



Full wwPDB EM Validation Report ⓘ

Feb 25, 2024 – 10:17 AM EST

PDB ID : 7JMJ
EMDB ID : EMD-22396
Title : Functional Pathways of Biomolecules Retrieved from Single-particle Snapshots
- Frame 37 - State 5 (S5)
Authors : Dashti, A.; des Georges, A.; Frank, J.; Ourmazd, A.
Deposited on : 2020-07-31
Resolution : 4.50 Å(reported)
Based on initial model : 5TB4

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

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

A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

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

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

EMDB validation analysis : 0.0.1.dev70
MolProbity : 4.02b-467
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.36

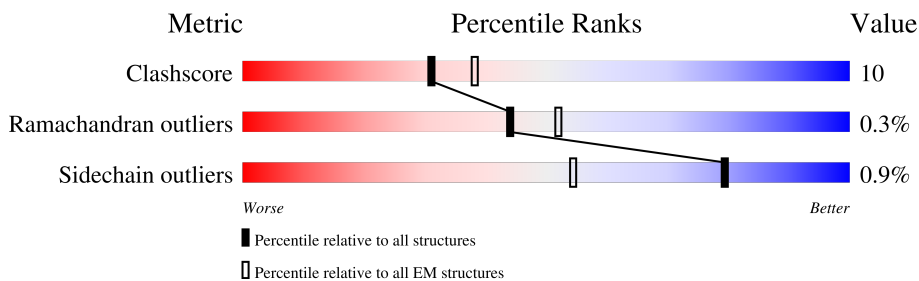
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 4.50 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	158937	4297
Ramachandran outliers	154571	4023
Sidechain outliers	154315	3826

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

Mol	Chain	Length	Quality of chain
1	A	107	36% (Upper red bar) 70% (Red) 30% (Yellow)
1	F	107	52% (Red) 73% (Red) 27% (Yellow)
1	H	107	52% (Red) 72% (Red) 28% (Yellow)
1	J	107	52% (Red) 72% (Red) 28% (Yellow)
2	B	4687	39% (Upper red bar) 70% (Red) 19% (Yellow) 11% (Grey)
2	E	4687	44% (Upper red bar) 70% (Red) 18% (Yellow) 11% (Grey)
2	G	4687	49% (Upper red bar) 70% (Red) 19% (Yellow) 11% (Grey)
2	I	4687	48% (Upper red bar) 70% (Red) 18% (Yellow) 11% (Grey)

2 Entry composition [i](#)

There are 4 unique types of molecules in this entry. The entry contains 120756 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 Peptidyl-prolyl cis-trans isomerase FKBP1B.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	A	107	Total 818	C 516	N 144	O 154	S 4	0	0
1	F	107	Total 818	C 516	N 144	O 154	S 4	0	0
1	H	107	Total 818	C 516	N 144	O 154	S 4	0	0
1	J	107	Total 818	C 516	N 144	O 154	S 4	0	0

- Molecule 2 is a protein called ryanodine receptor type 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
2	B	4168	Total 29369	C 18608	N 5202	O 5402	S 157	0	0
2	E	4168	Total 29369	C 18608	N 5202	O 5402	S 157	0	0
2	G	4168	Total 29369	C 18608	N 5202	O 5402	S 157	0	0
2	I	4168	Total 29369	C 18608	N 5202	O 5402	S 157	0	0

- Molecule 3 is ZINC ION (three-letter code: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms		AltConf
3	B	1	Total 1	Zn 1	0
3	E	1	Total 1	Zn 1	0
3	G	1	Total 1	Zn 1	0
3	I	1	Total 1	Zn 1	0

- Molecule 4 is CALCIUM ION (three-letter code: CA) (formula: Ca) (labeled as "Ligand of

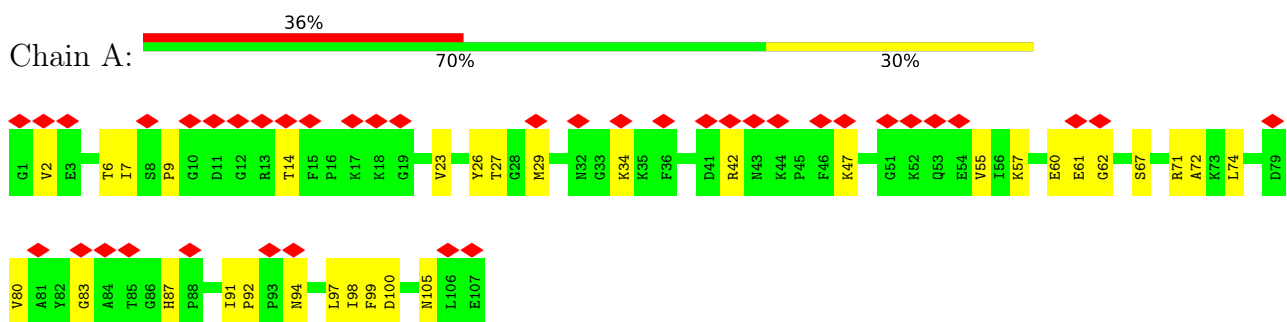
Interest" by depositor).

Mol	Chain	Residues	Atoms		AltConf
4	B	1	Total 1	Ca 1	0
4	E	1	Total 1	Ca 1	0
4	G	1	Total 1	Ca 1	0
4	I	1	Total 1	Ca 1	0

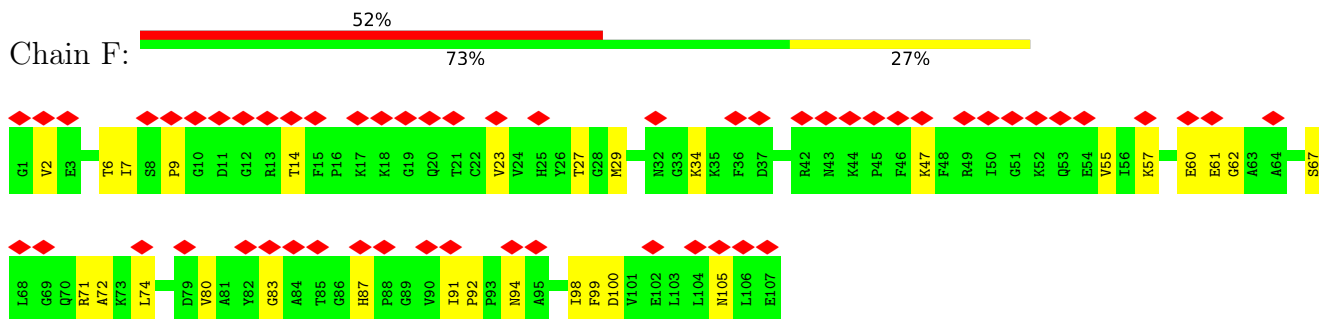
3 Residue-property plots [i](#)

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.

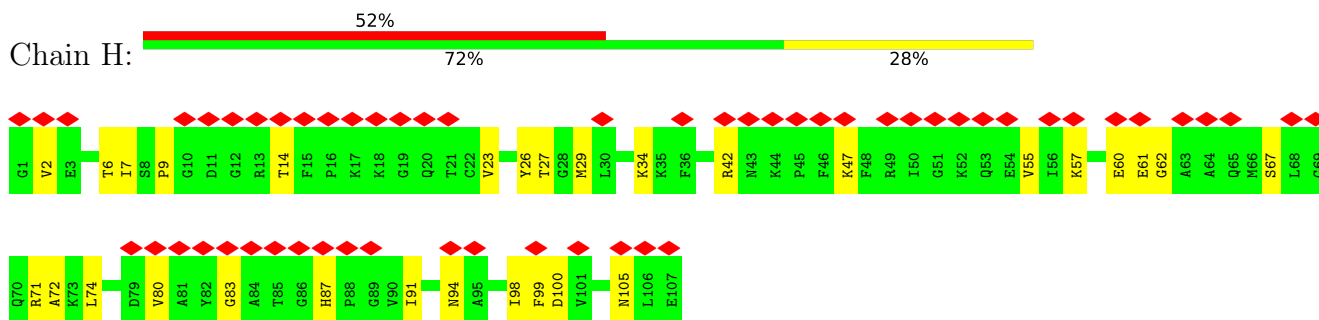
- Molecule 1: Peptidyl-prolyl cis-trans isomerase FKBP1B



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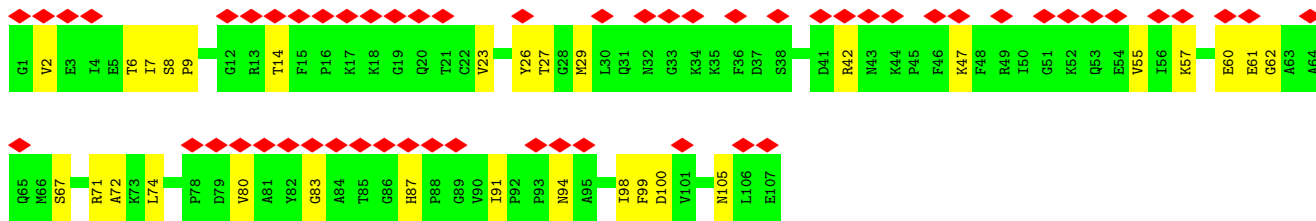


- Molecule 1: Peptidyl-prolyl cis-trans isomerase FKBP1B

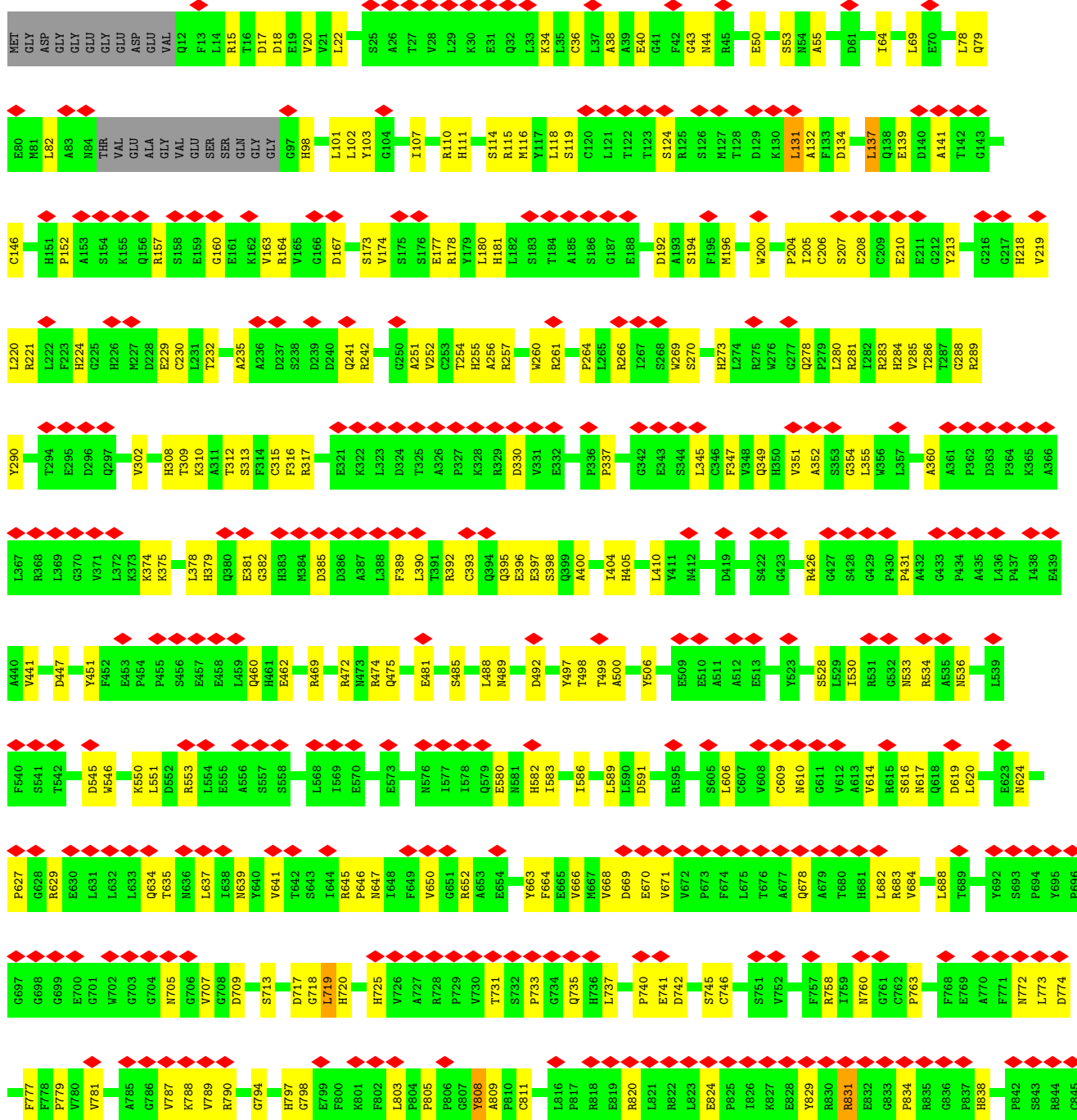


- Molecule 1: Peptidyl-prolyl cis-trans isomerase FKBP1B



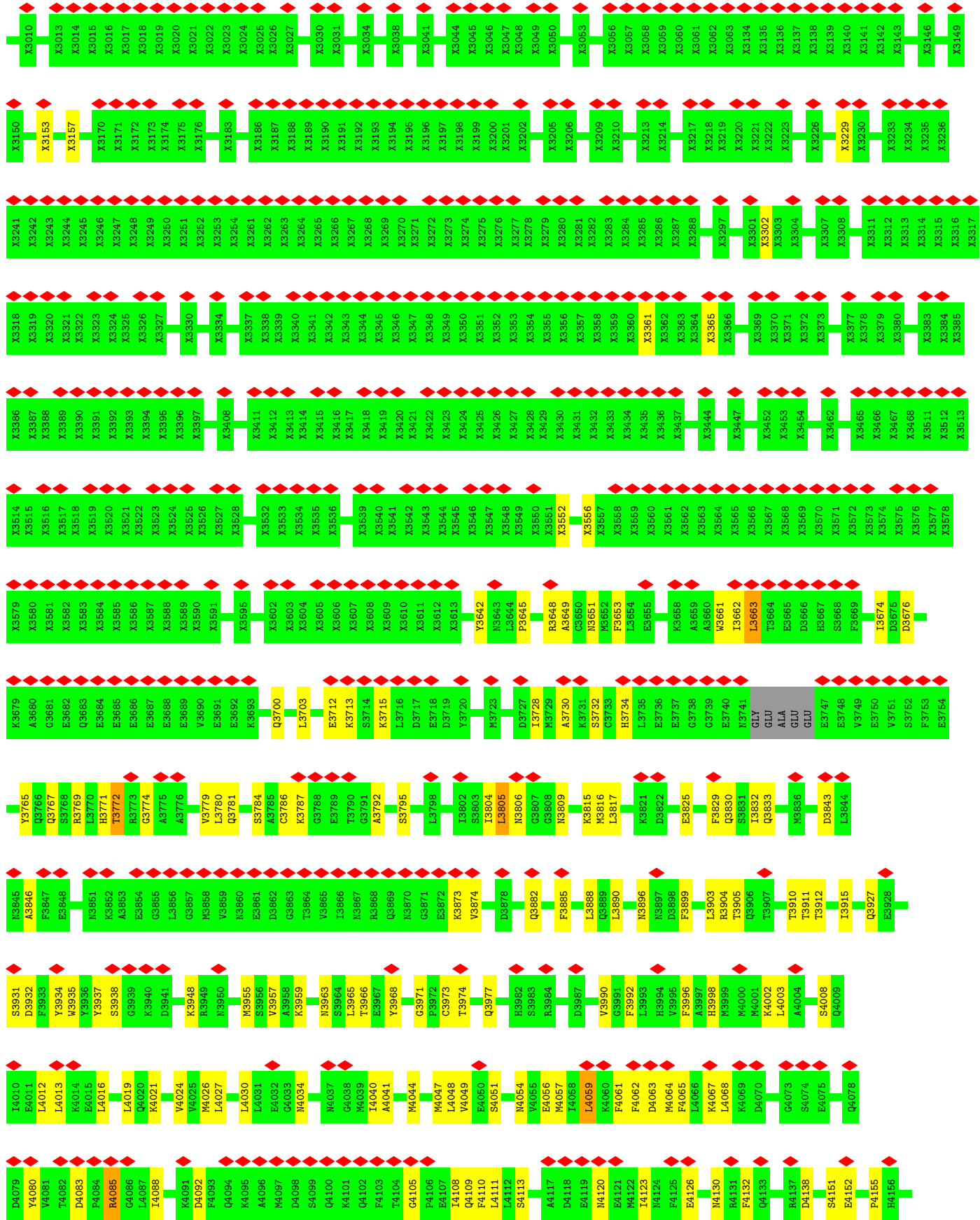


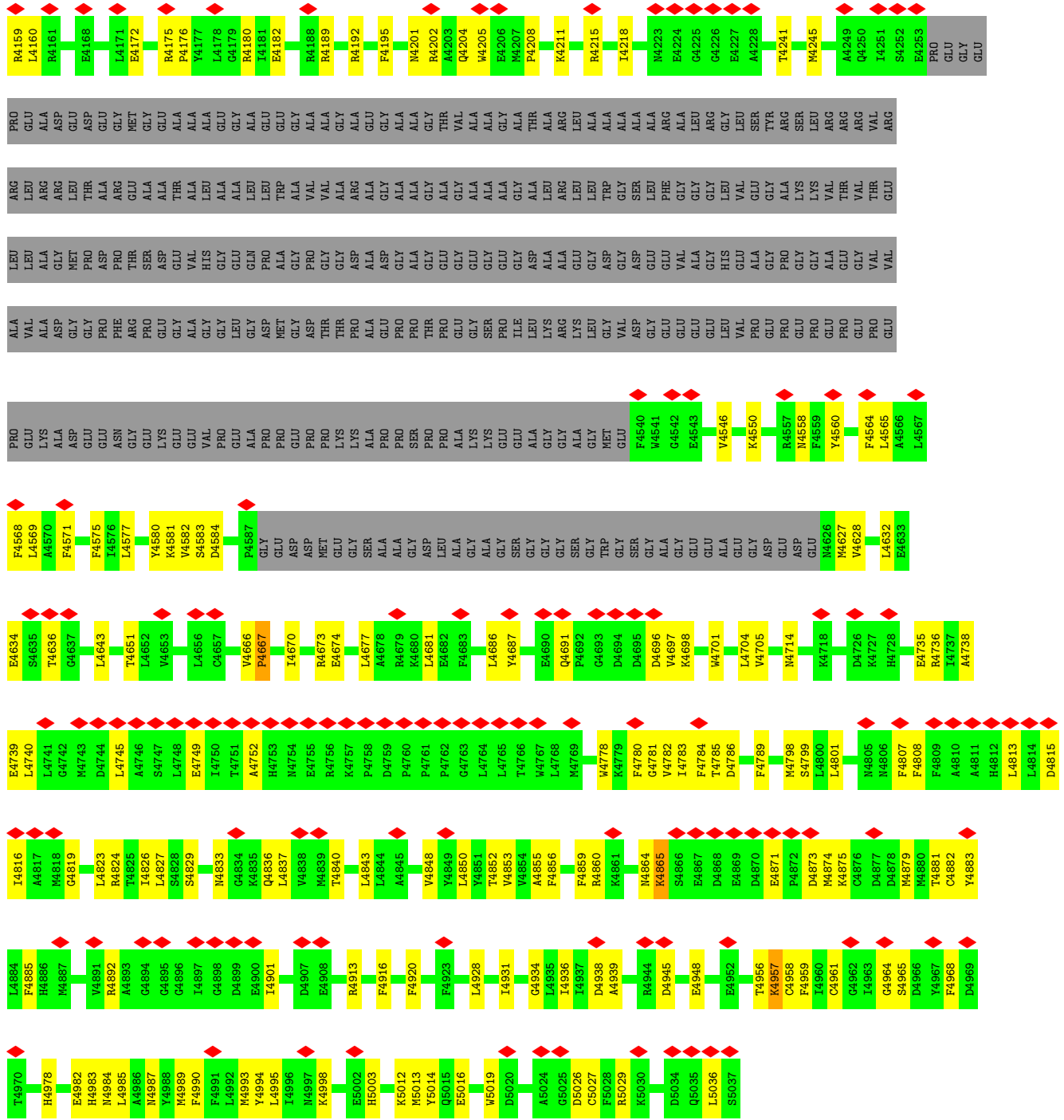
• Molecule 2: ryanodine receptor type 1



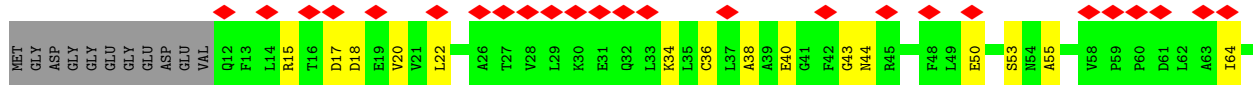
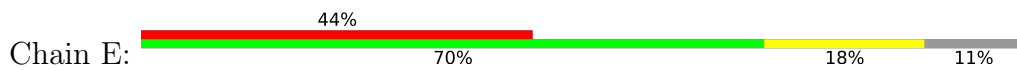
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R918	N919	Y920	Q923	M924	S925	G926	E927	T928	L929	K930	T931	L932	L933	L934	L935	G936	C937	H938	V939	G940	M941	A942	D943	E944	K945	A946	E947	D948	N949	L950	K951	K952	T953	G954	L955	P956	K957	T958	Y959	M960	M961	N963	G964	A968	D971	L972	S973	H974	V975	R976	L977	T978	P979	A980	Q981		
T982	T983	R987	L988	A989	G992	A1002	Q1003	G1004	W1005	S1006	Y1007	S1008	A1009	VAL	GLN	ASP	ILE	PRO	ALA	ARG	ARG	ASN	PRO	R1020	Y1024	R1025	D1028	E1029	A1030	T1031	K1032	R1033	S1034	N1035	R1036	D1037	S1038	L1039	C1040	Q1041	A1042	V1043	R1044	S1045	L1046	L1047	G1048	Y1049	Y1051	N1052	L1053	E1054	PRO				
PRO	ASP	GLN	GLU	PRO	SER	GLN	VAL	ASN	GLN	SER	ARG	TRP	D1070	R1071	S1072	R1073	I1074	F1075	R1076	A1077	E1078	K1079	S1080	Y1081	T1082	V1083	Q1084	S1085	W1088	D1172	F1089	A1090	E1091	F1092	E1093	A1094	V1095	T1096	T1097	R1101	V1102	G1103	W1104	A1105	R1106	P1107	E1108	L1109	C1192	P1111	D1112	V1113	E1114	L1115	G1116	A1117	D1118
H119	L120	A121	Y122	V123	F124	F129	G1140	R1141	Q1144	S1145	G1146	D1147	V1148	V1149	M1152	I1153	L1161	F1162	L1164	T1163	N1165	V1168	L1169	M1170	S1171	S1173	G1174	S1175	E1176	R1180	E1181	I1182	E1183	I1184	G1185	D1186	G1187	L1188	L1189	P1190	V1191	C1192	S1193	P1196	Q1198	V1199	G1200	H1201	L1202	N1203							
L1204	G1205	Q1206	D1207	V1208	S1209	S1210	L1211	R1212	F1213	F1214	A1215	L1216	C1217	G1218	L1219	Q1220	E1221	F1223	E1224	F1225	A1227	F1226	L1228	N1229	L1230	Q1231	R1232	P1233	V1234	T1235	F1238	S1239	K1240	S1241	L1242	P1243	Q1244	F1245	E1246	P1247	V1248	P1249	P1250	E1251	L1252	H1254	Y1255	V1257	A1258	R1259	M1260	D1261	G1262	T1263	V1264		
D1265	P1268	C1269	L1270	R1271	L1272	A1273	X1279	X1280	X1281	X1282	X1283	X1289	X1290	X1291	X1292	X1293	X1294	X1430	X1440	X1441	X1442	X1443	X1444	X1445	X1446	X1449	X1450	X1451	X1452	X1453	X1454	X1455	X1469	X1470	X1471	X1497	X1498	X1499	X1500	X1504	X1505	X1507	X1508	X1509	X1510	X1513	X1514	X1515									
X1516	X1519	X1520	X1521	X1522	X1523	X1524	X1525	X1526	X1527	X1528	X1529	X1530	X1531	X1532	X1534	X1535	X1543	X1544	X1545	X1546	X1547	X1548	X1549	X1550	X1551	X1552	X1553	X1554	A1577	A1578	M1579	F1580	L1581	E1583	R1584	K1585	M1586	F1587	Q1590	C1591	R1594	L1595	Q1598	M1599	L1600	V1603	S1604	W1605	S1606	R1607							
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D1821	G1822	G1823	Q1824	H1825	L1826	R1827	D1828	P1829	V1830	G1831	G1832	E1835	F1836	Q1837	F1838	V1839	P1840	L1841	L1842	K1843	L1844	L1848	L1849	H1850	M1851	G1852	I1853	F1854	G1855	D1856	E1857	L1858	V1859	I1862	M1865	I1866	F1871	T1872	E1873	E1874	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	GLU	
L1922	E1923	E1924	C1925	L1926	L1927	Q1928	M1929	K1930	L1931	P1932	V1935	C1940	E1944	E1950	L1951	Q1952	R1954	V1955	L1958																																						

A1959	A1960	F1961	A1962	R1964	Y1965	Q1970	Q1973	Y1977	L1978	L1979	L1980	M1981	R1982	A1983	F1984	T1985	M1986	S1987	A1988	A1989	E1990	T1991	A1992	T1995	R1996	E1997	F1998	R1999	S2000	P2001	P2002	Q2003	E2004	Q2005	T2006	N2007	R2008	H2011	F2012	K2013	A2016	D2017	E2018	E2019	D2020	C2021	P2022	L2023	P2024	T2027	R2028							
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X2617	X2618	X2619	X2620	X2623	X2624	X2625	X2626	X2627	X2631	X2632	X2635	X2641	X2644	X2645	X2646	X2647	X2648	X2650	X2651	X2652	X2653	X2654	X2655	X2656	X2657	X2658	X2670	X2671	X2672	X2673	X2674	X2675	X2676	X2677	X2683	X2686	X2687	X2688	X2689	X2690	X2691	X2692	X2693	X2694	X2695	X2696	X2697	X2698	X2699									
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T2910	L2911	T2912	A2913	K2914	E2915	A2917	R2918	D2919	R2920	E2921	K2922	A2923	Q2924	E2925	L2926	L2927	K2928	F2929	L2930	Q2931	R2932	M2933	G2934	V2935	A2936	V2937	T2938	R2939	X2942	X2943	X2944	X2945	X2946	X2947	X2948	X2949	X2950	X2951	X2952	X2953	X2954	X2955	X2956	X2959	X2960	X2961	X2965	X2968	X2995	X2996	X2997	X3003	X3004					



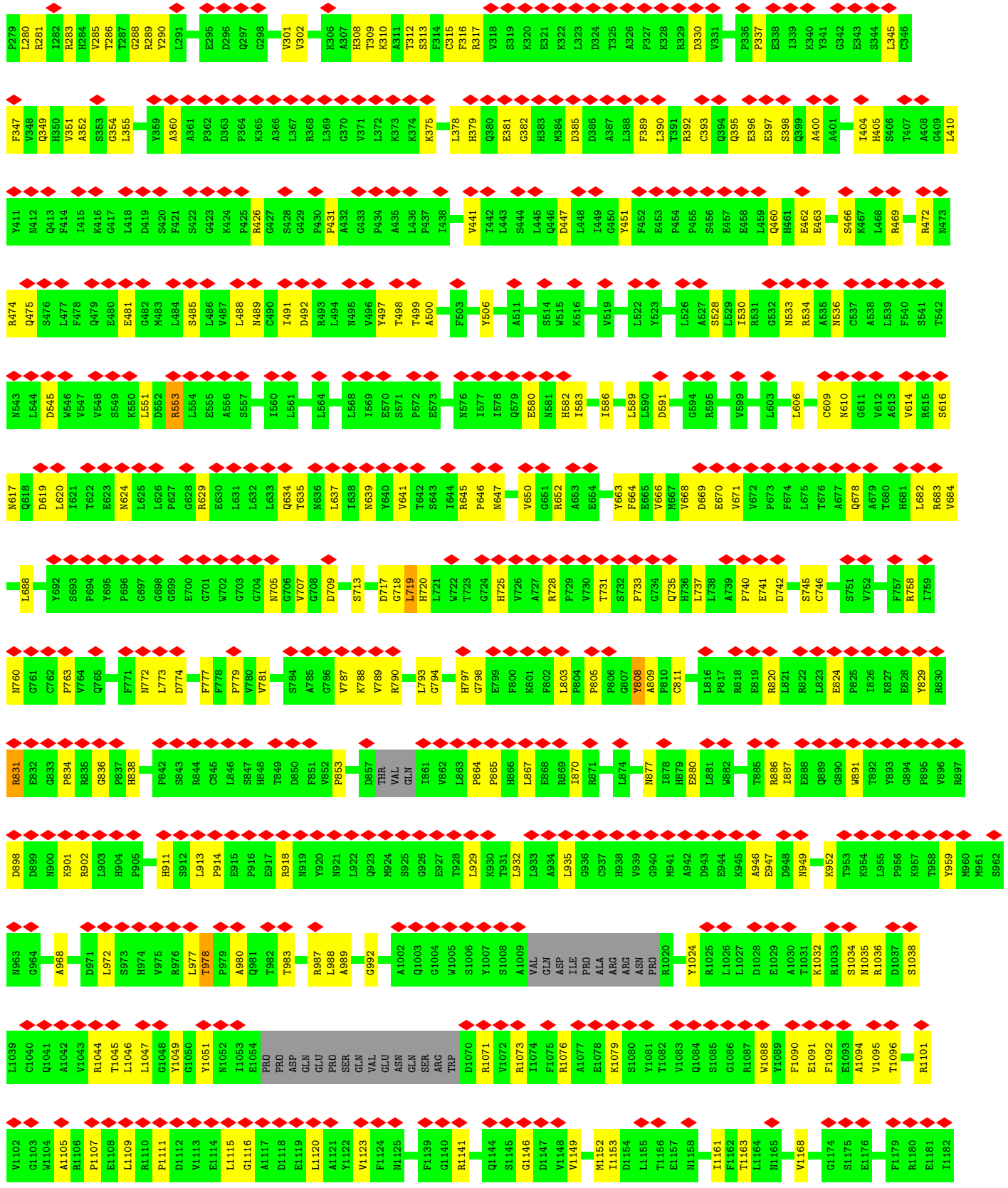


• Molecule 2: ryanodine receptor type 1



F2091	Q2092	S2093	L2094	Q2095	E2096	V2102	V2103	R2104	Q2107	V2110	V2111	E2115	L2116	A2119	H2120	L2123	L2124	H2125	R2126	Q2127	V2128	L2131	G2132	E2133	L2134	L2135	R2136	A2137	L2138	P2139	R2140	A2141	V2142	T2143	L2144	S2145	P2146	S2147	S2148	V2149	E2150	R2153	S2154	L2155	L2156	L2159	L2162	R2163																																																																							
L2166	I2167	M2170	Q2180	N2184	M2186	S2255	Y2256	L2257	K2189	Y2192	Q2193	H2194	P2195	N2196	M2198	R2199	A2200	H2204	E2205	T2206	V2207	V2212	N2213	V2214	L2215	G2216	G2217	G2218	E2219	L2220	K2221	E2222	I2223	P2226	K2227	M2228	V2229	T2230	S2231	C2232	C2233	R2234	F2235	L2236	C2237	Y2238	R2241	I2242	S2243	R2244																																																																					
G2245	N2246	Q2247	R2248	F2251	D2252	H2253	L2254	S2255	Y2256	L2257	L2258	G2261	I2263	G2264	L2265	G2266	M2267	G2268	G2269	S2270	L2273	D2274	V2275	A2276	A2277	A2278	I2281	D2282	N2283	G2284	E2285	L2286	A2287	L2288	A2289	L2290	Q2291	E2292	Q2293	D2294	L2295	V2298	V2299	L2302	C2310	P2311	M2312	L2313	L2314	A2315																																																																					
Y2318	P2319	D2320	I2321	C2326	E2329	R2330	R2336	F2340	V2341	N2342	G2343	E2344	S2345	V2346	E2347	E2348	N2351	R2355	I2358	R2359	C2363	F2364	L2368	R2369	E2370	E2371	G2372	G2373	S2374	G2375	L2376	L2377	A2378	E2381	E2388	E2389	P2390	P2395	GLY	VAL	ARG	ARG	ASP	ARG	ARG	ARG	ARG	GLU																																																																							
HIS	PHE	GLY	GLU	PRO	PRO	GLU	GLU	N2414	R2415	S2424	A2428	L2429	I2430	D2431	L2432	R2435	C2436	M2440	H2441	L2442	I2443	Q2444	A2445	G2446	K2447	G2448	E2449	A2450	L2451	R2452	L2453	R2454	A2455	L2456	L2457	R2458	S2459	L2460	V2461	P2462	D2464	D2465	L2466	V2467	G2468	I2469	L2470	S2471	L2472	P2473	L2474	Q2475	I2476																																																																		
P2477	T2478	L2479	X2487	X2488	X2500	X2501	X2502	X2503	X2507	X2510	X2511	X2512	X2513	X2514	X2515	X2516	X2517	X2518	X2521	X2522	X2533	X2536	X2537	X2555	X2556	X2557	X2560	X2561	X2562	X2563	X2564	X2565	X2566	X2567	X2568	X2582	X2583	X2584	X2585	X2586	X2587	X2588	X2589	X2590	X2591	X2599	X2602	X2603																																																																							
X2604	X2605	X2610	X2611	X2612	X2613	X2614	X2615	X2616	X2617	X2618	X2619	X2620	X2621	X2622	X2623	X2624	X2625	X2626	X2627	X2628	X2629	X2641	X2644	X2645	X2646	X2647	X2649	X2650	X2651	X2652	X2653	X2654	X2655	X2656	X2662	X2665	X2672	X2673	X2674	X2675	X2676	X2677	X2678	X2679	X2683	X2686	X2687	X2688	X2689																																																																						
X2690	X2691	X2692	X2693	X2694	X2695	X2696	X2697	X2698	X2699	X2700	X2701	X2702	X2703	X2704	X2705	X2706	X2707	X2708	X2709	X2710	X2711	X2712	X2713	X2714	X2715	X2716	X2717	X2718	X2719	X2720	X2721	X2722	X2723	X2724	X2725	X2726	X2727	X2728	X2729	X2730	X2731	X2732	X2733	X2734	X2735	D2736	P2737	R2738	P2739	V2740	E2741	T2742	L2743	M2744	V2745	I2746	I2747	P2748	E2749	K2750	L2751	D2752	S2753	F2754	I2755	M2756	K2757	F2758	A2759	E2760	V2761	T2762	H2763	E2764	K2765	W2766	A2767	F2768	D2769	K2770	I2771	Q2772	N2773	W2774	W2775	S2776	G2778	E2779																															
M2780	V2781	D2782	E2783	L2784	L2785	K2786	T2787	H2788	P2789	M2790	L2791	R2792	P2793	Y2794	K2795	T2796	F2797	S2798	E2799	R2800	D2801	K2802	E2803	L2804	V2805	R2806	W2807	P2808	L2809	K2810	E2811	L2812	L2813	K2814	A2815	M2816	L2817	A2818	W2819	E2820	W2821	T2822	L2823	E2824	K2825	A2826	R2827	E2828	E2829	E2830	GLU	GLU	THR	THR	GLU	LYS	LYS	LYS	THR																																																												
ARG	LYS	ILE	SER	THR	ALA	GLN	THR	TYR	ASP	PRO	ARG	GLY	V2855	M2856	P2857	Q2858	P2859	D2861	L2862	S2863	G2864	V2865	L2866	S2868	R2869	E2870	L2871	Q2872	A2873	M2874	E2875	E2876	Q2877	L2878	A2879	E2880	N2881	Y2882	H2883	N2884	T2885	W2886	R2888	K2889	K2890	K2891	Q2892	E2893	L2894	E2895	A2896	K2897	G2898	G2899																																																																	
G2900	T2901	H2902	P2903	L2904	L2905	V2906	P2907	Y2908	D2909	T2910	L2911	T2912	A2913	K2914	E2915	P2916	A2917	R2918	D2919	R2920	E2921	K2922	A2923	Q2924	E2925	L2926	L2927	L2928	F2929	L2930	Q2931	M2932	N2933	G2934	Y2935	A2936	V2937	T2938	R2939	E2940	X2941	X2942	X2943	X2944	X2945	X2946	X2947	X2948	X2949	X2950	X2951	X2952	X2953	X2956	X2959	X2964	X2965																																																														
X2968	X2971	X2972	X2975	X2976	X2977	X2978	X2979	X3001	X3009	X3013	X3014	X3015	X3016	X3017	X3018	X3019	X3020	X3021	X3022	X3023	X3024	X3025	X3026	X3027	X3028	X3032	X3045	X3046	X3047	X3048	X3049	X3050	X3051	X3052	X3053	X3056	X3057	X3060	X3061	X3062	X3063	X3064	X3065	X3066	X3067	X3068	X3069	X3070	X3071	X3072	X3073	X3074	X3075	X3076	X3077	X3078	X3079	X3080	X3081	X3082	X3083	X3084	X3085	X3086	X3087	X3088	X3089	X3090	X3091	X3092	X3093	X3094	X3095	X3096	X3097	X3098	X3099	X3100	X3101	X3102	X3103	X3104	X3105	X3106	X3107	X3108	X3109	X3110	X3111	X3112	X3113	X3114	X3115	X3116	X3117	X3118	X3119	X3120	X3121	X3122	X3123	X3124	X3125	X3126	X3127	X3128	X3129	X3130	X3131	X3132	X3133	X3134	X3135	X3136	X3137	X3138	X3139	X3140	X3143
X3158	X3161	X3162	X3163	X3170	X3171	X3172	X3173	X3174	X3177	X3186	X3187	X3188	X3189	X3190	X3191	X3192	X3193	X3194	X3195	X3196	X3197	X3200	X3214	X3215	X3216	X3217	X3218	X3219	X3220	X3221	X3229	X3234	X3235	X3236	X3241	X3242	X3243	X3244	X3245	X3246	X3247	X3248	X3249	X3250	X3251	X3252	X3253	X3254	X3261	X3262	X3263	X3264																																																																			

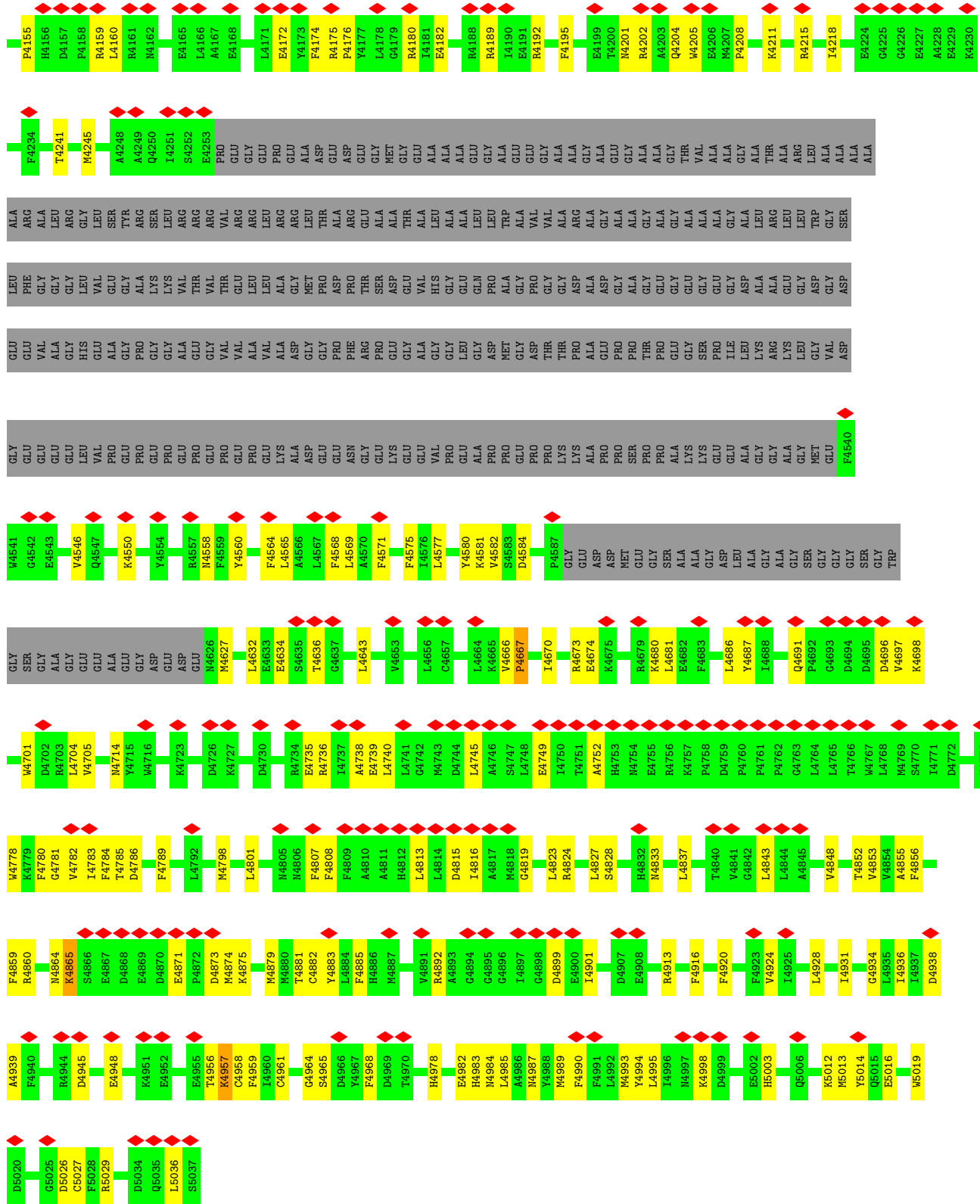
ALA	E4121	ALA	M4054	Y3968	V3874	S3796	SS732	H3667	X3563	X3424	X3346	X3265
ALA	M4122	ALA	V4055	G3971	M3875	K3799	C3733	S3668	X3564	X3425	X3347	X3266
ALA	I4123	ALA	E4056	P3972	A3876	K3799	H3734	F3669	X3565	X3426	X3348	X3269
ARG	M4124	ARG	M4057	C3973	D3877	L3800	L3735	E3670	X3566	X3427	X3349	X3270
ALA	F4125	ARG	I4058	T3974	D3878	G3801	E3736	D3671	X3567	X3428	X3350	X3271
LEU	E4126	LEU	L4059	E3977	E3979	I3802	E3737	R3672	X3568	X3429	X3351	X3272
GLY	M4130	LEU	F4062	Q3977	Q3882	S3803	G3738	M3673	X3569	X3430	X3352	X3273
LEU	F4131	LEU	D4063	R3984	D3883	L3805	G3739	I3674	X3570	X3431	X3353	X3274
SER	F4132	SER	D4063	R3984	D3883	L3805	G3739	D3675	X3571	X3432	X3354	X3275
ARG	Q4133	ARG	F4065	A3988	F3885	M3806	E3740	D3676	X3572	X3433	X3355	X3276
SER	E4134	SER	M4064	V3989	F3885	G3807	E3740	D3676	X3573	X3434	X3356	X3277
LEU	R4137	LEU	L4066	V3990	R3886	G3808	GLY	K3679	X3574	X3435	X3357	X3278
ARG	R4137	ARG	K4067	G3991	F3887	N3809	ALA	A3680	X3575	X3436	X3358	X3279
ARG	D4138	ARG	F3992	F3992	L3888	N3809	GLU	S3681	X3576	X3437	X3359	X3280
ARG	E4253	ARG	K4069	Q3889	Q3889	K3815	GLU	E3682	X3577	X3438	X3360	X3281
VAL	F4141	VAL	D4070	L3990	L3990	M3816	E3747	Q3683	X3578	X3439	X3361	X3282
ARG	G4073	ARG	A3997	E3893	E3893	L3817	E3748	Q3683	X3579	X3440	X3362	X3283
GLY	S4151	GLY	H3998	E3893	E3893	D3818	V3749	E3684	X3580	X3441	X3363	X3284
LEU	E4152	LEU	M3999	M3999	M3999	L3818	E3749	E3684	X3581	X3442	X3364	X3285
ARG	P4155	ARG	M4000	M4000	M4000	Y3819	E3750	E3686	X3582	X3443	X3365	X3286
LEU	P4155	LEU	K4002	K4002	K4002	E3750	V3751	E3687	X3583	X3444	X3366	X3287
LEU	R4159	LEU	L4003	L4003	L4003	K3823	SS752	E3688	X3584	X3445	X3367	X3288
ALA	L4160	ALA	L4004	L4004	L4004	K3824	F3753	E3689	X3585	X3446	X3368	X3289
ALA	F4163	ALA	A4004	A4004	A4004	E3825	E3754	V3690	X3586	X3447	X3369	X3290
ALA	F4163	ALA	S4008	S4008	S4008	F3829	E3755	E3691	X3587	X3448	X3370	X3291
GLY	E4172	GLY	Q4009	Q4009	Q4009	Q3830	E3759	E3692	X3588	X3449	X3371	X3292
ALA	Y4173	ALA	I4010	I4010	I4010	S3831	E3759	E3692	X3589	X3450	X3372	X3293
ALA	F4174	ALA	E4011	E4011	E4011	Q3832	E3759	E3692	X3590	X3451	X3373	X3294
ALA	R4175	ALA	L4012	L4012	L4012	Q3833	E3762	K3694	X3591	X3452	X3374	X3295
ALA	P4176	ALA	L4013	L4013	L4013	Q3833	K3762	K3694	X3592	X3453	X3375	X3296
LEU	I4088	LEU	K4014	K4014	K4014	L3842	Y3765	P3697	X3593	X3454	X3376	X3297
LEU	K4091	LEU	E4015	E4015	E4015	D3843	Q3766	L3698	X3594	X3455	X3377	X3298
GLY	D4092	GLY	L4016	L4016	L4016	D3843	Q3767	L3699	X3595	X3456	X3378	X3299
ALA	A4095	ALA	L4019	L4019	L4019	L3844	Y3766	L3699	X3596	X3457	X3379	X3300
ALA	E4182	ALA	D3932	D3932	D3932	L3844	Q3767	H3699	X3597	X3458	X3380	X3301
VAL	A4186	VAL	S3931	S3931	S3931	M3846	SS768	Q3700	X3598	X3459	X3381	X3302
VAL	S4187	VAL	D3933	D3933	D3933	A3846	R3769	L3701	X3599	X3460	X3382	X3303
ALA	R4188	ALA	Y3934	Y3934	Y3934	E3847	V3702	L3701	X3600	X3461	X3383	X3304
ALA	R4189	ALA	W3935	W3935	W3935	F3847	H3771	L3703	X3601	X3462	X3384	X3305
ALA	R4189	ALA	V4024	V4024	V4024	N3851	T3772	H3704	X3610	X3463	X3385	X3306
GLY	S4187	GLY	L4027	L4027	L4027	K3852	G3773	T3708	X3611	X3464	X3386	X3307
ALA	R4188	ALA	L4028	L4028	L4028	A3853	G3774	A3709	X3612	X3465	X3387	X3308
ALA	R4189	ALA	L4028	L4028	L4028	E3854	A3775	L3710	X3613	X3466	X3388	X3309
ALA	R4189	ALA	E4032	E4032	E4032	G3855	A3776	L3710	X3614	X3467	X3389	X3310
ALA	R4189	ALA	G4033	G4033	G4033	L3856	E3777	L3711	X3615	X3468	X3390	X3311
ALA	R4189	ALA	M4034	M4034	M4034	L3857	M3778	E3712	X3616	X3469	X3391	X3312
ALA	R4189	ALA	I4040	I4040	I4040	G3857	M3778	E3712	X3617	X3470	X3392	X3313
ALA	R4189	ALA	I4040	I4040	I4040	M3857	V3779	K3713	X3618	X3471	X3393	X3314
ALA	R4189	ALA	A4041	A4041	A4041	V3859	L3780	S3714	X3619	X3472	X3394	X3315
ALA	R4189	ALA	A4041	A4041	A4041	M3860	K3782	T3646	X3620	X3473	X3395	X3316
ALA	R4189	ALA	M4044	M4044	M4044	E3861	M3783	H3647	X3621	X3474	X3396	X3317
ALA	R4189	ALA	M4047	M4047	M4047	D3862	SS784	R3648	X3622	X3475	X3397	X3318
ALA	R4189	ALA	L4046	L4046	L4046	G3863	C3785	E3649	X3623	X3476	X3398	X3319
ALA	R4189	ALA	E4050	E4050	E4050	T3864	C3786	N3651	X3624	X3477	X3399	X3320
ALA	R4189	ALA	E4051	E4051	E4051	T3864	K3787	M3652	X3625	X3478	X3400	X3321
ALA	R4189	ALA	E4051	E4051	E4051	V3865	G3788	F3653	X3626	X3479	X3401	X3322
ALA	R4189	ALA	E4051	E4051	E4051	V3866	L3788	L3644	X3627	X3480	X3402	X3323
ALA	R4189	ALA	E4051	E4051	E4051	L3866	T3790	P3645	X3628	X3481	X3403	X3324
ALA	R4189	ALA	E4051	E4051	E4051	N3867	G3791	T3646	X3629	X3482	X3404	X3325
ALA	R4189	ALA	E4051	E4051	E4051	R3868	A3792	H3647	X3630	X3483	X3405	X3326
ALA	R4189	ALA	E4051	E4051	E4051	Q3869	K3792	R3645	X3631	X3484	X3406	X3327
ALA	R4189	ALA	E4051	E4051	E4051	M3870	H3793	T3646	X3632	X3485	X3407	X3328
ALA	R4189	ALA	E4051	E4051	E4051	G3871	V3794	E3665	X3633	X3486	X3408	X3329
ALA	R4189	ALA	E4051	E4051	E4051	E3872	SS795	D3666	X3634	X3487	X3409	X3330
ALA	R4189	ALA	E4051	E4051	E4051	K3873		D3666	X3635	X3488	X3410	X3331
ALA	R4189	ALA	E4051	E4051	E4051			D3666	X3636	X3489	X3411	X3332
ALA	R4189	ALA	E4051	E4051	E4051			D3666	X3637	X3490	X3412	X3333
ALA	R4189	ALA	E4051	E4051	E4051			D3666	X3638	X3491	X3413	X3334
ALA	R4189	ALA	E4051	E4051	E4051			D3666	X3639	X3492	X3414	X3335
ALA	R4189	ALA	E4051	E4051	E4051			D3666	X3640	X3493	X3415	X3336
ALA	R4189	ALA	E4051	E4051	E4051			D3666	X3641	X3494	X3416	X3337
ALA	R4189	ALA	E4051	E4051	E4051			D3666	X3642	X3495	X3417	X3338
ALA	R4189	ALA	E4051	E4051	E4051			D3666	X3643	X3496	X3418	X3339
ALA	R4189	ALA	E4051	E4051	E4051			D3666	X3644	X3497	X3419	X3340
ALA	R4189	ALA	E4051	E4051	E4051			D3666	X3645	X3498	X3420	X3341
ALA	R4189	ALA	E4051	E4051	E4051			D3666	X3646	X3499	X3421	X3342
ALA	R4189	ALA	E4051	E4051	E4051			D3666	X3647	X3500	X3422	X3343
ALA	R4189	ALA	E4051	E4051	E4051			D3666	X3648	X3501	X3423	X3344
ALA	R4189	ALA	E4051	E4051	E4051			D3666	X3649	X3502	X3424	X3345



K2221	E2285	K2360	L2433	X2511	X2605	X2678	K2770	E2850	K2890	X2952	X3050	X3221
L2286	L2286	P2361	G2434	X2512	X2606	X2679	I2771	GLU	K2891	X2953	X3051	X3229
A2287	A2287	E2362	R2435	X2513	X2607	X2682	Q2772	GLU	K2892	X2954	X3052	
L2288	L2288	C2363	C2436	X2514	X2608	X2683	N2773	ARG	E2893	X2955	X3053	
A2289	A2289	F2364	A2437	X2515	X2609	X2684	N2774	THR	L2894	X2956	X3054	
L2290	L2290	G2365	M2440	X2516	X2610	X2685	W2775	GLU	E2895	X2957	X3055	
Q2291	Q2291	L2368	H2441	X2517	X2611	X2686	S2776	LYS	A2896	X2958	X3056	
T2930	T2930	R2369	L2442	X2518	X2612	X2687	Y2777	LYS	K2897	X2959	X3057	
S2231	S2231	Q2293	L2443	X2519	X2613	X2688	Z2778	THR	G2898	X2960	X3058	
R2234	R2234	D2294	Q2444	X2520	X2614	X2689	E2779	ARG	G2899	X2961	X3059	
F2235	F2235	L2295	A2445	X2521	X2615	X2690	M2780	LYS	G2900	X2962	X3060	
L2236	L2236	E2296	G2446	X2522	X2616	X2691	V2781	ILE	G2901	X2963	X3061	
C2237	C2237	E2297	R2447	X2523	X2617	X2692	D2782	GLN	T2901	X2964	X3062	
Y2238	Y2238	Q2373	K2448	X2524	X2618	X2693	E2783	THR	H2902	X2965	X3063	
F2239	F2239	V2298	E2449	X2525	X2619	X2694	D2784	ALA	P2903	X2966	X3064	
C2240	C2240	V2299	A2450	X2526	X2620	X2695	E2785	GLN	L2904	X2967	X3065	
R2241	R2241	L2302	L2451	X2527	X2621	X2696	L2786	ASP	L2905	X2968	X3066	
I2242	I2242	A2303	R2452	X2528	X2622	X2697	K2787	THR	V2906	X2969	X3067	
S2243	S2243	G2304	L2453	X2529	X2623	X2698	H2788	TYR	P2907	X2970	X3068	
G2305	G2305	C2306	R2454	X2530	X2624	X2699	D2789	PRO	G2908	X2971	X3069	
I2244	I2244	G2307	A2455	X2531	X2625	X2700	H2790	ARG	Y2908	X2972	X3070	
O2245	O2245	L2307	L2456	X2532	X2626	X2701	M2791	GLU	T2909	X2973	X3071	
N2246	N2246	C2310	L2457	X2533	X2627	X2702	L2792	GLY	L2910	X2974	X3072	
Q2247	Q2247	P2311	R2458	X2534	X2628	X2703	K2793		L2911	X2975	X3073	
R2248	R2248	M3212	S2459	X2535	X2629	X2704	Y2794		T2912	X2976	X3074	
F2251	F2251	L2313	L2460	X2536	X2630	X2705	K2795		A2913	X2977	X3075	
H2253	H2253	L2314	Y2461	X2537	X2631	X2706	L2796		K2914	X2978	X3076	
L2254	L2254	Y2318	P2462	X2538	X2632	X2707	F2797		E2915	X2979	X3077	
Y2256	Y2256	D2320	L2463	X2539	X2633	X2708	S2798		K2916	X2980	X3078	
L2257	L2257	ARG	D2464	X2540	X2634	X2709	E2799		A2917	X2981	X3079	
E2258	E2258	VAL	L2465	X2541	X2635	X2710	K2800		R2918	X2982	X3080	
N2260	N2260	ARG	L2466	X2542	X2636	X2711	E2741		D2919	X2983	X3081	
S2261	S2261	ASP	V2467	X2543	X2637	X2712	D2801		E2921	X2984	X3082	
G2262	G2262	ASP	G2468	X2544	X2638	X2713	X2802		K2922	X2985	X3083	
I2263	I2263	ARG	L2469	X2545	X2639	X2714	E2803		A2924	X2986	X3084	
G2264	G2264	ARG	S2471	X2546	X2640	X2715	L2804		E2925	X2987	X3085	
L2265	L2265	GLU	L2472	X2547	X2641	X2716	Y2805		L2926	X2988	X3086	
G2266	G2266	HIS	P2473	X2548	X2642	X2717	R2806		L2927	X2989	X3087	
G2267	G2267	PHE	L2474	X2549	X2643	X2718	W2807		L2928	X2990	X3088	
H2267	H2267	GLY	L2475	X2550	X2644	X2719	P2808		K2928	X2991	X3089	
Q2268	Q2268	GLY	Q2476	X2551	X2645	X2720	I2809		F2929	X2992	X3090	
G2269	G2269	PRO	T2477	X2552	X2646	X2721	K2810		L2930	X2993	X3091	
S2270	S2270	PRO	T2478	X2553	X2647	X2722	E2811		Q2931	X2994	X3092	
T2271	T2271	GLU	L2479	X2554	X2648	X2723	S2812		M2932	X2995	X3093	
F2272	F2272	GLU	L2480	X2555	X2649	X2724	L2813		G2933	X2996	X3094	
L2273	L2273	N2414	X2487	X2556	X2650	X2725	K2814		G2934	X2997	X3095	
D2274	D2274	E2347	X2488	X2557	X2651	X2726	A2815		Y2935	X2998	X3096	
V2275	V2275	E2348	X2489	X2558	X2652	X2727	A2816		A2936	X2999	X3097	
A2276	A2276	E2349	X2500	X2559	X2653	X2728	I2817		K2938	X3000	X3098	
A2277	A2277	N2349	A2427	X2560	X2654	X2729	A2818		T2939	X3001	X3099	
A2278	A2278	A2350	A2428	X2561	X2655	X2730	W2819		R2938	X3002	X3100	
A2279	A2279	N2351	L2429	X2562	X2656	X2731	E2820		R2939	X3003	X3101	
I2281	I2281	N2351	I2430	X2563	X2657	X2732	E2821		K2942	X3004	X3102	
I2282	I2282	V2354	D2431	X2564	X2658	X2733	W2822		K2943	X3005	X3103	
N2283	N2283	R2355	L2432	X2565	X2659	X2734	I2823		X2944	X3006	X3104	
N2284	N2284	R2356	E2433	X2566	X2660	X2735	E2824		X2945	X3007	X3105	
		R2357		X2567	X2661	X2736	E2825		X2946	X3008	X3106	
		R2358		X2568	X2662	X2737	K2826		X2947	X3009	X3107	
		R2359		X2569	X2663	X2738	E2827		X2948	X3010	X3108	
				X2570	X2664	X2739	E2828		X2949	X3011	X3109	
				X2571	X2665	X2740	G2829		X2950	X3012	X3110	
				X2572	X2666	X2741	V2830		X2951	X3013	X3111	
				X2573	X2667	X2742	E2831		X2952	X3014	X3112	
				X2574	X2668	X2743	L2832		X2953	X3015	X3113	
				X2575	X2669	X2744	X2803		X2954	X3016	X3114	
				X2576	X2670	X2745	E2804		X2955	X3017	X3115	
				X2577	X2671	X2746	L2805		X2956	X3018	X3116	
				X2578	X2672	X2747	Y2806		X2957	X3019	X3117	
				X2579	X2673	X2748	W2807		X2958	X3020	X3118	
				X2580	X2674	X2749	P2808		X2959	X3021	X3119	
				X2581	X2675	X2750	I2809		X2960	X3022	X3120	
				X2582	X2676	X2751	K2810		X2961	X3023	X3121	
				X2583	X2677	X2752	E2811		X2962	X3024	X3122	
				X2584	X2678	X2753	S2812		X2963	X3025	X3123	
				X2585	X2679	X2754	L2813		X2964	X3026	X3124	
				X2586	X2680	X2755	K2814		X2965	X3027	X3125	
				X2587	X2681	X2756	L2815		X2966	X3028	X3126	
				X2588	X2682	X2757	A2816		X2967	X3029	X3127	
				X2589	X2683	X2758	I2817		X2968	X3030	X3128	
				X2590	X2684	X2759	A2818		X2969	X3031	X3129	
				X2591	X2685	X2760	W2819		X2970	X3032	X3130	
				X2592	X2686	X2761	E2820		X2971	X3033	X3131	
				X2593	X2687	X2762	W2821		X2972	X3034	X3132	
				X2594	X2688	X2763	I2822		X2973	X3035	X3133	
				X2595	X2689	X2764	E2823		X2974	X3036	X3134	
				X2596	X2690	X2765	I2824		X2975	X3037	X3135	
				X2597	X2691	X2766	E2825		X2976	X3038	X3136	
				X2598	X2692	X2767	K2826		X2977	X3039	X3137	
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				X2600	X2694	X2769	H2828		X2979	X3041	X3139	
				X2601	X2695	X2770	X2829		X2980	X3042	X3140	
				X2602	X2696	X2771	W2831		X2981	X3043	X3141	
				X2603	X2697	X2772	I2832		X2982	X3044	X3142	
				X2604	X2698	X2773	E2833		X2983	X3045	X3143	
				X2605	X2699	X2774	N2834		X2984	X3046	X3144	
				X2606	X2700	X2775	T2835		X2985	X3047	X3145	
				X2607	X2701	X2776	E2836		X2986	X3048	X3146	
				X2608	X2702	X2777	K2837		X2987	X3049	X3147	
				X2609	X2703	X2778	R2838		X2988	X3050	X3148	
				X2610	X2704	X2779	E2839		X2989	X3051	X3149	
				X2611	X2705	X2780	I2840		X2990	X3052	X3150	
				X2612	X2706	X2781	E2841		X2991	X3053	X3151	
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				X2615	X2709	X2784	E2844		X2994	X3056	X3154	
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				X2621	X2715	X2790	L2849		X3000	X3062	X3160	
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				X2624	X2718	X2793	G2852		X3003	X3065	X3163	
				X2625	X2719	X2794	V2853		X3004	X3066	X3164	
				X2626	X2720	X2795	L2854		X3005	X3067	X3165	
				X2627	X2721	X2796	E2855		X3006	X3068	X3166	
				X2628	X2722	X2797	P2856		X3007	X3069	X3167	
				X2629	X2723	X2798	Q2857		X3008	X3070	X3168	
				X2630	X2724	X2799	G2858		X3009	X3071	X3169	

V2102	L2166	R2234	E2296	G2372	A2445	X2520	X2612	X2692	D2782	H2902	X2975
V2103	L2167	F2235	K2297	G2373	G2446	X2521	X2613	X2693	E2783	P2903	X2976
R2104	L2168	L2236	V2298	S2374	K2447	X2522	X2614	X2694	E2784	L2904	X2995
W2105	V2169	C2237	V2299	G2375	G2448	X2523	X2615	X2695	L2785	L2905	X2996
A2106	Q2170	W2238	S2300	G2376	E2449	X2524	X2616	X2696	L2786	V2906	X2997
Q2107	M2171	F2239	Y2301	L2376	X2450	X2525	X2617	X2697	T2787	V2907	X2998
	P2172	C2240	L2302	A2378	L2451	X2526	X2618	X2698	H2788	Y2908	
	N2176	R2241	A2303	E2381	R2452	X2529	X2619	X2699	P2789	D2909	
	I2179	L2242	G2304	E2382	L2453	X2530	X2620	X2700	M2790	T2910	
	Q2180	S2243	C2305	E2388	R2454	X2531	X2621	X2701	L2791	L2911	
	N2184	Q2244	G2306	E2389	A2455	X2532	X2622	X2702	L2792	T2912	
	M2186	Q2245	L2307	I2384	L2456	X2533	X2624	X2703	P2793	A2913	
	N2187	R2247	M2312	R2385	L2457	X2534	X2625	X2704	Y2794	R2914	
	N2188	R2248	L2313	E2388	R2458	X2535	X2626	X2705	K2795	E2915	
	K2189	F2251	L2314	D2389	S2460	X2536	X2627	X2706	L2796	K2916	
	F2191	H2253	L2315	P2390	V2461	X2544	X2632	X2707	F2797	A2917	
	Y2192	R2254	A2315	A2391	L2462	X2545	X2641	X2708	E2798	D2918	
	Q2193	S2255	Y2318	R2392	L2463	X2548	X2644	X2709	S2799	R2919	
	R2194	L2257	D2320	GLY	V2467	X2551	X2645	X2710	K2800	R2920	
	Q2195	L2258	G2322	VAL	G2468	X2552	X2646	X2711	D2801	E2921	
	N2196	E2259	R2330	ARG	G2469	X2553	X2647	X2712	E2802	K2922	
	L2197	M2260	Y2331	ARG	I2470	X2554	X2648	X2713	I2804	A2923	
	M2198	S2261	L2332	ASP	X2471	X2555	X2649	X2714	Y2805	Q2924	
	R2199	G2262	L2335	ARG	S2472	X2556	X2650	X2715	R2806	E2925	
	M2203	I2263	R2336	ARG	L2472	X2557	X2651	X2716	W2807	L2926	
	H2204	G2265	R2340	GLU	P2473	X2558	X2652	X2717	P2808	L2927	
	E2205	L2267	W2341	HIS	L2474	X2559	X2653	X2718	I2809	K2928	
	T2206	M2267	N2342	PHE	Q2475	X2560	X2654	X2719	K2750	F2929	
	V2207	Q2268	O2343	GLY	Q2476	X2561	X2655	X2720	L2751	Q2930	
	M2208	G2269	PRO	GLU	P2477	X2562	X2656	X2721	D2752	M2932	
	M2211	S2270	E2344	PRO	T2478	X2563	X2657	X2722	S2753	N2933	
	W2212	T2271	Y2346	GLU	L2479	X2564	X2658	X2723	F2754	G2934	
	N2213	P2272	E2347	N2414	L2480	X2565	X2659	X2724	L2755	Y2935	
	W2214	L2273	E2348	M2423	X2490	X2566	X2662	X2725	M2756	A2936	
	L2215	G2274	M2349	A2427	X2499	X2567	X2666	X2726	K2757	V2937	
	G2216	V2275	A2350	A2428	X2500	X2568	X2669	X2727	E2760	T2938	
	G2217	I2276	A2276	L2429	X2501	X2583	X2673	X2728	Y2761	R2939	
	G2218	V2280	S2279	I2430	X2502	X2584	X2674	X2729	T2762	X2942	
	E2219	I2281	D2282	L2433	X2503	X2585	X2675	X2730	H2763	X2943	
	T2220	D2283	N2284	G2434	X2504	X2586	X2676	X2731	E2764	X2944	
	K2221	M2285	E2285	L2435	X2505	X2588	X2677	X2732	K2765	X2945	
	I2223	M2284	E2286	C2436	X2506	X2594	X2678	X2733	W2766	X2946	
	F2225	R2284	L2286	A2437	X2507	X2598	X2679	X2734	A2767	X2947	
	P2226	A2287	E2287	P2438	X2508	X2603	X2680	X2735	F2768	X2948	
	K2227	L2288	A2289	E2439	X2510	X2604	X2681	X2736	D2769	X2949	
	M2228	L2289	L2290	M2440	X2511	X2605	X2682	X2737	K2770	X2950	
	T2229	Q2291	E2292	H2441	X2512	X2606	X2683	X2738	I2771	X2951	
	S2231	E2293	C2232	L2442	X2513	X2607	X2684	X2739	Q2772	X2952	
	C2233	D2294	L2295	I2443	X2514	X2608	X2685	X2740	N2773	X2953	
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					X2517	X2611	X2688	X2743	X2676	X2956	
					X2518	X2612	X2689	X2744	X2677	X2957	
					X2519	X2613	X2690	X2745	X2678	X2958	
					X2520	X2614	X2691	X2746	X2679	X2959	
					X2521	X2615	X2692	X2747	X2680	X2960	
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					X2523	X2617	X2694	X2749	X2682		
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					X2527	X2621	X2698	X2753	X2686		
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					X2530	X2624	X2701	X2756	X2689		
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					X2535	X2629	X2706	X2761	X2694		
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					X2640	X2696	X2773	X2828	X2761		
					X2641	X2697	X2774	X2829	X2762		
					X2642	X2698	X2775	X2830	X2763		
					X2643	X2699	X2776	GLU	X2		

V4081	K4014	L4013	V5942	E3872	I3802	E3737	M6673	X3462	X3379	X3311	X5230	X3135
T4082	E4015	K4014	K3948	K3873	S3803	G3738	I3674	X3463	X3380	X3312	X5233	X3136
D4083	L4016	E4015	N3949	V3874	L3804	G3739	D3675	X3464	X3383	X3313	X5236	X3137
F4084	L4017	N3950	N3950	D3877	N3806	E3740	D3676	X3465	X3384	X3314	X5239	X3138
R4085	D4018	L4018	F3951	D3878	G3807	N3741	A3680	X3466	X3385	X3315	X5242	X3139
I4088	L4019	L4018	F3951	D3878	G3808	GLY	E5682	X3467	X3386	X3316	X5245	X3140
K4091	Q4020	L4019	A3954	F3881	N3809	ALA	Q3683	X3468	X3387	X3317	X5248	X3141
F4092	K4021	V4024	M3955	Q3882	K3815	GLU	E5684	X3469	X3388	X3318	X5251	X3142
Q4094	V4024	V4024	V3957	F3885	M3816	E3747	E5685	X3470	X3389	X3319	X5254	X3143
K4095	L4027	L4028	A3958	F3888	L3820	E3748	E5686	X3471	X3390	X3320	X5257	X3144
A4096	L4028	S4029	K3959	Q3889	K3821	V3749	E5687	X3472	X3391	X3321	X5260	X3145
D4098	S4029	L4030	F3962	L3890	K3824	E3750	E5688	X3473	X3392	X3322	X5263	X3146
S4099	L4030	M4034	S3964	E3893	K3824	V3751	V5690	X3474	X3393	X3323	X5266	X3147
Q4100	M4034	M4037	L3965	E3893	E3825	S3752	E5691	X3475	X3394	X3324	X5269	X3148
K4101	N4037	N4037	L3966	F3897	E3825	F3753	E5692	X3476	X3395	X3325	X5272	X3149
Q4102	I4040	I4040	E3967	N3897	F3829	E3754	E5693	X3477	X3396	X3326	X5275	X3150
F4103	A4041	A4041	Y3968	D3898	Q3830	X3755	E5694	X3478	X3397	X3327	X5278	X3151
T4104	A4041	A4041	I3969	S3831	S3831	K3756	K3694	X3479	X3398	X3328	X5281	X3152
O4105	R4042	R4042	Q3970	Q3833	Q3833	E3759	P3695	X3480	X3399	X3329	X5284	X3153
F4106	Q4043	Q4043	T3972	M3836	L3763	X3760	L3698	X3481	X3407	X3330	X5287	X3154
E4107	M4044	M4044	C3973	T3837	L3764	X3760	H3699	X3482	X3411	X3331	X5290	X3155
Q4109	D4046	D4046	T3974	T3838	L3764	X3760	Q3700	X3483	X3412	X3332	X5293	X3156
F4110	M4047	M4047	Q3977	C3839	L3765	X3760	L3701	X3484	X3413	X3333	X5296	X3157
L4111	L4048	L4048	Q3978	C3839	L3766	X3760	S3702	X3485	X3414	X3334	X5299	X3158
L4112	V4049	V4049	Q3978	L3842	L3766	X3760	H3704	X3486	X3415	X3335	X5302	X3159
S4113	E4050	E4050	A3981	D3843	L3770	X3760	F3705	X3487	X3416	X3336	X5305	X3160
A4117	S4051	S4051	H3982	L3844	L3770	X3760	S3768	X3488	X3417	X3337	X5308	X3161
D4118	S4052	S4052	S3983	L3844	L3770	X3760	R3706	X3489	X3418	X3338	X5311	X3162
F4119	S4053	S4053	H3984	L3844	L3770	X3760	S3707	X3490	X3419	X3339	X5314	X3163
F4120	M4054	M4054	D3987	N3845	L3772	X3760	R3708	X3491	X3420	X3340	X5317	X3164
N4120	E4055	E4055	Q3987	N3845	L3772	X3760	S3709	X3492	X3421	X3341	X5320	X3165
F4121	E4056	E4056	V3990	E3848	L3772	X3760	L3710	X3493	X3422	X3342	X5323	X3166
F4122	M4057	M4057	G3991	R3849	E3712	X3760	S3711	X3494	X3423	X3343	X5326	X3167
I4123	I4058	I4058	F3992	R3849	E3712	X3760	X3713	X3495	X3424	X3344	X5329	X3168
N4124	L4059	L4059	L3993	N3851	E3712	X3760	K3714	X3496	X3425	X3345	X5332	X3169
F4125	K4060	K4060	H3994	N3851	E3712	X3760	L3715	X3497	X3426	X3346	X5335	X3170
E4126	F4061	F4061	V3995	A3853	E3712	X3760	K3715	X3498	X3427	X3347	X5338	X3171
M4130	D4063	D4063	F3996	E3854	E3712	X3760	D3717	X3499	X3428	X3348	X5341	X3172
R4131	M4064	M4064	A3997	G3855	E3712	X3760	E3718	X3500	X3429	X3349	X5344	X3173
F4132	M4064	M4064	H3998	L3856	E3712	X3760	E3719	X3501	X3430	X3350	X5347	X3174
Q4133	F4065	F4065	R3999	G3857	E3712	X3760	X3720	X3502	X3431	X3351	X5350	X3175
A4136	K4067	K4067	M4000	M3858	E3712	X3760	K3651	X3503	X3432	X3352	X5353	X3176
R4137	K4068	K4068	K4002	V3859	E3712	X3760	K3652	X3504	X3433	X3353	X5356	X3177
D4138	K4069	K4069	L4003	G3788	E3712	X3760	A3724	X3505	X3434	X3354	X5359	X3178
F4139	D4070	D4070	F3933	E3789	E3712	X3760	X3725	X3506	X3435	X3355	X5362	X3179
G4073	D4070	D4070	Y3934	T3790	D3862	E3712	A3726	X3507	X3436	X3356	X5365	X3180
S4074	G4073	G4073	W3935	G3791	D3862	E3712	X3728	X3508	X3437	X3357	X5368	X3181
E4075	S4074	S4074	W3936	A3792	D3862	E3712	L3728	X3509	X3438	X3358	X5371	X3182
A4076	E4075	E4075	W3937	A3792	D3862	E3712	M3729	X3510	X3439	X3359	X5374	X3183
D4079	A4076	A4076	V3794	V3794	D3862	E3712	K3787	X3511	X3440	X3360	X5377	X3184
S4151	D4079	D4079	I3866	I3798	D3862	E3712	L3663	X3512	X3441	X3361	X5380	X3185
E4152	Y4080	Y4080	I3866	K3799	D3862	E3712	T3664	X3513	X3442	X3362	X5383	X3186
			I3866	K3799	D3862	E3712	E3665	X3514	X3443	X3363	X5386	X3187
			I3866	K3799	D3862	E3712	D3666	X3515	X3444	X3364	X5389	X3188
			I3866	K3799	D3862	E3712	H3667	X3516	X3445	X3365	X5392	X3189
			I3866	K3799	D3862	E3712	S3668	X3517	X3446	X3366	X5395	X3190
			I3866	K3799	D3862	E3712	H3734	X3518	X3447	X3367	X5398	X3191
			I3866	K3799	D3862	E3712	L3735	X3519	X3448	X3368	X5401	X3192
			I3866	K3799	D3862	E3712	E3736	X3520	X3449	X3369	X5404	X3193
			I3866	K3799	D3862	E3712	E3736	X3521	X3450	X3370	X5407	X3194
			I3866	K3799	D3862	E3712	E3736	X3522	X3451	X3371	X5410	X3195
			I3866	K3799	D3862	E3712	E3736	X3523	X3452	X3372	X5413	X3196
			I3866	K3799	D3862	E3712	E3736	X3524	X3453	X3373	X5416	X3197
			I3866	K3799	D3862	E3712	E3736	X3525	X3454	X3374	X5419	X3198
			I3866	K3799	D3862	E3712	E3736	X3526	X3455	X3375	X5422	X3199
			I3866	K3799	D3862	E3712	E3736	X3527	X3456	X3376	X5425	X3200
			I3866	K3799	D3862	E3712	E3736	X3528	X3457	X3377	X5428	X3201
			I3866	K3799	D3862	E3712	E3736	X3529	X3458	X3378	X5431	X3202
			I3866	K3799	D3862	E3712	E3736	X3530	X3459	X3379	X5434	X3203
			I3866	K3799	D3862	E3712	E3736	X3531	X3460	X3380	X5437	X3204
			I3866	K3799	D3862	E3712	E3736	X3532	X3461	X3381	X5440	X3205
			I3866	K3799	D3862	E3712	E3736	X3533	X3462	X3382	X5443	X3206
			I3866	K3799	D3862	E3712	E3736	X3534	X3463	X3383	X5446	X3207
			I3866	K3799	D3862	E3712	E3736	X3535	X3464	X3384	X5449	X3208
			I3866	K3799	D3862	E3712	E3736	X3536	X3465	X3385	X5452	X3209
			I3866	K3799	D3862	E3712	E3736	X3537	X3466	X3386	X5455	X3210
			I3866	K3799	D3862	E3712	E3736	X3538	X3467	X3387	X5458	X3211
			I3866	K3799	D3862	E3712	E3736	X3539	X3468	X3388	X5461	X3212
			I3866	K3799	D3862	E3712	E3736	X3540	X3469	X3389	X5464	X3213
			I3866	K3799	D3862	E3712	E3736	X3541	X3470	X3390	X5467	X3214
			I3866	K3799	D3862	E3712	E3736	X3542	X3471	X3391	X5470	X3215
			I3866	K3799	D3862	E3712	E3736	X3543	X3472	X3392	X5473	X3216
			I3866	K3799	D3862	E3712	E3736	X3544	X3473	X3393	X5476	X3217
			I3866	K3799	D3862	E3712	E3736	X3545	X3474	X3394	X5479	X3218
			I3866	K3799	D3862	E3712	E3736	X3546	X3475	X3395	X5482	X3219
			I3866	K3799	D3862	E3712	E3736	X3547	X3476	X3396	X5485	X3220
			I3866	K3799	D3862	E3712	E3736	X3548	X3477	X3397	X5488	X3221
			I3866	K3799	D3862	E3712	E3736	X3549	X3478	X3398	X5491	X3222
			I3866	K3799	D3862	E3712	E3736	X3550	X3479	X3399	X5494	X3223
			I3866	K3799	D3862	E3712	E3736	X3551	X3480	X3400	X5497	X3224
			I3866	K3799	D3862	E3712	E3736	X3552	X3481	X3401	X5500	X3225
			I3866	K3799	D3862	E3712	E3736	X3553	X3482	X3402	X5503	X3226
			I3866	K3799	D3862	E3712	E3736	X3554	X3483	X3403	X5506	X3227
			I3866	K3799	D3862	E3712	E3736	X3555	X3484	X3404	X5509	X3228
			I3866	K3799	D3862	E3712	E3736	X3556	X3485	X3405	X5512	X3229
			I3866	K3799	D3862	E3712	E3736	X3557	X3486	X3406	X5515	X3230
			I3866	K3799	D3862	E3712	E3736	X3558	X3487	X3407	X5518	X3231
			I3866	K3799	D3862	E3712	E3736	X3559	X3488	X3408	X5521	X3232
			I3866	K3799	D3862	E3712	E3736	X3560	X3489	X3409	X5524	X3233
			I3866	K3799	D3862	E3712	E3736	X3561	X3490	X3410	X5527	X3234
			I3866	K3799	D3862	E3712	E3736	X3562	X3491	X3411	X5530	X3235
			I3866	K3799	D3862	E3712	E3736	X3563	X3492	X3412	X5533	X3236
			I3866	K3799	D3862	E3712	E3736	X3564	X3493	X3413	X5536	X3237
			I3866	K3799	D3862	E3712	E3736	X3565	X3494	X3414	X5539</	



4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C4	Depositor
Number of particles used	791956	Depositor
Resolution determination method	OTHER	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI POLARA 300	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	50	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	0.466	Depositor
Minimum map value	-0.266	Depositor
Average map value	0.001	Depositor
Map value standard deviation	0.025	Depositor
Recommended contour level	0.16	Depositor
Map size (Å)	502.0, 502.0, 502.0	wwPDB
Map dimensions	400, 400, 400	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	1.255, 1.255, 1.255	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: CA, ZN

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
1	A	0.37	0/834	0.61	0/1123
1	F	0.37	0/834	0.61	0/1123
1	H	0.37	0/834	0.61	0/1123
1	J	0.37	0/834	0.61	0/1123
2	B	0.40	0/25428	0.61	5/34534 (0.0%)
2	E	0.40	0/25428	0.61	5/34534 (0.0%)
2	G	0.40	0/25428	0.61	5/34534 (0.0%)
2	I	0.40	0/25428	0.61	5/34534 (0.0%)
All	All	0.40	0/105048	0.61	20/142628 (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
2	B	0	19
2	E	0	19
2	G	0	19
2	I	0	20
All	All	0	77

There are no bond length outliers.

All (20) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	I	4985	LEU	CA-CB-CG	6.40	130.01	115.30
2	B	4985	LEU	CA-CB-CG	6.39	130.00	115.30
2	I	719	LEU	CA-CB-CG	6.39	130.00	115.30
2	B	719	LEU	CA-CB-CG	6.38	129.99	115.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	G	719	LEU	CA-CB-CG	6.38	129.97	115.30
2	G	4985	LEU	CA-CB-CG	6.38	129.97	115.30
2	E	4985	LEU	CA-CB-CG	6.38	129.96	115.30
2	E	719	LEU	CA-CB-CG	6.35	129.90	115.30
2	G	1667	LEU	CA-CB-CG	6.24	129.64	115.30
2	I	1667	LEU	CA-CB-CG	6.23	129.63	115.30
2	B	1667	LEU	CA-CB-CG	6.22	129.60	115.30
2	E	1667	LEU	CA-CB-CG	6.20	129.56	115.30
2	E	977	LEU	CA-CB-CG	5.40	127.71	115.30
2	G	977	LEU	CA-CB-CG	5.39	127.69	115.30
2	I	977	LEU	CA-CB-CG	5.37	127.65	115.30
2	B	977	LEU	CA-CB-CG	5.36	127.62	115.30
2	G	4643	LEU	CA-CB-CG	5.06	126.94	115.30
2	B	4643	LEU	CA-CB-CG	5.06	126.94	115.30
2	E	4643	LEU	CA-CB-CG	5.04	126.90	115.30
2	I	4643	LEU	CA-CB-CG	5.04	126.88	115.30

There are no chirality outliers.

All (77) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
2	B	137	LEU	Peptide
2	B	1676	LEU	Peptide
2	B	1690	ASP	Peptide
2	B	1712	TYR	Peptide
2	B	1828	ASP	Peptide
2	B	1840	PRO	Peptide
2	B	2291	GLN	Peptide
2	B	2342	ASN	Peptide
2	B	2343	GLY	Peptide
2	B	2472	LEU	Peptide
2	B	2807	TRP	Peptide
2	B	3786	CYS	Peptide
2	B	3971	GLY	Peptide
2	B	4666	VAL	Peptide
2	B	4696	ASP	Peptide
2	B	4807	PHE	Peptide
2	B	4865	LYS	Peptide
2	B	4873	ASP	Peptide
2	B	808	TYR	Peptide
2	E	137	LEU	Peptide
2	E	1676	LEU	Peptide

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Mol	Chain	Res	Type	Group
2	E	1690	ASP	Peptide
2	E	1712	TYR	Peptide
2	E	1828	ASP	Peptide
2	E	1840	PRO	Peptide
2	E	2291	GLN	Peptide
2	E	2342	ASN	Peptide
2	E	2343	GLY	Peptide
2	E	2472	LEU	Peptide
2	E	2807	TRP	Peptide
2	E	3786	CYS	Peptide
2	E	3971	GLY	Peptide
2	E	4666	VAL	Peptide
2	E	4696	ASP	Peptide
2	E	4807	PHE	Peptide
2	E	4865	LYS	Peptide
2	E	4873	ASP	Peptide
2	E	808	TYR	Peptide
2	G	137	LEU	Peptide
2	G	1676	LEU	Peptide
2	G	1690	ASP	Peptide
2	G	1712	TYR	Peptide
2	G	1828	ASP	Peptide
2	G	1840	PRO	Peptide
2	G	2291	GLN	Peptide
2	G	2342	ASN	Peptide
2	G	2343	GLY	Peptide
2	G	2472	LEU	Peptide
2	G	2807	TRP	Peptide
2	G	3786	CYS	Peptide
2	G	3971	GLY	Peptide
2	G	4666	VAL	Peptide
2	G	4696	ASP	Peptide
2	G	4807	PHE	Peptide
2	G	4865	LYS	Peptide
2	G	4873	ASP	Peptide
2	G	808	TYR	Peptide
2	I	137	LEU	Peptide
2	I	1676	LEU	Peptide
2	I	1690	ASP	Peptide
2	I	1712	TYR	Peptide
2	I	1828	ASP	Peptide
2	I	1840	PRO	Peptide

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Mol	Chain	Res	Type	Group
2	I	194	SER	Peptide
2	I	2291	GLN	Peptide
2	I	2342	ASN	Peptide
2	I	2343	GLY	Peptide
2	I	2472	LEU	Peptide
2	I	2807	TRP	Peptide
2	I	3786	CYS	Peptide
2	I	3971	GLY	Peptide
2	I	4666	VAL	Peptide
2	I	4696	ASP	Peptide
2	I	4807	PHE	Peptide
2	I	4865	LYS	Peptide
2	I	4873	ASP	Peptide
2	I	808	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	818	0	824	21	0
1	F	818	0	824	19	0
1	H	818	0	824	19	0
1	J	818	0	824	20	0
2	B	29369	0	24716	533	0
2	E	29369	0	24712	519	0
2	G	29369	0	24713	531	0
2	I	29369	0	24713	522	0
3	B	1	0	0	0	0
3	E	1	0	0	0	0
3	G	1	0	0	0	0
3	I	1	0	0	0	0
4	B	1	0	0	0	0
4	E	1	0	0	0	0
4	G	1	0	0	0	0
4	I	1	0	0	0	0
All	All	120756	0	102150	2154	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 10.

All (2154) 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)
2:G:4860:ARG:HD2	2:I:4582:VAL:HG11	1.65	0.79
2:B:853:PRO:HB3	2:B:1024:TYR:H	1.51	0.76
2:B:379:HIS:HD2	2:B:382:GLY:H	1.35	0.75
2:I:853:PRO:HB3	2:I:1024:TYR:H	1.51	0.75
2:E:853:PRO:HB3	2:E:1024:TYR:H	1.51	0.75
2:G:379:HIS:HD2	2:G:382:GLY:H	1.35	0.75
2:G:853:PRO:HB3	2:G:1024:TYR:H	1.51	0.74
2:I:379:HIS:HD2	2:I:382:GLY:H	1.35	0.74
2:E:379:HIS:HD2	2:E:382:GLY:H	1.35	0.72
2:B:1671:ARG:NH2	2:B:1710:GLY:O	2.23	0.72
2:E:1671:ARG:NH2	2:E:1710:GLY:O	2.23	0.72
2:I:1671:ARG:NH2	2:I:1710:GLY:O	2.23	0.72
2:I:111:HIS:HD2	2:I:114:SER:H	1.36	0.71
2:G:1671:ARG:NH2	2:G:1710:GLY:O	2.23	0.71
2:B:111:HIS:HD2	2:B:114:SER:H	1.36	0.70
2:B:4860:ARG:HD2	2:E:4582:VAL:HG11	1.73	0.70
2:E:111:HIS:HD2	2:E:114:SER:H	1.36	0.70
2:B:646:PRO:HD2	2:B:779:PRO:HB2	1.74	0.69
2:G:111:HIS:HD2	2:G:114:SER:H	1.36	0.69
2:I:646:PRO:HD2	2:I:779:PRO:HB2	1.74	0.69
2:E:646:PRO:HD2	2:E:779:PRO:HB2	1.74	0.69
2:G:646:PRO:HD2	2:G:779:PRO:HB2	1.74	0.69
2:E:221:ARG:NH2	2:E:255:HIS:O	2.27	0.68
2:G:219:VAL:HG13	2:G:285:VAL:HG21	1.76	0.68
2:B:745:SER:HB2	2:B:758:ARG:HB3	1.76	0.68
2:G:788:LYS:HG2	2:G:1630:CYS:H	1.60	0.67
2:I:221:ARG:NH2	2:I:255:HIS:O	2.27	0.67
2:I:745:SER:HB2	2:I:758:ARG:HB3	1.76	0.67
2:B:788:LYS:HG2	2:B:1630:CYS:H	1.60	0.67
2:G:221:ARG:NH2	2:G:255:HIS:O	2.27	0.67
2:B:221:ARG:NH2	2:B:255:HIS:O	2.27	0.67
2:I:788:LYS:HG2	2:I:1630:CYS:H	1.60	0.67
2:I:219:VAL:HG13	2:I:285:VAL:HG21	1.76	0.67
2:E:219:VAL:HG13	2:E:285:VAL:HG21	1.76	0.67
2:G:210:GLU:HG3	2:G:337:PRO:HG3	1.76	0.67
2:I:210:GLU:HG3	2:I:337:PRO:HG3	1.76	0.66
2:G:745:SER:HB2	2:G:758:ARG:HB3	1.76	0.66
2:B:1247:PRO:HA	2:B:1598:GLN:HA	1.77	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:788:LYS:HG2	2:E:1630:CYS:H	1.60	0.66
2:B:210:GLU:HG3	2:B:337:PRO:HG3	1.76	0.66
2:B:664:PHE:HB2	2:B:746:CYS:HB2	1.78	0.66
2:I:1667:LEU:HD23	2:I:1671:ARG:HH12	1.61	0.66
2:B:219:VAL:HG13	2:B:285:VAL:HG21	1.76	0.66
2:B:1667:LEU:HD23	2:B:1671:ARG:HH12	1.61	0.66
2:E:3937:TYR:O	2:E:4002:LYS:NZ	2.29	0.66
2:G:1092:PHE:HB3	2:G:1149:VAL:HB	1.77	0.66
2:E:210:GLU:HG3	2:E:337:PRO:HG3	1.76	0.66
2:E:829:TYR:HB3	2:E:1073:ARG:HH11	1.61	0.66
2:E:1092:PHE:HB3	2:E:1149:VAL:HB	1.77	0.66
2:E:664:PHE:HB2	2:E:746:CYS:HB2	1.78	0.65
2:E:745:SER:HB2	2:E:758:ARG:HB3	1.76	0.65
2:E:1519:UNK:HA	2:E:1526:UNK:HA	1.78	0.65
2:E:4176:PRO:O	2:E:4202:ARG:NH2	2.30	0.65
1:H:23:VAL:HG22	1:H:47:LYS:HG2	1.78	0.65
2:I:664:PHE:HB2	2:I:746:CYS:HB2	1.78	0.65
2:I:3937:TYR:O	2:I:4002:LYS:NZ	2.29	0.65
2:G:1247:PRO:HA	2:G:1598:GLN:HA	1.77	0.65
1:J:23:VAL:HG22	1:J:47:LYS:HG2	1.78	0.65
2:I:1092:PHE:HB3	2:I:1149:VAL:HB	1.77	0.65
2:E:3767:GLN:HB3	2:E:3772:THR:HG22	1.78	0.65
2:G:3767:GLN:HB3	2:G:3772:THR:HG22	1.77	0.65
2:B:1092:PHE:HB3	2:B:1149:VAL:HB	1.77	0.65
2:G:4176:PRO:O	2:G:4202:ARG:NH2	2.30	0.65
1:H:74:LEU:HB2	1:H:99:PHE:HB2	1.79	0.65
1:J:74:LEU:HB2	1:J:99:PHE:HB2	1.79	0.65
2:B:829:TYR:HB3	2:B:1073:ARG:HH11	1.61	0.65
2:B:3937:TYR:O	2:B:4002:LYS:NZ	2.29	0.65
1:F:23:VAL:HG22	1:F:47:LYS:HG2	1.78	0.65
2:G:664:PHE:HB2	2:G:746:CYS:HB2	1.78	0.65
2:I:1247:PRO:HA	2:I:1598:GLN:HA	1.77	0.65
2:B:4176:PRO:O	2:B:4202:ARG:NH2	2.30	0.65
2:G:829:TYR:HB3	2:G:1073:ARG:HH11	1.61	0.65
2:I:4176:PRO:O	2:I:4202:ARG:NH2	2.30	0.64
1:F:74:LEU:HB2	1:F:99:PHE:HB2	1.79	0.64
2:E:1247:PRO:HA	2:E:1598:GLN:HA	1.77	0.64
2:I:829:TYR:HB3	2:I:1073:ARG:HH11	1.61	0.64
2:G:1667:LEU:HD23	2:G:1671:ARG:HH12	1.61	0.64
1:A:23:VAL:HG22	1:A:47:LYS:HG2	1.78	0.64
2:B:3767:GLN:HB3	2:B:3772:THR:HG22	1.78	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:1232:ARG:HH21	2:E:1701:ALA:HB1	1.63	0.64
2:G:606:LEU:O	2:G:617:ASN:ND2	2.31	0.64
2:I:989:ALA:O	2:I:1035:ASN:ND2	2.31	0.64
2:I:2764:GLU:HG3	2:I:2857:PRO:HB2	1.80	0.64
2:B:606:LEU:O	2:B:617:ASN:ND2	2.31	0.64
2:B:1830:VAL:HB	2:B:1837:GLN:HA	1.80	0.64
2:E:1667:LEU:HD23	2:E:1671:ARG:HH12	1.61	0.64
2:G:3937:TYR:O	2:G:4002:LYS:NZ	2.29	0.64
2:I:2755:ILE:HD13	2:I:2810:LYS:HG2	1.80	0.64
2:B:1232:ARG:HH21	2:B:1701:ALA:HB1	1.63	0.64
2:I:132:ALA:HA	2:I:194:SER:HB2	1.79	0.64
2:I:3767:GLN:HB3	2:I:3772:THR:HG22	1.78	0.64
2:G:989:ALA:O	2:G:1035:ASN:ND2	2.31	0.64
2:B:2755:ILE:HD13	2:B:2810:LYS:HG2	1.80	0.64
2:E:1830:VAL:HB	2:E:1837:GLN:HA	1.80	0.64
1:A:74:LEU:HB2	1:A:99:PHE:HB2	1.79	0.63
2:E:132:ALA:HA	2:E:194:SER:HB2	1.78	0.63
2:I:2287:ALA:HA	2:I:2290:LEU:HD13	1.80	0.63
2:E:606:LEU:O	2:E:617:ASN:ND2	2.31	0.63
2:B:132:ALA:HA	2:B:194:SER:HB2	1.79	0.63
2:G:1232:ARG:HH21	2:G:1701:ALA:HB1	1.63	0.63
2:I:17:ASP:HB2	2:I:98:HIS:HE1	1.64	0.63
2:I:606:LEU:O	2:I:617:ASN:ND2	2.31	0.63
2:B:2287:ALA:HA	2:B:2290:LEU:HD13	1.80	0.63
2:G:132:ALA:HA	2:G:194:SER:HB2	1.79	0.63
2:G:2764:GLU:HG3	2:G:2857:PRO:HB2	1.80	0.63
2:B:989:ALA:O	2:B:1035:ASN:ND2	2.31	0.63
2:B:2003:GLN:O	2:B:2007:ASN:ND2	2.32	0.63
2:B:2764:GLU:HG3	2:B:2857:PRO:HB2	1.80	0.63
2:E:235:ALA:HA	2:E:257:ARG:HD3	1.80	0.63
2:E:256:ALA:HB1	2:E:286:THR:HG21	1.81	0.63
2:G:20:VAL:HG12	2:G:204:PRO:HA	1.81	0.63
2:B:235:ALA:HA	2:B:257:ARG:HD3	1.80	0.63
2:E:2003:GLN:O	2:E:2007:ASN:ND2	2.32	0.63
2:G:4704:LEU:HD22	2:G:4778:TRP:HB2	1.81	0.63
2:I:1830:VAL:HB	2:I:1837:GLN:HA	1.80	0.63
2:G:256:ALA:HB1	2:G:286:THR:HG21	1.81	0.63
2:E:2287:ALA:HA	2:E:2290:LEU:HD13	1.81	0.63
2:E:2764:GLU:HG3	2:E:2857:PRO:HB2	1.80	0.63
2:I:1232:ARG:HH21	2:I:1701:ALA:HB1	1.63	0.63
2:E:2755:ILE:HD13	2:E:2810:LYS:HG2	1.80	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:4704:LEU:HD22	2:E:4778:TRP:HB2	1.81	0.62
2:B:4824:ARG:HG3	2:B:4827:LEU:HD23	1.81	0.62
2:I:20:VAL:HG12	2:I:204:PRO:HA	1.81	0.62
2:I:4824:ARG:HG3	2:I:4827:LEU:HD23	1.81	0.62
1:A:6:THR:HA	1:A:72:ALA:HA	1.81	0.62
2:B:256:ALA:HB1	2:B:286:THR:HG21	1.81	0.62
2:E:18:ASP:HB2	2:E:69:LEU:HD12	1.82	0.62
2:G:17:ASP:HB2	2:G:98:HIS:HE1	1.64	0.62
2:B:17:ASP:HB2	2:B:98:HIS:HE1	1.64	0.62
2:G:18:ASP:HB2	2:G:69:LEU:HD12	1.82	0.62
2:G:4978:HIS:HA	2:G:4982:GLU:HB2	1.82	0.62
2:I:742:ASP:HA	2:I:760:ASN:HD21	1.64	0.62
2:E:989:ALA:O	2:E:1035:ASN:ND2	2.31	0.62
2:E:4581:LYS:HB2	2:E:4632:LEU:HB2	1.81	0.62
2:I:2003:GLN:O	2:I:2007:ASN:ND2	2.32	0.62
2:I:4978:HIS:HA	2:I:4982:GLU:HB2	1.82	0.62
2:B:742:ASP:HA	2:B:760:ASN:HD21	1.64	0.62
2:E:20:VAL:HG12	2:E:204:PRO:HA	1.81	0.62
2:E:1973:GLN:O	2:E:1977:TYR:N	2.33	0.62
2:G:2755:ILE:HD13	2:G:2810:LYS:HG2	1.80	0.62
2:I:2318:TYR:HH	2:I:2414:ASN:N	1.98	0.62
2:B:4581:LYS:HB2	2:B:4632:LEU:HB2	1.81	0.62
2:E:393:CYS:SG	2:E:395:GLN:NE2	2.73	0.62
2:G:1830:VAL:HB	2:G:1837:GLN:HA	1.80	0.62
2:G:1973:GLN:O	2:G:1977:TYR:N	2.33	0.62
2:I:261:ARG:HB3	2:I:283:ARG:HB3	1.82	0.62
2:G:2003:GLN:O	2:G:2007:ASN:ND2	2.32	0.62
2:E:17:ASP:HB2	2:E:98:HIS:HE1	1.64	0.62
2:B:393:CYS:SG	2:B:395:GLN:NE2	2.73	0.62
2:G:235:ALA:HA	2:G:257:ARG:HD3	1.80	0.62
2:E:4824:ARG:HG3	2:E:4827:LEU:HD23	1.81	0.61
1:F:6:THR:HA	1:F:72:ALA:HA	1.81	0.61
2:G:728:ARG:NH2	2:G:1527:UNK:O	2.33	0.61
2:B:4704:LEU:HD22	2:B:4778:TRP:HB2	1.81	0.61
2:G:393:CYS:SG	2:G:395:GLN:NE2	2.73	0.61
2:G:742:ASP:HA	2:G:760:ASN:HD21	1.64	0.61
2:G:2287:ALA:HA	2:G:2290:LEU:HD13	1.81	0.61
2:G:4581:LYS:HB2	2:G:4632:LEU:HB2	1.81	0.61
2:I:4704:LEU:HD22	2:I:4778:TRP:HB2	1.81	0.61
2:B:261:ARG:HB3	2:B:283:ARG:HB3	1.82	0.61
2:E:4978:HIS:HA	2:E:4982:GLU:HB2	1.82	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:639:ASN:H	2:G:678:GLN:HE22	1.49	0.61
2:G:887:ILE:HG21	2:G:959:TYR:HA	1.82	0.61
2:G:4824:ARG:HG3	2:G:4827:LEU:HD23	1.81	0.61
2:I:18:ASP:HB2	2:I:69:LEU:HD12	1.82	0.61
2:B:34:LYS:H	2:B:53:SER:HG	1.49	0.61
2:B:639:ASN:H	2:B:678:GLN:HE22	1.48	0.61
2:E:1271:ARG:HA	2:E:1471:UNK:HA	1.83	0.61
2:G:1700:ASP:OD2	2:G:1708:ARG:NH2	2.33	0.61
2:B:1271:ARG:HA	2:B:1471:UNK:HA	1.81	0.61
2:E:742:ASP:HA	2:E:760:ASN:HD21	1.64	0.61
2:E:887:ILE:HG21	2:E:959:TYR:HA	1.82	0.61
2:I:256:ALA:HB1	2:I:286:THR:HG21	1.81	0.61
2:I:393:CYS:SG	2:I:395:GLN:NE2	2.73	0.61
2:B:20:VAL:HG12	2:B:204:PRO:HA	1.81	0.61
2:E:639:ASN:H	2:E:678:GLN:HE22	1.48	0.61
2:I:1700:ASP:OD2	2:I:1708:ARG:NH2	2.34	0.61
2:I:4855:ALA:HA	2:I:4859:PHE:HB2	1.83	0.61
2:B:4978:HIS:HA	2:B:4982:GLU:HB2	1.82	0.61
2:E:34:LYS:H	2:E:53:SER:HG	1.49	0.61
2:E:2318:TYR:HH	2:E:2414:ASN:N	1.98	0.61
2:I:235:ALA:HA	2:I:257:ARG:HD3	1.80	0.61
2:I:1973:GLN:O	2:I:1977:TYR:N	2.33	0.61
1:J:6:THR:HA	1:J:72:ALA:HA	1.81	0.61
2:B:18:ASP:HB2	2:B:69:LEU:HD12	1.82	0.61
2:B:1973:GLN:O	2:B:1977:TYR:N	2.33	0.61
2:I:4581:LYS:HB2	2:I:4632:LEU:HB2	1.81	0.61
2:E:609:CYS:SG	2:E:610:ASN:N	2.74	0.61
1:H:6:THR:HA	1:H:72:ALA:HA	1.81	0.61
2:G:261:ARG:HB3	2:G:283:ARG:HB3	1.82	0.61
2:G:972:LEU:O	2:G:1044:ARG:NH2	2.34	0.61
2:G:4855:ALA:HA	2:G:4859:PHE:HB2	1.83	0.61
2:I:609:CYS:SG	2:I:610:ASN:N	2.74	0.61
2:I:1211:LEU:HD11	2:I:1225:PRO:HB3	1.83	0.61
2:B:1519:UNK:HA	2:B:1526:UNK:HA	1.83	0.60
2:B:2042:CYS:SG	2:B:2043:GLY:N	2.74	0.60
2:I:2257:LEU:HD11	2:I:2276:ALA:HB2	1.83	0.60
2:B:609:CYS:SG	2:B:610:ASN:N	2.74	0.60
2:B:2257:LEU:HD11	2:B:2276:ALA:HB2	1.83	0.60
2:G:609:CYS:SG	2:G:610:ASN:N	2.74	0.60
2:G:1211:LEU:HD11	2:G:1225:PRO:HB3	1.83	0.60
2:E:4584:ASP:HA	2:E:4627:MET:HA	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:4855:ALA:HA	2:E:4859:PHE:HB2	1.83	0.60
2:G:2318:TYR:HH	2:G:2414:ASN:N	1.98	0.60
2:I:1777:PHE:HA	2:I:1799:SER:HB2	1.84	0.60
2:E:261:ARG:HB3	2:E:283:ARG:HB3	1.82	0.60
2:I:242:ARG:NH1	2:I:481:GLU:OE1	2.35	0.60
2:E:1211:LEU:HD11	2:E:1225:PRO:HB3	1.83	0.60
2:E:1700:ASP:OD2	2:E:1708:ARG:NH2	2.34	0.60
2:E:2257:LEU:HD11	2:E:2276:ALA:HB2	1.83	0.60
2:B:4855:ALA:HA	2:B:4859:PHE:HB2	1.83	0.60
2:E:1721:GLU:O	2:E:1725:ARG:NH2	2.35	0.60
2:I:639:ASN:H	2:I:678:GLN:HE22	1.49	0.60
2:B:1700:ASP:OD2	2:B:1708:ARG:NH2	2.34	0.60
2:B:2318:TYR:HH	2:B:2414:ASN:N	1.98	0.60
2:G:2257:LEU:HD11	2:G:2276:ALA:HB2	1.83	0.60
2:B:1721:GLU:O	2:B:1725:ARG:NH2	2.35	0.60
2:B:4138:ASP:OD1	2:B:4138:ASP:N	2.34	0.60
2:G:1519:UNK:HA	2:G:1526:UNK:HA	1.82	0.60
2:G:1777:PHE:HA	2:G:1799:SER:HB2	1.84	0.60
2:I:887:ILE:HG21	2:I:959:TYR:HA	1.82	0.60
2:G:3732:SER:O	2:G:3769:ARG:NH2	2.35	0.60
2:I:2042:CYS:SG	2:I:2043:GLY:N	2.74	0.60
2:I:4138:ASP:OD1	2:I:4138:ASP:N	2.34	0.60
2:B:242:ARG:NH1	2:B:481:GLU:OE1	2.35	0.59
2:B:972:LEU:O	2:B:1044:ARG:NH2	2.34	0.59
2:G:2748:PRO:HD2	2:G:2751:LEU:HD12	1.84	0.59
2:B:887:ILE:HG21	2:B:959:TYR:HA	1.83	0.59
2:B:1218:GLY:HA2	2:B:1223:PHE:HB2	1.84	0.59
2:B:3732:SER:O	2:B:3769:ARG:NH2	2.35	0.59
2:B:4673:ARG:HH22	2:B:4698:LYS:HB2	1.68	0.59
2:E:242:ARG:NH1	2:E:481:GLU:OE1	2.35	0.59
2:E:1218:GLY:HA2	2:E:1223:PHE:HB2	1.84	0.59
2:G:242:ARG:NH1	2:G:481:GLU:OE1	2.35	0.59
2:G:1101:ARG:HE	2:G:1115:LEU:HB3	1.67	0.59
2:G:4584:ASP:HA	2:G:4627:MET:HA	1.84	0.59
2:B:426:ARG:HB2	2:B:506:TYR:HA	1.84	0.59
2:G:1649:ASP:HB3	2:G:1652:GLU:HG2	1.84	0.59
2:I:34:LYS:H	2:I:53:SER:HG	1.49	0.59
2:I:1649:ASP:HB3	2:I:1652:GLU:HG2	1.84	0.59
2:I:1721:GLU:O	2:I:1725:ARG:NH2	2.35	0.59
2:I:4584:ASP:HA	2:I:4627:MET:HA	1.84	0.59
2:B:1211:LEU:HD11	2:B:1225:PRO:HB3	1.83	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:4673:ARG:HH22	2:E:4698:LYS:HB2	1.67	0.59
2:I:1519:UNK:HA	2:I:1526:UNK:HA	1.83	0.59
2:B:1721:GLU:HG2	2:B:1725:ARG:HH12	1.67	0.59
2:I:2748:PRO:HD2	2:I:2751:LEU:HD12	1.84	0.59
2:I:3732:SER:O	2:I:3769:ARG:NH2	2.35	0.59
2:B:718:GLY:HA3	2:B:737:LEU:HA	1.85	0.59
2:E:2751:LEU:HD11	2:E:2823:ILE:HG21	1.84	0.59
2:I:426:ARG:HB2	2:I:506:TYR:HA	1.84	0.59
2:I:718:GLY:HA3	2:I:737:LEU:HA	1.85	0.59
2:E:1101:ARG:HE	2:E:1115:LEU:HB3	1.67	0.59
2:E:1721:GLU:HG2	2:E:1725:ARG:HH12	1.67	0.59
2:G:426:ARG:HB2	2:G:506:TYR:HA	1.84	0.59
2:I:2751:LEU:HD11	2:I:2823:ILE:HG21	1.84	0.59
2:B:232:THR:HB	2:B:252:VAL:HG11	1.85	0.59
2:E:4056:GLU:HA	2:E:4059:LEU:HB2	1.85	0.59
2:G:1721:GLU:O	2:G:1725:ARG:NH2	2.35	0.59
2:E:315:CYS:SG	2:E:316:PHE:N	2.76	0.59
2:E:1091:GLU:HB3	2:E:1203:ASN:HB3	1.85	0.59
2:E:3990:VAL:HG13	2:E:4051:SER:HB2	1.84	0.59
2:B:2748:PRO:HD2	2:B:2751:LEU:HD12	1.84	0.59
2:E:2748:PRO:HD2	2:E:2751:LEU:HD12	1.84	0.59
2:E:3732:SER:O	2:E:3769:ARG:NH2	2.35	0.59
2:G:3990:VAL:HG13	2:G:4051:SER:HB2	1.84	0.59
2:G:4673:ARG:HH22	2:G:4698:LYS:HB2	1.67	0.59
2:I:3990:VAL:HG13	2:I:4051:SER:HB2	1.84	0.59
2:B:1777:PHE:HA	2:B:1799:SER:HB2	1.84	0.58
2:B:2739:PRO:HB3	2:B:2884:ASN:HB3	1.85	0.58
2:I:1865:MET:N	2:I:1865:MET:SD	2.76	0.58
2:I:4083:ASP:HA	2:I:4085:ARG:HH11	1.68	0.58
2:I:4673:ARG:HH22	2:I:4698:LYS:HB2	1.68	0.58
2:B:157:ARG:NH2	2:B:167:ASP:OD1	2.36	0.58
2:B:4681:LEU:HD21	2:B:4687:TYR:HD2	1.68	0.58
2:E:1777:PHE:HA	2:E:1799:SER:HB2	1.84	0.58
2:E:2440:MET:O	2:E:2444:GLN:N	2.36	0.58
2:G:315:CYS:SG	2:G:316:PHE:N	2.76	0.58
2:G:1091:GLU:HB3	2:G:1203:ASN:HB3	1.85	0.58
2:G:1218:GLY:HA2	2:G:1223:PHE:HB2	1.84	0.58
2:G:1721:GLU:HG2	2:G:1725:ARG:HH12	1.67	0.58
2:G:4083:ASP:HA	2:G:4085:ARG:HH11	1.68	0.58
2:I:736:HIS:HB3	1:J:8:SER:H	1.68	0.58
2:E:2042:CYS:SG	2:E:2043:GLY:N	2.74	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:2739:PRO:HB3	2:E:2884:ASN:HB3	1.85	0.58
2:G:2751:LEU:HD11	2:G:2823:ILE:HG21	1.84	0.58
2:I:157:ARG:NH2	2:I:167:ASP:OD1	2.36	0.58
2:I:972:LEU:O	2:I:1044:ARG:NH2	2.34	0.58
2:B:3843:ASP:H	2:B:3874:VAL:HG13	1.69	0.58
2:B:4843:LEU:HD12	2:E:4823:LEU:HD21	1.85	0.58
2:G:157:ARG:NH2	2:G:167:ASP:OD1	2.36	0.58
2:G:731:THR:OG1	2:G:1519:UNK:O	2.20	0.58
1:H:27:THR:HB	1:H:100:ASP:HB3	1.86	0.58
2:I:1101:ARG:HE	2:I:1115:LEU:HB3	1.67	0.58
2:I:1218:GLY:HA2	2:I:1223:PHE:HB2	1.84	0.58
2:E:2281:ILE:HG23	2:E:2341:VAL:HG11	1.86	0.58
2:E:4105:GLY:HA2	2:E:4108:ILE:HD12	1.86	0.58
2:G:2042:CYS:SG	2:G:2043:GLY:N	2.74	0.58
2:G:4681:LEU:HD21	2:G:4687:TYR:HD2	1.68	0.58
2:I:315:CYS:SG	2:I:316:PHE:N	2.76	0.58
2:I:2281:ILE:HG23	2:I:2341:VAL:HG11	1.86	0.58
2:I:3843:ASP:H	2:I:3874:VAL:HG13	1.69	0.58
2:B:1091:GLU:HB3	2:B:1203:ASN:HB3	1.85	0.58
2:B:1649:ASP:HB3	2:B:1652:GLU:HG2	1.84	0.58
2:B:1865:MET:N	2:B:1865:MET:SD	2.77	0.58
2:E:1649:ASP:HB3	2:E:1652:GLU:HG2	1.84	0.58
2:G:2281:ILE:HG23	2:G:2341:VAL:HG11	1.86	0.58
2:I:1271:ARG:HA	2:I:1471:UNK:HA	1.85	0.58
2:I:1721:GLU:HG2	2:I:1725:ARG:HH12	1.67	0.58
2:B:2751:LEU:HD11	2:B:2823:ILE:HG21	1.84	0.58
2:B:4584:ASP:HA	2:B:4627:MET:HA	1.84	0.58
2:G:4056:GLU:HA	2:G:4059:LEU:HB2	1.84	0.58
2:I:2440:MET:O	2:I:2444:GLN:N	2.36	0.58
1:J:27:THR:HB	1:J:100:ASP:HB3	1.86	0.58
2:B:315:CYS:SG	2:B:316:PHE:N	2.76	0.58
2:B:3990:VAL:HG13	2:B:4051:SER:HB2	1.85	0.58
2:E:718:GLY:HA3	2:E:737:LEU:HA	1.85	0.58
2:E:972:LEU:O	2:E:1044:ARG:NH2	2.34	0.58
2:G:4105:GLY:HA2	2:G:4108:ILE:HD12	1.86	0.58
2:I:645:ARG:N	2:I:824:GLU:O	2.37	0.58
1:A:27:THR:HB	1:A:100:ASP:HB3	1.86	0.58
2:B:4105:GLY:HA2	2:B:4108:ILE:HD12	1.86	0.58
2:E:426:ARG:HB2	2:E:506:TYR:HA	1.84	0.58
2:E:157:ARG:NH2	2:E:167:ASP:OD1	2.36	0.58
2:E:232:THR:HB	2:E:252:VAL:HG11	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:718:GLY:HA3	2:G:737:LEU:HA	1.85	0.58
2:G:1865:MET:N	2:G:1865:MET:SD	2.76	0.58
2:G:3843:ASP:H	2:G:3874:VAL:HG13	1.69	0.58
2:G:4918:ILE:HD13	2:I:4892:ARG:HD3	1.85	0.58
2:I:232:THR:HB	2:I:252:VAL:HG11	1.85	0.58
2:B:4056:GLU:HA	2:B:4059:LEU:HB2	1.85	0.57
2:E:3843:ASP:H	2:E:3874:VAL:HG13	1.69	0.57
1:F:27:THR:HB	1:F:100:ASP:HB3	1.86	0.57
2:G:1727:ARG:HH12	2:G:1772:ARG:HB3	1.69	0.57
2:I:2739:PRO:HB3	2:I:2884:ASN:HB3	1.85	0.57
2:I:4056:GLU:HA	2:I:4059:LEU:HB2	1.85	0.57
2:I:637:LEU:HD23	2:I:1637:MET:HB3	1.86	0.57
2:B:1101:ARG:HE	2:B:1115:LEU:HB3	1.67	0.57
2:B:4582:VAL:HG11	2:I:4860:ARG:HD2	1.85	0.57
2:E:637:LEU:HD23	2:E:1637:MET:HB3	1.86	0.57
2:E:1865:MET:N	2:E:1865:MET:SD	2.76	0.57
2:I:1091:GLU:HB3	2:I:1203:ASN:HB3	1.85	0.57
2:E:4681:LEU:HD21	2:E:4687:TYR:HD2	1.68	0.57
2:G:650:VAL:HB	2:G:777:PHE:HB2	1.87	0.57
2:G:1743:ARG:O	2:G:1964:ARG:NH2	2.37	0.57
2:B:637:LEU:HD23	2:B:1637:MET:HB3	1.86	0.57
2:B:2281:ILE:HG23	2:B:2341:VAL:HG11	1.86	0.57
2:G:637:LEU:HD23	2:G:1637:MET:HB3	1.87	0.57
2:I:1727:ARG:HH12	2:I:1772:ARG:HB3	1.70	0.57
2:I:4681:LEU:HD21	2:I:4687:TYR:HD2	1.68	0.57
2:B:1743:ARG:O	2:B:1964:ARG:NH2	2.37	0.57
2:B:1808:ARG:NH1	2:B:1853:ILE:O	2.38	0.57
2:G:232:THR:HB	2:G:252:VAL:HG11	1.85	0.57
2:I:650:VAL:HB	2:I:777:PHE:HB2	1.87	0.57
2:E:4151:SER:HA	2:E:4160:LEU:HD21	1.86	0.57
2:E:4899:ASP:OD1	2:G:4892:ARG:NH2	2.32	0.57
2:G:2189:LYS:HA	2:G:2192:TYR:HD2	1.70	0.57
2:I:1743:ARG:O	2:I:1964:ARG:NH2	2.37	0.57
2:I:4105:GLY:HA2	2:I:4108:ILE:HD12	1.86	0.57
2:B:4083:ASP:HA	2:B:4085:ARG:HH11	1.68	0.57
2:G:2739:PRO:HB3	2:G:2884:ASN:HB3	1.85	0.57
2:I:488:LEU:O	2:I:492:ASP:N	2.37	0.57
2:I:497:TYR:HB3	2:I:500:ALA:HB2	1.86	0.57
2:B:650:VAL:HB	2:B:777:PHE:HB2	1.87	0.57
2:B:1727:ARG:HH12	2:B:1772:ARG:HB3	1.70	0.57
2:E:650:VAL:HB	2:E:777:PHE:HB2	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:4012:LEU:O	2:E:4016:LEU:N	2.38	0.57
2:E:4083:ASP:HA	2:E:4085:ARG:HH11	1.68	0.57
2:G:4151:SER:HA	2:G:4160:LEU:HD21	1.86	0.57
2:I:2189:LYS:HA	2:I:2192:TYR:HD2	1.70	0.57
2:B:497:TYR:HB3	2:B:500:ALA:HB2	1.86	0.56
2:G:1079:LYS:NZ	2:G:1107:PRO:O	2.38	0.56
2:I:281:ARG:NH2	2:I:309:THR:OG1	2.38	0.56
2:E:1079:LYS:NZ	2:E:1107:PRO:O	2.38	0.56
2:E:1743:ARG:O	2:E:1964:ARG:NH2	2.37	0.56
2:E:4749:GLU:HA	2:E:4752:ALA:HB3	1.88	0.56
2:G:488:LEU:O	2:G:492:ASP:N	2.37	0.56
2:G:4749:GLU:HA	2:G:4752:ALA:HB3	1.87	0.56
1:A:34:LYS:NZ	2:B:635:THR:O	2.37	0.56
2:B:177:GLU:HG3	2:E:2452:ARG:HH12	1.68	0.56
2:B:396:GLU:O	2:B:400:ALA:N	2.36	0.56
2:B:683:ARG:NH1	2:B:707:VAL:O	2.39	0.56
2:B:2189:LYS:HA	2:B:2192:TYR:HD2	1.70	0.56
2:E:1808:ARG:NH1	2:E:1853:ILE:O	2.38	0.56
2:E:4054:ASN:ND2	2:E:4057:MET:SD	2.79	0.56
2:G:281:ARG:NH2	2:G:309:THR:OG1	2.38	0.56
2:B:4054:ASN:ND2	2:B:4057:MET:SD	2.79	0.56
2:G:591:ASP:O	2:G:1594:ARG:NH2	2.39	0.56
2:B:4749:GLU:HA	2:B:4752:ALA:HB3	1.88	0.56
2:E:281:ARG:NH2	2:E:309:THR:OG1	2.38	0.56
2:E:497:TYR:HB3	2:E:500:ALA:HB2	1.86	0.56
2:E:1727:ARG:HH12	2:E:1772:ARG:HB3	1.70	0.56
2:I:591:ASP:O	2:I:1594:ARG:NH2	2.39	0.56
1:A:62:GLY:HA3	1:A:74:LEU:HD21	1.87	0.56
1:H:62:GLY:HA3	1:H:74:LEU:HD21	1.87	0.56
2:I:1808:ARG:NH1	2:I:1853:ILE:O	2.38	0.56
2:B:451:TYR:O	2:B:474:ARG:NH1	2.39	0.56
2:E:645:ARG:N	2:E:824:GLU:O	2.37	0.56
2:E:2189:LYS:HA	2:E:2192:TYR:HD2	1.70	0.56
2:G:451:TYR:O	2:G:474:ARG:NH1	2.39	0.56
2:I:4054:ASN:ND2	2:I:4057:MET:SD	2.79	0.56
2:B:591:ASP:O	2:B:1594:ARG:NH2	2.39	0.56
2:B:4155:PRO:HD2	2:B:5036:LEU:HD23	1.87	0.56
2:E:635:THR:O	1:F:34:LYS:NZ	2.36	0.56
2:B:3992:PHE:O	2:B:3996:PHE:N	2.36	0.56
2:B:4151:SER:HA	2:B:4160:LEU:HD21	1.86	0.56
1:F:62:GLY:HA3	1:F:74:LEU:HD21	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:497:TYR:HB3	2:G:500:ALA:HB2	1.86	0.56
2:G:1808:ARG:NH1	2:G:1853:ILE:O	2.38	0.56
1:J:62:GLY:HA3	1:J:74:LEU:HD21	1.87	0.56
2:B:281:ARG:NH2	2:B:309:THR:OG1	2.38	0.55
2:E:451:TYR:O	2:E:474:ARG:NH1	2.39	0.55
2:E:591:ASP:O	2:E:1594:ARG:NH2	2.39	0.55
2:G:4054:ASN:ND2	2:G:4057:MET:SD	2.79	0.55
2:I:1713:ASP:O	2:I:1717:SER:N	2.39	0.55
2:E:1838:PHE:HB3	2:E:1842:LEU:HD11	1.89	0.55
2:G:4012:LEU:O	2:G:4016:LEU:N	2.38	0.55
2:I:736:HIS:HB2	1:J:7:ILE:HG23	1.87	0.55
2:I:4749:GLU:HA	2:I:4752:ALA:HB3	1.88	0.55
2:B:647:ASN:ND2	2:B:820:ARG:O	2.39	0.55
2:E:488:LEU:O	2:E:492:ASP:N	2.37	0.55
2:E:683:ARG:NH1	2:E:707:VAL:O	2.39	0.55
2:E:728:ARG:NH2	2:E:1527:UNK:O	2.39	0.55
2:I:4151:SER:HA	2:I:4160:LEU:HD21	1.86	0.55
2:E:1667:LEU:O	2:E:1671:ARG:NH1	2.40	0.55
2:E:4155:PRO:HD2	2:E:5036:LEU:HD23	1.87	0.55
2:E:4958:CYS:SG	2:E:4959:PHE:N	2.79	0.55
2:E:396:GLU:O	2:E:400:ALA:N	2.36	0.55
2:E:1231:GLN:NE2	2:E:1821:ASP:O	2.40	0.55
2:G:1838:PHE:HB3	2:G:1842:LEU:HD11	1.89	0.55
2:B:1079:LYS:NZ	2:B:1107:PRO:O	2.38	0.55
2:B:4012:LEU:O	2:B:4016:LEU:N	2.38	0.55
2:G:2013:LYS:HA	2:G:2028:ARG:HB2	1.89	0.55
2:E:1241:SER:HA	2:E:1603:VAL:HA	1.88	0.55
2:G:683:ARG:NH1	2:G:707:VAL:O	2.39	0.55
2:G:4155:PRO:HD2	2:G:5036:LEU:HD23	1.87	0.55
2:B:2440:MET:O	2:B:2444:GLN:N	2.36	0.55
2:G:34:LYS:H	2:G:53:SER:HG	1.53	0.55
2:G:1231:GLN:NE2	2:G:1821:ASP:O	2.40	0.55
2:I:1653:LEU:HB3	2:I:1660:GLN:HB2	1.89	0.55
2:I:4786:ASP:OD2	2:I:4789:PHE:N	2.37	0.55
2:B:1838:PHE:HB3	2:B:1842:LEU:HD11	1.88	0.55
2:E:4152:GLU:OE1	2:E:4192:ARG:NH1	2.40	0.55
2:E:4215:ARG:HA	2:E:4218:ILE:HD12	1.89	0.55
2:G:4958:CYS:SG	2:G:4959:PHE:N	2.80	0.55
2:I:451:TYR:O	2:I:474:ARG:NH1	2.39	0.55
2:I:683:ARG:NH1	2:I:707:VAL:O	2.39	0.55
2:B:1241:SER:HA	2:B:1603:VAL:HA	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:4786:ASP:OD2	2:B:4789:PHE:N	2.37	0.55
2:B:4958:CYS:SG	2:B:4959:PHE:N	2.79	0.55
2:G:1653:LEU:HB3	2:G:1660:GLN:HB2	1.89	0.55
2:G:1667:LEU:O	2:G:1671:ARG:NH1	2.40	0.55
2:G:3781:GLN:HA	2:G:3784:SER:HB3	1.89	0.55
2:G:4126:GLU:O	2:G:4130:ASN:ND2	2.40	0.55
2:I:1838:PHE:HB3	2:I:1842:LEU:HD11	1.88	0.55
2:I:4012:LEU:O	2:I:4016:LEU:N	2.38	0.55
2:I:4155:PRO:HD2	2:I:5036:LEU:HD23	1.87	0.55
2:B:1667:LEU:O	2:B:1671:ARG:NH1	2.40	0.54
2:E:731:THR:OG1	2:E:1519:UNK:O	2.25	0.54
2:E:3992:PHE:O	2:E:3996:PHE:N	2.36	0.54
2:E:4126:GLU:O	2:E:4130:ASN:ND2	2.40	0.54
2:G:2185:ILE:HA	2:G:2188:ASN:HD21	1.72	0.54
2:G:2440:MET:O	2:G:2444:GLN:N	2.36	0.54
2:G:4201:ASN:O	2:G:4205:TRP:N	2.39	0.54
2:I:4958:CYS:SG	2:I:4959:PHE:N	2.79	0.54
2:B:1231:GLN:NE2	2:B:1821:ASP:O	2.40	0.54
2:B:2013:LYS:HA	2:B:2028:ARG:HB2	1.89	0.54
2:E:1653:LEU:HB3	2:E:1660:GLN:HB2	1.89	0.54
2:E:1721:GLU:OE2	2:E:1725:ARG:NH2	2.40	0.54
2:G:1241:SER:HA	2:G:1603:VAL:HA	1.88	0.54
2:I:1241:SER:HA	2:I:1603:VAL:HA	1.88	0.54
2:B:1653:LEU:HB3	2:B:1660:GLN:HB2	1.89	0.54
2:B:4126:GLU:O	2:B:4130:ASN:ND2	2.40	0.54
2:E:627:PRO:HB2	1:F:92:PRO:HD3	1.89	0.54
2:G:1258:ALA:HB3	2:G:1271:ARG:HB3	1.90	0.54
2:I:1258:ALA:HB3	2:I:1271:ARG:HB3	1.90	0.54
2:I:1667:LEU:O	2:I:1671:ARG:NH1	2.40	0.54
2:I:2013:LYS:HA	2:I:2028:ARG:HB2	1.89	0.54
2:B:1721:GLU:OE2	2:B:1725:ARG:NH2	2.40	0.54
2:G:1721:GLU:OE2	2:G:1725:ARG:NH2	2.40	0.54
2:I:2185:ILE:HA	2:I:2188:ASN:HD21	1.73	0.54
2:I:4961:CYS:SG	2:I:4978:HIS:NE2	2.80	0.54
2:B:1713:ASP:O	2:B:1717:SER:N	2.39	0.54
2:B:4215:ARG:HA	2:B:4218:ILE:HD12	1.89	0.54
2:E:647:ASN:ND2	2:E:820:ARG:O	2.39	0.54
2:E:1096:THR:HG23	2:E:1199:VAL:HG22	1.89	0.54
2:G:719:LEU:HD22	2:G:735:GLN:HG2	1.90	0.54
2:I:1231:GLN:NE2	2:I:1821:ASP:O	2.40	0.54
2:I:3781:GLN:HA	2:I:3784:SER:HB3	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:4201:ASN:O	2:B:4205:TRP:N	2.39	0.54
2:E:1854:PHE:HD1	2:E:1858:ASP:HB3	1.73	0.54
2:E:2185:ILE:HA	2:E:2188:ASN:HD21	1.72	0.54
1:F:87:HIS:N	1:F:91:ILE:O	2.41	0.54
1:H:87:HIS:N	1:H:91:ILE:O	2.41	0.54
2:I:1079:LYS:NZ	2:I:1107:PRO:O	2.38	0.54
1:J:87:HIS:N	1:J:91:ILE:O	2.41	0.54
2:B:719:LEU:HD22	2:B:735:GLN:HG2	1.90	0.54
2:E:4546:VAL:O	2:E:4550:LYS:N	2.38	0.54
2:G:1096:THR:HG23	2:G:1199:VAL:HG22	1.88	0.54
2:I:4126:GLU:O	2:I:4130:ASN:ND2	2.40	0.54
2:B:4152:GLU:OE1	2:B:4192:ARG:NH1	2.40	0.54
2:G:4961:CYS:SG	2:G:4978:HIS:NE2	2.80	0.54
2:B:1258:ALA:HB3	2:B:1271:ARG:HB3	1.90	0.54
2:B:4558:ASN:OD1	2:B:4558:ASN:N	2.39	0.54
2:E:551:LEU:HD11	2:E:589:LEU:HD13	1.90	0.54
2:E:3806:ASN:HA	2:E:3890:LEU:HD13	1.90	0.54
2:G:2927:LEU:HD23	2:G:2930:LEU:HD12	1.90	0.54
2:G:4215:ARG:HA	2:G:4218:ILE:HD12	1.89	0.54
2:I:396:GLU:O	2:I:400:ALA:N	2.36	0.54
2:B:551:LEU:HD11	2:B:589:LEU:HD13	1.90	0.53
2:B:4961:CYS:SG	2:B:4978:HIS:NE2	2.80	0.53
2:E:206:CYS:SG	2:E:207:SER:N	2.82	0.53
2:I:683:ARG:HG2	2:I:717:ASP:HB3	1.91	0.53
2:I:4152:GLU:OE1	2:I:4192:ARG:NH1	2.40	0.53
2:B:469:ARG:HH21	2:B:3712:GLU:HB3	1.73	0.53
2:B:619:ASP:OD1	2:B:1680:ARG:NH1	2.42	0.53
2:B:4546:VAL:O	2:B:4550:LYS:N	2.38	0.53
2:E:682:LEU:HD13	2:E:787:VAL:HG11	1.91	0.53
2:E:2927:LEU:HD23	2:E:2930:LEU:HD12	1.90	0.53
2:E:3959:LYS:O	2:E:3963:ASN:ND2	2.41	0.53
2:I:551:LEU:HD11	2:I:589:LEU:HD13	1.90	0.53
2:I:1679:ASN:HA	2:I:1682:ALA:HB3	1.90	0.53
2:I:3806:ASN:HA	2:I:3890:LEU:HD13	1.90	0.53
2:I:3959:LYS:O	2:I:3963:ASN:ND2	2.41	0.53
1:A:87:HIS:N	1:A:91:ILE:O	2.41	0.53
2:B:683:ARG:HG2	2:B:717:ASP:HB3	1.90	0.53
2:B:1679:ASN:HA	2:B:1682:ALA:HB3	1.90	0.53
2:B:3781:GLN:HA	2:B:3784:SER:HB3	1.89	0.53
2:E:3781:GLN:HA	2:E:3784:SER:HB3	1.89	0.53
2:G:619:ASP:OD1	2:G:1680:ARG:NH1	2.42	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:1854:PHE:HD1	2:G:1858:ASP:HB3	1.73	0.53
2:G:3932:ASP:HA	2:G:3935:TRP:HD1	1.73	0.53
2:G:3992:PHE:O	2:G:3996:PHE:N	2.36	0.53
2:B:206:CYS:SG	2:B:207:SER:N	2.82	0.53
2:E:4138:ASP:N	2:E:4138:ASP:OD1	2.34	0.53
2:G:206:CYS:SG	2:G:207:SER:N	2.82	0.53
2:G:637:LEU:HG	2:G:1693:GLN:HB3	1.91	0.53
2:G:1713:ASP:O	2:G:1717:SER:N	2.39	0.53
2:I:469:ARG:HH21	2:I:3712:GLU:HB3	1.73	0.53
2:I:719:LEU:HD22	2:I:735:GLN:HG2	1.90	0.53
2:I:3780:LEU:HD11	2:I:3816:MET:HG3	1.90	0.53
2:B:3806:ASN:HA	2:B:3890:LEU:HD13	1.90	0.53
2:E:1258:ALA:HB3	2:E:1271:ARG:HB3	1.90	0.53
2:G:551:LEU:HD11	2:G:589:LEU:HD13	1.90	0.53
2:G:683:ARG:HG2	2:G:717:ASP:HB3	1.90	0.53
2:G:2095:GLN:NE2	2:G:2127:GLN:O	2.42	0.53
2:G:3959:LYS:O	2:G:3963:ASN:ND2	2.41	0.53
2:I:4215:ARG:HA	2:I:4218:ILE:HD12	1.89	0.53
2:B:1096:THR:HG23	2:B:1199:VAL:HG22	1.88	0.53
2:E:469:ARG:HH21	2:E:3712:GLU:HB3	1.73	0.53
2:G:682:LEU:HD13	2:G:787:VAL:HG11	1.91	0.53
2:B:2132:GLY:O	2:B:2136:ARG:N	2.42	0.53
2:B:3780:LEU:HD11	2:B:3816:MET:HG3	1.90	0.53
2:E:683:ARG:HG2	2:E:717:ASP:HB3	1.90	0.53
2:I:1854:PHE:HD1	2:I:1858:ASP:HB3	1.73	0.53
2:I:2927:LEU:HD23	2:I:2930:LEU:HD12	1.90	0.53
2:E:2368:LEU:HD13	2:E:2376:LEU:HB2	1.91	0.53
2:E:2737:PRO:O	2:E:2888:ARG:NH2	2.42	0.53
2:G:469:ARG:HH21	2:G:3712:GLU:HB3	1.73	0.53
2:G:877:ASN:HD22	2:G:1045:THR:HG23	1.74	0.53
2:G:3780:LEU:HD11	2:G:3816:MET:HG3	1.90	0.53
2:I:2095:GLN:NE2	2:I:2127:GLN:O	2.42	0.53
2:I:2737:PRO:O	2:I:2888:ARG:NH2	2.42	0.53
2:B:1854:PHE:HD1	2:B:1858:ASP:HB3	1.73	0.53
2:E:278:GLN:N	2:E:315:CYS:SG	2.82	0.53
2:E:1679:ASN:HA	2:E:1682:ALA:HB3	1.90	0.53
2:E:2013:LYS:HA	2:E:2028:ARG:HB2	1.89	0.53
2:E:3552:UNK:O	2:E:3556:UNK:N	2.42	0.53
2:I:637:LEU:HG	2:I:1693:GLN:HB3	1.91	0.53
2:I:877:ASN:HD22	2:I:1045:THR:HG23	1.74	0.53
2:I:2104:ARG:HA	2:I:2107:GLN:HB3	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1659:LEU:O	2:B:1663:HIS:N	2.40	0.53
2:B:2927:LEU:HD23	2:B:2930:LEU:HD12	1.90	0.53
2:E:4560:TYR:O	2:E:4564:PHE:N	2.40	0.53
2:G:124:SER:HA	2:G:132:ALA:HB3	1.91	0.53
2:G:3904:ARG:NH2	2:G:3973:CYS:SG	2.82	0.53
2:G:4152:GLU:OE1	2:G:4192:ARG:NH1	2.40	0.53
2:I:124:SER:HA	2:I:132:ALA:HB3	1.91	0.53
2:I:1096:THR:HG23	2:I:1199:VAL:HG22	1.89	0.53
2:B:682:LEU:HD13	2:B:787:VAL:HG11	1.90	0.52
2:B:877:ASN:HD22	2:B:1045:THR:HG23	1.74	0.52
2:E:637:LEU:HG	2:E:1693:GLN:HB3	1.91	0.52
2:E:1713:ASP:O	2:E:1717:SER:N	2.39	0.52
2:E:4201:ASN:O	2:E:4205:TRP:N	2.39	0.52
2:I:278:GLN:N	2:I:315:CYS:SG	2.82	0.52
2:I:671:VAL:HG22	2:I:740:PRO:HG3	1.91	0.52
2:B:2185:ILE:HA	2:B:2188:ASN:HD21	1.72	0.52
2:B:3552:UNK:O	2:B:3556:UNK:N	2.42	0.52
2:B:3959:LYS:O	2:B:3963:ASN:ND2	2.41	0.52
2:E:619:ASP:OD1	2:E:1680:ARG:NH1	2.42	0.52
2:E:3780:LEU:HD11	2:E:3816:MET:HG3	1.90	0.52
2:E:4956:THR:O	2:E:4965:SER:N	2.42	0.52
2:G:645:ARG:N	2:G:824:GLU:O	2.37	0.52
2:G:2022:PRO:HB2	2:G:2024:PRO:HD2	1.92	0.52
2:G:2737:PRO:O	2:G:2888:ARG:NH2	2.42	0.52
2:G:3882:GLN:HB2	2:G:3957:VAL:HG22	1.91	0.52
2:G:4780:PHE:O	2:G:4784:PHE:N	2.40	0.52
2:I:2132:GLY:O	2:I:2136:ARG:N	2.42	0.52
2:B:2737:PRO:O	2:B:2888:ARG:NH2	2.42	0.52
2:B:4780:PHE:O	2:B:4784:PHE:N	2.40	0.52
2:E:671:VAL:HG22	2:E:740:PRO:HG3	1.91	0.52
2:E:719:LEU:HD22	2:E:735:GLN:HG2	1.90	0.52
2:E:3932:ASP:HA	2:E:3935:TRP:HD1	1.73	0.52
2:G:396:GLU:O	2:G:400:ALA:N	2.36	0.52
2:G:1046:LEU:HB3	2:G:1051:TYR:HB2	1.92	0.52
2:G:2257:LEU:O	2:G:2261:SER:N	2.43	0.52
2:G:3552:UNK:O	2:G:3556:UNK:N	2.43	0.52
2:G:4040:ILE:O	2:G:4044:MET:N	2.43	0.52
2:G:4998:LYS:HB3	2:G:5003:HIS:HE1	1.74	0.52
2:I:206:CYS:SG	2:I:207:SER:N	2.82	0.52
2:I:1694:LEU:O	2:I:1712:TYR:OH	2.21	0.52
2:I:3904:ARG:NH2	2:I:3973:CYS:SG	2.82	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:488:LEU:O	2:B:492:ASP:N	2.36	0.52
2:B:1071:ARG:HD3	2:B:1241:SER:HB3	1.92	0.52
2:B:2095:GLN:NE2	2:B:2127:GLN:O	2.42	0.52
2:B:2336:ARG:HD3	2:B:2435:ARG:HD2	1.92	0.52
2:E:2803:GLU:OE2	2:E:2806:ARG:NH1	2.42	0.52
2:E:4745:LEU:O	2:E:4749:GLU:N	2.41	0.52
2:E:4913:ARG:HA	2:E:4916:PHE:HB3	1.92	0.52
2:G:1694:LEU:O	2:G:1712:TYR:OH	2.21	0.52
2:G:2104:ARG:HA	2:G:2107:GLN:HB3	1.91	0.52
2:G:2132:GLY:O	2:G:2136:ARG:N	2.42	0.52
2:I:242:ARG:O	2:I:289:ARG:NH1	2.43	0.52
2:I:1163:THR:HA	2:I:1168:VAL:HA	1.91	0.52
2:B:124:SER:HA	2:B:132:ALA:HB3	1.91	0.52
2:B:4913:ARG:HA	2:B:4916:PHE:HB3	1.91	0.52
2:E:1046:LEU:HB3	2:E:1051:TYR:HB2	1.92	0.52
2:E:2770:LYS:HB3	2:E:2775:TRP:HB2	1.92	0.52
2:E:4241:THR:HB	2:E:4989:MET:HE1	1.91	0.52
2:G:647:ASN:ND2	2:G:820:ARG:O	2.39	0.52
2:I:619:ASP:OD1	2:I:1680:ARG:NH1	2.42	0.52
2:I:669:ASP:OD2	2:I:790:ARG:NH2	2.43	0.52
2:I:1046:LEU:HB3	2:I:1051:TYR:HB2	1.92	0.52
2:B:645:ARG:N	2:B:824:GLU:O	2.37	0.52
2:B:669:ASP:OD2	2:B:790:ARG:NH2	2.43	0.52
2:B:1046:LEU:HB3	2:B:1051:TYR:HB2	1.92	0.52
2:B:2104:ARG:HA	2:B:2107:GLN:HB3	1.91	0.52
2:B:3932:ASP:HA	2:B:3935:TRP:HD1	1.73	0.52
2:B:4049:VAL:HG21	2:B:4159:ARG:HD2	1.91	0.52
2:B:4956:THR:O	2:B:4965:SER:N	2.42	0.52
2:E:877:ASN:HD22	2:E:1045:THR:HG23	1.74	0.52
2:E:1163:THR:HA	2:E:1168:VAL:HA	1.91	0.52
2:E:4049:VAL:HG21	2:E:4159:ARG:HD2	1.91	0.52
2:G:2466:LEU:HA	2:G:2469:ILE:HD12	1.92	0.52
2:I:2336:ARG:HD3	2:I:2435:ARG:HD2	1.92	0.52
2:B:472:ARG:NH2	2:B:3712:GLU:OE2	2.43	0.52
2:B:2770:LYS:HB3	2:B:2775:TRP:HB2	1.92	0.52
2:E:2336:ARG:HD3	2:E:2435:ARG:HD2	1.92	0.52
2:G:1679:ASN:HA	2:G:1682:ALA:HB3	1.90	0.52
2:G:4786:ASP:OD2	2:G:4789:PHE:N	2.37	0.52
2:I:4201:ASN:O	2:I:4205:TRP:N	2.39	0.52
2:I:4998:LYS:HB3	2:I:5003:HIS:HE1	1.74	0.52
2:B:637:LEU:HG	2:B:1693:GLN:HB3	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2368:LEU:HD13	2:B:2376:LEU:HB2	1.91	0.52
2:B:4998:LYS:HB3	2:B:5003:HIS:HE1	1.74	0.52
2:E:2466:LEU:HA	2:E:2469:ILE:HD12	1.92	0.52
2:E:3882:GLN:HB2	2:E:3957:VAL:HG22	1.91	0.52
2:G:139:GLU:O	2:G:141:ALA:N	2.43	0.52
2:G:3806:ASN:HA	2:G:3890:LEU:HD13	1.90	0.52
2:I:682:LEU:HD13	2:I:787:VAL:HG11	1.91	0.52
2:I:731:THR:OG1	2:I:1519:UNK:O	2.27	0.52
2:I:2022:PRO:HB2	2:I:2024:PRO:HD2	1.92	0.52
2:I:4049:VAL:HG21	2:I:4159:ARG:HD2	1.91	0.52
2:B:111:HIS:CD2	2:B:114:SER:H	2.24	0.52
2:B:3882:GLN:HB2	2:B:3957:VAL:HG22	1.91	0.52
2:G:22:LEU:HD22	2:G:200:TRP:HB3	1.92	0.52
2:G:3829:PHE:HA	2:G:3832:ILE:HD12	1.92	0.52
2:G:4049:VAL:HG21	2:G:4159:ARG:HD2	1.91	0.52
2:I:1721:GLU:OE2	2:I:1725:ARG:NH2	2.40	0.52
2:I:2803:GLU:OE2	2:I:2806:ARG:NH1	2.43	0.52
2:I:3932:ASP:HA	2:I:3935:TRP:HD1	1.73	0.52
2:B:22:LEU:HD22	2:B:200:TRP:HB3	1.92	0.52
2:E:124:SER:HA	2:E:132:ALA:HB3	1.91	0.52
2:E:669:ASP:OD2	2:E:790:ARG:NH2	2.43	0.52
2:E:2095:GLN:NE2	2:E:2127:GLN:O	2.42	0.52
2:G:43:GLY:N	2:G:447:ASP:OD2	2.43	0.52
2:G:278:GLN:N	2:G:315:CYS:SG	2.82	0.52
2:G:669:ASP:OD2	2:G:790:ARG:NH2	2.43	0.52
2:G:1271:ARG:HA	2:G:1471:UNK:HA	1.92	0.52
2:I:880:GLU:OE1	2:I:968:ALA:N	2.43	0.52
2:I:3829:PHE:HA	2:I:3832:ILE:HD12	1.92	0.52
2:B:709:ASP:O	2:B:725:HIS:ND1	2.43	0.51
2:B:880:GLU:OE1	2:B:968:ALA:N	2.43	0.51
2:E:22:LEU:HD22	2:E:200:TRP:HB3	1.92	0.51
2:E:3904:ARG:NH2	2:E:3973:CYS:SG	2.82	0.51
1:F:7:ILE:HG22	1:F:9:PRO:HD2	1.92	0.51
2:G:2803:GLU:OE2	2:G:2806:ARG:NH1	2.43	0.51
2:I:709:ASP:O	2:I:725:HIS:ND1	2.43	0.51
2:I:1659:LEU:O	2:I:1663:HIS:N	2.40	0.51
2:I:3552:UNK:O	2:I:3556:UNK:N	2.43	0.51
2:I:4109:GLN:O	2:I:4113:SER:N	2.42	0.51
2:I:4956:THR:O	2:I:4965:SER:N	2.42	0.51
2:E:139:GLU:O	2:E:141:ALA:N	2.43	0.51
2:E:242:ARG:O	2:E:289:ARG:NH1	2.43	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:709:ASP:O	2:E:725:HIS:ND1	2.43	0.51
2:E:1071:ARG:HD3	2:E:1241:SER:HB3	1.92	0.51
2:E:2022:PRO:HB2	2:E:2024:PRO:HD2	1.92	0.51
2:E:2104:ARG:HA	2:E:2107:GLN:HB3	1.91	0.51
2:E:4998:LYS:HB3	2:E:5003:HIS:HE1	1.74	0.51
2:G:2336:ARG:HD3	2:G:2435:ARG:HD2	1.92	0.51
2:G:2770:LYS:HB3	2:G:2775:TRP:HB2	1.92	0.51
2:I:2257:LEU:O	2:I:2261:SER:N	2.43	0.51
2:I:2466:LEU:HA	2:I:2469:ILE:HD12	1.92	0.51
2:B:139:GLU:O	2:B:141:ALA:N	2.43	0.51
2:B:4697:VAL:O	2:B:4701:TRP:N	2.42	0.51
2:E:742:ASP:OD1	2:E:760:ASN:ND2	2.44	0.51
2:G:111:HIS:CD2	2:G:114:SER:H	2.24	0.51
2:G:2368:LEU:HD13	2:G:2376:LEU:HB2	1.91	0.51
2:I:139:GLU:O	2:I:141:ALA:N	2.43	0.51
2:I:2368:LEU:HD13	2:I:2376:LEU:HB2	1.91	0.51
2:I:2868:SER:O	2:I:2872:GLN:N	2.44	0.51
2:I:4780:PHE:O	2:I:4784:PHE:N	2.40	0.51
1:A:7:ILE:HG22	1:A:9:PRO:HD2	1.92	0.51
2:B:671:VAL:HG22	2:B:740:PRO:HG3	1.91	0.51
2:B:2452:ARG:HH12	2:I:177:GLU:HG3	1.74	0.51
2:B:2803:GLU:OE2	2:B:2806:ARG:NH1	2.43	0.51
2:B:3904:ARG:NH2	2:B:3973:CYS:SG	2.82	0.51
2:B:4044:MET:HA	2:B:4047:MET:HG2	1.92	0.51
2:G:242:ARG:O	2:G:289:ARG:NH1	2.43	0.51
2:G:1163:THR:HA	2:G:1168:VAL:HA	1.91	0.51
2:B:278:GLN:N	2:B:315:CYS:SG	2.82	0.51
2:B:742:ASP:OD1	2:B:760:ASN:ND2	2.44	0.51
2:B:2022:PRO:HB2	2:B:2024:PRO:HD2	1.92	0.51
2:E:1778:SER:N	2:E:1799:SER:O	2.44	0.51
2:E:4040:ILE:O	2:E:4044:MET:N	2.43	0.51
2:E:4786:ASP:OD2	2:E:4789:PHE:N	2.37	0.51
2:G:4204:GLN:NE2	2:G:4245:MET:SD	2.84	0.51
2:B:242:ARG:O	2:B:289:ARG:NH1	2.43	0.51
2:E:880:GLU:OE1	2:E:968:ALA:N	2.42	0.51
2:E:2257:LEU:O	2:E:2261:SER:N	2.43	0.51
2:E:2868:SER:O	2:E:2872:GLN:N	2.44	0.51
2:E:4697:VAL:O	2:E:4701:TRP:N	2.42	0.51
2:G:709:ASP:O	2:G:725:HIS:ND1	2.43	0.51
2:G:1071:ARG:HD3	2:G:1241:SER:HB3	1.92	0.51
1:H:7:ILE:HG22	1:H:9:PRO:HD2	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:2770:LYS:HB3	2:I:2775:TRP:HB2	1.92	0.51
2:B:4560:TYR:O	2:B:4564:PHE:N	2.40	0.51
2:B:4634:GLU:HG3	2:B:4636:THR:H	1.76	0.51
2:E:2235:PHE:HA	2:E:2238:TYR:HD2	1.75	0.51
2:G:4634:GLU:HG3	2:G:4636:THR:H	1.76	0.51
2:G:4913:ARG:HA	2:G:4916:PHE:HB3	1.92	0.51
2:I:647:ASN:ND2	2:I:820:ARG:O	2.39	0.51
2:I:742:ASP:OD1	2:I:760:ASN:ND2	2.44	0.51
2:I:3882:GLN:HB2	2:I:3957:VAL:HG22	1.91	0.51
2:I:4634:GLU:HG3	2:I:4636:THR:H	1.76	0.51
2:B:2257:LEU:O	2:B:2261:SER:N	2.43	0.51
2:B:2430:ILE:HG21	2:B:2502:UNK:HA	1.93	0.51
2:B:3829:PHE:HA	2:B:3832:ILE:HD12	1.92	0.51
2:E:4041:ALA:HA	2:E:4044:MET:HB2	1.93	0.51
2:G:1778:SER:N	2:G:1799:SER:O	2.44	0.51
2:B:2466:LEU:HA	2:B:2469:ILE:HD12	1.92	0.51
2:E:173:SER:HB3	2:E:178:ARG:H	1.76	0.51
2:E:472:ARG:NH2	2:E:3712:GLU:OE2	2.43	0.51
2:E:4044:MET:HA	2:E:4047:MET:HG2	1.92	0.51
2:G:252:VAL:HA	2:G:255:HIS:HB2	1.93	0.51
2:I:22:LEU:HD22	2:I:200:TRP:HB3	1.92	0.51
2:I:173:SER:HB3	2:I:178:ARG:H	1.76	0.51
2:I:1071:ARG:HD3	2:I:1241:SER:HB3	1.92	0.51
1:J:7:ILE:HG22	1:J:9:PRO:HD2	1.92	0.51
2:B:1163:THR:HA	2:B:1168:VAL:HA	1.91	0.51
2:B:2868:SER:O	2:B:2872:GLN:N	2.44	0.51
2:E:3829:PHE:HA	2:E:3832:ILE:HD12	1.92	0.51
2:E:4634:GLU:HG3	2:E:4636:THR:H	1.76	0.51
2:G:3830:GLN:HA	2:G:3833:GLN:HG2	1.93	0.51
2:G:4044:MET:HA	2:G:4047:MET:HG2	1.92	0.51
2:I:4204:GLN:NE2	2:I:4245:MET:SD	2.83	0.51
2:I:4546:VAL:O	2:I:4550:LYS:N	2.38	0.51
2:B:4204:GLN:NE2	2:B:4245:MET:SD	2.84	0.50
2:E:252:VAL:HA	2:E:255:HIS:HB2	1.93	0.50
2:E:4843:LEU:HD22	2:E:4928:LEU:HD11	1.93	0.50
2:G:671:VAL:HG22	2:G:740:PRO:HG3	1.91	0.50
2:G:1931:LEU:HB3	2:G:1935:VAL:HB	1.93	0.50
2:G:2868:SER:O	2:G:2872:GLN:N	2.44	0.50
2:I:111:HIS:CD2	2:I:114:SER:H	2.24	0.50
2:G:118:LEU:HD12	2:G:137:LEU:HB3	1.94	0.50
2:G:742:ASP:OD1	2:G:760:ASN:ND2	2.44	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:932:LEU:HD23	2:G:935:LEU:HD12	1.94	0.50
2:G:4041:ALA:HA	2:G:4044:MET:HB2	1.93	0.50
2:G:4064:MET:HA	2:G:4067:LYS:HG2	1.93	0.50
2:I:43:GLY:N	2:I:447:ASP:OD2	2.43	0.50
2:I:4913:ARG:HA	2:I:4916:PHE:HB3	1.92	0.50
2:B:173:SER:HB3	2:B:178:ARG:H	1.76	0.50
2:B:252:VAL:HA	2:B:255:HIS:HB2	1.93	0.50
2:B:1778:SER:N	2:B:1799:SER:O	2.44	0.50
2:B:4041:ALA:HA	2:B:4044:MET:HB2	1.93	0.50
2:E:932:LEU:HD23	2:E:935:LEU:HD12	1.94	0.50
2:G:914:PRO:O	2:G:918:ARG:N	2.45	0.50
2:G:4546:VAL:O	2:G:4550:LYS:N	2.38	0.50
2:I:4040:ILE:O	2:I:4044:MET:N	2.43	0.50
2:E:988:LEU:O	2:E:992:GLY:N	2.44	0.50
2:E:1931:LEU:HB3	2:E:1935:VAL:HB	1.93	0.50
2:E:4934:GLY:HA3	2:G:4937:ILE:HD12	1.94	0.50
2:G:78:LEU:O	2:G:82:LEU:N	2.43	0.50
2:G:1203:ASN:ND2	2:G:1210:SER:O	2.45	0.50
2:B:118:LEU:HD12	2:B:137:LEU:HB3	1.94	0.50
2:B:2235:PHE:HA	2:B:2238:TYR:HD2	1.75	0.50
2:E:395:GLN:HG3	2:E:397:GLU:H	1.76	0.50
2:E:4860:ARG:HD2	2:G:4582:VAL:HG11	1.93	0.50
2:G:395:GLN:HG3	2:G:397:GLU:H	1.76	0.50
2:G:635:THR:O	1:H:34:LYS:NZ	2.44	0.50
2:G:2235:PHE:HA	2:G:2238:TYR:HD2	1.76	0.50
2:G:4560:TYR:O	2:G:4564:PHE:N	2.40	0.50
2:G:4843:LEU:HD22	2:G:4928:LEU:HD11	1.93	0.50
2:I:932:LEU:HD23	2:I:935:LEU:HD12	1.94	0.50
2:I:1778:SER:N	2:I:1799:SER:O	2.44	0.50
2:I:1817:GLU:O	2:I:1821:ASP:N	2.42	0.50
2:I:2205:GLU:HG2	2:I:2253:HIS:HE1	1.77	0.50
2:I:2235:PHE:HA	2:I:2238:TYR:HD2	1.75	0.50
2:I:4044:MET:HA	2:I:4047:MET:HG2	1.92	0.50
2:B:43:GLY:N	2:B:447:ASP:OD2	2.43	0.50
2:B:131:LEU:HB3	2:E:2459:SER:HB2	1.93	0.50
2:B:4745:LEU:O	2:B:4749:GLU:N	2.41	0.50
2:E:43:GLY:N	2:E:447:ASP:OD2	2.43	0.50
2:E:3830:GLN:HA	2:E:3833:GLN:HG2	1.92	0.50
2:I:118:LEU:HD12	2:I:137:LEU:HB3	1.94	0.50
2:B:3830:GLN:HA	2:B:3833:GLN:HG2	1.92	0.50
2:E:317:ARG:N	2:E:347:PHE:O	2.45	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:4064:MET:HA	2:E:4067:LYS:HG2	1.93	0.50
2:G:880:GLU:OE1	2:G:968:ALA:N	2.42	0.50
2:G:1647:CYS:SG	2:G:1648:MET:N	2.85	0.50
2:I:472:ARG:NH2	2:I:3712:GLU:OE2	2.43	0.50
2:I:4041:ALA:HA	2:I:4044:MET:HB2	1.93	0.50
2:I:4558:ASN:OD1	2:I:4558:ASN:N	2.39	0.50
2:I:4990:PHE:O	2:I:4994:TYR:N	2.43	0.50
2:B:4565:LEU:O	2:B:4569:LEU:N	2.37	0.50
2:E:78:LEU:O	2:E:82:LEU:N	2.43	0.50
2:E:1970:GLN:HB2	2:E:3642:TYR:HA	1.94	0.50
2:G:173:SER:HB3	2:G:178:ARG:H	1.76	0.50
2:B:731:THR:OG1	2:B:1519:UNK:O	2.30	0.50
2:B:1647:CYS:SG	2:B:1648:MET:N	2.85	0.50
2:E:1659:LEU:O	2:E:1663:HIS:N	2.40	0.50
2:E:2132:GLY:O	2:E:2136:ARG:N	2.42	0.50
2:G:886:ARG:HB3	2:G:891:TRP:HB2	1.94	0.50
2:G:1718:ILE:HG13	2:G:1719:HIS:CD2	2.47	0.50
2:G:2205:GLU:HG2	2:G:2253:HIS:HE1	1.77	0.50
2:G:4956:THR:O	2:G:4965:SER:N	2.42	0.50
2:I:252:VAL:HA	2:I:255:HIS:HB2	1.93	0.50
2:I:1647:CYS:SG	2:I:1648:MET:N	2.85	0.50
2:I:3992:PHE:O	2:I:3996:PHE:N	2.36	0.50
2:B:932:LEU:HD23	2:B:935:LEU:HD12	1.94	0.49
2:B:1203:ASN:ND2	2:B:1210:SER:O	2.45	0.49
2:B:2205:GLU:HG2	2:B:2253:HIS:HE1	1.77	0.49
2:E:330:ASP:OD1	2:E:330:ASP:N	2.45	0.49
2:E:1848:LEU:HB3	2:E:1853:ILE:HB	1.94	0.49
2:E:3974:THR:HA	2:E:3977:GLN:HB2	1.94	0.49
2:I:1931:LEU:HB3	2:I:1935:VAL:HB	1.93	0.49
2:B:1848:LEU:HD22	2:B:1853:ILE:HG13	1.94	0.49
2:E:2205:GLU:HG2	2:E:2253:HIS:HE1	1.77	0.49
2:I:1718:ILE:HG13	2:I:1719:HIS:CD2	2.48	0.49
2:I:1848:LEU:HD22	2:I:1853:ILE:HG13	1.94	0.49
2:B:1294:UNK:HA	2:B:1455:UNK:HA	1.95	0.49
2:G:1848:LEU:HB3	2:G:1853:ILE:HB	1.94	0.49
2:I:886:ARG:HB3	2:I:891:TRP:HB2	1.94	0.49
2:I:1679:ASN:ND2	2:I:1798:LEU:O	2.45	0.49
2:I:3830:GLN:HA	2:I:3833:GLN:HG2	1.93	0.49
2:I:4745:LEU:O	2:I:4749:GLU:N	2.41	0.49
2:B:395:GLN:HG3	2:B:397:GLU:H	1.77	0.49
2:B:886:ARG:HB3	2:B:891:TRP:HB2	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:1679:ASN:ND2	2:B:1798:LEU:O	2.45	0.49
2:B:3804:ILE:O	2:B:3809:ASN:ND2	2.46	0.49
2:B:4040:ILE:O	2:B:4044:MET:N	2.43	0.49
2:B:4823:LEU:HD21	2:I:4843:LEU:HD12	1.94	0.49
2:E:5014:TYR:HD1	2:E:5019:TRP:HH2	1.60	0.49
2:G:1659:LEU:O	2:G:1663:HIS:N	2.40	0.49
2:G:1817:GLU:O	2:G:1821:ASP:N	2.42	0.49
2:G:3974:THR:HA	2:G:3977:GLN:HB2	1.94	0.49
2:I:988:LEU:O	2:I:992:GLY:N	2.44	0.49
2:B:317:ARG:N	2:B:347:PHE:O	2.45	0.49
2:B:1718:ILE:HG13	2:B:1719:HIS:CD2	2.47	0.49
2:B:4815:ASP:O	2:B:4819:GLY:N	2.44	0.49
2:E:1203:ASN:ND2	2:E:1210:SER:O	2.45	0.49
2:E:1647:CYS:SG	2:E:1648:MET:N	2.85	0.49
2:G:2342:ASN:OD1	2:G:2342:ASN:N	2.45	0.49
2:G:4945:ASP:HA	2:G:4948:GLU:HG2	1.95	0.49
2:I:78:LEU:O	2:I:82:LEU:N	2.43	0.49
2:I:914:PRO:O	2:I:918:ARG:N	2.45	0.49
2:I:3817:LEU:HD13	2:I:3899:PHE:HD1	1.78	0.49
2:I:4934:GLY:O	2:I:4938:ASP:N	2.41	0.49
2:B:1931:LEU:HB3	2:B:1935:VAL:HB	1.93	0.49
2:B:3817:LEU:HD13	2:B:3899:PHE:HD1	1.78	0.49
2:B:4782:VAL:O	2:B:4785:THR:OG1	2.29	0.49
2:B:5014:TYR:HD1	2:B:5019:TRP:HH2	1.60	0.49
2:E:475:GLN:NE2	2:E:528:SER:O	2.46	0.49
2:E:914:PRO:O	2:E:918:ARG:N	2.45	0.49
2:G:911:HIS:O	2:G:918:ARG:NH2	2.44	0.49
2:G:1970:GLN:HB2	2:G:3642:TYR:HA	1.94	0.49
2:I:707:VAL:HG23	2:I:713:SER:HB2	1.95	0.49
2:I:728:ARG:NH2	2:I:1527:UNK:O	2.46	0.49
2:I:3804:ILE:O	2:I:3809:ASN:ND2	2.46	0.49
2:I:4064:MET:HA	2:I:4067:LYS:HG2	1.93	0.49
2:B:988:LEU:O	2:B:992:GLY:N	2.44	0.49
2:B:1848:LEU:HB3	2:B:1853:ILE:HB	1.94	0.49
2:E:177:GLU:HG3	2:G:2452:ARG:HH12	1.78	0.49
2:E:3817:LEU:HD13	2:E:3899:PHE:HD1	1.78	0.49
2:G:475:GLN:NE2	2:G:528:SER:O	2.46	0.49
2:G:1693:GLN:HA	2:G:1696:HIS:HB3	1.95	0.49
2:I:1203:ASN:ND2	2:I:1210:SER:O	2.45	0.49
2:I:4843:LEU:HD22	2:I:4928:LEU:HD11	1.93	0.49
2:E:118:LEU:HD12	2:E:137:LEU:HB3	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:886:ARG:HB3	2:E:891:TRP:HB2	1.94	0.49
2:E:1693:GLN:HA	2:E:1696:HIS:HB3	1.94	0.49
2:E:4990:PHE:O	2:E:4994:TYR:N	2.43	0.49
2:G:988:LEU:O	2:G:992:GLY:N	2.44	0.49
2:G:2265:LEU:HB3	2:G:2330:ARG:HG2	1.95	0.49
2:I:4065:PHE:CE2	2:I:4132:PHE:HB3	2.48	0.49
2:B:261:ARG:HD3	2:B:283:ARG:HD3	1.95	0.49
2:B:1817:GLU:O	2:B:1821:ASP:N	2.42	0.49
2:B:4241:THR:HB	2:B:4989:MET:HE1	1.94	0.49
2:E:111:HIS:CD2	2:E:114:SER:H	2.24	0.49
2:E:3905:THR:HA	2:E:3912:THR:HG23	1.95	0.49
2:E:4945:ASP:HA	2:E:4948:GLU:HG2	1.95	0.49
2:G:317:ARG:N	2:G:347:PHE:O	2.45	0.49
2:G:1109:LEU:HA	2:G:1120:LEU:HD21	1.95	0.49
2:G:1679:ASN:ND2	2:G:1798:LEU:O	2.45	0.49
2:G:3804:ILE:O	2:G:3809:ASN:ND2	2.46	0.49
2:G:3905:THR:HA	2:G:3912:THR:HG23	1.95	0.49
2:I:395:GLN:HG3	2:I:397:GLU:H	1.76	0.49
2:B:911:HIS:O	2:B:918:ARG:NH2	2.44	0.49
2:B:1109:LEU:HA	2:B:1120:LEU:HD21	1.95	0.49
2:B:1970:GLN:HB2	2:B:3642:TYR:HA	1.94	0.49
2:B:4109:GLN:O	2:B:4113:SER:N	2.42	0.49
2:B:4843:LEU:HD22	2:B:4928:LEU:HD11	1.93	0.49
2:E:1679:ASN:ND2	2:E:1798:LEU:O	2.45	0.49
2:E:2265:LEU:HB3	2:E:2330:ARG:HG2	1.95	0.49
2:G:2430:ILE:HG21	2:G:2502:UNK:HA	1.95	0.49
2:G:4782:VAL:O	2:G:4785:THR:OG1	2.29	0.49
2:I:475:GLN:NE2	2:I:528:SER:O	2.46	0.49
2:B:4064:MET:HA	2:B:4067:LYS:HG2	1.93	0.48
2:E:1109:LEU:HA	2:E:1120:LEU:HD21	1.95	0.48
2:E:1848:LEU:HD22	2:E:1853:ILE:HG13	1.94	0.48
2:I:1109:LEU:HA	2:I:1120:LEU:HD21	1.95	0.48
2:I:4916:PHE:O	2:I:4920:PHE:N	2.46	0.48
2:B:475:GLN:NE2	2:B:528:SER:O	2.46	0.48
2:B:2265:LEU:HB3	2:B:2330:ARG:HG2	1.95	0.48
2:E:1718:ILE:HG13	2:E:1719:HIS:CD2	2.47	0.48
2:E:4895:GLY:O	2:G:4892:ARG:NH2	2.38	0.48
2:I:709:ASP:HB3	2:I:725:HIS:CE1	2.49	0.48
2:I:2265:LEU:HB3	2:I:2330:ARG:HG2	1.95	0.48
2:I:4571:PHE:O	2:I:4575:PHE:N	2.46	0.48
2:I:4577:LEU:HG	2:I:4580:TYR:HE2	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:4697:VAL:O	2:I:4701:TRP:N	2.42	0.48
2:I:4945:ASP:HA	2:I:4948:GLU:HG2	1.95	0.48
2:B:914:PRO:O	2:B:918:ARG:N	2.45	0.48
2:E:707:VAL:HG23	2:E:713:SER:HB2	1.95	0.48
2:I:3905:THR:HA	2:I:3912:THR:HG23	1.95	0.48
2:I:4735:GLU:O	2:I:4739:GLU:N	2.47	0.48
2:B:4577:LEU:HG	2:B:4580:TYR:HE2	1.78	0.48
2:B:4945:ASP:HA	2:B:4948:GLU:HG2	1.95	0.48
2:E:652:ARG:HB3	2:E:773:LEU:HD13	1.96	0.48
2:E:3804:ILE:O	2:E:3809:ASN:ND2	2.46	0.48
2:G:707:VAL:HG23	2:G:713:SER:HB2	1.95	0.48
2:G:709:ASP:HB3	2:G:725:HIS:CE1	2.48	0.48
2:G:4670:ILE:O	2:G:4674:GLU:N	2.38	0.48
2:G:4735:GLU:O	2:G:4739:GLU:N	2.47	0.48
2:I:1848:LEU:HB3	2:I:1853:ILE:HB	1.94	0.48
2:B:3674:ILE:HD11	2:B:3728:ILE:HG22	1.96	0.48
2:E:2004:GLU:HA	2:E:2007:ASN:HD22	1.79	0.48
2:E:2347:GLU:O	2:E:2351:ASN:N	2.36	0.48
2:E:4237:PHE:O	2:E:4241:THR:OG1	2.23	0.48
2:G:1848:LEU:HD22	2:G:1853:ILE:HG13	1.94	0.48
2:G:4065:PHE:CE2	2:G:4132:PHE:HB3	2.48	0.48
2:G:5014:TYR:HD1	2:G:5019:TRP:HH2	1.60	0.48
2:I:772:ASN:ND2	2:I:774:ASP:OD2	2.47	0.48
2:I:1196:PRO:O	2:I:1198:GLN:NE2	2.44	0.48
2:I:3974:THR:HA	2:I:3977:GLN:HB2	1.94	0.48
2:I:4560:TYR:O	2:I:4564:PHE:N	2.40	0.48
2:I:5014:TYR:HD1	2:I:5019:TRP:HH2	1.60	0.48
2:B:652:ARG:HB3	2:B:773:LEU:HD13	1.96	0.48
2:B:2004:GLU:HA	2:B:2007:ASN:HD22	1.79	0.48
2:E:4204:GLN:NE2	2:E:4245:MET:SD	2.84	0.48
2:E:4670:ILE:O	2:E:4674:GLU:N	2.37	0.48
2:G:4916:PHE:O	2:G:4920:PHE:N	2.46	0.48
2:I:261:ARG:HD3	2:I:283:ARG:HD3	1.95	0.48
2:I:1970:GLN:HB2	2:I:3642:TYR:HA	1.94	0.48
2:B:709:ASP:HB3	2:B:725:HIS:CE1	2.49	0.48
2:B:3974:THR:HA	2:B:3977:GLN:HB2	1.94	0.48
2:B:4990:PHE:O	2:B:4994:TYR:N	2.44	0.48
2:E:709:ASP:HB3	2:E:725:HIS:CE1	2.49	0.48
2:E:4735:GLU:O	2:E:4739:GLU:N	2.47	0.48
2:G:952:LYS:HB3	2:G:968:ALA:HB1	1.96	0.48
2:G:2004:GLU:HA	2:G:2007:ASN:HD22	1.79	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:251:ALA:O	2:I:254:THR:OG1	2.30	0.48
2:I:3674:ILE:HD11	2:I:3728:ILE:HG22	1.96	0.48
2:B:707:VAL:HG23	2:B:713:SER:HB2	1.95	0.48
2:B:952:LYS:HB3	2:B:968:ALA:HB1	1.96	0.48
2:E:251:ALA:O	2:E:254:THR:OG1	2.30	0.48
2:E:261:ARG:HD3	2:E:283:ARG:HD3	1.95	0.48
2:E:4065:PHE:CE2	2:E:4132:PHE:HB3	2.48	0.48
2:E:4780:PHE:O	2:E:4784:PHE:N	2.40	0.48
2:G:472:ARG:NH2	2:G:3712:GLU:OE2	2.43	0.48
2:G:4138:ASP:OD1	2:G:4138:ASP:N	2.34	0.48
2:G:4241:THR:HB	2:G:4989:MET:HE1	1.96	0.48
2:G:4577:LEU:HG	2:G:4580:TYR:HE2	1.79	0.48
2:G:4697:VAL:O	2:G:4701:TRP:N	2.42	0.48
2:I:2004:GLU:HA	2:I:2007:ASN:HD22	1.79	0.48
2:I:4961:CYS:HB3	2:I:4983:HIS:CE1	2.49	0.48
2:B:4065:PHE:CE2	2:B:4132:PHE:HB3	2.48	0.48
2:B:4916:PHE:O	2:B:4920:PHE:N	2.46	0.48
2:E:1663:HIS:O	2:E:1667:LEU:N	2.45	0.48
2:E:4916:PHE:O	2:E:4920:PHE:N	2.46	0.48
2:E:4928:LEU:HA	2:E:4931:ILE:HD12	1.96	0.48
2:G:385:ASP:OD1	2:G:385:ASP:N	2.47	0.48
2:G:3674:ILE:HD11	2:G:3728:ILE:HG22	1.96	0.48
2:G:4961:CYS:HB3	2:G:4983:HIS:CE1	2.49	0.48
2:I:317:ARG:N	2:I:347:PHE:O	2.45	0.48
2:B:1693:GLN:HA	2:B:1696:HIS:HB3	1.94	0.48
2:B:3905:THR:HA	2:B:3912:THR:HG23	1.95	0.48
2:B:4088:ILE:HG23	2:B:4123:ILE:HB	1.95	0.48
2:E:952:LYS:HB3	2:E:968:ALA:HB1	1.96	0.48
2:I:652:ARG:HB3	2:I:773:LEU:HD13	1.96	0.48
2:B:264:PRO:HA	2:B:280:LEU:HA	1.96	0.47
2:B:1931:LEU:HD22	2:B:1935:VAL:HG11	1.96	0.47
2:B:1950:GLU:OE2	2:B:1954:ARG:NH2	2.43	0.47
2:B:3955:MET:HG3	2:B:4019:LEU:HD22	1.96	0.47
2:B:4833:ASN:ND2	2:B:4939:ALA:HB2	2.29	0.47
2:B:4848:VAL:HG23	2:B:4883:TYR:HE1	1.79	0.47
2:E:1965:TYR:OH	2:E:2027:ILE:O	2.24	0.47
2:G:426:ARG:HG2	2:G:431:PRO:HA	1.96	0.47
2:G:2212:VAL:O	2:G:2216:GLY:N	2.46	0.47
2:G:4558:ASN:OD1	2:G:4558:ASN:N	2.39	0.47
2:G:4571:PHE:O	2:G:4575:PHE:N	2.46	0.47
2:G:4815:ASP:O	2:G:4819:GLY:N	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:1668:ARG:HA	2:I:1671:ARG:HH11	1.79	0.47
2:I:1693:GLN:HA	2:I:1696:HIS:HB3	1.94	0.47
2:I:1931:LEU:HD22	2:I:1935:VAL:HG11	1.96	0.47
2:I:1952:GLN:HA	2:I:1955:VAL:HG12	1.96	0.47
2:I:2457:LEU:HD23	2:I:2460:LEU:HD12	1.96	0.47
2:I:3955:MET:HG3	2:I:4019:LEU:HD22	1.96	0.47
2:I:4110:PHE:HA	2:I:4113:SER:HB3	1.96	0.47
2:I:4782:VAL:O	2:I:4785:THR:OG1	2.29	0.47
2:E:2286:LEU:HA	2:E:2289:ALA:HB3	1.97	0.47
2:E:3674:ILE:HD11	2:E:3728:ILE:HG22	1.96	0.47
2:E:5012:LYS:O	2:E:5016:GLU:N	2.43	0.47
2:G:261:ARG:HD3	2:G:283:ARG:HD3	1.95	0.47
2:G:2286:LEU:HA	2:G:2289:ALA:HB3	1.97	0.47
2:G:3771:HIS:O	2:G:3774:GLY:N	2.45	0.47
2:G:3772:THR:OG1	2:G:3815:LYS:NZ	2.46	0.47
2:G:3817:LEU:HD13	2:G:3899:PHE:HD1	1.78	0.47
2:G:3955:MET:HG3	2:G:4019:LEU:HD22	1.96	0.47
2:G:4110:PHE:HA	2:G:4113:SER:HB3	1.96	0.47
2:I:15:ARG:HD3	2:I:98:HIS:HB3	1.95	0.47
2:I:385:ASP:N	2:I:385:ASP:OD1	2.47	0.47
2:B:111:HIS:N	2:B:116:MET:O	2.37	0.47
2:B:460:GLN:HG2	2:B:462:GLU:H	1.80	0.47
2:B:1044:ARG:HA	2:B:1047:LEU:HD12	1.97	0.47
2:B:2286:LEU:HA	2:B:2289:ALA:HB3	1.97	0.47
2:B:4580:TYR:HB2	2:I:4879:MET:HB2	1.95	0.47
2:B:4813:LEU:HA	2:B:4816:ILE:HG12	1.96	0.47
2:B:4961:CYS:HB3	2:B:4983:HIS:CE1	2.49	0.47
2:E:870:ILE:HD11	2:E:1049:TYR:CG	2.49	0.47
2:E:1668:ARG:HA	2:E:1671:ARG:HH11	1.79	0.47
2:E:2758:PHE:O	2:E:2762:THR:N	2.46	0.47
2:E:4577:LEU:HG	2:E:4580:TYR:HE2	1.78	0.47
2:E:4961:CYS:HB3	2:E:4983:HIS:CE1	2.49	0.47
2:G:1668:ARG:HA	2:G:1671:ARG:HH11	1.79	0.47
2:G:4833:ASN:ND2	2:G:4939:ALA:HB2	2.29	0.47
2:G:4848:VAL:HG23	2:G:4883:TYR:HE1	1.79	0.47
2:I:264:PRO:HA	2:I:280:LEU:HA	1.96	0.47
2:I:870:ILE:HD11	2:I:1049:TYR:CG	2.49	0.47
2:B:1952:GLN:HA	2:B:1955:VAL:HG12	1.96	0.47
2:E:3955:MET:HG3	2:E:4019:LEU:HD22	1.96	0.47
2:E:4957:LYS:HE3	2:E:4957:LYS:HB3	1.73	0.47
2:G:4172:GLU:OE1	2:G:4175:ARG:NH1	2.47	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:379:HIS:CD2	2:I:382:GLY:H	2.25	0.47
2:I:4833:ASN:ND2	2:I:4939:ALA:HB2	2.29	0.47
2:B:15:ARG:HD3	2:B:98:HIS:HB3	1.95	0.47
2:B:18:ASP:H	2:B:69:LEU:HB2	1.80	0.47
2:B:870:ILE:HD11	2:B:1049:TYR:CG	2.49	0.47
2:B:2457:LEU:HD23	2:B:2460:LEU:HD12	1.96	0.47
2:E:15:ARG:HD3	2:E:98:HIS:HB3	1.95	0.47
2:E:1240:LYS:O	2:E:1604:SER:N	2.46	0.47
2:E:1931:LEU:HD22	2:E:1935:VAL:HG11	1.97	0.47
2:E:4833:ASN:ND2	2:E:4939:ALA:HB2	2.29	0.47
2:G:15:ARG:HD3	2:G:98:HIS:HB3	1.95	0.47
2:G:870:ILE:HD11	2:G:1049:TYR:CG	2.49	0.47
2:G:1044:ARG:HA	2:G:1047:LEU:HD12	1.97	0.47
2:G:4705:VAL:HB	2:G:4778:TRP:CG	2.49	0.47
2:I:18:ASP:H	2:I:69:LEU:HB2	1.80	0.47
2:I:207:SER:OG	2:I:208:CYS:N	2.48	0.47
2:B:1229:ASN:O	2:B:1827:ARG:N	2.40	0.47
2:B:2869:ARG:HH12	2:B:2945:UNK:C	2.27	0.47
2:B:4705:VAL:HB	2:B:4778:TRP:CG	2.49	0.47
2:B:4928:LEU:HA	2:B:4931:ILE:HD12	1.96	0.47
2:E:18:ASP:H	2:E:69:LEU:HB2	1.80	0.47
2:G:1931:LEU:HD22	2:G:1935:VAL:HG11	1.96	0.47
2:G:2143:THR:O	2:G:3651:ASN:ND2	2.38	0.47
2:G:2457:LEU:HD23	2:G:2460:LEU:HD12	1.96	0.47
2:G:4088:ILE:HG23	2:G:4123:ILE:HB	1.95	0.47
2:I:952:LYS:HB3	2:I:968:ALA:HB1	1.96	0.47
2:I:4705:VAL:HB	2:I:4778:TRP:CG	2.49	0.47
2:B:164:ARG:N	2:B:167:ASP:OD2	2.47	0.47
2:B:213:TYR:CG	2:B:337:PRO:HB2	2.50	0.47
2:B:629:ARG:HB3	2:B:634:GLN:NE2	2.30	0.47
2:B:1245:PHE:HE1	2:B:1600:LEU:HD23	1.80	0.47
2:B:4735:GLU:O	2:B:4739:GLU:N	2.47	0.47
2:E:38:ALA:HB1	2:E:64:ILE:HG13	1.96	0.47
2:E:772:ASN:ND2	2:E:774:ASP:OD2	2.47	0.47
2:E:1044:ARG:HA	2:E:1047:LEU:HD12	1.97	0.47
2:E:4837:LEU:HD21	2:E:4936:ILE:HD11	1.96	0.47
2:E:4848:VAL:HG23	2:E:4883:TYR:HE1	1.79	0.47
2:G:111:HIS:N	2:G:116:MET:O	2.37	0.47
2:G:629:ARG:HB3	2:G:634:GLN:NE2	2.30	0.47
2:G:652:ARG:HB3	2:G:773:LEU:HD13	1.96	0.47
2:G:1516:UNK:N	2:G:1529:UNK:O	2.48	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:4147:LEU:O	2:G:4151:SER:OG	2.29	0.47
2:G:4875:LYS:HB3	2:G:4882:CYS:HA	1.97	0.47
2:I:426:ARG:HG2	2:I:431:PRO:HA	1.97	0.47
2:I:1229:ASN:O	2:I:1827:ARG:N	2.40	0.47
2:I:1245:PHE:HE1	2:I:1600:LEU:HD23	1.80	0.47
2:I:2199:ARG:NH2	2:I:2246:ASN:OD1	2.48	0.47
2:I:2286:LEU:HA	2:I:2289:ALA:HB3	1.97	0.47
2:B:772:ASN:ND2	2:B:774:ASP:OD2	2.47	0.47
2:B:1663:HIS:O	2:B:1667:LEU:N	2.46	0.47
2:B:2143:THR:O	2:B:3651:ASN:ND2	2.38	0.47
2:B:4670:ILE:O	2:B:4674:GLU:N	2.37	0.47
2:E:4813:LEU:HA	2:E:4816:ILE:HG12	1.96	0.47
2:G:38:ALA:HB1	2:G:64:ILE:HG13	1.96	0.47
2:G:1196:PRO:O	2:G:1198:GLN:NE2	2.44	0.47
2:G:2199:ARG:NH2	2:G:2246:ASN:OD1	2.48	0.47
2:I:580:GLU:OE2	2:I:624:ASN:ND2	2.47	0.47
2:I:1649:ASP:OD1	2:I:1650:ILE:N	2.48	0.47
2:I:4024:VAL:HG23	2:I:4027:LEU:HD12	1.97	0.47
2:I:4088:ILE:HG23	2:I:4123:ILE:HB	1.95	0.47
2:B:426:ARG:HG2	2:B:431:PRO:HA	1.97	0.47
2:B:580:GLU:OE2	2:B:624:ASN:ND2	2.48	0.47
2:B:3772:THR:OG1	2:B:3815:LYS:NZ	2.46	0.47
2:E:213:TYR:CG	2:E:337:PRO:HB2	2.50	0.47
2:E:1865:MET:HB3	2:E:1926:LEU:HB2	1.96	0.47
2:E:4875:LYS:HB3	2:E:4882:CYS:HA	1.97	0.47
2:G:533:ASN:HB3	2:G:536:ASN:HB2	1.97	0.47
2:G:1577:ALA:HB1	2:G:1584:ARG:HA	1.97	0.47
2:I:3772:THR:OG1	2:I:3815:LYS:NZ	2.46	0.47
2:B:2199:ARG:NH2	2:B:2246:ASN:OD1	2.48	0.47
2:B:3805:LEU:H	2:B:3805:LEU:HG	1.51	0.47
2:B:4892:ARG:NH2	2:I:4899:ASP:OD1	2.44	0.47
2:E:243:ARG:NH1	2:E:301:VAL:O	2.39	0.47
2:E:426:ARG:HG2	2:E:431:PRO:HA	1.97	0.47
2:E:639:ASN:HD22	2:E:1635:THR:HA	1.80	0.47
2:E:2869:ARG:HH12	2:E:2945:UNK:C	2.28	0.47
2:G:330:ASP:N	2:G:330:ASP:OD1	2.44	0.47
2:G:4735:GLU:HA	2:G:4738:ALA:HB3	1.97	0.47
2:G:4928:LEU:HA	2:G:4931:ILE:HD12	1.96	0.47
2:I:213:TYR:CG	2:I:337:PRO:HB2	2.50	0.47
2:I:639:ASN:HD22	2:I:1635:THR:HA	1.80	0.47
2:I:1865:MET:HB3	2:I:1926:LEU:HB2	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:1965:TYR:OH	2:I:2027:ILE:O	2.24	0.47
2:I:4670:ILE:O	2:I:4674:GLU:N	2.37	0.47
2:I:4735:GLU:HA	2:I:4738:ALA:HB3	1.97	0.47
2:B:641:VAL:HG21	2:B:705:ASN:HA	1.97	0.46
2:B:4110:PHE:HA	2:B:4113:SER:HB3	1.96	0.46
2:E:629:ARG:HB3	2:E:634:GLN:NE2	2.30	0.46
2:E:1952:GLN:HA	2:E:1955:VAL:HG12	1.96	0.46
2:E:1960:ALA:O	2:E:1964:ARG:NE	2.47	0.46
2:G:18:ASP:H	2:G:69:LEU:HB2	1.80	0.46
2:G:639:ASN:HD22	2:G:1635:THR:HA	1.80	0.46
2:G:3948:LYS:NZ	2:G:4008:SER:O	2.49	0.46
2:G:4813:LEU:HA	2:G:4816:ILE:HG12	1.96	0.46
2:I:55:ALA:O	2:I:281:ARG:NH1	2.48	0.46
2:I:460:GLN:HG2	2:I:462:GLU:H	1.80	0.46
2:I:629:ARG:HB3	2:I:634:GLN:NE2	2.30	0.46
2:I:1294:UNK:HA	2:I:1455:UNK:HA	1.97	0.46
2:I:1665:HIS:HA	2:I:1668:ARG:HG2	1.98	0.46
2:I:4848:VAL:HG23	2:I:4883:TYR:HE1	1.79	0.46
2:B:69:LEU:HD22	2:B:107:ILE:HD11	1.98	0.46
2:B:1196:PRO:O	2:B:1198:GLN:NE2	2.44	0.46
2:B:1665:HIS:HA	2:B:1668:ARG:HG2	1.97	0.46
2:B:2459:SER:HB2	2:I:131:LEU:HB3	1.96	0.46
2:E:264:PRO:HA	2:E:280:LEU:HA	1.96	0.46
2:E:1649:ASP:OD1	2:E:1650:ILE:N	2.48	0.46
2:E:2212:VAL:O	2:E:2216:GLY:N	2.46	0.46
2:E:2231:SER:HA	2:E:2234:ARG:HG2	1.98	0.46
2:E:4088:ILE:HG23	2:E:4123:ILE:HB	1.96	0.46
2:E:4110:PHE:HA	2:E:4113:SER:HB3	1.96	0.46
2:E:4735:GLU:HA	2:E:4738:ALA:HB3	1.97	0.46
2:G:641:VAL:HG21	2:G:705:ASN:HA	1.97	0.46
2:G:946:ALA:HA	2:G:949:ASN:HB2	1.98	0.46
2:G:2336:ARG:NH2	2:G:2428:ALA:O	2.49	0.46
2:G:4565:LEU:O	2:G:4569:LEU:N	2.37	0.46
2:I:1044:ARG:HA	2:I:1047:LEU:HD12	1.97	0.46
2:I:1152:MET:HB2	2:I:1161:ILE:HB	1.97	0.46
2:I:2231:SER:HA	2:I:2234:ARG:HG2	1.98	0.46
2:B:1704:PRO:HG2	2:B:1707:LEU:HB2	1.98	0.46
2:B:1865:MET:HB3	2:B:1926:LEU:HB2	1.97	0.46
2:B:2950:UNK:O	2:B:2954:UNK:N	2.49	0.46
2:B:4934:GLY:O	2:B:4938:ASP:N	2.41	0.46
2:E:207:SER:OG	2:E:208:CYS:N	2.48	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:460:GLN:HG2	2:E:462:GLU:H	1.80	0.46
2:E:684:VAL:HA	2:E:781:VAL:HA	1.98	0.46
2:E:2457:LEU:HD23	2:E:2460:LEU:HD12	1.96	0.46
2:E:4705:VAL:HB	2:E:4778:TRP:CG	2.49	0.46
2:G:69:LEU:HD22	2:G:107:ILE:HD11	1.98	0.46
2:G:213:TYR:CG	2:G:337:PRO:HB2	2.50	0.46
2:G:1773:PRO:HD3	2:G:2156:LEU:HD21	1.97	0.46
2:G:3910:THR:HG23	2:G:3911:THR:HG23	1.97	0.46
2:I:911:HIS:O	2:I:918:ARG:NH2	2.44	0.46
2:B:639:ASN:HD22	2:B:1635:THR:HA	1.80	0.46
2:B:1841:VAL:HA	2:B:1844:LEU:HB3	1.98	0.46
2:B:2231:SER:HA	2:B:2234:ARG:HG2	1.98	0.46
2:B:3948:LYS:NZ	2:B:4008:SER:O	2.49	0.46
2:B:4735:GLU:HA	2:B:4738:ALA:HB3	1.97	0.46
2:E:1577:ALA:HB1	2:E:1584:ARG:HA	1.98	0.46
2:E:4782:VAL:O	2:E:4785:THR:OG1	2.29	0.46
2:G:1676:LEU:HD22	2:G:2167:ILE:HG13	1.98	0.46
2:G:2231:SER:HA	2:G:2234:ARG:HG2	1.98	0.46
2:G:3649:ALA:O	2:G:3653:PHE:N	2.45	0.46
1:H:14:THR:N	1:H:67:SER:OG	2.49	0.46
1:H:29:MET:HB3	1:H:98:ILE:HB	1.98	0.46
2:I:1841:VAL:HA	2:I:1844:LEU:HB3	1.98	0.46
2:B:385:ASP:OD1	2:B:385:ASP:N	2.47	0.46
2:B:1152:MET:HB2	2:B:1161:ILE:HB	1.97	0.46
2:B:4875:LYS:HA	2:B:4881:THR:HG22	1.98	0.46
2:E:1676:LEU:HD22	2:E:2167:ILE:HG13	1.98	0.46
2:E:1950:GLU:OE2	2:E:1954:ARG:NH2	2.43	0.46
2:E:2143:THR:O	2:E:3651:ASN:ND2	2.38	0.46
2:E:3910:THR:HG23	2:E:3911:THR:HG23	1.96	0.46
2:E:3948:LYS:NZ	2:E:4008:SER:O	2.49	0.46
1:F:14:THR:N	1:F:67:SER:OG	2.49	0.46
2:G:164:ARG:N	2:G:167:ASP:OD2	2.47	0.46
2:G:684:VAL:HA	2:G:781:VAL:HA	1.98	0.46
2:G:1286:UNK:HA	2:G:1461:UNK:HA	1.97	0.46
2:I:69:LEU:HD22	2:I:107:ILE:HD11	1.98	0.46
2:I:1704:PRO:HG2	2:I:1707:LEU:HB2	1.98	0.46
2:I:4928:LEU:HA	2:I:4931:ILE:HD12	1.96	0.46
2:B:1240:LYS:O	2:B:1604:SER:N	2.46	0.46
2:B:1676:LEU:HD22	2:B:2167:ILE:HG13	1.98	0.46
2:E:164:ARG:N	2:E:167:ASP:OD2	2.47	0.46
2:E:583:ILE:HA	2:E:586:ILE:HD12	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:614:VAL:HG22	2:E:616:SER:H	1.81	0.46
2:E:1245:PHE:HE1	2:E:1600:LEU:HD23	1.80	0.46
2:G:264:PRO:HA	2:G:280:LEU:HA	1.96	0.46
2:G:273:HIS:CE1	2:G:337:PRO:HB3	2.51	0.46
2:G:1649:ASP:OD1	2:G:1650:ILE:N	2.48	0.46
2:G:1865:MET:HB3	2:G:1926:LEU:HB2	1.97	0.46
2:G:1952:GLN:HA	2:G:1955:VAL:HG12	1.96	0.46
1:J:14:THR:N	1:J:67:SER:OG	2.49	0.46
2:B:78:LEU:O	2:B:82:LEU:N	2.43	0.46
2:B:330:ASP:OD1	2:B:330:ASP:N	2.44	0.46
2:B:614:VAL:HG22	2:B:616:SER:H	1.81	0.46
2:B:684:VAL:HA	2:B:781:VAL:HA	1.98	0.46
2:B:946:ALA:HA	2:B:949:ASN:HB2	1.98	0.46
2:B:1649:ASP:OD1	2:B:1650:ILE:N	2.48	0.46
2:B:1668:ARG:HA	2:B:1671:ARG:HH11	1.79	0.46
2:B:3771:HIS:O	2:B:3774:GLY:N	2.45	0.46
2:B:4195:PHE:HZ	2:B:4987:ASN:HB3	1.81	0.46
2:E:69:LEU:HD22	2:E:107:ILE:HD11	1.98	0.46
2:E:580:GLU:OE2	2:E:624:ASN:ND2	2.47	0.46
2:E:1773:PRO:HD3	2:E:2156:LEU:HD21	1.97	0.46
2:G:670:GLU:H	2:G:740:PRO:HB3	1.81	0.46
2:G:1663:HIS:O	2:G:1667:LEU:N	2.45	0.46
2:G:4195:PHE:HZ	2:G:4987:ASN:HB3	1.81	0.46
2:I:641:VAL:HG21	2:I:705:ASN:HA	1.97	0.46
2:I:946:ALA:HA	2:I:949:ASN:HB2	1.98	0.46
2:I:1773:PRO:HD3	2:I:2156:LEU:HD21	1.97	0.46
2:I:2336:ARG:NH2	2:I:2428:ALA:O	2.49	0.46
2:I:4813:LEU:HA	2:I:4816:ILE:HG12	1.96	0.46
1:A:23:VAL:HB	1:A:105:ASN:HA	1.98	0.46
2:B:38:ALA:HB1	2:B:64:ILE:HG13	1.96	0.46
2:B:2347:GLU:O	2:B:2351:ASN:N	2.36	0.46
2:E:110:ARG:HH21	2:E:115:ARG:HB3	1.81	0.46
2:E:670:GLU:H	2:E:740:PRO:HB3	1.81	0.46
2:E:1516:UNK:N	2:E:1529:UNK:O	2.49	0.46
2:E:1817:GLU:O	2:E:1821:ASP:N	2.42	0.46
2:E:3927:GLN:O	2:E:3931:SER:N	2.44	0.46
1:F:23:VAL:HB	1:F:105:ASN:HA	1.98	0.46
2:G:772:ASN:ND2	2:G:774:ASP:OD2	2.47	0.46
2:G:1665:HIS:HA	2:G:1668:ARG:HG2	1.97	0.46
2:G:1841:VAL:HA	2:G:1844:LEU:HB3	1.98	0.46
2:G:2149:VAL:O	2:G:2153:MET:N	2.46	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:4745:LEU:O	2:G:4749:GLU:N	2.41	0.46
2:I:614:VAL:HG22	2:I:616:SER:H	1.81	0.46
1:A:55:VAL:HG23	1:A:60:GLU:HB2	1.98	0.46
2:B:583:ILE:HA	2:B:586:ILE:HD12	1.98	0.46
2:B:1577:ALA:HB1	2:B:1584:ARG:HA	1.97	0.46
2:E:79:GLN:HA	2:E:82:LEU:HB2	1.98	0.46
2:E:4109:GLN:O	2:E:4113:SER:N	2.42	0.46
2:E:4172:GLU:OE1	2:E:4175:ARG:NH1	2.47	0.46
2:E:4571:PHE:O	2:E:4575:PHE:N	2.46	0.46
2:E:4875:LYS:HA	2:E:4881:THR:HG22	1.97	0.46
1:F:29:MET:HB3	1:F:98:ILE:HB	1.98	0.46
2:G:40:GLU:H	2:G:44:ASN:HD22	1.64	0.46
2:G:207:SER:OG	2:G:208:CYS:N	2.48	0.46
2:G:1245:PHE:HE1	2:G:1600:LEU:HD23	1.80	0.46
2:I:110:ARG:HH21	2:I:115:ARG:HB3	1.81	0.46
2:I:533:ASN:HB3	2:I:536:ASN:HB2	1.97	0.46
2:I:4021:LYS:HA	2:I:4024:VAL:HG12	1.98	0.46
2:B:379:HIS:CD2	2:B:382:GLY:H	2.25	0.46
2:B:533:ASN:HB3	2:B:536:ASN:HB2	1.97	0.46
2:B:3663:LEU:H	2:B:3663:LEU:HG	1.39	0.46
2:B:3910:THR:HG23	2:B:3911:THR:HG23	1.97	0.46
2:B:4024:VAL:HG23	2:B:4027:LEU:HD12	1.97	0.46
2:E:273:HIS:CE1	2:E:337:PRO:HB3	2.51	0.46
2:E:1665:HIS:HA	2:E:1668:ARG:HG2	1.98	0.46
2:E:2199:ARG:NH2	2:E:2246:ASN:OD1	2.48	0.46
2:E:3903:LEU:HG	2:E:3915:ILE:HD12	1.98	0.46
2:E:4195:PHE:HZ	2:E:4987:ASN:HB3	1.81	0.46
2:G:4109:GLN:O	2:G:4113:SER:N	2.42	0.46
2:I:4815:ASP:O	2:I:4819:GLY:N	2.44	0.46
2:I:4875:LYS:HB3	2:I:4882:CYS:HA	1.97	0.46
2:B:273:HIS:CE1	2:B:337:PRO:HB3	2.51	0.45
2:B:670:GLU:H	2:B:740:PRO:HB3	1.81	0.45
2:B:797:HIS:HB3	2:B:1625:GLY:H	1.81	0.45
2:B:1227:ALA:HB1	2:B:1230:MET:HG3	1.98	0.45
2:B:2243:SER:HB3	2:B:2246:ASN:H	1.81	0.45
2:B:4875:LYS:HB3	2:B:4882:CYS:HA	1.97	0.45
2:E:809:ALA:O	2:E:811:CYS:N	2.48	0.45
2:E:1152:MET:HB2	2:E:1161:ILE:HB	1.97	0.45
2:E:1841:VAL:HA	2:E:1844:LEU:HB3	1.98	0.45
2:E:4565:LEU:O	2:E:4569:LEU:N	2.37	0.45
2:E:4934:GLY:O	2:E:4938:ASP:N	2.41	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:55:VAL:HG23	1:F:60:GLU:HB2	1.98	0.45
2:G:110:ARG:HH21	2:G:115:ARG:HB3	1.81	0.45
2:G:460:GLN:HG2	2:G:462:GLU:H	1.80	0.45
2:G:1152:MET:HB2	2:G:1161:ILE:HB	1.97	0.45
2:G:1704:PRO:HG2	2:G:1707:LEU:HB2	1.98	0.45
2:G:2347:GLU:O	2:G:2351:ASN:N	2.36	0.45
2:G:4024:VAL:HG23	2:G:4027:LEU:HD12	1.97	0.45
2:I:2243:SER:HB3	2:I:2246:ASN:H	1.81	0.45
2:I:2342:ASN:OD1	2:I:2342:ASN:N	2.45	0.45
2:I:3910:THR:HG23	2:I:3911:THR:HG23	1.97	0.45
2:I:4837:LEU:HD21	2:I:4936:ILE:HD11	1.98	0.45
2:I:5012:LYS:O	2:I:5016:GLU:N	2.43	0.45
1:J:7:ILE:N	1:J:71:ARG:O	2.46	0.45
2:B:864:PRO:HD2	2:B:867:LEU:HD12	1.98	0.45
2:B:2862:LEU:HB3	2:B:2928:LYS:HB3	1.99	0.45
2:E:55:ALA:O	2:E:281:ARG:NH1	2.48	0.45
2:E:913:LEU:HD13	2:E:918:ARG:HA	1.99	0.45
2:E:1704:PRO:HG2	2:E:1707:LEU:HB2	1.98	0.45
1:F:83:GLY:O	1:F:94:ASN:N	2.50	0.45
2:G:809:ALA:O	2:G:811:CYS:N	2.48	0.45
2:G:864:PRO:HD2	2:G:867:LEU:HD12	1.98	0.45
2:G:2248:ARG:NH2	2:G:2285:GLU:OE1	2.49	0.45
2:G:3903:LEU:HG	2:G:3915:ILE:HD12	1.98	0.45
2:I:38:ALA:HB1	2:I:64:ILE:HG13	1.96	0.45
2:I:273:HIS:CE1	2:I:337:PRO:HB3	2.51	0.45
2:I:670:GLU:H	2:I:740:PRO:HB3	1.81	0.45
2:I:1577:ALA:HB1	2:I:1584:ARG:HA	1.98	0.45
2:I:2154:SER:O	2:I:2184:ASN:ND2	2.49	0.45
2:I:2212:VAL:O	2:I:2216:GLY:N	2.46	0.45
1:A:29:MET:HB3	1:A:98:ILE:HB	1.98	0.45
2:B:2154:SER:O	2:B:2184:ASN:ND2	2.49	0.45
2:B:4021:LYS:HA	2:B:4024:VAL:HG12	1.98	0.45
2:B:4865:LYS:HG2	2:B:4874:MET:HA	1.98	0.45
2:E:40:GLU:H	2:E:44:ASN:HD22	1.65	0.45
2:E:641:VAL:HG21	2:E:705:ASN:HA	1.97	0.45
2:G:583:ILE:HA	2:G:586:ILE:HD12	1.98	0.45
2:G:2243:SER:HB3	2:G:2246:ASN:H	1.81	0.45
2:G:4021:LYS:HA	2:G:4024:VAL:HG12	1.98	0.45
2:I:684:VAL:HA	2:I:781:VAL:HA	1.98	0.45
2:I:2869:ARG:HA	2:I:2872:GLN:HB3	1.98	0.45
2:I:3948:LYS:NZ	2:I:4008:SER:O	2.49	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:4865:LYS:HG2	2:I:4874:MET:HA	1.98	0.45
2:I:4875:LYS:HA	2:I:4881:THR:HG22	1.97	0.45
2:I:4957:LYS:HE3	2:I:4957:LYS:HB3	1.73	0.45
2:B:79:GLN:HA	2:B:82:LEU:HB2	1.98	0.45
2:E:2869:ARG:HA	2:E:2872:GLN:HB3	1.98	0.45
2:E:4024:VAL:HG23	2:E:4027:LEU:HD12	1.97	0.45
2:G:286:THR:HA	2:G:405:HIS:HB2	1.99	0.45
2:G:379:HIS:CD2	2:G:382:GLY:H	2.25	0.45
2:G:614:VAL:HG22	2:G:616:SER:H	1.81	0.45
2:I:913:LEU:HD13	2:I:918:ARG:HA	1.98	0.45
2:I:1227:ALA:HB1	2:I:1230:MET:HG3	1.98	0.45
2:I:1676:LEU:HD22	2:I:2167:ILE:HG13	1.98	0.45
2:I:2950:UNK:O	2:I:2954:UNK:N	2.50	0.45
1:J:23:VAL:HB	1:J:105:ASN:HA	1.98	0.45
2:B:110:ARG:HH21	2:B:115:ARG:HB3	1.81	0.45
2:B:207:SER:OG	2:B:208:CYS:N	2.48	0.45
2:B:1773:PRO:HD3	2:B:2156:LEU:HD21	1.97	0.45
2:B:2149:VAL:O	2:B:2153:MET:N	2.46	0.45
2:B:3903:LEU:HG	2:B:3915:ILE:HD12	1.98	0.45
2:E:2154:SER:O	2:E:2184:ASN:ND2	2.49	0.45
2:E:2862:LEU:HB3	2:E:2928:LYS:HB3	1.99	0.45
2:G:3927:GLN:O	2:G:3931:SER:N	2.44	0.45
2:I:40:GLU:H	2:I:44:ASN:HD22	1.64	0.45
2:I:580:GLU:HG3	2:I:620:LEU:HD22	1.99	0.45
2:I:4736:ARG:O	2:I:4740:LEU:N	2.50	0.45
1:J:55:VAL:HG23	1:J:60:GLU:HB2	1.98	0.45
1:A:2:VAL:HG21	1:A:61:GLU:HB2	1.98	0.45
2:B:266:ARG:NH2	2:B:269:TRP:O	2.50	0.45
2:B:4182:GLU:HA	2:B:4192:ARG:HA	1.99	0.45
2:E:241:GLN:O	2:E:289:ARG:NH1	2.44	0.45
2:E:668:VAL:HG22	2:E:789:VAL:HG23	1.99	0.45
2:E:790:ARG:HG2	2:E:1627:ALA:HA	1.98	0.45
2:E:1227:ALA:HB1	2:E:1230:MET:HG3	1.98	0.45
2:E:2248:ARG:NH2	2:E:2285:GLU:OE1	2.49	0.45
2:E:2336:ARG:NH2	2:E:2428:ALA:O	2.48	0.45
2:E:3885:PHE:HA	2:E:3888:LEU:HD12	1.99	0.45
2:G:3885:PHE:HA	2:G:3888:LEU:HD12	1.99	0.45
2:I:668:VAL:O	2:I:741:GLU:N	2.49	0.45
2:I:3998:HIS:CE1	2:I:4054:ASN:HD21	2.35	0.45
2:I:4182:GLU:HA	2:I:4192:ARG:HA	1.99	0.45
1:A:92:PRO:HD3	2:B:627:PRO:HB2	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:251:ALA:O	2:B:254:THR:OG1	2.30	0.45
2:B:668:VAL:O	2:B:741:GLU:N	2.49	0.45
2:B:733:PRO:HD2	2:B:763:PRO:HD2	1.99	0.45
2:B:4837:LEU:HD21	2:B:4936:ILE:HD11	1.98	0.45
2:E:134:ASP:HA	2:E:192:ASP:HA	1.98	0.45
2:E:286:THR:HA	2:E:405:HIS:HB2	1.99	0.45
2:E:1111:PRO:HD3	2:E:1605:TRP:HE1	1.82	0.45
2:G:1105:ALA:O	2:G:1189:LEU:N	2.50	0.45
2:G:1960:ALA:O	2:G:1964:ARG:NE	2.48	0.45
2:G:4875:LYS:HA	2:G:4881:THR:HG22	1.97	0.45
2:G:4934:GLY:O	2:G:4938:ASP:N	2.41	0.45
2:G:4990:PHE:O	2:G:4994:TYR:N	2.43	0.45
1:H:83:GLY:O	1:H:94:ASN:N	2.50	0.45
2:I:266:ARG:NH2	2:I:269:TRP:O	2.50	0.45
2:I:583:ILE:HA	2:I:586:ILE:HD12	1.98	0.45
2:I:1950:GLU:OE2	2:I:1954:ARG:NH2	2.43	0.45
2:I:2862:LEU:HB3	2:I:2928:LYS:HB3	1.99	0.45
1:A:14:THR:N	1:A:67:SER:OG	2.49	0.45
2:B:1516:UNK:N	2:B:1529:UNK:O	2.49	0.45
2:B:1740:PRO:HA	2:B:1743:ARG:HB3	1.99	0.45
2:E:911:HIS:O	2:E:918:ARG:NH2	2.44	0.45
2:E:1694:LEU:O	2:E:1712:TYR:OH	2.21	0.45
2:E:4815:ASP:O	2:E:4819:GLY:N	2.44	0.45
2:G:79:GLN:HA	2:G:82:LEU:HB2	1.98	0.45
2:G:3934:TYR:O	2:G:3938:SER:N	2.50	0.45
2:G:3998:HIS:CE1	2:G:4054:ASN:HD21	2.35	0.45
1:H:55:VAL:HG23	1:H:60:GLU:HB2	1.98	0.45
2:I:79:GLN:HA	2:I:82:LEU:HB2	1.98	0.45
2:I:134:ASP:HA	2:I:192:ASP:HA	1.98	0.45
2:I:797:HIS:HB3	2:I:1625:GLY:H	1.81	0.45
2:I:1268:PRO:HB2	2:I:1591:CYS:HB2	1.99	0.45
2:I:4195:PHE:HZ	2:I:4987:ASN:HB3	1.81	0.45
1:A:83:GLY:O	1:A:94:ASN:N	2.50	0.45
2:B:40:GLU:H	2:B:44:ASN:HD22	1.65	0.45
2:B:1105:ALA:O	2:B:1189:LEU:N	2.50	0.45
2:B:1268:PRO:HB2	2:B:1591:CYS:HB2	1.99	0.45
2:B:1679:ASN:O	2:B:1683:HIS:ND1	2.36	0.45
2:B:1960:ALA:O	2:B:1964:ARG:NE	2.48	0.45
2:B:3885:PHE:HA	2:B:3888:LEU:HD12	1.99	0.45
2:B:4571:PHE:O	2:B:4575:PHE:N	2.46	0.45
2:E:266:ARG:NH2	2:E:269:TRP:O	2.50	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:385:ASP:OD1	2:E:385:ASP:N	2.47	0.45
2:E:533:ASN:HB3	2:E:536:ASN:HB2	1.97	0.45
2:G:580:GLU:HG3	2:G:620:LEU:HD22	1.99	0.45
2:G:2862:LEU:HB3	2:G:2928:LYS:HB3	1.99	0.45
2:G:5012:LYS:O	2:G:5016:GLU:N	2.43	0.45
2:I:218:HIS:HB3	2:I:392:ARG:HD3	1.99	0.45
2:I:3846:ALA:HB1	2:I:3873:LYS:HG2	1.99	0.45
2:I:3927:GLN:O	2:I:3931:SER:N	2.44	0.45
2:B:134:ASP:HA	2:B:192:ASP:HA	1.98	0.45
2:B:668:VAL:HG22	2:B:789:VAL:HG23	1.99	0.45
2:B:2336:ARG:NH2	2:B:2428:ALA:O	2.48	0.45
2:B:3934:TYR:O	2:B:3938:SER:N	2.50	0.45
2:E:666:VAL:HG21	2:E:684:VAL:HG21	1.99	0.45
2:E:797:HIS:HB3	2:E:1625:GLY:H	1.81	0.45
2:E:946:ALA:HA	2:E:949:ASN:HB2	1.98	0.45
2:E:2243:SER:HB3	2:E:2246:ASN:H	1.81	0.45
2:E:3676:ASP:OD1	2:E:3676:ASP:N	2.49	0.45
2:E:4865:LYS:HG2	2:E:4874:MET:HA	1.98	0.45
2:G:40:GLU:H	2:G:44:ASN:ND2	2.15	0.45
2:G:134:ASP:HA	2:G:192:ASP:HA	1.98	0.45
2:G:266:ARG:NH2	2:G:269:TRP:O	2.50	0.45
2:G:668:VAL:HG22	2:G:789:VAL:HG23	1.99	0.45
2:G:717:ASP:OD1	2:G:720:HIS:ND1	2.50	0.45
2:G:913:LEU:HD13	2:G:918:ARG:HA	1.99	0.45
2:G:2869:ARG:HH12	2:G:2945:UNK:C	2.29	0.45
2:G:2950:UNK:O	2:G:2954:UNK:N	2.50	0.45
2:I:111:HIS:N	2:I:116:MET:O	2.37	0.45
2:I:404:ILE:HG21	2:I:481:GLU:HG3	1.99	0.45
2:I:1240:LYS:O	2:I:1604:SER:N	2.46	0.45
2:I:2248:ARG:NH2	2:I:2285:GLU:OE1	2.49	0.45
2:I:3903:LEU:HG	2:I:3915:ILE:HD12	1.98	0.45
1:J:29:MET:HB3	1:J:98:ILE:HB	1.98	0.45
2:B:404:ILE:HG21	2:B:481:GLU:HG3	1.99	0.44
2:B:530:ILE:HA	2:B:536:ASN:HB3	1.99	0.44
2:B:666:VAL:HG21	2:B:684:VAL:HG21	1.99	0.44
2:B:1737:PRO:HG2	2:B:1739:THR:HG23	1.99	0.44
2:B:2248:ARG:NH2	2:B:2285:GLU:OE1	2.49	0.44
2:B:2880:GLU:O	2:B:2884:ASN:N	2.47	0.44
2:B:4853:VAL:HA	2:B:4856:PHE:HB3	1.99	0.44
2:E:1684:ALA:HA	2:E:1782:PHE:HZ	1.82	0.44
2:E:3771:HIS:O	2:E:3774:GLY:N	2.45	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:3934:TYR:O	2:E:3938:SER:N	2.50	0.44
2:G:790:ARG:HG2	2:G:1627:ALA:HA	1.98	0.44
2:G:1774:PRO:HG2	2:G:1776:HIS:CE1	2.52	0.44
2:G:3846:ALA:HB1	2:G:3873:LYS:HG2	1.99	0.44
2:I:40:GLU:H	2:I:44:ASN:ND2	2.15	0.44
2:I:864:PRO:HD2	2:I:867:LEU:HD12	1.98	0.44
2:I:870:ILE:HD12	2:I:870:ILE:HA	1.86	0.44
2:I:1111:PRO:HD3	2:I:1605:TRP:HE1	1.82	0.44
2:I:1774:PRO:HG2	2:I:1776:HIS:CE1	2.52	0.44
2:B:790:ARG:HG2	2:B:1627:ALA:HA	1.98	0.44
2:B:1041:GLN:O	2:B:1045:THR:OG1	2.29	0.44
2:B:1965:TYR:OH	2:B:2027:ILE:O	2.24	0.44
2:B:2212:VAL:O	2:B:2216:GLY:N	2.46	0.44
2:B:3713:LYS:HG2	2:B:3715:LYS:H	1.82	0.44
2:E:218:HIS:HB3	2:E:392:ARG:HD3	1.99	0.44
2:E:1105:ALA:O	2:E:1189:LEU:N	2.50	0.44
2:G:2758:PHE:O	2:G:2762:THR:N	2.46	0.44
2:G:2869:ARG:HA	2:G:2872:GLN:HB3	1.98	0.44
2:I:2869:ARG:HH12	2:I:2945:UNK:C	2.30	0.44
2:I:3885:PHE:HA	2:I:3888:LEU:HD12	1.99	0.44
1:J:83:GLY:O	1:J:94:ASN:N	2.50	0.44
2:B:286:THR:HA	2:B:405:HIS:HB2	1.99	0.44
2:B:1111:PRO:HD3	2:B:1605:TRP:HE1	1.82	0.44
2:B:1774:PRO:HG2	2:B:1776:HIS:CE1	2.52	0.44
2:B:2869:ARG:HA	2:B:2872:GLN:HB3	1.98	0.44
2:B:4172:GLU:OE1	2:B:4175:ARG:NH1	2.47	0.44
2:E:864:PRO:HD2	2:E:867:LEU:HD12	1.98	0.44
2:E:1740:PRO:HA	2:E:1743:ARG:HB3	1.99	0.44
2:E:4021:LYS:HA	2:E:4024:VAL:HG12	1.98	0.44
2:G:243:ARG:NH1	2:G:301:VAL:O	2.39	0.44
2:G:797:HIS:HB3	2:G:1625:GLY:H	1.81	0.44
2:G:1227:ALA:HB1	2:G:1230:MET:HG3	1.98	0.44
2:G:2154:SER:O	2:G:2184:ASN:ND2	2.49	0.44
2:G:4182:GLU:HA	2:G:4192:ARG:HA	1.99	0.44
2:I:243:ARG:NH1	2:I:301:VAL:O	2.39	0.44
2:I:485:SER:O	2:I:489:ASN:N	2.50	0.44
2:I:1269:CYS:HA	2:I:1473:UNK:HA	1.99	0.44
1:J:2:VAL:HG21	1:J:61:GLU:HB2	1.98	0.44
2:B:1091:GLU:O	2:B:1203:ASN:N	2.40	0.44
2:E:3772:THR:OG1	2:E:3815:LYS:NZ	2.46	0.44
2:E:4182:GLU:HA	2:E:4192:ARG:HA	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:55:ALA:O	2:G:281:ARG:NH1	2.48	0.44
2:G:1268:PRO:HB2	2:G:1591:CYS:HB2	1.99	0.44
2:G:1764:GLY:HA3	2:G:1859:VAL:HG11	2.00	0.44
1:H:23:VAL:HB	1:H:105:ASN:HA	1.98	0.44
2:I:164:ARG:N	2:I:167:ASP:OD2	2.47	0.44
2:I:790:ARG:HG2	2:I:1627:ALA:HA	1.98	0.44
2:I:2142:TYR:CG	2:I:2197:LEU:HD13	2.53	0.44
2:I:3934:TYR:O	2:I:3938:SER:N	2.50	0.44
2:I:4565:LEU:O	2:I:4569:LEU:N	2.37	0.44
2:B:913:LEU:HD13	2:B:918:ARG:HA	1.98	0.44
2:B:2226:PRO:HA	2:B:2229:VAL:HG12	2.00	0.44
2:B:4201:ASN:ND2	2:B:4993:MET:SD	2.91	0.44
2:E:1032:LYS:O	2:E:1036:ARG:N	2.45	0.44
2:E:1737:PRO:HG2	2:E:1739:THR:HG23	1.99	0.44
2:E:2142:TYR:CG	2:E:2197:LEU:HD13	2.53	0.44
2:E:4068:LEU:HD23	2:E:4132:PHE:HE2	1.82	0.44
2:G:666:VAL:HG21	2:G:684:VAL:HG21	1.99	0.44
2:G:1497:UNK:HA	2:G:1535:UNK:HA	1.99	0.44
2:G:4201:ASN:ND2	2:G:4993:MET:SD	2.91	0.44
2:G:4853:VAL:HA	2:G:4856:PHE:HB3	1.99	0.44
2:I:668:VAL:HG22	2:I:789:VAL:HG23	1.99	0.44
2:I:717:ASP:OD1	2:I:720:HIS:ND1	2.50	0.44
2:I:1735:ILE:HG23	2:I:1771:LEU:HD23	1.99	0.44
2:I:2770:LYS:O	2:I:2775:TRP:N	2.42	0.44
2:I:4968:PHE:HE1	2:I:5029:ARG:HD3	1.82	0.44
2:B:40:GLU:H	2:B:44:ASN:ND2	2.15	0.44
2:E:1268:PRO:HB2	2:E:1591:CYS:HB2	1.99	0.44
2:E:3846:ALA:HB1	2:E:3873:LYS:HG2	2.00	0.44
2:G:668:VAL:O	2:G:741:GLU:N	2.49	0.44
2:G:2142:TYR:CG	2:G:2197:LEU:HD13	2.53	0.44
2:G:3676:ASP:OD1	2:G:3676:ASP:N	2.49	0.44
2:G:4068:LEU:HD23	2:G:4132:PHE:HE2	1.82	0.44
2:G:4837:LEU:HD21	2:G:4936:ILE:HD11	1.98	0.44
2:G:4957:LYS:HB3	2:G:4964:GLY:HA2	2.00	0.44
2:I:286:THR:HA	2:I:405:HIS:HB2	1.99	0.44
2:I:392:ARG:HH12	2:I:398:SER:HB2	1.83	0.44
2:I:2908:TYR:OH	2:I:2920:ARG:NE	2.45	0.44
2:I:3963:ASN:O	2:I:3966:THR:OG1	2.30	0.44
2:I:4201:ASN:ND2	2:I:4993:MET:SD	2.91	0.44
2:B:55:ALA:O	2:B:281:ARG:NH1	2.48	0.44
2:B:102:LEU:HB3	2:B:160:GLY:HA2	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:717:ASP:OD1	2:B:720:HIS:ND1	2.51	0.44
2:E:733:PRO:HD2	2:E:763:PRO:HD2	1.99	0.44
2:E:1196:PRO:O	2:E:1198:GLN:NE2	2.44	0.44
2:E:1735:ILE:HG23	2:E:1771:LEU:HD23	1.99	0.44
2:E:2444:GLN:HA	2:E:2451:LEU:HD21	2.00	0.44
2:E:4824:ARG:O	2:E:4828:SER:N	2.47	0.44
1:F:2:VAL:HG21	1:F:61:GLU:HB2	1.98	0.44
2:G:218:HIS:HB3	2:G:392:ARG:HD3	1.99	0.44
2:G:831:ARG:HD3	2:G:1199:VAL:HG12	1.99	0.44
2:I:1960:ALA:O	2:I:1964:ARG:NE	2.48	0.44
2:I:2226:PRO:HA	2:I:2229:VAL:HG12	2.00	0.44
2:B:218:HIS:HB3	2:B:392:ARG:HD3	1.99	0.44
2:B:392:ARG:HH12	2:B:398:SER:HB2	1.83	0.44
2:B:3846:ALA:HB1	2:B:3873:LYS:HG2	1.99	0.44
2:B:5012:LYS:O	2:B:5016:GLU:N	2.43	0.44
2:E:379:HIS:CD2	2:E:382:GLY:H	2.25	0.44
2:E:392:ARG:HH12	2:E:398:SER:HB2	1.83	0.44
2:E:2149:VAL:O	2:E:2153:MET:N	2.46	0.44
2:E:2255:SER:HA	2:E:2258:LEU:HB3	2.00	0.44
2:E:4003:LEU:HB2	2:E:4013:LEU:HD13	1.99	0.44
2:E:4208:PRO:HA	2:E:4211:LYS:HB3	2.00	0.44
2:G:379:HIS:CD2	2:G:381:GLU:H	2.36	0.44
2:G:580:GLU:OE2	2:G:624:ASN:ND2	2.47	0.44
2:G:1092:PHE:O	2:G:1149:VAL:N	2.49	0.44
2:G:1111:PRO:HD3	2:G:1605:TRP:HE1	1.82	0.44
2:G:1229:ASN:O	2:G:1827:ARG:N	2.40	0.44
2:G:1240:LYS:O	2:G:1604:SER:N	2.46	0.44
2:G:1269:CYS:HA	2:G:1473:UNK:HA	1.99	0.44
2:G:4865:LYS:HG2	2:G:4874:MET:HA	1.98	0.44
2:I:102:LEU:HB3	2:I:160:GLY:HA2	2.00	0.44
2:I:545:ASP:HA	2:I:582:HIS:CE1	2.53	0.44
2:I:733:PRO:HD2	2:I:763:PRO:HD2	1.99	0.44
2:B:580:GLU:HG3	2:B:620:LEU:HD22	1.99	0.44
2:B:2116:LEU:O	2:B:2120:MET:N	2.48	0.44
2:B:3998:HIS:CE1	2:B:4054:ASN:HD21	2.35	0.44
2:E:668:VAL:O	2:E:741:GLU:N	2.49	0.44
2:E:1229:ASN:O	2:E:1827:ARG:N	2.40	0.44
2:E:1764:GLY:HA3	2:E:1859:VAL:HG11	2.00	0.44
2:E:4968:PHE:HE1	2:E:5029:ARG:HD3	1.82	0.44
2:G:485:SER:O	2:G:489:ASN:N	2.50	0.44
2:G:530:ILE:HA	2:G:536:ASN:HB3	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:H:2:VAL:HG21	1:H:61:GLU:HB2	1.98	0.44
2:I:530:ILE:HA	2:I:536:ASN:HB3	1.98	0.44
2:I:1232:ARG:HD3	2:I:1702:HIS:HB3	2.00	0.44
2:I:1764:GLY:HA3	2:I:1859:VAL:HG11	2.00	0.44
2:I:3713:LYS:HG2	2:I:3715:LYS:H	1.82	0.44
2:I:4172:GLU:OE1	2:I:4175:ARG:NH1	2.47	0.44
2:I:4957:LYS:HB3	2:I:4964:GLY:HA2	2.00	0.44
2:B:410:LEU:HD21	2:B:441:VAL:HA	2.00	0.43
2:B:838:HIS:CE1	2:B:1201:HIS:HD2	2.36	0.43
2:B:2142:TYR:CG	2:B:2197:LEU:HD13	2.53	0.43
2:B:4885:PHE:HE2	2:B:4901:ILE:HD11	1.83	0.43
2:B:4968:PHE:HE1	2:B:5029:ARG:HD3	1.82	0.43
2:E:545:ASP:HA	2:E:582:HIS:CE1	2.53	0.43
2:E:4885:PHE:HE2	2:E:4901:ILE:HD11	1.83	0.43
2:G:288:GLY:HA3	2:G:405:HIS:CE1	2.53	0.43
2:G:2255:SER:HA	2:G:2258:LEU:HB3	2.00	0.43
2:G:4568:PHE:HA	2:G:4571:PHE:HD2	1.83	0.43
2:I:867:LEU:HD22	2:I:929:LEU:HD22	2.00	0.43
2:I:2102:VAL:HB	2:I:2124:LEU:HD12	2.01	0.43
2:I:3771:HIS:O	2:I:3774:GLY:N	2.45	0.43
1:A:97:LEU:HD13	1:A:97:LEU:HA	1.88	0.43
2:B:831:ARG:HD3	2:B:1199:VAL:HG12	1.99	0.43
2:B:1232:ARG:HD3	2:B:1702:HIS:HB3	2.00	0.43
2:B:2444:GLN:HA	2:B:2451:LEU:HD21	2.00	0.43
2:B:2758:PHE:O	2:B:2762:THR:N	2.46	0.43
2:B:3825:GLU:OE1	2:B:3825:GLU:N	2.52	0.43
2:B:4208:PRO:HA	2:B:4211:LYS:HB3	2.00	0.43
2:E:40:GLU:H	2:E:44:ASN:ND2	2.16	0.43
2:E:404:ILE:HG21	2:E:481:GLU:HG3	1.99	0.43
2:E:2102:VAL:HB	2:E:2124:LEU:HD12	2.00	0.43
2:E:2226:PRO:HA	2:E:2229:VAL:HG12	2.00	0.43
2:E:3649:ALA:O	2:E:3653:PHE:N	2.45	0.43
2:G:392:ARG:HH12	2:G:398:SER:HB2	1.83	0.43
2:G:545:ASP:HA	2:G:582:HIS:CE1	2.53	0.43
2:G:838:HIS:CE1	2:G:1201:HIS:HD2	2.37	0.43
2:G:1684:ALA:HA	2:G:1782:PHE:HZ	1.82	0.43
2:G:1735:ILE:HG23	2:G:1771:LEU:HD23	1.99	0.43
2:G:1737:PRO:HG2	2:G:1739:THR:HG23	1.99	0.43
2:G:2226:PRO:HA	2:G:2229:VAL:HG12	2.00	0.43
1:H:26:TYR:OH	1:H:42:ARG:NH2	2.35	0.43
2:I:330:ASP:N	2:I:330:ASP:OD1	2.45	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:666:VAL:HG21	2:I:684:VAL:HG21	1.99	0.43
2:I:1105:ALA:O	2:I:1189:LEU:N	2.50	0.43
2:I:3676:ASP:N	2:I:3676:ASP:OD1	2.49	0.43
2:B:229:GLU:OE2	2:B:374:LYS:NZ	2.41	0.43
2:B:1735:ILE:HG23	2:B:1771:LEU:HD23	1.99	0.43
2:E:831:ARG:HD3	2:E:1199:VAL:HG12	1.99	0.43
2:E:838:HIS:CE1	2:E:1201:HIS:HD2	2.37	0.43
2:E:3825:GLU:OE1	2:E:3825:GLU:N	2.51	0.43
2:E:3998:HIS:CE1	2:E:4054:ASN:HD21	2.35	0.43
2:G:2102:VAL:HB	2:G:2124:LEU:HD12	2.00	0.43
2:G:3713:LYS:HG2	2:G:3715:LYS:H	1.82	0.43
2:I:288:GLY:HA3	2:I:405:HIS:CE1	2.54	0.43
2:I:1116:GLY:HA3	2:I:1123:VAL:HG12	2.00	0.43
2:I:1679:ASN:O	2:I:1683:HIS:ND1	2.36	0.43
2:I:2444:GLN:HA	2:I:2451:LEU:HD21	2.00	0.43
2:B:794:GLY:H	2:B:798:GLY:HA3	1.84	0.43
2:B:867:LEU:HD22	2:B:929:LEU:HD22	2.00	0.43
2:B:1116:GLY:HA3	2:B:1123:VAL:HG12	2.00	0.43
2:B:2102:VAL:HB	2:B:2124:LEU:HD12	2.00	0.43
2:B:4736:ARG:O	2:B:4740:LEU:N	2.50	0.43
2:E:288:GLY:HA3	2:E:405:HIS:CE1	2.54	0.43
2:E:4201:ASN:ND2	2:E:4993:MET:SD	2.91	0.43
2:E:4957:LYS:HB3	2:E:4964:GLY:HA2	2.00	0.43
2:G:404:ILE:HG21	2:G:481:GLU:HG3	1.99	0.43
2:G:1116:GLY:HA3	2:G:1123:VAL:HG12	2.00	0.43
2:G:1740:PRO:HA	2:G:1743:ARG:HB3	1.99	0.43
2:G:3361:UNK:O	2:G:3365:UNK:N	2.52	0.43
1:H:7:ILE:N	1:H:71:ARG:O	2.46	0.43
2:I:2143:THR:O	2:I:3651:ASN:ND2	2.38	0.43
2:I:2880:GLU:O	2:I:2884:ASN:N	2.47	0.43
2:I:4853:VAL:HA	2:I:4856:PHE:HB3	1.99	0.43
2:B:545:ASP:HA	2:B:582:HIS:CE1	2.53	0.43
2:B:809:ALA:O	2:B:811:CYS:N	2.48	0.43
2:B:4957:LYS:HB3	2:B:4964:GLY:HA2	2.00	0.43
2:E:76:ARG:HB3	2:G:3935:TRP:HB3	2.01	0.43
2:E:410:LEU:HD21	2:E:441:VAL:HA	2.00	0.43
2:E:4853:VAL:HA	2:E:4856:PHE:HB3	1.99	0.43
2:G:220:LEU:HD11	2:G:390:LEU:HD22	2.00	0.43
2:G:4968:PHE:HE1	2:G:5029:ARG:HD3	1.82	0.43
2:I:809:ALA:O	2:I:811:CYS:N	2.48	0.43
2:I:3229:UNK:HA	2:I:3302:UNK:HA	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:3676:ASP:OD1	2:B:3676:ASP:N	2.49	0.43
2:B:3927:GLN:O	2:B:3931:SER:N	2.44	0.43
2:B:4068:LEU:HD23	2:B:4132:PHE:HE2	1.82	0.43
2:B:4780:PHE:HA	2:B:4783:ILE:HD12	2.00	0.43
2:E:102:LEU:HB3	2:E:160:GLY:HA2	1.99	0.43
2:E:530:ILE:HA	2:E:536:ASN:HB3	1.98	0.43
2:E:717:ASP:OD1	2:E:720:HIS:ND1	2.51	0.43
2:E:1774:PRO:HG2	2:E:1776:HIS:CE1	2.52	0.43
2:E:2908:TYR:OH	2:E:2920:ARG:NE	2.45	0.43
2:E:3361:UNK:O	2:E:3365:UNK:N	2.52	0.43
2:E:3779:VAL:HG23	2:E:3780:LEU:HD12	2.00	0.43
2:G:102:LEU:HB3	2:G:160:GLY:HA2	1.99	0.43
2:G:345:LEU:HD23	2:G:389:PHE:HB3	2.00	0.43
2:G:867:LEU:HD22	2:G:929:LEU:HD22	2.00	0.43
2:G:978:THR:HB	2:G:980:ALA:H	1.84	0.43
2:G:4003:LEU:HB2	2:G:4013:LEU:HD13	1.99	0.43
2:G:4208:PRO:HA	2:G:4211:LYS:HB3	2.00	0.43
2:I:4003:LEU:HB2	2:I:4013:LEU:HD13	1.99	0.43
2:I:4780:PHE:HA	2:I:4783:ILE:HD12	2.00	0.43
1:A:87:HIS:HB3	1:A:91:ILE:H	1.84	0.43
2:B:1684:ALA:HA	2:B:1782:PHE:HZ	1.82	0.43
2:B:4108:ILE:HA	2:B:4111:LEU:HD12	2.01	0.43
2:B:4568:PHE:HA	2:B:4571:PHE:HD2	1.84	0.43
2:B:4801:LEU:HB3	2:B:4808:PHE:CG	2.54	0.43
2:B:4850:LEU:HD22	2:E:4814:LEU:HD21	2.01	0.43
2:B:4957:LYS:HB3	2:B:4957:LYS:HE3	1.73	0.43
2:E:580:GLU:HG3	2:E:620:LEU:HD22	1.99	0.43
2:G:733:PRO:HD2	2:G:763:PRO:HD2	1.99	0.43
2:G:794:GLY:H	2:G:798:GLY:HA3	1.84	0.43
2:G:2144:ILE:H	2:G:2144:ILE:HG13	1.74	0.43
2:G:3963:ASN:O	2:G:3966:THR:OG1	2.30	0.43
2:I:831:ARG:HD3	2:I:1199:VAL:HG12	1.99	0.43
2:I:1658:ASP:N	2:I:1658:ASP:OD1	2.52	0.43
2:I:2758:PHE:O	2:I:2762:THR:N	2.46	0.43
2:I:4686:LEU:O	2:I:4691:GLN:N	2.52	0.43
2:B:313:SER:HB3	2:B:352:ALA:H	1.84	0.43
2:B:1764:GLY:HA3	2:B:1859:VAL:HG11	2.00	0.43
2:E:485:SER:O	2:E:489:ASN:N	2.50	0.43
2:E:1094:ALA:HA	2:E:1200:GLY:HA2	2.01	0.43
2:E:4108:ILE:HA	2:E:4111:LEU:HD12	2.01	0.43
2:G:1094:ALA:HA	2:G:1200:GLY:HA2	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:3825:GLU:OE1	2:G:3825:GLU:N	2.51	0.43
2:I:313:SER:HB3	2:I:352:ALA:H	1.84	0.43
2:I:410:LEU:HD21	2:I:441:VAL:HA	2.00	0.43
2:I:1684:ALA:HA	2:I:1782:PHE:HZ	1.82	0.43
2:B:379:HIS:CD2	2:B:381:GLU:H	2.36	0.43
2:E:379:HIS:CD2	2:E:381:GLU:H	2.36	0.43
2:E:4995:LEU:HA	2:E:4995:LEU:HD22	1.82	0.43
1:F:57:LYS:HB2	1:F:80:VAL:HB	2.01	0.43
2:G:4928:LEU:HD13	2:G:4931:ILE:HD12	2.01	0.43
2:I:758:ARG:NH2	2:I:803:LEU:O	2.52	0.43
2:I:838:HIS:CE1	2:I:1201:HIS:HD2	2.36	0.43
2:I:1740:PRO:HA	2:I:1743:ARG:HB3	1.99	0.43
2:I:2255:SER:HA	2:I:2258:LEU:HB3	2.00	0.43
2:I:3700:GLN:HA	2:I:3703:LEU:HD12	2.01	0.43
2:B:241:GLN:O	2:B:289:ARG:NH1	2.44	0.43
2:B:1658:ASP:OD1	2:B:1658:ASP:N	2.52	0.43
2:E:758:ARG:NH2	2:E:803:LEU:O	2.52	0.43
2:E:1116:GLY:HA3	2:E:1123:VAL:HG12	2.00	0.43
2:E:1679:ASN:O	2:E:1683:HIS:ND1	2.36	0.43
2:E:3713:LYS:HG2	2:E:3715:LYS:H	1.82	0.43
2:E:4780:PHE:HA	2:E:4783:ILE:HD12	2.00	0.43
2:G:4824:ARG:O	2:G:4828:SER:N	2.47	0.43
2:G:5026:ASP:OD1	2:G:5027:CYS:N	2.52	0.43
1:H:57:LYS:HB2	1:H:80:VAL:HB	2.01	0.43
2:I:379:HIS:CD2	2:I:381:GLU:H	2.36	0.43
2:I:794:GLY:H	2:I:798:GLY:HA3	1.84	0.43
2:I:4208:PRO:HA	2:I:4211:LYS:HB3	2.00	0.43
2:I:4801:LEU:HB3	2:I:4808:PHE:CG	2.54	0.43
2:B:290:TYR:O	2:B:302:VAL:N	2.52	0.42
2:B:758:ARG:NH2	2:B:803:LEU:O	2.52	0.42
2:B:4003:LEU:HB2	2:B:4013:LEU:HD13	1.99	0.42
2:E:345:LEU:HD23	2:E:389:PHE:HB3	2.00	0.42
2:G:410:LEU:HD21	2:G:441:VAL:HA	2.00	0.42
2:G:1727:ARG:HH21	2:G:1775:HIS:CE1	2.37	0.42
2:I:2149:VAL:O	2:I:2153:MET:N	2.46	0.42
1:J:57:LYS:HB2	1:J:80:VAL:HB	2.01	0.42
1:A:57:LYS:HB2	1:A:80:VAL:HB	2.01	0.42
2:B:2255:SER:HA	2:B:2258:LEU:HB3	2.00	0.42
2:B:3700:GLN:HA	2:B:3703:LEU:HD12	2.01	0.42
2:B:3779:VAL:HG23	2:B:3780:LEU:HD12	2.01	0.42
2:B:4836:GLN:O	2:B:4840:THR:OG1	2.28	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:5026:ASP:OD1	2:B:5027:CYS:N	2.52	0.42
2:E:313:SER:HB3	2:E:352:ALA:H	1.84	0.42
2:E:349:GLN:HE21	2:E:354:GLY:HA2	1.85	0.42
2:E:978:THR:HB	2:E:980:ALA:H	1.84	0.42
2:E:1232:ARG:HD3	2:E:1702:HIS:HB3	2.00	0.42
2:E:4801:LEU:HB3	2:E:4808:PHE:CG	2.54	0.42
2:G:313:SER:HB3	2:G:351:VAL:HB	2.01	0.42
2:G:1658:ASP:N	2:G:1658:ASP:OD1	2.52	0.42
2:G:3229:UNK:HA	2:G:3302:UNK:HA	2.00	0.42
2:G:4885:PHE:HE2	2:G:4901:ILE:HD11	1.83	0.42
2:I:1516:UNK:N	2:I:1529:UNK:O	2.52	0.42
2:I:3825:GLU:OE1	2:I:3825:GLU:N	2.51	0.42
2:I:4568:PHE:HA	2:I:4571:PHE:HD2	1.84	0.42
2:B:1661:ARG:O	2:B:1664:SER:OG	2.34	0.42
2:B:2517:UNK:O	2:B:2521:UNK:N	2.52	0.42
2:B:3361:UNK:O	2:B:3365:UNK:N	2.52	0.42
2:E:220:LEU:HD11	2:E:390:LEU:HD22	2.00	0.42
2:E:290:TYR:O	2:E:302:VAL:N	2.52	0.42
2:E:867:LEU:HD22	2:E:929:LEU:HD22	2.00	0.42
1:F:87:HIS:HB3	1:F:91:ILE:H	1.84	0.42
2:G:758:ARG:NH2	2:G:803:LEU:O	2.52	0.42
2:G:2444:GLN:HA	2:G:2451:LEU:HD21	2.00	0.42
2:G:4667:PRO:O	2:G:4714:ASN:ND2	2.52	0.42
2:I:220:LEU:HD11	2:I:390:LEU:HD22	2.00	0.42
2:I:1727:ARG:HH21	2:I:1775:HIS:CE1	2.38	0.42
2:I:4885:PHE:HE2	2:I:4901:ILE:HD11	1.83	0.42
2:B:891:TRP:HA	2:B:902:ARG:HB3	2.01	0.42
2:B:947:GLU:HG3	2:B:1049:TYR:HD1	1.85	0.42
2:B:1866:ILE:HG13	2:B:1926:LEU:HB3	2.02	0.42
2:E:299:LEU:HD12	2:E:299:LEU:HA	1.87	0.42
2:E:355:LEU:HB3	2:E:378:LEU:HB3	2.01	0.42
2:E:1727:ARG:HH21	2:E:1775:HIS:CE1	2.37	0.42
2:G:4780:PHE:HA	2:G:4783:ILE:HD12	2.00	0.42
2:I:1737:PRO:HG2	2:I:1739:THR:HG23	1.99	0.42
2:I:1866:ILE:HG13	2:I:1926:LEU:HB3	2.02	0.42
2:I:4061:PHE:C	2:I:4063:ASP:H	2.22	0.42
2:I:5026:ASP:OD1	2:I:5027:CYS:N	2.52	0.42
2:B:1497:UNK:HA	2:B:1535:UNK:HA	2.02	0.42
2:B:4061:PHE:C	2:B:4063:ASP:H	2.22	0.42
2:E:111:HIS:N	2:E:116:MET:O	2.37	0.42
2:E:498:THR:OG1	2:E:499:THR:N	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:1092:PHE:O	2:E:1149:VAL:N	2.49	0.42
2:E:1658:ASP:OD1	2:E:1658:ASP:N	2.52	0.42
2:E:1979:LEU:HA	2:E:1983:ALA:HB3	2.02	0.42
2:E:2430:ILE:HG21	2:E:2502:UNK:HA	2.01	0.42
2:E:4822:THR:O	2:E:4825:THR:OG1	2.28	0.42
2:G:891:TRP:HA	2:G:902:ARG:HB3	2.01	0.42
2:G:3674:ILE:HG13	2:G:3732:SER:HB3	2.01	0.42
2:G:4686:LEU:O	2:G:4691:GLN:N	2.52	0.42
2:G:4843:LEU:HD12	2:I:4823:LEU:HD21	2.02	0.42
2:I:17:ASP:HB2	2:I:98:HIS:CE1	2.50	0.42
2:I:4068:LEU:HD23	2:I:4132:PHE:HE2	1.82	0.42
2:B:349:GLN:HE21	2:B:354:GLY:HA2	1.85	0.42
2:B:1727:ARG:HH21	2:B:1775:HIS:CE1	2.38	0.42
2:E:281:ARG:HA	2:E:312:THR:HG21	2.02	0.42
2:E:1207:ASP:HB3	2:E:1210:SER:HB3	2.02	0.42
2:G:1207:ASP:HB3	2:G:1210:SER:HB3	2.02	0.42
2:G:5013:MET:HA	2:G:5016:GLU:HB3	2.01	0.42
2:I:264:PRO:HG2	2:I:270:SER:HB2	2.02	0.42
2:I:498:THR:OG1	2:I:499:THR:N	2.53	0.42
2:I:4864:ASN:H	2:I:4874:MET:HG2	1.84	0.42
2:B:546:TRP:O	2:B:550:LYS:NZ	2.35	0.42
2:B:2236:LEU:HD23	2:B:2275:VAL:HG21	2.02	0.42
2:B:2342:ASN:OD1	2:B:2342:ASN:N	2.45	0.42
2:B:3649:ALA:O	2:B:3653:PHE:N	2.45	0.42
2:B:4026:MET:O	2:B:4030:LEU:N	2.52	0.42
2:B:4048:LEU:HD23	2:B:4048:LEU:HA	1.87	0.42
2:B:4701:TRP:CZ2	2:B:4781:GLY:HA3	2.55	0.42
2:E:794:GLY:H	2:E:798:GLY:HA3	1.84	0.42
2:E:1866:ILE:HG13	2:E:1926:LEU:HB3	2.01	0.42
2:E:3229:UNK:HA	2:E:3302:UNK:HA	2.01	0.42
2:G:290:TYR:O	2:G:302:VAL:N	2.52	0.42
2:G:349:GLN:HE21	2:G:354:GLY:HA2	1.84	0.42
2:G:2021:CYS:HA	2:G:2022:PRO:HD3	1.91	0.42
2:G:3700:GLN:HA	2:G:3703:LEU:HD12	2.01	0.42
2:G:4048:LEU:HD23	2:G:4048:LEU:HA	1.87	0.42
2:G:4864:ASN:H	2:G:4874:MET:HG2	1.85	0.42
2:I:947:GLU:HG3	2:I:1049:TYR:HD1	1.85	0.42
2:I:1207:ASP:HB3	2:I:1210:SER:HB3	2.02	0.42
2:I:2002:PRO:HA	2:I:2005:GLN:HB3	2.02	0.42
2:I:5013:MET:HA	2:I:5016:GLU:HB3	2.01	0.42
2:B:345:LEU:HD23	2:B:389:PHE:HB3	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:498:THR:OG1	2:B:499:THR:N	2.53	0.42
2:B:4864:ASN:H	2:B:4874:MET:HG2	1.84	0.42
2:B:5013:MET:HA	2:B:5016:GLU:HB3	2.01	0.42
2:E:2517:UNK:O	2:E:2521:UNK:N	2.53	0.42
2:E:4568:PHE:HA	2:E:4571:PHE:HD2	1.84	0.42
2:G:180:LEU:HD22	2:G:200:TRP:NE1	2.35	0.42
2:G:313:SER:HB3	2:G:352:ALA:H	1.84	0.42
2:G:498:THR:OG1	2:G:499:THR:N	2.53	0.42
2:G:4801:LEU:HB3	2:G:4808:PHE:CG	2.54	0.42
2:I:891:TRP:HA	2:I:902:ARG:HB3	2.01	0.42
2:I:2236:LEU:HD23	2:I:2275:VAL:HG21	2.02	0.42
2:I:4241:THR:HB	2:I:4989:MET:HE1	2.01	0.42
2:I:4928:LEU:HD13	2:I:4931:ILE:HD12	2.01	0.42
2:B:264:PRO:HG2	2:B:270:SER:HB2	2.02	0.42
2:B:355:LEU:HB3	2:B:378:LEU:HB3	2.01	0.42
2:E:947:GLU:HG3	2:E:1049:TYR:HD1	1.85	0.42
2:E:3927:GLN:NE2	2:E:3988:ALA:O	2.49	0.42
2:E:4174:PHE:HD1	2:E:4174:PHE:HA	1.71	0.42
2:E:5013:MET:HA	2:E:5016:GLU:HB3	2.01	0.42
2:E:5026:ASP:OD1	2:E:5027:CYS:N	2.52	0.42
2:G:947:GLU:HG3	2:G:1049:TYR:HD1	1.85	0.42
2:I:180:LEU:HD22	2:I:200:TRP:NE1	2.35	0.42
2:I:313:SER:HB3	2:I:351:VAL:HB	2.01	0.42
2:I:1663:HIS:O	2:I:1667:LEU:N	2.46	0.42
2:I:1703:LEU:HD21	2:I:1830:VAL:HG13	2.02	0.42
2:I:1979:LEU:HA	2:I:1983:ALA:HB3	2.02	0.42
2:I:2116:LEU:O	2:I:2120:MET:N	2.48	0.42
2:I:3674:ILE:HG13	2:I:3732:SER:HB3	2.01	0.42
2:I:4667:PRO:O	2:I:4714:ASN:ND2	2.52	0.42
2:I:4989:MET:HE2	2:I:4989:MET:HB3	1.91	0.42
2:B:220:LEU:HD11	2:B:390:LEU:HD22	2.00	0.42
2:B:4686:LEU:O	2:B:4691:GLN:N	2.52	0.42
2:G:635:THR:HB	2:G:1639:LEU:HD23	2.02	0.42
2:G:1232:ARG:HD3	2:G:1702:HIS:HB3	2.00	0.42
2:G:3779:VAL:HG23	2:G:3780:LEU:HD12	2.00	0.42
2:G:4026:MET:O	2:G:4030:LEU:N	2.52	0.42
2:G:4736:ARG:O	2:G:4740:LEU:N	2.50	0.42
2:I:290:TYR:O	2:I:302:VAL:N	2.52	0.42
2:I:349:GLN:HE21	2:I:354:GLY:HA2	1.85	0.42
1:J:87:HIS:HB3	1:J:91:ILE:H	1.84	0.42
2:B:36:CYS:O	2:B:50:GLU:N	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2002:PRO:HA	2:B:2005:GLN:HB3	2.02	0.41
2:B:3229:UNK:HA	2:B:3302:UNK:HA	2.01	0.41
2:E:101:LEU:HB2	2:E:163:VAL:HB	2.02	0.41
2:E:3674:ILE:HG13	2:E:3732:SER:HB3	2.01	0.41
2:G:119:SER:HA	2:G:146:CYS:HA	2.03	0.41
2:G:3840:SER:OG	2:G:3875:MET:O	2.29	0.41
2:I:241:GLN:O	2:I:289:ARG:NH1	2.44	0.41
2:I:1094:ALA:HA	2:I:1200:GLY:HA2	2.01	0.41
2:I:2347:GLU:O	2:I:2351:ASN:N	2.36	0.41
2:I:4701:TRP:CZ2	2:I:4781:GLY:HA3	2.55	0.41
2:I:4852:THR:HG21	2:I:4883:TYR:HB2	2.01	0.41
2:B:1094:ALA:HA	2:B:1200:GLY:HA2	2.01	0.41
2:B:4928:LEU:HD13	2:B:4931:ILE:HD12	2.01	0.41
2:E:635:THR:HB	2:E:1639:LEU:HD23	2.02	0.41
2:E:891:TRP:HA	2:E:902:ARG:HB3	2.01	0.41
2:E:2116:LEU:O	2:E:2120:MET:N	2.48	0.41
2:E:4736:ARG:O	2:E:4740:LEU:N	2.50	0.41
2:E:4928:LEU:HD13	2:E:4931:ILE:HD12	2.01	0.41
2:G:1657:LEU:HD13	2:G:1657:LEU:HA	1.91	0.41
2:I:3361:UNK:O	2:I:3365:UNK:N	2.52	0.41
2:B:288:GLY:HA3	2:B:405:HIS:CE1	2.54	0.41
2:B:360:ALA:N	2:B:375:LYS:O	2.53	0.41
2:B:1207:ASP:HB3	2:B:1210:SER:HB3	2.02	0.41
2:B:1703:LEU:HD21	2:B:1830:VAL:HG13	2.01	0.41
2:B:2318:TYR:HA	2:B:2319:PRO:HD3	1.88	0.41
2:B:3792:ALA:HA	2:B:3795:SER:HB3	2.02	0.41
2:E:131:LEU:HB3	2:G:2459:SER:HB2	2.03	0.41
2:E:313:SER:HB3	2:E:351:VAL:HB	2.01	0.41
2:E:1090:PHE:CD2	2:E:1202:LEU:HD11	2.56	0.41
2:E:2236:LEU:HD23	2:E:2275:VAL:HG21	2.02	0.41
2:G:1088:TRP:HB2	2:G:1153:ILE:HG22	2.02	0.41
2:G:1866:ILE:HG13	2:G:1926:LEU:HB3	2.01	0.41
2:G:2116:LEU:O	2:G:2120:MET:N	2.48	0.41
2:G:2236:LEU:HD23	2:G:2275:VAL:HG21	2.02	0.41
2:G:4108:ILE:HA	2:G:4111:LEU:HD12	2.01	0.41
2:I:101:LEU:HB2	2:I:163:VAL:HB	2.02	0.41
2:I:4108:ILE:HA	2:I:4111:LEU:HD12	2.01	0.41
2:B:180:LEU:HD22	2:B:200:TRP:NE1	2.35	0.41
2:B:635:THR:HB	2:B:1639:LEU:HD23	2.02	0.41
2:B:898:ASP:HB3	2:B:901:LYS:HB2	2.03	0.41
2:B:978:THR:HB	2:B:980:ALA:H	1.84	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:983:THR:O	2:B:987:ARG:N	2.52	0.41
2:B:1090:PHE:CD2	2:B:1202:LEU:HD11	2.56	0.41
2:B:1092:PHE:O	2:B:1149:VAL:N	2.49	0.41
2:B:3674:ILE:HG13	2:B:3732:SER:HB3	2.02	0.41
2:B:4583:SER:O	2:B:4628:VAL:N	2.44	0.41
2:B:4826:ILE:O	2:B:4829:SER:OG	2.33	0.41
2:E:36:CYS:O	2:E:50:GLU:N	2.53	0.41
2:E:180:LEU:HD22	2:E:200:TRP:NE1	2.35	0.41
2:E:4852:THR:HG21	2:E:4883:TYR:HB2	2.02	0.41
2:G:281:ARG:HA	2:G:312:THR:HG21	2.02	0.41
2:G:2002:PRO:HA	2:G:2005:GLN:HB3	2.02	0.41
2:G:2458:ARG:NH2	2:G:2509:UNK:O	2.42	0.41
2:I:635:THR:HA	2:I:1639:LEU:HA	2.03	0.41
2:I:978:THR:HB	2:I:980:ALA:H	1.84	0.41
2:I:4824:ARG:O	2:I:4828:SER:N	2.47	0.41
2:B:2770:LYS:O	2:B:2775:TRP:N	2.42	0.41
2:B:4852:THR:HG21	2:B:4883:TYR:HB2	2.01	0.41
2:B:4879:MET:HB2	2:E:4580:TYR:HB2	2.02	0.41
2:E:264:PRO:HG2	2:E:270:SER:HB2	2.02	0.41
2:E:4686:LEU:O	2:E:4691:GLN:N	2.52	0.41
2:E:4864:ASN:H	2:E:4874:MET:HG2	1.84	0.41
2:G:224:HIS:H	2:G:230:CYS:HA	1.86	0.41
2:G:1679:ASN:O	2:G:1683:HIS:ND1	2.36	0.41
2:G:1950:GLU:OE2	2:G:1954:ARG:NH2	2.43	0.41
2:G:2880:GLU:O	2:G:2884:ASN:N	2.47	0.41
2:G:3953:LYS:O	2:G:3956:SER:OG	2.29	0.41
2:G:4701:TRP:CZ2	2:G:4781:GLY:HA3	2.55	0.41
2:G:4826:ILE:O	2:G:4829:SER:OG	2.33	0.41
2:I:345:LEU:HD23	2:I:389:PHE:HB3	2.00	0.41
2:I:1095:VAL:HA	2:I:1146:GLY:H	1.85	0.41
2:I:3779:VAL:HG23	2:I:3780:LEU:HD12	2.01	0.41
2:B:485:SER:O	2:B:489:ASN:N	2.50	0.41
2:B:1808:ARG:HD2	2:B:1854:PHE:HA	2.03	0.41
2:E:22:LEU:HD23	2:E:22:LEU:HA	1.92	0.41
2:E:805:PRO:HB2	2:E:808:TYR:CE2	2.56	0.41
2:E:3792:ALA:HA	2:E:3795:SER:HB3	2.02	0.41
2:E:3915:ILE:H	2:E:3915:ILE:HG13	1.56	0.41
2:G:1948:ASP:O	2:G:1952:GLN:N	2.44	0.41
2:G:4852:THR:HG21	2:G:4883:TYR:HB2	2.02	0.41
1:H:87:HIS:HB3	1:H:91:ILE:H	1.84	0.41
2:I:546:TRP:O	2:I:550:LYS:NZ	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:I:3889:GLN:HE22	2:I:3963:ASN:HB3	1.85	0.41
2:I:4174:PHE:HD1	2:I:4174:PHE:HA	1.71	0.41
1:J:26:TYR:OH	1:J:42:ARG:NH2	2.35	0.41
1:A:7:ILE:HB	1:A:71:ARG:HB3	2.03	0.41
2:B:224:HIS:H	2:B:230:CYS:HA	1.86	0.41
2:B:313:SER:HB3	2:B:351:VAL:HB	2.01	0.41
2:B:2674:UNK:O	2:B:2676:UNK:N	2.54	0.41
2:B:3730:ALA:O	2:B:3734:HIS:N	2.41	0.41
2:B:3963:ASN:O	2:B:3966:THR:OG1	2.30	0.41
2:B:4667:PRO:O	2:B:4714:ASN:ND2	2.52	0.41
2:B:4824:ARG:HA	2:B:4827:LEU:HB3	2.03	0.41
2:E:119:SER:HA	2:E:146:CYS:HA	2.03	0.41
2:E:308:HIS:CE1	2:E:310:LYS:HD2	2.56	0.41
2:E:2002:PRO:HA	2:E:2005:GLN:HB3	2.02	0.41
2:E:3700:GLN:HA	2:E:3703:LEU:HD12	2.01	0.41
2:E:3765:TYR:CD2	2:E:3769:ARG:HD3	2.56	0.41
2:G:173:SER:OG	2:G:174:VAL:N	2.54	0.41
2:G:360:ALA:N	2:G:375:LYS:O	2.53	0.41
2:G:1032:LYS:O	2:G:1036:ARG:N	2.45	0.41
2:G:2674:UNK:O	2:G:2676:UNK:N	2.54	0.41
2:G:3889:GLN:HE22	2:G:3963:ASN:HB3	1.86	0.41
2:I:355:LEU:HB3	2:I:378:LEU:HB3	2.01	0.41
2:I:898:ASP:HB3	2:I:901:LYS:HB2	2.03	0.41
2:I:2517:UNK:O	2:I:2521:UNK:N	2.54	0.41
2:I:4824:ARG:HA	2:I:4827:LEU:HB3	2.03	0.41
2:B:281:ARG:HA	2:B:312:THR:HG21	2.01	0.41
2:B:308:HIS:CE1	2:B:310:LYS:HD2	2.56	0.41
2:B:2021:CYS:HA	2:B:2022:PRO:HD3	1.91	0.41
2:B:2908:TYR:OH	2:B:2920:ARG:NE	2.45	0.41
2:E:181:HIS:CD2	2:E:196:MET:HB2	2.56	0.41
2:E:793:LEU:HD12	2:E:797:HIS:HB2	2.02	0.41
2:E:898:ASP:HB3	2:E:901:LYS:HB2	2.03	0.41
2:E:1088:TRP:HB2	2:E:1153:ILE:HG22	2.02	0.41
2:E:4701:TRP:CZ2	2:E:4781:GLY:HA3	2.55	0.41
2:G:1979:LEU:HA	2:G:1983:ALA:HB3	2.02	0.41
2:G:4705:VAL:HB	2:G:4778:TRP:CD1	2.56	0.41
2:I:119:SER:HA	2:I:146:CYS:HA	2.03	0.41
2:I:635:THR:HB	2:I:1639:LEU:HD23	2.02	0.41
2:I:1657:LEU:HD13	2:I:1657:LEU:HA	1.90	0.41
2:I:1698:LEU:N	2:I:1712:TYR:OH	2.54	0.41
2:B:181:HIS:CD2	2:B:196:MET:HB2	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:205:ILE:HD12	2:B:205:ILE:HA	1.94	0.41
2:B:635:THR:HA	2:B:1639:LEU:HA	2.03	0.41
2:B:805:PRO:HB2	2:B:808:TYR:CE2	2.56	0.41
2:B:1698:LEU:N	2:B:1712:TYR:OH	2.54	0.41
2:B:1979:LEU:HA	2:B:1983:ALA:HB3	2.01	0.41
2:B:2265:LEU:HD21	2:B:2273:LEU:HD13	2.02	0.41
2:B:3965:LEU:HA	2:B:3968:TYR:CD2	2.56	0.41
2:B:4705:VAL:HB	2:B:4778:TRP:CD1	2.56	0.41
2:E:1095:VAL:HA	2:E:1146:GLY:H	1.85	0.41
2:E:1703:LEU:HD21	2:E:1830:VAL:HG13	2.02	0.41
2:E:2880:GLU:O	2:E:2884:ASN:N	2.47	0.41
2:E:3646:THR:O	2:E:3650:CYS:N	2.49	0.41
2:E:4701:TRP:HE1	2:E:4782:VAL:HG23	1.86	0.41
2:E:4705:VAL:HB	2:E:4778:TRP:CD1	2.56	0.41
1:F:7:ILE:HB	1:F:71:ARG:HB3	2.03	0.41
2:G:36:CYS:O	2:G:50:GLU:N	2.53	0.41
2:G:259:LEU:HD23	2:G:259:LEU:HA	1.83	0.41
2:G:355:LEU:HB3	2:G:378:LEU:HB3	2.01	0.41
2:G:488:LEU:HA	2:G:491:ILE:HB	2.03	0.41
2:G:805:PRO:HB2	2:G:808:TYR:CE2	2.56	0.41
2:G:1090:PHE:CD2	2:G:1202:LEU:HD11	2.56	0.41
2:G:1808:ARG:HD2	2:G:1854:PHE:HA	2.03	0.41
2:G:3805:LEU:H	2:G:3805:LEU:HG	1.51	0.41
2:G:4702:ASP:HA	2:G:4778:TRP:HE1	1.86	0.41
1:H:7:ILE:HB	1:H:71:ARG:HB3	2.03	0.41
2:I:181:HIS:CD2	2:I:196:MET:HB2	2.56	0.41
2:I:663:TYR:HB2	2:I:808:TYR:HB3	2.03	0.41
2:I:2247:GLN:O	2:I:2279:SER:OG	2.39	0.41
2:I:2674:UNK:O	2:I:2676:UNK:N	2.54	0.41
2:I:3965:LEU:HA	2:I:3968:TYR:CD2	2.56	0.41
2:I:4705:VAL:HB	2:I:4778:TRP:CD1	2.56	0.41
1:A:26:TYR:OH	1:A:42:ARG:NH2	2.35	0.41
2:B:119:SER:HA	2:B:146:CYS:HA	2.02	0.41
2:B:870:ILE:HA	2:B:870:ILE:HD12	1.86	0.41
2:B:1088:TRP:HB2	2:B:1153:ILE:HG22	2.02	0.41
2:E:710:ASP:OD1	2:E:710:ASP:N	2.52	0.41
2:E:1808:ARG:HD2	2:E:1854:PHE:HA	2.03	0.41
2:E:2021:CYS:HA	2:E:2022:PRO:HD3	1.91	0.41
2:E:2265:LEU:HD21	2:E:2273:LEU:HD13	2.02	0.41
2:E:3645:PRO:HB2	2:E:3648:ARG:HB3	2.03	0.41
2:E:3963:ASN:O	2:E:3966:THR:OG1	2.30	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:F:7:ILE:N	1:F:71:ARG:O	2.46	0.41
2:G:793:LEU:HD12	2:G:797:HIS:HB2	2.02	0.41
2:G:1661:ARG:O	2:G:1664:SER:OG	2.34	0.41
2:G:1729:SER:O	2:G:2163:ARG:NH1	2.54	0.41
2:G:3765:TYR:CD2	2:G:3769:ARG:HD3	2.56	0.41
2:G:3965:LEU:HA	2:G:3968:TYR:CD2	2.56	0.41
2:G:4824:ARG:HA	2:G:4827:LEU:HB3	2.03	0.41
2:I:173:SER:OG	2:I:174:VAL:N	2.54	0.41
2:I:224:HIS:H	2:I:230:CYS:HA	1.86	0.41
2:I:788:LYS:HG2	2:I:1630:CYS:N	2.33	0.41
2:I:2207:VAL:HG13	2:I:2232:CYS:HB2	2.03	0.41
2:I:2759:ALA:HB1	2:I:2805:TYR:HB3	2.03	0.41
2:I:3805:LEU:H	2:I:3805:LEU:HG	1.51	0.41
2:I:4701:TRP:HE1	2:I:4782:VAL:HG23	1.86	0.41
1:A:7:ILE:N	1:A:71:ARG:O	2.46	0.40
2:B:4701:TRP:HE1	2:B:4782:VAL:HG23	1.86	0.40
2:E:836:GLY:HA3	2:E:1201:HIS:ND1	2.36	0.40
2:E:1936:LYS:O	2:E:1940:CYS:N	2.50	0.40
2:E:4824:ARG:HA	2:E:4827:LEU:HB3	2.03	0.40
2:G:101:LEU:HB2	2:G:163:VAL:HB	2.03	0.40
2:G:635:THR:HA	2:G:1639:LEU:HA	2.03	0.40
2:G:1095:VAL:HA	2:G:1146:GLY:H	1.85	0.40
2:G:1096:THR:OG1	2:G:1199:VAL:O	2.39	0.40
2:G:2770:LYS:O	2:G:2775:TRP:N	2.42	0.40
2:G:4701:TRP:HE1	2:G:4782:VAL:HG23	1.86	0.40
2:I:103:TYR:HB3	2:I:152:PRO:HD3	2.04	0.40
2:I:793:LEU:HD12	2:I:797:HIS:HB2	2.03	0.40
2:I:1948:ASP:O	2:I:1952:GLN:N	2.44	0.40
2:B:103:TYR:HB3	2:B:152:PRO:HD3	2.04	0.40
2:B:173:SER:OG	2:B:174:VAL:N	2.54	0.40
2:B:663:TYR:HB2	2:B:808:TYR:HB3	2.03	0.40
2:B:2207:VAL:HG13	2:B:2232:CYS:HB2	2.03	0.40
2:B:3153:UNK:O	2:B:3157:UNK:N	2.54	0.40
2:B:3765:TYR:CD2	2:B:3769:ARG:HD3	2.56	0.40
2:B:4677:LEU:HD13	2:B:4677:LEU:HA	1.94	0.40
2:E:1698:LEU:N	2:E:1712:TYR:OH	2.54	0.40
2:E:2207:VAL:HG13	2:E:2232:CYS:HB2	2.03	0.40
2:E:4182:GLU:HB3	2:E:4192:ARG:HG3	2.04	0.40
2:E:4859:PHE:HZ	2:E:4912:TYR:HB2	1.86	0.40
2:G:264:PRO:HG2	2:G:270:SER:HB2	2.02	0.40
2:G:864:PRO:HA	2:G:865:PRO:HD3	1.97	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:898:ASP:HB3	2:G:901:LYS:HB2	2.02	0.40
2:G:4570:ALA:O	2:G:4574:ASN:ND2	2.55	0.40
2:I:1088:TRP:HB2	2:I:1153:ILE:HG22	2.02	0.40
2:I:2265:LEU:HD21	2:I:2273:LEU:HD13	2.02	0.40
2:I:3663:LEU:H	2:I:3663:LEU:HG	1.40	0.40
2:I:3765:TYR:CD2	2:I:3769:ARG:HD3	2.56	0.40
1:J:7:ILE:HB	1:J:71:ARG:HB3	2.03	0.40
2:B:17:ASP:HB2	2:B:98:HIS:CE1	2.50	0.40
2:B:101:LEU:HB2	2:B:163:VAL:HB	2.02	0.40
2:B:1256:GLU:HG2	2:B:1273:ALA:HB3	2.03	0.40
2:B:4580:TYR:H	2:I:4879:MET:HB3	1.86	0.40
2:B:4651:THR:HA	2:B:4799:SER:HB3	2.04	0.40
2:E:4667:PRO:O	2:E:4714:ASN:ND2	2.52	0.40
2:G:17:ASP:HB2	2:G:98:HIS:CE1	2.50	0.40
2:G:836:GLY:HA3	2:G:1201:HIS:ND1	2.36	0.40
2:G:983:THR:O	2:G:987:ARG:N	2.52	0.40
2:G:1698:LEU:N	2:G:1712:TYR:OH	2.54	0.40
2:G:1936:LYS:O	2:G:1940:CYS:N	2.50	0.40
2:G:4174:PHE:HD1	2:G:4174:PHE:HA	1.71	0.40
2:G:4207:MET:HA	2:G:4208:PRO:HD3	1.96	0.40
2:I:308:HIS:CE1	2:I:310:LYS:HD2	2.56	0.40
2:I:488:LEU:HA	2:I:491:ILE:HB	2.03	0.40
2:I:805:PRO:HB2	2:I:808:TYR:CE2	2.56	0.40
2:I:1497:UNK:HA	2:I:1535:UNK:HA	2.02	0.40
2:I:4091:LYS:HA	2:I:4091:LYS:HD3	1.85	0.40
2:I:4924:VAL:O	2:I:4928:LEU:N	2.37	0.40
2:B:260:TRP:CE2	2:B:284:HIS:HD2	2.40	0.40
2:B:3645:PRO:HB2	2:B:3648:ARG:HB3	2.03	0.40
2:E:173:SER:OG	2:E:174:VAL:N	2.54	0.40
2:E:663:TYR:HB2	2:E:808:TYR:HB3	2.03	0.40
2:E:4570:ALA:O	2:E:4574:ASN:ND2	2.55	0.40
2:G:181:HIS:CD2	2:G:196:MET:HB2	2.56	0.40
2:G:308:HIS:CE1	2:G:310:LYS:HD2	2.56	0.40
2:G:663:TYR:HB2	2:G:808:TYR:HB3	2.03	0.40
2:G:1703:LEU:HD21	2:G:1830:VAL:HG13	2.01	0.40
2:G:1965:TYR:OH	2:G:2027:ILE:O	2.24	0.40
2:G:3661:TRP:HB3	2:G:3662:ILE:H	1.77	0.40
2:G:4795:TYR:CZ	2:G:4812:HIS:HD2	2.40	0.40
2:G:4961:CYS:HB2	2:G:4963:ILE:HD12	2.04	0.40
2:B:975:VAL:O	2:B:1044:ARG:NH2	2.52	0.40
2:B:1032:LYS:O	2:B:1036:ARG:N	2.45	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:B:2247:GLN:O	2:B:2279:SER:OG	2.39	0.40
2:B:2759:ALA:HB1	2:B:2805:TYR:HB3	2.04	0.40
2:B:3661:TRP:HB3	2:B:3662:ILE:H	1.77	0.40
2:B:4080:TYR:CD1	2:B:4092:ASP:HB2	2.57	0.40
2:E:224:HIS:H	2:E:230:CYS:HA	1.86	0.40
2:E:488:LEU:HA	2:E:491:ILE:HB	2.03	0.40
2:E:1497:UNK:HA	2:E:1535:UNK:HA	2.03	0.40
2:E:2318:TYR:HA	2:E:2319:PRO:HD3	1.88	0.40
2:E:2432:LEU:O	2:E:2436:CYS:N	2.55	0.40
2:E:3965:LEU:HA	2:E:3968:TYR:CD2	2.56	0.40
2:E:4651:THR:HA	2:E:4799:SER:HB3	2.04	0.40
2:G:463:GLU:O	2:G:466:SER:OG	2.34	0.40
2:G:1034:SER:O	2:G:1038:SER:N	2.54	0.40
2:G:2265:LEU:HD21	2:G:2273:LEU:HD13	2.02	0.40
2:G:2432:LEU:O	2:G:2436:CYS:N	2.55	0.40
2:G:4064:MET:HA	2:G:4067:LYS:HE3	2.04	0.40
2:I:19:GLU:HB2	2:I:206:CYS:HB3	2.04	0.40
2:I:131:LEU:H	2:I:131:LEU:HG	1.58	0.40
2:I:259:LEU:HD23	2:I:259:LEU:HA	1.83	0.40
2:I:281:ARG:HA	2:I:312:THR:HG21	2.02	0.40
2:I:1090:PHE:CD2	2:I:1202:LEU:HD11	2.56	0.40
2:I:2430:ILE:HG21	2:I:2502:UNK:HA	2.03	0.40
2:I:3694:LYS:HA	2:I:3695:PRO:HD3	1.98	0.40
2:I:4080:TYR:CD1	2:I:4092:ASP:HB2	2.57	0.40
2:I:4680:LYS:HB3	2:I:4686:LEU:HD22	2.03	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	105/107 (98%)	95 (90%)	10 (10%)	0	100 100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	F	105/107 (98%)	95 (90%)	10 (10%)	0	100	100
1	H	105/107 (98%)	95 (90%)	10 (10%)	0	100	100
1	J	105/107 (98%)	95 (90%)	10 (10%)	0	100	100
2	B	3235/4687 (69%)	2859 (88%)	367 (11%)	9 (0%)	41	76
2	E	3235/4687 (69%)	2860 (88%)	367 (11%)	8 (0%)	47	81
2	G	3235/4687 (69%)	2859 (88%)	367 (11%)	9 (0%)	41	76
2	I	3235/4687 (69%)	2860 (88%)	366 (11%)	9 (0%)	41	76
All	All	13360/19176 (70%)	11818 (88%)	1507 (11%)	35 (0%)	44	76

All (35) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	B	3772	THR
2	B	4667	PRO
2	E	3772	THR
2	E	4667	PRO
2	G	3772	THR
2	G	4667	PRO
2	I	3772	THR
2	I	4667	PRO
2	B	1708	ARG
2	B	1829	PRO
2	B	1932	PRO
2	B	4062	PHE
2	E	1708	ARG
2	E	1829	PRO
2	E	1932	PRO
2	G	1708	ARG
2	G	1829	PRO
2	G	1932	PRO
2	I	1708	ARG
2	I	1829	PRO
2	I	1932	PRO
2	I	4062	PHE
2	B	1840	PRO
2	E	1840	PRO
2	G	553	ARG
2	G	1840	PRO
2	I	1840	PRO
2	B	834	PRO

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Mol	Chain	Res	Type
2	G	834	PRO
2	I	834	PRO
2	B	2343	GLY
2	E	834	PRO
2	E	2343	GLY
2	G	2343	GLY
2	I	2343	GLY

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	88/88 (100%)	88 (100%)	0	100	100
1	F	88/88 (100%)	88 (100%)	0	100	100
1	H	88/88 (100%)	88 (100%)	0	100	100
1	J	88/88 (100%)	88 (100%)	0	100	100
2	B	2493/3209 (78%)	2469 (99%)	24 (1%)	76	86
2	E	2493/3209 (78%)	2469 (99%)	24 (1%)	76	86
2	G	2493/3209 (78%)	2469 (99%)	24 (1%)	76	86
2	I	2493/3209 (78%)	2469 (99%)	24 (1%)	76	86
All	All	10324/13188 (78%)	10228 (99%)	96 (1%)	79	87

All (96) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	B	131	LEU
2	B	534	ARG
2	B	553	ARG
2	B	688	LEU
2	B	831	ARG
2	B	978	THR
2	B	1076	ARG
2	B	1141	ARG

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Mol	Chain	Res	Type
2	B	1964	ARG
2	B	3663	LEU
2	B	3787	LYS
2	B	3805	LEU
2	B	3896	ASN
2	B	4034	ASN
2	B	4059	LEU
2	B	4085	ARG
2	B	4120	ASN
2	B	4180	ARG
2	B	4189	ARG
2	B	4798	MET
2	B	4871	GLU
2	B	4957	LYS
2	B	4984	ASN
2	B	4995	LEU
2	E	131	LEU
2	E	534	ARG
2	E	553	ARG
2	E	688	LEU
2	E	831	ARG
2	E	978	THR
2	E	1076	ARG
2	E	1141	ARG
2	E	1964	ARG
2	E	3663	LEU
2	E	3787	LYS
2	E	3805	LEU
2	E	3896	ASN
2	E	4034	ASN
2	E	4059	LEU
2	E	4085	ARG
2	E	4120	ASN
2	E	4180	ARG
2	E	4189	ARG
2	E	4798	MET
2	E	4871	GLU
2	E	4957	LYS
2	E	4984	ASN
2	E	4995	LEU
2	G	131	LEU
2	G	534	ARG

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Mol	Chain	Res	Type
2	G	553	ARG
2	G	688	LEU
2	G	831	ARG
2	G	978	THR
2	G	1076	ARG
2	G	1141	ARG
2	G	1964	ARG
2	G	3663	LEU
2	G	3787	LYS
2	G	3805	LEU
2	G	3896	ASN
2	G	4034	ASN
2	G	4059	LEU
2	G	4085	ARG
2	G	4120	ASN
2	G	4180	ARG
2	G	4189	ARG
2	G	4798	MET
2	G	4871	GLU
2	G	4957	LYS
2	G	4984	ASN
2	G	4995	LEU
2	I	131	LEU
2	I	534	ARG
2	I	553	ARG
2	I	688	LEU
2	I	831	ARG
2	I	978	THR
2	I	1076	ARG
2	I	1141	ARG
2	I	1964	ARG
2	I	3663	LEU
2	I	3787	LYS
2	I	3805	LEU
2	I	3896	ASN
2	I	4034	ASN
2	I	4059	LEU
2	I	4085	ARG
2	I	4120	ASN
2	I	4180	ARG
2	I	4189	ARG
2	I	4798	MET

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Mol	Chain	Res	Type
2	I	4871	GLU
2	I	4957	LYS
2	I	4984	ASN
2	I	4995	LEU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (169) such sidechains are listed below:

Mol	Chain	Res	Type
2	B	44	ASN
2	B	57	ASN
2	B	111	HIS
2	B	113	HIS
2	B	218	HIS
2	B	224	HIS
2	B	273	HIS
2	B	379	HIS
2	B	383	HIS
2	B	395	GLN
2	B	405	HIS
2	B	413	GLN
2	B	639	ASN
2	B	838	HIS
2	B	1158	ASN
2	B	1598	GLN
2	B	1679	ASN
2	B	1691	GLN
2	B	1719	HIS
2	B	1775	HIS
2	B	1941	ASN
2	B	1973	GLN
2	B	2005	GLN
2	B	2127	GLN
2	B	2188	ASN
2	B	3767	GLN
2	B	3889	GLN
2	B	3896	ASN
2	B	3960	GLN
2	B	3963	ASN
2	B	3978	GLN
2	B	3982	HIS
2	B	4034	ASN
2	B	4054	ASN

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Mol	Chain	Res	Type
2	B	4120	ASN
2	B	4130	ASN
2	B	4728	HIS
2	B	4833	ASN
2	B	4886	HIS
2	B	4984	ASN
2	B	4987	ASN
2	E	44	ASN
2	E	57	ASN
2	E	111	HIS
2	E	113	HIS
2	E	218	HIS
2	E	224	HIS
2	E	273	HIS
2	E	379	HIS
2	E	383	HIS
2	E	395	GLN
2	E	405	HIS
2	E	413	GLN
2	E	639	ASN
2	E	838	HIS
2	E	1158	ASN
2	E	1231	GLN
2	E	1598	GLN
2	E	1679	ASN
2	E	1691	GLN
2	E	1719	HIS
2	E	1775	HIS
2	E	1941	ASN
2	E	1973	GLN
2	E	2005	GLN
2	E	2127	GLN
2	E	2188	ASN
2	E	3767	GLN
2	E	3889	GLN
2	E	3896	ASN
2	E	3960	GLN
2	E	3963	ASN
2	E	3978	GLN
2	E	3982	HIS
2	E	4034	ASN
2	E	4054	ASN

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Mol	Chain	Res	Type
2	E	4120	ASN
2	E	4130	ASN
2	E	4728	HIS
2	E	4833	ASN
2	E	4886	HIS
2	E	4984	ASN
2	E	4987	ASN
2	G	44	ASN
2	G	57	ASN
2	G	111	HIS
2	G	113	HIS
2	G	218	HIS
2	G	224	HIS
2	G	273	HIS
2	G	379	HIS
2	G	383	HIS
2	G	395	GLN
2	G	405	HIS
2	G	413	GLN
2	G	479	GLN
2	G	639	ASN
2	G	838	HIS
2	G	1158	ASN
2	G	1231	GLN
2	G	1598	GLN
2	G	1679	ASN
2	G	1691	GLN
2	G	1719	HIS
2	G	1775	HIS
2	G	1941	ASN
2	G	1973	GLN
2	G	2005	GLN
2	G	2127	GLN
2	G	2188	ASN
2	G	3767	GLN
2	G	3889	GLN
2	G	3896	ASN
2	G	3960	GLN
2	G	3963	ASN
2	G	3978	GLN
2	G	3982	HIS
2	G	4034	ASN

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Mol	Chain	Res	Type
2	G	4054	ASN
2	G	4120	ASN
2	G	4130	ASN
2	G	4728	HIS
2	G	4833	ASN
2	G	4886	HIS
2	G	4984	ASN
2	G	4987	ASN
2	I	44	ASN
2	I	57	ASN
2	I	111	HIS
2	I	113	HIS
2	I	218	HIS
2	I	224	HIS
2	I	273	HIS
2	I	379	HIS
2	I	383	HIS
2	I	395	GLN
2	I	405	HIS
2	I	413	GLN
2	I	479	GLN
2	I	639	ASN
2	I	838	HIS
2	I	1158	ASN
2	I	1231	GLN
2	I	1598	GLN
2	I	1679	ASN
2	I	1691	GLN
2	I	1719	HIS
2	I	1775	HIS
2	I	1941	ASN
2	I	1973	GLN
2	I	2005	GLN
2	I	2127	GLN
2	I	2188	ASN
2	I	3767	GLN
2	I	3889	GLN
2	I	3896	ASN
2	I	3960	GLN
2	I	3963	ASN
2	I	3978	GLN
2	I	3982	HIS

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Mol	Chain	Res	Type
2	I	4034	ASN
2	I	4054	ASN
2	I	4120	ASN
2	I	4130	ASN
2	I	4728	HIS
2	I	4833	ASN
2	I	4886	HIS
2	I	4984	ASN
2	I	4987	ASN

5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

5.6 Ligand geometry [i](#)

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

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues

The following chains have linkage breaks:

Mol	Chain	Number of breaks
2	G	12
2	I	12
2	B	12
2	E	12

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	G	3613:UNK	C	3639:THR	N	44.11
1	I	3613:UNK	C	3639:THR	N	44.00
1	B	3613:UNK	C	3639:THR	N	43.94
1	E	3613:UNK	C	3639:THR	N	43.92
1	B	3163:UNK	C	3170:UNK	N	16.36
1	E	3163:UNK	C	3170:UNK	N	16.33
1	G	3163:UNK	C	3170:UNK	N	16.33
1	I	3163:UNK	C	3170:UNK	N	16.30
1	G	3468:UNK	C	3511:UNK	N	14.94
1	I	3468:UNK	C	3511:UNK	N	14.93
1	E	3468:UNK	C	3511:UNK	N	14.92
1	B	3468:UNK	C	3511:UNK	N	14.86
1	I	2703:UNK	C	2734:ASN	N	14.67
1	I	3063:UNK	C	3134:UNK	N	14.51
1	G	3063:UNK	C	3134:UNK	N	14.49
1	G	2703:UNK	C	2734:ASN	N	14.48
1	E	2703:UNK	C	2734:ASN	N	14.47
1	E	3063:UNK	C	3134:UNK	N	14.47
1	B	3063:UNK	C	3134:UNK	N	14.44
1	B	2703:UNK	C	2734:ASN	N	14.42
1	G	3236:UNK	C	3241:UNK	N	13.22
1	I	3236:UNK	C	3241:UNK	N	13.18
1	B	3236:UNK	C	3241:UNK	N	13.14
1	E	3236:UNK	C	3241:UNK	N	13.10
1	I	1564:UNK	C	1573:MET	N	12.99
1	B	1564:UNK	C	1573:MET	N	12.92
1	E	1564:UNK	C	1573:MET	N	12.81
1	G	1564:UNK	C	1573:MET	N	12.78
1	B	2976:UNK	C	2995:UNK	N	12.16
1	E	2976:UNK	C	2995:UNK	N	12.16
1	G	2976:UNK	C	2995:UNK	N	12.08
1	I	2976:UNK	C	2995:UNK	N	12.05

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Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	B	3254:UNK	C	3261:UNK	N	8.60
1	I	3254:UNK	C	3261:UNK	N	8.60
1	E	3254:UNK	C	3261:UNK	N	8.59
1	G	3254:UNK	C	3261:UNK	N	8.59
1	E	1297:UNK	C	1430:UNK	N	5.77
1	B	1297:UNK	C	1430:UNK	N	5.73
1	G	1297:UNK	C	1430:UNK	N	5.66
1	I	1297:UNK	C	1430:UNK	N	5.38
1	B	2479:LEU	C	2487:UNK	N	3.76
1	G	2939:ARG	C	2942:UNK	N	3.69
1	G	2479:LEU	C	2487:UNK	N	3.65
1	I	2479:LEU	C	2487:UNK	N	3.63
1	E	2479:LEU	C	2487:UNK	N	3.60
1	I	2939:ARG	C	2942:UNK	N	3.46
1	E	2939:ARG	C	2942:UNK	N	3.43
1	B	2939:ARG	C	2942:UNK	N	3.42

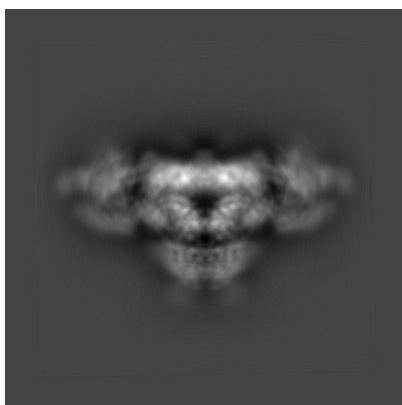
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-22396. These allow visual inspection of the internal detail of the map and identification of artifacts.

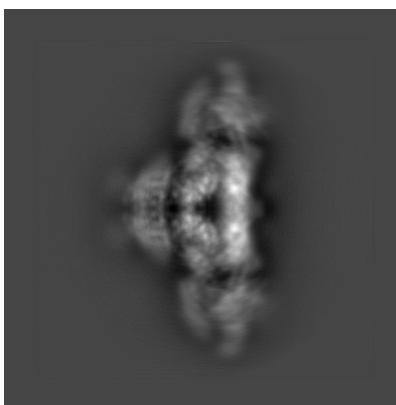
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections [i](#)

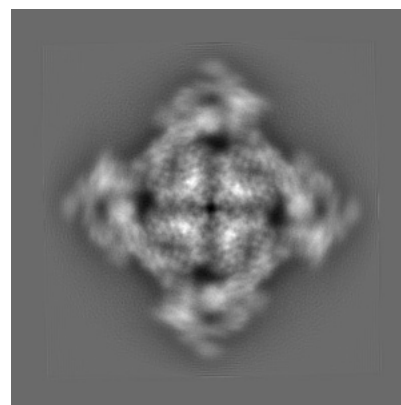
6.1.1 Primary map



X



Y

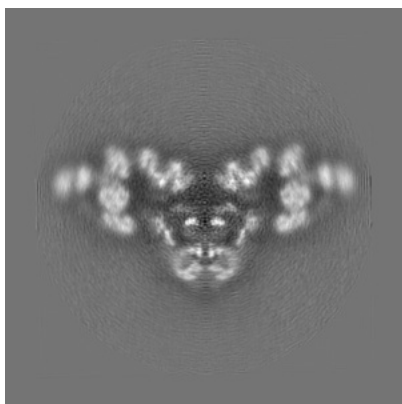


Z

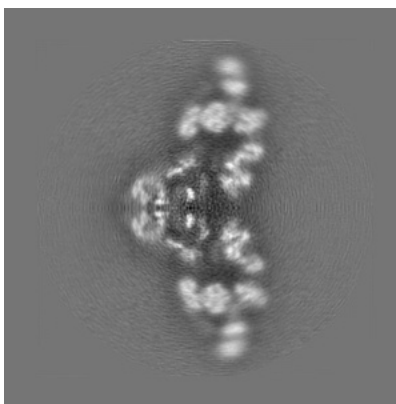
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

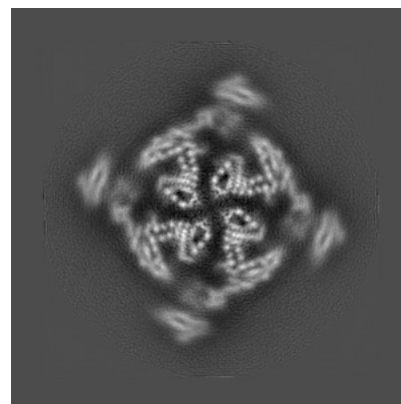
6.2.1 Primary map



X Index: 200



Y Index: 200

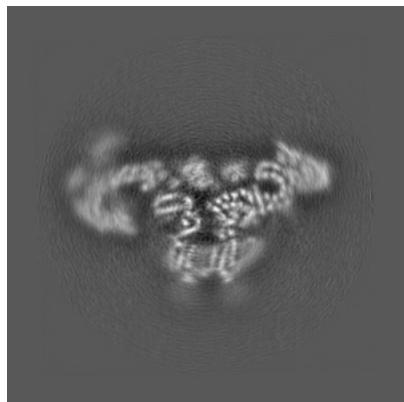


Z Index: 200

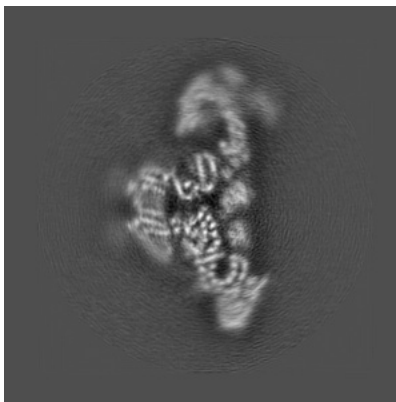
The images above show central slices of the map in three orthogonal directions.

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

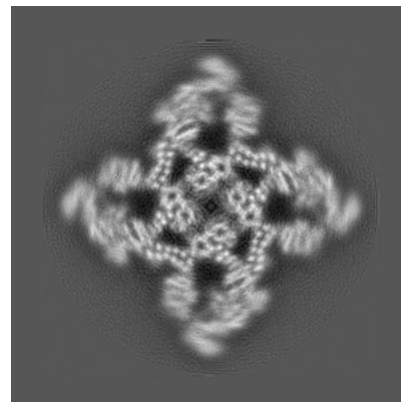
6.3.1 Primary map



X Index: 177



Y Index: 177



Z Index: 227

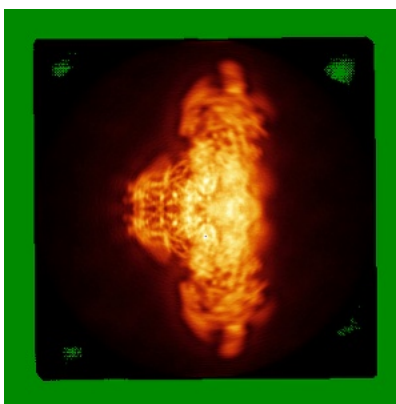
The images above show the largest variance slices of the map in three orthogonal directions.

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

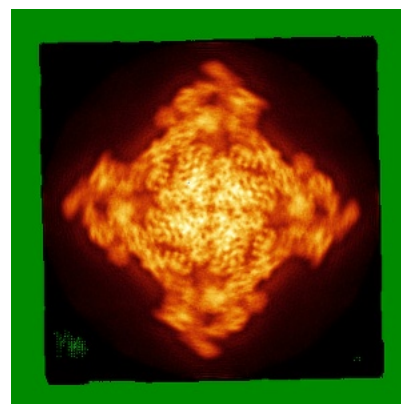
6.4.1 Primary map



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

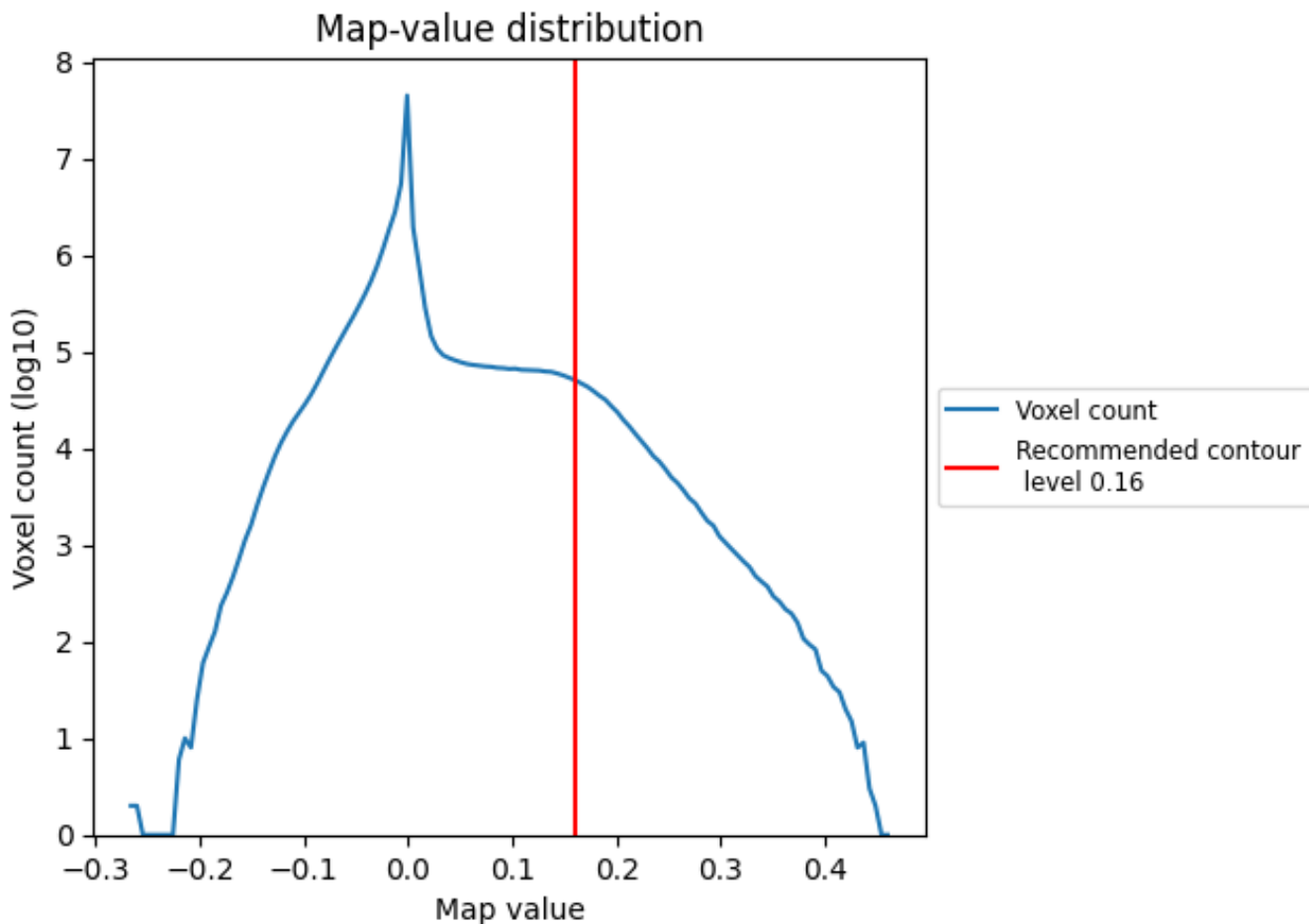
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

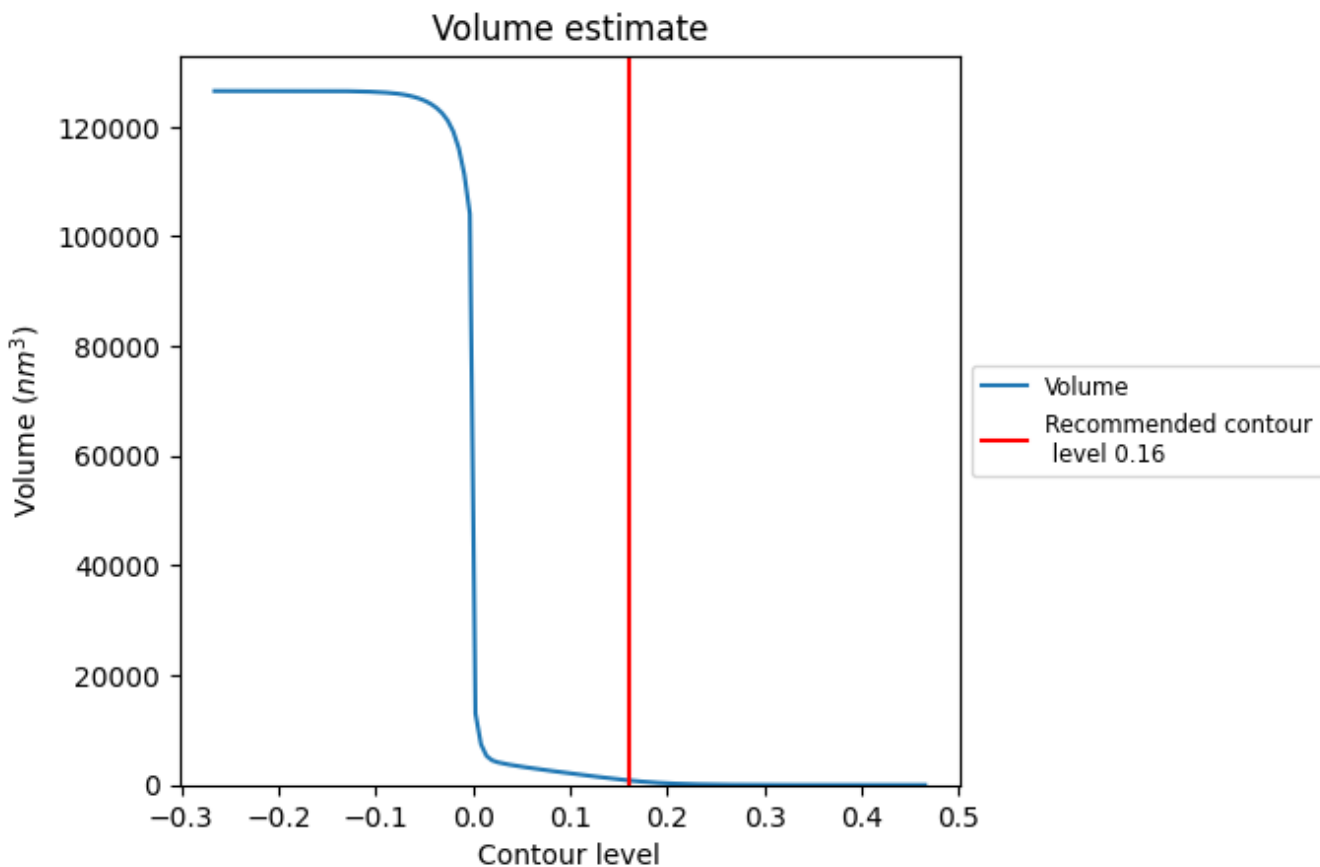
This section contains the results of statistical analysis of the map.

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.

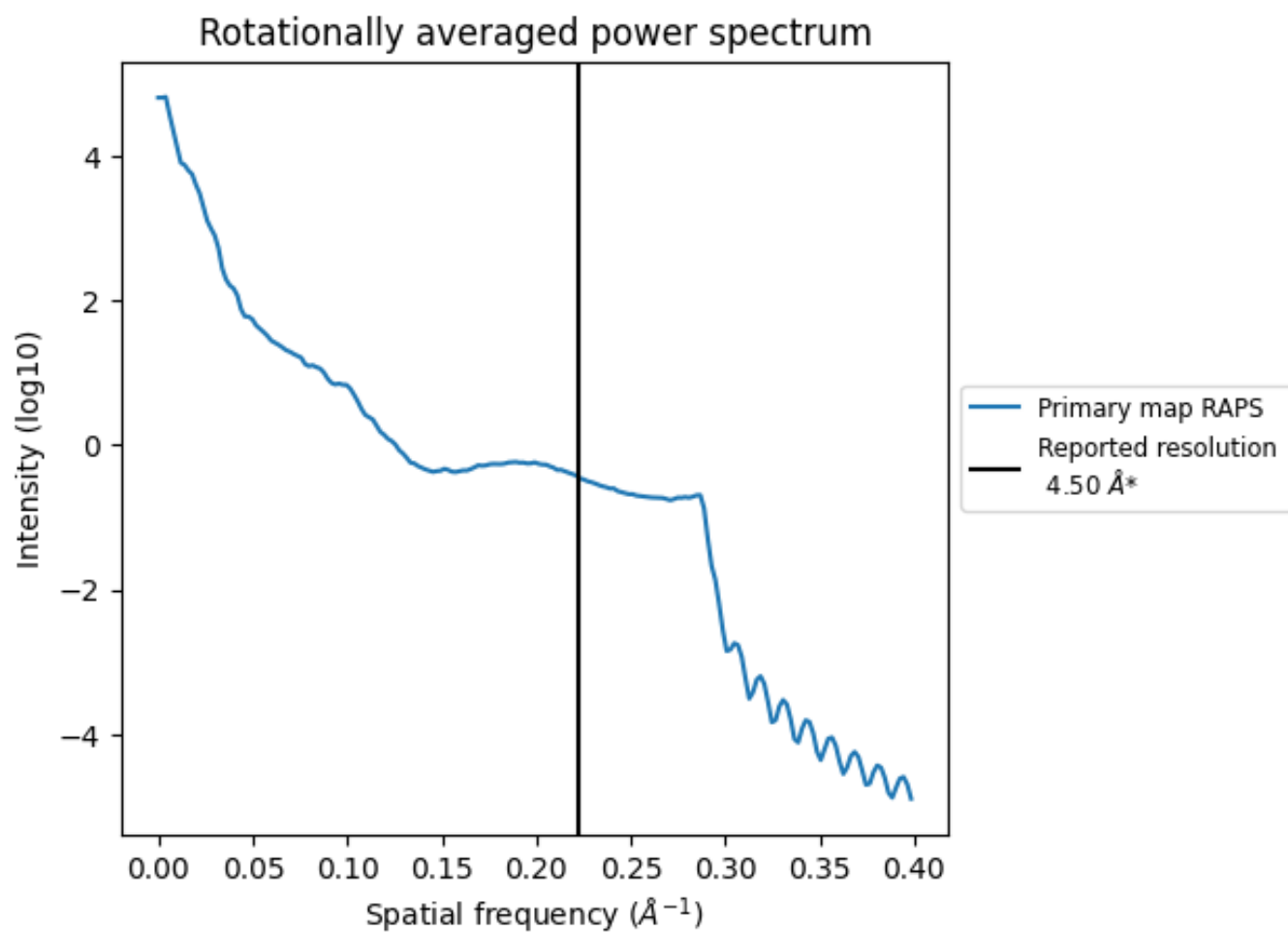
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 846 nm³; this corresponds to an approximate mass of 764 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 0.222\AA^{-1}

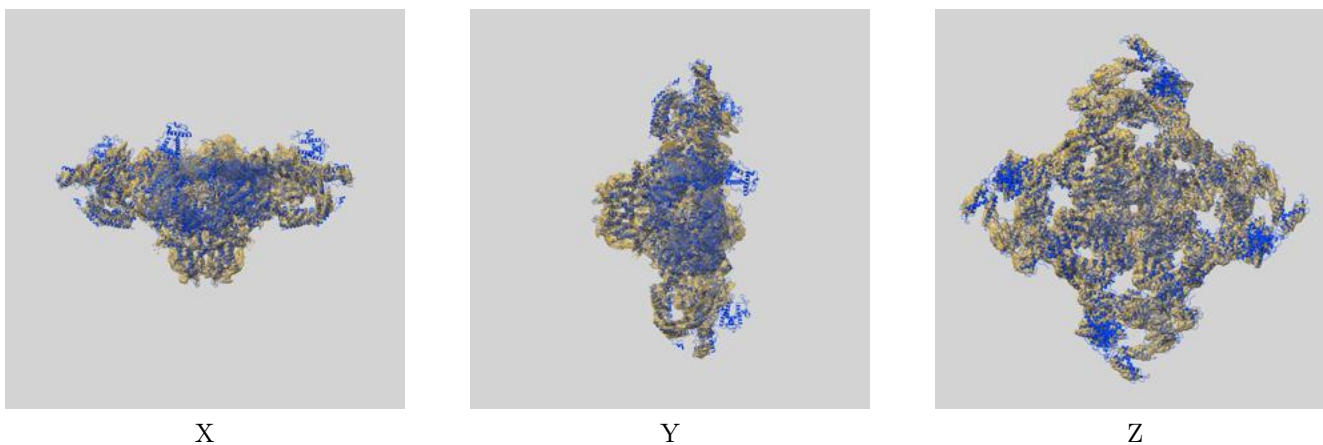
8 Fourier-Shell correlation

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

9 Map-model fit [i](#)

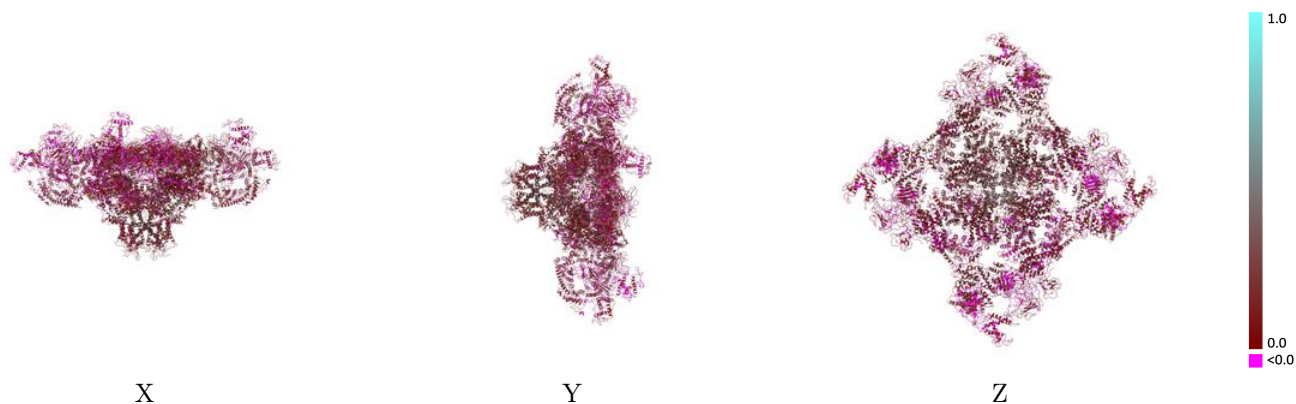
This section contains information regarding the fit between EMDB map EMD-22396 and PDB model 7JMJ. Per-residue inclusion information can be found in section 3 on page 5.

9.1 Map-model overlay [i](#)



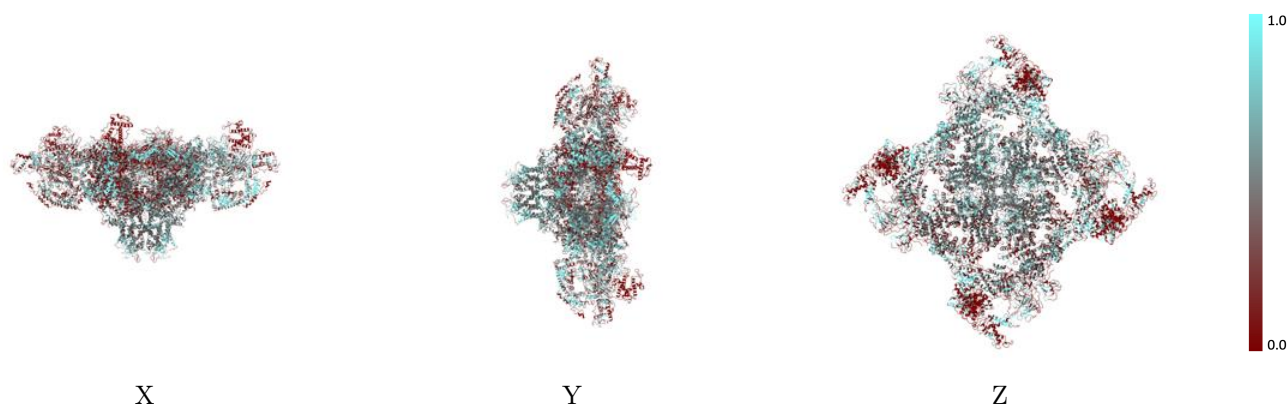
The images above show the 3D surface view of the map at the recommended contour level 0.16 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



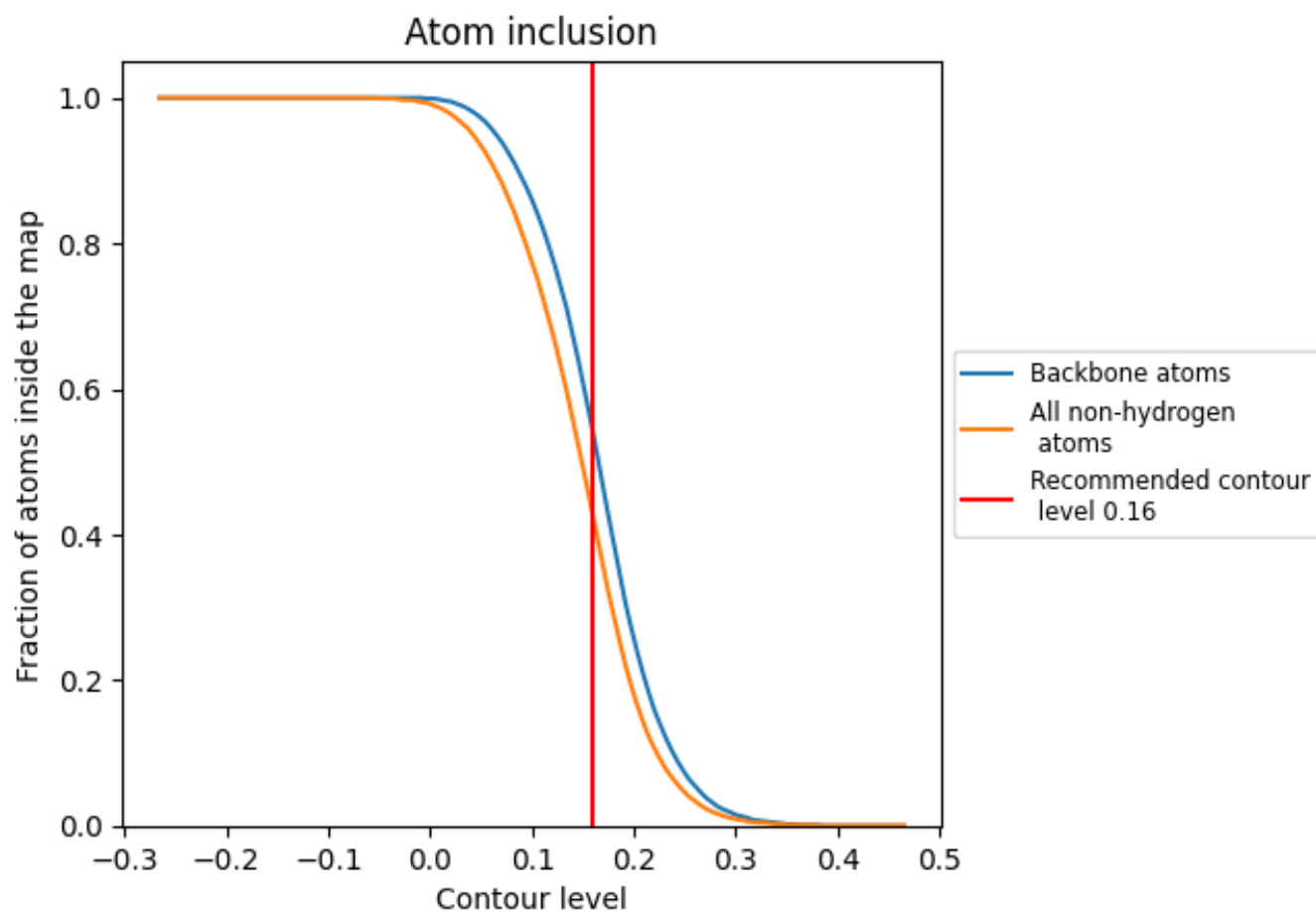
The images above show the model with each residue coloured according its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (0.16).

9.4 Atom inclusion [i](#)



At the recommended contour level, 54% of all backbone atoms, 42% 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 (0.16) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.4250	0.1330
A	0.4530	0.1410
B	0.4630	0.1670
E	0.4320	0.1360
F	0.4260	0.1110
G	0.3980	0.1060
H	0.3920	0.1210
I	0.4060	0.1230
J	0.4020	0.1150

