	1.66	0.77
3:C:2108:LYS:HG2	3:C:2263:LEU:HD23	1.65	0.77

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:1430:GLU:HB3	5:E:1431:LYS:HZ2	1.49	0.77
7:G:584:GLU:CG	7:G:593:LEU:HA	2.14	0.77
32:Q:970:ARG:HG2	32:Q:974:HIS:HE1	1.50	0.77
3:C:1590:VAL:HG22	3:C:1664:ILE:HD12	1.67	0.77
5:E:763:ARG:HH12	5:E:779:PRO:HA	1.50	0.77
5:E:2068:ILE:HB	5:E:2078:SER:HB2	1.65	0.77
5:E:2069:GLY:HA2	5:E:2077:ILE:HG12	1.66	0.77
7:G:420:ARG:HH11	7:G:444:GLU:HA	1.50	0.77
32:Q:913:ILE:HG22	32:Q:919:LYS:HE2	1.67	0.77
7:G:332:ILE:HD13	7:G:348:GLU:HG3	1.66	0.77
9:I:467:GLN:HB3	9:I:541:SER:HB2	1.67	0.77
19:L:55:TRP:HB2	19:L:197:LEU:HD21	1.67	0.77
27:X:37:TYR:HB3	27:X:39:GLN:HE22	1.50	0.77
5:E:736:ARG:HH22	5:E:773:GLU:HG2	1.48	0.77
5:E:1815:LEU:HD23	5:E:1829:ILE:HG22	1.66	0.76
5:E:2026:LYS:HA	5:E:2124:VAL:HG13	1.65	0.76
6:F:281:VAL:HG11	6:F:306:ASP:HB2	1.65	0.76
29:Z:333:ALA:HA	29:Z:336:LYS:HB2	1.67	0.76
7:G:577:TRP:HB3	7:G:610:LEU:HD21	1.67	0.76
3:C:1503:TRP:HE1	19:L:380:PHE:HD1	0.84	0.76
6:F:90:ILE:HB	6:F:105:LEU:HB2	1.66	0.76
9:I:553:ARG:HD3	9:I:726:ARG:HH22	1.51	0.76
3:C:2070:LYS:HD3	3:C:2070:LYS:H	1.51	0.76
5:E:60:LYS:HG2	5:E:61:PRO:HD2	1.68	0.76
9:I:381:THR:HG22	9:I:420:GLN:HG2	1.67	0.76
4:D:852:ARG:HD3	9:I:289:LEU:HD11	1.68	0.76
7:G:18:VAL:HG13	8:H:11:LYS:HD3	1.67	0.76
8:H:28:LEU:HD23	8:H:59:TYR:HB2	1.66	0.76
24:P:70:A:H61	27:X:87:ILE:HA	1.50	0.76
7:G:495:ARG:HH11	7:G:501:ILE:HD12	1.50	0.76
7:G:578:LEU:CD1	7:G:609:VAL:HG12	2.16	0.76
5:E:623:ASP:O	5:E:624:ARG:HB2	1.86	0.75
19:L:61:ALA:HA	19:L:64:MET:CB	2.10	0.75
8:H:41:LEU:HD13	8:H:105:SER:HA	1.68	0.75
6:F:356:ILE:HG23	6:F:357:GLN:H	1.52	0.75
5:E:422:PHE:HD2	5:E:890:GLU:HG3	1.52	0.75
5:E:1597:LEU:HG	5:E:1601:LEU:HD23	1.69	0.75
32:Q:778:LEU:HD21	32:Q:885:GLY:HA2	1.69	0.75
3:C:1676:ILE:HD13	3:C:1706:ASP:HB2	1.68	0.75
6:F:262:TRP:HB3	6:F:272:ARG:HG2	1.68	0.75
7:G:152:VAL:HG13	7:G:157:TRP:HE1	1.50	0.75

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:340:PRO:HA	7:G:346:TRP:HH2	1.52	0.75
3:C:1771:LEU:HA	3:C:1777:ILE:HD12	1.67	0.75
17:J:93:G:H1	17:J:104:U:H3	1.34	0.75
6:F:229:TYR:HB2	6:F:231:MET:HE1	1.69	0.75
7:G:341:LYS:HA	7:G:369:LEU:HD12	1.68	0.75
30:S:699:LYS:O	30:S:700:GLU:HG2	1.86	0.75
31:U:466:LYS:NZ	31:U:546:GLU:OE1	2.20	0.75
32:Q:748:PHE:HB2	32:Q:805:LEU:HD22	1.68	0.75
32:Q:812:LEU:HD11	32:Q:868:TYR:HA	1.69	0.75
5:E:60:LYS:O	5:E:62:GLN:NE2	2.20	0.74
9:I:479:GLU:HB3	9:I:700:GLN:HG3	1.69	0.74
5:E:426:LYS:HB3	5:E:427:ARG:HD2	1.70	0.74
9:I:361:LYS:N	9:I:364:GLU:OE1	2.20	0.74
5:E:1332:GLN:HE22	5:E:1358:ILE:HD12	1.50	0.74
29:Z:333:ALA:HA	29:Z:336:LYS:HD2	1.69	0.74
3:C:1703:ILE:HD13	3:C:1714:ALA:HB2	1.69	0.74
7:G:343:GLU:HG3	7:G:374:ARG:NH2	2.02	0.74
5:E:906:VAL:HA	5:E:981:VAL:HG11	1.70	0.74
7:G:456:ALA:HB1	7:G:466:ILE:HD13	1.69	0.74
6:F:213:ILE:HG22	6:F:237:SER:HB3	1.68	0.74
6:F:236:ASP:HB3	6:F:255:MET:HB2	1.69	0.74
5:E:1165:ILE:HG13	5:E:1167:MET:H	1.51	0.74
32:Q:970:ARG:O	32:Q:974:HIS:ND1	2.21	0.74
5:E:930:LEU:HD23	5:E:949:LEU:HD12	1.70	0.74
5:E:1538:ARG:NH1	5:E:1665:ASP:OD1	2.20	0.74
7:G:329:ARG:HD3	7:G:353:GLN:HA	1.70	0.74
7:G:581:ALA:HB3	7:G:613:MET:CE	2.18	0.74
9:I:177:ARG:HA	9:I:180:GLU:HG2	1.68	0.74
5:E:1627:MET:HA	5:E:1630:ARG:HE	1.53	0.73
5:E:537:LYS:NZ	5:E:583:THR:O	2.21	0.73
3:C:92:LEU:HD22	3:C:503:MET:HG3	1.71	0.73
5:E:828:ILE:HG21	5:E:849:ILE:HD11	1.69	0.73
7:G:523:GLN:HA	7:G:558:CYS:HA	1.69	0.73
18:K:53:G:H2'	18:K:54:G:C8	2.24	0.73
21:N:543:ILE:HG12	21:N:585:GLU:HG2	1.70	0.73
5:E:409:LEU:HD23	5:E:956:LEU:HD23	1.71	0.73
3:C:697:MET:HB2	7:G:157:TRP:CZ3	2.24	0.73
3:C:1405:LEU:HD23	5:E:61:PRO:HB3	1.69	0.73
7:G:348:GLU:OE1	7:G:351:ARG:NH2	2.22	0.73
17:J:2:A:H4'	17:J:3:C:H5'	1.69	0.73
18:K:54:G:H2'	18:K:55:C:C6	2.23	0.73

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:1775:GLN:NE2	3:C:1776:ILE:O	2.21	0.73
3:C:1781:ASP:HB3	3:C:1808:PHE:HB2	1.68	0.73
5:E:1855:TYR:HB3	5:E:1891:THR:HG21	1.69	0.73
8:H:85:PHE:CD2	8:H:123:ALA:HB1	2.23	0.73
26:W:119:GLN:HB2	30:S:700:GLU:CD	2.08	0.73
32:Q:775:ARG:NH1	32:Q:881:GLU:OE2	2.22	0.73
5:E:467:LEU:HD11	5:E:481:LEU:HD11	1.70	0.73
5:E:493:LEU:HG	5:E:515:MET:HG3	1.69	0.73
7:G:343:GLU:HG3	7:G:374:ARG:HH21	1.54	0.73
3:C:384:VAL:HG21	4:D:334:ILE:HD11	1.68	0.73
3:C:697:MET:HE1	3:C:702:LYS:HA	1.69	0.73
3:C:1415:GLY:O	3:C:1418:ARG:NH1	2.22	0.73
3:C:1732:LYS:HB3	30:S:710:ILE:HD11	1.70	0.73
6:F:155:ASN:O	6:F:290:ARG:NH2	2.22	0.73
17:J:88:A:H2'	17:J:89:A:C8	2.24	0.73
31:U:208:GLN:NE2	31:U:210:LYS:O	2.21	0.73
3:C:277:PRO:HB3	3:C:452:LYS:HB2	1.71	0.73
30:S:743:THR:O	30:S:747:MET:HG3	1.88	0.73
2:B:43:U:O2'	2:B:44:A:H5'	1.89	0.72
3:C:530:LEU:HB2	3:C:535:ARG:HH22	1.54	0.72
8:H:26:LEU:N	8:H:84:PHE:O	2.20	0.72
9:I:386:ILE:CG2	9:I:424:ILE:HD11	2.19	0.72
9:I:563:VAL:HA	9:I:566:ILE:HD12	1.71	0.72
5:E:591:GLU:O	5:E:595:ILE:HG12	1.89	0.72
8:H:11:LYS:NZ	8:H:15:ASP:OD2	2.22	0.72
31:U:485:SER:HB2	31:U:488:VAL:HG22	1.71	0.72
3:C:2009:ASP:HB2	3:C:2014:MET:CG	2.18	0.72
32:Q:698:PHE:HB2	32:Q:725:MET:HE1	1.71	0.72
3:C:1628:ASP:OD2	3:C:1664:ILE:N	2.21	0.72
5:E:493:LEU:O	5:E:519:ARG:NH1	2.23	0.72
5:E:731:THR:HG23	5:E:810:VAL:HG12	1.69	0.72
9:I:183:GLU:O	9:I:187:MET:HG3	1.89	0.72
3:C:1737:ASN:HB3	3:C:1740:LEU:HB2	1.72	0.72
4:D:135:CYS:HB2	4:D:242:LEU:HD13	1.70	0.72
6:F:301:ALA:HB2	6:F:311:VAL:HG22	1.71	0.72
2:B:5:U:H2'	2:B:6:C:C6	2.24	0.72
6:F:51:ARG:NH2	6:F:355:GLU:OE2	2.22	0.72
6:F:251:LEU:HD23	6:F:291:CYS:HB3	1.71	0.72
32:Q:751:LEU:HD22	32:Q:833:CYS:HB2	1.72	0.72
2:B:97:G:H1	2:B:116:U:H3	1.38	0.72
6:F:157:CYS:HB2	6:F:169:THR:HG22	1.71	0.72

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:856:LEU:HB3	3:C:860:GLN:NE2	2.05	0.71
3:C:1941:ARG:NE	3:C:2011:ILE:O	2.23	0.71
6:F:127:ALA:HA	6:F:133:VAL:HG22	1.70	0.71
6:F:309:VAL:HB	6:F:323:LEU:HB2	1.71	0.71
21:N:557:LYS:HE3	23:R:15:PHE:CE1	2.24	0.71
5:E:723:VAL:HG12	5:E:810:VAL:HG13	1.71	0.71
5:E:1146:LYS:HB3	5:E:1148:PHE:HE1	1.55	0.71
5:E:1908:LEU:O	5:E:1912:THR:HG23	1.91	0.71
7:G:297:LEU:O	7:G:301:VAL:HG13	1.90	0.71
5:E:2019:LEU:HB2	5:E:2120:TYR:HE2	1.56	0.71
7:G:431:PRO:HA	7:G:437:TRP:HE1	1.56	0.71
17:J:3:C:C5	21:N:566:GLN:HG2	2.25	0.71
32:Q:892:LYS:HB2	32:Q:896:HIS:HD2	1.55	0.71
3:C:1146:ASP:OD2	3:C:1182:ASN:ND2	2.21	0.71
7:G:319:GLU:HB2	7:G:328:ALA:HB2	1.71	0.71
32:Q:884:THR:HG22	32:Q:959:LEU:HA	1.72	0.71
3:C:1919:LEU:HD13	3:C:1936:LEU:HD21	1.71	0.71
29:Z:257:GLU:HG3	29:Z:260:ARG:HH21	1.55	0.71
4:D:955:ASP:HB3	4:D:956:PRO:HD3	1.72	0.71
5:E:1375:ARG:NH1	5:E:1419:LEU:O	2.24	0.71
5:E:2066:VAL:HG12	5:E:2068:ILE:HD11	1.72	0.71
5:E:2021:TYR:HA	5:E:2039:VAL:HA	1.73	0.71
6:F:239:THR:O	6:F:290:ARG:NH1	2.23	0.71
3:C:857:ASN:O	3:C:860:GLN:NE2	2.21	0.71
5:E:497:GLU:HG2	5:E:671:LYS:HG2	1.70	0.71
8:H:51:ASP:O	19:L:343:LEU:HD23	1.89	0.71
8:H:107:LYS:HE3	8:H:138:ASN:HA	1.73	0.70
31:U:529:LEU:HD23	31:U:534:VAL:HG22	1.72	0.70
3:C:1780:VAL:HB	3:C:1863:VAL:HG12	1.73	0.70
5:E:2069:GLY:HA3	5:E:2076:LEU:HA	1.73	0.70
29:Z:228:GLN:HB3	29:Z:231:TYR:HE1	1.55	0.70
5:E:1745:ILE:HG21	5:E:1751:ALA:HB2	1.73	0.70
5:E:1944:GLU:HA	5:E:1947:GLN:HG2	1.73	0.70
9:I:432:ILE:HG12	9:I:624:PRO:HB2	1.70	0.70
5:E:1670:ASN:HB3	5:E:1673:ILE:HG22	1.73	0.70
5:E:2068:ILE:O	5:E:2078:SER:N	2.22	0.70
7:G:425:ARG:HB2	30:S:560:CYS:HB3	1.72	0.70
9:I:164:LEU:HB3	9:I:168:GLU:OE2	1.91	0.70
3:C:86:ARG:HG3	7:G:101:ALA:HB3	1.73	0.70
9:I:189:GLU:OE1	9:I:192:ARG:NE	2.24	0.70
8:H:51:ASP:O	19:L:343:LEU:CB	2.39	0.70

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:K:61:G:H2'	18:K:62:G:C8	2.27	0.70
3:C:2141:GLU:OE1	3:C:2143:ARG:NH2	2.25	0.70
5:E:873:HIS:HA	5:E:876:LEU:HD12	1.73	0.70
3:C:1889:LEU:HB3	3:C:2014:MET:CE	2.21	0.70
3:C:2133:PRO:HD2	3:C:2139:VAL:HG23	1.72	0.70
8:H:52:LEU:HD13	8:H:116:ILE:HG21	1.74	0.70
3:C:1661:TRP:CE2	3:C:1700:GLY:HA3	2.27	0.70
5:E:1434:ILE:HG22	5:E:1437:ARG:HH22	1.57	0.70
6:F:55:LEU:HD22	6:F:353:MET:CE	2.22	0.70
4:D:785:ARG:HD3	4:D:828:MET:HE1	1.73	0.70
5:E:777:LEU:HD12	5:E:782:PHE:HB2	1.74	0.70
5:E:1943:MET:HB3	5:E:2109:MET:CE	2.22	0.70
3:C:1562:MET:HE3	3:C:1570:LYS:HG3	1.74	0.69
5:E:791:ARG:HD2	5:E:794:ARG:HD2	1.74	0.69
9:I:390:ILE:HD11	9:I:423:PRO:HG3	1.73	0.69
6:F:64:GLY:H	6:F:350:ARG:HH22	1.38	0.69
7:G:310:PRO:HA	7:G:313:ILE:HD12	1.74	0.69
9:I:477:THR:HG22	9:I:480:LEU:H	1.57	0.69
9:I:479:GLU:CA	9:I:700:GLN:OE1	2.40	0.69
32:Q:884:THR:HG23	32:Q:959:LEU:HD12	1.74	0.69
3:C:707:ARG:HA	8:H:4:LEU:HD21	1.73	0.69
3:C:1895:ALA:HB1	3:C:1943:LEU:HD22	1.74	0.69
5:E:1356:LYS:HB3	5:E:1490:LEU:HD23	1.74	0.69
3:C:1504:GLU:HG3	3:C:1507:SER:HB3	1.73	0.69
5:E:719:ASN:HB3	5:E:824:HIS:HB3	1.74	0.69
9:I:551:ALA:HA	9:I:554:MET:HG2	1.74	0.69
3:C:1660:TYR:OH	3:C:1701:VAL:HB	1.93	0.69
3:C:2193:VAL:HG11	3:C:2251:TYR:HE1	1.56	0.69
6:F:61:LEU:HD11	6:F:350:ARG:HB3	1.74	0.69
6:F:313:ASP:HB2	6:F:320:LEU:HG	1.74	0.69
4:D:715:GLY:HA2	4:D:729:ALA:HB1	1.74	0.69
5:E:1434:ILE:HA	5:E:1437:ARG:NH1	2.07	0.69
32:Q:749:HIS:HE1	32:Q:829:ILE:HG23	1.57	0.69
3:C:1330:MET:HE1	3:C:1369:TYR:HB3	1.74	0.69
3:C:1471:ARG:HB2	19:L:388:TYR:CE2	2.28	0.69
3:C:1522:GLN:O	3:C:1526:LEU:HD13	1.93	0.69
6:F:63:SER:HA	6:F:350:ARG:NH2	2.08	0.69
7:G:149:LEU:O	7:G:152:VAL:HG12	1.93	0.69
8:H:115:LEU:O	8:H:119:ILE:HG12	1.93	0.69
31:U:365:LEU:HG	31:U:366:PRO:HD2	1.75	0.69
3:C:1186:LEU:HD23	3:C:1195:ARG:HB2	1.75	0.69

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:1434:LYS:O	3:C:1439:ARG:NH2	2.24	0.69
4:D:711:ARG:HH21	4:D:730:ARG:HA	1.58	0.69
5:E:837:GLU:OE1	5:E:837:GLU:N	2.24	0.69
9:I:189:GLU:O	9:I:192:ARG:HG3	1.92	0.69
18:K:67:A:H4'	23:R:107:TRP:CD2	2.27	0.69
27:X:41:MET:SD	27:X:119:ASN:HA	2.32	0.69
5:E:840:ARG:HH22	5:E:842:THR:HG23	1.58	0.69
8:H:111:ASP:HB3	8:H:134:ILE:HD11	1.74	0.69
3:C:887:THR:HG21	7:G:274:LEU:HD11	1.75	0.68
3:C:1135:PRO:HD2	3:C:1138:ALA:HB3	1.74	0.68
3:C:1644:LEU:N	3:C:1647:ASP:OD2	2.26	0.68
5:E:542:ALA:HB3	5:E:548:VAL:HG22	1.75	0.68
5:E:853:LEU:HD12	5:E:883:LEU:HD21	1.75	0.68
5:E:1108:THR:HG21	5:E:1233:ILE:HD11	1.73	0.68
32:Q:823:VAL:HG22	32:Q:827:LYS:HA	1.74	0.68
3:C:1179:SER:O	3:C:1201:ARG:NH1	2.26	0.68
7:G:294:ALA:O	7:G:297:LEU:HG	1.93	0.68
9:I:175:LYS:O	9:I:178:GLN:HG3	1.93	0.68
3:C:2009:ASP:HB2	3:C:2014:MET:HG3	1.74	0.68
5:E:82:ASN:O	5:E:86:GLY:N	2.26	0.68
9:I:248:HIS:O	9:I:252:GLU:HG3	1.93	0.68
3:C:856:LEU:HB3	3:C:860:GLN:HE21	1.56	0.68
3:C:684:GLU:OE1	3:C:684:GLU:N	2.26	0.68
7:G:581:ALA:HB3	7:G:613:MET:HE1	1.74	0.68
5:E:1456:VAL:HG12	5:E:1491:SER:HB3	1.75	0.68
3:C:42:ALA:O	3:C:46:ALA:HB2	1.93	0.68
3:C:697:MET:HB2	7:G:157:TRP:CH2	2.28	0.68
8:H:85:PHE:CE2	8:H:123:ALA:HB1	2.28	0.68
8:H:91:LYS:CB	8:H:129:ILE:HG13	2.22	0.68
3:C:439:GLN:HB3	3:C:443:VAL:HG21	1.76	0.68
6:F:124:LEU:HB3	6:F:136:TRP:HB2	1.75	0.68
7:G:362:VAL:HG11	7:G:379:ALA:HB2	1.76	0.68
3:C:707:ARG:HD3	8:H:4:LEU:HD23	1.74	0.68
9:I:479:GLU:N	9:I:700:GLN:OE1	2.27	0.68
3:C:559:ASP:HA	3:C:562:VAL:HG22	1.76	0.68
5:E:983:GLU:OE2	5:E:986:ARG:NH2	2.27	0.68
2:B:70:A:C5'	2:B:72:U:H3	2.01	0.67
3:C:1604:LEU:HB3	3:C:1719:PHE:CE2	2.29	0.67
7:G:578:LEU:HD22	7:G:609:VAL:CG1	2.23	0.67
19:L:171:ALA:O	19:L:174:THR:HG23	1.94	0.67
27:X:64:LEU:H	27:X:108:ASP:HB3	1.59	0.67

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:309:ARG:NH2	9:I:285:ASP:OD2	2.26	0.67
5:E:828:ILE:HB	5:E:869:LEU:HD12	1.75	0.67
5:E:1368:LEU:HD13	5:E:1401:LEU:HD21	1.75	0.67
5:E:1979:VAL:HG13	5:E:1984:ASP:HB2	1.74	0.67
7:G:246:ALA:HB1	19:L:166:VAL:HG21	1.76	0.67
7:G:470:ALA:O	7:G:474:GLU:HG2	1.94	0.67
9:I:745:ILE:O	9:I:749:ILE:HG13	1.95	0.67
2:B:42:U:H2'	2:B:43:U:H4'	1.75	0.67
3:C:304:ILE:HD12	4:D:921:LEU:HA	1.77	0.67
5:E:1260:GLU:OE2	5:E:1261:PRO:HA	1.94	0.67
6:F:90:ILE:HG23	6:F:115:LEU:HD11	1.76	0.67
7:G:347:LEU:HD21	7:G:375:ILE:HD13	1.74	0.67
3:C:1762:TYR:HB3	3:C:1888:GLU:HG3	1.77	0.67
3:C:2093:SER:HB2	3:C:2226:THR:HG22	1.77	0.67
4:D:748:ASP:OD2	4:D:790:LYS:HE2	1.95	0.67
5:E:453:LYS:HG2	5:E:454:PRO:HD2	1.77	0.67
3:C:1422:LEU:HA	3:C:1427:ARG:HD3	1.77	0.67
27:X:63:VAL:HB	27:X:108:ASP:HA	1.76	0.67
3:C:2289:ASP:H	3:C:2292:MET:HE3	1.60	0.67
6:F:55:LEU:CD2	6:F:353:MET:CE	2.73	0.67
3:C:1562:MET:HE1	3:C:1570:LYS:HA	1.77	0.67
3:C:1889:LEU:HB3	3:C:2014:MET:HE1	1.77	0.67
5:E:1161:ILE:O	5:E:1165:ILE:HG23	1.95	0.67
17:J:64:A:H5"	30:S:745:ARG:NH2	2.10	0.67
26:W:84:ARG:HD3	27:X:49:ASP:OD1	1.95	0.67
5:E:703:ILE:O	5:E:707:ILE:HG12	1.95	0.67
24:P:66:A:H2'	26:W:138:ARG:NH1	2.08	0.67
3:C:1618:LYS:O	3:C:1618:LYS:HD2	1.95	0.67
5:E:1865:ASP:HA	5:E:1884:PHE:CE2	2.30	0.67
6:F:145:LYS:HA	6:F:145:LYS:HE3	1.76	0.67
7:G:23:ARG:HD3	8:H:18:ILE:HD13	1.77	0.67
7:G:253:MET:SD	19:L:124:GLU:HB3	2.35	0.67
7:G:301:VAL:HA	7:G:304:THR:HG22	1.76	0.67
2:B:76:A:N3	2:B:77:G:H1'	2.10	0.67
4:D:698:GLU:OE1	4:D:698:GLU:N	2.28	0.67
5:E:708:VAL:HG11	5:E:829:LYS:HD2	1.75	0.67
6:F:157:CYS:HA	6:F:169:THR:HA	1.76	0.67
9:I:738:ASN:N	9:I:765:ILE:O	2.20	0.67
23:R:9:LEU:HD13	23:R:26:HIS:HE1	1.59	0.67
24:P:21:G:N2	24:P:22:U:N1	2.43	0.67
3:C:1637:TRP:N	3:C:1656:THR:OG1	2.27	0.66

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:118:GLU:N	7:G:118:GLU:OE2	2.28	0.66
8:H:52:LEU:HD23	19:L:343:LEU:HD23	1.77	0.66
5:E:153:ARG:HD2	5:E:169:TYR:HE1	1.60	0.66
7:G:407:TRP:O	7:G:411:VAL:HG23	1.95	0.66
19:L:63:ILE:CB	19:L:99:LEU:HD11	2.22	0.66
3:C:1810:PHE:HE1	3:C:1815:GLY:HA2	1.60	0.66
5:E:702:GLN:O	5:E:706:GLU:HG2	1.95	0.66
7:G:482:MET:HA	7:G:485:LYS:HE3	1.76	0.66
4:D:230:ASP:OD1	4:D:259:LYS:HD2	1.96	0.66
5:E:1434:ILE:HG13	5:E:1435:LEU:HD12	1.78	0.66
5:E:1802:ILE:HG22	5:E:1812:PRO:HA	1.76	0.66
7:G:365:ALA:O	7:G:369:LEU:N	2.24	0.66
31:U:276:ARG:HD2	31:U:302:ALA:HB2	1.77	0.66
32:Q:787:LEU:HD12	32:Q:882:LEU:HB3	1.78	0.66
3:C:1789:THR:HG22	5:E:199:TYR:HA	1.78	0.66
5:E:678:ASN:H	5:E:885:GLN:NE2	1.93	0.66
5:E:964:LEU:HB3	5:E:970:VAL:HG22	1.78	0.66
7:G:296:LEU:O	7:G:299:LYS:HG3	1.96	0.66
9:I:167:ALA:O	9:I:170:GLU:HG3	1.96	0.66
32:Q:803:LEU:HD13	32:Q:872:MET:CE	2.25	0.66
3:C:1330:MET:CE	3:C:1369:TYR:HB3	2.25	0.66
3:C:1804:ASN:HD22	3:C:1907:LEU:HA	1.61	0.66
17:J:0:M7M:HBX	23:R:65:TRP:HB2	1.77	0.66
3:C:371:LEU:HD22	4:D:347:ILE:HG13	1.78	0.66
7:G:487:ILE:HD13	7:G:524:ALA:HB3	1.76	0.66
19:L:60:PHE:O	19:L:64:MET:HB2	1.96	0.66
4:D:459:SER:O	4:D:463:GLU:HG3	1.95	0.66
5:E:1626:PRO:O	5:E:1630:ARG:HG3	1.95	0.66
6:F:113:MET:HG2	6:F:155:ASN:HA	1.78	0.66
19:L:69:GLU:HG3	19:L:73:LYS:HE3	1.76	0.66
23:R:9:LEU:HD13	23:R:26:HIS:CE1	2.31	0.66
28:Y:79:ARG:HH22	28:Y:83:MET:HB2	1.60	0.66
3:C:1776:ILE:HG13	3:C:1811:ASN:HD21	1.59	0.66
4:D:295:ASP:OD1	4:D:296:GLU:N	2.29	0.66
5:E:926:TYR:HA	5:E:929:MET:HE3	1.76	0.66
5:E:1887:PRO:O	5:E:1891:THR:HG23	1.96	0.66
7:G:391:ARG:O	7:G:395:LYS:HG3	1.95	0.66
8:H:66:THR:HG22	8:H:69:TYR:HB2	1.78	0.66
5:E:1018:PHE:CE2	5:E:1063:LEU:HD22	2.31	0.65
5:E:1636:PHE:HD2	5:E:1656:VAL:HG21	1.61	0.65
5:E:1841:LYS:O	5:E:1845:LEU:HG	1.95	0.65

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:353:GLN:HB3	7:G:357:THR:HG23	1.78	0.65
32:Q:803:LEU:O	32:Q:807:LYS:HD3	1.94	0.65
5:E:1858:ILE:HD12	5:E:1859:PRO:HD3	1.77	0.65
9:I:612:ALA:HA	9:I:615:ARG:HE	1.59	0.65
17:J:64:A:H5"	30:S:745:ARG:CZ	2.25	0.65
19:L:164:ILE:HA	19:L:167:VAL:HG22	1.79	0.65
3:C:1552:GLN:HB2	3:C:1561:PHE:CE2	2.31	0.65
3:C:1823:HIS:H	3:C:1912:PRO:HB3	1.60	0.65
18:K:67:A:H4'	23:R:107:TRP:CE2	2.32	0.65
3:C:1585:ILE:O	3:C:1589:ILE:HG12	1.96	0.65
31:U:377:ASP:HA	31:U:380:GLN:HG2	1.78	0.65
2:B:74:U:H2'	2:B:75:G:O4'	1.96	0.65
3:C:422:LEU:HD12	3:C:422:LEU:H	1.60	0.65
3:C:606:LYS:NZ	34:C:3000:IHP:O33	2.23	0.65
4:D:785:ARG:HD3	4:D:828:MET:CE	2.27	0.65
5:E:881:SER:HA	5:E:886:GLN:HG3	1.78	0.65
32:Q:718:ILE:HG12	32:Q:764:CYS:SG	2.36	0.65
3:C:301:LYS:HB3	4:D:940:ARG:HG3	1.78	0.65
3:C:707:ARG:CZ	8:H:4:LEU:HB3	2.27	0.65
3:C:1765:SER:HB3	3:C:2014:MET:HG3	1.77	0.65
4:D:826:ARG:NH1	4:D:910:ASP:OD1	2.29	0.65
5:E:1538:ARG:O	5:E:1542:MET:HG2	1.95	0.65
4:D:724:TRP:HZ3	4:D:732:ILE:HD11	1.61	0.65
5:E:1364:ILE:HD12	5:E:1376:CYS:SG	2.36	0.65
32:Q:861:ILE:HG23	32:Q:894:ASN:HB3	1.78	0.65
2:B:8:G:N2	2:B:72:U:H5	1.95	0.65
3:C:2330:ARG:HD3	5:E:1086:GLN:OE1	1.97	0.65
5:E:777:LEU:HD12	5:E:782:PHE:CB	2.27	0.65
5:E:827:ILE:HD12	5:E:868:ILE:HB	1.79	0.65
5:E:993:ILE:HD11	5:E:998:VAL:HG23	1.79	0.65
8:H:51:ASP:O	19:L:343:LEU:HB3	1.97	0.65
9:I:796:ALA:O	9:I:802:GLN:NE2	2.22	0.65
30:S:749:LYS:O	30:S:753:GLU:HG2	1.97	0.65
5:E:489:TYR:HA	5:E:515:MET:SD	2.36	0.65
5:E:1107:LEU:O	5:E:1111:THR:HG23	1.97	0.65
2:B:37:G:H5"	2:B:38:C:H5	1.61	0.65
3:C:86:ARG:HH21	3:C:658:ARG:HB2	1.61	0.65
5:E:303:GLU:OE1	5:E:322:ARG:NH1	2.30	0.65
5:E:569:LEU:HD13	5:E:596:ILE:HD12	1.76	0.65
5:E:681:ARG:NH2	5:E:856:ALA:O	2.29	0.65
5:E:1375:ARG:NH2	5:E:1420:GLY:O	2.26	0.65

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:Z:330:LYS:O	29:Z:334:ALA:HB2	1.96	0.65
3:C:1787:ARG:HH11	5:E:200:GLY:HA2	1.61	0.64
5:E:514:LEU:HD13	5:E:558:ARG:HH21	1.60	0.64
6:F:69:VAL:HG12	6:F:345:ALA:HB1	1.79	0.64
7:G:124:GLU:O	7:G:128:ILE:HG12	1.97	0.64
7:G:565:TYR:O	7:G:569:VAL:HG13	1.96	0.64
2:B:38:C:H2'	2:B:39:C:H5'	1.79	0.64
3:C:1845:VAL:HG11	3:C:1872:LEU:HD21	1.79	0.64
3:C:2329:ASP:OD1	5:E:728:ARG:NH2	2.26	0.64
5:E:1752:VAL:O	5:E:1756:THR:HG23	1.97	0.64
5:E:2013:ARG:NH1	5:E:2050:PRO:O	2.30	0.64
3:C:1604:LEU:HD22	3:C:1719:PHE:HE2	1.61	0.64
3:C:1807:ILE:HD12	3:C:1820:LYS:HD3	1.78	0.64
3:C:2128:LEU:HD11	3:C:2178:ILE:HG22	1.78	0.64
5:E:1072:LEU:HD22	5:E:1081:MET:CE	2.28	0.64
5:E:1360:ALA:O	5:E:1364:ILE:HG12	1.97	0.64
6:F:178:LEU:HD13	6:F:188:GLN:HE21	1.62	0.64
3:C:758:ARG:HD3	3:C:779:LEU:HD11	1.78	0.64
3:C:1567:PRO:O	3:C:1571:ILE:HG12	1.97	0.64
3:C:1609:VAL:HG23	3:C:1631:LEU:HD22	1.80	0.64
3:C:1779:PHE:O	3:C:1809:ILE:HA	1.98	0.64
5:E:423:MET:SD	5:E:877:GLN:NE2	2.70	0.64
5:E:721:VAL:HB	5:E:808:VAL:HG12	1.79	0.64
5:E:1606:ASP:HB3	5:E:1609:LEU:HB3	1.79	0.64
6:F:113:MET:HB2	6:F:129:THR:HG22	1.79	0.64
32:Q:749:HIS:CE1	32:Q:829:ILE:HG23	2.32	0.64
32:Q:869:GLY:O	32:Q:991:ARG:NH1	2.30	0.64
3:C:1314:VAL:O	3:C:1318:THR:HG23	1.97	0.64
3:C:1729:ALA:O	3:C:1733:ILE:HG12	1.98	0.64
6:F:124:LEU:N	6:F:136:TRP:O	2.22	0.64
7:G:122:GLN:O	7:G:125:LYS:HG3	1.98	0.64
9:I:366:THR:H	9:I:369:ASP:HB2	1.62	0.64
2:B:40:U:H2'	2:B:41:U:C6	2.31	0.64
7:G:253:MET:CE	19:L:124:GLU:HB3	2.27	0.64
7:G:556:LEU:HD13	7:G:587:HIS:HB3	1.80	0.64
7:G:577:TRP:CZ2	7:G:600:ALA:HA	2.31	0.64
3:C:255:PHE:HB3	3:C:258:PHE:O	1.98	0.64
3:C:515:TYR:CG	3:C:530:LEU:HD21	2.33	0.64
5:E:153:ARG:HA	5:E:156:GLU:OE1	1.98	0.64
5:E:406:ARG:HD2	5:E:954:LEU:HD21	1.79	0.64
5:E:1351:PRO:HG3	5:E:1516:PRO:HA	1.80	0.64

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:1948:MET:O	5:E:1952:ALA:N	2.31	0.64
5:E:1917:SER:HA	5:E:2058:GLN:HE22	1.61	0.64
5:E:1963:LEU:HD11	5:E:1982:VAL:HG23	1.80	0.64
6:F:259:VAL:O	6:F:277:PHE:N	2.27	0.64
7:G:123:ARG:HH22	7:G:124:GLU:HG3	1.63	0.64
7:G:425:ARG:NH2	30:S:563:LEU:O	2.29	0.64
31:U:485:SER:O	31:U:489:GLN:HG3	1.97	0.64
32:Q:697:VAL:HG13	32:Q:698:PHE:HD1	1.62	0.64
3:C:796:LYS:HD3	31:U:410:ILE:HD11	1.80	0.64
5:E:1597:LEU:HD23	5:E:1614:LEU:HA	1.80	0.64
5:E:1828:THR:HG21	5:E:1854:GLU:OE1	1.98	0.64
7:G:134:GLU:HG3	7:G:135:ARG:HD2	1.78	0.64
31:U:108:LEU:HD11	31:U:186:LEU:HD11	1.80	0.64
5:E:1672:LYS:HG2	5:E:1860:ILE:CG2	2.28	0.64
5:E:2041:LEU:O	5:E:2087:LYS:HA	1.98	0.64
6:F:200:THR:HG21	6:F:250:LEU:HD11	1.79	0.64
7:G:353:GLN:HB3	7:G:357:THR:CG2	2.28	0.64
9:I:380:THR:HG21	9:I:628:TYR:HB2	1.80	0.64
18:K:62:G:H2'	18:K:63:C:C6	2.34	0.64
24:P:21:G:N2	24:P:22:U:C2	2.66	0.64
3:C:1782:ASP:HA	3:C:1785:VAL:HG23	1.80	0.63
6:F:194:TYR:HD2	6:F:214:ASP:HB3	1.63	0.63
7:G:354:PRO:HD2	7:G:357:THR:HG21	1.79	0.63
3:C:1839:TRP:HB3	3:C:1875:HIS:HE1	1.64	0.63
5:E:2071:ALA:HB2	5:E:2105:THR:HB	1.80	0.63
6:F:55:LEU:CD2	6:F:353:MET:HE3	2.28	0.63
7:G:565:TYR:HA	7:G:568:GLN:HG2	1.80	0.63
8:H:45:LEU:CD1	8:H:58:ILE:HD12	2.28	0.63
27:X:113:ARG:HA	27:X:118:ARG:HH22	1.63	0.63
32:Q:862:ILE:HG13	32:Q:864:LYS:H	1.64	0.63
3:C:1817:LEU:N	3:C:1917:PHE:O	2.31	0.63
6:F:335:PHE:CD1	6:F:342:ILE:HG12	2.33	0.63
25:V:44:ALA:HA	25:V:47:ILE:HD12	1.80	0.63
3:C:1505:LYS:CG	19:L:376:ASN:O	2.42	0.63
3:C:1629:ILE:HB	3:C:1662:ILE:HB	1.80	0.63
3:C:1090:ARG:HG3	3:C:1095:ILE:HG22	1.81	0.63
3:C:1872:LEU:HD22	3:C:1876:LEU:HD11	1.79	0.63
5:E:439:ARG:HB3	5:E:440:LYS:HZ2	1.64	0.63
5:E:532:ASN:ND2	5:E:535:ASP:OD2	2.32	0.63
5:E:610:ARG:HA	5:E:646:VAL:HG22	1.81	0.63
5:E:993:ILE:HD11	5:E:998:VAL:CG2	2.28	0.63

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:1804:ILE:HD12	5:E:1809:ASP:O	1.98	0.63
30:S:559:PHE:CZ	30:S:563:LEU:HD11	2.33	0.63
3:C:758:ARG:HD3	3:C:779:LEU:CD1	2.29	0.63
3:C:1606:ILE:HD13	3:C:1631:LEU:HD12	1.80	0.63
3:C:1771:LEU:HD23	3:C:1777:ILE:HD13	1.81	0.63
5:E:994:THR:HG23	5:E:1023:GLU:OE2	1.98	0.63
5:E:1319:SER:HA	5:E:1322:GLN:OE1	1.99	0.63
5:E:2020:SER:O	5:E:2040:GLN:N	2.23	0.63
7:G:578:LEU:CD2	7:G:609:VAL:CG1	2.77	0.63
9:I:532:VAL:HG13	9:I:537:TYR:HB2	1.80	0.63
24:P:21:G:H21	24:P:22:U:H1'	1.53	0.63
32:Q:816:ILE:HG21	32:Q:875:VAL:HG22	1.79	0.63
32:Q:908:MET:CE	32:Q:912:MET:HG2	2.28	0.63
32:Q:970:ARG:HG2	32:Q:974:HIS:CE1	2.34	0.63
3:C:439:GLN:HB3	3:C:443:VAL:CG2	2.29	0.63
3:C:1862:ILE:HG22	3:C:1887:SER:HB3	1.81	0.63
3:C:1927:ILE:HB	3:C:1931:THR:CG2	2.28	0.63
5:E:444:GLU:OE2	5:E:446:HIS:NE2	2.32	0.63
5:E:743:LEU:HD12	5:E:748:LEU:HD11	1.81	0.63
29:Z:326:ARG:HD2	29:Z:329:ARG:HE	1.64	0.63
3:C:941:LYS:HB3	3:C:942:PRO:HA	1.81	0.63
3:C:1376:GLU:O	3:C:1380:ILE:HG12	1.99	0.63
23:R:26:HIS:O	23:R:29:GLN:HG2	1.98	0.63
32:Q:856:ARG:NH1	32:Q:894:ASN:OD1	2.30	0.63
5:E:618:HIS:C	5:E:620:LEU:H	2.01	0.63
2:B:42:U:C3'	2:B:43:U:H4'	2.29	0.62
3:C:1633:ALA:HB2	3:C:1637:TRP:CE3	2.33	0.62
5:E:1535:THR:HG21	5:E:1676:TYR:CE1	2.34	0.62
5:E:2069:GLY:HA2	5:E:2077:ILE:H	1.64	0.62
7:G:246:ALA:HB1	19:L:166:VAL:CG2	2.29	0.62
29:Z:333:ALA:O	29:Z:337:GLY:N	2.32	0.62
32:Q:750:CYS:SG	32:Q:805:LEU:HD23	2.39	0.62
5:E:569:LEU:HG	5:E:586:ILE:HG21	1.80	0.62
5:E:1737:ASN:O	5:E:1740:ILE:HG22	1.99	0.62
8:H:105:SER:O	8:H:140:PRO:HG3	1.98	0.62
6:F:198:ALA:HB3	6:F:241:LEU:HG	1.81	0.62
7:G:563:TYR:O	7:G:567:LEU:HG	2.00	0.62
9:I:181:VAL:O	9:I:185:GLN:HG2	1.98	0.62
9:I:311:GLN:O	9:I:315:GLU:HG3	1.98	0.62
28:Y:55:VAL:CG2	28:Y:65:HIS:HB3	2.30	0.62
29:Z:305:VAL:HA	29:Z:308:LYS:HE2	1.81	0.62

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:548:VAL:HG13	5:E:587:VAL:HG12	1.79	0.62
5:E:1735:HIS:O	5:E:1739:GLU:HG2	1.99	0.62
7:G:578:LEU:HD21	7:G:609:VAL:HG11	1.80	0.62
23:R:115:MET:N	23:R:115:MET:SD	2.72	0.62
2:B:76:A:C4	2:B:77:G:H1'	2.35	0.62
3:C:422:LEU:O	3:C:635:ARG:NH2	2.26	0.62
3:C:1821:ILE:HG21	3:C:1909:ALA:HB3	1.81	0.62
4:D:762:VAL:O	4:D:766:ILE:HG13	1.99	0.62
5:E:430:LEU:HD12	30:S:553:PHE:CZ	2.35	0.62
5:E:849:ILE:HD12	5:E:852:MET:SD	2.40	0.62
7:G:377:ILE:O	7:G:381:GLU:HG3	1.98	0.62
19:L:236:GLY:HA3	19:L:240:ASN:HD22	1.65	0.62
25:V:1:MET:HG2	28:Y:234:LYS:HE2	1.81	0.62
30:S:741:MET:O	30:S:745:ARG:HG2	1.98	0.62
3:C:34:ALA:HA	6:F:213:ILE:CD1	2.28	0.62
3:C:863:GLU:CB	3:C:913:PRO:HB3	2.30	0.62
5:E:1597:LEU:HD11	5:E:1613:LEU:HD13	1.82	0.62
5:E:1859:PRO:O	5:E:1890:LYS:NZ	2.30	0.62
8:H:35:ASP:HB3	8:H:38:CYS:SG	2.40	0.62
3:C:710:LEU:HD22	8:H:4:LEU:HD13	1.82	0.62
5:E:1466:VAL:O	5:E:1470:ILE:HG23	2.00	0.62
5:E:2019:LEU:HB2	5:E:2120:TYR:CE2	2.35	0.62
5:E:2026:LYS:HE2	5:E:2124:VAL:HG22	1.80	0.62
5:E:437:ARG:HD2	5:E:439:ARG:HD2	1.80	0.62
5:E:1072:LEU:HD21	5:E:1077:LEU:HB3	1.82	0.62
3:C:288:LEU:HD23	3:C:288:LEU:H	1.65	0.62
5:E:1383:GLU:O	5:E:1387:GLU:HG2	1.99	0.62
5:E:1430:GLU:O	5:E:1434:ILE:HG23	1.99	0.62
5:E:1941:ALA:O	5:E:1944:GLU:HG2	2.00	0.62
18:K:61:G:H2'	18:K:62:G:H8	1.63	0.62
2:B:7:U:H2'	2:B:7:U:O2	1.99	0.62
3:C:1596:VAL:HG12	3:C:1725:LEU:HD11	1.82	0.62
3:C:2006:GLU:HG2	3:C:2016:ILE:HD13	1.81	0.62
3:C:2319:LEU:HD13	5:E:1137:GLU:HG2	1.82	0.62
5:E:2019:LEU:HD21	5:E:2108:PHE:CG	2.35	0.62
9:I:379:ILE:HG22	9:I:381:THR:HG23	1.82	0.62
31:U:433:TYR:HD2	31:U:434:LYS:HZ2	1.47	0.62
32:Q:798:GLN:OE1	32:Q:830:LEU:HG	2.00	0.62
32:Q:823:VAL:CG2	32:Q:827:LYS:HA	2.30	0.62
3:C:1070:ASP:OD1	3:C:1071:PHE:N	2.32	0.61
3:C:1895:ALA:O	3:C:1899:VAL:HG23	2.00	0.61

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:496:ASP:HB2	5:E:519:ARG:NH2	2.13	0.61
3:C:444:ARG:O	3:C:448:GLN:HG3	2.00	0.61
3:C:549:GLU:HB3	3:C:591:MET:HG2	1.81	0.61
3:C:1218:ASN:HB3	3:C:1221:THR:HG22	1.82	0.61
3:C:1784:ASN:HB3	3:C:1897:LEU:HD11	1.82	0.61
5:E:338:GLN:OE1	31:U:184:SER:N	2.24	0.61
5:E:738:ILE:HD13	5:E:741:MET:HE3	1.82	0.61
5:E:1194:THR:HG22	5:E:1197:THR:HB	1.82	0.61
5:E:1923:ILE:HD12	5:E:1946:ALA:HA	1.81	0.61
6:F:136:TRP:CZ3	6:F:143:ARG:HB2	2.35	0.61
9:I:744:ASN:OD1	9:I:747:ASP:N	2.28	0.61
31:U:362:HIS:ND1	31:U:364:ASP:OD1	2.29	0.61
1:A:3:A:H1'	24:P:62:C:H5'	1.82	0.61
2:B:68:C:C2	2:B:69:A:C8	2.88	0.61
3:C:713:LEU:CD2	3:C:739:ILE:HG12	2.31	0.61
9:I:483:GLN:HA	9:I:486:GLU:HG2	1.81	0.61
32:Q:873:TRP:HB2	32:Q:991:ARG:NH1	2.14	0.61
3:C:513:LEU:HD22	3:C:515:TYR:OH	1.99	0.61
3:C:693:ILE:HD11	3:C:735:ILE:HG23	1.83	0.61
5:E:617:ILE:HG22	5:E:652:SER:HB2	1.81	0.61
5:E:622:ASP:OD1	5:E:623:ASP:N	2.33	0.61
5:E:1611:GLU:OE1	5:E:1614:LEU:HD21	2.00	0.61
7:G:300:SER:O	7:G:303:GLU:HG3	2.01	0.61
7:G:414:GLU:HG3	7:G:422:MET:SD	2.39	0.61
9:I:186:ARG:NH1	9:I:187:MET:HG2	2.15	0.61
9:I:504:GLY:H	9:I:528:ARG:HG3	1.65	0.61
30:S:748:LYS:HA	30:S:751:ASP:OD2	1.99	0.61
31:U:432:THR:CG2	31:U:435:GLU:HB3	2.28	0.61
32:Q:701:VAL:HG22	32:Q:717:LYS:HG2	1.82	0.61
32:Q:886:LYS:HD3	32:Q:887:ILE:H	1.65	0.61
3:C:530:LEU:CB	3:C:535:ARG:HH22	2.14	0.61
3:C:950:LEU:CD2	3:C:954:LYS:HD2	2.31	0.61
4:D:491:HIS:HB3	4:D:551:LEU:HD22	1.83	0.61
5:E:607:GLN:HG2	5:E:608:LEU:HD12	1.81	0.61
5:E:835:SER:HB2	5:E:837:GLU:OE2	1.99	0.61
5:E:963:MET:O	5:E:966:LYS:HG2	1.99	0.61
5:E:1332:GLN:HA	5:E:1335:VAL:HG12	1.82	0.61
5:E:1912:THR:HA	5:E:1915:ILE:HD11	1.82	0.61
6:F:118:ASN:ND2	6:F:165:GLN:OE1	2.34	0.61
6:F:261:VAL:HG11	6:F:275:LYS:HE2	1.83	0.61
9:I:308:ASP:O	9:I:312:GLN:HG3	1.99	0.61

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:Q:698:PHE:HB2	32:Q:725:MET:CE	2.29	0.61
3:C:1787:ARG:HG3	3:C:1803:ILE:HG13	1.81	0.61
5:E:422:PHE:CD2	5:E:890:GLU:HG3	2.35	0.61
9:I:386:ILE:HG23	9:I:424:ILE:HD11	1.81	0.61
19:L:171:ALA:O	19:L:172:SER:C	2.38	0.61
30:S:738:SER:O	30:S:740:LYS:NZ	2.34	0.61
32:Q:969:GLN:O	32:Q:973:VAL:HG23	2.00	0.61
3:C:1322:LEU:CD2	19:L:380:PHE:O	2.49	0.61
3:C:1712:HIS:HB3	3:C:1734:MET:HE2	1.83	0.61
3:C:2097:ILE:HG21	3:C:2260:GLN:HB2	1.82	0.61
5:E:984:LEU:HD13	5:E:998:VAL:CG1	2.31	0.61
6:F:127:ALA:HA	6:F:133:VAL:HG13	1.82	0.61
6:F:162:ARG:HG3	6:F:203:ASP:O	2.01	0.61
6:F:239:THR:HB	6:F:288:LEU:HA	1.83	0.61
2:B:106:U:O2'	2:B:108:G:N7	2.29	0.61
3:C:1537:TRP:HE3	3:C:1751:LEU:HD13	1.65	0.61
3:C:1779:PHE:HE2	3:C:1812:PRO:HG3	1.66	0.61
5:E:1199:LYS:HE2	5:E:1253:THR:HG21	1.82	0.61
5:E:1878:LYS:NZ	5:E:1893:LEU:HD21	2.16	0.61
3:C:135:VAL:CG1	3:C:140:TYR:HB2	2.31	0.61
3:C:1644:LEU:HD11	3:C:1677:GLU:HB2	1.82	0.61
3:C:2003:THR:N	3:C:2006:GLU:OE1	2.32	0.61
5:E:1935:TRP:HB3	5:E:1938:PRO:HD2	1.83	0.61
7:G:298:LEU:O	7:G:301:VAL:HG22	2.01	0.61
9:I:329:THR:O	9:I:333:LYS:HG3	2.01	0.61
2:B:75:G:H2'	2:B:76:A:C8	2.35	0.61
3:C:658:ARG:HD2	7:G:89:PHE:HB3	1.83	0.61
3:C:1658:GLN:HB2	3:C:1659:LYS:HZ3	1.66	0.61
7:G:250:LEU:HG	19:L:166:VAL:HG13	1.83	0.61
7:G:578:LEU:CD1	7:G:613:MET:SD	2.87	0.61
19:L:161:ASN:O	19:L:164:ILE:HG12	2.00	0.61
5:E:1203:THR:HG22	5:E:1251:LEU:HD12	1.83	0.60
5:E:1669:TYR:HB2	5:E:1676:TYR:CZ	2.35	0.60
7:G:474:GLU:HG3	7:G:486:ILE:HD12	1.83	0.60
7:G:491:ILE:HD11	7:G:506:TRP:CH2	2.35	0.60
3:C:713:LEU:HD23	3:C:739:ILE:HG12	1.83	0.60
3:C:816:TRP:O	3:C:820:ARG:HG2	2.01	0.60
3:C:962:LEU:HB2	3:C:965:VAL:HB	1.84	0.60
3:C:2234:GLY:HA3	3:C:2255:HIS:HB3	1.84	0.60
5:E:65:GLU:HA	5:E:68:ARG:NH1	2.16	0.60
5:E:1187:SER:HB3	5:E:1203:THR:OG1	2.01	0.60

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:1743:LYS:HE2	5:E:1743:LYS:HA	1.83	0.60
7:G:394:ARG:O	7:G:398:GLU:HG3	2.01	0.60
8:H:22:ALA:HA	8:H:86:ASN:OD1	2.01	0.60
8:H:75:ILE:HA	8:H:101:LYS:HZ1	1.64	0.60
3:C:810:TYR:O	3:C:814:VAL:HG13	2.00	0.60
3:C:1645:LEU:N	3:C:1714:ALA:O	2.35	0.60
5:E:1030:ARG:N	5:E:1033:GLU:OE2	2.34	0.60
5:E:1228:VAL:HG21	5:E:1264:PRO:HD2	1.81	0.60
5:E:1868:LEU:HG	5:E:1893:LEU:HD13	1.83	0.60
5:E:1974:CYS:HB3	5:E:1979:VAL:O	2.00	0.60
8:H:55:MET:HE3	19:L:345:ALA:HB2	1.81	0.60
3:C:386:PRO:HD2	3:C:389:LYS:HD3	1.82	0.60
3:C:1017:ILE:HD11	3:C:1031:ILE:HD12	1.82	0.60
5:E:800:LEU:HB2	5:E:806:ILE:HD11	1.82	0.60
5:E:1740:ILE:HG21	5:E:1802:ILE:HG21	1.82	0.60
5:E:1878:LYS:HD3	5:E:1879:LEU:N	2.15	0.60
5:E:2110:SER:HB3	5:E:2113:TYR:O	2.02	0.60
6:F:197:LEU:HD11	6:F:213:ILE:HG22	1.84	0.60
7:G:23:ARG:CD	8:H:18:ILE:HD13	2.31	0.60
7:G:438:LEU:HD21	7:G:466:ILE:HA	1.82	0.60
9:I:723:VAL:HG11	24:P:3:A:OP1	2.01	0.60
24:P:69:A:H8	26:W:81:ARG:HD2	1.66	0.60
3:C:1333:VAL:HB	3:C:1365:ILE:HD11	1.84	0.60
3:C:1607:GLU:HB3	3:C:1634:SER:HB3	1.84	0.60
3:C:1776:ILE:CG2	3:C:1858:PRO:HA	2.31	0.60
5:E:1093:ARG:O	5:E:1097:GLU:HG2	2.02	0.60
5:E:1366:ARG:O	5:E:1370:GLN:HG2	2.02	0.60
5:E:1627:MET:HG3	5:E:1630:ARG:HH21	1.66	0.60
7:G:18:VAL:HG13	8:H:11:LYS:CD	2.32	0.60
19:L:61:ALA:O	19:L:65:MET:N	2.30	0.60
2:B:42:U:C2'	2:B:43:U:H4'	2.31	0.60
6:F:69:VAL:HG11	6:F:351:LEU:HD21	1.84	0.60
7:G:295:ARG:NH2	7:G:319:GLU:HA	2.16	0.60
22:O:110:SER:HB3	22:O:113:LYS:HB2	1.83	0.60
32:Q:867:ASP:O	32:Q:870:ILE:HG12	2.01	0.60
3:C:96:PRO:HG2	3:C:649:GLU:HG3	1.83	0.60
3:C:1640:SER:O	3:C:1717:ASN:HB2	2.02	0.60
3:C:2068:SER:HB3	3:C:2072:GLU:CB	2.32	0.60
5:E:2097:PRO:HD2	5:E:2102:HIS:CD2	2.36	0.60
7:G:250:LEU:HD12	19:L:166:VAL:HG22	1.82	0.60
7:G:299:LYS:HA	7:G:302:ARG:HG2	1.83	0.60

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:W:65:ASP:OD1	26:W:65:ASP:N	2.30	0.60
30:S:746:ARG:O	30:S:750:LEU:HG	2.01	0.60
3:C:1579:ALA:O	3:C:1584:LYS:NZ	2.23	0.60
3:C:1963:GLU:OE1	3:C:1966:HIS:ND1	2.33	0.60
5:E:503:ALA:HB1	5:E:504:PRO:HD2	1.82	0.60
5:E:2043:ARG:O	5:E:2087:LYS:NZ	2.26	0.60
5:E:2064:TRP:HB2	5:E:2082:LEU:HB2	1.81	0.60
6:F:124:LEU:O	6:F:136:TRP:N	2.23	0.60
6:F:243:LEU:HD23	6:F:244:SER:O	2.01	0.60
28:Y:85:TYR:CZ	28:Y:151:ARG:HG3	2.37	0.60
30:S:711:GLU:HG3	30:S:713:VAL:HG13	1.84	0.60
32:Q:912:MET:SD	32:Q:987:ASP:HA	2.41	0.60
3:C:881:ILE:HG23	3:C:918:THR:HG23	1.84	0.60
5:E:487:LYS:O	5:E:488:LEU:HD23	2.02	0.60
5:E:2020:SER:HB2	5:E:2040:GLN:HB2	1.82	0.60
8:H:31:GLY:HA2	8:H:78:ILE:CG2	2.32	0.60
9:I:331:GLU:O	9:I:334:GLU:HG3	2.02	0.60
9:I:552:ASP:N	9:I:552:ASP:OD1	2.35	0.60
9:I:668:ILE:HD12	9:I:718:LEU:HD23	1.84	0.60
9:I:768:LEU:HD22	9:I:776:PHE:HE1	1.67	0.60
31:U:338:LYS:HD3	31:U:340:LYS:HD3	1.84	0.60
31:U:442:GLN:HG2	31:U:485:SER:OG	2.01	0.60
32:Q:736:LEU:O	32:Q:740:ASN:ND2	2.35	0.60
5:E:2067:VAL:HG12	5:E:2079:ILE:HG13	1.83	0.60
7:G:299:LYS:O	7:G:303:GLU:HG2	2.02	0.60
3:C:781:ARG:HG2	3:C:1022:MET:HE1	1.84	0.59
3:C:1604:LEU:HD22	3:C:1719:PHE:CE2	2.36	0.59
3:C:1895:ALA:HB3	3:C:1940:LEU:CD1	2.31	0.59
3:C:2312:SER:O	3:C:2316:ASN:HB2	2.02	0.59
5:E:2069:GLY:HA3	5:E:2076:LEU:HD12	1.83	0.59
6:F:71:CYS:SG	6:F:115:LEU:N	2.74	0.59
7:G:526:MET:CB	7:G:562:ILE:HG13	2.33	0.59
32:Q:755:ARG:NH1	32:Q:757:PHE:HB3	2.17	0.59
3:C:92:LEU:HD22	3:C:503:MET:CG	2.32	0.59
3:C:1572:SER:O	3:C:1576:ILE:HG12	2.02	0.59
5:E:688:THR:N	5:E:867:GLY:O	2.29	0.59
5:E:858:ARG:HD2	5:E:861:TYR:CD2	2.33	0.59
7:G:319:GLU:OE1	7:G:327:VAL:HG13	2.02	0.59
7:G:332:ILE:HG22	7:G:349:ALA:HB2	1.84	0.59
7:G:394:ARG:HB2	30:S:559:PHE:CE1	2.37	0.59
20:M:414:ASN:HD22	20:M:456:LYS:HA	1.68	0.59

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:Q:812:LEU:HD23	32:Q:841:VAL:HG22	1.84	0.59
3:C:279:PHE:HE2	3:C:456:LEU:HG	1.67	0.59
5:E:430:LEU:HD11	5:E:447:VAL:CG2	2.26	0.59
5:E:531:ILE:HG23	5:E:533:VAL:HG13	1.83	0.59
5:E:536:PHE:HZ	5:E:564:ILE:HD12	1.67	0.59
5:E:1740:ILE:HD13	5:E:1802:ILE:HG21	1.84	0.59
6:F:166:LEU:CG	6:F:178:LEU:HD21	2.32	0.59
7:G:288:ILE:H	7:G:288:ILE:HD12	1.67	0.59
7:G:316:ALA:HB1	7:G:332:ILE:HD11	1.85	0.59
3:C:981:PHE:HE2	3:C:1090:ARG:HD2	1.67	0.59
3:C:1503:TRP:NE1	19:L:380:PHE:CD1	2.51	0.59
3:C:1941:ARG:HD2	3:C:2011:ILE:HA	1.84	0.59
4:D:843:VAL:HG22	4:D:871:ILE:HD11	1.85	0.59
5:E:406:ARG:HG3	5:E:954:LEU:HG	1.84	0.59
5:E:1593:THR:HG1	5:E:1595:LYS:HZ3	1.49	0.59
5:E:1825:ASN:HB3	5:E:1828:THR:CG2	2.27	0.59
6:F:240:GLY:O	6:F:253:ASN:N	2.35	0.59
6:F:261:VAL:HB	6:F:275:LYS:HB2	1.84	0.59
6:F:317:ARG:O	6:F:318:ARG:HD2	2.02	0.59
3:C:872:ASP:O	7:G:288:ILE:HG21	2.03	0.59
3:C:1384:ARG:HB2	3:C:2220:PRO:O	2.03	0.59
3:C:1720:PRO:HB3	30:S:701:LYS:HA	1.85	0.59
3:C:2149:PRO:O	3:C:2160:PRO:HD3	2.02	0.59
5:E:203:VAL:HA	7:G:304:THR:HG21	1.83	0.59
5:E:1228:VAL:CG2	5:E:1263:PRO:HB3	2.33	0.59
9:I:186:ARG:HH12	9:I:187:MET:HG2	1.66	0.59
9:I:571:PRO:O	9:I:600:ARG:NH2	2.36	0.59
3:C:660:PHE:HA	7:G:87:SER:HB3	1.83	0.59
3:C:690:MET:O	3:C:693:ILE:HG22	2.02	0.59
3:C:788:GLN:HG2	31:U:409:ILE:HD12	1.85	0.59
3:C:1919:LEU:HB3	3:C:1936:LEU:HD11	1.83	0.59
4:D:350:ASN:OD1	4:D:352:LYS:HG2	2.02	0.59
31:U:233:ASN:HD22	31:U:313:ILE:HG23	1.67	0.59
3:C:1742:VAL:HG21	30:S:726:PHE:CG	2.38	0.59
4:D:846:VAL:HG22	4:D:887:LEU:HD11	1.85	0.59
5:E:430:LEU:HD12	30:S:553:PHE:HZ	1.68	0.59
5:E:1912:THR:O	5:E:1916:LEU:HD23	2.02	0.59
6:F:308:PHE:HD2	6:F:322:LYS:HG2	1.68	0.59
7:G:259:SER:O	7:G:262:VAL:HG22	2.03	0.59
3:C:354:PRO:HB2	9:I:324:MET:SD	2.42	0.59
3:C:1919:LEU:CD1	3:C:1936:LEU:HD21	2.32	0.59

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:I:479:GLU:HB3	9:I:700:GLN:CG	2.32	0.59
19:L:137:ARG:HD3	19:L:158:ILE:HG12	1.84	0.59
29:Z:263:GLU:HG3	29:Z:266:ARG:HH21	1.68	0.59
32:Q:909:PRO:O	32:Q:913:ILE:HG13	2.03	0.59
3:C:1988:LEU:CD2	3:C:1999:VAL:HG13	2.33	0.59
5:E:991:TYR:CE2	5:E:1097:GLU:HG3	2.38	0.59
7:G:137:LYS:HD2	7:G:139:GLN:HE22	1.68	0.59
9:I:479:GLU:HA	9:I:700:GLN:OE1	2.03	0.59
20:M:329:VAL:HG22	20:M:340:THR:HG22	1.84	0.59
3:C:1718:TRP:O	30:S:699:LYS:NZ	2.34	0.59
3:C:1724:PRO:HD3	30:S:701:LYS:NZ	2.17	0.59
5:E:409:LEU:CD1	5:E:955:ASP:HB3	2.32	0.59
5:E:708:VAL:HG11	5:E:829:LYS:CD	2.33	0.59
5:E:801:PHE:HD1	5:E:821:LEU:HD11	1.68	0.59
5:E:914:LYS:HD2	5:E:915:ASP:H	1.68	0.59
7:G:97:ASP:HA	7:G:100:GLU:OE1	2.03	0.59
7:G:495:ARG:NH1	7:G:500:GLU:HA	2.17	0.59
9:I:773:SER:HA	9:I:776:PHE:CD2	2.38	0.59
30:S:705:LYS:HD3	30:S:706:PRO:HD2	1.83	0.59
5:E:111:GLU:O	5:E:114:GLU:HG3	2.03	0.58
5:E:940:HIS:O	5:E:944:LYS:HG2	2.03	0.58
5:E:1775:GLY:HA3	5:E:1780:HIS:ND1	2.19	0.58
5:E:1873:GLN:N	5:E:1873:GLN:OE1	2.36	0.58
7:G:329:ARG:HH11	7:G:354:PRO:HD3	1.68	0.58
7:G:420:ARG:NH1	7:G:444:GLU:HA	2.16	0.58
8:H:41:LEU:O	8:H:45:LEU:HD23	2.02	0.58
31:U:137:LEU:HB2	31:U:163:VAL:HG13	1.85	0.58
2:B:70:A:H5”	2:B:72:U:N3	2.02	0.58
3:C:1529:ILE:HD12	3:C:1532:ARG:HD2	1.85	0.58
4:D:534:VAL:HG12	4:D:535:ALA:H	1.66	0.58
8:H:51:ASP:C	19:L:343:LEU:HD22	2.23	0.58
9:I:387:PRO:HD2	9:I:424:ILE:CD1	2.34	0.58
9:I:554:MET:N	9:I:554:MET:SD	2.76	0.58
18:K:66:G:H2’	18:K:67:A:H8	1.68	0.58
28:Y:86:THR:O	28:Y:89:GLU:N	2.36	0.58
32:Q:748:PHE:CG	32:Q:805:LEU:HB2	2.37	0.58
32:Q:906:GLY:CA	32:Q:951:PRO:HG3	2.33	0.58
3:C:519:ASP:OD1	3:C:523:ASN:HB2	2.03	0.58
3:C:1790:ILE:HD12	7:G:308:HIS:HE1	1.67	0.58
3:C:1792:LYS:CG	3:C:1798:LEU:HD13	2.31	0.58
4:D:724:TRP:CZ3	4:D:732:ILE:HD11	2.38	0.58

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:1190:LEU:HD11	5:E:1284:VAL:HG21	1.86	0.58
5:E:1838:ALA:HA	5:E:1938:PRO:HG2	1.85	0.58
7:G:340:PRO:HA	7:G:346:TRP:CH2	2.37	0.58
7:G:468:ILE:O	7:G:472:LYS:HD3	2.03	0.58
9:I:578:ASP:OD1	9:I:623:ARG:NH1	2.36	0.58
9:I:652:ARG:NH2	9:I:683:SER:OG	2.36	0.58
28:Y:60:TYR:HE2	28:Y:75:MET:HG3	1.68	0.58
32:Q:862:ILE:HG21	32:Q:908:MET:CE	2.33	0.58
3:C:1936:LEU:O	3:C:1940:LEU:HD23	2.03	0.58
3:C:1957:ASP:O	3:C:1960:THR:HG22	2.03	0.58
3:C:2327:SER:H	5:E:728:ARG:HD2	1.68	0.58
5:E:533:VAL:HB	5:E:584:GLN:NE2	2.19	0.58
5:E:1380:THR:O	5:E:1429:PRO:HD3	2.04	0.58
5:E:1945:LEU:HA	5:E:1948:MET:CE	2.33	0.58
8:H:26:LEU:O	8:H:84:PHE:N	2.34	0.58
9:I:176:ARG:HA	9:I:179:GLN:OE1	2.03	0.58
29:Z:337:GLY:O	29:Z:338:VAL:HB	2.02	0.58
3:C:554:THR:O	3:C:558:VAL:HG23	2.03	0.58
5:E:115:VAL:HG12	5:E:175:LEU:HD11	1.85	0.58
5:E:901:LEU:O	5:E:905:ILE:HG13	2.03	0.58
5:E:1160:GLU:HA	5:E:1163:GLU:OE1	2.02	0.58
5:E:1962:GLN:HB2	5:E:2114:MET:CE	2.34	0.58
32:Q:859:GLU:HA	32:Q:862:ILE:HG12	1.85	0.58
5:E:509:LYS:HD2	5:E:651:LEU:HD23	1.85	0.58
5:E:509:LYS:HB3	5:E:651:LEU:HD23	1.85	0.58
5:E:718:LYS:HE2	5:E:719:ASN:ND2	2.19	0.58
5:E:1764:MET:HB3	5:E:1773:LEU:HD11	1.84	0.58
6:F:62:LEU:HD13	6:F:93:TRP:CD2	2.37	0.58
6:F:208:ILE:HG13	6:F:222:LEU:HD21	1.84	0.58
6:F:256:ASP:HB3	6:F:258:THR:HG22	1.86	0.58
7:G:547:ALA:HB2	7:G:562:ILE:CG2	2.34	0.58
7:G:551:VAL:HA	7:G:555:ALA:O	2.03	0.58
8:H:17:ALA:HB1	8:H:59:TYR:CE2	2.38	0.58
8:H:75:ILE:HD13	8:H:101:LYS:HZ2	1.69	0.58
17:J:2:A:HO2'	21:N:566:GLN:HA	1.67	0.58
28:Y:86:THR:N	28:Y:89:GLU:OE1	2.35	0.58
31:U:198:THR:OG1	31:U:201:GLN:HG3	2.04	0.58
2:B:35:U:H2'	2:B:36:C:C6	2.39	0.58
3:C:340:ILE:HD11	4:D:867:PRO:HG3	1.84	0.58
3:C:1135:PRO:O	3:C:1139:ARG:HG3	2.03	0.58
4:D:620:LYS:HE2	4:D:622:GLU:OE2	2.03	0.58

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:517:MET:O	5:E:521:ILE:HG12	2.03	0.58
7:G:294:ALA:HA	7:G:297:LEU:CD2	2.33	0.58
9:I:173:ALA:O	9:I:177:ARG:HG2	2.04	0.58
9:I:642:LYS:HB2	9:I:765:ILE:HD12	1.85	0.58
32:Q:841:VAL:O	32:Q:844:ASN:ND2	2.37	0.58
2:B:6:C:H5"	6:F:182:ARG:O	2.03	0.58
5:E:538:ILE:HB	5:E:585:ILE:CD1	2.33	0.58
5:E:725:VAL:HG21	5:E:731:THR:HA	1.84	0.58
5:E:1748:LYS:NZ	5:E:1807:GLU:OE1	2.35	0.58
5:E:1963:LEU:HD11	5:E:1982:VAL:CG2	2.34	0.58
7:G:577:TRP:CE2	7:G:600:ALA:HA	2.38	0.58
9:I:501:ALA:HA	9:I:523:ILE:HB	1.85	0.58
9:I:749:ILE:HA	9:I:752:ILE:HG12	1.84	0.58
21:N:533:LEU:HD23	21:N:568:TYR:CG	2.39	0.58
3:C:533:LYS:O	3:C:537:LYS:HG2	2.02	0.58
3:C:1402:ARG:NH1	5:E:221:ARG:HG2	2.19	0.58
3:C:1555:LEU:HD21	3:C:1574:ILE:CD1	2.34	0.58
5:E:1828:THR:HG22	5:E:1853:ALA:H	1.68	0.58
6:F:62:LEU:HB2	6:F:351:LEU:HB2	1.84	0.58
7:G:371:GLN:HG2	7:G:399:HIS:HB3	1.85	0.58
9:I:694:LEU:O	9:I:720:ALA:HA	2.04	0.58
31:U:403:ASP:O	31:U:406:GLU:HG2	2.04	0.58
2:B:69:A:H2'	2:B:69:A:N3	2.19	0.58
3:C:88:TYR:HD2	3:C:89:LEU:HD23	1.69	0.58
3:C:112:GLN:HE21	3:C:189:GLU:HA	1.69	0.58
3:C:486:LYS:O	3:C:487:LEU:HD23	2.04	0.58
3:C:1304:ASN:HB3	3:C:1548:TYR:OH	2.03	0.58
4:D:381:LEU:CD2	4:D:416:LEU:HD11	2.33	0.58
5:E:736:ARG:HE	5:E:777:LEU:HD21	1.68	0.58
5:E:1398:GLN:O	5:E:1402:ASN:HA	2.04	0.58
7:G:253:MET:HE1	19:L:124:GLU:HB3	1.84	0.58
7:G:374:ARG:O	7:G:377:ILE:HG22	2.04	0.58
8:H:41:LEU:O	8:H:44:ILE:HG22	2.04	0.58
31:U:134:TYR:OH	31:U:146:ARG:HD3	2.04	0.58
31:U:318:ASP:OD1	31:U:548:TYR:OH	2.21	0.58
2:B:37:G:N3	2:B:37:G:H2'	2.18	0.57
3:C:179:ALA:HA	3:C:183:LEU:HB2	1.85	0.57
3:C:1123:GLU:O	3:C:1126:VAL:HG22	2.04	0.57
3:C:1532:ARG:HA	3:C:1568:THR:HG21	1.86	0.57
3:C:1723:LYS:HB2	30:S:701:LYS:HZ2	1.69	0.57
5:E:624:ARG:O	5:E:627:VAL:HG22	2.04	0.57

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:1430:GLU:HB3	5:E:1431:LYS:NZ	2.18	0.57
29:Z:306:ARG:HH21	29:Z:309:GLN:HG3	1.69	0.57
2:B:42:U:H3'	2:B:43:U:H4'	1.85	0.57
3:C:1527:ASN:O	3:C:1530:PRO:HD2	2.03	0.57
3:C:1762:TYR:CB	3:C:1888:GLU:HG3	2.34	0.57
3:C:1765:SER:HB3	3:C:2014:MET:CG	2.33	0.57
3:C:1785:VAL:O	3:C:1805:GLY:HA3	2.04	0.57
4:D:442:LYS:NZ	4:D:467:ASP:O	2.32	0.57
8:H:27:VAL:CG2	8:H:58:ILE:HD13	2.34	0.57
3:C:1260:VAL:HG21	3:C:1325:LEU:HB3	1.86	0.57
3:C:1807:ILE:CG1	3:C:1822:ILE:HD11	2.30	0.57
3:C:1859:LYS:HA	3:C:1882:ILE:HG22	1.85	0.57
3:C:2274:PRO:HB2	3:C:2277:SER:O	2.05	0.57
5:E:738:ILE:HD13	5:E:741:MET:CE	2.34	0.57
5:E:1228:VAL:HG23	5:E:1263:PRO:HB3	1.86	0.57
5:E:1660:LEU:HD12	5:E:1701:ARG:O	2.04	0.57
5:E:2021:TYR:HB2	5:E:2039:VAL:HG22	1.86	0.57
8:H:51:ASP:O	19:L:343:LEU:HD22	2.02	0.57
31:U:516:ILE:HG12	31:U:518:VAL:HG13	1.86	0.57
3:C:1017:ILE:HD11	3:C:1031:ILE:CD1	2.34	0.57
3:C:1614:ILE:HD12	3:C:1618:LYS:CG	2.34	0.57
3:C:1896:CYS:O	3:C:1902:PHE:HB2	2.04	0.57
4:D:821:LEU:HB3	4:D:949:ILE:HG23	1.86	0.57
5:E:169:TYR:O	5:E:173:VAL:HG13	2.05	0.57
5:E:429:GLN:OE1	5:E:431:PRO:HD3	2.04	0.57
6:F:157:CYS:CB	6:F:169:THR:HG22	2.34	0.57
7:G:394:ARG:HG2	7:G:395:LYS:N	2.19	0.57
20:M:184:TYR:OH	20:M:188:ARG:NH1	2.37	0.57
31:U:406:GLU:O	31:U:407:GLN:HB3	2.05	0.57
32:Q:893:THR:H	32:Q:896:HIS:HB2	1.70	0.57
3:C:1345:GLN:HE22	3:C:1712:HIS:H	1.53	0.57
3:C:1570:LYS:O	3:C:1574:ILE:HG12	2.05	0.57
3:C:2005:SER:HA	3:C:2008:ARG:HG2	1.86	0.57
4:D:711:ARG:HE	4:D:730:ARG:HD3	1.70	0.57
4:D:715:GLY:O	4:D:719:GLN:HG2	2.04	0.57
5:E:704:MET:O	5:E:708:VAL:HG13	2.04	0.57
5:E:1329:ASN:O	5:E:1333:THR:HG23	2.04	0.57
6:F:243:LEU:CD2	6:F:247:GLY:HA2	2.28	0.57
7:G:397:LEU:HB3	30:S:563:LEU:HD13	1.86	0.57
9:I:439:SER:H	9:I:441:LYS:NZ	2.03	0.57
23:R:10:CYS:SG	23:R:29:GLN:NE2	2.67	0.57

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:Z:177:ARG:HG3	29:Z:222:ARG:HD2	1.86	0.57
31:U:170:LEU:CD2	31:U:193:LEU:HD23	2.35	0.57
3:C:2095:ASP:O	3:C:2258:ARG:HD2	2.04	0.57
5:E:1186:LEU:CD2	5:E:1204:ILE:HG12	2.34	0.57
5:E:1380:THR:OG1	5:E:1386:ALA:HB2	2.04	0.57
5:E:1748:LYS:HG2	5:E:1793:LEU:CD1	2.35	0.57
5:E:1930:LEU:HD12	5:E:1931:SER:N	2.19	0.57
18:K:66:G:H2'	18:K:67:A:C8	2.39	0.57
19:L:96:ALA:HB1	19:L:204:ILE:HG23	1.86	0.57
32:Q:807:LYS:HE2	32:Q:872:MET:HE3	1.86	0.57
32:Q:875:VAL:O	32:Q:879:LEU:HG	2.04	0.57
2:B:8:G:H8	2:B:8:G:OP2	1.88	0.57
3:C:711:GLN:HB3	7:G:163:VAL:HG11	1.86	0.57
3:C:1437:ARG:NH1	3:C:1455:TRP:O	2.38	0.57
3:C:1504:GLU:CG	3:C:1507:SER:HB3	2.34	0.57
3:C:2133:PRO:CD	3:C:2139:VAL:HG23	2.34	0.57
5:E:124:LEU:HD21	5:E:127:GLN:HG2	1.86	0.57
5:E:167:THR:HA	5:E:170:HIS:ND1	2.19	0.57
5:E:1136:PRO:HD2	5:E:1139:VAL:HG11	1.85	0.57
5:E:1912:THR:HA	5:E:1915:ILE:CD1	2.35	0.57
7:G:511:GLU:OE2	7:G:550:CYS:HA	2.05	0.57
18:K:52:A:N1	23:R:22:TYR:HB2	2.20	0.57
27:X:90:SER:O	27:X:94:ARG:HB2	2.05	0.57
32:Q:799:LEU:HD21	32:Q:821:ILE:HD13	1.85	0.57
32:Q:812:LEU:CD2	32:Q:841:VAL:HG22	2.34	0.57
3:C:1614:ILE:HD12	3:C:1618:LYS:HB3	1.87	0.57
5:E:1847:GLU:HG3	5:E:1892:ASN:HD21	1.68	0.57
6:F:241:LEU:HA	6:F:251:LEU:O	2.05	0.57
7:G:446:TYR:HA	7:G:449:ALA:HB3	1.86	0.57
7:G:482:MET:SD	7:G:486:ILE:HG13	2.44	0.57
19:L:212:MET:O	19:L:213:SER:C	2.42	0.57
27:X:107:GLU:OE1	27:X:107:GLU:N	2.37	0.57
2:B:28:A:O2'	3:C:643:GLY:HA3	2.05	0.57
3:C:371:LEU:HD13	4:D:347:ILE:HG12	1.86	0.57
3:C:1005:ILE:O	3:C:1009:MET:HG3	2.05	0.57
3:C:1405:LEU:O	3:C:1409:GLU:HB3	2.04	0.57
3:C:1868:MET:SD	3:C:1872:LEU:HG	2.45	0.57
5:E:1847:GLU:HG3	5:E:1892:ASN:ND2	2.20	0.57
5:E:1910:SER:HA	5:E:1913:GLU:OE1	2.05	0.57
6:F:90:ILE:HG21	6:F:124:LEU:HD21	1.86	0.57
6:F:219:VAL:HG11	6:F:229:TYR:CE1	2.40	0.57

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:298:LEU:O	7:G:302:ARG:HG2	2.04	0.57
7:G:309:PRO:O	7:G:313:ILE:HG13	2.04	0.57
7:G:332:ILE:CG2	7:G:349:ALA:HB2	2.34	0.57
23:R:77:LEU:HB2	23:R:84:VAL:HB	1.87	0.57
3:C:475:SER:HB3	7:G:108:LEU:CD2	2.35	0.57
3:C:2067:PHE:C	3:C:2072:GLU:HB3	2.25	0.57
3:C:2149:PRO:HB3	3:C:2281:TYR:CE1	2.39	0.57
5:E:435:PHE:CE1	5:E:446:HIS:HB2	2.40	0.57
5:E:696:LYS:HB3	5:E:699:LYS:HB3	1.86	0.57
5:E:1842:VAL:O	5:E:1846:ILE:HG23	2.03	0.57
5:E:2084:LEU:HD23	5:E:2084:LEU:H	1.70	0.57
6:F:229:TYR:HB2	6:F:231:MET:CE	2.33	0.57
7:G:409:ALA:O	7:G:413:LEU:HG	2.04	0.57
8:H:34:GLU:OE1	8:H:34:GLU:N	2.26	0.57
8:H:93:ASP:HA	8:H:99:HIS:CD2	2.39	0.57
9:I:422:ILE:O	9:I:426:LEU:HG	2.04	0.57
9:I:432:ILE:HB	9:I:626:VAL:HA	1.87	0.57
29:Z:311:ASP:OD1	29:Z:314:ARG:NH1	2.38	0.57
31:U:373:LEU:HB3	31:U:379:TYR:CE2	2.33	0.57
32:Q:803:LEU:HD13	32:Q:872:MET:HE2	1.87	0.57
3:C:143:GLN:NE2	3:C:207:PHE:O	2.38	0.56
3:C:264:PHE:CE1	3:C:459:LEU:HG	2.40	0.56
3:C:1393:ARG:HA	3:C:1403:LEU:HD11	1.86	0.56
3:C:2275:ALA:N	3:C:2295:GLU:O	2.33	0.56
5:E:409:LEU:HD13	5:E:955:ASP:HB3	1.87	0.56
5:E:785:HIS:CE1	5:E:815:LEU:HD13	2.40	0.56
5:E:804:LYS:HD3	5:E:858:ARG:NH1	2.13	0.56
6:F:54:SER:HB2	6:F:96:TYR:CE1	2.40	0.56
6:F:133:VAL:CG2	6:F:154:VAL:HG11	2.34	0.56
7:G:332:ILE:O	7:G:336:THR:HG23	2.05	0.56
7:G:423:LEU:HD22	7:G:440:LEU:HD13	1.87	0.56
8:H:91:LYS:O	8:H:129:ILE:HA	2.05	0.56
8:H:111:ASP:HB3	8:H:134:ILE:CD1	2.34	0.56
20:M:293:ASP:OD1	20:M:294:VAL:N	2.38	0.56
32:Q:795:TYR:CD1	32:Q:830:LEU:HD23	2.40	0.56
3:C:1740:LEU:O	3:C:1744:ARG:HD3	2.05	0.56
5:E:80:ASP:OD1	5:E:83:LYS:HE2	2.05	0.56
5:E:439:ARG:O	5:E:440:LYS:HG2	2.04	0.56
5:E:1846:ILE:HG13	5:E:1847:GLU:N	2.19	0.56
9:I:726:ARG:HE	9:I:726:ARG:C	2.08	0.56
26:W:46:ILE:O	26:W:79:ARG:NH1	2.38	0.56

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:65:G:C4	2:B:66:A:C8	2.93	0.56
3:C:510:ARG:HH12	7:G:89:PHE:HE1	1.53	0.56
3:C:690:MET:O	3:C:694:LEU:HG	2.04	0.56
3:C:1586:HIS:O	3:C:1590:VAL:HG23	2.06	0.56
3:C:1598:ASP:HA	3:C:1601:LEU:HD23	1.87	0.56
3:C:1988:LEU:HG	3:C:1999:VAL:HG13	1.87	0.56
5:E:170:HIS:O	5:E:173:VAL:HG22	2.05	0.56
5:E:430:LEU:HD13	5:E:434:SER:CB	2.36	0.56
5:E:593:TRP:NE1	5:E:631:LEU:HD21	2.19	0.56
5:E:614:LEU:HD11	5:E:628:LEU:CD2	2.36	0.56
5:E:655:LEU:HD23	5:E:889:ILE:HD11	1.88	0.56
5:E:973:ASP:OD1	5:E:978:ASN:N	2.38	0.56
5:E:1962:GLN:HB2	5:E:2114:MET:HE1	1.88	0.56
6:F:118:ASN:OD1	6:F:161:ARG:HG3	2.05	0.56
6:F:294:SER:HA	6:F:335:PHE:HD2	1.70	0.56
7:G:325:LEU:O	7:G:329:ARG:HG3	2.06	0.56
7:G:387:ARG:HA	7:G:390:LYS:CE	2.35	0.56
9:I:361:LYS:HA	9:I:391:ARG:HH12	1.69	0.56
9:I:505:GLY:O	9:I:508:ARG:NH1	2.38	0.56
9:I:656:LEU:HD21	9:I:687:MET:SD	2.45	0.56
9:I:671:VAL:HG21	9:I:677:CYS:HA	1.86	0.56
20:M:432:LYS:NZ	20:M:441:CYS:SG	2.78	0.56
24:P:60:A:H2'	24:P:61:U:C6	2.41	0.56
31:U:145:GLY:HA2	31:U:152:ALA:HB3	1.87	0.56
32:Q:787:LEU:HB2	32:Q:792:VAL:HG22	1.88	0.56
32:Q:789:ILE:HG12	32:Q:972:LYS:HB3	1.86	0.56
3:C:1104:ASP:OD1	3:C:1107:ARG:NH1	2.38	0.56
3:C:1336:PRO:HD2	3:C:1339:ASP:OD2	2.04	0.56
5:E:1184:LEU:HD13	5:E:1204:ILE:HG21	1.86	0.56
5:E:1612:THR:HG21	5:E:1619:TYR:CD1	2.41	0.56
5:E:1842:VAL:HA	5:E:1845:LEU:CD1	2.32	0.56
5:E:1905:SER:HB2	5:E:1908:LEU:HD13	1.88	0.56
7:G:467:TRP:HB3	7:G:490:ALA:HB2	1.87	0.56
8:H:26:LEU:HB3	8:H:84:PHE:CB	2.31	0.56
8:H:29:ARG:NH2	8:H:60:LEU:HB3	2.20	0.56
9:I:669:ILE:HG23	9:I:719:VAL:HA	1.88	0.56
2:B:68:C:H3'	2:B:69:A:H8	1.70	0.56
5:E:1018:PHE:O	5:E:1021:SER:OG	2.21	0.56
5:E:1340:TYR:O	5:E:1366:ARG:NH1	2.39	0.56
5:E:1431:LYS:O	5:E:1434:ILE:HG12	2.06	0.56
5:E:1455:GLU:HG2	5:E:1457:HIS:NE2	2.20	0.56

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:1797:GLU:CD	5:E:1804:ILE:HG22	2.26	0.56
5:E:1878:LYS:HD3	5:E:1879:LEU:H	1.69	0.56
6:F:152:SER:OG	6:F:173:ASP:HB3	2.06	0.56
7:G:386:ILE:O	7:G:390:LYS:HE2	2.05	0.56
7:G:770:ARG:NH2	20:M:492:GLU:OE2	2.39	0.56
31:U:247:PRO:HB2	31:U:248:PRO:HD3	1.87	0.56
32:Q:733:LEU:HD12	32:Q:765:LEU:CD2	2.36	0.56
32:Q:787:LEU:HB2	32:Q:792:VAL:CG2	2.35	0.56
32:Q:862:ILE:HD13	32:Q:908:MET:HE3	1.87	0.56
3:C:558:VAL:O	3:C:562:VAL:HG13	2.05	0.56
3:C:1382:SER:HA	3:C:1415:GLY:HA2	1.87	0.56
3:C:1978:LYS:O	3:C:1981:VAL:HG12	2.06	0.56
5:E:758:SER:O	5:E:762:LEU:HG	2.06	0.56
5:E:1033:GLU:CG	5:E:1077:LEU:HD21	2.30	0.56
5:E:1226:GLU:OE2	5:E:1269:ARG:HD3	2.06	0.56
5:E:1298:PRO:HG3	5:E:1515:HIS:HD2	1.70	0.56
5:E:1592:CYS:HB2	5:E:1640:ALA:HA	1.88	0.56
5:E:2017:ILE:HG23	5:E:2042:GLU:O	2.06	0.56
6:F:251:LEU:HB2	6:F:293:TRP:NE1	2.21	0.56
7:G:241:ARG:HH21	31:U:407:GLN:HG3	1.70	0.56
8:H:52:LEU:HD12	8:H:112:PHE:HE1	1.69	0.56
9:I:694:LEU:HD13	9:I:718:LEU:HD21	1.86	0.56
29:Z:352:LEU:HD23	29:Z:356:ARG:HH21	1.70	0.56
2:B:75:G:H2'	2:B:76:A:H8	1.70	0.56
5:E:549:GLN:O	5:E:552:VAL:HG12	2.05	0.56
5:E:1130:ARG:NE	5:E:1144:GLU:OE2	2.26	0.56
5:E:1358:ILE:HA	5:E:1361:GLU:OE1	2.06	0.56
6:F:55:LEU:HD22	6:F:353:MET:HE3	1.86	0.56
7:G:503:ARG:HH21	7:G:543:TRP:HD1	1.53	0.56
8:H:27:VAL:HG21	8:H:58:ILE:HD13	1.87	0.56
9:I:437:THR:OG1	9:I:729:ASP:HB3	2.06	0.56
20:M:407:LEU:HD11	21:N:540:GLY:HA2	1.88	0.56
32:Q:697:VAL:HG13	32:Q:698:PHE:CD1	2.41	0.56
32:Q:748:PHE:CD2	32:Q:805:LEU:HD13	2.41	0.56
3:C:369:GLU:OE2	4:D:345:GLY:HA3	2.06	0.56
5:E:469:LYS:HE2	5:E:472:GLN:OE1	2.06	0.56
5:E:637:ARG:NH2	5:E:915:ASP:OD1	2.26	0.56
5:E:1813:LEU:O	5:E:1817:MET:HG2	2.06	0.56
9:I:187:MET:HA	9:I:190:GLU:OE1	2.06	0.56
23:R:7:CYS:HB3	23:R:10:CYS:HB2	1.86	0.56
27:X:36:GLU:HG2	29:Z:328:LEU:HD12	1.88	0.56

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:Y:87:LYS:O	28:Y:90:GLU:N	2.39	0.56
31:U:377:ASP:CA	31:U:380:GLN:HG2	2.35	0.56
3:C:30:LEU:HD13	6:F:194:TYR:HE2	1.69	0.56
3:C:425:PRO:HB2	3:C:428:LYS:HB2	1.87	0.56
3:C:1304:ASN:HD21	3:C:1306:LYS:HG2	1.71	0.56
3:C:1609:VAL:HG23	3:C:1631:LEU:CD2	2.36	0.56
3:C:1633:ALA:HB2	3:C:1637:TRP:CZ3	2.41	0.56
3:C:1840:LYS:O	3:C:1843:GLU:HG2	2.06	0.56
3:C:1953:ILE:HG23	3:C:1982:GLN:OE1	2.06	0.56
5:E:542:ALA:HB3	5:E:548:VAL:CG2	2.36	0.56
5:E:548:VAL:HG13	5:E:587:VAL:CG1	2.35	0.56
6:F:133:VAL:HG23	6:F:154:VAL:HG11	1.88	0.56
7:G:427:VAL:HG21	7:G:440:LEU:HD22	1.88	0.56
17:J:86:U:H2'	17:J:87:C:C6	2.41	0.56
31:U:430:TYR:CD2	31:U:439:LYS:HD2	2.41	0.56
3:C:1585:ILE:HG12	3:C:1739:ALA:HB1	1.88	0.56
3:C:1772:PHE:CZ	3:C:1930:TYR:HA	2.41	0.56
4:D:320:LEU:HD21	4:D:344:TRP:HB2	1.88	0.56
4:D:436:GLN:OE1	4:D:437:HIS:NE2	2.39	0.56
4:D:594:PRO:HD3	4:D:603:MET:SD	2.46	0.56
4:D:749:THR:HB	4:D:754:VAL:HG21	1.88	0.56
5:E:873:HIS:HA	5:E:876:LEU:CD1	2.36	0.56
5:E:2041:LEU:HB3	5:E:2084:LEU:HD13	1.86	0.56
31:U:433:TYR:CD2	31:U:434:LYS:HG3	2.41	0.56
3:C:835:ASP:OD1	3:C:921:TYR:OH	2.21	0.55
4:D:311:SER:HB3	4:D:316:ILE:HB	1.88	0.55
5:E:137:ASP:O	5:E:140:LEU:HG	2.05	0.55
5:E:1302:LEU:HB2	5:E:1304:LEU:CD2	2.36	0.55
5:E:1814:ASN:OD1	5:E:1815:LEU:HD12	2.06	0.55
5:E:1927:VAL:HG22	5:E:1942:ALA:HB3	1.87	0.55
6:F:342:ILE:O	6:F:353:MET:HA	2.06	0.55
7:G:294:ALA:HA	7:G:297:LEU:HD23	1.88	0.55
8:H:11:LYS:HG2	8:H:69:TYR:CE2	2.41	0.55
21:N:562:ALA:O	21:N:565:GLY:N	2.39	0.55
31:U:250:ARG:O	31:U:254:LEU:HG	2.06	0.55
31:U:265:PRO:HD2	31:U:268:ASP:HB2	1.88	0.55
3:C:623:LYS:HE3	34:C:3000:IHP:O46	2.07	0.55
5:E:430:LEU:HD21	5:E:447:VAL:CG1	2.33	0.55
5:E:731:THR:HG22	5:E:784:ILE:HG22	1.87	0.55
5:E:2065:TRP:HA	5:E:2080:LYS:O	2.06	0.55
7:G:319:GLU:CB	7:G:328:ALA:HB2	2.35	0.55

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:346:TRP:CD1	7:G:365:ALA:HB2	2.41	0.55
7:G:434:VAL:O	7:G:438:LEU:HG	2.06	0.55
7:G:897:VAL:O	7:G:901:CYS:N	2.39	0.55
9:I:190:GLU:O	9:I:194:LYS:HG2	2.05	0.55
9:I:489:ILE:HB	9:I:493:LYS:HD3	1.87	0.55
17:J:113:U:H2'	17:J:114:G:H8	1.70	0.55
31:U:457:PHE:HE1	31:U:509:PRO:HA	1.71	0.55
3:C:288:LEU:HD12	9:I:255:LEU:C	2.27	0.55
3:C:1405:LEU:HD23	5:E:61:PRO:CB	2.35	0.55
4:D:918:ILE:HG13	4:D:935:ILE:HD11	1.88	0.55
9:I:786:SER:HB3	9:I:789:SER:HB2	1.88	0.55
20:M:237:CYS:HB3	20:M:246:LEU:HD11	1.88	0.55
32:Q:972:LYS:NZ	32:Q:1002:PHE:O	2.38	0.55
3:C:25:MET:HA	6:F:232:ARG:NH2	2.20	0.55
3:C:30:LEU:HD13	6:F:194:TYR:CE2	2.41	0.55
3:C:696:MET:CE	7:G:150:ALA:HA	2.29	0.55
3:C:898:PHE:CD2	3:C:905:LEU:HB3	2.36	0.55
3:C:1873:GLU:OE2	3:C:1884:ILE:HB	2.07	0.55
3:C:1895:ALA:HB3	3:C:1940:LEU:HD13	1.88	0.55
5:E:491:ALA:O	5:E:495:THR:HB	2.05	0.55
5:E:610:ARG:O	5:E:646:VAL:HG13	2.07	0.55
5:E:637:ARG:O	5:E:640:GLU:HG3	2.06	0.55
5:E:801:PHE:HB2	5:E:806:ILE:HD12	1.89	0.55
8:H:118:VAL:HG12	8:H:130:VAL:HG11	1.89	0.55
25:V:48:LEU:HD21	25:V:85:LEU:HB2	1.87	0.55
27:X:110:LYS:HD3	27:X:115:TYR:CZ	2.42	0.55
31:U:538:LEU:HB3	31:U:540:GLN:OE1	2.06	0.55
32:Q:789:ILE:HG12	32:Q:972:LYS:CB	2.37	0.55
3:C:33:LYS:NZ	6:F:236:ASP:OD1	2.38	0.55
3:C:231:THR:OG1	3:C:234:MET:HG3	2.07	0.55
3:C:1506:ALA:H	19:L:376:ASN:CG	2.10	0.55
3:C:1606:ILE:HD13	3:C:1631:LEU:CD1	2.35	0.55
5:E:428:CYS:SG	30:S:553:PHE:HB2	2.47	0.55
5:E:1593:THR:OG1	5:E:1595:LYS:NZ	2.31	0.55
7:G:281:ILE:HD12	7:G:282:PRO:HD2	1.88	0.55
7:G:423:LEU:O	7:G:427:VAL:HG13	2.06	0.55
7:G:437:TRP:HZ3	7:G:455:LYS:HB3	1.71	0.55
18:K:62:G:H2'	18:K:63:C:H6	1.69	0.55
21:N:557:LYS:O	21:N:558:PHE:C	2.43	0.55
25:V:4:ARG:HH12	25:V:15:GLN:HA	1.71	0.55
31:U:498:ASP:OD2	31:U:555:ARG:HD3	2.07	0.55

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:Q:700:ASN:OD1	32:Q:718:ILE:HB	2.05	0.55
32:Q:776:GLU:OE2	32:Q:780:LYS:HE2	2.06	0.55
3:C:50:LYS:NZ	6:F:110:GLY:HA2	2.22	0.55
3:C:95:MET:CE	3:C:126:ILE:HG22	2.37	0.55
3:C:381:PRO:O	4:D:354:ARG:NH2	2.40	0.55
3:C:1954:LEU:HA	3:C:1979:VAL:HG21	1.88	0.55
5:E:65:GLU:HA	5:E:68:ARG:HH12	1.70	0.55
5:E:89:LEU:HD13	7:G:363:ALA:O	2.07	0.55
5:E:131:ILE:HG12	5:E:697:ALA:HB1	1.87	0.55
5:E:1150:PHE:HE2	5:E:1154:TYR:HH	1.55	0.55
5:E:1450:LEU:HD12	5:E:1486:ARG:HB3	1.88	0.55
9:I:355:ARG:O	9:I:360:LYS:NZ	2.39	0.55
20:M:407:LEU:HD12	21:N:639:LYS:HA	1.88	0.55
3:C:1333:VAL:HB	3:C:1365:ILE:CD1	2.36	0.55
3:C:1710:ASN:O	3:C:1711:LEU:HD23	2.06	0.55
3:C:1806:ALA:HA	3:C:1820:LYS:O	2.07	0.55
3:C:1810:PHE:CE1	3:C:1815:GLY:HA2	2.41	0.55
3:C:1832:ARG:CG	3:C:1836:LEU:HD13	2.26	0.55
5:E:81:ILE:CD1	7:G:337:GLU:HG3	2.29	0.55
5:E:89:LEU:HB2	7:G:363:ALA:CB	2.34	0.55
7:G:328:ALA:O	7:G:332:ILE:HG13	2.06	0.55
7:G:474:GLU:HB3	7:G:482:MET:HG3	1.88	0.55
3:C:89:LEU:HD12	7:G:89:PHE:CZ	2.42	0.55
3:C:126:ILE:HD12	3:C:128:PHE:CZ	2.42	0.55
3:C:211:GLN:OE1	3:C:214:ARG:NH1	2.40	0.55
3:C:1808:PHE:CD2	3:C:1893:PHE:HB3	2.41	0.55
3:C:1927:ILE:HB	3:C:1931:THR:HG21	1.89	0.55
3:C:2334:TYR:CD1	5:E:591:GLU:HB3	2.42	0.55
4:D:219:LEU:HD22	4:D:251:LEU:HD12	1.88	0.55
4:D:682:LYS:HB3	4:D:797:ALA:HB2	1.87	0.55
5:E:80:ASP:O	5:E:83:LYS:HG2	2.07	0.55
5:E:1146:LYS:HB3	5:E:1148:PHE:CE1	2.39	0.55
6:F:156:SER:HB2	6:F:199:VAL:H	1.72	0.55
6:F:275:LYS:HA	6:F:317:ARG:NH1	2.22	0.55
9:I:177:ARG:O	9:I:181:VAL:HG13	2.06	0.55
9:I:691:ALA:HA	9:I:717:ILE:O	2.06	0.55
18:K:53:G:H2'	18:K:54:G:H8	1.68	0.55
27:X:110:LYS:HD3	27:X:115:TYR:CE2	2.42	0.55
32:Q:748:PHE:CB	32:Q:805:LEU:HB2	2.36	0.55
32:Q:781:TYR:O	32:Q:785:VAL:HG21	2.06	0.55
3:C:384:VAL:HG11	4:D:334:ILE:HD11	1.89	0.55

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:1645:LEU:HD21	3:C:1727:GLN:HG2	1.89	0.55
3:C:1658:GLN:C	3:C:1659:LYS:HD3	2.28	0.55
3:C:1690:ASP:HB3	3:C:1693:SER:HB3	1.89	0.55
3:C:1717:ASN:C	3:C:1717:ASN:HD22	2.10	0.55
3:C:1810:PHE:CD1	3:C:1919:LEU:HD12	2.42	0.55
4:D:809:ILE:HB	4:D:810:PRO:HD3	1.89	0.55
5:E:1722:LEU:HD23	5:E:1722:LEU:H	1.71	0.55
5:E:1808:MET:O	5:E:1808:MET:HG2	2.07	0.55
6:F:180:ASP:OD2	6:F:183:LYS:HG2	2.07	0.55
7:G:612:LEU:HD21	7:G:644:ILE:HD12	1.88	0.55
8:H:75:ILE:HD13	8:H:101:LYS:NZ	2.21	0.55
19:L:65:MET:HA	19:L:68:GLU:CD	2.28	0.55
3:C:1552:GLN:HB2	3:C:1561:PHE:CD2	2.42	0.55
3:C:2241:ASN:OD1	3:C:2242:THR:N	2.40	0.55
5:E:787:ALA:O	5:E:794:ARG:NH2	2.37	0.55
5:E:1072:LEU:HD22	5:E:1081:MET:HE3	1.89	0.55
5:E:1672:LYS:CE	5:E:1887:PRO:HG3	2.37	0.55
7:G:317:ARG:O	7:G:321:VAL:HG13	2.07	0.55
7:G:415:GLU:HB2	7:G:418:ASP:OD1	2.07	0.55
7:G:434:VAL:CG1	7:G:460:ILE:HG21	2.37	0.55
7:G:767:GLU:HG3	20:M:517:LYS:HZ1	1.72	0.55
9:I:374:ARG:NH2	9:I:389:PRO:HD3	2.22	0.55
19:L:63:ILE:O	19:L:67:ILE:HG12	2.07	0.55
24:P:64:A:H4'	24:P:72:A:C5	2.42	0.55
3:C:733:THR:OG1	3:C:734:PRO:HD3	2.07	0.54
5:E:120:ILE:HG23	5:E:132:LEU:CD1	2.36	0.54
5:E:1316:ALA:O	5:E:1320:LEU:HG	2.08	0.54
5:E:1368:LEU:HD22	5:E:1403:LYS:HE2	1.89	0.54
5:E:1606:ASP:O	5:E:1610:LYS:HG3	2.06	0.54
6:F:113:MET:HB2	6:F:129:THR:CG2	2.36	0.54
7:G:134:GLU:HG3	7:G:135:ARG:CD	2.36	0.54
7:G:372:SER:O	7:G:376:TYR:HD1	1.89	0.54
7:G:422:MET:HA	30:S:560:CYS:SG	2.47	0.54
19:L:210:SER:O	19:L:211:ARG:C	2.45	0.54
21:N:561:GLU:OE1	23:R:13:THR:N	2.27	0.54
28:Y:85:TYR:H	28:Y:85:TYR:HD1	1.55	0.54
32:Q:717:LYS:HD2	32:Q:767:PHE:HE2	1.70	0.54
32:Q:794:SER:O	32:Q:798:GLN:HG3	2.07	0.54
32:Q:878:THR:O	32:Q:882:LEU:HG	2.07	0.54
3:C:377:GLU:OE1	3:C:377:GLU:N	2.30	0.54
3:C:1237:MET:HG2	3:C:1284:LEU:HD13	1.87	0.54

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:1639:VAL:O	3:C:1653:ASP:HB3	2.07	0.54
5:E:139:VAL:HG21	5:E:172:LEU:HD11	1.90	0.54
5:E:724:PHE:CZ	5:E:816:ALA:HB2	2.41	0.54
5:E:1140:VAL:HA	5:E:1143:ILE:HG22	1.88	0.54
5:E:2000:THR:O	5:E:2004:ILE:HG13	2.08	0.54
7:G:421:ILE:HG21	30:S:557:SER:HA	1.88	0.54
9:I:387:PRO:HB2	9:I:423:PRO:HB2	1.90	0.54
9:I:763:VAL:HG12	9:I:765:ILE:HD11	1.89	0.54
17:J:21:U:O4	18:K:30:C:N4	2.40	0.54
19:L:63:ILE:HD12	19:L:99:LEU:HD21	1.89	0.54
28:Y:11:ARG:NH1	29:Z:199:GLU:O	2.40	0.54
28:Y:225:TYR:CD1	28:Y:225:TYR:N	2.75	0.54
29:Z:314:ARG:O	29:Z:318:ILE:HG12	2.06	0.54
29:Z:332:ALA:HB1	29:Z:336:LYS:HE3	1.90	0.54
3:C:1332:HIS:HB3	5:E:41:LEU:HB2	1.88	0.54
3:C:1529:ILE:CD1	3:C:1532:ARG:HD2	2.37	0.54
3:C:1816:GLN:HG2	3:C:1818:PHE:HE1	1.72	0.54
3:C:1862:ILE:HA	3:C:1885:LYS:O	2.07	0.54
4:D:711:ARG:NH2	4:D:730:ARG:HA	2.22	0.54
5:E:461:LEU:HD12	5:E:481:LEU:O	2.08	0.54
5:E:1031:GLU:HA	5:E:1034:LYS:HE3	1.88	0.54
5:E:1095:ILE:O	5:E:1099:VAL:HG22	2.08	0.54
5:E:1381:PRO:HG3	5:E:1467:LEU:HD22	1.89	0.54
5:E:1952:ALA:CB	5:E:2055:LEU:HD22	2.37	0.54
5:E:1962:GLN:OE1	5:E:2113:TYR:HA	2.07	0.54
6:F:336:HIS:HB3	6:F:339:GLU:O	2.06	0.54
7:G:415:GLU:HB3	7:G:416:PRO:HD2	1.89	0.54
7:G:494:LEU:HD22	7:G:499:VAL:HG11	1.89	0.54
19:L:64:MET:O	19:L:68:GLU:HG3	2.06	0.54
23:R:128:ARG:HA	23:R:131:LYS:HD2	1.88	0.54
32:Q:817:LYS:HE3	32:Q:819:ASP:CB	2.37	0.54
32:Q:862:ILE:HG21	32:Q:908:MET:HE3	1.89	0.54
5:E:153:ARG:HD2	5:E:169:TYR:CE1	2.42	0.54
5:E:1197:THR:O	5:E:1198:LEU:HD23	2.07	0.54
5:E:1527:ILE:CD1	5:E:1711:LYS:HA	2.38	0.54
5:E:1672:LYS:HG2	5:E:1860:ILE:HG22	1.88	0.54
6:F:114:GLU:HG3	6:F:290:ARG:NH2	2.22	0.54
6:F:201:PHE:CE1	6:F:208:ILE:HG12	2.42	0.54
7:G:329:ARG:NH1	7:G:354:PRO:HD3	2.21	0.54
7:G:355:GLY:O	7:G:359:LYS:HG3	2.08	0.54
9:I:726:ARG:HH21	9:I:727:GLY:HA3	1.72	0.54

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:S:731:HIS:HB3	30:S:732:ARG:NH2	2.22	0.54
3:C:1318:THR:OG1	3:C:1324:GLY:HA3	2.06	0.54
3:C:1411:SER:HA	3:C:1414:ARG:HD3	1.89	0.54
3:C:1658:GLN:H	3:C:1659:LYS:HZ1	1.55	0.54
4:D:132:VAL:HG22	4:D:438:ILE:HD13	1.88	0.54
5:E:89:LEU:HD12	7:G:363:ALA:HB1	1.90	0.54
5:E:447:VAL:O	5:E:686:GLU:HG2	2.07	0.54
5:E:1547:TYR:OH	5:E:1583:ASP:OD2	2.25	0.54
5:E:1625:SER:O	5:E:1629:ARG:HG3	2.07	0.54
5:E:1961:LYS:HD3	5:E:1971:ILE:HD11	1.88	0.54
6:F:237:SER:H	6:F:255:MET:HE2	1.72	0.54
8:H:27:VAL:HG12	8:H:83:PHE:CD1	2.42	0.54
17:J:2:A:H61	23:R:6:ARG:HH12	1.54	0.54
21:N:462:GLU:HA	21:N:465:ARG:HG2	1.88	0.54
27:X:12:VAL:HA	27:X:17:LEU:HD23	1.89	0.54
28:Y:80:LEU:HD12	28:Y:90:GLU:HG2	1.90	0.54
32:Q:692:TYR:HD1	32:Q:702:VAL:HG12	1.73	0.54
3:C:685:LEU:O	3:C:689:VAL:HG12	2.08	0.54
3:C:1503:TRP:O	19:L:377:ARG:HA	2.07	0.54
3:C:1560:ILE:HD11	3:C:1577:PHE:CE2	2.42	0.54
3:C:2164:PRO:CB	3:C:2296:LEU:HD11	2.34	0.54
5:E:469:LYS:O	5:E:469:LYS:HD3	2.07	0.54
5:E:533:VAL:HA	5:E:536:PHE:HE1	1.73	0.54
5:E:723:VAL:CG1	5:E:810:VAL:HG13	2.36	0.54
5:E:823:ALA:O	5:E:857:GLY:N	2.36	0.54
5:E:1383:GLU:HG3	5:E:1387:GLU:OE2	2.07	0.54
5:E:1712:ASP:O	5:E:1716:LYS:HG2	2.07	0.54
5:E:1872:ALA:HB1	5:E:1878:LYS:HE3	1.90	0.54
5:E:2038:LEU:HG	5:E:2040:GLN:HE22	1.72	0.54
6:F:190:PHE:CE2	6:F:208:ILE:HD12	2.43	0.54
7:G:301:VAL:O	7:G:305:ASN:HB2	2.07	0.54
7:G:425:ARG:CB	30:S:560:CYS:HB3	2.36	0.54
8:H:41:LEU:HD13	8:H:105:SER:CA	2.35	0.54
9:I:671:VAL:HG21	9:I:677:CYS:CA	2.38	0.54
17:J:32:C:O2'	19:L:330:LYS:NZ	2.41	0.54
17:J:88:A:O2'	27:X:39:GLN:NE2	2.40	0.54
29:Z:333:ALA:HA	29:Z:336:LYS:CD	2.38	0.54
31:U:224:ILE:CG2	31:U:529:LEU:HD21	2.37	0.54
32:Q:772:MET:O	32:Q:823:VAL:HG12	2.07	0.54
1:A:5:C:H1'	28:Y:225:TYR:CE1	2.43	0.54
2:B:37:G:H5"	2:B:38:C:C5	2.42	0.54

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:137:GLU:O	3:C:141:ILE:HG13	2.07	0.54
3:C:1018:ASN:OD1	3:C:1023:ASN:ND2	2.41	0.54
3:C:1636:LYS:CD	3:C:1656:THR:HG21	2.33	0.54
3:C:1771:LEU:CD2	3:C:1777:ILE:HG21	2.38	0.54
3:C:1821:ILE:HG12	3:C:1913:GLN:O	2.08	0.54
4:D:123:MET:HG2	4:D:199:LEU:CD2	2.38	0.54
4:D:319:THR:HG22	4:D:320:LEU:H	1.71	0.54
5:E:538:ILE:HB	5:E:585:ILE:HD13	1.89	0.54
5:E:676:PHE:HB3	5:E:680:PHE:HD2	1.73	0.54
5:E:738:ILE:HA	5:E:741:MET:HE2	1.89	0.54
5:E:1184:LEU:HD13	5:E:1204:ILE:CG2	2.38	0.54
6:F:61:LEU:HD12	6:F:351:LEU:O	2.07	0.54
6:F:300:ILE:HG13	6:F:312:TRP:HB2	1.90	0.54
7:G:383:GLU:OE2	7:G:389:LYS:HA	2.08	0.54
28:Y:111:ASN:O	28:Y:115:GLN:NE2	2.41	0.54
32:Q:792:VAL:HG21	32:Q:883:TYR:CD1	2.32	0.54
3:C:1518:LEU:HB2	3:C:1523:ARG:CZ	2.38	0.54
3:C:1642:PRO:HA	3:C:1717:ASN:HA	1.89	0.54
3:C:2108:LYS:O	3:C:2112:LYS:HG3	2.08	0.54
5:E:74:ARG:O	5:E:78:ARG:HG2	2.07	0.54
5:E:437:ARG:HG2	5:E:439:ARG:HG3	1.90	0.54
5:E:1427:SER:OG	5:E:1431:LYS:HB2	2.08	0.54
5:E:1596:ASP:O	5:E:1599:PRO:HD2	2.07	0.54
5:E:1878:LYS:HZ3	5:E:1893:LEU:HD21	1.72	0.54
7:G:376:TYR:CD2	7:G:396:ALA:HB2	2.43	0.54
7:G:403:SER:OG	7:G:406:LEU:HD12	2.08	0.54
7:G:424:SER:HA	7:G:440:LEU:HD21	1.90	0.54
9:I:780:LYS:CD	9:I:796:ALA:HA	2.36	0.54
18:K:52:A:C6	23:R:22:TYR:HB2	2.43	0.54
3:C:545:HIS:HB3	3:C:594:TYR:CD2	2.43	0.54
3:C:546:LEU:O	3:C:550:VAL:HG13	2.07	0.54
3:C:691:HIS:NE2	3:C:695:ASP:OD2	2.41	0.54
3:C:1790:ILE:CG2	3:C:1798:LEU:HD11	2.37	0.54
3:C:1810:PHE:HB2	3:C:1817:LEU:HD13	1.89	0.54
4:D:753:GLU:OE1	4:D:753:GLU:N	2.41	0.54
5:E:70:LYS:HG3	5:E:217:TYR:CE1	2.43	0.54
5:E:97:MET:HG2	5:E:137:ASP:OD2	2.07	0.54
5:E:565:THR:HB	5:E:583:THR:HA	1.89	0.54
5:E:1135:LEU:HD11	5:E:1174:ILE:CD1	2.38	0.54
5:E:1470:ILE:O	5:E:1474:MET:HG2	2.08	0.54
5:E:1620:LEU:HA	5:E:1624:LEU:HD12	1.88	0.54

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:1740:ILE:HD11	5:E:1810:VAL:CB	2.34	0.54
5:E:1871:LEU:O	5:E:1875:VAL:HG13	2.08	0.54
5:E:2022:GLU:N	5:E:2038:LEU:O	2.38	0.54
7:G:547:ALA:HB2	7:G:562:ILE:HB	1.90	0.54
7:G:700:GLU:HG3	7:G:704:HIS:HE1	1.73	0.54
19:L:61:ALA:CA	19:L:64:MET:HB3	2.16	0.54
19:L:69:GLU:HG2	19:L:70:TYR:N	2.20	0.54
20:M:228:ILE:HD13	20:M:515:THR:HG22	1.90	0.54
31:U:523:THR:HG22	31:U:524:GLY:H	1.73	0.54
32:Q:852:SER:O	32:Q:856:ARG:N	2.41	0.54
3:C:707:ARG:NH1	8:H:4:LEU:HB3	2.23	0.54
5:E:705:ASN:O	5:E:708:VAL:HG22	2.07	0.54
5:E:1825:ASN:OD1	5:E:1827:THR:HG22	2.09	0.54
5:E:2064:TRP:CH2	5:E:2110:SER:HB2	2.43	0.54
7:G:767:GLU:OE1	7:G:770:ARG:NH2	2.41	0.54
20:M:432:LYS:HG2	20:M:444:THR:HG22	1.90	0.54
32:Q:807:LYS:HG3	32:Q:868:TYR:CD1	2.43	0.54
3:C:203:VAL:O	3:C:207:PHE:HB2	2.08	0.53
3:C:1505:LYS:N	19:L:376:ASN:O	2.37	0.53
3:C:1840:LYS:O	3:C:1844:GLU:HG2	2.08	0.53
5:E:439:ARG:HB3	5:E:440:LYS:NZ	2.23	0.53
5:E:1669:TYR:OH	5:E:1674:HIS:ND1	2.23	0.53
5:E:1983:PHE:O	5:E:1987:GLU:HG2	2.08	0.53
6:F:197:LEU:O	6:F:290:ARG:NH1	2.29	0.53
7:G:427:VAL:CG1	7:G:436:LEU:HB3	2.28	0.53
9:I:442:THR:HA	9:I:445:PHE:CZ	2.42	0.53
9:I:639:VAL:HG13	9:I:762:GLY:O	2.08	0.53
30:S:745:ARG:O	30:S:748:LYS:HG2	2.07	0.53
31:U:368:GLU:O	31:U:372:GLN:NE2	2.41	0.53
3:C:1301:ILE:HG13	3:C:1307:MET:HE1	1.90	0.53
4:D:603:MET:HB2	4:D:651:ILE:HD11	1.91	0.53
5:E:509:LYS:HB3	5:E:651:LEU:CD2	2.39	0.53
5:E:794:ARG:HA	5:E:797:VAL:HG12	1.89	0.53
5:E:972:TYR:HE1	5:E:977:GLY:HA2	1.72	0.53
5:E:1287:ARG:HG3	5:E:1287:ARG:HH11	1.73	0.53
5:E:1446:GLN:O	5:E:1483:ARG:NH2	2.42	0.53
6:F:176:VAL:HB	6:F:190:PHE:HB2	1.90	0.53
6:F:260:ARG:CD	6:F:276:ILE:HG12	2.38	0.53
7:G:556:LEU:O	7:G:560:ARG:N	2.35	0.53
9:I:165:SER:O	9:I:169:ARG:HG3	2.08	0.53
9:I:482:GLN:HE22	9:I:700:GLN:CD	2.10	0.53

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:K:54:G:H2'	18:K:55:C:H6	1.73	0.53
30:S:721:THR:OG1	30:S:724:GLU:HG2	2.08	0.53
32:Q:684:ASP:OD2	32:Q:755:ARG:NH1	2.36	0.53
3:C:955:TRP:NE1	3:C:959:ILE:HD11	2.24	0.53
5:E:148:LEU:HB3	5:E:149:ARG:HH21	1.74	0.53
5:E:1564:PRO:HB3	5:E:1667:GLN:O	2.08	0.53
5:E:2066:VAL:HG12	5:E:2068:ILE:CD1	2.39	0.53
3:C:260:LEU:HD21	3:C:458:ALA:HB1	1.89	0.53
3:C:1304:ASN:ND2	3:C:1306:LYS:HG2	2.23	0.53
3:C:1810:PHE:HA	3:C:1817:LEU:HA	1.89	0.53
3:C:1821:ILE:HG21	3:C:1909:ALA:CB	2.38	0.53
4:D:680:ASN:HB3	4:D:682:LYS:HG2	1.91	0.53
5:E:546:SER:O	5:E:549:GLN:NE2	2.41	0.53
5:E:1361:GLU:O	5:E:1365:LEU:HG	2.08	0.53
7:G:502:ASN:HB2	7:G:506:TRP:H	1.71	0.53
9:I:180:GLU:O	9:I:184:ARG:HG3	2.09	0.53
9:I:776:PHE:HB2	9:I:800:ASP:OD2	2.08	0.53
19:L:141:GLU:OE1	19:L:154:ASN:ND2	2.41	0.53
24:P:54:U:O2'	24:P:57:G:OP1	2.24	0.53
32:Q:788:HIS:O	32:Q:792:VAL:HG23	2.08	0.53
32:Q:803:LEU:HD11	32:Q:875:VAL:CG2	2.32	0.53
3:C:419:ARG:NH2	3:C:423:ASP:O	2.42	0.53
3:C:801:ILE:HD12	3:C:1165:VAL:HG12	1.91	0.53
5:E:76:GLU:HA	5:E:79:HIS:ND1	2.24	0.53
5:E:327:MET:HB2	5:E:359:PHE:CZ	2.43	0.53
5:E:926:TYR:CD1	5:E:953:ARG:HD3	2.43	0.53
5:E:1007:PRO:HG3	5:E:1104:TRP:NE1	2.24	0.53
5:E:1598:ILE:O	5:E:1602:GLU:HG2	2.08	0.53
5:E:1849:ILE:HD12	5:E:1922:LEU:CD2	2.34	0.53
6:F:176:VAL:O	6:F:190:PHE:N	2.37	0.53
7:G:305:ASN:HB3	7:G:308:HIS:CB	2.36	0.53
7:G:463:ASP:OD2	7:G:466:ILE:HG13	2.07	0.53
8:H:84:PHE:CD1	8:H:89:HIS:HA	2.43	0.53
9:I:374:ARG:CZ	9:I:389:PRO:HD3	2.38	0.53
32:Q:684:ASP:HB2	32:Q:757:PHE:CD2	2.43	0.53
3:C:598:LEU:HD21	3:C:640:PHE:CE1	2.44	0.53
3:C:2193:VAL:HG23	3:C:2230:LEU:CD2	2.35	0.53
5:E:409:LEU:HD23	5:E:956:LEU:CD2	2.38	0.53
5:E:533:VAL:HA	5:E:536:PHE:CE1	2.44	0.53
5:E:972:TYR:CE1	5:E:977:GLY:HA2	2.43	0.53
5:E:1973:ARG:HE	5:E:1997:LEU:HD11	1.73	0.53

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:90:ILE:HD11	6:F:108:HIS:NE2	2.24	0.53
6:F:119:THR:HG23	6:F:161:ARG:CG	2.32	0.53
25:V:88:GLN:HA	25:V:91:GLU:HG3	1.90	0.53
27:X:76:LEU:HA	27:X:79:GLU:OE1	2.08	0.53
32:Q:793:ARG:NH1	32:Q:1005:GLU:OE1	2.37	0.53
2:B:8:G:N2	2:B:72:U:C5	2.77	0.53
3:C:66:VAL:O	3:C:70:ILE:HG12	2.09	0.53
3:C:1787:ARG:HB3	5:E:202:ASN:HA	1.89	0.53
4:D:692:LEU:HB3	4:D:786:ASN:OD1	2.07	0.53
4:D:758:LEU:O	4:D:762:VAL:HG22	2.08	0.53
5:E:60:LYS:HG2	5:E:61:PRO:CD	2.36	0.53
5:E:117:LEU:O	5:E:120:ILE:HG22	2.09	0.53
5:E:905:ILE:HG22	5:E:981:VAL:CG1	2.39	0.53
5:E:1460:GLY:HA2	5:E:1725:GLU:O	2.08	0.53
5:E:1945:LEU:HA	5:E:1948:MET:HE3	1.90	0.53
5:E:2051:VAL:HG13	5:E:2113:TYR:CZ	2.43	0.53
7:G:250:LEU:CD1	19:L:166:VAL:HG22	2.38	0.53
28:Y:80:LEU:CD1	28:Y:90:GLU:HG2	2.39	0.53
32:Q:725:MET:O	32:Q:728:THR:OG1	2.22	0.53
3:C:198:GLU:HG3	3:C:199:GLU:H	1.74	0.53
3:C:494:LEU:HD21	3:C:562:VAL:HG11	1.91	0.53
3:C:1476:GLN:O	3:C:1476:GLN:HG2	2.08	0.53
3:C:1495:PHE:CD2	3:C:1501:LEU:HD21	2.44	0.53
5:E:138:GLU:O	5:E:142:VAL:HG23	2.09	0.53
5:E:827:ILE:HD12	5:E:868:ILE:HD12	1.91	0.53
5:E:1618:GLY:O	5:E:1644:VAL:HA	2.08	0.53
5:E:1967:THR:OG1	5:E:1969:GLU:HG2	2.09	0.53
6:F:242:SER:O	6:F:250:LEU:HG	2.09	0.53
7:G:464:ARG:HD2	7:G:506:TRP:CD1	2.44	0.53
29:Z:353:GLN:HA	29:Z:356:ARG:HD2	1.91	0.53
32:Q:803:LEU:HD13	32:Q:872:MET:HE1	1.90	0.53
3:C:475:SER:HB3	7:G:108:LEU:HD22	1.91	0.53
3:C:776:LEU:HD22	3:C:900:ASP:HB2	1.90	0.53
3:C:1319:PRO:HG2	3:C:1475:ILE:HD11	1.91	0.53
3:C:1842:ALA:O	3:C:1845:VAL:HG12	2.09	0.53
3:C:1889:LEU:HB3	3:C:2014:MET:HE2	1.90	0.53
3:C:1892:PRO:HD3	3:C:1941:ARG:NH2	2.24	0.53
5:E:499:LEU:HD11	5:E:647:ARG:NH2	2.24	0.53
5:E:566:VAL:HA	5:E:585:ILE:O	2.09	0.53
5:E:1499:ASP:OD2	5:E:1766:GLN:HG3	2.08	0.53
6:F:91:LEU:HD22	6:F:93:TRP:CE2	2.43	0.53

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:410:ALA:HB1	7:G:422:MET:CE	2.39	0.53
9:I:509:GLU:O	9:I:513:PHE:N	2.42	0.53
24:P:78:C:H2'	24:P:79:G:H8	1.74	0.53
25:V:5:TYR:O	25:V:13:SER:HA	2.08	0.53
31:U:259:TYR:OH	31:U:282:ARG:NH2	2.41	0.53
3:C:1555:LEU:HD11	3:C:1574:ILE:HD13	1.90	0.53
3:C:1798:LEU:HD12	3:C:1799:THR:N	2.24	0.53
5:E:484:ILE:HG23	5:E:676:PHE:CE2	2.44	0.53
5:E:618:HIS:H	5:E:618:HIS:CD2	2.27	0.53
5:E:964:LEU:HD23	5:E:995:ASN:ND2	2.23	0.53
5:E:1081:MET:O	5:E:1085:THR:HG23	2.09	0.53
5:E:1307:LEU:H	5:E:1333:THR:HG22	1.74	0.53
5:E:1832:PHE:CE1	5:E:1848:ILE:HG22	2.43	0.53
5:E:1868:LEU:HB3	5:E:1884:PHE:HZ	1.74	0.53
5:E:1900:SER:HA	5:E:1954:TRP:HE1	1.74	0.53
7:G:243:ILE:HD13	31:U:544:LEU:HD11	1.90	0.53
7:G:332:ILE:HD11	7:G:352:LEU:HD12	1.90	0.53
7:G:487:ILE:HD11	7:G:521:THR:HA	1.90	0.53
19:L:61:ALA:O	19:L:64:MET:N	2.41	0.53
19:L:301:LEU:HD22	22:O:65:ILE:HD12	1.91	0.53
20:M:325:ARG:NH2	20:M:343:TYR:OH	2.42	0.53
31:U:135:ALA:HB2	31:U:167:LEU:HD21	1.91	0.53
32:Q:759:HIS:O	32:Q:762:HIS:HB2	2.09	0.53
3:C:555:LYS:HE2	3:C:559:ASP:OD2	2.09	0.52
3:C:736:GLU:O	3:C:740:LEU:HG	2.09	0.52
3:C:803:ALA:O	3:C:807:VAL:HG13	2.09	0.52
3:C:887:THR:CG2	7:G:274:LEU:HD11	2.39	0.52
3:C:1562:MET:CE	3:C:1570:LYS:HA	2.39	0.52
3:C:1802:PRO:HB2	3:C:1824:THR:OG1	2.10	0.52
3:C:2234:GLY:CA	3:C:2255:HIS:HB3	2.39	0.52
5:E:72:ARG:O	5:E:76:GLU:HG2	2.09	0.52
5:E:278:ASP:HB3	5:E:281:VAL:HG12	1.91	0.52
7:G:353:GLN:OE1	7:G:357:THR:OG1	2.21	0.52
9:I:468:GLY:O	9:I:542:ARG:NE	2.38	0.52
19:L:55:TRP:HB3	19:L:106:GLU:OE2	2.08	0.52
30:S:705:LYS:HD3	30:S:706:PRO:CD	2.39	0.52
32:Q:896:HIS:O	32:Q:900:LEU:HG	2.09	0.52
2:B:37:G:C6	2:B:38:C:H1'	2.45	0.52
3:C:1785:VAL:HG13	3:C:1822:ILE:HG12	1.92	0.52
4:D:891:THR:HG22	4:D:894:GLN:H	1.74	0.52
5:E:632:VAL:O	5:E:636:ILE:HG23	2.09	0.52

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:251:LEU:N	6:F:293:TRP:HE1	2.07	0.52
32:Q:682:VAL:HG22	32:Q:688:ASN:HD22	1.73	0.52
32:Q:881:GLU:O	32:Q:885:GLY:N	2.38	0.52
3:C:1637:TRP:O	3:C:1656:THR:HA	2.09	0.52
3:C:1823:HIS:HB3	3:C:1826:VAL:HG23	1.92	0.52
3:C:2068:SER:HB3	3:C:2072:GLU:HB3	1.91	0.52
3:C:2072:GLU:HA	3:C:2075:VAL:HG22	1.91	0.52
5:E:725:VAL:HG21	5:E:731:THR:CA	2.39	0.52
5:E:1521:VAL:HG23	5:E:1698:ASP:O	2.09	0.52
5:E:1832:PHE:CZ	5:E:1922:LEU:HD21	2.45	0.52
7:G:405:ARG:HA	7:G:408:LYS:HZ2	1.75	0.52
8:H:10:SER:O	8:H:14:VAL:HG23	2.09	0.52
20:M:411:TYR:HE2	20:M:451:LEU:HD13	1.73	0.52
24:P:70:A:OP1	26:W:42:ASN:ND2	2.42	0.52
3:C:122:ILE:HB	3:C:481:PHE:O	2.09	0.52
3:C:1624:SER:HA	3:C:1687:TYR:CE1	2.45	0.52
3:C:1730:MET:HA	3:C:1730:MET:CE	2.39	0.52
3:C:1794:PHE:HD2	3:C:1795:GLU:HG2	1.75	0.52
3:C:1853:PRO:HD2	3:C:1856:GLU:HB2	1.91	0.52
3:C:1895:ALA:HA	3:C:1898:LYS:HD3	1.91	0.52
3:C:1971:LEU:HB2	3:C:1976:TRP:CE2	2.45	0.52
4:D:749:THR:HB	4:D:754:VAL:CG2	2.39	0.52
5:E:543:PRO:HD2	5:E:547:LEU:HD23	1.92	0.52
5:E:837:GLU:O	5:E:1026:ASN:HB2	2.08	0.52
5:E:864:LYS:NZ	5:E:865:GLY:O	2.42	0.52
5:E:896:LYS:O	5:E:900:MET:HG2	2.09	0.52
5:E:931:ARG:NE	5:E:931:ARG:HA	2.24	0.52
5:E:1040:LEU:HD11	5:E:1072:LEU:CD1	2.40	0.52
5:E:1411:GLU:HB2	5:E:1414:THR:OG1	2.09	0.52
5:E:1547:TYR:HB2	5:E:1576:ILE:HD12	1.91	0.52
5:E:1589:PHE:HB3	5:E:1642:GLN:HB3	1.91	0.52
6:F:277:PHE:CE1	6:F:317:ARG:HD2	2.43	0.52
6:F:311:VAL:HB	6:F:321:TYR:HB2	1.91	0.52
29:Z:333:ALA:HA	29:Z:336:LYS:CB	2.37	0.52
3:C:158:ARG:HH22	3:C:573:GLN:HE21	1.58	0.52
3:C:518:LEU:HD12	3:C:523:ASN:O	2.09	0.52
3:C:1784:ASN:OD1	5:E:202:ASN:ND2	2.42	0.52
3:C:1794:PHE:CD2	3:C:1795:GLU:HG2	2.45	0.52
3:C:1963:GLU:OE2	3:C:1970:THR:HG21	2.09	0.52
5:E:514:LEU:HD13	5:E:558:ARG:HE	1.73	0.52
5:E:539:ILE:HG13	5:E:541:ILE:HD12	1.92	0.52

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:618:HIS:C	5:E:620:LEU:N	2.63	0.52
7:G:299:LYS:HA	7:G:302:ARG:NE	2.24	0.52
8:H:32:ARG:HB3	8:H:34:GLU:OE1	2.10	0.52
9:I:689:TYR:HB3	9:I:717:ILE:HD12	1.91	0.52
20:M:299:CYS:HA	20:M:305:VAL:HG12	1.91	0.52
3:C:95:MET:HE2	3:C:126:ILE:HG22	1.92	0.52
3:C:532:THR:O	3:C:535:ARG:HB2	2.10	0.52
3:C:658:ARG:HA	7:G:89:PHE:CB	2.39	0.52
3:C:732:PRO:HG2	3:C:735:ILE:HD12	1.92	0.52
3:C:774:LYS:O	3:C:778:ARG:HG3	2.09	0.52
3:C:858:GLN:O	3:C:862:GLU:HG2	2.10	0.52
3:C:923:ASP:OD2	3:C:1439:ARG:HD3	2.10	0.52
5:E:831:THR:HB	5:E:879:TYR:OH	2.10	0.52
5:E:1151:GLU:N	5:E:1151:GLU:OE2	2.42	0.52
5:E:1429:PRO:CG	5:E:1467:LEU:HD13	2.37	0.52
5:E:2031:SER:HB2	5:E:2098:ALA:HB2	1.90	0.52
6:F:89:LEU:HD12	6:F:105:LEU:O	2.10	0.52
6:F:197:LEU:HD11	6:F:237:SER:HB3	1.91	0.52
7:G:152:VAL:HG23	7:G:156:GLU:OE1	2.10	0.52
8:H:135:ASP:OD2	8:H:137:LYS:HB3	2.09	0.52
24:P:66:A:C5	24:P:72:A:C5	2.97	0.52
3:C:86:ARG:HG3	7:G:101:ALA:CB	2.39	0.52
3:C:724:ILE:HB	3:C:725:PRO:HD2	1.92	0.52
3:C:1307:MET:HA	3:C:1307:MET:CE	2.39	0.52
3:C:1895:ALA:CB	3:C:1943:LEU:HD22	2.37	0.52
4:D:352:LYS:HG3	4:D:353:THR:HG23	1.91	0.52
4:D:779:LEU:O	4:D:938:ARG:NH1	2.36	0.52
5:E:296:ALA:HB3	5:E:325:ARG:NH1	2.24	0.52
5:E:500:LEU:HD22	5:E:662:ALA:HB2	1.92	0.52
5:E:686:GLU:N	5:E:864:LYS:HZ3	2.08	0.52
5:E:1071:LYS:HA	5:E:1071:LYS:HE2	1.91	0.52
5:E:1300:GLU:OE2	5:E:1302:LEU:HD23	2.10	0.52
5:E:2068:ILE:HD11	5:E:2092:LEU:HD22	1.91	0.52
5:E:2069:GLY:HA2	5:E:2077:ILE:N	2.25	0.52
6:F:172:ASP:O	6:F:195:GLN:HG3	2.09	0.52
6:F:238:VAL:HG22	6:F:254:ALA:HB2	1.92	0.52
7:G:700:GLU:O	7:G:704:HIS:ND1	2.40	0.52
8:H:136:PRO:HA	8:H:139:ILE:CD1	2.37	0.52
32:Q:772:MET:HE3	32:Q:776:GLU:CG	2.40	0.52
3:C:886:LEU:HD11	7:G:273:TYR:CD1	2.45	0.52
3:C:995:ARG:HG3	7:G:255:LEU:HD13	1.91	0.52

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:380:ILE:O	4:D:384:VAL:HG23	2.10	0.52
5:E:1729:ASP:HA	5:E:1732:MET:HE2	1.91	0.52
5:E:2038:LEU:HG	5:E:2040:GLN:NE2	2.24	0.52
6:F:183:LYS:HG3	6:F:187:ILE:HD11	1.90	0.52
7:G:135:ARG:HH22	31:U:461:ASN:HA	1.74	0.52
7:G:336:THR:CG2	7:G:345:VAL:HG12	2.40	0.52
9:I:736:VAL:O	9:I:764:ALA:HA	2.10	0.52
3:C:1778:TRP:CD2	3:C:1858:PRO:HG3	2.45	0.52
3:C:1784:ASN:CB	3:C:1897:LEU:HD11	2.39	0.52
3:C:1792:LYS:CE	3:C:1798:LEU:HD22	2.37	0.52
4:D:308:CYS:HB2	4:D:433:MET:CE	2.39	0.52
4:D:413:ARG:HB2	4:D:414:PRO:HD3	1.92	0.52
5:E:566:VAL:HG22	5:E:585:ILE:CB	2.33	0.52
5:E:655:LEU:HD11	5:E:887:LEU:HB3	1.91	0.52
5:E:701:PHE:O	5:E:704:MET:HG3	2.09	0.52
5:E:724:PHE:HA	5:E:811:SER:O	2.10	0.52
5:E:826:VAL:O	5:E:827:ILE:HD13	2.10	0.52
5:E:1094:ALA:O	5:E:1098:ILE:HG13	2.10	0.52
5:E:1432:TRP:NE1	5:E:1474:MET:SD	2.83	0.52
5:E:2038:LEU:HD13	5:E:2091:LYS:HG3	1.92	0.52
6:F:156:SER:HB3	6:F:198:ALA:HA	1.90	0.52
6:F:177:LYS:HG2	6:F:189:THR:CG2	2.32	0.52
6:F:263:ASP:OD1	6:F:272:ARG:HG3	2.10	0.52
7:G:134:GLU:HG3	7:G:135:ARG:HG2	1.92	0.52
8:H:8:LEU:N	8:H:60:LEU:O	2.37	0.52
3:C:488:ASP:OD1	3:C:489:TRP:N	2.43	0.52
3:C:697:MET:CE	3:C:702:LYS:HA	2.40	0.52
3:C:781:ARG:HG2	3:C:1022:MET:CE	2.40	0.52
3:C:836:THR:O	3:C:840:ILE:HG12	2.09	0.52
4:D:736:GLY:HA3	4:D:741:GLY:HA3	1.91	0.52
5:E:774:LEU:HD22	5:E:784:ILE:HD11	1.91	0.52
5:E:828:ILE:CB	5:E:869:LEU:HD12	2.39	0.52
5:E:1072:LEU:HD21	5:E:1077:LEU:CB	2.39	0.52
5:E:1180:LEU:O	5:E:1215:HIS:NE2	2.41	0.52
5:E:1271:VAL:HG22	5:E:1279:GLU:CG	2.39	0.52
5:E:1439:TRP:CE3	5:E:1477:ILE:HG12	2.45	0.52
5:E:1672:LYS:HG2	5:E:1860:ILE:HG21	1.92	0.52
5:E:1814:ASN:HA	5:E:1817:MET:HG2	1.92	0.52
5:E:2066:VAL:HG23	5:E:2082:LEU:CD1	2.40	0.52
7:G:474:GLU:HB2	7:G:483:VAL:HG22	1.92	0.52
22:O:24:ASP:OD1	22:O:28:GLN:NE2	2.43	0.52

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:W:84:ARG:HG2	26:W:91:SER:HA	1.92	0.52
28:Y:85:TYR:HE2	28:Y:148:ASN:H	1.57	0.52
31:U:301:GLN:O	31:U:304:VAL:HG12	2.10	0.52
3:C:1644:LEU:HA	3:C:1715:TYR:HA	1.92	0.51
3:C:1658:GLN:H	3:C:1659:LYS:NZ	2.07	0.51
5:E:63:MET:O	5:E:67:ARG:HG3	2.11	0.51
5:E:112:THR:OG1	5:E:179:ILE:HG22	2.10	0.51
5:E:1390:TYR:CD2	5:E:1407:LEU:HB2	2.45	0.51
6:F:55:LEU:HD12	6:F:355:GLU:HG3	1.91	0.51
7:G:152:VAL:HA	7:G:156:GLU:OE1	2.09	0.51
7:G:299:LYS:HA	7:G:302:ARG:CG	2.39	0.51
7:G:405:ARG:HA	7:G:408:LYS:HG2	1.92	0.51
7:G:423:LEU:HB3	7:G:440:LEU:HD13	1.92	0.51
9:I:483:GLN:HA	9:I:486:GLU:CG	2.41	0.51
24:P:64:A:C2	27:X:130:ARG:HG3	2.45	0.51
31:U:357:THR:HB	31:U:382:THR:OG1	2.09	0.51
3:C:844:GLU:OE1	3:C:871:TYR:OH	2.29	0.51
3:C:1592:ASP:OD2	30:S:712:TYR:OH	2.28	0.51
3:C:1990:ASP:O	3:C:1994:LYS:HG2	2.10	0.51
3:C:2072:GLU:HG3	3:C:2072:GLU:O	2.10	0.51
5:E:111:GLU:O	5:E:115:VAL:HG23	2.08	0.51
5:E:1102:ARG:HG2	5:E:1104:TRP:CZ2	2.46	0.51
6:F:118:ASN:OD1	6:F:161:ARG:HA	2.10	0.51
6:F:197:LEU:HD13	6:F:239:THR:HG22	1.92	0.51
7:G:329:ARG:HG2	7:G:352:LEU:CB	2.34	0.51
9:I:428:ASN:O	9:I:588:MET:HE3	2.10	0.51
9:I:556:ASP:OD2	9:I:726:ARG:HD2	2.11	0.51
27:X:37:TYR:HB3	27:X:39:GLN:NE2	2.22	0.51
32:Q:853:ARG:HD2	32:Q:891:GLY:O	2.10	0.51
1:A:3:A:N7	28:Y:222:ARG:HD2	2.24	0.51
3:C:1090:ARG:HG3	3:C:1095:ILE:CG2	2.40	0.51
4:D:153:THR:HG1	4:D:154:HIS:CE1	2.29	0.51
4:D:159:LYS:CA	4:D:165:LEU:HD23	2.38	0.51
5:E:203:VAL:CG1	7:G:301:VAL:HG12	2.34	0.51
5:E:835:SER:HG	5:E:838:LYS:HB2	1.75	0.51
5:E:916:ALA:HB3	5:E:957:VAL:HG11	1.93	0.51
5:E:1451:PHE:O	5:E:1487:ILE:HA	2.10	0.51
5:E:1838:ALA:HB2	5:E:1935:TRP:CE2	2.45	0.51
5:E:1999:LEU:H	5:E:1999:LEU:HD23	1.75	0.51
6:F:255:MET:HA	6:F:282:HIS:CD2	2.46	0.51
7:G:250:LEU:HD21	19:L:170:THR:HB	1.92	0.51

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:W:149:GLU:OE2	26:W:149:GLU:N	2.34	0.51
28:Y:86:THR:O	28:Y:87:LYS:C	2.47	0.51
32:Q:899:LYS:HE2	32:Q:929:PHE:HE2	1.74	0.51
3:C:301:LYS:HG2	4:D:939:ARG:HB3	1.91	0.51
3:C:657:ALA:O	7:G:89:PHE:HB2	2.09	0.51
3:C:884:HIS:ND1	3:C:888:GLN:OE1	2.42	0.51
3:C:1505:LYS:HD3	19:L:376:ASN:HA	1.92	0.51
3:C:1772:PHE:CE1	3:C:1930:TYR:HA	2.46	0.51
3:C:2067:PHE:O	3:C:2072:GLU:HB3	2.11	0.51
3:C:2128:LEU:HD23	3:C:2142:ILE:HG12	1.92	0.51
5:E:611:LEU:HD12	5:E:647:ARG:HB3	1.92	0.51
5:E:625:GLY:N	5:E:626:PRO:CD	2.74	0.51
5:E:1452:VAL:HG22	5:E:1488:VAL:HB	1.91	0.51
5:E:1515:HIS:O	5:E:1518:VAL:HG12	2.10	0.51
5:E:1521:VAL:CG2	5:E:1699:GLU:HA	2.40	0.51
5:E:1598:ILE:HA	5:E:1601:LEU:HG	1.93	0.51
5:E:1620:LEU:HD12	5:E:1621:HIS:N	2.26	0.51
6:F:290:ARG:HG3	6:F:332:GLU:OE1	2.10	0.51
7:G:123:ARG:NH2	7:G:124:GLU:HG3	2.24	0.51
9:I:480:LEU:HA	9:I:483:GLN:HE22	1.75	0.51
9:I:606:THR:OG1	9:I:607:ALA:N	2.43	0.51
17:J:87:C:H2'	17:J:88:A:O4'	2.10	0.51
18:K:65:U:P	18:K:66:G:H5'	2.51	0.51
19:L:64:MET:HG3	19:L:68:GLU:OE2	2.11	0.51
20:M:389:GLY:HA3	20:M:403:LEU:HD12	1.92	0.51
24:P:45:U:H2'	24:P:46:G:H8	1.74	0.51
31:U:270:MET:SD	31:U:306:CYS:HB3	2.50	0.51
2:B:7:U:OP1	6:F:184:LYS:HB2	2.09	0.51
3:C:273:ILE:HG23	3:C:274:PRO:HD2	1.92	0.51
3:C:1358:SER:HG	3:C:1360:GLU:HG3	1.75	0.51
3:C:1506:ALA:HB3	19:L:376:ASN:OD1	2.10	0.51
3:C:2288:HIS:HA	3:C:2292:MET:HE1	1.92	0.51
4:D:159:LYS:HE3	4:D:164:ASP:HA	1.91	0.51
5:E:688:THR:HB	5:E:868:ILE:HG12	1.91	0.51
5:E:1033:GLU:HB2	5:E:1077:LEU:HD11	1.93	0.51
5:E:1475:ARG:NH1	5:E:1503:TRP:O	2.44	0.51
5:E:2026:LYS:CD	5:E:2124:VAL:HA	2.41	0.51
5:E:2106:LEU:O	5:E:2119:GLU:HA	2.11	0.51
7:G:278:ASN:O	7:G:281:ILE:HG22	2.10	0.51
7:G:332:ILE:CD1	7:G:352:LEU:HD12	2.40	0.51
7:G:374:ARG:HA	7:G:377:ILE:HG22	1.91	0.51

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:464:ARG:HD2	7:G:506:TRP:HD1	1.74	0.51
7:G:581:ALA:C	7:G:613:MET:HE1	2.31	0.51
9:I:193:LYS:HG3	9:I:197:GLN:NE2	2.26	0.51
9:I:431:ILE:HB	9:I:603:VAL:HA	1.93	0.51
23:R:133:MET:N	23:R:133:MET:SD	2.83	0.51
30:S:554:ASN:OD1	30:S:557:SER:HB3	2.11	0.51
32:Q:899:LYS:HE2	32:Q:929:PHE:CE2	2.45	0.51
3:C:948:PRO:HB2	3:C:949:PRO:HD3	1.92	0.51
3:C:1322:LEU:HD21	19:L:380:PHE:O	2.11	0.51
3:C:1798:LEU:HD21	7:G:314:ALA:HB2	1.93	0.51
4:D:134:LEU:HD13	4:D:202:ILE:HG23	1.93	0.51
4:D:259:LYS:HG2	35:D:1500:GTP:C6	2.45	0.51
4:D:758:LEU:HD22	4:D:803:ARG:NH1	2.25	0.51
5:E:537:LYS:O	5:E:609:VAL:HA	2.11	0.51
5:E:619:LEU:HD22	5:E:622:ASP:HB3	1.93	0.51
5:E:824:HIS:CD2	5:E:866:GLU:OE1	2.64	0.51
5:E:850:LEU:HD11	5:E:882:LEU:HD11	1.92	0.51
5:E:1010:SER:HB3	5:E:1013:GLU:OE2	2.11	0.51
5:E:1210:TRP:CZ3	5:E:1241:LEU:HD22	2.46	0.51
5:E:1417:LYS:O	5:E:1421:LYS:HG2	2.10	0.51
5:E:1930:LEU:HD11	5:E:1939:ALA:HA	1.92	0.51
5:E:1935:TRP:HB3	5:E:1938:PRO:CD	2.41	0.51
6:F:55:LEU:HD21	6:F:353:MET:CE	2.41	0.51
7:G:240:MET:HB2	31:U:408:LEU:HD22	1.92	0.51
7:G:325:LEU:HD12	7:G:329:ARG:HE	1.74	0.51
7:G:543:TRP:CZ3	7:G:569:VAL:HG11	2.45	0.51
9:I:183:GLU:HB3	9:I:186:ARG:HH21	1.75	0.51
9:I:322:ASP:O	9:I:326:LYS:HG3	2.10	0.51
3:C:531:THR:N	3:C:534:GLU:OE2	2.35	0.51
3:C:732:PRO:CG	3:C:735:ILE:HD12	2.40	0.51
3:C:1742:VAL:HG21	30:S:726:PHE:CD2	2.45	0.51
3:C:2328:ALA:N	5:E:1078:MET:HE1	2.17	0.51
4:D:706:GLN:HB3	4:D:708:THR:HG22	1.92	0.51
5:E:1381:PRO:HA	5:E:1429:PRO:CD	2.41	0.51
5:E:1610:LYS:HA	5:E:1613:LEU:HD21	1.93	0.51
7:G:329:ARG:HB3	7:G:353:GLN:CG	2.40	0.51
7:G:567:LEU:HD23	7:G:576:VAL:HG12	1.91	0.51
8:H:117:GLU:OE2	19:L:346:PRO:HD2	2.11	0.51
30:S:716:THR:CG2	30:S:718:ARG:HG3	2.37	0.51
31:U:230:ILE:O	31:U:313:ILE:HG22	2.11	0.51
31:U:508:LYS:HB2	31:U:511:GLU:HG2	1.93	0.51

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:822:MET:HA	4:D:822:MET:CE	2.41	0.51
5:E:629:GLU:OE1	5:E:893:MET:HB2	2.11	0.51
5:E:700:ARG:O	5:E:703:ILE:HG22	2.11	0.51
5:E:1525:LEU:HD12	5:E:1702:CYS:HB3	1.93	0.51
5:E:1898:HIS:CE1	5:E:1952:ALA:HB2	2.46	0.51
6:F:115:LEU:O	6:F:116:HIS:ND1	2.44	0.51
6:F:276:ILE:H	6:F:317:ARG:CZ	2.24	0.51
7:G:315:SER:O	7:G:319:GLU:HG3	2.11	0.51
9:I:420:GLN:O	9:I:423:PRO:HD2	2.11	0.51
9:I:671:VAL:O	9:I:721:THR:HG22	2.11	0.51
28:Y:79:ARG:HH12	28:Y:83:MET:HB2	1.76	0.51
28:Y:173:LYS:HG3	28:Y:176:ARG:HH12	1.76	0.51
2:B:55:C:O2'	2:B:56:C:H5'	2.11	0.51
3:C:227:ARG:HG3	3:C:416:GLY:O	2.10	0.51
3:C:511:LYS:CB	3:C:513:LEU:HG	2.40	0.51
3:C:860:GLN:HA	3:C:863:GLU:HG2	1.93	0.51
3:C:1088:PHE:HD1	3:C:1097:ILE:HG12	1.76	0.51
3:C:2231:THR:OG1	3:C:2255:HIS:O	2.22	0.51
4:D:668:GLU:O	4:D:823:ALA:HB1	2.10	0.51
5:E:1244:LYS:HD2	5:E:1245:TYR:CZ	2.46	0.51
5:E:1585:GLN:HB2	5:E:1588:ARG:HB2	1.93	0.51
5:E:1598:ILE:HA	5:E:1601:LEU:CD2	2.41	0.51
5:E:1837:ASN:O	5:E:1840:THR:HG22	2.11	0.51
5:E:1838:ALA:O	5:E:1938:PRO:HG3	2.11	0.51
6:F:130:ASP:N	6:F:130:ASP:OD1	2.44	0.51
6:F:326:HIS:HE2	6:F:344:SER:HB3	1.76	0.51
7:G:19:PRO:O	8:H:11:LYS:NZ	2.39	0.51
7:G:536:GLU:O	7:G:540:LYS:N	2.38	0.51
9:I:178:GLN:HA	9:I:181:VAL:HG22	1.92	0.51
9:I:328:ARG:NH1	9:I:336:GLU:HG2	2.26	0.51
19:L:58:LYS:O	19:L:59:MET:C	2.49	0.51
21:N:573:VAL:HG22	21:N:582:VAL:HA	1.93	0.51
22:O:36:ARG:HG3	22:O:41:GLU:HB3	1.93	0.51
25:V:84:GLU:HA	25:V:87:ILE:HG12	1.92	0.51
28:Y:78:CYS:O	28:Y:79:ARG:C	2.48	0.51
3:C:88:TYR:CD2	3:C:89:LEU:HD23	2.46	0.51
3:C:1592:ASP:HB3	3:C:1733:ILE:HD11	1.93	0.51
3:C:2330:ARG:HG2	3:C:2331:GLU:H	1.76	0.51
4:D:137:HIS:O	4:D:142:LYS:NZ	2.41	0.51
5:E:1463:ASN:O	5:E:1466:VAL:HG22	2.11	0.51
6:F:299:LYS:HG2	6:F:320:LEU:HD12	1.92	0.51

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:301:VAL:HA	7:G:304:THR:CG2	2.41	0.51
7:G:457:ARG:HD2	7:G:467:TRP:CE2	2.46	0.51
7:G:659:GLU:HG3	7:G:662:ARG:HH12	1.75	0.51
30:S:709:LYS:HD3	30:S:710:ILE:N	2.26	0.51
30:S:755:LEU:HA	30:S:758:LYS:HD2	1.91	0.51
31:U:360:LEU:HD13	31:U:361:PRO:HD3	1.91	0.51
32:Q:754:PHE:HB2	32:Q:766:VAL:HG12	1.92	0.51
3:C:91:ALA:O	3:C:126:ILE:HD13	2.10	0.50
3:C:154:GLU:HG3	3:C:158:ARG:HD3	1.92	0.50
3:C:855:ARG:NH2	3:C:1514:LYS:HD2	2.26	0.50
5:E:639:ILE:HG23	5:E:644:GLU:O	2.10	0.50
5:E:963:MET:HG3	5:E:966:LYS:HE3	1.93	0.50
5:E:983:GLU:HG3	5:E:987:ILE:HD11	1.92	0.50
5:E:1438:ARG:HB2	5:E:1442:ARG:NE	2.25	0.50
5:E:1630:ARG:O	5:E:1633:GLU:HG3	2.11	0.50
5:E:1672:LYS:HZ2	5:E:1887:PRO:HG3	1.76	0.50
6:F:53:SER:HB3	6:F:355:GLU:HG2	1.93	0.50
6:F:81:LEU:HD21	6:F:343:ILE:HD13	1.92	0.50
7:G:509:ASP:O	7:G:512:GLU:HG3	2.11	0.50
7:G:514:ASP:CB	7:G:555:ALA:HB2	2.41	0.50
9:I:193:LYS:HG3	9:I:197:GLN:HE21	1.76	0.50
9:I:428:ASN:HD22	9:I:601:GLN:CD	2.15	0.50
9:I:675:LYS:O	9:I:679:VAL:HG23	2.11	0.50
18:K:52:A:H2'	18:K:53:G:H8	1.75	0.50
18:K:53:G:H1	18:K:64:C:H42	1.59	0.50
18:K:64:C:H2'	18:K:65:U:C6	2.47	0.50
27:X:64:LEU:HB2	27:X:108:ASP:OD2	2.11	0.50
32:Q:718:ILE:HD13	32:Q:759:HIS:CE1	2.46	0.50
32:Q:822:LEU:HG	32:Q:833:CYS:SG	2.51	0.50
3:C:30:LEU:HD22	6:F:214:ASP:HA	1.94	0.50
3:C:564:TYR:CB	3:C:574:LEU:HD22	2.42	0.50
3:C:926:LEU:HD11	3:C:1009:MET:HE2	1.93	0.50
3:C:1135:PRO:HD2	3:C:1138:ALA:CB	2.40	0.50
3:C:1403:LEU:HD12	3:C:1403:LEU:H	1.76	0.50
3:C:1839:TRP:CZ3	3:C:1871:PRO:HA	2.46	0.50
4:D:308:CYS:HB2	4:D:433:MET:HE2	1.92	0.50
5:E:756:SER:O	5:E:760:GLU:HG2	2.10	0.50
5:E:1228:VAL:HG22	5:E:1265:GLN:O	2.10	0.50
5:E:1456:VAL:HG12	5:E:1491:SER:CB	2.39	0.50
5:E:2078:SER:OG	5:E:2094:PHE:HB3	2.12	0.50
9:I:646:MET:HE1	9:I:650:GLU:HB3	1.92	0.50

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:L:128:LEU:HD22	19:L:166:VAL:HG11	1.92	0.50
20:M:257:LEU:HD21	20:M:296:LEU:HD11	1.93	0.50
24:P:66:A:OP2	24:P:66:A:H4'	2.12	0.50
32:Q:862:ILE:HD11	32:Q:864:LYS:HB3	1.93	0.50
32:Q:965:LEU:HD22	32:Q:969:GLN:OE1	2.11	0.50
3:C:121:HIS:CD2	3:C:481:PHE:HB3	2.46	0.50
3:C:227:ARG:HB2	3:C:227:ARG:CZ	2.41	0.50
3:C:1469:ASN:ND2	5:E:55:LYS:O	2.42	0.50
3:C:1604:LEU:HB3	3:C:1719:PHE:CZ	2.46	0.50
3:C:2289:ASP:H	3:C:2292:MET:CE	2.24	0.50
5:E:686:GLU:H	5:E:864:LYS:HZ3	1.59	0.50
5:E:828:ILE:HD11	5:E:853:LEU:HD21	1.92	0.50
5:E:848:ASP:O	5:E:852:MET:HG2	2.11	0.50
5:E:1149:PRO:HD2	5:E:1152:ARG:HG3	1.92	0.50
5:E:1271:VAL:HG22	5:E:1279:GLU:HG3	1.94	0.50
5:E:1438:ARG:HD3	5:E:1442:ARG:NH2	2.27	0.50
5:E:1534:HIS:CE1	5:E:1536:GLN:HB2	2.47	0.50
5:E:1607:SER:O	5:E:1611:GLU:HG2	2.11	0.50
5:E:1660:LEU:HA	5:E:1701:ARG:O	2.10	0.50
5:E:2029:ILE:HG22	5:E:2125:ASP:HB2	1.93	0.50
6:F:260:ARG:HD3	6:F:276:ILE:HA	1.93	0.50
27:X:64:LEU:N	27:X:108:ASP:HB3	2.25	0.50
32:Q:850:LEU:HD23	32:Q:860:ILE:CD1	2.41	0.50
32:Q:884:THR:CG2	32:Q:959:LEU:HA	2.38	0.50
3:C:1644:LEU:CD1	3:C:1677:GLU:HB2	2.42	0.50
3:C:1771:LEU:HA	3:C:1777:ILE:CD1	2.39	0.50
4:D:264:ILE:HG12	4:D:378:TYR:CE1	2.47	0.50
4:D:381:LEU:HD22	4:D:416:LEU:HD11	1.94	0.50
4:D:828:MET:HE3	4:D:904:TRP:HB3	1.92	0.50
5:E:544:MET:HB2	5:E:547:LEU:HB2	1.94	0.50
5:E:917:VAL:HG13	5:E:953:ARG:HB2	1.94	0.50
5:E:1188:VAL:HG23	5:E:1200:VAL:HG13	1.92	0.50
5:E:1861:ARG:HB2	5:E:1864:GLU:OE1	2.11	0.50
5:E:1872:ALA:O	5:E:1875:VAL:HG22	2.11	0.50
6:F:239:THR:N	6:F:253:ASN:O	2.43	0.50
7:G:239:ASP:OD2	7:G:242:LYS:HG2	2.11	0.50
7:G:437:TRP:CE3	7:G:456:ALA:HB2	2.46	0.50
7:G:556:LEU:HD22	7:G:587:HIS:HB3	1.93	0.50
9:I:422:ILE:HD12	9:I:447:ILE:HB	1.93	0.50
9:I:432:ILE:CG2	9:I:626:VAL:HG13	2.42	0.50
18:K:58:U:H1'	18:K:60:G:C6	2.46	0.50

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:U:227:LEU:HD21	31:U:284:LEU:HD21	1.92	0.50
32:Q:736:LEU:HD13	32:Q:767:PHE:CE1	2.46	0.50
3:C:1317:TYR:CE1	3:C:1329:SER:HB3	2.47	0.50
3:C:1771:LEU:HD23	3:C:1777:ILE:HG21	1.94	0.50
5:E:1314:ASN:HB3	5:E:1317:PHE:CD2	2.46	0.50
5:E:2101:ALA:HB2	5:E:2125:ASP:C	2.31	0.50
7:G:387:ARG:HA	7:G:390:LYS:HE2	1.91	0.50
7:G:581:ALA:HB3	7:G:613:MET:SD	2.51	0.50
8:H:26:LEU:HD12	8:H:27:VAL:N	2.26	0.50
9:I:317:SER:O	9:I:318:ARG:HG2	2.11	0.50
9:I:426:LEU:O	9:I:427:GLN:C	2.49	0.50
27:X:106:THR:OG1	27:X:107:GLU:N	2.44	0.50
32:Q:778:LEU:HD11	32:Q:885:GLY:HA2	1.93	0.50
1:A:3:A:N3	24:P:61:U:O2'	2.36	0.50
2:B:3:A:H2'	2:B:3:A:N3	2.27	0.50
4:D:859:GLN:HG2	4:D:860:ASP:H	1.76	0.50
5:E:550:GLU:HG3	5:E:818:GLY:O	2.10	0.50
5:E:795:THR:O	5:E:798:GLU:HG2	2.12	0.50
5:E:897:LEU:HB3	5:E:898:PRO:HD3	1.93	0.50
5:E:1383:GLU:OE2	5:E:1428:THR:HG21	2.11	0.50
5:E:1764:MET:HB3	5:E:1773:LEU:CD1	2.42	0.50
5:E:1822:TYR:CE2	5:E:1925:ALA:HA	2.46	0.50
6:F:63:SER:HA	6:F:350:ARG:HH21	1.75	0.50
6:F:261:VAL:CG1	6:F:275:LYS:HE2	2.41	0.50
9:I:382:LYS:HE2	9:I:626:VAL:HB	1.93	0.50
9:I:424:ILE:H	9:I:424:ILE:HD12	1.77	0.50
24:P:31:U:H2'	24:P:32:A:C8	2.46	0.50
31:U:250:ARG:HD2	31:U:285:TRP:CE2	2.46	0.50
31:U:359:LYS:HG2	31:U:379:TYR:CD1	2.46	0.50
32:Q:693:THR:OG1	32:Q:701:VAL:HB	2.11	0.50
32:Q:748:PHE:HB3	32:Q:805:LEU:HB2	1.93	0.50
32:Q:799:LEU:O	32:Q:803:LEU:HG	2.11	0.50
32:Q:884:THR:CG2	32:Q:959:LEU:HD12	2.40	0.50
3:C:1962:THR:HB	3:C:1969:PRO:HA	1.92	0.50
5:E:70:LYS:HG3	5:E:217:TYR:HE1	1.77	0.50
5:E:573:HIS:NE2	5:E:601:GLY:HA2	2.26	0.50
5:E:602:GLU:OE2	5:E:605:TYR:HB2	2.12	0.50
5:E:707:ILE:O	5:E:711:LYS:HG2	2.11	0.50
5:E:1764:MET:HE2	5:E:1773:LEU:HD11	1.94	0.50
5:E:1803:SER:OG	5:E:1811:ALA:HB3	2.12	0.50
7:G:474:GLU:HA	7:G:477:ASN:HB2	1.93	0.50

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:8:LEU:HG	8:H:59:TYR:HB3	1.94	0.50
18:K:48:G:OP2	21:N:601:ARG:NE	2.44	0.50
26:W:79:ARG:N	26:W:98:GLU:OE1	2.45	0.50
28:Y:24:SER:OG	28:Y:27:ARG:NH2	2.40	0.50
32:Q:682:VAL:HG22	32:Q:688:ASN:ND2	2.27	0.50
32:Q:778:LEU:HD11	32:Q:885:GLY:CA	2.42	0.50
32:Q:810:ASN:O	32:Q:841:VAL:HG23	2.11	0.50
2:B:37:G:O6	2:B:43:U:O2'	2.29	0.50
3:C:317:PRO:O	3:C:321:ASN:HB2	2.11	0.50
3:C:440:PRO:O	3:C:443:VAL:HG22	2.11	0.50
3:C:2196:HIS:CD2	3:C:2213:ILE:HD11	2.47	0.50
5:E:484:ILE:HG23	5:E:676:PHE:CZ	2.46	0.50
5:E:538:ILE:HG12	5:E:611:LEU:HB3	1.94	0.50
5:E:623:ASP:O	5:E:624:ARG:CB	2.59	0.50
5:E:1465:PRO:HB3	5:E:1728:LEU:HD12	1.94	0.50
5:E:1699:GLU:OE1	5:E:1699:GLU:N	2.44	0.50
5:E:2041:LEU:CB	5:E:2084:LEU:HD13	2.41	0.50
6:F:132:THR:HG21	6:F:148:LYS:HG2	1.93	0.50
6:F:166:LEU:CD2	6:F:178:LEU:HD21	2.42	0.50
7:G:344:ASP:OD1	7:G:345:VAL:HG23	2.12	0.50
7:G:556:LEU:CD1	7:G:587:HIS:HB3	2.41	0.50
7:G:780:TRP:HZ3	7:G:799:LEU:HD22	1.76	0.50
9:I:183:GLU:OE1	9:I:186:ARG:NH2	2.45	0.50
30:S:559:PHE:O	30:S:562:THR:HG22	2.12	0.50
32:Q:774:LEU:HD13	32:Q:882:LEU:CD2	2.42	0.50
32:Q:778:LEU:CD2	32:Q:885:GLY:HA2	2.40	0.50
3:C:1471:ARG:CZ	19:L:383:ILE:CG2	2.84	0.50
5:E:158:ASP:CA	5:E:163:GLN:HB3	2.35	0.50
5:E:302:CYS:O	5:E:306:LEU:HG	2.12	0.50
5:E:525:ILE:HA	5:E:531:ILE:HD12	1.94	0.50
5:E:688:THR:HB	5:E:868:ILE:HA	1.93	0.50
5:E:734:THR:OG1	5:E:829:LYS:NZ	2.45	0.50
5:E:905:ILE:HG22	5:E:981:VAL:HG13	1.93	0.50
5:E:1170:MET:O	5:E:1174:ILE:HG12	2.12	0.50
5:E:1379:ILE:HG13	5:E:1451:PHE:CZ	2.46	0.50
5:E:1564:PRO:HA	5:E:1679:TYR:OH	2.12	0.50
5:E:1581:ALA:HA	5:E:1586:ARG:CG	2.39	0.50
6:F:53:SER:CB	6:F:355:GLU:HG2	2.42	0.50
7:G:325:LEU:HD11	7:G:329:ARG:HH21	1.75	0.50
18:K:52:A:C2	23:R:22:TYR:HB2	2.47	0.50
19:L:210:SER:O	19:L:213:SER:N	2.45	0.50

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:Z:374:ARG:NH2	29:Z:378:GLU:OE2	2.41	0.50
32:Q:699:SER:HB2	32:Q:718:ILE:O	2.12	0.50
2:B:17:U:H2'	2:B:18:C:C6	2.46	0.49
2:B:52:U:O2'	2:B:53:U:H5'	2.12	0.49
3:C:371:LEU:HD21	4:D:344:TRP:O	2.12	0.49
3:C:480:LYS:HA	3:C:480:LYS:HE3	1.94	0.49
3:C:1374:PRO:HG3	5:E:52:MET:HG2	1.94	0.49
3:C:1788:VAL:HA	3:C:1802:PRO:HA	1.94	0.49
4:D:205:THR:HB	4:D:215:VAL:HG22	1.93	0.49
4:D:394:ARG:NH1	4:D:398:GLU:OE2	2.45	0.49
4:D:584:THR:OG1	4:D:585:THR:N	2.44	0.49
5:E:719:ASN:ND2	5:E:824:HIS:CD2	2.80	0.49
5:E:926:TYR:HA	5:E:929:MET:CE	2.39	0.49
5:E:1071:LYS:HD3	5:E:1072:LEU:N	2.26	0.49
7:G:134:GLU:O	7:G:135:ARG:HD2	2.11	0.49
9:I:175:LYS:HG2	9:I:179:GLN:NE2	2.25	0.49
9:I:667:ILE:HA	9:I:733:VAL:HG13	1.93	0.49
19:L:374:GLN:H	19:L:377:ARG:HG2	1.77	0.49
23:R:60:HIS:HB3	23:R:76:HIS:HB2	1.94	0.49
3:C:513:LEU:HD12	3:C:540:PHE:CZ	2.46	0.49
3:C:1351:THR:HG23	3:C:1353:PHE:HE1	1.77	0.49
3:C:1392:LYS:HA	3:C:1395:GLU:HG3	1.93	0.49
3:C:2068:SER:HB3	3:C:2072:GLU:HB2	1.94	0.49
4:D:227:LEU:HD21	4:D:239:THR:HG23	1.94	0.49
5:E:142:VAL:O	5:E:146:GLU:HB3	2.12	0.49
5:E:496:ASP:OD1	5:E:647:ARG:HD2	2.12	0.49
5:E:1414:THR:O	5:E:1418:LEU:HG	2.12	0.49
5:E:1830:GLU:O	5:E:1834:MET:HG2	2.10	0.49
5:E:2064:TRP:HB3	5:E:2108:PHE:CE1	2.46	0.49
5:E:2069:GLY:CA	5:E:2076:LEU:HD12	2.42	0.49
7:G:155:GLU:OE2	7:G:156:GLU:HG3	2.12	0.49
8:H:106:PHE:CZ	8:H:115:LEU:HD23	2.47	0.49
9:I:387:PRO:HB2	9:I:423:PRO:CB	2.42	0.49
18:K:54:G:N2	18:K:64:C:C2	2.80	0.49
24:P:62:C:H2'	24:P:63:G:O4'	2.11	0.49
28:Y:79:ARG:O	28:Y:82:LYS:HB3	2.12	0.49
3:C:30:LEU:HB3	6:F:194:TYR:CZ	2.48	0.49
3:C:941:LYS:NZ	3:C:946:GLU:OE2	2.28	0.49
3:C:1332:HIS:HB3	5:E:41:LEU:CB	2.43	0.49
4:D:171:LEU:HB2	4:D:174:GLU:OE2	2.12	0.49
5:E:135:ALA:O	5:E:139:VAL:HG12	2.11	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:1308:PRO:HA	5:E:1327:PHE:CD1	2.47	0.49
5:E:1825:ASN:O	5:E:1829:ILE:HD12	2.13	0.49
7:G:347:LEU:CD2	7:G:375:ILE:HD13	2.40	0.49
28:Y:25:GLY:O	28:Y:28:THR:OG1	2.24	0.49
32:Q:858:PRO:O	32:Q:862:ILE:HG12	2.13	0.49
2:B:16:U:H2'	2:B:17:U:C6	2.47	0.49
3:C:534:GLU:HA	3:C:537:LYS:HG2	1.95	0.49
3:C:1366:PRO:HB2	3:C:1470:TYR:CE1	2.46	0.49
3:C:1630:LEU:HD12	3:C:1631:LEU:H	1.77	0.49
3:C:1807:ILE:HB	3:C:1820:LYS:HB3	1.95	0.49
4:D:135:CYS:HB2	4:D:242:LEU:CD1	2.39	0.49
5:E:835:SER:OG	5:E:838:LYS:HB2	2.12	0.49
7:G:250:LEU:HD11	19:L:166:VAL:HA	1.94	0.49
7:G:427:VAL:HG23	30:S:572:ALA:CB	2.42	0.49
7:G:438:LEU:HD22	7:G:469:THR:OG1	2.12	0.49
9:I:424:ILE:HD12	9:I:424:ILE:N	2.27	0.49
24:P:27:C:H2'	24:P:28:A:H8	1.76	0.49
32:Q:905:LYS:HZ2	32:Q:985:MET:HA	1.77	0.49
2:B:73:C:H2'	2:B:74:U:C2	2.48	0.49
3:C:97:HIS:O	3:C:101:LYS:HG2	2.12	0.49
3:C:198:GLU:HG3	3:C:199:GLU:N	2.27	0.49
3:C:379:GLU:HG3	4:D:355:LYS:HG3	1.94	0.49
3:C:1379:PHE:O	3:C:1383:GLN:HG3	2.12	0.49
3:C:1661:TRP:CD1	3:C:1699:THR:O	2.66	0.49
3:C:2307:GLU:HG2	5:E:1125:SER:OG	2.12	0.49
5:E:614:LEU:HD21	5:E:617:ILE:CG1	2.39	0.49
6:F:117:TYR:CZ	6:F:124:LEU:HD13	2.47	0.49
6:F:302:ALA:HB3	6:F:312:TRP:CZ3	2.47	0.49
6:F:330:ILE:HA	6:F:346:SER:HB3	1.95	0.49
7:G:325:LEU:O	7:G:328:ALA:HB3	2.13	0.49
9:I:467:GLN:HB2	9:I:542:ARG:HB3	1.94	0.49
9:I:482:GLN:NE2	9:I:700:GLN:HE22	1.99	0.49
9:I:744:ASN:ND2	9:I:747:ASP:OD2	2.45	0.49
26:W:20:ASP:HB2	26:W:22:THR:HG23	1.95	0.49
32:Q:751:LEU:HD22	32:Q:833:CYS:CB	2.40	0.49
32:Q:861:ILE:CD1	32:Q:897:MET:HB3	2.43	0.49
32:Q:908:MET:HB3	32:Q:913:ILE:HD11	1.94	0.49
3:C:33:LYS:HE3	6:F:237:SER:OG	2.12	0.49
3:C:86:ARG:NH2	3:C:658:ARG:HB2	2.26	0.49
3:C:510:ARG:HH22	7:G:89:PHE:HD1	1.58	0.49
3:C:682:ASP:N	3:C:682:ASP:OD1	2.46	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:810:TYR:O	3:C:813:THR:HG22	2.12	0.49
3:C:1787:ARG:HH21	3:C:1906:ILE:HG21	1.76	0.49
3:C:1916:LEU:O	3:C:1917:PHE:HD1	1.96	0.49
4:D:388:VAL:HA	4:D:392:LEU:HB2	1.94	0.49
5:E:614:LEU:HD11	5:E:628:LEU:HD23	1.94	0.49
5:E:724:PHE:CE2	5:E:816:ALA:HB2	2.48	0.49
5:E:1015:PHE:CE1	5:E:1063:LEU:HD23	2.48	0.49
5:E:1481:ILE:HG22	5:E:1483:ARG:H	1.78	0.49
5:E:1789:VAL:O	5:E:1793:LEU:HG	2.13	0.49
5:E:1815:LEU:HA	5:E:1818:ILE:HG22	1.95	0.49
5:E:2071:ALA:HB2	5:E:2105:THR:CG2	2.43	0.49
6:F:307:ARG:HB3	6:F:326:HIS:O	2.12	0.49
7:G:294:ALA:O	7:G:298:LEU:HG	2.11	0.49
7:G:348:GLU:OE2	7:G:352:LEU:HG	2.12	0.49
7:G:403:SER:HB2	7:G:406:LEU:HG	1.93	0.49
9:I:456:LEU:O	9:I:461:ARG:NH2	2.44	0.49
9:I:740:ASP:O	9:I:751:ARG:NH1	2.46	0.49
9:I:775:VAL:HG13	9:I:778:GLU:OE1	2.12	0.49
25:V:85:LEU:HD22	25:V:88:GLN:HE22	1.77	0.49
31:U:529:LEU:CD2	31:U:534:VAL:HG22	2.41	0.49
32:Q:994:ILE:H	32:Q:994:ILE:HD12	1.77	0.49
3:C:696:MET:HB3	7:G:149:LEU:HD23	1.94	0.49
3:C:979:SER:OG	3:C:980:ARG:N	2.45	0.49
3:C:1076:ASP:N	3:C:1076:ASP:OD1	2.45	0.49
3:C:1513:MET:O	3:C:1516:LYS:HG3	2.12	0.49
3:C:1790:ILE:HG22	3:C:1798:LEU:HD11	1.93	0.49
5:E:1620:LEU:O	5:E:1646:ALA:HA	2.12	0.49
6:F:53:SER:OG	6:F:355:GLU:HG2	2.13	0.49
8:H:11:LYS:HA	8:H:14:VAL:HG23	1.95	0.49
9:I:693:THR:HB	9:I:698:LYS:HE3	1.95	0.49
9:I:783:ILE:HG21	9:I:791:CYS:HA	1.95	0.49
21:N:597:LEU:HA	21:N:601:ARG:HB2	1.95	0.49
32:Q:709:ARG:O	32:Q:712:GLN:HG3	2.12	0.49
3:C:86:ARG:O	3:C:86:ARG:HD3	2.12	0.49
3:C:600:ARG:NH2	3:C:604:MET:HE1	2.18	0.49
3:C:1286:ASP:O	3:C:1289:VAL:HG22	2.13	0.49
3:C:1304:ASN:OD1	3:C:1305:SER:N	2.45	0.49
3:C:1539:SER:OG	3:C:1540:PRO:HD3	2.12	0.49
3:C:1715:TYR:CG	3:C:1715:TYR:O	2.65	0.49
3:C:1821:ILE:HB	3:C:1913:GLN:H	1.77	0.49
5:E:576:CYS:HA	5:E:579:GLU:CD	2.31	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:1610:LYS:O	5:E:1613:LEU:HG	2.12	0.49
5:E:1838:ALA:HB2	5:E:1935:TRP:CD1	2.48	0.49
6:F:57:ALA:HB3	6:F:60:MET:SD	2.52	0.49
7:G:344:ASP:OD1	7:G:345:VAL:N	2.46	0.49
7:G:358:ALA:O	7:G:362:VAL:HG23	2.13	0.49
7:G:570:PHE:CE1	7:G:573:LYS:HE2	2.47	0.49
21:N:575:LEU:HD21	21:N:650:GLN:HG3	1.95	0.49
24:P:64:A:H2	27:X:130:ARG:HG3	1.77	0.49
32:Q:814:ALA:O	32:Q:851:VAL:HA	2.13	0.49
2:B:26:A:H2'	2:B:27:U:O4'	2.13	0.49
2:B:76:A:C2	2:B:77:G:H1'	2.47	0.49
3:C:1001:VAL:HG22	3:C:1002:ASP:H	1.78	0.49
3:C:1537:TRP:CE3	3:C:1751:LEU:HD13	2.44	0.49
3:C:1681:ARG:HA	3:C:1715:TYR:CD2	2.47	0.49
3:C:1760:GLU:HG3	3:C:1883:VAL:HG13	1.95	0.49
3:C:1763:LEU:O	3:C:1888:GLU:HB2	2.13	0.49
5:E:96:GLU:HG3	7:G:367:ARG:HH21	1.78	0.49
5:E:442:TYR:CZ	5:E:707:ILE:HD11	2.47	0.49
5:E:1909:GLN:HG2	5:E:1913:GLU:OE2	2.13	0.49
6:F:231:MET:HG3	6:F:272:ARG:NH1	2.22	0.49
7:G:394:ARG:HA	30:S:559:PHE:HZ	1.78	0.49
7:G:410:ALA:HB1	7:G:422:MET:HE1	1.94	0.49
7:G:485:LYS:HD3	7:G:489:ARG:NH2	2.27	0.49
18:K:67:A:OP2	23:R:110:LYS:HD3	2.13	0.49
32:Q:695:GLN:HE22	32:Q:700:ASN:HB3	1.78	0.49
3:C:846:LEU:HB3	3:C:867:ILE:HD11	1.94	0.49
3:C:2190:PRO:HG3	3:C:2251:TYR:CE2	2.47	0.49
4:D:220:ARG:NH1	4:D:578:ARG:O	2.39	0.49
5:E:240:LEU:HD23	5:E:241:SER:N	2.28	0.49
5:E:593:TRP:HE1	5:E:631:LEU:HD21	1.78	0.49
5:E:641:MET:CE	5:E:1582:ALA:HB1	2.43	0.49
5:E:722:LEU:HD12	5:E:809:LEU:O	2.12	0.49
5:E:766:ALA:HA	5:E:769:CYS:SG	2.53	0.49
5:E:1404:LYS:HD2	5:E:1421:LYS:O	2.13	0.49
5:E:1405:VAL:HG12	5:E:1424:ILE:CB	2.37	0.49
5:E:1438:ARG:HB2	5:E:1442:ARG:HE	1.78	0.49
5:E:1515:HIS:HB3	5:E:1517:ASN:OD1	2.13	0.49
5:E:1838:ALA:HB3	5:E:1839:LYS:HE2	1.95	0.49
5:E:2101:ALA:HB2	5:E:2125:ASP:O	2.12	0.49
6:F:147:LEU:HD22	6:F:179:TRP:CE3	2.48	0.49
6:F:236:ASP:CB	6:F:255:MET:HB2	2.41	0.49

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:494:LEU:HB3	7:G:499:VAL:HG13	1.95	0.49
8:H:68:VAL:O	8:H:71:GLN:HG3	2.12	0.49
20:M:168:HIS:HB3	21:N:418:VAL:HG12	1.94	0.49
24:P:21:G:H22	24:P:22:U:H1'	1.69	0.49
32:Q:841:VAL:HG21	32:Q:868:TYR:OH	2.13	0.49
2:B:4:C:O2	2:B:4:C:H2'	2.13	0.48
3:C:1723:LYS:O	3:C:1727:GLN:HG3	2.13	0.48
5:E:2005:ALA:O	5:E:2009:ARG:NH1	2.46	0.48
6:F:330:ILE:HA	6:F:346:SER:CB	2.43	0.48
7:G:137:LYS:O	7:G:141:GLN:HG3	2.13	0.48
8:H:32:ARG:H	8:H:78:ILE:HD12	1.78	0.48
25:V:57:CYS:SG	25:V:59:LYS:NZ	2.80	0.48
32:Q:701:VAL:HG13	32:Q:717:LYS:HG2	1.95	0.48
3:C:126:ILE:HA	3:C:499:GLN:OE1	2.12	0.48
3:C:430:TRP:O	3:C:433:GLU:HG2	2.13	0.48
3:C:978:GLU:HG3	3:C:978:GLU:O	2.12	0.48
3:C:1591:MET:HG3	3:C:1592:ASP:N	2.27	0.48
3:C:2149:PRO:HA	3:C:2279:TRP:O	2.13	0.48
5:E:120:ILE:HG23	5:E:132:LEU:HD11	1.95	0.48
5:E:499:LEU:HD12	5:E:649:ILE:HD12	1.95	0.48
5:E:527:MET:N	5:E:527:MET:SD	2.85	0.48
5:E:569:LEU:HG	5:E:586:ILE:CG2	2.42	0.48
5:E:709:TYR:OH	5:E:742:CYS:HA	2.13	0.48
5:E:1223:ILE:O	5:E:1236:HIS:HA	2.13	0.48
5:E:1542:MET:O	5:E:1546:VAL:HG23	2.13	0.48
5:E:1575:ASP:O	5:E:1579:THR:HG23	2.13	0.48
5:E:1912:THR:HA	5:E:1915:ILE:HG12	1.94	0.48
5:E:2036:VAL:HG23	5:E:2092:LEU:O	2.14	0.48
6:F:260:ARG:NH1	6:F:273:CYS:SG	2.85	0.48
7:G:112:MET:HE2	7:G:112:MET:HA	1.95	0.48
7:G:312:TRP:CD1	7:G:331:LEU:HG	2.48	0.48
7:G:754:GLU:OE1	7:G:789:ARG:NH1	2.46	0.48
8:H:5:LEU:HB2	8:H:60:LEU:HD11	1.94	0.48
8:H:35:ASP:O	8:H:38:CYS:HB2	2.13	0.48
9:I:483:GLN:OE1	9:I:483:GLN:N	2.39	0.48
20:M:416:SER:OG	20:M:418:ASN:O	2.31	0.48
23:R:52:GLN:NE2	23:R:54:GLU:OE2	2.43	0.48
31:U:263:LYS:HB2	31:U:337:THR:HG23	1.95	0.48
32:Q:705:ARG:HB3	32:Q:711:ASN:OD1	2.13	0.48
3:C:529:THR:C	3:C:530:LEU:HD12	2.33	0.48
3:C:1038:SER:HG	3:C:1442:PHE:HD2	1.60	0.48

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:123:ALA:CB	5:E:161:LEU:HD11	2.43	0.48
5:E:322:ARG:NH1	5:E:1305:GLN:OE1	2.46	0.48
5:E:453:LYS:HG2	5:E:454:PRO:CD	2.43	0.48
5:E:988:ALA:HB2	5:E:998:VAL:CG2	2.38	0.48
5:E:1092:MET:SD	5:E:1114:LEU:HD23	2.54	0.48
5:E:1293:GLU:OE1	5:E:1293:GLU:N	2.46	0.48
5:E:1526:HIS:HB2	5:E:1703:VAL:HG22	1.95	0.48
5:E:1527:ILE:HA	5:E:1704:ILE:O	2.13	0.48
19:L:55:TRP:N	19:L:60:PHE:HB2	2.28	0.48
26:W:89:GLY:HA2	27:X:49:ASP:OD2	2.13	0.48
27:X:64:LEU:HD21	27:X:68:LYS:HE2	1.95	0.48
28:Y:245:ILE:O	28:Y:249:MET:HE3	2.13	0.48
31:U:157:VAL:CG1	31:U:176:PRO:HG3	2.43	0.48
32:Q:733:LEU:HD12	32:Q:765:LEU:HD22	1.95	0.48
2:B:71:C:H2'	2:B:72:U:H5'	1.95	0.48
3:C:221:ASN:OD1	3:C:222:GLY:N	2.46	0.48
3:C:888:GLN:O	3:C:889:ARG:HD3	2.12	0.48
3:C:1212:GLY:HA3	3:C:1280:ASN:HB2	1.94	0.48
3:C:1536:LEU:HD23	3:C:1751:LEU:HD23	1.96	0.48
3:C:1806:ALA:HB2	3:C:1906:ILE:HD13	1.94	0.48
3:C:1840:LYS:HD3	3:C:1843:GLU:OE2	2.13	0.48
5:E:121:GLN:HE22	5:E:126:ASP:HA	1.78	0.48
5:E:828:ILE:HD11	5:E:853:LEU:CD2	2.42	0.48
5:E:1030:ARG:NH1	5:E:1030:ARG:HB2	2.28	0.48
5:E:1080:ASP:O	5:E:1084:VAL:HG22	2.13	0.48
5:E:1222:TRP:O	5:E:1270:VAL:HA	2.12	0.48
5:E:1566:ARG:HG3	5:E:1622:GLU:HG3	1.95	0.48
5:E:2018:GLU:OE1	5:E:2018:GLU:N	2.47	0.48
6:F:71:CYS:SG	6:F:115:LEU:HB2	2.54	0.48
7:G:329:ARG:HB3	7:G:353:GLN:HG2	1.95	0.48
7:G:424:SER:O	7:G:427:VAL:HG22	2.13	0.48
8:H:9:THR:N	8:H:13:GLU:OE1	2.45	0.48
9:I:174:LEU:HA	9:I:177:ARG:CG	2.43	0.48
23:R:52:GLN:NE2	23:R:53:VAL:O	2.46	0.48
31:U:402:LYS:HG3	31:U:402:LYS:O	2.14	0.48
32:Q:812:LEU:CD1	32:Q:868:TYR:HA	2.41	0.48
3:C:841:LEU:O	3:C:845:ARG:HG2	2.13	0.48
3:C:1621:LYS:HG2	3:C:1623:ASN:OD1	2.12	0.48
3:C:1861:ILE:HD12	3:C:1882:ILE:HD12	1.95	0.48
3:C:2107:PRO:HG2	3:C:2110:VAL:HG22	1.95	0.48
3:C:2237:TRP:HZ2	3:C:2248:PRO:HG2	1.79	0.48

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:1803:SER:N	5:E:1811:ALA:O	2.28	0.48
6:F:162:ARG:HH12	6:F:203:ASP:HB2	1.78	0.48
6:F:310:TYR:HE1	6:F:322:LYS:HE3	1.78	0.48
7:G:336:THR:HG23	7:G:345:VAL:HG12	1.94	0.48
7:G:459:ASN:HB2	7:G:460:ILE:HD12	1.95	0.48
8:H:31:GLY:HA2	8:H:78:ILE:HG21	1.96	0.48
17:J:33:C:H5'	19:L:330:LYS:HZ3	1.78	0.48
19:L:211:ARG:HA	19:L:211:ARG:HD3	1.68	0.48
31:U:358:LYS:HG3	31:U:381:GLU:HA	1.96	0.48
32:Q:687:TYR:HA	32:Q:705:ARG:O	2.14	0.48
32:Q:995:ASN:O	32:Q:999:GLN:HG2	2.13	0.48
2:B:7:U:H5"	2:B:73:C:N4	2.18	0.48
3:C:66:VAL:HG22	3:C:120:TYR:CE2	2.49	0.48
3:C:811:THR:O	3:C:814:VAL:HG22	2.14	0.48
3:C:942:PRO:HG3	3:C:1091:TYR:CZ	2.49	0.48
3:C:991:THR:HB	7:G:251:MET:CE	2.43	0.48
3:C:1031:ILE:HG22	3:C:1033:GLY:H	1.78	0.48
3:C:1366:PRO:HD2	3:C:1474:MET:SD	2.53	0.48
3:C:1545:ALA:HB2	3:C:1563:HIS:CD2	2.49	0.48
3:C:1818:PHE:CZ	3:C:1916:LEU:HD22	2.48	0.48
5:E:538:ILE:O	5:E:585:ILE:HA	2.13	0.48
5:E:764:THR:HG22	5:E:768:GLN:HE22	1.78	0.48
5:E:1544:LYS:HB2	5:E:1545:PRO:HD3	1.95	0.48
5:E:1725:GLU:OE1	5:E:1763:ARG:HG2	2.12	0.48
5:E:1900:SER:HA	5:E:1954:TRP:NE1	2.28	0.48
5:E:2019:LEU:HD21	5:E:2108:PHE:CD2	2.49	0.48
7:G:577:TRP:HB3	7:G:610:LEU:CD2	2.39	0.48
9:I:165:SER:O	9:I:168:GLU:HG3	2.12	0.48
20:M:301:ALA:HA	20:M:325:ARG:HG3	1.96	0.48
21:N:545:VAL:HG23	21:N:633:VAL:HB	1.96	0.48
24:P:45:U:H2'	24:P:46:G:C8	2.48	0.48
3:C:1502:PHE:CE2	19:L:377:ARG:NH1	2.81	0.48
4:D:484:THR:HG23	4:D:489:GLN:O	2.13	0.48
5:E:625:GLY:O	5:E:627:VAL:N	2.46	0.48
5:E:738:ILE:HG22	5:E:782:PHE:HE2	1.78	0.48
5:E:1013:GLU:O	5:E:1017:VAL:HG23	2.14	0.48
5:E:1496:ASN:HD22	5:E:1763:ARG:CZ	2.27	0.48
5:E:1832:PHE:HZ	5:E:1922:LEU:HD21	1.79	0.48
5:E:1858:ILE:CG2	5:E:1887:PRO:HB3	2.43	0.48
6:F:156:SER:HB2	6:F:199:VAL:HG22	1.96	0.48
6:F:313:ASP:HB2	6:F:320:LEU:CG	2.43	0.48

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:144:LEU:HD23	8:H:144:LEU:H	1.78	0.48
28:Y:134:ASN:HA	28:Y:137:ILE:HG22	1.96	0.48
2:B:59:G:O2'	2:B:60:G:H5'	2.13	0.48
3:C:1318:THR:HG22	3:C:1478:LEU:CD1	2.36	0.48
3:C:1703:ILE:HD13	3:C:1714:ALA:CB	2.42	0.48
3:C:1810:PHE:CZ	3:C:1812:PRO:HA	2.49	0.48
3:C:1954:LEU:HG	3:C:1969:PRO:HG3	1.96	0.48
3:C:1973:ASP:OD1	3:C:1973:ASP:N	2.45	0.48
4:D:608:ARG:HD3	31:U:128:LEU:O	2.14	0.48
4:D:889:THR:HG21	9:I:290:TYR:CE2	2.49	0.48
5:E:708:VAL:O	5:E:712:ILE:HG12	2.14	0.48
5:E:878:TYR:O	5:E:879:TYR:C	2.51	0.48
5:E:1419:LEU:CD2	5:E:1425:ILE:HD13	2.44	0.48
5:E:1434:ILE:HA	5:E:1437:ARG:CZ	2.43	0.48
5:E:1844:GLY:O	5:E:1848:ILE:HG12	2.14	0.48
5:E:2038:LEU:CD1	5:E:2091:LYS:HG3	2.44	0.48
6:F:86:PHE:HA	6:F:111:ALA:HB2	1.96	0.48
9:I:446:LEU:HG	9:I:450:LEU:CD1	2.43	0.48
27:X:19:ASP:N	27:X:19:ASP:OD1	2.47	0.48
27:X:45:VAL:HG13	27:X:123:VAL:HG23	1.96	0.48
32:Q:816:ILE:HG21	32:Q:875:VAL:CG2	2.43	0.48
32:Q:924:ASP:OD1	32:Q:928:ASN:N	2.47	0.48
3:C:298:ASP:HB3	3:C:301:LYS:HE2	1.96	0.48
3:C:1067:MET:HE2	3:C:1075:GLN:HE22	1.79	0.48
3:C:1722:SER:O	3:C:1726:ILE:HG12	2.14	0.48
4:D:742:PRO:HG3	4:D:785:ARG:NH1	2.29	0.48
4:D:862:PRO:HB3	4:D:869:TYR:CE1	2.49	0.48
5:E:298:ASP:HB3	5:E:301:GLU:HG2	1.96	0.48
5:E:519:ARG:HD3	5:E:647:ARG:NH1	2.28	0.48
5:E:1057:ALA:O	5:E:1061:VAL:HG22	2.14	0.48
5:E:1838:ALA:HA	5:E:1938:PRO:CG	2.44	0.48
5:E:1912:THR:HA	5:E:1915:ILE:CG1	2.44	0.48
6:F:55:LEU:HD21	6:F:353:MET:HE3	1.95	0.48
7:G:25:ALA:HB1	8:H:72:TYR:OH	2.14	0.48
7:G:89:PHE:O	7:G:90:SER:HB3	2.14	0.48
9:I:429:ARG:HH21	9:I:625:ALA:N	2.11	0.48
32:Q:859:GLU:HA	32:Q:862:ILE:CG1	2.43	0.48
4:D:167:TYR:CD2	4:D:535:ALA:HB3	2.49	0.48
5:E:774:LEU:HD21	5:E:789:MET:HE1	1.94	0.48
5:E:1499:ASP:OD2	5:E:1763:ARG:NH1	2.47	0.48
5:E:1753:ASP:O	5:E:1756:THR:OG1	2.21	0.48

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:1825:ASN:CG	5:E:1827:THR:HG22	2.33	0.48
5:E:1944:GLU:HA	5:E:1947:GLN:CG	2.41	0.48
6:F:262:TRP:HB3	6:F:272:ARG:CG	2.39	0.48
7:G:271:LYS:O	7:G:275:THR:HG23	2.14	0.48
7:G:325:LEU:CD1	7:G:329:ARG:HH21	2.27	0.48
20:M:448:HIS:HE1	20:M:467:THR:HG23	1.78	0.48
22:O:109:GLY:HA3	32:Q:948:THR:HG21	1.96	0.48
27:X:22:ILE:H	27:X:22:ILE:HD12	1.78	0.48
31:U:247:PRO:HD2	31:U:449:TYR:OH	2.14	0.48
31:U:344:ILE:O	31:U:348:VAL:HG23	2.14	0.48
31:U:356:PHE:O	31:U:439:LYS:HA	2.14	0.48
31:U:399:PRO:O	31:U:400:LEU:HB3	2.14	0.48
32:Q:913:ILE:CG2	32:Q:919:LYS:HE2	2.41	0.48
3:C:86:ARG:NE	7:G:102:ASP:OD1	2.48	0.47
3:C:1862:ILE:CG2	3:C:1887:SER:HB3	2.44	0.47
5:E:139:VAL:CG2	5:E:172:LEU:HD11	2.44	0.47
5:E:298:ASP:N	5:E:301:GLU:OE2	2.42	0.47
5:E:484:ILE:H	5:E:484:ILE:HD12	1.78	0.47
5:E:509:LYS:O	5:E:512:VAL:HG22	2.14	0.47
5:E:1609:LEU:O	5:E:1612:THR:HG22	2.14	0.47
6:F:262:TRP:HE3	6:F:272:ARG:HG2	1.79	0.47
9:I:343:LEU:HD23	9:I:346:LYS:HZ1	1.79	0.47
17:J:91:U:H2'	17:J:92:A:C8	2.49	0.47
24:P:63:G:H2'	24:P:63:G:N3	2.29	0.47
26:W:74:TYR:HB3	26:W:104:ALA:HB1	1.96	0.47
30:S:559:PHE:O	30:S:563:LEU:HG	2.14	0.47
31:U:497:TYR:HB3	31:U:552:TRP:HB3	1.95	0.47
3:C:832:TYR:HB3	3:C:835:ASP:OD2	2.14	0.47
3:C:1334:LEU:HD12	3:C:1334:LEU:O	2.14	0.47
3:C:1640:SER:CB	30:S:699:LYS:HD3	2.36	0.47
4:D:138:LEU:HD13	4:D:139:HIS:CD2	2.48	0.47
4:D:705:VAL:HG21	4:D:717:PHE:CE1	2.49	0.47
5:E:522:GLY:O	5:E:525:ILE:HG22	2.14	0.47
5:E:603:ARG:O	5:E:606:THR:HG23	2.13	0.47
5:E:1441:GLN:O	5:E:1443:LYS:HE2	2.13	0.47
5:E:2077:ILE:HG13	5:E:2104:TYR:CE2	2.49	0.47
6:F:260:ARG:NE	6:F:276:ILE:HG23	2.29	0.47
7:G:423:LEU:HB3	7:G:440:LEU:CD1	2.44	0.47
9:I:738:ASN:HD21	9:I:751:ARG:HD2	1.79	0.47
9:I:745:ILE:HB	9:I:778:GLU:OE1	2.14	0.47
29:Z:333:ALA:CA	29:Z:336:LYS:HD2	2.42	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:Q:817:LYS:HA	32:Q:878:THR:OG1	2.14	0.47
3:C:142:SER:HA	3:C:242:ALA:HB2	1.95	0.47
3:C:162:LYS:N	9:I:375:GLU:OE2	2.47	0.47
3:C:1218:ASN:OD1	3:C:1221:THR:HG22	2.14	0.47
3:C:2307:GLU:HG3	3:C:2314:PHE:CZ	2.49	0.47
4:D:748:ASP:OD2	4:D:790:LYS:HB3	2.14	0.47
5:E:149:ARG:HA	5:E:152:GLU:OE1	2.14	0.47
5:E:794:ARG:HA	5:E:797:VAL:CG1	2.43	0.47
5:E:849:ILE:HA	5:E:852:MET:SD	2.55	0.47
5:E:1033:GLU:OE1	5:E:1033:GLU:N	2.38	0.47
5:E:1381:PRO:HG3	5:E:1467:LEU:CD2	2.45	0.47
6:F:86:PHE:HA	6:F:111:ALA:CB	2.44	0.47
7:G:295:ARG:HG2	7:G:318:LEU:CD2	2.44	0.47
7:G:296:LEU:HD12	7:G:299:LYS:HE3	1.97	0.47
9:I:174:LEU:HA	9:I:177:ARG:HG2	1.96	0.47
28:Y:115:GLN:HG3	28:Y:164:LEU:HD11	1.96	0.47
31:U:145:GLY:CA	31:U:152:ALA:HB3	2.44	0.47
32:Q:855:TYR:OH	32:Q:881:GLU:OE1	2.20	0.47
3:C:1084:PRO:O	3:C:1099:PHE:HA	2.14	0.47
3:C:1278:VAL:HG22	3:C:1284:LEU:CD2	2.44	0.47
3:C:1792:LYS:HE2	7:G:313:ILE:HG21	1.96	0.47
3:C:2089:HIS:O	3:C:2222:SER:HB2	2.14	0.47
5:E:763:ARG:CZ	5:E:763:ARG:HA	2.45	0.47
5:E:848:ASP:OD1	5:E:849:ILE:N	2.47	0.47
5:E:1332:GLN:NE2	5:E:1358:ILE:HB	2.29	0.47
5:E:1337:ASN:O	5:E:1341:ASN:HB2	2.13	0.47
5:E:1681:ILE:O	5:E:1685:LEU:HD23	2.14	0.47
5:E:1943:MET:HB3	5:E:2109:MET:HE2	1.94	0.47
5:E:2047:VAL:HG11	5:E:2085:GLN:OE1	2.14	0.47
5:E:2064:TRP:O	5:E:2082:LEU:N	2.46	0.47
23:R:106:TRP:HD1	23:R:109:ASN:ND2	2.06	0.47
32:Q:695:GLN:NE2	32:Q:700:ASN:HB3	2.29	0.47
32:Q:850:LEU:O	32:Q:860:ILE:HG21	2.15	0.47
2:B:8:G:C8	2:B:73:C:C2	3.02	0.47
3:C:155:LYS:HD2	3:C:621:VAL:HG13	1.97	0.47
3:C:813:THR:HG21	3:C:996:LEU:HD22	1.96	0.47
3:C:1622:MET:O	3:C:1687:TYR:OH	2.32	0.47
3:C:1641:ARG:NH1	3:C:1651:VAL:HG21	2.29	0.47
3:C:1807:ILE:O	3:C:1819:LEU:HA	2.14	0.47
3:C:1921:ASP:HB3	3:C:1966:HIS:CD2	2.49	0.47
5:E:492:ALA:HB3	5:E:515:MET:SD	2.54	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:766:ALA:CA	5:E:778:LEU:HD23	2.45	0.47
5:E:1527:ILE:HD11	5:E:1711:LYS:HA	1.96	0.47
5:E:1606:ASP:OD2	5:E:1619:TYR:OH	2.32	0.47
5:E:1822:TYR:CE2	5:E:1924:GLN:HG2	2.49	0.47
5:E:1950:THR:HG23	5:E:2060:ARG:CZ	2.44	0.47
5:E:2026:LYS:CE	5:E:2124:VAL:HG22	2.44	0.47
6:F:150:HIS:ND1	6:F:177:LYS:HD2	2.30	0.47
19:L:55:TRP:HD1	19:L:60:PHE:CZ	2.33	0.47
19:L:206:GLU:O	19:L:209:GLU:HB3	2.14	0.47
3:C:516:LEU:HD23	3:C:526:PRO:HA	1.96	0.47
3:C:1038:SER:HA	3:C:1442:PHE:CE2	2.50	0.47
3:C:1392:LYS:O	3:C:1395:GLU:HG3	2.14	0.47
3:C:1505:LYS:HB2	19:L:376:ASN:HA	1.97	0.47
3:C:1596:VAL:CG1	3:C:1725:LEU:HD11	2.45	0.47
3:C:1724:PRO:HD3	30:S:701:LYS:HZ1	1.79	0.47
3:C:2011:ILE:HG13	3:C:2012:LEU:N	2.29	0.47
3:C:2093:SER:HB2	3:C:2226:THR:CG2	2.44	0.47
5:E:931:ARG:HA	5:E:931:ARG:CZ	2.44	0.47
5:E:1437:ARG:HD3	5:E:1738:ALA:HB1	1.97	0.47
5:E:1660:LEU:HD21	5:E:1662:ILE:HD11	1.96	0.47
5:E:1838:ALA:HB2	5:E:1935:TRP:CD2	2.50	0.47
5:E:1927:VAL:HA	5:E:1930:LEU:HD21	1.97	0.47
7:G:468:ILE:HG23	7:G:513:CYS:SG	2.55	0.47
7:G:572:SER:HB3	7:G:577:TRP:NE1	2.30	0.47
9:I:449:LEU:HD23	9:I:450:LEU:HD12	1.96	0.47
9:I:670:PHE:HA	9:I:720:ALA:O	2.14	0.47
19:L:212:MET:HA	19:L:215:ILE:HG22	1.97	0.47
28:Y:55:VAL:HG23	28:Y:65:HIS:HB3	1.97	0.47
32:Q:748:PHE:CE1	32:Q:804:LYS:HD2	2.50	0.47
2:B:73:C:H2'	2:B:74:U:N1	2.30	0.47
3:C:694:LEU:HD22	3:C:697:MET:HE3	1.97	0.47
3:C:752:ASN:HD22	31:U:462:PHE:HD2	1.63	0.47
3:C:1407:ASP:OD1	3:C:1407:ASP:N	2.45	0.47
3:C:1979:VAL:O	3:C:1983:LEU:HG	2.14	0.47
3:C:2009:ASP:O	3:C:2014:MET:N	2.47	0.47
5:E:416:PHE:CE2	5:E:936:TYR:CE1	3.02	0.47
5:E:542:ALA:O	5:E:589:THR:HA	2.15	0.47
5:E:556:GLY:O	5:E:560:ALA:HB2	2.15	0.47
5:E:603:ARG:HA	5:E:606:THR:CG2	2.45	0.47
5:E:731:THR:HG22	5:E:784:ILE:CG2	2.45	0.47
5:E:849:ILE:HA	5:E:852:MET:CG	2.43	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:1140:VAL:HA	5:E:1143:ILE:CG2	2.45	0.47
5:E:1433:ASP:O	5:E:1437:ARG:HG3	2.14	0.47
5:E:1514:PHE:HB3	5:E:1518:VAL:HG11	1.97	0.47
5:E:1574:ILE:O	5:E:1578:THR:HG23	2.15	0.47
5:E:1871:LEU:HD23	5:E:1874:LYS:NZ	2.29	0.47
5:E:2005:ALA:HB1	5:E:2009:ARG:HH12	1.80	0.47
6:F:178:LEU:HD13	6:F:188:GLN:NE2	2.29	0.47
6:F:206:ASP:O	6:F:222:LEU:HG	2.14	0.47
6:F:260:ARG:HE	6:F:276:ILE:HG23	1.78	0.47
6:F:336:HIS:CB	6:F:341:ILE:HB	2.42	0.47
7:G:326:GLN:OE1	7:G:329:ARG:NH1	2.47	0.47
7:G:398:GLU:HG2	30:S:563:LEU:CD2	2.45	0.47
7:G:424:SER:OG	7:G:440:LEU:HD21	2.14	0.47
7:G:438:LEU:O	7:G:442:ARG:HG3	2.15	0.47
7:G:567:LEU:HD13	7:G:577:TRP:CZ3	2.49	0.47
7:G:567:LEU:CD2	7:G:576:VAL:HG12	2.45	0.47
9:I:377:TYR:HB2	9:I:379:ILE:HG13	1.96	0.47
9:I:646:MET:O	9:I:769:THR:HG22	2.15	0.47
18:K:66:G:H2'	18:K:67:A:O4'	2.14	0.47
19:L:210:SER:O	19:L:214:PHE:N	2.44	0.47
24:P:65:C:H4'	24:P:66:A:O5'	2.15	0.47
27:X:6:GLU:O	27:X:10:MET:HE3	2.15	0.47
27:X:27:GLU:OE1	27:X:27:GLU:N	2.42	0.47
28:Y:26:CYS:HA	28:Y:29:LEU:HG	1.97	0.47
3:C:86:ARG:CG	7:G:101:ALA:HB3	2.44	0.47
3:C:950:LEU:O	3:C:950:LEU:HD23	2.14	0.47
3:C:1274:PHE:HB2	3:C:1278:VAL:HG23	1.96	0.47
3:C:1661:TRP:NE1	3:C:1700:GLY:HA3	2.29	0.47
3:C:1995:ASN:O	3:C:1997:VAL:HG23	2.15	0.47
5:E:497:GLU:HG2	5:E:671:LYS:CG	2.40	0.47
5:E:544:MET:O	5:E:548:VAL:HG23	2.15	0.47
5:E:610:ARG:C	5:E:646:VAL:HG13	2.35	0.47
5:E:1815:LEU:HD23	5:E:1829:ILE:CG2	2.41	0.47
5:E:2068:ILE:CD1	5:E:2092:LEU:HD22	2.45	0.47
6:F:264:VAL:HG22	6:F:272:ARG:HH21	1.79	0.47
7:G:308:HIS:ND1	7:G:311:ALA:HB2	2.30	0.47
7:G:583:PHE:O	7:G:587:HIS:N	2.42	0.47
7:G:926:ILE:HA	7:G:929:ILE:HG22	1.97	0.47
8:H:67:ALA:HA	8:H:70:THR:HB	1.97	0.47
9:I:199:GLN:HB3	9:I:203:ARG:NH2	2.19	0.47
9:I:361:LYS:CA	9:I:391:ARG:HH12	2.28	0.47

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:L:131:ASN:HB3	19:L:134:ASP:HB2	1.96	0.47
19:L:171:ALA:O	19:L:173:THR:N	2.48	0.47
21:N:441:THR:O	21:N:445:GLN:NE2	2.46	0.47
3:C:528:LYS:HG3	3:C:530:LEU:HD12	1.96	0.47
3:C:950:LEU:HG	3:C:1379:PHE:CE1	2.49	0.47
3:C:1498:TRP:HA	3:C:1501:LEU:CD1	2.33	0.47
3:C:1582:TRP:HD1	3:C:1619:SER:HB3	1.79	0.47
3:C:1590:VAL:HG13	3:C:1629:ILE:HD11	1.97	0.47
3:C:1788:VAL:O	5:E:201:VAL:HB	2.15	0.47
3:C:2325:VAL:O	5:E:788:GLY:HA3	2.15	0.47
5:E:121:GLN:HA	5:E:132:LEU:HD11	1.97	0.47
5:E:1183:LYS:O	5:E:1184:LEU:HD23	2.14	0.47
5:E:1375:ARG:HA	5:E:1423:ASN:O	2.15	0.47
5:E:1918:LYS:HG2	5:E:1921:ARG:NH2	2.30	0.47
9:I:437:THR:HA	9:I:441:LYS:HE2	1.96	0.47
9:I:483:GLN:O	9:I:487:GLU:HG2	2.15	0.47
9:I:487:GLU:O	9:I:490:LYS:N	2.48	0.47
19:L:160:THR:O	19:L:164:ILE:HG23	2.15	0.47
19:L:294:LEU:HD11	19:L:327:LYS:HD3	1.97	0.47
22:O:28:GLN:HB3	22:O:112:LEU:HD11	1.95	0.47
25:V:39:ASP:OD1	25:V:42:ARG:NH1	2.48	0.47
3:C:1501:LEU:HD23	3:C:1753:LEU:CG	2.45	0.47
3:C:1597:PHE:CE2	3:C:1662:ILE:HD13	2.50	0.47
3:C:1667:ARG:HD2	3:C:1679:TYR:CD2	2.50	0.47
3:C:1807:ILE:HD12	3:C:1820:LYS:CD	2.45	0.47
4:D:390:THR:OG1	4:D:391:SER:N	2.47	0.47
5:E:718:LYS:HG3	5:E:719:ASN:H	1.80	0.47
5:E:784:ILE:HA	5:E:810:VAL:O	2.16	0.47
5:E:853:LEU:HD23	5:E:853:LEU:HA	1.70	0.47
5:E:2111:ASP:OD1	5:E:2111:ASP:N	2.48	0.47
6:F:319:ILE:O	6:F:319:ILE:HG13	2.15	0.47
7:G:495:ARG:HH12	7:G:500:GLU:HA	1.79	0.47
7:G:691:ILE:HG22	7:G:693:ALA:H	1.80	0.47
7:G:719:GLU:HB3	7:G:728:ALA:HB2	1.97	0.47
9:I:764:ALA:C	9:I:765:ILE:HD13	2.36	0.47
18:K:26:A:N7	19:L:352:LYS:NZ	2.64	0.47
32:Q:727:LYS:HD2	32:Q:727:LYS:O	2.14	0.47
32:Q:755:ARG:HH11	32:Q:757:PHE:HB3	1.80	0.47
3:C:788:GLN:NE2	31:U:409:ILE:HD11	2.29	0.46
3:C:1013:ASN:O	3:C:1026:ASN:ND2	2.48	0.46
3:C:1528:GLN:O	3:C:1531:ASN:HB2	2.15	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:1606:ILE:HG21	3:C:1631:LEU:CD1	2.45	0.46
3:C:1629:ILE:CG2	3:C:1662:ILE:HD12	2.46	0.46
3:C:1898:LYS:HB2	3:C:1943:LEU:HD21	1.96	0.46
3:C:2162:GLN:HG2	3:C:2163:LEU:O	2.15	0.46
4:D:227:LEU:HD21	4:D:239:THR:CG2	2.45	0.46
5:E:81:ILE:O	5:E:85:LYS:N	2.42	0.46
5:E:111:GLU:HA	5:E:114:GLU:HG3	1.97	0.46
5:E:465:GLU:O	5:E:472:GLN:NE2	2.48	0.46
5:E:501:LEU:CD2	5:E:512:VAL:HG21	2.45	0.46
5:E:656:PRO:HB2	5:E:888:PRO:HA	1.96	0.46
5:E:720:GLN:OE1	5:E:804:LYS:HA	2.15	0.46
5:E:1439:TRP:CG	5:E:1477:ILE:HD11	2.50	0.46
5:E:1904:LEU:HD22	5:E:1908:LEU:CD2	2.44	0.46
6:F:160:ALA:HB3	6:F:166:LEU:H	1.79	0.46
7:G:113:ASP:OD1	7:G:120:ARG:NH2	2.47	0.46
9:I:163:PHE:O	9:I:164:LEU:HD23	2.14	0.46
18:K:52:A:O2'	23:R:24:ARG:NH2	2.48	0.46
24:P:27:C:H2'	24:P:28:A:C8	2.50	0.46
3:C:284:ARG:NE	3:C:284:ARG:HA	2.31	0.46
3:C:705:LYS:O	3:C:709:ILE:HG12	2.15	0.46
3:C:1809:ILE:O	3:C:1818:PHE:N	2.25	0.46
3:C:1901:LYS:HD2	3:C:1967:ILE:CD1	2.46	0.46
3:C:2009:ASP:HB2	3:C:2014:MET:HG2	1.93	0.46
5:E:412:GLU:H	5:E:412:GLU:CD	2.16	0.46
5:E:437:ARG:HD2	5:E:439:ARG:CD	2.45	0.46
5:E:685:LEU:HD11	5:E:867:GLY:N	2.30	0.46
5:E:905:ILE:HG21	5:E:979:PHE:HB3	1.98	0.46
5:E:1037:LEU:HD11	5:E:1077:LEU:HD22	1.97	0.46
5:E:1160:GLU:O	5:E:1164:LEU:HD23	2.14	0.46
5:E:1428:THR:OG1	5:E:1431:LYS:HG2	2.14	0.46
5:E:1877:HIS:HB2	5:E:1896:GLN:NE2	2.31	0.46
5:E:2026:LYS:HA	5:E:2124:VAL:CG1	2.39	0.46
6:F:113:MET:CG	6:F:288:LEU:HD12	2.46	0.46
7:G:431:PRO:O	7:G:437:TRP:NE1	2.48	0.46
7:G:574:LYS:O	7:G:610:LEU:HD11	2.14	0.46
8:H:55:MET:SD	19:L:345:ALA:CB	3.01	0.46
19:L:280:VAL:HG11	19:L:292:ALA:HB2	1.97	0.46
20:M:379:LEU:HD11	21:N:390:TRP:CD1	2.50	0.46
20:M:385:LEU:HA	20:M:409:GLU:HB3	1.97	0.46
32:Q:917:VAL:HG12	32:Q:918:PHE:CD1	2.50	0.46
3:C:524:LEU:HD12	3:C:524:LEU:HA	1.80	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:1732:LYS:HB3	30:S:710:ILE:CD1	2.41	0.46
3:C:1927:ILE:HB	3:C:1931:THR:HG23	1.97	0.46
3:C:1934:SER:O	3:C:1937:ILE:HG22	2.16	0.46
4:D:692:LEU:HD13	4:D:788:LYS:HB2	1.97	0.46
5:E:739:ARG:HG2	5:E:782:PHE:CE1	2.51	0.46
5:E:763:ARG:NH1	5:E:779:PRO:HA	2.25	0.46
5:E:928:ARG:NE	5:E:928:ARG:HA	2.29	0.46
5:E:1842:VAL:HG23	5:E:1945:LEU:HB2	1.97	0.46
5:E:2036:VAL:HG21	5:E:2091:LYS:HD2	1.97	0.46
6:F:125:PHE:CD1	6:F:135:VAL:HG22	2.50	0.46
6:F:208:ILE:O	6:F:219:VAL:HA	2.14	0.46
6:F:240:GLY:HA3	6:F:290:ARG:HA	1.97	0.46
7:G:132:ARG:HD3	31:U:433:TYR:OH	2.14	0.46
8:H:10:SER:OG	8:H:13:GLU:HG3	2.15	0.46
24:P:66:A:C5	24:P:72:A:C6	3.03	0.46
32:Q:931:TYR:O	32:Q:943:VAL:HA	2.16	0.46
3:C:46:ALA:HB3	3:C:49:ARG:HG2	1.98	0.46
3:C:260:LEU:HD21	3:C:458:ALA:CB	2.45	0.46
3:C:1194:CYS:HB3	3:C:1228:CYS:SG	2.56	0.46
3:C:1723:LYS:HB2	30:S:701:LYS:NZ	2.29	0.46
3:C:1771:LEU:HD23	3:C:1777:ILE:CD1	2.44	0.46
3:C:1908:LYS:HE3	32:Q:843:ASP:HB3	1.98	0.46
3:C:2232:PRO:HB2	9:I:202:GLY:HA2	1.98	0.46
4:D:379:LYS:O	4:D:383:GLN:HG2	2.14	0.46
4:D:434:CYS:O	4:D:438:ILE:HB	2.16	0.46
4:D:617:LEU:HD11	4:D:629:ILE:CG2	2.45	0.46
5:E:600:GLY:HA2	5:E:603:ARG:HG3	1.96	0.46
5:E:791:ARG:O	5:E:794:ARG:HG2	2.15	0.46
5:E:815:LEU:CD1	5:E:819:VAL:HB	2.45	0.46
21:N:569:LEU:HD23	21:N:586:GLY:HA3	1.98	0.46
26:W:90:PHE:CE1	27:X:48:MET:HG3	2.51	0.46
27:X:33:ILE:O	27:X:37:TYR:N	2.43	0.46
30:S:554:ASN:HD21	30:S:557:SER:HB2	1.80	0.46
30:S:731:HIS:HB3	30:S:732:ARG:HH22	1.81	0.46
32:Q:908:MET:SD	32:Q:913:ILE:HG12	2.56	0.46
3:C:732:PRO:HD2	3:C:735:ILE:HD12	1.97	0.46
3:C:1021:ASP:OD1	3:C:1021:ASP:N	2.43	0.46
3:C:1554:GLN:HB2	3:C:1561:PHE:CE1	2.51	0.46
4:D:934:MET:O	4:D:938:ARG:HG3	2.15	0.46
5:E:549:GLN:HA	5:E:552:VAL:HG12	1.98	0.46
5:E:617:ILE:O	5:E:617:ILE:HG12	2.15	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:655:LEU:HG	5:E:887:LEU:O	2.15	0.46
5:E:1613:LEU:HD12	5:E:1614:LEU:N	2.31	0.46
5:E:1960:LEU:HD13	5:E:1974:CYS:SG	2.55	0.46
6:F:72:CYS:O	6:F:334:ALA:HB2	2.15	0.46
6:F:78:GLY:HA3	6:F:338:ASP:OD2	2.16	0.46
6:F:213:ILE:HA	6:F:237:SER:HA	1.97	0.46
9:I:374:ARG:HE	9:I:381:THR:HG21	1.80	0.46
9:I:446:LEU:HG	9:I:450:LEU:HD13	1.97	0.46
9:I:756:GLY:HA2	9:I:760:LYS:CG	2.39	0.46
25:V:7:CYS:SG	25:V:10:CYS:HB2	2.55	0.46
26:W:117:ILE:CD1	26:W:122:ILE:HG12	2.45	0.46
28:Y:53:ASP:OD1	28:Y:53:ASP:N	2.47	0.46
28:Y:134:ASN:OD1	28:Y:135:GLN:N	2.47	0.46
31:U:485:SER:HB2	31:U:488:VAL:CG2	2.42	0.46
3:C:112:GLN:NE2	3:C:189:GLU:HA	2.30	0.46
3:C:206:TRP:HE3	3:C:212:PRO:HB3	1.79	0.46
3:C:247:THR:HG22	3:C:247:THR:O	2.16	0.46
3:C:807:VAL:O	3:C:811:THR:HG23	2.16	0.46
3:C:939:TRP:NE1	3:C:1049:ASP:OD2	2.41	0.46
3:C:1607:GLU:OE2	3:C:1632:PHE:HB3	2.15	0.46
3:C:2107:PRO:HA	3:C:2264:SER:O	2.16	0.46
3:C:2128:LEU:HD11	3:C:2178:ILE:CG2	2.44	0.46
4:D:134:LEU:HD13	4:D:202:ILE:CG2	2.45	0.46
4:D:732:ILE:HD13	4:D:746:VAL:HG22	1.97	0.46
5:E:296:ALA:O	5:E:325:ARG:NH1	2.45	0.46
5:E:439:ARG:HE	5:E:440:LYS:HZ1	1.62	0.46
5:E:552:VAL:HG23	5:E:566:VAL:CG1	2.37	0.46
5:E:1521:VAL:HG22	5:E:1699:GLU:HA	1.97	0.46
5:E:1651:CYS:O	5:E:1690:HIS:NE2	2.44	0.46
5:E:1672:LYS:CD	5:E:1887:PRO:HG3	2.45	0.46
5:E:1814:ASN:HA	5:E:1817:MET:CG	2.45	0.46
8:H:57:ALA:HB1	8:H:59:TYR:CE1	2.50	0.46
8:H:114:ASP:OD2	8:H:133:PRO:HG2	2.16	0.46
9:I:668:ILE:HD13	9:I:718:LEU:HB3	1.98	0.46
21:N:576:HIS:ND1	21:N:651:CYS:O	2.45	0.46
22:O:50:ILE:HG22	22:O:106:ILE:HB	1.98	0.46
3:C:490:VAL:HG21	3:C:565:ARG:HG3	1.97	0.46
3:C:856:LEU:O	3:C:861:ARG:NH1	2.48	0.46
3:C:1093:ASP:OD1	3:C:1093:ASP:N	2.47	0.46
3:C:1645:LEU:HB2	3:C:1714:ALA:HB3	1.97	0.46
4:D:149:LEU:O	4:D:153:THR:HG23	2.16	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:449:ILE:HD11	4:D:497:LEU:HD23	1.97	0.46
5:E:350:MET:HE2	5:E:360:LEU:HB2	1.98	0.46
5:E:539:ILE:HD12	5:E:586:ILE:O	2.16	0.46
5:E:1186:LEU:HD23	5:E:1204:ILE:HG12	1.98	0.46
5:E:1398:GLN:OE1	5:E:1404:LYS:HA	2.16	0.46
5:E:1503:TRP:HA	5:E:1762:ARG:NH1	2.30	0.46
5:E:1741:VAL:HG21	5:E:1820:ALA:HB2	1.98	0.46
5:E:1764:MET:CE	5:E:1773:LEU:HD11	2.46	0.46
5:E:2084:LEU:HG	5:E:2085:GLN:N	2.31	0.46
6:F:90:ILE:HD11	6:F:108:HIS:CD2	2.51	0.46
6:F:281:VAL:CG1	6:F:306:ASP:HB2	2.41	0.46
7:G:397:LEU:HD22	7:G:407:TRP:CZ2	2.50	0.46
22:O:30:CYS:HB2	22:O:35:LEU:HD13	1.97	0.46
26:W:27:HIS:O	28:Y:221:ARG:NH1	2.49	0.46
32:Q:759:HIS:NE2	32:Q:764:CYS:SG	2.88	0.46
32:Q:913:ILE:HG22	32:Q:919:LYS:CE	2.43	0.46
3:C:705:LYS:NZ	7:G:157:TRP:O	2.49	0.46
3:C:1085:ILE:HD11	3:C:1160:ARG:HH12	1.81	0.46
3:C:2084:HIS:CD2	3:C:2085:LEU:HD22	2.51	0.46
3:C:2330:ARG:HG2	3:C:2331:GLU:N	2.31	0.46
4:D:219:LEU:HD22	4:D:251:LEU:CD1	2.46	0.46
5:E:727:SER:OG	5:E:730:GLU:HB2	2.15	0.46
6:F:262:TRP:CZ3	6:F:273:CYS:HB2	2.51	0.46
7:G:306:PRO:CB	7:G:338:MET:HE1	2.46	0.46
8:H:84:PHE:HD1	8:H:89:HIS:HA	1.80	0.46
9:I:515:LEU:HD11	9:I:538:LEU:HB2	1.98	0.46
9:I:768:LEU:HD11	9:I:779:LEU:CD2	2.45	0.46
19:L:200:SER:O	19:L:204:ILE:HG13	2.15	0.46
19:L:211:ARG:O	19:L:214:PHE:N	2.49	0.46
21:N:561:GLU:CD	23:R:13:THR:H	2.16	0.46
28:Y:86:THR:OG1	28:Y:88:GLU:HB3	2.16	0.46
31:U:224:ILE:HG23	31:U:529:LEU:HD21	1.98	0.46
32:Q:720:ARG:HD2	32:Q:725:MET:CE	2.45	0.46
32:Q:720:ARG:HD2	32:Q:725:MET:HE2	1.97	0.46
3:C:203:VAL:HG12	3:C:206:TRP:CZ2	2.51	0.46
3:C:1098:PHE:HE1	3:C:1185:LEU:HD21	1.81	0.46
3:C:1345:GLN:OE1	3:C:1711:LEU:HA	2.16	0.46
3:C:1760:GLU:HB3	3:C:1885:LYS:HB3	1.97	0.46
3:C:1808:PHE:HD1	3:C:1817:LEU:HD11	1.81	0.46
3:C:2229:LYS:NZ	3:C:2257:GLU:OE2	2.35	0.46
4:D:839:PRO:HD2	4:D:842:CYS:HB2	1.97	0.46

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:1308:PRO:HA	5:E:1327:PHE:HD1	1.80	0.46
5:E:1406:VAL:CG2	5:E:1418:LEU:HD22	2.45	0.46
6:F:75:HIS:NE2	6:F:121:GLY:O	2.47	0.46
7:G:363:ALA:HA	7:G:366:VAL:HG22	1.98	0.46
7:G:394:ARG:HB2	30:S:559:PHE:CZ	2.50	0.46
9:I:779:LEU:O	9:I:783:ILE:HG13	2.15	0.46
20:M:278:ALA:N	20:M:299:CYS:SG	2.89	0.46
21:N:557:LYS:O	21:N:559:LYS:N	2.49	0.46
30:S:720:LEU:HG	30:S:728:GLN:HE22	1.80	0.46
31:U:225:VAL:HG13	31:U:292:ALA:O	2.15	0.46
3:C:228:TRP:C	3:C:229:GLN:HG3	2.36	0.46
3:C:533:LYS:HG3	3:C:537:LYS:CE	2.34	0.46
3:C:545:HIS:O	3:C:549:GLU:HG2	2.16	0.46
3:C:873:ASN:HB2	7:G:288:ILE:HD13	1.97	0.46
3:C:926:LEU:HD11	3:C:1009:MET:CE	2.46	0.46
3:C:1439:ARG:O	3:C:1443:LYS:HG2	2.15	0.46
3:C:1505:LYS:CD	19:L:376:ASN:HA	2.46	0.46
3:C:1763:LEU:HD23	3:C:1889:LEU:HD21	1.97	0.46
3:C:1838:LYS:NZ	5:E:205:PHE:O	2.46	0.46
3:C:1901:LYS:HD2	3:C:1967:ILE:HD12	1.97	0.46
3:C:1998:ASN:ND2	3:C:2001:SER:HB2	2.31	0.46
4:D:141:GLY:HA2	35:D:1500:GTP:O1A	2.16	0.46
5:E:1447:ASN:O	5:E:1448:ILE:HD13	2.16	0.46
5:E:1525:LEU:HD23	5:E:1719:TYR:HE1	1.81	0.46
5:E:1842:VAL:HG21	5:E:1948:MET:CE	2.45	0.46
5:E:2017:ILE:HG12	5:E:2043:ARG:CA	2.41	0.46
6:F:73:LYS:O	6:F:81:LEU:HD12	2.16	0.46
9:I:671:VAL:CG2	9:I:677:CYS:HB2	2.46	0.46
18:K:67:A:C8	18:K:67:A:H5”	2.51	0.46
19:L:61:ALA:O	19:L:65:MET:HG3	2.16	0.46
24:P:59:A:H2’	24:P:60:A:C8	2.51	0.46
3:C:224:THR:HG22	3:C:226:GLN:HG2	1.97	0.45
3:C:701:ILE:HG21	7:G:158:LEU:HD23	1.97	0.45
3:C:950:LEU:HD22	3:C:954:LYS:HD2	1.97	0.45
3:C:1677:GLU:OE1	3:C:1677:GLU:N	2.46	0.45
3:C:1816:GLN:HG2	3:C:1818:PHE:CE1	2.50	0.45
5:E:175:LEU:O	5:E:179:ILE:HG12	2.15	0.45
5:E:288:GLU:HB3	5:E:309:LEU:HD21	1.96	0.45
5:E:737:ALA:O	5:E:741:MET:HG2	2.16	0.45
5:E:920:LEU:HD12	5:E:920:LEU:O	2.16	0.45
5:E:1523:LEU:HD21	5:E:1688:VAL:CG1	2.45	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:1560:ILE:HG13	5:E:1658:ALA:CB	2.46	0.45
5:E:1973:ARG:NH2	5:E:1974:CYS:SG	2.89	0.45
5:E:2029:ILE:CG2	5:E:2125:ASP:HB2	2.46	0.45
6:F:310:TYR:HB3	6:F:312:TRP:CZ3	2.51	0.45
7:G:308:HIS:NE2	7:G:310:PRO:HB2	2.32	0.45
7:G:362:VAL:O	7:G:366:VAL:HG22	2.16	0.45
8:H:74:ASP:O	8:H:101:LYS:NZ	2.48	0.45
9:I:489:ILE:O	9:I:492:GLY:N	2.48	0.45
9:I:763:VAL:HG12	9:I:765:ILE:CD1	2.45	0.45
18:K:66:G:C4	18:K:67:A:C8	3.04	0.45
27:X:129:LEU:HD23	27:X:129:LEU:HA	1.85	0.45
31:U:502:ASN:O	31:U:516:ILE:HA	2.16	0.45
32:Q:803:LEU:HD21	32:Q:875:VAL:HG21	1.98	0.45
32:Q:807:LYS:HG3	32:Q:868:TYR:CG	2.51	0.45
32:Q:862:ILE:HD13	32:Q:908:MET:CE	2.46	0.45
32:Q:912:MET:SD	32:Q:988:PRO:HD2	2.56	0.45
3:C:610:HIS:NE2	34:C:3000:IHP:O23	2.48	0.45
3:C:759:GLU:OE2	3:C:762:ARG:NH1	2.48	0.45
3:C:780:THR:HG23	3:C:898:PHE:CD1	2.51	0.45
3:C:2193:VAL:CG2	3:C:2230:LEU:HD21	2.38	0.45
5:E:462:LEU:CD1	5:E:466:LYS:HD2	2.45	0.45
5:E:539:ILE:HD11	5:E:588:CYS:SG	2.56	0.45
5:E:782:PHE:HA	5:E:808:VAL:HG23	1.98	0.45
5:E:1481:ILE:O	5:E:1482:GLU:HB3	2.16	0.45
5:E:1595:LYS:H	5:E:1595:LYS:HG2	1.54	0.45
7:G:482:MET:O	7:G:485:LYS:HG2	2.16	0.45
7:G:487:ILE:CD1	7:G:521:THR:HA	2.45	0.45
7:G:684:LEU:HA	7:G:687:VAL:HG22	1.98	0.45
9:I:429:ARG:HH21	9:I:624:PRO:C	2.19	0.45
9:I:668:ILE:HB	9:I:736:VAL:HG22	1.98	0.45
24:P:31:U:H2'	24:P:32:A:H8	1.79	0.45
29:Z:351:HIS:O	29:Z:355:LEU:HG	2.16	0.45
32:Q:688:ASN:OD1	32:Q:707:ASN:ND2	2.48	0.45
32:Q:793:ARG:HH12	32:Q:1005:GLU:HB2	1.80	0.45
32:Q:859:GLU:HA	32:Q:862:ILE:HD11	1.98	0.45
3:C:372:PRO:HG3	4:D:342:ARG:HG3	1.97	0.45
3:C:1763:LEU:HD11	3:C:1768:TYR:HA	1.98	0.45
4:D:436:GLN:HG2	4:D:437:HIS:CD2	2.51	0.45
4:D:721:LYS:HB3	4:D:721:LYS:HE3	1.79	0.45
5:E:840:ARG:NH2	5:E:842:THR:HG23	2.27	0.45
5:E:905:ILE:HG12	5:E:910:VAL:HG23	1.98	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:1139:VAL:O	5:E:1143:ILE:HG22	2.16	0.45
5:E:1706:CYS:HG	5:E:1714:PHE:HD2	1.64	0.45
5:E:2069:GLY:CA	5:E:2076:LEU:HA	2.44	0.45
6:F:65:HIS:HB2	6:F:349:LYS:O	2.15	0.45
6:F:89:LEU:HD21	6:F:104:THR:HG21	1.98	0.45
7:G:23:ARG:HD2	8:H:18:ILE:HG21	1.99	0.45
9:I:530:ILE:HA	9:I:533:LEU:HB2	1.98	0.45
18:K:65:U:OP1	18:K:66:G:H5'	2.15	0.45
24:P:60:A:H2'	24:P:61:U:H6	1.80	0.45
27:X:75:GLN:O	27:X:79:GLU:HG3	2.17	0.45
28:Y:146:PRO:HB2	28:Y:152:PHE:CD1	2.51	0.45
31:U:188:ASP:OD1	31:U:189:ILE:N	2.49	0.45
2:B:76:A:H2'	2:B:77:G:H4'	1.97	0.45
3:C:697:MET:CE	3:C:702:LYS:HG3	2.46	0.45
3:C:1493:THR:O	3:C:1748:ARG:NH2	2.47	0.45
3:C:1590:VAL:HG22	3:C:1664:ILE:CD1	2.42	0.45
3:C:1592:ASP:O	3:C:1596:VAL:HG23	2.16	0.45
3:C:1719:PHE:CD1	3:C:1720:PRO:HD2	2.51	0.45
3:C:1859:LYS:O	3:C:1882:ILE:HA	2.17	0.45
3:C:1942:ALA:CB	3:C:1983:LEU:HD22	2.46	0.45
4:D:392:LEU:HB3	4:D:393:PRO:HD3	1.98	0.45
5:E:493:LEU:O	5:E:519:ARG:HD2	2.17	0.45
5:E:618:HIS:H	5:E:618:HIS:HD2	1.64	0.45
5:E:938:ILE:HD13	5:E:949:LEU:CD2	2.47	0.45
5:E:984:LEU:HD13	5:E:998:VAL:HG13	1.99	0.45
5:E:1465:PRO:O	5:E:1469:VAL:HG23	2.17	0.45
5:E:1855:TYR:CE1	5:E:1915:ILE:HG22	2.51	0.45
6:F:227:LEU:HD12	6:F:227:LEU:O	2.17	0.45
6:F:302:ALA:H	6:F:312:TRP:HZ3	1.65	0.45
7:G:300:SER:O	7:G:304:THR:HG22	2.15	0.45
7:G:329:ARG:HA	7:G:332:ILE:HD12	1.98	0.45
8:H:52:LEU:HD23	19:L:343:LEU:HD21	1.95	0.45
18:K:56:C:H2'	18:K:57:C:H1'	1.97	0.45
19:L:250:MET:HA	19:L:274:ILE:HD12	1.99	0.45
20:M:276:VAL:HA	20:M:300:ALA:HA	1.98	0.45
24:P:48:U:H2'	24:P:49:C:C6	2.52	0.45
29:Z:355:LEU:O	29:Z:359:ILE:HG22	2.16	0.45
32:Q:717:LYS:O	32:Q:764:CYS:HA	2.16	0.45
32:Q:850:LEU:HD23	32:Q:860:ILE:HD12	1.96	0.45
2:B:77:G:H4'	2:B:77:G:OP1	2.17	0.45
3:C:277:PRO:HB3	3:C:452:LYS:CB	2.45	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:372:PRO:O	4:D:358:LYS:NZ	2.50	0.45
3:C:1614:ILE:HD12	3:C:1618:LYS:CB	2.47	0.45
3:C:2005:SER:O	3:C:2008:ARG:HG2	2.15	0.45
4:D:319:THR:HG22	4:D:320:LEU:N	2.31	0.45
7:G:308:HIS:CD2	7:G:310:PRO:HD2	2.52	0.45
7:G:434:VAL:HG11	7:G:463:ASP:HB2	1.99	0.45
8:H:54:LYS:HE2	19:L:343:LEU:H	1.81	0.45
19:L:59:MET:O	19:L:60:PHE:C	2.55	0.45
21:N:661:PHE:HB3	21:N:667:GLU:HA	1.99	0.45
24:P:16:C:H2'	24:P:17:G:C8	2.51	0.45
30:S:565:GLU:O	30:S:566:ILE:HB	2.17	0.45
32:Q:932:ILE:HG12	32:Q:943:VAL:HG22	1.99	0.45
3:C:37:TRP:CZ2	6:F:197:LEU:HD22	2.52	0.45
3:C:781:ARG:CG	3:C:1022:MET:HE1	2.47	0.45
3:C:872:ASP:O	3:C:874:PRO:HD3	2.17	0.45
3:C:1285:LEU:O	3:C:1289:VAL:HG13	2.17	0.45
3:C:1762:TYR:HA	3:C:1886:GLY:O	2.17	0.45
3:C:1778:TRP:CE3	3:C:1858:PRO:HG3	2.52	0.45
3:C:1935:ARG:HB2	3:C:1980:GLU:OE2	2.16	0.45
4:D:839:PRO:HD3	4:D:894:GLN:O	2.16	0.45
5:E:1007:PRO:HG3	5:E:1104:TRP:CE2	2.50	0.45
5:E:1034:LYS:HD3	5:E:1053:GLU:OE1	2.17	0.45
5:E:1552:LYS:HA	5:E:1552:LYS:HE2	1.97	0.45
8:H:31:GLY:N	8:H:63:VAL:HG13	2.32	0.45
9:I:382:LYS:HB3	9:I:626:VAL:HB	1.99	0.45
19:L:199:ALA:O	19:L:203:ARG:HG2	2.17	0.45
23:R:106:TRP:HA	23:R:109:ASN:OD1	2.17	0.45
31:U:224:ILE:HG22	31:U:529:LEU:HD21	1.98	0.45
31:U:425:ILE:H	31:U:425:ILE:HD12	1.82	0.45
3:C:792:HIS:CE1	31:U:409:ILE:HG13	2.51	0.45
3:C:1955:LYS:HB3	3:C:1960:THR:CG2	2.47	0.45
3:C:2125:ALA:HA	3:C:2178:ILE:O	2.17	0.45
4:D:285:VAL:HG12	4:D:300:LEU:HD12	1.98	0.45
4:D:763:LYS:O	4:D:767:VAL:HG23	2.17	0.45
5:E:739:ARG:HA	5:E:782:PHE:CZ	2.52	0.45
5:E:1046:ILE:HB	5:E:1064:GLN:NE2	2.32	0.45
5:E:1408:LEU:HB2	5:E:1427:SER:HB2	1.99	0.45
5:E:1937:SER:HB3	5:E:1938:PRO:HD3	1.99	0.45
5:E:1951:GLN:HG3	5:E:1962:GLN:CG	2.39	0.45
5:E:2064:TRP:CZ3	5:E:2110:SER:HB2	2.51	0.45
7:G:540:LYS:HA	7:G:543:TRP:CE3	2.52	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:70:THR:HG23	8:H:75:ILE:HB	1.98	0.45
24:P:2:A:H2'	24:P:3:A:C8	2.51	0.45
25:V:49:LEU:O	25:V:53:ASN:ND2	2.50	0.45
31:U:307:SER:O	31:U:309:LYS:N	2.50	0.45
31:U:402:LYS:HB2	31:U:406:GLU:OE2	2.17	0.45
31:U:496:THR:O	31:U:555:ARG:HB3	2.17	0.45
32:Q:818:PRO:HG3	32:Q:878:THR:HG23	1.99	0.45
2:B:39:C:H5"	2:B:40:U:H5	1.82	0.45
2:B:102:U:H2'	2:B:103:G:C8	2.52	0.45
3:C:404:LEU:HD22	3:C:411:PHE:O	2.17	0.45
3:C:769:LYS:HE2	3:C:1250:ALA:HB2	1.99	0.45
3:C:902:TYR:HB2	3:C:1242:ASN:ND2	2.31	0.45
3:C:1942:ALA:N	3:C:1987:ILE:HD11	2.32	0.45
3:C:2077:ALA:HB2	3:C:2305:TYR:CD2	2.52	0.45
3:C:2252:LEU:H	3:C:2255:HIS:CD2	2.34	0.45
4:D:804:GLY:H	4:D:808:ILE:HG12	1.81	0.45
4:D:891:THR:O	4:D:892:GLN:HB2	2.16	0.45
5:E:113:TYR:O	5:E:117:LEU:HG	2.17	0.45
5:E:437:ARG:CG	5:E:439:ARG:HG3	2.47	0.45
5:E:1176:LYS:O	5:E:1180:LEU:HG	2.17	0.45
5:E:1187:SER:O	5:E:1202:LEU:HD12	2.17	0.45
5:E:1868:LEU:HD11	5:E:1893:LEU:HB3	1.98	0.45
5:E:1911:ASP:O	5:E:1915:ILE:HG12	2.17	0.45
7:G:135:ARG:NE	7:G:135:ARG:HA	2.31	0.45
9:I:446:LEU:HD12	9:I:449:LEU:HD22	1.99	0.45
9:I:453:ILE:HD12	9:I:456:LEU:HD12	1.98	0.45
21:N:576:HIS:NE2	21:N:654:GLU:OE2	2.50	0.45
24:P:78:C:H2'	24:P:79:G:C8	2.52	0.45
29:Z:228:GLN:HB3	29:Z:231:TYR:CE1	2.44	0.45
29:Z:333:ALA:HA	29:Z:336:LYS:CG	2.46	0.45
31:U:200:GLN:OE1	31:U:200:GLN:HA	2.16	0.45
31:U:359:LYS:HG2	31:U:379:TYR:HD1	1.82	0.45
32:Q:695:GLN:OE1	32:Q:700:ASN:HB3	2.17	0.45
32:Q:924:ASP:OD2	32:Q:945:VAL:HG11	2.16	0.45
3:C:175:PRO:HG2	3:C:498:ARG:NH2	2.32	0.45
3:C:1064:PRO:HD2	3:C:1067:MET:CE	2.47	0.45
3:C:1354:ARG:HD2	3:C:1359:HIS:CE1	2.52	0.45
3:C:1580:HIS:HB3	3:C:1583:GLN:OE1	2.17	0.45
3:C:1899:VAL:HB	3:C:1902:PHE:HD1	1.82	0.45
3:C:2133:PRO:HG3	3:C:2141:GLU:CD	2.38	0.45
4:D:192:ASP:OD1	4:D:193:THR:N	2.47	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:146:GLU:OE2	5:E:153:ARG:NH2	2.49	0.45
5:E:1188:VAL:HG22	5:E:1190:LEU:HD12	1.99	0.45
5:E:1353:GLY:HA3	5:E:1692:ASN:HD22	1.82	0.45
5:E:1408:LEU:HD13	5:E:1435:LEU:HD22	1.99	0.45
5:E:2067:VAL:CG2	5:E:2107:TYR:HB2	2.47	0.45
6:F:208:ILE:CG1	6:F:222:LEU:HD21	2.47	0.45
7:G:282:PRO:HB2	7:G:284:HIS:NE2	2.32	0.45
7:G:332:ILE:CD1	7:G:348:GLU:HG3	2.44	0.45
7:G:376:TYR:CE2	7:G:396:ALA:HB2	2.52	0.45
7:G:689:ASP:N	7:G:689:ASP:OD1	2.50	0.45
9:I:341:ARG:HA	9:I:344:ARG:NH1	2.32	0.45
9:I:646:MET:HB3	9:I:646:MET:HE2	1.83	0.45
9:I:672:ASN:OD1	9:I:751:ARG:NH2	2.50	0.45
17:J:45:A:OP1	19:L:256:ARG:NH1	2.50	0.45
18:K:52:A:C6	18:K:53:G:C6	3.04	0.45
20:M:249:ALA:HB1	20:M:276:VAL:HG23	1.99	0.45
27:X:47:LYS:HD3	27:X:49:ASP:OD2	2.17	0.45
31:U:157:VAL:HG12	31:U:176:PRO:HG3	1.99	0.45
32:Q:859:GLU:HA	32:Q:862:ILE:CD1	2.46	0.45
3:C:511:LYS:NZ	7:G:88:LEU:HD21	2.31	0.45
3:C:530:LEU:HD23	3:C:534:GLU:HB3	1.99	0.45
3:C:710:LEU:CD2	8:H:4:LEU:HD13	2.46	0.45
3:C:781:ARG:O	3:C:785:LYS:HG3	2.17	0.45
3:C:1555:LEU:HD11	3:C:1574:ILE:CD1	2.46	0.45
3:C:1705:ILE:CD1	3:C:1712:HIS:HB3	2.47	0.45
3:C:1814:THR:HG23	3:C:1816:GLN:H	1.82	0.45
3:C:1988:LEU:CG	3:C:1999:VAL:HG13	2.47	0.45
3:C:2330:ARG:HH11	3:C:2330:ARG:HG3	1.82	0.45
4:D:557:GLN:HB3	4:D:558:PRO:HD3	1.99	0.45
4:D:688:ILE:O	4:D:688:ILE:HG13	2.17	0.45
5:E:503:ALA:O	5:E:653:ALA:HA	2.16	0.45
5:E:1050:GLU:OE1	5:E:1056:SER:HB3	2.17	0.45
5:E:1609:LEU:HA	5:E:1612:THR:HG22	1.98	0.45
5:E:2019:LEU:HD12	5:E:2120:TYR:CE2	2.51	0.45
6:F:156:SER:CB	6:F:199:VAL:HG22	2.46	0.45
6:F:198:ALA:O	6:F:210:SER:HA	2.17	0.45
7:G:21:LEU:O	7:G:21:LEU:HD23	2.16	0.45
7:G:117:LYS:HA	7:G:120:ARG:HH21	1.81	0.45
7:G:276:ASP:O	7:G:280:MET:HG3	2.16	0.45
7:G:474:GLU:CG	7:G:486:ILE:HD12	2.45	0.45
8:H:108:THR:N	8:H:111:ASP:OD2	2.49	0.45

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:I:670:PHE:HB3	9:I:751:ARG:CZ	2.47	0.45
28:Y:226:ARG:HD3	28:Y:227:ALA:HB2	1.99	0.45
29:Z:309:GLN:O	29:Z:312:THR:OG1	2.31	0.45
31:U:277:PHE:HA	31:U:299:MET:HE2	1.99	0.45
31:U:404:GLU:OE1	31:U:405:LYS:HE3	2.17	0.45
32:Q:759:HIS:O	32:Q:759:HIS:ND1	2.50	0.45
32:Q:793:ARG:NH1	32:Q:1005:GLU:HB2	2.31	0.45
3:C:1389:TYR:HD1	3:C:1408:LEU:HD21	1.82	0.44
3:C:1641:ARG:HB2	3:C:1642:PRO:HD2	1.99	0.44
5:E:51:ARG:N	5:E:54:ASP:OD2	2.43	0.44
5:E:296:ALA:HB1	5:E:302:CYS:HB3	1.98	0.44
5:E:498:ASN:C	5:E:667:VAL:HG22	2.37	0.44
5:E:619:LEU:CD2	5:E:622:ASP:HB3	2.48	0.44
5:E:1198:LEU:HG	5:E:1258:VAL:CG2	2.47	0.44
5:E:1419:LEU:HD22	5:E:1425:ILE:HD13	1.99	0.44
5:E:1752:VAL:CG1	9:I:161:PRO:HB2	2.47	0.44
5:E:2071:ALA:HB2	5:E:2105:THR:CB	2.46	0.44
6:F:55:LEU:HB2	6:F:355:GLU:OE2	2.17	0.44
6:F:356:ILE:HG23	6:F:357:GLN:N	2.26	0.44
9:I:694:LEU:HB2	9:I:718:LEU:HD11	1.98	0.44
9:I:728:ILE:HG22	9:I:730:ILE:HG13	1.99	0.44
19:L:63:ILE:HB	19:L:99:LEU:CD1	2.32	0.44
19:L:114:ILE:HG21	19:L:139:VAL:HG21	2.00	0.44
23:R:90:LEU:HA	23:R:93:LEU:HB2	2.00	0.44
25:V:1:MET:HB3	25:V:2:GLY:H	1.62	0.44
28:Y:77:SER:O	28:Y:81:ARG:HG2	2.16	0.44
31:U:277:PHE:HB2	31:U:299:MET:HE1	1.99	0.44
32:Q:789:ILE:HG21	32:Q:969:GLN:HG2	1.99	0.44
32:Q:982:GLN:O	32:Q:985:MET:HG2	2.17	0.44
3:C:294:ASN:N	3:C:297:ASN:OD1	2.50	0.44
3:C:384:VAL:O	4:D:354:ARG:NH2	2.47	0.44
3:C:804:GLU:O	3:C:807:VAL:HG22	2.17	0.44
5:E:728:ARG:NH2	5:E:787:ALA:HB3	2.33	0.44
5:E:766:ALA:HA	5:E:778:LEU:HD23	1.99	0.44
5:E:1824:ILE:HG22	5:E:1828:THR:OG1	2.18	0.44
5:E:1927:VAL:O	5:E:1930:LEU:HG	2.17	0.44
5:E:1945:LEU:HA	5:E:1948:MET:HE2	1.99	0.44
5:E:2084:LEU:HD12	5:E:2086:GLN:O	2.17	0.44
6:F:157:CYS:HA	6:F:168:CYS:O	2.16	0.44
9:I:380:THR:CG2	9:I:628:TYR:HB2	2.47	0.44
9:I:550:GLU:HA	9:I:606:THR:HA	1.98	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:I:591:ASN:HB3	9:I:598:LYS:HA	1.99	0.44
9:I:794:GLU:O	9:I:798:HIS:HB2	2.17	0.44
17:J:91:U:H2'	17:J:92:A:H8	1.82	0.44
18:K:58:U:H1'	18:K:60:G:N1	2.33	0.44
22:O:12:PRO:HB2	22:O:126:LEU:HG	1.99	0.44
23:R:45:ARG:HH12	23:R:118:LYS:HB3	1.81	0.44
23:R:53:VAL:HG11	23:R:82:LEU:HD23	1.99	0.44
26:W:18:SER:HB2	26:W:23:ASP:HB3	1.99	0.44
30:S:714:ASP:OD1	30:S:714:ASP:N	2.49	0.44
32:Q:848:PRO:HD3	32:Q:918:PHE:HE2	1.82	0.44
3:C:30:LEU:CD2	6:F:214:ASP:HA	2.46	0.44
3:C:949:PRO:HD3	3:C:1273:TYR:HE1	1.82	0.44
3:C:1920:TYR:CE1	3:C:1936:LEU:HD22	2.51	0.44
3:C:2188:LEU:O	3:C:2251:TYR:OH	2.34	0.44
4:D:140:HIS:CD2	4:D:230:ASP:HB2	2.52	0.44
4:D:589:LYS:HG3	4:D:628:VAL:HG13	1.98	0.44
5:E:546:SER:O	5:E:549:GLN:HG3	2.17	0.44
5:E:579:GLU:O	5:E:583:THR:HG22	2.18	0.44
5:E:641:MET:HE3	5:E:1582:ALA:HB1	1.99	0.44
5:E:685:LEU:HD12	5:E:865:GLY:O	2.17	0.44
5:E:762:LEU:HD22	5:E:778:LEU:HD11	1.99	0.44
5:E:849:ILE:HA	5:E:852:MET:HG2	2.00	0.44
5:E:1427:SER:OG	5:E:1428:THR:N	2.50	0.44
5:E:1732:MET:SD	5:E:1755:LEU:HD21	2.56	0.44
5:E:1923:ILE:HD12	5:E:1946:ALA:CA	2.46	0.44
5:E:2047:VAL:HG21	5:E:2085:GLN:OE1	2.18	0.44
7:G:307:HIS:O	7:G:309:PRO:HD3	2.18	0.44
9:I:480:LEU:HA	9:I:483:GLN:NE2	2.32	0.44
30:S:732:ARG:NE	30:S:732:ARG:HA	2.32	0.44
32:Q:862:ILE:CD1	32:Q:912:MET:HE3	2.48	0.44
1:A:3:A:H1'	24:P:62:C:C5'	2.46	0.44
3:C:211:GLN:OE1	3:C:214:ARG:HD2	2.18	0.44
3:C:301:LYS:HD2	4:D:940:ARG:HA	1.99	0.44
3:C:832:TYR:HB3	3:C:835:ASP:CG	2.38	0.44
3:C:1838:LYS:HE3	3:C:1865:ARG:NH1	2.33	0.44
3:C:2190:PRO:HG2	3:C:2246:ASN:O	2.17	0.44
5:E:409:LEU:O	5:E:959:THR:HG21	2.18	0.44
5:E:614:LEU:HD23	5:E:617:ILE:HD12	1.99	0.44
5:E:1087:SER:O	5:E:1091:LEU:HD13	2.18	0.44
5:E:1858:ILE:CD1	5:E:1859:PRO:HD3	2.47	0.44
5:E:2043:ARG:HG2	5:E:2045:GLU:H	1.81	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:335:GLY:O	7:G:339:CYS:N	2.45	0.44
9:I:178:GLN:O	9:I:181:VAL:HG22	2.17	0.44
17:J:86:U:H2'	17:J:87:C:C5	2.52	0.44
19:L:55:TRP:O	19:L:60:PHE:CD2	2.71	0.44
27:X:42:THR:OG1	27:X:119:ASN:OD1	2.31	0.44
29:Z:269:GLU:HA	29:Z:272:GLN:OE1	2.17	0.44
1:A:3:A:H2	24:P:61:U:O2	2.01	0.44
3:C:126:ILE:HD12	3:C:128:PHE:CE2	2.53	0.44
3:C:356:ILE:HD13	4:D:269:LEU:HD21	2.00	0.44
3:C:707:ARG:CG	8:H:4:LEU:HG	2.41	0.44
3:C:1270:LEU:CD2	3:C:1288:LEU:HD21	2.47	0.44
3:C:1889:LEU:HD13	3:C:1891:LEU:HD21	1.99	0.44
3:C:2190:PRO:HA	3:C:2251:TYR:CE1	2.53	0.44
4:D:216:THR:HG22	4:D:245:HIS:NE2	2.32	0.44
4:D:449:ILE:HD11	4:D:497:LEU:CD2	2.47	0.44
5:E:124:LEU:HD11	5:E:701:PHE:CE2	2.52	0.44
5:E:266:PHE:CZ	31:U:108:LEU:HD23	2.53	0.44
5:E:1440:LYS:O	5:E:1443:LYS:NZ	2.41	0.44
5:E:1767:ASN:ND2	5:E:1770:TYR:HB2	2.32	0.44
5:E:2061:GLU:OE2	5:E:2085:GLN:NE2	2.50	0.44
6:F:150:HIS:CE1	6:F:177:LYS:HD2	2.52	0.44
7:G:18:VAL:O	8:H:11:LYS:HD2	2.17	0.44
7:G:427:VAL:HG23	30:S:572:ALA:HB1	2.00	0.44
9:I:400:PRO:HA	9:I:403:LEU:HD12	2.00	0.44
17:J:35:A:N6	17:J:49:A:O2'	2.51	0.44
17:J:125:A:H2'	17:J:126:A:H8	1.81	0.44
18:K:57:C:O2	18:K:57:C:H2'	2.18	0.44
19:L:116:ASP:OD2	19:L:117:LYS:NZ	2.47	0.44
32:Q:814:ALA:O	32:Q:851:VAL:HG22	2.16	0.44
2:B:77:G:H2'	2:B:77:G:N3	2.32	0.44
3:C:414:ARG:NH2	4:D:408:LEU:O	2.48	0.44
3:C:853:LYS:HE3	3:C:853:LYS:HB2	1.74	0.44
3:C:1636:LYS:HZ2	24:P:65:C:P	2.41	0.44
3:C:1895:ALA:HB3	3:C:1940:LEU:HD12	1.98	0.44
3:C:2113:LYS:O	3:C:2117:ILE:HG23	2.17	0.44
4:D:481:MET:CE	4:D:559:ILE:HD11	2.47	0.44
5:E:462:LEU:HG	5:E:489:TYR:CE1	2.52	0.44
5:E:593:TRP:HD1	5:E:631:LEU:HG	1.82	0.44
5:E:793:ASP:O	5:E:797:VAL:HG12	2.17	0.44
5:E:1612:THR:HG21	5:E:1619:TYR:CE1	2.53	0.44
5:E:1868:LEU:HD23	5:E:1884:PHE:CE1	2.53	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:1935:TRP:HB3	5:E:1938:PRO:HG2	2.00	0.44
5:E:1973:ARG:HD3	5:E:1996:LEU:HD11	2.00	0.44
6:F:252:SER:HB3	6:F:262:TRP:HE1	1.81	0.44
7:G:137:LYS:HB3	7:G:139:GLN:NE2	2.33	0.44
17:J:125:A:H2'	17:J:126:A:C8	2.53	0.44
25:V:1:MET:CG	28:Y:234:LYS:HE2	2.47	0.44
27:X:117:ILE:H	27:X:117:ILE:HD12	1.83	0.44
31:U:391:LEU:HD12	31:U:452:PHE:HE1	1.82	0.44
32:Q:891:GLY:H	32:Q:897:MET:HE1	1.83	0.44
3:C:1086:ARG:O	3:C:1087:LEU:HD23	2.17	0.44
3:C:1301:ILE:HG13	3:C:1307:MET:CE	2.47	0.44
3:C:1310:ARG:HG2	3:C:1310:ARG:O	2.17	0.44
3:C:1585:ILE:CG1	3:C:1739:ALA:HB1	2.48	0.44
3:C:1628:ASP:O	3:C:1629:ILE:HD13	2.17	0.44
3:C:1762:TYR:CZ	3:C:1886:GLY:HA3	2.52	0.44
3:C:1890:GLN:O	3:C:1890:GLN:HG2	2.18	0.44
4:D:859:GLN:HG2	4:D:860:ASP:N	2.32	0.44
5:E:712:ILE:HD13	5:E:721:VAL:HG11	1.99	0.44
5:E:926:TYR:CE1	5:E:953:ARG:HD3	2.53	0.44
5:E:1041:LEU:HD23	5:E:1041:LEU:O	2.17	0.44
5:E:1502:HIS:ND1	5:E:1762:ARG:HD2	2.32	0.44
5:E:1597:LEU:HD12	5:E:1597:LEU:O	2.18	0.44
5:E:1631:LEU:O	5:E:1635:LEU:HG	2.17	0.44
5:E:1842:VAL:HG21	5:E:1948:MET:HE1	2.00	0.44
5:E:1952:ALA:HB3	5:E:2055:LEU:HD22	2.00	0.44
6:F:128:SER:O	6:F:154:VAL:HB	2.17	0.44
7:G:744:PRO:HA	7:G:747:LEU:HB2	2.00	0.44
8:H:8:LEU:O	8:H:61:VAL:HA	2.17	0.44
26:W:88:THR:OG1	26:W:89:GLY:N	2.51	0.44
27:X:68:LYS:O	27:X:72:ARG:HG2	2.18	0.44
28:Y:60:TYR:CE2	28:Y:75:MET:HG3	2.51	0.44
31:U:108:LEU:HD12	31:U:108:LEU:HA	1.83	0.44
3:C:46:ALA:HB3	3:C:49:ARG:CG	2.48	0.44
3:C:194:GLU:OE1	3:C:194:GLU:HA	2.17	0.44
3:C:1501:LEU:HD23	3:C:1753:LEU:HD11	1.99	0.44
3:C:1505:LYS:N	19:L:376:ASN:HB3	2.32	0.44
3:C:1914:MET:HG2	3:C:1915:VAL:N	2.32	0.44
3:C:2083:LEU:HD21	3:C:2120:LEU:HD21	1.99	0.44
3:C:2111:LEU:HD21	3:C:2225:LEU:HD11	2.00	0.44
5:E:840:ARG:NH2	5:E:842:THR:HA	2.33	0.44
5:E:933:PRO:HB2	5:E:938:ILE:HG22	1.99	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:1030:ARG:HB2	5:E:1033:GLU:OE2	2.18	0.44
5:E:1030:ARG:HD2	5:E:1032:GLU:OE2	2.18	0.44
5:E:1812:PRO:HB2	5:E:1817:MET:SD	2.57	0.44
5:E:1936:LEU:O	5:E:1940:LEU:HG	2.18	0.44
5:E:2043:ARG:CZ	5:E:2047:VAL:HG22	2.48	0.44
6:F:54:SER:HB2	6:F:96:TYR:CD1	2.53	0.44
6:F:123:MET:HE3	6:F:135:VAL:CG1	2.48	0.44
7:G:296:LEU:HD12	7:G:299:LYS:CE	2.48	0.44
7:G:385:ASP:OD1	7:G:385:ASP:N	2.51	0.44
7:G:405:ARG:HA	7:G:408:LYS:NZ	2.32	0.44
7:G:423:LEU:HD23	7:G:427:VAL:HG13	2.00	0.44
7:G:566:ALA:O	7:G:569:VAL:HG22	2.17	0.44
9:I:424:ILE:O	9:I:428:ASN:N	2.45	0.44
9:I:748:TYR:O	9:I:752:ILE:HG23	2.17	0.44
20:M:456:LYS:HE3	20:M:456:LYS:HB3	1.81	0.44
21:N:470:PRO:HA	21:N:471:PRO:HD3	1.89	0.44
24:P:69:A:C8	26:W:81:ARG:HD2	2.50	0.44
31:U:170:LEU:HD22	31:U:193:LEU:HD23	2.00	0.44
32:Q:796:SER:OG	32:Q:879:LEU:HD13	2.18	0.44
32:Q:812:LEU:HD11	32:Q:868:TYR:CA	2.45	0.44
3:C:200:ASP:OD1	3:C:240:ARG:NH2	2.38	0.44
3:C:707:ARG:HA	8:H:4:LEU:CD2	2.45	0.44
3:C:749:TRP:O	3:C:753:THR:HG22	2.17	0.44
3:C:796:LYS:HD3	31:U:410:ILE:CD1	2.46	0.44
3:C:1820:LYS:O	3:C:1822:ILE:HD12	2.18	0.44
3:C:1839:TRP:HZ3	3:C:1874:VAL:HB	1.83	0.44
3:C:1998:ASN:OD1	3:C:1998:ASN:N	2.50	0.44
4:D:481:MET:HE1	4:D:556:ASP:HA	1.99	0.44
5:E:1739:GLU:HA	5:E:1742:THR:HG22	2.00	0.44
5:E:1943:MET:HB3	5:E:2109:MET:SD	2.57	0.44
6:F:197:LEU:CD1	6:F:239:THR:HG22	2.47	0.44
6:F:220:TRP:CH2	6:F:227:LEU:HD23	2.52	0.44
6:F:220:TRP:CZ3	6:F:227:LEU:HB3	2.53	0.44
6:F:246:GLU:OE2	6:F:248:SER:HB2	2.17	0.44
6:F:343:ILE:HG13	6:F:353:MET:HB3	2.00	0.44
7:G:152:VAL:HG13	7:G:157:TRP:NE1	2.25	0.44
7:G:295:ARG:HH22	7:G:319:GLU:HA	1.81	0.44
7:G:427:VAL:HG21	7:G:440:LEU:CD2	2.48	0.44
7:G:864:PHE:HB3	7:G:881:PHE:CD2	2.52	0.44
24:P:79:G:H2'	24:P:80:G:H8	1.83	0.44
26:W:66:LYS:O	26:W:70:VAL:HG13	2.18	0.44

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:113:VAL:HG13	4:D:153:THR:O	2.18	0.43
4:D:338:GLU:O	4:D:342:ARG:NH1	2.51	0.43
4:D:474:LEU:HA	4:D:498:SER:O	2.18	0.43
5:E:76:GLU:HA	5:E:79:HIS:CE1	2.53	0.43
5:E:405:PRO:HB2	5:E:406:ARG:H	1.66	0.43
5:E:979:PHE:O	5:E:980:GLN:NE2	2.50	0.43
5:E:1136:PRO:O	5:E:1139:VAL:HG12	2.17	0.43
5:E:1206:PRO:HG3	5:E:1241:LEU:HD11	1.99	0.43
5:E:1335:VAL:HG11	5:E:1359:CYS:SG	2.58	0.43
5:E:1381:PRO:HA	5:E:1429:PRO:CG	2.48	0.43
5:E:1745:ILE:CG2	5:E:1751:ALA:HB2	2.46	0.43
5:E:1825:ASN:N	5:E:1854:GLU:OE2	2.31	0.43
5:E:2077:ILE:HG21	5:E:2104:TYR:OH	2.18	0.43
6:F:240:GLY:CA	6:F:290:ARG:HA	2.48	0.43
6:F:241:LEU:HD23	6:F:252:SER:HA	2.00	0.43
7:G:317:ARG:O	7:G:320:GLU:HG2	2.18	0.43
29:Z:311:ASP:HA	29:Z:314:ARG:HG2	2.00	0.43
32:Q:753:LEU:CD1	32:Q:765:LEU:HB3	2.48	0.43
32:Q:898:LEU:HD12	32:Q:922:HIS:ND1	2.33	0.43
3:C:37:TRP:HZ3	6:F:286:LYS:HG2	1.82	0.43
3:C:66:VAL:HG22	3:C:120:TYR:CZ	2.53	0.43
3:C:166:PHE:CE1	3:C:581:ILE:HD11	2.52	0.43
3:C:168:PRO:HG2	3:C:559:ASP:CB	2.48	0.43
3:C:206:TRP:HZ2	3:C:234:MET:HE3	1.82	0.43
3:C:288:LEU:HG	3:C:289:GLN:OE1	2.17	0.43
3:C:1471:ARG:NH1	19:L:383:ILE:HG22	2.32	0.43
3:C:1560:ILE:HD11	3:C:1577:PHE:HE2	1.82	0.43
3:C:1639:VAL:HG22	3:C:1640:SER:H	1.83	0.43
3:C:2004:GLN:HE22	3:C:2008:ARG:HD3	1.84	0.43
5:E:732:GLY:HA2	5:E:784:ILE:HG21	1.99	0.43
5:E:1217:SER:O	5:E:1243:ALA:HB2	2.18	0.43
5:E:1536:GLN:O	5:E:1540:LEU:HD13	2.17	0.43
5:E:1539:LEU:HA	5:E:1542:MET:CG	2.48	0.43
5:E:1937:SER:HB3	5:E:2074:ASN:HD21	1.83	0.43
9:I:442:THR:HA	9:I:445:PHE:CE2	2.53	0.43
9:I:667:ILE:HA	9:I:733:VAL:CG1	2.48	0.43
19:L:65:MET:SD	19:L:66:LYS:N	2.91	0.43
23:R:106:TRP:CD1	23:R:111:ALA:HB3	2.54	0.43
25:V:86:SER:O	25:V:90:GLU:HG3	2.17	0.43
2:B:10:U:H2'	2:B:11:U:C6	2.53	0.43
3:C:555:LYS:HE2	3:C:559:ASP:OD1	2.18	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:1784:ASN:HA	5:E:202:ASN:OD1	2.18	0.43
3:C:1922:ASP:OD1	3:C:1922:ASP:N	2.51	0.43
4:D:727:LEU:HA	4:D:727:LEU:HD23	1.73	0.43
4:D:922:GLU:HG2	9:I:247:LEU:HD11	2.00	0.43
5:E:201:VAL:HG13	7:G:305:ASN:ND2	2.33	0.43
5:E:620:LEU:HD12	5:E:620:LEU:HA	1.71	0.43
5:E:1346:VAL:HG12	5:E:1348:VAL:HG23	2.01	0.43
5:E:1659:HIS:NE2	5:E:1701:ARG:HD3	2.33	0.43
5:E:1822:TYR:HD2	5:E:1925:ALA:HB2	1.83	0.43
5:E:1973:ARG:HD3	5:E:1977:LYS:HD3	2.00	0.43
7:G:147:ARG:NH2	31:U:364:ASP:HB3	2.33	0.43
7:G:680:LYS:HD3	7:G:680:LYS:HA	1.80	0.43
9:I:669:ILE:HG22	9:I:718:LEU:O	2.18	0.43
22:O:36:ARG:HD3	22:O:36:ARG:HA	1.89	0.43
28:Y:90:GLU:HA	28:Y:93:MET:CE	2.48	0.43
31:U:231:LYS:HB3	31:U:231:LYS:HE3	1.73	0.43
2:B:10:U:H2'	2:B:11:U:H6	1.83	0.43
2:B:44:A:H4'	2:B:45:C:OP1	2.17	0.43
3:C:86:ARG:HB3	7:G:98:ASP:HA	1.99	0.43
3:C:895:GLY:HA2	3:C:1018:ASN:O	2.19	0.43
3:C:1085:ILE:HG23	3:C:1097:ILE:CG2	2.48	0.43
3:C:1230:LEU:O	3:C:1280:ASN:ND2	2.42	0.43
3:C:1831:LYS:O	3:C:1832:ARG:HD2	2.17	0.43
3:C:2105:ILE:CG2	3:C:2264:SER:HB3	2.49	0.43
3:C:2128:LEU:HD13	3:C:2177:TRP:HA	2.00	0.43
5:E:488:LEU:HD11	5:E:676:PHE:CE1	2.54	0.43
5:E:696:LYS:HG2	5:E:699:LYS:H	1.83	0.43
5:E:1610:LYS:HA	5:E:1613:LEU:CD2	2.48	0.43
5:E:1920:ILE:O	5:E:1923:ILE:HG12	2.18	0.43
5:E:2066:VAL:O	5:E:2079:ILE:HA	2.18	0.43
6:F:202:ASN:ND2	6:F:207:GLN:HB2	2.34	0.43
7:G:134:GLU:HG3	7:G:135:ARG:CG	2.47	0.43
7:G:508:GLN:HA	7:G:511:GLU:OE1	2.18	0.43
19:L:57:SER:O	19:L:60:PHE:HB3	2.18	0.43
19:L:61:ALA:O	19:L:62:GLU:C	2.57	0.43
21:N:558:PHE:CE2	23:R:12:GLN:HG3	2.54	0.43
24:P:49:C:H2'	24:P:50:U:C6	2.53	0.43
32:Q:706:ASP:OD2	32:Q:709:ARG:NE	2.25	0.43
32:Q:773:ASN:O	32:Q:777:VAL:HG23	2.18	0.43
32:Q:861:ILE:HD13	32:Q:897:MET:HB3	2.01	0.43
3:C:25:MET:HG2	6:F:232:ARG:NH2	2.34	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:1503:TRP:HB2	19:L:378:MET:CB	2.32	0.43
3:C:1763:LEU:HD21	3:C:1771:LEU:HD11	2.00	0.43
4:D:476:CYS:HB3	4:D:565:ILE:HB	2.00	0.43
4:D:530:LEU:HD22	4:D:550:VAL:CG2	2.49	0.43
5:E:690:VAL:HB	5:E:870:ILE:HG13	2.01	0.43
5:E:795:THR:HA	5:E:798:GLU:OE2	2.19	0.43
5:E:1036:GLU:OE2	5:E:1073:GLU:HB2	2.19	0.43
5:E:1193:ILE:HG13	5:E:1255:PHE:HE2	1.84	0.43
6:F:72:CYS:SG	6:F:343:ILE:HG23	2.59	0.43
6:F:127:ALA:HB2	6:F:157:CYS:SG	2.59	0.43
7:G:869:LYS:HA	7:G:869:LYS:HD2	1.78	0.43
29:Z:241:ARG:O	29:Z:245:ARG:HG2	2.19	0.43
29:Z:242:VAL:O	29:Z:246:ARG:HG2	2.18	0.43
32:Q:800:PHE:HB3	32:Q:998:LEU:HG	2.01	0.43
2:B:20:G:H21	2:B:20:G:P	2.41	0.43
3:C:260:LEU:HA	3:C:260:LEU:HD12	1.78	0.43
3:C:1000:ILE:HG13	3:C:1001:VAL:N	2.34	0.43
3:C:1213:VAL:HG22	3:C:1229:PHE:CD2	2.54	0.43
3:C:1502:PHE:CE1	3:C:1754:TYR:HB2	2.54	0.43
3:C:1532:ARG:HA	3:C:1568:THR:CG2	2.47	0.43
3:C:1560:ILE:HD11	3:C:1577:PHE:CD2	2.54	0.43
4:D:171:LEU:HB2	4:D:174:GLU:HG3	2.00	0.43
4:D:305:GLY:O	4:D:433:MET:HG3	2.19	0.43
5:E:727:SER:OG	5:E:730:GLU:OE1	2.26	0.43
5:E:917:VAL:HG13	5:E:953:ARG:CB	2.48	0.43
5:E:1108:THR:HG21	5:E:1233:ILE:CD1	2.46	0.43
5:E:1434:ILE:HA	5:E:1437:ARG:HH12	1.81	0.43
5:E:1763:ARG:HG2	5:E:1771:TYR:OH	2.18	0.43
5:E:1834:MET:N	5:E:1834:MET:SD	2.91	0.43
5:E:1904:LEU:HD22	5:E:1908:LEU:HD22	2.00	0.43
5:E:1951:GLN:CG	5:E:1962:GLN:HG3	2.40	0.43
6:F:261:VAL:HG23	6:F:277:PHE:HE2	1.83	0.43
9:I:320:TYR:O	9:I:324:MET:HG2	2.19	0.43
9:I:798:HIS:CG	9:I:799:PRO:HD2	2.53	0.43
23:R:135:LYS:HB2	23:R:135:LYS:HE2	1.93	0.43
24:P:2:A:H2'	24:P:3:A:H8	1.84	0.43
24:P:104:G:OP2	29:Z:250:ARG:NH1	2.51	0.43
29:Z:332:ALA:O	29:Z:336:LYS:HG3	2.19	0.43
32:Q:797:GLN:HB2	32:Q:1003:ILE:HG23	2.00	0.43
2:B:54:U:O2'	2:B:55:C:H5'	2.19	0.43
3:C:89:LEU:HD12	7:G:89:PHE:HZ	1.84	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:801:ILE:HD12	3:C:1165:VAL:CG1	2.49	0.43
3:C:997:LEU:O	3:C:1001:VAL:HG12	2.19	0.43
3:C:1487:HIS:HB3	3:C:1541:THR:HB	2.01	0.43
3:C:1660:TYR:CE1	3:C:1700:GLY:HA2	2.54	0.43
3:C:1719:PHE:O	3:C:1720:PRO:C	2.57	0.43
5:E:598:ARG:NH2	5:E:903:ALA:HB2	2.33	0.43
5:E:1799:SER:HA	5:E:1830:GLU:OE2	2.19	0.43
5:E:1832:PHE:HE1	5:E:1848:ILE:HG22	1.83	0.43
7:G:309:PRO:HB2	7:G:310:PRO:HD3	2.01	0.43
7:G:700:GLU:HG3	7:G:704:HIS:CE1	2.53	0.43
8:H:109:LYS:HB2	8:H:109:LYS:HE2	1.82	0.43
9:I:355:ARG:HE	9:I:355:ARG:HB2	1.64	0.43
9:I:476:PRO:HB3	9:I:526:PRO:HD2	2.01	0.43
9:I:768:LEU:HD11	9:I:779:LEU:HD23	2.01	0.43
19:L:63:ILE:O	19:L:66:LYS:HB2	2.19	0.43
24:P:69:A:H3’	26:W:42:ASN:HD21	1.83	0.43
32:Q:731:LYS:HD3	32:Q:735:PHE:CE2	2.53	0.43
32:Q:733:LEU:HD11	32:Q:756:HIS:CG	2.54	0.43
3:C:1576:ILE:HD13	3:C:1576:ILE:N	2.34	0.43
3:C:1625:SER:HB3	3:C:1695:TYR:OH	2.19	0.43
3:C:1786:TYR:O	5:E:203:VAL:HG22	2.19	0.43
5:E:108:GLU:HA	5:E:111:GLU:OE1	2.19	0.43
5:E:764:THR:CG2	5:E:768:GLN:HE22	2.32	0.43
5:E:1469:VAL:HG21	5:E:1735:HIS:CG	2.54	0.43
5:E:1855:TYR:HE1	5:E:1915:ILE:HA	1.83	0.43
5:E:1897:ALA:HA	5:E:1900:SER:OG	2.19	0.43
5:E:1937:SER:HB3	5:E:2074:ASN:ND2	2.34	0.43
6:F:127:ALA:CA	6:F:133:VAL:HG13	2.49	0.43
7:G:241:ARG:HH21	31:U:407:GLN:CG	2.32	0.43
7:G:333:MET:O	7:G:336:THR:OG1	2.31	0.43
8:H:52:LEU:HD12	8:H:112:PHE:CE1	2.50	0.43
20:M:281:PHE:HA	20:M:296:LEU:HD23	2.01	0.43
2:B:29:A:H2’	2:B:30:A:H8	1.83	0.43
2:B:58:U:O2’	2:B:59:G:H5’	2.18	0.43
2:B:59:G:O6	3:C:469:LYS:HD3	2.18	0.43
3:C:449:LYS:HE3	9:I:280:GLU:OE1	2.19	0.43
3:C:1154:PHE:CZ	3:C:1168:VAL:HG12	2.54	0.43
3:C:1792:LYS:HZ3	7:G:310:PRO:HB3	1.82	0.43
3:C:1849:ILE:HG23	3:C:1857:GLN:HG2	2.01	0.43
3:C:1941:ARG:O	3:C:1945:VAL:HG22	2.19	0.43
3:C:1949:ARG:O	3:C:1952:VAL:HG22	2.18	0.43

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:2131:VAL:HG12	3:C:2172:MET:HA	2.01	0.43
3:C:2200:MET:O	9:I:195:ARG:NH2	2.52	0.43
4:D:321:GLY:HA2	4:D:340:ALA:HB2	2.01	0.43
5:E:89:LEU:CD1	7:G:363:ALA:HB1	2.48	0.43
5:E:1157:ASN:O	5:E:1161:ILE:HG13	2.18	0.43
5:E:1742:THR:HG23	5:E:1744:THR:OG1	2.18	0.43
5:E:1843:ARG:HD2	5:E:1877:HIS:ND1	2.34	0.43
5:E:2084:LEU:HG	5:E:2085:GLN:H	1.81	0.43
7:G:242:LYS:HD3	7:G:242:LYS:HA	1.78	0.43
7:G:354:PRO:HD2	7:G:357:THR:CG2	2.49	0.43
8:H:102:PHE:CZ	8:H:139:ILE:HG23	2.54	0.43
9:I:741:MET:HE1	9:I:742:ALA:O	2.19	0.43
9:I:770:LYS:HE3	9:I:771:GLU:OE2	2.18	0.43
17:J:37:G:N3	17:J:48:G:N2	2.66	0.43
29:Z:284:GLU:HA	29:Z:287:GLU:OE1	2.18	0.43
30:S:719:LYS:O	30:S:719:LYS:HG3	2.18	0.43
2:B:5:U:H2'	2:B:6:C:C5	2.53	0.43
3:C:545:HIS:HB3	3:C:594:TYR:CE2	2.54	0.43
3:C:1306:LYS:N	3:C:1306:LYS:HD3	2.34	0.43
3:C:1602:ASP:OD1	3:C:1602:ASP:N	2.51	0.43
3:C:1760:GLU:CB	3:C:1885:LYS:HB3	2.49	0.43
4:D:103:THR:HG22	4:D:543:ARG:HD3	2.00	0.43
5:E:449:ALA:CB	5:E:864:LYS:HE2	2.48	0.43
5:E:514:LEU:HD13	5:E:558:ARG:NH2	2.32	0.43
5:E:1650:LEU:O	5:E:1654:MET:HG3	2.19	0.43
7:G:433:SER:OG	7:G:436:LEU:HD12	2.19	0.43
9:I:271:LYS:HE2	9:I:271:LYS:HB2	1.78	0.43
9:I:473:ILE:HG22	9:I:547:VAL:HB	2.01	0.43
9:I:645:LEU:HA	9:I:768:LEU:O	2.19	0.43
17:J:19:G:H1	18:K:32:C:H42	1.66	0.43
17:J:111:G:H1'	27:X:59:GLN:HE22	1.84	0.43
19:L:189:GLU:HA	19:L:192:ASP:HB2	2.01	0.43
19:L:305:VAL:HG21	19:L:316:VAL:HG11	2.01	0.43
24:P:66:A:C6	24:P:72:A:C4	3.07	0.43
28:Y:18:LEU:HD11	29:Z:188:LEU:HD22	2.01	0.43
28:Y:120:LYS:HB3	28:Y:120:LYS:HE2	1.81	0.43
3:C:726:TRP:CH2	3:C:739:ILE:HG21	2.54	0.42
3:C:1307:MET:HA	3:C:1307:MET:HE2	2.01	0.42
3:C:1340:LEU:HB3	3:C:1355:SER:O	2.19	0.42
3:C:2310:ARG:HD2	3:C:2313:HIS:ND1	2.33	0.42
3:C:2327:SER:N	5:E:728:ARG:HD2	2.31	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:245:HIS:O	4:D:249:GLU:HG2	2.18	0.42
4:D:388:VAL:HG23	4:D:392:LEU:HD22	2.00	0.42
5:E:79:HIS:CE1	5:E:107:LYS:HD2	2.54	0.42
5:E:552:VAL:CG2	5:E:566:VAL:HG12	2.39	0.42
5:E:734:THR:O	5:E:738:ILE:HG12	2.18	0.42
5:E:878:TYR:O	5:E:881:SER:N	2.52	0.42
5:E:928:ARG:O	5:E:929:MET:C	2.57	0.42
5:E:967:ASN:HB3	5:E:969:LEU:HD13	1.99	0.42
5:E:1001:TYR:OH	5:E:1091:LEU:HD23	2.18	0.42
5:E:1117:MET:O	5:E:1121:ARG:N	2.52	0.42
5:E:1752:VAL:HG11	9:I:161:PRO:HB2	2.00	0.42
5:E:1776:ILE:HD13	5:E:1776:ILE:HA	1.84	0.42
5:E:2051:VAL:CG2	5:E:2062:GLU:HB3	2.49	0.42
6:F:343:ILE:HD12	6:F:353:MET:HB3	2.01	0.42
7:G:151:GLU:N	7:G:151:GLU:OE1	2.52	0.42
7:G:353:GLN:HB3	7:G:357:THR:HG21	2.01	0.42
7:G:421:ILE:HG21	30:S:557:SER:CA	2.48	0.42
7:G:570:PHE:HB2	7:G:571:PRO:HD2	2.01	0.42
8:H:18:ILE:HG22	8:H:87:GLY:HA2	2.01	0.42
9:I:756:GLY:CA	9:I:760:LYS:HG3	2.38	0.42
26:W:149:GLU:H	26:W:149:GLU:CD	2.21	0.42
31:U:479:ASP:C	31:U:480:LEU:HD23	2.39	0.42
2:B:68:C:N3	2:B:69:A:N7	2.66	0.42
3:C:603:ARG:HD2	9:I:276:TRP:CZ2	2.54	0.42
3:C:872:ASP:C	3:C:874:PRO:HD3	2.39	0.42
3:C:1126:VAL:HG11	4:D:597:PRO:HD2	1.99	0.42
3:C:1954:LEU:HD21	3:C:1969:PRO:CD	2.50	0.42
4:D:126:SER:O	4:D:440:SER:OG	2.37	0.42
4:D:711:ARG:HH21	4:D:730:ARG:HD3	1.84	0.42
4:D:716:GLU:O	4:D:720:THR:HG23	2.19	0.42
5:E:593:TRP:CD1	5:E:631:LEU:HD11	2.53	0.42
5:E:993:ILE:HD11	5:E:998:VAL:HG22	2.00	0.42
5:E:1368:LEU:HD13	5:E:1401:LEU:CD2	2.45	0.42
5:E:1503:TRP:HA	5:E:1762:ARG:HH11	1.84	0.42
5:E:1819:ALA:O	5:E:1823:TYR:N	2.51	0.42
5:E:1838:ALA:HB2	5:E:1935:TRP:CG	2.53	0.42
6:F:154:VAL:HA	6:F:171:SER:HA	2.00	0.42
7:G:511:GLU:HB3	7:G:554:ASN:CB	2.48	0.42
9:I:193:LYS:O	9:I:197:GLN:HG3	2.19	0.42
9:I:386:ILE:HG22	9:I:424:ILE:HD11	1.99	0.42
29:Z:174:VAL:O	29:Z:178:LEU:HG	2.19	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:Q:906:GLY:N	32:Q:951:PRO:HG3	2.34	0.42
32:Q:930:MET:HB2	32:Q:943:VAL:CG1	2.49	0.42
2:B:15:C:O2'	2:B:16:U:H5'	2.18	0.42
2:B:60:G:O6	3:C:469:LYS:NZ	2.52	0.42
3:C:135:VAL:HG11	3:C:140:TYR:HB2	2.01	0.42
3:C:685:LEU:HG	3:C:742:TYR:HD1	1.84	0.42
3:C:707:ARG:NH2	8:H:4:LEU:O	2.53	0.42
3:C:953:TYR:CE1	3:C:1376:GLU:HG3	2.54	0.42
3:C:1714:ALA:HB3	3:C:1718:TRP:HH2	1.85	0.42
3:C:1811:ASN:O	3:C:1815:GLY:N	2.46	0.42
5:E:297:SER:N	5:E:301:GLU:OE2	2.52	0.42
5:E:809:LEU:HD12	5:E:810:VAL:N	2.34	0.42
5:E:969:LEU:HD13	5:E:995:ASN:OD1	2.19	0.42
5:E:1625:SER:OG	5:E:1628:GLU:HG3	2.19	0.42
5:E:1919:ALA:O	5:E:1923:ILE:HG12	2.19	0.42
5:E:2053:ALA:CB	5:E:2056:PHE:HB3	2.39	0.42
6:F:127:ALA:CA	6:F:133:VAL:HG22	2.44	0.42
7:G:312:TRP:HD1	7:G:331:LEU:HG	1.84	0.42
7:G:414:GLU:HB3	7:G:418:ASP:HB2	2.01	0.42
8:H:75:ILE:HA	8:H:101:LYS:NZ	2.32	0.42
9:I:174:LEU:HD23	9:I:177:ARG:HD3	2.01	0.42
29:Z:223:LEU:HD13	29:Z:226:LEU:HD12	2.02	0.42
29:Z:277:TRP:HA	29:Z:280:LYS:HE2	2.01	0.42
29:Z:328:LEU:HA	29:Z:331:GLU:OE1	2.19	0.42
30:S:758:LYS:HG2	30:S:759:MET:SD	2.58	0.42
32:Q:880:TYR:CD1	32:Q:959:LEU:HD13	2.54	0.42
2:B:67:A:C6	2:B:68:C:C4	3.06	0.42
3:C:488:ASP:O	3:C:492:VAL:HG23	2.19	0.42
3:C:713:LEU:HD21	3:C:739:ILE:HG12	2.01	0.42
3:C:1657:THR:HG21	3:C:1699:THR:HB	2.01	0.42
4:D:137:HIS:HB3	4:D:140:HIS:CE1	2.55	0.42
4:D:153:THR:OG1	4:D:154:HIS:ND1	2.43	0.42
4:D:259:LYS:HG2	35:D:1500:GTP:C5	2.54	0.42
4:D:347:ILE:HG23	4:D:356:PHE:HB3	2.01	0.42
5:E:115:VAL:HG12	5:E:175:LEU:CD1	2.49	0.42
5:E:260:PRO:HG2	5:E:362:GLN:HB2	2.02	0.42
5:E:917:VAL:HG12	5:E:953:ARG:HH21	1.83	0.42
5:E:1868:LEU:CG	5:E:1893:LEU:HD13	2.50	0.42
6:F:304:SER:HB2	6:F:310:TYR:CD2	2.54	0.42
7:G:243:ILE:H	7:G:243:ILE:HD12	1.83	0.42
7:G:301:VAL:CA	7:G:304:THR:HG22	2.46	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:K:56:C:H2'	18:K:57:C:C1'	2.49	0.42
32:Q:701:VAL:HG22	32:Q:717:LYS:CG	2.49	0.42
32:Q:770:LEU:HD13	32:Q:822:LEU:CB	2.42	0.42
3:C:1321:GLU:HB2	19:L:379:SER:O	2.20	0.42
3:C:1529:ILE:HA	3:C:1532:ARG:HG3	2.01	0.42
3:C:1554:GLN:HB2	3:C:1561:PHE:CD1	2.55	0.42
3:C:1577:PHE:CE1	3:C:1743:LEU:HD13	2.54	0.42
3:C:1687:TYR:HB3	3:C:1695:TYR:HE2	1.85	0.42
5:E:176:GLY:HA2	5:E:179:ILE:HG12	2.02	0.42
5:E:538:ILE:HB	5:E:585:ILE:HD12	2.01	0.42
5:E:622:ASP:C	5:E:623:ASP:O	2.55	0.42
5:E:912:ASN:HB3	5:E:914:LYS:HD2	2.00	0.42
5:E:1616:GLY:HA2	5:E:1641:ILE:HG22	2.01	0.42
5:E:1768:PRO:HG3	5:E:1776:ILE:CD1	2.42	0.42
5:E:1849:ILE:HG23	5:E:1922:LEU:HD13	2.02	0.42
5:E:1927:VAL:HG22	5:E:1942:ALA:CB	2.48	0.42
5:E:2067:VAL:HA	5:E:2079:ILE:HG13	2.00	0.42
6:F:114:GLU:HG3	6:F:290:ARG:HH21	1.83	0.42
6:F:169:THR:HA	6:F:199:VAL:HG21	2.01	0.42
6:F:213:ILE:HG22	6:F:237:SER:CB	2.44	0.42
7:G:335:GLY:O	7:G:339:CYS:HB2	2.20	0.42
7:G:401:PRO:HB3	30:S:564:GLY:HA2	2.00	0.42
7:G:447:GLU:HG2	7:G:448:ASN:H	1.85	0.42
8:H:11:LYS:HA	8:H:14:VAL:CG2	2.49	0.42
8:H:29:ARG:HH21	8:H:60:LEU:HD22	1.83	0.42
8:H:69:TYR:O	8:H:73:PHE:HD1	2.03	0.42
9:I:318:ARG:O	9:I:318:ARG:HG3	2.19	0.42
9:I:417:ILE:HD11	9:I:441:LYS:HA	2.01	0.42
9:I:547:VAL:HG22	9:I:603:VAL:HB	2.01	0.42
24:P:37:A:H2'	24:P:38:A:C8	2.55	0.42
30:S:728:GLN:O	30:S:732:ARG:HG2	2.19	0.42
31:U:498:ASP:O	31:U:552:TRP:HA	2.19	0.42
31:U:540:GLN:H	31:U:540:GLN:CD	2.22	0.42
32:Q:679:ILE:HD12	32:Q:690:TYR:C	2.40	0.42
32:Q:966:PRO:HB2	32:Q:968:ASP:OD1	2.19	0.42
1:A:7:U:H2'	1:A:8:U:C6	2.55	0.42
3:C:171:ASP:O	3:C:520:TYR:HB2	2.20	0.42
3:C:354:PRO:O	9:I:327:ARG:HD2	2.19	0.42
3:C:707:ARG:HD3	8:H:4:LEU:CD2	2.45	0.42
3:C:901:LEU:HB2	3:C:904:HIS:O	2.19	0.42
3:C:1607:GLU:CD	3:C:1634:SER:HB3	2.40	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:1788:VAL:HG12	3:C:1802:PRO:HA	2.01	0.42
3:C:1815:GLY:HA3	3:C:1920:TYR:CD2	2.55	0.42
3:C:1839:TRP:HB3	3:C:1875:HIS:CE1	2.49	0.42
4:D:738:ASP:N	4:D:738:ASP:OD1	2.52	0.42
4:D:931:ARG:O	4:D:935:ILE:HG12	2.20	0.42
5:E:973:ASP:OD2	5:E:976:THR:OG1	2.38	0.42
5:E:1149:PRO:HD2	5:E:1152:ARG:HH11	1.84	0.42
5:E:1979:VAL:HG13	5:E:1984:ASP:CB	2.45	0.42
5:E:2026:LYS:HD3	5:E:2124:VAL:HA	2.01	0.42
6:F:67:GLY:C	6:F:349:LYS:HG2	2.40	0.42
6:F:105:LEU:HD23	6:F:136:TRP:CG	2.54	0.42
6:F:108:HIS:CE1	6:F:134:ALA:HB3	2.54	0.42
6:F:225:ASN:O	6:F:225:ASN:ND2	2.52	0.42
7:G:316:ALA:HB2	7:G:332:ILE:CG1	2.50	0.42
7:G:405:ARG:HG2	7:G:408:LYS:HZ2	1.84	0.42
7:G:577:TRP:HB2	7:G:610:LEU:HD21	1.96	0.42
9:I:374:ARG:HH22	9:I:388:ASN:HA	1.84	0.42
9:I:424:ILE:O	9:I:425:GLY:C	2.55	0.42
19:L:55:TRP:CA	19:L:60:PHE:CG	2.96	0.42
21:N:593:LYS:HB2	21:N:593:LYS:HE3	1.80	0.42
24:P:74:A:OP1	26:W:33:ARG:NH1	2.52	0.42
32:Q:688:ASN:O	32:Q:704:ALA:HA	2.20	0.42
3:C:183:LEU:HD23	3:C:184:ASP:OD1	2.18	0.42
3:C:565:ARG:HA	3:C:565:ARG:HD2	1.85	0.42
3:C:769:LYS:HA	3:C:769:LYS:HD3	1.86	0.42
3:C:1385:VAL:CG2	3:C:1414:ARG:HE	2.32	0.42
3:C:1470:TYR:CE2	3:C:1474:MET:HE2	2.55	0.42
3:C:1636:LYS:HG3	27:X:129:LEU:HD11	2.02	0.42
3:C:1861:ILE:CD1	3:C:1882:ILE:HD12	2.50	0.42
3:C:1972:THR:HG23	3:C:1975:GLU:OE2	2.19	0.42
3:C:2124:ILE:O	3:C:2179:HIS:HA	2.20	0.42
5:E:139:VAL:HG22	5:E:143:LEU:HD23	2.02	0.42
5:E:163:GLN:HG3	5:E:163:GLN:O	2.20	0.42
5:E:167:THR:O	5:E:171:VAL:HG23	2.19	0.42
5:E:176:GLY:HA2	5:E:179:ILE:HD11	2.02	0.42
5:E:1519:ARG:HE	5:E:1519:ARG:HB3	1.58	0.42
5:E:1535:THR:HG21	5:E:1676:TYR:CZ	2.53	0.42
5:E:1672:LYS:NZ	5:E:1887:PRO:HG3	2.35	0.42
5:E:1850:SER:HB2	5:E:1891:THR:OG1	2.19	0.42
5:E:1973:ARG:CD	5:E:1977:LYS:HD3	2.49	0.42
6:F:200:THR:CG2	6:F:250:LEU:HD11	2.46	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:421:ILE:HD13	30:S:554:ASN:HD21	1.84	0.42
7:G:475:GLU:HG2	7:G:518:SER:CB	2.50	0.42
9:I:245:LYS:HD3	9:I:245:LYS:HA	1.73	0.42
21:N:556:LYS:O	21:N:559:LYS:HB3	2.19	0.42
23:R:23:SER:C	23:R:25:LYS:H	2.23	0.42
23:R:120:LEU:HD23	23:R:120:LEU:HA	1.89	0.42
24:P:66:A:N1	26:W:152:GLN:NE2	2.67	0.42
28:Y:79:ARG:O	28:Y:79:ARG:NH1	2.52	0.42
29:Z:308:LYS:HB2	29:Z:366:TYR:CE2	2.55	0.42
3:C:155:LYS:HD2	3:C:621:VAL:CG1	2.50	0.42
3:C:694:LEU:HD22	3:C:697:MET:CE	2.50	0.42
3:C:880:ARG:HG2	3:C:884:HIS:CD2	2.54	0.42
3:C:1733:ILE:O	3:C:1737:ASN:HB2	2.20	0.42
3:C:1951:LYS:HE2	3:C:1951:LYS:HB2	1.93	0.42
4:D:530:LEU:HD22	4:D:550:VAL:HG21	2.02	0.42
4:D:683:ASN:HA	4:D:795:VAL:O	2.20	0.42
5:E:165:ASP:OD1	5:E:166:ASP:N	2.52	0.42
5:E:488:LEU:HD11	5:E:676:PHE:HE1	1.84	0.42
5:E:1443:LYS:HA	5:E:1443:LYS:HD3	1.73	0.42
5:E:1488:VAL:HG12	5:E:1490:LEU:CD1	2.49	0.42
6:F:240:GLY:O	6:F:241:LEU:HD23	2.20	0.42
6:F:262:TRP:HB3	6:F:272:ARG:NE	2.35	0.42
6:F:264:VAL:HG22	6:F:272:ARG:NH2	2.35	0.42
7:G:136:PRO:HA	7:G:140:GLN:OE1	2.20	0.42
7:G:308:HIS:CE1	7:G:310:PRO:HB2	2.54	0.42
7:G:434:VAL:HB	7:G:463:ASP:OD2	2.20	0.42
9:I:192:ARG:HH11	9:I:196:LYS:HE2	1.85	0.42
20:M:497:GLY:H	20:M:510:CYS:HB2	1.85	0.42
23:R:153:ALA:O	23:R:157:GLU:HB2	2.20	0.42
28:Y:85:TYR:CD1	28:Y:85:TYR:N	2.87	0.42
32:Q:749:HIS:NE2	32:Q:798:GLN:HG2	2.34	0.42
2:B:9:G:C6	2:B:10:U:C4	3.08	0.42
2:B:70:A:H8	2:B:70:A:OP2	2.03	0.42
2:B:99:C:H2'	2:B:100:C:H6	1.84	0.42
3:C:240:ARG:NH1	3:C:240:ARG:HB3	2.35	0.42
3:C:318:TYR:HE2	3:C:329:LEU:HD21	1.85	0.42
3:C:858:GLN:NE2	3:C:862:GLU:OE2	2.45	0.42
3:C:1661:TRP:CD2	3:C:1700:GLY:HA3	2.54	0.42
3:C:1862:ILE:HG12	3:C:1885:LYS:HG3	2.02	0.42
3:C:2193:VAL:HG11	3:C:2251:TYR:CE1	2.45	0.42
3:C:2307:GLU:HG3	3:C:2314:PHE:CE1	2.55	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:346:ASP:N	4:D:346:ASP:OD1	2.52	0.42
4:D:837:GLN:O	4:D:837:GLN:HG2	2.19	0.42
5:E:539:ILE:HG13	5:E:541:ILE:CD1	2.50	0.42
5:E:604:THR:HA	5:E:1540:LEU:CD2	2.50	0.42
5:E:737:ALA:C	5:E:741:MET:HE2	2.39	0.42
5:E:1194:THR:C	5:E:1292:PRO:HG2	2.40	0.42
5:E:1397:PHE:CD2	5:E:1424:ILE:HD13	2.54	0.42
5:E:1627:MET:CG	5:E:1630:ARG:HH21	2.31	0.42
5:E:2021:TYR:CB	5:E:2039:VAL:HG22	2.49	0.42
5:E:2063:GLY:HA3	5:E:2081:ARG:NH2	2.35	0.42
5:E:2066:VAL:O	5:E:2068:ILE:HD12	2.19	0.42
7:G:547:ALA:HB2	7:G:562:ILE:CB	2.49	0.42
7:G:630:ILE:HA	7:G:633:LEU:HG	2.02	0.42
8:H:106:PHE:HZ	8:H:115:LEU:HD23	1.81	0.42
8:H:138:ASN:O	8:H:140:PRO:HD3	2.19	0.42
9:I:387:PRO:O	9:I:420:GLN:NE2	2.52	0.42
9:I:498:ARG:HB2	9:I:519:CYS:HA	2.02	0.42
26:W:90:PHE:CD1	27:X:48:MET:HG3	2.54	0.42
27:X:66:LEU:O	27:X:70:ILE:HG22	2.20	0.42
3:C:865:GLY:O	3:C:869:GLN:HG3	2.20	0.42
3:C:1686:ASP:O	3:C:1690:ASP:HB2	2.19	0.42
3:C:1953:ILE:CD1	3:C:1986:LEU:HD22	2.50	0.42
4:D:884:GLU:O	4:D:888:ARG:HG3	2.19	0.42
5:E:111:GLU:HA	5:E:114:GLU:CG	2.50	0.42
5:E:121:GLN:CA	5:E:132:LEU:HD11	2.50	0.42
5:E:164:THR:HB	5:E:168:ARG:HD3	2.01	0.42
5:E:520:GLU:HA	5:E:523:LYS:HD3	2.02	0.42
5:E:828:ILE:HG22	5:E:831:THR:HG22	2.02	0.42
5:E:982:THR:HG22	5:E:983:GLU:H	1.84	0.42
5:E:1138:GLU:HG2	5:E:1139:VAL:N	2.35	0.42
5:E:1153:LEU:HD13	5:E:1156:LEU:CD1	2.32	0.42
5:E:1194:THR:OG1	5:E:1195:ARG:N	2.52	0.42
5:E:1356:LYS:CB	5:E:1490:LEU:HD23	2.44	0.42
5:E:1542:MET:C	5:E:1545:PRO:HD2	2.39	0.42
5:E:1601:LEU:O	5:E:1604:LEU:HB2	2.20	0.42
5:E:1611:GLU:O	5:E:1614:LEU:HG	2.20	0.42
5:E:1951:GLN:O	5:E:2055:LEU:HD13	2.20	0.42
6:F:285:GLU:HG2	6:F:287:ASN:OD1	2.19	0.42
7:G:423:LEU:CD2	7:G:440:LEU:HD13	2.50	0.42
7:G:514:ASP:HA	7:G:518:SER:O	2.20	0.42
9:I:186:ARG:O	9:I:190:GLU:HG3	2.20	0.42

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:I:360:LYS:HA	9:I:364:GLU:OE1	2.19	0.42
19:L:65:MET:HA	19:L:68:GLU:OE1	2.20	0.42
19:L:249:ILE:HA	19:L:252:LEU:HG	2.02	0.42
20:M:363:GLY:HA3	20:M:392:TRP:HH2	1.85	0.42
23:R:90:LEU:HA	23:R:90:LEU:HD12	1.88	0.42
23:R:108:GLU:H	23:R:108:GLU:HG2	1.69	0.42
29:Z:195:LEU:HD22	29:Z:205:TRP:CE2	2.55	0.42
32:Q:850:LEU:HG	32:Q:851:VAL:HG23	2.02	0.42
2:B:5:U:OP2	2:B:5:U:H6	2.03	0.41
2:B:73:C:H2'	2:B:74:U:C6	2.54	0.41
3:C:651:TRP:HD1	7:G:82:ASN:HA	1.85	0.41
3:C:1768:TYR:HB2	3:C:1771:LEU:HD12	2.02	0.41
3:C:1911:GLU:HG2	3:C:1912:PRO:HD2	2.01	0.41
3:C:2070:LYS:HA	3:C:2073:TRP:HD1	1.85	0.41
4:D:142:LYS:HG2	35:D:1500:GTP:O2B	2.20	0.41
4:D:312:SER:OG	35:D:1500:GTP:N7	2.53	0.41
5:E:426:LYS:C	5:E:427:ARG:HD2	2.40	0.41
5:E:778:LEU:HD12	5:E:778:LEU:O	2.20	0.41
5:E:785:HIS:HB3	5:E:811:SER:HB3	2.00	0.41
5:E:795:THR:HA	5:E:798:GLU:HG2	2.01	0.41
5:E:984:LEU:HD11	5:E:1002:ASN:HB2	2.01	0.41
5:E:1030:ARG:HB3	5:E:1032:GLU:OE1	2.20	0.41
5:E:1524:GLU:N	5:E:1524:GLU:OE1	2.53	0.41
5:E:1609:LEU:O	5:E:1609:LEU:HD12	2.20	0.41
5:E:1768:PRO:HB3	5:E:1773:LEU:HB2	2.02	0.41
5:E:1886:ASP:O	5:E:1889:VAL:HG12	2.19	0.41
5:E:2066:VAL:HG23	5:E:2082:LEU:HD11	2.02	0.41
6:F:197:LEU:HB2	6:F:239:THR:HA	2.02	0.41
6:F:198:ALA:O	6:F:211:GLY:N	2.36	0.41
6:F:300:ILE:O	6:F:312:TRP:N	2.48	0.41
7:G:134:GLU:C	7:G:135:ARG:HD2	2.40	0.41
7:G:274:LEU:HD23	7:G:274:LEU:HA	1.80	0.41
7:G:427:VAL:HG12	7:G:436:LEU:CB	2.30	0.41
9:I:735:MET:CE	9:I:765:ILE:HD11	2.50	0.41
19:L:171:ALA:O	19:L:174:THR:N	2.53	0.41
21:N:557:LYS:O	21:N:560:ILE:N	2.53	0.41
24:P:107:G:OP2	29:Z:175:ARG:NH2	2.41	0.41
27:X:108:ASP:OD1	27:X:108:ASP:N	2.52	0.41
32:Q:753:LEU:HD13	32:Q:765:LEU:HB3	2.02	0.41
1:A:3:A:C8	28:Y:222:ARG:NH1	2.88	0.41
2:B:67:A:C5	2:B:68:C:C5	3.07	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:102:U:H2'	2:B:103:G:H8	1.85	0.41
3:C:758:ARG:HD2	3:C:758:ARG:HA	1.69	0.41
3:C:908:VAL:HG11	3:C:1448:LEU:HD22	2.00	0.41
3:C:1278:VAL:HG22	3:C:1284:LEU:HD23	2.01	0.41
3:C:1811:ASN:CG	3:C:1814:THR:HG22	2.40	0.41
3:C:1840:LYS:HB2	3:C:1840:LYS:HE2	1.82	0.41
4:D:891:THR:HG21	4:D:895:ALA:N	2.35	0.41
5:E:409:LEU:CD2	5:E:956:LEU:HD23	2.46	0.41
5:E:692:ILE:HD11	5:E:704:MET:HB3	2.01	0.41
5:E:730:GLU:O	5:E:734:THR:HG22	2.20	0.41
5:E:869:LEU:HD21	5:E:879:TYR:CG	2.55	0.41
5:E:925:LEU:O	5:E:929:MET:HE3	2.21	0.41
5:E:1165:ILE:O	5:E:1166:ARG:HB2	2.21	0.41
5:E:1386:ALA:O	5:E:1389:VAL:HG12	2.20	0.41
5:E:1961:LYS:HD3	5:E:1971:ILE:CD1	2.50	0.41
5:E:2040:GLN:OE1	5:E:2089:LYS:HD3	2.19	0.41
5:E:2067:VAL:HG12	5:E:2079:ILE:CD1	2.50	0.41
6:F:265:ARG:CD	6:F:267:PHE:HB3	2.37	0.41
8:H:51:ASP:HB3	19:L:343:LEU:HD22	2.02	0.41
19:L:210:SER:HA	19:L:213:SER:OG	2.21	0.41
20:M:368:VAL:HA	20:M:384:GLY:HA2	2.02	0.41
20:M:435:ASP:OD1	20:M:436:LEU:N	2.53	0.41
20:M:444:THR:OG1	21:N:668:HIS:ND1	2.53	0.41
28:Y:105:ILE:HD13	28:Y:105:ILE:HA	1.88	0.41
2:B:51:A:O2'	2:B:52:U:H5'	2.20	0.41
2:B:71:C:C3'	2:B:72:U:H5'	2.50	0.41
3:C:752:ASN:ND2	31:U:462:PHE:HB3	2.36	0.41
3:C:1310:ARG:HH11	3:C:1310:ARG:HG3	1.85	0.41
3:C:1316:PHE:HD1	3:C:1325:LEU:HD12	1.84	0.41
3:C:1632:PHE:HA	3:C:1658:GLN:O	2.19	0.41
3:C:1643:SER:OG	3:C:1718:TRP:NE1	2.54	0.41
3:C:1798:LEU:CD2	7:G:314:ALA:HB2	2.50	0.41
3:C:2232:PRO:HG3	9:I:198:PHE:CE1	2.55	0.41
4:D:254:THR:HB	4:D:433:MET:SD	2.61	0.41
4:D:836:VAL:HG13	4:D:887:LEU:HD21	2.02	0.41
4:D:925:PRO:HD2	4:D:928:HIS:ND1	2.36	0.41
5:E:410:ASP:HB3	5:E:412:GLU:OE2	2.20	0.41
5:E:411:LEU:O	5:E:415:VAL:HG13	2.20	0.41
5:E:423:MET:HE3	5:E:423:MET:HB3	1.57	0.41
5:E:592:LYS:O	5:E:595:ILE:HG13	2.20	0.41
5:E:1563:VAL:CG2	5:E:1569:THR:HG22	2.51	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:2099:THR:HG23	5:E:2099:THR:O	2.20	0.41
7:G:343:GLU:HG3	7:G:374:ARG:CZ	2.50	0.41
7:G:495:ARG:NH1	7:G:501:ILE:HD12	2.27	0.41
7:G:915:VAL:HG12	7:G:929:ILE:HD11	2.01	0.41
9:I:355:ARG:HH21	9:I:360:LYS:HE3	1.85	0.41
9:I:452:TRP:HE1	9:I:595:GLY:HA2	1.85	0.41
9:I:482:GLN:NE2	9:I:700:GLN:OE1	2.53	0.41
9:I:492:GLY:O	9:I:496:GLY:N	2.52	0.41
17:J:20:U:H3'	19:L:358:ARG:HH22	1.85	0.41
20:M:251:TRP:HH2	22:O:127:LEU:HD21	1.85	0.41
20:M:370:ASP:OD1	20:M:371:ILE:N	2.53	0.41
22:O:6:VAL:HG11	22:O:13:LEU:HD22	2.01	0.41
23:R:107:TRP:C	23:R:107:TRP:CD1	2.93	0.41
23:R:152:ALA:O	23:R:156:ARG:HG2	2.19	0.41
28:Y:45:PRO:HB3	29:Z:183:ARG:HE	1.85	0.41
28:Y:58:CYS:HB2	28:Y:64:HIS:HB2	2.02	0.41
28:Y:118:ILE:HA	28:Y:121:GLN:OE1	2.20	0.41
29:Z:209:TYR:O	29:Z:212:THR:OG1	2.37	0.41
32:Q:773:ASN:HA	32:Q:822:LEU:HA	2.02	0.41
32:Q:817:LYS:CE	32:Q:819:ASP:HB2	2.41	0.41
1:A:7:U:H2'	1:A:8:U:H6	1.84	0.41
2:B:69:A:C5	2:B:70:A:C5	3.08	0.41
3:C:476:PHE:CE1	7:G:108:LEU:HD13	2.54	0.41
3:C:590:GLY:HA2	3:C:592:TYR:CE1	2.55	0.41
3:C:701:ILE:HG21	7:G:158:LEU:CD2	2.51	0.41
3:C:804:GLU:OE1	3:C:804:GLU:N	2.53	0.41
3:C:1502:PHE:CZ	3:C:1754:TYR:HB2	2.55	0.41
3:C:1575:GLN:HA	3:C:1575:GLN:OE1	2.20	0.41
3:C:1763:LEU:CD2	3:C:1889:LEU:HD21	2.51	0.41
4:D:123:MET:HG2	4:D:199:LEU:HD21	2.02	0.41
4:D:888:ARG:O	4:D:893:GLY:N	2.51	0.41
5:E:54:ASP:O	5:E:55:LYS:HB2	2.19	0.41
5:E:1609:LEU:HB2	5:E:1619:TYR:OH	2.21	0.41
5:E:1920:ILE:HG23	5:E:1921:ARG:H	1.85	0.41
5:E:1970:HIS:HD2	5:E:1997:LEU:HD13	1.85	0.41
6:F:261:VAL:HG11	6:F:275:LYS:CE	2.50	0.41
7:G:424:SER:HA	7:G:440:LEU:CD2	2.49	0.41
8:H:75:ILE:CD1	8:H:101:LYS:HD2	2.50	0.41
9:I:551:ALA:HB3	9:I:606:THR:HB	2.02	0.41
9:I:775:VAL:O	9:I:775:VAL:HG12	2.20	0.41
21:N:545:VAL:HG11	21:N:669:TYR:HB3	2.02	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:P:64:A:H4'	24:P:72:A:C6	2.55	0.41
24:P:68:C:N4	26:W:126:TYR:O	2.50	0.41
28:Y:118:ILE:HA	28:Y:118:ILE:HD13	1.83	0.41
31:U:359:LYS:HB2	31:U:437:PHE:CE1	2.56	0.41
32:Q:959:LEU:HD21	32:Q:976:LEU:HG	2.01	0.41
2:B:31:U:H2'	2:B:32:C:H6	1.85	0.41
2:B:37:G:H5'	2:B:39:C:N4	2.35	0.41
3:C:50:LYS:HD3	6:F:88:ARG:HD3	2.02	0.41
3:C:224:THR:HG22	3:C:226:GLN:HE21	1.84	0.41
3:C:559:ASP:O	3:C:562:VAL:HG22	2.20	0.41
3:C:1691:ASN:HD21	9:I:771:GLU:HG2	1.86	0.41
3:C:1792:LYS:HE2	7:G:313:ILE:CG2	2.50	0.41
3:C:1942:ALA:HB3	3:C:1983:LEU:HD22	2.03	0.41
4:D:173:THR:HG23	4:D:181:ILE:HD12	2.01	0.41
4:D:474:LEU:O	4:D:475:MET:HG2	2.21	0.41
4:D:907:VAL:CG1	4:D:908:PRO:HD2	2.50	0.41
5:E:111:GLU:H	5:E:111:GLU:CD	2.24	0.41
5:E:143:LEU:HA	5:E:146:GLU:OE1	2.20	0.41
5:E:517:MET:SD	5:E:538:ILE:HG21	2.60	0.41
5:E:616:GLU:OE1	5:E:618:HIS:NE2	2.50	0.41
5:E:637:ARG:HE	5:E:919:TRP:HA	1.84	0.41
5:E:1009:LEU:HD22	5:E:1013:GLU:HB2	2.02	0.41
5:E:1340:TYR:O	5:E:1366:ARG:HD3	2.20	0.41
5:E:1871:LEU:HD23	5:E:1874:LYS:HE2	2.01	0.41
5:E:1899:LEU:HD21	5:E:1949:VAL:HA	2.02	0.41
5:E:1923:ILE:O	5:E:1927:VAL:HG23	2.19	0.41
5:E:1951:GLN:HE22	5:E:2054:PRO:HG3	1.85	0.41
6:F:253:ASN:HB2	6:F:291:CYS:SG	2.60	0.41
6:F:301:ALA:HB1	6:F:333:VAL:HG11	2.03	0.41
9:I:644:PHE:O	9:I:646:MET:HG3	2.20	0.41
9:I:791:CYS:SG	9:I:796:ALA:HB2	2.61	0.41
18:K:52:A:O4'	23:R:23:SER:HA	2.20	0.41
25:V:48:LEU:HD21	25:V:85:LEU:CB	2.51	0.41
28:Y:85:TYR:CE2	28:Y:147:LEU:HB2	2.56	0.41
32:Q:903:ASP:O	32:Q:952:THR:N	2.52	0.41
2:B:73:C:H3'	2:B:74:U:C6	2.55	0.41
3:C:384:VAL:CG2	4:D:334:ILE:HD11	2.43	0.41
3:C:530:LEU:HD23	3:C:534:GLU:CB	2.50	0.41
3:C:744:LYS:NZ	3:C:748:ASP:OD2	2.53	0.41
3:C:979:SER:OG	3:C:1168:VAL:HG13	2.21	0.41
3:C:980:ARG:NH2	3:C:1094:ARG:HD2	2.35	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:1740:LEU:HD23	3:C:1740:LEU:HA	1.88	0.41
3:C:1809:ILE:HB	3:C:1818:PHE:HB2	2.02	0.41
3:C:1831:LYS:HA	7:G:293:LYS:NZ	2.36	0.41
3:C:1839:TRP:CH2	19:L:370:GLU:HA	2.55	0.41
3:C:2103:THR:HB	3:C:2139:VAL:HG12	2.03	0.41
4:D:376:PRO:O	4:D:380:ILE:HG13	2.21	0.41
4:D:591:ALA:HA	4:D:627:HIS:O	2.20	0.41
4:D:700:ILE:HG21	4:D:741:GLY:O	2.20	0.41
4:D:829:GLU:OE2	4:D:878:ILE:HG22	2.20	0.41
4:D:843:VAL:O	4:D:847:TYR:HD1	2.03	0.41
5:E:90:LEU:O	7:G:395:LYS:NZ	2.51	0.41
5:E:157:ILE:HG13	5:E:158:ASP:N	2.35	0.41
5:E:298:ASP:O	5:E:301:GLU:HG2	2.20	0.41
5:E:572:ASP:OD2	5:E:574:GLN:HB2	2.21	0.41
5:E:1534:HIS:HE1	5:E:1536:GLN:HB2	1.86	0.41
5:E:1620:LEU:N	5:E:1645:VAL:O	2.33	0.41
5:E:2101:ALA:HB1	5:E:2123:SER:OG	2.21	0.41
6:F:214:ASP:N	6:F:214:ASP:OD1	2.45	0.41
6:F:265:ARG:HG2	6:F:266:PRO:HD2	2.02	0.41
7:G:543:TRP:HZ3	7:G:569:VAL:HG21	1.86	0.41
8:H:8:LEU:HA	8:H:13:GLU:OE1	2.21	0.41
8:H:18:ILE:CG2	8:H:87:GLY:HA2	2.51	0.41
8:H:35:ASP:O	8:H:39:LEU:HG	2.20	0.41
8:H:107:LYS:HG3	8:H:138:ASN:O	2.20	0.41
9:I:728:ILE:HG22	9:I:730:ILE:CG1	2.50	0.41
17:J:93:G:H2'	17:J:94:A:C8	2.56	0.41
19:L:60:PHE:CE2	19:L:61:ALA:HB2	2.55	0.41
20:M:223:ASN:HD21	20:M:517:LYS:HD3	1.85	0.41
21:N:407:LYS:H	21:N:407:LYS:HG2	1.72	0.41
23:R:26:HIS:HA	23:R:29:GLN:NE2	2.36	0.41
25:V:3:LYS:HE2	25:V:3:LYS:HB2	1.78	0.41
25:V:9:TYR:HB2	25:V:30:HIS:NE2	2.35	0.41
28:Y:77:SER:O	28:Y:78:CYS:C	2.58	0.41
31:U:429:GLU:HA	31:U:437:PHE:O	2.19	0.41
3:C:30:LEU:HB3	6:F:194:TYR:CE2	2.56	0.41
3:C:289:GLN:O	3:C:1139:ARG:NH2	2.48	0.41
3:C:519:ASP:OD1	3:C:525:LYS:HE2	2.21	0.41
3:C:1291:CYS:O	3:C:1295:ILE:HG12	2.21	0.41
3:C:1533:ARG:HH11	3:C:1752:GLN:HB2	1.85	0.41
3:C:2207:ASP:O	3:C:2211:THR:HG23	2.20	0.41
4:D:696:LEU:O	4:D:700:ILE:HG13	2.21	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:772:TRP:CE3	4:D:813:ARG:HD3	2.54	0.41
5:E:497:GLU:HG2	5:E:671:LYS:CD	2.51	0.41
5:E:718:LYS:HG3	5:E:719:ASN:N	2.36	0.41
5:E:869:LEU:HD21	5:E:879:TYR:CD2	2.56	0.41
5:E:1009:LEU:HD22	5:E:1013:GLU:CB	2.50	0.41
5:E:1269:ARG:NH2	5:E:1279:GLU:OE2	2.53	0.41
5:E:1457:HIS:CD2	5:E:1492:SER:H	2.38	0.41
5:E:2022:GLU:OE2	5:E:2024:VAL:HG22	2.21	0.41
6:F:209:ILE:HD13	6:F:272:ARG:NH2	2.35	0.41
6:F:209:ILE:HG21	6:F:250:LEU:HD13	2.03	0.41
6:F:255:MET:HA	6:F:282:HIS:CG	2.56	0.41
6:F:300:ILE:CG1	6:F:312:TRP:HB2	2.50	0.41
7:G:320:GLU:HA	7:G:325:LEU:HB3	2.02	0.41
7:G:417:GLU:HG2	7:G:418:ASP:N	2.36	0.41
8:H:26:LEU:O	8:H:83:PHE:HA	2.21	0.41
19:L:167:VAL:HA	19:L:170:THR:HG22	2.01	0.41
19:L:353:LYS:HA	19:L:353:LYS:HD3	1.83	0.41
21:N:534:LYS:HD3	21:N:534:LYS:HA	1.86	0.41
23:R:55:ARG:NH2	23:R:81:ASN:O	2.51	0.41
31:U:487:GLU:HG2	31:U:488:VAL:N	2.36	0.41
32:Q:697:VAL:HG13	32:Q:698:PHE:N	2.36	0.41
32:Q:749:HIS:ND1	32:Q:830:LEU:O	2.51	0.41
1:A:5:C:C6	28:Y:225:TYR:CD2	3.09	0.41
2:B:60:G:O2'	2:B:61:A:H5'	2.21	0.41
3:C:42:ALA:HA	6:F:153:PHE:CZ	2.56	0.41
3:C:155:LYS:O	3:C:155:LYS:HG2	2.20	0.41
3:C:175:PRO:HG2	3:C:498:ARG:HH22	1.86	0.41
3:C:195:LEU:HD11	3:C:207:PHE:CD2	2.56	0.41
3:C:209:ASP:HB2	3:C:212:PRO:HA	2.02	0.41
3:C:1555:LEU:HD23	3:C:1556:ASP:N	2.36	0.41
3:C:1668:TRP:CD2	3:C:1708:ALA:HB2	2.56	0.41
4:D:172:PHE:CZ	4:D:176:GLU:HG3	2.56	0.41
5:E:1200:VAL:HB	5:E:1254:PHE:CE1	2.56	0.41
5:E:1745:ILE:HG23	5:E:1751:ALA:N	2.36	0.41
5:E:1926:CYS:HA	5:E:1929:VAL:HG12	2.03	0.41
5:E:2064:TRP:N	5:E:2082:LEU:O	2.54	0.41
6:F:67:GLY:N	6:F:87:ASP:OD1	2.54	0.41
6:F:169:THR:CA	6:F:199:VAL:HG21	2.51	0.41
7:G:297:LEU:HD12	7:G:298:LEU:HD23	2.02	0.41
7:G:565:TYR:HA	7:G:568:GLN:CG	2.50	0.41
24:P:34:G:H2'	24:P:35:G:C8	2.56	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:V:49:LEU:HD12	25:V:53:ASN:HD22	1.86	0.41
32:Q:910:ASN:O	32:Q:914:ARG:HG3	2.20	0.41
3:C:269:LEU:CB	3:C:271:MET:HE2	2.51	0.41
3:C:287:ASN:OD1	3:C:288:LEU:HD23	2.21	0.41
3:C:555:LYS:HE2	3:C:559:ASP:CG	2.41	0.41
3:C:839:LEU:O	3:C:843:LEU:HG	2.20	0.41
3:C:922:LEU:HD11	3:C:1005:ILE:HG21	2.03	0.41
3:C:1247:ILE:CD1	3:C:1262:LYS:HB3	2.51	0.41
3:C:1322:LEU:HA	19:L:380:PHE:CE1	2.55	0.41
3:C:1426:ASP:O	3:C:1430:LEU:HG	2.21	0.41
3:C:1505:LYS:HB2	19:L:376:ASN:CA	2.51	0.41
3:C:1636:LYS:HZ3	3:C:1636:LYS:HB2	1.85	0.41
3:C:1660:TYR:OH	3:C:1717:ASN:O	2.37	0.41
3:C:2271:PHE:CD2	3:C:2301:PRO:HG3	2.56	0.41
3:C:2319:LEU:H	3:C:2319:LEU:HD23	1.85	0.41
4:D:355:LYS:HE2	4:D:355:LYS:HB3	1.86	0.41
4:D:507:VAL:HG22	4:D:527:VAL:HG23	2.03	0.41
4:D:726:LEU:HD11	4:D:730:ARG:HH22	1.85	0.41
4:D:948:SER:OG	4:D:951:LYS:HB2	2.21	0.41
5:E:276:TYR:HB3	5:E:281:VAL:HG13	2.03	0.41
5:E:484:ILE:HD11	5:E:680:PHE:HB3	2.03	0.41
5:E:498:ASN:HA	5:E:648:LEU:O	2.21	0.41
5:E:557:LYS:HD2	5:E:557:LYS:HA	1.80	0.41
5:E:621:HIS:O	5:E:892:GLN:HG3	2.19	0.41
5:E:736:ARG:HH21	5:E:777:LEU:CD2	2.33	0.41
5:E:1438:ARG:HB2	5:E:1442:ARG:NH2	2.36	0.41
5:E:1871:LEU:HD23	5:E:1874:LYS:CE	2.51	0.41
5:E:1904:LEU:HB3	5:E:1908:LEU:CB	2.51	0.41
5:E:1930:LEU:O	5:E:1933:ASN:HB3	2.21	0.41
5:E:2031:SER:HB2	5:E:2098:ALA:CB	2.51	0.41
5:E:2065:TRP:CE2	5:E:2081:ARG:HD3	2.56	0.41
6:F:65:HIS:CD2	6:F:93:TRP:HZ2	2.38	0.41
6:F:78:GLY:O	6:F:336:HIS:NE2	2.46	0.41
6:F:95:VAL:HG11	6:F:336:HIS:NE2	2.36	0.41
6:F:105:LEU:HD23	6:F:136:TRP:CD2	2.55	0.41
6:F:181:ILE:HG13	6:F:182:ARG:HG3	2.03	0.41
6:F:198:ALA:CB	6:F:241:LEU:HG	2.50	0.41
7:G:96:LYS:HG3	7:G:97:ASP:N	2.35	0.41
7:G:316:ALA:CB	7:G:332:ILE:HD11	2.49	0.41
7:G:479:ASN:ND2	7:G:482:MET:HB2	2.36	0.41
8:H:36:PRO:HA	8:H:39:LEU:CD1	2.51	0.41

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:92:VAL:HG21	8:H:119:ILE:HD11	2.03	0.41
9:I:640:GLU:HA	9:I:789:SER:OG	2.21	0.41
17:J:8:C:H42	18:K:43:G:H1	1.68	0.41
17:J:113:U:H2'	17:J:114:G:C8	2.54	0.41
19:L:257:LYS:HD3	19:L:257:LYS:HA	1.83	0.41
20:M:242:ASN:HB2	20:M:286:THR:HB	2.02	0.41
23:R:23:SER:C	23:R:25:LYS:N	2.73	0.41
24:P:3:A:H2'	24:P:4:A:C8	2.56	0.41
26:W:11:TYR:OH	26:W:143:GLY:O	2.22	0.41
28:Y:80:LEU:O	28:Y:83:MET:HB3	2.20	0.41
28:Y:87:LYS:HA	28:Y:90:GLU:HB2	2.03	0.41
28:Y:235:LYS:HB3	28:Y:239:GLU:HG3	2.02	0.41
29:Z:252:ARG:HA	29:Z:255:GLU:HG2	2.02	0.41
30:S:705:LYS:HE2	30:S:705:LYS:HA	2.02	0.41
31:U:358:LYS:HG3	31:U:381:GLU:HG2	2.02	0.41
32:Q:774:LEU:HD13	32:Q:882:LEU:HD21	2.03	0.41
32:Q:789:ILE:CG1	32:Q:972:LYS:HB3	2.49	0.41
32:Q:849:TYR:HA	32:Q:856:ARG:CZ	2.51	0.41
32:Q:905:LYS:HB3	32:Q:986:LEU:HG	2.02	0.41
3:C:318:TYR:CE2	3:C:329:LEU:HD21	2.56	0.41
3:C:1088:PHE:HA	3:C:1096:HIS:O	2.20	0.41
3:C:1109:LEU:HG	3:C:1152:ALA:HB1	2.03	0.41
3:C:1405:LEU:HD13	5:E:218:GLY:CA	2.50	0.41
3:C:1604:LEU:HA	3:C:1719:PHE:HZ	1.85	0.41
3:C:1643:SER:HB2	3:C:1647:ASP:OD2	2.21	0.41
5:E:791:ARG:NH1	5:E:795:THR:OG1	2.54	0.41
5:E:984:LEU:HD23	5:E:984:LEU:HA	1.75	0.41
5:E:1401:LEU:HG	5:E:1403:LYS:HG2	2.02	0.41
5:E:2066:VAL:HG23	5:E:2082:LEU:HD13	2.03	0.41
6:F:217:ILE:HD11	6:F:234:HIS:CD2	2.55	0.41
6:F:342:ILE:HD12	6:F:356:ILE:HB	2.02	0.41
7:G:20:GLY:H	8:H:68:VAL:CG1	2.27	0.41
7:G:152:VAL:HG22	7:G:157:TRP:CD1	2.56	0.41
8:H:26:LEU:HD12	8:H:27:VAL:H	1.85	0.41
8:H:36:PRO:HA	8:H:39:LEU:HG	2.03	0.41
9:I:192:ARG:NH1	9:I:196:LYS:HE2	2.36	0.41
9:I:345:LYS:HE3	9:I:345:LYS:HB2	1.85	0.41
9:I:382:LYS:HD3	9:I:628:TYR:HE1	1.86	0.41
17:J:64:A:C5'	30:S:745:ARG:NH2	2.83	0.41
21:N:549:ARG:NH1	21:N:627:THR:O	2.54	0.41
2:B:6:C:H2'	2:B:7:U:H6	1.86	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:48:LYS:HG3	3:C:49:ARG:N	2.35	0.40
3:C:313:LYS:HZ1	9:I:253:ARG:HD2	1.86	0.40
3:C:354:PRO:HG2	9:I:324:MET:HE3	2.03	0.40
3:C:515:TYR:CD1	3:C:530:LEU:HD21	2.56	0.40
3:C:1427:ARG:NH2	5:E:221:ARG:O	2.54	0.40
3:C:1892:PRO:HG2	3:C:1940:LEU:HB3	2.03	0.40
3:C:2237:TRP:CZ2	3:C:2248:PRO:HG2	2.55	0.40
4:D:242:LEU:HD23	4:D:242:LEU:HA	1.76	0.40
4:D:274:ALA:O	4:D:278:LEU:HG	2.20	0.40
5:E:785:HIS:N	5:E:810:VAL:O	2.48	0.40
5:E:1088:ALA:HB1	5:E:1118:ILE:HD13	2.02	0.40
5:E:1364:ILE:HD13	5:E:1450:LEU:CD2	2.51	0.40
5:E:1428:THR:HB	5:E:1429:PRO:CD	2.51	0.40
5:E:1642:GLN:HG2	5:E:1642:GLN:O	2.21	0.40
6:F:113:MET:SD	6:F:288:LEU:HD12	2.61	0.40
7:G:135:ARG:NH2	31:U:461:ASN:HA	2.37	0.40
7:G:424:SER:O	7:G:428:GLU:HG3	2.21	0.40
8:H:63:VAL:HG11	8:H:78:ILE:CG2	2.51	0.40
9:I:178:GLN:NE2	9:I:179:GLN:HG3	2.36	0.40
9:I:399:PRO:HA	9:I:400:PRO:HD3	1.89	0.40
19:L:67:ILE:O	19:L:71:ILE:HG12	2.21	0.40
20:M:182:ALA:HA	20:M:395:ARG:HD2	2.04	0.40
25:V:58:ARG:HH21	25:V:61:LEU:HD12	1.87	0.40
31:U:449:TYR:HA	31:U:552:TRP:O	2.21	0.40
32:Q:768:GLU:OE2	32:Q:831:LYS:NZ	2.54	0.40
32:Q:968:ASP:OD1	32:Q:969:GLN:N	2.54	0.40
2:B:53:U:O2'	2:B:54:U:H5'	2.21	0.40
3:C:602:ILE:HG21	9:I:274:PHE:HD2	1.85	0.40
3:C:881:ILE:HG21	3:C:921:TYR:CD2	2.54	0.40
3:C:1582:TRP:CD1	3:C:1619:SER:HB3	2.57	0.40
3:C:1607:GLU:HG3	3:C:1608:THR:N	2.36	0.40
3:C:1631:LEU:O	3:C:1659:LYS:HA	2.22	0.40
3:C:1732:LYS:HD3	3:C:1732:LYS:HA	1.72	0.40
3:C:1941:ARG:HG2	3:C:1987:ILE:HD13	2.01	0.40
3:C:2331:GLU:HG2	3:C:2333:LEU:HG	2.03	0.40
4:D:145:PHE:HE1	4:D:310:SER:HG	1.67	0.40
4:D:299:ILE:O	4:D:306:ASN:ND2	2.54	0.40
4:D:736:GLY:CA	4:D:743:ASN:HB2	2.34	0.40
4:D:737:PRO:HG3	4:D:783:LEU:HD23	2.03	0.40
5:E:41:LEU:HA	5:E:41:LEU:HD23	1.88	0.40
5:E:1037:LEU:HD11	5:E:1077:LEU:CD2	2.51	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:1611:GLU:HA	5:E:1614:LEU:HG	2.04	0.40
5:E:1817:MET:HG2	5:E:1817:MET:H	1.64	0.40
5:E:1883:LYS:HE2	5:E:1883:LYS:HB2	1.86	0.40
6:F:69:VAL:CG1	6:F:345:ALA:HB1	2.49	0.40
6:F:250:LEU:N	6:F:262:TRP:O	2.42	0.40
7:G:407:TRP:CD2	7:G:426:ALA:HB2	2.56	0.40
7:G:584:GLU:CG	7:G:593:LEU:CA	2.92	0.40
9:I:330:LEU:HD13	9:I:330:LEU:HA	1.97	0.40
9:I:447:ILE:HB	9:I:448:PRO:HD3	2.03	0.40
9:I:783:ILE:CG2	9:I:791:CYS:HA	2.51	0.40
24:P:66:A:O2'	26:W:146:GLY:HA2	2.21	0.40
24:P:75:U:OP1	26:W:29:ARG:N	2.54	0.40
26:W:81:ARG:HH11	26:W:83:VAL:HG22	1.86	0.40
30:S:709:LYS:HE2	30:S:709:LYS:HA	2.03	0.40
32:Q:770:LEU:HD12	32:Q:822:LEU:HD12	2.03	0.40
32:Q:803:LEU:CD1	32:Q:875:VAL:HG21	2.36	0.40
2:B:6:C:H2'	2:B:7:U:C6	2.56	0.40
2:B:38:C:C2'	2:B:39:C:H5'	2.50	0.40
3:C:97:HIS:CD2	3:C:645:THR:HG21	2.55	0.40
3:C:214:ARG:HG3	3:C:225:TYR:CD1	2.56	0.40
3:C:340:ILE:HD11	4:D:867:PRO:CG	2.50	0.40
3:C:773:LYS:HE3	3:C:773:LYS:HB3	1.85	0.40
3:C:1518:LEU:HB3	3:C:1523:ARG:HG3	2.04	0.40
3:C:1581:LEU:O	3:C:1585:ILE:HG13	2.21	0.40
3:C:1705:ILE:HA	3:C:1705:ILE:HD13	1.86	0.40
3:C:1804:ASN:HA	3:C:1822:ILE:O	2.20	0.40
5:E:421:HIS:HA	5:E:878:TYR:CE2	2.56	0.40
5:E:500:LEU:CD2	5:E:662:ALA:HB2	2.51	0.40
5:E:501:LEU:HD23	5:E:512:VAL:HG21	2.03	0.40
5:E:518:LEU:HD23	5:E:518:LEU:HA	1.81	0.40
5:E:580:ILE:HD13	5:E:580:ILE:HA	1.91	0.40
5:E:619:LEU:HD23	5:E:619:LEU:HA	1.91	0.40
5:E:709:TYR:O	5:E:713:MET:HG2	2.20	0.40
5:E:917:VAL:HG12	5:E:953:ARG:NH2	2.37	0.40
6:F:260:ARG:HD2	6:F:276:ILE:HG12	2.03	0.40
7:G:139:GLN:HG2	7:G:140:GLN:N	2.36	0.40
7:G:255:LEU:HA	7:G:255:LEU:HD23	1.87	0.40
7:G:301:VAL:O	7:G:305:ASN:N	2.54	0.40
8:H:55:MET:HG3	8:H:117:GLU:OE1	2.21	0.40
8:H:69:TYR:HD1	8:H:73:PHE:HE1	1.69	0.40
9:I:374:ARG:NH2	9:I:388:ASN:HA	2.36	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:I:441:LYS:HE3	9:I:441:LYS:HB3	1.83	0.40
19:L:55:TRP:HD1	19:L:60:PHE:CE1	2.40	0.40
23:R:20:HIS:HA	23:R:23:SER:HB3	2.02	0.40
27:X:114:ASP:N	27:X:114:ASP:OD1	2.54	0.40
31:U:402:LYS:HB2	31:U:402:LYS:HE2	1.85	0.40
32:Q:721:ASN:OD1	32:Q:762:HIS:NE2	2.50	0.40
2:B:58:U:H2'	2:B:59:G:H8	1.86	0.40
3:C:25:MET:HB3	3:C:26:SER:H	1.53	0.40
3:C:384:VAL:HG21	4:D:334:ILE:CD1	2.45	0.40
3:C:654:ASN:OD1	3:C:655:LEU:N	2.55	0.40
3:C:705:LYS:HD3	3:C:705:LYS:HA	1.84	0.40
3:C:955:TRP:HE1	3:C:959:ILE:HD11	1.85	0.40
3:C:2104:TYR:HA	3:C:2140:LYS:O	2.21	0.40
3:C:2284:MET:HE2	3:C:2284:MET:HB2	1.92	0.40
4:D:261:ASP:OD1	4:D:262:ARG:N	2.55	0.40
4:D:354:ARG:HE	4:D:354:ARG:HB3	1.71	0.40
5:E:468:PRO:O	5:E:472:GLN:HG3	2.22	0.40
5:E:684:PRO:HD2	5:E:863:THR:O	2.22	0.40
5:E:827:ILE:CD1	5:E:868:ILE:HD12	2.51	0.40
5:E:1600:TYR:HB3	5:E:1631:LEU:HD21	2.03	0.40
5:E:1822:TYR:CD2	5:E:1925:ALA:HA	2.56	0.40
5:E:1858:ILE:HG22	5:E:1887:PRO:HB3	2.03	0.40
5:E:2025:ASP:HB3	5:E:2028:SER:O	2.22	0.40
6:F:125:PHE:CE1	6:F:167:VAL:HG21	2.56	0.40
6:F:193:THR:HG23	6:F:194:TYR:CD2	2.56	0.40
6:F:250:LEU:HD23	6:F:251:LEU:N	2.37	0.40
6:F:297:GLY:O	6:F:314:THR:HG21	2.21	0.40
6:F:335:PHE:CE1	6:F:342:ILE:HG12	2.55	0.40
7:G:678:PHE:O	7:G:682:VAL:HG22	2.21	0.40
9:I:362:LEU:HB2	9:I:395:ASP:OD2	2.22	0.40
9:I:424:ILE:CD1	9:I:424:ILE:H	2.34	0.40
9:I:428:ASN:O	9:I:428:ASN:CG	2.60	0.40
17:J:41:G:HO2'	19:L:270:HIS:HD1	1.62	0.40
19:L:209:GLU:O	19:L:210:SER:C	2.60	0.40
20:M:422:ILE:HB	20:M:434:TRP:HB2	2.02	0.40
23:R:104:LYS:HA	23:R:104:LYS:HD3	1.91	0.40
24:P:50:U:H2'	24:P:51:G:C8	2.57	0.40
24:P:80:G:H2'	24:P:81:A:C8	2.56	0.40
25:V:88:GLN:O	25:V:92:GLU:HG2	2.22	0.40
29:Z:269:GLU:HA	29:Z:272:GLN:CD	2.42	0.40
31:U:247:PRO:HD2	31:U:449:TYR:CZ	2.57	0.40

Continued on next page...

Continued from previous page...

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:564:TYR:HB3	3:C:574:LEU:HD22	2.04	0.40
3:C:570:ASP:HB3	3:C:573:GLN:HG3	2.04	0.40
3:C:787:GLU:OE2	3:C:791:GLN:NE2	2.52	0.40
3:C:825:ILE:N	3:C:1000:ILE:O	2.52	0.40
3:C:1558:THR:HG22	3:C:1582:TRP:HE3	1.86	0.40
3:C:1819:LEU:O	3:C:1819:LEU:HD12	2.22	0.40
3:C:1889:LEU:HD13	3:C:1891:LEU:CD2	2.51	0.40
4:D:103:THR:CG2	4:D:543:ARG:HH11	2.35	0.40
4:D:212:SER:O	4:D:216:THR:HG23	2.22	0.40
5:E:137:ASP:HA	5:E:140:LEU:CD2	2.51	0.40
5:E:498:ASN:CB	5:E:667:VAL:HG22	2.52	0.40
5:E:527:MET:CE	5:E:527:MET:H	2.34	0.40
5:E:997:THR:OG1	5:E:1022:SER:HB3	2.22	0.40
5:E:1335:VAL:O	5:E:1339:VAL:HG12	2.22	0.40
5:E:1420:GLY:HA2	5:E:1444:ASN:ND2	2.36	0.40
5:E:1598:ILE:HA	5:E:1601:LEU:CG	2.51	0.40
5:E:1598:ILE:HA	5:E:1601:LEU:HD21	2.03	0.40
5:E:1609:LEU:HA	5:E:1619:TYR:CE1	2.56	0.40
5:E:1617:VAL:HG22	5:E:1643:VAL:HB	2.04	0.40
6:F:75:HIS:CE1	6:F:121:GLY:HA3	2.56	0.40
6:F:95:VAL:HG11	6:F:336:HIS:HE2	1.86	0.40
6:F:128:SER:HB3	6:F:132:THR:O	2.22	0.40
6:F:190:PHE:HE2	6:F:208:ILE:HD12	1.84	0.40
6:F:343:ILE:CG1	6:F:353:MET:HB3	2.51	0.40
9:I:436:GLU:HG3	9:I:757:ARG:NH1	2.36	0.40
9:I:441:LYS:HB2	9:I:605:PHE:CE2	2.56	0.40
9:I:476:PRO:HA	9:I:525:THR:HB	2.03	0.40
9:I:692:CYS:SG	9:I:715:LYS:HG3	2.61	0.40
9:I:729:ASP:OD1	9:I:729:ASP:N	2.54	0.40
27:X:126:ILE:HD13	27:X:126:ILE:HA	1.84	0.40
31:U:230:ILE:H	31:U:233:ASN:ND2	2.20	0.40
31:U:422:PHE:O	31:U:483:TYR:HB3	2.21	0.40
32:Q:787:LEU:CD1	32:Q:882:LEU:HB3	2.49	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	
3	C	2215/2335 (95%)	2139 (97%)	75 (3%)	1 (0%)	100	100
4	D	853/972 (88%)	825 (97%)	28 (3%)	0	100	100
5	E	1989/2136 (93%)	1910 (96%)	77 (4%)	2 (0%)	51	82
6	F	305/357 (85%)	292 (96%)	12 (4%)	1 (0%)	41	73
7	G	783/941 (83%)	763 (97%)	20 (3%)	0	100	100
8	H	141/149 (95%)	138 (98%)	3 (2%)	0	100	100
9	I	589/820 (72%)	565 (96%)	24 (4%)	0	100	100
10	a	69/240 (29%)	67 (97%)	2 (3%)	0	100	100
10	h	80/240 (33%)	75 (94%)	5 (6%)	0	100	100
10	o	84/240 (35%)	78 (93%)	5 (6%)	1 (1%)	13	44
11	b	79/119 (66%)	75 (95%)	4 (5%)	0	100	100
11	i	79/119 (66%)	76 (96%)	3 (4%)	0	100	100
11	p	80/119 (67%)	77 (96%)	3 (4%)	0	100	100
12	c	94/118 (80%)	90 (96%)	4 (4%)	0	100	100
12	j	90/118 (76%)	85 (94%)	5 (6%)	0	100	100
12	q	100/118 (85%)	91 (91%)	7 (7%)	2 (2%)	7	33
13	d	82/126 (65%)	80 (98%)	2 (2%)	0	100	100
13	k	81/126 (64%)	78 (96%)	3 (4%)	0	100	100
13	r	80/126 (64%)	76 (95%)	4 (5%)	0	100	100
14	e	75/92 (82%)	72 (96%)	3 (4%)	0	100	100
14	l	74/92 (80%)	70 (95%)	4 (5%)	0	100	100
14	s	79/92 (86%)	76 (96%)	3 (4%)	0	100	100
15	f	71/86 (83%)	69 (97%)	2 (3%)	0	100	100
15	m	70/86 (81%)	69 (99%)	1 (1%)	0	100	100
15	t	72/86 (84%)	71 (99%)	1 (1%)	0	100	100

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
16	g	72/76 (95%)	69 (96%)	3 (4%)	0	100	100
16	n	72/76 (95%)	67 (93%)	4 (6%)	1 (1%)	11	40
16	u	71/76 (93%)	65 (92%)	6 (8%)	0	100	100
19	L	312/499 (62%)	296 (95%)	15 (5%)	1 (0%)	41	73
20	M	359/522 (69%)	345 (96%)	14 (4%)	0	100	100
21	N	220/683 (32%)	206 (94%)	13 (6%)	1 (0%)	29	63
22	O	122/128 (95%)	119 (98%)	3 (2%)	0	100	100
23	R	155/332 (47%)	152 (98%)	3 (2%)	0	100	100
25	V	99/170 (58%)	98 (99%)	1 (1%)	0	100	100
26	W	165/246 (67%)	161 (98%)	4 (2%)	0	100	100
27	X	129/132 (98%)	124 (96%)	5 (4%)	0	100	100
28	Y	223/339 (66%)	212 (95%)	10 (4%)	1 (0%)	34	68
29	Z	208/485 (43%)	207 (100%)	0	1 (0%)	29	63
30	S	83/800 (10%)	79 (95%)	3 (4%)	1 (1%)	13	44
31	U	456/565 (81%)	437 (96%)	19 (4%)	0	100	100
32	Q	316/1007 (31%)	304 (96%)	11 (4%)	1 (0%)	41	73
All	All	11376/16189 (70%)	10948 (96%)	414 (4%)	14 (0%)	54	82

All (14) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
30	S	566	ILE
32	Q	851	VAL
3	C	56	ALA
19	L	172	SER
29	Z	338	VAL
5	E	90	LEU
16	n	8	GLU
10	o	89	ASP
12	q	11	MET
5	E	422	PHE
28	Y	79	ARG
21	N	559	LYS
12	q	12	THR
6	F	356	ILE

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
3	C	2015/2108 (96%)	1985 (98%)	30 (2%)	65 82
4	D	756/866 (87%)	747 (99%)	9 (1%)	71 85
5	E	1779/1908 (93%)	1751 (98%)	28 (2%)	62 81
6	F	263/300 (88%)	262 (100%)	1 (0%)	91 95
7	G	626/792 (79%)	616 (98%)	10 (2%)	62 81
8	H	131/137 (96%)	130 (99%)	1 (1%)	81 91
9	I	518/721 (72%)	508 (98%)	10 (2%)	57 78
10	a	67/177 (38%)	66 (98%)	1 (2%)	65 82
10	h	75/177 (42%)	72 (96%)	3 (4%)	31 61
10	o	78/177 (44%)	69 (88%)	9 (12%)	5 22
11	b	76/101 (75%)	75 (99%)	1 (1%)	69 84
11	i	76/101 (75%)	73 (96%)	3 (4%)	32 62
11	p	77/101 (76%)	75 (97%)	2 (3%)	46 72
12	c	93/110 (84%)	89 (96%)	4 (4%)	29 60
12	j	86/110 (78%)	83 (96%)	3 (4%)	36 65
12	q	100/110 (91%)	99 (99%)	1 (1%)	76 87
13	d	73/101 (72%)	73 (100%)	0	100 100
13	k	73/101 (72%)	71 (97%)	2 (3%)	44 71
13	r	72/101 (71%)	72 (100%)	0	100 100
14	e	72/84 (86%)	70 (97%)	2 (3%)	43 70
14	l	71/84 (84%)	67 (94%)	4 (6%)	21 52
14	s	75/84 (89%)	73 (97%)	2 (3%)	44 71
15	f	61/74 (82%)	57 (93%)	4 (7%)	16 47
15	m	61/74 (82%)	60 (98%)	1 (2%)	62 81
15	t	63/74 (85%)	61 (97%)	2 (3%)	39 68
16	g	64/66 (97%)	60 (94%)	4 (6%)	18 49

Continued on next page...

Continued from previous page...

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
16	n	64/66 (97%)	63 (98%)	1 (2%)	62 81
16	u	63/66 (96%)	61 (97%)	2 (3%)	39 68
19	L	271/424 (64%)	264 (97%)	7 (3%)	46 72
20	M	308/442 (70%)	308 (100%)	0	100 100
21	N	203/599 (34%)	200 (98%)	3 (2%)	65 82
22	O	107/111 (96%)	106 (99%)	1 (1%)	78 89
23	R	136/287 (47%)	133 (98%)	3 (2%)	52 76
25	V	92/151 (61%)	84 (91%)	8 (9%)	10 35
26	W	140/215 (65%)	134 (96%)	6 (4%)	29 60
27	X	117/119 (98%)	112 (96%)	5 (4%)	29 60
28	Y	213/313 (68%)	203 (95%)	10 (5%)	26 58
29	Z	173/401 (43%)	168 (97%)	5 (3%)	42 70
30	S	74/681 (11%)	70 (95%)	4 (5%)	22 53
31	U	420/511 (82%)	418 (100%)	2 (0%)	88 94
32	Q	291/919 (32%)	291 (100%)	0	100 100
All	All	10173/14144 (72%)	9979 (98%)	194 (2%)	59 78

All (194) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
3	C	225	TYR
3	C	295	GLU
3	C	353	ASP
3	C	470	ARG
3	C	515	TYR
3	C	525	LYS
3	C	763	ARG
3	C	768	ASP
3	C	871	TYR
3	C	934	ARG
3	C	1089	CYS
3	C	1298	ARG
3	C	1388	GLU
3	C	1476	GLN
3	C	1502	PHE
3	C	1513	MET
3	C	1515	TRP

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
3	C	1561	PHE
3	C	1659	LYS
3	C	1660	TYR
3	C	1678	ARG
3	C	1683	LYS
3	C	1710	ASN
3	C	1717	ASN
3	C	1719	PHE
3	C	1958	LYS
3	C	1991	TYR
3	C	2070	LYS
3	C	2200	MET
3	C	2334	TYR
4	D	162	ASP
4	D	203	MET
4	D	298	LEU
4	D	352	LYS
4	D	394	ARG
4	D	436	GLN
4	D	605	ASP
4	D	914	LYS
4	D	953	PHE
5	E	89	LEU
5	E	130	ASP
5	E	406	ARG
5	E	423	MET
5	E	460	GLN
5	E	618	HIS
5	E	619	LEU
5	E	620	LEU
5	E	631	LEU
5	E	753	ARG
5	E	789	MET
5	E	890	GLU
5	E	914	LYS
5	E	992	TYR
5	E	1259	PHE
5	E	1279	GLU
5	E	1300	GLU
5	E	1442	ARG
5	E	1627	MET
5	E	1665	ASP

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
5	E	1698	ASP
5	E	1705	MET
5	E	1732	MET
5	E	1734	ASP
5	E	1924	GLN
5	E	1948	MET
5	E	1993	ARG
5	E	2084	LEU
6	F	145	LYS
7	G	125	LYS
7	G	147	ARG
7	G	299	LYS
7	G	303	GLU
7	G	312	TRP
7	G	394	ARG
7	G	418	ASP
7	G	558	CYS
7	G	606	LYS
7	G	663	ARG
8	H	85	PHE
9	I	166	LYS
9	I	342	LYS
9	I	428	ASN
9	I	491	PHE
9	I	545	TYR
9	I	559	PHE
9	I	592	PHE
9	I	621	LEU
9	I	726	ARG
9	I	741	MET
10	a	6	SER
11	b	3	LEU
12	c	19	ARG
12	c	45	ASN
12	c	50	LYS
12	c	73	MET
14	e	51	ASP
14	e	59	ASP
15	f	20	MET
15	f	27	MET
15	f	39	TYR
15	f	71	TYR

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
16	g	14	ASP
16	g	45	CYS
16	g	59	MET
16	g	74	GLU
19	L	60	PHE
19	L	69	GLU
19	L	74	GLN
19	L	164	ILE
19	L	165	MET
19	L	170	THR
19	L	193	MET
21	N	452	THR
21	N	457	GLN
21	N	461	GLN
22	O	77	ASN
23	R	22	TYR
23	R	86	TYR
23	R	105	PHE
10	h	34	PHE
10	h	43	CYS
10	h	48	PHE
11	i	6	PHE
11	i	33	ASP
11	i	68	PHE
12	j	65	MET
12	j	95	TYR
12	j	99	MET
13	k	8	LYS
13	k	76	MET
14	l	28	ARG
14	l	53	TYR
14	l	77	ILE
14	l	78	MET
15	m	27	MET
16	n	48	MET
25	V	11	ASP
25	V	13	SER
25	V	16	ASP
25	V	17	ASN
25	V	40	MET
25	V	41	PHE
25	V	43	ASP

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
25	V	73	ARG
26	W	5	MET
26	W	28	ASP
26	W	64	GLU
26	W	65	ASP
26	W	66	LYS
26	W	119	GLN
27	X	10	MET
27	X	26	LEU
27	X	79	GLU
27	X	108	ASP
27	X	120	ARG
28	Y	39	ASP
28	Y	78	CYS
28	Y	79	ARG
28	Y	86	THR
28	Y	93	MET
28	Y	117	GLN
28	Y	214	GLU
28	Y	218	TYR
28	Y	225	TYR
28	Y	226	ARG
29	Z	231	TYR
29	Z	248	ARG
29	Z	313	LYS
29	Z	335	ARG
29	Z	345	ASP
10	o	34	PHE
10	o	35	ASP
10	o	38	MET
10	o	40	LEU
10	o	44	ASP
10	o	48	PHE
10	o	77	LEU
10	o	80	MET
10	o	88	LYS
11	p	45	MET
11	p	70	LEU
12	q	46	CYS
14	s	50	PHE
14	s	51	ASP
15	t	23	LEU

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
15	t	52	ASP
16	u	10	LYS
16	u	73	LEU
30	S	553	PHE
30	S	727	ARG
30	S	733	PHE
30	S	758	LYS
31	U	100	ARG
31	U	359	LYS

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (41) such sidechains are listed below:

Mol	Chain	Res	Type
3	C	226	GLN
3	C	1345	GLN
3	C	1363	GLN
3	C	1658	GLN
3	C	1717	ASN
3	C	1767	ASN
3	C	1804	ASN
3	C	1823	HIS
3	C	1875	HIS
4	D	139	HIS
5	E	121	GLN
5	E	418	GLN
5	E	719	ASN
5	E	824	HIS
5	E	885	GLN
5	E	967	ASN
5	E	1064	GLN
5	E	1332	GLN
5	E	2058	GLN
6	F	188	GLN
6	F	357	GLN
9	I	428	ASN
9	I	482	GLN
11	b	64	ASN
15	f	68	ASN
19	L	74	GLN
19	L	240	ASN
21	N	457	GLN
22	O	77	ASN

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
23	R	27	GLN
14	l	83	ASN
16	n	54	GLN
27	X	39	GLN
27	X	97	HIS
28	Y	74	HIS
14	s	26	GLN
16	u	26	HIS
31	U	233	ASN
31	U	372	GLN
32	Q	844	ASN
32	Q	896	HIS

5.3.3 RNA

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	A	12/280 (4%)	4 (33%)	0
17	J	104/131 (79%)	25 (24%)	1 (0%)
18	K	42/125 (33%)	9 (21%)	0
2	B	108/117 (92%)	32 (29%)	2 (1%)
24	P	121/135 (89%)	45 (37%)	2 (1%)
All	All	387/788 (49%)	115 (29%)	5 (1%)

All (115) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	A	0	A
1	A	1	A
1	A	2	U
1	A	5	C
2	B	4	C
2	B	5	U
2	B	7	U
2	B	8	G
2	B	9	G
2	B	21	A
2	B	22	U
2	B	24	G
2	B	28	A
2	B	30	A
2	B	36	C

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
2	B	37	G
2	B	40	U
2	B	42	U
2	B	43	U
2	B	47	A
2	B	48	A
2	B	69	A
2	B	70	A
2	B	73	C
2	B	74	U
2	B	77	G
2	B	87	A
2	B	94	U
2	B	95	G
2	B	98	G
2	B	105	U
2	B	106	U
2	B	107	U
2	B	108	G
2	B	113	G
2	B	114	G
17	J	2	A
17	J	5	A
17	J	7	C
17	J	27	A
17	J	31	U
17	J	42	C
17	J	43	A
17	J	44	U
17	J	45	A
17	J	46	G
17	J	50	G
17	J	57	A
17	J	59	U
17	J	93	G
17	J	95	G
17	J	109	U
17	J	111	G
17	J	112	G
17	J	116	A
17	J	119	U
17	J	120	U

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
17	J	121	U
17	J	123	G
17	J	124	G
17	J	125	A
18	K	29	A
18	K	30	C
18	K	38	G
18	K	50	A
18	K	51	G
18	K	56	C
18	K	57	C
18	K	61	G
18	K	66	G
24	P	6	G
24	P	7	G
24	P	13	U
24	P	14	G
24	P	19	G
24	P	20	A
24	P	21	G
24	P	22	U
24	P	24	G
24	P	26	A
24	P	30	G
24	P	33	G
24	P	34	G
24	P	53	G
24	P	63	G
24	P	65	C
24	P	66	A
24	P	67	U
24	P	69	A
24	P	70	A
24	P	71	G
24	P	73	G
24	P	74	A
24	P	82	A
24	P	83	G
24	P	88	A
24	P	90	U
24	P	93	U
24	P	94	U

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type
24	P	95	G
24	P	96	G
24	P	98	A
24	P	99	U
24	P	100	U
24	P	102	G
24	P	105	C
24	P	106	A
24	P	107	G
24	P	110	G
24	P	112	U
24	P	113	G
24	P	123	C
24	P	125	C
24	P	129	G
24	P	131	C

All (5) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
2	B	3	A
2	B	7	U
17	J	45	A
24	P	52	C
24	P	88	A

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

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

5.5 Carbohydrates (i)

There are no monosaccharides in this entry.

5.6 Ligand geometry (i)

Of 10 ligands modelled in this entry, 8 are 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	$\#\|Z\| > 2$
34	IHP	C	3000	-	36,36,36	0.78	0	54,60,60	0.90	0
35	GTP	D	1500	33	26,34,34	1.26	1 (3%)	32,54,54	1.70	7 (21%)

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
34	IHP	C	3000	-	-	5/30/54/54	0/1/1/1
35	GTP	D	1500	33	-	2/18/38/38	0/3/3/3

All (1) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
35	D	1500	GTP	C5-C6	-4.28	1.38	1.47

All (7) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	D	1500	GTP	PB-O3B-PG	-3.90	119.45	132.83
35	D	1500	GTP	PA-O3A-PB	-3.71	120.08	132.83
35	D	1500	GTP	C5-C6-N1	3.59	120.28	113.95
35	D	1500	GTP	C8-N7-C5	3.21	109.10	102.99
35	D	1500	GTP	C2-N1-C6	-3.00	119.58	125.10
35	D	1500	GTP	C3'-C2'-C1'	2.42	104.62	100.98
35	D	1500	GTP	O6-C6-C5	-2.08	120.30	124.37

There are no chirality outliers.

All (7) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
34	C	3000	IHP	C3-O13-P3-O23
35	D	1500	GTP	O4'-C4'-C5'-O5'
35	D	1500	GTP	C3'-C4'-C5'-O5'
34	C	3000	IHP	C6-O16-P6-O26

Continued on next page...

Continued from previous page...

Mol	Chain	Res	Type	Atoms
34	C	3000	IHP	C5-O15-P5-O25
34	C	3000	IHP	C1-O11-P1-O31
34	C	3000	IHP	C5-O15-P5-O35

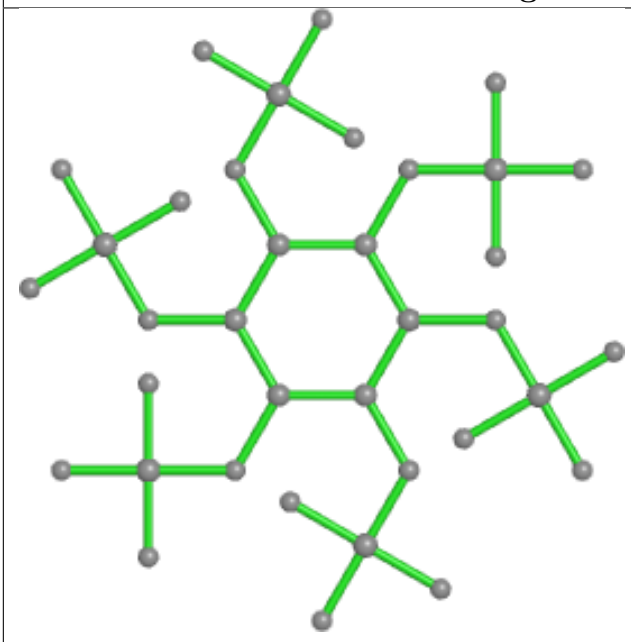
There are no ring outliers.

2 monomers are involved in 8 short contacts:

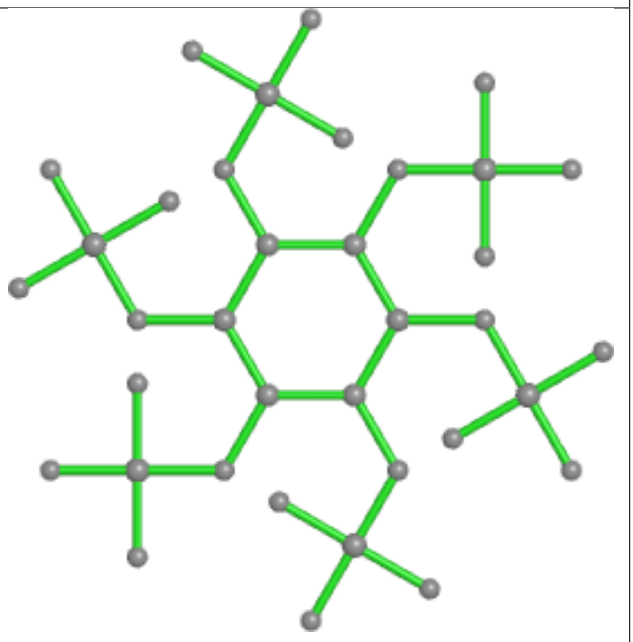
Mol	Chain	Res	Type	Clashes	Symm-Clashes
34	C	3000	IHP	3	0
35	D	1500	GTP	5	0

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.

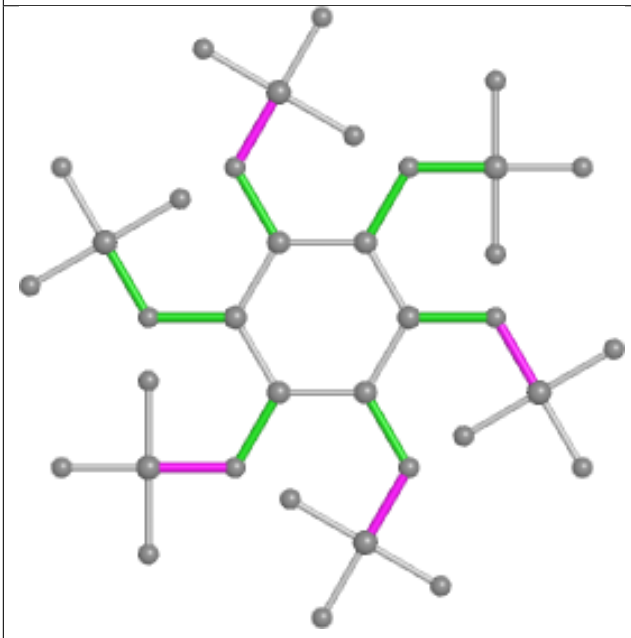
Ligand IHP C 3000



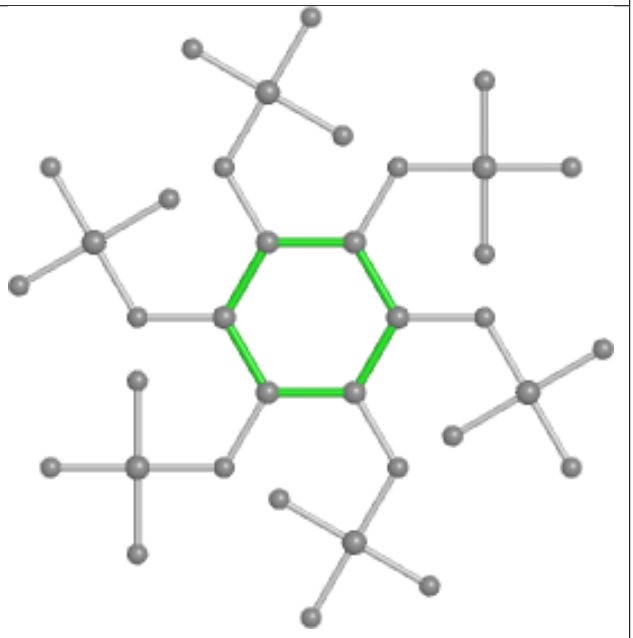
Bond lengths



Bond angles

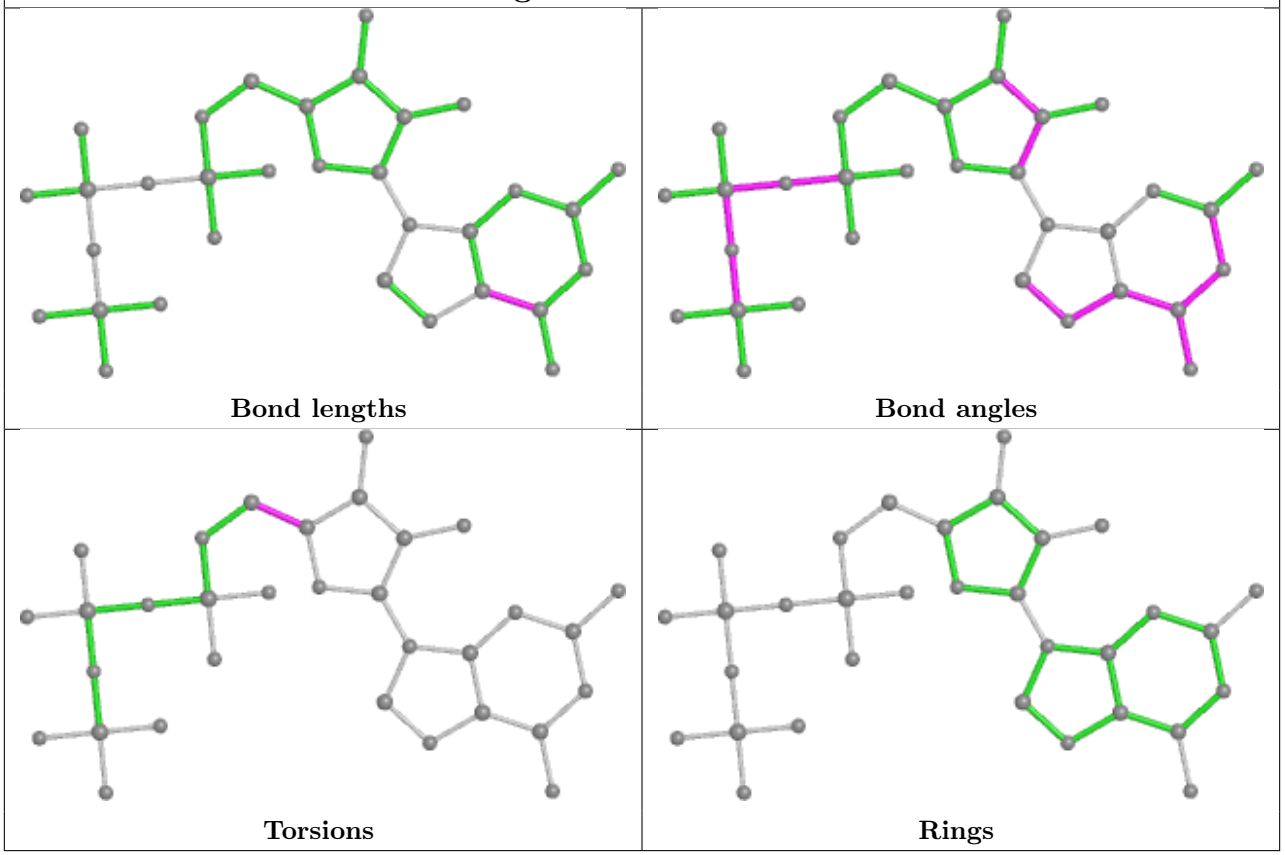


Torsions



Rings

Ligand GTP D 1500



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.