



Full wwPDB EM Validation Report ⓘ

Mar 26, 2026 – 04:01 PM UTC

PDB ID : 7NFC / pdb_00007nfc
EMDB ID : EMD-12299
Title : Cryo-EM structure of NHEJ super-complex (dimer)
Authors : Chaplin, A.K.; Hardwick, S.W.; Kefala Stavridi, A.; Chirgadze, D.Y.; Blundell, T.L.
Deposited on : 2021-02-05
Resolution : 4.14 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
MolProbity : 4-5-2 with Phenix2.0
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

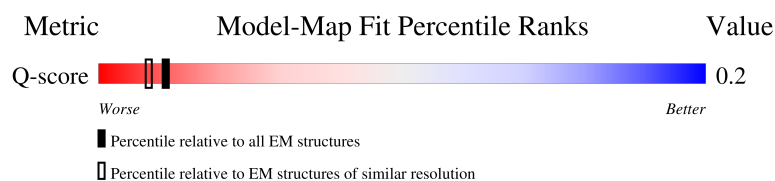
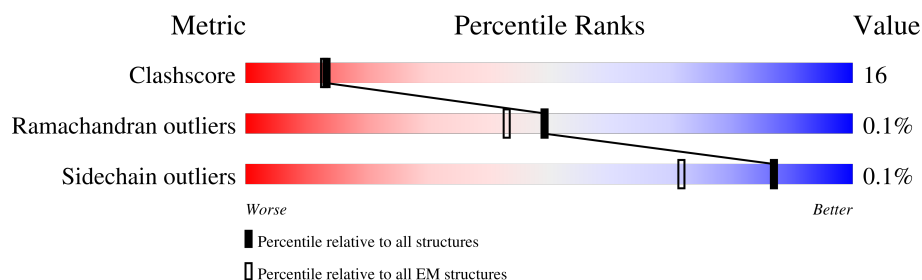
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 4.14 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.



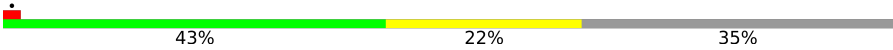
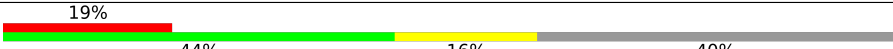
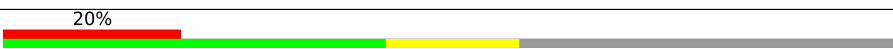
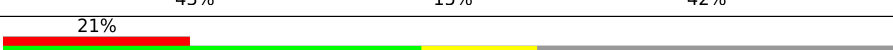
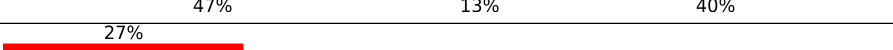
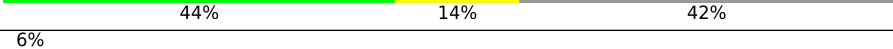
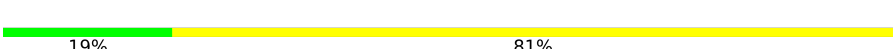
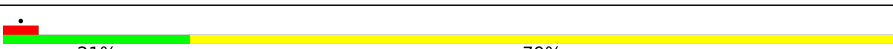
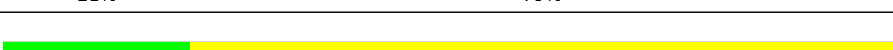
Metric	Whole archive (#Entries)	EM structures (#Entries)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	229148	23984	-
Ramachandran outliers	224038	23583	-
Sidechain outliers	223484	23102	-
Q-score	-	25397	5577 (3.64 - 4.64)

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	4148	
1	F	4148	
2	B	609	
2	G	609	

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Mol	Chain	Length	Quality of chain
3	C	732	
3	H	732	
4	K	336	
4	L	336	
4	N	336	
4	O	336	
5	M	911	
5	P	911	
6	Q	299	
6	R	299	
7	D	27	
8	E	28	
8	I	28	
9	J	27	

2 Entry composition

There are 9 unique types of molecules in this entry. The entry contains 89069 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a protein called DNA-dependent protein kinase catalytic subunit,DNA-dependent protein kinase catalytic subunit,DNA-PKcs.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	A	3562	Total	C	N	O	S	0	0
			28076	18032	4728	5132	184		
1	F	3557	Total	C	N	O	S	0	0
			28060	18026	4720	5131	183		

- Molecule 2 is a protein called X-ray repair cross-complementing protein 6.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	B	476	Total	C	N	O	S	0	0
			3822	2452	648	705	17		
2	G	489	Total	C	N	O	S	0	0
			3948	2529	669	732	18		

- Molecule 3 is a protein called X-ray repair cross-complementing protein 5.

Mol	Chain	Residues	Atoms					AltConf	Trace
3	C	477	Total	C	N	O	S	0	0
			3849	2466	646	714	23		
3	H	642	Total	C	N	O	S	0	0
			5150	3298	864	963	25		

- Molecule 4 is a protein called DNA repair protein XRCC4.

Mol	Chain	Residues	Atoms					AltConf	Trace
4	K	201	Total	C	N	O	S	0	0
			1625	1028	278	312	7		
4	L	195	Total	C	N	O	S	0	0
			1592	1009	272	304	7		
4	N	201	Total	C	N	O	S	0	0
			1625	1028	278	312	7		
4	O	194	Total	C	N	O	S	0	0
			1579	1000	271	301	7		

- Molecule 5 is a protein called DNA ligase 4.

Mol	Chain	Residues	Atoms					AltConf	Trace
5	M	258	Total	C	N	O	S	0	0
			2095	1333	353	396	13		
5	P	246	Total	C	N	O	S	0	0
			1965	1248	330	374	13		

- Molecule 6 is a protein called Non-homologous end-joining factor 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
6	Q	211	Total	C	N	O	S	0	0
			1690	1084	282	310	14		
6	R	218	Total	C	N	O	S	0	0
			1728	1105	288	320	15		

- Molecule 7 is a DNA chain called DNA (27-MER).

Mol	Chain	Residues	Atoms					AltConf	Trace
7	D	27	Total	C	N	O	P	0	0
			556	268	95	166	27		

- Molecule 8 is a DNA chain called DNA (28-MER).

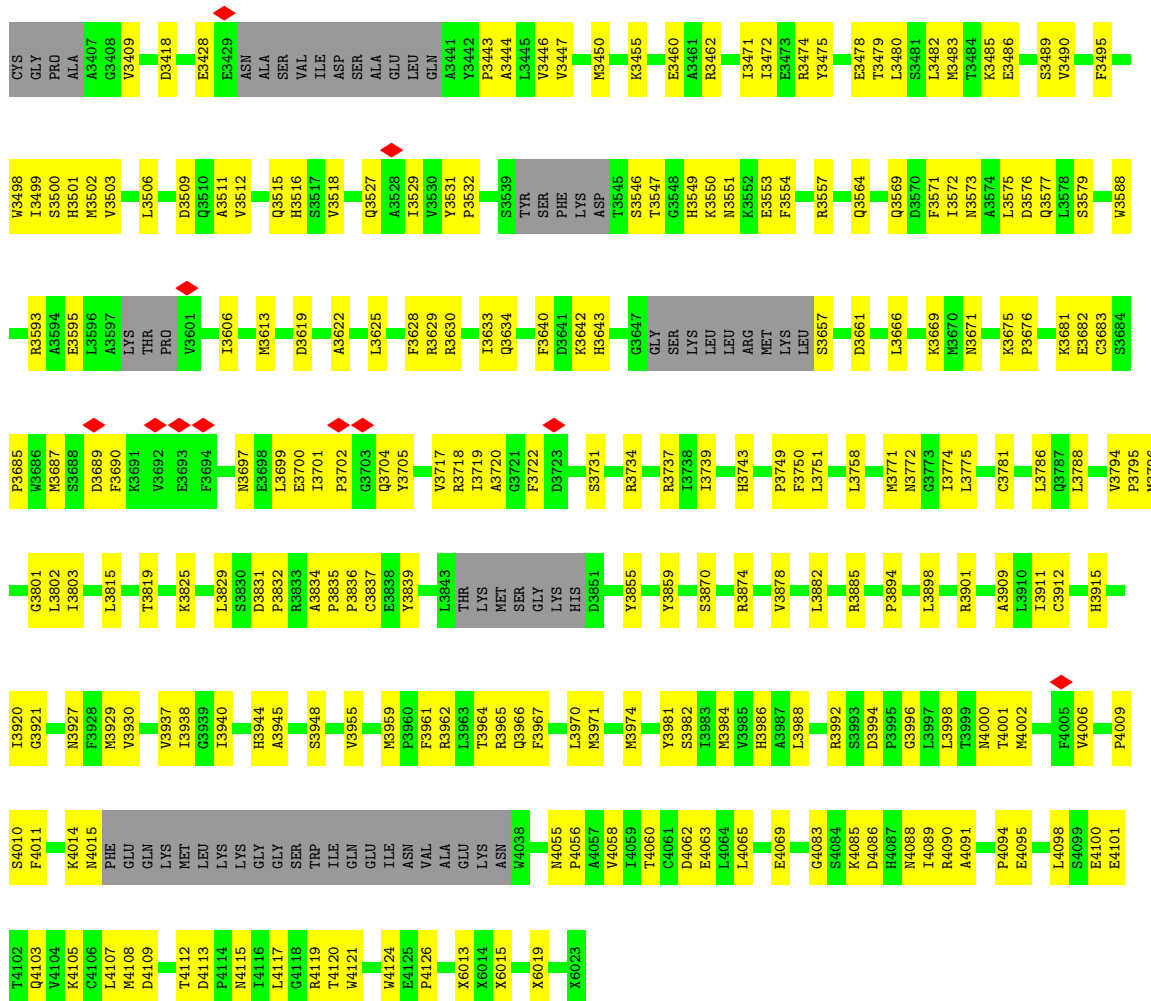
Mol	Chain	Residues	Atoms					AltConf	Trace
8	E	28	Total	C	N	O	P	0	0
			576	277	107	164	28		
8	I	28	Total	C	N	O	P	0	0
			576	277	107	164	28		

- Molecule 9 is a DNA chain called DNA (27-MER).

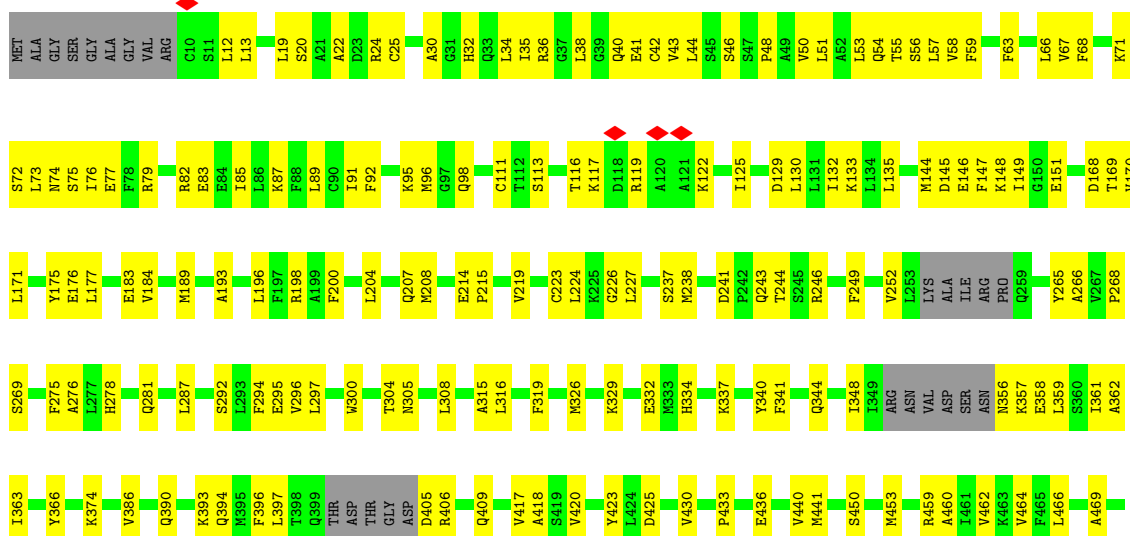
Mol	Chain	Residues	Atoms					AltConf	Trace
9	J	27	Total	C	N	O	P	0	0
			557	269	94	167	27		





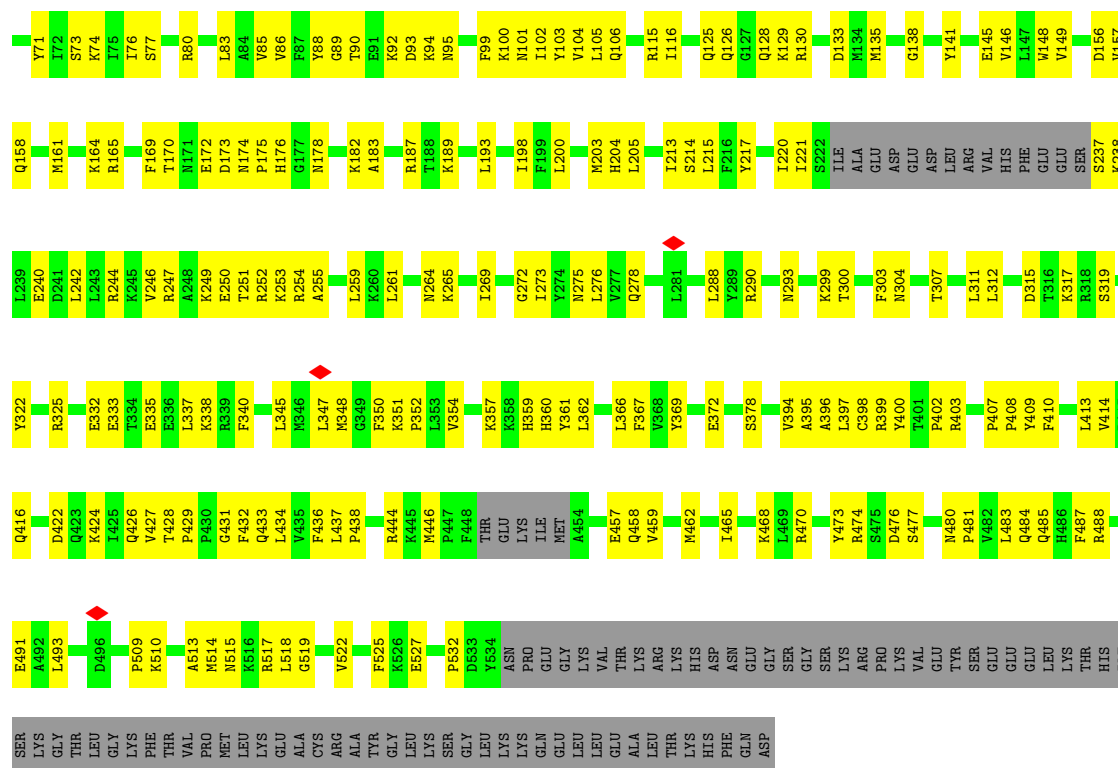


- Molecule 1: DNA-dependent protein kinase catalytic subunit,DNA-dependent protein kinase catalytic subunit,DNA-PKcs

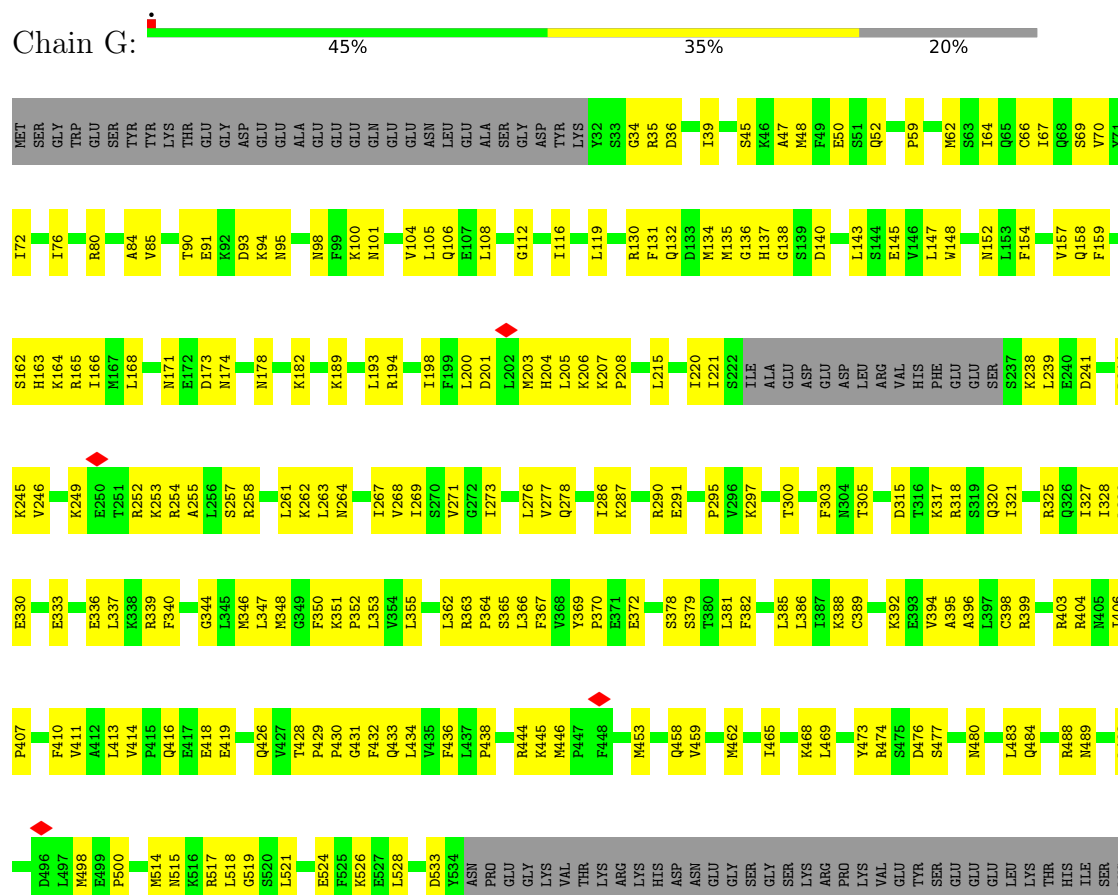


F1699	THR	V1596	PRO	G1383	S1300	L1095	F985	V904	N827	Q753	F649	VAL	L475
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N1598	ASP	N1385	ASP	N1385	H1304	F1099	Q1004	D908	K832	M754	Y651	SER	M477
M1600	GLU	I1386	GLU	I1386	D1305	F1194	D1005	F910	H833	L758	L655	SER	C478
L1601	ARG	D1387	ARG	D1387	V1100	F1195	D1005	F910	L834	G759	L655	SER	I479
D1602	GLN	D1388	GLN	D1388	F1101	P1196	L1010	L911	K835	Y762	R659	GLU	S480
Q1603	CYS	M1392	CYS	M1392	I1197	P1196	L1010	F912	K836	Y762	L660	GLY	V483
S1604	LEU	M1392	LEU	M1392	A1308	L1198	L1010	F912	P661	Y762	L660	GLY	V483
F1605	PRO	V1398	PRO	V1398	E1310	L1198	I1013	R913	P661	Y762	L660	GLY	H484
L1606	L1503	V1398	L1503	V1398	E1310	V1105	L1014	V914	L662	Y762	L662	GLY	H484
E1607	D1504	L1402	D1504	L1402	F1313	A1112	D1015	T915	Y565	Y762	L662	GLY	C486
R1608	C1507	M1403	C1507	M1403	G1313	I1017	G1016	E916	E567	Y762	L662	GLY	C486
Q1611	K1508	K1407	K1508	K1407	THR	V1018	V1018	L919	L573	Y762	L662	GLY	I490
K1612	L1514	K1407	L1514	K1407	GLY	D1019	D1019	T920	L583	Y762	L662	GLY	V496
H1613	L1517	K1407	L1517	K1407	ALA	H1115	H1115	D923	L583	Y762	L662	GLY	L497
K1617	L1517	K1407	L1517	K1407	ALA	A1116	V1021	D923	L583	Y762	L662	GLY	L497
I1622	F1521	L1415	F1521	L1415	ASN	S1120	S1023	T926	L585	Y762	L662	GLY	L497
H1625	T1540	L1419	T1540	L1419	ARG	I1131	T1024	T926	L585	Y762	L662	GLY	L497
W1626	ALA	E1421	ALA	E1421	S1333	H1133	L1025	L933	L585	Y762	L662	GLY	L497
K1627	SER	K1422	SER	K1422	K1334	D1132	R1026	L834	L585	Y762	L662	GLY	L497
K1628	LEU	K1422	LEU	K1422	L1134	C1136	C1029	H935	L585	Y762	L662	GLY	L497
L1639	GLY	I1428	GLY	I1428	I1137	I1137	E1035	M937	L585	Y762	L662	GLY	L497
E1640	SER	E1429	SER	E1429	S1144	A1148	F1036	V938	L585	Y762	L662	GLY	L497
T1641	GLN	E1430	GLN	E1430	A1148	A1148	F1036	M939	L585	Y762	L662	GLY	L497
K1642	GLY	L1431	GLY	L1431	I1151	R1151	Q1043	F940	L585	Y762	L662	GLY	L497
M1643	S1549	L1436	S1549	L1436	L1153	P1154	T1045	M941	L585	Y762	L662	GLY	L497
K1651	I1550	Y1437	I1550	Y1437	P1154	P1154	T1045	T946	L585	Y762	L662	GLY	L497
I1655	H1552	Q1442	H1552	Q1442	P1158	P1158	T1045	Q947	L585	Y762	L662	GLY	L497
D1656	Y1558	V1443	D1656	V1443	P1158	P1158	T1045	Q947	L585	Y762	L662	GLY	L497
S1657	F1559	D1444	S1657	D1444	P1158	P1158	T1045	Q947	L585	Y762	L662	GLY	L497
S1658	Y1560	R1445	S1658	R1445	P1158	P1158	T1045	Q947	L585	Y762	L662	GLY	L497
V1659	E1565	L1448	V1659	L1448	P1158	P1158	T1045	Q947	L585	Y762	L662	GLY	L497
T1663	N1568	V1452	T1663	V1452	P1158	P1158	T1045	Q947	L585	Y762	L662	GLY	L497
S1664	T1569	H1465	S1664	H1465	P1158	P1158	T1045	Q947	L585	Y762	L662	GLY	L497
E1670	L1571	N1466	E1670	N1466	P1158	P1158	T1045	Q947	L585	Y762	L662	GLY	L497
T1674	K1573	I1467	T1674	I1467	P1158	P1158	T1045	Q947	L585	Y762	L662	GLY	L497
D1685	N1574	L1468	D1685	L1468	P1158	P1158	T1045	Q947	L585	Y762	L662	GLY	L497
L1686	L1575	D1474	L1686	D1474	P1158	P1158	T1045	Q947	L585	Y762	L662	GLY	L497
H1687	D1576	H1475	H1687	H1475	P1158	P1158	T1045	Q947	L585	Y762	L662	GLY	L497
E1688	L1575	H1475	E1688	H1475	P1158	P1158	T1045	Q947	L585	Y762	L662	GLY	L497
K1689	V1579	L1482	K1689	L1482	P1158	P1158	T1045	Q947	L585	Y762	L662	GLY	L497
Q1690	L1580	E1482	Q1690	E1482	P1158	P1158	T1045	Q947	L585	Y762	L662	GLY	L497
Q1691	M1583	L1483	Q1691	L1483	P1158	P1158	T1045	Q947	L585	Y762	L662	GLY	L497
T1694	Q1584	L1484	T1694	L1484	P1158	P1158	T1045	Q947	L585	Y762	L662	GLY	L497
P1697	T1590	V1487	P1697	V1487	P1158	P1158	T1045	Q947	L585	Y762	L662	GLY	L497
F1698		A1492	F1698	A1492	P1158	P1158	T1045	Q947	L585	Y762	L662	GLY	L497





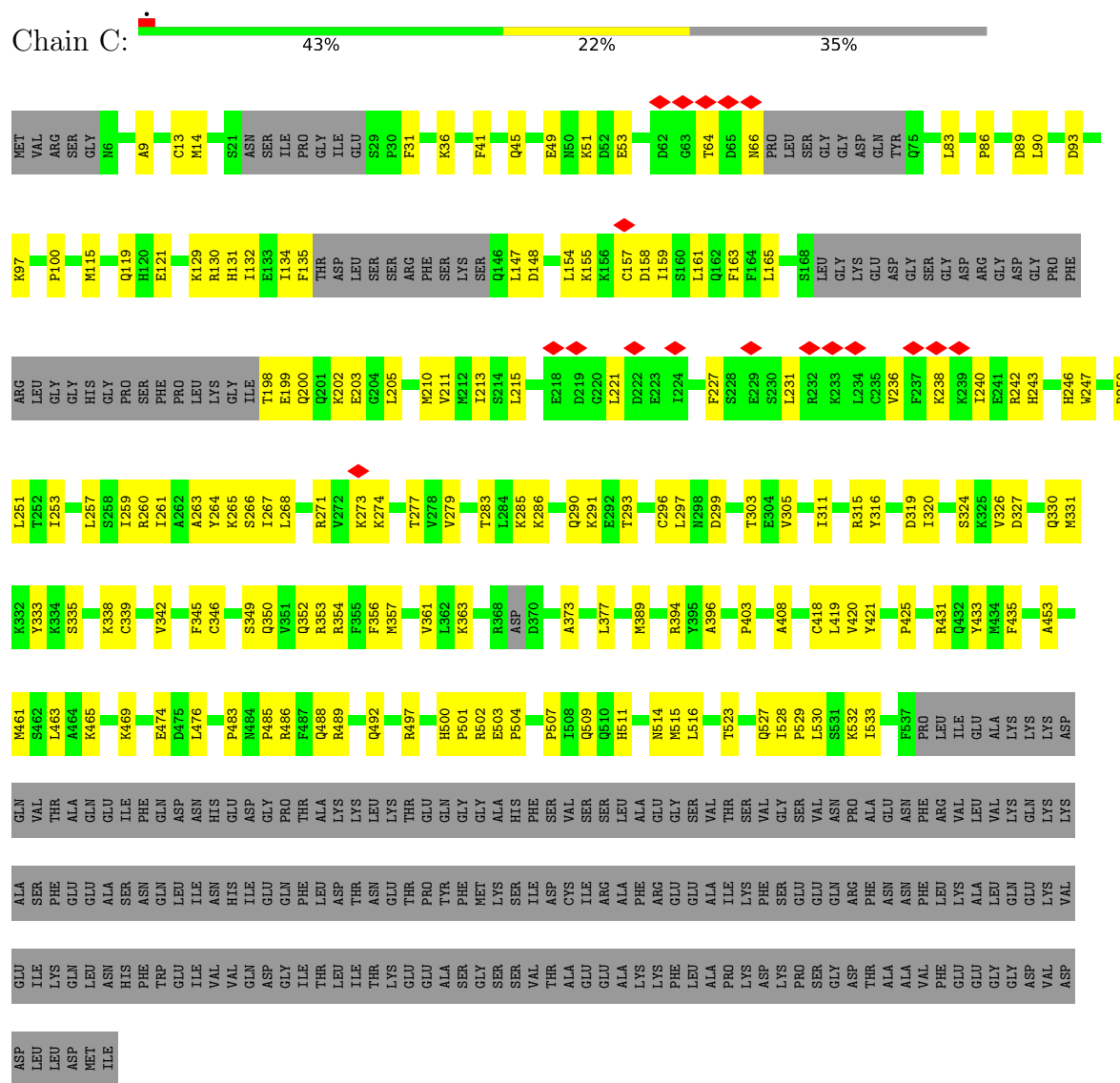
• Molecule 2: X-ray repair cross-complementing protein 6



GLY THR
LEU VAL
GLY SER
LYS PHE
THR THR
VAL VAL
MET MET
LEU LEU
LYS LYS
GLU GLU
ALA ALA
CYS CYS
ARG ARG
ALA ALA
TYR TYR
GLY GLY
LEU LEU
SER SER
GLY GLY
LEU LEU
LYS LYS
LYS LYS
GLN GLN
ASP ASP

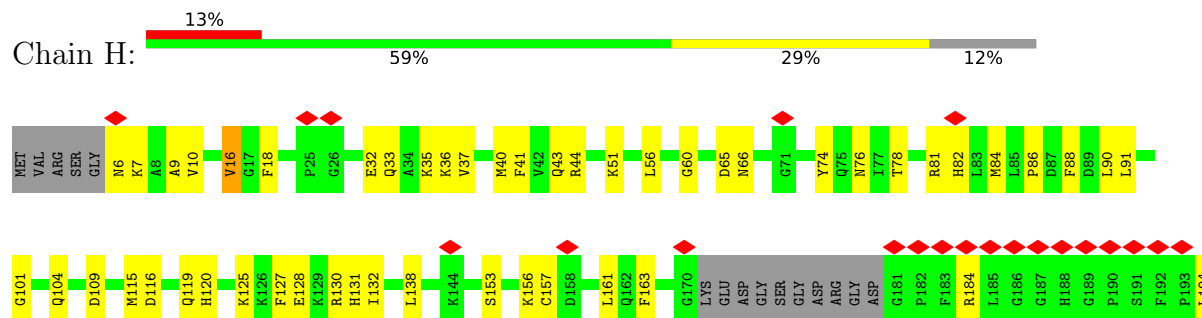
• Molecule 3: X-ray repair cross-complementing protein 5

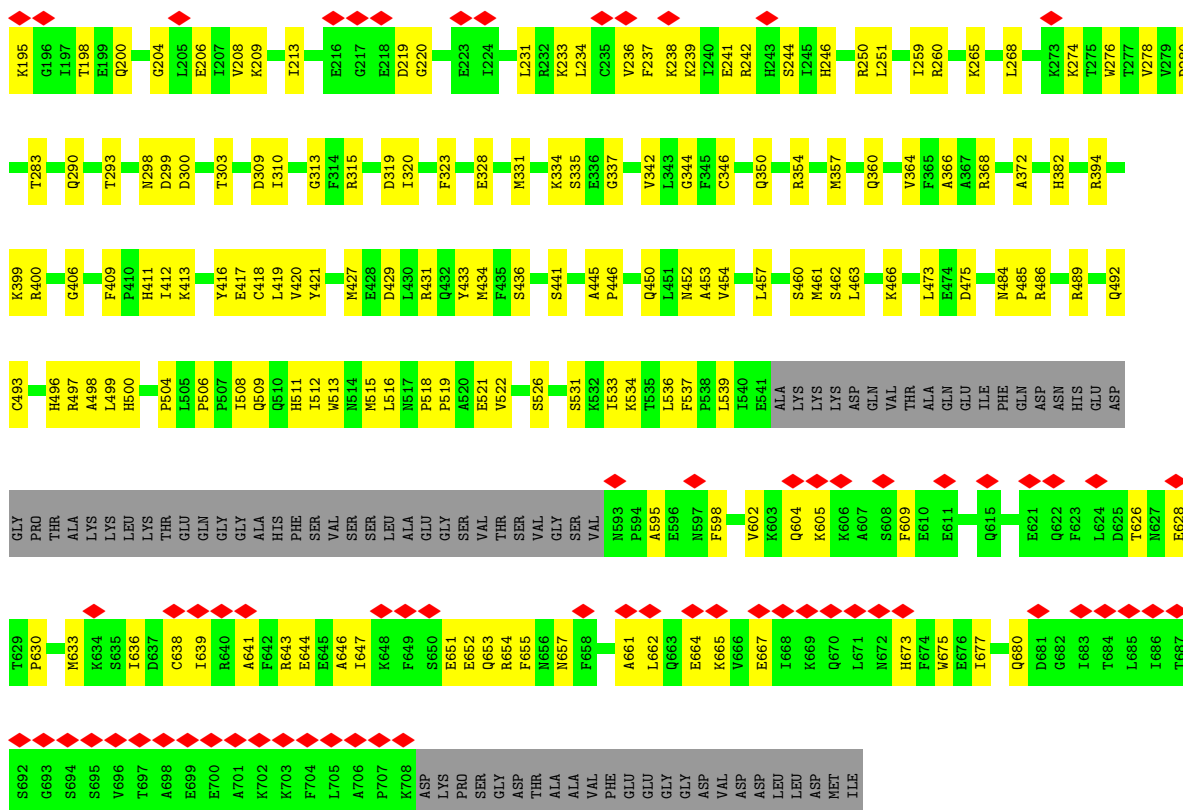
Chain C:



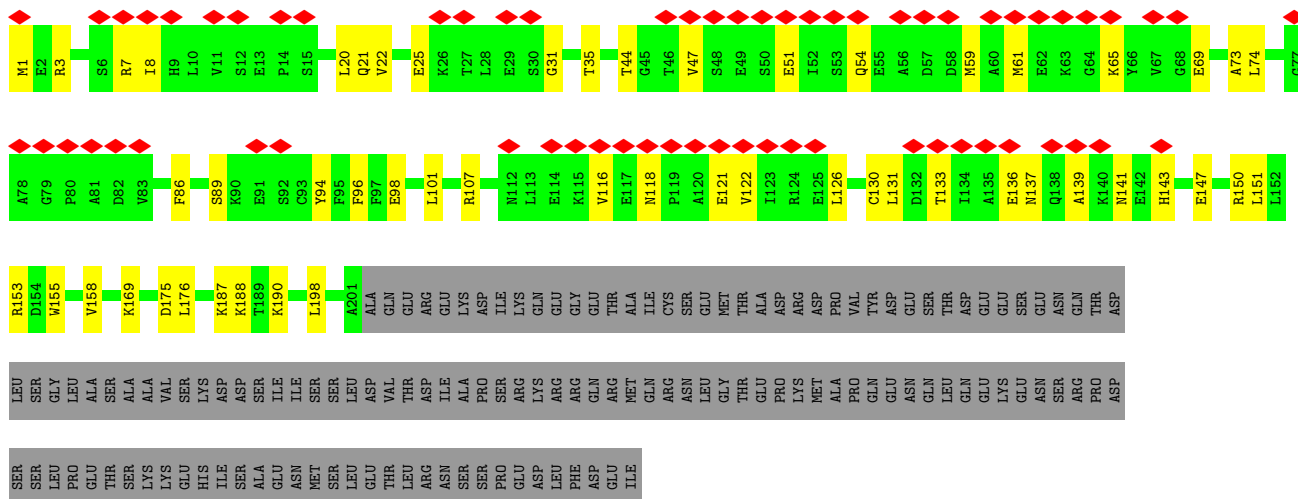
• Molecule 3: X-ray repair cross-complementing protein 5

Chain H:

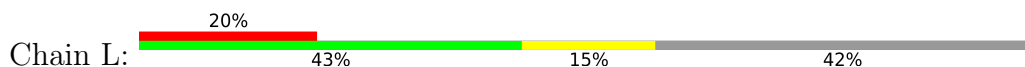




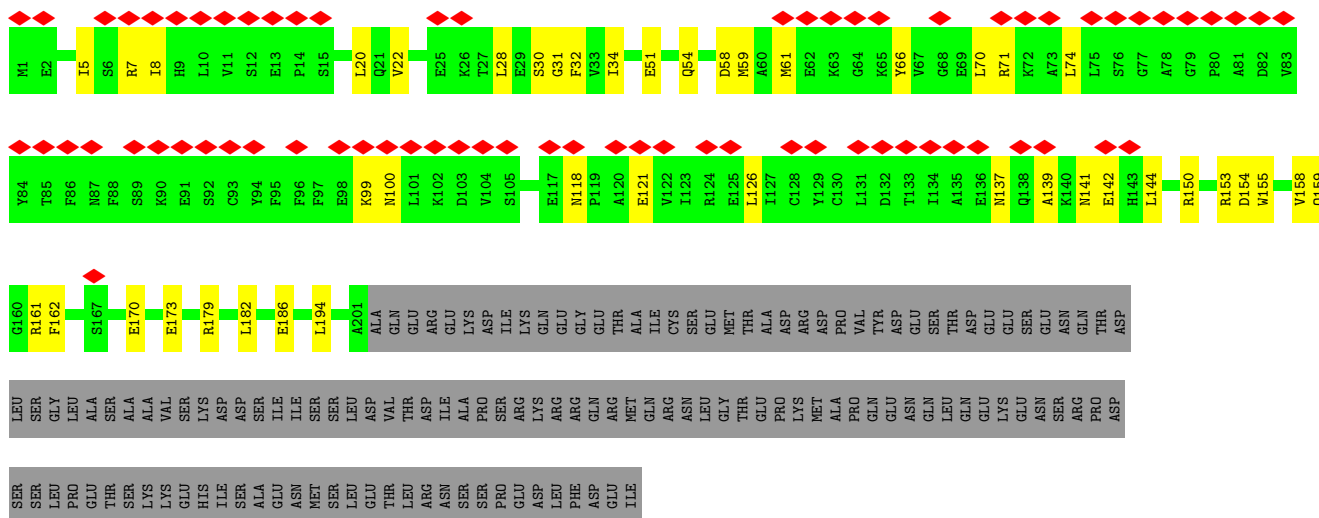
• Molecule 4: DNA repair protein XRCC4



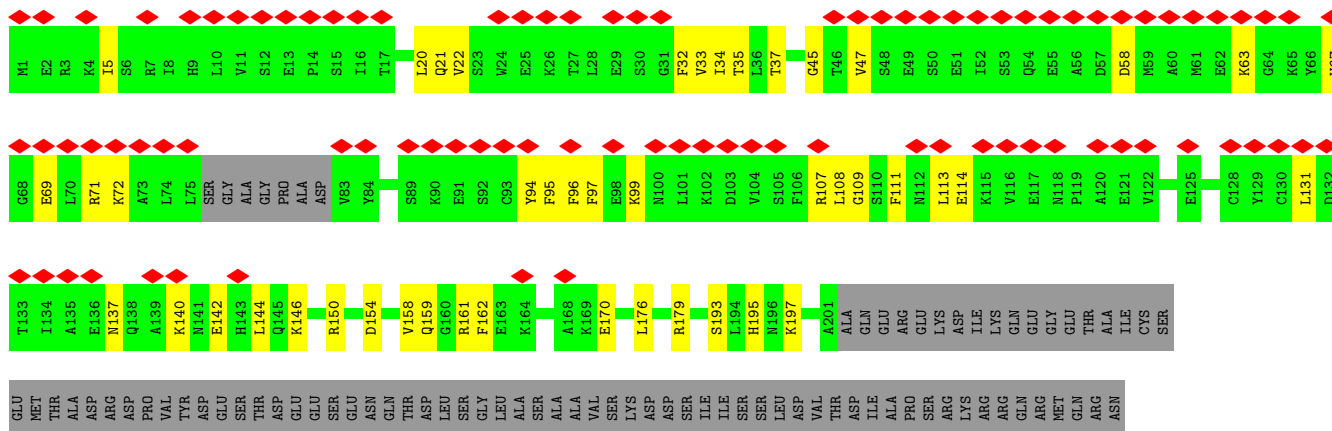
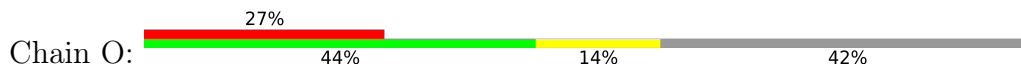
• Molecule 4: DNA repair protein XRCC4



- Molecule 4: DNA repair protein XRCC4



- Molecule 4: DNA repair protein XRCC4



LEU	GLY	THR	GLU	PRO	LYS	MET	ALA	PRO	GLN	GLU	ASN	GLN	LEU	GLN	GLU	LYS	ALA	ASN	SER	ARG	PRO	THR	ASP	SER	SER	LEU	LEU	PRO	GLU	THR	LEU	ARG	ASN	ARG	LEU	PHE	ASP	GLU	ILE
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● Molecule 5: DNA ligase 4



MET	ALA	ALA	SER	GLN	THR	THR	ALA	SER	GLN	THR	VAL	ALA	SER	LEU	PRO	HIS	VAL	PRO	HIS	VAL	ASP	ALA	THR	GLY	LEU	LEU	LEU	ASP	SER	LEU	TRP	ALA	ASP	LEU	ARG	LEU	ARG	LEU	HIS	THR	GLY	ASP	ILE
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THR	ASP	SER	PHE	ASP	THR	PRO	ALA	ALA	MET	ILE	THR	VAL	ILE	LEU	PRO	GLN	VAL	ASP	GLY	ASP	GLY	THR	GLY	LEU	LEU	LEU	ASP	GLY	LEU	ASP	GLY	LEU	ASP	LEU	ALA	THR	LEU	ARG	THR	GLY	THR	HIS	GLY
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ASP	ALA	GLY	ASP	PHE	THR	ALA	MET	ILE	THR	VAL	THR	VAL	PHE	LEU	PRO	LYS	PRO	ASP	GLY	GLY	THR	GLY	LEU	GLY	VAL	GLY	ASP	GLY	LEU	ASP	GLY	LEU	ASP	LEU	GLN	VAL	THR	LEU	ARG	THR	GLY	THR	ASP	ALA
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LEU	GLU	GLN	TRP	LEU	ILE	ARG	MET	ILE	THR	VAL	ILE	ILE	LYS	VAL	ASP	LEU	LYS	PRO	ASP	GLY	THR	THR	ILE	THR	GLN	VAL	GLY	ASP	GLY	LEU	VAL	CYS	ASP	ARG	GLN	THR	VAL	THR	LEU	GLY	THR	ASP	ILE	ILE
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THR	LEU	PHE	THR	ALA	THR	LYS	PRO	LYS	THR	ALA	ALA	ILE	ILE	ALA	HIS	GLY	VAL	ILE	GLY	GLY	HIS	GLN	THR	LEU	LEU	THR	GLY	ASP	GLN	THR	GLY	ASP	GLY	THR	THR	VAL	THR	THR	THR	THR	THR	THR	THR	THR	THR
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GLN	PHE	GLY	ALA	SER	PRO	THR	GLY	GLY	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR
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GLN	THR	CYS	TYR	ALA	THR	VAL	PHE	ASP	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR	THR
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SER	HIS	PHE	LEU	CYS	ALA	VAL	ALA	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY
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V666	M667	S668	O669	L678	R681	T682	A683	E684	F685	G686	G687	Y688	V690	Q691	N692	T697	I701	N706	I707	R708	V709	N710	K711	N712	I713	I714	S715	N716	K722	W725	L726	Q739	P740	R741	F742	M743	I744	H745	M746	C747	P748	K751	E752	H753	F754	A755	R756	E757	Y758
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S764	Y765	F766	I767	F778	M785	E786	Q787	E790	E800	Y803	S804	N805	R813	R814	R815	S822	Y823	A824	Y825	I826	N827	D828	L829	T831	K832	N833	E834	G835	T836	R837	L838	A839	A842	L843	R846	A850	K851	V852	K853	S854	C855	L856	A857	E858	C859	E867
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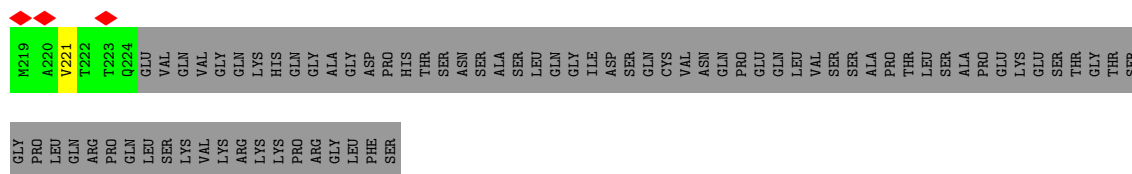
S870	R871	Y872	A873	D874	K876	A877	F878	R879	R880	T881	F882	K883	R884	K885	D899	K900	E905	E906	N907	Q908	Y909	L910	I911
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● Molecule 5: DNA ligase 4

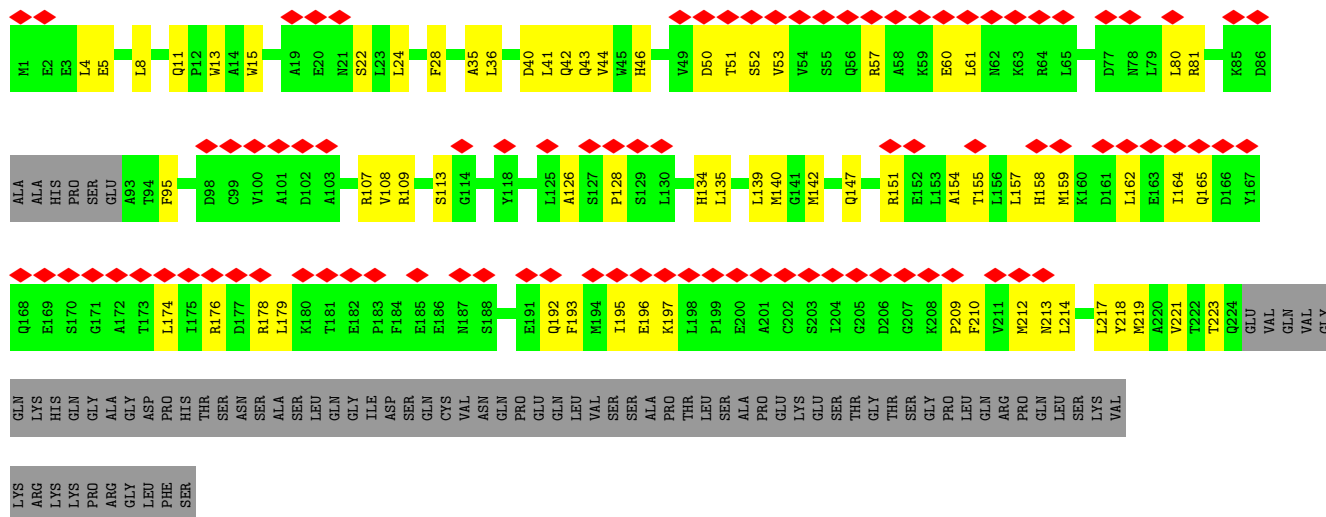


MET	ALA	ALA	SER	GLN	THR	SER	GLN	THR	THR	VAL	ALA	SER	HIS	VAL	PRO	PHE	ASP	CYS	SER	THR	LEU	GLU	ARG	ILE	GLN	LYS	SER	LYS	GLY	ARG	ALA	ARG	HIS	PHE	ARG	GLU	PHE	LEU	ASP	SER	TRP	ARG	LYS	PHE	HIS	ASP	ALA	LEU	HIS	LYS	ASN	HIS	LYS	ASP	VAL
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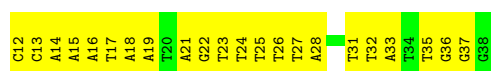




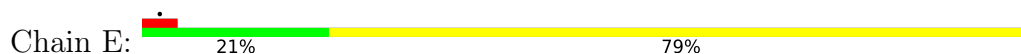
• Molecule 6: Non-homologous end-joining factor 1



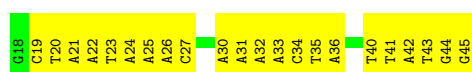
• Molecule 7: DNA (27-MER)



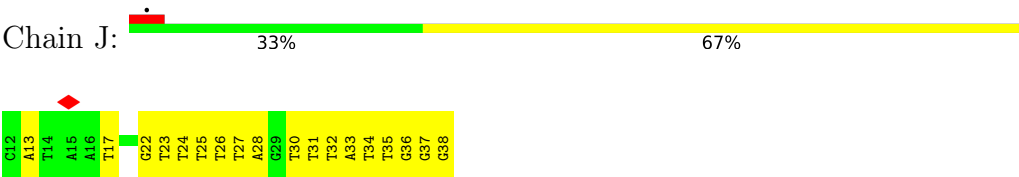
• Molecule 8: DNA (28-MER)



• Molecule 8: DNA (28-MER)



• Molecule 9: DNA (27-MER)



4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of particles used	23421	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 ($e^-/\text{\AA}^2$)	46.8	Depositor
Minimum defocus (nm)	Not provided	
Maximum defocus (nm)	Not provided	
Magnification	130000	Depositor
Image detector	GATAN K3 BIOQUANTUM (6k x 4k)	Depositor
Maximum map value	0.695	Depositor
Minimum map value	-0.275	Depositor
Average map value	0.001	Depositor
Map value standard deviation	0.024	Depositor
Recommended contour level	0.175	Depositor
Map size ($\text{\AA}$)	704.16003, 704.16003, 704.16003	wwPDB
Map dimensions	540, 540, 540	wwPDB
Map angles ($^\circ$)	90.0, 90.0, 90.0	wwPDB
Pixel spacing ($\text{\AA}$)	1.304, 1.304, 1.304	Depositor

5 Model quality [i](#)

5.1 Standard geometry [i](#)

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	0.17	0/28527	0.36	0/38582
1	F	0.16	0/28510	0.35	2/38552 (0.0%)
2	B	0.13	0/3896	0.33	0/5248
2	G	0.13	0/4025	0.30	0/5421
3	C	0.11	0/3921	0.26	0/5282
3	H	0.13	0/5254	0.34	1/7085 (0.0%)
4	K	0.11	0/1654	0.27	0/2224
4	L	0.13	0/1619	0.35	0/2174
4	N	0.11	0/1654	0.31	0/2224
4	O	0.11	0/1605	0.29	0/2155
5	M	0.10	0/2144	0.24	0/2895
5	P	0.23	0/2008	0.36	0/2712
6	Q	0.13	0/1722	0.41	2/2332 (0.1%)
6	R	0.14	0/1762	0.39	0/2389
7	D	0.22	0/622	0.39	0/959
8	E	0.23	0/647	0.42	0/996
8	I	0.23	0/647	0.40	0/996
9	J	0.24	0/623	0.47	0/961
All	All	0.16	0/90840	0.35	5/123187 (0.0%)

There are no bond length outliers.

All (5) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	F	956	PRO	N-CA-CB	7.92	110.77	103.08
3	H	16	VAL	N-CA-C	-6.85	105.81	111.91
6	Q	132	SER	CA-C-N	-5.86	111.91	122.46
6	Q	132	SER	C-N-CA	-5.86	111.91	122.46
1	F	1540	THR	CA-C-O	5.73	127.93	121.51

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	28076	0	28047	959	0
1	F	28060	0	28056	913	0
2	B	3822	0	3899	173	0
2	G	3948	0	4036	186	0
3	C	3849	0	3892	123	0
3	H	5150	0	5176	185	0
4	K	1625	0	1611	42	0
4	L	1592	0	1583	45	0
4	N	1625	0	1611	35	0
4	O	1579	0	1571	39	0
5	M	2095	0	2046	44	0
5	P	1965	0	1904	77	0
6	Q	1690	0	1699	54	0
6	R	1728	0	1728	66	0
7	D	556	0	310	35	0
8	E	576	0	318	28	0
8	I	576	0	318	35	0
9	J	557	0	311	29	0
All	All	89069	0	88116	2871	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 16.

All (2871) 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)
1:A:1549:SER:O	1:A:1550:VAL:HG22	1.17	1.29
1:A:1549:SER:O	1:A:1550:VAL:CG2	2.04	1.05
3:H:56:LEU:H	3:H:81:ARG:HB2	1.39	0.88
1:A:327:VAL:HG13	1:A:333:MET:HB2	1.58	0.85
5:P:811:SER:HB2	5:P:849:GLY:HA3	1.57	0.84
1:A:2965:TYR:HB3	1:A:3001:CYS:HB2	1.58	0.83
4:L:179:ARG:HD3	5:M:778:PHE:HB3	1.60	0.83
2:B:352:PRO:HA	2:B:394:VAL:HA	1.61	0.83
1:F:1115:HIS:HA	1:F:1119:LYS:HD2	1.61	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:203:MET:HE1	2:G:239:LEU:HG	1.62	0.81
6:Q:133:GLN:H	6:R:42:GLN:H	1.28	0.81
1:F:50:VAL:HG13	1:F:51:LEU:HG	1.62	0.81
1:F:3959:MET:HE2	1:F:4124:TRP:HE1	1.44	0.81
1:A:168:ASP:H	1:A:171:LEU:HD12	1.45	0.81
1:F:1428:ILE:HA	1:F:1431:LEU:HB2	1.63	0.80
1:F:901:MET:HG2	1:F:903:PRO:HD3	1.63	0.79
7:D:24:DT:H3	8:E:34:DC:H42	1.26	0.79
5:P:812:MET:H	5:P:848:HIS:HB3	1.46	0.79
1:F:1104:LEU:HD22	1:F:1134:LEU:HD13	1.66	0.78
3:H:242:ARG:NH2	8:I:22:DA:N7	2.31	0.78
1:F:2281:MET:HE1	1:F:2287:PRO:HA	1.66	0.77
1:A:2433:LYS:HG3	1:A:2472:GLN:HE22	1.47	0.77
1:A:1611:GLN:HE21	1:A:1614:GLN:HE21	1.32	0.77
1:A:2594:ASP:HA	1:A:2768:GLN:HE22	1.47	0.77
1:A:2357:GLU:HA	1:A:2360:PHE:HB3	1.65	0.77
1:A:3255:ALA:HB1	1:A:3258:LEU:HB2	1.65	0.77
5:M:813:PHE:HB3	5:M:850:ALA:HB2	1.66	0.77
1:A:3750:PHE:HB3	1:A:3802:LEU:HD11	1.67	0.76
1:F:149:ILE:HD11	1:F:183:GLU:HB2	1.65	0.76
6:Q:132:SER:HB3	6:R:44:VAL:HA	1.67	0.76
1:F:12:LEU:HD21	1:F:44:LEU:HD22	1.68	0.76
6:R:15:TRP:HE1	6:R:22:SER:HA	1.50	0.76
1:A:1803:GLU:HA	1:A:1806:ARG:HH21	1.51	0.75
4:N:28:LEU:HD22	4:N:71:ARG:HH12	1.50	0.75
6:Q:135:LEU:HB2	6:R:41:LEU:HB2	1.66	0.75
1:A:1307:ILE:HG23	1:A:1309:ALA:H	1.50	0.75
2:B:322:TYR:HE1	3:C:274:LYS:HG3	1.52	0.74
1:F:2776:ARG:HH21	1:F:2782:ASP:HB2	1.50	0.74
4:L:45:GLY:HA3	4:L:114:GLU:H	1.51	0.74
6:Q:132:SER:HA	6:R:40:ASP:H	1.50	0.74
1:A:3321:LEU:HD13	1:A:3324:ARG:HH12	1.52	0.74
6:R:57:ARG:HG2	6:R:61:LEU:HD22	1.70	0.74
2:G:403:ARG:H	2:G:406:ILE:HD11	1.53	0.74
1:F:3142:ILE:O	1:F:3147:LYS:NZ	2.21	0.73
2:G:533:ASP:OD1	3:H:250:ARG:NH2	2.20	0.73
3:C:501:PRO:HB2	3:C:502:ARG:HH21	1.53	0.73
2:G:69:SER:HB3	2:G:245:LYS:HB3	1.69	0.73
1:F:3684:SER:HB3	1:F:3687:MET:HB2	1.70	0.73
2:G:90:THR:HG23	2:G:135:MET:HE1	1.70	0.73
1:A:3971:MET:SD	1:A:3974:MET:HG3	2.29	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:255:ALA:HB3	2:G:258:ARG:HH22	1.53	0.73
7:D:21:DA:H2"	8:E:33:DA:H62	1.54	0.72
1:F:2859:GLN:HE22	1:F:2880:CYS:HB3	1.54	0.72
2:B:173:ASP:HB2	2:B:214:SER:H	1.55	0.72
1:A:3593:ARG:NH2	1:A:3657:SER:O	2.22	0.72
1:F:3982:SER:O	1:F:3986:HIS:ND1	2.21	0.72
3:H:647:ILE:HA	3:H:652:GLU:HG2	1.70	0.72
2:G:47:ALA:O	2:G:171:ASN:ND2	2.23	0.72
3:H:605:LYS:HB2	3:H:609:PHE:HZ	1.54	0.72
4:K:139:ALA:O	4:K:143:HIS:ND1	2.22	0.72
1:A:3480:LEU:HA	1:A:3483:MET:HE3	1.70	0.72
1:F:2356:MET:HE1	1:F:2359:LYS:H	1.55	0.72
1:F:1268:ASN:ND2	1:F:1347:THR:OG1	2.23	0.72
8:I:21:DA:H4'	9:J:36:DG:H1'	1.71	0.72
1:A:197:PHE:O	1:A:246:ARG:NH2	2.23	0.72
2:B:303:PHE:HB3	3:C:290:GLN:HB3	1.72	0.72
1:F:1220:LEU:HD11	1:F:1287:GLN:HB2	1.70	0.72
1:F:1151:ARG:NH1	1:F:1163:LEU:O	2.23	0.71
5:P:860:VAL:O	5:P:884:ARG:NH2	2.23	0.71
1:A:901:MET:HG2	1:A:903:PRO:HD3	1.72	0.71
1:A:3137:GLU:OE2	1:A:3166:ASN:ND2	2.23	0.71
5:M:707:ILE:HA	5:M:710:LYS:HD2	1.72	0.71
1:F:833:HIS:O	1:F:838:LYS:NZ	2.21	0.71
1:F:2290:PRO:O	1:F:2292:CYS:N	2.23	0.71
2:G:261:LEU:HB2	2:G:269:ILE:HB	1.71	0.71
6:Q:134:HIS:H	6:R:42:GLN:HB2	1.56	0.71
1:A:4055:ASN:HB2	1:A:4095:GLU:HA	1.71	0.71
5:M:663:GLU:HB3	5:M:697:THR:HA	1.71	0.71
5:M:682:ILE:HG12	5:M:687:GLY:HA3	1.72	0.71
1:A:3349:ALA:O	1:A:3357:ARG:NH2	2.23	0.70
5:M:746:MET:O	5:M:751:LYS:NZ	2.24	0.70
2:B:90:THR:HG21	2:B:103:TYR:HB2	1.73	0.70
3:H:662:LEU:HD23	3:H:665:LYS:HE2	1.74	0.70
1:A:3511:ALA:O	1:A:3515:GLN:NE2	2.25	0.70
6:R:11:GLN:HB2	6:R:28:PHE:HB2	1.73	0.70
1:F:1568:ASN:HA	1:F:1600:MET:HE1	1.72	0.70
1:A:726:LEU:HD13	1:A:754:MET:HE1	1.72	0.70
1:A:1172:LEU:HD11	1:A:1187:SER:HB2	1.73	0.70
1:A:2408:MET:HA	1:A:2411:LEU:HD22	1.73	0.70
1:A:1151:ARG:NH1	1:A:1163:LEU:O	2.22	0.70
1:A:865:GLN:HB2	1:A:3168:TYR:HB3	1.73	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:P:814:ARG:H	5:P:850:ALA:N	1.90	0.70
2:G:366:LEU:H	2:G:434:LEU:HB2	1.57	0.69
4:K:22:VAL:HG21	4:K:74:LEU:HB3	1.74	0.69
3:H:65:ASP:H	3:H:78:THR:HG22	1.57	0.69
1:A:2959:ALA:HA	1:A:2962:ARG:HD3	1.74	0.69
1:A:3622:ALA:HB3	1:A:3630:ARG:HD2	1.74	0.69
4:N:153:ARG:NH1	4:N:154:ASP:OD1	2.25	0.69
1:A:2225:HIS:HB2	1:A:2231:PHE:HB2	1.72	0.69
2:B:366:LEU:HB2	2:B:434:LEU:HD12	1.72	0.69
1:A:1171:TRP:O	1:A:1175:HIS:ND1	2.25	0.69
1:A:2331:MET:O	1:A:2334:LYS:NZ	2.26	0.69
1:F:827:ASN:HB3	1:F:836:LYS:HE2	1.74	0.69
1:A:248:ILE:HA	1:A:251:PHE:HD2	1.57	0.69
1:F:3593:ARG:NH2	1:F:3661:ASP:OD1	2.26	0.69
1:F:3679:ASN:HA	1:F:3726:VAL:HG22	1.74	0.69
4:O:5:ILE:HA	4:O:21:GLN:HA	1.74	0.69
7:D:27:DT:H2"	7:D:28:DA:C5	2.28	0.69
1:A:71:LYS:HB3	1:A:82:ARG:HH22	1.57	0.69
1:A:78:PHE:HB3	1:A:82:ARG:HH21	1.57	0.69
1:A:4086:ASP:HA	1:A:4089:ILE:HG12	1.73	0.68
5:P:746:MET:O	5:P:751:LYS:NZ	2.25	0.68
6:Q:134:HIS:HB3	6:R:42:GLN:HG3	1.75	0.68
1:A:2353:GLN:HA	1:A:2356:MET:HG3	1.75	0.68
1:F:2295:GLN:HG3	1:F:2298:GLU:HB3	1.75	0.68
1:F:3151:LEU:HA	1:F:3197:LEU:HD22	1.74	0.68
3:H:337:GLY:H	3:H:399:LYS:HB3	1.58	0.68
1:A:3266:SER:HB3	1:A:3273:LEU:HA	1.73	0.68
5:P:861:SER:O	5:P:887:LYS:NZ	2.25	0.68
1:F:207:GLN:NE2	1:F:215:PRO:O	2.26	0.68
1:F:1354:GLU:HA	1:F:1357:LYS:HB3	1.76	0.68
1:F:4055:ASN:HD22	1:F:4058:VAL:HG23	1.58	0.68
1:A:3666:LEU:HA	1:A:3669:LYS:HZ2	1.59	0.68
1:A:3266:SER:HA	1:A:3272:TRP:CD1	2.28	0.68
2:G:468:LYS:NZ	2:G:517:ARG:O	2.27	0.68
1:A:1238:GLN:HA	1:A:1296:PHE:HZ	1.59	0.68
1:A:2987:THR:HG23	1:A:2990:GLU:H	1.59	0.68
1:F:867:ASN:HB3	1:F:3129:LEU:HD11	1.75	0.68
4:N:118:ASN:ND2	4:N:121:GLU:OE1	2.25	0.68
1:F:2572:TYR:HE1	1:F:2791:ILE:HD11	1.59	0.68
2:G:339:ARG:O	3:H:489:ARG:NH1	2.26	0.68
5:P:663:GLU:HA	5:P:688:TYR:HB2	1.75	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:P:868:ASP:HB3	5:P:871:ARG:HE	1.58	0.68
1:A:304:THR:HG22	1:A:305:ASN:H	1.58	0.68
1:A:3443:PRO:HB3	1:A:3471:ILE:HD11	1.76	0.68
1:F:3493:TRP:HD1	1:F:3521:ILE:HG12	1.58	0.68
1:F:3659:PHE:HA	1:F:3662:ILE:HD12	1.76	0.68
1:A:919:LEU:HG	1:A:920:THR:HG23	1.74	0.67
1:A:3998:LEU:HB3	1:A:4002:MET:HE1	1.75	0.67
3:H:138:LEU:HD12	3:H:204:GLY:HA2	1.77	0.67
2:B:348:MET:HB2	2:B:397:LEU:HB3	1.76	0.67
1:F:40:GLN:OE1	1:F:2427:ARG:NH1	2.27	0.67
1:F:2442:MET:HE1	1:F:2446:LEU:HD13	1.76	0.67
3:H:489:ARG:HD2	3:H:508:ILE:HG13	1.76	0.67
6:R:212:MET:HE3	6:R:213:ASN:HD22	1.59	0.67
1:A:1304:HIS:HE1	1:A:1307:ILE:HG22	1.59	0.67
1:A:1420:ARG:NH2	1:A:1466:ASN:O	2.28	0.67
1:A:715:ALA:O	1:A:719:LYS:NZ	2.27	0.67
1:A:2791:ILE:HA	1:A:2794:LEU:HD12	1.76	0.67
1:F:304:THR:HG22	1:F:305:ASN:H	1.58	0.67
2:G:287:LYS:HB3	3:H:310:ILE:HD11	1.75	0.67
8:E:39:DA:N6	8:E:40:DT:O4	2.27	0.67
1:F:2731:ARG:HA	1:F:2733:MET:HE1	1.76	0.67
1:F:2959:ALA:HA	1:F:2962:ARG:HD3	1.75	0.67
2:G:193:LEU:HB2	2:G:198:ILE:HB	1.76	0.67
1:A:238:MET:HE3	1:A:283:SER:HB2	1.76	0.67
1:A:1442:GLN:OE1	1:A:1445:ARG:NH2	2.27	0.67
1:A:3837:CYS:SG	1:A:3874:ARG:NH1	2.68	0.67
2:G:94:LYS:NZ	2:G:104:VAL:O	2.28	0.67
5:M:692:ASN:OD1	5:M:708:ARG:NH2	2.28	0.67
8:I:21:DA:N3	9:J:35:DT:N3	2.35	0.67
1:F:2965:TYR:HB3	1:F:3001:CYS:HB2	1.77	0.67
8:I:35:DT:H3	9:J:22:DG:H22	1.41	0.67
1:A:672:ILE:O	1:A:676:ASN:ND2	2.29	0.66
2:B:95:ASN:HD21	2:B:99:PHE:H	1.43	0.66
1:A:3911:ILE:HD12	1:A:3937:VAL:HG23	1.77	0.66
1:F:1015:ASP:OD1	1:F:1016:GLY:N	2.28	0.66
1:A:3142:ILE:O	1:A:3147:LYS:NZ	2.28	0.66
1:F:2511:ILE:HD12	1:F:2550:ILE:HD12	1.76	0.66
1:F:767:GLU:OE2	1:F:854:ARG:NH1	2.29	0.66
1:A:1305:ASP:OD1	1:A:1334:LYS:NZ	2.27	0.66
5:P:665:CYS:HB2	5:P:697:THR:HG21	1.76	0.66
1:A:3944:HIS:ND1	1:A:3948:SER:O	2.28	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:170:VAL:HA	1:A:219:VAL:HG11	1.78	0.66
1:A:468:LEU:HD21	1:A:478:CYS:HB2	1.78	0.66
1:A:1568:ASN:HA	1:A:1600:MET:HE1	1.76	0.66
1:F:24:ARG:HG3	1:F:25:CYS:H	1.60	0.66
1:F:3554:PHE:HD1	1:F:3557:ARG:HH21	1.42	0.66
1:A:111:CYS:HB2	1:A:130:LEU:HD22	1.76	0.66
2:B:300:THR:OG1	3:C:291:LYS:NZ	2.29	0.66
6:Q:175:ILE:HG22	6:Q:177:ASP:H	1.60	0.66
1:A:23:ASP:O	1:A:70:ARG:NH2	2.29	0.66
1:A:996:THR:HG23	1:A:1043:GLN:HE21	1.61	0.66
5:P:654:LYS:N	5:P:684:GLU:O	2.29	0.66
7:D:37:DG:OP1	8:E:21:DA:N6	2.21	0.66
1:A:58:VAL:HG21	1:A:3098:ARG:HD2	1.79	0.65
1:F:1171:TRP:O	1:F:1175:HIS:ND1	2.27	0.65
1:F:3751:LEU:HD22	1:F:3803:ILE:HD11	1.79	0.65
2:G:90:THR:HB	2:G:101:ASN:HA	1.75	0.65
5:M:667:MET:HE1	5:M:706:ASN:HD21	1.60	0.65
1:A:87:LYS:NZ	1:A:829:VAL:O	2.30	0.65
1:A:459:ARG:HG2	1:A:540:MET:HE2	1.79	0.65
2:G:50:GLU:OE2	2:G:52:GLN:NE2	2.30	0.65
4:K:3:ARG:NH2	4:K:21:GLN:OE1	2.27	0.65
1:A:2869:LEU:HD13	1:A:2896:ALA:HA	1.78	0.65
1:F:672:ILE:O	1:F:676:ASN:ND2	2.30	0.65
9:J:26:DT:H2"	9:J:27:DT:H3	1.60	0.65
1:A:125:ILE:HG13	1:A:126:PRO:HD3	1.77	0.65
3:H:496:HIS:CD2	3:H:500:HIS:HE1	2.15	0.65
1:F:2213:ASN:ND2	1:F:2248:CYS:O	2.29	0.65
1:F:2415:LEU:HB2	1:F:2420:PHE:HB2	1.78	0.65
1:F:2986:PRO:O	1:F:2991:LYS:NZ	2.30	0.65
1:F:2987:THR:HG23	1:F:2990:GLU:H	1.61	0.65
2:G:414:VAL:HB	2:G:433:GLN:HB2	1.79	0.65
6:Q:129:SER:HA	6:R:44:VAL:HB	1.78	0.65
1:A:2322:VAL:HA	1:A:2325:LEU:HD12	1.79	0.65
1:F:95:LYS:O	1:F:96:MET:HE2	1.95	0.65
1:F:1663:THR:HG22	1:F:1664:SER:H	1.62	0.65
1:F:3062:LEU:HD13	1:F:3089:LEU:HD21	1.77	0.65
2:G:200:LEU:HD21	2:G:221:ILE:HG12	1.79	0.65
1:A:418:ALA:HB2	1:A:464:VAL:HG12	1.77	0.65
1:A:1397:ASP:OD1	1:A:1398:VAL:N	2.30	0.65
1:A:1549:SER:C	1:A:1550:VAL:HG22	2.16	0.65
1:A:2263:LYS:HE3	1:A:2265:PRO:HB3	1.77	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3428:GLU:OE1	1:A:3474:ARG:NH1	2.30	0.65
1:F:3700:GLU:HG3	1:F:3718:ARG:HA	1.79	0.65
2:G:157:VAL:HG22	2:G:159:PHE:H	1.61	0.65
3:H:43:GLN:HB3	3:H:91:LEU:HD21	1.78	0.65
4:K:65:LYS:NZ	4:K:69:GLU:OE2	2.29	0.65
5:M:663:GLU:HA	5:M:688:TYR:HB2	1.79	0.65
1:A:396:PHE:HD1	1:A:441:MET:HE3	1.61	0.65
1:A:3126:LEU:O	1:A:3130:GLN:NE2	2.29	0.65
1:A:1264:LEU:HD23	1:A:1340:ARG:HG3	1.78	0.65
2:B:357:LYS:HE2	2:B:359:HIS:HE1	1.61	0.65
1:F:2196:TRP:HB2	1:F:2199:LEU:HB2	1.77	0.65
1:F:2894:GLU:HG3	1:F:3973:PRO:HG2	1.77	0.65
1:F:3444:ALA:HB2	1:F:3478:GLU:HG3	1.79	0.65
1:F:3511:ALA:O	1:F:3515:GLN:NE2	2.30	0.64
1:A:2295:GLN:HG3	1:A:2298:GLU:HB3	1.79	0.64
2:B:156:ASP:O	2:B:158:GLN:NE2	2.30	0.64
2:B:458:GLN:HE22	2:B:527:GLU:HG3	1.62	0.64
1:A:852:ARG:HB3	1:A:3111:MET:HE1	1.80	0.64
1:A:2424:MET:HE1	1:A:2457:PRO:HB2	1.80	0.64
1:A:2312:TYR:HD2	1:A:2315:VAL:HG23	1.62	0.64
1:F:3158:LYS:HZ3	1:F:3162:ASN:HB3	1.60	0.64
1:F:3796:MET:H	1:F:3801:GLY:HA2	1.62	0.64
1:F:3882:LEU:HA	1:F:3885:ARG:HE	1.63	0.64
1:F:3998:LEU:HA	1:F:4001:THR:HG22	1.78	0.64
1:A:208:MET:HE1	1:A:256:ILE:HG21	1.78	0.64
3:C:453:ALA:HB1	3:C:533:ILE:HG12	1.79	0.64
2:B:261:LEU:HB3	2:B:269:ILE:HB	1.78	0.64
2:B:428:THR:OG1	3:C:354:ARG:NH1	2.31	0.64
1:F:3444:ALA:HA	1:F:3482:LEU:HD11	1.80	0.64
1:F:1442:GLN:OE1	1:F:1445:ARG:NH2	2.31	0.64
1:F:2830:ASN:O	1:F:2834:GLN:NE2	2.30	0.64
1:F:3666:LEU:HA	1:F:3669:LYS:HZ2	1.61	0.64
1:A:2943:PHE:HB3	1:A:2954:GLN:HG2	1.80	0.64
1:F:418:ALA:HB2	1:F:464:VAL:HG12	1.80	0.64
1:F:3138:ILE:HG22	1:F:3189:PHE:HZ	1.62	0.64
1:F:3258:LEU:O	1:F:3262:LEU:HG	1.97	0.64
1:F:3467:ARG:NH1	1:F:4000:ASN:OD1	2.31	0.64
3:H:44:ARG:HB2	3:H:237:PHE:HB2	1.80	0.64
1:A:1788:ARG:O	1:A:1794:GLN:NE2	2.31	0.64
1:A:256:ILE:HG23	1:A:257:ARG:HG2	1.78	0.63
1:A:3758:LEU:HB2	1:A:3795:PRO:HB3	1.81	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:2891:ARG:HG2	1:F:3894:PRO:HB3	1.81	0.63
1:F:3739:ILE:HA	1:F:3749:PRO:HA	1.78	0.63
4:L:139:ALA:O	4:L:143:HIS:ND1	2.25	0.63
4:N:51:GLU:HB3	4:N:54:GLN:HE22	1.63	0.63
1:A:278:HIS:HB3	1:A:281:GLN:HB2	1.79	0.63
1:A:865:GLN:NE2	1:A:3171:ALA:O	2.30	0.63
1:A:1625:HIS:HA	1:A:1628:LYS:HD3	1.80	0.63
1:A:2507:ILE:HA	1:A:2510:LEU:HD23	1.80	0.63
1:F:3512:VAL:HA	1:F:3515:GLN:HE21	1.62	0.63
1:F:3874:ARG:NH2	1:F:4117:LEU:O	2.32	0.63
4:K:198:LEU:HD13	4:L:198:LEU:HA	1.80	0.63
1:A:953:GLN:H	1:A:956:PRO:HG3	1.63	0.63
1:A:2291:GLN:CD	1:A:2292:CYS:H	2.05	0.63
1:A:3483:MET:HA	1:A:3486:GLU:HB2	1.80	0.63
1:A:3718:ARG:H	1:A:3743:HIS:CE1	2.16	0.63
1:A:975:ASP:O	1:A:981:ARG:NH2	2.27	0.63
1:A:1283:GLY:H	1:A:1286:ALA:HB2	1.63	0.63
1:F:340:TYR:O	1:F:344:GLN:NE2	2.31	0.63
1:A:864:GLY:N	1:A:3168:TYR:O	2.32	0.63
6:Q:136:ILE:HB	6:R:40:ASP:HA	1.81	0.63
1:A:1112:ALA:HA	1:A:1180:GLN:HG2	1.79	0.63
1:F:2405:VAL:HA	1:F:2408:MET:HE1	1.81	0.63
1:F:3369:ASP:HB3	1:F:3372:LYS:HG2	1.80	0.63
1:F:3835:PRO:HA	1:F:3839:TYR:HB2	1.81	0.63
2:G:303:PHE:HB3	3:H:290:GLN:HB2	1.78	0.63
6:Q:142:MET:HG2	6:Q:221:VAL:HB	1.80	0.63
1:A:1009:LEU:O	1:A:1013:ILE:HD12	1.98	0.63
2:G:404:ARG:NH2	8:I:32:DA:OP1	2.32	0.63
6:Q:131:VAL:HG13	6:R:135:LEU:HD23	1.81	0.63
1:A:82:ARG:HA	1:A:85:ILE:HD12	1.80	0.62
1:A:2380:ASN:OD1	1:A:2381:ALA:N	2.32	0.62
1:F:396:PHE:HE1	1:F:441:MET:HG3	1.64	0.62
1:F:4086:ASP:HA	1:F:4089:ILE:HG12	1.80	0.62
2:G:194:ARG:HH22	2:G:221:ILE:HA	1.63	0.62
2:G:352:PRO:HA	2:G:394:VAL:HA	1.81	0.62
5:M:711:ASN:O	5:M:715:SER:N	2.29	0.62
1:A:2891:ARG:HG2	1:A:3894:PRO:HB3	1.81	0.62
1:A:3982:SER:O	1:A:3986:HIS:ND1	2.21	0.62
2:B:304:ASN:HB3	2:B:311:LEU:HD21	1.79	0.62
2:G:291:GLU:HA	5:P:690:VAL:HG23	1.81	0.62
2:G:521:LEU:HA	2:G:524:GLU:HB2	1.81	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:R:60:GLU:HG2	6:R:61:LEU:HD12	1.82	0.62
1:A:1502:SER:OG	1:A:1503:LEU:N	2.31	0.62
1:A:3278:GLN:HB3	1:A:3282:ARG:HH12	1.64	0.62
2:B:347:LEU:HD11	2:B:396:ALA:HB1	1.80	0.62
1:A:1589:ASN:HD21	1:A:1592:MET:HG2	1.64	0.62
2:B:141:TYR:O	2:B:182:LYS:NZ	2.33	0.62
1:F:2375:ALA:HB3	1:F:2404:ARG:HD3	1.80	0.62
1:F:3929:MET:O	1:F:3938:ILE:N	2.27	0.62
2:G:203:MET:HE3	2:G:238:LYS:HG2	1.80	0.62
3:H:499:LEU:HD22	3:H:500:HIS:HD2	1.63	0.62
2:G:277:VAL:HG23	3:H:429:ASP:HB3	1.81	0.62
2:G:528:LEU:HD21	3:H:372:ALA:HB1	1.81	0.62
3:H:66:ASN:ND2	3:H:74:TYR:O	2.33	0.62
3:C:14:MET:HE1	3:C:134:ILE:HA	1.81	0.62
1:F:736:LEU:HD12	1:F:740:ILE:HG21	1.82	0.62
1:A:1568:ASN:HD22	1:A:1603:GLN:HB2	1.63	0.62
1:A:2196:TRP:HB2	1:A:2199:LEU:HB2	1.82	0.62
1:A:3720:ALA:HB3	1:A:3743:HIS:HB3	1.80	0.62
1:F:835:LYS:HD3	1:F:838:LYS:HD2	1.81	0.62
1:F:2742:MET:HE1	8:I:44:DG:H1	1.64	0.62
8:I:35:DT:H3	9:J:22:DG:N2	1.98	0.62
1:F:759:GLY:HA3	1:F:766:ALA:HB2	1.81	0.62
1:F:3809:THR:OG1	1:F:3929:MET:SD	2.51	0.62
1:A:2405:VAL:HA	1:A:2408:MET:HE1	1.82	0.62
1:F:785:MET:HA	1:F:788:TYR:CZ	2.35	0.62
1:F:1685:ASP:HB3	1:F:1688:LEU:HG	1.81	0.62
2:G:95:ASN:OD1	2:G:98:ASN:N	2.33	0.62
2:G:348:MET:HG3	2:G:410:PHE:HE1	1.65	0.62
1:F:3681:LYS:HB2	1:F:3687:MET:HG2	1.82	0.62
8:E:41:DT:H2''	8:E:42:DA:H5'	1.81	0.62
3:C:335:SER:OG	3:C:339:CYS:SG	2.58	0.61
1:F:1367:HIS:HB2	1:F:1370:ARG:HH12	1.63	0.61
2:G:132:GLN:OE1	2:G:137:HIS:ND1	2.33	0.61
5:M:739:GLN:OE1	5:M:741:ARG:NH1	2.33	0.61
1:A:332:GLU:HB2	1:A:335:LYS:HZ3	1.65	0.61
2:B:410:PHE:HB3	2:B:437:LEU:HD12	1.80	0.61
1:F:3443:PRO:HB3	1:F:3471:ILE:HD11	1.82	0.61
1:A:166:ILE:HG13	1:A:167:PRO:HD3	1.82	0.61
3:H:653:GLN:O	3:H:657:ASN:ND2	2.33	0.61
1:F:866:ILE:HG13	1:F:3168:TYR:HD2	1.64	0.61
1:F:2218:PHE:O	1:F:2222:HIS:ND1	2.33	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:67:ILE:HG13	2:G:119:LEU:HD21	1.82	0.61
2:G:246:VAL:HB	2:G:249:LYS:HZ1	1.65	0.61
5:M:822:SER:HB3	5:M:838:LEU:HD13	1.82	0.61
4:N:58:ASP:O	6:Q:75:HIS:NE2	2.34	0.61
5:P:666:VAL:HG11	5:P:679:GLU:HG2	1.81	0.61
1:F:3620:PRO:O	1:F:3630:ARG:NH1	2.31	0.61
1:A:2181:GLY:H	1:A:2185:MET:HE1	1.66	0.61
2:B:468:LYS:NZ	2:B:517:ARG:O	2.32	0.61
1:F:3035:PHE:HA	1:F:3038:GLU:HB2	1.82	0.61
4:L:69:GLU:OE1	4:L:99:LYS:NZ	2.33	0.61
4:L:158:VAL:HA	4:L:161:ARG:HG2	1.82	0.61
1:F:2514:ASN:HD22	1:F:2517:LEU:HG	1.64	0.61
1:F:1016:GLY:HA3	1:F:1029:CYS:SG	2.41	0.61
1:F:2151:ILE:HG12	1:F:2192:THR:HG21	1.83	0.61
1:F:2268:LYS:HE3	1:F:2312:TYR:HB2	1.81	0.61
3:H:598:PHE:HZ	3:H:638:CYS:HB2	1.65	0.61
1:F:996:THR:HG23	1:F:1043:GLN:HE21	1.66	0.61
1:A:149:ILE:HD11	1:A:183:GLU:HB2	1.81	0.61
1:A:1082:PHE:HA	1:A:1085:ILE:HG12	1.83	0.61
1:A:3700:GLU:HA	1:A:3719:ILE:H	1.65	0.61
1:F:2967:GLU:O	1:F:2971:GLN:HG2	2.01	0.61
3:H:508:ILE:HG23	3:H:509:GLN:H	1.64	0.61
1:A:2213:ASN:ND2	1:A:2248:CYS:O	2.33	0.60
3:C:238:LYS:HE2	3:C:483:PRO:HB3	1.82	0.60
1:F:1626:TRP:HZ2	1:F:1674:THR:HG21	1.65	0.60
1:F:2723:THR:HA	1:F:2726:LEU:HD13	1.81	0.60
2:G:493:LEU:HD11	5:P:708:ARG:HE	1.66	0.60
1:A:320:LEU:HD21	1:A:365:GLY:HA2	1.83	0.60
1:A:1375:THR:HG22	1:A:1382:ILE:HG21	1.82	0.60
1:A:2313:LYS:HA	1:A:2316:TYR:CZ	2.36	0.60
1:F:20:SER:HB2	1:F:66:LEU:HD23	1.83	0.60
7:D:18:DA:H2"	7:D:19:DA:C8	2.36	0.60
1:F:326:MET:HA	1:F:329:LYS:HE3	1.83	0.60
1:F:1172:LEU:HD11	1:F:1187:SER:HB2	1.83	0.60
4:N:155:TRP:HE1	4:O:158:VAL:HG21	1.66	0.60
1:A:2221:LYS:HZ2	1:A:2255:LEU:HD22	1.65	0.60
1:A:3512:VAL:HA	1:A:3515:GLN:HE21	1.66	0.60
3:C:93:ASP:HB3	3:C:97:LYS:HE2	1.83	0.60
1:F:3789:ARG:HD3	1:F:3938:ILE:HD11	1.83	0.60
2:G:329:LEU:HA	3:H:497:ARG:HH21	1.66	0.60
4:L:170:GLU:OE2	5:M:851:LYS:NZ	2.35	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:40:GLN:HB3	1:A:2427:ARG:HH21	1.66	0.60
1:A:771:ASN:OD1	1:A:854:ARG:NH2	2.34	0.60
1:A:1491:ILE:HG21	1:A:1558:TYR:HE2	1.67	0.60
1:A:3335:ARG:NH2	1:A:3418:ASP:OD2	2.33	0.60
1:F:919:LEU:HG	1:F:920:THR:HG23	1.82	0.60
1:A:264:ARG:N	8:E:40:DT:OP1	2.35	0.60
1:A:1145:LEU:HB3	1:A:1165:LEU:HB2	1.82	0.60
1:A:3628:PHE:HB2	1:A:3675:LYS:HB3	1.83	0.60
1:F:935:HIS:HB2	1:F:984:TYR:HE1	1.67	0.60
1:A:2425:ARG:NH1	1:A:2460:GLU:OE1	2.34	0.60
1:A:2808:LEU:HD23	1:A:2812:LEU:HD23	1.82	0.60
1:A:3506:LEU:O	1:A:3551:ASN:ND2	2.35	0.60
1:F:716:VAL:HG11	1:F:1120:SER:HB2	1.84	0.60
1:F:3380:ARG:O	1:F:3384:HIS:ND1	2.35	0.60
6:R:193:PHE:HA	6:R:197:LYS:HG2	1.84	0.60
1:A:2244:CYS:HG	1:A:2245:TRP:CD1	2.19	0.60
1:A:3079:GLU:OE2	1:A:3105:ASN:ND2	2.35	0.60
3:C:339:CYS:H	3:C:396:ALA:HB3	1.66	0.60
1:F:477:ASN:OD1	1:F:478:CYS:N	2.35	0.60
1:F:1112:ALA:HA	1:F:1180:GLN:HG2	1.83	0.60
2:B:161:MET:HE2	2:B:164:LYS:HG3	1.83	0.60
1:F:2742:MET:SD	9:J:13:DA:N6	2.65	0.60
1:F:3771:MET:HA	1:F:3774:ILE:HD12	1.83	0.60
1:A:1532:LEU:HD11	1:A:1560:TYR:HB2	1.83	0.60
3:C:497:ARG:NH1	3:C:503:GLU:O	2.35	0.60
1:F:1576:ASP:HA	1:F:1579:VAL:HB	1.84	0.60
1:F:3921:GLY:H	1:F:3944:HIS:HB2	1.66	0.60
4:N:159:GLN:OE1	4:O:161:ARG:NH2	2.34	0.60
1:A:785:MET:HA	1:A:788:TYR:CZ	2.37	0.59
1:F:1204:PRO:HB2	1:F:1206:LEU:H	1.67	0.59
1:F:2825:THR:HG22	1:F:2828:GLU:HG2	1.83	0.59
1:F:3103:ILE:HD13	1:F:3138:ILE:HD11	1.83	0.59
1:F:3392:ALA:HB1	1:F:3409:VAL:HG22	1.84	0.59
2:G:264:ASN:OD1	2:G:267:ILE:N	2.31	0.59
1:A:54:GLN:OE1	1:A:54:GLN:N	2.35	0.59
1:A:1211:VAL:HG13	1:A:1219:PHE:HZ	1.67	0.59
1:F:71:LYS:HB2	1:F:82:ARG:CZ	2.32	0.59
6:Q:131:VAL:H	6:R:44:VAL:HG23	1.68	0.59
1:A:1645:VAL:HA	1:A:1648:LEU:HD12	1.84	0.59
1:A:2569:SER:OG	1:A:2571:ASP:OD1	2.20	0.59
1:A:2825:THR:HG22	1:A:2828:GLU:HG2	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3007:GLU:O	1:A:3011:LEU:N	2.35	0.59
1:F:1820:VAL:HA	1:F:1824:LEU:HD23	1.83	0.59
1:F:2372:PRO:O	1:F:2404:ARG:NH1	2.36	0.59
5:P:743:MET:SD	5:P:746:MET:HB3	2.42	0.59
1:A:2514:ASN:HD22	1:A:2517:LEU:HG	1.66	0.59
2:B:94:LYS:HE2	2:B:103:TYR:HE1	1.67	0.59
2:B:372:GLU:HG2	2:B:378:SER:HB2	1.83	0.59
3:C:210:MET:HA	3:C:213:ILE:HG12	1.85	0.59
4:O:159:GLN:HG3	5:P:843:LEU:HD11	1.84	0.59
1:A:1015:ASP:OD1	1:A:1016:GLY:N	2.36	0.59
1:A:1389:VAL:N	1:A:1392:MET:SD	2.70	0.59
1:A:2298:GLU:HG2	1:A:2301:GLN:HB3	1.84	0.59
1:F:1765:VAL:O	1:F:1768:ARG:NE	2.36	0.59
1:F:3758:LEU:HB2	1:F:3795:PRO:HB3	1.85	0.59
3:H:431:ARG:HB3	3:H:433:TYR:CE1	2.38	0.59
3:H:509:GLN:HG3	3:H:511:HIS:H	1.67	0.59
1:A:483:VAL:HG21	1:A:567:GLU:HG3	1.84	0.59
1:A:675:ARG:HA	1:A:678:LYS:HE2	1.84	0.59
1:A:1465:HIS:HA	1:A:1468:LEU:HB3	1.84	0.59
1:A:3103:ILE:HD13	1:A:3138:ILE:HD11	1.85	0.59
2:B:217:TYR:HB3	2:B:221:ILE:HD12	1.85	0.59
2:G:399:ARG:HA	2:G:410:PHE:HA	1.82	0.59
3:H:334:LYS:NZ	3:H:400:ARG:O	2.34	0.59
1:A:1144:SER:O	1:A:1151:ARG:NH2	2.34	0.59
4:K:133:THR:O	4:K:137:ASN:ND2	2.33	0.59
1:A:1002:GLU:O	1:A:1004:GLN:NE2	2.36	0.59
1:A:2388:LYS:NZ	2:B:157:VAL:O	2.36	0.59
1:A:3392:ALA:HB1	1:A:3409:VAL:HG22	1.84	0.59
1:A:3625:LEU:H	1:A:3683:CYS:HA	1.68	0.59
3:C:349:SER:O	3:C:352:GLN:NE2	2.36	0.59
1:F:715:ALA:O	1:F:719:LYS:NZ	2.35	0.59
3:H:636:ILE:HA	3:H:639:ILE:HG12	1.85	0.59
4:K:1:MET:HE1	4:K:25:GLU:HB3	1.84	0.59
6:R:210:PHE:HA	6:R:214:LEU:HB2	1.85	0.59
1:A:229:SER:O	1:A:233:ASN:ND2	2.35	0.59
1:A:3855:TYR:OH	1:A:4120:THR:O	2.21	0.59
1:A:12:LEU:HD21	1:A:44:LEU:HD22	1.85	0.59
1:A:2824:LYS:O	1:A:2829:LYS:NZ	2.36	0.59
1:F:1115:HIS:CE1	1:F:1183:CYS:H	2.20	0.59
1:F:2313:LYS:HA	1:F:2316:TYR:CZ	2.37	0.59
8:I:45:DG:H5'	8:I:45:DG:H8	1.68	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:210:SER:OG	1:A:257:ARG:NH1	2.35	0.58
1:A:1640:GLU:HA	1:A:1643:MET:SD	2.43	0.58
1:A:2243:GLU:HG2	1:A:2283:ASN:HD21	1.67	0.58
1:A:2414:GLN:OE1	1:A:2414:GLN:N	2.34	0.58
1:A:2534:ASN:HB3	1:A:2537:ASP:HB2	1.84	0.58
1:F:305:ASN:ND2	8:I:41:DT:OP2	2.36	0.58
1:F:450:SER:OG	1:F:453:MET:SD	2.55	0.58
1:F:1717:LEU:O	1:F:1721:HIS:ND1	2.35	0.58
1:F:2327:LEU:O	1:F:2333:ARG:NH2	2.36	0.58
1:F:2388:LYS:NZ	2:G:154:PHE:O	2.33	0.58
2:G:39:ILE:HD12	2:G:84:ALA:HB3	1.85	0.58
2:B:362:LEU:HD23	2:B:436:PHE:HB3	1.84	0.58
1:F:933:LEU:HD22	1:F:2797:VAL:HG11	1.83	0.58
6:R:36:LEU:O	6:R:46:HIS:ND1	2.36	0.58
1:A:207:GLN:NE2	1:A:215:PRO:O	2.36	0.58
1:A:908:ASP:HA	1:A:911:LEU:HD23	1.84	0.58
1:A:2925:GLU:HA	1:A:2928:LYS:HD2	1.84	0.58
1:F:1190:LEU:HD12	1:F:1193:LYS:HD3	1.86	0.58
1:F:1297:PHE:HA	1:F:1301:ILE:HG12	1.85	0.58
1:F:3750:PHE:HB3	1:F:3802:LEU:HD11	1.86	0.58
2:G:254:ARG:NH1	8:I:33:DA:O3'	2.36	0.58
1:A:38:LEU:HD21	1:A:85:ILE:HG13	1.84	0.58
1:A:3380:ARG:O	1:A:3384:HIS:ND1	2.36	0.58
1:F:1304:HIS:HE1	1:F:1307:ILE:HG22	1.69	0.58
3:H:44:ARG:NH2	3:H:233:LYS:O	2.36	0.58
1:A:95:LYS:O	1:A:96:MET:HE2	2.03	0.58
2:B:352:PRO:HB2	2:B:354:VAL:HG22	1.85	0.58
1:F:1502:SER:OG	1:F:1503:LEU:N	2.34	0.58
1:A:1487:VAL:HG23	1:A:1488:TYR:HD1	1.68	0.58
1:A:2372:PRO:O	1:A:2404:ARG:NH1	2.36	0.58
1:A:2404:ARG:NH2	1:A:2406:GLU:OE2	2.36	0.58
1:A:1685:ASP:HB3	1:A:1688:LEU:HG	1.84	0.58
1:F:3288:SER:HA	1:F:3292:GLY:HA3	1.84	0.58
3:H:496:HIS:CD2	3:H:506:PRO:HD3	2.38	0.58
9:J:26:DT:H2''	9:J:27:DT:N3	2.19	0.58
2:B:480:ASN:OD1	2:B:483:LEU:N	2.30	0.58
2:B:522:VAL:HA	2:B:525:PHE:HB2	1.85	0.58
2:G:300:THR:HA	3:H:293:THR:HA	1.86	0.58
4:L:150:ARG:NH1	4:L:151:LEU:HG	2.18	0.58
1:A:2479:TRP:O	1:A:2483:ASN:ND2	2.29	0.58
1:A:3474:ARG:NH2	1:A:3475:TYR:OH	2.37	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:399:ARG:HA	2:B:410:PHE:HA	1.85	0.58
1:F:3048:LYS:HD2	1:F:3061:LEU:HB2	1.85	0.58
2:G:34:GLY:HA3	2:G:162:SER:HB3	1.83	0.58
5:P:660:GLU:HG2	5:P:686:GLY:HA3	1.84	0.58
5:P:746:MET:HE3	5:P:751:LYS:HA	1.86	0.58
1:F:3733:ARG:NH2	1:F:3755:GLY:O	2.37	0.58
3:H:460:SER:OG	3:H:461:MET:SD	2.62	0.58
8:E:43:DT:H2''	8:E:44:DG:H5'	1.86	0.58
1:A:4115:ASN:O	1:A:4119:ARG:N	2.36	0.57
1:F:802:THR:O	1:F:852:ARG:NH1	2.36	0.57
1:F:3389:VAL:HG13	1:F:3413:TYR:HE1	1.69	0.57
3:H:519:PRO:HB2	3:H:521:GLU:HG2	1.85	0.57
1:A:1304:HIS:ND1	1:A:1307:ILE:O	2.37	0.57
1:A:3148:GLN:NE2	1:A:3150:ASN:OD1	2.38	0.57
1:A:3151:LEU:HD21	1:A:3196:LYS:HE3	1.86	0.57
1:A:3313:SER:HB2	1:A:3316:LEU:HD22	1.87	0.57
2:B:247:ARG:NH2	2:B:491:GLU:OE2	2.36	0.57
1:F:469:ALA:HA	1:F:475:LEU:HD13	1.85	0.57
1:F:2348:GLN:OE1	1:F:2353:GLN:NE2	2.36	0.57
1:F:2380:ASN:OD1	1:F:2381:ALA:N	2.37	0.57
2:G:253:LYS:HD2	2:G:254:ARG:HB2	1.86	0.57
1:A:471:LYS:O	1:A:475:LEU:N	2.28	0.57
1:A:3576:ASP:O	1:A:3579:SER:OG	2.21	0.57
3:C:250:ARG:HA	3:C:260:ARG:HA	1.86	0.57
1:F:297:LEU:HD23	1:F:316:LEU:HA	1.86	0.57
1:A:3117:ILE:O	1:A:3125:ARG:NH2	2.37	0.57
2:B:252:ARG:NH1	2:B:254:ARG:O	2.31	0.57
2:B:413:LEU:HB2	2:B:432:PHE:HB3	1.86	0.57
1:F:113:SER:O	1:F:117:LYS:HB2	2.04	0.57
1:F:1151:ARG:HB2	1:F:1163:LEU:HD12	1.86	0.57
1:F:1195:VAL:HA	1:F:1198:LEU:HD12	1.85	0.57
1:F:1685:ASP:H	1:F:1688:LEU:HD12	1.69	0.57
1:F:2388:LYS:NZ	2:G:157:VAL:O	2.38	0.57
1:F:3464:LYS:HD3	1:F:3997:LEU:HD21	1.85	0.57
1:A:1369:MET:HE1	1:A:1418:HIS:HB2	1.85	0.57
1:A:3142:ILE:HA	1:A:3145:ILE:HG12	1.86	0.57
1:F:2257:PHE:HB2	1:F:2299:TYR:HE1	1.69	0.57
1:F:2271:SER:HA	1:F:2274:ILE:HD12	1.87	0.57
1:F:2291:GLN:NE2	1:F:2292:CYS:SG	2.78	0.57
1:A:984:TYR:HA	1:A:987:LEU:HB3	1.86	0.57
1:A:2123:PRO:HA	1:A:2127:LYS:HG2	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:639:ALA:O	1:F:643:GLU:N	2.37	0.57
1:F:1305:ASP:OD1	1:F:1334:LYS:NZ	2.37	0.57
2:G:305:THR:HG23	3:H:290:GLN:HG3	1.85	0.57
1:A:89:LEU:O	1:A:93:LEU:N	2.36	0.57
1:A:2120:ARG:HE	1:A:2159:PRO:HG2	1.70	0.57
1:A:3553:GLU:HG3	1:A:3557:ARG:HH22	1.69	0.57
3:H:9:ALA:HB3	3:H:130:ARG:HG3	1.85	0.57
6:Q:27:VAL:HG11	6:Q:80:LEU:HD12	1.85	0.57
1:A:753:GLN:NE2	1:A:791:ASP:O	2.32	0.57
1:A:993:HIS:ND1	1:A:2779:ASP:OD1	2.32	0.57
1:A:1096:VAL:O	1:A:1100:VAL:HG13	2.04	0.57
1:A:1583:MET:HE3	1:A:1629:CYS:HB3	1.87	0.57
2:B:485:GLN:NE2	3:C:333:TYR:O	2.38	0.57
1:F:3155:VAL:H	1:F:3159:ARG:HH22	1.51	0.57
7:D:25:DT:H3'	7:D:26:DT:H72	1.86	0.57
1:A:128:LEU:HD21	1:A:170:VAL:HB	1.86	0.57
1:F:2342:CYS:HB3	1:F:2377:ARG:HH22	1.70	0.57
1:F:2358:ASP:OD2	1:F:2359:LYS:NZ	2.31	0.57
1:F:2824:LYS:O	1:F:2829:LYS:NZ	2.38	0.57
2:G:131:PHE:CZ	2:G:135:MET:HG2	2.39	0.57
1:A:1717:LEU:O	1:A:1721:HIS:ND1	2.38	0.57
1:A:1843:ILE:HA	1:A:1846:ASP:HB3	1.85	0.57
2:B:350:PHE:HD2	3:C:461:MET:HB2	1.70	0.57
1:F:476:ARG:HH22	1:F:1558:TYR:HE1	1.52	0.56
1:F:1023:SER:OG	1:F:1026:ARG:NH2	2.38	0.56
1:A:1849:ASP:OD1	1:A:1850:VAL:N	2.38	0.56
2:B:362:LEU:HB3	2:B:436:PHE:HB2	1.86	0.56
1:F:396:PHE:HD1	1:F:441:MET:HE2	1.71	0.56
1:F:538:ASP:HA	1:F:541:MET:HG3	1.87	0.56
1:F:2365:ASN:HD22	1:F:2396:LEU:HG	1.69	0.56
4:K:31:GLY:HA3	4:K:47:VAL:HG21	1.87	0.56
1:A:40:GLN:HG3	1:A:2427:ARG:HE	1.70	0.56
1:A:145:ASP:O	1:A:148:LYS:NZ	2.33	0.56
1:A:1576:ASP:HA	1:A:1579:VAL:HB	1.86	0.56
1:A:2464:HIS:CE1	1:A:2466:SER:HG	2.24	0.56
1:A:2732:PHE:HA	1:A:2734:ARG:HH11	1.70	0.56
1:A:3546:SER:O	1:A:3550:LYS:NZ	2.37	0.56
1:A:3554:PHE:HD1	1:A:3557:ARG:HH21	1.54	0.56
2:B:276:LEU:HA	3:C:433:TYR:HE2	1.69	0.56
1:F:68:PHE:O	1:F:82:ARG:NH2	2.38	0.56
1:F:117:LYS:NZ	3:H:298:ASN:O	2.29	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:1048:GLN:HA	1:F:1051:LYS:HG2	1.86	0.56
1:F:2534:ASN:HB3	1:F:2537:ASP:HB2	1.87	0.56
1:F:3639:GLU:O	1:F:3643:HIS:ND1	2.34	0.56
1:F:3702:PRO:HB2	1:F:3794:VAL:HG21	1.87	0.56
2:G:271:VAL:HG12	2:G:370:PRO:HA	1.85	0.56
2:G:318:ARG:HH21	3:H:278:VAL:HG13	1.70	0.56
3:H:409:PHE:HB3	3:H:420:VAL:HG23	1.87	0.56
5:P:813:PHE:HA	5:P:850:ALA:O	2.05	0.56
5:P:845:LEU:HD22	5:P:852:VAL:HG13	1.87	0.56
1:A:1820:VAL:HA	1:A:1824:LEU:HD13	1.85	0.56
2:B:470:ARG:HH21	3:C:346:CYS:HA	1.70	0.56
1:F:938:VAL:HA	1:F:941:MET:HG3	1.86	0.56
2:G:476:ASP:HB2	3:H:427:MET:HG3	1.87	0.56
1:A:2232:ARG:NH1	1:A:2275:GLN:OE1	2.39	0.56
1:A:2522:ARG:HH21	1:A:2564:GLU:HG3	1.70	0.56
1:F:2330:VAL:HG22	1:F:2331:MET:SD	2.46	0.56
5:P:694:GLY:O	5:P:718:HIS:NE2	2.33	0.56
1:A:1354:GLU:HA	1:A:1357:LYS:HB3	1.88	0.56
1:A:3151:LEU:HD22	1:A:3197:LEU:HA	1.87	0.56
1:A:3737:ARG:HA	1:A:3751:LEU:HA	1.88	0.56
1:F:672:ILE:HG13	1:F:676:ASN:HD21	1.70	0.56
1:F:865:GLN:HE22	1:F:3171:ALA:N	2.04	0.56
1:F:1377:CYS:SG	1:F:1378:GLU:N	2.78	0.56
1:F:2131:GLY:O	1:F:2135:ASN:ND2	2.38	0.56
1:A:852:ARG:NH2	1:A:922:SER:OG	2.38	0.56
1:A:1354:GLU:HB3	1:A:1357:LYS:HD3	1.87	0.56
1:A:3110:PHE:CE1	1:A:3128:LYS:HG3	2.40	0.56
2:B:275:ASN:O	2:B:278:GLN:NE2	2.38	0.56
1:F:529:ASP:HA	1:F:532:ARG:HH11	1.70	0.56
1:F:1307:ILE:HG23	1:F:1309:ALA:H	1.70	0.56
1:F:1605:PHE:O	1:F:1608:ARG:NH2	2.39	0.56
1:F:2555:LEU:HD11	1:F:2854:PHE:HA	1.86	0.56
6:Q:44:VAL:HG12	6:Q:130:LEU:HD21	1.87	0.56
1:F:116:THR:O	2:G:297:LYS:NZ	2.38	0.56
1:F:1238:GLN:HB2	1:F:1239:PRO:HD3	1.88	0.56
3:H:153:SER:HA	3:H:156:LYS:HE2	1.87	0.56
3:H:315:ARG:HH11	3:H:320:ILE:HG13	1.70	0.56
1:A:2511:ILE:HD12	1:A:2550:ILE:HD12	1.87	0.56
3:C:514:ASN:OD1	3:C:515:MET:N	2.39	0.56
1:F:584:GLU:O	1:F:613:HIS:N	2.38	0.56
1:F:3736:LYS:HB2	1:F:3752:VAL:HB	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:3828:TYR:OH	1:F:3876:SER:O	2.24	0.56
4:K:169:LYS:HB2	4:L:169:LYS:HG3	1.87	0.56
5:M:710:LYS:HA	5:M:713:ILE:HD12	1.86	0.56
1:A:168:ASP:OD1	1:A:169:THR:N	2.35	0.55
1:A:1261:LEU:HG	1:A:1340:ARG:HG2	1.89	0.55
2:B:71:TYR:HB2	2:B:116:ILE:HD11	1.87	0.55
1:F:3826:ALA:O	1:F:3830:SER:HB3	2.06	0.55
3:H:412:ILE:HA	3:H:417:GLU:HG3	1.87	0.55
8:E:23:DT:H2''	8:E:25:DA:N1	2.21	0.55
1:A:996:THR:HG23	1:A:1043:GLN:NE2	2.20	0.55
1:A:3447:VAL:HA	1:A:3450:MET:HG3	1.88	0.55
1:F:1070:PRO:HA	1:F:1113:LEU:HD21	1.88	0.55
1:F:1134:LEU:HD23	1:F:1137:ILE:HD11	1.89	0.55
5:M:666:VAL:HA	5:M:701:ILE:HB	1.88	0.55
1:A:3294:SER:O	1:A:3298:LEU:HG	2.07	0.55
3:C:242:ARG:HD2	3:C:273:LYS:HE3	1.88	0.55
1:F:459:ARG:HG2	1:F:540:MET:HE2	1.87	0.55
3:H:453:ALA:HB2	3:H:536:LEU:HD23	1.87	0.55
4:O:142:GLU:HB3	4:O:146:LYS:NZ	2.22	0.55
7:D:18:DA:H2'	7:D:18:DA:N3	2.20	0.55
1:A:200:PHE:CE2	1:A:227:LEU:HD21	2.41	0.55
1:A:2290:PRO:O	1:A:2292:CYS:N	2.39	0.55
1:A:2576:MET:HE2	1:A:2576:MET:N	2.21	0.55
1:A:3569:GLN:HA	1:A:3572:ILE:HD12	1.88	0.55
1:A:3576:ASP:O	1:A:3629:ARG:NH1	2.40	0.55
1:A:3717:VAL:HA	1:A:3743:HIS:HE1	1.72	0.55
1:F:782:ARG:NH1	1:F:3168:TYR:OH	2.40	0.55
4:K:187:LYS:HZ1	4:L:188:LYS:HG3	1.72	0.55
5:M:725:TRP:HE3	5:M:726:LEU:HD22	1.71	0.55
5:P:764:SER:OG	5:P:767:ILE:O	2.24	0.55
1:A:63:PHE:HE2	1:A:85:ILE:HG12	1.70	0.55
1:A:2205:VAL:HG22	1:A:2207:LYS:H	1.70	0.55
2:B:457:GLU:OE2	2:B:458:GLN:NE2	2.30	0.55
2:B:481:PRO:HA	2:B:484:GLN:HE21	1.70	0.55
1:F:3414:MET:HA	1:F:3414:MET:HE3	1.89	0.55
5:P:813:PHE:H	5:P:848:HIS:HB2	1.70	0.55
1:A:71:LYS:CB	1:A:82:ARG:HH22	2.20	0.55
1:A:1610:ASN:OD1	1:A:1611:GLN:N	2.38	0.55
1:A:1614:GLN:HA	1:A:1617:LYS:HE2	1.89	0.55
1:A:2737:GLU:HG2	1:A:2740:SER:HB2	1.88	0.55
3:H:86:PRO:HA	3:H:90:LEU:HD12	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:I:34:DC:H42	9:J:23:DT:H3	1.53	0.55
1:A:983:LEU:HD22	1:A:2775:TYR:HE2	1.71	0.55
1:A:1841:SER:HA	1:A:1844:VAL:HG23	1.89	0.55
1:F:538:ASP:OD1	1:F:539:GLN:N	2.40	0.55
1:F:2331:MET:O	1:F:2334:LYS:NZ	2.32	0.55
1:F:2439:ILE:HD12	1:F:2454:LEU:HD21	1.89	0.55
1:F:3455:LYS:O	1:F:3455:LYS:NZ	2.29	0.55
1:F:3527:GLN:HB2	1:F:3705:TYR:HE2	1.72	0.55
1:F:4113:ASP:O	1:F:4117:LEU:HG	2.06	0.55
2:G:381:LEU:O	2:G:385:LEU:HG	2.05	0.55
1:A:3263:HIS:HB2	1:A:3276:TRP:CZ2	2.42	0.55
2:B:264:ASN:HD22	3:C:530:LEU:HD13	1.72	0.55
1:F:87:LYS:HE2	1:F:831:LEU:HD13	1.87	0.55
2:G:336:GLU:O	3:H:489:ARG:NH2	2.40	0.55
2:G:348:MET:HE3	3:H:518:PRO:HD3	1.88	0.55
7:D:37:DG:C8	8:E:19:DC:H2"	2.42	0.55
1:A:535:LEU:O	1:A:637:LYS:NZ	2.29	0.55
1:A:1151:ARG:HB2	1:A:1163:LEU:HD12	1.89	0.55
1:A:2375:ALA:HB1	1:A:2379:MET:HE3	1.88	0.55
1:F:2479:TRP:O	1:F:2483:ASN:ND2	2.26	0.55
1:F:3255:ALA:HB1	1:F:3258:LEU:HB2	1.89	0.55
3:H:453:ALA:HB1	3:H:533:ILE:HG12	1.88	0.55
4:K:101:LEU:HD21	6:R:113:SER:HB3	1.89	0.55
5:P:665:CYS:HB3	5:P:700:VAL:HA	1.88	0.55
3:C:253:ILE:HB	3:C:257:LEU:HB3	1.88	0.55
1:F:3118:ASP:HB3	1:F:3121:LEU:HD13	1.88	0.55
1:F:3226:ASP:N	1:F:3229:SER:HG	2.05	0.55
1:A:3512:VAL:O	1:A:3516:HIS:ND1	2.34	0.54
1:F:1452:VAL:HA	1:F:1517:LEU:HD11	1.89	0.54
1:F:1608:ARG:HH21	1:F:1612:LYS:HZ1	1.54	0.54
2:G:35:ARG:HH21	2:G:80:ARG:HB3	1.72	0.54
2:G:166:ILE:HB	2:G:200:LEU:HA	1.89	0.54
6:R:195:ILE:HG23	6:R:196:GLU:HG3	1.88	0.54
1:A:2220:MET:HA	1:A:2223:VAL:HG12	1.89	0.54
1:A:3878:VAL:O	1:A:3965:ARG:NH1	2.39	0.54
2:B:361:TYR:OH	3:C:356:PHE:O	2.22	0.54
1:F:1070:PRO:HG2	1:F:3715:TYR:HB2	1.88	0.54
1:A:2943:PHE:O	1:A:2954:GLN:NE2	2.40	0.54
1:A:2986:PRO:O	1:A:2991:LYS:NZ	2.40	0.54
2:B:484:GLN:O	2:B:488:ARG:HG2	2.08	0.54
1:F:79:ARG:NH1	1:F:119:ARG:HD2	2.23	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:1551:ILE:HG13	1:F:1552:HIS:H	1.73	0.54
1:F:1686:LEU:HA	1:F:1689:LYS:HD2	1.90	0.54
2:G:328:ILE:O	3:H:497:ARG:NE	2.41	0.54
3:H:641:ALA:O	3:H:644:GLU:HG3	2.06	0.54
5:P:856:LEU:HD11	5:P:882:PHE:HZ	1.72	0.54
1:A:1358:LEU:HA	1:A:1361:LYS:HE2	1.89	0.54
1:A:1878:ASP:OD1	1:A:1879:VAL:N	2.40	0.54
1:A:2402:LEU:HD11	1:A:2437:ASP:HB2	1.88	0.54
1:A:95:LYS:HD3	1:A:97:GLY:H	1.73	0.54
1:A:1958:GLU:HG2	1:A:1959:LEU:H	1.72	0.54
1:A:2963:SER:OG	1:A:3250:ASN:O	2.22	0.54
1:F:863:GLY:HA3	1:F:3167:ARG:O	2.07	0.54
1:F:1268:ASN:HD21	1:F:1344:PHE:HA	1.72	0.54
1:F:1766:LEU:HD23	1:F:1822:ARG:HH11	1.71	0.54
1:F:3808:ASN:ND2	1:F:3933:GLU:OE1	2.40	0.54
1:F:3831:ASP:HB3	1:F:3832:PRO:HD3	1.90	0.54
1:A:542:ASP:OD1	1:A:543:SER:N	2.41	0.54
1:A:2290:PRO:O	1:A:2293:GLY:N	2.36	0.54
1:A:3035:PHE:HA	1:A:3038:GLU:HB2	1.90	0.54
1:A:3701:ILE:HB	1:A:3704:GLN:NE2	2.23	0.54
1:F:762:TYR:HD2	1:F:765:LEU:HB2	1.71	0.54
1:F:3142:ILE:HA	1:F:3145:ILE:HG12	1.89	0.54
1:F:3183:ILE:HD12	1:F:3238:MET:HB3	1.89	0.54
2:G:458:GLN:HB3	2:G:462:MET:HE1	1.90	0.54
6:R:41:LEU:HD11	6:R:139:LEU:HD21	1.89	0.54
1:A:582:THR:HA	1:A:660:LEU:HD21	1.90	0.54
1:A:1420:ARG:NH1	1:A:1467:ILE:O	2.39	0.54
1:A:1675:TYR:OH	1:A:1692:ALA:O	2.22	0.54
1:A:1686:LEU:HA	1:A:1689:LYS:HD2	1.90	0.54
1:F:862:LEU:HD23	1:F:866:ILE:HG21	1.90	0.54
1:F:2940:ARG:O	1:F:2944:THR:HB	2.08	0.54
1:F:3126:LEU:O	1:F:3130:GLN:NE2	2.41	0.54
1:F:3639:GLU:HG3	1:F:3643:HIS:HE1	1.72	0.54
2:G:85:VAL:HG23	2:G:105:LEU:HB3	1.90	0.54
4:N:5:ILE:HG13	4:N:126:LEU:HD21	1.90	0.54
1:A:172:GLU:HG3	1:A:220:LEU:HD13	1.89	0.54
1:A:759:GLY:HA3	1:A:766:ALA:HB2	1.90	0.54
1:A:1204:PRO:HB2	1:A:1206:LEU:H	1.72	0.54
1:A:1389:VAL:HG23	1:A:1391:VAL:HG22	1.88	0.54
1:A:2587:GLN:O	1:A:2777:HIS:N	2.38	0.54
1:A:3008:TRP:HA	1:A:3011:LEU:HD12	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3882:LEU:HA	1:A:3885:ARG:HE	1.72	0.54
1:A:3981:TYR:HE1	1:A:4105:LYS:HB2	1.73	0.54
1:F:2847:THR:OG1	1:F:2849:SER:O	2.25	0.54
1:F:3112:GLN:O	1:F:3115:SER:OG	2.23	0.54
1:F:3269:ARG:HE	1:F:3272:TRP:HB2	1.73	0.54
1:F:3385:LEU:HB3	1:F:3416:LEU:HD12	1.89	0.54
4:L:162:PHE:HE2	5:M:843:LEU:HB3	1.72	0.54
5:M:713:ILE:HG12	5:M:745:HIS:HB2	1.90	0.54
1:F:305:ASN:O	1:F:308:LEU:N	2.40	0.54
1:F:2414:GLN:OE1	1:F:2414:GLN:N	2.40	0.54
1:F:3065:ILE:O	1:F:3069:MET:N	2.40	0.54
1:F:3971:MET:HE1	1:F:3974:MET:H	1.73	0.54
2:G:163:HIS:HE1	2:G:165:ARG:HB2	1.72	0.54
5:P:743:MET:HE2	5:P:743:MET:HA	1.90	0.54
1:A:2589:TYR:H	1:A:2776:ARG:HA	1.73	0.54
5:P:747:CYS:SG	5:P:749:SER:OG	2.62	0.54
1:A:1115:HIS:CE1	1:A:1183:CYS:H	2.26	0.53
1:A:1406:LEU:HA	1:A:1409:SER:HB3	1.90	0.53
1:A:3689:ASP:CG	1:A:3690:PHE:H	2.16	0.53
2:B:515:ASN:O	2:B:519:GLY:N	2.41	0.53
1:F:348:ILE:HG21	1:F:362:ALA:HB2	1.90	0.53
1:F:3700:GLU:OE1	1:F:3705:TYR:OH	2.24	0.53
5:P:725:TRP:HB2	5:P:742:PHE:CD2	2.44	0.53
1:A:175:TYR:O	1:A:227:LEU:HD12	2.08	0.53
1:A:977:ASP:OD1	1:A:980:THR:N	2.37	0.53
1:A:1605:PHE:HE2	1:A:6013:UNK:HA	1.73	0.53
1:A:3183:ILE:HG13	1:A:3242:MET:HE2	1.89	0.53
1:A:3485:LYS:O	1:A:3489:SER:OG	2.25	0.53
2:B:40:PHE:HB2	2:B:85:VAL:HG12	1.90	0.53
1:F:135:LEU:HD21	1:F:177:LEU:HA	1.90	0.53
1:F:1849:ASP:OD1	1:F:1850:VAL:N	2.42	0.53
1:F:3506:LEU:HG	1:F:3515:GLN:HG3	1.88	0.53
3:H:81:ARG:HD2	3:H:90:LEU:HD22	1.90	0.53
1:A:1169:VAL:HG11	1:A:1198:LEU:HD11	1.91	0.53
1:A:2356:MET:HE1	1:A:2359:LYS:H	1.74	0.53
1:A:3901:ARG:NH1	1:A:3971:MET:HG2	2.24	0.53
2:B:74:LYS:HG3	2:B:83:LEU:HD11	1.91	0.53
2:B:426:GLN:NE2	2:B:427:VAL:O	2.42	0.53
1:F:266:ALA:O	1:F:269:SER:OG	2.21	0.53
1:F:3179:TRP:HE3	1:F:3242:MET:SD	2.31	0.53
1:F:3278:GLN:HB3	1:F:3282:ARG:HH12	1.72	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:P:813:PHE:H	5:P:848:HIS:CB	2.21	0.53
6:Q:159:MET:SD	6:Q:160:LYS:HG3	2.48	0.53
8:I:27:DC:H2'	9:J:30:DT:C2	2.43	0.53
1:A:938:VAL:HA	1:A:941:MET:HG3	1.91	0.53
1:A:1743:MET:HE3	1:A:1773:VAL:HG12	1.91	0.53
1:A:1833:LEU:HD11	1:A:1883:ARG:HD2	1.90	0.53
1:A:2271:SER:HA	1:A:2274:ILE:HD12	1.91	0.53
1:A:3502:MET:HG3	1:A:3518:VAL:HG11	1.89	0.53
3:C:497:ARG:HH22	3:C:504:PRO:HA	1.73	0.53
1:F:67:VAL:HA	1:F:71:LYS:HE2	1.90	0.53
1:F:651:TYR:CZ	1:F:655:LEU:HD11	2.44	0.53
1:F:959:TYR:CZ	1:F:963:LYS:HD2	2.43	0.53
1:F:3820:MET:HB3	1:F:3885:ARG:HH22	1.72	0.53
2:G:348:MET:HG3	2:G:410:PHE:CE1	2.44	0.53
4:L:51:GLU:OE1	4:L:112:ASN:ND2	2.33	0.53
1:A:886:TRP:O	1:A:888:ARG:NH1	2.41	0.53
1:A:1238:GLN:HA	1:A:1296:PHE:CZ	2.43	0.53
1:F:993:HIS:NE2	1:F:1035:GLU:OE2	2.32	0.53
1:F:1058:SER:O	1:F:1062:ARG:HG2	2.08	0.53
2:G:318:ARG:HB3	3:H:276:TRP:HB3	1.90	0.53
3:H:522:VAL:O	3:H:526:SER:OG	2.23	0.53
4:K:187:LYS:HA	4:K:190:LYS:HD2	1.90	0.53
4:L:56:ALA:HB1	4:L:63:LYS:HG2	1.90	0.53
1:F:36:ARG:HD3	1:F:2426:HIS:CG	2.44	0.53
1:F:880:MET:O	1:F:881:LYS:HG2	2.08	0.53
1:F:2346:ALA:HB2	1:F:2377:ARG:HH11	1.74	0.53
2:G:329:LEU:HD12	3:H:497:ARG:HH21	1.73	0.53
3:H:33:GLN:HA	3:H:36:LYS:HG2	1.90	0.53
4:N:28:LEU:HD23	4:N:70:LEU:HD13	1.90	0.53
8:I:27:DC:H1'	9:J:31:DT:C2	2.43	0.53
1:A:10:CYS:SG	1:A:11:SER:N	2.81	0.53
1:A:992:ILE:HG23	1:A:1036:PHE:HD1	1.72	0.53
1:A:2244:CYS:SG	1:A:2245:TRP:N	2.82	0.53
1:A:2283:ASN:HB2	1:A:2285:LEU:HG	1.91	0.53
1:A:3994:ASP:HB3	1:A:3998:LEU:HG	1.91	0.53
2:B:88:TYR:HB3	2:B:146:VAL:HG11	1.90	0.53
1:F:1238:GLN:HA	1:F:1296:PHE:CZ	2.43	0.53
3:H:44:ARG:CZ	3:H:234:LEU:HA	2.38	0.53
8:I:30:DA:H3'	8:I:32:DA:N6	2.24	0.53
1:A:1633:TRP:HA	1:A:1678:LEU:HD21	1.90	0.53
3:H:76:ASN:ND2	3:H:104:GLN:O	2.35	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:R:95:PHE:HE2	6:R:108:VAL:HG13	1.74	0.53
1:A:651:TYR:CZ	1:A:655:LEU:HD11	2.44	0.53
1:A:1475:LEU:HD23	1:A:1527:ARG:HD2	1.91	0.53
1:A:2439:ILE:HD12	1:A:2454:LEU:HD21	1.90	0.53
1:A:3479:THR:HA	1:A:3482:LEU:HB2	1.91	0.53
2:G:178:ASN:HD21	2:G:182:LYS:HD2	1.74	0.53
4:N:99:LYS:NZ	4:N:100:ASN:O	2.42	0.53
1:A:1418:HIS:O	1:A:1422:LYS:HG2	2.09	0.53
1:A:3172:LYS:HD3	1:A:3248:LYS:HB3	1.89	0.53
1:A:3915:HIS:HB2	1:A:3920:ILE:HB	1.91	0.53
2:B:400:TYR:N	2:B:409:TYR:O	2.30	0.53
1:F:1601:LEU:HD13	1:F:1651:LYS:HB3	1.91	0.53
1:F:2160:TYR:HD2	1:F:2164:TRP:CD1	2.26	0.53
1:F:2287:PRO:HG3	1:F:2330:VAL:HA	1.90	0.53
1:F:3566:GLY:O	1:F:3570:ASP:N	2.37	0.53
1:F:3974:MET:SD	1:F:3976:GLU:N	2.82	0.53
2:G:327:ILE:HG23	3:H:497:ARG:HG2	1.90	0.53
5:P:826:ILE:HG13	5:P:856:LEU:HD22	1.90	0.53
1:A:880:MET:O	1:A:881:LYS:HG2	2.09	0.52
1:A:1805:PHE:HZ	1:A:1869:LYS:HA	1.73	0.52
1:A:2271:SER:HB3	1:A:2315:VAL:HG22	1.91	0.52
1:A:3930:VAL:HB	1:A:3937:VAL:HG12	1.90	0.52
1:F:175:TYR:O	1:F:227:LEU:HD12	2.08	0.52
1:F:2157:PHE:HB2	1:F:2160:TYR:HB3	1.92	0.52
1:F:2443:MET:HE2	1:F:2479:TRP:CE3	2.44	0.52
1:F:3428:GLU:OE1	1:F:3474:ARG:NH2	2.42	0.52
1:F:4115:ASN:O	1:F:4119:ARG:N	2.40	0.52
1:A:1864:ASP:OD1	1:A:1864:ASP:N	2.42	0.52
1:A:4055:ASN:HD22	1:A:4058:VAL:HG23	1.74	0.52
2:B:357:LYS:HE2	2:B:359:HIS:CE1	2.43	0.52
3:C:529:PRO:HA	3:C:532:LYS:HG2	1.91	0.52
1:F:440:VAL:HG21	1:F:485:GLN:HG3	1.91	0.52
1:F:1058:SER:HA	1:F:1061:LYS:HE2	1.92	0.52
1:F:1082:PHE:HA	1:F:1085:ILE:HG12	1.91	0.52
1:F:3354:ASP:O	1:F:3358:ARG:NH1	2.42	0.52
1:F:3364:GLY:HA3	1:F:3373:VAL:HA	1.91	0.52
2:G:59:PRO:HA	2:G:62:MET:SD	2.49	0.52
4:L:4:LYS:HG3	4:L:74:LEU:HD22	1.92	0.52
5:P:737:PRO:O	5:P:739:GLN:NE2	2.42	0.52
5:P:754:PHE:O	5:P:758:TYR:N	2.39	0.52
1:A:79:ARG:HE	1:A:82:ARG:HD2	1.73	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1086:TYR:CE1	1:A:1133:HIS:HB3	2.43	0.52
1:A:1590:THR:HG21	1:A:1641:THR:HG23	1.89	0.52
1:A:4108:MET:O	1:A:4112:THR:OG1	2.25	0.52
2:B:414:VAL:HB	2:B:433:GLN:HB2	1.90	0.52
1:F:1779:GLN:O	1:F:1783:ARG:HG2	2.10	0.52
2:G:444:ARG:HH11	3:H:244:SER:HB2	1.74	0.52
7:D:23:DT:H2'	7:D:24:DT:N3	2.24	0.52
1:A:94:GLU:CD	1:A:95:LYS:H	2.16	0.52
1:A:910:PHE:HB2	1:A:937:MET:HE1	1.90	0.52
1:A:4113:ASP:O	1:A:4117:LEU:HG	2.09	0.52
2:B:259:LEU:HD11	2:B:400:TYR:HE1	1.74	0.52
1:F:56:SER:HA	1:F:59:PHE:HD2	1.74	0.52
1:F:1153:LEU:HD12	1:F:1154:PRO:HD2	1.92	0.52
1:F:1568:ASN:HD22	1:F:1603:GLN:HB2	1.74	0.52
1:F:3472:ILE:HA	1:F:3479:THR:HG21	1.91	0.52
1:F:3493:TRP:CD1	1:F:3521:ILE:HG12	2.42	0.52
2:G:194:ARG:NH1	2:G:220:ILE:O	2.43	0.52
2:G:474:ARG:HB3	2:G:477:SER:HB2	1.90	0.52
4:L:37:THR:HG22	4:L:39:GLY:H	1.74	0.52
1:A:672:ILE:HG13	1:A:676:ASN:HD21	1.74	0.52
1:A:782:ARG:HA	1:A:785:MET:HE2	1.91	0.52
1:A:2820:MET:HE1	1:A:2829:LYS:HG2	1.90	0.52
2:G:348:MET:HG2	2:G:398:CYS:HA	1.90	0.52
5:M:659:PHE:HD2	5:M:685:PHE:HB3	1.73	0.52
1:A:450:SER:O	1:A:454:GLN:HG3	2.10	0.52
1:A:1302:ALA:H	1:A:1334:LYS:NZ	2.07	0.52
1:A:1867:ILE:HD13	1:A:1936:ARG:HB3	1.92	0.52
1:A:2948:GLY:HA3	1:A:2954:GLN:HE21	1.73	0.52
3:C:327:ASP:O	3:C:331:MET:HG3	2.10	0.52
1:F:639:ALA:HA	1:F:642:PHE:HB3	1.91	0.52
2:G:419:GLU:OE1	2:G:428:THR:OG1	2.26	0.52
1:A:36:ARG:HD3	1:A:2426:HIS:HB2	1.90	0.52
1:A:342:MET:HE2	1:A:346:TYR:CD2	2.43	0.52
1:A:1153:LEU:HD12	1:A:1154:PRO:HD2	1.90	0.52
1:A:3240:MET:HE3	1:A:3272:TRP:CH2	2.45	0.52
2:B:85:VAL:HG22	2:B:106:GLN:HB3	1.92	0.52
1:F:891:ARG:NH1	1:F:956:PRO:O	2.43	0.52
1:F:1348:LEU:O	1:F:1352:SER:OG	2.22	0.52
1:F:2312:TYR:CE2	1:F:2314:GLU:HB3	2.45	0.52
1:F:3011:LEU:HD22	1:F:3047:SER:HA	1.91	0.52
1:F:3781:CYS:HB3	1:F:3786:LEU:HB2	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:314:SER:O	1:A:317:GLU:HG3	2.10	0.52
1:A:1727:ARG:HD2	1:A:1772:HIS:HB2	1.91	0.52
1:A:3503:VAL:HG11	1:A:3532:PRO:HB3	1.92	0.52
1:A:3921:GLY:H	1:A:3944:HIS:HB2	1.73	0.52
3:C:266:SER:N	3:C:361:VAL:O	2.41	0.52
1:F:3012:GLU:O	1:F:3015:SER:OG	2.22	0.52
4:K:150:ARG:O	4:K:153:ARG:HG3	2.10	0.52
4:O:69:GLU:HA	4:O:72:LYS:HG2	1.91	0.52
1:A:1279:LEU:HD22	1:A:1356:TRP:HE1	1.74	0.52
1:A:1357:LYS:HG3	1:A:1361:LYS:HZ3	1.75	0.52
1:A:3169:PRO:HG2	1:A:3179:TRP:CZ2	2.45	0.52
1:A:3771:MET:HA	1:A:3774:ILE:HD12	1.92	0.52
2:B:92:LYS:HE2	2:B:135:MET:HA	1.92	0.52
3:C:86:PRO:HA	3:C:90:LEU:HD12	1.92	0.52
3:C:326:VAL:O	3:C:330:GLN:HG2	2.10	0.52
1:F:1438:GLY:O	1:F:1445:ARG:NH2	2.37	0.52
1:F:2201:THR:HG23	1:F:2203:THR:HG22	1.92	0.52
1:F:2753:ARG:O	1:F:2757:ILE:HG12	2.10	0.52
1:F:3974:MET:HE2	1:F:3979:LEU:H	1.74	0.52
8:I:24:DA:H5'	8:I:25:DA:N7	2.25	0.52
1:F:98:GLN:NE2	1:F:98:GLN:O	2.42	0.52
1:F:1268:ASN:ND2	1:F:1344:PHE:HA	2.25	0.52
1:F:2466:SER:HG	1:F:2469:CYS:HG	1.57	0.52
1:F:3575:LEU:HD13	1:F:3578:LEU:HD12	1.92	0.52
1:A:396:PHE:CD1	1:A:441:MET:HE3	2.45	0.51
1:A:732:PHE:O	1:A:735:SER:OG	2.24	0.51
1:A:1016:GLY:O	1:A:1026:ARG:HG2	2.10	0.51
1:A:1281:VAL:HG23	1:A:1282:LEU:HG	1.91	0.51
1:A:1725:GLN:HG3	1:A:1728:GLU:H	1.75	0.51
1:A:1957:ASN:HB2	1:A:2103:HIS:NE2	2.25	0.51
1:F:214:GLU:OE2	8:I:31:DA:N6	2.36	0.51
1:F:996:THR:HG23	1:F:1043:GLN:NE2	2.24	0.51
1:F:1367:HIS:HB2	1:F:1370:ARG:NH1	2.25	0.51
1:F:3240:MET:HE3	1:F:3272:TRP:CH2	2.45	0.51
2:G:515:ASN:O	2:G:519:GLY:N	2.42	0.51
1:A:708:VAL:HG22	1:A:740:ILE:HG13	1.92	0.51
1:A:1452:VAL:HA	1:A:1517:LEU:HD11	1.91	0.51
1:F:72:SER:H	1:F:82:ARG:NH2	2.08	0.51
1:F:860:GLY:HA3	1:F:3136:THR:HG21	1.91	0.51
1:F:3155:VAL:HG23	1:F:3159:ARG:HH12	1.75	0.51
2:G:484:GLN:O	2:G:488:ARG:HG2	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:H:246:HIS:NE2	9:J:36:DG:OP1	2.42	0.51
3:H:633:MET:HA	3:H:636:ILE:HG12	1.92	0.51
4:O:34:ILE:HD13	4:O:95:PHE:HE2	1.75	0.51
8:E:26:DA:C2	8:E:27:DC:H2'	2.44	0.51
1:A:196:LEU:HB3	1:A:200:PHE:CZ	2.45	0.51
1:A:1294:VAL:HA	1:A:1297:PHE:CD2	2.45	0.51
1:A:1649:LEU:HA	1:A:1652:ILE:HD12	1.93	0.51
1:A:1762:MET:HE1	1:A:1778:PHE:CD1	2.45	0.51
1:A:1878:ASP:HB3	1:A:1947:CYS:HA	1.92	0.51
1:A:2174:SER:OG	1:A:2214:ARG:NH1	2.43	0.51
2:B:251:THR:O	3:C:431:ARG:NH1	2.42	0.51
1:F:40:GLN:CD	1:F:2427:ARG:HB2	2.35	0.51
1:F:938:VAL:HG21	1:F:969:LEU:HD11	1.93	0.51
1:F:1010:LEU:HG	1:F:1014:LEU:HD23	1.91	0.51
1:F:1958:GLU:HG2	1:F:1959:LEU:N	2.25	0.51
1:F:3110:PHE:CD2	1:F:3135:LEU:HD11	2.45	0.51
1:F:3244:ASP:OD1	1:F:3247:ARG:NH2	2.32	0.51
2:G:407:PRO:HG3	3:H:486:ARG:HD3	1.93	0.51
3:H:44:ARG:HH11	3:H:236:VAL:H	1.57	0.51
1:A:762:TYR:HD2	1:A:765:LEU:HD23	1.75	0.51
1:A:959:TYR:CE2	1:A:963:LYS:HD2	2.45	0.51
1:A:2834:GLN:HG3	1:A:2838:GLN:HE21	1.75	0.51
1:A:3269:ARG:CZ	1:A:3272:TRP:HB2	2.41	0.51
1:F:770:LEU:HD11	1:F:858:MET:HG2	1.92	0.51
1:F:982:GLN:HE21	1:F:2591:ILE:HG23	1.75	0.51
1:F:1069:HIS:NE2	1:F:3743:HIS:O	2.44	0.51
1:F:1086:TYR:CE1	1:F:1133:HIS:HB3	2.45	0.51
2:G:444:ARG:NH2	3:H:241:GLU:OE1	2.40	0.51
3:H:357:MET:N	3:H:357:MET:SD	2.84	0.51
1:A:3263:HIS:HB2	1:A:3276:TRP:CE2	2.45	0.51
1:A:3965:ARG:HD3	1:A:3966:GLN:HE22	1.75	0.51
2:B:48:MET:HG3	2:B:128:GLN:HE21	1.76	0.51
2:B:146:VAL:HA	2:B:149:VAL:HG12	1.93	0.51
2:B:255:ALA:O	8:E:32:DA:N6	2.43	0.51
1:F:1372:LEU:O	1:F:1376:LEU:HG	2.11	0.51
1:F:3506:LEU:HD21	1:F:3554:PHE:HD2	1.76	0.51
1:F:4055:ASN:HB2	1:F:4095:GLU:HA	1.92	0.51
1:F:4107:LEU:O	1:F:4111:ALA:HB3	2.09	0.51
4:N:20:LEU:HD21	4:N:74:LEU:HD13	1.92	0.51
6:Q:210:PHE:HB2	6:R:140:MET:HG3	1.93	0.51
1:A:923:ASP:O	1:A:926:THR:N	2.44	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:407:PRO:HB3	3:C:486:ARG:HG3	1.92	0.51
1:F:542:ASP:OD1	1:F:543:SER:N	2.42	0.51
1:F:1086:TYR:CD1	1:F:1133:HIS:HB3	2.46	0.51
1:F:2746:LYS:O	1:F:2750:GLU:HG2	2.10	0.51
1:F:3050:LYS:NZ	1:F:3180:ASP:OD1	2.36	0.51
4:L:146:LYS:O	4:L:149:GLU:HG3	2.10	0.51
5:P:812:MET:O	5:P:850:ALA:HB3	2.11	0.51
5:P:816:HIS:C	5:P:851:LYS:H	2.18	0.51
1:A:1375:THR:HG22	1:A:1382:ILE:HD13	1.91	0.51
1:A:3295:GLU:O	1:A:3299:THR:HG22	2.11	0.51
2:B:77:SER:HB2	2:B:249:LYS:HB3	1.92	0.51
3:C:155:LYS:HZ3	3:C:215:LEU:HB2	1.76	0.51
1:F:2225:HIS:HB2	1:F:2231:PHE:HB2	1.93	0.51
1:F:3811:THR:HG23	1:F:3814:ASP:H	1.76	0.51
1:F:3970:LEU:HG	1:F:3971:MET:HG3	1.93	0.51
2:G:101:ASN:ND2	2:G:140:ASP:O	2.43	0.51
3:H:7:LYS:HE2	3:H:128:GLU:HG3	1.92	0.51
7:D:33:DA:H5''	7:D:33:DA:C8	2.46	0.51
1:A:250:ASN:OD1	1:A:254:LYS:NZ	2.44	0.51
1:A:1611:GLN:HB2	1:A:1613:HIS:ND1	2.26	0.51
1:A:3500:SER:HA	1:A:3503:VAL:HG12	1.93	0.51
1:A:3992:ARG:NH2	1:A:4100:GLU:HG3	2.25	0.51
2:B:396:ALA:HB3	2:B:413:LEU:HD21	1.92	0.51
1:F:1780:SER:HA	1:F:1783:ARG:HG2	1.91	0.51
1:F:2410:GLU:O	1:F:2414:GLN:NE2	2.44	0.51
4:O:150:ARG:NH2	4:O:154:ASP:OD2	2.44	0.51
6:Q:11:GLN:HG3	6:Q:28:PHE:HB2	1.92	0.51
7:D:31:DT:H2'	7:D:32:DT:C2	2.45	0.51
1:A:1046:PRO:O	1:A:1049:GLN:N	2.43	0.51
1:A:3146:SER:C	1:A:3147:LYS:HD2	2.36	0.51
1:A:3619:ASP:OD1	1:A:3619:ASP:N	2.44	0.51
1:A:3751:LEU:HD22	1:A:3803:ILE:HD11	1.92	0.51
1:F:125:ILE:HD12	1:F:125:ILE:H	1.75	0.51
1:F:1746:PHE:HB3	1:F:1762:MET:SD	2.50	0.51
1:F:2357:GLU:HA	1:F:2360:PHE:HB3	1.93	0.51
1:F:2964:ASP:HB2	1:F:3252:PHE:HD2	1.76	0.51
1:F:4086:ASP:OD1	1:F:4087:HIS:N	2.43	0.51
2:G:317:LYS:NZ	2:G:330:GLU:OE1	2.43	0.51
4:O:67:VAL:HB	4:O:71:ARG:HH12	1.76	0.51
6:Q:128:PRO:HB3	6:R:128:PRO:HA	1.93	0.51
6:R:193:PHE:HD1	6:R:197:LYS:HG3	1.76	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3050:LYS:NZ	1:A:3180:ASP:OD1	2.31	0.51
1:A:3796:MET:H	1:A:3801:GLY:HA2	1.76	0.51
1:F:146:GLU:N	1:F:146:GLU:OE1	2.44	0.51
1:F:1601:LEU:HB3	1:F:1655:ILE:HD11	1.93	0.51
2:G:355:LEU:HD11	3:H:475:ASP:HB2	1.92	0.51
3:H:457:LEU:HD12	3:H:461:MET:HE3	1.93	0.51
4:K:187:LYS:NZ	4:L:188:LYS:HG3	2.26	0.51
6:R:154:ALA:O	6:R:158:HIS:ND1	2.44	0.51
1:A:425:ASP:OD1	1:A:425:ASP:N	2.44	0.50
1:A:1071:ASN:OD1	1:A:1073:PHE:N	2.43	0.50
1:A:1474:ASP:OD1	1:A:1474:ASP:N	2.43	0.50
1:A:1560:TYR:OH	1:A:1599:GLY:HA3	2.11	0.50
1:A:2151:ILE:HG12	1:A:2192:THR:HG21	1.93	0.50
1:F:2844:LEU:HB3	1:F:2875:ALA:HB1	1.93	0.50
1:F:2929:LEU:O	1:F:2932:SER:OG	2.22	0.50
1:A:440:VAL:HG21	1:A:485:GLN:HG3	1.94	0.50
1:A:1369:MET:HA	1:A:1372:LEU:HG	1.93	0.50
1:A:1800:SER:C	1:A:1804:MET:HE3	2.35	0.50
1:A:2571:ASP:O	1:A:2787:HIS:ND1	2.43	0.50
1:A:2833:THR:HG21	1:A:2867:ALA:HB1	1.91	0.50
1:A:2980:ASP:N	1:A:2980:ASP:OD1	2.44	0.50
1:A:3283:LEU:O	1:A:3287:ARG:HG3	2.11	0.50
1:A:4006:VAL:HG11	1:A:4009:PRO:HB3	1.91	0.50
2:B:261:LEU:HA	2:B:345:LEU:HB2	1.93	0.50
1:F:169:THR:OG1	9:J:22:DG:OP1	2.22	0.50
1:F:1164:CYS:SG	1:F:1165:LEU:N	2.84	0.50
2:G:500:PRO:HD3	5:P:707:ILE:HG12	1.94	0.50
6:Q:10:MET:N	6:Q:10:MET:HE2	2.27	0.50
6:Q:134:HIS:N	6:R:42:GLN:HB2	2.23	0.50
1:A:879:MET:HG2	1:A:881:LYS:H	1.75	0.50
1:A:1058:SER:HA	1:A:1061:LYS:HE2	1.93	0.50
1:A:1261:LEU:HD11	1:A:1337:VAL:HA	1.93	0.50
1:A:3138:ILE:HG22	1:A:3189:PHE:HZ	1.75	0.50
1:A:3831:ASP:HB3	1:A:3832:PRO:HD3	1.94	0.50
3:C:157:CYS:SG	3:C:158:ASP:N	2.84	0.50
3:C:489:ARG:NH1	3:C:507:PRO:O	2.45	0.50
1:F:483:VAL:HG21	1:F:567:GLU:HG3	1.93	0.50
1:F:2935:GLU:OE2	1:F:2938:VAL:N	2.33	0.50
2:G:163:HIS:CE1	2:G:165:ARG:HB2	2.46	0.50
4:L:143:HIS:O	4:L:146:LYS:HG3	2.11	0.50
1:A:433:PRO:HA	1:A:436:GLU:HG2	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2353:GLN:HB3	1:A:2360:PHE:HB2	1.93	0.50
3:C:299:ASP:OD1	3:C:303:THR:OG1	2.24	0.50
1:F:189:MET:O	1:F:193:ALA:N	2.44	0.50
1:F:655:LEU:O	1:F:659:ARG:HG2	2.11	0.50
1:F:1407:LYS:HA	1:F:1412:LYS:HB3	1.93	0.50
1:F:1419:LEU:HG	1:F:1467:ILE:HD13	1.93	0.50
4:N:161:ARG:HH22	5:P:837:ARG:HD2	1.75	0.50
7:D:15:DA:N6	8:E:43:DT:O4	2.44	0.50
1:A:342:MET:HE3	1:A:345:PHE:HB2	1.93	0.50
1:A:787:PRO:O	1:A:790:LYS:NZ	2.29	0.50
1:A:2161:ALA:HA	1:A:2164:TRP:HB2	1.94	0.50
1:A:3702:PRO:HB2	1:A:3794:VAL:HG11	1.94	0.50
1:F:462:VAL:HG11	1:F:540:MET:HE1	1.93	0.50
1:F:535:LEU:HD23	1:F:565:TYR:HD1	1.76	0.50
1:F:2921:LEU:O	1:F:2925:GLU:HG3	2.12	0.50
1:F:3294:SER:O	1:F:3298:LEU:HG	2.12	0.50
3:H:654:ARG:HA	3:H:657:ASN:HD21	1.75	0.50
4:N:144:LEU:HB3	4:O:144:LEU:HB3	1.93	0.50
1:A:2428:ASP:HB2	1:A:2431:ARG:HB2	1.93	0.50
3:C:509:GLN:OE1	3:C:511:HIS:ND1	2.39	0.50
1:F:19:LEU:HA	1:F:34:LEU:HD22	1.94	0.50
1:F:1373:VAL:HG11	1:F:1422:LYS:HG3	1.94	0.50
1:F:1583:MET:HG3	1:F:1628:LYS:HB2	1.94	0.50
1:F:1597:LEU:O	1:F:1601:LEU:HG	2.12	0.50
1:F:3191:SER:O	1:F:3194:GLU:N	2.44	0.50
2:G:364:PRO:HG3	3:H:357:MET:HA	1.94	0.50
2:G:369:TYR:CD1	2:G:370:PRO:HD2	2.45	0.50
3:H:184:ARG:HG2	3:H:519:PRO:HB3	1.94	0.50
3:H:661:ALA:HA	3:H:664:GLU:CD	2.36	0.50
1:A:1357:LYS:HG3	1:A:1361:LYS:NZ	2.27	0.50
1:A:2331:MET:HG2	1:A:2334:LYS:HG2	1.92	0.50
1:A:3998:LEU:O	1:A:4001:THR:HG22	2.11	0.50
1:F:1238:GLN:HA	1:F:1296:PHE:HZ	1.77	0.50
1:F:1333:SER:O	1:F:1337:VAL:HG23	2.12	0.50
1:F:3146:SER:C	1:F:3147:LYS:HD2	2.37	0.50
1:F:3714:GLU:OE1	1:F:3714:GLU:N	2.45	0.50
3:H:441:SER:O	3:H:445:ALA:N	2.45	0.50
5:M:843:LEU:HA	5:M:846:ARG:HG2	1.92	0.50
4:N:161:ARG:CZ	5:P:840:ILE:HG21	2.42	0.50
4:O:22:VAL:HG23	4:O:35:THR:H	1.77	0.50
4:O:22:VAL:HA	4:O:35:THR:HB	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:237:SER:OG	1:A:238:MET:N	2.43	0.50
1:A:406:ARG:HE	1:A:409:GLN:NE2	2.09	0.50
1:A:1018:VAL:HG22	1:A:1074:LYS:HG2	1.94	0.50
2:B:100:LYS:NZ	2:B:101:ASN:OD1	2.40	0.50
2:B:350:PHE:HB3	2:B:394:VAL:HG12	1.94	0.50
3:C:251:LEU:N	3:C:259:ILE:O	2.45	0.50
1:F:2101:VAL:HG13	1:F:2153:THR:HG22	1.93	0.50
6:R:107:ARG:HD3	6:R:109:ARG:HH21	1.77	0.50
1:A:92:PHE:CD1	1:A:96:MET:HG3	2.47	0.50
1:A:682:TYR:CZ	1:A:700:LYS:HD3	2.46	0.50
1:A:1164:CYS:SG	1:A:1165:LEU:N	2.84	0.50
1:A:1626:TRP:HZ2	1:A:1674:THR:HG21	1.76	0.50
1:A:2576:MET:HE1	1:A:2787:HIS:CG	2.47	0.50
2:B:510:LYS:HG2	2:B:513:ALA:HB3	1.94	0.50
1:F:908:ASP:HA	1:F:911:LEU:HD23	1.92	0.50
1:F:1713:VAL:O	1:F:1716:GLN:HG2	2.12	0.50
3:H:44:ARG:NH1	3:H:236:VAL:H	2.10	0.50
3:H:250:ARG:NH1	3:H:260:ARG:HH21	2.10	0.50
4:N:141:ASN:HD21	4:O:140:LYS:HD3	1.77	0.50
4:O:33:VAL:HG22	4:O:47:VAL:H	1.76	0.50
6:R:57:ARG:HA	6:R:61:LEU:HB2	1.93	0.50
9:J:33:DA:H2"	9:J:34:DT:C2	2.47	0.50
1:A:933:LEU:HD11	1:A:2794:LEU:HD23	1.93	0.49
1:A:2244:CYS:HG	1:A:2245:TRP:CG	2.29	0.49
1:A:2333:ARG:HH22	1:A:2371:PHE:HE1	1.60	0.49
1:A:2567:SER:HA	1:A:2572:TYR:CD2	2.47	0.49
1:A:3085:GLU:OE1	1:A:3085:GLU:N	2.38	0.49
1:A:3577:GLN:NE2	1:A:3629:ARG:HB3	2.27	0.49
1:A:3588:TRP:CE2	1:A:3613:MET:HG2	2.47	0.49
1:F:76:ILE:HA	1:F:79:ARG:HB2	1.93	0.49
1:F:1096:VAL:O	1:F:1100:VAL:HG13	2.12	0.49
1:F:1211:VAL:HG13	1:F:1219:PHE:HZ	1.77	0.49
1:F:1444:ASP:N	1:F:1444:ASP:OD1	2.44	0.49
1:F:1691:GLN:O	1:F:1694:THR:OG1	2.22	0.49
1:F:3034:PRO:O	1:F:3038:GLU:N	2.45	0.49
1:F:3930:VAL:HB	1:F:3937:VAL:HG12	1.93	0.49
2:G:64:ILE:HD13	2:G:67:ILE:HD11	1.93	0.49
2:G:263:LEU:HD22	2:G:347:LEU:HD22	1.94	0.49
2:G:350:PHE:H	3:H:463:LEU:HD13	1.77	0.49
4:L:145:GLN:HA	4:L:148:ASN:HD21	1.77	0.49
4:O:193:SER:O	4:O:197:LYS:HG2	2.11	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:I:40:DT:H2''	8:I:41:DT:O4'	2.12	0.49
1:A:111:CYS:HB2	1:A:130:LEU:CD2	2.42	0.49
1:A:1102:GLU:O	1:A:1106:ILE:HG12	2.12	0.49
1:F:1219:PHE:O	1:F:1223:THR:OG1	2.26	0.49
1:F:1840:PHE:O	1:F:1844:VAL:HG23	2.12	0.49
1:F:3643:HIS:HB3	1:F:3659:PHE:HE2	1.76	0.49
7:D:22:DG:H5''	7:D:23:DT:H73	1.93	0.49
1:A:898:PHE:HB2	1:A:901:MET:O	2.12	0.49
1:A:3369:ASP:HB3	1:A:3372:LYS:HG2	1.94	0.49
1:A:4120:THR:HG21	1:A:4126:PRO:HG3	1.94	0.49
2:B:249:LYS:NZ	2:B:250:GLU:O	2.44	0.49
1:F:4055:ASN:HD21	1:F:4057:ALA:HB3	1.77	0.49
2:G:469:LEU:HD11	2:G:514:MET:HB2	1.94	0.49
3:H:251:LEU:HB3	3:H:259:ILE:HB	1.94	0.49
1:A:1565:GLU:OE2	1:A:1603:GLN:NE2	2.45	0.49
1:A:1603:GLN:HA	1:A:1606:ARG:HH21	1.77	0.49
1:A:3155:VAL:H	1:A:3159:ARG:HH22	1.58	0.49
1:A:3909:ALA:HB1	1:A:3984:MET:HE3	1.94	0.49
2:B:317:LYS:N	3:C:279:VAL:O	2.34	0.49
2:B:476:ASP:OD1	2:B:476:ASP:N	2.46	0.49
1:F:584:GLU:HB2	1:F:613:HIS:HB3	1.94	0.49
1:F:1287:GLN:HG3	1:F:1289:SER:H	1.77	0.49
1:F:1921:ASP:OD1	1:F:1922:ALA:N	2.45	0.49
1:F:1934:LEU:HD13	1:F:1937:ARG:HH21	1.77	0.49
1:F:3658:ASP:OD1	1:F:3658:ASP:N	2.43	0.49
5:P:748:PRO:HA	5:P:751:LYS:HD2	1.95	0.49
6:Q:133:GLN:N	6:R:43:GLN:H	2.11	0.49
8:E:40:DT:H4'	8:E:41:DT:OP1	2.11	0.49
1:A:305:ASN:O	1:A:308:LEU:N	2.45	0.49
1:A:1333:SER:O	1:A:1337:VAL:HG23	2.13	0.49
1:A:1921:ASP:OD1	1:A:1922:ALA:N	2.45	0.49
2:B:80:ARG:HH22	7:D:24:DT:H4'	1.78	0.49
2:B:173:ASP:HB2	2:B:214:SER:N	2.27	0.49
1:F:1448:LEU:HD11	1:F:1514:LEU:HD21	1.94	0.49
1:F:1465:HIS:HD2	1:F:1468:LEU:HD23	1.77	0.49
1:F:1715:GLU:HA	1:F:1718:ILE:HG12	1.94	0.49
3:H:466:LYS:HD2	3:H:473:LEU:H	1.77	0.49
1:A:767:GLU:OE2	1:A:771:ASN:ND2	2.32	0.49
2:B:145:GLU:OE1	2:B:145:GLU:N	2.46	0.49
1:F:73:LEU:O	1:F:79:ARG:NH2	2.45	0.49
1:F:3002:TYR:CD1	1:F:3010:SER:HB2	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:498:MET:HE1	5:P:705:GLU:HB2	1.94	0.49
3:H:81:ARG:HB3	3:H:84:MET:SD	2.52	0.49
3:H:489:ARG:O	3:H:492:GLN:HG3	2.12	0.49
4:L:137:ASN:O	4:L:141:ASN:ND2	2.45	0.49
1:A:1663:THR:HG22	1:A:1664:SER:H	1.77	0.49
1:A:2188:GLU:HG2	1:A:2729:ARG:HH12	1.77	0.49
1:A:3998:LEU:O	1:A:4001:THR:N	2.42	0.49
1:F:3665:MET:HA	1:F:3668:LEU:HG	1.94	0.49
1:F:3855:TYR:OH	1:F:4120:THR:O	2.30	0.49
4:N:5:ILE:HD11	4:N:126:LEU:HD11	1.93	0.49
6:Q:15:TRP:HE1	6:Q:22:SER:HA	1.78	0.49
1:A:24:ARG:HH21	1:A:70:ARG:HH21	1.59	0.49
1:A:1489:LYS:HD2	1:A:1492:ALA:HB3	1.94	0.49
1:A:3301:LEU:HB3	1:A:3304:VAL:HA	1.94	0.49
1:A:3630:ARG:O	1:A:3634:GLN:NE2	2.40	0.49
3:C:64:THR:HG22	3:C:66:ASN:H	1.78	0.49
1:F:50:VAL:O	1:F:54:GLN:NE2	2.45	0.49
1:F:2138:VAL:HG13	1:F:2143:ARG:HE	1.76	0.49
1:F:3123:GLN:H	1:F:3123:GLN:CD	2.21	0.49
1:F:3577:GLN:HB3	1:F:3683:CYS:SG	2.53	0.49
1:F:3717:VAL:HA	1:F:3743:HIS:CE1	2.48	0.49
3:H:280:ASP:HB3	3:H:283:THR:HG22	1.94	0.49
4:K:188:LYS:HZ1	5:M:764:SER:N	2.10	0.49
4:L:155:TRP:O	4:L:159:GLN:HG2	2.12	0.49
6:R:50:ASP:OD1	6:R:51:THR:N	2.45	0.49
8:E:28:DT:H6	8:E:28:DT:H5"	1.76	0.49
1:A:716:VAL:HG11	1:A:1120:SER:HB2	1.94	0.49
1:A:1715:GLU:HA	1:A:1718:ILE:HG12	1.95	0.49
1:A:2301:GLN:HA	1:A:2304:VAL:HG22	1.95	0.49
1:A:2402:LEU:HD12	1:A:2438:ILE:HG13	1.95	0.49
1:A:3549:HIS:ND1	1:A:3553:GLU:OE1	2.43	0.49
2:B:86:VAL:HG22	2:B:104:VAL:HG22	1.95	0.49
1:F:2373:PRO:HA	1:F:2404:ARG:HH12	1.77	0.49
2:G:428:THR:OG1	3:H:354:ARG:NH1	2.46	0.49
3:H:411:HIS:N	3:H:418:CYS:O	2.45	0.49
5:M:668:SER:OG	5:M:669:GLY:N	2.46	0.49
1:A:1435:ASN:ND2	1:A:1440:ASP:OD2	2.46	0.49
2:B:45:SER:HA	2:B:138:GLY:H	1.77	0.49
1:F:914:VAL:HG11	1:F:937:MET:HE1	1.95	0.49
1:F:3169:PRO:HG2	1:F:3179:TRP:CH2	2.48	0.49
1:F:3266:SER:HA	1:F:3272:TRP:CD1	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:278:GLN:OE1	3:H:431:ARG:NH2	2.46	0.49
2:G:318:ARG:HE	3:H:278:VAL:HG22	1.78	0.49
3:H:153:SER:HA	3:H:156:LYS:HG2	1.95	0.49
5:M:654:LYS:N	5:M:684:GLU:O	2.46	0.49
4:N:30:SER:OG	4:N:31:GLY:N	2.46	0.49
4:O:142:GLU:HB3	4:O:146:LYS:HZ3	1.76	0.49
7:D:22:DG:C8	7:D:23:DT:H72	2.48	0.49
1:A:1298:LEU:HG	1:A:1367:HIS:CD2	2.48	0.48
1:A:1407:LYS:HA	1:A:1412:LYS:HB3	1.95	0.48
1:A:1778:PHE:O	1:A:1781:SER:OG	2.25	0.48
1:A:3622:ALA:HB2	1:A:3633:ILE:HD11	1.93	0.48
2:B:141:TYR:HE2	2:B:176:HIS:HD1	1.59	0.48
2:B:459:VAL:HA	2:B:462:MET:SD	2.53	0.48
3:C:418:CYS:SG	3:C:419:LEU:N	2.86	0.48
1:F:430:VAL:HG21	1:F:1643:MET:HB3	1.94	0.48
1:F:2155:GLU:HA	1:F:2158:ARG:HG2	1.95	0.48
2:G:411:VAL:HG22	2:G:436:PHE:HA	1.94	0.48
3:H:234:LEU:HB3	3:H:237:PHE:HB3	1.95	0.48
8:I:30:DA:H3'	8:I:32:DA:H61	1.78	0.48
1:A:417:VAL:HA	1:A:420:VAL:HG12	1.94	0.48
1:A:1371:VAL:O	1:A:1375:THR:HG23	2.13	0.48
1:A:2817:LEU:HD23	1:A:2865:HIS:CE1	2.47	0.48
1:A:3387:GLU:O	1:A:3390:GLN:HG2	2.13	0.48
1:A:3515:GLN:HB3	1:A:3554:PHE:CE2	2.48	0.48
1:A:3547:THR:HA	1:A:3550:LYS:HD3	1.95	0.48
1:A:3981:TYR:OH	1:A:4101:GLU:HB2	2.13	0.48
2:B:319:SER:N	3:C:277:THR:O	2.45	0.48
2:B:351:LYS:O	2:B:395:ALA:N	2.46	0.48
3:C:523:THR:O	3:C:527:GLN:HG2	2.12	0.48
1:F:111:CYS:O	1:F:130:LEU:HD11	2.13	0.48
1:F:1196:PRO:HA	1:F:1202:ARG:O	2.14	0.48
1:F:2133:LEU:HD11	1:F:2171:LEU:HD13	1.94	0.48
1:F:2481:HIS:NE2	1:F:2530:ARG:HG2	2.27	0.48
1:F:3097:ASP:N	1:F:3097:ASP:OD1	2.45	0.48
1:F:3269:ARG:HG3	1:F:3272:TRP:H	1.77	0.48
1:F:3533:PHE:O	1:F:3537:SER:N	2.46	0.48
1:F:3888:VAL:HA	1:F:3891:SER:HB3	1.95	0.48
3:H:319:ASP:OD1	3:H:320:ILE:N	2.43	0.48
3:H:450:GLN:HA	3:H:537:PHE:HZ	1.78	0.48
1:A:1058:SER:O	1:A:1062:ARG:HG2	2.13	0.48
1:A:2349:LEU:HB3	1:A:2360:PHE:HE1	1.77	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3625:LEU:HB2	1:A:3682:GLU:O	2.13	0.48
1:A:3739:ILE:HA	1:A:3749:PRO:HA	1.96	0.48
2:B:299:LYS:HD3	3:C:296:CYS:HB2	1.94	0.48
1:F:359:LEU:O	1:F:363:ILE:HG12	2.13	0.48
1:F:840:LEU:HD23	1:F:840:LEU:H	1.78	0.48
1:F:2348:GLN:OE1	1:F:2352:HIS:NE2	2.46	0.48
1:F:3326:GLN:NE2	1:F:3326:GLN:O	2.46	0.48
3:H:233:LYS:HE3	3:H:512:ILE:HD12	1.95	0.48
4:L:147:GLU:O	4:L:150:ARG:HD3	2.13	0.48
6:Q:57:ARG:HB3	6:Q:119:TRP:HH2	1.77	0.48
1:A:143:LEU:N	1:A:146:GLU:OE2	2.46	0.48
1:A:848:LEU:HD11	1:A:922:SER:HB2	1.95	0.48
1:A:1115:HIS:HA	1:A:1119:LYS:HD3	1.95	0.48
1:A:1528:LEU:HD23	1:A:1531:LEU:HD12	1.96	0.48
1:A:3072:GLU:OE1	1:A:3072:GLU:N	2.44	0.48
1:A:3443:PRO:HA	1:A:3446:VAL:HG22	1.94	0.48
1:A:3927:ASN:O	1:A:3940:ILE:N	2.36	0.48
1:F:1019:ASP:N	1:F:1019:ASP:OD1	2.46	0.48
1:F:1354:GLU:HB3	1:F:1357:LYS:HD3	1.94	0.48
1:F:1881:TYR:CE1	1:F:1951:VAL:HA	2.48	0.48
1:F:3358:ARG:H	1:F:3358:ARG:HD2	1.78	0.48
2:G:262:LYS:HG3	2:G:346:MET:HA	1.96	0.48
2:G:278:GLN:NE2	3:H:433:TYR:OH	2.36	0.48
3:H:32:GLU:HA	3:H:35:LYS:HZ3	1.78	0.48
3:H:484:ASN:HD21	3:H:486:ARG:HB3	1.76	0.48
3:H:595:ALA:HA	3:H:598:PHE:CE2	2.48	0.48
3:H:605:LYS:HB2	3:H:609:PHE:CZ	2.43	0.48
4:K:89:SER:OG	4:K:94:TYR:O	2.29	0.48
4:N:155:TRP:HZ3	4:O:150:ARG:HH22	1.62	0.48
5:P:659:PHE:HB2	5:P:685:PHE:O	2.13	0.48
1:A:1871:MET:HE1	1:A:1939:LEU:C	2.39	0.48
1:F:175:TYR:HB2	1:F:223:CYS:HB3	1.94	0.48
1:F:417:VAL:HA	1:F:420:VAL:HG12	1.96	0.48
1:F:2241:LEU:HA	1:F:2244:CYS:SG	2.53	0.48
1:F:2928:LYS:HZ2	1:F:2996:LEU:HD12	1.78	0.48
1:F:3007:GLU:O	1:F:3011:LEU:HG	2.13	0.48
2:G:39:ILE:HD11	2:G:108:LEU:HD21	1.96	0.48
3:H:209:LYS:O	3:H:213:ILE:HG23	2.14	0.48
1:A:460:ALA:O	1:A:464:VAL:HG13	2.14	0.48
1:A:729:CYS:O	1:A:733:LEU:HD23	2.14	0.48
1:A:741:ILE:HA	1:A:748:TYR:HE2	1.79	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:768:VAL:HA	1:A:771:ASN:HD22	1.79	0.48
1:A:827:ASN:HB3	1:A:836:LYS:HZ3	1.77	0.48
1:A:2215:LEU:HD23	1:A:2219:LEU:HD23	1.96	0.48
1:A:3527:GLN:HB2	1:A:3705:TYR:CE2	2.49	0.48
1:A:3815:LEU:O	1:A:3819:THR:HG23	2.14	0.48
1:A:3930:VAL:HA	1:A:3937:VAL:HA	1.95	0.48
2:B:325:ARG:HH12	3:C:89:ASP:HB3	1.77	0.48
3:C:253:ILE:HG23	3:C:342:VAL:HG11	1.95	0.48
3:C:363:LYS:HB2	3:C:418:CYS:SG	2.54	0.48
1:F:900:GLU:OE1	1:F:900:GLU:N	2.46	0.48
1:F:2362:VAL:O	1:F:2366:LYS:HG2	2.13	0.48
1:F:2522:ARG:HH22	1:F:2564:GLU:HG3	1.78	0.48
3:H:531:SER:HA	3:H:534:LYS:HG2	1.96	0.48
4:K:175:ASP:OD1	4:K:176:LEU:N	2.47	0.48
5:M:665:CYS:HB2	5:M:697:THR:HG21	1.95	0.48
5:P:842:ALA:HA	5:P:845:LEU:HD12	1.94	0.48
1:A:217:LEU:HD23	1:A:218:PRO:HD3	1.95	0.48
1:A:1444:ASP:HA	1:A:1447:ARG:HH21	1.79	0.48
1:A:1740:VAL:HA	1:A:1743:MET:HG3	1.96	0.48
1:A:2847:THR:OG1	1:A:2849:SER:O	2.27	0.48
1:A:3301:LEU:HD23	1:A:3304:VAL:HA	1.95	0.48
1:A:3825:LYS:O	1:A:3829:LEU:HB2	2.14	0.48
2:B:429:PRO:HG2	3:C:435:PHE:HD2	1.79	0.48
1:F:573:LEU:HD22	1:F:649:PHE:HD1	1.78	0.48
1:F:758:LEU:HD13	1:F:976:VAL:HG21	1.96	0.48
1:F:898:PHE:HB2	1:F:901:MET:O	2.14	0.48
1:F:1135:CYS:HB3	1:F:1190:LEU:HD11	1.95	0.48
1:F:1687:HIS:ND1	1:F:1741:ASP:OD2	2.46	0.48
1:F:3735:PRO:HB3	1:F:3751:LEU:HD21	1.95	0.48
1:F:3738:ILE:HD12	1:F:3740:ILE:HD11	1.96	0.48
1:F:3775:LEU:HD13	1:F:3786:LEU:HB3	1.96	0.48
3:H:434:MET:SD	3:H:436:SER:OG	2.66	0.48
4:L:35:THR:HG22	4:L:44:THR:HG23	1.94	0.48
1:A:1322:THR:O	1:A:1326:GLU:N	2.47	0.48
1:A:1697:PRO:HA	1:A:1753:SER:HB3	1.96	0.48
1:A:3301:LEU:HB2	1:A:3333:THR:HG21	1.96	0.48
1:A:3700:GLU:HG3	1:A:3718:ARG:HA	1.96	0.48
3:C:251:LEU:HB3	3:C:259:ILE:HG13	1.96	0.48
1:F:1803:GLU:HA	1:F:1806:ARG:HH21	1.79	0.48
2:G:386:LEU:HD13	2:G:430:PRO:HB2	1.94	0.48
4:K:7:ARG:HG2	4:L:131:LEU:HD13	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:P:813:PHE:C	5:P:849:GLY:H	2.21	0.48
1:A:13:LEU:HD21	1:A:3069:MET:HB3	1.95	0.48
1:A:1428:ILE:HA	1:A:1431:LEU:HB2	1.96	0.48
1:A:3262:LEU:HD22	1:A:3272:TRP:HZ2	1.77	0.48
1:A:3681:LYS:HE3	1:A:3687:MET:HE3	1.96	0.48
1:F:866:ILE:HG13	1:F:3168:TYR:CD2	2.46	0.48
1:F:1069:HIS:ND1	1:F:3743:HIS:HD2	2.11	0.48
8:E:28:DT:H1'	8:E:29:DA:H5''	1.96	0.48
8:I:34:DC:N4	9:J:23:DT:H3	2.11	0.48
1:A:713:GLU:O	1:A:717:LYS:HG2	2.14	0.48
1:A:902:LYS:HG2	1:F:2570:PRO:HB2	1.96	0.48
1:A:2745:ARG:HH21	8:E:45:DG:H2'	1.78	0.48
1:A:3149:GLY:O	1:A:3152:SER:OG	2.31	0.48
2:B:80:ARG:NH2	7:D:25:DT:OP1	2.47	0.48
1:F:923:ASP:O	1:F:926:THR:N	2.47	0.48
1:F:1565:GLU:OE1	1:F:1606:ARG:NH1	2.47	0.48
1:F:1864:ASP:OD1	1:F:1864:ASP:N	2.47	0.48
1:F:3509:ASP:N	1:F:3509:ASP:OD1	2.46	0.48
3:H:342:VAL:HG12	3:H:344:GLY:H	1.78	0.48
9:J:37:DG:H1'	9:J:38:DG:C2	2.48	0.48
1:A:2751:GLN:NE2	1:A:2752:LYS:HG2	2.29	0.47
1:A:4011:PHE:O	1:A:4015:ASN:ND2	2.46	0.47
3:C:36:LYS:NZ	3:C:231:LEU:HD11	2.29	0.47
1:F:74:ASN:HD21	1:F:122:LYS:HB2	1.78	0.47
1:F:1249:SER:OG	1:F:1310:GLU:OE1	2.25	0.47
1:F:3679:ASN:HB3	1:F:3725:ARG:HA	1.96	0.47
5:M:716:ASN:ND2	5:M:748:PRO:HD3	2.29	0.47
6:Q:133:GLN:H	6:R:42:GLN:N	2.04	0.47
7:D:15:DA:H2''	7:D:16:DA:C8	2.49	0.47
8:I:27:DC:H2'	9:J:30:DT:H1'	1.94	0.47
1:A:734:LEU:HD11	1:A:768:VAL:HG13	1.96	0.47
1:A:2486:ASP:OD1	1:A:2486:ASP:N	2.45	0.47
1:F:144:MET:N	1:F:146:GLU:OE1	2.46	0.47
1:F:860:GLY:C	1:F:3136:THR:HG21	2.40	0.47
1:F:865:GLN:HB2	1:F:3168:TYR:CG	2.49	0.47
1:F:894:PHE:O	1:F:905:ILE:N	2.31	0.47
1:F:994:TRP:CG	1:F:2581:LEU:HD21	2.48	0.47
1:F:1725:GLN:NE2	1:F:1769:GLU:HG3	2.29	0.47
1:F:2428:ASP:O	1:F:2432:GLN:HG2	2.14	0.47
1:F:2742:MET:HE1	8:I:44:DG:N1	2.29	0.47
1:F:3088:LEU:HD21	1:F:3138:ILE:HG21	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:H:300:ASP:OD1	3:H:300:ASP:N	2.46	0.47
7:D:28:DA:H2	8:E:30:DA:N1	2.12	0.47
9:J:25:DT:H2'	9:J:26:DT:C4	2.49	0.47
1:A:736:LEU:HB3	1:A:740:ILE:HG21	1.96	0.47
1:A:4098:LEU:HD11	1:A:4103:GLN:HA	1.96	0.47
2:B:333:GLU:O	2:B:337:LEU:HG	2.15	0.47
3:C:165:LEU:HD21	3:C:205:LEU:HD11	1.95	0.47
1:F:145:ASP:HA	1:F:147:PHE:CE2	2.48	0.47
1:F:394:GLN:CD	1:F:1737:ASN:HB3	2.39	0.47
1:F:396:PHE:CE1	1:F:441:MET:HG3	2.47	0.47
1:F:425:ASP:OD1	1:F:425:ASP:N	2.48	0.47
1:F:2322:VAL:HA	1:F:2325:LEU:HD12	1.95	0.47
1:F:2335:ASN:ND2	1:F:2337:LEU:HD23	2.29	0.47
1:F:3669:LYS:HG3	1:F:3670:MET:SD	2.54	0.47
1:F:3680:LEU:HD21	1:F:3688:SER:HA	1.96	0.47
2:G:465:ILE:HG23	2:G:518:LEU:HD21	1.97	0.47
5:M:708:ARG:O	5:M:712:ILE:HG12	2.14	0.47
6:R:219:MET:O	6:R:223:THR:OG1	2.31	0.47
1:A:143:LEU:O	1:A:144:MET:HE2	2.14	0.47
1:A:369:PHE:O	1:A:372:PRO:HD2	2.14	0.47
1:A:790:LYS:HA	1:A:869:ASN:HB3	1.96	0.47
1:A:901:MET:N	1:A:901:MET:SD	2.87	0.47
1:A:1099:PHE:CE1	1:A:1152:ARG:HD3	2.50	0.47
1:A:2548:PRO:HB2	1:A:2848:PHE:CD1	2.49	0.47
3:C:357:MET:HG2	3:C:425:PRO:HB3	1.96	0.47
1:F:92:PHE:O	1:F:96:MET:HG2	2.15	0.47
1:F:1474:ASP:OD1	1:F:1474:ASP:N	2.47	0.47
1:F:3569:GLN:HA	1:F:3572:ILE:HD12	1.95	0.47
1:F:4054:ALA:H	1:F:4103:GLN:NE2	2.12	0.47
4:L:134:ILE:HA	4:L:137:ASN:HD21	1.79	0.47
1:A:1424:THR:HA	1:A:1467:ILE:HD11	1.97	0.47
1:A:2205:VAL:HG13	1:A:2208:ASP:H	1.79	0.47
1:A:3825:LYS:HA	1:A:3829:LEU:HD23	1.96	0.47
1:F:168:ASP:H	1:F:171:LEU:HD12	1.79	0.47
1:F:899:ARG:HD3	1:F:2568:MET:HB3	1.95	0.47
1:F:2938:VAL:O	1:F:2942:ILE:HG12	2.15	0.47
1:F:3443:PRO:HA	1:F:3446:VAL:HG22	1.97	0.47
2:G:166:ILE:O	2:G:201:ASP:N	2.48	0.47
2:G:366:LEU:HB2	2:G:434:LEU:HD12	1.97	0.47
3:H:82:HIS:H	3:H:84:MET:HE1	1.78	0.47
3:H:309:ASP:OD1	3:H:309:ASP:N	2.46	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:O:107:ARG:NH1	4:O:108:LEU:O	2.48	0.47
6:R:176:ARG:NH1	6:R:179:LEU:HD23	2.29	0.47
1:A:653:LEU:HD21	1:A:669:LEU:HB3	1.95	0.47
1:A:2124:SER:OG	1:A:2126:MET:HE1	2.15	0.47
1:A:2584:CYS:HB2	1:A:2780:LEU:HD12	1.97	0.47
1:A:2866:ALA:HA	1:A:2869:LEU:HG	1.97	0.47
2:B:176:HIS:CE1	2:B:178:ASN:HD21	2.32	0.47
2:B:304:ASN:ND2	2:B:307:THR:HB	2.30	0.47
1:F:147:PHE:C	1:F:148:LYS:HD3	2.40	0.47
1:F:3283:LEU:O	1:F:3287:ARG:HG3	2.15	0.47
2:G:206:LYS:HG2	2:G:207:LYS:HG3	1.96	0.47
5:P:813:PHE:N	5:P:850:ALA:H	2.12	0.47
6:Q:136:ILE:O	6:Q:140:MET:N	2.38	0.47
1:A:1302:ALA:H	1:A:1334:LYS:HZ1	1.63	0.47
1:A:1833:LEU:HG	1:A:1836:LEU:HD23	1.96	0.47
1:A:4090:ARG:NH2	1:A:4109:ASP:OD2	2.47	0.47
2:B:398:CYS:SG	2:B:399:ARG:N	2.87	0.47
2:B:422:ASP:N	2:B:422:ASP:OD1	2.44	0.47
2:B:468:LYS:HG3	2:B:518:LEU:HA	1.95	0.47
2:B:488:ARG:HE	2:B:491:GLU:CD	2.23	0.47
3:C:283:THR:HB	3:C:285:LYS:HE2	1.95	0.47
3:C:500:HIS:HB3	3:C:503:GLU:HB3	1.96	0.47
3:C:528:ILE:HG22	3:C:532:LYS:HZ1	1.80	0.47
1:F:58:VAL:HG21	1:F:3098:ARG:HD2	1.96	0.47
1:F:196:LEU:HB3	1:F:200:PHE:CZ	2.50	0.47
1:F:778:ILE:HD12	1:F:3161:LEU:HD11	1.97	0.47
1:F:868:LYS:NZ	1:F:3170:ASP:OD1	2.48	0.47
1:F:1181:THR:OG1	1:F:1184:ARG:NH2	2.47	0.47
1:F:1504:ASP:O	1:F:1508:LYS:N	2.41	0.47
1:F:1575:LEU:HD11	1:F:1617:LYS:HD2	1.97	0.47
1:F:2147:ALA:HB2	1:F:2171:LEU:HD21	1.95	0.47
1:F:2312:TYR:HD2	1:F:2315:VAL:HG23	1.80	0.47
1:F:2511:ILE:HD11	1:F:2553:HIS:HB2	1.96	0.47
1:F:3151:LEU:HD22	1:F:3197:LEU:HB2	1.97	0.47
1:F:3455:LYS:HE2	1:F:3491:PRO:HG3	1.97	0.47
1:F:3720:ALA:HB3	1:F:3743:HIS:HA	1.95	0.47
3:H:10:VAL:HG22	3:H:131:HIS:HB3	1.96	0.47
3:H:662:LEU:HA	3:H:665:LYS:HG2	1.97	0.47
6:R:155:THR:O	6:R:159:MET:HE3	2.15	0.47
7:D:17:DT:H3	8:E:39:DA:H61	1.61	0.47
8:I:23:DT:H3'	8:I:24:DA:C8	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:33:GLN:OE1	1:A:2422:GLN:NE2	2.39	0.47
1:A:359:LEU:O	1:A:363:ILE:HG12	2.15	0.47
1:A:784:VAL:O	1:A:787:PRO:HD2	2.14	0.47
1:A:1722:PHE:HA	1:A:1729:PHE:HZ	1.79	0.47
1:A:2723:THR:HA	1:A:2726:LEU:HD13	1.97	0.47
2:B:348:MET:N	2:B:397:LEU:O	2.45	0.47
1:F:122:LYS:HD2	1:F:122:LYS:HA	1.79	0.47
1:F:541:MET:HE3	1:F:560:LEU:HB3	1.97	0.47
1:F:780:ILE:HB	1:F:785:MET:HE1	1.96	0.47
1:F:939:MET:HE1	1:F:2781:PRO:CB	2.45	0.47
1:F:1413:ASP:OD1	1:F:1414:ILE:N	2.48	0.47
1:F:2349:LEU:HB3	1:F:2360:PHE:HE1	1.79	0.47
1:F:3930:VAL:HA	1:F:3937:VAL:HA	1.96	0.47
2:G:36:ASP:OD1	2:G:163:HIS:ND1	2.35	0.47
5:P:666:VAL:HB	5:P:689:ILE:HG23	1.97	0.47
1:A:50:VAL:HG13	1:A:51:LEU:HG	1.97	0.47
1:A:1102:GLU:H	1:A:1102:GLU:CD	2.21	0.47
1:A:1196:PRO:HA	1:A:1202:ARG:O	2.15	0.47
1:A:2750:GLU:O	1:A:2754:GLU:HG2	2.15	0.47
1:A:3097:ASP:OD1	1:A:3098:ARG:N	2.48	0.47
2:B:509:PRO:HD3	3:C:394:ARG:HD3	1.97	0.47
3:C:266:SER:HB3	3:C:361:VAL:HG12	1.95	0.47
1:F:79:ARG:HH22	1:F:82:ARG:HD2	1.79	0.47
1:F:486:GLY:O	1:F:490:ILE:HG12	2.15	0.47
1:F:1769:GLU:HB2	1:F:1772:HIS:CG	2.49	0.47
1:F:1948:ALA:HA	1:F:1951:VAL:HG22	1.95	0.47
1:F:2353:GLN:HA	1:F:2356:MET:HG3	1.96	0.47
1:F:2584:CYS:HB2	1:F:2780:LEU:HD12	1.97	0.47
1:F:3165:THR:HG21	1:F:3241:LYS:HE2	1.96	0.47
1:F:3909:ALA:HB1	1:F:3984:MET:HE3	1.97	0.47
3:H:413:LYS:HG2	3:H:416:TYR:H	1.80	0.47
6:Q:135:LEU:N	6:R:40:ASP:O	2.47	0.47
6:Q:159:MET:HA	6:Q:162:LEU:HD12	1.97	0.47
8:I:35:DT:C4	8:I:36:DA:C6	3.03	0.47
1:A:322:GLN:OE1	1:A:326:MET:HE3	2.15	0.47
1:A:723:ASP:C	1:A:725:LEU:H	2.23	0.47
1:A:1479:VAL:HG11	1:A:1521:PHE:HD2	1.79	0.47
1:A:2548:PRO:HB2	1:A:2848:PHE:HD1	1.80	0.47
2:B:42:VAL:HG12	2:B:169:PHE:HB2	1.97	0.47
2:B:367:PHE:CE1	2:B:431:GLY:HA3	2.50	0.47
3:C:9:ALA:HB3	3:C:130:ARG:HG3	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:49:GLU:O	3:C:51:LYS:NZ	2.48	0.47
3:C:297:LEU:HD13	3:C:305:VAL:HG21	1.97	0.47
1:F:176:GLU:OE2	1:F:226:GLY:HA3	2.15	0.47
1:F:3528:ALA:HB2	1:F:3705:TYR:HD2	1.79	0.47
1:F:3915:HIS:HB2	1:F:3920:ILE:HB	1.96	0.47
4:K:94:TYR:CZ	4:K:96:PHE:HB3	2.50	0.47
4:L:145:GLN:HA	4:L:148:ASN:ND2	2.29	0.47
5:M:803:TYR:HB2	5:M:805:TRP:CE2	2.50	0.47
4:N:162:PHE:HD1	4:O:162:PHE:HD1	1.63	0.47
6:R:13:TRP:HB3	6:R:210:PHE:CZ	2.49	0.47
1:A:865:GLN:HE22	1:A:3171:ALA:N	2.12	0.46
1:A:1635:LYS:HD2	1:A:1635:LYS:HA	1.76	0.46
1:A:3269:ARG:HG3	1:A:3272:TRP:H	1.79	0.46
3:C:250:ARG:HB3	3:C:338:LYS:NZ	2.30	0.46
1:F:2492:ASP:O	1:F:2496:GLN:HG3	2.15	0.46
1:F:2990:GLU:HG2	1:F:2994:TRP:CE2	2.50	0.46
2:G:413:LEU:HB3	2:G:432:PHE:CD1	2.50	0.46
4:N:150:ARG:O	4:N:153:ARG:HD3	2.15	0.46
5:P:753:HIS:HA	5:P:756:ARG:HE	1.80	0.46
5:P:772:ASN:O	5:P:776:GLU:HG2	2.14	0.46
9:J:24:DT:H2''	9:J:25:DT:C6	2.50	0.46
1:A:38:LEU:CD2	1:A:85:ILE:HG13	2.45	0.46
1:A:3642:LYS:HG3	1:A:3643:HIS:ND1	2.30	0.46
2:B:38:LEU:HD13	2:B:165:ARG:HG3	1.96	0.46
2:B:125:GLN:NE2	2:B:128:GLN:OE1	2.45	0.46
2:B:240:GLU:O	2:B:244:ARG:N	2.39	0.46
3:C:251:LEU:HB2	3:C:261:ILE:HD13	1.96	0.46
1:F:1304:HIS:ND1	1:F:1307:ILE:O	2.34	0.46
1:F:1504:ASP:HB3	1:F:1507:CYS:HB2	1.96	0.46
1:F:3505:LEU:HD12	1:F:3508:LYS:HD2	1.97	0.46
3:H:630:PRO:HA	3:H:633:MET:HG3	1.97	0.46
1:A:1800:SER:O	1:A:1804:MET:HE3	2.15	0.46
1:A:1960:LYS:O	1:A:1962:TYR:N	2.49	0.46
1:A:2732:PHE:HA	1:A:2734:ARG:NH1	2.31	0.46
1:A:3482:LEU:O	1:A:3486:GLU:HG3	2.16	0.46
2:B:312:LEU:N	2:B:315:ASP:OD2	2.39	0.46
1:F:32:HIS:O	1:F:35:ILE:HG22	2.16	0.46
1:F:287:LEU:HB2	1:F:326:MET:HE1	1.98	0.46
1:F:406:ARG:HG3	1:F:409:GLN:NE2	2.31	0.46
1:F:718:MET:HA	1:F:721:TYR:CD2	2.50	0.46
1:F:1783:ARG:HH22	1:F:1830:HIS:HB2	1.79	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:1867:ILE:HD11	1:F:1940:TYR:HB2	1.97	0.46
1:F:2826:LEU:HA	1:F:2829:LYS:HE2	1.97	0.46
1:F:3825:LYS:O	1:F:3829:LEU:HB2	2.16	0.46
1:F:3923:ARG:HA	1:F:3959:MET:CE	2.46	0.46
2:G:416:GLN:N	2:G:431:GLY:O	2.43	0.46
3:H:299:ASP:OD2	3:H:303:THR:OG1	2.27	0.46
3:H:364:VAL:HB	3:H:419:LEU:HB2	1.97	0.46
4:O:58:ASP:OD1	4:O:58:ASP:N	2.45	0.46
5:P:690:VAL:HG22	5:P:692:ASN:H	1.79	0.46
1:A:639:ALA:HB2	1:A:676:ASN:HB3	1.97	0.46
1:A:1366:THR:O	1:A:1369:MET:HG3	2.15	0.46
1:A:1558:TYR:CZ	1:A:1562:LEU:HD11	2.51	0.46
1:A:1745:LYS:HA	1:A:1748:ASP:OD2	2.16	0.46
1:A:2392:VAL:O	1:A:2396:LEU:HG	2.14	0.46
1:A:3182:ILE:O	1:A:3186:ARG:HG2	2.15	0.46
1:F:196:LEU:HB3	1:F:200:PHE:CE2	2.50	0.46
1:F:1154:PRO:HD3	1:F:1163:LEU:HD11	1.98	0.46
1:F:2164:TRP:C	1:F:2167:PRO:HD2	2.41	0.46
1:F:2821:ASP:N	1:F:2821:ASP:OD1	2.48	0.46
1:F:3980:MET:SD	1:F:3980:MET:N	2.87	0.46
2:G:90:THR:HB	2:G:101:ASN:CA	2.46	0.46
2:G:244:ARG:HG2	2:G:246:VAL:HG13	1.98	0.46
2:G:262:LYS:NZ	2:G:344:GLY:HA3	2.31	0.46
3:H:37:VAL:HG12	3:H:231:LEU:HD21	1.97	0.46
5:P:696:ASP:OD1	5:P:696:ASP:N	2.48	0.46
1:A:1608:ARG:HH21	1:A:1612:LYS:NZ	2.14	0.46
1:A:3455:LYS:O	1:A:3455:LYS:NZ	2.33	0.46
1:A:3835:PRO:HG2	1:A:3836:PRO:HD3	1.97	0.46
3:C:135:PHE:HD1	3:C:227:PHE:CE1	2.33	0.46
3:C:147:LEU:HD11	3:C:211:VAL:HG21	1.96	0.46
3:C:316:TYR:N	3:C:319:ASP:O	2.48	0.46
1:F:982:GLN:NE2	1:F:2591:ILE:HG23	2.30	0.46
1:F:1158:PRO:HG2	1:F:1159:PRO:HD3	1.96	0.46
1:F:1420:ARG:NE	1:F:1466:ASN:O	2.49	0.46
1:F:2731:ARG:O	1:F:2734:ARG:NH2	2.49	0.46
1:F:3267:LYS:H	1:F:3267:LYS:HG2	1.58	0.46
1:A:24:ARG:NH2	1:A:70:ARG:HH21	2.13	0.46
1:A:32:HIS:O	1:A:35:ILE:HG22	2.16	0.46
1:A:475:LEU:HD22	1:A:476:ARG:HD3	1.98	0.46
1:A:1101:PHE:HD2	1:A:1163:LEU:HD13	1.81	0.46
1:A:1663:THR:HG22	1:A:1664:SER:N	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:C:148:ASP:OD1	3:C:148:ASP:N	2.49	0.46
3:C:297:LEU:HB3	3:C:303:THR:OG1	2.14	0.46
1:F:1148:ALA:HB2	1:F:1164:CYS:HB2	1.98	0.46
1:F:2310:VAL:HA	1:F:2316:TYR:CE2	2.51	0.46
1:F:2466:SER:OG	1:F:2469:CYS:SG	2.65	0.46
2:G:367:PHE:CE2	2:G:369:TYR:HB2	2.51	0.46
6:Q:44:VAL:HG12	6:Q:130:LEU:HD11	1.98	0.46
1:A:63:PHE:CE2	1:A:85:ILE:HG12	2.51	0.46
1:A:864:GLY:HA3	1:A:3170:ASP:CG	2.41	0.46
1:A:1086:TYR:CZ	1:A:1133:HIS:HB3	2.51	0.46
1:A:1133:HIS:O	1:A:1137:ILE:HG12	2.15	0.46
1:A:1367:HIS:HB2	1:A:1370:ARG:HH12	1.79	0.46
1:A:2478:MET:HG2	1:A:2524:PHE:CE1	2.50	0.46
1:A:3265:GLU:O	1:A:3268:THR:OG1	2.26	0.46
2:B:290:ARG:HH11	5:M:690:VAL:HG21	1.81	0.46
2:B:304:ASN:CG	2:B:307:THR:HB	2.41	0.46
3:C:277:THR:HA	3:C:286:LYS:HZ1	1.80	0.46
1:F:2307:MET:HE1	1:F:2316:TYR:O	2.15	0.46
2:G:85:VAL:HG22	2:G:106:GLN:HB3	1.96	0.46
2:G:362:LEU:HG	2:G:438:PRO:HG3	1.98	0.46
3:H:40:MET:HA	3:H:43:GLN:HG3	1.96	0.46
6:Q:139:LEU:HA	6:Q:142:MET:HE3	1.97	0.46
1:A:1251:GLN:OE1	1:A:1251:GLN:N	2.39	0.46
1:A:1287:GLN:HB3	1:A:1290:LEU:HD12	1.97	0.46
1:A:1639:LEU:HD23	1:A:1643:MET:HE1	1.98	0.46
1:A:1801:VAL:HA	1:A:1804:MET:HG2	1.98	0.46
1:A:3296:GLN:HG3	1:A:3337:ILE:HD11	1.97	0.46
2:B:89:GLY:HA2	2:B:101:ASN:HB3	1.98	0.46
2:B:416:GLN:N	2:B:431:GLY:O	2.38	0.46
2:B:481:PRO:HG2	3:C:403:PRO:HG2	1.98	0.46
3:C:265:LYS:NZ	8:E:23:DT:H5'	2.31	0.46
3:C:465:LYS:N	3:C:474:GLU:O	2.48	0.46
1:F:75:SER:HB2	1:F:77:GLU:HG2	1.98	0.46
1:F:669:LEU:O	1:F:673:THR:OG1	2.29	0.46
1:F:2246:LYS:H	1:F:2249:LEU:HD11	1.81	0.46
1:F:2382:VAL:HA	1:F:2385:LEU:HG	1.98	0.46
1:F:3008:TRP:HA	1:F:3011:LEU:HD12	1.98	0.46
1:F:3369:ASP:OD1	1:F:3370:SER:N	2.49	0.46
1:F:3499:ILE:HA	1:F:3502:MET:SD	2.56	0.46
5:P:811:SER:CB	5:P:849:GLY:HA3	2.37	0.46
8:E:34:DC:H5	8:E:35:DT:C2	2.32	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:849:GLU:OE1	1:A:849:GLU:N	2.40	0.46
1:A:901:MET:HB2	1:A:2819:GLU:HG2	1.98	0.46
1:A:908:ASP:OD1	1:A:908:ASP:N	2.47	0.46
1:A:3959:MET:HG3	1:A:4124:TRP:NE1	2.31	0.46
2:B:60:PHE:O	2:B:63:SER:OG	2.26	0.46
1:F:935:HIS:CD2	1:F:2775:TYR:HE1	2.34	0.46
1:F:1046:PRO:HA	1:F:1049:GLN:HE21	1.81	0.46
1:F:1342:MET:O	1:F:1346:THR:HG23	2.16	0.46
1:F:1580:LEU:HD13	1:F:1625:HIS:CD2	2.50	0.46
1:F:3583:LEU:HA	1:F:3586:LYS:HE2	1.97	0.46
2:G:419:GLU:N	2:G:426:GLN:HE22	2.13	0.46
3:H:51:LYS:HB3	3:H:125:LYS:NZ	2.31	0.46
4:K:130:CYS:SG	4:K:131:LEU:N	2.89	0.46
1:A:163:LYS:NZ	3:C:291:LYS:HD3	2.31	0.46
1:A:3107:ILE:O	1:A:3111:MET:HG2	2.15	0.46
1:A:3704:GLN:HE22	1:A:3717:VAL:HG13	1.80	0.46
3:C:242:ARG:HE	3:C:243:HIS:H	1.64	0.46
1:F:754:MET:HE3	1:F:1021:VAL:HB	1.98	0.46
1:F:1608:ARG:HE	1:F:1612:LYS:NZ	2.14	0.46
1:F:2161:ALA:HA	1:F:2164:TRP:HB2	1.96	0.46
1:F:2427:ARG:HH21	1:F:2465:PRO:HD2	1.81	0.46
1:F:2443:MET:HA	1:F:2446:LEU:HB2	1.98	0.46
1:F:2510:LEU:O	1:F:2518:GLN:NE2	2.42	0.46
1:F:3704:GLN:CD	1:F:3716:HIS:HE1	2.24	0.46
1:F:3870:SER:C	1:F:3874:ARG:HE	2.20	0.46
1:F:4121:TRP:HB3	1:F:4124:TRP:HB2	1.97	0.46
4:N:137:ASN:HB3	4:O:137:ASN:HB3	1.97	0.46
5:P:878:PHE:O	5:P:881:THR:OG1	2.25	0.46
6:Q:133:GLN:HB2	6:R:43:GLN:HB2	1.98	0.46
1:A:357:LYS:O	1:A:361:ILE:HG12	2.16	0.45
1:A:1150:LYS:HA	1:A:1150:LYS:HD2	1.79	0.45
1:A:1260:LEU:HD21	1:A:1293:ALA:HB1	1.97	0.45
1:A:1574:ASN:CG	1:A:1578:ALA:H	2.21	0.45
1:A:2154:GLU:HA	1:A:2157:PHE:CZ	2.51	0.45
1:A:2589:TYR:HB2	1:A:2777:HIS:HB2	1.98	0.45
1:A:2921:LEU:O	1:A:2925:GLU:HG3	2.16	0.45
1:A:3772:ASN:ND2	1:A:3788:LEU:O	2.44	0.45
3:C:154:LEU:HA	3:C:159:ILE:HB	1.98	0.45
1:F:1048:GLN:OE1	1:F:1048:GLN:N	2.49	0.45
2:G:291:GLU:HG3	5:P:690:VAL:HG23	1.98	0.45
2:G:351:LYS:C	2:G:394:VAL:HG13	2.41	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:R:4:LEU:O	6:R:8:LEU:HB2	2.15	0.45
1:A:251:PHE:HE1	1:A:293:LEU:HD11	1.80	0.45
1:A:862:LEU:HD12	1:A:866:ILE:HG21	1.98	0.45
1:A:935:HIS:CE1	1:A:987:LEU:HD13	2.51	0.45
1:A:3509:ASP:N	1:A:3509:ASP:OD1	2.44	0.45
1:A:3550:LYS:O	1:A:3553:GLU:HG2	2.16	0.45
2:B:90:THR:OG1	2:B:135:MET:O	2.33	0.45
3:C:199:GLU:OE2	3:C:202:LYS:NZ	2.42	0.45
3:C:247:TRP:HD1	3:C:263:ALA:HB3	1.82	0.45
1:F:913:ARG:O	1:F:916:GLU:HG3	2.16	0.45
1:F:2227:LYS:HB2	1:F:2230:VAL:HG22	1.98	0.45
1:F:3462:ARG:HG2	1:F:3498:TRP:HZ3	1.82	0.45
1:F:3911:ILE:HD12	1:F:3937:VAL:HG23	1.98	0.45
2:G:340:PHE:HE2	3:H:485:PRO:HB2	1.81	0.45
2:G:389:CYS:HA	2:G:392:LYS:HB3	1.98	0.45
2:G:473:TYR:HD2	3:H:350:GLN:HB3	1.82	0.45
5:M:722:LYS:HG3	5:M:742:PHE:O	2.15	0.45
1:A:21:ALA:HA	1:A:24:ARG:HH12	1.81	0.45
1:A:710:PHE:O	1:A:714:VAL:HG23	2.16	0.45
1:A:1773:VAL:HG12	1:A:1773:VAL:O	2.16	0.45
1:A:2420:PHE:CE2	1:A:2439:ILE:HD11	2.51	0.45
1:A:3308:ASP:N	1:A:3308:ASP:OD1	2.48	0.45
1:A:3915:HIS:CE1	1:A:3961:PHE:HB3	2.51	0.45
2:B:416:GLN:NE2	2:B:433:GLN:OE1	2.41	0.45
3:C:36:LYS:HZ1	3:C:231:LEU:HD11	1.81	0.45
3:C:363:LYS:HA	3:C:420:VAL:HA	1.99	0.45
1:F:642:PHE:HZ	1:F:673:THR:HG23	1.81	0.45
1:F:1217:VAL:HA	1:F:1285:GLU:OE1	2.17	0.45
1:F:1366:THR:HB	1:F:1369:MET:HE3	1.99	0.45
1:F:2869:LEU:HB2	1:F:2899:ARG:NH1	2.31	0.45
1:F:3321:LEU:HD13	1:F:3324:ARG:HH12	1.81	0.45
3:H:626:THR:HG22	3:H:628:GLU:H	1.80	0.45
4:K:3:ARG:NH1	4:K:122:VAL:O	2.50	0.45
4:N:155:TRP:HA	4:N:158:VAL:HG22	1.98	0.45
1:A:145:ASP:HA	1:A:147:PHE:CE2	2.51	0.45
1:A:345:PHE:HB3	1:A:366:TYR:CE1	2.51	0.45
1:A:1672:PHE:CZ	1:A:1676:ILE:HD11	2.52	0.45
1:A:2257:PHE:O	1:A:2261:SER:OG	2.25	0.45
1:A:2430:GLU:OE1	1:A:2430:GLU:N	2.29	0.45
1:A:3988:LEU:HD12	1:A:3988:LEU:HA	1.82	0.45
3:C:247:TRP:CD1	3:C:263:ALA:HB3	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:168:ASP:OD1	1:F:169:THR:N	2.43	0.45
1:F:208:MET:HE2	1:F:252:VAL:HG21	1.98	0.45
1:F:1095:LEU:O	1:F:1099:PHE:N	2.48	0.45
1:F:1580:LEU:O	1:F:1584:GLN:HG2	2.17	0.45
1:F:2522:ARG:HH21	1:F:2560:ASN:HB3	1.81	0.45
1:F:3174:ASP:HB3	1:F:3178:ILE:HD13	1.98	0.45
1:F:3500:SER:HA	1:F:3503:VAL:HG12	1.97	0.45
2:G:148:TRP:N	2:G:189:LYS:HZ1	2.14	0.45
2:G:480:ASN:OD1	2:G:483:LEU:N	2.33	0.45
3:H:115:MET:O	3:H:119:GLN:HG2	2.17	0.45
3:H:602:VAL:HA	3:H:609:PHE:CD2	2.52	0.45
5:M:843:LEU:HD23	5:M:846:ARG:HH11	1.82	0.45
7:D:35:DT:H2'	7:D:36:DG:C8	2.52	0.45
1:A:55:THR:O	1:A:58:VAL:HG12	2.16	0.45
1:A:925:GLN:HA	1:A:2769:VAL:HG13	1.99	0.45
1:A:1145:LEU:HD23	1:A:1165:LEU:HD13	1.97	0.45
1:A:1771:GLN:H	1:A:1775:GLU:CD	2.24	0.45
1:A:3050:LYS:HZ1	1:A:3181:ASP:HA	1.81	0.45
1:A:3389:VAL:O	1:A:3393:GLU:HG3	2.17	0.45
1:A:3835:PRO:HA	1:A:3839:TYR:HB2	1.98	0.45
2:B:95:ASN:ND2	2:B:99:PHE:H	2.12	0.45
2:B:247:ARG:HG2	2:B:247:ARG:O	2.17	0.45
3:C:259:ILE:HD12	3:C:377:LEU:HD21	1.98	0.45
1:F:1379:PRO:HB2	1:F:1385:ASN:HD22	1.81	0.45
1:F:1773:VAL:O	1:F:1773:VAL:HG12	2.16	0.45
1:F:2745:ARG:HG3	8:I:45:DG:O4'	2.16	0.45
4:L:144:LEU:O	4:L:148:ASN:ND2	2.50	0.45
5:M:667:MET:HE1	5:M:706:ASN:ND2	2.30	0.45
4:N:155:TRP:NE1	4:O:158:VAL:HG21	2.31	0.45
5:P:670:THR:HG23	5:P:675:LYS:HB2	1.98	0.45
5:P:681:ARG:NH2	5:P:730:PHE:HB3	2.32	0.45
6:Q:100:VAL:HG12	6:Q:101:ALA:H	1.80	0.45
6:R:80:LEU:HD23	6:R:80:LEU:H	1.82	0.45
1:A:450:SER:N	1:A:453:MET:SD	2.89	0.45
1:A:1372:LEU:O	1:A:1375:THR:OG1	2.25	0.45
1:A:1593:VAL:HA	1:A:1596:VAL:HG22	1.98	0.45
1:A:3179:TRP:C	1:A:3242:MET:HE1	2.42	0.45
2:B:203:MET:SD	2:B:238:LYS:N	2.74	0.45
1:F:117:LYS:NZ	3:H:299:ASP:HA	2.32	0.45
1:F:241:ASP:O	1:F:244:THR:HG22	2.17	0.45
1:F:1066:LEU:HD12	1:F:1074:LYS:HB3	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:2408:MET:HG3	1:F:2411:LEU:HD13	1.98	0.45
1:F:3128:LYS:HA	1:F:3128:LYS:HD3	1.78	0.45
2:G:200:LEU:HD23	2:G:200:LEU:H	1.82	0.45
3:H:9:ALA:O	3:H:131:HIS:N	2.32	0.45
3:H:237:PHE:CE2	3:H:239:LYS:HB2	2.51	0.45
4:N:179:ARG:O	4:N:182:LEU:HG	2.17	0.45
5:P:668:SER:HB3	5:P:703:GLY:H	1.82	0.45
6:Q:29:ILE:HD13	6:Q:76:LEU:HB3	1.97	0.45
6:R:214:LEU:O	6:R:218:TYR:HB2	2.17	0.45
1:A:371:GLY:HA2	1:A:423:TYR:CZ	2.51	0.45
1:A:525:LYS:HE2	1:A:525:LYS:HB2	1.71	0.45
1:A:1287:GLN:HG3	1:A:1289:SER:H	1.81	0.45
1:A:1525:CYS:O	1:A:1529:VAL:HG23	2.16	0.45
1:A:2126:MET:HE3	1:A:2126:MET:HB3	1.78	0.45
1:A:3577:GLN:HE21	1:A:3629:ARG:HB3	1.82	0.45
2:B:100:LYS:HA	2:B:100:LYS:HD2	1.77	0.45
3:C:213:ILE:HB	3:C:221:LEU:HD22	1.99	0.45
3:C:488:GLN:O	3:C:492:GLN:HG3	2.17	0.45
1:F:1101:PHE:HD2	1:F:1163:LEU:HD13	1.82	0.45
1:F:2264:ASP:N	1:F:2265:PRO:HD3	2.31	0.45
1:F:2404:ARG:HA	1:F:2404:ARG:HD2	1.75	0.45
1:F:3305:SER:OG	1:F:3308:ASP:OD1	2.28	0.45
2:G:171:ASN:HB3	2:G:206:LYS:HB2	1.98	0.45
2:G:350:PHE:HB3	2:G:394:VAL:HG12	1.98	0.45
2:G:459:VAL:HG11	3:H:382:HIS:ND1	2.31	0.45
3:H:496:HIS:NE2	3:H:504:PRO:O	2.48	0.45
1:A:1369:MET:HE1	1:A:1418:HIS:CB	2.47	0.45
1:A:2492:ASP:OD1	1:A:2493:ASN:N	2.50	0.45
2:B:94:LYS:N	2:B:102:ILE:O	2.41	0.45
1:F:730:LEU:HD11	1:F:765:LEU:HD11	1.99	0.45
1:F:1643:MET:SD	1:F:1688:LEU:HD22	2.57	0.45
1:F:3141:PHE:HA	1:F:3144:PHE:CE1	2.52	0.45
1:F:3588:TRP:CD1	1:F:3609:MET:SD	3.10	0.45
1:F:3619:ASP:N	1:F:3619:ASP:OD1	2.48	0.45
2:G:254:ARG:NH1	8:I:34:DC:O4'	2.50	0.45
2:G:351:LYS:O	2:G:395:ALA:N	2.50	0.45
3:H:461:MET:HG3	3:H:526:SER:OG	2.17	0.45
4:K:73:ALA:HB1	4:K:86:PHE:HZ	1.81	0.45
4:O:20:LEU:HD21	4:O:35:THR:O	2.16	0.45
6:Q:53:VAL:O	6:Q:56:GLN:HG3	2.15	0.45
6:Q:154:ALA:O	6:Q:158:HIS:ND1	2.36	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:E:31:DA:H2'	8:E:31:DA:N3	2.31	0.45
8:I:33:DA:H2	9:J:25:DT:H3	1.63	0.45
8:I:41:DT:O3'	8:I:42:DA:H8	2.00	0.45
1:A:1065:SER:O	1:A:1069:HIS:N	2.50	0.45
1:A:1867:ILE:O	1:A:1871:MET:HG2	2.17	0.45
1:A:1963:GLN:HA	1:A:2125:TRP:CH2	2.52	0.45
1:A:2142:ILE:O	1:A:2146:LEU:HG	2.17	0.45
1:A:3490:VAL:HG21	1:A:3495:PHE:CE2	2.51	0.45
1:A:3564:GLN:CD	1:A:3697:ASN:HB2	2.42	0.45
1:A:3687:MET:HE1	1:A:3722:PHE:CG	2.52	0.45
1:A:3962:ARG:HD2	1:A:4124:TRP:CZ2	2.52	0.45
3:C:129:LYS:NZ	3:C:131:HIS:HB2	2.32	0.45
1:F:82:ARG:HA	1:F:85:ILE:HD12	1.99	0.45
1:F:939:MET:HE3	1:F:2783:ILE:HD13	1.98	0.45
1:F:1218:SER:O	1:F:1222:ASN:N	2.48	0.45
1:F:1603:GLN:OE1	1:F:1606:ARG:NH2	2.50	0.45
1:F:3165:THR:HA	1:F:3238:MET:HE1	1.99	0.45
7:D:19:DA:H2	8:E:39:DA:C2	2.35	0.45
1:A:472:GLY:O	1:A:475:LEU:HB3	2.17	0.45
1:A:652:GLU:HA	1:A:655:LEU:HD12	1.99	0.45
1:A:675:ARG:HG2	1:A:678:LYS:HE2	1.98	0.45
1:A:1150:LYS:HD2	1:A:1162:SER:HA	1.99	0.45
1:A:1504:ASP:N	1:A:1508:LYS:HZ3	2.15	0.45
1:A:2844:LEU:HD21	1:A:2858:ILE:HG21	1.99	0.45
1:A:3781:CYS:HB3	1:A:3786:LEU:HB2	1.99	0.45
2:B:85:VAL:HG23	2:B:105:LEU:HB3	1.99	0.45
2:B:429:PRO:HG2	3:C:435:PHE:CD2	2.52	0.45
1:F:237:SER:OG	1:F:238:MET:N	2.49	0.45
1:F:1169:VAL:HG11	1:F:1198:LEU:HD11	1.98	0.45
1:F:3577:GLN:HA	1:F:3629:ARG:CZ	2.47	0.45
1:F:4125:GLU:HG3	1:F:4127:TRP:NE1	2.32	0.45
2:G:35:ARG:NH2	2:G:80:ARG:HB3	2.32	0.45
2:G:367:PHE:HE2	2:G:369:TYR:HB2	1.82	0.45
2:G:370:PRO:HD3	2:G:382:PHE:CD2	2.52	0.45
3:H:335:SER:HB3	3:H:394:ARG:HH12	1.82	0.45
5:M:746:MET:HE1	5:M:754:PHE:CD2	2.52	0.45
6:R:81:ARG:HD2	6:R:81:ARG:O	2.17	0.45
1:A:242:PRO:O	1:A:246:ARG:HG2	2.16	0.44
1:A:406:ARG:C	1:A:409:GLN:HE22	2.25	0.44
1:A:458:CYS:HG	1:A:533:HIS:CD2	2.35	0.44
1:A:1377:CYS:SG	1:A:1378:GLU:N	2.89	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1667:SER:O	1:A:1670:GLU:HG2	2.16	0.44
1:A:1877:LEU:HA	1:A:1880:MET:HG2	1.98	0.44
1:A:2410:GLU:O	1:A:2414:GLN:NE2	2.50	0.44
1:A:3048:LYS:HD2	1:A:3061:LEU:HB2	1.99	0.44
1:A:3246:ALA:CB	1:A:3254:LEU:HD11	2.47	0.44
1:F:145:ASP:O	1:F:148:LYS:NZ	2.38	0.44
1:F:374:LYS:NZ	1:F:423:TYR:O	2.42	0.44
1:F:723:ASP:C	1:F:725:LEU:H	2.23	0.44
1:F:1069:HIS:CE1	1:F:3743:HIS:HD2	2.35	0.44
1:F:1353:PRO:HD2	1:F:1356:TRP:CE3	2.51	0.44
1:F:3387:GLU:O	1:F:3390:GLN:NE2	2.50	0.44
2:G:346:MET:HG2	2:G:399:ARG:HH21	1.82	0.44
2:G:493:LEU:HD23	3:H:323:PHE:CE1	2.53	0.44
4:L:175:ASP:OD1	4:L:176:LEU:N	2.50	0.44
5:M:833:ASN:HB3	5:M:836:THR:HG21	1.99	0.44
4:O:94:TYR:HD2	4:O:96:PHE:HB2	1.82	0.44
6:R:46:HIS:HB3	6:R:126:ALA:HB2	1.99	0.44
8:I:25:DA:N6	9:J:33:DA:N3	2.64	0.44
1:A:332:GLU:HB2	1:A:335:LYS:NZ	2.32	0.44
1:A:475:LEU:O	1:A:479:ILE:HG12	2.16	0.44
1:A:537:SER:O	1:A:541:MET:HG3	2.16	0.44
1:A:907:LEU:HB3	1:A:937:MET:HE3	2.00	0.44
1:A:1153:LEU:HD11	1:A:1157:PHE:HB3	1.99	0.44
1:A:2216:LEU:HD13	1:A:2241:LEU:HD23	2.00	0.44
1:A:2411:LEU:O	1:A:2415:LEU:HG	2.16	0.44
1:A:2953:THR:OG1	1:A:2994:TRP:NE1	2.49	0.44
1:F:945:ALA:C	1:F:947:GLN:H	2.26	0.44
1:F:992:ILE:HG21	1:F:1036:PHE:HB2	2.00	0.44
1:F:1343:GLU:HG2	1:F:1398:VAL:HG21	1.98	0.44
1:F:1551:ILE:HG13	1:F:1552:HIS:N	2.32	0.44
1:F:1690:GLY:O	1:F:1694:THR:HG23	2.17	0.44
1:F:1740:VAL:HA	1:F:1743:MET:HG3	1.98	0.44
1:F:2091:HIS:HB2	1:F:2094:MET:HG3	1.99	0.44
1:F:3007:GLU:O	1:F:3011:LEU:N	2.50	0.44
1:F:3052:LEU:HA	1:F:3056:GLU:O	2.17	0.44
1:F:3118:ASP:OD1	1:F:3119:VAL:N	2.50	0.44
2:G:45:SER:HA	2:G:138:GLY:H	1.80	0.44
4:K:96:PHE:HD2	4:K:98:GLU:HG3	1.83	0.44
4:L:133:THR:O	4:L:137:ASN:ND2	2.51	0.44
4:L:155:TRP:HA	4:L:158:VAL:HG12	1.99	0.44
1:A:122:LYS:HD2	1:A:122:LYS:HA	1.87	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:247:GLU:HG2	1:A:251:PHE:CE2	2.52	0.44
1:A:827:ASN:HB3	1:A:836:LYS:NZ	2.33	0.44
1:A:1526:GLU:OE2	1:A:1574:ASN:ND2	2.51	0.44
1:A:3179:TRP:HB3	1:A:3242:MET:HE1	1.98	0.44
3:C:528:ILE:HG22	3:C:532:LYS:NZ	2.33	0.44
1:F:40:GLN:HA	1:F:43:VAL:HG22	1.97	0.44
1:F:168:ASP:OD2	9:J:22:DG:H5"	2.17	0.44
1:F:754:MET:O	1:F:758:LEU:HD23	2.17	0.44
1:F:1144:SER:O	1:F:1151:ARG:NH2	2.49	0.44
1:F:2738:LYS:HE3	1:F:2742:MET:HE2	1.99	0.44
1:F:3686:TRP:CD1	1:F:3690:PHE:HD2	2.35	0.44
2:G:168:LEU:N	2:G:201:ASP:O	2.48	0.44
4:K:51:GLU:O	4:K:54:GLN:HG3	2.17	0.44
1:A:3158:LYS:HZ3	1:A:3186:ARG:NH1	2.15	0.44
1:A:3462:ARG:HG2	1:A:3498:TRP:HZ3	1.81	0.44
1:A:3775:LEU:HD13	1:A:3786:LEU:HB3	2.00	0.44
2:B:189:LYS:HE2	2:B:189:LYS:HB2	1.87	0.44
2:B:416:GLN:HB3	2:B:431:GLY:H	1.81	0.44
3:C:242:ARG:HD3	3:C:271:ARG:CZ	2.47	0.44
1:F:22:ALA:HB3	1:F:34:LEU:HD21	2.00	0.44
1:F:749:VAL:O	1:F:753:GLN:HG2	2.17	0.44
1:F:889:GLU:HB2	1:F:891:ARG:HH21	1.82	0.44
1:F:1048:GLN:HA	1:F:1051:LYS:HZ2	1.82	0.44
1:F:1626:TRP:CZ2	1:F:1674:THR:HG21	2.51	0.44
1:F:2371:PHE:HD2	1:F:2374:LEU:HB2	1.82	0.44
1:F:2548:PRO:HB2	1:F:2848:PHE:CD1	2.53	0.44
1:F:3577:GLN:OE1	1:F:3629:ARG:NE	2.49	0.44
5:M:900:LYS:HB3	5:M:900:LYS:HE2	1.85	0.44
8:I:33:DA:H2"	8:I:34:DC:C6	2.53	0.44
1:A:1713:VAL:O	1:A:1716:GLN:HG2	2.17	0.44
1:A:3137:GLU:OE1	1:A:3186:ARG:NH2	2.51	0.44
1:A:3498:TRP:HD1	1:A:3501:HIS:CE1	2.36	0.44
2:B:473:TYR:HD2	3:C:350:GLN:HB3	1.82	0.44
3:C:267:ILE:H	3:C:361:VAL:HB	1.83	0.44
1:F:2220:MET:HA	1:F:2223:VAL:HG12	1.99	0.44
1:F:2306:ASN:HA	1:F:2309:PHE:CD2	2.52	0.44
1:F:2331:MET:HG2	1:F:2334:LYS:HG2	1.98	0.44
1:F:2339:GLU:O	1:F:2343:GLU:HG2	2.17	0.44
2:G:72:ILE:O	2:G:76:ILE:HG12	2.17	0.44
2:G:173:ASP:HB2	2:G:215:LEU:HG	1.99	0.44
2:G:320:GLN:OE1	3:H:274:LYS:HE3	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:372:GLU:OE2	2:G:379:SER:N	2.44	0.44
4:K:176:LEU:HD23	4:K:176:LEU:HA	1.86	0.44
4:L:150:ARG:HH12	4:L:151:LEU:HG	1.81	0.44
6:Q:16:LEU:HB3	6:Q:23:LEU:HD12	1.99	0.44
6:R:50:ASP:HB3	6:R:53:VAL:HG12	1.99	0.44
6:R:192:GLN:HA	6:R:195:ILE:HG22	2.00	0.44
1:A:164:LYS:HB3	1:A:166:ILE:HG12	1.99	0.44
1:A:489:ARG:O	1:A:492:SER:OG	2.30	0.44
1:A:1186:LYS:HA	1:A:1186:LYS:HD2	1.76	0.44
1:A:2153:THR:O	1:A:2156:VAL:HG12	2.18	0.44
1:A:2306:ASN:HA	1:A:2309:PHE:CD2	2.53	0.44
1:A:3321:LEU:HD13	1:A:3324:ARG:NH1	2.28	0.44
2:B:350:PHE:HA	2:B:396:ALA:HA	1.98	0.44
1:F:278:HIS:HB3	1:F:281:GLN:HG3	1.98	0.44
1:F:2260:PHE:HB3	1:F:2273:GLY:HA3	2.00	0.44
1:F:2304:VAL:O	1:F:2307:MET:HB2	2.17	0.44
1:F:3968:ILE:HD12	1:F:3976:GLU:HG3	1.99	0.44
1:F:3968:ILE:HG23	1:F:3976:GLU:HG3	2.00	0.44
1:A:1357:LYS:O	1:A:1360:LYS:HB3	2.17	0.44
1:A:2239:LYS:HB2	1:A:2279:ILE:HD12	2.00	0.44
1:A:3118:ASP:HB3	1:A:3121:LEU:HD13	2.00	0.44
1:A:4086:ASP:N	1:A:4086:ASP:OD1	2.50	0.44
2:B:288:LEU:HB2	3:C:311:ILE:HB	1.99	0.44
1:F:405:ASP:HB3	1:F:406:ARG:H	1.64	0.44
1:F:539:GLN:N	1:F:539:GLN:OE1	2.46	0.44
1:F:1757:MET:O	1:F:1760:GLU:HG2	2.17	0.44
1:F:1769:GLU:H	1:F:1772:HIS:CE1	2.36	0.44
1:F:2184:TYR:HE1	1:F:2734:ARG:HD2	1.82	0.44
1:F:2257:PHE:HA	1:F:2260:PHE:CE2	2.53	0.44
1:F:2291:GLN:CD	1:F:2292:CYS:H	2.26	0.44
1:F:3048:LYS:HE2	1:F:3061:LEU:HD13	1.99	0.44
1:F:3772:ASN:HD21	1:F:3788:LEU:HB3	1.83	0.44
1:F:3792:SER:N	1:F:3804:GLU:OE1	2.51	0.44
1:F:3992:ARG:HA	1:F:3992:ARG:HD3	1.67	0.44
4:K:3:ARG:HB3	4:K:21:GLN:NE2	2.32	0.44
4:K:141:ASN:HD21	4:L:140:LYS:HE2	1.82	0.44
5:M:800:GLU:HG2	5:M:805:TRP:HB2	1.99	0.44
1:A:860:GLY:C	1:A:3136:THR:HG21	2.43	0.44
1:A:990:GLN:HB3	1:A:2781:PRO:HD3	1.99	0.44
1:A:1066:LEU:HA	1:A:1069:HIS:HD2	1.82	0.44
1:A:2854:PHE:O	1:A:2858:ILE:HG12	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2880:CYS:HA	1:A:2885:GLN:HB2	1.99	0.44
1:A:3123:GLN:OE1	1:A:3123:GLN:N	2.40	0.44
1:A:3859:TYR:CE1	1:A:4119:ARG:HA	2.52	0.44
3:C:497:ARG:HA	3:C:497:ARG:HD3	1.79	0.44
1:F:433:PRO:O	1:F:436:GLU:HG2	2.17	0.44
1:F:864:GLY:HA3	1:F:3170:ASP:CG	2.42	0.44
1:F:910:PHE:HE1	1:F:2807:GLN:HB3	1.83	0.44
1:F:1294:VAL:HA	1:F:1297:PHE:CD2	2.53	0.44
1:F:1778:PHE:O	1:F:1781:SER:OG	2.25	0.44
1:F:3243:ILE:HD13	1:F:3262:LEU:HD11	1.98	0.44
1:F:3700:GLU:OE2	1:F:3716:HIS:ND1	2.32	0.44
2:G:241:ASP:HA	2:G:244:ARG:NH1	2.33	0.44
3:H:194:LEU:HG	3:H:195:LYS:HD2	1.99	0.44
3:H:667:GLU:HA	3:H:675:TRP:CZ3	2.53	0.44
4:N:170:GLU:O	4:N:173:GLU:HG2	2.17	0.44
8:I:45:DG:H5'	8:I:45:DG:C8	2.51	0.44
1:A:949:PRO:HD3	1:F:2579:HIS:HB3	1.99	0.44
1:A:1212:LEU:HD12	1:A:1216:GLY:HA2	1.99	0.44
1:A:1723:PRO:HB2	1:A:1724:MET:CE	2.48	0.44
1:A:1725:GLN:HE22	1:A:1727:ARG:HH21	1.65	0.44
1:A:2428:ASP:O	1:A:2432:GLN:HG2	2.17	0.44
1:A:2526:SER:O	1:A:2538:ARG:NH2	2.51	0.44
1:A:2919:ASP:OD1	1:A:2919:ASP:N	2.51	0.44
1:A:3019:ILE:HG13	1:A:3020:ASP:H	1.83	0.44
1:A:3254:LEU:HB2	1:A:3256:MET:HE3	1.99	0.44
1:A:3967:PHE:O	1:A:3970:LEU:HD22	2.18	0.44
1:A:4065:LEU:HG	1:A:4069:GLU:HB3	1.99	0.44
2:B:93:ASP:OD1	2:B:93:ASP:N	2.51	0.44
2:B:400:TYR:CZ	2:B:402:PRO:HG3	2.53	0.44
2:B:474:ARG:HB3	2:B:477:SER:HB3	2.00	0.44
3:C:353:ARG:HA	3:C:356:PHE:CD1	2.53	0.44
1:F:1255:CYS:HA	1:F:1258:ASP:OD2	2.17	0.44
1:F:2274:ILE:HD11	1:F:2306:ASN:ND2	2.33	0.44
1:F:3959:MET:HG3	1:F:4124:TRP:CZ2	2.53	0.44
2:G:148:TRP:CD1	2:G:152:ASN:HD21	2.36	0.44
3:H:452:ASN:OD1	3:H:453:ALA:N	2.50	0.44
4:O:32:PHE:HZ	4:O:109:GLY:HA2	1.81	0.44
5:P:708:ARG:O	5:P:712:ILE:HG12	2.18	0.44
5:P:771:LEU:HB3	5:P:775:LYS:NZ	2.33	0.44
6:Q:139:LEU:HG	6:R:142:MET:HE1	2.00	0.44
7:D:17:DT:H6	7:D:17:DT:H2'	1.68	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:90:CYS:N	1:A:133:LYS:HZ1	2.15	0.43
1:A:1220:LEU:HA	1:A:1224:PHE:HD2	1.83	0.43
1:A:1439:PRO:HA	1:A:1445:ARG:HH22	1.82	0.43
1:A:1646:LEU:O	1:A:1649:LEU:HG	2.18	0.43
1:A:3133:GLN:HA	1:A:3136:THR:HG22	1.99	0.43
1:A:3512:VAL:HB	1:A:3516:HIS:CE1	2.53	0.43
1:A:3683:CYS:O	1:A:3685:PRO:HD3	2.17	0.43
3:C:251:LEU:H	3:C:261:ILE:HG12	1.81	0.43
1:F:198:ARG:NH1	2:G:315:ASP:OD2	2.51	0.43
1:F:393:LYS:HA	1:F:393:LYS:HD2	1.55	0.43
1:F:1133:HIS:O	1:F:1137:ILE:HG12	2.18	0.43
1:F:1725:GLN:OE1	1:F:1726:SER:N	2.51	0.43
1:F:2589:TYR:HB2	1:F:2777:HIS:HB2	2.00	0.43
1:F:2827:SER:OG	1:F:2828:GLU:OE2	2.36	0.43
1:F:2980:ASP:N	1:F:2980:ASP:OD1	2.50	0.43
2:G:145:GLU:OE1	2:G:145:GLU:N	2.51	0.43
4:K:44:THR:HG23	4:K:116:VAL:HG23	1.99	0.43
4:K:169:LYS:HE2	4:K:169:LYS:HB3	1.83	0.43
4:L:176:LEU:HD23	4:L:176:LEU:HA	1.84	0.43
5:M:764:SER:OG	5:M:767:ILE:O	2.36	0.43
4:N:61:MET:HE1	4:N:66:TYR:HB2	2.00	0.43
1:A:899:ARG:HD3	1:A:2568:MET:HB3	2.00	0.43
1:A:1557:GLU:HB3	1:A:1592:MET:HE1	1.99	0.43
1:A:2737:GLU:O	1:A:2741:LEU:N	2.41	0.43
1:A:3005:LEU:O	1:A:3010:SER:OG	2.28	0.43
1:F:243:GLN:O	1:F:246:ARG:HG2	2.18	0.43
1:F:2184:TYR:CE1	1:F:2734:ARG:HD2	2.53	0.43
1:F:2452:ARG:HE	1:F:2497:GLU:CD	2.23	0.43
1:F:3823:GLU:HG2	1:F:3824:GLU:N	2.33	0.43
1:F:3919:GLY:HA3	1:F:3947:GLY:HA2	1.99	0.43
6:Q:50:ASP:OD1	6:Q:51:THR:N	2.37	0.43
7:D:13:DC:OP1	7:D:14:DA:N6	2.51	0.43
1:A:208:MET:HE2	1:A:252:VAL:HG12	1.99	0.43
1:A:1643:MET:HA	1:A:1646:LEU:HD12	2.00	0.43
1:A:1760:GLU:O	1:A:1764:GLU:HG2	2.17	0.43
1:A:2844:LEU:HB3	1:A:2875:ALA:HB1	2.00	0.43
1:A:3165:THR:HB	1:A:3169:PRO:HG3	1.99	0.43
1:A:3353:GLU:HG2	1:A:3357:ARG:HG3	1.99	0.43
2:B:170:THR:O	2:B:205:LEU:HD13	2.18	0.43
1:F:249:PHE:O	1:F:252:VAL:HG12	2.18	0.43
1:F:460:ALA:O	1:F:464:VAL:HG13	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:732:PHE:O	1:F:735:SER:OG	2.26	0.43
1:F:2162:LYS:HG3	1:F:2163:HIS:ND1	2.33	0.43
1:F:3419:PHE:O	1:F:3423:GLN:HG2	2.17	0.43
2:G:351:LYS:N	2:G:395:ALA:O	2.43	0.43
3:H:65:ASP:O	3:H:78:THR:HA	2.18	0.43
3:H:116:ASP:O	3:H:120:HIS:ND1	2.49	0.43
5:M:659:PHE:HB2	5:M:685:PHE:O	2.18	0.43
5:P:788:THR:HG23	5:P:791:GLU:H	1.82	0.43
6:R:212:MET:HE3	6:R:213:ASN:ND2	2.30	0.43
1:A:1367:HIS:HB2	1:A:1370:ARG:NH1	2.34	0.43
1:A:3898:LEU:O	1:A:3901:ARG:HG3	2.17	0.43
2:B:126:GLN:HA	2:B:129:LYS:HZ3	1.84	0.43
2:B:360:HIS:HB2	2:B:438:PRO:HG2	2.00	0.43
1:F:13:LEU:HD21	1:F:3069:MET:HG3	2.00	0.43
1:F:3529:ILE:C	1:F:3532:PRO:HD2	2.44	0.43
2:G:262:LYS:HB3	2:G:268:VAL:HG12	1.99	0.43
2:G:276:LEU:HA	3:H:433:TYR:CE1	2.54	0.43
3:H:360:GLN:NE2	8:I:24:DA:N1	2.65	0.43
4:N:59:MET:SD	4:N:59:MET:N	2.87	0.43
6:Q:157:LEU:HD21	6:R:157:LEU:HA	1.99	0.43
1:A:765:LEU:HA	1:A:768:VAL:HG12	2.01	0.43
1:A:1071:ASN:HB3	1:A:1074:LYS:HG3	2.00	0.43
1:A:1158:PRO:HG2	1:A:1159:PRO:HD3	2.00	0.43
2:B:204:HIS:O	2:B:205:LEU:HD12	2.18	0.43
3:C:242:ARG:NE	3:C:243:HIS:H	2.16	0.43
1:F:710:PHE:O	1:F:714:VAL:HG23	2.19	0.43
1:F:975:ASP:N	1:F:981:ARG:HH21	2.17	0.43
1:F:1769:GLU:HB2	1:F:1772:HIS:CD2	2.52	0.43
1:F:2349:LEU:HB3	1:F:2360:PHE:CE1	2.54	0.43
1:F:2899:ARG:HH21	1:F:2900:LEU:HG	1.84	0.43
1:F:2964:ASP:HB2	1:F:3252:PHE:CD2	2.54	0.43
1:F:3887:PHE:HA	1:F:3890:MET:SD	2.58	0.43
1:F:3962:ARG:HD2	1:F:4124:TRP:CZ2	2.54	0.43
2:G:325:ARG:HG3	3:H:88:PHE:CD2	2.54	0.43
3:H:163:PHE:HB3	3:H:208:VAL:HG21	2.00	0.43
5:P:659:PHE:HD2	5:P:685:PHE:HB3	1.82	0.43
5:P:814:ARG:H	5:P:849:GLY:C	2.26	0.43
1:A:1300:SER:HA	1:A:1304:HIS:HB3	2.00	0.43
1:A:2126:MET:SD	1:A:2126:MET:N	2.92	0.43
1:A:2482:ASP:HA	1:A:2485:ARG:HD2	1.99	0.43
1:A:2492:ASP:O	1:A:2496:GLN:HG3	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2967:GLU:O	1:A:2971:GLN:HG2	2.18	0.43
1:A:3264:LYS:O	1:A:3267:LYS:NZ	2.42	0.43
1:A:3961:PHE:HE2	1:A:4107:LEU:HD21	1.83	0.43
2:B:193:LEU:HB2	2:B:198:ILE:HD12	2.01	0.43
2:B:203:MET:SD	2:B:237:SER:HB2	2.58	0.43
2:B:276:LEU:HD23	2:B:276:LEU:H	1.84	0.43
2:B:403:ARG:NH1	8:E:31:DA:O3'	2.51	0.43
1:F:528:VAL:HA	1:F:633:ILE:HD11	2.00	0.43
1:F:978:GLN:HG2	1:F:2597:PHE:HA	2.01	0.43
1:F:1419:LEU:HD21	1:F:1467:ILE:HB	2.01	0.43
1:F:2238:ILE:O	1:F:2241:LEU:HG	2.18	0.43
1:F:3383:GLN:HG3	1:F:3387:GLU:OE2	2.18	0.43
1:F:4090:ARG:HH22	1:F:4106:CYS:HA	1.82	0.43
3:H:33:GLN:HA	3:H:36:LYS:HE3	2.00	0.43
3:H:400:ARG:HH12	9:J:34:DT:P	2.41	0.43
4:O:95:PHE:HB2	4:O:113:LEU:HD13	1.98	0.43
6:Q:146:LEU:HD13	6:R:147:GLN:HE21	1.83	0.43
8:I:43:DT:H2''	8:I:44:DG:C2	2.53	0.43
1:A:168:ASP:OD2	7:D:22:DG:H5'	2.19	0.43
1:A:767:GLU:HB2	1:A:851:ILE:HD11	2.01	0.43
1:A:894:PHE:O	1:A:905:ILE:N	2.40	0.43
1:A:1046:PRO:O	1:A:1049:GLN:HB2	2.18	0.43
1:A:2450:GLU:O	1:A:2453:GLU:HG2	2.19	0.43
1:A:3527:GLN:O	1:A:3529:ILE:HD12	2.19	0.43
1:A:3571:PHE:CE2	1:A:3699:LEU:HD22	2.53	0.43
1:A:3595:GLU:HB2	1:A:3606:ILE:HD11	2.00	0.43
1:A:3878:VAL:HG13	1:A:3965:ARG:HH11	1.83	0.43
3:C:13:CYS:O	3:C:14:MET:HE2	2.18	0.43
3:C:115:MET:O	3:C:119:GLN:HG2	2.18	0.43
3:C:315:ARG:HH11	3:C:320:ILE:HG13	1.84	0.43
1:F:475:LEU:O	1:F:479:ILE:HG12	2.18	0.43
1:F:1745:LYS:HA	1:F:1748:ASP:OD2	2.19	0.43
1:F:2153:THR:O	1:F:2156:VAL:HG12	2.19	0.43
1:F:2522:ARG:NH2	1:F:2564:GLU:HG3	2.34	0.43
2:G:388:LYS:HG3	3:H:454:VAL:HG11	2.00	0.43
2:G:489:ASN:ND2	3:H:331:MET:HB2	2.34	0.43
4:K:8:ILE:HG21	4:K:20:LEU:H	1.83	0.43
4:N:186:GLU:OE2	5:P:803:TYR:OH	2.26	0.43
7:D:19:DA:H2	8:E:39:DA:H2	1.65	0.43
1:A:264:ARG:HG3	8:E:39:DA:H2''	2.00	0.43
1:A:389:ILE:O	1:A:393:LYS:HG2	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:459:ARG:HG2	1:A:540:MET:CE	2.46	0.43
1:A:536:SER:HB3	1:A:637:LYS:HD3	2.01	0.43
1:A:1173:LEU:HD12	1:A:1191:PHE:CE1	2.54	0.43
1:A:2464:HIS:ND1	1:A:2466:SER:OG	2.52	0.43
1:A:2578:GLU:OE1	1:A:2578:GLU:N	2.42	0.43
1:A:2788:SER:HA	1:A:2791:ILE:HG12	2.00	0.43
1:A:3593:ARG:HH22	1:A:3661:ASP:CG	2.27	0.43
3:C:497:ARG:NH2	3:C:504:PRO:HA	2.34	0.43
1:F:1379:PRO:O	1:F:1382:ILE:HG12	2.18	0.43
1:F:1596:VAL:O	1:F:1600:MET:HG2	2.19	0.43
1:F:1959:LEU:HA	1:F:2123:PRO:HG3	1.99	0.43
1:F:2510:LEU:HD12	1:F:2521:ILE:HG23	2.00	0.43
1:F:2576:MET:HE1	1:F:2787:HIS:CD2	2.53	0.43
1:F:3420:CYS:SG	1:F:3421:ASP:N	2.92	0.43
2:G:418:GLU:HG2	2:G:426:GLN:OE1	2.18	0.43
2:G:426:GLN:HG3	2:G:429:PRO:HG3	2.01	0.43
2:G:445:LYS:O	2:G:446:MET:HE2	2.17	0.43
4:K:107:ARG:O	4:K:107:ARG:HD3	2.19	0.43
5:P:757:GLU:HG3	5:P:758:TYR:CD2	2.52	0.43
5:P:819:TYR:HA	5:P:853:VAL:HB	2.01	0.43
6:Q:98:ASP:OD1	6:Q:98:ASP:N	2.52	0.43
6:R:50:ASP:OD1	6:R:52:SER:N	2.39	0.43
7:D:13:DC:H4'	7:D:14:DA:H2'	2.01	0.43
1:A:142:ARG:CZ	1:A:182:GLY:HA2	2.49	0.43
1:A:446:PHE:CD1	1:A:530:LEU:HD12	2.54	0.43
1:A:715:ALA:O	1:A:718:MET:HG3	2.19	0.43
1:A:935:HIS:HB2	1:A:984:TYR:HE1	1.83	0.43
1:A:1081:ALA:O	1:A:1085:ILE:HG23	2.19	0.43
1:A:1115:HIS:CD2	1:A:1119:LYS:HD3	2.53	0.43
1:A:2371:PHE:CD2	1:A:2374:LEU:HB2	2.53	0.43
1:A:2532:PRO:O	1:A:2538:ARG:NH1	2.50	0.43
2:B:35:ARG:NH2	2:B:80:ARG:HB3	2.34	0.43
2:B:126:GLN:O	2:B:130:ARG:HG2	2.17	0.43
2:B:130:ARG:NH1	2:B:133:ASP:OD2	2.51	0.43
2:B:357:LYS:H	2:B:360:HIS:CE1	2.36	0.43
2:B:488:ARG:O	2:B:491:GLU:HG2	2.19	0.43
1:F:356:ASN:HB3	1:F:358:GLU:HG2	2.00	0.43
1:F:409:GLN:H	1:F:409:GLN:CD	2.26	0.43
1:F:774:GLU:O	1:F:778:ILE:HG12	2.19	0.43
1:F:1611:GLN:HB2	1:F:1613:HIS:ND1	2.34	0.43
1:F:1747:LEU:HD21	1:F:1778:PHE:HD1	1.82	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:3321:LEU:HD13	1:F:3324:ARG:NH1	2.34	0.43
2:G:453:MET:HE1	3:H:382:HIS:CG	2.53	0.43
3:H:18:PHE:HA	3:H:101:GLY:HA3	2.00	0.43
3:H:219:ASP:OD1	3:H:220:GLY:N	2.52	0.43
3:H:646:ALA:HA	3:H:651:GLU:HG3	2.00	0.43
4:K:187:LYS:HD3	4:L:187:LYS:HB3	2.01	0.43
5:P:667:MET:HE1	5:P:708:ARG:HG3	2.00	0.43
1:A:525:LYS:O	1:A:528:VAL:HG22	2.19	0.43
1:A:2746:LYS:HD2	7:D:12:DC:H3'	2.00	0.43
1:A:3244:ASP:O	1:A:3248:LYS:HG2	2.19	0.43
1:F:30:ALA:O	1:F:34:LEU:HG	2.19	0.43
1:F:275:PHE:CZ	1:F:319:PHE:HB2	2.54	0.43
1:F:294:PHE:CE2	1:F:344:GLN:HG2	2.54	0.43
1:F:2181:GLY:H	1:F:2185:MET:HE1	1.83	0.43
1:F:2255:LEU:HA	1:F:2258:GLU:HG2	2.00	0.43
1:F:2305:ASN:O	1:F:2308:SER:OG	2.25	0.43
1:F:2869:LEU:HD13	1:F:2896:ALA:HA	1.99	0.43
1:F:3809:THR:OG1	1:F:3930:VAL:O	2.37	0.43
1:F:3912:CYS:HA	1:F:3915:HIS:CD2	2.54	0.43
2:G:330:GLU:HB3	2:G:333:GLU:HG2	2.01	0.43
3:H:84:MET:SD	3:H:84:MET:N	2.92	0.43
3:H:673:HIS:ND1	3:H:673:HIS:O	2.52	0.43
4:L:161:ARG:O	4:L:164:LYS:HG3	2.18	0.43
6:Q:157:LEU:HG	6:R:157:LEU:HD13	2.00	0.43
6:Q:211:VAL:HG23	6:Q:212:MET:SD	2.59	0.43
6:R:24:LEU:HD23	6:R:210:PHE:CE1	2.53	0.43
7:D:16:DA:H2''	7:D:17:DT:C5	2.53	0.43
1:A:1190:LEU:HD23	1:A:1193:LYS:HD3	2.01	0.42
1:A:3128:LYS:HD3	1:A:3128:LYS:HA	1.83	0.42
1:A:3529:ILE:C	1:A:3532:PRO:HD2	2.44	0.42
1:A:3981:TYR:CE1	1:A:4105:LYS:HB2	2.53	0.42
2:B:90:THR:O	2:B:100:LYS:NZ	2.52	0.42
2:B:293:ASN:HD21	5:M:692:ASN:ND2	2.17	0.42
2:B:446:MET:SD	2:B:446:MET:N	2.92	0.42
3:C:83:LEU:HD23	3:C:83:LEU:H	1.84	0.42
1:F:12:LEU:HA	1:F:41:GLU:OE2	2.19	0.42
1:F:635:PRO:HB3	1:F:672:ILE:HD11	2.01	0.42
1:F:1685:ASP:OD1	1:F:1686:LEU:N	2.52	0.42
1:F:3293:CYS:O	1:F:3297:VAL:HG23	2.19	0.42
1:F:4065:LEU:HD12	1:F:4069:GLU:HB3	2.01	0.42
2:G:154:PHE:CZ	2:G:166:ILE:HD11	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:353:LEU:O	2:G:353:LEU:HD23	2.19	0.42
4:K:21:GLN:O	4:K:35:THR:OG1	2.36	0.42
4:O:109:GLY:HA3	4:O:111:PHE:CZ	2.54	0.42
1:A:387:GLU:O	1:A:391:ARG:HG2	2.19	0.42
1:A:567:GLU:HA	1:A:570:LYS:HE2	2.01	0.42
1:A:770:LEU:O	1:A:774:GLU:HG3	2.19	0.42
1:A:2454:LEU:O	1:A:2458:VAL:HG23	2.18	0.42
1:A:3078:LEU:HA	1:A:3082:TYR:HD2	1.84	0.42
1:A:3197:LEU:HD22	1:A:3227:ILE:HG21	2.00	0.42
1:A:3474:ARG:HE	1:A:3474:ARG:HB3	1.69	0.42
1:A:3499:ILE:HA	1:A:3502:MET:SD	2.60	0.42
1:A:3553:GLU:HG3	1:A:3557:ARG:NH2	2.33	0.42
1:A:3675:LYS:NZ	1:A:3676:PRO:O	2.35	0.42
1:A:4085:LYS:O	1:A:4089:ILE:HG23	2.19	0.42
2:B:332:GLU:O	2:B:335:GLU:HG2	2.18	0.42
1:F:46:SER:C	1:F:48:PRO:HD3	2.43	0.42
1:F:798:GLY:HA2	1:F:801:LYS:NZ	2.33	0.42
1:F:1020:PRO:HA	1:F:1073:PHE:CE1	2.54	0.42
1:F:1358:LEU:HA	1:F:1361:LYS:HE2	2.01	0.42
1:F:2365:ASN:ND2	1:F:2396:LEU:HG	2.34	0.42
1:F:3251:ASN:HB2	1:F:3254:LEU:HD13	2.01	0.42
1:F:3531:TYR:HB2	1:F:3532:PRO:HD3	2.01	0.42
1:F:4057:ALA:HB1	1:F:4082:ARG:HA	2.01	0.42
2:G:526:LYS:HE2	2:G:528:LEU:HB3	2.01	0.42
5:M:754:PHE:O	5:M:758:TYR:N	2.52	0.42
5:P:675:LYS:N	5:P:676:PRO:HD2	2.35	0.42
1:A:21:ALA:HA	1:A:24:ARG:NH1	2.35	0.42
1:A:164:LYS:HE3	1:A:166:ILE:HG23	2.01	0.42
1:A:344:GLN:O	1:A:348:ILE:HG12	2.19	0.42
1:A:959:TYR:CE1	1:A:1007:VAL:HG21	2.54	0.42
1:A:1006:THR:HG22	1:A:1054:VAL:HG21	2.01	0.42
1:A:1087:ARG:HA	1:A:1090:ARG:NH2	2.35	0.42
1:A:2295:GLN:HG3	1:A:2298:GLU:H	1.83	0.42
1:A:3569:GLN:NE2	1:A:3573:ASN:OD1	2.48	0.42
1:A:4083:GLY:HA3	1:A:4088:ASN:HB2	2.01	0.42
2:B:174:ASN:HB2	2:B:215:LEU:HB2	2.01	0.42
3:C:53:GLU:HB3	3:C:83:LEU:HB2	1.99	0.42
3:C:134:ILE:HG21	3:C:163:PHE:CE1	2.55	0.42
1:F:1004:GLN:HG2	1:F:1005:ASP:N	2.34	0.42
1:F:1075:ARG:HD3	1:F:1113:LEU:HD23	2.00	0.42
1:F:1388:ASP:HA	1:F:1392:MET:HG2	1.99	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:2173:ALA:HB1	1:F:2214:ARG:NH2	2.34	0.42
1:F:3148:GLN:NE2	1:F:3150:ASN:OD1	2.53	0.42
1:F:3285:HIS:NE2	1:F:3333:THR:HB	2.34	0.42
1:F:3506:LEU:HD21	1:F:3554:PHE:CD2	2.55	0.42
2:G:66:CYS:O	2:G:70:VAL:HG13	2.19	0.42
3:H:677:ILE:HA	3:H:680:GLN:HG2	2.00	0.42
4:L:3:ARG:NE	4:L:21:GLN:OE1	2.51	0.42
6:R:217:LEU:O	6:R:221:VAL:HG23	2.19	0.42
1:A:130:LEU:HA	1:A:130:LEU:HD23	1.73	0.42
1:A:234:PHE:CD2	1:A:235:THR:HG23	2.53	0.42
1:A:851:ILE:HD13	1:A:851:ILE:HA	1.92	0.42
1:A:1623:LEU:HD12	1:A:1623:LEU:HA	1.88	0.42
1:A:3625:LEU:N	1:A:3683:CYS:HA	2.33	0.42
3:C:83:LEU:HD22	3:C:121:GLU:HG2	2.01	0.42
1:F:36:ARG:HD3	1:F:2426:HIS:CD2	2.55	0.42
1:F:397:LEU:C	1:F:1744:LYS:HZ3	2.27	0.42
1:F:1296:PHE:HA	1:F:1299:GLU:HG2	2.01	0.42
1:F:1714:LEU:HB3	1:F:1761:LEU:HD21	2.00	0.42
1:F:2122:LEU:HB2	1:F:2126:MET:SD	2.59	0.42
1:F:2955:SER:O	1:F:2958:LEU:HG	2.20	0.42
1:F:3133:GLN:O	1:F:3136:THR:HG22	2.18	0.42
3:H:233:LYS:HD3	3:H:515:MET:HE3	2.01	0.42
3:H:508:ILE:HG23	3:H:509:GLN:N	2.32	0.42
4:O:158:VAL:HG22	4:O:161:ARG:HE	1.85	0.42
5:P:666:VAL:HG12	5:P:675:LYS:HE3	2.00	0.42
1:A:156:PHE:HA	1:A:159:GLU:HG3	2.01	0.42
1:A:738:HIS:O	1:A:742:GLU:HG3	2.20	0.42
1:A:773:LEU:C	1:A:858:MET:HE1	2.44	0.42
1:A:1482:GLU:OE1	1:A:1482:GLU:N	2.50	0.42
1:A:1815:THR:OG1	1:A:1816:ARG:N	2.53	0.42
1:A:2102:LYS:HD3	1:A:2102:LYS:HA	1.82	0.42
1:A:2584:CYS:SG	1:A:2585:GLU:N	2.93	0.42
1:A:3175:PRO:O	1:A:3177:ASN:N	2.53	0.42
1:A:3571:PHE:O	1:A:3575:LEU:HG	2.19	0.42
2:B:66:CYS:SG	2:B:242:LEU:HB2	2.60	0.42
3:C:198:THR:OG1	3:C:199:GLU:N	2.50	0.42
3:C:200:GLN:HA	3:C:203:GLU:HG2	2.02	0.42
1:F:19:LEU:HD13	1:F:34:LEU:HD22	2.01	0.42
1:F:296:VAL:HG22	1:F:300:TRP:CD1	2.54	0.42
1:F:784:VAL:HG13	1:F:785:MET:SD	2.58	0.42
1:F:1018:VAL:HG22	1:F:1074:LYS:HG2	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:1403:MET:SD	1:F:1415:LEU:HD11	2.59	0.42
1:F:1598:ASN:HA	1:F:1601:LEU:HD12	2.00	0.42
1:F:1716:GLN:HG3	1:F:1717:LEU:HD12	2.01	0.42
1:F:1816:ARG:HA	1:F:1819:PHE:CE2	2.54	0.42
1:F:1945:TYR:CE2	1:F:1949:ILE:HD11	2.54	0.42
1:F:2215:LEU:HD23	1:F:2219:LEU:HD23	2.00	0.42
1:F:2387:PRO:O	2:G:158:GLN:NE2	2.42	0.42
1:F:2466:SER:C	1:F:2470:ARG:HH21	2.28	0.42
1:F:2724:ASP:N	1:F:2724:ASP:OD1	2.52	0.42
1:F:3037:GLN:HA	1:F:3040:TYR:CD2	2.54	0.42
2:G:131:PHE:O	2:G:135:MET:HB3	2.18	0.42
4:N:7:ARG:HD3	4:O:131:LEU:HD12	2.00	0.42
5:P:739:GLN:O	5:P:741:ARG:N	2.47	0.42
6:Q:13:TRP:CE3	6:Q:24:LEU:HG	2.55	0.42
6:R:5:GLU:HG3	6:R:134:HIS:CE1	2.54	0.42
6:R:13:TRP:HB3	6:R:210:PHE:CE1	2.55	0.42
1:A:380:ASP:O	1:A:384:MET:HG2	2.19	0.42
1:A:1586:SER:OG	1:A:1593:VAL:HG21	2.20	0.42
1:A:2413:PHE:HB3	2:B:148:TRP:CH2	2.54	0.42
1:A:3472:ILE:HA	1:A:3479:THR:HG21	2.01	0.42
1:A:3588:TRP:CZ2	1:A:3613:MET:HG2	2.55	0.42
2:B:204:HIS:NE2	2:B:237:SER:HB3	2.34	0.42
3:C:89:ASP:OD1	3:C:90:LEU:N	2.52	0.42
3:C:469:LYS:HA	3:C:469:LYS:HD3	1.88	0.42
1:F:129:ASP:HA	1:F:132:ILE:HG12	2.00	0.42
1:F:1800:SER:O	1:F:1803:GLU:HG3	2.19	0.42
1:F:2486:ASP:N	1:F:2486:ASP:OD1	2.51	0.42
1:F:3633:ILE:HG13	1:F:3634:GLN:N	2.35	0.42
2:G:204:HIS:CG	2:G:208:PRO:HA	2.55	0.42
2:G:321:ILE:H	3:H:274:LYS:HE2	1.85	0.42
3:H:44:ARG:NH2	3:H:234:LEU:HA	2.34	0.42
4:L:4:LYS:HE2	4:L:74:LEU:HB3	2.02	0.42
1:A:79:ARG:O	1:A:82:ARG:HG2	2.19	0.42
1:A:342:MET:HE1	1:A:366:TYR:CE1	2.54	0.42
1:A:892:LEU:HD12	1:A:892:LEU:HA	1.83	0.42
1:A:985:GLU:HA	1:A:988:VAL:HG22	2.02	0.42
1:A:1047:GLN:O	1:A:1051:LYS:HD3	2.19	0.42
1:A:1076:LEU:HB3	1:A:1123:THR:HG23	2.01	0.42
1:A:1643:MET:HE3	1:A:1688:LEU:HD11	2.02	0.42
1:F:357:LYS:O	1:F:361:ILE:HG12	2.20	0.42
1:F:1852:LYS:NZ	1:F:1918:LEU:HB3	2.35	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:2227:LYS:C	1:F:2229:ALA:H	2.28	0.42
1:F:2256:ILE:O	1:F:2260:PHE:HD2	2.02	0.42
1:F:3980:MET:O	1:F:3984:MET:HG2	2.19	0.42
2:G:204:HIS:ND1	2:G:208:PRO:HA	2.35	0.42
2:G:269:ILE:HG23	2:G:378:SER:HB3	2.01	0.42
3:H:9:ALA:HB2	3:H:127:PHE:CD1	2.55	0.42
3:H:434:MET:HE3	3:H:434:MET:HB3	1.80	0.42
5:M:722:LYS:NZ	5:M:744:ILE:HD11	2.34	0.42
4:N:99:LYS:HD2	4:N:99:LYS:HA	1.82	0.42
4:N:194:LEU:HD11	4:O:195:HIS:CE1	2.55	0.42
1:A:208:MET:HE3	1:A:208:MET:O	2.19	0.42
1:A:681:LYS:HD3	1:A:681:LYS:HA	1.84	0.42
1:A:1113:LEU:HD12	1:A:1113:LEU:HA	1.91	0.42
1:A:1757:MET:O	1:A:1760:GLU:HG2	2.20	0.42
1:A:1799:GLU:O	1:A:1802:TYR:HB3	2.20	0.42
1:A:2327:LEU:HB3	1:A:2371:PHE:CD1	2.55	0.42
1:A:2412:TYR:OH	1:A:2453:GLU:OE2	2.29	0.42
2:B:76:ILE:HD11	2:B:487:PHE:CE1	2.55	0.42
2:B:200:LEU:H	2:B:200:LEU:HD23	1.85	0.42
2:B:272:GLY:O	2:B:369:TYR:N	2.40	0.42
3:C:132:ILE:HB	3:C:161:LEU:HB3	2.01	0.42
1:F:1729:PHE:HD1	1:F:1735:ARG:HH11	1.65	0.42
1:F:2335:ASN:OD1	1:F:2336:ILE:N	2.52	0.42
2:G:303:PHE:N	3:H:290:GLN:O	2.53	0.42
3:H:41:PHE:HE1	3:H:236:VAL:HG11	1.85	0.42
3:H:156:LYS:HG3	3:H:157:CYS:SG	2.59	0.42
4:O:131:LEU:HD23	4:O:131:LEU:HA	1.90	0.42
5:P:722:LYS:HG3	5:P:742:PHE:O	2.19	0.42
6:R:135:LEU:HD12	6:R:135:LEU:HA	1.91	0.42
7:D:23:DT:H2'	7:D:24:DT:C4	2.55	0.42
1:A:24:ARG:NH2	1:A:70:ARG:HE	2.18	0.42
1:A:296:VAL:HA	1:A:299:LYS:HG2	2.02	0.42
1:A:538:ASP:HA	1:A:541:MET:HG3	2.02	0.42
1:A:1149:LYS:O	1:A:1163:LEU:N	2.42	0.42
1:A:1666:GLY:O	1:A:1669:PRO:HD2	2.20	0.42
1:A:2348:GLN:OE1	1:A:2353:GLN:NE2	2.52	0.42
1:A:3133:GLN:NE2	1:A:3137:GLU:OE2	2.53	0.42
1:A:3258:LEU:HA	1:A:3261:GLU:OE1	2.20	0.42
1:A:3305:SER:HB2	1:A:3308:ASP:CG	2.44	0.42
1:A:3945:ALA:H	1:A:3948:SER:HG	1.64	0.42
1:A:4062:ASP:OD1	1:A:4063:GLU:N	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:264:ASN:OD1	2:B:265:LYS:N	2.47	0.42
1:F:433:PRO:HB3	1:F:6018:UNK:HA	2.01	0.42
1:F:661:PRO:C	1:F:662:LEU:HD12	2.45	0.42
1:F:1560:TYR:CZ	1:F:1596:VAL:HA	2.55	0.42
1:F:2130:HIS:NE2	1:F:2167:PRO:HG3	2.35	0.42
1:F:2938:VAL:HG12	1:F:2942:ILE:HG12	2.02	0.42
1:F:2978:LYS:HG2	1:F:2980:ASP:O	2.20	0.42
1:F:3030:ILE:HD12	1:F:3030:ILE:H	1.85	0.42
1:F:3100:LYS:HA	1:F:3103:ILE:HG22	2.02	0.42
1:F:3149:GLY:O	1:F:3152:SER:OG	2.30	0.42
1:F:3480:LEU:O	1:F:3483:MET:HG2	2.20	0.42
3:H:265:LYS:HD3	3:H:268:LEU:HD22	2.02	0.42
3:H:328:GLU:HA	3:H:331:MET:HG2	2.01	0.42
6:Q:100:VAL:HG12	6:Q:101:ALA:N	2.34	0.42
6:R:95:PHE:CE2	6:R:108:VAL:HG13	2.53	0.42
1:A:966:PHE:HD1	1:A:969:LEU:HD12	1.84	0.42
1:A:1278:ALA:HB3	1:A:1356:TRP:CD1	2.55	0.42
1:A:1400:VAL:HG13	1:A:1461:ALA:HB2	2.02	0.42
1:A:2155:GLU:HA	1:A:2158:ARG:HD3	2.01	0.42
1:A:2260:PHE:HA	1:A:2270:ASN:HB2	2.01	0.42
1:A:3118:ASP:C	1:A:3125:ARG:HH21	2.28	0.42
1:A:3460:GLU:OE1	1:A:3460:GLU:N	2.45	0.42
1:A:3859:TYR:OH	1:A:4120:THR:O	2.38	0.42
3:C:345:PHE:HB3	3:C:389:MET:SD	2.60	0.42
1:F:63:PHE:CE2	1:F:85:ILE:HG12	2.54	0.42
1:F:276:ALA:HB2	1:F:315:ALA:HA	2.01	0.42
1:F:718:MET:SD	1:F:719:LYS:HG3	2.60	0.42
1:F:753:GLN:NE2	1:F:791:ASP:O	2.42	0.42
1:F:1484:LEU:HA	1:F:1487:VAL:HG12	2.02	0.42
1:F:1625:HIS:HA	1:F:1628:LYS:NZ	2.35	0.42
1:F:1627:LYS:NZ	1:F:1670:GLU:HB2	2.35	0.42
1:F:2142:ILE:O	1:F:2146:LEU:HG	2.19	0.42
1:F:2201:THR:HA	1:F:2202:PRO:HD3	1.89	0.42
1:F:2208:ASP:OD1	1:F:2209:GLU:N	2.52	0.42
1:F:3175:PRO:O	1:F:3177:ASN:N	2.53	0.42
1:F:4091:ALA:C	1:F:4094:PRO:HD2	2.45	0.42
4:K:137:ASN:HB3	4:L:137:ASN:HB2	2.02	0.42
4:L:102:LYS:HE3	4:L:102:LYS:HB2	1.96	0.42
5:P:725:TRP:NE1	5:P:736:VAL:O	2.43	0.42
6:Q:40:ASP:OD1	6:Q:40:ASP:N	2.51	0.42
1:A:82:ARG:O	1:A:86:LEU:HG	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:409:GLN:H	1:A:409:GLN:CD	2.28	0.41
1:A:461:ILE:O	1:A:464:VAL:HG22	2.19	0.41
1:A:1005:ASP:OD1	1:A:1005:ASP:N	2.54	0.41
1:A:1034:ARG:HD2	1:A:1084:ASN:O	2.20	0.41
1:A:1347:THR:O	1:A:1351:THR:OG1	2.31	0.41
1:A:1419:LEU:HG	1:A:1467:ILE:HD13	2.02	0.41
1:A:1506:SER:O	1:A:1509:GLN:HG3	2.19	0.41
1:A:2243:GLU:HA	1:A:2246:LYS:HE3	2.02	0.41
1:A:2312:TYR:CE2	1:A:2314:GLU:HB3	2.55	0.41
1:A:2411:LEU:HD21	1:A:2442:MET:HG2	2.00	0.41
1:F:466:LEU:HD21	1:F:541:MET:HE2	2.00	0.41
1:F:889:GLU:OE2	1:F:3889:ARG:NH2	2.53	0.41
1:F:984:TYR:HA	1:F:987:LEU:HB3	2.02	0.41
1:F:1352:SER:HB2	1:F:1356:TRP:HB2	2.02	0.41
1:F:2216:LEU:O	1:F:2219:LEU:HG	2.19	0.41
2:G:90:THR:HG21	2:G:93:ASP:HA	2.02	0.41
2:G:416:GLN:HB2	2:G:431:GLY:N	2.35	0.41
4:L:134:ILE:HA	4:L:137:ASN:ND2	2.35	0.41
5:M:678:LEU:HD23	5:M:681:ARG:HH21	1.85	0.41
8:E:45:DG:H21	8:E:45:DG:P	2.43	0.41
8:I:26:DA:H2''	8:I:27:DC:C6	2.55	0.41
1:A:962:TYR:HB3	1:A:966:PHE:CE2	2.55	0.41
1:A:1958:GLU:HG2	1:A:1959:LEU:N	2.35	0.41
1:A:2962:ARG:NH1	1:A:2967:GLU:OE2	2.32	0.41
1:A:3444:ALA:HB2	1:A:3478:GLU:HG3	2.02	0.41
2:B:462:MET:HA	2:B:465:ILE:HB	2.01	0.41
1:F:42:CYS:SG	1:F:91:ILE:HD11	2.60	0.41
1:F:72:SER:H	1:F:82:ARG:HH22	1.67	0.41
1:F:151:GLU:H	1:F:151:GLU:HG2	1.66	0.41
1:F:860:GLY:CA	1:F:3136:THR:HG21	2.50	0.41
1:F:983:LEU:HD12	1:F:984:TYR:CD1	2.56	0.41
1:F:3014:CYS:O	1:F:3016:THR:HG23	2.20	0.41
1:F:3281:CYS:HB2	1:F:3329:LEU:HD13	2.02	0.41
1:F:3462:ARG:HG2	1:F:3498:TRP:CZ3	2.55	0.41
2:G:67:ILE:HA	2:G:70:VAL:HG22	2.02	0.41
2:G:134:MET:SD	2:G:135:MET:HB2	2.60	0.41
2:G:362:LEU:HD23	2:G:362:LEU:HA	1.84	0.41
2:G:363:ARG:NH2	9:J:28:DA:OP2	2.33	0.41
4:K:133:THR:O	4:K:136:GLU:HG3	2.20	0.41
5:P:825:VAL:HG23	5:P:828:ASP:HB2	2.02	0.41
6:R:174:LEU:HB2	6:R:179:LEU:HD11	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:35:ILE:HD12	1:A:80:GLU:HG3	2.02	0.41
1:A:988:VAL:HG21	1:A:1028:PHE:HZ	1.84	0.41
1:A:1268:ASN:HD21	1:A:1344:PHE:HB2	1.86	0.41
1:A:3037:GLN:HA	1:A:3040:TYR:CD2	2.55	0.41
1:A:3259:LEU:O	1:A:3276:TRP:NE1	2.46	0.41
1:A:3531:TYR:HB2	1:A:3532:PRO:HD3	2.02	0.41
1:A:3834:ALA:N	1:A:3835:PRO:HD2	2.35	0.41
1:A:4091:ALA:C	1:A:4094:PRO:HD2	2.45	0.41
2:B:338:LYS:HE3	2:B:407:PRO:HD3	2.01	0.41
1:F:337:LYS:HA	1:F:341:PHE:CD2	2.54	0.41
1:F:832:LYS:C	1:F:834:LEU:H	2.26	0.41
1:F:3231:ILE:HG13	1:F:3232:ARG:N	2.34	0.41
1:F:3856:MET:N	1:F:3856:MET:SD	2.93	0.41
1:F:4054:ALA:HA	1:F:4097:GLY:H	1.85	0.41
3:H:37:VAL:HA	3:H:40:MET:HG3	2.02	0.41
3:H:496:HIS:CG	3:H:506:PRO:HD3	2.55	0.41
4:N:22:VAL:HG23	4:N:32:PHE:HB2	2.02	0.41
5:P:837:ARG:HG2	5:P:840:ILE:HB	2.02	0.41
6:Q:164:ILE:HA	6:Q:167:TYR:CD2	2.56	0.41
6:R:142:MET:HA	6:R:221:VAL:HG11	2.02	0.41
9:J:17:DT:H6	9:J:17:DT:H2'	1.67	0.41
9:J:27:DT:H6	9:J:27:DT:H2'	1.59	0.41
1:A:392:CYS:O	1:A:396:PHE:HB3	2.20	0.41
1:A:850:GLU:HG3	1:A:851:ILE:N	2.35	0.41
1:A:891:ARG:HD3	1:A:957:PRO:HA	2.01	0.41
1:A:928:VAL:HB	1:A:2769:VAL:HG11	2.02	0.41
1:A:1255:CYS:HA	1:A:1258:ASP:OD2	2.20	0.41
1:A:2133:LEU:HD13	1:A:2146:LEU:HD12	2.03	0.41
1:A:2525:TRP:CH2	1:A:2545:LEU:HD11	2.55	0.41
1:A:3444:ALA:HA	1:A:3482:LEU:HD11	2.02	0.41
2:B:532:PRO:HG3	3:C:373:ALA:HB2	2.03	0.41
1:F:1101:PHE:CD1	1:F:1168:LEU:HG	2.55	0.41
1:F:1131:ILE:HD11	1:F:1186:LYS:HG2	2.01	0.41
1:F:1372:LEU:HD22	1:F:1402:LEU:HD21	2.02	0.41
1:F:2224:PHE:O	1:F:2225:HIS:ND1	2.53	0.41
1:F:2376:ASP:OD1	1:F:2377:ARG:N	2.54	0.41
1:F:2773:ARG:HG2	1:F:2789:SER:OG	2.21	0.41
1:F:2965:TYR:O	1:F:2969:ALA:N	2.38	0.41
1:F:3234:CYS:O	1:F:3238:MET:HG2	2.20	0.41
1:F:3243:ILE:CD1	1:F:3262:LEU:HD11	2.50	0.41
1:F:3781:CYS:O	1:F:3785:ALA:N	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:H:400:ARG:HH22	9:J:34:DT:P	2.42	0.41
4:K:59:MET:HB3	4:K:61:MET:HE3	2.02	0.41
4:O:45:GLY:H	4:O:114:GLU:CD	2.28	0.41
6:Q:60:GLU:HG3	6:Q:61:LEU:HD12	2.02	0.41
6:R:176:ARG:HD2	6:R:178:ARG:HB3	2.03	0.41
7:D:37:DG:H21	8:E:21:DA:H5'	1.84	0.41
8:I:19:DC:H1'	8:I:20:DT:C4	2.55	0.41
1:A:179:GLY:C	1:A:230:LEU:HD22	2.45	0.41
1:A:452:LYS:HB3	7:D:12:DC:H41	1.85	0.41
1:A:479:ILE:HG13	1:A:480:SER:N	2.35	0.41
1:A:865:GLN:O	1:A:868:LYS:HG2	2.20	0.41
1:A:972:LEU:HB3	1:A:984:TYR:CD2	2.56	0.41
1:A:1235:ILE:HD12	1:A:1238:GLN:OE1	2.21	0.41
1:A:1264:LEU:O	1:A:1268:ASN:ND2	2.53	0.41
1:A:1346:THR:HG22	1:A:1402:LEU:HB2	2.02	0.41
1:A:2097:LEU:HD12	1:A:2149:LEU:HD21	2.02	0.41
1:A:2257:PHE:HA	1:A:2260:PHE:CE1	2.56	0.41
1:A:2899:ARG:HH21	1:A:2900:LEU:HG	1.85	0.41
2:B:183:ALA:O	2:B:187:ARG:HG3	2.20	0.41
2:B:244:ARG:HG3	2:B:246:VAL:HG23	2.02	0.41
3:C:41:PHE:O	3:C:45:GLN:HG2	2.21	0.41
3:C:236:VAL:HG23	3:C:236:VAL:O	2.19	0.41
1:F:681:LYS:HA	1:F:681:LYS:HD3	1.78	0.41
1:F:1059:LEU:O	1:F:1063:LEU:HD23	2.20	0.41
1:F:1436:LEU:HD23	1:F:1436:LEU:H	1.84	0.41
1:F:1590:THR:HG21	1:F:1641:THR:HG23	2.02	0.41
1:F:1713:VAL:HA	1:F:1716:GLN:HG2	2.02	0.41
1:F:1878:ASP:OD1	1:F:1879:VAL:N	2.54	0.41
1:F:2154:GLU:HA	1:F:2157:PHE:CE1	2.55	0.41
1:F:2349:LEU:O	1:F:2353:GLN:HB2	2.20	0.41
1:F:2833:THR:HG21	1:F:2867:ALA:HB1	2.02	0.41
1:F:4012:ASP:HB2	1:F:4038:TRP:CE2	2.56	0.41
2:G:48:MET:HE3	2:G:59:PRO:C	2.46	0.41
3:H:198:THR:HG22	3:H:200:GLN:H	1.86	0.41
3:H:366:ALA:O	3:H:368:ARG:NH1	2.46	0.41
6:Q:160:LYS:HB3	6:R:164:ILE:HD11	2.01	0.41
1:A:337:LYS:HE3	1:A:337:LYS:HB3	1.95	0.41
1:A:860:GLY:HA3	1:A:3136:THR:HG21	2.03	0.41
1:A:907:LEU:HD23	1:A:937:MET:HG3	2.02	0.41
1:A:1240:THR:HG22	1:A:1310:GLU:HA	2.01	0.41
1:A:1348:LEU:O	1:A:1352:SER:OG	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1468:LEU:HD12	1:A:1469:PRO:HD2	2.02	0.41
1:A:1598:ASN:HA	1:A:1601:LEU:HD12	2.03	0.41
1:A:1935:GLU:O	1:A:1939:LEU:HG	2.21	0.41
1:A:2955:SER:O	1:A:2958:LEU:HG	2.20	0.41
1:A:3226:ASP:HB3	1:A:3227:ILE:H	1.75	0.41
3:C:463:LEU:O	3:C:476:LEU:N	2.25	0.41
1:F:332:GLU:HA	1:F:334:HIS:CE1	2.56	0.41
1:F:1603:GLN:O	1:F:1603:GLN:NE2	2.54	0.41
1:F:1772:HIS:CD2	1:F:1773:VAL:HG23	2.55	0.41
1:F:2753:ARG:O	1:F:2756:GLU:HG3	2.20	0.41
1:F:3008:TRP:O	1:F:3011:LEU:HB2	2.20	0.41
1:F:3255:ALA:HB1	1:F:3258:LEU:HD23	2.03	0.41
1:F:3621:LYS:HA	1:F:3630:ARG:NH2	2.35	0.41
1:F:4090:ARG:NH1	1:F:4091:ALA:HB2	2.36	0.41
2:G:130:ARG:O	2:G:134:MET:HG3	2.21	0.41
2:G:367:PHE:CE1	2:G:431:GLY:HA3	2.55	0.41
3:H:125:LYS:HB2	3:H:125:LYS:HE3	1.89	0.41
3:H:357:MET:HE3	3:H:357:MET:HB3	1.96	0.41
3:H:513:TRP:HA	3:H:516:LEU:HD13	2.02	0.41
3:H:643:ARG:HD2	3:H:655:PHE:CD2	2.55	0.41
5:P:728:GLU:HB3	5:P:736:VAL:HG21	2.02	0.41
6:Q:158:HIS:O	6:Q:162:LEU:HG	2.21	0.41
6:Q:190:LEU:HD23	6:Q:190:LEU:HA	1.94	0.41
6:R:162:LEU:O	6:R:165:GLN:HG3	2.21	0.41
8:I:44:DG:H2'	8:I:45:DG:H2'	2.02	0.41
1:A:297:LEU:HD23	1:A:316:LEU:HA	2.03	0.41
1:A:1127:CYS:O	1:A:1131:ILE:HG12	2.20	0.41
1:A:1342:MET:O	1:A:1346:THR:HG23	2.20	0.41
1:A:1747:LEU:HD23	1:A:1747:LEU:HA	1.94	0.41
1:A:2466:SER:C	1:A:2470:ARG:HH21	2.29	0.41
1:A:3068:ALA:HB1	1:A:3074:GLN:HG2	2.00	0.41
2:B:172:GLU:HB2	2:B:175:PRO:HB3	2.03	0.41
2:B:414:VAL:O	2:B:432:PHE:HA	2.20	0.41
3:C:324:SER:OG	3:C:327:ASP:HB2	2.20	0.41
1:F:170:VAL:HA	1:F:219:VAL:HG11	2.03	0.41
1:F:292:SER:O	1:F:295:GLU:HG2	2.21	0.41
1:F:2298:GLU:HG2	1:F:2301:GLN:HB3	2.02	0.41
1:F:2733:MET:SD	1:F:2733:MET:N	2.94	0.41
1:F:3244:ASP:HB3	1:F:3248:LYS:NZ	2.35	0.41
1:F:3665:MET:SD	1:F:3669:LYS:NZ	2.93	0.41
1:F:3955:VAL:HG11	1:F:4121:TRP:CZ3	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:35:ARG:HE	2:G:80:ARG:HB3	1.85	0.41
2:G:295:PRO:O	3:H:298:ASN:ND2	2.53	0.41
2:G:396:ALA:HB3	2:G:413:LEU:HB2	2.02	0.41
3:H:82:HIS:N	3:H:84:MET:HE1	2.36	0.41
3:H:206:GLU:O	3:H:209:LYS:HG2	2.20	0.41
3:H:604:GLN:HG3	3:H:605:LYS:HG3	2.02	0.41
4:N:8:ILE:O	4:N:8:ILE:HG13	2.19	0.41
1:A:487:LEU:HD23	1:A:487:LEU:HA	1.93	0.41
1:A:762:TYR:CD2	1:A:765:LEU:HD23	2.55	0.41
1:A:767:GLU:O	1:A:771:ASN:ND2	2.53	0.41
1:A:965:THR:HG22	1:A:969:LEU:HG	2.02	0.41
1:A:1220:LEU:HA	1:A:1224:PHE:HB2	2.03	0.41
1:A:1623:LEU:HD11	1:A:1671:VAL:HG11	2.02	0.41
1:A:1833:LEU:HA	1:A:1836:LEU:HB3	2.03	0.41
1:A:1851:LEU:HD11	1:A:1874:TYR:CE1	2.56	0.41
1:A:2382:VAL:HA	1:A:2385:LEU:HG	2.02	0.41
1:A:3718:ARG:H	1:A:3743:HIS:HE1	1.62	0.41
1:A:3962:ARG:HH21	1:A:3964:THR:HB	1.85	0.41
2:B:259:LEU:HD11	2:B:400:TYR:CE1	2.54	0.41
1:F:24:ARG:HG3	1:F:25:CYS:N	2.31	0.41
1:F:67:VAL:O	1:F:82:ARG:NH2	2.51	0.41
1:F:386:VAL:O	1:F:390:GLN:HG2	2.21	0.41
1:F:479:ILE:HG13	1:F:480:SER:N	2.36	0.41
1:F:1476:HIS:ND1	1:F:1521:PHE:HB3	2.35	0.41
1:F:3677:PRO:HG3	1:F:3683:CYS:HB2	2.02	0.41
1:F:3994:ASP:O	1:F:3998:LEU:N	2.49	0.41
2:G:100:LYS:NZ	2:G:101:ASN:H	2.18	0.41
2:G:174:ASN:HB2	2:G:215:LEU:HB2	2.03	0.41
4:N:20:LEU:HD13	4:N:34:ILE:HG13	2.02	0.41
4:O:158:VAL:HG22	4:O:161:ARG:HH21	1.84	0.41
5:P:713:ILE:HG23	5:P:745:HIS:HB2	2.01	0.41
6:R:4:LEU:O	6:R:8:LEU:CB	2.68	0.41
1:A:40:GLN:NE2	1:A:2427:ARG:H	2.19	0.41
1:A:67:VAL:HA	1:A:71:LYS:HE2	2.02	0.41
1:A:127:ALA:O	1:A:131:LEU:HG	2.21	0.41
1:A:296:VAL:HG22	1:A:300:TRP:CD1	2.56	0.41
1:A:430:VAL:HG21	1:A:1643:MET:HG2	2.02	0.41
1:A:538:ASP:OD1	1:A:539:GLN:N	2.51	0.41
1:A:573:LEU:HD13	1:A:649:PHE:HD1	1.86	0.41
1:A:834:LEU:HD12	1:A:837:THR:HG23	2.03	0.41
1:A:1071:ASN:H	1:A:1075:ARG:NH1	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1086:TYR:CD1	1:A:1133:HIS:HB3	2.56	0.41
1:A:1203:SER:N	1:A:1204:PRO:HD3	2.35	0.41
1:A:1264:LEU:HD11	1:A:1344:PHE:CG	2.55	0.41
1:A:1511:ALA:HA	1:A:1514:LEU:HD12	2.03	0.41
1:A:1588:ASP:OD1	1:A:1589:ASN:N	2.52	0.41
1:A:1731:PRO:HA	1:A:1736:PHE:CD2	2.56	0.41
1:A:1805:PHE:CZ	1:A:1869:LYS:HA	2.55	0.41
1:A:2375:ALA:O	1:A:2379:MET:HG2	2.21	0.41
1:A:2478:MET:HG2	1:A:2524:PHE:CD1	2.56	0.41
1:A:2506:LEU:HD23	1:A:2506:LEU:HA	1.88	0.41
1:A:2567:SER:HA	1:A:2572:TYR:CE2	2.56	0.41
1:A:2773:ARG:NE	1:A:2775:TYR:HE1	2.18	0.41
1:A:3234:CYS:O	1:A:3238:MET:HG2	2.20	0.41
1:A:3613:MET:HE1	1:A:3640:PHE:CE1	2.56	0.41
1:A:3912:CYS:HA	1:A:3915:HIS:NE2	2.36	0.41
1:A:3955:VAL:HG11	1:A:4121:TRP:CE3	2.56	0.41
1:A:4010:SER:O	1:A:4014:LYS:HG2	2.21	0.41
1:A:4056:PRO:O	1:A:4060:THR:OG1	2.26	0.41
2:B:193:LEU:HB2	2:B:198:ILE:HB	2.03	0.41
2:B:203:MET:SD	2:B:238:LYS:HB2	2.61	0.41
2:B:253:LYS:HD2	2:B:253:LYS:HA	1.82	0.41
2:B:255:ALA:HB1	2:B:273:ILE:O	2.21	0.41
2:B:470:ARG:HD2	3:C:389:MET:HE1	2.03	0.41
1:F:53:LEU:O	1:F:57:LEU:HG	2.21	0.41
1:F:55:THR:O	1:F:58:VAL:HG12	2.20	0.41
1:F:83:GLU:HG2	1:F:129:ASP:OD2	2.21	0.41
1:F:145:ASP:OD1	1:F:145:ASP:N	2.50	0.41
1:F:183:GLU:HG2	1:F:184:VAL:H	1.86	0.41
1:F:204:LEU:HD21	1:F:224:LEU:HD22	2.03	0.41
1:F:583:LEU:HB2	1:F:614:PRO:HA	2.02	0.41
1:F:1343:GLU:O	1:F:1346:THR:OG1	2.33	0.41
1:F:1568:ASN:O	1:F:1572:LEU:HD23	2.21	0.41
1:F:1783:ARG:HH12	1:F:1830:HIS:HB2	1.86	0.41
1:F:2188:GLU:HG2	1:F:2728:LEU:HD21	2.01	0.41
1:F:2252:PRO:C	1:F:2254:ARG:H	2.27	0.41
1:F:2331:MET:O	1:F:2331:MET:HG2	2.20	0.41
1:F:2366:LYS:HA	1:F:2369:LYS:NZ	2.35	0.41
1:F:2418:LYS:HA	1:F:2418:LYS:HD3	1.81	0.41
1:F:2526:SER:O	1:F:2538:ARG:NH2	2.53	0.41
1:F:2531:LEU:HD23	1:F:2531:LEU:HA	1.81	0.41
1:F:2820:MET:SD	1:F:2821:ASP:N	2.94	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:3447:VAL:HG11	1:F:3471:ILE:HD13	2.03	0.41
1:F:3922:ASP:HB3	1:F:3928:PHE:CE1	2.56	0.41
2:G:91:GLU:OE1	2:G:136:GLY:HA3	2.20	0.41
2:G:286:ILE:N	3:H:313:GLY:O	2.37	0.41
2:G:290:ARG:HH12	5:P:695:PRO:HD2	1.86	0.41
3:H:406:GLY:HA3	3:H:421:TYR:CE1	2.55	0.41
4:K:21:GLN:HE22	4:K:126:LEU:HD12	1.86	0.41
4:L:120:ALA:HA	4:L:123:ILE:HG22	2.03	0.41
7:D:21:DA:H61	8:E:36:DA:H61	1.68	0.41
1:A:21:ALA:O	1:A:24:ARG:HG2	2.21	0.41
1:A:629:PHE:O	1:A:633:ILE:HG12	2.21	0.41
1:A:900:GLU:OE1	1:A:900:GLU:N	2.54	0.41
1:A:1353:PRO:HD2	1:A:1356:TRP:CE3	2.56	0.41
1:A:1484:LEU:HD13	1:A:1531:LEU:HD13	2.03	0.41
1:A:2216:LEU:O	1:A:2219:LEU:HG	2.21	0.41
1:A:2295:GLN:HG3	1:A:2298:GLU:CB	2.49	0.41
1:A:2331:MET:O	1:A:2331:MET:HG2	2.21	0.41
1:A:2379:MET:SD	1:A:2404:ARG:HG3	2.61	0.41
1:A:3050:LYS:NZ	1:A:3184:THR:OG1	2.47	0.41
2:B:58:THR:N	2:B:59:PRO:HD2	2.36	0.41
1:F:1022:ASP:O	1:F:1025:LEU:HB3	2.20	0.41
1:F:1570:GLU:HA	1:F:1573:LYS:HE2	2.03	0.41
1:F:1871:MET:HE1	1:F:1939:LEU:O	2.20	0.41
1:F:2797:VAL:HG13	1:F:2804:ILE:HD12	2.03	0.41
1:F:2963:SER:OG	1:F:3250:ASN:O	2.21	0.41
1:F:3175:PRO:HA	1:F:3249:GLN:HE22	1.85	0.41
1:F:3558:ILE:O	1:F:3562:LEU:HG	2.21	0.41
1:F:3909:ALA:O	1:F:3984:MET:HE1	2.21	0.41
2:G:112:GLY:O	2:G:116:ILE:HG12	2.20	0.41
2:G:257:SER:OG	2:G:273:ILE:HB	2.20	0.41
2:G:327:ILE:HD11	3:H:498:ALA:HB2	2.03	0.41
4:K:118:ASN:HB3	4:K:121:GLU:HG3	2.01	0.41
4:N:139:ALA:O	4:N:142:GLU:HG3	2.21	0.41
4:O:63:LYS:O	4:O:67:VAL:HG22	2.20	0.41
5:P:816:HIS:N	5:P:850:ALA:HA	2.36	0.41
1:A:2097:LEU:HB2	1:A:2149:LEU:HD11	2.03	0.40
1:A:2187:VAL:HA	1:A:2190:VAL:HG22	2.03	0.40
1:A:2574:ASN:O	1:A:2787:HIS:ND1	2.54	0.40
1:A:6015:UNK:O	1:A:6019:UNK:N	2.54	0.40
2:B:340:PHE:CD2	2:B:408:PRO:HG3	2.56	0.40
2:B:424:LYS:HA	2:B:424:LYS:HD3	1.80	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:493:LEU:HD12	2:B:493:LEU:HA	1.84	0.40
1:F:265:TYR:C	1:F:268:PRO:HD2	2.46	0.40
1:F:734:LEU:HD11	1:F:768:VAL:HG22	2.04	0.40
1:F:1105:VAL:HG21	1:F:1154:PRO:HB2	2.03	0.40
1:F:1304:HIS:CE1	1:F:1307:ILE:HG22	2.54	0.40
1:F:1639:LEU:HA	1:F:1642:LYS:HE3	2.02	0.40
1:F:1803:GLU:HA	1:F:1806:ARG:NH2	2.36	0.40
1:F:1818:SER:O	1:F:1822:ARG:HG3	2.21	0.40
1:F:2481:HIS:HD1	1:F:2499:PHE:HE1	1.68	0.40
1:F:2578:GLU:HG2	1:F:2579:HIS:N	2.35	0.40
1:F:2839:ASP:HA	1:F:2842:ARG:NH1	2.36	0.40
1:F:3445:LEU:O	1:F:3448:GLU:HG2	2.20	0.40
1:F:3483:MET:HE3	1:F:3513:ALA:H	1.86	0.40
1:F:3534:ILE:HD13	1:F:3534:ILE:HA	1.89	0.40
1:F:3563:ASP:C	1:F:3564:GLN:HG3	2.46	0.40
2:G:143:LEU:O	2:G:147:LEU:HG	2.22	0.40
2:G:164:LYS:HE3	2:G:164:LYS:HB3	1.89	0.40
2:G:365:SER:OG	2:G:434:LEU:N	2.53	0.40
4:L:180:PHE:HA	4:L:183:VAL:HG12	2.02	0.40
5:M:659:PHE:CD2	5:M:685:PHE:HB3	2.55	0.40
4:O:97:PHE:HE2	4:O:99:LYS:HD3	1.85	0.40
4:O:170:GLU:OE2	5:P:847:PHE:HA	2.20	0.40
4:O:176:LEU:HD23	4:O:179:ARG:HH11	1.86	0.40
5:P:746:MET:HE3	5:P:751:LYS:HG2	2.03	0.40
5:P:770:ASP:OD1	5:P:773:GLN:HG2	2.21	0.40
9:J:33:DA:H2"	9:J:34:DT:O2	2.21	0.40
1:A:238:MET:N	1:A:238:MET:SD	2.94	0.40
1:A:1012:ALA:HA	1:A:1015:ASP:OD2	2.21	0.40
1:A:1142:HIS:CG	1:A:1197:LEU:HD12	2.56	0.40
1:A:2356:MET:SD	1:A:2357:GLU:N	2.94	0.40
1:A:2464:HIS:O	1:A:2466:SER:N	2.53	0.40
1:A:2735:ASP:N	1:A:2735:ASP:OD1	2.50	0.40
1:A:2752:LYS:HD3	1:A:2752:LYS:HA	1.96	0.40
1:A:3183:ILE:HD12	1:A:3238:MET:HB3	2.03	0.40
1:A:3701:ILE:HG13	1:A:3719:ILE:HG13	2.03	0.40
1:A:3731:SER:H	1:A:3734:ARG:HA	1.85	0.40
1:F:1071:ASN:OD1	1:F:1073:PHE:N	2.52	0.40
1:F:1771:GLN:HA	1:F:1775:GLU:HG3	2.02	0.40
1:F:2356:MET:SD	1:F:2357:GLU:N	2.95	0.40
1:F:2517:LEU:HA	1:F:2520:ILE:HG22	2.04	0.40
1:F:3015:SER:O	1:F:3016:THR:OG1	2.33	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:3186:ARG:O	1:F:3190:LEU:HG	2.21	0.40
1:F:3254:LEU:HB2	1:F:3256:MET:HE3	2.03	0.40
2:G:205:LEU:HD12	2:G:205:LEU:HA	1.95	0.40
2:G:350:PHE:HB2	3:H:462:SER:HA	2.02	0.40
3:H:44:ARG:HD2	3:H:236:VAL:HB	2.04	0.40
3:H:74:TYR:CD2	3:H:109:ASP:HB3	2.56	0.40
3:H:539:LEU:HD23	3:H:539:LEU:HA	1.88	0.40
6:Q:67:ALA:HB3	6:Q:72:PHE:CE1	2.56	0.40
6:Q:211:VAL:O	6:Q:215:GLN:HG2	2.21	0.40
6:R:209:PRO:HA	6:R:212:MET:HG2	2.03	0.40
9:J:37:DG:H1'	9:J:38:DG:N2	2.36	0.40
1:A:75:SER:HB2	1:A:77:GLU:HG2	2.03	0.40
1:A:446:PHE:HB3	1:A:527:TYR:HE1	1.86	0.40
1:A:1271:ILE:O	1:A:1274:ARG:HD2	2.21	0.40
1:A:1297:PHE:HA	1:A:1301:ILE:HG12	2.03	0.40
1:A:2129:LEU:HD22	1:A:2146:LEU:HD21	2.02	0.40
1:A:2193:ILE:HA	1:A:2196:TRP:CH2	2.57	0.40
1:A:2724:ASP:N	1:A:2724:ASP:OD1	2.54	0.40
1:A:2749:ALA:O	1:A:2753:ARG:HG2	2.21	0.40
1:A:2837:LEU:HD21	1:A:2868:LEU:HA	2.03	0.40
1:A:3278:GLN:HB3	1:A:3282:ARG:NH1	2.31	0.40
1:A:3911:ILE:O	1:A:3915:HIS:CD2	2.75	0.40
2:B:73:SER:O	2:B:77:SER:HB3	2.22	0.40
2:B:106:GLN:CD	2:B:115:ARG:HE	2.29	0.40
2:B:367:PHE:HE1	2:B:431:GLY:HA3	1.86	0.40
2:B:444:ARG:HH21	3:C:268:LEU:HD23	1.86	0.40
3:C:31:PHE:CZ	3:C:100:PRO:HG3	2.57	0.40
3:C:335:SER:OG	3:C:394:ARG:NH2	2.55	0.40
1:F:38:LEU:CD2	1:F:85:ILE:HG13	2.51	0.40
1:F:89:LEU:O	1:F:133:LYS:NZ	2.54	0.40
1:F:1045:THR:HG22	1:F:1047:GLN:H	1.87	0.40
1:F:1087:ARG:H	1:F:1087:ARG:HG2	1.65	0.40
1:F:1203:SER:N	1:F:1204:PRO:HD3	2.36	0.40
1:F:1622:ILE:HD12	1:F:1622:ILE:HA	1.92	0.40
1:F:2130:HIS:CD2	1:F:2167:PRO:HG3	2.57	0.40
1:F:2288:TYR:CZ	1:F:2290:PRO:HA	2.56	0.40
1:F:2820:MET:HA	1:F:2823:PHE:CE1	2.56	0.40
1:F:2858:ILE:HD13	1:F:2858:ILE:HA	1.91	0.40
1:F:2964:ASP:OD1	1:F:2967:GLU:HB3	2.22	0.40
1:F:3015:SER:C	1:F:3017:ALA:H	2.29	0.40
1:F:3700:GLU:HG2	1:F:3704:GLN:HE21	1.87	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:3736:LYS:O	1:F:3752:VAL:N	2.44	0.40
1:F:3886:ALA:O	1:F:3889:ARG:HB3	2.22	0.40
3:H:132:ILE:O	3:H:161:LEU:HA	2.21	0.40
3:H:236:VAL:O	3:H:238:LYS:HE3	2.22	0.40
3:H:457:LEU:O	3:H:461:MET:HE2	2.22	0.40
4:K:147:GLU:O	4:K:151:LEU:HD23	2.21	0.40
4:K:155:TRP:HD1	4:L:158:VAL:HG11	1.86	0.40
4:K:158:VAL:HG11	4:L:159:GLN:OE1	2.21	0.40
6:Q:136:ILE:HG23	6:Q:140:MET:HE3	2.02	0.40
6:R:35:ALA:HB1	6:R:46:HIS:CE1	2.56	0.40
6:R:151:ARG:O	6:R:155:THR:HG23	2.22	0.40
7:D:23:DT:H5"	7:D:24:DT:O4	2.22	0.40
1:A:1253:THR:O	1:A:1257:LEU:HG	2.21	0.40
1:A:1721:HIS:HB3	1:A:1739:TYR:CE1	2.57	0.40
1:A:2335:ASN:OD1	1:A:2336:ILE:N	2.51	0.40
1:A:2427:ARG:HG3	1:A:2432:GLN:NE2	2.37	0.40
1:A:2957:LEU:HD23	1:A:2957:LEU:HA	1.82	0.40
1:A:3996:GLY:O	1:A:4000:ASN:ND2	2.54	0.40
2:B:220:ILE:HG23	2:B:221:ILE:HG13	2.04	0.40
2:B:300:THR:HB	3:C:293:THR:HG23	2.03	0.40
3:C:246:HIS:HB2	3:C:264:TYR:CE2	2.57	0.40
3:C:408:ALA:HA	3:C:421:TYR:HA	2.04	0.40
1:F:2952:ILE:HD11	1:F:2971:GLN:OE1	2.21	0.40
1:F:3729:MET:HE1	1:F:3731:SER:OG	2.22	0.40
1:F:3997:LEU:HD23	1:F:3997:LEU:HA	1.96	0.40
1:F:4011:PHE:HA	1:F:4014:LYS:NZ	2.36	0.40
2:G:337:LEU:HD11	3:H:493:CYS:SG	2.61	0.40
3:H:6:ASN:HA	3:H:128:GLU:OE1	2.22	0.40
3:H:16:VAL:O	3:H:16:VAL:HG12	2.21	0.40
3:H:16:VAL:HB	3:H:60:GLY:C	2.46	0.40
5:M:753:HIS:NE2	5:M:757:GLU:OE2	2.55	0.40
4:O:20:LEU:HD13	4:O:37:THR:HG22	2.03	0.40
5:P:741:ARG:NH1	5:P:742:PHE:HB3	2.37	0.40
7:D:22:DG:H8	7:D:23:DT:H72	1.85	0.40
1:A:76:ILE:HD11	1:A:122:LYS:HE2	2.04	0.40
1:A:238:MET:HE2	1:A:238:MET:HB2	2.00	0.40
1:A:527:TYR:HB2	1:A:629:PHE:HE1	1.86	0.40
1:A:717:LYS:HB3	1:A:721:TYR:OH	2.22	0.40
1:A:718:MET:HA	1:A:721:TYR:CD2	2.57	0.40
1:A:1487:VAL:HG23	1:A:1488:TYR:CD1	2.52	0.40
1:A:1769:GLU:HB2	1:A:1772:HIS:CG	2.57	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2333:ARG:NH2	1:A:2371:PHE:HE1	2.18	0.40
1:A:3550:LYS:HA	1:A:3553:GLU:CD	2.46	0.40
1:A:3870:SER:O	1:A:3874:ARG:NE	2.34	0.40
1:A:3929:MET:N	1:A:3938:ILE:O	2.51	0.40
2:B:102:ILE:HD11	2:B:145:GLU:HB3	2.04	0.40
2:B:299:LYS:HB3	2:B:299:LYS:HE2	1.73	0.40
2:B:350:PHE:HB2	3:C:461:MET:O	2.22	0.40
2:B:485:GLN:NE2	3:C:333:TYR:H	2.19	0.40
2:B:514:MET:SD	2:B:515:ASN:N	2.94	0.40
3:C:238:LYS:NZ	3:C:240:ILE:O	2.55	0.40
3:C:485:PRO:HG2	3:C:516:LEU:HD21	2.02	0.40
1:F:275:PHE:CE2	1:F:319:PHE:HB2	2.56	0.40
1:F:363:ILE:HD13	1:F:366:TYR:CE2	2.57	0.40
1:F:409:GLN:OE1	1:F:409:GLN:N	2.47	0.40
1:F:527:TYR:HB2	1:F:629:PHE:CE1	2.56	0.40
1:F:637:LYS:HD2	1:F:637:LYS:HA	1.86	0.40
1:F:797:ASP:C	1:F:801:LYS:HZ3	2.30	0.40
1:F:977:ASP:OD1	1:F:978:GLN:N	2.54	0.40
1:F:1013:ILE:HA	1:F:1017:ILE:HD13	2.04	0.40
1:F:1429:GLU:HB3	1:F:1482:GLU:OE2	2.21	0.40
1:F:1697:PRO:HA	1:F:1753:SER:HB3	2.04	0.40
1:F:1723:PRO:O	1:F:1768:ARG:NH1	2.53	0.40
1:F:2253:TYR:HA	1:F:2256:ILE:HD12	2.02	0.40
1:F:2849:SER:HB3	1:F:3080:LEU:HD13	2.04	0.40
2:G:189:LYS:HE2	2:G:189:LYS:HB3	1.85	0.40
2:G:252:ARG:HB2	3:H:431:ARG:HD2	2.03	0.40
3:H:346:CYS:SG	3:H:350:GLN:HG3	2.61	0.40
3:H:446:PRO:HA	3:H:450:GLN:CD	2.46	0.40
4:K:187:LYS:HZ2	4:L:187:LYS:HB2	1.86	0.40
5:M:787:GLN:OE1	5:M:787:GLN:N	2.54	0.40
4:O:20:LEU:HB2	4:O:37:THR:HG22	2.02	0.40
7:D:26:DT:H2''	7:D:27:DT:C6	2.56	0.40
9:J:32:DT:H2''	9:J:33:DA:O4'	2.20	0.40

There are no symmetry-related clashes.

5.3 Torsion angles

5.3.1 Protein backbone

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	3474/4148 (84%)	3222 (93%)	248 (7%)	4 (0%)	48	81
1	F	3467/4148 (84%)	3198 (92%)	265 (8%)	4 (0%)	48	81
2	B	468/609 (77%)	430 (92%)	37 (8%)	1 (0%)	43	76
2	G	485/609 (80%)	460 (95%)	25 (5%)	0	100	100
3	C	465/732 (64%)	445 (96%)	20 (4%)	0	100	100
3	H	636/732 (87%)	597 (94%)	39 (6%)	0	100	100
4	K	199/336 (59%)	195 (98%)	4 (2%)	0	100	100
4	L	191/336 (57%)	184 (96%)	7 (4%)	0	100	100
4	N	199/336 (59%)	191 (96%)	8 (4%)	0	100	100
4	O	190/336 (56%)	182 (96%)	8 (4%)	0	100	100
5	M	256/911 (28%)	239 (93%)	17 (7%)	0	100	100
5	P	242/911 (27%)	225 (93%)	16 (7%)	1 (0%)	30	65
6	Q	205/299 (69%)	185 (90%)	20 (10%)	0	100	100
6	R	214/299 (72%)	200 (94%)	14 (6%)	0	100	100
All	All	10691/14742 (72%)	9953 (93%)	728 (7%)	10 (0%)	49	81

All (10) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	2291	GLN
1	F	955	ALA
1	F	956	PRO
1	F	2291	GLN
1	A	1550	VAL
1	A	3671	ASN
2	B	213	ILE
1	F	3304	VAL
1	A	841	SER

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Mol	Chain	Res	Type
5	P	849	GLY

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	
1	A	3054/3671 (83%)	3049 (100%)	5 (0%)	87	86
1	F	3058/3671 (83%)	3058 (100%)	0	100	100
2	B	427/548 (78%)	427 (100%)	0	100	100
2	G	444/548 (81%)	444 (100%)	0	100	100
3	C	434/649 (67%)	434 (100%)	0	100	100
3	H	575/649 (89%)	575 (100%)	0	100	100
4	K	179/303 (59%)	179 (100%)	0	100	100
4	L	177/303 (58%)	177 (100%)	0	100	100
4	N	179/303 (59%)	179 (100%)	0	100	100
4	O	175/303 (58%)	175 (100%)	0	100	100
5	M	234/808 (29%)	234 (100%)	0	100	100
5	P	217/808 (27%)	216 (100%)	1 (0%)	81	81
6	Q	187/262 (71%)	187 (100%)	0	100	100
6	R	191/262 (73%)	191 (100%)	0	100	100
All	All	9531/13088 (73%)	9525 (100%)	6 (0%)	87	88

All (6) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	802	THR
1	A	946	THR
1	A	1426	GLN
1	A	1539	SER
1	A	1549	SER
5	P	817	THR

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (116) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	109	ASN
1	A	207	GLN
1	A	325	ASN
1	A	409	GLN
1	A	484	HIS
1	A	676	ASN
1	A	720	GLN
1	A	739	ASN
1	A	990	GLN
1	A	1043	GLN
1	A	1069	HIS
1	A	1084	ASN
1	A	1201	ASN
1	A	1231	GLN
1	A	1287	GLN
1	A	1325	GLN
1	A	1568	ASN
1	A	1611	GLN
1	A	1687	HIS
1	A	1963	GLN
1	A	2291	GLN
1	A	2301	GLN
1	A	2348	GLN
1	A	2353	GLN
1	A	2354	ASN
1	A	2365	ASN
1	A	2475	ASN
1	A	2543	ASN
1	A	2751	GLN
1	A	2768	GLN
1	A	2838	GLN
1	A	2951	GLN
1	A	2954	GLN
1	A	2979	GLN
1	A	3148	GLN
1	A	3150	ASN
1	A	3291	GLN
1	A	3422	GLN
1	A	3470	GLN
1	A	3515	GLN
1	A	3704	GLN

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Mol	Chain	Res	Type
1	A	3915	HIS
1	A	3966	GLN
1	A	4015	ASN
2	B	110	ASN
2	B	293	ASN
2	B	359	HIS
3	C	152	HIS
3	C	290	GLN
3	C	312	GLN
3	C	527	GLN
1	F	325	ASN
1	F	442	GLN
1	F	676	ASN
1	F	738	HIS
1	F	982	GLN
1	F	1146	ASN
1	F	1231	GLN
1	F	1268	ASN
1	F	1385	ASN
1	F	1509	GLN
1	F	1568	ASN
1	F	1654	GLN
1	F	1772	HIS
1	F	2103	HIS
1	F	2105	HIS
1	F	2135	ASN
1	F	2234	ASN
1	F	2275	GLN
1	F	2291	GLN
1	F	2348	GLN
1	F	2353	GLN
1	F	2365	ASN
1	F	2426	HIS
1	F	2475	ASN
1	F	2587	GLN
1	F	2834	GLN
1	F	2859	GLN
1	F	3070	HIS
1	F	3084	GLN
1	F	3154	GLN
1	F	3278	GLN
1	F	3524	ASN

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Mol	Chain	Res	Type
1	F	3569	GLN
1	F	3573	ASN
1	F	3602	ASN
1	F	3634	GLN
1	F	3704	GLN
1	F	3743	HIS
1	F	3762	GLN
1	F	3924	HIS
1	F	3927	ASN
1	F	4015	ASN
1	F	4055	ASN
2	G	125	GLN
2	G	152	ASN
2	G	178	ASN
2	G	426	GLN
2	G	489	ASN
3	H	290	GLN
3	H	414	HIS
3	H	496	HIS
3	H	500	HIS
3	H	619	HIS
3	H	657	ASN
3	H	680	GLN
4	K	156	ASN
4	L	40	HIS
4	L	185	ASN
5	M	680	ASN
4	N	143	HIS
4	O	200	ASN
6	Q	224	GLN
6	R	6	GLN
6	R	62	ASN
6	R	213	ASN

5.3.3 RNA ⓘ

There are no RNA molecules in this entry.

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

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](#)

There are no ligands in this entry.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

The following chains have linkage breaks:

Mol	Chain	Number of breaks
1	F	1
1	A	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	F	4128:MET	C	6004:UNK	N	90.10
1	A	4128:MET	C	6004:UNK	N	89.52

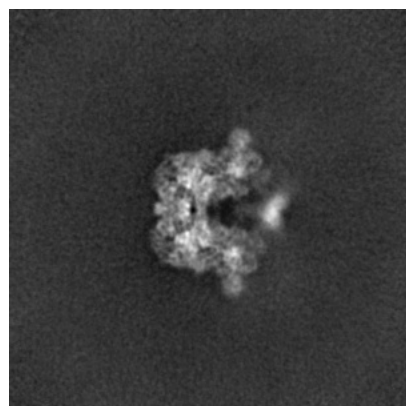
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-12299. These allow visual inspection of the internal detail of the map and identification of artifacts.

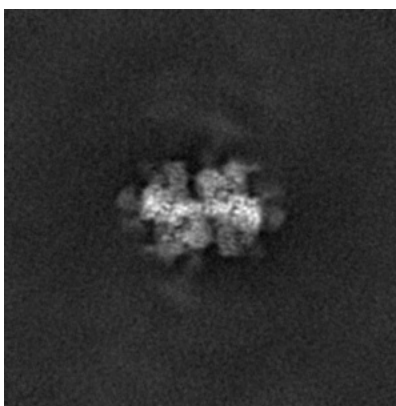
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

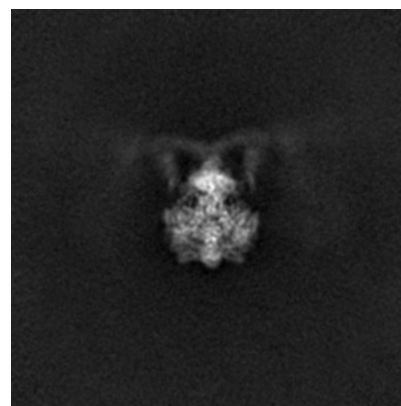
6.1.1 Primary map



X

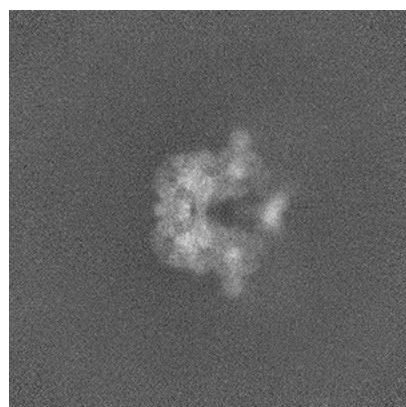


Y

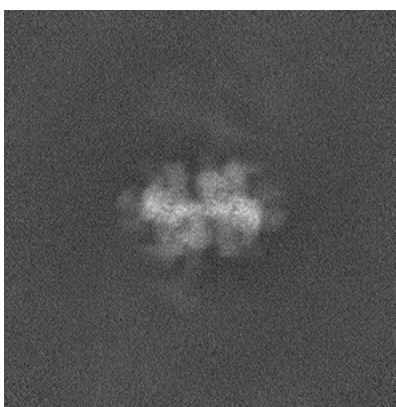


Z

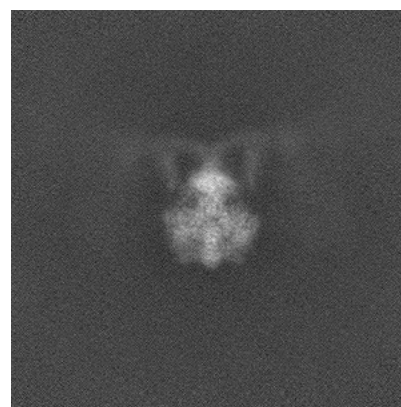
6.1.2 Raw map



X



Y

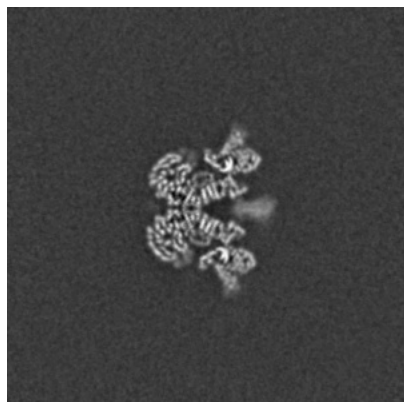


Z

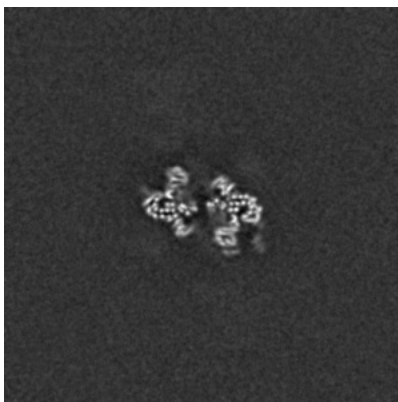
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

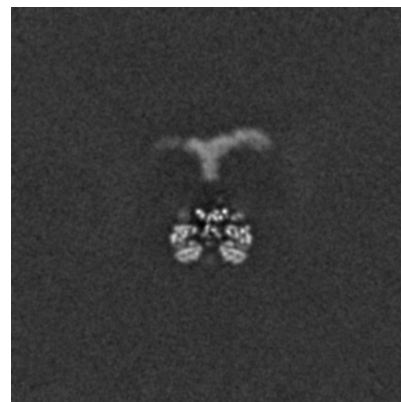
6.2.1 Primary map



X Index: 270

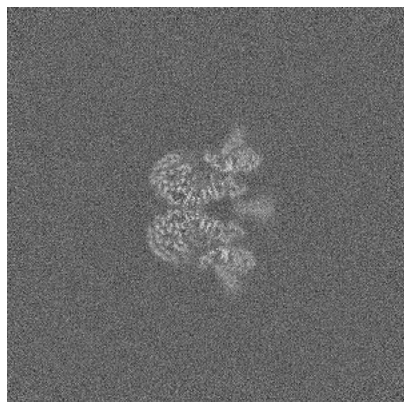


Y Index: 270



Z Index: 270

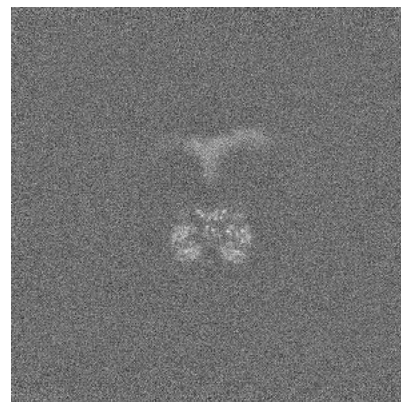
6.2.2 Raw map



X Index: 270



Y Index: 270

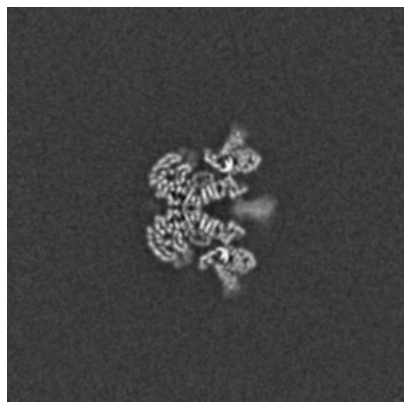


Z Index: 270

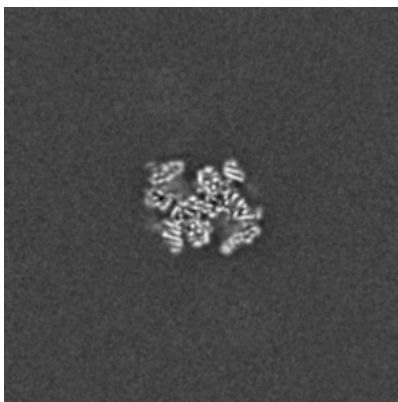
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

6.3.1 Primary map



X Index: 270

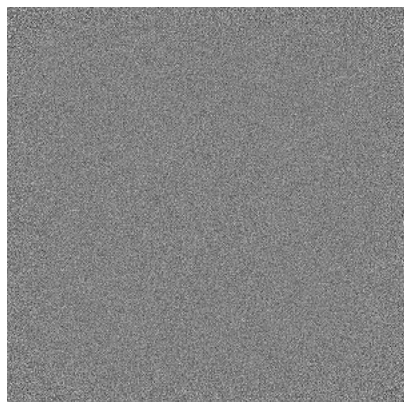


Y Index: 241

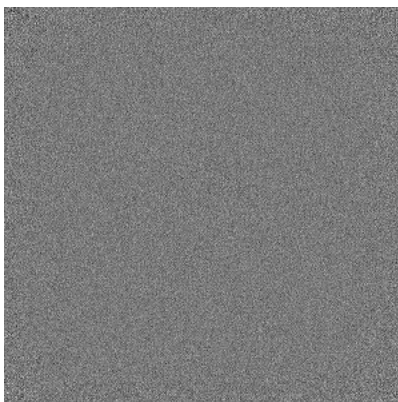


Z Index: 313

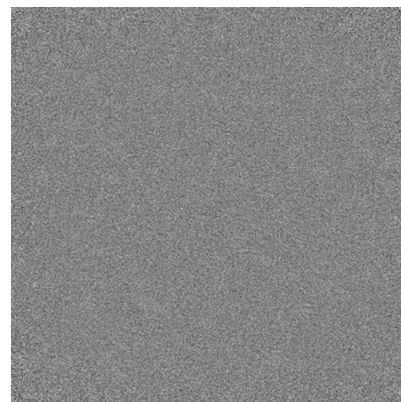
6.3.2 Raw map



X Index: 0



Y Index: 0

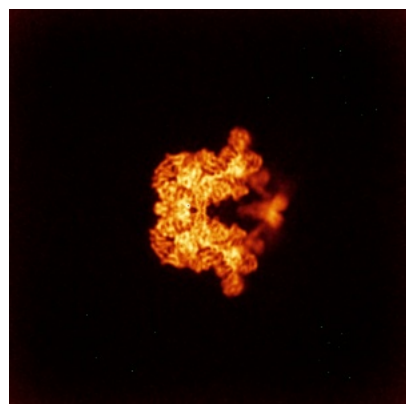


Z Index: 0

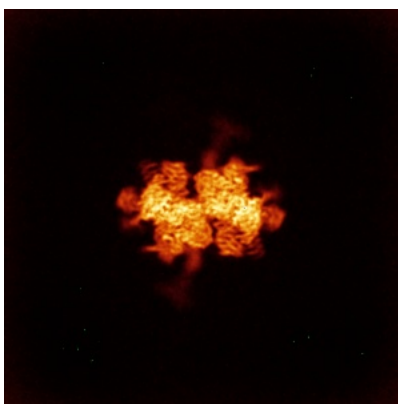
The images above show the largest variance slices of the map in three orthogonal directions.

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

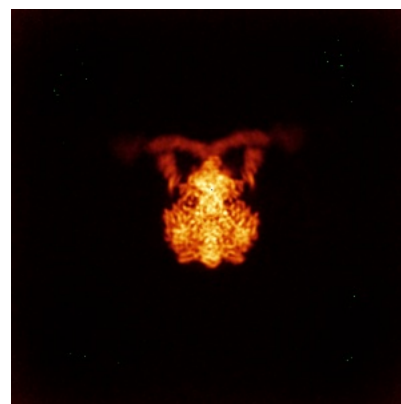
6.4.1 Primary map



X

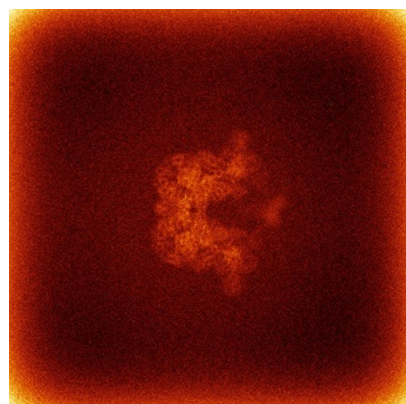


Y

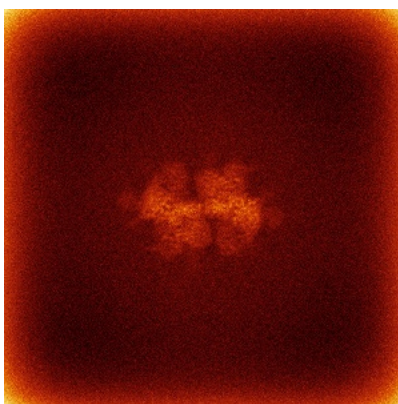


Z

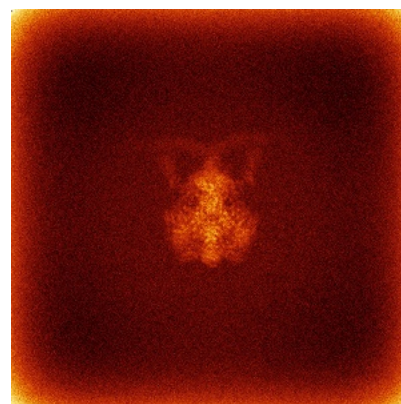
6.4.2 Raw map



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



X



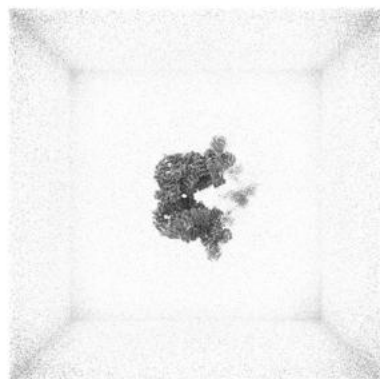
Y



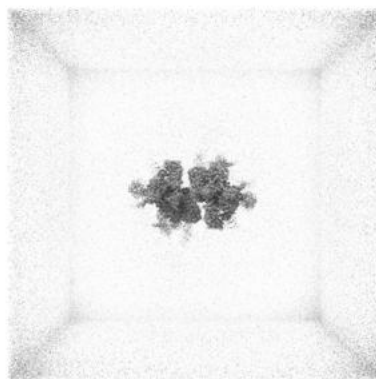
Z

The images above show the 3D surface view of the map at the recommended contour level 0.175. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

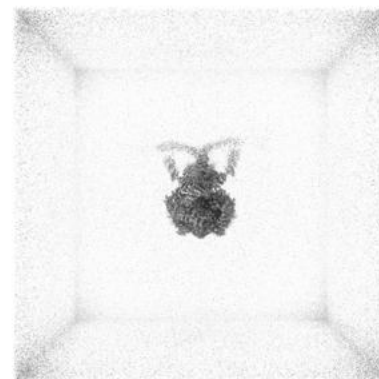
6.5.2 Raw map



X



Y



Z

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.

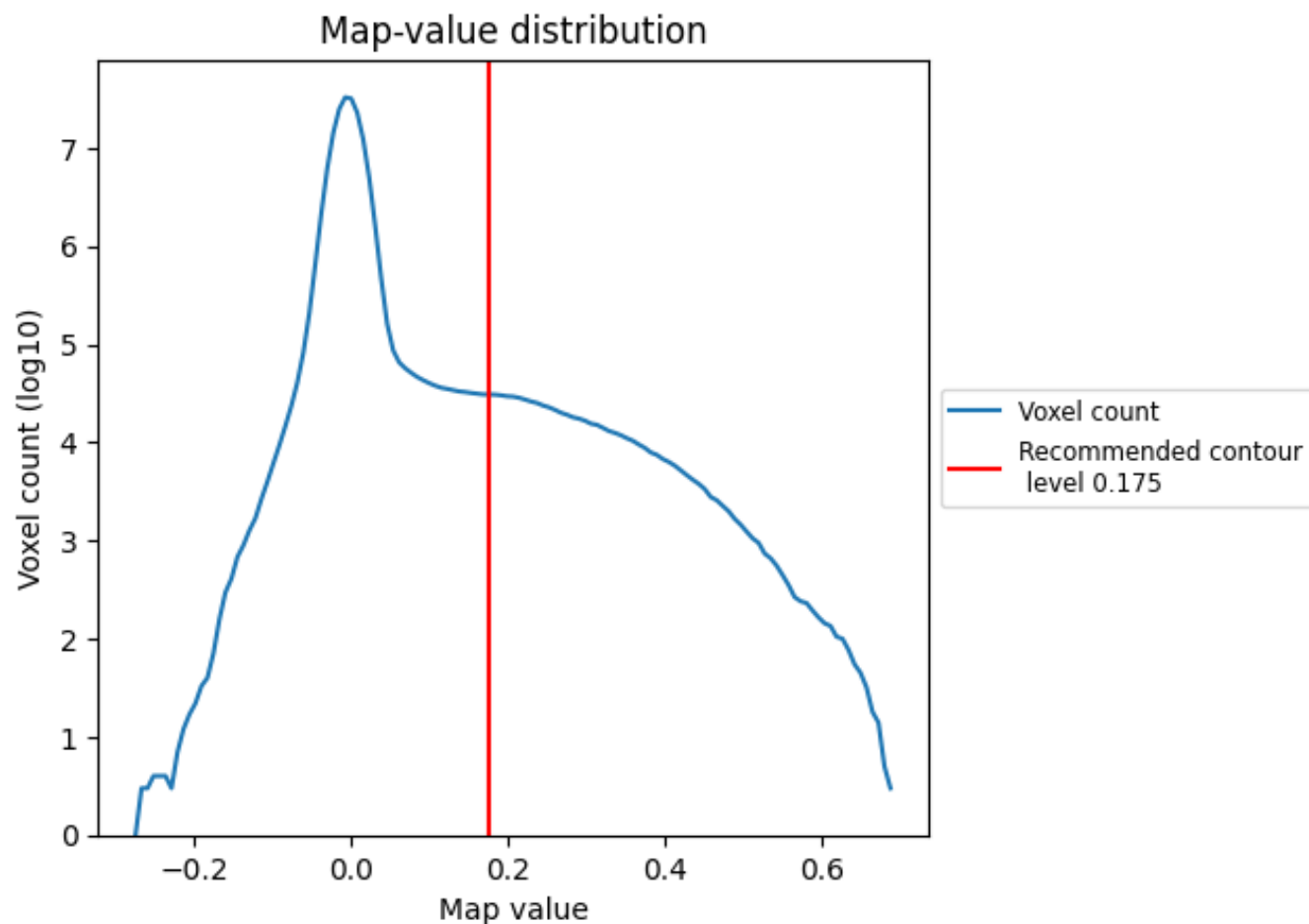
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

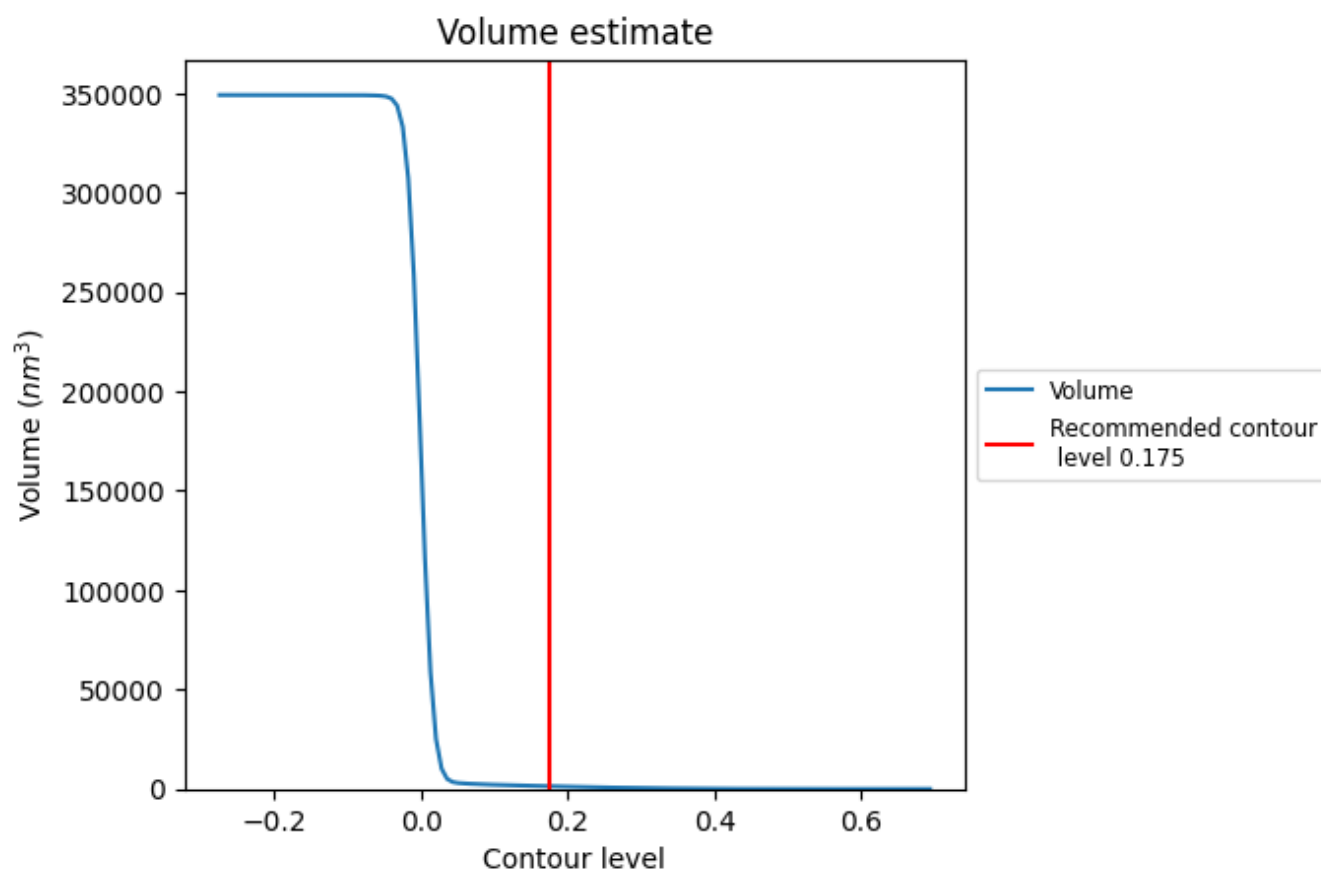
This section contains the results of statistical analysis of the map.

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.

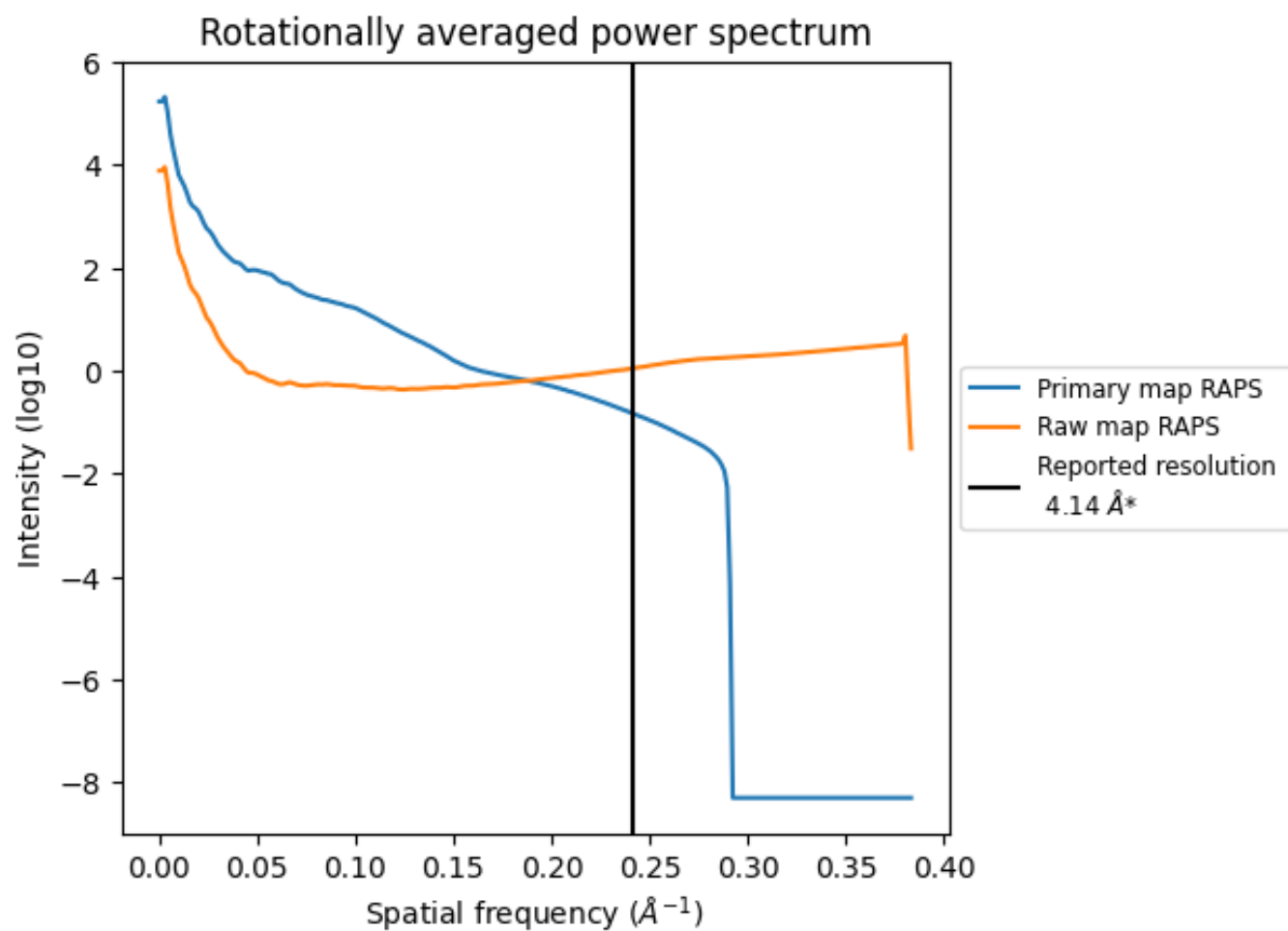
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 1371 nm^3 ; this corresponds to an approximate mass of 1239 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 ⓘ

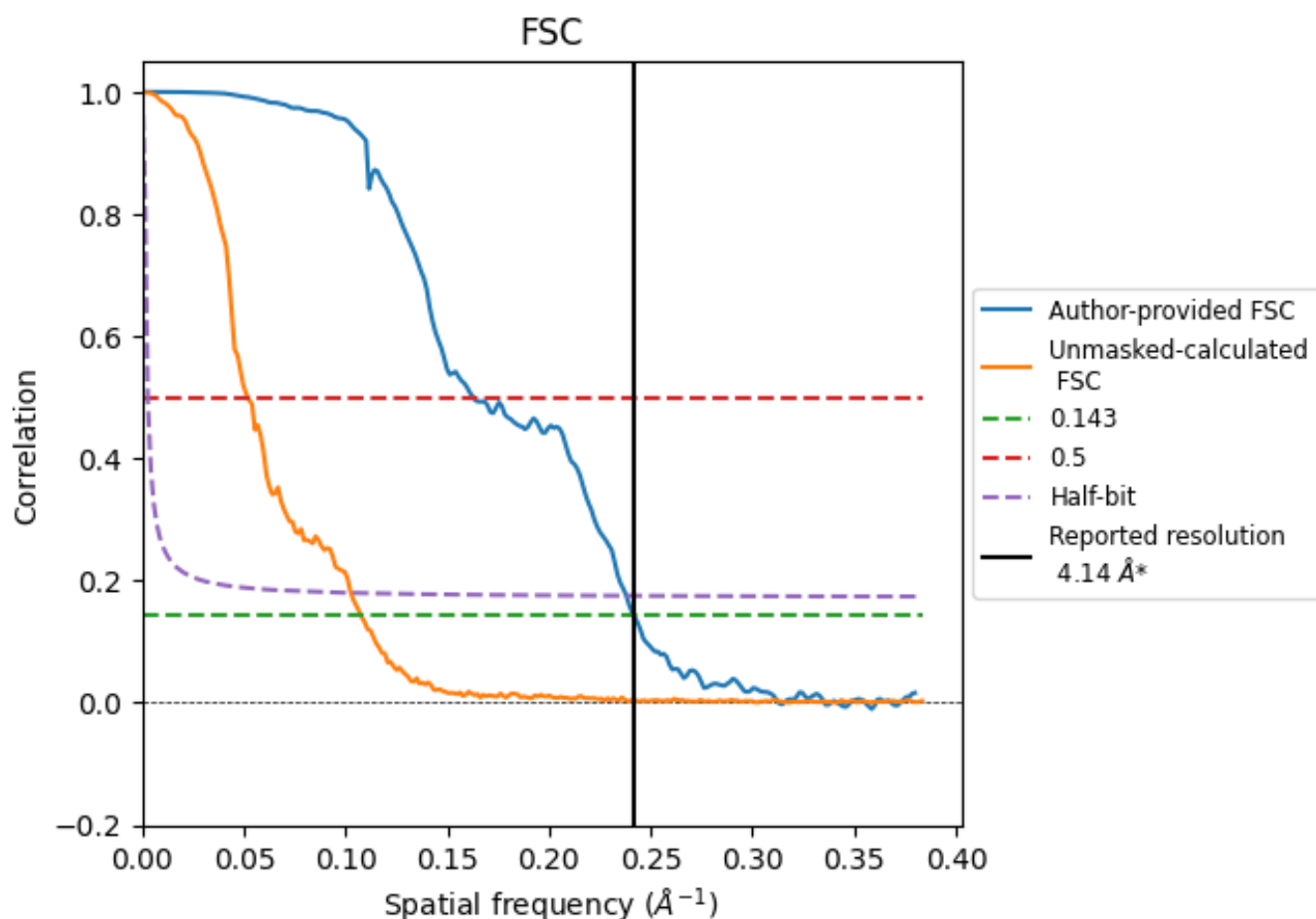


*Reported resolution corresponds to spatial frequency of 0.242 Å⁻¹

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 0.242 $\text{\AA}^{-1}$

8.2 Resolution estimates [i](#)

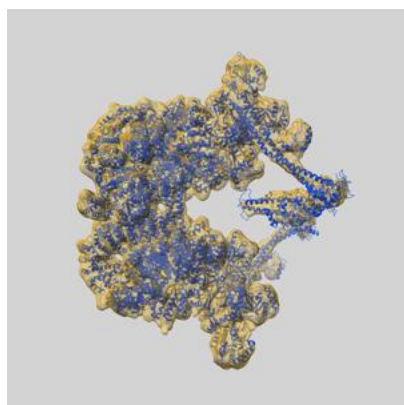
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	4.14	-	-
Author-provided FSC curve	4.14	6.14	4.20
Unmasked-calculated*	9.30	19.27	9.74

*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 9.30 differs from the reported value 4.14 by more than 10 %

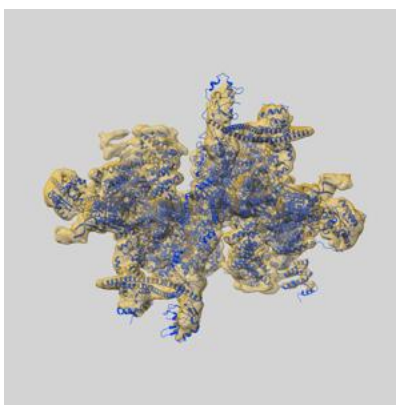
9 Map-model fit [i](#)

This section contains information regarding the fit between EMDB map EMD-12299 and PDB model 7NFC. Per-residue inclusion information can be found in section [3](#) on page [6](#).

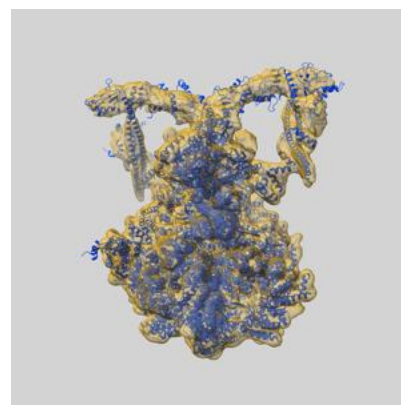
9.1 Map-model overlay [i](#)



X



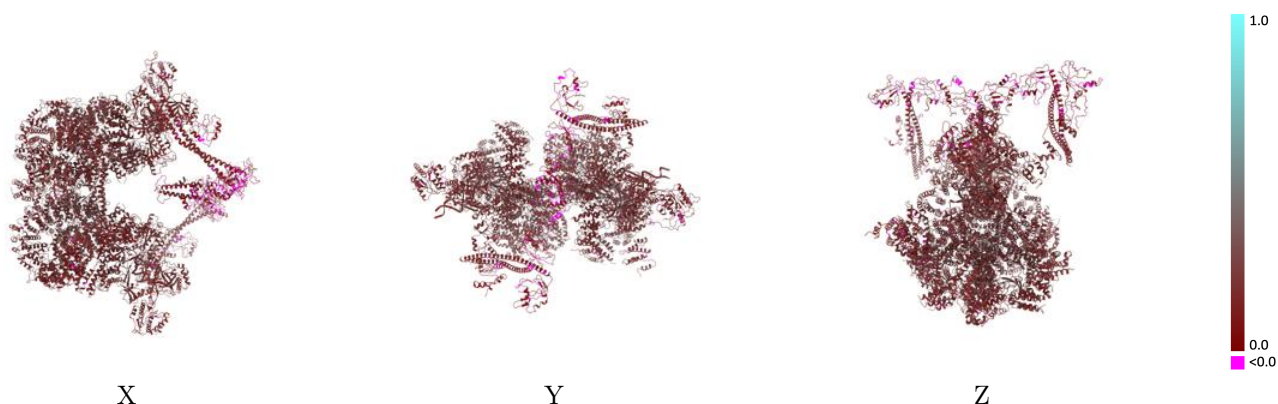
Y



Z

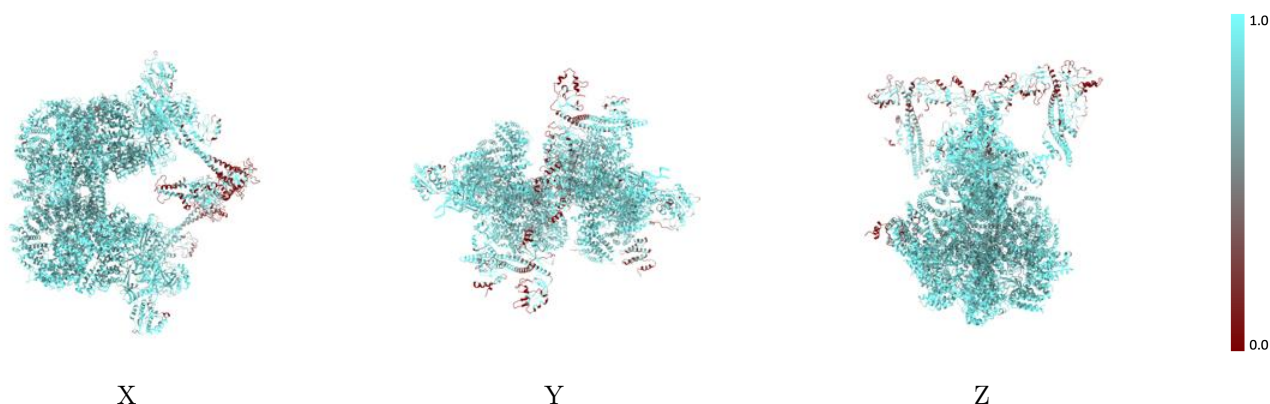
The images above show the 3D surface view of the map at the recommended contour level 0.175 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



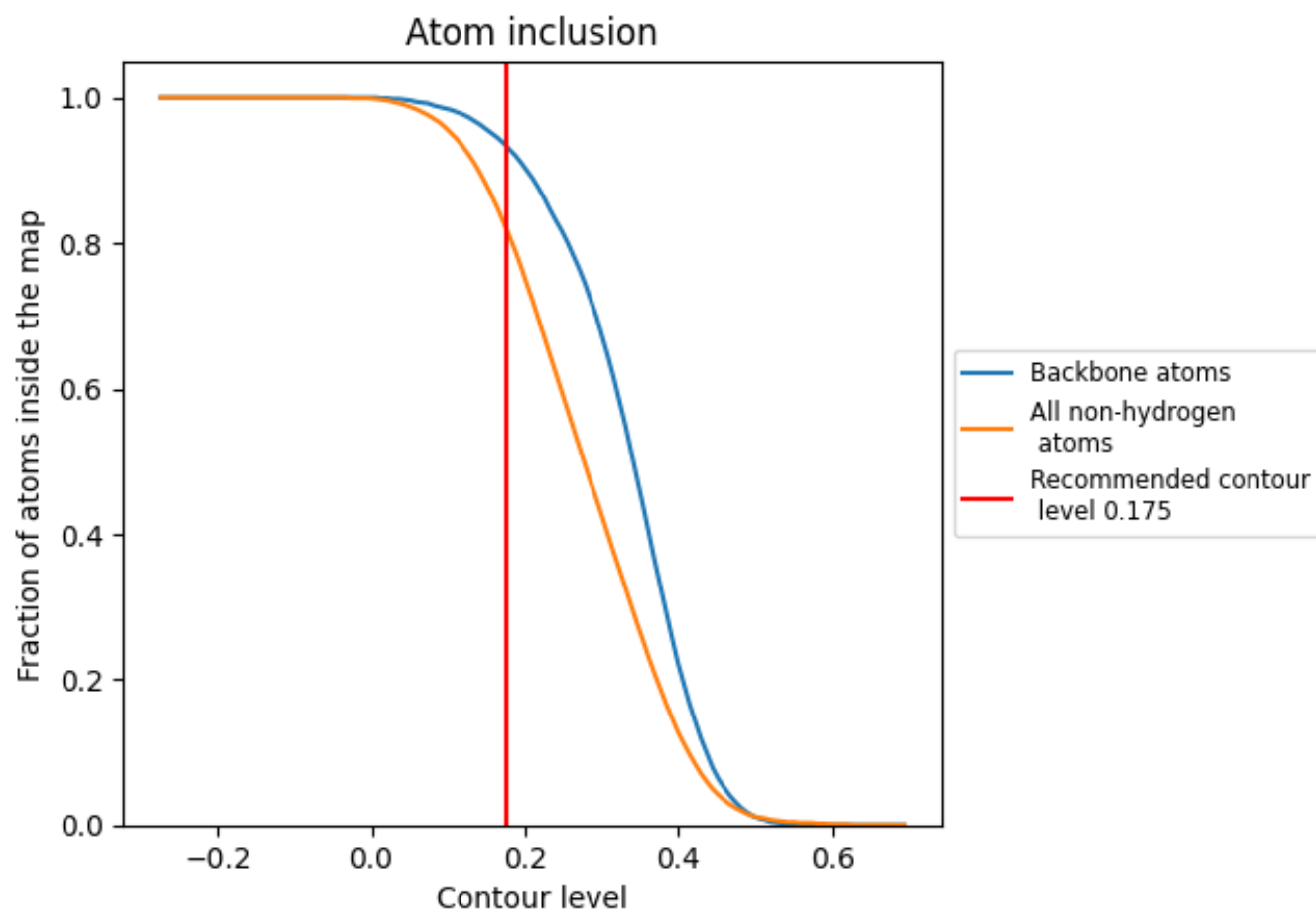
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (0.175).

9.4 Atom inclusion [i](#)



At the recommended contour level, 94% of all backbone atoms, 82% 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 (0.175) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.8220	 0.2000
A	 0.8610	 0.2150
B	 0.8780	 0.2140
C	 0.8580	 0.2000
D	 0.9190	 0.2360
E	 0.9290	 0.2190
F	 0.8630	 0.2170
G	 0.8790	 0.2170
H	 0.7590	 0.1840
I	 0.9290	 0.2420
J	 0.9320	 0.2470
K	 0.6290	 0.1220
L	 0.5850	 0.1210
M	 0.7290	 0.1570
N	 0.5900	 0.1080
O	 0.5000	 0.1150
P	 0.8410	 0.1680
Q	 0.5410	 0.1000
R	 0.5340	 0.0830

