



Full wwPDB EM Validation Report ⓘ

Mar 30, 2026 – 02:41 AM UTC

PDB ID : 8X4E / pdb_00008x4e
EMDB ID : EMD-38048
Title : Cryo-EM structure of Ryanodine receptor 1 (TM helix S0, 5 mM Ca2+)
Authors : Chen, Q.; Hu, H.
Deposited on : 2023-11-15
Resolution : 3.30 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

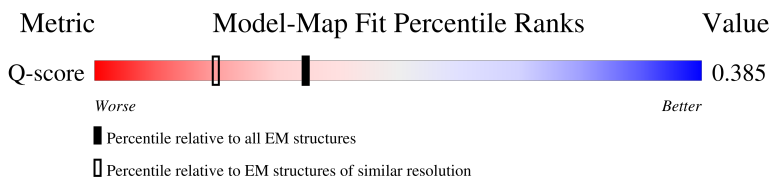
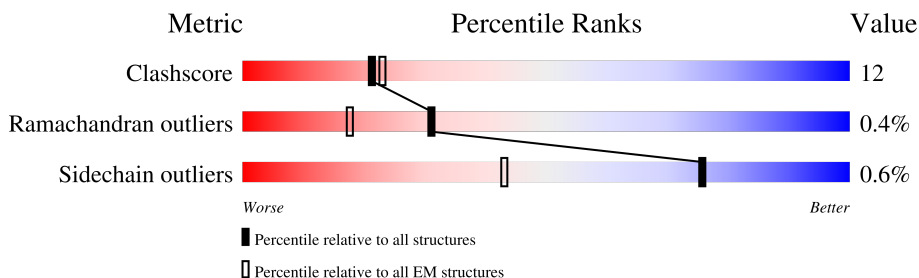
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 3.30 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	15087 (2.80 - 3.80)

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	5037	
1	B	5037	
1	C	5037	
1	D	5037	

2 Entry composition

There are 3 unique types of molecules in this entry. The entry contains 118280 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 Ryanodine receptor 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	A	3982	Total	C	N	O	S	0	0
			29568	18816	5133	5431	188		
1	B	3982	Total	C	N	O	S	0	0
			29568	18816	5133	5431	188		
1	C	3982	Total	C	N	O	S	0	0
			29568	18816	5133	5431	188		
1	D	3982	Total	C	N	O	S	0	0
			29568	18816	5133	5431	188		

- Molecule 2 is ZINC ION (CCD ID: ZN) (formula: Zn) (labeled as "Ligand of Interest" by depositor).

Mol	Chain	Residues	Atoms		AltConf
2	A	1	Total	Zn	0
			1	1	
2	B	1	Total	Zn	0
			1	1	
2	C	1	Total	Zn	0
			1	1	
2	D	1	Total	Zn	0
			1	1	

- Molecule 3 is CALCIUM ION (CCD ID: CA) (formula: Ca) (labeled as "Ligand of Interest" by depositor).

Mol	Chain	Residues	Atoms		AltConf
3	A	1	Total	Ca	0
			1	1	
3	B	1	Total	Ca	0
			1	1	
3	C	1	Total	Ca	0
			1	1	
3	D	1	Total	Ca	0
			1	1	

LYS	R2552	V2229	V2098	L2009	GLU	ALA	M1648	F1564	W1452	GLU	GLY	E1224	P1111
ALA	L2556	C2240	V2102	L2010	GLU	E1793	D1649	GLU	V1453	ALA	ALA	E1228	E1114
THR	A2557	G2241	F2011	F2012	GLU	A1796	I1650	LEU	T1454	ARG	ARG	M1229	L1115
ASP	V2558	S2243	M2120	F2012	GLU	R1797	L1651	GLY	T1455	LYS	ALA	M1230	
ALA	A2570	N2414	M2120	C2021	ASP	P1800	E1653	GLN	D1456	ARG	GLU	F1238	V1123
GLU	L2418	L2418	L2131	P2022	GLU	P1800	S1654	LYS	Y1457	LYS	PRO	S1239	G1126
ASN	G2419	Q2247	L2135	R2028	GLU	E1805	E1655	ASN	H1458	PHE	ASP	K1240	
ASP	H2420	D2252	L2138	C2042	LYS	R1808	D1658	M1573	Q1459	LYS	PRO	S1241	F1139
ARG	M2423	S2279	P2139	Q2043	GLU	D1809	L1659	P1574	L1575	ALA	TYR	L1242	R1140
PRO	R2435	E2296	Y2142	I2044	ASP	K1810	Q1660	S1576	H1460	ASN	GLY	P1243	R1141
VAL	P2438			G2048	GLU	M1814	H1683	A1577	M1463	LYS	LEU	V1248	F1142
THR	H2441	V2299	V2149	GLU	GLU	A1826	T1686	A1578	T1473	ALA	ARG	H1252	W1143
LEU	H2441	S2300	T2152	GLU	GLU	R1827	R1671	F1580	G1481	MET	ARG	P1253	Q1144
ASN	Q2444	M2153	M2153	GLU	LYS	D1828	A1675	R1584	N1482	ALA	SER	H1254	D1147
VAL	Q2444	S2154	S2154	PRO	ASP	P1829	L1677	C1591	V1483	THR	GLY	Y1255	V1148
ILE	R2454	L2155	R2163	GLU	ALA	S1832	H1683	R1594	K1488	PRO	THR	R1259	C1151
PRO	L2455	W2323	S2164	GLU	LYS	S1833	H1683	L1595	C1492	ALA	GLU	C1269	M1152
GLU	L2457	W2324	T2167	THR	GLU	E1835	L1684	M1599	V1495	PRO	GLU	L1270	L1155
LEU	R2458	P2325	Q2168	LEU	GLU	F1836	L1684	L1600	W1495	ALA	GLY	L1272	T1161
ASP	S2459	Y2331	Q2169	SER	GLU	Q1837	E1699	M1601	W1495	LEU	GLY	A1273	N1165
SER	L2460	M2170	M2170	ARG	ALA	F1838	E1699	M1608	R1508	PRO	GLY	H1274	
PHE	L2463	E2174	E2175	LEU	PRO	V1839	G1705	P1609	R1508	ARG	GLU	L1287	D1172
ASN	D2464	E2178	M2178	SER	GLY	P1840	P1706	N1610	S1501	PRO	THR	L1287	
LYS	L2474	Q2180	Q2180	GLU	ASP	V1841	L1715	V1615	S1502	ALA	GLY	L1293	E1176
ALA	L2479	L1922	L1922	THR	LYS	L1849	L1716	GLU	P1503	LYS	GLY	P1294	T1177
THR	GLY	L1927	L1927	VAL	GLU	V1859	S1717	THR	F1507	VAL	THR	Q1296	R1180
LYS	ASP	L1931	L1931	ARG	LEU	Q1861	M1730	ARG	R1508	THR	THR	F1297	
TRP	ALA	L1932	L1932	LYS	LYS	I1862	M1735	ALA	V1515	ALA	PRO	HIS	E1163
ALA	VAL	P1932	P1932	LYS	LYS	K1863	I1735	GLY	C1518	GLN	GLY	GLN	
PHE	Q2487	V1935	V1935	GLU	GLU	M1865	L1738	E1622	L1526	THR	VAL	HIS	F1188
ASP	F2494	L2197	L2197	GLU	LEU	I1866	L1738	W1626	M1532	ALA	ALA	PHE	L1189
LYS	V2495	M2198	M2198	GLU	GLU	E1867	P1750	W1626	K1534	GLY	GLY	THR	P1190
ALA	P2496	V2207	V2207	PRO	LYS	P1868	P1750	Q1629	E1535	ILE	VAL	PRO	G1195
LEU	D2497	E2208	E2208	GLU	GLU	F1871	G1755	Q1629	T1538	ASN	PRO	LEU	Q1198
PRO		M2209	M2209	GLU	GLU	E1874	G1755	Q1629	M1537	GLY	ALA	ALA	G1205
ASN	F2505	V2210	V2210	LEU	LEU	GLU	V1765	P1633	T1538	VAL	VAL	ALA	V1208
TRP	L2506	L2215	L2215	LEU	LEU	GLU	G1766	L1634	F1540	ARG	ARG	PRO	R1212
TYR	Y2510	T2220	T2220	PRO	PRO	GLU	L1771	M1637	Q1541	ALA	PRO	PRO	A1215
VAL	G2511	GLU	GLU	ALA	ALA	GLU	R1772	A1638	E1543	GLY	GLY	GLY	L1218
ALA	L2512	GLU	GLU	GLU	GLU	GLU	R1772	L1639	P1544	ASN	GLN	LEU	G1219
SER	M2546	L2223	L2223	K2089	GLU	GLU	A1788	L1639	V1554	LYS	GLY	PRO	L1219
TYR	A2547	P2226	P2226	S2093	GLU	GLU	ALA	E1643	L1555	ASP	ASP	PRO	Q1220
SER	L2548	K2227	K2227	L2094	GLU	GLU	GLY	E1643	P1556	THR	ALA	ALA	G1222
ALA		M2228	M2228		GLU	GLU	VAL	C1647		THR	THR	ASP	F1223
LYS													



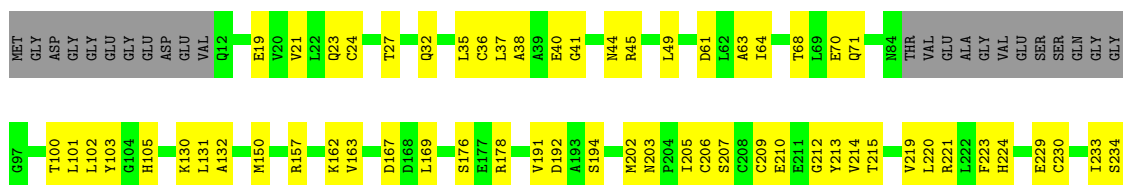




Q4102	Q3927	GLU	GLU	ARG	GLY	S3309	C3170	PHE	LEU	THR	LEU	LYS	L2556
F4103	Q3946	GLU	E3747	ARG	ASP	L3312	Y3173	PHE	VAL	ALA	VAL	LYS	A2557
G4105	Q3949	VAL	E3748	ALA	ARG	L3315	S3174	SER	THR	THR	TYR	ALA	V2558
L4112	Q3960	VAL	R3761	ALA	SER	L3318	L3175	ALA	ASP	PRO	ASP	VAL	L2559
S4113	Q3962	CYS	R3762	CYS	GLN	M3318	K3179	GLU	THR	LEU	MET	ASP	A2570
C4114	Q3966	PHE	L3763	PHE	THR	A3339	Y3182	ASP	ARG	ARG	GLU	ALA	H2574
E4119	T3967	ARG	Q3767	ARG	SER	Q3343	R3187	ILE	GLU	GLU	LYS	GLY	H2584
N4120	E3968	MET	S3768	THR	LEU	L3385	L3190	LYS	ALA	THR	LYS	PHE	T2585
E4121	Y3968	ILE	V3511	ILE	GLY	V3400	L3197	MET	VAL	ASN	LYS	ASP	V2586
E4126	G3971	M3524	M3524	T3639	M3524	V3426	L3197	VAL	GLU	ASN	ALA	ARG	Y2587
N4130	P3972	T3645	T3645	P3640	T3645	E3426	M3201	GLU	ARG	PRO	LYS	PRO	S2590
R4131	G3973	H3647	H3647	L3641	H3647	M3430	A3204	LEU	ASP	GLU	ASP	VAL	R2591
F4132	N3976	M3652	M3652	L3641	M3652	F3435	F3205	GLY	LEU	LEU	LYS	THR	K2597
Q4133	N3978	F3853	F3853	L3641	F3853	V3438	P3208	LYS	ALA	GLY	ALA	GLY	L2603
Q4133	C3786	E3655	E3655	L3641	E3655	S3446	E3212	VAL	PHE	ILE	LEU	VAL	A2637
I4139	T3790	S3656	S3656	L3641	S3656	H3449	C3216	SER	LEU	THR	LEU	ILE	P2640
L4150	V3794	Y3657	Y3657	L3641	Y3657	S3468	A3228	ALA	GLY	PRO	GLY	PRO	L2644
S4151	L3798	A3660	A3660	L3641	A3660	L3468	L3232	THR	VAL	GLN	LEU	LYS	T2645
E4152	K3799	W3661	W3661	L3641	W3661	LEU	L3232	GLY	GLY	ASN	ASP	PHE	C2651
R4159	K4021	L3662	L3662	L3641	L3662	ALA	S3235	VAL	VAL	ALA	LEU	ILE	D2692
R4180	V4036	T3664	T3664	L3641	T3664	THR	G3254	GLN	ALA	ALA	GLY	ASN	Q2693
G4185	M4037	H3667	H3667	L3641	H3667	ASP	GLY	GLY	THR	GLY	GLY	LYS	E2694
A4186	M4047	S3668	S3668	L3641	S3668	LYS	GLY	LEU	ARG	ALA	GLY	ALA	L2695
S4187	L4048	R3672	R3672	L3641	R3672	LYS	GLY	THR	GLY	GLY	GLY	GLY	L2696
R4188	V4049	L3817	L3817	L3641	L3817	LYS	GLY	TYR	LEU	ASN	THR	THR	R2697
R4192	S4051	L3835	L3835	L3641	L3835	LYS	GLY	THR	LEU	LYS	ILE	HIS	Y2698
I4193	S4052	T3838	T3838	L3641	T3838	ALA	GLY	ALA	ASP	ASN	GLU	GLU	L2703
Y4194	E4056	L3842	L3842	L3641	L3842	LYS	GLY	THR	MET	THR	LYS	TRP	CYS
F4219	K4060	D3878	D3878	L3641	D3878	LYS	A3261	ALA	GLY	TRP	ALA	ALA	ALA
E4227	M4064	E3879	E3879	L3641	E3879	GLY	R3262	L3136	ASP	GLY	ARG	PHE	ILE
A4228	M4064	F3880	F3880	L3641	F3880	ASP	R3262	L3137	THR	GLY	GLY	ASP	ALA
E4229	K4067	L3721	L3721	L3641	L3721	ALA	L3274	P3138	SER	LYS	LYS	GLY	ALA
D4240	K4069	Y3722	Y3722	L3641	Y3722	GLN	P3275	V3139	VAL	THR	GLN	ILE	ALA
M4245	R4085	Y3725	Y3725	L3641	Y3725	GLY	W3285	L3143	S2950	LEU	GLY	ASN	LEU
Q4246	G4086	M3729	M3729	L3641	M3729	GLY	E3290	F3144	Q2961	GLY	ARG	ASN	PRO
I4247	L4087	C3733	C3733	L3641	C3733	ASP	A3291	Q3145	R2965	THR	GLY	TRP	ASP
E4253	L4088	Q3889	Q3889	L3641	Q3889	GLU	P3293	H3146	A2975	GLY	LYS	TYR	VAL
PRO	S4089	G3738	G3738	L3641	G3738	THR	P3294	Q3149	H2976	GLY	LYS	GLY	ASP
GLU	K4090	G3739	G3739	L3641	G3739	ARG	P3302	V3163	LEU	GLY	GLY	GLY	ALA
GLY	F4093	E3740	E3740	L3641	E3740	LYS	P3303	SER	ALA	ARG	THR	ASN	SER
GLU	M4097	N3741	N3741	L3641	N3741	LYS	C3304	TYR	VAL	ILE	LYS	VAL	TYR
PRO		GLY	GLY	L3641	GLY	ARG	T3308	THR	VAL	ARG	PRO	ASP	SER
GLU		ALA	ALA	L3641	ALA	ARG		LEU	SER	LEU	GLU	LYS	GLU











F4975	T4825	L4681	GLU	ASN	PHE	PRO	SER	I4247	S4089	Q3946	E3748	VAL	SER
H4978	S4828	E4682	GLY	GLY	ARG	THR	LEU	E4253	K4090	R3949	Q3761	ALA	VAL
H4983	L4886	F4683	ALA	LYS	PRO	SER	ARG		F4093	Q3960	R3762	CYS	GLN
L4985	L4832	G4685	GLY	GLY	GLY	ASP	GLY		M4097	V3961	L3763	THR	SER
Y4988	L4837	L4686	VAL	VAL	ALA	VAL	V4316		Q4102	F3962	Q3767	LEU	ILE
M4989	T4688	I4688	PRO	PRO	GLY	GLY	R4317		F4103	T3966	R3768	V3511	
L4992	T4689	E4690	GLY	GLY	LEU	GLY	R4318		T4104	E3967	S3769	M3524	
L4995	A4845	E4690	ALA	ALA	GLN	GLY	R4320		C4105	Y3968	H3770	L3644	
I4996	A4846	A4691	PRO	PRO	PRO	ASP	R4321		P4106	ASP	H3771	T3645	
D4999	L4850	P4692	PRO	PRO	ALA	GLY	L4322		E4107	G3971	T3772	T3528	
Y5009	Y4683	D4696	PRO	PRO	GLY	PRO	T4323		L4112	F3972	R3773	H3646	
V5010	V4697	V4697	GLY	GLY	ASP	GLY	V4339		S4113	C3973	G3774	H3647	
V5011	D4878	K4698	GLY	PRO	THR	GLY	A4340		S4114	N3976	M3778	M3652	
M5013	M4879	G4699	PRO	PRO	PRO	ASP	R4341		C4114	F3979	C3786	F3653	
D5020	Y4683	D4702	GLY	PRO	ALA	ALA	A4342		S4115	L3980	T3790	F3655	
C5027	G4895	F4712	GLY	PRO	GLY	GLY	A4344		E4119	V3989	L3798	S3656	
F5028	G4896	Y4715	PRO	PRO	GLY	GLY	A4345		N4120	V3990	V3794	Y3657	
R5029	L4897	Y4715	PRO	PRO	THR	GLY	GLY		E4121	F3991	L3799	A3660	
Q5035	E4900	V4724	GLY	GLY	GLY	GLY	GLY		E4126	F3992	K3799	W3661	
L5036	L4901	M4743	GLY	LYS	SER	GLY	ALA		M4130	F3996	T3802	L3662	
S5037	P4904	G4763	ASP	GLY	PRO	GLY	ALA		R4131	M4000	S3803	L3683	
	A4905	W4767	GLY	GLY	PRO	GLY	GLY		Q4132	D4006	K3809	T3664	
	G4906	Y4767	GLY	GLY	PRO	GLY	GLY		Q4133	S4007	L3817	H3667	
	D4907	L4790	GLY	GLY	GLY	GLY	GLY		L4139	S4008	T3838	S3668	
	Y4909	M4796	ALA	GLY	LYS	GLY	ALA		E4152	K4021	L3842	R3672	
	E4910	L4796	GLY	GLY	LYS	GLY	GLY		R4159	V4036	L3835	G3578	
	L4911	E4633	GLY	GLY	GLY	GLY	GLY		E4184	N4037	T3838	R3582	
	Y4912	E4634	GLY	GLY	GLY	GLY	GLY		Q4185	M4047	D3878	A3680	
	L4918	S4635	GLY	GLY	GLY	GLY	GLY		A4186	L4048	E3879	G3681	
	F4923	M4798	GLY	GLY	GLY	GLY	GLY		S4187	V4049	F3880	E3682	
	L4928	S4799	GLY	GLY	VAL	GLY	VAL		R4188	S4051	D3883	P3697	
	L4929	G4802	GLY	GLY	VAL	GLY	GLY		R4189	S4052	L3890	L3721	
	A4930	F4807	GLY	GLY	GLY	GLY	GLY		L4190	E4056	L3884	Y3722	
	L4931	F4809	GLY	GLY	PRO	GLY	LYS		E4191	K4060	Y3725	Y3725	
	L4932	A4810	GLY	GLY	PRO	GLY	LYS		R4192	F4061	M3729	ALA	
	Q4933	A4811	GLY	GLY	PRO	GLY	VAL		Y4194	F4061	Q3889	VAL	
	V4950	H4812	GLY	GLY	PRO	GLY	THR		F4219	M4064	L3891	HIS	
	C4958	L4813	GLY	GLY	PRO	VAL	VAL		E4227	K4067	G3738	LYS	
	F4959	L4814	GLY	GLY	PRO	VAL	VAL		A4228	L4068	E3740	LEU	
	L4960	D4815	GLY	GLY	PRO	VAL	VAL		E4229	K4069	N3741	LEU	
	F4968	I4816	GLY	GLY	LYS	ALA	ALA		D4240	R4085	GLY	GLN	
		A4817	GLY	GLY	ALA	ASP	GLY		M4245	G4096	ALA	ARG	
		M4819	ASP	ASP	ASP	GLY	PRO		Q4246	I4088	GLY	ARG	
		V4820	MET	MET	GLU	PRO	ASP				VAL	ALA	VAL

4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	279704	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	50	Depositor
Minimum defocus (nm)	1200	Depositor
Maximum defocus (nm)	2200	Depositor
Magnification	Not provided	
Image detector	FEI FALCON III (4k x 4k)	Depositor
Maximum map value	3.162	Depositor
Minimum map value	-1.419	Depositor
Average map value	-0.000	Depositor
Map value standard deviation	0.061	Depositor
Recommended contour level	0.182	Depositor
Map size (Å)	643.2, 643.2, 643.2	wwPDB
Map dimensions	600, 600, 600	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.072, 1.072, 1.072	Depositor

5 Model quality ⓘ

5.1 Standard geometry ⓘ

Bond lengths and bond angles in the following residue types are not validated in this section: CA, ZN

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	0.30	10/30188 (0.0%)	0.42	14/41084 (0.0%)
1	B	0.30	10/30188 (0.0%)	0.42	14/41084 (0.0%)
1	C	0.30	10/30188 (0.0%)	0.42	14/41084 (0.0%)
1	D	0.30	10/30188 (0.0%)	0.42	14/41084 (0.0%)
All	All	0.30	40/120752 (0.0%)	0.42	56/164336 (0.0%)

All (40) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	A	4811	ALA	CA-C	-8.80	1.42	1.52
1	B	4811	ALA	CA-C	-8.80	1.42	1.52
1	C	4811	ALA	CA-C	-8.80	1.42	1.52
1	D	4811	ALA	CA-C	-8.80	1.42	1.52
1	A	4911	LEU	CA-C	-7.89	1.42	1.52
1	B	4911	LEU	CA-C	-7.89	1.42	1.52
1	C	4911	LEU	CA-C	-7.89	1.42	1.52
1	D	4911	LEU	CA-C	-7.89	1.42	1.52
1	A	4812	HIS	CA-C	-6.75	1.44	1.52
1	B	4812	HIS	CA-C	-6.75	1.44	1.52
1	C	4812	HIS	CA-C	-6.75	1.44	1.52
1	D	4812	HIS	CA-C	-6.75	1.44	1.52
1	A	4912	TYR	N-CA	-6.25	1.37	1.46
1	B	4912	TYR	N-CA	-6.25	1.37	1.46
1	C	4912	TYR	N-CA	-6.25	1.37	1.46
1	D	4912	TYR	N-CA	-6.25	1.37	1.46
1	A	4812	HIS	N-CA	-6.03	1.39	1.46
1	B	4812	HIS	N-CA	-6.03	1.39	1.46
1	C	4812	HIS	N-CA	-6.03	1.39	1.46
1	D	4812	HIS	N-CA	-6.03	1.39	1.46
1	A	4910	GLU	CA-C	-5.70	1.45	1.53
1	B	4910	GLU	CA-C	-5.70	1.45	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	C	4910	GLU	CA-C	-5.70	1.45	1.53
1	D	4910	GLU	CA-C	-5.70	1.45	1.53
1	A	4810	ALA	CA-C	-5.63	1.45	1.53
1	B	4810	ALA	CA-C	-5.63	1.45	1.53
1	C	4810	ALA	CA-C	-5.63	1.45	1.53
1	D	4810	ALA	CA-C	-5.63	1.45	1.53
1	A	4633	GLU	CA-C	-5.54	1.45	1.53
1	B	4633	GLU	CA-C	-5.54	1.45	1.53
1	C	4633	GLU	CA-C	-5.54	1.45	1.53
1	D	4633	GLU	CA-C	-5.54	1.45	1.53
1	A	4808	PHE	CA-C	-5.51	1.45	1.52
1	B	4808	PHE	CA-C	-5.51	1.45	1.52
1	C	4808	PHE	CA-C	-5.51	1.45	1.52
1	D	4808	PHE	CA-C	-5.51	1.45	1.52
1	A	4808	PHE	C-O	-5.23	1.17	1.24
1	B	4808	PHE	C-O	-5.23	1.17	1.24
1	C	4808	PHE	C-O	-5.23	1.17	1.24
1	D	4808	PHE	C-O	-5.23	1.17	1.24

All (56) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	4912	TYR	N-CA-C	-11.61	99.22	113.50
1	B	4912	TYR	N-CA-C	-11.61	99.22	113.50
1	C	4912	TYR	N-CA-C	-11.61	99.22	113.50
1	D	4912	TYR	N-CA-C	-11.61	99.22	113.50
1	A	4812	HIS	N-CA-C	-10.05	99.34	112.41
1	B	4812	HIS	N-CA-C	-10.05	99.34	112.41
1	C	4812	HIS	N-CA-C	-10.05	99.34	112.41
1	D	4812	HIS	N-CA-C	-10.05	99.34	112.41
1	A	4815	ASP	N-CA-C	-9.18	101.34	112.54
1	B	4815	ASP	N-CA-C	-9.18	101.34	112.54
1	C	4815	ASP	N-CA-C	-9.18	101.34	112.54
1	D	4815	ASP	N-CA-C	-9.18	101.34	112.54
1	A	1842	LEU	N-CA-C	-8.81	102.55	113.38
1	B	1842	LEU	N-CA-C	-8.81	102.55	113.38
1	C	1842	LEU	N-CA-C	-8.81	102.55	113.38
1	D	1842	LEU	N-CA-C	-8.81	102.55	113.38
1	A	4342	ALA	N-CA-C	-8.46	103.08	113.41
1	B	4342	ALA	N-CA-C	-8.46	103.08	113.41
1	C	4342	ALA	N-CA-C	-8.46	103.08	113.41
1	D	4342	ALA	N-CA-C	-8.46	103.08	113.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	4636	THR	N-CA-C	-8.03	101.91	112.34
1	B	4636	THR	N-CA-C	-8.03	101.91	112.34
1	C	4636	THR	N-CA-C	-8.03	101.91	112.34
1	D	4636	THR	N-CA-C	-8.03	101.91	112.34
1	A	4813	LEU	N-CA-C	-7.88	103.81	113.50
1	B	4813	LEU	N-CA-C	-7.88	103.81	113.50
1	C	4813	LEU	N-CA-C	-7.88	103.81	113.50
1	D	4813	LEU	N-CA-C	-7.88	103.81	113.50
1	A	4811	ALA	N-CA-C	-7.66	101.89	112.30
1	B	4811	ALA	N-CA-C	-7.66	101.89	112.30
1	C	4811	ALA	N-CA-C	-7.66	101.89	112.30
1	D	4811	ALA	N-CA-C	-7.66	101.89	112.30
1	A	4321	ARG	CA-C-N	-5.95	114.60	123.00
1	A	4321	ARG	C-N-CA	-5.95	114.60	123.00
1	B	4321	ARG	CA-C-N	-5.95	114.60	123.00
1	B	4321	ARG	C-N-CA	-5.95	114.60	123.00
1	C	4321	ARG	CA-C-N	-5.95	114.60	123.00
1	C	4321	ARG	C-N-CA	-5.95	114.60	123.00
1	D	4321	ARG	CA-C-N	-5.95	114.60	123.00
1	D	4321	ARG	C-N-CA	-5.95	114.60	123.00
1	A	4809	PHE	N-CA-C	-5.90	106.32	112.93
1	B	4809	PHE	N-CA-C	-5.90	106.32	112.93
1	C	4809	PHE	N-CA-C	-5.90	106.32	112.93
1	D	4809	PHE	N-CA-C	-5.90	106.32	112.93
1	A	4344	ALA	N-CA-C	-5.32	102.51	110.23
1	B	4344	ALA	N-CA-C	-5.32	102.51	110.23
1	C	4344	ALA	N-CA-C	-5.32	102.51	110.23
1	D	4344	ALA	N-CA-C	-5.32	102.51	110.23
1	A	4910	GLU	CB-CA-C	-5.10	104.92	111.50
1	B	4910	GLU	CB-CA-C	-5.10	104.92	111.50
1	C	4910	GLU	CB-CA-C	-5.10	104.92	111.50
1	D	4910	GLU	CB-CA-C	-5.10	104.92	111.50
1	A	4911	LEU	N-CA-C	-5.03	100.08	110.80
1	B	4911	LEU	N-CA-C	-5.03	100.08	110.80
1	C	4911	LEU	N-CA-C	-5.03	100.08	110.80
1	D	4911	LEU	N-CA-C	-5.03	100.08	110.80

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	29568	0	27784	682	0
1	B	29568	0	27784	684	0
1	C	29568	0	27784	693	0
1	D	29568	0	27784	698	0
2	A	1	0	0	0	0
2	B	1	0	0	0	0
2	C	1	0	0	0	0
2	D	1	0	0	0	0
3	A	1	0	0	0	0
3	B	1	0	0	0	0
3	C	1	0	0	0	0
3	D	1	0	0	0	0
All	All	118280	0	111136	2705	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 12.

All (2705) 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:B:4634:GLU:HG3	1:B:4636:THR:HG22	1.46	0.97
1:C:4634:GLU:HG3	1:C:4636:THR:HG22	1.46	0.97
1:A:4634:GLU:HG3	1:A:4636:THR:HG22	1.46	0.94
1:D:4634:GLU:HG3	1:D:4636:THR:HG22	1.46	0.94
1:D:4069:LYS:HB2	1:D:4133:GLN:HE22	1.41	0.85
1:A:2420:HIS:HA	1:A:2423:MET:HE2	1.59	0.85
1:B:2420:HIS:HA	1:B:2423:MET:HE2	1.59	0.85
1:B:4069:LYS:HB2	1:B:4133:GLN:HE22	1.41	0.84
1:A:4069:LYS:HB2	1:A:4133:GLN:HE22	1.41	0.84
1:D:2420:HIS:HA	1:D:2423:MET:HE2	1.59	0.83
1:C:4069:LYS:HB2	1:C:4133:GLN:HE22	1.41	0.83
1:D:3051:ARG:HH22	1:D:3182:TYR:HB2	1.44	0.83
1:C:2420:HIS:HA	1:C:2423:MET:HE2	1.59	0.83
1:A:3051:ARG:HH22	1:A:3182:TYR:HB2	1.44	0.82
1:C:3051:ARG:HH22	1:C:3182:TYR:HB2	1.44	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1492:CYS:H	1:A:1540:PHE:HE1	1.27	0.82
1:A:3285:TRP:HE1	1:A:3293:PRO:HG3	1.44	0.82
1:B:3285:TRP:HE1	1:B:3293:PRO:HG3	1.44	0.81
1:A:1501:VAL:HG12	1:A:1503:PRO:HD3	1.62	0.81
1:D:1492:CYS:H	1:D:1540:PHE:HE1	1.27	0.81
1:B:1501:VAL:HG12	1:B:1503:PRO:HD3	1.62	0.81
1:B:3051:ARG:HH22	1:B:3182:TYR:HB2	1.44	0.81
1:C:1501:VAL:HG12	1:C:1503:PRO:HD3	1.62	0.81
1:D:3285:TRP:HE1	1:D:3293:PRO:HG3	1.44	0.80
1:C:3285:TRP:HE1	1:C:3293:PRO:HG3	1.44	0.80
1:C:1492:CYS:H	1:C:1540:PHE:HE1	1.27	0.80
1:D:1501:VAL:HG12	1:D:1503:PRO:HD3	1.62	0.80
1:B:4679:ARG:NH1	1:B:4715:TYR:OH	2.15	0.80
1:C:4679:ARG:NH1	1:C:4715:TYR:OH	2.15	0.80
1:B:1492:CYS:H	1:B:1540:PHE:HE1	1.27	0.79
1:D:4679:ARG:NH1	1:D:4715:TYR:OH	2.15	0.79
1:C:4340:ALA:C	1:C:4342:ALA:H	1.89	0.78
1:A:4340:ALA:C	1:A:4342:ALA:H	1.89	0.78
1:D:4340:ALA:C	1:D:4342:ALA:H	1.89	0.78
1:A:4679:ARG:NH1	1:A:4715:TYR:OH	2.15	0.78
1:A:745:SER:HB2	1:A:758:ARG:HB2	1.66	0.78
1:B:745:SER:HB2	1:B:758:ARG:HB2	1.66	0.77
1:D:3990:VAL:HG23	1:D:4051:SER:HB3	1.67	0.77
1:A:3990:VAL:HG23	1:A:4051:SER:HB3	1.67	0.77
1:C:745:SER:HB2	1:C:758:ARG:HB2	1.66	0.77
1:C:4344:ALA:HB3	1:C:4564:PHE:CD2	2.20	0.77
1:C:3990:VAL:HG23	1:C:4051:SER:HB3	1.67	0.77
1:D:745:SER:HB2	1:D:758:ARG:HB2	1.66	0.77
1:C:626:LEU:HG	1:C:628:GLY:H	1.50	0.76
1:D:4344:ALA:HB3	1:D:4564:PHE:CD2	2.20	0.76
1:A:4581:LYS:HD2	1:A:4632:LEU:HD22	1.67	0.76
1:B:3990:VAL:HG23	1:B:4051:SER:HB3	1.67	0.76
1:B:4340:ALA:C	1:B:4342:ALA:H	1.89	0.76
1:B:4344:ALA:HB3	1:B:4564:PHE:CD2	2.20	0.76
1:A:626:LEU:HG	1:A:628:GLY:H	1.50	0.76
1:A:4344:ALA:HB3	1:A:4564:PHE:CD2	2.20	0.76
1:B:626:LEU:HG	1:B:628:GLY:H	1.50	0.76
1:D:626:LEU:HG	1:D:628:GLY:H	1.50	0.76
1:C:4581:LYS:HD2	1:C:4632:LEU:HD22	1.67	0.75
1:C:4345:ALA:CB	1:C:4561:THR:HG22	2.17	0.75
1:A:760:ASN:O	1:A:801:LYS:NZ	2.20	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:4581:LYS:HD2	1:B:4632:LEU:HD22	1.67	0.75
1:B:4345:ALA:CB	1:B:4561:THR:HG22	2.17	0.74
1:A:4345:ALA:CB	1:A:4561:THR:HG22	2.17	0.74
1:C:760:ASN:O	1:C:801:LYS:NZ	2.20	0.74
1:D:4581:LYS:HD2	1:D:4632:LEU:HD22	1.67	0.74
1:D:4345:ALA:CB	1:D:4561:THR:HG22	2.17	0.74
1:C:1208:VAL:O	1:D:3577:ARG:NH2	2.21	0.74
1:C:4635:SER:C	1:C:4637:GLY:N	2.41	0.74
1:A:1208:VAL:O	1:B:3577:ARG:NH2	2.21	0.74
1:B:760:ASN:O	1:B:801:LYS:NZ	2.20	0.74
1:D:760:ASN:O	1:D:801:LYS:NZ	2.20	0.74
1:A:3577:ARG:NH2	1:D:1208:VAL:O	2.21	0.74
1:C:404:ILE:HG23	1:C:483:MET:HE3	1.70	0.74
1:A:4635:SER:C	1:A:4637:GLY:N	2.41	0.73
1:A:404:ILE:HG23	1:A:483:MET:HE3	1.70	0.73
1:B:100:THR:HG21	1:B:162:LYS:HE3	1.69	0.73
1:B:404:ILE:HG23	1:B:483:MET:HE3	1.70	0.73
1:B:1208:VAL:O	1:C:3577:ARG:NH2	2.21	0.73
1:C:101:LEU:HD23	1:C:150:MET:HE1	1.71	0.73
1:D:101:LEU:HD23	1:D:150:MET:HE1	1.71	0.73
1:A:1835:GLU:O	1:A:1837:GLN:N	2.21	0.73
1:C:1147:ASP:OD1	1:C:1165:ASN:ND2	2.22	0.73
1:B:1835:GLU:O	1:B:1837:GLN:N	2.21	0.73
1:D:1839:VAL:HB	1:D:1840:PRO:HD3	1.70	0.73
1:B:1839:VAL:HB	1:B:1840:PRO:HD3	1.70	0.73
1:C:1835:GLU:O	1:C:1837:GLN:N	2.21	0.73
1:D:404:ILE:HG23	1:D:483:MET:HE3	1.70	0.73
1:A:101:LEU:HD23	1:A:150:MET:HE1	1.71	0.72
1:C:100:THR:HG21	1:C:162:LYS:HE3	1.69	0.72
1:A:1147:ASP:OD1	1:A:1165:ASN:ND2	2.22	0.72
1:A:3733:CYS:HG	1:A:3803:SER:HG	1.36	0.72
1:B:101:LEU:HD23	1:B:150:MET:HE1	1.71	0.72
1:A:100:THR:HG21	1:A:162:LYS:HE3	1.69	0.72
1:B:1834:VAL:O	1:B:1837:GLN:HB3	1.90	0.72
1:C:1834:VAL:O	1:C:1837:GLN:HB3	1.90	0.72
1:D:315:CYS:SG	1:D:349:GLN:NE2	2.62	0.72
1:B:4635:SER:C	1:B:4637:GLY:N	2.41	0.72
1:D:100:THR:HG21	1:D:162:LYS:HE3	1.69	0.72
1:D:1147:ASP:OD1	1:D:1165:ASN:ND2	2.22	0.72
1:D:1835:GLU:O	1:D:1837:GLN:N	2.21	0.72
1:A:1834:VAL:O	1:A:1837:GLN:HB3	1.90	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:315:CYS:SG	1:A:349:GLN:NE2	2.62	0.72
1:B:315:CYS:SG	1:B:349:GLN:NE2	2.62	0.72
1:B:1147:ASP:OD1	1:B:1165:ASN:ND2	2.22	0.72
1:C:315:CYS:SG	1:C:349:GLN:NE2	2.62	0.72
1:C:1839:VAL:HB	1:C:1840:PRO:HD3	1.70	0.72
1:A:1839:VAL:HB	1:A:1840:PRO:HD3	1.70	0.71
1:D:4958:CYS:SG	1:D:4978:HIS:CD2	2.82	0.71
1:A:3891:LEU:HB3	1:A:3899:PHE:HE2	1.56	0.71
1:B:3891:LEU:HB3	1:B:3899:PHE:HE2	1.56	0.71
1:C:3891:LEU:HB3	1:C:3899:PHE:HE2	1.56	0.71
1:A:1578:ALA:O	1:A:1584:ARG:NH2	2.24	0.71
1:D:2644:LEU:HG	1:D:2645:THR:HG23	1.73	0.71
1:A:3889:GLN:HG3	1:A:3967:GLU:HG3	1.72	0.71
1:B:1578:ALA:O	1:B:1584:ARG:NH2	2.24	0.71
1:C:683:ARG:HB3	1:C:717:ASP:HB3	1.73	0.70
1:D:3891:LEU:HB3	1:D:3899:PHE:HE2	1.56	0.70
1:D:4635:SER:C	1:D:4637:GLY:N	2.41	0.70
1:A:2644:LEU:HG	1:A:2645:THR:HG23	1.73	0.70
1:B:3889:GLN:HG3	1:B:3967:GLU:HG3	1.72	0.70
1:C:4807:PHE:C	1:C:4809:PHE:H	2.00	0.70
1:D:1834:VAL:O	1:D:1837:GLN:HB3	1.90	0.70
1:D:3889:GLN:HG3	1:D:3967:GLU:HG3	1.72	0.70
1:C:1578:ALA:O	1:C:1584:ARG:NH2	2.24	0.70
1:C:2644:LEU:HG	1:C:2645:THR:HG23	1.73	0.70
1:C:4958:CYS:SG	1:C:4978:HIS:CD2	2.82	0.70
1:D:1578:ALA:O	1:D:1584:ARG:NH2	2.24	0.70
1:D:3817:LEU:HD13	1:D:3899:PHE:HD1	1.57	0.70
1:A:3817:LEU:HD13	1:A:3899:PHE:HD1	1.57	0.70
1:C:3817:LEU:HD13	1:C:3899:PHE:HD1	1.57	0.70
1:D:683:ARG:HB3	1:D:717:ASP:HB3	1.73	0.70
1:A:1037:ASP:O	1:A:1041:GLN:NE2	2.25	0.70
1:D:1037:ASP:O	1:D:1041:GLN:NE2	2.25	0.70
1:B:1453:VAL:HG23	1:B:1454:THR:H	1.58	0.69
1:B:3817:LEU:HD13	1:B:3899:PHE:HD1	1.57	0.69
1:C:3889:GLN:HG3	1:C:3967:GLU:HG3	1.72	0.69
1:B:1037:ASP:O	1:B:1041:GLN:NE2	2.25	0.69
1:A:683:ARG:HB3	1:A:717:ASP:HB3	1.73	0.69
1:D:4807:PHE:C	1:D:4809:PHE:H	2.00	0.69
1:B:36:CYS:SG	1:B:37:LEU:N	2.65	0.69
1:C:1037:ASP:O	1:C:1041:GLN:NE2	2.25	0.69
1:D:36:CYS:SG	1:D:37:LEU:N	2.65	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:794:GLY:H	1:D:798:GLY:HA3	1.57	0.69
1:B:683:ARG:HB3	1:B:717:ASP:HB3	1.73	0.69
1:C:1453:VAL:HG23	1:C:1454:THR:H	1.58	0.69
1:D:4344:ALA:HB3	1:D:4564:PHE:HD2	1.57	0.69
1:B:2644:LEU:HG	1:B:2645:THR:HG23	1.73	0.68
1:A:638:ILE:HG21	1:A:703:GLY:HA3	1.75	0.68
1:A:794:GLY:H	1:A:798:GLY:HA3	1.57	0.68
1:C:36:CYS:SG	1:C:37:LEU:N	2.65	0.68
1:A:4807:PHE:C	1:A:4809:PHE:H	2.00	0.68
1:B:4807:PHE:C	1:B:4809:PHE:H	2.00	0.68
1:C:3733:CYS:SG	1:C:3803:SER:OG	2.52	0.68
1:D:1453:VAL:HG23	1:D:1454:THR:H	1.58	0.68
1:A:209:CYS:SG	1:A:210:GLU:N	2.67	0.68
1:A:4630:TYR:HE2	1:A:4632:LEU:HD13	1.57	0.68
1:B:638:ILE:HG21	1:B:703:GLY:HA3	1.75	0.68
1:C:794:GLY:H	1:C:798:GLY:HA3	1.57	0.68
1:A:1453:VAL:HG23	1:A:1454:THR:H	1.58	0.68
1:A:4958:CYS:SG	1:A:4978:HIS:CD2	2.82	0.68
1:C:3446:SER:HA	1:C:3449:HIS:HB3	1.76	0.68
1:C:4344:ALA:HB3	1:C:4564:PHE:HD2	1.57	0.68
1:A:4344:ALA:HB3	1:A:4564:PHE:HD2	1.57	0.68
1:B:794:GLY:H	1:B:798:GLY:HA3	1.57	0.68
1:B:4863:TYR:HA	1:B:4901:ILE:HD11	1.75	0.68
1:B:4344:ALA:HB3	1:B:4564:PHE:HD2	1.57	0.68
1:D:3733:CYS:SG	1:D:3803:SER:OG	2.52	0.68
1:C:4630:TYR:HE2	1:C:4632:LEU:HD13	1.57	0.68
1:D:4340:ALA:C	1:D:4342:ALA:N	2.51	0.68
1:D:4345:ALA:HB2	1:D:4561:THR:HG22	1.76	0.68
1:D:4630:TYR:HE2	1:D:4632:LEU:HD13	1.57	0.68
1:A:4863:TYR:HA	1:A:4901:ILE:HD11	1.75	0.67
1:C:4344:ALA:O	1:C:4345:ALA:C	2.37	0.67
1:D:2102:VAL:HG13	1:D:2120:MET:HG2	1.76	0.67
1:D:4817:ALA:C	1:D:4819:GLY:H	2.02	0.67
1:B:4152:GLU:OE1	1:B:4194:TYR:OH	2.12	0.67
1:C:4817:ALA:C	1:C:4819:GLY:H	2.02	0.67
1:D:3446:SER:HA	1:D:3449:HIS:HB3	1.76	0.67
1:A:36:CYS:SG	1:A:37:LEU:N	2.65	0.67
1:A:2495:VAL:HG22	1:A:2497:ASP:H	1.59	0.67
1:B:2495:VAL:HG22	1:B:2497:ASP:H	1.59	0.67
1:C:2021:CYS:SG	1:C:2028:ARG:NH1	2.68	0.67
1:A:2131:LEU:HB2	1:A:3662:ILE:HG12	1.77	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4345:ALA:HB2	1:A:4561:THR:HG22	1.76	0.67
1:D:638:ILE:HG21	1:D:703:GLY:HA3	1.75	0.67
1:D:2021:CYS:SG	1:D:2028:ARG:NH1	2.68	0.67
1:B:3446:SER:HA	1:B:3449:HIS:HB3	1.76	0.67
1:D:2131:LEU:HB2	1:D:3662:ILE:HG12	1.77	0.67
1:D:2495:VAL:HG22	1:D:2497:ASP:H	1.59	0.67
1:D:4863:TYR:HA	1:D:4901:ILE:HD11	1.75	0.67
1:B:209:CYS:SG	1:B:210:GLU:N	2.67	0.67
1:C:4863:TYR:HA	1:C:4901:ILE:HD11	1.75	0.67
1:A:2102:VAL:HG13	1:A:2120:MET:HG2	1.76	0.67
1:A:4817:ALA:C	1:A:4819:GLY:H	2.02	0.67
1:A:4152:GLU:OE1	1:A:4194:TYR:OH	2.12	0.67
1:B:3733:CYS:HG	1:B:3803:SER:HG	1.42	0.67
1:B:4817:ALA:C	1:B:4819:GLY:H	2.02	0.67
1:C:2131:LEU:HB2	1:C:3662:ILE:HG12	1.77	0.67
1:D:3552:PHE:O	1:D:3555:ASN:ND2	2.28	0.67
1:A:27:THR:HG22	1:A:32:GLN:HA	1.77	0.67
1:B:2131:LEU:HB2	1:B:3662:ILE:HG12	1.77	0.67
1:B:3733:CYS:SG	1:B:3803:SER:OG	2.52	0.67
1:B:4630:TYR:HE2	1:B:4632:LEU:HD13	1.57	0.67
1:A:3733:CYS:SG	1:A:3803:SER:OG	2.52	0.66
1:B:2021:CYS:SG	1:B:2028:ARG:NH1	2.68	0.66
1:C:273:HIS:O	1:C:275:ARG:NH2	2.28	0.66
1:C:632:LEU:O	1:C:634:GLN:NE2	2.28	0.66
1:C:2102:VAL:HG13	1:C:2120:MET:HG2	1.76	0.66
1:C:4340:ALA:C	1:C:4342:ALA:N	2.51	0.66
1:A:273:HIS:O	1:A:275:ARG:NH2	2.28	0.66
1:A:2456:ILE:HD11	1:D:176:SER:HA	1.78	0.66
1:B:3552:PHE:O	1:B:3555:ASN:ND2	2.28	0.66
1:B:4345:ALA:HB2	1:B:4561:THR:HG22	1.76	0.66
1:C:3552:PHE:O	1:C:3555:ASN:ND2	2.28	0.66
1:C:4152:GLU:OE1	1:C:4194:TYR:OH	2.12	0.66
1:C:209:CYS:SG	1:C:210:GLU:N	2.67	0.66
1:C:638:ILE:HG21	1:C:703:GLY:HA3	1.75	0.66
1:C:4345:ALA:HB2	1:C:4561:THR:HG22	1.76	0.66
1:D:4807:PHE:O	1:D:4809:PHE:N	2.29	0.66
1:A:4933:GLN:HG2	1:D:4930:ALA:HB2	1.77	0.66
1:B:4958:CYS:SG	1:B:4978:HIS:CD2	2.82	0.66
1:A:4340:ALA:C	1:A:4342:ALA:N	2.51	0.66
1:A:2021:CYS:SG	1:A:2028:ARG:NH1	2.68	0.66
1:B:27:THR:HG22	1:B:32:GLN:HA	1.77	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:2495:VAL:HG22	1:C:2497:ASP:H	1.59	0.66
1:D:209:CYS:SG	1:D:210:GLU:N	2.67	0.66
1:A:2570:ALA:O	1:A:2574:HIS:ND1	2.29	0.66
1:B:273:HIS:O	1:B:275:ARG:NH2	2.28	0.66
1:B:2102:VAL:HG13	1:B:2120:MET:HG2	1.76	0.66
1:B:2570:ALA:O	1:B:2574:HIS:ND1	2.29	0.66
1:B:4340:ALA:C	1:B:4342:ALA:N	2.51	0.66
1:C:176:SER:HA	1:D:2456:ILE:HD11	1.78	0.66
1:B:4636:THR:C	1:B:4638:TYR:H	2.04	0.66
1:C:27:THR:HG22	1:C:32:GLN:HA	1.77	0.66
1:B:4807:PHE:O	1:B:4809:PHE:N	2.29	0.66
1:D:632:LEU:O	1:D:634:GLN:NE2	2.28	0.66
1:D:4344:ALA:O	1:D:4345:ALA:C	2.37	0.66
1:B:4930:ALA:HB2	1:C:4933:GLN:HG2	1.77	0.66
1:C:652:ARG:NH1	1:C:750:LEU:O	2.29	0.66
1:C:4807:PHE:O	1:C:4809:PHE:N	2.29	0.66
1:D:4152:GLU:OE1	1:D:4194:TYR:OH	2.12	0.66
1:A:3552:PHE:O	1:A:3555:ASN:ND2	2.28	0.65
1:A:176:SER:HA	1:B:2456:ILE:HD11	1.78	0.65
1:A:392:ARG:NH1	1:A:393:CYS:O	2.29	0.65
1:A:660:GLY:HA3	1:A:750:LEU:HD13	1.77	0.65
1:A:3446:SER:HA	1:A:3449:HIS:HB3	1.76	0.65
1:B:652:ARG:NH1	1:B:750:LEU:O	2.29	0.65
1:B:1215:ALA:HA	1:B:1219:LEU:HB3	1.78	0.65
1:C:1772:ARG:NH2	1:C:1952:GLN:OE1	2.29	0.65
1:D:27:THR:HG22	1:D:32:GLN:HA	1.77	0.65
1:D:660:GLY:HA3	1:D:750:LEU:HD13	1.77	0.65
1:A:3722:TYR:HE1	1:A:3778:MET:HE3	1.62	0.65
1:B:660:GLY:HA3	1:B:750:LEU:HD13	1.77	0.65
1:C:4636:THR:C	1:C:4638:TYR:H	2.04	0.65
1:D:652:ARG:NH1	1:D:750:LEU:O	2.29	0.65
1:A:652:ARG:NH1	1:A:750:LEU:O	2.29	0.65
1:A:4344:ALA:O	1:A:4345:ALA:C	2.37	0.65
1:A:4636:THR:C	1:A:4638:TYR:H	2.04	0.65
1:A:4807:PHE:O	1:A:4809:PHE:N	2.29	0.65
1:C:392:ARG:NH1	1:C:393:CYS:O	2.29	0.65
1:A:4930:ALA:HB2	1:B:4933:GLN:HG2	1.77	0.65
1:D:3722:TYR:HE1	1:D:3778:MET:HE3	1.62	0.65
1:D:3989:VAL:HG21	1:D:4047:MET:HE2	1.79	0.65
1:A:2651:CYS:HA	1:A:2695:LEU:HB2	1.78	0.65
1:B:615:ARG:NH2	1:B:1677:GLY:O	2.30	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:632:LEU:O	1:A:634:GLN:NE2	2.28	0.65
1:A:3989:VAL:HG21	1:A:4047:MET:HE2	1.79	0.65
1:B:176:SER:HA	1:C:2456:ILE:HD11	1.78	0.65
1:C:4930:ALA:HB2	1:D:4933:GLN:HG2	1.77	0.65
1:C:2182:ILE:HD13	1:C:2185:ILE:HD11	1.79	0.65
1:D:392:ARG:NH1	1:D:393:CYS:O	2.29	0.65
1:A:615:ARG:NH2	1:A:1677:GLY:O	2.30	0.65
1:B:2651:CYS:HA	1:B:2695:LEU:HB2	1.78	0.65
1:C:1215:ALA:HA	1:C:1219:LEU:HB3	1.78	0.65
1:D:273:HIS:O	1:D:275:ARG:NH2	2.28	0.65
1:D:615:ARG:NH2	1:D:1677:GLY:O	2.30	0.65
1:A:1772:ARG:NH2	1:A:1952:GLN:OE1	2.29	0.65
1:B:1772:ARG:NH2	1:B:1952:GLN:OE1	2.29	0.65
1:C:3722:TYR:HE1	1:C:3778:MET:HE3	1.62	0.65
1:D:2182:ILE:HD13	1:D:2185:ILE:HD11	1.79	0.65
1:B:961:MET:SD	1:B:963:ASN:ND2	2.70	0.64
1:B:2182:ILE:HD13	1:B:2185:ILE:HD11	1.79	0.64
1:B:3989:VAL:HG21	1:B:4047:MET:HE2	1.79	0.64
1:B:4344:ALA:O	1:B:4345:ALA:C	2.37	0.64
1:C:615:ARG:NH2	1:C:1677:GLY:O	2.30	0.64
1:C:1712:TYR:OH	1:C:1814:MET:SD	2.55	0.64
1:D:1712:TYR:OH	1:D:1814:MET:SD	2.55	0.64
1:D:1772:ARG:NH2	1:D:1952:GLN:OE1	2.29	0.64
1:D:1838:PHE:O	1:D:1839:VAL:C	2.39	0.64
1:B:40:GLU:HB3	1:B:44:ASN:HD21	1.62	0.64
1:B:1838:PHE:O	1:B:1839:VAL:C	2.39	0.64
1:C:3989:VAL:HG21	1:C:4047:MET:HE2	1.79	0.64
1:D:4636:THR:C	1:D:4638:TYR:H	2.04	0.64
1:A:40:GLU:HB3	1:A:44:ASN:HD21	1.62	0.64
1:B:3722:TYR:HE1	1:B:3778:MET:HE3	1.62	0.64
1:D:2570:ALA:O	1:D:2574:HIS:ND1	2.29	0.64
1:D:2651:CYS:HA	1:D:2695:LEU:HB2	1.78	0.64
1:B:4863:TYR:HA	1:B:4901:ILE:CD1	2.28	0.64
1:C:4863:TYR:HA	1:C:4901:ILE:CD1	2.28	0.64
1:D:1215:ALA:HA	1:D:1219:LEU:HB3	1.78	0.64
1:A:1215:ALA:HA	1:A:1219:LEU:HB3	1.78	0.64
1:A:4863:TYR:HA	1:A:4901:ILE:CD1	2.28	0.64
1:B:1699:GLU:OE1	1:B:1810:LYS:NZ	2.30	0.64
1:C:660:GLY:HA3	1:C:750:LEU:HD13	1.77	0.64
1:C:1699:GLU:OE1	1:C:1810:LYS:NZ	2.30	0.64
1:D:40:GLU:HB3	1:D:44:ASN:HD21	1.62	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:961:MET:SD	1:D:963:ASN:ND2	2.70	0.64
1:C:961:MET:SD	1:C:963:ASN:ND2	2.70	0.64
1:D:4863:TYR:HA	1:D:4901:ILE:CD1	2.28	0.64
1:A:961:MET:SD	1:A:963:ASN:ND2	2.70	0.64
1:B:392:ARG:NH1	1:B:393:CYS:O	2.29	0.64
1:A:2182:ILE:HD13	1:A:2185:ILE:HD11	1.79	0.64
1:B:1243:PRO:HB2	1:B:1600:LEU:HD21	1.80	0.64
1:D:4345:ALA:CB	1:D:4561:THR:HA	2.28	0.64
1:C:40:GLU:HB3	1:C:44:ASN:HD21	1.62	0.63
1:C:2651:CYS:HA	1:C:2695:LEU:HB2	1.78	0.63
1:C:4085:ARG:HH11	1:C:4087:LEU:HD12	1.64	0.63
1:A:1243:PRO:HB2	1:A:1600:LEU:HD21	1.80	0.63
1:B:1508:ARG:O	1:B:1537:ASN:ND2	2.32	0.63
1:B:3971:GLY:O	1:B:3973:CYS:N	2.31	0.63
1:C:1243:PRO:HB2	1:C:1600:LEU:HD21	1.80	0.63
1:D:4085:ARG:HH11	1:D:4087:LEU:HD12	1.64	0.63
1:A:4345:ALA:CB	1:A:4561:THR:HA	2.28	0.63
1:B:2584:HIS:HD1	1:B:2585:THR:HG22	1.64	0.63
1:D:1508:ARG:O	1:D:1537:ASN:ND2	2.32	0.63
1:A:1712:TYR:OH	1:A:1814:MET:SD	2.55	0.63
1:A:1838:PHE:O	1:A:1839:VAL:C	2.39	0.63
1:A:2584:HIS:HD1	1:A:2585:THR:HG22	1.64	0.63
1:B:632:LEU:O	1:B:634:GLN:NE2	2.28	0.63
1:B:4807:PHE:C	1:B:4809:PHE:N	2.55	0.63
1:D:1243:PRO:HB2	1:D:1600:LEU:HD21	1.80	0.63
1:D:1699:GLU:OE1	1:D:1810:LYS:NZ	2.30	0.63
1:B:4085:ARG:HH11	1:B:4087:LEU:HD12	1.64	0.63
1:A:3971:GLY:O	1:A:3973:CYS:N	2.31	0.63
1:A:4340:ALA:O	1:A:4343:GLY:N	2.31	0.63
1:B:686:TRP:NE1	1:B:746:CYS:SG	2.72	0.63
1:C:3971:GLY:O	1:C:3973:CYS:N	2.31	0.63
1:D:686:TRP:NE1	1:D:746:CYS:SG	2.72	0.63
1:D:719:LEU:O	1:D:720:HIS:ND1	2.31	0.63
1:A:719:LEU:O	1:A:720:HIS:ND1	2.31	0.63
1:B:1712:TYR:OH	1:B:1814:MET:SD	2.55	0.63
1:C:686:TRP:NE1	1:C:746:CYS:SG	2.72	0.63
1:C:4345:ALA:CB	1:C:4561:THR:HA	2.28	0.63
1:A:4085:ARG:HH11	1:A:4087:LEU:HD12	1.64	0.63
1:B:4345:ALA:CB	1:B:4561:THR:HA	2.28	0.63
1:D:3971:GLY:O	1:D:3973:CYS:N	2.31	0.63
1:B:719:LEU:O	1:B:720:HIS:ND1	2.31	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1439:VAL:HG21	1:D:1543:GLU:HG3	1.81	0.63
1:D:2584:HIS:HD1	1:D:2585:THR:HG22	1.64	0.63
1:A:1508:ARG:O	1:A:1537:ASN:ND2	2.32	0.62
1:B:3426:GLU:O	1:B:3430:ASN:N	2.27	0.62
1:D:871:ARG:HH22	1:D:918:ARG:HH12	1.47	0.62
1:A:686:TRP:NE1	1:A:746:CYS:SG	2.72	0.62
1:D:4807:PHE:C	1:D:4809:PHE:N	2.55	0.62
1:A:871:ARG:HH22	1:A:918:ARG:HH12	1.47	0.62
1:A:1439:VAL:HG21	1:A:1543:GLU:HG3	1.81	0.62
1:C:719:LEU:O	1:C:720:HIS:ND1	2.31	0.62
1:C:1508:ARG:O	1:C:1537:ASN:ND2	2.32	0.62
1:C:2584:HIS:HD1	1:C:2585:THR:HG22	1.64	0.62
1:C:1439:VAL:HG21	1:C:1543:GLU:HG3	1.81	0.62
1:C:1838:PHE:O	1:C:1839:VAL:C	2.39	0.62
1:A:680:THR:HG23	1:A:784:SER:HB2	1.81	0.62
1:A:1248:VAL:HG22	1:A:1599:MET:HE2	1.82	0.62
1:A:1699:GLU:OE1	1:A:1810:LYS:NZ	2.30	0.62
1:A:3891:LEU:HB3	1:A:3899:PHE:CE2	2.35	0.62
1:B:1219:LEU:HG	1:B:1220:GLN:HG3	1.82	0.62
1:D:3657:TYR:HB3	1:D:3661:TRP:HE1	1.65	0.62
1:C:680:THR:HG23	1:C:784:SER:HB2	1.81	0.62
1:D:1730:MET:O	1:D:1772:ARG:NH1	2.33	0.62
1:A:1024:TYR:HA	1:A:1027:LEU:HB2	1.81	0.62
1:B:1024:TYR:HA	1:B:1027:LEU:HB2	1.81	0.62
1:A:1730:MET:O	1:A:1772:ARG:NH1	2.33	0.62
1:C:1248:VAL:HG22	1:C:1599:MET:HE2	1.82	0.62
1:C:3657:TYR:HB3	1:C:3661:TRP:HE1	1.65	0.62
1:D:1024:TYR:HA	1:D:1027:LEU:HB2	1.81	0.62
1:D:1219:LEU:HG	1:D:1220:GLN:HG3	1.82	0.62
1:A:3657:TYR:HB3	1:A:3661:TRP:HE1	1.65	0.61
1:B:1439:VAL:HG21	1:B:1543:GLU:HG3	1.81	0.61
1:B:1973:GLN:OE1	1:B:1976:ARG:NH2	2.33	0.61
1:D:4340:ALA:O	1:D:4343:GLY:N	2.31	0.61
1:B:1730:MET:O	1:B:1772:ARG:NH1	2.33	0.61
1:B:3657:TYR:HB3	1:B:3661:TRP:HE1	1.65	0.61
1:C:4340:ALA:O	1:C:4343:GLY:N	2.31	0.61
1:C:1219:LEU:HG	1:C:1220:GLN:HG3	1.82	0.61
1:C:1973:GLN:OE1	1:C:1976:ARG:NH2	2.33	0.61
1:C:2012:PHE:HD2	1:C:2022:PRO:HD3	1.65	0.61
1:C:2570:ALA:O	1:C:2574:HIS:ND1	2.29	0.61
1:C:3891:LEU:HB3	1:C:3899:PHE:CE2	2.35	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:4807:PHE:C	1:C:4809:PHE:N	2.55	0.61
1:B:1248:VAL:HG22	1:B:1599:MET:HE2	1.82	0.61
1:B:4906:GLY:O	1:B:4907:ASP:C	2.43	0.61
1:C:4906:GLY:O	1:C:4907:ASP:C	2.43	0.61
1:D:939:VAL:HA	1:D:1053:ILE:HD12	1.83	0.61
1:A:939:VAL:HA	1:A:1053:ILE:HD12	1.83	0.61
1:A:4069:LYS:HB2	1:A:4133:GLN:NE2	2.15	0.61
1:C:871:ARG:HH22	1:C:918:ARG:HH12	1.47	0.61
1:A:4906:GLY:O	1:A:4907:ASP:C	2.43	0.61
1:D:680:THR:HG23	1:D:784:SER:HB2	1.81	0.61
1:A:1219:LEU:HG	1:A:1220:GLN:HG3	1.82	0.61
1:D:3768:SER:O	1:D:3773:ARG:NH1	2.29	0.61
1:A:1148:VAL:HG21	1:A:1212:ARG:HG3	1.83	0.61
1:A:1973:GLN:OE1	1:A:1976:ARG:NH2	2.33	0.61
1:A:3799:LYS:NZ	1:A:3883:ASP:OD2	2.33	0.61
1:C:219:VAL:HG13	1:C:285:VAL:HG21	1.83	0.61
1:C:1730:MET:O	1:C:1772:ARG:NH1	2.33	0.61
1:C:3426:GLU:O	1:C:3430:ASN:N	2.27	0.61
1:D:1835:GLU:C	1:D:1837:GLN:N	2.59	0.61
1:D:1973:GLN:OE1	1:D:1976:ARG:NH2	2.33	0.61
1:D:2012:PHE:HD2	1:D:2022:PRO:HD3	1.65	0.61
1:D:3891:LEU:HB3	1:D:3899:PHE:CE2	2.35	0.61
1:A:4807:PHE:C	1:A:4809:PHE:N	2.55	0.61
1:B:680:THR:HG23	1:B:784:SER:HB2	1.81	0.60
1:B:871:ARG:HH22	1:B:918:ARG:HH12	1.47	0.60
1:B:1101:ARG:NH1	1:B:1115:LEU:O	2.34	0.60
1:D:1248:VAL:HG22	1:D:1599:MET:HE2	1.82	0.60
1:D:4906:GLY:O	1:D:4907:ASP:C	2.43	0.60
1:A:1101:ARG:NH1	1:A:1115:LEU:O	2.34	0.60
1:B:1148:VAL:HG21	1:B:1212:ARG:HG3	1.83	0.60
1:C:1024:TYR:HA	1:C:1027:LEU:HB2	1.81	0.60
1:D:219:VAL:HG13	1:D:285:VAL:HG21	1.83	0.60
1:B:4345:ALA:HB1	1:B:4561:THR:HG22	1.83	0.60
1:B:3768:SER:O	1:B:3773:ARG:NH1	2.29	0.60
1:C:4069:LYS:HB2	1:C:4133:GLN:NE2	2.15	0.60
1:A:1676:LEU:HD12	1:A:2167:ILE:HD12	1.84	0.60
1:A:2012:PHE:HD2	1:A:2022:PRO:HD3	1.65	0.60
1:B:1458:HIS:NE2	1:B:1483:VAL:HG21	2.17	0.60
1:C:1458:HIS:NE2	1:C:1483:VAL:HG21	2.17	0.60
1:D:764:VAL:HG12	1:D:766:GLY:H	1.67	0.60
1:D:977:LEU:HD23	1:D:1047:LEU:HD22	1.84	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:977:LEU:HD23	1:C:1047:LEU:HD22	1.84	0.60
1:C:3799:LYS:NZ	1:C:3883:ASP:OD2	2.33	0.60
1:D:3799:LYS:NZ	1:D:3883:ASP:OD2	2.33	0.60
1:B:3891:LEU:HB3	1:B:3899:PHE:CE2	2.35	0.60
1:C:1969:LEU:HD12	1:C:2009:LEU:HD21	1.84	0.60
1:D:4069:LYS:HB2	1:D:4133:GLN:NE2	2.15	0.60
1:B:63:ALA:HB2	1:B:261:ARG:HH12	1.67	0.60
1:B:1708:ARG:NH1	1:B:1837:GLN:HA	2.17	0.60
1:B:2012:PHE:HD2	1:B:2022:PRO:HD3	1.65	0.60
1:C:1708:ARG:NH1	1:C:1837:GLN:HA	2.17	0.60
1:C:1805:GLU:OE1	1:C:1808:ARG:NH2	2.30	0.60
1:D:1101:ARG:NH1	1:D:1115:LEU:O	2.34	0.60
1:D:1708:ARG:NH1	1:D:1837:GLN:HA	2.17	0.60
1:B:1676:LEU:HD12	1:B:2167:ILE:HD12	1.84	0.60
1:B:1805:GLU:OE1	1:B:1808:ARG:NH2	2.30	0.60
1:C:4245:MET:HE1	1:C:4989:MET:HE1	1.84	0.60
1:A:1708:ARG:NH1	1:A:1837:GLN:HA	2.17	0.60
1:A:3768:SER:O	1:A:3773:ARG:NH1	2.29	0.60
1:B:591:ASP:O	1:B:1594:ARG:NH2	2.35	0.60
1:B:3657:TYR:HB3	1:B:3661:TRP:NE1	2.17	0.60
1:C:4345:ALA:HB1	1:C:4561:THR:HG22	1.83	0.60
1:A:219:VAL:HG13	1:A:285:VAL:HG21	1.83	0.59
1:A:221:ARG:NH1	1:A:253:CYS:O	2.35	0.59
1:A:63:ALA:HB2	1:A:261:ARG:HH12	1.67	0.59
1:A:3657:TYR:HB3	1:A:3661:TRP:NE1	2.17	0.59
1:B:3799:LYS:NZ	1:B:3883:ASP:OD2	2.33	0.59
1:B:4245:MET:HE1	1:B:4989:MET:HE1	1.84	0.59
1:C:63:ALA:HB2	1:C:261:ARG:HH12	1.67	0.59
1:D:591:ASP:O	1:D:1594:ARG:NH2	2.35	0.59
1:D:1148:VAL:HG21	1:D:1212:ARG:HG3	1.83	0.59
1:D:1676:LEU:HD12	1:D:2167:ILE:HD12	1.84	0.59
1:A:1969:LEU:HD12	1:A:2009:LEU:HD21	1.84	0.59
1:B:939:VAL:HA	1:B:1053:ILE:HD12	1.83	0.59
1:B:3292:PRO:O	1:B:3294:PRO:HD3	2.03	0.59
1:A:1458:HIS:NE2	1:A:1483:VAL:HG21	2.17	0.59
1:A:3292:PRO:O	1:A:3294:PRO:HD3	2.03	0.59
1:C:1101:ARG:NH1	1:C:1115:LEU:O	2.34	0.59
1:C:1148:VAL:HG21	1:C:1212:ARG:HG3	1.83	0.59
1:D:221:ARG:NH1	1:D:253:CYS:O	2.35	0.59
1:D:1458:HIS:NE2	1:D:1483:VAL:HG21	2.17	0.59
1:A:764:VAL:HG12	1:A:766:GLY:H	1.67	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4345:ALA:HB1	1:A:4561:THR:HG22	1.83	0.59
1:B:221:ARG:NH1	1:B:253:CYS:O	2.35	0.59
1:B:1969:LEU:HD12	1:B:2009:LEU:HD21	1.84	0.59
1:B:4340:ALA:O	1:B:4343:GLY:N	2.31	0.59
1:C:3768:SER:O	1:C:3773:ARG:NH1	2.29	0.59
1:D:941:MET:HE3	1:D:944:GLU:HA	1.85	0.59
1:A:234:SER:HB2	1:A:242:ARG:HA	1.85	0.59
1:B:219:VAL:HG13	1:B:285:VAL:HG21	1.83	0.59
1:B:977:LEU:HD23	1:B:1047:LEU:HD22	1.84	0.59
1:C:591:ASP:O	1:C:1594:ARG:NH2	2.35	0.59
1:C:764:VAL:HG12	1:C:766:GLY:H	1.67	0.59
1:C:2044:ILE:HD11	1:C:2131:LEU:HD13	1.85	0.59
1:C:4633:GLU:HB2	1:C:4639:MET:HG3	1.84	0.59
1:D:2044:ILE:HD11	1:D:2131:LEU:HD13	1.85	0.59
1:D:3292:PRO:O	1:D:3294:PRO:HD3	2.03	0.59
1:A:4635:SER:C	1:A:4637:GLY:H	2.11	0.59
1:C:1676:LEU:HD12	1:C:2167:ILE:HD12	1.84	0.59
1:C:3657:TYR:HB3	1:C:3661:TRP:NE1	2.17	0.59
1:D:1805:GLU:OE1	1:D:1808:ARG:NH2	2.30	0.59
1:A:2044:ILE:HD11	1:A:2131:LEU:HD13	1.85	0.59
1:B:1161:ILE:HD11	1:B:1223:PHE:HE2	1.68	0.59
1:C:939:VAL:HA	1:C:1053:ILE:HD12	1.83	0.59
1:C:978:THR:HG23	1:C:980:ALA:H	1.67	0.59
1:D:978:THR:HG23	1:D:980:ALA:H	1.67	0.59
1:D:3657:TYR:HB3	1:D:3661:TRP:NE1	2.17	0.59
1:D:4245:MET:HE1	1:D:4989:MET:HE1	1.84	0.59
1:B:4633:GLU:HB2	1:B:4639:MET:HG3	1.84	0.59
1:C:941:MET:HE3	1:C:944:GLU:HA	1.85	0.59
1:B:4817:ALA:O	1:B:4819:GLY:N	2.36	0.59
1:C:3292:PRO:O	1:C:3294:PRO:HD3	2.03	0.59
1:A:977:LEU:HD23	1:A:1047:LEU:HD22	1.84	0.58
1:A:1161:ILE:HD11	1:A:1223:PHE:HE2	1.68	0.58
1:A:1607:ARG:NH1	1:A:1610:ASN:OD1	2.36	0.58
1:B:1607:ARG:NH1	1:B:1610:ASN:OD1	2.36	0.58
1:C:2474:LEU:HD22	1:C:2494:PHE:HD2	1.68	0.58
1:D:63:ALA:HB2	1:D:261:ARG:HH12	1.67	0.58
1:D:1867:GLU:O	1:D:1871:PHE:N	2.36	0.58
1:B:2474:LEU:HD22	1:B:2494:PHE:HD2	1.68	0.58
1:D:234:SER:HB2	1:D:242:ARG:HA	1.85	0.58
1:D:4345:ALA:HB1	1:D:4561:THR:HG22	1.83	0.58
1:D:4633:GLU:HB2	1:D:4639:MET:HG3	1.84	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3426:GLU:O	1:A:3430:ASN:N	2.27	0.58
1:B:215:THR:OG1	1:B:271:GLY:O	2.20	0.58
1:B:234:SER:HB2	1:B:242:ARG:HA	1.85	0.58
1:A:591:ASP:O	1:A:1594:ARG:NH2	2.35	0.58
1:B:1867:GLU:O	1:B:1871:PHE:N	2.36	0.58
1:B:4635:SER:C	1:B:4637:GLY:H	2.11	0.58
1:C:3145:GLN:O	1:C:3149:GLN:NE2	2.37	0.58
1:D:1607:ARG:NH1	1:D:1610:ASN:OD1	2.36	0.58
1:D:1969:LEU:HD12	1:D:2009:LEU:HD21	1.84	0.58
1:A:1867:GLU:O	1:A:1871:PHE:N	2.36	0.58
1:A:4633:GLU:HB2	1:A:4639:MET:HG3	1.84	0.58
1:B:252:VAL:HG12	1:B:258:SER:HB3	1.85	0.58
1:B:978:THR:HG23	1:B:980:ALA:H	1.67	0.58
1:B:2458:ARG:HH21	1:B:2510:TYR:HA	1.69	0.58
1:C:1835:GLU:C	1:C:1837:GLN:N	2.59	0.58
1:A:252:VAL:HG12	1:A:258:SER:HB3	1.85	0.58
1:B:764:VAL:HG12	1:B:766:GLY:H	1.67	0.58
1:C:1607:ARG:NH1	1:C:1610:ASN:OD1	2.36	0.58
1:C:4635:SER:C	1:C:4637:GLY:H	2.11	0.58
1:D:1647:CYS:SG	1:D:1648:MET:N	2.77	0.58
1:A:2587:TYR:O	1:A:2590:SER:N	2.36	0.58
1:D:2587:TYR:O	1:D:2590:SER:N	2.36	0.58
1:B:1101:ARG:NH2	1:B:1114:GLU:OE2	2.37	0.58
1:B:1835:GLU:C	1:B:1837:GLN:N	2.59	0.58
1:B:2044:ILE:HD11	1:B:2131:LEU:HD13	1.85	0.58
1:B:3145:GLN:O	1:B:3149:GLN:NE2	2.37	0.58
1:B:4069:LYS:HB2	1:B:4133:GLN:NE2	2.15	0.58
1:C:1647:CYS:SG	1:C:1648:MET:N	2.77	0.58
1:D:2474:LEU:HD22	1:D:2494:PHE:HD2	1.68	0.58
1:D:3946:GLN:OE1	1:D:3949:ARG:NH1	2.37	0.58
1:D:4635:SER:C	1:D:4637:GLY:H	2.11	0.58
1:A:4245:MET:HE1	1:A:4989:MET:HE1	1.84	0.58
1:B:1835:GLU:C	1:B:1837:GLN:H	2.12	0.58
1:B:3946:GLN:OE1	1:B:3949:ARG:NH1	2.37	0.58
1:C:221:ARG:NH1	1:C:253:CYS:O	2.35	0.58
1:C:1101:ARG:NH2	1:C:1114:GLU:OE2	2.37	0.58
1:D:4633:GLU:HG2	1:D:4635:SER:N	2.19	0.58
1:A:2458:ARG:HH21	1:A:2510:TYR:HA	1.69	0.58
1:B:941:MET:HE3	1:B:944:GLU:HA	1.85	0.58
1:C:1835:GLU:C	1:C:1837:GLN:H	2.12	0.58
1:C:1867:GLU:O	1:C:1871:PHE:N	2.36	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:3786:CYS:SG	1:C:3794:VAL:HG22	2.44	0.58
1:D:252:VAL:HG12	1:D:258:SER:HB3	1.85	0.58
1:B:3786:CYS:SG	1:B:3794:VAL:HG22	2.44	0.57
1:C:788:LYS:HG2	1:C:1629:GLN:HA	1.85	0.57
1:C:1161:ILE:HD11	1:C:1223:PHE:HE2	1.68	0.57
1:D:3786:CYS:SG	1:D:3794:VAL:HG22	2.44	0.57
1:D:5027:CYS:O	1:D:5029:ARG:N	2.37	0.57
1:A:978:THR:HG23	1:A:980:ALA:H	1.67	0.57
1:A:2474:LEU:HD22	1:A:2494:PHE:HD2	1.68	0.57
1:A:3228:ALA:HA	1:A:3302:PRO:HG3	1.86	0.57
1:A:4574:ASN:ND2	1:A:4813:LEU:HG	2.20	0.57
1:B:1647:CYS:SG	1:B:1648:MET:N	2.77	0.57
1:C:3946:GLN:OE1	1:C:3949:ARG:NH1	2.37	0.57
1:D:1161:ILE:HD11	1:D:1223:PHE:HE2	1.68	0.57
1:D:2458:ARG:HH21	1:D:2510:TYR:HA	1.69	0.57
1:A:1101:ARG:NH2	1:A:1114:GLU:OE2	2.37	0.57
1:A:1835:GLU:C	1:A:1837:GLN:H	2.12	0.57
1:B:206:CYS:SG	1:B:207:SER:N	2.77	0.57
1:C:234:SER:HB2	1:C:242:ARG:HA	1.85	0.57
1:C:252:VAL:HG12	1:C:258:SER:HB3	1.85	0.57
1:C:3228:ALA:HA	1:C:3302:PRO:HG3	1.86	0.57
1:A:1269:CYS:HB3	1:A:1473:THR:HG23	1.87	0.57
1:A:3767:GLN:OE1	1:A:3809:ASN:ND2	2.38	0.57
1:A:4895:GLY:O	1:B:4892:ARG:NH2	2.38	0.57
1:C:3767:GLN:OE1	1:C:3809:ASN:ND2	2.38	0.57
1:C:4321:ARG:NH2	1:C:4323:THR:HG22	2.19	0.57
1:C:5027:CYS:O	1:C:5029:ARG:N	2.37	0.57
1:D:584:LYS:NZ	1:D:624:ASN:OD1	2.35	0.57
1:A:206:CYS:SG	1:A:207:SER:N	2.77	0.57
1:A:1647:CYS:SG	1:A:1648:MET:N	2.77	0.57
1:A:4321:ARG:NH2	1:A:4323:THR:HG22	2.19	0.57
1:A:4678:ALA:HB1	1:A:4720:VAL:HG21	1.86	0.57
1:B:4574:ASN:ND2	1:B:4813:LEU:HG	2.20	0.57
1:C:2587:TYR:O	1:C:2590:SER:N	2.36	0.57
1:D:3145:GLN:O	1:D:3149:GLN:NE2	2.37	0.57
1:A:3786:CYS:SG	1:A:3794:VAL:HG22	2.44	0.57
1:D:1835:GLU:C	1:D:1837:GLN:H	2.12	0.57
1:D:3228:ALA:HA	1:D:3302:PRO:HG3	1.86	0.57
1:D:4574:ASN:ND2	1:D:4813:LEU:HG	2.20	0.57
1:A:5027:CYS:O	1:A:5029:ARG:N	2.37	0.57
1:B:788:LYS:HG2	1:B:1629:GLN:HA	1.85	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3228:ALA:HA	1:B:3302:PRO:HG3	1.86	0.57
1:A:3143:LEU:HD13	1:A:3146:HIS:CE1	2.40	0.57
1:A:3946:GLN:OE1	1:A:3949:ARG:NH1	2.37	0.57
1:B:1269:CYS:HB3	1:B:1473:THR:HG23	1.87	0.57
1:B:2587:TYR:O	1:B:2590:SER:N	2.36	0.57
1:B:3143:LEU:HD13	1:B:3146:HIS:CE1	2.40	0.57
1:C:1139:PHE:CZ	1:C:1177:THR:HG22	2.40	0.57
1:C:4633:GLU:HG2	1:C:4635:SER:N	2.19	0.57
1:D:675:LEU:HG	1:D:676:THR:H	1.69	0.57
1:D:788:LYS:HG2	1:D:1629:GLN:HA	1.85	0.57
1:A:941:MET:HE3	1:A:944:GLU:HA	1.85	0.57
1:A:1835:GLU:C	1:A:1837:GLN:N	2.59	0.57
1:D:206:CYS:SG	1:D:207:SER:N	2.77	0.57
1:D:234:SER:HB2	1:D:242:ARG:HG3	1.87	0.57
1:D:1079:LYS:NZ	1:D:1655:GLU:OE2	2.35	0.57
1:D:1101:ARG:NH2	1:D:1114:GLU:OE2	2.37	0.57
1:D:1139:PHE:CZ	1:D:1177:THR:HG22	2.40	0.57
1:D:1269:CYS:HB3	1:D:1473:THR:HG23	1.87	0.57
1:D:4678:ALA:HB1	1:D:4720:VAL:HG21	1.86	0.57
1:A:1437:VAL:HG11	1:A:1538:THR:HG21	1.87	0.57
1:B:350:HIS:HD2	1:B:352:ALA:H	1.53	0.57
1:B:3767:GLN:OE1	1:B:3809:ASN:ND2	2.38	0.57
1:C:234:SER:HB2	1:C:242:ARG:HG3	1.87	0.57
1:A:788:LYS:HG2	1:A:1629:GLN:HA	1.85	0.56
1:A:1501:VAL:HG13	1:A:1534:LYS:HD3	1.87	0.56
1:A:4817:ALA:O	1:A:4819:GLY:N	2.36	0.56
1:B:694:PRO:HG3	1:B:826:ILE:HG13	1.87	0.56
1:B:1139:PHE:CZ	1:B:1177:THR:HG22	2.40	0.56
1:B:4633:GLU:HG2	1:B:4635:SER:N	2.19	0.56
1:B:5027:CYS:O	1:B:5029:ARG:N	2.37	0.56
1:C:215:THR:OG1	1:C:271:GLY:O	2.20	0.56
1:C:2458:ARG:HH21	1:C:2510:TYR:HA	1.69	0.56
1:D:3767:GLN:OE1	1:D:3809:ASN:ND2	2.38	0.56
1:A:1805:GLU:OE1	1:A:1808:ARG:NH2	2.30	0.56
1:A:3145:GLN:O	1:A:3149:GLN:NE2	2.37	0.56
1:A:4633:GLU:HG2	1:A:4635:SER:N	2.19	0.56
1:B:1437:VAL:HG11	1:B:1538:THR:HG21	1.87	0.56
1:B:4574:ASN:HD22	1:B:4813:LEU:HG	1.70	0.56
1:A:584:LYS:NZ	1:A:624:ASN:OD1	2.35	0.56
1:A:4892:ARG:NH2	1:D:4895:GLY:O	2.38	0.56
1:B:4895:GLY:O	1:C:4892:ARG:NH2	2.38	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:350:HIS:HD2	1:C:352:ALA:H	1.53	0.56
1:C:675:LEU:HG	1:C:676:THR:H	1.69	0.56
1:C:1437:VAL:HG11	1:C:1538:THR:HG21	1.87	0.56
1:C:4687:TYR:OH	1:C:4699:GLY:O	2.20	0.56
1:C:4712:PRO:O	1:C:4718:LYS:NZ	2.38	0.56
1:C:4895:GLY:O	1:D:4892:ARG:NH2	2.38	0.56
1:D:1501:VAL:HG13	1:D:1534:LYS:HD3	1.87	0.56
1:D:3426:GLU:O	1:D:3430:ASN:N	2.27	0.56
1:D:3578:GLY:O	1:D:3582:ARG:N	2.37	0.56
1:D:4321:ARG:NH2	1:D:4323:THR:HG22	2.19	0.56
1:A:3059:THR:O	1:A:3187:ARG:NH2	2.39	0.56
1:A:4712:PRO:O	1:A:4718:LYS:NZ	2.38	0.56
1:C:3315:LEU:O	1:C:3318:ASN:ND2	2.39	0.56
1:C:4678:ALA:HB1	1:C:4720:VAL:HG21	1.86	0.56
1:A:178:ARG:NE	1:A:194:SER:O	2.38	0.56
1:A:1189:LEU:HD12	1:A:1190:PRO:HD2	1.87	0.56
1:A:1650:ILE:HG23	1:A:1651:LEU:HD22	1.87	0.56
1:B:1189:LEU:HD12	1:B:1190:PRO:HD2	1.87	0.56
1:B:1765:VAL:HG22	1:B:1766:GLY:H	1.71	0.56
1:C:206:CYS:SG	1:C:207:SER:N	2.77	0.56
1:C:1269:CYS:HB3	1:C:1473:THR:HG23	1.87	0.56
1:C:3059:THR:O	1:C:3187:ARG:NH2	2.39	0.56
1:C:4574:ASN:ND2	1:C:4813:LEU:HG	2.20	0.56
1:A:1139:PHE:CZ	1:A:1177:THR:HG22	2.40	0.56
1:B:4321:ARG:NH2	1:B:4323:THR:HG22	2.19	0.56
1:C:4574:ASN:HD22	1:C:4813:LEU:HG	1.70	0.56
1:D:3143:LEU:HD13	1:D:3146:HIS:CE1	2.40	0.56
1:D:4817:ALA:O	1:D:4819:GLY:N	2.36	0.56
1:A:1765:VAL:HG22	1:A:1766:GLY:H	1.71	0.56
1:A:2548:LEU:O	1:A:2552:ARG:NH1	2.39	0.56
1:A:3315:LEU:O	1:A:3318:ASN:ND2	2.39	0.56
1:B:3059:THR:O	1:B:3187:ARG:NH2	2.39	0.56
1:B:4635:SER:O	1:B:4636:THR:C	2.49	0.56
1:B:4678:ALA:HB1	1:B:4720:VAL:HG21	1.86	0.56
1:D:1072:VAL:HG12	1:D:1195:GLY:HA2	1.88	0.56
1:A:694:PRO:HG3	1:A:826:ILE:HG13	1.87	0.56
1:A:1835:GLU:HG2	1:A:1932:PRO:HG2	1.87	0.56
1:A:4574:ASN:HD22	1:A:4813:LEU:HG	1.70	0.56
1:B:1650:ILE:HG23	1:B:1651:LEU:HD22	1.87	0.56
1:B:2548:LEU:O	1:B:2552:ARG:NH1	2.39	0.56
1:C:3143:LEU:HD13	1:C:3146:HIS:CE1	2.40	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:350:HIS:HD2	1:D:352:ALA:H	1.53	0.56
1:B:863:LEU:HD22	1:B:868:GLU:HG2	1.88	0.56
1:B:4712:PRO:O	1:B:4718:LYS:NZ	2.38	0.56
1:D:960:MET:HA	1:D:960:MET:HE3	1.88	0.56
1:D:1765:VAL:HG22	1:D:1766:GLY:H	1.71	0.56
1:D:4574:ASN:HD22	1:D:4813:LEU:HG	1.70	0.56
1:A:1072:VAL:HG12	1:A:1195:GLY:HA2	1.88	0.56
1:A:3652:MET:O	1:A:3656:SER:OG	2.24	0.56
1:C:1554:VAL:HG12	1:C:1556:PRO:HD3	1.88	0.56
1:A:675:LEU:HG	1:A:676:THR:H	1.69	0.55
1:A:4635:SER:O	1:A:4636:THR:C	2.49	0.55
1:C:694:PRO:HG3	1:C:826:ILE:HG13	1.87	0.55
1:C:2548:LEU:O	1:C:2552:ARG:NH1	2.39	0.55
1:D:1189:LEU:HD12	1:D:1190:PRO:HD2	1.87	0.55
1:A:793:LEU:HD21	1:A:797:HIS:H	1.71	0.55
1:B:977:LEU:HB3	1:B:1047:LEU:HD22	1.88	0.55
1:B:1501:VAL:HG13	1:B:1534:LYS:HD3	1.87	0.55
1:B:1554:VAL:HG12	1:B:1556:PRO:HD3	1.88	0.55
1:D:694:PRO:HG3	1:D:826:ILE:HG13	1.87	0.55
1:D:3315:LEU:O	1:D:3318:ASN:ND2	2.39	0.55
1:A:350:HIS:HD2	1:A:352:ALA:H	1.53	0.55
1:B:234:SER:HB2	1:B:242:ARG:HG3	1.87	0.55
1:B:3315:LEU:O	1:B:3318:ASN:ND2	2.39	0.55
1:C:70:GLU:O	1:C:71:GLN:NE2	2.39	0.55
1:D:1554:VAL:HG12	1:D:1556:PRO:HD3	1.88	0.55
1:C:1650:ILE:HG23	1:C:1651:LEU:HD22	1.87	0.55
1:C:3524:MET:O	1:C:3528:THR:OG1	2.24	0.55
1:D:1287:LEU:HB2	1:D:1460:HIS:HB2	1.88	0.55
1:D:1437:VAL:HG11	1:D:1538:THR:HG21	1.87	0.55
1:D:1650:ILE:HG23	1:D:1651:LEU:HD22	1.87	0.55
1:D:3654:LEU:O	1:D:3661:TRP:NE1	2.38	0.55
1:A:1287:LEU:HB2	1:A:1460:HIS:HB2	1.88	0.55
1:A:4345:ALA:HB3	1:A:4561:THR:HA	1.89	0.55
1:C:1189:LEU:HD12	1:C:1190:PRO:HD2	1.87	0.55
1:D:793:LEU:HD21	1:D:797:HIS:H	1.71	0.55
1:D:1835:GLU:HG2	1:D:1932:PRO:HG2	1.87	0.55
1:D:4813:LEU:O	1:D:4816:ILE:HB	2.07	0.55
1:B:675:LEU:HG	1:B:676:THR:H	1.69	0.55
1:C:1765:VAL:HG22	1:C:1766:GLY:H	1.71	0.55
1:C:1835:GLU:HG2	1:C:1932:PRO:HG2	1.87	0.55
1:A:234:SER:HB2	1:A:242:ARG:HG3	1.87	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1554:VAL:HG12	1:A:1556:PRO:HD3	1.88	0.55
1:A:4813:LEU:O	1:A:4816:ILE:HB	2.07	0.55
1:C:1501:VAL:HG13	1:C:1534:LYS:HD3	1.87	0.55
1:C:4813:LEU:O	1:C:4816:ILE:HB	2.07	0.55
1:D:70:GLU:O	1:D:71:GLN:NE2	2.39	0.55
1:D:215:THR:OG1	1:D:271:GLY:O	2.20	0.55
1:D:2556:LEU:HD13	1:D:2597:LYS:HA	1.89	0.55
1:D:3059:THR:O	1:D:3187:ARG:NH2	2.39	0.55
1:D:4345:ALA:HB3	1:D:4561:THR:HA	1.89	0.55
1:B:584:LYS:NZ	1:B:624:ASN:OD1	2.35	0.55
1:C:1126:GLY:HA3	1:C:1143:TRP:CE2	2.42	0.55
1:A:960:MET:HA	1:A:960:MET:HE3	1.88	0.55
1:A:3187:ARG:HH12	1:A:3190:LEU:HD12	1.72	0.55
1:B:2556:LEU:HD13	1:B:2597:LYS:HA	1.89	0.55
1:B:3187:ARG:HH12	1:B:3190:LEU:HD12	1.72	0.55
1:C:977:LEU:HB3	1:C:1047:LEU:HD22	1.88	0.55
1:D:863:LEU:HD22	1:D:868:GLU:HG2	1.88	0.55
1:D:3524:MET:O	1:D:3528:THR:OG1	2.24	0.55
1:D:4696:ASP:OD1	1:D:4696:ASP:N	2.40	0.55
1:A:70:GLU:O	1:A:71:GLN:NE2	2.39	0.55
1:A:977:LEU:HB3	1:A:1047:LEU:HD22	1.88	0.55
1:A:2556:LEU:HD13	1:A:2597:LYS:HA	1.89	0.55
1:A:3578:GLY:O	1:A:3582:ARG:N	2.37	0.55
1:B:178:ARG:NE	1:B:194:SER:O	2.38	0.55
1:B:277:GLY:HA2	1:B:315:CYS:HB2	1.89	0.55
1:B:960:MET:HA	1:B:960:MET:HE3	1.88	0.55
1:B:4345:ALA:HB3	1:B:4561:THR:HA	1.89	0.55
1:D:1126:GLY:HA3	1:D:1143:TRP:CE2	2.42	0.55
1:A:1141:ARG:HH22	1:A:1144:GLN:HE22	1.55	0.54
1:B:70:GLU:O	1:B:71:GLN:NE2	2.39	0.54
1:D:2548:LEU:O	1:D:2552:ARG:NH1	2.39	0.54
1:D:4240:ASP:OD2	1:D:4672:LYS:NZ	2.39	0.54
1:B:1126:GLY:HA3	1:B:1143:TRP:CE2	2.42	0.54
1:B:1835:GLU:HG2	1:B:1932:PRO:HG2	1.87	0.54
1:B:3578:GLY:O	1:B:3582:ARG:N	2.37	0.54
1:C:1072:VAL:HG12	1:C:1195:GLY:HA2	1.88	0.54
1:C:2556:LEU:HD13	1:C:2597:LYS:HA	1.89	0.54
1:D:102:LEU:HB2	1:D:105:HIS:HD2	1.73	0.54
1:A:215:THR:OG1	1:A:271:GLY:O	2.20	0.54
1:A:4900:GLU:O	1:A:4901:ILE:HD13	2.07	0.54
1:B:320:LYS:HE2	1:B:382:GLY:HA3	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:320:LYS:HE2	1:C:382:GLY:HA3	1.90	0.54
1:C:960:MET:HE3	1:C:960:MET:HA	1.88	0.54
1:C:1287:LEU:HB2	1:C:1460:HIS:HB2	1.88	0.54
1:C:4090:LYS:HG3	1:C:4112:LEU:HD22	1.90	0.54
1:D:977:LEU:HB3	1:D:1047:LEU:HD22	1.88	0.54
1:D:3652:MET:O	1:D:3656:SER:OG	2.24	0.54
1:D:4090:LYS:HG3	1:D:4112:LEU:HD22	1.90	0.54
1:D:4900:GLU:O	1:D:4901:ILE:HD13	2.07	0.54
1:A:2512:ILE:HD11	1:A:2558:VAL:HG11	1.89	0.54
1:B:1072:VAL:HG12	1:B:1195:GLY:HA2	1.88	0.54
1:B:4090:LYS:HG3	1:B:4112:LEU:HD22	1.90	0.54
1:B:4813:LEU:O	1:B:4816:ILE:HB	2.07	0.54
1:B:4817:ALA:C	1:B:4819:GLY:N	2.66	0.54
1:C:4345:ALA:HB3	1:C:4561:THR:HA	1.89	0.54
1:D:4712:PRO:O	1:D:4718:LYS:NZ	2.38	0.54
1:D:4825:THR:O	1:D:4828:SER:OG	2.23	0.54
1:A:863:LEU:HD22	1:A:868:GLU:HG2	1.88	0.54
1:A:977:LEU:HD12	1:A:978:THR:N	2.23	0.54
1:A:4817:ALA:C	1:A:4819:GLY:N	2.66	0.54
1:B:793:LEU:HD21	1:B:797:HIS:H	1.71	0.54
1:B:4684:ASP:OD1	1:B:4685:GLY:N	2.41	0.54
1:A:3524:MET:O	1:A:3528:THR:OG1	2.24	0.54
1:B:3654:LEU:O	1:B:3661:TRP:NE1	2.38	0.54
1:C:102:LEU:HB2	1:C:105:HIS:HD2	1.73	0.54
1:B:977:LEU:HD12	1:B:978:THR:N	2.23	0.54
1:C:863:LEU:HD22	1:C:868:GLU:HG2	1.88	0.54
1:C:2512:ILE:HD11	1:C:2558:VAL:HG11	1.89	0.54
1:C:4817:ALA:O	1:C:4819:GLY:N	2.36	0.54
1:C:4900:GLU:O	1:C:4901:ILE:HD13	2.07	0.54
1:D:2512:ILE:HD11	1:D:2558:VAL:HG11	1.89	0.54
1:D:3200:ALA:O	1:D:3204:ALA:N	2.40	0.54
1:A:169:LEU:HD13	1:A:202:MET:HE1	1.90	0.54
1:A:3654:LEU:O	1:A:3661:TRP:NE1	2.38	0.54
1:B:2512:ILE:HD11	1:B:2558:VAL:HG11	1.89	0.54
1:B:4900:GLU:O	1:B:4901:ILE:HD13	2.07	0.54
1:C:793:LEU:HD21	1:C:797:HIS:H	1.71	0.54
1:C:3919:THR:HG21	1:C:3968:TYR:HE2	1.73	0.54
1:A:102:LEU:HB2	1:A:105:HIS:HD2	1.73	0.54
1:B:4912:TYR:OH	1:D:4320:ARG:HG2	2.08	0.54
1:A:2170:MET:HE1	1:A:2178:MET:HE1	1.89	0.54
1:C:1141:ARG:HH22	1:C:1144:GLN:HE22	1.55	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1970:GLN:NE2	1:C:3641:LEU:O	2.36	0.54
1:D:1141:ARG:HH22	1:D:1144:GLN:HE22	1.55	0.54
1:D:4635:SER:O	1:D:4636:THR:C	2.49	0.54
1:A:3200:ALA:O	1:A:3204:ALA:N	2.40	0.53
1:A:4912:TYR:OH	1:C:4320:ARG:HG2	2.08	0.53
1:C:575:LEU:HD22	1:C:609:CYS:HB3	1.90	0.53
1:C:2170:MET:HE1	1:C:2178:MET:HE1	1.89	0.53
1:D:3187:ARG:HH12	1:D:3190:LEU:HD12	1.72	0.53
1:A:320:LYS:HE2	1:A:382:GLY:HA3	1.90	0.53
1:A:4090:LYS:HG3	1:A:4112:LEU:HD22	1.90	0.53
1:B:575:LEU:HD22	1:B:609:CYS:HB3	1.90	0.53
1:B:1088:TRP:HA	1:B:1224:GLU:O	2.09	0.53
1:B:1141:ARG:HH22	1:B:1144:GLN:HE22	1.55	0.53
1:C:3187:ARG:HH12	1:C:3190:LEU:HD12	1.72	0.53
1:D:4576:ILE:HG22	1:D:4631:PHE:CE2	2.44	0.53
1:A:2358:ILE:HD13	1:A:2460:LEU:HD12	1.91	0.53
1:B:664:PHE:HB3	1:B:746:CYS:HB3	1.91	0.53
1:C:277:GLY:HA2	1:C:315:CYS:HB2	1.89	0.53
1:D:320:LYS:HE2	1:D:382:GLY:HA3	1.90	0.53
1:D:2170:MET:HE1	1:D:2178:MET:HE1	1.89	0.53
1:D:3232:LEU:HB3	1:D:3235:SER:HB3	1.91	0.53
1:D:3657:TYR:HB3	1:D:3661:TRP:CD1	2.44	0.53
1:D:4636:THR:C	1:D:4638:TYR:N	2.66	0.53
1:A:664:PHE:HB3	1:A:746:CYS:HB3	1.91	0.53
1:A:4636:THR:C	1:A:4638:TYR:N	2.66	0.53
1:B:1287:LEU:HB2	1:B:1460:HIS:HB2	1.88	0.53
1:B:2170:MET:HE1	1:B:2178:MET:HE1	1.89	0.53
1:B:3657:TYR:HB3	1:B:3661:TRP:CD1	2.44	0.53
1:C:3232:LEU:HB3	1:C:3235:SER:HB3	1.91	0.53
1:C:4635:SER:O	1:C:4636:THR:C	2.49	0.53
1:D:169:LEU:HD13	1:D:202:MET:HE1	1.90	0.53
1:A:575:LEU:HD22	1:A:609:CYS:HB3	1.90	0.53
1:A:3761:GLN:C	1:A:3763:LEU:H	2.17	0.53
1:A:4684:ASP:OD1	1:A:4685:GLY:N	2.41	0.53
1:C:4576:ILE:HG22	1:C:4631:PHE:CE2	2.44	0.53
1:D:2358:ILE:HD13	1:D:2460:LEU:HD12	1.91	0.53
1:D:3761:GLN:C	1:D:3763:LEU:H	2.17	0.53
1:A:1126:GLY:HA3	1:A:1143:TRP:CE2	2.42	0.53
1:A:3919:THR:HG21	1:A:3968:TYR:HE2	1.73	0.53
1:A:4320:ARG:HG2	1:C:4912:TYR:OH	2.08	0.53
1:B:4320:ARG:HG2	1:D:4912:TYR:OH	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:277:GLY:HA2	1:D:315:CYS:HB2	1.89	0.53
1:A:4687:TYR:OH	1:A:4699:GLY:O	2.20	0.53
1:B:2358:ILE:HD13	1:B:2460:LEU:HD12	1.91	0.53
1:B:3761:GLN:C	1:B:3763:LEU:H	2.17	0.53
1:C:150:MET:HB2	1:C:169:LEU:HD23	1.91	0.53
1:C:977:LEU:HD12	1:C:978:THR:N	2.23	0.53
1:C:1859:VAL:HA	1:C:1862:ILE:HG22	1.91	0.53
1:C:4684:ASP:OD1	1:C:4685:GLY:N	2.41	0.53
1:A:150:MET:HB2	1:A:169:LEU:HD23	1.91	0.53
1:A:595:ARG:NH1	1:A:631:LEU:O	2.42	0.53
1:A:1088:TRP:HA	1:A:1224:GLU:O	2.09	0.53
1:A:3657:TYR:HB3	1:A:3661:TRP:CD1	2.44	0.53
1:B:102:LEU:HB2	1:B:105:HIS:HD2	1.73	0.53
1:C:675:LEU:HD21	1:C:1633:PRO:HB3	1.90	0.53
1:C:1088:TRP:HA	1:C:1224:GLU:O	2.09	0.53
1:C:3200:ALA:O	1:C:3204:ALA:N	2.40	0.53
1:D:977:LEU:HD12	1:D:978:THR:N	2.23	0.53
1:D:1088:TRP:HA	1:D:1224:GLU:O	2.09	0.53
1:A:675:LEU:HD21	1:A:1633:PRO:HB3	1.90	0.53
1:B:150:MET:HB2	1:B:169:LEU:HD23	1.91	0.53
1:B:1859:VAL:HA	1:B:1862:ILE:HG22	1.91	0.53
1:B:3919:THR:HG21	1:B:3968:TYR:HE2	1.73	0.53
1:C:584:LYS:NZ	1:C:624:ASN:OD1	2.35	0.53
1:C:4691:GLN:OE1	1:C:4692:PRO:HD2	2.09	0.53
1:D:675:LEU:HD21	1:D:1633:PRO:HB3	1.90	0.53
1:D:1859:VAL:HA	1:D:1862:ILE:HG22	1.91	0.53
1:D:2961:GLN:O	1:D:2965:ARG:NH1	2.42	0.53
1:D:4180:ARG:HD3	1:D:4192:ARG:HH21	1.74	0.53
1:D:4691:GLN:OE1	1:D:4692:PRO:HD2	2.09	0.53
1:A:1970:GLN:NE2	1:A:3641:LEU:O	2.36	0.53
1:A:3232:LEU:HB3	1:A:3235:SER:HB3	1.91	0.53
1:A:4576:ILE:HG22	1:A:4631:PHE:CE2	2.44	0.53
1:B:169:LEU:HD13	1:B:202:MET:HE1	1.90	0.53
1:B:234:SER:OG	1:B:240:ASP:OD2	2.27	0.53
1:B:2961:GLN:O	1:B:2965:ARG:NH1	2.42	0.53
1:C:664:PHE:HB3	1:C:746:CYS:HB3	1.91	0.53
1:D:1259:ARG:NH2	1:D:1591:CYS:SG	2.82	0.53
1:A:667:MET:HE2	1:A:790:ARG:HG2	1.91	0.52
1:A:1259:ARG:NH2	1:A:1591:CYS:SG	2.82	0.52
1:A:2153:MET:HA	1:A:2153:MET:HE3	1.91	0.52
1:B:1079:LYS:NZ	1:B:1655:GLU:OE2	2.35	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:4909:TYR:CZ	1:D:4319:LEU:HD12	2.45	0.52
1:C:3654:LEU:O	1:C:3661:TRP:NE1	2.38	0.52
1:A:102:LEU:HB2	1:A:105:HIS:CD2	2.44	0.52
1:A:1833:SER:O	1:A:1834:VAL:C	2.51	0.52
1:A:4909:TYR:CZ	1:C:4319:LEU:HD12	2.45	0.52
1:B:102:LEU:HB2	1:B:105:HIS:CD2	2.44	0.52
1:B:595:ARG:NH1	1:B:631:LEU:O	2.42	0.52
1:B:4576:ILE:HG22	1:B:4631:PHE:CE2	2.44	0.52
1:C:684:VAL:HG21	1:C:744:VAL:HG11	1.91	0.52
1:C:4321:ARG:HH11	1:C:4321:ARG:HG2	1.74	0.52
1:D:595:ARG:NH1	1:D:631:LEU:O	2.42	0.52
1:D:664:PHE:HB3	1:D:746:CYS:HB3	1.91	0.52
1:D:4684:ASP:OD1	1:D:4685:GLY:N	2.41	0.52
1:A:2961:GLN:O	1:A:2965:ARG:NH1	2.42	0.52
1:B:3232:LEU:HB3	1:B:3235:SER:HB3	1.91	0.52
1:B:4321:ARG:HG2	1:B:4321:ARG:HH11	1.74	0.52
1:C:595:ARG:NH1	1:C:631:LEU:O	2.42	0.52
1:C:2358:ILE:HD13	1:C:2460:LEU:HD12	1.91	0.52
1:C:3657:TYR:HB3	1:C:3661:TRP:CD1	2.44	0.52
1:C:4052:SER:O	1:C:4056:GLU:HG2	2.09	0.52
1:D:667:MET:HE2	1:D:790:ARG:HG2	1.91	0.52
1:A:2042:CYS:SG	1:A:2043:GLY:N	2.83	0.52
1:B:2153:MET:HA	1:B:2153:MET:HE3	1.91	0.52
1:B:4691:GLN:OE1	1:B:4692:PRO:HD2	2.09	0.52
1:C:169:LEU:HD13	1:C:202:MET:HE1	1.90	0.52
1:C:1712:TYR:CD2	1:C:1840:PRO:O	2.63	0.52
1:C:4240:ASP:OD2	1:C:4672:LYS:NZ	2.39	0.52
1:D:102:LEU:HB2	1:D:105:HIS:CD2	2.44	0.52
1:D:178:ARG:NE	1:D:194:SER:O	2.38	0.52
1:A:277:GLY:HA2	1:A:315:CYS:HB2	1.89	0.52
1:B:1712:TYR:CD2	1:B:1840:PRO:O	2.63	0.52
1:D:575:LEU:HD22	1:D:609:CYS:HB3	1.90	0.52
1:D:3919:THR:HG21	1:D:3968:TYR:HE2	1.73	0.52
1:A:1712:TYR:CD2	1:A:1840:PRO:O	2.63	0.52
1:A:4321:ARG:HG2	1:A:4321:ARG:HH11	1.74	0.52
1:B:684:VAL:HG21	1:B:744:VAL:HG11	1.91	0.52
1:B:1259:ARG:NH2	1:B:1591:CYS:SG	2.82	0.52
1:B:2042:CYS:SG	1:B:2043:GLY:N	2.83	0.52
1:B:4052:SER:O	1:B:4056:GLU:HG2	2.09	0.52
1:B:4240:ASP:OD2	1:B:4672:LYS:NZ	2.39	0.52
1:D:1712:TYR:CD2	1:D:1840:PRO:O	2.63	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:4798:MET:O	1:D:4802:GLY:N	2.43	0.52
1:A:214:VAL:HG21	1:A:390:LEU:HD11	1.91	0.52
1:A:1859:VAL:HA	1:A:1862:ILE:HG22	1.91	0.52
1:A:4052:SER:O	1:A:4056:GLU:HG2	2.09	0.52
1:B:130:LYS:HD2	1:B:131:LEU:N	2.25	0.52
1:B:667:MET:HE2	1:B:790:ARG:HG2	1.91	0.52
1:B:1833:SER:O	1:B:1834:VAL:C	2.51	0.52
1:B:3652:MET:O	1:B:3656:SER:OG	2.24	0.52
1:C:102:LEU:HB2	1:C:105:HIS:CD2	2.44	0.52
1:C:1259:ARG:NH2	1:C:1591:CYS:SG	2.82	0.52
1:C:2042:CYS:SG	1:C:2043:GLY:N	2.83	0.52
1:C:2961:GLN:O	1:C:2965:ARG:NH1	2.42	0.52
1:A:4888:TYR:HA	1:D:4918:ILE:HD11	1.92	0.52
1:B:3524:MET:O	1:B:3528:THR:OG1	2.24	0.52
1:D:214:VAL:HG21	1:D:390:LEU:HD11	1.91	0.52
1:A:1079:LYS:NZ	1:A:1655:GLU:OE2	2.35	0.52
1:A:3771:HIS:HB3	1:A:3774:GLY:H	1.75	0.52
1:A:4319:LEU:HD12	1:C:4909:TYR:CZ	2.45	0.52
1:A:4636:THR:O	1:A:4638:TYR:N	2.43	0.52
1:B:4636:THR:O	1:B:4638:TYR:N	2.43	0.52
1:C:4918:ILE:HD11	1:D:4888:TYR:HA	1.92	0.52
1:D:234:SER:OG	1:D:240:ASP:OD2	2.27	0.52
1:D:350:HIS:HB3	1:D:353:SER:HB2	1.92	0.52
1:D:2042:CYS:SG	1:D:2043:GLY:N	2.83	0.52
1:D:4321:ARG:HG2	1:D:4321:ARG:HH11	1.74	0.52
1:A:130:LYS:HD2	1:A:131:LEU:N	2.25	0.52
1:A:4798:MET:O	1:A:4802:GLY:N	2.43	0.52
1:B:1089:TYR:HB2	1:B:1152:MET:SD	2.50	0.52
1:C:130:LYS:HD2	1:C:131:LEU:N	2.25	0.52
1:C:234:SER:OG	1:C:240:ASP:OD2	2.27	0.52
1:C:1469:VAL:HG23	1:C:1488:LYS:HD3	1.92	0.52
1:C:3960:GLN:NE2	1:C:3960:GLN:O	2.43	0.52
1:D:150:MET:HB2	1:D:169:LEU:HD23	1.91	0.52
1:D:3960:GLN:O	1:D:3960:GLN:NE2	2.43	0.52
1:A:668:VAL:HA	1:A:789:VAL:HG12	1.92	0.51
1:A:689:THR:HA	1:A:778:PHE:CE2	2.45	0.51
1:B:411:TYR:HB2	1:B:486:LEU:HD21	1.93	0.51
1:B:1469:VAL:HG23	1:B:1488:LYS:HD3	1.92	0.51
1:B:4180:ARG:HD3	1:B:4192:ARG:HH21	1.74	0.51
1:B:4319:LEU:HD12	1:D:4909:TYR:CZ	2.45	0.51
1:B:4918:ILE:HD11	1:C:4888:TYR:HA	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:350:HIS:HB3	1:C:353:SER:HB2	1.92	0.51
1:C:4180:ARG:HD3	1:C:4192:ARG:HH21	1.74	0.51
1:A:4180:ARG:HD3	1:A:4192:ARG:HH21	1.74	0.51
1:C:1833:SER:O	1:C:1834:VAL:C	2.51	0.51
1:C:4636:THR:C	1:C:4638:TYR:N	2.66	0.51
1:D:130:LYS:HD2	1:D:131:LEU:N	2.25	0.51
1:D:411:TYR:HB2	1:D:486:LEU:HD21	1.93	0.51
1:D:4052:SER:O	1:D:4056:GLU:HG2	2.09	0.51
1:A:350:HIS:HB3	1:A:353:SER:HB2	1.92	0.51
1:A:4691:GLN:OE1	1:A:4692:PRO:HD2	2.09	0.51
1:B:214:VAL:HG21	1:B:390:LEU:HD11	1.91	0.51
1:C:252:VAL:HG22	1:C:257:ARG:NH2	2.26	0.51
1:C:1100:MET:HB2	1:C:1143:TRP:HZ3	1.75	0.51
1:C:3051:ARG:NH2	1:C:3179:LYS:O	2.44	0.51
1:D:689:THR:HA	1:D:778:PHE:CE2	2.45	0.51
1:D:1100:MET:HB2	1:D:1143:TRP:HZ3	1.75	0.51
1:D:1240:LYS:HE2	1:D:1606:SER:HB2	1.92	0.51
1:A:3680:ALA:HB3	1:A:3697:PRO:HG2	1.93	0.51
1:A:3729:MET:HB3	1:A:3770:LEU:HD21	1.92	0.51
1:B:689:THR:HA	1:B:778:PHE:CE2	2.45	0.51
1:C:646:PRO:HG2	1:C:779:PRO:HG2	1.93	0.51
1:C:668:VAL:HA	1:C:789:VAL:HG12	1.92	0.51
1:C:3761:GLN:C	1:C:3763:LEU:H	2.17	0.51
1:D:668:VAL:HA	1:D:789:VAL:HG12	1.92	0.51
1:A:221:ARG:NH2	1:A:259:LEU:HD21	2.26	0.51
1:A:1089:TYR:HB2	1:A:1152:MET:SD	2.50	0.51
1:A:4918:ILE:HD11	1:B:4888:TYR:HA	1.92	0.51
1:B:675:LEU:HD21	1:B:1633:PRO:HB3	1.90	0.51
1:B:3960:GLN:O	1:B:3960:GLN:NE2	2.43	0.51
1:B:4798:MET:O	1:B:4802:GLY:N	2.43	0.51
1:C:221:ARG:NH2	1:C:259:LEU:HD21	2.26	0.51
1:C:667:MET:HE2	1:C:790:ARG:HG2	1.91	0.51
1:C:3578:GLY:O	1:C:3582:ARG:N	2.37	0.51
1:C:4634:GLU:HG3	1:C:4636:THR:CG2	2.32	0.51
1:C:4636:THR:O	1:C:4638:TYR:N	2.43	0.51
1:D:1866:ILE:C	1:D:1868:PRO:HD2	2.36	0.51
1:D:3680:ALA:HB3	1:D:3697:PRO:HG2	1.93	0.51
1:D:3729:MET:HB3	1:D:3770:LEU:HD21	1.92	0.51
1:A:411:TYR:HB2	1:A:486:LEU:HD21	1.93	0.51
1:A:3960:GLN:NE2	1:A:3960:GLN:O	2.43	0.51
1:A:4638:TYR:O	1:A:4641:PRO:HD2	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:668:VAL:HA	1:B:789:VAL:HG12	1.92	0.51
1:C:192:ASP:OD2	1:C:194:SER:OG	2.29	0.51
1:D:23:GLN:HE21	1:D:203:ASN:HD22	1.58	0.51
1:D:4636:THR:O	1:D:4638:TYR:N	2.43	0.51
1:B:221:ARG:NH2	1:B:259:LEU:HD21	2.26	0.51
1:C:411:TYR:HB2	1:C:486:LEU:HD21	1.93	0.51
1:C:497:TYR:HD1	1:C:503:PHE:HB3	1.76	0.51
1:C:3729:MET:HB3	1:C:3770:LEU:HD21	1.92	0.51
1:C:4635:SER:O	1:C:4637:GLY:N	2.44	0.51
1:C:4798:MET:O	1:C:4802:GLY:N	2.43	0.51
1:D:665:GLU:HG3	1:D:792:LEU:HD12	1.93	0.51
1:D:2153:MET:HE3	1:D:2153:MET:HA	1.91	0.51
1:D:4638:TYR:O	1:D:4641:PRO:HD2	2.11	0.51
1:A:23:GLN:HE21	1:A:203:ASN:HD22	1.58	0.51
1:A:497:TYR:HD1	1:A:503:PHE:HB3	1.76	0.51
1:A:684:VAL:HG21	1:A:744:VAL:HG11	1.91	0.51
1:B:350:HIS:HB3	1:B:353:SER:HB2	1.92	0.51
1:B:1970:GLN:NE2	1:B:3641:LEU:O	2.36	0.51
1:C:689:THR:HA	1:C:778:PHE:CE2	2.45	0.51
1:C:1089:TYR:HB2	1:C:1152:MET:SD	2.50	0.51
1:C:2153:MET:HA	1:C:2153:MET:HE3	1.91	0.51
1:D:192:ASP:OD2	1:D:194:SER:OG	2.29	0.51
1:A:252:VAL:HG22	1:A:257:ARG:NH2	2.26	0.51
1:B:3200:ALA:O	1:B:3204:ALA:N	2.40	0.51
1:B:3771:HIS:HB3	1:B:3774:GLY:H	1.75	0.51
1:C:2149:VAL:HA	1:C:2152:THR:HG22	1.93	0.51
1:D:684:VAL:HG21	1:D:744:VAL:HG11	1.91	0.51
1:D:1161:ILE:HG13	1:D:1161:ILE:O	2.11	0.51
1:D:4635:SER:O	1:D:4637:GLY:N	2.44	0.51
1:A:1161:ILE:HG13	1:A:1161:ILE:O	2.11	0.51
1:A:1469:VAL:HG23	1:A:1488:LYS:HD3	1.92	0.51
1:A:4098:ASP:OD1	1:A:4098:ASP:N	2.41	0.51
1:B:1866:ILE:C	1:B:1868:PRO:HD2	2.36	0.51
1:B:3729:MET:HB3	1:B:3770:LEU:HD21	1.92	0.51
1:C:178:ARG:NE	1:C:194:SER:O	2.38	0.51
1:C:2961:GLN:NE2	1:C:3037:GLU:OE2	2.44	0.51
1:D:497:TYR:HD1	1:D:503:PHE:HB3	1.76	0.51
1:D:583:ILE:CD1	1:D:620:LEU:HB3	2.42	0.51
1:D:646:PRO:HG2	1:D:779:PRO:HG2	1.93	0.51
1:A:583:ILE:CD1	1:A:620:LEU:HB3	2.42	0.50
1:A:665:GLU:OE1	1:A:745:SER:OG	2.23	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:665:GLU:HG3	1:A:792:LEU:HD12	1.93	0.50
1:A:1866:ILE:C	1:A:1868:PRO:HD2	2.36	0.50
1:A:2961:GLN:NE2	1:A:3037:GLU:OE2	2.44	0.50
1:B:3680:ALA:HB3	1:B:3697:PRO:HG2	1.93	0.50
1:B:4635:SER:O	1:B:4637:GLY:N	2.44	0.50
1:C:214:VAL:HG21	1:C:390:LEU:HD11	1.91	0.50
1:C:583:ILE:CD1	1:C:620:LEU:HB3	2.42	0.50
1:D:252:VAL:HG22	1:D:257:ARG:NH2	2.26	0.50
1:A:4227:GLU:HG2	1:A:4229:GLU:H	1.76	0.50
1:B:583:ILE:CD1	1:B:620:LEU:HB3	2.42	0.50
1:B:1161:ILE:O	1:B:1161:ILE:HG13	2.11	0.50
1:B:1240:LYS:HE2	1:B:1606:SER:HB2	1.92	0.50
1:C:1161:ILE:HG13	1:C:1161:ILE:O	2.11	0.50
1:C:1866:ILE:C	1:C:1868:PRO:HD2	2.36	0.50
1:C:4036:VAL:O	1:C:4037:ASN:ND2	2.44	0.50
1:C:4638:TYR:O	1:C:4641:PRO:HD2	2.11	0.50
1:C:4696:ASP:OD1	1:C:4696:ASP:N	2.40	0.50
1:D:221:ARG:NH2	1:D:259:LEU:HD21	2.26	0.50
1:D:4634:GLU:C	1:D:4636:THR:H	2.19	0.50
1:A:192:ASP:OD2	1:A:194:SER:OG	2.29	0.50
1:A:646:PRO:HG2	1:A:779:PRO:HG2	1.93	0.50
1:A:1104:TRP:NE1	1:A:1151:CYS:SG	2.85	0.50
1:B:252:VAL:HG22	1:B:257:ARG:NH2	2.26	0.50
1:B:2149:VAL:HA	1:B:2152:THR:HG22	1.93	0.50
1:C:3652:MET:O	1:C:3656:SER:OG	2.24	0.50
1:A:1224:GLU:OE2	1:A:1228:ILE:HB	2.11	0.50
1:B:497:TYR:HD1	1:B:503:PHE:HB3	1.76	0.50
1:B:4687:TYR:OH	1:B:4699:GLY:O	2.20	0.50
1:C:711:LEU:HB3	1:C:1532:ASN:ND2	2.27	0.50
1:C:1293:LEU:CD2	1:C:1579:MET:HB3	2.42	0.50
1:D:1089:TYR:HB2	1:D:1152:MET:SD	2.50	0.50
1:D:1224:GLU:OE2	1:D:1228:ILE:HB	2.11	0.50
1:D:2441:HIS:HA	1:D:2444:GLN:HG2	1.94	0.50
1:D:4036:VAL:O	1:D:4037:ASN:ND2	2.44	0.50
1:D:4999:ASP:OD1	1:D:4999:ASP:N	2.45	0.50
1:C:23:GLN:HE21	1:C:203:ASN:HD22	1.58	0.50
1:C:4634:GLU:C	1:C:4636:THR:H	2.19	0.50
1:D:378:LEU:HD12	1:D:378:LEU:O	2.12	0.50
1:D:1469:VAL:HG23	1:D:1488:LYS:HD3	1.92	0.50
1:A:378:LEU:O	1:A:378:LEU:HD12	2.12	0.50
1:A:2149:VAL:HA	1:A:2152:THR:HG22	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:378:LEU:HD12	1:B:378:LEU:O	2.12	0.50
1:B:4036:VAL:O	1:B:4037:ASN:ND2	2.44	0.50
1:B:4638:TYR:O	1:B:4641:PRO:HD2	2.11	0.50
1:C:350:HIS:CD2	1:C:352:ALA:H	2.30	0.50
1:C:3771:HIS:HB3	1:C:3774:GLY:H	1.75	0.50
1:D:350:HIS:CD2	1:D:352:ALA:H	2.30	0.50
1:D:2149:VAL:HA	1:D:2152:THR:HG22	1.93	0.50
1:A:1100:MET:HB2	1:A:1143:TRP:HZ3	1.75	0.50
1:A:1240:LYS:HE2	1:A:1606:SER:HB2	1.92	0.50
1:A:2441:HIS:HA	1:A:2444:GLN:HG2	1.94	0.50
1:A:4320:ARG:HB3	1:A:4320:ARG:CZ	2.42	0.50
1:A:4635:SER:O	1:A:4637:GLY:N	2.44	0.50
1:B:224:HIS:HB3	1:B:229:GLU:HB3	1.94	0.50
1:B:1104:TRP:NE1	1:B:1151:CYS:SG	2.85	0.50
1:B:1293:LEU:CD2	1:B:1579:MET:HB3	2.42	0.50
1:C:378:LEU:HD12	1:C:378:LEU:O	2.12	0.50
1:C:878:ILE:HD12	1:C:924:MET:HE1	1.94	0.50
1:C:3680:ALA:HB3	1:C:3697:PRO:HG2	1.93	0.50
1:D:3051:ARG:NH2	1:D:3179:LYS:O	2.44	0.50
1:A:4036:VAL:O	1:A:4037:ASN:ND2	2.44	0.50
1:B:646:PRO:HG2	1:B:779:PRO:HG2	1.93	0.50
1:B:4633:GLU:CB	1:B:4639:MET:HG3	2.42	0.50
1:D:224:HIS:HB3	1:D:229:GLU:HB3	1.94	0.50
1:D:711:LEU:HB3	1:D:1532:ASN:ND2	2.27	0.50
1:D:4687:TYR:OH	1:D:4699:GLY:O	2.20	0.50
1:A:223:PHE:N	1:A:389:PHE:O	2.45	0.50
1:B:23:GLN:HE21	1:B:203:ASN:HD22	1.58	0.50
1:B:1735:ILE:HG13	1:B:1771:LEU:HD23	1.94	0.50
1:B:2961:GLN:NE2	1:B:3037:GLU:OE2	2.44	0.50
1:C:665:GLU:HG3	1:C:792:LEU:HD12	1.93	0.50
1:D:878:ILE:HD12	1:D:924:MET:HE1	1.94	0.50
1:D:3771:HIS:HB3	1:D:3774:GLY:H	1.75	0.50
1:D:3878:ASP:OD1	1:D:3879:GLU:N	2.45	0.50
1:A:711:LEU:HB3	1:A:1532:ASN:ND2	2.27	0.49
1:A:3197:LEU:HD21	1:A:3201:MET:HE3	1.94	0.49
1:B:412:ASN:OD1	1:B:413:GLN:N	2.46	0.49
1:B:1100:MET:HB2	1:B:1143:TRP:HZ3	1.75	0.49
1:B:1224:GLU:OE2	1:B:1228:ILE:HB	2.11	0.49
1:B:4227:GLU:HG2	1:B:4229:GLU:H	1.76	0.49
1:C:1240:LYS:HE2	1:C:1606:SER:HB2	1.92	0.49
1:C:1653:LEU:HD13	1:C:1660:GLN:HA	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:4666:VAL:HA	1:D:4669:VAL:HG22	1.94	0.49
1:A:350:HIS:CD2	1:A:352:ALA:H	2.30	0.49
1:C:1507:GLY:O	1:C:1508:ARG:NE	2.42	0.49
1:C:4999:ASP:N	1:C:4999:ASP:OD1	2.45	0.49
1:D:412:ASN:OD1	1:D:413:GLN:N	2.46	0.49
1:D:2961:GLN:NE2	1:D:3037:GLU:OE2	2.44	0.49
1:A:2174:GLU:OE1	1:A:2174:GLU:N	2.39	0.49
1:A:4240:ASP:OD2	1:A:4672:LYS:NZ	2.39	0.49
1:B:959:TYR:HE2	1:B:966:LYS:HD2	1.78	0.49
1:B:3878:ASP:OD1	1:B:3879:GLU:N	2.45	0.49
1:B:4636:THR:C	1:B:4638:TYR:N	2.66	0.49
1:C:224:HIS:HB3	1:C:229:GLU:HB3	1.94	0.49
1:C:1735:ILE:HG13	1:C:1771:LEU:HD23	1.94	0.49
1:C:1839:VAL:O	1:C:1841:VAL:N	2.46	0.49
1:C:4227:GLU:HG2	1:C:4229:GLU:H	1.76	0.49
1:C:4633:GLU:CB	1:C:4639:MET:HG3	2.42	0.49
1:D:1104:TRP:NE1	1:D:1151:CYS:SG	2.85	0.49
1:D:4320:ARG:HB3	1:D:4320:ARG:CZ	2.42	0.49
1:A:224:HIS:HB3	1:A:229:GLU:HB3	1.94	0.49
1:B:665:GLU:HG3	1:B:792:LEU:HD12	1.93	0.49
1:B:1653:LEU:HD13	1:B:1660:GLN:HA	1.94	0.49
1:B:2441:HIS:HA	1:B:2444:GLN:HG2	1.94	0.49
1:B:4320:ARG:CZ	1:B:4320:ARG:HB3	2.42	0.49
1:B:4634:GLU:C	1:B:4636:THR:H	2.19	0.49
1:C:359:TYR:HD2	1:C:361:ALA:HB2	1.77	0.49
1:C:1104:TRP:NE1	1:C:1151:CYS:SG	2.85	0.49
1:C:1224:GLU:OE2	1:C:1228:ILE:HB	2.11	0.49
1:D:223:PHE:N	1:D:389:PHE:O	2.45	0.49
1:D:2243:SER:O	1:D:2247:GLN:NE2	2.46	0.49
1:D:3197:LEU:HD21	1:D:3201:MET:HE3	1.94	0.49
1:A:412:ASN:OD1	1:A:413:GLN:N	2.46	0.49
1:B:40:GLU:H	1:B:44:ASN:HD21	1.60	0.49
1:C:412:ASN:OD1	1:C:413:GLN:N	2.46	0.49
1:A:1839:VAL:O	1:A:1841:VAL:N	2.46	0.49
1:A:4634:GLU:C	1:A:4636:THR:H	2.19	0.49
1:B:649:PHE:HB3	1:B:776:LEU:HD22	1.95	0.49
1:C:2243:SER:O	1:C:2247:GLN:NE2	2.46	0.49
1:C:4666:VAL:HA	1:C:4669:VAL:HG22	1.94	0.49
1:A:169:LEU:HB2	1:A:202:MET:HE1	1.94	0.49
1:A:649:PHE:HB3	1:A:776:LEU:HD22	1.95	0.49
1:A:1293:LEU:CD2	1:A:1579:MET:HB3	2.42	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1576:SER:HA	1:A:1579:MET:HG2	1.94	0.49
1:B:169:LEU:HB2	1:B:202:MET:HE1	1.94	0.49
1:B:223:PHE:N	1:B:389:PHE:O	2.45	0.49
1:B:350:HIS:CD2	1:B:352:ALA:H	2.30	0.49
1:B:1507:GLY:O	1:B:1508:ARG:NE	2.42	0.49
1:B:1839:VAL:O	1:B:1841:VAL:N	2.46	0.49
1:C:1230:MET:HE2	1:C:1827:ARG:NH2	2.28	0.49
1:D:1293:LEU:CD2	1:D:1579:MET:HB3	2.42	0.49
1:D:4227:GLU:HG2	1:D:4229:GLU:H	1.76	0.49
1:A:255:HIS:HB3	1:A:480:GLU:HG3	1.94	0.49
1:A:359:TYR:HD2	1:A:361:ALA:HB2	1.77	0.49
1:A:3385:ALA:HB1	1:A:3400:VAL:HG13	1.95	0.49
1:A:4340:ALA:O	1:A:4342:ALA:N	2.46	0.49
1:A:4666:VAL:HA	1:A:4669:VAL:HG22	1.94	0.49
1:A:4696:ASP:OD1	1:A:4696:ASP:N	2.40	0.49
1:B:2243:SER:O	1:B:2247:GLN:NE2	2.46	0.49
1:D:359:TYR:HD2	1:D:361:ALA:HB2	1.77	0.49
1:D:2010:LEU:HD13	1:D:3657:TYR:HD1	1.77	0.49
1:A:959:TYR:HE2	1:A:966:LYS:HD2	1.78	0.49
1:A:3657:TYR:CE1	1:A:3660:ALA:HB3	2.48	0.49
1:B:717:ASP:OD1	1:B:720:HIS:HB2	2.13	0.49
1:B:2252:ASP:OD1	1:B:2252:ASP:N	2.45	0.49
1:C:3657:TYR:CE1	1:C:3660:ALA:HB3	2.48	0.49
1:C:3878:ASP:OD1	1:C:3879:GLU:N	2.45	0.49
1:D:1839:VAL:O	1:D:1841:VAL:N	2.46	0.49
1:D:2243:SER:HB3	1:D:2246:ASN:HD22	1.78	0.49
1:D:3657:TYR:CE1	1:D:3660:ALA:HB3	2.48	0.49
1:D:4340:ALA:O	1:D:4342:ALA:N	2.46	0.49
1:D:4633:GLU:CB	1:D:4639:MET:HG3	2.42	0.49
1:A:717:ASP:OD1	1:A:720:HIS:HB2	2.13	0.49
1:A:1735:ILE:HG13	1:A:1771:LEU:HD23	1.94	0.49
1:B:711:LEU:HB3	1:B:1532:ASN:ND2	2.27	0.49
1:B:4340:ALA:O	1:B:4342:ALA:N	2.46	0.49
1:C:40:GLU:H	1:C:44:ASN:HD21	1.60	0.49
1:C:290:TYR:O	1:C:302:VAL:N	2.46	0.49
1:C:959:TYR:HE2	1:C:966:LYS:HD2	1.78	0.49
1:C:3569:LEU:C	1:C:3571:TRP:H	2.21	0.49
1:D:290:TYR:O	1:D:302:VAL:N	2.46	0.49
1:D:959:TYR:HE2	1:D:966:LYS:HD2	1.78	0.49
1:D:1507:GLY:O	1:D:1508:ARG:NE	2.42	0.49
1:D:1833:SER:O	1:D:1834:VAL:C	2.51	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:4049:VAL:HG11	1:D:4159:ARG:HB3	1.95	0.49
1:D:4634:GLU:HG3	1:D:4636:THR:CG2	2.32	0.49
1:A:1543:GLU:HB2	1:A:1544:PRO:HD3	1.95	0.48
1:B:4666:VAL:HA	1:B:4669:VAL:HG22	1.94	0.48
1:C:3285:TRP:NE1	1:C:3293:PRO:HG3	2.23	0.48
1:D:592:LYS:HG2	1:D:1580:PHE:CD2	2.49	0.48
1:D:1576:SER:HA	1:D:1579:MET:HG2	1.94	0.48
1:D:3385:ALA:HB1	1:D:3400:VAL:HG13	1.95	0.48
1:A:878:ILE:HD12	1:A:924:MET:HE1	1.94	0.48
1:A:1653:LEU:HD13	1:A:1660:GLN:HA	1.94	0.48
1:A:4049:VAL:HG11	1:A:4159:ARG:HB3	1.95	0.48
1:B:628:GLY:C	1:B:629:ARG:HG2	2.39	0.48
1:B:665:GLU:OE1	1:B:745:SER:OG	2.23	0.48
1:B:893:TYR:OH	1:B:904:HIS:O	2.32	0.48
1:B:1230:MET:HE2	1:B:1827:ARG:NH2	2.28	0.48
1:B:2223:ILE:O	1:B:2223:ILE:HG22	2.13	0.48
1:B:4049:VAL:HG11	1:B:4159:ARG:HB3	1.95	0.48
1:C:893:TYR:OH	1:C:904:HIS:O	2.32	0.48
1:C:2441:HIS:HA	1:C:2444:GLN:HG2	1.94	0.48
1:D:40:GLU:H	1:D:44:ASN:HD21	1.60	0.48
1:D:221:ARG:HH21	1:D:259:LEU:HD21	1.78	0.48
1:D:1458:HIS:CE1	1:D:1483:VAL:HG21	2.48	0.48
1:D:1653:LEU:HD13	1:D:1660:GLN:HA	1.94	0.48
1:A:867:LEU:HD11	1:A:929:LEU:HD22	1.95	0.48
1:A:2463:LEU:HG	1:A:2464:ASP:H	1.79	0.48
1:A:3569:LEU:HG	1:A:3574:ALA:HB3	1.95	0.48
1:B:592:LYS:HG2	1:B:1580:PHE:CD2	2.49	0.48
1:B:1458:HIS:CE1	1:B:1483:VAL:HG21	2.48	0.48
1:B:2243:SER:HB3	1:B:2246:ASN:HD22	1.78	0.48
1:B:3657:TYR:CE1	1:B:3660:ALA:HB3	2.48	0.48
1:B:4126:GLU:O	1:B:4130:ASN:ND2	2.35	0.48
1:C:223:PHE:N	1:C:389:PHE:O	2.45	0.48
1:C:649:PHE:HB3	1:C:776:LEU:HD22	1.95	0.48
1:C:1576:SER:HA	1:C:1579:MET:HG2	1.94	0.48
1:C:4186:ALA:H	1:C:4188:ARG:HH22	1.60	0.48
1:D:565:TYR:CZ	1:D:569:ILE:HD11	2.49	0.48
1:D:867:LEU:HD11	1:D:929:LEU:HD22	1.95	0.48
1:D:2223:ILE:HG22	1:D:2223:ILE:O	2.13	0.48
1:D:2463:LEU:HG	1:D:2464:ASP:H	1.79	0.48
1:A:290:TYR:O	1:A:302:VAL:N	2.46	0.48
1:A:2223:ILE:HG22	1:A:2223:ILE:O	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4999:ASP:N	1:A:4999:ASP:OD1	2.45	0.48
1:B:359:TYR:HD2	1:B:361:ALA:HB2	1.77	0.48
1:B:3163:VAL:HG12	1:B:3173:TYR:HD1	1.79	0.48
1:C:255:HIS:HB3	1:C:480:GLU:HG3	1.94	0.48
1:C:1139:PHE:HZ	1:C:1177:THR:HG22	1.79	0.48
1:C:3385:ALA:HB1	1:C:3400:VAL:HG13	1.95	0.48
1:C:4049:VAL:HG11	1:C:4159:ARG:HB3	1.95	0.48
1:D:649:PHE:HB3	1:D:776:LEU:HD22	1.95	0.48
1:D:717:ASP:OD1	1:D:720:HIS:HB2	2.13	0.48
1:D:1139:PHE:HZ	1:D:1177:THR:HG22	1.79	0.48
1:D:1252:HIS:CE1	1:D:1255:TYR:HD2	2.32	0.48
1:D:1543:GLU:HB2	1:D:1544:PRO:HD3	1.95	0.48
1:D:1735:ILE:HG13	1:D:1771:LEU:HD23	1.94	0.48
1:D:2198:MET:HE2	1:D:2198:MET:N	2.29	0.48
1:D:2546:MET:HA	1:D:2546:MET:HE2	1.96	0.48
1:A:248:GLU:HG2	1:A:252:VAL:HG23	1.96	0.48
1:A:1139:PHE:HZ	1:A:1177:THR:HG22	1.79	0.48
1:A:2546:MET:HA	1:A:2546:MET:HE2	1.96	0.48
1:A:3878:ASP:OD1	1:A:3879:GLU:N	2.45	0.48
1:A:4633:GLU:CB	1:A:4639:MET:HG3	2.42	0.48
1:B:248:GLU:HG2	1:B:252:VAL:HG23	1.96	0.48
1:B:255:HIS:HB3	1:B:480:GLU:HG3	1.94	0.48
1:B:1252:HIS:CE1	1:B:1255:TYR:HD2	2.32	0.48
1:B:2546:MET:HE2	1:B:2546:MET:HA	1.96	0.48
1:B:3385:ALA:HB1	1:B:3400:VAL:HG13	1.95	0.48
1:B:4999:ASP:OD1	1:B:4999:ASP:N	2.45	0.48
1:C:565:TYR:CZ	1:C:569:ILE:HD11	2.49	0.48
1:C:2546:MET:HE2	1:C:2546:MET:HA	1.96	0.48
1:D:255:HIS:HB3	1:D:480:GLU:HG3	1.94	0.48
1:D:1230:MET:HE2	1:D:1827:ARG:NH2	2.28	0.48
1:A:40:GLU:H	1:A:44:ASN:HD21	1.60	0.48
1:A:221:ARG:HH21	1:A:259:LEU:HD21	1.78	0.48
1:A:592:LYS:HG2	1:A:1580:PHE:CD2	2.49	0.48
1:A:874:LEU:HB2	1:A:1046:LEU:HD21	1.96	0.48
1:A:2243:SER:O	1:A:2247:GLN:NE2	2.46	0.48
1:A:2243:SER:HB3	1:A:2246:ASN:HD22	1.78	0.48
1:A:4060:LYS:NZ	1:A:4107:GLU:OE2	2.39	0.48
1:A:4186:ALA:H	1:A:4188:ARG:HH22	1.60	0.48
1:B:878:ILE:HD12	1:B:924:MET:HE1	1.94	0.48
1:B:3569:LEU:C	1:B:3571:TRP:H	2.21	0.48
1:C:37:LEU:HD13	1:C:191:VAL:HG21	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:592:LYS:HG2	1:C:1580:PHE:CD2	2.49	0.48
1:C:717:ASP:OD1	1:C:720:HIS:HB2	2.13	0.48
1:D:886:ARG:NH1	1:D:889:GLN:OE1	2.47	0.48
1:A:1230:MET:HE2	1:A:1827:ARG:NH2	2.28	0.48
1:A:2010:LEU:HD13	1:A:3657:TYR:HD1	1.77	0.48
1:A:2198:MET:HE2	1:A:2198:MET:N	2.29	0.48
1:B:41:GLY:O	1:B:45:ARG:NH1	2.47	0.48
1:B:290:TYR:O	1:B:302:VAL:N	2.46	0.48
1:B:1543:GLU:HB2	1:B:1544:PRO:HD3	1.95	0.48
1:B:1576:SER:HA	1:B:1579:MET:HG2	1.94	0.48
1:B:3569:LEU:HG	1:B:3574:ALA:HB3	1.95	0.48
1:D:1861:GLN:HA	1:D:1864:LYS:HE3	1.95	0.48
1:A:234:SER:OG	1:A:240:ASP:OD2	2.27	0.48
1:A:1507:GLY:O	1:A:1508:ARG:NE	2.42	0.48
1:A:1861:GLN:HA	1:A:1864:LYS:HE3	1.95	0.48
1:A:2220:THR:HA	1:A:2223:ILE:HD11	1.96	0.48
1:A:4837:LEU:HD11	1:A:4932:ILE:HG23	1.96	0.48
1:B:2131:LEU:HB2	1:B:3662:ILE:CG1	2.44	0.48
1:B:4825:THR:O	1:B:4828:SER:OG	2.23	0.48
1:C:628:GLY:C	1:C:629:ARG:HG2	2.39	0.48
1:C:1295:VAL:O	1:C:1453:VAL:HA	2.14	0.48
1:C:1458:HIS:CE1	1:C:1483:VAL:HG21	2.48	0.48
1:C:2463:LEU:HG	1:C:2464:ASP:H	1.79	0.48
1:C:4320:ARG:CZ	1:C:4320:ARG:HB3	2.42	0.48
1:D:2207:VAL:HA	1:D:2210:VAL:HG12	1.96	0.48
1:A:2252:ASP:N	1:A:2252:ASP:OD1	2.45	0.48
1:A:3051:ARG:NH2	1:A:3179:LYS:O	2.44	0.48
1:B:37:LEU:HD13	1:B:191:VAL:HG21	1.95	0.48
1:B:1219:LEU:HD11	1:C:3528:THR:HG23	1.96	0.48
1:B:2463:LEU:HG	1:B:2464:ASP:H	1.79	0.48
1:B:2586:VAL:HG22	1:B:2591:ARG:HB2	1.96	0.48
1:C:822:ARG:HH21	1:C:1626:TRP:HB3	1.79	0.48
1:C:1219:LEU:HD11	1:D:3528:THR:HG23	1.96	0.48
1:C:1861:GLN:HA	1:C:1864:LYS:HE3	1.95	0.48
1:C:2207:VAL:HA	1:C:2210:VAL:HG12	1.96	0.48
1:C:2457:LEU:HD21	1:C:2505:PHE:CE1	2.49	0.48
1:C:4340:ALA:O	1:C:4342:ALA:N	2.46	0.48
1:D:37:LEU:HD13	1:D:191:VAL:HG21	1.95	0.48
1:D:822:ARG:HH21	1:D:1626:TRP:HB3	1.79	0.48
1:D:1453:VAL:HG23	1:D:1454:THR:N	2.28	0.48
1:A:1458:HIS:CE1	1:A:1483:VAL:HG21	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2457:LEU:HD21	1:A:2505:PHE:CE1	2.49	0.48
1:B:4343:GLY:O	1:B:4344:ALA:C	2.57	0.48
1:C:41:GLY:O	1:C:45:ARG:NH1	2.47	0.48
1:C:221:ARG:HH21	1:C:259:LEU:HD21	1.78	0.48
1:C:886:ARG:NH1	1:C:889:GLN:OE1	2.47	0.48
1:C:1218:GLY:HA2	1:C:1223:PHE:HB2	1.96	0.48
1:C:2010:LEU:HD13	1:C:3657:TYR:HD1	1.77	0.48
1:C:2181:SER:O	1:C:2185:ILE:HG12	2.14	0.48
1:C:2198:MET:N	1:C:2198:MET:HE2	2.29	0.48
1:C:2243:SER:HB3	1:C:2246:ASN:HD22	1.78	0.48
1:C:4104:THR:HG22	1:C:4106:PRO:HD2	1.96	0.48
1:C:4219:PHE:CD1	1:C:4950:VAL:HG21	2.49	0.48
1:D:41:GLY:O	1:D:45:ARG:NH1	2.47	0.48
1:D:2174:GLU:OE1	1:D:2174:GLU:N	2.39	0.48
1:D:2457:LEU:HD21	1:D:2505:PHE:CE1	2.49	0.48
1:D:3534:MET:C	1:D:3535:LEU:HD12	2.39	0.48
1:D:4837:LEU:HD11	1:D:4932:ILE:HG23	1.96	0.48
1:A:2586:VAL:HG22	1:A:2591:ARG:HB2	1.96	0.47
1:A:3534:MET:C	1:A:3535:LEU:HD12	2.39	0.47
1:B:867:LEU:HD11	1:B:929:LEU:HD22	1.95	0.47
1:B:886:ARG:NH1	1:B:889:GLN:OE1	2.47	0.47
1:B:1861:GLN:HA	1:B:1864:LYS:HE3	1.95	0.47
1:B:2010:LEU:HD13	1:B:3657:TYR:HD1	1.77	0.47
1:B:2457:LEU:HD21	1:B:2505:PHE:CE1	2.49	0.47
1:B:4104:THR:HG22	1:B:4106:PRO:HD2	1.96	0.47
1:C:2223:ILE:O	1:C:2223:ILE:HG22	2.13	0.47
1:C:4114:CYS:O	1:C:4131:ARG:NH2	2.47	0.47
1:D:4114:CYS:O	1:D:4131:ARG:NH2	2.47	0.47
1:A:571:SER:O	1:A:574:VAL:HG12	2.15	0.47
1:A:628:GLY:C	1:A:629:ARG:HG2	2.39	0.47
1:A:668:VAL:HG11	1:A:738:LEU:HD12	1.96	0.47
1:A:1218:GLY:HA2	1:A:1223:PHE:HB2	1.96	0.47
1:A:3558:HIS:CE1	1:A:3593:VAL:HG22	2.49	0.47
1:B:4186:ALA:H	1:B:4188:ARG:HH22	1.60	0.47
1:C:1683:HIS:CD2	1:C:1800:PRO:HG3	2.49	0.47
1:C:4837:LEU:HD11	1:C:4932:ILE:HG23	1.96	0.47
1:D:874:LEU:HB2	1:D:1046:LEU:HD21	1.96	0.47
1:D:2252:ASP:OD1	1:D:2252:ASP:N	2.45	0.47
1:D:3163:VAL:HG12	1:D:3173:TYR:HD1	1.79	0.47
1:A:37:LEU:HD13	1:A:191:VAL:HG21	1.95	0.47
1:A:1252:HIS:CE1	1:A:1255:TYR:HD2	2.32	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3163:VAL:HG12	1:A:3173:TYR:HD1	1.79	0.47
1:A:3569:LEU:C	1:A:3571:TRP:H	2.21	0.47
1:B:19:GLU:HB2	1:B:206:CYS:HB3	1.96	0.47
1:B:1658:ASP:OD1	1:B:1658:ASP:N	2.46	0.47
1:B:4696:ASP:OD1	1:B:4696:ASP:N	2.40	0.47
1:C:2174:GLU:OE1	1:C:2174:GLU:N	2.39	0.47
1:D:893:TYR:OH	1:D:904:HIS:O	2.32	0.47
1:D:1218:GLY:HA2	1:D:1223:PHE:HB2	1.96	0.47
1:D:2220:THR:HA	1:D:2223:ILE:HD11	1.96	0.47
1:D:3285:TRP:NE1	1:D:3293:PRO:HG3	2.23	0.47
1:D:4219:PHE:CD1	1:D:4950:VAL:HG21	2.49	0.47
1:A:1295:VAL:O	1:A:1453:VAL:HA	2.14	0.47
1:A:4114:CYS:O	1:A:4131:ARG:NH2	2.47	0.47
1:B:565:TYR:CZ	1:B:569:ILE:HD11	2.49	0.47
1:B:1683:HIS:CD2	1:B:1800:PRO:HG3	2.49	0.47
1:B:3197:LEU:HD21	1:B:3201:MET:HE3	1.94	0.47
1:B:4837:LEU:HD11	1:B:4932:ILE:HG23	1.96	0.47
1:C:169:LEU:HB2	1:C:202:MET:HE1	1.94	0.47
1:C:665:GLU:OE1	1:C:745:SER:OG	2.23	0.47
1:C:1252:HIS:CE1	1:C:1255:TYR:HD2	2.32	0.47
1:C:1543:GLU:HB2	1:C:1544:PRO:HD3	1.95	0.47
1:C:3197:LEU:HD21	1:C:3201:MET:HE3	1.94	0.47
1:C:3569:LEU:HG	1:C:3574:ALA:HB3	1.95	0.47
1:D:169:LEU:HB2	1:D:202:MET:HE1	1.94	0.47
1:D:793:LEU:HG	1:D:795:GLY:H	1.79	0.47
1:D:3838:THR:O	1:D:3838:THR:OG1	2.29	0.47
1:A:565:TYR:CZ	1:A:569:ILE:HD11	2.49	0.47
1:A:893:TYR:OH	1:A:904:HIS:O	2.32	0.47
1:A:2181:SER:O	1:A:2185:ILE:HG12	2.14	0.47
1:A:4219:PHE:CD1	1:A:4950:VAL:HG21	2.49	0.47
1:B:2220:THR:HA	1:B:2223:ILE:HD11	1.96	0.47
1:B:3534:MET:C	1:B:3535:LEU:HD12	2.39	0.47
1:B:4119:GLU:HG2	1:B:4121:GLU:HG2	1.97	0.47
1:B:4219:PHE:CD1	1:B:4950:VAL:HG21	2.49	0.47
1:B:4721:LYS:HB3	1:B:4743:MET:HE2	1.97	0.47
1:B:4907:ASP:O	1:B:4909:TYR:N	2.48	0.47
1:B:4908:GLU:H	1:B:4908:GLU:HG3	1.34	0.47
1:C:1653:LEU:HB3	1:C:1660:GLN:HB2	1.97	0.47
1:C:1658:ASP:OD1	1:C:1658:ASP:N	2.46	0.47
1:C:2316:LYS:HE2	1:C:2318:TYR:HE2	1.79	0.47
1:D:207:SER:HB3	1:D:334:MET:SD	2.55	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:628:GLY:C	1:D:629:ARG:HG2	2.39	0.47
1:D:3569:LEU:C	1:D:3571:TRP:H	2.21	0.47
1:D:4186:ALA:H	1:D:4188:ARG:HH22	1.60	0.47
1:D:4817:ALA:C	1:D:4819:GLY:N	2.66	0.47
1:A:19:GLU:HB2	1:A:206:CYS:HB3	1.96	0.47
1:A:41:GLY:O	1:A:45:ARG:NH1	2.47	0.47
1:A:1219:LEU:HD11	1:B:3528:THR:HG23	1.96	0.47
1:A:2131:LEU:HB2	1:A:3662:ILE:CG1	2.44	0.47
1:A:3528:THR:HG23	1:D:1219:LEU:HD11	1.96	0.47
1:A:4126:GLU:O	1:A:4130:ASN:ND2	2.35	0.47
1:A:4721:LYS:HB3	1:A:4743:MET:HE2	1.97	0.47
1:A:4904:PRO:O	1:A:4910:GLU:HG3	2.15	0.47
1:B:822:ARG:HH21	1:B:1626:TRP:HB3	1.79	0.47
1:B:874:LEU:HB2	1:B:1046:LEU:HD21	1.96	0.47
1:B:1218:GLY:HA2	1:B:1223:PHE:HB2	1.96	0.47
1:B:1295:VAL:O	1:B:1453:VAL:HA	2.14	0.47
1:B:1708:ARG:HH12	1:B:1837:GLN:HA	1.80	0.47
1:B:3174:SER:OG	1:B:3175:LEU:N	2.48	0.47
1:B:4904:PRO:O	1:B:4910:GLU:HG3	2.15	0.47
1:C:248:GLU:HG2	1:C:252:VAL:HG23	1.96	0.47
1:C:1208:VAL:HA	1:D:3573:MET:CE	2.45	0.47
1:C:3163:VAL:HG12	1:C:3173:TYR:HD1	1.79	0.47
1:D:3569:LEU:HG	1:D:3574:ALA:HB3	1.95	0.47
1:D:3927:GLN:HB3	1:D:3992:PHE:CE2	2.50	0.47
1:D:4633:GLU:HG3	1:D:4637:GLY:H	1.80	0.47
1:D:4907:ASP:O	1:D:4909:TYR:N	2.48	0.47
1:A:822:ARG:HH21	1:A:1626:TRP:HB3	1.79	0.47
1:A:1683:HIS:CD2	1:A:1800:PRO:HG3	2.49	0.47
1:A:2208:MET:HE3	1:A:2208:MET:HB3	1.67	0.47
1:A:2512:ILE:O	1:A:2512:ILE:HG13	2.15	0.47
1:A:3573:MET:CE	1:D:1208:VAL:HA	2.45	0.47
1:A:4807:PHE:O	1:A:4810:ALA:N	2.48	0.47
1:A:4825:THR:O	1:A:4828:SER:OG	2.23	0.47
1:B:1653:LEU:HB3	1:B:1660:GLN:HB2	1.97	0.47
1:B:2198:MET:HE2	1:B:2198:MET:N	2.29	0.47
1:B:2316:LYS:HE2	1:B:2318:TYR:HE2	1.79	0.47
1:B:3838:THR:O	1:B:3838:THR:OG1	2.29	0.47
1:B:4968:PHE:O	1:B:4975:PHE:N	2.48	0.47
1:C:793:LEU:HG	1:C:795:GLY:H	1.79	0.47
1:C:2220:THR:HA	1:C:2223:ILE:HD11	1.96	0.47
1:C:3534:MET:C	1:C:3535:LEU:HD12	2.39	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:4908:GLU:H	1:C:4908:GLU:HG3	1.34	0.47
1:D:248:GLU:HG2	1:D:252:VAL:HG23	1.96	0.47
1:D:1108:GLU:OE1	1:D:1108:GLU:N	2.48	0.47
1:D:1683:HIS:CD2	1:D:1800:PRO:HG3	2.49	0.47
1:D:4104:THR:HG22	1:D:4106:PRO:HD2	1.96	0.47
1:D:4580:TYR:HD2	1:D:4807:PHE:CZ	2.33	0.47
1:A:886:ARG:NH1	1:A:889:GLN:OE1	2.47	0.47
1:A:1708:ARG:HH12	1:A:1837:GLN:HA	1.80	0.47
1:A:3927:GLN:HB3	1:A:3992:PHE:CE2	2.50	0.47
1:A:5035:GLN:O	1:A:5036:LEU:HD22	2.15	0.47
1:B:571:SER:O	1:B:574:VAL:HG12	2.15	0.47
1:B:2181:SER:O	1:B:2185:ILE:HG12	2.14	0.47
1:B:3558:HIS:CE1	1:B:3593:VAL:HG22	2.49	0.47
1:B:3927:GLN:HB3	1:B:3992:PHE:CE2	2.50	0.47
1:B:4814:LEU:C	1:B:4816:ILE:N	2.69	0.47
1:C:867:LEU:HD11	1:C:929:LEU:HD22	1.95	0.47
1:C:1694:LEU:HB3	1:C:1715:LEU:HD12	1.96	0.47
1:C:2252:ASP:N	1:C:2252:ASP:OD1	2.45	0.47
1:C:4907:ASP:O	1:C:4909:TYR:N	2.48	0.47
1:D:590:LEU:HB2	1:D:599:VAL:HG11	1.97	0.47
1:D:1108:GLU:CD	1:D:1108:GLU:H	2.23	0.47
1:D:1295:VAL:O	1:D:1453:VAL:HA	2.14	0.47
1:D:1694:LEU:HB3	1:D:1715:LEU:HD12	1.96	0.47
1:D:2512:ILE:O	1:D:2512:ILE:HG13	2.15	0.47
1:D:3558:HIS:CE1	1:D:3593:VAL:HG22	2.49	0.47
1:A:793:LEU:HG	1:A:795:GLY:H	1.79	0.47
1:A:1653:LEU:HB3	1:A:1660:GLN:HB2	1.97	0.47
1:B:668:VAL:HG11	1:B:738:LEU:HD12	1.96	0.47
1:B:2174:GLU:OE1	1:B:2174:GLU:N	2.39	0.47
1:B:2512:ILE:HG13	1:B:2512:ILE:O	2.15	0.47
1:B:4569:LEU:HD22	1:B:4646:LEU:HD22	1.97	0.47
1:B:5027:CYS:C	1:B:5029:ARG:H	2.23	0.47
1:C:207:SER:HB3	1:C:334:MET:SD	2.55	0.47
1:C:571:SER:O	1:C:574:VAL:HG12	2.15	0.47
1:C:2131:LEU:HB2	1:C:3662:ILE:CG1	2.44	0.47
1:C:2512:ILE:HG13	1:C:2512:ILE:O	2.15	0.47
1:C:4060:LYS:NZ	1:C:4107:GLU:OE2	2.39	0.47
1:C:4098:ASP:OD1	1:C:4098:ASP:N	2.41	0.47
1:C:4569:LEU:HD22	1:C:4646:LEU:HD22	1.97	0.47
1:C:4633:GLU:HG3	1:C:4637:GLY:H	1.80	0.47
1:C:4721:LYS:HB3	1:C:4743:MET:HE2	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1658:ASP:OD1	1:D:1658:ASP:N	2.46	0.47
1:D:2340:PHE:HD1	1:D:2435:ARG:HG3	1.79	0.47
1:A:1108:GLU:H	1:A:1108:GLU:CD	2.23	0.47
1:A:2207:VAL:HA	1:A:2210:VAL:HG12	1.96	0.47
1:A:2316:LYS:HE2	1:A:2318:TYR:HE2	1.79	0.47
1:A:2340:PHE:HD1	1:A:2435:ARG:HG3	1.79	0.47
1:A:3174:SER:OG	1:A:3175:LEU:N	2.48	0.47
1:A:4580:TYR:HD2	1:A:4807:PHE:CZ	2.33	0.47
1:A:4634:GLU:HG3	1:A:4636:THR:CG2	2.32	0.47
1:A:4814:LEU:HD21	1:D:4850:LEU:HD22	1.97	0.47
1:B:977:LEU:HD12	1:B:978:THR:H	1.80	0.47
1:B:4339:VAL:HG21	1:B:4816:ILE:HD11	1.97	0.47
1:C:2131:LEU:HD12	1:C:3662:ILE:HG13	1.97	0.47
1:C:3927:GLN:HB3	1:C:3992:PHE:CE2	2.50	0.47
1:C:4580:TYR:HD2	1:C:4807:PHE:CZ	2.33	0.47
1:C:5027:CYS:C	1:C:5029:ARG:H	2.23	0.47
1:D:2131:LEU:HD12	1:D:3662:ILE:HG13	1.97	0.47
1:D:4085:ARG:NH1	1:D:4087:LEU:HD12	2.29	0.47
1:A:4339:VAL:HG21	1:A:4816:ILE:HD11	1.97	0.46
1:A:4907:ASP:O	1:A:4909:TYR:N	2.48	0.46
1:B:61:ASP:OD1	1:B:61:ASP:N	2.48	0.46
1:B:192:ASP:N	1:B:192:ASP:OD1	2.48	0.46
1:B:221:ARG:HH21	1:B:259:LEU:HD21	1.78	0.46
1:B:1208:VAL:HA	1:C:3573:MET:CE	2.45	0.46
1:B:2207:VAL:HA	1:B:2210:VAL:HG12	1.96	0.46
1:B:4796:MET:O	1:B:4799:SER:OG	2.27	0.46
1:C:61:ASP:OD1	1:C:61:ASP:N	2.48	0.46
1:C:874:LEU:HB2	1:C:1046:LEU:HD21	1.96	0.46
1:C:2368:LEU:HD13	1:C:2376:LEU:HB2	1.97	0.46
1:C:4119:GLU:HG2	1:C:4121:GLU:HG2	1.97	0.46
1:C:4960:ILE:HD11	1:C:4985:LEU:HB3	1.97	0.46
1:D:4321:ARG:HG2	1:D:4321:ARG:NH1	2.31	0.46
1:D:4721:LYS:HB3	1:D:4743:MET:HE2	1.97	0.46
1:D:4968:PHE:O	1:D:4975:PHE:N	2.48	0.46
1:A:192:ASP:OD1	1:A:192:ASP:N	2.48	0.46
1:B:207:SER:HB3	1:B:334:MET:SD	2.55	0.46
1:B:871:ARG:HH22	1:B:918:ARG:NH1	2.13	0.46
1:B:871:ARG:NH2	1:B:918:ARG:HH22	2.14	0.46
1:B:2368:LEU:HD13	1:B:2376:LEU:HB2	1.97	0.46
1:B:3051:ARG:NH2	1:B:3179:LYS:O	2.44	0.46
1:B:4321:ARG:HG2	1:B:4321:ARG:NH1	2.31	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1079:LYS:NZ	1:C:1655:GLU:OE2	2.35	0.46
1:C:2586:VAL:HG22	1:C:2591:ARG:HB2	1.96	0.46
1:C:4850:LEU:HD22	1:D:4814:LEU:HD21	1.97	0.46
1:C:5035:GLN:O	1:C:5036:LEU:HD22	2.15	0.46
1:D:2181:SER:O	1:D:2185:ILE:HG12	2.14	0.46
1:D:4904:PRO:O	1:D:4910:GLU:HG3	2.15	0.46
1:A:61:ASP:OD1	1:A:61:ASP:N	2.48	0.46
1:A:207:SER:HB3	1:A:334:MET:SD	2.55	0.46
1:A:590:LEU:HB2	1:A:599:VAL:HG11	1.97	0.46
1:A:1126:GLY:HA3	1:A:1143:TRP:CD2	2.50	0.46
1:A:2301:TYR:HB3	1:A:2331:TYR:CE2	2.51	0.46
1:A:4321:ARG:HG2	1:A:4321:ARG:NH1	2.31	0.46
1:A:4814:LEU:C	1:A:4816:ILE:N	2.69	0.46
1:B:2301:TYR:HB3	1:B:2331:TYR:CE2	2.51	0.46
1:B:4807:PHE:O	1:B:4810:ALA:N	2.48	0.46
1:C:19:GLU:HB2	1:C:206:CYS:HB3	1.96	0.46
1:C:793:LEU:HD23	1:C:793:LEU:H	1.80	0.46
1:C:1083:VAL:HG21	1:C:1088:TRP:CE2	2.51	0.46
1:C:1126:GLY:HA3	1:C:1143:TRP:CD2	2.50	0.46
1:C:4321:ARG:HG2	1:C:4321:ARG:NH1	2.31	0.46
1:C:4339:VAL:HG21	1:C:4816:ILE:HD11	1.97	0.46
1:D:665:GLU:OE1	1:D:745:SER:OG	2.23	0.46
1:D:4339:VAL:HG21	1:D:4816:ILE:HD11	1.97	0.46
1:D:4807:PHE:O	1:D:4810:ALA:N	2.48	0.46
1:D:5035:GLN:O	1:D:5036:LEU:HD22	2.15	0.46
1:A:1208:VAL:HA	1:B:3573:MET:CE	2.45	0.46
1:A:4343:GLY:O	1:A:4344:ALA:C	2.57	0.46
1:B:618:GLN:NE2	1:B:1675:ALA:H	2.14	0.46
1:B:793:LEU:H	1:B:793:LEU:HD23	1.80	0.46
1:B:2302:LEU:HD11	1:B:2332:LEU:HB2	1.97	0.46
1:B:3285:TRP:NE1	1:B:3293:PRO:HG3	2.23	0.46
1:B:4633:GLU:HG3	1:B:4637:GLY:H	1.80	0.46
1:C:668:VAL:HG11	1:C:738:LEU:HD12	1.96	0.46
1:C:871:ARG:NH2	1:C:918:ARG:HH22	2.14	0.46
1:C:3721:LEU:HD11	1:C:3725:TYR:HE2	1.80	0.46
1:C:4085:ARG:NH1	1:C:4087:LEU:HD12	2.29	0.46
1:D:1832:GLY:O	1:D:1833:SER:CB	2.64	0.46
1:D:2368:LEU:HD13	1:D:2376:LEU:HB2	1.97	0.46
1:D:2586:VAL:HG22	1:D:2591:ARG:HB2	1.96	0.46
1:D:4960:ILE:HD11	1:D:4985:LEU:HB3	1.97	0.46
1:A:460:GLN:HB2	1:A:463:GLU:OE2	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4104:THR:HG22	1:A:4106:PRO:HD2	1.96	0.46
1:A:4633:GLU:HG3	1:A:4637:GLY:H	1.80	0.46
1:A:4968:PHE:O	1:A:4975:PHE:N	2.48	0.46
1:B:1126:GLY:HA3	1:B:1143:TRP:CD2	2.50	0.46
1:B:1139:PHE:HZ	1:B:1177:THR:HG22	1.79	0.46
1:B:3721:LEU:HD11	1:B:3725:TYR:HE2	1.80	0.46
1:B:4580:TYR:HD2	1:B:4807:PHE:CZ	2.33	0.46
1:C:590:LEU:HB2	1:C:599:VAL:HG11	1.97	0.46
1:C:4968:PHE:O	1:C:4975:PHE:N	2.48	0.46
1:D:668:VAL:HG11	1:D:738:LEU:HD12	1.96	0.46
1:D:793:LEU:HD23	1:D:793:LEU:H	1.80	0.46
1:D:977:LEU:HD12	1:D:978:THR:H	1.80	0.46
1:D:1653:LEU:HB3	1:D:1660:GLN:HB2	1.97	0.46
1:D:2302:LEU:HD11	1:D:2332:LEU:HB2	1.97	0.46
1:A:2226:PRO:C	1:A:2228:MET:H	2.24	0.46
1:A:4085:ARG:NH1	1:A:4087:LEU:HD12	2.29	0.46
1:A:4633:GLU:C	1:A:4635:SER:H	2.24	0.46
1:A:5027:CYS:C	1:A:5029:ARG:H	2.23	0.46
1:B:793:LEU:HG	1:B:795:GLY:H	1.79	0.46
1:B:2142:TYR:CG	1:B:2197:LEU:HD13	2.50	0.46
1:B:4114:CYS:O	1:B:4131:ARG:NH2	2.47	0.46
1:B:4993:MET:HE2	1:B:4993:MET:HB3	1.84	0.46
1:C:1108:GLU:H	1:C:1108:GLU:CD	2.23	0.46
1:C:3558:HIS:CE1	1:C:3593:VAL:HG22	2.49	0.46
1:D:167:ASP:N	1:D:167:ASP:OD1	2.48	0.46
1:D:460:GLN:HB2	1:D:463:GLU:OE2	2.16	0.46
1:D:1083:VAL:HG21	1:D:1088:TRP:CE2	2.51	0.46
1:D:2142:TYR:CG	1:D:2197:LEU:HD13	2.50	0.46
1:D:4060:LYS:NZ	1:D:4107:GLU:OE2	2.39	0.46
1:D:4569:LEU:HD22	1:D:4646:LEU:HD22	1.97	0.46
1:A:1463:ASN:N	1:A:1492:CYS:SG	2.82	0.46
1:A:1658:ASP:OD1	1:A:1658:ASP:N	2.46	0.46
1:A:2368:LEU:HD13	1:A:2376:LEU:HB2	1.97	0.46
1:A:4960:ILE:HD11	1:A:4985:LEU:HB3	1.97	0.46
1:B:1083:VAL:HG21	1:B:1088:TRP:CE2	2.51	0.46
1:B:1108:GLU:CD	1:B:1108:GLU:H	2.23	0.46
1:B:2131:LEU:HD12	1:B:3662:ILE:HG13	1.97	0.46
1:B:4815:ASP:O	1:B:4816:ILE:C	2.57	0.46
1:C:871:ARG:HH22	1:C:918:ARG:NH1	2.13	0.46
1:C:2301:TYR:HB3	1:C:2331:TYR:CE2	2.51	0.46
1:D:481:GLU:OE1	1:D:481:GLU:N	2.49	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1970:GLN:NE2	1:D:3641:LEU:O	2.36	0.46
1:D:2301:TYR:HB3	1:D:2331:TYR:CE2	2.51	0.46
1:D:2316:LYS:HE2	1:D:2318:TYR:HE2	1.79	0.46
1:A:414:PHE:HD1	1:A:437:PRO:HD2	1.81	0.46
1:A:793:LEU:HD23	1:A:793:LEU:H	1.80	0.46
1:A:871:ARG:NH2	1:A:918:ARG:HH22	2.14	0.46
1:A:977:LEU:HD12	1:A:978:THR:H	1.80	0.46
1:A:1079:LYS:HG3	1:A:1655:GLU:OE2	2.16	0.46
1:A:1108:GLU:OE1	1:A:1108:GLU:N	2.48	0.46
1:A:1694:LEU:HB3	1:A:1715:LEU:HD12	1.96	0.46
1:A:3645:PRO:HB2	1:A:3647:HIS:HD1	1.81	0.46
1:A:4569:LEU:HD22	1:A:4646:LEU:HD22	1.97	0.46
1:B:5035:GLN:O	1:B:5036:LEU:HD22	2.15	0.46
1:C:414:PHE:HD1	1:C:437:PRO:HD2	1.81	0.46
1:C:460:GLN:HB2	1:C:463:GLU:OE2	2.16	0.46
1:C:2340:PHE:HD1	1:C:2435:ARG:HG3	1.79	0.46
1:C:4825:THR:O	1:C:4828:SER:OG	2.23	0.46
1:D:571:SER:O	1:D:574:VAL:HG12	2.15	0.46
1:D:1111:PRO:HD3	1:D:1605:TRP:HE1	1.81	0.46
1:D:1126:GLY:HA3	1:D:1143:TRP:CD2	2.50	0.46
1:D:2131:LEU:HB2	1:D:3662:ILE:CG1	2.44	0.46
1:A:1238:PHE:CD1	1:A:1608:MET:HG2	2.51	0.46
1:B:460:GLN:HB2	1:B:463:GLU:OE2	2.16	0.46
1:B:1434:TYR:HA	1:B:1449:TRP:HB3	1.98	0.46
1:B:2340:PHE:HD1	1:B:2435:ARG:HG3	1.79	0.46
1:B:3014:CYS:SG	1:B:3015:LEU:N	2.89	0.46
1:B:4633:GLU:C	1:B:4635:SER:H	2.24	0.46
1:C:871:ARG:NE	1:C:925:SER:OG	2.49	0.46
1:C:977:LEU:HD12	1:C:978:THR:H	1.80	0.46
1:C:1708:ARG:HH12	1:C:1837:GLN:HA	1.80	0.46
1:C:4807:PHE:O	1:C:4810:ALA:N	2.48	0.46
1:C:4923:PHE:O	1:C:4928:LEU:HD23	2.16	0.46
1:D:871:ARG:NE	1:D:925:SER:OG	2.49	0.46
1:D:1708:ARG:HH12	1:D:1837:GLN:HA	1.80	0.46
1:D:4119:GLU:HG2	1:D:4121:GLU:HG2	1.97	0.46
1:A:688:LEU:H	1:A:688:LEU:HD23	1.81	0.46
1:A:2142:TYR:CG	1:A:2197:LEU:HD13	2.50	0.46
1:A:3014:CYS:SG	1:A:3015:LEU:N	2.89	0.46
1:B:132:ALA:O	1:B:194:SER:OG	2.34	0.46
1:B:1694:LEU:HB3	1:B:1715:LEU:HD12	1.96	0.46
1:B:2226:PRO:C	1:B:2228:MET:H	2.24	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:4850:LEU:HD22	1:C:4814:LEU:HD21	1.97	0.46
1:C:1106:ARG:NH2	1:C:1183:GLU:OE2	2.49	0.46
1:C:1111:PRO:HD3	1:C:1605:TRP:HE1	1.81	0.46
1:C:1238:PHE:CD1	1:C:1608:MET:HG2	2.51	0.46
1:C:4679:ARG:HH12	1:C:4715:TYR:HH	1.58	0.46
1:D:400:ALA:O	1:D:404:ILE:HG13	2.16	0.46
1:D:2226:PRO:C	1:D:2228:MET:H	2.24	0.46
1:D:4067:LYS:HD3	1:D:4102:GLN:HG3	1.98	0.46
1:A:1083:VAL:HG21	1:A:1088:TRP:CE2	2.51	0.45
1:A:1111:PRO:HD3	1:A:1605:TRP:HE1	1.81	0.45
1:A:1453:VAL:HG23	1:A:1454:THR:N	2.28	0.45
1:A:1832:GLY:O	1:A:1833:SER:CB	2.64	0.45
1:B:167:ASP:N	1:B:167:ASP:OD1	2.48	0.45
1:B:590:LEU:HB2	1:B:599:VAL:HG11	1.97	0.45
1:B:1001:VAL:HA	1:B:1020:ARG:NH2	2.31	0.45
1:B:3304:CYS:O	1:B:3308:THR:OG1	2.25	0.45
1:B:3645:PRO:HB2	1:B:3647:HIS:HD1	1.81	0.45
1:B:4085:ARG:NH1	1:B:4087:LEU:HD12	2.29	0.45
1:C:4067:LYS:HD3	1:C:4102:GLN:HG3	1.98	0.45
1:D:3014:CYS:SG	1:D:3015:LEU:N	2.89	0.45
1:D:3290:GLU:C	1:D:3293:PRO:HD2	2.41	0.45
1:A:871:ARG:NE	1:A:925:SER:OG	2.49	0.45
1:A:1001:VAL:HA	1:A:1020:ARG:NH2	2.31	0.45
1:A:2131:LEU:HD12	1:A:3662:ILE:HG13	1.97	0.45
1:A:3721:LEU:HD11	1:A:3725:TYR:HE2	1.80	0.45
1:A:4879:MET:HG2	1:B:4578:LEU:HA	1.99	0.45
1:B:414:PHE:HD1	1:B:437:PRO:HD2	1.81	0.45
1:B:481:GLU:OE1	1:B:481:GLU:N	2.49	0.45
1:B:4923:PHE:O	1:B:4928:LEU:HD23	2.16	0.45
1:C:266:ARG:O	1:C:270:SER:OG	2.34	0.45
1:C:430:PRO:HA	1:C:431:PRO:HD3	1.86	0.45
1:C:1453:VAL:HG23	1:C:1454:THR:N	2.28	0.45
1:C:1495:VAL:HG11	1:C:1536:SER:O	2.16	0.45
1:C:4796:MET:O	1:C:4799:SER:OG	2.27	0.45
1:C:4904:PRO:O	1:C:4910:GLU:HG3	2.15	0.45
1:D:192:ASP:OD1	1:D:192:ASP:N	2.48	0.45
1:D:1457:TYR:O	1:D:1497:GLY:N	2.47	0.45
1:D:1463:ASN:N	1:D:1492:CYS:SG	2.82	0.45
1:A:2302:LEU:HD11	1:A:2332:LEU:HB2	1.97	0.45
1:A:4067:LYS:HD3	1:A:4102:GLN:HG3	1.98	0.45
1:A:4578:LEU:HA	1:D:4879:MET:HG2	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:213:TYR:CZ	1:B:337:PRO:HB2	2.52	0.45
1:B:400:ALA:O	1:B:404:ILE:HG13	2.16	0.45
1:B:871:ARG:NE	1:B:925:SER:OG	2.49	0.45
1:B:4634:GLU:HG3	1:B:4636:THR:CG2	2.32	0.45
1:C:481:GLU:OE1	1:C:481:GLU:N	2.49	0.45
1:C:1079:LYS:HG3	1:C:1655:GLU:OE2	2.16	0.45
1:C:1161:ILE:HA	1:C:1177:THR:OG1	2.16	0.45
1:C:3290:GLU:C	1:C:3293:PRO:HD2	2.41	0.45
1:D:213:TYR:CZ	1:D:337:PRO:HB2	2.52	0.45
1:D:484:LEU:HD11	1:D:526:LEU:HD12	1.99	0.45
1:D:688:LEU:HD23	1:D:688:LEU:H	1.81	0.45
1:D:3174:SER:OG	1:D:3175:LEU:N	2.48	0.45
1:D:4763:GLY:HA3	1:D:4767:TRP:CE2	2.52	0.45
1:A:213:TYR:CZ	1:A:337:PRO:HB2	2.52	0.45
1:A:484:LEU:HD11	1:A:526:LEU:HD12	1.99	0.45
1:A:1176:GLU:O	1:A:1180:ARG:NH2	2.44	0.45
1:B:4067:LYS:HD3	1:B:4102:GLN:HG3	1.98	0.45
1:C:688:LEU:HD23	1:C:688:LEU:H	1.81	0.45
1:C:1108:GLU:OE1	1:C:1108:GLU:N	2.48	0.45
1:C:2003:GLN:HB3	1:C:3652:MET:HE3	1.99	0.45
1:C:3645:PRO:HB2	1:C:3647:HIS:HD1	1.81	0.45
1:C:4698:LYS:HD3	1:C:4698:LYS:HA	1.72	0.45
1:C:4763:GLY:HA3	1:C:4767:TRP:CE2	2.52	0.45
1:D:19:GLU:HB2	1:D:206:CYS:HB3	1.96	0.45
1:D:871:ARG:NH2	1:D:918:ARG:HH22	2.14	0.45
1:D:1079:LYS:HG3	1:D:1655:GLU:OE2	2.16	0.45
1:D:4923:PHE:O	1:D:4928:LEU:HD23	2.16	0.45
1:A:914:PRO:HB2	1:A:916:PRO:HD2	1.99	0.45
1:A:3143:LEU:HD13	1:A:3146:HIS:HE1	1.81	0.45
1:A:3290:GLU:C	1:A:3293:PRO:HD2	2.41	0.45
1:A:4763:GLY:HA3	1:A:4767:TRP:CE2	2.52	0.45
1:A:4850:LEU:HD22	1:B:4814:LEU:HD21	1.97	0.45
1:B:914:PRO:HB2	1:B:916:PRO:HD2	1.99	0.45
1:B:1079:LYS:HG3	1:B:1655:GLU:OE2	2.16	0.45
1:B:1115:LEU:HG	1:B:1123:VAL:HG11	1.99	0.45
1:B:1457:TYR:O	1:B:1497:GLY:N	2.47	0.45
1:C:484:LEU:HD11	1:C:526:LEU:HD12	1.99	0.45
1:C:618:GLN:NE2	1:C:1675:ALA:H	2.14	0.45
1:D:1835:GLU:O	1:D:1836:PHE:C	2.59	0.45
1:A:167:ASP:N	1:A:167:ASP:OD1	2.48	0.45
1:A:1230:MET:HE2	1:A:1827:ARG:HH22	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1842:LEU:HD12	1:A:1842:LEU:HA	1.77	0.45
1:A:3285:TRP:NE1	1:A:3293:PRO:HG3	2.23	0.45
1:A:4322:LEU:HD23	1:A:4322:LEU:HA	1.84	0.45
1:B:1106:ARG:NH2	1:B:1183:GLU:OE2	2.49	0.45
1:B:1238:PHE:CD1	1:B:1608:MET:HG2	2.51	0.45
1:B:1495:VAL:HG11	1:B:1536:SER:O	2.16	0.45
1:B:2003:GLN:HB3	1:B:3652:MET:HE3	1.99	0.45
1:B:3290:GLU:C	1:B:3293:PRO:HD2	2.41	0.45
1:C:2142:TYR:CG	1:C:2197:LEU:HD13	2.50	0.45
1:C:4879:MET:HG2	1:D:4578:LEU:HA	1.99	0.45
1:D:103:TYR:HE2	1:D:157:ARG:HD3	1.82	0.45
1:D:3645:PRO:HB2	1:D:3647:HIS:HD1	1.81	0.45
1:A:266:ARG:O	1:A:270:SER:OG	2.34	0.45
1:A:1106:ARG:NH2	1:A:1183:GLU:OE2	2.49	0.45
1:A:2179:ILE:HG13	1:A:2228:MET:HE1	1.99	0.45
1:B:688:LEU:HD23	1:B:688:LEU:H	1.81	0.45
1:B:1111:PRO:HD3	1:B:1605:TRP:HE1	1.81	0.45
1:B:2093:SER:OG	1:B:2094:LEU:N	2.50	0.45
1:B:4960:ILE:HD11	1:B:4985:LEU:HB3	1.97	0.45
1:C:213:TYR:CZ	1:C:337:PRO:HB2	2.52	0.45
1:C:1230:MET:HE2	1:C:1827:ARG:HH22	1.82	0.45
1:C:1832:GLY:O	1:C:1833:SER:CB	2.64	0.45
1:C:3668:SER:O	1:C:3672:ARG:NH2	2.47	0.45
1:D:1001:VAL:HA	1:D:1020:ARG:NH2	2.31	0.45
1:D:1495:VAL:HG11	1:D:1536:SER:O	2.16	0.45
1:D:1663:HIS:O	1:D:1666:THR:HG22	2.17	0.45
1:D:4343:GLY:O	1:D:4344:ALA:C	2.57	0.45
1:A:103:TYR:HE2	1:A:157:ARG:HD3	1.82	0.45
1:A:618:GLN:NE2	1:A:1675:ALA:H	2.14	0.45
1:A:871:ARG:HH22	1:A:918:ARG:NH1	2.13	0.45
1:A:1634:LEU:HD12	1:A:1634:LEU:HA	1.86	0.45
1:A:4119:GLU:HG2	1:A:4121:GLU:HG2	1.97	0.45
1:A:4923:PHE:O	1:A:4928:LEU:HD23	2.16	0.45
1:C:1001:VAL:HA	1:C:1020:ARG:NH2	2.31	0.45
1:C:2226:PRO:C	1:C:2228:MET:H	2.24	0.45
1:C:2243:SER:OG	1:C:2246:ASN:HB2	2.17	0.45
1:D:1294:PRO:HB3	1:D:1455:PRO:HG3	1.99	0.45
1:D:2093:SER:OG	1:D:2094:LEU:N	2.50	0.45
1:D:2155:LEU:HD12	1:D:2185:ILE:HG22	1.99	0.45
1:D:2331:TYR:C	1:D:2333:ASP:H	2.25	0.45
1:D:3721:LEU:HD11	1:D:3725:TYR:HE2	1.80	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:4908:GLU:H	1:D:4908:GLU:HG3	1.34	0.45
1:A:481:GLU:N	1:A:481:GLU:OE1	2.49	0.45
1:B:411:TYR:HE1	1:B:441:VAL:HG23	1.82	0.45
1:B:1161:ILE:HA	1:B:1177:THR:OG1	2.16	0.45
1:B:1832:GLY:O	1:B:1833:SER:CB	2.64	0.45
1:B:4901:ILE:HD12	1:B:4901:ILE:HA	1.65	0.45
1:C:45:ARG:NH2	1:C:447:ASP:OD2	2.50	0.45
1:C:224:HIS:H	1:C:230:CYS:HA	1.82	0.45
1:C:3143:LEU:HD13	1:C:3146:HIS:HE1	1.81	0.45
1:C:4343:GLY:O	1:C:4344:ALA:C	2.57	0.45
1:D:414:PHE:HD1	1:D:437:PRO:HD2	1.81	0.45
1:D:618:GLN:NE2	1:D:1675:ALA:H	2.14	0.45
1:D:1106:ARG:NH2	1:D:1183:GLU:OE2	2.49	0.45
1:D:1238:PHE:CD1	1:D:1608:MET:HG2	2.51	0.45
1:D:3667:HIS:ND1	1:D:3667:HIS:O	2.50	0.45
1:A:400:ALA:O	1:A:404:ILE:HG13	2.16	0.45
1:A:2003:GLN:HB3	1:A:3652:MET:HE3	1.99	0.45
1:A:2093:SER:OG	1:A:2094:LEU:N	2.50	0.45
1:A:5013:MET:HE2	1:A:5013:MET:HB3	1.88	0.45
1:B:709:ASP:OD1	1:B:709:ASP:N	2.43	0.45
1:B:1437:VAL:HA	1:B:1556:PRO:HA	1.99	0.45
1:B:4879:MET:HG2	1:C:4578:LEU:HA	1.99	0.45
1:C:3657:TYR:C	1:C:3661:TRP:CD1	2.95	0.45
1:D:1176:GLU:O	1:D:1180:ARG:NH2	2.44	0.45
1:D:1230:MET:HE2	1:D:1827:ARG:HH22	1.82	0.45
1:D:1839:VAL:HG12	1:D:1840:PRO:N	2.32	0.45
1:D:2243:SER:OG	1:D:2246:ASN:HB2	2.17	0.45
1:D:3641:LEU:HD23	1:D:3641:LEU:H	1.82	0.45
1:A:2331:TYR:C	1:A:2333:ASP:H	2.25	0.44
1:B:2179:ILE:HG13	1:B:2228:MET:HE1	1.99	0.44
1:B:3274:LEU:N	1:B:3275:PRO:HD2	2.32	0.44
1:B:4012:LEU:HD23	1:B:4012:LEU:HA	1.84	0.44
1:C:400:ALA:O	1:C:404:ILE:HG13	2.16	0.44
1:C:914:PRO:HB2	1:C:916:PRO:HD2	1.99	0.44
1:C:1294:PRO:HB3	1:C:1455:PRO:HG3	1.99	0.44
1:C:3641:LEU:H	1:C:3641:LEU:HD23	1.82	0.44
1:C:3973:CYS:SG	1:C:3976:ASN:ND2	2.90	0.44
1:C:4185:GLY:HA3	1:C:5009:TYR:CE2	2.53	0.44
1:D:2003:GLN:HB3	1:D:3652:MET:HE3	1.99	0.44
1:D:3657:TYR:C	1:D:3661:TRP:CD1	2.95	0.44
1:D:4814:LEU:C	1:D:4816:ILE:N	2.69	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1839:VAL:HG12	1:A:1840:PRO:N	2.32	0.44
1:A:4815:ASP:O	1:A:4816:ILE:C	2.57	0.44
1:C:1434:TYR:HA	1:C:1449:TRP:HB3	1.98	0.44
1:C:1663:HIS:O	1:C:1666:THR:HG22	2.17	0.44
1:C:3014:CYS:SG	1:C:3015:LEU:N	2.89	0.44
1:C:4817:ALA:C	1:C:4819:GLY:N	2.66	0.44
1:D:233:ILE:HD11	1:D:301:VAL:HG21	1.99	0.44
1:D:1473:THR:N	1:D:1484:HIS:O	2.47	0.44
1:D:4815:ASP:O	1:D:4816:ILE:C	2.57	0.44
1:A:1931:LEU:HD22	1:A:1935:VAL:HG11	1.99	0.44
1:A:3973:CYS:SG	1:A:3976:ASN:ND2	2.90	0.44
1:B:1931:LEU:HD22	1:B:1935:VAL:HG11	1.99	0.44
1:B:2243:SER:OG	1:B:2246:ASN:HB2	2.17	0.44
1:B:2323:TRP:HZ3	1:B:2325:PRO:HB3	1.83	0.44
1:B:2331:TYR:C	1:B:2333:ASP:H	2.25	0.44
1:B:3667:HIS:ND1	1:B:3667:HIS:O	2.50	0.44
1:B:4185:GLY:HA3	1:B:5009:TYR:CE2	2.53	0.44
1:C:233:ILE:HD11	1:C:301:VAL:HG21	1.99	0.44
1:C:411:TYR:HE1	1:C:441:VAL:HG23	1.82	0.44
1:C:560:ILE:HA	1:C:563:VAL:HG12	2.00	0.44
1:C:2383:ALA:O	1:C:2386:ILE:HG22	2.18	0.44
1:C:4633:GLU:C	1:C:4635:SER:H	2.24	0.44
1:C:4799:SER:HB3	1:C:4812:HIS:HE1	1.83	0.44
1:D:1161:ILE:HA	1:D:1177:THR:OG1	2.16	0.44
1:D:1434:TYR:HA	1:D:1449:TRP:HB3	1.98	0.44
1:D:2360:LYS:HD2	1:D:2360:LYS:HA	1.77	0.44
1:D:4633:GLU:C	1:D:4635:SER:H	2.24	0.44
1:A:1161:ILE:HA	1:A:1177:THR:OG1	2.16	0.44
1:A:3274:LEU:N	1:A:3275:PRO:HD2	2.32	0.44
1:B:224:HIS:H	1:B:230:CYS:HA	1.82	0.44
1:B:1108:GLU:OE1	1:B:1108:GLU:N	2.48	0.44
1:B:2458:ARG:NH2	1:B:2510:TYR:HA	2.33	0.44
1:B:3973:CYS:SG	1:B:3976:ASN:ND2	2.90	0.44
1:C:1437:VAL:HA	1:C:1556:PRO:HA	1.99	0.44
1:C:2093:SER:OG	1:C:2094:LEU:N	2.50	0.44
1:C:2302:LEU:HD11	1:C:2332:LEU:HB2	1.97	0.44
1:D:266:ARG:O	1:D:270:SER:OG	2.34	0.44
1:D:626:LEU:HG	1:D:628:GLY:N	2.27	0.44
1:D:1115:LEU:HG	1:D:1123:VAL:HG11	1.99	0.44
1:D:4845:ALA:O	1:D:4883:TYR:OH	2.35	0.44
1:A:1434:TYR:HA	1:A:1449:TRP:HB3	1.98	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3667:HIS:ND1	1:A:3667:HIS:O	2.50	0.44
1:B:224:HIS:N	1:B:229:GLU:O	2.51	0.44
1:B:3641:LEU:HD23	1:B:3641:LEU:H	1.82	0.44
1:B:3798:LEU:O	1:B:3802:ILE:HG12	2.18	0.44
1:C:167:ASP:OD1	1:C:167:ASP:N	2.48	0.44
1:C:2323:TRP:HZ3	1:C:2325:PRO:HB3	1.83	0.44
1:C:3274:LEU:N	1:C:3275:PRO:HD2	2.32	0.44
1:D:2179:ILE:HG13	1:D:2228:MET:HE1	1.99	0.44
1:D:3143:LEU:HD13	1:D:3146:HIS:HE1	1.81	0.44
1:D:3292:PRO:HB2	1:D:3293:PRO:HD3	2.00	0.44
1:D:4799:SER:HB3	1:D:4812:HIS:HE1	1.83	0.44
1:A:233:ILE:HD11	1:A:301:VAL:HG21	1.99	0.44
1:A:292:ALA:HA	1:A:314:PHE:HZ	1.83	0.44
1:A:2155:LEU:HD12	1:A:2185:ILE:HG22	1.99	0.44
1:A:4185:GLY:HA3	1:A:5009:TYR:CE2	2.53	0.44
1:B:484:LEU:HD11	1:B:526:LEU:HD12	1.99	0.44
1:B:1663:HIS:O	1:B:1666:THR:HG22	2.17	0.44
1:B:3657:TYR:C	1:B:3661:TRP:CD1	2.95	0.44
1:B:4322:LEU:HD23	1:B:4322:LEU:HA	1.84	0.44
1:B:4799:SER:HB3	1:B:4812:HIS:HE1	1.83	0.44
1:C:626:LEU:HG	1:C:628:GLY:N	2.27	0.44
1:D:3435:PHE:HA	1:D:3438:VAL:HG13	2.00	0.44
1:D:5027:CYS:C	1:D:5029:ARG:H	2.23	0.44
1:A:719:LEU:O	1:A:719:LEU:HG	2.18	0.44
1:A:2348:GLU:H	1:A:2348:GLU:CD	2.26	0.44
1:A:3570:ARG:HA	1:A:3574:ALA:O	2.18	0.44
1:A:3798:LEU:O	1:A:3802:ILE:HG12	2.18	0.44
1:B:45:ARG:NH2	1:B:447:ASP:OD2	2.50	0.44
1:B:1176:GLU:O	1:B:1180:ARG:NH2	2.44	0.44
1:C:103:TYR:HE2	1:C:157:ARG:HD3	1.82	0.44
1:C:342:GLY:H	1:C:389:PHE:HE1	1.66	0.44
1:C:482:GLY:C	1:C:484:LEU:H	2.26	0.44
1:C:1115:LEU:HG	1:C:1123:VAL:HG11	1.99	0.44
1:C:1221:GLU:OE2	1:C:1221:GLU:N	2.51	0.44
1:C:1931:LEU:HD22	1:C:1935:VAL:HG11	1.99	0.44
1:D:292:ALA:HA	1:D:314:PHE:HZ	1.83	0.44
1:D:411:TYR:HE1	1:D:441:VAL:HG23	1.82	0.44
1:D:3798:LEU:O	1:D:3802:ILE:HG12	2.18	0.44
1:D:3973:CYS:SG	1:D:3976:ASN:ND2	2.90	0.44
1:A:224:HIS:H	1:A:230:CYS:HA	1.82	0.44
1:A:769:GLU:O	1:A:1515:VAL:HG22	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1663:HIS:O	1:A:1666:THR:HG22	2.17	0.44
1:A:3292:PRO:HB2	1:A:3293:PRO:HD3	2.00	0.44
1:A:3657:TYR:C	1:A:3661:TRP:CD1	2.95	0.44
1:B:3570:ARG:HA	1:B:3574:ALA:O	2.18	0.44
1:C:224:HIS:N	1:C:229:GLU:O	2.51	0.44
1:C:2331:TYR:C	1:C:2333:ASP:H	2.25	0.44
1:C:3435:PHE:HA	1:C:3438:VAL:HG13	2.00	0.44
1:C:3798:LEU:O	1:C:3802:ILE:HG12	2.18	0.44
1:D:212:GLY:O	1:D:340:LYS:HG3	2.18	0.44
1:D:560:ILE:HA	1:D:563:VAL:HG12	2.00	0.44
1:A:1437:VAL:HA	1:A:1556:PRO:HA	1.99	0.44
1:A:4799:SER:HB3	1:A:4812:HIS:HE1	1.83	0.44
1:B:3292:PRO:HB2	1:B:3293:PRO:HD3	2.00	0.44
1:B:3835:LEU:HD22	1:B:3880:PHE:HZ	1.83	0.44
1:B:4763:GLY:HA3	1:B:4767:TRP:CE2	2.52	0.44
1:C:3667:HIS:ND1	1:C:3667:HIS:O	2.50	0.44
1:D:224:HIS:H	1:D:230:CYS:HA	1.82	0.44
1:D:4698:LYS:HD3	1:D:4698:LYS:HA	1.72	0.44
1:A:1115:LEU:HG	1:A:1123:VAL:HG11	1.99	0.43
1:A:3641:LEU:HD23	1:A:3641:LEU:H	1.82	0.43
1:B:719:LEU:O	1:B:719:LEU:HG	2.18	0.43
1:B:2348:GLU:H	1:B:2348:GLU:CD	2.26	0.43
1:B:3143:LEU:HD13	1:B:3146:HIS:HE1	1.81	0.43
1:C:2179:ILE:HG13	1:C:2228:MET:HE1	1.99	0.43
1:D:615:ARG:CZ	1:D:2168:VAL:HG21	2.49	0.43
1:D:871:ARG:HH22	1:D:918:ARG:NH1	2.13	0.43
1:D:2383:ALA:O	1:D:2386:ILE:HG22	2.18	0.43
1:A:560:ILE:HA	1:A:563:VAL:HG12	2.00	0.43
1:A:1495:VAL:HG11	1:A:1536:SER:O	2.16	0.43
1:A:2243:SER:OG	1:A:2246:ASN:HB2	2.17	0.43
1:A:2383:ALA:O	1:A:2386:ILE:HG22	2.18	0.43
1:A:3835:LEU:HD22	1:A:3880:PHE:HZ	1.83	0.43
1:B:103:TYR:HE2	1:B:157:ARG:HD3	1.82	0.43
1:B:233:ILE:HD11	1:B:301:VAL:HG21	1.99	0.43
1:B:430:PRO:HA	1:B:431:PRO:HD3	1.86	0.43
1:B:1481:GLY:HA2	1:B:1573:MET:O	2.18	0.43
1:B:4992:LEU:O	1:B:4996:ILE:HG13	2.19	0.43
1:C:247:TYR:CE2	1:C:376:ALA:HB2	2.54	0.43
1:C:292:ALA:HA	1:C:314:PHE:HZ	1.83	0.43
1:C:875:ALA:O	1:C:879:HIS:ND1	2.52	0.43
1:C:3292:PRO:HB2	1:C:3293:PRO:HD3	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:224:HIS:N	1:D:229:GLU:O	2.51	0.43
1:D:342:GLY:H	1:D:389:PHE:HE1	1.66	0.43
1:D:914:PRO:HB2	1:D:916:PRO:HD2	1.99	0.43
1:D:2138:LEU:HD12	1:D:2138:LEU:HA	1.84	0.43
1:D:4897:ILE:H	1:D:4897:ILE:HG13	1.59	0.43
1:A:224:HIS:N	1:A:229:GLU:O	2.51	0.43
1:A:4060:LYS:HG3	1:A:4064:MET:HE2	2.01	0.43
1:B:317:ARG:N	1:B:347:PHE:O	2.48	0.43
1:B:482:GLY:C	1:B:484:LEU:H	2.26	0.43
1:B:1230:MET:HE2	1:B:1827:ARG:HH22	1.82	0.43
1:B:2383:ALA:O	1:B:2386:ILE:HG22	2.18	0.43
1:B:4983:HIS:HB2	1:B:4988:TYR:HE1	1.83	0.43
1:C:615:ARG:CZ	1:C:2168:VAL:HG21	2.49	0.43
1:C:1839:VAL:C	1:C:1841:VAL:H	2.26	0.43
1:C:4983:HIS:HB2	1:C:4988:TYR:HE1	1.83	0.43
1:D:645:ARG:HB3	1:D:780:VAL:HG12	2.01	0.43
1:D:4060:LYS:HG3	1:D:4064:MET:HE2	2.01	0.43
1:A:45:ARG:NH2	1:A:447:ASP:OD2	2.50	0.43
1:A:286:THR:HG23	1:A:287:THR:HG23	2.01	0.43
1:A:720:HIS:O	1:A:721:LEU:HD23	2.18	0.43
1:A:1091:GLU:CD	1:A:1212:ARG:H	2.26	0.43
1:A:1221:GLU:OE2	1:A:1221:GLU:N	2.51	0.43
1:A:1294:PRO:HB3	1:A:1455:PRO:HG3	1.99	0.43
1:A:1481:GLY:HA2	1:A:1573:MET:O	2.18	0.43
1:A:3435:PHE:HA	1:A:3438:VAL:HG13	2.00	0.43
1:A:4992:LEU:O	1:A:4996:ILE:HG13	2.19	0.43
1:B:2155:LEU:HD12	1:B:2185:ILE:HG22	1.99	0.43
1:B:3817:LEU:HD13	1:B:3899:PHE:CD1	2.45	0.43
1:C:192:ASP:N	1:C:192:ASP:OD1	2.48	0.43
1:C:709:ASP:OD1	1:C:709:ASP:N	2.43	0.43
1:C:719:LEU:O	1:C:719:LEU:HG	2.18	0.43
1:D:3570:ARG:HA	1:D:3574:ALA:O	2.18	0.43
1:A:482:GLY:C	1:A:484:LEU:H	2.26	0.43
1:A:615:ARG:CZ	1:A:2168:VAL:HG21	2.49	0.43
1:A:875:ALA:O	1:A:879:HIS:ND1	2.52	0.43
1:B:615:ARG:CZ	1:B:2168:VAL:HG21	2.49	0.43
1:B:720:HIS:O	1:B:721:LEU:HD23	2.18	0.43
1:B:1839:VAL:C	1:B:1841:VAL:H	2.26	0.43
1:B:3716:LEU:HD12	1:B:3716:LEU:HA	1.86	0.43
1:B:4060:LYS:HG3	1:B:4064:MET:HE2	2.01	0.43
1:C:720:HIS:O	1:C:721:LEU:HD23	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:2155:LEU:HD12	1:C:2185:ILE:HG22	1.99	0.43
1:D:19:GLU:HA	1:D:68:THR:HA	2.01	0.43
1:D:720:HIS:O	1:D:721:LEU:HD23	2.18	0.43
1:D:1437:VAL:HA	1:D:1556:PRO:HA	1.99	0.43
1:D:1481:GLY:HA2	1:D:1573:MET:O	2.18	0.43
1:D:4185:GLY:HA3	1:D:5009:TYR:CE2	2.53	0.43
1:A:411:TYR:HE1	1:A:441:VAL:HG23	1.82	0.43
1:A:2458:ARG:NH2	1:A:2510:TYR:HA	2.33	0.43
1:A:3679:LYS:HB3	1:A:3679:LYS:HE3	1.84	0.43
1:A:3962:PHE:O	1:A:3966:THR:HG23	2.19	0.43
1:A:4120:ASN:C	1:A:4120:ASN:HD22	2.26	0.43
1:A:4983:HIS:HB2	1:A:4988:TYR:HE1	1.83	0.43
1:B:247:TYR:CE2	1:B:376:ALA:HB2	2.54	0.43
1:B:659:TYR:O	1:B:661:LYS:HG2	2.19	0.43
1:B:1294:PRO:HB3	1:B:1455:PRO:HG3	1.99	0.43
1:B:3435:PHE:HA	1:B:3438:VAL:HG13	2.00	0.43
1:C:212:GLY:O	1:C:340:LYS:HG3	2.18	0.43
1:C:769:GLU:O	1:C:1515:VAL:HG22	2.18	0.43
1:C:1098:GLY:HA3	1:C:1198:GLN:NE2	2.34	0.43
1:C:3570:ARG:HA	1:C:3574:ALA:O	2.18	0.43
1:C:3657:TYR:O	1:C:3661:TRP:HD1	2.02	0.43
1:C:3835:LEU:HD22	1:C:3880:PHE:HZ	1.83	0.43
1:C:4060:LYS:HG3	1:C:4064:MET:HE2	2.01	0.43
1:C:4126:GLU:O	1:C:4130:ASN:ND2	2.35	0.43
1:C:4815:ASP:O	1:C:4816:ILE:C	2.57	0.43
1:D:247:TYR:CE2	1:D:376:ALA:HB2	2.54	0.43
1:D:659:TYR:O	1:D:661:LYS:HG2	2.19	0.43
1:D:719:LEU:O	1:D:719:LEU:HG	2.18	0.43
1:D:1221:GLU:N	1:D:1221:GLU:OE2	2.51	0.43
1:D:2240:CYS:SG	1:D:2279:SER:HA	2.59	0.43
1:D:3274:LEU:N	1:D:3275:PRO:HD2	2.32	0.43
1:A:38:ALA:HB1	1:A:64:ILE:HG13	2.01	0.43
1:B:1103:GLY:HA3	1:B:1123:VAL:HA	2.01	0.43
1:B:1495:VAL:HG21	1:B:1536:SER:C	2.44	0.43
1:C:645:ARG:HB3	1:C:780:VAL:HG12	2.01	0.43
1:C:711:LEU:HD23	1:C:711:LEU:H	1.84	0.43
1:D:61:ASP:N	1:D:61:ASP:OD1	2.48	0.43
1:D:875:ALA:O	1:D:879:HIS:ND1	2.52	0.43
1:D:1243:PRO:HB3	1:D:1602:PRO:HA	2.01	0.43
1:D:2165:LEU:HD23	1:D:2165:LEU:HA	1.85	0.43
1:D:2296:GLU:HA	1:D:2299:VAL:HG12	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:3533:ILE:H	1:D:3533:ILE:HD12	1.84	0.43
1:D:3835:LEU:HD22	1:D:3880:PHE:HZ	1.83	0.43
1:A:672:VAL:HG11	1:A:675:LEU:HD13	2.01	0.43
1:A:711:LEU:HD23	1:A:711:LEU:H	1.84	0.43
1:A:1834:VAL:O	1:A:1835:GLU:C	2.62	0.43
1:A:2323:TRP:HZ3	1:A:2325:PRO:HB3	1.83	0.43
1:A:3923:LEU:HD21	1:A:3962:PHE:HE1	1.84	0.43
1:A:4572:ALA:O	1:A:4576:ILE:HG12	2.19	0.43
1:A:4907:ASP:O	1:A:4908:GLU:C	2.62	0.43
1:B:103:TYR:CD2	1:B:163:VAL:HG22	2.54	0.43
1:B:245:VAL:O	1:B:375:LYS:HG3	2.19	0.43
1:B:292:ALA:HA	1:B:314:PHE:HZ	1.83	0.43
1:B:1671:ARG:HG2	1:B:1717:SER:HB3	2.01	0.43
1:B:1835:GLU:O	1:B:1836:PHE:C	2.59	0.43
1:B:3668:SER:O	1:B:3672:ARG:NH2	2.47	0.43
1:C:103:TYR:CD2	1:C:163:VAL:HG22	2.54	0.43
1:C:1839:VAL:CB	1:C:1840:PRO:HD3	2.45	0.43
1:C:4992:LEU:O	1:C:4996:ILE:HG13	2.19	0.43
1:D:672:VAL:HG11	1:D:675:LEU:HD13	2.01	0.43
1:D:3657:TYR:O	1:D:3661:TRP:HD1	2.02	0.43
1:D:3962:PHE:O	1:D:3966:THR:HG23	2.19	0.43
1:A:212:GLY:O	1:A:340:LYS:HG3	2.18	0.43
1:A:1103:GLY:HA3	1:A:1123:VAL:HA	2.01	0.43
1:A:1243:PRO:HB3	1:A:1602:PRO:HA	2.01	0.43
1:B:2240:CYS:SG	1:B:2279:SER:HA	2.59	0.43
1:C:19:GLU:HA	1:C:68:THR:HA	2.01	0.43
1:C:1495:VAL:HG21	1:C:1536:SER:C	2.44	0.43
1:C:1671:ARG:HG2	1:C:1717:SER:HB3	2.01	0.43
1:C:1835:GLU:O	1:C:1836:PHE:C	2.59	0.43
1:C:1842:LEU:HD12	1:C:1842:LEU:HA	1.77	0.43
1:C:2438:PRO:HG3	1:C:2454:ARG:HG3	2.01	0.43
1:C:4907:ASP:C	1:C:4909:TYR:N	2.76	0.43
1:D:646:PRO:HD2	1:D:779:PRO:O	2.19	0.43
1:D:1238:PHE:HD1	1:D:1608:MET:HG2	1.84	0.43
1:D:1839:VAL:CB	1:D:1840:PRO:HD3	2.45	0.43
1:D:2458:ARG:NH2	1:D:2510:TYR:HA	2.33	0.43
1:D:4120:ASN:C	1:D:4120:ASN:HD22	2.26	0.43
1:D:4630:TYR:CE2	1:D:4632:LEU:HD13	2.46	0.43
1:D:4634:GLU:C	1:D:4636:THR:N	2.76	0.43
1:D:4983:HIS:HB2	1:D:4988:TYR:HE1	1.83	0.43
1:D:5013:MET:HE1	1:D:5020:ASP:HB2	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:19:GLU:HA	1:A:68:THR:HA	2.01	0.43
1:A:247:TYR:CE2	1:A:376:ALA:HB2	2.54	0.43
1:A:1952:GLN:O	1:A:1956:GLU:HG2	2.19	0.43
1:A:4021:LYS:HA	1:A:4139:ILE:HD13	2.01	0.43
1:A:5013:MET:HE1	1:A:5020:ASP:HB2	2.00	0.43
1:B:560:ILE:HA	1:B:563:VAL:HG12	2.00	0.43
1:B:1243:PRO:HB3	1:B:1602:PRO:HA	2.01	0.43
1:B:4845:ALA:O	1:B:4883:TYR:OH	2.35	0.43
1:C:1238:PHE:HD1	1:C:1608:MET:HG2	1.84	0.43
1:C:1243:PRO:HB3	1:C:1602:PRO:HA	2.01	0.43
1:C:1839:VAL:HG12	1:C:1840:PRO:N	2.32	0.43
1:D:711:LEU:H	1:D:711:LEU:HD23	1.84	0.43
1:D:1839:VAL:C	1:D:1841:VAL:H	2.26	0.43
1:A:645:ARG:HB3	1:A:780:VAL:HG12	2.01	0.42
1:A:2637:ALA:O	1:A:2640:PRO:HD2	2.19	0.42
1:A:3205:PHE:C	1:A:3208:PRO:HD2	2.45	0.42
1:A:4634:GLU:C	1:A:4636:THR:N	2.76	0.42
1:A:4828:SER:O	1:A:4832:HIS:N	2.52	0.42
1:B:711:LEU:HD23	1:B:711:LEU:H	1.84	0.42
1:B:875:ALA:O	1:B:879:HIS:ND1	2.52	0.42
1:B:4021:LYS:HA	1:B:4139:ILE:HD13	2.01	0.42
1:B:4572:ALA:O	1:B:4576:ILE:HG12	2.19	0.42
1:B:4907:ASP:O	1:B:4908:GLU:C	2.62	0.42
1:C:426:ARG:NH1	1:C:508:GLY:HA2	2.34	0.42
1:C:659:TYR:O	1:C:661:LYS:HG2	2.19	0.42
1:C:1103:GLY:HA3	1:C:1123:VAL:HA	2.01	0.42
1:C:1254:HIS:HB2	1:C:1274:HIS:ND1	2.34	0.42
1:C:1481:GLY:HA2	1:C:1573:MET:O	2.18	0.42
1:C:4814:LEU:C	1:C:4816:ILE:N	2.69	0.42
1:D:426:ARG:NH1	1:D:508:GLY:HA2	2.34	0.42
1:D:769:GLU:O	1:D:1515:VAL:HG22	2.18	0.42
1:D:1103:GLY:HA3	1:D:1123:VAL:HA	2.01	0.42
1:D:4907:ASP:O	1:D:4908:GLU:C	2.62	0.42
1:A:181:HIS:N	1:A:192:ASP:O	2.50	0.42
1:A:646:PRO:HD2	1:A:779:PRO:O	2.19	0.42
1:B:38:ALA:HB1	1:B:64:ILE:HG13	2.01	0.42
1:B:672:VAL:HG11	1:B:675:LEU:HD13	2.01	0.42
1:B:769:GLU:O	1:B:1515:VAL:HG22	2.18	0.42
1:B:2637:ALA:O	1:B:2640:PRO:HD2	2.19	0.42
1:B:3533:ILE:HD12	1:B:3533:ILE:H	1.84	0.42
1:C:672:VAL:HG11	1:C:675:LEU:HD13	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:805:PRO:HB2	1:C:808:TYR:CE1	2.54	0.42
1:C:1172:ASP:OD1	1:C:1172:ASP:N	2.52	0.42
1:C:2240:CYS:SG	1:C:2279:SER:HA	2.59	0.42
1:C:3339:ALA:HB3	1:C:3343:GLN:HB2	2.01	0.42
1:C:3923:LEU:HD21	1:C:3962:PHE:HE1	1.84	0.42
1:C:3962:PHE:O	1:C:3966:THR:HG23	2.19	0.42
1:D:103:TYR:CD2	1:D:163:VAL:HG22	2.54	0.42
1:D:132:ALA:O	1:D:194:SER:OG	2.34	0.42
1:D:805:PRO:HB2	1:D:808:TYR:CE1	2.54	0.42
1:D:1098:GLY:HA3	1:D:1198:GLN:NE2	2.34	0.42
1:D:1671:ARG:HG2	1:D:1717:SER:HB3	2.01	0.42
1:D:2438:PRO:HG3	1:D:2454:ARG:HG3	2.01	0.42
1:D:4630:TYR:CD2	1:D:4631:PHE:O	2.72	0.42
1:D:5013:MET:HE2	1:D:5013:MET:HB3	1.88	0.42
1:A:805:PRO:HB2	1:A:808:TYR:CE1	2.54	0.42
1:A:2240:CYS:SG	1:A:2279:SER:HA	2.59	0.42
1:A:3661:TRP:C	1:A:3663:LEU:H	2.28	0.42
1:A:3668:SER:O	1:A:3672:ARG:NH2	2.47	0.42
1:A:4796:MET:O	1:A:4799:SER:OG	2.27	0.42
1:A:4907:ASP:C	1:A:4909:TYR:N	2.76	0.42
1:A:4908:GLU:H	1:A:4908:GLU:HG3	1.34	0.42
1:B:426:ARG:NH1	1:B:508:GLY:HA2	2.34	0.42
1:B:3309:SER:O	1:B:3312:LEU:HD23	2.20	0.42
1:C:2296:GLU:HA	1:C:2299:VAL:HG12	2.00	0.42
1:C:3533:ILE:H	1:C:3533:ILE:HD12	1.84	0.42
1:C:3842:LEU:HD23	1:C:3842:LEU:HA	1.83	0.42
1:D:340:LYS:O	1:D:344:SER:OG	2.31	0.42
1:D:482:GLY:C	1:D:484:LEU:H	2.26	0.42
1:D:1931:LEU:HD22	1:D:1935:VAL:HG11	1.99	0.42
1:D:2135:LEU:HD13	1:D:3662:ILE:HG22	2.01	0.42
1:D:3309:SER:O	1:D:3312:LEU:HD23	2.20	0.42
1:D:4126:GLU:O	1:D:4130:ASN:ND2	2.35	0.42
1:A:132:ALA:O	1:A:194:SER:OG	2.34	0.42
1:A:245:VAL:O	1:A:375:LYS:HG3	2.19	0.42
1:A:342:GLY:H	1:A:389:PHE:HE1	1.66	0.42
1:A:426:ARG:NH1	1:A:508:GLY:HA2	2.34	0.42
1:A:1293:LEU:HD23	1:A:1579:MET:HB3	2.01	0.42
1:A:1671:ARG:HG2	1:A:1717:SER:HB3	2.01	0.42
1:A:2296:GLU:HA	1:A:2299:VAL:HG12	2.00	0.42
1:A:2368:LEU:HD22	1:A:2376:LEU:HD13	2.02	0.42
1:B:19:GLU:HA	1:B:68:THR:HA	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:212:GLY:O	1:B:340:LYS:HG3	2.18	0.42
1:B:286:THR:HG23	1:B:287:THR:HG23	2.01	0.42
1:B:342:GLY:H	1:B:389:PHE:HE1	1.66	0.42
1:B:805:PRO:HB2	1:B:808:TYR:CE1	2.54	0.42
1:B:882:TRP:HZ3	1:B:886:ARG:HD3	1.85	0.42
1:B:3962:PHE:O	1:B:3966:THR:HG23	2.19	0.42
1:C:317:ARG:N	1:C:347:PHE:O	2.48	0.42
1:C:882:TRP:HZ3	1:C:886:ARG:HD3	1.85	0.42
1:C:2348:GLU:CD	1:C:2348:GLU:H	2.26	0.42
1:C:3662:ILE:O	1:C:3664:THR:N	2.50	0.42
1:D:286:THR:HG23	1:D:287:THR:HG23	2.01	0.42
1:D:882:TRP:HZ3	1:D:886:ARG:HD3	1.85	0.42
1:D:2368:LEU:HD22	1:D:2376:LEU:HD13	2.02	0.42
1:D:2637:ALA:O	1:D:2640:PRO:HD2	2.19	0.42
1:D:4796:MET:O	1:D:4799:SER:OG	2.27	0.42
1:A:882:TRP:HZ3	1:A:886:ARG:HD3	1.85	0.42
1:A:3838:THR:O	1:A:3838:THR:OG1	2.29	0.42
1:B:645:ARG:HG2	1:B:826:ILE:HG23	2.01	0.42
1:B:884:LEU:HG	1:B:965:TYR:HD2	1.84	0.42
1:B:1254:HIS:HB2	1:B:1274:HIS:ND1	2.34	0.42
1:B:1683:HIS:HD2	1:B:1800:PRO:HG3	1.85	0.42
1:B:1952:GLN:O	1:B:1956:GLU:HG2	2.19	0.42
1:B:3802:ILE:HD12	1:B:3886:ARG:HG3	2.01	0.42
1:B:4247:ILE:HD11	1:B:4667:PRO:HB2	2.01	0.42
1:B:4630:TYR:CD2	1:B:4631:PHE:O	2.72	0.42
1:C:245:VAL:O	1:C:375:LYS:HG3	2.19	0.42
1:C:568:LEU:HD23	1:C:568:LEU:HA	1.89	0.42
1:C:3309:SER:O	1:C:3312:LEU:HD23	2.20	0.42
1:C:3771:HIS:HA	1:C:3773:ARG:NH1	2.35	0.42
1:C:4572:ALA:O	1:C:4576:ILE:HG12	2.19	0.42
1:D:1952:GLN:O	1:D:1956:GLU:HG2	2.19	0.42
1:D:2215:LEU:HD12	1:D:2229:VAL:HG11	2.02	0.42
1:D:2438:PRO:HG3	1:D:2454:ARG:HB2	2.02	0.42
1:D:3205:PHE:C	1:D:3208:PRO:HD2	2.45	0.42
1:D:3798:LEU:HD21	1:D:3884:LEU:HA	2.02	0.42
1:D:4646:LEU:HD23	1:D:4646:LEU:HA	1.91	0.42
1:A:21:VAL:HG12	1:A:205:ILE:HB	2.02	0.42
1:A:2215:LEU:HD12	1:A:2229:VAL:HG11	2.02	0.42
1:A:2438:PRO:HG3	1:A:2454:ARG:HB2	2.02	0.42
1:A:3533:ILE:H	1:A:3533:ILE:HD12	1.84	0.42
1:A:4702:ASP:OD1	1:A:4702:ASP:N	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1453:VAL:HG23	1:B:1454:THR:N	2.28	0.42
1:B:1829:PRO:HG2	1:B:1833:SER:H	1.85	0.42
1:B:3339:ALA:HB3	1:B:3343:GLN:HB2	2.01	0.42
1:C:451:TYR:OH	1:C:474:ARG:HD2	2.20	0.42
1:C:3679:LYS:HE3	1:C:3679:LYS:HB3	1.84	0.42
1:C:4630:TYR:CD2	1:C:4631:PHE:O	2.72	0.42
1:D:4679:ARG:HH12	1:D:4715:TYR:HH	1.60	0.42
1:A:1098:GLY:HA3	1:A:1198:GLN:NE2	2.34	0.42
1:A:1238:PHE:HD1	1:A:1608:MET:HG2	1.84	0.42
1:A:1444:GLU:HA	1:A:1445:PRO:HD3	1.92	0.42
1:A:1457:TYR:O	1:A:1497:GLY:N	2.47	0.42
1:A:1683:HIS:HD2	1:A:1800:PRO:HG3	1.85	0.42
1:A:1839:VAL:C	1:A:1841:VAL:H	2.26	0.42
1:A:4630:TYR:CD2	1:A:4631:PHE:O	2.72	0.42
1:B:1221:GLU:OE2	1:B:1221:GLU:N	2.51	0.42
1:B:1238:PHE:HD1	1:B:1608:MET:HG2	1.84	0.42
1:B:2296:GLU:HA	1:B:2299:VAL:HG12	2.00	0.42
1:B:4120:ASN:HD22	1:B:4120:ASN:C	2.26	0.42
1:B:4150:LEU:HD12	1:B:4150:LEU:HA	1.92	0.42
1:C:49:LEU:HD11	1:C:191:VAL:HG13	2.02	0.42
1:C:286:THR:HG23	1:C:287:THR:HG23	2.01	0.42
1:C:1539:PHE:O	1:C:1542:VAL:HG22	2.20	0.42
1:C:2458:ARG:NH2	1:C:2510:TYR:HA	2.33	0.42
1:D:451:TYR:OH	1:D:474:ARG:HD2	2.20	0.42
1:D:1483:VAL:HG12	1:D:1575:LEU:HD22	2.02	0.42
1:D:1927:LEU:HB3	1:D:1939:MET:SD	2.60	0.42
1:D:4247:ILE:HD11	1:D:4667:PRO:HB2	2.01	0.42
1:D:4992:LEU:O	1:D:4996:ILE:HG13	2.19	0.42
1:A:103:TYR:CD2	1:A:163:VAL:HG22	2.54	0.42
1:A:659:TYR:O	1:A:661:LYS:HG2	2.19	0.42
1:A:1483:VAL:HG12	1:A:1575:LEU:HD22	2.02	0.42
1:A:1495:VAL:HG21	1:A:1536:SER:C	2.44	0.42
1:A:1579:MET:HE2	1:A:1595:LEU:HD21	2.01	0.42
1:A:2438:PRO:HG3	1:A:2454:ARG:HG3	2.01	0.42
1:A:3657:TYR:O	1:A:3661:TRP:HD1	2.02	0.42
1:A:4247:ILE:HD11	1:A:4667:PRO:HB2	2.01	0.42
1:B:645:ARG:HB3	1:B:780:VAL:HG12	2.01	0.42
1:B:646:PRO:HD2	1:B:779:PRO:O	2.19	0.42
1:B:972:LEU:HD13	1:B:1044:ARG:HB3	2.01	0.42
1:B:1834:VAL:O	1:B:1835:GLU:C	2.62	0.42
1:B:2438:PRO:HG3	1:B:2454:ARG:HB2	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3205:PHE:C	1:B:3208:PRO:HD2	2.45	0.42
1:C:415:ILE:HD12	1:C:415:ILE:HA	1.90	0.42
1:C:1483:VAL:HG12	1:C:1575:LEU:HD22	2.02	0.42
1:C:1952:GLN:O	1:C:1956:GLU:HG2	2.19	0.42
1:C:2438:PRO:HG3	1:C:2454:ARG:HB2	2.02	0.42
1:C:3838:THR:O	1:C:3838:THR:OG1	2.29	0.42
1:C:4021:LYS:HA	1:C:4139:ILE:HD13	2.01	0.42
1:C:4322:LEU:HD23	1:C:4322:LEU:HA	1.84	0.42
1:D:1579:MET:HE2	1:D:1595:LEU:HD21	2.01	0.42
1:D:2323:TRP:HZ3	1:D:2325:PRO:HB3	1.83	0.42
1:D:3339:ALA:HB3	1:D:3343:GLN:HB2	2.01	0.42
1:D:4572:ALA:O	1:D:4576:ILE:HG12	2.19	0.42
1:D:4685:GLY:HA3	1:D:4689:THR:HB	2.02	0.42
1:A:1835:GLU:O	1:A:1838:PHE:N	2.53	0.42
1:A:4901:ILE:HD12	1:A:4901:ILE:HA	1.65	0.42
1:B:21:VAL:HG12	1:B:205:ILE:HB	2.02	0.42
1:B:1927:LEU:HB3	1:B:1939:MET:SD	2.60	0.42
1:B:3923:LEU:HD21	1:B:3962:PHE:HE1	1.84	0.42
1:B:5027:CYS:O	1:B:5027:CYS:SG	2.78	0.42
1:C:1207:ASP:OD1	1:C:1207:ASP:N	2.53	0.42
1:C:1579:MET:HE2	1:C:1595:LEU:HD21	2.01	0.42
1:C:1829:PRO:HG2	1:C:1833:SER:H	1.85	0.42
1:C:1835:GLU:O	1:C:1838:PHE:N	2.53	0.42
1:C:1927:LEU:HB3	1:C:1939:MET:SD	2.60	0.42
1:C:3980:LEU:HD23	1:C:3980:LEU:HA	1.85	0.42
1:D:627:PRO:O	1:D:629:ARG:NE	2.53	0.42
1:D:1254:HIS:HB2	1:D:1274:HIS:ND1	2.34	0.42
1:D:4907:ASP:C	1:D:4909:TYR:N	2.76	0.42
1:A:732:SER:O	1:A:735:GLN:HG2	2.20	0.42
1:A:790:ARG:NH1	1:A:797:HIS:HB3	2.35	0.42
1:A:1254:HIS:HB2	1:A:1274:HIS:ND1	2.34	0.42
1:A:3577:ARG:CZ	1:D:1208:VAL:O	2.68	0.42
1:A:3798:LEU:HD21	1:A:3884:LEU:HA	2.02	0.42
1:A:4630:TYR:CE2	1:A:4632:LEU:HD13	2.46	0.42
1:B:609:CYS:SG	1:B:610:ASN:N	2.93	0.42
1:B:1098:GLY:HA3	1:B:1198:GLN:NE2	2.34	0.42
1:B:1539:PHE:O	1:B:1542:VAL:HG22	2.20	0.42
1:B:2164:SER:O	1:B:2167:ILE:HG12	2.20	0.42
1:B:4634:GLU:C	1:B:4636:THR:N	2.76	0.42
1:C:38:ALA:HB1	1:C:64:ILE:HG13	2.01	0.42
1:C:790:ARG:NH1	1:C:797:HIS:HB3	2.35	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1518:CYS:O	1:C:1526:LEU:HA	2.20	0.42
1:C:1730:MET:SD	1:C:2163:ARG:NH1	2.93	0.42
1:C:2135:LEU:HD13	1:C:3662:ILE:HG22	2.01	0.42
1:C:4685:GLY:HA3	1:C:4689:THR:HB	2.02	0.42
1:C:4828:SER:O	1:C:4832:HIS:N	2.52	0.42
1:D:49:LEU:HD11	1:D:191:VAL:HG13	2.02	0.42
1:D:245:VAL:O	1:D:375:LYS:HG3	2.19	0.42
1:D:645:ARG:HG2	1:D:826:ILE:HG23	2.01	0.42
1:D:972:LEU:HD13	1:D:1044:ARG:HB3	2.01	0.42
1:D:1835:GLU:O	1:D:1838:PHE:N	2.53	0.42
1:D:3661:TRP:C	1:D:3663:LEU:H	2.28	0.42
1:D:3842:LEU:HA	1:D:3842:LEU:HD23	1.83	0.42
1:A:977:LEU:HD12	1:A:978:THR:HG22	2.02	0.41
1:A:1229:ASN:HB3	1:A:1826:ALA:HA	2.02	0.41
1:B:49:LEU:HD11	1:B:191:VAL:HG13	2.02	0.41
1:B:1172:ASP:N	1:B:1172:ASP:OD1	2.52	0.41
1:B:1295:VAL:N	1:B:1453:VAL:O	2.53	0.41
1:B:1483:VAL:HG12	1:B:1575:LEU:HD22	2.02	0.41
1:B:3657:TYR:O	1:B:3661:TRP:HD1	2.02	0.41
1:B:3771:HIS:HA	1:B:3773:ARG:NH1	2.35	0.41
1:B:5013:MET:HE2	1:B:5013:MET:HB3	1.88	0.41
1:C:1229:ASN:HB3	1:C:1826:ALA:HA	2.02	0.41
1:C:1834:VAL:O	1:C:1835:GLU:C	2.62	0.41
1:C:3205:PHE:C	1:C:3208:PRO:HD2	2.45	0.41
1:C:4120:ASN:C	1:C:4120:ASN:HD22	2.26	0.41
1:C:4907:ASP:O	1:C:4908:GLU:C	2.62	0.41
1:C:5027:CYS:O	1:C:5027:CYS:SG	2.78	0.41
1:D:732:SER:O	1:D:735:GLN:HG2	2.20	0.41
1:D:1730:MET:SD	1:D:2163:ARG:NH1	2.93	0.41
1:D:1829:PRO:HG2	1:D:1833:SER:H	1.85	0.41
1:D:2695:LEU:HD12	1:D:2696:TYR:H	1.85	0.41
1:D:3716:LEU:HD12	1:D:3716:LEU:HA	1.86	0.41
1:D:4702:ASP:N	1:D:4702:ASP:OD1	2.53	0.41
1:A:40:GLU:HB3	1:A:44:ASN:ND2	2.33	0.41
1:A:609:CYS:SG	1:A:610:ASN:N	2.93	0.41
1:A:2194:HIS:HE1	1:A:3647:HIS:NE2	2.18	0.41
1:A:3716:LEU:HD12	1:A:3716:LEU:HA	1.86	0.41
1:A:3790:THR:HG22	1:A:3835:LEU:HD23	2.02	0.41
1:A:4798:MET:HE2	1:A:4798:MET:HA	2.02	0.41
1:A:4816:ILE:O	1:A:4820:VAL:HG23	2.20	0.41
1:B:451:TYR:OH	1:B:474:ARG:HD2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:790:ARG:NH1	1:B:797:HIS:HB3	2.35	0.41
1:B:1730:MET:SD	1:B:2163:ARG:NH1	2.93	0.41
1:B:1839:VAL:HG12	1:B:1840:PRO:N	2.32	0.41
1:B:4685:GLY:HA3	1:B:4689:THR:HB	2.02	0.41
1:C:646:PRO:HD2	1:C:779:PRO:O	2.19	0.41
1:C:884:LEU:HG	1:C:965:TYR:HD2	1.84	0.41
1:C:1208:VAL:O	1:D:3577:ARG:CZ	2.68	0.41
1:C:1463:ASN:N	1:C:1492:CYS:SG	2.82	0.41
1:C:1683:HIS:ND1	1:C:1797:ARG:HG2	2.35	0.41
1:C:2164:SER:O	1:C:2167:ILE:HG12	2.20	0.41
1:C:2637:ALA:O	1:C:2640:PRO:HD2	2.19	0.41
1:C:4798:MET:HA	1:C:4798:MET:HE2	2.02	0.41
1:C:4816:ILE:O	1:C:4820:VAL:HG23	2.20	0.41
1:D:220:LEU:CB	1:D:392:ARG:HA	2.51	0.41
1:D:719:LEU:O	1:D:720:HIS:CG	2.73	0.41
1:D:884:LEU:HG	1:D:965:TYR:HD2	1.84	0.41
1:D:925:SER:O	1:D:928:THR:OG1	2.38	0.41
1:D:1495:VAL:HG21	1:D:1536:SER:C	2.44	0.41
1:D:1539:PHE:O	1:D:1542:VAL:HG22	2.20	0.41
1:D:1637:MET:HE3	1:D:1637:MET:HB2	1.83	0.41
1:D:1683:HIS:ND1	1:D:1797:ARG:HG2	2.35	0.41
1:D:1683:HIS:HD2	1:D:1800:PRO:HG3	1.85	0.41
1:D:3558:HIS:HE2	1:D:3593:VAL:HA	1.86	0.41
1:A:1730:MET:SD	1:A:2163:ARG:NH1	2.93	0.41
1:A:3339:ALA:HB3	1:A:3343:GLN:HB2	2.01	0.41
1:A:4690:GLU:O	1:A:4691:GLN:HG2	2.21	0.41
1:B:220:LEU:CB	1:B:392:ARG:HA	2.51	0.41
1:B:1208:VAL:O	1:C:3577:ARG:CZ	2.68	0.41
1:B:1229:ASN:HB3	1:B:1826:ALA:HA	2.02	0.41
1:B:1293:LEU:HD23	1:B:1579:MET:HB3	2.01	0.41
1:B:1295:VAL:HB	1:B:1452:TRP:O	2.21	0.41
1:B:1579:MET:HE2	1:B:1595:LEU:HD21	2.01	0.41
1:B:2094:LEU:O	1:B:2098:VAL:HG12	2.20	0.41
1:B:2194:HIS:HE1	1:B:3647:HIS:NE2	2.18	0.41
1:B:3662:ILE:O	1:B:3664:THR:N	2.50	0.41
1:B:4630:TYR:CE2	1:B:4632:LEU:HD13	2.46	0.41
1:B:4828:SER:O	1:B:4832:HIS:N	2.52	0.41
1:B:5013:MET:HE1	1:B:5020:ASP:HB2	2.00	0.41
1:C:732:SER:O	1:C:735:GLN:HG2	2.20	0.41
1:C:972:LEU:HD21	1:C:1048:GLY:HA3	2.03	0.41
1:C:1295:VAL:HB	1:C:1452:TRP:O	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:2695:LEU:HD12	1:C:2696:TYR:H	1.85	0.41
1:C:3802:ILE:HD12	1:C:3886:ARG:HG3	2.01	0.41
1:D:38:ALA:HB1	1:D:64:ILE:HG13	2.01	0.41
1:D:977:LEU:HD12	1:D:978:THR:HG22	2.02	0.41
1:D:1229:ASN:HB3	1:D:1826:ALA:HA	2.02	0.41
1:D:1293:LEU:HD23	1:D:1579:MET:HB3	2.01	0.41
1:D:3197:LEU:HD12	1:D:3197:LEU:HA	1.96	0.41
1:A:220:LEU:CB	1:A:392:ARG:HA	2.51	0.41
1:A:591:ASP:HB2	1:A:631:LEU:HD11	2.02	0.41
1:A:1835:GLU:O	1:A:1836:PHE:C	2.59	0.41
1:A:3761:GLN:O	1:A:3762:ARG:HB2	2.20	0.41
1:A:3771:HIS:HA	1:A:3773:ARG:NH1	2.35	0.41
1:B:40:GLU:HB3	1:B:44:ASN:ND2	2.33	0.41
1:B:591:ASP:HB2	1:B:631:LEU:HD11	2.02	0.41
1:B:1028:ASP:N	1:B:1028:ASP:OD1	2.54	0.41
1:B:1463:ASN:N	1:B:1492:CYS:SG	2.82	0.41
1:B:3532:LEU:HA	1:B:3535:LEU:HD13	2.03	0.41
1:C:252:VAL:HA	1:C:255:HIS:HB2	2.03	0.41
1:C:645:ARG:HG2	1:C:826:ILE:HG23	2.01	0.41
1:C:804:PRO:HA	1:C:805:PRO:HD3	1.91	0.41
1:C:977:LEU:HD12	1:C:978:THR:HG22	2.02	0.41
1:C:1176:GLU:O	1:C:1180:ARG:NH2	2.44	0.41
1:C:1601:MET:HA	1:C:1602:PRO:HD3	1.92	0.41
1:C:2094:LEU:O	1:C:2098:VAL:HG12	2.20	0.41
1:C:2215:LEU:HD12	1:C:2229:VAL:HG11	2.02	0.41
1:C:3532:LEU:HA	1:C:3535:LEU:HD13	2.03	0.41
1:D:45:ARG:NH2	1:D:447:ASP:OD2	2.50	0.41
1:D:1518:CYS:O	1:D:1526:LEU:HA	2.20	0.41
1:D:1705:GLY:O	1:D:1708:ARG:N	2.54	0.41
1:D:1750:PRO:HD2	1:D:1755:GLY:HA3	2.02	0.41
1:D:2094:LEU:O	1:D:2098:VAL:HG12	2.20	0.41
1:D:2164:SER:O	1:D:2167:ILE:HG12	2.20	0.41
1:D:3644:LEU:HD12	1:D:3645:PRO:HD2	2.03	0.41
1:D:3771:HIS:HA	1:D:3773:ARG:NH1	2.35	0.41
1:D:4021:LYS:HA	1:D:4139:ILE:HD13	2.01	0.41
1:A:451:TYR:OH	1:A:474:ARG:HD2	2.20	0.41
1:A:685:GLY:HA3	1:A:714:TYR:O	2.20	0.41
1:A:925:SER:O	1:A:928:THR:OG1	2.38	0.41
1:A:1539:PHE:O	1:A:1542:VAL:HG22	2.20	0.41
1:A:1653:LEU:HD12	1:A:1707:LEU:HD11	2.02	0.41
1:A:1829:PRO:HG2	1:A:1833:SER:H	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1839:VAL:CB	1:A:1840:PRO:HD3	2.45	0.41
1:A:3802:ILE:HD12	1:A:3886:ARG:HG3	2.01	0.41
1:A:5027:CYS:O	1:A:5027:CYS:SG	2.78	0.41
1:B:349:GLN:HG2	1:B:356:TRP:CH2	2.56	0.41
1:B:418:LEU:HA	1:B:421:PHE:HE1	1.86	0.41
1:B:2438:PRO:HG3	1:B:2454:ARG:HG3	2.01	0.41
1:B:3558:HIS:HE2	1:B:3593:VAL:HA	1.86	0.41
1:B:3761:GLN:O	1:B:3762:ARG:HB2	2.20	0.41
1:B:4824:ARG:HE	1:B:4824:ARG:HB3	1.66	0.41
1:C:181:HIS:N	1:C:192:ASP:O	2.50	0.41
1:C:551:LEU:HD23	1:C:553:ARG:NH2	2.36	0.41
1:C:1028:ASP:N	1:C:1028:ASP:OD1	2.54	0.41
1:C:1293:LEU:HD23	1:C:1579:MET:HB3	2.01	0.41
1:C:2208:MET:HE3	1:C:2208:MET:HB3	1.67	0.41
1:C:3212:GLU:HA	1:C:3216:CYS:SG	2.61	0.41
1:C:3798:LEU:HD21	1:C:3884:LEU:HA	2.02	0.41
1:C:4247:ILE:HD11	1:C:4667:PRO:HB2	2.01	0.41
1:C:4819:GLY:O	1:C:4820:VAL:C	2.63	0.41
1:D:349:GLN:HG2	1:D:356:TRP:CH2	2.56	0.41
1:D:1444:GLU:HA	1:D:1445:PRO:HD3	1.92	0.41
1:D:1457:TYR:OH	1:D:1643:GLU:O	2.38	0.41
1:D:4995:LEU:HD23	1:D:5011:TRP:HB2	2.03	0.41
1:D:5027:CYS:O	1:D:5027:CYS:SG	2.78	0.41
1:A:252:VAL:HA	1:A:255:HIS:HB2	2.03	0.41
1:A:349:GLN:HG2	1:A:356:TRP:CH2	2.56	0.41
1:A:645:ARG:HG2	1:A:826:ILE:HG23	2.01	0.41
1:A:1683:HIS:ND1	1:A:1797:ARG:HG2	2.35	0.41
1:A:2094:LEU:O	1:A:2098:VAL:HG12	2.20	0.41
1:A:2418:LEU:HD12	1:A:2418:LEU:HA	1.94	0.41
1:A:2506:LEU:HD12	1:A:2510:TYR:HB2	2.03	0.41
1:A:4006:ASP:OD1	1:A:4008:SER:N	2.53	0.41
1:A:4685:GLY:HA3	1:A:4689:THR:HB	2.02	0.41
1:B:652:ARG:HD2	1:B:750:LEU:HB2	2.02	0.41
1:B:977:LEU:HD12	1:B:978:THR:HG22	2.02	0.41
1:B:1750:PRO:HD2	1:B:1755:GLY:HA3	2.02	0.41
1:B:2215:LEU:HD12	1:B:2229:VAL:HG11	2.02	0.41
1:B:2695:LEU:HD12	1:B:2696:TYR:H	1.85	0.41
1:B:3842:LEU:HA	1:B:3842:LEU:HD23	1.83	0.41
1:B:4702:ASP:N	1:B:4702:ASP:OD1	2.53	0.41
1:B:4798:MET:HE2	1:B:4798:MET:HA	2.02	0.41
1:B:4816:ILE:O	1:B:4820:VAL:HG23	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:4907:ASP:C	1:B:4909:TYR:N	2.76	0.41
1:C:220:LEU:HB2	1:C:392:ARG:HA	2.03	0.41
1:C:349:GLN:HG2	1:C:356:TRP:CH2	2.56	0.41
1:C:1293:LEU:HD21	1:C:1579:MET:HB3	2.03	0.41
1:C:1634:LEU:HD12	1:C:1634:LEU:HA	1.86	0.41
1:C:1680:ARG:HA	1:C:1797:ARG:HD2	2.03	0.41
1:C:3174:SER:OG	1:C:3175:LEU:N	2.48	0.41
1:C:4112:LEU:O	1:C:4115:SER:OG	2.39	0.41
1:C:4802:GLY:HA3	1:C:4809:PHE:CE2	2.56	0.41
1:C:5013:MET:HE1	1:C:5020:ASP:HB2	2.00	0.41
1:D:21:VAL:HG12	1:D:205:ILE:HB	2.02	0.41
1:D:4690:GLU:O	1:D:4691:GLN:HG2	2.21	0.41
1:A:884:LEU:HG	1:A:965:TYR:HD2	1.84	0.41
1:A:1927:LEU:HB3	1:A:1939:MET:SD	2.60	0.41
1:A:2164:SER:O	1:A:2167:ILE:HG12	2.20	0.41
1:A:3309:SER:O	1:A:3312:LEU:HD23	2.20	0.41
1:B:63:ALA:HB2	1:B:261:ARG:NH1	2.36	0.41
1:B:719:LEU:O	1:B:720:HIS:CG	2.73	0.41
1:B:732:SER:O	1:B:735:GLN:HG2	2.20	0.41
1:B:1705:GLY:O	1:B:1708:ARG:N	2.54	0.41
1:B:2418:LEU:HD12	1:B:2418:LEU:HA	1.94	0.41
1:B:3212:GLU:HA	1:B:3216:CYS:SG	2.61	0.41
1:B:3790:THR:HG22	1:B:3835:LEU:HD23	2.02	0.41
1:C:627:PRO:O	1:C:629:ARG:NE	2.53	0.41
1:C:759:ILE:HG22	1:C:760:ASN:H	1.86	0.41
1:C:972:LEU:HD13	1:C:1044:ARG:HB3	2.01	0.41
1:C:1154:ASP:OD1	1:C:1156:THR:OG1	2.28	0.41
1:C:1240:LYS:HG3	1:C:1241:SER:H	1.86	0.41
1:C:4006:ASP:OD1	1:C:4008:SER:N	2.53	0.41
1:C:4093:PHE:CZ	1:C:4097:MET:HE3	2.56	0.41
1:C:4878:ASP:OD1	1:C:4879:MET:N	2.54	0.41
1:C:4995:LEU:HD23	1:C:5011:TRP:HB2	2.03	0.41
1:D:252:VAL:HA	1:D:255:HIS:HB2	2.03	0.41
1:D:317:ARG:N	1:D:347:PHE:O	2.48	0.41
1:D:646:PRO:HA	1:D:823:LEU:HA	2.03	0.41
1:D:972:LEU:HD21	1:D:1048:GLY:HA3	2.03	0.41
1:D:1240:LYS:HG3	1:D:1241:SER:H	1.86	0.41
1:D:2175:GLU:HB2	1:D:2228:MET:HE3	2.03	0.41
1:D:2194:HIS:HE1	1:D:3647:HIS:NE2	2.18	0.41
1:D:2506:LEU:HD12	1:D:2510:TYR:HB2	2.03	0.41
1:D:3802:ILE:HD12	1:D:3886:ARG:HG3	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:3980:LEU:HD23	1:D:3980:LEU:HA	1.85	0.41
1:A:49:LEU:HD11	1:A:191:VAL:HG13	2.02	0.41
1:A:1271:ARG:C	1:A:1272:LEU:HD12	2.45	0.41
1:A:4802:GLY:HA3	1:A:4809:PHE:CE2	2.56	0.41
1:A:4878:ASP:OD1	1:A:4879:MET:N	2.54	0.41
1:B:181:HIS:N	1:B:192:ASP:O	2.50	0.41
1:B:759:ILE:HG22	1:B:760:ASN:H	1.86	0.41
1:B:1207:ASP:OD1	1:B:1207:ASP:N	2.53	0.41
1:B:1653:LEU:HD12	1:B:1707:LEU:HD11	2.02	0.41
1:B:1683:HIS:ND1	1:B:1797:ARG:HG2	2.35	0.41
1:B:1839:VAL:CB	1:B:1840:PRO:HD3	2.45	0.41
1:B:4088:ILE:HD11	1:B:4093:PHE:HD2	1.86	0.41
1:B:4802:GLY:HA3	1:B:4809:PHE:CE2	2.56	0.41
1:C:2175:GLU:HB2	1:C:2228:MET:HE3	2.03	0.41
1:C:3558:HIS:HE2	1:C:3593:VAL:HA	1.86	0.41
1:C:4980:LEU:HD23	1:C:4980:LEU:HA	1.96	0.41
1:D:1834:VAL:O	1:D:1835:GLU:C	2.62	0.41
1:D:2348:GLU:H	1:D:2348:GLU:CD	2.26	0.41
1:D:3761:GLN:O	1:D:3762:ARG:HB2	2.20	0.41
1:A:24:CYS:O	1:A:35:LEU:N	2.45	0.41
1:A:34:LYS:H	1:A:53:SER:HB2	1.86	0.41
1:A:418:LEU:HA	1:A:421:PHE:HE1	1.86	0.41
1:A:972:LEU:HD13	1:A:1044:ARG:HB3	2.01	0.41
1:A:1172:ASP:N	1:A:1172:ASP:OD1	2.52	0.41
1:A:1205:GLY:O	1:B:3573:MET:HE3	2.21	0.41
1:A:1293:LEU:HD21	1:A:1579:MET:HB3	2.03	0.41
1:A:1705:GLY:O	1:A:1708:ARG:N	2.54	0.41
1:A:1849:LEU:HD12	1:A:1849:LEU:HA	1.84	0.41
1:A:2175:GLU:HB2	1:A:2228:MET:HE3	2.03	0.41
1:A:2552:ARG:CZ	1:A:2552:ARG:HA	2.51	0.41
1:A:2695:LEU:HD12	1:A:2696:TYR:H	1.85	0.41
1:A:3532:LEU:HA	1:A:3535:LEU:HD13	2.03	0.41
1:A:4088:ILE:HD11	1:A:4093:PHE:HD2	1.86	0.41
1:A:4682:GLU:HA	1:A:4724:VAL:HG12	2.03	0.41
1:B:24:CYS:O	1:B:35:LEU:N	2.45	0.41
1:B:111:HIS:CE1	1:B:113:HIS:HB3	2.56	0.41
1:B:220:LEU:HB2	1:B:392:ARG:HA	2.03	0.41
1:B:252:VAL:HA	1:B:255:HIS:HB2	2.03	0.41
1:B:633:LEU:HD23	1:B:1639:LEU:HD22	2.02	0.41
1:B:637:LEU:HD23	1:B:1637:MET:HB3	2.03	0.41
1:B:685:GLY:HA3	1:B:714:TYR:O	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1154:ASP:O	1:B:1158:ASN:N	2.54	0.41
1:B:1205:GLY:O	1:C:3573:MET:HE3	2.21	0.41
1:B:1601:MET:HA	1:B:1602:PRO:HD3	1.92	0.41
1:B:1842:LEU:HD12	1:B:1842:LEU:HA	1.77	0.41
1:B:2368:LEU:HD22	1:B:2376:LEU:HD13	2.02	0.41
1:B:4682:GLU:HA	1:B:4724:VAL:HG12	2.03	0.41
1:B:4690:GLU:O	1:B:4691:GLN:HG2	2.21	0.41
1:B:4878:ASP:OD1	1:B:4879:MET:N	2.54	0.41
1:B:4995:LEU:HD23	1:B:5011:TRP:HB2	2.03	0.41
1:C:21:VAL:HG12	1:C:205:ILE:HB	2.02	0.41
1:C:220:LEU:CB	1:C:392:ARG:HA	2.51	0.41
1:C:591:ASP:HB2	1:C:631:LEU:HD11	2.02	0.41
1:C:719:LEU:O	1:C:720:HIS:CG	2.73	0.41
1:C:1271:ARG:C	1:C:1272:LEU:HD12	2.45	0.41
1:C:1457:TYR:O	1:C:1497:GLY:N	2.47	0.41
1:C:1457:TYR:OH	1:C:1643:GLU:O	2.38	0.41
1:C:1683:HIS:HD2	1:C:1800:PRO:HG3	1.85	0.41
1:C:2138:LEU:N	1:C:2139:PRO:HD2	2.36	0.41
1:C:2368:LEU:HD22	1:C:2376:LEU:HD13	2.02	0.41
1:C:3716:LEU:HD12	1:C:3716:LEU:HA	1.86	0.41
1:C:4690:GLU:HG2	1:C:4691:GLN:H	1.86	0.41
1:D:591:ASP:HB2	1:D:631:LEU:HD11	2.02	0.41
1:D:685:GLY:HA3	1:D:714:TYR:O	2.20	0.41
1:D:759:ILE:HG22	1:D:760:ASN:H	1.86	0.41
1:D:1271:ARG:C	1:D:1272:LEU:HD12	2.45	0.41
1:D:1295:VAL:HB	1:D:1452:TRP:O	2.21	0.41
1:D:1540:PHE:O	1:D:1543:GLU:HG2	2.21	0.41
1:D:1867:GLU:O	1:D:1870:VAL:N	2.53	0.41
1:D:3662:ILE:O	1:D:3664:THR:N	2.50	0.41
1:D:3790:THR:HG22	1:D:3835:LEU:HD23	2.02	0.41
1:D:3923:LEU:HD21	1:D:3962:PHE:HE1	1.84	0.41
1:D:4088:ILE:HD11	1:D:4093:PHE:HD2	1.86	0.41
1:D:4682:GLU:HA	1:D:4724:VAL:HG12	2.03	0.41
1:D:4790:LEU:HA	1:D:4790:LEU:HD23	1.85	0.41
1:D:4798:MET:HE2	1:D:4798:MET:HA	2.02	0.41
1:D:4802:GLY:HA3	1:D:4809:PHE:CE2	2.56	0.41
1:D:4816:ILE:O	1:D:4820:VAL:HG23	2.20	0.41
1:D:4878:ASP:OD1	1:D:4879:MET:N	2.54	0.41
1:D:4911:LEU:HD13	1:D:4911:LEU:HA	1.84	0.41
1:A:111:HIS:CE1	1:A:113:HIS:HB3	2.56	0.41
1:A:551:LEU:HD23	1:A:553:ARG:NH2	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:719:LEU:O	1:A:720:HIS:CG	2.73	0.41
1:A:804:PRO:HA	1:A:805:PRO:HD3	1.91	0.41
1:A:1295:VAL:HB	1:A:1452:TRP:O	2.21	0.41
1:A:2135:LEU:HD13	1:A:3662:ILE:HG22	2.01	0.41
1:A:2138:LEU:N	1:A:2139:PRO:HD2	2.36	0.41
1:B:551:LEU:HD23	1:B:553:ARG:NH2	2.36	0.41
1:B:1663:HIS:HA	1:B:1666:THR:HG22	2.04	0.41
1:B:1680:ARG:HA	1:B:1797:ARG:HD2	2.03	0.41
1:B:1835:GLU:O	1:B:1838:PHE:N	2.53	0.41
1:B:2208:MET:HE3	1:B:2208:MET:HB3	1.67	0.41
1:B:3661:TRP:C	1:B:3663:LEU:H	2.28	0.41
1:B:4690:GLU:HG2	1:B:4691:GLN:H	1.86	0.41
1:C:637:LEU:HD23	1:C:1637:MET:HB3	2.03	0.41
1:C:1770:SER:HB2	1:C:1956:GLU:OE2	2.21	0.41
1:C:3761:GLN:O	1:C:3762:ARG:HB2	2.20	0.41
1:C:4061:PHE:HA	1:C:4064:MET:HE3	2.03	0.41
1:C:4088:ILE:HD11	1:C:4093:PHE:HD2	1.86	0.41
1:C:4682:GLU:HA	1:C:4724:VAL:HG12	2.03	0.41
1:D:24:CYS:O	1:D:35:LEU:N	2.45	0.41
1:D:178:ARG:HA	1:D:178:ARG:HD2	1.89	0.41
1:D:551:LEU:HD23	1:D:553:ARG:NH2	2.36	0.41
1:D:790:ARG:NH1	1:D:797:HIS:HB3	2.35	0.41
1:D:1155:LEU:HD11	1:D:1188:PHE:CD2	2.56	0.41
1:D:1651:LEU:HD13	1:D:1651:LEU:HA	1.95	0.41
1:D:3212:GLU:HA	1:D:3216:CYS:SG	2.61	0.41
1:D:4006:ASP:OD1	1:D:4008:SER:N	2.53	0.41
1:D:4828:SER:O	1:D:4832:HIS:N	2.52	0.41
1:A:633:LEU:HD23	1:A:1639:LEU:HD22	2.02	0.40
1:A:652:ARG:HD2	1:A:750:LEU:HB2	2.02	0.40
1:A:1208:VAL:O	1:B:3577:ARG:CZ	2.68	0.40
1:A:1540:PHE:O	1:A:1543:GLU:HG2	2.21	0.40
1:A:2456:ILE:HD12	1:D:131:LEU:HD11	2.03	0.40
1:A:3770:LEU:HD12	1:A:3770:LEU:HA	1.93	0.40
1:B:34:LYS:H	1:B:53:SER:HB2	1.86	0.40
1:B:1271:ARG:C	1:B:1272:LEU:HD12	2.45	0.40
1:B:1518:CYS:O	1:B:1526:LEU:HA	2.20	0.40
1:B:1770:SER:HB2	1:B:1956:GLU:OE2	2.21	0.40
1:B:2135:LEU:HD13	1:B:3662:ILE:HG22	2.01	0.40
1:B:3798:LEU:HD21	1:B:3884:LEU:HA	2.02	0.40
1:C:34:LYS:H	1:C:53:SER:HB2	1.86	0.40
1:C:646:PRO:HA	1:C:823:LEU:HA	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:652:ARG:HD2	1:C:750:LEU:HB2	2.02	0.40
1:C:1705:GLY:O	1:C:1708:ARG:N	2.54	0.40
1:C:1750:PRO:HD2	1:C:1755:GLY:HA3	2.02	0.40
1:C:4633:GLU:O	1:C:4635:SER:N	2.50	0.40
1:C:4897:ILE:H	1:C:4897:ILE:HG13	1.59	0.40
1:D:633:LEU:HD23	1:D:1639:LEU:HD22	2.02	0.40
1:D:1154:ASP:O	1:D:1158:ASN:N	2.54	0.40
1:D:2138:LEU:N	1:D:2139:PRO:HD2	2.36	0.40
1:D:2552:ARG:CZ	1:D:2552:ARG:HA	2.51	0.40
1:D:4819:GLY:O	1:D:4820:VAL:C	2.63	0.40
1:A:402:ARG:HA	1:A:402:ARG:HD2	1.78	0.40
1:A:627:PRO:O	1:A:629:ARG:NE	2.53	0.40
1:A:1152:MET:HE3	1:A:1223:PHE:HD2	1.87	0.40
1:A:1663:HIS:HA	1:A:1666:THR:HG22	2.04	0.40
1:A:3272:ILE:O	1:A:3272:ILE:HG13	2.21	0.40
1:A:3558:HIS:HE2	1:A:3593:VAL:HA	1.86	0.40
1:A:3644:LEU:HD12	1:A:3645:PRO:HD2	2.03	0.40
1:A:4061:PHE:HA	1:A:4064:MET:HE3	2.03	0.40
1:A:4690:GLU:HG2	1:A:4691:GLN:H	1.86	0.40
1:B:2175:GLU:HB2	1:B:2228:MET:HE3	2.03	0.40
1:B:4093:PHE:CZ	1:B:4097:MET:HE3	2.56	0.40
1:B:4925:ILE:O	1:B:4929:LEU:HB2	2.22	0.40
1:C:959:TYR:HD2	1:C:966:LYS:HB2	1.87	0.40
1:C:3661:TRP:C	1:C:3663:LEU:H	2.28	0.40
1:C:4690:GLU:O	1:C:4691:GLN:HG2	2.21	0.40
1:D:637:LEU:HD23	1:D:1637:MET:HB3	2.03	0.40
1:D:1152:MET:HE3	1:D:1223:PHE:HD2	1.87	0.40
1:D:1653:LEU:HD12	1:D:1707:LEU:HD11	2.02	0.40
1:D:2654:TYR:O	1:D:2658:PRO:HD3	2.22	0.40
1:D:4061:PHE:HA	1:D:4064:MET:HE3	2.03	0.40
1:D:4112:LEU:O	1:D:4115:SER:OG	2.39	0.40
1:A:637:LEU:HD23	1:A:1637:MET:HB3	2.03	0.40
1:A:683:ARG:HD2	1:A:707:VAL:O	2.21	0.40
1:A:3212:GLU:HA	1:A:3216:CYS:SG	2.61	0.40
1:A:3996:PHE:O	1:A:4000:MET:HB2	2.22	0.40
1:A:4993:MET:HE2	1:A:4993:MET:HB3	1.84	0.40
1:B:626:LEU:HG	1:B:628:GLY:N	2.27	0.40
1:B:1155:LEU:HD11	1:B:1188:PHE:CD2	2.56	0.40
1:B:2548:LEU:O	1:B:2552:ARG:HG2	2.22	0.40
1:C:418:LEU:HA	1:C:421:PHE:HE1	1.86	0.40
1:C:633:LEU:HD23	1:C:1639:LEU:HD22	2.02	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:660:GLY:O	1:C:750:LEU:HB3	2.22	0.40
1:C:685:GLY:HA3	1:C:714:TYR:O	2.20	0.40
1:C:1205:GLY:O	1:D:3573:MET:HE3	2.21	0.40
1:C:1653:LEU:HD12	1:C:1707:LEU:HD11	2.02	0.40
1:C:2358:ILE:HD12	1:C:2358:ILE:HA	1.91	0.40
1:C:2654:TYR:O	1:C:2658:PRO:HD3	2.22	0.40
1:C:3644:LEU:HD12	1:C:3645:PRO:HD2	2.03	0.40
1:D:652:ARG:HD2	1:D:750:LEU:HB2	2.02	0.40
1:D:956:PRO:O	1:D:959:TYR:HD1	2.04	0.40
1:D:2208:MET:HE3	1:D:2208:MET:HB3	1.67	0.40
1:D:2559:LEU:HD21	1:D:2603:ILE:HG22	2.04	0.40
1:D:3996:PHE:O	1:D:4000:MET:HB2	2.22	0.40
1:A:1240:LYS:HG3	1:A:1241:SER:H	1.86	0.40
1:A:1457:TYR:OH	1:A:1643:GLU:O	2.38	0.40
1:A:1518:CYS:O	1:A:1526:LEU:HA	2.20	0.40
1:A:4093:PHE:CZ	1:A:4097:MET:HE3	2.56	0.40
1:B:583:ILE:HD11	1:B:620:LEU:HB3	2.04	0.40
1:B:956:PRO:O	1:B:959:TYR:HD1	2.04	0.40
1:B:972:LEU:HD21	1:B:1048:GLY:HA3	2.03	0.40
1:B:2138:LEU:N	1:B:2139:PRO:HD2	2.36	0.40
1:B:2538:THR:OG1	1:B:2539:ALA:N	2.55	0.40
1:B:2552:ARG:CZ	1:B:2552:ARG:HA	2.51	0.40
1:B:2559:LEU:HD21	1:B:2603:ILE:HG22	2.04	0.40
1:B:3005:LEU:HD11	1:B:3050:VAL:HB	2.04	0.40
1:C:235:ALA:HA	1:C:257:ARG:HH11	1.87	0.40
1:C:445:LEU:HD23	1:C:445:LEU:HA	1.91	0.40
1:C:805:PRO:HB2	1:C:808:TYR:CD1	2.57	0.40
1:C:869:ARG:NH2	1:C:873:LYS:HZ3	2.20	0.40
1:C:1540:PHE:O	1:C:1543:GLU:HG2	2.21	0.40
1:C:1849:LEU:HA	1:C:1849:LEU:HD12	1.84	0.40
1:C:2194:HIS:HE1	1:C:3647:HIS:NE2	2.18	0.40
1:C:3934:TYR:HD1	1:C:3999:MET:HE3	1.87	0.40
1:C:4864:ASN:HB3	1:C:4874:MET:SD	2.62	0.40
1:D:235:ALA:HA	1:D:257:ARG:HH11	1.87	0.40
1:D:402:ARG:HD2	1:D:402:ARG:HA	1.78	0.40
1:D:430:PRO:HA	1:D:431:PRO:HD3	1.86	0.40
1:D:1172:ASP:OD1	1:D:1172:ASP:N	2.52	0.40
1:D:1770:SER:HB2	1:D:1956:GLU:OE2	2.21	0.40
1:D:3668:SER:O	1:D:3672:ARG:NH2	2.47	0.40
1:D:3817:LEU:HD13	1:D:3899:PHE:CD1	2.45	0.40
1:D:4093:PHE:CZ	1:D:4097:MET:HE3	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:4863:TYR:HA	1:D:4901:ILE:HD12	2.04	0.40
1:A:583:ILE:HD11	1:A:620:LEU:HB3	2.04	0.40
1:A:805:PRO:HB2	1:A:808:TYR:CD1	2.57	0.40
1:A:1155:LEU:HD11	1:A:1188:PHE:CD2	2.56	0.40
1:A:1738:LEU:HD13	1:A:1738:LEU:HA	1.93	0.40
1:A:1750:PRO:HD2	1:A:1755:GLY:HA3	2.02	0.40
1:A:3224:PRO:HB2	1:A:3298:ALA:HB2	2.04	0.40
1:A:3832:ILE:HD13	1:A:3832:ILE:HA	1.98	0.40
1:B:4060:LYS:HD2	1:B:4060:LYS:HA	1.90	0.40
1:B:4790:LEU:HD23	1:B:4790:LEU:HA	1.85	0.40
1:C:243:ARG:HB3	1:C:300:VAL:HG23	2.04	0.40
1:C:956:PRO:O	1:C:959:TYR:HD1	2.04	0.40
1:C:1473:THR:N	1:C:1484:HIS:O	2.47	0.40
1:C:4184:MET:HB2	1:C:4190:ILE:HD13	2.04	0.40
1:C:4702:ASP:OD1	1:C:4702:ASP:N	2.53	0.40
1:C:4863:TYR:HB2	1:C:4876:CYS:SG	2.62	0.40
1:D:220:LEU:HB2	1:D:392:ARG:HA	2.03	0.40
1:D:609:CYS:SG	1:D:610:ASN:N	2.93	0.40
1:D:805:PRO:HB2	1:D:808:TYR:CD1	2.57	0.40
1:D:1663:HIS:HA	1:D:1666:THR:HG22	2.04	0.40
1:D:1680:ARG:HA	1:D:1797:ARG:HD2	2.03	0.40
1:D:1838:PHE:O	1:D:1841:VAL:N	2.53	0.40
1:D:3532:LEU:HA	1:D:3535:LEU:HD13	2.03	0.40
1:D:4184:MET:HB2	1:D:4190:ILE:HD13	2.04	0.40
1:D:4681:LEU:HD23	1:D:4681:LEU:HA	1.91	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	3934/5037 (78%)	3496 (89%)	423 (11%)	15 (0%)	30	60

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	B	3934/5037 (78%)	3496 (89%)	423 (11%)	15 (0%)	30	60
1	C	3934/5037 (78%)	3496 (89%)	423 (11%)	15 (0%)	30	60
1	D	3934/5037 (78%)	3496 (89%)	423 (11%)	15 (0%)	30	60
All	All	15736/20148 (78%)	13984 (89%)	1692 (11%)	60 (0%)	31	60

All (60) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	4808	PHE
1	B	4808	PHE
1	C	4808	PHE
1	D	4808	PHE
1	A	1835	GLU
1	A	1836	PHE
1	A	4319	LEU
1	A	4341	ARG
1	A	4818	MET
1	A	4908	GLU
1	B	1835	GLU
1	B	1836	PHE
1	B	4319	LEU
1	B	4341	ARG
1	B	4818	MET
1	B	4908	GLU
1	C	1835	GLU
1	C	1836	PHE
1	C	4319	LEU
1	C	4341	ARG
1	C	4818	MET
1	C	4908	GLU
1	D	1835	GLU
1	D	1836	PHE
1	D	4319	LEU
1	D	4341	ARG
1	D	4818	MET
1	D	4908	GLU
1	A	4320	ARG
1	A	4911	LEU
1	B	4320	ARG
1	B	4911	LEU
1	C	4320	ARG

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Mol	Chain	Res	Type
1	C	4911	LEU
1	D	4320	ARG
1	D	4911	LEU
1	A	1833	SER
1	B	1833	SER
1	C	1833	SER
1	D	1833	SER
1	A	5028	PHE
1	B	5028	PHE
1	C	5028	PHE
1	D	5028	PHE
1	A	1839	VAL
1	A	1840	PRO
1	A	4637	GLY
1	B	1839	VAL
1	B	1840	PRO
1	B	4637	GLY
1	C	1839	VAL
1	C	1840	PRO
1	C	4637	GLY
1	D	1839	VAL
1	D	1840	PRO
1	D	4637	GLY
1	A	4819	GLY
1	B	4819	GLY
1	C	4819	GLY
1	D	4819	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	2905/4276 (68%)	2887 (99%)	18 (1%)	78	81
1	B	2905/4276 (68%)	2887 (99%)	18 (1%)	78	81
1	C	2905/4276 (68%)	2887 (99%)	18 (1%)	78	81

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	D	2905/4276 (68%)	2887 (99%)	18 (1%)	78	81
All	All	11620/17104 (68%)	11548 (99%)	72 (1%)	76	81

All (72) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	1834	VAL
1	A	1841	VAL
1	A	1842	LEU
1	A	4317	ARG
1	A	4318	ARG
1	A	4319	LEU
1	A	4320	ARG
1	A	4633	GLU
1	A	4634	GLU
1	A	4635	SER
1	A	4636	THR
1	A	4639	MET
1	A	4816	ILE
1	A	4820	VAL
1	A	4897	ILE
1	A	4901	ILE
1	A	4908	GLU
1	A	4911	LEU
1	B	1834	VAL
1	B	1841	VAL
1	B	1842	LEU
1	B	4317	ARG
1	B	4318	ARG
1	B	4319	LEU
1	B	4320	ARG
1	B	4633	GLU
1	B	4634	GLU
1	B	4635	SER
1	B	4636	THR
1	B	4639	MET
1	B	4816	ILE
1	B	4820	VAL
1	B	4897	ILE
1	B	4901	ILE
1	B	4908	GLU
1	B	4911	LEU

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Mol	Chain	Res	Type
1	C	1834	VAL
1	C	1841	VAL
1	C	1842	LEU
1	C	4317	ARG
1	C	4318	ARG
1	C	4319	LEU
1	C	4320	ARG
1	C	4633	GLU
1	C	4634	GLU
1	C	4635	SER
1	C	4636	THR
1	C	4639	MET
1	C	4816	ILE
1	C	4820	VAL
1	C	4897	ILE
1	C	4901	ILE
1	C	4908	GLU
1	C	4911	LEU
1	D	1834	VAL
1	D	1841	VAL
1	D	1842	LEU
1	D	4317	ARG
1	D	4318	ARG
1	D	4319	LEU
1	D	4320	ARG
1	D	4633	GLU
1	D	4634	GLU
1	D	4635	SER
1	D	4636	THR
1	D	4639	MET
1	D	4816	ILE
1	D	4820	VAL
1	D	4897	ILE
1	D	4901	ILE
1	D	4908	GLU
1	D	4911	LEU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (150) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	23	GLN
1	A	32	GLN

Continued on next page...

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Mol	Chain	Res	Type
1	A	44	ASN
1	A	399	GLN
1	A	618	GLN
1	A	735	GLN
1	A	909	ASN
1	A	911	HIS
1	A	1041	GLN
1	A	1165	ASN
1	A	1220	GLN
1	A	1231	GLN
1	A	1491	ASN
1	A	1558	HIS
1	A	1663	HIS
1	A	1683	HIS
1	A	1760	HIS
1	A	1837	GLN
1	A	1953	HIS
1	A	2035	HIS
1	A	2184	ASN
1	A	2213	ASN
1	A	2414	ASN
1	A	2444	GLN
1	A	2551	ASN
1	A	3012	ASN
1	A	3449	HIS
1	A	3597	GLN
1	A	3704	HIS
1	A	3809	ASN
1	A	3950	ASN
1	A	4153	HIS
1	A	4223	ASN
1	A	4553	ASN
1	A	4707	ASN
1	A	4806	ASN
1	A	4987	ASN
1	B	23	GLN
1	B	32	GLN
1	B	44	ASN
1	B	399	GLN
1	B	618	GLN
1	B	735	GLN
1	B	1041	GLN

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Continued from previous page...

Mol	Chain	Res	Type
1	B	1165	ASN
1	B	1198	GLN
1	B	1220	GLN
1	B	1231	GLN
1	B	1491	ASN
1	B	1558	HIS
1	B	1663	HIS
1	B	1683	HIS
1	B	1760	HIS
1	B	1837	GLN
1	B	1953	HIS
1	B	2035	HIS
1	B	2184	ASN
1	B	2213	ASN
1	B	2414	ASN
1	B	2444	GLN
1	B	2551	ASN
1	B	3012	ASN
1	B	3146	HIS
1	B	3449	HIS
1	B	3597	GLN
1	B	3704	HIS
1	B	3809	ASN
1	B	3950	ASN
1	B	4005	GLN
1	B	4223	ASN
1	B	4553	ASN
1	B	4707	ASN
1	B	4806	ASN
1	B	4987	ASN
1	C	23	GLN
1	C	32	GLN
1	C	44	ASN
1	C	399	GLN
1	C	618	GLN
1	C	735	GLN
1	C	909	ASN
1	C	911	HIS
1	C	1041	GLN
1	C	1165	ASN
1	C	1220	GLN
1	C	1231	GLN

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Mol	Chain	Res	Type
1	C	1491	ASN
1	C	1558	HIS
1	C	1663	HIS
1	C	1683	HIS
1	C	1760	HIS
1	C	1837	GLN
1	C	1953	HIS
1	C	2035	HIS
1	C	2184	ASN
1	C	2213	ASN
1	C	2414	ASN
1	C	2444	GLN
1	C	2551	ASN
1	C	3234	ASN
1	C	3449	HIS
1	C	3597	GLN
1	C	3704	HIS
1	C	3809	ASN
1	C	3950	ASN
1	C	3960	GLN
1	C	4005	GLN
1	C	4153	HIS
1	C	4223	ASN
1	C	4553	ASN
1	C	4707	ASN
1	C	4983	HIS
1	C	4987	ASN
1	D	23	GLN
1	D	32	GLN
1	D	44	ASN
1	D	399	GLN
1	D	618	GLN
1	D	735	GLN
1	D	909	ASN
1	D	911	HIS
1	D	1041	GLN
1	D	1165	ASN
1	D	1198	GLN
1	D	1220	GLN
1	D	1231	GLN
1	D	1491	ASN
1	D	1558	HIS

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Mol	Chain	Res	Type
1	D	1663	HIS
1	D	1683	HIS
1	D	1760	HIS
1	D	1837	GLN
1	D	1953	HIS
1	D	2035	HIS
1	D	2184	ASN
1	D	2213	ASN
1	D	2414	ASN
1	D	2444	GLN
1	D	2551	ASN
1	D	3597	GLN
1	D	3704	HIS
1	D	3809	ASN
1	D	3950	ASN
1	D	4005	GLN
1	D	4153	HIS
1	D	4223	ASN
1	D	4553	ASN
1	D	4707	ASN
1	D	4806	ASN
1	D	4987	ASN

5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 8 ligands modelled in this entry, 8 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

5.7 Other polymers

There are no such residues in this entry.

5.8 Polymer linkage issues

There are no chain breaks in this entry.

6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-38048. These allow visual inspection of the internal detail of the map and identification of artifacts.

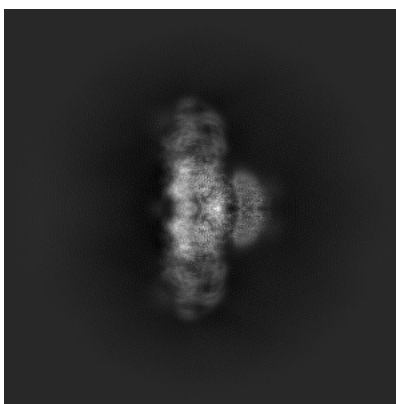
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

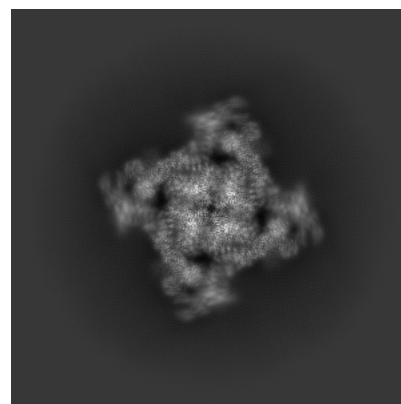
6.1.1 Primary map



X

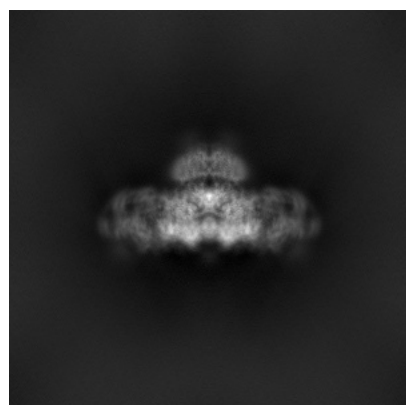


Y

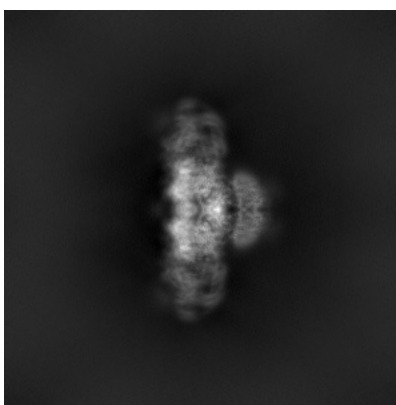


Z

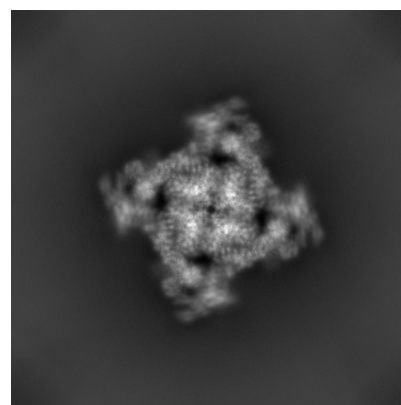
6.1.2 Raw map



X



Y

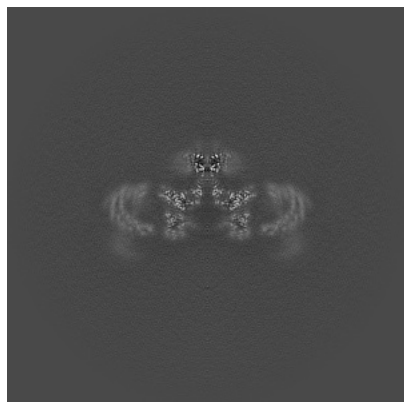


Z

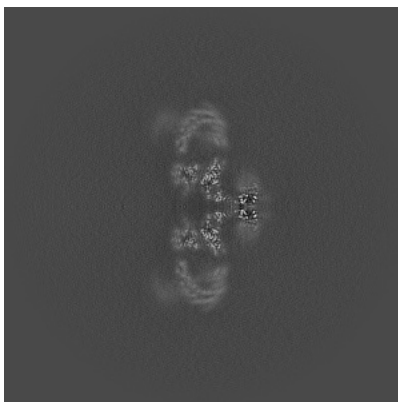
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

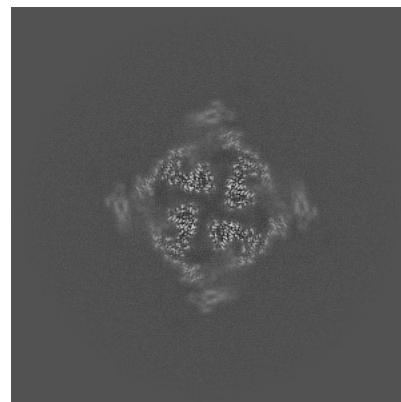
6.2.1 Primary map



X Index: 300

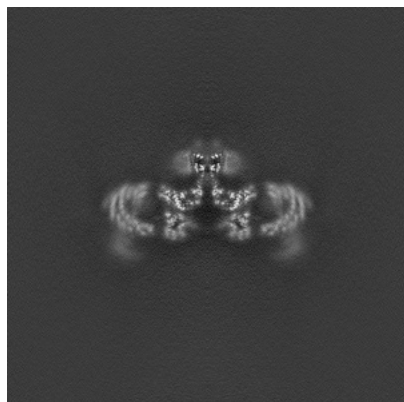


Y Index: 300

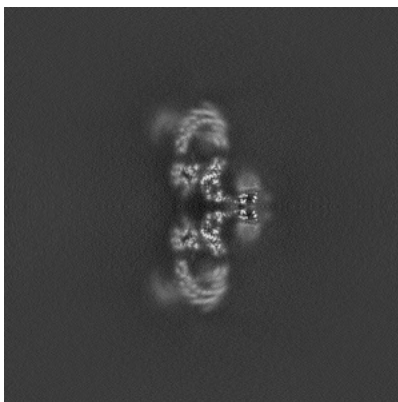


Z Index: 300

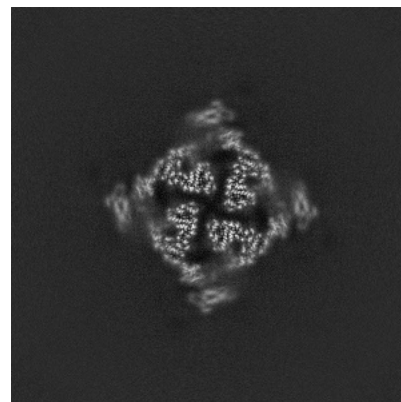
6.2.2 Raw map



X Index: 300



Y Index: 300

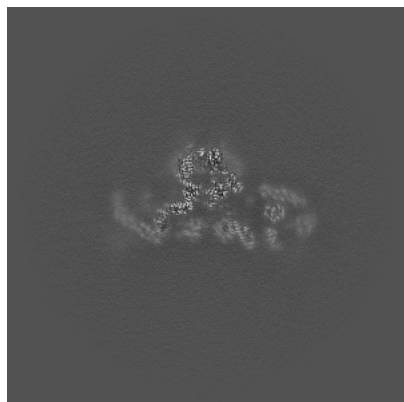


Z Index: 300

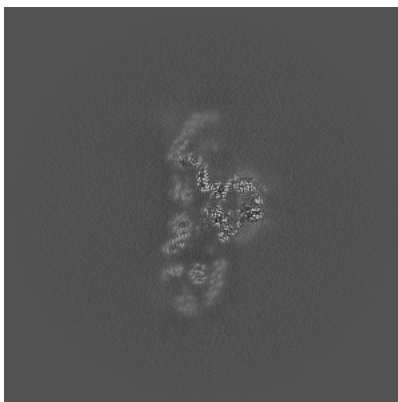
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

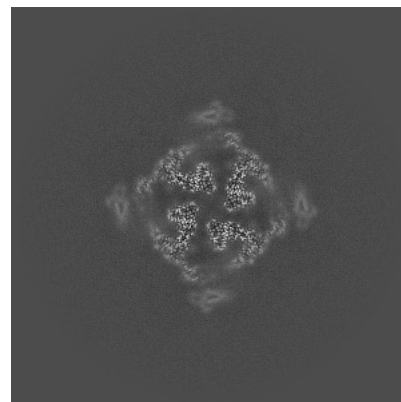
6.3.1 Primary map



X Index: 321

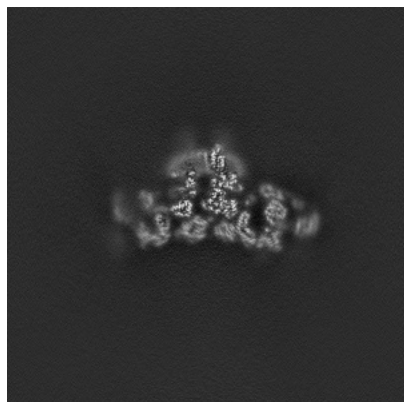


Y Index: 321

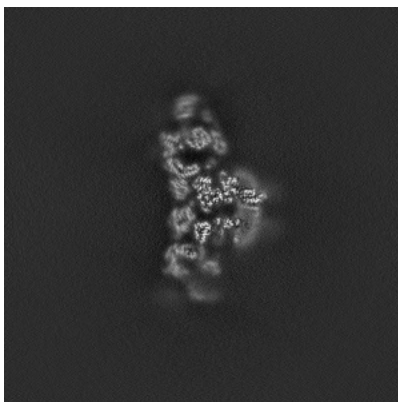


Z Index: 302

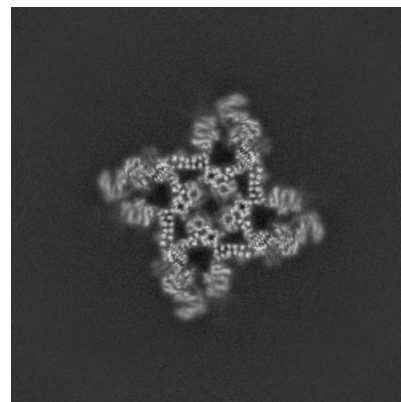
6.3.2 Raw map



X Index: 329



Y Index: 271

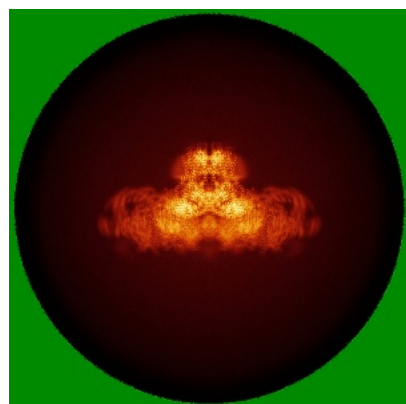


Z Index: 273

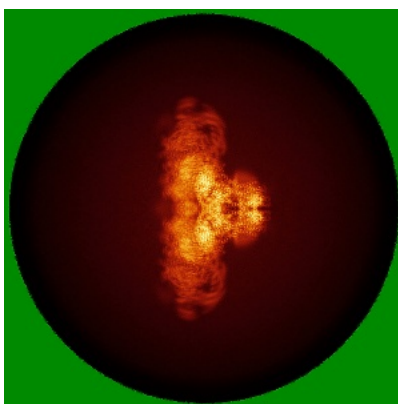
The images above show the largest variance slices of the map in three orthogonal directions.

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

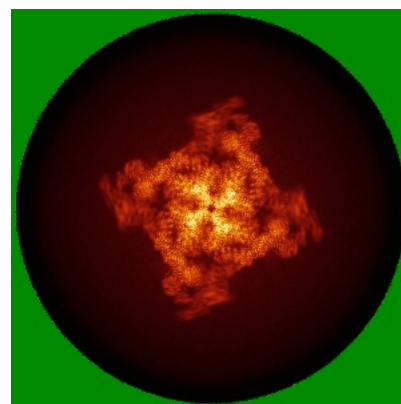
6.4.1 Primary map



X

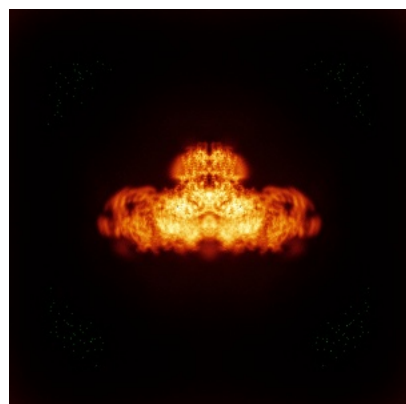


Y

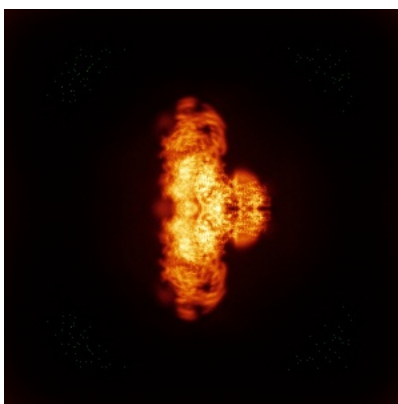


Z

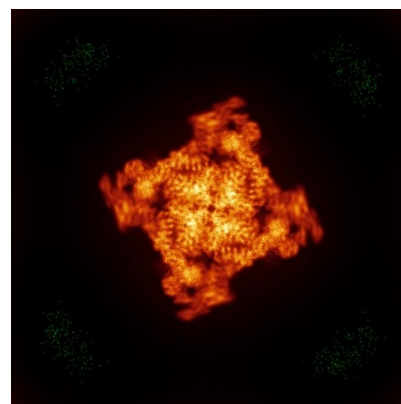
6.4.2 Raw map



X



Y

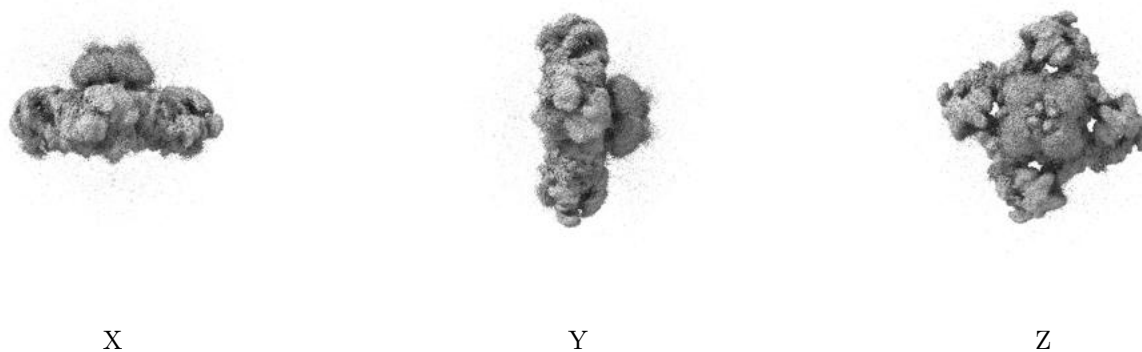


Z

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

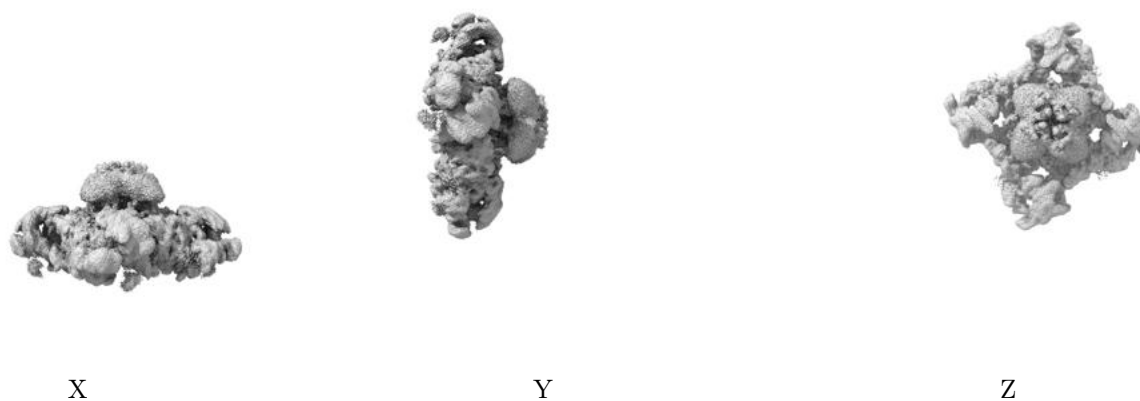
6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 0.182. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

6.5.2 Raw map



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

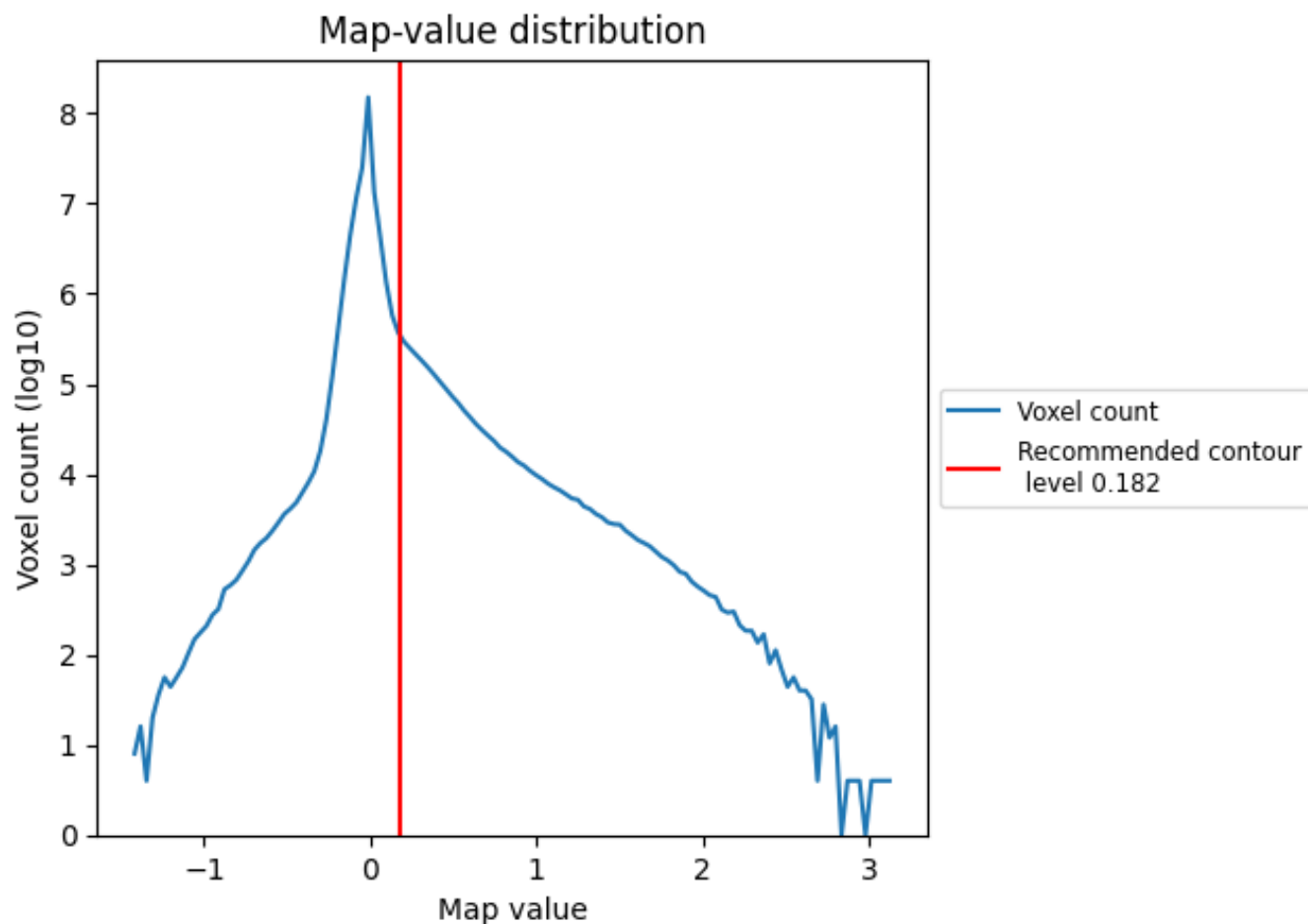
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

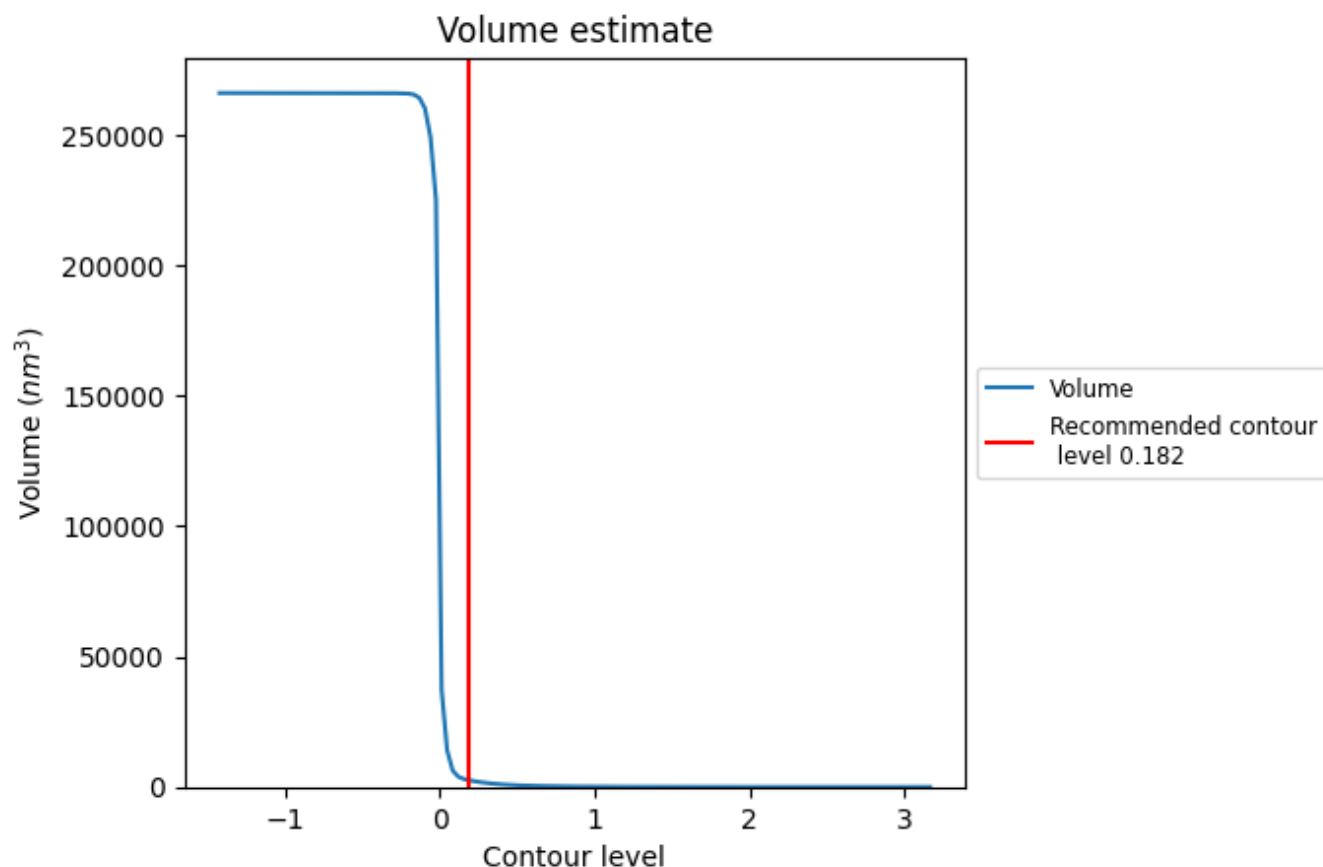
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution [i](#)



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

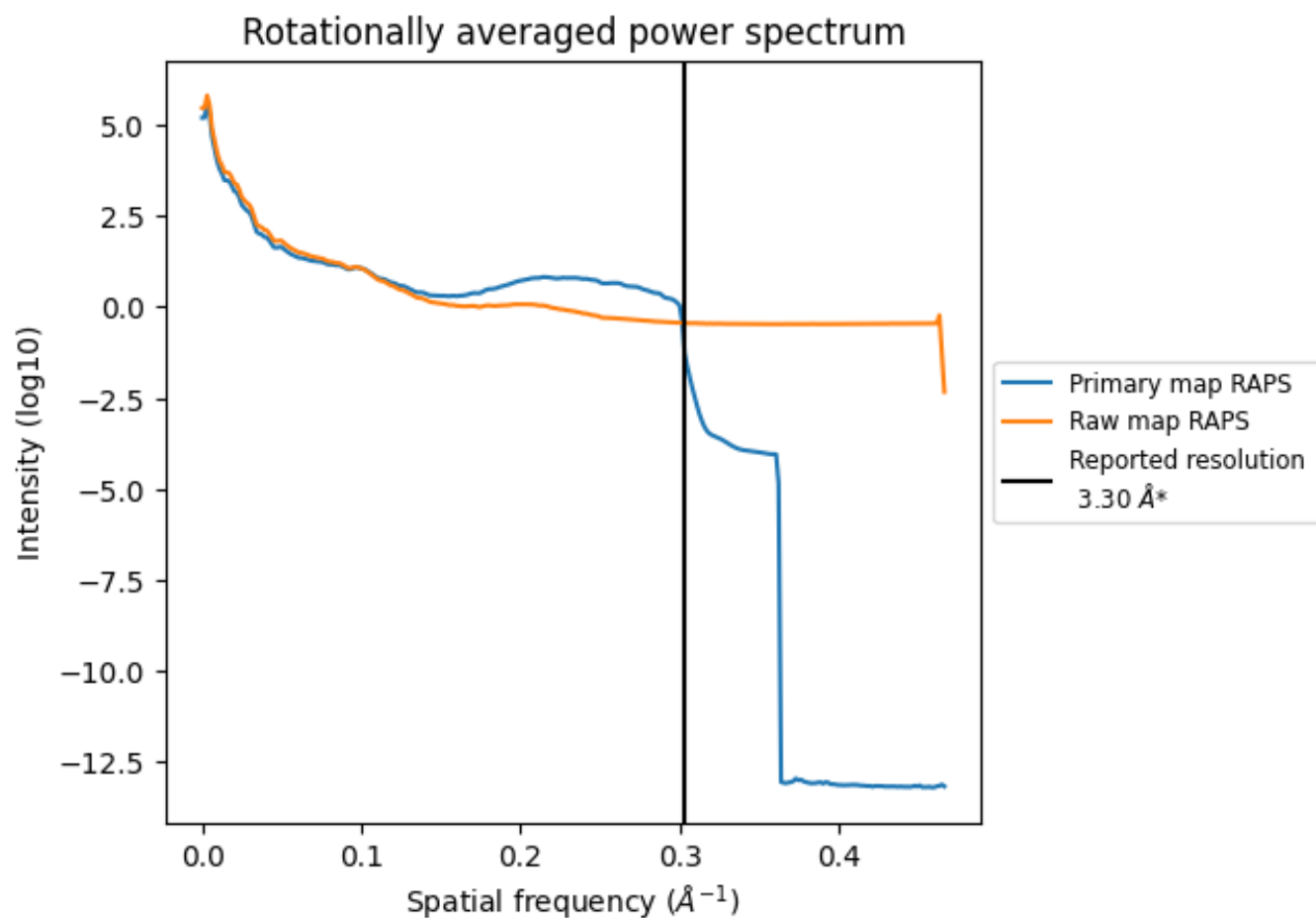
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 2676 nm^3 ; this corresponds to an approximate mass of 2418 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 ⓘ

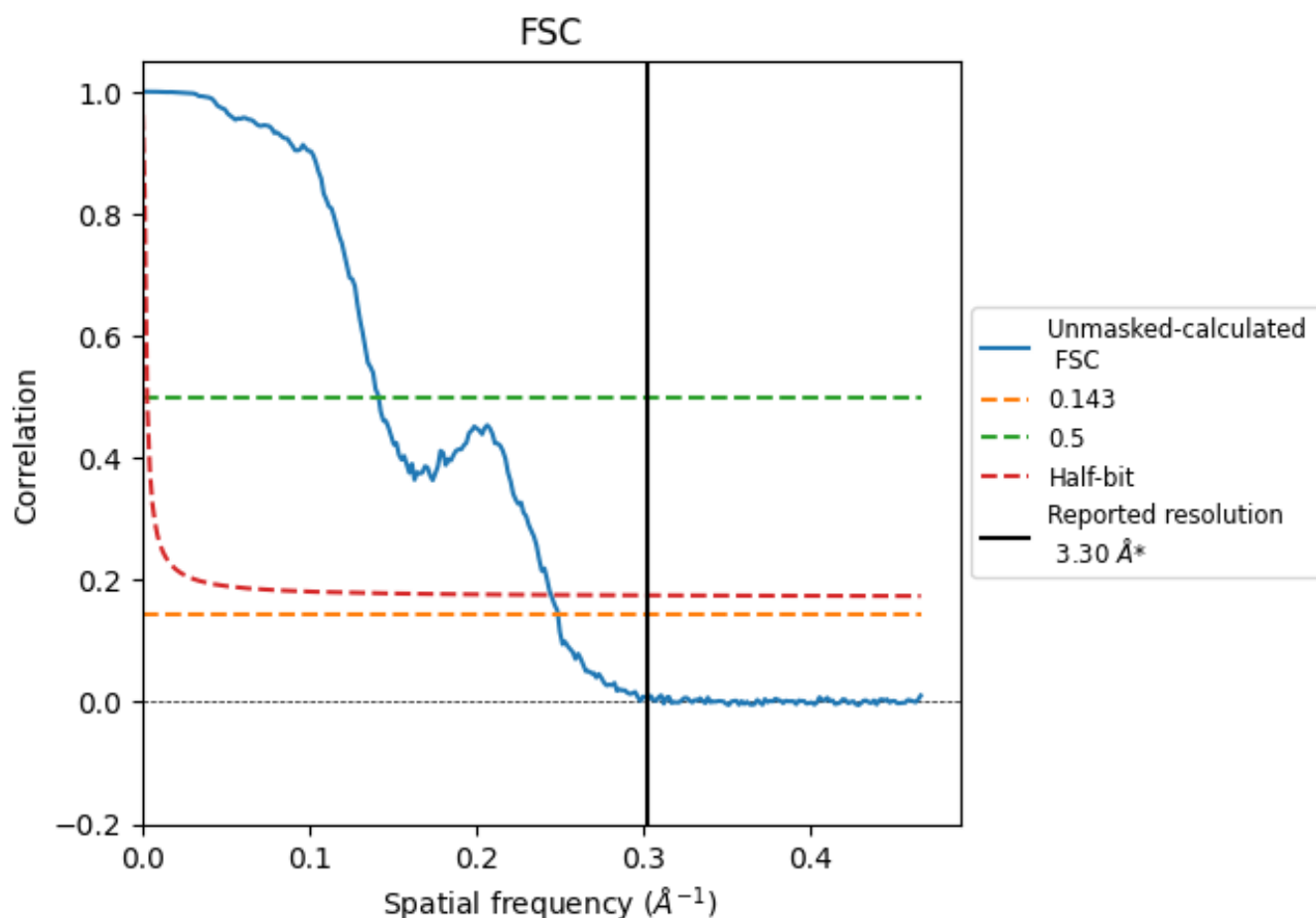


*Reported resolution corresponds to spatial frequency of 0.303 Å⁻¹

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 $0.303 \text{ \AA}^{-1}$

8.2 Resolution estimates [i](#)

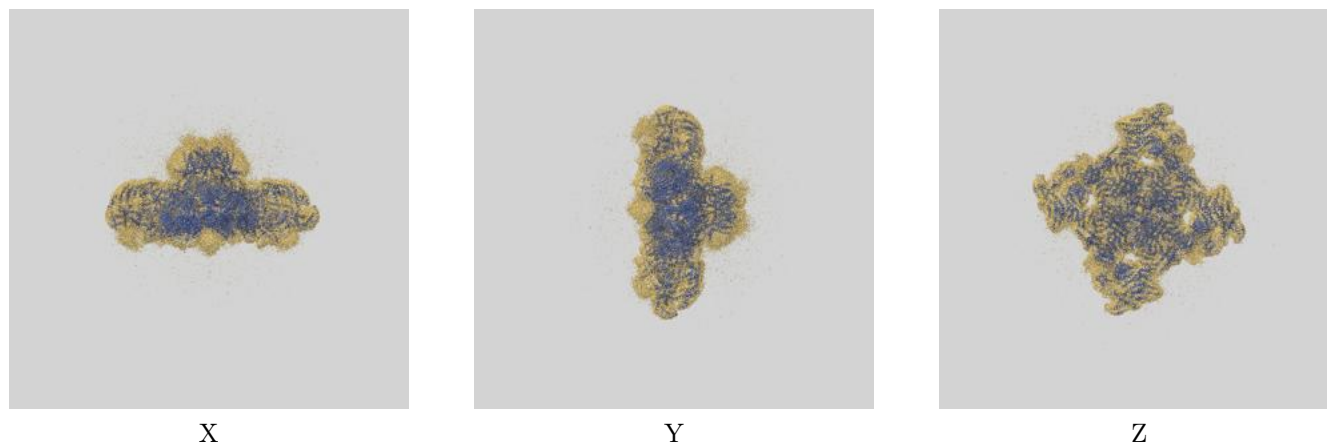
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	3.30	-	-
Author-provided FSC curve	-	-	-
Unmasked-calculated*	4.02	7.06	4.08

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps. The value from deposited half-maps intersecting FSC 0.143 CUT-OFF 4.02 differs from the reported value 3.3 by more than 10 %

9 Map-model fit [i](#)

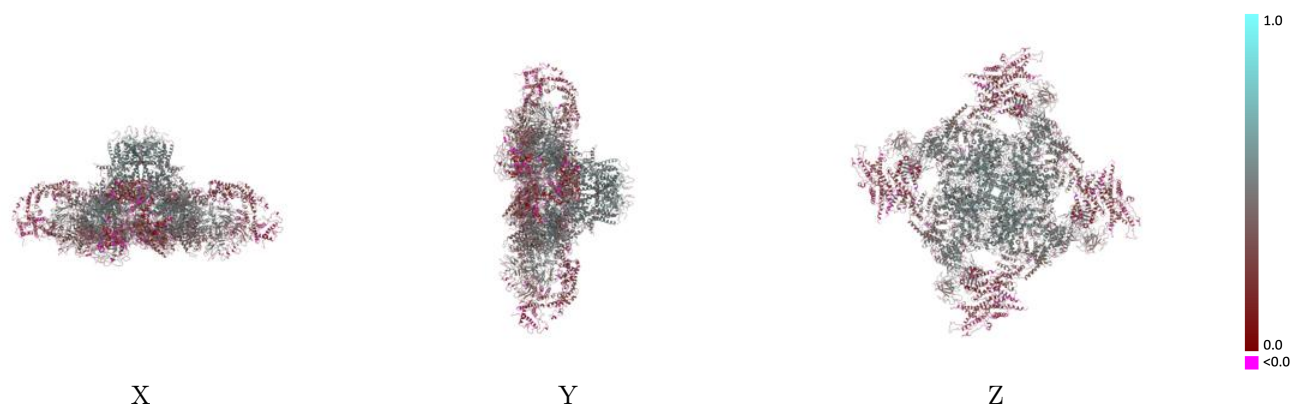
This section contains information regarding the fit between EMDB map EMD-38048 and PDB model 8X4E. Per-residue inclusion information can be found in [section 3](#) on [page 4](#).

9.1 Map-model overlay [i](#)



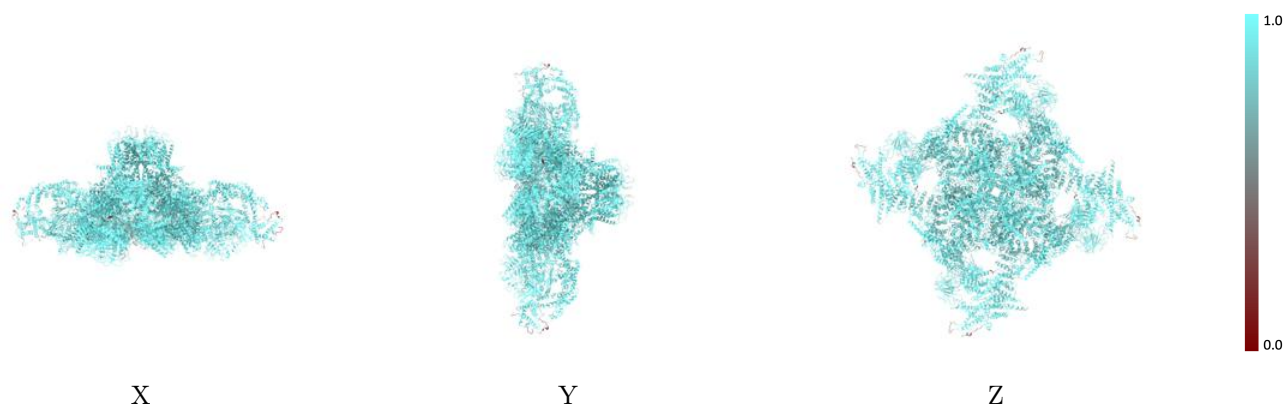
The images above show the 3D surface view of the map at the recommended contour level 0.182 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



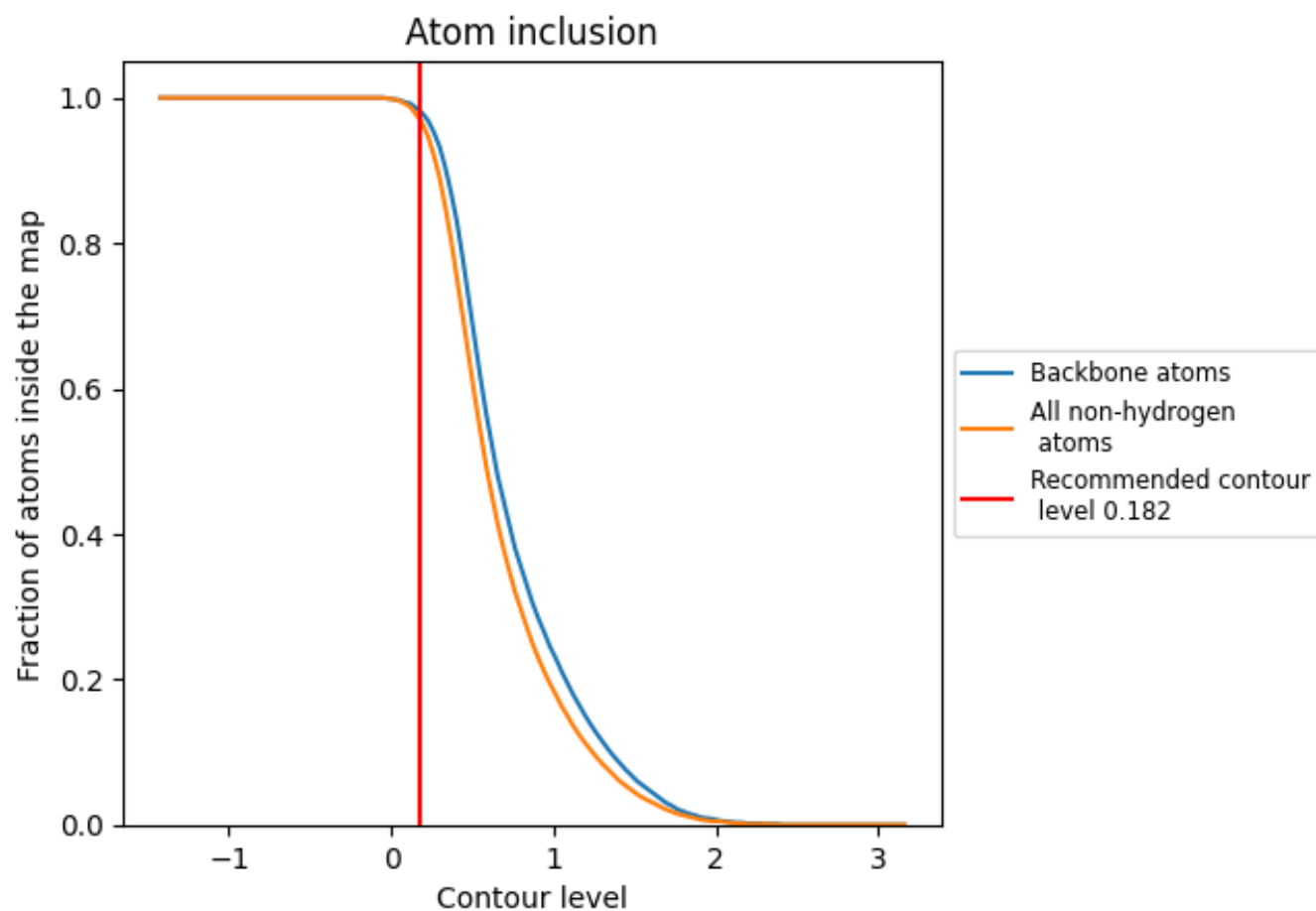
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (0.182).

9.4 Atom inclusion ⓘ



At the recommended contour level, 98% of all backbone atoms, 97% 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 (0.182) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.9690	0.3850
A	0.9690	0.3840
B	0.9690	0.3850
C	0.9690	0.3850
D	0.9690	0.3850

