



Full wwPDB EM Validation Report ⓘ

Dec 2, 2025 – 12:46 pm GMT

PDB ID : 9HXW / pdb_00009hwx
EMDB ID : EMD-52490
Title : Cryo-EM structure of the human UBR4/KCMF1/CALM1 complex (composite map)
Authors : Grabarczyk, D.B.; Clausen, T.
Deposited on : 2025-01-08
Resolution : 3.10 Å(reported)

This is a Full wwPDB EM Validation Report for a publicly released PDB entry.

We welcome your comments at validation@mail.wwpdb.org

A user guide is available at

<https://www.wwpdb.org/validation/2017/EMValidationReportHelp>
with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

<http://www.wwpdb.org/validation/2017/FAQs#types>.

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

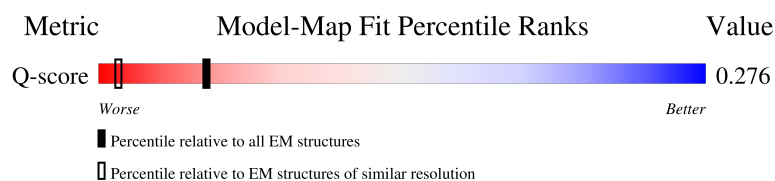
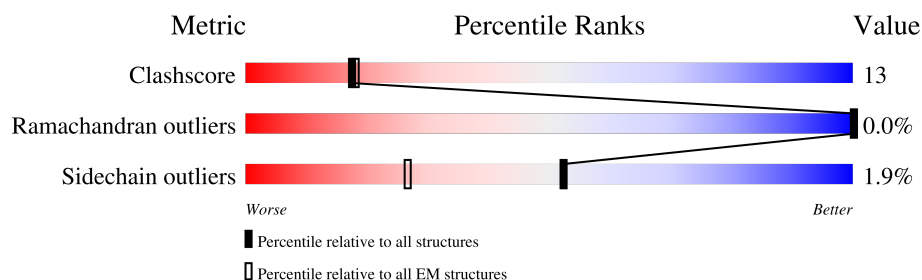
EMDB validation analysis : 0.0.1.dev129
MolProbity : 4-5-2 with Phenix2.0
Percentile statistics : 20231227.v01 (using entries in the PDB archive December 27th 2023)
EM percentile statistics : 202505.v01 (Using data in the EMDB archive up until May 2025)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.46

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 3.10 Å.

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



Metric	Whole archive (#Entries)	EM structures (#Entries)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	210492	15764	-
Ramachandran outliers	207382	16835	-
Sidechain outliers	206894	16415	-
Q-score	-	25397	14724 (2.60 - 3.60)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions $\leq 5\%$. The upper red bar (where present) indicates the fraction of residues that have poor fit to the EM map (all-atom inclusion $< 40\%$). The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	C	331	
1	D	331	
2	E	158	
2	F	158	

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Mol	Chain	Length	Quality of chain
3	A	4781	16% 60% 24% • 15%
3	B	4781	16% 60% 24% • 15%

2 Entry composition

There are 4 unique types of molecules in this entry. The entry contains 68636 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 E3 ubiquitin-protein ligase KCMF1.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	D	181	Total	C	N	O	S	0	0
			1423	875	247	285	16		
1	C	181	Total	C	N	O	S	0	0
			1423	875	247	285	16		

- Molecule 2 is a protein called Calmodulin-1.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	E	149	Total	C	N	O	S	0	0
			1174	719	189	256	10		
2	F	149	Total	C	N	O	S	0	0
			1174	719	189	256	10		

There are 18 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
E	-8	MET	-	initiating methionine	UNP P0DP23
E	-7	ASP	-	expression tag	UNP P0DP23
E	-6	TYR	-	expression tag	UNP P0DP23
E	-5	LYS	-	expression tag	UNP P0DP23
E	-4	ASP	-	expression tag	UNP P0DP23
E	-3	ASP	-	expression tag	UNP P0DP23
E	-2	ASP	-	expression tag	UNP P0DP23
E	-1	ASP	-	expression tag	UNP P0DP23
E	0	LYS	-	expression tag	UNP P0DP23
F	-8	MET	-	initiating methionine	UNP P0DP23
F	-7	ASP	-	expression tag	UNP P0DP23
F	-6	TYR	-	expression tag	UNP P0DP23
F	-5	LYS	-	expression tag	UNP P0DP23
F	-4	ASP	-	expression tag	UNP P0DP23
F	-3	ASP	-	expression tag	UNP P0DP23
F	-2	ASP	-	expression tag	UNP P0DP23
F	-1	ASP	-	expression tag	UNP P0DP23

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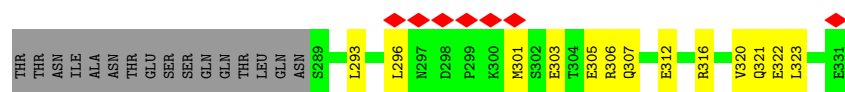
Chain	Residue	Modelled	Actual	Comment	Reference
F	0	LYS	-	expression tag	UNP P0DP23

- Molecule 3 is a protein called E3 ubiquitin-protein ligase UBR4.

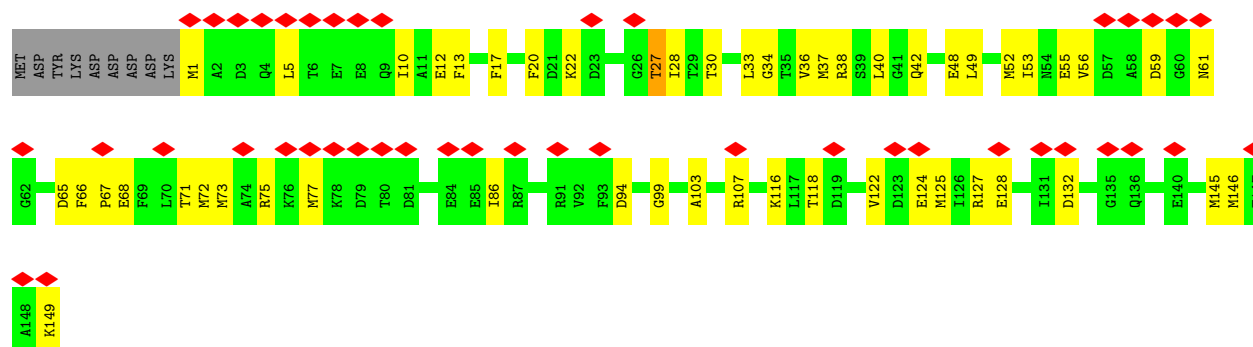
Mol	Chain	Residues	Atoms					AltConf	Trace
3	A	4045	Total	C	N	O	S	0	0
			31711	20123	5410	5969	209		
3	B	4045	Total	C	N	O	S	0	0
			31711	20123	5410	5969	209		

- Molecule 4 is ZINC ION (CCD ID: ZN) (formula: Zn).

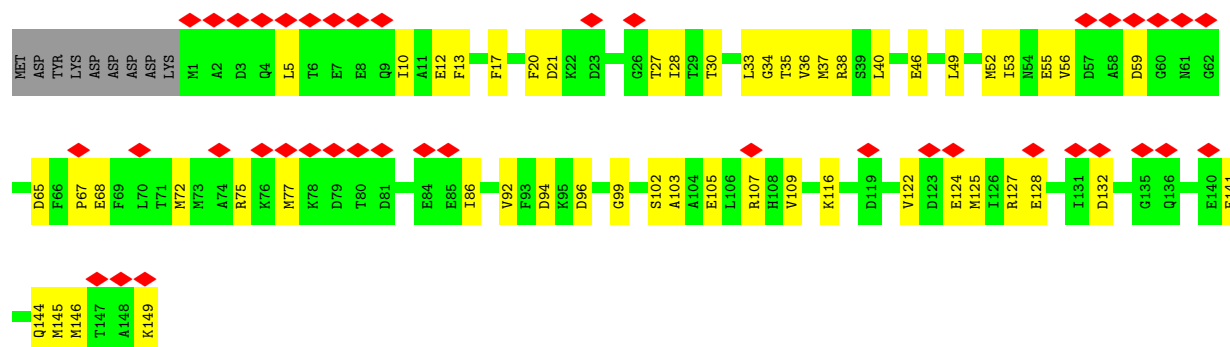
Mol	Chain	Residues	Atoms		AltConf
4	D	4	Total	Zn	0
			4	4	
4	A	6	Total	Zn	0
			6	6	
4	C	4	Total	Zn	0
			4	4	
4	B	6	Total	Zn	0
			6	6	



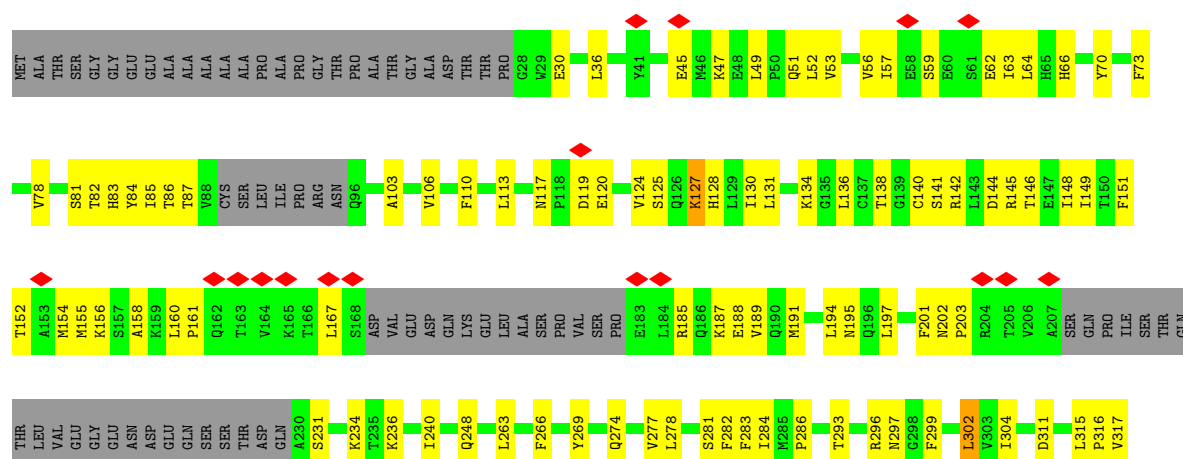
• Molecule 2: Calmodulin-1

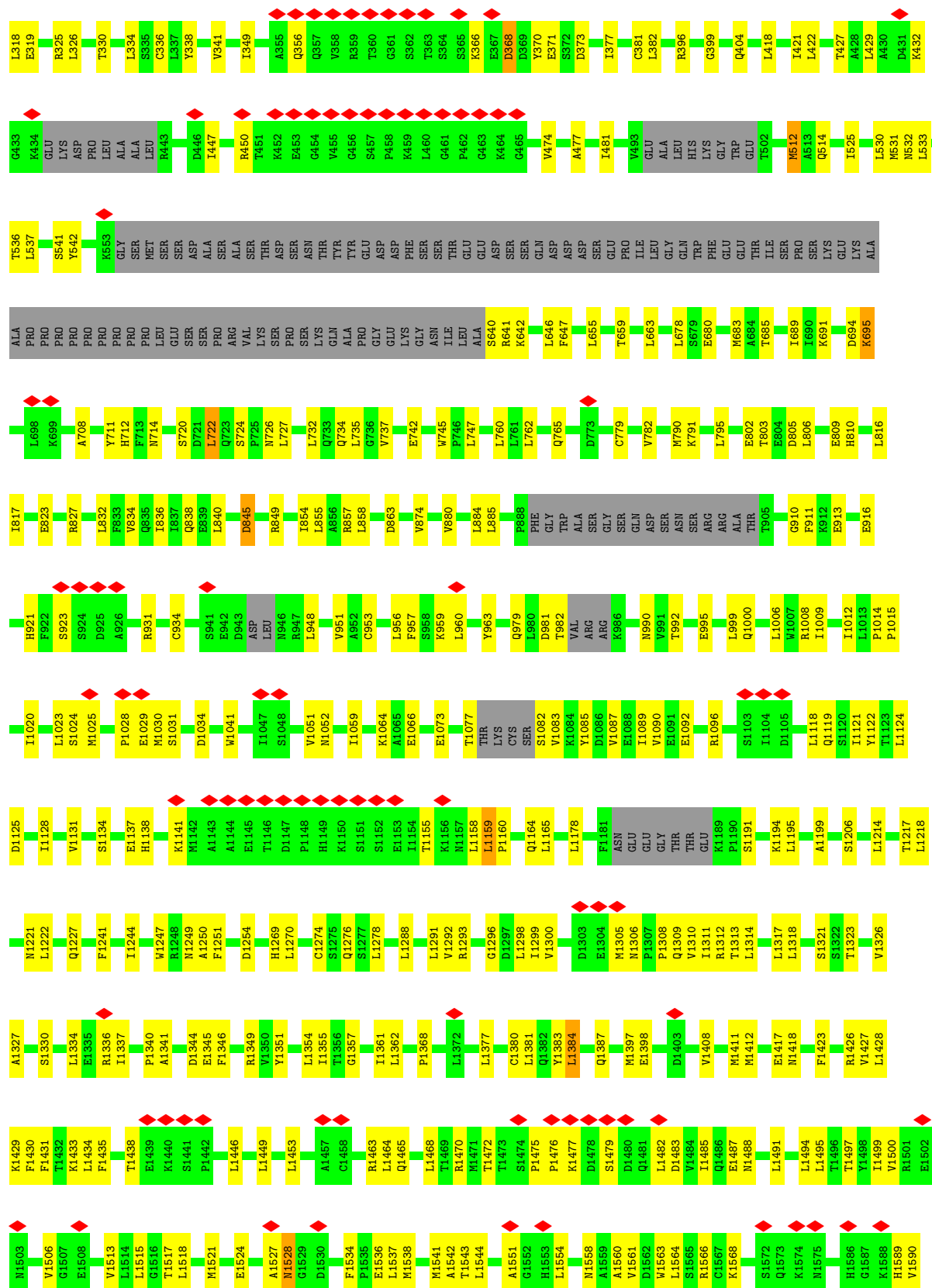


• Molecule 2: Calmodulin-1



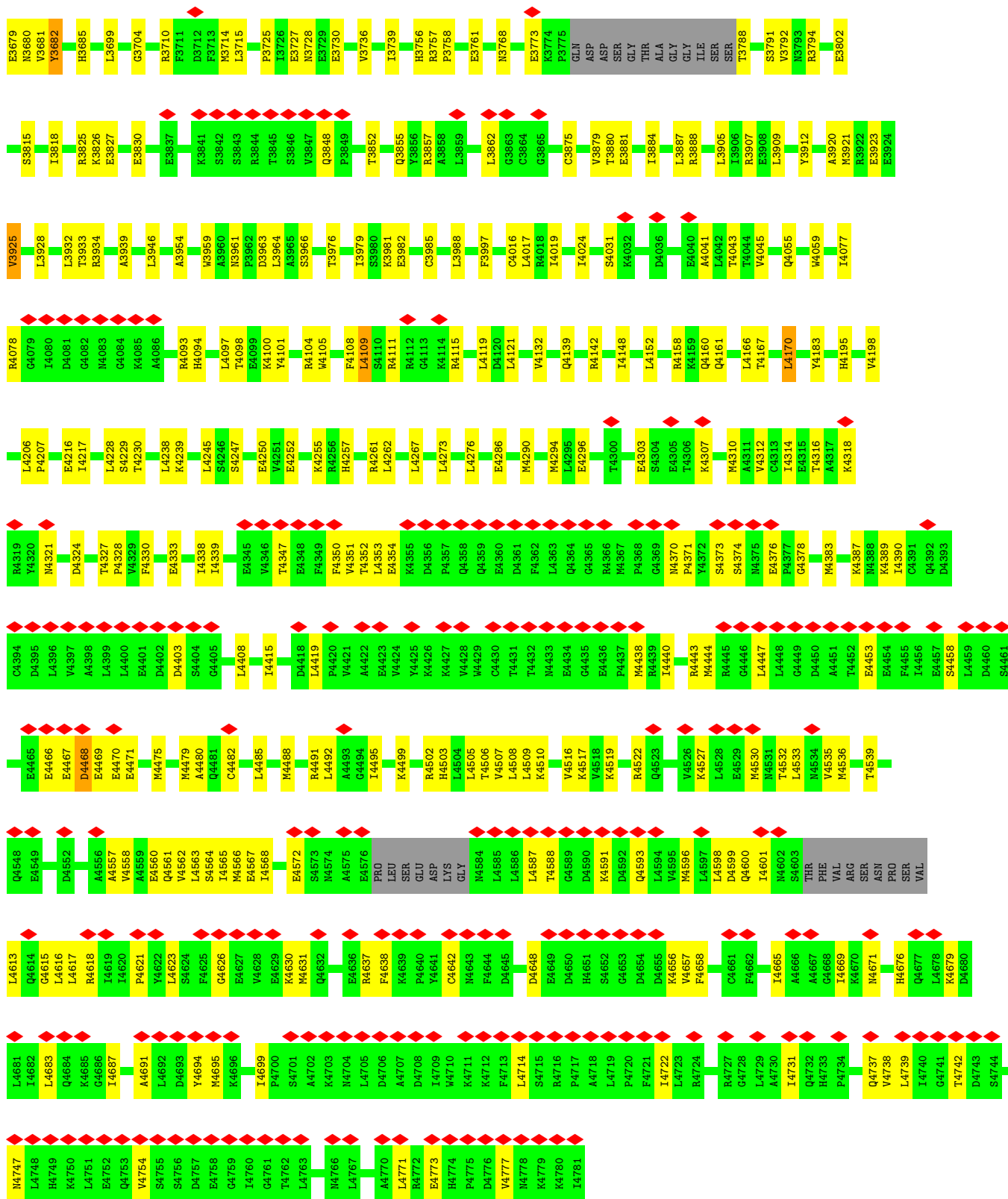
• Molecule 3: E3 ubiquitin-protein ligase UBR4





L1591	L1592	L1593	E1594	E1595	T1596	C1597	H1598	T1599	M1600		A1604	D1605	T1606	T1607	N1608	A1609	L1610	S1611	Q1612	S1613	N1614	GLY	GLN	GLY	PRO	SER	HIS	LEU	SER	VAL	ASP	GLY	GLU	LEU	ARG	ALA	ILE	GLU	VAL	ASP	ASP	ASP	TRP	VAL	GLU	GLU	LEU	ALA	VAL	GLU	GLU	ASP	SER																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
ASP	GLU	D1655	S1656	L1657	C1658	N1659	I1659	K1660	L1661	C1662	T1663	F1664	T1665	I1666	T1667	Q1668	K1669	S1670	E1670	F1671	M1672	N1673	Q1674	H1675	Y1677	H1678		T1681	C1682	K1683	H1684	V1685	D1686			V1690	C1691	T1692		K1696	V1697	C1698	H1699	K1700	D1701	H1702	E1703	I1704	S1705	A1707	K1708	Y1709	G1710	S1711		C1716		K1719	E1720	D1721																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
G1722	S1723	C1724	L1725	A1726	L1727	V1728	K1729	R1730	T1731	P1732	S1733	SER	GLY	MET	SER	SER	THR	MET	LYS	GLU	SER	ALA	PHE	GLN	SER	GLU	PRO	ARG	ILE	SER	GLU	SER	LEU	VAL	ARG	HIS	ALA	SER	THR	SER	SER	PRO	ALA	ASP	LYS	VAL	THR	ILE	SER	ASP	GLY	VAL	ALA	ASP	GLU	GLU																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
LYS	PRO	LYS	LYS	SER	SER	LEU	CYS	ARG	THR	VAL	G1794	C1795	R1796	M1801	N1804	F1805	S1806	F1807	L1810	V1811	M1814	F1817	L1818	M1819	I1822	F1826	A1829	S1830	A1831	V1832	G1833	R1837	Q1840	L1845	H1846	K1850	A1851	V1852	E1853	M1854	L1858	M1859	V1860	P1861	T1862																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
L1863	G1864	S1865	Q1866	E1867	F1870	E1871	N1872	V1873	R1874	H1875	N1876	Y1877	D1880	Q1881	T1884	I1885	R1886	L1888	I1889	S1890	A1891	S1895	V1896	M1899	C1900	V1901	L1902	S1903	S1904	P1905	H1906	G1907	R1908	R1909	Q1910	H1911	L1912	A1913	V1914	S1915	H1916	E1917	K1918	G1919	K1920	T1922	V1923	Q1925	L1926																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																											
S1927	A1928	L1929	L1930	K1931	Q1932	A1933	D1934	S1935	S1936	K1937	R1938	L1940	T1941	L1942	T1943	R1944	L1945	V1950	T1953	V1954	L1955	S1956	L1957	T1958	G1959	N1960	P1961	C1962	K1963	E1964	D1965	Y1966	L1967	A1968	V1969	G1971	L1972	K1973	D1974	C1975	H1976	V1977	L1978	T1979	F1980	S1981	S1982	S1983	G1984	S1987	D1988	H1989	V1991																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
L1992	H1993	P1994	Q1995	L1996	A1997	T1998	G1999	N2000	F2001	I2002	K2004	A2005	V2006	W2007	G2010	E2014	L2015	A2016	I2017	T2018	T2019	V2023	K2024	L2025	Y2026	D2027	L2028	C2029	V2030	D2031	A2032	L2033	S2034	P2035	T2036	F2037	Y2038	F2039	L2040	L2041	P2042	S2043	L2046	R2047	D2048	V2049	T2050	F2051	L2052	F2053	N2054	E2055	K2058																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
N2059	L2060	L2061	Y2062	L2063	A2067	G2068	Y2069	L2070	Y2071	T2072	Q2073	L2074	N2075	E2076	A2078	S2079	S2080	Q2081	Q2082	Q2083	Q2084	P2085	F2086	Y2087	Y2088	L2092	E2093	L2094	N2095	H2096	E2097	D2098	L2099	K2100	D2101	S2102	N2103	S2104	Q2105	V2106	A2107	G2110	V2111	S2112	V2113	Y2114	Y2115	S2116	H2117	V2118	L2119	Q2120	N2121	L2122	F2123																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					
Y2126	K2130	S2131	F2132	A2133	A2134	T2135	I2136	T2139	T2140	L2141	E2142	V2143	L2144	Q2145	L2146	F2147	P2148	I2149	N2150	T2151	K2152	S2153	S2154	N2155	G2156	G2157	S2158	K2159	T2160	S2161	P2162	A2163	L2164	C2165	Q2166	W2167	N2172	H2173	P2174	Q2181	Q2182	T2183	T2184	C2185	V2186	P2187	L2188	V2189	Y2192	K2193	P2194	D2195	T2196																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
F2197	L2198	I2199	Q2200	E2201	I2202	K2203	T2204	L2205	F2206	A2207	K2208	A2209	K2210	I2211	Q2212	D2213	M2214	V2215	A2216	I2217	H2218	R2219	T2220	A2221	C2222	N2223	E2224	Q2225	Q2226	E2227	T2228	T2229	L2232	L2233	C2234	E2235	D2236	Q2237	S2238	L2239	R2240	I2241	Y2242	M2243	A2244	N2245	V2246	E2247	N2248	T2249	S2250	Y2251	W2252	L2253	Q2254	P2255	S2256	L2257																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
Q2258	P2259	S2260	SER	VAL	ILE	SER	ILE	MET	LYS	PRO	VAL	ARG	LYS	THR	ALA	THR	ILE	THR	ARG	THR	SER	SER	SER	Q2284	P2288	L2289	D2290	F2291	F2292	E2293	H2294	N2295	L2298	D2307	L2308	L2309	Q2310	Y2311	Y2312	N2313	Q2316	T2317	R2320	L2321	W2322	S2323	T2324	G2325	N2326	Y2327	V2328	A2329																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
N2330	T2331	K2332	P2333	Q2334	G2335	F2336	E2339	N2344	S2345	T2346	M2347	M2352	R2353	I2354	Q2355	I2356	Y2367	I2368	F2371	Q2372	M2375	Q2376	L2377	N2378	L2379	S2380	R2381	W2384	F2385	D2386	R2391	E2392	E2393	A2394	L2395	Q2396	A2397	K2400	L2403	F2404	I2405	V2409	D2410	P2411	A2412	G2413	V2414																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
I2417	V2420	K2427	E2428	Q2429	F2430	Q2431	W2432	PRO	ASP	GLU	PRO	M2352	R2353	I2354	Q2355	I2356	Y2367	I2368	F2371	Q2372	M2375	Q2376	L2377	N2378	L2379	S2380	R2381	W2384	F2385	D2386	R2391	E2392	E2393	A2394	L2395	Q2396	A2397	K2400	L2403	F2404	I2405	V2409	D2410	P2411	A2412	G2413	V2414																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													</

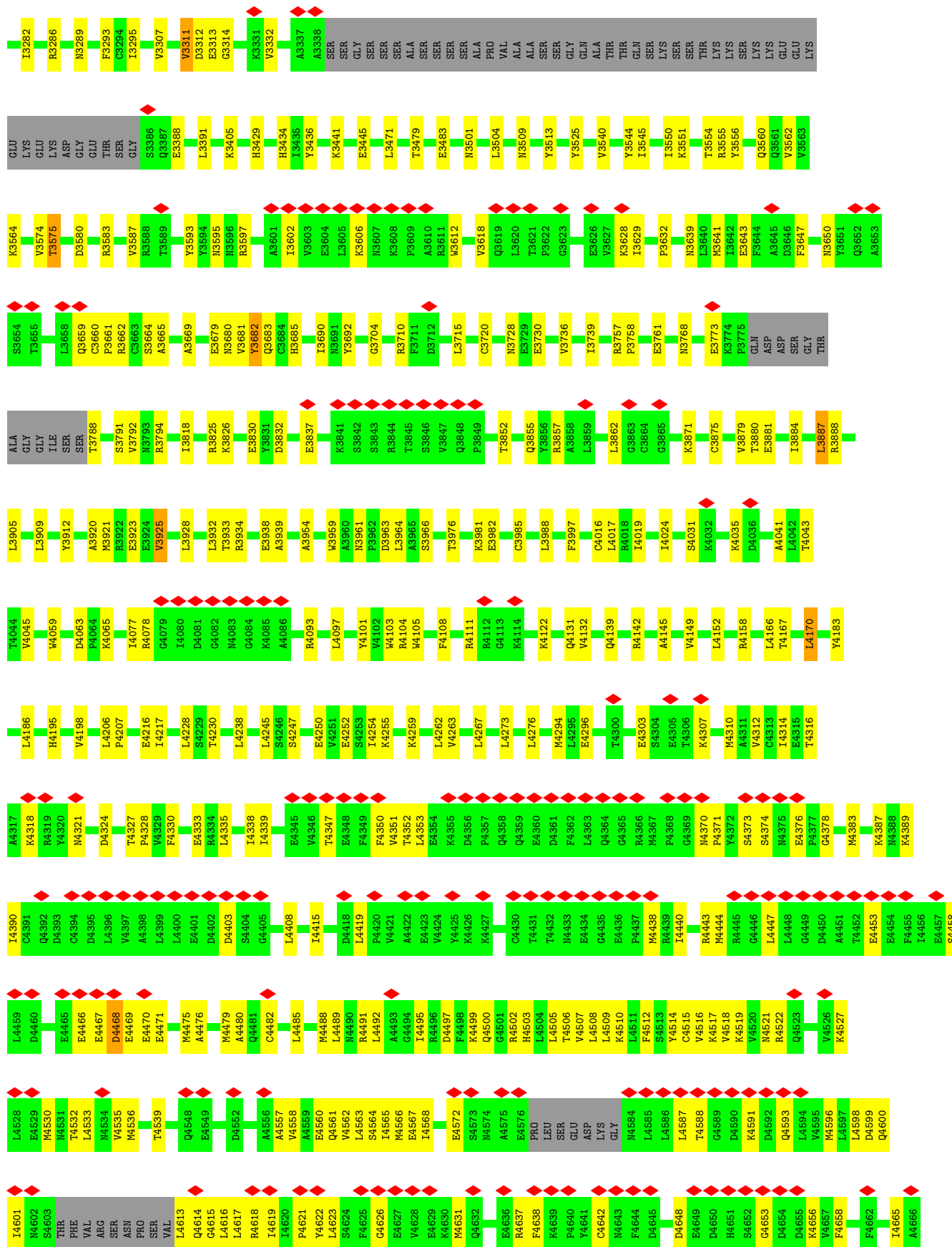


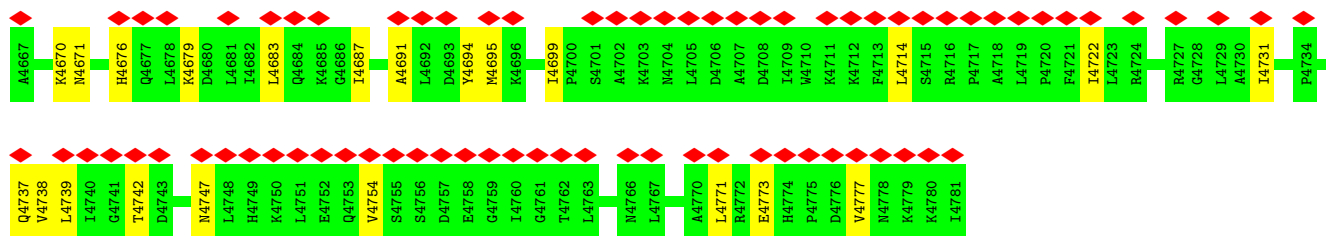




V2192	D2048	H2117	D2049	H1916	A1951	GLY	GLY	S1711	ASP	M1585	D1483	G1405	T1313
K2193	V2049	V2118	T2050	E1917	V1952	LYS	LYS	C1716	SER	H1586	V1484	V1408	L1317
P2194	T2050	L2119	F2051	K1918	E1853	VAL	VAL		GLN	G1587	I1485	Q1409	L1318
D2195	T2051	Q2120	F2051	G1919	M1854	ALA	ALA		ALA	K1588	E1487	M1410	S1321
T2196	D2052	M2121	T2052	K1920	L1858	ASP	ASP		ASP	H1589	M1488	M1411	S1322
F2197	F2053	L2122	F2053	I1921	M1859	GLU	GLU		ASP	M1590	L1491	M1412	T1323
L2198	N2054		N2054	T1922	V1860	GLY	GLY		ASP	I1592	E1417		
T2199	E2055		E2055	V1923	P1861	LYS	LYS		ASP	I1593	N1418		
Q2200	K2058		K2058	L1924	T1862	PRO	PRO		GLU	E1594			
E2201	N2059		N2059	Q1925	L1863	LYS	LYS		GLU	C1595			
T2202	I2060		I2060	S1927	G1864	SER	SER		GLU	T1596			
K2203	L2061		L2061	A1928	S1865	LEU	LEU		GLU	C1597			
T2204	V2062		V2062	A1929	S1866	CYS	CYS		GLU	H1598			
L2205	L2063		L2063	L1930	E1867	ARG	ARG		THR	I1599			
F2206				K1931	F1870	THR	THR		VAL	M1600			
A2207	G2068		G2068	Q1932	F1871	GLU	GLU		VAL	S1601			
K2208	Y2069		Y2069	A1933	M1875	C1795	C1794		GLY	A1604			
A2209	T2070		T2070	D1934	M1876	R1796	R1796		GLY	D1605			
K2210	Y2071		Y2071	S1935	Y1877				GLY	V1606			
T2211	L2074		L2074	S1936	D1880	M1801	M1801		SER	T1607			
D2212	M2075		M2075	K1937	Q1887				GLY	M1608			
D2213	E2076		E2076	T1943	T1884	M1804	M1804		GLY	A1609			
M2214	T2077		T2077	R1944	I1885	F1805	F1805		GLY	L1610			
V2215	A2078		A2078	L1945	I1886	S1806	S1806		GLY	S1611			
A2216	S2079		S2079	T1941	Q1887	F1807	F1807		GLY	Q1612			
T2217	S2080		S2080	L1942	T1888	A1808	A1808		GLY	S1613			
K2218	A2081		A2081	T1943	I1889	P1809	P1809		GLY	N1614			
H2219	Q2082		Q2082	R1944	I1890	L1810	L1810		GLY	GLY			
T2220	S2083		S2083	L1945	I1891	V1811	V1811		GLY	L1534			
C2222	Q2084		Q2084	V1950	S1892	D1813	D1813		GLY	L1537			
N2223	P2085		P2085	T1958	L1894	L1814	L1814		GLY	M1538			
E2224	F2086		F2086	G1958	R1895	L1815	L1815		GLY	L1449			
Q2225	Y2087		Y2087	T1959	R1896	F1817	F1817		GLY	L1453			
Q2226	V2088		V2088	C1962	V1897	L1818	L1818		GLY	A1457			
T2227	L2092		L2092	K1963	I1901	M1819	M1819		GLY	C1458			
T2228	E2093		E2093	E1964	C1900				GLY	V1459			
T2229	L2094		L2094	D1965	V1901				GLY	E1460			
N2230	N2095		N2095	Y1966	L1902				GLY	A1551			
L2232	H2096		H2096	L1967	S1903				GLY	L1554			
L2233	E2097		E2097	A1968	P1905				GLY	L1384			
C2234	D2098		D2098	V1969	V1905				GLY	E1385			
E2235	L2099		L2099	G1970	G1907				GLY	Q1387			
D2236	K2100		K2100	L1972	R1908				GLY	L1468			
Q2237	D2101		D2101	C1975	R1909				GLY	T1469			
S2238	S2102		S2102	H1976	Q1910				GLY	R1470			
L2239	N2103		N2103	V1977	L1912				GLY	L1471			
R2240	V2106		V2106	T1978	A1913				GLY	T1472			
T2241	A2107		A2107	F1980	S1915				GLY	S1474			
K2242	Q2182		Q2182						GLY	P1475			
N2243	T2183		T2183						GLY	K1477			
A2244	T2184		T2184						GLY	D1478			
N2245	V2185		V2185						GLY	S1479			
V2246	P2187		P2187						GLY	Q1480			
E2247	L2188		L2188						GLY	D1481			
N2248	V2189		V2189						GLY	L1482			
L2253									GLY				







4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	1638723	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	TFS KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	50	Depositor
Minimum defocus (nm)	800	Depositor
Maximum defocus (nm)	2000	Depositor
Magnification	Not provided	
Image detector	FEI FALCON IV (4k x 4k)	Depositor
Maximum map value	0.055	Depositor
Minimum map value	0.000	Depositor
Average map value	0.007	Depositor
Map value standard deviation	0.001	Depositor
Recommended contour level	0.0089	Depositor
Map size (Å)	486.912, 486.912, 486.912	wwPDB
Map dimensions	384, 384, 384	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.268, 1.268, 1.268	Depositor

5 Model quality

5.1 Standard geometry

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

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	C	0.10	0/1451	0.26	0/1962
1	D	0.12	0/1451	0.36	0/1962
2	E	0.14	0/1186	0.44	0/1590
2	F	0.14	0/1186	0.39	0/1590
3	A	0.13	0/32281	0.37	4/43722 (0.0%)
3	B	0.13	0/32281	0.38	3/43722 (0.0%)
All	All	0.13	0/69836	0.37	7/94548 (0.0%)

Chiral center outliers are detected by calculating the chiral volume of a chiral center and verifying if the center is modelled as a planar moiety or with the opposite hand. A planarity outlier is detected by checking planarity of atoms in a peptide group, atoms in a mainchain group or atoms of a sidechain that are expected to be planar.

Mol	Chain	#Chirality outliers	#Planarity outliers
3	A	0	2
3	B	0	2
All	All	0	4

There are no bond length outliers.

All (7) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	B	1819	MET	CA-CB-CG	6.21	126.52	114.10
3	B	1599	ILE	CA-C-N	-5.46	111.02	121.94
3	B	1599	ILE	C-N-CA	-5.46	111.02	121.94
3	A	1599	ILE	CA-C-N	-5.34	111.26	121.94
3	A	1599	ILE	C-N-CA	-5.34	111.26	121.94
3	A	1600	MET	CA-CB-CG	5.18	124.47	114.10
3	A	1814	MET	CA-CB-CG	5.16	124.43	114.10

There are no chirality outliers.

All (4) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
3	A	117	ASN	Peptide
3	A	4468	ASP	Peptide
3	B	117	ASN	Peptide
3	B	4468	ASP	Peptide

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	C	1423	0	1335	38	0
1	D	1423	0	1335	52	0
2	E	1174	0	1105	46	0
2	F	1174	0	1105	39	0
3	A	31711	0	32086	859	0
3	B	31711	0	32086	860	0
4	A	6	0	0	0	0
4	B	6	0	0	0	0
4	C	4	0	0	0	0
4	D	4	0	0	0	0
All	All	68636	0	69052	1834	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 (1834) 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)
3:B:1020:ILE:O	3:B:1024:SER:HB2	1.66	0.96
3:B:231:SER:HA	3:B:234:LYS:HE3	1.49	0.95
2:E:34:GLY:O	2:E:38:ARG:HB3	1.70	0.91
3:A:1020:ILE:O	3:A:1024:SER:HB2	1.71	0.90
3:B:3233:LEU:HD11	3:B:3282:ILE:HG21	1.57	0.87
3:B:1438:THR:HG23	3:B:1446:LEU:HB3	1.57	0.86
3:A:3233:LEU:HD11	3:A:3282:ILE:HG21	1.59	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:1438:THR:HG23	3:A:1446:LEU:HB3	1.58	0.84
3:B:2559:SER:HG	3:B:2628:HIS:HE2	1.26	0.83
3:A:3010:LEU:HD23	3:A:3081:ILE:HG12	1.61	0.83
3:A:2309:LEU:HD22	1:C:87:GLY:HA3	1.62	0.82
3:B:4591:LYS:NZ	3:B:4631:MET:SD	2.53	0.81
3:A:4339:ILE:HD13	3:A:4475:MET:HB3	1.61	0.81
3:A:4467:GLU:HG2	3:A:4468:ASP:H	1.46	0.81
3:B:4467:GLU:HG2	3:B:4468:ASP:H	1.45	0.81
3:A:3270:ILE:HD11	3:A:3632:PRO:HG2	1.62	0.80
3:B:4339:ILE:HD13	3:B:4475:MET:HB3	1.62	0.80
3:A:4485:LEU:HA	3:A:4488:MET:HE3	1.64	0.80
3:B:3270:ILE:HD11	3:B:3632:PRO:HG2	1.63	0.80
3:A:2984:THR:HA	3:A:2987:GLN:HE21	1.47	0.79
3:B:1610:LEU:HD22	3:B:2492:VAL:HG22	1.65	0.79
1:D:330:ARG:HB3	3:B:4122:LYS:HZ2	1.47	0.79
3:B:1426:ARG:NH1	3:B:1426:ARG:O	2.16	0.78
3:A:2975:LEU:HB2	3:A:2976:MET:HE2	1.66	0.78
3:B:2214:MET:HE2	3:B:2230:MET:HE2	1.64	0.77
3:A:3593:TYR:HB2	3:A:3641:MET:HB3	1.67	0.77
3:B:3436:TYR:HH	3:B:3479:THR:HG1	1.33	0.77
3:A:2354:ILE:HG22	3:A:2420:VAL:HG22	1.66	0.76
3:B:2354:ILE:HG22	3:B:2420:VAL:HG22	1.67	0.76
3:B:3593:TYR:HB2	3:B:3641:MET:HB3	1.66	0.76
2:E:27:THR:HG23	2:E:65:ASP:HB3	1.66	0.76
2:E:37:MET:HG2	2:E:42:GLN:HE21	1.50	0.76
3:B:1391:SER:HA	3:B:1394:ARG:HE	1.50	0.76
3:B:4485:LEU:HA	3:B:4488:MET:HE3	1.68	0.76
3:B:62:GLU:O	3:B:66:HIS:NE2	2.18	0.75
3:B:1340:PRO:HD2	3:B:1344:ASP:HB2	1.66	0.75
3:A:1677:TYR:HA	3:A:1707:ALA:H	1.52	0.75
3:A:1340:PRO:HD2	3:A:1344:ASP:HB2	1.67	0.75
1:D:52:MET:HE2	1:D:52:MET:HA	1.69	0.75
3:A:3102:LEU:O	3:A:3197:TYR:OH	2.04	0.74
3:B:3102:LEU:O	3:B:3197:TYR:OH	2.05	0.74
3:B:1677:TYR:HA	3:B:1707:ALA:H	1.52	0.74
3:A:1859:MET:SD	3:A:2242:TYR:HB3	2.28	0.74
3:B:31:VAL:HA	3:B:34:ARG:HG3	1.69	0.74
3:B:1859:MET:SD	3:B:2242:TYR:HB3	2.28	0.73
3:A:3555:ARG:HD3	3:A:3606:LYS:HD3	1.71	0.73
3:B:73:PHE:HA	3:B:154:MET:HE1	1.69	0.73
3:B:4499:LYS:HA	3:B:4502:ARG:HH21	1.54	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:87:GLY:HA3	3:B:2309:LEU:HD22	1.70	0.72
3:B:1381:LEU:HD23	3:B:1384:LEU:HD11	1.69	0.72
3:B:1858:LEU:HD11	3:B:2198:LEU:HB3	1.70	0.72
3:A:2192:VAL:HG13	3:A:2197:PHE:HE1	1.55	0.72
3:A:4499:LYS:HA	3:A:4502:ARG:HH21	1.54	0.72
2:E:52:MET:HA	2:E:52:MET:HE3	1.70	0.72
1:D:113:CYS:HA	1:D:116:LEU:HB2	1.72	0.71
3:A:1858:LEU:HD11	3:A:2198:LEU:HB3	1.72	0.71
3:A:4591:LYS:HE3	3:A:4626:GLY:H	1.56	0.71
3:B:2975:LEU:HB2	3:B:2976:MET:HE2	1.72	0.71
2:F:52:MET:HA	2:F:52:MET:HE3	1.73	0.71
3:B:2025:ILE:HB	3:B:2037:PHE:HB2	1.73	0.71
3:B:2589:VAL:HG21	3:B:2670:CYS:HB2	1.73	0.71
3:B:2192:VAL:HG13	3:B:2197:PHE:HE1	1.56	0.70
3:B:3739:ILE:HD11	3:B:3825:ARG:HG2	1.71	0.70
3:A:2310:GLN:HE21	1:C:54:CYS:HB2	1.57	0.70
3:B:286:PRO:HB2	3:B:349:ILE:HD12	1.73	0.70
2:E:37:MET:HA	2:E:40:LEU:HG	1.74	0.70
3:A:1030:MET:SD	3:A:1096:ARG:NH1	2.64	0.70
3:B:816:LEU:HD22	3:B:880:VAL:HG11	1.73	0.70
3:A:3739:ILE:HD11	3:A:3825:ARG:HG2	1.72	0.69
3:B:1521:MET:HE3	3:B:1521:MET:H	1.54	0.69
3:B:2232:LEU:HB2	3:B:2240:ARG:HB2	1.74	0.69
3:B:802:GLU:OE1	3:B:802:GLU:N	2.20	0.69
3:B:1707:ALA:O	3:B:2353:ARG:NH2	2.25	0.69
3:B:4522:ARG:HH21	3:B:4568:ILE:HD11	1.57	0.69
3:A:64:LEU:HD12	3:A:113:LEU:HD21	1.74	0.69
3:B:2110:GLY:HA2	3:B:2126:TYR:HA	1.73	0.69
3:B:3229:ASP:OD2	3:B:3289:ASN:ND2	2.25	0.69
3:A:806:LEU:HD23	3:A:857:ARG:HD2	1.74	0.69
3:B:2972:MET:HB3	3:B:2976:MET:HE3	1.75	0.69
3:B:2969:ARG:O	3:B:2973:VAL:HG23	1.93	0.69
3:A:286:PRO:HB2	3:A:349:ILE:HD12	1.74	0.69
3:B:3555:ARG:HD3	3:B:3606:LYS:HD3	1.74	0.68
3:A:2589:VAL:HG21	3:A:2670:CYS:HB2	1.74	0.68
3:A:4558:VAL:O	3:A:4562:VAL:HG23	1.93	0.68
3:A:4596:MET:H	3:A:4596:MET:HE3	1.57	0.68
3:A:1707:ALA:O	3:A:2353:ARG:NH2	2.25	0.68
3:B:1244:ILE:HA	3:B:1293:ARG:HH22	1.59	0.68
3:B:4536:MET:SD	3:B:4566:MET:HE1	2.34	0.68
3:A:1244:ILE:HA	3:A:1293:ARG:HH22	1.59	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:2025:ILE:HB	3:A:2037:PHE:HB2	1.76	0.68
3:A:913:GLU:OE1	3:A:913:GLU:N	2.25	0.67
3:A:2183:THR:HG23	3:A:2184:THR:HG23	1.76	0.67
3:A:4522:ARG:HH21	3:A:4568:ILE:HD11	1.59	0.67
3:B:806:LEU:HD23	3:B:857:ARG:HD2	1.75	0.67
3:B:4558:VAL:O	3:B:4562:VAL:HG23	1.94	0.67
3:A:4536:MET:SD	3:A:4566:MET:HE1	2.33	0.67
2:F:55:GLU:OE2	2:F:75:ARG:NH2	2.26	0.67
3:A:2530:ALA:O	3:A:2536:ARG:NH2	2.27	0.67
3:A:3909:LEU:HD12	3:A:3925:VAL:HG23	1.77	0.67
3:A:4536:MET:HG3	3:A:4565:ILE:HD11	1.77	0.67
3:A:326:LEU:O	3:A:330:THR:HG23	1.95	0.67
1:C:303:GLU:OE1	1:C:307:GLN:NE2	2.28	0.67
3:B:1900:CYS:SG	3:B:1959:GLY:N	2.66	0.67
3:A:1900:CYS:SG	3:A:1959:GLY:N	2.66	0.67
3:B:3909:LEU:HD12	3:B:3925:VAL:HG23	1.76	0.67
3:A:990:ASN:HD21	3:A:1276:GLN:HB2	1.59	0.67
3:B:2183:THR:HG23	3:B:2184:THR:HG23	1.77	0.67
3:B:3057:ARG:HH21	3:B:3139:PHE:HA	1.60	0.66
1:D:20:ARG:NH2	1:D:38:GLU:OE2	2.27	0.66
3:A:4695:MET:HE1	3:A:4722:ILE:HD13	1.77	0.66
3:A:2476:GLU:O	3:A:2480:VAL:HG23	1.96	0.66
3:B:4093:ARG:O	3:B:4097:LEU:HD12	1.95	0.66
3:A:2375:MET:SD	3:A:2375:MET:N	2.69	0.66
3:B:326:LEU:O	3:B:330:THR:HG23	1.95	0.66
3:B:2149:ILE:HG12	3:B:2197:PHE:HE2	1.60	0.66
3:A:236:LYS:O	3:A:240:ILE:HG13	1.96	0.66
3:A:802:GLU:OE1	3:A:802:GLU:N	2.21	0.66
3:A:816:LEU:HD22	3:A:880:VAL:HG11	1.77	0.66
3:A:2110:GLY:HA2	3:A:2126:TYR:HA	1.76	0.66
3:A:3229:ASP:OD2	3:A:3289:ASN:ND2	2.25	0.66
1:D:110:CYS:HB2	1:D:128:PHE:CE1	2.31	0.65
1:D:301:MET:HG2	1:D:305:GLU:HG3	1.77	0.65
3:A:1667:THR:HG22	3:A:1672:MET:HG2	1.77	0.65
1:D:330:ARG:HB3	3:B:4122:LYS:NZ	2.11	0.65
3:B:1667:THR:HG22	3:B:1672:MET:HG2	1.77	0.65
1:C:24:CYS:SG	1:C:46:HIS:HE1	2.19	0.65
3:B:708:ALA:O	3:B:712:HIS:ND1	2.30	0.65
2:E:124:GLU:HA	2:E:127:ARG:HE	1.61	0.65
3:A:127:LYS:HD2	3:A:304:ILE:HD11	1.79	0.65
3:B:1996:LEU:HD11	3:B:2002:ILE:HG13	1.78	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:4536:MET:HG3	3:B:4565:ILE:HD11	1.79	0.65
3:B:4588:THR:HB	3:B:4623:LEU:HD23	1.77	0.65
3:A:4093:ARG:O	3:A:4097:LEU:HD12	1.96	0.65
3:B:2375:MET:N	3:B:2375:MET:SD	2.70	0.65
3:B:1484:VAL:O	3:B:1488:ASN:ND2	2.30	0.65
2:E:34:GLY:O	2:E:38:ARG:CB	2.43	0.65
3:A:73:PHE:HA	3:A:154:MET:HE1	1.78	0.65
3:A:1178:LEU:HD11	3:A:1199:ALA:HB2	1.78	0.65
3:B:1125:ASP:OD2	3:B:1269:HIS:NE2	2.29	0.65
3:A:2978:LEU:HG	3:A:3006:LEU:HD12	1.78	0.65
3:A:1125:ASP:OD2	3:A:1269:HIS:NE2	2.28	0.64
3:A:2048:ASP:HB3	3:A:2113:VAL:HG12	1.79	0.64
3:A:2583:MET:SD	3:A:2584:ARG:NH1	2.70	0.64
3:A:3857:ARG:HH21	3:A:3862:LEU:HD13	1.60	0.64
1:C:27:CYS:SG	1:C:50:HIS:HE1	2.17	0.64
3:B:2010:GLY:O	3:B:2639:ASN:ND2	2.30	0.64
3:B:4591:LYS:HE3	3:B:4626:GLY:H	1.61	0.64
3:A:1446:LEU:HD23	3:A:1449:LEU:HD21	1.80	0.64
3:A:3007:THR:HB	3:A:3010:LEU:HD22	1.80	0.64
3:B:52:LEU:O	3:B:56:VAL:HG23	1.98	0.64
3:B:3662:ARG:HD2	3:B:3679:GLU:HG3	1.80	0.64
3:B:4353:LEU:HD22	3:B:4390:ILE:HD11	1.80	0.64
3:A:2214:MET:HE1	3:A:2232:LEU:HG	1.78	0.64
3:A:4353:LEU:HD22	3:A:4390:ILE:HD11	1.79	0.64
3:B:1389:GLU:O	3:B:1394:ARG:NH2	2.30	0.64
3:B:2368:ILE:HD12	3:B:2403:LEU:HD11	1.80	0.64
3:B:2530:ALA:O	3:B:2536:ARG:NH2	2.31	0.64
3:B:3556:TYR:HD2	3:B:3704:GLY:HA3	1.62	0.64
3:A:2484:GLU:HA	3:A:2487:GLU:HG2	1.78	0.64
3:B:3660:CYS:HB3	3:B:3665:ALA:H	1.63	0.64
3:B:53:VAL:O	3:B:57:ILE:HG13	1.98	0.64
3:B:3014:ASP:HB3	3:B:3017:ASP:HB3	1.79	0.64
3:A:4588:THR:HB	3:A:4623:LEU:HD23	1.80	0.64
3:B:236:LYS:O	3:B:240:ILE:HG13	1.98	0.64
3:A:691:LYS:NZ	3:A:734:GLN:O	2.28	0.64
3:A:3660:CYS:HB3	3:A:3665:ALA:H	1.64	0.63
3:B:514:GLN:OE1	3:B:514:GLN:N	2.31	0.63
3:B:1438:THR:HA	3:B:1446:LEU:HD13	1.80	0.63
3:A:3556:TYR:HD2	3:A:3704:GLY:HA3	1.62	0.63
2:E:38:ARG:HH22	3:A:4160:GLN:HB2	1.64	0.63
3:A:197:LEU:HD21	3:B:762:LEU:HB3	1.79	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:708:ALA:O	3:A:712:HIS:ND1	2.31	0.63
3:A:4350:PHE:HB3	3:A:4371:PRO:HB2	1.80	0.63
3:A:1030:MET:HE3	3:A:1030:MET:H	1.64	0.63
3:A:2232:LEU:HB2	3:A:2240:ARG:HB2	1.80	0.63
3:B:2987:GLN:OE1	3:B:2987:GLN:N	2.30	0.63
3:A:1351:TYR:O	3:A:1355:ILE:HG13	1.99	0.63
3:A:2149:ILE:HG12	3:A:2197:PHE:HE2	1.63	0.63
3:A:53:VAL:O	3:A:57:ILE:HG13	1.99	0.63
3:A:1384:LEU:HA	3:A:1387:GLN:HG3	1.81	0.63
3:A:3014:ASP:HB3	3:A:3017:ASP:HB3	1.81	0.63
1:C:20:ARG:NH2	1:C:38:GLU:OE2	2.32	0.63
3:A:2689:PRO:HB3	3:A:2995:ARG:HH12	1.63	0.63
3:B:1030:MET:SD	3:B:1096:ARG:NH1	2.71	0.63
3:B:4695:MET:HE1	3:B:4722:ILE:HD13	1.80	0.63
2:E:37:MET:HG2	2:E:42:GLN:NE2	2.14	0.63
2:F:124:GLU:HA	2:F:127:ARG:HE	1.62	0.63
3:A:1031:SER:H	3:A:1034:ASP:HB2	1.64	0.63
3:A:1438:THR:HA	3:A:1446:LEU:HD13	1.80	0.63
3:A:3158:GLN:OE1	3:A:3158:GLN:N	2.26	0.63
3:A:52:LEU:O	3:A:56:VAL:HG23	1.99	0.63
3:A:809:GLU:HB3	3:A:884:LEU:HD11	1.80	0.63
3:A:3662:ARG:HD2	3:A:3679:GLU:HG3	1.80	0.63
3:A:4488:MET:HB2	3:A:4508:LEU:HD11	1.80	0.63
3:B:84:TYR:O	3:B:87:THR:OG1	2.17	0.62
3:B:2689:PRO:HB3	3:B:2995:ARG:HH12	1.64	0.62
3:B:3034:MET:HE1	3:B:3097:TYR:HB2	1.80	0.62
3:B:3089:LEU:HD12	3:B:3094:ALA:HB2	1.81	0.62
3:B:4350:PHE:HB3	3:B:4371:PRO:HB2	1.80	0.62
3:A:2111:VAL:HG21	3:A:2163:ALA:HB1	1.81	0.62
3:A:3018:LYS:HA	3:A:3021:LEU:HD12	1.81	0.62
3:A:4255:LYS:HZ2	3:A:4255:LYS:HB3	1.64	0.62
3:B:2971:HIS:CE1	3:B:2975:LEU:HD21	2.33	0.62
3:B:2320:ARG:HE	3:B:2328:VAL:HG22	1.65	0.62
3:B:1317:LEU:HD12	3:B:1323:THR:HG21	1.79	0.62
2:E:30:THR:HG22	2:E:33:LEU:HD12	1.79	0.62
3:B:809:GLU:HB3	3:B:884:LEU:HD11	1.82	0.62
3:A:765:GLN:HE22	3:A:817:ILE:HG23	1.65	0.62
3:A:1222:LEU:O	3:A:1227:GLN:NE2	2.33	0.62
3:A:3501:ASN:HB3	3:A:3912:TYR:CD2	2.35	0.62
3:B:73:PHE:CE2	3:B:161:PRO:HD3	2.34	0.62
3:B:293:THR:HG23	3:B:296:ARG:HH21	1.65	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:3267:ASP:N	3:B:3267:ASP:OD1	2.33	0.62
3:B:765:GLN:HE22	3:B:817:ILE:HG23	1.65	0.62
3:B:3509:ASN:OD1	3:B:3757:ARG:NH2	2.32	0.62
3:A:742:GLU:OE1	3:A:742:GLU:N	2.33	0.62
3:A:3136:MET:HB2	3:A:3145:VAL:HG21	1.82	0.62
3:A:4378:GLY:HA3	3:A:4389:LYS:HD3	1.81	0.62
3:B:1996:LEU:HD21	3:B:2019:THR:HG21	1.80	0.62
3:B:2111:VAL:HG21	3:B:2163:ALA:HB1	1.81	0.62
3:B:3025:LEU:HD11	3:B:3085:THR:HG22	1.80	0.62
3:A:1853:GLU:N	3:A:1853:GLU:OE1	2.33	0.62
3:A:4479:MET:HE3	3:A:4479:MET:H	1.63	0.62
3:B:1178:LEU:HD11	3:B:1199:ALA:HB2	1.82	0.62
3:B:2476:GLU:O	3:B:2480:VAL:HG23	2.00	0.62
3:B:3501:ASN:HB3	3:B:3912:TYR:CD2	2.34	0.62
3:A:845:ASP:N	3:A:845:ASP:OD1	2.30	0.61
3:A:2982:LEU:HB3	3:A:3027:GLN:HE22	1.65	0.61
3:A:3982:GLU:OE1	1:C:316:ARG:NH1	2.33	0.61
3:B:2048:ASP:HB3	3:B:2113:VAL:HG12	1.80	0.61
3:B:2063:ILE:HG23	3:B:2071:TYR:HB2	1.82	0.61
3:B:1446:LEU:HD23	3:B:1449:LEU:HD21	1.80	0.61
3:B:2970:LEU:O	3:B:2974:ARG:HG3	2.00	0.61
3:A:857:ARG:NH2	3:A:931:ARG:O	2.33	0.61
3:B:4378:GLY:HA3	3:B:4389:LYS:HD3	1.81	0.61
3:A:981:ASP:OD1	3:A:981:ASP:N	2.33	0.61
1:C:301:MET:HG2	1:C:305:GLU:HG3	1.82	0.61
3:B:82:THR:O	3:B:86:THR:HG23	2.00	0.61
3:A:82:THR:O	3:A:86:THR:HG23	2.00	0.61
3:A:1317:LEU:HD12	3:A:1323:THR:HG21	1.82	0.61
3:B:1306:ASN:OD1	3:B:1308:PRO:HD2	2.01	0.61
3:B:4510:LYS:O	3:B:4514:TYR:HD1	1.83	0.61
3:A:84:TYR:O	3:A:87:THR:OG1	2.19	0.61
3:A:399:GLY:HA3	3:B:399:GLY:HA3	1.83	0.61
3:A:3267:ASP:N	3:A:3267:ASP:OD1	2.32	0.61
3:B:691:LYS:NZ	3:B:734:GLN:O	2.29	0.61
3:A:1306:ASN:OD1	3:A:1308:PRO:HD2	2.01	0.61
3:A:3575:THR:HG22	3:A:3628:LYS:HD3	1.83	0.61
3:A:4387:LYS:NZ	3:A:4403:ASP:OD1	2.32	0.61
3:B:1832:VAL:O	3:B:1837:ARG:NH2	2.34	0.61
2:F:5:LEU:HB3	2:F:10:ILE:HD11	1.83	0.60
3:B:857:ARG:NH2	3:B:931:ARG:O	2.34	0.60
3:B:1853:GLU:OE1	3:B:1853:GLU:N	2.33	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:2216:ALA:HB2	3:B:2230:MET:HE3	1.81	0.60
2:E:38:ARG:NH2	3:A:4160:GLN:HB2	2.16	0.60
3:A:2291:PHE:O	3:A:2295:ASN:ND2	2.33	0.60
3:A:2368:ILE:HD12	3:A:2403:LEU:HD11	1.82	0.60
3:B:1165:LEU:HG	3:B:1291:LEU:HD11	1.83	0.60
3:B:2014:GLU:OE1	3:B:2014:GLU:N	2.34	0.60
3:A:4031:SER:HB3	1:C:306:ARG:HG2	1.82	0.60
3:B:1308:PRO:HA	3:B:1311:ILE:HG12	1.82	0.60
3:A:2998:PRO:HA	3:A:3001:GLN:HB2	1.83	0.60
3:A:3509:ASN:OD1	3:A:3757:ARG:NH2	2.32	0.60
3:B:913:GLU:H	3:B:913:GLU:CD	2.09	0.60
3:B:1222:LEU:O	3:B:1227:GLN:NE2	2.34	0.60
3:B:1560:ALA:HA	3:B:1563:TRP:HB2	1.82	0.60
3:A:1165:LEU:HG	3:A:1291:LEU:HD11	1.82	0.60
3:B:2521:VAL:HG23	3:B:2522:GLN:OE1	2.01	0.60
1:D:82:TYR:OH	1:D:128:PHE:HB3	2.01	0.60
3:A:3888:ARG:HG3	3:A:3928:LEU:HB2	1.84	0.60
3:A:683:MET:HE3	3:A:727:LEU:HB3	1.84	0.60
3:A:1475:PRO:HG2	3:A:1482:LEU:HD23	1.83	0.60
3:A:3000:MET:HA	3:A:3003:ILE:HG13	1.82	0.60
3:A:4353:LEU:O	3:A:4370:ASN:ND2	2.29	0.60
3:A:1308:PRO:HA	3:A:1311:ILE:HG12	1.84	0.60
3:A:2063:ILE:HG23	3:A:2071:TYR:HB2	1.84	0.60
3:A:2308:LEU:HD23	3:A:2330:ASN:HD22	1.67	0.60
3:A:3583:ARG:NE	3:A:3583:ARG:O	2.34	0.60
3:B:2997:ILE:H	3:B:2997:ILE:HD12	1.66	0.60
3:B:3575:THR:HG22	3:B:3628:LYS:HD3	1.84	0.60
2:E:33:LEU:HD23	2:E:37:MET:HE1	1.84	0.60
3:B:1411:MET:HB3	3:B:1431:PHE:CZ	2.37	0.60
3:A:191:MET:HA	3:A:191:MET:HE3	1.83	0.59
3:A:1832:VAL:O	3:A:1837:ARG:NH2	2.35	0.59
3:A:1924:LEU:HD21	3:A:1942:LEU:HD13	1.83	0.59
3:B:845:ASP:OD1	3:B:845:ASP:N	2.33	0.59
3:B:4679:LYS:NZ	3:B:4731:ILE:O	2.35	0.59
2:E:5:LEU:HB3	2:E:10:ILE:HD11	1.84	0.59
3:A:2978:LEU:HD23	3:A:2981:LEU:HD21	1.84	0.59
3:B:4312:VAL:O	3:B:4316:THR:HG23	2.02	0.59
3:A:160:LEU:HD21	3:A:167:LEU:HG	1.85	0.59
3:A:293:THR:HG23	3:A:296:ARG:HH21	1.67	0.59
3:A:1427:VAL:O	3:A:1430:PHE:HB3	2.03	0.59
3:B:138:THR:OG1	3:B:142:ARG:NH2	2.35	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:981:ASP:N	3:B:981:ASP:OD1	2.34	0.59
3:A:2661:VAL:HG23	3:A:2682:TYR:HE1	1.68	0.59
3:B:284:ILE:HG22	3:B:286:PRO:HD3	1.84	0.59
3:B:3560:GLN:HE21	3:B:3643:GLU:HG3	1.68	0.59
3:B:2312:TYR:HB3	3:B:2320:ARG:HH12	1.67	0.59
3:B:3050:GLU:HG2	3:B:3153:PHE:CD2	2.38	0.59
3:B:3580:ASP:HB3	3:B:3710:ARG:HD3	1.84	0.59
1:D:38:GLU:HG2	3:B:2332:LYS:HE3	1.85	0.59
3:A:2487:GLU:OE1	3:A:2528:LEU:HB2	2.01	0.59
3:A:3580:ASP:HB3	3:A:3710:ARG:HD3	1.83	0.59
1:D:306:ARG:HG2	3:B:4031:SER:HB3	1.85	0.59
3:A:849:ARG:NH1	3:A:982:THR:OG1	2.36	0.59
3:B:3225:ARG:NH2	3:B:3229:ASP:OD1	2.36	0.59
3:B:4247:SER:HA	3:B:4250:GLU:OE2	2.02	0.59
1:D:316:ARG:NH1	3:B:3982:GLU:OE1	2.36	0.59
3:A:319:GLU:H	3:A:319:GLU:CD	2.11	0.59
3:A:1214:LEU:H	3:A:1214:LEU:HD12	1.67	0.59
3:A:1536:GLU:OE1	3:A:1536:GLU:N	2.34	0.59
3:A:2214:MET:HE3	3:A:2215:VAL:H	1.68	0.59
3:A:2997:ILE:H	3:A:2997:ILE:HD12	1.67	0.59
3:B:319:GLU:CD	3:B:319:GLU:H	2.11	0.59
3:A:284:ILE:HG22	3:A:286:PRO:HD3	1.85	0.59
3:A:4522:ARG:HB2	3:A:4572:GLU:HG2	1.85	0.59
3:B:1706:TYR:N	3:B:2386:ASP:OD2	2.28	0.59
3:B:3583:ARG:NE	3:B:3583:ARG:O	2.34	0.59
3:A:62:GLU:O	3:A:66:HIS:NE2	2.36	0.58
3:A:1590:VAL:HA	3:A:1593:LEU:HG	1.85	0.58
3:A:3089:LEU:HD12	3:A:3094:ALA:HB2	1.83	0.58
3:A:3959:TRP:NE1	3:B:3912:TYR:OH	2.28	0.58
3:A:4312:VAL:O	3:A:4316:THR:HG23	2.02	0.58
3:B:1485:ILE:HA	3:B:1488:ASN:HD22	1.69	0.58
3:B:3888:ARG:HG3	3:B:3928:LEU:HB2	1.85	0.58
3:B:4351:VAL:HA	3:B:4438:MET:HB3	1.84	0.58
3:B:1308:PRO:HB2	3:B:1312:ARG:NH1	2.18	0.58
3:B:2291:PHE:O	3:B:2295:ASN:ND2	2.34	0.58
3:B:4479:MET:HE3	3:B:4479:MET:H	1.68	0.58
3:A:134:LYS:HZ1	3:A:311:ASP:HA	1.68	0.58
3:A:2317:ILE:HG12	3:A:2320:ARG:HH21	1.69	0.58
3:A:1521:MET:SD	3:A:1521:MET:N	2.75	0.58
3:A:2307:ASP:HB3	3:A:2336:PHE:HB2	1.86	0.58
3:B:86:THR:OG1	3:B:140:CYS:SG	2.61	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:1142:MET:HE3	3:B:1148:PRO:HA	1.86	0.58
3:B:2317:ILE:HG12	3:B:2320:ARG:HH22	1.68	0.58
3:B:2484:GLU:HA	3:B:2487:GLU:HG2	1.84	0.58
3:B:4255:LYS:HZ2	3:B:4255:LYS:HB3	1.69	0.58
3:A:73:PHE:CE2	3:A:161:PRO:HD3	2.39	0.58
3:A:762:LEU:HB3	3:B:197:LEU:HD21	1.85	0.58
3:A:4351:VAL:HA	3:A:4438:MET:HB3	1.84	0.58
3:B:4488:MET:O	3:B:4492:LEU:HD22	2.04	0.58
3:B:2308:LEU:HD23	3:B:2330:ASN:HD22	1.68	0.58
3:B:2583:MET:SD	3:B:2584:ARG:NH1	2.76	0.58
3:B:4206:LEU:HD13	3:B:4262:LEU:HD11	1.84	0.58
2:F:49:LEU:O	2:F:53:ILE:HG23	2.04	0.58
3:A:1996:LEU:HD11	3:A:2002:ILE:HG13	1.85	0.58
3:B:1118:LEU:HA	3:B:1121:ILE:HD12	1.86	0.58
3:B:1427:VAL:HG22	3:B:1431:PHE:CE2	2.38	0.58
3:B:1541:MET:HA	3:B:1544:LEU:HB2	1.85	0.58
3:B:4198:VAL:HG12	3:B:4254:ILE:HD11	1.84	0.58
3:A:1541:MET:HA	3:A:1544:LEU:HB2	1.86	0.57
3:A:3225:ARG:NH2	3:A:3229:ASP:OD1	2.37	0.57
3:B:542:TYR:HD2	3:B:689:ILE:HD12	1.69	0.57
3:B:959:LYS:NZ	3:B:960:LEU:H	2.02	0.57
3:A:3388:GLU:OE1	3:A:3388:GLU:N	2.34	0.57
3:A:3818:ILE:HD12	3:B:4230:THR:HG21	1.85	0.57
3:A:4321:ASN:O	3:A:4491:ARG:NH1	2.35	0.57
3:A:3560:GLN:HE21	3:A:3643:GLU:HG3	1.69	0.57
3:A:4247:SER:HA	3:A:4250:GLU:OE2	2.03	0.57
3:B:474:VAL:HG11	3:B:646:LEU:HG	1.87	0.57
3:B:4522:ARG:HB2	3:B:4572:GLU:HG2	1.87	0.57
3:A:3025:LEU:HD11	3:A:3085:THR:HG22	1.86	0.57
3:A:3560:GLN:HB3	3:A:3641:MET:HE1	1.85	0.57
3:A:4656:LYS:HD2	3:A:4657:VAL:N	2.18	0.57
3:A:4679:LYS:NZ	3:A:4731:ILE:O	2.38	0.57
3:B:2214:MET:SD	3:B:2232:LEU:HG	2.44	0.57
2:E:77:MET:SD	2:E:77:MET:N	2.76	0.57
3:A:1538:MET:HE3	3:A:1598:HIS:HB3	1.87	0.57
3:A:1600:MET:HE3	3:A:1600:MET:H	1.69	0.57
3:B:1475:PRO:HG2	3:B:1482:LEU:HD23	1.85	0.57
3:B:1214:LEU:H	3:B:1214:LEU:HD12	1.69	0.57
3:B:1858:LEU:HD23	3:B:2248:ASN:HB3	1.86	0.57
3:B:4699:ILE:HD13	3:B:4747:ASN:HB3	1.87	0.57
3:A:189:VAL:HG11	3:B:874:VAL:HG13	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:1118:LEU:HA	3:A:1121:ILE:HD12	1.87	0.57
3:A:4310:MET:O	3:A:4314:ILE:HG12	2.05	0.57
3:A:4408:LEU:HD13	3:A:4440:ILE:HG21	1.87	0.57
3:B:160:LEU:HD21	3:B:167:LEU:HG	1.85	0.57
3:B:2487:GLU:OE1	3:B:2528:LEU:HB2	2.04	0.57
3:B:4310:MET:SD	3:B:4310:MET:N	2.77	0.57
3:B:1590:VAL:HA	3:B:1593:LEU:HG	1.86	0.56
3:A:795:LEU:HD12	3:A:840:LEU:HD13	1.87	0.56
3:A:921:HIS:CE1	3:A:1274:CYS:HB2	2.40	0.56
3:A:1244:ILE:HG12	3:A:1293:ARG:HH12	1.70	0.56
3:A:1706:TYR:N	3:A:2386:ASP:OD2	2.28	0.56
3:B:64:LEU:HD12	3:B:113:LEU:HD21	1.85	0.56
3:B:1671:PHE:C	3:B:1672:MET:HE2	2.30	0.56
3:B:2544:ASP:OD2	3:B:2584:ARG:NH2	2.38	0.56
2:F:77:MET:SD	2:F:77:MET:N	2.70	0.56
3:A:514:GLN:OE1	3:A:514:GLN:N	2.38	0.56
3:A:1064:LYS:NZ	3:A:1066:GLU:HB2	2.19	0.56
3:A:1899:MET:HG2	3:A:1914:VAL:HG12	1.86	0.56
3:A:2970:LEU:O	3:A:2974:ARG:HG3	2.06	0.56
3:A:4310:MET:N	3:A:4310:MET:SD	2.78	0.56
3:A:4527:LYS:HB2	3:A:4530:MET:HE1	1.87	0.56
3:A:4598:LEU:HD13	3:A:4637:ARG:HH22	1.69	0.56
3:B:234:LYS:HD2	3:B:235:THR:N	2.20	0.56
3:B:2181:GLN:HB2	3:B:2185:GLY:H	1.71	0.56
3:B:3095:VAL:HB	3:B:3190:TRP:HZ2	1.70	0.56
3:B:3961:ASN:ND2	3:B:3963:ASP:OD2	2.38	0.56
3:A:2181:GLN:HB2	3:A:2185:GLY:H	1.71	0.56
2:E:122:VAL:HA	2:E:125:MET:HG2	1.88	0.56
3:A:474:VAL:HG11	3:A:646:LEU:HG	1.86	0.56
3:A:1292:VAL:HG21	3:A:1326:VAL:HG13	1.87	0.56
3:A:1807:PHE:HA	3:A:1810:LEU:HD23	1.88	0.56
3:B:3107:GLU:HA	3:B:3110:LYS:HG2	1.87	0.56
2:E:49:LEU:O	2:E:53:ILE:HG13	2.06	0.56
2:E:56:VAL:HG11	2:E:68:GLU:HG3	1.87	0.56
3:A:4338:ILE:HB	3:A:4475:MET:HE1	1.88	0.56
3:A:4699:ILE:HD13	3:A:4747:ASN:HB3	1.87	0.56
3:B:921:HIS:CE1	3:B:1274:CYS:HB2	2.40	0.56
3:B:1476:PRO:HG2	3:B:1479:SER:HB3	1.87	0.56
3:B:4466:GLU:HA	3:B:4469:GLU:HB3	1.88	0.56
2:F:122:VAL:HA	2:F:125:MET:HG2	1.87	0.56
3:A:1308:PRO:HB2	3:A:1312:ARG:NH1	2.20	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:2662:ASP:OD1	3:A:2663:ILE:N	2.39	0.56
3:B:1423:PHE:O	3:B:1427:VAL:HG12	2.06	0.56
3:B:4387:LYS:NZ	3:B:4403:ASP:OD1	2.32	0.56
3:A:2018:VAL:HG13	3:A:2023:VAL:HG22	1.86	0.56
3:B:429:LEU:HA	3:B:432:LYS:HG2	1.87	0.56
3:B:1819:MET:O	3:B:1819:MET:HE3	2.06	0.56
2:F:146:MET:HE3	3:B:4101:TYR:HD1	1.71	0.56
3:A:720:SER:O	3:A:722:LEU:HD22	2.05	0.56
3:A:1119:GLN:HA	3:A:1122:TYR:CZ	2.41	0.56
3:A:1428:LEU:HB3	3:A:1491:LEU:HD13	1.86	0.56
3:A:3107:GLU:HA	3:A:3110:LYS:HG2	1.88	0.56
3:B:720:SER:O	3:B:722:LEU:HD22	2.05	0.56
3:B:2698:LYS:O	3:B:2702:ILE:HG12	2.06	0.56
3:B:4518:VAL:HB	3:B:4521:ASN:HB3	1.87	0.56
3:A:1671:PHE:C	3:A:1672:MET:HE2	2.30	0.56
3:A:2676:ASN:OD1	3:A:2677:THR:N	2.39	0.56
3:A:4041:ALA:HA	3:A:4078:ARG:HH12	1.71	0.56
3:B:1119:GLN:HA	3:B:1122:TYR:CZ	2.41	0.55
3:B:4254:ILE:HD12	3:B:4254:ILE:H	1.72	0.55
3:B:4598:LEU:HD13	3:B:4637:ARG:HH22	1.70	0.55
2:E:55:GLU:OE2	2:E:75:ARG:NH2	2.37	0.55
3:A:992:THR:N	3:A:995:GLU:OE1	2.35	0.55
3:A:4466:GLU:HA	3:A:4469:GLU:HB3	1.87	0.55
3:A:4516:VAL:O	3:A:4522:ARG:NH2	2.39	0.55
3:A:4563:LEU:HD21	3:A:4615:GLY:HA3	1.87	0.55
3:A:4593:GLN:OE1	3:A:4593:GLN:N	2.23	0.55
3:B:3388:GLU:OE1	3:B:3388:GLU:N	2.35	0.55
2:E:65:ASP:OD2	2:E:67:PRO:HD2	2.06	0.55
2:E:132:ASP:OD1	2:E:132:ASP:N	2.39	0.55
3:A:533:LEU:O	3:A:537:LEU:HG	2.07	0.55
3:B:1915:SER:HB3	3:B:1957:LEU:HD11	1.88	0.55
3:A:1915:SER:HB3	3:A:1957:LEU:HD11	1.88	0.55
3:A:3095:VAL:HB	3:A:3190:TRP:HZ2	1.71	0.55
3:A:4596:MET:O	3:A:4600:GLN:HG2	2.06	0.55
3:B:2192:VAL:HG13	3:B:2197:PHE:CE1	2.41	0.55
3:B:1292:VAL:HG21	3:B:1326:VAL:HG13	1.89	0.55
3:B:2499:GLU:HA	3:B:2502:LYS:HD3	1.88	0.55
3:B:4216:GLU:OE2	3:B:4238:LEU:HD13	2.07	0.55
3:B:795:LEU:HD12	3:B:840:LEU:HD13	1.89	0.55
3:B:4353:LEU:O	3:B:4370:ASN:ND2	2.29	0.55
3:B:4596:MET:O	3:B:4600:GLN:HG2	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:542:TYR:HD2	3:A:689:ILE:HD12	1.72	0.55
3:A:1357:GLY:O	3:A:1361:ILE:HG22	2.06	0.55
3:A:2499:GLU:HA	3:A:2502:LYS:HD3	1.89	0.55
3:A:4468:ASP:HB3	3:A:4471:GLU:HB3	1.89	0.55
3:A:2543:LYS:HE2	3:A:2547:LEU:HD12	1.89	0.55
3:B:2018:VAL:HG13	3:B:2023:VAL:HG22	1.87	0.55
3:B:2998:PRO:HA	3:B:3001:GLN:HB2	1.89	0.55
1:D:56:LEU:HD11	3:B:2311:VAL:HG13	1.88	0.55
3:B:655:LEU:O	3:B:659:THR:HG23	2.07	0.55
3:B:2676:ASN:OD1	3:B:2677:THR:N	2.40	0.55
3:B:3163:MET:HE1	3:B:3166:ARG:HH12	1.72	0.55
3:A:429:LEU:HA	3:A:432:LYS:HG2	1.87	0.55
3:A:655:LEU:O	3:A:659:THR:HG23	2.07	0.55
3:A:1896:ARG:NH1	3:A:2213:ASP:OD2	2.40	0.55
3:A:2521:VAL:HG23	3:A:2522:GLN:OE1	2.07	0.55
3:A:3144:TYR:O	3:A:3148:HIS:ND1	2.36	0.55
3:A:3556:TYR:CD2	3:A:3704:GLY:HA3	2.42	0.55
3:B:418:LEU:HD11	3:B:477:ALA:HA	1.89	0.55
3:B:4563:LEU:HD21	3:B:4615:GLY:HA3	1.89	0.55
3:B:1357:GLY:O	3:B:1361:ILE:HG23	2.07	0.54
3:B:1807:PHE:HA	3:B:1810:LEU:HD23	1.89	0.54
3:B:3560:GLN:HB3	3:B:3641:MET:HE1	1.89	0.54
3:B:4338:ILE:HB	3:B:4475:MET:HE1	1.89	0.54
3:A:2990:ASN:OD1	3:A:2990:ASN:N	2.40	0.54
3:B:533:LEU:O	3:B:537:LEU:HG	2.07	0.54
3:B:2662:ASP:OD1	3:B:2663:ILE:N	2.40	0.54
3:B:4195:HIS:HA	3:B:4198:VAL:HG22	1.90	0.54
3:B:4273:LEU:HA	3:B:4276:LEU:HD23	1.88	0.54
3:B:4527:LYS:HB2	3:B:4530:MET:HE1	1.88	0.54
3:A:2027:ASP:OD2	3:A:2027:ASP:N	2.39	0.54
3:A:3669:ALA:O	3:A:3682:TYR:OH	2.24	0.54
3:B:2978:LEU:HG	3:B:3006:LEU:HD12	1.88	0.54
3:B:3000:MET:HB2	3:B:3058:LEU:HD13	1.87	0.54
3:A:3023:ASN:O	3:A:3027:GLN:HG3	2.07	0.54
1:C:312:GLU:HG3	1:C:316:ARG:HD2	1.90	0.54
3:B:1521:MET:H	3:B:1521:MET:CE	2.21	0.54
3:B:2976:MET:O	3:B:2980:ARG:HG2	2.06	0.54
3:B:3313:GLU:OE1	3:B:3313:GLU:N	2.21	0.54
3:B:4593:GLN:OE1	3:B:4593:GLN:N	2.28	0.54
3:A:1973:LYS:HD3	3:A:1996:LEU:HD13	1.89	0.54
3:A:4239:LYS:NZ	3:A:4290:MET:SD	2.80	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:1558:ASN:O	3:B:1561:VAL:HB	2.08	0.54
1:D:63:LEU:HD11	3:B:2414:VAL:HG11	1.89	0.54
3:A:1678:HIS:N	3:A:1705:SER:O	2.36	0.54
3:A:2637:PRO:HD3	3:A:2648:PRO:HG2	1.90	0.54
3:A:3050:GLU:HG2	3:A:3153:PHE:CD2	2.42	0.54
3:B:1408:VAL:O	3:B:1411:MET:HG3	2.08	0.54
3:B:1678:HIS:N	3:B:1705:SER:O	2.36	0.54
3:B:2474:VAL:HG23	3:B:2475:LEU:HD12	1.89	0.54
3:B:4509:LEU:HD13	3:B:4561:GLN:OE1	2.07	0.54
3:A:1495:LEU:O	3:A:1499:ILE:HG12	2.08	0.54
3:A:3905:LEU:HD23	3:A:3932:LEU:HD11	1.90	0.54
3:A:4352:THR:N	3:A:4438:MET:O	2.35	0.54
3:B:1859:MET:HB3	3:B:2200:GLN:NE2	2.22	0.54
3:B:2135:THR:O	3:B:2144:LEU:N	2.40	0.54
3:B:4408:LEU:HD13	3:B:4440:ILE:HG21	1.90	0.54
3:B:4532:THR:HG22	3:B:4536:MET:HE3	1.90	0.54
2:F:33:LEU:HD13	2:F:53:ILE:HG22	1.90	0.54
3:A:1476:PRO:HG2	3:A:1479:SER:HB3	1.89	0.54
3:A:4273:LEU:HA	3:A:4276:LEU:HD23	1.89	0.54
3:B:659:THR:HA	3:B:663:LEU:HD12	1.90	0.54
3:B:1244:ILE:HG12	3:B:1293:ARG:HH12	1.73	0.54
3:B:3669:ALA:O	3:B:3682:TYR:OH	2.23	0.54
3:A:1924:LEU:HD12	3:A:1925:GLN:N	2.23	0.54
3:B:1899:MET:HG2	3:B:1914:VAL:HG12	1.88	0.54
3:B:3556:TYR:CD2	3:B:3704:GLY:HA3	2.42	0.54
3:A:145:ARG:O	3:A:149:ILE:HG12	2.07	0.53
3:A:2972:MET:O	3:A:2976:MET:HG2	2.07	0.53
3:A:4024:ILE:HD13	1:C:320:VAL:HG13	1.91	0.53
3:B:373:ASP:O	3:B:377:ILE:HG22	2.07	0.53
3:B:3680:ASN:OD1	3:B:3681:VAL:N	2.41	0.53
3:B:3905:LEU:HD23	3:B:3932:LEU:HD11	1.91	0.53
1:D:17:PHE:CE1	1:D:33:CYS:HB2	2.43	0.53
1:D:57:THR:O	1:D:61:PHE:N	2.40	0.53
3:A:1858:LEU:HD23	3:A:2248:ASN:HB3	1.90	0.53
3:B:3045:ARG:HG3	3:B:3050:GLU:OE2	2.08	0.53
3:B:4517:LYS:HA	3:B:4522:ARG:HH22	1.73	0.53
3:A:1384:LEU:HD11	3:A:1430:PHE:CE2	2.43	0.53
3:A:2131:SER:HB2	3:A:2149:ILE:HB	1.91	0.53
3:A:2135:THR:O	3:A:2144:LEU:N	2.40	0.53
3:A:3680:ASN:OD1	3:A:3681:VAL:N	2.41	0.53
3:A:4324:ASP:OD1	3:A:4324:ASP:N	2.40	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:4468:ASP:O	3:A:4470:GLU:N	2.42	0.53
3:B:2307:ASP:HB3	3:B:2336:PHE:HB2	1.88	0.53
3:A:1487:GLU:O	3:A:1491:LEU:HG	2.08	0.53
3:B:992:THR:N	3:B:995:GLU:OE1	2.36	0.53
3:B:1351:TYR:O	3:B:1355:ILE:HG13	2.08	0.53
3:B:1564:LEU:HD21	3:B:1807:PHE:HE2	1.72	0.53
3:B:3007:THR:HG22	3:B:3010:LEU:HD22	1.90	0.53
3:A:1160:PRO:O	3:A:1164:GLN:HG2	2.09	0.53
3:A:3597:ARG:O	3:A:3639:ASN:ND2	2.41	0.53
3:A:3961:ASN:ND2	3:A:3963:ASP:OD2	2.41	0.53
3:A:4737:GLN:NE2	3:A:4773:GLU:OE1	2.41	0.53
3:B:134:LYS:HZ1	3:B:311:ASP:HA	1.72	0.53
3:B:1538:MET:O	3:B:1542:ALA:HB3	2.09	0.53
3:B:1877:TYR:O	3:B:1886:ARG:NH2	2.42	0.53
3:A:4100:LYS:HZ3	3:A:4104:ARG:NH2	2.06	0.53
3:A:4596:MET:HA	3:A:4599:ASP:OD1	2.09	0.53
3:B:145:ARG:O	3:B:149:ILE:HG12	2.09	0.53
3:B:2070:ILE:HB	3:B:2092:LEU:HB2	1.90	0.53
3:B:2290:ASP:OD2	3:B:2294:HIS:NE2	2.41	0.53
3:B:2511:LEU:O	3:B:2515:LEU:HD12	2.09	0.53
3:A:3005:MET:HA	3:A:3008:THR:HG23	1.89	0.53
3:B:2335:GLY:CA	3:B:2405:ILE:O	2.57	0.53
1:D:137:ARG:NH1	1:D:138:ALA:H	2.07	0.53
3:A:2529:LEU:HG	3:A:2539:TYR:CD1	2.43	0.53
3:A:2580:ILE:HG22	3:A:2588:LEU:HB2	1.91	0.53
3:B:1874:ARG:HA	3:B:2212:GLN:HE22	1.73	0.53
3:B:2121:MET:SD	3:B:2122:LEU:N	2.82	0.53
3:A:2070:ILE:HB	3:A:2092:LEU:HB2	1.90	0.53
1:D:322:GLU:OE2	3:B:4158:ARG:NH2	2.32	0.53
3:A:1387:GLN:HE22	3:A:1397:MET:HG2	1.74	0.53
3:A:4638:PHE:HA	3:A:4658:PHE:CZ	2.43	0.53
3:B:1859:MET:HE2	3:B:1859:MET:HA	1.91	0.53
3:B:4041:ALA:HA	3:B:4078:ARG:HH12	1.73	0.53
3:B:4468:ASP:HB3	3:B:4471:GLU:HB3	1.90	0.53
1:D:25:LEU:O	1:D:109:ILE:N	2.29	0.52
3:A:1874:ARG:HA	3:A:2212:GLN:HE22	1.73	0.52
3:A:2313:ASN:O	3:A:2317:ILE:HG13	2.09	0.52
3:A:2538:ALA:O	3:A:2542:HIS:ND1	2.42	0.52
3:A:3101:VAL:HG11	3:A:3164:VAL:HG21	1.91	0.52
3:A:4216:GLU:OE2	3:A:4238:LEU:HD13	2.08	0.52
3:B:2131:SER:HB2	3:B:2149:ILE:HB	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:3050:GLU:HG2	3:B:3153:PHE:HD2	1.73	0.52
3:B:3921:MET:O	3:B:3925:VAL:HG12	2.09	0.52
3:B:4252:GLU:N	3:B:4252:GLU:OE1	2.41	0.52
3:A:1345:GLU:OE2	3:A:1349:ARG:NH1	2.42	0.52
3:B:4468:ASP:O	3:B:4470:GLU:N	2.42	0.52
1:D:94:GLN:HA	1:D:132:LEU:HD13	1.91	0.52
3:A:281:SER:OG	3:A:282:PHE:N	2.42	0.52
3:A:418:LEU:HD11	3:A:477:ALA:HA	1.91	0.52
3:A:1861:PRO:HB3	3:A:2242:TYR:CZ	2.45	0.52
3:A:2511:LEU:O	3:A:2515:LEU:HD12	2.09	0.52
3:B:4691:ALA:O	3:B:4695:MET:HG2	2.09	0.52
3:A:2976:MET:O	3:A:2980:ARG:HG2	2.10	0.52
3:B:913:GLU:OE1	3:B:913:GLU:N	2.31	0.52
3:B:1318:LEU:HA	3:B:1327:ALA:HB1	1.90	0.52
3:B:1600:MET:SD	3:B:2481:SER:HB2	2.49	0.52
3:B:4737:GLN:NE2	3:B:4773:GLU:OE1	2.42	0.52
3:A:1158:LEU:HB3	3:A:1298:LEU:HD21	1.91	0.52
3:A:1610:LEU:HD21	3:A:2492:VAL:HG13	1.91	0.52
3:A:1859:MET:HB3	3:A:2200:GLN:NE2	2.24	0.52
3:A:3921:MET:O	3:A:3925:VAL:HG12	2.09	0.52
3:B:1309:GLN:H	3:B:1309:GLN:CD	2.17	0.52
3:B:2637:PRO:HD3	3:B:2648:PRO:HG2	1.91	0.52
2:F:5:LEU:HD21	2:F:13:PHE:HE2	1.74	0.52
2:F:17:PHE:HE1	2:F:28:ILE:HG12	1.74	0.52
3:A:1124:LEU:O	3:A:1128:ILE:HG12	2.09	0.52
3:A:1318:LEU:HA	3:A:1327:ALA:HB1	1.91	0.52
3:A:1538:MET:O	3:A:1542:ALA:HB3	2.09	0.52
3:A:1564:LEU:HD21	3:A:1807:PHE:HE2	1.75	0.52
3:A:1859:MET:HA	3:A:1859:MET:HE2	1.91	0.52
3:A:2335:GLY:CA	3:A:2405:ILE:O	2.58	0.52
3:A:4166:LEU:O	3:A:4183:TYR:OH	2.27	0.52
3:B:532:ASN:O	3:B:536:THR:OG1	2.27	0.52
3:B:2980:ARG:HA	3:B:2980:ARG:NH1	2.24	0.52
3:A:51:GLN:OE1	3:A:51:GLN:N	2.38	0.52
3:A:1015:PRO:HG3	3:A:1041:TRP:HE1	1.74	0.52
3:A:1408:VAL:O	3:A:1411:MET:HG3	2.09	0.52
3:A:1446:LEU:HA	3:A:1449:LEU:HG	1.91	0.52
3:A:1888:LEU:HD12	3:A:1893:VAL:HB	1.92	0.52
3:A:2327:TYR:OH	1:C:63:LEU:O	2.26	0.52
3:A:3000:MET:HB2	3:A:3058:LEU:HD13	1.91	0.52
3:B:2181:GLN:NE2	3:B:2186:VAL:O	2.33	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:4516:VAL:O	3:B:4522:ARG:NH2	2.42	0.52
2:E:59:ASP:OD1	2:E:59:ASP:N	2.41	0.52
3:A:2317:ILE:HA	3:A:2320:ARG:HH21	1.75	0.52
3:A:2356:ILE:HG22	3:A:2417:ILE:HA	1.92	0.52
3:A:4230:THR:HG21	3:B:3818:ILE:HD12	1.91	0.52
3:B:281:SER:OG	3:B:282:PHE:N	2.42	0.52
3:B:4613:LEU:HD12	3:B:4614:GLN:N	2.25	0.52
3:A:1381:LEU:HD13	3:A:1426:ARG:HG3	1.91	0.52
3:A:1877:TYR:O	3:A:1886:ARG:NH2	2.42	0.52
3:A:2117:HIS:O	3:A:2120:GLN:NE2	2.43	0.52
3:A:2544:ASP:OD2	3:A:2584:ARG:NH2	2.43	0.52
1:C:120:ASP:HB3	1:C:123:HIS:HB2	1.92	0.52
3:B:2979:GLU:HA	3:B:2982:LEU:HD12	1.92	0.52
3:B:3593:TYR:OH	3:B:3643:GLU:OE1	2.27	0.52
3:B:4314:ILE:O	3:B:4318:LYS:HG2	2.10	0.52
3:B:4321:ASN:O	3:B:4491:ARG:NH1	2.39	0.52
2:E:12:GLU:OE1	2:E:40:LEU:HD22	2.10	0.52
3:A:2192:VAL:HG13	3:A:2197:PHE:CE1	2.39	0.52
3:A:2243:MET:HE3	3:A:2243:MET:C	2.35	0.52
3:A:2290:ASP:OD2	3:A:2294:HIS:NE2	2.41	0.52
3:A:3021:LEU:O	3:A:3025:LEU:HD23	2.09	0.52
3:A:3048:LEU:O	3:A:3051:VAL:HG22	2.10	0.52
3:B:959:LYS:HZ2	3:B:960:LEU:H	1.57	0.52
3:B:1015:PRO:HG3	3:B:1041:TRP:HE1	1.74	0.52
3:B:1446:LEU:HA	3:B:1449:LEU:HG	1.92	0.52
3:B:3021:LEU:O	3:B:3025:LEU:HD23	2.09	0.52
3:B:4324:ASP:N	3:B:4324:ASP:OD1	2.40	0.52
2:E:38:ARG:HH12	3:A:4160:GLN:HG3	1.75	0.51
3:A:1494:LEU:O	3:A:1497:THR:OG1	2.25	0.51
3:A:3074:ILE:HG22	3:A:3076:GLU:H	1.76	0.51
3:B:3597:ARG:O	3:B:3639:ASN:ND2	2.43	0.51
1:D:88:TYR:HD1	1:D:92:SER:HB3	1.75	0.51
3:A:1663:THR:O	3:A:1667:THR:HG23	2.11	0.51
3:A:2216:ALA:C	3:A:2217:ILE:HD13	2.35	0.51
3:A:3190:TRP:O	3:A:3194:LEU:HB3	2.11	0.51
3:A:4444:MET:HE1	3:A:4447:LEU:HB2	1.91	0.51
3:B:73:PHE:HB2	3:B:158:ALA:HB1	1.91	0.51
3:B:322:ASN:OD1	3:B:323:PRO:HD2	2.09	0.51
3:B:3934:ARG:HH21	3:B:3981:LYS:HD2	1.75	0.51
2:E:34:GLY:HA2	2:E:49:LEU:HD21	1.93	0.51
3:A:659:THR:HA	3:A:663:LEU:HD12	1.90	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:1077:THR:O	3:A:1082:SER:N	2.43	0.51
3:A:3278:ALA:O	3:A:3282:ILE:HG22	2.10	0.51
3:A:4267:LEU:HD11	3:A:4316:THR:HG21	1.92	0.51
3:B:2352:MET:HE1	3:B:2403:LEU:HD13	1.92	0.51
3:B:3938:GLU:OE1	3:B:3938:GLU:N	2.34	0.51
3:B:4488:MET:HB2	3:B:4508:LEU:HD11	1.92	0.51
1:D:320:VAL:HG13	3:B:4024:ILE:HD13	1.93	0.51
3:A:2368:ILE:HG23	3:A:2377:LEU:HD11	1.92	0.51
3:A:3048:LEU:O	3:A:3052:HIS:ND1	2.43	0.51
3:A:3593:TYR:OH	3:A:3643:GLU:OE1	2.27	0.51
3:A:4195:HIS:HA	3:A:4198:VAL:HG22	1.93	0.51
3:A:4642:CYS:HB2	3:A:4687:ILE:HD11	1.90	0.51
3:B:202:ASN:HB2	3:B:203:PRO:HA	1.92	0.51
3:A:1028:PRO:HB2	3:A:1029:GLU:OE1	2.11	0.51
3:A:1134:SER:O	3:A:1137:GLU:HG3	2.10	0.51
3:A:4415:ILE:HG23	3:A:4419:LEU:HD12	1.92	0.51
3:A:1218:LEU:HA	3:A:1221:ASN:HD21	1.76	0.51
3:A:4314:ILE:O	3:A:4318:LYS:HG2	2.11	0.51
3:A:4532:THR:HG22	3:A:4536:MET:HE3	1.93	0.51
3:B:60:GLU:OE2	3:B:106:VAL:HG22	2.11	0.51
3:B:1124:LEU:O	3:B:1128:ILE:HG12	2.10	0.51
3:B:1385:GLU:HG2	3:B:1430:PHE:HD2	1.75	0.51
3:B:1391:SER:HA	3:B:1394:ARG:NE	2.22	0.51
3:A:802:GLU:HG2	3:A:803:THR:HG23	1.91	0.51
3:A:1605:ASP:HA	3:A:1608:ASN:HD21	1.76	0.51
3:A:2356:ILE:HD12	3:A:2379:LEU:HD11	1.93	0.51
3:A:4509:LEU:HD13	3:A:4561:GLN:OE1	2.10	0.51
3:B:3278:ALA:O	3:B:3282:ILE:HG22	2.11	0.51
2:E:30:THR:HA	2:E:33:LEU:HB2	1.93	0.51
3:A:138:THR:OG1	3:A:142:ARG:NH2	2.44	0.51
3:A:790:MET:HB3	3:A:858:LEU:HD21	1.92	0.51
3:A:1558:ASN:O	3:A:1561:VAL:HB	2.11	0.51
3:A:1924:LEU:HD12	3:A:1925:GLN:H	1.76	0.51
3:A:4517:LYS:HA	3:A:4522:ARG:HH22	1.74	0.51
3:B:1134:SER:O	3:B:1137:GLU:HG3	2.11	0.51
3:B:1158:LEU:HB3	3:B:1298:LEU:HD21	1.93	0.51
3:B:1538:MET:HE3	3:B:1598:HIS:HB3	1.91	0.51
3:A:2352:MET:HE1	3:A:2403:LEU:HD13	1.93	0.51
3:A:2496:ILE:O	3:A:2500:ARG:HG2	2.11	0.51
3:A:3007:THR:HA	3:A:3010:LEU:HD13	1.93	0.51
3:A:4353:LEU:HD23	3:A:4440:ILE:HB	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:1247:TRP:HA	3:B:1251:PHE:HB2	1.93	0.51
3:B:1592:ILE:O	3:B:1596:THR:HG23	2.11	0.51
3:B:4476:ALA:HA	3:B:4479:MET:HE1	1.93	0.51
3:B:4642:CYS:HB2	3:B:4687:ILE:HD11	1.92	0.51
3:B:4683:LEU:HD11	3:B:4739:LEU:HD22	1.93	0.51
3:A:1608:ASN:OD1	3:A:1609:ALA:N	2.44	0.51
3:B:1218:LEU:HA	3:B:1221:ASN:HD21	1.75	0.51
3:B:1663:THR:O	3:B:1667:THR:HG23	2.11	0.51
3:B:1861:PRO:HB3	3:B:2242:TYR:CZ	2.45	0.51
3:B:3190:TRP:O	3:B:3194:LEU:HB3	2.10	0.51
2:F:59:ASP:N	2:F:59:ASP:OD1	2.40	0.50
3:B:103:ALA:O	3:B:107:LEU:HG	2.11	0.50
3:B:1896:ARG:NH1	3:B:2213:ASP:OD2	2.43	0.50
3:B:3162:GLU:OE1	3:B:3163:MET:HE2	2.11	0.50
3:B:4415:ILE:HG23	3:B:4419:LEU:HD12	1.91	0.50
3:A:3332:VAL:HG11	3:A:3434:HIS:NE2	2.26	0.50
3:A:3934:ARG:HH21	3:A:3981:LYS:HD2	1.75	0.50
3:A:4158:ARG:NH2	1:C:322:GLU:OE2	2.38	0.50
3:B:49:LEU:O	3:B:53:VAL:HG23	2.12	0.50
3:B:2496:ILE:O	3:B:2500:ARG:HG2	2.11	0.50
3:B:3773:GLU:OE1	3:B:3794:ARG:NH2	2.44	0.50
2:E:17:PHE:HE1	2:E:28:ILE:HG12	1.76	0.50
2:F:116:LYS:HZ2	3:B:4077:ILE:HG12	1.76	0.50
3:A:2698:LYS:O	3:A:2702:ILE:HG12	2.11	0.50
3:A:4683:LEU:HD11	3:A:4739:LEU:HD22	1.93	0.50
3:B:30:GLU:CD	3:B:30:GLU:H	2.20	0.50
3:B:1888:LEU:HD12	3:B:1893:VAL:HB	1.91	0.50
3:B:3101:VAL:HG11	3:B:3164:VAL:HG21	1.92	0.50
3:B:4383:MET:HE3	3:B:4408:LEU:HD12	1.94	0.50
1:D:85:LYS:HB3	1:D:88:TYR:HE2	1.73	0.50
3:A:525:ILE:HD13	3:A:530:LEU:HD13	1.94	0.50
3:A:3788:THR:O	3:A:3791:SER:OG	2.23	0.50
3:B:1384:LEU:O	3:B:1387:GLN:NE2	2.35	0.50
3:B:2245:ASN:ND2	3:B:2248:ASN:OD1	2.45	0.50
3:B:2316:GLN:O	3:B:2320:ARG:HG3	2.11	0.50
3:B:2320:ARG:HH21	3:B:2328:VAL:HG22	1.75	0.50
2:E:116:LYS:HZ2	3:A:4077:ILE:HG23	1.76	0.50
3:A:317:VAL:O	3:A:325:ARG:NH2	2.25	0.50
3:A:1411:MET:HB3	3:A:1431:PHE:CZ	2.46	0.50
3:A:2621:PHE:O	3:A:2625:LEU:HG	2.12	0.50
3:B:2990:ASN:OD1	3:B:2990:ASN:N	2.39	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:131:LEU:HB2	3:A:142:ARG:HG2	1.94	0.50
3:A:2118:VAL:HG21	3:A:2174:PRO:HB3	1.93	0.50
3:A:3230:LEU:HD23	3:A:3296:LYS:NZ	2.26	0.50
3:A:4383:MET:HE3	3:A:4408:LEU:HD12	1.94	0.50
3:B:1428:LEU:HB3	3:B:1491:LEU:HD13	1.94	0.50
3:B:1534:PHE:HA	3:B:1537:LEU:HG	1.94	0.50
3:B:2540:HIS:HA	3:B:2543:LYS:HZ2	1.77	0.50
3:B:3136:MET:HA	3:B:3136:MET:HE3	1.93	0.50
3:B:4593:GLN:HA	3:B:4596:MET:SD	2.52	0.50
3:A:202:ASN:HB2	3:A:203:PRO:HA	1.93	0.50
3:A:1090:VAL:HG21	3:A:1131:VAL:HG23	1.93	0.50
3:A:1191:SER:H	3:A:1194:LYS:HE2	1.77	0.50
3:A:1247:TRP:HA	3:A:1251:PHE:HB2	1.93	0.50
3:A:3032:LEU:HD23	3:A:3052:HIS:HD2	1.77	0.50
1:C:46:HIS:HA	1:C:50:HIS:CE1	2.46	0.50
3:B:62:GLU:OE1	3:B:66:HIS:NE2	2.44	0.50
3:B:2529:LEU:HG	3:B:2539:TYR:CD1	2.47	0.50
3:B:2580:ILE:HG22	3:B:2588:LEU:HB2	1.94	0.50
3:B:2621:PHE:O	3:B:2625:LEU:HG	2.11	0.50
3:B:4353:LEU:HD23	3:B:4440:ILE:HB	1.93	0.50
2:F:34:GLY:HA3	2:F:49:LEU:HD11	1.94	0.50
2:F:124:GLU:HG3	2:F:128:GLU:OE2	2.12	0.50
3:A:404:GLN:HG2	3:B:396:ARG:HH21	1.76	0.50
3:A:2414:VAL:HG11	1:C:63:LEU:HD11	1.94	0.50
3:B:78:VAL:HG11	3:B:110:PHE:HE1	1.77	0.50
3:B:283:PHE:O	3:B:338:TYR:OH	2.17	0.50
3:B:1160:PRO:O	3:B:1164:GLN:HG2	2.12	0.50
3:B:1924:LEU:HD12	3:B:1925:GLN:N	2.26	0.50
3:B:4267:LEU:HD11	3:B:4316:THR:HG21	1.92	0.50
3:B:4352:THR:N	3:B:4438:MET:O	2.35	0.50
3:A:2982:LEU:HB3	3:A:3027:GLN:NE2	2.27	0.50
3:B:1090:VAL:HG21	3:B:1131:VAL:HG23	1.93	0.50
3:B:1359:TYR:CE2	3:B:1405:GLY:HA2	2.47	0.50
3:B:1487:GLU:O	3:B:1491:LEU:HG	2.12	0.50
3:B:1604:ALA:HA	3:B:1607:THR:HG22	1.94	0.50
3:B:2313:ASN:O	3:B:2317:ILE:HG13	2.12	0.50
3:B:2368:ILE:HG23	3:B:2377:LEU:HD11	1.92	0.50
3:A:1309:GLN:HG3	3:A:1312:ARG:HH21	1.77	0.49
3:A:4533:LEU:HD23	3:A:4587:LEU:HD11	1.94	0.49
3:B:1924:LEU:HD21	3:B:1942:LEU:HD13	1.93	0.49
3:B:3332:VAL:HG11	3:B:3434:HIS:NE2	2.26	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:102:SER:N	2:F:105:GLU:OE1	2.45	0.49
3:A:3003:ILE:HA	3:A:3006:LEU:HB2	1.94	0.49
3:B:802:GLU:HG2	3:B:803:THR:HG23	1.93	0.49
3:B:1368:PRO:HG3	3:B:1418:ASN:HB3	1.93	0.49
2:E:5:LEU:HD21	2:E:13:PHE:HE2	1.76	0.49
2:E:103:ALA:O	2:E:107:ARG:HG2	2.12	0.49
2:F:46:GLU:OE1	2:F:46:GLU:HA	2.13	0.49
3:A:863:ASP:OD1	3:A:1008:ARG:NH2	2.45	0.49
3:B:1850:LYS:NZ	3:B:2194:PRO:O	2.45	0.49
3:B:1902:LEU:HD21	3:B:1967:LEU:HB2	1.93	0.49
3:B:3144:TYR:O	3:B:3148:HIS:ND1	2.37	0.49
3:B:3513:TYR:CZ	3:B:3525:TYR:HB3	2.47	0.49
1:D:312:GLU:HG3	1:D:316:ARG:HD2	1.93	0.49
2:F:35:THR:HA	2:F:38:ARG:HB3	1.94	0.49
3:A:3976:THR:HA	3:A:4019:ILE:HD11	1.94	0.49
3:B:1077:THR:O	3:B:1082:SER:N	2.45	0.49
3:B:1201:VAL:HG12	3:B:1202:LEU:HD22	1.93	0.49
2:E:38:ARG:HH12	3:A:4160:GLN:CG	2.25	0.49
3:A:532:ASN:O	3:A:536:THR:OG1	2.27	0.49
3:A:3773:GLU:OE1	3:A:3794:ARG:NH2	2.45	0.49
3:B:37:LEU:O	3:B:40:SER:OG	2.25	0.49
3:A:1902:LEU:HD21	3:A:1967:LEU:HB2	1.94	0.49
3:A:3225:ARG:HH21	3:A:3286:ARG:CZ	2.24	0.49
3:B:2702:ILE:HA	3:B:3005:MET:SD	2.53	0.49
3:B:4245:LEU:HB3	3:B:4294:MET:HE1	1.94	0.49
3:A:152:THR:O	3:A:156:LYS:HG2	2.13	0.49
3:A:953:CYS:HA	3:A:956:LEU:HB2	1.95	0.49
3:A:1537:LEU:HB3	3:A:1541:MET:HE1	1.95	0.49
3:A:1604:ALA:HA	3:A:1607:THR:HG22	1.95	0.49
3:A:2098:ASP:O	3:A:2130:LYS:NZ	2.46	0.49
3:A:2974:ARG:HB3	3:A:3006:LEU:HD13	1.93	0.49
3:B:678:LEU:HD12	3:B:683:MET:HE2	1.93	0.49
3:B:882:HIS:ND1	3:B:907:LEU:HD22	2.28	0.49
3:B:1309:GLN:HG3	3:B:1312:ARG:NH2	2.28	0.49
3:B:3188:HIS:HA	3:B:3191:PHE:CD2	2.48	0.49
3:B:3225:ARG:HH21	3:B:3286:ARG:NE	2.11	0.49
3:A:1564:LEU:O	3:A:1568:LYS:N	2.41	0.49
3:A:1592:ILE:O	3:A:1596:THR:HG23	2.12	0.49
3:A:2474:VAL:HG23	3:A:2475:LEU:HD12	1.94	0.49
3:A:2991:VAL:O	3:A:2995:ARG:HD3	2.12	0.49
3:A:3095:VAL:HB	3:A:3190:TRP:CZ2	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:4492:LEU:HD12	3:A:4539:THR:HG21	1.95	0.49
1:C:85:LYS:HB3	1:C:88:TYR:HE2	1.77	0.49
3:B:1308:PRO:HG2	3:B:1309:GLN:NE2	2.28	0.49
3:B:1310:VAL:HA	3:B:1313:THR:HG22	1.94	0.49
3:B:2540:HIS:HA	3:B:2543:LYS:HG2	1.95	0.49
3:B:2969:ARG:HG2	3:B:2970:LEU:N	2.27	0.49
3:B:3074:ILE:HG22	3:B:3076:GLU:H	1.76	0.49
3:B:4466:GLU:HG2	3:B:4469:GLU:HG2	1.95	0.49
2:E:145:MET:HE3	3:A:4105:TRP:CD1	2.48	0.49
3:A:541:SER:OG	3:A:647:PHE:O	2.31	0.49
3:A:2245:ASN:HB3	3:A:2248:ASN:HB2	1.95	0.49
3:A:3136:MET:HA	3:A:3136:MET:HE3	1.94	0.49
3:A:3513:TYR:CZ	3:A:3525:TYR:HB3	2.48	0.49
3:A:4618:ARG:O	3:A:4621:PRO:HD2	2.13	0.49
3:B:78:VAL:HG11	3:B:110:PHE:CE1	2.47	0.49
3:B:1484:VAL:HG12	3:B:1488:ASN:HD21	1.78	0.49
3:B:2626:VAL:HG21	3:B:2681:ILE:HD12	1.95	0.49
2:E:59:ASP:OD2	2:E:61:ASN:ND2	2.46	0.49
2:F:30:THR:HG22	2:F:33:LEU:HD12	1.95	0.49
2:F:145:MET:HE3	3:B:4105:TRP:CD1	2.48	0.49
3:A:2971:HIS:O	3:A:2975:LEU:HG	2.13	0.49
3:A:3023:ASN:O	3:A:3026:SER:OG	2.25	0.49
3:A:4466:GLU:HG2	3:A:4469:GLU:HG2	1.94	0.49
3:A:4691:ALA:O	3:A:4695:MET:HG2	2.12	0.49
3:B:56:VAL:HG12	3:B:106:VAL:HG11	1.94	0.49
3:B:640:SER:OG	3:B:641:ARG:N	2.46	0.49
3:B:1138:HIS:HA	3:B:1141:LYS:HE3	1.95	0.49
3:B:2245:ASN:HB3	3:B:2248:ASN:HB2	1.95	0.49
3:B:4653:GLY:O	3:B:4656:LYS:HG3	2.13	0.49
3:A:640:SER:OG	3:A:641:ARG:N	2.46	0.48
3:A:1309:GLN:CD	3:A:1309:GLN:H	2.20	0.48
3:A:1518:LEU:HD23	3:A:1541:MET:HB3	1.94	0.48
3:A:2014:GLU:OE1	3:A:2014:GLU:N	2.45	0.48
3:A:3041:LYS:HD3	3:A:3041:LYS:N	2.28	0.48
3:A:3243:LEU:HD11	3:A:3271:SER:HB2	1.95	0.48
3:A:3429:HIS:HA	3:A:3471:LEU:HD11	1.95	0.48
3:A:874:VAL:HG13	3:B:189:VAL:HG11	1.96	0.48
3:A:1398:GLU:HA	3:A:1398:GLU:OE2	2.12	0.48
3:A:2483:LEU:HB2	3:A:2524:GLN:NE2	2.28	0.48
3:B:144:ASP:OD2	3:B:146:THR:OG1	2.28	0.48
3:B:4492:LEU:HA	3:B:4495:ILE:HD12	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:30:GLU:CD	3:A:30:GLU:H	2.21	0.48
3:A:283:PHE:O	3:A:338:TYR:OH	2.18	0.48
3:A:959:LYS:NZ	3:A:960:LEU:H	2.10	0.48
3:A:1310:VAL:HA	3:A:1313:THR:HG22	1.96	0.48
3:A:1426:ARG:O	3:A:1426:ARG:HD3	2.12	0.48
3:A:1551:ALA:HA	3:A:1554:LEU:HD23	1.94	0.48
3:A:2111:VAL:HG12	3:A:2165:CYS:HB3	1.95	0.48
3:A:2332:LYS:HE3	1:C:38:GLU:HG2	1.94	0.48
3:B:127:LYS:O	3:B:130:ILE:HG22	2.13	0.48
3:B:685:THR:O	3:B:689:ILE:HG12	2.13	0.48
3:B:1859:MET:HG3	3:B:2242:TYR:HD2	1.78	0.48
3:B:4444:MET:HE1	3:B:4447:LEU:HB2	1.94	0.48
3:A:732:LEU:HD21	3:A:760:LEU:HD13	1.94	0.48
3:A:1859:MET:HG3	3:A:2242:TYR:HD2	1.77	0.48
3:A:2310:GLN:NE2	1:C:54:CYS:HB2	2.26	0.48
3:B:1804:ASN:HA	3:B:2494:PRO:HD3	1.95	0.48
3:B:2316:GLN:HB3	3:B:2320:ARG:NH1	2.28	0.48
3:B:3095:VAL:HB	3:B:3190:TRP:CZ2	2.47	0.48
3:B:4618:ARG:O	3:B:4621:PRO:HD2	2.13	0.48
3:A:2622:ILE:HD13	3:A:2622:ILE:N	2.29	0.48
3:A:2660:LEU:O	3:A:2664:ILE:HG12	2.14	0.48
3:B:525:ILE:HD13	3:B:530:LEU:HD13	1.94	0.48
3:B:2243:MET:HE3	3:B:2243:MET:C	2.37	0.48
3:B:3052:HIS:O	3:B:3055:VAL:HG12	2.14	0.48
3:B:3976:THR:HA	3:B:4019:ILE:HD11	1.95	0.48
3:A:70:TYR:CE1	3:A:161:PRO:HA	2.48	0.48
3:A:948:LEU:HD12	3:A:1012:ILE:HG22	1.95	0.48
3:A:4094:HIS:O	3:A:4098:THR:OG1	2.26	0.48
3:B:1398:GLU:OE2	3:B:1398:GLU:HA	2.14	0.48
3:B:2025:ILE:O	3:B:2036:THR:N	2.46	0.48
3:B:3225:ARG:HH21	3:B:3286:ARG:CZ	2.26	0.48
3:B:4139:GLN:HG3	3:B:4142:ARG:HH21	1.78	0.48
3:B:4509:LEU:HD12	3:B:4510:LYS:N	2.28	0.48
3:A:1811:VAL:HA	3:A:1814:MET:SD	2.54	0.48
3:A:3595:ASN:OD1	3:A:3639:ASN:HB2	2.13	0.48
1:C:114:ALA:HA	1:C:121:PRO:HA	1.96	0.48
3:B:269:TYR:HE2	3:B:302:LEU:HD11	1.79	0.48
3:B:868:GLN:OE1	3:B:871:LYS:NZ	2.47	0.48
3:B:1161:ALA:HA	3:B:1164:GLN:HE21	1.79	0.48
3:B:1853:GLU:OE2	3:B:2196:THR:HB	2.14	0.48
3:B:4564:SER:HA	3:B:4567:GLU:HG3	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:330:ARG:NE	3:B:4122:LYS:HZ2	2.11	0.48
3:A:2550:LYS:HD3	3:A:2551:ALA:N	2.29	0.48
3:A:4694:TYR:HB3	3:A:4695:MET:HE2	1.96	0.48
3:B:519:GLN:HA	3:B:522:GLN:HG2	1.96	0.48
3:B:3429:HIS:HA	3:B:3471:LEU:HD11	1.96	0.48
3:B:4166:LEU:O	3:B:4183:TYR:OH	2.27	0.48
3:A:299:PHE:HB3	3:A:373:ASP:OD1	2.14	0.48
3:A:396:ARG:HH21	3:B:404:GLN:HG2	1.77	0.48
3:A:3188:HIS:HA	3:A:3191:PHE:CD2	2.49	0.48
3:A:3225:ARG:HH21	3:A:3286:ARG:NE	2.11	0.48
3:B:154:MET:SD	3:B:158:ALA:HB2	2.54	0.48
3:B:910:GLY:HA2	3:B:934:CYS:H	1.78	0.48
3:B:1460:GLU:HG2	3:B:1463:ARG:HG2	1.95	0.48
3:B:4383:MET:HE3	3:B:4383:MET:HB2	1.79	0.48
1:D:51:PRO:HG2	1:D:81:PRO:O	2.14	0.48
3:A:2151:ILE:HG23	3:A:2199:ILE:HD12	1.94	0.48
3:A:3880:THR:O	3:A:3884:ILE:HG12	2.14	0.48
3:A:3966:SER:OG	3:B:3768:ASN:ND2	2.47	0.48
3:B:1191:SER:H	3:B:1194:LYS:HE2	1.79	0.48
3:B:1384:LEU:HA	3:B:1387:GLN:HG3	1.95	0.48
3:B:1428:LEU:HA	3:B:1431:PHE:HD2	1.79	0.48
3:B:3243:LEU:HD11	3:B:3271:SER:HB2	1.96	0.48
3:B:4617:LEU:HD13	3:B:4665:ILE:HG13	1.95	0.48
3:A:512:MET:HE3	3:A:512:MET:HB3	1.77	0.47
3:A:1218:LEU:HA	3:A:1221:ASN:ND2	2.28	0.47
3:A:2979:GLU:HA	3:A:2982:LEU:HD12	1.96	0.47
3:A:4139:GLN:HG3	3:A:4142:ARG:HH21	1.78	0.47
3:A:4467:GLU:HG2	3:A:4468:ASP:N	2.23	0.47
3:B:299:PHE:HB3	3:B:373:ASP:OD1	2.14	0.47
3:B:541:SER:OG	3:B:647:PHE:O	2.32	0.47
3:B:1159:LEU:HD21	3:B:1299:ILE:HD12	1.95	0.47
3:B:1411:MET:HB3	3:B:1431:PHE:HZ	1.76	0.47
3:B:2151:ILE:HG23	3:B:2199:ILE:HD12	1.95	0.47
3:B:3587:VAL:HG22	3:B:3647:PHE:HE1	1.79	0.47
3:B:3661:PRO:HB3	3:B:3685:HIS:CE1	2.49	0.47
3:B:4467:GLU:HG2	3:B:4468:ASP:N	2.22	0.47
3:A:685:THR:O	3:A:689:ILE:HG12	2.14	0.47
3:A:1309:GLN:HG3	3:A:1312:ARG:NH2	2.28	0.47
3:A:2010:GLY:O	3:A:2639:ASN:ND2	2.47	0.47
3:A:2321:LEU:HD22	3:A:2420:VAL:HG23	1.96	0.47
3:A:4059:TRP:CE3	1:C:323:LEU:HD21	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:152:THR:O	3:B:156:LYS:HG2	2.13	0.47
3:B:995:GLU:O	3:B:999:LEU:HD23	2.15	0.47
3:B:2356:ILE:HG22	3:B:2417:ILE:HA	1.95	0.47
3:B:3595:ASN:OD1	3:B:3639:ASN:HB2	2.13	0.47
2:E:124:GLU:HG3	2:E:128:GLU:OE2	2.14	0.47
2:E:146:MET:HE3	3:A:4101:TYR:HD1	1.79	0.47
3:A:154:MET:SD	3:A:158:ALA:HB2	2.55	0.47
3:A:849:ARG:NH1	3:A:979:GLN:O	2.47	0.47
3:A:1368:PRO:HG3	3:A:1418:ASN:HB3	1.96	0.47
3:A:2245:ASN:ND2	3:A:2248:ASN:OD1	2.47	0.47
3:B:1031:SER:H	3:B:1034:ASP:HB2	1.79	0.47
3:B:1064:LYS:HE3	3:B:1067:HIS:CE1	2.49	0.47
3:B:1218:LEU:HA	3:B:1221:ASN:ND2	2.29	0.47
3:B:2111:VAL:HG12	3:B:2165:CYS:HB3	1.97	0.47
3:B:2117:HIS:O	3:B:2120:GLN:NE2	2.48	0.47
3:B:2136:ILE:HA	3:B:2143:VAL:HA	1.97	0.47
3:B:2356:ILE:HD12	3:B:2379:LEU:HD11	1.95	0.47
1:D:64:TYR:CD1	3:B:2311:VAL:HG11	2.50	0.47
3:A:3933:THR:HG22	3:A:3939:ALA:HB1	1.96	0.47
3:B:4561:GLN:O	3:B:4565:ILE:HG23	2.14	0.47
3:B:1244:ILE:HA	3:B:1293:ARG:NH2	2.28	0.47
3:B:3003:ILE:HA	3:B:3006:LEU:HB2	1.96	0.47
3:B:4515:CYS:SG	3:B:4521:ASN:ND2	2.87	0.47
1:D:86:MET:SD	3:B:2310:GLN:HG3	2.54	0.47
3:A:680:GLU:OE1	3:A:680:GLU:N	2.30	0.47
3:A:2245:ASN:O	3:A:2249:THR:N	2.47	0.47
3:A:2678:ALA:O	3:A:2681:ILE:HG12	2.14	0.47
3:A:3912:TYR:OH	3:B:3959:TRP:NE1	2.33	0.47
3:B:356:GLN:HG2	3:B:427:THR:HG22	1.97	0.47
3:B:1919:GLY:O	3:B:1950:VAL:N	2.47	0.47
3:B:3063:MET:HE2	3:B:3063:MET:HA	1.97	0.47
3:B:3880:THR:O	3:B:3884:ILE:HG12	2.14	0.47
2:F:149:LYS:OXT	3:B:4111:ARG:NH2	2.46	0.47
3:A:78:VAL:HG11	3:A:110:PHE:CD2	2.49	0.47
3:A:125:SER:H	3:A:128:HIS:HD2	1.62	0.47
3:A:366:LYS:HG3	3:A:370:TYR:CE2	2.50	0.47
3:A:1676:TRP:HZ2	3:A:1708:LYS:HE2	1.80	0.47
3:A:1804:ASN:HA	3:A:2494:PRO:HD3	1.96	0.47
3:A:2136:ILE:HA	3:A:2143:VAL:HA	1.96	0.47
3:B:64:LEU:HD12	3:B:113:LEU:HD11	1.96	0.47
3:B:1020:ILE:O	3:B:1024:SER:CB	2.51	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:1412:MET:HE2	3:B:1463:ARG:HD2	1.96	0.47
3:B:1604:ALA:HB2	3:B:2484:GLU:OE1	2.15	0.47
3:B:2622:ILE:HD13	3:B:2622:ILE:N	2.28	0.47
3:B:2660:LEU:O	3:B:2664:ILE:HG12	2.14	0.47
3:B:2971:HIS:HA	3:B:2974:ARG:HD3	1.96	0.47
3:B:4035:LYS:HD2	3:B:4035:LYS:HA	1.62	0.47
3:A:1464:LEU:HD12	3:A:1465:GLN:N	2.29	0.47
3:A:1930:LEU:HB3	3:A:2219:HIS:CE1	2.50	0.47
3:A:2627:ASN:O	3:A:2631:LYS:HG2	2.14	0.47
3:A:2993:GLY:HA3	3:A:3153:PHE:HE2	1.80	0.47
3:A:4695:MET:HE2	3:A:4695:MET:N	2.30	0.47
1:C:27:CYS:HB3	1:C:30:TYR:CE1	2.49	0.47
3:B:953:CYS:HA	3:B:956:LEU:HB2	1.97	0.47
3:B:3933:THR:HG22	3:B:3939:ALA:HB1	1.96	0.47
3:B:4017:LEU:HD11	3:B:4132:VAL:HG11	1.97	0.47
2:F:12:GLU:OE1	2:F:40:LEU:HD22	2.15	0.47
3:A:274:GLN:OE1	3:A:274:GLN:HA	2.15	0.47
3:A:1901:VAL:HG21	3:A:2217:ILE:HD11	1.96	0.47
3:B:1085:TYR:O	3:B:1089:ILE:HG22	2.14	0.47
3:B:1924:LEU:HD12	3:B:1925:GLN:H	1.78	0.47
3:B:2118:VAL:HG21	3:B:2174:PRO:HB3	1.95	0.47
3:B:4638:PHE:HA	3:B:4658:PHE:CZ	2.50	0.47
3:A:1138:HIS:HA	3:A:1141:LYS:HE3	1.97	0.47
3:A:1850:LYS:NZ	3:A:2194:PRO:O	2.48	0.47
3:A:4771:LEU:HB3	3:A:4777:VAL:HG11	1.96	0.47
3:B:4771:LEU:HB3	3:B:4777:VAL:HG11	1.96	0.47
3:A:3768:ASN:ND2	3:B:3966:SER:OG	2.47	0.46
3:A:4492:LEU:HA	3:A:4495:ILE:HD12	1.97	0.46
3:B:1464:LEU:HD12	3:B:1465:GLN:N	2.31	0.46
3:B:3562:VAL:HG22	3:B:3641:MET:SD	2.55	0.46
1:D:37:TYR:CE1	1:D:52:MET:HG2	2.50	0.46
2:E:38:ARG:HD2	2:E:38:ARG:O	2.15	0.46
3:A:724:SER:OG	3:A:726:ASN:OD1	2.21	0.46
3:A:1023:LEU:HD21	3:A:1041:TRP:CZ3	2.50	0.46
3:A:1384:LEU:HD11	3:A:1430:PHE:HE2	1.80	0.46
3:A:2559:SER:OG	3:A:2628:HIS:NE2	2.35	0.46
3:A:4443:ARG:NH2	3:A:4453:GLU:OE1	2.46	0.46
3:A:4561:GLN:O	3:A:4565:ILE:HG23	2.14	0.46
3:B:83:HIS:O	3:B:87:THR:HG23	2.15	0.46
3:B:145:ARG:HH21	3:B:148:ILE:HD12	1.80	0.46
3:B:1608:ASN:OD1	3:B:1609:ALA:N	2.48	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:269:TYR:HE2	3:A:302:LEU:HD11	1.80	0.46
3:A:1000:GLN:HA	3:A:1270:LEU:HD13	1.97	0.46
3:A:1408:VAL:O	3:A:1412:MET:HG2	2.15	0.46
3:A:1423:PHE:O	3:A:1427:VAL:HG12	2.16	0.46
3:A:1468:LEU:O	3:A:1472:THR:OG1	2.20	0.46
3:A:1853:GLU:OE2	3:A:2196:THR:HB	2.15	0.46
3:A:3224:TYR:O	3:A:3228:ARG:HG3	2.14	0.46
3:B:680:GLU:OE1	3:B:680:GLU:N	2.24	0.46
3:B:823:GLU:O	3:B:827:ARG:HG2	2.15	0.46
3:B:866:LEU:HD13	3:B:1013:LEU:HD21	1.97	0.46
3:B:1377:LEU:HA	3:B:1380:CYS:SG	2.56	0.46
3:B:1498:TYR:HD1	3:B:1501:ARG:HH12	1.62	0.46
3:B:4503:HIS:O	3:B:4507:VAL:HG13	2.15	0.46
3:A:86:THR:HG22	3:A:136:LEU:HD13	1.97	0.46
3:A:1308:PRO:HG2	3:A:1309:GLN:NE2	2.31	0.46
3:A:1600:MET:SD	3:A:2481:SER:HB2	2.55	0.46
3:A:1610:LEU:HD12	3:A:1610:LEU:O	2.14	0.46
3:A:2298:LEU:HD13	3:A:2347:MET:HE2	1.97	0.46
3:A:2320:ARG:NH1	3:A:2328:VAL:HG22	2.30	0.46
3:A:2480:VAL:HG13	3:A:2524:GLN:OE1	2.15	0.46
3:A:4535:VAL:O	3:A:4539:THR:HG23	2.15	0.46
3:B:1318:LEU:H	3:B:1318:LEU:HD12	1.81	0.46
3:B:4310:MET:HE3	3:B:4310:MET:HA	1.97	0.46
3:A:1241:PHE:HE2	3:A:1269:HIS:CD2	2.34	0.46
3:A:1318:LEU:HD12	3:A:1318:LEU:H	1.81	0.46
3:A:1604:ALA:HB2	3:A:2484:GLU:OE1	2.15	0.46
3:A:3017:ASP:O	3:A:3021:LEU:HG	2.16	0.46
3:A:4738:VAL:O	3:A:4742:THR:OG1	2.34	0.46
3:B:70:TYR:CE1	3:B:161:PRO:HA	2.50	0.46
3:B:366:LYS:HG3	3:B:370:TYR:CE2	2.51	0.46
3:B:948:LEU:HD12	3:B:1012:ILE:HG22	1.97	0.46
3:B:1119:GLN:HA	3:B:1122:TYR:CE2	2.50	0.46
3:B:4512:PHE:HA	3:B:4515:CYS:SG	2.56	0.46
1:D:316:ARG:O	1:D:320:VAL:HG12	2.15	0.46
3:A:201:PHE:CE2	3:A:203:PRO:HB3	2.50	0.46
3:A:356:GLN:HG2	3:A:427:THR:HG22	1.98	0.46
3:A:995:GLU:O	3:A:999:LEU:HD23	2.15	0.46
3:A:3587:VAL:HG22	3:A:3647:PHE:HE1	1.80	0.46
3:A:3661:PRO:HB3	3:A:3685:HIS:CE1	2.50	0.46
3:A:4245:LEU:HB3	3:A:4294:MET:HE1	1.97	0.46
3:B:1460:GLU:OE1	3:B:1463:ARG:NE	2.47	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:1518:LEU:HD23	3:B:1541:MET:HB3	1.97	0.46
3:B:1554:LEU:HD21	3:B:1795:CYS:HB2	1.98	0.46
3:B:1605:ASP:HA	3:B:1608:ASN:HD21	1.80	0.46
3:B:2698:LYS:HE3	3:B:2698:LYS:HB3	1.74	0.46
3:B:2981:LEU:O	3:B:2985:LEU:HD23	2.15	0.46
3:B:3000:MET:HA	3:B:3003:ILE:HG13	1.97	0.46
1:D:56:LEU:HD21	3:B:2311:VAL:HG22	1.97	0.46
3:A:1296:GLY:O	3:A:1299:ILE:HG22	2.15	0.46
3:A:1412:MET:HG3	3:A:1463:ARG:NH2	2.31	0.46
3:A:1499:ILE:HG23	3:A:1506:VAL:HG21	1.97	0.46
3:A:3063:MET:HA	3:A:3063:MET:HE2	1.97	0.46
3:A:3213:LEU:O	3:A:3217:ILE:HG22	2.16	0.46
3:A:4017:LEU:HD11	3:A:4132:VAL:HG11	1.98	0.46
3:B:1000:GLN:HA	3:B:1270:LEU:HD13	1.96	0.46
3:B:1069:SER:O	3:B:1073:GLU:HG2	2.16	0.46
3:B:1513:VAL:O	3:B:1517:THR:HG23	2.16	0.46
3:B:1818:LEU:O	3:B:1822:ILE:HG12	2.15	0.46
3:B:2098:ASP:O	3:B:2130:LYS:NZ	2.47	0.46
2:E:17:PHE:CD2	2:E:66:PHE:HD2	2.34	0.46
2:F:103:ALA:O	2:F:107:ARG:HG2	2.16	0.46
3:A:127:LYS:O	3:A:130:ILE:HG22	2.16	0.46
3:A:145:ARG:HH21	3:A:148:ILE:HD12	1.81	0.46
3:A:1527:ALA:HB2	3:A:1566:ARG:HH12	1.81	0.46
3:A:1660:LYS:O	3:A:1730:ARG:NH2	2.49	0.46
3:A:2054:ASN:HB3	3:A:2060:ILE:HD11	1.98	0.46
1:C:293:LEU:HA	1:C:296:LEU:HD23	1.98	0.46
3:B:75:SER:O	3:B:78:VAL:HG12	2.16	0.46
3:B:2321:LEU:HD13	3:B:2420:VAL:HB	1.97	0.46
3:B:2321:LEU:HD22	3:B:2420:VAL:HG23	1.97	0.46
3:B:4535:VAL:O	3:B:4539:THR:HG23	2.15	0.46
1:D:131:HIS:O	1:D:136:HIS:HB2	2.16	0.46
2:E:73:MET:SD	2:E:73:MET:N	2.88	0.46
2:F:20:PHE:CE2	2:F:36:VAL:HA	2.51	0.46
3:A:1434:LEU:O	3:A:1438:THR:OG1	2.27	0.46
3:A:2521:VAL:HA	3:A:2524:GLN:HG2	1.98	0.46
3:A:3052:HIS:O	3:A:3055:VAL:HG12	2.16	0.46
3:B:274:GLN:OE1	3:B:274:GLN:HA	2.15	0.46
3:B:2379:LEU:HD21	3:B:2385:PHE:HE1	1.81	0.46
3:B:2395:LEU:HD23	3:B:2432:TRP:CZ3	2.51	0.46
3:B:2542:HIS:HA	3:B:2545:GLN:OE1	2.16	0.46
3:B:2982:LEU:HB3	3:B:3027:GLN:NE2	2.31	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:149:LYS:OXT	3:A:4111:ARG:NH2	2.47	0.46
3:A:296:ARG:HG2	3:A:297:ASN:H	1.81	0.46
3:A:765:GLN:NE2	3:A:817:ILE:HG23	2.31	0.46
3:A:1119:GLN:HA	3:A:1122:TYR:CE2	2.51	0.46
3:A:1677:TYR:OH	3:A:2293:GLU:OE2	2.22	0.46
3:A:1819:MET:HA	3:A:1822:ILE:HB	1.98	0.46
3:A:2626:VAL:HG21	3:A:2681:ILE:HD12	1.97	0.46
3:B:1538:MET:O	3:B:1542:ALA:CB	2.65	0.46
3:B:2483:LEU:HB2	3:B:2524:GLN:NE2	2.31	0.46
3:B:2521:VAL:HA	3:B:2524:GLN:HG2	1.97	0.46
3:B:3213:LEU:O	3:B:3217:ILE:HG22	2.16	0.46
3:B:3261:GLY:N	3:B:3837:GLU:OE2	2.42	0.46
3:B:3985:CYS:HB3	3:B:3988:LEU:HD12	1.98	0.46
1:D:64:TYR:HA	3:B:2329:ALA:HB3	1.98	0.45
2:E:56:VAL:HG21	2:E:72:MET:HE2	1.98	0.45
3:A:86:THR:OG1	3:A:140:CYS:SG	2.65	0.45
3:A:144:ASP:OD2	3:A:146:THR:OG1	2.31	0.45
3:A:1513:VAL:O	3:A:1517:THR:HG23	2.16	0.45
3:A:2379:LEU:HD21	3:A:2385:PHE:HE1	1.81	0.45
3:B:447:ILE:O	3:B:450:ARG:HG3	2.16	0.45
3:B:1676:TRP:HZ2	3:B:1708:LYS:HE2	1.80	0.45
3:B:2972:MET:O	3:B:2976:MET:HG2	2.15	0.45
3:B:2974:ARG:HB3	3:B:3006:LEU:HD13	1.98	0.45
2:E:107:ARG:HD3	2:E:122:VAL:HG21	1.98	0.45
2:F:34:GLY:O	2:F:38:ARG:CB	2.65	0.45
3:A:2115:TYR:HB2	3:A:2122:LEU:HD13	1.97	0.45
3:A:3544:TYR:O	3:A:3545:ILE:HD13	2.16	0.45
3:A:4617:LEU:HD13	3:A:4665:ILE:HG13	1.97	0.45
3:B:115:LEU:HD23	3:B:129:LEU:HD12	1.98	0.45
3:B:317:VAL:O	3:B:325:ARG:NH2	2.25	0.45
3:B:1660:LYS:O	3:B:1730:ARG:NH2	2.49	0.45
3:B:4506:THR:HG22	3:B:4510:LYS:HZ1	1.81	0.45
3:B:4557:ALA:O	3:B:4560:GLU:HG3	2.16	0.45
3:A:447:ILE:O	3:A:450:ARG:HG3	2.16	0.45
3:A:1919:GLY:O	3:A:1950:VAL:N	2.47	0.45
3:A:1960:ASN:HD22	3:A:2007:TRP:CG	2.33	0.45
3:A:2210:LYS:N	3:A:2235:GLU:OE1	2.49	0.45
3:A:2320:ARG:CZ	3:A:2328:VAL:HG22	2.47	0.45
3:A:2395:LEU:HD23	3:A:2432:TRP:CZ3	2.51	0.45
3:A:3727:GLU:OE1	3:A:3727:GLU:N	2.50	0.45
3:A:4564:SER:HA	3:A:4567:GLU:HG3	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:125:THR:HG21	1:C:131:HIS:HB2	1.99	0.45
3:B:3021:LEU:O	3:B:3024:LEU:HG	2.16	0.45
3:B:3224:TYR:O	3:B:3228:ARG:HG3	2.16	0.45
3:B:3312:ASP:OD1	3:B:3314:GLY:N	2.48	0.45
3:A:45:GLU:HG3	3:A:47:LYS:H	1.81	0.45
3:A:83:HIS:O	3:A:87:THR:HG23	2.17	0.45
3:A:1596:THR:O	3:A:1597:CYS:C	2.59	0.45
3:A:2219:HIS:NE2	3:A:2229:THR:OG1	2.48	0.45
3:A:3307:VAL:O	3:A:3311:VAL:HG23	2.16	0.45
3:A:3618:VAL:HG21	3:A:3629:ILE:HG12	1.98	0.45
3:A:4591:LYS:HZ3	3:A:4631:MET:HG2	1.81	0.45
3:A:4648:ASP:OD2	3:A:4694:TYR:OH	2.34	0.45
3:B:1214:LEU:HD13	3:B:1354:LEU:HD12	1.98	0.45
3:B:3618:VAL:HG21	3:B:3629:ILE:HG12	1.98	0.45
1:D:112:ILE:HB	1:D:136:HIS:CE1	2.52	0.45
1:D:114:ALA:HA	1:D:121:PRO:HA	1.99	0.45
3:A:124:VAL:HG12	3:A:128:HIS:HB2	1.97	0.45
3:A:694:ASP:OD1	3:A:695:LYS:N	2.49	0.45
3:A:2320:ARG:HA	3:A:2326:MET:SD	2.57	0.45
3:A:3273:MET:HE3	3:A:3633:LEU:HG	1.99	0.45
3:A:3728:ASN:ND2	3:A:3730:GLU:OE2	2.49	0.45
3:B:125:SER:N	3:B:128:HIS:HD2	2.15	0.45
3:B:293:THR:O	3:B:297:ASN:ND2	2.49	0.45
3:B:296:ARG:HG2	3:B:297:ASN:H	1.81	0.45
3:B:1960:ASN:HD22	3:B:2007:TRP:CG	2.34	0.45
3:B:2538:ALA:O	3:B:2542:HIS:ND1	2.50	0.45
3:B:2550:LYS:O	3:B:2553:GLN:HG3	2.16	0.45
1:D:324:LEU:HD11	3:B:4152:LEU:HD11	1.98	0.45
3:A:293:THR:O	3:A:297:ASN:ND2	2.49	0.45
3:A:680:GLU:H	3:A:680:GLU:CD	2.21	0.45
3:A:2550:LYS:O	3:A:2553:GLN:HG3	2.16	0.45
3:A:2636:LYS:HB2	3:A:2649:GLY:HA3	1.99	0.45
3:A:4108:PHE:CD1	3:A:4108:PHE:C	2.94	0.45
3:B:125:SER:H	3:B:128:HIS:HD2	1.65	0.45
3:B:201:PHE:CE2	3:B:203:PRO:HB3	2.52	0.45
3:B:201:PHE:CZ	3:B:203:PRO:HB3	2.51	0.45
3:B:336:CYS:SG	3:B:381:CYS:HA	2.57	0.45
3:B:3728:ASN:ND2	3:B:3730:GLU:OE2	2.49	0.45
3:B:4063:ASP:OD1	3:B:4065:LYS:NZ	2.49	0.45
3:B:4695:MET:HE2	3:B:4695:MET:N	2.32	0.45
3:A:185:ARG:O	3:A:188:GLU:HG3	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:2228:THR:HB	3:A:2244:ALA:HB3	1.99	0.45
3:A:2317:ILE:HG12	3:A:2320:ARG:NH2	2.30	0.45
3:A:3018:LYS:HA	3:A:3021:LEU:CD1	2.47	0.45
1:C:316:ARG:O	1:C:320:VAL:HG12	2.17	0.45
3:B:3210:VAL:HA	3:B:3213:LEU:HG	1.99	0.45
3:B:3736:VAL:O	3:B:3739:ILE:HG22	2.17	0.45
3:B:4103:TRP:HZ3	3:B:4104:ARG:HH21	1.64	0.45
3:B:4443:ARG:NH2	3:B:4453:GLU:OE1	2.46	0.45
3:A:2037:PHE:CE2	3:A:2075:MET:HB2	2.52	0.45
3:A:3312:ASP:OD1	3:A:3314:GLY:N	2.45	0.45
3:A:3881:GLU:HG2	3:A:3921:MET:SD	2.57	0.45
3:B:1241:PHE:HE2	3:B:1269:HIS:CD2	2.34	0.45
3:B:1441:SER:O	3:B:1441:SER:OG	2.31	0.45
3:B:1596:THR:O	3:B:1597:CYS:C	2.59	0.45
3:B:1685:VAL:HG21	3:B:2381:ARG:HD2	1.98	0.45
3:B:1814:MET:HA	3:B:1817:PHE:CE1	2.51	0.45
3:B:1845:LEU:HD21	3:B:2119:LEU:HD22	1.98	0.45
3:B:2054:ASN:HB3	3:B:2060:ILE:HD11	1.98	0.45
3:B:2187:PRO:HG2	3:B:2202:ILE:HB	1.98	0.45
3:B:2210:LYS:N	3:B:2235:GLU:OE1	2.50	0.45
3:B:2589:VAL:HG22	3:B:2667:TYR:CD1	2.51	0.45
3:B:3293:PHE:C	3:B:3293:PHE:CD1	2.95	0.45
3:B:4259:LYS:O	3:B:4263:VAL:HG13	2.17	0.45
3:A:1254:ASP:C	3:A:1254:ASP:OD1	2.60	0.45
3:A:2543:LYS:C	3:A:2543:LYS:HD3	2.42	0.45
3:B:131:LEU:HB2	3:B:142:ARG:HG2	1.99	0.45
3:B:765:GLN:NE2	3:B:817:ILE:HG23	2.31	0.45
3:B:1023:LEU:HD21	3:B:1041:TRP:CZ3	2.50	0.45
3:B:1334:LEU:HA	3:B:1334:LEU:HD23	1.80	0.45
3:B:1677:TYR:OH	3:B:2293:GLU:OE2	2.22	0.45
3:B:1692:THR:OG1	3:B:2293:GLU:OE2	2.24	0.45
3:B:3050:GLU:O	3:B:3054:VAL:HG22	2.17	0.45
3:B:3233:LEU:HB3	3:B:3293:PHE:CE2	2.52	0.45
3:B:4327:THR:OG1	3:B:4328:PRO:HD3	2.16	0.45
3:B:4648:ASP:OD2	3:B:4694:TYR:OH	2.34	0.45
3:A:849:ARG:NH2	3:A:982:THR:O	2.47	0.45
3:A:1059:ILE:HD13	3:A:1059:ILE:HA	1.88	0.45
3:A:1538:MET:HA	3:A:1541:MET:SD	2.57	0.45
3:B:683:MET:HE3	3:B:727:LEU:HD12	1.99	0.45
3:B:1381:LEU:O	3:B:1384:LEU:HD12	2.16	0.45
3:B:2529:LEU:HG	3:B:2539:TYR:CE1	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:2678:ALA:O	3:B:2681:ILE:HG12	2.16	0.45
3:B:3544:TYR:O	3:B:3545:ILE:HD13	2.17	0.45
3:A:125:SER:N	3:A:128:HIS:HD2	2.15	0.44
3:A:128:HIS:O	3:A:131:LEU:HD12	2.17	0.44
3:A:910:GLY:HA2	3:A:934:CYS:H	1.82	0.44
3:A:1336:ARG:HE	3:A:1337:ILE:HD11	1.82	0.44
3:A:1924:LEU:HD11	3:A:1942:LEU:HB3	1.99	0.44
3:A:2692:ALA:O	3:A:2696:SER:OG	2.26	0.44
3:B:2115:TYR:HA	3:B:2122:LEU:HA	1.99	0.44
3:A:336:CYS:SG	3:A:381:CYS:HA	2.57	0.44
3:A:4479:MET:SD	3:A:4480:ALA:N	2.90	0.44
3:A:4563:LEU:HA	3:A:4566:MET:HG2	1.98	0.44
1:C:132:LEU:HA	1:C:136:HIS:HB2	1.98	0.44
3:B:1930:LEU:HB3	3:B:2219:HIS:CE1	2.52	0.44
3:B:2706:ARG:NH2	3:B:2707:PRO:O	2.50	0.44
3:B:3035:ASP:OD1	3:B:3035:ASP:N	2.44	0.44
3:B:3871:LYS:HD3	3:B:3871:LYS:N	2.32	0.44
2:E:1:MET:HE1	2:E:71:THR:HA	1.99	0.44
2:F:56:VAL:HG11	2:F:72:MET:HE2	1.99	0.44
3:A:1685:VAL:HG21	3:A:2381:ARG:HD2	1.98	0.44
3:A:2060:ILE:HG21	3:A:2141:LEU:HD21	2.00	0.44
3:A:2589:VAL:HG22	3:A:2667:TYR:CD1	2.53	0.44
3:A:3756:HIS:ND1	3:A:3802:GLU:OE2	2.48	0.44
3:A:4591:LYS:HE2	3:A:4631:MET:HE3	1.99	0.44
3:B:1408:VAL:O	3:B:1412:MET:HG2	2.18	0.44
3:B:1672:MET:HE2	3:B:1672:MET:N	2.32	0.44
3:B:3887:LEU:HD13	3:B:3887:LEU:HA	1.85	0.44
3:B:4216:GLU:OE2	3:B:4217:ILE:HG13	2.18	0.44
3:B:4714:LEU:HD11	3:B:4754:VAL:HG11	1.99	0.44
3:A:957:PHE:HZ	3:A:1014:PRO:HG2	1.82	0.44
3:A:1672:MET:HE2	3:A:1672:MET:N	2.32	0.44
3:A:2978:LEU:O	3:A:2981:LEU:HG	2.18	0.44
3:A:3007:THR:CB	3:A:3010:LEU:HD22	2.47	0.44
3:A:3210:VAL:HA	3:A:3213:LEU:HG	1.99	0.44
3:A:3852:THR:HG23	3:A:3855:GLN:H	1.83	0.44
3:B:2654:GLU:O	3:B:2658:ASN:ND2	2.30	0.44
3:B:3023:ASN:C	3:B:3023:ASN:OD1	2.61	0.44
3:B:3192:TYR:C	3:B:3192:TYR:CD1	2.94	0.44
3:B:4108:PHE:CD1	3:B:4108:PHE:C	2.95	0.44
3:B:4167:THR:O	3:B:4170:LEU:HB2	2.18	0.44
1:D:120:ASP:HB3	1:D:123:HIS:HB2	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:73:MET:HA	2:E:73:MET:HE3	2.00	0.44
3:A:338:TYR:O	3:A:338:TYR:HD1	2.00	0.44
3:A:418:LEU:HA	3:A:421:ILE:HG22	2.00	0.44
3:A:1030:MET:H	3:A:1030:MET:CE	2.29	0.44
3:A:1206:SER:H	3:A:1321:SER:HB2	1.82	0.44
3:A:2968:ASN:O	3:A:2971:HIS:N	2.50	0.44
3:B:418:LEU:HA	3:B:421:ILE:HG22	1.99	0.44
3:B:1816:ASN:O	3:B:1819:MET:HB3	2.18	0.44
3:B:3583:ARG:HG3	3:B:3650:ASN:HD22	1.83	0.44
1:D:293:LEU:HA	1:D:296:LEU:HD23	1.99	0.44
2:F:65:ASP:OD1	2:F:67:PRO:HD2	2.18	0.44
3:A:201:PHE:CZ	3:A:203:PRO:HB3	2.52	0.44
3:A:832:LEU:O	3:A:836:ILE:HG12	2.18	0.44
3:A:834:VAL:O	3:A:838:GLN:HG3	2.18	0.44
3:A:1909:ARG:HH12	3:A:1980:PHE:HB2	1.82	0.44
3:A:2971:HIS:HA	3:A:2974:ARG:HD3	1.99	0.44
3:A:4152:LEU:HD23	1:C:321:GLN:HG2	2.00	0.44
3:A:4479:MET:HA	3:A:4482:CYS:SG	2.58	0.44
3:A:4509:LEU:HD12	3:A:4510:LYS:N	2.33	0.44
3:A:4557:ALA:O	3:A:4560:GLU:HG3	2.18	0.44
1:C:125:THR:HG22	1:C:127:ASP:H	1.83	0.44
3:B:779:CYS:O	3:B:782:VAL:HG12	2.18	0.44
3:B:1227:GLN:CD	3:B:1227:GLN:N	2.76	0.44
3:B:2151:ILE:HD11	3:B:2164:LEU:HD11	2.00	0.44
3:B:3881:GLU:HG2	3:B:3921:MET:SD	2.57	0.44
3:B:4479:MET:SD	3:B:4480:ALA:N	2.91	0.44
3:B:4521:ASN:C	3:B:4521:ASN:OD1	2.61	0.44
3:A:1428:LEU:HB3	3:A:1491:LEU:CD1	2.48	0.44
3:A:3233:LEU:HB3	3:A:3293:PHE:CE2	2.53	0.44
3:A:4167:THR:HA	3:A:4170:LEU:HD23	2.00	0.44
3:B:119:ASP:OD1	3:B:120:GLU:N	2.49	0.44
3:B:1159:LEU:HD12	3:B:1159:LEU:HA	1.88	0.44
3:B:1811:VAL:HA	3:B:1814:MET:SD	2.58	0.44
3:B:2037:PHE:CE2	3:B:2075:MET:HB2	2.52	0.44
3:B:4314:ILE:HD11	3:B:4335:LEU:HD11	1.99	0.44
2:F:116:LYS:HE2	2:F:116:LYS:HB2	1.56	0.44
2:F:132:ASP:OD1	2:F:132:ASP:N	2.38	0.44
3:A:124:VAL:HG22	3:A:151:PHE:CE1	2.52	0.44
3:A:1025:MET:SD	3:A:1025:MET:N	2.82	0.44
3:A:1299:ILE:HD11	3:A:1305:MET:SD	2.58	0.44
3:A:1810:LEU:O	3:A:1814:MET:SD	2.76	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:1845:LEU:HD21	3:A:2119:LEU:HD22	2.00	0.44
3:A:3312:ASP:OD1	3:A:3312:ASP:C	2.61	0.44
3:A:4519:LYS:HA	3:A:4519:LYS:HD3	1.87	0.44
3:B:86:THR:HG22	3:B:136:LEU:HD13	1.99	0.44
3:B:127:LYS:HE2	3:B:127:LYS:HB2	1.86	0.44
3:B:680:GLU:H	3:B:680:GLU:CD	2.17	0.44
3:B:2971:HIS:O	3:B:2975:LEU:HG	2.18	0.44
3:B:4495:ILE:HD13	3:B:4505:LEU:HG	1.99	0.44
3:B:4596:MET:SD	3:B:4596:MET:N	2.89	0.44
3:A:678:LEU:HD12	3:A:683:MET:HE2	2.00	0.44
3:A:779:CYS:O	3:A:782:VAL:HG12	2.17	0.44
3:A:1020:ILE:O	3:A:1024:SER:CB	2.56	0.44
3:A:1538:MET:N	3:A:1538:MET:SD	2.90	0.44
3:A:1854:MET:HG3	3:A:2199:ILE:HD11	2.00	0.44
3:A:2323:SER:HB3	3:A:2326:MET:HE1	1.99	0.44
3:A:3295:ILE:HD11	3:A:3391:LEU:HD22	2.00	0.44
3:A:4167:THR:O	3:A:4170:LEU:HB2	2.18	0.44
3:A:4216:GLU:OE1	3:A:4238:LEU:HB2	2.18	0.44
3:A:4310:MET:HA	3:A:4310:MET:HE3	2.00	0.44
3:A:4503:HIS:O	3:A:4507:VAL:HG13	2.17	0.44
3:A:4671:ASN:OD1	3:A:4676:HIS:NE2	2.51	0.44
3:B:2335:GLY:HA3	3:B:2405:ILE:O	2.18	0.44
3:B:3039:VAL:O	3:B:3042:LYS:HG2	2.18	0.44
3:B:4519:LYS:HA	3:B:4519:LYS:HD3	1.85	0.44
3:A:302:LEU:HB3	3:A:377:ILE:HD12	1.99	0.43
3:A:747:LEU:HB2	3:A:805:ASP:HA	1.99	0.43
3:A:1085:TYR:O	3:A:1089:ILE:HG22	2.18	0.43
3:A:3293:PHE:CD1	3:A:3293:PHE:C	2.96	0.43
3:A:3575:THR:OG1	3:A:3714:MET:HB3	2.18	0.43
3:A:3583:ARG:HG3	3:A:3650:ASN:HD22	1.83	0.43
3:A:4206:LEU:HD13	3:A:4262:LEU:HD11	1.99	0.43
3:A:4383:MET:HE3	3:A:4383:MET:HB2	1.82	0.43
3:A:4562:VAL:O	3:A:4565:ILE:HG12	2.18	0.43
1:C:24:CYS:HB2	1:C:46:HIS:HE1	1.83	0.43
3:B:1138:HIS:O	3:B:1142:MET:HB2	2.19	0.43
3:B:1278:LEU:HD23	3:B:1278:LEU:HA	1.89	0.43
3:B:1538:MET:SD	3:B:1538:MET:N	2.91	0.43
3:B:2115:TYR:HB2	3:B:2122:LEU:HD13	2.00	0.43
3:B:4419:LEU:HD21	3:B:4458:SER:HA	2.00	0.43
1:D:323:LEU:HD21	3:B:4059:TRP:CE3	2.53	0.43
3:A:1341:ALA:HA	3:A:1346:PHE:CD2	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:1377:LEU:HA	3:A:1380:CYS:SG	2.57	0.43
3:A:1429:LYS:HD3	3:A:1433:LYS:HG3	2.00	0.43
3:A:1485:ILE:HA	3:A:1488:ASN:HD22	1.84	0.43
3:A:2151:ILE:HD11	3:A:2164:LEU:HD11	1.99	0.43
3:A:2356:ILE:HD11	3:A:2385:PHE:CD1	2.53	0.43
3:A:2578:ARG:NE	3:A:2662:ASP:OD2	2.46	0.43
3:A:3234:ASP:O	3:A:3238:ARG:HG3	2.18	0.43
3:A:3875:CYS:O	3:A:3879:VAL:HG23	2.17	0.43
3:B:858:LEU:HD23	3:B:858:LEU:HA	1.87	0.43
3:B:1270:LEU:HD23	3:B:1270:LEU:HA	1.87	0.43
3:B:2636:LYS:HB2	3:B:2649:GLY:HA3	2.00	0.43
3:B:4479:MET:HA	3:B:4482:CYS:SG	2.57	0.43
2:F:34:GLY:HA2	2:F:49:LEU:HD21	2.00	0.43
3:A:1159:LEU:HD21	3:A:1299:ILE:HD12	2.00	0.43
3:A:1244:ILE:HA	3:A:1293:ARG:NH2	2.28	0.43
3:A:1483:ASP:OD1	3:A:1483:ASP:N	2.50	0.43
3:A:1538:MET:O	3:A:1542:ALA:CB	2.66	0.43
3:A:1589:HIS:O	3:A:1592:ILE:HG22	2.18	0.43
3:A:1593:LEU:HD12	3:A:1594:GLU:N	2.34	0.43
3:A:2187:PRO:HG2	3:A:2202:ILE:HB	2.00	0.43
3:A:2335:GLY:HA3	3:A:2405:ILE:O	2.18	0.43
3:B:185:ARG:O	3:B:188:GLU:HG3	2.18	0.43
3:B:368:ASP:O	3:B:371:GLU:HG3	2.18	0.43
3:B:1527:ALA:HB2	3:B:1566:ARG:HH12	1.83	0.43
3:B:1585:MET:N	3:B:1585:MET:HE2	2.33	0.43
3:B:1607:THR:HG21	3:B:2488:SER:OG	2.18	0.43
3:B:1690:VAL:HG12	3:B:1716:CYS:HB2	2.00	0.43
3:B:1837:ARG:O	3:B:1840:GLN:HG2	2.18	0.43
3:B:3099:LEU:HD22	3:B:3103:LYS:HZ1	1.83	0.43
3:B:3136:MET:HB2	3:B:3145:VAL:HG21	1.99	0.43
3:B:4347:THR:O	3:B:4374:SER:OG	2.36	0.43
1:D:22:TYR:HD1	1:D:52:MET:SD	2.41	0.43
1:D:25:LEU:HD11	1:D:79:THR:HB	2.00	0.43
3:A:81:SER:O	3:A:85:ILE:HG13	2.18	0.43
3:A:231:SER:HA	3:A:234:LYS:HE2	2.01	0.43
3:A:745:TRP:HE1	3:A:810:HIS:CE1	2.37	0.43
3:A:3047:ALA:O	3:A:3051:VAL:HG13	2.18	0.43
3:A:3099:LEU:HD22	3:A:3103:LYS:HZ1	1.83	0.43
3:A:3192:TYR:C	3:A:3192:TYR:CD2	2.96	0.43
3:A:4495:ILE:HD13	3:A:4505:LEU:HG	2.00	0.43
3:B:1023:LEU:HD21	3:B:1041:TRP:CE3	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:2978:LEU:HD23	3:B:2981:LEU:HD21	2.00	0.43
3:B:4216:GLU:OE1	3:B:4238:LEU:HB2	2.19	0.43
3:A:855:LEU:HA	3:A:855:LEU:HD12	1.77	0.43
3:A:4327:THR:OG1	3:A:4328:PRO:HD3	2.17	0.43
3:B:1206:SER:H	3:B:1321:SER:HB2	1.84	0.43
3:B:2228:THR:HB	3:B:2244:ALA:HB3	2.00	0.43
3:B:3140:PHE:CZ	3:B:3153:PHE:HE1	2.37	0.43
3:B:3293:PHE:C	3:B:3293:PHE:HD1	2.26	0.43
3:B:3307:VAL:O	3:B:3311:VAL:HG23	2.19	0.43
3:B:3920:ALA:O	3:B:3923:GLU:HG3	2.19	0.43
3:B:4518:VAL:O	3:B:4522:ARG:HG2	2.19	0.43
2:E:20:PHE:CE2	2:E:36:VAL:HA	2.53	0.43
3:A:1023:LEU:HD21	3:A:1041:TRP:CE3	2.54	0.43
3:A:2025:ILE:O	3:A:2036:THR:N	2.51	0.43
3:A:4216:GLU:OE2	3:A:4217:ILE:HG13	2.18	0.43
3:A:4695:MET:CE	3:A:4722:ILE:HG21	2.48	0.43
3:A:4714:LEU:HD11	3:A:4754:VAL:HG11	2.00	0.43
3:B:75:SER:HB2	3:B:123:ALA:HB3	2.00	0.43
3:B:263:LEU:HD12	3:B:266:PHE:CD2	2.54	0.43
3:B:745:TRP:HE1	3:B:810:HIS:CE1	2.37	0.43
3:B:1811:VAL:HG11	3:B:2486:LEU:HG	1.99	0.43
3:B:2060:ILE:HG21	3:B:2141:LEU:HD21	2.01	0.43
3:B:2991:VAL:O	3:B:2995:ARG:HD3	2.18	0.43
3:B:3852:THR:HG23	3:B:3855:GLN:H	1.83	0.43
2:E:118:THR:O	2:E:122:VAL:HG22	2.19	0.43
3:A:248:GLN:NE2	3:A:316:PRO:O	2.51	0.43
3:A:711:TYR:OH	3:A:885:LEU:O	2.37	0.43
3:A:1278:LEU:HD23	3:A:1278:LEU:HA	1.89	0.43
3:A:2706:ARG:NH2	3:A:2707:PRO:O	2.52	0.43
3:A:3039:VAL:O	3:A:3042:LYS:HG2	2.18	0.43
3:A:4419:LEU:HD21	3:A:4458:SER:HA	1.99	0.43
3:B:59:SER:O	3:B:63:ILE:HG13	2.19	0.43
3:B:338:TYR:O	3:B:338:TYR:HD1	2.01	0.43
3:B:965:GLU:H	3:B:965:GLU:CD	2.26	0.43
3:B:1538:MET:HA	3:B:1541:MET:SD	2.59	0.43
3:B:1904:SER:N	3:B:1964:GLU:OE1	2.51	0.43
3:B:1909:ARG:HH12	3:B:1980:PHE:HB2	1.83	0.43
3:B:3192:TYR:C	3:B:3192:TYR:HD1	2.27	0.43
3:B:3312:ASP:OD1	3:B:3312:ASP:C	2.61	0.43
3:B:3875:CYS:O	3:B:3879:VAL:HG23	2.19	0.43
3:B:4593:GLN:H	3:B:4593:GLN:CD	2.21	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:78:VAL:HG11	3:A:110:PHE:HD2	1.84	0.43
3:A:187:LYS:O	3:A:191:MET:HG2	2.19	0.43
3:A:1214:LEU:HD13	3:A:1354:LEU:HD12	2.01	0.43
3:A:1930:LEU:HD22	3:A:2219:HIS:CD2	2.54	0.43
3:A:1961:PRO:HB2	3:A:2641:PHE:CZ	2.54	0.43
3:A:2115:TYR:HA	3:A:2122:LEU:HA	2.01	0.43
3:A:2218:ARG:NH2	3:A:2253:LEU:HD13	2.33	0.43
3:A:3045:ARG:HG3	3:A:3050:GLU:OE2	2.19	0.43
3:B:36:LEU:HD22	3:B:84:TYR:HD2	1.84	0.43
3:B:81:SER:O	3:B:85:ILE:HG13	2.19	0.43
3:B:834:VAL:O	3:B:838:GLN:HG3	2.18	0.43
3:B:1593:LEU:O	3:B:1596:THR:OG1	2.30	0.43
3:B:1807:PHE:CD1	3:B:1810:LEU:HD23	2.54	0.43
3:B:1909:ARG:HD3	3:B:1911:HIS:CD2	2.53	0.43
3:B:3271:SER:HA	3:B:3274:GLU:OE1	2.19	0.43
3:B:3295:ILE:HD11	3:B:3391:LEU:HD22	2.00	0.43
2:F:34:GLY:O	2:F:38:ARG:HB3	2.18	0.43
3:A:1214:LEU:HD11	3:A:1383:TYR:CE2	2.54	0.43
3:A:1227:GLN:N	3:A:1227:GLN:CD	2.77	0.43
3:A:1427:VAL:HG22	3:A:1431:PHE:CE2	2.53	0.43
3:A:1477:LYS:HA	3:A:1477:LYS:HD3	1.86	0.43
3:A:2139:THR:HG23	3:A:2140:THR:HG23	2.01	0.43
3:A:2153:SER:OG	3:A:2155:ASN:O	2.36	0.43
3:A:3042:LYS:N	3:A:3042:LYS:HD2	2.34	0.43
3:A:4593:GLN:HA	3:A:4596:MET:HE1	2.00	0.43
3:B:66:HIS:CD2	3:B:74:TYR:CE2	3.07	0.43
3:B:1300:VAL:HG22	3:B:1336:ARG:CZ	2.48	0.43
3:B:1568:LYS:HE2	3:B:1814:MET:HB3	2.00	0.43
3:B:3161:THR:O	3:B:3165:LEU:HD23	2.19	0.43
3:A:195:ASN:C	3:A:195:ASN:OD1	2.62	0.43
3:A:1814:MET:HB2	3:A:1818:LEU:HD23	2.01	0.43
3:A:1837:ARG:O	3:A:1840:GLN:HG2	2.19	0.43
3:A:1909:ARG:HD3	3:A:1911:HIS:CD2	2.53	0.43
3:A:3387:GLN:O	3:A:3391:LEU:HG	2.18	0.43
3:A:4109:LEU:HD13	3:A:4115:ARG:HD3	2.01	0.43
3:A:4347:THR:O	3:A:4374:SER:OG	2.37	0.43
3:B:48:GLU:HA	3:B:51:GLN:NE2	2.33	0.43
3:B:700:GLY:H	3:B:703:ASP:HB3	1.83	0.43
3:B:2038:TYR:CD2	3:B:2085:PRO:HB3	2.54	0.43
3:B:2218:ARG:NH2	3:B:2253:LEU:HD13	2.34	0.43
3:B:2320:ARG:HA	3:B:2326:MET:SD	2.59	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:3564:LYS:HB3	3:B:3602:ILE:HD11	2.01	0.43
3:A:73:PHE:HB2	3:A:158:ALA:HB1	2.01	0.42
3:A:823:GLU:O	3:A:827:ARG:HG2	2.19	0.42
3:A:2212:GLN:H	3:A:2234:CYS:HA	1.84	0.42
3:A:2214:MET:CE	3:A:2232:LEU:HG	2.48	0.42
3:A:2355:GLN:HB2	3:A:2384:TRP:CE2	2.54	0.42
3:A:2969:ARG:HG2	3:A:2970:LEU:N	2.34	0.42
3:A:3564:LYS:HB3	3:A:3602:ILE:HD11	1.99	0.42
3:A:4252:GLU:OE1	3:A:4252:GLU:N	2.52	0.42
3:A:4598:LEU:HA	3:A:4601:ILE:HD12	2.00	0.42
3:B:73:PHE:CD1	3:B:155:MET:HE1	2.54	0.42
3:B:135:GLY:HA2	3:B:142:ARG:HH21	1.84	0.42
3:B:823:GLU:OE1	3:B:826:ARG:NH2	2.38	0.42
3:B:1593:LEU:HD12	3:B:1594:GLU:N	2.34	0.42
3:B:4533:LEU:HD23	3:B:4587:LEU:HD11	2.00	0.42
3:B:4562:VAL:O	3:B:4565:ILE:HG12	2.19	0.42
3:B:4566:MET:HB3	3:B:4619:ILE:HD11	2.00	0.42
3:A:59:SER:O	3:A:63:ILE:HG13	2.19	0.42
3:A:368:ASP:O	3:A:371:GLU:HG3	2.18	0.42
3:A:1677:TYR:HA	3:A:1707:ALA:N	2.28	0.42
3:A:2038:TYR:CD2	3:A:2085:PRO:HB3	2.54	0.42
3:A:3574:VAL:HG22	3:A:3715:LEU:HD23	2.00	0.42
3:B:855:LEU:HA	3:B:855:LEU:HD12	1.78	0.42
3:B:964:ASP:OD1	3:B:1016:SER:OG	2.37	0.42
3:B:1305:MET:HE1	3:B:1307:PRO:HA	2.01	0.42
3:B:1589:HIS:O	3:B:1592:ILE:HG22	2.19	0.42
3:B:2627:ASN:O	3:B:2631:LYS:HG2	2.19	0.42
3:B:3207:ARG:O	3:B:3210:VAL:HG12	2.19	0.42
3:B:3501:ASN:HB3	3:B:3912:TYR:CE2	2.54	0.42
3:B:4506:THR:O	3:B:4509:LEU:HG	2.19	0.42
3:B:4695:MET:CE	3:B:4722:ILE:HG21	2.49	0.42
3:A:1431:PHE:O	3:A:1434:LEU:HD12	2.19	0.42
3:A:1904:SER:N	3:A:1964:GLU:OE1	2.52	0.42
3:A:3010:LEU:HG	3:A:3021:LEU:HD21	2.01	0.42
3:A:3050:GLU:O	3:A:3054:VAL:HG22	2.19	0.42
3:A:4330:PHE:HA	3:A:4333:GLU:HG3	2.01	0.42
3:B:82:THR:HG22	3:B:107:LEU:HD13	2.01	0.42
3:B:1336:ARG:HE	3:B:1337:ILE:HD11	1.83	0.42
3:B:4489:LEU:HD23	3:B:4489:LEU:HA	1.85	0.42
1:D:86:MET:HB3	3:B:2309:LEU:HB3	2.02	0.42
2:F:21:ASP:HA	2:F:28:ILE:HG22	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:49:LEU:O	3:A:53:VAL:HG23	2.19	0.42
3:A:1300:VAL:HG22	3:A:1336:ARG:CZ	2.49	0.42
3:A:1607:THR:HG21	3:A:2488:SER:OG	2.18	0.42
3:A:2329:ALA:HB3	1:C:64:TYR:HA	2.02	0.42
3:A:2529:LEU:HA	3:A:2532:LEU:HD12	2.01	0.42
3:B:1155:THR:HB	3:B:1298:LEU:HD11	2.02	0.42
3:B:1429:LYS:HD3	3:B:1433:LYS:HG3	2.02	0.42
3:B:1589:HIS:CE1	3:B:1590:VAL:HG23	2.54	0.42
3:B:1909:ARG:NH2	3:B:1980:PHE:O	2.44	0.42
3:B:1930:LEU:HD22	3:B:2219:HIS:CD2	2.53	0.42
3:B:2968:ASN:O	3:B:2971:HIS:HB3	2.19	0.42
3:A:1515:LEU:HD23	3:A:1541:MET:HB2	2.01	0.42
3:A:1560:ALA:HA	3:A:1563:TRP:HB2	2.01	0.42
3:A:2542:HIS:HA	3:A:2545:GLN:OE1	2.20	0.42
3:A:3161:THR:O	3:A:3165:LEU:HD23	2.20	0.42
3:A:3547:LEU:HD21	3:A:3563:VAL:HG11	2.00	0.42
3:B:694:ASP:OD1	3:B:695:LYS:N	2.52	0.42
3:B:1125:ASP:O	3:B:1128:ILE:HG13	2.19	0.42
3:B:1249:ASN:OD1	3:B:1250:ALA:N	2.49	0.42
3:B:1515:LEU:HD23	3:B:1541:MET:HB2	2.00	0.42
3:B:1810:LEU:H	3:B:1810:LEU:HD22	1.85	0.42
3:B:3758:PRO:O	3:B:3761:GLU:HG2	2.19	0.42
2:F:37:MET:HA	2:F:40:LEU:HG	2.00	0.42
3:A:318:LEU:HA	3:A:325:ARG:NH2	2.34	0.42
3:A:642:LYS:HE2	3:A:642:LYS:HB2	1.88	0.42
3:A:1138:HIS:O	3:A:1141:LYS:HG2	2.19	0.42
3:A:2181:GLN:NE2	3:A:2186:VAL:O	2.34	0.42
3:A:2211:ILE:HA	3:A:2234:CYS:HA	2.01	0.42
3:A:4121:LEU:HG	3:A:4161:GLN:HG3	2.01	0.42
3:B:301:SER:O	3:B:304:ILE:HG22	2.20	0.42
3:B:1341:ALA:HA	3:B:1346:PHE:CD2	2.54	0.42
3:B:1596:THR:O	3:B:1599:ILE:HG12	2.19	0.42
3:B:3154:GLU:H	3:B:3154:GLU:HG2	1.71	0.42
3:A:790:MET:SD	3:A:854:ILE:HG23	2.60	0.42
3:A:1125:ASP:O	3:A:1128:ILE:HG13	2.20	0.42
3:A:1589:HIS:CE1	3:A:1590:VAL:HG23	2.54	0.42
3:A:3032:LEU:HD23	3:A:3032:LEU:HA	1.87	0.42
3:A:3633:LEU:HD23	3:A:3633:LEU:HA	1.92	0.42
3:A:3736:VAL:O	3:A:3739:ILE:HG22	2.19	0.42
3:B:34:ARG:HG3	3:B:34:ARG:HH11	1.85	0.42
3:B:128:HIS:O	3:B:131:LEU:HD12	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:1483:ASP:N	3:B:1483:ASP:OD1	2.49	0.42
3:B:3788:THR:O	3:B:3791:SER:OG	2.27	0.42
3:B:4303:GLU:HB3	3:B:4307:LYS:NZ	2.35	0.42
1:D:26:ILE:HG12	1:D:108:VAL:HG12	2.01	0.42
3:A:141:SER:H	3:A:142:ARG:NH2	2.18	0.42
3:A:913:GLU:H	3:A:913:GLU:CD	2.17	0.42
3:A:1155:THR:HB	3:A:1298:LEU:HD11	2.01	0.42
3:A:1314:LEU:HD12	3:A:1330:SER:HB2	2.02	0.42
3:A:2002:ILE:HA	3:A:2019:THR:HG22	2.01	0.42
3:A:2316:GLN:O	3:A:2320:ARG:HG3	2.20	0.42
3:A:3207:ARG:O	3:A:3210:VAL:HG12	2.19	0.42
3:A:3293:PHE:C	3:A:3293:PHE:HD1	2.28	0.42
3:A:4303:GLU:HB3	3:A:4307:LYS:NZ	2.35	0.42
3:B:115:LEU:HD21	3:B:129:LEU:HB2	2.02	0.42
3:B:833:PHE:CZ	3:B:858:LEU:HD22	2.55	0.42
3:B:1090:VAL:HG11	3:B:1131:VAL:HG21	2.01	0.42
3:B:1163:LEU:HD13	3:B:1313:THR:HG21	2.01	0.42
3:B:3042:LYS:N	3:B:3042:LYS:HD2	2.35	0.42
3:B:4492:LEU:HD13	3:B:4508:LEU:HD23	2.01	0.42
3:B:4566:MET:N	3:B:4566:MET:SD	2.93	0.42
1:D:4:HIS:NE2	1:D:19:GLY:O	2.48	0.42
3:A:131:LEU:HB2	3:A:142:ARG:CG	2.49	0.42
3:A:963:TYR:OH	3:A:1014:PRO:O	2.32	0.42
3:B:747:LEU:HB2	3:B:805:ASP:HA	2.02	0.42
3:B:1254:ASP:C	3:B:1254:ASP:OD1	2.63	0.42
3:B:1976:HIS:CD2	3:B:1991:VAL:HG13	2.55	0.42
3:B:2662:ASP:OD1	3:B:2662:ASP:C	2.63	0.42
3:B:2700:ALA:O	3:B:2703:ARG:HG3	2.20	0.42
3:B:3141:LEU:O	3:B:3145:VAL:HG23	2.19	0.42
3:B:4438:MET:HE3	3:B:4440:ILE:HG13	2.02	0.42
3:B:4622:TYR:OH	3:B:4670:LYS:NZ	2.53	0.42
3:A:1994:PRO:HG3	3:A:2002:ILE:HD11	2.01	0.42
3:A:2121:MET:HE1	3:A:2123:PHE:CE2	2.55	0.42
3:A:4438:MET:HE3	3:A:4440:ILE:HG13	2.02	0.42
3:B:1564:LEU:O	3:B:1568:LYS:N	2.43	0.42
3:B:2016:ALA:HB2	3:B:2025:ILE:HG12	2.02	0.42
3:B:2356:ILE:HD11	3:B:2385:PHE:CD1	2.55	0.42
3:B:4596:MET:CE	3:B:4596:MET:H	2.33	0.42
3:B:4694:TYR:HB3	3:B:4695:MET:HE2	2.02	0.42
3:A:36:LEU:HD22	3:A:84:TYR:HD2	1.84	0.41
3:A:1908:ARG:NH1	3:A:1910:GLN:OE1	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:2661:VAL:HG23	3:A:2682:TYR:CE1	2.50	0.41
3:B:1083:VAL:O	3:B:1087:VAL:HG22	2.20	0.41
3:B:1296:GLY:O	3:B:1299:ILE:HG22	2.20	0.41
3:B:1899:MET:HE2	3:B:1899:MET:HB2	1.92	0.41
3:B:2355:GLN:HB2	3:B:2384:TRP:CE2	2.54	0.41
2:E:22:LYS:HD3	2:E:22:LYS:N	2.35	0.41
3:A:1600:MET:HE3	3:A:1600:MET:N	2.34	0.41
3:A:3021:LEU:O	3:A:3024:LEU:HG	2.21	0.41
3:A:3051:VAL:HA	3:A:3054:VAL:HG22	2.02	0.41
3:A:3979:ILE:HG21	3:A:4019:ILE:HG23	2.02	0.41
3:A:4286:GLU:OE1	3:A:4286:GLU:HA	2.19	0.41
1:C:61:PHE:CE2	1:C:72:VAL:HG23	2.55	0.41
3:B:1116:PRO:HD3	3:B:1172:PHE:CE1	2.55	0.41
3:B:2335:GLY:HA2	3:B:2405:ILE:O	2.20	0.41
3:B:3158:GLN:OE1	3:B:3158:GLN:N	2.44	0.41
2:F:116:LYS:HZ2	3:B:4077:ILE:H	1.68	0.41
3:A:418:LEU:HA	3:A:418:LEU:HD23	1.95	0.41
3:A:695:LYS:HE3	3:A:695:LYS:HB3	1.87	0.41
3:A:2311:VAL:HG11	1:C:64:TYR:CD1	2.55	0.41
3:A:3218:CYS:O	3:A:3220:SER:N	2.52	0.41
3:A:3259:SER:HB2	3:A:3848:GLN:HG2	2.02	0.41
3:A:4043:THR:HG22	3:A:4045:VAL:H	1.85	0.41
3:A:4637:ARG:HH21	3:A:4638:PHE:HE1	1.68	0.41
1:C:24:CYS:CB	1:C:46:HIS:HE1	2.34	0.41
3:B:124:VAL:HG12	3:B:128:HIS:HB2	2.02	0.41
3:B:1563:TRP:O	3:B:1566:ARG:HB2	2.20	0.41
3:B:2153:SER:OG	3:B:2155:ASN:O	2.37	0.41
3:B:2211:ILE:HA	3:B:2234:CYS:HA	2.02	0.41
3:B:2993:GLY:HA3	3:B:3050:GLU:HB3	2.01	0.41
1:D:22:TYR:HB3	1:D:52:MET:SD	2.60	0.41
1:D:65:TYR:OH	3:B:2311:VAL:O	2.29	0.41
3:A:263:LEU:HD12	3:A:266:PHE:CD2	2.55	0.41
3:A:1334:LEU:HD23	3:A:1334:LEU:HA	1.79	0.41
3:A:1814:MET:HA	3:A:1817:PHE:CE1	2.55	0.41
3:A:2564:ASP:OD1	3:A:2564:ASP:C	2.63	0.41
3:A:2700:ALA:O	3:A:2703:ARG:HG3	2.20	0.41
3:A:3015:GLU:HA	3:A:3018:LYS:HG2	2.02	0.41
3:A:3557:THR:O	3:A:3699:LEU:HB2	2.21	0.41
3:A:3725:PRO:HA	3:A:3827:GLU:OE2	2.20	0.41
3:A:3997:PHE:HB2	3:A:4016:CYS:HB3	2.02	0.41
3:A:4257:HIS:HE1	3:A:4261:ARG:NH2	2.18	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:4506:THR:O	3:A:4509:LEU:HG	2.19	0.41
3:B:108:ILE:HD13	3:B:108:ILE:HA	1.82	0.41
3:B:152:THR:O	3:B:155:MET:HB3	2.20	0.41
3:B:879:GLN:HA	3:B:907:LEU:HD21	2.02	0.41
3:B:1537:LEU:HB3	3:B:1541:MET:HE1	2.02	0.41
3:B:2540:HIS:CG	3:B:2543:LYS:HZ2	2.38	0.41
3:B:2988:LEU:HD23	3:B:2996:ALA:HB1	2.01	0.41
3:B:3167:LEU:O	3:B:3171:ILE:HG12	2.20	0.41
3:B:3690:ILE:HB	3:B:3692:TYR:CE1	2.55	0.41
1:D:20:ARG:HD3	1:D:64:TYR:OH	2.20	0.41
3:A:911:PHE:HD1	3:A:911:PHE:HA	1.76	0.41
3:A:1191:SER:H	3:A:1194:LYS:CE	2.34	0.41
3:A:1412:MET:HG3	3:A:1463:ARG:HH21	1.86	0.41
3:A:1563:TRP:O	3:A:1566:ARG:HB2	2.20	0.41
3:A:1960:ASN:HA	3:A:2007:TRP:CD1	2.55	0.41
3:A:2113:VAL:HG22	3:A:2122:LEU:HD11	2.03	0.41
3:A:2486:LEU:HD23	3:A:2486:LEU:HA	1.93	0.41
3:A:3920:ALA:O	3:A:3923:GLU:HG3	2.20	0.41
3:A:4206:LEU:HB2	3:A:4207:PRO:HD3	2.02	0.41
1:C:91:THR:O	1:C:94:GLN:HG2	2.21	0.41
3:B:318:LEU:HA	3:B:325:ARG:NH2	2.35	0.41
3:B:2139:THR:HG23	3:B:2140:THR:HG23	2.02	0.41
3:B:2486:LEU:HD23	3:B:2486:LEU:HA	1.92	0.41
3:B:3659:GLN:HG2	3:B:3664:SER:HA	2.03	0.41
3:B:3857:ARG:HH21	3:B:3862:LEU:HD23	1.84	0.41
3:B:4145:ALA:O	3:B:4149:VAL:HG22	2.21	0.41
3:B:4167:THR:HA	3:B:4170:LEU:HD23	2.02	0.41
3:B:4330:PHE:HA	3:B:4333:GLU:HG3	2.01	0.41
3:A:119:ASP:OD1	3:A:120:GLU:N	2.49	0.41
3:A:1064:LYS:HZ3	3:A:1066:GLU:HB2	1.86	0.41
3:A:1178:LEU:HD23	3:A:1178:LEU:HA	1.84	0.41
3:A:1249:ASN:OD1	3:A:1250:ALA:N	2.50	0.41
3:A:1362:LEU:HD23	3:A:1362:LEU:HA	1.89	0.41
3:A:1690:VAL:HG12	3:A:1716:CYS:HB2	2.01	0.41
3:A:2483:LEU:HB2	3:A:2524:GLN:HE21	1.86	0.41
3:A:2662:ASP:OD1	3:A:2662:ASP:C	2.63	0.41
3:A:4148:ILE:HD13	3:A:4148:ILE:HA	1.89	0.41
3:A:4566:MET:N	3:A:4566:MET:SD	2.93	0.41
1:C:26:ILE:HG12	1:C:108:VAL:HG12	2.02	0.41
3:B:1960:ASN:HA	3:B:2007:TRP:CD1	2.56	0.41
3:B:3000:MET:H	3:B:3000:MET:HG2	1.64	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:B:3612:TRP:CH2	3:B:3641:MET:HB2	2.55	0.41
3:B:4043:THR:HG22	3:B:4045:VAL:H	1.86	0.41
1:D:25:LEU:HD21	1:D:53:GLN:HB2	2.02	0.41
3:A:141:SER:OG	3:A:142:ARG:NH1	2.54	0.41
3:A:655:LEU:HD12	3:A:655:LEU:HA	1.88	0.41
3:A:1006:LEU:HA	3:A:1009:ILE:HG22	2.02	0.41
3:A:2181:GLN:HE22	3:A:2188:LEU:HD12	1.86	0.41
3:A:2480:VAL:HA	3:A:2524:GLN:HE22	1.84	0.41
3:A:2699:GLN:HA	3:A:2702:ILE:HG12	2.02	0.41
3:A:2982:LEU:O	3:A:2985:LEU:HG	2.20	0.41
3:A:4669:ILE:HG21	3:A:4679:LYS:HG3	2.02	0.41
3:B:105:LYS:HE2	3:B:250:LEU:HD21	2.03	0.41
3:B:125:SER:O	3:B:129:LEU:HG	2.21	0.41
3:B:957:PHE:HZ	3:B:1014:PRO:HG2	1.85	0.41
3:B:1468:LEU:O	3:B:1472:THR:OG1	2.23	0.41
3:B:1846:HIS:NE2	3:B:2144:LEU:HD23	2.35	0.41
3:B:2517:ALA:HB3	3:B:2522:GLN:OE1	2.20	0.41
3:B:2999:TYR:O	3:B:3003:ILE:HG13	2.21	0.41
3:B:3574:VAL:HG22	3:B:3715:LEU:HD23	2.01	0.41
3:B:3954:ALA:HA	3:B:3964:LEU:HD22	2.03	0.41
3:B:4497:ASP:OD1	3:B:4500:GLN:N	2.35	0.41
2:F:65:ASP:OD1	2:F:65:ASP:C	2.64	0.41
3:A:53:VAL:HG13	3:A:103:ALA:HB2	2.03	0.41
3:A:1596:THR:O	3:A:1599:ILE:HG12	2.21	0.41
3:A:2219:HIS:ND1	3:A:2220:THR:O	2.51	0.41
3:A:2499:GLU:O	3:A:2502:LYS:NZ	2.40	0.41
3:A:3501:ASN:HB3	3:A:3912:TYR:CE2	2.56	0.41
3:B:1280:LEU:HD23	3:B:1280:LEU:HA	1.81	0.41
3:B:3057:ARG:O	3:B:3061:VAL:HG23	2.20	0.41
3:B:3218:CYS:O	3:B:3220:SER:N	2.53	0.41
3:B:4637:ARG:HH21	3:B:4638:PHE:HE1	1.67	0.41
1:D:301:MET:HE2	1:D:301:MET:HB3	1.95	0.41
3:A:56:VAL:HG12	3:A:106:VAL:HG11	2.03	0.41
3:A:735:LEU:HB3	3:A:737:VAL:HG22	2.03	0.41
3:A:1023:LEU:HD11	3:A:1041:TRP:HZ3	1.86	0.41
3:A:1083:VAL:O	3:A:1087:VAL:HG22	2.21	0.41
3:A:1090:VAL:HG11	3:A:1131:VAL:HG21	2.03	0.41
3:A:1214:LEU:O	3:A:1217:THR:OG1	2.39	0.41
3:A:1417:GLU:HA	3:A:1470:ARG:NH1	2.36	0.41
3:A:1521:MET:H	3:A:1521:MET:CE	2.34	0.41
3:A:1534:PHE:HA	3:A:1537:LEU:HG	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:2517:ALA:HB3	3:A:2522:GLN:OE1	2.21	0.41
3:A:3536:ASN:HB3	3:A:3815:SER:OG	2.20	0.41
3:A:3818:ILE:HD13	3:A:3818:ILE:HA	1.89	0.41
3:A:3985:CYS:HB3	3:A:3988:LEU:HD12	2.02	0.41
3:A:4352:THR:HG22	3:A:4354:GLU:HG3	2.03	0.41
3:A:4694:TYR:HB3	3:A:4695:MET:CE	2.51	0.41
3:B:833:PHE:HZ	3:B:858:LEU:O	2.04	0.41
3:B:1005:ILE:O	3:B:1009:ILE:HG22	2.20	0.41
3:B:1822:ILE:HG22	3:B:2475:LEU:HB3	2.02	0.41
3:B:1908:ARG:NH1	3:B:1910:GLN:OE1	2.54	0.41
3:B:2212:GLN:H	3:B:2234:CYS:HA	1.85	0.41
3:B:3997:PHE:HB2	3:B:4016:CYS:HB3	2.02	0.41
3:B:4596:MET:HA	3:B:4599:ASP:OD1	2.21	0.41
3:B:4598:LEU:HD23	3:B:4601:ILE:HD12	2.02	0.41
3:B:4631:MET:H	3:B:4631:MET:HG2	1.67	0.41
3:A:302:LEU:HD12	3:A:377:ILE:HD11	2.02	0.41
3:A:1387:GLN:HE22	3:A:1397:MET:CG	2.34	0.41
3:A:1524:GLU:O	3:A:1528:ASN:ND2	2.45	0.41
3:A:1859:MET:HB3	3:A:2200:GLN:HE22	1.86	0.41
3:A:1899:MET:SD	3:A:2213:ASP:HB2	2.61	0.41
3:A:2061:ILE:HG23	3:A:2073:GLN:HB3	2.03	0.41
3:A:4228:LEU:HD23	3:A:4228:LEU:O	2.21	0.41
3:B:1809:PRO:O	3:B:1812:LEU:HD12	2.21	0.41
3:B:1961:PRO:HB2	3:B:2641:PHE:CZ	2.55	0.41
3:B:2653:ILE:H	3:B:2653:ILE:HG12	1.65	0.41
3:B:3106:LEU:HD13	3:B:3193:PHE:CE1	2.56	0.41
1:D:79:THR:O	1:D:111:PRO:HG3	2.22	0.40
2:F:68:GLU:O	2:F:72:MET:HG3	2.20	0.40
3:A:1092:GLU:O	3:A:1096:ARG:HG3	2.21	0.40
3:A:1846:HIS:NE2	3:A:2144:LEU:HD23	2.36	0.40
3:A:3586:MET:SD	3:A:3648:TYR:HB3	2.61	0.40
3:B:1426:ARG:HD2	3:B:1426:ARG:HA	1.80	0.40
3:B:1514:LEU:HD23	3:B:1544:LEU:HD11	2.03	0.40
3:B:3090:LEU:HD13	3:B:3090:LEU:HA	1.97	0.40
3:B:3551:LYS:HE2	3:B:3554:THR:HB	2.03	0.40
3:B:4671:ASN:OD1	3:B:4676:HIS:NE2	2.54	0.40
3:A:152:THR:O	3:A:155:MET:HB3	2.21	0.40
3:A:1020:ILE:HD13	3:A:1041:TRP:CH2	2.56	0.40
3:A:1270:LEU:HD23	3:A:1270:LEU:HA	1.87	0.40
3:A:2067:ALA:O	3:A:2105:GLN:HA	2.22	0.40
3:A:2666:GLY:O	3:A:2669:THR:OG1	2.31	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:2702:ILE:HA	3:A:3005:MET:SD	2.61	0.40
3:A:3233:LEU:HB3	3:A:3293:PHE:CD2	2.56	0.40
3:A:4055:GLN:HG2	3:A:4119:LEU:HD23	2.03	0.40
1:C:25:LEU:HD21	1:C:53:GLN:HB2	2.03	0.40
1:C:301:MET:HE2	1:C:301:MET:HB3	1.95	0.40
3:B:699:LYS:HA	3:B:699:LYS:HD3	1.74	0.40
3:B:742:GLU:OE1	3:B:742:GLU:N	2.40	0.40
3:B:1020:ILE:HD13	3:B:1041:TRP:CH2	2.56	0.40
3:B:1191:SER:H	3:B:1194:LYS:NZ	2.19	0.40
3:B:1378:GLU:OE1	3:B:1378:GLU:HA	2.21	0.40
3:B:1854:MET:HG3	3:B:2199:ILE:HD11	2.02	0.40
3:B:2151:ILE:O	3:B:2161:SER:OG	2.31	0.40
3:B:2342:ASN:ND2	3:B:2347:MET:SD	2.94	0.40
3:B:2550:LYS:HD3	3:B:2551:ALA:N	2.36	0.40
3:B:3053:LEU:O	3:B:3056:MET:HG2	2.21	0.40
3:B:3220:SER:OG	3:B:3222:GLU:OE2	2.40	0.40
3:B:3683:GLN:HB3	3:B:3690:ILE:HG12	2.02	0.40
3:B:4206:LEU:HB2	3:B:4207:PRO:HD3	2.02	0.40
2:E:94:ASP:OD1	2:E:99:GLY:N	2.42	0.40
2:F:94:ASP:OD1	2:F:99:GLY:N	2.40	0.40
2:F:96:ASP:OD1	2:F:96:ASP:N	2.54	0.40
2:F:141:GLU:O	2:F:144:GLN:HG3	2.21	0.40
3:A:1596:THR:HA	3:A:1599:ILE:HG12	2.04	0.40
3:A:1692:THR:OG1	3:A:2293:GLU:OE2	2.24	0.40
3:A:3167:LEU:N	3:A:3168:PRO:HD2	2.37	0.40
3:A:4373:SER:HB3	3:A:4376:GLU:HG3	2.04	0.40
3:B:531:MET:HE3	3:B:531:MET:HB3	1.95	0.40
3:B:807:ASN:OD1	3:B:807:ASN:N	2.54	0.40
3:B:1135:LEU:HD23	3:B:1135:LEU:HA	1.86	0.40
3:B:1417:GLU:HA	3:B:1470:ARG:NH1	2.37	0.40
3:B:1551:ALA:O	3:B:1554:LEU:HB2	2.21	0.40
3:B:2503:ASN:O	3:B:2506:GLN:HG2	2.22	0.40
3:B:2566:ASP:HB2	3:B:2569:VAL:HG12	2.04	0.40
3:B:2700:ALA:HA	3:B:2703:ARG:HG2	2.03	0.40
3:B:3441:LYS:O	3:B:3445:GLU:HG3	2.21	0.40
1:D:85:LYS:HD2	1:D:85:LYS:HA	1.92	0.40
1:D:321:GLN:HG2	3:B:4152:LEU:HD23	2.03	0.40
3:A:1064:LYS:HZ2	3:A:1066:GLU:HB2	1.87	0.40
3:A:1195:LEU:HD23	3:A:1195:LEU:HA	1.83	0.40
3:A:1497:THR:HA	3:A:1500:VAL:HG22	2.02	0.40
3:A:1976:HIS:CD2	3:A:1991:VAL:HG13	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:2131:SER:HB3	3:A:2149:ILE:HD12	2.03	0.40
3:A:3090:LEU:HD13	3:A:3090:LEU:HA	1.93	0.40
3:A:3659:GLN:HG2	3:A:3664:SER:HA	2.03	0.40
3:A:3758:PRO:O	3:A:3761:GLU:HG2	2.20	0.40
3:A:3954:ALA:HA	3:A:3964:LEU:HD22	2.03	0.40
1:C:88:TYR:HD1	1:C:92:SER:HB3	1.85	0.40
3:B:195:ASN:OD1	3:B:195:ASN:C	2.64	0.40
3:B:1471:MET:N	3:B:1471:MET:SD	2.94	0.40
3:B:2018:VAL:HG21	3:B:2049:VAL:HB	2.04	0.40
3:B:4019:ILE:HD13	3:B:4019:ILE:HA	1.91	0.40
3:B:4738:VAL:O	3:B:4742:THR:OG1	2.34	0.40
3:A:531:MET:HE3	3:A:531:MET:HB3	1.92	0.40
3:A:791:LYS:HD3	3:A:836:ILE:HD12	2.04	0.40
3:A:2121:MET:SD	3:A:2133:ALA:HB1	2.62	0.40
3:A:3170:GLN:O	3:A:3173:LYS:HG3	2.22	0.40
3:A:3907:ARG:NH1	3:A:3946:LEU:HD21	2.36	0.40
3:A:4591:LYS:HB2	3:A:4630:LYS:HD2	2.04	0.40
3:A:4593:GLN:H	3:A:4593:GLN:CD	2.21	0.40
3:B:1191:SER:H	3:B:1194:LYS:CE	2.35	0.40
3:B:3170:GLN:O	3:B:3173:LYS:HG3	2.22	0.40
3:B:3818:ILE:HD13	3:B:3818:ILE:HA	1.89	0.40
3:B:4373:SER:HB3	3:B:4376:GLU:HG3	2.03	0.40
3:B:4616:LEU:HD12	3:B:4617:LEU:N	2.36	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	C	177/331 (54%)	173 (98%)	4 (2%)	0	100	100
1	D	177/331 (54%)	174 (98%)	3 (2%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
2	E	147/158 (93%)	144 (98%)	3 (2%)	0	100	100
2	F	147/158 (93%)	144 (98%)	3 (2%)	0	100	100
3	A	3999/4781 (84%)	3856 (96%)	142 (4%)	1 (0%)	100	100
3	B	3999/4781 (84%)	3862 (97%)	136 (3%)	1 (0%)	100	100
All	All	8646/10540 (82%)	8353 (97%)	291 (3%)	2 (0%)	100	100

All (2) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
3	A	923	SER
3	B	923	SER

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	C	160/287 (56%)	160 (100%)	0	100	100
1	D	160/287 (56%)	156 (98%)	4 (2%)	42	69
2	E	127/136 (93%)	124 (98%)	3 (2%)	44	70
2	F	127/136 (93%)	123 (97%)	4 (3%)	35	63
3	A	3569/4176 (86%)	3505 (98%)	64 (2%)	54	76
3	B	3569/4176 (86%)	3500 (98%)	69 (2%)	52	75
All	All	7712/9198 (84%)	7568 (98%)	144 (2%)	52	75

All (144) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	D	27	CYS
1	D	82	TYR
1	D	83	CYS
1	D	110	CYS
2	E	27	THR

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Mol	Chain	Res	Type
2	E	48	GLU
2	E	86	ILE
2	F	27	THR
2	F	86	ILE
2	F	92	VAL
2	F	109	VAL
3	A	127	LYS
3	A	194	LEU
3	A	277	VAL
3	A	278	LEU
3	A	302	LEU
3	A	315	LEU
3	A	334	LEU
3	A	341	VAL
3	A	368	ASP
3	A	382	LEU
3	A	422	LEU
3	A	481	ILE
3	A	512	MET
3	A	695	LYS
3	A	714	ASN
3	A	722	LEU
3	A	845	ASP
3	A	916	GLU
3	A	951	VAL
3	A	1051	VAL
3	A	1052	ASN
3	A	1073	GLU
3	A	1159	LEU
3	A	1288	LEU
3	A	1384	LEU
3	A	1435	PHE
3	A	1453	LEU
3	A	1528	ASN
3	A	1543	THR
3	A	1899	MET
3	A	1977	VAL
3	A	1990	LEU
3	A	2063	ILE
3	A	2143	VAL
3	A	2515	LEU
3	A	2672	LEU

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Mol	Chain	Res	Type
3	A	2972	MET
3	A	3000	MET
3	A	3005	MET
3	A	3163	MET
3	A	3166	ARG
3	A	3214	LEU
3	A	3224	TYR
3	A	3233	LEU
3	A	3244	LEU
3	A	3267	ASP
3	A	3271	SER
3	A	3311	VAL
3	A	3483	GLU
3	A	3504	LEU
3	A	3540	VAL
3	A	3550	ILE
3	A	3682	TYR
3	A	3792	VAL
3	A	3826	LYS
3	A	3830	GLU
3	A	3887	LEU
3	A	3925	VAL
3	A	4109	LEU
3	A	4170	LEU
3	A	4229	SER
3	A	4296	GLU
3	A	4613	LEU
3	A	4616	LEU
3	B	80	LEU
3	B	194	LEU
3	B	277	VAL
3	B	278	LEU
3	B	302	LEU
3	B	315	LEU
3	B	334	LEU
3	B	341	VAL
3	B	368	ASP
3	B	382	LEU
3	B	422	LEU
3	B	481	ILE
3	B	714	ASN
3	B	722	LEU

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Mol	Chain	Res	Type
3	B	845	ASP
3	B	916	GLU
3	B	951	VAL
3	B	970	LEU
3	B	1051	VAL
3	B	1052	ASN
3	B	1092	GLU
3	B	1131	VAL
3	B	1159	LEU
3	B	1167	ASP
3	B	1288	LEU
3	B	1299	ILE
3	B	1410	ILE
3	B	1434	LEU
3	B	1435	PHE
3	B	1453	LEU
3	B	1528	ASN
3	B	1543	THR
3	B	1899	MET
3	B	1977	VAL
3	B	1990	LEU
3	B	2063	ILE
3	B	2143	VAL
3	B	2672	LEU
3	B	3000	MET
3	B	3163	MET
3	B	3166	ARG
3	B	3201	GLN
3	B	3214	LEU
3	B	3224	TYR
3	B	3233	LEU
3	B	3242	LYS
3	B	3244	LEU
3	B	3249	ILE
3	B	3267	ASP
3	B	3311	VAL
3	B	3405	LYS
3	B	3483	GLU
3	B	3504	LEU
3	B	3540	VAL
3	B	3550	ILE
3	B	3575	THR

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Mol	Chain	Res	Type
3	B	3682	TYR
3	B	3720	CYS
3	B	3792	VAL
3	B	3826	LYS
3	B	3830	GLU
3	B	3832	ASP
3	B	3887	LEU
3	B	3925	VAL
3	B	4131	GLN
3	B	4170	LEU
3	B	4186	LEU
3	B	4228	LEU
3	B	4296	GLU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (59) such sidechains are listed below:

Mol	Chain	Res	Type
1	D	122	ASN
1	D	131	HIS
2	E	9	GLN
2	F	9	GLN
2	F	42	GLN
3	A	128	HIS
3	A	196	GLN
3	A	202	ASN
3	A	237	ASN
3	A	404	GLN
3	A	479	HIS
3	A	882	HIS
3	A	1179	GLN
3	A	1266	GLN
3	A	1387	GLN
3	A	1409	GLN
3	A	1488	ASN
3	A	1876	ASN
3	A	1976	HIS
3	A	2166	GLN
3	A	2245	ASN
3	A	2248	ASN
3	A	2310	GLN
3	A	2319	HIS
3	A	2987	GLN

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Mol	Chain	Res	Type
3	A	3201	GLN
3	A	3231	HIS
3	A	3306	GLN
3	A	3400	ASN
3	A	3500	GLN
3	A	3506	ASN
3	A	3591	ASN
3	A	3927	GLN
3	A	4651	HIS
1	C	46	HIS
1	C	122	ASN
3	B	202	ASN
3	B	479	HIS
3	B	881	GLN
3	B	1179	GLN
3	B	1266	GLN
3	B	1488	ASN
3	B	1823	GLN
3	B	1876	ASN
3	B	2166	GLN
3	B	2245	ASN
3	B	2248	ASN
3	B	2319	HIS
3	B	2501	ASN
3	B	3113	GLN
3	B	3306	GLN
3	B	3400	ASN
3	B	3506	ASN
3	B	3569	HIS
3	B	3759	GLN
3	B	3762	ASN
3	B	3927	GLN
3	B	4602	ASN
3	B	4690	ASN

5.3.3 RNA ⓘ

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 20 ligands modelled in this entry, 20 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

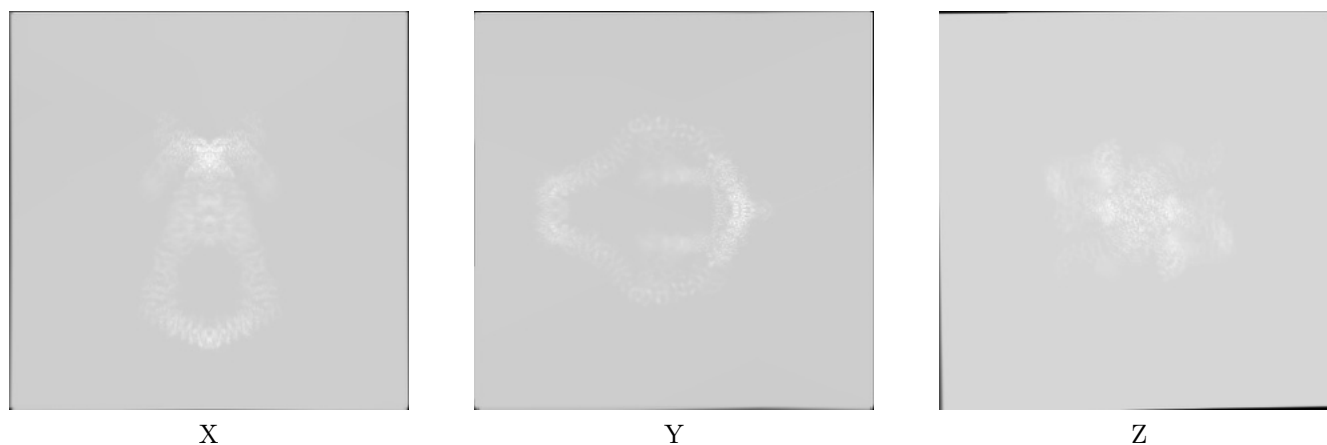
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-52490. 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](#)

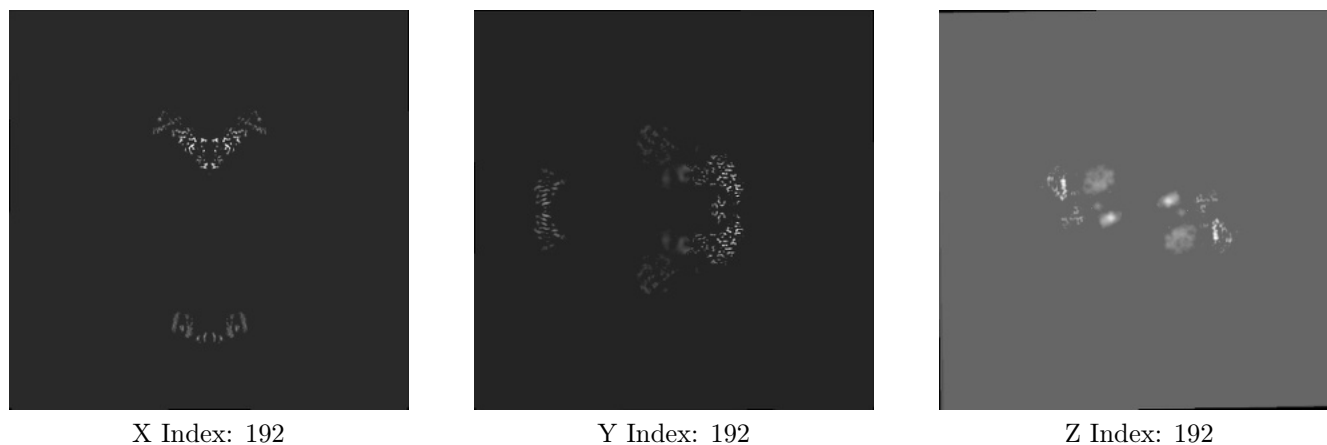
6.1.1 Primary map



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

6.2 Central slices [i](#)

6.2.1 Primary map



X Index: 192

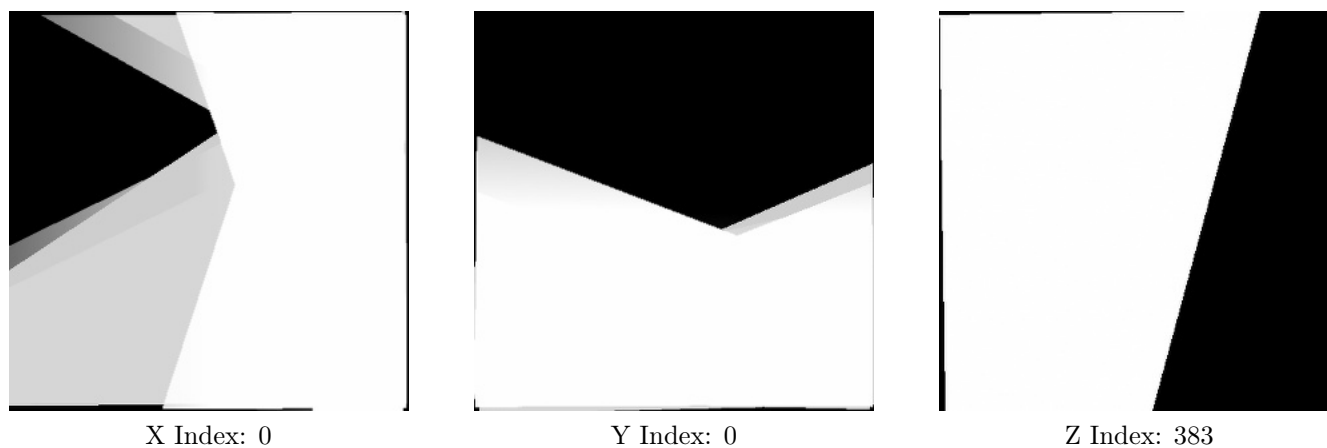
Y Index: 192

Z Index: 192

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

6.3 Largest variance slices [i](#)

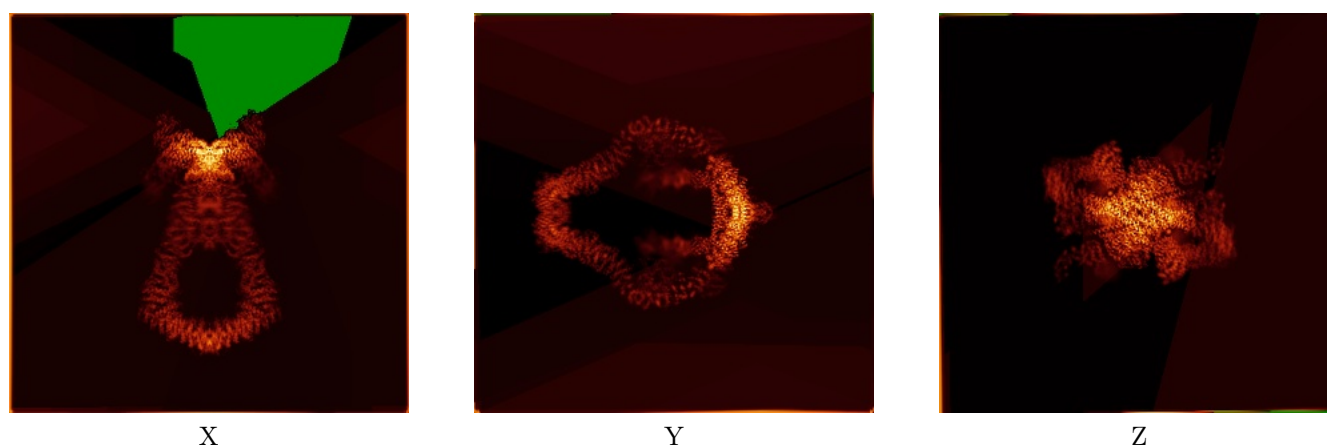
6.3.1 Primary map



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

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

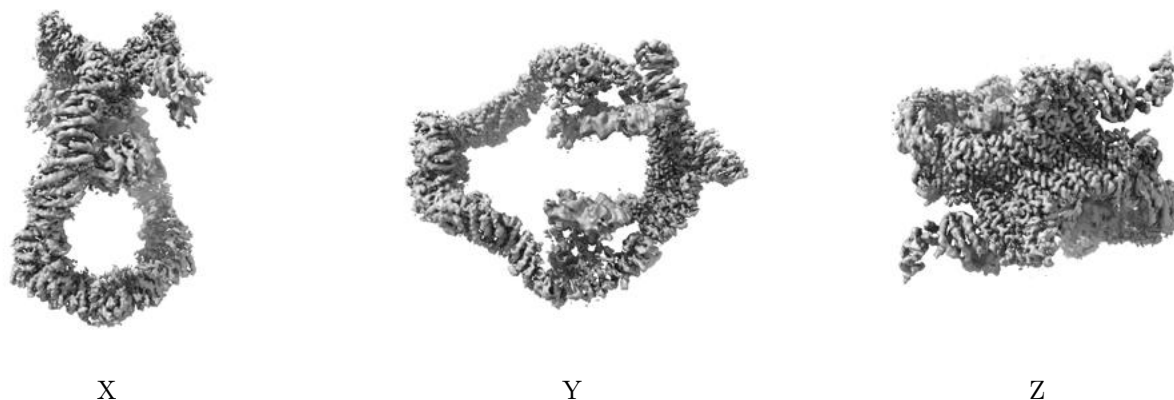
6.4.1 Primary map



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 0.0089. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

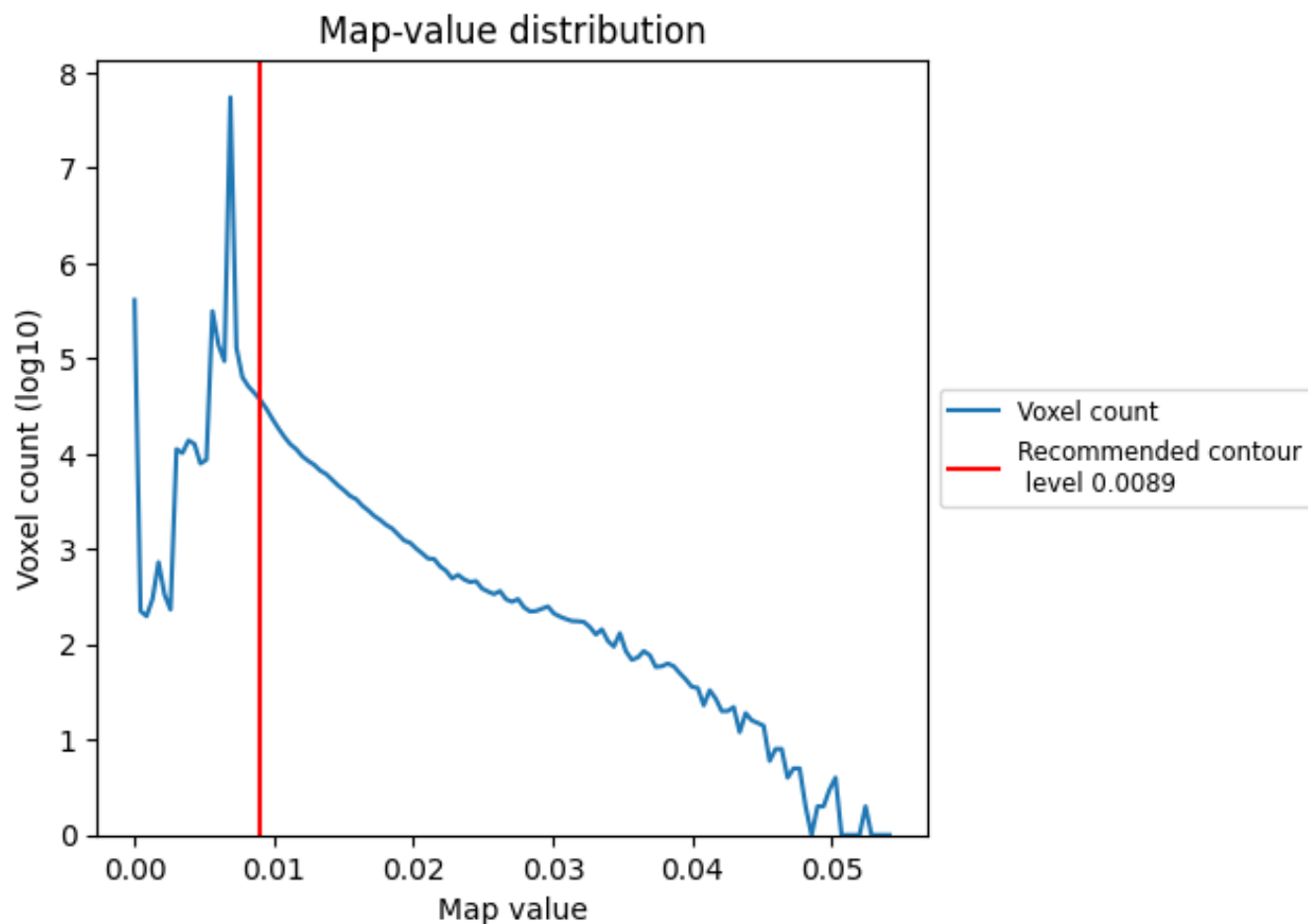
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

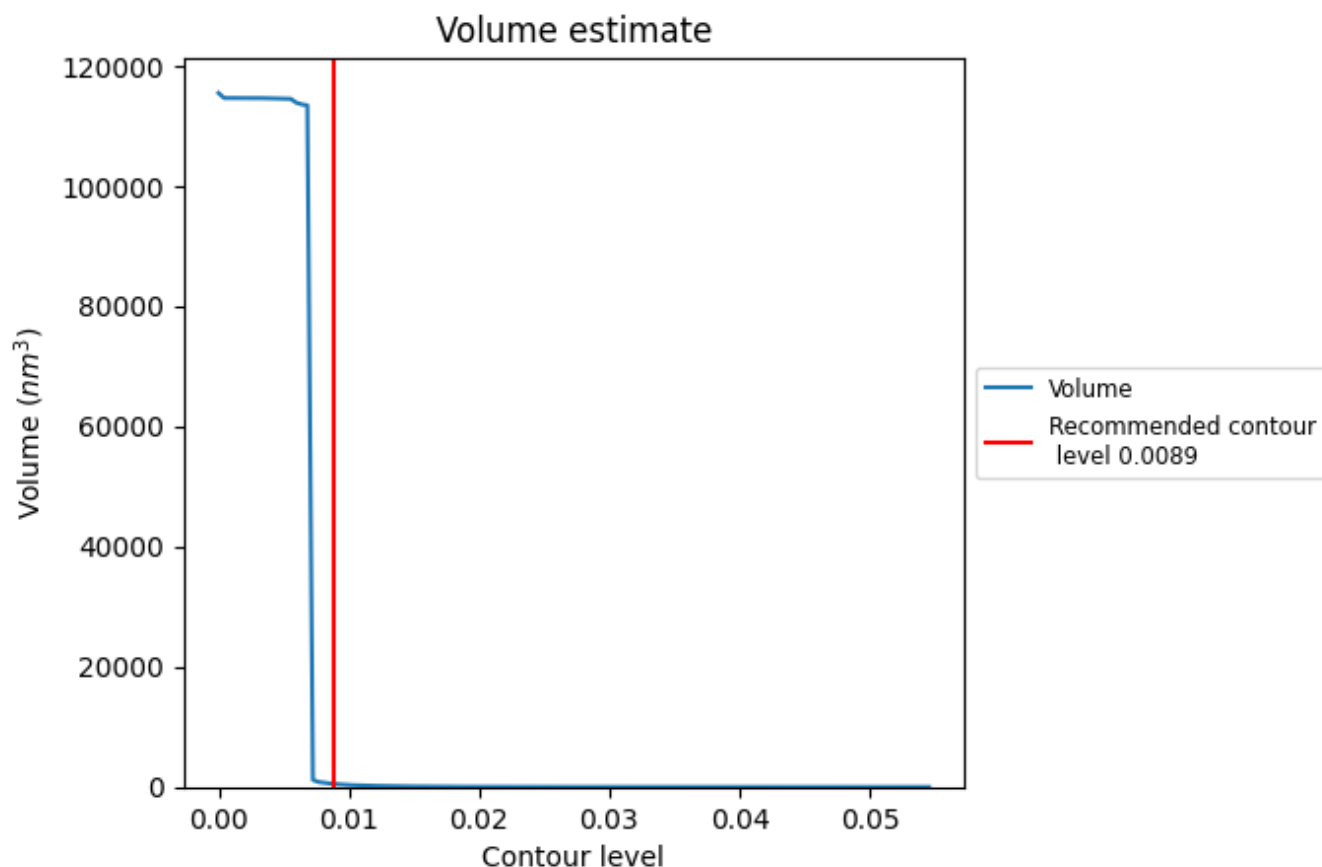
This section contains the results of statistical analysis of the map.

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.

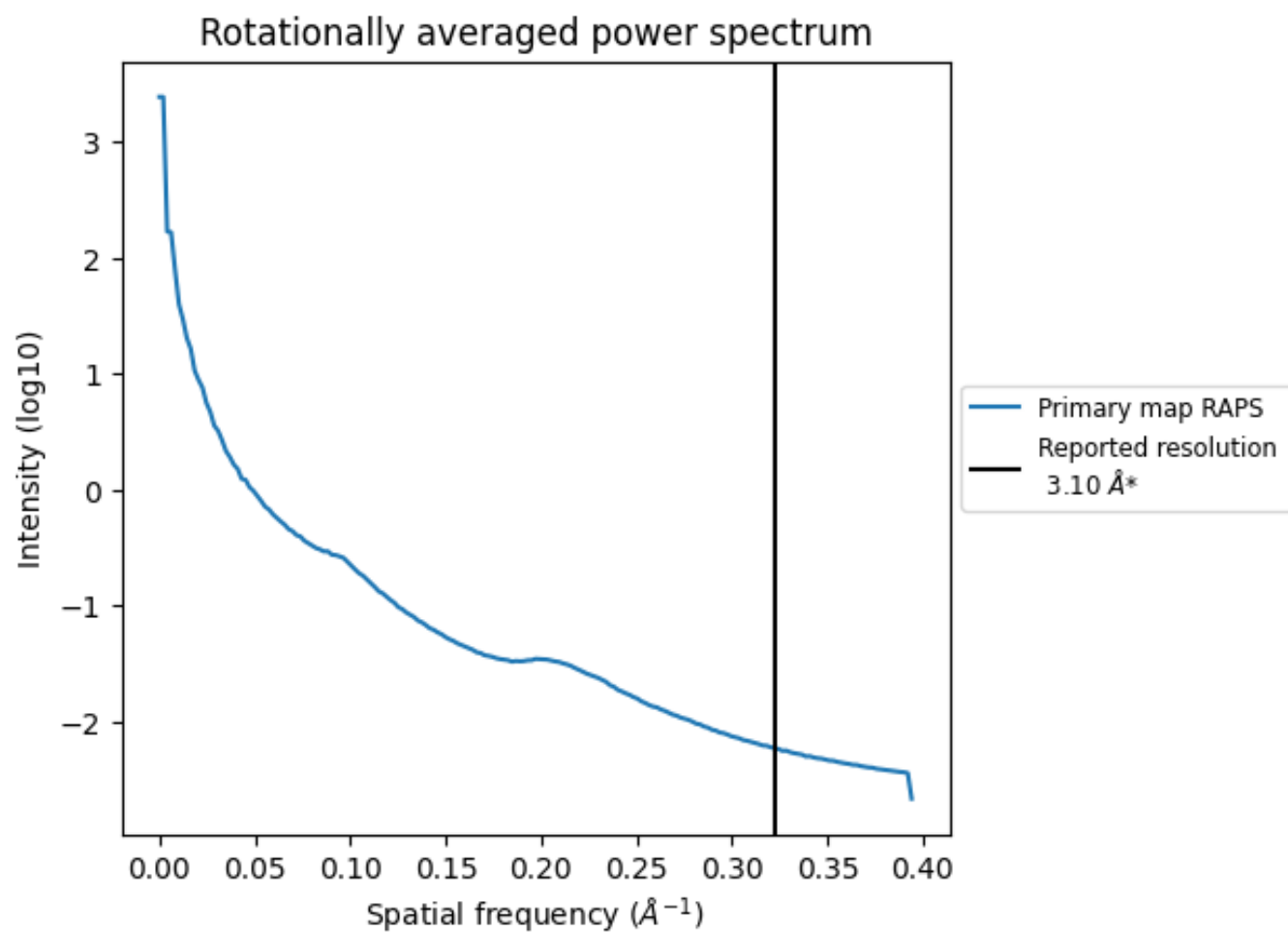
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 507 nm³; this corresponds to an approximate mass of 458 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 0.323 Å⁻¹

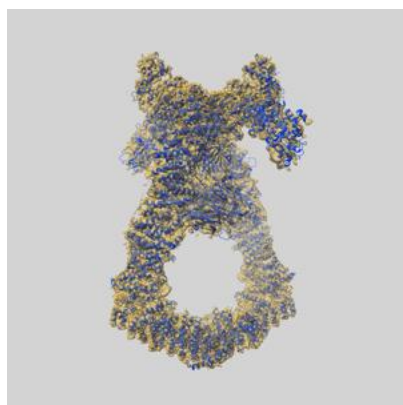
8 Fourier-Shell correlation

This section was not generated. No FSC curve or half-maps provided.

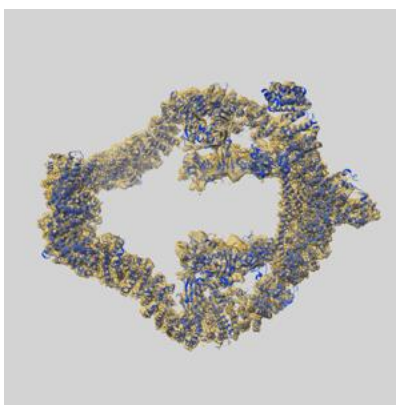
9 Map-model fit [i](#)

This section contains information regarding the fit between EMDB map EMD-52490 and PDB model 9HXW. Per-residue inclusion information can be found in [section 3](#) on [page 6](#).

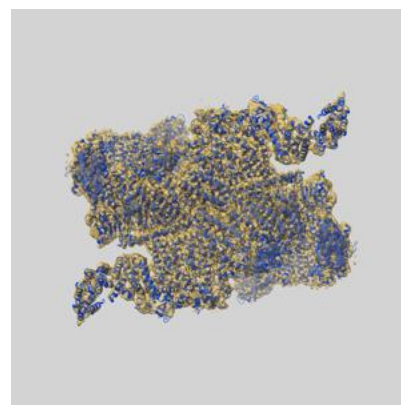
9.1 Map-model overlay [i](#)



X



Y



Z

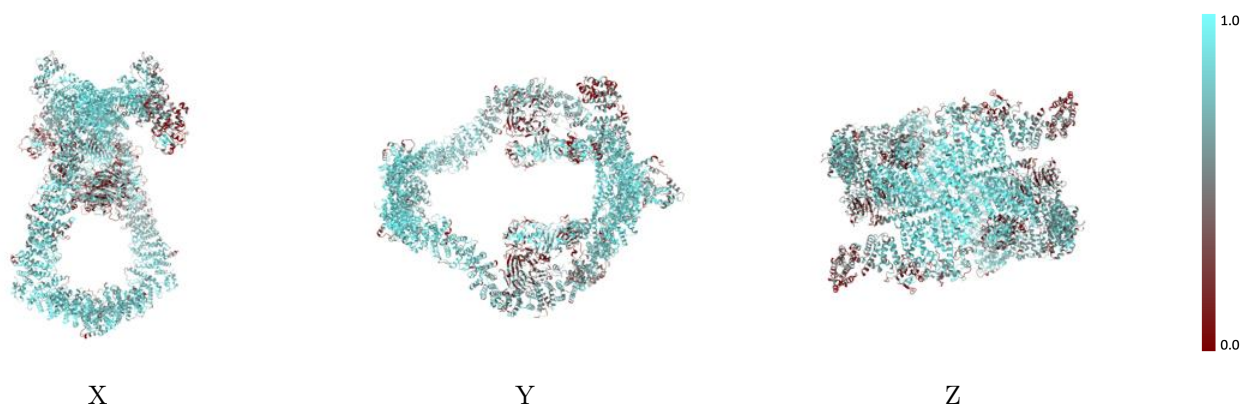
The images above show the 3D surface view of the map at the recommended contour level 0.0089 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



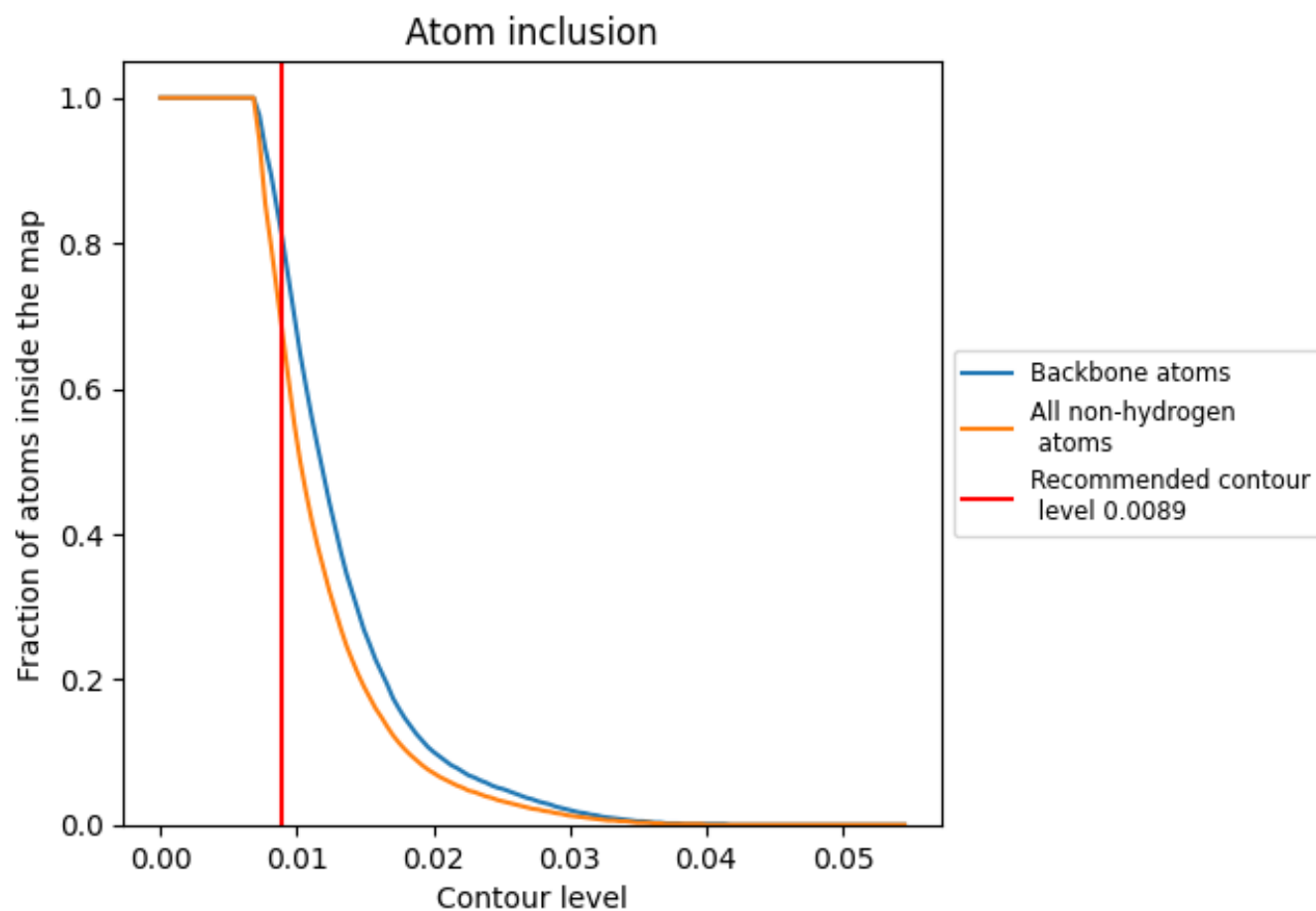
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (0.0089).

9.4 Atom inclusion [i](#)



At the recommended contour level, 81% of all backbone atoms, 68% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary ⓘ

The table lists the average atom inclusion at the recommended contour level (0.0089) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.6810	0.2760
A	0.6890	0.2820
B	0.6910	0.2820
C	0.6150	0.1550
D	0.5610	0.1460
E	0.5590	0.2670
F	0.5710	0.2760

1.0

0.0

<0.0