



# Full wwPDB EM Validation Report ⓘ

Dec 26, 2024 – 08:26 AM EST

PDB ID : 6JG3  
EMDB ID : EMD-9823  
Title : Cryo-EM structure of RyR2 (Ca<sup>2+</sup> alone dataset)  
Authors : Chi, X.M.; Gong, D.S.; Ren, K.; Zhou, G.W.; Huang, G.X.Y.; Lei, J.L.; Zhou, Q.; Yan, N.  
Deposited on : 2019-02-13  
Resolution : 6.10 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](mailto:validation@mail.wwpdb.org)

A user guide is available at

<https://www.wwpdb.org/validation/2017/EMValidationReportHelp>

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

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

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

EMDB validation analysis : 0.0.1.dev113  
MolProbity : 4.02b-467  
Percentile statistics : 20231227.v01 (using entries in the PDB archive December 27th 2023)  
MapQ : 1.9.13  
Ideal geometry (proteins) : Engh & Huber (2001)  
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)  
Validation Pipeline (wwPDB-VP) : 2.40

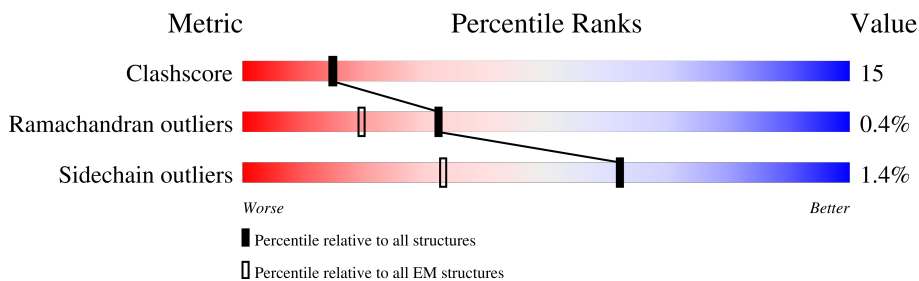
# 1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

*ELECTRON MICROSCOPY*

The reported resolution of this entry is 6.10 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)
Clashscore	210492	15764
Ramachandran outliers	207382	16835
Sidechain outliers	206894	16415

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

Mol	Chain	Length	Quality of chain
1	A	4968	
1	B	4968	
1	C	4968	
1	D	4968	

## 2 Entry composition

There are 2 unique types of molecules in this entry. The entry contains 106185 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a protein called Ryanodine receptor 2.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	A	3477	26546	16893	4545	4951	157	0	0
1	B	3477	26546	16893	4545	4951	157	0	0
1	C	3477	26546	16893	4545	4951	157	0	0
1	D	3477	26543	16890	4545	4951	157	0	0

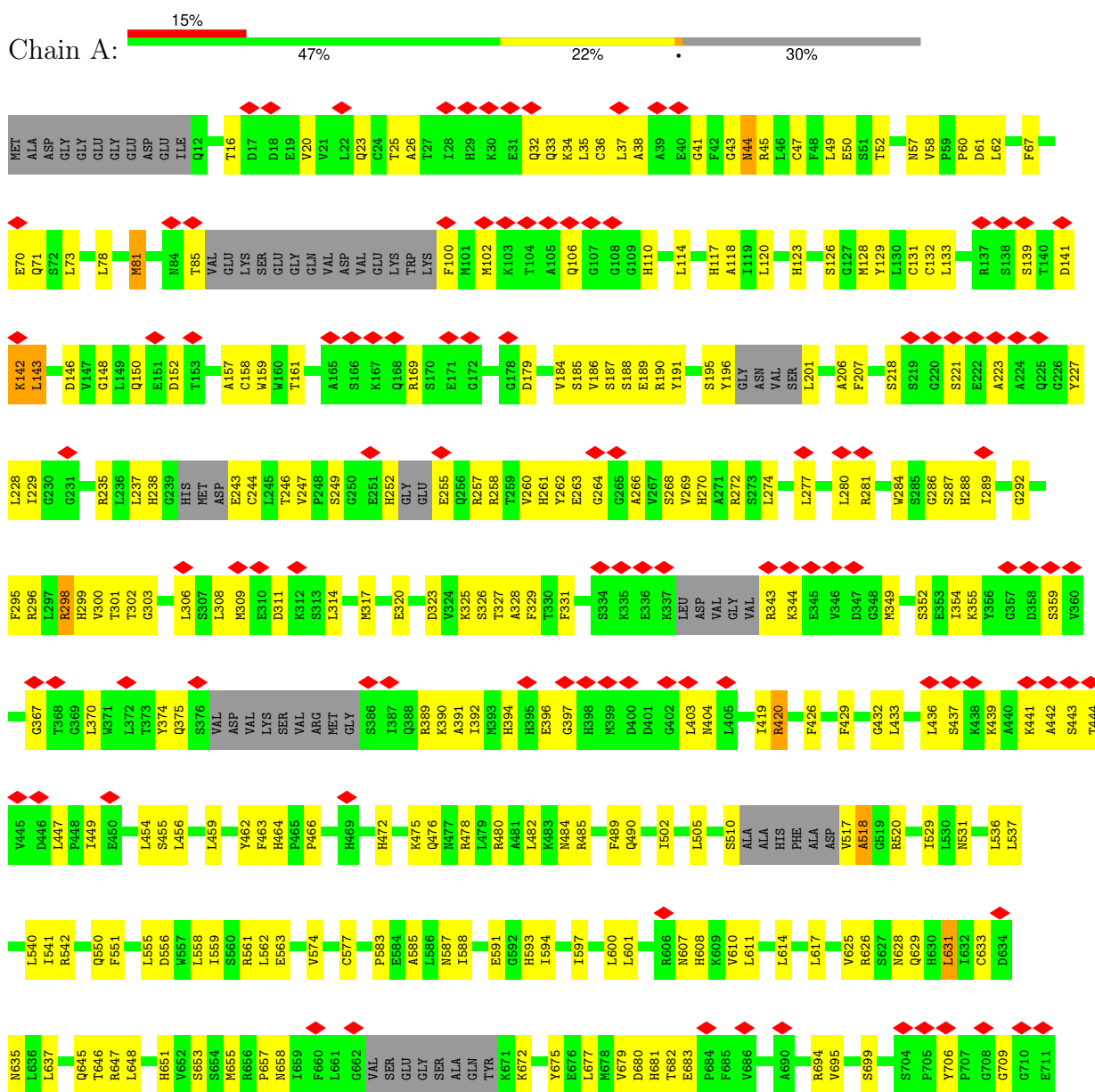
- Molecule 2 is ZINC ION (three-letter code: ZN) (formula: Zn).

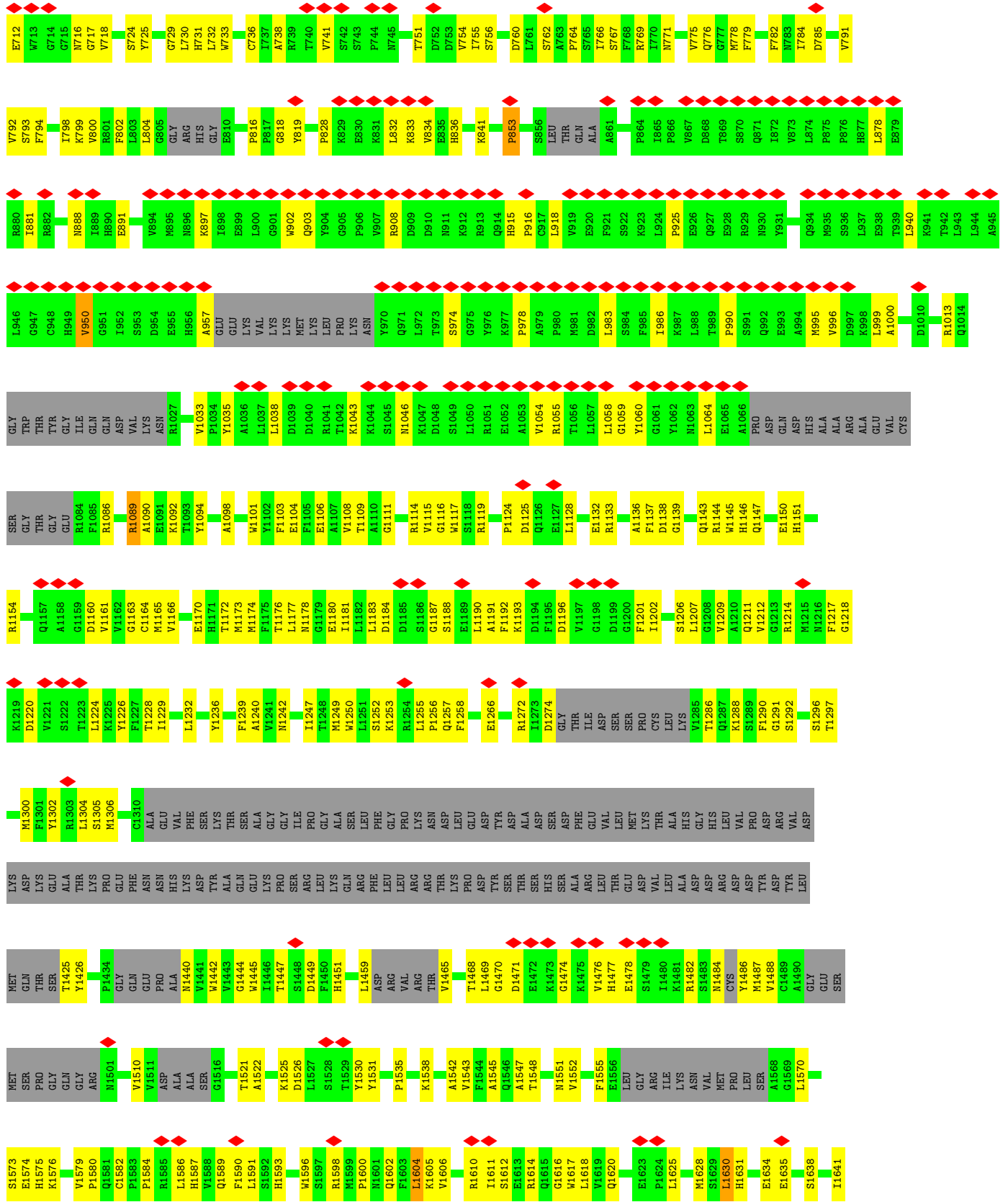
Mol	Chain	Residues	Atoms		AltConf
			Total	Zn	
2	A	1	1	1	0
2	B	1	1	1	0
2	C	1	1	1	0
2	D	1	1	1	0

### 3 Residue-property plots

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

#### • Molecule 1: Ryanodine receptor 2



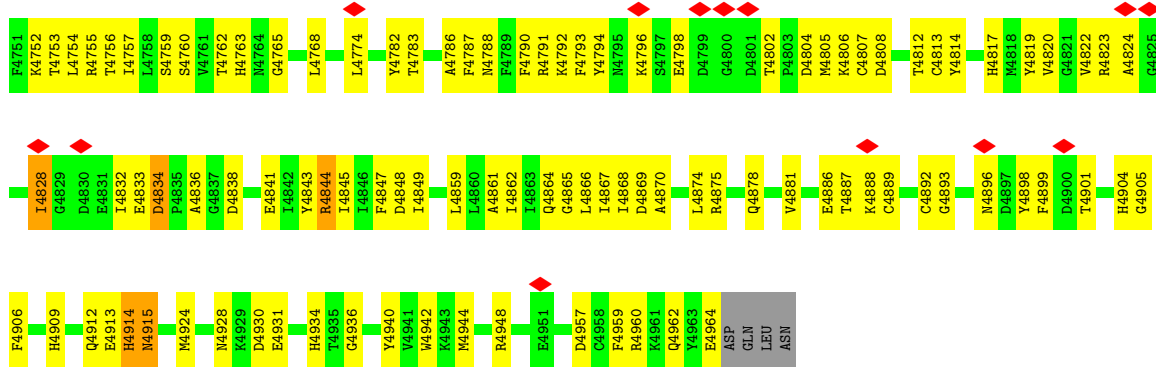


L1642	L1643	L1644	L1645	L1646	L1647	L1651	L1654	L1657	L1658	L1659	L1662	L1663	L1664	L1667	L1668	L1669	L1672	L1673	L1676	L1679	L1680	L1681	L1682	L1683	L1684	L1685	L1686	L1687	L1688	L1691	L1692	L1693	L1694	L1695	L1696	L1699	L1702	L1703	L1704	L1707	L1711	L1718	L1721															
I1726	I1727	P1728	M1729	T1730	L1738	F1739	P1740	D1741	GLU	ASN	LYS	LYS	LYS	HIS	G1747	L1748	P1749	G1750	G1751	G1752	S1756	L1757	R1758	P1759	M1760	M1761	P1766	S1767	PHE	P1683	VAL	GLU	SER	ILE	ASN	M1773	Q1777	L1781	E1781	F1782	P1783	I1786	I1792	L1795	V1799	S1803	L1804	R1807	D1808	G1811								
F1816	V1819	P1820	K1823	L1828	M1831	G1832	CYS	F1833	F1834	H1835	M1836	E1837	D1838	L1839	K1840	H1841	I1842	L1843	E1847	P1848	S1849	VAL	PHE	LYS	GLU	ALA	ALA	GLY	PRO	ALA	GLU	GLU	GLU	ASN	GLU	SER	ASP	THR	LEU	GLU	LYS	ARG	GLU	PRO	ALA	ALA	GLU	GLU	GLU									
SER	LYS	GLY	GLY	ARG	PRO	LYS	GLU	G1893	P1900	K1904	C1908	Q1912	R1920	H1921	R1922	I1923	I1926	F1929	V1934	V1943	MET	GLN	ALA	LEU	LEU	GLY	ASP	ASN	MET	SER	ALA	ALA	ALA	THR	LEU	THR	LYS	ARG	LYS	THR	LYS	PHE	ARG	SER	PRO	ARG	PRO	LEU	GLM	GLY	PRO	ALA	ASN	MET	LEU			
LEU	ASN	PHE	LYS	ASP	ASP	LYS	SER	CYS	PRO	CYS	PRO	GLU	ILE	D1995	G1996	L1997	D1999	D2003	E2011	L2012	D2013	GLU	ASP	GLY	SER	LEU	ASP	GLY	ASN	S2022	D2023	L2024	T2025	L2026	R2027	L2030	L2031	S2032	L2033	K2036	V2037	T2038	Y2039	L2040	LYS	LYS	LYS	GLN	ALA	ALA	GLU	LYS						
LEU	VAL	GLU	SER	ASP	SER	LYS	SER	T2058	L2059	L2062	I2063	T2066	R1994	M2067	E2073	S2074	V2075	L2081	L2088	L2089	H2090	R2091	D2094	L2103	T2106	Y2107	N2110	D2116	T2117	I2118	L2121	A2122	S2123	Q2126	I2127	L2130	M2135	G2136	E2140	K2141	L2142	M2143	L2144															
R2145	D2149	N2153	Q2158	G2181	GLY	GLU	SER	L2059	L2062	I2063	T2066	R1994	M2067	E2073	S2074	V2075	L2081	L2088	L2089	H2090	R2091	D2094	L2103	T2106	Y2107	N2110	D2116	T2117	I2118	L2121	A2122	S2123	Q2126	I2127	L2130	M2135	G2136	E2140	K2141	L2142	M2143	L2144																
E2253	L2254	A2255	L2256	A2257	L2258	V2266	R2267	R2268	Y2269	L2270	L2275	GLN	SER	CYS	GLN	MET	LEU	VAL	SER	LYS	TRP	ASN	P2293	G2296	E2297	R2298	Y2299	R2304	F2305	A2306	V2307	F2308	C2309	S2313	L2324	L2325	L2326	R2327	F2328	R2328	P2240	V2243	A2246	S2247	V2248													
LEU	ARG	GLY	GLU	GLY	GLY	G2343	L2344	M2348	E2349	E2350	A2351	I2354	ALA	GLU	ASP	PRO	PRO	THR	THR	SER	GLY	PRO	SER	LYS	MET	PRO	ASP	THR	THR	ILE	HIS	MET	G2386	F2392	R2402	C2463	A2404	PRO	GLU	MET	PHE	GLY	GLY	PRO	PRO	ALA												
HIS	ALA	LYS	LYS	GLY	E2416	A2417	I2418	R2421	S2422	I2423	L2424	R2425	S2426	LEU	PRO	L2503	G2431	D2432	L2433	V2436	I2437	S2438	I2439	A2440	F2441	Q2442	MET	PRO	THR	ILE	ALA	ALA	LYS	ASP	ASN	VAL	VAL	GLU	PRO	ASP	ASP	L2535	F2536	A2537	G2538	L2549	V2553	TYR	ARG	LEU	SER	K2558	L2562	A2565	E2571	V2572	C2573	L2574
V2476	Y2477	ILE	CYS	GLU	V2481	Q2482	F2484	L2485	L2486	L2489	GLU	ASN	VAL	G2492	L2503	ASP	THR	THR	ALA	ALA	LEU	SER	ALA	T2511	Y2520	L2521	C2522	T2523	L2529	THR	ARG	CYS	ALA	ALA	PRO	L2535	F2536	A2537	G2538	L2549	V2553	TYR	ARG	LEU	SER	K2558	L2562	A2565	E2571	V2572	C2573	L2574						
L2575	S2576	ILE	CYS	GLY	GLN	R2582	P2583	S2584	D2596	V2597	P2598	L2599	L2600	M2601	GLU	HIS	GLU	LYS	GLN	SER	C2623	L2624	S2627	TRP	L2621	ASN	PHE	GLY	ALA	A2634	S2635	R2642	R2643	K2644	L2649	L2653	SER	GLN	LYS	Y2658	E2659	Q2660	E2661	L2662	F2662	K2664	L2665	A2666	L2667	P2668	C2669	L2670	S2729	H2730	D2731	K2732		
A2672	V2673	A2674	G2675	F2678	P2679	TYR	MET	GLU	SER	ASN	TYR	VAL	SER	MET	MET	GLU	LYS	GLN	SER	C2623	L2624	S2627	TRP	L2621	ASN	PHE	GLY	ALA	A2634	S2635	R2642	R2643	K2644	L2649	L2653	SER	GLN	LYS	Y2658	E2659	Q2660	E2661	L2662	F2662	K2664	L2665	A2666	L2667	P2668	C2669	L2670	S2729	H2730	D2731	K2732			

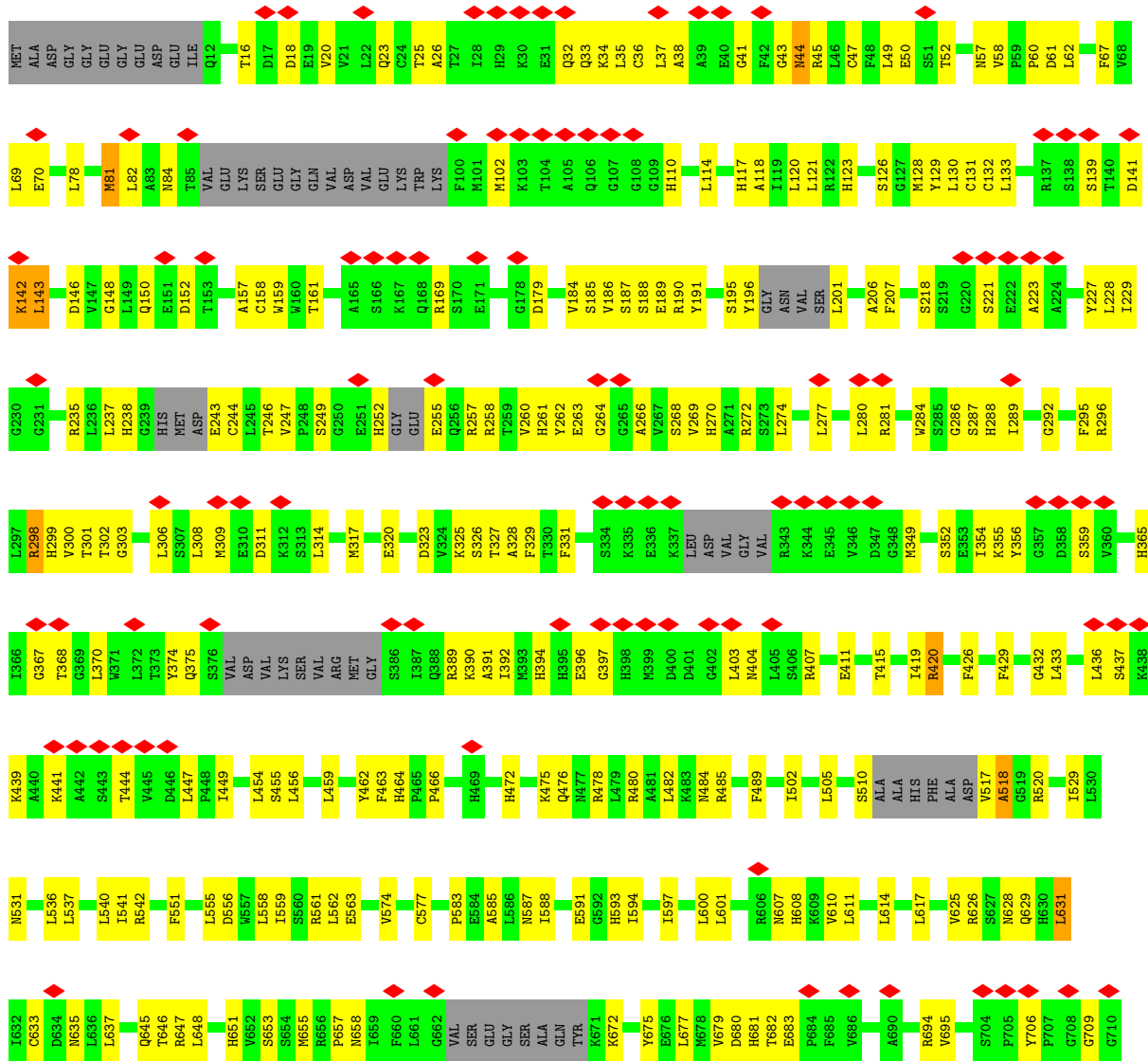


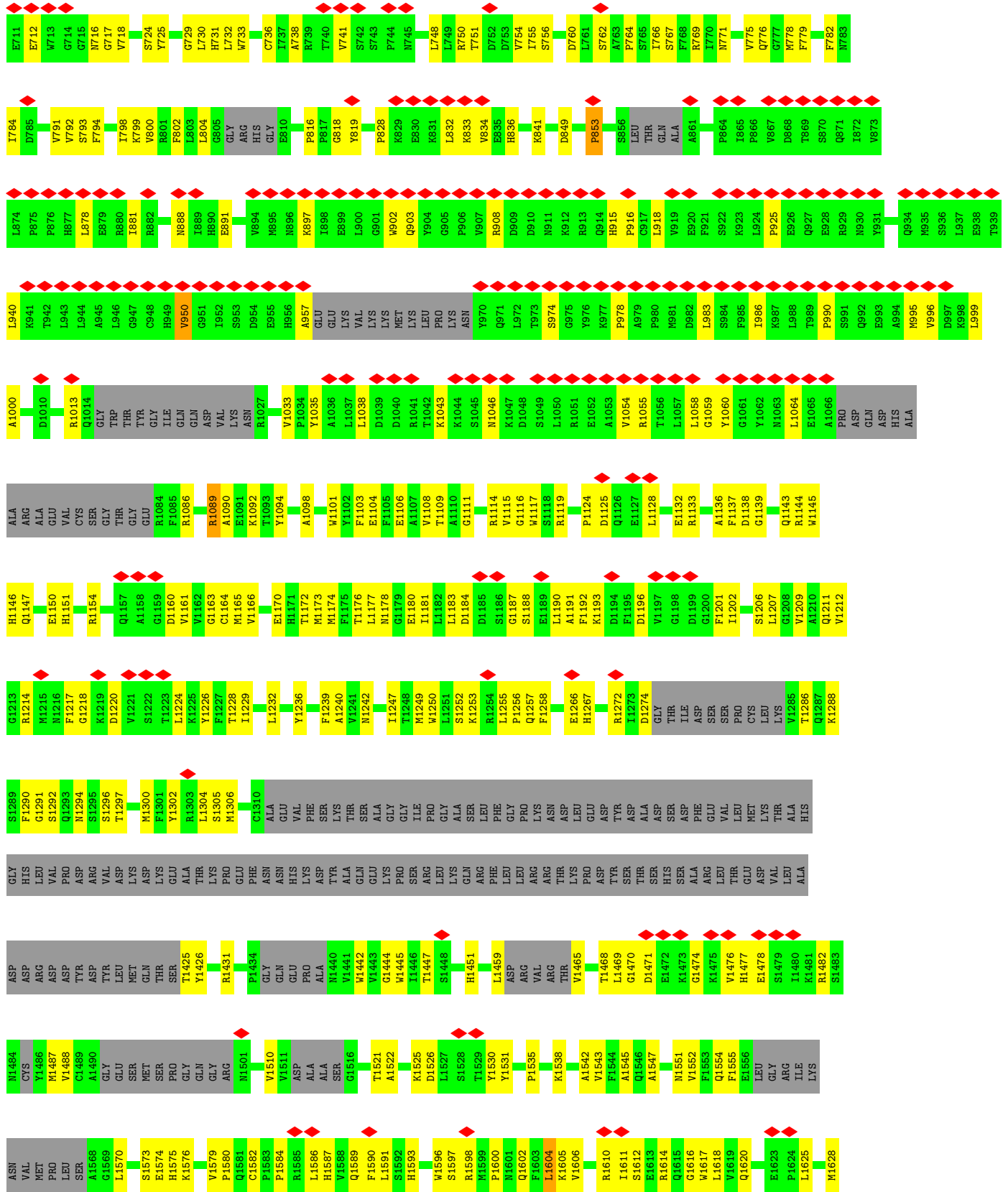


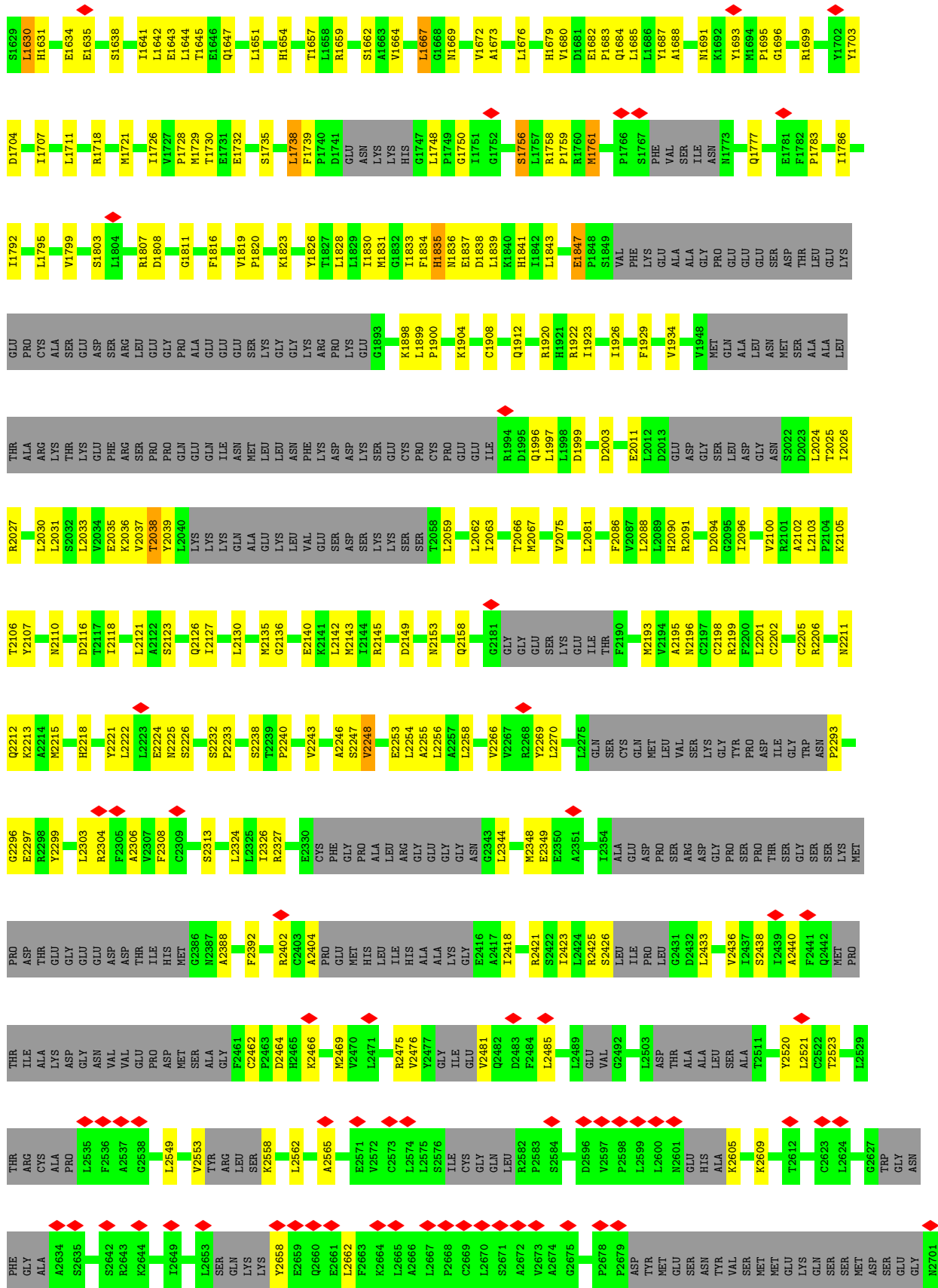




• Molecule 1: Ryanodine receptor 2

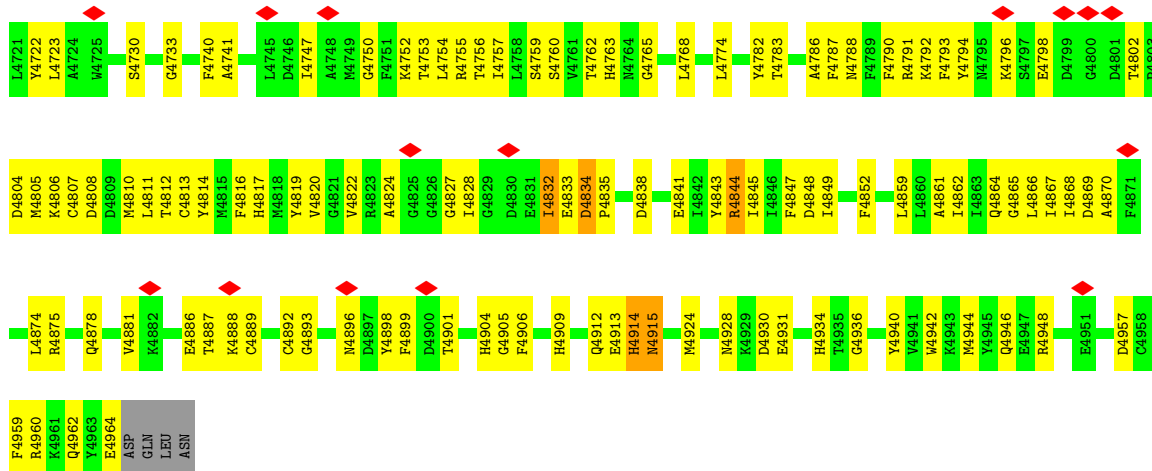




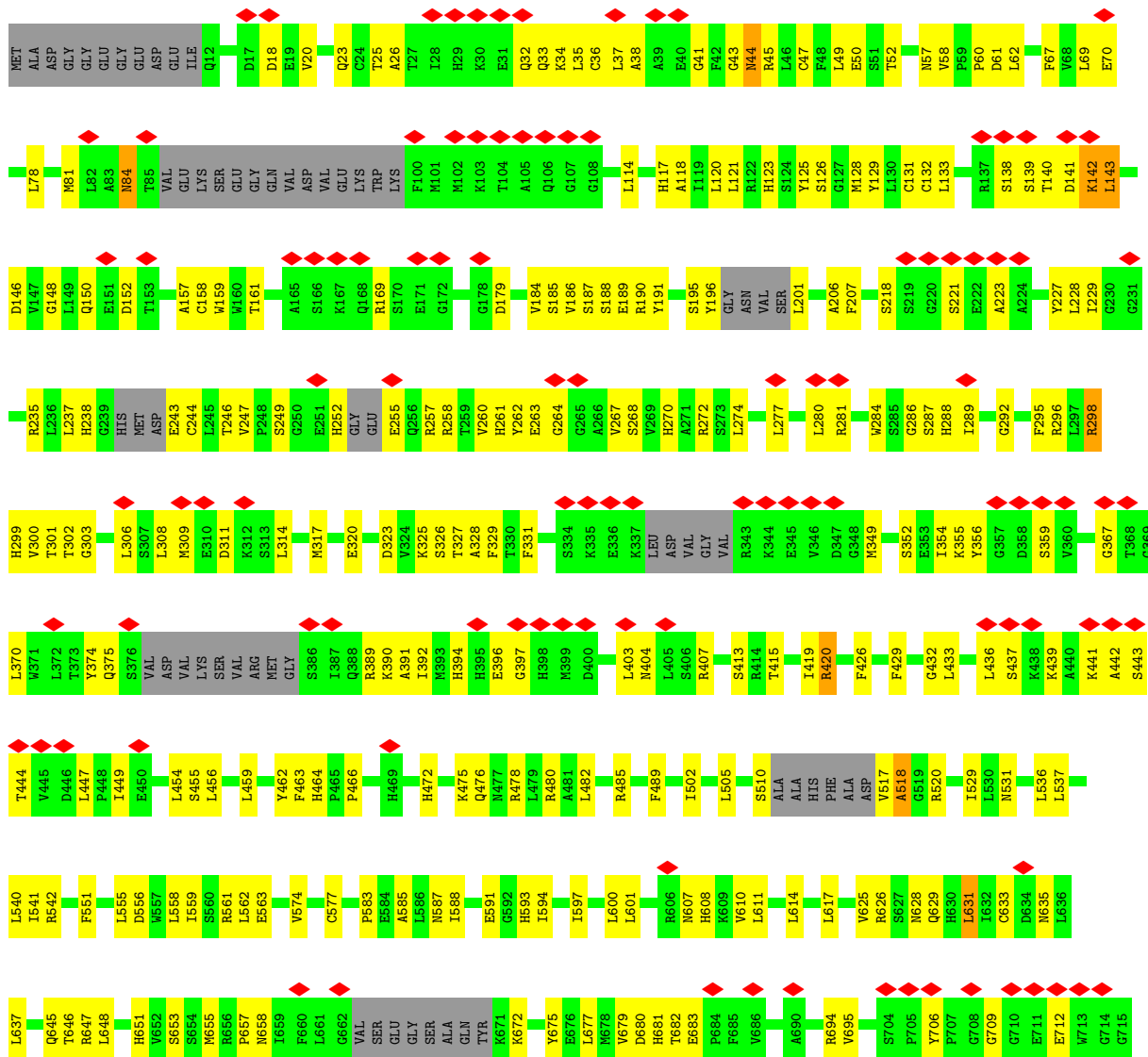


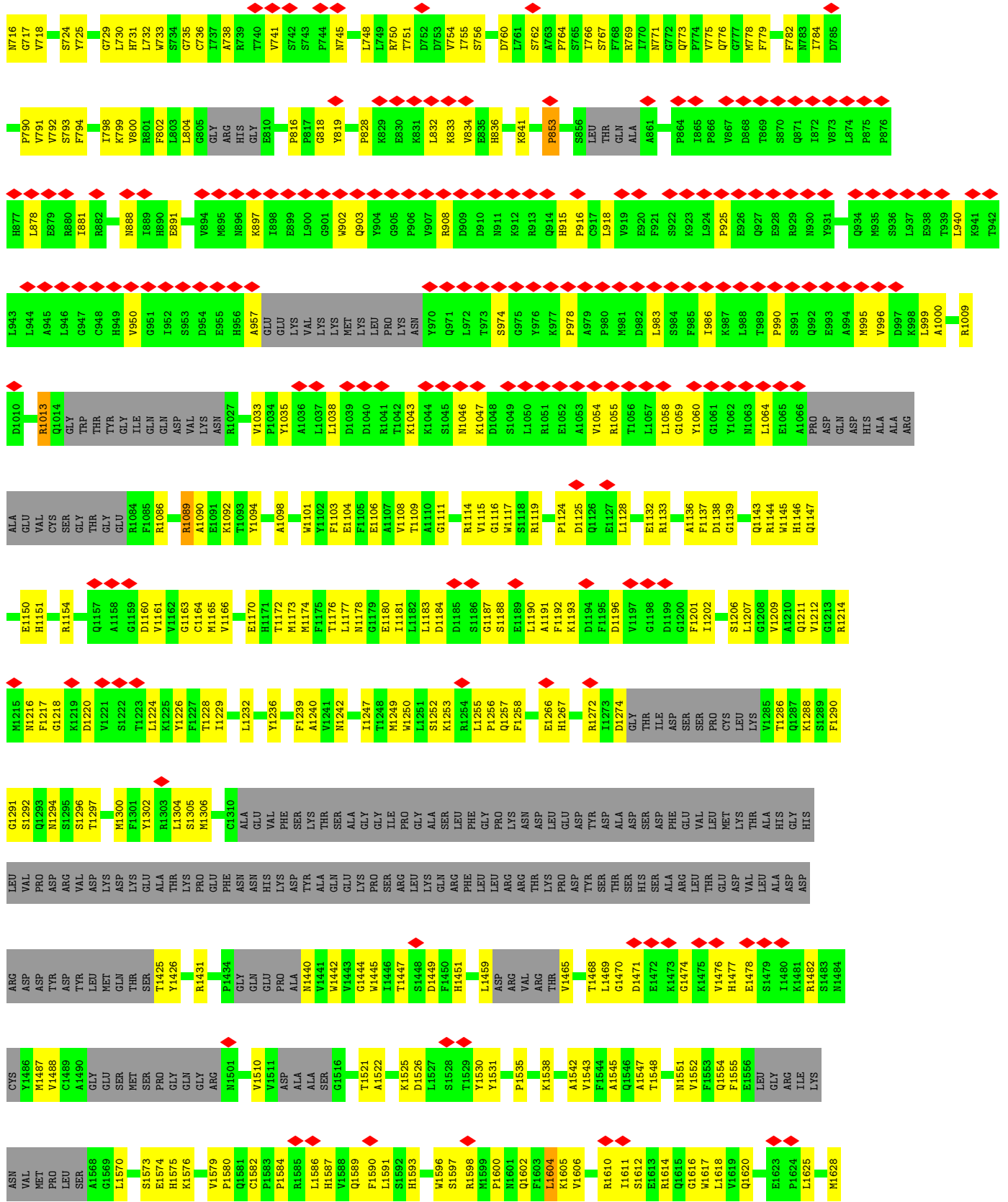
ASP	PRO	ASN	ALA	SER	CYS	ILE	L3124	D3063	E3003	LEU	E2882	Y2822	K2762	F2702
PRO	GLY	GLN	ARG	THR	SER	TYR	E3125	N3064	M3004	GLU	K2883	S2823	K2763	M2703
GLN	ASP	ILE	D3126	A3065	TYR	ASN	V3005	R3005	H3005	PHE	A2884	P2824	L2764	M2704
THR	LEU	ASN	V3127	A3066	SER	LYS	A3067	T3006	T3006	GLY	K2885	R2825	S2765	Q2705
VAL	ILE	SER	Q3128	E3067	TRP	ARG	D3068	F3009	F3009	GLY	R2886	A2826	K2766	P2706
ARG	ALA	TRP	V3129	D3068	TRP	SER	L3069	L3069	L3069	SER	R2887	I2827	K2767	V2707
ALA	LEU	TRP	S3130	L3069	ARG	ARG	K3071	K3071	K3071	ARG	E2888	D2828	E2768	D2708
LEU	LEU	ARG	E3070	E3070	GLU	ALA	K3011	K3011	K3011	SER	K2889	M2829	K2769	T2709
LEU	ALA	LEU	Y3132	K3071	ALA	LEU	L3012	L3012	L3012	GLY	A2890	S2830	E2770	S2710
LEU	LEU	LEU	K3013	K3072	ALA	LEU	G3013	G3013	G3013	GLY	K2891	M2831	I2771	M2711
ASN	ASN	ASN	V3014	M3073	ASN	ASN	V3014	V3014	V3014	HIS	Q2892	S2832	Y2772	I2712
ASN	LEU	LEU	L3015	L3015	PRO	PRO	L3015	L3015	L3015	PRO	D2893	T2833	R2773	T2713
LEU	LEU	LEU	V3016	V3016	THR	THR	V3016	V3016	V3016	TYR	L2894	L2834	W2774	I2714
GLY	GLY	GLY	L3017	L3017	THR	THR	R3017	R3017	R3017	GLN	K2895	S2835	P2775	P2715
GLY	ALA	VAL	H3018	H3018	VAL	VAL	H3018	H3018	H3018	ILE	F2896	R2836	I2776	E2716
ASN	ASN	ASP	G3019	G3019	ASP	ASP	G3019	G3019	G3019	ILE	L2897	L2837	K2777	K2717
ASP	ASP	VAL	Q3080	Q3080	VAL	VAL	I3020	I3020	I3020	LYS	Q2898	D2837	K2778	L2718
GLY	VAL	CYS	F3081	F3081	CYS	CYS	S3021	S3021	S3021	PHE	L2899	H2839	S2779	E2719
PRO	PRO	PRO	T3082	T3082	PRO	PRO	L3022	L3022	L3022	ALA	M2900	A2840	E2780	Y2720
ASN	ASN	ASN	HIS	HIS	ASN	ASN	F3023	F3023	F3023	VAL	Q2901	M2841	K2781	F2721
ASN	ASN	ASN	T3028	T3028	ASN	ASN	G3024	G3024	G3024	VAL	A2902	E2842	L2782	I2722
VAL	VAL	VAL	N3025	N3025	VAL	VAL	N3025	N3025	N3025	LEU	Y2904	A2843	M2783	M2723
GLY	GLY	GLY	D3026	D3026	GLY	GLY	D3026	D3026	D3026	PRO	M2844	L2784	L2784	K2724
ILE	ILE	ILE	A3027	A3027	ILE	ILE	A3027	A3027	A3027	ILE	M2845	A2785	A2785	Y2725
TYR	TYR	TYR	L3034	L3034	TYR	TYR	L3034	L3034	L3034	ASP	R2906	A2846	W2786	A2726
GLY	GLY	GLY	SER	SER	GLY	GLY	SER	SER	SER	GLN	Q2907	E2847	G2787	E2727
VAL	VAL	VAL	ILE	ILE	VAL	VAL	ILE	ILE	ILE	TYR	PHE	A2848	W2788	H2728
THR	THR	THR	N3035	N3035	THR	THR	N3035	N3035	N3035	PHE	L2898	M2848	W2788	H2728
GLY	GLY	GLY	V3036	V3036	GLY	GLY	V3036	V3036	V3036	ASN	Y2849	Y2849	R2789	S2729
GLY	GLY	GLY	L3037	L3037	GLY	GLY	L3037	L3037	L3037	ASN	H2850	H2850	I2790	H2730
ILE	ILE	ILE	G3038	G3038	ILE	ILE	G3038	G3038	G3038	HIS	N2851	N2851	E2791	D2731
ASN	ASN	ASN	Q3039	Q3039	ASN	ASN	Q3039	Q3039	Q3039	HIS	N2852	N2852	R2792	D2732
ASN	ASN	ASN	T3040	T3040	ASN	ASN	T3040	T3040	T3040	ARG	L2853	L2853	R2792	K2732
ASN	ASN	ASN	L3041	L3041	ASN	ASN	L3041	L3041	L3041	ARG	Y2882	Y2882	R2792	W2733
ASN	ASN	ASN	D3042	D3042	ASN	ASN	D3042	D3042	D3042	ARG	F2883	F2883	T2793	M2733
GLY	GLY	GLY	A3043	A3043	GLY	GLY	A3043	A3043	A3043	ARG	L2984	L2984	R2794	M2734
ASN	ASN	ASN	R3044	R3044	ASN	ASN	R3044	R3044	R3044	GLU	S2985	S2985	R2794	M2734
HIS	HIS	HIS	L3044	L3044	HIS	HIS	L3044	L3044	L3044	GLY	A2986	A2986	G2796	M2735
VAL	VAL	VAL	S3107	S3107	VAL	VAL	S3107	S3107	S3107	LYS	L2987	L2987	G2796	D2736
VAL	VAL	VAL	S3108	S3108	VAL	VAL	S3108	S3108	S3108	ARG	A2987	A2987	T2797	K2737
VAL	VAL	VAL	L3109	L3109	VAL	VAL	L3109	L3109	L3109	ARG	L2988	L2988	SER	L2738
VAL	VAL	VAL	F3110	F3110	VAL	VAL	F3110	F3110	F3110	ARG	L2989	L2989	MET	A2739
VAL	VAL	VAL	E3111	E3111	VAL	VAL	E3111	E3111	E3111	PHE	L2990	L2990	ALA	A2739
VAL	VAL	VAL	H3112	H3112	VAL	VAL	H3112	H3112	H3112	THR	C2992	C2992	LEU	A2740
VAL	VAL	VAL	I3113	I3113	VAL	VAL	I3113	I3113	I3113	THR	L2991	L2991	TYR	M2740
VAL	VAL	VAL	G3114	G3114	VAL	VAL	G3114	G3114	G3114	THR	C2993	C2993	ASN	G2741
VAL	VAL	VAL	Q3115	Q3115	VAL	VAL	Q3115	Q3115	Q3115	THR	L2994	L2994	THR	M2741
VAL	VAL	VAL	H3116	H3116	VAL	VAL	H3116	H3116	H3116	THR	G2995	G2995	THR	M2741
VAL	VAL	VAL	Q3117	Q3117	VAL	VAL	Q3117	Q3117	Q3117	THR	H2996	H2996	ARG	M2744
VAL	VAL	VAL	F3118	F3118	VAL	VAL	F3118	F3118	F3118	ARG	A2997	A2997	ARG	G2745
GLY	GLY	GLY	L3176	L3176	GLY	GLY	L3176	L3176	L3176	ARG	L2998	L2998	ILE	E2746
GLY	GLY	GLY	D3177	D3177	GLY	GLY	D3177	D3177	D3177	VAL	H2999	H2999	THR	I2747
ASP	ASP	ASP	K3178	K3178	ASP	ASP	K3178	K3178	K3178	VAL	N2999	N2999	THR	E2748
ASP	ASP	ASP	H3179	H3179	ASP	ASP	H3179	H3179	H3179	ALA	K3000	K3000	SER	M2749
ASP	ASP	ASP	N3180	N3180	ASP	ASP	N3180	N3180	N3180	ALA	E3001	E3001	VAL	D2750
ASP	ASP	ASP	I3181	I3181	ASP	ASP	I3181	I3181	I3181	HIS	L2871	L2871	SER	M2751
ASP	ASP	ASP	Y3182	Y3182	ASP	ASP	Y3182	Y3182	Y3182	GLN	L2872	L2872	SER	S2752
S3183	S3183	S3183	F3061	F3061	S3183	S3183	F3061	F3061	F3061	GLN	V2816	V2816	SER	K2753
			L3062	L3062	ALA	ALA	L3062	L3062	L3062	ALA	D2817	D2817	ALA	I2754
			ALA	ALA	ALA	ALA	ALA	ALA	ALA	LEU	A2818	A2818	ALA	P2756
			ALA	ALA	ALA	ALA	ALA	ALA	ALA	LEU	Y2875	Y2875	ALA	L2757
			ALA	ALA	ALA	ALA	ALA	ALA	ALA	ARG	H2820	H2820	ALA	K2758
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														P2760
														Y2761

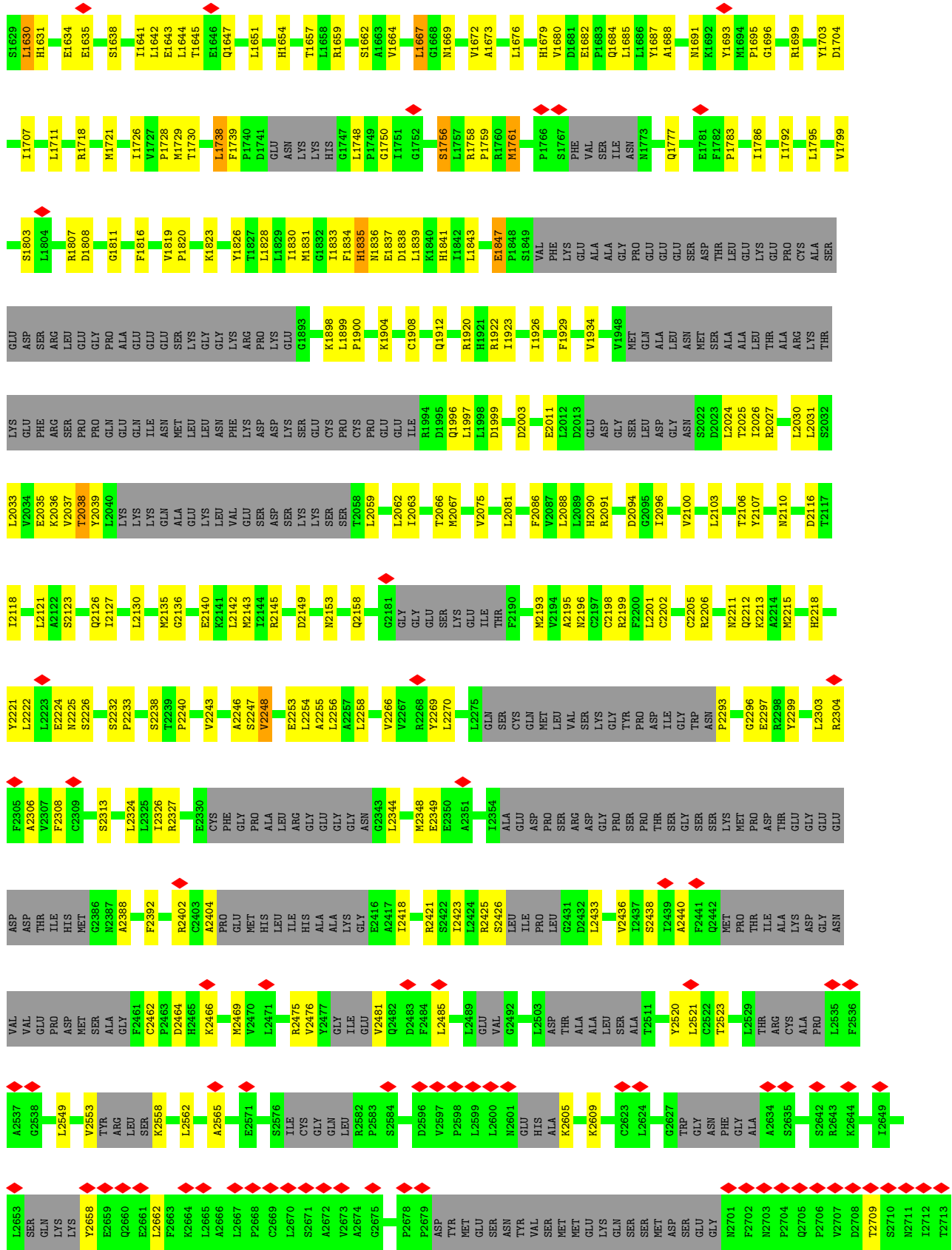




• Molecule 1: Ryanodine receptor 2



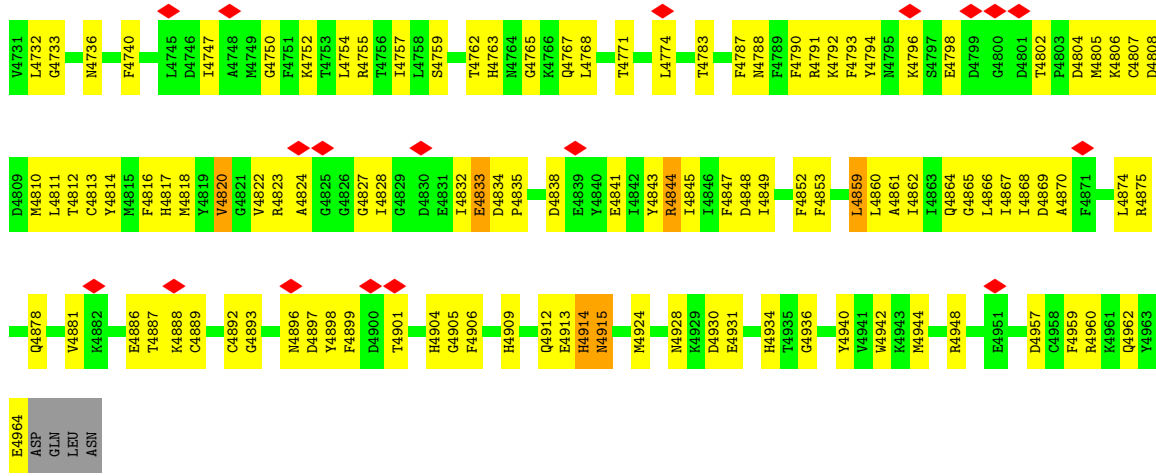




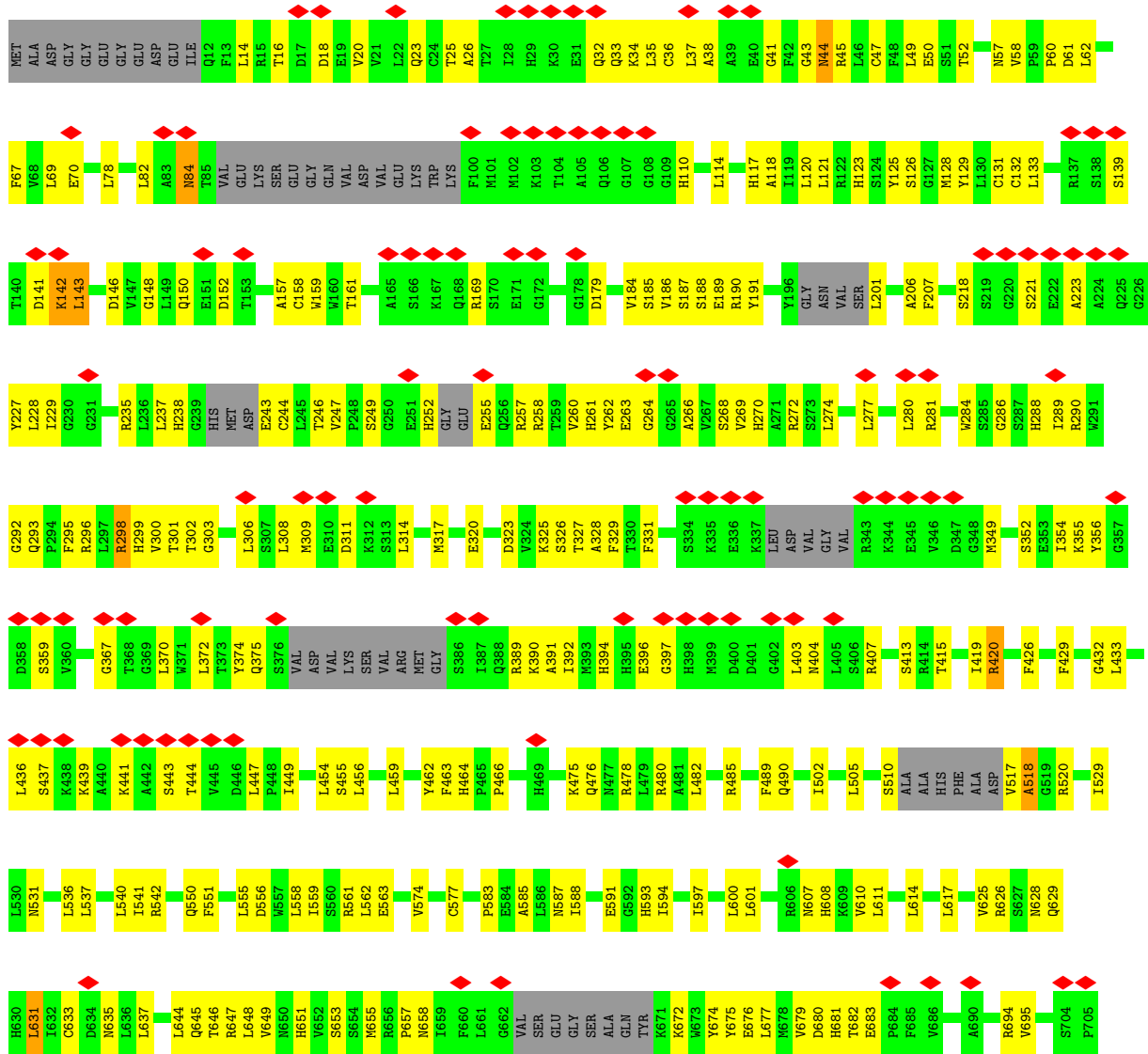


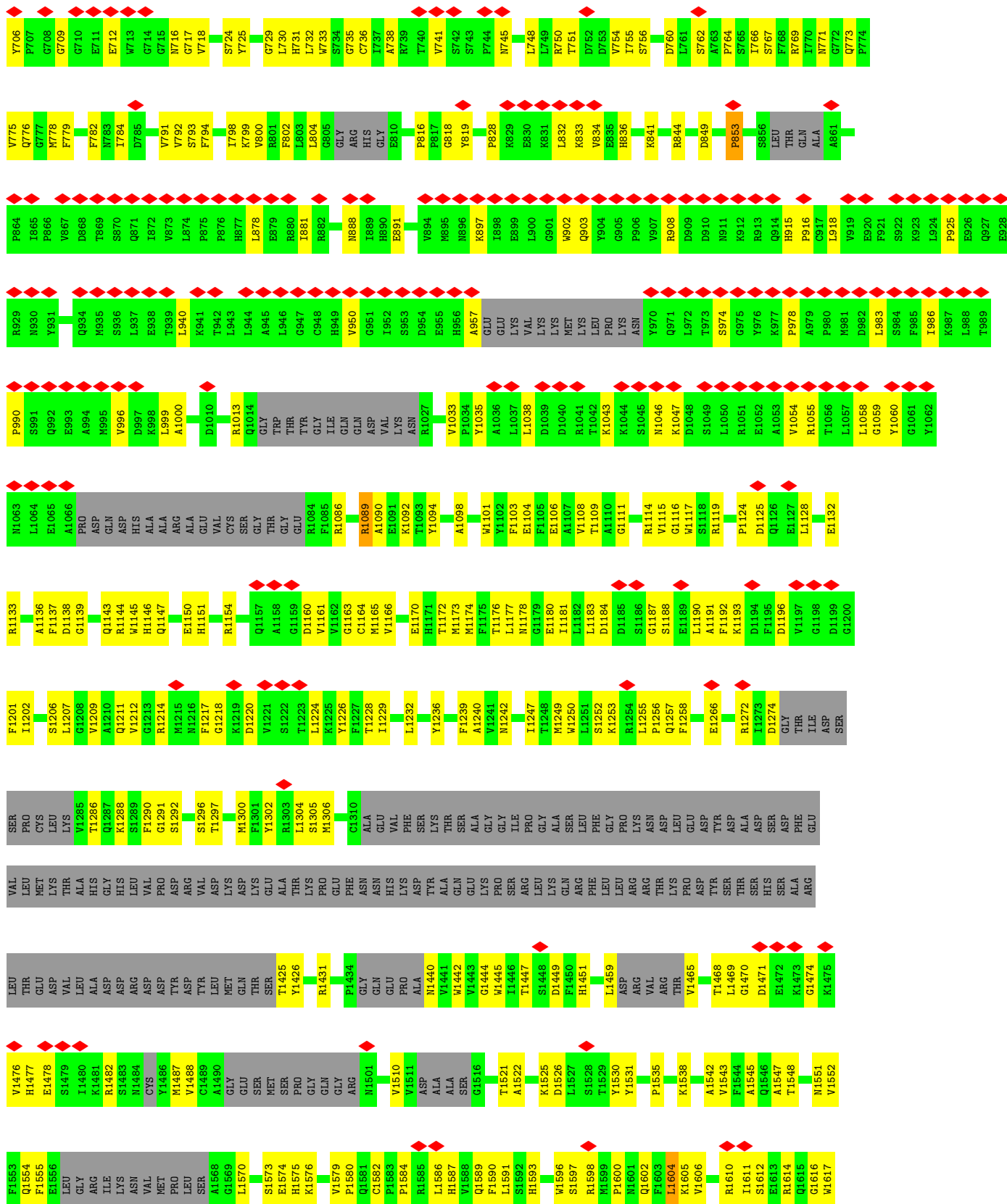
L2834	L2835	R2836	D2837	L2838	H2839	A2840	M2841	E2842	A2843	M2844	M2845	A2846	E2847	M2848	Y2849	H2850	N2851	H2852	M2853	A2854	K2855	K2856	K2857	R2858	L2859	E2860	L2861	S2862	K2863	K2864	G2865	G2866	M2868	H2869	P2870	L2871	L2872	V2873	P2874	Y2875	D2876	T2877	L2878	A2880	K2881	E2882	A2883	A2884	K2885	D2886	R2887	E2888	K2889	A2890	Q2891	D2892	L2893					
V2774	P2775	I2776	K2777	E2778	S2779	L2780	K2781	T2782	M2783	L2784	A2785	W2786	G2787	W2788	R2789	H2790	E2791	R2792	T2793	R2794	E2795	G2796	D2797	SER	L2738	MET	A2739	ALA	H2740	TYR	G2741	A2742	I2743	Y2744	G2745	E2746	I2747	Y2748	S2749	D2750	V2751	S2752	K2753	Q2754	I2755	P2756	L2757	H2758	K2759	P2760	Y2761	K2762	L2763	L2764	S2765	E2766	K2767	E2768	E2770	I2771	Y2772	
L2894	K2895	F2896	L2897	Q2898	L2899	M2900	G2901	Y2902	A2903	V2904	S2905	R2906	G2907	PHE	LYS	GLN	LEU	GLU	LEU	ASP	THR	THR	THR	ARG	ARG	Y2982	F2983	L2984	S2985	A2987	S2988	R2989	P2990	L2991	C2992	S2993	G2994	C2995	H2996	A2997	S2998	M2999	K3000	E3001	K3002	E3003	M3004	V3005	THR	SER	LEU	F3009	C3010	K3011	L3012	G3013						
HIS	PHE	PRO	TYR	GLN	GLU	ILE	LYS	PHE	ALA	VAL	VAL	LEU	PRO	LEU	LEU	ILE	ASP	GLN	TYR	PHE	GLU	ASP	ASN	HIS	ARG	ARG	Y2982	F2983	L2984	S2985	A2987	S2988	R2989	P2990	L2991	C2992	S2993	G2994	C2995	H2996	A2997	S2998	M2999	K3000	E3001	K3002	E3003	M3004	V3005	THR	SER	LEU	F3009	C3010	K3011	L3012	G3013					
W3014	L3015	V3016	R3017	H3018	R3019	I3020	S3021	L3022	F3023	G3024	N3025	D3026	A3027	T3028	SER	ILE	VAL	ASN	ASN	GLU	ASP	THR	HIS	ARG	ARG	Y2982	F2983	L2984	S2985	A2987	S2988	R2989	P2990	L2991	C2992	S2993	G2994	C2995	H2996	A2997	S2998	M2999	K3000	E3001	K3002	E3003	M3004	V3005	THR	SER	LEU	F3009	C3010	K3011	L3012	G3013						
E3074	N3075	L3076	G3079	Q3080	F3081	T3082	HIS	THR	ARG	ASN	GLN	PRO	LEU	LEU	VAL	THR	THR	ILE	ILE	ASN	ASN	TYR	T3098	T3099	V3100	L3102	L3103	P3104	M3105	L3106	S3107	S3108	L3109	F3110	E3111	H3112	I3113	G3114	Q3115	H3116	Q3117	F3118	GLY	GLU	ALA	LEU	ASP	LEU	ILE	L3124	E3125	D3126	V3127	Q3128	V3129	S3130	C3131	Y3132	R3133	I3134		
L3135	T3136	S3137	L3138	Y3139	A3140	L3141	G3142	T3143	S3144	LYS	SER	ILE	ILE	TYR	V3149	E3150	R3151	Q3152	R3153	S3154	A3155	L3156	G3157	E3158	C3159	L3160	A3161	A3162	F3163	A3164	G3165	A3166	PHE	PRO	VAL	A3170	F3171	L3172	E3173	T3174	H3175	L3176	D3177	K3178	H3179	M3180	I3181	Y3182	S3183	ILE	TYR	ASN	ASN	THR	THR	LYS	SER	SER	ARG	GLU	ALA	
ALA	LEU	ASN	LEU	THR	PRO	VAL	ASP	ASN	PRO	LYS	SER	ILE	ILE	TYR	V3149	E3150	R3151	Q3152	R3153	S3154	A3155	L3156	G3157	E3158	C3159	L3160	A3161	A3162	F3163	A3164	G3165	A3166	PHE	PRO	VAL	A3170	F3171	L3172	E3173	T3174	H3175	L3176	D3177	K3178	H3179	M3180	I3181	Y3182	S3183	ILE	TYR	ASN	ASN	THR	THR	LYS	SER	SER	ARG	GLU	ALA	
PRO	GLU	ASN	LEU	GLY	PRO	THR	ARG	ALA	GLU	VAL	MET	GLY	VAL	THR	HIS	MET	ASN	ASN	THR	GLU	GLU	GLY	ASP	HIS	ASN	ILE	ILE	ASP	ALA	LEU	LEU	LEU	VAL	THR	PRO	VAL	A3170	F3171	L3172	E3173	T3174	H3175	L3176	D3177	K3178	H3179	M3180	I3181	Y3182	S3183	ILE	TYR	ASN	ASN	THR	THR	LYS	SER	SER	ARG	GLU	ALA
LEU	LEU	LYS	THR	HIS	PHE	LEU	PRO	VAL	ASP	ASN	PRO	ILE	ILE	TYR	V3149	E3150	R3151	Q3152	R3153	S3154	A3155	L3156	G3157	E3158	C3159	L3160	A3161	A3162	F3163	A3164	G3165	A3166	PHE	PRO	VAL	A3170	F3171	L3172	E3173	T3174	H3175	L3176	D3177	K3178	H3179	M3180	I3181	Y3182	S3183	ILE	TYR	ASN	ASN	THR	THR	LYS	SER	SER	ARG	GLU	ALA	
ILE	ARG	PHE	VAL	ASP	THR	ALA	ALA	TRP	VAL	LYS	PRO	GLY	GLY	VAL	V3149	E3150	R3151	Q3152	R3153	S3154	A3155	L3156	G3157	E3158	C3159	L3160	A3161	A3162	F3163	A3164	G3165	A3166	PHE	PRO	VAL	A3170	F3171	L3172	E3173	T3174	H3175	L3176	D3177	K3178	H3179	M3180	I3181	Y3182	S3183	ILE	TYR	ASN	ASN	THR	THR	LYS	SER	SER	ARG	GLU	ALA	
ASP	THR	LYS	SER	LEU	LYS	ALA	ALA	VAL	VAL	GLN	GLU	ASP	GLN	ASP	V3149	E3150	R3151	Q3152	R3153	S3154	A3155	L3156	G3157	E3158	C3159	L3160	A3161	A3162	F3163	A3164	G3165	A3166	PHE	PRO	VAL	A3170	F3171	L3172	E3173	T3174	H3175	L3176	D3177	K3178	H3179	M3180	I3181	Y3182	S3183	ILE	TYR	ASN	ASN	THR	THR	LYS	SER	SER	ARG	GLU	ALA	
ASN	ARG	PHE	LEU	LYS	THR	GLU	GLU	VAL	VAL	ASP	ILE	ILE	ARG	ARG	V3149	E3150	R3151	Q3152	R3153	S3154	A3155	L3156	G3157	E3158	C3159	L3160	A3161	A3162	F3163	A3164	G3165	A3166	PHE	PRO	VAL	A3170	F3171	L3172	E3173	T3174	H3175	L3176	D3177	K3178	H3179	M3180	I3181	Y3182	S3183	ILE	TYR	ASN	ASN	THR	THR	LYS	SER	SER	ARG	GLU	ALA	
ILE	ALA	VAL	PHE	HIS	LEU	GLU	GLN	GLY	THR	ASP	ILE	ILE	ARG	ARG	V3149	E3150	R3151	Q3152	R3153	S3154	A3155	L3156	G3157	E3158	C3159	L3160	A3161	A3162	F3163	A3164	G3165	A3166	PHE	PRO	VAL	A3170	F3171	L3172	E3173	T3174	H3175	L3176	D3177	K3178	H3179	M3180	I3181	Y3182	S3183	ILE	TYR	ASN	ASN	THR	THR	LYS	SER	SER	ARG	GLU	ALA	
F3613	R3614																																																													





• Molecule 1: Ryanodine receptor 2

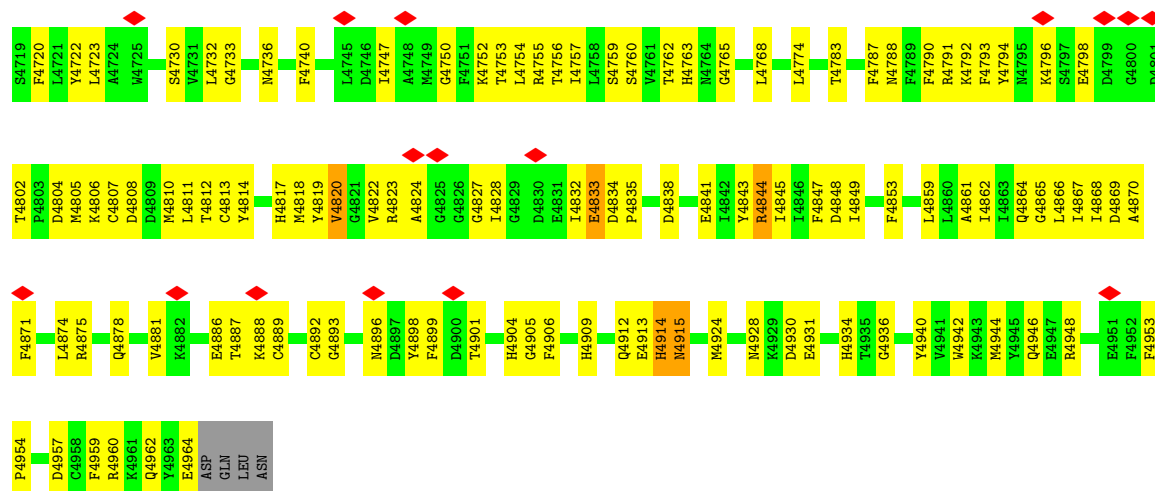














## 4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C4	Depositor
Number of particles used	24250	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ( $e^-/\text{\AA}^2$ )	48.6	Depositor
Minimum defocus (nm)	Not provided	
Maximum defocus (nm)	Not provided	
Magnification	Not provided	
Image detector	GATAN K2 SUMMIT (4k x 4k)	Depositor
Maximum map value	0.258	Depositor
Minimum map value	-0.089	Depositor
Average map value	0.001	Depositor
Map value standard deviation	0.012	Depositor
Recommended contour level	0.065	Depositor
Map size (Å)	522.6, 522.6, 522.6	wwPDB
Map dimensions	200, 200, 200	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	2.613, 2.613, 2.613	Depositor

## 5 Model quality [i](#)

### 5.1 Standard geometry [i](#)

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	A	0.40	0/27034	0.64	13/36550 (0.0%)
1	B	0.40	0/27034	0.64	13/36550 (0.0%)
1	C	0.40	0/27034	0.65	16/36550 (0.0%)
1	D	0.40	0/27031	0.64	17/36546 (0.0%)
All	All	0.40	0/108133	0.64	59/146196 (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
1	A	0	37
1	B	0	37
1	C	0	37
1	D	0	37
All	All	0	148

There are no bond length outliers.

All (59) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	C	4820	VAL	CB-CA-C	-7.94	96.32	111.40
1	C	4833	GLU	CB-CA-C	7.71	125.81	110.40
1	D	4833	GLU	CB-CA-C	7.64	125.67	110.40
1	D	4519	LEU	CB-CA-C	-6.91	97.06	110.20
1	A	3742	LEU	CA-CB-CG	6.63	130.55	115.30
1	D	3742	LEU	CA-CB-CG	6.61	130.50	115.30
1	B	3742	LEU	CA-CB-CG	6.61	130.49	115.30
1	C	3742	LEU	CA-CB-CG	6.61	130.50	115.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	1738	LEU	CA-CB-CG	6.30	129.79	115.30
1	C	1738	LEU	CA-CB-CG	6.28	129.75	115.30
1	D	1738	LEU	CA-CB-CG	6.28	129.75	115.30
1	B	1738	LEU	CA-CB-CG	6.26	129.71	115.30
1	A	555	LEU	CA-CB-CG	6.14	129.41	115.30
1	B	555	LEU	CA-CB-CG	6.13	129.39	115.30
1	C	555	LEU	CA-CB-CG	6.12	129.38	115.30
1	D	555	LEU	CA-CB-CG	6.12	129.38	115.30
1	C	4833	GLU	N-CA-C	-5.89	95.09	111.00
1	B	2038	THR	C-N-CA	5.83	136.28	121.70
1	A	2038	THR	C-N-CA	5.83	136.26	121.70
1	D	2038	THR	C-N-CA	5.82	136.26	121.70
1	D	4820	VAL	CB-CA-C	-5.82	100.35	111.40
1	C	2038	THR	C-N-CA	5.80	136.21	121.70
1	A	2039	TYR	N-CA-C	5.79	126.62	111.00
1	B	2039	TYR	N-CA-C	5.78	126.59	111.00
1	D	2039	TYR	N-CA-C	5.77	126.57	111.00
1	C	2039	TYR	N-CA-C	5.77	126.57	111.00
1	A	4573	LEU	CA-CB-CG	5.67	128.33	115.30
1	C	4573	LEU	CA-CB-CG	5.67	128.33	115.30
1	D	4573	LEU	CA-CB-CG	5.66	128.33	115.30
1	B	4573	LEU	CA-CB-CG	5.66	128.32	115.30
1	C	139	SER	C-N-CA	5.45	135.31	121.70
1	B	139	SER	C-N-CA	5.43	135.29	121.70
1	D	139	SER	C-N-CA	5.43	135.27	121.70
1	A	139	SER	C-N-CA	5.42	135.24	121.70
1	A	631	LEU	CA-CB-CG	5.41	127.74	115.30
1	B	631	LEU	CA-CB-CG	5.41	127.74	115.30
1	D	631	LEU	CA-CB-CG	5.41	127.73	115.30
1	C	631	LEU	CA-CB-CG	5.40	127.72	115.30
1	A	3880	LEU	CA-CB-CG	5.39	127.70	115.30
1	B	3880	LEU	CA-CB-CG	5.38	127.67	115.30
1	D	3880	LEU	CA-CB-CG	5.38	127.67	115.30
1	C	3880	LEU	CA-CB-CG	5.37	127.64	115.30
1	B	1630	LEU	CA-CB-CG	5.18	127.23	115.30
1	C	1630	LEU	CA-CB-CG	5.18	127.23	115.30
1	D	1630	LEU	CA-CB-CG	5.17	127.19	115.30
1	A	1630	LEU	CA-CB-CG	5.17	127.19	115.30
1	D	4833	GLU	N-CA-C	-5.17	97.05	111.00
1	B	2081	LEU	CA-CB-CG	5.12	127.08	115.30
1	A	2081	LEU	CA-CB-CG	5.11	127.06	115.30
1	D	2081	LEU	CA-CB-CG	5.11	127.05	115.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	C	2081	LEU	CA-CB-CG	5.10	127.03	115.30
1	C	1667	LEU	CA-CB-CG	5.06	126.94	115.30
1	D	1667	LEU	CA-CB-CG	5.04	126.91	115.30
1	B	1667	LEU	CA-CB-CG	5.04	126.89	115.30
1	A	1667	LEU	CA-CB-CG	5.03	126.87	115.30
1	D	456	LEU	CA-CB-CG	5.03	126.86	115.30
1	C	456	LEU	CA-CB-CG	5.01	126.83	115.30
1	B	456	LEU	CA-CB-CG	5.01	126.83	115.30
1	A	456	LEU	CA-CB-CG	5.01	126.81	115.30

There are no chirality outliers.

All (148) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	1266	GLU	Peptide
1	A	141	ASP	Peptide
1	A	142	LYS	Peptide
1	A	1476	VAL	Peptide
1	A	1579	VAL	Peptide
1	A	1604	LEU	Peptide
1	A	1635	GLU	Peptide
1	A	1756	SER	Peptide
1	A	1777	GLN	Peptide
1	A	1835	HIS	Peptide
1	A	1847	GLU	Peptide
1	A	2075	VAL	Peptide
1	A	221	SER	Peptide
1	A	2232	SER	Peptide
1	A	2248	VAL	Peptide
1	A	2293	PRO	Peptide
1	A	2462	CYS	Peptide
1	A	3634	GLU	Peptide
1	A	3847	LEU	Peptide
1	A	3849	GLU	Peptide
1	A	3926	GLN	Peptide
1	A	4075	GLU	Peptide
1	A	4085	VAL	Peptide
1	A	4123	ALA	Peptide
1	A	4146	ILE	Peptide
1	A	4594	LEU	Peptide
1	A	4627	ILE	Peptide
1	A	4644	ASN	Peptide

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>Group</b>
1	A	4787	PHE	Peptide
1	A	4914	HIS	Peptide
1	A	4915	ASN	Peptide
1	A	518	ALA	Peptide
1	A	729	GLY	Peptide
1	A	775	VAL	Peptide
1	A	816	PRO	Peptide
1	A	818	GLY	Peptide
1	A	819	TYR	Peptide
1	B	1266	GLU	Peptide
1	B	141	ASP	Peptide
1	B	142	LYS	Peptide
1	B	1476	VAL	Peptide
1	B	1579	VAL	Peptide
1	B	1604	LEU	Peptide
1	B	1635	GLU	Peptide
1	B	1756	SER	Peptide
1	B	1777	GLN	Peptide
1	B	1835	HIS	Peptide
1	B	1847	GLU	Peptide
1	B	2075	VAL	Peptide
1	B	221	SER	Peptide
1	B	2232	SER	Peptide
1	B	2248	VAL	Peptide
1	B	2293	PRO	Peptide
1	B	2462	CYS	Peptide
1	B	3634	GLU	Peptide
1	B	3847	LEU	Peptide
1	B	3849	GLU	Peptide
1	B	3926	GLN	Peptide
1	B	4075	GLU	Peptide
1	B	4085	VAL	Peptide
1	B	4123	ALA	Peptide
1	B	4146	ILE	Peptide
1	B	4594	LEU	Peptide
1	B	4627	ILE	Peptide
1	B	4644	ASN	Peptide
1	B	4787	PHE	Peptide
1	B	4914	HIS	Peptide
1	B	4915	ASN	Peptide
1	B	518	ALA	Peptide
1	B	729	GLY	Peptide

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>Group</b>
1	B	775	VAL	Peptide
1	B	816	PRO	Peptide
1	B	818	GLY	Peptide
1	B	819	TYR	Peptide
1	C	1266	GLU	Peptide
1	C	141	ASP	Peptide
1	C	142	LYS	Peptide
1	C	1476	VAL	Peptide
1	C	1579	VAL	Peptide
1	C	1604	LEU	Peptide
1	C	1635	GLU	Peptide
1	C	1756	SER	Peptide
1	C	1777	GLN	Peptide
1	C	1835	HIS	Peptide
1	C	1847	GLU	Peptide
1	C	2075	VAL	Peptide
1	C	221	SER	Peptide
1	C	2232	SER	Peptide
1	C	2248	VAL	Peptide
1	C	2293	PRO	Peptide
1	C	2462	CYS	Peptide
1	C	3634	GLU	Peptide
1	C	3847	LEU	Peptide
1	C	3849	GLU	Peptide
1	C	3926	GLN	Peptide
1	C	4075	GLU	Peptide
1	C	4085	VAL	Peptide
1	C	4123	ALA	Peptide
1	C	4146	ILE	Peptide
1	C	4594	LEU	Peptide
1	C	4627	ILE	Peptide
1	C	4644	ASN	Peptide
1	C	4787	PHE	Peptide
1	C	4914	HIS	Peptide
1	C	4915	ASN	Peptide
1	C	518	ALA	Peptide
1	C	729	GLY	Peptide
1	C	775	VAL	Peptide
1	C	816	PRO	Peptide
1	C	818	GLY	Peptide
1	C	819	TYR	Peptide
1	D	1266	GLU	Peptide

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Mol	Chain	Res	Type	Group
1	D	141	ASP	Peptide
1	D	142	LYS	Peptide
1	D	1476	VAL	Peptide
1	D	1579	VAL	Peptide
1	D	1604	LEU	Peptide
1	D	1635	GLU	Peptide
1	D	1756	SER	Peptide
1	D	1777	GLN	Peptide
1	D	1835	HIS	Peptide
1	D	1847	GLU	Peptide
1	D	2075	VAL	Peptide
1	D	221	SER	Peptide
1	D	2232	SER	Peptide
1	D	2248	VAL	Peptide
1	D	2293	PRO	Peptide
1	D	2462	CYS	Peptide
1	D	3634	GLU	Peptide
1	D	3847	LEU	Peptide
1	D	3849	GLU	Peptide
1	D	3926	GLN	Peptide
1	D	4075	GLU	Peptide
1	D	4085	VAL	Peptide
1	D	4123	ALA	Peptide
1	D	4146	ILE	Peptide
1	D	4594	LEU	Peptide
1	D	4627	ILE	Peptide
1	D	4644	ASN	Peptide
1	D	4787	PHE	Peptide
1	D	4914	HIS	Peptide
1	D	4915	ASN	Peptide
1	D	518	ALA	Peptide
1	D	729	GLY	Peptide
1	D	775	VAL	Peptide
1	D	816	PRO	Peptide
1	D	818	GLY	Peptide
1	D	819	TYR	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	A	26546	0	25084	786	0
1	B	26546	0	25084	830	0
1	C	26546	0	25084	831	0
1	D	26543	0	25075	820	0
2	A	1	0	0	0	0
2	B	1	0	0	0	0
2	C	1	0	0	0	0
2	D	1	0	0	0	0
All	All	106185	0	100327	3072	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 15.

All (3072) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:4820:VAL:O	1:D:4824:ALA:HB2	1.31	1.25
1:A:4783:THR:HG23	1:A:4817:HIS:CD2	1.75	1.21
1:B:4811:LEU:HB2	1:C:4519:LEU:CD1	1.71	1.18
1:A:4519:LEU:HD12	1:C:4811:LEU:HB2	1.28	1.16
1:B:4519:LEU:HD11	1:D:4811:LEU:HD13	1.28	1.13
1:B:4832:ILE:HD11	1:B:4844:ARG:HD3	1.20	1.12
1:C:4521:TYR:CE1	1:C:4561:VAL:CG2	2.33	1.12
1:A:4774:LEU:HD22	1:D:4754:LEU:CD2	1.79	1.12
1:B:4849:ILE:HG22	1:C:4822:VAL:CG1	1.80	1.11
1:C:4820:VAL:O	1:C:4820:VAL:CG1	1.99	1.10
1:A:4849:ILE:HG22	1:D:4822:VAL:HG11	1.22	1.09
1:A:4754:LEU:CD2	1:C:4774:LEU:HD22	1.83	1.09
1:B:4519:LEU:HB2	1:D:4814:TYR:CE2	1.88	1.08
1:A:4774:LEU:CD2	1:D:4754:LEU:HD22	1.85	1.07
1:A:81:MET:SD	1:A:102:MET:HA	1.95	1.07
1:B:4808:ASP:HB3	1:C:4523:VAL:CG2	1.84	1.07
1:B:4849:ILE:HG22	1:C:4822:VAL:HG11	1.14	1.07
1:B:4774:LEU:HD22	1:C:4754:LEU:CD2	1.84	1.06
1:A:4849:ILE:HG22	1:D:4822:VAL:CG1	1.84	1.06
1:C:4820:VAL:O	1:C:4820:VAL:HG12	1.46	1.05
1:A:4519:LEU:CD1	1:C:4811:LEU:HB2	1.86	1.05
1:B:4867:ILE:HG21	1:D:4861:ALA:HB1	1.08	1.04
1:C:4520:PHE:HB3	1:C:4562:LEU:CD2	1.87	1.04
1:C:4521:TYR:CE1	1:C:4561:VAL:HG22	1.92	1.04

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:4519:LEU:CD1	1:D:4811:LEU:HD13	1.85	1.04
1:B:4849:ILE:CG2	1:C:4822:VAL:CG1	2.36	1.03
1:A:4520:PHE:HB3	1:A:4562:LEU:HD23	1.38	1.03
1:A:4754:LEU:HD22	1:C:4774:LEU:CD2	1.89	1.03
1:B:4754:LEU:HD22	1:D:4774:LEU:HD22	1.04	1.02
1:B:4808:ASP:HB3	1:C:4523:VAL:HG23	1.41	1.01
1:B:4774:LEU:CD2	1:C:4754:LEU:HD22	1.89	1.01
1:A:4867:ILE:HG21	1:C:4861:ALA:HB1	1.05	1.01
1:A:190:ARG:NH1	1:D:2423:ILE:HG23	1.75	1.00
1:B:4832:ILE:CD1	1:B:4844:ARG:HD3	1.90	1.00
1:B:4754:LEU:CD2	1:D:4774:LEU:HD22	1.91	1.00
1:B:4861:ALA:HB1	1:C:4867:ILE:HG21	1.06	1.00
1:B:4868:ILE:HG12	1:D:4865:GLY:HA2	1.42	0.99
1:A:4861:ALA:HB1	1:D:4867:ILE:HG21	1.02	0.99
1:A:4519:LEU:CD1	1:C:4811:LEU:HD13	1.94	0.98
1:A:4519:LEU:HD11	1:C:4811:LEU:HD13	1.44	0.97
1:B:4774:LEU:HD22	1:C:4754:LEU:HD22	0.98	0.97
1:C:4521:TYR:CE1	1:C:4561:VAL:HG23	1.98	0.97
1:A:190:ARG:HH12	1:D:2423:ILE:HG23	1.29	0.96
1:A:4849:ILE:CG2	1:D:4822:VAL:CG1	2.44	0.96
1:B:4811:LEU:HB2	1:C:4519:LEU:HD13	1.43	0.96
1:A:190:ARG:HH12	1:D:2423:ILE:CG2	1.77	0.96
1:A:4754:LEU:HD22	1:C:4774:LEU:HD22	0.98	0.95
1:A:4783:THR:CG2	1:A:4817:HIS:CD2	2.48	0.95
1:A:190:ARG:NH1	1:D:2423:ILE:CG2	2.29	0.95
1:B:190:ARG:NH1	1:C:2423:ILE:HG23	1.81	0.95
1:B:4754:LEU:HD22	1:D:4774:LEU:CD2	1.96	0.95
1:B:4519:LEU:CB	1:D:4814:TYR:HE2	1.80	0.94
1:B:4849:ILE:CG2	1:C:4822:VAL:HG11	1.97	0.94
1:B:4820:VAL:O	1:B:4824:ALA:HB2	1.64	0.94
1:B:4519:LEU:HD12	1:D:4811:LEU:HB2	1.50	0.94
1:C:4783:THR:HG23	1:C:4817:HIS:CD2	2.03	0.94
1:C:4521:TYR:HE1	1:C:4561:VAL:HG23	1.29	0.94
1:A:4817:HIS:ND1	1:A:4828:ILE:HD11	1.82	0.94
1:A:4861:ALA:CB	1:D:4867:ILE:HG21	1.96	0.94
1:A:2423:ILE:HG23	1:C:190:ARG:NH1	1.83	0.93
1:C:4820:VAL:O	1:C:4824:ALA:HB2	1.68	0.93
1:A:4865:GLY:HA2	1:D:4868:ILE:HG12	1.51	0.93
1:B:4519:LEU:HB2	1:D:4814:TYR:HE2	1.26	0.93
1:A:4868:ILE:HG12	1:C:4865:GLY:HA2	1.50	0.92
1:B:2423:ILE:HG23	1:D:190:ARG:NH1	1.84	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4832:ILE:HD11	1:A:4844:ARG:HD3	1.50	0.92
1:B:4865:GLY:HA2	1:C:4868:ILE:HG12	1.50	0.92
1:B:4822:VAL:HB	1:D:4849:ILE:CG2	1.99	0.91
1:B:4783:THR:HG23	1:B:4817:HIS:CD2	2.05	0.91
1:B:4868:ILE:HG12	1:D:4865:GLY:CA	2.00	0.91
1:A:4823:ARG:CB	1:C:4849:ILE:HD12	2.00	0.91
1:A:4774:LEU:HD22	1:D:4754:LEU:HD22	0.93	0.91
1:B:2423:ILE:CG2	1:D:190:ARG:HH12	1.84	0.91
1:A:4520:PHE:HB3	1:A:4562:LEU:CD2	2.00	0.91
1:A:2423:ILE:CG2	1:C:190:ARG:HH12	1.84	0.90
1:A:4861:ALA:HB1	1:D:4867:ILE:CG2	1.97	0.90
1:A:4867:ILE:HG21	1:C:4861:ALA:CB	1.99	0.90
1:B:190:ARG:HH12	1:C:2423:ILE:CG2	1.84	0.90
1:B:190:ARG:NH1	1:C:2423:ILE:CG2	2.35	0.89
1:B:2423:ILE:CG2	1:D:190:ARG:NH1	2.35	0.89
1:A:2423:ILE:HG23	1:C:190:ARG:HH12	1.37	0.88
1:B:4861:ALA:CB	1:C:4867:ILE:HG21	2.00	0.88
1:B:4523:VAL:HG23	1:D:4808:ASP:HB3	1.53	0.88
1:A:4822:VAL:CG1	1:C:4853:PHE:HB2	2.03	0.88
1:B:81:MET:SD	1:B:102:MET:HA	2.14	0.88
1:A:2423:ILE:CG2	1:C:190:ARG:NH1	2.36	0.87
1:B:4519:LEU:CD1	1:D:4811:LEU:CD1	2.52	0.86
1:B:4066:PHE:O	1:B:4070:CYS:HB2	1.76	0.86
1:D:4783:THR:HG23	1:D:4817:HIS:CD2	2.09	0.86
1:B:190:ARG:HH12	1:C:2423:ILE:HG23	1.37	0.86
1:A:4184:LYS:CB	1:D:4904:HIS:CE1	2.59	0.86
1:A:4867:ILE:CG2	1:C:4861:ALA:HB1	1.99	0.85
1:B:4861:ALA:HB1	1:C:4867:ILE:CG2	2.00	0.85
1:D:4066:PHE:O	1:D:4070:CYS:HB2	1.76	0.85
1:A:4822:VAL:HB	1:C:4849:ILE:HG22	1.58	0.85
1:B:4867:ILE:CG2	1:D:4861:ALA:HB1	2.02	0.85
1:A:4904:HIS:CE1	1:C:4184:LYS:CB	2.59	0.85
1:C:4066:PHE:O	1:C:4070:CYS:HB2	1.76	0.85
1:B:4822:VAL:HB	1:D:4849:ILE:HG22	1.56	0.85
1:A:4849:ILE:CG2	1:D:4822:VAL:HG11	2.05	0.84
1:B:4865:GLY:CA	1:C:4868:ILE:HG12	2.06	0.84
1:B:4519:LEU:CD1	1:D:4811:LEU:HB2	2.07	0.84
1:B:4833:GLU:HB3	1:B:4844:ARG:HH22	1.42	0.84
1:A:143:LEU:CB	1:D:2426:SER:HB3	2.07	0.84
1:A:4066:PHE:O	1:A:4070:CYS:HB2	1.76	0.84
1:C:4783:THR:HG23	1:C:4817:HIS:CG	2.12	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2423:ILE:HG23	1:D:190:ARG:HH12	1.40	0.83
1:A:4868:ILE:HG12	1:C:4865:GLY:CA	2.06	0.83
1:B:4184:LYS:CB	1:C:4904:HIS:CE1	2.61	0.83
1:A:4865:GLY:CA	1:D:4868:ILE:HG12	2.09	0.82
1:B:4849:ILE:HG23	1:C:4822:VAL:HG12	1.61	0.82
1:C:4520:PHE:O	1:C:4561:VAL:HG13	1.80	0.81
1:B:4822:VAL:HG13	1:D:4853:PHE:HB2	1.62	0.81
1:C:4813:CYS:SG	1:C:4817:HIS:HD2	2.03	0.81
1:A:4783:THR:HG23	1:A:4817:HIS:CG	2.16	0.81
1:A:4519:LEU:HD12	1:C:4811:LEU:CB	2.10	0.81
1:C:4521:TYR:CD1	1:C:4561:VAL:HG22	2.16	0.81
1:C:4832:ILE:HD11	1:C:4844:ARG:CD	2.10	0.81
1:A:4519:LEU:CD1	1:C:4811:LEU:CB	2.59	0.81
1:B:4819:TYR:HA	1:D:4849:ILE:HG21	1.63	0.80
1:B:4867:ILE:HG21	1:D:4861:ALA:CB	2.03	0.80
1:C:1799:VAL:O	1:C:1803:SER:HB3	1.82	0.80
1:A:1799:VAL:O	1:A:1803:SER:HB3	1.82	0.80
1:B:1799:VAL:O	1:B:1803:SER:HB3	1.82	0.80
1:D:1799:VAL:O	1:D:1803:SER:HB3	1.82	0.80
1:C:4520:PHE:HB3	1:C:4562:LEU:HD22	1.61	0.80
1:D:4820:VAL:O	1:D:4820:VAL:CG1	2.31	0.79
1:B:4832:ILE:CD1	1:B:4844:ARG:CD	2.59	0.79
1:D:4627:ILE:O	1:D:4631:TRP:HB2	1.83	0.79
1:A:4843:TYR:O	1:A:4847:PHE:HB2	1.83	0.79
1:B:4904:HIS:CE1	1:D:4184:LYS:CB	2.66	0.79
1:A:4627:ILE:O	1:A:4631:TRP:HB2	1.83	0.78
1:C:4843:TYR:O	1:C:4847:PHE:HB2	1.83	0.78
1:A:123:HIS:HD2	1:A:126:SER:H	1.30	0.78
1:B:4817:HIS:ND1	1:B:4828:ILE:HD11	1.98	0.78
1:B:143:LEU:CB	1:C:2426:SER:HB3	2.13	0.78
1:B:4627:ILE:O	1:B:4631:TRP:HB2	1.83	0.78
1:B:4843:TYR:O	1:B:4847:PHE:HB2	1.83	0.78
1:D:4843:TYR:O	1:D:4847:PHE:HB2	1.83	0.78
1:A:2426:SER:HB3	1:C:143:LEU:CB	2.14	0.78
1:D:123:HIS:HD2	1:D:126:SER:H	1.30	0.78
1:C:4018:PHE:O	1:C:4022:LEU:HB2	1.85	0.77
1:D:4561:VAL:HG22	1:D:4562:LEU:N	1.99	0.77
1:B:4018:PHE:O	1:B:4022:LEU:HB2	1.85	0.77
1:C:4627:ILE:O	1:C:4631:TRP:HB2	1.83	0.77
1:A:4018:PHE:O	1:A:4022:LEU:HB2	1.85	0.77
1:B:2426:SER:HB3	1:D:143:LEU:CB	2.15	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:123:HIS:HD2	1:B:126:SER:H	1.30	0.76
1:B:4808:ASP:HB3	1:C:4523:VAL:HG21	1.66	0.76
1:D:4018:PHE:O	1:D:4022:LEU:HB2	1.85	0.76
1:C:123:HIS:HD2	1:C:126:SER:H	1.30	0.76
1:D:4820:VAL:O	1:D:4824:ALA:CB	2.23	0.76
1:A:4519:LEU:CD1	1:C:4811:LEU:CD1	2.63	0.75
1:A:4904:HIS:NE2	1:C:4184:LYS:CB	2.49	0.75
1:B:4834:ASP:N	1:B:4834:ASP:OD1	2.19	0.75
1:A:706:TYR:HB2	1:A:709:GLY:HA3	1.69	0.75
1:B:4175:PHE:O	1:B:4179:ASN:HB2	1.86	0.75
1:C:706:TYR:HB2	1:C:709:GLY:HA3	1.69	0.75
1:C:4175:PHE:O	1:C:4179:ASN:HB2	1.86	0.74
1:B:706:TYR:HB2	1:B:709:GLY:HA3	1.69	0.74
1:B:4519:LEU:HD13	1:D:4811:LEU:CD1	2.17	0.74
1:D:4820:VAL:O	1:D:4820:VAL:HG12	1.87	0.74
1:B:4822:VAL:CB	1:D:4849:ILE:HG22	2.17	0.74
1:D:4175:PHE:O	1:D:4179:ASN:HB2	1.86	0.74
1:C:4832:ILE:HD11	1:C:4844:ARG:HD3	1.70	0.74
1:D:706:TYR:HB2	1:D:709:GLY:HA3	1.69	0.74
1:B:4811:LEU:CB	1:C:4519:LEU:HD13	2.16	0.74
1:B:2344:LEU:O	1:B:2348:MET:HB2	1.88	0.74
1:B:4820:VAL:O	1:B:4824:ALA:CB	2.34	0.74
1:C:4813:CYS:SG	1:C:4817:HIS:CD2	2.81	0.74
1:A:4175:PHE:O	1:A:4179:ASN:HB2	1.86	0.73
1:C:2344:LEU:O	1:C:2348:MET:HB2	1.88	0.73
1:A:4783:THR:CG2	1:A:4817:HIS:HD2	2.01	0.73
1:C:4517:ILE:HA	1:C:4520:PHE:HE2	1.52	0.73
1:B:4184:LYS:CB	1:C:4904:HIS:NE2	2.51	0.73
1:D:2344:LEU:O	1:D:2348:MET:HB2	1.88	0.73
1:D:4832:ILE:HD12	1:D:4848:ASP:OD2	1.88	0.73
1:A:4820:VAL:O	1:A:4824:ALA:HB2	1.90	0.72
1:C:4832:ILE:HD12	1:C:4848:ASP:OD2	1.88	0.72
1:A:4184:LYS:CB	1:D:4904:HIS:NE2	2.52	0.72
1:D:4813:CYS:SG	1:D:4817:HIS:HD2	2.12	0.72
1:C:4783:THR:CG2	1:C:4817:HIS:CD2	2.73	0.72
1:D:4783:THR:HG23	1:D:4817:HIS:CG	2.25	0.72
1:B:4849:ILE:CG2	1:C:4822:VAL:HG12	2.18	0.72
1:B:4904:HIS:NE2	1:D:4184:LYS:CB	2.53	0.72
1:A:4820:VAL:O	1:A:4824:ALA:N	2.23	0.71
1:B:776:GLN:HB3	1:B:1470:GLY:HA3	1.72	0.71
1:B:4811:LEU:HB2	1:C:4519:LEU:HD12	1.71	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2344:LEU:O	1:A:2348:MET:HB2	1.88	0.71
1:B:4517:ILE:HA	1:B:4520:PHE:CE2	2.25	0.71
1:C:4834:ASP:OD1	1:C:4834:ASP:N	2.23	0.71
1:D:776:GLN:HB3	1:D:1470:GLY:HA3	1.72	0.71
1:D:4817:HIS:ND1	1:D:4828:ILE:HD11	2.05	0.71
1:B:4808:ASP:CB	1:C:4523:VAL:CG2	2.67	0.71
1:D:4517:ILE:HA	1:D:4520:PHE:CE2	2.26	0.71
1:C:4002:ASP:HA	1:C:4115:ARG:HH22	1.56	0.70
1:D:4517:ILE:HA	1:D:4520:PHE:HE2	1.56	0.70
1:B:4832:ILE:HD11	1:B:4844:ARG:CD	2.11	0.70
1:A:4822:VAL:HB	1:C:4849:ILE:CG2	2.22	0.70
1:C:776:GLN:HB3	1:C:1470:GLY:HA3	1.72	0.70
1:B:4822:VAL:CG1	1:D:4849:ILE:HG22	2.21	0.70
1:D:4002:ASP:HA	1:D:4115:ARG:HH22	1.56	0.70
1:A:4864:GLN:HG3	1:D:4868:ILE:HD11	1.74	0.70
1:A:776:GLN:HB3	1:A:1470:GLY:HA3	1.72	0.70
1:A:4002:ASP:HA	1:A:4115:ARG:HH22	1.56	0.70
1:A:4522:LYS:HG2	1:A:4560:TYR:OH	1.92	0.70
1:B:3729:GLN:HE22	1:B:3769:GLY:H	1.40	0.70
1:B:4002:ASP:HA	1:B:4115:ARG:HH22	1.56	0.70
1:B:4519:LEU:HD12	1:D:4811:LEU:CB	2.22	0.70
1:C:4562:LEU:HG	1:C:4563:GLU:N	2.06	0.70
1:D:4561:VAL:CG2	1:D:4562:LEU:N	2.55	0.69
1:B:1124:PRO:HB2	1:B:1252:SER:HB3	1.74	0.69
1:B:4808:ASP:CB	1:C:4523:VAL:HG21	2.22	0.69
1:C:4519:LEU:HD12	1:C:4519:LEU:O	1.92	0.69
1:D:3729:GLN:HE22	1:D:3769:GLY:H	1.40	0.69
1:C:1124:PRO:HB2	1:C:1252:SER:HB3	1.75	0.69
1:A:190:ARG:NH1	1:D:2423:ILE:HG21	2.07	0.69
1:B:4519:LEU:CD1	1:D:4811:LEU:CB	2.70	0.69
1:D:4832:ILE:HD11	1:D:4844:ARG:CD	2.23	0.69
1:D:1124:PRO:HB2	1:D:1252:SER:HB3	1.74	0.69
1:A:601:LEU:HD11	1:A:607:ASN:H	1.58	0.68
1:B:2423:ILE:HG21	1:D:190:ARG:NH1	2.08	0.68
1:B:4796:LYS:H	1:B:4805:MET:HB3	1.59	0.68
1:C:694:ARG:HB2	1:C:793:SER:HB2	1.75	0.68
1:B:694:ARG:HB2	1:B:793:SER:HB2	1.75	0.68
1:A:4849:ILE:HG23	1:D:4822:VAL:HG12	1.74	0.68
1:B:4783:THR:CG2	1:B:4817:HIS:CD2	2.77	0.68
1:C:1642:LEU:HD21	1:C:1691:ASN:HB3	1.76	0.68
1:D:4796:LYS:H	1:D:4805:MET:HB3	1.59	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4868:ILE:HD11	1:C:4864:GLN:CG	2.24	0.68
1:A:1642:LEU:HD21	1:A:1691:ASN:HB3	1.76	0.68
1:A:4864:GLN:CG	1:D:4868:ILE:HD11	2.23	0.68
1:A:4832:ILE:HD11	1:A:4844:ARG:CD	2.23	0.68
1:C:3729:GLN:HE22	1:C:3769:GLY:H	1.40	0.68
1:D:1165:MET:HB2	1:D:1174:MET:HB2	1.76	0.68
1:A:694:ARG:HB2	1:A:793:SER:HB2	1.75	0.68
1:A:1124:PRO:HB2	1:A:1252:SER:HB3	1.74	0.68
1:A:1165:MET:HB2	1:A:1174:MET:HB2	1.76	0.68
1:B:601:LEU:HD11	1:B:607:ASN:H	1.58	0.68
1:C:1165:MET:HB2	1:C:1174:MET:HB2	1.76	0.68
1:B:1165:MET:HB2	1:B:1174:MET:HB2	1.76	0.68
1:A:3729:GLN:HE22	1:A:3769:GLY:H	1.40	0.68
1:C:4796:LYS:H	1:C:4805:MET:HB3	1.59	0.68
1:B:4522:LYS:HG2	1:B:4560:TYR:OH	1.93	0.67
1:D:4834:ASP:N	1:D:4834:ASP:OD1	2.27	0.67
1:B:1642:LEU:HD21	1:B:1691:ASN:HB3	1.76	0.67
1:D:601:LEU:HD11	1:D:607:ASN:H	1.58	0.67
1:D:694:ARG:HB2	1:D:793:SER:HB2	1.75	0.67
1:A:4820:VAL:O	1:A:4824:ALA:CB	2.42	0.67
1:B:4808:ASP:CG	1:C:4523:VAL:HG21	2.14	0.67
1:C:601:LEU:HD11	1:C:607:ASN:H	1.58	0.67
1:C:712:GLU:HA	1:C:1638:SER:HB2	1.77	0.67
1:D:502:ILE:O	1:D:561:ARG:NH1	2.27	0.67
1:A:4868:ILE:HD11	1:C:4864:GLN:HG3	1.76	0.67
1:C:502:ILE:O	1:C:561:ARG:NH1	2.27	0.66
1:B:3952:PHE:HB3	1:B:3976:GLN:HE21	1.61	0.66
1:D:712:GLU:HA	1:D:1638:SER:HB2	1.77	0.66
1:A:712:GLU:HA	1:A:1638:SER:HB2	1.77	0.66
1:A:4519:LEU:HD13	1:C:4811:LEU:HD13	1.75	0.66
1:A:4796:LYS:H	1:A:4805:MET:HB3	1.59	0.66
1:B:680:ASP:HB2	1:B:799:LYS:HG3	1.78	0.66
1:B:4864:GLN:CG	1:C:4868:ILE:HD11	2.25	0.66
1:C:4517:ILE:HA	1:C:4520:PHE:CE2	2.31	0.66
1:D:1642:LEU:HD21	1:D:1691:ASN:HB3	1.76	0.66
1:D:2308:PHE:HA	1:D:2313:SER:HA	1.78	0.66
1:A:4519:LEU:HD13	1:C:4811:LEU:CD1	2.25	0.66
1:B:2308:PHE:HA	1:B:2313:SER:HA	1.78	0.66
1:C:2308:PHE:HA	1:C:2313:SER:HA	1.78	0.66
1:C:3952:PHE:HB3	1:C:3976:GLN:HE21	1.61	0.66
1:A:1819:VAL:O	1:A:1823:LYS:HB2	1.96	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3727:TYR:O	1:B:3731:ARG:HB2	1.96	0.66
1:D:3952:PHE:HB3	1:D:3976:GLN:HE21	1.61	0.66
1:A:3727:TYR:O	1:A:3731:ARG:HB2	1.96	0.66
1:C:1819:VAL:O	1:C:1823:LYS:HB2	1.96	0.66
1:C:3727:TYR:O	1:C:3731:ARG:HB2	1.96	0.66
1:D:3727:TYR:O	1:D:3731:ARG:HB2	1.96	0.66
1:B:1819:VAL:O	1:B:1823:LYS:HB2	1.96	0.66
1:B:4810:MET:CB	1:C:4519:LEU:HA	2.25	0.66
1:D:3924:TYR:HB3	1:D:3932:ASN:HD21	1.61	0.65
1:A:2308:PHE:HA	1:A:2313:SER:HA	1.78	0.65
1:B:712:GLU:HA	1:B:1638:SER:HB2	1.77	0.65
1:A:2791:GLU:H	1:A:2903:ALA:HB3	1.62	0.65
1:A:3924:TYR:HB3	1:A:3932:ASN:HD21	1.61	0.65
1:A:3952:PHE:HB3	1:A:3976:GLN:HE21	1.61	0.65
1:B:2791:GLU:H	1:B:2903:ALA:HB3	1.62	0.65
1:C:802:PHE:HB2	1:C:1617:TRP:HB2	1.79	0.65
1:C:3748:SER:HB2	1:C:3751:GLU:HB2	1.79	0.65
1:D:1819:VAL:O	1:D:1823:LYS:HB2	1.96	0.65
1:B:502:ILE:O	1:B:561:ARG:NH1	2.27	0.65
1:B:81:MET:SD	1:B:102:MET:CA	2.85	0.65
1:B:4523:VAL:CG2	1:D:4808:ASP:HB3	2.25	0.65
1:C:4520:PHE:HB3	1:C:4562:LEU:HD23	1.76	0.65
1:C:3924:TYR:HB3	1:C:3932:ASN:HD21	1.61	0.65
1:B:3748:SER:HB2	1:B:3751:GLU:HB2	1.78	0.65
1:B:4864:GLN:HG3	1:C:4868:ILE:HD11	1.77	0.65
1:C:680:ASP:HB2	1:C:799:LYS:HG3	1.78	0.65
1:C:1699:ARG:NH1	1:C:1816:PHE:O	2.30	0.65
1:A:1699:ARG:NH1	1:A:1816:PHE:O	2.30	0.65
1:B:190:ARG:NH1	1:C:2423:ILE:HG21	2.11	0.65
1:C:70:GLU:HB2	1:C:120:LEU:HB3	1.79	0.65
1:B:766:ILE:HB	1:B:779:PHE:HB2	1.79	0.65
1:B:3924:TYR:HB3	1:B:3932:ASN:HD21	1.61	0.65
1:B:81:MET:SD	1:B:102:MET:CB	2.86	0.64
1:C:2791:GLU:H	1:C:2903:ALA:HB3	1.62	0.64
1:D:2791:GLU:H	1:D:2903:ALA:HB3	1.62	0.64
1:A:70:GLU:HB2	1:A:120:LEU:HB3	1.79	0.64
1:A:680:ASP:HB2	1:A:799:LYS:HG3	1.78	0.64
1:D:1699:ARG:NH1	1:D:1816:PHE:O	2.30	0.64
1:B:1699:ARG:NH1	1:B:1816:PHE:O	2.30	0.64
1:C:1137:PHE:HA	1:C:1144:ARG:HA	1.80	0.64
1:A:2423:ILE:HG21	1:C:190:ARG:NH1	2.12	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4874:LEU:O	1:A:4878:GLN:NE2	2.31	0.64
1:B:802:PHE:HB2	1:B:1617:TRP:HB2	1.79	0.64
1:B:1137:PHE:HA	1:B:1144:ARG:HA	1.80	0.64
1:C:756:SER:HB3	1:C:769:ARG:HB2	1.80	0.64
1:D:766:ILE:HB	1:D:779:PHE:HB2	1.79	0.64
1:C:766:ILE:HB	1:C:779:PHE:HB2	1.79	0.64
1:D:680:ASP:HB2	1:D:799:LYS:HG3	1.78	0.64
1:D:3748:SER:HB2	1:D:3751:GLU:HB2	1.78	0.64
1:B:4511:ALA:HA	1:B:4514:ILE:HD12	1.80	0.63
1:C:4569:MET:O	1:C:4573:LEU:HB2	1.98	0.63
1:D:4783:THR:CG2	1:D:4817:HIS:CD2	2.81	0.63
1:A:756:SER:HB3	1:A:769:ARG:HB2	1.80	0.63
1:B:4874:LEU:O	1:B:4878:GLN:NE2	2.31	0.63
1:C:1256:PRO:HD2	1:C:1451:HIS:HB3	1.79	0.63
1:B:70:GLU:HB2	1:B:120:LEU:HB3	1.79	0.63
1:B:4822:VAL:CG1	1:D:4849:ILE:O	2.45	0.63
1:C:4874:LEU:O	1:C:4878:GLN:NE2	2.31	0.63
1:D:802:PHE:HB2	1:D:1617:TRP:HB2	1.79	0.63
1:C:4817:HIS:ND1	1:C:4828:ILE:HD11	2.13	0.63
1:D:4649:PHE:HB3	1:D:4653:LYS:HE3	1.81	0.63
1:D:4813:CYS:SG	1:D:4817:HIS:CD2	2.91	0.63
1:A:4649:PHE:HB3	1:A:4653:LYS:HE3	1.81	0.63
1:B:1256:PRO:HD2	1:B:1451:HIS:HB3	1.79	0.63
1:B:1258:PHE:HB2	1:B:1593:HIS:HB3	1.80	0.63
1:A:1137:PHE:HA	1:A:1144:ARG:HA	1.80	0.63
1:B:756:SER:HB3	1:B:769:ARG:HB2	1.80	0.63
1:B:4517:ILE:HA	1:B:4520:PHE:HE2	1.61	0.63
1:C:4889:CYS:O	1:C:4893:GLY:N	2.32	0.63
1:D:4874:LEU:O	1:D:4878:GLN:NE2	2.31	0.63
1:C:4511:ALA:HA	1:C:4514:ILE:HD12	1.80	0.63
1:D:1258:PHE:HB2	1:D:1593:HIS:HB3	1.80	0.63
1:A:1256:PRO:HD2	1:A:1451:HIS:HB3	1.79	0.63
1:A:3748:SER:HB2	1:A:3751:GLU:HB2	1.79	0.63
1:C:4520:PHE:CB	1:C:4562:LEU:CD2	2.72	0.63
1:D:70:GLU:HB2	1:D:120:LEU:HB3	1.79	0.63
1:D:1256:PRO:HD2	1:D:1451:HIS:HB3	1.79	0.63
1:A:4569:MET:O	1:A:4573:LEU:HB2	1.98	0.63
1:D:2158:GLN:O	1:D:3616:ARG:NH1	2.31	0.63
1:D:4511:ALA:HA	1:D:4514:ILE:HD12	1.80	0.63
1:A:2116:ASP:OD1	1:A:2153:ASN:ND2	2.32	0.62
1:B:2158:GLN:O	1:B:3616:ARG:NH1	2.32	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:4868:ILE:HD11	1:D:4864:GLN:CG	2.28	0.62
1:C:2158:GLN:O	1:C:3616:ARG:NH1	2.32	0.62
1:D:4569:MET:O	1:D:4573:LEU:HB2	1.98	0.62
1:A:802:PHE:HB2	1:A:1617:TRP:HB2	1.79	0.62
1:A:2158:GLN:O	1:A:3616:ARG:NH1	2.31	0.62
1:A:4519:LEU:HD12	1:A:4519:LEU:O	1.99	0.62
1:D:756:SER:HB3	1:D:769:ARG:HB2	1.80	0.62
1:D:1116:GLY:HA3	1:D:1136:ALA:HA	1.82	0.62
1:D:2116:ASP:OD1	1:D:2153:ASN:ND2	2.32	0.62
1:B:3665:LEU:HD23	1:B:3735:ARG:HD3	1.81	0.62
1:C:3665:LEU:HD23	1:C:3735:ARG:HD3	1.81	0.62
1:D:1089:ARG:HH21	1:D:1600:PRO:HG3	1.65	0.62
1:A:766:ILE:HB	1:A:779:PHE:HB2	1.79	0.62
1:B:1729:MET:HG2	1:B:2110:ASN:HA	1.81	0.62
1:B:4569:MET:O	1:B:4573:LEU:HB2	1.98	0.62
1:B:4649:PHE:HB3	1:B:4653:LYS:HE3	1.81	0.62
1:A:81:MET:SD	1:A:102:MET:CA	2.80	0.62
1:A:1258:PHE:HB2	1:A:1593:HIS:HB3	1.80	0.62
1:A:2215:MET:HA	1:A:2218:HIS:HD2	1.65	0.62
1:C:4649:PHE:HB3	1:C:4653:LYS:HE3	1.81	0.62
1:D:1425:THR:N	1:D:1510:VAL:O	2.33	0.62
1:D:3767:LEU:HD21	1:D:3774:VAL:HB	1.82	0.62
1:A:1089:ARG:HH21	1:A:1600:PRO:HG3	1.65	0.62
1:A:1116:GLY:HA3	1:A:1136:ALA:HA	1.82	0.62
1:A:4184:LYS:HA	1:D:4904:HIS:NE2	2.14	0.62
1:B:2215:MET:HA	1:B:2218:HIS:HD2	1.65	0.62
1:D:1137:PHE:HA	1:D:1144:ARG:HA	1.79	0.62
1:D:1729:MET:HG2	1:D:2110:ASN:HA	1.81	0.62
1:A:4849:ILE:HG23	1:D:4822:VAL:CG1	2.26	0.62
1:C:25:THR:HB	1:C:32:GLN:HB3	1.82	0.62
1:C:1258:PHE:HB2	1:C:1593:HIS:HB3	1.80	0.62
1:A:1425:THR:N	1:A:1510:VAL:O	2.33	0.62
1:B:25:THR:HB	1:B:32:GLN:HB3	1.82	0.62
1:C:1089:ARG:HH21	1:C:1600:PRO:HG3	1.65	0.62
1:A:4828:ILE:HG23	1:A:4828:ILE:O	2.00	0.61
1:B:1116:GLY:HA3	1:B:1136:ALA:HA	1.82	0.61
1:C:4820:VAL:O	1:C:4820:VAL:HG13	1.97	0.61
1:C:4832:ILE:HD11	1:C:4844:ARG:HD2	1.79	0.61
1:B:4519:LEU:CB	1:D:4814:TYR:CE2	2.64	0.61
1:C:1729:MET:HG2	1:C:2110:ASN:HA	1.81	0.61
1:D:3665:LEU:HD23	1:D:3735:ARG:HD3	1.81	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3665:LEU:HD23	1:A:3735:ARG:HD3	1.81	0.61
1:A:4511:ALA:HA	1:A:4514:ILE:HD12	1.80	0.61
1:C:4820:VAL:O	1:C:4824:ALA:CB	2.45	0.61
1:C:4905:GLY:O	1:C:4909:HIS:HB2	2.00	0.61
1:B:1089:ARG:HH21	1:B:1600:PRO:HG3	1.65	0.61
1:B:3767:LEU:HD21	1:B:3774:VAL:HB	1.82	0.61
1:B:4822:VAL:CG1	1:D:4853:PHE:HB2	2.30	0.61
1:B:4889:CYS:O	1:B:4893:GLY:N	2.32	0.61
1:D:2215:MET:HA	1:D:2218:HIS:HD2	1.65	0.61
1:D:4517:ILE:O	1:D:4520:PHE:HD2	1.83	0.61
1:B:1425:THR:N	1:B:1510:VAL:O	2.33	0.61
1:B:4931:GLU:OE2	1:B:4942:TRP:NE1	2.34	0.61
1:C:1425:THR:N	1:C:1510:VAL:O	2.33	0.61
1:B:3903:GLY:O	1:B:3907:PHE:CB	2.49	0.61
1:B:4828:ILE:HG23	1:B:4828:ILE:O	2.01	0.61
1:D:25:THR:HB	1:D:32:GLN:HB3	1.82	0.61
1:D:3920:THR:O	1:D:3924:TYR:N	2.33	0.61
1:D:4931:GLU:OE2	1:D:4942:TRP:NE1	2.34	0.61
1:A:1272:ARG:NH1	1:A:1587:HIS:O	2.34	0.61
1:B:1272:ARG:NH1	1:B:1587:HIS:O	2.34	0.61
1:C:1116:GLY:HA3	1:C:1136:ALA:HA	1.82	0.61
1:D:4889:CYS:O	1:D:4893:GLY:N	2.32	0.61
1:A:4843:TYR:O	1:A:4847:PHE:CB	2.49	0.61
1:C:2215:MET:HA	1:C:2218:HIS:HD2	1.65	0.61
1:C:3767:LEU:HD21	1:C:3774:VAL:HB	1.82	0.61
1:D:1445:TRP:H	1:D:1487:MET:HB2	1.66	0.61
1:D:4905:GLY:O	1:D:4909:HIS:HB2	2.00	0.61
1:A:25:THR:HB	1:A:32:GLN:HB3	1.82	0.61
1:A:4905:GLY:O	1:A:4909:HIS:HB2	2.01	0.61
1:D:694:ARG:NH1	1:D:724:SER:OG	2.34	0.61
1:D:4828:ILE:O	1:D:4828:ILE:HG23	2.01	0.61
1:A:4931:GLU:OE2	1:A:4942:TRP:NE1	2.34	0.61
1:B:4783:THR:HG23	1:B:4817:HIS:CG	2.35	0.61
1:C:3903:GLY:O	1:C:3907:PHE:CB	2.49	0.61
1:C:4843:TYR:O	1:C:4847:PHE:CB	2.49	0.61
1:D:1272:ARG:NH1	1:D:1587:HIS:O	2.34	0.61
1:D:2195:ALA:HB1	1:D:2238:SER:HB2	1.82	0.61
1:A:694:ARG:NH1	1:A:724:SER:OG	2.34	0.60
1:A:1445:TRP:H	1:A:1487:MET:HB2	1.66	0.60
1:A:3903:GLY:O	1:A:3907:PHE:CB	2.49	0.60
1:B:4788:ASN:O	1:B:4791:ARG:NH2	2.35	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:4931:GLU:OE2	1:C:4942:TRP:NE1	2.34	0.60
1:A:3767:LEU:HD21	1:A:3774:VAL:HB	1.82	0.60
1:B:694:ARG:NH1	1:B:724:SER:OG	2.34	0.60
1:B:1302:TYR:HB2	1:B:1543:VAL:HB	1.83	0.60
1:B:4843:TYR:O	1:B:4847:PHE:CB	2.49	0.60
1:A:2248:VAL:HG11	1:A:2306:ALA:HA	1.84	0.60
1:B:4905:GLY:O	1:B:4909:HIS:HB2	2.00	0.60
1:C:1302:TYR:HB2	1:C:1543:VAL:HB	1.83	0.60
1:C:2195:ALA:HB1	1:C:2238:SER:HB2	1.82	0.60
1:D:247:VAL:O	1:D:272:ARG:NH1	2.31	0.60
1:A:308:LEU:HD21	1:A:370:LEU:HD12	1.83	0.60
1:C:308:LEU:HD21	1:C:370:LEU:HD12	1.83	0.60
1:C:2248:VAL:HG11	1:C:2306:ALA:HA	1.84	0.60
1:C:4788:ASN:O	1:C:4791:ARG:NH2	2.35	0.60
1:A:4849:ILE:CG2	1:D:4822:VAL:HG12	2.28	0.60
1:B:1146:HIS:HB2	1:B:1192:PHE:HE1	1.67	0.60
1:C:694:ARG:NH1	1:C:724:SER:OG	2.34	0.60
1:C:1272:ARG:NH2	1:C:1590:PHE:O	2.34	0.60
1:D:1146:HIS:HB2	1:D:1192:PHE:HE1	1.67	0.60
1:A:247:VAL:O	1:A:272:ARG:NH1	2.31	0.60
1:B:4810:MET:CB	1:C:4519:LEU:O	2.50	0.60
1:D:1272:ARG:NH2	1:D:1590:PHE:O	2.34	0.60
1:B:1272:ARG:NH2	1:B:1590:PHE:O	2.34	0.60
1:B:1445:TRP:H	1:B:1487:MET:HB2	1.66	0.60
1:D:4788:ASN:O	1:D:4791:ARG:NH2	2.35	0.60
1:A:1729:MET:HG2	1:A:2110:ASN:HA	1.81	0.60
1:B:2195:ALA:HB1	1:B:2238:SER:HB2	1.82	0.60
1:A:281:ARG:NH2	1:A:284:TRP:O	2.35	0.60
1:C:1146:HIS:HB2	1:C:1192:PHE:HE1	1.67	0.60
1:D:3903:GLY:O	1:D:3907:PHE:CB	2.49	0.60
1:A:1146:HIS:HB2	1:A:1192:PHE:HE1	1.67	0.60
1:A:1272:ARG:NH2	1:A:1590:PHE:O	2.34	0.60
1:A:4148:ARG:NH2	1:A:4150:TYR:OH	2.35	0.60
1:A:4889:CYS:O	1:A:4893:GLY:N	2.32	0.60
1:B:3920:THR:O	1:B:3924:TYR:N	2.33	0.60
1:B:4148:ARG:NH2	1:B:4150:TYR:OH	2.35	0.60
1:B:4517:ILE:O	1:B:4520:PHE:HD2	1.85	0.60
1:C:281:ARG:NH2	1:C:284:TRP:O	2.35	0.60
1:C:1445:TRP:H	1:C:1487:MET:HB2	1.66	0.60
1:C:4558:VAL:HG13	1:C:4558:VAL:O	2.02	0.59
1:D:1190:LEU:HD12	1:D:1193:LYS:HE2	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1302:TYR:HB2	1:D:1543:VAL:HB	1.83	0.59
1:A:1086:ARG:HB2	1:A:1207:LEU:HB2	1.84	0.59
1:A:4765:GLY:HA2	1:A:4768:LEU:HB2	1.85	0.59
1:B:1447:THR:HG23	1:B:1538:LYS:HB2	1.84	0.59
1:B:1482:ARG:HB3	1:B:1531:TYR:HD1	1.68	0.59
1:B:4868:ILE:HD11	1:D:4864:GLN:HG3	1.83	0.59
1:C:1272:ARG:NH1	1:C:1587:HIS:O	2.34	0.59
1:C:2116:ASP:OD1	1:C:2153:ASN:ND2	2.32	0.59
1:C:3903:GLY:O	1:C:3907:PHE:HB3	2.03	0.59
1:D:1106:GLU:HB3	1:D:1214:ARG:HB3	1.84	0.59
1:D:1447:THR:HG23	1:D:1538:LYS:HB2	1.84	0.59
1:D:2248:VAL:HG11	1:D:2306:ALA:HA	1.84	0.59
1:D:4765:GLY:HA2	1:D:4768:LEU:HB2	1.84	0.59
1:D:4832:ILE:HG23	1:D:4833:GLU:O	2.01	0.59
1:A:2195:ALA:HB1	1:A:2238:SER:HB2	1.82	0.59
1:B:4519:LEU:HD12	1:B:4519:LEU:O	2.02	0.59
1:C:4627:ILE:O	1:C:4631:TRP:CB	2.51	0.59
1:C:4828:ILE:HG23	1:C:4828:ILE:O	2.01	0.59
1:A:502:ILE:O	1:A:561:ARG:NH1	2.27	0.59
1:A:1482:ARG:HB3	1:A:1531:TYR:HD1	1.68	0.59
1:A:3844:LEU:HA	1:A:3847:LEU:HD13	1.84	0.59
1:A:4788:ASN:O	1:A:4791:ARG:NH2	2.34	0.59
1:A:4822:VAL:O	1:A:4822:VAL:HG12	2.01	0.59
1:C:4622:PRO:O	1:C:4630:GLN:NE2	2.36	0.59
1:A:4160:GLN:NE2	1:A:4201:MET:O	2.36	0.59
1:A:4642:PRO:HG2	1:A:4648:LYS:HD3	1.85	0.59
1:A:4904:HIS:NE2	1:C:4184:LYS:HA	2.18	0.59
1:B:2248:VAL:HG11	1:B:2306:ALA:HA	1.83	0.59
1:C:3844:LEU:HA	1:C:3847:LEU:HD13	1.84	0.59
1:C:4148:ARG:NH2	1:C:4150:TYR:OH	2.35	0.59
1:D:4642:PRO:HG2	1:D:4648:LYS:HD3	1.85	0.59
1:D:4752:LYS:HG3	1:D:4755:ARG:HE	1.68	0.59
1:D:4798:GLU:H	1:D:4802:THR:HG1	1.49	0.59
1:A:4622:PRO:O	1:A:4630:GLN:NE2	2.36	0.59
1:B:3903:GLY:O	1:B:3907:PHE:HB3	2.02	0.59
1:B:4517:ILE:O	1:B:4520:PHE:CD2	2.56	0.59
1:B:4752:LYS:HG3	1:B:4755:ARG:HE	1.68	0.59
1:C:3920:THR:O	1:C:3924:TYR:N	2.33	0.59
1:A:4849:ILE:CG2	1:D:4822:VAL:HB	2.32	0.59
1:B:308:LEU:HD21	1:B:370:LEU:HD12	1.83	0.59
1:B:3663:ASP:OD2	1:B:3735:ARG:NH2	2.36	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3901:GLU:OE1	1:B:3902:GLN:NE2	2.36	0.59
1:C:4642:PRO:HG2	1:C:4648:LYS:HD3	1.85	0.59
1:C:4796:LYS:NZ	1:C:4816:PHE:CD1	2.70	0.59
1:D:4622:PRO:O	1:D:4630:GLN:NE2	2.36	0.59
1:B:281:ARG:NH2	1:B:284:TRP:O	2.35	0.59
1:B:3805:ASP:OD2	1:B:3809:PHE:N	2.33	0.59
1:B:4089:HIS:O	1:B:4093:LYS:N	2.35	0.59
1:B:4642:PRO:HG2	1:B:4648:LYS:HD3	1.85	0.59
1:C:374:TYR:HA	1:C:391:ALA:HA	1.85	0.59
1:D:1086:ARG:HB2	1:D:1207:LEU:HB2	1.84	0.59
1:D:4148:ARG:NH2	1:D:4150:TYR:OH	2.35	0.59
1:D:4561:VAL:CG2	1:D:4562:LEU:H	2.14	0.59
1:A:3901:GLU:OE1	1:A:3902:GLN:NE2	2.36	0.59
1:A:4627:ILE:O	1:A:4631:TRP:CB	2.51	0.59
1:D:4832:ILE:HD11	1:D:4844:ARG:HD3	1.83	0.59
1:A:1447:THR:HG23	1:A:1538:LYS:HB2	1.84	0.59
1:A:2212:GLN:NE2	1:A:2246:ALA:O	2.36	0.59
1:A:4747:ILE:HD12	1:A:4750:GLY:HA3	1.85	0.59
1:B:247:VAL:O	1:B:272:ARG:NH1	2.31	0.59
1:B:1291:GLY:HA2	1:B:1551:ASN:H	1.68	0.59
1:B:4627:ILE:O	1:B:4631:TRP:CB	2.51	0.59
1:B:4765:GLY:HA2	1:B:4768:LEU:HB2	1.85	0.59
1:C:1106:GLU:HB3	1:C:1214:ARG:HB3	1.84	0.59
1:C:1447:THR:HG23	1:C:1538:LYS:HB2	1.84	0.59
1:C:4747:ILE:HD12	1:C:4750:GLY:HA3	1.85	0.59
1:D:1482:ARG:HB3	1:D:1531:TYR:HD1	1.68	0.59
1:D:4936:GLY:O	1:D:4940:TYR:HB2	2.03	0.59
1:A:1291:GLY:HA2	1:A:1551:ASN:H	1.68	0.58
1:A:1302:TYR:HB2	1:A:1543:VAL:HB	1.83	0.58
1:B:1086:ARG:HB2	1:B:1207:LEU:HB2	1.84	0.58
1:C:4160:GLN:NE2	1:C:4201:MET:O	2.36	0.58
1:C:4752:LYS:HG3	1:C:4755:ARG:HE	1.68	0.58
1:C:4936:GLY:O	1:C:4940:TYR:HB2	2.03	0.58
1:D:308:LEU:HD21	1:D:370:LEU:HD12	1.83	0.58
1:D:3901:GLU:OE1	1:D:3902:GLN:NE2	2.36	0.58
1:A:374:TYR:HA	1:A:391:ALA:HA	1.85	0.58
1:A:1106:GLU:HB3	1:A:1214:ARG:HB3	1.84	0.58
1:B:754:VAL:HB	1:B:771:ASN:HA	1.86	0.58
1:B:4936:GLY:O	1:B:4940:TYR:HB2	2.03	0.58
1:C:299:HIS:HD2	1:C:302:THR:H	1.51	0.58
1:C:1086:ARG:HB2	1:C:1207:LEU:HB2	1.83	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1291:GLY:HA2	1:C:1551:ASN:H	1.68	0.58
1:D:281:ARG:NH2	1:D:284:TRP:O	2.35	0.58
1:D:4843:TYR:O	1:D:4847:PHE:CB	2.49	0.58
1:B:4160:GLN:NE2	1:B:4201:MET:O	2.36	0.58
1:B:4887:THR:HA	1:B:4896:ASN:HB2	1.86	0.58
1:C:150:GLN:NE2	1:C:158:CYS:SG	2.76	0.58
1:C:754:VAL:HB	1:C:771:ASN:HA	1.85	0.58
1:C:1482:ARG:HB3	1:C:1531:TYR:HD1	1.68	0.58
1:C:2212:GLN:NE2	1:C:2246:ALA:O	2.36	0.58
1:D:4887:THR:HA	1:D:4896:ASN:HB2	1.86	0.58
1:A:754:VAL:HB	1:A:771:ASN:HA	1.85	0.58
1:B:4519:LEU:HD11	1:D:4811:LEU:CD1	2.13	0.58
1:C:3856:GLN:NE2	1:C:3923:GLU:O	2.37	0.58
1:D:150:GLN:NE2	1:D:158:CYS:SG	2.76	0.58
1:A:26:ALA:HB3	1:A:33:GLN:HB3	1.86	0.58
1:A:3663:ASP:OD2	1:A:3735:ARG:NH2	2.36	0.58
1:A:3856:GLN:NE2	1:A:3923:GLU:O	2.36	0.58
1:B:35:LEU:HD13	1:B:49:LEU:HD22	1.86	0.58
1:B:4622:PRO:O	1:B:4630:GLN:NE2	2.36	0.58
1:C:247:VAL:O	1:C:272:ARG:NH1	2.31	0.58
1:C:1288:LYS:HB2	1:C:1555:PHE:HB2	1.86	0.58
1:C:4765:GLY:HA2	1:C:4768:LEU:HB2	1.84	0.58
1:C:4887:THR:HA	1:C:4896:ASN:HB2	1.85	0.58
1:D:3663:ASP:OD2	1:D:3735:ARG:NH2	2.36	0.58
1:D:4627:ILE:O	1:D:4631:TRP:CB	2.51	0.58
1:A:299:HIS:HD2	1:A:302:THR:H	1.51	0.58
1:A:731:HIS:HE1	1:A:738:ALA:HB1	1.69	0.58
1:A:4752:LYS:HG3	1:A:4755:ARG:HE	1.68	0.58
1:A:4936:GLY:O	1:A:4940:TYR:HB2	2.03	0.58
1:B:1190:LEU:HD12	1:B:1193:LYS:HE2	1.84	0.58
1:B:3844:LEU:HA	1:B:3847:LEU:HD13	1.84	0.58
1:B:4747:ILE:HD12	1:B:4750:GLY:HA3	1.85	0.58
1:C:731:HIS:HE1	1:C:738:ALA:HB1	1.69	0.58
1:C:3901:GLU:OE1	1:C:3902:GLN:NE2	2.36	0.58
1:D:754:VAL:HB	1:D:771:ASN:HA	1.86	0.58
1:A:277:LEU:HD22	1:A:295:PHE:HB3	1.86	0.58
1:B:26:ALA:HB3	1:B:33:GLN:HB3	1.86	0.58
1:C:35:LEU:HD13	1:C:49:LEU:HD22	1.86	0.58
1:C:4616:LEU:HA	1:C:4620:GLU:HB2	1.86	0.58
1:C:4754:LEU:HA	1:C:4757:ILE:HD12	1.86	0.58
1:D:277:LEU:HD22	1:D:295:PHE:HB3	1.86	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:4747:ILE:HD12	1:D:4750:GLY:HA3	1.85	0.58
1:A:150:GLN:NE2	1:A:158:CYS:SG	2.76	0.58
1:A:4617:TYR:OH	1:A:4629:GLY:O	2.22	0.58
1:A:4754:LEU:HA	1:A:4757:ILE:HD12	1.86	0.58
1:D:1291:GLY:HA2	1:D:1551:ASN:H	1.68	0.58
1:D:2212:GLN:NE2	1:D:2246:ALA:O	2.36	0.58
1:A:71:GLN:NE2	1:A:106:GLN:H	2.02	0.58
1:A:3805:ASP:OD2	1:A:3809:PHE:N	2.33	0.58
1:A:3903:GLY:O	1:A:3907:PHE:HB3	2.02	0.58
1:A:4888:LYS:HB3	1:A:4893:GLY:HA2	1.86	0.58
1:B:237:LEU:HB2	1:B:404:ASN:HB3	1.86	0.58
1:B:3856:GLN:NE2	1:B:3923:GLU:O	2.36	0.58
1:B:4184:LYS:HA	1:C:4904:HIS:NE2	2.19	0.58
1:C:26:ALA:HB3	1:C:33:GLN:HB3	1.86	0.58
1:C:1482:ARG:NH1	1:C:1530:TYR:O	2.37	0.58
1:D:237:LEU:HB2	1:D:404:ASN:HB3	1.86	0.58
1:A:4887:THR:HA	1:A:4896:ASN:HB2	1.86	0.58
1:B:1106:GLU:HB3	1:B:1214:ARG:HB3	1.84	0.58
1:C:1190:LEU:HD12	1:C:1193:LYS:HE2	1.84	0.58
1:C:4617:TYR:OH	1:C:4629:GLY:O	2.22	0.58
1:D:26:ALA:HB3	1:D:33:GLN:HB3	1.86	0.58
1:D:3844:LEU:HA	1:D:3847:LEU:HD13	1.84	0.58
1:D:3856:GLN:NE2	1:D:3923:GLU:O	2.36	0.58
1:D:4160:GLN:NE2	1:D:4201:MET:O	2.36	0.58
1:D:4754:LEU:HA	1:D:4757:ILE:HD12	1.85	0.58
1:A:1190:LEU:HD12	1:A:1193:LYS:HE2	1.84	0.57
1:B:2212:GLN:NE2	1:B:2246:ALA:O	2.36	0.57
1:B:4616:LEU:HA	1:B:4620:GLU:HB2	1.86	0.57
1:C:3806:LEU:O	1:C:3810:GLU:N	2.37	0.57
1:D:374:TYR:HA	1:D:391:ALA:HA	1.85	0.57
1:D:1288:LYS:HB2	1:D:1555:PHE:HB2	1.86	0.57
1:D:1926:ILE:HD13	1:D:2037:VAL:HG11	1.86	0.57
1:B:1482:ARG:NH1	1:B:1530:TYR:O	2.37	0.57
1:B:3806:LEU:O	1:B:3810:GLU:N	2.37	0.57
1:C:237:LEU:HB2	1:C:404:ASN:HB3	1.86	0.57
1:A:4616:LEU:HA	1:A:4620:GLU:HB2	1.86	0.57
1:C:2404:ALA:HB2	1:C:2475:ARG:HE	1.69	0.57
1:C:3663:ASP:OD2	1:C:3735:ARG:NH2	2.36	0.57
1:D:608:HIS:HA	1:D:611:LEU:HD13	1.86	0.57
1:D:2404:ALA:HB2	1:D:2475:ARG:HE	1.69	0.57
1:A:2404:ALA:HB2	1:A:2475:ARG:HE	1.69	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:150:GLN:NE2	1:B:158:CYS:SG	2.76	0.57
1:B:1288:LYS:HB2	1:B:1555:PHE:HB2	1.86	0.57
1:B:2116:ASP:OD1	1:B:2153:ASN:ND2	2.32	0.57
1:B:4754:LEU:HA	1:B:4757:ILE:HD12	1.86	0.57
1:C:655:MET:HG2	1:C:836:HIS:HA	1.87	0.57
1:D:35:LEU:HD13	1:D:49:LEU:HD22	1.86	0.57
1:D:299:HIS:HD2	1:D:302:THR:H	1.51	0.57
1:D:731:HIS:HE1	1:D:738:ALA:HB1	1.69	0.57
1:A:71:GLN:NE2	1:A:106:GLN:N	2.53	0.57
1:A:237:LEU:HB2	1:A:404:ASN:HB3	1.86	0.57
1:B:585:ALA:HA	1:B:588:ILE:HD12	1.86	0.57
1:C:4520:PHE:CB	1:C:4562:LEU:HD23	2.33	0.57
1:D:4013:MET:N	1:D:4013:MET:SD	2.78	0.57
1:D:4142:SER:O	1:D:4144:LYS:NZ	2.38	0.57
1:A:235:ARG:NH2	1:A:268:SER:O	2.38	0.57
1:A:439:LYS:HD3	1:A:441:LYS:HB2	1.87	0.57
1:A:4832:ILE:HG23	1:A:4833:GLU:O	2.05	0.57
1:B:374:TYR:HA	1:B:391:ALA:HA	1.85	0.57
1:B:4013:MET:N	1:B:4013:MET:SD	2.78	0.57
1:B:4617:TYR:OH	1:B:4629:GLY:O	2.22	0.57
1:B:4835:PRO:HB3	1:B:4845:ILE:HG13	1.87	0.57
1:C:439:LYS:HD3	1:C:441:LYS:HB2	1.87	0.57
1:C:741:VAL:HG22	1:C:1469:LEU:HD23	1.87	0.57
1:D:741:VAL:HG22	1:D:1469:LEU:HD23	1.87	0.57
1:D:3903:GLY:O	1:D:3907:PHE:HB3	2.02	0.57
1:A:608:HIS:HA	1:A:611:LEU:HD13	1.86	0.57
1:A:741:VAL:HG22	1:A:1469:LEU:HD23	1.87	0.57
1:A:4814:TYR:HE2	1:D:4519:LEU:CB	2.18	0.57
1:B:4810:MET:CB	1:C:4519:LEU:CA	2.82	0.57
1:C:1926:ILE:HD13	1:C:2037:VAL:HG11	1.86	0.57
1:A:35:LEU:HD13	1:A:49:LEU:HD22	1.86	0.57
1:A:646:THR:HG23	1:A:1684:GLN:HE22	1.70	0.57
1:A:3920:THR:O	1:A:3924:TYR:N	2.33	0.57
1:B:235:ARG:NH2	1:B:268:SER:O	2.38	0.57
1:B:439:LYS:HD3	1:B:441:LYS:HB2	1.87	0.57
1:B:741:VAL:HG22	1:B:1469:LEU:HD23	1.87	0.57
1:D:1482:ARG:NH1	1:D:1530:TYR:O	2.37	0.57
1:D:4959:PHE:O	1:D:4962:GLN:NE2	2.35	0.57
1:A:4013:MET:N	1:A:4013:MET:SD	2.78	0.57
1:A:4959:PHE:O	1:A:4962:GLN:NE2	2.35	0.57
1:B:299:HIS:HD2	1:B:302:THR:H	1.51	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:731:HIS:HE1	1:B:738:ALA:HB1	1.69	0.57
1:B:1926:ILE:HD13	1:B:2037:VAL:HG11	1.86	0.57
1:C:277:LEU:HD22	1:C:295:PHE:HB3	1.86	0.57
1:C:3805:ASP:OD2	1:C:3809:PHE:N	2.34	0.57
1:A:655:MET:HG2	1:A:836:HIS:HA	1.87	0.57
1:A:677:LEU:HB2	1:A:755:ILE:HB	1.87	0.57
1:B:655:MET:HG2	1:B:836:HIS:HA	1.87	0.57
1:B:4849:ILE:HD12	1:C:4823:ARG:CB	2.34	0.57
1:C:2760:PRO:HD2	1:C:2763:LEU:HD12	1.87	0.57
1:D:4835:PRO:HB3	1:D:4845:ILE:HG13	1.87	0.57
1:A:4189:LEU:HD23	1:A:4192:ASN:HD22	1.70	0.56
1:A:4849:ILE:CG2	1:D:4822:VAL:CB	2.83	0.56
1:C:1104:GLU:HA	1:C:1163:GLY:HA2	1.86	0.56
1:C:4835:PRO:HB3	1:C:4845:ILE:HG13	1.87	0.56
1:C:4888:LYS:HB3	1:C:4893:GLY:HA2	1.86	0.56
1:D:235:ARG:NH2	1:D:268:SER:O	2.38	0.56
1:A:2760:PRO:HD2	1:A:2763:LEU:HD12	1.87	0.56
1:A:4516:PHE:O	1:A:4519:LEU:HD23	2.05	0.56
1:B:277:LEU:HD22	1:B:295:PHE:HB3	1.86	0.56
1:B:2221:TYR:O	1:B:2225:ASN:ND2	2.38	0.56
1:C:626:ARG:NH1	1:C:1667:LEU:O	2.39	0.56
1:C:1125:ASP:HA	1:C:1598:ARG:HG3	1.88	0.56
1:D:4617:TYR:OH	1:D:4629:GLY:O	2.22	0.56
1:A:1482:ARG:NH1	1:A:1530:TYR:O	2.37	0.56
1:A:2026:ILE:HG23	1:A:2030:LEU:HD12	1.87	0.56
1:A:2221:TYR:O	1:A:2225:ASN:ND2	2.38	0.56
1:B:677:LEU:HB2	1:B:755:ILE:HB	1.87	0.56
1:B:1125:ASP:HA	1:B:1598:ARG:HG3	1.87	0.56
1:B:1250:TRP:HE1	1:B:1643:GLU:HG3	1.71	0.56
1:B:2440:ALA:HA	1:B:2466:LYS:HD2	1.87	0.56
1:B:4888:LYS:HB3	1:B:4893:GLY:HA2	1.86	0.56
1:B:4904:HIS:NE2	1:D:4184:LYS:HA	2.20	0.56
1:C:235:ARG:NH2	1:C:268:SER:O	2.38	0.56
1:C:1250:TRP:HE1	1:C:1643:GLU:HG3	1.71	0.56
1:C:2026:ILE:HG23	1:C:2030:LEU:HD12	1.87	0.56
1:C:2221:TYR:O	1:C:2225:ASN:ND2	2.38	0.56
1:C:4013:MET:SD	1:C:4013:MET:N	2.78	0.56
1:C:4142:SER:O	1:C:4144:LYS:NZ	2.38	0.56
1:D:677:LEU:HB2	1:D:755:ILE:HB	1.87	0.56
1:D:3805:ASP:OD2	1:D:3809:PHE:N	2.34	0.56
1:D:4189:LEU:HD23	1:D:4192:ASN:HD22	1.70	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:585:ALA:HA	1:A:588:ILE:HD12	1.86	0.56
1:A:1926:ILE:HD13	1:A:2037:VAL:HG11	1.86	0.56
1:B:2715:PRO:HD2	1:B:2718:LEU:HD12	1.88	0.56
1:D:655:MET:HG2	1:D:836:HIS:HA	1.87	0.56
1:D:1250:TRP:HE1	1:D:1643:GLU:HG3	1.71	0.56
1:D:2221:TYR:O	1:D:2225:ASN:ND2	2.38	0.56
1:D:2440:ALA:HA	1:D:2466:LYS:HD2	1.87	0.56
1:D:4616:LEU:HA	1:D:4620:GLU:HB2	1.86	0.56
1:B:2760:PRO:HD2	1:B:2763:LEU:HD12	1.87	0.56
1:C:1098:ALA:O	1:C:1101:TRP:NE1	2.38	0.56
1:C:2440:ALA:HA	1:C:2466:LYS:HD2	1.87	0.56
1:C:4189:LEU:HD23	1:C:4192:ASN:HD22	1.70	0.56
1:D:1098:ALA:O	1:D:1101:TRP:NE1	2.38	0.56
1:D:1104:GLU:HA	1:D:1163:GLY:HA2	1.86	0.56
1:A:626:ARG:NH1	1:A:1667:LEU:O	2.39	0.56
1:B:2193:MET:HA	1:B:2196:ASN:HD22	1.70	0.56
1:B:4189:LEU:HD23	1:B:4192:ASN:HD22	1.70	0.56
1:B:4832:ILE:HD13	1:B:4844:ARG:CD	2.35	0.56
1:C:2193:MET:HA	1:C:2196:ASN:HD22	1.70	0.56
1:C:4089:HIS:O	1:C:4093:LYS:N	2.35	0.56
1:D:1125:ASP:HA	1:D:1598:ARG:HG3	1.87	0.56
1:D:3862:GLN:OE1	1:D:3865:ASN:ND2	2.39	0.56
1:A:1104:GLU:HA	1:A:1163:GLY:HA2	1.86	0.56
1:A:1144:ARG:N	1:A:1150:GLU:O	2.35	0.56
1:A:3862:GLN:OE1	1:A:3865:ASN:ND2	2.39	0.56
1:A:4819:TYR:HA	1:C:4849:ILE:HG21	1.87	0.56
1:B:185:SER:OG	1:B:186:VAL:N	2.39	0.56
1:B:608:HIS:HA	1:B:611:LEU:HD13	1.86	0.56
1:B:626:ARG:NH1	1:B:1667:LEU:O	2.39	0.56
1:B:2404:ALA:HB2	1:B:2475:ARG:HE	1.69	0.56
1:B:4519:LEU:HB3	1:D:4814:TYR:HE2	1.67	0.56
1:C:585:ALA:HA	1:C:588:ILE:HD12	1.87	0.56
1:C:986:ILE:HD12	1:C:1059:GLY:HA2	1.88	0.56
1:C:3862:GLN:OE1	1:C:3865:ASN:ND2	2.39	0.56
1:D:1522:ALA:N	1:D:1525:LYS:O	2.39	0.56
1:A:2213:LYS:HA	1:A:2254:LEU:HD21	1.88	0.56
1:A:4822:VAL:HG13	1:C:4853:PHE:HB2	1.84	0.56
1:B:986:ILE:HD12	1:B:1059:GLY:HA2	1.88	0.56
1:B:1104:GLU:HA	1:B:1163:GLY:HA2	1.86	0.56
1:C:288:HIS:ND1	1:C:349:MET:O	2.39	0.56
1:C:677:LEU:HB2	1:C:755:ILE:HB	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:2715:PRO:HD2	1:C:2718:LEU:HD12	1.88	0.56
1:D:585:ALA:HA	1:D:588:ILE:HD12	1.87	0.56
1:D:4089:HIS:O	1:D:4093:LYS:N	2.35	0.56
1:D:4888:LYS:HB3	1:D:4893:GLY:HA2	1.86	0.56
1:B:646:THR:HG23	1:B:1684:GLN:HE22	1.70	0.56
1:B:2213:LYS:HA	1:B:2254:LEU:HD21	1.88	0.56
1:B:4822:VAL:HG11	1:D:4849:ILE:O	2.05	0.56
1:B:4957:ASP:OD1	1:B:4957:ASP:N	2.39	0.56
1:C:185:SER:OG	1:C:186:VAL:N	2.39	0.56
1:D:249:SER:O	1:D:257:ARG:NH2	2.39	0.56
1:A:1288:LYS:HB2	1:A:1555:PHE:HB2	1.86	0.56
1:A:2440:ALA:HA	1:A:2466:LYS:HD2	1.87	0.56
1:C:1522:ALA:N	1:C:1525:LYS:O	2.39	0.56
1:D:2715:PRO:HD2	1:D:2718:LEU:HD12	1.88	0.56
1:A:37:LEU:HD11	1:A:47:CYS:HB3	1.88	0.55
1:A:1783:PRO:HB3	1:A:1786:ILE:HD12	1.88	0.55
1:B:4052:ALA:O	1:B:4056:HIS:ND1	2.40	0.55
1:C:2213:LYS:HA	1:C:2254:LEU:HD21	1.88	0.55
1:D:439:LYS:HD3	1:D:441:LYS:HB2	1.87	0.55
1:D:878:LEU:HD23	1:D:881:ILE:HD13	1.89	0.55
1:D:2760:PRO:HD2	1:D:2763:LEU:HD12	1.87	0.55
1:D:4717:ASP:HB3	1:D:4720:PHE:HB3	1.88	0.55
1:A:1922:ARG:NH1	1:A:2037:VAL:O	2.39	0.55
1:A:4052:ALA:O	1:A:4056:HIS:ND1	2.40	0.55
1:A:4089:HIS:O	1:A:4093:LYS:N	2.35	0.55
1:B:878:LEU:HD23	1:B:881:ILE:HD13	1.88	0.55
1:C:37:LEU:HD11	1:C:47:CYS:HB3	1.88	0.55
1:C:878:LEU:HD23	1:C:881:ILE:HD13	1.88	0.55
1:C:3842:ARG:NH1	1:C:3845:GLN:OE1	2.40	0.55
1:D:646:THR:HG23	1:D:1684:GLN:HE22	1.70	0.55
1:D:2213:LYS:HA	1:D:2254:LEU:HD21	1.88	0.55
1:A:249:SER:O	1:A:257:ARG:NH2	2.39	0.55
1:A:4717:ASP:HB3	1:A:4720:PHE:HB3	1.88	0.55
1:B:3862:GLN:OE1	1:B:3865:ASN:ND2	2.38	0.55
1:B:3959:LEU:HD23	1:B:3965:GLN:HB3	1.89	0.55
1:B:4820:VAL:O	1:B:4824:ALA:N	2.38	0.55
1:C:4717:ASP:HB3	1:C:4720:PHE:HB3	1.88	0.55
1:D:185:SER:OG	1:D:186:VAL:N	2.39	0.55
1:D:626:ARG:NH1	1:D:1667:LEU:O	2.39	0.55
1:D:2213:LYS:HG2	1:D:2254:LEU:HD11	1.89	0.55
1:A:1125:ASP:HA	1:A:1598:ARG:HG3	1.87	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1912:GLN:O	1:A:2091:ARG:NH1	2.37	0.55
1:A:4085:VAL:O	1:A:4089:HIS:N	2.36	0.55
1:A:4487:ALA:O	1:A:4491:LYS:HB2	2.07	0.55
1:B:300:VAL:O	1:B:420:ARG:NH2	2.40	0.55
1:B:2026:ILE:HG23	1:B:2030:LEU:HD12	1.87	0.55
1:B:3926:GLN:HG3	1:B:4936:GLY:H	1.72	0.55
1:C:608:HIS:HA	1:C:611:LEU:HD13	1.86	0.55
1:C:1570:LEU:O	1:C:1573:SER:OG	2.24	0.55
1:C:3959:LEU:HD23	1:C:3965:GLN:HB3	1.89	0.55
1:C:4616:LEU:HD12	1:C:4622:PRO:HG3	1.88	0.55
1:C:4832:ILE:HG23	1:C:4833:GLU:O	2.06	0.55
1:D:37:LEU:HD11	1:D:47:CYS:HB3	1.88	0.55
1:D:228:LEU:HB3	1:D:289:ILE:HB	1.89	0.55
1:D:288:HIS:ND1	1:D:349:MET:O	2.39	0.55
1:D:1573:SER:HB3	1:D:1582:CYS:HA	1.89	0.55
1:D:1922:ARG:NH1	1:D:2037:VAL:O	2.39	0.55
1:D:4832:ILE:HD11	1:D:4844:ARG:HD2	1.88	0.55
1:D:4957:ASP:N	1:D:4957:ASP:OD1	2.39	0.55
1:A:300:VAL:O	1:A:420:ARG:NH2	2.40	0.55
1:A:1250:TRP:HE1	1:A:1643:GLU:HG3	1.71	0.55
1:A:1522:ALA:N	1:A:1525:LYS:O	2.39	0.55
1:A:1573:SER:HB3	1:A:1582:CYS:HA	1.89	0.55
1:B:249:SER:O	1:B:257:ARG:NH2	2.39	0.55
1:B:1226:TYR:HD1	1:B:1229:ILE:HD12	1.71	0.55
1:B:1645:THR:HG22	1:B:1695:PRO:HG3	1.89	0.55
1:B:1783:PRO:HB3	1:B:1786:ILE:HD12	1.88	0.55
1:B:4487:ALA:O	1:B:4491:LYS:HB2	2.07	0.55
1:C:300:VAL:O	1:C:420:ARG:NH2	2.40	0.55
1:C:2213:LYS:HG2	1:C:2254:LEU:HD11	1.89	0.55
1:D:169:ARG:NH2	1:D:179:ASP:OD1	2.39	0.55
1:A:185:SER:OG	1:A:186:VAL:N	2.39	0.55
1:B:1922:ARG:NH1	1:B:2037:VAL:O	2.39	0.55
1:C:1922:ARG:NH1	1:C:2037:VAL:O	2.39	0.55
1:C:4136:ARG:NH2	1:C:4150:TYR:OH	2.40	0.55
1:C:4487:ALA:O	1:C:4491:LYS:HB2	2.07	0.55
1:D:1645:THR:HG22	1:D:1695:PRO:HG3	1.89	0.55
1:A:228:LEU:HB3	1:A:289:ILE:HB	1.89	0.55
1:A:2255:ALA:HA	1:A:2258:LEU:HD23	1.89	0.55
1:A:2715:PRO:HD2	1:A:2718:LEU:HD12	1.88	0.55
1:A:4136:ARG:NH2	1:A:4150:TYR:OH	2.40	0.55
1:A:4184:LYS:CA	1:D:4904:HIS:NE2	2.70	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:563:GLU:HG2	1:B:600:LEU:HD13	1.89	0.55
1:C:249:SER:O	1:C:257:ARG:NH2	2.39	0.55
1:C:1573:SER:HB3	1:C:1582:CYS:HA	1.89	0.55
1:C:4957:ASP:OD1	1:C:4957:ASP:N	2.39	0.55
1:D:1226:TYR:HD1	1:D:1229:ILE:HD12	1.71	0.55
1:D:1300:MET:HB2	1:D:1545:ALA:HB3	1.89	0.55
1:D:2255:ALA:HA	1:D:2258:LEU:HD23	1.89	0.55
1:A:288:HIS:ND1	1:A:349:MET:O	2.39	0.55
1:A:878:LEU:HD23	1:A:881:ILE:HD13	1.88	0.55
1:A:1242:ASN:HB3	1:A:1807:ARG:HB2	1.89	0.55
1:B:3842:ARG:NH1	1:B:3845:GLN:OE1	2.40	0.55
1:B:4142:SER:O	1:B:4144:LYS:NZ	2.38	0.55
1:B:4833:GLU:HB3	1:B:4844:ARG:NH2	2.19	0.55
1:C:646:THR:HG23	1:C:1684:GLN:HE22	1.70	0.55
1:D:4141:GLY:N	1:D:4147:GLU:OE1	2.40	0.55
1:D:4616:LEU:HD12	1:D:4622:PRO:HG3	1.88	0.55
1:A:394:HIS:HD2	1:A:397:GLY:H	1.55	0.55
1:A:682:THR:H	1:A:751:THR:HG22	1.72	0.55
1:A:986:ILE:HD12	1:A:1059:GLY:HA2	1.88	0.55
1:A:1602:GLN:HB3	1:A:1604:LEU:HD12	1.89	0.55
1:A:4142:SER:O	1:A:4144:LYS:NZ	2.38	0.55
1:A:4178:VAL:HG11	1:A:4881:VAL:HA	1.89	0.55
1:A:4759:SER:HA	1:A:4762:THR:HG22	1.89	0.55
1:B:1573:SER:HB3	1:B:1582:CYS:HA	1.89	0.55
1:B:2213:LYS:HG2	1:B:2254:LEU:HD11	1.89	0.55
1:C:4820:VAL:C	1:C:4824:ALA:HB2	2.27	0.55
1:D:394:HIS:HD2	1:D:397:GLY:H	1.55	0.55
1:D:682:THR:H	1:D:751:THR:HG22	1.72	0.55
1:D:3842:ARG:NH1	1:D:3845:GLN:OE1	2.40	0.55
1:A:169:ARG:NH2	1:A:179:ASP:OD1	2.39	0.55
1:A:246:THR:N	1:A:261:HIS:O	2.32	0.55
1:A:2193:MET:HA	1:A:2196:ASN:HD22	1.71	0.55
1:A:3926:GLN:HG3	1:A:4936:GLY:H	1.72	0.55
1:B:228:LEU:HB3	1:B:289:ILE:HB	1.89	0.55
1:B:682:THR:H	1:B:751:THR:HG22	1.72	0.55
1:C:243:GLU:HA	1:C:264:GLY:HA2	1.89	0.55
1:C:1117:TRP:HB3	1:C:1201:PHE:HB3	1.89	0.55
1:C:1242:ASN:HB3	1:C:1807:ARG:HB2	1.89	0.55
1:C:4759:SER:HA	1:C:4762:THR:HG22	1.89	0.55
1:D:563:GLU:HG2	1:D:600:LEU:HD13	1.89	0.55
1:D:3727:TYR:O	1:D:3731:ARG:CB	2.55	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:3926:GLN:HG3	1:D:4936:GLY:H	1.72	0.55
1:A:3806:LEU:O	1:A:3810:GLU:N	2.37	0.54
1:A:3925:ILE:HD11	1:A:3936:LEU:HD13	1.89	0.54
1:A:3959:LEU:HD23	1:A:3965:GLN:HB3	1.89	0.54
1:B:1522:ALA:N	1:B:1525:LYS:O	2.39	0.54
1:B:3727:TYR:O	1:B:3731:ARG:CB	2.55	0.54
1:B:4178:VAL:HG11	1:B:4881:VAL:HA	1.89	0.54
1:C:3911:ILE:HG23	1:C:3975:LEU:HD22	1.89	0.54
1:C:4052:ALA:O	1:C:4056:HIS:ND1	2.40	0.54
1:D:3911:ILE:HG23	1:D:3975:LEU:HD22	1.90	0.54
1:D:4487:ALA:O	1:D:4491:LYS:HB2	2.07	0.54
1:A:2059:LEU:HA	1:A:2062:LEU:HG	1.89	0.54
1:A:2213:LYS:HG2	1:A:2254:LEU:HD11	1.89	0.54
1:B:2255:ALA:HA	1:B:2258:LEU:HD23	1.89	0.54
1:C:2059:LEU:HA	1:C:2062:LEU:HG	1.90	0.54
1:C:3925:ILE:HD11	1:C:3936:LEU:HD13	1.89	0.54
1:D:300:VAL:O	1:D:420:ARG:NH2	2.40	0.54
1:D:1144:ARG:N	1:D:1150:GLU:O	2.35	0.54
1:D:2193:MET:HA	1:D:2196:ASN:HD22	1.70	0.54
1:D:4052:ALA:O	1:D:4056:HIS:ND1	2.40	0.54
1:A:3727:TYR:O	1:A:3731:ARG:CB	2.55	0.54
1:A:3842:ARG:NH1	1:A:3845:GLN:OE1	2.40	0.54
1:B:1300:MET:HB2	1:B:1545:ALA:HB3	1.89	0.54
1:C:682:THR:H	1:C:751:THR:HG22	1.72	0.54
1:C:1602:GLN:HB3	1:C:1604:LEU:HD12	1.89	0.54
1:C:4178:VAL:HG11	1:C:4881:VAL:HA	1.89	0.54
1:D:1602:GLN:HB3	1:D:1604:LEU:HD12	1.89	0.54
1:A:480:ARG:NH2	1:A:3679:GLU:OE2	2.41	0.54
1:A:1300:MET:HB2	1:A:1545:ALA:HB3	1.89	0.54
1:B:2059:LEU:HA	1:B:2062:LEU:HG	1.90	0.54
1:B:3696:MET:O	1:B:3699:SER:OG	2.26	0.54
1:B:4717:ASP:HB3	1:B:4720:PHE:HB3	1.88	0.54
1:C:228:LEU:HB3	1:C:289:ILE:HB	1.89	0.54
1:C:246:THR:N	1:C:261:HIS:O	2.33	0.54
1:C:1783:PRO:HB3	1:C:1786:ILE:HD12	1.88	0.54
1:C:2255:ALA:HA	1:C:2258:LEU:HD23	1.89	0.54
1:D:1132:GLU:HB3	1:D:1147:GLN:HE21	1.73	0.54
1:D:1999:ASP:O	1:D:2003:ASP:N	2.40	0.54
1:D:2026:ILE:HG23	1:D:2030:LEU:HD12	1.87	0.54
1:D:3925:ILE:HD11	1:D:3936:LEU:HD13	1.89	0.54
1:D:4178:VAL:HG11	1:D:4881:VAL:HA	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:150:GLN:HG3	1:A:152:ASP:H	1.72	0.54
1:A:1117:TRP:HB3	1:A:1201:PHE:HB3	1.89	0.54
1:B:150:GLN:HG3	1:B:152:ASP:H	1.72	0.54
1:B:1999:ASP:O	1:B:2003:ASP:N	2.40	0.54
1:B:3729:GLN:O	1:B:3733:HIS:ND1	2.32	0.54
1:B:4136:ARG:NH2	1:B:4150:TYR:OH	2.40	0.54
1:C:1611:ILE:O	1:C:1620:GLN:N	2.38	0.54
1:C:1843:LEU:O	1:C:1847:GLU:N	2.40	0.54
1:C:1999:ASP:O	1:C:2003:ASP:N	2.40	0.54
1:A:243:GLU:HA	1:A:264:GLY:HA2	1.89	0.54
1:A:563:GLU:HG2	1:A:600:LEU:HD13	1.89	0.54
1:A:1132:GLU:HB3	1:A:1147:GLN:HE21	1.73	0.54
1:A:1645:THR:HG22	1:A:1695:PRO:HG3	1.89	0.54
1:A:3911:ILE:HG23	1:A:3975:LEU:HD22	1.89	0.54
1:A:4849:ILE:HG22	1:D:4822:VAL:CB	2.37	0.54
1:B:243:GLU:HA	1:B:264:GLY:HA2	1.89	0.54
1:B:2196:ASN:OD1	1:B:2199:ARG:NH1	2.41	0.54
1:B:4616:LEU:HD12	1:B:4622:PRO:HG3	1.88	0.54
1:C:150:GLN:HG3	1:C:152:ASP:H	1.72	0.54
1:C:563:GLU:HG2	1:C:600:LEU:HD13	1.89	0.54
1:C:4833:GLU:O	1:C:4844:ARG:NH2	2.41	0.54
1:D:243:GLU:HA	1:D:264:GLY:HA2	1.89	0.54
1:D:2304:ARG:HG3	1:D:2402:ARG:HG3	1.90	0.54
1:A:375:GLN:HE21	1:A:392:ILE:HD13	1.73	0.54
1:B:169:ARG:NH2	1:B:179:ASP:OD1	2.39	0.54
1:B:375:GLN:HE21	1:B:392:ILE:HD13	1.73	0.54
1:B:1611:ILE:O	1:B:1620:GLN:N	2.38	0.54
1:B:2304:ARG:HG3	1:B:2402:ARG:HG3	1.90	0.54
1:B:3925:ILE:HD11	1:B:3936:LEU:HD13	1.89	0.54
1:B:4849:ILE:CG2	1:C:4822:VAL:CB	2.86	0.54
1:C:1726:ILE:HD11	1:C:2121:LEU:HD11	1.90	0.54
1:D:536:LEU:HG	1:D:540:LEU:HD13	1.90	0.54
1:D:986:ILE:HD12	1:D:1059:GLY:HA2	1.88	0.54
1:A:43:GLY:H	1:A:45:ARG:HH12	1.56	0.54
1:B:288:HIS:ND1	1:B:349:MET:O	2.39	0.54
1:B:536:LEU:HG	1:B:540:LEU:HD13	1.90	0.54
1:B:1132:GLU:HB3	1:B:1147:GLN:HE21	1.73	0.54
1:B:1242:ASN:HB3	1:B:1807:ARG:HB2	1.89	0.54
1:B:3911:ILE:HG23	1:B:3975:LEU:HD22	1.89	0.54
1:C:43:GLY:H	1:C:45:ARG:HH12	1.56	0.54
1:D:1726:ILE:HD11	1:D:2121:LEU:HD11	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:3696:MET:O	1:D:3699:SER:OG	2.26	0.54
1:D:3806:LEU:O	1:D:3810:GLU:N	2.37	0.54
1:D:3917:VAL:O	1:D:3920:THR:OG1	2.21	0.54
1:D:3959:LEU:HD23	1:D:3965:GLN:HB3	1.89	0.54
1:A:4616:LEU:HD12	1:A:4622:PRO:HG3	1.88	0.54
1:B:1117:TRP:HB3	1:B:1201:PHE:HB3	1.89	0.54
1:B:3748:SER:O	1:B:3793:SER:OG	2.25	0.54
1:B:4959:PHE:O	1:B:4962:GLN:NE2	2.35	0.54
1:C:1226:TYR:HD1	1:C:1229:ILE:HD12	1.71	0.54
1:D:150:GLN:HG3	1:D:152:ASP:H	1.72	0.54
1:D:1228:THR:HA	1:D:1232:LEU:HD12	1.90	0.54
1:D:1242:ASN:HB3	1:D:1807:ARG:HB2	1.89	0.54
1:D:1783:PRO:HB3	1:D:1786:ILE:HD12	1.88	0.54
1:A:536:LEU:HG	1:A:540:LEU:HD13	1.90	0.54
1:A:4640:SER:O	1:A:4643:ASN:ND2	2.41	0.54
1:A:4924:MET:O	1:A:4928:ASN:N	2.36	0.54
1:B:37:LEU:HD11	1:B:47:CYS:HB3	1.88	0.54
1:B:4141:GLY:N	1:B:4147:GLU:OE1	2.40	0.54
1:B:4594:LEU:HG	1:B:4595:LYS:HG3	1.90	0.54
1:B:4822:VAL:CB	1:D:4849:ILE:CG2	2.80	0.54
1:C:1300:MET:HB2	1:C:1545:ALA:HB3	1.89	0.54
1:C:3983:LEU:O	1:C:3987:LEU:HB2	2.08	0.54
1:C:4783:THR:HG21	1:C:4817:HIS:HB2	1.90	0.54
1:C:4813:CYS:O	1:C:4817:HIS:HB2	2.08	0.54
1:D:150:GLN:NE2	1:D:152:ASP:O	2.41	0.54
1:D:480:ARG:NH2	1:D:3679:GLU:OE2	2.41	0.54
1:D:1300:MET:N	1:D:1545:ALA:O	2.40	0.54
1:D:1589:GLN:NE2	1:D:1634:GLU:OE1	2.41	0.54
1:A:1226:TYR:HD1	1:A:1229:ILE:HD12	1.71	0.53
1:A:1999:ASP:O	1:A:2003:ASP:N	2.40	0.53
1:A:4141:GLY:N	1:A:4147:GLU:OE1	2.40	0.53
1:A:4519:LEU:HB2	1:C:4814:TYR:CE2	2.43	0.53
1:B:43:GLY:H	1:B:45:ARG:HH12	1.56	0.53
1:C:1119:ARG:NH2	1:C:1196:ASP:O	2.42	0.53
1:C:4141:GLY:N	1:C:4147:GLU:OE1	2.40	0.53
1:D:2196:ASN:OD1	1:D:2199:ARG:NH1	2.41	0.53
1:D:4558:VAL:O	1:D:4558:VAL:HG13	2.07	0.53
1:A:295:PHE:N	1:A:329:PHE:O	2.40	0.53
1:A:694:ARG:NH1	1:A:716:ASN:O	2.41	0.53
1:A:2304:ARG:HG3	1:A:2402:ARG:HG3	1.90	0.53
1:B:150:GLN:NE2	1:B:152:ASP:O	2.41	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:394:HIS:HD2	1:B:397:GLY:H	1.55	0.53
1:B:480:ARG:NH2	1:B:3679:GLU:OE2	2.41	0.53
1:B:1098:ALA:O	1:B:1101:TRP:NE1	2.38	0.53
1:B:2832:VAL:O	1:B:2895:LYS:NZ	2.40	0.53
1:B:4085:VAL:O	1:B:4089:HIS:N	2.36	0.53
1:C:295:PHE:N	1:C:329:PHE:O	2.39	0.53
1:C:1228:THR:HA	1:C:1232:LEU:HD12	1.90	0.53
1:C:1288:LYS:H	1:C:1555:PHE:H	1.57	0.53
1:C:3696:MET:O	1:C:3699:SER:OG	2.26	0.53
1:D:694:ARG:NH1	1:D:716:ASN:O	2.41	0.53
1:D:1630:LEU:HD22	1:D:1641:ILE:HD13	1.90	0.53
1:D:2059:LEU:HA	1:D:2062:LEU:HG	1.90	0.53
1:D:4136:ARG:NH2	1:D:4150:TYR:OH	2.40	0.53
1:A:1119:ARG:NH2	1:A:1196:ASP:O	2.42	0.53
1:A:1288:LYS:H	1:A:1555:PHE:H	1.57	0.53
1:A:1589:GLN:NE2	1:A:1634:GLU:OE1	2.41	0.53
1:A:3696:MET:O	1:A:3699:SER:OG	2.26	0.53
1:B:4519:LEU:HD13	1:D:4811:LEU:HD12	1.88	0.53
1:C:1300:MET:N	1:C:1545:ALA:O	2.40	0.53
1:C:1589:GLN:NE2	1:C:1634:GLU:OE1	2.41	0.53
1:C:2304:ARG:HG3	1:C:2402:ARG:HG3	1.90	0.53
1:C:3748:SER:O	1:C:3793:SER:OG	2.25	0.53
1:D:43:GLY:H	1:D:45:ARG:HH12	1.56	0.53
1:D:375:GLN:N	1:D:390:LYS:O	2.40	0.53
1:D:1117:TRP:HB3	1:D:1201:PHE:HB3	1.89	0.53
1:D:1756:SER:O	1:D:1920:ARG:NH2	2.42	0.53
1:A:2011:GLU:O	1:A:2027:ARG:NH2	2.42	0.53
1:A:4092:ALA:HA	1:A:4095:ILE:HD12	1.90	0.53
1:A:4957:ASP:N	1:A:4957:ASP:OD1	2.39	0.53
1:B:1630:LEU:HD22	1:B:1641:ILE:HD13	1.90	0.53
1:C:150:GLN:NE2	1:C:152:ASP:O	2.41	0.53
1:C:252:HIS:HB3	1:C:255:GLU:HB2	1.90	0.53
1:C:536:LEU:HG	1:C:540:LEU:HD13	1.90	0.53
1:C:1132:GLU:HB3	1:C:1147:GLN:HE21	1.73	0.53
1:C:1143:GLN:HA	1:C:1151:HIS:HA	1.91	0.53
1:C:1645:THR:HG22	1:C:1695:PRO:HG3	1.89	0.53
1:C:1703:TYR:HD2	1:C:1820:PRO:HB2	1.74	0.53
1:C:1756:SER:O	1:C:1920:ARG:NH2	2.42	0.53
1:C:4594:LEU:HG	1:C:4595:LYS:HG3	1.90	0.53
1:D:436:LEU:HD21	1:D:444:THR:HG21	1.91	0.53
1:D:645:GLN:HB3	1:D:1631:HIS:HE1	1.74	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:3729:GLN:O	1:D:3733:HIS:ND1	2.32	0.53
1:A:1761:MET:SD	1:A:1761:MET:N	2.70	0.53
1:C:694:ARG:NH1	1:C:716:ASN:O	2.41	0.53
1:C:1912:GLN:O	1:C:2091:ARG:NH1	2.37	0.53
1:C:3926:GLN:HG3	1:C:4936:GLY:H	1.72	0.53
1:D:246:THR:N	1:D:261:HIS:O	2.32	0.53
1:D:375:GLN:HE21	1:D:392:ILE:HD13	1.73	0.53
1:D:1288:LYS:H	1:D:1555:PHE:H	1.57	0.53
1:A:150:GLN:NE2	1:A:152:ASP:O	2.41	0.53
1:A:252:HIS:HB3	1:A:255:GLU:HB2	1.90	0.53
1:A:1570:LEU:O	1:A:1573:SER:OG	2.24	0.53
1:A:2196:ASN:OD1	1:A:2199:ARG:NH1	2.41	0.53
1:A:4517:ILE:C	1:A:4519:LEU:H	2.11	0.53
1:B:1602:GLN:HB3	1:B:1604:LEU:HD12	1.89	0.53
1:B:1756:SER:O	1:B:1920:ARG:NH2	2.42	0.53
1:B:3983:LEU:O	1:B:3987:LEU:HB2	2.08	0.53
1:C:375:GLN:HE21	1:C:392:ILE:HD13	1.73	0.53
1:C:394:HIS:HD2	1:C:397:GLY:H	1.55	0.53
1:C:1218:GLY:HA3	1:C:1240:ALA:H	1.73	0.53
1:C:2011:GLU:O	1:C:2027:ARG:NH2	2.42	0.53
1:D:1912:GLN:HE21	1:D:2088:LEU:HD23	1.74	0.53
1:D:4640:SER:O	1:D:4643:ASN:ND2	2.41	0.53
1:D:4722:TYR:HD2	1:D:4723:LEU:HD12	1.74	0.53
1:A:3983:LEU:O	1:A:3987:LEU:HB2	2.08	0.53
1:A:4187:MET:HA	1:A:4190:PHE:HB3	1.91	0.53
1:A:4869:ASP:HB3	1:D:4875:ARG:HH21	1.73	0.53
1:A:4930:ASP:O	1:A:4934:HIS:N	2.42	0.53
1:A:4960:ARG:NH1	1:A:4964:GLU:O	2.42	0.53
1:B:1143:GLN:HA	1:B:1151:HIS:HA	1.91	0.53
1:B:1218:GLY:HA3	1:B:1240:ALA:H	1.73	0.53
1:B:3917:VAL:O	1:B:3920:THR:OG1	2.21	0.53
1:B:4092:ALA:HA	1:B:4095:ILE:HD12	1.90	0.53
1:C:436:LEU:HD21	1:C:444:THR:HG21	1.91	0.53
1:C:1912:GLN:HE21	1:C:2088:LEU:HD23	1.74	0.53
1:C:2196:ASN:OD1	1:C:2199:ARG:NH1	2.41	0.53
1:C:3727:TYR:O	1:C:3731:ARG:CB	2.55	0.53
1:C:4722:TYR:HD2	1:C:4723:LEU:HD12	1.74	0.53
1:D:4838:ASP:HB3	1:D:4841:GLU:HB2	1.91	0.53
1:D:4960:ARG:NH1	1:D:4964:GLU:O	2.42	0.53
1:A:436:LEU:HD21	1:A:444:THR:HG21	1.91	0.53
1:A:2857:LYS:HE3	1:A:2861:LEU:HD11	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4722:TYR:HD2	1:A:4723:LEU:HD12	1.74	0.53
1:B:436:LEU:HD21	1:B:444:THR:HG21	1.91	0.53
1:B:1228:THR:HA	1:B:1232:LEU:HD12	1.90	0.53
1:B:2011:GLU:O	1:B:2027:ARG:NH2	2.42	0.53
1:C:480:ARG:NH2	1:C:3679:GLU:OE2	2.41	0.53
1:C:645:GLN:HB3	1:C:1631:HIS:HE1	1.74	0.53
1:C:4959:PHE:O	1:C:4962:GLN:NE2	2.35	0.53
1:D:681:HIS:HB2	1:D:799:LYS:HG2	1.91	0.53
1:D:4187:MET:HA	1:D:4190:PHE:HB3	1.91	0.53
1:A:49:LEU:HD12	1:A:201:LEU:HB3	1.90	0.53
1:A:238:HIS:HA	1:A:403:LEU:HD13	1.91	0.53
1:A:4774:LEU:HD13	1:D:4754:LEU:HD13	1.91	0.53
1:B:1154:ARG:HH22	1:B:1180:GLU:HB2	1.74	0.53
1:B:2224:GLU:O	1:B:2269:TYR:OH	2.27	0.53
1:B:4516:PHE:O	1:B:4520:PHE:CE2	2.62	0.53
1:B:4640:SER:O	1:B:4643:ASN:ND2	2.41	0.53
1:C:4898:TYR:O	1:C:4901:THR:OG1	2.23	0.53
1:D:49:LEU:HD12	1:D:201:LEU:HB3	1.90	0.53
1:D:252:HIS:HB3	1:D:255:GLU:HB2	1.90	0.53
1:D:957:ALA:H	1:D:1060:TYR:HA	1.74	0.53
1:D:1611:ILE:O	1:D:1620:GLN:N	2.38	0.53
1:A:645:GLN:HB3	1:A:1631:HIS:HE1	1.74	0.53
1:A:4904:HIS:NE2	1:C:4184:LYS:CA	2.72	0.53
1:B:238:HIS:HA	1:B:403:LEU:HD13	1.91	0.53
1:B:252:HIS:HB3	1:B:255:GLU:HB2	1.90	0.53
1:B:957:ALA:H	1:B:1060:TYR:HA	1.74	0.53
1:B:1119:ARG:NH2	1:B:1196:ASP:O	2.42	0.53
1:B:2857:LYS:HE3	1:B:2861:LEU:HD11	1.91	0.53
1:B:4722:TYR:HD2	1:B:4723:LEU:HD12	1.74	0.53
1:B:4759:SER:HA	1:B:4762:THR:HG22	1.89	0.53
1:C:2857:LYS:HE3	1:C:2861:LEU:HD11	1.91	0.53
1:D:2011:GLU:O	1:D:2027:ARG:NH2	2.42	0.53
1:D:4759:SER:HA	1:D:4762:THR:HG22	1.89	0.53
1:D:4807:CYS:SG	1:D:4812:THR:OG1	2.59	0.53
1:D:4930:ASP:O	1:D:4934:HIS:N	2.42	0.53
1:A:1143:GLN:HA	1:A:1151:HIS:HA	1.91	0.52
1:A:1218:GLY:HA3	1:A:1240:ALA:H	1.73	0.52
1:A:3728:GLN:O	1:A:3732:LEU:N	2.42	0.52
1:B:1288:LYS:H	1:B:1555:PHE:H	1.56	0.52
1:B:1726:ILE:HD11	1:B:2121:LEU:HD11	1.90	0.52
1:B:1912:GLN:O	1:B:2091:ARG:NH1	2.37	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3956:GLN:HA	1:B:3959:LEU:HB2	1.91	0.52
1:B:4838:ASP:HB3	1:B:4841:GLU:HB2	1.91	0.52
1:C:49:LEU:HD12	1:C:201:LEU:HB3	1.90	0.52
1:C:3956:GLN:HA	1:C:3959:LEU:HB2	1.91	0.52
1:D:1703:TYR:HD2	1:D:1820:PRO:HB2	1.74	0.52
1:D:4936:GLY:O	1:D:4940:TYR:CB	2.58	0.52
1:A:1154:ARG:HH22	1:A:1180:GLU:HB2	1.74	0.52
1:A:1611:ILE:O	1:A:1620:GLN:N	2.38	0.52
1:A:1703:TYR:HD2	1:A:1820:PRO:HB2	1.74	0.52
1:A:4594:LEU:HG	1:A:4595:LYS:HG3	1.90	0.52
1:B:49:LEU:HD12	1:B:201:LEU:HB3	1.90	0.52
1:B:1703:TYR:HD2	1:B:1820:PRO:HB2	1.74	0.52
1:C:3890:TYR:O	1:C:3894:SER:HB3	2.09	0.52
1:C:4640:SER:O	1:C:4643:ASN:ND2	2.41	0.52
1:D:123:HIS:N	1:D:128:MET:O	2.34	0.52
1:D:1143:GLN:HA	1:D:1151:HIS:HA	1.91	0.52
1:A:1726:ILE:HD11	1:A:2121:LEU:HD11	1.90	0.52
1:D:1108:VAL:HG12	1:D:1109:THR:HG23	1.92	0.52
1:D:1119:ARG:NH2	1:D:1196:ASP:O	2.42	0.52
1:D:1218:GLY:HA3	1:D:1240:ALA:H	1.73	0.52
1:D:2832:VAL:O	1:D:2895:LYS:NZ	2.40	0.52
1:D:2857:LYS:HE3	1:D:2861:LEU:HD11	1.91	0.52
1:D:4092:ALA:HA	1:D:4095:ILE:HD12	1.90	0.52
1:A:957:ALA:H	1:A:1060:TYR:HA	1.74	0.52
1:A:1257:GLN:O	1:A:1596:TRP:N	2.36	0.52
1:A:1630:LEU:HD22	1:A:1641:ILE:HD13	1.90	0.52
1:A:1756:SER:O	1:A:1920:ARG:NH2	2.42	0.52
1:B:694:ARG:NH1	1:B:716:ASN:O	2.41	0.52
1:B:1108:VAL:HG12	1:B:1109:THR:HG23	1.92	0.52
1:B:1589:GLN:NE2	1:B:1634:GLU:OE1	2.41	0.52
1:B:4960:ARG:NH1	1:B:4964:GLU:O	2.42	0.52
1:C:695:VAL:HG22	1:C:792:VAL:HG13	1.91	0.52
1:C:957:ALA:H	1:C:1060:TYR:HA	1.74	0.52
1:C:1154:ARG:HH22	1:C:1180:GLU:HB2	1.74	0.52
1:C:1292:SER:OG	1:C:1296:SER:O	2.28	0.52
1:D:238:HIS:N	1:D:243:GLU:O	2.43	0.52
1:D:725:TYR:HA	1:D:732:LEU:HA	1.92	0.52
1:D:1184:ASP:OD2	1:D:1188:SER:OG	2.27	0.52
1:D:2425:ARG:NH2	1:D:2476:VAL:O	2.43	0.52
1:D:4594:LEU:HG	1:D:4595:LYS:HG3	1.90	0.52
1:D:4924:MET:O	1:D:4928:ASN:N	2.36	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:681:HIS:HB2	1:B:799:LYS:HG2	1.91	0.52
1:B:1184:ASP:OD2	1:B:1188:SER:OG	2.27	0.52
1:C:2425:ARG:NH2	1:C:2476:VAL:O	2.43	0.52
1:C:4138:GLU:HA	1:C:4148:ARG:HA	1.91	0.52
1:C:4960:ARG:NH1	1:C:4964:GLU:O	2.42	0.52
1:D:1570:LEU:O	1:D:1573:SER:OG	2.24	0.52
1:A:2090:HIS:O	1:A:2094:ASP:N	2.43	0.52
1:A:2425:ARG:NH2	1:A:2476:VAL:O	2.43	0.52
1:B:38:ALA:HB2	1:B:50:GLU:HB2	1.92	0.52
1:D:3983:LEU:O	1:D:3987:LEU:HB2	2.08	0.52
1:D:4814:TYR:O	1:D:4818:MET:HB2	2.09	0.52
1:A:1108:VAL:HG12	1:A:1109:THR:HG23	1.92	0.52
1:A:1300:MET:N	1:A:1545:ALA:O	2.40	0.52
1:A:3956:GLN:HA	1:A:3959:LEU:HB2	1.91	0.52
1:B:725:TYR:HA	1:B:732:LEU:HA	1.92	0.52
1:B:733:TRP:HB3	1:B:736:CYS:HA	1.92	0.52
1:B:2090:HIS:O	1:B:2094:ASP:N	2.43	0.52
1:B:2425:ARG:NH2	1:B:2476:VAL:O	2.43	0.52
1:C:4092:ALA:HA	1:C:4095:ILE:HD12	1.90	0.52
1:D:3956:GLN:HA	1:D:3959:LEU:HB2	1.91	0.52
1:A:1470:GLY:HA2	1:A:1474:GLY:HA2	1.92	0.52
1:A:3919:ASN:O	1:A:3922:THR:OG1	2.27	0.52
1:A:4807:CYS:SG	1:A:4812:THR:OG1	2.59	0.52
1:A:4838:ASP:HB3	1:A:4841:GLU:HB2	1.91	0.52
1:C:38:ALA:HB2	1:C:50:GLU:HB2	1.92	0.52
1:C:681:HIS:HB2	1:C:799:LYS:HG2	1.91	0.52
1:D:238:HIS:HA	1:D:403:LEU:HD13	1.91	0.52
1:D:695:VAL:HG22	1:D:792:VAL:HG13	1.91	0.52
1:D:1154:ARG:HH22	1:D:1180:GLU:HB2	1.74	0.52
1:D:2090:HIS:O	1:D:2094:ASP:N	2.43	0.52
1:A:1912:GLN:HE21	1:A:2088:LEU:HD23	1.74	0.52
1:A:3890:TYR:O	1:A:3894:SER:HB3	2.09	0.52
1:B:1172:THR:HB	1:B:1190:LEU:HD22	1.92	0.52
1:B:3890:TYR:O	1:B:3894:SER:HB3	2.09	0.52
1:B:4187:MET:HA	1:B:4190:PHE:HB3	1.91	0.52
1:B:4936:GLY:O	1:B:4940:TYR:CB	2.58	0.52
1:C:1108:VAL:HG12	1:C:1109:THR:HG23	1.92	0.52
1:D:244:CYS:O	1:D:263:GLU:N	2.40	0.52
1:D:633:CYS:O	1:D:637:LEU:N	2.41	0.52
1:A:280:LEU:HD23	1:A:296:ARG:HH11	1.75	0.52
1:A:733:TRP:HB3	1:A:736:CYS:HA	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1228:THR:HA	1:A:1232:LEU:HD12	1.90	0.52
1:A:3729:GLN:O	1:A:3733:HIS:ND1	2.32	0.52
1:B:695:VAL:HG22	1:B:792:VAL:HG13	1.91	0.52
1:B:1292:SER:OG	1:B:1296:SER:O	2.28	0.52
1:B:4862:ILE:O	1:B:4866:LEU:HB2	2.10	0.52
1:C:1304:LEU:HG	1:C:1591:LEU:H	1.75	0.52
1:C:2090:HIS:O	1:C:2094:ASP:N	2.43	0.52
1:C:3692:TYR:HA	1:C:3695:ILE:HD12	1.92	0.52
1:D:1459:LEU:HD13	1:D:1465:VAL:HG23	1.92	0.52
1:D:3692:TYR:HA	1:D:3695:ILE:HD12	1.92	0.52
1:D:4138:GLU:HA	1:D:4148:ARG:HA	1.91	0.52
1:A:2027:ARG:HH12	1:A:2031:LEU:HB2	1.75	0.51
1:B:280:LEU:HD23	1:B:296:ARG:HH11	1.75	0.51
1:B:1570:LEU:O	1:B:1573:SER:OG	2.24	0.51
1:B:3692:TYR:HA	1:B:3695:ILE:HD12	1.92	0.51
1:B:4930:ASP:O	1:B:4934:HIS:N	2.42	0.51
1:C:25:THR:HG22	1:C:34:LYS:HG2	1.92	0.51
1:C:238:HIS:HA	1:C:403:LEU:HD13	1.91	0.51
1:C:559:ILE:HG21	1:C:593:HIS:HD1	1.75	0.51
1:C:733:TRP:HB3	1:C:736:CYS:HA	1.92	0.51
1:C:4085:VAL:O	1:C:4089:HIS:N	2.36	0.51
1:C:4930:ASP:O	1:C:4934:HIS:N	2.42	0.51
1:D:262:TYR:HB2	1:D:389:ARG:HB3	1.92	0.51
1:A:38:ALA:HB2	1:A:50:GLU:HB2	1.92	0.51
1:A:681:HIS:HB2	1:A:799:LYS:HG2	1.91	0.51
1:A:725:TYR:HA	1:A:732:LEU:HA	1.92	0.51
1:A:1459:LEU:HD13	1:A:1465:VAL:HG23	1.92	0.51
1:A:1843:LEU:O	1:A:1847:GLU:N	2.40	0.51
1:A:3692:TYR:HA	1:A:3695:ILE:HD12	1.92	0.51
1:A:3743:GLN:NE2	1:A:3781:TYR:OH	2.35	0.51
1:A:4936:GLY:O	1:A:4940:TYR:CB	2.57	0.51
1:B:645:GLN:HB3	1:B:1631:HIS:HE1	1.74	0.51
1:B:1912:GLN:HE21	1:B:2088:LEU:HD23	1.74	0.51
1:B:4184:LYS:CA	1:C:4904:HIS:NE2	2.73	0.51
1:B:4849:ILE:CG2	1:C:4822:VAL:HB	2.40	0.51
1:D:280:LEU:HD23	1:D:296:ARG:HH11	1.75	0.51
1:A:459:LEU:HA	1:A:462:TYR:HB3	1.92	0.51
1:A:4862:ILE:O	1:A:4866:LEU:HB2	2.10	0.51
1:B:1304:LEU:HG	1:B:1591:LEU:H	1.75	0.51
1:C:280:LEU:HD23	1:C:296:ARG:HH11	1.75	0.51
1:C:1184:ASP:OD2	1:C:1188:SER:OG	2.27	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1630:LEU:HD22	1:C:1641:ILE:HD13	1.90	0.51
1:C:2297:GLU:HB3	1:C:2392:PHE:HD1	1.75	0.51
1:C:4487:ALA:O	1:C:4491:LYS:CB	2.59	0.51
1:D:38:ALA:HB2	1:D:50:GLU:HB2	1.92	0.51
1:D:4487:ALA:O	1:D:4491:LYS:CB	2.59	0.51
1:A:2224:GLU:O	1:A:2269:TYR:OH	2.27	0.51
1:A:2832:VAL:O	1:A:2895:LYS:NZ	2.40	0.51
1:B:1470:GLY:HA2	1:B:1474:GLY:HA2	1.92	0.51
1:C:1209:VAL:N	1:C:1211:GLN:OE1	2.44	0.51
1:C:3917:VAL:O	1:C:3920:THR:OG1	2.21	0.51
1:C:4187:MET:HA	1:C:4190:PHE:HB3	1.91	0.51
1:C:4838:ASP:HB3	1:C:4841:GLU:HB2	1.91	0.51
1:C:4924:MET:O	1:C:4928:ASN:N	2.36	0.51
1:D:2297:GLU:HB3	1:D:2392:PHE:HD1	1.75	0.51
1:D:4763:HIS:HE1	1:D:4870:ALA:HB1	1.76	0.51
1:B:2297:GLU:HB3	1:B:2392:PHE:HD1	1.75	0.51
1:C:725:TYR:HA	1:C:732:LEU:HA	1.92	0.51
1:C:4936:GLY:O	1:C:4940:TYR:CB	2.58	0.51
1:D:185:SER:HB3	1:D:189:GLU:H	1.76	0.51
1:D:1304:LEU:HG	1:D:1591:LEU:H	1.76	0.51
1:D:3890:TYR:O	1:D:3894:SER:HB3	2.09	0.51
1:D:4862:ILE:O	1:D:4866:LEU:HB2	2.10	0.51
1:A:559:ILE:HG21	1:A:593:HIS:HD1	1.75	0.51
1:A:1304:LEU:HG	1:A:1591:LEU:H	1.75	0.51
1:A:2297:GLU:HB3	1:A:2392:PHE:HD1	1.75	0.51
1:B:185:SER:HB3	1:B:189:GLU:H	1.76	0.51
1:B:1459:LEU:HD13	1:B:1465:VAL:HG23	1.92	0.51
1:B:1642:LEU:HD23	1:B:1693:TYR:HB2	1.93	0.51
1:B:4016:LYS:O	1:B:4020:MET:HB2	2.11	0.51
1:B:4487:ALA:O	1:B:4491:LYS:CB	2.59	0.51
1:C:2027:ARG:HH12	1:C:2031:LEU:HB2	1.75	0.51
1:C:4561:VAL:HG12	1:C:4562:LEU:N	2.25	0.51
1:C:4862:ILE:O	1:C:4866:LEU:HB2	2.10	0.51
1:D:733:TRP:HB3	1:D:736:CYS:HA	1.92	0.51
1:D:1172:THR:HB	1:D:1190:LEU:HD22	1.92	0.51
1:A:25:THR:HG22	1:A:34:LYS:HG2	1.92	0.51
1:B:1738:LEU:HG	1:B:2037:VAL:HG22	1.92	0.51
1:B:4138:GLU:HA	1:B:4148:ARG:HA	1.91	0.51
1:B:4798:GLU:H	1:B:4802:THR:HG1	1.59	0.51
1:D:295:PHE:N	1:D:329:PHE:O	2.39	0.51
1:D:1470:GLY:HA2	1:D:1474:GLY:HA2	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:2224:GLU:O	1:D:2269:TYR:OH	2.27	0.51
1:A:238:HIS:N	1:A:243:GLU:O	2.43	0.51
1:A:375:GLN:N	1:A:390:LYS:O	2.40	0.51
1:A:1172:THR:HB	1:A:1190:LEU:HD22	1.92	0.51
1:A:1934:VAL:HG11	1:A:3618:VAL:HA	1.93	0.51
1:B:1570:LEU:HD13	1:B:1584:PRO:HD3	1.93	0.51
1:B:4763:HIS:HE1	1:B:4870:ALA:HB1	1.76	0.51
1:C:1642:LEU:HD23	1:C:1693:TYR:HB2	1.93	0.51
1:C:2103:LEU:HA	1:C:2106:THR:HG22	1.93	0.51
1:C:3893:TYR:O	1:C:3958:LYS:NZ	2.44	0.51
1:D:2027:ARG:HH12	1:D:2031:LEU:HB2	1.75	0.51
1:A:1184:ASP:OD2	1:A:1188:SER:OG	2.27	0.51
1:A:2149:ASP:O	1:A:2153:ASN:N	2.44	0.51
1:A:4733:GLY:HA3	1:A:4740:PHE:HD1	1.76	0.51
1:A:4763:HIS:HE1	1:A:4870:ALA:HB1	1.76	0.51
1:B:2198:CYS:HA	1:B:2201:LEU:HB2	1.93	0.51
1:B:3743:GLN:NE2	1:B:3781:TYR:OH	2.35	0.51
1:C:2149:ASP:O	1:C:2153:ASN:N	2.44	0.51
1:C:2436:VAL:HG22	1:C:2469:MET:HB3	1.93	0.51
1:D:131:CYS:N	1:D:148:GLY:O	2.43	0.51
1:D:1738:LEU:HG	1:D:2037:VAL:HG22	1.92	0.51
1:D:1934:VAL:HG11	1:D:3618:VAL:HA	1.93	0.51
1:A:262:TYR:HB2	1:A:389:ARG:HB3	1.92	0.51
1:A:432:GLY:HA3	1:A:447:LEU:HD12	1.93	0.51
1:A:717:GLY:O	1:A:736:CYS:N	2.36	0.51
1:A:3897:ASP:OD1	1:A:3958:LYS:NZ	2.40	0.51
1:A:4016:LYS:O	1:A:4020:MET:HB2	2.11	0.51
1:B:459:LEU:HA	1:B:462:TYR:HB3	1.92	0.51
1:B:559:ILE:HG21	1:B:593:HIS:HD1	1.75	0.51
1:B:4124:GLU:HA	1:B:4127:LEU:HD13	1.93	0.51
1:C:169:ARG:NH2	1:C:179:ASP:OD1	2.39	0.51
1:C:1470:GLY:HA2	1:C:1474:GLY:HA2	1.92	0.51
1:C:1738:LEU:HG	1:C:2037:VAL:HG22	1.92	0.51
1:D:1642:LEU:HD23	1:D:1693:TYR:HB2	1.93	0.51
1:D:2198:CYS:HA	1:D:2201:LEU:HB2	1.93	0.51
1:A:1718:ARG:NH2	1:A:1759:PRO:O	2.44	0.50
1:A:1792:ILE:HA	1:A:1795:LEU:HD12	1.93	0.50
1:A:4138:GLU:HA	1:A:4148:ARG:HA	1.91	0.50
1:B:238:HIS:N	1:B:243:GLU:O	2.43	0.50
1:B:295:PHE:N	1:B:329:PHE:O	2.39	0.50
1:B:1934:VAL:HG11	1:B:3618:VAL:HA	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1128:LEU:HD13	1:C:1206:SER:HB2	1.92	0.50
1:C:3803:VAL:HG22	1:C:3878:TYR:HE1	1.76	0.50
1:C:4016:LYS:O	1:C:4020:MET:HB2	2.11	0.50
1:C:4733:GLY:HA3	1:C:4740:PHE:HD1	1.76	0.50
1:D:132:CYS:H	1:D:157:ALA:HB1	1.76	0.50
1:D:1209:VAL:N	1:D:1211:GLN:OE1	2.44	0.50
1:D:3893:TYR:O	1:D:3958:LYS:NZ	2.44	0.50
1:D:4124:GLU:HA	1:D:4127:LEU:HD13	1.93	0.50
1:A:1128:LEU:HD13	1:A:1206:SER:HB2	1.92	0.50
1:A:4487:ALA:O	1:A:4491:LYS:CB	2.59	0.50
1:A:4519:LEU:HD11	1:C:4811:LEU:HB2	1.88	0.50
1:B:897:LYS:HB3	1:B:902:TRP:HB2	1.94	0.50
1:B:2103:LEU:HA	1:B:2106:THR:HG22	1.93	0.50
1:B:2436:VAL:HG22	1:B:2469:MET:HB3	1.93	0.50
1:C:299:HIS:NE2	1:C:301:THR:OG1	2.41	0.50
1:C:432:GLY:HA3	1:C:447:LEU:HD12	1.93	0.50
1:C:897:LYS:HB3	1:C:902:TRP:HB2	1.94	0.50
1:C:940:LEU:HD22	1:C:950:VAL:HG21	1.94	0.50
1:C:1934:VAL:HG11	1:C:3618:VAL:HA	1.93	0.50
1:D:672:LYS:HA	1:D:760:ASP:HA	1.94	0.50
1:D:2149:ASP:O	1:D:2153:ASN:N	2.44	0.50
1:D:2553:VAL:O	1:D:2605:LYS:N	2.44	0.50
1:A:1738:LEU:HG	1:A:2037:VAL:HG22	1.92	0.50
1:A:3893:TYR:O	1:A:3958:LYS:NZ	2.44	0.50
1:B:132:CYS:H	1:B:157:ALA:HB1	1.76	0.50
1:B:262:TYR:HB2	1:B:389:ARG:HB3	1.92	0.50
1:B:1304:LEU:HD23	1:B:1306:MET:H	1.77	0.50
1:B:4813:CYS:SG	1:B:4817:HIS:HD2	2.34	0.50
1:B:4822:VAL:HG12	1:B:4822:VAL:O	2.12	0.50
1:C:459:LEU:HA	1:C:462:TYR:HB3	1.92	0.50
1:C:1111:GLY:HA3	1:C:1211:GLN:HE21	1.77	0.50
1:C:2224:GLU:O	1:C:2269:TYR:OH	2.27	0.50
1:D:1292:SER:OG	1:D:1296:SER:O	2.28	0.50
1:D:1570:LEU:HD13	1:D:1584:PRO:HD3	1.93	0.50
1:D:2436:VAL:HG22	1:D:2469:MET:HB3	1.93	0.50
1:D:4733:GLY:HA3	1:D:4740:PHE:HD1	1.76	0.50
1:A:695:VAL:HG22	1:A:792:VAL:HG13	1.91	0.50
1:A:2436:VAL:HG22	1:A:2469:MET:HB3	1.93	0.50
1:A:3733:HIS:NE2	1:A:3734:ASP:OD1	2.45	0.50
1:B:41:GLY:H	1:B:44:ASN:HB3	1.77	0.50
1:B:940:LEU:HD22	1:B:950:VAL:HG11	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1209:VAL:N	1:B:1211:GLN:OE1	2.44	0.50
1:B:1761:MET:SD	1:B:1761:MET:N	2.70	0.50
1:B:4581:THR:HA	1:B:4730:SER:HB3	1.93	0.50
1:B:4822:VAL:HG11	1:D:4849:ILE:HG22	1.93	0.50
1:C:132:CYS:H	1:C:157:ALA:HB1	1.76	0.50
1:C:672:LYS:HA	1:C:760:ASP:HA	1.94	0.50
1:C:2024:LEU:HD23	1:C:2025:THR:H	1.76	0.50
1:C:2198:CYS:HA	1:C:2201:LEU:HB2	1.93	0.50
1:C:3728:GLN:O	1:C:3732:LEU:N	2.42	0.50
1:C:3743:GLN:NE2	1:C:3781:TYR:OH	2.35	0.50
1:D:897:LYS:HB3	1:D:902:TRP:HB2	1.94	0.50
1:A:1209:VAL:N	1:A:1211:GLN:OE1	2.44	0.50
1:A:1642:LEU:HD23	1:A:1693:TYR:HB2	1.93	0.50
1:A:4522:LYS:CG	1:A:4560:TYR:OH	2.60	0.50
1:B:679:VAL:HA	1:B:800:VAL:HG12	1.94	0.50
1:B:2149:ASP:O	1:B:2153:ASN:N	2.44	0.50
1:B:3685:GLU:OE1	1:B:3755:MET:N	2.43	0.50
1:C:41:GLY:H	1:C:44:ASN:HB3	1.77	0.50
1:C:1304:LEU:HD23	1:C:1306:MET:H	1.77	0.50
1:C:1459:LEU:HD13	1:C:1465:VAL:HG23	1.92	0.50
1:C:2553:VAL:O	1:C:2605:LYS:N	2.44	0.50
1:C:3733:HIS:NE2	1:C:3734:ASP:OD1	2.45	0.50
1:D:299:HIS:NE2	1:D:301:THR:OG1	2.41	0.50
1:D:559:ILE:HG21	1:D:593:HIS:HD1	1.75	0.50
1:D:4016:LYS:O	1:D:4020:MET:HB2	2.11	0.50
1:A:832:LEU:O	1:A:1614:ARG:NH1	2.45	0.50
1:A:1111:GLY:HA3	1:A:1211:GLN:HE21	1.77	0.50
1:A:1426:TYR:HB2	1:A:1574:GLU:HB2	1.94	0.50
1:A:3803:VAL:HG22	1:A:3878:TYR:HE1	1.76	0.50
1:B:672:LYS:HA	1:B:760:ASP:HA	1.94	0.50
1:B:2024:LEU:HD23	1:B:2025:THR:H	1.76	0.50
1:B:2558:LYS:O	1:B:2562:LEU:N	2.41	0.50
1:B:3803:VAL:HG22	1:B:3878:TYR:HE1	1.76	0.50
1:B:4171:ARG:HH12	1:B:4175:PHE:HB2	1.77	0.50
1:B:4733:GLY:HA3	1:B:4740:PHE:HD1	1.76	0.50
1:B:4898:TYR:O	1:B:4901:THR:OG1	2.23	0.50
1:C:4827:GLY:HA3	1:C:4852:PHE:CB	2.42	0.50
1:D:1912:GLN:O	1:D:2091:ARG:NH1	2.37	0.50
1:D:2103:LEU:HA	1:D:2106:THR:HG22	1.93	0.50
1:D:3811:ARG:O	1:D:3815:ALA:N	2.43	0.50
1:A:1837:GLU:O	1:A:1841:HIS:N	2.45	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4144:LYS:N	1:A:4147:GLU:OE2	2.45	0.50
1:A:4813:CYS:SG	1:A:4817:HIS:CD2	3.05	0.50
1:A:4834:ASP:N	1:A:4834:ASP:OD1	2.27	0.50
1:A:4875:ARG:HH21	1:C:4869:ASP:HB3	1.77	0.50
1:A:4892:CYS:HB2	1:A:4914:HIS:CD2	2.47	0.50
1:B:1444:GLY:N	1:B:1542:ALA:O	2.39	0.50
1:B:2027:ARG:HH12	1:B:2031:LEU:HB2	1.75	0.50
1:C:23:GLN:HA	1:C:36:CYS:HA	1.93	0.50
1:C:1172:THR:HB	1:C:1190:LEU:HD22	1.92	0.50
1:C:1426:TYR:HB2	1:C:1574:GLU:HB2	1.94	0.50
1:C:1469:LEU:N	1:C:1477:HIS:O	2.45	0.50
1:D:1843:LEU:O	1:D:1847:GLU:N	2.40	0.50
1:A:185:SER:HB3	1:A:189:GLU:H	1.76	0.50
1:B:1300:MET:N	1:B:1545:ALA:O	2.40	0.50
1:B:3893:TYR:O	1:B:3958:LYS:NZ	2.44	0.50
1:C:426:PHE:HA	1:C:429:PHE:HB3	1.94	0.50
1:C:679:VAL:HA	1:C:800:VAL:HG12	1.94	0.50
1:D:25:THR:HG22	1:D:34:LYS:HG2	1.92	0.50
1:D:940:LEU:HD22	1:D:950:VAL:HG21	1.94	0.50
1:D:1111:GLY:HA3	1:D:1211:GLN:HE21	1.77	0.50
1:D:1469:LEU:N	1:D:1477:HIS:O	2.45	0.50
1:D:2558:LYS:O	1:D:2562:LEU:N	2.41	0.50
1:D:3741:VAL:HG13	1:D:3759:THR:HB	1.94	0.50
1:A:41:GLY:H	1:A:44:ASN:HB3	1.77	0.50
1:A:426:PHE:HA	1:A:429:PHE:HB3	1.94	0.50
1:A:2324:LEU:HD23	1:A:2327:ARG:HD2	1.94	0.50
1:A:3741:VAL:HG13	1:A:3759:THR:HB	1.94	0.50
1:B:3741:VAL:HG13	1:B:3759:THR:HB	1.94	0.50
1:C:262:TYR:HB2	1:C:389:ARG:HB3	1.92	0.50
1:C:1718:ARG:NH2	1:C:1759:PRO:O	2.44	0.50
1:C:3076:LEU:O	1:C:3080:GLN:N	2.45	0.50
1:C:3685:GLU:OE1	1:C:3755:MET:N	2.43	0.50
1:C:4581:THR:HA	1:C:4730:SER:HB3	1.93	0.50
1:D:591:GLU:HG3	1:D:635:ASN:HD21	1.77	0.50
1:D:832:LEU:O	1:D:1614:ARG:NH1	2.45	0.50
1:D:3813:ASN:OD1	1:D:3892:TYR:OH	2.30	0.50
1:D:4144:LYS:N	1:D:4147:GLU:OE2	2.45	0.50
1:A:23:GLN:HA	1:A:36:CYS:HA	1.93	0.49
1:A:2103:LEU:HA	1:A:2106:THR:HG22	1.93	0.49
1:A:4581:THR:HA	1:A:4730:SER:HB3	1.93	0.49
1:B:23:GLN:HA	1:B:36:CYS:HA	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:244:CYS:O	1:B:263:GLU:N	2.40	0.49
1:B:832:LEU:O	1:B:1614:ARG:NH1	2.45	0.49
1:B:1792:ILE:HA	1:B:1795:LEU:HD12	1.93	0.49
1:B:4813:CYS:SG	1:B:4817:HIS:CD2	3.05	0.49
1:C:2033:LEU:HA	1:C:2036:LYS:HE3	1.94	0.49
1:C:2296:GLY:HA2	1:C:2299:TYR:HD2	1.76	0.49
1:C:3741:VAL:HG13	1:C:3759:THR:HB	1.94	0.49
1:C:3960:SER:OG	1:C:4070:CYS:SG	2.60	0.49
1:C:4832:ILE:CD1	1:C:4844:ARG:CD	2.88	0.49
1:C:4892:CYS:HB2	1:C:4914:HIS:CD2	2.47	0.49
1:D:23:GLN:HA	1:D:36:CYS:HA	1.93	0.49
1:D:432:GLY:HA3	1:D:447:LEU:HD12	1.93	0.49
1:D:459:LEU:HA	1:D:462:TYR:HB3	1.92	0.49
1:D:1792:ILE:HA	1:D:1795:LEU:HD12	1.93	0.49
1:D:2033:LEU:HA	1:D:2036:LYS:HE3	1.94	0.49
1:D:2296:GLY:HA2	1:D:2299:TYR:HD2	1.76	0.49
1:D:4155:GLU:OE2	1:D:4158:ARG:NH2	2.45	0.49
1:D:4520:PHE:HB3	1:D:4562:LEU:CD2	2.41	0.49
1:D:4581:THR:HA	1:D:4730:SER:HB3	1.93	0.49
1:A:25:THR:O	1:A:32:GLN:NE2	2.45	0.49
1:A:131:CYS:N	1:A:148:GLY:O	2.43	0.49
1:A:614:LEU:HD23	1:A:617:LEU:HD12	1.94	0.49
1:A:1304:LEU:HD23	1:A:1306:MET:H	1.77	0.49
1:A:1570:LEU:HD13	1:A:1584:PRO:HD3	1.93	0.49
1:A:2418:ILE:HA	1:A:2421:ARG:HB2	1.95	0.49
1:B:1128:LEU:HD13	1:B:1206:SER:HB2	1.92	0.49
1:B:4144:LYS:N	1:B:4147:GLU:OE2	2.45	0.49
1:B:4892:CYS:HB2	1:B:4914:HIS:CD2	2.47	0.49
1:B:4944:MET:O	1:B:4948:ARG:N	2.45	0.49
1:C:237:LEU:N	1:C:404:ASN:O	2.45	0.49
1:C:258:ARG:NH1	1:C:317:MET:SD	2.86	0.49
1:C:3813:ASN:OD1	1:C:3892:TYR:OH	2.30	0.49
1:D:41:GLY:H	1:D:44:ASN:HB3	1.77	0.49
1:D:1094:TYR:OH	1:D:1808:ASP:OD1	2.30	0.49
1:D:1304:LEU:HD23	1:D:1306:MET:H	1.77	0.49
1:D:3854:ASP:OD1	1:D:3854:ASP:N	2.46	0.49
1:D:4193:PHE:O	1:D:4197:THR:OG1	2.26	0.49
1:D:4892:CYS:HB2	1:D:4914:HIS:CD2	2.47	0.49
1:A:132:CYS:H	1:A:157:ALA:HB1	1.76	0.49
1:A:591:GLU:HG3	1:A:635:ASN:HD21	1.77	0.49
1:A:672:LYS:HA	1:A:760:ASP:HA	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:897:LYS:HB3	1:A:902:TRP:HB2	1.94	0.49
1:A:4794:TYR:H	1:A:4806:LYS:HD3	1.77	0.49
1:A:4944:MET:O	1:A:4948:ARG:N	2.46	0.49
1:B:614:LEU:HD23	1:B:617:LEU:HD12	1.94	0.49
1:B:3919:ASN:O	1:B:3922:THR:OG1	2.27	0.49
1:B:4904:HIS:NE2	1:D:4184:LYS:CA	2.76	0.49
1:C:244:CYS:O	1:C:263:GLU:N	2.40	0.49
1:C:1570:LEU:HD13	1:C:1584:PRO:HD3	1.93	0.49
1:C:1792:ILE:HA	1:C:1795:LEU:HD12	1.93	0.49
1:C:3919:ASN:O	1:C:3922:THR:OG1	2.27	0.49
1:C:4124:GLU:HA	1:C:4127:LEU:HD13	1.93	0.49
1:D:57:ASN:HA	1:D:323:ASP:HA	1.95	0.49
1:D:4171:ARG:HH12	1:D:4175:PHE:HB2	1.77	0.49
1:D:4944:MET:O	1:D:4948:ARG:N	2.45	0.49
1:A:940:LEU:HD22	1:A:950:VAL:HG11	1.94	0.49
1:A:2296:GLY:HA2	1:A:2299:TYR:HD2	1.76	0.49
1:A:2553:VAL:O	1:A:2605:LYS:N	2.44	0.49
1:A:3076:LEU:O	1:A:3080:GLN:N	2.45	0.49
1:B:633:CYS:O	1:B:637:LEU:N	2.41	0.49
1:B:3733:HIS:NE2	1:B:3734:ASP:OD1	2.45	0.49
1:B:3742:LEU:HD11	1:B:3782:LEU:HD21	1.94	0.49
1:C:482:LEU:HA	1:C:485:ARG:HE	1.78	0.49
1:C:2418:ILE:HA	1:C:2421:ARG:HB2	1.95	0.49
1:C:4763:HIS:HE1	1:C:4870:ALA:HB1	1.76	0.49
1:D:258:ARG:NH1	1:D:317:MET:SD	2.86	0.49
1:A:3813:ASN:OD1	1:A:3892:TYR:OH	2.30	0.49
1:A:4832:ILE:CD1	1:A:4844:ARG:CD	2.89	0.49
1:B:432:GLY:HA3	1:B:447:LEU:HD12	1.93	0.49
1:B:510:SER:HA	1:B:517:VAL:HG11	1.95	0.49
1:B:1144:ARG:N	1:B:1150:GLU:O	2.35	0.49
1:B:2553:VAL:O	1:B:2605:LYS:N	2.44	0.49
1:B:3813:ASN:OD1	1:B:3892:TYR:OH	2.30	0.49
1:C:296:ARG:HA	1:C:328:ALA:HA	1.94	0.49
1:C:717:GLY:O	1:C:736:CYS:N	2.37	0.49
1:C:832:LEU:O	1:C:1614:ARG:NH1	2.45	0.49
1:C:3742:LEU:HD11	1:C:3782:LEU:HD21	1.94	0.49
1:C:4144:LYS:N	1:C:4147:GLU:OE2	2.44	0.49
1:C:4154:SER:OG	1:C:4156:SER:OG	2.30	0.49
1:D:237:LEU:N	1:D:404:ASN:O	2.45	0.49
1:D:1837:GLU:O	1:D:1841:HIS:N	2.45	0.49
1:A:118:ALA:HB1	1:A:159:TRP:HB3	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:258:ARG:NH1	1:A:317:MET:SD	2.86	0.49
1:A:2024:LEU:HD23	1:A:2025:THR:H	1.77	0.49
1:A:3917:VAL:O	1:A:3920:THR:OG1	2.21	0.49
1:B:57:ASN:HA	1:B:323:ASP:HA	1.95	0.49
1:B:258:ARG:NH1	1:B:317:MET:SD	2.86	0.49
1:B:1704:ASP:HA	1:B:1707:ILE:HD12	1.95	0.49
1:B:2324:LEU:HD23	1:B:2327:ARG:HD2	1.94	0.49
1:C:185:SER:HB3	1:C:189:GLU:H	1.76	0.49
1:C:228:LEU:HD12	1:C:354:ILE:HB	1.95	0.49
1:C:375:GLN:N	1:C:390:LYS:O	2.40	0.49
1:C:4155:GLU:OE2	1:C:4158:ARG:NH2	2.45	0.49
1:D:426:PHE:HA	1:D:429:PHE:HB3	1.94	0.49
1:D:510:SER:HA	1:D:517:VAL:HG11	1.95	0.49
1:D:674:TYR:OH	1:D:676:GLU:OE2	2.25	0.49
1:D:1128:LEU:HD13	1:D:1206:SER:HB2	1.92	0.49
1:D:1426:TYR:HB2	1:D:1574:GLU:HB2	1.94	0.49
1:D:3803:VAL:HG22	1:D:3878:TYR:HE1	1.76	0.49
1:A:1094:TYR:OH	1:A:1808:ASP:OD1	2.30	0.49
1:A:2198:CYS:HA	1:A:2201:LEU:HB2	1.93	0.49
1:A:4124:GLU:HA	1:A:4127:LEU:HD13	1.93	0.49
1:B:25:THR:O	1:B:32:GLN:NE2	2.45	0.49
1:B:25:THR:HG22	1:B:34:LYS:HG2	1.92	0.49
1:B:2296:GLY:HA2	1:B:2299:TYR:HD2	1.76	0.49
1:B:4869:ASP:HB3	1:C:4875:ARG:HH21	1.77	0.49
1:C:614:LEU:HD23	1:C:617:LEU:HD12	1.94	0.49
1:C:996:VAL:HA	1:C:999:LEU:HD12	1.95	0.49
1:C:3897:ASP:OD1	1:C:3958:LYS:NZ	2.40	0.49
1:D:25:THR:O	1:D:32:GLN:NE2	2.45	0.49
1:D:1761:MET:SD	1:D:1761:MET:N	2.70	0.49
1:D:3685:GLU:OE1	1:D:3755:MET:N	2.43	0.49
1:A:1521:THR:HA	1:A:1526:ASP:HA	1.95	0.49
1:A:2243:VAL:O	1:A:2247:SER:N	2.46	0.49
1:A:3854:ASP:N	1:A:3854:ASP:OD1	2.46	0.49
1:B:228:LEU:HD12	1:B:354:ILE:HB	1.95	0.49
1:B:4103:LEU:HD23	1:B:4106:LEU:HD12	1.95	0.49
1:C:510:SER:HA	1:C:517:VAL:HG11	1.95	0.49
1:C:591:GLU:HG3	1:C:635:ASN:HD21	1.77	0.49
1:C:1094:TYR:OH	1:C:1808:ASP:OD1	2.30	0.49
1:D:296:ARG:HA	1:D:328:ALA:HA	1.94	0.49
1:D:1521:THR:HA	1:D:1526:ASP:HA	1.95	0.49
1:D:3733:HIS:NE2	1:D:3734:ASP:OD1	2.45	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:633:CYS:O	1:A:637:LEU:N	2.41	0.49
1:A:679:VAL:HA	1:A:800:VAL:HG12	1.94	0.49
1:A:4103:LEU:HD23	1:A:4106:LEU:HD12	1.95	0.49
1:B:426:PHE:HA	1:B:429:PHE:HB3	1.94	0.49
1:B:482:LEU:HA	1:B:485:ARG:HE	1.78	0.49
1:B:558:LEU:O	1:B:562:LEU:HB2	2.13	0.49
1:B:591:GLU:HG3	1:B:635:ASN:HD21	1.77	0.49
1:B:1843:LEU:O	1:B:1847:GLU:N	2.40	0.49
1:B:2027:ARG:HH22	1:B:2031:LEU:HD22	1.78	0.49
1:B:4155:GLU:OE2	1:B:4158:ARG:NH2	2.45	0.49
1:C:4807:CYS:SG	1:C:4812:THR:OG1	2.59	0.49
1:C:4944:MET:O	1:C:4948:ARG:N	2.45	0.49
1:D:2024:LEU:HD23	1:D:2025:THR:H	1.77	0.49
1:D:2196:ASN:HA	1:D:2199:ARG:HD2	1.95	0.49
1:D:2324:LEU:HD23	1:D:2327:ARG:HD2	1.94	0.49
1:D:2418:ILE:HA	1:D:2421:ARG:HB2	1.95	0.49
1:D:3076:LEU:O	1:D:3080:GLN:N	2.45	0.49
1:D:4085:VAL:O	1:D:4089:HIS:N	2.36	0.49
1:D:4198:ILE:HG12	1:D:4924:MET:HG2	1.95	0.49
1:D:4912:GLN:O	1:D:4915:ASN:ND2	2.46	0.49
1:A:57:ASN:HA	1:A:323:ASP:HA	1.95	0.49
1:A:1469:LEU:N	1:A:1477:HIS:O	2.45	0.49
1:A:4519:LEU:HD11	1:C:4811:LEU:CD1	2.26	0.49
1:B:476:GLN:NE2	1:B:3679:GLU:OE1	2.39	0.49
1:B:891:GLU:HB2	1:B:978:PRO:HG3	1.95	0.49
1:B:1111:GLY:HA3	1:B:1211:GLN:HE21	1.77	0.49
1:B:1469:LEU:N	1:B:1477:HIS:O	2.45	0.49
1:B:3076:LEU:O	1:B:3080:GLN:N	2.45	0.49
1:B:4794:TYR:H	1:B:4806:LYS:HD3	1.77	0.49
1:B:4912:GLN:O	1:B:4915:ASN:ND2	2.46	0.49
1:C:57:ASN:HA	1:C:323:ASP:HA	1.95	0.49
1:C:558:LEU:O	1:C:562:LEU:HB2	2.13	0.49
1:C:1521:THR:HA	1:C:1526:ASP:HA	1.95	0.49
1:C:1996:GLN:HA	1:C:1997:LEU:HD23	1.95	0.49
1:D:306:LEU:HD11	1:D:314:LEU:HG	1.95	0.49
1:D:717:GLY:O	1:D:736:CYS:N	2.36	0.49
1:D:2027:ARG:HH22	1:D:2031:LEU:HD22	1.78	0.49
1:A:296:ARG:HA	1:A:328:ALA:HA	1.94	0.48
1:A:996:VAL:HA	1:A:999:LEU:HD12	1.95	0.48
1:A:3685:GLU:OE1	1:A:3755:MET:N	2.43	0.48
1:B:375:GLN:N	1:B:390:LYS:O	2.40	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1426:TYR:HB2	1:B:1574:GLU:HB2	1.94	0.48
1:B:2418:ILE:HA	1:B:2421:ARG:HB2	1.95	0.48
1:B:4807:CYS:SG	1:B:4812:THR:OG1	2.59	0.48
1:C:306:LEU:HD11	1:C:314:LEU:HG	1.95	0.48
1:C:4783:THR:CG2	1:C:4817:HIS:CB	2.91	0.48
1:C:4912:GLN:O	1:C:4915:ASN:ND2	2.46	0.48
1:D:558:LEU:O	1:D:562:LEU:HB2	2.13	0.48
1:D:2463:PRO:O	1:D:2520:TYR:OH	2.26	0.48
1:D:4103:LEU:HD23	1:D:4106:LEU:HD12	1.95	0.48
1:A:143:LEU:CB	1:D:2426:SER:CB	2.85	0.48
1:A:482:LEU:HA	1:A:485:ARG:HE	1.78	0.48
1:A:510:SER:HA	1:A:517:VAL:HG11	1.95	0.48
1:A:2558:LYS:O	1:A:2562:LEU:N	2.41	0.48
1:A:4198:ILE:HG12	1:A:4924:MET:HG2	1.95	0.48
1:B:296:ARG:HA	1:B:328:ALA:HA	1.94	0.48
1:B:1094:TYR:OH	1:B:1808:ASP:OD1	2.30	0.48
1:C:633:CYS:O	1:C:637:LEU:N	2.41	0.48
1:C:891:GLU:HB2	1:C:978:PRO:HG3	1.95	0.48
1:C:2243:VAL:O	1:C:2247:SER:N	2.46	0.48
1:D:118:ALA:HB1	1:D:159:TRP:HB3	1.94	0.48
1:D:2243:VAL:O	1:D:2247:SER:N	2.46	0.48
1:A:1117:TRP:HE1	1:A:1164:CYS:HB3	1.79	0.48
1:A:2481:VAL:O	1:A:2485:LEU:N	2.46	0.48
1:A:4912:GLN:O	1:A:4915:ASN:ND2	2.46	0.48
1:B:1521:THR:HA	1:B:1526:ASP:HA	1.95	0.48
1:B:1628:MET:HG3	1:B:1641:ILE:HG13	1.95	0.48
1:B:1696:GLY:H	1:B:1811:GLY:HA2	1.78	0.48
1:B:2033:LEU:HA	1:B:2036:LYS:HE3	1.94	0.48
1:B:2243:VAL:O	1:B:2247:SER:N	2.46	0.48
1:B:3854:ASP:OD1	1:B:3854:ASP:N	2.46	0.48
1:C:594:ILE:HA	1:C:597:ILE:HD12	1.95	0.48
1:C:4804:ASP:OD1	1:C:4804:ASP:N	2.46	0.48
1:D:679:VAL:HA	1:D:800:VAL:HG12	1.94	0.48
1:D:1166:VAL:HA	1:D:1173:MET:HG3	1.96	0.48
1:D:1257:GLN:O	1:D:1596:TRP:N	2.36	0.48
1:D:1704:ASP:HA	1:D:1707:ILE:HD12	1.94	0.48
1:A:306:LEU:HD11	1:A:314:LEU:HG	1.95	0.48
1:A:1098:ALA:O	1:A:1101:TRP:NE1	2.38	0.48
1:A:1696:GLY:H	1:A:1811:GLY:HA2	1.78	0.48
1:A:1996:GLN:HA	1:A:1997:LEU:HD23	1.95	0.48
1:C:2135:MET:HA	1:C:2136:GLY:HA3	1.65	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:2324:LEU:HD23	1:C:2327:ARG:HD2	1.94	0.48
1:C:2481:VAL:O	1:C:2485:LEU:N	2.46	0.48
1:C:3854:ASP:N	1:C:3854:ASP:OD1	2.46	0.48
1:C:4103:LEU:HD23	1:C:4106:LEU:HD12	1.95	0.48
1:C:4794:TYR:H	1:C:4806:LYS:HD3	1.77	0.48
1:D:614:LEU:HD23	1:D:617:LEU:HD12	1.94	0.48
1:D:891:GLU:HB2	1:D:978:PRO:HG3	1.95	0.48
1:D:1119:ARG:HB2	1:D:1133:ARG:HD3	1.96	0.48
1:A:228:LEU:HD12	1:A:354:ILE:HB	1.95	0.48
1:A:558:LEU:O	1:A:562:LEU:HB2	2.13	0.48
1:A:2549:LEU:O	1:A:2553:VAL:N	2.46	0.48
1:B:118:ALA:HB1	1:B:159:TRP:HB3	1.94	0.48
1:B:131:CYS:N	1:B:148:GLY:O	2.43	0.48
1:B:306:LEU:HD11	1:B:314:LEU:HG	1.95	0.48
1:B:583:PRO:O	1:B:587:ASN:ND2	2.46	0.48
1:B:594:ILE:HA	1:B:597:ILE:HD12	1.95	0.48
1:B:1718:ARG:NH2	1:B:1759:PRO:O	2.44	0.48
1:B:4924:MET:O	1:B:4928:ASN:N	2.36	0.48
1:C:129:TYR:O	1:C:150:GLN:N	2.44	0.48
1:C:897:LYS:HD3	1:C:918:LEU:HD21	1.96	0.48
1:C:2549:LEU:O	1:C:2553:VAL:N	2.46	0.48
1:D:129:TYR:O	1:D:150:GLN:N	2.44	0.48
1:D:583:PRO:O	1:D:587:ASN:ND2	2.46	0.48
1:D:4794:TYR:H	1:D:4806:LYS:HD3	1.77	0.48
1:A:583:PRO:O	1:A:587:ASN:ND2	2.46	0.48
1:A:897:LYS:HD3	1:A:918:LEU:HD21	1.96	0.48
1:A:2033:LEU:HA	1:A:2036:LYS:HE3	1.94	0.48
1:A:4798:GLU:H	1:A:4802:THR:HG1	1.56	0.48
1:B:355:LYS:O	1:B:359:SER:OG	2.32	0.48
1:B:1837:GLU:O	1:B:1841:HIS:N	2.45	0.48
1:C:25:THR:O	1:C:32:GLN:NE2	2.45	0.48
1:C:1117:TRP:HE1	1:C:1164:CYS:HB3	1.79	0.48
1:C:1166:VAL:HA	1:C:1173:MET:HG3	1.96	0.48
1:C:1696:GLY:H	1:C:1811:GLY:HA2	1.78	0.48
1:C:2027:ARG:HH22	1:C:2031:LEU:HD22	1.78	0.48
1:C:2196:ASN:HA	1:C:2199:ARG:HD2	1.95	0.48
1:C:2832:VAL:O	1:C:2895:LYS:NZ	2.40	0.48
1:C:4171:ARG:HH12	1:C:4175:PHE:HB2	1.77	0.48
1:D:355:LYS:O	1:D:359:SER:OG	2.32	0.48
1:D:897:LYS:HD3	1:D:918:LEU:HD21	1.96	0.48
1:D:4804:ASP:OD1	1:D:4804:ASP:N	2.46	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1119:ARG:HB2	1:A:1133:ARG:HD3	1.96	0.48
1:A:1704:ASP:HA	1:A:1707:ILE:HD12	1.94	0.48
1:A:2196:ASN:HA	1:A:2199:ARG:HD2	1.95	0.48
1:A:3742:LEU:HD11	1:A:3782:LEU:HD21	1.94	0.48
1:B:129:TYR:O	1:B:150:GLN:N	2.44	0.48
1:B:4822:VAL:HG12	1:D:4849:ILE:O	2.14	0.48
1:C:463:PHE:HE1	1:C:485:ARG:HB3	1.79	0.48
1:C:1628:MET:HG3	1:C:1641:ILE:HG13	1.95	0.48
1:D:133:LEU:HB2	1:D:146:ASP:HB2	1.96	0.48
1:D:228:LEU:HD12	1:D:354:ILE:HB	1.95	0.48
1:D:1718:ARG:NH2	1:D:1759:PRO:O	2.44	0.48
1:A:129:TYR:O	1:A:150:GLN:N	2.44	0.48
1:A:463:PHE:HE1	1:A:485:ARG:HB3	1.79	0.48
1:A:891:GLU:HB2	1:A:978:PRO:HG3	1.95	0.48
1:A:2027:ARG:HH22	1:A:2031:LEU:HD22	1.78	0.48
1:A:4898:TYR:O	1:A:4901:THR:OG1	2.23	0.48
1:B:261:HIS:HA	1:B:390:LYS:HA	1.96	0.48
1:B:1154:ARG:NH2	1:B:1180:GLU:OE1	2.47	0.48
1:B:1160:ASP:OD1	1:B:1178:ASN:ND2	2.47	0.48
1:B:4154:SER:OG	1:B:4156:SER:OG	2.30	0.48
1:C:1154:ARG:NH2	1:C:1180:GLU:OE1	2.47	0.48
1:C:1704:ASP:HA	1:C:1707:ILE:HD12	1.94	0.48
1:C:4198:ILE:HG12	1:C:4924:MET:HG2	1.95	0.48
1:D:1256:PRO:O	1:D:1451:HIS:ND1	2.37	0.48
1:D:1799:VAL:O	1:D:1803:SER:CB	2.59	0.48
1:A:133:LEU:HB2	1:A:146:ASP:HB2	1.96	0.48
1:A:237:LEU:N	1:A:404:ASN:O	2.45	0.48
1:A:355:LYS:O	1:A:359:SER:OG	2.32	0.48
1:A:1444:GLY:N	1:A:1542:ALA:O	2.39	0.48
1:B:246:THR:N	1:B:261:HIS:O	2.32	0.48
1:B:897:LYS:HD3	1:B:918:LEU:HD21	1.96	0.48
1:B:1996:GLN:HA	1:B:1997:LEU:HD23	1.95	0.48
1:C:238:HIS:N	1:C:243:GLU:O	2.43	0.48
1:C:4783:THR:HG23	1:C:4817:HIS:CB	2.43	0.48
1:D:541:ILE:HG12	1:D:551:PHE:CE2	2.49	0.48
1:D:3742:LEU:HD11	1:D:3782:LEU:HD21	1.94	0.48
1:A:541:ILE:HG12	1:A:551:PHE:CE2	2.49	0.48
1:A:1154:ARG:NH2	1:A:1180:GLU:OE1	2.47	0.48
1:A:4849:ILE:HG21	1:D:4819:TYR:HA	1.96	0.48
1:B:133:LEU:HB2	1:B:146:ASP:HB2	1.96	0.48
1:B:717:GLY:O	1:B:736:CYS:N	2.36	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1605:LYS:HD3	1:B:1606:VAL:HG23	1.95	0.48
1:B:4733:GLY:HA3	1:B:4740:PHE:CD1	2.49	0.48
1:C:3762:LEU:O	1:C:3766:ILE:N	2.42	0.48
1:C:4045:SER:O	1:C:4049:PHE:N	2.44	0.48
1:D:261:HIS:HA	1:D:390:LYS:HA	1.96	0.48
1:D:1605:LYS:HD3	1:D:1606:VAL:HG23	1.95	0.48
1:A:1292:SER:OG	1:A:1296:SER:O	2.28	0.47
1:A:2658:TYR:O	1:A:2662:LEU:N	2.47	0.47
1:A:3834:ASP:N	1:A:3834:ASP:OD1	2.47	0.47
1:B:20:VAL:O	1:B:67:PHE:N	2.45	0.47
1:B:4558:VAL:O	1:B:4558:VAL:HG13	2.14	0.47
1:C:133:LEU:HB2	1:C:146:ASP:HB2	1.96	0.47
1:C:1644:LEU:HG	1:C:1647:GLN:HB2	1.96	0.47
1:C:4733:GLY:HA3	1:C:4740:PHE:CD1	2.49	0.47
1:D:1160:ASP:OD1	1:D:1178:ASN:ND2	2.47	0.47
1:D:4898:TYR:O	1:D:4901:THR:OG1	2.23	0.47
1:A:677:LEU:HD11	1:A:792:VAL:HG21	1.96	0.47
1:A:1628:MET:HG3	1:A:1641:ILE:HG13	1.95	0.47
1:B:1166:VAL:HA	1:B:1173:MET:HG3	1.96	0.47
1:C:84:ASN:O	1:C:84:ASN:ND2	2.47	0.47
1:C:118:ALA:HB1	1:C:159:TRP:HB3	1.94	0.47
1:C:1444:GLY:N	1:C:1542:ALA:O	2.40	0.47
1:C:1669:ASN:O	1:C:1673:ALA:N	2.43	0.47
1:D:996:VAL:HA	1:D:999:LEU:HD12	1.95	0.47
1:D:1644:LEU:HG	1:D:1647:GLN:HB2	1.96	0.47
1:D:2549:LEU:O	1:D:2553:VAL:N	2.46	0.47
1:A:4018:PHE:O	1:A:4022:LEU:CB	2.61	0.47
1:C:583:PRO:O	1:C:587:ASN:ND2	2.46	0.47
1:C:1160:ASP:OD1	1:C:1178:ASN:ND2	2.47	0.47
1:D:482:LEU:HA	1:D:485:ARG:HE	1.78	0.47
1:D:833:LYS:HG2	1:D:1614:ARG:HH22	1.80	0.47
1:D:1154:ARG:NH2	1:D:1180:GLU:OE1	2.47	0.47
1:D:1738:LEU:HD13	1:D:1739:PHE:HB3	1.96	0.47
1:A:466:PRO:HB2	1:A:475:LYS:HG3	1.96	0.47
1:A:908:ARG:HA	1:A:916:PRO:HD3	1.97	0.47
1:A:1272:ARG:HD2	1:A:1586:LEU:HB3	1.97	0.47
1:A:1605:LYS:HD3	1:A:1606:VAL:HG23	1.95	0.47
1:A:4733:GLY:HA3	1:A:4740:PHE:CD1	2.49	0.47
1:B:1738:LEU:HD13	1:B:1739:PHE:HB3	1.96	0.47
1:B:2549:LEU:O	1:B:2553:VAL:N	2.46	0.47
1:B:4198:ILE:HG12	1:B:4924:MET:HG2	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1605:LYS:HD3	1:C:1606:VAL:HG23	1.95	0.47
1:C:2520:TYR:HA	1:C:2523:THR:HB	1.96	0.47
1:C:2658:TYR:O	1:C:2662:LEU:N	2.47	0.47
1:C:4018:PHE:O	1:C:4022:LEU:CB	2.61	0.47
1:D:20:VAL:O	1:D:67:PHE:N	2.45	0.47
1:D:594:ILE:HA	1:D:597:ILE:HD12	1.95	0.47
1:D:677:LEU:HD11	1:D:792:VAL:HG21	1.96	0.47
1:D:1117:TRP:HE1	1:D:1164:CYS:HB3	1.79	0.47
1:D:1696:GLY:H	1:D:1811:GLY:HA2	1.78	0.47
1:D:1996:GLN:HA	1:D:1997:LEU:HD23	1.95	0.47
1:D:4113:ASP:HB2	1:D:4116:LEU:HB3	1.96	0.47
1:A:261:HIS:HA	1:A:390:LYS:HA	1.96	0.47
1:A:464:HIS:O	1:A:478:ARG:NH2	2.48	0.47
1:A:4155:GLU:OE2	1:A:4158:ARG:NH2	2.45	0.47
1:B:58:VAL:HG22	1:B:320:GLU:HA	1.97	0.47
1:B:143:LEU:CB	1:C:2426:SER:CB	2.89	0.47
1:B:464:HIS:O	1:B:478:ARG:NH2	2.48	0.47
1:B:908:ARG:HA	1:B:916:PRO:HD3	1.97	0.47
1:B:996:VAL:HA	1:B:999:LEU:HD12	1.95	0.47
1:B:2196:ASN:HA	1:B:2199:ARG:HD2	1.95	0.47
1:B:2520:TYR:HA	1:B:2523:THR:HB	1.97	0.47
1:C:833:LYS:HG2	1:C:1614:ARG:HH22	1.80	0.47
1:C:1144:ARG:N	1:C:1150:GLU:O	2.35	0.47
1:C:1173:MET:O	1:C:1191:ALA:N	2.48	0.47
1:D:908:ARG:HA	1:D:916:PRO:HD3	1.97	0.47
1:D:3919:ASN:O	1:D:3922:THR:OG1	2.27	0.47
1:D:3922:THR:O	1:D:3926:GLN:N	2.43	0.47
1:A:443:SER:HA	1:A:444:THR:HA	1.52	0.47
1:A:2464:ASP:OD1	1:A:2464:ASP:N	2.47	0.47
1:A:4171:ARG:HH12	1:A:4175:PHE:HB2	1.77	0.47
1:A:4808:ASP:HB3	1:D:4523:VAL:HG23	1.96	0.47
1:B:1119:ARG:HB2	1:B:1133:ARG:HD3	1.95	0.47
1:B:2464:ASP:OD1	1:B:2464:ASP:N	2.47	0.47
1:B:4519:LEU:HD12	1:D:4811:LEU:CA	2.45	0.47
1:B:4632:ASP:HA	1:B:4709:TRP:HE1	1.80	0.47
1:C:58:VAL:HG22	1:C:320:GLU:HA	1.97	0.47
1:C:355:LYS:O	1:C:359:SER:OG	2.32	0.47
1:C:4767:GLN:O	1:C:4771:THR:OG1	2.23	0.47
1:D:1610:ARG:NH1	1:D:1612:SER:OG	2.48	0.47
1:D:4635:VAL:O	1:D:4638:THR:OG1	2.30	0.47
1:A:419:ILE:HG12	1:A:489:PHE:HE1	1.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1166:VAL:HA	1:A:1173:MET:HG3	1.96	0.47
1:A:1173:MET:O	1:A:1191:ALA:N	2.48	0.47
1:A:2222:LEU:O	1:A:2226:SER:N	2.37	0.47
1:B:463:PHE:HE1	1:B:485:ARG:HB3	1.79	0.47
1:B:541:ILE:HG12	1:B:551:PHE:CE2	2.49	0.47
1:B:903:GLN:HG3	1:B:974:SER:HB2	1.97	0.47
1:B:1109:THR:OG1	1:B:1212:VAL:N	2.48	0.47
1:B:1117:TRP:HE1	1:B:1164:CYS:HB3	1.79	0.47
1:B:1252:SER:HB2	1:B:1598:ARG:HB2	1.97	0.47
1:B:1644:LEU:HG	1:B:1647:GLN:HB2	1.96	0.47
1:C:464:HIS:O	1:C:478:ARG:NH2	2.48	0.47
1:C:466:PRO:HB2	1:C:475:LYS:HG3	1.96	0.47
1:C:903:GLN:HG3	1:C:974:SER:HB2	1.97	0.47
1:C:1033:VAL:HG23	1:C:1038:LEU:HB3	1.97	0.47
1:C:1106:GLU:HA	1:C:1161:VAL:HG22	1.97	0.47
1:C:1761:MET:SD	1:C:1761:MET:N	2.70	0.47
1:C:4113:ASP:HB2	1:C:4116:LEU:HB3	1.96	0.47
1:D:308:LEU:HA	1:D:314:LEU:HA	1.97	0.47
1:D:464:HIS:O	1:D:478:ARG:NH2	2.48	0.47
1:D:764:PRO:HG3	1:D:782:PHE:H	1.80	0.47
1:D:3728:GLN:O	1:D:3732:LEU:N	2.42	0.47
1:D:4733:GLY:HA3	1:D:4740:PHE:CD1	2.49	0.47
1:A:594:ILE:HA	1:A:597:ILE:HD12	1.95	0.47
1:A:1115:VAL:O	1:A:1137:PHE:N	2.48	0.47
1:A:1610:ARG:NH1	1:A:1612:SER:OG	2.48	0.47
1:A:1644:LEU:HG	1:A:1647:GLN:HB2	1.96	0.47
1:A:4113:ASP:HB2	1:A:4116:LEU:HB3	1.96	0.47
1:B:466:PRO:HB2	1:B:475:LYS:HG3	1.96	0.47
1:B:3728:GLN:O	1:B:3732:LEU:N	2.42	0.47
1:B:4804:ASP:N	1:B:4804:ASP:OD1	2.46	0.47
1:C:261:HIS:HA	1:C:390:LYS:HA	1.96	0.47
1:C:419:ILE:HG12	1:C:489:PHE:HE1	1.80	0.47
1:C:677:LEU:HD11	1:C:792:VAL:HG21	1.96	0.47
1:C:1119:ARG:HB2	1:C:1133:ARG:HD3	1.96	0.47
1:C:1272:ARG:HD2	1:C:1586:LEU:HB3	1.97	0.47
1:C:1576:LYS:NZ	1:C:1589:GLN:OE1	2.48	0.47
1:D:463:PHE:HE1	1:D:485:ARG:HB3	1.79	0.47
1:D:1109:THR:OG1	1:D:1212:VAL:N	2.48	0.47
1:D:1628:MET:HG3	1:D:1641:ILE:HG13	1.95	0.47
1:D:2520:TYR:HA	1:D:2523:THR:HB	1.97	0.47
1:A:1106:GLU:HA	1:A:1161:VAL:HG22	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1576:LYS:NZ	1:A:1589:GLN:OE1	2.48	0.47
1:A:1738:LEU:HD13	1:A:1739:PHE:HB3	1.96	0.47
1:B:123:HIS:N	1:B:128:MET:O	2.34	0.47
1:B:647:ARG:HH11	1:B:1684:GLN:HB2	1.80	0.47
1:B:3834:ASP:OD1	1:B:3834:ASP:N	2.47	0.47
1:C:908:ARG:HA	1:C:916:PRO:HD3	1.97	0.47
1:D:629:GLN:HB3	1:D:1664:VAL:HG13	1.97	0.47
1:D:1252:SER:HB2	1:D:1598:ARG:HB2	1.97	0.47
1:D:3993:ASN:HD21	1:D:4111:PRO:HD2	1.80	0.47
1:A:308:LEU:HA	1:A:314:LEU:HA	1.97	0.47
1:A:1033:VAL:HG23	1:A:1038:LEU:HB3	1.97	0.47
1:A:1160:ASP:OD1	1:A:1178:ASN:ND2	2.47	0.47
1:A:1669:ASN:O	1:A:1673:ALA:N	2.43	0.47
1:A:3960:SER:OG	1:A:4070:CYS:SG	2.60	0.47
1:A:4558:VAL:HG13	1:A:4558:VAL:O	2.15	0.47
1:B:651:HIS:N	1:B:1625:LEU:O	2.45	0.47
1:B:677:LEU:HD11	1:B:792:VAL:HG21	1.96	0.47
1:B:1173:MET:O	1:B:1191:ALA:N	2.48	0.47
1:B:1576:LYS:NZ	1:B:1589:GLN:OE1	2.48	0.47
1:C:718:VAL:HG12	1:C:736:CYS:HB2	1.97	0.47
1:D:466:PRO:HB2	1:D:475:LYS:HG3	1.96	0.47
1:D:3743:GLN:NE2	1:D:3781:TYR:OH	2.35	0.47
1:A:903:GLN:HG3	1:A:974:SER:HB2	1.97	0.46
1:A:1109:THR:OG1	1:A:1212:VAL:N	2.48	0.46
1:A:4045:SER:O	1:A:4049:PHE:N	2.44	0.46
1:A:4517:ILE:HA	1:A:4520:PHE:CE2	2.50	0.46
1:C:131:CYS:N	1:C:148:GLY:O	2.43	0.46
1:C:541:ILE:HG12	1:C:551:PHE:CE2	2.49	0.46
1:C:1000:ALA:HB1	1:C:1046:ASN:HB3	1.97	0.46
1:C:1610:ARG:NH1	1:C:1612:SER:OG	2.48	0.46
1:C:2086:PHE:O	1:C:3692:TYR:OH	2.25	0.46
1:C:2558:LYS:O	1:C:2562:LEU:N	2.41	0.46
1:C:3729:GLN:O	1:C:3733:HIS:ND1	2.32	0.46
1:C:4522:LYS:HD2	1:C:4522:LYS:HA	1.47	0.46
1:D:419:ILE:HG12	1:D:489:PHE:HE1	1.80	0.46
1:D:1000:ALA:HB1	1:D:1046:ASN:HB3	1.97	0.46
1:D:1576:LYS:NZ	1:D:1589:GLN:OE1	2.48	0.46
1:D:3834:ASP:N	1:D:3834:ASP:OD1	2.47	0.46
1:A:123:HIS:N	1:A:128:MET:O	2.34	0.46
1:A:833:LYS:HG2	1:A:1614:ARG:HH22	1.80	0.46
1:A:2486:LEU:HD13	1:A:2537:ALA:CB	2.45	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1000:ALA:HB1	1:B:1046:ASN:HB3	1.97	0.46
1:B:4518:LEU:HG	1:B:4741:ALA:HB2	1.97	0.46
1:B:4849:ILE:HG22	1:C:4822:VAL:CB	2.43	0.46
1:C:1799:VAL:O	1:C:1803:SER:CB	2.59	0.46
1:D:476:GLN:NE2	1:D:3679:GLU:OE1	2.39	0.46
1:D:903:GLN:HG3	1:D:974:SER:HB2	1.97	0.46
1:D:1115:VAL:O	1:D:1137:PHE:N	2.48	0.46
1:A:58:VAL:HG22	1:A:320:GLU:HA	1.97	0.46
1:A:629:GLN:HB3	1:A:1664:VAL:HG13	1.97	0.46
1:A:764:PRO:HG3	1:A:782:PHE:H	1.80	0.46
1:A:1000:ALA:HB1	1:A:1046:ASN:HB3	1.98	0.46
1:A:4011:VAL:HA	1:A:4014:ILE:HG12	1.98	0.46
1:A:4632:ASP:HA	1:A:4709:TRP:HE1	1.80	0.46
1:A:4754:LEU:HD13	1:C:4774:LEU:HD13	1.97	0.46
1:A:4906:PHE:HA	1:A:4909:HIS:HB3	1.98	0.46
1:B:629:GLN:HB3	1:B:1664:VAL:HG13	1.97	0.46
1:B:718:VAL:HG12	1:B:736:CYS:HB2	1.97	0.46
1:B:4113:ASP:HB2	1:B:4116:LEU:HB3	1.96	0.46
1:C:1837:GLU:O	1:C:1841:HIS:N	2.45	0.46
1:D:433:LEU:O	1:D:437:SER:HB3	2.16	0.46
1:D:718:VAL:HG12	1:D:736:CYS:HB2	1.97	0.46
1:D:1444:GLY:N	1:D:1542:ALA:O	2.39	0.46
1:D:4158:ARG:O	1:D:4162:GLU:N	2.48	0.46
1:A:433:LEU:O	1:A:437:SER:HB3	2.16	0.46
1:A:2520:TYR:HA	1:A:2523:THR:HB	1.96	0.46
1:B:542:ARG:NE	1:B:577:CYS:SG	2.89	0.46
1:B:1257:GLN:O	1:B:1596:TRP:N	2.36	0.46
1:B:1610:ARG:NH1	1:B:1612:SER:OG	2.48	0.46
1:C:308:LEU:HA	1:C:314:LEU:HA	1.97	0.46
1:C:542:ARG:NE	1:C:577:CYS:SG	2.89	0.46
1:C:1109:THR:OG1	1:C:1212:VAL:N	2.48	0.46
1:C:2464:ASP:N	1:C:2464:ASP:OD1	2.47	0.46
1:C:4632:ASP:HA	1:C:4709:TRP:HE1	1.80	0.46
1:D:2481:VAL:O	1:D:2485:LEU:N	2.46	0.46
1:D:3960:SER:OG	1:D:4070:CYS:SG	2.60	0.46
1:D:4632:ASP:HA	1:D:4709:TRP:HE1	1.80	0.46
1:A:718:VAL:HG12	1:A:736:CYS:HB2	1.97	0.46
1:B:308:LEU:HA	1:B:314:LEU:HA	1.97	0.46
1:B:1272:ARG:HD2	1:B:1586:LEU:HB3	1.97	0.46
1:B:1836:ASN:HA	1:B:1839:LEU:HD12	1.98	0.46
1:B:2266:VAL:O	1:B:2270:LEU:N	2.48	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2426:SER:CB	1:D:143:LEU:CB	2.90	0.46
1:C:762:SER:H	1:C:784:ILE:HD11	1.80	0.46
1:C:1115:VAL:O	1:C:1137:PHE:N	2.48	0.46
1:C:1252:SER:HB2	1:C:1598:ARG:HB2	1.97	0.46
1:D:1033:VAL:HG23	1:D:1038:LEU:HB3	1.97	0.46
1:D:1828:LEU:HD12	1:D:1831:MET:HB2	1.97	0.46
1:D:2464:ASP:OD1	1:D:2464:ASP:N	2.47	0.46
1:D:3748:SER:O	1:D:3793:SER:OG	2.25	0.46
1:D:4045:SER:O	1:D:4049:PHE:N	2.44	0.46
1:D:4906:PHE:HA	1:D:4909:HIS:HB3	1.98	0.46
1:A:244:CYS:O	1:A:263:GLU:N	2.39	0.46
1:A:3993:ASN:HD21	1:A:4111:PRO:HD2	1.80	0.46
1:A:4523:VAL:HG23	1:C:4808:ASP:HB3	1.98	0.46
1:A:4635:VAL:O	1:A:4638:THR:OG1	2.30	0.46
1:B:1115:VAL:O	1:B:1137:PHE:N	2.48	0.46
1:B:1828:LEU:HD12	1:B:1831:MET:HB2	1.97	0.46
1:B:3786:LYS:HD2	1:B:3865:ASN:HA	1.97	0.46
1:B:3922:THR:O	1:B:3926:GLN:N	2.43	0.46
1:B:3993:ASN:HD21	1:B:4111:PRO:HD2	1.80	0.46
1:B:4519:LEU:C	1:D:4810:MET:CB	2.84	0.46
1:B:4827:GLY:HA3	1:B:4852:PHE:CB	2.45	0.46
1:B:4845:ILE:O	1:B:4849:ILE:HG12	2.16	0.46
1:C:433:LEU:O	1:C:437:SER:HB3	2.16	0.46
1:C:647:ARG:HH11	1:C:1684:GLN:HB2	1.80	0.46
1:D:2135:MET:HA	1:D:2136:GLY:HA3	1.65	0.46
1:D:3831:LEU:HA	1:D:3832:GLN:HA	1.71	0.46
1:A:1468:THR:HA	1:A:1478:GLU:HA	1.98	0.46
1:A:4905:GLY:O	1:A:4909:HIS:CB	2.63	0.46
1:B:4906:PHE:HA	1:B:4909:HIS:HB3	1.98	0.46
1:C:443:SER:HA	1:C:444:THR:HA	1.52	0.46
1:C:629:GLN:HB3	1:C:1664:VAL:HG13	1.97	0.46
1:C:4906:PHE:HA	1:C:4909:HIS:HB3	1.98	0.46
1:D:58:VAL:HG22	1:D:320:GLU:HA	1.97	0.46
1:D:1173:MET:O	1:D:1191:ALA:N	2.48	0.46
1:D:2266:VAL:O	1:D:2270:LEU:N	2.48	0.46
1:A:260:VAL:O	1:A:391:ALA:N	2.47	0.46
1:A:270:HIS:HB3	1:A:272:ARG:HG2	1.97	0.46
1:A:1176:THR:HG22	1:A:1181:ILE:HA	1.98	0.46
1:A:2135:MET:HA	1:A:2136:GLY:HA3	1.65	0.46
1:A:4804:ASP:OD1	1:A:4804:ASP:N	2.46	0.46
1:B:229:ILE:HA	1:B:288:HIS:HA	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:299:HIS:NE2	1:B:301:THR:OG1	2.41	0.46
1:B:419:ILE:HG12	1:B:489:PHE:HE1	1.80	0.46
1:B:833:LYS:HG2	1:B:1614:ARG:HH22	1.80	0.46
1:B:1183:LEU:HB3	1:B:1187:GLY:HA2	1.97	0.46
1:C:229:ILE:HA	1:C:288:HIS:HA	1.98	0.46
1:C:1217:PHE:HB3	1:C:1247:ILE:HD12	1.98	0.46
1:C:1836:ASN:HA	1:C:1839:LEU:HD12	1.98	0.46
1:C:3834:ASP:OD1	1:C:3834:ASP:N	2.47	0.46
1:D:1119:ARG:HH11	1:D:1133:ARG:HG2	1.81	0.46
1:D:4011:VAL:HA	1:D:4014:ILE:HG12	1.97	0.46
1:A:299:HIS:NE2	1:A:301:THR:OG1	2.41	0.46
1:A:1217:PHE:HB3	1:A:1247:ILE:HD12	1.98	0.46
1:A:1305:SER:HB2	1:A:1591:LEU:HD12	1.98	0.46
1:A:3786:LYS:HD2	1:A:3865:ASN:HA	1.97	0.46
1:A:4813:CYS:SG	1:A:4817:HIS:HD2	2.39	0.46
1:A:4845:ILE:O	1:A:4849:ILE:HG12	2.16	0.46
1:B:762:SER:H	1:B:784:ILE:HD11	1.80	0.46
1:B:764:PRO:HG3	1:B:782:PHE:H	1.80	0.46
1:B:1176:THR:HG22	1:B:1181:ILE:HA	1.98	0.46
1:B:4037:ASP:OD2	1:B:4042:GLY:N	2.49	0.46
1:B:4160:GLN:HB3	1:B:4201:MET:HB3	1.98	0.46
1:B:4522:LYS:HB3	1:B:4560:TYR:CZ	2.51	0.46
1:C:121:LEU:HD23	1:C:121:LEU:HA	1.81	0.46
1:C:1738:LEU:HD13	1:C:1739:PHE:HB3	1.96	0.46
1:C:2222:LEU:O	1:C:2226:SER:N	2.37	0.46
1:C:4905:GLY:O	1:C:4909:HIS:CB	2.63	0.46
1:D:4905:GLY:O	1:D:4909:HIS:CB	2.63	0.46
1:A:695:VAL:HG13	1:A:792:VAL:HG22	1.98	0.46
1:A:4486:ILE:N	1:A:4489:GLN:OE1	2.49	0.46
1:B:270:HIS:HB3	1:B:272:ARG:HG2	1.97	0.46
1:B:1033:VAL:HG23	1:B:1038:LEU:HB3	1.97	0.46
1:B:1106:GLU:HA	1:B:1161:VAL:HG22	1.97	0.46
1:B:4774:LEU:HD13	1:C:4754:LEU:HD13	1.98	0.46
1:C:260:VAL:O	1:C:391:ALA:N	2.47	0.46
1:C:1828:LEU:HD12	1:C:1831:MET:HB2	1.97	0.46
1:C:3922:THR:O	1:C:3926:GLN:N	2.43	0.46
1:D:1305:SER:HB2	1:D:1591:LEU:HD12	1.98	0.46
1:D:1468:THR:HA	1:D:1478:GLU:HA	1.98	0.46
1:D:3786:LYS:HD2	1:D:3865:ASN:HA	1.97	0.46
1:D:4160:GLN:HB3	1:D:4201:MET:HB3	1.98	0.46
1:A:699:SER:OG	1:A:785:ASP:O	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1252:SER:HB2	1:A:1598:ARG:HB2	1.97	0.45
1:C:764:PRO:HG3	1:C:782:PHE:H	1.80	0.45
1:C:1305:SER:HB2	1:C:1591:LEU:HD12	1.98	0.45
1:C:4521:TYR:CD1	1:C:4561:VAL:CG2	2.85	0.45
1:D:695:VAL:HG13	1:D:792:VAL:HG22	1.98	0.45
1:D:1183:LEU:HB3	1:D:1187:GLY:HA2	1.97	0.45
1:D:1836:ASN:HA	1:D:1839:LEU:HD12	1.98	0.45
1:D:2063:ILE:O	1:D:2066:THR:OG1	2.31	0.45
1:A:476:GLN:NE2	1:A:3679:GLU:OE1	2.39	0.45
1:A:762:SER:H	1:A:784:ILE:HD11	1.81	0.45
1:A:1828:LEU:HD12	1:A:1831:MET:HB2	1.97	0.45
1:A:4037:ASP:OD2	1:A:4042:GLY:N	2.49	0.45
1:A:4158:ARG:O	1:A:4162:GLU:N	2.48	0.45
1:B:1669:ASN:O	1:B:1673:ALA:N	2.43	0.45
1:B:4600:ILE:HD12	1:B:4603:ARG:HB3	1.99	0.45
1:B:4635:VAL:O	1:B:4638:THR:OG1	2.30	0.45
1:B:4905:GLY:O	1:B:4909:HIS:CB	2.63	0.45
1:D:647:ARG:HH11	1:D:1684:GLN:HB2	1.80	0.45
1:D:762:SER:H	1:D:784:ILE:HD11	1.80	0.45
1:D:4597:PRO:HA	1:D:4600:ILE:HG22	1.98	0.45
1:A:85:THR:C	1:A:100:PHE:N	2.69	0.45
1:A:802:PHE:N	1:A:1616:GLY:O	2.50	0.45
1:B:433:LEU:O	1:B:437:SER:HB3	2.16	0.45
1:B:3949:LEU:HD23	1:B:3952:PHE:HD2	1.82	0.45
1:C:133:LEU:N	1:C:146:ASP:O	2.46	0.45
1:C:1124:PRO:HG3	1:C:1600:PRO:HD3	1.98	0.45
1:C:1748:LEU:HD13	1:C:1750:GLY:H	1.81	0.45
1:C:2266:VAL:O	1:C:2270:LEU:N	2.48	0.45
1:C:4600:ILE:HD12	1:C:4603:ARG:HB3	1.99	0.45
1:D:121:LEU:HD23	1:D:121:LEU:HA	1.81	0.45
1:D:1106:GLU:HA	1:D:1161:VAL:HG22	1.97	0.45
1:D:3762:LEU:O	1:D:3766:ILE:N	2.42	0.45
1:D:3984:LEU:HG	1:D:4102:LEU:HD12	1.98	0.45
1:D:4037:ASP:OD2	1:D:4042:GLY:N	2.49	0.45
1:A:1119:ARG:HH11	1:A:1133:ARG:HG2	1.81	0.45
1:B:1748:LEU:HD13	1:B:1750:GLY:H	1.81	0.45
1:B:4486:ILE:N	1:B:4489:GLN:OE1	2.49	0.45
1:C:476:GLN:NE2	1:C:3679:GLU:OE1	2.39	0.45
1:C:1176:THR:HG22	1:C:1181:ILE:HA	1.98	0.45
1:C:3993:ASN:HD21	1:C:4111:PRO:HD2	1.80	0.45
1:C:4486:ILE:N	1:C:4489:GLN:OE1	2.49	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:542:ARG:NE	1:D:577:CYS:SG	2.89	0.45
1:D:1124:PRO:HG3	1:D:1600:PRO:HD3	1.98	0.45
1:D:4171:ARG:NH1	1:D:4175:PHE:HB2	2.32	0.45
1:D:4486:ILE:N	1:D:4489:GLN:OE1	2.49	0.45
1:D:4845:ILE:O	1:D:4849:ILE:HG12	2.16	0.45
1:A:647:ARG:HH11	1:A:1684:GLN:HB2	1.80	0.45
1:A:1183:LEU:HB3	1:A:1187:GLY:HA2	1.97	0.45
1:A:3984:LEU:HG	1:A:4102:LEU:HD12	1.98	0.45
1:A:4139:ILE:HD12	1:A:4147:GLU:HB2	1.99	0.45
1:A:4171:ARG:NH1	1:A:4175:PHE:HB2	2.32	0.45
1:B:274:LEU:H	1:B:299:HIS:CE1	2.35	0.45
1:B:1468:THR:HA	1:B:1478:GLU:HA	1.98	0.45
1:B:4810:MET:CB	1:C:4519:LEU:C	2.84	0.45
1:B:4816:PHE:O	1:B:4820:VAL:HG23	2.16	0.45
1:C:517:VAL:HB	1:C:520:ARG:HG2	1.99	0.45
1:C:3811:ARG:O	1:C:3815:ALA:N	2.43	0.45
1:C:3984:LEU:HG	1:C:4102:LEU:HD12	1.98	0.45
1:C:4717:ASP:OD1	1:C:4718:ASN:N	2.50	0.45
1:D:61:ASP:OD1	1:D:62:LEU:N	2.50	0.45
1:D:229:ILE:HA	1:D:288:HIS:HA	1.98	0.45
1:D:802:PHE:N	1:D:1616:GLY:O	2.50	0.45
1:D:1176:THR:HG22	1:D:1181:ILE:HA	1.98	0.45
1:D:1659:ARG:O	1:D:1662:SER:OG	2.30	0.45
1:D:1676:LEU:HA	1:D:1679:HIS:HB2	1.99	0.45
1:D:1748:LEU:HD13	1:D:1750:GLY:H	1.81	0.45
1:D:2123:SER:O	1:D:2126:GLN:NE2	2.50	0.45
1:D:4018:PHE:O	1:D:4022:LEU:CB	2.61	0.45
1:D:4717:ASP:OD1	1:D:4718:ASN:N	2.50	0.45
1:A:20:VAL:O	1:A:67:PHE:N	2.45	0.45
1:A:4594:LEU:O	1:A:4596:VAL:N	2.50	0.45
1:B:1676:LEU:HA	1:B:1679:HIS:HB2	1.99	0.45
1:B:1732:GLU:O	1:B:1735:SER:OG	2.30	0.45
1:B:4597:PRO:HA	1:B:4600:ILE:HG22	1.99	0.45
1:C:653:SER:OG	1:C:794:PHE:O	2.33	0.45
1:C:1183:LEU:HB3	1:C:1187:GLY:HA2	1.97	0.45
1:C:2123:SER:O	1:C:2126:GLN:NE2	2.50	0.45
1:C:3786:LYS:HD2	1:C:3865:ASN:HA	1.98	0.45
1:D:443:SER:HA	1:D:444:THR:HA	1.52	0.45
1:D:1086:ARG:O	1:D:1206:SER:OG	2.30	0.45
1:D:3763:GLY:HA2	1:D:3766:ILE:HD12	1.98	0.45
1:D:3890:TYR:HE1	1:D:3954:HIS:HB2	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1659:ARG:O	1:A:1662:SER:OG	2.30	0.45
1:A:1748:LEU:HD13	1:A:1750:GLY:H	1.81	0.45
1:A:2349:GLU:OE2	1:A:2438:SER:OG	2.35	0.45
1:B:1106:GLU:N	1:B:1214:ARG:O	2.50	0.45
1:B:1305:SER:HB2	1:B:1591:LEU:HD12	1.98	0.45
1:B:4018:PHE:O	1:B:4022:LEU:CB	2.61	0.45
1:C:270:HIS:HB3	1:C:272:ARG:HG2	1.97	0.45
1:C:1256:PRO:O	1:C:1451:HIS:ND1	2.37	0.45
1:C:2313:SER:OG	1:C:2475:ARG:NH2	2.50	0.45
1:C:3949:LEU:HD23	1:C:3952:PHE:HD2	1.82	0.45
1:C:4037:ASP:OD2	1:C:4042:GLY:N	2.49	0.45
1:C:4845:ILE:O	1:C:4849:ILE:HG12	2.16	0.45
1:D:1106:GLU:N	1:D:1214:ARG:O	2.50	0.45
1:D:1272:ARG:HD2	1:D:1586:LEU:HB3	1.97	0.45
1:D:3870:ASN:HD21	1:D:3872:ILE:HD12	1.82	0.45
1:A:1836:ASN:HA	1:A:1839:LEU:HD12	1.98	0.45
1:A:2313:SER:OG	1:A:2475:ARG:NH2	2.50	0.45
1:A:3763:GLY:HA2	1:A:3766:ILE:HD12	1.98	0.45
1:B:1119:ARG:HH11	1:B:1133:ARG:HG2	1.81	0.45
1:B:2313:SER:OG	1:B:2475:ARG:NH2	2.50	0.45
1:B:3763:GLY:HA2	1:B:3766:ILE:HD12	1.98	0.45
1:B:4171:ARG:NH1	1:B:4175:PHE:HB2	2.32	0.45
1:B:4811:LEU:HB2	1:C:4519:LEU:HD11	1.86	0.45
1:C:394:HIS:CD2	1:C:396:GLU:H	2.35	0.45
1:C:4594:LEU:O	1:C:4596:VAL:N	2.50	0.45
1:D:274:LEU:H	1:D:299:HIS:CE1	2.35	0.45
1:D:1114:ARG:NH1	1:D:1128:LEU:O	2.50	0.45
1:A:1676:LEU:HA	1:A:1679:HIS:HB2	1.99	0.45
1:A:2123:SER:O	1:A:2126:GLN:NE2	2.50	0.45
1:A:2793:THR:OG1	1:A:2901:GLY:O	2.33	0.45
1:A:4717:ASP:OD1	1:A:4718:ASN:N	2.50	0.45
1:B:517:VAL:HB	1:B:520:ARG:HG2	1.99	0.45
1:B:1217:PHE:HB3	1:B:1247:ILE:HD12	1.98	0.45
1:B:2110:ASN:HB3	1:B:3615:HIS:HB3	1.99	0.45
1:B:2123:SER:O	1:B:2126:GLN:NE2	2.50	0.45
1:B:4594:LEU:O	1:B:4596:VAL:N	2.50	0.45
1:B:4717:ASP:OD1	1:B:4718:ASN:N	2.50	0.45
1:C:1106:GLU:N	1:C:1214:ARG:O	2.50	0.45
1:C:1468:THR:HA	1:C:1478:GLU:HA	1.98	0.45
1:C:3763:GLY:HA2	1:C:3766:ILE:HD12	1.98	0.45
1:C:3903:GLY:O	1:C:3907:PHE:HB2	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:4158:ARG:O	1:C:4162:GLU:N	2.48	0.45
1:C:4160:GLN:HB3	1:C:4201:MET:HB3	1.98	0.45
1:D:1217:PHE:HB3	1:D:1247:ILE:HD12	1.98	0.45
1:A:61:ASP:OD1	1:A:62:LEU:N	2.50	0.45
1:A:517:VAL:HB	1:A:520:ARG:HG2	1.99	0.45
1:A:542:ARG:NE	1:A:577:CYS:SG	2.89	0.45
1:A:2222:LEU:HD11	1:A:2240:PRO:HB2	2.00	0.45
1:A:3806:LEU:HD21	1:A:3892:TYR:HB2	1.99	0.45
1:A:3831:LEU:HA	1:A:3832:GLN:HA	1.71	0.45
1:A:4160:GLN:HB3	1:A:4201:MET:HB3	1.98	0.45
1:A:4600:ILE:HD12	1:A:4603:ARG:HB3	1.99	0.45
1:B:237:LEU:N	1:B:404:ASN:O	2.45	0.45
1:B:2326:ILE:HG22	1:D:207:PHE:CB	2.47	0.45
1:C:61:ASP:OD1	1:C:62:LEU:N	2.50	0.45
1:C:274:LEU:H	1:C:299:HIS:CE1	2.35	0.45
1:C:1119:ARG:HH11	1:C:1133:ARG:HG2	1.81	0.45
1:D:270:HIS:HB3	1:D:272:ARG:HG2	1.97	0.45
1:D:2110:ASN:HB3	1:D:3615:HIS:HB3	1.99	0.45
1:D:2136:GLY:O	1:D:2140:GLU:N	2.49	0.45
1:D:4600:ILE:HD12	1:D:4603:ARG:HB3	1.99	0.45
1:D:4783:THR:HG21	1:D:4817:HIS:HB2	1.97	0.45
1:A:133:LEU:N	1:A:146:ASP:O	2.46	0.44
1:A:207:PHE:CB	1:D:2326:ILE:HG22	2.47	0.44
1:A:4849:ILE:HD12	1:D:4823:ARG:CB	2.46	0.44
1:B:1114:ARG:NH1	1:B:1128:LEU:O	2.50	0.44
1:B:1669:ASN:HB3	1:B:1672:VAL:HB	1.99	0.44
1:B:4886:GLU:O	1:B:4896:ASN:ND2	2.50	0.44
1:C:459:LEU:O	1:C:463:PHE:N	2.35	0.44
1:C:802:PHE:N	1:C:1616:GLY:O	2.50	0.44
1:C:1669:ASN:HB3	1:C:1672:VAL:HB	1.99	0.44
1:C:2110:ASN:HB3	1:C:3615:HIS:HB3	1.99	0.44
1:C:2349:GLU:OE2	1:C:2438:SER:OG	2.35	0.44
1:C:4814:TYR:O	1:C:4818:MET:HB2	2.16	0.44
1:A:1124:PRO:HG3	1:A:1600:PRO:HD3	1.98	0.44
1:A:1274:ASP:HA	1:A:1286:THR:H	1.82	0.44
1:A:2266:VAL:O	1:A:2270:LEU:N	2.48	0.44
1:A:3890:TYR:HE1	1:A:3954:HIS:HB2	1.82	0.44
1:B:81:MET:SD	1:B:102:MET:HB3	2.57	0.44
1:B:3984:LEU:HG	1:B:4102:LEU:HD12	1.98	0.44
1:C:4171:ARG:NH1	1:C:4175:PHE:HB2	2.32	0.44
1:D:4046:LYS:HG3	1:D:4068:LEU:HD22	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:229:ILE:HA	1:A:288:HIS:HA	1.98	0.44
1:A:1106:GLU:N	1:A:1214:ARG:O	2.50	0.44
1:A:4886:GLU:O	1:A:4896:ASN:ND2	2.50	0.44
1:B:695:VAL:HG13	1:B:792:VAL:HG22	1.98	0.44
1:B:802:PHE:N	1:B:1616:GLY:O	2.50	0.44
1:B:1124:PRO:HG3	1:B:1600:PRO:HD3	1.98	0.44
1:B:1274:ASP:HA	1:B:1286:THR:H	1.82	0.44
1:B:3642:ILE:HD13	1:B:3645:LEU:HD12	2.00	0.44
1:B:3808:ALA:HA	1:B:3811:ARG:HD3	2.00	0.44
1:B:3890:TYR:HE1	1:B:3954:HIS:HB2	1.82	0.44
1:B:4139:ILE:HD12	1:B:4147:GLU:HB2	1.99	0.44
1:B:4158:ARG:O	1:B:4162:GLU:N	2.48	0.44
1:C:1055:ARG:HA	1:C:1058:LEU:HB2	2.00	0.44
1:C:2253:GLU:HA	1:C:2256:LEU:HD12	2.00	0.44
1:C:3806:LEU:HD21	1:C:3892:TYR:HB2	1.99	0.44
1:C:4011:VAL:HA	1:C:4014:ILE:HG12	1.97	0.44
1:C:4139:ILE:HD12	1:C:4147:GLU:HB2	1.99	0.44
1:D:1220:ASP:O	1:D:1224:LEU:N	2.51	0.44
1:D:1669:ASN:HB3	1:D:1672:VAL:HB	1.99	0.44
1:A:190:ARG:HH12	1:D:2423:ILE:HG21	1.67	0.44
1:A:1669:ASN:HB3	1:A:1672:VAL:HB	1.99	0.44
1:A:1799:VAL:O	1:A:1803:SER:CB	2.59	0.44
1:A:3870:ASN:HD21	1:A:3872:ILE:HD12	1.82	0.44
1:A:4154:SER:OG	1:A:4156:SER:OG	2.30	0.44
1:B:274:LEU:HD23	1:B:274:LEU:HA	1.88	0.44
1:B:541:ILE:HG12	1:B:551:PHE:HE2	1.83	0.44
1:B:3811:ARG:O	1:B:3815:ALA:N	2.43	0.44
1:B:3870:ASN:HD21	1:B:3872:ILE:HD12	1.82	0.44
1:B:4045:SER:O	1:B:4049:PHE:N	2.44	0.44
1:C:1114:ARG:NH1	1:C:1128:LEU:O	2.50	0.44
1:C:3808:ALA:HA	1:C:3811:ARG:HD3	2.00	0.44
1:C:3890:TYR:HE1	1:C:3954:HIS:HB2	1.82	0.44
1:C:4886:GLU:O	1:C:4896:ASN:ND2	2.50	0.44
1:D:394:HIS:CD2	1:D:396:GLU:H	2.35	0.44
1:D:1055:ARG:HA	1:D:1058:LEU:HB2	2.00	0.44
1:D:1900:PRO:O	1:D:1904:LYS:NZ	2.44	0.44
1:D:2253:GLU:HA	1:D:2256:LEU:HD12	2.00	0.44
1:A:2253:GLU:HA	1:A:2256:LEU:HD12	2.00	0.44
1:A:4046:LYS:HG3	1:A:4068:LEU:HD22	2.00	0.44
1:A:4834:ASP:O	1:A:4836:ALA:N	2.51	0.44
1:B:299:HIS:CD2	1:B:302:THR:H	2.34	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:394:HIS:CD2	1:B:396:GLU:H	2.35	0.44
1:B:1835:HIS:O	1:B:1838:ASP:N	2.47	0.44
1:B:3983:LEU:HD23	1:B:4102:LEU:HD11	2.00	0.44
1:C:4597:PRO:HA	1:C:4600:ILE:HG22	1.99	0.44
1:D:1297:THR:HA	1:D:1547:ALA:HB3	2.00	0.44
1:D:2313:SER:OG	1:D:2475:ARG:NH2	2.50	0.44
1:D:3642:ILE:HD13	1:D:3645:LEU:HD12	2.00	0.44
1:D:3911:ILE:HD12	1:D:3975:LEU:HD22	1.99	0.44
1:D:4517:ILE:O	1:D:4520:PHE:CD2	2.67	0.44
1:D:4594:LEU:O	1:D:4596:VAL:N	2.50	0.44
1:D:4820:VAL:O	1:D:4820:VAL:HG13	2.17	0.44
1:A:394:HIS:CD2	1:A:396:GLU:H	2.35	0.44
1:A:4597:PRO:HA	1:A:4600:ILE:HG22	1.98	0.44
1:A:4814:TYR:CE2	1:D:4519:LEU:CB	3.00	0.44
1:B:43:GLY:HA2	1:B:454:LEU:HG	2.00	0.44
1:B:655:MET:HE2	1:B:655:MET:HB3	1.87	0.44
1:B:675:TYR:HB2	1:B:804:LEU:HD21	1.99	0.44
1:B:1055:ARG:HA	1:B:1058:LEU:HB2	2.00	0.44
1:B:1799:VAL:O	1:B:1803:SER:CB	2.59	0.44
1:B:2481:VAL:O	1:B:2485:LEU:N	2.46	0.44
1:B:4011:VAL:HA	1:B:4014:ILE:HG12	1.97	0.44
1:B:4848:ASP:OD1	1:B:4849:ILE:N	2.51	0.44
1:C:541:ILE:HG12	1:C:551:PHE:HE2	1.83	0.44
1:C:648:LEU:HD23	1:C:1684:GLN:HA	2.00	0.44
1:C:695:VAL:HG13	1:C:792:VAL:HG22	1.98	0.44
1:C:1160:ASP:HA	1:C:1178:ASN:HD21	1.83	0.44
1:C:3831:LEU:HA	1:C:3832:GLN:HA	1.71	0.44
1:C:3852:ASN:O	1:C:3856:GLN:N	2.39	0.44
1:C:3977:LYS:HE2	1:C:3977:LYS:HB3	1.88	0.44
1:C:4046:LYS:HG3	1:C:4068:LEU:HD22	2.00	0.44
1:D:114:LEU:HB2	1:D:117:HIS:CE1	2.53	0.44
1:D:648:LEU:HD23	1:D:1684:GLN:HA	2.00	0.44
1:D:2222:LEU:HD11	1:D:2240:PRO:HB2	2.00	0.44
1:A:436:LEU:HD22	1:A:518:ALA:HA	2.00	0.44
1:A:1055:ARG:HA	1:A:1058:LEU:HB2	2.00	0.44
1:A:3892:TYR:CZ	1:A:3896:LYS:HE3	2.53	0.44
1:B:61:ASP:OD1	1:B:62:LEU:N	2.50	0.44
1:B:2253:GLU:HA	1:B:2256:LEU:HD12	2.00	0.44
1:B:3806:LEU:HD21	1:B:3892:TYR:HB2	1.99	0.44
1:C:114:LEU:HB2	1:C:117:HIS:CE1	2.53	0.44
1:C:123:HIS:N	1:C:128:MET:O	2.34	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1676:LEU:HA	1:C:1679:HIS:HB2	1.99	0.44
1:C:3892:TYR:CZ	1:C:3896:LYS:HE3	2.53	0.44
1:D:43:GLY:HA2	1:D:454:LEU:HG	2.00	0.44
1:D:4820:VAL:HG11	1:D:4828:ILE:HG13	2.00	0.44
1:D:4886:GLU:O	1:D:4896:ASN:ND2	2.50	0.44
1:A:114:LEU:HB2	1:A:117:HIS:CE1	2.53	0.44
1:A:161:THR:N	1:A:184:VAL:O	2.50	0.44
1:A:274:LEU:H	1:A:299:HIS:CE1	2.35	0.44
1:A:1089:ARG:O	1:A:1250:TRP:N	2.40	0.44
1:A:2136:GLY:O	1:A:2140:GLU:N	2.49	0.44
1:A:2486:LEU:HD13	1:A:2537:ALA:HB3	2.00	0.44
1:A:3959:LEU:HD13	1:A:3969:LEU:HA	2.00	0.44
1:B:3831:LEU:HA	1:B:3832:GLN:HA	1.71	0.44
1:B:4519:LEU:O	1:D:4810:MET:CB	2.66	0.44
1:C:43:GLY:HA2	1:C:454:LEU:HG	2.00	0.44
1:C:1900:PRO:O	1:C:1904:LYS:NZ	2.44	0.44
1:C:3760:LEU:HD22	1:C:3840:LEU:HA	2.00	0.44
1:C:3993:ASN:HD22	1:C:4110:MET:HG3	1.83	0.44
1:D:299:HIS:CD2	1:D:302:THR:H	2.34	0.44
1:D:541:ILE:HG12	1:D:551:PHE:HE2	1.83	0.44
1:D:675:TYR:HB2	1:D:804:LEU:HD21	1.99	0.44
1:D:1274:ASP:HA	1:D:1286:THR:H	1.82	0.44
1:D:3760:LEU:HD22	1:D:3840:LEU:HA	2.00	0.44
1:D:3949:LEU:HD23	1:D:3952:PHE:HD2	1.82	0.44
1:D:4848:ASP:OD1	1:D:4849:ILE:N	2.51	0.44
1:A:43:GLY:HA2	1:A:454:LEU:HG	2.00	0.44
1:A:675:TYR:HB2	1:A:804:LEU:HD21	1.99	0.44
1:B:121:LEU:HD23	1:B:121:LEU:HA	1.81	0.44
1:B:2222:LEU:HD11	1:B:2240:PRO:HB2	2.00	0.44
1:B:3960:SER:OG	1:B:4070:CYS:SG	2.60	0.44
1:C:281:ARG:NH2	1:C:287:SER:OG	2.44	0.44
1:C:675:TYR:HB2	1:C:804:LEU:HD21	1.99	0.44
1:D:517:VAL:HB	1:D:520:ARG:HG2	1.99	0.44
1:D:2793:THR:OG1	1:D:2901:GLY:O	2.33	0.44
1:D:4139:ILE:HD12	1:D:4147:GLU:HB2	1.99	0.44
1:D:4757:ILE:O	1:D:4760:SER:OG	2.30	0.44
1:A:541:ILE:HG12	1:A:551:PHE:HE2	1.83	0.43
1:A:1996:GLN:HA	1:A:1997:LEU:HA	1.82	0.43
1:A:3762:LEU:O	1:A:3766:ILE:N	2.42	0.43
1:A:3911:ILE:HD12	1:A:3975:LEU:HD22	1.99	0.43
1:A:3949:LEU:HD23	1:A:3952:PHE:HD2	1.82	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:114:LEU:HB2	1:B:117:HIS:CE1	2.53	0.43
1:B:556:ASP:N	1:B:556:ASP:OD1	2.51	0.43
1:B:2024:LEU:H	1:B:2027:ARG:HB3	1.83	0.43
1:B:4023:LYS:HA	1:B:4026:ASP:HB2	1.99	0.43
1:B:4627:ILE:HA	1:B:4630:GLN:HB2	2.00	0.43
1:C:2222:LEU:HD11	1:C:2240:PRO:HB2	2.00	0.43
1:C:3959:LEU:HD13	1:C:3969:LEU:HA	2.00	0.43
1:C:4023:LYS:HA	1:C:4026:ASP:HB2	1.99	0.43
1:D:325:LYS:HB2	1:D:367:GLY:HA3	2.00	0.43
1:D:3808:ALA:HA	1:D:3811:ARG:HD3	2.00	0.43
1:D:4023:LYS:HA	1:D:4026:ASP:HB2	1.99	0.43
1:A:3760:LEU:HD22	1:A:3840:LEU:HA	2.00	0.43
1:A:4023:LYS:HA	1:A:4026:ASP:HB2	1.99	0.43
1:A:4757:ILE:O	1:A:4760:SER:OG	2.29	0.43
1:B:82:LEU:HD23	1:B:82:LEU:C	2.37	0.43
1:B:648:LEU:HD23	1:B:1684:GLN:HA	2.00	0.43
1:B:853:PRO:HD3	1:B:1086:ARG:HG2	2.00	0.43
1:B:1718:ARG:NH2	1:B:1758:ARG:O	2.52	0.43
1:B:3760:LEU:HD22	1:B:3840:LEU:HA	2.00	0.43
1:B:4046:LYS:HG3	1:B:4068:LEU:HD22	2.00	0.43
1:C:436:LEU:HD22	1:C:518:ALA:HA	2.00	0.43
1:C:1297:THR:HA	1:C:1547:ALA:HB3	2.00	0.43
1:C:3983:LEU:HD23	1:C:4102:LEU:HD11	2.00	0.43
1:D:853:PRO:HD3	1:D:1086:ARG:HG2	2.00	0.43
1:D:3892:TYR:CZ	1:D:3896:LYS:HE3	2.53	0.43
1:A:853:PRO:HD3	1:A:1086:ARG:HG2	2.00	0.43
1:A:1288:LYS:HE3	1:A:1555:PHE:HD2	1.83	0.43
1:A:3808:ALA:HA	1:A:3811:ARG:HD3	2.00	0.43
1:A:4848:ASP:OD1	1:A:4849:ILE:N	2.51	0.43
1:B:325:LYS:HB2	1:B:367:GLY:HA3	2.01	0.43
1:B:3730:ALA:HA	1:B:3733:HIS:CE1	2.53	0.43
1:B:4783:THR:HG21	1:B:4814:TYR:HA	2.01	0.43
1:C:853:PRO:HD3	1:C:1086:ARG:HG2	2.00	0.43
1:C:1274:ASP:HA	1:C:1286:THR:H	1.82	0.43
1:C:3870:ASN:HD21	1:C:3872:ILE:HD12	1.82	0.43
1:C:3911:ILE:HD12	1:C:3975:LEU:HD22	1.99	0.43
1:C:4783:THR:HG21	1:C:4814:TYR:HA	2.01	0.43
1:D:133:LEU:N	1:D:146:ASP:O	2.46	0.43
1:D:1738:LEU:HD22	1:D:1739:PHE:H	1.84	0.43
1:D:1996:GLN:HA	1:D:1997:LEU:HA	1.82	0.43
1:D:2024:LEU:H	1:D:2027:ARG:HB3	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:3730:ALA:HA	1:D:3733:HIS:CE1	2.53	0.43
1:D:3959:LEU:HD13	1:D:3969:LEU:HA	2.00	0.43
1:A:888:ASN:HB3	1:A:983:LEU:HD21	2.00	0.43
1:A:1160:ASP:HA	1:A:1178:ASN:HD21	1.83	0.43
1:A:2843:GLU:OE2	1:A:2875:TYR:OH	2.24	0.43
1:A:3791:PHE:HB3	1:A:3869:VAL:HG11	2.01	0.43
1:B:1220:ASP:O	1:B:1224:LEU:N	2.51	0.43
1:B:1471:ASP:H	1:B:1474:GLY:H	1.66	0.43
1:B:2349:GLU:OE2	1:B:2438:SER:OG	2.35	0.43
1:B:3892:TYR:CZ	1:B:3896:LYS:HE3	2.53	0.43
1:B:3997:GLY:HA2	1:B:4000:MET:SD	2.59	0.43
1:C:1165:MET:HB3	1:C:1236:TYR:CZ	2.54	0.43
1:C:3642:ILE:HD13	1:C:3645:LEU:HD12	2.00	0.43
1:C:3791:PHE:HB3	1:C:3869:VAL:HG11	2.01	0.43
1:C:4783:THR:CG2	1:C:4817:HIS:CG	2.93	0.43
1:C:4899:PHE:O	1:C:4906:PHE:N	2.52	0.43
1:D:651:HIS:N	1:D:1625:LEU:O	2.45	0.43
1:D:888:ASN:HB3	1:D:983:LEU:HD21	2.00	0.43
1:D:1253:LYS:HB3	1:D:1255:LEU:H	1.84	0.43
1:D:2894:LEU:HD23	1:D:2897:LEU:HD12	2.00	0.43
1:A:1220:ASP:O	1:A:1224:LEU:N	2.51	0.43
1:A:4899:PHE:O	1:A:4906:PHE:N	2.52	0.43
1:B:292:GLY:N	1:B:331:PHE:O	2.52	0.43
1:B:1297:THR:HA	1:B:1547:ALA:HB3	2.00	0.43
1:B:3903:GLY:O	1:B:3907:PHE:HB2	2.17	0.43
1:B:3959:LEU:HD13	1:B:3969:LEU:HA	2.00	0.43
1:B:4522:LYS:HA	1:B:4522:LYS:HD2	1.87	0.43
1:B:4899:PHE:O	1:B:4906:PHE:N	2.52	0.43
1:C:161:THR:N	1:C:184:VAL:O	2.50	0.43
1:C:2024:LEU:H	1:C:2027:ARG:HB3	1.83	0.43
1:C:2063:ILE:O	1:C:2066:THR:OG1	2.31	0.43
1:C:3730:ALA:HA	1:C:3733:HIS:CE1	2.53	0.43
1:C:3997:GLY:HA2	1:C:4000:MET:SD	2.59	0.43
1:D:1718:ARG:NH2	1:D:1758:ARG:O	2.52	0.43
1:D:3806:LEU:HD21	1:D:3892:TYR:HB2	1.99	0.43
1:D:4627:ILE:HA	1:D:4630:GLN:HB2	2.00	0.43
1:A:292:GLY:N	1:A:331:PHE:O	2.52	0.43
1:A:648:LEU:HD23	1:A:1684:GLN:HA	2.00	0.43
1:A:651:HIS:N	1:A:1625:LEU:O	2.45	0.43
1:A:653:SER:OG	1:A:794:PHE:O	2.33	0.43
1:A:794:PHE:HB2	1:A:798:ILE:HD12	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1306:MET:HB3	1:A:1575:HIS:CE1	2.54	0.43
1:A:1718:ARG:NH2	1:A:1758:ARG:O	2.52	0.43
1:A:2063:ILE:O	1:A:2066:THR:OG1	2.31	0.43
1:A:2202:CYS:O	1:A:2205:CYS:N	2.52	0.43
1:A:3642:ILE:HD13	1:A:3645:LEU:HD12	2.00	0.43
1:B:794:PHE:HB2	1:B:798:ILE:HD12	2.01	0.43
1:B:1256:PRO:O	1:B:1451:HIS:ND1	2.37	0.43
1:B:1738:LEU:HD22	1:B:1739:PHE:H	1.84	0.43
1:B:3791:PHE:HB3	1:B:3869:VAL:HG11	2.01	0.43
1:C:1092:LYS:HG2	1:C:1202:ILE:HD13	2.00	0.43
1:D:3791:PHE:HB3	1:D:3869:VAL:HG11	2.01	0.43
1:D:4783:THR:HG21	1:D:4814:TYR:HA	2.00	0.43
1:A:1738:LEU:HD22	1:A:1739:PHE:H	1.84	0.43
1:A:2110:ASN:HB3	1:A:3615:HIS:HB3	1.99	0.43
1:A:3993:ASN:HD22	1:A:4110:MET:HA	1.83	0.43
1:A:3993:ASN:HD22	1:A:4110:MET:HG3	1.83	0.43
1:A:4094:ASP:O	1:A:4098:ASN:ND2	2.52	0.43
1:A:4189:LEU:HA	1:A:4192:ASN:HD22	1.84	0.43
1:B:1165:MET:HB3	1:B:1236:TYR:CZ	2.54	0.43
1:B:4824:ALA:HB1	1:B:4827:GLY:O	2.18	0.43
1:C:20:VAL:O	1:C:67:PHE:N	2.45	0.43
1:C:218:SER:HB3	1:C:286:GLY:HA3	2.01	0.43
1:C:1220:ASP:O	1:C:1224:LEU:N	2.51	0.43
1:C:1738:LEU:HD22	1:C:1739:PHE:H	1.83	0.43
1:C:4561:VAL:CG1	1:C:4562:LEU:N	2.81	0.43
1:D:655:MET:HE2	1:D:655:MET:HB3	1.88	0.43
1:D:4664:ARG:CZ	1:D:4667:ILE:HG13	2.49	0.43
1:A:2024:LEU:H	1:A:2027:ARG:HB3	1.83	0.43
1:A:3730:ALA:HA	1:A:3733:HIS:CE1	2.53	0.43
1:B:433:LEU:O	1:B:437:SER:CB	2.67	0.43
1:B:995:MET:HE3	1:B:1064:LEU:HD22	2.00	0.43
1:B:1160:ASP:HA	1:B:1178:ASN:HD21	1.83	0.43
1:B:1306:MET:HB3	1:B:1575:HIS:CE1	2.54	0.43
1:B:1920:ARG:HA	1:B:1923:ILE:HD12	2.01	0.43
1:B:2658:TYR:O	1:B:2662:LEU:N	2.47	0.43
1:B:2894:LEU:HD23	1:B:2897:LEU:HD12	2.00	0.43
1:B:3911:ILE:HD12	1:B:3975:LEU:HD22	1.99	0.43
1:B:3993:ASN:HD22	1:B:4110:MET:HG3	1.83	0.43
1:B:4664:ARG:CZ	1:B:4667:ILE:HG13	2.49	0.43
1:B:4783:THR:CG2	1:B:4817:HIS:HD2	2.30	0.43
1:C:888:ASN:HB3	1:C:983:LEU:HD21	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1898:LYS:NZ	1:C:1899:LEU:O	2.51	0.43
1:C:3857:ASN:OD1	1:C:3860:ARG:NH2	2.52	0.43
1:C:4104:THR:O	1:C:4107:SER:OG	2.28	0.43
1:C:4581:THR:O	1:C:4584:SER:OG	2.29	0.43
1:C:4848:ASP:OD1	1:C:4849:ILE:N	2.51	0.43
1:D:649:VAL:O	1:D:1627:PHE:N	2.31	0.43
1:D:716:ASN:ND2	1:D:791:VAL:O	2.52	0.43
1:D:4899:PHE:O	1:D:4906:PHE:N	2.52	0.43
1:A:309:MET:HG2	1:A:311:ASP:H	1.84	0.43
1:A:1297:THR:HA	1:A:1547:ALA:HB3	2.00	0.43
1:A:1487:MET:SD	1:A:1531:TYR:HB2	2.59	0.43
1:A:1654:HIS:O	1:A:1657:THR:OG1	2.26	0.43
1:B:1654:HIS:O	1:B:1657:THR:OG1	2.26	0.43
1:C:309:MET:HG2	1:C:311:ASP:H	1.84	0.43
1:C:1726:ILE:HG22	1:C:2107:TYR:HB3	2.01	0.43
1:C:2894:LEU:HD23	1:C:2897:LEU:HD12	2.00	0.43
1:D:260:VAL:O	1:D:391:ALA:N	2.47	0.43
1:D:3993:ASN:HD22	1:D:4110:MET:HG3	1.83	0.43
1:D:4093:LYS:HG2	1:D:4130:PHE:CZ	2.54	0.43
1:A:1092:LYS:HG2	1:A:1202:ILE:HD13	2.00	0.43
1:B:1253:LYS:HB3	1:B:1255:LEU:H	1.84	0.43
1:B:4093:LYS:HG2	1:B:4130:PHE:CZ	2.54	0.43
1:B:4909:HIS:O	1:B:4913:GLU:HB2	2.19	0.43
1:C:292:GLY:N	1:C:331:PHE:O	2.52	0.43
1:C:433:LEU:O	1:C:437:SER:CB	2.67	0.43
1:C:995:MET:HE3	1:C:1064:LEU:HD22	2.01	0.43
1:C:1288:LYS:HE3	1:C:1555:PHE:HD2	1.83	0.43
1:C:1680:VAL:HG22	1:C:1685:LEU:HD11	2.01	0.43
1:C:4664:ARG:CZ	1:C:4667:ILE:HG13	2.49	0.43
1:D:187:SER:OG	1:D:188:SER:N	2.52	0.43
1:D:238:HIS:HB3	1:D:243:GLU:HB3	2.01	0.43
1:D:1165:MET:HB3	1:D:1236:TYR:CZ	2.54	0.43
1:D:1306:MET:HB3	1:D:1575:HIS:CE1	2.54	0.43
1:D:1487:MET:SD	1:D:1531:TYR:HB2	2.59	0.43
1:D:2605:LYS:O	1:D:2609:LYS:N	2.49	0.43
1:A:238:HIS:HB3	1:A:243:GLU:HB3	2.01	0.42
1:A:433:LEU:O	1:A:437:SER:CB	2.67	0.42
1:A:601:LEU:HB2	1:A:610:VAL:HG11	2.01	0.42
1:A:1090:ALA:HA	1:A:1249:MET:HA	2.01	0.42
1:A:1165:MET:HB3	1:A:1236:TYR:CZ	2.54	0.42
1:A:2894:LEU:HD23	1:A:2897:LEU:HD12	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4519:LEU:HB2	1:C:4814:TYR:HE2	1.80	0.42
1:A:4664:ARG:CZ	1:A:4667:ILE:HG13	2.49	0.42
1:A:4670:LEU:HD13	1:A:4670:LEU:HA	1.83	0.42
1:A:4783:THR:HG21	1:A:4814:TYR:HA	2.00	0.42
1:B:436:LEU:HD22	1:B:518:ALA:HA	2.00	0.42
1:B:716:ASN:ND2	1:B:791:VAL:O	2.52	0.42
1:B:1092:LYS:HG2	1:B:1202:ILE:HD13	2.00	0.42
1:B:2136:GLY:O	1:B:2140:GLU:N	2.49	0.42
1:C:794:PHE:HB2	1:C:798:ILE:HD12	2.01	0.42
1:C:1035:TYR:CZ	1:C:1043:LYS:HG2	2.54	0.42
1:C:1718:ARG:NH2	1:C:1758:ARG:O	2.52	0.42
1:D:794:PHE:HB2	1:D:798:ILE:HD12	2.01	0.42
1:D:2349:GLU:OE2	1:D:2438:SER:OG	2.35	0.42
1:D:3903:GLY:O	1:D:3907:PHE:HB2	2.17	0.42
1:D:3983:LEU:HD23	1:D:4102:LEU:HD11	2.00	0.42
1:D:4561:VAL:HG22	1:D:4562:LEU:O	2.19	0.42
1:D:4713:VAL:O	1:D:4716:THR:OG1	2.26	0.42
1:A:325:LYS:HB2	1:A:367:GLY:HA3	2.01	0.42
1:A:556:ASP:N	1:A:556:ASP:OD1	2.51	0.42
1:A:1726:ILE:HG22	1:A:2107:TYR:HB3	2.01	0.42
1:A:3996:ILE:HG12	1:A:4000:MET:HE3	2.01	0.42
1:A:4005:VAL:HG21	1:A:4115:ARG:HB3	2.01	0.42
1:B:235:ARG:HE	1:B:274:LEU:HD21	1.84	0.42
1:B:260:VAL:O	1:B:391:ALA:N	2.47	0.42
1:B:411:GLU:H	1:B:411:GLU:HG3	1.62	0.42
1:B:1442:TRP:HD1	1:B:1488:VAL:HG13	1.84	0.42
1:B:2737:LYS:HD2	1:B:2755:GLN:HE22	1.84	0.42
1:C:235:ARG:HE	1:C:274:LEU:HD21	1.84	0.42
1:C:325:LYS:HB2	1:C:367:GLY:HA3	2.01	0.42
1:C:1138:ASP:HB2	1:C:1145:TRP:HE1	1.85	0.42
1:C:1835:HIS:O	1:C:1838:ASP:N	2.47	0.42
1:C:4093:LYS:HG2	1:C:4130:PHE:CZ	2.53	0.42
1:C:4798:GLU:H	1:C:4802:THR:HG1	1.62	0.42
1:D:292:GLY:N	1:D:331:PHE:O	2.52	0.42
1:D:1035:TYR:CZ	1:D:1043:LYS:HG2	2.54	0.42
1:D:1090:ALA:HA	1:D:1249:MET:HA	2.01	0.42
1:D:1288:LYS:HE3	1:D:1555:PHE:HD2	1.83	0.42
1:D:1471:ASP:H	1:D:1474:GLY:H	1.66	0.42
1:D:1835:HIS:O	1:D:1838:ASP:N	2.47	0.42
1:D:4094:ASP:O	1:D:4098:ASN:ND2	2.52	0.42
1:D:4135:GLY:N	1:D:4151:PHE:O	2.48	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:897:LYS:HE2	1:A:915:HIS:CG	2.54	0.42
1:A:1138:ASP:HB2	1:A:1145:TRP:HE1	1.85	0.42
1:A:1929:PHE:CZ	1:A:2030:LEU:HB3	2.55	0.42
1:B:799:LYS:HZ1	1:B:1618:LEU:HD13	1.83	0.42
1:B:888:ASN:HB3	1:B:983:LEU:HD21	2.00	0.42
1:B:1288:LYS:HE3	1:B:1555:PHE:HD2	1.83	0.42
1:B:1487:MET:SD	1:B:1531:TYR:HB2	2.59	0.42
1:B:3857:ASN:OD1	1:B:3860:ARG:NH2	2.52	0.42
1:B:4104:THR:O	1:B:4107:SER:OG	2.28	0.42
1:B:4113:ASP:O	1:B:4117:GLN:N	2.47	0.42
1:C:238:HIS:HB3	1:C:243:GLU:HB3	2.01	0.42
1:C:1154:ARG:HE	1:C:1177:LEU:HD23	1.84	0.42
1:C:1253:LYS:HB3	1:C:1255:LEU:H	1.84	0.42
1:C:1442:TRP:HD1	1:C:1488:VAL:HG13	1.85	0.42
1:C:4627:ILE:HA	1:C:4630:GLN:HB2	2.00	0.42
1:D:1160:ASP:HA	1:D:1178:ASN:HD21	1.83	0.42
1:D:1442:TRP:HD1	1:D:1488:VAL:HG13	1.84	0.42
1:D:1628:MET:HB2	1:D:1687:TYR:HE2	1.84	0.42
1:A:73:LEU:O	1:A:117:HIS:CG	2.73	0.42
1:A:995:MET:HE3	1:A:1064:LEU:HD22	2.01	0.42
1:A:1256:PRO:O	1:A:1451:HIS:ND1	2.37	0.42
1:A:1442:TRP:HD1	1:A:1488:VAL:HG13	1.84	0.42
1:A:2717:LYS:HA	1:A:2720:TYR:HD2	1.85	0.42
1:A:3983:LEU:HD23	1:A:4102:LEU:HD11	2.00	0.42
1:A:4093:LYS:HG2	1:A:4130:PHE:CZ	2.53	0.42
1:A:4627:ILE:HA	1:A:4630:GLN:HB2	2.00	0.42
1:B:281:ARG:NH2	1:B:287:SER:OG	2.44	0.42
1:B:1929:PHE:CZ	1:B:2030:LEU:HB3	2.55	0.42
1:B:2202:CYS:O	1:B:2205:CYS:N	2.52	0.42
1:B:4094:ASP:O	1:B:4098:ASN:ND2	2.52	0.42
1:C:138:SER:O	1:C:140:THR:OG1	2.26	0.42
1:C:191:TYR:N	1:C:206:ALA:O	2.52	0.42
1:C:601:LEU:HB2	1:C:610:VAL:HG11	2.01	0.42
1:C:716:ASN:ND2	1:C:791:VAL:O	2.52	0.42
1:C:897:LYS:HE2	1:C:915:HIS:CG	2.54	0.42
1:C:2202:CYS:O	1:C:2205:CYS:N	2.52	0.42
1:C:4635:VAL:O	1:C:4638:THR:OG1	2.30	0.42
1:D:14:LEU:HD23	1:D:14:LEU:HA	1.89	0.42
1:D:745:ASN:ND2	1:D:773:GLN:OE1	2.38	0.42
1:D:2222:LEU:O	1:D:2226:SER:N	2.37	0.42
1:D:2658:TYR:O	1:D:2662:LEU:N	2.47	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:3993:ASN:HD22	1:D:4110:MET:HA	1.84	0.42
1:D:4953:PHE:HA	1:D:4954:PRO:HD3	1.86	0.42
1:A:71:GLN:HE22	1:A:106:GLN:H	1.65	0.42
1:A:716:ASN:ND2	1:A:791:VAL:O	2.52	0.42
1:A:1664:VAL:HG12	1:A:1672:VAL:HG11	2.01	0.42
1:A:1920:ARG:HA	1:A:1923:ILE:HD12	2.01	0.42
1:B:218:SER:HB3	1:B:286:GLY:HA3	2.01	0.42
1:B:1154:ARG:HE	1:B:1177:LEU:HD23	1.85	0.42
1:C:1471:ASP:H	1:C:1474:GLY:H	1.66	0.42
1:C:1487:MET:SD	1:C:1531:TYR:HB2	2.59	0.42
1:C:1929:PHE:CZ	1:C:2030:LEU:HB3	2.55	0.42
1:D:84:ASN:ND2	1:D:84:ASN:O	2.52	0.42
1:D:1718:ARG:HA	1:D:1721:MET:HB2	2.02	0.42
1:D:2202:CYS:O	1:D:2205:CYS:N	2.52	0.42
1:D:3857:ASN:OD1	1:D:3860:ARG:NH2	2.52	0.42
1:D:3897:ASP:OD1	1:D:3958:LYS:NZ	2.40	0.42
1:A:218:SER:HB3	1:A:286:GLY:HA3	2.01	0.42
1:A:799:LYS:HZ1	1:A:1618:LEU:HD13	1.84	0.42
1:A:1035:TYR:CZ	1:A:1043:LYS:HG2	2.55	0.42
1:A:3766:ILE:HG22	1:A:3767:LEU:HG	2.02	0.42
1:A:3857:ASN:OD1	1:A:3860:ARG:NH2	2.52	0.42
1:A:4790:PHE:HA	1:A:4793:PHE:HE2	1.85	0.42
1:B:207:PHE:CB	1:C:2326:ILE:HG22	2.50	0.42
1:B:244:CYS:N	1:B:263:GLU:O	2.41	0.42
1:B:537:LEU:HD23	1:B:574:VAL:HG21	2.02	0.42
1:B:653:SER:OG	1:B:794:PHE:O	2.33	0.42
1:B:1035:TYR:CZ	1:B:1043:LYS:HG2	2.54	0.42
1:B:2063:ILE:O	1:B:2066:THR:OG1	2.31	0.42
1:B:4757:ILE:O	1:B:4760:SER:OG	2.30	0.42
1:C:1257:GLN:O	1:C:1596:TRP:N	2.36	0.42
1:C:1728:PRO:HB2	1:C:1730:THR:HG23	2.02	0.42
1:C:2793:THR:OG1	1:C:2901:GLY:O	2.33	0.42
1:C:3993:ASN:HD22	1:C:4110:MET:HA	1.84	0.42
1:C:4790:PHE:HA	1:C:4793:PHE:HE2	1.85	0.42
1:D:537:LEU:HD23	1:D:574:VAL:HG21	2.02	0.42
1:D:556:ASP:N	1:D:556:ASP:OD1	2.51	0.42
1:D:799:LYS:HZ1	1:D:1618:LEU:HD13	1.84	0.42
1:D:3997:GLY:HA2	1:D:4000:MET:SD	2.59	0.42
1:D:4832:ILE:CD1	1:D:4848:ASP:OD2	2.65	0.42
1:A:235:ARG:HE	1:A:274:LEU:HD21	1.84	0.42
1:A:1628:MET:HB2	1:A:1687:TYR:HE2	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1651:LEU:HD11	1:A:1695:PRO:HG2	2.02	0.42
1:A:3983:LEU:HD12	1:A:3983:LEU:HA	1.82	0.42
1:A:4833:GLU:HG2	1:A:4834:ASP:OD1	2.20	0.42
1:A:4865:GLY:HA3	1:D:4871:PHE:CD2	2.54	0.42
1:B:601:LEU:HB2	1:B:610:VAL:HG11	2.01	0.42
1:B:1680:VAL:HG22	1:B:1685:LEU:HD11	2.01	0.42
1:B:1728:PRO:HB2	1:B:1730:THR:HG23	2.02	0.42
1:B:2142:LEU:HD23	1:B:2145:ARG:HD2	2.02	0.42
1:B:3993:ASN:HD22	1:B:4110:MET:HA	1.84	0.42
1:C:657:PRO:HA	1:C:834:VAL:HA	2.02	0.42
1:C:1654:HIS:O	1:C:1657:THR:OG1	2.26	0.42
1:C:4094:ASP:O	1:C:4098:ASN:ND2	2.52	0.42
1:D:43:GLY:HA3	1:D:455:SER:HB2	2.02	0.42
1:D:1651:LEU:HD11	1:D:1695:PRO:HG2	2.02	0.42
1:D:1664:VAL:HG12	1:D:1672:VAL:HG11	2.01	0.42
1:D:1920:ARG:HA	1:D:1923:ILE:HD12	2.01	0.42
1:D:4747:ILE:HD12	1:D:4747:ILE:HA	1.95	0.42
1:D:4909:HIS:O	1:D:4913:GLU:HB2	2.19	0.42
1:A:657:PRO:HA	1:A:834:VAL:HA	2.02	0.42
1:A:1253:LYS:HB3	1:A:1255:LEU:H	1.84	0.42
1:A:1471:ASP:H	1:A:1474:GLY:H	1.66	0.42
1:A:2142:LEU:HD23	1:A:2145:ARG:HD2	2.02	0.42
1:A:3811:ARG:O	1:A:3815:ALA:N	2.43	0.42
1:A:3997:GLY:HA2	1:A:4000:MET:SD	2.59	0.42
1:B:1090:ALA:HA	1:B:1249:MET:HA	2.01	0.42
1:B:1898:LYS:NZ	1:B:1899:LEU:O	2.51	0.42
1:B:2102:ALA:HA	1:B:2105:LYS:HZ1	1.85	0.42
1:B:2717:LYS:HA	1:B:2720:TYR:HD2	1.85	0.42
1:B:4189:LEU:HA	1:B:4192:ASN:HD22	1.84	0.42
1:C:43:GLY:HA3	1:C:455:SER:HB2	2.01	0.42
1:C:1256:PRO:HB3	1:C:1597:SER:HA	2.02	0.42
1:C:1306:MET:HB3	1:C:1575:HIS:CE1	2.54	0.42
1:C:1651:LEU:HD11	1:C:1695:PRO:HG2	2.02	0.42
1:C:1659:ARG:O	1:C:1662:SER:OG	2.30	0.42
1:C:1838:ASP:HA	1:C:1841:HIS:HB3	2.02	0.42
1:C:3694:ASP:O	1:C:3698:LYS:HG2	2.20	0.42
1:D:218:SER:HB3	1:D:286:GLY:HA3	2.01	0.42
1:D:436:LEU:HD22	1:D:518:ALA:HA	2.00	0.42
1:D:897:LYS:HE2	1:D:915:HIS:CG	2.54	0.42
1:D:2737:LYS:HD2	1:D:2755:GLN:HE22	1.84	0.42
1:A:187:SER:OG	1:A:188:SER:N	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:298:ARG:HE	1:A:303:GLY:HA2	1.85	0.42
1:A:767:SER:HA	1:A:778:MET:HE2	2.00	0.42
1:A:1170:GLU:O	1:A:1172:THR:N	2.52	0.42
1:A:1680:VAL:HG22	1:A:1685:LEU:HD11	2.01	0.42
1:A:1728:PRO:HB2	1:A:1730:THR:HG23	2.02	0.42
1:A:4909:HIS:O	1:A:4913:GLU:HB2	2.19	0.42
1:B:238:HIS:HB3	1:B:243:GLU:HB3	2.01	0.42
1:B:1726:ILE:HG22	1:B:2107:TYR:HB3	2.01	0.42
1:B:1900:PRO:O	1:B:1904:LYS:NZ	2.44	0.42
1:B:2086:PHE:O	1:B:3692:TYR:OH	2.25	0.42
1:B:4833:GLU:O	1:B:4844:ARG:NH2	2.52	0.42
1:C:2521:LEU:HD22	1:C:2565:ALA:HB2	2.02	0.42
1:C:3766:ILE:HG22	1:C:3767:LEU:HG	2.02	0.42
1:C:4909:HIS:O	1:C:4913:GLU:HB2	2.19	0.42
1:D:161:THR:N	1:D:184:VAL:O	2.50	0.42
1:D:433:LEU:O	1:D:437:SER:CB	2.67	0.42
1:D:653:SER:OG	1:D:794:PHE:O	2.33	0.42
1:D:767:SER:HA	1:D:778:MET:HE2	2.02	0.42
1:D:1089:ARG:O	1:D:1250:TRP:N	2.40	0.42
1:D:1626:GLN:O	1:D:1687:TYR:OH	2.31	0.42
1:D:2709:THR:HB	1:D:2781:LYS:HB3	2.02	0.42
1:D:4189:LEU:HA	1:D:4192:ASN:HD22	1.84	0.42
1:D:4670:LEU:HA	1:D:4670:LEU:HD13	1.83	0.42
1:A:1696:GLY:HA2	1:A:1699:ARG:HB3	2.02	0.42
1:A:2126:GLN:O	1:A:2130:LEU:HB2	2.20	0.42
1:A:2127:ILE:HD11	1:A:2143:MET:HG3	2.02	0.42
1:A:3812:GLN:HA	1:A:3815:ALA:HB3	2.02	0.42
1:A:3922:THR:O	1:A:3926:GLN:N	2.43	0.42
1:A:4782:TYR:O	1:A:4786:ALA:N	2.35	0.42
1:B:187:SER:OG	1:B:188:SER:N	2.52	0.42
1:B:356:TYR:CD1	1:B:407:ARG:HB3	2.55	0.42
1:B:1838:ASP:HA	1:B:1841:HIS:HB3	2.02	0.42
1:B:1929:PHE:HZ	1:B:2030:LEU:HB3	1.85	0.42
1:B:2035:GLU:O	1:B:2038:THR:OG1	2.37	0.42
1:B:4790:PHE:HA	1:B:4793:PHE:HE2	1.85	0.42
1:C:326:SER:OG	1:C:327:THR:N	2.53	0.42
1:C:1089:ARG:O	1:C:1250:TRP:N	2.40	0.42
1:C:2142:LEU:HD23	1:C:2145:ARG:HD2	2.02	0.42
1:C:2737:LYS:HD2	1:C:2755:GLN:HE22	1.84	0.42
1:C:4189:LEU:HA	1:C:4192:ASN:HD22	1.84	0.42
1:D:235:ARG:HE	1:D:274:LEU:HD21	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1726:ILE:HG22	1:D:2107:TYR:HB3	2.01	0.42
1:D:2717:LYS:HA	1:D:2720:TYR:HD2	1.85	0.42
1:D:3812:GLN:HA	1:D:3815:ALA:HB3	2.02	0.42
1:D:4790:PHE:HA	1:D:4793:PHE:HE2	1.85	0.42
1:A:43:GLY:HA3	1:A:455:SER:HB2	2.02	0.41
1:A:343:ARG:HB3	1:A:344:LYS:H	1.68	0.41
1:A:1114:ARG:NH1	1:A:1128:LEU:O	2.50	0.41
1:A:3637:PHE:O	1:A:3641:LEU:N	2.51	0.41
1:A:3903:GLY:O	1:A:3907:PHE:HB2	2.17	0.41
1:B:52:THR:HA	1:B:60:PRO:HG3	2.02	0.41
1:B:161:THR:N	1:B:184:VAL:O	2.50	0.41
1:B:190:ARG:HH11	1:C:2423:ILE:HG23	1.79	0.41
1:B:748:LEU:HB2	1:B:750:ARG:HG3	2.02	0.41
1:B:897:LYS:HE2	1:B:915:HIS:CG	2.54	0.41
1:B:1696:GLY:HA2	1:B:1699:ARG:HB3	2.02	0.41
1:B:2521:LEU:HD22	1:B:2565:ALA:HB2	2.02	0.41
1:C:537:LEU:HD23	1:C:574:VAL:HG21	2.02	0.41
1:C:556:ASP:N	1:C:556:ASP:OD1	2.51	0.41
1:C:1090:ALA:HA	1:C:1249:MET:HA	2.01	0.41
1:C:2605:LYS:O	1:C:2609:LYS:N	2.49	0.41
1:C:3666:HIS:HE1	1:C:3670:LEU:HD12	1.85	0.41
1:C:4135:GLY:N	1:C:4151:PHE:O	2.48	0.41
1:D:1092:LYS:HG2	1:D:1202:ILE:HD13	2.00	0.41
1:D:1680:VAL:HG22	1:D:1685:LEU:HD11	2.01	0.41
1:D:1728:PRO:HB2	1:D:1730:THR:HG23	2.02	0.41
1:D:2142:LEU:HD23	1:D:2145:ARG:HD2	2.02	0.41
1:A:281:ARG:NH2	1:A:287:SER:OG	2.44	0.41
1:A:433:LEU:HD21	1:A:505:LEU:HG	2.02	0.41
1:A:1654:HIS:HA	1:A:1657:THR:HG23	2.02	0.41
1:A:1838:ASP:HA	1:A:1841:HIS:HB3	2.02	0.41
1:A:2521:LEU:HD22	1:A:2565:ALA:HB2	2.01	0.41
1:B:223:ALA:HB2	1:B:349:MET:HG3	2.03	0.41
1:B:415:THR:HG21	1:B:485:ARG:HG2	2.02	0.41
1:B:849:ASP:OD2	1:B:1214:ARG:NE	2.53	0.41
1:B:1833:ILE:HG22	1:B:1834:PHE:H	1.85	0.41
1:B:2709:THR:HB	1:B:2781:LYS:HB3	2.02	0.41
1:C:52:THR:HA	1:C:60:PRO:HG3	2.02	0.41
1:C:681:HIS:ND1	1:C:683:GLU:OE2	2.53	0.41
1:C:799:LYS:HZ1	1:C:1618:LEU:HD13	1.86	0.41
1:C:1696:GLY:HA2	1:C:1699:ARG:HB3	2.02	0.41
1:C:1718:ARG:HA	1:C:1721:MET:HB2	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:298:ARG:HE	1:D:303:GLY:HA2	1.85	0.41
1:D:309:MET:HG2	1:D:311:ASP:H	1.84	0.41
1:D:1137:PHE:CE2	1:D:1139:GLY:HA2	2.56	0.41
1:D:1154:ARG:HE	1:D:1177:LEU:HD23	1.84	0.41
1:D:1170:GLU:O	1:D:1172:THR:N	2.52	0.41
1:D:1929:PHE:HZ	1:D:2030:LEU:HB3	1.85	0.41
1:D:3996:ILE:HG12	1:D:4000:MET:HE3	2.01	0.41
1:A:223:ALA:HB2	1:A:349:MET:HG3	2.03	0.41
1:A:1137:PHE:CE2	1:A:1139:GLY:HA2	2.56	0.41
1:A:4193:PHE:O	1:A:4197:THR:OG1	2.26	0.41
1:A:4519:LEU:HD12	1:C:4811:LEU:CA	2.50	0.41
1:A:4732:LEU:O	1:A:4736:ASN:N	2.52	0.41
1:B:309:MET:HG2	1:B:311:ASP:H	1.84	0.41
1:B:326:SER:OG	1:B:327:THR:N	2.53	0.41
1:B:681:HIS:ND1	1:B:683:GLU:OE2	2.53	0.41
1:B:767:SER:HA	1:B:778:MET:HE2	2.02	0.41
1:B:1256:PRO:HB3	1:B:1597:SER:HA	2.02	0.41
1:B:1664:VAL:HG12	1:B:1672:VAL:HG11	2.01	0.41
1:B:2196:ASN:HA	1:B:2199:ARG:HH11	1.86	0.41
1:B:2433:LEU:HA	1:B:2436:VAL:HB	2.02	0.41
1:B:3694:ASP:O	1:B:3698:LYS:HG2	2.20	0.41
1:B:4632:ASP:OD1	1:B:4632:ASP:N	2.53	0.41
1:C:472:HIS:O	1:C:476:GLN:HG2	2.21	0.41
1:C:4495:TYR:HA	1:C:4498:ARG:HG2	2.03	0.41
1:D:1138:ASP:HB2	1:D:1145:TRP:HE1	1.85	0.41
1:D:1833:ILE:HG22	1:D:1834:PHE:H	1.85	0.41
1:D:4005:VAL:HG21	1:D:4115:ARG:HB3	2.01	0.41
1:D:4732:LEU:O	1:D:4736:ASN:N	2.52	0.41
1:A:449:ILE:HG23	1:A:529:ILE:HD11	2.02	0.41
1:A:1835:HIS:O	1:A:1838:ASP:N	2.47	0.41
1:A:3694:ASP:O	1:A:3698:LYS:HG2	2.20	0.41
1:B:591:GLU:HA	1:B:631:LEU:HD21	2.03	0.41
1:B:1431:ARG:HB3	1:B:1554:GLN:HB2	2.03	0.41
1:B:1628:MET:HB2	1:B:1687:TYR:HE2	1.84	0.41
1:B:1651:LEU:HD11	1:B:1695:PRO:HG2	2.02	0.41
1:B:1654:HIS:HA	1:B:1657:THR:HG23	2.02	0.41
1:B:3766:ILE:HG22	1:B:3767:LEU:HG	2.01	0.41
1:B:4754:LEU:HD13	1:D:4774:LEU:HD13	2.02	0.41
1:C:298:ARG:HE	1:C:303:GLY:HA2	1.85	0.41
1:C:449:ILE:HG23	1:C:529:ILE:HD11	2.02	0.41
1:C:1654:HIS:HA	1:C:1657:THR:HG23	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:591:GLU:HA	1:D:631:LEU:HD21	2.03	0.41
1:D:1828:LEU:HD12	1:D:1828:LEU:HA	1.91	0.41
1:D:3694:ASP:O	1:D:3698:LYS:HG2	2.20	0.41
1:A:472:HIS:O	1:A:476:GLN:HG2	2.21	0.41
1:A:559:ILE:HD13	1:A:593:HIS:HB3	2.02	0.41
1:A:681:HIS:ND1	1:A:683:GLU:OE2	2.53	0.41
1:A:1154:ARG:HE	1:A:1177:LEU:HD23	1.85	0.41
1:B:43:GLY:HA3	1:B:455:SER:HB2	2.01	0.41
1:B:246:THR:HG1	1:B:272:ARG:NH1	2.19	0.41
1:B:1138:ASP:HB2	1:B:1145:TRP:HE1	1.85	0.41
1:B:1170:GLU:O	1:B:1172:THR:N	2.52	0.41
1:B:3882:VAL:O	1:B:3886:ILE:HG12	2.20	0.41
1:B:4495:TYR:HA	1:B:4498:ARG:HG2	2.03	0.41
1:B:4782:TYR:O	1:B:4786:ALA:N	2.35	0.41
1:C:1920:ARG:HA	1:C:1923:ILE:HD12	2.01	0.41
1:C:2126:GLN:O	1:C:2130:LEU:HB2	2.20	0.41
1:C:2709:THR:HB	1:C:2781:LYS:HB3	2.01	0.41
1:C:2717:LYS:HA	1:C:2720:TYR:HD2	1.85	0.41
1:C:3666:HIS:CE1	1:C:3670:LEU:HD12	2.56	0.41
1:C:4114:THR:HA	1:C:4117:GLN:HB2	2.02	0.41
1:D:125:TYR:OH	1:D:413:SER:O	2.38	0.41
1:D:326:SER:OG	1:D:327:THR:N	2.53	0.41
1:D:356:TYR:CD1	1:D:407:ARG:HB3	2.55	0.41
1:D:748:LEU:HB2	1:D:750:ARG:HG3	2.02	0.41
1:D:2196:ASN:HA	1:D:2199:ARG:HH11	1.86	0.41
1:D:2521:LEU:HD22	1:D:2565:ALA:HB2	2.01	0.41
1:D:3627:LYS:HE2	1:D:3627:LYS:HB3	1.84	0.41
1:A:191:TYR:N	1:A:206:ALA:O	2.52	0.41
1:A:223:ALA:HB3	1:A:288:HIS:CE1	2.56	0.41
1:A:326:SER:OG	1:A:327:THR:N	2.53	0.41
1:A:2196:ASN:HA	1:A:2199:ARG:HH11	1.86	0.41
1:A:2709:THR:HB	1:A:2781:LYS:HB3	2.01	0.41
1:A:2737:LYS:HD2	1:A:2755:GLN:HE22	1.84	0.41
1:A:4495:TYR:HA	1:A:4498:ARG:HG2	2.03	0.41
1:B:277:LEU:HD23	1:B:277:LEU:HA	1.93	0.41
1:B:1090:ALA:HA	1:B:1249:MET:HG2	2.03	0.41
1:B:1290:PHE:HB2	1:B:1552:VAL:HG12	2.02	0.41
1:B:2063:ILE:O	1:B:2067:MET:HG2	2.21	0.41
1:B:3637:PHE:O	1:B:3641:LEU:N	2.51	0.41
1:B:3666:HIS:CE1	1:B:3670:LEU:HD12	2.56	0.41
1:B:4005:VAL:HG21	1:B:4115:ARG:HB3	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:4114:THR:HA	1:B:4117:GLN:HB2	2.02	0.41
1:C:244:CYS:N	1:C:263:GLU:O	2.41	0.41
1:C:299:HIS:CD2	1:C:302:THR:H	2.34	0.41
1:C:356:TYR:CD1	1:C:407:ARG:HB3	2.55	0.41
1:C:1137:PHE:CE2	1:C:1139:GLY:HA2	2.55	0.41
1:C:1628:MET:HB2	1:C:1687:TYR:HE2	1.84	0.41
1:C:1664:VAL:HG12	1:C:1672:VAL:HG11	2.01	0.41
1:C:2388:ALA:O	1:C:2392:PHE:HB2	2.21	0.41
1:C:4005:VAL:HG21	1:C:4115:ARG:HB3	2.01	0.41
1:C:4160:GLN:HE22	1:C:4204:ALA:HB3	1.86	0.41
1:C:4610:LYS:O	1:C:4614:ASP:HB2	2.21	0.41
1:D:277:LEU:HD23	1:D:277:LEU:HA	1.93	0.41
1:D:490:GLN:NE2	1:D:550:GLN:HG3	2.36	0.41
1:D:681:HIS:ND1	1:D:683:GLU:OE2	2.53	0.41
1:D:1103:PHE:HB3	1:D:1239:PHE:CE2	2.56	0.41
1:D:1838:ASP:HA	1:D:1841:HIS:HB3	2.02	0.41
1:D:2063:ILE:O	1:D:2067:MET:HG2	2.21	0.41
1:D:2127:ILE:HD11	1:D:2143:MET:HG3	2.02	0.41
1:D:3666:HIS:HE1	1:D:3670:LEU:HD12	1.85	0.41
1:D:3766:ILE:HG22	1:D:3767:LEU:HG	2.01	0.41
1:D:4753:THR:O	1:D:4756:THR:OG1	2.26	0.41
1:A:441:LYS:HA	1:A:442:ALA:HA	1.84	0.41
1:A:1103:PHE:HB3	1:A:1239:PHE:CE2	2.56	0.41
1:A:3677:LEU:HD23	1:A:3677:LEU:HA	1.83	0.41
1:A:3733:HIS:HA	1:A:3737:ALA:HB3	2.02	0.41
1:A:4114:THR:HA	1:A:4117:GLN:HB2	2.02	0.41
1:A:4610:LYS:O	1:A:4614:ASP:HB2	2.21	0.41
1:B:266:ALA:HB1	1:B:269:VAL:HB	2.03	0.41
1:B:449:ILE:HG23	1:B:529:ILE:HD11	2.02	0.41
1:B:1659:ARG:O	1:B:1662:SER:OG	2.30	0.41
1:B:1718:ARG:HA	1:B:1721:MET:HB2	2.02	0.41
1:B:2135:MET:HA	1:B:2136:GLY:HA3	1.65	0.41
1:B:2388:ALA:O	1:B:2392:PHE:HB2	2.21	0.41
1:B:3666:HIS:HE1	1:B:3670:LEU:HD12	1.85	0.41
1:B:4517:ILE:HA	1:B:4520:PHE:CD2	2.55	0.41
1:B:4600:ILE:HD12	1:B:4600:ILE:HA	1.96	0.41
1:B:4753:THR:O	1:B:4756:THR:OG1	2.26	0.41
1:C:223:ALA:HB3	1:C:288:HIS:CE1	2.56	0.41
1:C:227:TYR:CD2	1:C:352:SER:HB2	2.56	0.41
1:C:274:LEU:HD23	1:C:274:LEU:HA	1.88	0.41
1:C:2433:LEU:HA	1:C:2436:VAL:HB	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:223:ALA:HB2	1:D:349:MET:HG3	2.03	0.41
1:D:227:TYR:CD2	1:D:352:SER:HB2	2.56	0.41
1:D:657:PRO:HA	1:D:834:VAL:HA	2.02	0.41
1:D:1092:LYS:H	1:D:1250:TRP:HZ3	1.68	0.41
1:D:1669:ASN:O	1:D:1673:ALA:N	2.43	0.41
1:D:1696:GLY:HA2	1:D:1699:ARG:HB3	2.02	0.41
1:D:2388:ALA:O	1:D:2392:PHE:HB2	2.21	0.41
1:D:3882:VAL:O	1:D:3886:ILE:HG12	2.20	0.41
1:D:4520:PHE:HB2	1:D:4561:VAL:HG23	2.03	0.41
1:D:4768:LEU:HG	1:D:4866:LEU:HD23	2.02	0.41
1:A:52:THR:HA	1:A:60:PRO:HG3	2.02	0.41
1:A:227:TYR:CD2	1:A:352:SER:HB2	2.56	0.41
1:A:490:GLN:NE2	1:A:550:GLN:HG3	2.36	0.41
1:A:1440:ASN:HB2	1:A:1548:THR:HG21	2.03	0.41
1:A:1900:PRO:O	1:A:1904:LYS:NZ	2.44	0.41
1:A:1929:PHE:HZ	1:A:2030:LEU:HB3	1.85	0.41
1:A:3627:LYS:HE2	1:A:3627:LYS:HB3	1.84	0.41
1:A:3977:LYS:HE2	1:A:3977:LYS:HB3	1.88	0.41
1:A:4753:THR:O	1:A:4756:THR:OG1	2.26	0.41
1:B:227:TYR:CD2	1:B:352:SER:HB2	2.56	0.41
1:B:601:LEU:HD13	1:B:610:VAL:HG21	2.03	0.41
1:B:1137:PHE:CE2	1:B:1139:GLY:HA2	2.55	0.41
1:B:3762:LEU:O	1:B:3766:ILE:N	2.42	0.41
1:B:3852:ASN:O	1:B:3856:GLN:N	2.39	0.41
1:C:187:SER:OG	1:C:188:SER:N	2.52	0.41
1:C:591:GLU:HA	1:C:631:LEU:HD21	2.03	0.41
1:C:767:SER:HA	1:C:778:MET:HE2	2.02	0.41
1:C:4768:LEU:HG	1:C:4866:LEU:HD23	2.03	0.41
1:D:601:LEU:HB2	1:D:610:VAL:HG11	2.01	0.41
1:D:849:ASP:OD2	1:D:1214:ARG:NE	2.53	0.41
1:D:1819:VAL:O	1:D:1823:LYS:CB	2.66	0.41
1:D:1929:PHE:CZ	1:D:2030:LEU:HB3	2.55	0.41
1:D:2102:ALA:HA	1:D:2105:LYS:HZ1	1.86	0.41
1:D:4495:TYR:HA	1:D:4498:ARG:HG2	2.03	0.41
1:A:266:ALA:HB1	1:A:269:VAL:HB	2.03	0.41
1:A:299:HIS:CD2	1:A:302:THR:H	2.34	0.41
1:A:537:LEU:HD23	1:A:574:VAL:HG21	2.02	0.41
1:A:1718:ARG:HA	1:A:1721:MET:HB2	2.02	0.41
1:A:2426:SER:CB	1:C:143:LEU:CB	2.91	0.41
1:A:3666:HIS:HE1	1:A:3670:LEU:HD12	1.85	0.41
1:A:3882:VAL:O	1:A:3886:ILE:HG12	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4004:LEU:HD13	1:A:4004:LEU:HA	1.88	0.41
1:A:4747:ILE:HD12	1:A:4747:ILE:HA	1.95	0.41
1:B:16:THR:N	1:B:110:HIS:O	2.54	0.41
1:B:298:ARG:HE	1:B:303:GLY:HA2	1.85	0.41
1:B:559:ILE:HD13	1:B:593:HIS:HB3	2.02	0.41
1:B:647:ARG:HH12	1:B:1683:PRO:HG2	1.86	0.41
1:B:657:PRO:HA	1:B:834:VAL:HA	2.02	0.41
1:B:1103:PHE:HB3	1:B:1239:PHE:CE2	2.56	0.41
1:B:1267:HIS:HB3	1:B:1294:ASN:HD21	1.86	0.41
1:B:2096:ILE:O	1:B:2100:VAL:N	2.53	0.41
1:B:3812:GLN:HA	1:B:3815:ALA:HB3	2.02	0.41
1:B:4610:LYS:O	1:B:4614:ASP:HB2	2.21	0.41
1:C:120:LEU:HB2	1:C:159:TRP:CH2	2.56	0.41
1:C:125:TYR:OH	1:C:413:SER:O	2.38	0.41
1:C:223:ALA:HB2	1:C:349:MET:HG3	2.03	0.41
1:C:415:THR:HG21	1:C:485:ARG:HG2	2.02	0.41
1:C:717:GLY:O	1:C:735:GLY:N	2.54	0.41
1:C:832:LEU:HD12	1:C:1617:TRP:CG	2.56	0.41
1:C:1009:ARG:O	1:C:1013:ARG:NH1	2.45	0.41
1:C:1043:LYS:O	1:C:1047:LYS:HB2	2.21	0.41
1:C:1103:PHE:HB3	1:C:1239:PHE:CE2	2.56	0.41
1:C:1267:HIS:HB3	1:C:1294:ASN:HD21	1.86	0.41
1:C:1440:ASN:HB2	1:C:1548:THR:HG21	2.03	0.41
1:C:1929:PHE:HZ	1:C:2030:LEU:HB3	1.85	0.41
1:C:2035:GLU:O	1:C:2038:THR:OG1	2.37	0.41
1:C:2127:ILE:HD11	1:C:2143:MET:HG3	2.02	0.41
1:C:3733:HIS:HA	1:C:3737:ALA:HB3	2.02	0.41
1:C:3812:GLN:HA	1:C:3815:ALA:HB3	2.02	0.41
1:C:4575:ILE:O	1:C:4579:LEU:HB2	2.21	0.41
1:D:52:THR:HA	1:D:60:PRO:HG3	2.02	0.41
1:D:120:LEU:HB2	1:D:159:TRP:CH2	2.56	0.41
1:D:274:LEU:HD23	1:D:274:LEU:HA	1.88	0.41
1:D:433:LEU:HD21	1:D:505:LEU:HG	2.02	0.41
1:D:449:ILE:HG23	1:D:529:ILE:HD11	2.02	0.41
1:D:559:ILE:HD13	1:D:593:HIS:HB3	2.02	0.41
1:D:4160:GLN:HE22	1:D:4204:ALA:HB3	1.86	0.41
1:D:4610:LYS:O	1:D:4614:ASP:HB2	2.21	0.41
1:A:1484:ASN:H	1:A:1486:TYR:HA	1.86	0.41
1:A:4135:GLY:N	1:A:4151:PHE:O	2.48	0.41
1:B:120:LEU:HB2	1:B:159:TRP:CH2	2.56	0.41
1:B:472:HIS:O	1:B:476:GLN:HG2	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:4942:TRP:O	1:B:4946:GLN:HG2	2.21	0.41
1:C:748:LEU:HB2	1:C:750:ARG:HG3	2.02	0.41
1:C:2096:ILE:O	1:C:2100:VAL:N	2.53	0.41
1:C:3882:VAL:O	1:C:3886:ILE:HG12	2.20	0.41
1:D:266:ALA:HB1	1:D:269:VAL:HB	2.03	0.41
1:D:647:ARG:HH12	1:D:1683:PRO:HG2	1.86	0.41
1:D:1043:LYS:O	1:D:1047:LYS:HB2	2.21	0.41
1:D:1431:ARG:HB3	1:D:1554:GLN:HB2	2.03	0.41
1:D:4942:TRP:O	1:D:4946:GLN:HG2	2.21	0.41
1:A:16:THR:N	1:A:110:HIS:O	2.54	0.40
1:A:1250:TRP:CD1	1:A:1602:GLN:HA	2.57	0.40
1:A:2267:VAL:HG21	1:A:2328:ARG:HH21	1.87	0.40
1:A:3831:LEU:HA	1:A:3831:LEU:HD23	1.92	0.40
1:A:4090:GLU:HA	1:A:4093:LYS:HB3	2.03	0.40
1:A:4160:GLN:HE22	1:A:4204:ALA:HB3	1.86	0.40
1:B:18:ASP:HB2	1:B:69:LEU:HD12	2.02	0.40
1:B:832:LEU:HD12	1:B:1617:TRP:CG	2.56	0.40
1:B:1092:LYS:H	1:B:1250:TRP:HZ3	1.68	0.40
1:B:1826:TYR:CZ	1:B:1830:ILE:HD11	2.56	0.40
1:B:2126:GLN:O	1:B:2130:LEU:HB2	2.20	0.40
1:B:2605:LYS:O	1:B:2609:LYS:N	2.49	0.40
1:C:433:LEU:HD21	1:C:505:LEU:HG	2.02	0.40
1:C:556:ASP:HA	1:C:559:ILE:HD12	2.03	0.40
1:C:1431:ARG:HB3	1:C:1554:GLN:HB2	2.03	0.40
1:C:1449:ASP:N	1:C:1449:ASP:OD1	2.55	0.40
1:C:1833:ILE:HG22	1:C:1834:PHE:H	1.85	0.40
1:C:2136:GLY:O	1:C:2140:GLU:N	2.49	0.40
1:D:1290:PHE:HB2	1:D:1552:VAL:HG12	2.02	0.40
1:D:1440:ASN:HB2	1:D:1548:THR:HG21	2.03	0.40
1:D:4090:GLU:HA	1:D:4093:LYS:HB3	2.03	0.40
1:D:4824:ALA:HB1	1:D:4827:GLY:O	2.20	0.40
1:A:556:ASP:HA	1:A:559:ILE:HD12	2.03	0.40
1:A:1290:PHE:HB2	1:A:1552:VAL:HG12	2.02	0.40
1:A:1711:LEU:HD22	1:A:1828:LEU:HD13	2.03	0.40
1:A:1833:ILE:HG22	1:A:1834:PHE:H	1.85	0.40
1:A:2063:ILE:O	1:A:2067:MET:HG2	2.21	0.40
1:A:2326:ILE:HG22	1:C:207:PHE:CB	2.51	0.40
1:A:4097:PHE:HB2	1:A:4130:PHE:CE1	2.57	0.40
1:A:4651:LYS:HZ1	1:A:4670:LEU:C	2.25	0.40
1:B:1685:LEU:HA	1:B:1688:ALA:HB3	2.04	0.40
1:B:2222:LEU:O	1:B:2226:SER:N	2.36	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:4875:ARG:HH21	1:D:4869:ASP:HB3	1.85	0.40
1:C:18:ASP:HB2	1:C:69:LEU:HD12	2.02	0.40
1:C:195:SER:OG	1:C:196:TYR:N	2.55	0.40
1:C:441:LYS:HA	1:C:442:ALA:HA	1.84	0.40
1:C:1711:LEU:HD22	1:C:1828:LEU:HD13	2.03	0.40
1:C:2196:ASN:HA	1:C:2199:ARG:HH11	1.86	0.40
1:C:2266:VAL:HG11	1:C:2303:LEU:HD11	2.04	0.40
1:D:18:ASP:HB2	1:D:69:LEU:HD12	2.02	0.40
1:D:415:THR:HG21	1:D:485:ARG:HG2	2.02	0.40
1:D:717:GLY:O	1:D:735:GLY:N	2.54	0.40
1:D:1090:ALA:HA	1:D:1249:MET:HG2	2.03	0.40
1:D:1654:HIS:HA	1:D:1657:THR:HG23	2.02	0.40
1:D:1711:LEU:HD22	1:D:1828:LEU:HD13	2.03	0.40
1:A:1685:LEU:HA	1:A:1688:ALA:HB3	2.03	0.40
1:A:2433:LEU:HA	1:A:2436:VAL:HB	2.02	0.40
1:B:433:LEU:HD21	1:B:505:LEU:HG	2.02	0.40
1:B:556:ASP:HA	1:B:559:ILE:HD12	2.03	0.40
1:B:782:PHE:HE1	1:B:1465:VAL:HG13	1.86	0.40
1:B:1250:TRP:CD1	1:B:1602:GLN:HA	2.57	0.40
1:B:1711:LEU:HD22	1:B:1828:LEU:HD13	2.03	0.40
1:B:2127:ILE:HD11	1:B:2143:MET:HG3	2.02	0.40
1:B:3666:HIS:HB2	1:B:3735:ARG:HG2	2.04	0.40
1:B:4022:LEU:HD21	1:B:4129:TYR:CE2	2.57	0.40
1:B:4160:GLN:HE22	1:B:4204:ALA:HB3	1.86	0.40
1:B:4651:LYS:HZ1	1:B:4670:LEU:C	2.24	0.40
1:B:4768:LEU:HG	1:B:4866:LEU:HD23	2.03	0.40
1:C:263:GLU:HB3	1:C:267:VAL:HG11	2.04	0.40
1:C:651:HIS:N	1:C:1625:LEU:O	2.45	0.40
1:C:1090:ALA:HA	1:C:1249:MET:HG2	2.03	0.40
1:C:1685:LEU:HA	1:C:1688:ALA:HB3	2.04	0.40
1:C:1819:VAL:O	1:C:1823:LYS:CB	2.66	0.40
1:C:4097:PHE:HB2	1:C:4130:PHE:CE1	2.57	0.40
1:C:4897:ASP:OD1	1:C:4897:ASP:N	2.55	0.40
1:D:16:THR:N	1:D:110:HIS:O	2.54	0.40
1:D:191:TYR:N	1:D:206:ALA:O	2.52	0.40
1:D:844:ARG:HH22	1:D:1212:VAL:HG11	1.86	0.40
1:D:1256:PRO:HB3	1:D:1597:SER:HA	2.02	0.40
1:D:1898:LYS:NZ	1:D:1899:LEU:O	2.51	0.40
1:D:3977:LYS:HE2	1:D:3977:LYS:HB3	1.88	0.40
1:A:195:SER:OG	1:A:196:TYR:N	2.55	0.40
1:A:591:GLU:HA	1:A:631:LEU:HD21	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4768:LEU:HG	1:A:4866:LEU:HD23	2.03	0.40
1:B:365:HIS:HD2	1:B:368:THR:HG23	1.87	0.40
1:B:1819:VAL:O	1:B:1823:LYS:CB	2.66	0.40
1:B:2266:VAL:HG11	1:B:2303:LEU:HD11	2.04	0.40
1:B:4822:VAL:CG1	1:D:4849:ILE:CG2	2.96	0.40
1:C:228:LEU:HA	1:C:228:LEU:HD23	1.85	0.40
1:C:246:THR:HG1	1:C:272:ARG:NH1	2.20	0.40
1:C:559:ILE:HD13	1:C:593:HIS:HB3	2.02	0.40
1:C:745:ASN:ND2	1:C:773:GLN:OE1	2.38	0.40
1:C:782:PHE:HE1	1:C:1465:VAL:HG13	1.86	0.40
1:C:1170:GLU:O	1:C:1172:THR:N	2.52	0.40
1:C:1290:PHE:HB2	1:C:1552:VAL:HG12	2.02	0.40
1:C:1828:LEU:HD12	1:C:1828:LEU:HA	1.91	0.40
1:C:3907:PHE:O	1:C:3911:ILE:HG12	2.21	0.40
1:C:4732:LEU:O	1:C:4736:ASN:N	2.51	0.40
1:C:4859:LEU:HD23	1:C:4860:LEU:HG	2.04	0.40
1:D:223:ALA:HB3	1:D:288:HIS:CE1	2.56	0.40
1:D:372:LEU:HD11	1:D:391:ALA:HB1	2.04	0.40
1:D:601:LEU:HD13	1:D:610:VAL:HG21	2.03	0.40
1:D:644:LEU:HD11	1:D:1650:LEU:HD11	2.03	0.40
1:D:2126:GLN:O	1:D:2130:LEU:HB2	2.20	0.40
1:D:3666:HIS:HB2	1:D:3735:ARG:HG2	2.04	0.40
1:D:3666:HIS:CE1	1:D:3670:LEU:HD12	2.56	0.40
1:D:3733:HIS:HA	1:D:3737:ALA:HB3	2.02	0.40
1:D:3831:LEU:HA	1:D:3831:LEU:HD23	1.92	0.40
1:D:4516:PHE:O	1:D:4520:PHE:CE2	2.74	0.40
1:D:4575:ILE:O	1:D:4579:LEU:HB2	2.21	0.40
1:A:480:ARG:HG2	1:A:484:ASN:HD21	1.87	0.40
1:A:1449:ASP:OD1	1:A:1449:ASP:N	2.55	0.40
1:A:3907:PHE:O	1:A:3911:ILE:HG12	2.21	0.40
1:A:4519:LEU:HA	1:C:4810:MET:CB	2.52	0.40
1:B:130:LEU:HA	1:B:130:LEU:HD12	1.89	0.40
1:B:190:ARG:HH12	1:C:2423:ILE:HG21	1.72	0.40
1:B:191:TYR:N	1:B:206:ALA:O	2.52	0.40
1:B:195:SER:OG	1:B:196:TYR:N	2.54	0.40
1:B:223:ALA:HB3	1:B:288:HIS:CE1	2.56	0.40
1:B:228:LEU:HD23	1:B:228:LEU:HA	1.85	0.40
1:B:480:ARG:HG2	1:B:484:ASN:HD21	1.87	0.40
1:B:2027:ARG:NH1	1:B:2031:LEU:HB2	2.37	0.40
1:B:3983:LEU:HD12	1:B:3983:LEU:HA	1.82	0.40
1:B:4501:TYR:HD1	1:B:4501:TYR:HA	1.75	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:129:TYR:N	1:C:150:GLN:O	2.39	0.40
1:C:675:TYR:CE1	1:C:790:PRO:HB3	2.57	0.40
1:C:1214:ARG:HD3	1:C:1216:ASN:HD21	1.87	0.40
1:C:1447:THR:OG1	1:C:1538:LYS:O	2.28	0.40
1:C:1826:TYR:CZ	1:C:1830:ILE:HD11	2.57	0.40
1:C:2063:ILE:O	1:C:2067:MET:HG2	2.21	0.40
1:D:129:TYR:N	1:D:150:GLN:O	2.39	0.40
1:D:290:ARG:H	1:D:293:GLN:NE2	2.20	0.40
1:D:1250:TRP:CD1	1:D:1602:GLN:HA	2.57	0.40
1:D:1449:ASP:N	1:D:1449:ASP:OD1	2.55	0.40
1:D:2086:PHE:O	1:D:3692:TYR:OH	2.25	0.40
1:D:3767:LEU:HD23	1:D:3767:LEU:HA	1.86	0.40
1:D:4114:THR:HA	1:D:4117:GLN:HB2	2.02	0.40
1:D:4651:LYS:HZ1	1:D:4670:LEU:C	2.24	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	A	3355/4968 (68%)	2934 (88%)	408 (12%)	13 (0%)	30	68
1	B	3355/4968 (68%)	2936 (88%)	407 (12%)	12 (0%)	30	68
1	C	3355/4968 (68%)	2934 (88%)	408 (12%)	13 (0%)	30	68
1	D	3355/4968 (68%)	2938 (88%)	405 (12%)	12 (0%)	30	68
All	All	13420/19872 (68%)	11742 (88%)	1628 (12%)	50 (0%)	32	68

All (50) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	143	LEU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	B	143	LEU
1	C	143	LEU
1	D	143	LEU
1	A	142	LYS
1	A	730	LEU
1	B	142	LYS
1	B	730	LEU
1	C	142	LYS
1	C	730	LEU
1	D	142	LYS
1	D	730	LEU
1	A	4518	LEU
1	A	4595	LYS
1	B	4595	LYS
1	C	4595	LYS
1	D	4595	LYS
1	A	853	PRO
1	A	1580	PRO
1	B	853	PRO
1	B	1580	PRO
1	C	853	PRO
1	C	1580	PRO
1	D	853	PRO
1	D	1580	PRO
1	A	828	PRO
1	A	2233	PRO
1	A	4071	ALA
1	B	828	PRO
1	B	2233	PRO
1	B	4071	ALA
1	C	828	PRO
1	C	2233	PRO
1	C	4071	ALA
1	C	4519	LEU
1	D	828	PRO
1	D	2233	PRO
1	D	4071	ALA
1	A	1535	PRO
1	B	1535	PRO
1	C	1535	PRO
1	D	1535	PRO
1	B	1682	GLU

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Mol	Chain	Res	Type
1	A	1682	GLU
1	C	1682	GLU
1	D	1682	GLU
1	A	3803	VAL
1	B	3803	VAL
1	C	3803	VAL
1	D	3803	VAL

### 5.3.2 Protein sidechains [i](#)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	2678/4355 (62%)	2640 (99%)	38 (1%)	62	75
1	B	2678/4355 (62%)	2640 (99%)	38 (1%)	62	75
1	C	2677/4355 (62%)	2641 (99%)	36 (1%)	65	77
1	D	2676/4355 (61%)	2642 (99%)	34 (1%)	65	77
All	All	10709/17420 (62%)	10563 (99%)	146 (1%)	62	75

All (146) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	44	ASN
1	A	78	LEU
1	A	81	MET
1	A	298	ARG
1	A	420	ARG
1	A	531	ASN
1	A	625	VAL
1	A	628	ASN
1	A	658	ASN
1	A	841	LYS
1	A	925	PRO
1	A	950	VAL
1	A	990	PRO
1	A	1013	ARG

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	A	1054	VAL
1	A	1089	ARG
1	A	1761	MET
1	A	1908	CYS
1	A	2118	ILE
1	A	2206	ARG
1	A	2211	ASN
1	A	3813	ASN
1	A	3870	ASN
1	A	3906	ASN
1	A	4087	ARG
1	A	4136	ARG
1	A	4171	ARG
1	A	4179	ASN
1	A	4499	ASN
1	A	4518	LEU
1	A	4519	LEU
1	A	4562	LEU
1	A	4652	ARG
1	A	4792	LYS
1	A	4828	ILE
1	A	4834	ASP
1	A	4844	ARG
1	A	4859	LEU
1	B	44	ASN
1	B	78	LEU
1	B	81	MET
1	B	84	ASN
1	B	298	ARG
1	B	420	ARG
1	B	531	ASN
1	B	625	VAL
1	B	628	ASN
1	B	658	ASN
1	B	841	LYS
1	B	925	PRO
1	B	950	VAL
1	B	990	PRO
1	B	1013	ARG
1	B	1054	VAL
1	B	1089	ARG
1	B	1761	MET

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	B	1908	CYS
1	B	2118	ILE
1	B	2206	ARG
1	B	2211	ASN
1	B	3813	ASN
1	B	3870	ASN
1	B	3906	ASN
1	B	4087	ARG
1	B	4136	ARG
1	B	4171	ARG
1	B	4179	ASN
1	B	4499	ASN
1	B	4519	LEU
1	B	4562	LEU
1	B	4652	ARG
1	B	4792	LYS
1	B	4832	ILE
1	B	4834	ASP
1	B	4844	ARG
1	B	4859	LEU
1	C	44	ASN
1	C	78	LEU
1	C	81	MET
1	C	84	ASN
1	C	298	ARG
1	C	420	ARG
1	C	531	ASN
1	C	625	VAL
1	C	628	ASN
1	C	658	ASN
1	C	841	LYS
1	C	925	PRO
1	C	990	PRO
1	C	1013	ARG
1	C	1054	VAL
1	C	1089	ARG
1	C	1761	MET
1	C	1908	CYS
1	C	2118	ILE
1	C	2206	ARG
1	C	2211	ASN
1	C	3813	ASN

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	C	3870	ASN
1	C	3906	ASN
1	C	4087	ARG
1	C	4136	ARG
1	C	4171	ARG
1	C	4179	ASN
1	C	4499	ASN
1	C	4518	LEU
1	C	4522	LYS
1	C	4562	LEU
1	C	4652	ARG
1	C	4792	LYS
1	C	4844	ARG
1	C	4859	LEU
1	D	44	ASN
1	D	78	LEU
1	D	82	LEU
1	D	84	ASN
1	D	298	ARG
1	D	420	ARG
1	D	531	ASN
1	D	625	VAL
1	D	628	ASN
1	D	658	ASN
1	D	841	LYS
1	D	925	PRO
1	D	990	PRO
1	D	1013	ARG
1	D	1054	VAL
1	D	1089	ARG
1	D	1761	MET
1	D	1908	CYS
1	D	2118	ILE
1	D	2206	ARG
1	D	2211	ASN
1	D	3813	ASN
1	D	3870	ASN
1	D	3906	ASN
1	D	4087	ARG
1	D	4136	ARG
1	D	4171	ARG
1	D	4179	ASN

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	D	4499	ASN
1	D	4521	TYR
1	D	4652	ARG
1	D	4792	LYS
1	D	4844	ARG
1	D	4859	LEU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (230) such sidechains are listed below:

<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	A	23	GLN
1	A	44	ASN
1	A	71	GLN
1	A	84	ASN
1	A	123	HIS
1	A	150	GLN
1	A	293	GLN
1	A	375	GLN
1	A	394	HIS
1	A	484	ASN
1	A	490	GLN
1	A	531	ASN
1	A	587	ASN
1	A	604	HIS
1	A	608	HIS
1	A	628	ASN
1	A	635	ASN
1	A	658	ASN
1	A	781	ASN
1	A	888	ASN
1	A	1147	GLN
1	A	1257	GLN
1	A	1267	HIS
1	A	1294	ASN
1	A	1631	HIS
1	A	1656	HIS
1	A	1684	GLN
1	A	1710	HIS
1	A	1946	ASN
1	A	2211	ASN
1	A	2218	HIS
1	A	3666	HIS

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	A	3667	GLN
1	A	3729	GLN
1	A	3743	GLN
1	A	3799	GLN
1	A	3813	ASN
1	A	3870	ASN
1	A	3904	GLN
1	A	3916	GLN
1	A	3919	ASN
1	A	3926	GLN
1	A	3932	ASN
1	A	3954	HIS
1	A	3956	GLN
1	A	3965	GLN
1	A	3976	GLN
1	A	3993	ASN
1	A	4098	ASN
1	A	4128	ASN
1	A	4160	GLN
1	A	4179	ASN
1	A	4192	ASN
1	A	4817	HIS
1	A	4878	GLN
1	A	4918	ASN
1	B	23	GLN
1	B	44	ASN
1	B	84	ASN
1	B	117	HIS
1	B	123	HIS
1	B	150	GLN
1	B	293	GLN
1	B	375	GLN
1	B	394	HIS
1	B	484	ASN
1	B	490	GLN
1	B	531	ASN
1	B	587	ASN
1	B	604	HIS
1	B	608	HIS
1	B	628	ASN
1	B	635	ASN
1	B	658	ASN

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	B	781	ASN
1	B	888	ASN
1	B	1147	GLN
1	B	1257	GLN
1	B	1267	HIS
1	B	1294	ASN
1	B	1631	HIS
1	B	1656	HIS
1	B	1684	GLN
1	B	1710	HIS
1	B	1946	ASN
1	B	2211	ASN
1	B	2212	GLN
1	B	2218	HIS
1	B	3666	HIS
1	B	3667	GLN
1	B	3729	GLN
1	B	3743	GLN
1	B	3799	GLN
1	B	3813	ASN
1	B	3870	ASN
1	B	3904	GLN
1	B	3916	GLN
1	B	3919	ASN
1	B	3926	GLN
1	B	3932	ASN
1	B	3954	HIS
1	B	3956	GLN
1	B	3965	GLN
1	B	3976	GLN
1	B	3990	ASN
1	B	3993	ASN
1	B	4098	ASN
1	B	4128	ASN
1	B	4160	GLN
1	B	4179	ASN
1	B	4192	ASN
1	B	4817	HIS
1	B	4878	GLN
1	B	4918	ASN
1	C	23	GLN
1	C	44	ASN

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	C	84	ASN
1	C	117	HIS
1	C	123	HIS
1	C	150	GLN
1	C	293	GLN
1	C	375	GLN
1	C	394	HIS
1	C	484	ASN
1	C	490	GLN
1	C	531	ASN
1	C	587	ASN
1	C	604	HIS
1	C	608	HIS
1	C	628	ASN
1	C	635	ASN
1	C	658	ASN
1	C	781	ASN
1	C	888	ASN
1	C	1147	GLN
1	C	1257	GLN
1	C	1267	HIS
1	C	1294	ASN
1	C	1631	HIS
1	C	1656	HIS
1	C	1684	GLN
1	C	1710	HIS
1	C	1946	ASN
1	C	2211	ASN
1	C	2212	GLN
1	C	2218	HIS
1	C	3666	HIS
1	C	3667	GLN
1	C	3729	GLN
1	C	3743	GLN
1	C	3799	GLN
1	C	3813	ASN
1	C	3870	ASN
1	C	3904	GLN
1	C	3916	GLN
1	C	3919	ASN
1	C	3926	GLN
1	C	3932	ASN

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	C	3954	HIS
1	C	3956	GLN
1	C	3965	GLN
1	C	3976	GLN
1	C	3990	ASN
1	C	3993	ASN
1	C	4098	ASN
1	C	4128	ASN
1	C	4160	GLN
1	C	4179	ASN
1	C	4192	ASN
1	C	4817	HIS
1	C	4878	GLN
1	C	4918	ASN
1	D	23	GLN
1	D	44	ASN
1	D	84	ASN
1	D	117	HIS
1	D	123	HIS
1	D	150	GLN
1	D	293	GLN
1	D	375	GLN
1	D	394	HIS
1	D	484	ASN
1	D	490	GLN
1	D	531	ASN
1	D	587	ASN
1	D	604	HIS
1	D	608	HIS
1	D	628	ASN
1	D	635	ASN
1	D	658	ASN
1	D	781	ASN
1	D	888	ASN
1	D	1147	GLN
1	D	1257	GLN
1	D	1267	HIS
1	D	1294	ASN
1	D	1631	HIS
1	D	1656	HIS
1	D	1684	GLN
1	D	1710	HIS

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Mol	Chain	Res	Type
1	D	1946	ASN
1	D	2211	ASN
1	D	2212	GLN
1	D	2218	HIS
1	D	3666	HIS
1	D	3667	GLN
1	D	3729	GLN
1	D	3743	GLN
1	D	3799	GLN
1	D	3813	ASN
1	D	3870	ASN
1	D	3904	GLN
1	D	3916	GLN
1	D	3919	ASN
1	D	3926	GLN
1	D	3932	ASN
1	D	3954	HIS
1	D	3956	GLN
1	D	3965	GLN
1	D	3976	GLN
1	D	3990	ASN
1	D	3993	ASN
1	D	4098	ASN
1	D	4128	ASN
1	D	4160	GLN
1	D	4179	ASN
1	D	4192	ASN
1	D	4817	HIS
1	D	4878	GLN
1	D	4918	ASN

### 5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

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

## 5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

## 5.6 Ligand geometry [i](#)

Of 4 ligands modelled in this entry, 4 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.

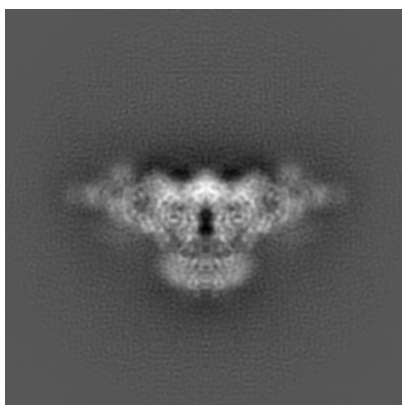
## 6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-9823. These allow visual inspection of the internal detail of the map and identification of artifacts.

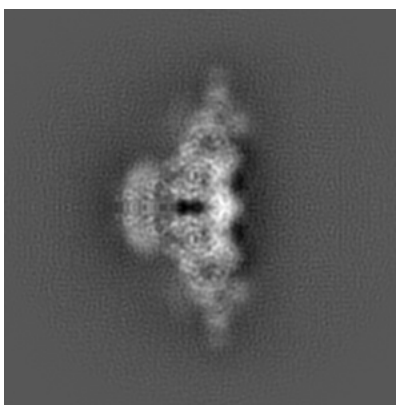
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

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

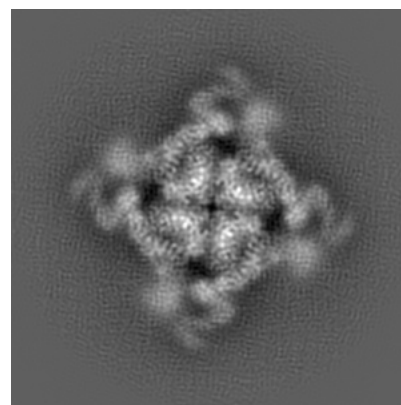
#### 6.1.1 Primary map



X



Y

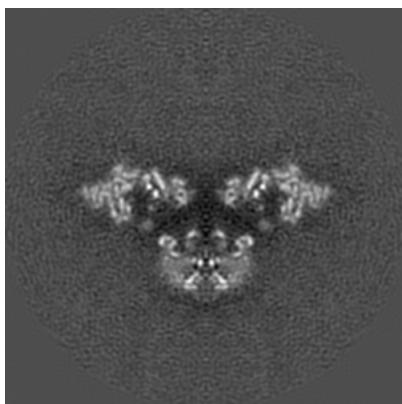


Z

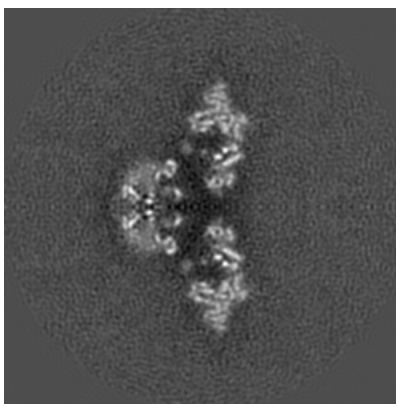
The images above show the map projected in three orthogonal directions.

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

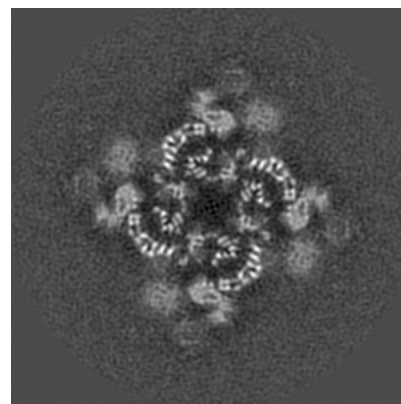
#### 6.2.1 Primary map



X Index: 100



Y Index: 100



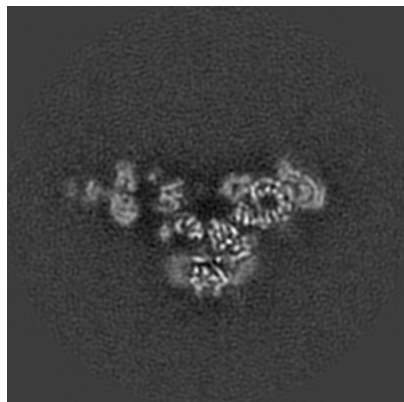
Z Index: 100



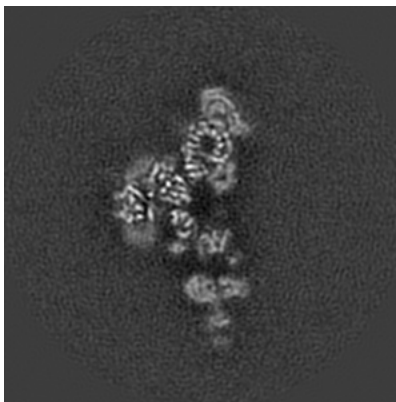
The images above show central slices of the map in three orthogonal directions.

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

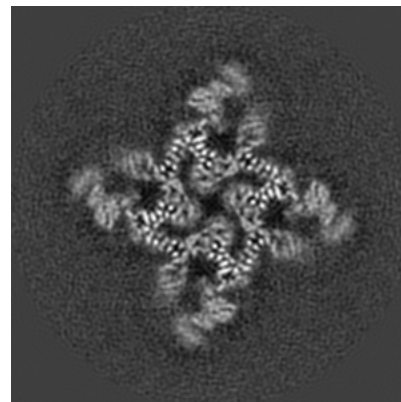
### 6.3.1 Primary map



X Index: 95



Y Index: 105

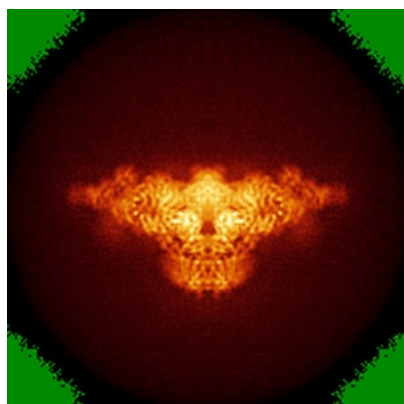


Z Index: 107

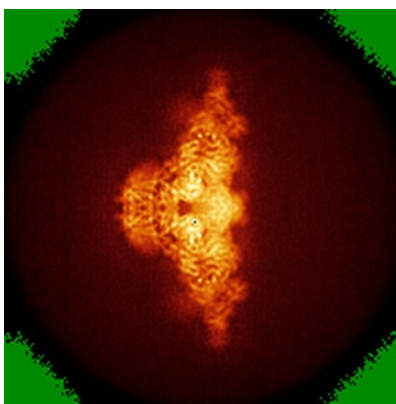
The images above show the largest variance slices of the map in three orthogonal directions.

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

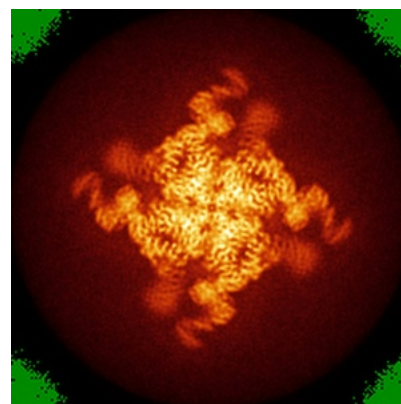
### 6.4.1 Primary map



X



Y

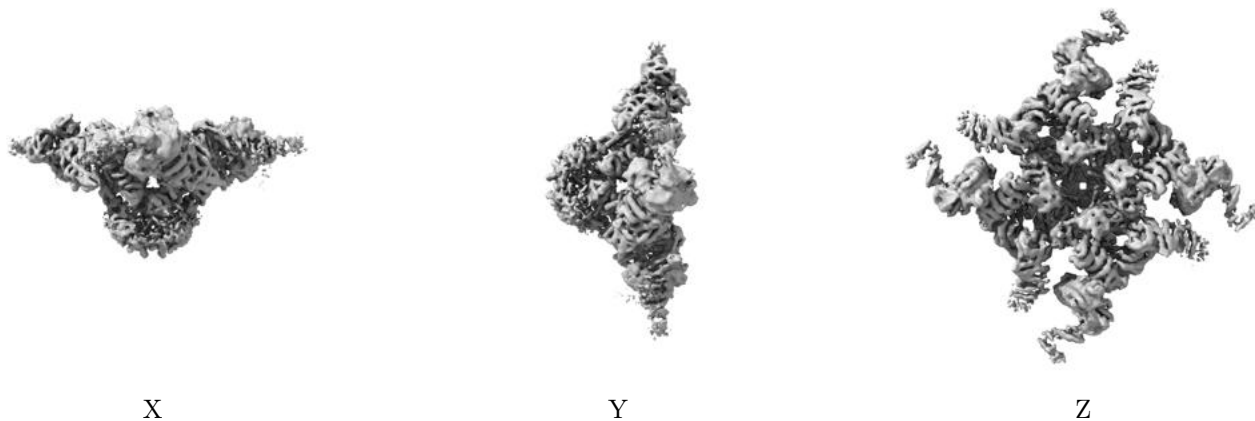


Z

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

## 6.5 Orthogonal surface views [i](#)

### 6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 0.065. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

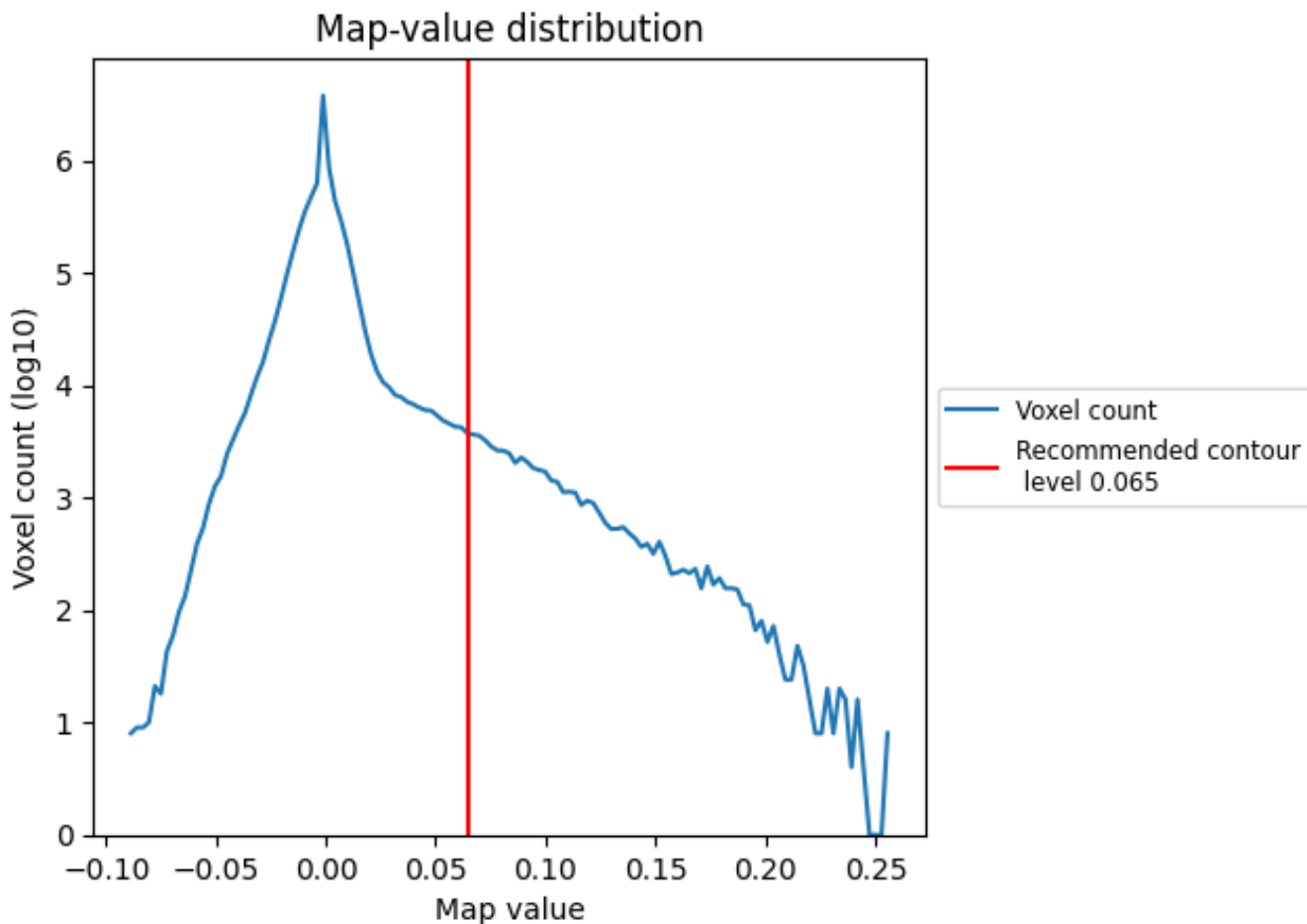
## 6.6 Mask visualisation [i](#)

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

## 7 Map analysis [i](#)

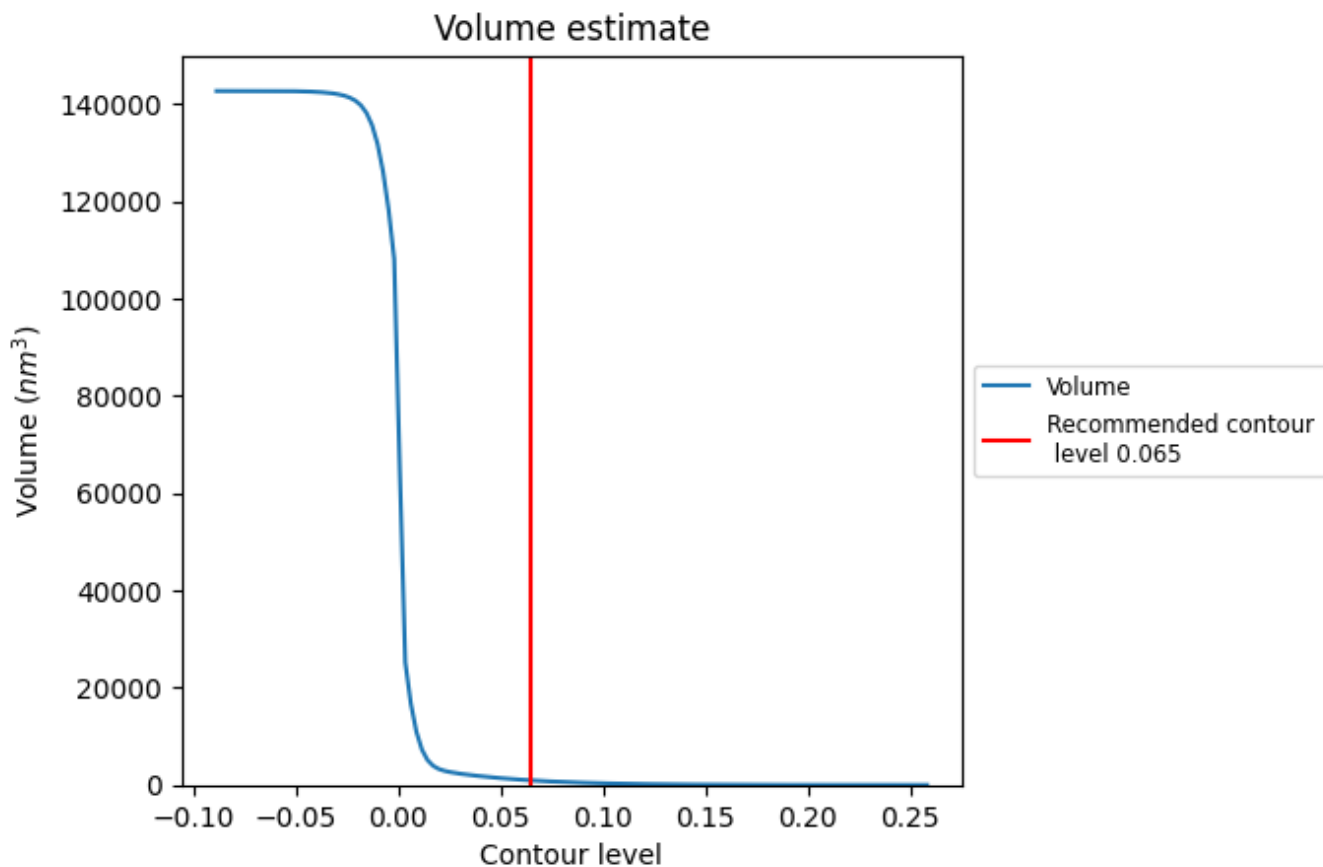
This section contains the results of statistical analysis of the map.

### 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.

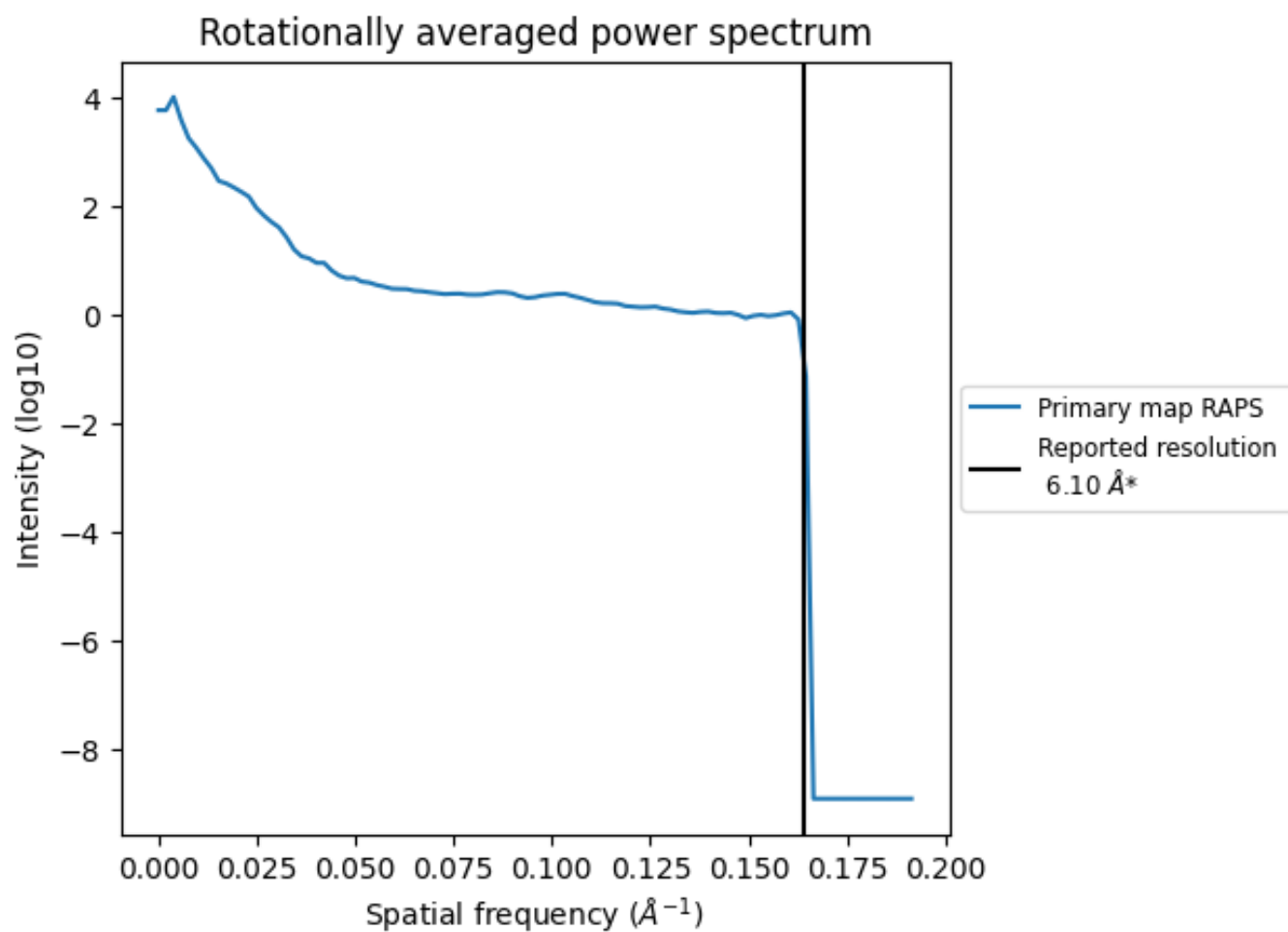
## 7.2 Volume estimate [\(i\)](#)



The volume at the recommended contour level is 947 nm<sup>3</sup>; this corresponds to an approximate mass of 855 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 i

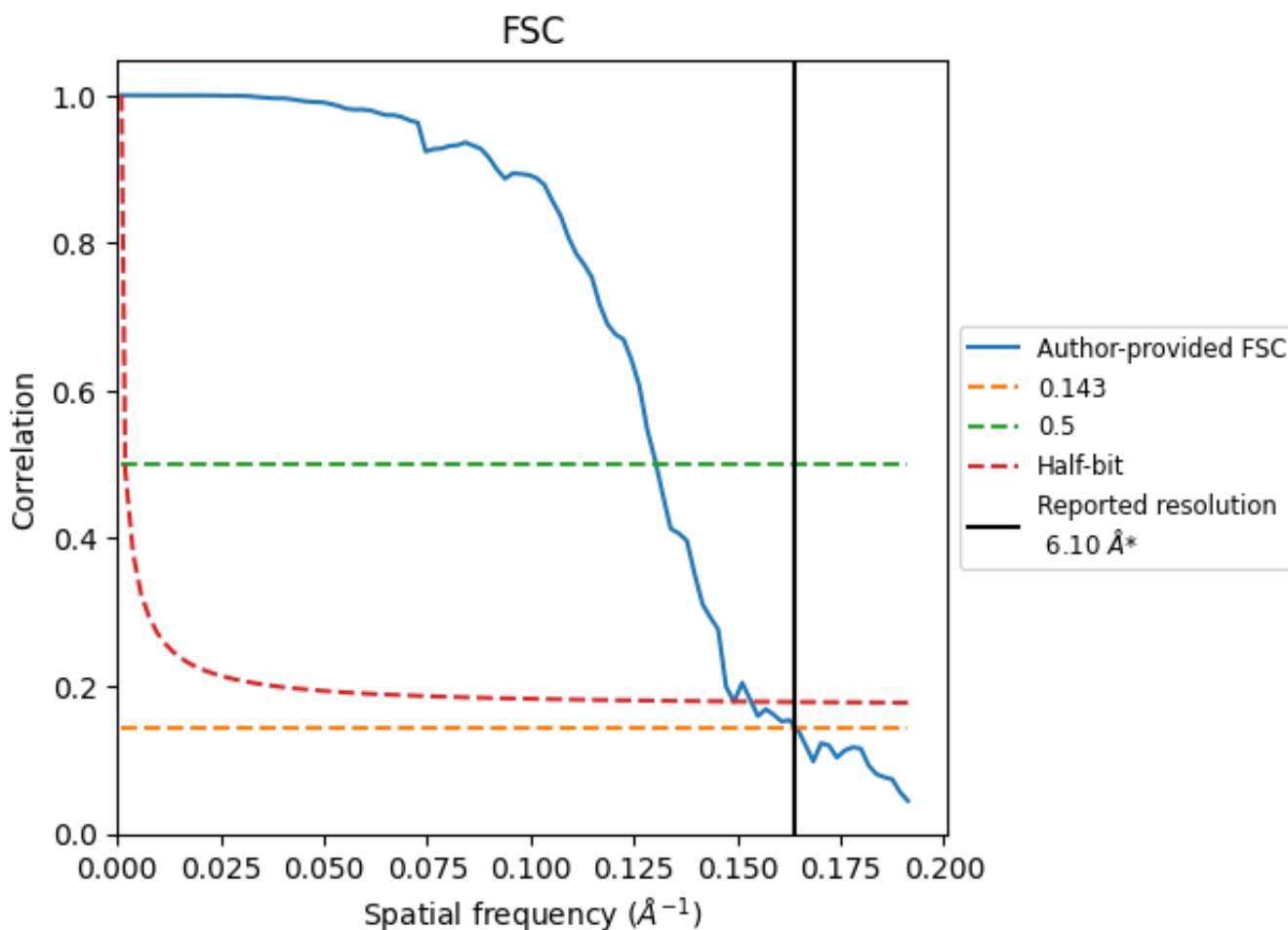


\*Reported resolution corresponds to spatial frequency of 0.164 Å<sup>-1</sup>

## 8 Fourier-Shell correlation [i](#)

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

### 8.1 FSC [i](#)



\*Reported resolution corresponds to spatial frequency of 0.164 Å<sup>-1</sup>

## 8.2 Resolution estimates [i](#)

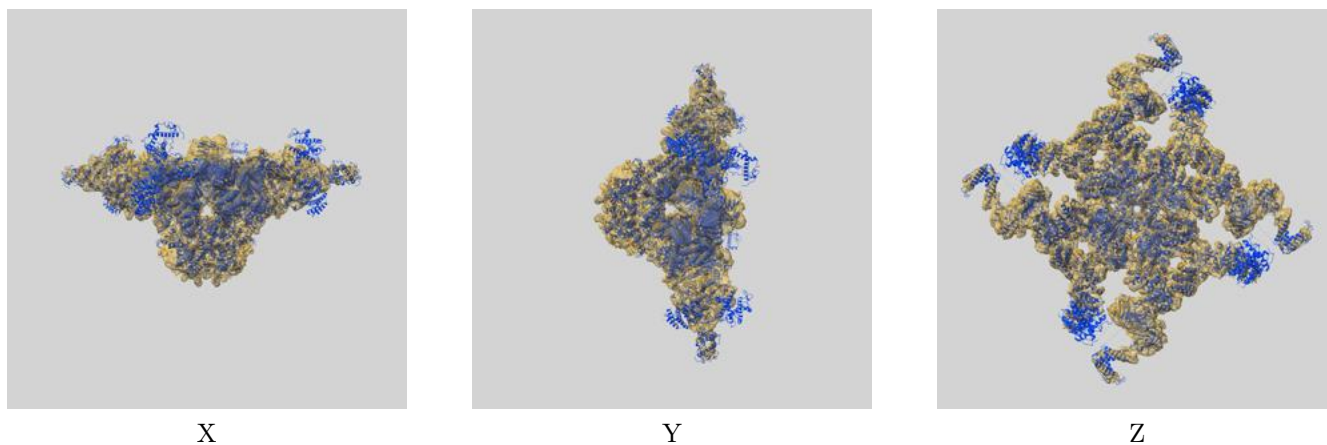
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	6.10	-	-
Author-provided FSC curve	6.09	7.67	6.70
Unmasked-calculated*	-	-	-

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

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

This section contains information regarding the fit between EMDB map EMD-9823 and PDB model 6JG3. Per-residue inclusion information can be found in section [3](#) on page [4](#).

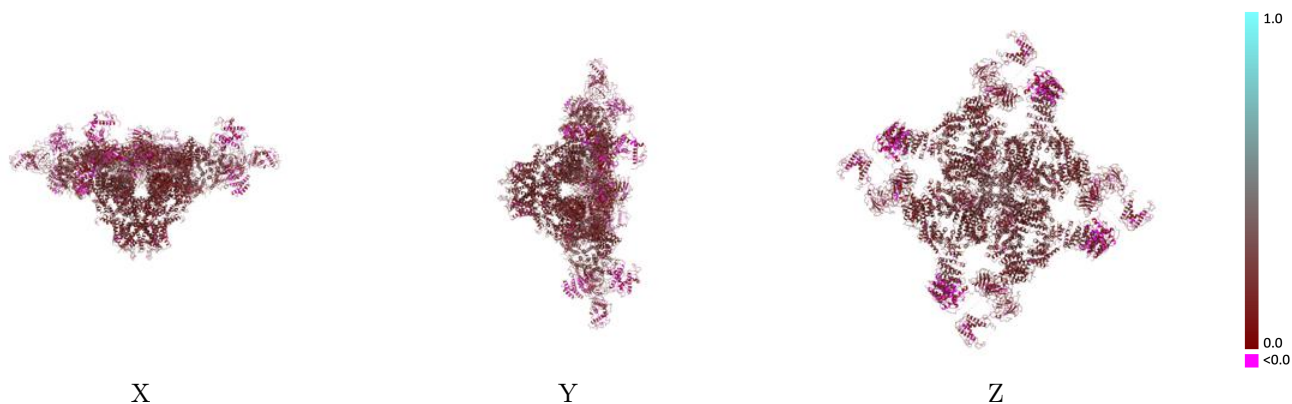
### 9.1 Map-model overlay [i](#)



The images above show the 3D surface view of the map at the recommended contour level 0.065 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.

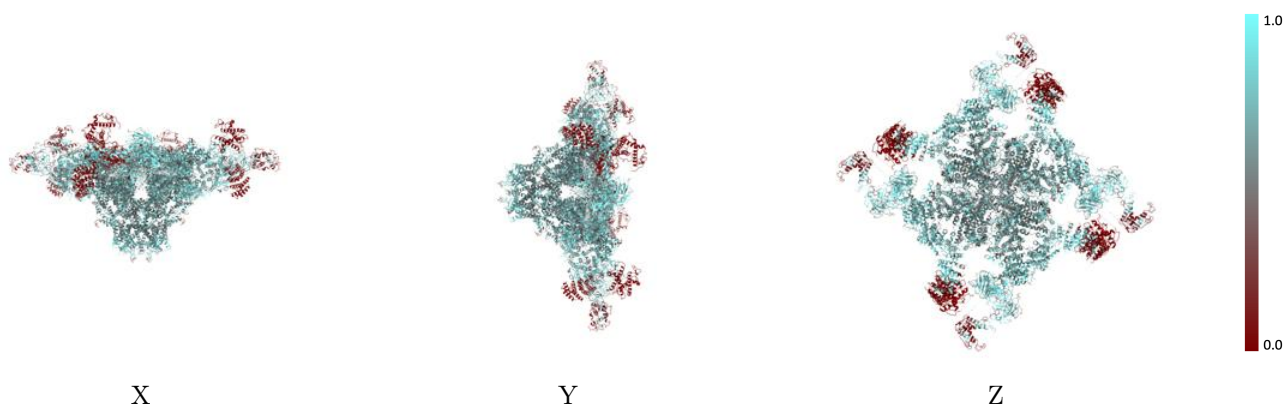


## 9.2 Q-score mapped to coordinate model [i](#)



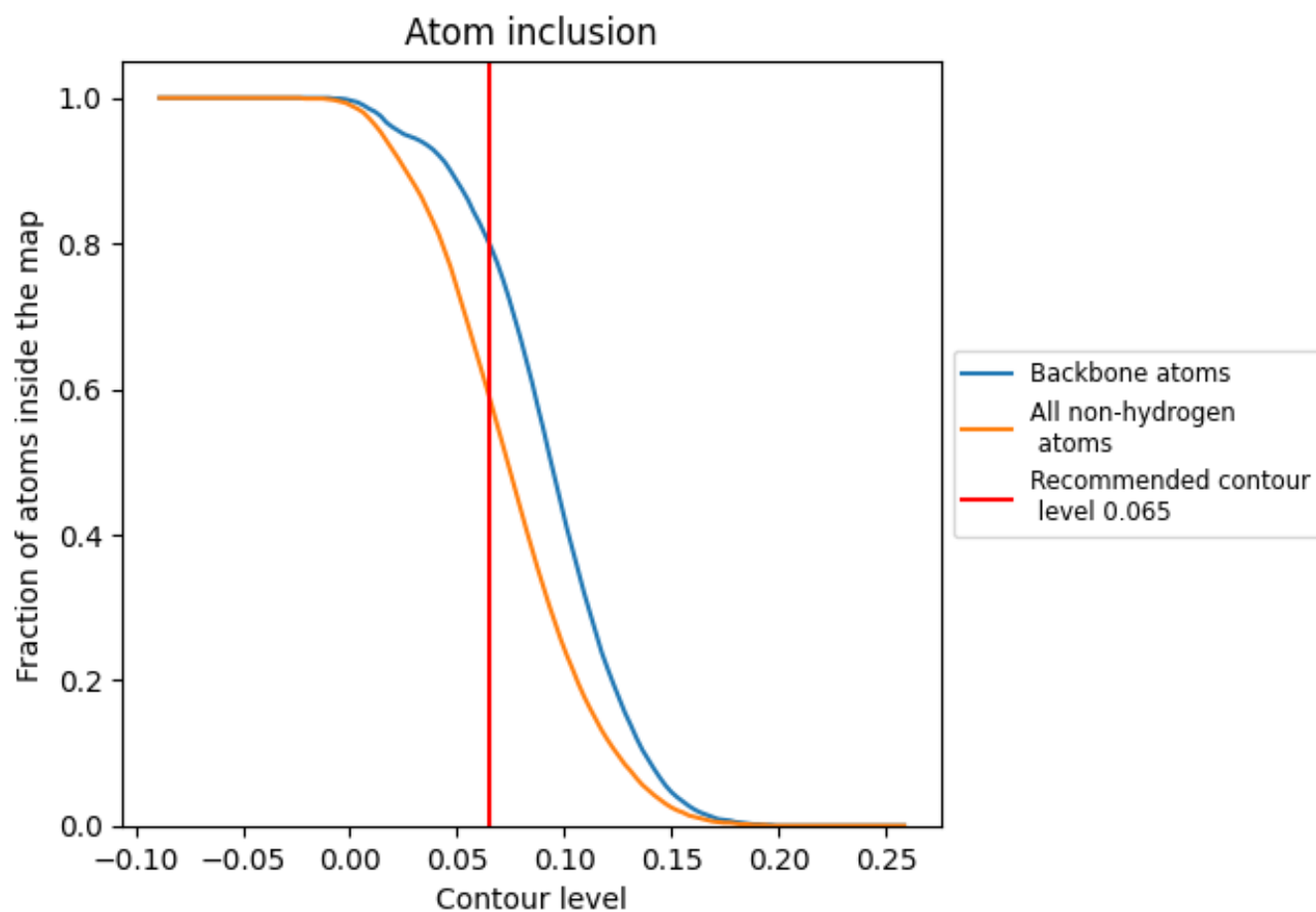
The images above show the model with each residue coloured according its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (0.065).

## 9.4 Atom inclusion [i](#)



At the recommended contour level, 80% of all backbone atoms, 59% of all non-hydrogen atoms, are inside the map.

## 9.5 Map-model fit summary [i](#)

The table lists the average atom inclusion at the recommended contour level (0.065) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.5900	 0.1840
A	 0.5900	 0.1830
B	 0.5900	 0.1850
C	 0.5900	 0.1840
D	 0.5900	 0.1840

