



## Full wwPDB EM Validation Report ⓘ

Oct 7, 2024 – 01:05 pm BST

PDB ID : 8RRS  
EMDB ID : EMD-19463  
Title : Structure of mouse RyR2 solubilised in detergent in open state in complex with Ca<sup>2+</sup>, ATP, caffeine and Nb9657.  
Authors : Li, C.; Efremov, R.G.  
Deposited on : 2024-01-23  
Resolution : 3.40 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](mailto: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>.

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

EMDB validation analysis : 0.0.1.dev113  
Mogul : 1.8.4, CSD as541be (2020)  
MolProbity : 4.02b-467  
buster-report : 1.1.7 (2018)  
Percentile statistics : 20231227.v01 (using entries in the PDB archive December 27th 2023)  
MapQ : 1.9.13  
Ideal geometry (proteins) : Engh & Huber (2001)  
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)  
Validation Pipeline (wwPDB-VP) : 2.39

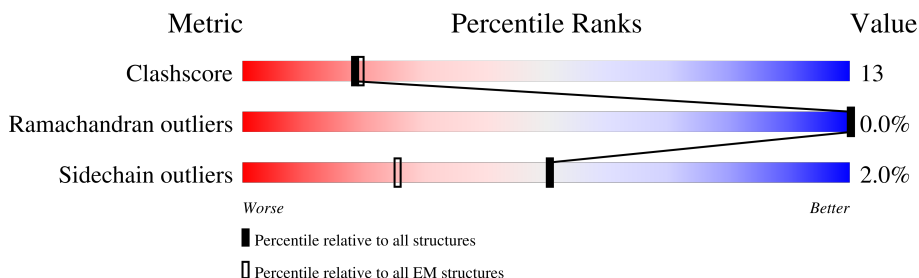
# 1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

*ELECTRON MICROSCOPY*

The reported resolution of this entry is 3.40 Å.

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



Metric	Whole archive (#Entries)	EM structures (#Entries)
Clashscore	210492	15764
Ramachandran outliers	207382	16835
Sidechain outliers	206894	16415

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  $\geq 3$ , 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	4966	
1	C	4966	
1	E	4966	
1	F	4966	
2	B	137	
2	D	137	
2	G	137	
2	I	137	

## 2 Entry composition

There are 6 unique types of molecules in this entry. The entry contains 136400 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 2.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	A	4142	Total	C	N	O	S	0	0
			33088	21113	5650	6106	219		
1	C	4142	Total	C	N	O	S	0	0
			33088	21113	5650	6106	219		
1	E	4142	Total	C	N	O	S	0	0
			33088	21113	5650	6106	219		
1	F	4142	Total	C	N	O	S	0	0
			33088	21113	5650	6106	219		

- Molecule 2 is a protein called Nanobody 9657.

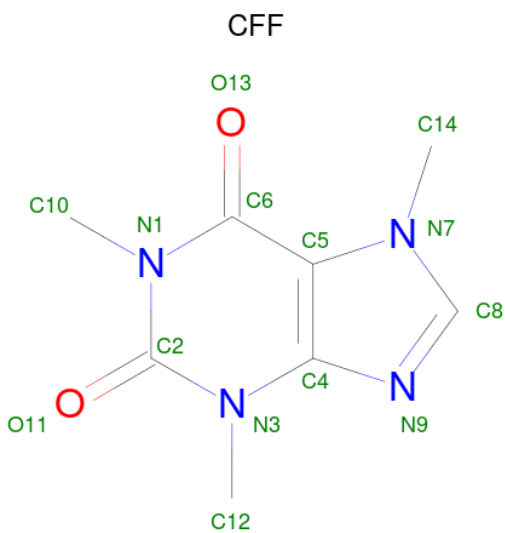
Mol	Chain	Residues	Atoms					AltConf	Trace
2	B	126	Total	C	N	O	S	0	0
			965	595	170	195	5		
2	D	126	Total	C	N	O	S	0	0
			965	595	170	195	5		
2	G	126	Total	C	N	O	S	0	0
			965	595	170	195	5		
2	I	126	Total	C	N	O	S	0	0
			965	595	170	195	5		

- Molecule 3 is ADENOSINE-5'-TRIPHOSPHATE (three-letter code: ATP) (formula:  $C_{10}H_{16}N_5O_{13}P_3$ ).



Mol	Chain	Residues	Atoms					AltConf
3	A	1	Total 31	C 10	N 5	O 13	P 3	0
3	C	1	Total 31	C 10	N 5	O 13	P 3	0
3	E	1	Total 31	C 10	N 5	O 13	P 3	0
3	F	1	Total 31	C 10	N 5	O 13	P 3	0

- Molecule 4 is CAFFEINE (three-letter code: CFF) (formula:  $\text{C}_8\text{H}_{10}\text{N}_4\text{O}_2$ ) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms				AltConf
4	A	1	Total	C	N	O	0
			14	8	4	2	
4	C	1	Total	C	N	O	0
			14	8	4	2	
4	E	1	Total	C	N	O	0
			14	8	4	2	
4	F	1	Total	C	N	O	0
			14	8	4	2	

- Molecule 5 is ZINC ION (three-letter code: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms		AltConf
5	A	1	Total	Zn	0
			1	1	
5	C	1	Total	Zn	0
			1	1	
5	E	1	Total	Zn	0
			1	1	
5	F	1	Total	Zn	0
			1	1	

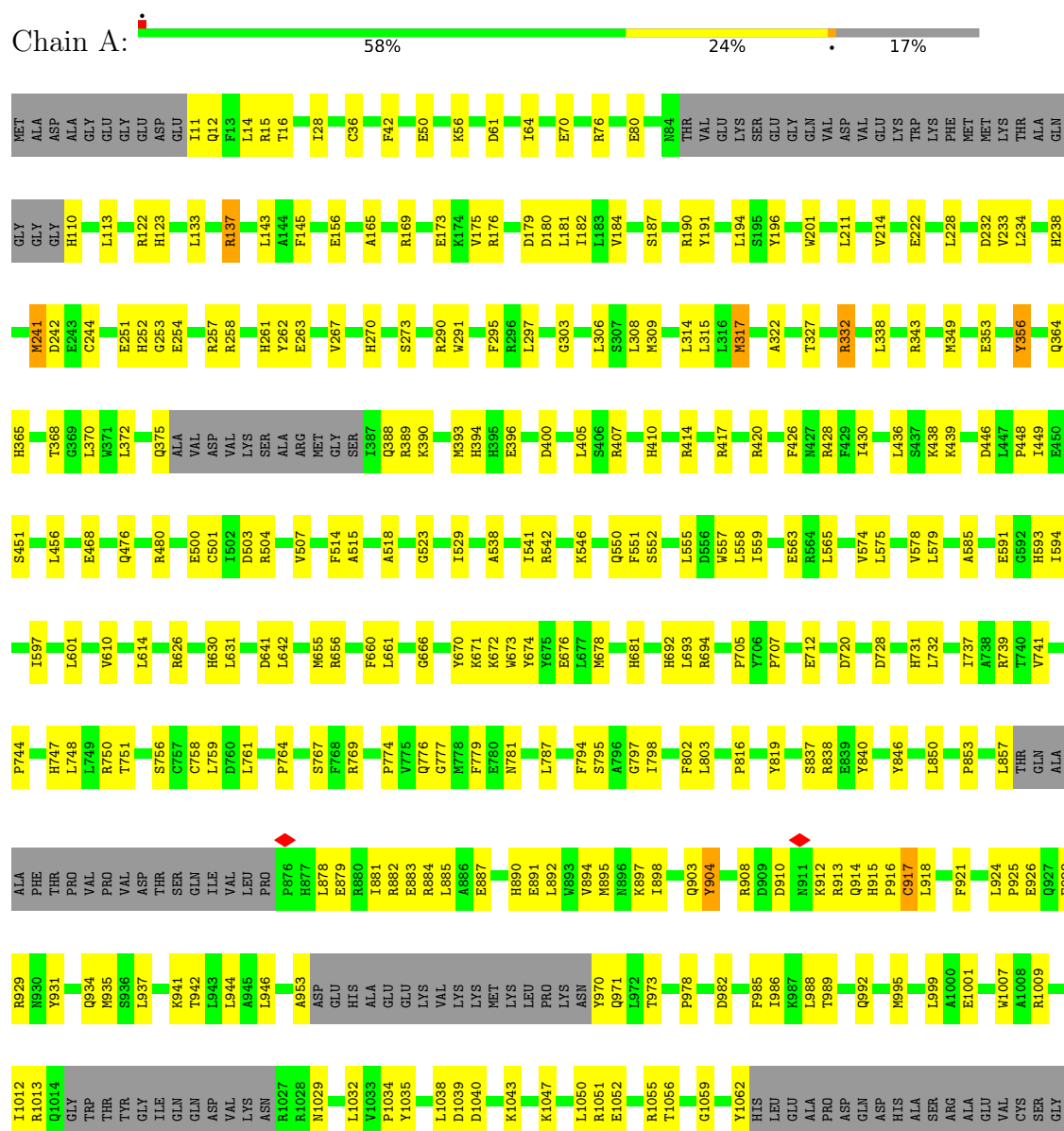
- Molecule 6 is CALCIUM ION (three-letter code: CA) (formula: Ca).

Mol	Chain	Residues	Atoms		AltConf
6	A	1	Total	Ca	0
			1	1	
6	C	1	Total	Ca	0
			1	1	
6	E	1	Total	Ca	0
			1	1	
6	F	1	Total	Ca	0
			1	1	

### 3 Residue-property plots

These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion in map density. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. A red diamond above a residue indicates a poor fit to the EM map for this residue (all-atom inclusion < 40%). Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

#### • Molecule 1: Ryanodine receptor 2



Y2518	P2442	Q2210	L2079	G2007	L1907	L1840	E1733	P1584	Q1436	PRO	R1303	L1207	THR
L2519	THR	Q2219	L2079	I2008	L1908	K1841	L1739	P1585	E1437	GLU	R1304	G1208	GLY
C2520	ALA	Y2219	M2083	LEU	L1909	H1842	L1739	H1588	P1438	PHE	S1305	R1209	GLU
L2526	LYS	M2233	L2086	ASP	C1913	L1844	L1749	Q1589	A1439	ASN	C1310	A1210	F1085
L2527	ASP	M2233	L2086	GLU	C1914	Q1845	P1750	Q1590	N1440	HIS	C1310	Q1211	R1086
L2528	GLY	T2237	R2089	ASP	C1915	L1846	L1754	V1595	G1444	LYS	S1315	N1216	E1091
R2529	LYS	P2238	Q2090	GLY	R1920	I1847	L1758	L1596	V1445	ASP	S1315	F1217	K1092
C2530	VAL	L2239	L2094	LEU	S1928	F1852	R1758	W1597	I1446	ALA	VAL	G1218	Y1094
A2531	THR	A2244	V2098	ASP	D1929	GLU	M1762	N1602	H1451	LYS	GLY	D1220	K1097
F2534	ASP	E2258	R2089	SER	V1932	ALA	M1762	V1609	D1458	PRO	GLY	V1221	A1098
A2535	ILE	P2259	A2100	ASN	V1932	VAL	P1767	S1610	L1459	SER	GLY	Y1236	G1099
G2536	GLU	L2101	GLU	ASP	L1935	PRO	SER	P1611	D1460	ARG	PRO	R1100	R1090
T2537	GLU	E2262	P2102	THR	Q1939	GLU	VAL	G1617	R1461	LEU	GLY	N1242	W1101
H2540	GLU	K2263	K2103	ILE	Q1939	GLU	VAL	G1617	T1466	LYS	ALA	Y1102	Y1102
A2541	GLU	V2264	T2104	ARG	R1942	GLY	ILE	V1620	T1467	GLY	PHE	R1245	F1103
S2542	ASP	R2265	Y2105	GLY	R1942	GLY	SER	Q1621	T1467	ARG	PHE	D1247	E1104
L2543	ASP	R2266	Y2105	ARG	S1953	THR	SER	C1622	T1469	PHE	TYR	I1247	M1113
L2544	LEU	C2276	S2121	LEU	A1954	PRO	ASN	L1623	G1470	LEU	PRO	T1248	R1114
D2545	LEU	M2278	I2125	SER	A1955	GLU	C1776	L1636	D1471	ARG	LYS	L1251	M1114
S2546	SER	L2279	V2131	LEU	L1956	LYS	D1786	E1636	H1477	ARG	ASN	W1117	W1117
L2548	VAL	R2289	R2132	VAL	R1959	GLU	I1786	R1637	H1477	THR	ASP	R1254	W1117
H2549	GLU	M2289	M2133	LYS	K1960	SER	K1789	R1638	I1480	LYS	GLU	Q1257	P1120
Y2552	THR	R2296	L2145	THR	R1962	ILE	K1791	D1641	R1481	ASP	ASP	F1258	P1124
R2553	TYR	F2300	M2149	TYR	R1965	ALA	M1795	E1644	S1483	SER	ASP	P1262	E1127
L2554	LEU	L2301	F2154	LEU	S1966	LYS	K1801	E1649	C1485	GLY	ASP	H1265	L1128
S2555	LYS	R2302	F2154	LYS	P1967	LEU	K1801	E1486	F1137	HIS	SER	A1136	A1136
T2556	LYS	M2317	P2158	LYS	P1968	GLU	E1802	C1666	M1487	SER	ASP	H1267	F1137
Q2564	ALA	N2317	N2158	GLN	Q1971	GLY	L1805	L1677	M1484	ALA	PHE	I1268	D1138
R2565	ALA	L2160	L2160	ALA	I1972	GLU	L1805	L1677	M1484	ARG	GLU	E1269	D1138
D2566	LYS	M2161	M2161	LYS	L1975	GLU	R1808	V1681	E1507	LEU	VAL	R1272	R1144
T2567	PRO	L2164	L2164	VAL	L1975	ALA	D1809	V1681	E1507	THR	LEU	W1156	W1156
I2568	ALA	M2166	M2166	ALA	F1978	GLY	V1811	L1686	C1510	GLU	MET	I1273	W1156
E2569	SER	R2326	R2326	SER	K1979	LYS	T1814	Y1694	E1535	VAL	THR	D1274	C1164
V2570	ASP	F2330	V2175	ASP	C1985	LYS	T1814	Y1694	E1535	ALA	THR	GLY	C1164
L2573	SER	L2342	K2184	SER	P1988	PRO	T1815	Y1704	T1538	ALA	HIS	THR	M1165
Q2578	ARG	L2342	K2184	ARG	P1988	LYS	F1816	D1705	V1553	ASP	GLY	ILE	V1166
L2579	LYS	L2343	K2184	LYS	P1988	LYS	F1817	L1706	V1553	SER	HIS	ASP	D1167
R2580	CYS	E1989	L1818	CYS	E1989	GLU	L1818	L1707	F1554	ARG	LEU	SER	M1168
P2581	SER	S2056	L2057	SER	E1990	GLU	P1821	I1708	F1554	ASP	VAL	PRO	M1173
S2582	LEU	S2056	L2057	LEU	I1991	GLU	P1821	D1709	E1557	PRO	PRO	CYS	M1174
M2583	VAL	M2065	M2065	VAL	R1992	M1895	Y1827	I1710	E1557	ASP	ASP	LEU	D1174
Q2584	GLU	V2066	V2066	GLU	L1995	E1899	Y1827	I1710	R1560	ARG	ARG	K1284	L1177
S2585	LYS	R2067	R2067	LYS	L1995	P1900	I1831	S1713	I1561	ILE	ASP	V1285	L1182
H2586	LYS	E2071	E2071	LYS	F1998	V1901	I1831	S1713	K1562	LYS	LYS	Q1287	L1182
L2587	ASP	E2071	E2071	ASP	H1999	K1902	I1834	M1722	N1563	LYS	ASP	F1290	L1190
L2588	GLU	E2071	E2071	GLU	E2000	L1903	I1834	I1727	H1576	LYS	LYS	F1290	L1190
L2591	THR	E2075	E2075	THR	D2001	Q1904	M1837	V1728	K1577	GLU	GLU	F1192	F1192
V2592	PRO	M2441	M2441	PRO	C2006	M1905	E1838	P1729	C1583	THR	THR	Q1293	F1201
						C1906	D1839			LYS	LYS	N1295	I1202





- Molecule 1: Ryanodine receptor 2

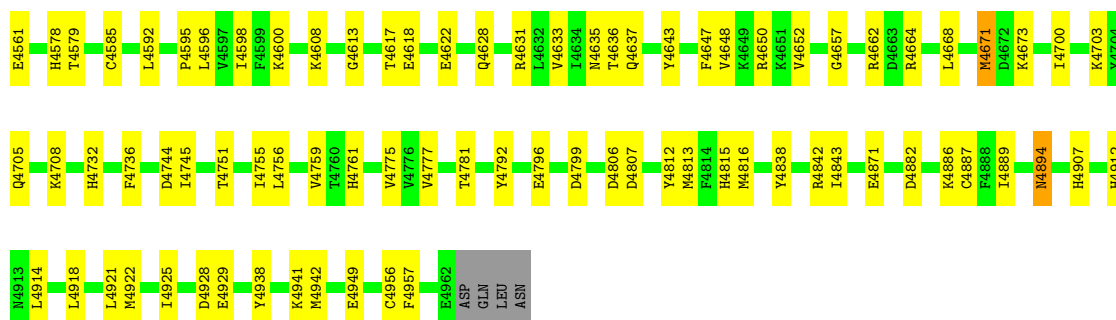
Frequency	Percentage
Daily	59%
Often	24%
Sometimes	17%
Never	2%



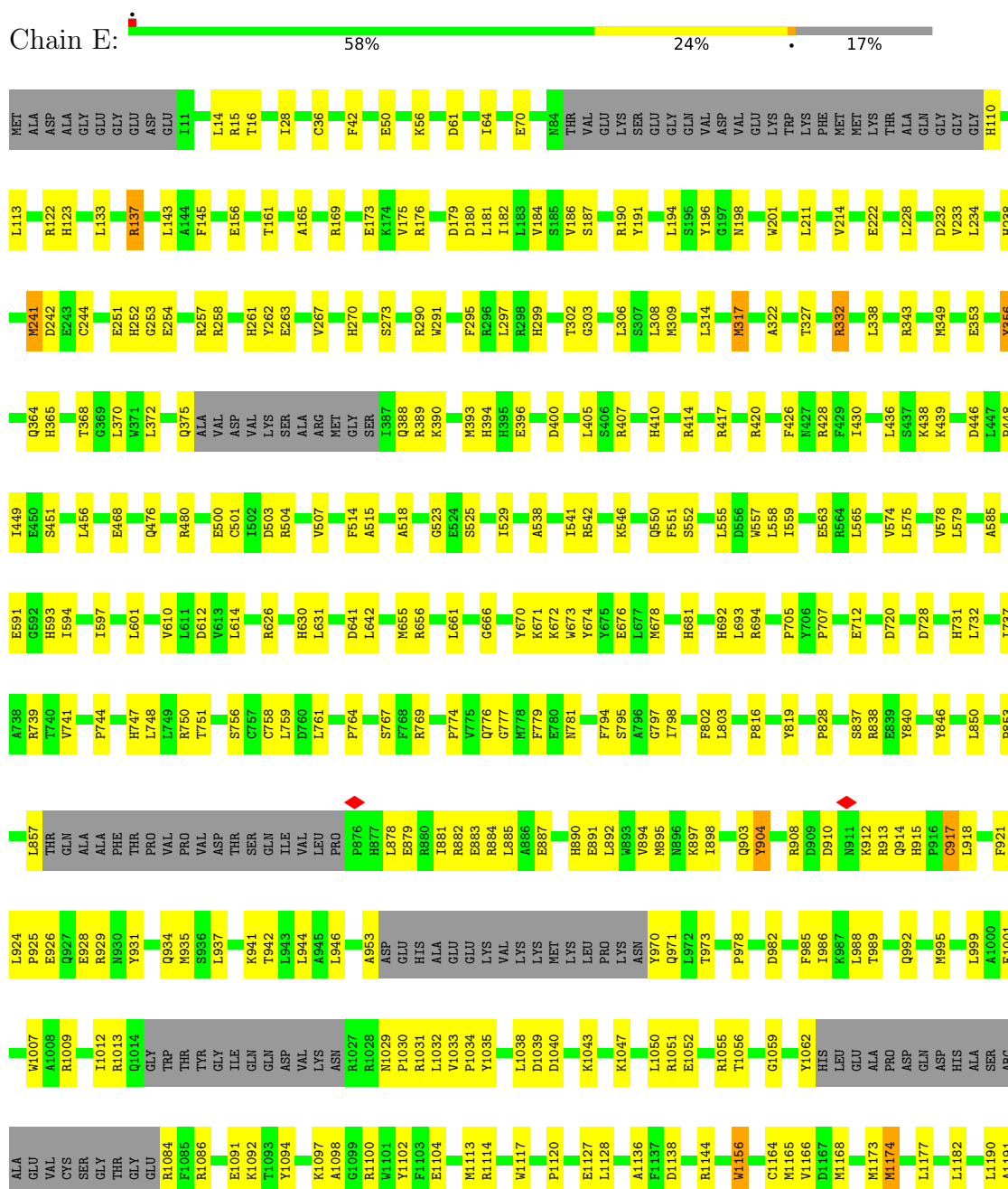
K1853	L1758	Q1590	N1440	C1310	Q1211	R1084	GLY	Y931	THR	H747	I594	L456	T388
GLU	R1759	V1595	G1444	S1315	M1216	F1085	TRP	Q934	PRO	L748	I597	VAL	G369
ALA		V1595	V1445	LYS	F1217	R1086	THR	M935	PRO	L749			L370
VAL	M1762	N1602	I1446	SER	K1218	E1091	GLY	S836	ASP	R750	L601	VAL	W371
PRO				VAL	K1219	K1092	ILE	L537	THR	T751	V610	VAL	L372
GLU	P1767	V1609	H1451	ALA	D1220	T1093	GLN						
GLU	S1610	S1610		GLY	V1221	Y1094	GLN	K941	SER	S756	R460		Q375
GLU	PHE	PRO	D1458	GLY	Y1236	K1097	ASP	T9412	GLN	C767	L614	ALA	ALA
GLU	VAL	SER	L1459	LEU	Y1246	A1098	ASP	T9412	GLN	C768	E500	VAL	VAL
GLY	SER	ARG	D1460	ARG	Y1247	K1098	ILE	L943	ILE	L759	C501	ASP	ASP
THR	ILE	LEU	R1461	GLY	M1242	G1099	LYS	L944	VAL	D760	D760	VAL	VAL
SER		LYS		ALA	N1242	G1099	ASN	A945	LEU	L761	H630	D502	LYS
GLU		GLN	T1466	GLY	R1245	R1100	R1027	L946	PRO	P764	L631	R504	SER
GLU	PHE	ARG	V1467	PHE	D1246	W1101	R1028						ALA
GLU	ASP	PHE	T1468	TYR	I1247	Y1102	M1029	A953					ALA
ILE	C1776	GLY	T1469	GLY	T1248	F1103	L1032	ASP	H877	S767	D641	V507	ARG
ILE		LEU	G1470	GLY		E1104	L1033	GLU	R879	R768	L642		GLY
SER	D1786	E1636	G1470	PRO	L1251	M1113	L1033	HIS	R880	R769	H513	H513	GLY
ILE		ARG	D1471	LYS		R1114	P1034	ALA	I881		P614	P614	SER
GLU		THR	H1477	ASN	R1254		Y1035	GLU	R882	P774	M655	A515	I387
ASP	K1789	THR		ASP				GLU	R883	V775	R656	D516	Q388
ASP	A1790	PRO	I1480	LEU	Q1257	W1117	L1038	LYS	R884	V776	L661	D516	Q388
ALA	K1791	LYS		GLU	F1258		D1039	VAL	R885	G777	L885	V517	R389
ALA		ASP	K1481	GLU			D1040	LYS	L886	M778	G666	A518	K390
LEU	M1795	TYR	R1482	PHE				LYS	A886	F779		G523	M393
GLU		SER	S1483	ASP	P1262	E1127	K1043	MET	E887	E780	Y670	I529	H394
GLY	K1801	SER	S1483	ASP		L1128		LYS	H890	N781	K671	I529	H394
GLU	E1802	THR	N1484	VAL	H1265		K1047	LEU	E891		K672	E891	H395
GLU		GLY	N1484	ASP	E1266	A1136		PRO	R892	F794	W673	A538	E396
GLU	L1805	HIS	SER	SER	H1267	F1137	L1050	LYS	L892	W674	Y674	S795	D400
ALA	M1487	SER	ALA	PHE	I1268	D1138	R1051	ASN	W893	A796	Y675	I541	
LYS	R1808	ALA	ARG	GLU	E1269		E1052	Y970	M895	C797	E676	R542	L405
GLY	D1809	THR	LEU	VAL		R1144			N896	L677	M678	K546	S406
GLY	P1810	THR	LEU	GLU	I1272		T1055	T973	K897	L798			R407
LYS	V1811	GLU	GLU	MET	D1274	W1156	T1056		I897		H681	Q550	H410
ARG		LYS	ASP	LYS				P978	I898	F802		F551	H410
PRO	T1814	VAL	VAL	THR	GLY	G1164	G1059	D982	Q903	L803	H692	S552	R414
LYS	T1815	LEU	LEU	ALA	THR	M1165			Y904	P816	L693	S552	R414
GLU	E1816	ALA	ALA	HIS	ILE	V1166	Y1062	F985	R908	Y819	L694	L555	R417
GLU	F1817	ASP	ASP	GLY	ASP	D1167	HIS	1986	D909	P828	D556	D556	R420
GLU	L1818	ASP	ASP	GLY	SER	M1168	LEU	K987	D910		W557	W557	R420
GLU		ARG	ARG	LEU	SER		ALA	L988			L558	L558	
GLU	Y1827	ASP	ASP	VAL	PRO	M1173	PRO	T989	N911	S837	E712	L559	F426
GLU		ASP	ASP	PRO	CYS	M1174	ASP		K912	R838	D720	E563	F427
GLU	I1831	ASP	ASP	PRO	LEU		GLN	Q992	R913	E839	F429	E563	R428
GLU	I1834	ARG	ARG	ILE	V1285	L1177	ASP		Q914	Y840	D728	L565	F429
GLU		ILE	M1421	LYS	Q1286	L1182	HIS	M995	H915			L565	I430
GLU	N1837	LYS	LYS	ASP	T1287	L1190	ALA		P916	Y846	H731	V574	L436
GLU	E1838	ASP	ASP	ASP		L1191	SER	L999	C917		L732	L575	L436
GLU	D1839	LYS	LYS	GLY	F1290	F1192	ARG	A1000	L918	L860		S437	S437
GLU	L1840	THR	THR	GLU			ALA	E1001				K439	K439
GLU	K1841	PRO	PRO	THR	Q1293	F1201	GLU		F921	P853	I737	V578	K439
GLU	H1842	LYS	LYS	VAL	M1294	I1202	CYS	W1007	L924	L857	A738	L579	D446
GLU	I1843	LYS	LYS	CYS	N1295		SER	R1008	P925	THR	R739	L579	D446
GLU	L1844	PRO	PRO	GLU			GLY	R1009	E926	GLN	T740	A855	I447
GLU	Q1845	GLU	GLU	GLU	R1303	L1207	THR	I1012	Q927	ALA	V741	P448	P448
GLU	L1846	PHE	PHE	ASN	L1304	G1208	GLY	I1013	E928	ALA		E591	I449
GLU	I1847	ASN	ASN	GLU	S1305	V1209	THR	R1013	R929	ALA	P744	G592	E450
GLU		ASN	ASN	ASN		A1210	GLU	Q1014	N930	PHE		H593	S451

I3121	I3122	E3123	D3124	V3029	N3030	C3031	L3032	H3033	L3034	L3035	T3038	L3039	D3040	A3041	R3042	T3043	G3155	A3159	A3160	F3161	D3050	S3051	V3052	K3053	R3057	N3178	V3179	V3180	N3184	T3185	R3186	R3189	P3197	E3201	D3202	V3203	P3208	E3211	K3212	L3213	M3214	I3217	L3220	I3225	R3226	M3233																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
A3025	I3028	V3029	N3030	C3031	L3032	H3033	L3034	L3035	T3038	L3039	D3040	A3041	R3042	T3043	G3155	A3159	A3160	F3161	D3050	S3051	V3052	K3053	R3057	N3178	V3179	V3180	N3184	T3185	R3186	R3189	P3197	E3201	D3202	V3203	P3208	E3211	K3212	L3213	M3214	I3217	L3220	I3225	R3226	M3233																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
Q2937	Y2938	D2943	K2949	G2950	Y2955	F2961	F2962	V2965	V2966	L2967	I2970	D2971	Q2972	Y2973	F2974	H2977	R2978	L2979	Y2980	F2981	L2982	S2983	ALA	ALA	SER	ARG	PRO	LEU	CYS	THR	GLY	GLY	HIS	ALA	S2996	N2997	K2998	E2999	K3000	M3002	L3006	F3007	L3010	L3013	V3014	R3017	I3018																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
A2852	K2855	L2856	L2857	E2858	L2859	E2860	L2861	K2862	G2863	G2864	G2865	H2866	L2867	F2868	L2869	T2877	A2878	K2881	Q2889	L2890	L2891	L2892	K2893	G2905	PHE	LYS	ASP	LEU	ALA	HIS	GLY	ASP	THR	PRO	SER	ARG	ILE	ALA	ASP	MET	ASN	VAL	THR	LEU	SER	ARG	D2835	L2836	M2839	W2851																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
A2852	K2855	L2856	L2857	E2858	L2859	E2860	L2861	K2862	G2863	G2864	G2865	H2866	L2867	F2868	L2869	T2877	A2878	K2881	Q2889	L2890	L2891	L2892	K2893	G2905	PHE	LYS	ASP	LEU	ALA	HIS	GLY	ASP	THR	PRO	SER	ARG	ILE	ALA	ASP	MET	ASN	VAL	THR	LEU	SER	ARG	D2835	L2836	M2839	W2851																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
Q2937	Y2938	D2943	K2949	G2950	Y2955	F2961	F2962	V2965	V2966	L2967	I2970	D2971	Q2972	Y2973	F2974	H2977	R2978	L2979	Y2980	F2981	L2982	S2983	ALA	ALA	SER	ARG	PRO	LEU	CYS	THR	GLY	GLY	HIS	ALA	S2996	N2997	K2998	E2999	K3000	M3002	L3006	F3007	L3010	L3013	V3014	R3017	I3018																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
A3025	I3028	V3029	N3030	C3031	L3032	H3033	L3034	L3035	T3038	L3039	D3040	A3041	R3042	T3043	G3155	A3159	A3160	F3161	D3050	S3051	V3052	K3053	R3057	N3178	V3179	V3180	N3184	T3185	R3186	R3189	P3197	E3201	D3202	V3203	P3208	E3211	K3212	L3213	M3214	I3217	L3220	I3225	R3226	M3233																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
I3121	I3122	E3123	D3124	V3029	N3030	C3031	L3032	H3033	L3034	L3035	T3038	L3039	D3040	A3041	R3042	T3043	G3155	A3159	A3160	F3161	D3050	S3051	V3052	K3053	R3057	N3178	V3179	V3180	N3184	T3185	R3186	R3189	P3197	E3201	D3202	V3203	P3208	E3211	K3212	L3213	M3214	I3217	L3220	I3225	R3226	M3233																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
ASP	GLY	SER	ASN	ASP	LEU	THR	ILE	GLU	GLU	VAL	GLU	GLU	VAL	GLU	GLU	VAL	LYS	LYS	THR	TYR	LEU	LYS	LYS	LYS	GLN	ALA	GLU	LYS	PRO	VAL	ALA	SER	ASP	ARG	LYS	CYS	SER	GLY	L2056	L2057	E2071	E2001	D2001	G2006	G2007	L2008	GLU	LEU	ASP	GLU	ASP	GLY	GLY	SER	LEU																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
I2094	V2098	K2263	L2101	V2265	R2266	T2104	Y2106	C2276	Q2277	S2121	L2126	V2131	R2132	M2133	L2145	W2149	R2302	M2317	P2158	W2159	L2160	M2161	L2164	G2166	M2166	V2176	L2342	L2343	K2184	R2346	E2347	P2189	K2190	M2191	V2192	A2193	R2197	W2065	V2066	R2067	Y2201	F2202	I2206	Y2219	THR	PRO	SER	GLY	ASP	GLY	GLY	LYS	LYS	THR	LEU	ASP	GLY	GLY	SER	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GLY	GL





● Molecule 1: Ryanodine receptor 2



R2580	R2581	S2582	M2583	M2584	Q2585	H2586	L2587	L2588	L2591	R2592	M2604	L2608	L2609	H2612	Y2613	E2614	R2615	K2618	Y2619	Y2620	C2621	L2622	G2625	F2629	S2633	E2636	L2637	H2638	R2641	L2642	L2643	L2647	E2657	E2659	L2660	F2661	K2662	C2667	L2668	S2669	A2670	V2671	A2672	G2673	A2674																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
D2430	L2431	G2432	G2433	V2434	L2435	S2436	I2437	E2438	F2439	Q2440	M2441	THR	ILE	ALA	THR	ASP	GLY	LYS	ASP	GLY	LYS	VAL	VAL	E2452	D2453	D2454	M2455	S2456	A2457	G2458	F2459	G2460	H2463	K2464	M2467	D2472	R2473	V2474	Y2475	Q2480	D2481	F2482	L2483	L2484	H2485	L2486	V2489	G2490	F2491	R2496	A2497	A2498	A2499	L2501																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
R2502	T2503	L2506	G2507	M2508	A2512	L2513	A2514	L2515	R2516	R2517	L2518	L2519	C2520	T2521	L2526	L2527	T2528	R2529	C2530	A2531	F2534	A2535	T2536	H2540	A2541	S2542	L2543	L2544	S2545	L2546	L2548	H2549	Y2552	R2553	L2554	S2555	K2556	T2561	Q2564	R2565	L2566	S2567	T2568	E2569	V2570	L2573	Q2578	L2579																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
L2343	M2346	L2350	L2351	L2352	A2353	D2354	D2355	R2358	F2361	THR	ILE	PRO	THR	THR	LYS	ASP	GLY	LYS	ASP	GLY	LYS	VAL	VAL	E2452	D2453	D2454	M2455	S2456	A2457	G2458	F2459	G2460	H2463	K2464	M2467	D2472	R2473	V2474	Y2475	Q2480	D2481	F2482	L2483	L2484	H2485	L2486	V2489	G2490	F2491	R2496	A2497	A2498	A2499	L2501																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
R2067	E2071	E2075	D2076	L2079	M2083	L2086	R2089	Q2090	I2094	V2098	R2099	A2100	L2101	F2102	T2104	Y2105	S2121	I2125	V2131	R2132	M2133	R2143	G2144	L2145	M2149	F2154	P2158	R2159	L2160	M2161	L2164	G2165	M2166	V2175	K2184	L2185	L2186	L2187	L2188	L2189	L2190	L2191	L2192	L2193	L2194	L2195	L2196	L2197	L2198	L2199	L2200	L2201	L2202	L2203	L2204	L2205	L2206	L2207	L2208	L2209	L2210	L2211	L2212	L2213	L2214	L2215	L2216	L2217	L2218	L2219	L2220	L2221	L2222	L2223	L2224	L2225	L2226	L2227	L2228	L2229	L2230	L2231	L2232	L2233	L2234	L2235	L2236	L2237	L2238	L2239	L2240	L2241	L2242	L2243	L2244	L2245	L2246	L2247	L2248	L2249	L2250	L2251	L2252	L2253	L2254	L2255	L2256	L2257	L2258	L2259	L2260	L2261	L2262	L2263	L2264	L2265	L2266	L2267	L2268	L2269	L2270	L2271	L2272	L2273	L2274	L2275	L2276	L2277	L2278	L2279	L2280	L2281	L2282	L2283	L2284	L2285	L2286	L2287	L2288	L2289	L2290	L2291	L2292	L2293	L2294	L2295	L2296	L2297	L2298	L2299	L2300	L2301	L2302	L2303	L2304	L2305	L2306	L2307	L2308	L2309	L2310	L2311	L2312	L2313	L2314	L2315	L2316	L2317	L2318	L2319	L2320	L2321	L2322	L2323	L2324	L2325	L2326	L2327	L2328	L2329	L2330	L2331	L2332	L2333	L2334	L2335	L2336	L2337	L2338	L2339	L2340	L2341	L2342	L2343	L2344	L2345	L2346	L2347	L2348	L2349	L2350	L2351	L2352	L2353	L2354	L2355	L2356	L2357	L2358	L2359	L2360	L2361	L2362	L2363	L2364	L2365	L2366	L2367	L2368	L2369	L2370	L2371	L2372	L2373	L2374	L2375	L2376	L2377	L2378	L2379	L2380	L2381	L2382	L2383	L2384	L2385	L2386	L2387	L2388	L2389	L2390	L2391	L2392	L2393	L2394	L2395	L2396	L2397	L2398	L2399	L2400	L2401	L2402	L2403	L2404	L2405	L2406	L2407	L2408	L2409	L2410	L2411	L2412	L2413	L2414	L2415	L2416	L2417	L2418	L2419	L2420	L2421	L2422	L2423	L2424	L2425	L2426	L2427	L2428	L2429	L2430	L2431	L2432	L2433	L2434	L2435	L2436	L2437	L2438	L2439	L2440	L2441	L2442	L2443	L2444	L2445	L2446	L2447	L2448	L2449	L2450	L2451	L2452	L2453	L2454	L2455	L2456	L2457	L2458	L2459	L2460	L2461	L2462	L2463	L2464	L2465	L2466	L2467	L2468	L2469	L2470	L2471	L2472	L2473	L2474	L2475	L2476	L2477	L2478	L2479	L2480	L2481	L2482	L2483	L2484	L2485	L2486	L2487	L2488	L2489	L2490	L2491	L2492	L2493	L2494	L2495	L2496	L2497	L2498	L2499	L2500	L2501	L2502	L2503	L2504	L2505	L2506	L2507	L2508	L2509	L2510	L2511	L2512	L2513	L2514	L2515	L2516	L2517	L2518	L2519	L2520	L2521	L2522	L2523	L2524	L2525	L2526	L2527	L2528	L2529	L2530	L2531	L2532	L2533	L2534	L2535	L2536	L2537	L2538	L2539	L2540	L2541	L2542	L2543	L2544	L2545	L2546	L2547	L2548	L2549	L2550	L2551	L2552	L2553	L2554	L2555	L2556	L2557	L2558	L2559	L2560	L2561	L2562	L2563	L2564	L2565	L2566	L2567	L2568	L2569	L2570	L2571	L2572	L2573	L2574	L2575	L2576	L2577	L2578	L2579	L2580	L2581	L2582	L2583	L2584	L2585	L2586	L2587	L2588	L2589	L2590	L2591	L2592	L2593	L2594	L2595	L2596	L2597	L2598	L2599	L2600	L2601	L2602	L2603	L2604	L2605	L2606	L2607	L2608	L2609	L2610	L2611	L2612	L2613	L2614	L2615	L2616	L2617	L2618	L2619	L2620	L2621	L2622	L2623	L2624	L2625	L2626	L2627	L2628	L2629	L2630	L2631	L2632	L2633	L2634	L2635	L2636	L2637	L2638	L2639	L2640	L2641	L2642	L2643	L2644	L2645	L2646	L2647	L2648	L2649	L2650	L2651	L2652	L2653	L2654	L2655	L2656	L2657	L2658	L2659	L2660	L2661	L2662	L2663	L2664	L2665	L2666	L2667	L2668	L2669	L2670	L2671	L2672	L2673	L2674	L2675	L2676	L2677	L2678	L2679	L2680	L2681	L2682	L2683	L2684	L2685	L2686	L2687	L2688	L2689	L2690	L2691	L2692	L2693	L2694	L2695	L2696	L2697	L2698	L2699	L2700	L2701	L2702	L2703	L2704	L2705	L2706	L2707	L2708	L2709	L2710	L2711	L2712	L2713	L2714	L2715	L2716	L2717	L2718	L2719	L2720	L2721	L2722	L2723	L2724	L2725	L2726	L2727	L2728	L2729	L2730	L2731	L2732	L2733	L2734	L2735	L2736	L2737	L2738	L2739	L2740	L2741	L2742	L2743	L2744	L2745	L2746	L2747	L2748	L2749	L2750	L2751	L2752	L2753	L2754	L2755	L2756	L2757	L2758	L2759	L2760	L2761	L2762	L2763	L2764	L2765	L2766	L2767	L2768	L2769	L2770	L2771	L2772	L2773	L2774	L2775	L2776	L2777	L2778	L2779	L2780	L2781	L2782	L2783	L2784	L2785	L2786	L2787	L2788	L2789	L2790	L2791	L2792	L2793	L2794	L2795	L2796	L2797	L2798	L2799	L2800	L2801	L2802	L2803	L2804	L2805	L2806	L2807	L2808	L2809	L2810	L2811	L2812	L2813	L2814	L2815	L2816	L2817	L2818	L2819	L2820	L2821	L2822	L2823	L2824	L2825	L2826	L2827	L2828	L2829	L2830	L2831	L2832	L2833	L2834	L2835	L2836	L2837	L2838	L2839	L2840	L2841	L2842	L2843	L2844	L2845	L2846	L2847	L2848	L2849	L2850	L2851	L2852	L2853	L2854	L2855	L2856	L2857	L2858	L2859	L2860	L2861	L2862	L2863	L2864	L2865	L2866	L2867	L2868	L2869	L2870	L2871	L2872	L2873	L2874	L2875	L2876	L2877	L2878	L2879	L2880	L2881	L2882	L2883	L2884	L2885	L2886	L2887	L2888	L2889	L2890	L2891	L2892	L2893	L2894	L2895	L2896	L2897	L2898	L2899	L2900	L2901	L2902	L2903	L2904	L2905	L2906	L2907	L2908	L2909	L2910	L2911	L2912	L2913	L2914	L2915	L2916	L2917	L2918	L2919	L2920	L2921	L2922	L2923	L2924	L2925	L2926	L2927	L2928	L2929	L2930	L2931	L2932	L2933	L2934	L2935	L2936	L2937	L2938	L2939	L2940	L2941	L2942	L2943	L2944	L2945	L2946	L2947	L2948	L2949	L2950	L2951	L2952	L2953	L2954	L2955	L2956	L2957	L2958	L2959	L2960	L2961	L2962	L2963	L2964	L2965	L2966	L2967	L2968	L2969	L2970	L2971	L2972	L2973	L2974	L2975	L2976	L2977	L2978	L2979	L2980	L2981	L2982	L2983	L2984	L2985	L2986	L2987	L2988	L2989	L2990	L2991	L2992	L2993	L2994	L2995	L2996	L2997	L2998	L2999	L3000	L3001	L3002	L3003	L3004	L3005	L3006	L3007	L3008	L3009	L3010	L3011	L3012	L3013	L3014	L3015	L3016	L3017	L3018	L3019	L3020	L3021	L3022	L3023	L3024	L3025	L3026	L3027	L3028	L3029	L3030	L3031	L3032	L3033	L3034	L3035	L3036	L3037	L3038	L3039	L3040	L3041	L3042	L3043	L3044	L3045	L3046	L3047	L3048	L3049	L3050	L3051	L3052	L3053	L3054	L3055	L3056	L3057	L3058	L3059	L3060	L3061	L3062	L3063	L3064	L3065	L3066	L3067	L3068	L3069	L3070	L3071	L3072	L3073	L3074	L3075	L3076	L3077	L3078	L3079	L3080	L3081	L3082	L3083	L3084	L3085	L3086	L3087	L3088	L3089	L3090	L3091	L3092	L3093	L3094	L3095	L3096	L3097	L3098	L3099	L3100	L3101	L3102	L3103	L3104	L3105	L3106	L3107	L3108	L3109	L3110	L3111	L3112	L3113	L3114	L3115	L3116	L3117	L3118	L3119	L3120	L3121	L3122	L3123	L3124	L3125	L3126	L3127	L3128	L3129	L3130	L3131	L3132	L3133	L3134	L3135	L3136	L3137	L3138	L3139	L3140	L3141	L3142	L3143	L3144	L3145	L3146	L3147	L3148	L3149	L3150	L3151	L3152	L3153	L3154	L3155	L3156	L3157	L3158	L3159	L3160	L3161	L3162	L3163	L3164	L3165	L3166	L3167	L3168	L3169	L3170	L3171	L3172	L3173	L3174	L3175	L3176	L3177	L3178	L3179	L3180	L3181	L3182	L3183	L3184	L3185	L3186	L3187	L3188	L3189	L3190	L3191	L3192	L3193	L3194	L3195	L3196	L3197	L3198	L3199	L3200	L3201	L3202	L3203	L3204	L3205	L3206	L3207	L3208	L3209	L3210	L3211	L3212	L3213	L3214	L3215	L3216	L3217	L3218	L3219	L3220	L3221	L3222	L3223	L3224	L3225	L3226	L3227	L3228	L3229	L3230	L3231	L3232	L3233	L3234	L3235	L3236	L3237	L3238	L3239	L3240	L3241	L3242	L3243	L3244	L3245	L3246	L3247	L3248	L3249	L3250	L3251	L3252	L3253	L3254	L3255	L3256	L3257	L3258	L3259	L3260	L3261	L3262	L3263	L3264	L3265	L3266	L3267	L3268	L3269	L3270	L3271	L3272	L3273	L3274	L3275	L3276	L3277	L3278	L3279	L3280	L3281	L3282	L3283	L3284	L3285	L3286	L3287	L3288	L3289	L3290	L3291	L3292	L3293	L3294	L3295	L3296	L3297	L3298	L3299	L3300	L3301	L3302	L3303	L3304	L3305	L3306	L3307	L3308	L330

E3717	R3614	E3548	R3448	I3354	I3283	R3184	L3074	PRO	ASP	SER	K2860
Q3721	A3615	R3549	K3449	L3361	N3286	T3185	L3078	LEU	LEU	ILE	GLU
Q3727	N3617	V3550	K3450	A3362	L3287	R3186	Q3078	CYS	ASP	ASP	SER
A3728	L3618	G3552	K3454	R3363	G3288	R3189	K3083	THR	LEU	ALA	ASN
R3729	F3619	G3553	R3457	D3364	I3289	P3197	S3084	GLY	THR	HIS	TYR
L3730	L3620	I3556	R3465	L3365	E3291	P3197	Q3085	HIS	PRO	GLY	VAL
H3731	Y3623	L3557	S3463	F3368	G3292	P3197	V3089	ALA	SER	TYR	SER
R3733	V3627	S3564	L3464	Y3369	A3293	E3201	V3089	N2997	LEU	PRO	MET
A3736	E3636	L3372	V3466	L3372	N3295	D3302	I3093	K2918	ARG	ALA	GLU
I3764	A3644	V3376	K3470	V3376	L3298	P3208	I3094	E2999	ALA	ILE	LYS
N3769	G3647	D3377	R3471	D3377	F3301	E3211	I3095	K3000	ASP	SER	GLN
A3648	G3648	N3378	L3472	N3378	S3302	K3212	T3096	E3001	MET	ASP	SER
F3649	F3649	R3380	P3474	R3380	Q3303	L3213	T3097	M3002	SER	SER	SER
V3772	LEU	A3381	I3475	A3381	Q3303	M3214	S3105	L3006	ASN	ASN	ASP
K3775	PRO	F3382	I3479	F3382	I3306	I3217	F3108	F3007	THR	THR	GLU
M3776	VAL	N3383	C3480	L3384	N3307	I3217	E3109	L3010	LEU	LEU	GLY
L3802	GLU	K3385	A3481	K3385	K3308	H3110	H3110	L3013	SER	SER	ASN
N3805	ASP	P3386	P3482	E3386	V3309	L3220	F3116	V3014	ARG	PHE	ASN
R3809	GLU	F3387	G3483	F3387	K3310	I3225	G3117	I3018	L2835	L2836	PRO
Q3810	ALA	N3388	D3484	N3388	L3313	R3226	G3117	A3025	M2839	R2771	GLN
R3811	SER	F3389	Q3485	P3389	L3314	R3226	L3120	A2995	I2774	I2774	PRO
V3814	LYS	A3391	L3487	A3391	K3315	M3233	L3121	H2996	K2767	K2767	VAL
E3814	LYS	E3392	I3488	E3392	H3316	M3234	I3122	A2997	K2768	K2768	ASP
M3818	ALA	E3393	I3488	E3393	D3124	V3236	E3123	Y2998	K2769	K2769	THR
V3828	VAL	L3394	L3490	L3394	V3125	I3237	V3125	L2928	E2766	E2766	GLY
D3831	TRP	F3395	L3490	F3395	Q3126	R3237	Q3126	L2929	K2781	K2781	ASN
E3833	LYS	R3396	R3505	R3396	L3321	P3239	V3126	R2930	V2784	V2784	THR
F3834	LYS	M3397	R3508	M3397	K3322	M3240	C3129	Y2931	Y2770	Y2770	ASN
R3840	LEU	V3398	I3508	V3398	E3323	L3241	L3133	D2932	R2771	R2771	PRO
Q3843	SER	A3399	T3512	A3399	K3324	L3241	L3133	E2934	I2774	I2774	GLN
L3844	LYS	E3400	G3516	E3400	L3325	L3241	T3134	A2936	K2775	K2775	VAL
N3850	GLN	F3401	R3517	F3401	K3326	M3245	S3135	H2936	W2851	W2851	ASP
S3851	ARG	I3403	L3518	I3403	K3327	S3246	S3135	Y2938	A2852	A2852	THR
F3852	LYS	F3411	A3522	F3411	K3328	R3247	V3146	L2965	L2778	L2778	LYS
R3840	ARG	A3522	A3522	A3522	M3331	W3249	V3147	V2966	M2781	M2781	GLY
Q3843	ALA	N3425	A3522	N3425	V3332	E3250	R3151	L2967	K2855	K2855	ASN
L3844	VAL	M3426	A3522	M3426	E3335	H3256	G3155	I2970	L2859	L2859	THR
N3850	VAL	Q3526	A3522	Q3526	E3335	H3256	G3155	D2971	E2860	E2860	GLY
S3851	CYS	M3527	A3522	M3527	E3335	H3256	E3156	Q2972	S2861	S2861	ILE
F3852	ARG	Y3530	A3522	Y3530	L3339	M3262	A3159	Y2973	K2862	K2862	ARG
Q3854	ARG	K3435	A3522	K3435	K3340	M3262	A3159	F2974	G2864	G2864	THR
R3858	ALA	S3436	A3522	S3436	A3341	H3271	A3160	H2977	H2877	H2877	LEU
T3859	PRO	P3534	A3522	P3534	E3342	M3272	F3161	L2978	A2878	A2878	ASN
R3858	LEU	N3535	A3522	N3535	A3344	N3273	P3166	L2979	K2881	K2881	ARG
T3859	THR	R3536	A3522	R3536	G3345	T3274	P3166	Y2980	Q2889	Q2889	THR
I3870	ASN	T3537	A3522	T3537	D3346	L3275	T3167	F2981	D2890	D2890	ARG
V3874	LEU	P3540	A3522	P3540	S3347	I3279	T3172	L2982	I2891	I2891	ILE
D3875	LYS	V3547	A3522	V3547	S3348	K3281	N3178	S2983	F2892	F2892	GLN
					L3352	K3281	V3179	ALA	K2893	K2893	SER
					L3353	K3281	V3180	ALA	G2905	G2905	PHE
								ARG	LYS	LYS	VAL



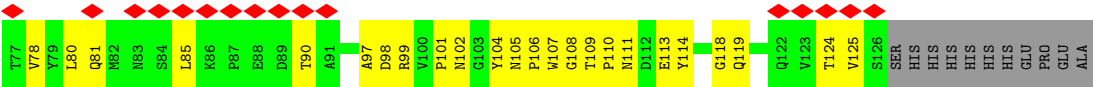












## 4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	76852	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	JEOL CRYO ARM 300	Depositor
Voltage (kV)	300	Depositor
Electron dose ( $e^-/\text{\AA}^2$ )	60	Depositor
Minimum defocus (nm)	1500	Depositor
Maximum defocus (nm)	2500	Depositor
Magnification	Not provided	
Image detector	GATAN K3 (6k x 4k)	Depositor
Maximum map value	5.181	Depositor
Minimum map value	-0.204	Depositor
Average map value	0.074	Depositor
Map value standard deviation	0.151	Depositor
Recommended contour level	0.35	Depositor
Map size ( $\text{\AA}$ )	490.56, 490.56, 490.56	wwPDB
Map dimensions	336, 336, 336	wwPDB
Map angles ( $^\circ$ )	90.0, 90.0, 90.0	wwPDB
Pixel spacing ( $\text{\AA}$ )	1.46, 1.46, 1.46	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, ATP, CFF

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\# Z  > 5$	RMSZ	$\# Z  > 5$
1	A	0.26	0/33802	0.50	1/45653 (0.0%)
1	C	0.26	0/33802	0.50	1/45653 (0.0%)
1	E	0.26	0/33802	0.50	1/45653 (0.0%)
1	F	0.26	0/33802	0.50	1/45653 (0.0%)
2	B	0.26	0/984	0.51	0/1335
2	D	0.26	0/984	0.51	0/1335
2	G	0.26	0/984	0.51	0/1335
2	I	0.26	0/984	0.51	0/1335
All	All	0.26	0/139144	0.50	4/187952 (0.0%)

There are no bond length outliers.

All (4) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	E	1494	MET	CA-CB-CG	5.38	122.45	113.30
1	F	1494	MET	CA-CB-CG	5.38	122.44	113.30
1	C	1494	MET	CA-CB-CG	5.37	122.43	113.30
1	A	1494	MET	CA-CB-CG	5.36	122.41	113.30

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	33088	0	32662	852	0
1	C	33088	0	32662	837	0
1	E	33088	0	32662	853	0
1	F	33088	0	32662	854	0
2	B	965	0	910	28	0
2	D	965	0	910	27	0
2	G	965	0	910	28	0
2	I	965	0	910	27	0
3	A	31	0	12	3	0
3	C	31	0	12	3	0
3	E	31	0	12	3	0
3	F	31	0	12	3	0
4	A	14	0	10	0	0
4	C	14	0	10	0	0
4	E	14	0	10	0	0
4	F	14	0	10	0	0
5	A	1	0	0	0	0
5	C	1	0	0	0	0
5	E	1	0	0	0	0
5	F	1	0	0	0	0
6	A	1	0	0	0	0
6	C	1	0	0	0	0
6	E	1	0	0	0	0
6	F	1	0	0	0	0
All	All	136400	0	134376	3465	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 13.

All (3465) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2641:ARG:HH12	1:A:2680:MET:HE3	1.42	0.85
1:C:2641:ARG:HH12	1:C:2680:MET:HE3	1.41	0.84
1:E:2641:ARG:HH12	1:E:2680:MET:HE3	1.41	0.84
1:A:4040:GLY:HA3	1:A:4078:ASP:HA	1.60	0.83
1:F:2641:ARG:HH12	1:F:2680:MET:HE3	1.41	0.83
1:C:4040:GLY:HA3	1:C:4078:ASP:HA	1.60	0.83
1:E:4040:GLY:HA3	1:E:4078:ASP:HA	1.60	0.82
1:F:4040:GLY:HA3	1:F:4078:ASP:HA	1.60	0.81
1:F:3392:GLU:HG2	1:F:3479:ILE:HG12	1.63	0.81
1:C:3392:GLU:HG2	1:C:3479:ILE:HG12	1.63	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3376:VAL:O	1:A:3380:ARG:HB2	1.82	0.80
1:C:3376:VAL:O	1:C:3380:ARG:HB2	1.82	0.80
1:E:3376:VAL:O	1:E:3380:ARG:HB2	1.82	0.79
1:A:3392:GLU:HG2	1:A:3479:ILE:HG12	1.63	0.79
1:C:306:LEU:HD11	1:C:314:LEU:HB3	1.65	0.78
1:F:3376:VAL:O	1:F:3380:ARG:HB2	1.82	0.78
1:E:3392:GLU:HG2	1:E:3479:ILE:HG12	1.63	0.78
1:A:306:LEU:HD11	1:A:314:LEU:HB3	1.65	0.77
1:E:306:LEU:HD11	1:E:314:LEU:HB3	1.65	0.77
1:F:306:LEU:HD11	1:F:314:LEU:HB3	1.65	0.77
1:C:2916:ILE:O	1:C:2919:ARG:N	2.20	0.75
1:E:2916:ILE:O	1:E:2919:ARG:N	2.20	0.75
1:F:2916:ILE:O	1:F:2919:ARG:N	2.20	0.75
1:A:2916:ILE:O	1:A:2919:ARG:N	2.20	0.74
1:E:2609:LEU:HD12	1:E:2613:TYR:HE1	1.54	0.73
1:F:891:GLU:HB2	1:F:978:PRO:HB3	1.71	0.72
1:E:891:GLU:HB2	1:E:978:PRO:HB3	1.71	0.72
1:F:2545:ASP:O	1:F:2549:HIS:ND1	2.20	0.72
1:F:794:PHE:HB2	1:F:798:ILE:HG21	1.72	0.72
1:C:2609:LEU:HD12	1:C:2613:TYR:HE1	1.54	0.72
1:E:3049:LEU:HD23	1:E:3052:VAL:HG23	1.72	0.72
1:A:3049:LEU:HD23	1:A:3052:VAL:HG23	1.72	0.71
1:A:2609:LEU:HD12	1:A:2613:TYR:HE1	1.54	0.71
1:C:794:PHE:HB2	1:C:798:ILE:HG21	1.72	0.71
1:C:3238:LEU:HD12	1:C:3241:LEU:HD11	1.73	0.71
1:E:3238:LEU:HD12	1:E:3241:LEU:HD11	1.73	0.71
1:F:2609:LEU:HD12	1:F:2613:TYR:HE1	1.54	0.71
1:F:3238:LEU:HD12	1:F:3241:LEU:HD11	1.73	0.71
1:A:794:PHE:HB2	1:A:798:ILE:HG21	1.72	0.71
1:E:794:PHE:HB2	1:E:798:ILE:HG21	1.72	0.71
1:A:2545:ASP:O	1:A:2549:HIS:ND1	2.21	0.71
1:E:2545:ASP:O	1:E:2549:HIS:ND1	2.21	0.71
1:E:2922:TYR:HB2	1:E:3002:MET:HE1	1.71	0.70
2:B:34:MET:HE1	2:B:78:VAL:HG11	1.74	0.70
1:E:3843:GLN:HG3	1:E:3921:GLU:HG3	1.72	0.70
1:A:3238:LEU:HD12	1:A:3241:LEU:HD11	1.73	0.70
1:A:891:GLU:HB2	1:A:978:PRO:HB3	1.71	0.70
1:A:3843:GLN:HG3	1:A:3921:GLU:HG3	1.72	0.70
1:E:2501:LEU:HD13	1:E:2512:ALA:HA	1.74	0.70
1:F:3843:GLN:HG3	1:F:3921:GLU:HG3	1.72	0.70
1:A:924:LEU:HD12	1:A:925:PRO:HD2	1.74	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:924:LEU:HD12	1:C:925:PRO:HD2	1.74	0.70
1:F:2922:TYR:HB2	1:F:3002:MET:HE1	1.73	0.70
1:C:891:GLU:HB2	1:C:978:PRO:HB3	1.71	0.70
1:A:2922:TYR:HB2	1:A:3002:MET:HE1	1.73	0.70
1:C:2545:ASP:O	1:C:2549:HIS:ND1	2.20	0.70
1:E:3399:ALA:HB1	1:E:3556:VAL:HG21	1.74	0.70
1:F:3049:LEU:HD23	1:F:3052:VAL:HG23	1.72	0.70
1:C:3226:ARG:HA	1:C:3234:MET:SD	2.32	0.70
1:C:3399:ALA:HB1	1:C:3556:VAL:HG21	1.74	0.70
1:F:3399:ALA:HB1	1:F:3556:VAL:HG21	1.74	0.70
1:C:3049:LEU:HD23	1:C:3052:VAL:HG23	1.72	0.69
1:A:3399:ALA:HB1	1:A:3556:VAL:HG21	1.74	0.69
1:C:2501:LEU:HD13	1:C:2512:ALA:HA	1.74	0.69
1:F:3226:ARG:HA	1:F:3234:MET:SD	2.32	0.69
1:A:3273:ASN:HD21	1:A:3310:LYS:HB2	1.56	0.69
1:E:924:LEU:HD12	1:E:925:PRO:HD2	1.74	0.69
1:C:3843:GLN:HG3	1:C:3921:GLU:HG3	1.71	0.69
1:E:3226:ARG:HA	1:E:3234:MET:SD	2.32	0.69
2:G:34:MET:HE1	2:G:78:VAL:HG11	1.74	0.69
1:A:3226:ARG:HA	1:A:3234:MET:SD	2.32	0.69
1:C:3273:ASN:HD21	1:C:3310:LYS:HB2	1.57	0.69
1:E:3273:ASN:HD21	1:E:3310:LYS:HB2	1.57	0.69
1:A:2501:LEU:HD13	1:A:2512:ALA:HA	1.74	0.69
1:A:4013:LEU:HD13	1:A:4121:ALA:HB2	1.75	0.69
1:E:946:LEU:HD13	1:E:995:MET:HG2	1.75	0.69
1:F:764:PRO:HB2	1:F:781:ASN:H	1.58	0.69
1:F:946:LEU:HD13	1:F:995:MET:HG2	1.75	0.69
1:F:2501:LEU:HD13	1:F:2512:ALA:HA	1.74	0.69
1:A:764:PRO:HB2	1:A:781:ASN:H	1.58	0.69
1:E:764:PRO:HB2	1:E:781:ASN:H	1.58	0.69
1:E:3326:LYS:HD3	1:E:3397:MET:HB3	1.75	0.69
1:F:924:LEU:HD12	1:F:925:PRO:HD2	1.74	0.69
1:F:4013:LEU:HD13	1:F:4121:ALA:HB2	1.75	0.69
1:C:764:PRO:HB2	1:C:781:ASN:H	1.58	0.69
1:A:2620:TYR:HB2	1:A:2674:ALA:HB1	1.76	0.69
1:A:3326:LYS:HD3	1:A:3397:MET:HB3	1.75	0.69
1:C:2620:TYR:HB2	1:C:2674:ALA:HB1	1.75	0.69
1:F:3727:GLN:O	1:F:3731:HIS:HB3	1.93	0.69
1:C:234:LEU:HD12	1:C:405:LEU:HB3	1.76	0.68
1:A:3727:GLN:O	1:A:3731:HIS:HB3	1.93	0.68
1:E:3727:GLN:O	1:E:3731:HIS:HB3	1.93	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:3273:ASN:HD21	1:F:3310:LYS:HB2	1.57	0.68
1:C:4013:LEU:HD13	1:C:4121:ALA:HB2	1.75	0.68
1:F:3326:LYS:HD3	1:F:3397:MET:HB3	1.75	0.68
1:F:2620:TYR:HB2	1:F:2674:ALA:HB1	1.75	0.68
2:I:34:MET:HE1	2:I:78:VAL:HG11	1.75	0.68
1:C:3326:LYS:HD3	1:C:3397:MET:HB3	1.75	0.68
1:E:4013:LEU:HD13	1:E:4121:ALA:HB2	1.75	0.68
1:F:1303:ARG:NH2	1:F:1590:GLN:OE1	2.27	0.68
1:F:3167:ILE:O	1:F:3247:ARG:NH2	2.27	0.68
1:C:1303:ARG:NH2	1:C:1590:GLN:OE1	2.27	0.68
2:G:36:TRP:HB2	2:G:48:VAL:HB	1.76	0.68
1:E:3000:LYS:HD2	1:E:3043:THR:HG21	1.76	0.68
1:E:3167:ILE:O	1:E:3247:ARG:NH2	2.27	0.68
1:C:3000:LYS:HD2	1:C:3043:THR:HG21	1.76	0.67
1:C:3727:GLN:O	1:C:3731:HIS:HB3	1.93	0.67
1:E:2620:TYR:HB2	1:E:2674:ALA:HB1	1.75	0.67
1:A:1303:ARG:NH2	1:A:1590:GLN:OE1	2.27	0.67
1:A:3993:THR:HA	1:A:3996:LYS:HE2	1.76	0.67
1:E:234:LEU:HD12	1:E:405:LEU:HB3	1.76	0.67
1:F:234:LEU:HD12	1:F:405:LEU:HB3	1.76	0.67
1:C:946:LEU:HD13	1:C:995:MET:HG2	1.75	0.67
1:F:3000:LYS:HD2	1:F:3043:THR:HG21	1.76	0.67
1:A:982:ASP:HB3	1:A:985:PHE:HB2	1.76	0.67
1:A:3000:LYS:HD2	1:A:3043:THR:HG21	1.77	0.67
1:C:3993:THR:HA	1:C:3996:LYS:HE2	1.77	0.67
1:F:3041:ALA:HB3	1:F:3116:PHE:HB3	1.76	0.67
2:I:36:TRP:HB2	2:I:48:VAL:HB	1.76	0.67
1:C:982:ASP:HB3	1:C:985:PHE:HB2	1.76	0.67
1:A:234:LEU:HD12	1:A:405:LEU:HB3	1.76	0.67
1:E:3993:THR:HA	1:E:3996:LYS:HE2	1.77	0.67
1:E:4158:GLN:HB3	1:E:4199:MET:HB3	1.76	0.67
1:F:3993:THR:HA	1:F:3996:LYS:HE2	1.77	0.67
1:A:946:LEU:HD13	1:A:995:MET:HG2	1.75	0.67
1:A:4942:MET:HE1	1:A:4949:GLU:HG3	1.76	0.67
1:E:1303:ARG:NH2	1:E:1590:GLN:OE1	2.27	0.67
1:A:2918:LYS:HD2	1:A:2919:ARG:N	2.10	0.67
1:F:3237:VAL:HA	1:F:3240:MET:HG2	1.77	0.67
1:A:3041:ALA:HB3	1:A:3116:PHE:HB3	1.76	0.66
1:A:3167:ILE:O	1:A:3247:ARG:NH2	2.27	0.66
1:E:3041:ALA:HB3	1:E:3116:PHE:HB3	1.76	0.66
1:A:1560:ARG:NH1	1:A:1561:ILE:O	2.29	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1560:ARG:NH1	1:C:1561:ILE:O	2.29	0.66
1:C:3466:VAL:HG22	1:C:3470:LYS:HE3	1.78	0.66
1:E:2918:LYS:HD2	1:E:2919:ARG:N	2.10	0.66
1:A:3237:VAL:HA	1:A:3240:MET:HG2	1.77	0.66
1:C:4158:GLN:HB3	1:C:4199:MET:HB3	1.76	0.66
1:F:1267:HIS:HB3	1:F:1295:ASN:H	1.61	0.66
1:A:3211:GLU:HA	1:A:3214:MET:HG2	1.77	0.66
1:A:3466:VAL:HG22	1:A:3470:LYS:HE3	1.78	0.66
1:A:4158:GLN:HB3	1:A:4199:MET:HB3	1.76	0.66
2:D:105:ASN:ND2	2:D:108:GLY:O	2.29	0.66
1:E:982:ASP:HB3	1:E:985:PHE:HB2	1.76	0.66
2:I:105:ASN:ND2	2:I:108:GLY:O	2.29	0.66
1:C:3041:ALA:HB3	1:C:3116:PHE:HB3	1.76	0.66
1:E:3211:GLU:HA	1:E:3214:MET:HG2	1.77	0.66
1:C:1437:GLU:O	1:C:1440:ASN:ND2	2.29	0.66
1:F:1560:ARG:NH1	1:F:1561:ILE:O	2.29	0.66
1:F:4942:MET:HE1	1:F:4949:GLU:HG3	1.78	0.66
1:E:3818:MET:N	1:E:3818:MET:SD	2.70	0.66
1:F:982:ASP:HB3	1:F:985:PHE:HB2	1.76	0.66
1:F:3211:GLU:HA	1:F:3214:MET:HG2	1.77	0.66
1:F:3466:VAL:HG22	1:F:3470:LYS:HE3	1.78	0.66
2:B:36:TRP:HB2	2:B:48:VAL:HB	1.76	0.65
2:D:36:TRP:HB2	2:D:48:VAL:HB	1.76	0.65
2:B:105:ASN:ND2	2:B:108:GLY:O	2.29	0.65
1:C:3167:ILE:O	1:C:3247:ARG:NH2	2.27	0.65
1:E:1560:ARG:NH1	1:E:1561:ILE:O	2.29	0.65
1:E:3039:LEU:O	1:E:3110:HIS:NE2	2.30	0.65
1:A:1267:HIS:HB3	1:A:1295:ASN:H	1.61	0.65
1:C:3237:VAL:HA	1:C:3240:MET:HG2	1.77	0.65
1:E:3237:VAL:HA	1:E:3240:MET:HG2	1.77	0.65
1:A:3039:LEU:O	1:A:3110:HIS:NE2	2.29	0.65
1:E:2439:PHE:CZ	1:E:2464:LYS:HD2	2.32	0.65
1:F:3818:MET:N	1:F:3818:MET:SD	2.70	0.65
1:A:2439:PHE:CZ	1:A:2464:LYS:HD2	2.32	0.65
1:C:2918:LYS:HD2	1:C:2919:ARG:N	2.10	0.65
1:F:4158:GLN:HB3	1:F:4199:MET:HB3	1.76	0.65
1:A:317:MET:N	1:A:317:MET:SD	2.70	0.65
1:E:1267:HIS:HB3	1:E:1295:ASN:H	1.61	0.65
1:E:1913:CYS:SG	1:E:2090:GLN:NE2	2.61	0.65
2:G:105:ASN:ND2	2:G:108:GLY:O	2.29	0.65
1:C:3039:LEU:O	1:C:3110:HIS:NE2	2.30	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:222:GLU:HB2	1:E:349:MET:HG3	1.79	0.65
1:E:1437:GLU:O	1:E:1440:ASN:ND2	2.29	0.65
1:F:222:GLU:HB2	1:F:349:MET:HG3	1.79	0.65
1:F:1437:GLU:O	1:F:1440:ASN:ND2	2.29	0.65
1:C:317:MET:N	1:C:317:MET:SD	2.70	0.65
1:E:2355:ASP:HB3	1:E:2358:ARG:HB2	1.79	0.65
1:E:2579:LEU:O	1:E:2615:ARG:NH1	2.30	0.65
1:E:3466:VAL:HG22	1:E:3470:LYS:HE3	1.78	0.65
1:F:3039:LEU:O	1:F:3110:HIS:NE2	2.29	0.65
1:A:946:LEU:HD11	1:A:999:LEU:HB2	1.79	0.65
1:C:3211:GLU:HA	1:C:3214:MET:HG2	1.77	0.65
1:E:317:MET:N	1:E:317:MET:SD	2.70	0.65
1:F:2439:PHE:CZ	1:F:2464:LYS:HD2	2.32	0.65
1:F:2579:LEU:O	1:F:2615:ARG:NH1	2.30	0.65
1:F:2918:LYS:HD2	1:F:2919:ARG:N	2.10	0.65
1:C:2439:PHE:CZ	1:C:2464:LYS:HD2	2.32	0.64
1:C:3614:ARG:HH22	1:C:3618:LEU:HD21	1.62	0.64
1:C:3818:MET:SD	1:C:3818:MET:N	2.70	0.64
1:E:555:LEU:HD21	1:E:578:VAL:HG11	1.79	0.64
1:E:946:LEU:HD11	1:E:999:LEU:HB2	1.79	0.64
1:F:317:MET:SD	1:F:317:MET:N	2.70	0.64
1:A:2579:LEU:O	1:A:2615:ARG:NH1	2.30	0.64
1:C:1267:HIS:HB3	1:C:1295:ASN:H	1.61	0.64
1:C:3151:ARG:HD3	1:C:3236:VAL:HG21	1.79	0.64
1:A:3614:ARG:HH22	1:A:3618:LEU:HD21	1.62	0.64
1:C:2579:LEU:O	1:C:2615:ARG:NH1	2.30	0.64
1:F:671:LYS:HB3	1:F:761:LEU:HB3	1.80	0.64
1:A:222:GLU:HB2	1:A:349:MET:HG3	1.79	0.64
1:A:3818:MET:N	1:A:3818:MET:SD	2.70	0.64
1:F:555:LEU:HD21	1:F:578:VAL:HG11	1.79	0.64
1:A:1437:GLU:O	1:A:1440:ASN:ND2	2.29	0.64
1:C:222:GLU:HB2	1:C:349:MET:HG3	1.79	0.64
1:C:2355:ASP:HB3	1:C:2358:ARG:HB2	1.78	0.64
1:F:3614:ARG:HH22	1:F:3618:LEU:HD21	1.62	0.64
1:C:2938:TYR:HB3	1:C:2955:TYR:HB3	1.79	0.64
1:C:4942:MET:HE1	1:C:4949:GLU:HG3	1.80	0.64
1:E:2265:VAL:HG12	1:E:2326:ARG:HH21	1.63	0.64
1:E:2938:TYR:HB3	1:E:2955:TYR:HB3	1.79	0.64
1:E:3614:ARG:HH22	1:E:3618:LEU:HD21	1.62	0.64
1:F:946:LEU:HD11	1:F:999:LEU:HB2	1.79	0.64
1:F:2265:VAL:HG12	1:F:2326:ARG:HH21	1.63	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:2355:ASP:HB3	1:F:2358:ARG:HB2	1.79	0.64
1:E:3151:ARG:HD3	1:E:3236:VAL:HG21	1.79	0.64
1:A:3151:ARG:HD3	1:A:3236:VAL:HG21	1.79	0.64
1:F:4617:THR:OG1	1:F:4618:GLU:OE1	2.16	0.64
1:C:555:LEU:HD21	1:C:578:VAL:HG11	1.79	0.63
1:C:946:LEU:HD11	1:C:999:LEU:HB2	1.79	0.63
1:F:891:GLU:HA	1:F:894:VAL:HG22	1.79	0.63
1:F:2938:TYR:HB3	1:F:2955:TYR:HB3	1.79	0.63
1:C:2265:VAL:HG12	1:C:2326:ARG:HH21	1.63	0.63
1:C:2778:LEU:HA	1:C:2781:MET:HE3	1.81	0.63
2:D:34:MET:HE1	2:D:78:VAL:HG11	1.80	0.63
1:F:3151:ARG:HD3	1:F:3236:VAL:HG21	1.79	0.63
1:A:671:LYS:HB3	1:A:761:LEU:HB3	1.79	0.63
1:A:2938:TYR:HB3	1:A:2955:TYR:HB3	1.79	0.63
1:E:671:LYS:HB3	1:E:761:LEU:HB3	1.79	0.63
1:A:1913:CYS:SG	1:A:2090:GLN:NE2	2.61	0.63
1:F:1845:GLN:NE2	1:F:1852:PHE:O	2.32	0.63
1:A:891:GLU:HA	1:A:894:VAL:HG22	1.79	0.63
1:A:2265:VAL:HG12	1:A:2326:ARG:HH21	1.63	0.63
1:A:2355:ASP:HB3	1:A:2358:ARG:HB2	1.79	0.63
1:C:3217:ILE:HA	1:C:3220:LEU:HG	1.81	0.63
1:C:4617:THR:OG1	1:C:4618:GLU:OE1	2.16	0.63
1:E:4617:THR:OG1	1:E:4618:GLU:OE1	2.16	0.63
1:F:3129:CYS:HB3	1:F:3161:PHE:HE1	1.64	0.63
1:E:891:GLU:HA	1:E:894:VAL:HG22	1.79	0.63
1:F:594:ILE:HD12	1:F:631:LEU:HD13	1.81	0.63
1:C:3129:CYS:HB3	1:C:3161:PHE:HE1	1.64	0.63
1:A:555:LEU:HD21	1:A:578:VAL:HG11	1.79	0.62
1:A:3129:CYS:HB3	1:A:3161:PHE:HE1	1.64	0.62
1:A:4051:MET:HA	1:A:4054:HIS:HB2	1.81	0.62
1:C:1845:GLN:NE2	1:C:1852:PHE:O	2.32	0.62
1:E:1845:GLN:NE2	1:E:1852:PHE:O	2.32	0.62
1:E:4051:MET:HA	1:E:4054:HIS:HB2	1.81	0.62
1:F:1913:CYS:SG	1:F:2090:GLN:NE2	2.61	0.62
1:F:3217:ILE:HA	1:F:3220:LEU:HG	1.81	0.62
1:C:891:GLU:HA	1:C:894:VAL:HG22	1.79	0.62
1:C:2587:LEU:O	1:C:2591:LEU:HG	2.00	0.62
1:E:3129:CYS:HB3	1:E:3161:PHE:HE1	1.64	0.62
1:F:2713:PRO:HD2	1:F:2716:LEU:HD12	1.81	0.62
1:A:1935:LEU:HD11	1:A:1975:LEU:HD22	1.82	0.62
1:C:671:LYS:HB3	1:C:761:LEU:HB3	1.79	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2713:PRO:HD2	1:A:2716:LEU:HD12	1.81	0.62
1:A:3217:ILE:HA	1:A:3220:LEU:HG	1.81	0.62
1:E:2587:LEU:O	1:E:2591:LEU:HG	2.00	0.62
1:A:594:ILE:HD12	1:A:631:LEU:HD13	1.81	0.62
1:C:1935:LEU:HD11	1:C:1975:LEU:HD22	1.82	0.62
1:C:4051:MET:HA	1:C:4054:HIS:HB2	1.81	0.62
1:F:2981:PHE:HB3	1:F:3000:LYS:HE2	1.82	0.62
1:A:2585:GLN:OE1	1:A:2585:GLN:N	2.33	0.62
1:C:594:ILE:HD12	1:C:631:LEU:HD13	1.81	0.62
1:E:1935:LEU:HD11	1:E:1975:LEU:HD22	1.82	0.62
1:F:1789:LYS:HE3	1:F:1834:ILE:HG22	1.82	0.62
1:F:1935:LEU:HD11	1:F:1975:LEU:HD22	1.82	0.62
1:A:1953:SER:H	1:A:1956:LEU:HB2	1.65	0.62
1:A:4622:GLU:HA	1:A:4628:GLN:HE21	1.65	0.62
1:C:671:LYS:HG3	1:C:761:LEU:HD22	1.81	0.62
1:C:1953:SER:H	1:C:1956:LEU:HB2	1.65	0.62
1:C:2981:PHE:HB3	1:C:3000:LYS:HE2	1.82	0.62
1:E:671:LYS:HG3	1:E:761:LEU:HD22	1.81	0.62
1:E:3331:MET:O	1:E:3335:GLU:HG2	2.00	0.62
1:E:4942:MET:HE1	1:E:4949:GLU:HG3	1.81	0.62
1:A:1845:GLN:NE2	1:A:1852:PHE:O	2.32	0.62
1:A:4617:THR:OG1	1:A:4618:GLU:OE1	2.16	0.62
1:C:2585:GLN:N	1:C:2585:GLN:OE1	2.33	0.62
1:E:2974:PHE:HB3	1:E:3038:THR:HG21	1.82	0.62
1:F:1953:SER:H	1:F:1956:LEU:HB2	1.65	0.62
1:F:2585:GLN:N	1:F:2585:GLN:OE1	2.33	0.62
1:F:2587:LEU:O	1:F:2591:LEU:HG	2.00	0.62
1:C:2086:LEU:HD12	1:C:2089:ARG:HD3	1.82	0.61
1:E:2585:GLN:OE1	1:E:2585:GLN:N	2.33	0.61
1:E:2973:TYR:O	1:E:2977:HIS:ND1	2.33	0.61
1:F:3900:GLN:OE1	1:F:3903:ARG:NH1	2.33	0.61
1:A:2412:LYS:HG3	1:A:2415:ALA:H	1.65	0.61
1:A:2974:PHE:HB3	1:A:3038:THR:HG21	1.82	0.61
1:A:3331:MET:O	1:A:3335:GLU:HG2	2.00	0.61
1:C:176:ARG:HD3	1:C:179:ASP:HB3	1.82	0.61
1:C:2973:TYR:O	1:C:2977:HIS:ND1	2.33	0.61
1:E:165:ALA:HB2	1:E:182:ILE:HG12	1.82	0.61
1:E:594:ILE:HD12	1:E:631:LEU:HD13	1.81	0.61
1:E:747:HIS:ND1	1:E:748:LEU:O	2.31	0.61
1:E:2086:LEU:HD12	1:E:2089:ARG:HD3	1.81	0.61
1:F:2973:TYR:O	1:F:2977:HIS:ND1	2.33	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:4051:MET:HA	1:F:4054:HIS:HB2	1.81	0.61
1:F:4132:LEU:HD11	1:F:4148:TYR:HB3	1.83	0.61
1:A:2587:LEU:O	1:A:2591:LEU:HG	2.00	0.61
1:A:2778:LEU:HA	1:A:2781:MET:HE3	1.83	0.61
1:A:3382:LYS:HA	1:A:3385:LYS:HD2	1.82	0.61
1:E:1953:SER:H	1:E:1956:LEU:HB2	1.65	0.61
1:E:2412:LYS:HG3	1:E:2415:ALA:H	1.65	0.61
1:F:165:ALA:HB2	1:F:182:ILE:HG12	1.83	0.61
1:F:3764:ILE:O	1:F:3769:ASN:ND2	2.31	0.61
1:C:2713:PRO:HD2	1:C:2716:LEU:HD12	1.81	0.61
1:C:3331:MET:O	1:C:3335:GLU:HG2	2.00	0.61
1:C:3900:GLN:OE1	1:C:3903:ARG:NH1	2.33	0.61
1:E:953:ALA:H	1:E:1062:TYR:HD1	1.49	0.61
1:E:3382:LYS:HA	1:E:3385:LYS:HD2	1.83	0.61
1:F:671:LYS:HG3	1:F:761:LEU:HD22	1.81	0.61
1:A:2086:LEU:HD12	1:A:2089:ARG:HD3	1.82	0.61
1:A:2669:SER:O	1:A:2972:GLN:NE2	2.34	0.61
1:A:3440:LYS:HA	1:A:3443:ILE:HD11	1.82	0.61
1:A:4132:LEU:HD11	1:A:4148:TYR:HB3	1.82	0.61
1:C:2716:LEU:HD13	1:C:2778:LEU:HB3	1.83	0.61
1:C:3382:LYS:HA	1:C:3385:LYS:HD2	1.83	0.61
1:E:2981:PHE:HB3	1:E:3000:LYS:HE2	1.82	0.61
1:E:3217:ILE:HA	1:E:3220:LEU:HG	1.81	0.61
1:E:4132:LEU:HD11	1:E:4148:TYR:HB3	1.82	0.61
1:F:953:ALA:H	1:F:1062:TYR:HD1	1.49	0.61
1:F:2716:LEU:HD13	1:F:2778:LEU:HB3	1.83	0.61
1:F:3331:MET:O	1:F:3335:GLU:HG2	2.00	0.61
1:F:3382:LYS:HA	1:F:3385:LYS:HD2	1.83	0.61
1:A:176:ARG:HD3	1:A:179:ASP:HB3	1.82	0.61
1:A:671:LYS:HG3	1:A:761:LEU:HD22	1.81	0.61
1:A:2973:TYR:O	1:A:2977:HIS:ND1	2.33	0.61
1:C:4132:LEU:HD11	1:C:4148:TYR:HB3	1.82	0.61
1:E:3440:LYS:HA	1:E:3443:ILE:HD11	1.82	0.61
1:E:3900:GLN:OE1	1:E:3903:ARG:NH1	2.33	0.61
1:F:2922:TYR:O	1:F:2926:GLN:HB2	2.01	0.61
2:I:68:THR:HB	2:I:81:GLN:HB2	1.83	0.61
1:A:3233:MET:HA	1:A:3237:VAL:HB	1.83	0.61
1:A:3900:GLN:OE1	1:A:3903:ARG:NH1	2.33	0.61
1:C:953:ALA:H	1:C:1062:TYR:HD1	1.49	0.61
1:C:4079:TYR:O	1:C:4083:VAL:HG12	2.01	0.61
1:E:476:GLN:NE2	1:E:3677:GLU:OE1	2.34	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:1789:LYS:HE3	1:E:1834:ILE:HG22	1.82	0.61
1:E:2922:TYR:O	1:E:2926:GLN:HB2	2.01	0.61
1:E:3233:MET:HA	1:E:3237:VAL:HB	1.83	0.61
1:E:4079:TYR:O	1:E:4083:VAL:HG12	2.01	0.61
1:F:4195:THR:O	1:F:4199:MET:HG3	2.01	0.61
1:A:2343:LEU:HD23	1:A:2430:ASP:HA	1.82	0.61
1:A:2716:LEU:HD13	1:A:2778:LEU:HB3	1.83	0.61
1:C:1086:ARG:HH21	1:C:1251:LEU:HD13	1.66	0.61
1:C:2343:LEU:HD23	1:C:2430:ASP:HA	1.82	0.61
1:E:2713:PRO:HD2	1:E:2716:LEU:HD12	1.81	0.61
1:E:3384:LEU:HD21	1:E:3474:PRO:HB2	1.83	0.61
1:F:2086:LEU:HD12	1:F:2089:ARG:HD3	1.82	0.61
1:F:4079:TYR:O	1:F:4083:VAL:HG12	2.01	0.61
1:A:476:GLN:NE2	1:A:3677:GLU:OE1	2.34	0.61
1:A:747:HIS:ND1	1:A:748:LEU:O	2.31	0.61
1:E:1961:THR:HA	1:E:1965:ARG:HB2	1.83	0.61
1:E:2343:LEU:HD23	1:E:2430:ASP:HA	1.82	0.61
1:F:2974:PHE:HB3	1:F:3038:THR:HG21	1.82	0.61
2:B:68:THR:HB	2:B:81:GLN:HB2	1.83	0.60
1:C:777:GLY:HA3	1:C:1469:LEU:HD12	1.83	0.60
1:C:2669:SER:O	1:C:2972:GLN:NE2	2.34	0.60
1:C:4195:THR:O	1:C:4199:MET:HG3	2.01	0.60
1:E:2716:LEU:HD13	1:E:2778:LEU:HB3	1.83	0.60
1:E:4622:GLU:HA	1:E:4628:GLN:HE21	1.65	0.60
1:F:3233:MET:HA	1:F:3237:VAL:HB	1.83	0.60
1:A:165:ALA:HB2	1:A:182:ILE:HG12	1.83	0.60
1:A:953:ALA:H	1:A:1062:TYR:HD1	1.49	0.60
1:A:4195:THR:O	1:A:4199:MET:HG3	2.01	0.60
1:C:2661:PHE:HD2	1:C:2965:VAL:HG21	1.66	0.60
1:E:2519:LEU:HD21	1:E:2554:LEU:HD21	1.83	0.60
1:F:2669:SER:O	1:F:2972:GLN:NE2	2.34	0.60
1:A:2981:PHE:HB3	1:A:3000:LYS:HE2	1.82	0.60
1:C:476:GLN:NE2	1:C:3677:GLU:OE1	2.34	0.60
1:C:2922:TYR:O	1:C:2926:GLN:HB2	2.01	0.60
1:C:3233:MET:HA	1:C:3237:VAL:HB	1.83	0.60
1:E:1827:TYR:CZ	1:E:1831:ILE:HD11	2.37	0.60
1:F:176:ARG:HD3	1:F:179:ASP:HB3	1.82	0.60
1:F:332:ARG:NH1	1:F:364:GLN:OE1	2.34	0.60
1:F:887:GLU:HA	1:F:890:HIS:CD2	2.37	0.60
1:F:2237:THR:HG22	1:F:2239:LEU:H	1.67	0.60
1:F:4622:GLU:HA	1:F:4628:GLN:HE21	1.65	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:68:THR:HB	2:G:81:GLN:HB2	1.83	0.60
1:A:1086:ARG:HH21	1:A:1251:LEU:HD13	1.66	0.60
1:A:1144:ARG:HH11	1:A:1191:ALA:HA	1.66	0.60
1:A:1789:LYS:HE3	1:A:1834:ILE:HG22	1.82	0.60
1:A:2519:LEU:HD21	1:A:2554:LEU:HD21	1.83	0.60
1:C:165:ALA:HB2	1:C:182:ILE:HG12	1.82	0.60
1:C:2412:LYS:HG3	1:C:2415:ALA:H	1.65	0.60
1:C:2974:PHE:HB3	1:C:3038:THR:HG21	1.82	0.60
1:E:1086:ARG:HH21	1:E:1251:LEU:HD13	1.66	0.60
1:E:3089:VAL:O	1:E:3093:ILE:HG12	2.01	0.60
1:F:1144:ARG:HH11	1:F:1191:ALA:HA	1.66	0.60
1:C:1827:TYR:CZ	1:C:1831:ILE:HD11	2.37	0.60
1:E:2669:SER:O	1:E:2972:GLN:NE2	2.34	0.60
1:F:476:GLN:NE2	1:F:3677:GLU:OE1	2.34	0.60
1:F:2343:LEU:HD23	1:F:2430:ASP:HA	1.82	0.60
1:A:4079:TYR:O	1:A:4083:VAL:HG12	2.01	0.60
1:C:1789:LYS:HE3	1:C:1834:ILE:HG22	1.82	0.60
1:C:2435:ILE:HD12	1:C:2464:LYS:HG2	1.84	0.60
1:C:4622:GLU:HA	1:C:4628:GLN:HE21	1.65	0.60
1:E:2661:PHE:HD2	1:E:2965:VAL:HG21	1.66	0.60
1:F:3089:VAL:O	1:F:3093:ILE:HG12	2.01	0.60
1:A:1827:TYR:CZ	1:A:1831:ILE:HD11	2.37	0.60
1:C:3089:VAL:O	1:C:3093:ILE:HG12	2.01	0.60
1:E:332:ARG:NH1	1:E:364:GLN:OE1	2.34	0.60
1:E:887:GLU:HA	1:E:890:HIS:CD2	2.37	0.60
1:E:2237:THR:HG22	1:E:2239:LEU:H	1.67	0.60
1:E:2928:LEU:HD13	1:E:2970:ILE:HG22	1.84	0.60
1:F:3440:LYS:HA	1:F:3443:ILE:HD11	1.82	0.60
1:A:1174:MET:HB3	1:A:1190:LEU:HA	1.84	0.60
1:A:3089:VAL:O	1:A:3093:ILE:HG12	2.01	0.60
1:C:887:GLU:HA	1:C:890:HIS:CD2	2.37	0.60
1:C:2237:THR:HG22	1:C:2239:LEU:H	1.67	0.60
1:E:1174:MET:HB3	1:E:1190:LEU:HA	1.84	0.60
1:A:707:PRO:HG2	1:A:838:ARG:HB2	1.84	0.60
1:A:777:GLY:HA3	1:A:1469:LEU:HD12	1.83	0.60
2:D:68:THR:HB	2:D:81:GLN:HB2	1.83	0.60
1:E:1144:ARG:HH11	1:E:1191:ALA:HA	1.66	0.60
1:E:4761:HIS:NE2	1:E:4871:GLU:OE2	2.35	0.60
1:F:2412:LYS:HG3	1:F:2415:ALA:H	1.65	0.60
1:A:2435:ILE:HD12	1:A:2464:LYS:HG2	1.84	0.60
1:C:3440:LYS:HA	1:C:3443:ILE:HD11	1.82	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:4761:HIS:NE2	1:C:4871:GLU:OE2	2.35	0.60
1:E:176:ARG:HD3	1:E:179:ASP:HB3	1.82	0.60
1:F:332:ARG:NH2	1:F:338:LEU:O	2.35	0.60
1:F:1086:ARG:HH21	1:F:1251:LEU:HD13	1.66	0.60
1:F:4761:HIS:NE2	1:F:4871:GLU:OE2	2.35	0.60
1:A:113:LEU:HD12	1:A:175:VAL:HG21	1.84	0.59
1:A:332:ARG:NH1	1:A:364:GLN:OE1	2.34	0.59
1:E:332:ARG:NH2	1:E:338:LEU:O	2.35	0.59
1:F:2661:PHE:HD2	1:F:2965:VAL:HG21	1.66	0.59
1:A:1929:ASP:OD1	1:A:3612:ARG:NH2	2.35	0.59
1:A:1961:THR:HA	1:A:1965:ARG:HB2	1.83	0.59
1:A:4761:HIS:NE2	1:A:4871:GLU:OE2	2.35	0.59
1:C:332:ARG:NH1	1:C:364:GLN:OE1	2.34	0.59
1:C:707:PRO:HG2	1:C:838:ARG:HB2	1.84	0.59
1:E:1929:ASP:OD1	1:E:3612:ARG:NH2	2.35	0.59
1:F:1827:TYR:CZ	1:F:1831:ILE:HD11	2.37	0.59
1:A:2928:LEU:HD13	1:A:2970:ILE:HG22	1.84	0.59
1:C:2519:LEU:HD21	1:C:2554:LEU:HD21	1.83	0.59
1:E:707:PRO:HG2	1:E:838:ARG:HB2	1.84	0.59
1:F:707:PRO:HG2	1:F:838:ARG:HB2	1.84	0.59
1:F:777:GLY:HA3	1:F:1469:LEU:HD12	1.83	0.59
1:F:1009:ARG:HH21	1:F:1013:ARG:HH12	1.50	0.59
1:A:887:GLU:HA	1:A:890:HIS:CD2	2.37	0.59
1:C:2922:TYR:HB2	1:C:3002:MET:HE1	1.83	0.59
1:F:3384:LEU:HD21	1:F:3474:PRO:HB2	1.83	0.59
1:C:1009:ARG:HH21	1:C:1013:ARG:HH12	1.50	0.59
1:C:1961:THR:HA	1:C:1965:ARG:HB2	1.83	0.59
1:E:777:GLY:HA3	1:E:1469:LEU:HD12	1.83	0.59
1:F:1929:ASP:OD1	1:F:3612:ARG:NH2	2.35	0.59
1:F:1961:THR:HA	1:F:1965:ARG:HB2	1.83	0.59
1:A:3384:LEU:HD21	1:A:3474:PRO:HB2	1.83	0.59
1:C:262:TYR:HB2	1:C:389:ARG:HB2	1.85	0.59
1:F:2519:LEU:HD21	1:F:2554:LEU:HD21	1.83	0.59
1:F:3530:TYR:HA	1:F:3533:LEU:HD12	1.85	0.59
1:A:2463:HIS:O	1:A:2467:MET:HG2	2.03	0.59
1:A:2669:SER:HB3	1:A:2972:GLN:HG3	1.85	0.59
1:C:2145:LEU:O	1:C:2149:MET:HG2	2.03	0.59
1:C:2463:HIS:O	1:C:2467:MET:HG2	2.03	0.59
1:C:3384:LEU:HD21	1:C:3474:PRO:HB2	1.83	0.59
1:E:173:GLU:HA	1:F:3938:ARG:HH12	1.68	0.59
1:E:3530:TYR:HA	1:E:3533:LEU:HD12	1.85	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:4195:THR:O	1:E:4199:MET:HG3	2.01	0.59
1:F:113:LEU:HD12	1:F:175:VAL:HG21	1.84	0.59
1:A:1009:ARG:HH21	1:A:1013:ARG:HH12	1.50	0.59
1:A:1285:VAL:O	1:A:1287:GLN:NE2	2.36	0.59
1:C:1038:LEU:HD23	1:C:1043:LYS:HG2	1.85	0.59
1:C:1144:ARG:HH11	1:C:1191:ALA:HA	1.66	0.59
1:C:2928:LEU:HD13	1:C:2970:ILE:HG22	1.84	0.59
1:E:2435:ILE:HD12	1:E:2464:LYS:HG2	1.84	0.59
1:E:3487:LEU:HD11	1:E:3512:ILE:HA	1.85	0.59
1:F:747:HIS:ND1	1:F:748:LEU:O	2.31	0.59
1:F:3276:LEU:O	1:F:3280:LEU:HG	2.03	0.59
1:A:2661:PHE:HD2	1:A:2965:VAL:HG21	1.66	0.59
1:A:3530:TYR:HA	1:A:3533:LEU:HD12	1.85	0.59
1:A:4956:CYS:SG	1:A:4957:PHE:N	2.76	0.59
1:C:3487:LEU:HD11	1:C:3512:ILE:HA	1.85	0.59
1:E:1285:VAL:O	1:E:1287:GLN:NE2	2.36	0.59
1:F:262:TYR:HB2	1:F:389:ARG:HB2	1.85	0.59
1:A:332:ARG:NH2	1:A:338:LEU:O	2.35	0.59
1:A:1038:LEU:HD23	1:A:1043:LYS:HG2	1.85	0.59
1:A:2145:LEU:O	1:A:2149:MET:HG2	2.03	0.59
1:C:113:LEU:HD12	1:C:175:VAL:HG21	1.84	0.59
1:C:1174:MET:HB3	1:C:1190:LEU:HA	1.84	0.59
1:C:1704:TYR:O	1:C:1708:ILE:HG12	2.03	0.59
1:C:3530:TYR:HA	1:C:3533:LEU:HD12	1.85	0.59
1:C:4956:CYS:SG	1:C:4957:PHE:N	2.76	0.59
1:F:1100:ARG:HB3	1:F:1236:TYR:HA	1.84	0.59
1:F:1704:TYR:O	1:F:1708:ILE:HG12	2.03	0.59
1:A:1704:TYR:O	1:A:1708:ILE:HG12	2.03	0.58
1:C:1929:ASP:OD1	1:C:3612:ARG:NH2	2.35	0.58
1:E:2480:GLN:NE2	1:E:2537:THR:OG1	2.36	0.58
1:E:2669:SER:HB3	1:E:2972:GLN:HG3	1.85	0.58
1:F:194:LEU:HD11	1:F:201:TRP:HB3	1.85	0.58
1:F:1174:MET:HB3	1:F:1190:LEU:HA	1.84	0.58
1:F:2086:LEU:O	1:F:2090:GLN:HG2	2.03	0.58
1:C:194:LEU:HD11	1:C:201:TRP:HB3	1.85	0.58
1:C:3053:LYS:HG3	1:C:3057:ARG:HH12	1.68	0.58
1:E:1038:LEU:HD23	1:E:1043:LYS:HG2	1.85	0.58
1:F:4956:CYS:SG	1:F:4957:PHE:N	2.76	0.58
1:A:3938:ARG:HH12	1:C:173:GLU:HA	1.68	0.58
1:C:332:ARG:NH2	1:C:338:LEU:O	2.35	0.58
1:C:3276:LEU:O	1:C:3280:LEU:HG	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:3053:LYS:HG3	1:E:3057:ARG:HH12	1.68	0.58
1:F:1038:LEU:HD23	1:F:1043:LYS:HG2	1.85	0.58
1:F:3487:LEU:HD11	1:F:3512:ILE:HA	1.85	0.58
1:A:262:TYR:HB2	1:A:389:ARG:HB2	1.85	0.58
1:A:3053:LYS:HG3	1:A:3057:ARG:HH12	1.68	0.58
1:A:3487:LEU:HD11	1:A:3512:ILE:HA	1.85	0.58
1:E:113:LEU:HD12	1:E:175:VAL:HG21	1.84	0.58
1:E:1100:ARG:HB3	1:E:1236:TYR:HA	1.84	0.58
1:E:3276:LEU:O	1:E:3280:LEU:HG	2.03	0.58
1:A:2922:TYR:O	1:A:2926:GLN:HB2	2.01	0.58
1:C:2086:LEU:O	1:C:2090:GLN:HG2	2.03	0.58
1:E:2145:LEU:O	1:E:2149:MET:HG2	2.03	0.58
1:E:3508:ILE:HG22	1:E:3547:VAL:HG22	1.85	0.58
1:A:194:LEU:HD11	1:A:201:TRP:HB3	1.85	0.58
1:C:1285:VAL:O	1:C:1287:GLN:NE2	2.36	0.58
1:C:3508:ILE:HG22	1:C:3547:VAL:HG22	1.85	0.58
1:E:156:GLU:HB2	1:E:187:SER:HB3	1.84	0.58
1:E:194:LEU:HD11	1:E:201:TRP:HB3	1.85	0.58
1:F:2145:LEU:O	1:F:2149:MET:HG2	2.03	0.58
1:A:156:GLU:HB2	1:A:187:SER:HB3	1.84	0.58
1:A:2086:LEU:O	1:A:2090:GLN:HG2	2.03	0.58
1:A:2237:THR:HG22	1:A:2239:LEU:H	1.67	0.58
1:A:3508:ILE:HG22	1:A:3547:VAL:HG22	1.85	0.58
1:C:1007:TRP:HH2	2:D:113:GLU:HB2	1.69	0.58
1:F:156:GLU:HB2	1:F:187:SER:HB3	1.84	0.58
1:F:1733:GLU:HB2	1:F:1754:LEU:HD21	1.85	0.58
1:F:2435:ILE:HD12	1:F:2464:LYS:HG2	1.84	0.58
2:I:4:LEU:HB2	2:I:118:GLY:HA3	1.86	0.58
1:A:3276:LEU:O	1:A:3280:LEU:HG	2.03	0.58
1:A:4843:ILE:HD13	1:E:4813:MET:SD	2.44	0.58
1:C:1100:ARG:HB3	1:C:1236:TYR:HA	1.85	0.58
1:C:3938:ARG:HH12	1:F:173:GLU:HA	1.69	0.58
1:E:2585:GLN:HA	1:E:2588:LEU:HD12	1.86	0.58
1:E:4956:CYS:SG	1:E:4957:PHE:N	2.76	0.58
1:F:2463:HIS:O	1:F:2467:MET:HG2	2.03	0.58
2:G:4:LEU:HB2	2:G:118:GLY:HA3	1.86	0.58
1:A:1733:GLU:HB2	1:A:1754:LEU:HD21	1.85	0.58
1:C:2480:GLN:HE22	1:C:2534:PHE:HA	1.69	0.58
1:C:2669:SER:HB3	1:C:2972:GLN:HG3	1.85	0.58
1:E:2086:LEU:O	1:E:2090:GLN:HG2	2.03	0.58
1:A:1007:TRP:HH2	2:B:113:GLU:HB2	1.69	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:4:LEU:HB2	2:B:118:GLY:HA3	1.86	0.58
1:C:156:GLU:HB2	1:C:187:SER:HB3	1.84	0.58
1:C:2330:PHE:HE2	1:C:2425:LEU:HD21	1.69	0.58
1:C:2585:GLN:HA	1:C:2588:LEU:HD12	1.86	0.58
1:C:3122:LEU:HA	1:C:3126:GLN:HE21	1.69	0.58
1:E:2330:PHE:HE2	1:E:2425:LEU:HD21	1.69	0.58
1:F:2669:SER:HB3	1:F:2972:GLN:HG3	1.85	0.58
1:F:3053:LYS:HG3	1:F:3057:ARG:HH12	1.68	0.58
1:F:3389:PRO:HG3	1:F:3537:THR:HG21	1.86	0.58
1:A:1100:ARG:HB3	1:A:1236:TYR:HA	1.85	0.57
1:A:2480:GLN:NE2	1:A:2537:THR:OG1	2.37	0.57
1:A:3764:ILE:O	1:A:3769:ASN:ND2	2.31	0.57
1:C:552:SER:HA	1:C:555:LEU:HG	1.86	0.57
1:C:3831:ASP:HB2	1:C:3834:PHE:HB3	1.86	0.57
1:E:1009:ARG:HH21	1:E:1013:ARG:HH12	1.50	0.57
1:E:2480:GLN:HE22	1:E:2534:PHE:HA	1.69	0.57
1:F:1310:CYS:SG	1:F:1538:THR:N	2.76	0.57
1:F:2480:GLN:NE2	1:F:2537:THR:OG1	2.36	0.57
1:F:3122:LEU:HA	1:F:3126:GLN:HE21	1.69	0.57
1:A:3389:PRO:HG3	1:A:3537:THR:HG21	1.86	0.57
1:C:1733:GLU:HB2	1:C:1754:LEU:HD21	1.86	0.57
1:C:2480:GLN:NE2	1:C:2537:THR:OG1	2.36	0.57
1:E:262:TYR:HB2	1:E:389:ARG:HB2	1.85	0.57
1:F:2928:LEU:HD13	1:F:2970:ILE:HG22	1.84	0.57
1:A:2480:GLN:HE22	1:A:2534:PHE:HA	1.69	0.57
1:A:3292:GLY:HA3	1:A:3295:MET:CE	2.34	0.57
1:C:3339:LEU:HD22	1:C:3354:ILE:HD12	1.87	0.57
1:E:2520:CYS:SG	1:E:2564:GLN:HG2	2.45	0.57
1:F:3339:LEU:HD22	1:F:3354:ILE:HD12	1.87	0.57
1:F:3831:ASP:HB2	1:F:3834:PHE:HB3	1.86	0.57
1:A:2520:CYS:SG	1:A:2564:GLN:HG2	2.45	0.57
1:C:3292:GLY:HA3	1:C:3295:MET:CE	2.34	0.57
1:C:4813:MET:SD	1:F:4843:ILE:HD13	2.44	0.57
1:E:1704:TYR:O	1:E:1708:ILE:HG12	2.03	0.57
1:E:1733:GLU:HB2	1:E:1754:LEU:HD21	1.85	0.57
1:E:3001:GLU:HG2	1:E:3048:GLY:HA2	1.86	0.57
1:E:4843:ILE:HD13	1:F:4813:MET:SD	2.45	0.57
1:F:448:PRO:HB2	1:F:451:SER:HB3	1.87	0.57
1:F:2503:THR:OG1	1:F:2506:LEU:HB2	2.04	0.57
1:F:3272:MET:HG3	1:F:3309:VAL:HG12	1.87	0.57
1:C:515:ALA:HB2	1:C:523:GLY:HA3	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:3001:GLU:HG2	1:C:3048:GLY:HA2	1.86	0.57
1:E:903:GLN:O	1:E:915:HIS:N	2.35	0.57
1:E:3122:LEU:HA	1:E:3126:GLN:HE21	1.69	0.57
1:F:2480:GLN:HE22	1:F:2534:PHE:HA	1.69	0.57
1:F:3393:GLU:HG3	1:F:3397:MET:HE2	1.86	0.57
1:F:3508:ILE:HG22	1:F:3547:VAL:HG22	1.85	0.57
1:A:173:GLU:HA	1:E:3938:ARG:HH12	1.69	0.57
1:A:515:ALA:HB2	1:A:523:GLY:HA3	1.87	0.57
1:A:1901:VAL:O	1:A:1905:MET:HG3	2.05	0.57
1:A:2585:GLN:HA	1:A:2588:LEU:HD12	1.86	0.57
1:A:3272:MET:HE2	1:A:3308:LYS:HB2	1.85	0.57
1:C:448:PRO:HB2	1:C:451:SER:HB3	1.87	0.57
1:C:3389:PRO:HG3	1:C:3537:THR:HG21	1.85	0.57
1:E:1007:TRP:HH2	2:I:113:GLU:HB2	1.69	0.57
1:E:3831:ASP:HB2	1:E:3834:PHE:HB3	1.86	0.57
1:F:2330:PHE:HE2	1:F:2425:LEU:HD21	1.69	0.57
1:A:2350:ILE:O	1:A:2354:GLU:HG2	2.05	0.57
1:A:3122:LEU:HA	1:A:3126:GLN:HE21	1.69	0.57
1:E:2463:HIS:O	1:E:2467:MET:HG2	2.03	0.57
1:F:2350:ILE:O	1:F:2354:GLU:HG2	2.05	0.57
1:A:3001:GLU:HG2	1:A:3048:GLY:HA2	1.86	0.57
1:C:2350:ILE:O	1:C:2354:GLU:HG2	2.05	0.57
1:C:2612:HIS:CE1	1:C:2620:TYR:HH	2.23	0.57
1:E:3292:GLY:HA3	1:E:3295:MET:CE	2.34	0.57
1:E:3328:LYS:O	1:E:3332:VAL:HG23	2.05	0.57
1:E:3389:PRO:HG3	1:E:3537:THR:HG21	1.86	0.57
1:F:908:ARG:HE	2:G:104:TYR:HB3	1.70	0.57
1:F:1285:VAL:O	1:F:1287:GLN:NE2	2.36	0.57
1:F:2585:GLN:HA	1:F:2588:LEU:HD12	1.86	0.57
1:F:3328:LYS:O	1:F:3332:VAL:HG23	2.05	0.57
1:C:2520:CYS:SG	1:C:2564:GLN:HG2	2.45	0.57
1:C:2592:VAL:HA	1:C:2643:LEU:HD13	1.87	0.57
1:C:3272:MET:HG3	1:C:3309:VAL:HG12	1.87	0.57
2:D:4:LEU:HB2	2:D:118:GLY:HA3	1.86	0.57
1:F:2520:CYS:SG	1:F:2564:GLN:HG2	2.45	0.57
1:A:538:ALA:O	1:A:542:ARG:HB3	2.05	0.57
1:A:552:SER:HA	1:A:555:LEU:HG	1.86	0.57
1:A:3339:LEU:HD22	1:A:3354:ILE:HD12	1.87	0.57
1:C:1098:ALA:HA	1:C:1168:MET:HB3	1.87	0.57
1:C:1913:CYS:SG	1:C:2090:GLN:NE2	2.61	0.57
1:C:2503:THR:OG1	1:C:2506:LEU:HB2	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:2350:ILE:O	1:E:2354:GLU:HG2	2.05	0.57
1:F:3001:GLU:HG2	1:F:3048:GLY:HA2	1.86	0.57
1:A:448:PRO:HB2	1:A:451:SER:HB3	1.87	0.56
1:A:2385:ASN:HD21	1:A:2457:ALA:HA	1.70	0.56
1:A:2503:THR:OG1	1:A:2506:LEU:HB2	2.05	0.56
1:A:3831:ASP:HB2	1:A:3834:PHE:HB3	1.86	0.56
1:C:538:ALA:O	1:C:542:ARG:HB3	2.05	0.56
1:C:3272:MET:HE2	1:C:3308:LYS:HB2	1.85	0.56
1:E:538:ALA:O	1:E:542:ARG:HB3	2.05	0.56
1:E:1262:PRO:HG2	1:E:1265:HIS:HB2	1.87	0.56
1:E:1310:CYS:SG	1:E:1538:THR:N	2.76	0.56
1:E:2592:VAL:HA	1:E:2643:LEU:HD13	1.87	0.56
1:E:3172:THR:HB	1:E:3201:GLU:HG3	1.87	0.56
1:F:538:ALA:O	1:F:542:ARG:HB3	2.05	0.56
1:F:552:SER:HA	1:F:555:LEU:HG	1.86	0.56
1:F:2385:ASN:HD21	1:F:2457:ALA:HA	1.70	0.56
1:C:1686:LEU:HD11	1:C:1710:ILE:HD11	1.87	0.56
1:E:1246:ASP:OD1	1:E:1694:TYR:OH	2.23	0.56
1:E:3393:GLU:HG3	1:E:3397:MET:HE2	1.86	0.56
1:F:1007:TRP:HH2	2:G:113:GLU:HB2	1.68	0.56
1:F:1901:VAL:O	1:F:1905:MET:HG3	2.05	0.56
1:F:3292:GLY:HA3	1:F:3295:MET:CE	2.34	0.56
1:F:3447:GLU:HA	1:F:3450:LYS:HD2	1.87	0.56
1:A:1262:PRO:HG2	1:A:1265:HIS:HB2	1.87	0.56
1:A:1686:LEU:HD11	1:A:1710:ILE:HD11	1.87	0.56
1:A:2330:PHE:HE2	1:A:2425:LEU:HD21	1.69	0.56
1:A:3272:MET:HG3	1:A:3309:VAL:HG12	1.87	0.56
1:C:137:ARG:HA	1:C:137:ARG:HE	1.71	0.56
1:C:2166:MET:N	1:C:2166:MET:SD	2.78	0.56
1:E:552:SER:HA	1:E:555:LEU:HG	1.86	0.56
1:E:2385:ASN:HD21	1:E:2457:ALA:HA	1.70	0.56
1:E:2778:LEU:HA	1:E:2781:MET:HE3	1.86	0.56
1:E:3272:MET:HG3	1:E:3309:VAL:HG12	1.87	0.56
1:F:137:ARG:HA	1:F:137:ARG:HE	1.71	0.56
1:F:559:ILE:HD13	1:F:593:HIS:HB3	1.87	0.56
1:F:1104:GLU:HB2	1:F:1216:ASN:HB3	1.88	0.56
1:F:1120:PRO:HG3	1:F:1202:ILE:HD11	1.88	0.56
1:F:2342:LEU:O	1:F:2346:MET:HG2	2.05	0.56
1:F:4003:VAL:HG11	1:F:4113:ARG:HD2	1.88	0.56
1:F:4494:ALA:HB1	1:F:4592:LEU:HD13	1.88	0.56
1:A:2967:LEU:HD11	1:A:3028:ILE:HA	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:3447:GLU:HA	1:C:3450:LYS:HD2	1.87	0.56
1:E:1120:PRO:HG3	1:E:1202:ILE:HD11	1.87	0.56
1:F:4181:GLU:HA	1:F:4184:LYS:HB2	1.88	0.56
1:A:3647:GLY:O	1:A:3658:LYS:NZ	2.37	0.56
1:C:1901:VAL:O	1:C:1905:MET:HG3	2.05	0.56
1:C:4494:ALA:HB1	1:C:4592:LEU:HD13	1.88	0.56
1:E:1901:VAL:O	1:E:1905:MET:HG3	2.05	0.56
1:E:3272:MET:HE2	1:E:3308:LYS:HB2	1.88	0.56
1:E:3339:LEU:HD22	1:E:3354:ILE:HD12	1.87	0.56
1:F:1098:ALA:HA	1:F:1168:MET:HB3	1.87	0.56
1:A:1310:CYS:SG	1:A:1538:THR:N	2.76	0.56
1:C:2278:MET:N	1:C:2278:MET:SD	2.79	0.56
1:C:3393:GLU:HA	1:C:3396:ARG:HD2	1.88	0.56
1:C:4003:VAL:HG11	1:C:4113:ARG:HD2	1.88	0.56
1:E:448:PRO:HB2	1:E:451:SER:HB3	1.87	0.56
1:E:1811:VAL:HB	1:E:1818:LEU:HD13	1.87	0.56
1:A:3172:THR:HB	1:A:3201:GLU:HG3	1.87	0.56
1:A:3920:THR:O	1:A:3924:GLN:HG2	2.06	0.56
1:C:1104:GLU:HB2	1:C:1216:ASN:HB3	1.88	0.56
1:C:1811:VAL:HB	1:C:1818:LEU:HD13	1.87	0.56
1:C:4628:GLN:OE1	1:C:4631:ARG:NH2	2.39	0.56
1:E:515:ALA:HB2	1:E:523:GLY:HA3	1.87	0.56
1:E:2641:ARG:NH1	1:E:2680:MET:HE3	2.18	0.56
1:E:3393:GLU:HA	1:E:3396:ARG:HD2	1.88	0.56
1:E:3396:ARG:O	1:E:3400:GLU:HG3	2.06	0.56
1:E:4494:ALA:HB1	1:E:4592:LEU:HD13	1.88	0.56
1:A:1727:ILE:HD11	1:A:2164:LEU:HD21	1.87	0.56
1:C:908:ARG:HE	2:D:104:TYR:HB3	1.70	0.56
1:C:1262:PRO:HG2	1:C:1265:HIS:HB2	1.87	0.56
1:C:2342:LEU:O	1:C:2346:MET:HG2	2.05	0.56
1:C:3920:THR:O	1:C:3924:GLN:HG2	2.06	0.56
1:E:137:ARG:HA	1:E:137:ARG:HE	1.71	0.56
1:E:769:ARG:HH22	1:E:816:PRO:HD3	1.71	0.56
1:E:4628:GLN:OE1	1:E:4631:ARG:NH2	2.39	0.56
1:F:1262:PRO:HG2	1:F:1265:HIS:HB2	1.87	0.56
1:A:3328:LYS:O	1:A:3332:VAL:HG23	2.05	0.56
1:A:4628:GLN:OE1	1:A:4631:ARG:NH2	2.39	0.56
1:C:4181:GLU:HA	1:C:4184:LYS:HB2	1.88	0.56
1:E:559:ILE:HD13	1:E:593:HIS:HB3	1.87	0.56
1:E:2967:LEU:HD11	1:E:3028:ILE:HA	1.87	0.56
1:E:3731:HIS:CE1	1:E:3775:LYS:HD2	2.41	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:4181:GLU:HA	1:E:4184:LYS:HB2	1.88	0.56
1:F:676:GLU:HG3	1:F:803:LEU:HB2	1.88	0.56
1:F:1641:ASP:HB3	1:F:1644:GLU:HG3	1.88	0.56
1:A:137:ARG:HA	1:A:137:ARG:HE	1.71	0.56
1:A:559:ILE:HD13	1:A:593:HIS:HB3	1.87	0.56
1:A:2592:VAL:HA	1:A:2643:LEU:HD13	1.87	0.56
1:C:2967:LEU:HD11	1:C:3028:ILE:HA	1.87	0.56
1:C:3172:THR:HB	1:C:3201:GLU:HG3	1.87	0.56
1:C:3764:ILE:O	1:C:3769:ASN:ND2	2.31	0.56
1:E:1686:LEU:HD11	1:E:1710:ILE:HD11	1.87	0.56
1:E:3764:ILE:O	1:E:3769:ASN:ND2	2.31	0.56
1:F:515:ALA:HB2	1:F:523:GLY:HA3	1.87	0.56
1:F:1727:ILE:HD11	1:F:2164:LEU:HD21	1.87	0.56
1:F:3172:THR:HB	1:F:3201:GLU:HG3	1.87	0.56
1:A:908:ARG:HE	2:B:104:TYR:HB3	1.70	0.55
1:A:1098:ALA:HA	1:A:1168:MET:HB3	1.87	0.55
1:A:1104:GLU:HB2	1:A:1216:ASN:HB3	1.88	0.55
1:A:1120:PRO:HG3	1:A:1202:ILE:HD11	1.88	0.55
1:C:1641:ASP:HB3	1:C:1644:GLU:HG3	1.88	0.55
1:C:2385:ASN:HD21	1:C:2457:ALA:HA	1.70	0.55
1:E:4003:VAL:HG11	1:E:4113:ARG:HD2	1.88	0.55
1:A:2342:LEU:O	1:A:2346:MET:HG2	2.05	0.55
1:A:4494:ALA:HB1	1:A:4592:LEU:HD13	1.88	0.55
1:C:2981:PHE:CG	1:C:2996:SER:HB3	2.42	0.55
1:C:3348:SER:O	1:C:3352:LEU:HG	2.06	0.55
1:E:676:GLU:HG3	1:E:803:LEU:HB2	1.88	0.55
1:E:2503:THR:OG1	1:E:2506:LEU:HB2	2.04	0.55
1:F:3348:SER:O	1:F:3352:LEU:HG	2.06	0.55
1:F:3731:HIS:CE1	1:F:3775:LYS:HD2	2.41	0.55
1:A:3393:GLU:HA	1:A:3396:ARG:HD2	1.88	0.55
1:A:3396:ARG:O	1:A:3400:GLU:HG3	2.06	0.55
1:A:4181:GLU:HA	1:A:4184:LYS:HB2	1.88	0.55
1:C:676:GLU:HG3	1:C:803:LEU:HB2	1.88	0.55
1:C:1120:PRO:HG3	1:C:1202:ILE:HD11	1.87	0.55
1:C:3328:LYS:O	1:C:3332:VAL:HG23	2.05	0.55
1:E:2932:VAL:HG21	1:E:3006:LEU:HD11	1.89	0.55
1:F:1686:LEU:HD11	1:F:1710:ILE:HD11	1.87	0.55
1:F:3396:ARG:O	1:F:3400:GLU:HG3	2.06	0.55
1:F:3920:THR:O	1:F:3924:GLN:HG2	2.06	0.55
1:A:989:THR:HG23	1:A:992:GLN:H	1.71	0.55
1:A:2542:SER:HB2	1:A:2877:THR:HB	1.89	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1480:ILE:H	1:C:1480:ILE:HD12	1.72	0.55
1:C:3393:GLU:O	1:C:3397:MET:HE2	2.07	0.55
1:E:891:GLU:O	1:E:895:MET:HG3	2.07	0.55
1:E:2342:LEU:O	1:E:2346:MET:HG2	2.05	0.55
1:F:1811:VAL:HB	1:F:1818:LEU:HD13	1.87	0.55
1:F:2542:SER:HB2	1:F:2877:THR:HB	1.88	0.55
1:F:3393:GLU:HA	1:F:3396:ARG:HD2	1.88	0.55
1:A:1165:MET:HB2	1:A:1174:MET:SD	2.46	0.55
1:A:4813:MET:SD	1:C:4843:ILE:HD13	2.47	0.55
1:C:559:ILE:HD13	1:C:593:HIS:HB3	1.87	0.55
1:C:891:GLU:O	1:C:895:MET:HG3	2.07	0.55
1:C:1248:THR:HG22	1:C:1602:ASN:HD21	1.72	0.55
1:E:838:ARG:HH21	1:E:1254:ARG:HD2	1.71	0.55
1:E:1098:ALA:HA	1:E:1168:MET:HB3	1.87	0.55
1:E:2278:MET:N	1:E:2278:MET:SD	2.79	0.55
1:E:2580:ARG:HD2	1:E:2581:PRO:HD2	1.89	0.55
1:E:3647:GLY:O	1:E:3658:LYS:NZ	2.37	0.55
1:E:3920:THR:O	1:E:3924:GLN:HG2	2.06	0.55
1:F:4628:GLN:OE1	1:F:4631:ARG:NH2	2.39	0.55
1:A:676:GLU:HG3	1:A:803:LEU:HB2	1.88	0.55
1:A:1641:ASP:HB3	1:A:1644:GLU:HG3	1.88	0.55
1:A:3348:SER:O	1:A:3352:LEU:HG	2.06	0.55
1:A:3731:HIS:CE1	1:A:3775:LYS:HD2	2.41	0.55
1:E:989:THR:HG23	1:E:992:GLN:H	1.71	0.55
1:E:1104:GLU:HB2	1:E:1216:ASN:HB3	1.88	0.55
1:E:1641:ASP:HB3	1:E:1644:GLU:HG3	1.88	0.55
1:F:2580:ARG:HD2	1:F:2581:PRO:HD2	1.89	0.55
1:A:769:ARG:HH22	1:A:816:PRO:HD3	1.71	0.55
1:A:838:ARG:HH21	1:A:1254:ARG:HD2	1.71	0.55
1:A:1480:ILE:H	1:A:1480:ILE:HD12	1.72	0.55
1:C:1165:MET:HB2	1:C:1174:MET:SD	2.47	0.55
1:C:1310:CYS:SG	1:C:1538:THR:N	2.76	0.55
1:C:2191:MET:HG3	1:C:2191:MET:O	2.07	0.55
1:E:1248:THR:HG22	1:E:1602:ASN:HD21	1.72	0.55
1:E:1727:ILE:HD11	1:E:2164:LEU:HD21	1.87	0.55
1:E:1843:ILE:HD13	1:E:1846:LEU:HD21	1.89	0.55
1:E:3348:SER:O	1:E:3352:LEU:HG	2.06	0.55
1:F:2317:ASN:O	1:F:2321:ARG:HG2	2.07	0.55
1:A:1811:VAL:HB	1:A:1818:LEU:HD13	1.87	0.55
1:A:1843:ILE:HD13	1:A:1846:LEU:HD21	1.89	0.55
1:C:1727:ILE:HD11	1:C:2164:LEU:HD21	1.87	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:3396:ARG:O	1:C:3400:GLU:HG3	2.06	0.55
1:E:1480:ILE:HD12	1:E:1480:ILE:H	1.72	0.55
1:F:769:ARG:HH22	1:F:816:PRO:HD3	1.71	0.55
1:F:1165:MET:HB2	1:F:1174:MET:SD	2.47	0.55
1:F:1480:ILE:H	1:F:1480:ILE:HD12	1.72	0.55
1:F:2278:MET:N	1:F:2278:MET:SD	2.79	0.55
1:F:2932:VAL:HG21	1:F:3006:LEU:HD11	1.89	0.55
1:A:113:LEU:HB2	1:A:175:VAL:HB	1.89	0.55
1:A:3447:GLU:HA	1:A:3450:LYS:HD2	1.87	0.55
1:A:4003:VAL:HG11	1:A:4113:ARG:HD2	1.88	0.55
1:C:3379:ASN:HB2	1:C:3382:LYS:HD3	1.89	0.55
1:C:3731:HIS:CE1	1:C:3775:LYS:HD2	2.41	0.55
1:F:2592:VAL:HA	1:F:2643:LEU:HD13	1.87	0.55
1:A:2981:PHE:CG	1:A:2996:SER:HB3	2.42	0.55
1:E:853:PRO:HD3	1:E:1086:ARG:HG3	1.89	0.55
1:E:3472:LEU:HD23	1:E:3475:ILE:HD12	1.88	0.55
1:A:2580:ARG:HD2	1:A:2581:PRO:HD2	1.89	0.54
1:A:3379:ASN:HB2	1:A:3382:LYS:HD3	1.89	0.54
1:A:3802:LEU:HD22	1:A:3828:VAL:HG22	1.89	0.54
1:C:838:ARG:HH21	1:C:1254:ARG:HD2	1.71	0.54
1:C:853:PRO:HD3	1:C:1086:ARG:HG3	1.89	0.54
1:C:3472:LEU:HD23	1:C:3475:ILE:HD12	1.88	0.54
1:C:3802:LEU:HD22	1:C:3828:VAL:HG22	1.89	0.54
1:C:3840:ARG:HH21	1:C:3844:LEU:HD21	1.72	0.54
1:E:908:ARG:HE	2:I:104:TYR:HB3	1.71	0.54
1:E:1165:MET:HB2	1:E:1174:MET:SD	2.47	0.54
1:E:3802:LEU:HD22	1:E:3828:VAL:HG22	1.89	0.54
1:F:2967:LEU:HD11	1:F:3028:ILE:HA	1.87	0.54
1:F:3684:ASP:O	1:F:3688:MET:HG2	2.07	0.54
1:F:4046:ASP:O	1:F:4049:LYS:HG2	2.08	0.54
1:A:3472:LEU:HD23	1:A:3475:ILE:HD12	1.88	0.54
1:A:4046:ASP:O	1:A:4049:LYS:HG2	2.07	0.54
1:C:143:LEU:O	1:C:190:ARG:NE	2.34	0.54
1:C:1246:ASP:OD1	1:C:1694:TYR:OH	2.22	0.54
1:E:2981:PHE:CG	1:E:2996:SER:HB3	2.42	0.54
1:F:891:GLU:O	1:F:895:MET:HG3	2.07	0.54
1:F:2981:PHE:CG	1:F:2996:SER:HB3	2.41	0.54
1:A:891:GLU:O	1:A:895:MET:HG3	2.07	0.54
1:A:2278:MET:N	1:A:2278:MET:SD	2.79	0.54
1:A:3208:PRO:HB3	1:A:3212:LYS:HD3	1.89	0.54
1:A:3237:VAL:HA	1:A:3240:MET:CG	2.37	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3840:ARG:HH21	1:A:3844:LEU:HD21	1.72	0.54
1:A:4099:VAL:HG12	1:A:4132:LEU:HD13	1.90	0.54
1:C:113:LEU:HB2	1:C:175:VAL:HB	1.89	0.54
1:E:3447:GLU:HA	1:E:3450:LYS:HD2	1.87	0.54
1:E:3684:ASP:O	1:E:3688:MET:HG2	2.07	0.54
1:F:3802:LEU:HD22	1:F:3828:VAL:HG22	1.89	0.54
1:A:1248:THR:HG22	1:A:1602:ASN:HD21	1.72	0.54
1:A:1942:ARG:HH22	1:A:1975:LEU:HD21	1.73	0.54
1:A:2612:HIS:CE1	1:A:2620:TYR:HH	2.24	0.54
1:A:2932:VAL:HG21	1:A:3006:LEU:HD11	1.89	0.54
1:A:3684:ASP:O	1:A:3688:MET:HG2	2.07	0.54
1:C:769:ARG:HH22	1:C:816:PRO:HD3	1.71	0.54
1:C:2542:SER:HB2	1:C:2877:THR:HB	1.88	0.54
1:C:2580:ARG:HD2	1:C:2581:PRO:HD2	1.89	0.54
1:C:4099:VAL:HG12	1:C:4132:LEU:HD13	1.90	0.54
1:E:113:LEU:HB2	1:E:175:VAL:HB	1.89	0.54
1:E:2166:MET:N	1:E:2166:MET:SD	2.78	0.54
1:A:1791:LYS:O	1:A:1795:MET:HG3	2.08	0.54
1:A:2592:VAL:HG22	1:A:2643:LEU:HB2	1.89	0.54
1:A:3388:ASN:ND2	1:A:3390:GLU:OE1	2.41	0.54
1:E:143:LEU:O	1:E:190:ARG:NE	2.34	0.54
1:E:3237:VAL:HA	1:E:3240:MET:CG	2.37	0.54
1:E:4099:VAL:HG12	1:E:4132:LEU:HD13	1.89	0.54
1:F:1843:ILE:HD13	1:F:1846:LEU:HD21	1.89	0.54
1:F:3379:ASN:HB2	1:F:3382:LYS:HD3	1.89	0.54
1:A:2658:GLN:O	1:A:2662:LYS:HB2	2.08	0.54
1:C:3178:ASN:OD1	1:C:3180:TYR:N	2.40	0.54
1:E:1942:ARG:HH22	1:E:1975:LEU:HD21	1.73	0.54
1:C:2932:VAL:HG21	1:C:3006:LEU:HD11	1.89	0.54
1:C:2998:LYS:HG3	1:C:3002:MET:HE2	1.88	0.54
1:E:4046:ASP:O	1:E:4049:LYS:HG2	2.08	0.54
1:F:3472:LEU:HD23	1:F:3475:ILE:HD12	1.88	0.54
1:A:1012:ILE:HG22	1:A:1032:LEU:HG	1.90	0.54
1:A:1246:ASP:OD1	1:A:1694:TYR:OH	2.22	0.54
1:C:747:HIS:ND1	1:C:748:LEU:O	2.31	0.54
1:C:2317:ASN:O	1:C:2321:ARG:HG2	2.07	0.54
1:C:2658:GLN:O	1:C:2662:LYS:HB2	2.08	0.54
1:C:2672:ALA:O	1:C:2977:HIS:NE2	2.36	0.54
1:E:2317:ASN:O	1:E:2321:ARG:HG2	2.07	0.54
1:F:113:LEU:HB2	1:F:175:VAL:HB	1.89	0.54
1:F:3178:ASN:OD1	1:F:3180:TYR:N	2.40	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:3208:PRO:HB3	1:F:3212:LYS:HD3	1.89	0.54
1:C:1942:ARG:HH22	1:C:1975:LEU:HD21	1.73	0.54
1:C:3684:ASP:O	1:C:3688:MET:HG2	2.07	0.54
1:E:3840:ARG:HH21	1:E:3844:LEU:HD21	1.72	0.54
1:F:853:PRO:HD3	1:F:1086:ARG:HG3	1.89	0.54
1:F:2592:VAL:HG22	1:F:2643:LEU:HB2	1.89	0.54
1:F:2641:ARG:NH1	1:F:2680:MET:HE3	2.18	0.54
1:A:853:PRO:HD3	1:A:1086:ARG:HG3	1.89	0.54
1:A:3178:ASN:OD1	1:A:3180:TYR:N	2.40	0.54
1:C:989:THR:HG23	1:C:992:GLN:H	1.71	0.54
1:C:2419:ARG:NE	1:C:2474:VAL:O	2.36	0.54
1:C:4046:ASP:O	1:C:4049:LYS:HG2	2.08	0.54
1:E:2612:HIS:CE1	1:E:2620:TYR:HH	2.25	0.54
1:E:3388:ASN:ND2	1:E:3390:GLU:OE1	2.41	0.54
1:F:989:THR:HG23	1:F:992:GLN:H	1.71	0.54
1:F:4099:VAL:HG12	1:F:4132:LEU:HD13	1.90	0.54
1:A:2460:CYS:HB2	1:A:2463:HIS:ND1	2.23	0.53
1:A:2673:GLY:HA2	1:A:2977:HIS:CE1	2.43	0.53
1:C:1012:ILE:HG22	1:C:1032:LEU:HG	1.90	0.53
1:C:1843:ILE:HD13	1:C:1846:LEU:HD21	1.89	0.53
1:E:2542:SER:HB2	1:E:2877:THR:HB	1.88	0.53
1:E:2658:GLN:O	1:E:2662:LYS:HB2	2.08	0.53
1:E:3475:ILE:O	1:E:3479:ILE:HG13	2.08	0.53
1:F:3475:ILE:O	1:F:3479:ILE:HG13	2.08	0.53
1:A:2166:MET:N	1:A:2166:MET:SD	2.78	0.53
1:C:2460:CYS:HB2	1:C:2463:HIS:ND1	2.23	0.53
1:C:2544:ILE:O	1:C:2548:LEU:HG	2.08	0.53
1:E:2460:CYS:HB2	1:E:2463:HIS:ND1	2.23	0.53
1:E:2673:GLY:HA2	1:E:2977:HIS:CE1	2.43	0.53
1:F:838:ARG:HH21	1:F:1254:ARG:HD2	1.71	0.53
1:F:942:THR:O	1:F:946:LEU:HG	2.08	0.53
1:F:1248:THR:HG22	1:F:1602:ASN:HD21	1.72	0.53
1:F:1891:GLY:O	1:F:1895:MET:HG3	2.09	0.53
1:F:1942:ARG:HH22	1:F:1975:LEU:HD21	1.73	0.53
1:A:2317:ASN:O	1:A:2321:ARG:HG2	2.07	0.53
1:C:1791:LYS:O	1:C:1795:MET:HG3	2.08	0.53
1:C:3388:ASN:ND2	1:C:3390:GLU:OE1	2.41	0.53
1:E:2592:VAL:HG22	1:E:2643:LEU:HB2	1.89	0.53
1:E:3208:PRO:HB3	1:E:3212:LYS:HD3	1.89	0.53
1:F:1791:LYS:O	1:F:1795:MET:HG3	2.08	0.53
1:F:2544:ILE:O	1:F:2548:LEU:HG	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:2889:GLN:HG2	1:F:2893:LYS:HE3	1.91	0.53
1:F:3237:VAL:HA	1:F:3240:MET:CG	2.37	0.53
1:A:895:MET:HG2	1:A:978:PRO:HG2	1.91	0.53
1:A:2544:ILE:O	1:A:2548:LEU:HG	2.08	0.53
1:C:394:HIS:ND1	1:C:396:GLU:HG3	2.24	0.53
1:C:3208:PRO:HB3	1:C:3212:LYS:HD3	1.89	0.53
1:C:3392:GLU:O	1:C:3396:ARG:HG3	2.08	0.53
1:E:2544:ILE:O	1:E:2548:LEU:HG	2.08	0.53
1:F:1242:ASN:HB3	1:F:1808:ARG:HD2	1.90	0.53
1:F:1902:LYS:HD2	1:F:2079:LEU:HD21	1.90	0.53
1:F:2438:ALA:HA	1:F:2464:LYS:HZ1	1.73	0.53
1:F:3647:GLY:O	1:F:3658:LYS:NZ	2.37	0.53
1:F:3840:ARG:HH21	1:F:3844:LEU:HD21	1.72	0.53
1:A:2889:GLN:HG2	1:A:2893:LYS:HE3	1.91	0.53
1:C:4806:ASP:OD1	1:C:4807:ASP:N	2.42	0.53
1:E:1012:ILE:HG22	1:E:1032:LEU:HG	1.90	0.53
1:E:1902:LYS:HD2	1:E:2079:LEU:HD21	1.90	0.53
1:E:2438:ALA:HA	1:E:2464:LYS:HZ1	1.72	0.53
1:F:2658:GLN:O	1:F:2662:LYS:HB2	2.08	0.53
1:F:4806:ASP:OD1	1:F:4807:ASP:N	2.42	0.53
1:A:394:HIS:ND1	1:A:396:GLU:HG3	2.24	0.53
1:A:942:THR:O	1:A:946:LEU:HG	2.08	0.53
1:A:1242:ASN:HB3	1:A:1808:ARG:HD2	1.90	0.53
1:A:1891:GLY:O	1:A:1895:MET:HG3	2.09	0.53
1:A:2931:TYR:HB3	1:A:2962:PHE:HE1	1.74	0.53
1:E:575:LEU:O	1:E:579:LEU:HG	2.09	0.53
1:E:895:MET:HG2	1:E:978:PRO:HG2	1.91	0.53
1:E:1791:LYS:O	1:E:1795:MET:HG3	2.08	0.53
1:E:4806:ASP:OD1	1:E:4807:ASP:N	2.42	0.53
1:F:2540:HIS:O	1:F:2543:LEU:N	2.42	0.53
1:F:2778:LEU:HA	1:F:2781:MET:HE3	1.89	0.53
1:F:2931:TYR:HB3	1:F:2962:PHE:HE1	1.74	0.53
1:A:4781:THR:HG21	1:A:4812:TYR:HB2	1.91	0.53
1:C:895:MET:HG2	1:C:978:PRO:HG2	1.91	0.53
1:C:942:THR:O	1:C:946:LEU:HG	2.08	0.53
1:C:2931:TYR:HB3	1:C:2962:PHE:CE1	2.44	0.53
1:E:2191:MET:O	1:E:2191:MET:HG3	2.07	0.53
1:F:3388:ASN:ND2	1:F:3390:GLU:OE1	2.41	0.53
1:F:3392:GLU:O	1:F:3396:ARG:HG3	2.08	0.53
2:G:19:ARG:HG3	2:G:81:GLN:HE22	1.74	0.53
2:G:33:SER:HB2	2:G:98:ASP:O	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2931:TYR:HB3	1:A:2962:PHE:CE1	2.44	0.53
1:A:3392:GLU:O	1:A:3396:ARG:HG3	2.08	0.53
1:C:2673:GLY:HA2	1:C:2977:HIS:CE1	2.43	0.53
1:E:942:THR:O	1:E:946:LEU:HG	2.08	0.53
1:E:2889:GLN:HG2	1:E:2893:LYS:HE3	1.91	0.53
1:E:3379:ASN:HB2	1:E:3382:LYS:HD3	1.89	0.53
1:E:4058:THR:O	1:E:4062:THR:HG23	2.09	0.53
1:F:1012:ILE:HG22	1:F:1032:LEU:HG	1.90	0.53
1:A:2419:ARG:NE	1:A:2474:VAL:O	2.35	0.53
1:C:1891:GLY:O	1:C:1895:MET:HG3	2.09	0.53
1:C:2931:TYR:HB3	1:C:2962:PHE:HE1	1.74	0.53
1:E:1891:GLY:O	1:E:1895:MET:HG3	2.09	0.53
1:E:2925:LEU:HD23	1:E:2928:LEU:HD12	1.91	0.53
1:E:3878:LEU:HD22	1:E:3938:ARG:HG2	1.91	0.53
1:F:2460:CYS:HB2	1:F:2463:HIS:ND1	2.23	0.53
1:F:2931:TYR:HB3	1:F:2962:PHE:CE1	2.44	0.53
1:A:1609:VAL:HG13	1:A:1611:ARG:HG3	1.91	0.53
2:D:19:ARG:HG3	2:D:81:GLN:HE22	1.74	0.53
1:E:2931:TYR:HB3	1:E:2962:PHE:CE1	2.44	0.53
1:F:575:LEU:O	1:F:579:LEU:HG	2.09	0.53
1:F:1649:GLU:OE1	1:F:1649:GLU:N	2.36	0.53
1:F:2673:GLY:HA2	1:F:2977:HIS:CE1	2.43	0.53
1:F:2925:LEU:HD23	1:F:2928:LEU:HD12	1.91	0.53
2:I:19:ARG:HG3	2:I:81:GLN:HE22	1.74	0.53
1:A:3878:LEU:HD22	1:A:3938:ARG:HG2	1.91	0.52
1:C:3237:VAL:HA	1:C:3240:MET:CG	2.37	0.52
1:C:4781:THR:HG21	1:C:4812:TYR:HB2	1.91	0.52
1:C:4889:ILE:HD13	1:C:4912:HIS:HB3	1.91	0.52
1:F:394:HIS:ND1	1:F:396:GLU:HG3	2.24	0.52
1:F:3878:LEU:HD22	1:F:3938:ARG:HG2	1.91	0.52
2:I:33:SER:HB2	2:I:98:ASP:O	2.09	0.52
1:A:575:LEU:O	1:A:579:LEU:HG	2.09	0.52
1:A:1419:TYR:HE2	1:A:1563:ASN:HB3	1.74	0.52
1:A:2925:LEU:HD23	1:A:2928:LEU:HD12	1.91	0.52
1:A:3475:ILE:O	1:A:3479:ILE:HG13	2.08	0.52
1:A:4058:THR:O	1:A:4062:THR:HG23	2.09	0.52
1:C:2889:GLN:HG2	1:C:2893:LYS:HE3	1.91	0.52
1:C:2922:TYR:O	1:C:2926:GLN:CB	2.57	0.52
1:C:3878:LEU:HD22	1:C:3938:ARG:HG2	1.91	0.52
1:C:4058:THR:O	1:C:4062:THR:HG23	2.09	0.52
2:D:4:LEU:HD21	2:D:97:ALA:HB2	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:394:HIS:ND1	1:E:396:GLU:HG3	2.24	0.52
1:E:3178:ASN:OD1	1:E:3180:TYR:N	2.41	0.52
1:E:4907:HIS:CE1	1:E:4912:HIS:ND1	2.78	0.52
1:F:261:HIS:CD2	1:F:263:GLU:HG3	2.45	0.52
1:A:2540:HIS:O	1:A:2543:LEU:N	2.42	0.52
2:B:19:ARG:HG3	2:B:81:GLN:HE22	1.74	0.52
1:C:2540:HIS:O	1:C:2543:LEU:N	2.42	0.52
1:C:2592:VAL:HG22	1:C:2643:LEU:HB2	1.89	0.52
1:C:2925:LEU:HD23	1:C:2928:LEU:HD12	1.91	0.52
1:C:3475:ILE:O	1:C:3479:ILE:HG13	2.08	0.52
1:E:931:TYR:CD2	2:I:101:PRO:HG3	2.44	0.52
1:E:2931:TYR:HB3	1:E:2962:PHE:HE1	1.74	0.52
1:E:4889:ILE:HD13	1:E:4912:HIS:HB3	1.91	0.52
1:C:892:LEU:HA	1:C:895:MET:HE3	1.92	0.52
1:C:1242:ASN:HB3	1:C:1808:ARG:HD2	1.90	0.52
1:C:1902:LYS:HD2	1:C:2079:LEU:HD21	1.90	0.52
1:E:1221:VAL:HG21	1:F:3525:TRP:CG	2.45	0.52
1:E:1419:TYR:HE2	1:E:1563:ASN:HB3	1.74	0.52
1:E:3392:GLU:O	1:E:3396:ARG:HG3	2.08	0.52
1:F:1609:VAL:HG13	1:F:1611:ARG:HG3	1.92	0.52
1:A:3108:PHE:HB2	1:A:3160:ALA:HB1	1.92	0.52
1:C:1419:TYR:HE2	1:C:1563:ASN:HB3	1.74	0.52
1:C:2189:PRO:HA	1:C:2192:VAL:HG12	1.92	0.52
1:E:1955:ALA:O	1:E:1959:ARG:HG2	2.10	0.52
1:F:895:MET:HG2	1:F:978:PRO:HG2	1.91	0.52
1:A:4806:ASP:OD1	1:A:4807:ASP:N	2.42	0.52
1:A:4889:ILE:HD13	1:A:4912:HIS:HB3	1.90	0.52
1:E:1609:VAL:HG13	1:E:1611:ARG:HG3	1.91	0.52
1:E:2201:TYR:O	1:E:2205:ILE:HG23	2.10	0.52
1:E:2540:HIS:O	1:E:2543:LEU:N	2.42	0.52
1:E:4781:THR:HG21	1:E:4812:TYR:HB2	1.91	0.52
1:F:928:GLU:OE2	2:G:102:ASN:ND2	2.43	0.52
1:F:1900:PRO:O	1:F:1904:GLN:HG2	2.10	0.52
1:F:2201:TYR:O	1:F:2205:ILE:HG23	2.10	0.52
1:F:2922:TYR:O	1:F:2926:GLN:CB	2.57	0.52
1:F:3916:PHE:O	1:F:3920:THR:HG23	2.10	0.52
1:F:4058:THR:O	1:F:4062:THR:HG23	2.09	0.52
1:A:892:LEU:HA	1:A:895:MET:HE3	1.91	0.52
1:A:2191:MET:HG3	1:A:2191:MET:O	2.07	0.52
1:C:238:HIS:HB2	1:C:242:ASP:H	1.75	0.52
1:C:666:GLY:HA3	1:C:1034:PRO:HG3	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1609:VAL:HG13	1:C:1611:ARG:HG3	1.92	0.52
1:C:2997:ASN:O	1:C:3001:GLU:HG3	2.10	0.52
1:C:3525:TRP:CG	1:F:1221:VAL:HG21	2.45	0.52
1:E:3108:PHE:HB2	1:E:3160:ALA:HB1	1.92	0.52
1:F:1092:LYS:HE3	1:F:1120:PRO:HB3	1.92	0.52
1:F:1419:TYR:HE2	1:F:1563:ASN:HB3	1.74	0.52
1:C:261:HIS:CD2	1:C:263:GLU:HG3	2.44	0.52
1:C:3916:PHE:O	1:C:3920:THR:HG23	2.10	0.52
1:E:1242:ASN:HB3	1:E:1808:ARG:HD2	1.90	0.52
1:E:2067:ARG:O	1:E:2071:GLU:HG2	2.10	0.52
1:E:2922:TYR:O	1:E:2926:GLN:CB	2.57	0.52
1:E:4796:GLU:OE1	1:E:4796:GLU:N	2.37	0.52
1:F:666:GLY:HA3	1:F:1034:PRO:HG3	1.92	0.52
1:F:1246:ASP:OD1	1:F:1694:TYR:OH	2.23	0.52
1:F:4781:THR:HG21	1:F:4812:TYR:HB2	1.91	0.52
1:A:1902:LYS:HD2	1:A:2079:LEU:HD21	1.90	0.52
1:A:2201:TYR:O	1:A:2205:ILE:HG23	2.10	0.52
1:A:2922:TYR:O	1:A:2926:GLN:CB	2.57	0.52
1:A:4907:HIS:CE1	1:A:4912:HIS:ND1	2.78	0.52
1:C:575:LEU:O	1:C:579:LEU:HG	2.09	0.52
1:C:1900:PRO:O	1:C:1904:GLN:HG2	2.10	0.52
1:C:2075:GLU:OE1	1:C:2075:GLU:N	2.43	0.52
1:C:2657:GLU:HB2	1:C:2660:LEU:HB3	1.92	0.52
1:A:546:LYS:O	1:A:550:GLN:HG2	2.10	0.52
1:A:551:PHE:HE2	1:A:558:LEU:HD11	1.75	0.52
1:C:1092:LYS:HE3	1:C:1120:PRO:HB3	1.92	0.52
1:C:1471:ASP:HB2	1:C:1477:HIS:NE2	2.25	0.52
1:C:2441:MET:HE2	1:C:2506:LEU:HD11	1.92	0.52
1:E:238:HIS:HB2	1:E:242:ASP:H	1.75	0.52
1:E:2657:GLU:HB2	1:E:2660:LEU:HB3	1.92	0.52
1:E:2997:ASN:O	1:E:3001:GLU:HG3	2.10	0.52
1:F:143:LEU:O	1:F:190:ARG:NE	2.34	0.52
1:F:251:GLU:HG3	1:F:252:HIS:CE1	2.45	0.52
1:F:887:GLU:O	1:F:891:GLU:HG2	2.10	0.52
1:F:1955:ALA:O	1:F:1959:ARG:HG2	2.10	0.52
1:F:2405:MET:HE2	1:F:2407:LEU:H	1.74	0.52
1:F:4907:HIS:CE1	1:F:4912:HIS:ND1	2.78	0.52
1:A:251:GLU:HG3	1:A:252:HIS:CE1	2.45	0.51
1:A:2552:TYR:CE2	1:A:2556:LYS:HE3	2.45	0.51
2:B:4:LEU:HD21	2:B:97:ALA:HB2	1.91	0.51
1:C:2552:TYR:CE2	1:C:2556:LYS:HE3	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:551:PHE:HE2	1:E:558:LEU:HD11	1.75	0.51
1:E:3729:ARG:O	1:E:3733:ARG:NH1	2.43	0.51
1:F:2067:ARG:O	1:F:2071:GLU:HG2	2.10	0.51
2:G:4:LEU:HD21	2:G:97:ALA:HB2	1.91	0.51
1:A:261:HIS:CD2	1:A:263:GLU:HG3	2.45	0.51
1:A:1221:VAL:HG21	1:E:3525:TRP:CG	2.45	0.51
1:A:1272:ARG:NH2	1:A:1583:CYS:SG	2.83	0.51
1:A:2189:PRO:HA	1:A:2192:VAL:HG12	1.91	0.51
1:A:2438:ALA:HA	1:A:2464:LYS:HZ1	1.74	0.51
1:A:2997:ASN:O	1:A:3001:GLU:HG3	2.10	0.51
1:A:3273:ASN:ND2	1:A:3310:LYS:HB2	2.23	0.51
2:B:33:SER:HB2	2:B:98:ASP:O	2.09	0.51
1:C:251:GLU:HG3	1:C:252:HIS:CE1	2.45	0.51
1:C:546:LYS:O	1:C:550:GLN:HG2	2.10	0.51
1:E:3916:PHE:O	1:E:3920:THR:HG23	2.10	0.51
1:F:2997:ASN:O	1:F:3001:GLU:HG3	2.10	0.51
1:A:238:HIS:HB2	1:A:242:ASP:H	1.75	0.51
1:E:666:GLY:HA3	1:E:1034:PRO:HG3	1.92	0.51
1:E:1257:GLN:HG2	1:E:1451:HIS:HE1	1.76	0.51
1:E:1900:PRO:O	1:E:1904:GLN:HG2	2.10	0.51
1:F:2657:GLU:HB2	1:F:2660:LEU:HB3	1.92	0.51
1:F:3273:ASN:ND2	1:F:3310:LYS:HB2	2.23	0.51
1:F:3280:LEU:HD12	1:F:3317:HIS:HB2	1.93	0.51
1:A:1959:ARG:HA	1:A:1962:ARG:HB3	1.92	0.51
1:A:2067:ARG:O	1:A:2071:GLU:HG2	2.10	0.51
1:A:2657:GLU:HB2	1:A:2660:LEU:HB3	1.92	0.51
1:C:887:GLU:O	1:C:891:GLU:HG2	2.10	0.51
1:C:2527:LEU:HA	1:C:2531:ALA:HB2	1.93	0.51
1:C:3636:GLU:HG2	1:C:3696:LYS:HB2	1.93	0.51
1:E:601:LEU:HB2	1:E:610:VAL:HG11	1.93	0.51
1:E:2189:PRO:HA	1:E:2192:VAL:HG12	1.91	0.51
1:E:2441:MET:HE2	1:E:2506:LEU:HD11	1.92	0.51
1:E:4156:ARG:O	1:E:4160:GLU:HG2	2.10	0.51
1:F:238:HIS:HB2	1:F:242:ASP:H	1.75	0.51
1:F:1959:ARG:HA	1:F:1962:ARG:HB3	1.92	0.51
1:A:666:GLY:HA3	1:A:1034:PRO:HG3	1.92	0.51
1:A:1052:GLU:O	1:A:1056:THR:HG23	2.11	0.51
1:A:1092:LYS:HE3	1:A:1120:PRO:HB3	1.92	0.51
1:A:1955:ALA:O	1:A:1959:ARG:HG2	2.10	0.51
1:C:903:GLN:O	1:C:915:HIS:N	2.35	0.51
1:E:244:CYS:SG	1:E:273:SER:HB2	2.51	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:1471:ASP:HB2	1:E:1477:HIS:NE2	2.25	0.51
1:E:1636:GLU:HB2	1:E:1638:ARG:HG2	1.93	0.51
1:E:2405:MET:HE2	1:E:2407:LEU:H	1.75	0.51
1:E:3031:CYS:HA	1:E:3034:ILE:HG22	1.93	0.51
1:E:3280:LEU:HD12	1:E:3317:HIS:HB2	1.93	0.51
1:F:1636:GLU:HB2	1:F:1638:ARG:HG2	1.93	0.51
1:F:3031:CYS:HA	1:F:3034:ILE:HG22	1.93	0.51
1:F:3729:ARG:O	1:F:3733:ARG:NH1	2.43	0.51
1:A:887:GLU:O	1:A:891:GLU:HG2	2.10	0.51
1:A:1900:PRO:O	1:A:1904:GLN:HG2	2.10	0.51
1:A:3293:ALA:HA	1:A:3363:ARG:HD2	1.92	0.51
1:C:1955:ALA:O	1:C:1959:ARG:HG2	2.10	0.51
1:C:3108:PHE:HB2	1:C:3160:ALA:HB1	1.92	0.51
1:C:3280:LEU:HD12	1:C:3317:HIS:HB2	1.93	0.51
2:D:33:SER:HB2	2:D:98:ASP:O	2.09	0.51
1:E:1814:THR:HB	1:E:1817:PHE:HD2	1.76	0.51
1:E:2075:GLU:OE1	1:E:2075:GLU:N	2.43	0.51
1:E:2352:ILE:HA	1:E:2358:ARG:HB3	1.92	0.51
1:F:3293:ALA:HA	1:F:3363:ARG:HD2	1.92	0.51
1:A:2075:GLU:OE1	1:A:2075:GLU:N	2.43	0.51
1:C:928:GLU:OE2	2:D:102:ASN:ND2	2.44	0.51
1:C:1959:ARG:HA	1:C:1962:ARG:HB3	1.92	0.51
1:C:2201:TYR:O	1:C:2205:ILE:HG23	2.10	0.51
1:C:2641:ARG:NH1	1:C:2680:MET:HE3	2.19	0.51
1:E:261:HIS:CD2	1:E:263:GLU:HG3	2.45	0.51
1:E:2382:HIS:HB2	1:E:2385:ASN:HB2	1.92	0.51
1:E:3273:ASN:ND2	1:E:3310:LYS:HB2	2.24	0.51
1:F:551:PHE:HE2	1:F:558:LEU:HD11	1.75	0.51
1:F:892:LEU:HD23	1:F:895:MET:HE1	1.91	0.51
1:F:1269:GLU:OE2	1:F:1293:GLN:NE2	2.30	0.51
1:F:1471:ASP:HB2	1:F:1477:HIS:NE2	2.25	0.51
1:F:1814:THR:HB	1:F:1817:PHE:HD2	1.76	0.51
1:A:3805:ASN:O	1:A:3809:ARG:HG3	2.11	0.51
1:A:3916:PHE:O	1:A:3920:THR:HG23	2.10	0.51
1:C:2065:MET:HE1	1:C:2086:LEU:HD23	1.93	0.51
1:C:4907:HIS:CE1	1:C:4912:HIS:ND1	2.78	0.51
1:E:546:LYS:O	1:E:550:GLN:HG2	2.10	0.51
1:F:2552:TYR:CE2	1:F:2556:LYS:HE3	2.45	0.51
2:I:4:LEU:HD21	2:I:97:ALA:HB2	1.91	0.51
1:A:3729:ARG:O	1:A:3733:ARG:NH1	2.43	0.51
1:A:4048:HIS:ND1	1:A:4066:LEU:HD11	2.26	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4156:ARG:O	1:A:4160:GLU:HG2	2.10	0.51
1:C:244:CYS:SG	1:C:273:SER:HB2	2.51	0.51
1:C:2067:ARG:O	1:C:2071:GLU:HG2	2.10	0.51
1:E:251:GLU:HG3	1:E:252:HIS:CE1	2.45	0.51
1:E:1052:GLU:O	1:E:1056:THR:HG23	2.11	0.51
1:E:1092:LYS:HE3	1:E:1120:PRO:HB3	1.92	0.51
1:F:546:LYS:O	1:F:550:GLN:HG2	2.10	0.51
1:F:601:LEU:HB2	1:F:610:VAL:HG11	1.93	0.51
1:A:244:CYS:SG	1:A:273:SER:HB2	2.51	0.51
1:A:928:GLU:OE2	2:B:102:ASN:ND2	2.44	0.51
1:A:3393:GLU:HG3	1:A:3397:MET:HE2	1.92	0.51
1:A:3636:GLU:HG2	1:A:3696:LYS:HB2	1.93	0.51
1:C:737:ILE:HB	1:C:1482:ARG:HH21	1.76	0.51
1:C:2352:ILE:HA	1:C:2358:ARG:HB3	1.92	0.51
1:C:3159:ALA:HB2	1:C:3240:MET:HE2	1.93	0.51
1:C:3273:ASN:ND2	1:C:3310:LYS:HB2	2.24	0.51
1:C:3729:ARG:O	1:C:3733:ARG:NH1	2.43	0.51
1:C:4796:GLU:OE1	1:C:4796:GLU:N	2.37	0.51
1:E:2527:LEU:HA	1:E:2531:ALA:HB2	1.93	0.51
1:F:244:CYS:SG	1:F:273:SER:HB2	2.51	0.51
1:F:1257:GLN:HG2	1:F:1451:HIS:HE1	1.76	0.51
1:F:2189:PRO:HA	1:F:2192:VAL:HG12	1.91	0.51
1:F:2382:HIS:HB2	1:F:2385:ASN:HB2	1.92	0.51
1:F:3108:PHE:HB2	1:F:3160:ALA:HB1	1.92	0.51
1:F:4889:ILE:HD13	1:F:4912:HIS:HB3	1.90	0.51
1:A:3393:GLU:O	1:A:3397:MET:HE2	2.10	0.50
1:C:551:PHE:HE2	1:C:558:LEU:HD11	1.75	0.50
1:C:3155:GLY:O	1:C:3240:MET:HE1	2.12	0.50
1:F:2075:GLU:OE1	1:F:2075:GLU:N	2.43	0.50
1:F:4156:ARG:O	1:F:4160:GLU:HG2	2.10	0.50
1:A:1257:GLN:HG2	1:A:1451:HIS:HE1	1.76	0.50
1:A:1269:GLU:OE2	1:A:1293:GLN:NE2	2.30	0.50
1:A:1471:ASP:HB2	1:A:1477:HIS:NE2	2.25	0.50
1:A:1636:GLU:HB2	1:A:1638:ARG:HG2	1.93	0.50
1:A:2527:LEU:HA	1:A:2531:ALA:HB2	1.93	0.50
1:A:3031:CYS:HA	1:A:3034:ILE:HG22	1.93	0.50
1:A:3280:LEU:HD12	1:A:3317:HIS:HB2	1.93	0.50
1:A:3484:ASP:O	1:A:3488:ILE:HG13	2.11	0.50
1:C:2382:HIS:HB2	1:C:2385:ASN:HB2	1.92	0.50
1:C:3647:GLY:O	1:C:3658:LYS:NZ	2.37	0.50
1:E:737:ILE:HB	1:E:1482:ARG:HH21	1.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:1269:GLU:OE2	1:E:1293:GLN:NE2	2.30	0.50
1:F:263:GLU:OE2	1:F:388:GLN:NE2	2.40	0.50
1:F:737:ILE:HB	1:F:1482:ARG:HH21	1.76	0.50
1:F:3166:PRO:HD2	1:F:3167:ILE:HD12	1.93	0.50
1:F:4045:ARG:HA	1:F:4045:ARG:HE	1.76	0.50
1:A:4045:ARG:HA	1:A:4045:ARG:HE	1.76	0.50
1:C:1257:GLN:HG2	1:C:1451:HIS:HE1	1.76	0.50
1:C:1636:GLU:HB2	1:C:1638:ARG:HG2	1.93	0.50
1:C:3031:CYS:HA	1:C:3034:ILE:HG22	1.93	0.50
1:C:3484:ASP:O	1:C:3488:ILE:HG13	2.11	0.50
1:C:4156:ARG:O	1:C:4160:GLU:HG2	2.10	0.50
1:E:739:ARG:HH12	1:E:1480:ILE:HG21	1.77	0.50
1:E:2672:ALA:HB3	1:E:2972:GLN:HE22	1.77	0.50
1:F:4796:GLU:OE1	1:F:4796:GLU:N	2.37	0.50
1:A:2352:ILE:HA	1:A:2358:ARG:HB3	1.92	0.50
1:C:2101:LEU:O	1:C:2104:THR:HG22	2.12	0.50
1:C:2482:PHE:CZ	1:C:2486:LEU:HD11	2.47	0.50
1:C:2672:ALA:HB3	1:C:2972:GLN:HE22	1.77	0.50
1:E:1959:ARG:HA	1:E:1962:ARG:HB3	1.92	0.50
1:F:1128:LEU:HG	1:F:1136:ALA:HB2	1.93	0.50
1:F:2672:ALA:HB3	1:F:2972:GLN:HE22	1.77	0.50
1:F:3155:GLY:O	1:F:3240:MET:HE1	2.12	0.50
1:F:4111:ASP:O	1:F:4115:GLN:HG2	2.12	0.50
1:A:1446:ILE:HG22	1:A:1485:CYS:HA	1.94	0.50
1:C:1084:ARG:HG3	1:C:1084:ARG:O	2.12	0.50
1:C:2438:ALA:HA	1:C:2464:LYS:HZ1	1.75	0.50
1:E:887:GLU:O	1:E:891:GLU:HG2	2.10	0.50
1:E:3636:GLU:HG2	1:E:3696:LYS:HB2	1.93	0.50
1:F:1052:GLU:O	1:F:1056:THR:HG23	2.11	0.50
1:F:2482:PHE:CZ	1:F:2486:LEU:HD11	2.47	0.50
1:F:3380:ARG:HH21	1:F:3474:PRO:HG2	1.77	0.50
1:F:4048:HIS:ND1	1:F:4066:LEU:HD11	2.26	0.50
1:A:253:GLY:O	1:A:257:ARG:HG3	2.12	0.50
1:A:2101:LEU:O	1:A:2104:THR:HG22	2.12	0.50
1:C:3178:ASN:O	1:C:3184:ASN:ND2	2.45	0.50
1:C:4045:ARG:HA	1:C:4045:ARG:HE	1.76	0.50
1:C:4048:HIS:ND1	1:C:4066:LEU:HD11	2.26	0.50
1:E:656:ARG:HG2	1:E:837:SER:HA	1.93	0.50
1:E:3380:ARG:HH21	1:E:3474:PRO:HG2	1.77	0.50
1:E:4657:GLY:HA3	1:E:4662:ARG:HG2	1.94	0.50
1:F:656:ARG:HG2	1:F:837:SER:HA	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:2527:LEU:HA	1:F:2531:ALA:HB2	1.93	0.50
1:F:3522:ALA:HA	1:F:3525:TRP:CD1	2.47	0.50
1:C:3166:PRO:HD2	1:C:3167:ILE:HD12	1.93	0.50
1:C:3293:ALA:HA	1:C:3363:ARG:HD2	1.93	0.50
1:E:1939:GLN:HA	1:E:1942:ARG:HG2	1.94	0.50
1:E:1988:PRO:HB2	1:E:1991:ILE:HG12	1.93	0.50
1:E:2552:TYR:CE2	1:E:2556:LYS:HE3	2.45	0.50
1:E:3155:GLY:O	1:E:3240:MET:HE1	2.12	0.50
1:E:3314:LEU:HD12	1:E:3315:LYS:N	2.27	0.50
1:E:3805:ASN:O	1:E:3809:ARG:HG3	2.11	0.50
1:E:4111:ASP:O	1:E:4115:GLN:HG2	2.12	0.50
1:F:739:ARG:HH12	1:F:1480:ILE:HG21	1.77	0.50
1:F:3178:ASN:O	1:F:3184:ASN:ND2	2.45	0.50
1:F:3636:GLU:HG2	1:F:3696:LYS:HB2	1.93	0.50
1:A:601:LEU:HB2	1:A:610:VAL:HG11	1.93	0.50
1:A:737:ILE:HB	1:A:1482:ARG:HH21	1.76	0.50
1:A:1814:THR:HB	1:A:1817:PHE:HD2	1.76	0.50
1:A:3525:TRP:CG	1:C:1221:VAL:HG21	2.46	0.50
1:C:253:GLY:O	1:C:257:ARG:HG3	2.12	0.50
1:C:1052:GLU:O	1:C:1056:THR:HG23	2.11	0.50
1:C:1446:ILE:HG22	1:C:1485:CYS:HA	1.93	0.50
1:C:2480:GLN:HG2	1:C:2537:THR:HG21	1.94	0.50
1:C:3380:ARG:HH21	1:C:3474:PRO:HG2	1.77	0.50
1:C:3522:ALA:HA	1:C:3525:TRP:CD1	2.47	0.50
1:C:3805:ASN:O	1:C:3809:ARG:HG3	2.11	0.50
1:C:4647:PHE:HD1	1:C:4650:ARG:HD3	1.76	0.50
1:E:892:LEU:HA	1:E:895:MET:HE3	1.93	0.50
1:E:1729:PRO:HD3	1:E:1758:LEU:HD22	1.94	0.50
1:E:3484:ASP:O	1:E:3488:ILE:HG13	2.11	0.50
1:E:4635:ASN:OD1	1:E:4703:LYS:NZ	2.38	0.50
1:F:2330:PHE:CE2	1:F:2425:LEU:HD21	2.47	0.50
1:F:2352:ILE:HA	1:F:2358:ARG:HB3	1.92	0.50
1:F:4116:THR:O	1:F:4119:GLU:HG2	2.12	0.50
1:F:4478:PHE:HA	1:F:4481:LYS:HE2	1.94	0.50
1:A:1113:MET:HB2	1:A:1156:TRP:HZ2	1.77	0.50
1:A:1128:LEU:HG	1:A:1136:ALA:HB2	1.93	0.50
1:A:1666:CYS:HB3	1:A:1677:LEU:HD12	1.94	0.50
1:C:2330:PHE:CE2	1:C:2425:LEU:HD21	2.47	0.50
1:C:3018:ILE:HG21	1:C:3095:TYR:HB2	1.94	0.50
1:E:449:ILE:HG23	1:E:529:ILE:HD11	1.94	0.50
1:E:3178:ASN:O	1:E:3184:ASN:ND2	2.45	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:3050:ASP:HA	1:F:3053:LYS:HG2	1.94	0.50
1:A:557:TRP:CE3	1:A:558:LEU:HD23	2.47	0.49
1:A:924:LEU:HD23	1:A:929:ARG:HA	1.94	0.49
1:A:1979:LYS:HE2	1:A:3627:TRP:CD1	2.47	0.49
1:C:1814:THR:HB	1:C:1817:PHE:HD2	1.76	0.49
1:E:1113:MET:HB2	1:E:1156:TRP:HZ2	1.77	0.49
1:E:3293:ALA:HA	1:E:3363:ARG:HD2	1.92	0.49
1:F:2480:GLN:HG2	1:F:2537:THR:HG21	1.94	0.49
1:F:4657:GLY:HA3	1:F:4662:ARG:HG2	1.94	0.49
1:A:449:ILE:HG23	1:A:529:ILE:HD11	1.94	0.49
1:A:739:ARG:HH12	1:A:1480:ILE:HG21	1.77	0.49
1:A:3050:ASP:HA	1:A:3053:LYS:HG2	1.94	0.49
1:A:3155:GLY:O	1:A:3240:MET:HE1	2.12	0.49
1:A:3314:LEU:HD12	1:A:3315:LYS:N	2.27	0.49
1:A:3380:ARG:HH21	1:A:3474:PRO:HG2	1.77	0.49
1:A:4478:PHE:HA	1:A:4481:LYS:HE2	1.94	0.49
1:C:449:ILE:HG23	1:C:529:ILE:HD11	1.94	0.49
1:C:601:LEU:HB2	1:C:610:VAL:HG11	1.93	0.49
1:C:1649:GLU:OE1	1:C:1649:GLU:N	2.36	0.49
1:C:2999:GLU:HA	1:C:3002:MET:SD	2.52	0.49
1:C:3050:ASP:HA	1:C:3053:LYS:HG2	1.94	0.49
1:E:303:GLY:HA2	1:E:420:ARG:HH11	1.77	0.49
1:F:1666:CYS:HB3	1:F:1677:LEU:HD12	1.94	0.49
1:F:3314:LEU:HD12	1:F:3315:LYS:N	2.27	0.49
1:F:3805:ASN:O	1:F:3809:ARG:HG3	2.11	0.49
1:A:1553:VAL:HG23	1:A:1554:PHE:H	1.78	0.49
1:A:1988:PRO:HB2	1:A:1991:ILE:HG12	1.93	0.49
1:C:1666:CYS:HB3	1:C:1677:LEU:HD12	1.94	0.49
1:C:3314:LEU:HD12	1:C:3315:LYS:N	2.27	0.49
1:C:4478:PHE:HA	1:C:4481:LYS:HE2	1.94	0.49
1:E:557:TRP:CE3	1:E:558:LEU:HD23	2.47	0.49
1:E:2643:LEU:O	1:E:2647:ILE:HG13	2.12	0.49
1:E:2999:GLU:HA	1:E:3002:MET:SD	2.53	0.49
1:E:3050:ASP:HA	1:E:3053:LYS:HG2	1.94	0.49
1:E:4048:HIS:ND1	1:E:4066:LEU:HD11	2.26	0.49
1:E:4647:PHE:HD1	1:E:4650:ARG:HD3	1.76	0.49
1:F:1988:PRO:HB2	1:F:1991:ILE:HG12	1.93	0.49
1:F:2419:ARG:NE	1:F:2474:VAL:O	2.35	0.49
1:F:2643:LEU:O	1:F:2647:ILE:HG13	2.12	0.49
1:F:3802:LEU:HB2	1:F:3883:SER:HB2	1.95	0.49
1:A:2330:PHE:CE2	1:A:2425:LEU:HD21	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2382:HIS:HB2	1:A:2385:ASN:HB2	1.92	0.49
1:A:2482:PHE:CZ	1:A:2486:LEU:HD11	2.47	0.49
1:A:3905:PHE:O	1:A:3909:ILE:HG12	2.12	0.49
1:A:4116:THR:O	1:A:4119:GLU:HG2	2.12	0.49
1:A:4647:PHE:HD1	1:A:4650:ARG:HD3	1.76	0.49
1:C:303:GLY:HA2	1:C:420:ARG:HH11	1.77	0.49
1:C:924:LEU:HD23	1:C:929:ARG:HA	1.94	0.49
1:C:1939:GLN:HA	1:C:1942:ARG:HG2	1.94	0.49
1:E:2482:PHE:CZ	1:E:2486:LEU:HD11	2.47	0.49
1:E:2672:ALA:O	1:E:2977:HIS:NE2	2.36	0.49
1:F:557:TRP:CE3	1:F:558:LEU:HD23	2.47	0.49
1:F:924:LEU:HD23	1:F:929:ARG:HA	1.94	0.49
1:F:3484:ASP:O	1:F:3488:ILE:HG13	2.11	0.49
1:A:503:ASP:O	1:A:507:VAL:HG23	2.13	0.49
1:A:2999:GLU:HA	1:A:3002:MET:SD	2.53	0.49
1:A:4057:TYR:HB3	1:A:4061:GLU:HB2	1.95	0.49
1:C:2503:THR:O	1:C:2507:SER:N	2.35	0.49
1:C:3646:PRO:HB2	1:C:3658:LYS:HZ2	1.78	0.49
1:E:253:GLY:O	1:E:257:ARG:HG3	2.12	0.49
1:E:892:LEU:HD23	1:E:895:MET:HE1	1.93	0.49
1:E:1128:LEU:HG	1:E:1136:ALA:HB2	1.93	0.49
1:E:1553:VAL:HG23	1:E:1554:PHE:H	1.78	0.49
1:E:3392:GLU:OE1	1:E:3537:THR:OG1	2.31	0.49
1:E:3522:ALA:HA	1:E:3525:TRP:CD1	2.47	0.49
1:F:303:GLY:HA2	1:F:420:ARG:HH11	1.77	0.49
1:F:449:ILE:HG23	1:F:529:ILE:HD11	1.94	0.49
1:F:1729:PRO:HD3	1:F:1758:LEU:HD22	1.94	0.49
1:F:3272:MET:HE2	1:F:3308:LYS:HB2	1.93	0.49
1:F:4636:THR:OG1	1:F:4637:GLN:N	2.46	0.49
1:A:656:ARG:HG2	1:A:837:SER:HA	1.94	0.49
1:A:894:VAL:HA	1:A:897:LYS:HB2	1.94	0.49
1:A:2643:LEU:O	1:A:2647:ILE:HG13	2.12	0.49
1:A:3324:LYS:HA	1:A:3327:LYS:HD2	1.95	0.49
1:C:557:TRP:CE3	1:C:558:LEU:HD23	2.47	0.49
1:C:4116:THR:O	1:C:4119:GLU:HG2	2.12	0.49
1:E:1609:VAL:HG23	1:E:1620:VAL:HG22	1.95	0.49
1:E:1666:CYS:HB3	1:E:1677:LEU:HD12	1.94	0.49
1:F:563:GLU:OE1	1:F:563:GLU:N	2.39	0.49
1:F:2166:MET:N	1:F:2166:MET:SD	2.78	0.49
1:F:2191:MET:O	1:F:2191:MET:HG3	2.07	0.49
1:F:3018:ILE:HG21	1:F:3095:TYR:HB2	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:3935:ALA:O	1:F:3940:TRP:NE1	2.44	0.49
1:A:1084:ARG:HG3	1:A:1084:ARG:O	2.11	0.49
1:A:4796:GLU:OE1	1:A:4796:GLU:N	2.37	0.49
1:C:739:ARG:HH12	1:C:1480:ILE:HG21	1.77	0.49
1:C:4111:ASP:O	1:C:4115:GLN:HG2	2.12	0.49
1:C:4112:THR:O	1:C:4116:THR:HG23	2.13	0.49
1:C:4195:THR:HB	1:C:4918:LEU:HD11	1.95	0.49
1:E:2998:LYS:O	1:E:3002:MET:HG3	2.13	0.49
1:E:4636:THR:OG1	1:E:4637:GLN:N	2.46	0.49
1:F:253:GLY:O	1:F:257:ARG:HG3	2.12	0.49
1:F:894:VAL:HA	1:F:897:LYS:HB2	1.94	0.49
1:F:925:PRO:HG2	1:F:928:GLU:HB2	1.94	0.49
1:F:1084:ARG:HG3	1:F:1084:ARG:O	2.12	0.49
1:F:1979:LYS:HE2	1:F:3627:TRP:CD1	2.47	0.49
1:F:4112:THR:O	1:F:4116:THR:HG23	2.13	0.49
1:A:670:TYR:HD2	1:A:672:LYS:HB2	1.78	0.49
1:A:846:TYR:CZ	1:A:1219:LYS:HB2	2.48	0.49
1:A:1939:GLN:HA	1:A:1942:ARG:HG2	1.94	0.49
1:A:2569:GLU:O	1:A:2573:LEU:HG	2.13	0.49
1:A:3041:ALA:HB1	1:A:3120:LEU:HB2	1.94	0.49
1:C:656:ARG:HG2	1:C:837:SER:HA	1.94	0.49
1:C:892:LEU:HD23	1:C:895:MET:HE1	1.94	0.49
1:C:1553:VAL:HG23	1:C:1554:PHE:H	1.78	0.49
1:C:2569:GLU:O	1:C:2573:LEU:HG	2.13	0.49
1:C:3905:PHE:O	1:C:3909:ILE:HG12	2.12	0.49
1:C:4057:TYR:HB3	1:C:4061:GLU:HB2	1.95	0.49
1:E:180:ASP:HB3	1:E:211:LEU:HD12	1.94	0.49
1:E:503:ASP:O	1:E:507:VAL:HG23	2.13	0.49
1:E:925:PRO:HG2	1:E:928:GLU:HB2	1.94	0.49
1:E:1979:LYS:HE2	1:E:3627:TRP:CD1	2.47	0.49
1:E:3802:LEU:HB2	1:E:3883:SER:HB2	1.95	0.49
1:E:4057:TYR:HB3	1:E:4061:GLU:HB2	1.95	0.49
1:F:816:PRO:HG2	1:F:819:TYR:CG	2.48	0.49
1:F:931:TYR:CD2	2:G:101:PRO:HG3	2.47	0.49
1:F:1446:ILE:HG22	1:F:1485:CYS:HA	1.94	0.49
1:F:1706:LEU:O	1:F:1710:ILE:HG12	2.13	0.49
1:F:2778:LEU:HD23	1:F:2781:MET:HE3	1.95	0.49
1:F:3905:PHE:O	1:F:3909:ILE:HG12	2.12	0.49
1:F:4647:PHE:HD1	1:F:4650:ARG:HD3	1.76	0.49
1:A:180:ASP:HB3	1:A:211:LEU:HD12	1.94	0.49
1:A:2480:GLN:HG2	1:A:2537:THR:HG21	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2839:MET:HG3	1:A:2892:PHE:HZ	1.78	0.49
1:A:2998:LYS:O	1:A:3002:MET:HG3	2.13	0.49
1:A:3018:ILE:HG21	1:A:3095:TYR:HB2	1.94	0.49
1:A:3159:ALA:HB2	1:A:3240:MET:HE2	1.94	0.49
1:A:3802:LEU:HB2	1:A:3883:SER:HB2	1.95	0.49
1:A:4111:ASP:O	1:A:4115:GLN:HG2	2.12	0.49
1:C:1128:LEU:HG	1:C:1136:ALA:HB2	1.93	0.49
1:C:1190:LEU:HD23	1:C:1190:LEU:H	1.78	0.49
1:C:1979:LYS:HE2	1:C:3627:TRP:CD1	2.47	0.49
1:C:3397:MET:O	1:C:3401:VAL:HG23	2.13	0.49
1:C:3935:ALA:O	1:C:3940:TRP:NE1	2.44	0.49
1:C:4657:GLY:HA3	1:C:4662:ARG:HG2	1.94	0.49
1:E:1681:VAL:HG21	1:E:1706:LEU:HD21	1.95	0.49
1:E:2065:MET:HE1	1:E:2086:LEU:HD23	1.95	0.49
1:E:2503:THR:O	1:E:2507:SER:N	2.35	0.49
1:E:4045:ARG:HA	1:E:4045:ARG:HE	1.76	0.49
1:F:1553:VAL:HG23	1:F:1554:PHE:H	1.78	0.49
1:F:2569:GLU:O	1:F:2573:LEU:HG	2.13	0.49
1:F:2999:GLU:HA	1:F:3002:MET:SD	2.53	0.49
1:F:3393:GLU:O	1:F:3397:MET:HE2	2.13	0.49
1:A:1649:GLU:OE1	1:A:1649:GLU:N	2.36	0.49
1:A:2383:MET:O	1:A:2387:ILE:HG12	2.13	0.49
1:A:3178:ASN:O	1:A:3184:ASN:ND2	2.45	0.49
1:A:4664:ARG:HD2	1:A:4668:LEU:HD23	1.95	0.49
1:C:846:TYR:CZ	1:C:1219:LYS:HB2	2.48	0.49
1:C:1706:LEU:O	1:C:1710:ILE:HG12	2.13	0.49
1:E:816:PRO:HG2	1:E:819:TYR:CG	2.48	0.49
1:E:846:TYR:CZ	1:E:1219:LYS:HB2	2.48	0.49
1:E:924:LEU:HD23	1:E:929:ARG:HA	1.94	0.49
1:E:1272:ARG:NH2	1:E:1583:CYS:SG	2.83	0.49
1:E:1446:ILE:HG22	1:E:1485:CYS:HA	1.94	0.49
1:F:1113:MET:SD	1:F:1211:GLN:HB3	2.53	0.49
1:F:1272:ARG:NH2	1:F:1583:CYS:SG	2.83	0.49
1:F:2101:LEU:O	1:F:2104:THR:HG22	2.12	0.49
1:F:3239:PRO:HB3	1:F:3301:PHE:CG	2.48	0.49
1:F:4664:ARG:HD2	1:F:4668:LEU:HD23	1.95	0.49
1:A:4195:THR:HB	1:A:4918:LEU:HD11	1.95	0.48
1:A:4657:GLY:HA3	1:A:4662:ARG:HG2	1.94	0.48
1:C:816:PRO:HG2	1:C:819:TYR:CG	2.48	0.48
1:C:1113:MET:HB2	1:C:1156:TRP:HZ2	1.77	0.48
1:C:1729:PRO:HD3	1:C:1758:LEU:HD22	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1988:PRO:HB2	1:C:1991:ILE:HG12	1.93	0.48
1:C:3071:MET:HE3	1:C:3135:SER:HA	1.95	0.48
1:E:2419:ARG:NE	1:E:2474:VAL:O	2.35	0.48
1:E:4043:SER:HA	1:E:4076:THR:HA	1.95	0.48
1:E:4478:PHE:HA	1:E:4481:LYS:HE2	1.94	0.48
1:F:180:ASP:HB3	1:F:211:LEU:HD12	1.94	0.48
1:F:503:ASP:O	1:F:507:VAL:HG23	2.13	0.48
1:F:846:TYR:CZ	1:F:1219:LYS:HB2	2.48	0.48
1:F:892:LEU:HA	1:F:895:MET:HE3	1.95	0.48
1:F:1113:MET:HB2	1:F:1156:TRP:HZ2	1.77	0.48
1:F:1681:VAL:HG21	1:F:1706:LEU:HD21	1.95	0.48
1:F:2065:MET:HE1	1:F:2086:LEU:HD23	1.95	0.48
1:F:2423:ARG:NH2	1:F:2475:TYR:O	2.44	0.48
1:A:1190:LEU:HD23	1:A:1190:LEU:H	1.78	0.48
1:A:3397:MET:O	1:A:3401:VAL:HG23	2.13	0.48
1:A:4636:THR:OG1	1:A:4637:GLN:N	2.46	0.48
1:C:3505:ARG:HB2	1:C:3551:LEU:HD22	1.95	0.48
1:E:417:ARG:HG3	1:E:420:ARG:HH21	1.77	0.48
1:E:670:TYR:HD2	1:E:672:LYS:HB2	1.78	0.48
1:E:2330:PHE:CE2	1:E:2425:LEU:HD21	2.47	0.48
1:E:2839:MET:HG3	1:E:2892:PHE:HZ	1.78	0.48
1:E:3239:PRO:HB3	1:E:3301:PHE:CG	2.48	0.48
1:F:4195:THR:HB	1:F:4918:LEU:HD11	1.95	0.48
1:A:892:LEU:HD23	1:A:895:MET:HE1	1.94	0.48
1:A:1609:VAL:HG23	1:A:1620:VAL:HG22	1.95	0.48
1:A:1729:PRO:HD3	1:A:1758:LEU:HD22	1.94	0.48
1:C:180:ASP:HB3	1:C:211:LEU:HD12	1.94	0.48
1:C:693:LEU:HD22	1:C:798:ILE:HD11	1.96	0.48
1:E:1113:MET:SD	1:E:1211:GLN:HB3	2.53	0.48
1:F:417:ARG:HG3	1:F:420:ARG:HH21	1.77	0.48
1:F:670:TYR:HD2	1:F:672:LYS:HB2	1.78	0.48
1:F:1708:ILE:O	1:F:1713:SER:HB3	2.14	0.48
1:F:2878:ALA:HA	1:F:2881:LYS:HE3	1.95	0.48
1:F:4043:SER:HA	1:F:4076:THR:HA	1.95	0.48
1:A:1708:ILE:O	1:A:1713:SER:HB3	2.14	0.48
1:A:2618:LYS:O	1:A:2625:GLY:HA2	2.14	0.48
1:A:3522:ALA:HA	1:A:3525:TRP:CD1	2.47	0.48
1:A:4112:THR:O	1:A:4116:THR:HG23	2.13	0.48
1:A:4700:ILE:HD12	1:A:4705:GLN:HG3	1.96	0.48
1:C:670:TYR:HD2	1:C:672:LYS:HB2	1.78	0.48
1:C:894:VAL:HA	1:C:897:LYS:HB2	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:904:TYR:HB3	1:C:918:LEU:HD23	1.95	0.48
1:C:2643:LEU:O	1:C:2647:ILE:HG13	2.12	0.48
1:C:2839:MET:HG3	1:C:2892:PHE:HZ	1.78	0.48
1:C:3041:ALA:HB1	1:C:3120:LEU:HB2	1.94	0.48
1:E:1708:ILE:O	1:E:1713:SER:HB3	2.14	0.48
1:E:2101:LEU:O	1:E:2104:THR:HG22	2.12	0.48
1:E:2878:ALA:HA	1:E:2881:LYS:HE3	1.95	0.48
1:E:2925:LEU:O	1:E:2929:ILE:HG13	2.14	0.48
1:E:3041:ALA:HB1	1:E:3120:LEU:HB2	1.94	0.48
1:E:3166:PRO:HD2	1:E:3167:ILE:HD12	1.93	0.48
1:E:3772:VAL:O	1:E:3776:MET:HG3	2.14	0.48
1:F:903:GLN:O	1:F:915:HIS:N	2.35	0.48
1:F:1939:GLN:HA	1:F:1942:ARG:HG2	1.94	0.48
1:F:3071:MET:HE3	1:F:3135:SER:HA	1.94	0.48
1:F:3159:ALA:HB2	1:F:3240:MET:HE2	1.94	0.48
1:A:263:GLU:OE2	1:A:388:GLN:NE2	2.40	0.48
1:A:1681:VAL:HG21	1:A:1706:LEU:HD21	1.95	0.48
1:A:3166:PRO:HD2	1:A:3167:ILE:HD12	1.93	0.48
1:C:555:LEU:HD11	1:C:585:ALA:HB1	1.96	0.48
1:C:1681:VAL:HG21	1:C:1706:LEU:HD21	1.95	0.48
1:C:2618:LYS:O	1:C:2625:GLY:HA2	2.14	0.48
1:C:2925:LEU:O	1:C:2929:ILE:HG13	2.14	0.48
1:C:3239:PRO:HB3	1:C:3301:PHE:CG	2.49	0.48
1:E:894:VAL:HA	1:E:897:LYS:HB2	1.94	0.48
1:E:1436:GLN:NE2	1:E:1440:ASN:OD1	2.46	0.48
1:F:1190:LEU:HD23	1:F:1190:LEU:H	1.78	0.48
1:F:1968:PRO:O	1:F:1972:ILE:HG12	2.13	0.48
1:F:2925:LEU:O	1:F:2929:ILE:HG13	2.14	0.48
1:A:143:LEU:O	1:A:190:ARG:NE	2.34	0.48
1:C:503:ASP:O	1:C:507:VAL:HG23	2.13	0.48
1:C:925:PRO:HG2	1:C:928:GLU:HB2	1.95	0.48
1:C:3078:GLN:HB3	1:C:3085:GLN:HG3	1.96	0.48
1:C:4636:THR:OG1	1:C:4637:GLN:N	2.46	0.48
1:C:4664:ARG:HD2	1:C:4668:LEU:HD23	1.95	0.48
1:E:2480:GLN:HG2	1:E:2537:THR:HG21	1.94	0.48
1:E:3018:ILE:HG21	1:E:3095:TYR:HB2	1.94	0.48
1:E:3905:PHE:O	1:E:3909:ILE:HG12	2.12	0.48
1:E:4664:ARG:HD2	1:E:4668:LEU:HD23	1.95	0.48
1:F:3505:ARG:HB2	1:F:3551:LEU:HD22	1.95	0.48
1:A:692:HIS:HB3	1:A:795:SER:HB2	1.96	0.48
1:A:925:PRO:HG2	1:A:928:GLU:HB2	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2672:ALA:HB3	1:A:2972:GLN:HE22	1.77	0.48
1:C:1113:MET:SD	1:C:1211:GLN:HB3	2.53	0.48
1:E:1429:SER:OG	1:E:1557:GLU:HB2	2.14	0.48
1:E:1972:ILE:HG13	1:E:3618:LEU:HB3	1.96	0.48
1:E:2569:GLU:O	1:E:2573:LEU:HG	2.13	0.48
1:E:3393:GLU:O	1:E:3397:MET:HE2	2.13	0.48
1:E:4044:LYS:HZ1	1:E:4071:THR:HA	1.79	0.48
1:F:1609:VAL:HG23	1:F:1620:VAL:HG22	1.95	0.48
1:F:2321:ARG:O	1:F:2325:ARG:HG2	2.14	0.48
1:F:2503:THR:O	1:F:2507:SER:N	2.35	0.48
1:F:2618:LYS:O	1:F:2625:GLY:HA2	2.14	0.48
1:F:4057:TYR:HB3	1:F:4061:GLU:HB2	1.95	0.48
1:A:303:GLY:HA2	1:A:420:ARG:HH11	1.77	0.48
1:A:904:TYR:HB3	1:A:918:LEU:HD23	1.95	0.48
1:A:931:TYR:CD2	2:B:101:PRO:HG3	2.49	0.48
1:A:1051:ARG:HG2	1:A:1055:ARG:HE	1.79	0.48
1:C:417:ARG:HG3	1:C:420:ARG:HH21	1.77	0.48
1:C:692:HIS:HB3	1:C:795:SER:HB2	1.96	0.48
1:C:712:GLU:HG2	1:C:838:ARG:HG2	1.96	0.48
1:C:1968:PRO:O	1:C:1972:ILE:HG12	2.13	0.48
1:E:1084:ARG:HG3	1:E:1084:ARG:O	2.12	0.48
1:E:1928:SER:HG	1:E:3619:PHE:HD1	1.60	0.48
1:E:2383:MET:O	1:E:2387:ILE:HG12	2.13	0.48
1:E:3324:LYS:HA	1:E:3327:LYS:HD2	1.95	0.48
1:E:4116:THR:O	1:E:4119:GLU:HG2	2.12	0.48
1:F:1429:SER:OG	1:F:1557:GLU:HB2	2.14	0.48
1:F:1722:MET:HE2	1:F:1759:ARG:HG2	1.96	0.48
1:F:3772:VAL:O	1:F:3776:MET:HG3	2.14	0.48
1:F:4635:ASN:OD1	1:F:4703:LYS:NZ	2.38	0.48
1:A:712:GLU:HG2	1:A:838:ARG:HG2	1.96	0.48
1:A:816:PRO:HG2	1:A:819:TYR:CG	2.48	0.48
1:A:1047:LYS:HB3	1:A:1051:ARG:HH12	1.79	0.48
1:A:1968:PRO:O	1:A:1972:ILE:HG12	2.13	0.48
1:A:1972:ILE:HG13	1:A:3618:LEU:HB3	1.96	0.48
1:A:2472:ASP:OD2	1:A:2529:ARG:NE	2.47	0.48
1:A:2641:ARG:NH1	1:A:2680:MET:HE3	2.19	0.48
1:C:3772:VAL:O	1:C:3776:MET:HG3	2.14	0.48
1:E:1047:LYS:HB3	1:E:1051:ARG:HH12	1.79	0.48
1:E:1144:ARG:HB2	1:E:1192:PHE:CZ	2.49	0.48
1:E:1190:LEU:HD23	1:E:1190:LEU:H	1.78	0.48
1:E:2430:ASP:O	1:E:2434:VAL:HG23	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:3053:LYS:HG3	1:E:3057:ARG:NH1	2.29	0.48
1:E:3505:ARG:HB2	1:E:3551:LEU:HD22	1.95	0.48
1:F:1431:ARG:NH2	1:F:1507:GLU:OE1	2.47	0.48
1:F:2998:LYS:O	1:F:3002:MET:HG3	2.13	0.48
1:F:4044:LYS:HZ1	1:F:4071:THR:HA	1.78	0.48
1:A:781:ASN:HB3	1:A:1466:THR:HG22	1.96	0.48
1:A:1144:ARG:HB2	1:A:1192:PHE:CZ	2.49	0.48
1:A:1431:ARG:NH2	1:A:1507:GLU:OE1	2.47	0.48
1:A:1436:GLN:NE2	1:A:1440:ASN:OD1	2.46	0.48
1:C:781:ASN:HB3	1:C:1466:THR:HG22	1.96	0.48
1:C:931:TYR:CD2	2:D:101:PRO:HG3	2.48	0.48
1:C:2175:VAL:HG12	1:C:2219:TYR:CZ	2.49	0.48
1:C:2998:LYS:O	1:C:3002:MET:HG3	2.13	0.48
1:C:3802:LEU:HB2	1:C:3883:SER:HB2	1.95	0.48
1:E:263:GLU:OE2	1:E:388:GLN:NE2	2.40	0.48
1:E:1444:GLY:HA3	1:E:1487:MET:HA	1.96	0.48
1:E:1968:PRO:O	1:E:1972:ILE:HG12	2.13	0.48
1:E:4195:THR:HB	1:E:4918:LEU:HD11	1.95	0.48
1:E:4700:ILE:HD12	1:E:4705:GLN:HG3	1.96	0.48
1:F:693:LEU:HD22	1:F:798:ILE:HD11	1.96	0.48
1:F:802:PHE:O	1:F:1617:GLY:HA3	2.14	0.48
1:F:2441:MET:HE2	1:F:2506:LEU:HD11	1.95	0.48
1:F:3053:LYS:HG3	1:F:3057:ARG:NH1	2.29	0.48
1:F:4104:LEU:O	1:F:4108:MET:HB2	2.14	0.48
1:A:417:ARG:HG3	1:A:420:ARG:HH21	1.77	0.47
1:A:693:LEU:HD22	1:A:798:ILE:HD11	1.96	0.47
1:A:3122:LEU:H	1:A:3125:VAL:HB	1.79	0.47
1:A:3239:PRO:HB3	1:A:3301:PHE:CG	2.48	0.47
1:A:3772:VAL:O	1:A:3776:MET:HG3	2.14	0.47
1:C:1609:VAL:HG23	1:C:1620:VAL:HG22	1.95	0.47
1:E:802:PHE:O	1:E:1617:GLY:HA3	2.14	0.47
1:E:2774:ILE:HD12	1:E:2891:ILE:HD12	1.96	0.47
1:E:4112:THR:O	1:E:4116:THR:HG23	2.13	0.47
1:F:555:LEU:HD11	1:F:585:ALA:HB1	1.96	0.47
1:F:781:ASN:HB3	1:F:1466:THR:HG22	1.96	0.47
1:F:2472:ASP:OD2	1:F:2529:ARG:NE	2.47	0.47
1:F:2774:ILE:HD12	1:F:2891:ILE:HD12	1.96	0.47
1:F:2839:MET:HG3	1:F:2892:PHE:HZ	1.78	0.47
1:A:1429:SER:OG	1:A:1557:GLU:HB2	2.14	0.47
1:A:1706:LEU:O	1:A:1710:ILE:HG12	2.13	0.47
1:A:2405:MET:HE2	1:A:2407:LEU:H	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2727:SER:OG	1:A:2767:LYS:NZ	2.47	0.47
1:A:3392:GLU:OE1	1:A:3537:THR:OG1	2.31	0.47
1:A:3505:ARG:HB2	1:A:3551:LEU:HD22	1.95	0.47
1:A:4887:CYS:HA	3:A:5101:ATP:H2	1.79	0.47
1:C:626:ARG:O	1:C:630:HIS:ND1	2.47	0.47
1:C:1269:GLU:OE2	1:C:1293:GLN:NE2	2.30	0.47
1:C:2472:ASP:OD2	1:C:2529:ARG:NE	2.47	0.47
1:C:3324:LYS:HA	1:C:3327:LYS:HD2	1.95	0.47
1:C:4777:VAL:HG11	1:C:4816:MET:HG2	1.97	0.47
1:E:693:LEU:HD22	1:E:798:ILE:HD11	1.96	0.47
1:E:2618:LYS:O	1:E:2625:GLY:HA2	2.14	0.47
1:E:3397:MET:O	1:E:3401:VAL:HG23	2.13	0.47
1:E:4777:VAL:HG11	1:E:4816:MET:HG2	1.97	0.47
1:F:1436:GLN:NE2	1:F:1440:ASN:OD1	2.46	0.47
1:F:2727:SER:OG	1:F:2767:LYS:NZ	2.47	0.47
1:F:3041:ALA:HB1	1:F:3120:LEU:HB2	1.94	0.47
1:A:1113:MET:SD	1:A:1211:GLN:HB3	2.53	0.47
1:A:2175:VAL:HG12	1:A:2219:TYR:CZ	2.49	0.47
1:C:15:ARG:HB3	1:C:110:HIS:HB3	1.96	0.47
1:C:1436:GLN:NE2	1:C:1440:ASN:OD1	2.46	0.47
1:C:1920:ARG:NH1	1:C:2006:CYS:SG	2.87	0.47
1:C:2383:MET:O	1:C:2387:ILE:HG12	2.13	0.47
1:C:2878:ALA:HA	1:C:2881:LYS:HE3	1.95	0.47
1:E:15:ARG:HB3	1:E:110:HIS:HB3	1.97	0.47
1:E:70:GLU:OE1	1:E:122:ARG:NH2	2.48	0.47
1:E:781:ASN:HB3	1:E:1466:THR:HG22	1.96	0.47
1:E:2472:ASP:OD2	1:E:2529:ARG:NE	2.47	0.47
1:E:3071:MET:HE3	1:E:3135:SER:HA	1.96	0.47
1:E:4887:CYS:HA	3:E:5101:ATP:H2	1.79	0.47
1:F:626:ARG:O	1:F:630:HIS:ND1	2.47	0.47
1:F:1144:ARG:HB2	1:F:1192:PHE:CZ	2.49	0.47
1:F:3078:GLN:HB3	1:F:3085:GLN:HG3	1.96	0.47
1:A:1920:ARG:NH1	1:A:2006:CYS:SG	2.87	0.47
1:A:3425:ASN:ND2	1:A:3428:SER:HB3	2.30	0.47
1:A:4043:SER:HA	1:A:4076:THR:HA	1.95	0.47
1:A:4635:ASN:OD1	1:A:4703:LYS:NZ	2.38	0.47
1:C:1458:ASP:OD1	1:C:1459:LEU:N	2.48	0.47
1:C:3122:LEU:H	1:C:3125:VAL:HB	1.80	0.47
1:C:3425:ASN:ND2	1:C:3428:SER:HB3	2.30	0.47
1:E:4104:LEU:O	1:E:4108:MET:HB2	2.14	0.47
1:F:70:GLU:OE1	1:F:122:ARG:NH2	2.48	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:1444:GLY:HA3	1:F:1487:MET:HA	1.96	0.47
1:F:1972:ILE:HG13	1:F:3618:LEU:HB3	1.96	0.47
1:F:2383:MET:O	1:F:2387:ILE:HG12	2.13	0.47
1:A:626:ARG:O	1:A:630:HIS:ND1	2.47	0.47
1:A:2320:VAL:HG11	1:A:2418:ILE:HD12	1.97	0.47
1:A:2503:THR:O	1:A:2507:SER:N	2.35	0.47
1:A:3053:LYS:HG3	1:A:3057:ARG:NH1	2.29	0.47
1:C:802:PHE:O	1:C:1617:GLY:HA3	2.14	0.47
1:C:1429:SER:OG	1:C:1557:GLU:HB2	2.14	0.47
1:C:2430:ASP:O	1:C:2434:VAL:HG23	2.14	0.47
1:C:2566:ASP:O	1:C:2570:VAL:HG23	2.15	0.47
1:C:2774:ILE:HD12	1:C:2891:ILE:HD12	1.96	0.47
1:C:3852:ASP:OD1	1:C:3853:PHE:N	2.48	0.47
1:C:4887:CYS:HA	3:C:5101:ATP:H2	1.79	0.47
1:E:1932:VAL:HG13	1:E:3612:ARG:HH12	1.80	0.47
1:E:2321:ARG:O	1:E:2325:ARG:HG2	2.14	0.47
1:E:2506:LEU:HA	1:E:2506:LEU:HD12	1.62	0.47
1:E:2727:SER:OG	1:E:2767:LYS:NZ	2.47	0.47
1:E:3324:LYS:O	1:E:3328:LYS:HG2	2.15	0.47
1:F:712:GLU:HG2	1:F:838:ARG:HG2	1.96	0.47
1:F:1051:ARG:HG2	1:F:1055:ARG:HE	1.79	0.47
1:F:1920:ARG:NH1	1:F:2006:CYS:SG	2.87	0.47
1:A:802:PHE:O	1:A:1617:GLY:HA3	2.14	0.47
1:A:853:PRO:HG2	1:A:1209:VAL:HA	1.96	0.47
1:A:903:GLN:O	1:A:915:HIS:N	2.35	0.47
1:A:2566:ASP:O	1:A:2570:VAL:HG23	2.15	0.47
1:A:2767:LYS:HG2	1:A:2771:ARG:HH21	1.80	0.47
1:C:1708:ILE:O	1:C:1713:SER:HB3	2.13	0.47
1:C:2973:TYR:CE1	1:C:2979:LEU:HD21	2.50	0.47
1:C:4043:SER:HA	1:C:4076:THR:HA	1.95	0.47
1:C:4700:ILE:HD12	1:C:4705:GLN:HG3	1.96	0.47
1:E:1706:LEU:O	1:E:1710:ILE:HG12	2.13	0.47
1:E:2566:ASP:O	1:E:2570:VAL:HG23	2.15	0.47
1:F:2320:VAL:HG11	1:F:2418:ILE:HD12	1.97	0.47
1:F:2430:ASP:O	1:F:2434:VAL:HG23	2.14	0.47
1:F:2609:LEU:O	1:F:2613:TYR:HD1	1.98	0.47
1:F:3273:ASN:HA	1:F:3313:LEU:HD11	1.96	0.47
1:A:70:GLU:OE1	1:A:122:ARG:NH2	2.48	0.47
1:A:2321:ARG:O	1:A:2325:ARG:HG2	2.14	0.47
1:A:2672:ALA:O	1:A:2977:HIS:NE2	2.36	0.47
1:A:2878:ALA:HA	1:A:2881:LYS:HE3	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2925:LEU:O	1:A:2929:ILE:HG13	2.14	0.47
2:B:85:LEU:HD13	2:B:125:VAL:HG22	1.97	0.47
1:C:70:GLU:OE1	1:C:122:ARG:NH2	2.48	0.47
1:C:137:ARG:HA	1:C:137:ARG:NE	2.30	0.47
1:C:1051:ARG:HG2	1:C:1055:ARG:HE	1.79	0.47
1:C:2320:VAL:HG11	1:C:2418:ILE:HD12	1.97	0.47
1:C:2767:LYS:HG2	1:C:2771:ARG:HH21	1.80	0.47
1:C:3939:LEU:HD21	1:C:3980:MET:HE1	1.97	0.47
1:E:681:HIS:HA	1:E:751:THR:HG22	1.97	0.47
1:E:1051:ARG:HG2	1:E:1055:ARG:HE	1.79	0.47
1:E:1431:ARG:NH2	1:E:1507:GLU:OE1	2.47	0.47
1:E:1722:MET:HE2	1:E:1759:ARG:HG2	1.97	0.47
1:E:2320:VAL:HG11	1:E:2418:ILE:HD12	1.97	0.47
1:E:2767:LYS:HG2	1:E:2771:ARG:HH21	1.80	0.47
1:E:3852:ASP:OD1	1:E:3853:PHE:N	2.48	0.47
1:F:290:ARG:NH2	1:F:343:ARG:O	2.48	0.47
1:F:934:GLN:OE1	1:F:935:MET:HG2	2.15	0.47
1:F:1458:ASP:OD1	1:F:1459:LEU:N	2.48	0.47
1:F:1932:VAL:HG13	1:F:3612:ARG:HH12	1.80	0.47
1:F:2767:LYS:HG2	1:F:2771:ARG:HH21	1.80	0.47
1:F:2973:TYR:CE1	1:F:2979:LEU:HD21	2.50	0.47
1:F:3309:VAL:H	1:F:3378:TYR:HE2	1.62	0.47
1:F:3324:LYS:HA	1:F:3327:LYS:HD2	1.95	0.47
1:F:3392:GLU:OE1	1:F:3537:THR:OG1	2.31	0.47
1:F:3425:ASN:ND2	1:F:3428:SER:HB3	2.30	0.47
1:F:4777:VAL:HG11	1:F:4816:MET:HG2	1.96	0.47
1:A:2973:TYR:CE1	1:A:2979:LEU:HD21	2.50	0.47
1:A:3944:VAL:HG13	1:A:4005:SER:HB3	1.96	0.47
1:C:2727:SER:OG	1:C:2767:LYS:NZ	2.47	0.47
1:C:3241:LEU:HA	1:C:3244:TYR:HB2	1.97	0.47
1:C:3273:ASN:HA	1:C:3313:LEU:HD11	1.96	0.47
1:C:3392:GLU:OE1	1:C:3537:THR:OG1	2.31	0.47
1:C:3944:VAL:HG13	1:C:4005:SER:HB3	1.96	0.47
1:E:626:ARG:O	1:E:630:HIS:ND1	2.47	0.47
1:E:692:HIS:HB3	1:E:795:SER:HB2	1.96	0.47
1:E:3159:ALA:HB2	1:E:3240:MET:CE	2.45	0.47
1:E:3234:MET:O	1:E:3238:LEU:HB3	2.15	0.47
1:E:3944:VAL:HG13	1:E:4005:SER:HB3	1.96	0.47
1:F:137:ARG:HA	1:F:137:ARG:NE	2.30	0.47
1:F:2455:MET:SD	1:F:2456:SER:N	2.88	0.47
1:F:3241:LEU:HA	1:F:3244:TYR:HB2	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:3964:ILE:O	1:F:3968:LYS:HG3	2.15	0.47
2:G:85:LEU:HD13	2:G:125:VAL:HG22	1.97	0.47
2:I:85:LEU:HD13	2:I:125:VAL:HG22	1.96	0.47
1:A:915:HIS:CE1	1:A:917:CYS:HB3	2.50	0.47
1:A:2455:MET:SD	1:A:2456:SER:N	2.88	0.47
1:A:2998:LYS:HG3	1:A:3002:MET:CE	2.45	0.47
1:A:3071:MET:HE3	1:A:3135:SER:HA	1.97	0.47
1:A:3852:ASP:OD1	1:A:3853:PHE:N	2.48	0.47
1:A:4777:VAL:HG11	1:A:4816:MET:HG2	1.97	0.47
1:C:915:HIS:CE1	1:C:917:CYS:HB3	2.50	0.47
1:C:1047:LYS:HB3	1:C:1051:ARG:HH12	1.79	0.47
1:C:1932:VAL:HG13	1:C:3612:ARG:HH12	1.80	0.47
1:C:3250:GLU:O	1:C:3256:HIS:NE2	2.47	0.47
1:C:3393:GLU:HG3	1:C:3397:MET:CE	2.45	0.47
1:E:1649:GLU:OE1	1:E:1649:GLU:N	2.36	0.47
1:E:1920:ARG:NH1	1:E:2006:CYS:SG	2.87	0.47
1:E:4882:ASP:O	1:E:4886:LYS:HG2	2.15	0.47
1:F:904:TYR:HB3	1:F:918:LEU:HD23	1.95	0.47
1:F:1047:LYS:HB3	1:F:1051:ARG:HH12	1.79	0.47
1:F:3234:MET:O	1:F:3238:LEU:HB3	2.15	0.47
1:A:290:ARG:NH2	1:A:343:ARG:O	2.48	0.47
1:A:2774:ILE:HD12	1:A:2891:ILE:HD12	1.96	0.47
1:A:3273:ASN:HA	1:A:3313:LEU:HD11	1.96	0.47
1:A:3536:ARG:HH22	1:A:3540:PRO:HG3	1.80	0.47
1:C:468:GLU:OE1	1:C:468:GLU:N	2.41	0.47
1:C:853:PRO:HG2	1:C:1209:VAL:HA	1.96	0.47
1:C:1245:ARG:HD2	1:C:1694:TYR:CZ	2.50	0.47
1:C:2526:LEU:HB3	1:C:2534:PHE:CE1	2.50	0.47
1:C:4745:ILE:HD11	1:F:4775:VAL:HG21	1.97	0.47
1:E:290:ARG:NH2	1:E:343:ARG:O	2.48	0.47
1:E:2175:VAL:HG12	1:E:2219:TYR:CZ	2.49	0.47
1:E:3309:VAL:H	1:E:3378:TYR:HE2	1.62	0.47
1:E:3536:ARG:HH22	1:E:3540:PRO:HG3	1.80	0.47
1:E:3964:ILE:O	1:E:3968:LYS:HG3	2.15	0.47
1:F:692:HIS:HB3	1:F:795:SER:HB2	1.96	0.47
1:F:2175:VAL:HG12	1:F:2219:TYR:CZ	2.50	0.47
1:F:3250:GLU:O	1:F:3256:HIS:NE2	2.47	0.47
1:F:3536:ARG:HH22	1:F:3540:PRO:HG3	1.80	0.47
1:F:3944:VAL:HG13	1:F:4005:SER:HB3	1.96	0.47
1:A:681:HIS:HA	1:A:751:THR:HG22	1.97	0.46
1:A:1928:SER:HG	1:A:3619:PHE:HD1	1.60	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2430:ASP:O	1:A:2434:VAL:HG23	2.14	0.46
1:A:2433:GLY:O	1:A:2437:ILE:HG12	2.16	0.46
1:A:3159:ALA:HB2	1:A:3240:MET:CE	2.45	0.46
1:A:4104:LEU:O	1:A:4108:MET:HB2	2.14	0.46
1:C:1444:GLY:HA3	1:C:1487:MET:HA	1.96	0.46
1:C:2998:LYS:HG3	1:C:3002:MET:CE	2.45	0.46
1:C:3309:VAL:H	1:C:3378:TYR:HE2	1.63	0.46
1:C:3964:ILE:O	1:C:3968:LYS:HG3	2.15	0.46
1:E:712:GLU:HG2	1:E:838:ARG:HG2	1.96	0.46
1:E:2998:LYS:HG3	1:E:3002:MET:CE	2.45	0.46
1:E:3078:GLN:HB3	1:E:3085:GLN:HG3	1.96	0.46
1:F:853:PRO:HG2	1:F:1209:VAL:HA	1.96	0.46
1:F:4700:ILE:HD12	1:F:4705:GLN:HG3	1.96	0.46
1:A:2526:LEU:HB3	1:A:2534:PHE:CE1	2.50	0.46
1:A:2609:LEU:O	1:A:2613:TYR:HD1	1.98	0.46
1:A:3250:GLU:O	1:A:3256:HIS:NE2	2.47	0.46
1:A:3324:LYS:O	1:A:3328:LYS:HG2	2.15	0.46
1:A:3964:ILE:O	1:A:3968:LYS:HG3	2.15	0.46
1:C:308:LEU:HD21	1:C:370:LEU:HD12	1.97	0.46
1:C:1117:TRP:HB3	1:C:1201:PHE:HB3	1.98	0.46
1:C:1431:ARG:NH2	1:C:1507:GLU:OE1	2.47	0.46
1:C:1801:LYS:HE3	1:C:1801:LYS:HB3	1.71	0.46
1:C:1972:ILE:HG13	1:C:3618:LEU:HB3	1.96	0.46
1:E:555:LEU:HD11	1:E:585:ALA:HB1	1.96	0.46
1:E:563:GLU:OE1	1:E:563:GLU:N	2.39	0.46
1:E:2433:GLY:O	1:E:2437:ILE:HG12	2.16	0.46
1:E:3273:ASN:HA	1:E:3313:LEU:HD11	1.96	0.46
1:F:1086:ARG:NH1	1:F:1254:ARG:HH21	2.13	0.46
1:F:3245:MET:O	1:F:3249:TRP:HB2	2.15	0.46
1:A:15:ARG:HB3	1:A:110:HIS:HB3	1.97	0.46
1:A:563:GLU:OE1	1:A:563:GLU:N	2.39	0.46
1:A:1117:TRP:HB3	1:A:1201:PHE:HB3	1.97	0.46
1:A:1444:GLY:HA3	1:A:1487:MET:HA	1.96	0.46
1:A:3555:ASN:O	1:A:3559:HIS:ND1	2.41	0.46
1:C:290:ARG:NH2	1:C:343:ARG:O	2.48	0.46
1:C:3324:LYS:O	1:C:3328:LYS:HG2	2.15	0.46
2:D:34:MET:O	2:D:50:THR:HG23	2.16	0.46
1:E:1086:ARG:NH1	1:E:1254:ARG:HH21	2.13	0.46
1:E:2325:ARG:HA	1:E:2325:ARG:HD3	1.73	0.46
1:E:2455:MET:SD	1:E:2456:SER:N	2.88	0.46
1:E:2973:TYR:CE1	1:E:2979:LEU:HD21	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:3245:MET:O	1:E:3249:TRP:HB2	2.16	0.46
1:F:681:HIS:HA	1:F:751:THR:HG22	1.97	0.46
1:F:1117:TRP:HB3	1:F:1201:PHE:HB3	1.97	0.46
1:F:2998:LYS:HG3	1:F:3002:MET:CE	2.45	0.46
1:F:3319:LEU:HB2	1:F:3320:PRO:HD3	1.97	0.46
1:F:3324:LYS:O	1:F:3328:LYS:HG2	2.15	0.46
1:F:3397:MET:O	1:F:3401:VAL:HG23	2.13	0.46
1:F:3555:ASN:O	1:F:3559:HIS:ND1	2.41	0.46
1:A:1458:ASP:OD1	1:A:1459:LEU:N	2.48	0.46
1:A:3234:MET:O	1:A:3238:LEU:HB3	2.15	0.46
1:A:3393:GLU:HG3	1:A:3397:MET:CE	2.45	0.46
1:A:4775:VAL:HG21	1:E:4745:ILE:HD11	1.97	0.46
2:B:34:MET:O	2:B:50:THR:HG23	2.16	0.46
1:C:375:GLN:NE2	1:C:390:LYS:HB2	2.31	0.46
1:C:1722:MET:HE2	1:C:1759:ARG:HG2	1.97	0.46
1:C:2455:MET:SD	1:C:2456:SER:N	2.88	0.46
1:C:3289:ILE:HD12	1:C:3291:GLU:H	1.81	0.46
1:C:4882:ASP:O	1:C:4886:LYS:HG2	2.15	0.46
1:E:673:TRP:HD1	1:E:759:LEU:HD12	1.81	0.46
1:E:904:TYR:HB3	1:E:918:LEU:HD23	1.95	0.46
1:E:934:GLN:OE1	1:E:935:MET:HG2	2.15	0.46
1:E:2497:ALA:O	1:E:2500:SER:OG	2.29	0.46
1:E:2526:LEU:HB3	1:E:2534:PHE:HE1	1.80	0.46
1:E:2609:LEU:O	1:E:2613:TYR:HD1	1.98	0.46
1:E:4151:ILE:HD12	1:E:4156:ARG:HH21	1.81	0.46
1:F:2526:LEU:HB3	1:F:2534:PHE:CE1	2.50	0.46
1:F:3159:ALA:HB2	1:F:3240:MET:CE	2.45	0.46
2:G:52:THR:HG21	2:G:102:ASN:HA	1.98	0.46
1:A:308:LEU:HD21	1:A:370:LEU:HD12	1.97	0.46
1:A:3241:LEU:HA	1:A:3244:TYR:HB2	1.97	0.46
1:A:4882:ASP:O	1:A:4886:LYS:HG2	2.15	0.46
1:C:887:GLU:OE1	1:C:890:HIS:NE2	2.49	0.46
1:C:934:GLN:OE1	1:C:935:MET:HG2	2.15	0.46
1:C:1272:ARG:NH2	1:C:1583:CYS:SG	2.83	0.46
1:C:2321:ARG:O	1:C:2325:ARG:HG2	2.14	0.46
1:C:3536:ARG:HH22	1:C:3540:PRO:HG3	1.80	0.46
1:C:3717:GLU:O	1:C:3721:GLN:HG2	2.16	0.46
1:C:3920:THR:HG22	1:C:3980:MET:HA	1.98	0.46
1:E:16:THR:HB	1:E:110:HIS:HA	1.98	0.46
1:E:853:PRO:HG2	1:E:1209:VAL:HA	1.96	0.46
1:E:1458:ASP:OD1	1:E:1459:LEU:N	2.48	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:308:LEU:HD21	1:F:370:LEU:HD12	1.97	0.46
1:F:887:GLU:OE1	1:F:890:HIS:NE2	2.49	0.46
1:F:1458:ASP:HB3	1:F:1461:ARG:HE	1.80	0.46
1:F:3393:GLU:HG3	1:F:3397:MET:CE	2.45	0.46
1:F:3852:ASP:OD1	1:F:3853:PHE:N	2.48	0.46
1:F:4887:CYS:HA	3:F:5101:ATP:H2	1.79	0.46
2:I:52:THR:HG21	2:I:102:ASN:HA	1.98	0.46
1:C:681:HIS:HA	1:C:751:THR:HG22	1.97	0.46
1:C:846:TYR:HE2	1:C:1218:GLY:H	1.64	0.46
1:C:2432:VAL:O	1:C:2435:ILE:HG22	2.16	0.46
1:C:2526:LEU:HB3	1:C:2534:PHE:HE1	1.80	0.46
1:C:2609:LEU:O	1:C:2613:TYR:HD1	1.98	0.46
1:C:4104:LEU:O	1:C:4108:MET:HB2	2.15	0.46
2:D:85:LEU:HD13	2:D:125:VAL:HG22	1.97	0.46
1:E:228:LEU:HA	1:E:356:TYR:CD2	2.50	0.46
1:E:375:GLN:NE2	1:E:390:LYS:HB2	2.31	0.46
1:E:2526:LEU:HB3	1:E:2534:PHE:CE1	2.50	0.46
1:E:3108:PHE:N	1:E:3108:PHE:CD1	2.83	0.46
1:E:3220:LEU:HD22	1:E:3225:ILE:HD13	1.98	0.46
1:F:228:LEU:HA	1:F:356:TYR:CD2	2.50	0.46
1:F:846:TYR:HE2	1:F:1218:GLY:H	1.64	0.46
1:F:915:HIS:CE1	1:F:917:CYS:HB3	2.50	0.46
1:F:3122:LEU:H	1:F:3125:VAL:HB	1.80	0.46
1:F:4894:ASN:HD22	1:F:4894:ASN:C	2.19	0.46
1:A:228:LEU:HA	1:A:356:TYR:CD2	2.50	0.46
1:A:375:GLN:NE2	1:A:390:LYS:HB2	2.31	0.46
1:A:1932:VAL:HG13	1:A:3612:ARG:HH12	1.80	0.46
1:A:2441:MET:HE2	1:A:2506:LEU:HD11	1.97	0.46
1:C:3159:ALA:HB2	1:C:3240:MET:CE	2.45	0.46
1:E:137:ARG:HA	1:E:137:ARG:NE	2.30	0.46
1:E:915:HIS:CE1	1:E:917:CYS:HB3	2.50	0.46
1:E:1482:ARG:HG2	1:E:1535:GLU:OE2	2.16	0.46
1:E:2778:LEU:HD23	1:E:2781:MET:HE3	1.98	0.46
1:E:3393:GLU:HG3	1:E:3397:MET:CE	2.45	0.46
1:E:4914:LEU:H	3:E:5101:ATP:HN61	1.64	0.46
1:F:15:ARG:HB3	1:F:110:HIS:HB3	1.97	0.46
1:F:1245:ARG:HD2	1:F:1694:TYR:CZ	2.50	0.46
1:F:2731:TRP:O	1:F:2735:LYS:HG2	2.16	0.46
1:F:2996:SER:O	1:F:3000:LYS:HG3	2.16	0.46
1:A:555:LEU:HD11	1:A:585:ALA:HB1	1.96	0.46
1:A:1086:ARG:NH1	1:A:1254:ARG:HH21	2.13	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1245:ARG:HD2	1:A:1694:TYR:CZ	2.50	0.46
1:A:3220:LEU:HD22	1:A:3225:ILE:HD13	1.98	0.46
1:A:3319:LEU:HB2	1:A:3320:PRO:HD3	1.97	0.46
1:C:322:ALA:HB1	1:C:327:THR:HG21	1.98	0.46
1:C:1458:ASP:HB3	1:C:1461:ARG:HE	1.80	0.46
1:C:3053:LYS:HG3	1:C:3057:ARG:NH1	2.29	0.46
1:C:3117:GLY:HA2	1:C:3121:ILE:HD13	1.98	0.46
1:E:1117:TRP:HB3	1:E:1201:PHE:HB3	1.98	0.46
1:E:2158:PRO:HA	1:E:2161:MET:HB2	1.98	0.46
1:E:3122:LEU:H	1:E:3125:VAL:HB	1.80	0.46
1:E:3250:GLU:O	1:E:3256:HIS:NE2	2.47	0.46
1:F:2566:ASP:O	1:F:2570:VAL:HG23	2.14	0.46
1:F:3220:LEU:HD22	1:F:3225:ILE:HD13	1.98	0.46
1:F:3717:GLU:O	1:F:3721:GLN:HG2	2.16	0.46
2:G:34:MET:O	2:G:50:THR:HG23	2.16	0.46
1:A:137:ARG:HA	1:A:137:ARG:NE	2.30	0.46
1:A:375:GLN:HE21	1:A:390:LYS:HB2	1.80	0.46
1:A:468:GLU:OE1	1:A:468:GLU:N	2.41	0.46
1:A:2441:MET:CE	1:A:2506:LEU:HD11	2.46	0.46
1:A:2731:TRP:O	1:A:2735:LYS:HG2	2.16	0.46
1:A:3078:GLN:HB3	1:A:3085:GLN:HG3	1.96	0.46
1:A:3920:THR:HG22	1:A:3980:MET:HA	1.98	0.46
1:C:16:THR:HB	1:C:110:HIS:HA	1.98	0.46
1:C:1144:ARG:HB2	1:C:1192:PHE:CZ	2.49	0.46
1:C:2433:GLY:O	1:C:2437:ILE:HG12	2.16	0.46
1:C:2996:SER:O	1:C:3000:LYS:HG3	2.16	0.46
1:C:4151:ILE:HD12	1:C:4156:ARG:HH21	1.81	0.46
1:E:375:GLN:HE21	1:E:390:LYS:HB2	1.80	0.46
1:E:1483:SER:HB3	1:E:1486:TYR:CE2	2.51	0.46
1:E:3241:LEU:HA	1:E:3244:TYR:HB2	1.97	0.46
1:E:4000:ASP:O	1:E:4004:GLU:HG2	2.16	0.46
1:F:2526:LEU:HB3	1:F:2534:PHE:HE1	1.80	0.46
1:F:2621:CYS:SG	1:F:2622:LEU:N	2.89	0.46
1:A:254:GLU:O	1:A:258:ARG:HG3	2.16	0.46
1:A:2158:PRO:HA	1:A:2161:MET:HB2	1.98	0.46
1:A:2484:LEU:HD13	1:A:2540:HIS:ND1	2.32	0.46
1:A:2526:LEU:HB3	1:A:2534:PHE:HE1	1.80	0.46
1:A:2614:GLU:HG3	1:A:2670:ALA:HB2	1.98	0.46
1:A:3122:LEU:HA	1:A:3126:GLN:HG3	1.98	0.46
1:A:3249:TRP:CZ3	1:A:3308:LYS:HD3	2.51	0.46
1:A:3717:GLU:O	1:A:3721:GLN:HG2	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:309:MET:N	1:C:309:MET:SD	2.89	0.46
1:C:1482:ARG:HG2	1:C:1535:GLU:OE2	2.16	0.46
1:C:3234:MET:O	1:C:3238:LEU:HB3	2.15	0.46
1:C:4044:LYS:HZ1	1:C:4071:THR:HA	1.81	0.46
1:C:4914:LEU:H	3:C:5101:ATP:HN61	1.64	0.46
1:E:887:GLU:OE1	1:E:890:HIS:NE2	2.49	0.46
1:E:986:ILE:HG21	1:E:1059:GLY:HA2	1.98	0.46
1:E:2405:MET:CE	1:E:2407:LEU:H	2.29	0.46
1:E:3831:ASP:OD1	1:E:3831:ASP:N	2.49	0.46
1:F:1482:ARG:HG2	1:F:1535:GLU:OE2	2.16	0.46
1:F:2405:MET:CE	1:F:2407:LEU:H	2.29	0.46
1:F:3854:GLN:NE2	1:F:3921:GLU:O	2.49	0.46
2:G:105:ASN:ND2	2:G:111:ASN:HB2	2.31	0.46
1:A:1458:ASP:HB3	1:A:1461:ARG:HE	1.80	0.45
1:A:1577:LYS:HE2	1:A:1577:LYS:HA	1.98	0.45
1:A:1903:LEU:O	1:A:1907:LEU:HG	2.16	0.45
1:A:2496:ARG:NH2	1:A:2546:SER:OG	2.49	0.45
1:A:2506:LEU:HD12	1:A:2506:LEU:HA	1.62	0.45
1:A:3117:GLY:HA2	1:A:3121:ILE:HD13	1.98	0.45
1:A:3934:LEU:HD23	1:A:3939:LEU:HD22	1.98	0.45
1:A:4000:ASP:O	1:A:4004:GLU:HG2	2.16	0.45
1:A:4151:ILE:HD12	1:A:4156:ARG:HH21	1.81	0.45
1:C:1483:SER:HB3	1:C:1486:TYR:CE2	2.51	0.45
1:C:1903:LEU:O	1:C:1907:LEU:HG	2.16	0.45
1:C:2614:GLU:HG3	1:C:2670:ALA:HB2	1.98	0.45
1:C:2621:CYS:SG	1:C:2622:LEU:N	2.89	0.45
1:C:2731:TRP:O	1:C:2735:LYS:HG2	2.16	0.45
1:C:2977:HIS:O	1:C:3440:LYS:HD3	2.16	0.45
1:C:3122:LEU:HA	1:C:3126:GLN:HG3	1.98	0.45
1:C:3220:LEU:HD22	1:C:3225:ILE:HD13	1.98	0.45
1:E:1245:ARG:HD2	1:E:1694:TYR:CZ	2.50	0.45
1:E:1272:ARG:HH12	1:E:1585:PRO:HA	1.82	0.45
1:E:1903:LEU:O	1:E:1907:LEU:HG	2.16	0.45
1:F:1577:LYS:HE2	1:F:1577:LYS:HA	1.98	0.45
1:F:2496:ARG:NH2	1:F:2546:SER:OG	2.49	0.45
1:F:4151:ILE:HD12	1:F:4156:ARG:HH21	1.81	0.45
1:F:4882:ASP:O	1:F:4886:LYS:HG2	2.15	0.45
1:F:4914:LEU:H	3:F:5101:ATP:HN61	1.64	0.45
2:I:34:MET:O	2:I:50:THR:HG23	2.16	0.45
1:A:887:GLU:OE1	1:A:890:HIS:NE2	2.49	0.45
1:A:934:GLN:OE1	1:A:935:MET:HG2	2.15	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2621:CYS:SG	1:A:2622:LEU:N	2.89	0.45
1:A:3000:LYS:HB2	1:A:3043:THR:HG21	1.99	0.45
1:C:1086:ARG:NH1	1:C:1254:ARG:HH21	2.13	0.45
1:C:2065:MET:HG3	1:C:2083:MET:HG2	1.98	0.45
1:E:309:MET:N	1:E:309:MET:SD	2.89	0.45
1:E:846:TYR:HE2	1:E:1218:GLY:H	1.64	0.45
1:E:1801:LYS:HE3	1:E:1801:LYS:HB3	1.71	0.45
1:E:3319:LEU:HB2	1:E:3320:PRO:HD3	1.97	0.45
1:E:3425:ASN:ND2	1:E:3428:SER:HB3	2.30	0.45
1:E:4017:ASP:OD1	1:E:4124:VAL:HG13	2.17	0.45
1:F:673:TRP:HD1	1:F:759:LEU:HD12	1.81	0.45
1:F:1903:LEU:O	1:F:1907:LEU:HG	2.16	0.45
1:F:2433:GLY:O	1:F:2437:ILE:HG12	2.16	0.45
1:F:3010:LEU:O	1:F:3014:VAL:HG23	2.17	0.45
1:F:3122:LEU:HA	1:F:3126:GLN:HG3	1.98	0.45
1:A:322:ALA:HB1	1:A:327:THR:HG21	1.98	0.45
1:A:912:LYS:HB2	1:A:914:GLN:HG2	1.99	0.45
1:A:986:ILE:HG21	1:A:1059:GLY:HA2	1.98	0.45
1:A:1272:ARG:HH12	1:A:1585:PRO:HA	1.81	0.45
1:A:3309:VAL:H	1:A:3378:TYR:HE2	1.62	0.45
1:A:4017:ASP:OD1	1:A:4124:VAL:HG13	2.17	0.45
1:C:228:LEU:HA	1:C:356:TYR:CD2	2.50	0.45
1:C:2680:MET:HA	1:C:2680:MET:CE	2.46	0.45
1:C:3736:ALA:HB1	1:C:3776:MET:HG2	1.98	0.45
1:C:3854:GLN:NE2	1:C:3921:GLU:O	2.49	0.45
1:E:2614:GLU:HG3	1:E:2670:ALA:HB2	1.98	0.45
1:E:2731:TRP:O	1:E:2735:LYS:HG2	2.16	0.45
1:E:3000:LYS:HB2	1:E:3043:THR:HG21	1.99	0.45
1:E:3030:ASN:HA	1:E:3033:HIS:HD2	1.81	0.45
1:F:16:THR:HB	1:F:110:HIS:HA	1.98	0.45
1:F:2352:ILE:HD13	1:F:2358:ARG:HB3	1.98	0.45
1:F:2441:MET:CE	1:F:2506:LEU:HD11	2.46	0.45
1:F:3289:ILE:HD12	1:F:3291:GLU:H	1.81	0.45
1:F:3736:ALA:HB1	1:F:3776:MET:HG2	1.98	0.45
1:A:673:TRP:HD1	1:A:759:LEU:HD12	1.81	0.45
1:A:2233:MET:O	1:A:2296:ARG:NH2	2.48	0.45
1:C:169:ARG:HD2	1:C:176:ARG:HH12	1.82	0.45
1:C:986:ILE:HG21	1:C:1059:GLY:HA2	1.98	0.45
1:C:1576:HIS:CD2	1:C:1577:LYS:HG2	2.51	0.45
1:E:308:LEU:HD21	1:E:370:LEU:HD12	1.97	0.45
1:E:912:LYS:HB2	1:E:914:GLN:HG2	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:2352:ILE:HD13	1:E:2358:ARG:HB3	1.98	0.45
1:F:322:ALA:HB1	1:F:327:THR:HG21	1.98	0.45
1:F:1174:MET:CB	1:F:1190:LEU:HA	2.47	0.45
1:F:3000:LYS:HB2	1:F:3043:THR:HG21	1.99	0.45
1:A:2432:VAL:O	1:A:2435:ILE:HG22	2.16	0.45
1:A:2977:HIS:O	1:A:3440:LYS:HD3	2.16	0.45
1:A:3010:LEU:O	1:A:3014:VAL:HG23	2.16	0.45
1:A:3108:PHE:N	1:A:3108:PHE:CD1	2.83	0.45
1:C:2441:MET:CE	1:C:2506:LEU:HD11	2.46	0.45
1:C:2496:ARG:NH2	1:C:2546:SER:OG	2.49	0.45
1:C:3383:TRP:CH2	1:C:3394:LEU:HD23	2.52	0.45
1:C:4183:GLU:HG2	1:C:4186:GLU:HB3	1.98	0.45
1:E:436:LEU:HD21	1:E:518:ALA:HB2	1.99	0.45
1:E:1576:HIS:CD2	1:E:1577:LYS:HG2	2.51	0.45
1:E:2065:MET:HG3	1:E:2083:MET:HG2	1.98	0.45
1:E:2432:VAL:O	1:E:2435:ILE:HG22	2.16	0.45
1:E:2680:MET:CE	1:E:2680:MET:HA	2.46	0.45
1:E:3010:LEU:O	1:E:3014:VAL:HG23	2.17	0.45
1:E:3249:TRP:CZ3	1:E:3308:LYS:HD3	2.51	0.45
1:E:3289:ILE:HD12	1:E:3291:GLU:H	1.81	0.45
1:E:3717:GLU:O	1:E:3721:GLN:HG2	2.16	0.45
1:F:1272:ARG:HH12	1:F:1585:PRO:HA	1.81	0.45
1:F:1483:SER:HB3	1:F:1486:TYR:CE2	2.51	0.45
1:F:2735:LYS:HB3	1:F:2740:TRP:HB2	1.99	0.45
1:F:3327:LYS:O	1:F:3331:MET:HG3	2.16	0.45
1:F:3920:THR:HG22	1:F:3980:MET:HA	1.98	0.45
1:A:241:MET:HE2	1:A:241:MET:HB2	1.78	0.45
1:A:1482:ARG:HG2	1:A:1535:GLU:OE2	2.16	0.45
1:A:1576:HIS:CD2	1:A:1577:LYS:HG2	2.51	0.45
1:A:2680:MET:HA	1:A:2680:MET:CE	2.46	0.45
2:B:119:GLN:OE1	2:B:119:GLN:N	2.50	0.45
1:C:254:GLU:O	1:C:258:ARG:HG3	2.16	0.45
1:C:563:GLU:OE1	1:C:563:GLU:N	2.39	0.45
1:C:912:LYS:HB2	1:C:914:GLN:HG2	1.98	0.45
1:C:1303:ARG:O	1:C:1590:GLN:N	2.38	0.45
1:C:2423:ARG:NH2	1:C:2475:TYR:O	2.44	0.45
1:C:3065:GLU:HG2	1:C:3069:LYS:HE3	1.99	0.45
1:C:3549:ARG:O	1:C:3553:ILE:HG12	2.17	0.45
1:C:3831:ASP:N	1:C:3831:ASP:OD1	2.49	0.45
1:E:1458:ASP:HB3	1:E:1461:ARG:HE	1.80	0.45
1:E:2441:MET:CE	1:E:2506:LEU:HD11	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:2484:LEU:HD13	1:E:2540:HIS:ND1	2.32	0.45
1:E:2977:HIS:O	1:E:3440:LYS:HD3	2.16	0.45
1:E:4579:THR:HG1	1:E:4732:HIS:CD2	2.34	0.45
1:E:4775:VAL:HG21	1:F:4745:ILE:HD11	1.98	0.45
1:F:375:GLN:HE21	1:F:390:LYS:HB2	1.80	0.45
1:F:2432:VAL:O	1:F:2435:ILE:HG22	2.16	0.45
1:F:2540:HIS:HB3	1:F:2543:LEU:HD23	1.99	0.45
1:F:2680:MET:HA	1:F:2680:MET:CE	2.46	0.45
1:F:3108:PHE:N	1:F:3108:PHE:CD1	2.83	0.45
1:F:3831:ASP:N	1:F:3831:ASP:OD1	2.49	0.45
1:F:3934:LEU:HD23	1:F:3939:LEU:HD22	1.98	0.45
1:F:4000:ASP:O	1:F:4004:GLU:HG2	2.16	0.45
1:A:356:TYR:CD1	1:A:407:ARG:HG2	2.52	0.45
1:A:898:ILE:HG21	1:A:973:THR:HA	1.99	0.45
1:A:1483:SER:HB3	1:A:1486:TYR:CE2	2.51	0.45
1:A:2065:MET:HE1	1:A:2086:LEU:HD23	1.99	0.45
1:A:2264:VAL:HG21	1:A:2300:PHE:HE2	1.82	0.45
1:A:2464:LYS:HB3	1:A:2518:TYR:CE1	2.52	0.45
1:A:3030:ASN:HA	1:A:3033:HIS:HD2	1.81	0.45
1:A:3736:ALA:HB1	1:A:3776:MET:HG2	1.98	0.45
1:A:4169:ARG:NH2	3:A:5101:ATP:O1G	2.50	0.45
1:A:4183:GLU:HG2	1:A:4186:GLU:HB3	1.99	0.45
1:C:295:PHE:HE1	1:C:297:LEU:HG	1.82	0.45
1:C:1471:ASP:HB2	1:C:1477:HIS:CE1	2.52	0.45
1:C:2405:MET:CE	1:C:2407:LEU:H	2.29	0.45
1:C:2484:LEU:HD13	1:C:2540:HIS:ND1	2.32	0.45
1:C:2735:LYS:HB3	1:C:2740:TRP:HB2	1.99	0.45
1:C:3097:THR:HG21	1:C:3146:TYR:CE2	2.52	0.45
1:C:3108:PHE:N	1:C:3108:PHE:CD1	2.83	0.45
1:C:3934:LEU:HD23	1:C:3939:LEU:HD22	1.97	0.45
1:C:4000:ASP:O	1:C:4004:GLU:HG2	2.16	0.45
1:C:4894:ASN:HD22	1:C:4894:ASN:C	2.19	0.45
2:D:52:THR:HG21	2:D:102:ASN:HA	1.98	0.45
1:E:898:ILE:HG21	1:E:973:THR:HA	1.99	0.45
1:E:3122:LEU:HA	1:E:3126:GLN:HG3	1.98	0.45
1:E:3327:LYS:O	1:E:3331:MET:HG3	2.16	0.45
1:E:3854:GLN:NE2	1:E:3921:GLU:O	2.49	0.45
1:E:3920:THR:HG22	1:E:3980:MET:HA	1.98	0.45
1:E:4169:ARG:NH2	3:E:5101:ATP:O1G	2.50	0.45
1:E:4941:LYS:HE2	1:E:4941:LYS:HB3	1.82	0.45
1:F:375:GLN:NE2	1:F:390:LYS:HB2	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:2158:PRO:HA	1:F:2161:MET:HB2	1.98	0.45
1:F:2614:GLU:HG3	1:F:2670:ALA:HB2	1.98	0.45
1:F:3097:THR:HG21	1:F:3146:TYR:CE2	2.52	0.45
1:A:593:HIS:O	1:A:597:ILE:HG13	2.17	0.45
1:A:3245:MET:O	1:A:3249:TRP:HB2	2.16	0.45
1:A:3289:ILE:HD12	1:A:3291:GLU:H	1.81	0.45
1:A:3327:LYS:O	1:A:3331:MET:HG3	2.16	0.45
1:C:2352:ILE:HD13	1:C:2358:ARG:HB3	1.98	0.45
1:C:3000:LYS:HB2	1:C:3043:THR:HG21	1.99	0.45
1:E:2442:PRO:HA	1:E:2454:ASP:CG	2.37	0.45
1:E:2621:CYS:SG	1:E:2622:LEU:N	2.89	0.45
1:E:2996:SER:O	1:E:3000:LYS:HG3	2.16	0.45
1:E:3549:ARG:O	1:E:3553:ILE:HG12	2.17	0.45
1:E:3736:ALA:HB1	1:E:3776:MET:HG2	1.98	0.45
1:E:3934:LEU:HD23	1:E:3939:LEU:HD22	1.98	0.45
1:F:169:ARG:HD2	1:F:176:ARG:HH12	1.82	0.45
1:F:309:MET:N	1:F:309:MET:SD	2.89	0.45
1:F:1576:HIS:CD2	1:F:1577:LYS:HG2	2.51	0.45
1:F:2264:VAL:HG21	1:F:2300:PHE:HE2	1.82	0.45
1:F:3850:ASN:ND2	1:F:3853:PHE:HB2	2.32	0.45
2:I:105:ASN:ND2	2:I:111:ASN:HB2	2.31	0.45
1:A:16:THR:HB	1:A:110:HIS:HA	1.98	0.45
1:A:436:LEU:HD21	1:A:518:ALA:HB2	1.99	0.45
1:A:846:TYR:HE2	1:A:1218:GLY:H	1.64	0.45
1:A:1722:MET:HE2	1:A:1759:ARG:HG2	1.99	0.45
1:A:1786:ASP:OD1	1:A:1786:ASP:N	2.50	0.45
1:A:2405:MET:CE	1:A:2407:LEU:H	2.29	0.45
1:A:2459:PHE:HE1	1:A:2464:LYS:HG3	1.82	0.45
1:A:2996:SER:O	1:A:3000:LYS:HG3	2.16	0.45
1:A:4914:LEU:H	3:A:5101:ATP:HN61	1.64	0.45
2:B:52:THR:HG21	2:B:102:ASN:HA	1.98	0.45
2:B:105:ASN:ND2	2:B:111:ASN:HB2	2.31	0.45
1:C:673:TRP:HD1	1:C:759:LEU:HD12	1.81	0.45
1:C:1786:ASP:OD1	1:C:1786:ASP:N	2.50	0.45
1:C:2464:LYS:HB3	1:C:2518:TYR:CE1	2.52	0.45
1:C:3249:TRP:CZ3	1:C:3308:LYS:HD3	2.51	0.45
1:C:3858:ARG:HG2	1:C:3859:THR:HG23	1.99	0.45
1:E:254:GLU:O	1:E:258:ARG:HG3	2.16	0.45
1:E:2496:ARG:NH2	1:E:2546:SER:OG	2.49	0.45
1:E:3025:ALA:O	1:E:3029:VAL:HG23	2.17	0.45
1:E:3850:ASN:ND2	1:E:3853:PHE:HB2	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:4894:ASN:C	1:E:4894:ASN:HD22	2.19	0.45
1:F:375:GLN:NE2	1:F:390:LYS:O	2.50	0.45
1:F:593:HIS:O	1:F:597:ILE:HG13	2.17	0.45
1:F:917:CYS:HA	1:F:924:LEU:HD11	1.99	0.45
1:F:1786:ASP:OD1	1:F:1786:ASP:N	2.50	0.45
1:F:3025:ALA:O	1:F:3029:VAL:HG23	2.17	0.45
1:F:3858:ARG:HG2	1:F:3859:THR:HG23	1.99	0.45
1:F:4169:ARG:NH2	3:F:5101:ATP:O1G	2.50	0.45
1:A:372:LEU:HD23	1:A:372:LEU:H	1.81	0.45
1:A:1471:ASP:HB2	1:A:1477:HIS:CE1	2.52	0.45
1:A:3065:GLU:HG2	1:A:3069:LYS:HE3	1.99	0.45
1:A:3549:ARG:O	1:A:3553:ILE:HG12	2.17	0.45
1:A:3850:ASN:ND2	1:A:3853:PHE:HB2	2.32	0.45
1:C:375:GLN:HE21	1:C:390:LYS:HB2	1.80	0.45
1:C:2276:CYS:SG	1:C:2279:LEU:HG	2.57	0.45
1:C:3025:ALA:O	1:C:3029:VAL:HG23	2.17	0.45
1:C:3245:MET:O	1:C:3249:TRP:HB2	2.16	0.45
1:C:3319:LEU:HB2	1:C:3320:PRO:HD3	1.97	0.45
1:C:3327:LYS:O	1:C:3331:MET:HG3	2.16	0.45
1:C:4635:ASN:OD1	1:C:4703:LYS:NZ	2.38	0.45
2:D:105:ASN:ND2	2:D:111:ASN:HB2	2.31	0.45
1:E:2464:LYS:HB3	1:E:2518:TYR:CE1	2.52	0.45
1:E:2934:GLU:HB3	1:E:2938:TYR:CZ	2.52	0.45
1:F:11:ILE:HD12	1:F:11:ILE:HA	1.85	0.45
1:F:898:ILE:HG21	1:F:973:THR:HA	1.99	0.45
1:F:1419:TYR:CE2	1:F:1563:ASN:HB3	2.52	0.45
1:F:2065:MET:HG3	1:F:2083:MET:HG2	1.98	0.45
1:F:3249:TRP:CZ3	1:F:3308:LYS:HD3	2.51	0.45
1:F:3292:GLY:HA3	1:F:3295:MET:HE3	1.98	0.45
1:F:4017:ASP:OD1	1:F:4124:VAL:HG13	2.17	0.45
1:A:1091:GLU:HB3	1:A:1094:TYR:HD2	1.82	0.44
1:A:2065:MET:HG3	1:A:2083:MET:HG2	1.98	0.44
1:A:2540:HIS:HB3	1:A:2543:LEU:HD23	1.99	0.44
1:C:356:TYR:CD1	1:C:407:ARG:HG2	2.52	0.44
1:C:1029:ASN:O	1:C:1032:LEU:HB2	2.17	0.44
1:C:1174:MET:CB	1:C:1190:LEU:HA	2.47	0.44
1:C:3030:ASN:HA	1:C:3033:HIS:HD2	1.81	0.44
1:C:3463:SER:HB3	1:C:3466:VAL:HG12	1.99	0.44
1:C:3850:ASN:ND2	1:C:3853:PHE:HB2	2.32	0.44
1:C:4169:ARG:NH2	3:C:5101:ATP:O1G	2.50	0.44
1:C:4928:ASP:OD1	1:C:4929:GLU:N	2.50	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:1577:LYS:HE2	1:E:1577:LYS:HA	1.98	0.44
1:E:3117:GLY:HA2	1:E:3121:ILE:HD13	1.98	0.44
1:E:4928:ASP:OD1	1:E:4929:GLU:N	2.50	0.44
1:F:436:LEU:HD21	1:F:518:ALA:HB2	1.99	0.44
1:F:986:ILE:HG21	1:F:1059:GLY:HA2	1.98	0.44
1:F:2484:LEU:HD13	1:F:2540:HIS:ND1	2.32	0.44
1:F:3117:GLY:HA2	1:F:3121:ILE:HD13	1.98	0.44
1:F:3939:LEU:HD21	1:F:3980:MET:HE1	1.99	0.44
1:A:1029:ASN:O	1:A:1032:LEU:HB2	2.18	0.44
1:A:3226:ARG:HH12	1:A:3286:ASN:HA	1.82	0.44
1:A:3831:ASP:N	1:A:3831:ASP:OD1	2.49	0.44
1:A:3967:LEU:O	1:A:3971:MET:HG3	2.18	0.44
1:C:908:ARG:NH1	1:C:910:ASP:OD1	2.51	0.44
1:C:1577:LYS:HA	1:C:1577:LYS:HE2	1.98	0.44
1:C:2094:ILE:O	1:C:2098:VAL:HG22	2.18	0.44
1:C:2264:VAL:HG21	1:C:2300:PHE:HE2	1.82	0.44
1:C:2934:GLU:HB3	1:C:2938:TYR:CZ	2.52	0.44
2:D:119:GLN:N	2:D:119:GLN:OE1	2.50	0.44
1:E:295:PHE:HE1	1:E:297:LEU:HG	1.82	0.44
1:E:908:ARG:NH1	1:E:910:ASP:OD1	2.51	0.44
1:E:1029:ASN:O	1:E:1032:LEU:HB2	2.18	0.44
1:E:1786:ASP:N	1:E:1786:ASP:OD1	2.50	0.44
1:E:2459:PHE:HE1	1:E:2464:LYS:HG3	1.82	0.44
1:E:2753:GLN:HG2	1:E:2755:LEU:H	1.83	0.44
1:E:3133:LEU:HB2	1:E:3161:PHE:CE2	2.53	0.44
1:E:3383:TRP:CH2	1:E:3394:LEU:HD23	2.52	0.44
1:E:4183:GLU:HG2	1:E:4186:GLU:HB3	1.99	0.44
1:F:254:GLU:O	1:F:258:ARG:HG3	2.16	0.44
1:F:1471:ASP:HB2	1:F:1477:HIS:CE1	2.52	0.44
1:F:2464:LYS:HB3	1:F:2518:TYR:CE1	2.52	0.44
1:F:2506:LEU:HD12	1:F:2506:LEU:HA	1.62	0.44
1:F:2753:GLN:HG2	1:F:2755:LEU:H	1.83	0.44
1:A:1844:LEU:HA	1:A:1847:ILE:HG22	1.99	0.44
1:A:2442:PRO:HA	1:A:2454:ASP:CG	2.37	0.44
1:A:3097:THR:HG21	1:A:3146:TYR:CE2	2.52	0.44
1:A:4042:ILE:HD11	1:A:4079:TYR:HB3	2.00	0.44
1:C:375:GLN:NE2	1:C:390:LYS:O	2.50	0.44
1:C:1114:ARG:NH1	1:C:1127:GLU:OE1	2.51	0.44
1:C:2158:PRO:HA	1:C:2161:MET:HB2	1.98	0.44
1:C:2405:MET:HE2	1:C:2407:LEU:H	1.83	0.44
1:C:2981:PHE:HB3	1:C:3000:LYS:CE	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:4088:GLU:OE1	1:C:4088:GLU:N	2.51	0.44
1:E:372:LEU:HD23	1:E:372:LEU:H	1.81	0.44
1:E:426:PHE:HZ	1:E:456:LEU:HD21	1.82	0.44
1:E:593:HIS:O	1:E:597:ILE:HG13	2.17	0.44
1:E:1762:MET:HE2	1:E:1762:MET:HB2	1.81	0.44
1:E:1844:LEU:HA	1:E:1847:ILE:HG22	1.99	0.44
1:E:2735:LYS:HB3	1:E:2740:TRP:HB2	1.99	0.44
1:E:3486:GLU:O	1:E:3490:LEU:HG	2.17	0.44
1:E:3660:VAL:HG13	1:E:3664:HIS:ND1	2.33	0.44
1:E:4608:LYS:O	1:E:4613:GLY:N	2.50	0.44
1:E:4838:TYR:O	1:E:4842:ARG:HB2	2.18	0.44
1:F:1905:MET:O	1:F:1909:LEU:HG	2.17	0.44
1:F:3133:LEU:HB2	1:F:3161:PHE:CE2	2.53	0.44
2:G:119:GLN:N	2:G:119:GLN:OE1	2.50	0.44
2:I:66:ARG:HA	2:I:66:ARG:NE	2.33	0.44
2:I:119:GLN:OE1	2:I:119:GLN:N	2.50	0.44
1:A:309:MET:N	1:A:309:MET:SD	2.89	0.44
1:A:375:GLN:NE2	1:A:390:LYS:O	2.50	0.44
1:A:1039:ASP:O	1:A:1043:LYS:HG3	2.18	0.44
1:A:1837:ASN:HA	1:A:1840:LEU:HD12	1.99	0.44
1:A:2352:ILE:HD13	1:A:2358:ARG:HB3	1.98	0.44
1:A:2423:ARG:NH2	1:A:2475:TYR:O	2.44	0.44
1:A:3854:GLN:NE2	1:A:3921:GLU:O	2.49	0.44
1:A:4838:TYR:O	1:A:4842:ARG:HB2	2.18	0.44
1:C:2775:LYS:HE3	1:C:2775:LYS:HB3	1.89	0.44
1:C:2851:TRP:HH2	1:C:2869:LEU:HD13	1.82	0.44
1:C:3123:GLU:OE2	1:C:3186:ARG:NH2	2.51	0.44
1:C:3555:ASN:O	1:C:3559:HIS:ND1	2.41	0.44
1:E:375:GLN:NE2	1:E:390:LYS:O	2.50	0.44
1:F:372:LEU:HD23	1:F:372:LEU:H	1.81	0.44
1:F:393:MET:HE2	1:F:393:MET:HA	1.99	0.44
1:F:739:ARG:HE	1:F:1467:VAL:HG11	1.82	0.44
1:F:1114:ARG:NH1	1:F:1127:GLU:OE1	2.50	0.44
1:F:1267:HIS:HB3	1:F:1295:ASN:N	2.31	0.44
1:F:3030:ASN:HA	1:F:3033:HIS:HD2	1.81	0.44
1:F:3065:GLU:HG2	1:F:3069:LYS:HE3	1.99	0.44
1:F:3226:ARG:HH12	1:F:3286:ASN:HA	1.82	0.44
1:F:4662:ARG:HE	1:F:4662:ARG:HB3	1.68	0.44
2:G:66:ARG:NE	2:G:66:ARG:HA	2.33	0.44
1:A:12:GLN:H	1:A:12:GLN:HG3	1.61	0.44
1:A:291:TRP:CD1	1:A:353:GLU:HB3	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:739:ARG:HE	1:A:1467:VAL:HG11	1.82	0.44
1:A:908:ARG:NH1	1:A:910:ASP:OD1	2.51	0.44
1:A:999:LEU:HD21	1:A:1050:LEU:HD12	2.00	0.44
1:A:2680:MET:HE3	1:A:2680:MET:HA	1.99	0.44
1:A:4894:ASN:C	1:A:4894:ASN:HD22	2.19	0.44
1:C:732:LEU:HG	1:C:741:VAL:HB	2.00	0.44
1:C:2561:THR:O	1:C:2565:ARG:HG3	2.18	0.44
1:C:3010:LEU:O	1:C:3014:VAL:HG23	2.17	0.44
1:C:3226:ARG:HH12	1:C:3286:ASN:HA	1.82	0.44
1:C:4017:ASP:OD1	1:C:4124:VAL:HG13	2.17	0.44
1:E:322:ALA:HB1	1:E:327:THR:HG21	1.98	0.44
1:E:393:MET:HA	1:E:393:MET:HE2	1.99	0.44
1:E:428:ARG:HH21	1:E:446:ASP:HB2	1.83	0.44
1:E:1516:SER:O	1:E:1533:GLN:NE2	2.38	0.44
1:E:1727:ILE:HG22	1:E:1758:LEU:HD23	2.00	0.44
1:E:1905:MET:O	1:E:1909:LEU:HG	2.17	0.44
1:E:2264:VAL:HG21	1:E:2300:PHE:HE2	1.82	0.44
1:E:2435:ILE:HD12	1:E:2435:ILE:HA	1.86	0.44
1:E:2981:PHE:HB3	1:E:3000:LYS:CE	2.47	0.44
1:E:4042:ILE:HD11	1:E:4079:TYR:HB3	2.00	0.44
1:F:356:TYR:CD1	1:F:407:ARG:HG2	2.52	0.44
1:F:1928:SER:HG	1:F:3619:PHE:HD1	1.65	0.44
1:F:2094:ILE:O	1:F:2098:VAL:HG22	2.18	0.44
1:F:2262:GLU:O	1:F:2266:ARG:HG3	2.18	0.44
1:F:2977:HIS:O	1:F:3440:LYS:HD3	2.16	0.44
1:F:2981:PHE:HB3	1:F:3000:LYS:CE	2.47	0.44
1:A:169:ARG:HD2	1:A:176:ARG:HH12	1.82	0.44
1:A:2723:TYR:CE2	1:A:2774:ILE:HG13	2.53	0.44
1:A:2981:PHE:HB3	1:A:3000:LYS:CE	2.47	0.44
1:A:3383:TRP:CH2	1:A:3394:LEU:HD23	2.52	0.44
1:A:4044:LYS:HZ1	1:A:4071:THR:HA	1.82	0.44
1:A:4921:LEU:O	1:A:4925:ILE:HG13	2.18	0.44
2:B:66:ARG:NE	2:B:66:ARG:HA	2.33	0.44
1:C:12:GLN:H	1:C:12:GLN:HG3	1.61	0.44
1:C:400:ASP:OD1	1:C:400:ASP:N	2.51	0.44
1:C:797:GLY:HA2	1:C:1623:LEU:HA	2.00	0.44
1:C:898:ILE:HG21	1:C:973:THR:HA	1.99	0.44
1:C:2591:LEU:HD11	1:C:2608:LEU:HD23	2.00	0.44
1:C:2753:GLN:HG2	1:C:2755:LEU:H	1.83	0.44
1:C:3133:LEU:HB2	1:C:3161:PHE:CE2	2.53	0.44
1:E:2405:MET:SD	1:E:2408:ILE:HG12	2.58	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:4927:LYS:HE2	1:E:4927:LYS:HB3	1.84	0.44
1:F:661:LEU:HD13	1:F:673:TRP:NE1	2.33	0.44
1:F:797:GLY:HA2	1:F:1623:LEU:HA	2.00	0.44
1:F:1029:ASN:O	1:F:1032:LEU:HB2	2.18	0.44
1:F:2276:CYS:SG	1:F:2279:LEU:HG	2.57	0.44
1:F:2459:PHE:HE1	1:F:2464:LYS:HG3	1.82	0.44
1:F:2497:ALA:O	1:F:2500:SER:OG	2.29	0.44
1:F:2672:ALA:O	1:F:2977:HIS:NE2	2.36	0.44
1:F:2851:TRP:HH2	1:F:2869:LEU:HD13	1.82	0.44
1:F:2934:GLU:HB3	1:F:2938:TYR:CZ	2.52	0.44
1:F:3395:PHE:HD1	1:F:3472:LEU:HB3	1.82	0.44
1:F:3967:LEU:O	1:F:3971:MET:HG3	2.18	0.44
1:F:4183:GLU:HG2	1:F:4186:GLU:HB3	1.98	0.44
1:A:2276:CYS:SG	1:A:2279:LEU:HG	2.58	0.44
1:A:3262:MET:SD	1:A:3262:MET:N	2.91	0.44
1:A:3361:LEU:O	1:A:3365:LEU:HG	2.18	0.44
1:A:3399:ALA:O	1:A:3403:ILE:HG12	2.18	0.44
1:A:3858:ARG:HG2	1:A:3859:THR:HG23	1.99	0.44
1:A:4596:LEU:HG	1:A:4600:LYS:HE3	2.00	0.44
1:A:4598:ILE:HD13	1:A:4708:LYS:HE3	2.00	0.44
1:C:393:MET:HE2	1:C:393:MET:HA	1.99	0.44
1:C:426:PHE:HZ	1:C:456:LEU:HD21	1.82	0.44
1:C:1039:ASP:O	1:C:1043:LYS:HG3	2.18	0.44
1:C:2262:GLU:O	1:C:2266:ARG:HG3	2.18	0.44
1:C:2436:SER:HB3	1:C:2489:VAL:HG12	2.00	0.44
1:E:1174:MET:CB	1:E:1190:LEU:HA	2.47	0.44
1:E:2500:SER:O	1:E:2506:LEU:HD23	2.18	0.44
1:F:916:PRO:HG2	2:G:104:TYR:CE2	2.53	0.44
1:F:1102:TYR:HA	1:F:1164:CYS:O	2.18	0.44
1:F:2442:PRO:HA	1:F:2454:ASP:CG	2.37	0.44
1:F:3383:TRP:CH2	1:F:3394:LEU:HD23	2.52	0.44
1:F:3660:VAL:HG13	1:F:3664:HIS:ND1	2.33	0.44
1:F:4608:LYS:O	1:F:4613:GLY:N	2.50	0.44
1:A:232:ASP:OD1	1:A:233:VAL:N	2.51	0.44
1:A:917:CYS:HA	1:A:924:LEU:HD11	1.99	0.44
1:A:2405:MET:SD	1:A:2408:ILE:HG12	2.58	0.44
1:A:2735:LYS:HB3	1:A:2740:TRP:HB2	1.99	0.44
1:A:3463:SER:HB3	1:A:3466:VAL:HG12	1.99	0.44
1:A:3480:CYS:HB2	1:A:3485:GLN:NE2	2.33	0.44
1:A:4008:ASN:O	1:A:4012:ILE:HG13	2.18	0.44
1:A:4608:LYS:O	1:A:4613:GLY:N	2.50	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4928:ASP:OD1	1:A:4929:GLU:N	2.50	0.44
1:C:372:LEU:H	1:C:372:LEU:HD23	1.81	0.44
1:C:728:ASP:OD1	1:C:731:HIS:N	2.41	0.44
1:C:917:CYS:HA	1:C:924:LEU:HD11	1.99	0.44
1:C:1102:TYR:HA	1:C:1164:CYS:O	2.18	0.44
1:C:1272:ARG:HH12	1:C:1585:PRO:HA	1.81	0.44
1:C:1998:PHE:HA	1:C:2001:ASP:OD2	2.18	0.44
1:C:3399:ALA:O	1:C:3403:ILE:HG12	2.18	0.44
1:C:3967:LEU:O	1:C:3971:MET:HG3	2.18	0.44
1:C:4921:LEU:O	1:C:4925:ILE:HG13	2.18	0.44
2:D:66:ARG:NE	2:D:66:ARG:HA	2.33	0.44
1:E:661:LEU:HD13	1:E:673:TRP:NE1	2.33	0.44
1:E:732:LEU:HG	1:E:741:VAL:HB	2.00	0.44
1:E:1040:ASP:HA	1:E:1043:LYS:HE2	2.00	0.44
1:E:2437:ILE:O	1:E:2464:LYS:HE3	2.18	0.44
1:E:2517:ARG:O	1:E:2521:THR:HG23	2.18	0.44
1:E:2540:HIS:HB3	1:E:2543:LEU:HD23	1.99	0.44
1:E:3097:THR:HG21	1:E:3146:TYR:CE2	2.52	0.44
1:E:3123:GLU:OE2	1:E:3186:ARG:NH2	2.51	0.44
1:E:3262:MET:N	1:E:3262:MET:SD	2.91	0.44
1:F:1727:ILE:HG22	1:F:1758:LEU:HD23	2.00	0.44
1:F:2983:SER:HA	1:F:3439:SER:HB3	2.00	0.44
1:F:3197:PRO:HD2	1:F:3203:VAL:HG22	2.00	0.44
1:F:3399:ALA:O	1:F:3403:ILE:HG12	2.18	0.44
1:F:3549:ARG:O	1:F:3553:ILE:HG12	2.17	0.44
1:F:4928:ASP:OD1	1:F:4929:GLU:N	2.50	0.44
1:A:1905:MET:O	1:A:1909:LEU:HG	2.17	0.44
1:A:3074:LEU:HD22	1:A:3147:VAL:HG23	2.00	0.44
1:A:3486:GLU:O	1:A:3490:LEU:HG	2.17	0.44
1:A:4069:ALA:HA	1:A:4082:PHE:CE1	2.53	0.44
1:A:4745:ILE:HD11	1:C:4775:VAL:HG21	1.99	0.44
1:C:739:ARG:HE	1:C:1467:VAL:HG11	1.82	0.44
1:C:1040:ASP:HA	1:C:1043:LYS:HE2	2.00	0.44
1:C:2517:ARG:O	1:C:2521:THR:HG23	2.18	0.44
1:C:2723:TYR:CE2	1:C:2774:ILE:HG13	2.53	0.44
1:C:3480:CYS:HB2	1:C:3485:GLN:NE2	2.33	0.44
1:C:4008:ASN:O	1:C:4012:ILE:HG13	2.18	0.44
1:C:4598:ILE:HD13	1:C:4708:LYS:HE3	2.00	0.44
1:C:4608:LYS:O	1:C:4613:GLY:N	2.50	0.44
1:E:356:TYR:CD1	1:E:407:ARG:HG2	2.52	0.44
1:E:739:ARG:HE	1:E:1467:VAL:HG11	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:917:CYS:HA	1:E:924:LEU:HD11	1.99	0.44
1:E:1039:ASP:O	1:E:1043:LYS:HG3	2.18	0.44
1:E:1419:TYR:CE2	1:E:1563:ASN:HB3	2.52	0.44
1:E:2276:CYS:SG	1:E:2279:LEU:HG	2.57	0.44
1:E:2859:LEU:HD11	1:E:2867:HIS:CD2	2.53	0.44
1:E:3226:ARG:HH12	1:E:3286:ASN:HA	1.82	0.44
1:E:3399:ALA:O	1:E:3403:ILE:HG12	2.18	0.44
1:E:4088:GLU:N	1:E:4088:GLU:OE1	2.51	0.44
1:F:426:PHE:HZ	1:F:456:LEU:HD21	1.82	0.44
1:F:732:LEU:HG	1:F:741:VAL:HB	2.00	0.44
1:F:1091:GLU:HB3	1:F:1094:TYR:HD2	1.82	0.44
1:F:1750:PRO:HG3	1:F:2057:LEU:HD22	2.00	0.44
1:F:2561:THR:O	1:F:2565:ARG:HG3	2.18	0.44
1:F:3123:GLU:OE2	1:F:3186:ARG:NH2	2.51	0.44
1:F:4008:ASN:O	1:F:4012:ILE:HG13	2.18	0.44
1:F:4009:VAL:O	1:F:4013:LEU:HG	2.18	0.44
1:A:267:VAL:HA	1:A:270:HIS:ND1	2.33	0.43
1:A:393:MET:HE2	1:A:393:MET:HA	1.99	0.43
1:A:884:ARG:HG3	1:A:885:LEU:N	2.33	0.43
1:A:916:PRO:HG2	2:B:104:TYR:CE2	2.53	0.43
1:A:1303:ARG:O	1:A:1590:GLN:N	2.38	0.43
1:A:1762:MET:HE2	1:A:1762:MET:HB2	1.84	0.43
1:A:2851:TRP:HH2	1:A:2869:LEU:HD13	1.82	0.43
1:A:3133:LEU:HB2	1:A:3161:PHE:CE2	2.53	0.43
1:A:3395:PHE:HD1	1:A:3472:LEU:HB3	1.82	0.43
1:A:4088:GLU:OE1	1:A:4088:GLU:N	2.51	0.43
2:B:40:ALA:HB3	2:B:43:LYS:HB2	2.00	0.43
1:C:291:TRP:CD1	1:C:353:GLU:HB3	2.53	0.43
1:C:436:LEU:HD21	1:C:518:ALA:HB2	1.99	0.43
1:C:1837:ASN:HA	1:C:1840:LEU:HD12	2.00	0.43
1:C:3361:LEU:O	1:C:3365:LEU:HG	2.18	0.43
1:C:4838:TYR:O	1:C:4842:ARG:HB2	2.18	0.43
1:E:884:ARG:HG3	1:E:885:LEU:N	2.33	0.43
1:E:3553:ILE:O	1:E:3557:LEU:HG	2.18	0.43
1:E:3858:ARG:HG2	1:E:3859:THR:HG23	2.00	0.43
1:E:4030:THR:HA	1:E:4033:GLU:HG3	2.00	0.43
1:E:4596:LEU:HG	1:E:4600:LYS:HE3	2.00	0.43
1:F:468:GLU:OE1	1:F:468:GLU:N	2.41	0.43
1:F:884:ARG:HG3	1:F:885:LEU:N	2.33	0.43
1:F:2500:SER:O	1:F:2506:LEU:HD23	2.18	0.43
1:F:3463:SER:HB3	1:F:3466:VAL:HG12	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:3488:ILE:HG12	1:F:3550:VAL:HA	2.00	0.43
1:F:4069:ALA:HA	1:F:4082:PHE:CE1	2.53	0.43
1:A:400:ASP:OD1	1:A:400:ASP:N	2.51	0.43
1:A:428:ARG:HH21	1:A:446:ASP:HB2	1.83	0.43
1:A:1114:ARG:NH1	1:A:1127:GLU:OE1	2.51	0.43
1:A:2500:SER:O	1:A:2506:LEU:HD23	2.18	0.43
1:A:2936:HIS:CE1	1:A:3013:LEU:HD13	2.53	0.43
1:A:3403:ILE:HD11	1:A:3556:VAL:HA	2.00	0.43
1:A:3553:ILE:O	1:A:3557:LEU:HG	2.18	0.43
1:C:593:HIS:O	1:C:597:ILE:HG13	2.17	0.43
1:C:1113:MET:HB2	1:C:1156:TRP:CZ2	2.54	0.43
1:C:1419:TYR:CE2	1:C:1563:ASN:HB3	2.52	0.43
1:C:2086:LEU:O	1:C:2089:ARG:HG2	2.18	0.43
1:C:2498:ALA:HB2	1:C:2515:LEU:HD21	2.00	0.43
1:C:4009:VAL:O	1:C:4013:LEU:HG	2.19	0.43
1:C:4579:THR:HG1	1:C:4732:HIS:CD2	2.34	0.43
1:E:169:ARG:HD2	1:E:176:ARG:HH12	1.82	0.43
1:E:610:VAL:O	1:E:614:LEU:HG	2.18	0.43
1:E:1809:ASP:N	1:E:1809:ASP:OD1	2.51	0.43
1:E:2414:GLU:O	1:E:2418:ILE:HG12	2.18	0.43
1:E:2936:HIS:CE1	1:E:3013:LEU:HD13	2.53	0.43
1:F:133:LEU:O	1:F:145:PHE:HB3	2.19	0.43
1:F:291:TRP:CD1	1:F:353:GLU:HB3	2.53	0.43
1:F:295:PHE:HE1	1:F:297:LEU:HG	1.82	0.43
1:F:912:LYS:HB2	1:F:914:GLN:HG2	1.99	0.43
1:F:1001:GLU:HG2	1:F:1035:TYR:CD1	2.53	0.43
1:F:1040:ASP:HA	1:F:1043:LYS:HE2	2.00	0.43
1:F:2591:LEU:HD11	1:F:2608:LEU:HD23	2.00	0.43
1:F:3262:MET:SD	1:F:3262:MET:N	2.91	0.43
1:F:3361:LEU:O	1:F:3365:LEU:HG	2.18	0.43
1:A:295:PHE:HE1	1:A:297:LEU:HG	1.82	0.43
1:A:2094:ILE:O	1:A:2098:VAL:HG22	2.18	0.43
1:A:2561:THR:O	1:A:2565:ARG:HG3	2.18	0.43
1:A:2859:LEU:HD11	1:A:2867:HIS:CD2	2.53	0.43
1:A:3197:PRO:HD2	1:A:3203:VAL:HG22	2.00	0.43
1:A:3488:ILE:HG12	1:A:3550:VAL:HA	2.00	0.43
1:A:4595:PRO:HA	1:A:4598:ILE:HG12	2.01	0.43
1:C:1905:MET:O	1:C:1909:LEU:HG	2.17	0.43
1:C:2442:PRO:HA	1:C:2454:ASP:CG	2.38	0.43
1:C:2540:HIS:HB3	1:C:2543:LEU:HD23	1.99	0.43
1:C:2980:TYR:O	1:C:3000:LYS:HE2	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:3395:PHE:HD1	1:C:3472:LEU:HB3	1.82	0.43
1:E:232:ASP:OD1	1:E:233:VAL:N	2.51	0.43
1:E:267:VAL:HA	1:E:270:HIS:ND1	2.33	0.43
1:E:291:TRP:CD1	1:E:353:GLU:HB3	2.53	0.43
1:E:365:HIS:HD2	1:E:368:THR:HG22	1.83	0.43
1:E:400:ASP:OD1	1:E:400:ASP:N	2.51	0.43
1:E:879:GLU:O	1:E:883:GLU:HG2	2.19	0.43
1:E:2094:ILE:O	1:E:2098:VAL:HG22	2.18	0.43
1:E:2561:THR:O	1:E:2565:ARG:HG3	2.18	0.43
1:E:3967:LEU:O	1:E:3971:MET:HG3	2.18	0.43
1:E:4069:ALA:HA	1:E:4082:PHE:CE1	2.53	0.43
1:E:4595:PRO:HA	1:E:4598:ILE:HG12	2.01	0.43
1:F:610:VAL:O	1:F:614:LEU:HG	2.18	0.43
1:F:881:ILE:HA	1:F:884:ARG:HG2	2.00	0.43
1:F:1113:MET:HB2	1:F:1156:TRP:CZ2	2.54	0.43
1:F:2086:LEU:O	1:F:2089:ARG:HG2	2.18	0.43
1:F:2723:TYR:CE2	1:F:2774:ILE:HG13	2.53	0.43
1:F:4042:ILE:HD11	1:F:4079:TYR:HB3	2.00	0.43
1:F:4922:MET:HE2	1:F:4922:MET:HB2	1.92	0.43
1:A:610:VAL:O	1:A:614:LEU:HG	2.18	0.43
1:A:732:LEU:HG	1:A:741:VAL:HB	2.00	0.43
1:A:797:GLY:HA2	1:A:1623:LEU:HA	2.00	0.43
1:A:2262:GLU:O	1:A:2266:ARG:HG3	2.18	0.43
1:A:2924:PHE:O	1:A:2928:LEU:HG	2.19	0.43
1:A:3025:ALA:O	1:A:3029:VAL:HG23	2.17	0.43
1:C:1437:GLU:OE2	1:C:1439:ALA:HB3	2.19	0.43
1:C:2459:PHE:HE1	1:C:2464:LYS:HG3	1.82	0.43
1:C:2500:SER:O	1:C:2506:LEU:HD23	2.18	0.43
1:C:3014:VAL:HG12	1:C:3095:TYR:HE1	1.83	0.43
1:C:4941:LYS:HE2	1:C:4941:LYS:HB3	1.82	0.43
1:E:1001:GLU:HG2	1:E:1035:TYR:CD1	2.53	0.43
1:E:1471:ASP:HB2	1:E:1477:HIS:CE1	2.52	0.43
1:E:1998:PHE:HA	1:E:2001:ASP:OD2	2.18	0.43
1:E:3065:GLU:HG2	1:E:3069:LYS:HE3	1.99	0.43
1:E:3395:PHE:HD1	1:E:3472:LEU:HB3	1.82	0.43
1:E:4009:VAL:O	1:E:4013:LEU:HG	2.18	0.43
1:F:232:ASP:OD1	1:F:233:VAL:N	2.51	0.43
1:F:879:GLU:O	1:F:883:GLU:HG2	2.19	0.43
1:F:1809:ASP:OD1	1:F:1809:ASP:N	2.51	0.43
1:F:1837:ASN:HA	1:F:1840:LEU:HD12	1.99	0.43
1:F:1998:PHE:HA	1:F:2001:ASP:OD2	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:2325:ARG:HA	1:F:2325:ARG:HD3	1.73	0.43
1:F:2498:ALA:HB2	1:F:2515:LEU:HD21	2.00	0.43
1:F:2517:ARG:O	1:F:2521:THR:HG23	2.18	0.43
1:F:3480:CYS:HB2	1:F:3485:GLN:NE2	2.33	0.43
1:F:4030:THR:HA	1:F:4033:GLU:HG3	2.00	0.43
1:F:4088:GLU:OE1	1:F:4088:GLU:N	2.51	0.43
1:A:3123:GLU:OE2	1:A:3186:ARG:NH2	2.51	0.43
1:C:50:GLU:OE2	1:C:61:ASP:N	2.52	0.43
1:C:241:MET:HB2	1:C:241:MET:HE2	1.78	0.43
1:C:916:PRO:HG2	2:D:104:TYR:CE2	2.54	0.43
1:C:999:LEU:HD21	1:C:1050:LEU:HD12	2.00	0.43
1:C:1091:GLU:HB3	1:C:1094:TYR:HD2	1.82	0.43
1:C:2859:LEU:HD11	1:C:2867:HIS:CD2	2.53	0.43
1:C:3074:LEU:HD22	1:C:3147:VAL:HG23	2.00	0.43
1:C:3660:VAL:HG13	1:C:3664:HIS:ND1	2.33	0.43
1:C:3731:HIS:NE2	1:C:3775:LYS:HD2	2.34	0.43
1:C:4042:ILE:HD11	1:C:4079:TYR:HB3	2.00	0.43
1:E:797:GLY:HA2	1:E:1623:LEU:HA	2.00	0.43
1:E:881:ILE:HA	1:E:884:ARG:HG2	2.00	0.43
1:E:928:GLU:OE2	2:I:102:ASN:ND2	2.49	0.43
1:E:1102:TYR:HA	1:E:1164:CYS:O	2.18	0.43
1:E:1750:PRO:HG3	1:E:2057:LEU:HD22	2.00	0.43
1:E:2262:GLU:O	1:E:2266:ARG:HG3	2.18	0.43
1:E:3463:SER:HB3	1:E:3466:VAL:HG12	1.99	0.43
1:E:3488:ILE:HG12	1:E:3550:VAL:HA	2.00	0.43
1:E:4598:ILE:HD13	1:E:4708:LYS:HE3	2.00	0.43
1:F:890:HIS:O	1:F:894:VAL:HG13	2.19	0.43
1:F:2980:TYR:O	1:F:3000:LYS:HE2	2.18	0.43
1:F:3365:LEU:O	1:F:3369:TYR:HB2	2.19	0.43
1:A:426:PHE:HZ	1:A:456:LEU:HD21	1.82	0.43
1:A:591:GLU:HA	1:A:631:LEU:HD11	2.01	0.43
1:A:728:ASP:OD1	1:A:731:HIS:N	2.41	0.43
1:A:1040:ASP:HA	1:A:1043:LYS:HE2	2.00	0.43
1:A:1102:TYR:HA	1:A:1164:CYS:O	2.18	0.43
1:A:1113:MET:HB2	1:A:1156:TRP:CZ2	2.54	0.43
1:A:2437:ILE:O	1:A:2464:LYS:HE3	2.18	0.43
1:A:2765:LYS:O	1:A:2768:GLU:HG3	2.19	0.43
1:A:2980:TYR:O	1:A:3000:LYS:HE2	2.18	0.43
1:A:4662:ARG:HH21	1:A:4673:LYS:HD2	1.84	0.43
1:C:267:VAL:HA	1:C:270:HIS:ND1	2.33	0.43
1:C:591:GLU:HA	1:C:631:LEU:HD11	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:661:LEU:HD13	1:C:673:TRP:NE1	2.33	0.43
1:C:1001:GLU:HG2	1:C:1035:TYR:CD1	2.53	0.43
1:C:1928:SER:HG	1:C:3619:PHE:HD1	1.66	0.43
1:C:2405:MET:SD	1:C:2408:ILE:HG12	2.58	0.43
1:C:3486:GLU:O	1:C:3490:LEU:HG	2.17	0.43
1:C:3488:ILE:HG12	1:C:3550:VAL:HA	2.00	0.43
1:C:4030:THR:HA	1:C:4033:GLU:HG3	2.00	0.43
1:C:4508:ALA:HB2	1:C:4578:HIS:HE1	1.83	0.43
1:C:4662:ARG:HH21	1:C:4673:LYS:HD2	1.84	0.43
1:E:894:VAL:O	1:E:898:ILE:HG12	2.18	0.43
1:E:1091:GLU:HB3	1:E:1094:TYR:HD2	1.82	0.43
1:E:2723:TYR:CE2	1:E:2774:ILE:HG13	2.53	0.43
1:E:2983:SER:HA	1:E:3439:SER:HB3	2.00	0.43
1:E:3361:LEU:O	1:E:3365:LEU:HG	2.18	0.43
1:E:4559:VAL:HG22	1:E:4561:GLU:H	1.84	0.43
1:F:267:VAL:HA	1:F:270:HIS:ND1	2.33	0.43
1:F:365:HIS:HD2	1:F:368:THR:HG22	1.83	0.43
1:F:2405:MET:SD	1:F:2408:ILE:HG12	2.58	0.43
1:F:2414:GLU:O	1:F:2418:ILE:HG12	2.18	0.43
1:F:2435:ILE:HD12	1:F:2435:ILE:HA	1.87	0.43
1:F:3014:VAL:HG12	1:F:3095:TYR:HE1	1.83	0.43
1:F:3486:GLU:O	1:F:3490:LEU:HG	2.18	0.43
1:F:4595:PRO:HA	1:F:4598:ILE:HG12	2.00	0.43
1:F:4838:TYR:O	1:F:4842:ARG:HB2	2.18	0.43
1:A:2591:LEU:HD11	1:A:2608:LEU:HD23	2.00	0.43
1:A:2753:GLN:HG2	1:A:2755:LEU:H	1.83	0.43
1:A:4671:MET:HG2	1:A:4671:MET:O	2.19	0.43
1:C:894:VAL:O	1:C:898:ILE:HG12	2.18	0.43
1:C:2936:HIS:CE1	1:C:3013:LEU:HD13	2.53	0.43
1:C:3262:MET:N	1:C:3262:MET:SD	2.91	0.43
1:C:3303:GLN:O	1:C:3306:ILE:HG22	2.19	0.43
1:C:4035:ASP:OD1	1:C:4042:ILE:HG23	2.19	0.43
1:C:4069:ALA:HA	1:C:4082:PHE:CE1	2.53	0.43
1:C:4559:VAL:HG22	1:C:4561:GLU:H	1.83	0.43
1:E:241:MET:HB2	1:E:241:MET:HE2	1.78	0.43
1:E:999:LEU:HD21	1:E:1050:LEU:HD12	2.00	0.43
1:E:2143:ARG:HE	1:E:2143:ARG:HB3	1.67	0.43
1:E:2851:TRP:HH2	1:E:2869:LEU:HD13	1.82	0.43
1:F:400:ASP:OD1	1:F:400:ASP:N	2.51	0.43
1:F:428:ARG:HH21	1:F:446:ASP:HB2	1.83	0.43
1:F:999:LEU:HD21	1:F:1050:LEU:HD12	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:1039:ASP:OD1	1:F:1039:ASP:N	2.52	0.43
1:F:1039:ASP:O	1:F:1043:LYS:HG3	2.18	0.43
1:F:2437:ILE:O	1:F:2464:LYS:HE3	2.18	0.43
1:F:2765:LYS:O	1:F:2768:GLU:HG3	2.19	0.43
1:F:2859:LEU:HD11	1:F:2867:HIS:CD2	2.53	0.43
1:F:3394:LEU:HA	1:F:3397:MET:HE3	2.01	0.43
1:F:4042:ILE:HB	1:F:4047:PHE:HB2	2.00	0.43
1:F:4508:ALA:HB2	1:F:4578:HIS:HE1	1.83	0.43
1:F:4671:MET:HG2	1:F:4671:MET:O	2.19	0.43
1:A:11:ILE:HD12	1:A:11:ILE:HA	1.85	0.43
1:A:390:LYS:HA	1:A:390:LYS:HD3	1.89	0.43
1:A:797:GLY:N	1:A:1622:CYS:O	2.52	0.43
1:A:941:LYS:NZ	1:A:944:LEU:HD11	2.34	0.43
1:A:1001:GLU:HG2	1:A:1035:TYR:CD1	2.53	0.43
1:A:1727:ILE:HG22	1:A:1758:LEU:HD23	2.00	0.43
1:A:1801:LYS:HB3	1:A:1801:LYS:HE3	1.71	0.43
1:A:2086:LEU:O	1:A:2089:ARG:HG2	2.18	0.43
1:A:2414:GLU:O	1:A:2418:ILE:HG12	2.19	0.43
1:A:3303:GLN:O	1:A:3306:ILE:HG22	2.19	0.43
1:A:3660:VAL:HG13	1:A:3664:HIS:ND1	2.33	0.43
1:A:4166:GLU:O	1:A:4169:ARG:HG2	2.19	0.43
1:A:4508:ALA:HB2	1:A:4578:HIS:HE1	1.83	0.43
1:C:232:ASP:OD1	1:C:233:VAL:N	2.51	0.43
1:C:2289:TRP:CZ2	1:C:2387:ILE:HD12	2.54	0.43
1:C:2414:GLU:O	1:C:2418:ILE:HG12	2.19	0.43
1:C:3553:ILE:O	1:C:3557:LEU:HG	2.18	0.43
1:E:758:CYS:SG	1:E:767:SER:HB3	2.59	0.43
1:E:1837:ASN:HA	1:E:1840:LEU:HD12	1.99	0.43
1:E:2210:GLN:NE2	1:E:2244:ALA:O	2.45	0.43
1:E:3394:LEU:HA	1:E:3397:MET:HE3	2.01	0.43
1:E:3731:HIS:NE2	1:E:3775:LYS:HD2	2.34	0.43
1:F:908:ARG:NH1	1:F:910:ASP:OD1	2.51	0.43
1:F:970:TYR:HB2	1:F:971:GLN:H	1.70	0.43
1:F:2936:HIS:CE1	1:F:3013:LEU:HD13	2.53	0.43
1:F:4166:GLU:O	1:F:4169:ARG:HG2	2.19	0.43
1:A:890:HIS:O	1:A:894:VAL:HG13	2.18	0.43
1:A:1174:MET:CB	1:A:1190:LEU:HA	2.47	0.43
1:A:1998:PHE:HA	1:A:2001:ASP:OD2	2.18	0.43
1:A:4135:ILE:HG12	1:A:4149:PHE:HE1	1.84	0.43
2:B:90:THR:HG23	2:B:124:THR:HA	2.01	0.43
1:C:133:LEU:O	1:C:145:PHE:HB3	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:430:ILE:HD13	1:C:500:GLU:HG3	2.01	0.43
1:C:565:LEU:HD23	1:C:565:LEU:O	2.19	0.43
1:C:1727:ILE:HG22	1:C:1758:LEU:HD23	2.00	0.43
1:C:2514:ALA:HA	1:C:2517:ARG:HD2	2.01	0.43
1:C:2765:LYS:O	1:C:2768:GLU:HG3	2.19	0.43
1:C:2852:ALA:O	1:C:2855:LYS:HG3	2.19	0.43
1:C:4199:MET:HE2	1:C:4199:MET:HB2	1.81	0.43
1:C:4596:LEU:HG	1:C:4600:LYS:HE3	2.00	0.43
1:E:890:HIS:O	1:E:894:VAL:HG13	2.19	0.43
1:E:1113:MET:HB2	1:E:1156:TRP:CZ2	2.54	0.43
1:E:1114:ARG:NH1	1:E:1127:GLU:OE1	2.51	0.43
1:E:1258:PHE:HB2	1:E:1303:ARG:HH21	1.84	0.43
1:E:2580:ARG:HG2	1:E:2583:MET:HE3	2.00	0.43
1:E:3159:ALA:HB2	1:E:3240:MET:HE2	2.00	0.43
1:E:3365:LEU:O	1:E:3369:TYR:HB2	2.19	0.43
1:E:4008:ASN:O	1:E:4012:ILE:HG13	2.18	0.43
1:F:1762:MET:HE2	1:F:1762:MET:HB2	1.85	0.43
1:F:3731:HIS:NE2	1:F:3775:LYS:HD2	2.34	0.43
1:F:4559:VAL:HG22	1:F:4561:GLU:H	1.84	0.43
2:I:40:ALA:HB3	2:I:43:LYS:HB2	2.00	0.43
1:A:438:LYS:HG3	1:A:439:LYS:HG2	2.00	0.43
1:A:882:ARG:HH11	1:A:937:LEU:HA	1.84	0.43
1:A:2076:ASP:HB3	1:A:2079:LEU:HB3	2.01	0.43
1:A:2517:ARG:O	1:A:2521:THR:HG23	2.18	0.43
1:A:2929:ILE:HG12	1:A:3006:LEU:HD13	2.01	0.43
1:C:428:ARG:HH21	1:C:446:ASP:HB2	1.83	0.43
1:C:610:VAL:O	1:C:614:LEU:HG	2.18	0.43
1:C:1809:ASP:N	1:C:1809:ASP:OD1	2.51	0.43
1:C:1844:LEU:HA	1:C:1847:ILE:HG22	1.99	0.43
1:C:2924:PHE:O	1:C:2928:LEU:HG	2.19	0.43
1:C:2983:SER:HA	1:C:3439:SER:HB3	2.00	0.43
2:D:40:ALA:HB3	2:D:43:LYS:HB2	2.01	0.43
1:E:591:GLU:HA	1:E:631:LEU:HD11	2.01	0.43
1:E:732:LEU:HB3	1:E:779:PHE:CZ	2.54	0.43
1:E:878:LEU:HD23	1:E:878:LEU:H	1.84	0.43
1:E:1437:GLU:OE2	1:E:1439:ALA:HB3	2.19	0.43
1:E:2498:ALA:HB2	1:E:2515:LEU:HD21	2.00	0.43
1:E:2929:ILE:HG12	1:E:3006:LEU:HD13	2.01	0.43
1:E:3240:MET:HE2	1:E:3240:MET:HA	2.00	0.43
1:E:4035:ASP:OD1	1:E:4042:ILE:HG23	2.18	0.43
1:E:4135:ILE:HG12	1:E:4149:PHE:HE1	1.84	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:4166:GLU:O	1:E:4169:ARG:HG2	2.19	0.43
1:E:4648:VAL:O	1:E:4652:VAL:HG12	2.19	0.43
1:F:430:ILE:HD13	1:F:500:GLU:HG3	2.01	0.43
1:F:2193:ALA:O	1:F:2197:ARG:HG3	2.19	0.43
1:F:2436:SER:HB3	1:F:2489:VAL:HG12	2.00	0.43
1:F:3007:PHE:HD1	1:F:3007:PHE:O	2.02	0.43
1:F:4035:ASP:OD1	1:F:4042:ILE:HG23	2.19	0.43
1:A:14:LEU:HD11	1:A:214:VAL:HG21	2.01	0.42
1:A:365:HIS:HD2	1:A:368:THR:HG22	1.83	0.42
1:A:410:HIS:O	1:A:414:ARG:HG2	2.19	0.42
1:A:565:LEU:O	1:A:565:LEU:HD23	2.19	0.42
1:A:2289:TRP:CZ2	1:A:2387:ILE:HD12	2.54	0.42
1:A:2436:SER:HB3	1:A:2489:VAL:HG12	2.00	0.42
1:A:2514:ALA:HA	1:A:2517:ARG:HD2	2.01	0.42
1:A:2852:ALA:O	1:A:2855:LYS:HG3	2.19	0.42
1:C:557:TRP:HE3	1:C:558:LEU:HD23	1.84	0.42
1:C:878:LEU:HD23	1:C:878:LEU:H	1.84	0.42
1:C:941:LYS:NZ	1:C:944:LEU:HD11	2.34	0.42
1:C:2497:ALA:O	1:C:2500:SER:OG	2.29	0.42
1:C:4671:MET:O	1:C:4671:MET:HG2	2.19	0.42
2:D:90:THR:HG23	2:D:124:THR:HA	2.01	0.42
1:E:133:LEU:O	1:E:145:PHE:HB3	2.19	0.42
1:E:430:ILE:HD13	1:E:500:GLU:HG3	2.01	0.42
1:E:797:GLY:N	1:E:1622:CYS:O	2.52	0.42
1:E:2591:LEU:HD11	1:E:2608:LEU:HD23	2.00	0.42
1:E:2852:ALA:O	1:E:2855:LYS:HG3	2.19	0.42
1:E:3197:PRO:HD2	1:E:3203:VAL:HG22	2.00	0.42
1:E:4662:ARG:HH21	1:E:4673:LYS:HD2	1.84	0.42
1:F:184:VAL:HG22	1:F:191:TYR:CD1	2.54	0.42
1:F:797:GLY:N	1:F:1622:CYS:O	2.52	0.42
1:F:1437:GLU:OE2	1:F:1439:ALA:HB3	2.19	0.42
1:F:1844:LEU:HA	1:F:1847:ILE:HG22	1.99	0.42
1:F:2580:ARG:HG2	1:F:2583:MET:HE3	2.01	0.42
1:F:4598:ILE:HD13	1:F:4708:LYS:HE3	2.00	0.42
1:A:661:LEU:HD13	1:A:673:TRP:NE1	2.33	0.42
1:A:1437:GLU:OE2	1:A:1439:ALA:HB3	2.19	0.42
1:A:1739:LEU:HD23	1:A:1739:LEU:H	1.84	0.42
1:A:1750:PRO:HG3	1:A:2057:LEU:HD22	2.00	0.42
1:A:1809:ASP:OD1	1:A:1809:ASP:N	2.51	0.42
1:A:3454:LYS:HA	1:A:3457:ARG:HG3	2.01	0.42
1:A:4009:VAL:O	1:A:4013:LEU:HG	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4648:VAL:O	1:A:4652:VAL:HG12	2.19	0.42
1:C:881:ILE:HA	1:C:884:ARG:HG2	2.00	0.42
1:C:3294:TRP:O	1:C:3298:LEU:HG	2.20	0.42
1:C:4595:PRO:HA	1:C:4598:ILE:HG12	2.01	0.42
1:E:1039:ASP:OD1	1:E:1039:ASP:N	2.52	0.42
1:E:2436:SER:HB3	1:E:2489:VAL:HG12	2.00	0.42
1:F:438:LYS:HG3	1:F:439:LYS:HG2	2.01	0.42
1:F:2998:LYS:HG3	1:F:3002:MET:HE2	2.00	0.42
1:F:3303:GLN:O	1:F:3306:ILE:HG22	2.19	0.42
1:F:3403:ILE:HD11	1:F:3556:VAL:HA	2.00	0.42
1:A:2498:ALA:HB2	1:A:2515:LEU:HD21	2.00	0.42
1:A:2934:GLU:HB3	1:A:2938:TYR:CZ	2.52	0.42
1:A:4042:ILE:HB	1:A:4047:PHE:HB2	2.00	0.42
2:B:18:LEU:HD23	2:B:18:LEU:HA	1.87	0.42
1:C:365:HIS:HD2	1:C:368:THR:HG22	1.83	0.42
1:C:758:CYS:SG	1:C:767:SER:HB3	2.59	0.42
1:C:884:ARG:HG3	1:C:885:LEU:N	2.33	0.42
1:C:890:HIS:O	1:C:894:VAL:HG13	2.18	0.42
1:C:1039:ASP:OD1	1:C:1039:ASP:N	2.52	0.42
1:C:2233:MET:O	1:C:2296:ARG:NH2	2.48	0.42
1:C:2943:ASP:OD2	1:C:3017:ARG:NE	2.48	0.42
1:C:4010:GLU:HG2	1:C:4120:LEU:HD13	2.02	0.42
1:E:480:ARG:NH2	1:E:3677:GLU:OE2	2.52	0.42
1:E:2980:TYR:O	1:E:3000:LYS:HE2	2.18	0.42
1:E:3074:LEU:HD22	1:E:3147:VAL:HG23	2.00	0.42
1:E:3085:GLN:HE21	1:E:3089:VAL:HG12	1.84	0.42
1:E:3480:CYS:HB2	1:E:3485:GLN:NE2	2.33	0.42
1:E:4500:MET:HG2	1:E:4585:CYS:SG	2.60	0.42
1:E:4921:LEU:O	1:E:4925:ILE:HG13	2.18	0.42
1:F:769:ARG:HA	1:F:774:PRO:HA	2.01	0.42
1:F:894:VAL:O	1:F:898:ILE:HG12	2.18	0.42
1:F:1428:TYR:CE1	1:F:1510:CYS:HB2	2.54	0.42
1:F:2852:ALA:O	1:F:2855:LYS:HG3	2.19	0.42
1:F:3553:ILE:O	1:F:3557:LEU:HG	2.18	0.42
1:F:3909:ILE:HG21	1:F:3969:GLU:HB3	2.01	0.42
1:F:4921:LEU:O	1:F:4925:ILE:HG13	2.18	0.42
2:G:107:TRP:HD1	2:G:110:PRO:HB2	1.84	0.42
1:A:732:LEU:HB3	1:A:779:PHE:CZ	2.54	0.42
1:A:894:VAL:O	1:A:898:ILE:HG12	2.18	0.42
1:A:1791:LYS:HG3	1:A:1795:MET:SD	2.59	0.42
1:A:1995:LEU:HD11	1:A:3623:TYR:CE1	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3085:GLN:HE21	1:A:3089:VAL:HG12	1.84	0.42
1:A:4030:THR:HA	1:A:4033:GLU:HG3	2.00	0.42
1:C:480:ARG:NH2	1:C:3677:GLU:OE2	2.53	0.42
1:C:2325:ARG:HD3	1:C:2325:ARG:HA	1.73	0.42
1:C:2584:MET:HE2	1:C:2588:LEU:HG	2.02	0.42
1:C:3197:PRO:HD2	1:C:3203:VAL:HG22	2.00	0.42
1:C:3217:ILE:HD11	1:C:3241:LEU:HD22	2.02	0.42
1:C:3403:ILE:HD11	1:C:3556:VAL:HA	2.00	0.42
1:C:3454:LYS:HA	1:C:3457:ARG:HG3	2.02	0.42
1:C:4042:ILE:HB	1:C:4047:PHE:HB2	2.00	0.42
1:E:14:LEU:HD11	1:E:214:VAL:HG21	2.01	0.42
1:E:430:ILE:HG23	1:E:504:ARG:HE	1.84	0.42
1:E:850:LEU:O	1:E:1207:LEU:HD12	2.20	0.42
1:E:1428:TYR:CE1	1:E:1510:CYS:HB2	2.54	0.42
1:E:2086:LEU:O	1:E:2089:ARG:HG2	2.18	0.42
1:E:2121:SER:O	1:E:2125:ILE:HG12	2.19	0.42
1:E:2175:VAL:HG12	1:E:2219:TYR:CE2	2.55	0.42
1:E:2514:ALA:HA	1:E:2517:ARG:HD2	2.01	0.42
1:E:3303:GLN:O	1:E:3306:ILE:HG22	2.19	0.42
1:E:4508:ALA:HB2	1:E:4578:HIS:HE1	1.83	0.42
1:E:4671:MET:O	1:E:4671:MET:HG2	2.19	0.42
1:F:557:TRP:HE3	1:F:558:LEU:HD23	1.84	0.42
1:F:2121:SER:O	1:F:2125:ILE:HG12	2.19	0.42
1:F:2289:TRP:CZ2	1:F:2387:ILE:HD12	2.54	0.42
1:F:2929:ILE:HG12	1:F:3006:LEU:HD13	2.01	0.42
1:F:3294:TRP:O	1:F:3298:LEU:HG	2.20	0.42
2:I:107:TRP:HD1	2:I:110:PRO:HB2	1.84	0.42
1:A:878:LEU:H	1:A:878:LEU:HD23	1.84	0.42
1:A:881:ILE:HA	1:A:884:ARG:HG2	2.00	0.42
1:A:2175:VAL:HG12	1:A:2219:TYR:CE2	2.55	0.42
1:A:4010:GLU:HG2	1:A:4120:LEU:HD13	2.02	0.42
1:A:4199:MET:HE2	1:A:4199:MET:HB2	1.77	0.42
1:C:430:ILE:HG23	1:C:504:ARG:HE	1.85	0.42
1:C:769:ARG:HA	1:C:774:PRO:HA	2.01	0.42
1:C:797:GLY:N	1:C:1622:CYS:O	2.52	0.42
1:C:850:LEU:O	1:C:1207:LEU:HD12	2.20	0.42
1:C:1750:PRO:HG3	1:C:2057:LEU:HD22	2.00	0.42
1:C:2193:ALA:O	1:C:2197:ARG:HG3	2.19	0.42
1:C:3636:GLU:HG3	1:C:3693:ILE:HG23	2.01	0.42
1:E:184:VAL:HG22	1:E:191:TYR:CD1	2.54	0.42
1:E:882:ARG:HH11	1:E:937:LEU:HA	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:1990:GLU:CD	1:E:1990:GLU:H	2.22	0.42
1:E:1995:LEU:HD11	1:E:3623:TYR:CE1	2.54	0.42
1:E:2076:ASP:HB3	1:E:2079:LEU:HB3	2.01	0.42
1:E:3014:VAL:HG12	1:E:3095:TYR:HE1	1.83	0.42
1:E:3275:LEU:O	1:E:3279:ILE:HG13	2.19	0.42
1:E:3403:ILE:HD11	1:E:3556:VAL:HA	2.00	0.42
1:F:758:CYS:SG	1:F:767:SER:HB3	2.59	0.42
1:F:1595:VAL:HG23	1:F:1595:VAL:O	2.20	0.42
1:F:2175:VAL:HG12	1:F:2219:TYR:CE2	2.55	0.42
1:F:2514:ALA:HA	1:F:2517:ARG:HD2	2.01	0.42
1:F:3074:LEU:HD22	1:F:3147:VAL:HG23	2.00	0.42
1:F:3454:LYS:HA	1:F:3457:ARG:HG3	2.02	0.42
1:F:4596:LEU:HG	1:F:4600:LYS:HE3	2.00	0.42
1:A:430:ILE:HD13	1:A:500:GLU:HG3	2.01	0.42
1:A:480:ARG:NH2	1:A:3677:GLU:OE2	2.52	0.42
1:A:758:CYS:SG	1:A:767:SER:HB3	2.59	0.42
1:A:1113:MET:SD	1:A:1207:LEU:HD22	2.60	0.42
1:A:1419:TYR:CE2	1:A:1563:ASN:HB3	2.52	0.42
1:A:1990:GLU:H	1:A:1990:GLU:CD	2.22	0.42
1:A:2121:SER:O	1:A:2125:ILE:HG12	2.19	0.42
1:A:3007:PHE:HD1	1:A:3007:PHE:O	2.02	0.42
1:A:3014:VAL:HG12	1:A:3095:TYR:HE1	1.83	0.42
1:A:3275:LEU:O	1:A:3279:ILE:HG13	2.19	0.42
1:A:3769:ASN:OD1	1:A:3769:ASN:N	2.53	0.42
1:A:4035:ASP:OD1	1:A:4042:ILE:HG23	2.18	0.42
1:A:4483:ILE:O	1:A:4486:GLN:HG3	2.19	0.42
1:A:4559:VAL:HG22	1:A:4561:GLU:H	1.84	0.42
1:C:176:ARG:HE	1:C:181:LEU:HB3	1.85	0.42
1:C:879:GLU:O	1:C:883:GLU:HG2	2.19	0.42
1:C:1739:LEU:HD23	1:C:1739:LEU:H	1.84	0.42
1:C:1762:MET:HE2	1:C:1762:MET:HB2	1.87	0.42
1:C:2480:GLN:HE21	1:C:2484:LEU:HD11	1.84	0.42
1:E:4616:ILE:HD13	1:E:4616:ILE:HA	1.88	0.42
1:F:50:GLU:OE2	1:F:61:ASP:N	2.52	0.42
1:F:565:LEU:HD23	1:F:565:LEU:O	2.19	0.42
1:F:591:GLU:HA	1:F:631:LEU:HD11	2.01	0.42
1:F:1739:LEU:HD23	1:F:1739:LEU:H	1.84	0.42
1:F:2076:ASP:HB3	1:F:2079:LEU:HB3	2.01	0.42
1:F:2924:PHE:O	1:F:2928:LEU:HG	2.19	0.42
1:F:3217:ILE:HD11	1:F:3241:LEU:HD22	2.02	0.42
1:F:4662:ARG:HH21	1:F:4673:LYS:HD2	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:28:ILE:HD12	1:A:201:TRP:HE1	1.85	0.42
1:A:1177:LEU:HB2	1:A:1182:LEU:HD21	2.02	0.42
1:A:2983:SER:HA	1:A:3439:SER:HB3	2.00	0.42
1:A:3217:ILE:HD11	1:A:3241:LEU:HD22	2.02	0.42
1:A:3939:LEU:HD21	1:A:3980:MET:HE1	2.01	0.42
1:C:184:VAL:HG22	1:C:191:TYR:CD1	2.54	0.42
1:C:840:TYR:HE2	1:C:1086:ARG:HH12	1.68	0.42
1:C:1258:PHE:HB2	1:C:1303:ARG:HH21	1.84	0.42
1:C:2105:TYR:CZ	1:C:2160:LEU:HB2	2.55	0.42
1:C:2175:VAL:HG12	1:C:2219:TYR:CE2	2.55	0.42
1:C:3769:ASN:OD1	1:C:3769:ASN:N	2.53	0.42
1:C:4166:GLU:O	1:C:4169:ARG:HG2	2.19	0.42
1:E:941:LYS:NZ	1:E:944:LEU:HD11	2.34	0.42
1:E:1267:HIS:HB3	1:E:1295:ASN:N	2.31	0.42
1:E:1595:VAL:HG23	1:E:1595:VAL:O	2.20	0.42
1:E:1841:LYS:O	1:E:1845:GLN:HG2	2.20	0.42
1:E:2765:LYS:O	1:E:2768:GLU:HG3	2.19	0.42
1:E:3698:CYS:SG	1:E:3730:LEU:HD21	2.60	0.42
1:E:3935:ALA:O	1:E:3940:TRP:NE1	2.44	0.42
1:E:4042:ILE:HB	1:E:4047:PHE:HB2	2.00	0.42
1:E:4483:ILE:O	1:E:4486:GLN:HG3	2.19	0.42
1:F:430:ILE:HG23	1:F:504:ARG:HE	1.85	0.42
1:F:941:LYS:NZ	1:F:944:LEU:HD11	2.34	0.42
1:A:879:GLU:O	1:A:883:GLU:HG2	2.19	0.42
1:A:3286:ASN:HB3	1:A:3295:MET:HE3	2.01	0.42
1:A:3731:HIS:NE2	1:A:3775:LYS:HD2	2.34	0.42
2:B:107:TRP:HD1	2:B:110:PRO:HB2	1.84	0.42
1:C:1553:VAL:HG23	1:C:1554:PHE:N	2.35	0.42
1:C:1595:VAL:HG23	1:C:1595:VAL:O	2.20	0.42
1:C:2437:ILE:O	1:C:2464:LYS:HE3	2.18	0.42
1:C:3275:LEU:O	1:C:3279:ILE:HG13	2.19	0.42
1:C:4519:LYS:HE2	1:C:4519:LYS:HB3	1.88	0.42
1:E:438:LYS:HG3	1:E:439:LYS:HG2	2.01	0.42
1:E:565:LEU:O	1:E:565:LEU:HD23	2.19	0.42
1:E:2193:ALA:O	1:E:2197:ARG:HG3	2.19	0.42
1:E:2233:MET:O	1:E:2296:ARG:NH2	2.48	0.42
1:E:2455:MET:HE3	1:E:2456:SER:HB2	2.02	0.42
1:E:2579:LEU:N	1:E:2615:ARG:HH12	2.18	0.42
1:E:2924:PHE:O	1:E:2928:LEU:HG	2.19	0.42
1:F:694:ARG:NH1	1:F:720:ASP:OD1	2.53	0.42
1:F:840:TYR:HE2	1:F:1086:ARG:HH12	1.68	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:1553:VAL:HG23	1:F:1554:PHE:N	2.35	0.42
1:F:1995:LEU:HD11	1:F:3623:TYR:CE1	2.54	0.42
1:F:4135:ILE:HG12	1:F:4149:PHE:HE1	1.84	0.42
1:F:4500:MET:HG2	1:F:4585:CYS:SG	2.60	0.42
1:F:4941:LYS:HB3	1:F:4941:LYS:HE2	1.82	0.42
2:G:40:ALA:HB3	2:G:43:LYS:HB2	2.00	0.42
1:A:840:TYR:HE2	1:A:1086:ARG:HH12	1.68	0.42
1:A:1267:HIS:HB3	1:A:1295:ASN:N	2.31	0.42
1:A:3018:ILE:HD12	1:A:3095:TYR:HD1	1.85	0.42
1:A:3294:TRP:O	1:A:3298:LEU:HG	2.20	0.42
1:A:3698:CYS:SG	1:A:3730:LEU:HD21	2.60	0.42
1:C:694:ARG:NH1	1:C:720:ASP:OD1	2.53	0.42
1:C:1791:LYS:HG3	1:C:1795:MET:SD	2.59	0.42
1:C:2121:SER:O	1:C:2125:ILE:HG12	2.19	0.42
1:C:3085:GLN:HE21	1:C:3089:VAL:HG12	1.84	0.42
1:C:3365:LEU:O	1:C:3369:TYR:HB2	2.19	0.42
1:C:3909:ILE:HG21	1:C:3969:GLU:HB3	2.01	0.42
1:C:3993:THR:O	1:C:3997:GLN:HG3	2.20	0.42
1:E:176:ARG:HE	1:E:181:LEU:HB3	1.85	0.42
1:E:468:GLU:OE1	1:E:468:GLU:N	2.41	0.42
1:E:1739:LEU:HD23	1:E:1739:LEU:H	1.84	0.42
1:E:2099:ARG:O	1:E:2103:LYS:NZ	2.34	0.42
1:E:2480:GLN:HE21	1:E:2484:LEU:HD11	1.84	0.42
1:E:3007:PHE:O	1:E:3007:PHE:HD1	2.02	0.42
1:E:3482:PRO:HD2	1:E:3527:MET:SD	2.60	0.42
1:E:3939:LEU:HD21	1:E:3980:MET:HE1	2.01	0.42
1:E:4010:GLU:HG2	1:E:4120:LEU:HD13	2.02	0.42
1:E:4508:ALA:O	1:E:4511:ILE:HG22	2.20	0.42
1:E:4633:VAL:O	1:E:4636:THR:HG22	2.20	0.42
1:F:238:HIS:HB2	1:F:242:ASP:N	2.35	0.42
1:F:626:ARG:HH21	1:F:2131:VAL:HG11	1.84	0.42
1:F:3698:CYS:SG	1:F:3730:LEU:HD21	2.60	0.42
1:F:4648:VAL:O	1:F:4652:VAL:HG12	2.19	0.42
1:A:674:TYR:HE1	1:A:756:SER:HB2	1.85	0.42
1:A:850:LEU:O	1:A:1207:LEU:HD12	2.20	0.42
1:A:1841:LYS:O	1:A:1845:GLN:HG2	2.20	0.42
1:A:2193:ALA:O	1:A:2197:ARG:HG3	2.19	0.42
1:A:3482:PRO:HD2	1:A:3527:MET:SD	2.60	0.42
1:A:3727:GLN:O	1:A:3731:HIS:CB	2.66	0.42
1:A:3909:ILE:HG21	1:A:3969:GLU:HB3	2.01	0.42
1:A:4500:MET:HG2	1:A:4585:CYS:SG	2.60	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1113:MET:SD	1:C:1207:LEU:HD22	2.60	0.42
1:C:1802:GLU:HA	1:C:1805:LEU:HG	2.02	0.42
1:C:2580:ARG:HG2	1:C:2583:MET:HE3	2.01	0.42
1:C:3226:ARG:NH1	1:C:3286:ASN:HA	2.35	0.42
1:C:3322:MET:HB3	1:C:3368:PHE:CE2	2.55	0.42
1:C:3482:PRO:HD2	1:C:3527:MET:SD	2.60	0.42
2:D:109:THR:OG1	2:D:110:PRO:HD3	2.20	0.42
1:E:50:GLU:OE2	1:E:61:ASP:N	2.52	0.42
1:E:238:HIS:HB2	1:E:242:ASP:N	2.35	0.42
1:E:410:HIS:O	1:E:414:ARG:HG2	2.20	0.42
1:E:747:HIS:CE1	1:E:750:ARG:HG2	2.55	0.42
1:E:769:ARG:HA	1:E:774:PRO:HA	2.01	0.42
1:E:840:TYR:HE2	1:E:1086:ARG:HH12	1.68	0.42
1:E:934:GLN:CD	2:I:99:ARG:HH22	2.22	0.42
1:E:1553:VAL:HG23	1:E:1554:PHE:N	2.35	0.42
1:E:1791:LYS:HG3	1:E:1795:MET:SD	2.59	0.42
1:E:2258:GLU:N	1:E:2259:PRO:HD2	2.35	0.42
1:E:2289:TRP:CZ2	1:E:2387:ILE:HD12	2.54	0.42
1:E:3018:ILE:HD12	1:E:3095:TYR:HD1	1.85	0.42
1:E:3322:MET:HB3	1:E:3368:PHE:CE2	2.55	0.42
1:F:410:HIS:O	1:F:414:ARG:HG2	2.20	0.42
1:F:480:ARG:NH2	1:F:3677:GLU:OE2	2.52	0.42
1:F:850:LEU:O	1:F:1207:LEU:HD12	2.20	0.42
1:F:1166:VAL:HG22	1:F:1173:MET:HB2	2.02	0.42
1:F:3283:ILE:O	1:F:3287:LEU:HG	2.20	0.42
1:F:3636:GLU:HG3	1:F:3693:ILE:HG23	2.01	0.42
1:F:4168:LYS:HE2	1:F:4168:LYS:HB3	1.86	0.42
1:A:184:VAL:HG22	1:A:191:TYR:CD1	2.54	0.41
1:A:2132:ARG:HG2	1:A:2133:MET:H	1.85	0.41
1:A:2258:GLU:N	1:A:2259:PRO:HD2	2.35	0.41
1:A:4508:ALA:O	1:A:4511:ILE:HG22	2.20	0.41
1:C:238:HIS:HB2	1:C:242:ASP:N	2.35	0.41
1:C:410:HIS:O	1:C:414:ARG:HG2	2.20	0.41
1:C:882:ARG:HH11	1:C:937:LEU:HA	1.84	0.41
1:C:1990:GLU:H	1:C:1990:GLU:CD	2.22	0.41
1:C:2426:ILE:O	1:C:2475:TYR:OH	2.37	0.41
1:C:4500:MET:HG2	1:C:4585:CYS:SG	2.60	0.41
1:C:4792:TYR:HH	1:C:4815:HIS:CE1	2.38	0.41
2:D:107:TRP:HD1	2:D:110:PRO:HB2	1.84	0.41
1:E:64:ILE:HA	1:E:123:HIS:CE1	2.55	0.41
1:E:626:ARG:HH21	1:E:2131:VAL:HG11	1.84	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:1113:MET:SD	1:E:1207:LEU:HD22	2.60	0.41
1:E:1814:THR:HG22	1:E:1816:GLU:H	1.85	0.41
1:E:2581:PRO:HD2	1:E:2629:PHE:HD2	1.85	0.41
1:E:3226:ARG:NH1	1:E:3286:ASN:HA	2.35	0.41
1:E:3454:LYS:HA	1:E:3457:ARG:HG3	2.02	0.41
1:E:3636:GLU:HG3	1:E:3693:ILE:HG23	2.02	0.41
1:E:3993:THR:O	1:E:3997:GLN:HG3	2.20	0.41
1:F:390:LYS:HA	1:F:390:LYS:HD3	1.89	0.41
1:F:1114:ARG:HG2	1:F:1138:ASP:HB2	2.01	0.41
1:F:1791:LYS:HG3	1:F:1795:MET:SD	2.59	0.41
1:F:1841:LYS:O	1:F:1845:GLN:HG2	2.20	0.41
1:F:4505:LEU:HD13	1:F:4744:ASP:HB3	2.02	0.41
1:F:4633:VAL:O	1:F:4636:THR:HG22	2.20	0.41
1:A:133:LEU:O	1:A:145:PHE:HB3	2.19	0.41
1:A:626:ARG:HH21	1:A:2131:VAL:HG11	1.84	0.41
1:A:2753:GLN:NE2	1:A:2762:LEU:O	2.49	0.41
1:A:2974:PHE:HD1	1:A:2979:LEU:HD12	1.86	0.41
1:A:3638:LYS:HE2	1:A:3638:LYS:HB3	1.89	0.41
1:A:3935:ALA:O	1:A:3940:TRP:NE1	2.44	0.41
2:B:104:TYR:HD1	2:B:106:PRO:HD3	1.84	0.41
1:C:64:ILE:HA	1:C:123:HIS:CE1	2.55	0.41
1:C:1114:ARG:HG2	1:C:1138:ASP:HB2	2.01	0.41
1:C:1166:VAL:HG22	1:C:1173:MET:HB2	2.02	0.41
1:C:4135:ILE:HG12	1:C:4149:PHE:HE1	1.84	0.41
1:C:4648:VAL:O	1:C:4652:VAL:HG12	2.19	0.41
1:E:28:ILE:HD12	1:E:201:TRP:HE1	1.85	0.41
1:E:728:ASP:OD1	1:E:731:HIS:N	2.41	0.41
1:E:1114:ARG:HG2	1:E:1138:ASP:HB2	2.01	0.41
1:E:1144:ARG:H	1:E:1144:ARG:HG2	1.73	0.41
1:E:2132:ARG:HG2	1:E:2133:MET:H	1.85	0.41
1:E:3909:ILE:HG21	1:E:3969:GLU:HB3	2.01	0.41
1:F:241:MET:HE2	1:F:241:MET:HB2	1.78	0.41
1:F:674:TYR:HE1	1:F:756:SER:HB2	1.85	0.41
1:F:828:PRO:HG2	1:F:1033:VAL:HG21	2.02	0.41
1:F:1113:MET:SD	1:F:1207:LEU:HD22	2.60	0.41
1:F:1985:CYS:SG	1:F:1992:ARG:NH1	2.94	0.41
1:F:3482:PRO:HD2	1:F:3527:MET:SD	2.60	0.41
1:F:3769:ASN:OD1	1:F:3769:ASN:N	2.53	0.41
2:G:18:LEU:HD23	2:G:18:LEU:HA	1.87	0.41
2:I:90:THR:HG23	2:I:124:THR:HA	2.01	0.41
2:I:109:THR:OG1	2:I:110:PRO:HD3	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:557:TRP:HE3	1:A:558:LEU:HD23	1.84	0.41
1:A:694:ARG:NH1	1:A:720:ASP:OD1	2.53	0.41
1:A:769:ARG:HA	1:A:774:PRO:HA	2.01	0.41
1:A:1039:ASP:OD1	1:A:1039:ASP:N	2.52	0.41
1:A:1595:VAL:O	1:A:1595:VAL:HG23	2.20	0.41
1:A:1985:CYS:SG	1:A:1992:ARG:NH1	2.94	0.41
1:A:2459:PHE:CE1	1:A:2464:LYS:HG3	2.56	0.41
1:A:2998:LYS:HG3	1:A:3002:MET:HE2	2.01	0.41
1:A:3365:LEU:O	1:A:3369:TYR:HB2	2.19	0.41
1:A:3993:THR:O	1:A:3997:GLN:HG3	2.20	0.41
1:C:14:LEU:HD11	1:C:214:VAL:HG21	2.01	0.41
1:C:1177:LEU:HB2	1:C:1182:LEU:HD21	2.02	0.41
1:C:1428:TYR:CE1	1:C:1510:CYS:HB2	2.54	0.41
1:C:3369:TYR:HE2	1:C:3465:ILE:HA	1.85	0.41
1:C:4751:THR:O	1:C:4755:ILE:HG13	2.21	0.41
1:E:674:TYR:HE1	1:E:756:SER:HB2	1.85	0.41
1:E:1165:MET:HA	1:E:1165:MET:HE3	2.03	0.41
1:E:1999:HIS:CG	1:E:3627:TRP:HD1	2.39	0.41
1:E:3217:ILE:HD11	1:E:3241:LEU:HD22	2.02	0.41
1:E:3426:ASN:O	1:E:3430:LEU:HG	2.21	0.41
1:E:3832:ASP:N	1:E:3832:ASP:OD1	2.53	0.41
1:F:882:ARG:HH11	1:F:937:LEU:HA	1.84	0.41
1:F:2233:MET:O	1:F:2296:ARG:NH2	2.48	0.41
1:F:3085:GLN:HE21	1:F:3089:VAL:HG12	1.84	0.41
1:F:3275:LEU:O	1:F:3279:ILE:HG13	2.19	0.41
1:F:3322:MET:HB3	1:F:3368:PHE:CE2	2.55	0.41
1:F:3369:TYR:HE2	1:F:3465:ILE:HA	1.85	0.41
2:G:90:THR:HG23	2:G:124:THR:HA	2.01	0.41
1:A:64:ILE:HA	1:A:123:HIS:CE1	2.55	0.41
1:A:1303:ARG:HD3	1:A:1446:ILE:HD11	2.03	0.41
1:A:1553:VAL:HG23	1:A:1554:PHE:N	2.35	0.41
1:A:1899:GLU:HA	1:A:1902:LYS:HG2	2.03	0.41
1:A:2579:LEU:N	1:A:2615:ARG:HH12	2.18	0.41
1:A:3283:ILE:O	1:A:3287:LEU:HG	2.20	0.41
1:A:3482:PRO:O	1:A:3486:GLU:HG3	2.20	0.41
1:A:4030:THR:HG23	1:A:4054:HIS:HE1	1.86	0.41
1:C:747:HIS:CE1	1:C:750:ARG:HG2	2.55	0.41
1:C:2929:ILE:HG12	1:C:3006:LEU:HD13	2.01	0.41
1:C:3007:PHE:O	1:C:3007:PHE:HD1	2.02	0.41
1:C:3018:ILE:HD12	1:C:3095:TYR:HD1	1.85	0.41
1:C:3254:GLU:OE1	1:C:3254:GLU:N	2.47	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:3426:ASN:O	1:C:3430:LEU:HG	2.21	0.41
1:C:3875:ASP:O	1:C:3879:ARG:HG3	2.21	0.41
1:C:4483:ILE:O	1:C:4486:GLN:HG3	2.19	0.41
1:C:4505:LEU:HD13	1:C:4744:ASP:HB3	2.02	0.41
1:E:1303:ARG:O	1:E:1590:GLN:N	2.38	0.41
1:E:1899:GLU:HA	1:E:1902:LYS:HG2	2.03	0.41
1:E:2459:PHE:CE1	1:E:2464:LYS:HG3	2.56	0.41
1:E:2918:LYS:HA	1:E:2999:GLU:OE2	2.21	0.41
1:E:4751:THR:O	1:E:4755:ILE:HG13	2.21	0.41
1:F:176:ARG:HE	1:F:181:LEU:HB3	1.85	0.41
1:F:732:LEU:HB3	1:F:779:PHE:CZ	2.54	0.41
1:F:878:LEU:HD23	1:F:878:LEU:H	1.84	0.41
1:F:1258:PHE:HB2	1:F:1303:ARG:HH21	1.84	0.41
1:F:1516:SER:O	1:F:1533:GLN:NE2	2.38	0.41
1:F:1801:LYS:HB3	1:F:1801:LYS:HE3	1.71	0.41
1:F:1990:GLU:H	1:F:1990:GLU:CD	2.22	0.41
1:F:2105:TYR:CZ	1:F:2160:LEU:HB2	2.55	0.41
1:F:2202:PHE:O	1:F:2205:ILE:HG12	2.21	0.41
1:F:2581:PRO:HD2	1:F:2629:PHE:HD2	1.85	0.41
1:F:3226:ARG:NH1	1:F:3286:ASN:HA	2.35	0.41
1:F:3875:ASP:O	1:F:3879:ARG:HG3	2.21	0.41
1:A:1814:THR:HG22	1:A:1816:GLU:H	1.85	0.41
1:A:2480:GLN:HE21	1:A:2484:LEU:HD11	1.84	0.41
1:A:2581:PRO:HD2	1:A:2629:PHE:HD2	1.85	0.41
1:A:3129:CYS:HB3	1:A:3161:PHE:CE1	2.51	0.41
1:A:3226:ARG:NH1	1:A:3286:ASN:HA	2.35	0.41
1:A:3254:GLU:OE1	1:A:3254:GLU:N	2.47	0.41
1:A:4633:VAL:O	1:A:4636:THR:HG22	2.20	0.41
2:B:109:THR:OG1	2:B:110:PRO:HD3	2.20	0.41
1:C:744:PRO:HD3	1:C:776:GLN:HE21	1.85	0.41
2:D:52:THR:HA	2:D:71:ARG:HH11	1.86	0.41
1:E:2105:TYR:CZ	1:E:2160:LEU:HB2	2.55	0.41
1:E:3769:ASN:OD1	1:E:3769:ASN:N	2.53	0.41
1:F:251:GLU:HG3	1:F:252:HIS:ND1	2.36	0.41
1:F:299:HIS:HB3	1:F:302:THR:HG22	2.02	0.41
1:F:908:ARG:NE	2:G:104:TYR:HB3	2.36	0.41
1:F:3046:LYS:HD2	1:F:3046:LYS:O	2.21	0.41
1:F:3488:ILE:HA	1:F:3550:VAL:HG13	2.03	0.41
1:F:4010:GLU:HG2	1:F:4120:LEU:HD13	2.02	0.41
1:F:4483:ILE:O	1:F:4486:GLN:HG3	2.19	0.41
1:F:4508:ALA:O	1:F:4511:ILE:HG22	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:104:TYR:HD1	2:G:106:PRO:HD3	1.84	0.41
1:A:176:ARG:HE	1:A:181:LEU:HB3	1.85	0.41
1:A:921:PHE:HA	1:A:924:LEU:HB2	2.02	0.41
1:A:970:TYR:HB2	1:A:971:GLN:H	1.70	0.41
1:A:2455:MET:HE3	1:A:2456:SER:HB2	2.03	0.41
1:A:2996:SER:O	1:A:2999:GLU:HB2	2.21	0.41
1:A:3240:MET:HE2	1:A:3240:MET:HA	2.03	0.41
1:A:3426:ASN:O	1:A:3430:LEU:HG	2.21	0.41
1:A:3636:GLU:HG3	1:A:3693:ILE:HG23	2.01	0.41
1:A:4140:SER:O	1:A:4140:SER:OG	2.39	0.41
1:C:28:ILE:HD12	1:C:201:TRP:HE1	1.85	0.41
1:C:732:LEU:HB3	1:C:779:PHE:CZ	2.54	0.41
1:C:1841:LYS:O	1:C:1845:GLN:HG2	2.20	0.41
1:C:3383:TRP:HH2	1:C:3394:LEU:HD23	1.85	0.41
1:C:3832:ASP:N	1:C:3832:ASP:OD1	2.54	0.41
1:C:3870:ILE:O	1:C:3874:VAL:HG23	2.20	0.41
1:C:4164:VAL:HG21	1:C:4199:MET:HG2	2.03	0.41
1:E:3369:TYR:HE2	1:E:3465:ILE:HA	1.85	0.41
1:E:3875:ASP:O	1:E:3879:ARG:HG3	2.21	0.41
1:F:161:THR:HG23	1:F:186:VAL:HG22	2.03	0.41
1:F:747:HIS:CE1	1:F:750:ARG:HG2	2.55	0.41
1:F:1588:HIS:CE1	1:F:1590:GLN:HE21	2.39	0.41
1:F:1814:THR:HG22	1:F:1816:GLU:H	1.85	0.41
1:F:1899:GLU:HA	1:F:1902:LYS:HG2	2.03	0.41
1:F:2480:GLN:HE21	1:F:2484:LEU:HD11	1.84	0.41
1:F:2859:LEU:HD13	1:F:2866:ASN:HA	2.02	0.41
1:F:3240:MET:HE2	1:F:3240:MET:HA	2.03	0.41
1:F:4164:VAL:HG21	1:F:4199:MET:HG2	2.03	0.41
1:A:56:LYS:HE2	1:A:56:LYS:HB2	1.88	0.41
1:A:251:GLU:HG3	1:A:252:HIS:ND1	2.36	0.41
1:A:430:ILE:HG23	1:A:504:ARG:HE	1.84	0.41
1:A:1258:PHE:HB2	1:A:1303:ARG:HH21	1.84	0.41
1:A:3369:TYR:HE2	1:A:3465:ILE:HA	1.85	0.41
1:A:4164:VAL:HG21	1:A:4199:MET:HG2	2.03	0.41
1:A:4505:LEU:HD13	1:A:4744:ASP:HB3	2.02	0.41
1:C:263:GLU:OE2	1:C:388:GLN:NE2	2.40	0.41
1:C:299:HIS:HB3	1:C:302:THR:HG22	2.02	0.41
1:C:1420:LEU:O	1:C:1423:THR:HG22	2.21	0.41
1:C:1686:LEU:HD13	1:C:1707:LEU:HD13	2.02	0.41
1:C:1995:LEU:HD11	1:C:3623:TYR:CE1	2.54	0.41
1:C:2996:SER:O	1:C:2999:GLU:HB2	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:3283:ILE:O	1:C:3287:LEU:HG	2.20	0.41
1:C:3943:VAL:HG23	1:C:3977:MET:SD	2.61	0.41
1:C:3998:MET:O	1:C:4002:LEU:HG	2.21	0.41
1:C:4188:PHE:CE1	1:C:4914:LEU:HD22	2.56	0.41
1:C:4508:ALA:O	1:C:4511:ILE:HG22	2.20	0.41
1:E:557:TRP:HE3	1:E:558:LEU:HD23	1.84	0.41
1:E:1097:LYS:HD2	1:E:1097:LYS:N	2.36	0.41
1:E:2423:ARG:NH2	1:E:2475:TYR:O	2.44	0.41
1:E:4140:SER:O	1:E:4140:SER:OG	2.39	0.41
1:E:4164:VAL:HG21	1:E:4199:MET:HG2	2.03	0.41
1:F:28:ILE:HD12	1:F:201:TRP:HE1	1.85	0.41
1:F:2258:GLU:N	1:F:2259:PRO:HD2	2.35	0.41
1:F:2276:CYS:HB2	1:F:2290:ASN:ND2	2.36	0.41
1:F:2621:CYS:HA	1:F:2676:PRO:HG3	2.02	0.41
1:F:3383:TRP:HH2	1:F:3394:LEU:HD23	1.85	0.41
1:F:4501:ARG:HA	1:F:4501:ARG:HD2	1.93	0.41
1:A:50:GLU:OE2	1:A:61:ASP:N	2.52	0.41
1:A:744:PRO:HD3	1:A:776:GLN:HE21	1.85	0.41
1:A:928:GLU:OE1	1:A:928:GLU:N	2.49	0.41
1:A:1097:LYS:HD2	1:A:1097:LYS:N	2.36	0.41
1:A:1114:ARG:HG2	1:A:1138:ASP:HB2	2.01	0.41
1:A:1305:SER:N	1:A:1588:HIS:O	2.54	0.41
1:A:3943:VAL:HG23	1:A:3977:MET:SD	2.61	0.41
1:A:4044:LYS:HB2	1:A:4075:GLU:OE2	2.21	0.41
1:C:674:TYR:HE1	1:C:756:SER:HB2	1.85	0.41
1:C:1267:HIS:HB3	1:C:1295:ASN:N	2.31	0.41
1:C:1814:THR:HG22	1:C:1816:GLU:H	1.85	0.41
1:C:1899:GLU:HA	1:C:1902:LYS:HG2	2.03	0.41
1:C:1967:PRO:O	1:C:1971:GLN:HG3	2.21	0.41
1:C:2076:ASP:HB3	1:C:2079:LEU:HB3	2.01	0.41
1:C:2258:GLU:N	1:C:2259:PRO:HD2	2.35	0.41
1:C:3029:VAL:HG12	1:C:3033:HIS:NE2	2.36	0.41
1:C:3482:PRO:O	1:C:3486:GLU:HG3	2.20	0.41
1:C:3811:ASN:O	1:C:3814:GLU:HG2	2.21	0.41
1:C:4020:LEU:HD12	1:C:4124:VAL:HG12	2.03	0.41
1:C:4633:VAL:O	1:C:4636:THR:HG22	2.20	0.41
1:E:299:HIS:HB3	1:E:302:THR:HG22	2.02	0.41
1:E:641:ASP:O	1:E:642:LEU:HB3	2.21	0.41
1:E:705:PRO:HG3	1:E:857:LEU:HD12	2.03	0.41
1:E:828:PRO:HG2	1:E:1033:VAL:HG21	2.02	0.41
1:E:921:PHE:HB2	1:E:929:ARG:NH1	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:1166:VAL:HG22	1:E:1173:MET:HB2	2.02	0.41
1:E:1802:GLU:HA	1:E:1805:LEU:HG	2.02	0.41
1:E:1985:CYS:SG	1:E:1992:ARG:NH1	2.94	0.41
1:E:2065:MET:HE2	1:E:2065:MET:HB2	1.99	0.41
1:E:2279:LEU:HB3	1:E:2284:TYR:HB2	2.03	0.41
1:E:3283:ILE:O	1:E:3287:LEU:HG	2.20	0.41
1:E:3294:TRP:O	1:E:3298:LEU:HG	2.19	0.41
1:E:4044:LYS:HB2	1:E:4075:GLU:OE2	2.21	0.41
1:E:4199:MET:HE2	1:E:4199:MET:HB2	1.76	0.41
1:E:4521:SER:O	1:E:4556:VAL:N	2.54	0.41
1:F:261:HIS:HD2	1:F:263:GLU:HG3	1.86	0.41
1:F:1097:LYS:HD2	1:F:1097:LYS:N	2.36	0.41
1:F:2348:GLU:O	1:F:2352:ILE:HG12	2.21	0.41
1:F:3029:VAL:HG12	1:F:3033:HIS:NE2	2.36	0.41
1:F:3832:ASP:N	1:F:3832:ASP:OD1	2.54	0.41
1:F:3998:MET:O	1:F:4002:LEU:HG	2.21	0.41
1:A:641:ASP:O	1:A:642:LEU:HB3	2.21	0.41
1:A:1428:TYR:CE1	1:A:1510:CYS:HB2	2.54	0.41
1:A:2105:TYR:CZ	1:A:2160:LEU:HB2	2.55	0.41
1:A:2210:GLN:NE2	1:A:2244:ALA:O	2.45	0.41
1:A:3322:MET:HB3	1:A:3368:PHE:CE2	2.55	0.41
1:A:4645:ASP:OD1	1:A:4645:ASP:N	2.44	0.41
1:A:4751:THR:O	1:A:4755:ILE:HG13	2.21	0.41
1:A:4756:LEU:O	1:A:4759:VAL:HG12	2.21	0.41
2:B:52:THR:HA	2:B:71:ARG:HH11	1.85	0.41
1:C:251:GLU:HG3	1:C:252:HIS:ND1	2.36	0.41
1:C:438:LYS:HG3	1:C:439:LYS:HG2	2.01	0.41
1:C:556:ASP:OD1	1:C:556:ASP:N	2.54	0.41
1:C:601:LEU:HD13	1:C:610:VAL:HB	2.03	0.41
1:C:1097:LYS:N	1:C:1097:LYS:HD2	2.36	0.41
1:C:1985:CYS:SG	1:C:1992:ARG:NH1	2.94	0.41
1:C:2154:PHE:CE1	1:C:2205:ILE:HD13	2.56	0.41
1:C:2202:PHE:O	1:C:2205:ILE:HG12	2.21	0.41
1:C:2276:CYS:HB2	1:C:2290:ASN:ND2	2.36	0.41
1:C:2348:GLU:O	1:C:2352:ILE:HG12	2.21	0.41
1:C:2579:LEU:N	1:C:2615:ARG:HH12	2.18	0.41
1:C:2974:PHE:HD1	1:C:2979:LEU:HD12	1.86	0.41
1:C:3124:ASP:N	1:C:3124:ASP:OD1	2.54	0.41
1:C:3698:CYS:SG	1:C:3730:LEU:HD21	2.60	0.41
1:C:4662:ARG:HE	1:C:4662:ARG:HB3	1.68	0.41
1:C:4756:LEU:O	1:C:4759:VAL:HG12	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:D:104:TYR:HD1	2:D:106:PRO:HD3	1.84	0.41
1:E:56:LYS:HE2	1:E:56:LYS:HB2	1.88	0.41
1:E:161:THR:HG23	1:E:186:VAL:HG22	2.03	0.41
1:E:173:GLU:HA	1:F:3938:ARG:NH1	2.35	0.41
1:E:198:ASN:N	1:E:198:ASN:OD1	2.54	0.41
1:E:430:ILE:HD11	1:E:501:CYS:HB3	2.02	0.41
1:E:612:ASP:OD1	1:E:1657:HIS:ND1	2.50	0.41
1:E:694:ARG:NH1	1:E:720:ASP:OD1	2.53	0.41
1:E:1177:LEU:HB2	1:E:1182:LEU:HD21	2.02	0.41
1:E:2154:PHE:CE1	1:E:2205:ILE:HD13	2.56	0.41
1:E:2584:MET:HE2	1:E:2588:LEU:HG	2.03	0.41
1:E:3129:CYS:HB3	1:E:3161:PHE:CE1	2.51	0.41
1:E:3214:MET:SD	1:E:3271:HIS:NE2	2.94	0.41
1:E:3369:TYR:HA	1:E:3372:LEU:HB3	2.03	0.41
1:E:3386:GLU:HB3	1:E:3535:ASN:ND2	2.36	0.41
1:E:3482:PRO:O	1:E:3486:GLU:HG3	2.21	0.41
1:E:3998:MET:O	1:E:4002:LEU:HG	2.21	0.41
1:E:4030:THR:HG23	1:E:4054:HIS:HE1	1.86	0.41
1:E:4756:LEU:O	1:E:4759:VAL:HG12	2.21	0.41
1:F:744:PRO:HD3	1:F:776:GLN:HE21	1.85	0.41
1:F:921:PHE:HB2	1:F:929:ARG:NH1	2.36	0.41
1:F:928:GLU:OE1	1:F:928:GLU:N	2.49	0.41
1:F:1273:ILE:HB	1:F:1287:GLN:OE1	2.21	0.41
1:F:1303:ARG:HD3	1:F:1446:ILE:HD11	2.03	0.41
1:F:1802:GLU:HA	1:F:1805:LEU:HG	2.02	0.41
1:F:2143:ARG:HE	1:F:2143:ARG:HB3	1.67	0.41
1:F:2392:ALA:HB2	1:F:2463:HIS:CD2	2.56	0.41
1:F:2459:PHE:CE1	1:F:2464:LYS:HG3	2.56	0.41
1:F:2584:MET:HE2	1:F:2588:LEU:HG	2.03	0.41
1:F:2974:PHE:HD1	1:F:2979:LEU:HD12	1.86	0.41
1:F:3018:ILE:HD12	1:F:3095:TYR:HD1	1.85	0.41
1:F:3482:PRO:O	1:F:3486:GLU:HG3	2.21	0.41
1:F:3638:LYS:HE2	1:F:3638:LYS:HB3	1.89	0.41
1:F:3870:ILE:O	1:F:3874:VAL:HG23	2.21	0.41
1:F:3993:THR:O	1:F:3997:GLN:HG3	2.20	0.41
1:F:4030:THR:HG23	1:F:4054:HIS:HE1	1.86	0.41
1:F:4188:PHE:CE1	1:F:4914:LEU:HD22	2.56	0.41
2:G:109:THR:OG1	2:G:110:PRO:HD3	2.20	0.41
1:A:747:HIS:CE1	1:A:750:ARG:HG2	2.55	0.41
1:A:2392:ALA:HB2	1:A:2463:HIS:CD2	2.56	0.41
1:A:2426:ILE:O	1:A:2475:TYR:OH	2.37	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2554:LEU:HG	1:A:2568:ILE:HD13	2.03	0.41
1:A:2918:LYS:HA	1:A:2999:GLU:OE2	2.21	0.41
1:A:3046:LYS:HD2	1:A:3046:LYS:O	2.21	0.41
1:A:3214:MET:SD	1:A:3271:HIS:NE2	2.94	0.41
1:A:3616:VAL:O	1:A:3620:LEU:HG	2.21	0.41
1:C:641:ASP:O	1:C:642:LEU:HB3	2.21	0.41
1:C:828:PRO:HG2	1:C:1033:VAL:HG21	2.02	0.41
1:C:1305:SER:N	1:C:1588:HIS:O	2.54	0.41
1:C:2132:ARG:HG2	1:C:2133:MET:H	1.85	0.41
1:C:2224:SER:HB2	1:C:2239:LEU:HB2	2.03	0.41
1:C:2392:ALA:HB2	1:C:2463:HIS:CD2	2.56	0.41
1:C:2549:HIS:H	1:C:2549:HIS:HD1	1.68	0.41
1:C:2918:LYS:HA	1:C:2999:GLU:OE2	2.21	0.41
1:E:251:GLU:HG3	1:E:252:HIS:ND1	2.36	0.41
1:E:1686:LEU:HD13	1:E:1707:LEU:HD13	2.02	0.41
1:E:2775:LYS:HE3	1:E:2775:LYS:HB3	1.89	0.41
1:E:2974:PHE:HD1	1:E:2979:LEU:HD12	1.86	0.41
1:F:14:LEU:HD11	1:F:214:VAL:HG21	2.01	0.41
1:F:2132:ARG:HG2	1:F:2133:MET:H	1.85	0.41
1:F:2918:LYS:HA	1:F:2999:GLU:OE2	2.21	0.41
1:F:3124:ASP:OD1	1:F:3124:ASP:N	2.54	0.41
1:F:3369:TYR:HA	1:F:3372:LEU:HB3	2.03	0.41
1:F:4579:THR:HG1	1:F:4732:HIS:CD2	2.36	0.41
2:I:48:VAL:HG12	2:I:49:ALA:H	1.86	0.41
2:I:104:TYR:HD1	2:I:106:PRO:HD3	1.84	0.41
1:A:173:GLU:HA	1:E:3938:ARG:NH1	2.36	0.40
1:A:541:ILE:HD11	1:A:574:VAL:HG13	2.04	0.40
1:A:601:LEU:HD13	1:A:610:VAL:HB	2.03	0.40
1:A:1420:LEU:O	1:A:1423:THR:HG22	2.21	0.40
1:A:1749:LEU:HD23	1:A:1844:LEU:HD12	2.03	0.40
1:A:1838:GLU:H	1:A:1838:GLU:CD	2.25	0.40
1:A:2099:ARG:O	1:A:2103:LYS:NZ	2.34	0.40
1:A:2621:CYS:HA	1:A:2676:PRO:HG3	2.02	0.40
1:A:3029:VAL:HG12	1:A:3033:HIS:NE2	2.36	0.40
1:A:3386:GLU:HB3	1:A:3535:ASN:ND2	2.36	0.40
1:C:626:ARG:HH21	1:C:2131:VAL:HG11	1.84	0.40
1:C:908:ARG:NE	2:D:104:TYR:HB3	2.35	0.40
1:C:2680:MET:HE3	1:C:2680:MET:HA	2.02	0.40
1:C:2922:TYR:CD1	1:C:3002:MET:HE1	2.56	0.40
1:C:3046:LYS:HD2	1:C:3046:LYS:O	2.21	0.40
1:E:514:PHE:HD2	1:E:523:GLY:HA2	1.86	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:921:PHE:HA	1:E:924:LEU:HB2	2.02	0.40
1:E:1978:PHE:CZ	1:E:1995:LEU:HD23	2.56	0.40
1:E:2481:ASP:OD1	1:E:2482:PHE:N	2.54	0.40
1:E:3105:SER:HB3	1:E:3156:GLU:HG2	2.04	0.40
1:E:3273:ASN:ND2	1:E:3313:LEU:HG	2.37	0.40
1:E:4020:LEU:HD12	1:E:4124:VAL:HG12	2.03	0.40
1:F:612:ASP:OD1	1:F:1657:HIS:ND1	2.50	0.40
1:F:921:PHE:HA	1:F:924:LEU:HB2	2.02	0.40
1:F:1177:LEU:HB2	1:F:1182:LEU:HD21	2.02	0.40
1:F:1838:GLU:CD	1:F:1838:GLU:H	2.25	0.40
1:F:1967:PRO:O	1:F:1971:GLN:HG3	2.21	0.40
1:F:1999:HIS:CG	1:F:3627:TRP:HD1	2.39	0.40
1:F:2455:MET:HE3	1:F:2456:SER:HB2	2.03	0.40
1:F:2554:LEU:HG	1:F:2568:ILE:HD13	2.03	0.40
1:F:2577:GLY:O	1:F:2615:ARG:HD2	2.21	0.40
1:F:3007:PHE:HA	1:F:3035:LEU:HD13	2.03	0.40
1:F:3276:LEU:HD22	1:F:3309:VAL:HG11	2.04	0.40
1:F:3348:SER:HA	1:F:3351:GLU:HB2	2.04	0.40
1:F:4756:LEU:O	1:F:4759:VAL:HG12	2.21	0.40
2:G:52:THR:HA	2:G:71:ARG:HH11	1.85	0.40
2:I:64:LYS:HE2	2:I:64:LYS:HB3	1.94	0.40
1:A:314:LEU:O	1:A:315:LEU:HD23	2.22	0.40
1:A:514:PHE:HD2	1:A:523:GLY:HA2	1.86	0.40
1:A:555:LEU:HD23	1:A:555:LEU:HA	1.93	0.40
1:A:1257:GLN:HB2	1:A:1596:LEU:HD21	2.03	0.40
1:A:1967:PRO:O	1:A:1971:GLN:HG3	2.21	0.40
1:A:1999:HIS:CG	1:A:3627:TRP:HD1	2.39	0.40
1:A:2202:PHE:O	1:A:2205:ILE:HG12	2.21	0.40
1:A:2481:ASP:OD1	1:A:2482:PHE:N	2.54	0.40
1:A:3348:SER:HA	1:A:3351:GLU:HB2	2.04	0.40
1:A:3369:TYR:HA	1:A:3372:LEU:HB3	2.03	0.40
1:A:3488:ILE:HA	1:A:3550:VAL:HG13	2.03	0.40
1:A:3998:MET:O	1:A:4002:LEU:HG	2.21	0.40
1:A:4479:TRP:O	1:A:4483:ILE:HG12	2.22	0.40
1:C:314:LEU:O	1:C:315:LEU:HD23	2.21	0.40
1:C:430:ILE:HD11	1:C:501:CYS:HB3	2.02	0.40
1:C:513:HIS:O	1:C:517:VAL:HG23	2.22	0.40
1:C:1257:GLN:HG2	1:C:1451:HIS:CE1	2.56	0.40
1:C:2581:PRO:HD2	1:C:2629:PHE:HD2	1.85	0.40
1:C:2621:CYS:HA	1:C:2676:PRO:HG3	2.02	0.40
1:C:3502:GLU:OE1	1:C:3502:GLU:N	2.40	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:525:SER:O	1:E:529:ILE:HG13	2.21	0.40
1:E:1273:ILE:HB	1:E:1287:GLN:OE1	2.21	0.40
1:E:1704:TYR:CG	1:E:1821:PRO:HB2	2.57	0.40
1:E:2426:ILE:O	1:E:2475:TYR:OH	2.37	0.40
1:E:2859:LEU:HD13	1:E:2866:ASN:HA	2.02	0.40
1:E:3007:PHE:HA	1:E:3035:LEU:HD13	2.03	0.40
1:E:3029:VAL:HG12	1:E:3033:HIS:NE2	2.36	0.40
1:E:3046:LYS:O	1:E:3046:LYS:HD2	2.21	0.40
1:E:3616:VAL:O	1:E:3620:LEU:HG	2.21	0.40
1:E:4505:LEU:HD13	1:E:4744:ASP:HB3	2.02	0.40
1:F:1310:CYS:HA	1:F:1514:ALA:HB1	2.03	0.40
1:F:1978:PHE:CZ	1:F:1995:LEU:HD23	2.56	0.40
1:F:2481:ASP:OD1	1:F:2482:PHE:N	2.54	0.40
1:F:2579:LEU:N	1:F:2615:ARG:HH12	2.18	0.40
1:F:2667:CYS:O	1:F:2671:VAL:HG23	2.21	0.40
1:F:3214:MET:SD	1:F:3271:HIS:NE2	2.94	0.40
1:F:3943:VAL:HG23	1:F:3977:MET:SD	2.61	0.40
1:A:430:ILE:HD11	1:A:501:CYS:HB3	2.02	0.40
1:A:705:PRO:HG3	1:A:857:LEU:HD12	2.03	0.40
1:A:921:PHE:HB2	1:A:929:ARG:NH1	2.36	0.40
1:A:1166:VAL:HG22	1:A:1173:MET:HB2	2.02	0.40
1:A:1273:ILE:HB	1:A:1287:GLN:OE1	2.21	0.40
1:A:1978:PHE:CZ	1:A:1995:LEU:HD23	2.56	0.40
1:A:2348:GLU:O	1:A:2352:ILE:HG12	2.21	0.40
1:A:2549:HIS:HD1	1:A:2549:HIS:H	1.68	0.40
1:A:2999:GLU:O	1:A:3003:VAL:HG23	2.22	0.40
1:A:3273:ASN:ND2	1:A:3313:LEU:HG	2.37	0.40
1:A:3276:LEU:HD22	1:A:3309:VAL:HG11	2.04	0.40
1:A:3383:TRP:HH2	1:A:3394:LEU:HD23	1.85	0.40
1:A:4188:PHE:CE1	1:A:4914:LEU:HD22	2.56	0.40
1:A:4521:SER:O	1:A:4556:VAL:N	2.54	0.40
1:C:541:ILE:HD11	1:C:574:VAL:HG13	2.04	0.40
1:C:2459:PHE:CE1	1:C:2464:LYS:HG3	2.56	0.40
1:C:2481:ASP:OD1	1:C:2482:PHE:N	2.54	0.40
1:C:2535:ALA:HB1	1:C:2578:GLN:O	2.21	0.40
1:C:2554:LEU:HG	1:C:2568:ILE:HD13	2.03	0.40
1:C:3007:PHE:HA	1:C:3035:LEU:HD13	2.04	0.40
1:E:541:ILE:HD11	1:E:574:VAL:HG13	2.03	0.40
1:E:744:PRO:HD3	1:E:776:GLN:HE21	1.86	0.40
1:E:1305:SER:N	1:E:1588:HIS:O	2.54	0.40
1:E:2202:PHE:O	1:E:2205:ILE:HG12	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:E:2224:SER:HB2	1:E:2239:LEU:HB2	2.03	0.40
1:E:2261:LEU:HD12	1:E:2261:LEU:HA	1.94	0.40
1:E:2392:ALA:HB2	1:E:2463:HIS:CD2	2.56	0.40
1:E:2535:ALA:HB1	1:E:2578:GLN:O	2.22	0.40
1:E:2667:CYS:O	1:E:2671:VAL:HG23	2.21	0.40
1:E:3014:VAL:HG12	1:E:3095:TYR:CE1	2.57	0.40
1:E:3030:ASN:HA	1:E:3033:HIS:CD2	2.56	0.40
1:F:64:ILE:HA	1:F:123:HIS:CE1	2.55	0.40
1:F:541:ILE:HD11	1:F:574:VAL:HG13	2.04	0.40
1:F:900:LEU:HB2	1:F:902:TRP:HD1	1.86	0.40
1:F:2224:SER:HB2	1:F:2239:LEU:HB2	2.03	0.40
1:F:2996:SER:O	1:F:2999:GLU:HB2	2.21	0.40
1:F:2999:GLU:O	1:F:3003:VAL:HG23	2.22	0.40
1:F:3426:ASN:O	1:F:3430:LEU:HG	2.21	0.40
1:F:3612:ARG:HH11	1:F:3612:ARG:HA	1.87	0.40
1:F:4113:ARG:H	1:F:4113:ARG:HG2	1.60	0.40
2:I:69:ILE:HB	2:I:80:LEU:HD13	2.04	0.40
1:A:76:ARG:O	1:A:80:GLU:HG2	2.22	0.40
1:A:1704:TYR:CG	1:A:1821:PRO:HB2	2.57	0.40
1:A:2154:PHE:CE1	1:A:2205:ILE:HD13	2.56	0.40
1:A:2580:ARG:HG2	1:A:2583:MET:HE3	2.01	0.40
1:A:2633:SER:OG	1:A:2636:GLU:HG3	2.22	0.40
1:A:3014:VAL:HG12	1:A:3095:TYR:CE1	2.57	0.40
1:A:3105:SER:HB3	1:A:3156:GLU:HG2	2.04	0.40
1:A:3612:ARG:O	1:A:3616:VAL:HG12	2.22	0.40
1:A:4618:GLU:OE1	1:A:4618:GLU:N	2.54	0.40
1:C:1303:ARG:HD3	1:C:1446:ILE:HD11	2.03	0.40
1:C:1588:HIS:CE1	1:C:1590:GLN:HE21	2.39	0.40
1:C:2428:LEU:O	1:C:2432:VAL:HG23	2.22	0.40
1:C:3754:VAL:HA	1:C:3757:THR:HG22	2.04	0.40
1:E:970:TYR:HB2	1:E:971:GLN:H	1.70	0.40
1:E:1030:PRO:HB2	1:E:1031:ARG:NH1	2.36	0.40
1:E:2633:SER:OG	1:E:2636:GLU:HG3	2.22	0.40
1:E:2765:LYS:O	1:E:2769:ILE:HG22	2.22	0.40
1:E:3870:ILE:O	1:E:3874:VAL:HG23	2.20	0.40
1:E:3900:GLN:HA	1:E:3903:ARG:HH11	1.87	0.40
1:E:3943:VAL:HG23	1:E:3977:MET:SD	2.61	0.40
1:E:4618:GLU:OE1	1:E:4618:GLU:N	2.54	0.40
1:F:641:ASP:O	1:F:642:LEU:HB3	2.21	0.40
1:F:1257:GLN:HB2	1:F:1596:LEU:HD21	2.03	0.40
1:F:1843:ILE:HD13	1:F:1843:ILE:HA	1.92	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:4030:THR:HG23	1:F:4054:HIS:CE1	2.57	0.40
1:F:4751:THR:O	1:F:4755:ILE:HG13	2.21	0.40
2:G:48:VAL:HG12	2:G:49:ALA:H	1.86	0.40
1:A:660:PHE:HB3	1:A:787:LEU:HD22	2.04	0.40
1:A:897:LYS:HE2	1:A:915:HIS:NE2	2.36	0.40
1:A:908:ARG:NE	2:B:104:TYR:HB3	2.35	0.40
1:A:1124:PRO:HG3	1:A:1597:TRP:CE2	2.57	0.40
1:A:1588:HIS:CE1	1:A:1590:GLN:HE21	2.39	0.40
1:A:1686:LEU:HD13	1:A:1707:LEU:HD13	2.02	0.40
1:A:1802:GLU:HA	1:A:1805:LEU:HG	2.02	0.40
1:A:2535:ALA:HB1	1:A:2578:GLN:O	2.21	0.40
1:A:2676:PRO:HA	1:A:2677:PRO:HD3	1.99	0.40
1:A:3612:ARG:HA	1:A:3612:ARG:HH11	1.87	0.40
1:A:3754:VAL:HA	1:A:3757:THR:HG22	2.04	0.40
1:A:3811:ASN:O	1:A:3814:GLU:HG2	2.21	0.40
2:B:69:ILE:HB	2:B:80:LEU:HD13	2.04	0.40
1:C:143:LEU:HB3	1:C:190:ARG:HH21	1.87	0.40
1:C:227:TYR:HA	1:C:355:LYS:HA	2.03	0.40
1:C:921:PHE:HA	1:C:924:LEU:HB2	2.02	0.40
1:C:1838:GLU:H	1:C:1838:GLU:CD	2.25	0.40
1:C:1978:PHE:CZ	1:C:1995:LEU:HD23	2.56	0.40
1:C:1999:HIS:CG	1:C:3627:TRP:HD1	2.39	0.40
1:C:2455:MET:HE3	1:C:2456:SER:HB2	2.04	0.40
1:C:2588:LEU:HD21	1:C:2612:HIS:NE2	2.37	0.40
1:C:3214:MET:SD	1:C:3271:HIS:NE2	2.94	0.40
1:C:3386:GLU:HB3	1:C:3535:ASN:ND2	2.36	0.40
1:C:4044:LYS:HB2	1:C:4075:GLU:OE2	2.21	0.40
1:C:4168:LYS:HB3	1:C:4168:LYS:HE2	1.86	0.40
2:D:48:VAL:HG12	2:D:49:ALA:H	1.86	0.40
1:E:897:LYS:HE2	1:E:915:HIS:NE2	2.36	0.40
1:E:1420:LEU:O	1:E:1423:THR:HG22	2.21	0.40
1:E:1967:PRO:O	1:E:1971:GLN:HG3	2.21	0.40
1:E:2276:CYS:HB2	1:E:2290:ASN:ND2	2.36	0.40
1:E:2549:HIS:HD1	1:E:2549:HIS:H	1.68	0.40
1:E:2554:LEU:HG	1:E:2568:ILE:HD13	2.03	0.40
1:E:3644:ALA:HB2	1:E:3663:LEU:HD13	2.04	0.40
1:E:3811:ASN:O	1:E:3814:GLU:HG2	2.21	0.40
1:F:525:SER:O	1:F:529:ILE:HG13	2.21	0.40
1:F:705:PRO:HG3	1:F:857:LEU:HD12	2.03	0.40
1:F:1124:PRO:HG3	1:F:1597:TRP:CE2	2.57	0.40
1:F:2154:PHE:CE1	1:F:2205:ILE:HD13	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:2221:LEU:HD12	1:F:2260:ASP:HB2	2.03	0.40
1:F:2564:GLN:O	1:F:2568:ILE:HG13	2.22	0.40
1:F:2850:ILE:HD12	1:F:2850:ILE:HA	1.96	0.40
1:F:3169:PHE:HE1	1:F:3244:TYR:OH	2.05	0.40
1:F:3369:TYR:CE2	1:F:3465:ILE:HA	2.57	0.40
1:F:3374:ARG:NH2	1:F:3431:ILE:O	2.55	0.40
1:F:3616:VAL:O	1:F:3620:LEU:HG	2.21	0.40
1:F:3754:VAL:HA	1:F:3757:THR:HG22	2.04	0.40
1:F:3902:GLN:HE21	1:F:3963:GLN:HG2	1.87	0.40
1:F:4020:LEU:HD12	1:F:4124:VAL:HG12	2.03	0.40
1:F:4199:MET:HB2	1:F:4199:MET:HE2	1.76	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	4094/4966 (82%)	3987 (97%)	106 (3%)	1 (0%)	100	100
1	C	4094/4966 (82%)	3986 (97%)	107 (3%)	1 (0%)	100	100
1	E	4094/4966 (82%)	3986 (97%)	107 (3%)	1 (0%)	100	100
1	F	4094/4966 (82%)	3983 (97%)	110 (3%)	1 (0%)	100	100
2	B	124/137 (90%)	118 (95%)	6 (5%)	0	100	100
2	D	124/137 (90%)	118 (95%)	6 (5%)	0	100	100
2	G	124/137 (90%)	118 (95%)	6 (5%)	0	100	100
2	I	124/137 (90%)	118 (95%)	6 (5%)	0	100	100
All	All	16872/20412 (83%)	16414 (97%)	454 (3%)	4 (0%)	100	100

All (4) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	2530	CYS
1	C	2530	CYS
1	E	2530	CYS
1	F	2530	CYS

### 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	3589/4355 (82%)	3516 (98%)	73 (2%)	50	70
1	C	3589/4355 (82%)	3517 (98%)	72 (2%)	50	70
1	E	3589/4355 (82%)	3516 (98%)	73 (2%)	50	70
1	F	3589/4355 (82%)	3516 (98%)	73 (2%)	50	70
2	B	103/114 (90%)	102 (99%)	1 (1%)	73	83
2	D	103/114 (90%)	102 (99%)	1 (1%)	73	83
2	G	103/114 (90%)	101 (98%)	2 (2%)	52	71
2	I	103/114 (90%)	102 (99%)	1 (1%)	73	83
All	All	14768/17876 (83%)	14472 (98%)	296 (2%)	50	70

All (296) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	36	CYS
1	A	42	PHE
1	A	137	ARG
1	A	196	TYR
1	A	241	MET
1	A	317	MET
1	A	332	ARG
1	A	356	TYR
1	A	655	MET
1	A	678	MET
1	A	904	TYR
1	A	913	ARG

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Mol	Chain	Res	Type
1	A	917	CYS
1	A	926	GLU
1	A	988	LEU
1	A	1156	TRP
1	A	1174	MET
1	A	1290	PHE
1	A	1293	GLN
1	A	1421	MET
1	A	1487	MET
1	A	1801	LYS
1	A	1915	CYS
1	A	1962	ARG
1	A	2083	MET
1	A	2184	LYS
1	A	2302	ARG
1	A	2383	MET
1	A	2406	HIS
1	A	2491	PHE
1	A	2534	PHE
1	A	2549	HIS
1	A	2604	MET
1	A	2638	HIS
1	A	2723	TYR
1	A	2740	TRP
1	A	2742	TYR
1	A	2836	LEU
1	A	2855	LYS
1	A	2918	LYS
1	A	2924	PHE
1	A	2931	TYR
1	A	2961	PHE
1	A	2973	TYR
1	A	2974	PHE
1	A	3007	PHE
1	A	3046	LYS
1	A	3244	TYR
1	A	3281	LYS
1	A	3294	TRP
1	A	3322	MET
1	A	3383	TRP
1	A	3411	PHE
1	A	3427	MET

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Mol	Chain	Res	Type
1	A	3627	TRP
1	A	3853	PHE
1	A	3888	TYR
1	A	3955	MET
1	A	3977	MET
1	A	4011	MET
1	A	4047	PHE
1	A	4051	MET
1	A	4111	ASP
1	A	4161	LYS
1	A	4512	ASN
1	A	4518	TYR
1	A	4643	TYR
1	A	4671	MET
1	A	4736	PHE
1	A	4799	ASP
1	A	4894	ASN
1	A	4922	MET
1	A	4938	TYR
2	B	114	TYR
1	C	36	CYS
1	C	42	PHE
1	C	137	ARG
1	C	196	TYR
1	C	241	MET
1	C	317	MET
1	C	332	ARG
1	C	356	TYR
1	C	655	MET
1	C	678	MET
1	C	904	TYR
1	C	913	ARG
1	C	917	CYS
1	C	926	GLU
1	C	988	LEU
1	C	1156	TRP
1	C	1174	MET
1	C	1290	PHE
1	C	1293	GLN
1	C	1421	MET
1	C	1487	MET
1	C	1801	LYS

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Mol	Chain	Res	Type
1	C	1915	CYS
1	C	1962	ARG
1	C	2083	MET
1	C	2184	LYS
1	C	2302	ARG
1	C	2383	MET
1	C	2406	HIS
1	C	2491	PHE
1	C	2534	PHE
1	C	2549	HIS
1	C	2604	MET
1	C	2638	HIS
1	C	2723	TYR
1	C	2740	TRP
1	C	2742	TYR
1	C	2836	LEU
1	C	2855	LYS
1	C	2918	LYS
1	C	2924	PHE
1	C	2931	TYR
1	C	2961	PHE
1	C	2973	TYR
1	C	2974	PHE
1	C	3007	PHE
1	C	3046	LYS
1	C	3244	TYR
1	C	3281	LYS
1	C	3294	TRP
1	C	3322	MET
1	C	3383	TRP
1	C	3411	PHE
1	C	3627	TRP
1	C	3853	PHE
1	C	3888	TYR
1	C	3955	MET
1	C	3977	MET
1	C	4011	MET
1	C	4047	PHE
1	C	4051	MET
1	C	4111	ASP
1	C	4161	LYS
1	C	4512	ASN

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Mol	Chain	Res	Type
1	C	4518	TYR
1	C	4643	TYR
1	C	4671	MET
1	C	4736	PHE
1	C	4799	ASP
1	C	4894	ASN
1	C	4922	MET
1	C	4938	TYR
2	D	114	TYR
1	E	36	CYS
1	E	42	PHE
1	E	137	ARG
1	E	196	TYR
1	E	241	MET
1	E	317	MET
1	E	332	ARG
1	E	356	TYR
1	E	655	MET
1	E	678	MET
1	E	904	TYR
1	E	913	ARG
1	E	917	CYS
1	E	926	GLU
1	E	988	LEU
1	E	1156	TRP
1	E	1174	MET
1	E	1290	PHE
1	E	1293	GLN
1	E	1421	MET
1	E	1487	MET
1	E	1801	LYS
1	E	1915	CYS
1	E	1962	ARG
1	E	2083	MET
1	E	2184	LYS
1	E	2302	ARG
1	E	2383	MET
1	E	2406	HIS
1	E	2491	PHE
1	E	2534	PHE
1	E	2549	HIS
1	E	2604	MET

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Mol	Chain	Res	Type
1	E	2638	HIS
1	E	2723	TYR
1	E	2740	TRP
1	E	2742	TYR
1	E	2836	LEU
1	E	2855	LYS
1	E	2918	LYS
1	E	2924	PHE
1	E	2931	TYR
1	E	2961	PHE
1	E	2973	TYR
1	E	2974	PHE
1	E	3007	PHE
1	E	3046	LYS
1	E	3244	TYR
1	E	3281	LYS
1	E	3294	TRP
1	E	3322	MET
1	E	3383	TRP
1	E	3411	PHE
1	E	3427	MET
1	E	3627	TRP
1	E	3853	PHE
1	E	3888	TYR
1	E	3955	MET
1	E	3977	MET
1	E	4011	MET
1	E	4047	PHE
1	E	4051	MET
1	E	4111	ASP
1	E	4161	LYS
1	E	4512	ASN
1	E	4518	TYR
1	E	4643	TYR
1	E	4671	MET
1	E	4736	PHE
1	E	4799	ASP
1	E	4894	ASN
1	E	4922	MET
1	E	4938	TYR
1	F	36	CYS
1	F	42	PHE

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Mol	Chain	Res	Type
1	F	137	ARG
1	F	196	TYR
1	F	241	MET
1	F	317	MET
1	F	332	ARG
1	F	356	TYR
1	F	655	MET
1	F	678	MET
1	F	904	TYR
1	F	913	ARG
1	F	917	CYS
1	F	926	GLU
1	F	988	LEU
1	F	1156	TRP
1	F	1174	MET
1	F	1290	PHE
1	F	1293	GLN
1	F	1421	MET
1	F	1487	MET
1	F	1801	LYS
1	F	1915	CYS
1	F	1962	ARG
1	F	2083	MET
1	F	2184	LYS
1	F	2302	ARG
1	F	2383	MET
1	F	2406	HIS
1	F	2491	PHE
1	F	2534	PHE
1	F	2549	HIS
1	F	2604	MET
1	F	2638	HIS
1	F	2723	TYR
1	F	2740	TRP
1	F	2742	TYR
1	F	2836	LEU
1	F	2855	LYS
1	F	2918	LYS
1	F	2924	PHE
1	F	2931	TYR
1	F	2961	PHE
1	F	2973	TYR

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Mol	Chain	Res	Type
1	F	2974	PHE
1	F	3007	PHE
1	F	3046	LYS
1	F	3244	TYR
1	F	3281	LYS
1	F	3294	TRP
1	F	3322	MET
1	F	3383	TRP
1	F	3411	PHE
1	F	3427	MET
1	F	3627	TRP
1	F	3853	PHE
1	F	3888	TYR
1	F	3955	MET
1	F	3977	MET
1	F	4011	MET
1	F	4047	PHE
1	F	4051	MET
1	F	4111	ASP
1	F	4161	LYS
1	F	4512	ASN
1	F	4518	TYR
1	F	4643	TYR
1	F	4671	MET
1	F	4736	PHE
1	F	4799	ASP
1	F	4894	ASN
1	F	4922	MET
1	F	4938	TYR
2	G	46	GLU
2	G	114	TYR
2	I	114	TYR

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (53) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	238	HIS
1	A	375	GLN
1	A	476	GLN
1	A	1143	GLN
1	A	1296	ASN
1	A	1498	GLN

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Mol	Chain	Res	Type
1	A	1588	HIS
1	A	2480	GLN
1	A	2972	GLN
1	A	3126	GLN
1	A	3485	GLN
1	A	3954	GLN
1	A	4786	ASN
2	B	105	ASN
1	C	238	HIS
1	C	375	GLN
1	C	476	GLN
1	C	1143	GLN
1	C	1296	ASN
1	C	1498	GLN
1	C	1588	HIS
1	C	2480	GLN
1	C	2578	GLN
1	C	2972	GLN
1	C	3126	GLN
1	C	3485	GLN
1	C	4786	ASN
2	D	105	ASN
1	E	238	HIS
1	E	375	GLN
1	E	476	GLN
1	E	1143	GLN
1	E	1296	ASN
1	E	1588	HIS
1	E	1936	GLN
1	E	2480	GLN
1	E	2972	GLN
1	E	3126	GLN
1	E	3485	GLN
1	E	4786	ASN
1	F	238	HIS
1	F	375	GLN
1	F	476	GLN
1	F	1143	GLN
1	F	1296	ASN
1	F	1588	HIS
1	F	2480	GLN
1	F	2972	GLN

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Mol	Chain	Res	Type
1	F	3126	GLN
1	F	3485	GLN
1	F	4786	ASN
2	G	105	ASN
2	I	105	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 16 ligands modelled in this entry, 8 are monoatomic - leaving 8 for Mogul analysis.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\# Z  > 2$	Counts	RMSZ	$\# Z  > 2$
3	ATP	F	5101	-	26,33,33	0.62	0	31,52,52	0.78	2 (6%)
4	CFF	C	5102	-	8,15,15	1.04	0	8,23,23	2.51	2 (25%)
4	CFF	E	5102	-	8,15,15	1.04	0	8,23,23	2.52	2 (25%)
3	ATP	E	5101	-	26,33,33	0.62	0	31,52,52	0.78	2 (6%)
3	ATP	A	5101	-	26,33,33	0.61	0	31,52,52	0.78	2 (6%)
4	CFF	F	5102	-	8,15,15	1.04	0	8,23,23	2.51	2 (25%)
4	CFF	A	5102	-	8,15,15	1.04	0	8,23,23	2.52	2 (25%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
3	ATP	C	5101	-	26,33,33	0.62	0	31,52,52	0.78	2 (6%)

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the Chemical Component Dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
3	ATP	F	5101	-	-	5/18/38/38	0/3/3/3
4	CFF	C	5102	-	-	-	0/2/2/2
4	CFF	E	5102	-	-	-	0/2/2/2
3	ATP	E	5101	-	-	5/18/38/38	0/3/3/3
3	ATP	A	5101	-	-	5/18/38/38	0/3/3/3
4	CFF	F	5102	-	-	-	0/2/2/2
4	CFF	A	5102	-	-	-	0/2/2/2
3	ATP	C	5101	-	-	5/18/38/38	0/3/3/3

There are no bond length outliers.

All (16) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
4	A	5102	CFF	C5-C6-N1	-5.88	111.93	118.20
4	E	5102	CFF	C5-C6-N1	-5.88	111.93	118.20
4	F	5102	CFF	C5-C6-N1	-5.87	111.94	118.20
4	C	5102	CFF	C5-C6-N1	-5.87	111.94	118.20
4	A	5102	CFF	C4-C5-C6	3.73	122.36	119.96
4	E	5102	CFF	C4-C5-C6	3.73	122.36	119.96
4	F	5102	CFF	C4-C5-C6	3.72	122.35	119.96
4	C	5102	CFF	C4-C5-C6	3.72	122.35	119.96
3	F	5101	ATP	C5-C6-N6	2.31	123.86	120.35
3	A	5101	ATP	C5-C6-N6	2.30	123.85	120.35
3	C	5101	ATP	C5-C6-N6	2.30	123.84	120.35
3	E	5101	ATP	C5-C6-N6	2.27	123.81	120.35
3	E	5101	ATP	PB-O3B-PG	2.04	139.82	132.83
3	F	5101	ATP	PB-O3B-PG	2.04	139.81	132.83
3	C	5101	ATP	PB-O3B-PG	2.03	139.80	132.83
3	A	5101	ATP	PB-O3B-PG	2.03	139.79	132.83

There are no chirality outliers.

All (20) torsion outliers are listed below:

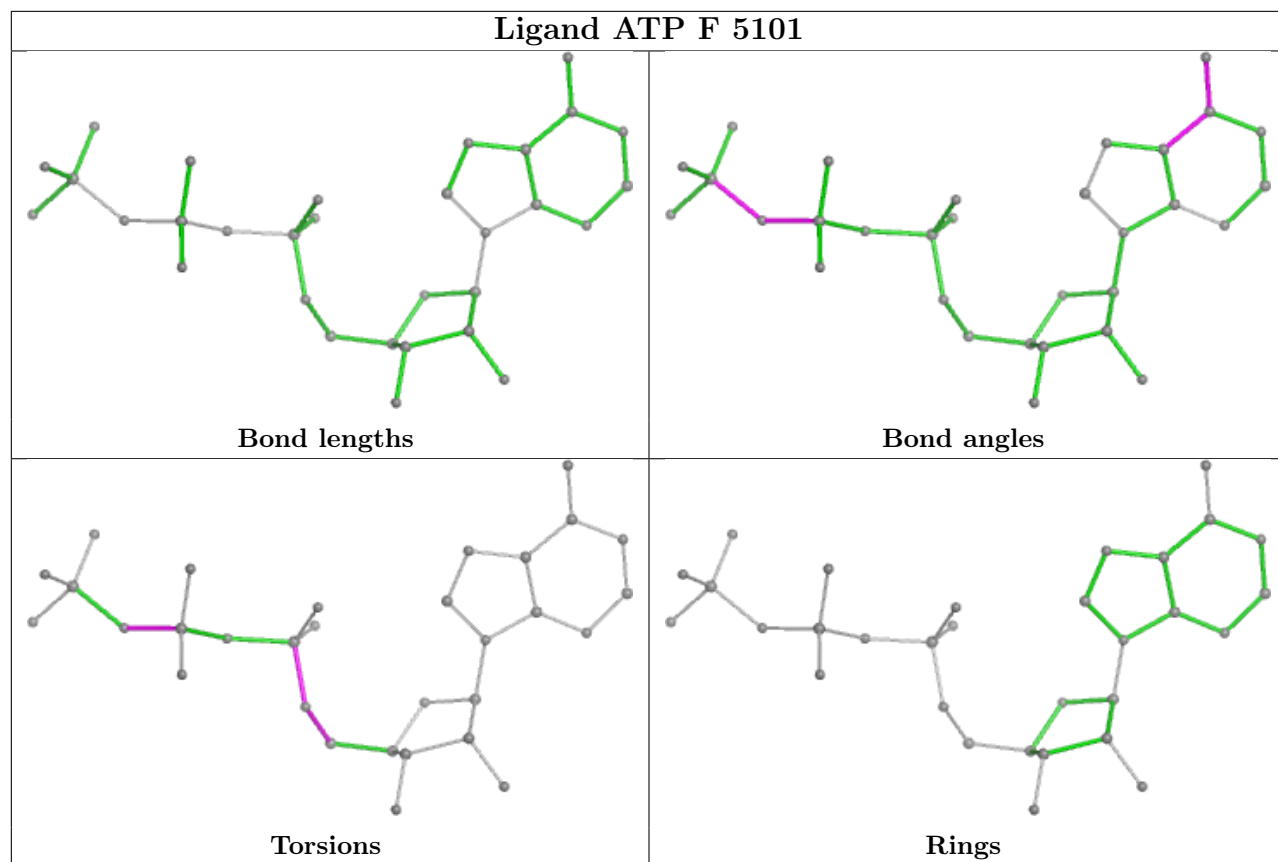
Mol	Chain	Res	Type	Atoms
3	A	5101	ATP	C5'-O5'-PA-O1A
3	C	5101	ATP	C5'-O5'-PA-O1A
3	E	5101	ATP	C5'-O5'-PA-O1A
3	F	5101	ATP	C5'-O5'-PA-O1A
3	A	5101	ATP	C4'-C5'-O5'-PA
3	C	5101	ATP	C4'-C5'-O5'-PA
3	E	5101	ATP	C4'-C5'-O5'-PA
3	F	5101	ATP	C4'-C5'-O5'-PA
3	A	5101	ATP	C5'-O5'-PA-O2A
3	C	5101	ATP	C5'-O5'-PA-O2A
3	E	5101	ATP	C5'-O5'-PA-O2A
3	F	5101	ATP	C5'-O5'-PA-O2A
3	A	5101	ATP	PG-O3B-PB-O2B
3	C	5101	ATP	PG-O3B-PB-O2B
3	E	5101	ATP	PG-O3B-PB-O2B
3	F	5101	ATP	PG-O3B-PB-O2B
3	A	5101	ATP	C5'-O5'-PA-O3A
3	C	5101	ATP	C5'-O5'-PA-O3A
3	E	5101	ATP	C5'-O5'-PA-O3A
3	F	5101	ATP	C5'-O5'-PA-O3A

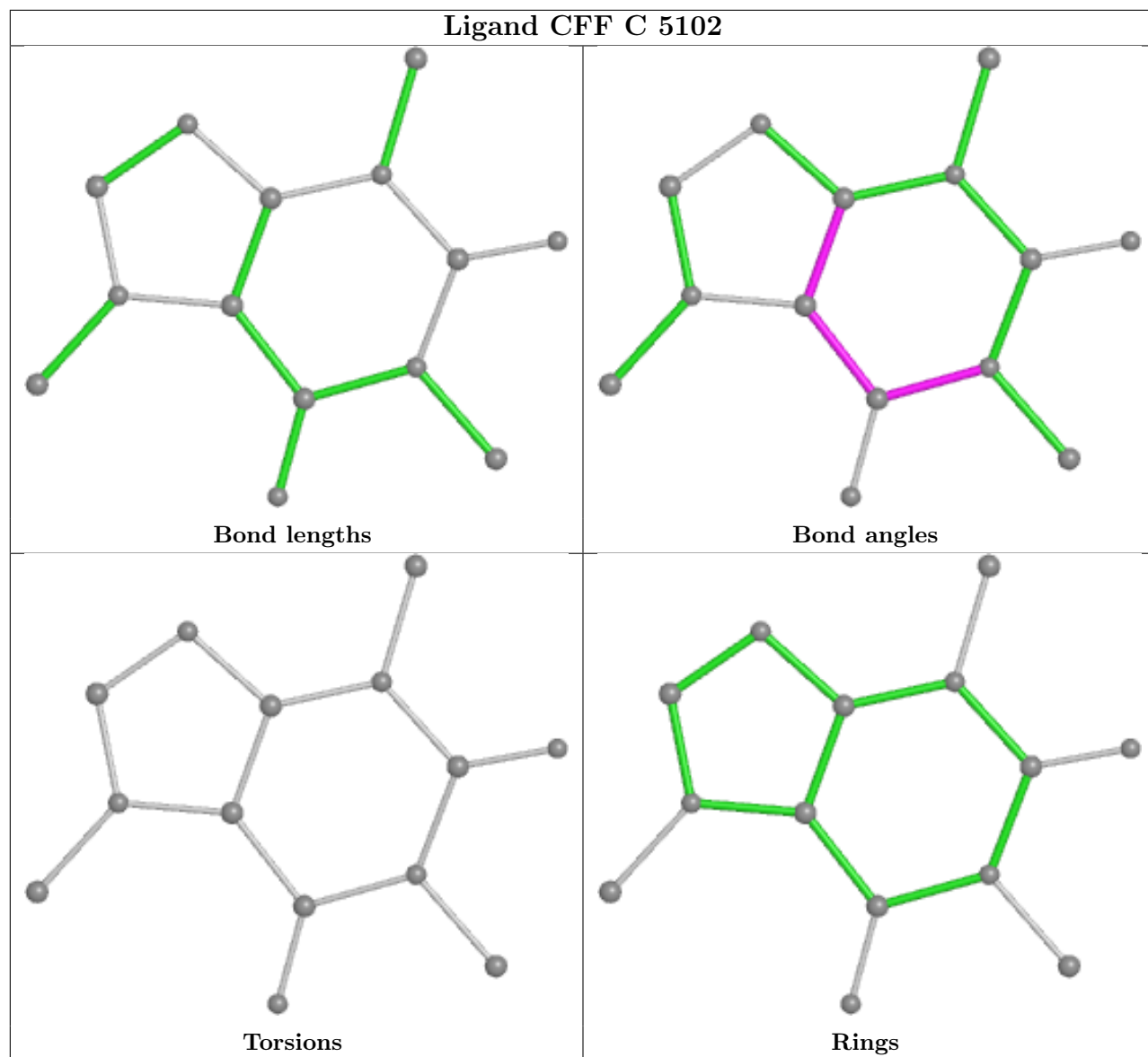
There are no ring outliers.

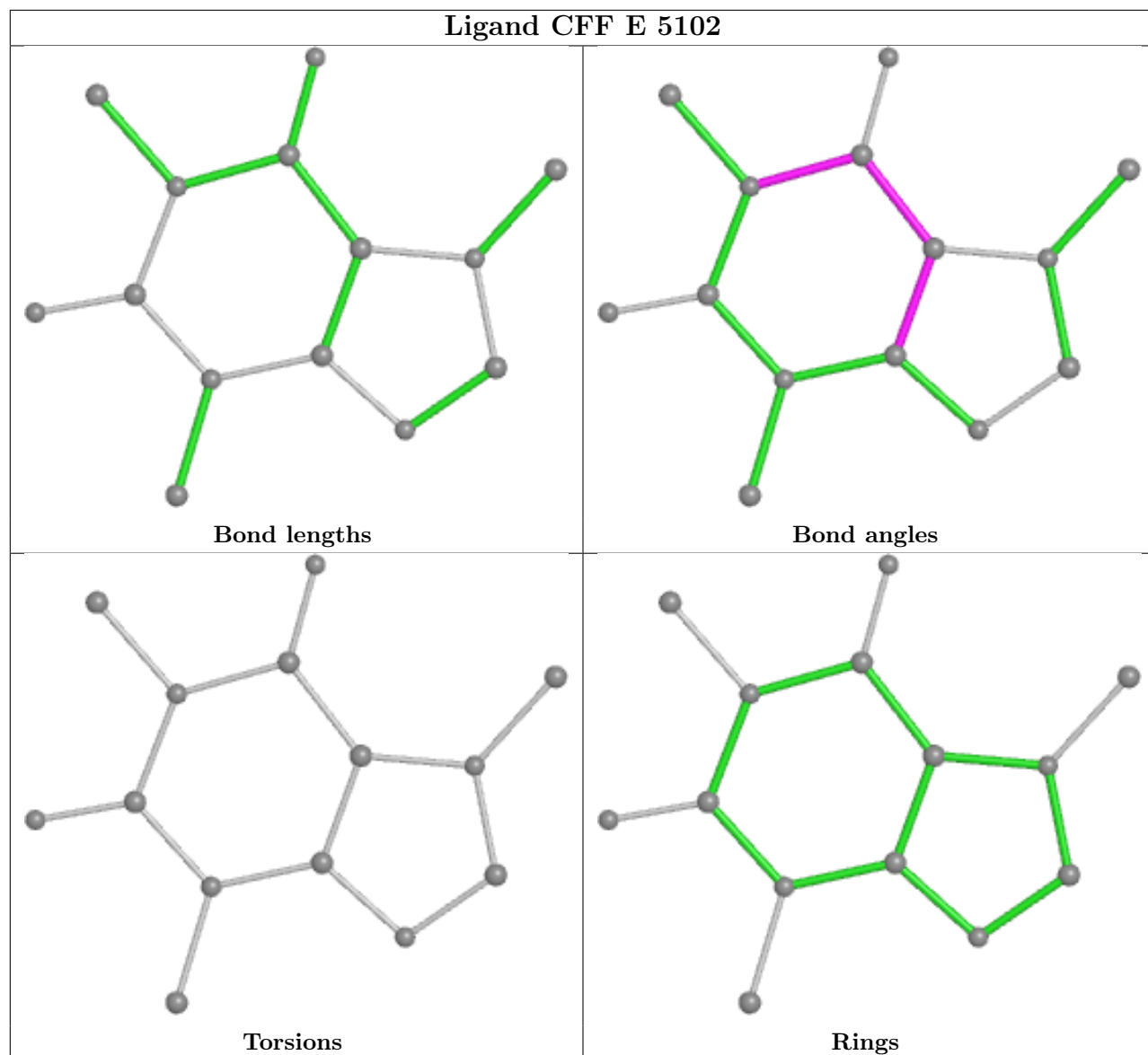
4 monomers are involved in 12 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
3	F	5101	ATP	3	0
3	E	5101	ATP	3	0
3	A	5101	ATP	3	0
3	C	5101	ATP	3	0

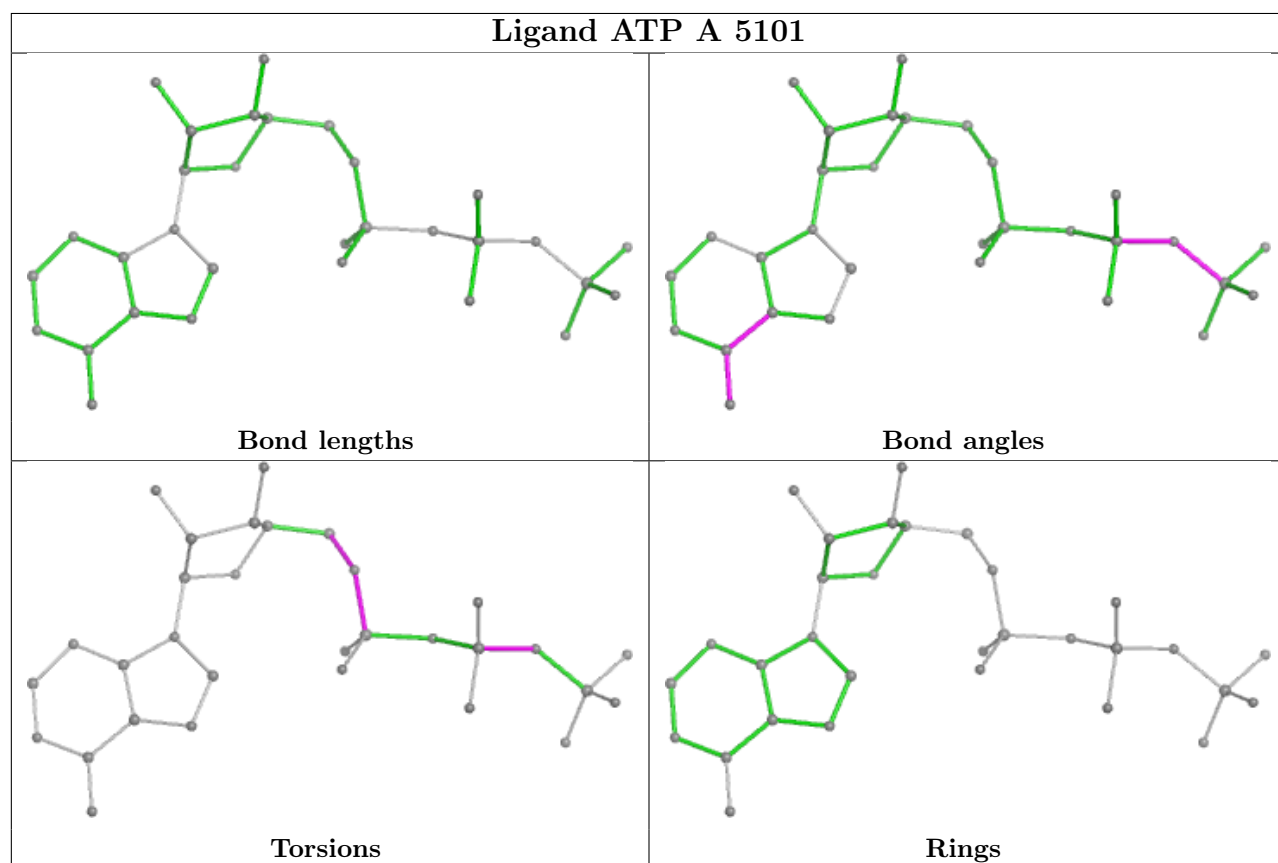
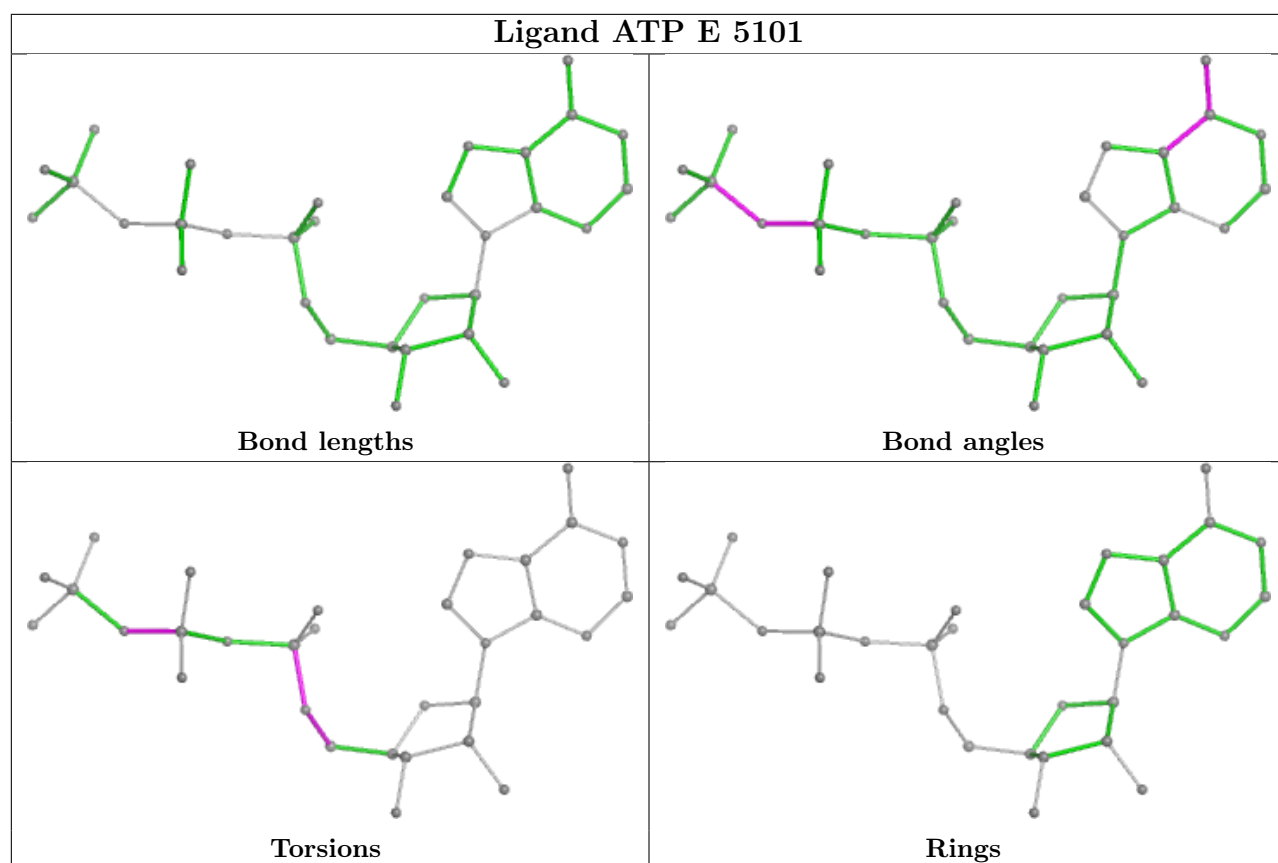
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included.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

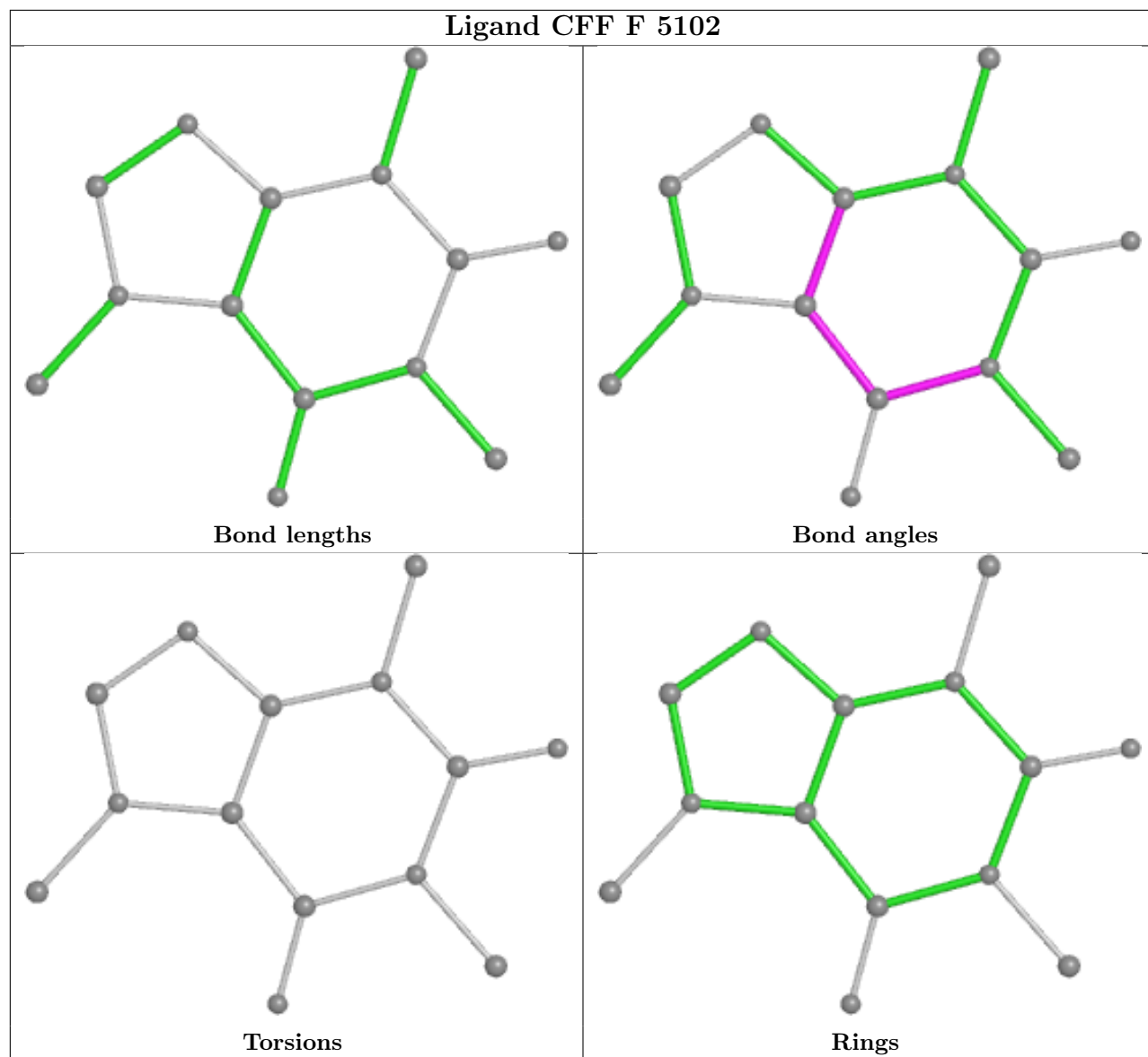


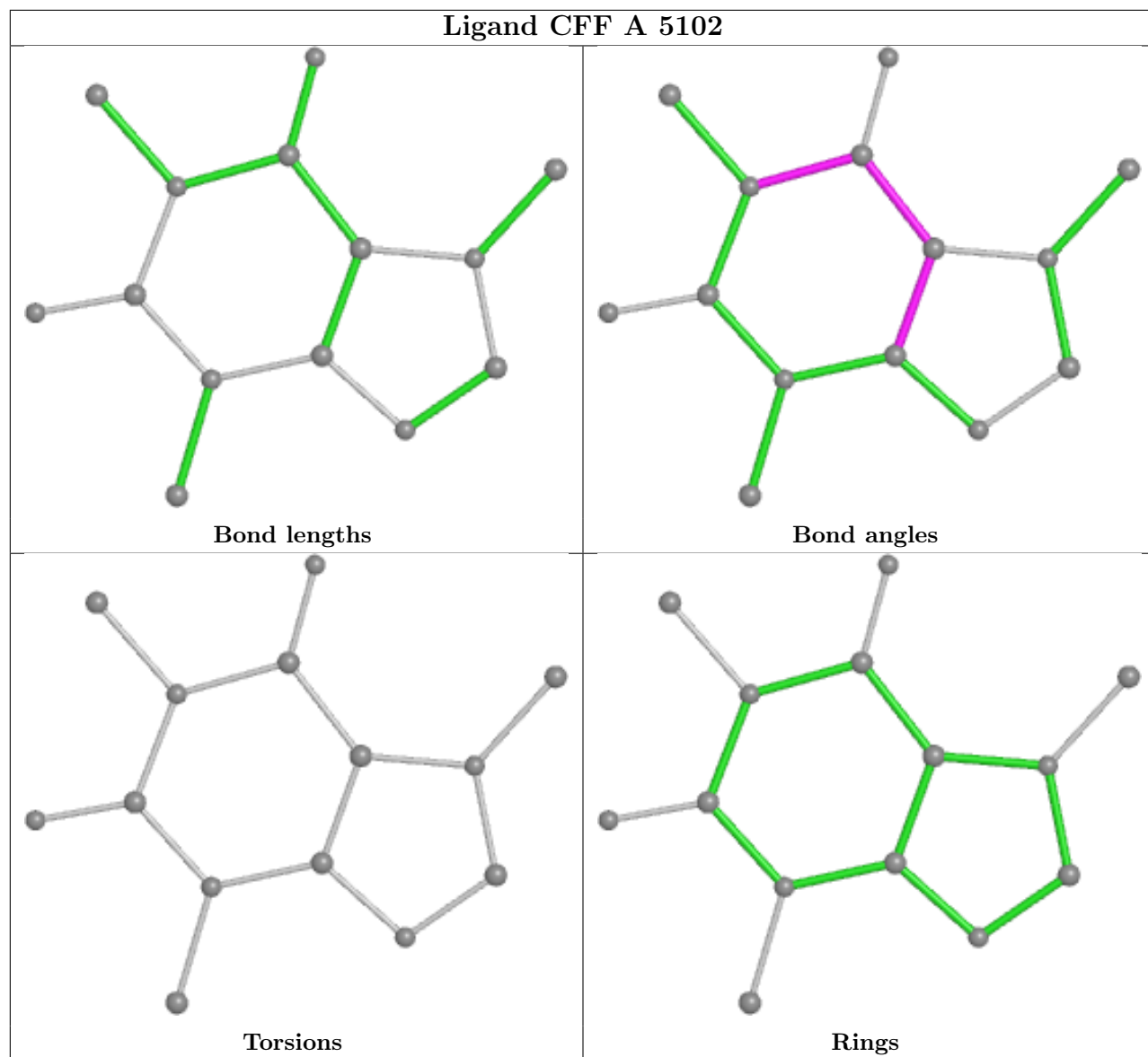


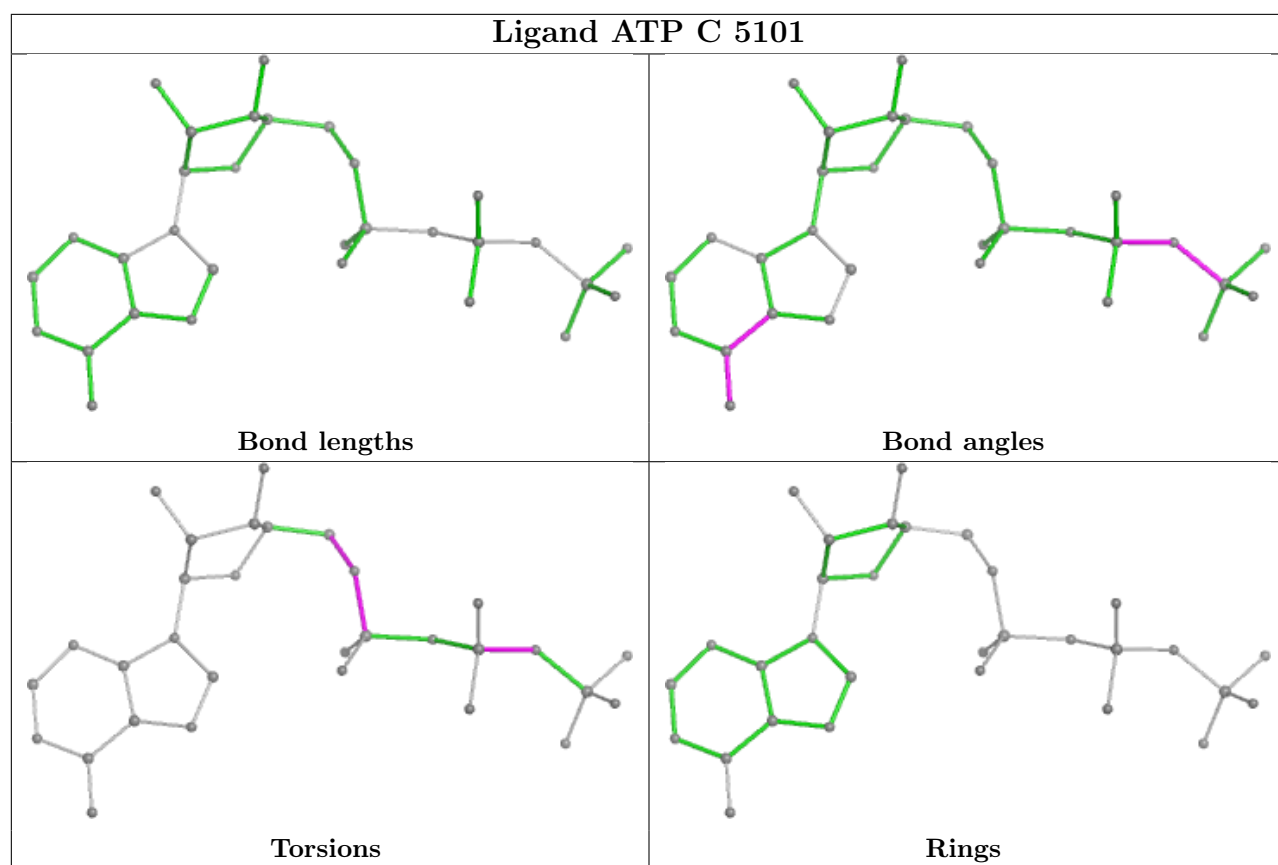












## 5.7 Other polymers [i](#)

There are no such residues in this entry.

## 5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

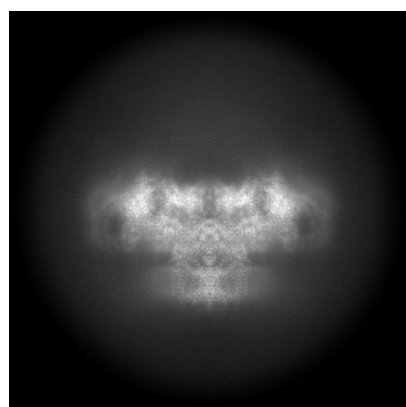
## 6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-19463. These allow visual inspection of the internal detail of the map and identification of artifacts.

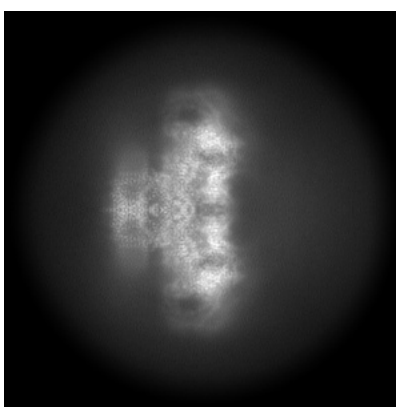
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

### 6.1 Orthogonal projections [i](#)

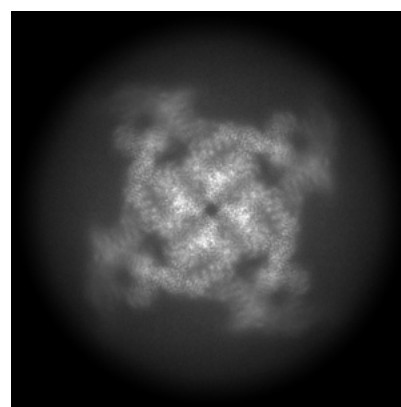
#### 6.1.1 Primary map



X



Y

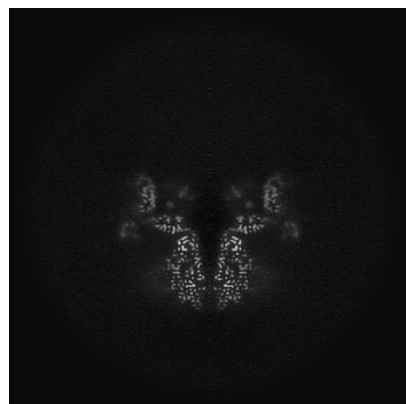


Z

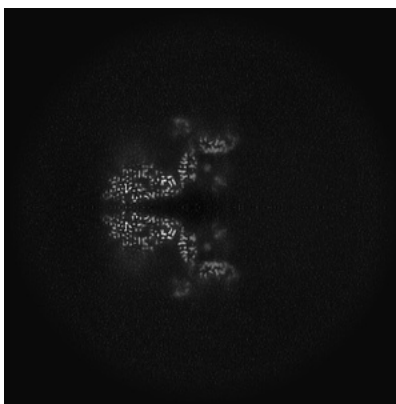
The images above show the map projected in three orthogonal directions.

### 6.2 Central slices [i](#)

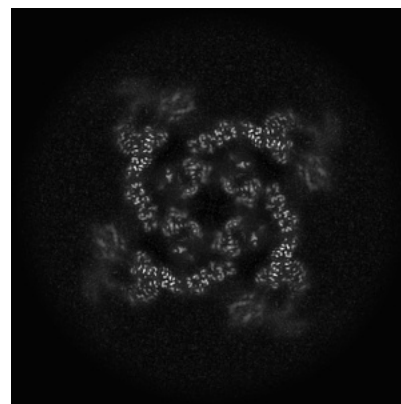
#### 6.2.1 Primary map



X Index: 168



Y Index: 168

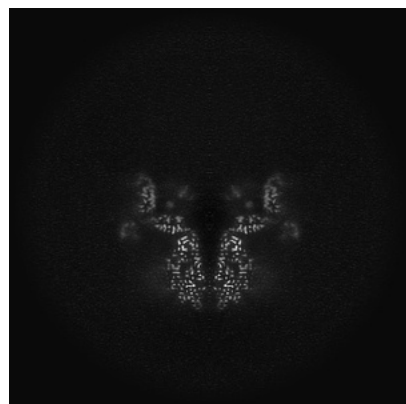


Z Index: 168

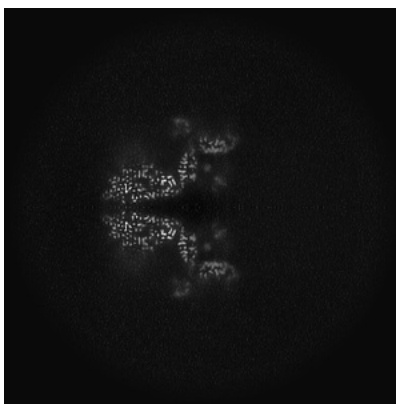
The images above show central slices of the map in three orthogonal directions.

## 6.3 Largest variance slices [i](#)

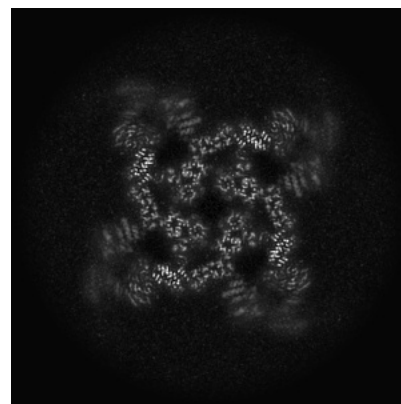
### 6.3.1 Primary map



X Index: 168



Y Index: 168

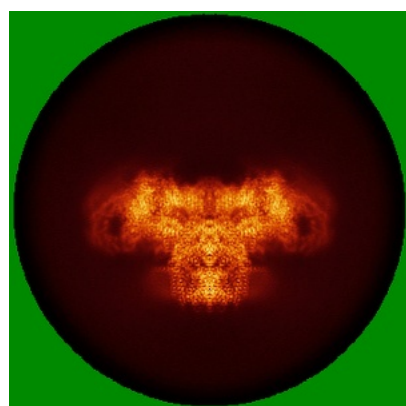


Z Index: 173

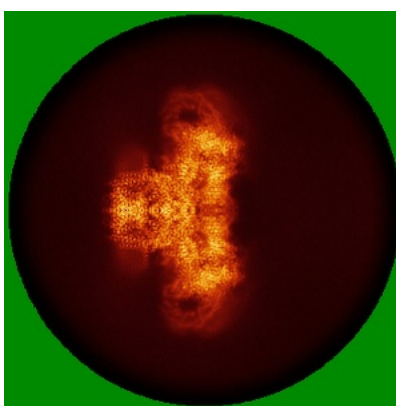
The images above show the largest variance slices of the map in three orthogonal directions.

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

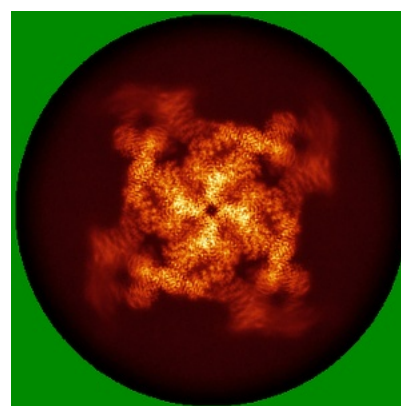
### 6.4.1 Primary map



X



Y

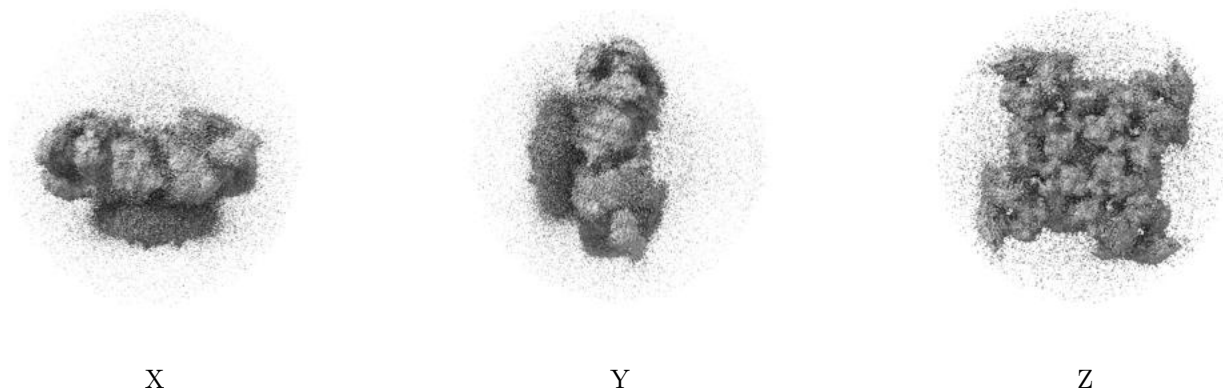


Z

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 0.35. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

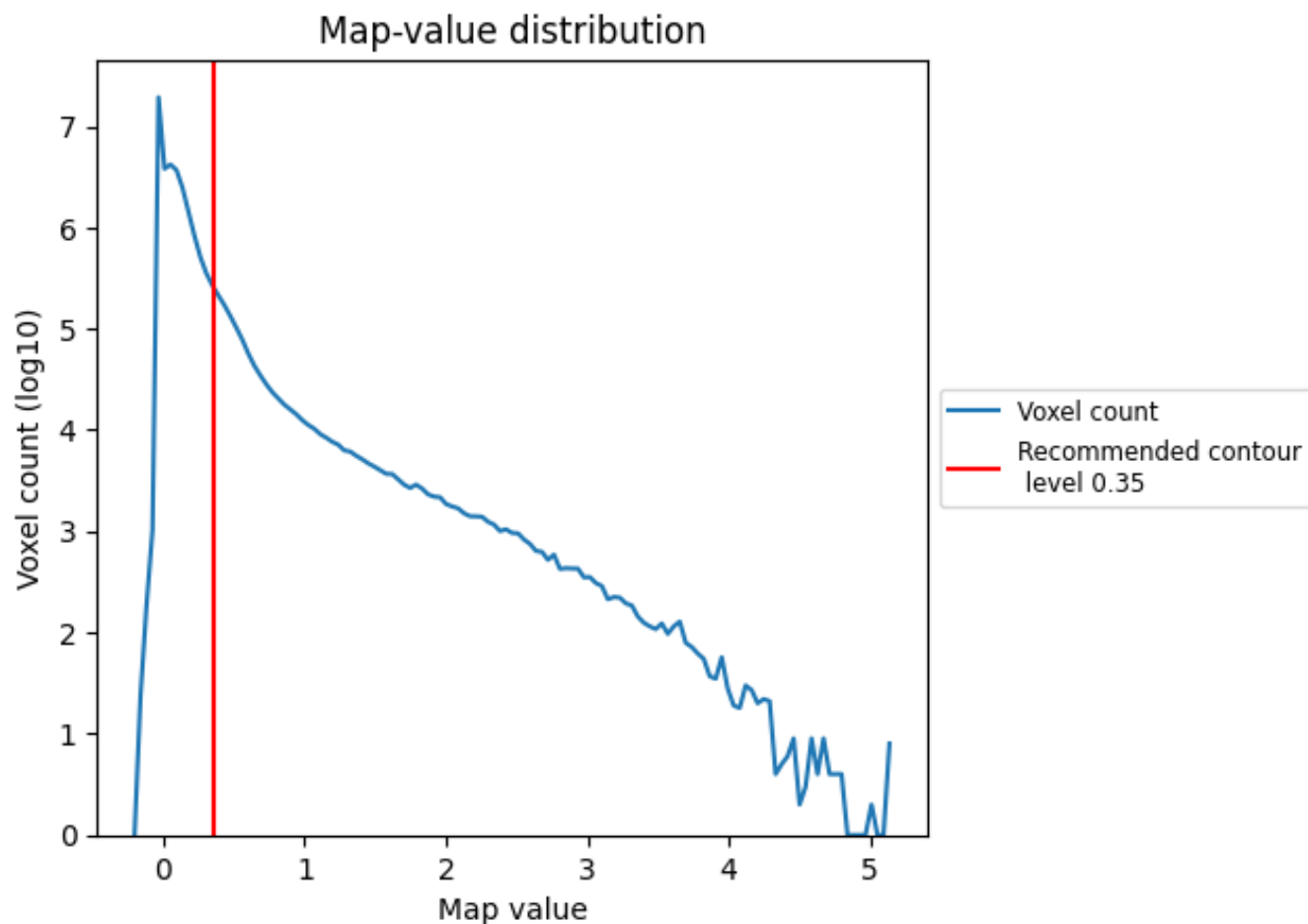
## 6.6 Mask visualisation [i](#)

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.

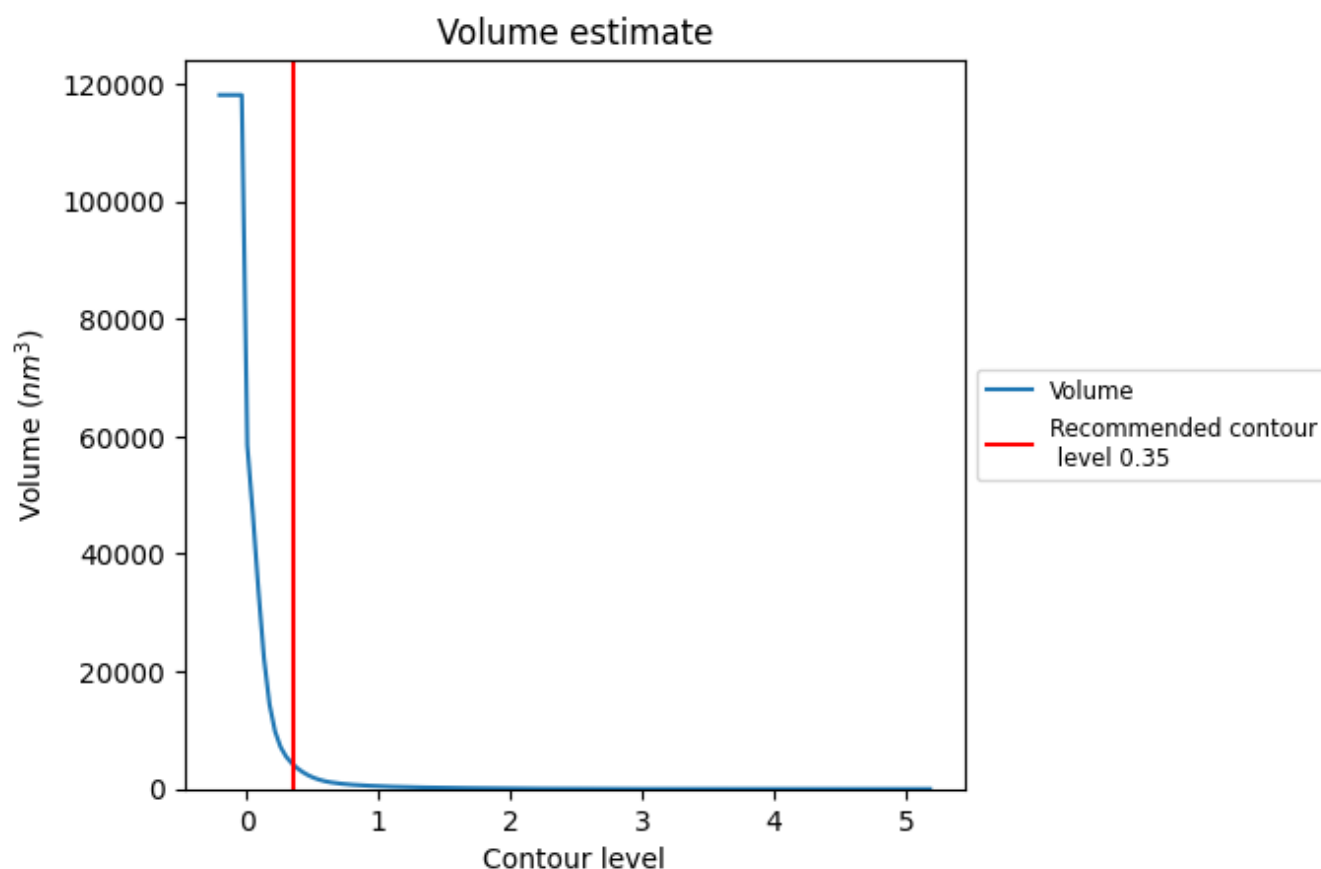
### 7.1 Map-value distribution [i](#)



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.



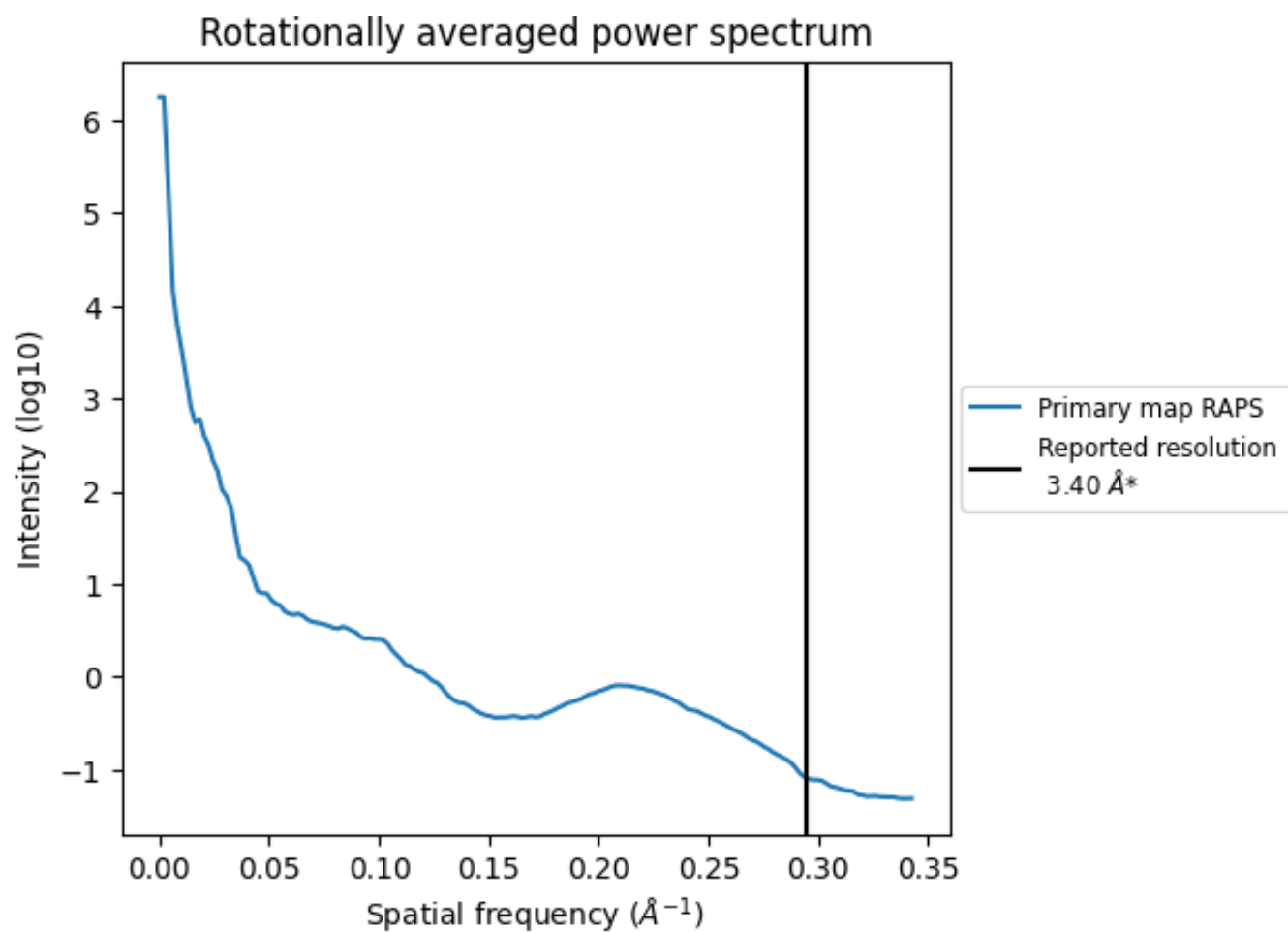
## 7.2 Volume estimate [i](#)



The volume at the recommended contour level is  $4230 \text{ nm}^3$ ; this corresponds to an approximate mass of 3821 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 ⓘ

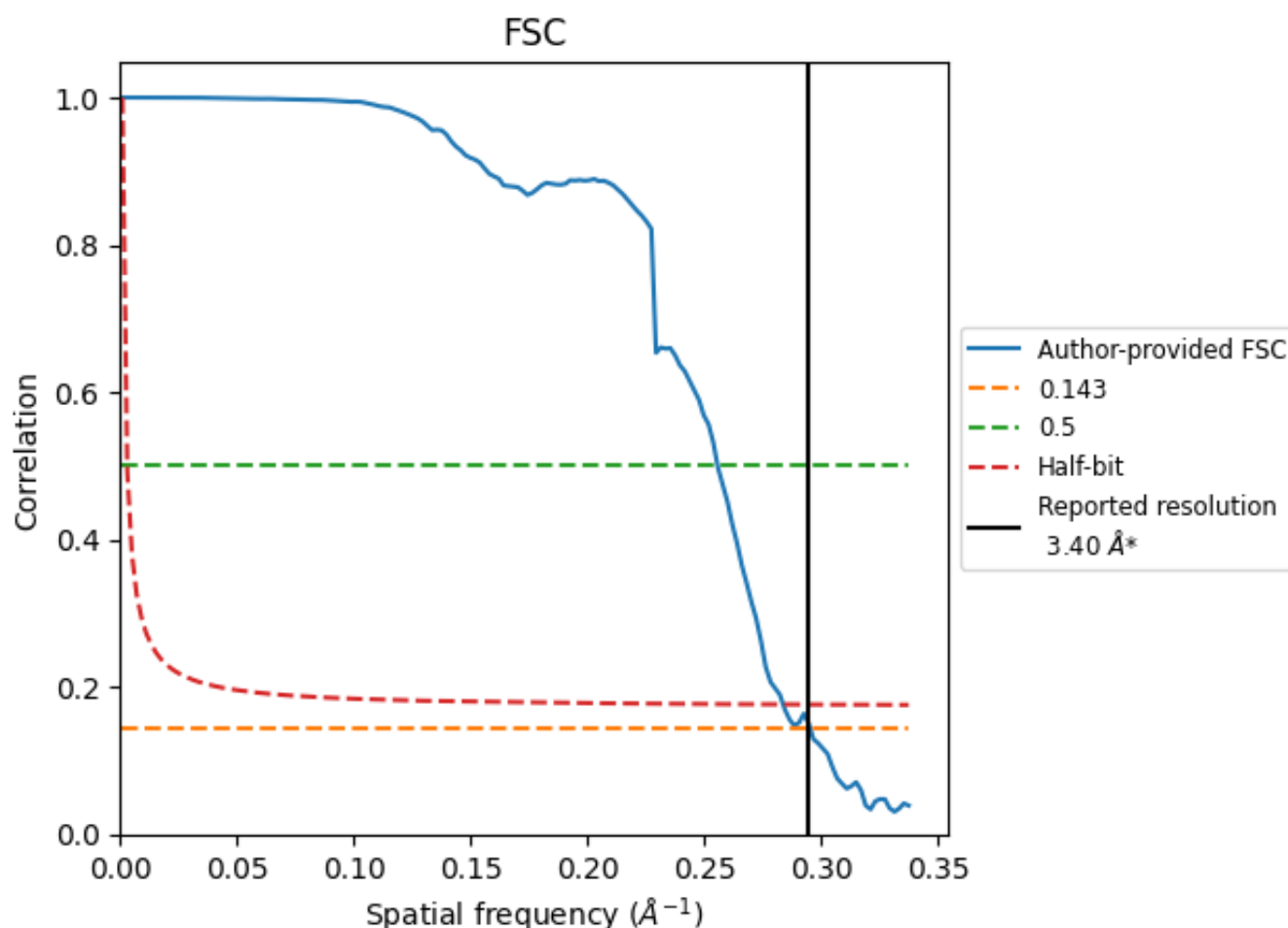


\*Reported resolution corresponds to spatial frequency of 0.294 Å<sup>-1</sup>

## 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 0.294 Å<sup>-1</sup>

## 8.2 Resolution estimates [i](#)

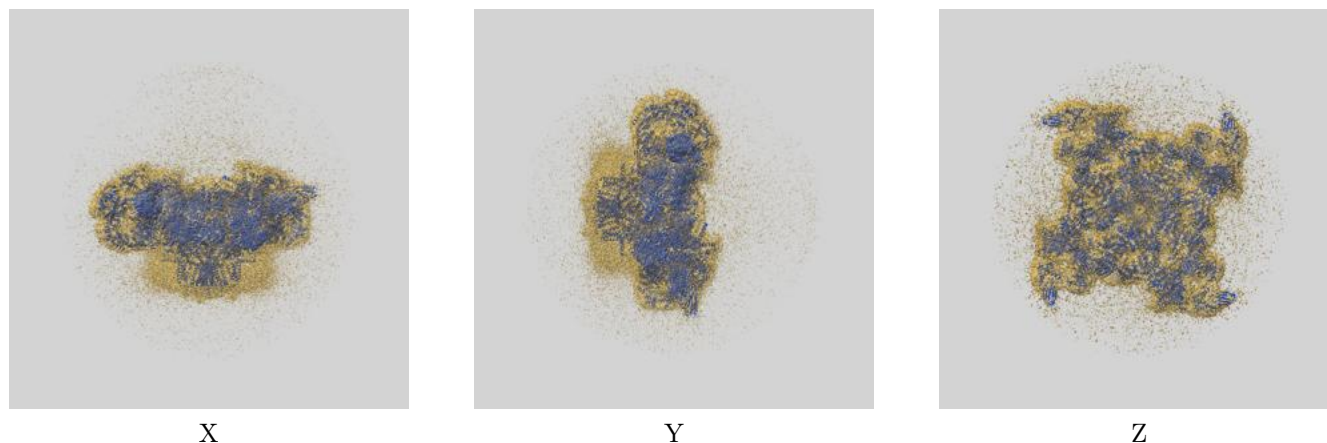
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	3.40	-	-
Author-provided FSC curve	3.39	3.91	3.52
Unmasked-calculated*	-	-	-

\*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps.

## 9 Map-model fit [i](#)

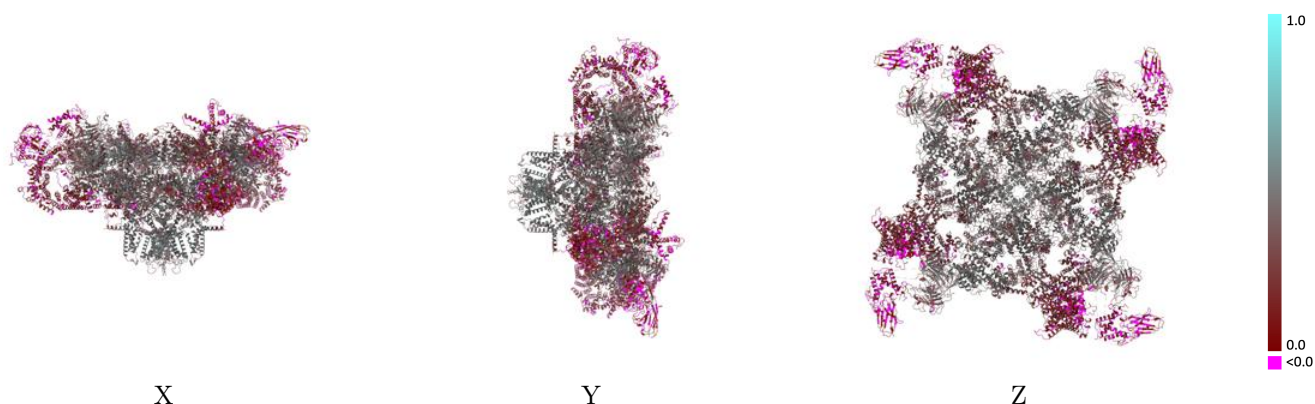
This section contains information regarding the fit between EMDB map EMD-19463 and PDB model 8RRS. Per-residue inclusion information can be found in section [3](#) on page [6](#).

### 9.1 Map-model overlay [i](#)



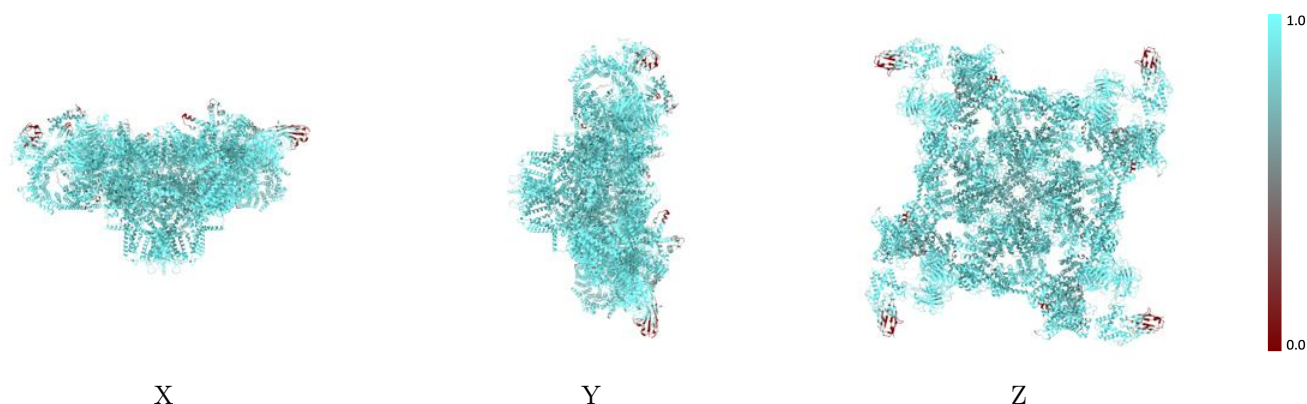
The images above show the 3D surface view of the map at the recommended contour level 0.35 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



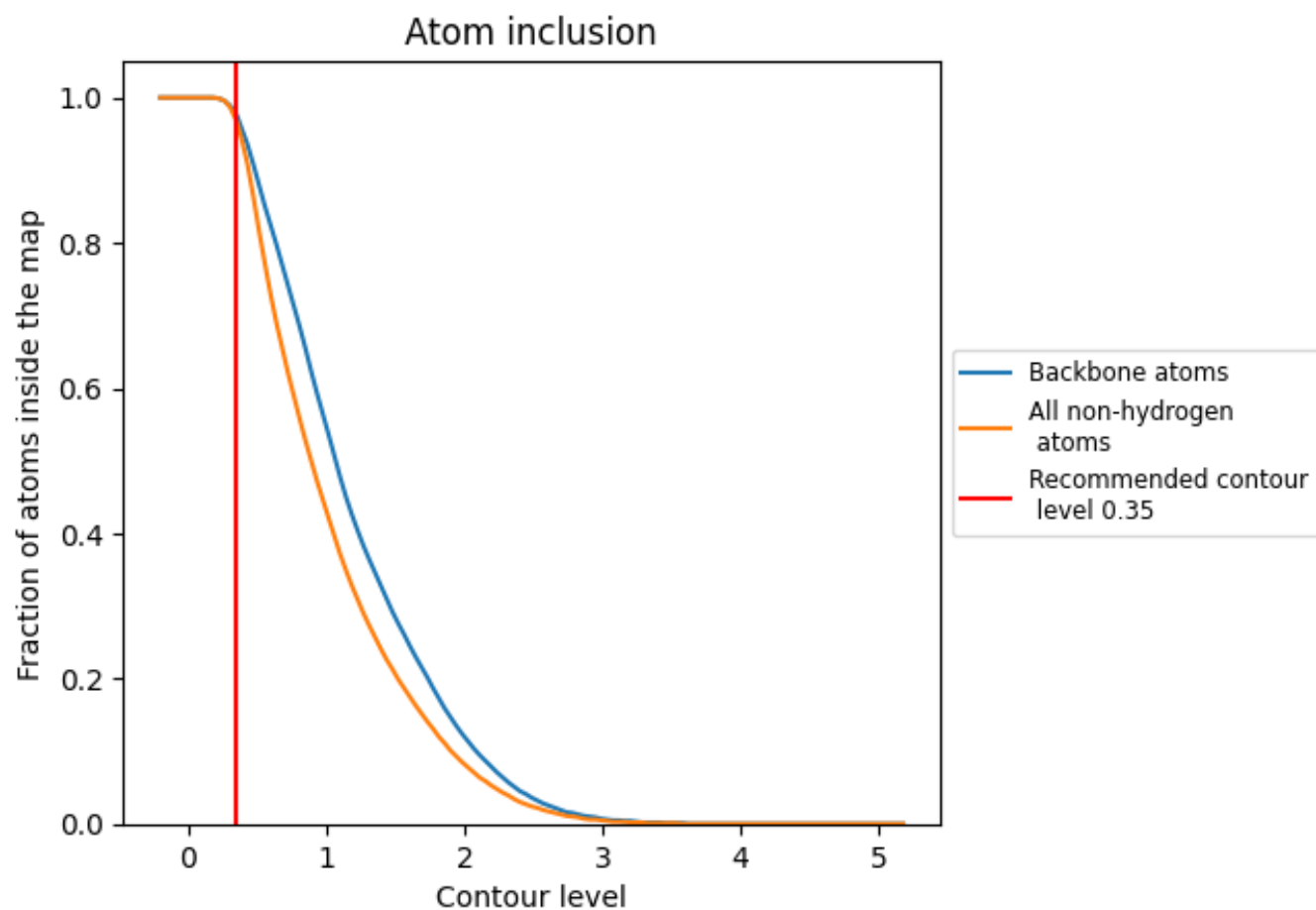
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (0.35).

## 9.4 Atom inclusion [i](#)



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 (0.35) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	<div></div> 0.9670	<div></div> 0.3070
A	<div></div> 0.9780	<div></div> 0.3140
B	<div></div> 0.5750	<div></div> 0.0800
C	<div></div> 0.9780	<div></div> 0.3140
D	<div></div> 0.5720	<div></div> 0.0810
E	<div></div> 0.9780	<div></div> 0.3130
F	<div></div> 0.9780	<div></div> 0.3130
G	<div></div> 0.5750	<div></div> 0.0790
I	<div></div> 0.5750	<div></div> 0.0790

1.0

0.0

<0.0