



Full wwPDB EM Validation Report ⓘ

Nov 11, 2024 – 10:24 PM EST

PDB ID : 9E1H
EMDB ID : EMD-47394
Title : Structure of RyR1 in the primed state in the presence of oxopyricid
Authors : Miotto, M.C.; Marks, A.R.
Deposited on : 2024-10-21
Resolution : 3.26 Å (reported)
Based on initial model : 7TZC

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.dev113
Mogul : 2022.3.0, CSD as543be (2022)
MolProbity : 4.02b-467
buster-report : 1.1.7 (2018)
Percentile statistics : 20231227.v01 (using entries in the PDB archive December 27th 2023)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.39

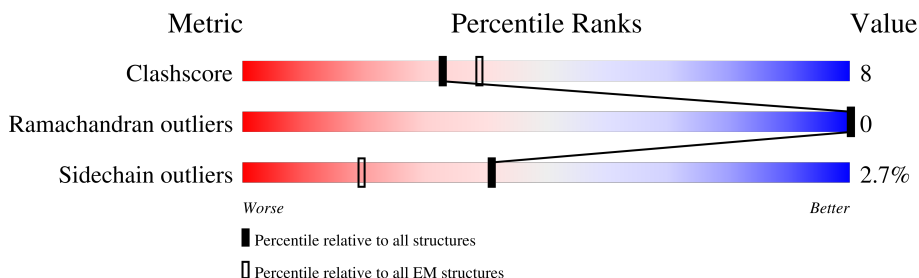
1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 3.26 Å.

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



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

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

Mol	Chain	Length	Quality of chain
1	A	5037	38% 70% 17% 13%
1	B	5037	38% 70% 17% 13%
1	C	5037	38% 70% 17% 13%
1	D	5037	38% 69% 17% 13%
2	E	108	74% 64% 31%
2	F	108	73% 61% 33% 5%
2	G	108	73% 67% 30%
2	H	108	75% 63% 33%

2 Entry composition

There are 7 unique types of molecules in this entry. The entry contains 144120 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a protein called Ryanodine receptor 1.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	A	4404	35150	22365	6063	6485	237	9	0
1	B	4404	35150	22365	6063	6485	237	9	0
1	D	4404	35150	22365	6063	6485	237	9	0
1	C	4404	35150	22365	6063	6485	237	9	0

- Molecule 2 is a protein called Peptidyl-prolyl cis-trans isomerase FKBP1A.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
2	E	107	831	527	146	154	4	0	0
2	H	107	831	527	146	154	4	0	0
2	G	107	831	527	146	154	4	0	0
2	F	107	831	527	146	154	4	0	0

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



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

- Molecule 4 is CALCIUM ION (three-letter code: CA) (formula: Ca).

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

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

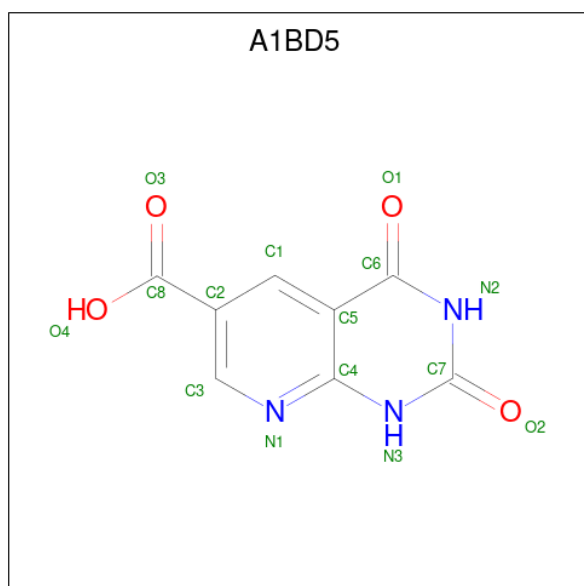
Mol	Chain	Residues	Atoms		AltConf
5	A	1	Total	Zn	0
			1	1	

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

- Molecule 6 is oxopyricid (three-letter code: A1BD5) (formula: C₈H₅N₃O₄) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms				AltConf
6	A	1	Total	C	N	O	0
			15	8	3	4	
6	B	1	Total	C	N	O	0
			15	8	3	4	
6	D	1	Total	C	N	O	0
			15	8	3	4	
6	C	1	Total	C	N	O	0
			15	8	3	4	

- Molecule 7 is water.

Mol	Chain	Residues	Atoms		AltConf
7	A	1	Total	O	0
			1	1	
7	B	1	Total	O	0
			1	1	

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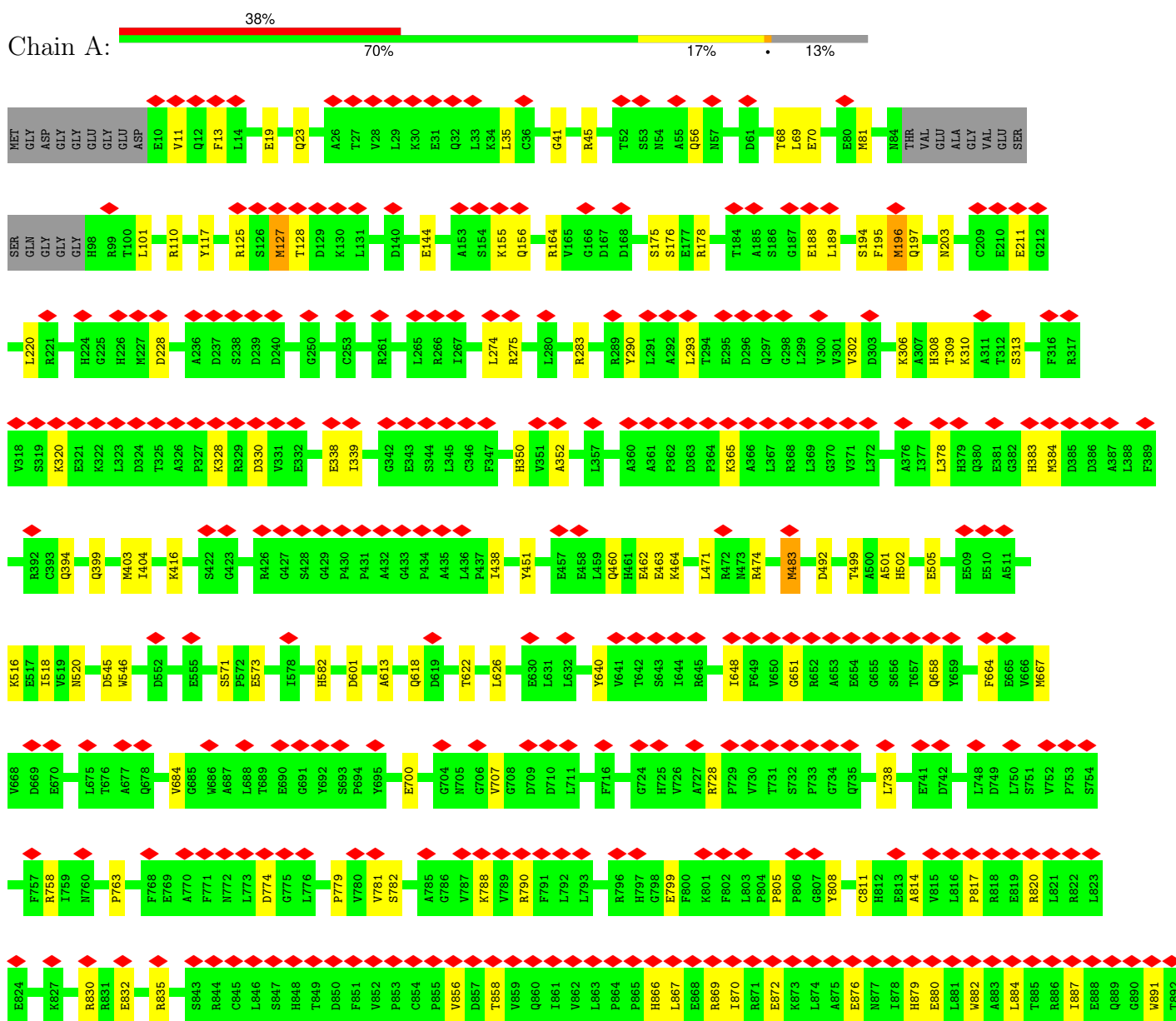
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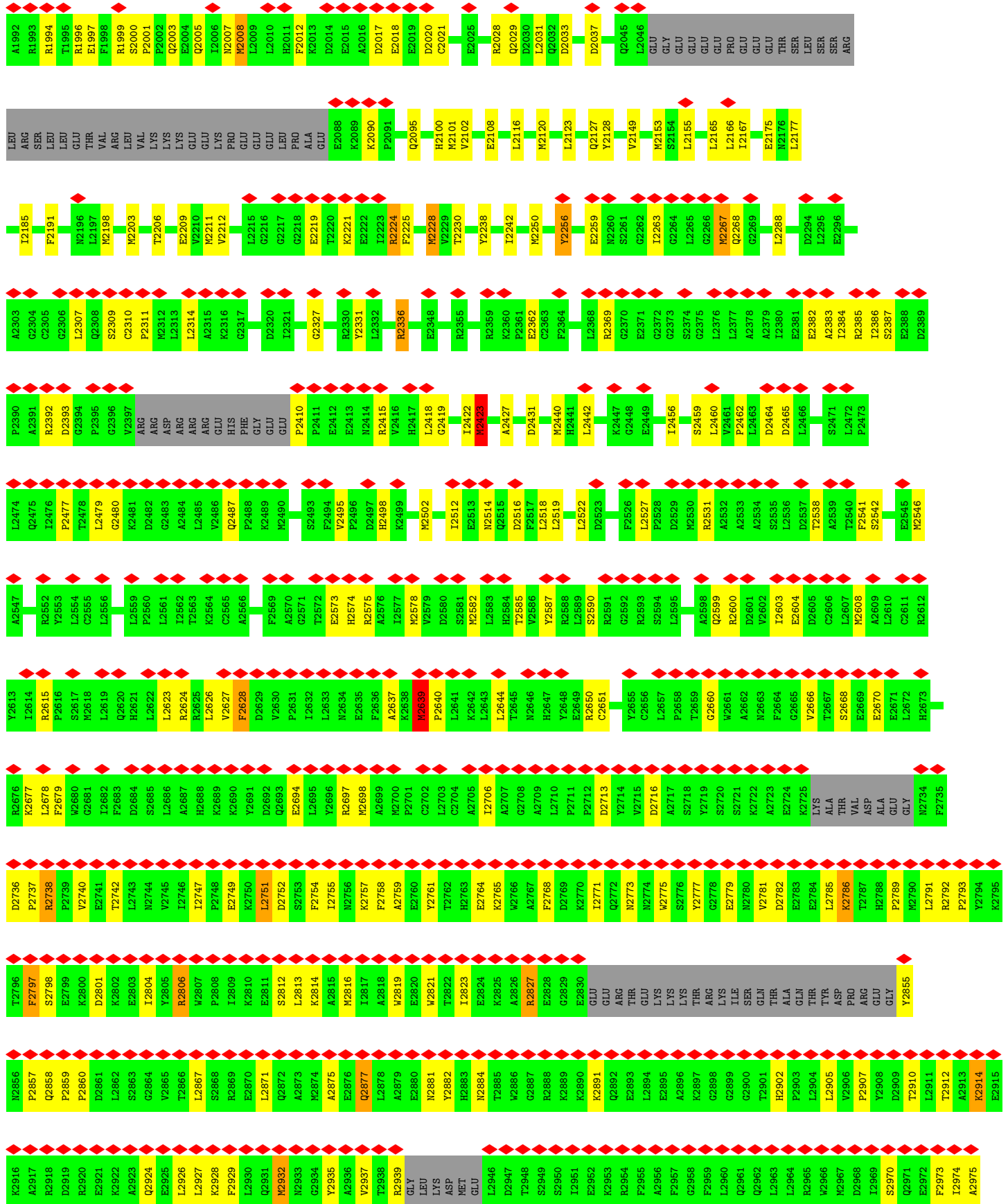
Mol	Chain	Residues	Atoms	AltConf
7	D	1	Total O 1 1	0
7	C	1	Total O 1 1	0

3 Residue-property plots

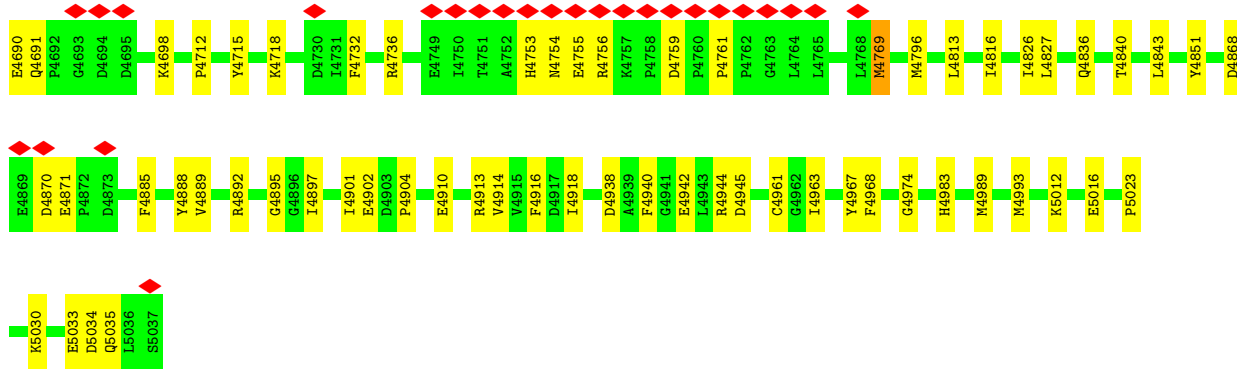
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion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

• Molecule 1: Ryanodine receptor 1

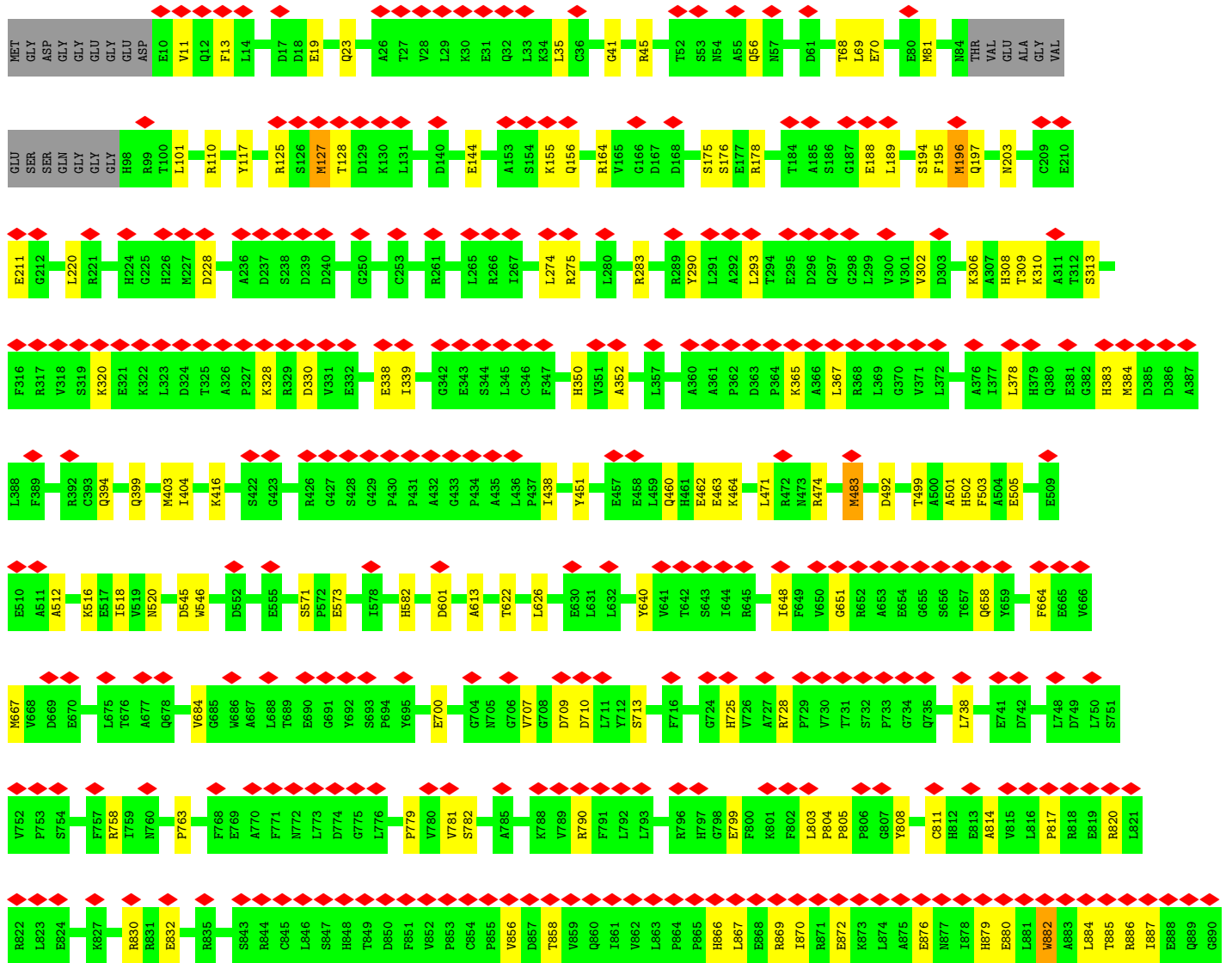




V3340	F3341	A3342	Q3343	F3344	I3345	V3346	S3347	R3348	A3349	R3350	P3351	E3352	L3353	L3354	H3355	S3356	H3357	F3358	I3359	P3360	T3361	I3362	G3363	L3364	L3365	R3366	K3367	R3368	A3369	G3370	K3371	V3372	V3373	A3374	E3375	E3376	E3377	Q3378	R3380	L3381	E3382	A3383	K3384	A3385	E3386	E3387	E3388	G3389	G3390	E3391	L3392	L3393	V3394	M3395	D3396	F3397	F3398	S3399																					
Y3280	L3281	P3282	R3283	M3284	V3285	E3286	R3287	G3288	P3289	E3290	A3291	P3292	P3293	P3294	A3295	L3296	P3297	A3298	G3299	A3300	P3301	P3302	P3303	G3304	T3305	A3306	P3307	T3308	S3309	D3310	H3311	L3312	N3313	S3314	L3315	L3316	G3317	N3318	I3319	L3320	R3321	I3322	I3323	V3324	N3325	N3326	N3327	G3328	I3329	E3330	A3331	A3332	T3333	V3334	N3335	N3336	L3337	G3338	I3339	L3340	L3341	L3342	L3343	L3344	Q3345	H3346	L3347	A3348	Q3349	H3350	L3351	F3352	G3353	D3354	L3355	S3356	V3357	L3358	D3359
T5220	T3221	K3222	S3223	P3224	R3225	E3226	R3227	A3228	I3229	L3230	G3231	L3232	P3233	N3234	S3235	V3236	E3237	E3238	M3239	C3240	P3241	D3242	I3243	P3244	V3245	L3246	D3247	R3248	L3249	M3250	A3251	D3252	I3253	G3254	G3255	L3256	A3257	E3258	S3259	G3260	A3261	R3262	Y3263	T3264	F3265	M3266	P3267	H3268	V3269	I3270	E3271	I3272	T3273	L3274	P3275	M3276	L3277	C3278	S3279																				
D3160	V3161	K3162	V3163	S3164	C3165	Y3166	R3167	T3168	L3169	C3170	S3171	I3172	V3173	S3174	L3175	G3176	T3177	T3178	K3179	N3180	T3181	Y3182	V3183	E3184	K3185	L3186	R3187	P3188	A3189	L3190	G3191	E3192	C3193	L3194	A3195	R3196	L3197	A3198	A3199	A3200	M3201	P3202	A3204	F3205	L3206	L3207	P3208	Q3209	L3210	N3211	E3212	V3213	N3214	A3215	C3216	S3217	Y3218																						
S3100	E3101	D3102	I3103	E3104	K3105	M3106	V3107	E3108	N3109	L3110	R3111	G3112	L3113	K3114	V3115	S3116	G3117	A3118	ARG	THR	GLN	VAL	K3123	G3124	V3125	G3126	Q3127	N3128	L3129	T3130	Y3131	T3132	T3133	V3134	A3135	L3136	F3138	V3139	L3140	T3141	T3142	L3143	F3144	Q3145	H3146	L3147	A3148	Q3149	H3150	L3151	F3152	G3153	D3154	L3155	V3156	L3157	L3158	D3159																					
T3040	S3041	L3042	F3043	C3044	R3045	V3046	A3047	A3048	L3049	V3050	R3051	H3052	R3053	V3054	S3055	L3056	F3057	G3058	T3059	D3060	A3061	P3062	A3063	V3064	V3065	N3066	C3067	L3068	H3069	I3070	L3071	A3072	R3073	S3074	L3075	D3076	A3077	R3078	T3079	V3080	K3082	S3083	G3084	P3085	E3086	I3087	V3088	K3089	A3090	G3091	L3092	R3093	S3094	F3095	F3096	S3097	S3098	A3099																					
V2980	V2981	S2982	S2983	Q2984	R2985	V2986	E2987	K2988	S2989	P2990	H2991	E2992	Q2993	E2994	I2995	K2996	F2997	F2998	A2999	K3000	I3001	L3002	L3003	P3004	L3005	I3006	N3007	Q3008	Y3009	F3010	S3011	E2952	K2953	R2954	F2955	A2956	F2957	G2958	F2959	L2960	Q2961	Q2962	A3022	K3023	V3024	L3025	G3026	S3027	G3028	G3029	H3030	A3031	G3091	L3092	N3033	K3034	E3035	E3037	M3038	I3039																			
P2860	D2861	L2862	S2863	G2864	V2865	T2866	L2867	S2868	R2869	E2870	L2871	Q2872	A2873	M2874	A2875	E2876	Q2877	L2878	A2879	E2880	N2881	Y2882	H2883	N2884	T2885	W2886	G2887	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	K2916	A2917	R2918	D2919																				
R2920	E2921	K2922	A2923	Q2924	E2925	L2926	L2927	K2928	P2929	L2930	Q2931	W2932	W2933	G2934	Y2935	A2936	V2937	T2938	R2939	GLY	LEU	LYS	ASP	MET	L3294	D2947	T2948	S2949	S2950	I2951	E2952	K2953	R2954	F2955	A2956	F2957	G2958	F2959	L2960	Q2961	Q2962	A3022	K3023	V3024	L3025	W2966	H2967	D2968	I2969	G3028	G3029	H3030	A3031	G3091	L3092	N3033	K3034	H2976	L2977	E2978	A2979																		
K2800	D2801	K2802	E2803	L2804	Y2805	R2806	W2807	P2808	L2809	K2810	E2811	S2812	L2813	K2814	A2815	M2816	L2817	A2818	W2819	E2820	W2821	T2822	L2823	E2824	K2825	A2826	R2827	R2828	G2829	E2830	GLU	ARG	THR	GLU	LYS	LYS	THR	ARG	LYS	ILE	SER	GLN	THR	ALA	GLN	THR	TYR	ALA	ASP	PRO	VAL	GLU	GLY	Y2855	N2856	P2857	Q2858	P2859																					
V2740	E2741	T2742	L2743	G2744	V2745	I2746	I2747	E2748	P2749	K2750	L2751	D2752	S2753	F2754	I2755	M2756	K2757	F2758	A2759	E2760	Y2761	T2762	H2763	E2764	K2765	W2766	A2767	F2768	D2769	K2770	I2771	Q2772	N2773	M2774	W2775	S2776	Y2777	G2778	E2779	N2780	W2781	D2782	E2783	E2784	L2785	K2786	T2787	VAL	ASP	ALA	GLU	GLY	N2794	F2795	D2796	Y2797	K2798	E2799																					
W2680	G2681	I2682	F2683	D2684	S2685	L2686	A2687	H2688	K2689	K2690	Y2691	D2692	Q2693	E2694	L2695	Y2696	R2697	M2698	A2699	M2700	P2701	C2702	L2703	C2704	A2705	L2706	A2707	G2708	A2709	L2710	P2711	P2712	D2713	Y2714	V2715	L2716	D2717	L2718	S2719	W2720	A2721	K2722	A2723	A2724	K2725	LYS	THR	VAL	ASP	ALA	GLU	GLY	N2734	F2735	D2736	Y2737	R2738	P2739																					



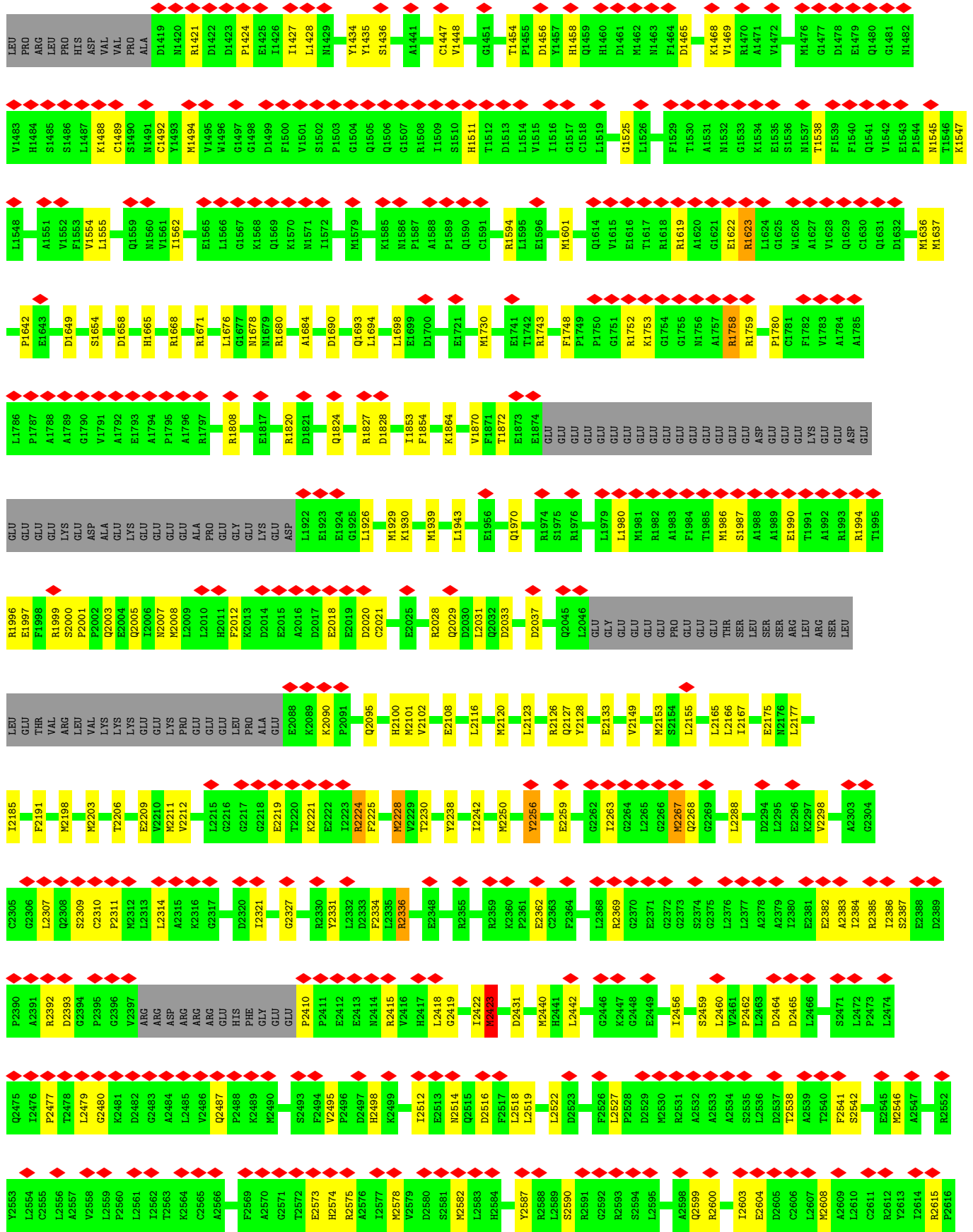
• Molecule 1: Ryanodine receptor 1



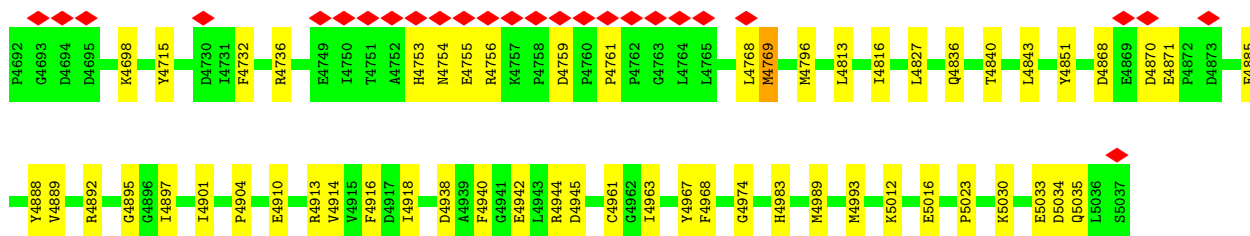
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K1079	G1086	E1093	E1093	V1095	T1096	E1099	M1100	R1101	D1112	V1113	E1114	L1115	G1116	A1117	D1118	E1119	F1124	M1125	G1126	H1127	R1128	W1132	F1139	W1143	Q1144	S1145	G1146	D1147	G1150	D1154	L1155	T1156	E1157	T1163	L1164	M1165	G1166	E1167	V1168	L1169	M1170	S1171	D1172	S1173	G1174	S1175	T1177											
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ALA	GLU	ALA	GLY	LYS	PRO	LYS	THR	GLY	THR	PRO	GLY	THR	GLN	PRO	GLY	VAL	ALA	GLN	PRO	VAL	THR	VAL	THR	ARG	ALA	LEU	LEU	ASN	GLU	ASP	LEU	ALA	GLN	PRO	THR	PRO	GLU	ALA	ASN	GLU	TYR	GLU	ASN	LEU	ARG	ARG	SER	GLN	PRO	ALA	GLY	TRP	GLY	GLU				
THR	PRO	ALA	LEU	PRO	ARG	LEU	HIS	ASP	VAL	VAL	D1419	M1420	R1421	D1422	D1423	P1424	E1425	I1426	I1427	L1428	M1429	Y1435	S1436	A1441	C1447	V1448	G1451	T1454	P1455	D1456	H1457	Q1459	H1460	D1461	M1462	M1463	D1465	K1468	V1469	R1470	A1471	V1472	M1476	G1477	D1478	E1479	Q1480											
G1481	N1482	V1483	H1484	S1485	S1486	L1487	K1488	C1489	S1490	M1491	C1492	Y1493	M1494	V1495	W1496	G1497	G1498	D1499	F1500	V1501	S1502	P1503	G1504	Q1505	Q1506	N1508	S1510	H1511	T1512	D1513	L1514	V1515	I1516	G1517	C1518	L1519	G1525	L1526	F1529	T1530	M1532	N1533	K1534	E1535	S1536	M1537	L1538	F1539	F1540	Q1541	V1542	E1543	P1544	M1545				
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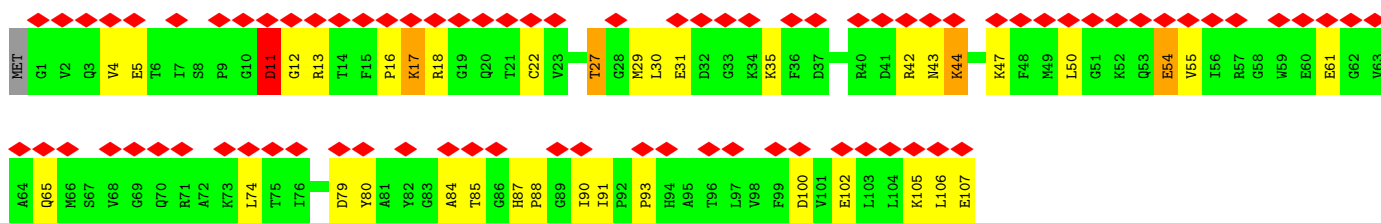
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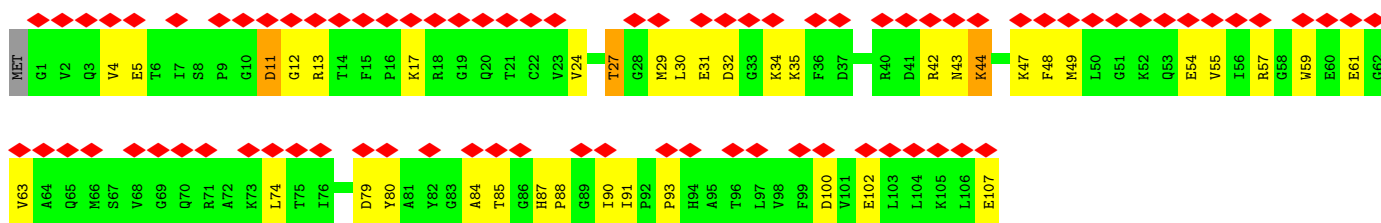
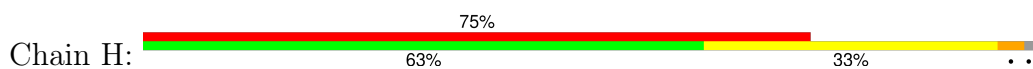
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A3099	S3100	E3101	D3102	I3103	E3104	K3105	M3106	V3107	E3108	N3109	L3110	R3111	L3112	G3113	K3114	Y3115	S3116	GLN	ALA	ARG	THR	GLN	VAL	K3123	G3124	V3125	K3126	Q3127	N3128	L3129	T3130	Y3131	T3132	T3133	V3134	A3135	L3136	L3137	P3138	V3139	L3140	T3141	L3142	L3143	F3144	Q3145	H3146	I3147	A3148	Q3149	L3210	Q3151	F3152	G3153	R3154	D3155	V3156	I3157	L3158
D3159	D3160	V3161	Q3162	S3163	S3164	C3165	Y3166	R3167	T3168	L3169	C3170	S3171	I3172	Y3173	S3174	L3175	G3176	T3177	T3178	K3179	N3180	T3181	Y3182	V3183	K3185	L3186	R3187	F3188	A3189	L3190	G3191	E3192	C3193	L3194	A3195	R3196	L3197	A3198	A3199	A3200	M3201	P3202	V3203	A3204	F3205	L3206	E3207	F3208	Q3209	L3210	N3211	E3212	Y3213	N3214	A3215	C3216	S3217	V3218	
Y3219	T3220	T3221	K3222	S3223	P3224	R3225	E3226	R3227	A3228	L3229	L3230	G3231	L3232	P3233	N3234	S3235	V3236	E3237	E3238	M3239	C3240	P3241	D3242	I3243	E3244	V3245	L3246	D3247	R3248	L3249	M3250	A3251	L3252	I3253	G3254	G3255	L3256	L3257	E3258	S3259	G3260	A3261	R3262	Y3263	T3264	E3265	N3266	P3267	H3268	V3269	I3270	E3271	L3272	T3273	L3274	P3275	N3276	L3277	C3278
S3279	Y3280	L3281	P3282	R3283	V3284	M3285	E3286	R3287	G3288	P3289	E3290	A3291	P3292	P3293	P3294	A3295	L3296	P3297	A3298	G3299	A3300	P3301	P3302	P3303	T3305	A3306	V3307	T3308	S3309	D3310	H3311	L3312	N3313	S3314	L3315	L3316	G3317	N3318	I3319	L3320	R3321	I3322	I3323	V3324	N3325	N3326	G3328	I3329	D3330	E3331	A3332	R3333	M3334	M3335	K3336	R3337	F3338		
A3339	V3340	F3341	A3342	Q3343	P3344	I3345	V3346	S3347	R3348	A3349	R3350	P3351	E3352	L3353	L3354	H3355	S3356	H3357	F3358	I3359	P3360	T3361	L3362	K3363	L3365	L3366	K3367	R3368	A3369	G3370	H3371	K3372	V3373	V3374	A3375	E3376	E3377	G3378	L3379	R3380	L3381	E3382	I3383	V3384	N3385	E3386	A3387	E3388	E3389	G3390	E3391	L3392	L3393	V3394	R3395	D3396	E3397	F3398	



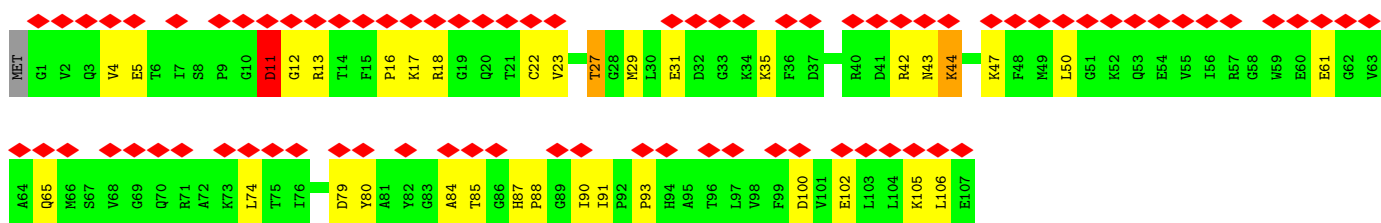
• Molecule 2: Peptidyl-prolyl cis-trans isomerase FKBP1A



• Molecule 2: Peptidyl-prolyl cis-trans isomerase FKBP1A

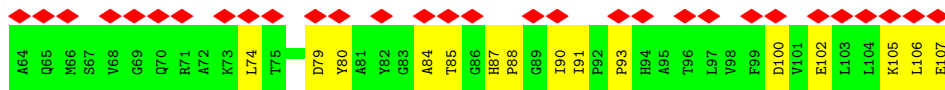


• Molecule 2: Peptidyl-prolyl cis-trans isomerase FKBP1A



• Molecule 2: Peptidyl-prolyl cis-trans isomerase FKBP1A





4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	14467	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	TFS KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	58	Depositor
Minimum defocus (nm)	500	Depositor
Maximum defocus (nm)	1500	Depositor
Magnification	Not provided	
Image detector	GATAN K3 BIOQUANTUM (6k x 4k)	Depositor
Maximum map value	0.395	Depositor
Minimum map value	-0.215	Depositor
Average map value	0.000	Depositor
Map value standard deviation	0.019	Depositor
Recommended contour level	0.1	Depositor
Map size (Å)	423.424, 423.424, 423.424	wwPDB
Map dimensions	512, 512, 512	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	0.827, 0.827, 0.827	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: A1BD5, ATP, ZN, CA

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	0.34	0/35977	0.51	7/48726 (0.0%)
1	B	0.34	0/35977	0.51	7/48726 (0.0%)
1	C	0.34	0/35977	0.51	7/48726 (0.0%)
1	D	0.34	0/35977	0.51	7/48726 (0.0%)
2	E	0.34	0/850	0.60	1/1146 (0.1%)
2	F	0.34	0/850	0.60	0/1146
2	G	0.34	0/850	0.60	1/1146 (0.1%)
2	H	0.34	0/850	0.59	0/1146
All	All	0.34	0/147308	0.51	30/199488 (0.0%)

There are no bond length outliers.

All (30) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	3603	LEU	CA-CB-CG	8.06	133.84	115.30
1	B	3603	LEU	CA-CB-CG	8.05	133.82	115.30
1	D	3603	LEU	CA-CB-CG	8.05	133.82	115.30
1	C	3603	LEU	CA-CB-CG	8.05	133.81	115.30
1	D	3623	LEU	CA-CB-CG	6.22	129.61	115.30
1	B	3623	LEU	CA-CB-CG	6.22	129.60	115.30
1	A	3623	LEU	CA-CB-CG	6.21	129.59	115.30
1	C	3623	LEU	CA-CB-CG	6.20	129.57	115.30
1	B	3542	LEU	CA-CB-CG	6.02	129.15	115.30
1	C	3542	LEU	CA-CB-CG	6.02	129.14	115.30
1	A	3542	LEU	CA-CB-CG	6.01	129.12	115.30
1	D	3542	LEU	CA-CB-CG	6.00	129.10	115.30
1	D	3478	MET	CA-CB-CG	5.78	123.12	113.30
1	C	3478	MET	CA-CB-CG	5.77	123.11	113.30
1	A	3478	MET	CA-CB-CG	5.77	123.11	113.30
1	B	3478	MET	CA-CB-CG	5.76	123.10	113.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	D	2639	MET	CB-CG-SD	5.25	128.16	112.40
1	C	2639	MET	CB-CG-SD	5.24	128.12	112.40
1	A	2639	MET	CB-CG-SD	5.24	128.11	112.40
1	C	3534	MET	CA-CB-CG	5.23	122.19	113.30
1	B	2639	MET	CB-CG-SD	5.23	128.09	112.40
1	A	3534	MET	CA-CB-CG	5.20	122.14	113.30
1	D	3534	MET	CA-CB-CG	5.18	122.11	113.30
1	B	3534	MET	CA-CB-CG	5.17	122.09	113.30
1	C	2423	MET	CA-CB-CG	5.08	121.93	113.30
1	A	2423	MET	CA-CB-CG	5.07	121.92	113.30
2	E	11	ASP	CB-CG-OD1	5.07	122.86	118.30
1	B	2423	MET	CA-CB-CG	5.07	121.92	113.30
1	D	2423	MET	CA-CB-CG	5.07	121.92	113.30
2	G	11	ASP	CB-CG-OD1	5.07	122.86	118.30

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts [i](#)

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	35150	0	34797	577	0
1	B	35150	0	34797	567	0
1	C	35150	0	34797	570	0
1	D	35150	0	34797	579	0
2	E	831	0	831	28	0
2	F	831	0	831	30	0
2	G	831	0	831	25	0
2	H	831	0	831	21	0
3	A	31	0	12	0	0
3	B	31	0	12	0	0
3	C	31	0	12	0	0
3	D	31	0	12	0	0
4	A	1	0	0	0	0
4	B	1	0	0	0	0
4	C	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
4	D	1	0	0	0	0
5	A	1	0	0	0	0
5	B	1	0	0	0	0
5	C	1	0	0	0	0
5	D	1	0	0	0	0
6	A	15	0	0	0	0
6	B	15	0	0	0	0
6	C	15	0	0	0	0
6	D	15	0	0	0	0
7	A	1	0	0	0	0
7	B	1	0	0	0	0
7	C	1	0	0	0	0
7	D	1	0	0	0	0
All	All	144120	0	142560	2359	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 8.

All (2359) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:2765:LYS:HZ3	1:C:2857:PRO:HB2	1.39	0.88
2:F:18:ARG:HH21	2:F:50:LEU:HD22	1.43	0.83
1:D:3539:ARG:HH12	1:D:3542:LEU:HD22	1.43	0.83
2:E:61:GLU:OE2	2:E:61:GLU:N	2.12	0.82
1:A:3539:ARG:HH12	1:A:3542:LEU:HD22	1.43	0.82
1:B:3539:ARG:HH12	1:B:3542:LEU:HD22	1.43	0.82
2:G:18:ARG:HH21	2:G:50:LEU:HD22	1.44	0.81
2:E:18:ARG:HH21	2:E:50:LEU:HD22	1.43	0.81
1:C:3539:ARG:HH12	1:C:3542:LEU:HD22	1.43	0.80
2:H:61:GLU:OE1	2:H:61:GLU:N	2.14	0.79
2:F:61:GLU:OE1	2:F:61:GLU:N	2.12	0.79
2:F:90:ILE:HG22	2:F:91:ILE:HG13	1.63	0.79
1:B:2765:LYS:HZ3	1:B:2857:PRO:HB2	1.47	0.78
1:D:2765:LYS:HZ3	1:D:2857:PRO:HB2	1.47	0.78
2:G:61:GLU:OE1	2:G:61:GLU:N	2.11	0.77
1:A:1280:GLN:O	1:A:1281:ASN:ND2	2.20	0.75
1:D:1280:GLN:O	1:D:1281:ASN:ND2	2.20	0.75
1:B:1280:GLN:O	1:B:1281:ASN:ND2	2.20	0.75
1:C:1280:GLN:O	1:C:1281:ASN:ND2	2.20	0.74
1:A:2765:LYS:HZ2	1:A:2860:PRO:HA	1.52	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1684:ALA:HA	2:E:90:ILE:HD11	1.70	0.73
1:A:1996:ARG:HH21	1:A:1999:ARG:HE	1.37	0.73
1:B:1996:ARG:HH21	1:B:1999:ARG:HE	1.37	0.73
1:C:891:TRP:HA	1:C:902:ARG:HB3	1.71	0.73
1:D:891:TRP:HA	1:D:902:ARG:HB3	1.71	0.72
1:B:891:TRP:HA	1:B:902:ARG:HB3	1.71	0.72
1:A:891:TRP:HA	1:A:902:ARG:HB3	1.71	0.72
1:A:2765:LYS:HZ3	1:A:2857:PRO:HB2	1.53	0.71
1:D:1996:ARG:HH21	1:D:1999:ARG:HE	1.37	0.71
1:C:3442:PHE:HE1	1:C:3511:VAL:HG12	1.56	0.71
1:D:3442:PHE:HE1	1:D:3511:VAL:HG12	1.56	0.71
1:C:1996:ARG:HH21	1:C:1999:ARG:HE	1.37	0.71
1:B:3442:PHE:HE1	1:B:3511:VAL:HG12	1.56	0.71
1:C:972:LEU:HD13	1:C:1044:ARG:HB3	1.73	0.71
1:B:972:LEU:HD13	1:B:1044:ARG:HB3	1.73	0.70
1:A:4938:ASP:OD1	1:D:4944:ARG:NH1	2.23	0.70
1:A:972:LEU:HD13	1:A:1044:ARG:HB3	1.73	0.70
1:A:3442:PHE:HE1	1:A:3511:VAL:HG12	1.56	0.70
1:C:3324:VAL:HG11	1:C:3361:THR:HG22	1.74	0.70
2:H:90:ILE:HD11	1:D:1684:ALA:HA	1.74	0.70
1:A:3324:VAL:HG11	1:A:3361:THR:HG22	1.74	0.69
1:B:2165:LEU:HD11	1:B:2177:LEU:HD23	1.74	0.69
1:B:3324:VAL:HG11	1:B:3361:THR:HG22	1.74	0.69
1:D:3324:VAL:HG11	1:D:3361:THR:HG22	1.74	0.69
1:D:972:LEU:HD13	1:D:1044:ARG:HB3	1.73	0.69
1:D:2165:LEU:HD11	1:D:2177:LEU:HD23	1.74	0.69
1:D:3114:LYS:HD3	1:D:3116:SER:H	1.57	0.69
1:C:23:GLN:NE2	1:C:203:ASN:OD1	2.26	0.69
2:F:90:ILE:HD11	1:B:1684:ALA:HA	1.75	0.68
1:A:23:GLN:NE2	1:A:203:ASN:OD1	2.26	0.68
1:C:3114:LYS:HD3	1:C:3116:SER:H	1.57	0.68
1:A:1066:GLN:HB2	1:A:1071:ARG:HE	1.58	0.68
1:B:4944:ARG:NH1	1:C:4938:ASP:OD1	2.26	0.68
1:C:4967:TYR:OH	1:C:5033:GLU:OE2	2.12	0.68
2:G:87:HIS:HB3	2:G:90:ILE:HB	1.75	0.68
1:B:23:GLN:NE2	1:B:203:ASN:OD1	2.26	0.68
1:D:1066:GLN:HB2	1:D:1071:ARG:HE	1.58	0.68
1:D:925:SER:O	1:D:928:THR:OG1	2.12	0.68
1:B:1066:GLN:HB2	1:B:1071:ARG:HE	1.58	0.68
1:D:23:GLN:NE2	1:D:203:ASN:OD1	2.26	0.68
1:C:2165:LEU:HD11	1:C:2177:LEU:HD23	1.74	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3114:LYS:HD3	1:A:3116:SER:H	1.57	0.67
1:B:925:SER:O	1:B:928:THR:OG1	2.12	0.67
1:B:3114:LYS:HD3	1:B:3116:SER:H	1.57	0.67
1:D:2754:PHE:HE2	1:D:2813:LEU:HD11	1.59	0.67
1:D:4938:ASP:OD1	1:C:4944:ARG:NH1	2.26	0.67
1:A:925:SER:O	1:A:928:THR:OG1	2.12	0.67
1:C:925:SER:O	1:C:928:THR:OG1	2.12	0.67
1:A:2165:LEU:HD11	1:A:2177:LEU:HD23	1.74	0.67
1:A:4967:TYR:OH	1:A:5033:GLU:OE2	2.12	0.67
1:C:2754:PHE:HE2	1:C:2813:LEU:HD11	1.60	0.67
1:C:3169:LEU:HD12	1:C:3194:LEU:HD11	1.77	0.67
2:G:90:ILE:HD11	1:C:1684:ALA:HA	1.76	0.67
1:C:1066:GLN:HB2	1:C:1071:ARG:HE	1.58	0.67
1:A:2742:THR:HG21	1:A:2814:LYS:HB3	1.76	0.67
1:B:2737:PRO:HD2	1:B:2891:LYS:HD3	1.76	0.67
1:B:2754:PHE:HE2	1:B:2813:LEU:HD11	1.59	0.67
1:B:2765:LYS:HZ2	1:B:2860:PRO:HA	1.59	0.67
1:D:1980:LEU:HD11	1:D:1994:ARG:HB3	1.77	0.67
1:C:2737:PRO:HD2	1:C:2891:LYS:HD3	1.76	0.67
1:C:3594:ARG:NH2	1:C:3597:GLN:OE1	2.28	0.67
1:B:3169:LEU:HD12	1:B:3194:LEU:HD11	1.77	0.67
1:B:4967:TYR:OH	1:B:5033:GLU:OE2	2.12	0.67
1:C:1980:LEU:HD11	1:C:1994:ARG:HB3	1.77	0.67
1:B:2742:THR:HG21	1:B:2814:LYS:HB3	1.76	0.66
1:A:3594:ARG:NH2	1:A:3597:GLN:OE1	2.28	0.66
1:D:2737:PRO:HD2	1:D:2891:LYS:HD3	1.76	0.66
1:D:3169:LEU:HD12	1:D:3194:LEU:HD11	1.77	0.66
1:D:3335:MET:SD	1:D:3403:ARG:NH1	2.69	0.66
1:C:2902:HIS:HB3	1:C:2905:LEU:HG	1.78	0.66
1:A:2737:PRO:HD2	1:A:2891:LYS:HD3	1.76	0.66
1:D:1232:ARG:NH2	1:D:1828:ASP:O	2.29	0.66
1:D:2902:HIS:HB3	1:D:2905:LEU:HG	1.78	0.66
1:D:1099:GLU:OE2	1:D:1125:ASN:ND2	2.29	0.66
1:D:2765:LYS:HZ2	1:D:2860:PRO:HA	1.60	0.66
1:D:4967:TYR:OH	1:D:5033:GLU:OE2	2.12	0.66
1:C:858:THR:HB	1:C:930:LYS:HD2	1.77	0.66
1:A:858:THR:HB	1:A:930:LYS:HD2	1.77	0.66
1:A:2754:PHE:HE2	1:A:2813:LEU:HD11	1.60	0.66
1:B:858:THR:HB	1:B:930:LYS:HD2	1.77	0.66
1:C:943:ASP:HB2	1:C:1050:GLY:HA3	1.77	0.66
2:G:18:ARG:HG2	2:G:18:ARG:HH11	1.61	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:830:ARG:NH2	1:C:832:GLU:OE2	2.29	0.66
1:A:3335:MET:SD	1:A:3403:ARG:NH1	2.69	0.65
2:E:18:ARG:HG2	2:E:18:ARG:HH11	1.61	0.65
1:B:3335:MET:SD	1:B:3403:ARG:NH1	2.69	0.65
1:B:3594:ARG:NH2	1:B:3597:GLN:OE1	2.28	0.65
1:D:3594:ARG:NH2	1:D:3597:GLN:OE1	2.28	0.65
1:A:876:GLU:HG2	1:A:918:ARG:HD3	1.78	0.65
1:A:1980:LEU:HD11	1:A:1994:ARG:HB3	1.77	0.65
1:A:2902:HIS:HB3	1:A:2905:LEU:HG	1.78	0.65
1:A:3169:LEU:HD12	1:A:3194:LEU:HD11	1.77	0.65
1:B:987:ARG:HH12	1:B:1056:PRO:HD2	1.61	0.65
1:D:830:ARG:NH2	1:D:832:GLU:OE2	2.29	0.65
1:D:858:THR:HB	1:D:930:LYS:HD2	1.77	0.65
1:C:3599:VAL:O	1:C:3603:LEU:HD12	1.97	0.65
1:A:830:ARG:NH2	1:A:832:GLU:OE2	2.30	0.65
1:D:943:ASP:HB2	1:D:1050:GLY:HA3	1.77	0.65
1:D:1454:THR:OG1	1:D:1456:ASP:OD1	2.14	0.65
1:C:2742:THR:HG21	1:C:2814:LYS:HB3	1.76	0.65
2:F:5:GLU:OE1	2:F:5:GLU:N	2.29	0.65
1:B:1980:LEU:HD11	1:B:1994:ARG:HB3	1.77	0.65
1:B:2902:HIS:HB3	1:B:2905:LEU:HG	1.78	0.65
1:C:2191:PHE:HD1	1:C:2198:MET:HE3	1.61	0.65
1:C:2779:GLU:HG3	1:C:2792:ARG:HG2	1.78	0.65
1:A:3594:ARG:CZ	1:A:3594:ARG:HA	2.27	0.65
1:B:830:ARG:NH2	1:B:832:GLU:OE2	2.30	0.65
1:B:943:ASP:HB2	1:B:1050:GLY:HA3	1.77	0.65
1:B:2191:PHE:HD1	1:B:2198:MET:HE3	1.61	0.65
1:D:2742:THR:HG21	1:D:2814:LYS:HB3	1.76	0.65
1:D:2779:GLU:HG3	1:D:2792:ARG:HG2	1.78	0.65
1:C:1099:GLU:OE2	1:C:1125:ASN:ND2	2.29	0.65
1:C:1232:ARG:NH2	1:C:1828:ASP:O	2.29	0.65
1:C:3335:MET:SD	1:C:3403:ARG:NH1	2.69	0.65
1:B:3599:VAL:O	1:B:3603:LEU:HD12	1.97	0.65
1:D:2191:PHE:HD1	1:D:2198:MET:HE3	1.62	0.65
1:D:3599:VAL:O	1:D:3603:LEU:HD12	1.97	0.65
1:C:987:ARG:HH12	1:C:1056:PRO:HD2	1.61	0.65
1:A:4944:ARG:NH1	1:B:4938:ASP:OD1	2.29	0.65
2:E:5:GLU:N	2:E:5:GLU:OE2	2.30	0.65
1:B:3594:ARG:CZ	1:B:3594:ARG:HA	2.27	0.65
1:A:987:ARG:HH12	1:A:1056:PRO:HD2	1.61	0.64
1:A:2779:GLU:HG3	1:A:2792:ARG:HG2	1.79	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2812:SER:OG	1:A:2882:TYR:OH	2.15	0.64
1:D:987:ARG:HH12	1:D:1056:PRO:HD2	1.60	0.64
2:H:5:GLU:N	2:H:5:GLU:OE2	2.30	0.64
1:D:876:GLU:HG2	1:D:918:ARG:HD3	1.78	0.64
1:C:3594:ARG:HA	1:C:3594:ARG:CZ	2.27	0.64
2:G:5:GLU:N	2:G:5:GLU:OE2	2.30	0.64
2:F:18:ARG:HG2	2:F:18:ARG:HH11	1.61	0.64
1:B:3414:ARG:HE	1:B:3472:ALA:HB3	1.62	0.64
1:B:4676:GLU:OE2	1:B:4698:LYS:NZ	2.31	0.64
1:A:728:ARG:NH2	1:A:1489:CYS:SG	2.71	0.64
1:A:943:ASP:HB2	1:A:1050:GLY:HA3	1.77	0.64
1:A:4676:GLU:OE2	1:A:4698:LYS:NZ	2.31	0.64
1:C:876:GLU:HG2	1:C:918:ARG:HD3	1.78	0.64
1:A:943:ASP:OD2	1:A:945:LYS:NZ	2.31	0.64
1:A:2191:PHE:HD1	1:A:2198:MET:HE3	1.63	0.64
1:B:876:GLU:HG2	1:B:918:ARG:HD3	1.78	0.64
1:B:2779:GLU:HG3	1:B:2792:ARG:HG2	1.78	0.64
1:D:3594:ARG:CZ	1:D:3594:ARG:HA	2.27	0.64
1:A:3599:VAL:O	1:A:3603:LEU:HD12	1.97	0.64
1:B:1454:THR:OG1	1:B:1456:ASP:OD1	2.14	0.64
1:B:2644:LEU:HD13	1:B:2678:LEU:HD21	1.79	0.64
1:C:728:ARG:NH2	1:C:1489:CYS:SG	2.71	0.64
1:A:3329:ILE:HD11	1:A:3332:ALA:HB2	1.80	0.64
1:B:2624:ARG:HD3	1:B:2910:THR:HB	1.80	0.64
1:D:3959:LYS:NZ	1:D:4022:ASP:OD2	2.31	0.64
1:C:943:ASP:OD2	1:C:945:LYS:NZ	2.31	0.64
1:C:1454:THR:OG1	1:C:1456:ASP:OD1	2.14	0.64
1:C:3414:ARG:HE	1:C:3472:ALA:HB3	1.62	0.64
1:A:1232:ARG:NH2	1:A:1828:ASP:O	2.29	0.63
1:B:1232:ARG:NH2	1:B:1828:ASP:O	2.29	0.63
1:B:2777:TYR:HB3	1:B:2791:LEU:HD23	1.80	0.63
1:D:2624:ARG:HD3	1:D:2910:THR:HB	1.80	0.63
1:D:4676:GLU:OE2	1:D:4698:LYS:NZ	2.31	0.63
1:B:943:ASP:OD2	1:B:945:LYS:NZ	2.31	0.63
1:D:460:GLN:N	1:D:463:GLU:OE2	2.31	0.63
1:A:394:GLN:OE1	1:A:394:GLN:N	2.32	0.63
1:A:460:GLN:N	1:A:463:GLU:OE2	2.31	0.63
1:C:2644:LEU:HD13	1:C:2678:LEU:HD21	1.79	0.63
1:C:4676:GLU:OE2	1:C:4698:LYS:NZ	2.31	0.63
1:D:3414:ARG:HE	1:D:3472:ALA:HB3	1.62	0.63
1:B:56:GLN:O	1:B:309:THR:OG1	2.16	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:394:GLN:OE1	1:B:394:GLN:N	2.32	0.63
1:B:728:ARG:NH2	1:B:1489:CYS:SG	2.71	0.63
1:D:728:ARG:NH2	1:D:1489:CYS:SG	2.71	0.63
1:B:1099:GLU:OE2	1:B:1125:ASN:ND2	2.29	0.63
1:D:3329:ILE:HD11	1:D:3332:ALA:HB2	1.79	0.63
1:C:56:GLN:O	1:C:309:THR:OG1	2.16	0.63
1:A:1099:GLU:OE2	1:A:1125:ASN:ND2	2.29	0.63
2:F:27:THR:HG23	2:F:100:ASP:HB3	1.81	0.63
1:A:3959:LYS:NZ	1:A:4022:ASP:OD2	2.31	0.63
1:A:5034:ASP:OD1	1:A:5035:GLN:N	2.32	0.63
2:G:27:THR:HG23	2:G:100:ASP:HB3	1.81	0.63
1:D:56:GLN:O	1:D:309:THR:OG1	2.16	0.63
1:D:2777:TYR:HB3	1:D:2791:LEU:HD23	1.80	0.63
1:A:2644:LEU:HD13	1:A:2678:LEU:HD21	1.79	0.62
1:A:2777:TYR:HB3	1:A:2791:LEU:HD23	1.80	0.62
1:B:2650:ARG:NH1	1:B:2651:CYS:SG	2.72	0.62
1:D:5034:ASP:OD1	1:D:5035:GLN:N	2.32	0.62
1:C:5034:ASP:OD1	1:C:5035:GLN:N	2.32	0.62
1:B:2970:SER:HA	1:B:2973:PHE:CE2	2.34	0.62
1:D:2644:LEU:HD13	1:D:2678:LEU:HD21	1.79	0.62
1:A:2624:ARG:HD3	1:A:2910:THR:HB	1.80	0.62
1:A:2650:ARG:NH1	1:A:2651:CYS:SG	2.73	0.62
1:A:3020:THR:HG23	1:A:3023:LYS:H	1.64	0.62
1:A:3414:ARG:HE	1:A:3472:ALA:HB3	1.62	0.62
1:B:2812:SER:HG	1:B:2882:TYR:HH	1.45	0.62
1:D:2309:SER:HB2	1:D:2314:LEU:HD21	1.81	0.62
1:D:2650:ARG:NH1	1:D:2651:CYS:SG	2.72	0.62
1:D:876:GLU:OE2	1:D:918:ARG:NH1	2.32	0.62
1:C:188:GLU:OE2	1:C:188:GLU:N	2.33	0.62
1:C:2970:SER:HA	1:C:2973:PHE:CE2	2.34	0.62
1:C:3329:ILE:HD11	1:C:3332:ALA:HB2	1.79	0.62
1:A:188:GLU:N	1:A:188:GLU:OE2	2.33	0.62
1:D:943:ASP:OD2	1:D:945:LYS:NZ	2.31	0.62
1:C:460:GLN:N	1:C:463:GLU:OE2	2.31	0.62
1:B:3329:ILE:HD11	1:B:3332:ALA:HB2	1.79	0.62
1:A:919:ASN:HA	1:A:922:LEU:HD23	1.82	0.62
1:A:2309:SER:HB2	1:A:2314:LEU:HD21	1.81	0.62
1:B:3020:THR:HG23	1:B:3023:LYS:H	1.64	0.62
1:B:876:GLU:OE2	1:B:918:ARG:NH1	2.32	0.62
1:C:2777:TYR:HB3	1:C:2791:LEU:HD23	1.80	0.62
1:D:3020:THR:HG23	1:D:3023:LYS:H	1.64	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:799:GLU:OE1	1:C:1623:ARG:NH2	2.33	0.62
1:C:2288:LEU:O	1:C:3849:ARG:NH1	2.31	0.62
1:C:2650:ARG:NH1	1:C:2651:CYS:SG	2.73	0.62
1:A:2970:SER:HA	1:A:2973:PHE:CE2	2.34	0.61
1:B:176:SER:OG	1:B:178:ARG:NH1	2.30	0.61
1:D:394:GLN:OE1	1:D:394:GLN:N	2.32	0.61
1:A:876:GLU:OE2	1:A:918:ARG:NH1	2.32	0.61
1:C:3020:THR:HG23	1:C:3023:LYS:H	1.64	0.61
1:A:56:GLN:O	1:A:309:THR:OG1	2.16	0.61
1:A:4836:GLN:O	1:A:4840:THR:HG23	2.01	0.61
1:C:1427:ILE:HG23	1:C:1428:LEU:HD22	1.83	0.61
1:A:799:GLU:OE1	1:A:1623:ARG:NH2	2.33	0.61
1:B:799:GLU:OE1	1:B:1623:ARG:NH2	2.33	0.61
1:B:1427:ILE:HG23	1:B:1428:LEU:HD22	1.82	0.61
1:B:1808:ARG:HD3	1:B:1853:ILE:HG22	1.83	0.61
1:B:4836:GLN:O	1:B:4840:THR:HG23	2.01	0.61
1:B:5034:ASP:OD1	1:B:5035:GLN:N	2.32	0.61
1:C:876:GLU:OE2	1:C:918:ARG:NH1	2.32	0.61
1:C:1808:ARG:HD3	1:C:1853:ILE:HG22	1.83	0.61
1:B:3623:LEU:HD12	1:B:3624:LEU:N	2.16	0.61
1:D:176:SER:OG	1:D:178:ARG:NH1	2.30	0.61
1:D:4172:GLU:OE1	1:D:4175:ARG:NH1	2.34	0.61
1:A:4172:GLU:OE1	1:A:4175:ARG:NH1	2.34	0.61
1:B:3959:LYS:NZ	1:B:4022:ASP:OD2	2.31	0.61
1:C:176:SER:OG	1:C:178:ARG:NH1	2.30	0.61
1:C:990:GLU:OE2	1:C:1025:ARG:NH2	2.34	0.61
1:C:2309:SER:HB2	1:C:2314:LEU:HD21	1.81	0.61
1:B:1062:GLN:NE2	1:B:1064:GLU:OE1	2.30	0.61
1:C:2624:ARG:HD3	1:C:2910:THR:HB	1.80	0.61
1:A:1808:ARG:HD3	1:A:1853:ILE:HG22	1.83	0.61
1:A:2288:LEU:O	1:A:3849:ARG:NH1	2.31	0.61
1:B:919:ASN:HA	1:B:922:LEU:HD23	1.82	0.61
1:D:799:GLU:OE1	1:D:1623:ARG:NH2	2.33	0.61
1:D:1808:ARG:HD3	1:D:1853:ILE:HG22	1.83	0.61
1:D:2970:SER:HA	1:D:2973:PHE:CE2	2.34	0.61
1:C:3623:LEU:HD12	1:C:3624:LEU:N	2.16	0.61
1:C:4172:GLU:OE1	1:C:4175:ARG:NH1	2.34	0.61
1:A:990:GLU:OE2	1:A:1025:ARG:NH2	2.34	0.61
1:A:3623:LEU:HD12	1:A:3624:LEU:N	2.16	0.61
1:C:394:GLN:N	1:C:394:GLN:OE1	2.32	0.61
1:B:4172:GLU:OE1	1:B:4175:ARG:NH1	2.34	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:90:ILE:HG22	2:G:91:ILE:HG13	1.82	0.60
1:B:188:GLU:N	1:B:188:GLU:OE2	2.33	0.60
1:B:3400:VAL:HG23	1:B:3403:ARG:HH21	1.67	0.60
1:D:990:GLU:OE2	1:D:1025:ARG:NH2	2.34	0.60
1:D:4836:GLN:O	1:D:4840:THR:HG23	2.01	0.60
1:B:2309:SER:HB2	1:B:2314:LEU:HD21	1.81	0.60
1:D:188:GLU:N	1:D:188:GLU:OE2	2.33	0.60
1:D:1427:ILE:HG23	1:D:1428:LEU:HD22	1.82	0.60
1:D:2812:SER:OG	1:D:2882:TYR:OH	2.15	0.60
1:C:919:ASN:HA	1:C:922:LEU:HD23	1.82	0.60
2:H:87:HIS:HB3	2:H:90:ILE:HB	1.83	0.60
1:B:399:GLN:O	1:B:403:MET:HG2	2.02	0.60
1:D:3623:LEU:HD12	1:D:3624:LEU:N	2.16	0.60
1:D:4687:TYR:O	1:D:4691:GLN:NE2	2.34	0.60
1:C:399:GLN:O	1:C:403:MET:HG2	2.01	0.60
1:D:399:GLN:O	1:D:403:MET:HG2	2.02	0.60
1:C:4836:GLN:O	1:C:4840:THR:HG23	2.01	0.60
2:E:42:ARG:HE	2:E:44:LYS:HE3	1.65	0.60
1:C:156:GLN:OE1	1:C:156:GLN:N	2.34	0.60
1:B:4687:TYR:O	1:B:4691:GLN:NE2	2.35	0.60
1:D:156:GLN:OE1	1:D:156:GLN:N	2.34	0.60
1:A:3951:PHE:O	1:A:3955:MET:HG3	2.02	0.60
1:A:4687:TYR:O	1:A:4691:GLN:NE2	2.34	0.60
1:C:3400:VAL:HG23	1:C:3403:ARG:HH21	1.67	0.60
1:C:3951:PHE:O	1:C:3955:MET:HG3	2.02	0.60
1:C:4687:TYR:O	1:C:4691:GLN:NE2	2.34	0.60
1:A:1062:GLN:NE2	1:A:1064:GLU:OE1	2.30	0.60
1:A:3840:SER:OG	1:A:3877:ASP:OD1	2.19	0.60
1:C:2108:GLU:O	1:C:3694:LYS:NZ	2.35	0.60
1:A:1427:ILE:HG23	1:A:1428:LEU:HD22	1.83	0.60
1:B:990:GLU:OE2	1:B:1025:ARG:NH2	2.34	0.60
1:D:3951:PHE:O	1:D:3955:MET:HG3	2.02	0.60
1:C:302:VAL:HB	1:C:306:LYS:HE3	1.84	0.60
1:C:3959:LYS:NZ	1:C:4022:ASP:OD2	2.31	0.60
1:A:4064:MET:HE1	1:A:4110:PHE:HD2	1.67	0.59
2:H:27:THR:HG23	2:H:100:ASP:HB3	1.83	0.59
1:C:3504:SER:HG	1:C:3507:THR:HG1	1.45	0.59
1:A:3400:VAL:HG23	1:A:3403:ARG:HH21	1.67	0.59
1:D:1636:MET:HE1	1:D:1649:ASP:HA	1.84	0.59
1:C:1619:ARG:NH2	1:C:1622:GLU:OE1	2.35	0.59
1:D:919:ASN:HA	1:D:922:LEU:HD23	1.82	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1619:ARG:NH2	1:D:1622:GLU:OE1	2.35	0.59
1:B:2018:GLU:OE1	1:B:2028:ARG:NH1	2.36	0.59
1:D:3412:LEU:HD11	1:D:3434:LEU:HD21	1.85	0.59
1:C:2018:GLU:OE1	1:C:2028:ARG:NH1	2.36	0.59
1:A:3412:LEU:HD11	1:A:3434:LEU:HD21	1.85	0.59
1:B:302:VAL:HB	1:B:306:LYS:HE3	1.84	0.59
1:D:545:ASP:OD1	1:D:582:HIS:NE2	2.32	0.59
1:C:2626:LEU:HD22	1:C:2640:PRO:HB3	1.85	0.59
1:C:3840:SER:OG	1:C:3877:ASP:OD1	2.19	0.59
1:A:1619:ARG:NH2	1:A:1622:GLU:OE1	2.35	0.59
1:A:2108:GLU:O	1:A:3694:LYS:NZ	2.35	0.59
1:A:2128:TYR:OH	1:A:3676:ASP:OD2	2.20	0.59
1:A:2175:GLU:HG3	1:A:2228:MET:HB3	1.85	0.59
1:B:2626:LEU:HD22	1:B:2640:PRO:HB3	1.85	0.59
1:D:2018:GLU:OE1	1:D:2028:ARG:NH1	2.36	0.59
1:D:2175:GLU:HG3	1:D:2228:MET:HB3	1.85	0.59
1:D:3840:SER:OG	1:D:3877:ASP:OD1	2.19	0.59
1:C:3412:LEU:HD11	1:C:3434:LEU:HD21	1.85	0.59
1:B:460:GLN:N	1:B:463:GLU:OE2	2.30	0.59
1:B:3951:PHE:O	1:B:3955:MET:HG3	2.02	0.59
1:B:4654:ALA:C	1:B:4796:MET:HE1	2.23	0.59
1:D:3400:VAL:HG23	1:D:3403:ARG:HH21	1.67	0.59
1:C:970:LEU:HD23	1:C:1045:THR:HG23	1.85	0.59
1:D:3296:LEU:HG	1:D:3297:PRO:HD3	1.85	0.59
1:D:3530:GLN:N	1:D:3530:GLN:OE1	2.36	0.59
1:D:4064:MET:HE1	1:D:4110:PHE:HD2	1.67	0.59
1:A:302:VAL:HB	1:A:306:LYS:HE3	1.84	0.59
1:A:1454:THR:OG1	1:A:1456:ASP:OD1	2.14	0.59
2:E:27:THR:HG23	2:E:100:ASP:HB3	1.83	0.59
2:E:87:HIS:HB3	2:E:90:ILE:HB	1.84	0.59
1:B:970:LEU:HD23	1:B:1045:THR:HG23	1.85	0.59
1:A:399:GLN:O	1:A:403:MET:HG2	2.02	0.58
1:B:1154:ASP:OD1	1:B:1156:THR:OG1	2.21	0.58
1:B:2288:LEU:O	1:B:3849:ARG:NH1	2.31	0.58
1:B:5012:LYS:NZ	1:B:5016:GLU:OE2	2.33	0.58
1:C:545:ASP:OD1	1:C:582:HIS:NE2	2.32	0.58
1:A:1154:ASP:OD1	1:A:1156:THR:OG1	2.21	0.58
1:A:4901:ILE:HG13	1:A:4913:ARG:NH2	2.18	0.58
1:B:4901:ILE:HG13	1:B:4913:ARG:NH2	2.18	0.58
1:C:4064:MET:HE1	1:C:4110:PHE:HD2	1.67	0.58
1:A:2018:GLU:OE1	1:A:2028:ARG:NH1	2.36	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:47:LYS:NZ	2:F:107:GLU:OE2	2.32	0.58
1:B:1619:ARG:NH2	1:B:1622:GLU:OE1	2.36	0.58
1:D:1062:GLN:NE2	1:D:1064:GLU:OE1	2.30	0.58
1:A:3530:GLN:N	1:A:3530:GLN:OE1	2.36	0.58
1:B:4064:MET:HE1	1:B:4110:PHE:HD2	1.68	0.58
1:B:2456:ILE:O	1:B:2459:SER:OG	2.17	0.58
1:D:302:VAL:HB	1:D:306:LYS:HE3	1.84	0.58
1:D:2128:TYR:OH	1:D:3676:ASP:OD2	2.20	0.58
1:B:3530:GLN:OE1	1:B:3530:GLN:N	2.36	0.58
1:C:3530:GLN:OE1	1:C:3530:GLN:N	2.36	0.58
1:A:156:GLN:OE1	1:A:156:GLN:N	2.34	0.58
1:A:2626:LEU:HD22	1:A:2640:PRO:HB3	1.85	0.58
1:B:156:GLN:N	1:B:156:GLN:OE1	2.34	0.58
1:B:3412:LEU:HD11	1:B:3434:LEU:HD21	1.85	0.58
1:B:197:GLN:OE1	1:B:197:GLN:N	2.30	0.58
1:C:1062:GLN:NE2	1:C:1064:GLU:OE1	2.30	0.58
1:C:4901:ILE:HG13	1:C:4913:ARG:NH2	2.18	0.58
1:A:3296:LEU:HG	1:A:3297:PRO:HD3	1.85	0.58
1:A:4654:ALA:C	1:A:4796:MET:HE1	2.24	0.58
1:B:2128:TYR:OH	1:B:3676:ASP:OD2	2.20	0.58
1:C:3017:PHE:O	1:C:3036:LYS:NZ	2.37	0.58
1:B:1031:THR:O	1:B:1035:ASN:ND2	2.36	0.57
1:B:3270:ILE:HA	1:B:3274:LEU:HD12	1.86	0.57
1:D:1154:ASP:OD1	1:D:1156:THR:OG1	2.21	0.57
1:D:2626:LEU:HD22	1:D:2640:PRO:HB3	1.85	0.57
1:B:3296:LEU:HG	1:B:3297:PRO:HD3	1.85	0.57
1:D:970:LEU:HD23	1:D:1045:THR:HG23	1.85	0.57
1:C:2522:LEU:HD13	1:C:2582:MET:HE1	1.86	0.57
1:C:3296:LEU:HG	1:C:3297:PRO:HD3	1.85	0.57
1:A:176:SER:OG	1:A:178:ARG:NH1	2.30	0.57
1:A:2587:TYR:O	1:A:2590:SER:OG	2.18	0.57
1:C:1870:VAL:HA	1:C:2090:LYS:HZ1	1.69	0.57
1:D:3270:ILE:HA	1:D:3274:LEU:HD12	1.86	0.57
1:D:4901:ILE:HG13	1:D:4913:ARG:NH2	2.18	0.57
1:C:309:THR:O	1:C:313:SER:OG	2.18	0.57
1:A:545:ASP:OD1	1:A:582:HIS:NE2	2.32	0.57
1:A:2410:PRO:HB3	1:A:2415:ARG:HB3	1.86	0.57
1:B:2410:PRO:HB3	1:B:2415:ARG:HB3	1.86	0.57
1:B:2456:ILE:O	1:B:2460:LEU:HD22	2.05	0.57
1:D:2456:ILE:O	1:D:2460:LEU:HD22	2.05	0.57
1:D:4654:ALA:C	1:D:4796:MET:HE1	2.25	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:2456:ILE:O	1:C:2460:LEU:HD22	2.05	0.57
1:A:970:LEU:HD23	1:A:1045:THR:HG23	1.85	0.57
1:A:3550:ARG:HG2	1:A:3594:ARG:NH1	2.20	0.57
1:B:3017:PHE:O	1:B:3036:LYS:NZ	2.37	0.57
1:C:2175:GLU:HG3	1:C:2228:MET:HB3	1.85	0.57
1:C:4654:ALA:C	1:C:4796:MET:HE1	2.25	0.57
1:D:1031:THR:O	1:D:1035:ASN:ND2	2.36	0.57
1:D:2108:GLU:O	1:D:3694:LYS:NZ	2.35	0.57
1:C:3550:ARG:HG2	1:C:3594:ARG:NH1	2.20	0.57
1:A:3017:PHE:O	1:A:3036:LYS:NZ	2.37	0.57
1:D:197:GLN:OE1	1:D:197:GLN:N	2.30	0.57
1:A:2881:ASN:HA	1:A:2884:ASN:ND2	2.20	0.57
1:B:1147:ASP:HB3	1:B:1164:LEU:HD11	1.87	0.57
1:B:3442:PHE:CE1	1:B:3511:VAL:HG12	2.39	0.57
1:D:2116:LEU:O	1:D:2120:MET:HG2	2.05	0.57
1:D:2410:PRO:HB3	1:D:2415:ARG:HB3	1.86	0.57
1:C:2410:PRO:HB3	1:C:2415:ARG:HB3	1.86	0.57
1:C:2881:ASN:HA	1:C:2884:ASN:ND2	2.20	0.57
1:A:2679:PHE:HB2	1:A:2706:ILE:HG21	1.87	0.57
1:D:1870:VAL:HA	1:D:2090:LYS:HZ1	1.68	0.57
1:D:1987:SER:HB2	1:D:1994:ARG:HH22	1.70	0.57
1:D:2679:PHE:HB2	1:D:2706:ILE:HG21	1.87	0.57
1:D:3752:SER:OG	1:D:3755:GLU:OE1	2.23	0.57
1:A:1147:ASP:HB3	1:A:1164:LEU:HD11	1.87	0.56
1:B:2175:GLU:HG3	1:B:2228:MET:HB3	1.85	0.56
1:B:3550:ARG:HG2	1:B:3594:ARG:NH1	2.20	0.56
1:C:2116:LEU:O	1:C:2120:MET:HG2	2.05	0.56
1:C:2128:TYR:OH	1:C:3676:ASP:OD2	2.20	0.56
1:C:4555:LEU:HD21	1:C:4656:LEU:HD22	1.87	0.56
1:A:2875:ALA:HB2	1:A:2927:LEU:HD22	1.88	0.56
1:A:4137:ARG:NH2	1:A:4199:GLU:OE2	2.38	0.56
1:B:984:LEU:O	1:B:988:LEU:HG	2.05	0.56
1:B:2108:GLU:O	1:B:3694:LYS:NZ	2.35	0.56
1:B:2679:PHE:HB2	1:B:2706:ILE:HG21	1.87	0.56
1:B:2881:ASN:HA	1:B:2884:ASN:ND2	2.20	0.56
1:D:3017:PHE:O	1:D:3036:LYS:NZ	2.37	0.56
1:C:3752:SER:OG	1:C:3755:GLU:OE1	2.23	0.56
1:C:3850:GLN:NE2	1:C:3872:GLU:OE1	2.32	0.56
1:B:545:ASP:OD1	1:B:582:HIS:NE2	2.32	0.56
1:B:856:VAL:H	1:B:991:ASN:ND2	2.03	0.56
1:B:4006:ASP:OD1	1:B:4006:ASP:N	2.38	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:984:LEU:O	1:D:988:LEU:HG	2.05	0.56
1:D:2875:ALA:HB2	1:D:2927:LEU:HD22	1.87	0.56
1:D:2881:ASN:HA	1:D:2884:ASN:ND2	2.20	0.56
1:D:4006:ASP:N	1:D:4006:ASP:OD1	2.38	0.56
1:C:856:VAL:H	1:C:991:ASN:ND2	2.03	0.56
1:C:3270:ILE:HA	1:C:3274:LEU:HD12	1.86	0.56
1:C:4006:ASP:N	1:C:4006:ASP:OD1	2.38	0.56
1:A:516:LYS:O	1:A:520:ASN:ND2	2.34	0.56
1:A:984:LEU:O	1:A:988:LEU:HG	2.05	0.56
1:A:3752:SER:OG	1:A:3755:GLU:OE1	2.23	0.56
1:C:2679:PHE:HB2	1:C:2706:ILE:HG21	1.87	0.56
1:C:2867:LEU:HB2	1:C:2928:LYS:HZ3	1.71	0.56
1:C:3366:ARG:NH1	1:C:3440:GLU:OE1	2.34	0.56
1:A:2116:LEU:O	1:A:2120:MET:HG2	2.05	0.56
1:A:3270:ILE:HA	1:A:3274:LEU:HD12	1.86	0.56
1:C:1101:ARG:NH1	1:C:1115:LEU:O	2.39	0.56
1:A:4639:MET:HA	1:A:4642:ALA:HB3	1.87	0.56
1:B:4152:GLU:OE1	1:B:4194:TYR:OH	2.23	0.56
1:D:4137:ARG:NH2	1:D:4199:GLU:OE2	2.38	0.56
1:C:1999:ARG:HG2	1:C:3635:CYS:HB3	1.88	0.56
1:A:1987:SER:HB2	1:A:1994:ARG:HH22	1.70	0.56
1:B:2116:LEU:O	1:B:2120:MET:HG2	2.05	0.56
1:B:2875:ALA:HB2	1:B:2927:LEU:HD22	1.87	0.56
1:B:3752:SER:OG	1:B:3755:GLU:OE1	2.23	0.56
1:D:19:GLU:HG2	1:D:68:THR:HG22	1.88	0.56
1:D:856:VAL:H	1:D:991:ASN:ND2	2.03	0.56
1:D:2867:LEU:HB2	1:D:2928:LYS:HZ3	1.71	0.56
1:D:3550:ARG:HG2	1:D:3594:ARG:NH1	2.20	0.56
1:C:983:THR:O	1:C:987:ARG:HG3	2.06	0.56
1:B:1448:VAL:HG22	1:B:1554:VAL:HG23	1.88	0.56
1:B:1990:GLU:OE1	1:B:1994:ARG:NH2	2.39	0.56
1:B:2867:LEU:HB2	1:B:2928:LYS:HZ3	1.71	0.56
1:B:4989:MET:O	1:B:4993:MET:HG3	2.06	0.56
1:C:1031:THR:O	1:C:1035:ASN:ND2	2.36	0.56
1:C:4639:MET:HA	1:C:4642:ALA:HB3	1.87	0.56
1:A:2456:ILE:O	1:A:2460:LEU:HD22	2.05	0.56
1:A:4060:LYS:O	1:A:4064:MET:HG3	2.06	0.56
1:A:4989:MET:O	1:A:4993:MET:HG3	2.06	0.56
1:B:1987:SER:HB2	1:B:1994:ARG:HH22	1.70	0.56
1:B:3768:SER:HA	1:B:3771:HIS:CD2	2.41	0.56
1:D:1990:GLU:OE1	1:D:1994:ARG:NH2	2.39	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1272:LEU:HD22	1:C:1289:LEU:HD11	1.87	0.56
1:A:462:GLU:OE2	1:A:462:GLU:N	2.27	0.56
1:A:5012:LYS:NZ	1:A:5016:GLU:OE2	2.33	0.56
1:D:3413:ILE:HD12	1:D:3509:LEU:HD23	1.88	0.56
1:D:3768:SER:HA	1:D:3771:HIS:CD2	2.41	0.56
1:C:1987:SER:HB2	1:C:1994:ARG:HH22	1.70	0.56
1:C:4137:ARG:NH2	1:C:4199:GLU:OE2	2.38	0.56
1:C:5012:LYS:NZ	1:C:5016:GLU:OE2	2.33	0.56
1:A:872:GLU:HA	1:A:922:LEU:HD11	1.88	0.55
1:A:1990:GLU:OE1	1:A:1994:ARG:NH2	2.39	0.55
1:B:950:LEU:HD13	1:B:970:LEU:HD11	1.88	0.55
1:B:1636:MET:HE1	1:B:1649:ASP:HA	1.86	0.55
1:B:4137:ARG:NH2	1:B:4199:GLU:OE2	2.38	0.55
1:B:4639:MET:HA	1:B:4642:ALA:HB3	1.87	0.55
1:C:4989:MET:O	1:C:4993:MET:HG3	2.06	0.55
1:A:950:LEU:HD13	1:A:970:LEU:HD11	1.88	0.55
1:A:985:VAL:HG22	1:A:1043:VAL:HG21	1.89	0.55
1:B:4555:LEU:HD21	1:B:4656:LEU:HD22	1.87	0.55
1:C:1147:ASP:HB3	1:C:1164:LEU:HD11	1.87	0.55
1:C:4686:LEU:HD12	1:C:4690:GLU:HG3	1.89	0.55
1:A:1636:MET:HE1	1:A:1649:ASP:HA	1.87	0.55
1:A:1999:ARG:HG2	1:A:3635:CYS:HB3	1.88	0.55
2:G:18:ARG:HG2	2:G:18:ARG:NH1	2.21	0.55
1:B:2751:LEU:HD13	1:B:2823:ILE:HD13	1.87	0.55
1:B:3840:SER:OG	1:B:3877:ASP:OD1	2.19	0.55
1:D:1272:LEU:HD22	1:D:1289:LEU:HD11	1.87	0.55
1:C:1990:GLU:OE1	1:C:1994:ARG:NH2	2.39	0.55
1:C:2875:ALA:HB2	1:C:2927:LEU:HD22	1.87	0.55
1:A:983:THR:O	1:A:987:ARG:HG3	2.06	0.55
1:A:1448:VAL:HG22	1:A:1554:VAL:HG23	1.88	0.55
1:A:3768:SER:HA	1:A:3771:HIS:CD2	2.41	0.55
1:B:3261:ALA:HB1	1:B:3265:GLU:HG3	1.88	0.55
1:D:1448:VAL:HG22	1:D:1554:VAL:HG23	1.88	0.55
1:D:4989:MET:O	1:D:4993:MET:HG3	2.06	0.55
1:C:3261:ALA:HB1	1:C:3265:GLU:HG3	1.88	0.55
1:A:19:GLU:HG2	1:A:68:THR:HG22	1.88	0.55
1:A:1101:ARG:NH1	1:A:1115:LEU:O	2.39	0.55
1:A:2155:LEU:HD11	1:A:2198:MET:HE2	1.87	0.55
1:D:1101:ARG:NH1	1:D:1115:LEU:O	2.39	0.55
1:D:2751:LEU:HD13	1:D:2823:ILE:HD13	1.87	0.55
1:D:3850:GLN:NE2	1:D:3872:GLU:OE1	2.32	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:4060:LYS:O	1:D:4064:MET:HG3	2.06	0.55
1:D:4686:LEU:HD12	1:D:4690:GLU:HG3	1.88	0.55
1:C:3768:SER:HA	1:C:3771:HIS:CD2	2.41	0.55
1:B:983:THR:O	1:B:987:ARG:HG3	2.06	0.55
1:B:2029:GLN:NE2	1:B:2033:ASP:OD1	2.40	0.55
1:D:700:GLU:OE2	1:D:1458:HIS:NE2	2.33	0.55
1:D:1147:ASP:HB3	1:D:1164:LEU:HD11	1.87	0.55
1:C:1636:MET:HE1	1:C:1649:ASP:HA	1.88	0.55
1:A:1031:THR:O	1:A:1035:ASN:ND2	2.36	0.55
1:A:1272:LEU:HD22	1:A:1289:LEU:HD11	1.88	0.55
1:B:462:GLU:OE2	1:B:462:GLU:N	2.27	0.55
1:D:228:ASP:OD1	1:D:228:ASP:N	2.40	0.55
1:D:1999:ARG:HG2	1:D:3635:CYS:HB3	1.88	0.55
1:D:5012:LYS:NZ	1:D:5016:GLU:OE2	2.33	0.55
1:C:984:LEU:O	1:C:988:LEU:HG	2.05	0.55
1:C:2029:GLN:NE2	1:C:2033:ASP:OD1	2.40	0.55
1:A:856:VAL:H	1:A:991:ASN:ND2	2.04	0.55
2:G:50:LEU:H	2:G:50:LEU:HD12	1.71	0.55
1:B:4060:LYS:O	1:B:4064:MET:HG3	2.06	0.55
1:C:4060:LYS:O	1:C:4064:MET:HG3	2.06	0.55
1:A:2029:GLN:NE2	1:A:2033:ASP:OD1	2.40	0.55
1:A:3413:ILE:HD12	1:A:3509:LEU:HD23	1.89	0.55
1:A:4555:LEU:HD21	1:A:4656:LEU:HD22	1.87	0.55
1:B:19:GLU:HG2	1:B:68:THR:HG22	1.88	0.55
1:B:516:LYS:O	1:B:520:ASN:ND2	2.34	0.55
1:D:4904:PRO:HB3	1:D:4913:ARG:HG2	1.89	0.55
1:C:516:LYS:O	1:C:520:ASN:ND2	2.34	0.55
1:C:950:LEU:HD13	1:C:970:LEU:HD11	1.88	0.55
1:A:228:ASP:OD1	1:A:228:ASP:N	2.40	0.55
1:A:3261:ALA:HB1	1:A:3265:GLU:HG3	1.88	0.55
1:A:4006:ASP:N	1:A:4006:ASP:OD1	2.38	0.55
1:B:4056:GLU:HG2	1:B:4166:LEU:HD13	1.89	0.55
1:B:4686:LEU:HD12	1:B:4690:GLU:HG3	1.89	0.55
1:D:309:THR:O	1:D:313:SER:OG	2.18	0.55
1:C:19:GLU:HG2	1:C:68:THR:HG22	1.88	0.55
1:D:950:LEU:HD13	1:D:970:LEU:HD11	1.88	0.54
1:C:2751:LEU:HD13	1:C:2823:ILE:HD13	1.87	0.54
1:A:2456:ILE:O	1:A:2459:SER:OG	2.17	0.54
1:A:2751:LEU:HD13	1:A:2823:ILE:HD13	1.87	0.54
1:A:3623:LEU:HD12	1:A:3624:LEU:H	1.72	0.54
1:A:4056:GLU:HG2	1:A:4166:LEU:HD13	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3623:LEU:HD12	1:B:3624:LEU:H	1.72	0.54
1:D:2929:PHE:HA	1:D:2932:MET:SD	2.47	0.54
1:C:872:GLU:HA	1:C:922:LEU:HD11	1.88	0.54
1:C:4152:GLU:OE1	1:C:4194:TYR:OH	2.23	0.54
1:B:2155:LEU:HD11	1:B:2198:MET:HE2	1.89	0.54
1:D:983:THR:O	1:D:987:ARG:HG3	2.06	0.54
1:D:985:VAL:HG22	1:D:1043:VAL:HG21	1.89	0.54
1:D:2029:GLN:NE2	1:D:2033:ASP:OD1	2.40	0.54
1:D:4639:MET:HA	1:D:4642:ALA:HB3	1.87	0.54
1:C:3413:ILE:HD12	1:C:3509:LEU:HD23	1.88	0.54
1:A:2867:LEU:HB2	1:A:2928:LYS:HZ3	1.71	0.54
1:B:309:THR:O	1:B:313:SER:OG	2.18	0.54
1:B:1999:ARG:HG2	1:B:3635:CYS:HB3	1.88	0.54
1:C:985:VAL:HG22	1:C:1043:VAL:HG21	1.89	0.54
1:C:3442:PHE:CE1	1:C:3511:VAL:HG12	2.39	0.54
1:D:872:GLU:HA	1:D:922:LEU:HD11	1.88	0.54
1:D:3261:ALA:HB1	1:D:3265:GLU:HG3	1.88	0.54
1:C:2456:ILE:O	1:C:2459:SER:OG	2.17	0.54
1:A:2149:VAL:O	1:A:2153:MET:HG2	2.08	0.54
1:A:2736:ASP:O	1:A:2738:ARG:NH1	2.40	0.54
1:A:2924:GLN:O	1:A:2928:LYS:HG2	2.08	0.54
1:A:2929:PHE:HA	1:A:2932:MET:SD	2.47	0.54
1:B:985:VAL:HG22	1:B:1043:VAL:HG21	1.89	0.54
1:B:1101:ARG:NH1	1:B:1115:LEU:O	2.39	0.54
1:B:1272:LEU:HD22	1:B:1289:LEU:HD11	1.87	0.54
1:B:2736:ASP:O	1:B:2738:ARG:NH1	2.40	0.54
1:D:3673:MET:HE1	1:D:3728:ILE:HD13	1.89	0.54
1:A:4152:GLU:OE1	1:A:4194:TYR:OH	2.23	0.54
1:B:2587:TYR:O	1:B:2590:SER:OG	2.18	0.54
1:B:3413:ILE:HD12	1:B:3509:LEU:HD23	1.88	0.54
1:B:3955:MET:HB3	1:B:4019:LEU:HD22	1.89	0.54
1:D:4555:LEU:HD21	1:D:4656:LEU:HD22	1.87	0.54
1:C:1996:ARG:NH2	1:C:1999:ARG:HE	2.05	0.54
1:C:2924:GLN:O	1:C:2928:LYS:HG2	2.08	0.54
1:C:4056:GLU:HG2	1:C:4166:LEU:HD13	1.89	0.54
1:A:197:GLN:OE1	1:A:197:GLN:N	2.30	0.54
1:A:1996:ARG:NH2	1:A:1999:ARG:HE	2.05	0.54
1:B:1676:LEU:HD22	1:B:2167:ILE:HD12	1.90	0.54
1:D:2924:GLN:O	1:D:2928:LYS:HG2	2.08	0.54
1:D:4688:ILE:HG23	1:D:4732:PHE:CD1	2.43	0.54
1:C:462:GLU:OE2	1:C:462:GLU:N	2.27	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:2929:PHE:HA	1:C:2932:MET:SD	2.47	0.54
1:C:4904:PRO:HB3	1:C:4913:ARG:HG2	1.88	0.54
1:A:4686:LEU:HD12	1:A:4690:GLU:HG3	1.89	0.54
2:F:18:ARG:HG2	2:F:18:ARG:NH1	2.21	0.54
1:D:622:THR:HG23	1:D:626:LEU:HD12	1.90	0.54
1:D:1676:LEU:HD22	1:D:2167:ILE:HD12	1.90	0.54
1:C:1448:VAL:HG22	1:C:1554:VAL:HG23	1.88	0.54
1:C:1676:LEU:HD22	1:C:2167:ILE:HD12	1.90	0.54
1:A:1289:LEU:HD12	1:A:1562:ILE:HD11	1.90	0.54
1:B:1870:VAL:HA	1:B:2090:LYS:HZ1	1.73	0.54
1:B:2149:VAL:O	1:B:2153:MET:HG2	2.08	0.54
1:D:3955:MET:HB3	1:D:4019:LEU:HD22	1.89	0.54
1:C:228:ASP:OD1	1:C:228:ASP:N	2.40	0.54
1:C:3955:MET:HB3	1:C:4019:LEU:HD22	1.89	0.54
1:A:622:THR:HG23	1:A:626:LEU:HD12	1.90	0.53
1:A:3535:LEU:O	1:A:3539:ARG:HG2	2.08	0.53
1:A:4904:PRO:HB3	1:A:4913:ARG:HG2	1.89	0.53
1:D:2155:LEU:HD11	1:D:2198:MET:HE2	1.89	0.53
1:C:275:ARG:HH21	1:C:328:LYS:HG3	1.74	0.53
1:A:2519:LEU:HD13	1:A:2575:ARG:HG3	1.90	0.53
1:A:2978:GLU:OE2	1:A:3053:ARG:NH1	2.41	0.53
1:B:2929:PHE:HA	1:B:2932:MET:SD	2.47	0.53
1:D:1996:ARG:NH2	1:D:1999:ARG:HE	2.05	0.53
1:D:2736:ASP:O	1:D:2738:ARG:NH1	2.40	0.53
1:D:4056:GLU:HG2	1:D:4166:LEU:HD13	1.89	0.53
1:A:3955:MET:HB3	1:A:4019:LEU:HD22	1.89	0.53
1:B:1289:LEU:HD12	1:B:1562:ILE:HD11	1.90	0.53
1:D:1289:LEU:HD12	1:D:1562:ILE:HD11	1.90	0.53
1:D:2149:VAL:O	1:D:2153:MET:HG2	2.08	0.53
1:D:2382:GLU:O	1:D:2386:ILE:HG23	2.09	0.53
1:C:127:MET:CE	1:C:127:MET:H	2.22	0.53
1:C:404:ILE:HG23	1:C:483:MET:HE1	1.91	0.53
1:C:2736:ASP:O	1:C:2738:ARG:NH1	2.40	0.53
1:C:3623:LEU:HD12	1:C:3624:LEU:H	1.72	0.53
1:A:3442:PHE:CE1	1:A:3511:VAL:HG12	2.39	0.53
1:B:127:MET:CE	1:B:127:MET:H	2.21	0.53
1:B:872:GLU:HA	1:B:922:LEU:HD11	1.88	0.53
1:B:2660:GLY:HA3	1:B:2666:VAL:HG22	1.91	0.53
1:B:2924:GLN:O	1:B:2928:LYS:HG2	2.08	0.53
1:D:516:LYS:O	1:D:520:ASN:ND2	2.34	0.53
1:D:3442:PHE:CE1	1:D:3511:VAL:HG12	2.39	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:2382:GLU:O	1:C:2386:ILE:HG23	2.09	0.53
1:A:4627:MET:H	1:A:4627:MET:CE	2.22	0.53
1:A:4759:ASP:O	1:A:4761:PRO:HD3	2.09	0.53
1:B:2736:ASP:OD1	1:B:2736:ASP:N	2.41	0.53
1:D:2519:LEU:HD13	1:D:2575:ARG:HG3	1.90	0.53
1:D:4759:ASP:O	1:D:4761:PRO:HD3	2.09	0.53
1:D:4768:LEU:HB3	1:D:4769:MET:HE3	1.90	0.53
1:C:211:GLU:CD	1:C:211:GLU:H	2.12	0.53
1:A:4910:GLU:O	1:A:4914:VAL:HG13	2.09	0.53
2:E:18:ARG:HG2	2:E:18:ARG:NH1	2.21	0.53
1:B:228:ASP:OD1	1:B:228:ASP:N	2.40	0.53
1:B:3535:LEU:O	1:B:3539:ARG:HG2	2.08	0.53
1:D:3433:GLU:HG3	1:D:3437:MET:HE2	1.91	0.53
1:C:2155:LEU:HD11	1:C:2198:MET:HE2	1.89	0.53
1:C:2660:GLY:HA3	1:C:2666:VAL:HG22	1.91	0.53
1:C:2765:LYS:NZ	1:C:2860:PRO:HA	2.23	0.53
1:C:4627:MET:CE	1:C:4627:MET:H	2.22	0.53
1:A:2660:GLY:HA3	1:A:2666:VAL:HG22	1.91	0.53
1:A:4688:ILE:HG23	1:A:4732:PHE:CD1	2.43	0.53
1:B:211:GLU:H	1:B:211:GLU:CD	2.12	0.53
1:B:4904:PRO:HB3	1:B:4913:ARG:HG2	1.89	0.53
1:D:1078:GLU:OE2	1:D:1654:SER:OG	2.19	0.53
1:D:2660:GLY:HA3	1:D:2666:VAL:HG22	1.91	0.53
1:D:2978:GLU:OE2	1:D:3053:ARG:NH1	2.41	0.53
1:B:2382:GLU:O	1:B:2386:ILE:HG23	2.09	0.53
1:B:4627:MET:CE	1:B:4627:MET:H	2.22	0.53
1:B:4910:GLU:O	1:B:4914:VAL:HG13	2.09	0.53
1:D:3623:LEU:HD12	1:D:3624:LEU:H	1.72	0.53
1:D:4910:GLU:O	1:D:4914:VAL:HG13	2.09	0.53
1:D:4963:ILE:HD13	1:D:5030:LYS:HE3	1.91	0.53
1:C:2978:GLU:OE2	1:C:3053:ARG:NH1	2.41	0.53
1:A:211:GLU:CD	1:A:211:GLU:H	2.12	0.53
1:A:1676:LEU:HD22	1:A:2167:ILE:HD12	1.90	0.53
2:H:79:ASP:OD2	2:H:80:TYR:N	2.42	0.53
2:G:16:PRO:HG3	2:G:106:LEU:HD11	1.89	0.53
1:B:2003:GLN:NE2	1:B:2007:ASN:OD1	2.42	0.53
1:B:3366:ARG:NH1	1:B:3440:GLU:OE1	2.34	0.53
1:D:127:MET:H	1:D:127:MET:CE	2.21	0.53
1:C:2812:SER:O	1:C:2816:MET:HE3	2.09	0.53
1:C:3389:GLU:N	1:C:3389:GLU:OE2	2.42	0.53
2:E:4:VAL:HG22	2:E:74:LEU:HD22	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:50:LEU:HD12	2:F:50:LEU:H	1.72	0.53
1:B:622:THR:HG23	1:B:626:LEU:HD12	1.90	0.53
1:B:2519:LEU:HD13	1:B:2575:ARG:HG3	1.90	0.53
1:D:2765:LYS:NZ	1:D:2860:PRO:HA	2.23	0.53
1:D:2813:LEU:HD13	1:D:2816:MET:SD	2.49	0.53
1:C:4688:ILE:HG23	1:C:4732:PHE:CD1	2.43	0.53
1:C:4759:ASP:O	1:C:4761:PRO:HD3	2.09	0.53
1:B:3389:GLU:N	1:B:3389:GLU:OE2	2.42	0.52
1:B:4759:ASP:O	1:B:4761:PRO:HD3	2.09	0.52
1:D:2288:LEU:O	1:D:3849:ARG:NH1	2.31	0.52
1:A:4769:MET:SD	1:A:4769:MET:N	2.73	0.52
1:B:275:ARG:HH21	1:B:328:LYS:HG3	1.74	0.52
1:C:2149:VAL:O	1:C:2153:MET:HG2	2.08	0.52
1:C:2792:ARG:NH2	1:C:2798:SER:OG	2.43	0.52
1:A:3389:GLU:N	1:A:3389:GLU:OE2	2.42	0.52
1:B:2978:GLU:OE2	1:B:3053:ARG:NH1	2.41	0.52
1:D:3389:GLU:N	1:D:3389:GLU:OE2	2.42	0.52
1:C:283:ARG:NH1	1:C:290:TYR:OH	2.42	0.52
1:C:4910:GLU:O	1:C:4914:VAL:HG13	2.09	0.52
1:A:283:ARG:NH1	1:A:290:TYR:OH	2.43	0.52
1:A:923:GLN:O	1:A:927:GLU:HG2	2.10	0.52
1:B:2813:LEU:HD13	1:B:2816:MET:SD	2.49	0.52
1:B:4688:ILE:HG23	1:B:4732:PHE:CD1	2.43	0.52
1:D:275:ARG:HH21	1:D:328:LYS:HG3	1.74	0.52
1:D:3366:ARG:NH1	1:D:3440:GLU:OE1	2.34	0.52
1:D:3535:LEU:O	1:D:3539:ARG:HG2	2.08	0.52
1:C:622:THR:HG23	1:C:626:LEU:HD12	1.90	0.52
1:C:2309:SER:OG	1:C:2321:ILE:O	2.20	0.52
1:C:3288:GLY:HA2	1:C:3303:PRO:HB3	1.92	0.52
1:A:293:LEU:HD13	1:A:378:LEU:HD12	1.91	0.52
1:A:492:ASP:OD1	1:A:546:TRP:NE1	2.42	0.52
1:A:913:LEU:HD11	1:A:918:ARG:HE	1.75	0.52
1:A:2813:LEU:HD13	1:A:2816:MET:SD	2.50	0.52
2:G:4:VAL:HG22	2:G:74:LEU:HD22	1.92	0.52
1:D:923:GLN:O	1:D:927:GLU:HG2	2.10	0.52
1:D:1156:THR:OG1	1:D:1157:GLU:OE1	2.27	0.52
1:D:2456:ILE:O	1:D:2459:SER:OG	2.17	0.52
1:D:3545:THR:HG22	1:D:3548:GLU:HG3	1.91	0.52
1:D:4627:MET:H	1:D:4627:MET:CE	2.22	0.52
1:C:308:HIS:CE1	1:C:310:LYS:HB3	2.45	0.52
1:A:1175:SER:OG	1:A:1180:ARG:NH1	2.43	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2382:GLU:O	1:A:2386:ILE:HG23	2.09	0.52
1:A:4963:ILE:HD13	1:A:5030:LYS:HE3	1.91	0.52
2:E:44:LYS:HD2	2:E:44:LYS:O	2.10	0.52
1:B:923:GLN:O	1:B:927:GLU:HG2	2.10	0.52
1:B:1996:ARG:NH2	1:B:1999:ARG:HE	2.05	0.52
1:B:2751:LEU:O	1:B:2755:ILE:HG12	2.10	0.52
1:B:2765:LYS:NZ	1:B:2860:PRO:HA	2.23	0.52
1:D:211:GLU:CD	1:D:211:GLU:H	2.12	0.52
1:D:913:LEU:HD11	1:D:918:ARG:HE	1.75	0.52
1:D:1175:SER:OG	1:D:1180:ARG:NH1	2.43	0.52
1:D:2792:ARG:NH2	1:D:2798:SER:OG	2.43	0.52
1:C:293:LEU:HD13	1:C:378:LEU:HD12	1.91	0.52
1:A:1870:VAL:HA	1:A:2090:LYS:HZ1	1.74	0.52
2:H:44:LYS:HD2	2:H:44:LYS:O	2.10	0.52
1:B:308:HIS:CE1	1:B:310:LYS:HB3	2.45	0.52
1:B:884:LEU:O	1:B:887:ILE:HG22	2.10	0.52
1:B:913:LEU:HD11	1:B:918:ARG:HE	1.75	0.52
1:C:2003:GLN:NE2	1:C:2007:ASN:OD1	2.42	0.52
1:C:2519:LEU:HD13	1:C:2575:ARG:HG3	1.90	0.52
1:C:3535:LEU:O	1:C:3539:ARG:HG2	2.08	0.52
1:C:4640:GLU:HB3	1:C:4641:PRO:HD3	1.92	0.52
1:C:4963:ILE:HD13	1:C:5030:LYS:HE3	1.91	0.52
1:A:275:ARG:HH21	1:A:328:LYS:HG3	1.74	0.52
1:A:2736:ASP:OD1	1:A:2736:ASP:N	2.41	0.52
2:E:16:PRO:HG3	2:E:106:LEU:HD11	1.91	0.52
2:G:22:CYS:SG	2:G:50:LEU:HD11	2.50	0.52
2:F:79:ASP:OD1	2:F:80:TYR:N	2.43	0.52
1:B:4963:ILE:HD13	1:B:5030:LYS:HE3	1.91	0.52
1:D:404:ILE:HG23	1:D:483:MET:HE1	1.92	0.52
1:D:867:LEU:HG	1:D:929:LEU:HD13	1.92	0.52
1:D:2382:GLU:OE1	1:D:2385:ARG:NH1	2.38	0.52
1:C:1547:LYS:NZ	1:C:1642:PRO:O	2.43	0.52
1:C:2751:LEU:O	1:C:2755:ILE:HG12	2.10	0.52
1:C:3443:ILE:HG12	1:C:3605:HIS:CD2	2.45	0.52
1:A:127:MET:CE	1:A:127:MET:H	2.22	0.52
1:A:308:HIS:CE1	1:A:310:LYS:HB3	2.45	0.52
1:A:2765:LYS:NZ	1:A:2860:PRO:HA	2.23	0.52
1:A:3377:GLU:HA	1:A:3380:ARG:HG2	1.92	0.52
2:E:22:CYS:SG	2:E:50:LEU:HD11	2.50	0.52
1:B:1547:LYS:NZ	1:B:1642:PRO:O	2.43	0.52
1:B:2001:PRO:HB3	1:B:3864:THR:HB	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2792:ARG:NH2	1:B:2798:SER:OG	2.43	0.52
1:D:283:ARG:NH1	1:D:290:TYR:OH	2.42	0.52
1:C:2382:GLU:OE1	1:C:2385:ARG:NH1	2.38	0.52
1:A:3443:ILE:HG12	1:A:3605:HIS:CD2	2.45	0.52
2:E:79:ASP:OD2	2:E:80:TYR:N	2.43	0.52
1:B:1175:SER:OG	1:B:1180:ARG:NH1	2.43	0.52
1:B:2573:GLU:OE2	1:B:2615:ARG:NE	2.42	0.52
1:C:867:LEU:HG	1:C:929:LEU:HD13	1.92	0.52
1:C:1154:ASP:OD1	1:C:1156:THR:OG1	2.21	0.52
1:C:1289:LEU:HD12	1:C:1562:ILE:HD11	1.90	0.52
1:A:309:THR:O	1:A:313:SER:OG	2.18	0.51
1:A:3455:GLU:OE2	1:A:3508:SER:OG	2.28	0.51
1:B:3377:GLU:HA	1:B:3380:ARG:HG2	1.92	0.51
1:B:3443:ILE:HG12	1:B:3605:HIS:CD2	2.45	0.51
1:D:3288:GLY:HA2	1:D:3303:PRO:HB3	1.92	0.51
1:D:3377:GLU:HA	1:D:3380:ARG:HG2	1.92	0.51
1:C:952:LYS:HD3	1:C:970:LEU:HA	1.92	0.51
1:C:2813:LEU:HD13	1:C:2816:MET:SD	2.50	0.51
1:C:3433:GLU:HG3	1:C:3437:MET:HE2	1.92	0.51
1:C:3545:THR:HG22	1:C:3548:GLU:HG3	1.91	0.51
1:A:1547:LYS:NZ	1:A:1642:PRO:O	2.43	0.51
1:A:2792:ARG:NH2	1:A:2798:SER:OG	2.43	0.51
2:F:4:VAL:HG22	2:F:74:LEU:HD22	1.92	0.51
1:B:975:VAL:HG12	1:B:1044:ARG:HH11	1.75	0.51
1:B:3916:ILE:HG22	1:B:3980:LEU:HD21	1.93	0.51
1:C:2736:ASP:OD1	1:C:2736:ASP:N	2.41	0.51
1:A:3545:THR:HG22	1:A:3548:GLU:HG3	1.91	0.51
1:A:4640:GLU:HB3	1:A:4641:PRO:HD3	1.92	0.51
2:G:79:ASP:OD2	2:G:80:TYR:N	2.42	0.51
1:B:3288:GLY:HA2	1:B:3303:PRO:HB3	1.92	0.51
1:D:293:LEU:HD13	1:D:378:LEU:HD12	1.91	0.51
1:D:1547:LYS:NZ	1:D:1642:PRO:O	2.43	0.51
1:D:2751:LEU:O	1:D:2755:ILE:HG12	2.10	0.51
1:D:4640:GLU:HB3	1:D:4641:PRO:HD3	1.92	0.51
1:C:923:GLN:O	1:C:927:GLU:HG2	2.10	0.51
1:C:1175:SER:OG	1:C:1180:ARG:NH1	2.43	0.51
1:C:3377:GLU:HA	1:C:3380:ARG:HG2	1.92	0.51
1:A:3182:TYR:HA	1:A:3185:LYS:HE3	1.93	0.51
1:B:293:LEU:HD13	1:B:378:LEU:HD12	1.91	0.51
1:D:70:GLU:OE2	1:D:110:ARG:NE	2.38	0.51
1:D:451:TYR:CZ	1:D:474:ARG:HD2	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:492:ASP:OD1	1:D:546:TRP:NE1	2.42	0.51
1:D:975:VAL:HG12	1:D:1044:ARG:HH11	1.75	0.51
1:D:3916:ILE:HG22	1:D:3980:LEU:HD21	1.93	0.51
1:C:913:LEU:HD11	1:C:918:ARG:HE	1.75	0.51
1:C:2001:PRO:HB3	1:C:3864:THR:HB	1.92	0.51
1:C:2327:GLY:O	1:C:2331:TYR:HD1	1.94	0.51
1:C:3916:ILE:HG22	1:C:3980:LEU:HD21	1.93	0.51
1:A:700:GLU:OE2	1:A:1458:HIS:NE2	2.33	0.51
1:B:952:LYS:HD3	1:B:970:LEU:HA	1.93	0.51
1:B:3106:MET:SD	1:B:3129:LEU:HA	2.51	0.51
1:B:3862:ASP:OD1	1:B:3862:ASP:N	2.44	0.51
1:D:3455:GLU:OE2	1:D:3508:SER:OG	2.28	0.51
1:C:975:VAL:HG12	1:C:1044:ARG:HH11	1.75	0.51
1:C:3455:GLU:OE2	1:C:3508:SER:OG	2.28	0.51
1:A:975:VAL:HG12	1:A:1044:ARG:HH11	1.75	0.51
1:A:2751:LEU:O	1:A:2755:ILE:HG12	2.10	0.51
1:B:3391:GLU:HG3	1:B:3395:ARG:HE	1.76	0.51
1:D:308:HIS:CE1	1:D:310:LYS:HB3	2.45	0.51
1:C:1156:THR:OG1	1:C:1157:GLU:OE1	2.27	0.51
1:A:451:TYR:CZ	1:A:474:ARG:HD2	2.46	0.51
1:A:884:LEU:O	1:A:887:ILE:HG22	2.10	0.51
1:A:2749:GLU:HG3	1:A:2752:ASP:HB2	1.93	0.51
1:A:3862:ASP:OD1	1:A:3862:ASP:N	2.44	0.51
1:B:451:TYR:CZ	1:B:474:ARG:HD2	2.46	0.51
1:D:3182:TYR:HA	1:D:3185:LYS:HE3	1.93	0.51
1:A:648:ILE:HG23	1:A:814:ALA:HB3	1.93	0.51
1:B:1293:LEU:HD11	1:B:1594:ARG:HD3	1.93	0.51
1:B:2327:GLY:O	1:B:2331:TYR:HD1	1.94	0.51
1:D:2749:GLU:HG3	1:D:2752:ASP:HB2	1.93	0.51
1:C:492:ASP:OD1	1:C:546:TRP:NE1	2.42	0.51
1:C:884:LEU:O	1:C:887:ILE:HG22	2.10	0.51
1:C:1293:LEU:HD11	1:C:1594:ARG:HD3	1.93	0.51
1:A:2166:LEU:HD11	1:A:2206:THR:HG23	1.93	0.51
1:A:3916:ILE:HG22	1:A:3980:LEU:HD21	1.93	0.51
1:A:4063:ASP:OD1	1:A:4064:MET:N	2.44	0.51
1:A:4843:LEU:HD21	1:D:4827:LEU:HD21	1.93	0.51
1:B:867:LEU:HG	1:B:929:LEU:HD13	1.92	0.51
1:B:2382:GLU:OE1	1:B:2385:ARG:NH1	2.38	0.51
1:B:3590:GLU:O	1:B:3594:ARG:HG2	2.11	0.51
1:D:1492:CYS:SG	1:D:1494:MET:HG3	2.51	0.51
1:D:2001:PRO:HB3	1:D:3864:THR:HB	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:3443:ILE:HG12	1:D:3605:HIS:CD2	2.45	0.51
1:D:4152:GLU:OE1	1:D:4194:TYR:OH	2.23	0.51
1:C:929:LEU:HA	1:C:932:LEU:HD12	1.93	0.51
1:A:2001:PRO:HB3	1:A:3864:THR:HB	1.92	0.51
1:A:2327:GLY:O	1:A:2331:TYR:HD1	1.94	0.51
2:F:44:LYS:HD2	2:F:44:LYS:O	2.11	0.51
1:B:648:ILE:HG23	1:B:814:ALA:HB3	1.93	0.51
1:B:2021:CYS:O	1:B:2028:ARG:NH2	2.44	0.51
1:B:2166:LEU:HD11	1:B:2206:THR:HG23	1.93	0.51
1:D:2311:PRO:HA	1:D:2314:LEU:HD23	1.93	0.51
1:C:648:ILE:HG23	1:C:814:ALA:HB3	1.93	0.51
1:C:2166:LEU:HD11	1:C:2206:THR:HG23	1.93	0.51
1:C:2495:VAL:HG22	1:C:2498:HIS:CE1	2.46	0.51
1:C:3260:GLY:HA2	1:C:3325:ASN:ND2	2.26	0.51
1:A:2495:VAL:HG22	1:A:2498:HIS:CE1	2.46	0.50
1:A:3202:PRO:HB2	1:A:3216:CYS:SG	2.51	0.50
1:B:2514:ASN:OD1	1:B:2514:ASN:N	2.45	0.50
1:B:3182:TYR:HA	1:B:3185:LYS:HE3	1.92	0.50
1:B:3433:GLU:HG3	1:B:3437:MET:HE2	1.93	0.50
1:B:3545:THR:HG22	1:B:3548:GLU:HG3	1.91	0.50
1:B:4063:ASP:OD1	1:B:4064:MET:N	2.44	0.50
1:B:4640:GLU:HB3	1:B:4641:PRO:HD3	1.92	0.50
1:D:884:LEU:O	1:D:887:ILE:HG22	2.10	0.50
1:D:2003:GLN:NE2	1:D:2007:ASN:OD1	2.42	0.50
1:D:2495:VAL:HG22	1:D:2498:HIS:CE1	2.46	0.50
1:D:3357:HIS:O	1:D:3361:THR:HG23	2.11	0.50
1:C:2021:CYS:O	1:C:2028:ARG:NH2	2.44	0.50
1:C:3240:CYS:HB3	1:C:3243:ILE:HG12	1.93	0.50
1:C:4768:LEU:HB3	1:C:4769:MET:HE3	1.93	0.50
1:A:2479:LEU:HB2	1:A:2541:PHE:HZ	1.77	0.50
2:H:4:VAL:HG22	2:H:74:LEU:HD22	1.93	0.50
1:B:404:ILE:HG23	1:B:483:MET:HE1	1.93	0.50
1:D:462:GLU:OE2	1:D:462:GLU:N	2.27	0.50
1:D:2166:LEU:HD11	1:D:2206:THR:HG23	1.93	0.50
1:D:3240:CYS:HB3	1:D:3243:ILE:HG12	1.93	0.50
1:C:451:TYR:CZ	1:C:474:ARG:HD2	2.46	0.50
1:C:3357:HIS:O	1:C:3361:THR:HG23	2.11	0.50
1:A:3106:MET:SD	1:A:3129:LEU:HA	2.51	0.50
1:A:3590:GLU:O	1:A:3594:ARG:HG2	2.11	0.50
1:A:3872:GLU:HG3	1:A:3874:VAL:H	1.77	0.50
2:E:50:LEU:H	2:E:50:LEU:HD12	1.75	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:952:LYS:HD3	1:D:970:LEU:HA	1.93	0.50
1:D:2224:ARG:HG2	1:D:2225:PHE:CD2	2.47	0.50
1:D:3872:GLU:HG3	1:D:3874:VAL:H	1.77	0.50
1:C:3106:MET:SD	1:C:3129:LEU:HA	2.51	0.50
1:C:3391:GLU:HG3	1:C:3395:ARG:HE	1.76	0.50
1:A:483:MET:HE2	1:A:483:MET:N	2.26	0.50
1:A:952:LYS:HD3	1:A:970:LEU:HA	1.93	0.50
1:A:3260:GLY:HA2	1:A:3325:ASN:ND2	2.26	0.50
1:B:2479:LEU:HB2	1:B:2541:PHE:HZ	1.76	0.50
1:B:3202:PRO:HB2	1:B:3216:CYS:SG	2.51	0.50
1:D:648:ILE:HG23	1:D:814:ALA:HB3	1.93	0.50
1:D:2514:ASN:N	1:D:2514:ASN:OD1	2.45	0.50
1:D:3202:PRO:HB2	1:D:3216:CYS:SG	2.51	0.50
1:C:1492:CYS:SG	1:C:1494:MET:HG3	2.51	0.50
1:C:2479:LEU:HB2	1:C:2541:PHE:HZ	1.77	0.50
1:C:2749:GLU:HG3	1:C:2752:ASP:HB2	1.93	0.50
1:A:1492:CYS:SG	1:A:1494:MET:HG3	2.51	0.50
1:A:2812:SER:O	1:A:2816:MET:HE3	2.11	0.50
1:A:3288:GLY:HA2	1:A:3303:PRO:HB3	1.92	0.50
1:A:3391:GLU:HG3	1:A:3395:ARG:HE	1.76	0.50
1:B:2462:PRO:HG2	1:B:2465:ASP:HB2	1.93	0.50
1:B:2812:SER:O	1:B:2816:MET:HE3	2.12	0.50
1:B:3260:GLY:HA2	1:B:3325:ASN:ND2	2.27	0.50
1:D:1252:HIS:O	1:D:1275:ARG:NH1	2.45	0.50
1:D:2538:THR:O	1:D:2542:SER:HB2	2.11	0.50
1:D:3604:TYR:O	1:D:3607:GLU:HG3	2.12	0.50
1:A:867:LEU:HG	1:A:929:LEU:HD13	1.92	0.50
1:A:2155:LEU:HD11	1:A:2198:MET:CE	2.42	0.50
2:G:44:LYS:HD2	2:G:44:LYS:O	2.12	0.50
1:B:2495:VAL:HG22	1:B:2498:HIS:CE1	2.46	0.50
1:D:2462:PRO:HG2	1:D:2465:ASP:HB2	1.93	0.50
1:D:2573:GLU:OE2	1:D:2615:ARG:NE	2.42	0.50
1:D:4063:ASP:OD1	1:D:4064:MET:N	2.44	0.50
1:C:2514:ASN:N	1:C:2514:ASN:OD1	2.44	0.50
1:A:1252:HIS:O	1:A:1275:ARG:NH1	2.45	0.50
1:A:3266:MET:O	1:A:3266:MET:HG2	2.12	0.50
1:B:929:LEU:HA	1:B:932:LEU:HD12	1.93	0.50
1:B:1252:HIS:O	1:B:1275:ARG:NH1	2.45	0.50
1:B:2749:GLU:HG3	1:B:2752:ASP:HB2	1.93	0.50
1:D:2327:GLY:O	1:D:2331:TYR:HD1	1.94	0.50
1:D:2827:ARG:NH2	1:D:2935:TYR:OH	2.45	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:3266:MET:O	1:D:3266:MET:HG2	2.12	0.50
1:D:3391:GLU:HG3	1:D:3395:ARG:HE	1.76	0.50
1:C:601:ASP:OD1	1:C:1665:HIS:ND1	2.41	0.50
1:C:2462:PRO:HG2	1:C:2465:ASP:HB2	1.93	0.50
1:C:3539:ARG:NH1	1:C:3542:LEU:HD22	2.21	0.50
1:C:3673:MET:HE1	1:C:3728:ILE:HD13	1.93	0.50
1:C:3862:ASP:N	1:C:3862:ASP:OD1	2.44	0.50
1:C:4063:ASP:OD1	1:C:4064:MET:N	2.44	0.50
1:A:2021:CYS:O	1:A:2028:ARG:NH2	2.44	0.50
1:A:2538:THR:O	1:A:2542:SER:HB2	2.11	0.50
1:B:2827:ARG:NH2	1:B:2935:TYR:OH	2.45	0.50
1:D:127:MET:SD	1:D:128:THR:HG23	2.52	0.50
1:D:2021:CYS:O	1:D:2028:ARG:NH2	2.44	0.50
1:D:2781:VAL:HA	1:D:2789:PRO:HB2	1.93	0.50
1:C:2224:ARG:HG2	1:C:2225:PHE:CD2	2.47	0.50
1:C:3182:TYR:HA	1:C:3185:LYS:HE3	1.92	0.50
1:C:3604:TYR:O	1:C:3607:GLU:HG3	2.12	0.50
1:C:3872:GLU:HG3	1:C:3874:VAL:H	1.77	0.50
1:A:2514:ASN:N	1:A:2514:ASN:OD1	2.44	0.50
1:A:3357:HIS:O	1:A:3361:THR:HG23	2.11	0.50
1:A:3556:ASN:HB3	1:A:3559:LEU:HD13	1.94	0.50
2:G:79:ASP:OD2	2:G:80:TYR:HD2	1.95	0.50
2:F:79:ASP:OD1	2:F:80:TYR:HD1	1.95	0.50
1:B:2102:VAL:HG13	1:B:2120:MET:HE2	1.94	0.50
1:B:2311:PRO:HA	1:B:2314:LEU:HD23	1.93	0.50
1:B:3240:CYS:HB3	1:B:3243:ILE:HG12	1.93	0.50
1:D:908:VAL:HA	1:D:961:MET:HE3	1.93	0.50
1:D:2155:LEU:HD11	1:D:2198:MET:CE	2.42	0.50
1:D:3629:ARG:HA	1:D:3632:VAL:HG22	1.94	0.50
1:C:127:MET:SD	1:C:128:THR:HG23	2.52	0.50
1:C:758:ARG:HG2	1:C:763:PRO:HA	1.94	0.50
1:C:1252:HIS:O	1:C:1275:ARG:NH1	2.45	0.50
1:C:3556:ASN:HB3	1:C:3559:LEU:HD13	1.94	0.50
1:A:127:MET:SD	1:A:128:THR:HG23	2.52	0.49
1:B:1492:CYS:SG	1:B:1494:MET:HG3	2.51	0.49
1:B:2538:THR:O	1:B:2542:SER:HB2	2.11	0.49
1:B:3872:GLU:HG3	1:B:3874:VAL:H	1.77	0.49
1:D:3590:GLU:O	1:D:3594:ARG:HG2	2.11	0.49
1:D:3604:TYR:O	1:D:3608:GLN:HG2	2.13	0.49
1:D:3862:ASP:OD1	1:D:3862:ASP:N	2.44	0.49
1:C:11:VAL:HG11	1:C:164:ARG:HD3	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1293:LEU:HD11	1:A:1594:ARG:HD3	1.93	0.49
1:A:3366:ARG:NH1	1:A:3440:GLU:OE1	2.34	0.49
1:B:11:VAL:HG11	1:B:164:ARG:HD3	1.94	0.49
1:D:929:LEU:HA	1:D:932:LEU:HD12	1.93	0.49
1:D:3106:MET:SD	1:D:3129:LEU:HA	2.51	0.49
1:D:3233:PRO:HB2	1:D:3238:GLU:HB2	1.94	0.49
1:D:3556:ASN:HB3	1:D:3559:LEU:HD13	1.94	0.49
1:C:1031:THR:HG22	1:C:1035:ASN:HD21	1.78	0.49
1:C:2781:VAL:HA	1:C:2789:PRO:HB2	1.93	0.49
1:C:3590:GLU:O	1:C:3594:ARG:HG2	2.11	0.49
1:A:2311:PRO:HA	1:A:2314:LEU:HD23	1.93	0.49
1:B:283:ARG:NH1	1:B:290:TYR:OH	2.42	0.49
1:B:2155:LEU:HD11	1:B:2198:MET:CE	2.42	0.49
1:B:2781:VAL:HA	1:B:2789:PRO:HB2	1.93	0.49
1:C:2827:ARG:NH2	1:C:2935:TYR:OH	2.45	0.49
1:A:2462:PRO:HG2	1:A:2465:ASP:HB2	1.93	0.49
1:A:3332:ALA:HB3	1:A:3403:ARG:NH1	2.28	0.49
1:B:127:MET:SD	1:B:128:THR:HG23	2.52	0.49
1:B:3266:MET:HG2	1:B:3266:MET:O	2.12	0.49
1:B:3357:HIS:O	1:B:3361:THR:HG23	2.11	0.49
1:D:3260:GLY:HA2	1:D:3325:ASN:ND2	2.27	0.49
1:D:3539:ARG:NH1	1:D:3542:LEU:HD22	2.21	0.49
1:C:197:GLN:OE1	1:C:197:GLN:N	2.30	0.49
1:C:2155:LEU:HD11	1:C:2198:MET:CE	2.42	0.49
1:C:2311:PRO:HA	1:C:2314:LEU:HD23	1.93	0.49
1:C:2538:THR:O	1:C:2542:SER:HB2	2.11	0.49
1:C:3233:PRO:HB2	1:C:3238:GLU:HB2	1.94	0.49
1:C:3266:MET:O	1:C:3266:MET:HG2	2.12	0.49
1:C:3332:ALA:HB3	1:C:3403:ARG:NH1	2.28	0.49
1:A:3629:ARG:HA	1:A:3632:VAL:HG22	1.94	0.49
1:B:3604:TYR:O	1:B:3608:GLN:HG2	2.13	0.49
1:C:2477:PRO:HB3	1:C:2487:GLN:HG2	1.95	0.49
1:C:3202:PRO:HB2	1:C:3216:CYS:SG	2.51	0.49
1:A:2827:ARG:NH2	1:A:2935:TYR:OH	2.45	0.49
1:A:3240:CYS:HB3	1:A:3243:ILE:HG12	1.93	0.49
1:A:4736:ARG:NH2	1:D:4079:ASP:OD2	2.36	0.49
1:B:3604:TYR:O	1:B:3607:GLU:HG3	2.12	0.49
1:D:3332:ALA:HB3	1:D:3403:ARG:NH1	2.28	0.49
1:C:499:THR:HG23	1:C:502:HIS:H	1.77	0.49
1:C:2102:VAL:HG13	1:C:2120:MET:HE2	1.95	0.49
1:C:3604:TYR:O	1:C:3608:GLN:HG2	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1163:THR:HG22	1:A:1168:VAL:HA	1.95	0.49
1:A:2781:VAL:HA	1:A:2789:PRO:HB2	1.93	0.49
1:B:492:ASP:OD1	1:B:546:TRP:NE1	2.42	0.49
1:B:758:ARG:HG2	1:B:763:PRO:HA	1.94	0.49
1:B:3332:ALA:HB3	1:B:3403:ARG:NH1	2.28	0.49
1:D:1293:LEU:HD11	1:D:1594:ARG:HD3	1.93	0.49
1:C:3629:ARG:HA	1:C:3632:VAL:HG22	1.94	0.49
1:A:684:VAL:HG22	1:A:781:VAL:HG12	1.95	0.49
1:A:2382:GLU:OE1	1:A:2385:ARG:NH1	2.38	0.49
1:A:3604:TYR:O	1:A:3607:GLU:HG3	2.12	0.49
2:H:79:ASP:OD2	2:H:80:TYR:HD1	1.96	0.49
2:F:22:CYS:SG	2:F:50:LEU:HD11	2.53	0.49
1:D:499:THR:HG23	1:D:502:HIS:H	1.77	0.49
1:D:2479:LEU:HB2	1:D:2541:PHE:HZ	1.76	0.49
1:C:2812:SER:OG	1:C:2882:TYR:OH	2.15	0.49
1:A:758:ARG:HG2	1:A:763:PRO:HA	1.94	0.49
1:A:2003:GLN:NE2	1:A:2007:ASN:OD1	2.42	0.49
1:A:3539:ARG:HH11	1:A:3539:ARG:HA	1.78	0.49
1:A:3604:TYR:O	1:A:3608:GLN:HG2	2.13	0.49
1:B:2477:PRO:HB3	1:B:2487:GLN:HG2	1.95	0.49
1:A:929:LEU:HA	1:A:932:LEU:HD12	1.93	0.49
1:A:2224:ARG:HG2	1:A:2225:PHE:CD2	2.47	0.49
1:B:700:GLU:OE2	1:B:1458:HIS:NE2	2.33	0.49
1:D:1753:LYS:HB3	1:D:1758:ARG:HA	1.95	0.49
1:D:2812:SER:O	1:D:2816:MET:HE3	2.13	0.49
1:C:1163:THR:HG22	1:C:1168:VAL:HA	1.95	0.49
1:C:2773:ASN:OD1	1:C:2786:LYS:NZ	2.37	0.49
1:B:499:THR:HG23	1:B:502:HIS:H	1.77	0.48
1:B:667:MET:SD	1:B:790:ARG:NH2	2.86	0.48
1:B:2224:ARG:HG2	1:B:2225:PHE:CD2	2.47	0.48
1:B:3556:ASN:HB3	1:B:3559:LEU:HD13	1.94	0.48
1:D:2522:LEU:HD13	1:D:2582:MET:HE1	1.95	0.48
1:C:1116:GLY:HA3	1:C:1132:TRP:HB3	1.95	0.48
1:A:601:ASP:OD1	1:A:1665:HIS:ND1	2.41	0.48
1:A:3233:PRO:HB2	1:A:3238:GLU:HB2	1.94	0.48
1:A:3433:GLU:HG3	1:A:3437:MET:HE2	1.95	0.48
1:A:3941:ASP:OD1	1:A:3941:ASP:N	2.46	0.48
1:B:4092:ASP:HA	1:B:4095:LYS:HG2	1.95	0.48
1:D:667:MET:SD	1:D:790:ARG:NH2	2.86	0.48
1:D:684:VAL:HG22	1:D:781:VAL:HG12	1.95	0.48
1:D:758:ARG:HG2	1:D:763:PRO:HA	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:866:HIS:CE1	1:D:941:MET:HG2	2.49	0.48
1:A:4079:ASP:OD2	1:B:4736:ARG:NH2	2.35	0.48
2:E:79:ASP:OD2	2:E:80:TYR:HD1	1.96	0.48
1:B:41:GLY:O	1:B:45:ARG:NH1	2.47	0.48
1:B:1031:THR:HG22	1:B:1035:ASN:HD21	1.78	0.48
1:B:1116:GLY:HA3	1:B:1132:TRP:HB3	1.95	0.48
1:B:3629:ARG:HA	1:B:3632:VAL:HG22	1.94	0.48
1:D:11:VAL:HG11	1:D:164:ARG:HD3	1.94	0.48
1:D:1116:GLY:HA3	1:D:1132:TRP:HB3	1.95	0.48
1:D:4015:GLU:HA	1:D:4018:ASP:OD2	2.14	0.48
1:C:667:MET:SD	1:C:790:ARG:NH2	2.86	0.48
1:C:3264:THR:OG1	1:C:3265:GLU:OE1	2.31	0.48
1:C:3539:ARG:HA	1:C:3539:ARG:HH11	1.78	0.48
1:C:4015:GLU:HA	1:C:4018:ASP:OD2	2.14	0.48
1:A:1031:THR:HG22	1:A:1035:ASN:HD21	1.78	0.48
1:A:2765:LYS:NZ	1:A:2857:PRO:HB2	2.27	0.48
1:A:3539:ARG:NH1	1:A:3542:LEU:HD22	2.21	0.48
1:B:684:VAL:HG22	1:B:781:VAL:HG12	1.95	0.48
1:B:3264:THR:OG1	1:B:3265:GLU:OE1	2.31	0.48
1:A:3850:GLN:NE2	1:A:3872:GLU:OE1	2.33	0.48
2:H:11:ASP:OD2	2:H:12:GLY:N	2.47	0.48
1:D:3105:LYS:O	1:D:3108:GLU:HG3	2.14	0.48
1:D:3159:ASP:OD1	1:D:3159:ASP:N	2.46	0.48
1:A:499:THR:HG23	1:A:502:HIS:H	1.77	0.48
1:B:3105:LYS:O	1:B:3108:GLU:HG3	2.14	0.48
1:D:1163:THR:HG22	1:D:1168:VAL:HA	1.95	0.48
1:C:3263:TYR:N	1:C:3326:ASN:OD1	2.47	0.48
1:A:2477:PRO:HB3	1:A:2487:GLN:HG2	1.95	0.48
1:B:3201:MET:SD	1:B:3202:PRO:HD2	2.54	0.48
1:B:3455:GLU:OE2	1:B:3508:SER:OG	2.28	0.48
1:B:4015:GLU:HA	1:B:4018:ASP:OD2	2.14	0.48
1:D:1024:TYR:CZ	1:D:1032:LYS:HG3	2.49	0.48
1:D:1031:THR:HG22	1:D:1035:ASN:HD21	1.78	0.48
1:D:2736:ASP:OD1	1:D:2736:ASP:N	2.41	0.48
1:D:3263:TYR:N	1:D:3326:ASN:OD1	2.47	0.48
1:A:11:VAL:HG11	1:A:164:ARG:HD3	1.94	0.48
1:A:3256:LEU:HD11	1:A:3322:ILE:HD11	1.96	0.48
1:A:4712:PRO:O	1:A:4718:LYS:NZ	2.42	0.48
2:F:11:ASP:OD2	2:F:12:GLY:N	2.47	0.48
1:B:3539:ARG:HA	1:B:3539:ARG:HH11	1.78	0.48
1:C:41:GLY:O	1:C:45:ARG:NH1	2.46	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:700:GLU:OE2	1:C:1458:HIS:NE2	2.33	0.48
1:C:2123:LEU:O	1:C:2127:GLN:HG2	2.14	0.48
1:A:1116:GLY:HA3	1:A:1132:TRP:HB3	1.95	0.48
1:A:2522:LEU:HD13	1:A:2582:MET:HE1	1.95	0.48
1:A:3263:TYR:N	1:A:3326:ASN:OD1	2.47	0.48
1:A:4888:TYR:HD1	1:B:4918:ILE:CD1	2.27	0.48
2:H:48:PHE:HZ	2:H:63:VAL:HG21	1.79	0.48
1:B:1163:THR:HG22	1:B:1168:VAL:HA	1.94	0.48
1:B:1753:LYS:HB3	1:B:1758:ARG:HA	1.95	0.48
1:B:3233:PRO:HB2	1:B:3238:GLU:HB2	1.94	0.48
1:B:3291:ALA:O	1:B:3293:PRO:HD3	2.14	0.48
1:B:4754:ASN:HB3	1:B:4756:ARG:HH21	1.79	0.48
1:C:1024:TYR:CZ	1:C:1032:LYS:HG3	2.49	0.48
1:C:3201:MET:SD	1:C:3202:PRO:HD2	2.54	0.48
1:A:41:GLY:O	1:A:45:ARG:NH1	2.46	0.48
1:A:667:MET:SD	1:A:790:ARG:NH2	2.86	0.48
1:A:1078:GLU:OE2	1:A:1654:SER:OG	2.19	0.48
1:A:2573:GLU:OE2	1:A:2615:ARG:NE	2.42	0.48
1:A:2773:ASN:OD1	1:A:2786:LYS:NZ	2.37	0.48
1:A:2782:ASP:N	1:A:2782:ASP:OD1	2.47	0.48
1:B:866:HIS:CE1	1:B:941:MET:HG2	2.49	0.48
1:D:1079:LYS:HA	1:D:1189:LEU:HD11	1.96	0.48
1:D:3291:ALA:O	1:D:3293:PRO:HD3	2.14	0.48
1:D:3539:ARG:HH11	1:D:3539:ARG:HA	1.78	0.48
1:D:4016:LEU:O	1:D:4020:GLN:HG3	2.14	0.48
1:D:4177:TYR:CE1	1:D:4199:GLU:HG3	2.49	0.48
1:D:4754:ASN:HB3	1:D:4756:ARG:HH21	1.79	0.48
1:C:684:VAL:HG22	1:C:781:VAL:HG12	1.95	0.48
1:C:866:HIS:CE1	1:C:941:MET:HG2	2.49	0.48
1:C:3105:LYS:O	1:C:3108:GLU:HG3	2.14	0.48
1:A:320:LYS:NZ	1:A:383:HIS:O	2.32	0.47
1:A:1024:TYR:CZ	1:A:1032:LYS:HG3	2.49	0.47
1:A:2185:ILE:HG21	1:A:2203:MET:HE1	1.96	0.47
1:A:3105:LYS:O	1:A:3108:GLU:HG3	2.14	0.47
1:A:4064:MET:HE1	1:A:4110:PHE:CD2	2.49	0.47
1:A:4092:ASP:HA	1:A:4095:LYS:HG2	1.95	0.47
1:A:4754:ASN:HB3	1:A:4756:ARG:HH21	1.79	0.47
1:B:774:ASP:OD2	1:B:1470:ARG:NH2	2.36	0.47
1:B:2755:ILE:HD12	1:B:2813:LEU:HG	1.96	0.47
1:B:3256:LEU:HD11	1:B:3322:ILE:HD11	1.96	0.47
1:B:3673:MET:HE1	1:B:3728:ILE:HD13	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:4177:TYR:CE1	1:B:4199:GLU:HG3	2.49	0.47
1:D:601:ASP:OD1	1:D:1665:HIS:ND1	2.41	0.47
1:D:2477:PRO:HB3	1:D:2487:GLN:HG2	1.95	0.47
1:D:3771:HIS:O	1:D:3815:LYS:NZ	2.46	0.47
1:D:4092:ASP:HA	1:D:4095:LYS:HG2	1.95	0.47
1:A:1079:LYS:HA	1:A:1189:LEU:HD11	1.95	0.47
1:A:2393:ASP:OD1	1:A:2418:LEU:N	2.47	0.47
1:A:3291:ALA:O	1:A:3293:PRO:HD3	2.14	0.47
1:A:4177:TYR:CE1	1:A:4199:GLU:HG3	2.49	0.47
1:A:4888:TYR:HD1	1:B:4918:ILE:HD11	1.79	0.47
1:D:41:GLY:O	1:D:45:ARG:NH1	2.47	0.47
1:D:2386:ILE:HG22	1:D:2392:ARG:CZ	2.45	0.47
1:D:2393:ASP:OD1	1:D:2418:LEU:N	2.47	0.47
1:D:3201:MET:SD	1:D:3202:PRO:HD2	2.54	0.47
1:C:2386:ILE:HG22	1:C:2392:ARG:CZ	2.45	0.47
1:C:2573:GLU:OE2	1:C:2615:ARG:NE	2.42	0.47
2:F:16:PRO:HG3	2:F:106:LEU:HD11	1.95	0.47
1:B:1024:TYR:CZ	1:B:1032:LYS:HG3	2.49	0.47
1:D:3442:PHE:CD2	1:D:3514:LEU:HD22	2.49	0.47
1:D:3686:GLU:N	1:D:3686:GLU:OE2	2.47	0.47
1:D:4712:PRO:O	1:D:4718:LYS:NZ	2.42	0.47
1:C:70:GLU:OE2	1:C:110:ARG:NE	2.38	0.47
1:C:1753:LYS:HB3	1:C:1758:ARG:HA	1.95	0.47
1:A:3159:ASP:OD1	1:A:3159:ASP:N	2.46	0.47
1:A:3686:GLU:N	1:A:3686:GLU:OE2	2.47	0.47
1:B:70:GLU:OE2	1:B:110:ARG:NE	2.38	0.47
1:B:2209:GLU:HA	1:B:2212:VAL:HG22	1.97	0.47
1:B:2754:PHE:CE2	1:B:2813:LEU:HD11	2.47	0.47
1:D:3535:LEU:O	1:D:3538:THR:OG1	2.28	0.47
1:D:4813:LEU:O	1:D:4816:ILE:HG12	2.15	0.47
1:C:2393:ASP:OD1	1:C:2418:LEU:N	2.47	0.47
1:C:2765:LYS:HZ2	1:C:2860:PRO:HA	1.80	0.47
1:C:3686:GLU:N	1:C:3686:GLU:OE2	2.47	0.47
1:C:4092:ASP:HA	1:C:4095:LYS:HG2	1.95	0.47
1:C:4813:LEU:O	1:C:4816:ILE:HG12	2.15	0.47
1:A:866:HIS:CE1	1:A:941:MET:HG2	2.49	0.47
1:A:2095:GLN:HG3	1:A:2127:GLN:HB3	1.97	0.47
1:B:2095:GLN:HG3	1:B:2127:GLN:HB3	1.97	0.47
1:B:3686:GLU:OE2	1:B:3686:GLU:N	2.47	0.47
1:B:3941:ASP:OD1	1:B:3941:ASP:N	2.46	0.47
1:D:2384:ILE:O	1:D:2387:SER:OG	2.28	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:3734:HIS:CG	1:D:3735:LEU:N	2.82	0.47
1:C:2782:ASP:OD1	1:C:2782:ASP:N	2.47	0.47
1:C:4968:PHE:O	1:C:4974:GLY:HA3	2.15	0.47
1:A:3114:LYS:HE3	1:A:3123:LYS:HD2	1.97	0.47
1:A:3362:ILE:HG22	1:A:3437:MET:HB3	1.97	0.47
1:A:4813:LEU:O	1:A:4816:ILE:HG12	2.15	0.47
1:B:3362:ILE:HG22	1:B:3437:MET:HB3	1.97	0.47
1:B:3734:HIS:CG	1:B:3735:LEU:N	2.82	0.47
1:B:4000:MET:HE1	1:B:4058:ILE:HG12	1.96	0.47
1:B:4769:MET:SD	1:B:4769:MET:N	2.73	0.47
1:C:4754:ASN:HB3	1:C:4756:ARG:HH21	1.79	0.47
1:A:70:GLU:OE2	1:A:110:ARG:NE	2.38	0.47
1:A:618:GLN:OE1	1:A:1678:ASN:ND2	2.43	0.47
1:A:1753:LYS:HB3	1:A:1758:ARG:HA	1.95	0.47
1:A:4016:LEU:O	1:A:4020:GLN:HG3	2.14	0.47
1:B:618:GLN:OE1	1:B:1678:ASN:ND2	2.43	0.47
1:B:1079:LYS:HA	1:B:1189:LEU:HD11	1.95	0.47
1:B:2123:LEU:O	1:B:2127:GLN:HG2	2.14	0.47
1:B:3114:LYS:HE3	1:B:3123:LYS:HD2	1.97	0.47
1:B:4888:TYR:HD1	1:C:4918:ILE:CD1	2.28	0.47
1:D:2095:GLN:HG3	1:D:2127:GLN:HB3	1.97	0.47
1:D:2123:LEU:O	1:D:2127:GLN:HG2	2.14	0.47
1:D:2185:ILE:HG21	1:D:2203:MET:HE1	1.96	0.47
1:D:2527:LEU:HD11	1:D:2582:MET:HA	1.97	0.47
1:D:2773:ASN:OD1	1:D:2786:LYS:NZ	2.37	0.47
1:D:3443:ILE:HG12	1:D:3605:HIS:HD2	1.80	0.47
1:D:4968:PHE:O	1:D:4974:GLY:HA3	2.15	0.47
1:C:2209:GLU:HA	1:C:2212:VAL:HG22	1.97	0.47
1:C:2637:ALA:C	1:C:2640:PRO:HD2	2.35	0.47
1:C:2755:ILE:HD12	1:C:2813:LEU:HG	1.96	0.47
1:C:3256:LEU:HD11	1:C:3322:ILE:HD11	1.96	0.47
1:C:3362:ILE:HG22	1:C:3437:MET:HB3	1.97	0.47
1:C:3442:PHE:CD2	1:C:3514:LEU:HD22	2.49	0.47
1:C:4016:LEU:O	1:C:4020:GLN:HG3	2.14	0.47
1:C:4769:MET:SD	1:C:4769:MET:N	2.73	0.47
1:A:2637:ALA:C	1:A:2640:PRO:HD2	2.35	0.47
1:A:2755:ILE:HD12	1:A:2813:LEU:HG	1.97	0.47
1:A:4015:GLU:HA	1:A:4018:ASP:OD2	2.14	0.47
1:B:2386:ILE:HG22	1:B:2392:ARG:CZ	2.45	0.47
1:B:2773:ASN:OD1	1:B:2786:LYS:NZ	2.37	0.47
1:B:2782:ASP:N	1:B:2782:ASP:OD1	2.47	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:2001:PRO:O	1:D:2005:GLN:HG3	2.15	0.47
1:D:2637:ALA:C	1:D:2640:PRO:HD2	2.35	0.47
1:D:3717:ASP:OD1	1:D:3717:ASP:N	2.48	0.47
1:C:35:LEU:HD11	1:C:189:LEU:HD13	1.97	0.47
1:C:2095:GLN:HG3	1:C:2127:GLN:HB3	1.97	0.47
1:C:2185:ILE:HG21	1:C:2203:MET:HE1	1.97	0.47
1:C:3291:ALA:O	1:C:3293:PRO:HD3	2.14	0.47
1:C:3734:HIS:CG	1:C:3735:LEU:N	2.82	0.47
1:A:2209:GLU:HA	1:A:2212:VAL:HG22	1.97	0.47
1:A:2464:ASP:OD1	1:A:2465:ASP:N	2.48	0.47
1:A:3201:MET:SD	1:A:3202:PRO:HD2	2.54	0.47
1:A:3734:HIS:CG	1:A:3735:LEU:N	2.82	0.47
1:A:3842:LEU:HB2	1:A:3929:SER:HB2	1.97	0.47
1:B:3842:LEU:HB2	1:B:3929:SER:HB2	1.97	0.47
1:B:3850:GLN:NE2	1:B:3872:GLU:OE1	2.33	0.47
1:B:4079:ASP:OD2	1:C:4736:ARG:NH2	2.36	0.47
1:D:950:LEU:HD23	1:D:950:LEU:HA	1.81	0.47
1:A:2123:LEU:O	1:A:2127:GLN:HG2	2.14	0.47
1:A:3579:LEU:HB2	1:A:3582:ARG:HG2	1.97	0.47
1:A:4000:MET:HE1	1:A:4058:ILE:HG12	1.97	0.47
1:B:35:LEU:HD11	1:B:189:LEU:HD13	1.97	0.47
1:B:110:ARG:NH2	1:B:117:TYR:OH	2.48	0.47
1:B:2020:ASP:OD1	1:B:2020:ASP:N	2.42	0.47
1:B:4968:PHE:O	1:B:4974:GLY:HA3	2.15	0.47
1:D:110:ARG:NH2	1:D:117:TYR:OH	2.48	0.47
1:D:4918:ILE:CD1	1:C:4888:TYR:HD1	2.27	0.47
1:C:2527:LEU:HD11	1:C:2582:MET:HA	1.97	0.47
1:C:3443:ILE:HG12	1:C:3605:HIS:HD2	1.80	0.47
1:C:3765:TYR:CD2	1:C:4753:HIS:HA	2.50	0.47
1:A:3442:PHE:CD2	1:A:3514:LEU:HD22	2.49	0.46
1:A:3717:ASP:OD1	1:A:3717:ASP:N	2.48	0.46
1:A:3996:PHE:CD2	1:A:4020:GLN:HG2	2.51	0.46
1:B:707:VAL:HG23	1:B:782:SER:HB3	1.97	0.46
1:B:3263:TYR:N	1:B:3326:ASN:OD1	2.47	0.46
1:B:3442:PHE:CD2	1:B:3514:LEU:HD22	2.49	0.46
1:D:438:ILE:HG23	1:D:518:ILE:HD11	1.98	0.46
1:D:3362:ILE:HG22	1:D:3437:MET:HB3	1.97	0.46
1:C:1079:LYS:HA	1:C:1189:LEU:HD11	1.96	0.46
1:C:4000:MET:HE1	1:C:4058:ILE:HG12	1.98	0.46
1:C:4158:PRO:HA	1:C:4161:ARG:HD3	1.97	0.46
2:H:90:ILE:HG22	2:H:91:ILE:HG13	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2757:LYS:O	1:B:2761:TYR:HB2	2.15	0.46
1:B:2812:SER:OG	1:B:2882:TYR:OH	2.15	0.46
1:B:4158:PRO:HA	1:B:4161:ARG:HD3	1.97	0.46
1:B:4813:LEU:O	1:B:4816:ILE:HG12	2.15	0.46
1:D:3256:LEU:HD11	1:D:3322:ILE:HD11	1.96	0.46
1:D:4000:MET:HE1	1:D:4058:ILE:HG12	1.97	0.46
1:C:707:VAL:HG23	1:C:782:SER:HB3	1.98	0.46
1:C:2464:ASP:OD1	1:C:2465:ASP:N	2.48	0.46
1:C:2754:PHE:CE2	1:C:2813:LEU:HD11	2.47	0.46
1:A:1168:VAL:HG11	1:A:1176:GLU:HG2	1.98	0.46
1:A:3443:ILE:HG12	1:A:3605:HIS:HD2	1.80	0.46
2:F:87:HIS:HB3	2:F:90:ILE:HB	1.96	0.46
1:B:438:ILE:HG23	1:B:518:ILE:HD11	1.98	0.46
1:B:3765:TYR:CD2	1:B:4753:HIS:HA	2.50	0.46
1:B:4570:ALA:O	1:B:4574:ASN:ND2	2.44	0.46
1:D:3114:LYS:HE3	1:D:3123:LYS:HD2	1.97	0.46
1:C:438:ILE:HG23	1:C:518:ILE:HD11	1.98	0.46
1:A:1753:LYS:HD3	1:A:1759:ARG:N	2.31	0.46
1:A:2386:ILE:HG22	1:A:2392:ARG:CZ	2.45	0.46
1:B:1753:LYS:HD3	1:B:1759:ARG:N	2.31	0.46
1:B:2393:ASP:OD1	1:B:2418:LEU:N	2.47	0.46
1:B:3996:PHE:CD2	1:B:4020:GLN:HG2	2.51	0.46
1:D:1753:LYS:HD3	1:D:1759:ARG:N	2.31	0.46
1:D:2219:GLU:N	1:D:2219:GLU:OE2	2.49	0.46
1:D:4238:CYS:SG	1:D:4989:MET:HG2	2.56	0.46
1:A:707:VAL:HG23	1:A:782:SER:HB3	1.98	0.46
1:A:2512:ILE:HG21	1:A:2518:LEU:HD13	1.98	0.46
1:A:4968:PHE:O	1:A:4974:GLY:HA3	2.15	0.46
2:G:11:ASP:OD1	2:G:12:GLY:N	2.49	0.46
1:B:601:ASP:OD1	1:B:1665:HIS:ND1	2.41	0.46
1:B:1008:SER:HB3	1:B:1017:ARG:HB3	1.98	0.46
1:B:2001:PRO:O	1:B:2005:GLN:HG3	2.15	0.46
1:B:3579:LEU:HB2	1:B:3582:ARG:HG2	1.97	0.46
1:B:4016:LEU:O	1:B:4020:GLN:HG3	2.14	0.46
1:D:2755:ILE:HD12	1:D:2813:LEU:HG	1.97	0.46
1:D:4769:MET:SD	1:D:4769:MET:N	2.73	0.46
1:C:1753:LYS:HD3	1:C:1759:ARG:N	2.31	0.46
1:C:4238:CYS:SG	1:C:4989:MET:HG2	2.56	0.46
1:A:2527:LEU:HD11	1:A:2582:MET:HA	1.97	0.46
1:A:2757:LYS:O	1:A:2761:TYR:HB2	2.15	0.46
1:A:2986:VAL:HG22	1:A:2988:LYS:H	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:11:ASP:OD1	2:E:12:GLY:N	2.49	0.46
1:B:2185:ILE:HG21	1:B:2203:MET:HE1	1.97	0.46
1:B:2464:ASP:OD1	1:B:2465:ASP:N	2.48	0.46
1:B:2986:VAL:HG22	1:B:2988:LYS:H	1.81	0.46
1:B:4238:CYS:SG	1:B:4989:MET:HG2	2.56	0.46
1:D:3765:TYR:CD2	1:D:4753:HIS:HA	2.50	0.46
1:D:3996:PHE:CD2	1:D:4020:GLN:HG2	2.51	0.46
1:D:4064:MET:HE1	1:D:4110:PHE:CD2	2.49	0.46
1:C:110:ARG:NH2	1:C:117:TYR:OH	2.48	0.46
1:C:4064:MET:HE1	1:C:4110:PHE:CD2	2.48	0.46
1:C:4177:TYR:CE1	1:C:4199:GLU:HG3	2.49	0.46
1:A:438:ILE:HG23	1:A:518:ILE:HD11	1.98	0.46
1:A:866:HIS:CG	1:A:941:MET:HG2	2.51	0.46
1:A:2001:PRO:O	1:A:2005:GLN:HG3	2.15	0.46
1:B:194:SER:OG	1:B:195:PHE:N	2.49	0.46
1:B:1168:VAL:HG11	1:B:1176:GLU:HG2	1.98	0.46
1:B:2512:ILE:HG21	1:B:2518:LEU:HD13	1.97	0.46
1:D:2102:VAL:HG13	1:D:2120:MET:HE2	1.98	0.46
1:D:2209:GLU:HA	1:D:2212:VAL:HG22	1.97	0.46
1:D:2757:LYS:O	1:D:2761:TYR:HB2	2.15	0.46
1:C:3734:HIS:CG	1:C:3735:LEU:H	2.34	0.46
1:A:2102:VAL:HG13	1:A:2120:MET:HE2	1.97	0.46
1:A:2219:GLU:N	1:A:2219:GLU:OE2	2.49	0.46
1:A:2384:ILE:O	1:A:2387:SER:OG	2.28	0.46
1:A:2974:ILE:HG13	1:A:2975:ALA:N	2.31	0.46
1:A:3373:VAL:HG12	1:A:3398:PHE:HZ	1.81	0.46
2:F:18:ARG:NH2	2:F:50:LEU:HD22	2.22	0.46
1:B:483:MET:HE2	1:B:483:MET:N	2.30	0.46
1:D:866:HIS:O	1:D:869:ARG:HG3	2.16	0.46
1:D:2974:ILE:HG13	1:D:2975:ALA:N	2.31	0.46
1:C:1168:VAL:HG11	1:C:1176:GLU:HG2	1.98	0.46
1:C:2001:PRO:O	1:C:2005:GLN:HG3	2.15	0.46
1:C:3579:LEU:HB2	1:C:3582:ARG:HG2	1.97	0.46
1:A:110:ARG:NH2	1:A:117:TYR:OH	2.48	0.46
1:A:4238:CYS:SG	1:A:4989:MET:HG2	2.56	0.46
1:B:2219:GLU:OE2	1:B:2219:GLU:N	2.49	0.46
1:B:3003:LEU:HB2	1:B:3004:PRO:HD3	1.98	0.46
1:B:3373:VAL:HG12	1:B:3398:PHE:HZ	1.81	0.46
1:D:707:VAL:HG23	1:D:782:SER:HB3	1.97	0.46
1:D:957:LYS:O	1:D:960:MET:HG2	2.16	0.46
1:D:3842:LEU:HB2	1:D:3929:SER:HB2	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:866:HIS:CG	1:C:941:MET:HG2	2.51	0.46
1:C:2219:GLU:N	1:C:2219:GLU:OE2	2.49	0.46
1:C:2768:PHE:HB2	1:C:2857:PRO:HG2	1.98	0.46
1:C:3941:ASP:N	1:C:3941:ASP:OD1	2.46	0.46
1:A:894:GLY:HA3	1:A:903:LEU:HB3	1.98	0.46
1:A:3003:LEU:HB2	1:A:3004:PRO:HD3	1.98	0.46
1:A:3765:TYR:CD2	1:A:4753:HIS:HA	2.50	0.46
1:A:4686:LEU:HD23	1:A:4687:TYR:CE2	2.52	0.46
1:B:3767:GLN:OE1	1:B:3809:ASN:ND2	2.45	0.46
1:B:3856:LEU:HD12	1:B:3857:GLY:N	2.31	0.46
1:D:1168:VAL:HG11	1:D:1176:GLU:HG2	1.98	0.46
1:D:2858:GLN:HB2	1:D:2859:PRO:HD3	1.98	0.46
1:C:350:HIS:CE1	1:C:352:ALA:HB3	2.51	0.46
1:C:2522:LEU:HD13	1:C:2582:MET:CE	2.46	0.46
1:C:2757:LYS:O	1:C:2761:TYR:HB2	2.16	0.46
1:C:3734:HIS:O	1:C:3736:GLU:HG3	2.16	0.46
1:C:3842:LEU:HB2	1:C:3929:SER:HB2	1.97	0.46
1:A:2212:VAL:HG11	1:A:2256:TYR:CE2	2.52	0.45
1:B:866:HIS:O	1:B:869:ARG:HG3	2.16	0.45
1:B:2637:ALA:C	1:B:2640:PRO:HD2	2.35	0.45
1:B:3734:HIS:CG	1:B:3735:LEU:H	2.34	0.45
1:D:894:GLY:HA3	1:D:903:LEU:HB3	1.98	0.45
1:D:3269:VAL:HA	1:D:3273:THR:HB	1.98	0.45
1:D:3373:VAL:HG12	1:D:3398:PHE:HZ	1.81	0.45
1:D:3579:LEU:HB2	1:D:3582:ARG:HG2	1.97	0.45
1:D:3734:HIS:CG	1:D:3735:LEU:H	2.34	0.45
1:C:866:HIS:O	1:C:869:ARG:HG3	2.16	0.45
1:C:3996:PHE:CD2	1:C:4020:GLN:HG2	2.50	0.45
1:A:2012:PHE:CZ	1:A:2031:LEU:HD23	2.51	0.45
2:G:84:ALA:O	2:G:93:PRO:HB3	2.17	0.45
1:B:866:HIS:CG	1:B:941:MET:HG2	2.51	0.45
1:B:2527:LEU:HD11	1:B:2582:MET:HA	1.97	0.45
1:D:35:LEU:HD11	1:D:189:LEU:HD13	1.97	0.45
1:D:483:MET:HE2	1:D:483:MET:N	2.31	0.45
1:D:1226:PHE:O	1:D:1827:ARG:NH2	2.50	0.45
1:D:1469:VAL:HG13	1:D:1492:CYS:HB3	1.99	0.45
1:D:2522:LEU:HD13	1:D:2582:MET:CE	2.46	0.45
1:D:4158:PRO:HA	1:D:4161:ARG:HD3	1.97	0.45
1:C:3535:LEU:O	1:C:3538:THR:OG1	2.28	0.45
1:C:3856:LEU:HD12	1:C:3857:GLY:N	2.31	0.45
1:A:774:ASP:OD2	1:A:1470:ARG:NH2	2.36	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3734:HIS:CG	1:A:3735:LEU:H	2.34	0.45
1:A:4892:ARG:NH1	1:B:4895:GLY:O	2.44	0.45
1:B:2212:VAL:HG11	1:B:2256:TYR:CE2	2.52	0.45
1:D:866:HIS:CG	1:D:941:MET:HG2	2.51	0.45
1:D:2012:PHE:CZ	1:D:2031:LEU:HD23	2.51	0.45
1:D:2464:ASP:OD1	1:D:2465:ASP:N	2.48	0.45
1:D:3003:LEU:HB2	1:D:3004:PRO:HD3	1.98	0.45
1:D:4868:ASP:OD1	1:D:4870:ASP:N	2.50	0.45
1:C:3114:LYS:HE3	1:C:3123:LYS:HD2	1.97	0.45
1:A:35:LEU:HD11	1:A:189:LEU:HD13	1.97	0.45
1:A:957:LYS:O	1:A:960:MET:HG2	2.16	0.45
1:A:4158:PRO:HA	1:A:4161:ARG:HD3	1.97	0.45
1:B:2758:PHE:CE2	1:B:2926:LEU:HD12	2.52	0.45
1:B:4686:LEU:HD23	1:B:4687:TYR:CE2	2.52	0.45
1:B:4827:LEU:HD21	1:C:4843:LEU:HD21	1.99	0.45
1:D:194:SER:OG	1:D:195:PHE:N	2.49	0.45
1:D:613:ALA:HB2	1:D:1676:LEU:HD12	1.98	0.45
1:C:1078:GLU:OE2	1:C:1654:SER:OG	2.19	0.45
1:C:2758:PHE:CE2	1:C:2926:LEU:HD12	2.52	0.45
1:A:194:SER:OG	1:A:195:PHE:N	2.49	0.45
1:A:404:ILE:HG23	1:A:483:MET:HE1	1.98	0.45
1:A:1008:SER:HB3	1:A:1017:ARG:HB3	1.98	0.45
1:A:1297:PHE:CE2	1:A:1525:GLY:HA2	2.52	0.45
1:A:1469:VAL:HG13	1:A:1492:CYS:HB3	1.99	0.45
1:A:2754:PHE:CE2	1:A:2813:LEU:HD11	2.47	0.45
1:A:2758:PHE:CE2	1:A:2926:LEU:HD12	2.52	0.45
2:E:61:GLU:O	2:E:65:GLN:HG3	2.16	0.45
2:G:18:ARG:NH2	2:G:50:LEU:HD22	2.22	0.45
2:G:88:PRO:HB2	1:C:1680:ARG:HH12	1.82	0.45
1:B:1297:PHE:CE2	1:B:1525:GLY:HA2	2.52	0.45
1:B:2012:PHE:CZ	1:B:2031:LEU:HD23	2.51	0.45
1:B:2758:PHE:HE2	1:B:2926:LEU:HD12	1.82	0.45
1:C:938:HIS:HB3	1:C:1054:GLU:HB3	1.99	0.45
1:C:1008:SER:HB3	1:C:1017:ARG:HB3	1.98	0.45
1:C:3445:TRP:NE1	1:C:3455:GLU:OE1	2.46	0.45
1:A:3130:THR:HA	1:A:3133:THR:HG22	1.98	0.45
1:B:3535:LEU:O	1:B:3538:THR:OG1	2.28	0.45
1:B:3734:HIS:O	1:B:3736:GLU:HG3	2.16	0.45
1:B:4885:PHE:O	1:B:4889:VAL:HG22	2.17	0.45
1:D:2758:PHE:HE2	1:D:2926:LEU:HD12	1.82	0.45
1:D:2782:ASP:N	1:D:2782:ASP:OD1	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:2986:VAL:HG22	1:D:2988:LYS:H	1.81	0.45
1:D:3856:LEU:HD12	1:D:3857:GLY:N	2.31	0.45
1:C:908:VAL:HA	1:C:961:MET:HE3	1.98	0.45
1:C:1469:VAL:HG13	1:C:1492:CYS:HB3	1.99	0.45
1:C:3762:ARG:CZ	1:C:4755:GLU:HB2	2.47	0.45
1:A:866:HIS:O	1:A:869:ARG:HG3	2.16	0.45
1:A:1226:PHE:O	1:A:1827:ARG:NH2	2.50	0.45
1:A:2758:PHE:HE2	1:A:2926:LEU:HD12	1.82	0.45
1:A:2858:GLN:HB2	1:A:2859:PRO:HD3	1.99	0.45
1:A:3856:LEU:HD12	1:A:3857:GLY:N	2.31	0.45
1:B:3539:ARG:NH1	1:B:3542:LEU:HD22	2.21	0.45
1:D:2512:ILE:HG21	1:D:2518:LEU:HD13	1.97	0.45
1:D:2587:TYR:O	1:D:2590:SER:OG	2.18	0.45
1:D:2768:PHE:HB2	1:D:2857:PRO:HG2	1.98	0.45
1:D:3767:GLN:OE1	1:D:3809:ASN:ND2	2.44	0.45
1:D:3941:ASP:OD1	1:D:3941:ASP:N	2.46	0.45
1:D:4736:ARG:NH2	1:C:4079:ASP:OD2	2.36	0.45
1:C:194:SER:OG	1:C:195:PHE:N	2.49	0.45
1:C:2986:VAL:HG22	1:C:2988:LYS:H	1.81	0.45
1:C:3373:VAL:HG12	1:C:3398:PHE:HZ	1.81	0.45
1:A:2768:PHE:HB2	1:A:2857:PRO:HG2	1.97	0.45
1:A:3762:ARG:CZ	1:A:4755:GLU:HB2	2.47	0.45
1:A:4217:PHE:O	1:A:4221:VAL:HG22	2.17	0.45
2:F:84:ALA:O	2:F:93:PRO:HB3	2.17	0.45
1:B:350:HIS:CE1	1:B:352:ALA:HB3	2.51	0.45
1:B:957:LYS:O	1:B:960:MET:HG2	2.16	0.45
1:B:2747:ILE:HD11	1:B:2814:LYS:HD3	1.99	0.45
1:B:2768:PHE:HB2	1:B:2857:PRO:HG2	1.97	0.45
1:D:1997:GLU:O	1:D:2000:SER:OG	2.27	0.45
1:D:2212:VAL:HG11	1:D:2256:TYR:CE2	2.52	0.45
1:D:3501:ASP:N	1:D:3501:ASP:OD1	2.50	0.45
1:C:1226:PHE:O	1:C:1827:ARG:NH2	2.50	0.45
1:C:2974:ILE:HG13	1:C:2975:ALA:N	2.31	0.45
1:C:3717:ASP:N	1:C:3717:ASP:OD1	2.48	0.45
1:C:4868:ASP:OD1	1:C:4870:ASP:N	2.50	0.45
1:A:350:HIS:CE1	1:A:352:ALA:HB3	2.51	0.45
2:H:84:ALA:O	2:H:93:PRO:HB3	2.17	0.45
1:B:894:GLY:HA3	1:B:903:LEU:HB3	1.98	0.45
1:B:2522:LEU:HD13	1:B:2582:MET:CE	2.46	0.45
1:D:350:HIS:CE1	1:D:352:ALA:HB3	2.52	0.45
1:D:2747:ILE:HD11	1:D:2814:LYS:HD3	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:4686:LEU:HD23	1:D:4687:TYR:CE2	2.52	0.45
1:D:4918:ILE:HD11	1:C:4888:TYR:HD1	1.82	0.45
1:C:2256:TYR:HD2	1:C:2256:TYR:O	2.00	0.45
1:C:2512:ILE:HG21	1:C:2518:LEU:HD13	1.97	0.45
1:C:2858:GLN:HB2	1:C:2859:PRO:HD3	1.98	0.45
1:C:3249:LEU:HD21	1:C:3273:THR:HG23	1.99	0.45
1:C:4885:PHE:O	1:C:4889:VAL:HG22	2.17	0.45
1:A:365:LYS:HE3	1:A:365:LYS:HB3	1.74	0.45
1:A:2821:TRP:HH2	1:A:2877:GLN:HB3	1.82	0.45
1:A:3628:ARG:HG3	1:A:3631:ALA:HB3	1.99	0.45
1:A:4868:ASP:OD1	1:A:4870:ASP:N	2.50	0.45
2:E:11:ASP:OD1	2:E:13:ARG:N	2.32	0.45
1:B:1469:VAL:HG13	1:B:1492:CYS:HB3	1.99	0.45
1:B:2309:SER:OG	1:B:2321:ILE:O	2.20	0.45
1:B:3628:ARG:HG3	1:B:3631:ALA:HB3	1.99	0.45
1:B:3762:ARG:CZ	1:B:4755:GLU:HB2	2.47	0.45
1:D:2867:LEU:HD21	1:D:2871:LEU:HB3	1.99	0.45
1:C:144:GLU:HG3	1:C:175:SER:HB3	1.99	0.45
1:C:894:GLY:HA3	1:C:903:LEU:HB3	1.99	0.45
1:C:4686:LEU:HD23	1:C:4687:TYR:CE2	2.52	0.45
1:A:2747:ILE:HD11	1:A:2814:LYS:HD3	1.99	0.44
1:A:3264:THR:OG1	1:A:3265:GLU:OE1	2.31	0.44
1:A:3269:VAL:HA	1:A:3273:THR:HB	1.98	0.44
1:B:144:GLU:HG3	1:B:175:SER:HB3	1.99	0.44
1:B:613:ALA:HB2	1:B:1676:LEU:HD12	1.99	0.44
1:B:3130:THR:HA	1:B:3133:THR:HG22	1.98	0.44
1:D:460:GLN:HB2	1:D:463:GLU:OE1	2.18	0.44
1:D:4825:THR:O	1:D:4828:SER:OG	2.27	0.44
1:C:1297:PHE:CE2	1:C:1525:GLY:HA2	2.52	0.44
1:C:2212:VAL:HG11	1:C:2256:TYR:CE2	2.52	0.44
1:C:2764:GLU:HG3	1:C:2857:PRO:HB3	2.00	0.44
1:C:3449:HIS:C	1:C:3449:HIS:ND1	2.71	0.44
1:C:3628:ARG:HG3	1:C:3631:ALA:HB3	1.99	0.44
1:A:1025:ARG:H	1:A:1025:ARG:HD2	1.82	0.44
1:B:1226:PHE:O	1:B:1827:ARG:NH2	2.50	0.44
1:B:2823:ILE:HA	1:B:2937:VAL:HA	2.00	0.44
1:D:275:ARG:NH1	1:D:338:GLU:OE2	2.50	0.44
1:D:1025:ARG:H	1:D:1025:ARG:HD2	1.82	0.44
1:C:275:ARG:NH1	1:C:338:GLU:OE2	2.50	0.44
1:C:3130:THR:HA	1:C:3133:THR:HG22	1.98	0.44
1:C:4217:PHE:O	1:C:4221:VAL:HG22	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3734:HIS:O	1:A:3736:GLU:HG3	2.16	0.44
1:B:2821:TRP:HD1	1:B:2939:ARG:HA	1.83	0.44
1:B:4868:ASP:OD1	1:B:4870:ASP:N	2.50	0.44
1:D:938:HIS:HB3	1:D:1054:GLU:HB3	1.99	0.44
1:D:1008:SER:HB3	1:D:1017:ARG:HB3	1.98	0.44
1:D:3445:TRP:NE1	1:D:3455:GLU:OE1	2.46	0.44
1:D:3762:ARG:CZ	1:D:4755:GLU:HB2	2.47	0.44
1:D:4843:LEU:HD21	1:C:4827:LEU:HD21	1.99	0.44
1:C:2012:PHE:CZ	1:C:2031:LEU:HD23	2.51	0.44
1:C:2623:LEU:O	1:C:2627:VAL:HG23	2.18	0.44
1:C:3003:LEU:HB2	1:C:3004:PRO:HD3	1.98	0.44
1:A:2821:TRP:HD1	1:A:2939:ARG:HA	1.83	0.44
1:A:3137:LEU:HD21	1:A:3190:LEU:HD23	2.00	0.44
1:A:3226:GLU:C	1:A:3228:ALA:H	2.21	0.44
2:G:61:GLU:O	2:G:65:GLN:HG3	2.17	0.44
1:B:938:HIS:HB3	1:B:1054:GLU:HB3	1.99	0.44
1:B:961:MET:H	1:B:961:MET:HG2	1.58	0.44
1:B:2479:LEU:HD22	1:B:2480:GLY:H	1.83	0.44
1:B:2641:LEU:HD23	1:B:2641:LEU:HA	1.88	0.44
1:B:3249:LEU:HD21	1:B:3273:THR:HG23	1.99	0.44
1:B:3269:VAL:HA	1:B:3273:THR:HB	1.98	0.44
1:B:3449:HIS:ND1	1:B:3449:HIS:C	2.71	0.44
1:D:1823:GLY:O	1:D:1825:HIS:ND1	2.47	0.44
1:D:2256:TYR:O	1:D:2256:TYR:HD2	2.00	0.44
1:D:2758:PHE:CE2	1:D:2926:LEU:HD12	2.52	0.44
1:D:2793:PRO:HA	1:D:2855:TYR:CG	2.53	0.44
1:D:3130:THR:HA	1:D:3133:THR:HG22	1.98	0.44
1:D:4039:MET:HG2	1:D:4040:ILE:N	2.33	0.44
1:C:460:GLN:HB2	1:C:463:GLU:OE1	2.18	0.44
1:C:501:ALA:O	1:C:505:GLU:HG3	2.18	0.44
1:C:613:ALA:HB2	1:C:1676:LEU:HD12	1.99	0.44
1:C:2747:ILE:HD11	1:C:2814:LYS:HD3	1.99	0.44
1:C:2755:ILE:CD1	1:C:2813:LEU:HG	2.48	0.44
1:C:2758:PHE:HE2	1:C:2926:LEU:HD12	1.82	0.44
1:A:4885:PHE:O	1:A:4889:VAL:HG22	2.17	0.44
1:B:901:LYS:HA	1:B:901:LYS:HD2	1.81	0.44
1:B:908:VAL:HA	1:B:961:MET:HE3	2.00	0.44
1:B:976:ARG:HA	1:B:1044:ARG:HH12	1.83	0.44
1:B:1970:GLN:HG2	1:B:3642:TYR:HA	2.00	0.44
1:B:2755:ILE:CD1	1:B:2813:LEU:HG	2.48	0.44
1:B:3226:GLU:C	1:B:3228:ALA:H	2.21	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:4039:MET:HG2	1:B:4040:ILE:N	2.33	0.44
1:D:1206:GLN:HA	1:D:1227:ALA:O	2.18	0.44
1:D:1297:PHE:CE2	1:D:1525:GLY:HA2	2.52	0.44
1:D:1970:GLN:HG2	1:D:3642:TYR:HA	2.00	0.44
1:D:2755:ILE:CD1	1:D:2813:LEU:HG	2.48	0.44
1:D:3310:ASP:HA	1:D:3350:ARG:HH12	1.83	0.44
1:D:3734:HIS:O	1:D:3736:GLU:HG3	2.16	0.44
1:C:957:LYS:O	1:C:960:MET:HG2	2.16	0.44
1:C:2587:TYR:O	1:C:2590:SER:OG	2.18	0.44
1:C:4039:MET:HG2	1:C:4040:ILE:N	2.33	0.44
1:A:613:ALA:HB2	1:A:1676:LEU:HD12	1.99	0.44
1:A:2522:LEU:HD13	1:A:2582:MET:CE	2.46	0.44
1:A:2755:ILE:CD1	1:A:2813:LEU:HG	2.48	0.44
1:B:2740:VAL:HG21	1:B:2819:TRP:NE1	2.33	0.44
1:B:3376:GLU:OE2	1:B:3450:ASN:ND2	2.51	0.44
1:B:3717:ASP:N	1:B:3717:ASP:OD1	2.48	0.44
1:D:501:ALA:O	1:D:505:GLU:HG3	2.18	0.44
1:D:2623:LEU:O	1:D:2627:VAL:HG23	2.18	0.44
1:D:3249:LEU:HD21	1:D:3273:THR:HG23	1.99	0.44
1:D:3264:THR:OG1	1:D:3265:GLU:OE1	2.31	0.44
1:C:950:LEU:HD23	1:C:950:LEU:HA	1.81	0.44
1:A:460:GLN:HB2	1:A:463:GLU:OE1	2.18	0.44
1:A:2793:PRO:HA	1:A:2855:TYR:CG	2.53	0.44
2:H:88:PRO:HB2	1:D:1680:ARG:HH12	1.82	0.44
1:B:460:GLN:HB2	1:B:463:GLU:OE1	2.18	0.44
1:B:2974:ILE:HG13	1:B:2975:ALA:N	2.31	0.44
1:B:3443:ILE:HG12	1:B:3605:HIS:HD2	1.80	0.44
1:B:4892:ARG:NH1	1:C:4895:GLY:O	2.44	0.44
1:D:2716:ASP:OD1	1:D:2716:ASP:N	2.51	0.44
1:D:2754:PHE:CE2	1:D:2813:LEU:HD11	2.47	0.44
1:D:3628:ARG:HG3	1:D:3631:ALA:HB3	1.99	0.44
1:C:1970:GLN:HG2	1:C:3642:TYR:HA	2.00	0.44
1:C:2479:LEU:HD22	1:C:2480:GLY:H	1.83	0.44
1:C:2765:LYS:HD3	1:C:2765:LYS:HA	1.70	0.44
1:C:2821:TRP:HD1	1:C:2939:ARG:HA	1.82	0.44
1:C:2867:LEU:HD21	1:C:2871:LEU:HB3	1.99	0.44
1:C:3501:ASP:OD1	1:C:3501:ASP:N	2.50	0.44
1:A:144:GLU:HG3	1:A:175:SER:HB3	1.99	0.44
1:A:1780:PRO:HG2	2:E:42:ARG:HD3	2.00	0.44
1:A:2764:GLU:HG3	1:A:2857:PRO:HB3	2.00	0.44
1:A:3310:ASP:HA	1:A:3350:ARG:HH12	1.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4039:MET:HG2	1:A:4040:ILE:N	2.33	0.44
1:A:5030:LYS:HB2	1:A:5030:LYS:HE2	1.78	0.44
1:B:835:ARG:NH2	1:B:1210:SER:O	2.35	0.44
1:B:1000:ARG:HA	1:B:1003:GLN:OE1	2.18	0.44
1:B:2858:GLN:HB2	1:B:2859:PRO:HD3	1.98	0.44
1:B:3607:GLU:OE2	1:B:3608:GLN:NE2	2.48	0.44
1:D:2821:TRP:HD1	1:D:2939:ARG:HA	1.83	0.44
1:C:1000:ARG:HA	1:C:1003:GLN:OE1	2.18	0.44
1:C:2230:THR:HB	1:C:2267:MET:HE3	2.00	0.44
1:C:3255:GLY:O	1:C:3258:GLU:HG3	2.18	0.44
1:A:3209:GLN:HG2	1:A:3210:LEU:HG	2.00	0.44
1:A:3376:GLU:OE2	1:A:3450:ASN:ND2	2.51	0.44
1:A:3835:LEU:HD22	1:A:3880:PHE:HZ	1.83	0.44
2:E:47:LYS:NZ	2:E:107:GLU:OE2	2.34	0.44
2:G:23:VAL:HG22	2:G:47:LYS:HD3	1.99	0.44
1:B:2516:ASP:N	1:B:2516:ASP:OD1	2.51	0.44
1:D:144:GLU:HG3	1:D:175:SER:HB3	2.00	0.44
1:D:2740:VAL:HG21	1:D:2819:TRP:NE1	2.33	0.44
1:D:3378:GLN:HA	1:D:3381:LEU:HD23	2.00	0.44
1:C:365:LYS:HE3	1:C:365:LYS:HB3	1.74	0.44
1:C:3269:VAL:HA	1:C:3273:THR:HB	1.98	0.44
1:C:3376:GLU:OE2	1:C:3450:ASN:ND2	2.51	0.44
1:A:908:VAL:HA	1:A:961:MET:HE3	2.00	0.43
1:A:938:HIS:HB3	1:A:1054:GLU:HB3	1.99	0.43
1:A:950:LEU:HD23	1:A:950:LEU:HA	1.81	0.43
1:A:3249:LEU:HD21	1:A:3273:THR:HG23	1.99	0.43
1:A:3255:GLY:O	1:A:3258:GLU:HG3	2.18	0.43
1:A:3449:HIS:C	1:A:3449:HIS:ND1	2.71	0.43
1:A:3673:MET:HE1	1:A:3728:ILE:HD13	1.99	0.43
1:A:4253:GLU:HG3	1:A:4557:ARG:HH21	1.83	0.43
1:B:3835:LEU:HD22	1:B:3880:PHE:HZ	1.83	0.43
1:B:4897:ILE:O	1:B:4901:ILE:HG12	2.18	0.43
1:D:1943:LEU:HB2	1:D:2123:LEU:HD21	2.00	0.43
1:C:817:PRO:O	1:C:820:ARG:NH2	2.51	0.43
1:C:2694:GLU:HA	1:C:2697:ARG:NH1	2.33	0.43
1:A:501:ALA:O	1:A:505:GLU:HG3	2.18	0.43
1:A:817:PRO:O	1:A:820:ARG:NH2	2.51	0.43
1:A:1636:MET:CE	1:A:1649:ASP:HA	2.49	0.43
1:A:2823:ILE:HA	1:A:2937:VAL:HA	2.00	0.43
1:A:3284:TRP:HB3	1:A:3305:THR:HG21	2.00	0.43
1:A:3528:THR:HG23	1:A:3573:MET:HE3	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:275:ARG:NH1	1:B:338:GLU:OE2	2.50	0.43
1:B:2623:LEU:O	1:B:2627:VAL:HG23	2.18	0.43
1:B:2764:GLU:HG3	1:B:2857:PRO:HB3	2.00	0.43
1:B:2765:LYS:HD3	1:B:2765:LYS:HA	1.70	0.43
1:B:2821:TRP:HB3	1:B:2937:VAL:HG22	2.01	0.43
1:B:3137:LEU:HD21	1:B:3190:LEU:HD23	2.00	0.43
1:B:4712:PRO:O	1:B:4718:LYS:NZ	2.42	0.43
1:D:1465:ASP:OD1	1:D:1468:LYS:HG2	2.18	0.43
1:C:483:MET:N	1:C:483:MET:HE2	2.32	0.43
1:C:2823:ILE:HA	1:C:2937:VAL:HA	2.00	0.43
1:C:3378:GLN:HA	1:C:3381:LEU:HD23	2.00	0.43
1:C:4253:GLU:HG3	1:C:4557:ARG:HH21	1.83	0.43
1:A:1465:ASP:OD1	1:A:1468:LYS:HG2	2.18	0.43
1:A:1943:LEU:HB2	1:A:2123:LEU:HD21	2.00	0.43
1:A:2867:LEU:HD21	1:A:2871:LEU:HB3	1.99	0.43
2:F:32:ASP:OD2	2:F:34:LYS:NZ	2.47	0.43
1:B:501:ALA:O	1:B:505:GLU:HG3	2.18	0.43
1:B:2668:SER:C	1:B:2670:GLU:H	2.22	0.43
1:B:2821:TRP:HH2	1:B:2877:GLN:HB3	1.83	0.43
1:B:3209:GLN:HG2	1:B:3210:LEU:HG	2.00	0.43
1:D:328:LYS:HE3	1:D:328:LYS:HB3	1.75	0.43
1:D:817:PRO:O	1:D:820:ARG:NH2	2.51	0.43
1:D:4217:PHE:O	1:D:4221:VAL:HG22	2.17	0.43
1:D:4813:LEU:HD23	1:D:4813:LEU:HA	1.79	0.43
1:D:4897:ILE:O	1:D:4901:ILE:HG12	2.18	0.43
1:C:1943:LEU:HB2	1:C:2123:LEU:HD21	2.00	0.43
1:C:2821:TRP:HH2	1:C:2877:GLN:HB3	1.83	0.43
1:C:2821:TRP:HB3	1:C:2937:VAL:HG22	2.01	0.43
1:C:4897:ILE:O	1:C:4901:ILE:HG12	2.18	0.43
1:A:2538:THR:HG23	1:A:2541:PHE:H	1.83	0.43
1:A:2694:GLU:HA	1:A:2697:ARG:NH1	2.33	0.43
2:E:90:ILE:HG22	2:E:91:ILE:HG13	1.99	0.43
1:B:817:PRO:O	1:B:820:ARG:NH2	2.51	0.43
1:B:870:ILE:HG12	1:B:1051:TYR:HE2	1.84	0.43
1:B:1025:ARG:H	1:B:1025:ARG:HD2	1.82	0.43
1:B:1823:GLY:O	1:B:1825:HIS:ND1	2.47	0.43
1:B:2256:TYR:HD2	1:B:2256:TYR:O	2.00	0.43
1:B:4888:TYR:HD1	1:C:4918:ILE:HD11	1.83	0.43
1:D:664:PHE:HB3	1:D:811:CYS:SG	2.59	0.43
1:D:2479:LEU:HD22	1:D:2480:GLY:H	1.83	0.43
1:D:3449:HIS:ND1	1:D:3449:HIS:C	2.71	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1465:ASP:OD1	1:C:1468:LYS:HG2	2.18	0.43
1:C:3226:GLU:C	1:C:3228:ALA:H	2.21	0.43
1:A:870:ILE:HG12	1:A:1051:TYR:HE2	1.84	0.43
1:A:1206:GLN:HA	1:A:1227:ALA:O	2.18	0.43
1:A:2256:TYR:O	1:A:2256:TYR:HD2	2.00	0.43
1:A:2479:LEU:HD22	1:A:2480:GLY:H	1.83	0.43
1:A:3823:LYS:HD3	1:A:3823:LYS:HA	1.83	0.43
1:B:2867:LEU:HD21	1:B:2871:LEU:HB3	1.99	0.43
1:B:3255:GLY:O	1:B:3258:GLU:HG3	2.18	0.43
1:D:320:LYS:NZ	1:D:383:HIS:O	2.32	0.43
1:D:2821:TRP:HB3	1:D:2937:VAL:HG22	2.00	0.43
1:D:3209:GLN:HG2	1:D:3210:LEU:HG	2.00	0.43
1:D:3255:GLY:O	1:D:3258:GLU:HG3	2.18	0.43
1:D:3880:PHE:HA	1:D:3883:ASP:OD2	2.19	0.43
1:D:4885:PHE:O	1:D:4889:VAL:HG22	2.17	0.43
1:C:976:ARG:HA	1:C:1044:ARG:HH12	1.83	0.43
1:C:1025:ARG:H	1:C:1025:ARG:HD2	1.82	0.43
1:C:3284:TRP:HB3	1:C:3305:THR:HG21	2.00	0.43
1:A:2516:ASP:OD1	1:A:2516:ASP:N	2.51	0.43
1:A:2740:VAL:HG21	1:A:2819:TRP:NE1	2.33	0.43
1:A:3183:VAL:O	1:A:3187:ARG:HG3	2.19	0.43
1:A:3501:ASP:N	1:A:3501:ASP:OD1	2.50	0.43
2:F:48:PHE:HZ	2:F:63:VAL:HG21	1.84	0.43
2:F:88:PRO:HB2	1:B:1680:ARG:HH12	1.83	0.43
1:B:1231[B]:GLN:H	1:B:1231[B]:GLN:HG3	1.56	0.43
1:B:1465:ASP:OD1	1:B:1468:LYS:HG2	2.18	0.43
1:B:3310:ASP:HA	1:B:3350:ARG:HH12	1.83	0.43
1:B:3705:PHE:HA	1:B:3708:THR:HG22	2.01	0.43
1:B:3880:PHE:HA	1:B:3883:ASP:OD2	2.19	0.43
1:B:4217:PHE:O	1:B:4221:VAL:HG22	2.17	0.43
1:B:4253:GLU:HG3	1:B:4557:ARG:NH2	2.34	0.43
1:D:416:LYS:HE3	1:D:416:LYS:HB2	1.84	0.43
1:D:976:ARG:HA	1:D:1044:ARG:HH12	1.83	0.43
1:D:1636:MET:CE	1:D:1649:ASP:HA	2.48	0.43
1:D:2516:ASP:OD1	1:D:2516:ASP:N	2.51	0.43
1:D:2694:GLU:HA	1:D:2697:ARG:NH1	2.33	0.43
1:D:2764:GLU:HG3	1:D:2857:PRO:HB3	2.00	0.43
1:D:4689:THR:OG1	1:D:4690:GLU:OE1	2.34	0.43
1:D:4961:CYS:HB3	1:D:4983:HIS:CE1	2.54	0.43
1:C:664:PHE:HB3	1:C:811:CYS:SG	2.59	0.43
1:C:1206:GLN:HA	1:C:1227:ALA:O	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:2793:PRO:HA	1:C:2855:TYR:CG	2.53	0.43
1:C:3137:LEU:HD21	1:C:3190:LEU:HD23	2.00	0.43
1:C:4253:GLU:HG3	1:C:4557:ARG:NH2	2.34	0.43
1:A:275:ARG:NH1	1:A:338:GLU:OE2	2.50	0.43
1:A:1970:GLN:HG2	1:A:3642:TYR:HA	2.00	0.43
1:A:2462:PRO:HB2	1:A:2464:ASP:OD1	2.19	0.43
1:A:2600:ARG:O	1:A:2604:GLU:HG3	2.19	0.43
1:A:2677:LYS:HB3	1:A:2677:LYS:HE2	1.85	0.43
1:A:2821:TRP:HB3	1:A:2937:VAL:HG22	2.00	0.43
1:A:3384:LYS:HD2	1:A:3386:GLU:HB3	2.01	0.43
1:A:4768:LEU:HB3	1:A:4769:MET:HE3	2.00	0.43
1:A:4895:GLY:O	1:D:4892:ARG:NH1	2.44	0.43
1:A:4918:ILE:CD1	1:D:4888:TYR:HD1	2.31	0.43
2:G:11:ASP:OD1	2:G:13:ARG:N	2.32	0.43
1:B:1636:MET:CE	1:B:1649:ASP:HA	2.49	0.43
1:B:2600:ARG:O	1:B:2604:GLU:HG3	2.19	0.43
1:B:2793:PRO:HA	1:B:2855:TYR:CG	2.53	0.43
1:B:3378:GLN:HA	1:B:3381:LEU:HD23	2.00	0.43
1:B:4961:CYS:HB3	1:B:4983:HIS:CE1	2.54	0.43
1:D:196:MET:SD	1:D:196:MET:N	2.92	0.43
1:D:1249:PRO:HA	1:D:1250:PRO:HD3	1.95	0.43
1:D:2462:PRO:HB2	1:D:2464:ASP:OD1	2.19	0.43
1:D:3183:VAL:O	1:D:3187:ARG:HG3	2.19	0.43
1:D:3284:TRP:HB3	1:D:3305:THR:HG21	2.00	0.43
1:D:4638:TYR:O	1:D:4641:PRO:HD2	2.19	0.43
1:C:416:LYS:HE3	1:C:416:LYS:HB2	1.84	0.43
1:C:2600:ARG:O	1:C:2604:GLU:HG3	2.19	0.43
1:C:2740:VAL:HG21	1:C:2819:TRP:NE1	2.33	0.43
1:A:2238:TYR:O	1:A:2242:ILE:HG13	2.19	0.43
1:A:3880:PHE:HA	1:A:3883:ASP:OD2	2.19	0.43
2:E:84:ALA:O	2:E:93:PRO:HB3	2.17	0.43
2:H:42:ARG:HD3	1:D:1780:PRO:HG2	2.01	0.43
2:H:57:ARG:HD3	2:H:80:TYR:HA	2.00	0.43
2:F:11:ASP:OD2	2:F:13:ARG:N	2.35	0.43
1:B:664:PHE:HB3	1:B:811:CYS:SG	2.59	0.43
1:B:1424:PRO:HA	1:B:1427:ILE:HG22	2.01	0.43
1:B:1658:ASP:OD1	1:B:1658:ASP:N	2.52	0.43
1:B:1943:LEU:HB2	1:B:2123:LEU:HD21	2.00	0.43
1:B:2694:GLU:HA	1:B:2697:ARG:NH1	2.33	0.43
1:B:2768:PHE:O	1:B:2771:ILE:HG22	2.19	0.43
1:B:3462:ASN:N	1:B:3462:ASN:OD1	2.52	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3501:ASP:N	1:B:3501:ASP:OD1	2.50	0.43
1:D:1447:CYS:HB3	1:D:1555:LEU:HB3	2.00	0.43
1:D:2538:THR:HG23	1:D:2541:PHE:H	1.83	0.43
1:D:3112:LEU:HA	1:D:3112:LEU:HD13	1.85	0.43
1:D:3137:LEU:HD21	1:D:3190:LEU:HD23	2.00	0.43
1:D:4253:GLU:HG3	1:D:4557:ARG:HH21	1.83	0.43
1:C:3880:PHE:HA	1:C:3883:ASP:OD2	2.19	0.43
1:A:196:MET:SD	1:A:196:MET:N	2.92	0.43
1:A:664:PHE:HB3	1:A:811:CYS:SG	2.59	0.43
1:A:924:MET:O	1:A:928:THR:HG23	2.19	0.43
1:A:3478:MET:O	1:A:3478:MET:SD	2.77	0.43
1:A:3695:PRO:HB3	1:A:3699:HIS:HB3	2.01	0.43
1:A:3771:HIS:O	1:A:3815:LYS:NZ	2.46	0.43
1:A:4840:THR:HG22	1:D:4826:ILE:HD13	2.00	0.43
2:H:32:ASP:OD2	2:H:34:LYS:NZ	2.45	0.43
1:B:196:MET:N	1:B:196:MET:SD	2.92	0.43
1:B:1206:GLN:HA	1:B:1227:ALA:O	2.18	0.43
1:B:3284:TRP:HB3	1:B:3305:THR:HG21	2.00	0.43
1:D:880:GLU:HG3	1:D:910:PHE:HB3	2.01	0.43
1:D:1658:ASP:OD1	1:D:1658:ASP:N	2.52	0.43
1:D:3226:GLU:C	1:D:3228:ALA:H	2.21	0.43
1:D:3376:GLU:OE2	1:D:3450:ASN:ND2	2.51	0.43
1:D:3835:LEU:HD22	1:D:3880:PHE:HZ	1.83	0.43
1:C:1424:PRO:HA	1:C:1427:ILE:HG22	2.01	0.43
1:C:1447:CYS:HB3	1:C:1555:LEU:HB3	2.00	0.43
1:C:1658:ASP:N	1:C:1658:ASP:OD1	2.52	0.43
1:C:1748:PHE:HB2	1:C:1758:ARG:NH2	2.34	0.43
1:C:2238:TYR:O	1:C:2242:ILE:HG13	2.19	0.43
1:C:2527:LEU:HD12	1:C:2527:LEU:HA	1.87	0.43
1:C:3382:GLU:OE1	1:C:3382:GLU:N	2.52	0.43
1:C:3525:CYS:SG	1:C:3599:VAL:HG21	2.59	0.43
1:C:3835:LEU:HD22	1:C:3880:PHE:HZ	1.83	0.43
1:C:4243:PHE:CE2	1:C:4247:ILE:HD11	2.54	0.43
1:A:738:LEU:HD23	1:A:738:LEU:HA	1.86	0.43
1:A:976:ARG:HA	1:A:1044:ARG:HH12	1.83	0.43
1:A:1000:ARG:HA	1:A:1003:GLN:OE1	2.18	0.43
1:A:1055:PRO:HA	1:A:1056:PRO:HD3	1.95	0.43
1:A:3378:GLN:HA	1:A:3381:LEU:HD23	2.00	0.43
1:B:2527:LEU:HA	1:B:2527:LEU:HD12	1.87	0.43
1:B:3384:LYS:HD2	1:B:3386:GLU:HB3	2.01	0.43
1:D:3634:ALA:HA	1:D:3637:ARG:HG2	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:4961:CYS:HB3	1:C:4983:HIS:CE1	2.54	0.43
1:A:664:PHE:CZ	1:A:779:PRO:HB3	2.54	0.42
1:A:880:GLU:HG3	1:A:910:PHE:HB3	2.01	0.42
1:A:1575:LEU:HD23	1:A:1575:LEU:HA	1.84	0.42
1:A:1748:PHE:HB2	1:A:1758:ARG:NH2	2.34	0.42
1:A:1997:GLU:O	1:A:2000:SER:OG	2.27	0.42
1:A:2604:GLU:HG2	1:A:2639:MET:HG3	2.01	0.42
1:A:3277:LEU:HD23	1:A:3277:LEU:HA	1.90	0.42
2:F:57:ARG:HE	2:F:57:ARG:HB2	1.56	0.42
1:B:2462:PRO:HB2	1:B:2464:ASP:OD1	2.19	0.42
1:B:2604:GLU:HG2	1:B:2639:MET:HG3	2.01	0.42
1:B:3771:HIS:O	1:B:3815:LYS:NZ	2.46	0.42
1:B:4638:TYR:O	1:B:4641:PRO:HD2	2.19	0.42
1:D:924:MET:O	1:D:928:THR:HG23	2.19	0.42
1:D:1000:ARG:HA	1:D:1003:GLN:OE1	2.18	0.42
1:D:2238:TYR:O	1:D:2242:ILE:HG13	2.19	0.42
1:D:2604:GLU:HG2	1:D:2639:MET:HG3	2.01	0.42
1:D:2641:LEU:HA	1:D:2641:LEU:HD23	1.88	0.42
1:D:4253:GLU:HG3	1:D:4557:ARG:NH2	2.34	0.42
1:D:4961:CYS:HA	1:D:5023:PRO:O	2.19	0.42
1:C:2516:ASP:OD1	1:C:2516:ASP:N	2.51	0.42
1:C:2599:GLN:O	1:C:2603:ILE:HG13	2.19	0.42
1:A:2599:GLN:O	1:A:2603:ILE:HG13	2.19	0.42
1:A:2881:ASN:HA	1:A:2884:ASN:HD21	1.83	0.42
1:A:4253:GLU:HG3	1:A:4557:ARG:NH2	2.34	0.42
1:A:4570:ALA:O	1:A:4574:ASN:ND2	2.44	0.42
1:B:1299:GLN:NE2	1:B:1545:ASN:OD1	2.53	0.42
1:B:1926:LEU:O	1:B:1929:MET:HB2	2.19	0.42
1:B:2310:CYS:O	1:B:2314:LEU:HD22	2.19	0.42
1:B:3132:THR:HG22	1:B:3137:LEU:HD13	2.01	0.42
1:B:3944:GLU:OE1	1:B:3946:GLN:N	2.50	0.42
1:D:2768:PHE:O	1:D:2771:ILE:HG22	2.19	0.42
1:D:2821:TRP:HH2	1:D:2877:GLN:HB3	1.82	0.42
1:D:2823:ILE:HA	1:D:2937:VAL:HA	2.00	0.42
1:D:4243:PHE:CE2	1:D:4247:ILE:HD11	2.54	0.42
1:C:618:GLN:OE1	1:C:1678:ASN:ND2	2.43	0.42
1:C:2604:GLU:HG2	1:C:2639:MET:HG3	2.01	0.42
1:C:3209:GLN:HG2	1:C:3210:LEU:HG	2.00	0.42
1:C:3310:ASP:HA	1:C:3350:ARG:HH12	1.83	0.42
1:C:3478:MET:O	1:C:3478:MET:SD	2.77	0.42
1:C:3634:ALA:HA	1:C:3637:ARG:HG2	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:328:LYS:HE3	1:A:328:LYS:HB3	1.75	0.42
1:A:2716:ASP:OD1	1:A:2716:ASP:N	2.51	0.42
1:A:4961:CYS:HB3	1:A:4983:HIS:CE1	2.54	0.42
1:B:2230:THR:HB	1:B:2267:MET:HE3	2.01	0.42
1:B:4253:GLU:HG3	1:B:4557:ARG:HH21	1.83	0.42
1:D:471:LEU:HA	1:D:474:ARG:HE	1.85	0.42
1:D:901:LYS:HD2	1:D:901:LYS:HA	1.81	0.42
1:D:1299:GLN:NE2	1:D:1545:ASN:OD1	2.53	0.42
1:D:2599:GLN:O	1:D:2603:ILE:HG13	2.19	0.42
1:D:2765:LYS:HD3	1:D:2765:LYS:HA	1.70	0.42
1:D:2990:PRO:HG2	1:D:2991:HIS:CE1	2.55	0.42
1:D:3062:PRO:HA	1:D:3065:VAL:HG22	2.02	0.42
1:D:3462:ASN:N	1:D:3462:ASN:OD1	2.52	0.42
1:D:4057:MET:HE2	1:D:4057:MET:HB2	1.81	0.42
1:C:471:LEU:HA	1:C:474:ARG:HE	1.85	0.42
1:C:2263:ILE:HD12	1:C:2263:ILE:HA	1.92	0.42
1:C:2462:PRO:HB2	1:C:2464:ASP:OD1	2.19	0.42
1:C:2768:PHE:O	1:C:2771:ILE:HG22	2.19	0.42
1:C:3462:ASN:OD1	1:C:3462:ASN:N	2.52	0.42
1:C:3767:GLN:OE1	1:C:3809:ASN:ND2	2.45	0.42
1:A:648:ILE:HD13	1:A:811:CYS:HB3	2.01	0.42
1:A:1037:ASP:O	1:A:1041:GLN:HG2	2.20	0.42
1:A:1658:ASP:N	1:A:1658:ASP:OD1	2.52	0.42
1:A:2527:LEU:HD12	1:A:2527:LEU:HA	1.87	0.42
1:A:3705:PHE:HA	1:A:3708:THR:HG22	2.01	0.42
1:A:4638:TYR:O	1:A:4641:PRO:HD2	2.19	0.42
2:H:47:LYS:NZ	2:H:107:GLU:OE2	2.30	0.42
2:F:57:ARG:HD3	2:F:80:TYR:HA	2.01	0.42
1:B:879:HIS:NE2	1:B:921:ASN:HB2	2.35	0.42
1:B:1447:CYS:HB3	1:B:1555:LEU:HB3	2.00	0.42
1:B:2238:TYR:O	1:B:2242:ILE:HG13	2.19	0.42
1:B:2998:PHE:HA	1:B:3002:LEU:HD23	2.02	0.42
1:B:3062:PRO:HA	1:B:3065:VAL:HG22	2.02	0.42
1:B:4064:MET:HE1	1:B:4110:PHE:CD2	2.51	0.42
1:D:2600:ARG:O	1:D:2604:GLU:HG3	2.19	0.42
1:D:3594:ARG:HA	1:D:3594:ARG:NH1	2.35	0.42
1:C:1930:LYS:HE2	1:C:1930:LYS:HB2	1.91	0.42
1:C:4134:GLU:HB3	1:C:4135:PRO:HD3	2.02	0.42
1:A:922:LEU:HD13	1:A:922:LEU:HA	1.89	0.42
1:A:1447:CYS:HB3	1:A:1555:LEU:HB3	2.00	0.42
1:A:2623:LEU:O	1:A:2627:VAL:HG23	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2990:PRO:HG2	1:A:2991:HIS:CE1	2.55	0.42
1:A:3367:LYS:HE3	1:A:3367:LYS:HB2	1.86	0.42
1:A:4897:ILE:O	1:A:4901:ILE:HG12	2.18	0.42
2:G:42:ARG:HD3	1:C:1780:PRO:HG2	2.02	0.42
1:B:336:PRO:HA	1:B:337:PRO:HD3	1.89	0.42
1:B:1055:PRO:HA	1:B:1056:PRO:HD3	1.95	0.42
1:B:2307:LEU:HD21	1:B:2362:GLU:HB2	2.02	0.42
1:B:3183:VAL:O	1:B:3187:ARG:HG3	2.19	0.42
1:D:1601:MET:HA	1:D:1601:MET:CE	2.50	0.42
1:D:1926:LEU:O	1:D:1929:MET:HB2	2.19	0.42
1:D:2020:ASP:OD1	1:D:2020:ASP:N	2.42	0.42
1:D:3695:PRO:HB3	1:D:3699:HIS:HB3	2.01	0.42
1:C:640:TYR:CE2	1:C:1636:MET:HB3	2.55	0.42
1:C:709:ASP:OD1	1:C:725:HIS:ND1	2.48	0.42
1:C:1926:LEU:O	1:C:1929:MET:HB2	2.19	0.42
1:C:3062:PRO:HA	1:C:3065:VAL:HG22	2.02	0.42
1:C:4675:LYS:HG3	1:C:4715:TYR:CE1	2.55	0.42
1:C:4961:CYS:HA	1:C:5023:PRO:O	2.19	0.42
1:A:13:PHE:CE1	1:A:164:ARG:HG2	2.55	0.42
1:A:835:ARG:NH2	1:A:1210:SER:O	2.35	0.42
1:A:1926:LEU:O	1:A:1929:MET:HB2	2.19	0.42
1:A:4675:LYS:HG3	1:A:4715:TYR:CE1	2.55	0.42
1:B:788:LYS:HB2	1:B:788:LYS:HE3	1.82	0.42
1:B:924:MET:O	1:B:928:THR:HG23	2.19	0.42
1:B:1748:PHE:HB2	1:B:1758:ARG:NH2	2.34	0.42
1:B:3525:CYS:SG	1:B:3599:VAL:HG21	2.59	0.42
1:B:4243:PHE:CE2	1:B:4247:ILE:HD11	2.54	0.42
1:B:4675:LYS:HG3	1:B:4715:TYR:CE1	2.55	0.42
1:D:1424:PRO:HA	1:D:1427:ILE:HG22	2.01	0.42
1:D:2668:SER:C	1:D:2670:GLU:H	2.22	0.42
1:D:3478:MET:SD	1:D:3478:MET:O	2.77	0.42
1:D:3525:CYS:SG	1:D:3599:VAL:HG21	2.59	0.42
1:D:4675:LYS:HG3	1:D:4715:TYR:CE1	2.55	0.42
1:C:2668:SER:C	1:C:2670:GLU:H	2.22	0.42
1:C:3183:VAL:O	1:C:3187:ARG:HG3	2.19	0.42
1:C:3384:LYS:HD2	1:C:3386:GLU:HB3	2.01	0.42
1:C:3594:ARG:HA	1:C:3594:ARG:NH1	2.35	0.42
1:C:3944:GLU:H	1:C:3944:GLU:HG3	1.74	0.42
1:A:640:TYR:CE2	1:A:1636:MET:HB3	2.55	0.42
1:A:970:LEU:HG	1:A:972:LEU:HD21	2.02	0.42
1:A:1601:MET:HA	1:A:1601:MET:CE	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2998:PHE:HA	1:A:3002:LEU:HD23	2.01	0.42
1:A:3062:PRO:HA	1:A:3065:VAL:HG22	2.02	0.42
1:A:4961:CYS:HA	1:A:5023:PRO:O	2.19	0.42
1:B:2185:ILE:HD13	1:B:2203:MET:HE1	2.01	0.42
1:B:2694:GLU:HA	1:B:2697:ARG:HH12	1.85	0.42
1:B:3478:MET:SD	1:B:3478:MET:O	2.77	0.42
1:D:1032:LYS:HE3	1:D:1032:LYS:HB2	1.88	0.42
1:D:1037:ASP:O	1:D:1041:GLN:HG2	2.20	0.42
1:D:2307:LEU:HD21	1:D:2362:GLU:HB2	2.02	0.42
1:D:2624:ARG:O	1:D:2627:VAL:HB	2.20	0.42
1:D:3384:LYS:HD2	1:D:3386:GLU:HB3	2.01	0.42
1:C:196:MET:N	1:C:196:MET:SD	2.92	0.42
1:C:664:PHE:CZ	1:C:779:PRO:HB3	2.54	0.42
1:C:870:ILE:HG12	1:C:1051:TYR:HE2	1.84	0.42
1:C:924:MET:O	1:C:928:THR:HG23	2.19	0.42
1:C:2998:PHE:HA	1:C:3002:LEU:HD23	2.01	0.42
1:C:3705:PHE:HA	1:C:3708:THR:HG22	2.01	0.42
1:C:4638:TYR:O	1:C:4641:PRO:HD2	2.19	0.42
1:A:2765:LYS:HD3	1:A:2765:LYS:HA	1.70	0.42
1:A:3462:ASN:OD1	1:A:3462:ASN:N	2.52	0.42
1:A:4902:GLU:O	1:A:4913:ARG:NH1	2.52	0.42
1:B:648:ILE:HD13	1:B:811:CYS:HB3	2.02	0.42
1:B:2538:THR:HG23	1:B:2541:PHE:H	1.83	0.42
1:D:640:TYR:CE2	1:D:1636:MET:HB3	2.55	0.42
1:D:870:ILE:HG12	1:D:1051:TYR:HE2	1.84	0.42
1:D:937:CYS:N	1:D:1056:PRO:HG3	2.35	0.42
1:D:970:LEU:HG	1:D:972:LEU:HD21	2.02	0.42
1:D:2230:THR:HB	1:D:2267:MET:HE3	2.02	0.42
1:D:2256:TYR:O	1:D:2259:GLU:HG3	2.20	0.42
1:D:4060:LYS:HD2	1:D:4060:LYS:HA	1.91	0.42
1:C:13:PHE:CE1	1:C:164:ARG:HG2	2.55	0.42
1:C:970:LEU:HG	1:C:972:LEU:HD21	2.02	0.42
1:C:1055:PRO:HA	1:C:1056:PRO:HD3	1.95	0.42
1:C:2307:LEU:HD21	1:C:2362:GLU:HB2	2.02	0.42
1:C:2310:CYS:O	1:C:2314:LEU:HD22	2.19	0.42
1:C:2538:THR:HG23	1:C:2541:PHE:H	1.83	0.42
1:C:2694:GLU:HA	1:C:2697:ARG:HH12	1.85	0.42
1:C:2907:PRO:HB2	1:C:2910:THR:HG23	2.02	0.42
1:C:4851:TYR:HD1	1:C:4916:PHE:CE1	2.38	0.42
1:A:471:LEU:HA	1:A:474:ARG:HE	1.85	0.42
1:A:901:LYS:HA	1:A:901:LYS:HD2	1.82	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1424:PRO:HA	1:A:1427:ILE:HG22	2.01	0.42
1:A:1864:LYS:HE3	1:A:1872:THR:HA	2.02	0.42
1:A:2256:TYR:O	1:A:2259:GLU:HG3	2.20	0.42
1:A:2801:ASP:HA	1:A:2804:ILE:HG12	2.02	0.42
1:A:2907:PRO:HB2	1:A:2910:THR:HG23	2.02	0.42
1:A:3525:CYS:SG	1:A:3599:VAL:HG21	2.59	0.42
1:A:4790:LEU:HD23	1:A:4790:LEU:HA	1.90	0.42
2:H:54:GLU:OE1	2:H:55:VAL:HG13	2.20	0.42
1:B:664:PHE:CZ	1:B:779:PRO:HB3	2.54	0.42
1:B:2907:PRO:HB2	1:B:2910:THR:HG23	2.02	0.42
1:B:2912:THR:HG23	1:B:2914:LYS:HG3	2.02	0.42
1:B:3382:GLU:OE1	1:B:3382:GLU:N	2.52	0.42
1:B:4134:GLU:HB3	1:B:4135:PRO:HD3	2.02	0.42
1:D:879:HIS:NE2	1:D:921:ASN:HB2	2.35	0.42
1:D:1748:PHE:HB2	1:D:1758:ARG:NH2	2.34	0.42
1:D:2427:ALA:HA	1:D:2502:MET:HE1	2.02	0.42
1:D:2881:ASN:HA	1:D:2884:ASN:HD21	1.83	0.42
1:D:3852:LYS:HE3	1:D:3852:LYS:HB3	1.91	0.42
1:C:1299:GLN:NE2	1:C:1545:ASN:OD1	2.53	0.42
1:C:1636:MET:CE	1:C:1649:ASP:HA	2.49	0.42
1:A:69:LEU:HD13	1:A:101:LEU:HD11	2.02	0.42
1:A:651:GLY:N	1:A:658:GLN:OE1	2.53	0.42
1:A:2008:MET:HE3	1:A:2020:ASP:HB2	2.01	0.42
1:A:2574:HIS:CD2	1:A:2574:HIS:H	2.38	0.42
1:A:3607:GLU:OE2	1:A:3608:GLN:NE2	2.48	0.42
1:A:3621:HIS:O	1:A:3622:LYS:HG3	2.20	0.42
1:A:3762:ARG:HD3	1:A:4754:ASN:HA	2.02	0.42
1:A:4091:LYS:HE2	1:A:4091:LYS:HB2	1.89	0.42
1:A:4243:PHE:CE2	1:A:4247:ILE:HD11	2.54	0.42
1:B:13:PHE:CE1	1:B:164:ARG:HG2	2.55	0.42
1:B:471:LEU:HA	1:B:474:ARG:HE	1.85	0.42
1:B:640:TYR:CE2	1:B:1636:MET:HB3	2.55	0.42
1:B:2191:PHE:CE2	1:B:2242:ILE:HD11	2.55	0.42
1:B:3594:ARG:HA	1:B:3594:ARG:NH1	2.35	0.42
1:B:3695:PRO:HB3	1:B:3699:HIS:HB3	2.01	0.42
1:D:13:PHE:CE1	1:D:164:ARG:HG2	2.55	0.42
1:D:738:LEU:HA	1:D:738:LEU:HD23	1.86	0.42
1:D:1668:ARG:HG3	1:D:1671:ARG:NH2	2.35	0.42
1:D:2310:CYS:O	1:D:2314:LEU:HD22	2.19	0.42
1:D:4558:ASN:HB3	1:D:4561:THR:OG1	2.20	0.42
1:C:1488:LYS:HE3	1:C:1488:LYS:HB2	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:3132:THR:HG22	1:C:3137:LEU:HD13	2.01	0.42
1:C:3695:PRO:HB3	1:C:3699:HIS:HB3	2.01	0.42
1:C:4148:THR:HG21	1:C:4180:ARG:HH21	1.85	0.42
1:C:5030:LYS:HB2	1:C:5030:LYS:HE2	1.78	0.42
1:A:788:LYS:HE3	1:A:788:LYS:HB2	1.82	0.41
1:A:805:PRO:HG2	1:A:808:TYR:CD1	2.55	0.41
1:A:2624:ARG:O	1:A:2627:VAL:HB	2.20	0.41
1:A:2668:SER:C	1:A:2670:GLU:H	2.22	0.41
1:A:2768:PHE:O	1:A:2771:ILE:HG22	2.19	0.41
1:A:3230:LEU:HD23	1:A:3230:LEU:H	1.85	0.41
1:A:3382:GLU:OE1	1:A:3382:GLU:N	2.52	0.41
1:A:3731:LYS:HA	1:A:3734:HIS:CE1	2.55	0.41
1:B:176:SER:HG	1:B:178:ARG:HH11	1.61	0.41
1:B:3367:LYS:HE3	1:B:3367:LYS:HB2	1.86	0.41
1:B:4148:THR:HG21	1:B:4180:ARG:HH21	1.85	0.41
1:D:709:ASP:OD1	1:D:725:HIS:ND1	2.48	0.41
1:D:3006:ILE:HG23	1:D:3010:PHE:CD2	2.55	0.41
1:D:3342:ALA:O	1:D:3345:ILE:HG12	2.21	0.41
1:D:4148:THR:HG21	1:D:4180:ARG:HH21	1.85	0.41
1:D:4917:ASP:OD2	1:C:4888:TYR:OH	2.25	0.41
1:C:2793:PRO:O	1:C:2797:PHE:N	2.53	0.41
1:C:4558:ASN:HB3	1:C:4561:THR:OG1	2.20	0.41
1:A:1299:GLN:NE2	1:A:1545:ASN:OD1	2.53	0.41
1:A:3132:THR:HG22	1:A:3137:LEU:HD13	2.01	0.41
1:A:3933:PHE:HD2	1:A:3951:PHE:CE2	2.38	0.41
1:A:4558:ASN:HB3	1:A:4561:THR:OG1	2.20	0.41
2:G:13:ARG:HB2	2:G:13:ARG:CZ	2.51	0.41
2:F:42:ARG:HD3	1:B:1780:PRO:HG2	2.02	0.41
1:B:880:GLU:HG3	1:B:910:PHE:HB3	2.01	0.41
1:B:937:CYS:N	1:B:1056:PRO:HG3	2.35	0.41
1:B:970:LEU:HG	1:B:972:LEU:HD21	2.02	0.41
1:B:1690:ASP:OD2	1:B:1693:GLN:NE2	2.53	0.41
1:B:3230:LEU:HD23	1:B:3230:LEU:H	1.85	0.41
1:B:3762:ARG:HD3	1:B:4754:ASN:HA	2.02	0.41
1:B:3933:PHE:HD2	1:B:3951:PHE:CE2	2.39	0.41
1:B:4655:PHE:N	1:B:4796:MET:HE1	2.34	0.41
1:D:330:ASP:N	1:D:330:ASP:OD1	2.54	0.41
1:D:651:GLY:N	1:D:658:GLN:OE1	2.53	0.41
1:D:1694:LEU:O	1:D:1698:LEU:HG	2.21	0.41
1:D:2694:GLU:HA	1:D:2697:ARG:HH12	1.85	0.41
1:D:2907:PRO:HB2	1:D:2910:THR:HG23	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:3762:ARG:HD3	1:D:4754:ASN:HA	2.02	0.41
1:D:4895:GLY:O	1:C:4892:ARG:NH1	2.44	0.41
1:C:835:ARG:NH2	1:C:1210:SER:O	2.35	0.41
1:C:2624:ARG:O	1:C:2627:VAL:HB	2.20	0.41
1:C:3762:ARG:HD3	1:C:4754:ASN:HA	2.02	0.41
1:C:4570:ALA:O	1:C:4574:ASN:ND2	2.44	0.41
1:A:1694:LEU:O	1:A:1698:LEU:HG	2.21	0.41
1:A:1823:GLY:O	1:A:1825:HIS:ND1	2.47	0.41
1:A:2263:ILE:HD12	1:A:2263:ILE:HA	1.92	0.41
1:A:2427:ALA:HA	1:A:2502:MET:HE1	2.02	0.41
1:B:463:GLU:HG2	1:B:464:LYS:N	2.35	0.41
1:B:651:GLY:N	1:B:658:GLN:OE1	2.53	0.41
1:B:1601:MET:HA	1:B:1601:MET:CE	2.50	0.41
1:B:1668:ARG:HG3	1:B:1671:ARG:NH2	2.35	0.41
1:B:2599:GLN:O	1:B:2603:ILE:HG13	2.19	0.41
1:D:803:LEU:HD12	1:D:804:PRO:HD2	2.02	0.41
1:D:1864:LYS:HE3	1:D:1872:THR:HA	2.02	0.41
1:D:1926:LEU:HB3	1:D:1939:MET:SD	2.60	0.41
1:D:2677:LYS:HE2	1:D:2677:LYS:HB3	1.85	0.41
1:C:1601:MET:HA	1:C:1601:MET:CE	2.50	0.41
1:C:2191:PHE:CE2	1:C:2242:ILE:HD11	2.55	0.41
1:C:2801:ASP:HA	1:C:2804:ILE:HG12	2.02	0.41
1:C:3621:HIS:O	1:C:3622:LYS:HG3	2.20	0.41
1:C:3974:THR:O	1:C:3978:GLN:HG2	2.20	0.41
1:A:2123:LEU:HD12	1:A:2123:LEU:HA	1.95	0.41
1:A:2793:PRO:O	1:A:2797:PHE:N	2.53	0.41
1:A:3594:ARG:HA	1:A:3594:ARG:NH1	2.35	0.41
1:A:3634:ALA:HA	1:A:3637:ARG:HG2	2.01	0.41
2:F:54:GLU:OE2	2:F:55:VAL:HG13	2.20	0.41
1:B:274:LEU:HB3	1:B:339:ILE:HD12	2.03	0.41
1:B:365:LYS:HB3	1:B:365:LYS:HE3	1.74	0.41
1:B:2256:TYR:O	1:B:2259:GLU:HG3	2.20	0.41
1:B:4902:GLU:O	1:B:4913:ARG:NH1	2.52	0.41
1:D:367:LEU:HD12	1:D:367:LEU:HA	1.89	0.41
1:D:805:PRO:HG2	1:D:808:TYR:CD1	2.55	0.41
1:D:2574:HIS:CD2	1:D:2574:HIS:H	2.38	0.41
1:D:3051:ARG:HA	1:D:3131:TYR:CE1	2.56	0.41
1:D:3705:PHE:HA	1:D:3708:THR:HG22	2.01	0.41
1:C:648:ILE:HD13	1:C:811:CYS:HB3	2.01	0.41
1:C:981:GLN:O	1:C:985:VAL:HG23	2.20	0.41
1:C:1997:GLU:O	1:C:2000:SER:OG	2.27	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:2881:ASN:HA	1:C:2884:ASN:HD21	1.83	0.41
1:A:990:GLU:HA	1:A:1024:TYR:CG	2.56	0.41
1:A:2307:LEU:HD21	1:A:2362:GLU:HB2	2.02	0.41
1:A:2310:CYS:O	1:A:2314:LEU:HD22	2.19	0.41
1:A:2775:TRP:CD2	1:A:2786:LYS:HE3	2.56	0.41
1:A:3006:ILE:HG23	1:A:3010:PHE:CD2	2.55	0.41
1:A:3445:TRP:NE1	1:A:3455:GLU:OE1	2.46	0.41
1:A:4627:MET:H	1:A:4627:MET:HE3	1.85	0.41
1:B:2793:PRO:O	1:B:2797:PHE:N	2.53	0.41
1:B:2990:PRO:HG2	1:B:2991:HIS:CE1	2.55	0.41
1:B:3051:ARG:HA	1:B:3131:TYR:CE1	2.56	0.41
1:D:664:PHE:CZ	1:D:779:PRO:HB3	2.54	0.41
1:D:3132:THR:HG22	1:D:3137:LEU:HD13	2.01	0.41
1:D:3508:SER:HB3	1:D:3511:VAL:HG22	2.02	0.41
1:C:458:GLU:H	1:C:458:GLU:HG3	1.70	0.41
1:C:803:LEU:HD12	1:C:804:PRO:HD2	2.02	0.41
1:C:901:LYS:HG3	1:C:903:LEU:HG	2.03	0.41
1:C:961:MET:H	1:C:961:MET:HG2	1.59	0.41
1:C:1668:ARG:HG3	1:C:1671:ARG:NH2	2.35	0.41
1:C:3162:GLN:OE1	1:C:3218:VAL:HG13	2.21	0.41
1:C:3933:PHE:HD2	1:C:3951:PHE:CE2	2.38	0.41
1:A:981:GLN:O	1:A:985:VAL:HG23	2.20	0.41
1:A:3342:ALA:O	1:A:3345:ILE:HG12	2.20	0.41
1:A:4148:THR:HG21	1:A:4180:ARG:HH21	1.85	0.41
1:B:2419:GLY:O	1:B:2423:MET:SD	2.79	0.41
1:B:2624:ARG:O	1:B:2627:VAL:HB	2.20	0.41
1:B:3112:LEU:HD13	1:B:3112:LEU:HA	1.85	0.41
1:B:4851:TYR:HD1	1:B:4916:PHE:CE1	2.38	0.41
1:B:4904:PRO:CB	1:B:4913:ARG:HG2	2.51	0.41
1:D:365:LYS:HB3	1:D:365:LYS:HE3	1.74	0.41
1:D:710:ASP:OD1	1:D:713:SER:OG	2.26	0.41
1:D:2628:PHE:HZ	1:D:2910:THR:HG21	1.86	0.41
1:D:2740:VAL:HG21	1:D:2819:TRP:HE1	1.86	0.41
1:D:2871:LEU:HG	1:D:2927:LEU:HD21	2.03	0.41
1:D:3230:LEU:H	1:D:3230:LEU:HD23	1.85	0.41
1:D:3731:LYS:HA	1:D:3734:HIS:CE1	2.56	0.41
1:D:3974:THR:O	1:D:3978:GLN:HG2	2.20	0.41
1:D:4134:GLU:HB3	1:D:4135:PRO:HD3	2.01	0.41
1:C:463:GLU:HG2	1:C:464:LYS:N	2.35	0.41
1:C:1032:LYS:HE3	1:C:1032:LYS:HB2	1.88	0.41
1:C:2628:PHE:HZ	1:C:2910:THR:HG21	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:571:SER:OG	1:A:573:GLU:OE1	2.25	0.41
1:A:1680:ARG:HH12	2:E:88:PRO:HB2	1.84	0.41
1:A:2191:PHE:CE2	1:A:2242:ILE:HD11	2.55	0.41
1:A:2230:THR:HB	1:A:2267:MET:HE3	2.03	0.41
1:A:2383:ALA:HA	1:A:2386:ILE:HG12	2.03	0.41
1:A:2419:GLY:O	1:A:2422:ILE:N	2.54	0.41
1:A:2754:PHE:HB2	1:A:2935:TYR:CZ	2.55	0.41
1:A:3944:GLU:OE1	1:A:3946:GLN:N	2.50	0.41
1:A:4655:PHE:N	1:A:4796:MET:HE1	2.35	0.41
2:E:29:MET:HG2	2:E:30:LEU:O	2.21	0.41
1:B:981:GLN:O	1:B:985:VAL:HG23	2.20	0.41
1:B:1434:TYR:OH	1:B:1436:SER:HB3	2.21	0.41
1:B:1820:ARG:O	1:B:1824:GLN:HG2	2.20	0.41
1:B:2092:GLN:HE21	1:B:2092:GLN:HB3	1.69	0.41
1:B:3445:TRP:NE1	1:B:3455:GLU:OE1	2.46	0.41
1:B:4010:ILE:O	1:B:4014:LYS:HG3	2.21	0.41
1:D:274:LEU:HB3	1:D:339:ILE:HD12	2.03	0.41
1:D:2191:PHE:CE2	1:D:2242:ILE:HD11	2.55	0.41
1:D:2419:GLY:O	1:D:2422:ILE:N	2.54	0.41
1:D:2998:PHE:HA	1:D:3002:LEU:HD23	2.01	0.41
1:D:3933:PHE:HD2	1:D:3951:PHE:CE2	2.39	0.41
1:C:274:LEU:HB3	1:C:339:ILE:HD12	2.03	0.41
1:C:879:HIS:NE2	1:C:921:ASN:HB2	2.35	0.41
1:C:1690:ASP:OD2	1:C:1693:GLN:NE2	2.53	0.41
1:C:1820:ARG:O	1:C:1824:GLN:HG2	2.20	0.41
1:C:2384:ILE:O	1:C:2387:SER:OG	2.28	0.41
1:A:879:HIS:NE2	1:A:921:ASN:HB2	2.35	0.41
1:A:937:CYS:N	1:A:1056:PRO:HG3	2.35	0.41
1:A:1808:ARG:HB2	1:A:1854:PHE:CE1	2.56	0.41
1:A:2336:ARG:HG3	1:A:2431:ASP:OD2	2.21	0.41
1:A:4010:ILE:O	1:A:4014:LYS:HG3	2.21	0.41
2:H:24:VAL:HG21	2:H:59:TRP:HZ3	1.86	0.41
1:B:69:LEU:HD13	1:B:101:LEU:HD11	2.02	0.41
1:B:330:ASP:OD1	1:B:330:ASP:N	2.54	0.41
1:B:1037:ASP:O	1:B:1041:GLN:HG2	2.20	0.41
1:B:2419:GLY:O	1:B:2422:ILE:N	2.54	0.41
1:B:2775:TRP:CD2	1:B:2786:LYS:HE3	2.56	0.41
1:B:3634:ALA:HA	1:B:3637:ARG:HG2	2.01	0.41
1:B:3731:LYS:HA	1:B:3734:HIS:CE1	2.56	0.41
1:B:3974:THR:O	1:B:3978:GLN:HG2	2.20	0.41
1:B:4961:CYS:HA	1:B:5023:PRO:O	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:990:GLU:HA	1:D:1024:TYR:CG	2.56	0.41
1:D:1690:ASP:OD2	1:D:1693:GLN:NE2	2.53	0.41
1:D:2017:ASP:OD1	1:D:2017:ASP:N	2.53	0.41
1:D:2419:GLY:O	1:D:2423:MET:SD	2.79	0.41
1:D:2754:PHE:HB2	1:D:2935:TYR:CZ	2.56	0.41
1:D:2801:ASP:HA	1:D:2804:ILE:HG12	2.02	0.41
1:D:3171:SER:O	1:D:3174:SER:OG	2.33	0.41
1:D:3523:ASN:O	1:D:3582:ARG:NH2	2.54	0.41
1:D:3607:GLU:OE2	1:D:3608:GLN:NE2	2.48	0.41
1:C:69:LEU:HD13	1:C:101:LEU:HD11	2.02	0.41
1:C:328:LYS:HB3	1:C:328:LYS:HE3	1.75	0.41
1:C:651:GLY:N	1:C:658:GLN:OE1	2.53	0.41
1:C:937:CYS:N	1:C:1056:PRO:HG3	2.35	0.41
1:C:2336:ARG:HG3	1:C:2431:ASP:OD2	2.21	0.41
1:C:2641:LEU:HA	1:C:2641:LEU:HD23	1.88	0.41
1:C:2713:ASP:OD1	1:C:2713:ASP:N	2.52	0.41
1:C:3731:LYS:HA	1:C:3734:HIS:CE1	2.56	0.41
1:A:330:ASP:N	1:A:330:ASP:OD1	2.54	0.41
1:A:416:LYS:HE3	1:A:416:LYS:HB2	1.84	0.41
1:A:1690:ASP:OD2	1:A:1693:GLN:NE2	2.53	0.41
1:A:1926:LEU:HB3	1:A:1939:MET:SD	2.60	0.41
1:A:2628:PHE:HZ	1:A:2910:THR:HG21	1.86	0.41
1:A:2713:ASP:OD1	1:A:2713:ASP:N	2.52	0.41
1:A:2740:VAL:HG21	1:A:2819:TRP:HE1	1.86	0.41
1:A:2816:MET:HE3	1:A:2816:MET:HB3	1.83	0.41
1:A:3329:ILE:O	1:A:3403:ARG:NH2	2.54	0.41
1:A:3523:ASN:O	1:A:3582:ARG:NH2	2.54	0.41
1:A:4942:GLU:HA	1:A:4945:ASP:OD2	2.21	0.41
2:F:13:ARG:HB2	2:F:13:ARG:CZ	2.51	0.41
1:B:306:LYS:HE3	1:B:306:LYS:HB2	1.94	0.41
1:B:803:LEU:HD12	1:B:804:PRO:HD2	2.02	0.41
1:B:805:PRO:HG2	1:B:808:TYR:CD1	2.55	0.41
1:B:1634:LEU:HD23	1:B:1634:LEU:HA	1.90	0.41
1:B:1864:LYS:HE3	1:B:1872:THR:HA	2.02	0.41
1:B:2574:HIS:CD2	1:B:2574:HIS:H	2.38	0.41
1:B:2628:PHE:HZ	1:B:2910:THR:HG21	1.86	0.41
1:B:2754:PHE:HB2	1:B:2935:TYR:CZ	2.56	0.41
1:B:3342:ALA:O	1:B:3345:ILE:HG12	2.21	0.41
1:B:3508:SER:HB3	1:B:3511:VAL:HG22	2.02	0.41
1:B:3523:ASN:O	1:B:3582:ARG:NH2	2.54	0.41
1:B:4942:GLU:HA	1:B:4945:ASP:OD2	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:503:PHE:HD2	1:D:512:ALA:HA	1.86	0.41
1:D:1820:ARG:O	1:D:1824:GLN:HG2	2.20	0.41
1:D:2258:LEU:HD23	1:D:2258:LEU:HA	1.89	0.41
1:D:2912:THR:HG23	1:D:2914:LYS:HG3	2.02	0.41
1:D:3162:GLN:OE1	1:D:3218:VAL:HG13	2.21	0.41
1:D:3621:HIS:O	1:D:3622:LYS:HG3	2.20	0.41
1:D:4570:ALA:O	1:D:4574:ASN:ND2	2.44	0.41
1:D:4851:TYR:HD1	1:D:4916:PHE:CE1	2.38	0.41
1:C:1037:ASP:O	1:C:1041:GLN:HG2	2.20	0.41
1:C:1694:LEU:O	1:C:1698:LEU:HG	2.21	0.41
1:C:1808:ARG:HB2	1:C:1854:PHE:CE1	2.56	0.41
1:C:1864:LYS:HE3	1:C:1872:THR:HA	2.02	0.41
1:C:1926:LEU:HB3	1:C:1939:MET:SD	2.60	0.41
1:C:2185:ILE:HD13	1:C:2203:MET:HE1	2.02	0.41
1:C:2256:TYR:O	1:C:2259:GLU:HG3	2.20	0.41
1:C:2298:VAL:HG21	1:C:2334:PHE:CE2	2.56	0.41
1:C:2419:GLY:O	1:C:2423:MET:SD	2.79	0.41
1:C:2675:THR:HB	1:C:2710:LEU:HD21	2.03	0.41
1:C:2740:VAL:HG21	1:C:2819:TRP:HE1	1.86	0.41
1:C:2775:TRP:CD2	1:C:2786:LYS:HE3	2.56	0.41
1:C:2871:LEU:HG	1:C:2927:LEU:HD21	2.02	0.41
1:C:2912:THR:HG23	1:C:2914:LYS:HG3	2.02	0.41
1:C:3006:ILE:HG23	1:C:3010:PHE:CD2	2.55	0.41
1:C:3051:ARG:HA	1:C:3131:TYR:CE1	2.56	0.41
1:C:3230:LEU:HD23	1:C:3230:LEU:H	1.85	0.41
1:C:3342:ALA:O	1:C:3345:ILE:HG12	2.20	0.41
1:C:4010:ILE:O	1:C:4014:LYS:HG3	2.21	0.41
1:C:4057:MET:HE2	1:C:4057:MET:HB2	1.81	0.41
1:A:274:LEU:HB3	1:A:339:ILE:HD12	2.03	0.41
1:A:2479:LEU:HD22	1:A:2480:GLY:N	2.36	0.41
1:A:2531:ARG:HG2	1:A:2585:THR:HG21	2.03	0.41
1:A:2694:GLU:HA	1:A:2697:ARG:HH12	1.85	0.41
1:A:2912:THR:HG23	1:A:2914:LYS:HG3	2.02	0.41
1:A:3974:THR:O	1:A:3978:GLN:HG2	2.20	0.41
1:B:503:PHE:HD2	1:B:512:ALA:HA	1.86	0.41
1:B:1694:LEU:O	1:B:1698:LEU:HG	2.21	0.41
1:B:2675:THR:HB	1:B:2710:LEU:HD21	2.02	0.41
1:B:2740:VAL:HG21	1:B:2819:TRP:HE1	1.86	0.41
1:B:3199:ALA:HB2	1:B:3279:SER:OG	2.21	0.41
1:B:3823:LYS:HA	1:B:3823:LYS:HD3	1.83	0.41
1:D:463:GLU:HG2	1:D:464:LYS:N	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:648:ILE:HD13	1:D:811:CYS:HB3	2.02	0.41
1:D:981:GLN:O	1:D:985:VAL:HG23	2.20	0.41
1:D:1808:ARG:HB2	1:D:1854:PHE:CE1	2.56	0.41
1:D:1999:ARG:HG3	1:D:3635:CYS:O	2.21	0.41
1:C:367:LEU:HD12	1:C:367:LEU:HA	1.89	0.41
1:C:503:PHE:HD2	1:C:512:ALA:HA	1.86	0.41
1:C:805:PRO:HG2	1:C:808:TYR:CD1	2.55	0.41
1:C:880:GLU:HG3	1:C:910:PHE:HB3	2.01	0.41
1:C:990:GLU:HG3	1:C:1024:TYR:HB3	2.03	0.41
1:C:2383:ALA:HA	1:C:2386:ILE:HG12	2.03	0.41
1:C:2419:GLY:O	1:C:2422:ILE:N	2.54	0.41
1:C:2574:HIS:CD2	1:C:2574:HIS:H	2.38	0.41
1:C:2990:PRO:HG2	1:C:2991:HIS:CE1	2.55	0.41
1:A:990:GLU:HG3	1:A:1024:TYR:HB3	2.03	0.40
1:A:1434:TYR:OH	1:A:1436:SER:HB3	2.21	0.40
1:A:1820:ARG:O	1:A:1824:GLN:HG2	2.20	0.40
1:A:2419:GLY:O	1:A:2423:MET:SD	2.79	0.40
1:A:3199:ALA:HB2	1:A:3279:SER:OG	2.21	0.40
1:A:3508:SER:HB3	1:A:3511:VAL:HG22	2.02	0.40
1:A:3535:LEU:O	1:A:3538:THR:OG1	2.28	0.40
1:A:4904:PRO:CB	1:A:4913:ARG:HG2	2.51	0.40
1:B:1488:LYS:HE3	1:B:1488:LYS:HB2	1.85	0.40
1:B:1926:LEU:HB3	1:B:1939:MET:SD	2.60	0.40
1:B:2871:LEU:HG	1:B:2927:LEU:HD21	2.03	0.40
1:B:3329:ILE:O	1:B:3403:ARG:NH2	2.54	0.40
1:D:69:LEU:HD13	1:D:101:LEU:HD11	2.02	0.40
1:D:886:ARG:HB3	1:D:891:TRP:HB2	2.03	0.40
1:D:1575:LEU:HA	1:D:1575:LEU:HD23	1.84	0.40
1:D:2775:TRP:CD2	1:D:2786:LYS:HE3	2.56	0.40
1:D:2793:PRO:O	1:D:2797:PHE:N	2.53	0.40
1:D:3329:ILE:O	1:D:3403:ARG:NH2	2.54	0.40
1:D:3733:CYS:HB2	1:D:3803:SER:OG	2.21	0.40
1:D:4105:GLY:O	1:D:4109:GLN:HG2	2.21	0.40
1:C:1434:TYR:OH	1:C:1436:SER:HB3	2.21	0.40
1:C:4689:THR:OG1	1:C:4690:GLU:OE1	2.34	0.40
1:A:1527:MET:HE3	1:A:1527:MET:HB3	1.92	0.40
1:A:3051:ARG:HA	1:A:3131:TYR:CE1	2.55	0.40
1:A:3733:CYS:HB2	1:A:3803:SER:OG	2.21	0.40
2:F:17:LYS:HE3	2:F:17:LYS:HB3	1.81	0.40
1:B:901:LYS:HG3	1:B:903:LEU:HG	2.03	0.40
1:B:2123:LEU:HD12	1:B:2123:LEU:HA	1.95	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2298:VAL:HG21	1:B:2334:PHE:CE2	2.56	0.40
1:B:3194:LEU:HD12	1:B:3194:LEU:HA	1.86	0.40
1:B:3232:LEU:HA	1:B:3233:PRO:HD3	1.89	0.40
1:B:3546:ASP:O	1:B:3550:ARG:HG3	2.22	0.40
1:D:882:TRP:O	1:D:885:THR:OG1	2.35	0.40
1:D:2867:LEU:HD21	1:D:2871:LEU:HD23	2.03	0.40
1:D:3459:VAL:HG11	1:D:3503:TYR:HD1	1.87	0.40
1:C:589:LEU:HD12	1:C:589:LEU:HA	1.92	0.40
1:C:990:GLU:HA	1:C:1024:TYR:CG	2.56	0.40
1:C:2716:ASP:OD1	1:C:2716:ASP:N	2.51	0.40
1:C:4105:GLY:O	1:C:4109:GLN:HG2	2.21	0.40
1:A:1668:ARG:HG3	1:A:1671:ARG:NH2	2.35	0.40
1:A:2017:ASP:OD1	1:A:2017:ASP:N	2.53	0.40
1:A:2759:ALA:HB1	1:A:2806:ARG:HA	2.04	0.40
1:A:3256:LEU:HD21	1:A:3269:VAL:HG11	2.04	0.40
1:A:4134:GLU:HB3	1:A:4135:PRO:HD3	2.02	0.40
2:E:54:GLU:OE2	2:E:55:VAL:HG13	2.22	0.40
1:B:2881:ASN:HA	1:B:2884:ASN:HD21	1.84	0.40
1:B:3733:CYS:HB2	1:B:3803:SER:OG	2.21	0.40
1:B:4558:ASN:HB3	1:B:4561:THR:OG1	2.20	0.40
1:D:571:SER:OG	1:D:573:GLU:OE1	2.25	0.40
1:D:1858:ASP:O	1:D:1862:ILE:HG13	2.22	0.40
1:D:2191:PHE:CD1	1:D:2198:MET:HE3	2.50	0.40
1:D:2675:THR:HB	1:D:2710:LEU:HD21	2.03	0.40
1:D:3232:LEU:HA	1:D:3233:PRO:HD3	1.90	0.40
1:D:3528:THR:HG23	1:D:3573:MET:CE	2.52	0.40
1:D:3944:GLU:H	1:D:3944:GLU:HG3	1.74	0.40
1:C:330:ASP:OD1	1:C:330:ASP:N	2.54	0.40
1:C:1999:ARG:HG3	1:C:3635:CYS:O	2.21	0.40
1:C:2479:LEU:HD22	1:C:2480:GLY:N	2.36	0.40
1:C:4060:LYS:HD2	1:C:4060:LYS:HA	1.91	0.40
1:A:463:GLU:HG2	1:A:464:LYS:N	2.36	0.40
1:A:1999:ARG:HG3	1:A:3635:CYS:O	2.21	0.40
1:A:3528:THR:HG23	1:A:3573:MET:CE	2.52	0.40
1:A:4827:LEU:HD21	1:B:4843:LEU:HD21	2.02	0.40
1:A:4851:TYR:HD1	1:A:4916:PHE:CE1	2.38	0.40
2:E:13:ARG:CZ	2:E:13:ARG:HB2	2.51	0.40
2:H:29:MET:HG2	2:H:30:LEU:O	2.21	0.40
1:B:908:VAL:HG13	1:B:909:ASN:H	1.87	0.40
1:B:990:GLU:HA	1:B:1024:TYR:CG	2.56	0.40
1:B:1118:ASP:N	1:B:1118:ASP:OD1	2.55	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2263:ILE:HD12	1:B:2263:ILE:HA	1.92	0.40
1:B:2663:ASN:ND2	1:B:2663:ASN:O	2.55	0.40
1:B:2785:LEU:O	1:B:2786:LYS:HG3	2.22	0.40
1:B:3368:ARG:O	1:B:3372:VAL:HG23	2.22	0.40
1:B:3528:THR:HG23	1:B:3573:MET:CE	2.52	0.40
1:B:3621:HIS:O	1:B:3622:LYS:HG3	2.20	0.40
1:D:901:LYS:HG3	1:D:903:LEU:HG	2.03	0.40
1:D:922:LEU:HD13	1:D:922:LEU:HA	1.89	0.40
1:D:2263:ILE:HD12	1:D:2263:ILE:HA	1.92	0.40
1:D:2298:VAL:HG21	1:D:2334:PHE:CE2	2.56	0.40
1:D:2663:ASN:ND2	1:D:2663:ASN:O	2.55	0.40
1:D:2785:LEU:O	1:D:2786:LYS:HG3	2.22	0.40
1:D:3582:ARG:HD3	1:D:3582:ARG:HA	1.91	0.40
1:C:2020:ASP:OD1	1:C:2020:ASP:N	2.42	0.40
1:C:2754:PHE:HB2	1:C:2935:TYR:CZ	2.56	0.40
1:C:3171:SER:O	1:C:3174:SER:OG	2.33	0.40
1:C:3523:ASN:O	1:C:3582:ARG:NH2	2.54	0.40
1:C:3633:VAL:HG12	1:C:3637:ARG:HE	1.87	0.40
1:C:3733:CYS:HB2	1:C:3803:SER:OG	2.21	0.40
1:A:2785:LEU:O	1:A:2786:LYS:HG3	2.22	0.40
1:A:3162:GLN:OE1	1:A:3218:VAL:HG13	2.21	0.40
1:A:3240:CYS:HB3	1:A:3243:ILE:CG1	2.51	0.40
1:A:3531:ASP:HA	1:A:3534:MET:SD	2.62	0.40
2:E:17:LYS:HE3	2:E:17:LYS:HB3	1.80	0.40
1:B:950:LEU:HD23	1:B:950:LEU:HA	1.81	0.40
1:B:2336:ARG:HG3	1:B:2431:ASP:OD2	2.21	0.40
1:B:2427:ALA:HA	1:B:2502:MET:HE1	2.02	0.40
1:B:3633:VAL:HG12	1:B:3637:ARG:HE	1.87	0.40
1:B:4826:ILE:HD13	1:C:4840:THR:HG22	2.03	0.40
1:D:1118:ASP:OD1	1:D:1118:ASP:N	2.55	0.40
1:D:2750:LYS:NZ	1:D:2823:ILE:O	2.50	0.40
1:D:3693:LYS:HA	1:D:3693:LYS:HD2	1.89	0.40
1:D:4211:LYS:O	1:D:4215:ARG:HG3	2.22	0.40
1:C:886:ARG:HB3	1:C:891:TRP:HB2	2.03	0.40
1:C:2126:ARG:NH2	1:C:2133:GLU:OE2	2.52	0.40
1:C:3400:VAL:HG23	1:C:3403:ARG:NH2	2.35	0.40
1:C:3459:VAL:HG11	1:C:3503:TYR:HD1	1.87	0.40
1:C:3528:THR:HG23	1:C:3573:MET:CE	2.52	0.40
1:C:4942:GLU:HA	1:C:4945:ASP:OD2	2.21	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	4385/5037 (87%)	4247 (97%)	138 (3%)	0	100	100
1	B	4385/5037 (87%)	4247 (97%)	138 (3%)	0	100	100
1	C	4385/5037 (87%)	4247 (97%)	138 (3%)	0	100	100
1	D	4385/5037 (87%)	4247 (97%)	138 (3%)	0	100	100
2	E	105/108 (97%)	103 (98%)	2 (2%)	0	100	100
2	F	105/108 (97%)	103 (98%)	2 (2%)	0	100	100
2	G	105/108 (97%)	103 (98%)	2 (2%)	0	100	100
2	H	105/108 (97%)	101 (96%)	4 (4%)	0	100	100
All	All	17960/20580 (87%)	17398 (97%)	562 (3%)	0	100	100

There are no Ramachandran outliers to report.

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	3836/4276 (90%)	3738 (97%)	98 (3%)	41	64
1	B	3836/4276 (90%)	3738 (97%)	98 (3%)	41	64
1	C	3836/4276 (90%)	3738 (97%)	98 (3%)	41	64
1	D	3836/4276 (90%)	3738 (97%)	98 (3%)	41	64
2	E	89/90 (99%)	78 (88%)	11 (12%)	4	16
2	F	89/90 (99%)	77 (86%)	12 (14%)	3	13

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
2	G	89/90 (99%)	78 (88%)	11 (12%)	4	16
2	H	89/90 (99%)	78 (88%)	11 (12%)	4	16
All	All	15700/17464 (90%)	15263 (97%)	437 (3%)	41	62

All (437) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	81	MET
1	A	125	ARG
1	A	127	MET
1	A	155	LYS
1	A	196	MET
1	A	220	LEU
1	A	384	MET
1	A	483	MET
1	A	882	TRP
1	A	898	ASP
1	A	945	LYS
1	A	957	LYS
1	A	959	TYR
1	A	960	MET
1	A	963	ASN
1	A	976	ARG
1	A	998	ARG
1	A	1003	GLN
1	A	1025	ARG
1	A	1044	ARG
1	A	1143	TRP
1	A	1281	ASN
1	A	1421	ARG
1	A	1435	TYR
1	A	1511	HIS
1	A	1538	THR
1	A	1623	ARG
1	A	1637	MET
1	A	1730	MET
1	A	1743[A]	ARG
1	A	1743[B]	ARG
1	A	1752	ARG
1	A	1758	ARG
1	A	1986	MET

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Mol	Chain	Res	Type
1	A	2008	MET
1	A	2037	ASP
1	A	2100[A]	HIS
1	A	2100[B]	HIS
1	A	2101	MET
1	A	2211	MET
1	A	2221	LYS
1	A	2224	ARG
1	A	2228	MET
1	A	2250	MET
1	A	2256	TYR
1	A	2267	MET
1	A	2268[A]	GLN
1	A	2268[B]	GLN
1	A	2336	ARG
1	A	2369[A]	ARG
1	A	2369[B]	ARG
1	A	2423	MET
1	A	2440	MET
1	A	2442	LEU
1	A	2546	MET
1	A	2578	MET
1	A	2608	MET
1	A	2628	PHE
1	A	2639	MET
1	A	2698	MET
1	A	2738	ARG
1	A	2751	LEU
1	A	2786	LYS
1	A	2797	PHE
1	A	2806	ARG
1	A	2827	ARG
1	A	2877	GLN
1	A	2914	LYS
1	A	2932	MET
1	A	2976	HIS
1	A	3053	ARG
1	A	3106	MET
1	A	3182	TYR
1	A	3201	MET
1	A	3250	MET
1	A	3409	TYR

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Mol	Chain	Res	Type
1	A	3449	HIS
1	A	3451	PHE
1	A	3462	ASN
1	A	3478	MET
1	A	3534	MET
1	A	3614	LYS
1	A	3622	LYS
1	A	3673	MET
1	A	3720	TYR
1	A	3757	GLU
1	A	3759	GLU
1	A	3858	MET
1	A	3899	PHE
1	A	3933	PHE
1	A	4039	MET
1	A	4057	MET
1	A	4580	TYR
1	A	4627	MET
1	A	4639	MET
1	A	4769	MET
1	A	4871	GLU
1	A	4940	PHE
2	E	11	ASP
2	E	17	LYS
2	E	27	THR
2	E	31	GLU
2	E	35	LYS
2	E	43	ASN
2	E	44	LYS
2	E	54	GLU
2	E	85	THR
2	E	102	GLU
2	E	105	LYS
2	H	11	ASP
2	H	13	ARG
2	H	17	LYS
2	H	27	THR
2	H	31	GLU
2	H	35	LYS
2	H	43	ASN
2	H	44	LYS
2	H	49	MET

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Mol	Chain	Res	Type
2	H	85	THR
2	H	102	GLU
2	G	11	ASP
2	G	17	LYS
2	G	27	THR
2	G	29	MET
2	G	31	GLU
2	G	35	LYS
2	G	43	ASN
2	G	44	LYS
2	G	85	THR
2	G	102	GLU
2	G	105	LYS
2	F	11	ASP
2	F	17	LYS
2	F	27	THR
2	F	29	MET
2	F	31	GLU
2	F	35	LYS
2	F	43	ASN
2	F	44	LYS
2	F	54	GLU
2	F	85	THR
2	F	102	GLU
2	F	105	LYS
1	B	81	MET
1	B	125	ARG
1	B	127	MET
1	B	155	LYS
1	B	196	MET
1	B	220	LEU
1	B	384	MET
1	B	483	MET
1	B	882	TRP
1	B	898	ASP
1	B	945	LYS
1	B	957	LYS
1	B	959	TYR
1	B	960	MET
1	B	963	ASN
1	B	976	ARG
1	B	998	ARG

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Mol	Chain	Res	Type
1	B	1003	GLN
1	B	1025	ARG
1	B	1044	ARG
1	B	1143	TRP
1	B	1281	ASN
1	B	1421	ARG
1	B	1435	TYR
1	B	1511	HIS
1	B	1538	THR
1	B	1623	ARG
1	B	1637	MET
1	B	1730	MET
1	B	1743[A]	ARG
1	B	1743[B]	ARG
1	B	1752	ARG
1	B	1758	ARG
1	B	1986	MET
1	B	2008	MET
1	B	2037	ASP
1	B	2100[A]	HIS
1	B	2100[B]	HIS
1	B	2101	MET
1	B	2211	MET
1	B	2221	LYS
1	B	2224	ARG
1	B	2228	MET
1	B	2250	MET
1	B	2256	TYR
1	B	2267	MET
1	B	2268[A]	GLN
1	B	2268[B]	GLN
1	B	2336	ARG
1	B	2369[A]	ARG
1	B	2369[B]	ARG
1	B	2423	MET
1	B	2440	MET
1	B	2442	LEU
1	B	2546	MET
1	B	2578	MET
1	B	2608	MET
1	B	2628	PHE
1	B	2639	MET

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Mol	Chain	Res	Type
1	B	2698	MET
1	B	2738	ARG
1	B	2751	LEU
1	B	2786	LYS
1	B	2797	PHE
1	B	2806	ARG
1	B	2827	ARG
1	B	2877	GLN
1	B	2914	LYS
1	B	2932	MET
1	B	2976	HIS
1	B	3053	ARG
1	B	3106	MET
1	B	3182	TYR
1	B	3201	MET
1	B	3250	MET
1	B	3409	TYR
1	B	3449	HIS
1	B	3451	PHE
1	B	3462	ASN
1	B	3478	MET
1	B	3534	MET
1	B	3614	LYS
1	B	3622	LYS
1	B	3673	MET
1	B	3720	TYR
1	B	3757	GLU
1	B	3759	GLU
1	B	3858	MET
1	B	3899	PHE
1	B	3933	PHE
1	B	4039	MET
1	B	4057	MET
1	B	4580	TYR
1	B	4627	MET
1	B	4639	MET
1	B	4769	MET
1	B	4871	GLU
1	B	4940	PHE
1	D	81	MET
1	D	125	ARG
1	D	127	MET

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Mol	Chain	Res	Type
1	D	155	LYS
1	D	196	MET
1	D	220	LEU
1	D	384	MET
1	D	483	MET
1	D	882	TRP
1	D	898	ASP
1	D	945	LYS
1	D	957	LYS
1	D	959	TYR
1	D	960	MET
1	D	963	ASN
1	D	976	ARG
1	D	998	ARG
1	D	1003	GLN
1	D	1025	ARG
1	D	1044	ARG
1	D	1143	TRP
1	D	1281	ASN
1	D	1421	ARG
1	D	1435	TYR
1	D	1511	HIS
1	D	1538	THR
1	D	1623	ARG
1	D	1637	MET
1	D	1730	MET
1	D	1743[A]	ARG
1	D	1743[B]	ARG
1	D	1752	ARG
1	D	1758	ARG
1	D	1986	MET
1	D	2008	MET
1	D	2037	ASP
1	D	2100[A]	HIS
1	D	2100[B]	HIS
1	D	2101	MET
1	D	2211	MET
1	D	2221	LYS
1	D	2224	ARG
1	D	2228	MET
1	D	2250	MET
1	D	2256	TYR

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Mol	Chain	Res	Type
1	D	2267	MET
1	D	2268[A]	GLN
1	D	2268[B]	GLN
1	D	2336	ARG
1	D	2369[A]	ARG
1	D	2369[B]	ARG
1	D	2423	MET
1	D	2440	MET
1	D	2442	LEU
1	D	2546	MET
1	D	2578	MET
1	D	2608	MET
1	D	2628	PHE
1	D	2639	MET
1	D	2698	MET
1	D	2738	ARG
1	D	2751	LEU
1	D	2786	LYS
1	D	2797	PHE
1	D	2806	ARG
1	D	2827	ARG
1	D	2877	GLN
1	D	2914	LYS
1	D	2932	MET
1	D	2976	HIS
1	D	3053	ARG
1	D	3106	MET
1	D	3182	TYR
1	D	3201	MET
1	D	3250	MET
1	D	3409	TYR
1	D	3449	HIS
1	D	3451	PHE
1	D	3462	ASN
1	D	3478	MET
1	D	3534	MET
1	D	3614	LYS
1	D	3622	LYS
1	D	3673	MET
1	D	3720	TYR
1	D	3757	GLU
1	D	3759	GLU

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Mol	Chain	Res	Type
1	D	3858	MET
1	D	3899	PHE
1	D	3933	PHE
1	D	4039	MET
1	D	4057	MET
1	D	4580	TYR
1	D	4627	MET
1	D	4639	MET
1	D	4769	MET
1	D	4871	GLU
1	D	4940	PHE
1	C	81	MET
1	C	125	ARG
1	C	127	MET
1	C	155	LYS
1	C	196	MET
1	C	220	LEU
1	C	384	MET
1	C	483	MET
1	C	882	TRP
1	C	898	ASP
1	C	945	LYS
1	C	957	LYS
1	C	959	TYR
1	C	960	MET
1	C	963	ASN
1	C	976	ARG
1	C	998	ARG
1	C	1003	GLN
1	C	1025	ARG
1	C	1044	ARG
1	C	1143	TRP
1	C	1281	ASN
1	C	1421	ARG
1	C	1435	TYR
1	C	1511	HIS
1	C	1538	THR
1	C	1623	ARG
1	C	1637	MET
1	C	1730	MET
1	C	1743[A]	ARG
1	C	1743[B]	ARG

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Mol	Chain	Res	Type
1	C	1752	ARG
1	C	1758	ARG
1	C	1986	MET
1	C	2008	MET
1	C	2037	ASP
1	C	2100[A]	HIS
1	C	2100[B]	HIS
1	C	2101	MET
1	C	2211	MET
1	C	2221	LYS
1	C	2224	ARG
1	C	2228	MET
1	C	2250	MET
1	C	2256	TYR
1	C	2267	MET
1	C	2268[A]	GLN
1	C	2268[B]	GLN
1	C	2336	ARG
1	C	2369[A]	ARG
1	C	2369[B]	ARG
1	C	2423	MET
1	C	2440	MET
1	C	2442	LEU
1	C	2546	MET
1	C	2578	MET
1	C	2608	MET
1	C	2628	PHE
1	C	2639	MET
1	C	2698	MET
1	C	2738	ARG
1	C	2751	LEU
1	C	2786	LYS
1	C	2797	PHE
1	C	2806	ARG
1	C	2827	ARG
1	C	2877	GLN
1	C	2914	LYS
1	C	2932	MET
1	C	2976	HIS
1	C	3053	ARG
1	C	3106	MET
1	C	3182	TYR

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Mol	Chain	Res	Type
1	C	3201	MET
1	C	3250	MET
1	C	3409	TYR
1	C	3449	HIS
1	C	3451	PHE
1	C	3462	ASN
1	C	3478	MET
1	C	3534	MET
1	C	3614	LYS
1	C	3622	LYS
1	C	3673	MET
1	C	3720	TYR
1	C	3757	GLU
1	C	3759	GLU
1	C	3858	MET
1	C	3899	PHE
1	C	3933	PHE
1	C	4039	MET
1	C	4057	MET
1	C	4580	TYR
1	C	4627	MET
1	C	4639	MET
1	C	4769	MET
1	C	4871	GLU
1	C	4940	PHE

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (9) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	991	ASN
1	A	4009	GLN
1	B	991	ASN
1	B	4009	GLN
1	D	991	ASN
1	D	4009	GLN
1	C	991	ASN
1	C	2092	GLN
1	C	4009	GLN

5.3.3 RNA [i](#)

There are no RNA molecules in this entry.

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

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

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 16 ligands modelled in this entry, 8 are monoatomic - leaving 8 for Mogul analysis.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
3	ATP	D	5301	-	28,33,33	0.66	0	34,52,52	0.99	2 (5%)
6	A1BD5	B	5304	-	16,16,16	0.96	0	21,23,23	0.73	0
6	A1BD5	A	5304	-	16,16,16	0.97	0	21,23,23	0.73	0
3	ATP	B	5301	-	28,33,33	0.65	0	34,52,52	0.99	2 (5%)
3	ATP	C	5301	-	28,33,33	0.67	0	34,52,52	1.00	2 (5%)
6	A1BD5	C	5304	-	16,16,16	0.96	0	21,23,23	0.73	0
3	ATP	A	5301	-	28,33,33	0.66	0	34,52,52	0.99	2 (5%)
6	A1BD5	D	5304	-	16,16,16	0.96	0	21,23,23	0.73	0

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
3	ATP	D	5301	-	-	9/18/38/38	0/3/3/3

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
6	A1BD5	B	5304	-	-	0/4/4/4	0/2/2/2
6	A1BD5	A	5304	-	-	0/4/4/4	0/2/2/2
3	ATP	B	5301	-	-	9/18/38/38	0/3/3/3
3	ATP	C	5301	-	-	9/18/38/38	0/3/3/3
6	A1BD5	C	5304	-	-	0/4/4/4	0/2/2/2
3	ATP	A	5301	-	-	9/18/38/38	0/3/3/3
6	A1BD5	D	5304	-	-	0/4/4/4	0/2/2/2

There are no bond length outliers.

All (8) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	C	5301	ATP	C4'-O4'-C1'	-4.65	105.67	109.92
3	B	5301	ATP	C4'-O4'-C1'	-4.59	105.72	109.92
3	A	5301	ATP	C4'-O4'-C1'	-4.59	105.72	109.92
3	D	5301	ATP	C4'-O4'-C1'	-4.58	105.73	109.92
3	C	5301	ATP	C5-C6-N6	2.36	123.90	120.31
3	B	5301	ATP	C5-C6-N6	2.35	123.89	120.31
3	A	5301	ATP	C5-C6-N6	2.34	123.88	120.31
3	D	5301	ATP	C5-C6-N6	2.34	123.87	120.31

There are no chirality outliers.

All (36) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
3	A	5301	ATP	PB-O3B-PG-O2G
3	A	5301	ATP	C5'-O5'-PA-O1A
3	A	5301	ATP	C5'-O5'-PA-O2A
3	A	5301	ATP	C5'-O5'-PA-O3A
3	B	5301	ATP	PB-O3B-PG-O2G
3	B	5301	ATP	C5'-O5'-PA-O1A
3	B	5301	ATP	C5'-O5'-PA-O2A
3	B	5301	ATP	C5'-O5'-PA-O3A
3	D	5301	ATP	PB-O3B-PG-O2G
3	D	5301	ATP	C5'-O5'-PA-O1A
3	D	5301	ATP	C5'-O5'-PA-O2A
3	D	5301	ATP	C5'-O5'-PA-O3A
3	C	5301	ATP	PB-O3B-PG-O2G
3	C	5301	ATP	C5'-O5'-PA-O1A
3	C	5301	ATP	C5'-O5'-PA-O2A

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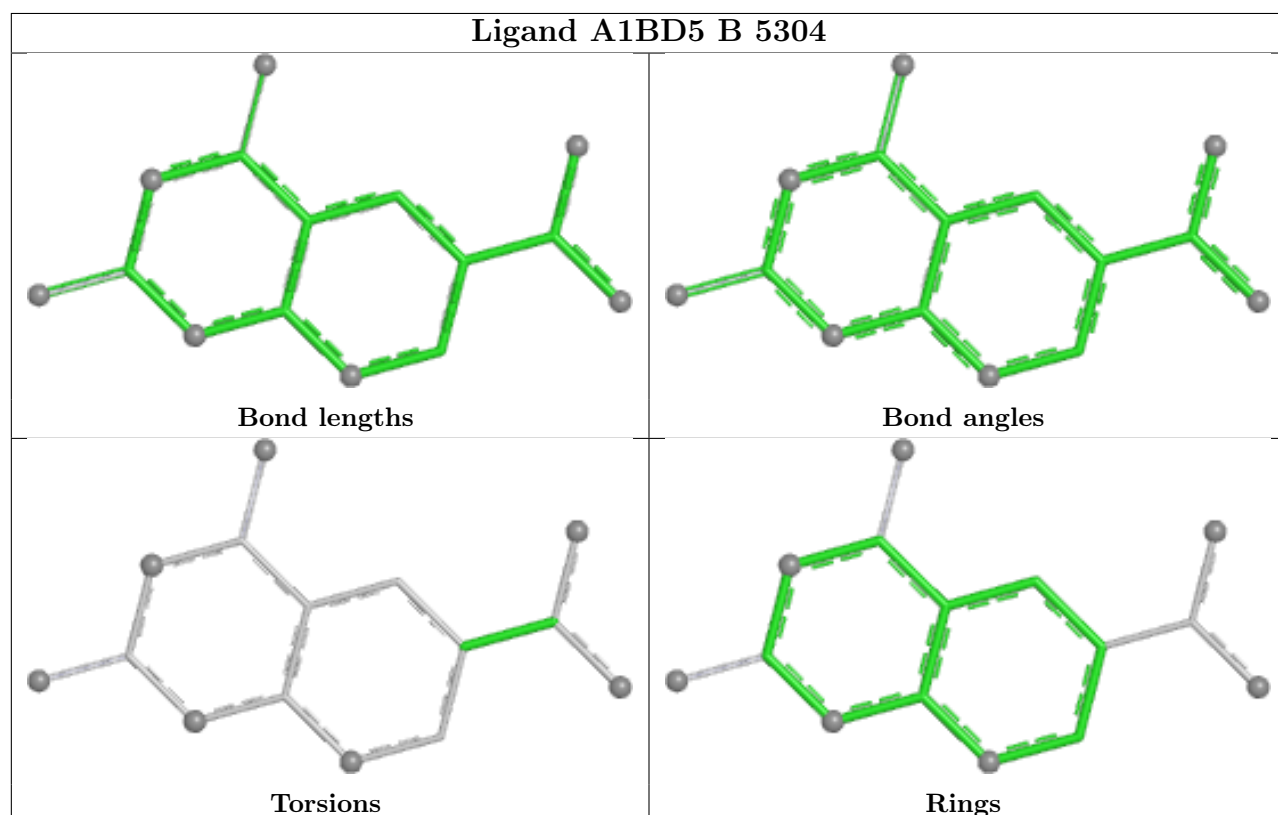
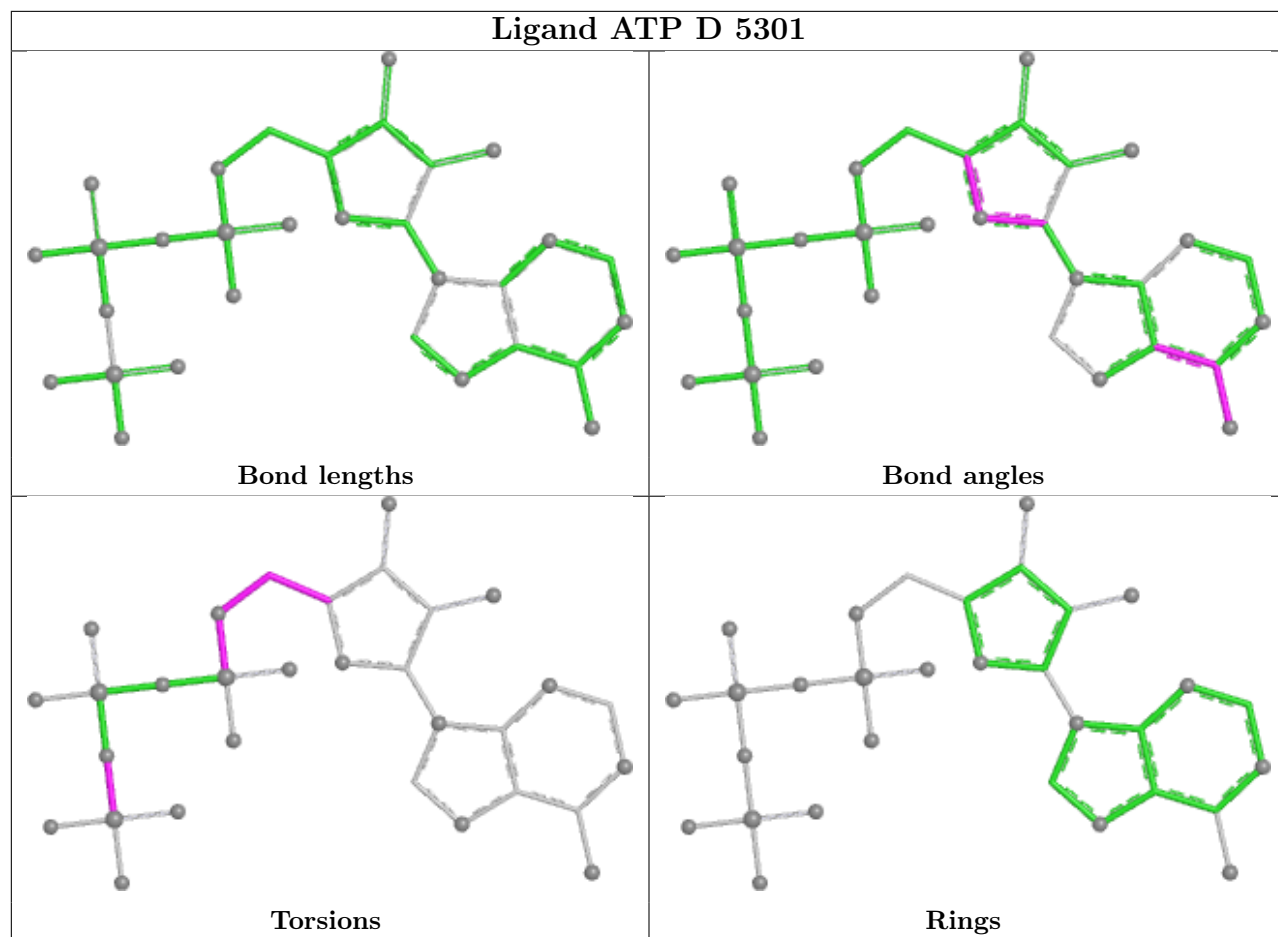
Continued from previous page...

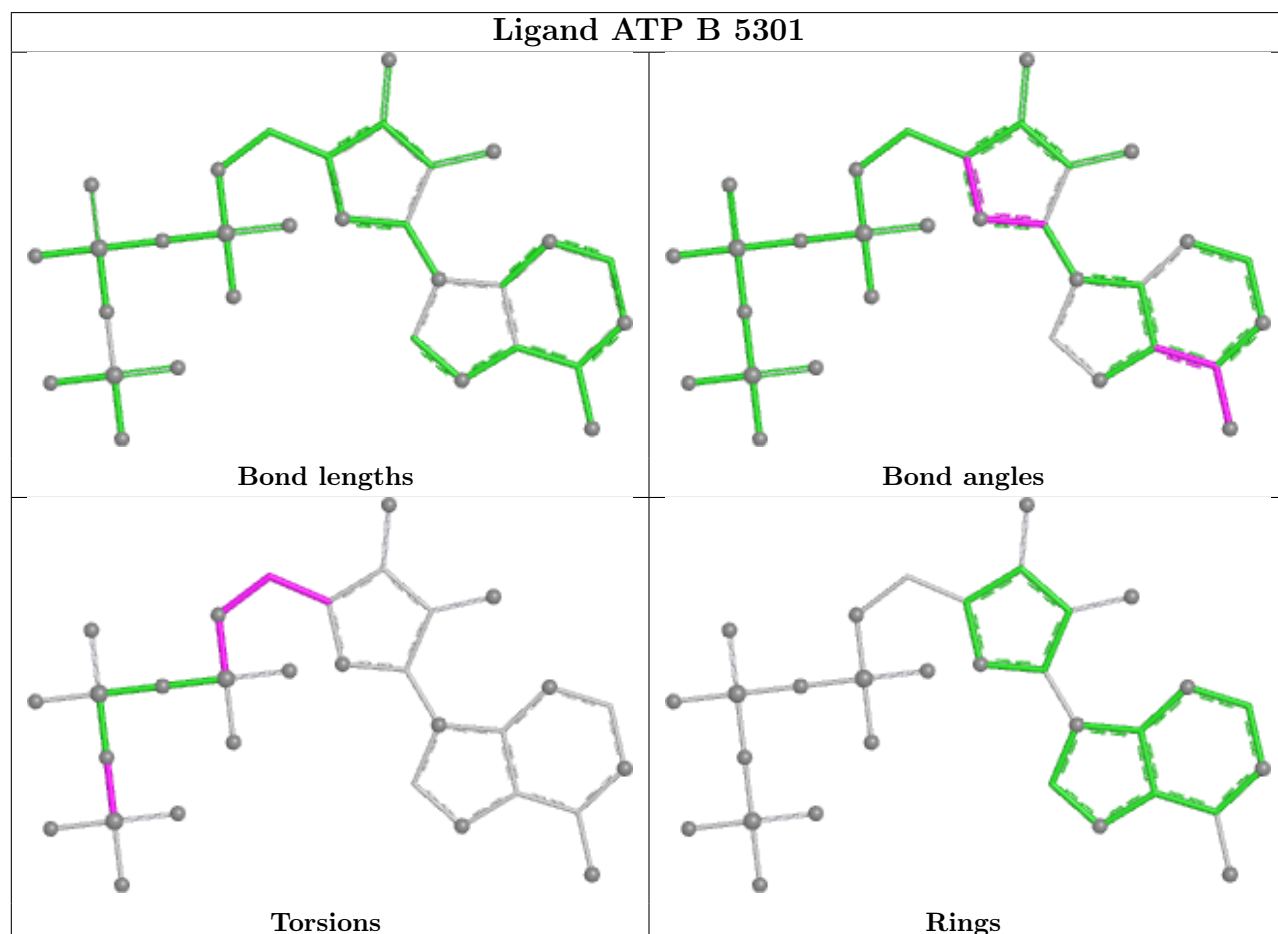
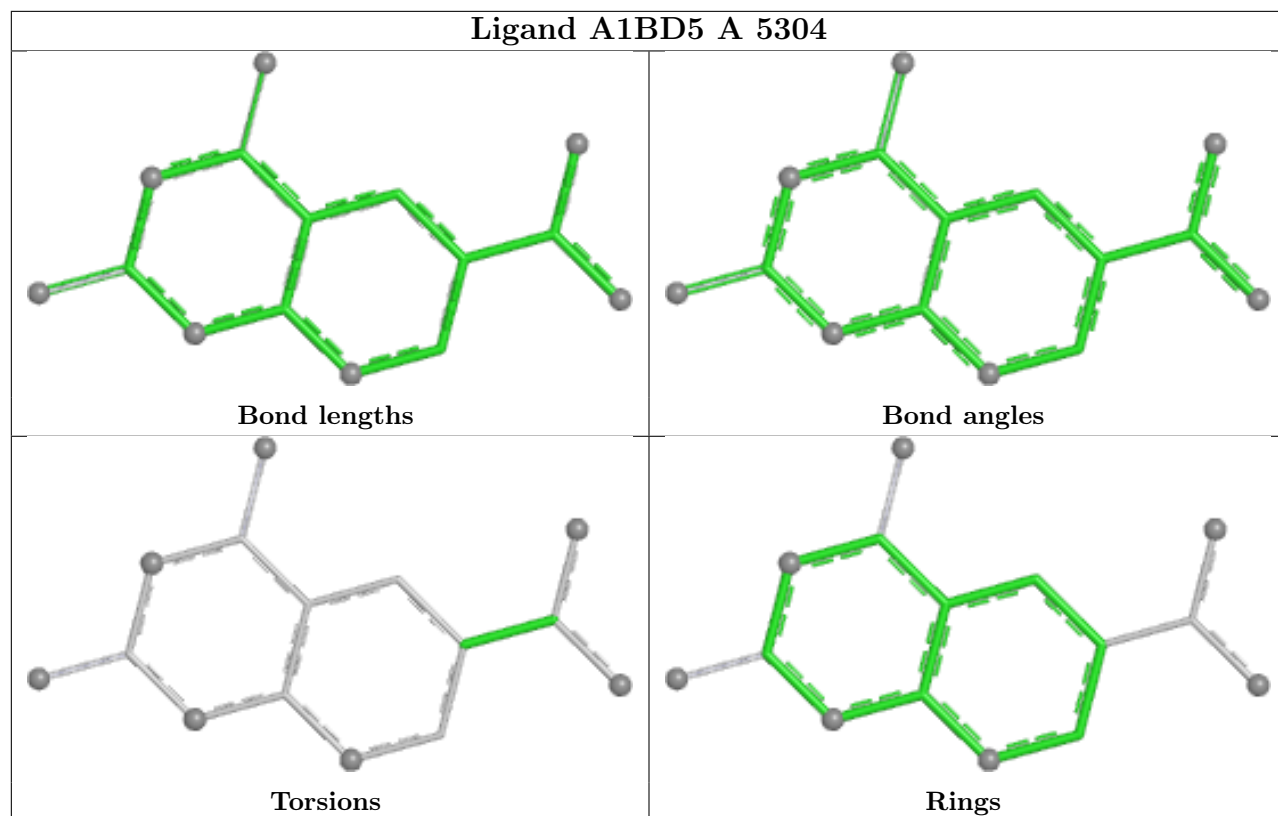
Mol	Chain	Res	Type	Atoms
3	C	5301	ATP	C5'-O5'-PA-O3A
3	B	5301	ATP	O4'-C4'-C5'-O5'
3	A	5301	ATP	PB-O3B-PG-O3G
3	B	5301	ATP	PB-O3B-PG-O3G
3	D	5301	ATP	PB-O3B-PG-O3G
3	C	5301	ATP	PB-O3B-PG-O3G
3	A	5301	ATP	O4'-C4'-C5'-O5'
3	D	5301	ATP	O4'-C4'-C5'-O5'
3	C	5301	ATP	O4'-C4'-C5'-O5'
3	A	5301	ATP	C3'-C4'-C5'-O5'
3	B	5301	ATP	C3'-C4'-C5'-O5'
3	D	5301	ATP	C3'-C4'-C5'-O5'
3	C	5301	ATP	C3'-C4'-C5'-O5'
3	A	5301	ATP	C4'-C5'-O5'-PA
3	B	5301	ATP	C4'-C5'-O5'-PA
3	D	5301	ATP	C4'-C5'-O5'-PA
3	C	5301	ATP	C4'-C5'-O5'-PA
3	A	5301	ATP	PB-O3B-PG-O1G
3	B	5301	ATP	PB-O3B-PG-O1G
3	D	5301	ATP	PB-O3B-PG-O1G
3	C	5301	ATP	PB-O3B-PG-O1G

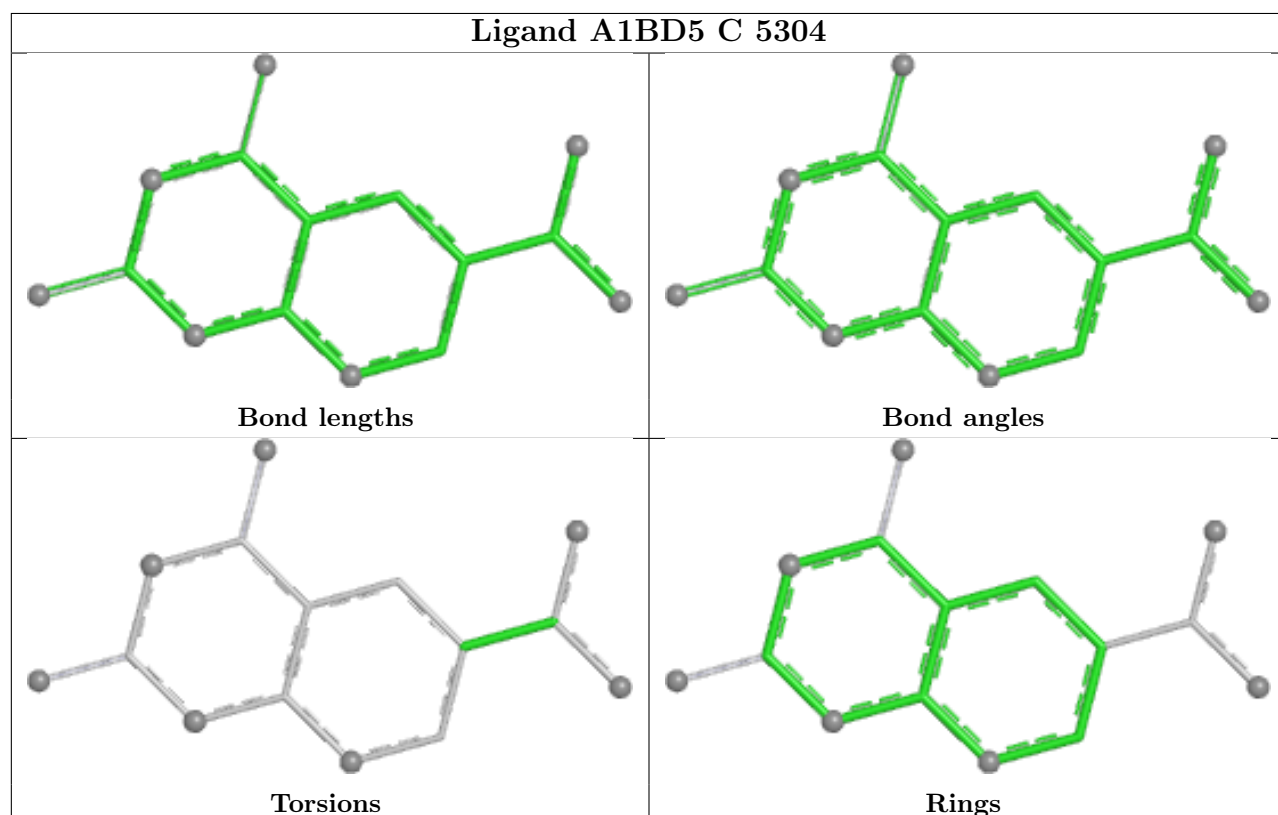
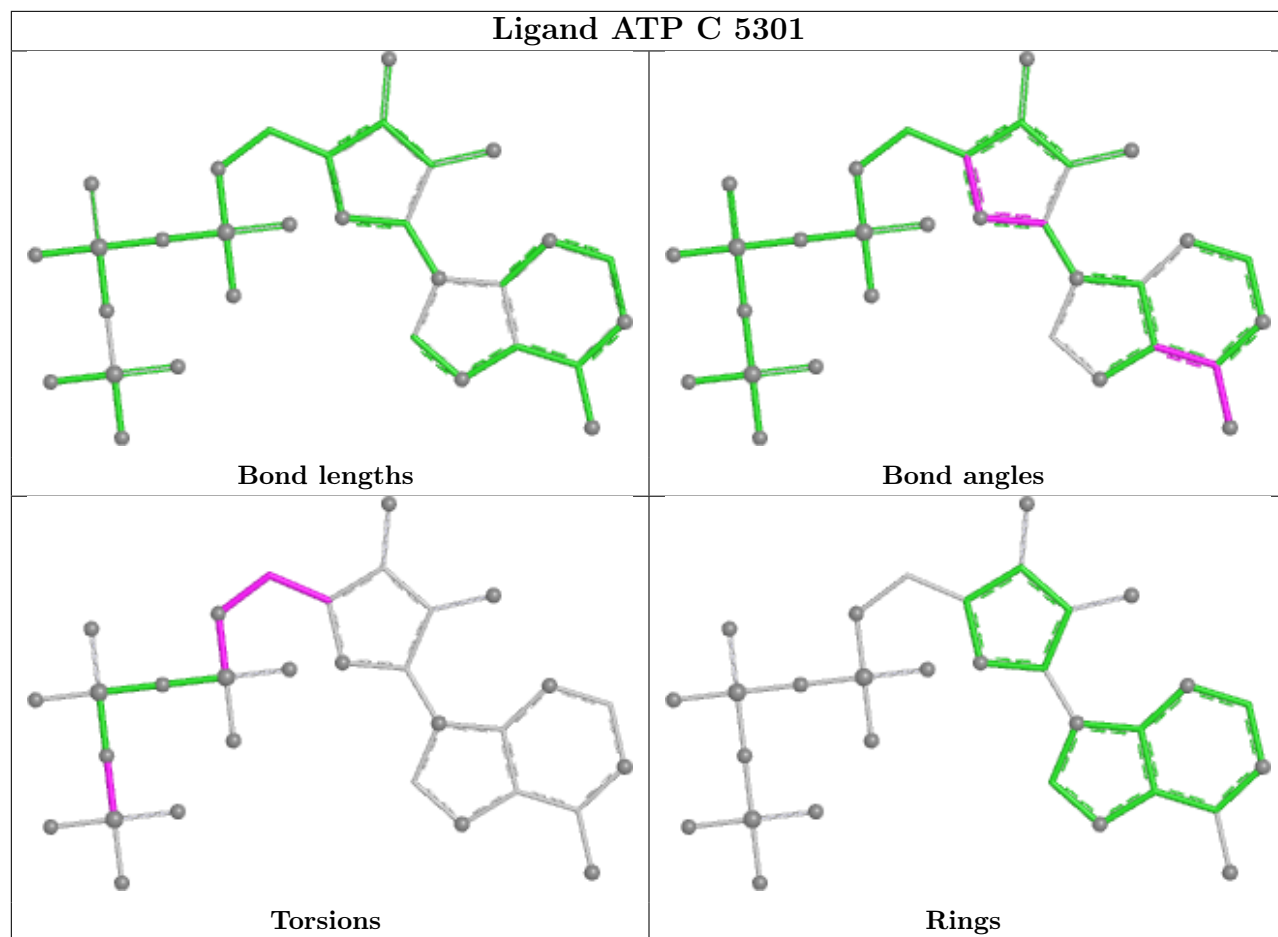
There are no ring outliers.

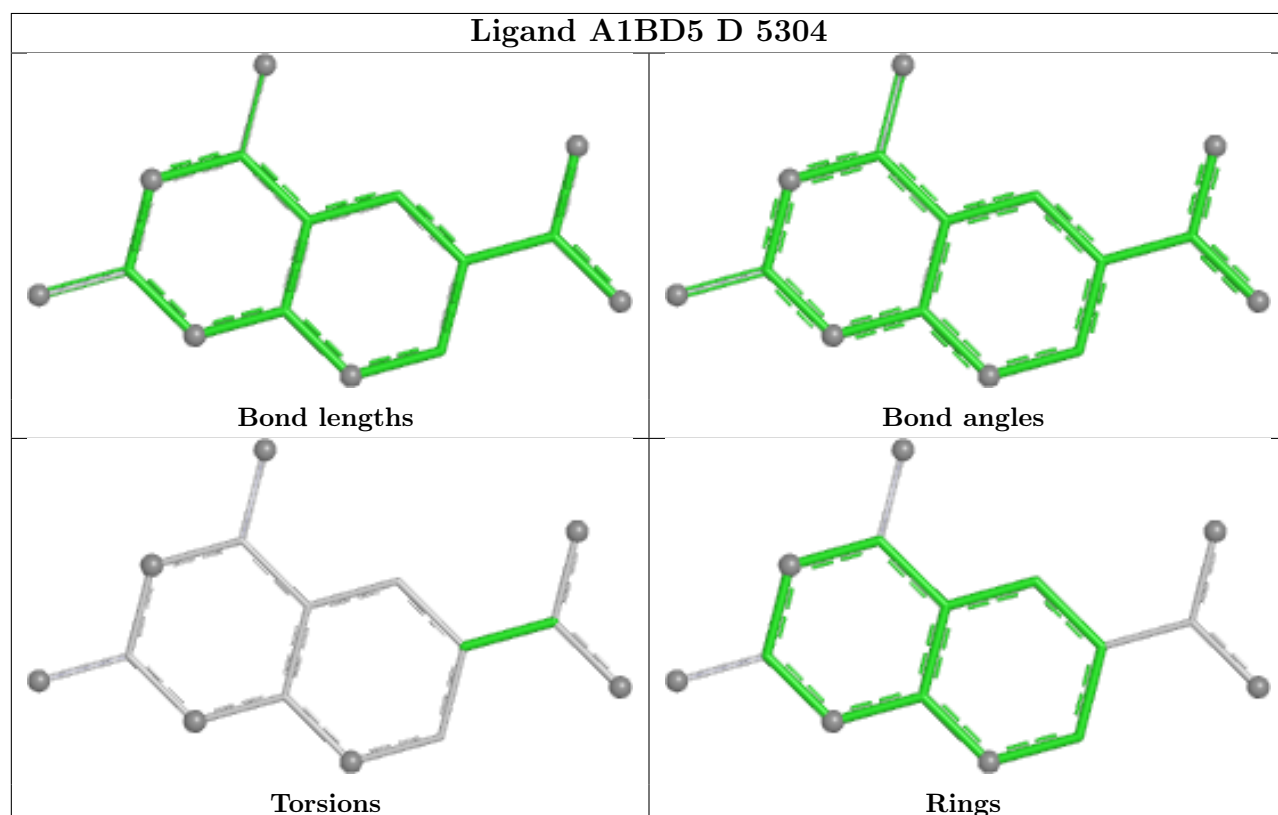
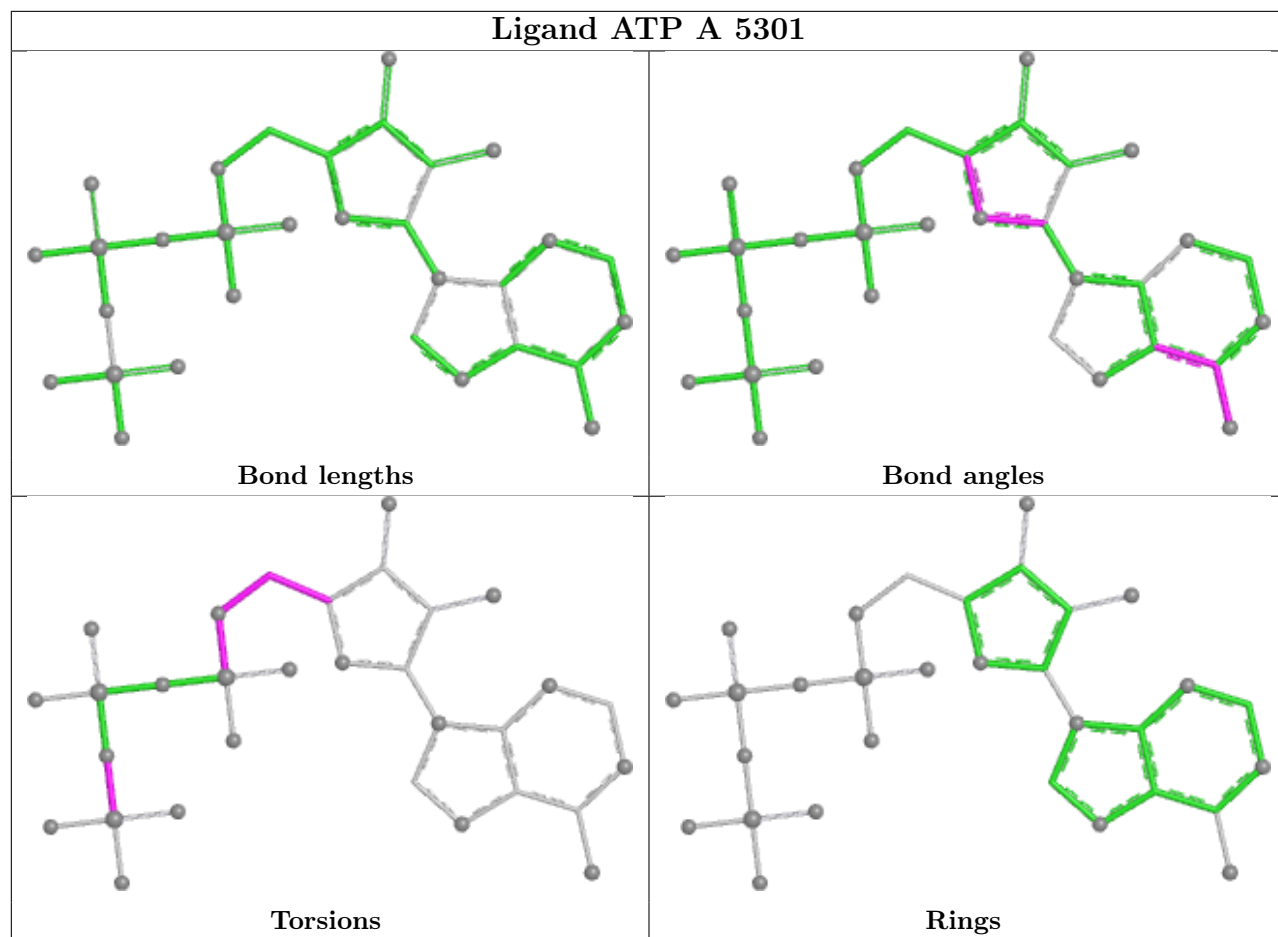
No monomer is involved in short contacts.

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









5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

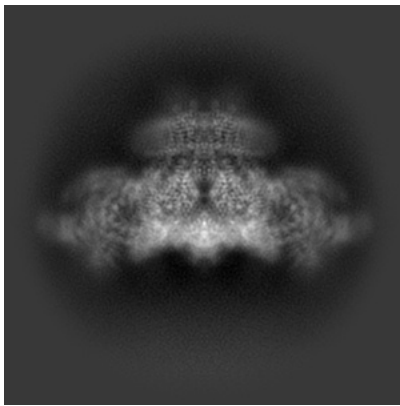
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-47394. These allow visual inspection of the internal detail of the map and identification of artifacts.

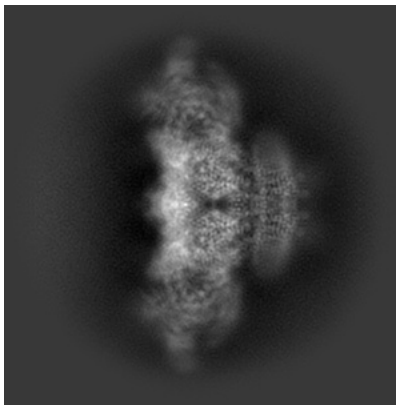
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

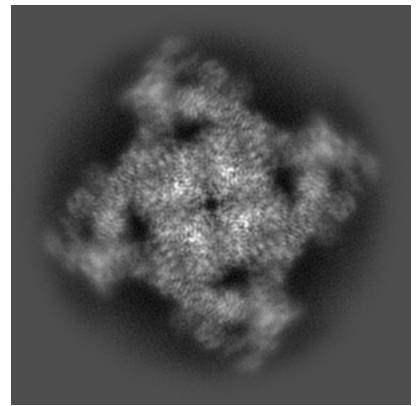
6.1.1 Primary map



X

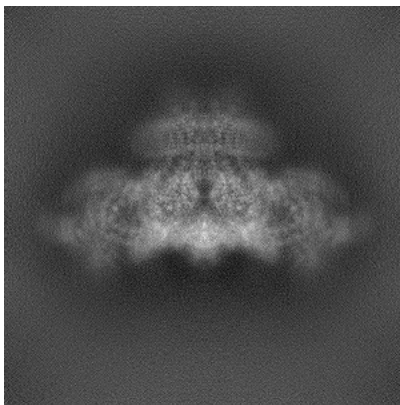


Y

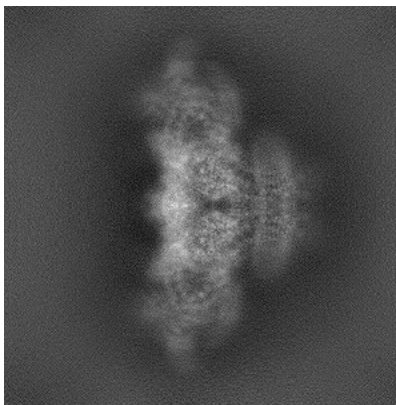


Z

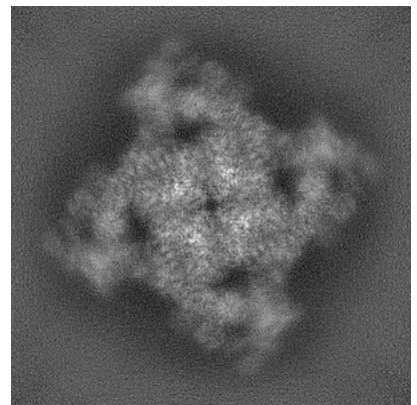
6.1.2 Raw map



X



Y

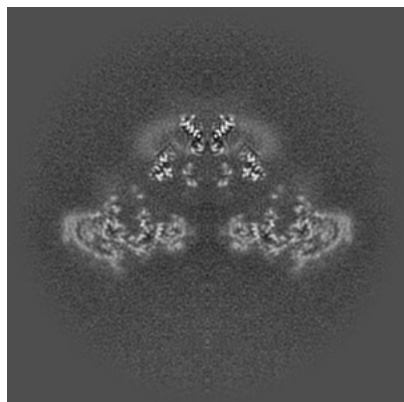


Z

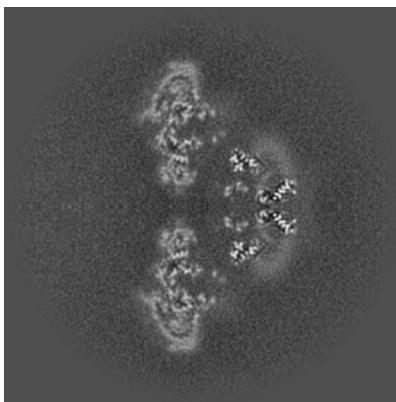
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

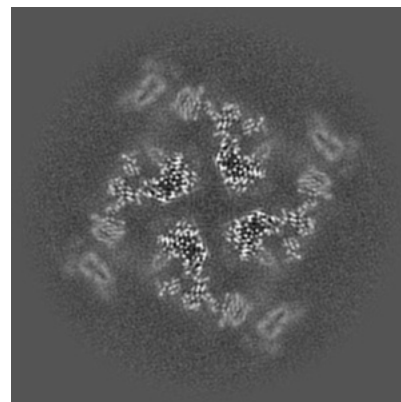
6.2.1 Primary map



X Index: 256

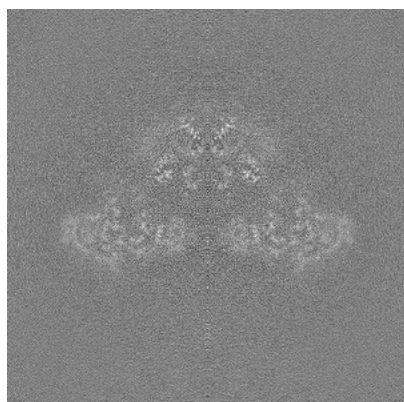


Y Index: 256

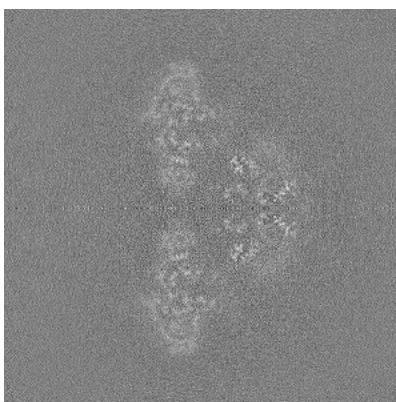


Z Index: 256

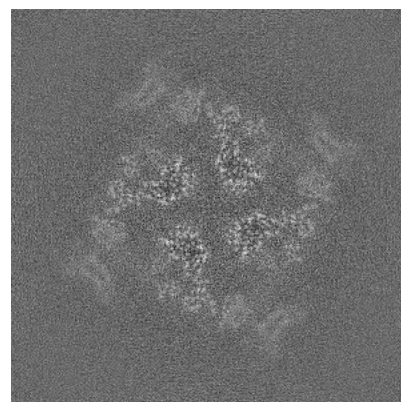
6.2.2 Raw map



X Index: 256



Y Index: 256

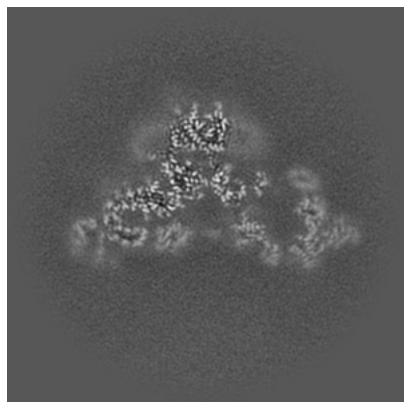


Z Index: 256

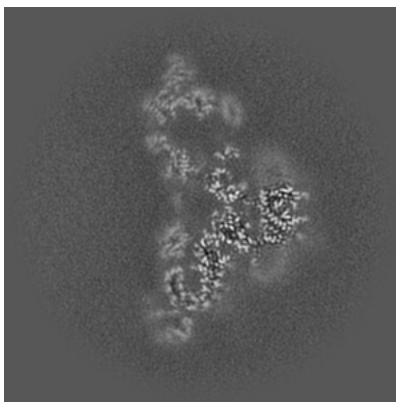
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

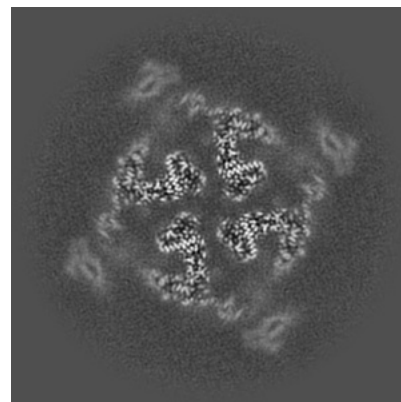
6.3.1 Primary map



X Index: 239

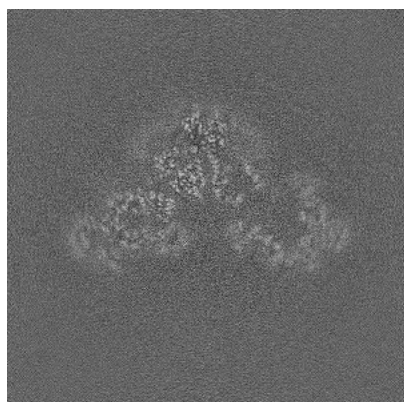


Y Index: 273

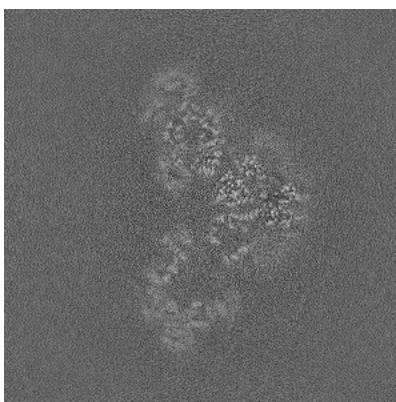


Z Index: 265

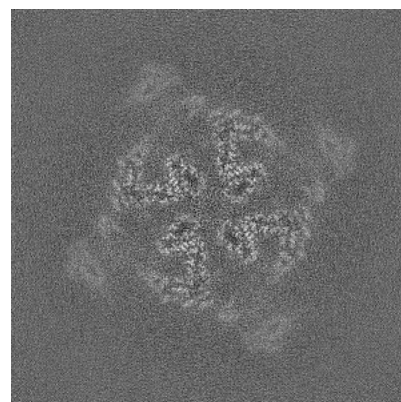
6.3.2 Raw map



X Index: 244



Y Index: 244

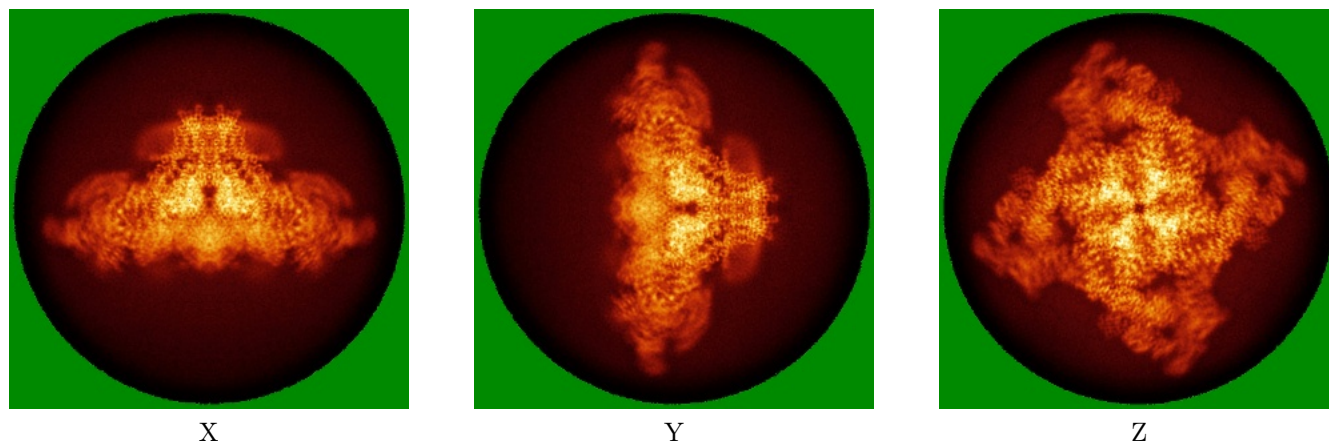


Z Index: 266

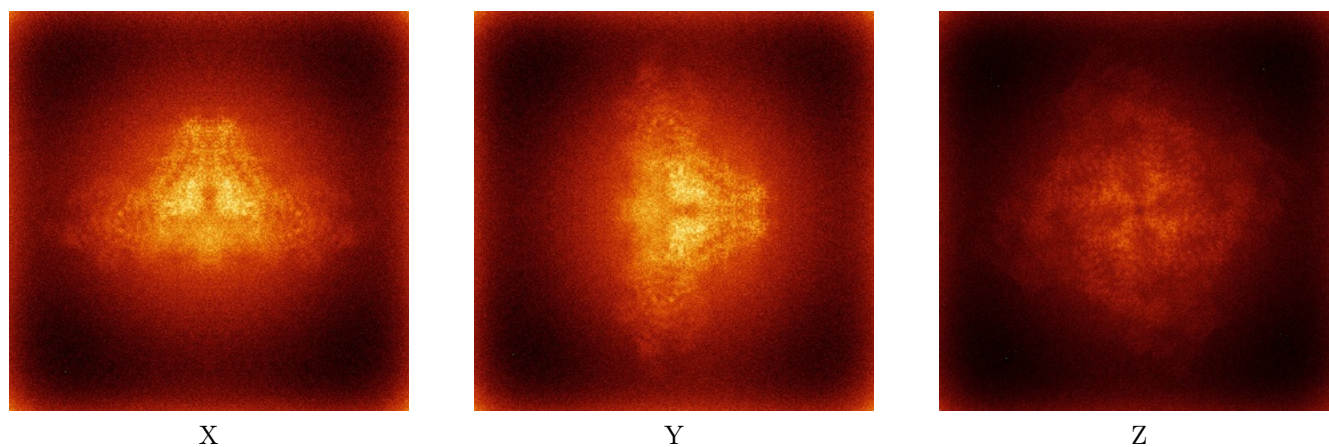
The images above show the largest variance slices of the map in three orthogonal directions.

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

6.4.1 Primary map



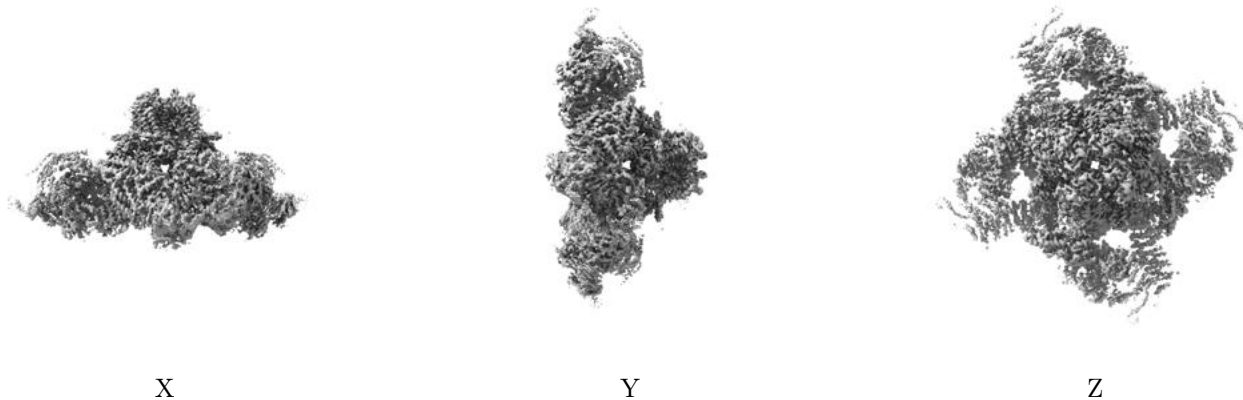
6.4.2 Raw map



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

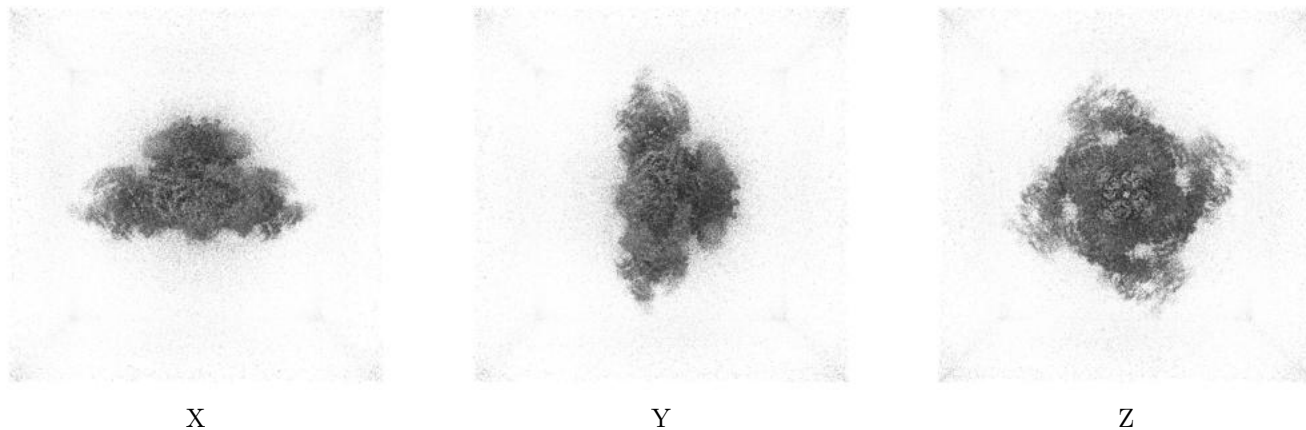
6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 0.1. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

6.5.2 Raw map



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

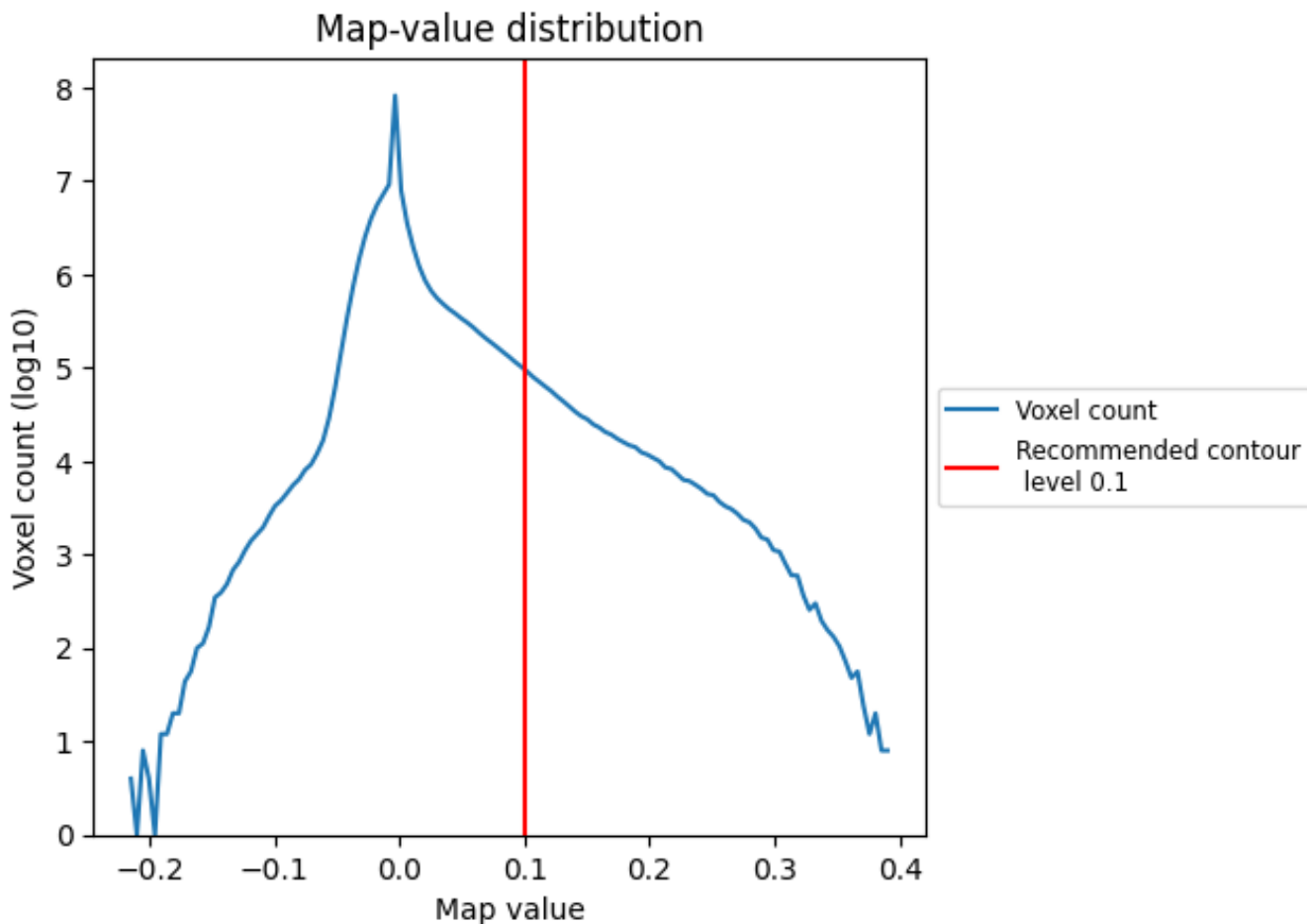
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

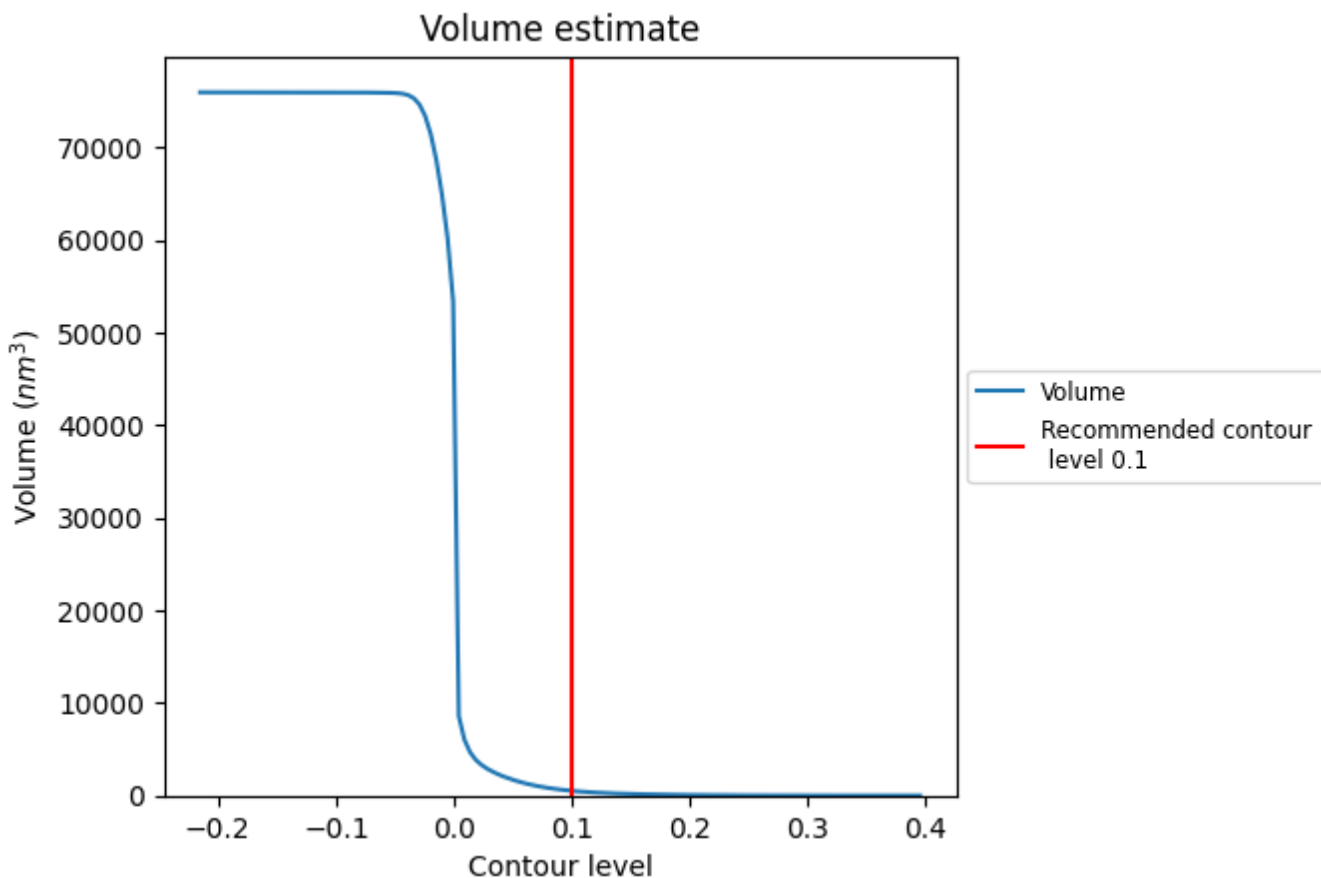
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution [i](#)



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

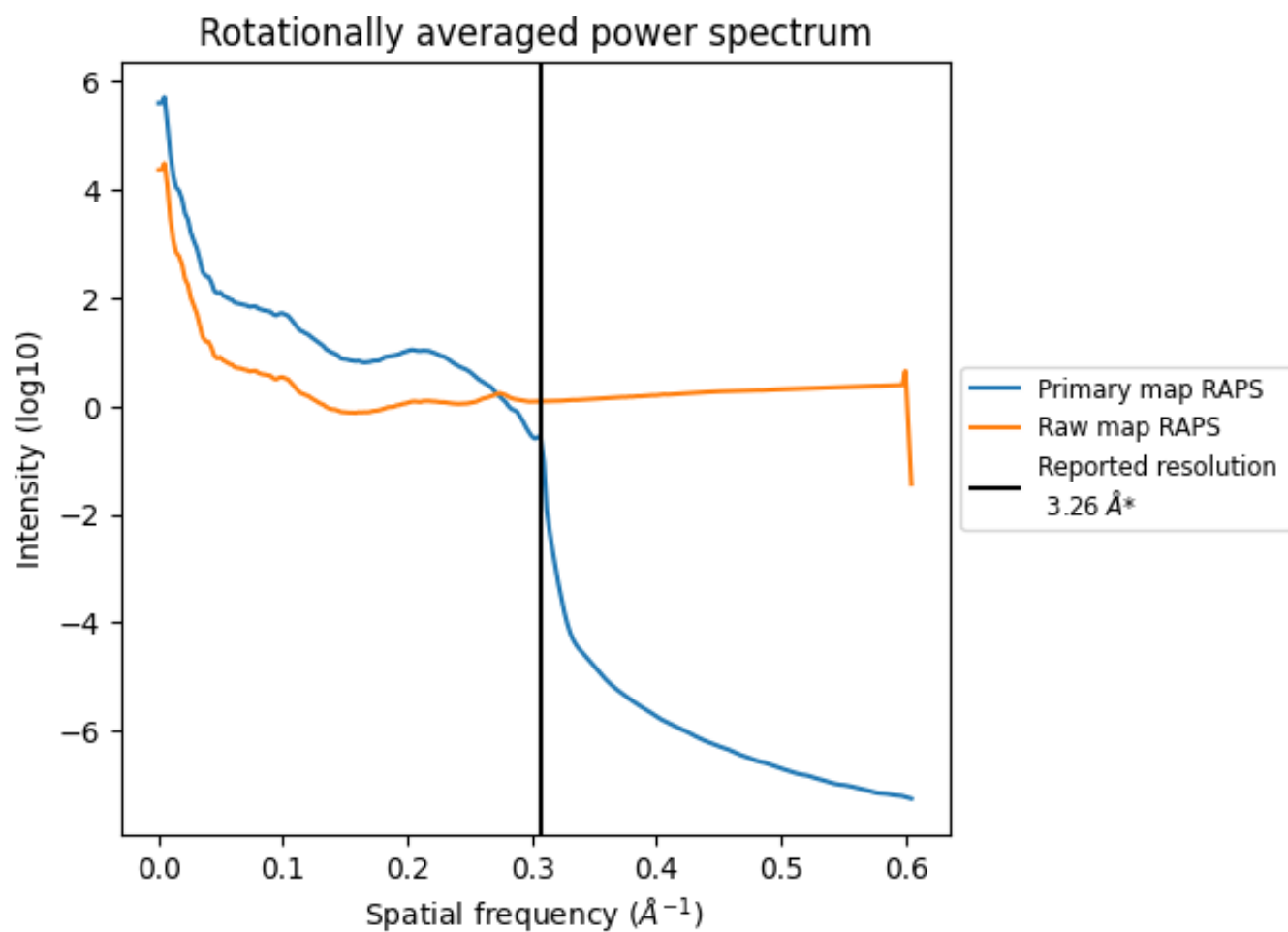
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 512 nm^3 ; this corresponds to an approximate mass of 463 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

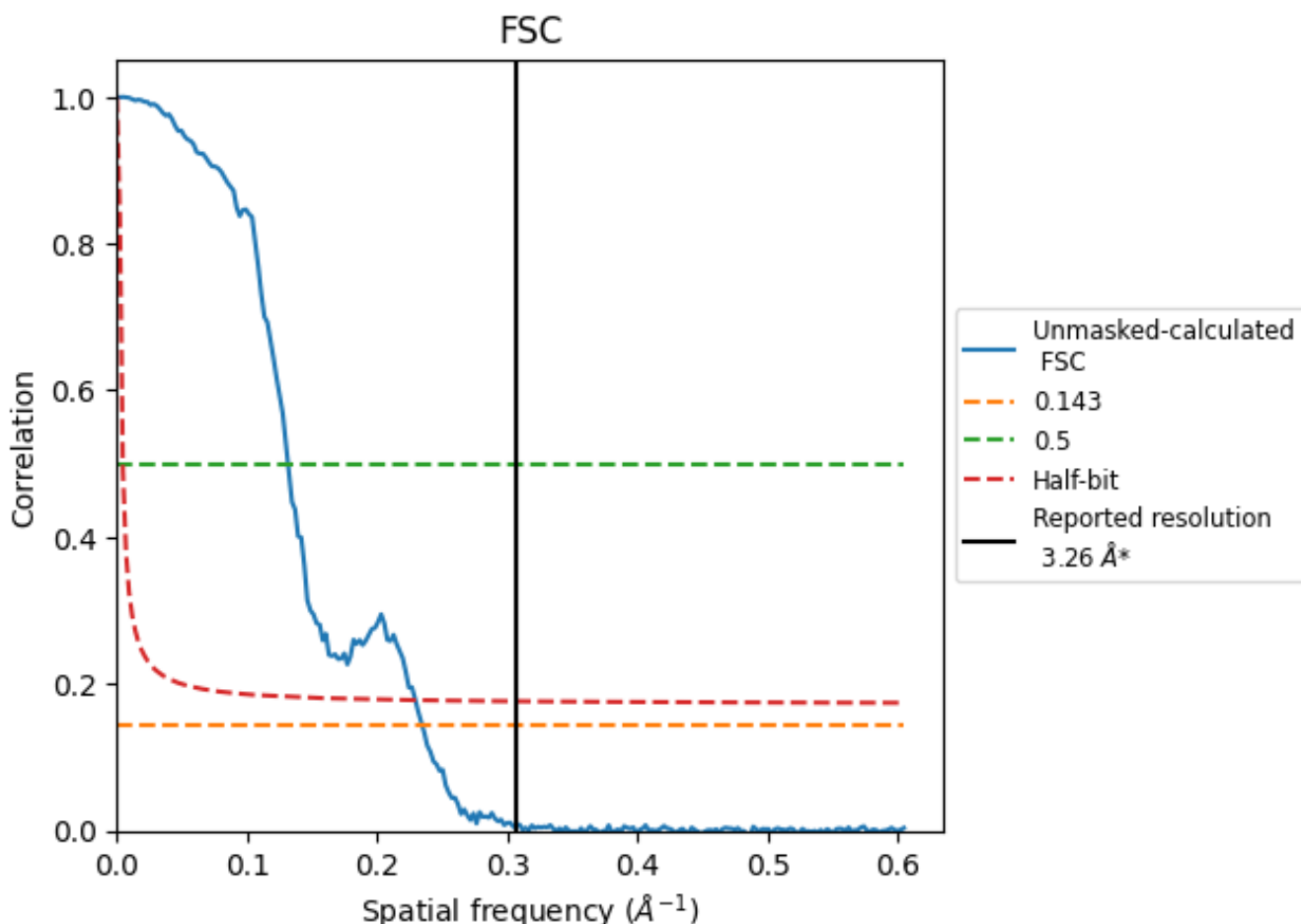


*Reported resolution corresponds to spatial frequency of 0.307 Å⁻¹

8 Fourier-Shell correlation [i](#)

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

8.1 FSC [i](#)



*Reported resolution corresponds to spatial frequency of 0.307\AA^{-1}

8.2 Resolution estimates [i](#)

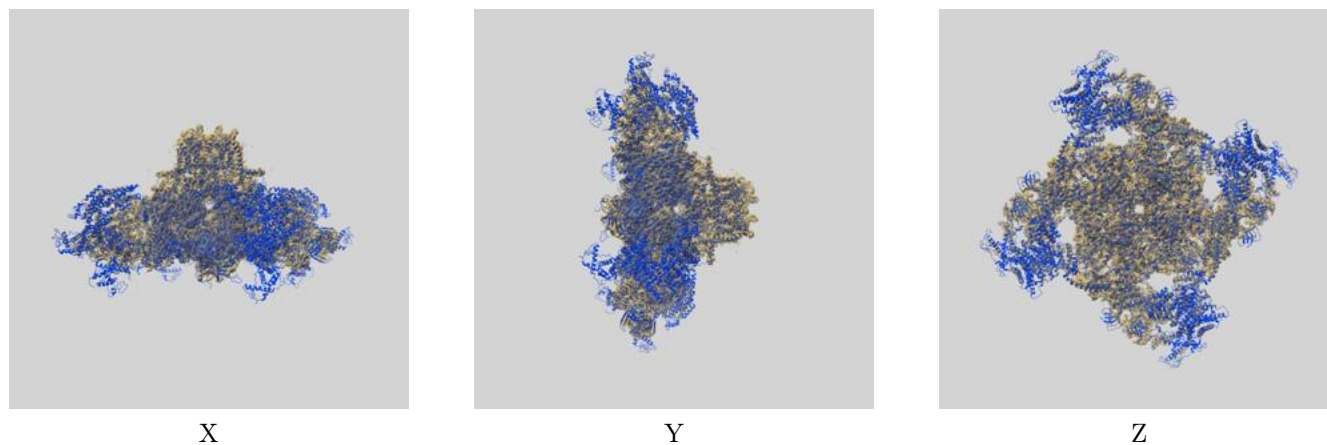
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	3.26	-	-
Author-provided FSC curve	-	-	-
Unmasked-calculated*	4.26	7.60	4.36

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps. The value from deposited half-maps intersecting FSC 0.143 CUT-OFF 4.26 differs from the reported value 3.26 by more than 10 %

9 Map-model fit [i](#)

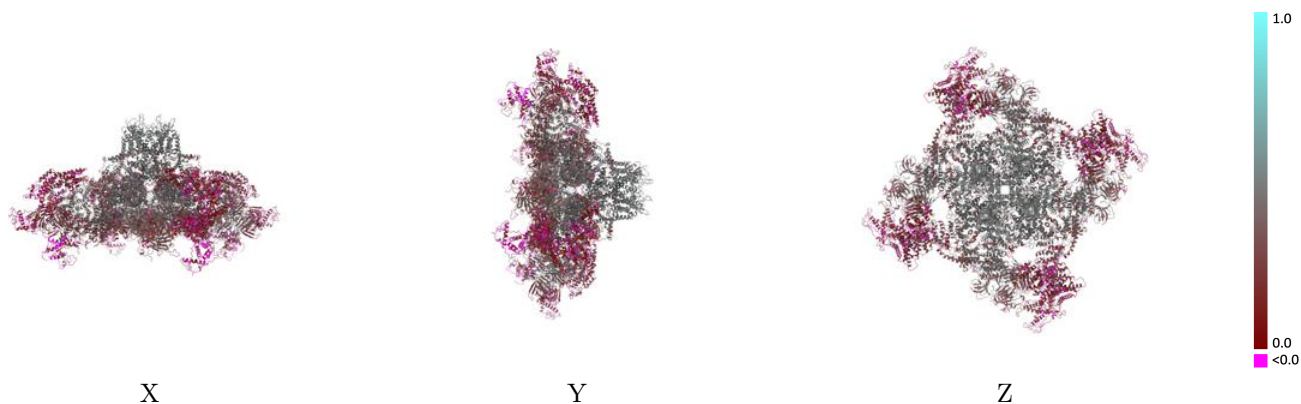
This section contains information regarding the fit between EMDB map EMD-47394 and PDB model 9E1H. Per-residue inclusion information can be found in section 3 on page 7.

9.1 Map-model overlay [i](#)



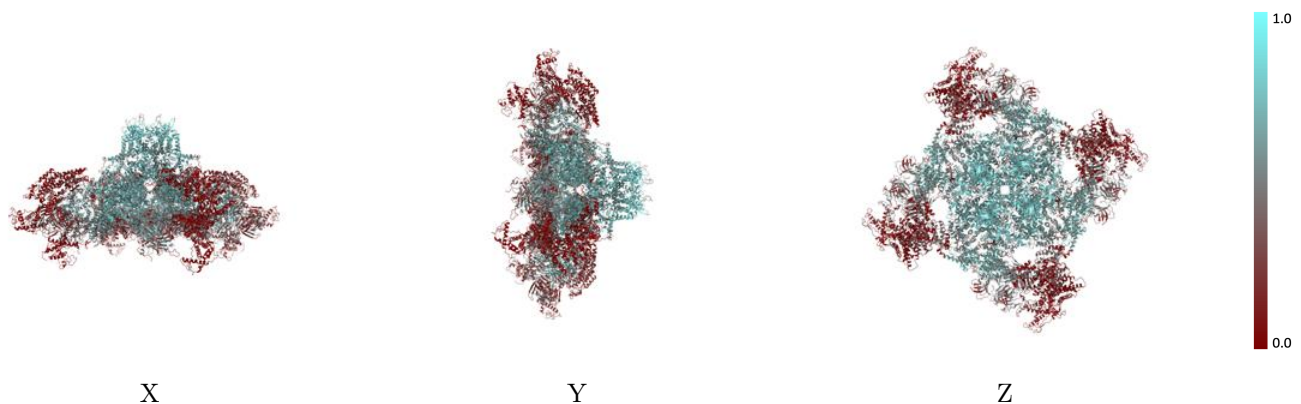
The images above show the 3D surface view of the map at the recommended contour level 0.1 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



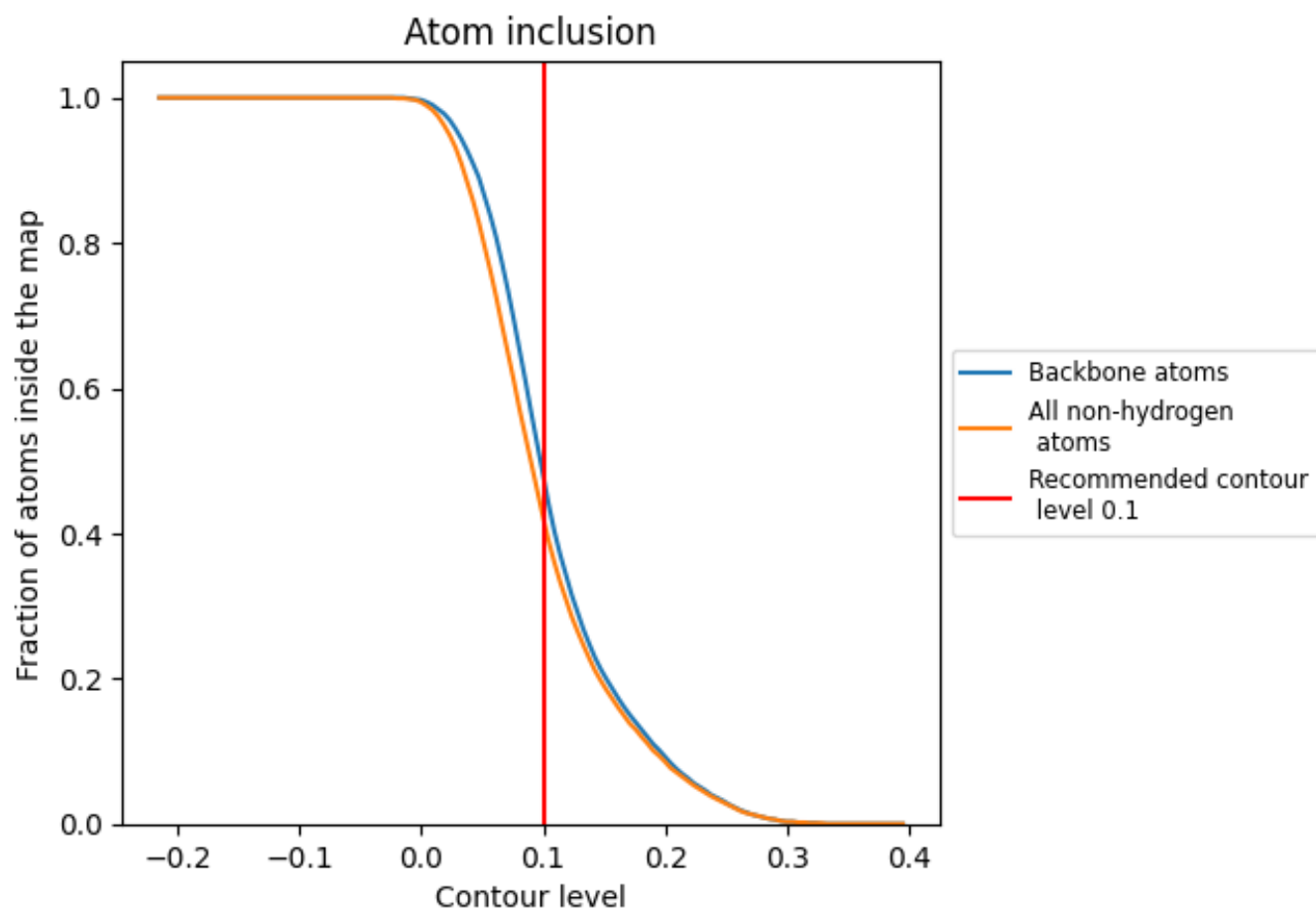
The images above show the model with each residue coloured according its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions 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 (0.1).



















9.4 Atom inclusion [i](#)



At the recommended contour level, 48% 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 (0.1) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.4210	 0.3140
A	 0.4340	 0.3130
B	 0.4350	 0.3130
C	 0.4340	 0.3130
D	 0.4340	 0.3130
E	 0.2440	 0.3570
F	 0.2440	 0.3560
G	 0.2470	 0.3530
H	 0.2420	 0.3560

