



Full wwPDB EM Validation Report ⓘ

Mar 6, 2026 – 09:25 PM UTC

PDB ID : 8Y6O / pdb_00008y6o
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:

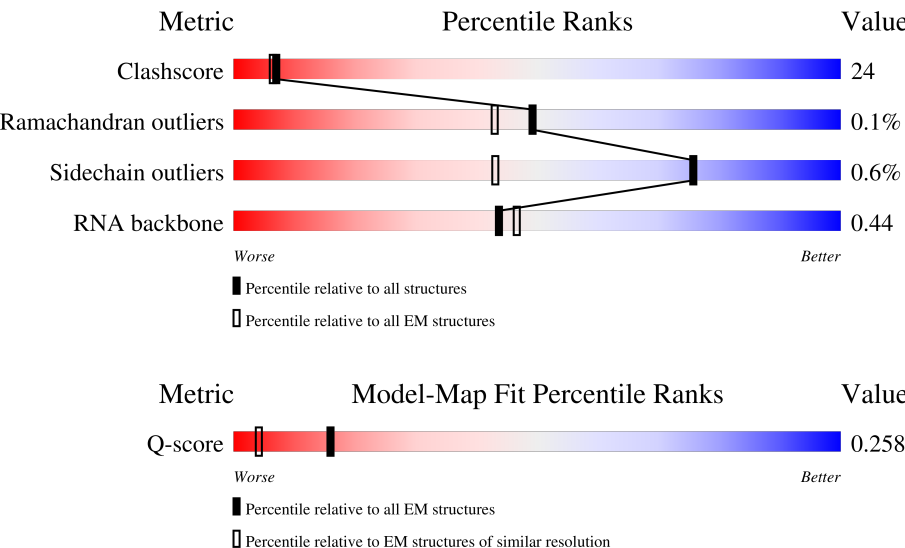
EMDB validation analysis : 0.0.1.dev132
Mogul : 2022.3.0, CSD as543be (2022)
MolProbity : 4-5-2 with Phenix2.0
Buster-report : wwPDB partial adaption of 1.1.7 (2018)
Percentile statistics : 20250101.v01 (using entries in the PDB archive January 1st 2025)
EM percentile statistics : 202505.v01 (Using data in the EMDB archive up until May 2025)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.49

1 Overall quality at a glance

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

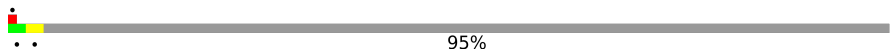
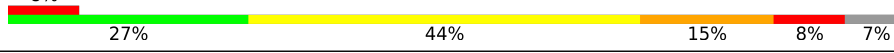

The reported resolution of this entry is 3.38 Å.

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)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	229148	23984	-
Ramachandran outliers	224038	23583	-
Sidechain outliers	223484	23102	-
RNA backbone	8273	3508	-
Q-score	-	25397	14261 (2.88 - 3.88)

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 $\leq 5\%$. The upper red bar (where present) indicates the fraction of residues that have poor fit to the EM map (all-atom inclusion $< 40\%$). The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	A	280	 95%
2	B	117	 8% 27% 44% 15% 8% 7%
3	C	2335	 55% 40% 5%

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Mol	Chain	Length	Quality of chain
4	D	972	
5	E	2136	
6	F	357	
7	G	941	
8	H	149	
9	I	820	
10	a	240	
10	h	240	
10	o	240	
11	b	119	
11	i	119	
11	p	119	
12	c	118	
12	j	118	
12	q	118	
13	d	126	
13	k	126	
13	r	126	
14	e	92	
14	l	92	
14	s	92	
15	f	86	
15	m	86	
15	t	86	
16	g	76	

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Mol	Chain	Length	Quality of chain
16	n	76	
16	u	76	
17	J	131	
18	K	125	
19	L	499	
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 [i](#)

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
1	A	13	Total	C	N	O	P	0	0
			268	121	41	93	13		

- Molecule 2 is a RNA chain called U5 snRNA.

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

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

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

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

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

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

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

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

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

- 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		

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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		

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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		

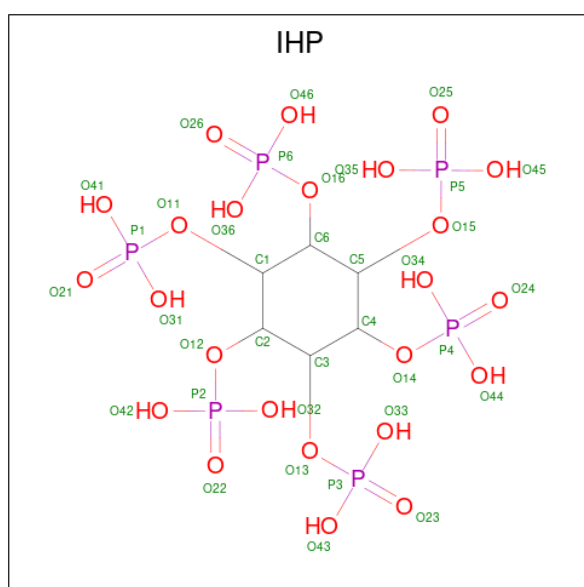
- Molecule 32 is a protein called Serine/threonine-protein kinase PRP4 homolog.

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 (CCD ID: MG) (formula: Mg).

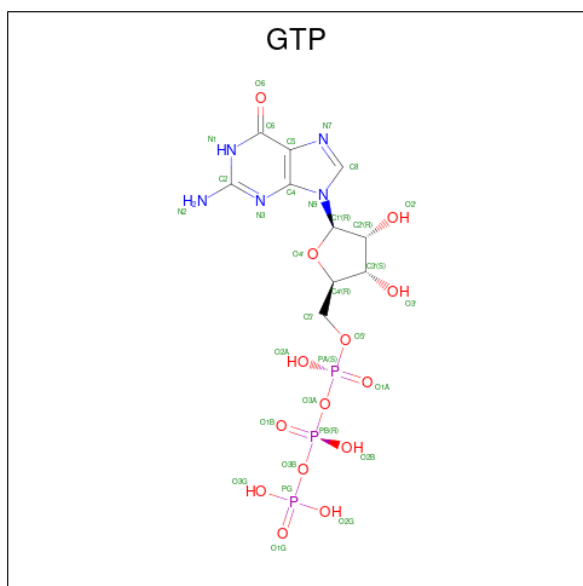
Mol	Chain	Residues	Atoms		AltConf
33	B	1	Total	Mg	0
			1	1	
33	D	1	Total	Mg	0
			1	1	

- Molecule 34 is INOSITOL HEXAKISPHOSPHATE (CCD ID: 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 (CCD ID: GTP) (formula: $C_{10}H_{16}N_5O_{14}P_3$).



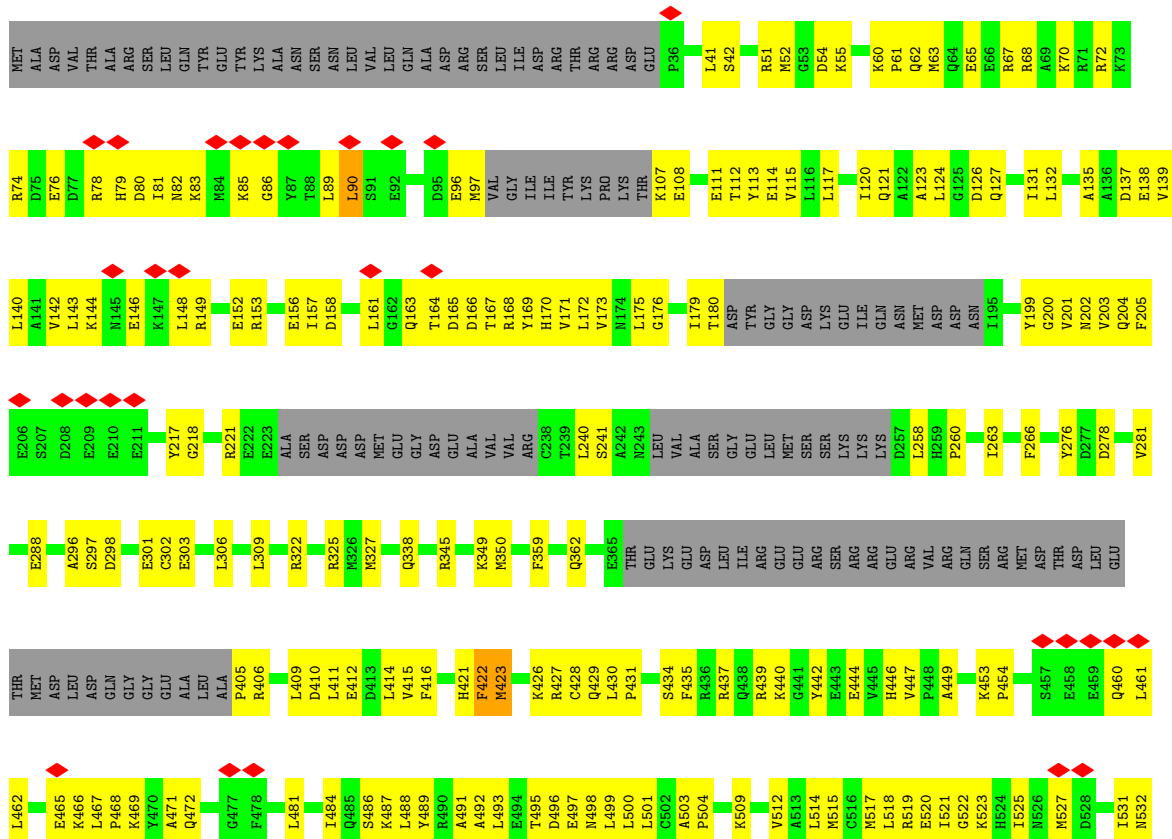
Mol	Chain	Residues	Atoms					AltConf
35	D	1	Total	C	N	O	P	0
			32	10	5	14	3	

- Molecule 36 is ZINC ION (CCD ID: ZN) (formula: Zn).

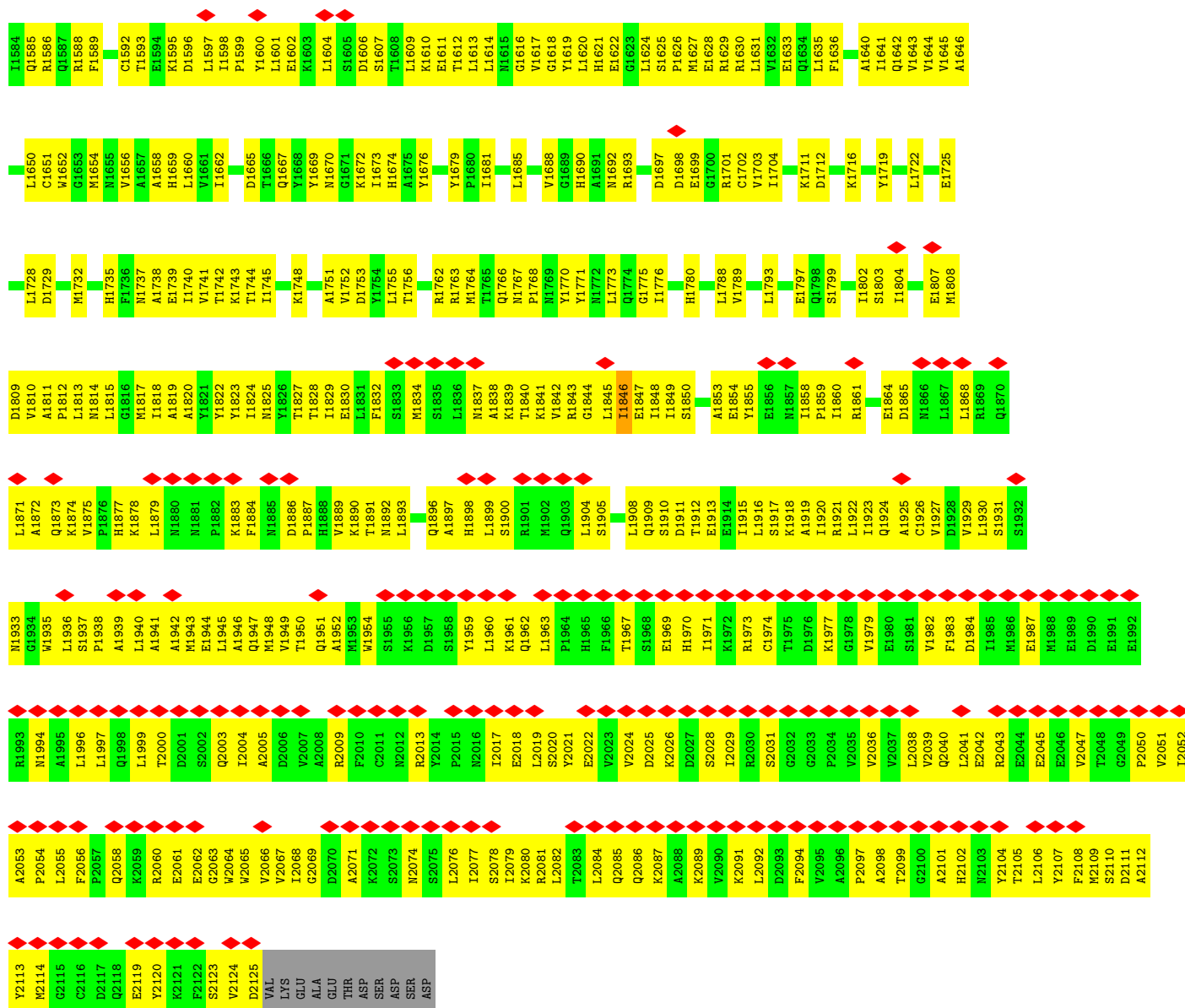
Mol	Chain	Residues	Atoms		AltConf
36	R	2	Total	Zn	0
			2	2	
36	V	2	Total	Zn	0
			2	2	
36	Y	1	Total	Zn	0
			1	1	
36	U	1	Total	Zn	0
			1	1	



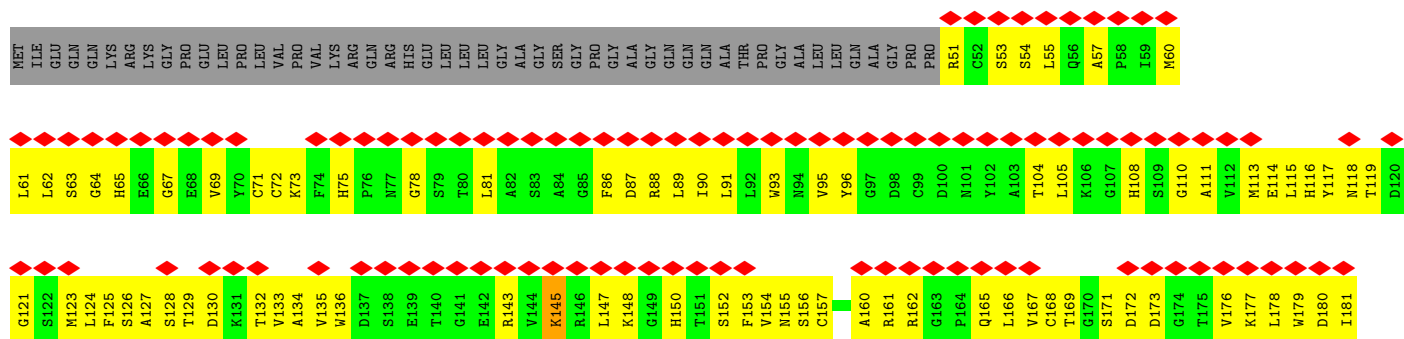
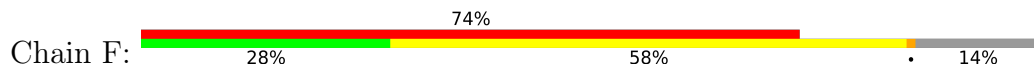






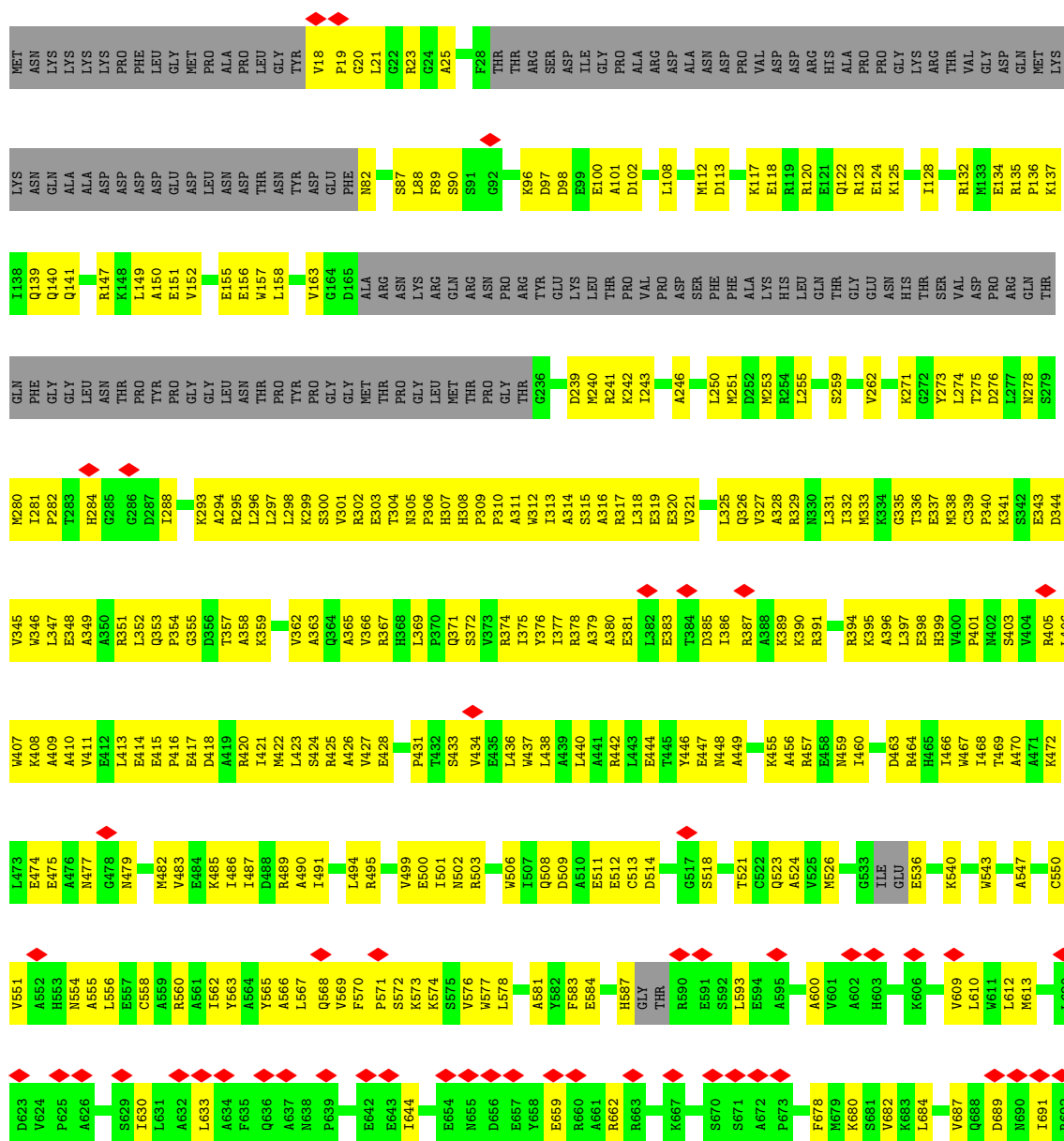


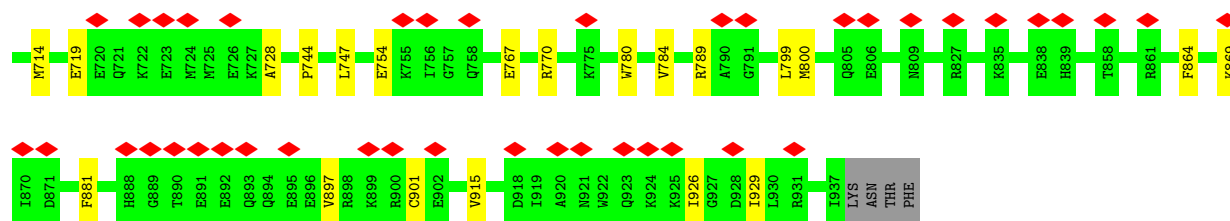
● Molecule 6: U5 small nuclear ribonucleoprotein 40 kDa protein



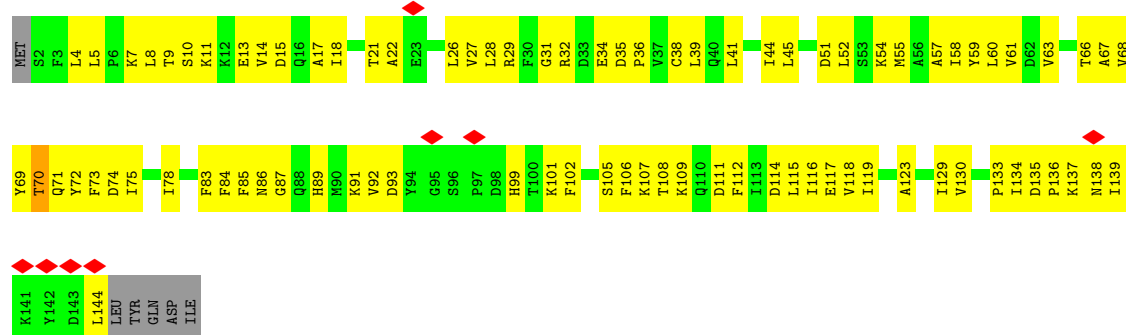


• Molecule 7: Pre-mRNA-processing factor 6

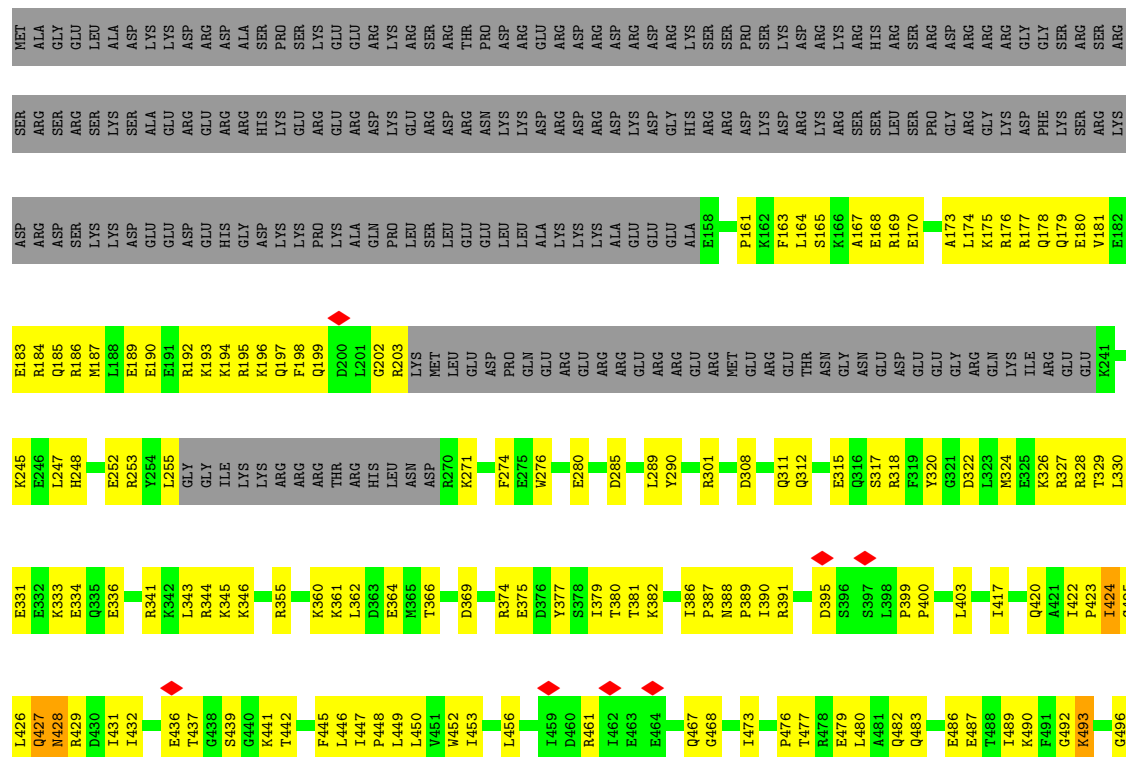


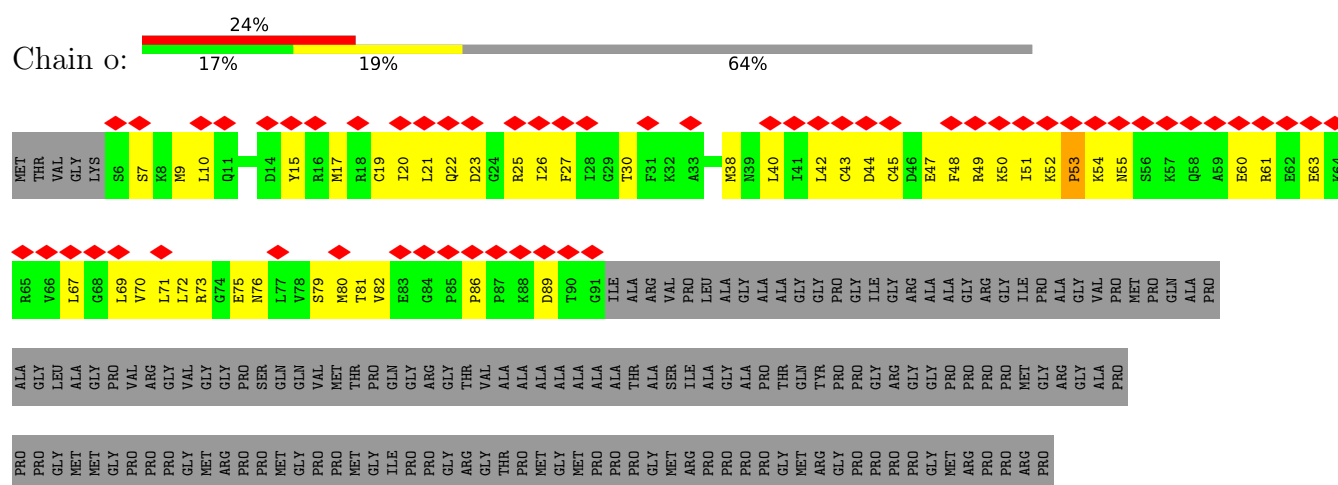


• Molecule 8: Thioredoxin-like protein 4B

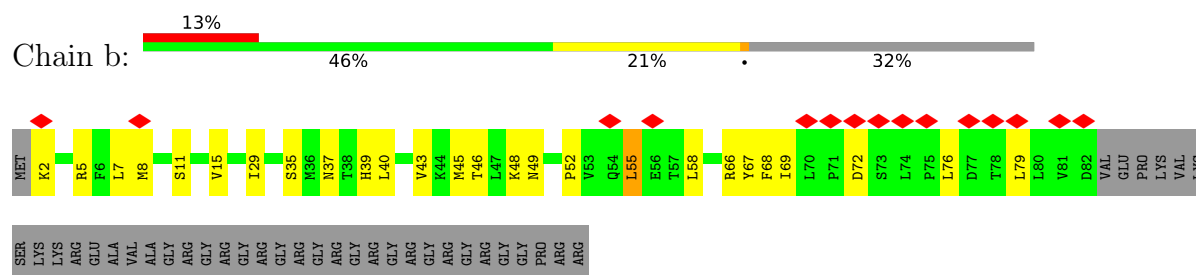


• Molecule 9: Probable ATP-dependent RNA helicase DDX23

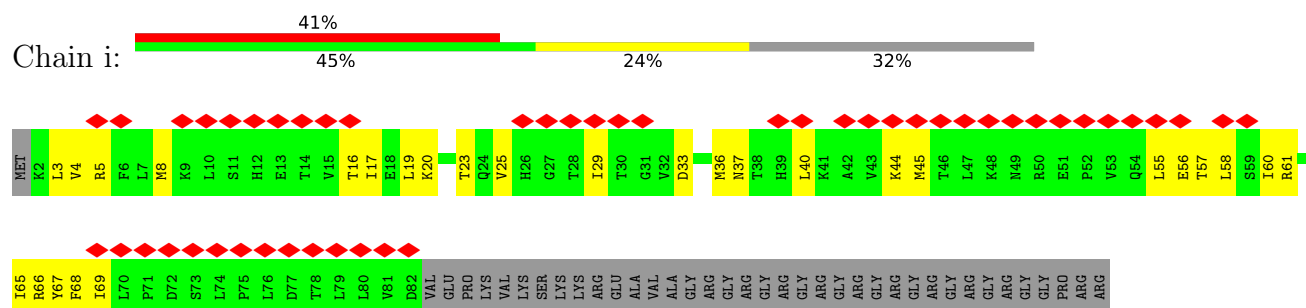




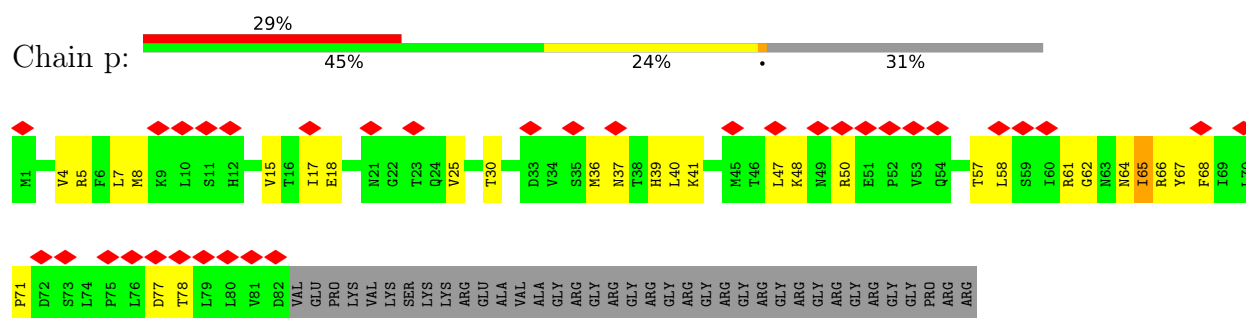
- Molecule 11: Small nuclear ribonucleoprotein Sm D1



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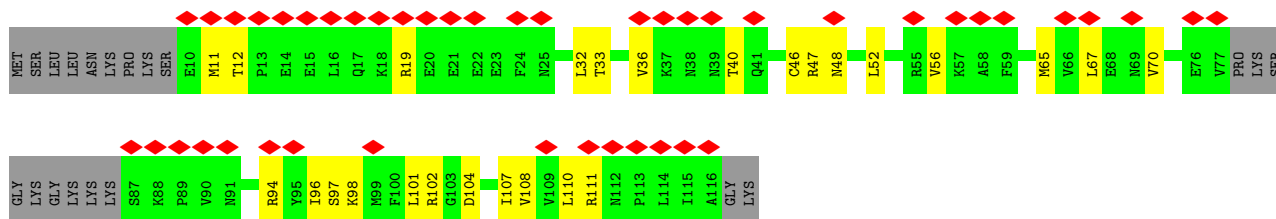


- Molecule 11: Small nuclear ribonucleoprotein Sm D1

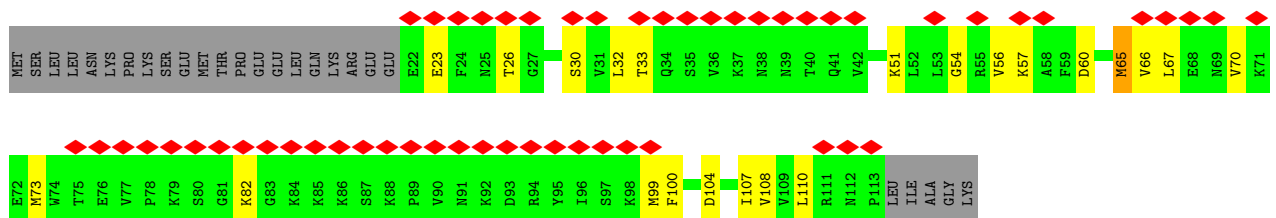


- Molecule 12: Small nuclear ribonucleoprotein Sm D2

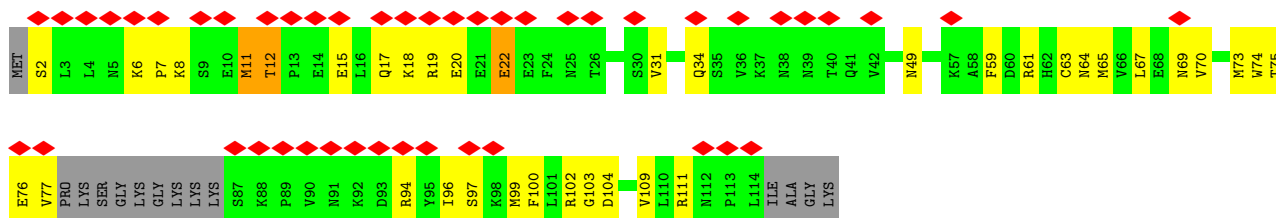
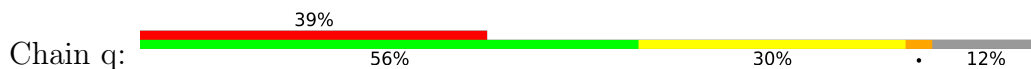




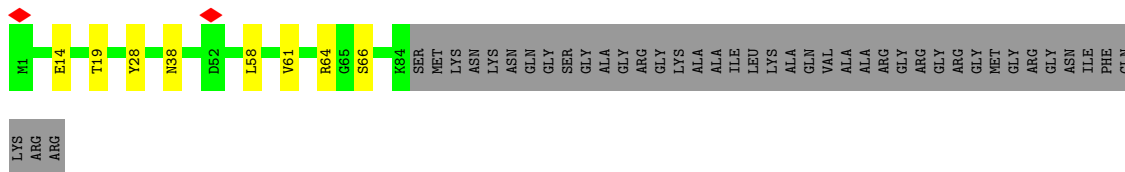
• Molecule 12: Small nuclear ribonucleoprotein Sm D2



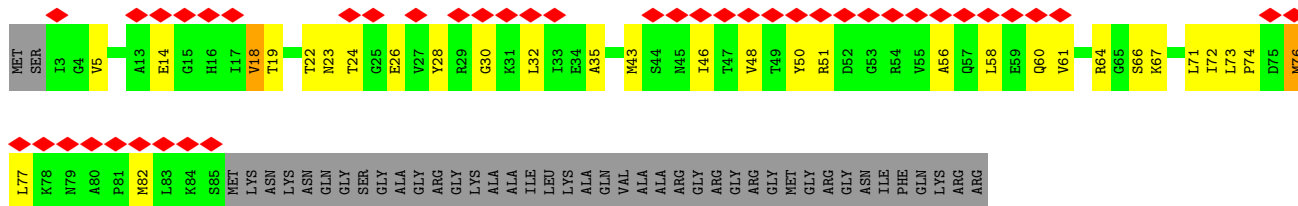
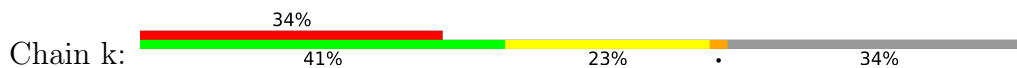
• Molecule 13: Small nuclear ribonucleoprotein Sm D3



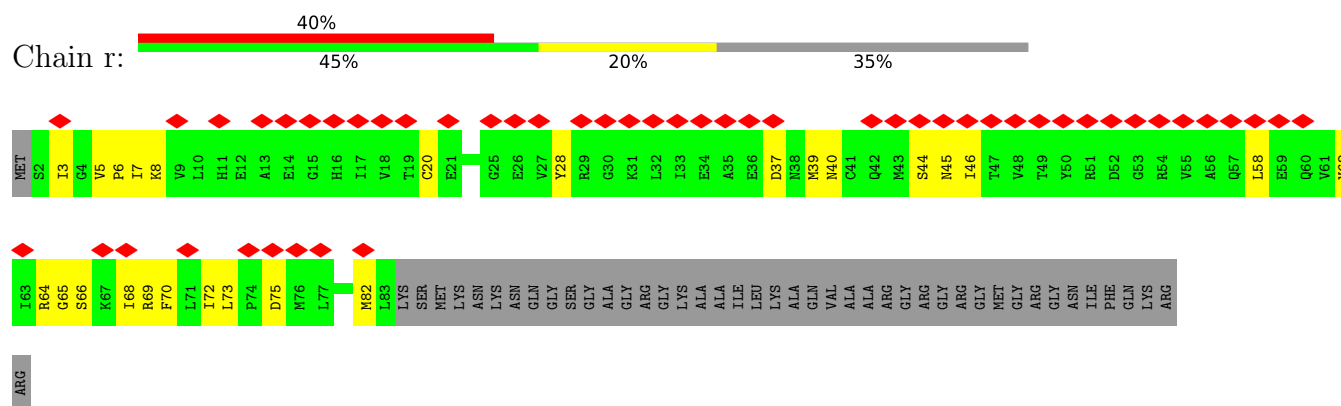
• Molecule 13: Small nuclear ribonucleoprotein Sm D3



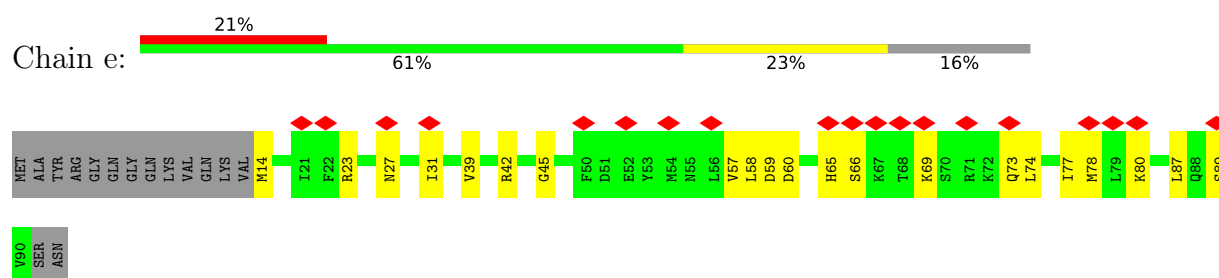
• Molecule 13: Small nuclear ribonucleoprotein Sm D3



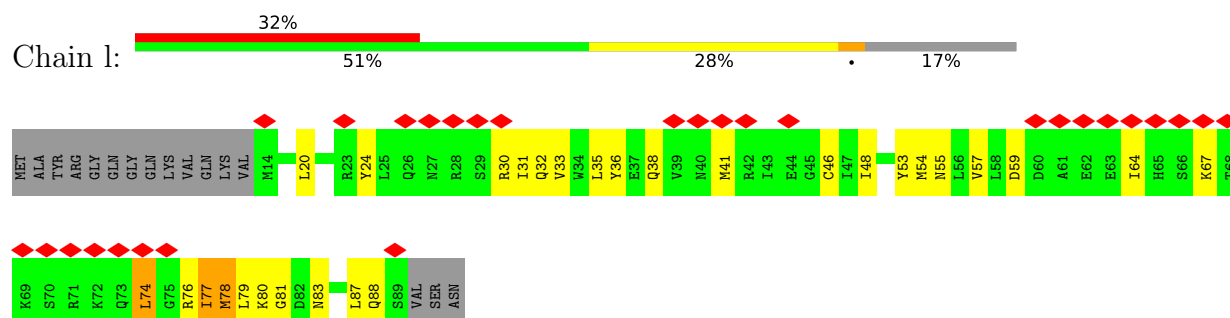
- Molecule 13: Small nuclear ribonucleoprotein Sm D3



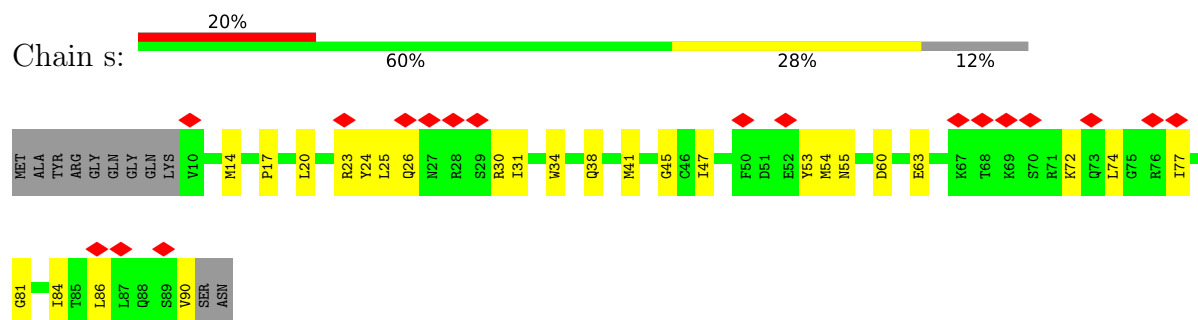
- Molecule 14: Small nuclear ribonucleoprotein E



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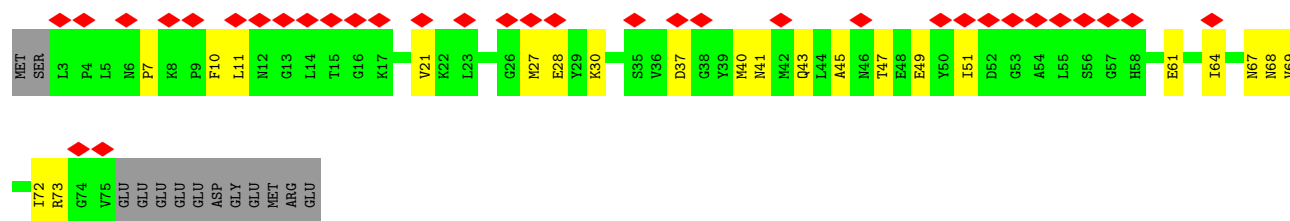


- Molecule 14: Small nuclear ribonucleoprotein E



- Molecule 15: Small nuclear ribonucleoprotein F

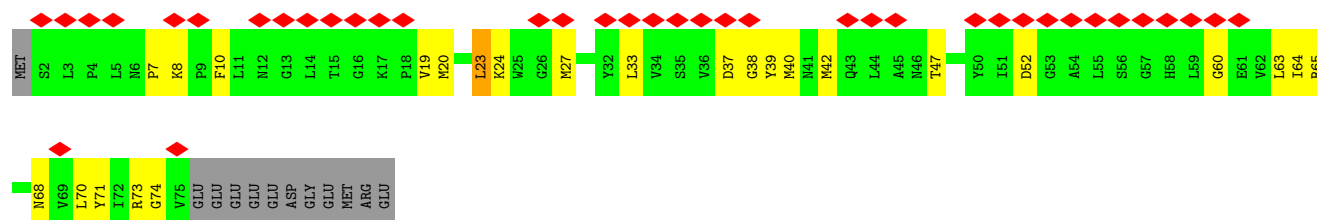




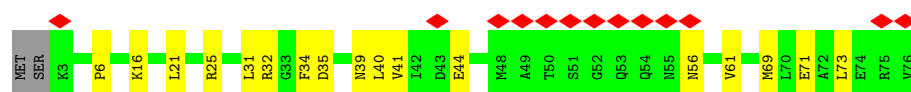
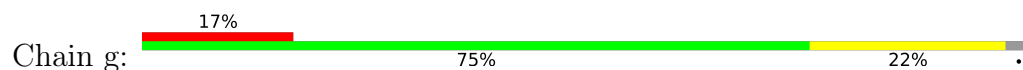
• Molecule 15: Small nuclear ribonucleoprotein F



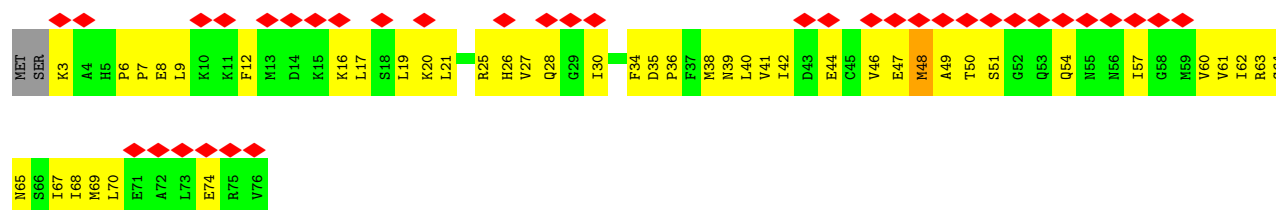
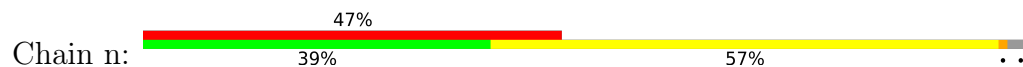
• Molecule 15: Small nuclear ribonucleoprotein F



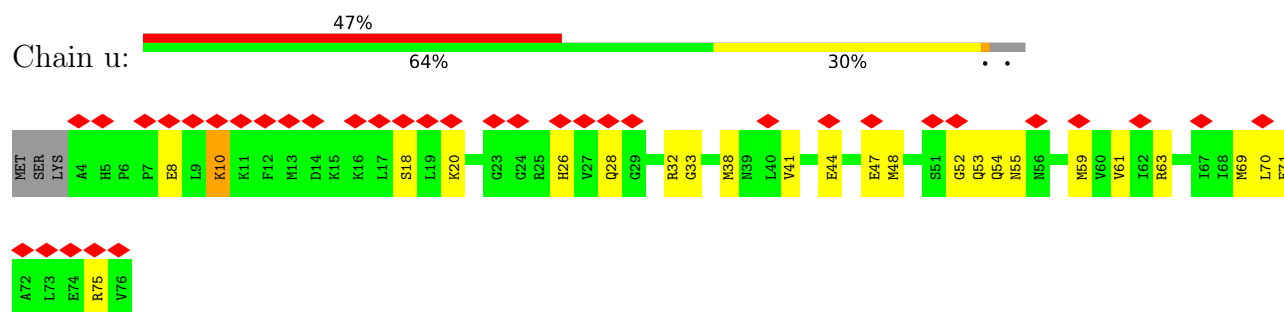
• Molecule 16: Small nuclear ribonucleoprotein G



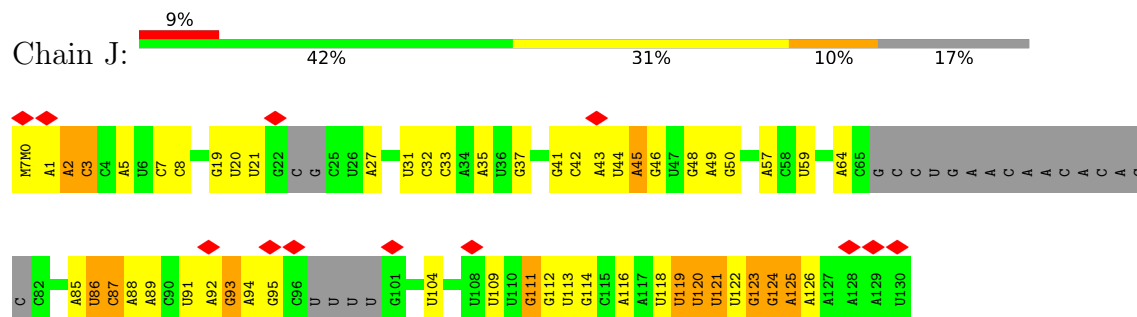
• Molecule 16: Small nuclear ribonucleoprotein G



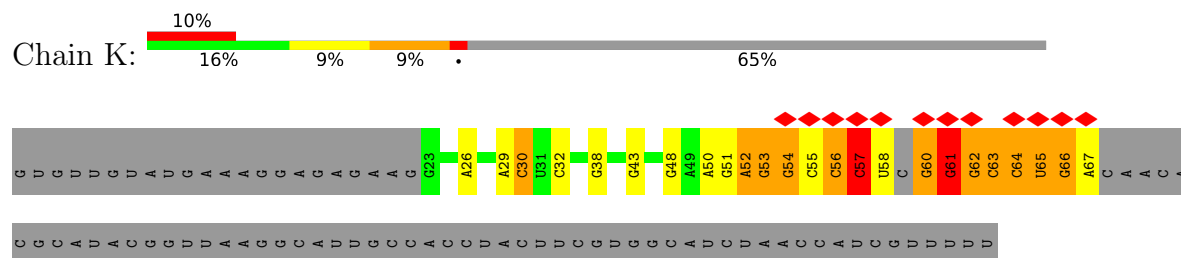
• Molecule 16: Small nuclear ribonucleoprotein G



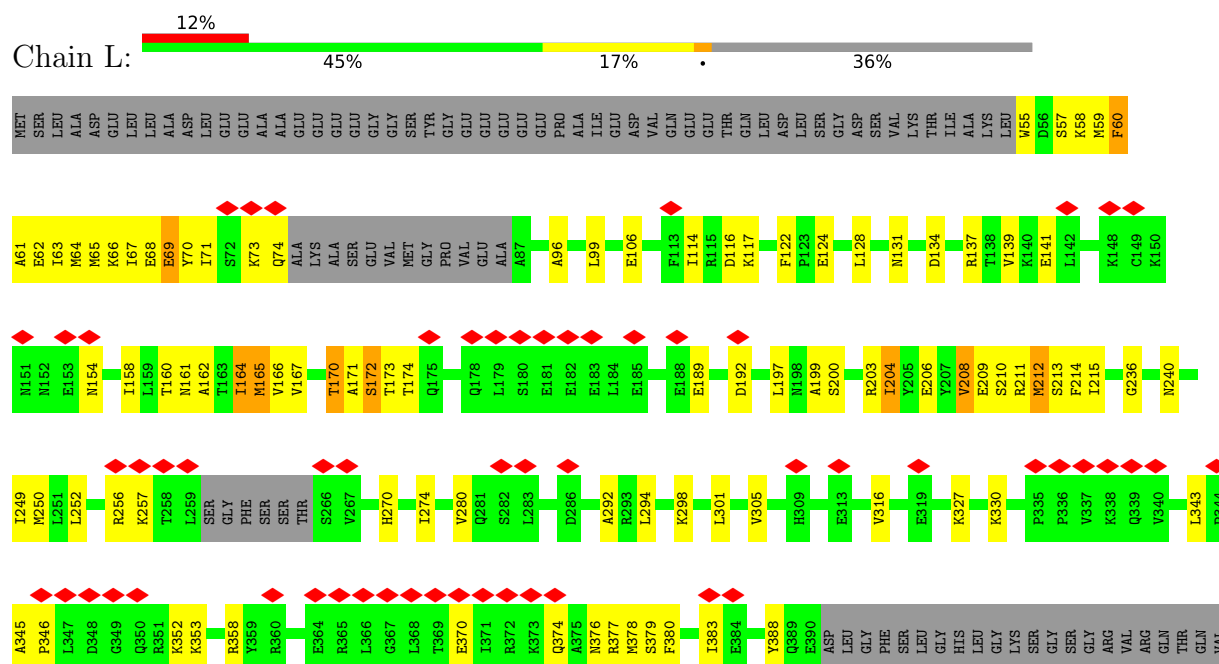
• Molecule 17: U4atac snRNA



• Molecule 18: U6atac snRNA



• Molecule 19: U4/U6 small nuclear ribonucleoprotein Prp31



ALA
GLU
ALA
ASN
GLN
LYS
TYR
PHE
SER
SER
MET
ALA
GLU
PHE
LEU
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VAL
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THR

- Molecule 20: U4/U6 small nuclear ribonucleoprotein Prp4



GUU ALA GLY ASN ASN ASN THR THR GLY VAL PHE LEU LEU GLU GLU HIS SER SER ARG ARG GLN ALA ALA GLU VAL LEU LEU ALA ALA GLY PHE GLU ARG ARG ARG ALA ARG GLN LEU LEU ASN VAL SER THR ASP ASP SER SER GLU VAL LYS CYS CYS LEU LEU ALA ALA LEU LEU GLY GLU PRO PRO THR THR

LEU	PHE	GLY	GLY	PRO	ALA	GLU	ARG	ARG	GLU	ARG	LEU	ARG	ASN	ILE	LEU	SER	VAL	VAL	GLY	THR	ASP	ALA	LEU	LYS	LYS	THR	LYS	LYS	ASP	ASP	GLU	LYS	SER	LYS	LYS	GLU	GLU	V162	Q163	Q164	T165	V166	V167	H168	E169	P171	M172	S173	M180	I181	M182	M183	Y184
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F187	R188	A189	M190	K191	E194	E195	A196	L197	L198	H199	K200	E201	T202	P203	E204	T205	T206	T207	T208	S209	Q210	M211	Q212	E213	L214	H215	K216	N223	T228	C237	N242	L246	A249	C250	W251	L257	R270	N273	V276	G277	A278	F281	T286	V287	S288	L289	M290	K291	E294	E295	A296	L297	L298	H299	K300	E301	T302	P303	E304	T305	T306	T307	T308	S309	Q310	M311	Q312	E313	L314	H315	K316	N323	T328	C337	N342	L346	A349	C350	W351	L357	R370	N373	V376	G377	A378	F381	T386	V387	S388	L389	M390	K391	E394	E395	A396	L397	L398	H399	K400	E401	T402	P403	E404	T405	T406	T407	T408	S409	Q410	M411	Q412	E413	L414	H415	K416	N423	T428	C437	N442	L446	A449	C450	W451	L457	R470	N473	V476	G477	A478	F481	T486	V487	S488	L489	M490	K491	E494	E495	A496	L497	L498	H499	K500	E501	T502	P503	E504	T505	T506	T507	T508	S509	Q510	M511	Q512	E513	L514	H515	K516	N523	T528	C537	N542	L546	A549	C550	W551	L557	R570	N573	V576	G577	A578	F581	T586	V587	S588	L589	M590	K591	E594	E595	A596	L597	L598	H599	K600	E601	T602	P603	E604	T605	T606	T607	T608	S609	Q610	M611	Q612	E613	L614	H615	K616	N623	T628	C637	N642	L646	A649	C650	W651	L657	R670	N673	V676	G677	A678	F681	T686	V687	S688	L689	M690	K691	E694	E695	A696	L697	L698	H699	K700	E701	T702	P703	E704	T705	T706	T707	T708	S709	Q710	M711	Q712	E713	L714	H715	K716	N723	T728	C737	N742	L746	A749	C750	W751	L757	R770	N773	V776	G777	A778	F781	T786	V787	S788	L789	M790	K791	E794	E795	A796	L797	L798	H799	K800	E801	T802	P803	E804	T805	T806	T807	T808	S809	Q810	M811	Q812	E813	L814	H815	K816	N823	T828	C837	N842	L846	A849	C850	W851	L857	R870	N873	V876	G877	A878	F881	T886	V887	S888	L889	M890	K891	E894	E895	A896	L897	L898	H899	K900	E901	T902	P903	E904	T905	T906	T907	T908	S909	Q910	M911	Q912	E913	L914	H915	K916	N923	T928	C937	N942	L946	A949	C950	W951	L957	R970	N973	V976	G977	A978	F981	T986	V987	S988	L989	M990	K991	E994	E995	A996	L997	L998	H999	K1000	E1001	T1002	P1003	E1004	T1005	T1006	T1007	T1008	S1009	Q1010	M1011	Q1012	E1013	L1014	H1015	K1016	N1023	T1028	C1037	N1042	L1046	A1049	C1050	W1051	L1057	R1070	N1073	V1076	G1077	A1078	F1081	T1086	V1087	S1088	L1089	M1090	K1091	E1094	E1095	A1096	L1097	L1098	H1099	K1100	E1101	T1102	P1103	E1104	T1105	T1106	T1107	T1108	S1109	Q1110	M1111	Q1112	E1113	L1114	H1115	K1116	N1123	T1128	C1137	N1142	L1146	A1149	C1150	W1151	L1157	R1170	N1173	V1176	G1177	A1178	F1181	T1186	V1187	S1188	L1189	M1190	K1191	E1194	E1195	A1196	L1197	L1198	H1199	K1200	E1201	T1202	P1203	E1204	T1205	T1206	T1207	T1208	S1209	Q1210	M1211	Q1212	E1213	L1214	H1215	K1216	N1223	T1228	C1237	N1242	L1246	A1249	C1250	W1251	L1257	R1270	N1273	V1276	G1277	A1278	F1281	T1286	V1287	S1288	L1289	M1290	K1291	E1294	E1295	A1296	L1297	L1298	H1299	K1300	E1301	T1302	P1303	E1304	T1305	T1306	T1307	T1308	S1309	Q1310	M1311	Q1312	E1313	L1314	H1315	K1316	N1323	T1328	C1337	N1342	L1346	A1349	C1350	W1351	L1357	R1370	N1373	V1376	G1377	A1378	F1381	T1386	V1387	S1388	L1389	M1390	K1391	E1394	E1395	A1396	L1397	L1398	H1399	K1400	E1401	T1402	P1403	E1404	T1405	T1406	T1407	T1408	S1409	Q1410	M1411	Q1412	E1413	L1414	H1415	K1416	N1423	T1428	C1437	N1442	L1446	A1449	C1450	W1451	L1457	R1470	N1473	V1476	G1477	A1478	F1481	T1486	V1487	S1488	L1489	M1490	K1491	E1494	E1495	A1496	L1497	L1498	H1499	K1500	E1501	T1502	P1503	E1504	T1505	T1506	T1507	T1508	S1509	Q1510	M1511	Q1512	E1513	L1514	H1515	K1516	N1523	T1528	C1537	N1542	L1546	A1549	C1550	W1551	L1557	R1570	N1573	V1576	G1577	A1578	F1581	T1586	V1587	S1588	L1589	M1590	K1591	E1594	E1595	A1596	L1597	L1598	H1599	K1600	E1601	T1602	P1603	E1604	T1605	T1606	T1607	T1608	S1609	Q1610	M1611	Q1612	E1613	L1614	H1615	K1616	N1623	T1628	C1637	N1642	L1646	A1649	C1650	W1651	L1657	R1670	N1673	V1676	G1677	A1678	F1681	T1686	V1687	S1688	L1689	M1690	K1691	E1694	E1695	A1696	L1697	L1698	H1699	K1700	E1701	T1702	P1703	E1704	T1705	T1706	T1707	T1708	S1709	Q1710	M1711	Q1712	E1713	L1714	H1715	K1716	N1723	T1728	C1737	N1742	L1746	A1749	C1750	W1751	L1757	R1770	N1773	V1776	G1777	A1778	F1781	T1786	V1787	S1788	L1789	M1790	K1791	E1794	E1795	A1796	L1797	L1798	H1799	K1800	E1801	T1802	P1803	E1804	T1805	T1806	T1807	T1808	S1809	Q1810	M1811	Q1812	E1813	L1814	H1815	K1816	N1823	T1828	C1837	N1842	L1846	A1849	C1850	W1851	L1857	R1870	N1873	V1876	G1877	A1878	F1881	T1886	V1887	S1888	L1889	M1890	K1891	E1894	E1895	A1896	L1897	L1898	H1899	K1900	E1901	T1902	P1903	E1904	T1905	T1906	T1907	T1908	S1909	Q1910	M1911	Q1912	E1913	L1914	H1915	K1916	N1923	T1928	C1937	N1942	L1946	A1949	C1950	W1951	L1957	R1970	N1973	V1976	G1977	A1978	F1981	T1986	V1987	S1988	L1989	M1990	K1991	E1994	E1995	A1996	L1997	L1998	H1999	K2000	E2001	T2002	P2003	E2004	T2005	T2006	T2007	T2008	S2009	Q2010	M2011	Q2012	E2013	L2014	H2015	K2016	N2023	T2028	C2037	N2042	L2046	A2049	C2050	W2051	L2057	R2070	N2073	V2076	G2077	A2078	F2081	T2086	V2087	S2088	L2089	M2090	K2091	E2094	E2095	A2096	L2097	L2098	H2099	K2100	E2101	T2102	P2103	E2104	T2105	T2106	T2107	T2108	S2109	Q2110	M2111	Q2112	E2113	L2114	H2115	K2116	N2123	T2128	C2137	N2142	L2146	A2149	C2150	W2151	L2157	R2170	N2173	V2176	G2177	A2178	F2181	T2186	V2187	S2188	L2189	M2190	K2191	E2194	E2195	A2196	L2197	L2198	H2199	K2200	E2201	T2202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D290	P291	K292	D293	V294	L296	C299	A300	A301	V305	L310	D311	S312	D313	A317	D318	I319	E320	G321	H322	T323	V324	R325	V329	T340	Y343	D344	R345	E353	A354	G355	E356	E357	T358	G363	M366	G367	V368	F369	D370	I371	L379	G384	L385	G389
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K392	R395	L403	E404	L407	K408	A409	T410	Y411	L414	F415	S416	F417	N418	L422	K432	V433	W434	D435	L436	R440	C441	T444	H448	L451	K456	T467	Y470	G492	G493	K494	G497	S501	S502	D503	C510	T515	F516	K517	F522
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- Molecule 21: U4/U6 small nuclear ribonucleoprotein Prp3



ARG	PHE	VAL	ASP	LYS	LEU	PHE	GLU	ALA	VAL	GLU	GLY	ARG	SER	SER	ARG	HIS	SER	LYS	SER	SER	SER	ASP	ARG	SER	ARG	LYS	ARG	GLU	LEU	LYS	GLU	PHE	GLY	ASP	ASP	SER	SER	GLU	ILE	SER	LYS	GLU	SER	SER	GLY	VAL	LYS	LYS	ARG	ARG	ILE	PRO	ARG	PHE	ARG	GLU	GLU	VAL	GLU
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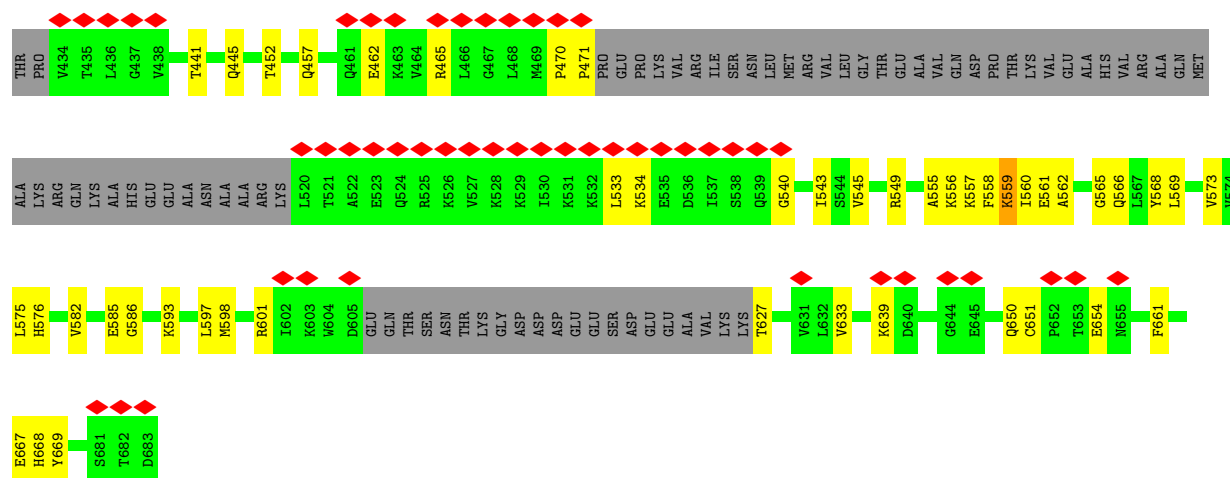
GLU GLU PRO PRO GLU VAL ILE PRO GLY PRO PRO PRO SER SER SER SER PHE ILE SER SER PRO PRO THR THR PRO GLN GLN ILE GLU GLU ARG ARG GLN THR ALA ALA MET MET GLU MET GLN LYS ILE THR LYS THR LEU LEU GLN LEU LEU THR THR LYS THR LEU LEU GLN ILE GLU GLU ARG ARG LYS LYS GLN GLN LEU LEU THR THR PRO PRO SER SER SER SER GLN GLU ARG

LEU	PRO	PRO	GLY	ASN	THR	THR	GLN	PRO	PRO	SER	GLN	ALA	ALA	THR	PHE	GLU	LYS	ALA	ARG	ALA	LYS	ALA	ALA	GLU	LEU	GLN	ALA	ALA	ARG	ASN	ASP	ALA	ILE	ILE	GLY	GLY	LEU	LEU	LEU	LYS	PRO	PRO	GLY	LEU	LEU	ILE	ILE	ASN	ASN	VAL	HIS	ALA	ALA	MET	MET	GLY	GLY	ILE	ILE
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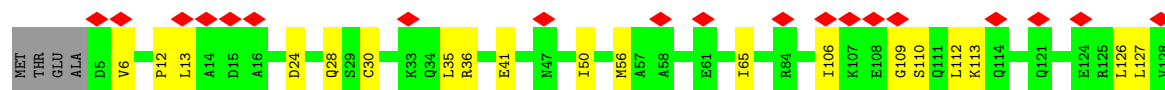
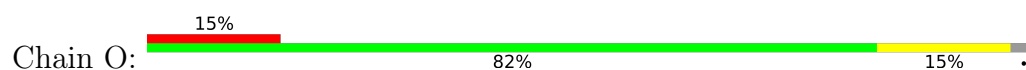
ALA	PRO	PRO	LYS	VAL	GLU	LEU	LYS	ASP	THR	THR	LYS	PRO	PRO	THR	PRO	LEU	ILE	LEU	ASP	GLN	GLY	ARG	THR	VAL	ASP	ALA	THR	THR	GLY	GLY	GLU	ILE	GLU	LEU	THR	THR	HIS	ARG	ARG	MET	PRO	PRO	THR	THR	LEU	LYS	ALA	ALA	ALA	VAL	LYS	ARG	GLU	GLU	PHE	GNE	LYS	GLN	GLN	LEU	LYS	GLU	YS
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PRO	SER	GLU	ASP	MET	GLU	SER	ASN	THR	PHE	PHE	ASP	PRO	ARG	VAL	SER	SER	LEU	ALA	PRO	SER	GLN	ARG	ARG	GLN	ARG	THR	PHE	LYS	PHE	HIS	ASP	LYS	GLY	LYS	PHE	GLU	LYS	LEU	ALA	ALA	GLN	ARG	ARG	LEU	ARG	THR	LYS	ALA	ALA	GLN	GLU	LEU	LYS	GLN	GLN	LEU	LEU	GLU	GLY	LEU	THR	ASP	GLN	ALA	ALA	ARG
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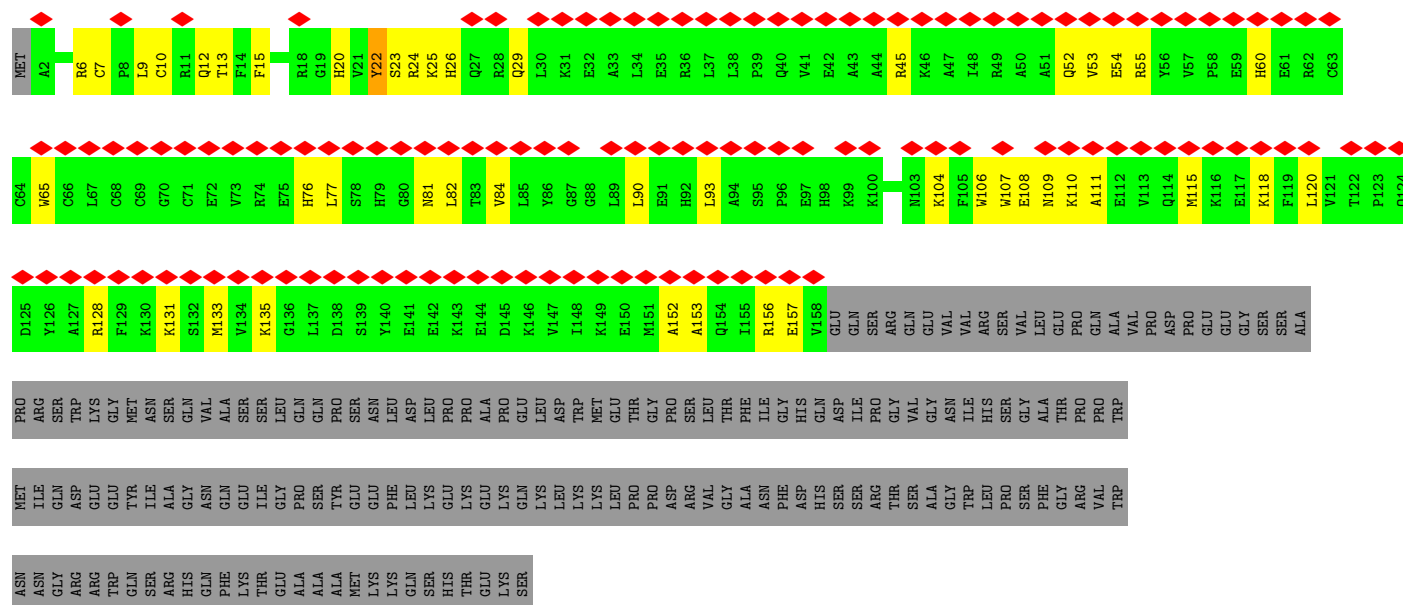
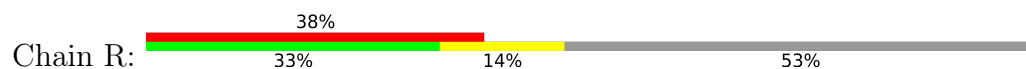
LYS	THR	GLY	ILE	HIS	THR	SER	THR	THR	ARG	LEU	ALA	LEU	ILE	ALA	PRO	LYS	LYS	GLU	LEU	LYS	E381	E382	E383	E384	E385	E386	E387	E390	I395	P396	N397	G398	G399	D400	L401	F402	E403	E404	N405	P406	K407	R408	E409	D410	V411	F412	V418	Q423	L424	N425	P426	P427	VAL	ASP	ASN	ASN
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• Molecule 22: NHP2-like protein 1

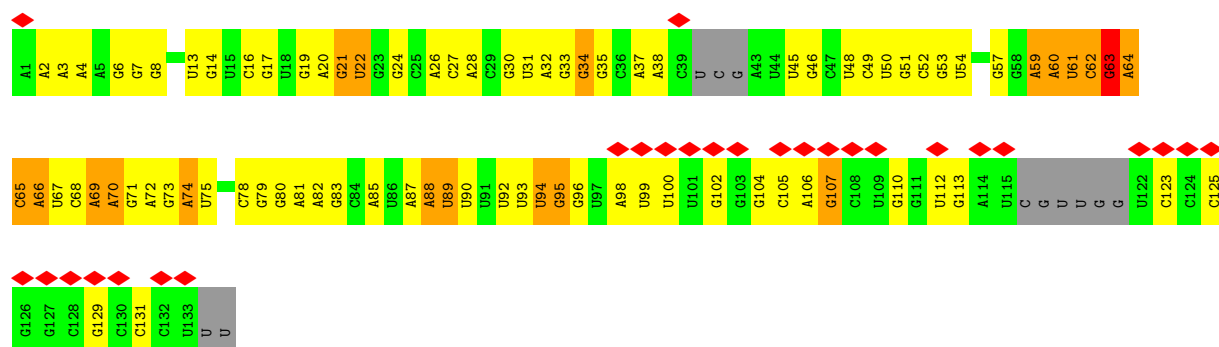


• Molecule 23: Centrosomal AT-AC splicing factor

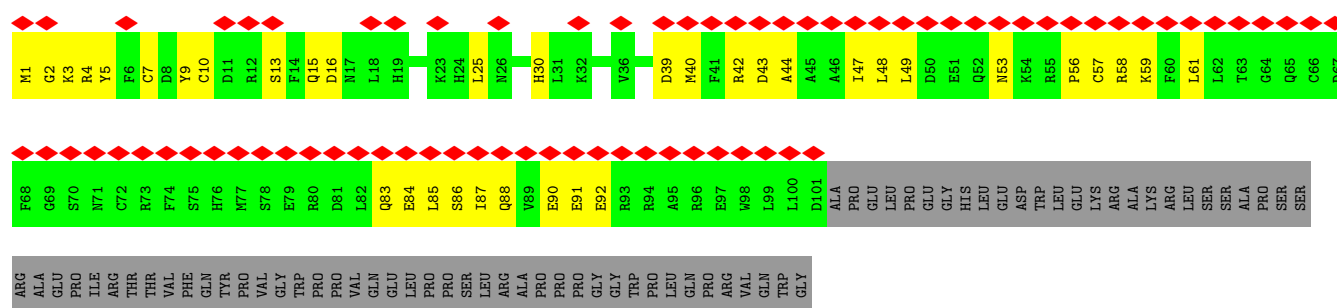
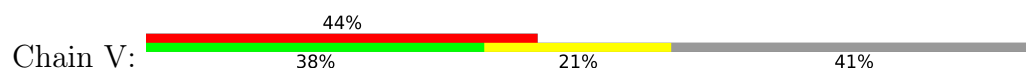


• Molecule 24: U11 snRNA

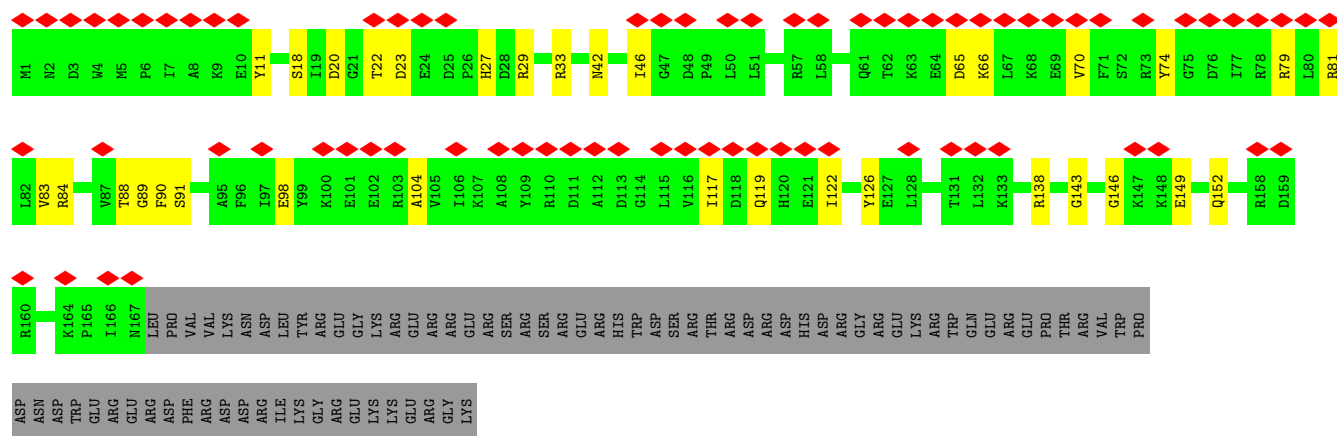




• Molecule 25: Zinc finger matrix-type protein 5

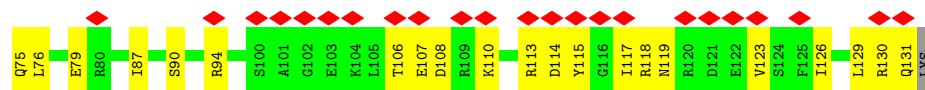


• Molecule 26: U11/U12 small nuclear ribonucleoprotein 35 kDa protein

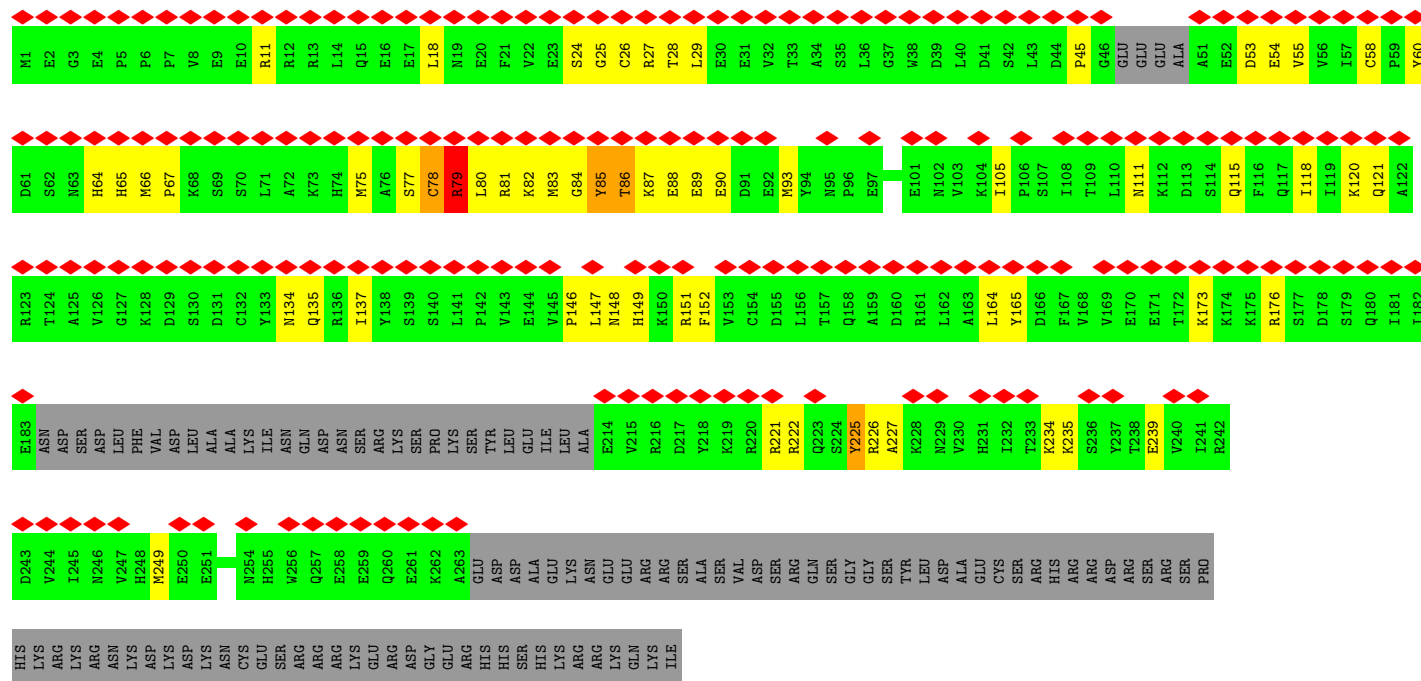


• Molecule 27: U11/U12 small nuclear ribonucleoprotein 25 kDa protein

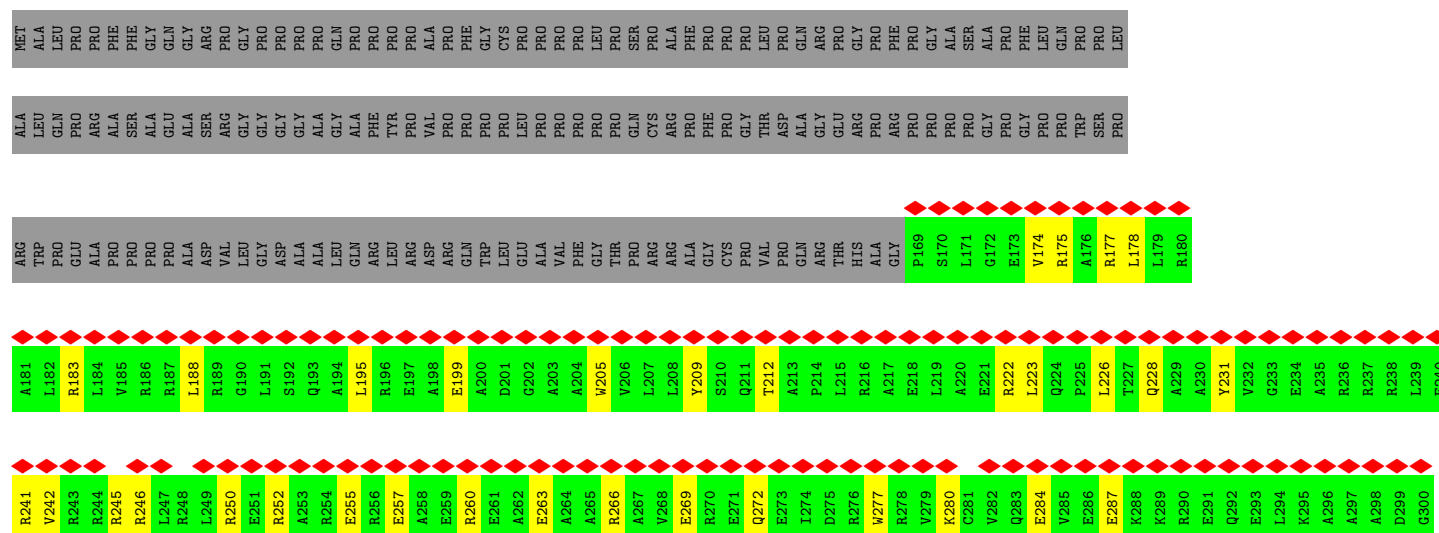
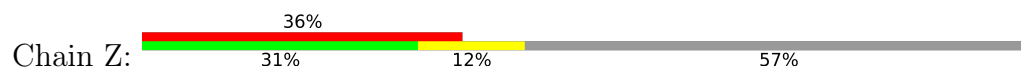


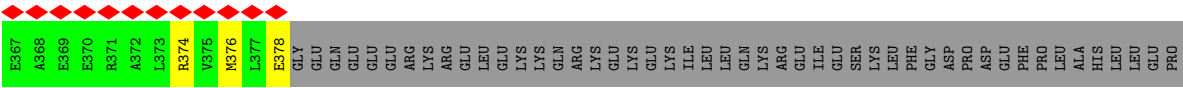
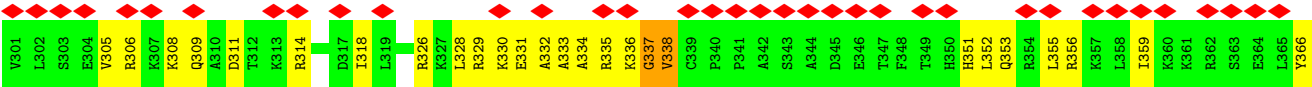


- Molecule 28: U11/U12 small nuclear ribonucleoprotein 48 kDa protein

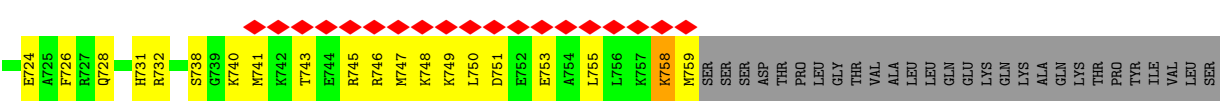
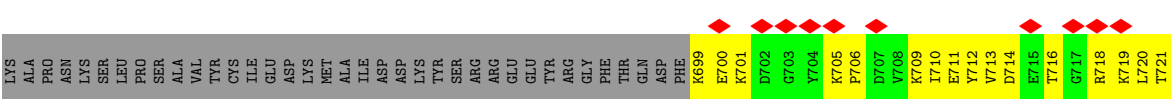
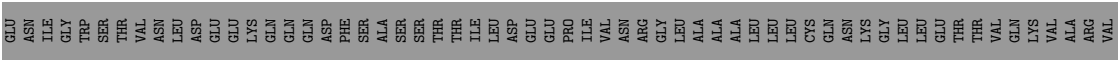
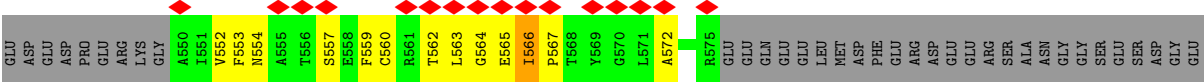
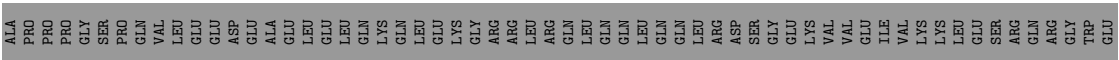
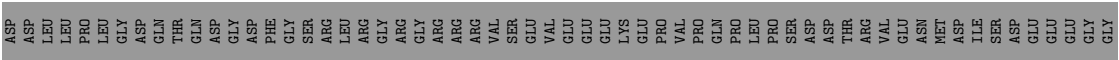
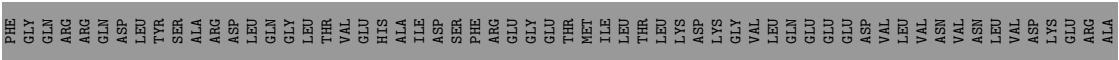
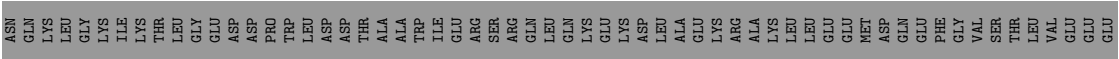
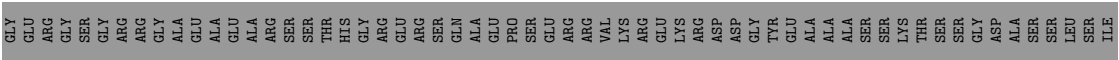


- Molecule 29: Programmed cell death protein 7





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



[illegible]

4 Experimental information

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 ($e^-/\text{\AA}^2$)	50	Depositor
Minimum defocus (nm)	500	Depositor
Maximum defocus (nm)	3000	Depositor
Magnification	81000	Depositor
Image detector	GATAN K3 (6k x 4k)	Depositor
Maximum map value	2.669	Depositor
Minimum map value	-1.184	Depositor
Average map value	0.004	Depositor
Map value standard deviation	0.049	Depositor
Recommended contour level	0.25	Depositor
Map size (\AA)	549.9904, 549.9904, 549.9904	wwPDB
Map dimensions	512, 512, 512	wwPDB
Map angles ($^\circ$)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (\AA)	1.0742, 1.0742, 1.0742	Depositor

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: MG, ZN, IHP, M7M, 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	0.26	0/297	0.28	0/458
2	B	0.38	0/2559	0.66	15/3977 (0.4%)
3	C	0.25	0/19000	0.37	2/25777 (0.0%)
4	D	0.27	0/6899	0.35	0/9372
5	E	0.20	0/16393	0.39	5/22174 (0.0%)
6	F	0.30	0/2453	0.43	0/3323
7	G	0.20	0/6341	0.40	0/8559
8	H	0.21	0/1169	0.40	0/1580
9	I	0.33	0/4903	0.57	4/6584 (0.1%)
10	a	0.32	0/602	0.55	0/801
10	h	0.34	0/679	0.59	1/905 (0.1%)
10	o	0.54	0/702	0.88	3/936 (0.3%)
11	b	0.18	0/649	0.49	0/878
11	i	0.28	0/649	0.51	0/878
11	p	0.33	0/657	0.63	0/888
12	c	0.20	0/805	0.61	0/1081
12	j	0.31	0/747	0.51	0/1000
12	q	0.47	0/854	0.77	1/1146 (0.1%)
13	d	0.19	0/665	0.44	0/896
13	k	0.36	0/660	0.64	0/889
13	r	0.45	0/651	0.82	0/878
14	e	0.24	0/646	0.70	0/867
14	l	0.36	0/639	0.67	0/857
14	s	0.51	0/676	0.81	0/907
15	f	0.24	0/579	0.65	0/783
15	m	0.61	1/574 (0.2%)	0.75	0/775
15	t	0.49	0/588	0.69	0/795
16	g	0.18	0/584	0.47	0/779
16	n	0.55	0/584	0.74	0/779
16	u	0.50	0/575	0.77	0/768
17	J	0.25	1/2553 (0.0%)	0.40	4/3966 (0.1%)
18	K	0.45	0/1052	0.82	10/1636 (0.6%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
19	L	0.42	0/2550	0.73	4/3432 (0.1%)
20	M	0.22	0/2943	0.51	0/3996
21	N	0.27	0/1898	0.57	0/2550
22	O	0.25	0/972	0.57	0/1312
23	R	0.34	0/1313	0.57	0/1762
24	P	0.35	0/2957	0.50	6/4603 (0.1%)
25	V	0.28	0/874	0.74	1/1166 (0.1%)
26	W	0.40	0/1388	0.62	0/1866
27	X	0.52	0/1069	0.75	0/1441
28	Y	0.37	0/1923	0.64	0/2588
29	Z	0.30	0/1741	0.59	1/2323 (0.0%)
30	S	0.18	0/711	0.36	0/942
31	U	0.27	0/3861	0.39	0/5230
32	Q	0.11	0/2673	0.32	0/3593
All	All	0.29	2/104257 (0.0%)	0.50	57/142696 (0.0%)

All (2) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
17	J	1	A	P-O5'	-6.59	1.49	1.59
15	m	30	LYS	CG-CD	-5.37	1.36	1.52

All (57) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	P	64	A	P-O3'-C3'	-9.27	106.30	120.20
18	K	65	U	P-O3'-C3'	-8.88	106.87	120.20
24	P	62	C	P-O3'-C3'	-8.87	106.90	120.20
2	B	67	A	P-O3'-C3'	-8.65	107.23	120.20
2	B	66	A	P-O3'-C3'	-8.50	107.44	120.20
24	P	60	A	P-O3'-C3'	-8.39	107.62	120.20
17	J	87	C	P-O3'-C3'	-8.34	107.69	120.20
2	B	71	C	P-O3'-C3'	-8.21	107.89	120.20
2	B	68	C	P-O3'-C3'	-8.13	108.01	120.20
24	P	61	U	P-O3'-C3'	-8.11	108.03	120.20
18	K	64	C	P-O3'-C3'	-8.00	108.20	120.20
18	K	62	G	P-O3'-C3'	-7.91	108.34	120.20
24	P	63	G	P-O3'-C3'	-7.89	108.37	120.20
18	K	53	G	P-O3'-C3'	-7.82	108.47	120.20
17	J	86	U	P-O3'-C3'	-7.76	108.57	120.20
18	K	60	G	P-O3'-C3'	-7.75	108.57	120.20
2	B	69	A	P-O3'-C3'	-7.72	108.62	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
18	K	57	C	P-O3'-C3'	-7.68	108.69	120.20
18	K	52	A	P-O3'-C3'	-7.57	108.84	120.20
2	B	75	G	P-O3'-C3'	-7.55	108.88	120.20
18	K	63	C	P-O3'-C3'	-7.53	108.90	120.20
17	J	3	C	P-O3'-C3'	-7.45	109.03	120.20
2	B	74	U	P-O3'-C3'	-7.19	109.42	120.20
2	B	9	G	P-O3'-C3'	-7.14	109.49	120.20
9	I	424	ILE	N-CA-C	-7.02	103.46	110.62
29	Z	337	GLY	CA-C-O	-6.91	117.73	122.22
18	K	54	G	P-O3'-C3'	-6.88	109.87	120.20
2	B	73	C	P-O3'-C3'	-6.88	109.88	120.20
3	C	1661	TRP	CA-C-N	-6.68	113.71	122.99
3	C	1661	TRP	C-N-CA	-6.68	113.71	122.99
19	L	212	MET	CA-C-N	-6.60	110.74	120.38
19	L	212	MET	C-N-CA	-6.60	110.74	120.38
2	B	4	C	P-O3'-C3'	-6.50	110.44	120.20
5	E	623	ASP	N-CA-C	-6.36	102.13	110.33
2	B	3	A	P-O3'-C3'	-6.31	110.73	120.20
18	K	61	G	P-O3'-C3'	-6.09	111.06	120.20
5	E	619	LEU	N-CA-C	-6.08	104.98	113.37
25	V	56	PRO	CA-N-CD	-6.07	103.51	112.00
2	B	77	G	P-O3'-C3'	-5.90	111.36	120.20
2	B	6	C	P-O3'-C3'	-5.89	111.36	120.20
12	q	22	GLU	CA-CB-CG	5.78	125.66	114.10
9	I	427	GLN	N-CA-C	-5.74	104.39	111.33
5	E	624	ARG	N-CA-C	-5.65	101.45	113.20
5	E	927	ILE	CA-C-N	-5.55	112.90	120.44
5	E	927	ILE	C-N-CA	-5.55	112.90	120.44
17	J	85	A	P-O3'-C3'	-5.52	111.91	120.20
10	h	38	MET	CB-CA-C	5.50	119.23	111.86
19	L	208	VAL	N-CA-C	-5.40	104.69	110.36
10	o	53	PRO	CA-C-N	5.40	131.85	121.54
10	o	53	PRO	C-N-CA	5.40	131.85	121.54
24	P	59	A	P-O3'-C3'	-5.38	112.13	120.20
2	B	8	G	P-O3'-C3'	-5.36	112.17	120.20
9	I	502	VAL	CA-CB-CG1	5.32	119.44	110.40
9	I	493	LYS	CG-CD-CE	5.26	123.41	111.30
2	B	7	U	P-O3'-C3'	-5.20	112.40	120.20
10	o	80	MET	CB-CG-SD	5.17	128.20	112.70
19	L	204	ILE	N-CA-C	-5.04	105.48	110.62

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	268	0	138	10	0
2	B	2296	0	1163	91	0
3	C	18488	0	18369	1010	0
4	D	6747	0	6755	210	0
5	E	16077	0	16192	1229	0
6	F	2399	0	2334	286	0
7	G	6229	0	6163	442	0
8	H	1145	0	1160	132	0
9	I	4819	0	4893	271	0
10	a	594	0	615	11	0
10	h	669	0	697	26	0
10	o	692	0	717	40	0
11	b	641	0	681	19	0
11	i	641	0	681	20	0
11	p	649	0	693	23	0
12	c	796	0	821	17	0
12	j	737	0	780	21	0
12	q	844	0	876	32	0
13	d	657	0	675	6	0
13	k	652	0	670	36	0
13	r	643	0	657	20	0
14	e	638	0	657	17	0
14	l	631	0	648	28	0
14	s	668	0	689	21	0
15	f	567	0	575	15	0
15	m	562	0	574	42	0
15	t	576	0	589	30	0
16	g	577	0	603	12	0
16	n	577	0	603	45	0
16	u	568	0	590	24	0
17	J	2320	0	1178	48	0
18	K	942	0	478	39	0
19	L	2512	0	2526	148	0
20	M	2863	0	2763	43	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
21	N	1861	0	1895	39	0
22	O	960	0	1010	13	0
23	R	1285	0	1282	47	0
24	P	2647	0	1334	80	0
25	V	857	0	829	26	0
26	W	1359	0	1375	32	0
27	X	1055	0	1083	44	0
28	Y	1889	0	1831	64	0
29	Z	1727	0	1827	47	0
30	S	701	0	721	74	0
31	U	3765	0	3777	111	0
32	Q	2626	0	2698	223	0
33	B	1	0	0	0	0
33	D	1	0	0	0	0
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	4787	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 24.

All (4787) 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
3:C:1330:MET:HE1	3:C:1369:TYR:HB3	1.35	1.07
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
7:G:581:ALA:HB1	7:G:613:MET:HE2	1.39	1.04
8:H:8:LEU:HB2	8:H:61:VAL:HG22	1.39	1.04
5:E:738:ILE:HD13	5:E:741:MET:HE3	1.39	1.04

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
12:j:54:GLY:HA3	12:j:70:VAL:HG12	1.39	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
5:E:1962:GLN:HB2	5:E:2114:MET:HE2	1.40	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
5:E:971:LYS:HB3	5:E:980:GLN:HB2	1.46	0.97
4:D:196:LYS:HE2	13:d:14:GLU:HB2	1.45	0.97
16:n:6:PRO:HA	16:n:36:PRO:HA	1.46	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
3:C:1889:LEU:HB3	3:C:2014:MET:HE1	1.47	0.95
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
3:C:1562:MET:HE1	3:C:1570:LYS:HA	1.51	0.92
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
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:697:MET:HE1	3:C:702:LYS:HG3	1.54	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
10:o:47:GLU:HB3	10:o:67:LEU:HD11	1.54	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
4:D:308:CYS:HB2	4:D:433:MET:HE2	1.54	0.88
19:L:55:TRP:HA	19:L:60:PHE:CD1	2.08	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:L:122:PHE:HZ	19:L:170:THR:HG23	1.39	0.88
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
9:I:199:GLN:HB3	9:I:203:ARG:HH21	1.38	0.87
15:f:30:LYS:O	15:f:47:THR:HA	1.74	0.86
32:Q:698:PHE:HB2	32:Q:725:MET:HE1	1.57	0.86
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:1945:LEU:HA	5:E:1948:MET:HE3	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
3:C:1730:MET:HE2	3:C:1730:MET:HA	1.60	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: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
3:C:164:MET:HE2	3:C:569:VAL:HG11	1.60	0.81
5:E:2052:ILE:HG22	5:E:2054:PRO:HD3	1.63	0.81
3:C:781:ARG:HA	3:C:1022:MET:HE1	1.62	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
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
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
7:G:581:ALA:CB	7:G:613:MET:HE1	2.12	0.79
9:I:780:LYS:HD2	9:I:796:ALA:HA	1.64	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:577:TRP:CB	7:G:610:LEU:HD21	2.12	0.79
14:l:74:LEU:HD22	15:m:73:ARG:HD3	1.65	0.79
10:o:51:ILE:HB	10:o:61:ARG:HB2	1.62	0.79
30:S:716:THR:HG23	30:S:718:ARG:HG3	1.65	0.79
3:C:2289:ASP:H	3:C:2292:MET:HE3	1.48	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
26:W:119:GLN:HB2	30:S:700:GLU:CD	2.08	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
5:E:1165:ILE:HD12	5:E:1167:MET:HE2	1.64	0.77
5:E:1430:GLU:HB3	5:E:1431:LYS:HZ2	1.49	0.77
5:E:1764:MET:HE2	5:E:1773:LEU:HD11	1.65	0.77
7:G:584:GLU:CG	7:G:593:LEU:HA	2.14	0.77
12:q:67:LEU:HB2	12:q:99:MET:HB3	1.67	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
4:D:822:MET:HA	4:D:822:MET:HE3	1.68	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
15:m:18:PRO:HB2	15:m:30:LYS:NZ	2.01	0.75
32:Q:908:MET:HE2	32:Q:912:MET:HG2	1.67	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:1307:MET:HE2	3:C:1307:MET:HA	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
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
7:G:341:LYS:HA	7:G:369:LEU:HD12	1.68	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:p:67:TYR:HB2	12:q:99:MET:HE2	1.69	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
4:D:785:ARG:HD3	4:D:828:MET:HE1	1.67	0.74
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
8:H:75:ILE:HA	8:H:101:LYS:HZ2	1.52	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
6:F:55:LEU:CD2	6:F:353:MET:HE3	2.19	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: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
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
14:l:54:MET:HE3	16:n:63:ARG:HH11	1.55	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
6:F:237:SER:H	6:F:255:MET:HE2	1.54	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
11:p:5:ARG:HA	11:p:8:MET:HG2	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
3:C:856:LEU:HB3	3:C:860:GLN:NE2	2.05	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
10:h:67:LEU:HD13	13:k:72:ILE:HD12	1.72	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
23:R:106:TRP:CD1	23:R:109:ASN:HD21	2.07	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
7:G:581:ALA:CB	7:G:613:MET:HE2	2.16	0.71
29:Z:257:GLU:HG3	29:Z:260:ARG:HH21	1.55	0.71
3:C:95:MET:HE1	3:C:126:ILE:HG22	1.72	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
7:G:253:MET:HE1	19:L:128:LEU:HD11	1.73	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:1842:VAL:HG21	5:E:1948:MET:HE1	1.72	0.70
5:E:2068:ILE:O	5:E:2078:SER:N	2.22	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
3:C:696:MET:HE2	7:G:149:LEU:O	1.91	0.70
5:E:713:MET:HE2	5:E:713:MET:HA	1.74	0.70
8:H:51:ASP:O	19:L:343:LEU:CB	2.39	0.70
18:K:61:G:H2'	18:K:62:G:C8	2.27	0.70
13:k:61:VAL:HG23	16:n:69:MET:HE1	1.74	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:1301:ILE:HG13	3:C:1307:MET:HE3	1.73	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
16:n:46:VAL:HG23	16:n:48:MET:HE1	1.74	0.70
11:p:36:MET:HE1	11:p:65:ILE:HD11	1.71	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
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
10:o:19:CYS:SG	10:o:27:PHE:HB2	2.32	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
3:C:1889:LEU:HB3	3:C:2014:MET:CE	2.21	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:1471:ARG:HB2	19:L:388:TYR:CE2	2.28	0.69
3:C:1513:MET:HE2	3:C:1513:MET:O	1.92	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
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:618:HIS:C	5:E:620:LEU:H	2.01	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
6:F:55:LEU:HD21	6:F:353:MET:HE3	1.74	0.68
16:n:26:HIS:HB3	16:n:48:MET:HG2	1.75	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
11:b:11:SER:HA	11:b:29:ILE:HD11	1.76	0.68
11:i:16:THR:HB	11:i:69:ILE:HB	1.76	0.68
10:o:70:VAL:HG12	13:r:72:ILE:HG23	1.75	0.68
3:C:684:GLU:OE1	3:C:684:GLU:N	2.26	0.68
24:P:88:A:H61	15:t:40:MET:HE3	1.59	0.68
5:E:1456:VAL:HG12	5:E:1491:SER:HB3	1.75	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
15:m:14:LEU:CD1	15:m:33:LEU:HD21	2.24	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
28:Y:90:GLU:HA	28:Y:93:MET:HE1	1.75	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
12:q:11:MET:SD	12:q:19:ARG:HD2	2.35	0.67
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
15:m:33:LEU:HA	15:m:44:LEU:HA	1.75	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
10:o:69:LEU:HD21	13:r:75:ASP:HA	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
24:P:88:A:N6	15:t:40:MET:HE3	2.09	0.67
3:C:1422:LEU:HA	3:C:1427:ARG:HD3	1.77	0.67
10:h:40:LEU:HD12	10:h:72:LEU:HD23	1.76	0.67
27:X:63:VAL:HB	27:X:108:ASP:HA	1.76	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:55:LEU:CD2	6:F:353:MET:CE	2.73	0.67
32:Q:862:ILE:HG21	32:Q:908:MET:HE1	1.75	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
15:m:27:MET:SD	15:m:27:MET:N	2.66	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
16:n:35:ASP:HB2	16:n:36:PRO:HD2	1.76	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
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
27:X:7:GLY:HA2	27:X:10:MET:HE1	1.78	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
9:I:646:MET:HE2	9:I:650:GLU:HB3	1.76	0.66
32:Q:803:LEU:HD13	32:Q:872:MET:CE	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
15:m:21:VAL:HG12	15:m:72:ILE:HG12	1.78	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
19:L:171:ALA:O	19:L:172:SER:C	2.38	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
13:r:70:PHE:HE1	13:r:72:ILE:HD11	1.61	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:1382:MET:HE1	5:E:1652:TRP:CE2	2.30	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
7:G:353:GLN:HB3	7:G:357:THR:HG23	1.78	0.65
10:h:71:LEU:HB3	13:k:71:LEU:HB2	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
13:d:58:LEU:HD23	16:g:71:GLU:HG3	1.77	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
12:c:33:THR:O	12:c:36:VAL:HB	1.95	0.65
31:U:377:ASP:HA	31:U:380:GLN:HG2	1.78	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
19:L:59:MET:HE3	19:L:63:ILE:HD11	1.77	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
7:G:410:ALA:HB1	7:G:422:MET:HE3	1.78	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
11:b:45:MET:HE2	11:b:55:LEU:HD11	1.78	0.65
15:m:18:PRO:HB2	15:m:30:LYS:HZ3	1.61	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
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
5:E:737:ALA:C	5:E:741:MET:HE2	2.22	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:J:118:U:O2'	13:k:64:ARG:NH2	2.30	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
15:m:42:MET:HB3	15:m:64:ILE:HB	1.78	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
14:e:23:ARG:O	14:e:27:ASN:ND2	2.30	0.64
16:n:64:GLY:HA2	16:n:67:ILE:HD12	1.78	0.64
15:t:42:MET:HB2	15:t:64:ILE:HB	1.79	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
6:F:229:TYR:HD1	6:F:231:MET:HE3	1.63	0.64
13:k:19:THR:O	13:k:72:ILE:N	2.28	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
10:a:26:ILE:HB	10:a:48:PHE:HB2	1.79	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
5:E:1948:MET:O	5:E:1952:ALA:N	2.31	0.64
3:C:1562:MET:HE2	3:C:1573:LEU:HD12	1.80	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
10:o:42:LEU:O	10:o:69:LEU:HA	1.98	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
12:q:63:CYS:SG	15:t:65:ARG:NH1	2.72	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
7:G:565:TYR:HA	7:G:568:GLN:HG2	1.80	0.63
7:G:767:GLU:HG3	20:M:517:LYS:HZ1	1.63	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
10:h:40:LEU:HB2	10:h:72:LEU:HB3	1.79	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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: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
5:E:1804:ILE:HD12	5:E:1809:ASP:O	1.98	0.63
5:E:2043:ARG:O	5:E:2087:LYS:NZ	2.26	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
12:j:67:LEU:HB2	12:j:99:MET:SD	2.38	0.63
24:P:21:G:H21	24:P:22:U:H1'	1.53	0.63
13:r:64:ARG:HG2	13:r:66:SER:H	1.64	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
5:E:1859:PRO:O	5:E:1890:LYS:NZ	2.30	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
14:e:39:VAL:O	14:e:42:ARG:NH2	2.32	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:893:MET:HE3	5:E:900:MET:HG3	1.80	0.63
6:F:230:THR:C	6:F:231:MET:HE2	2.24	0.63
10:o:15:TYR:HD1	10:o:86:PRO:HB3	1.62	0.63
2:B:42:U:C3'	2:B:43:U:H4'	2.29	0.62
3:C:696:MET:CE	7:G:150:ALA:HA	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
8:H:51:ASP:C	19:L:343:LEU:HD22	2.23	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
13:k:74:PRO:HG2	13:k:76:MET:HE1	1.80	0.62
24:P:8:G:C8	25:V:1:MET:HE1	2.34	0.62
12:q:2:SER:N	12:q:6:LYS:HZ1	1.97	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
10:h:67:LEU:HD22	13:k:72:ILE:HG21	1.82	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
32:Q:902:MET:HE1	32:Q:929:PHE:CG	2.33	0.62
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
10:o:30:THR:HB	10:o:43:CYS:HB3	1.80	0.62
14:s:77:ILE:HG22	15:t:73:ARG:HB3	1.81	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
8:H:35:ASP:HB3	8:H:38:CYS:SG	2.40	0.62
17:J:121:U:H5	10:h:37:HIS:HA	1.65	0.62
15:m:28:GLU:HB2	15:m:50:TYR:HB2	1.80	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
17:J:122:U:O2'	15:m:65:ARG:NH2	2.32	0.62
3:C:288:LEU:HD23	3:C:288:LEU:H	1.65	0.62
3:C:1562:MET:HE1	3:C:1570:LYS:CA	2.27	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
14:l:53:TYR:HD1	14:l:55:ASN:H	1.48	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
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
5:E:496:ASP:HB2	5:E:519:ARG:NH2	2.13	0.61
15:m:11:LEU:HD22	15:m:36:VAL:HG21	1.82	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: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
19:L:212:MET:O	19:L:213:SER:C	2.42	0.61
24:P:88:A:H61	15:t:40:MET:HG2	1.65	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:I:483:GLN:HA	9:I:486:GLU:HG2	1.81	0.61
15:t:47:THR:HG23	15:t:60:GLY:O	2.00	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
15:t:19:VAL:HA	15:t:74:GLY:HA2	1.81	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
3:C:1841:THR:HG23	3:C:1868:MET:HE1	1.81	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
7:G:581:ALA:HB3	7:G:613:MET:HE1	1.81	0.61
9:I:308:ASP:O	9:I:312:GLN:HG3	1.99	0.61
9:I:726:ARG:HE	9:I:726:ARG:C	2.08	0.61
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
14:l:76:ARG:HG3	15:m:10:PHE:CZ	2.36	0.61
16:n:7:PRO:HG2	16:n:9:LEU:HD12	1.82	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:2097:ILE:HG21	3:C:2260:GLN:HB2	1.82	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:781:ARG:HH11	3:C:1022:MET:HE2	1.66	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:1797:GLU:CD	5:E:1804:ILE:HG22	2.26	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
3:C:2067:PHE:C	3:C:2072:GLU:HB3	2.25	0.61
5:E:926:TYR:HA	5:E:929:MET:HE3	1.83	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
11:b:46:THR:HG22	11:b:52:PRO:HB3	1.83	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
12:c:46:CYS:SG	12:c:47:ARG:N	2.74	0.60
17:J:33:C:H5'	19:L:330:LYS:HZ3	1.65	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:t:23:LEU:HD23	15:t:27:MET:HE3	1.84	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
13:r:20:CYS:HB3	13:r:28:TYR: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
17:J:122:U:H1'	12:j:104:ASP:HB3	1.83	0.60
24:P:69:A:H8	26:W:81:ARG:HD2	1.66	0.60
16:u:52:GLY:O	16:u:54:GLN:NE2	2.35	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:288:LEU:HD12	9:I:255:LEU:C	2.27	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:299:LYS:HA	7:G:302:ARG:HG2	1.83	0.60
14:I:32:GLN:OE1	14:I:88:GLN:NE2	2.35	0.60
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: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
9:I:186:ARG:HH22	9:I:187:MET:HE3	1.66	0.60
21:N:557:LYS:O	21:N:558:PHE:C	2.43	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
3:C:1506:ALA:H	19:L:376:ASN:CG	2.10	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
13:k:32:LEU:HD21	13:k:35:ALA:HB2	1.84	0.60
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
15:f:21:VAL:HG13	15:f:69:VAL:HG23	1.84	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
3:C:1658:GLN:C	3:C:1659:LYS:HD3	2.28	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
19:L:65:MET:HA	19:L:68:GLU:CD	2.28	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:1717:ASN:C	3:C:1717:ASN:HD22	2.10	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
13:k:22:THR:HG22	13:k:24:THR:H	1.68	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
19:L:210:SER:O	19:L:211:ARG:C	2.45	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
9:I:735:MET:HE2	9:I:765:ILE:HD11	1.85	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
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
16:g:44:GLU:OE1	16:g:56:ASN:ND2	2.35	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
5:E:1165:ILE:CD1	5:E:1167:MET:HE2	2.33	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:112:MET:HE2	7:G:112:MET:HA	1.83	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
11:b:67:TYR:OH	12:c:94:ARG:NH2	2.36	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
5:E:1959:TYR:O	5:E:2114:MET:HE3	2.03	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:807:LYS:HE2	32:Q:872:MET:HE3	1.84	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
5:E:439:ARG:HE	5:E:440:LYS:HZ1	1.50	0.58
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
6:F:229:TYR:HB2	6:F:231:MET:CE	2.33	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
10:h:41:ILE:HG21	13:k:82:MET:HE1	1.85	0.58
11:i:5:ARG:HA	11:i:8:MET:HG2	1.85	0.58
12:j:30:SER:HA	12:j:33:THR:HG22	1.84	0.58
28:Y:60:TYR:HE2	28:Y:75:MET:HG3	1.68	0.58
13:r:70:PHE:CE1	13:r:72:ILE:HD11	2.38	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
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
12:c:102:ARG:NH1	12:c:104:ASP:OD2	2.36	0.58
29:Z:337:GLY:O	29:Z:338:VAL:HB	2.02	0.58
16:u:26:HIS:HB3	16:u:48:MET:HB2	1.85	0.58
3:C:554:THR:O	3:C:558:VAL:HG23	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
6:F:229:TYR:HB2	6:F:231:MET:HE1	1.85	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
9:I:482:GLN:HE22	9:I:700:GLN:CD	2.10	0.58
15:m:11:LEU:HD13	15:m:36:VAL:HG11	1.84	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
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
14:s:24:TYR:OH	16:u:59:MET:HB3	2.04	0.58
32:Q:891:GLY:H	32:Q:897:MET:HE1	1.68	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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: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
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
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
5:E:1382:MET:HE1	5:E:1652:TRP:CD2	2.38	0.57
8:H:27:VAL:CG2	8:H:58:ILE:HD13	2.34	0.57
3:C:269:LEU:HB3	3:C:271:MET:HE2	1.85	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: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:51:ASP:O	19:L:343:LEU:HD22	2.02	0.57
14:I:80:LYS:HD3	14:I:81:GLY:H	1.68	0.57
31:U:516:ILE:HG12	31:U:518:VAL:HG13	1.86	0.57
32:Q:889:PHE:O	32:Q:897:MET:HE1	2.05	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
5:E:439:ARG:HB3	5:E:440:LYS:HZ2	1.68	0.57
6:F:157:CYS:CB	6:F:169:THR:HG22	2.34	0.57
7:G:253:MET:HE1	19:L:128:LEU:CD1	2.33	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
12:j:56:VAL:HA	12:j:67:LEU:HD23	1.85	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:1712:HIS:HB3	3:C:1734:MET:HE2	1.86	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
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
32:Q:803:LEU:HD13	32:Q:872:MET:HE1	1.86	0.57
3:C:781:ARG:NH1	3:C:1022:MET:HE2	2.19	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:h:18:ARG:HB3	10:h:81:THR:HB	1.87	0.57
10:o:53:PRO:HG3	10:o:60:GLU:HG2	1.85	0.57
11:p:41:LYS:HA	11:p:57:THR:HA	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
14:e:65:HIS:O	14:e:69:LYS:N	2.38	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
10:o:23:ASP:OD2	13:r:69:ARG:NH2	2.38	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
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
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
13:k:19:THR:HB	13:k:72:ILE:HB	1.86	0.57
13:k:61:VAL:HG23	16:n:69:MET:CE	2.35	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:475:SER:HB3	7:G:108:LEU:CD2	2.35	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
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
13:k:32:LEU:HD12	13:k:43:MET:HG3	1.86	0.57
29:Z:311:ASP:OD1	29:Z:314:ARG:NH1	2.38	0.57
11:p:4:VAL:HA	11:p:7:LEU:HD23	1.85	0.57
31:U:373:LEU:HB3	31:U:379:TYR:CE2	2.33	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
10:o:54:LYS:HE3	10:o:61:ARG:HD2	1.87	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
16:n:9:LEU:HB2	16:n:34:PHE:CE1	2.40	0.56
26:W:46:ILE:O	26:W:79:ARG:NH1	2.38	0.56
10:o:73:ARG:HG3	13:r:39:MET:HE1	1.86	0.56
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:1945:LEU:HA	5:E:1948:MET:CE	2.33	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
12:j:56:VAL:HG22	12:j:65:MET:SD	2.45	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:81:ILE:HD12	7:G:333:MET:HE1	1.88	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
10:h:71:LEU:N	13:k:71:LEU:O	2.36	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
7:G:306:PRO:O	7:G:338:MET:HE2	2.04	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
28:Y:86:THR:O	28:Y:87:LYS:C	2.47	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
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
17:J:118:U:H1'	16:n:65:ASN:HB2	1.87	0.56
20:M:407:LEU:HD11	21:N:540:GLY:HA2	1.88	0.56
10:o:15:TYR:HA	10:o:86:PRO:HA	1.88	0.56
14:s:20:LEU:HD13	16:u:61:VAL:HB	1.86	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
3:C:926:LEU:HD11	3:C:1009:MET:HE2	1.87	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
14:l:80:LYS:HB3	14:l:83:ASN:HD22	1.71	0.56
27:X:36:GLU:HG2	29:Z:328:LEU:HD12	1.88	0.56
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
12:j:110:LEU:HD11	15:m:59:LEU:HB3	1.87	0.56
13:k:76:MET:HE3	13:k:76:MET:H	1.71	0.56
31:U:318:ASP:OD1	31:U:548:TYR:OH	2.21	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
5:E:1943:MET:HB3	5:E:2109:MET:HE1	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:N:562:ALA:O	21:N:565:GLY:N	2.39	0.55
11:i:16:THR:O	11:i:69:ILE:N	2.40	0.55
28:Y:78:CYS:O	28:Y:79:ARG:C	2.48	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
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
19:L:58:LYS:O	19:L:59:MET:C	2.49	0.55
31:U:457:PHE:HE1	31:U:509:PRO:HA	1.71	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
14:e:74:LEU:HD22	15:f:73:ARG:HD3	1.88	0.55
20:M:237:CYS:HB3	20:M:246:LEU:HD11	1.88	0.55
10:o:17:MET:SD	10:o:82:VAL:HG22	2.46	0.55
12:q:49:ASN:O	12:q:75:THR:OG1	2.23	0.55
32:Q:772:MET:HE2	32:Q:777:VAL:CG2	2.35	0.55
32:Q:972:LYS:NZ	32:Q:1002:PHE:O	2.38	0.55
32:Q:982:GLN:HA	32:Q:985:MET:HE2	1.88	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: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
9:I:428:ASN:HD22	9:I:601:GLN:CD	2.15	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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: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
25:V:4:ARG:HH12	25:V:15:GLN:HA	1.71	0.55
25:V:40:MET:H	25:V:40:MET:HE3	1.71	0.55
31:U:498:ASP:OD2	31:U:555:ARG:HD3	2.07	0.55
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:641:MET:HE1	5:E:1582:ALA:HB1	1.88	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
13:r:64:ARG:HD3	13:r:66:SER:HB3	1.87	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
10:o:26:ILE:HB	10:o:48:PHE:HB2	1.89	0.55
11:p:15:VAL:HG12	11:p:71:PRO:HD3	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
5:E:2101:ALA:HB2	5:E:2125:ASP:C	2.31	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:426:LEU:O	9:I:427:GLN:C	2.49	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
13:k:67:LYS:HG3	16:n:68:ILE:HA	1.88	0.55
24:P:87:A:OP1	12:q:61:ARG:NH1	2.29	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
3:C:1645:LEU:HD21	3:C:1727:GLN:HG2	1.89	0.55
3:C:1690:ASP:HB3	3:C:1693:SER:HB3	1.89	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
15:m:40:MET:HE1	15:m:69:VAL:HG21	1.89	0.55
13:r:62:TYR:HB3	16:u:70:LEU:HB2	1.89	0.55
14:s:23:ARG:HA	14:s:26:GLN:HE21	1.69	0.55
3:C:269:LEU:CB	3:C:271:MET:HE2	2.37	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: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:17:ALA:O	8:H:21:THR:OG1	2.21	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
15:m:36:VAL:HG13	15:m:40:MET:HA	1.89	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
14:e:87:LEU:HB2	16:g:61:VAL:HG12	1.89	0.54
21:N:561:GLU:OE1	23:R:13:THR:N	2.27	0.54
16:n:42:ILE:HD13	16:n:62:ILE:HD12	1.89	0.54
28:Y:85:TYR:H	28:Y:85:TYR:HD1	1.55	0.54
10:o:52:LYS:HG3	10:o:54:LYS:H	1.71	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
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
14:e:59:ASP:OD1	14:e:59:ASP:N	2.37	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
13:k:76:MET:SD	13:k:77:LEU:HG	2.48	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
7:G:581:ALA:C	7:G:613:MET:HE1	2.33	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
11:i:56:GLU:HG2	11:i:57:THR:HG23	1.90	0.54
32:Q:817:LYS:HE3	32:Q:819:ASP:CB	2.37	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
13:k:26:GLU:HG2	13:k:50:TYR:HA	1.90	0.54
16:n:46:VAL:HG11	16:n:54:GLN:HE21	1.72	0.54
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:123:MET:HE3	6:F:135:VAL:HG11	1.89	0.54
8:H:27:VAL:HG12	8:H:83:PHE:CD1	2.42	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
15:m:18:PRO:HB2	15:m:30:LYS:HZ1	1.71	0.54
16:n:12:PHE:HB3	16:n:17:LEU:HD11	1.89	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
1:A:3:A:N3	24:P:61:U:O2'	2.36	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
4:D:828:MET:HE3	4:D:904:TRP:HB3	1.89	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: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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
12:j:107:ILE:HA	15:m:68:ASN:HD22	1.72	0.54
13:k:14:GLU:HA	13:k:32:LEU:HD23	1.90	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:1072:LEU:HD22	5:E:1081:MET:HE3	1.90	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:354:PRO:HD2	9:I:324:MET:HE1	1.90	0.54
3:C:707:ARG:NH1	8:H:4:LEU:HB3	2.23	0.54
3:C:1064:PRO:HD2	3:C:1067:MET:HE3	1.90	0.54
5:E:576:CYS:HA	5:E:579:GLU:CD	2.31	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
9:I:428:ASN:O	9:I:588:MET:HE3	2.08	0.54
11:b:66:ARG:NH2	12:c:48:ASN:OD1	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
32:Q:897:MET:HE2	32:Q:897:MET:HA	1.90	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:1643:SER:HG	3:C:1718:TRP:CD1	2.26	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
14:e:65:HIS:O	14:e:69:LYS:HA	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
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
18:K:54:G:H2'	18:K:55:C:H6	1.73	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
17:J:123:G:OP2	15:m:65:ARG:NH2	2.41	0.53
17:J:123:G:H5'	15:m:67:ASN:HD22	1.74	0.53
24:P:95:G:N2	15:t:24:LYS:HZ1	2.06	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
32:Q:899:LYS:HA	32:Q:902:MET:HE3	1.90	0.53
3:C:419:ARG:NH2	3:C:423:ASP:O	2.42	0.53
3:C:529:THR:C	3:C:530:LEU:HD12	2.33	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
17:J:120:U:O2'	11:i:61:ARG:NH2	2.28	0.53
11:i:4:VAL:HG13	11:i:36:MET:HB3	1.90	0.53
16:n:30:ILE:N	16:n:44:GLU:OE2	2.35	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:955:TRP:CZ2	3:C:976:MET:HE1	2.43	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:1834:MET:HA	5:E:1834:MET:HE3	1.90	0.53
5:E:1973:ARG:HE	5:E:1997:LEU:HD11	1.73	0.53
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
21:N:560:ILE:HG12	21:N:598:MET:HE1	1.90	0.53
12:j:57:LYS:HB3	12:j:66:VAL:HG13	1.90	0.53
14:l:33:VAL:HG12	14:l:87:LEU:HG	1.90	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: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
14:l:30:ARG:NH1	14:l:46:CYS:SG	2.81	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:95:MET:HE2	3:C:95:MET:HA	1.90	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:G:464:ARG:HD2	7:G:506:TRP:CD1	2.44	0.53
12:c:47:ARG:HA	12:c:107:ILE:HD11	1.90	0.53
21:N:561:GLU:CD	23:R:13:THR:H	2.16	0.53
29:Z:353:GLN:HA	29:Z:356:ARG:HD2	1.91	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: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
5:E:1753:ASP:O	5:E:1756:THR:OG1	2.21	0.53
6:F:91:LEU:HD22	6:F:93:TRP:CE2	2.43	0.53
9:I:509:GLU:O	9:I:513:PHE:N	2.42	0.53
16:g:35:ASP:OD2	16:g:39:ASN:ND2	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
12:q:17:GLN:O	12:q:20:GLU:HB3	2.09	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:878:TYR:O	5:E:879:TYR:C	2.51	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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: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
12:q:70:VAL:HG21	12:q:99:MET:HB2	1.91	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
3:C:2327:SER:OG	5:E:1078:MET:HE1	2.10	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
6:F:251:LEU:N	6:F:293:TRP:HE1	2.07	0.52
14:e:45:GLY:HA3	14:e:58:LEU:HD13	1.90	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:1825:ASN:CG	5:E:1827:THR:HG22	2.33	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
14:e:42:ARG:NH1	14:e:66:SER:OG	2.42	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: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
15:f:21:VAL:O	15:f:28:GLU:HA	2.09	0.52
29:Z:333:ALA:HA	29:Z:336:LYS:CB	2.37	0.52
32:Q:772:MET:HE2	32:Q:777:VAL:HG23	1.91	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
7:G:299:LYS:HA	7:G:302:ARG:NE	2.24	0.52
7:G:410:ALA:HB1	7:G:422:MET:CE	2.39	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
11:b:5:ARG:HA	11:b:8:MET:HE3	1.90	0.52
20:M:299:CYS:HA	20:M:305:VAL:HG12	1.91	0.52
16:n:19:LEU:N	16:n:27:VAL:O	2.42	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:135:ASP:OD2	8:H:137:LYS:HB3	2.09	0.52
10:a:35:ASP:N	10:a:35:ASP:OD1	2.42	0.52
10:h:16:ARG:HH11	10:h:29:GLY:HA2	1.73	0.52
10:h:71:LEU:HD22	13:k:71:LEU:HD12	1.90	0.52
24:P:66:A:C5	24:P:72:A:C5	2.97	0.52
32:Q:803:LEU:HD13	32:Q:872:MET:HE2	1.91	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: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: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
15:m:20:MET:HE1	15:m:71:TYR:HE1	1.75	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
4:D:380:ILE:O	4:D:384:VAL:HG23	2.10	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
16:n:16:LYS:HE2	16:n:28:GLN:HB3	1.92	0.52
3:C:1275:ARG:HB3	5:E:52:MET:HE2	1.92	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: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
10:h:79:SER:HB3	11:i:58:LEU:HD11	1.92	0.52
14:l:36:TYR:N	14:l:83:ASN:O	2.42	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
14:l:88:GLN:HA	16:n:60:VAL:HG12	1.92	0.52
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:610:ARG:C	5:E:646:VAL:HG13	2.35	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
6:F:236:ASP:HB3	6:F:255:MET:HE2	1.92	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
14:l:80:LYS:HD3	14:l:81:GLY:N	2.25	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:556:ASP:OD2	9:I:726:ARG:HD2	2.11	0.51
13:k:46:ILE:HG21	13:k:61:VAL:HG11	1.91	0.51
27:X:37:TYR:HB3	27:X:39:GLN:NE2	2.22	0.51
16:u:18:SER:HB2	16:u:28:GLN:HB3	1.92	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: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: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
26:W:149:GLU:OE2	26:W:149:GLU:N	2.34	0.51
10:o:9:MET:HE3	11:p:39:HIS:CE1	2.44	0.51
15:t:24:LYS:HG3	15:t:68:ASN:O	2.11	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:625:GLY:N	5:E:626:PRO:CD	2.74	0.51
5:E:926:TYR:HA	5:E:929:MET:CE	2.39	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:113:MET:HE2	6:F:288:LEU:HD12	1.93	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
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:1506:ALA:HB3	19:L:376:ASN:OD1	2.10	0.51
4:D:159:LYS:HE3	4:D:164:ASP:HA	1.91	0.51
5:E:412:GLU:H	5:E:412:GLU:CD	2.16	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
7:G:464:ARG:HD2	7:G:506:TRP:HD1	1.74	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
24:P:94:U:OP2	15:t:65:ARG:NH2	2.44	0.51
10:o:21:LEU:HD12	10:o:25:ARG:HB2	1.93	0.51
10:o:73:ARG:HE	10:o:75:GLU:HG2	1.75	0.51
14:s:25:LEU:HD13	14:s:47:ILE:HD12	1.93	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
10:a:15:TYR:CE2	10:a:86:PRO:HG3	2.45	0.51
19:L:165:MET:HE2	19:L:166:VAL:HG23	1.92	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
4:D:706:GLN:HB3	4:D:708:THR:HG22	1.92	0.51
5:E:618:HIS:C	5:E:620:LEU:N	2.63	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
5:E:1672:LYS:HZ2	5:E:1887:PRO:HG3	1.76	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
16:g:35:ASP:OD1	16:g:39:ASN:N	2.44	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
12:q:34:GLN:HB2	12:q:111:ARG:HH22	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
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:OD1	6:F:130:ASP:N	2.44	0.51
6:F:326:HIS:HE2	6:F:344:SER:HB3	1.76	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
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
10:h:51:ILE:HD11	10:h:62:GLU:HB2	1.93	0.51
25:V:84:GLU:HA	25:V:87:ILE:HG12	1.92	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:686:GLU:N	5:E:864:LYS:HZ3	2.09	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
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
10:h:73:ARG:CZ	13:k:66:SER:HA	2.41	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
4:D:153:THR:HG1	4:D:154:HIS:CE1	2.30	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
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: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
24:P:88:A:H61	15:t:40:MET:CE	2.24	0.50
27:X:64:LEU:HB2	27:X:108:ASP:OD2	2.11	0.50
12:q:63:CYS:HB2	12:q:65:MET:HE2	1.93	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:228:TRP:C	3:C:229:GLN:HG3	2.36	0.50
3:C:564:TYR:CB	3:C:574:LEU:HD22	2.42	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
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:735:MET:HE2	9:I:765:ILE:CG1	2.40	0.50
11:b:35:SER:OG	11:b:37:ASN:ND2	2.44	0.50
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
24:P:88:A:N6	15:t:38:GLY:O	2.45	0.50
32:Q:862:ILE:HD11	32:Q:864:LYS:HB3	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
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
16:g:16:LYS:HG2	16:g:73:LEU:HD12	1.94	0.50
18:K:58:U:H1'	18:K:60:G:C6	2.46	0.50
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
7:G:387:ARG:HA	7:G:390:LYS:HE2	1.91	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:429:ARG:HH21	9:I:624:PRO:C	2.19	0.50
10:a:47:GLU:O	10:a:64:LYS:HA	2.11	0.50
27:X:106:THR:OG1	27:X:107:GLU:N	2.44	0.50
14:s:54:MET:SD	14:s:84:ILE:HD11	2.52	0.50
32:Q:778:LEU:HD11	32:Q:885:GLY:HA2	1.93	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
9:I:764:ALA:C	9:I:765:ILE:HD13	2.36	0.50
14:e:73:GLN:OE1	14:e:74:LEU:N	2.43	0.50
15:m:19:VAL:HG12	15:m:74:GLY:HA2	1.94	0.50
24:P:31:U:H2'	24:P:32:A:C8	2.46	0.50
14:s:74:LEU:O	15:t:73:ARG:NE	2.44	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:1019:TYR:HD2	3:C:1022:MET:HE3	1.76	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: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
8:H:8:LEU:HG	8:H:59:TYR:HB3	1.94	0.50
9:I:606:THR:OG1	9:I:607:ALA:N	2.43	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:e:65:HIS:O	14:e:69:LYS:CA	2.59	0.50
18:K:48:G:OP2	21:N:601:ARG:NE	2.44	0.50
13:k:64:ARG:HG3	16:n:38:MET:SD	2.51	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:686:GLU:H	5:E:864:LYS:HZ3	1.60	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:1732:MET:HE1	5:E:1788:LEU:HD23	1.94	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
19:L:59:MET:O	19:L:60:PHE:C	2.55	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
3:C:1687:TYR:O	3:C:1693:SER:OG	2.27	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
16:n:28:GLN:HB2	16:n:48:MET:HE1	1.94	0.50
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:1636:LYS:HZ2	24:P:65:C:P	2.35	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: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
10:o:71:LEU:HD11	13:r:6:PRO:HB3	1.94	0.49
12:q:69:ASN:N	12:q:97:SER:O	2.41	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
24:P:88:A:N6	15:t:40:MET:HG2	2.26	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
3:C:2133:PRO:HG3	3:C:2141:GLU:CD	2.38	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
5:E:925:LEU:C	5:E:929:MET:HE2	2.37	0.49
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
11:i:33:ASP:HB2	11:i:37:ASN:HB2	1.94	0.49
28:Y:25:GLY:O	28:Y:28:THR:OG1	2.24	0.49
12:q:76:GLU:HG3	12:q:77:VAL:HG23	1.93	0.49
16:u:47:GLU:OE2	16:u:55:ASN:ND2	2.45	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:512:VAL:HA	5:E:515:MET:HE2	1.95	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
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:498:ASN:C	5:E:667:VAL:HG22	2.37	0.49
5:E:614:LEU:HD21	5:E:617:ILE:CG1	2.39	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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: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
15:m:14:LEU:HD12	15:m:33:LEU:HD21	1.94	0.49
25:V:85:LEU:HD22	25:V:88:GLN:HE22	1.77	0.49
13:r:5:VAL:HG13	13:r:6:PRO:HD3	1.94	0.49
15:t:70:LEU:HD22	15:t:71:TYR:HD1	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:1513:MET:O	3:C:1516:LYS:HG3	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
5:E:1725:GLU:OE1	5:E:1771:TYR:OH	2.24	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
13:k:46:ILE:HG21	13:k:61:VAL:CG1	2.43	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: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: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
11:b:67:TYR:HB3	12:c:101:LEU:HD12	1.95	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
32:Q:902:MET:HE1	32:Q:929:PHE:CD2	2.47	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:485:LYS:HD3	7:G:489:ARG:NH2	2.27	0.49
12:c:52:LEU:HD12	12:c:67:LEU:HD22	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:K:67:A:OP2	23:R:110:LYS:HD3	2.13	0.49
14:l:78:MET:HE3	15:m:72:ILE:HB	1.95	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
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
16:n:63:ARG:HG2	16:n:65:ASN:H	1.78	0.49
24:P:21:G:H22	24:P:22:U:H1'	1.69	0.49
10:o:17:MET:SD	10:o:82:VAL:HA	2.53	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:123:MET:HE3	6:F:135:VAL:CG1	2.42	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
13:d:38:ASN:OD1	13:d:38:ASN:N	2.44	0.48
16:n:48:MET:SD	16:n:48:MET:N	2.82	0.48
25:V:57:CYS:SG	25:V:59:LYS:NZ	2.80	0.48
12:q:59:PHE:HB3	12:q:65:MET:SD	2.53	0.48
13:r:37:ASP:N	13:r:37:ASP:OD1	2.45	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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: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
10:h:81:THR:HG21	11:i:55:LEU:HD13	1.94	0.48
10:o:22:GLN:N	10:o:76:ASN:O	2.46	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
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
15:f:49:GLU:N	15:f:49:GLU:OE1	2.46	0.48
19:L:55:TRP:N	19:L:60:PHE:HB2	2.28	0.48
12:j:67:LEU:HB3	12:j:70:VAL:HG11	1.96	0.48
13:k:28:TYR:HB3	13:k:46:ILE:HD11	1.95	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
12:q:19:ARG:HA	12:q:22:GLU:OE1	2.13	0.48
31:U:157:VAL:CG1	31:U:176:PRO:HG3	2.43	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:U:277:PHE:HA	31:U:299:MET:HE2	1.95	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:61:MET:HE1	3:C:65:HIS:ND1	2.29	0.48
3:C:221:ASN:OD1	3:C:222:GLY:N	2.46	0.48
3:C:682:ASP:N	3:C:682:ASP:OD1	2.46	0.48
3:C:888:GLN:O	3:C:889:ARG:HD3	2.12	0.48
3:C:1076:ASP:N	3:C:1076:ASP:OD1	2.45	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
12:c:108:VAL:HG12	15:f:64:ILE:HG13	1.95	0.48
23:R:52:GLN:NE2	23:R:53:VAL:O	2.46	0.48
15:m:21:VAL:HG12	15:m:72:ILE:HG23	1.96	0.48
15:m:48:GLU:HG3	15:m:50:TYR:OH	2.13	0.48
10:o:51:ILE:HD11	10:o:63:GLU:HB2	1.95	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:1730:MET:HA	3:C:1730:MET:CE	2.39	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
19:L:211:ARG:HA	19:L:211:ARG:HD3	1.68	0.48
13:r:7:ILE:H	13:r:7:ILE:HD12	1.78	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
16:n:6:PRO:CA	16:n:36:PRO:HA	2.33	0.48
24:P:45:U:H2'	24:P:46:G:C8	2.48	0.48
13:r:40:ASN:OD1	13:r:65:GLY:N	2.41	0.48
3:C:832:TYR:HB3	3:C:835:ASP:CG	2.38	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
7:G:112:MET:HE2	7:G:112:MET:CA	2.43	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:144:LEU:HD23	8:H:144:LEU:H	1.78	0.48
17:J:32:C:O2'	19:L:330:LYS:NZ	2.41	0.48
19:L:61:ALA:O	19:L:62:GLU:C	2.57	0.48
28:Y:134:ASN:HA	28:Y:137:ILE:HG22	1.96	0.48
11:p:4:VAL:O	11:p:7:LEU:N	2.47	0.48
13:r:3:ILE:O	13:r:8:LYS:NZ	2.46	0.48
16:u:18:SER:HA	16:u:28:GLN:HA	1.95	0.48
32:Q:905:LYS:HZ2	32:Q:985:MET:HA	1.78	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: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
16:n:34:PHE:HB3	16:n:40:LEU:HD23	1.95	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:1722:SER:O	3:C:1726:ILE:HG12	2.14	0.48
3:C:2327:SER:HA	5:E:1078:MET:HE1	1.95	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:m:20:MET:HB2	15:m:30:LYS:HD3	1.96	0.48
15:t:20:MET:HE2	15:t:73:ARG:HH11	1.79	0.48
31:U:479:ASP:C	31:U:480:LEU:HD23	2.39	0.48
32:Q:859:GLU:HA	32:Q:862:ILE:CG1	2.43	0.48
3:C:872:ASP:C	3:C:874:PRO:HD3	2.39	0.48
4:D:167:TYR:CD2	4:D:535:ALA:HB3	2.49	0.48
4:D:481:MET:HE3	4:D:559:ILE:HD11	1.95	0.48
5:E:1499:ASP:OD2	5:E:1763:ARG:NH1	2.47	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
12:c:97:SER:O	12:c:98:LYS:NZ	2.44	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
14:l:38:GLN:OE1	14:l:41:MET:HE2	2.13	0.48
24:P:95:G:H1	15:t:24:LYS:HZ1	1.62	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
3:C:1926:THR:HG21	12:j:82:LYS:HE3	1.95	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
17:J:91:U:H2'	17:J:92:A:C8	2.49	0.47
13:k:58:LEU:HD23	13:k:60:GLN:H	1.78	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:229:TYR:CD1	6:F:231:MET:HE3	2.46	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
10:h:40:LEU:HD23	10:h:40:LEU:HA	1.68	0.47
29:Z:333:ALA:CA	29:Z:336:LYS:HD2	2.42	0.47
10:o:38:MET:HE3	11:p:61:ARG:HG3	1.96	0.47
12:q:102:ARG:NE	12:q:104:ASP:OD2	2.43	0.47
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:928:ARG:O	5:E:929:MET:C	2.57	0.47
5:E:1332:GLN:NE2	5:E:1358:ILE:HB	2.29	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:1959:TYR:C	5:E:2114:MET:HE3	2.40	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
11:i:19:LEU:HD21	11:i:60:ILE:HD13	1.95	0.47
26:W:149:GLU:H	26:W:149:GLU:CD	2.21	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:313:LYS:HZ1	9:I:253:ARG:HD2	1.79	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
5:E:766:ALA:CA	5:E:778:LEU:HD23	2.45	0.47
5:E:848:ASP:O	5:E:852:MET:HE3	2.15	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
12:c:70:VAL:HB	12:c:96:ILE:HB	1.97	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
20:M:190:MET:HE1	21:N:387:ILE:HG22	1.96	0.47
14:l:57:VAL:HG12	14:l:78:MET:HB3	1.95	0.47
11:p:17:ILE:HB	11:p:25:VAL:HG23	1.96	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
10:a:45:CYS:HB3	10:a:67:LEU:HD12	1.95	0.47
19:L:212:MET:HA	19:L:215:ILE:HG22	1.97	0.47
15:m:23:LEU:HD11	15:m:64:ILE:HG21	1.96	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: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:1719:PHE:O	3:C:1720:PRO:C	2.57	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:622:ASP:C	5:E:623:ASP:O	2.55	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
11:b:69:ILE:HD12	12:c:96:ILE:HG12	1.97	0.47
15:f:45:ALA:HA	15:f:61:GLU:HG2	1.97	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
23:R:23:SER:C	23:R:25:LYS:H	2.23	0.47
24:P:65:C:H4'	24:P:66:A:O5'	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
11:p:65:ILE:HD12	11:p:68:PHE:HE1	1.79	0.47
31:U:540:GLN:H	31:U:540:GLN:CD	2.22	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: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:67:GLY:C	6:F:349:LYS:HG2	2.40	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
9:I:424:ILE:O	9:I:425:GLY:C	2.55	0.47
14:e:14:MET:SD	14:e:14:MET:N	2.88	0.47
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
23:R:23:SER:C	23:R:25:LYS:N	2.73	0.47
13:k:23:ASN:N	13:k:67:LYS:O	2.42	0.47
12:q:31:VAL:O	12:q:111:ARG:NH2	2.41	0.47
32:Q:679:ILE:HD12	32:Q:690:TYR:C	2.40	0.47
3:C:528:LYS:HG3	3:C:530:LEU:HD12	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:428:ASN:CG	9:I:588:MET:HE3	2.39	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
12:c:32:LEU:HD22	12:c:65:MET:HE1	1.96	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
15:m:33:LEU:HD22	15:m:42:MET:HE1	1.97	0.47
16:n:17:LEU:HD22	16:n:70:LEU:HD22	1.96	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
18:K:26:A:N7	19:L:352:LYS:NZ	2.64	0.47
14:l:57:VAL:HG13	15:m:7:PRO:HG3	1.97	0.47
14:s:41:MET:HE1	14:s:63:GLU:OE1	2.15	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:1528:GLN:O	3:C:1531:ASN:HB2	2.15	0.46
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:1926:THR:CG2	12:j:82:LYS:HE3	2.44	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:1542:MET:C	5:E:1545:PRO:HD2	2.39	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: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
9:I:646:MET:HE2	9:I:650:GLU:CB	2.45	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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:426:LYS:C	5:E:427:ARG:HD2	2.40	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:1194:THR:C	5:E:1292:PRO:HG2	2.40	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
7:G:134:GLU:C	7:G:135:ARG:HD2	2.40	0.46
8:H:10:SER:OG	8:H:13:GLU:HG3	2.15	0.46
15:f:43:GLN:NE2	15:f:61:GLU:OE2	2.49	0.46
10:h:50:LYS:HG2	10:h:51:ILE:HG23	1.98	0.46
24:P:66:A:C5	24:P:72:A:C6	3.03	0.46
24:P:88:A:H62	15:t:39:TYR:HA	1.80	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:1811:ASN:CG	3:C:1814:THR:HG22	2.40	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
17:J:124:G:C6	15:m:24:LYS:HB3	2.50	0.46
21:N:569:LEU:HD23	21:N:586:GLY:HA3	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:i:68:PHE:HB2	12:j:100:PHE:HB3	1.96	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
12:q:11:MET:SD	12:q:19:ARG:CD	3.03	0.46
14:s:55:ASN:OD1	14:s:81:GLY:N	2.48	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
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
23:R:107:TRP:C	23:R:107:TRP:CD1	2.93	0.46
11:i:36:MET:HE1	11:i:65:ILE:HB	1.97	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
10:h:33:ALA:HB1	13:k:5:VAL:HG13	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
4:D:449:ILE:HD11	4:D:497:LEU:HD23	1.97	0.46
5:E:111:GLU:H	5:E:111:GLU:CD	2.24	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: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
24:P:92:U:O4	10:o:38:MET:HE2	2.16	0.46
26:W:27:HIS:O	28:Y:221:ARG:NH1	2.49	0.46
10:o:40:LEU:HD12	10:o:72:LEU:HB2	1.95	0.46
11:p:8:MET:SD	11:p:8:MET:N	2.89	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:168:THR:OG1	4:D:204:ASP:OD2	2.27	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:F:262:TRP:CZ3	6:F:273:CYS:HB2	2.51	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
15:m:17:LYS:HE3	15:m:75:VAL:C	2.40	0.46
28:Y:77:SER:O	28:Y:78:CYS:C	2.58	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
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
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:253:MET:HE2	19:L:124:GLU:HB3	1.96	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
14:s:17:PRO:HB3	16:u:61:VAL:HG21	1.97	0.46
16:u:75:ARG:O	16:u:75:ARG:HD2	2.16	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:45:TYR:OH	6:F:113:MET:HE1	2.16	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
21:N:557:LYS:O	21:N:559:LYS:N	2.49	0.46
24:P:59:A:H2'	24:P:60:A:C8	2.51	0.46
32:Q:862:ILE:HD13	32:Q:908:MET:CE	2.46	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:1607:GLU:CD	3:C:1634:SER:HB3	2.40	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
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
13:k:48:VAL:HB	13:k:56:ALA:HB3	1.98	0.45
16:n:69:MET:HE3	16:n:69:MET:HB3	1.66	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: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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: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:668:ILE:HB	9:I:736:VAL:HG22	1.98	0.45
10:a:79:SER:HB2	11:b:58:LEU:HD11	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
14:s:31:ILE:N	14:s:45:GLY:O	2.45	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
5:E:1139:VAL:O	5:E:1143:ILE:HG22	2.16	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
10:h:17:MET:HG3	10:h:42:LEU:HD21	1.98	0.45
14:l:83:ASN:HD21	15:m:24:LYS:HE2	1.82	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
14:s:34:TRP:CD2	14:s:86:LEU:HD23	2.49	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: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
13:d:61:VAL:HG13	16:g:69:MET:HE2	1.98	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
12:j:23:GLU:HA	12:j:26:THR:HG22	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
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
5:E:492:ALA:CB	5:E:515:MET:HE3	2.46	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
13:d:19:THR:HA	13:d:28:TYR:O	2.15	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
12:q:73:MET:HG3	12:q:75:THR:HG23	1.98	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:37:TRP:CZ2	6:F:197:LEU:HD22	2.52	0.45
3:C:555:LYS:HE2	3:C:559:ASP:CG	2.41	0.45
3:C:696:MET:HE2	7:G:150:ALA:HA	1.98	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
14:e:60:ASP:OD2	14:e:60:ASP:N	2.50	0.45
14:e:78:MET:HG2	15:f:11:LEU:HD21	1.98	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
13:k:46:ILE:HD13	13:k:61:VAL:HG11	1.99	0.45
10:o:55:ASN:OD1	10:o:55:ASN:N	2.50	0.45
12:q:64:ASN:OD1	12:q:103:GLY:N	2.49	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
32:Q:772:MET:HE3	32:Q:776:GLU:HB3	1.99	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:1440:LYS:O	5:E:1443:LYS:NZ	2.41	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
8:H:70:THR:HG23	8:H:75:ILE:HB	1.98	0.45
9:I:428:ASN:O	9:I:428:ASN:CG	2.60	0.45
19:L:209:GLU:O	19:L:210:SER:C	2.60	0.45
14:l:57:VAL:HA	14:l:78:MET:HA	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
29:Z:269:GLU:HA	29:Z:272:GLN:CD	2.42	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
10:o:7:SER:HA	10:o:10:LEU:HD12	1.99	0.45
16:u:38:MET:HE2	16:u:38:MET:HB3	1.78	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:D:192:ASP:OD1	4:D:193:THR:N	2.47	0.45
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
6:F:236:ASP:HB3	6:F:255:MET:CE	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:604:MET:HE3	9:I:621:LEU:HD11	1.99	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
15:m:20:MET:N	15:m:73:ARG:O	2.47	0.45
27:X:47:LYS:HD3	27:X:49:ASP:OD2	2.17	0.45
10:o:44:ASP:OD1	10:o:44:ASP:N	2.50	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:1481:ILE:O	5:E:1482:GLU:HB3	2.16	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
9:I:670:PHE:HB3	9:I:751:ARG:CZ	2.47	0.45
16:g:21:LEU:HB2	16:g:25:ARG:HB2	1.98	0.45
10:h:69:LEU:HG	13:k:73:LEU:HB2	1.99	0.45
28:Y:226:ARG:HD3	28:Y:227:ALA:HB2	1.99	0.45
12:q:18:LYS:O	12:q:22:GLU:HG3	2.16	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: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
12:j:51:LYS:HB2	12:j:73:MET:SD	2.57	0.44
13:k:60:GLN:NE2	16:n:74:GLU:O	2.50	0.44
14:l:67:LYS:HE3	14:l:67:LYS:HB3	1.83	0.44
15:m:16:GLY:HA2	15:m:32:TYR:CE1	2.52	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
10:o:45:CYS:SG	10:o:67:LEU:HD12	2.57	0.44
11:p:18:GLU:HG3	11:p:67:TYR:CE2	2.52	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:1260:GLU:CD	5:E:1261:PRO:HA	2.42	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: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
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
11:b:2:LYS:HB2	11:b:5:ARG:HG2	1.99	0.44
14:e:80:LYS:HA	14:e:80:LYS:HD2	1.78	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
11:i:29:ILE:HA	11:i:40:LEU:HD23	1.99	0.44
26:W:18:SER:HB2	26:W:23:ASP:HB3	1.99	0.44
12:q:109:VAL:HB	15:t:63:LEU:HB3	1.98	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:685:LEU:HD12	5:E:865:GLY:O	2.17	0.44
5:E:694:GLU:CD	5:E:699:LYS:HG3	2.42	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:H:7:LYS:C	8:H:8:LEU:HD23	2.43	0.44
9:I:480:LEU:HA	9:I:483:GLN:NE2	2.32	0.44
12:c:11:MET:HG3	12:c:12:THR:HG23	1.98	0.44
15:f:72:ILE:HD12	15:f:72:ILE:HA	1.87	0.44
10:h:33:ALA:HB3	10:h:41:ILE:HB	2.00	0.44
12:j:66:VAL:HG23	12:j:99:MET:O	2.16	0.44
13:k:24:THR:O	13:k:51:ARG:NH1	2.39	0.44
14:s:41:MET:HA	14:s:41:MET:HE3	1.98	0.44
30:S:732:ARG:NE	30:S:732:ARG:HA	2.32	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: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:616:GLU:C	5:E:618:HIS:H	2.25	0.44
5:E:1087:SER:O	5:E:1091:LEU:HD13	2.18	0.44
5:E:1729:ASP:HA	5:E:1732:MET:HE2	1.99	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
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
14:l:35:LEU:HD21	14:l:79:LEU:HD11	1.99	0.44
14:l:54:MET:HE3	16:n:63:ARG:NH1	2.29	0.44
16:n:47:GLU:HG2	16:n:57:ILE:HD11	1.99	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:1639:VAL:C	30:S:699:LYS:HE3	2.42	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:E:266:PHE:CZ	31:U:108:LEU:HD23	2.53	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
12:c:12:THR:HG21	12:c:19:ARG:HH12	1.82	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
28:Y:87:LYS:O	28:Y:88:GLU:C	2.61	0.44
15:t:23:LEU:HD23	15:t:27:MET:CE	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: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
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
17:J:125:A:N3	15:m:25:TRP:NE1	2.66	0.44
13:k:24:THR:HG21	16:n:20:LYS:HE2	1.99	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
16:u:69:MET:HE2	16:u:69:MET:HB2	1.80	0.44
31:U:391:LEU:HD12	31:U:452:PHE:HE1	1.82	0.44
3:C:1086:ARG:O	3:C:1087:LEU:HD23	2.17	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:1762:TYR:CZ	3:C:1886:GLY:HA3	2.52	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:1825:ASN:O	5:E:1828:THR:OG1	2.34	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
10:h:77:LEU:HG	10:h:80:MET:HE1	1.99	0.44
16:n:21:LEU:HB2	16:n:25:ARG:HG2	2.00	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
12:q:11:MET:HE3	12:q:11:MET:HB2	1.82	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
3:C:2289:ASP:H	3:C:2292:MET:CE	2.24	0.44
5:E:423:MET:HB3	5:E:423:MET:HE3	1.35	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
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:55:LEU:HD21	6:F:353:MET:CE	2.41	0.44
7:G:296:LEU:HD12	7:G:299:LYS:CE	2.48	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
17:J:118:U:H3	16:n:39:ASN:HD21	1.64	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
14:l:24:TYR:CZ	14:l:31:ILE:HB	2.53	0.44
15:m:20:MET:HE3	15:m:73:ARG:HB3	2.00	0.44
24:P:69:A:C8	26:W:81:ARG:HD2	2.50	0.44
11:p:47:LEU:HD12	11:p:48:LYS:H	1.83	0.44
14:s:54:MET:HE1	16:u:63:ARG:HD2	2.00	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
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
9:I:301:ARG:HH21	9:I:324:MET:HE2	1.83	0.44
11:b:48:LYS:NZ	11:b:49:ASN:OD1	2.51	0.44
16:g:31:LEU:HD11	16:g:40:LEU:HD22	1.99	0.44
16:g:32:ARG:HB2	16:g:41:VAL:HG23	2.00	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
16:u:32:ARG:HD3	16:u:32:ARG:HA	1.84	0.44
3:C:1301:ILE:CG1	3:C:1307:MET:HE3	2.46	0.43
3:C:1890:GLN:O	3:C:1890:GLN:HG2	2.18	0.43

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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:786:HIS:H	5:E:789:MET:HE3	1.83	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:1398:GLN:CD	5:E:1404:LYS:HA	2.43	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
19:L:208:VAL:O	19:L:209:GLU:C	2.61	0.43
24:P:95:G:O6	14:s:38:GLN:NE2	2.51	0.43
29:Z:311:ASP:HA	29:Z:314:ARG:HG2	2.00	0.43
10:o:25:ARG:HD2	10:o:49:ARG:HB2	1.98	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: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:1970:THR:C	3:C:1971:LEU:HD12	2.43	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:925:LEU:O	5:E:929:MET:HE2	2.17	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
12:q:99:MET:HE3	12:q:100:PHE:H	1.83	0.43
14:s:53:TYR:HB2	14:s:55:ASN:ND2	2.33	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
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
4:D:925:PRO:HD2	4:D:928:HIS:HD1	1.83	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
22:O:56:MET:HE2	22:O:56:MET:HB3	1.79	0.43
10:o:81:THR:HB	11:p:58:LEU:HD13	2.00	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:1330:MET:CE	3:C:1369:TYR:HB3	2.25	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:852:MET:HE2	5:E:852:MET:HB3	1.94	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:65:MET:SD	19:L:65:MET:C	3.01	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
12:q:11:MET:SD	12:q:19:ARG:CZ	3.07	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
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:1031:GLU:H	5:E:1031:GLU:CD	2.26	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:19:PRO:O	8:H:11:LYS:NZ	2.39	0.43
7:G:869:LYS:HA	7:G:869:LYS:HD2	1.78	0.43
15:f:67:ASN:OD1	15:f:68:ASN:ND2	2.51	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
30:S:565:GLU:C	30:S:567:PRO:HD2	2.43	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
10:a:27:PHE:HE1	10:a:47:GLU:HG3	1.83	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
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:2328:ALA:H	5:E:1078:MET:HE2	1.83	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
15:m:37:ASP:OD1	15:m:41:ASN:N	2.46	0.43
24:P:69:A:H3'	26:W:42:ASN:HD21	1.83	0.43
12:q:73:MET:HE3	12:q:74:TRP:C	2.43	0.43
14:s:63:GLU:OE2	14:s:72:LYS:HG2	2.18	0.43
15:t:7:PRO:O	15:t:10:PHE:HB3	2.18	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:784:ILE:HG13	5:E:789:MET:HE1	2.01	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
12:j:65:MET:HE2	12:j:65:MET:HB3	1.97	0.43
14:l:79:LEU:HD23	14:l:80:LYS:N	2.34	0.43
24:P:85:A:H5'	12:q:8:LYS:CE	2.48	0.43
10:o:60:GLU:C	10:o:61:ARG:HG3	2.43	0.43
11:p:77:ASP:OD1	11:p:78:THR:N	2.51	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	1.81	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
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:137:LYS:H	7:G:140:GLN:CD	2.27	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:735:MET:HE2	9:I:765:ILE:CD1	2.47	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
14:I:88:GLN:HB2	16:n:57:ILE:HG21	2.01	0.43
16:n:46:VAL:HG11	16:n:54:GLN:NE2	2.34	0.43
16:n:49:ALA:O	16:n:50:THR:C	2.61	0.43
29:Z:284:GLU:HA	29:Z:287:GLU:OE1	2.18	0.43
15:t:52:ASP:OD1	15:t:52:ASP:N	2.52	0.43
30:S:719:LYS:O	30:S:719:LYS:HG3	2.18	0.43
32:Q:862:ILE:HD13	32:Q:908:MET:HE1	2.00	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
6:F:231:MET:HE2	6:F:231:MET:N	2.34	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
14:e:31:ILE:HD13	14:e:89:SER:HA	2.01	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
17:J:121:U:OP1	11:i:61:ARG:NH1	2.37	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
28:Y:149:HIS:CE1	16:u:20:LYS:HD3	2.54	0.43
13:r:46:ILE:HG13	13:r:58:LEU:HB2	2.01	0.43
15:t:37:ASP:OD1	15:t:40:MET:N	2.52	0.43
3:C:726:TRP:CH2	3:C:739:ILE:HG21	2.54	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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: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
12:c:40:THR:HG21	12:c:111:ARG:HH11	1.84	0.42
13:d:64:ARG:HG2	13:d:66:SER:H	1.84	0.42
11:p:47:LEU:HD23	11:p:50:ARG:HG3	2.01	0.42
13:r:20:CYS:SG	13:r:68:ILE:HD11	2.59	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:781:ARG:HG2	3:C:1022:MET:HE1	2.01	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
12:c:56:VAL:HG12	12:c:67:LEU:HG	2.00	0.42
29:Z:174:VAL:O	29:Z:178:LEU:HG	2.19	0.42

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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
3:C:2288:HIS:HA	3:C:2292:MET:HE1	2.02	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
9:I:174:LEU:HD23	9:I:177:ARG:HD3	2.01	0.42
10:h:19:CYS:HB2	10:h:27:PHE:HB2	2.01	0.42
14:l:87:LEU:HD13	16:n:61:VAL:HG23	2.00	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
11:p:68:PHE:HB2	12:q:100:PHE:HB3	2.01	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:1508:GLY:HA2	3:C:1752:GLN:CD	2.44	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
7:G:385:ASP:OD1	7:G:385:ASP:N	2.51	0.42
18:K:56:C:H2'	18:K:57:C:C1'	2.49	0.42
21:N:555:ALA:O	21:N:556:LYS:C	2.59	0.42
14:l:77:ILE:HD11	15:m:71:TYR:HB2	2.00	0.42
10:o:20:ILE:HD13	10:o:79:SER:OG	2.20	0.42
10:o:51:ILE:H	10:o:51:ILE:HD12	1.85	0.42
11:p:30:THR:HG23	11:p:40:LEU:HA	2.01	0.42
13:r:82:MET:N	13:r:82:MET:SD	2.92	0.42
15:t:19:VAL:HG11	15:t:33:LEU:HB2	2.00	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
32:Q:862:ILE:CD1	32:Q:912:MET:HE3	2.50	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: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:I:609:MET:HA	9:I:609:MET:HE2	2.01	0.42
11:b:15:VAL:HG11	11:b:68:PHE:HD2	1.85	0.42
24:P:37:A:H2'	24:P:38:A:C8	2.55	0.42
10:o:54:LYS:HE3	10:o:61:ARG:HH11	1.85	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
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: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: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:1693:ARG:HE	5:E:1697:ASP:CG	2.28	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: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
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
11:i:17:ILE:O	11:i:25:VAL:N	2.47	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: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:625:GLY:C	5:E:627:VAL:N	2.77	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
5:E:2017:ILE:HG23	5:E:2042:GLU:C	2.44	0.42
6:F:200:THR:CG2	6:F:250:LEU:HD11	2.46	0.42
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
7:G:784:VAL:HG21	7:G:800:MET:HE2	2.01	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:120:LEU:HD23	23:R:120:LEU:HA	1.89	0.42
11:i:23:THR:HB	11:i:45:MET:HE1	2.01	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
16:u:53:GLN:OE1	16:u:53:GLN:N	2.49	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:104:THR:C	6:F:105:LEU:HD12	2.44	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:I:192:ARG:HH11	9:I:196:LYS:HE2	1.85	0.42
11:b:5:ARG:HD3	11:b:8:MET:HE3	2.02	0.42
19:L:165:MET:HE3	19:L:165:MET:HB2	1.90	0.42
20:M:497:GLY:H	20:M:510:CYS:HB2	1.85	0.42
21:N:557:LYS:C	21:N:559:LYS:N	2.76	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
16:u:32:ARG:HB3	16:u:41:VAL:HG12	2.01	0.42
32:Q:749:HIS:NE2	32:Q:798:GLN:HG2	2.34	0.42
32:Q:908:MET:HE3	32:Q:912:MET:HE2	2.00	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:1358:SER:HG	3:C:1360:GLU:HG3	1.84	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
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
4:D:934:MET:HE3	4:D:938:ARG:HD2	2.02	0.42
5:E:412:GLU:CD	5:E:412:GLU:N	2.78	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: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
10:a:49:ARG:O	10:a:62:GLU:HA	2.20	0.42
17:J:119:U:H3	16:n:38:MET:HE3	1.85	0.42
16:n:35:ASP:OD1	16:n:39:ASN:N	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:1067:MET:HE1	3:C:1075:GLN:OE1	2.20	0.42
3:C:1647:ASP:O	3:C:1723:LYS:NZ	2.33	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:350:MET:HE2	5:E:350:MET:HB3	1.76	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: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
7:G:714:MET:HB2	7:G:714:MET:HE3	1.76	0.42
9:I:186:ARG:O	9:I:190:GLU:HG3	2.20	0.42
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
28:Y:66:MET:HE3	28:Y:67:PRO:HD2	2.00	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
2:B:88:A:H61	15:f:40:MET:HG2	1.85	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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: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: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
17:J:37:G:OP1	19:L:298:LYS:NZ	2.49	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
12:j:107:ILE:HG22	12:j:108:VAL:HG13	2.02	0.41
24:P:85:A:H5'	12:q:8:LYS:HE2	2.02	0.41
24:P:107:G:OP2	29:Z:175:ARG:NH2	2.41	0.41
25:V:25:LEU:HD23	25:V:25:LEU:C	2.45	0.41
25:V:83:GLN:O	25:V:86:SER:OG	2.27	0.41
27:X:108:ASP:OD1	27:X:108:ASP:N	2.52	0.41
28:Y:90:GLU:HA	28:Y:93:MET:CE	2.48	0.41
10:o:19:CYS:HG	10:o:27:PHE:HB2	1.83	0.41
15:t:20:MET:N	15:t:73:ARG:O	2.40	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
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: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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: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
11:b:76:LEU:HA	11:b:79:LEU:HB2	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
15:m:20:MET:HE3	15:m:20:MET:HB3	1.99	0.41
16:n:38:MET:O	16:n:40:LEU:HG	2.20	0.41
24:P:89:U:O4'	16:u:63:ARG:NH2	2.53	0.41
28:Y:105:ILE:HD13	28:Y:105:ILE:HA	1.88	0.41
28:Y:165:TYR:OH	16:u:44:GLU:OE2	2.33	0.41
12:q:7:PRO:O	12:q:11:MET:HE3	2.20	0.41
14:s:60:ASP:OD1	14:s:60:ASP:N	2.49	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: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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
17:J:123:G:C2	11:i:20:LYS:HD3	2.55	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:152:ALA:O	23:R:156:ARG:HG2	2.19	0.41
10:h:71:LEU:HB2	13:k:73:LEU:HD11	2.01	0.41
13:k:18:VAL:N	13:k:30:GLY:O	2.51	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:84:GLY:O	28:Y:85:TYR:C	2.63	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
13:r:44:SER:OG	13:r:45:ASN:N	2.53	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: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:343:LEU:HA	9:I:346:LYS:HZ3	1.85	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:N:545:VAL:HG11	21:N:669:TYR:HB3	2.02	0.41
14:I:20:LEU:O	14:I:24:TYR:N	2.40	0.41
15:m:15:THR:HA	15:m:33:LEU:HD11	2.02	0.41
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:1652:MET:HE1	30:S:700:GLU:CD	2.44	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: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:1627:MET:HE3	5:E:1627:MET:HB2	1.78	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
15:f:7:PRO:HA	15:f:10:PHE:HB3	2.01	0.41
18:K:52:A:O4'	23:R:23:SER:HA	2.20	0.41
19:L:171:ALA:C	19:L:173:THR:N	2.79	0.41
20:M:366:MET:HE2	20:M:366:MET:HB3	1.96	0.41
24:P:88:A:H61	15:t:40:MET:CG	2.30	0.41
25:V:48:LEU:HD21	25:V:85:LEU:CB	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:Y:85:TYR:CE2	28:Y:147:LEU:HB2	2.56	0.41
10:o:54:LYS:CE	10:o:61:ARG:HD2	2.50	0.41
14:s:54:MET:HE3	16:u:63:ARG:HH11	1.86	0.41
16:u:18:SER:OG	16:u:71:GLU:OE2	2.38	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
3:C:1562:MET:HE1	3:C:1570:LYS:HG3	2.01	0.41
3:C:1575:GLN:OE1	3:C:1575:GLN:HA	2.20	0.41
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
3:C:2169:LEU:HG	3:C:2272:MET:HE1	2.02	0.41
4:D:308:CYS:HB2	4:D:433:MET:CE	2.39	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:701:GLU:CD	4:D:785:ARG:HH22	2.29	0.41
4:D:822:MET:HE3	4:D:822:MET:CA	2.46	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:I:728:ILE:HG22	9:I:730:ILE:CG1	2.50	0.41
10:a:31:PHE:HA	10:a:42:LEU:HD23	2.02	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
20:M:470:TYR:HB3	20:M:494:LYS:HZ2	1.86	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
11:i:44:LYS:HE3	11:i:44:LYS:HB2	1.73	0.41
16:n:28:GLN:HB2	16:n:46:VAL:HG23	2.03	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
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
3:C:2328:ALA:H	5:E:1078:MET:CE	2.34	0.41
4:D:696:LEU:O	4:D:700:ILE:HG13	2.21	0.41
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:527:MET:HE3	5:E:527:MET:H	1.86	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:517:MET:HE2	5:E:613:ILE:HD12	2.01	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
10:h:17:MET:HE1	10:h:80:MET:HA	2.02	0.41
10:h:86:PRO:HA	10:h:87:PRO:HD3	1.97	0.41
15:m:47:THR:HG23	15:m:59:LEU:HB2	2.03	0.41
16:n:40:LEU:HD11	16:n:70:LEU:HD11	2.02	0.41
24:P:34:G:H2'	24:P:35:G:C8	2.56	0.41
25:V:49:LEU:HD12	25:V:53:ASN:HD22	1.86	0.41
11:p:37:ASN:OD1	11:p:62:GLY:N	2.45	0.41
14:s:30:ARG:O	14:s:90:VAL:N	2.50	0.41
32:Q:910:ASN:O	32:Q:914:ARG:HG3	2.20	0.41
3:C:287:ASN:OD1	3:C:288:LEU:HD23	2.21	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:955:TRP:CE2	3:C:976:MET:HE1	2.56	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: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:738:ASP:N	4:D:738:ASP:OD1	2.52	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:1473:ARG:HH12	5:E:1739:GLU:CD	2.27	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:126:SER:C	6:F:133:VAL:HG13	2.45	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
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
16:g:6:PRO:HB2	16:g:34:PHE:HE2	1.85	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
20:M:501:SER:OG	20:M:503:ASP:OD1	2.31	0.41
12:j:32:LEU:HD23	12:j:32:LEU:HA	1.95	0.41
14:l:48:ILE:HD11	14:l:59:ASP:HB2	2.02	0.41
16:n:3:LYS:HB3	16:n:3:LYS:HE2	1.84	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
12:q:94:ARG:HG2	12:q:96:ILE:HD11	2.03	0.41
16:u:71:GLU:N	16:u:71:GLU:OE1	2.54	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:786:HIS:CD2	5:E:789:MET:HE3	2.55	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
11:b:7:LEU:HD23	11:b:7:LEU:HA	1.89	0.41
15:f:37:ASP:HB3	15:f:41:ASN:H	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
16:n:49:ALA:C	16:n:51:SER:N	2.79	0.41
2:B:6:C:H2'	2:B:7:U:H6	1.86	0.40
3:C:48:LYS:HG3	3:C:49:ARG:N	2.35	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:515:TYR:CD1	3:C:530:LEU:HD21	2.56	0.40
3:C:1019:TYR:CD2	3:C:1022:MET:HE3	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:2200:MET:HE2	3:C:2200:MET:HB2	1.84	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
6:F:289:LEU:HD12	6:F:303:GLY:C	2.46	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
9:I:656:LEU:CD1	9:I:687:MET:HE1	2.49	0.40
10:a:50:LYS:HD2	10:a:50:LYS:HA	1.84	0.40
19:L:67:ILE:O	19:L:71:ILE:HG12	2.21	0.40
19:L:211:ARG:O	19:L:212:MET:C	2.63	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
28:Y:249:MET:N	28:Y:249:MET:HE2	2.37	0.40
29:Z:376:MET:HE2	29:Z:376:MET:HB3	1.93	0.40
11:p:66:ARG:HB3	11:p:67:TYR:HD1	1.86	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
19:L:374:GLN:C	19:L:376:ASN:N	2.79	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
28:Y:226:ARG:HD3	28:Y:226:ARG:C	2.46	0.40
10:o:26:ILE:O	10:o:48:PHE:N	2.49	0.40
10:o:50:LYS:HD3	11:p:50:ARG:HH22	1.86	0.40
15:t:8:LYS:HE2	15:t:8:LYS:HB2	1.83	0.40
16:u:8:GLU:OE1	16:u:10:LYS:HB2	2.20	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
32:Q:861:ILE:HG12	32:Q:894:ASN:CG	2.46	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
5:E:1157:ASN:H	5:E:1160:GLU:CD	2.29	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
9:I:441:LYS:HE3	9:I:441:LYS:HB3	1.83	0.40
11:b:72:ASP:N	11:b:72:ASP:OD1	2.53	0.40
15:f:27:MET:HB3	15:f:51:ILE:HD13	2.03	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
11:p:61:ARG:HB3	11:p:64:ASN:OD1	2.21	0.40
12:q:12:THR:HG23	12:q:15:GLU:HG2	2.04	0.40
14:s:14:MET:HG2	16:u:33:GLY:HA2	2.03	0.40
15:t:23:LEU:HA	15:t:23:LEU:HD12	1.70	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
11:b:40:LEU:HD12	11:b:43:VAL:HG22	2.03	0.40
14:e:57:VAL:HA	14:e:77:ILE:O	2.21	0.40
17:J:41:G:HO2'	19:L:270:HIS:HD1	1.62	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
11:i:3:LEU:HD23	12:j:60:ASP:HB3	2.02	0.40
16:n:34:PHE:CB	16:n:40:LEU:HD23	2.52	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
31:U:247:PRO:HD2	31:U:449:TYR:CZ	2.57	0.40
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:345:ARG:HH22	5:E:349:LYS:HZ2	1.70	0.40
5:E:498:ASN:CB	5:E:667:VAL:HG22	2.52	0.40
5:E:527:MET:H	5:E:527:MET:CE	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:389:PRO:C	9:I:390:ILE:HD13	2.46	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
10:a:9:MET:HE3	11:b:39:HIS:CE1	2.56	0.40
16:g:41:VAL:HG12	16:g:61:VAL:HG23	2.03	0.40
11:i:66:ARG:HG2	11:i:67:TYR:HD2	1.87	0.40
12:j:67:LEU:HD12	12:j:99:MET:HE1	2.03	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:277:PHE:CA	31:U:299:MET:HE2	2.52	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%)	48	77
6	F	305/357 (85%)	292 (96%)	12 (4%)	1 (0%)	36	64
7	G	783/941 (83%)	763 (97%)	20 (3%)	0	100	100
8	H	141/149 (95%)	138 (98%)	3 (2%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
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%)	10	34
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%)	6	24
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
16	g	72/76 (95%)	69 (96%)	3 (4%)	0	100	100
16	n	72/76 (95%)	67 (93%)	4 (6%)	1 (1%)	9	30
16	u	71/76 (93%)	65 (92%)	6 (8%)	0	100	100
19	L	312/499 (62%)	296 (95%)	15 (5%)	1 (0%)	36	64
20	M	359/522 (69%)	345 (96%)	14 (4%)	0	100	100
21	N	220/683 (32%)	206 (94%)	13 (6%)	1 (0%)	24	53
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%)	30	58

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
29	Z	208/485 (43%)	207 (100%)	0	1 (0%)	24	53
30	S	83/800 (10%)	79 (95%)	3 (4%)	1 (1%)	10	34
31	U	456/565 (81%)	437 (96%)	19 (4%)	0	100	100
32	Q	316/1007 (31%)	304 (96%)	11 (4%)	1 (0%)	36	64
All	All	11376/16189 (70%)	10948 (96%)	414 (4%)	14 (0%)	49	77

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 ⓘ

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%)	2009 (100%)	6 (0%)	86	84
4	D	756/866 (87%)	755 (100%)	1 (0%)	88	89
5	E	1779/1908 (93%)	1769 (99%)	10 (1%)	78	80
6	F	263/300 (88%)	262 (100%)	1 (0%)	84	82
7	G	626/792 (79%)	626 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
8	H	131/137 (96%)	130 (99%)	1 (1%)	73	77
9	I	518/721 (72%)	516 (100%)	2 (0%)	84	82
10	a	67/177 (38%)	66 (98%)	1 (2%)	57	69
10	h	75/177 (42%)	75 (100%)	0	100	100
10	o	78/177 (44%)	78 (100%)	0	100	100
11	b	76/101 (75%)	75 (99%)	1 (1%)	61	71
11	i	76/101 (75%)	76 (100%)	0	100	100
11	p	77/101 (76%)	76 (99%)	1 (1%)	61	71
12	c	93/110 (84%)	92 (99%)	1 (1%)	65	74
12	j	86/110 (78%)	85 (99%)	1 (1%)	63	72
12	q	100/110 (91%)	100 (100%)	0	100	100
13	d	73/101 (72%)	73 (100%)	0	100	100
13	k	73/101 (72%)	71 (97%)	2 (3%)	39	61
13	r	72/101 (71%)	71 (99%)	1 (1%)	59	70
14	e	72/84 (86%)	72 (100%)	0	100	100
14	l	71/84 (84%)	67 (94%)	4 (6%)	19	46
14	s	75/84 (89%)	75 (100%)	0	100	100
15	f	61/74 (82%)	61 (100%)	0	100	100
15	m	61/74 (82%)	61 (100%)	0	100	100
15	t	63/74 (85%)	62 (98%)	1 (2%)	55	68
16	g	64/66 (97%)	64 (100%)	0	100	100
16	n	64/66 (97%)	62 (97%)	2 (3%)	35	59
16	u	63/66 (96%)	62 (98%)	1 (2%)	55	68
19	L	271/424 (64%)	265 (98%)	6 (2%)	45	63
20	M	308/442 (70%)	308 (100%)	0	100	100
21	N	203/599 (34%)	201 (99%)	2 (1%)	68	75
22	O	107/111 (96%)	107 (100%)	0	100	100
23	R	136/287 (47%)	135 (99%)	1 (1%)	76	78
25	V	92/151 (61%)	90 (98%)	2 (2%)	45	63
26	W	140/215 (65%)	140 (100%)	0	100	100
27	X	117/119 (98%)	117 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
28	Y	213/313 (68%)	208 (98%)	5 (2%)	44	63
29	Z	173/401 (43%)	172 (99%)	1 (1%)	78	80
30	S	74/681 (11%)	73 (99%)	1 (1%)	59	70
31	U	420/511 (82%)	419 (100%)	1 (0%)	87	85
32	Q	291/919 (32%)	291 (100%)	0	100	100
All	All	10173/14144 (72%)	10117 (99%)	56 (1%)	76	80

All (56) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
3	C	768	ASP
3	C	1636	LYS
3	C	1659	LYS
3	C	1717	ASN
3	C	1719	PHE
3	C	2014	MET
4	D	160	ARG
5	E	414	LEU
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	890	GLU
5	E	942	ASP
5	E	1846	ILE
6	F	145	LYS
8	H	70	THR
9	I	428	ASN
9	I	726	ARG
10	a	28	ILE
11	b	55	LEU
12	c	110	LEU
19	L	60	PHE
19	L	69	GLU
19	L	74	GLN
19	L	164	ILE
19	L	165	MET
19	L	170	THR

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Mol	Chain	Res	Type
21	N	452	THR
21	N	457	GLN
23	R	22	TYR
12	j	65	MET
13	k	18	VAL
13	k	76	MET
14	l	64	ILE
14	l	74	LEU
14	l	77	ILE
14	l	78	MET
16	n	41	VAL
16	n	48	MET
25	V	16	ASP
25	V	43	ASP
28	Y	78	CYS
28	Y	79	ARG
28	Y	85	TYR
28	Y	86	THR
28	Y	225	TYR
29	Z	335	ARG
11	p	65	ILE
13	r	73	LEU
15	t	23	LEU
16	u	10	LYS
30	S	758	LYS
31	U	339	LYS

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (125) such sidechains are listed below:

Mol	Chain	Res	Type
3	C	57	GLN
3	C	97	HIS
3	C	181	ASN
3	C	226	GLN
3	C	397	ASN
3	C	545	HIS
3	C	573	GLN
3	C	680	HIS
3	C	752	ASN
3	C	1023	ASN
3	C	1217	GLN
3	C	1363	GLN

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Mol	Chain	Res	Type
3	C	1399	GLN
3	C	1658	GLN
3	C	1665	GLN
3	C	1717	ASN
3	C	1737	ASN
3	C	1767	ASN
3	C	1804	ASN
3	C	1823	HIS
3	C	1830	GLN
3	C	1875	HIS
3	C	1944	HIS
3	C	1946	ASN
3	C	2166	HIS
4	D	139	HIS
4	D	140	HIS
4	D	280	HIS
4	D	513	ASN
4	D	542	ASN
4	D	837	GLN
5	E	82	ASN
5	E	121	GLN
5	E	418	GLN
5	E	532	ASN
5	E	621	HIS
5	E	719	ASN
5	E	771	ASN
5	E	824	HIS
5	E	885	GLN
5	E	967	ASN
5	E	1064	GLN
5	E	1158	HIS
5	E	1191	GLN
5	E	1281	GLN
5	E	1332	GLN
5	E	1513	ASN
5	E	1615	ASN
5	E	1730	HIS
5	E	1766	GLN
5	E	1791	GLN
5	E	2058	GLN
5	E	2103	ASN
6	F	188	GLN

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Mol	Chain	Res	Type
6	F	357	GLN
7	G	308	HIS
7	G	399	HIS
7	G	733	ASN
7	G	797	ASN
8	H	110	GLN
9	I	401	HIS
9	I	428	ASN
9	I	482	GLN
9	I	641	GLN
11	b	12	HIS
11	b	64	ASN
12	c	25	ASN
12	c	64	ASN
12	c	69	ASN
14	e	40	ASN
14	e	83	ASN
15	f	68	ASN
16	g	54	GLN
19	L	74	GLN
19	L	198	ASN
19	L	240	ASN
20	M	164	GLN
20	M	463	ASN
21	N	397	ASN
21	N	445	GLN
21	N	457	GLN
21	N	524	GLN
21	N	563	ASN
21	N	660	HIS
22	O	68	HIS
22	O	77	ASN
22	O	87	GLN
23	R	27	GLN
11	i	64	ASN
12	j	34	GLN
12	j	45	ASN
14	l	27	ASN
14	l	65	HIS
14	l	83	ASN
16	n	54	GLN
16	n	55	ASN

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Mol	Chain	Res	Type
25	V	65	GLN
25	V	88	GLN
26	W	59	ASN
26	W	152	GLN
27	X	39	GLN
27	X	59	GLN
27	X	97	HIS
28	Y	63	ASN
28	Y	74	HIS
28	Y	158	GLN
28	Y	229	ASN
29	Z	228	GLN
10	o	58	GLN
11	p	26	HIS
12	q	69	ASN
14	s	16	GLN
14	s	26	GLN
14	s	32	GLN
15	t	12	ASN
16	u	55	ASN
30	S	728	GLN
31	U	233	ASN
31	U	316	GLN
31	U	372	GLN
31	U	472	ASN
31	U	521	HIS
32	Q	896	HIS
32	Q	926	ASN
32	Q	1004	GLN

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%)	46 (38%)	2 (1%)
All	All	387/788 (49%)	116 (29%)	5 (1%)

All (116) 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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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	89	U
24	P	90	U
24	P	93	U
24	P	94	U
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 oligosaccharides 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	$\# Z > 2$
35	GTP	D	1500	33	33,34,34	0.95	0	50,54,54	1.63	8 (16%)
34	IHP	C	3000	-	36,36,36	0.79	0	60,60,60	0.89	0

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
35	GTP	D	1500	33	-	2/22/38/38	0/3/3/3
34	IHP	C	3000	-	-	3/30/54/54	0/1/1/1

There are no bond length outliers.

All (8) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
35	D	1500	GTP	C5-C4-N3	-4.99	120.45	128.39
35	D	1500	GTP	C2-N3-C4	4.75	120.48	112.30
35	D	1500	GTP	N9-C4-N3	3.09	132.12	125.95
35	D	1500	GTP	C2-N1-C6	-3.05	119.58	125.11

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
35	D	1500	GTP	N9-C8-N7	-2.94	107.95	113.40
35	D	1500	GTP	C5-C6-N1	2.76	120.28	113.25
35	D	1500	GTP	C8-N7-C5	2.72	109.10	104.26
35	D	1500	GTP	O6-C6-C5	-2.36	120.30	126.53

There are no chirality outliers.

All (5) torsion outliers are listed below:

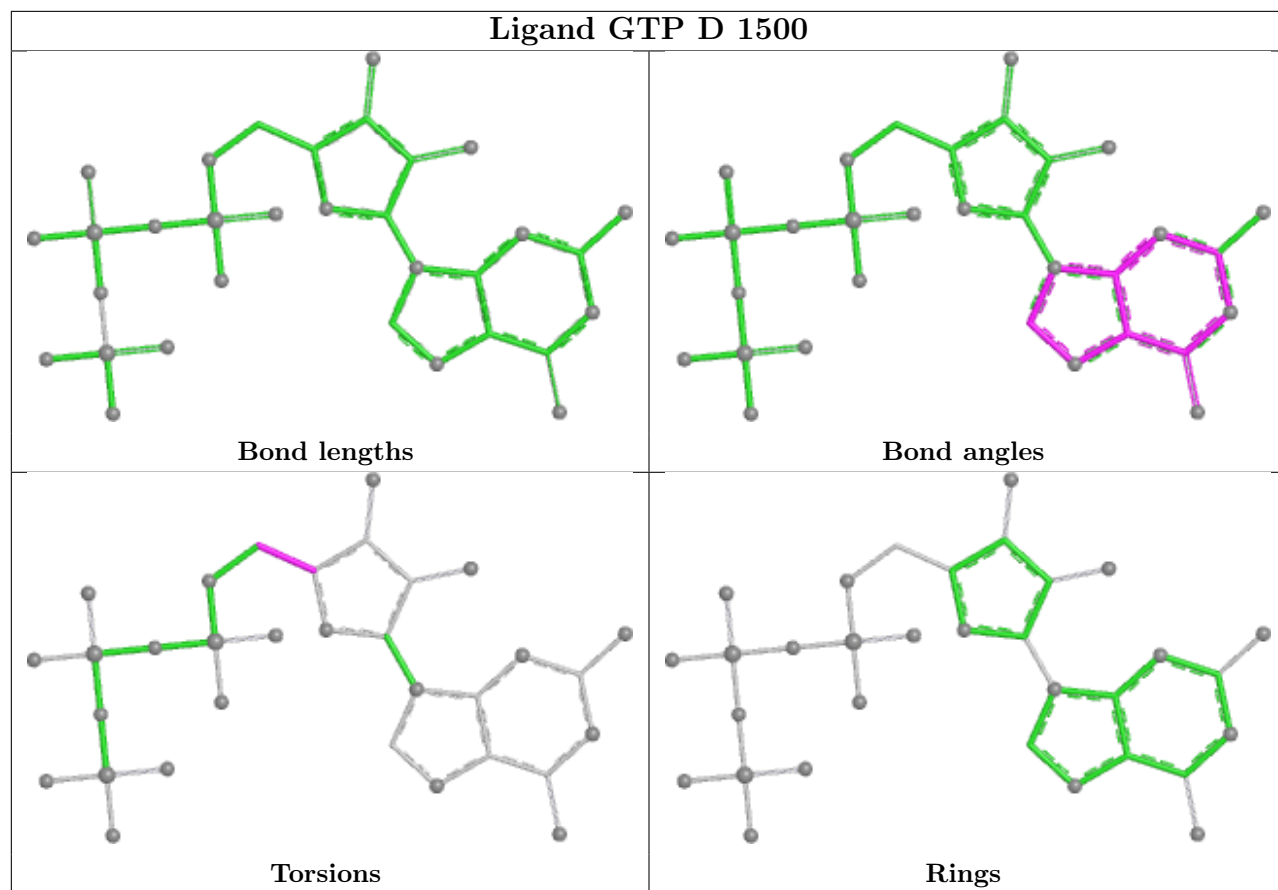
Mol	Chain	Res	Type	Atoms
35	D	1500	GTP	O4'-C4'-C5'-O5'
35	D	1500	GTP	C3'-C4'-C5'-O5'
34	C	3000	IHP	C3-O13-P3-O23
34	C	3000	IHP	C5-O15-P5-O25
34	C	3000	IHP	C6-O16-P6-O26

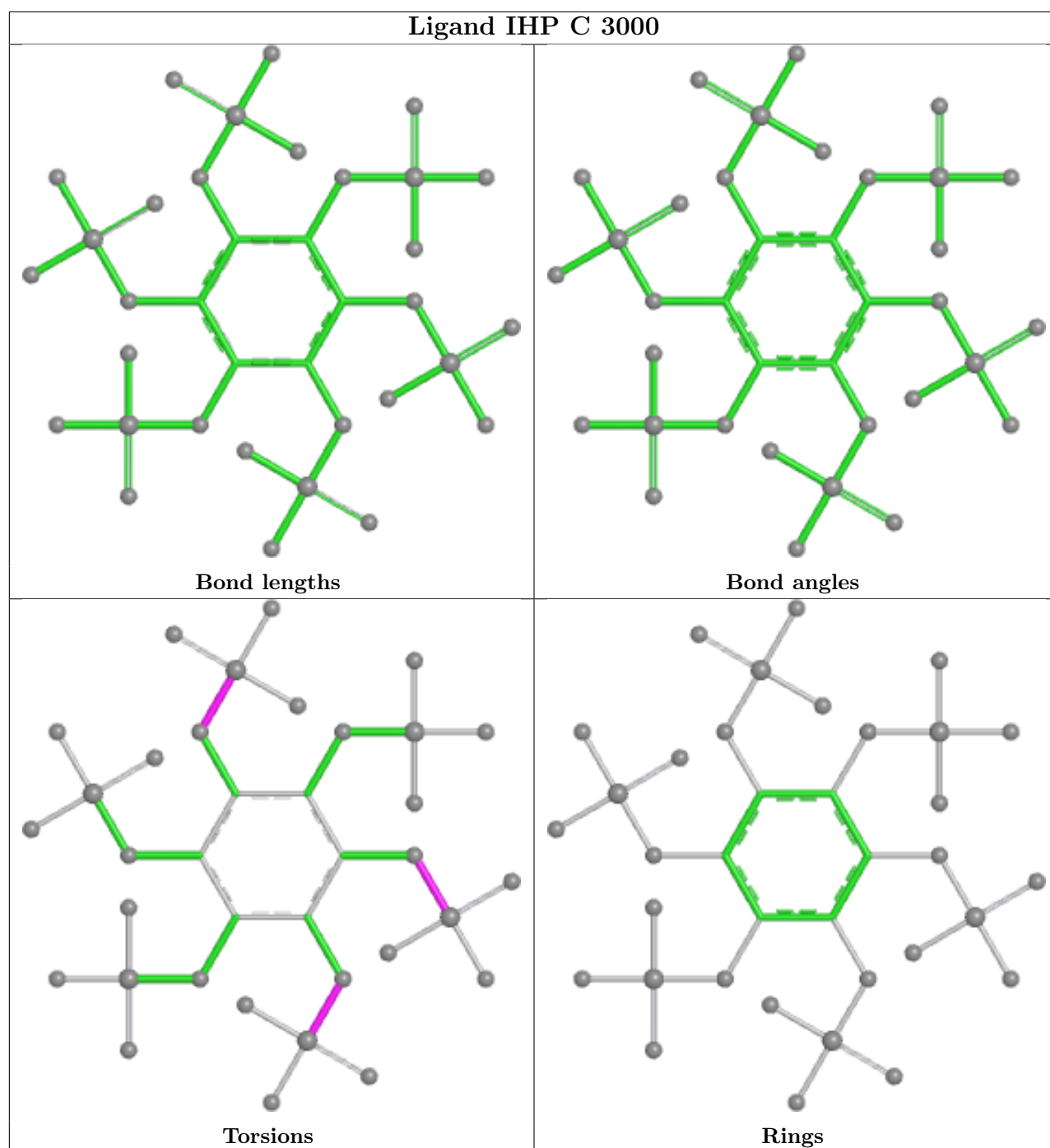
There are no ring outliers.

2 monomers are involved in 8 short contacts:

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

The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less than 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.





5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

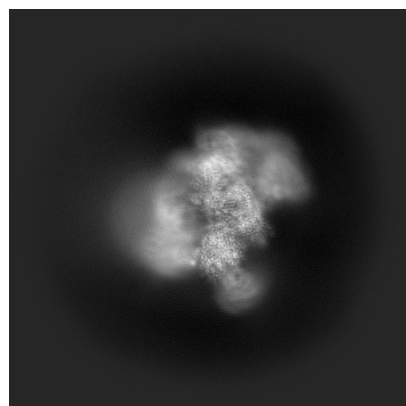
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-38993. These allow visual inspection of the internal detail of the map and identification of artifacts.

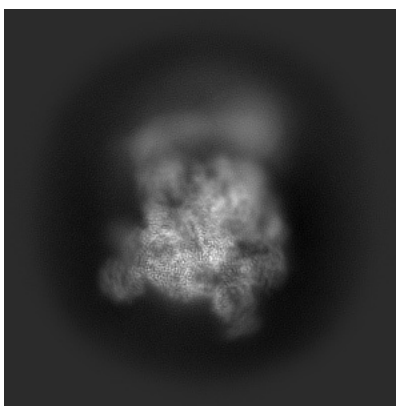
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

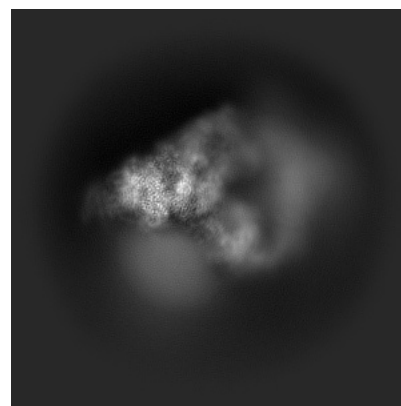
6.1.1 Primary map



X

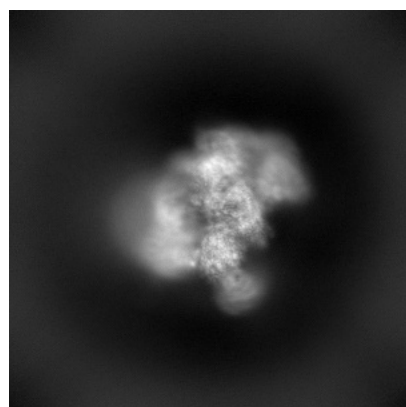


Y

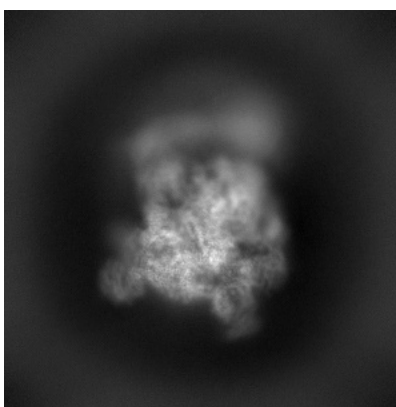


Z

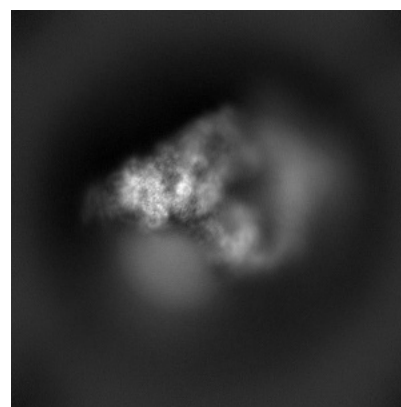
6.1.2 Raw map



X



Y

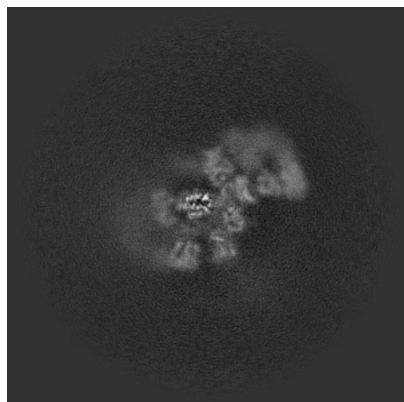


Z

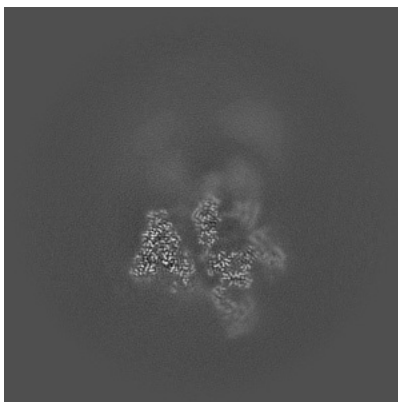
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

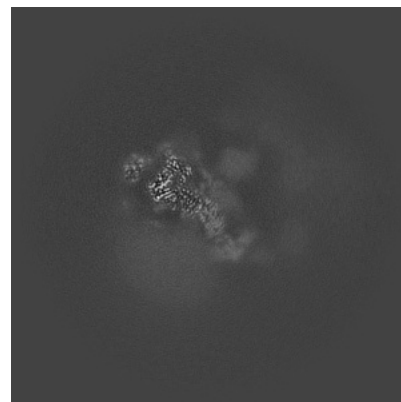
6.2.1 Primary map



X Index: 256

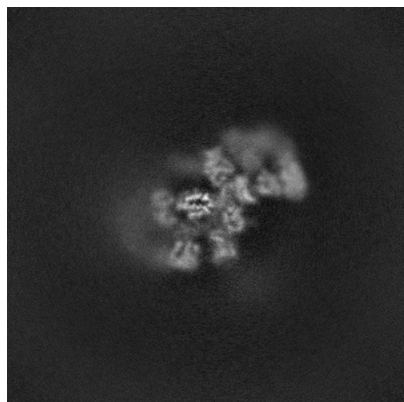


Y Index: 256

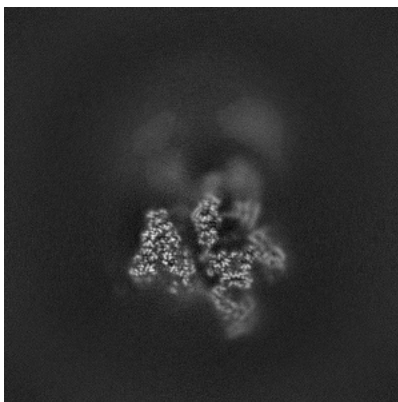


Z Index: 256

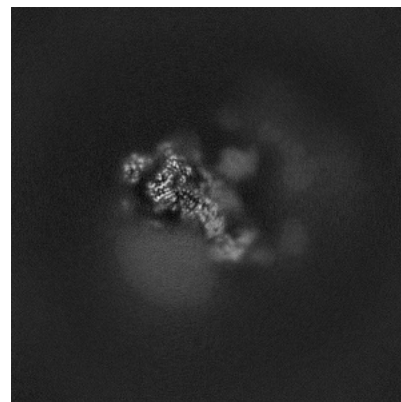
6.2.2 Raw map



X Index: 256



Y Index: 256

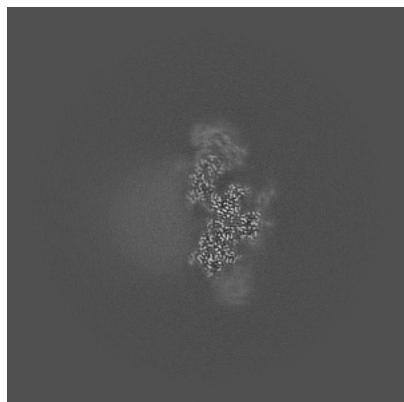


Z Index: 256

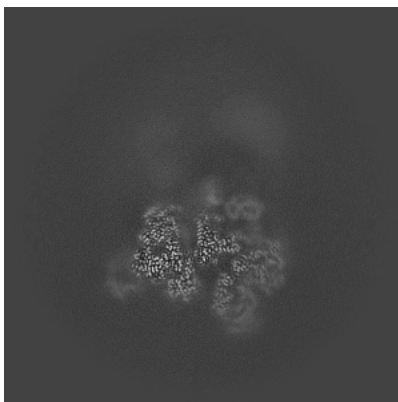
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

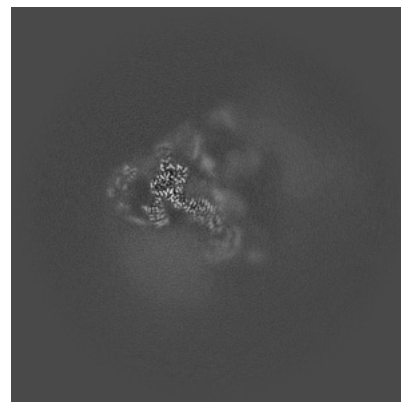
6.3.1 Primary map



X Index: 188

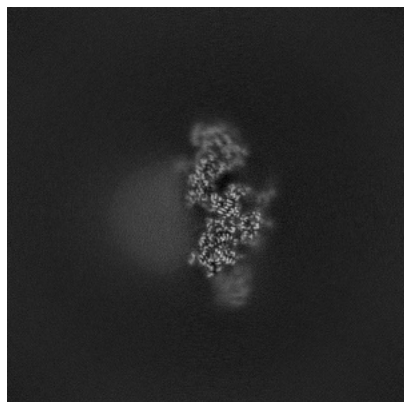


Y Index: 268

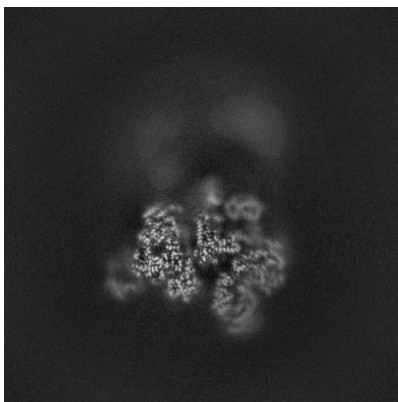


Z Index: 266

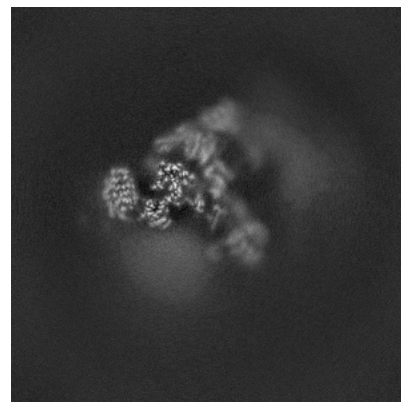
6.3.2 Raw map



X Index: 187



Y Index: 268

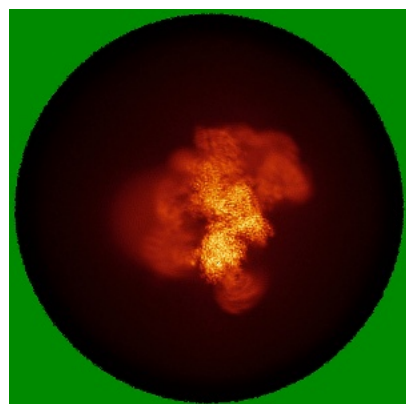


Z Index: 275

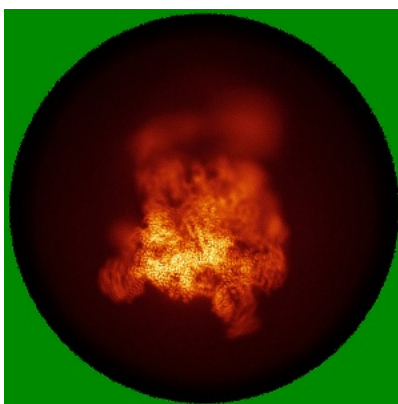
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal standard-deviation projections (False-color) [i](#)

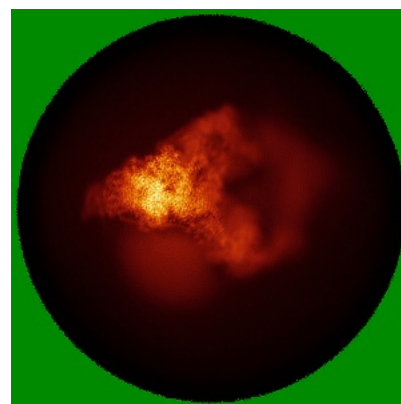
6.4.1 Primary map



X

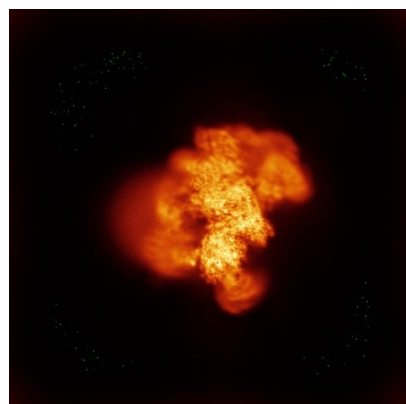


Y

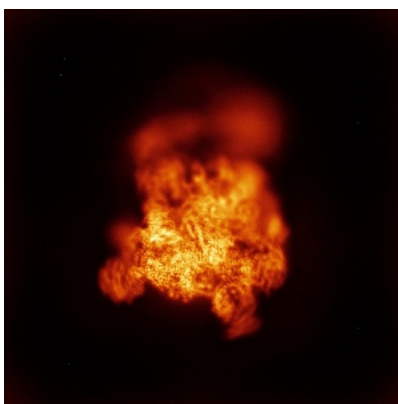


Z

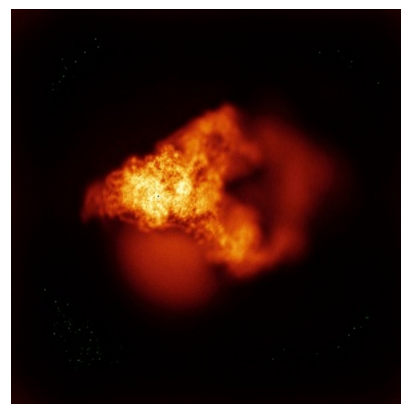
6.4.2 Raw map



X



Y

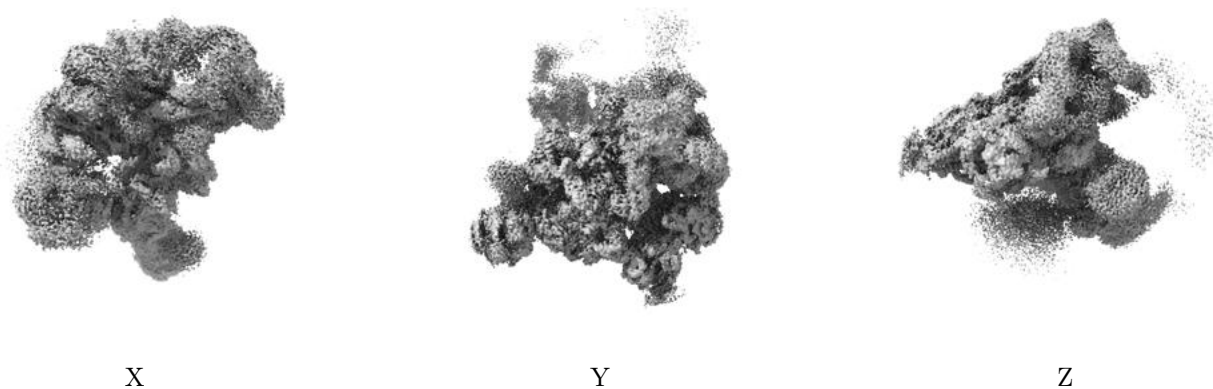


Z

The images above show the map standard deviation projections with false color in three orthogonal directions. Minimum values are shown in green, max in blue, and dark to light orange shades represent small to large values respectively.

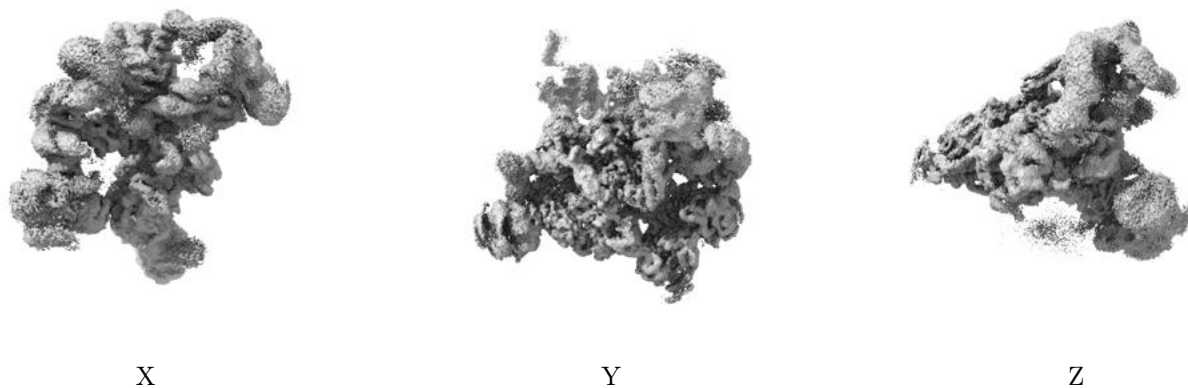
6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 0.25. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

6.5.2 Raw map



These images show the 3D surface of the raw map. The raw map's contour level was selected so that its surface encloses the same volume as the primary map does at its recommended contour level.

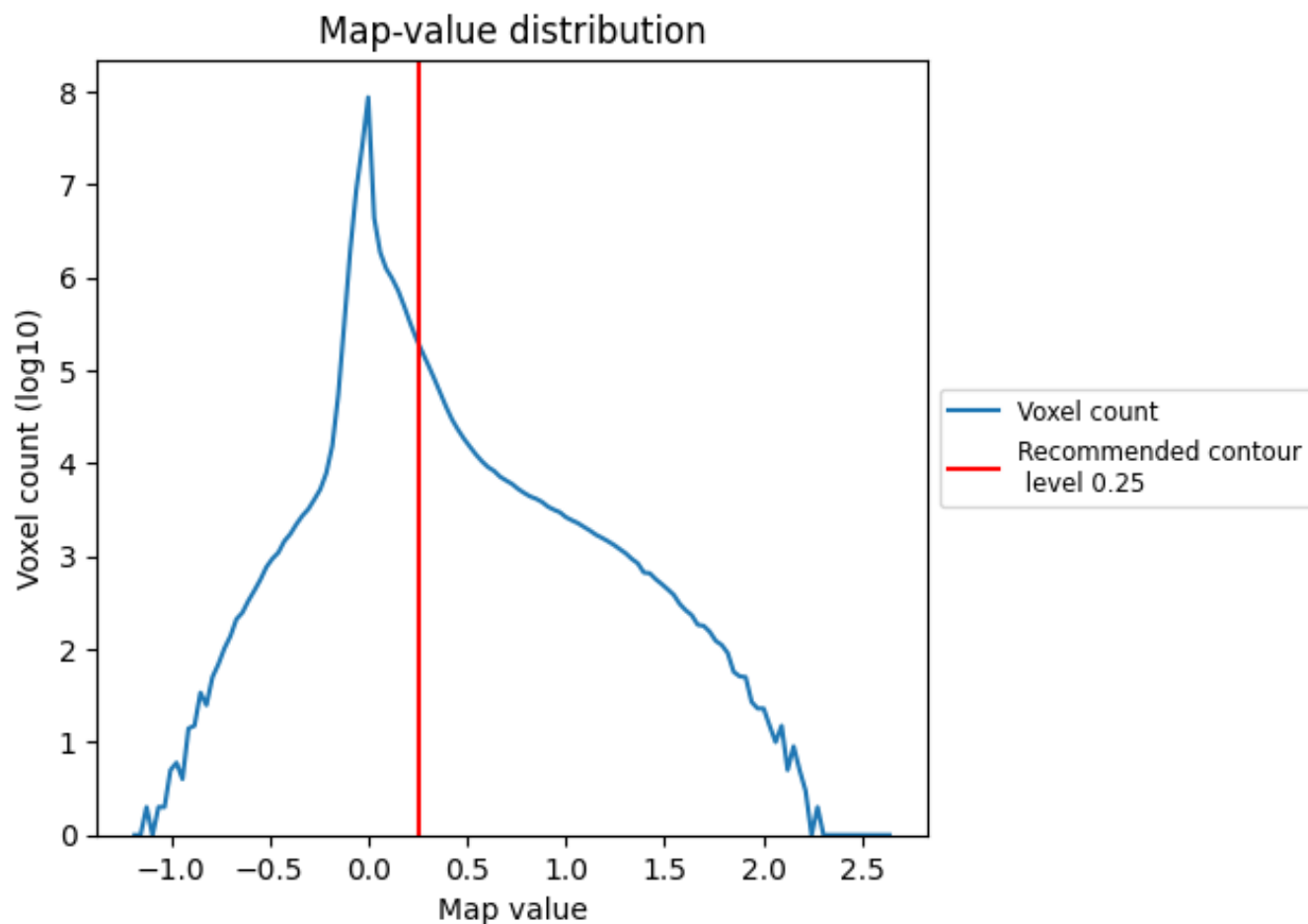
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

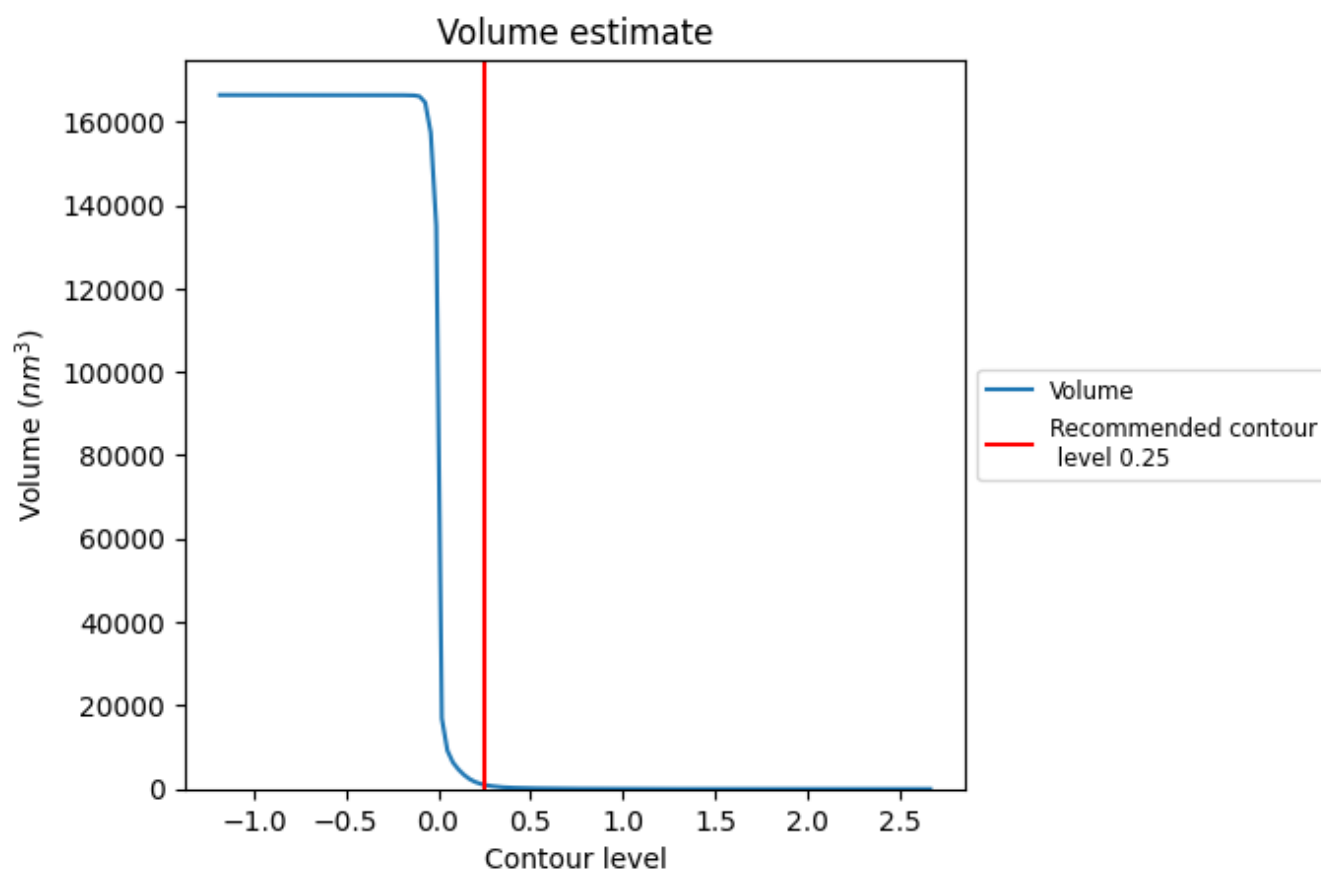
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution [i](#)



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

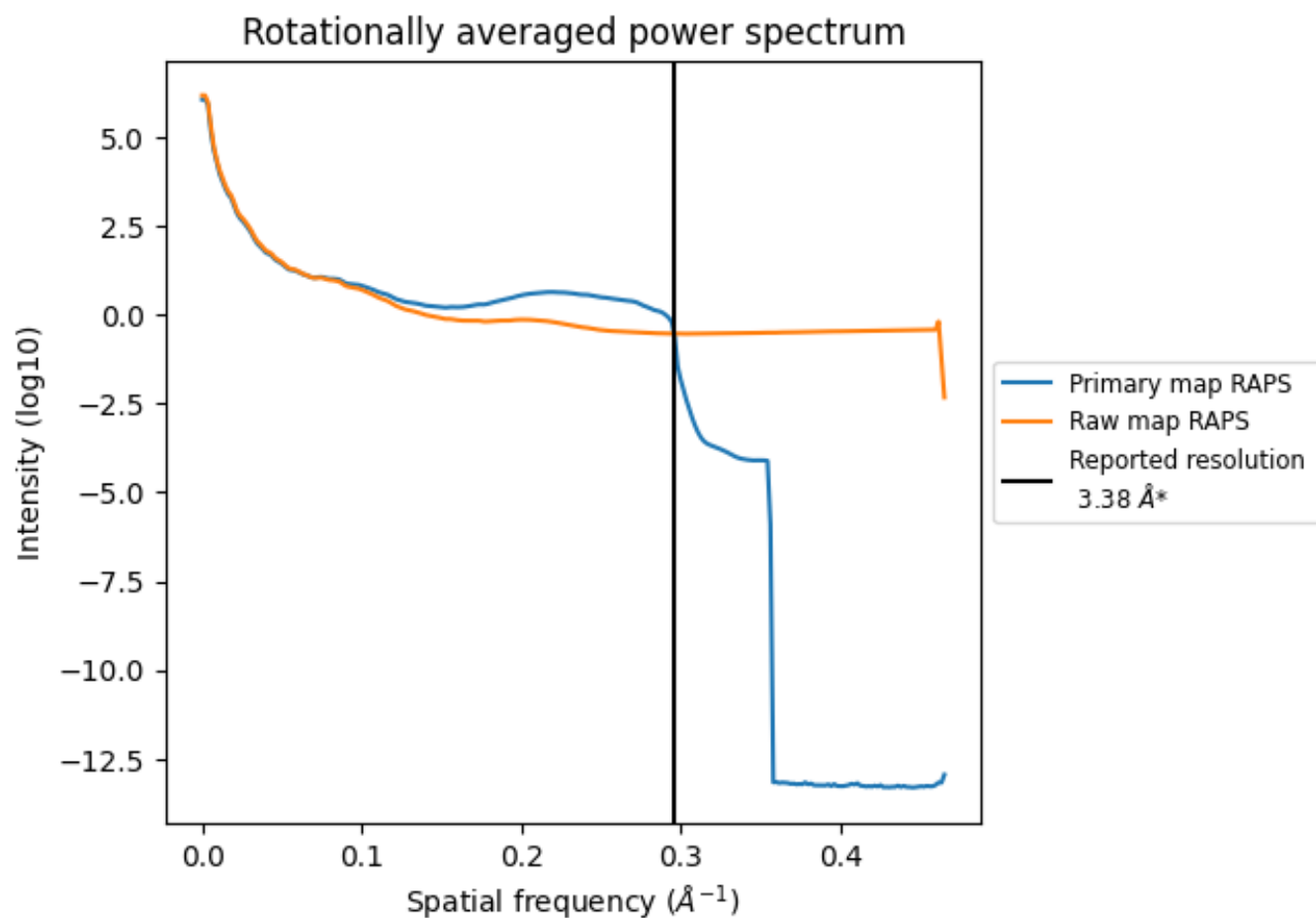
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 1019 nm^3 ; this corresponds to an approximate mass of 920 kDa.

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

7.3 Rotationally averaged power spectrum ⓘ

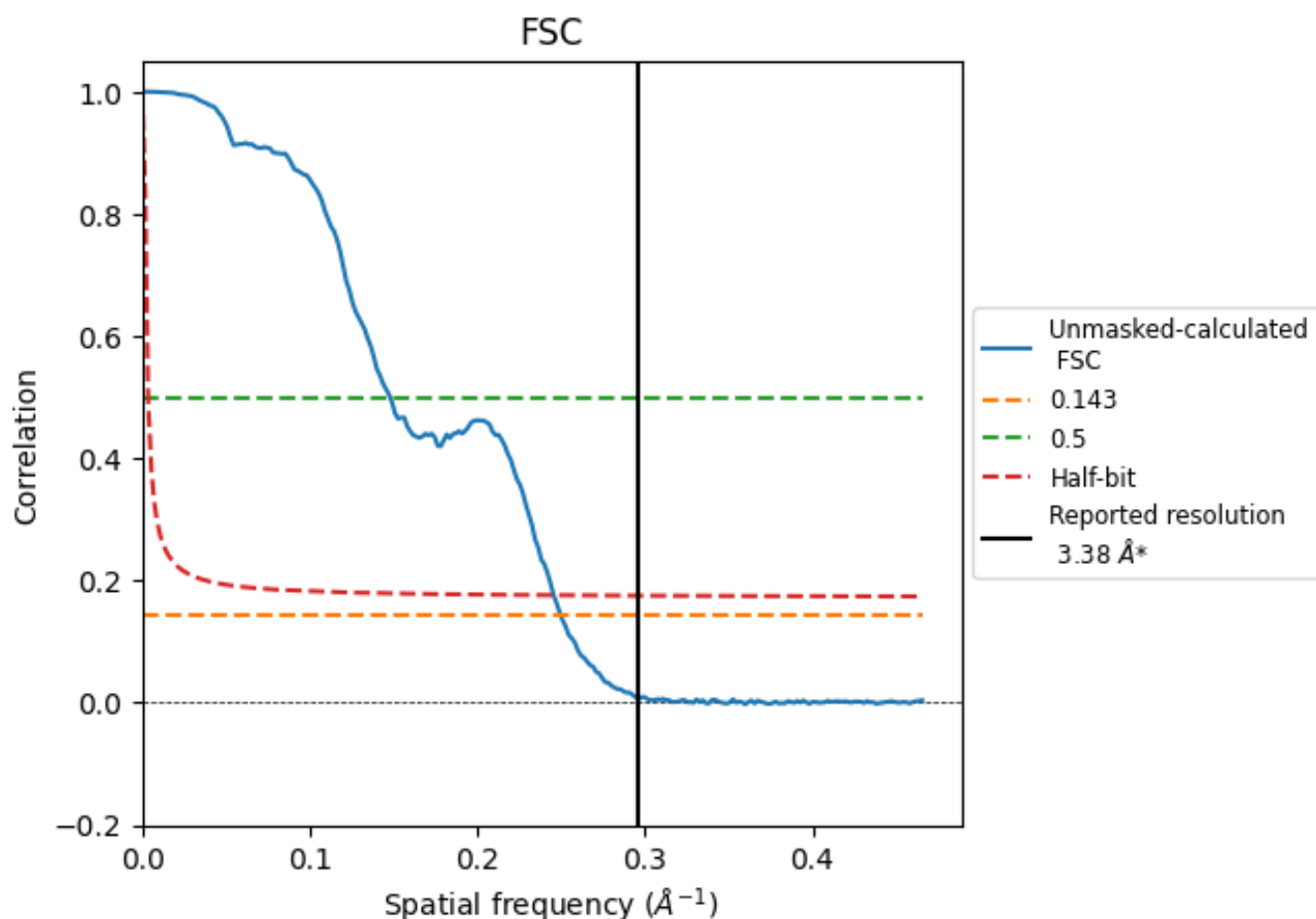


*Reported resolution corresponds to spatial frequency of 0.296 \AA^{-1}

8 Fourier-Shell correlation [i](#)

Fourier-Shell Correlation (FSC) is the most commonly used method to estimate the resolution of single-particle and subtomogram-averaged maps. The shape of the curve depends on the imposed symmetry, mask and whether or not the two 3D reconstructions used were processed from a common reference. The reported resolution is shown as a black line. A curve is displayed for the half-bit criterion in addition to lines showing the 0.143 gold standard cut-off and 0.5 cut-off.

8.1 FSC [i](#)



*Reported resolution corresponds to spatial frequency of 0.296 \AA^{-1}

8.2 Resolution estimates [i](#)

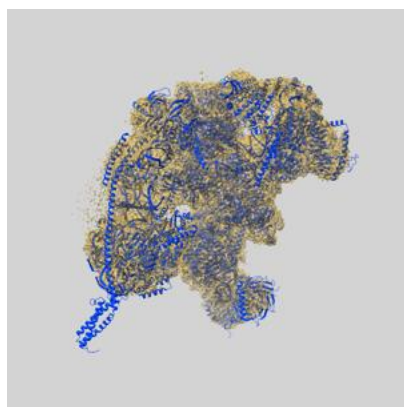
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	3.38	-	-
Author-provided FSC curve	-	-	-
Unmasked-calculated*	4.00	6.76	4.07

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps. The value from deposited half-maps intersecting FSC 0.143 CUT-OFF 4.00 differs from the reported value 3.38 by more than 10 %

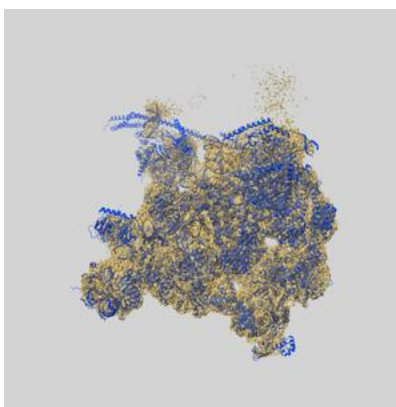
9 Map-model fit [i](#)

This section contains information regarding the fit between EMDB map EMD-38993 and PDB model 8Y6O. Per-residue inclusion information can be found in [section 3](#) on [page 12](#).

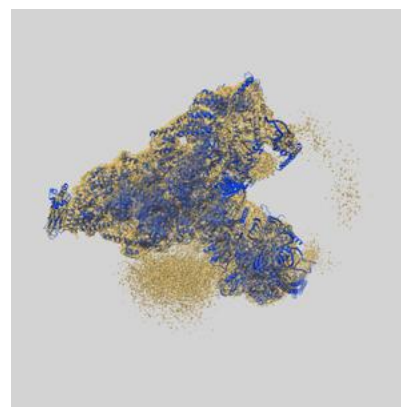
9.1 Map-model overlay [i](#)



X



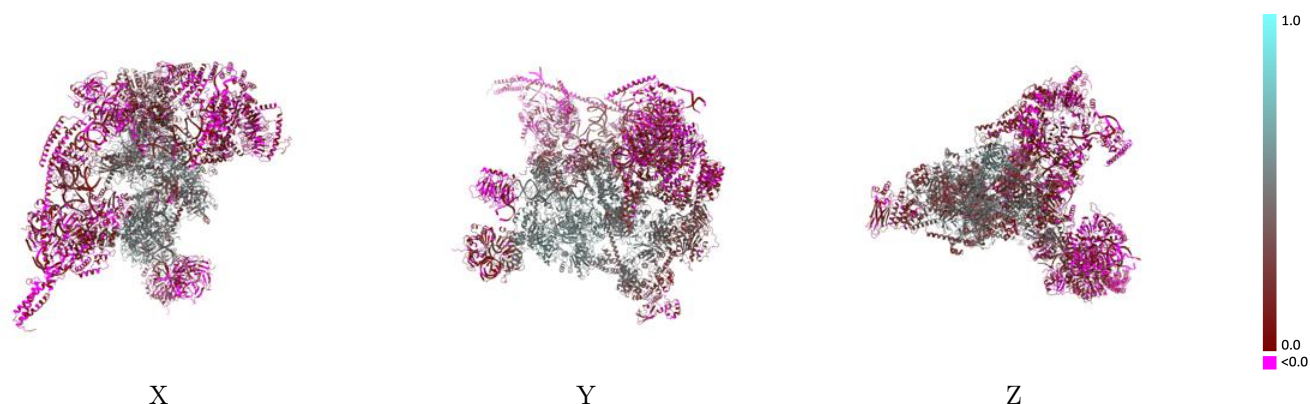
Y



Z

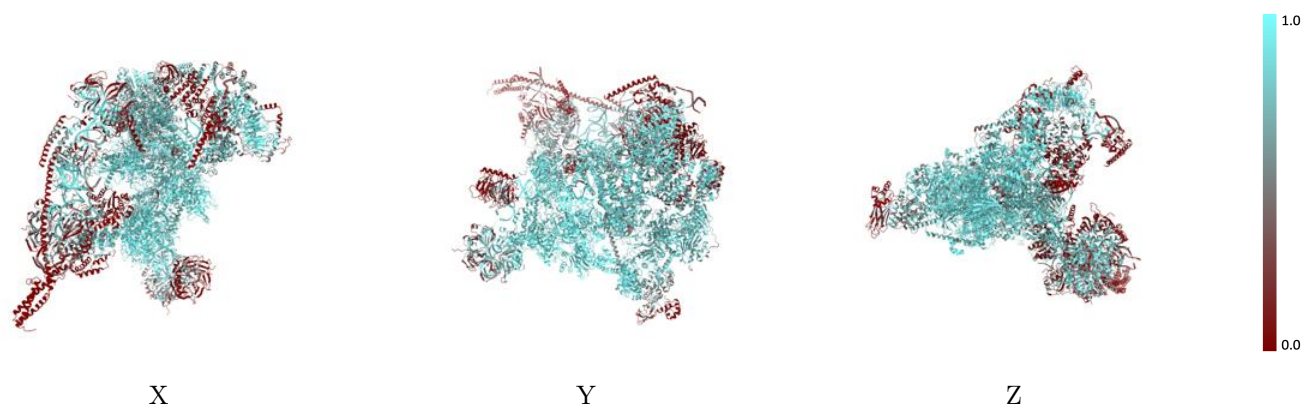
The images above show the 3D surface view of the map at the recommended contour level 0.25 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

9.2 Q-score mapped to coordinate model [i](#)



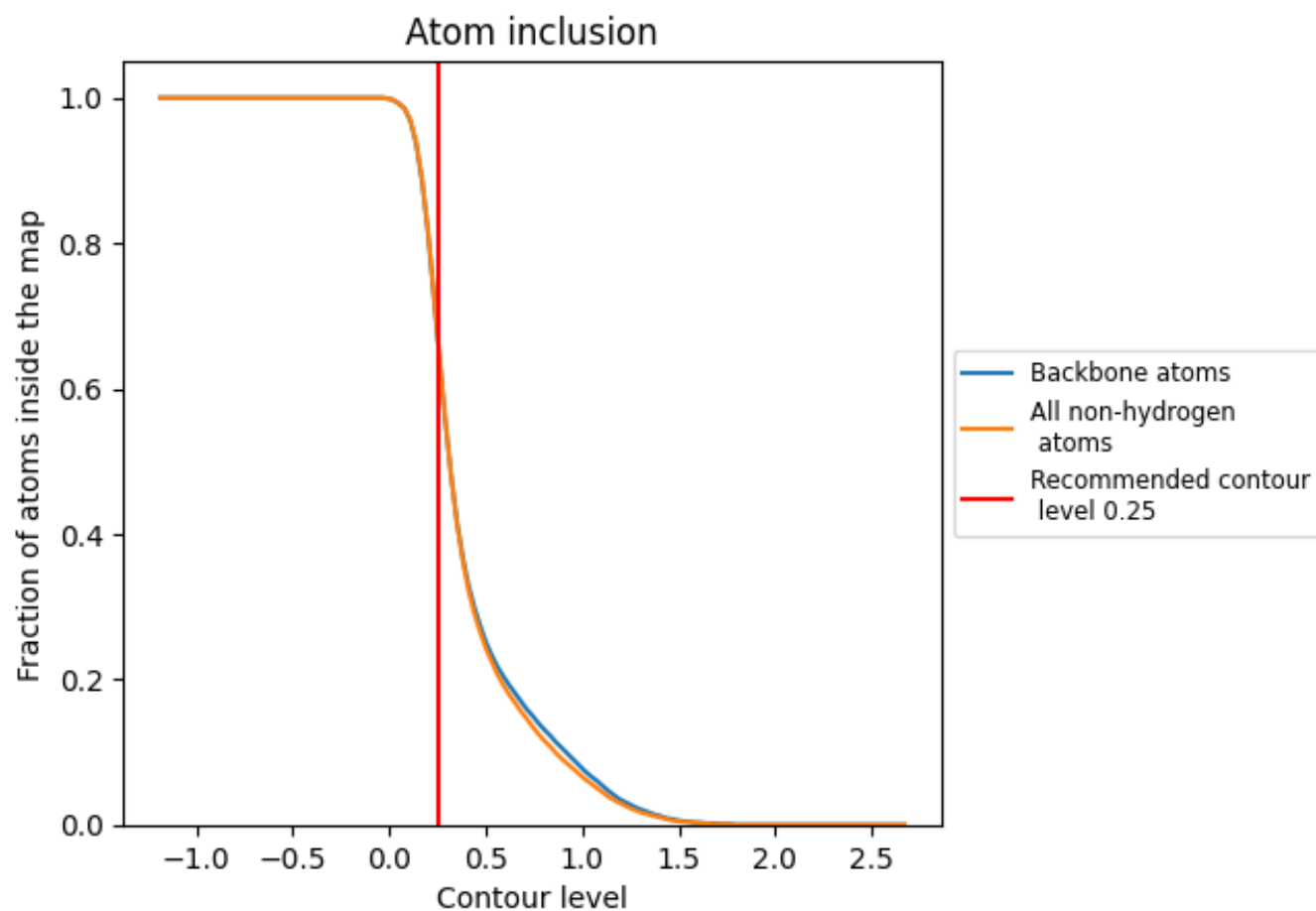
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions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

9.3 Atom inclusion mapped to coordinate model [i](#)



The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.25).







































































9.4 Atom inclusion [i](#)



At the recommended contour level, 67% of all backbone atoms, 68% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary ⓘ

























The table lists the average atom inclusion at the recommended contour level (0.25) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.6760	 0.2580
A	 0.6490	 0.1320
B	 0.8580	 0.3050
C	 0.8850	 0.4490
D	 0.9600	 0.5390
E	 0.7700	 0.3290
F	 0.1450	 -0.0050
G	 0.7440	 0.1650
H	 0.7850	 0.2830
I	 0.5710	 0.2360
J	 0.7860	 0.0990
K	 0.6800	 0.1030
L	 0.6520	 0.1720
M	 0.7370	 0.0570
N	 0.5620	 0.0760
O	 0.6580	 0.1350
P	 0.6990	 0.1240
Q	 0.0780	 0.0890
R	 0.1980	 0.0080
S	 0.4200	 0.1720
U	 0.9600	 0.5260
V	 0.2160	 0.0440
W	 0.4960	 0.0680
X	 0.5310	 0.1190
Y	 0.1360	 0.0350
Z	 0.1530	 0.0330
a	 0.7010	 0.2520
b	 0.5930	 0.1370
c	 0.4560	 0.0880
d	 0.8320	 0.4020
e	 0.5870	 0.1890
f	 0.5100	 0.1330
g	 0.6610	 0.2940
h	 0.3910	 0.0660
i	 0.3460	 0.0320



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Chain	Atom inclusion	Q-score
j	 0.3820	 0.0770
k	 0.4160	 0.0300
l	 0.5610	 0.0420
m	 0.5960	 0.0450
n	 0.4620	 0.0300
o	 0.2970	 0.0230
p	 0.4950	 0.0480
q	 0.4820	 0.0720
r	 0.3250	 0.1010
s	 0.5920	 0.0810
t	 0.4400	 0.0660
u	 0.3980	 0.0450