



Full wwPDB EM Validation Report ⓘ

Mar 8, 2026 – 05:59 AM UTC

PDB ID : 9E1F / pdb_00009e1f
EMDB ID : EMD-47392
Title : Structure of RyR1 in the primed state in the presence of allopurinol
Authors : Miotto, M.C.; Marks, A.R.
Deposited on : 2024-10-21
Resolution : 3.03 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.dev132
Mogul : 2022.3.0, CSD as543be (2022)
MolProbity : 4-5-2 with Phenix2.0
Buster-report : wwPDB partial adaption of 1.1.7 (2018)
Percentile statistics : 20250101.v01 (using entries in the PDB archive January 1st 2025)
EM percentile statistics : 202505.v01 (Using data in the EMDb archive up until May 2025)
MapQ : 1.9.13
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.49

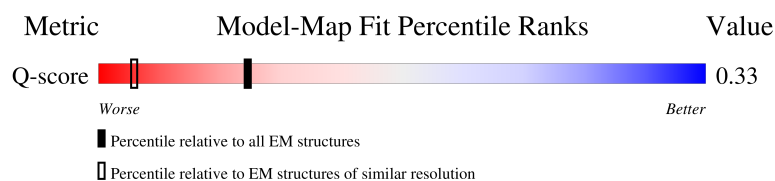
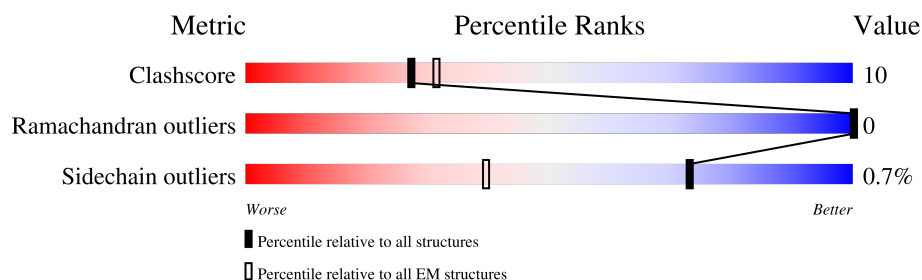
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 3.03 Å.

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



Metric	Whole archive (#Entries)	EM structures (#Entries)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	229148	23984	-
Ramachandran outliers	224038	23583	-
Sidechain outliers	223484	23102	-
Q-score	-	25397	13929 (2.53 - 3.53)

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	44% 68% 19% 13%
1	B	5037	44% 69% 19% 13%
1	C	5037	44% 69% 19% 13%
1	D	5037	44% 68% 19% 13%

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Mol	Chain	Length	Quality of chain
2	E	108	79% 22% ..
2	F	108	78% 24% .
2	G	108	79% 23% ..
2	H	108	78% 20% ..

2 Entry composition

There are 7 unique types of molecules in this entry. The entry contains 144104 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
1	A	4404	Total	C	N	O	S	9	0
			35150	22365	6063	6485	237		
1	B	4404	Total	C	N	O	S	9	0
			35150	22365	6063	6485	237		
1	D	4404	Total	C	N	O	S	9	0
			35150	22365	6063	6485	237		
1	C	4404	Total	C	N	O	S	9	0
			35150	22365	6063	6485	237		

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

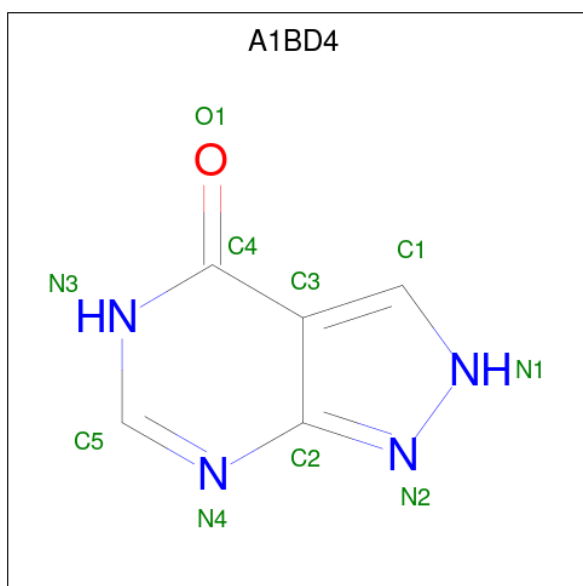
Mol	Chain	Residues	Atoms					AltConf	Trace
2	E	107	Total	C	N	O	S	0	0
			831	527	146	154	4		
2	H	107	Total	C	N	O	S	0	0
			831	527	146	154	4		
2	G	107	Total	C	N	O	S	0	0
			831	527	146	154	4		
2	F	107	Total	C	N	O	S	0	0
			831	527	146	154	4		

- Molecule 3 is ADENOSINE-5'-TRIPHOSPHATE (CCD ID: ATP) (formula: C₁₀H₁₆N₅O₁₃P₃).

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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 allopurinol (CCD ID: A1BD4) (formula: $C_5H_4N_4O$) (labeled as "Ligand of Interest" by depositor).



Mol	Chain	Residues	Atoms				AltConf
6	A	1	Total	C	N	O	0
			10	5	4	1	
6	B	1	Total	C	N	O	0
			10	5	4	1	
6	D	1	Total	C	N	O	0
			10	5	4	1	
6	C	1	Total	C	N	O	0
			10	5	4	1	

- Molecule 7 is water.

Mol	Chain	Residues	Atoms		AltConf
7	A	2	Total	O	0
			2	2	
7	B	2	Total	O	0
			2	2	

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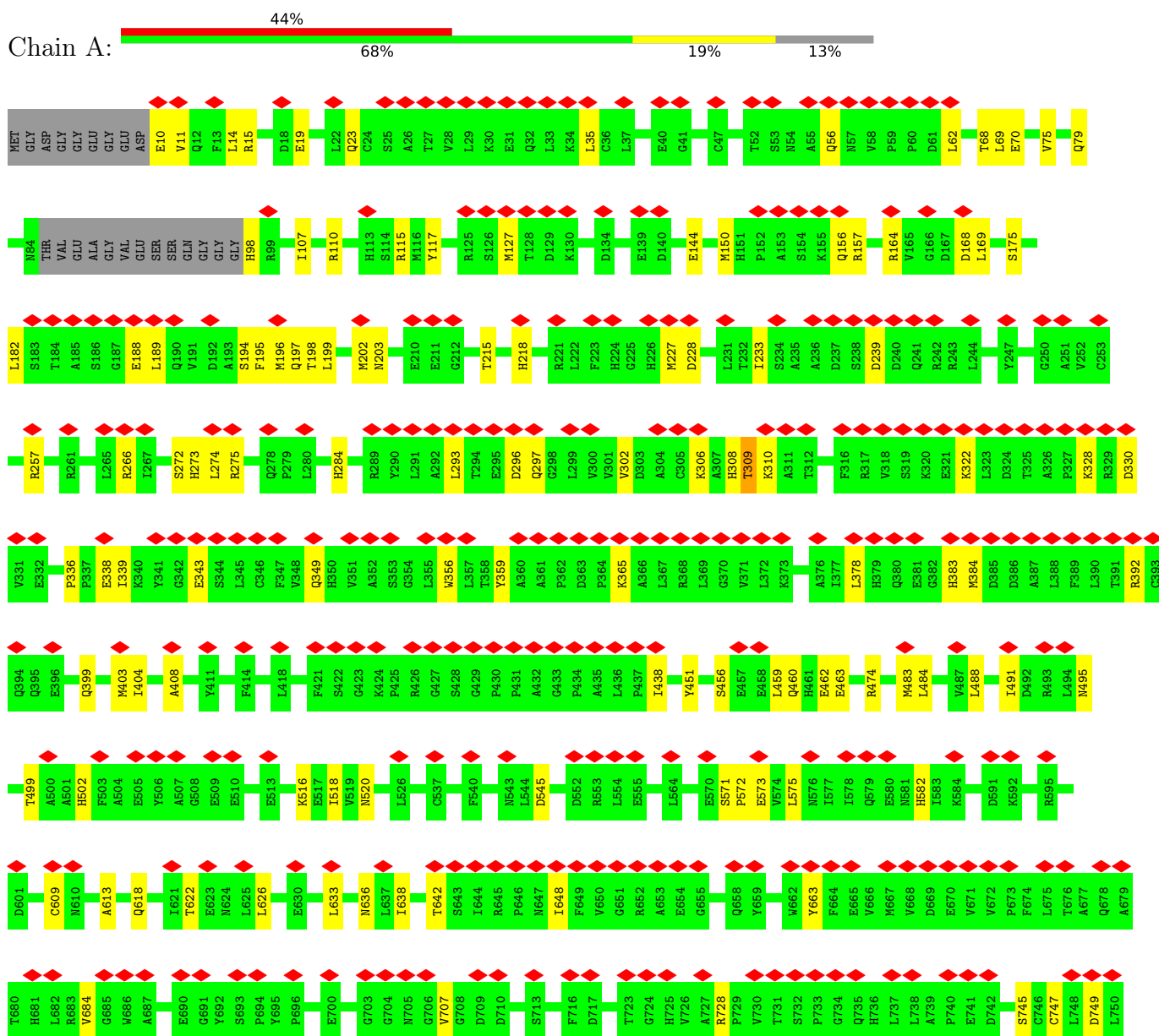
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Mol	Chain	Residues	Atoms		AltConf
7	D	2	Total	O	0
			2	2	
7	C	2	Total	O	0
			2	2	

3 Residue-property plots [i](#)

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

- Molecule 1: Ryanodine receptor 1





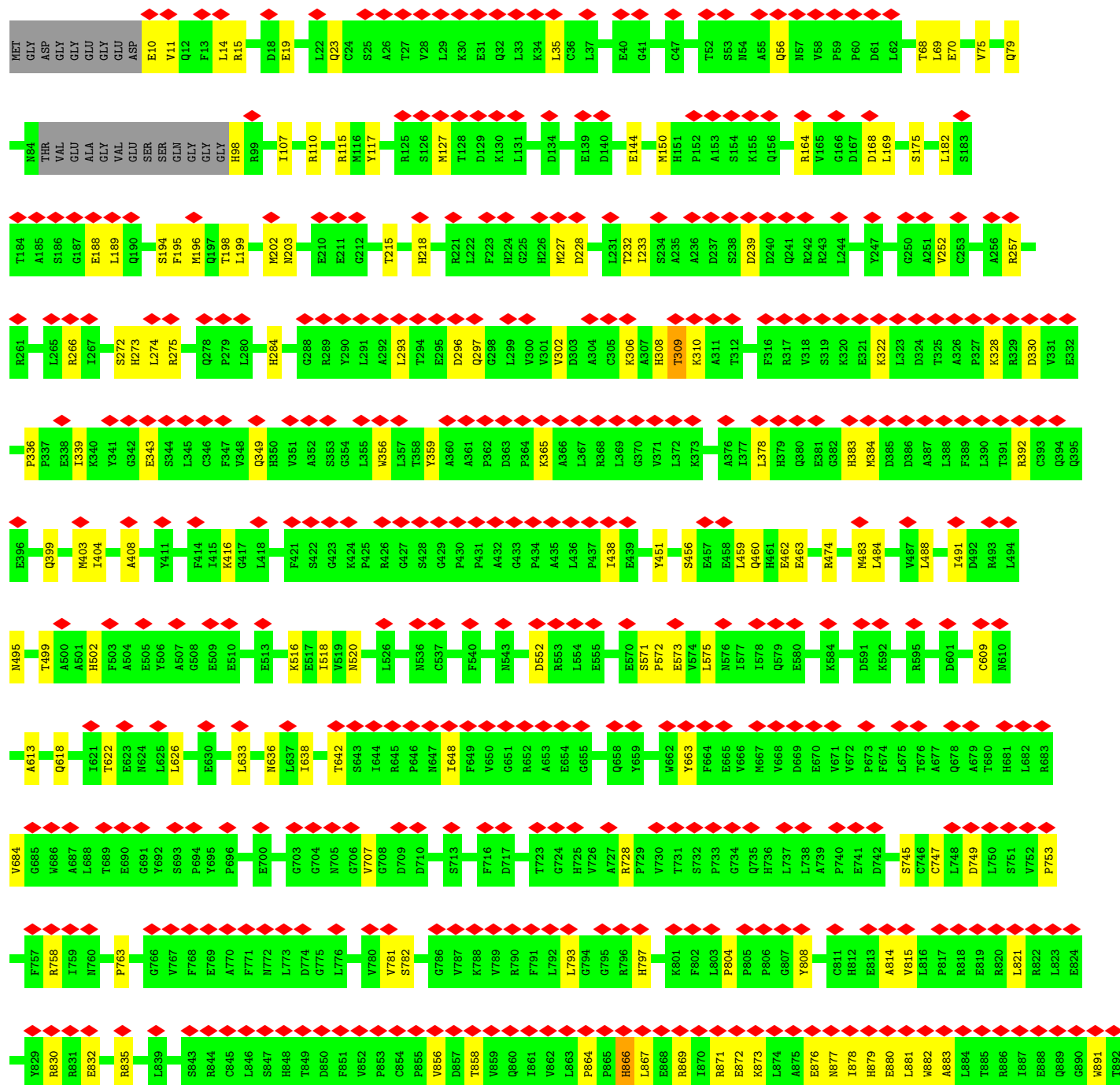
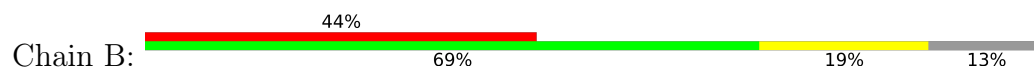


A3431	K3371	H3311	A3251	G3191	V3131	L3071	T3011	I2951	K2891	GLU	P2711
E3432	V3372	L3312	D3252	E3192	T3132	A3072	N3012	E2952	Q2892	GLU	P2712
E3433	V3373	N3313	I3253	C3193	T3133	R3073	H3013	K2953	E2893	THR	D2713
L3434	A3374	S3314	G3254	L3194	V3134	S3074	C3014	R2954	L2894	GLU	V2714
F3435	E3375	L3315	G3255	A3195	A3135	L3075	L3015	F2955	E2895	LYS	V2715
R3436	E3376	L3316	L3256	R3196	A3136	D3076	F3017	A2956	A2896	LYS	D2716
V3437	E3377	L3317	A3257	L3197	L3137	A3077	L3018	F2957	K2897	THR	A2717
V3438	Q3378	N3318	E3258	A3198	R3138	R3078	L3019	Q2958	Q2898	ARG	S2718
G3439	L3379	L3319	S3259	A3199	V3139	T3079	S3019	F2959	G2899	LYS	V2719
E3440	R3380	L3320	G3260	A3200	L3140	V3080	T3020	L2960	G2900	ILE	S2720
I3441	L3381	R3321	A3261	M3201	T3141	M3081	F3021	Q2961	T2901	GLN	S2721
F3442	E3382	L3322	R3262	P3202	T3142	K3082	A3022	Q2962	H2902	THR	K2722
I3443	A3383	I3323	V3263	V3203	L3143	S3083	K3023	L2963	P2903	ALA	A2723
Y3444	K3384	V3324	T3264	A3204	F3144	G3084	V3024	L2964	L2904	THR	A2724
V3445	A3385	N3325	E3265	F3205	Q3145	P3085	L3025	R2965	L2905	TVR	E2725
S3446	E3386	N3326	M3266	L3206	H3146	E3086	G3026	W2966	V2906	ASP	K2725
K3447	A3387	L3327	F3267	E3207	I3147	I3087	S3027	M2967	P2907	PRO	LYS
S3448	E3388	G3328	H3268	P3208	A3148	V3088	G3028	D2968	Y2908	ARG	THR
H3449	E3389	I3329	V3269	Q3209	Q3149	K3089	G3029	I2969	D2909	GLU	VAL
R3450	G3390	D3330	I3270	L3210	H3150	A3090	H3030	S2970	T2910	GLU	ASP
F3451	E3391	E3331	E3271	N3211	Q3151	G3091	S3031	Q2971	L2911	GLY	ALA
K3452	L3392	A3332	I3272	G3212	L3152	L3092	S3032	E2972	L2912	GLY	GLY
R3453	L3393	V3333	T3273	Y3213	G3153	R3093	N3033	F2973	A2913		N2734
V3454	V3394	W3334	L3274	N3214	D3154	S3094	K3034	I2974	K2914		F2735
E3455	R3395	M3335	F3275	A3215	D3155	F3095	E3035	A2975	E2915		D2736
K3456	R3396	K3336	M3276	C3216	V3156	F3096	K3036	H2976	K2916		P2737
N3457	L3397	R3337	L3277	S3217	I3157	E3097	E3037	L2977	A2917		R2738
F3458	E3397	L3338	C3278	V3218	L3158	S3098	I3038	E2978	R2918		V2740
V3459	F3398	A3339	S3279	Y3219	D3159	A3099	T3039	A2979	D2919		E2741
V3460	S3399	V3340	Y3280	T3220	D3160	S3100	T3040	V2980	R2920		K2800
Q3461	V3400	F3341	L3281	T3221	V3161	E3101	S3041	V2981	E2921		T2742
N3462	L3401	A3342	P3282	K3222	Q3162	I3103	L3042	S2982	K2922		L2743
E3463	C3402	Q3343	A3283	S3223	V3163	E3104	F3043	S2983	E2923		L2744
I3464	R3403	P3344	W3284	P3224	S3164	E3104	C3044	G2984	Q2924		V2745
N3465	D3404	I3345	W3285	R3225	C3165	K3105	K3045	R2985	E2925		L2746
N3466	L3405	V3346	E3286	E3226	V3166	M3106	L3046	V2986	E2926		L2747
K3467	Y3406	S3347	E3287	R3227	F3167	V3107	A3047	E2987	L2927		P2748
S3468	A3407	R3348	G3288	A3228	T3168	E3108	A3048	K2988	K2928		E2749
F3469	L3408	P3289	P3289	I3229	L3169	N3109	L3049	S2989	F2929		K2750
L3470	Y3409	E3290	E3290	L3230	C3170	L3110	P2990	P2990	L2930		L2751
T3471	P3410	P3351	A3291	G3231	S3171	R3111	K3051	H2991	E2931		D2752
A3472	L3411	E3352	P3292	L3232	T3172	L3112	Q2932	E2992	K2932		S2753
D3473	L3412	L3353	P3293	P3233	Y3173	G3113	R3053	Q2993	L2878		F2754
S3474	I3413	L3354	A3294	N3234	S3174	K3114	V3054	E2994	A2879		L2755
K3475	R3414	H3355	A3295	S3235	L3175	V3115	S3055	L2995	E2880		L2756
S3476	V3415	S3356	L3296	V3236	G3176	S3116	K2996	K2996	N2881		K2757
K3477	V3416	H3357	P3297	E3237	T3177	GLN	F3057	F2997	Y2882		F2758
H3478	N3417	F3358	A3298	E3238	T3178	ALA	K2998	F2998	Y2883		A2759
A3479	N3418	L3359	G3299	M3239	K3179	ARG	T3058	A2999	K2884		E2760
ALA	N3419	P3360	A3300	G3240	N3180	THR	T3059	K3000	R2939		Y2761
GLY	A3421	T3361	F3301	F3241	T3181	GLN	A3061	I3001	GLY		L2762
ASP	H3422	I3362	P3302	D3242	Y3182	VAL	P3062	L3002	LEU		H2763
GLN	W3423	G3363	C3304	P3244	V3183	ALA	A3063	L3003	ASP		E2764
GLY	L3424	R3364	T3305	V3245	K3185	ARG	V3064	P3004	GLY		K2765
GLY	T3425	L3365	T3306	V3246	K3186	THR	V3065	L3005	K2889		L2766
SER	A3426	K3366	A3306	L3247	R3187	GLN	N3066	N3007	ASP		A2767
ASP	P3427	R3367	V3307	D3247	L3188	VAL	C3067	Q3008	GLY		F2768
	N3428	A3368	T3308	R3248	P3188	ALA	N3068	Y3009	GLY		D2769
	A3429	A3369	S3309	L3249	A3189	ARG	H3069	F3010	GLY		K2770
	N3430	G3370	D3310	M3250	L3190	THR	T3070				



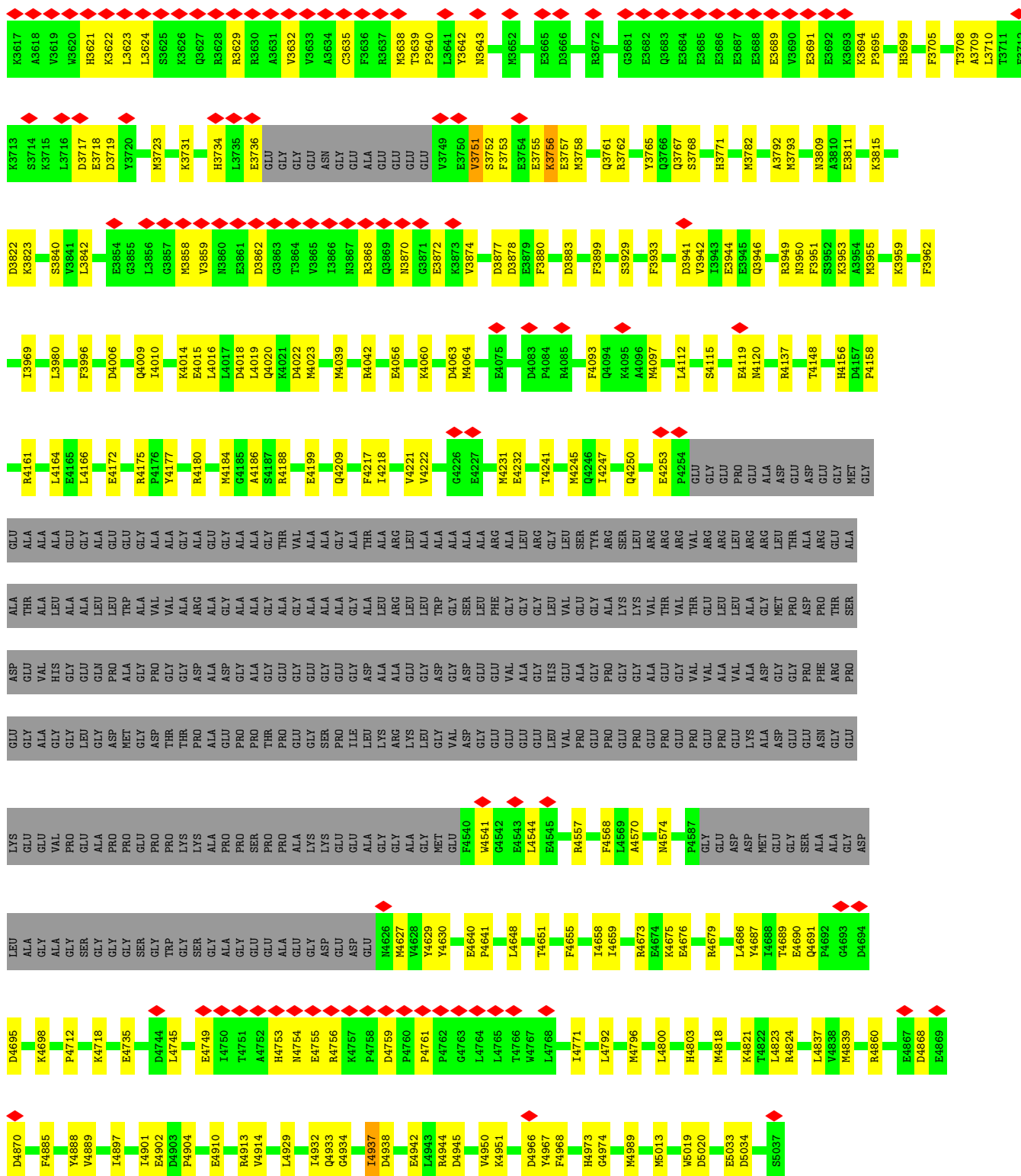


• Molecule 1: Ryanodine receptor 1

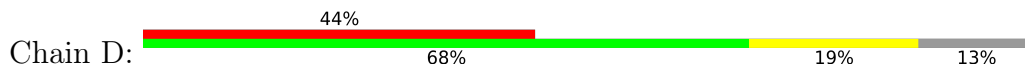




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• Molecule 1: Ryanodine receptor 1

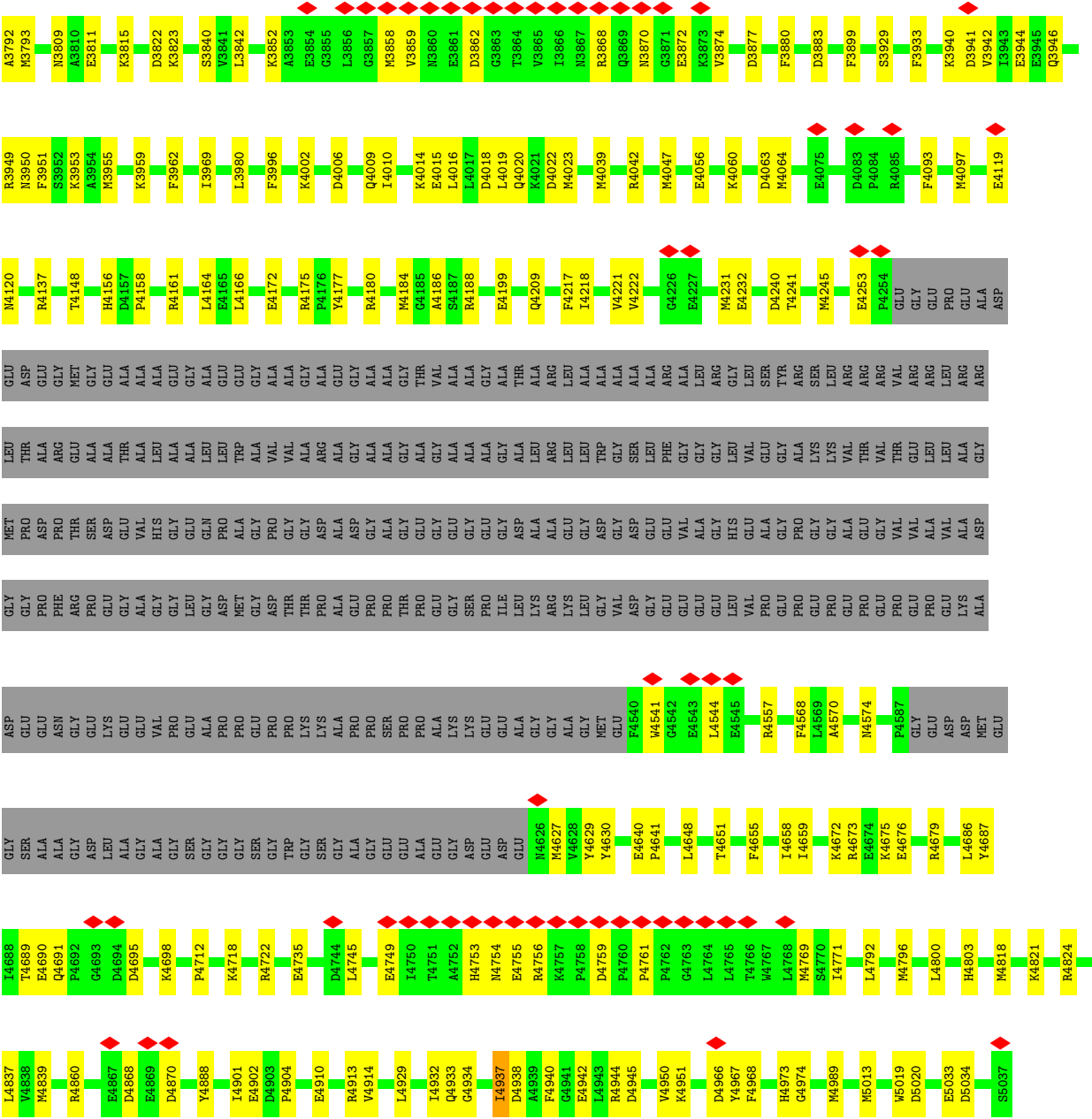




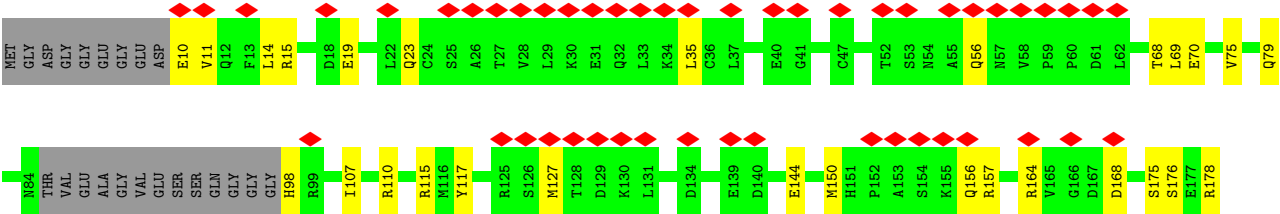


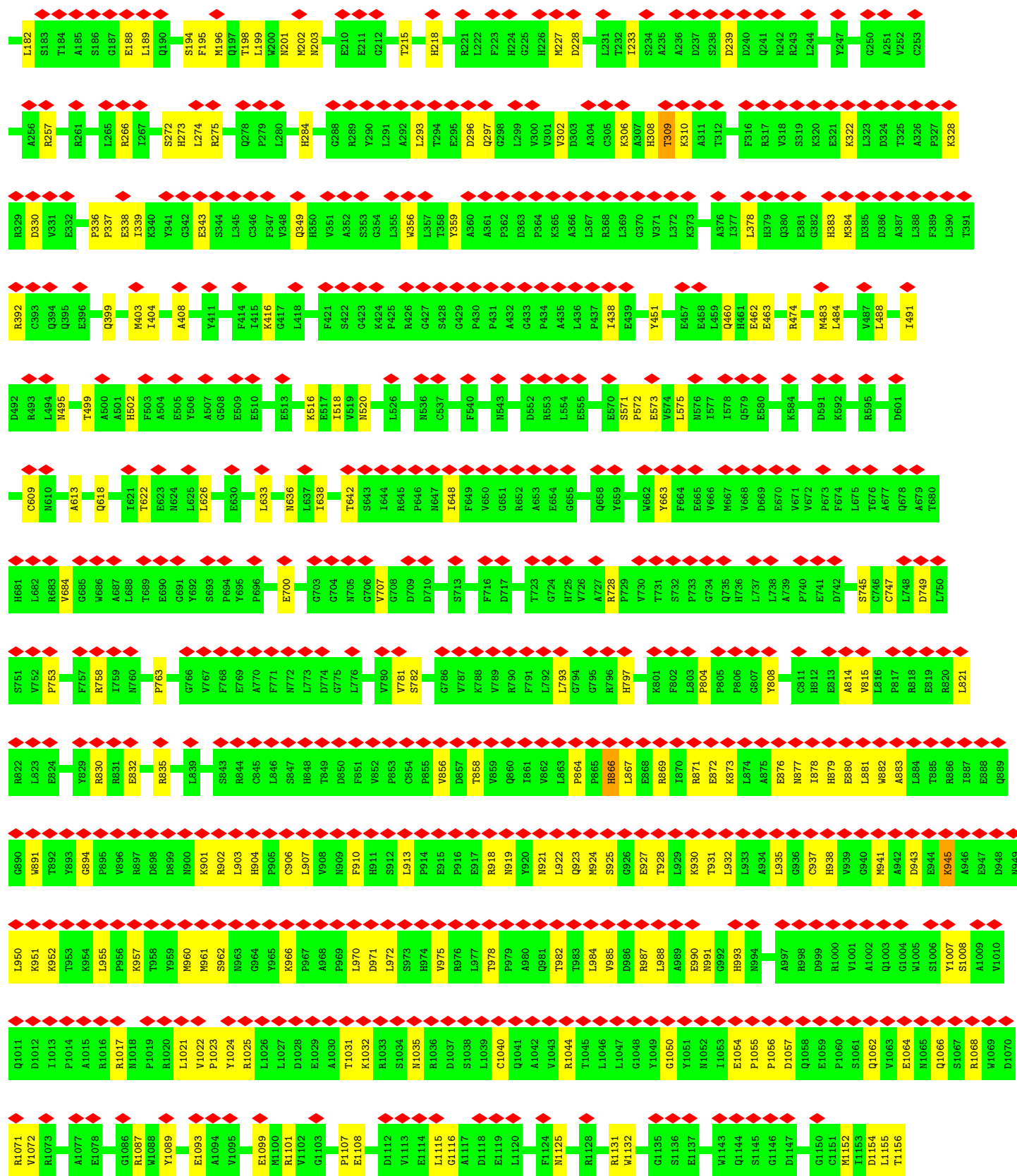


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● Molecule 1: Ryanodine receptor 1

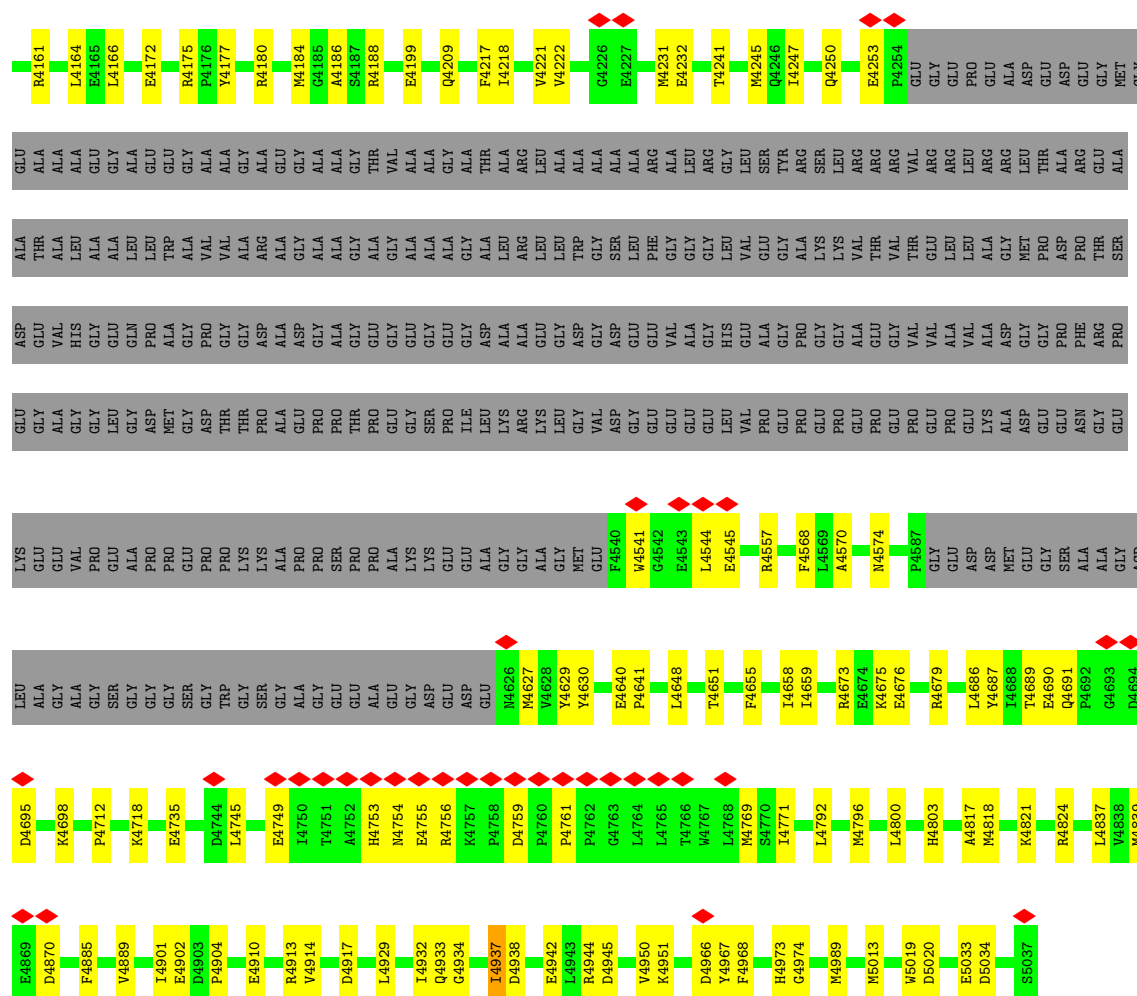




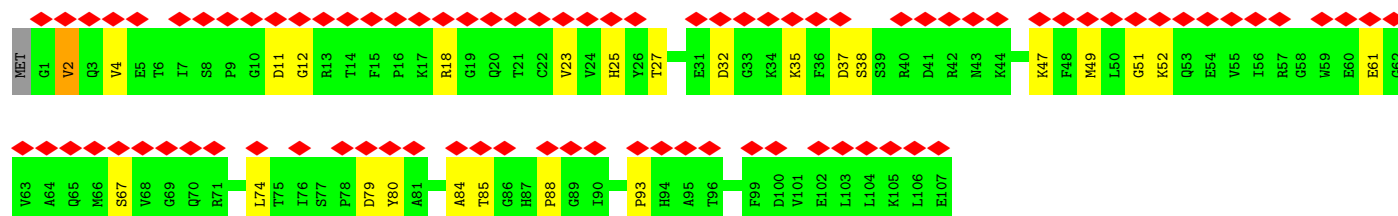
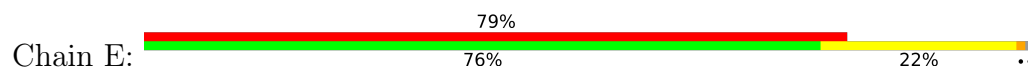


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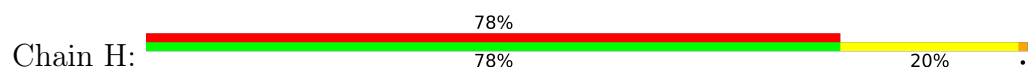
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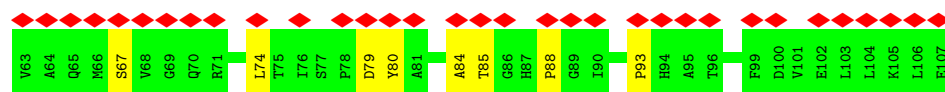


• Molecule 2: Peptidyl-prolyl cis-trans isomerase FKBP1A

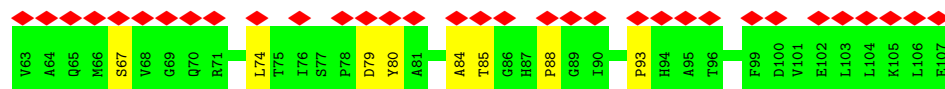
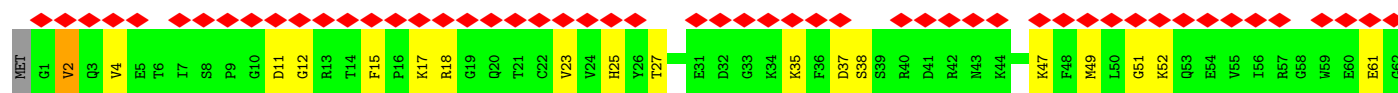
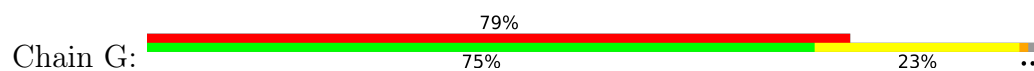


• Molecule 2: Peptidyl-prolyl cis-trans isomerase FKBP1A

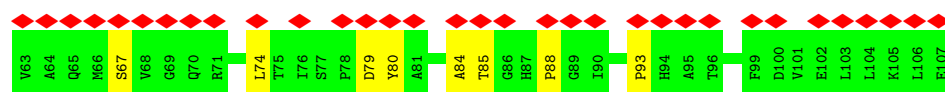
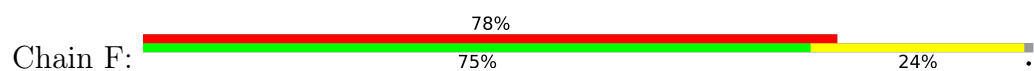




• Molecule 2: Peptidyl-prolyl cis-trans isomerase FKBP1A



• 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	41370	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	0.433	Depositor
Minimum map value	-0.213	Depositor
Average map value	0.000	Depositor
Map value standard deviation	0.016	Depositor
Recommended contour level	0.1	Depositor
Map size (Å)	427.52, 427.52, 427.52	wwPDB
Map dimensions	512, 512, 512	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	0.835, 0.835, 0.835	Depositor

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: A1BD4, CA, ATP, ZN

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\# Z > 5$	RMSZ	$\# Z > 5$
1	A	0.23	0/35977	0.36	1/48726 (0.0%)
1	B	0.23	0/35977	0.36	1/48726 (0.0%)
1	C	0.23	0/35977	0.36	1/48726 (0.0%)
1	D	0.23	0/35977	0.36	1/48726 (0.0%)
2	E	0.21	0/850	0.34	0/1146
2	F	0.21	0/850	0.36	0/1146
2	G	0.21	0/850	0.33	0/1146
2	H	0.21	0/850	0.36	0/1146
All	All	0.23	0/147308	0.36	4/199488 (0.0%)

There are no bond length outliers.

All (4) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	B	3603	LEU	CA-CB-CG	5.27	134.74	116.30
1	A	3603	LEU	CA-CB-CG	5.26	134.71	116.30
1	D	3603	LEU	CA-CB-CG	5.25	134.69	116.30
1	C	3603	LEU	CA-CB-CG	5.25	134.69	116.30

There are no chirality outliers.

There are no planarity outliers.

5.2 Too-close contacts

In the following table, the Non-H and H(model) columns list the number of non-hydrogen atoms and hydrogen atoms in the chain respectively. The H(added) column lists the number of hydrogen atoms added and optimized by MolProbity. The Clashes column lists the number of clashes within the asymmetric unit, whereas Symm-Clashes lists symmetry-related clashes.

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	35150	0	34797	698	0
1	B	35150	0	34797	688	0
1	C	35150	0	34797	697	0
1	D	35150	0	34797	697	0
2	E	831	0	831	14	0
2	F	831	0	831	15	0
2	G	831	0	831	14	0
2	H	831	0	831	14	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
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	10	0	0	0	0
6	B	10	0	0	0	0
6	C	10	0	0	0	0
6	D	10	0	0	0	0
7	A	2	0	0	0	0
7	B	2	0	0	0	0
7	C	2	0	0	0	0
7	D	2	0	0	0	0
All	All	144104	0	142560	2810	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 10.

All (2810) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4860:ARG:NH1	1:D:4630:TYR:OH	1.88	1.06
1:A:4630:TYR:OH	1:B:4860:ARG:NH1	1.92	1.01
1:B:4630:TYR:OH	1:C:4860:ARG:NH1	1.97	0.96
1:D:4860:ARG:NH1	1:C:4630:TYR:OH	1.97	0.95
1:D:2765:LYS:HZ3	1:D:2857:PRO:HB2	1.38	0.89
1:A:2175:GLU:HG3	1:A:2228:MET:HB3	1.54	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:2175:GLU:HG3	1:D:2228:MET:HB3	1.54	0.89
1:A:2765:LYS:HZ3	1:A:2857:PRO:HB2	1.38	0.88
1:B:2175:GLU:HG3	1:B:2228:MET:HB3	1.54	0.87
1:C:2175:GLU:HG3	1:C:2228:MET:HB3	1.54	0.87
1:B:876:GLU:HG2	1:B:918:ARG:HD3	1.61	0.83
1:C:2765:LYS:HZ3	1:C:2857:PRO:HB2	1.41	0.83
1:A:876:GLU:HG2	1:A:918:ARG:HD3	1.61	0.82
1:B:2765:LYS:HZ3	1:B:2857:PRO:HB2	1.44	0.82
1:D:876:GLU:HG2	1:D:918:ARG:HD3	1.61	0.82
1:C:876:GLU:HG2	1:C:918:ARG:HD3	1.61	0.81
1:B:460:GLN:HE22	1:B:462:GLU:HB3	1.46	0.81
1:C:460:GLN:HE22	1:C:462:GLU:HB3	1.46	0.81
1:A:878:ILE:HD11	1:A:924:MET:HE1	1.64	0.79
1:A:460:GLN:HE22	1:A:462:GLU:HB3	1.46	0.79
1:B:878:ILE:HD11	1:B:924:MET:HE1	1.64	0.79
1:D:460:GLN:HE22	1:D:462:GLU:HB3	1.46	0.79
1:D:878:ILE:HD11	1:D:924:MET:HE1	1.64	0.78
1:D:3577:ARG:HH22	1:D:3582:ARG:HB3	1.48	0.78
1:B:3577:ARG:HH22	1:B:3582:ARG:HB3	1.48	0.78
1:D:2779:GLU:HG3	1:D:2792:ARG:HG2	1.66	0.78
1:C:2779:GLU:HG3	1:C:2792:ARG:HG2	1.66	0.78
1:C:3577:ARG:HH22	1:C:3582:ARG:HB3	1.48	0.77
1:A:3577:ARG:HH22	1:A:3582:ARG:HB3	1.48	0.77
1:B:1759:ARG:HE	1:B:1759:ARG:H	1.30	0.77
1:D:1759:ARG:HE	1:D:1759:ARG:H	1.30	0.77
1:C:1759:ARG:H	1:C:1759:ARG:HE	1.30	0.77
1:A:2779:GLU:HG3	1:A:2792:ARG:HG2	1.66	0.77
1:C:878:ILE:HD11	1:C:924:MET:HE1	1.64	0.77
1:A:4934:GLY:HA3	1:D:4937:ILE:HD12	1.67	0.76
1:A:1759:ARG:HE	1:A:1759:ARG:H	1.30	0.76
1:B:2779:GLU:HG3	1:B:2792:ARG:HG2	1.66	0.76
1:A:4232:GLU:HG2	1:A:5019:TRP:HE1	1.52	0.75
1:D:2642:LYS:HE2	1:D:2642:LYS:HA	1.69	0.75
1:A:2978:GLU:OE2	1:A:3053:ARG:NH1	2.21	0.74
1:A:1280:GLN:O	1:A:1281:ASN:ND2	2.21	0.74
1:A:2642:LYS:HE2	1:A:2642:LYS:HA	1.69	0.74
1:D:2978:GLU:OE2	1:D:3053:ARG:NH1	2.21	0.74
1:C:2978:GLU:OE2	1:C:3053:ARG:NH1	2.20	0.74
1:B:4232:GLU:HG2	1:B:5019:TRP:HE1	1.52	0.74
1:C:3209:GLN:OE1	1:C:3209:GLN:N	2.19	0.74
1:C:3718:GLU:HG2	1:C:3723:MET:HE1	1.70	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1280:GLN:O	1:B:1281:ASN:ND2	2.21	0.74
1:C:1280:GLN:O	1:C:1281:ASN:ND2	2.21	0.74
1:A:3209:GLN:N	1:A:3209:GLN:OE1	2.19	0.73
1:D:1280:GLN:O	1:D:1281:ASN:ND2	2.21	0.73
1:C:891:TRP:HA	1:C:902:ARG:HB3	1.70	0.73
1:C:4232:GLU:HG2	1:C:5019:TRP:HE1	1.52	0.73
1:D:3209:GLN:N	1:D:3209:GLN:OE1	2.19	0.73
1:D:3457:ASN:HB3	1:D:3461:GLN:HE22	1.53	0.73
1:C:3623:LEU:HD12	1:C:3624:LEU:HG	1.71	0.73
1:A:3457:ASN:HB3	1:A:3461:GLN:HE22	1.53	0.73
1:A:188:GLU:N	1:A:188:GLU:OE2	2.22	0.73
1:A:3718:GLU:HG2	1:A:3723:MET:HE1	1.70	0.73
1:B:2642:LYS:HE2	1:B:2642:LYS:HA	1.69	0.73
1:B:2978:GLU:OE2	1:B:3053:ARG:NH1	2.21	0.73
1:C:188:GLU:OE2	1:C:188:GLU:N	2.22	0.73
1:B:961:MET:HG2	1:B:962:SER:H	1.53	0.73
1:C:961:MET:HG2	1:C:962:SER:H	1.53	0.73
1:D:4232:GLU:HG2	1:D:5019:TRP:HE1	1.52	0.73
1:C:3457:ASN:HB3	1:C:3461:GLN:HE22	1.54	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:B:3209:GLN:OE1	1:B:3209:GLN:N	2.19	0.73
1:B:3457:ASN:HB3	1:B:3461:GLN:HE22	1.53	0.72
1:D:891:TRP:HA	1:D:902:ARG:HB3	1.70	0.72
1:B:3718:GLU:HG2	1:B:3723:MET:HE1	1.70	0.72
1:A:961:MET:HG2	1:A:962:SER:H	1.53	0.72
1:B:3623:LEU:HD12	1:B:3624:LEU:HG	1.71	0.72
1:B:891:TRP:HA	1:B:902:ARG:HB3	1.70	0.72
1:D:3623:LEU:HD12	1:D:3624:LEU:HG	1.71	0.72
1:B:987:ARG:HH12	1:B:991:ASN:HB2	1.55	0.72
1:D:2191:PHE:HA	1:D:2198:MET:HE3	1.72	0.72
1:D:2258:LEU:HD22	1:D:2297:LYS:HZ3	1.55	0.72
1:C:2191:PHE:HA	1:C:2198:MET:HE3	1.72	0.72
1:A:987:ARG:HH12	1:A:991:ASN:HB2	1.55	0.72
1:A:2191:PHE:HA	1:A:2198:MET:HE3	1.72	0.72
1:B:2191:PHE:HA	1:B:2198:MET:HE3	1.72	0.72
1:B:2258:LEU:HD22	1:B:2297:LYS:HZ3	1.55	0.72
1:D:961:MET:HG2	1:D:962:SER:H	1.53	0.72
1:A:891:TRP:HA	1:A:902:ARG:HB3	1.70	0.71
1:C:2258:LEU:HD22	1:C:2297:LYS:HZ3	1.54	0.71
1:D:1996:ARG:HH21	1:D:1999:ARG:HE	1.37	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3623:LEU:HD12	1:A:3624:LEU:HG	1.71	0.71
1:C:2642:LYS:HA	1:C:2642:LYS:HE2	1.69	0.71
1:B:188:GLU:N	1:B:188:GLU:OE2	2.22	0.71
1:B:215:THR:HG22	1:B:273:HIS:HA	1.73	0.71
1:D:188:GLU:N	1:D:188:GLU:OE2	2.22	0.71
1:C:1996:ARG:HH21	1:C:1999:ARG:HE	1.37	0.71
1:A:2258:LEU:HD22	1:A:2297:LYS:HZ3	1.56	0.71
1:D:3718:GLU:HG2	1:D:3723:MET:HE1	1.70	0.71
1:C:987:ARG:HH12	1:C:991:ASN:HB2	1.55	0.71
1:C:215:THR:HG22	1:C:273:HIS:HA	1.73	0.71
1:C:4839:MET:HE3	1:C:4839:MET:HA	1.73	0.71
1:D:987:ARG:HH12	1:D:991:ASN:HB2	1.55	0.70
1:C:3767:GLN:OE1	1:C:3809:ASN:ND2	2.24	0.70
1:A:2513:GLU:N	1:A:2513:GLU:OE2	2.24	0.70
1:A:215:THR:HG22	1:A:273:HIS:HA	1.73	0.70
1:A:858:THR:HB	1:A:930:LYS:HD2	1.73	0.70
1:A:14:LEU:HD13	1:A:202:MET:HE2	1.74	0.70
1:C:2737:PRO:HD2	1:C:2891:LYS:HD3	1.74	0.70
1:B:2513:GLU:N	1:B:2513:GLU:OE2	2.24	0.70
1:B:4839:MET:HA	1:B:4839:MET:HE3	1.73	0.70
1:D:14:LEU:HD13	1:D:202:MET:HE2	1.73	0.70
1:D:215:THR:HG22	1:D:273:HIS:HA	1.73	0.70
1:D:3767:GLN:OE1	1:D:3809:ASN:ND2	2.24	0.70
1:B:2812:SER:OG	1:B:2882:TYR:OH	2.10	0.70
1:A:3767:GLN:OE1	1:A:3809:ASN:ND2	2.24	0.70
1:A:2582:MET:HE3	1:A:2610:LEU:HD13	1.74	0.70
1:D:1251:GLU:N	1:D:1251:GLU:OE2	2.24	0.70
1:C:14:LEU:HD13	1:C:202:MET:HE2	1.73	0.70
1:B:2582:MET:HE3	1:B:2610:LEU:HD13	1.74	0.69
1:B:2737:PRO:HD2	1:B:2891:LYS:HD3	1.74	0.69
1:A:4241:THR:HB	1:A:4989:MET:HE1	1.74	0.69
1:D:858:THR:HB	1:D:930:LYS:HD2	1.73	0.69
1:D:4241:THR:HB	1:D:4989:MET:HE1	1.75	0.69
1:B:14:LEU:HD13	1:B:202:MET:HE2	1.74	0.69
1:A:4839:MET:HA	1:A:4839:MET:HE3	1.73	0.69
1:D:2812:SER:OG	1:D:2882:TYR:OH	2.10	0.69
2:G:27:THR:HG23	2:G:38:SER:HB2	1.74	0.69
1:D:925:SER:O	1:D:928:THR:OG1	2.11	0.69
1:D:2513:GLU:N	1:D:2513:GLU:OE2	2.25	0.69
1:C:858:THR:HB	1:C:930:LYS:HD2	1.73	0.69
1:C:2582:MET:HE3	1:C:2610:LEU:HD13	1.74	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2812:SER:OG	1:A:2882:TYR:OH	2.10	0.69
1:D:2737:PRO:HD2	1:D:2891:LYS:HD3	1.74	0.69
1:C:3366:ARG:NH1	1:C:3440:GLU:OE1	2.25	0.69
1:A:2821:TRP:HH2	1:A:2877:GLN:HB3	1.58	0.69
1:B:858:THR:HB	1:B:930:LYS:HD2	1.73	0.69
1:A:2737:PRO:HD2	1:A:2891:LYS:HD3	1.74	0.68
1:B:2821:TRP:HH2	1:B:2877:GLN:HB3	1.58	0.68
1:B:3366:ARG:NH1	1:B:3440:GLU:OE1	2.25	0.68
1:B:3767:GLN:OE1	1:B:3809:ASN:ND2	2.24	0.68
1:D:4839:MET:HA	1:D:4839:MET:HE3	1.73	0.68
1:C:2513:GLU:N	1:C:2513:GLU:OE2	2.24	0.68
1:B:4937:ILE:HD12	1:C:4934:GLY:HA3	1.73	0.68
1:D:2582:MET:HE3	1:D:2610:LEU:HD13	1.74	0.68
1:C:1251:GLU:OE2	1:C:1251:GLU:N	2.24	0.68
1:C:4241:THR:HB	1:C:4989:MET:HE1	1.74	0.68
1:A:925:SER:O	1:A:928:THR:OG1	2.11	0.68
1:A:3366:ARG:NH1	1:A:3440:GLU:OE1	2.25	0.68
2:E:27:THR:HG23	2:E:38:SER:HB2	1.74	0.68
1:B:4241:THR:HB	1:B:4989:MET:HE1	1.74	0.68
1:D:2490:MET:HA	1:D:2490:MET:HE2	1.76	0.68
1:C:925:SER:O	1:C:928:THR:OG1	2.11	0.68
1:D:2867:LEU:HB2	1:D:2928:LYS:HZ3	1.59	0.68
1:A:2490:MET:HE2	1:A:2490:MET:HA	1.76	0.68
1:B:2490:MET:HE2	1:B:2490:MET:HA	1.76	0.68
1:D:2821:TRP:HH2	1:D:2877:GLN:HB3	1.58	0.68
2:F:27:THR:HG23	2:F:38:SER:HB2	1.76	0.68
1:C:2490:MET:HE2	1:C:2490:MET:HA	1.76	0.68
1:C:2821:TRP:HH2	1:C:2877:GLN:HB3	1.58	0.68
1:B:925:SER:O	1:B:928:THR:OG1	2.11	0.67
2:H:27:THR:HG23	2:H:38:SER:HB2	1.75	0.67
1:D:987:ARG:NH1	1:D:991:ASN:HB2	2.09	0.67
1:D:3114:LYS:HD3	1:D:3116:SER:H	1.58	0.67
1:A:4937:ILE:HD12	1:B:4934:GLY:HA3	1.76	0.67
1:B:987:ARG:NH1	1:B:991:ASN:HB2	2.09	0.67
1:B:3114:LYS:HD3	1:B:3116:SER:H	1.58	0.67
1:D:2309:SER:OG	1:D:2321:ILE:O	2.12	0.67
1:C:3114:LYS:HD3	1:C:3116:SER:H	1.58	0.67
1:C:3723:MET:HE3	1:C:3793:MET:HE3	1.77	0.67
1:D:3324:VAL:HG11	1:D:3361:THR:HG22	1.76	0.67
1:D:1108:GLU:OE1	1:D:1108:GLU:N	2.21	0.67
1:D:4934:GLY:HA3	1:C:4937:ILE:HD12	1.74	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:955:LEU:O	1:A:966:LYS:NZ	2.28	0.67
1:A:987:ARG:NH1	1:A:991:ASN:HB2	2.09	0.67
1:D:3366:ARG:NH1	1:D:3440:GLU:OE1	2.25	0.67
1:A:2309:SER:OG	1:A:2321:ILE:O	2.12	0.66
1:D:3723:MET:HE3	1:D:3793:MET:HE3	1.77	0.66
1:A:1251:GLU:OE2	1:A:1251:GLU:N	2.24	0.66
1:B:3324:VAL:HG11	1:B:3361:THR:HG22	1.76	0.66
1:B:3723:MET:HE3	1:B:3793:MET:HE3	1.77	0.66
1:B:4060:LYS:O	1:B:4064:MET:HG3	1.95	0.66
1:C:4060:LYS:O	1:C:4064:MET:HG3	1.95	0.66
1:A:2867:LEU:HB2	1:A:2928:LYS:HZ3	1.59	0.66
1:D:2751:LEU:HD13	1:D:2823:ILE:HD13	1.78	0.66
1:A:3114:LYS:HD3	1:A:3116:SER:H	1.58	0.66
1:A:4060:LYS:O	1:A:4064:MET:HG3	1.95	0.66
1:B:2867:LEU:HB2	1:B:2928:LYS:HZ3	1.60	0.66
1:D:4060:LYS:O	1:D:4064:MET:HG3	1.95	0.66
1:C:987:ARG:NH1	1:C:991:ASN:HB2	2.09	0.66
1:A:168:ASP:HB3	1:A:199:LEU:HD12	1.78	0.66
1:B:1023:PRO:HB3	1:B:1025:ARG:HH21	1.61	0.66
1:B:1251:GLU:OE2	1:B:1251:GLU:N	2.24	0.66
1:B:2309:SER:OG	1:B:2321:ILE:O	2.12	0.66
1:A:2751:LEU:HD13	1:A:2823:ILE:HD13	1.78	0.66
1:A:3324:VAL:HG11	1:A:3361:THR:HG22	1.76	0.66
1:B:955:LEU:O	1:B:966:LYS:NZ	2.28	0.66
1:D:168:ASP:HB3	1:D:199:LEU:HD12	1.78	0.66
1:D:2116:LEU:O	1:D:2120:MET:HG2	1.96	0.66
1:C:2867:LEU:HB2	1:C:2928:LYS:HZ3	1.60	0.66
1:C:3324:VAL:HG11	1:C:3361:THR:HG22	1.77	0.66
1:C:866:HIS:HD2	1:C:867:LEU:H	1.44	0.66
1:C:955:LEU:O	1:C:966:LYS:NZ	2.28	0.65
1:C:1023:PRO:HB3	1:C:1025:ARG:HH21	1.61	0.65
1:A:3723:MET:HE3	1:A:3793:MET:HE3	1.77	0.65
1:A:2781:VAL:HA	1:A:2789:PRO:HB2	1.79	0.65
1:C:1759:ARG:H	1:C:1759:ARG:NE	1.95	0.65
1:D:11:VAL:HG11	1:D:164:ARG:HD3	1.79	0.65
1:D:2781:VAL:HA	1:D:2789:PRO:HB2	1.79	0.65
1:C:11:VAL:HG11	1:C:164:ARG:HD3	1.79	0.65
1:A:3335:MET:SD	1:A:3403:ARG:NH1	2.70	0.65
1:B:11:VAL:HG11	1:B:164:ARG:HD3	1.79	0.65
1:B:1108:GLU:OE1	1:B:1108:GLU:N	2.21	0.65
1:B:2781:VAL:HA	1:B:2789:PRO:HB2	1.79	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:866:HIS:HD2	1:D:867:LEU:H	1.45	0.65
1:C:1987:SER:HB2	1:C:1994:ARG:HH22	1.62	0.65
1:A:866:HIS:HD2	1:A:867:LEU:H	1.44	0.65
1:A:1023:PRO:HB3	1:A:1025:ARG:HH21	1.61	0.65
1:A:2116:LEU:O	1:A:2120:MET:HG2	1.96	0.65
1:B:168:ASP:HB3	1:B:199:LEU:HD12	1.78	0.65
1:D:3335:MET:SD	1:D:3403:ARG:NH1	2.70	0.65
1:C:2751:LEU:HD13	1:C:2823:ILE:HD13	1.78	0.65
1:B:2970:SER:HA	1:B:2973:PHE:CE2	2.32	0.65
1:D:3222:LYS:O	1:D:3227:ARG:NH2	2.28	0.65
1:C:2309:SER:OG	1:C:2321:ILE:O	2.12	0.65
1:C:2970:SER:HA	1:C:2973:PHE:CE2	2.32	0.65
1:B:866:HIS:HD2	1:B:867:LEU:H	1.44	0.65
1:B:1759:ARG:H	1:B:1759:ARG:NE	1.95	0.65
1:D:1023:PRO:HB3	1:D:1025:ARG:HH21	1.61	0.65
1:A:11:VAL:HG11	1:A:164:ARG:HD3	1.79	0.64
1:B:2751:LEU:HD13	1:B:2823:ILE:HD13	1.78	0.64
1:D:2970:SER:HA	1:D:2973:PHE:CE2	2.32	0.64
1:C:2116:LEU:O	1:C:2120:MET:HG2	1.96	0.64
1:C:3599:VAL:O	1:C:3603:LEU:HD12	1.98	0.64
1:B:3638:MET:HA	1:B:3638:MET:HE2	1.80	0.64
1:D:3599:VAL:O	1:D:3603:LEU:HD12	1.98	0.64
1:C:2781:VAL:HA	1:C:2789:PRO:HB2	1.79	0.64
1:A:3222:LYS:O	1:A:3227:ARG:NH2	2.28	0.64
1:B:2116:LEU:O	1:B:2120:MET:HG2	1.96	0.64
1:C:1108:GLU:OE1	1:C:1108:GLU:N	2.21	0.64
1:C:3335:MET:SD	1:C:3403:ARG:NH1	2.70	0.64
1:B:3599:VAL:O	1:B:3603:LEU:HD12	1.98	0.64
1:D:1759:ARG:H	1:D:1759:ARG:NE	1.95	0.64
1:B:3335:MET:SD	1:B:3403:ARG:NH1	2.70	0.64
1:A:2970:SER:HA	1:A:2973:PHE:CE2	2.32	0.64
1:A:3638:MET:HE2	1:A:3638:MET:HA	1.80	0.64
1:C:2198:MET:HG2	1:C:2203:MET:HE2	1.79	0.64
1:A:2644:LEU:HD13	1:A:2678:LEU:HD21	1.80	0.64
1:C:168:ASP:HB3	1:C:199:LEU:HD12	1.78	0.64
1:D:2198:MET:HG2	1:D:2203:MET:HE2	1.79	0.64
1:C:3638:MET:HE2	1:C:3638:MET:HA	1.80	0.64
1:A:3599:VAL:O	1:A:3603:LEU:HD12	1.98	0.64
1:B:4929:LEU:O	1:B:4933:GLN:HG2	1.98	0.64
1:A:1987:SER:HB2	1:A:1994:ARG:HH22	1.62	0.63
1:B:1987:SER:HB2	1:B:1994:ARG:HH22	1.62	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:4929:LEU:O	1:D:4933:GLN:HG2	1.98	0.63
1:A:302:VAL:HB	1:A:306:LYS:HE3	1.81	0.63
1:A:4929:LEU:O	1:A:4933:GLN:HG2	1.98	0.63
1:D:955:LEU:O	1:D:966:LYS:NZ	2.28	0.63
1:D:3169:LEU:HD12	1:D:3194:LEU:HD11	1.81	0.63
1:C:4929:LEU:O	1:C:4933:GLN:HG2	1.98	0.63
1:B:3169:LEU:HD12	1:B:3194:LEU:HD11	1.81	0.63
1:B:2198:MET:HG2	1:B:2203:MET:HE2	1.79	0.63
1:D:2644:LEU:HD13	1:D:2678:LEU:HD21	1.80	0.63
1:D:3638:MET:HE2	1:D:3638:MET:HA	1.80	0.63
1:A:3169:LEU:HD12	1:A:3194:LEU:HD11	1.81	0.63
2:H:88:PRO:HB2	1:D:1680:ARG:HH12	1.63	0.63
1:A:1108:GLU:OE1	1:A:1108:GLU:N	2.21	0.63
1:D:302:VAL:HB	1:D:306:LYS:HE3	1.81	0.63
1:D:2271:THR:OG1	1:D:2330:ARG:NH2	2.32	0.63
1:A:2108:GLU:O	1:A:3694:LYS:NZ	2.32	0.63
1:C:3169:LEU:HD12	1:C:3194:LEU:HD11	1.81	0.63
1:A:2271:THR:OG1	1:A:2330:ARG:NH2	2.32	0.63
2:F:61:GLU:N	2:F:61:GLU:OE1	2.32	0.63
1:C:2271:THR:OG1	1:C:2330:ARG:NH2	2.32	0.63
1:D:1987:SER:HB2	1:D:1994:ARG:HH22	1.62	0.62
1:A:5034:ASP:OD1	1:A:5034:ASP:N	2.32	0.62
1:D:4712:PRO:O	1:D:4718:LYS:NZ	2.29	0.62
1:C:2644:LEU:HD13	1:C:2678:LEU:HD21	1.80	0.62
1:A:3569:LEU:O	1:A:3573:MET:HB2	2.00	0.62
1:A:4901:ILE:HG13	1:A:4913:ARG:NH2	2.14	0.62
1:B:2644:LEU:HD13	1:B:2678:LEU:HD21	1.80	0.62
1:B:3757:GLU:O	1:B:3761:GLN:HG2	1.99	0.62
1:A:2198:MET:HG2	1:A:2203:MET:HE2	1.79	0.62
1:B:2271:THR:OG1	1:B:2330:ARG:NH2	2.32	0.62
1:D:4901:ILE:HG13	1:D:4913:ARG:NH2	2.14	0.62
1:C:302:VAL:HB	1:C:306:LYS:HE3	1.81	0.62
1:C:4039:MET:HA	1:C:4039:MET:HE3	1.82	0.62
1:A:19:GLU:HG2	1:A:68:THR:HG22	1.82	0.62
1:A:1099:GLU:OE2	1:A:1125:ASN:ND2	2.33	0.62
2:G:88:PRO:HB2	1:C:1680:ARG:HH12	1.64	0.62
1:B:1099:GLU:OE2	1:B:1125:ASN:ND2	2.33	0.62
1:D:275:ARG:HH21	1:D:336:PRO:HD2	1.65	0.62
1:D:3757:GLU:O	1:D:3761:GLN:HG2	1.99	0.62
1:C:4231:MET:HA	1:C:4231:MET:HE3	1.82	0.62
1:A:1759:ARG:H	1:A:1759:ARG:NE	1.95	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:3811:GLU:OE1	1:D:3811:GLU:N	2.27	0.62
1:C:2108:GLU:O	1:C:3694:LYS:NZ	2.32	0.62
1:D:830:ARG:NH2	1:D:832:GLU:OE2	2.33	0.62
1:D:910:PHE:HA	1:D:913:LEU:HG	1.82	0.62
1:D:5034:ASP:OD1	1:D:5034:ASP:N	2.32	0.62
1:C:2650:ARG:NH1	1:C:2651:CYS:SG	2.73	0.62
2:F:88:PRO:HB2	1:B:1680:ARG:HH12	1.64	0.62
1:B:19:GLU:HG2	1:B:68:THR:HG22	1.82	0.62
1:B:4039:MET:HA	1:B:4039:MET:HE3	1.82	0.62
1:B:4901:ILE:HG13	1:B:4913:ARG:NH2	2.14	0.62
1:D:19:GLU:HG2	1:D:68:THR:HG22	1.82	0.62
1:C:19:GLU:HG2	1:C:68:THR:HG22	1.82	0.62
1:C:972:LEU:HD13	1:C:1044:ARG:HB3	1.81	0.62
1:A:2650:ARG:NH1	1:A:2651:CYS:SG	2.73	0.62
1:A:3757:GLU:O	1:A:3761:GLN:HG2	1.99	0.62
1:B:2650:ARG:NH1	1:B:2651:CYS:SG	2.73	0.62
1:B:3569:LEU:O	1:B:3573:MET:HB2	2.00	0.62
1:D:2650:ARG:NH1	1:D:2651:CYS:SG	2.73	0.62
1:A:4172:GLU:OE1	1:A:4175:ARG:NH1	2.34	0.61
1:B:910:PHE:HA	1:B:913:LEU:HG	1.82	0.61
1:C:4901:ILE:HG13	1:C:4913:ARG:NH2	2.14	0.61
2:G:37:ASP:OD1	2:G:38:SER:N	2.33	0.61
1:B:4231:MET:HE3	1:B:4231:MET:HA	1.82	0.61
1:D:972:LEU:HD13	1:D:1044:ARG:HB3	1.81	0.61
1:C:1099:GLU:OE2	1:C:1125:ASN:ND2	2.33	0.61
2:E:37:ASP:OD1	2:E:38:SER:N	2.32	0.61
1:B:275:ARG:HH21	1:B:336:PRO:HD2	1.65	0.61
1:B:302:VAL:HB	1:B:306:LYS:HE3	1.81	0.61
1:B:919:ASN:HA	1:B:922:LEU:HD23	1.82	0.61
1:B:2291:GLN:OE1	1:B:2292:GLU:N	2.31	0.61
1:B:3523:ASN:O	1:B:3582:ARG:NH2	2.33	0.61
1:D:919:ASN:HA	1:D:922:LEU:HD23	1.82	0.61
1:D:2108:GLU:O	1:D:3694:LYS:NZ	2.32	0.61
1:D:3523:ASN:O	1:D:3582:ARG:NH2	2.33	0.61
1:D:4039:MET:HA	1:D:4039:MET:HE3	1.82	0.61
1:C:3569:LEU:O	1:C:3573:MET:HB2	2.00	0.61
1:C:3757:GLU:O	1:C:3761:GLN:HG2	1.99	0.61
1:B:1454:THR:OG1	1:B:1456:ASP:OD1	2.18	0.61
1:D:4172:GLU:OE1	1:D:4175:ARG:NH1	2.34	0.61
1:C:3523:ASN:O	1:C:3582:ARG:NH2	2.33	0.61
1:A:830:ARG:NH2	1:A:832:GLU:OE2	2.33	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:972:LEU:HD13	1:A:1044:ARG:HB3	1.81	0.61
1:A:4231:MET:HA	1:A:4231:MET:HE3	1.82	0.61
1:A:4651:THR:HG23	1:A:4796:MET:HE1	1.83	0.61
1:B:4172:GLU:OE1	1:B:4175:ARG:NH1	2.33	0.61
1:C:275:ARG:HH21	1:C:336:PRO:HD2	1.65	0.61
1:C:3504:SER:HG	1:C:3507:THR:HG1	1.46	0.61
1:A:3523:ASN:O	1:A:3582:ARG:NH2	2.33	0.61
1:C:3590:GLU:O	1:C:3594:ARG:HG2	2.01	0.61
1:C:3811:GLU:OE1	1:C:3811:GLU:N	2.27	0.61
1:A:3590:GLU:O	1:A:3594:ARG:HG2	2.01	0.61
1:B:972:LEU:HD13	1:B:1044:ARG:HB3	1.82	0.61
1:D:4231:MET:HA	1:D:4231:MET:HE3	1.82	0.61
1:A:941:MET:SD	1:A:941:MET:N	2.74	0.61
1:D:941:MET:N	1:D:941:MET:SD	2.74	0.61
1:D:3569:LEU:O	1:D:3573:MET:HB2	2.00	0.61
1:D:4651:THR:HG23	1:D:4796:MET:HE1	1.83	0.61
1:A:4039:MET:HE3	1:A:4039:MET:HA	1.82	0.60
1:B:1676:LEU:HD22	1:B:2167:ILE:HD12	1.83	0.60
1:B:4651:THR:HG23	1:B:4796:MET:HE1	1.83	0.60
1:D:1099:GLU:OE2	1:D:1125:ASN:ND2	2.33	0.60
1:D:1676:LEU:HD22	1:D:2167:ILE:HD12	1.83	0.60
1:C:2777:TYR:HB3	1:C:2791:LEU:HD23	1.83	0.60
1:A:919:ASN:HA	1:A:922:LEU:HD23	1.82	0.60
1:B:4712:PRO:O	1:B:4718:LYS:NZ	2.29	0.60
1:C:1676:LEU:HD22	1:C:2167:ILE:HD12	1.83	0.60
1:A:4796:MET:HE2	1:A:4800:LEU:HG	1.84	0.60
1:B:3590:GLU:O	1:B:3594:ARG:HG2	2.01	0.60
1:D:4796:MET:HE2	1:D:4800:LEU:HG	1.84	0.60
1:C:910:PHE:HA	1:C:913:LEU:HG	1.82	0.60
1:C:4172:GLU:OE1	1:C:4175:ARG:NH1	2.34	0.60
1:A:1676:LEU:HD22	1:A:2167:ILE:HD12	1.83	0.60
1:C:2008:MET:HE1	1:C:2022:PRO:HD3	1.84	0.60
1:A:275:ARG:HH21	1:A:336:PRO:HD2	1.65	0.60
1:B:3400:VAL:HG23	1:B:3403:ARG:HH21	1.67	0.60
1:D:2008:MET:HE1	1:D:2022:PRO:HD3	1.84	0.60
1:D:3590:GLU:O	1:D:3594:ARG:HG2	2.01	0.60
1:C:1062:GLN:NE2	1:C:1064:GLU:OE1	2.32	0.60
1:A:2777:TYR:HB3	1:A:2791:LEU:HD23	1.83	0.60
1:C:941:MET:N	1:C:941:MET:SD	2.74	0.60
1:A:233:ILE:O	1:A:257:ARG:NH1	2.35	0.60
1:C:233:ILE:O	1:C:257:ARG:NH1	2.35	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3400:VAL:HG23	1:A:3403:ARG:HH21	1.67	0.60
1:D:233:ILE:O	1:D:257:ARG:NH1	2.35	0.60
1:D:2777:TYR:HB3	1:D:2791:LEU:HD23	1.83	0.60
1:D:3514:LEU:HD21	1:D:3602:VAL:HG13	1.84	0.60
1:A:2291:GLN:OE1	1:A:2292:GLU:N	2.31	0.60
1:B:2777:TYR:HB3	1:B:2791:LEU:HD23	1.83	0.60
1:C:3514:LEU:HD21	1:C:3602:VAL:HG13	1.84	0.60
1:A:107:ILE:HG23	1:A:150:MET:HE2	1.84	0.59
1:A:910:PHE:HA	1:A:913:LEU:HG	1.82	0.59
1:B:4796:MET:HE2	1:B:4800:LEU:HG	1.84	0.59
1:D:1232:ARG:NH2	1:D:1828:ASP:O	2.35	0.59
1:C:4651:THR:HG23	1:C:4796:MET:HE1	1.83	0.59
1:B:830:ARG:NH2	1:B:832:GLU:OE2	2.33	0.59
1:C:3329:ILE:HD11	1:C:3332:ALA:HB2	1.83	0.59
1:B:1753:LYS:HB3	1:B:1758:ARG:HA	1.85	0.59
1:C:919:ASN:HA	1:C:922:LEU:HD23	1.82	0.59
1:A:3514:LEU:HD21	1:A:3602:VAL:HG13	1.84	0.59
1:B:3567:PRO:HA	1:B:3570:ARG:HH12	1.67	0.59
1:B:107:ILE:HG23	1:B:150:MET:HE2	1.84	0.59
1:B:2008:MET:HE1	1:B:2022:PRO:HD3	1.84	0.59
1:B:3329:ILE:HD11	1:B:3332:ALA:HB2	1.83	0.59
1:D:3329:ILE:HD11	1:D:3332:ALA:HB2	1.83	0.59
1:C:4796:MET:HE2	1:C:4800:LEU:HG	1.84	0.59
1:A:2506:LEU:HD21	1:A:2512:ILE:HD11	1.85	0.59
1:D:3400:VAL:HG23	1:D:3403:ARG:HH21	1.67	0.59
1:C:3400:VAL:HG23	1:C:3403:ARG:HH21	1.67	0.59
1:A:1232:ARG:NH2	1:A:1828:ASP:O	2.35	0.59
1:A:2008:MET:HE1	1:A:2022:PRO:HD3	1.84	0.59
1:B:10:GLU:HG2	1:B:11:VAL:H	1.68	0.59
1:B:516:LYS:O	1:B:520:ASN:ND2	2.32	0.59
1:C:1753:LYS:HB3	1:C:1758:ARG:HA	1.85	0.59
1:A:3206:LEU:HD11	1:A:3276:MET:HE3	1.85	0.59
1:D:3206:LEU:HD11	1:D:3276:MET:HE3	1.85	0.59
1:A:1531:ALA:HB3	1:A:1534:LYS:HE2	1.85	0.59
1:A:3567:PRO:HA	1:A:3570:ARG:HH12	1.67	0.59
2:F:37:ASP:OD2	2:F:38:SER:N	2.35	0.59
1:D:2506:LEU:HD21	1:D:2512:ILE:HD11	1.85	0.59
1:B:3514:LEU:HD21	1:B:3602:VAL:HG13	1.84	0.58
1:A:935:LEU:HD21	1:A:987:ARG:HE	1.68	0.58
1:C:10:GLU:HG2	1:C:11:VAL:H	1.68	0.58
1:C:2291:GLN:OE1	1:C:2292:GLU:N	2.31	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1619:ARG:NH2	1:B:1622:GLU:OE1	2.37	0.58
1:D:107:ILE:HG23	1:D:150:MET:HE2	1.84	0.58
1:D:2293:GLN:H	1:D:2293:GLN:CD	2.11	0.58
1:A:2208:MET:HE1	1:A:2253:HIS:HB3	1.85	0.58
1:B:935:LEU:HD21	1:B:987:ARG:HE	1.68	0.58
1:B:2108:GLU:O	1:B:3694:LYS:NZ	2.32	0.58
1:D:1023:PRO:HB3	1:D:1025:ARG:NH2	2.19	0.58
1:C:4712:PRO:O	1:C:4718:LYS:NZ	2.29	0.58
1:A:10:GLU:HG2	1:A:11:VAL:H	1.68	0.58
1:A:3329:ILE:HD11	1:A:3332:ALA:HB2	1.83	0.58
1:B:3206:LEU:HD11	1:B:3276:MET:HE3	1.85	0.58
1:B:4676:GLU:OE2	1:B:4698:LYS:NZ	2.37	0.58
1:D:1454:THR:OG1	1:D:1456:ASP:OD1	2.18	0.58
1:C:1023:PRO:HB3	1:C:1025:ARG:NH2	2.19	0.58
1:C:3206:LEU:HD11	1:C:3276:MET:HE3	1.85	0.58
1:A:56:GLN:O	1:A:309:THR:OG1	2.22	0.58
1:A:2881:ASN:HA	1:A:2884:ASN:ND2	2.19	0.58
2:H:4:VAL:HG22	2:H:74:LEU:HD22	1.86	0.58
2:H:37:ASP:OD2	2:H:38:SER:N	2.36	0.58
1:D:3567:PRO:HA	1:D:3570:ARG:HH12	1.67	0.58
1:C:107:ILE:HG23	1:C:150:MET:HE2	1.84	0.58
1:C:3567:PRO:HA	1:C:3570:ARG:HH12	1.67	0.58
1:A:1619:ARG:NH2	1:A:1622:GLU:OE1	2.37	0.58
1:A:2794:TYR:H	1:A:2855:TYR:HB2	1.68	0.58
1:B:233:ILE:O	1:B:257:ARG:NH1	2.35	0.58
1:B:941:MET:N	1:B:941:MET:SD	2.74	0.58
1:B:2208:MET:HE1	1:B:2253:HIS:HB3	1.85	0.58
1:B:2881:ASN:HA	1:B:2884:ASN:ND2	2.19	0.58
1:D:1753:LYS:HB3	1:D:1758:ARG:HA	1.85	0.58
1:D:2881:ASN:HA	1:D:2884:ASN:ND2	2.19	0.58
1:C:1531:ALA:HB3	1:C:1534:LYS:HE2	1.85	0.58
1:C:1619:ARG:NH2	1:C:1622:GLU:OE1	2.37	0.58
1:C:2794:TYR:H	1:C:2855:TYR:HB2	1.68	0.58
1:C:3382:GLU:OE2	1:C:3382:GLU:N	2.34	0.58
1:A:516:LYS:O	1:A:520:ASN:ND2	2.32	0.58
1:A:4676:GLU:OE2	1:A:4698:LYS:NZ	2.37	0.58
1:B:1531:ALA:HB3	1:B:1534:LYS:HE2	1.85	0.58
1:B:3020:THR:HG23	1:B:3023:LYS:H	1.69	0.58
1:D:1031:THR:O	1:D:1035:ASN:ND2	2.36	0.58
1:D:935:LEU:HD21	1:D:987:ARG:HE	1.68	0.58
1:D:3020:THR:HG23	1:D:3023:LYS:H	1.69	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1232:ARG:NH2	1:C:1828:ASP:O	2.35	0.58
1:C:2506:LEU:HD21	1:C:2512:ILE:HD11	1.85	0.58
1:A:2293:GLN:H	1:A:2293:GLN:CD	2.12	0.58
1:A:3020:THR:HG23	1:A:3023:LYS:H	1.69	0.58
1:B:2690:LYS:HD3	1:B:2691:TYR:H	1.69	0.58
1:B:4749:GLU:O	1:B:4753:HIS:ND1	2.37	0.58
1:D:10:GLU:HG2	1:D:11:VAL:H	1.68	0.58
1:D:2794:TYR:H	1:D:2855:TYR:HB2	1.68	0.58
1:C:2690:LYS:HD3	1:C:2691:TYR:H	1.69	0.58
1:A:1448:VAL:HG22	1:A:1554:VAL:HG23	1.86	0.57
1:A:4910:GLU:O	1:A:4914:VAL:HG13	2.04	0.57
1:B:2018:GLU:OE1	1:B:2028:ARG:NH1	2.37	0.57
1:B:2506:LEU:HD21	1:B:2512:ILE:HD11	1.85	0.57
1:B:2794:TYR:H	1:B:2855:TYR:HB2	1.68	0.57
1:D:3017:PHE:O	1:D:3036:LYS:NZ	2.37	0.57
1:D:3539:ARG:NH1	1:D:3544:ASP:OD2	2.37	0.57
1:D:4676:GLU:OE2	1:D:4698:LYS:NZ	2.37	0.57
1:C:935:LEU:HD21	1:C:987:ARG:HE	1.68	0.57
1:C:2881:ASN:HA	1:C:2884:ASN:ND2	2.19	0.57
1:D:1531:ALA:HB3	1:D:1534:LYS:HE2	1.85	0.57
1:D:1619:ARG:NH2	1:D:1622:GLU:OE1	2.36	0.57
1:C:2018:GLU:OE1	1:C:2028:ARG:NH1	2.37	0.57
1:C:2812:SER:OG	1:C:2882:TYR:OH	2.10	0.57
1:A:2018:GLU:OE1	1:A:2028:ARG:NH1	2.37	0.57
1:A:4749:GLU:O	1:A:4753:HIS:ND1	2.37	0.57
1:D:2792:ARG:NH2	1:D:2798:SER:OG	2.37	0.57
1:D:4910:GLU:O	1:D:4914:VAL:HG13	2.04	0.57
1:C:2792:ARG:NH2	1:C:2798:SER:OG	2.37	0.57
1:C:3222:LYS:O	1:C:3227:ARG:NH2	2.28	0.57
1:A:1066:GLN:HB2	1:A:1071:ARG:NH1	2.20	0.57
1:A:2679:PHE:HB2	1:A:2706:ILE:HG21	1.86	0.57
1:B:1066:GLN:HB2	1:B:1071:ARG:NH1	2.20	0.57
1:B:2792:ARG:NH2	1:B:2798:SER:OG	2.37	0.57
1:C:3020:THR:HG23	1:C:3023:LYS:H	1.69	0.57
1:A:2690:LYS:HD3	1:A:2691:TYR:H	1.69	0.57
1:B:56:GLN:O	1:B:309:THR:OG1	2.22	0.57
1:B:1062:GLN:NE2	1:B:1064:GLU:OE1	2.32	0.57
1:D:408:ALA:HB2	1:D:483:MET:HE1	1.87	0.57
1:D:4749:GLU:O	1:D:4753:HIS:ND1	2.37	0.57
1:C:830:ARG:NH2	1:C:832:GLU:OE2	2.33	0.57
1:C:3577:ARG:NH1	1:C:3577:ARG:HA	2.20	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1023:PRO:HB3	1:A:1025:ARG:NH2	2.19	0.57
1:A:1753:LYS:HB3	1:A:1758:ARG:HA	1.85	0.57
1:B:4910:GLU:O	1:B:4914:VAL:HG13	2.04	0.57
1:D:2208:MET:HE1	1:D:2253:HIS:HB3	1.85	0.57
1:C:56:GLN:O	1:C:309:THR:OG1	2.22	0.57
1:A:110:ARG:NH2	1:A:117:TYR:OH	2.38	0.57
1:A:1680:ARG:HH12	2:E:88:PRO:HB2	1.69	0.57
1:A:3556:ASN:HB3	1:A:3559:LEU:HD13	1.87	0.57
2:F:4:VAL:HG22	2:F:74:LEU:HD22	1.86	0.57
1:B:3271:GLU:OE2	1:B:3337:ARG:NH2	2.33	0.57
1:B:3577:ARG:NH1	1:B:3577:ARG:HA	2.20	0.57
1:D:56:GLN:O	1:D:309:THR:OG1	2.22	0.57
1:A:266:ARG:NH2	1:A:272:SER:OG	2.38	0.57
1:A:2792:ARG:NH2	1:A:2798:SER:OG	2.37	0.57
2:E:4:VAL:HG22	2:E:74:LEU:HD22	1.87	0.57
2:H:61:GLU:OE1	2:H:61:GLU:N	2.32	0.57
1:B:110:ARG:NH2	1:B:117:TYR:OH	2.38	0.57
1:B:266:ARG:NH2	1:B:272:SER:OG	2.38	0.57
1:B:408:ALA:HB2	1:B:483:MET:HE1	1.87	0.57
1:B:2679:PHE:HB2	1:B:2706:ILE:HG21	1.86	0.57
1:B:3556:ASN:HB3	1:B:3559:LEU:HD13	1.87	0.57
1:D:110:ARG:NH2	1:D:117:TYR:OH	2.38	0.57
1:D:2018:GLU:OE1	1:D:2028:ARG:NH1	2.37	0.57
1:C:408:ALA:HB2	1:C:483:MET:HE1	1.87	0.57
1:C:2208:MET:HE1	1:C:2253:HIS:HB3	1.85	0.57
1:C:4676:GLU:OE2	1:C:4698:LYS:NZ	2.37	0.57
1:A:408:ALA:HB2	1:A:483:MET:HE1	1.87	0.57
1:A:3017:PHE:O	1:A:3036:LYS:NZ	2.37	0.57
1:A:4938:ASP:OD1	1:D:4944:ARG:NH2	2.37	0.57
1:B:1023:PRO:HB3	1:B:1025:ARG:NH2	2.19	0.57
1:B:3017:PHE:O	1:B:3036:LYS:NZ	2.37	0.57
1:C:1163:THR:HG22	1:C:1168:VAL:HA	1.87	0.57
1:C:2679:PHE:HB2	1:C:2706:ILE:HG21	1.86	0.57
1:A:571:SER:OG	1:A:573:GLU:OE1	2.19	0.57
1:B:70:GLU:OE2	1:B:110:ARG:NE	2.32	0.57
1:B:1232:ARG:NH2	1:B:1828:ASP:O	2.35	0.57
1:B:1448:VAL:HG22	1:B:1554:VAL:HG23	1.86	0.57
1:B:3540:TYR:CE1	1:B:3549:VAL:HG11	2.40	0.57
1:D:2679:PHE:HB2	1:D:2706:ILE:HG21	1.86	0.57
1:C:3539:ARG:NH1	1:C:3544:ASP:OD2	2.37	0.57
1:C:3556:ASN:HB3	1:C:3559:LEU:HD13	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3382:GLU:OE2	1:A:3382:GLU:N	2.34	0.56
1:D:266:ARG:NH2	1:D:272:SER:OG	2.38	0.56
1:C:622:THR:HG23	1:C:626:LEU:HD12	1.86	0.56
1:C:4910:GLU:O	1:C:4914:VAL:HG13	2.04	0.56
1:A:622:THR:HG23	1:A:626:LEU:HD12	1.86	0.56
1:B:2534:ALA:HA	1:B:2588:ARG:HH21	1.70	0.56
1:B:3539:ARG:NH1	1:B:3544:ASP:OD2	2.37	0.56
1:D:622:THR:HG23	1:D:626:LEU:HD12	1.86	0.56
1:D:1066:GLN:HB2	1:D:1071:ARG:NH1	2.20	0.56
1:C:1031:THR:O	1:C:1035:ASN:ND2	2.36	0.56
1:A:70:GLU:OE2	1:A:110:ARG:NE	2.32	0.56
1:A:2534:ALA:HA	1:A:2588:ARG:HH21	1.70	0.56
1:A:4712:PRO:O	1:A:4718:LYS:NZ	2.29	0.56
1:B:613:ALA:HB2	1:B:1676:LEU:HD12	1.87	0.56
1:B:2293:GLN:H	1:B:2293:GLN:CD	2.12	0.56
1:B:3222:LYS:O	1:B:3227:ARG:NH2	2.28	0.56
1:D:618:GLN:OE1	1:D:1678:ASN:ND2	2.37	0.56
1:D:2449:GLU:OE1	1:D:2449:GLU:N	2.24	0.56
1:C:110:ARG:NH2	1:C:117:TYR:OH	2.38	0.56
1:C:266:ARG:NH2	1:C:272:SER:OG	2.38	0.56
1:C:613:ALA:HB2	1:C:1676:LEU:HD12	1.87	0.56
1:C:3017:PHE:O	1:C:3036:LYS:NZ	2.37	0.56
1:C:3540:TYR:CE1	1:C:3549:VAL:HG11	2.40	0.56
1:C:4186:ALA:O	1:C:4188:ARG:NH2	2.38	0.56
1:C:4749:GLU:O	1:C:4753:HIS:ND1	2.37	0.56
1:B:2021:CYS:O	1:B:2028:ARG:NH2	2.39	0.56
1:D:2690:LYS:HD3	1:D:2691:TYR:H	1.69	0.56
1:A:3107:VAL:O	1:A:3111:ARG:NH1	2.39	0.56
1:A:3539:ARG:NH1	1:A:3544:ASP:OD2	2.37	0.56
1:A:3577:ARG:NH1	1:A:3577:ARG:HA	2.20	0.56
1:D:1186:ASP:OD2	1:D:1186:ASP:N	2.35	0.56
1:D:2310:CYS:HB3	1:D:2313:LEU:HB2	1.88	0.56
1:D:3556:ASN:HB3	1:D:3559:LEU:HD13	1.87	0.56
1:D:4904:PRO:HB3	1:D:4913:ARG:HG2	1.88	0.56
1:C:3107:VAL:O	1:C:3111:ARG:NH1	2.39	0.56
1:A:1031:THR:O	1:A:1035:ASN:ND2	2.36	0.56
1:A:3540:TYR:CE1	1:A:3549:VAL:HG11	2.40	0.56
1:A:3762:ARG:NH2	1:A:4755:GLU:OE1	2.39	0.56
1:B:3414:ARG:HE	1:B:3472:ALA:HB3	1.71	0.56
1:D:1448:VAL:HG22	1:D:1554:VAL:HG23	1.86	0.56
1:D:3762:ARG:NH2	1:D:4755:GLU:OE1	2.39	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:516:LYS:O	1:C:520:ASN:ND2	2.32	0.56
1:C:2534:ALA:HA	1:C:2588:ARG:HH21	1.70	0.56
2:G:4:VAL:HG22	2:G:74:LEU:HD22	1.88	0.56
1:B:622:THR:HG23	1:B:626:LEU:HD12	1.86	0.56
1:B:1163:THR:HG22	1:B:1168:VAL:HA	1.87	0.56
1:B:1947:CYS:SG	1:B:2127:GLN:NE2	2.76	0.56
1:B:3382:GLU:OE2	1:B:3382:GLU:N	2.34	0.56
1:D:4186:ALA:O	1:D:4188:ARG:NH2	2.38	0.56
1:C:1066:GLN:HB2	1:C:1071:ARG:NH1	2.20	0.56
1:C:1448:VAL:HG22	1:C:1554:VAL:HG23	1.86	0.56
1:C:2021:CYS:O	1:C:2028:ARG:NH2	2.39	0.56
1:C:3414:ARG:HE	1:C:3472:ALA:HB3	1.71	0.56
1:A:1062:GLN:NE2	1:A:1064:GLU:OE1	2.32	0.56
1:D:1168:VAL:HG11	1:D:1176:GLU:HG2	1.88	0.56
1:D:3533:ILE:HD13	1:D:3596:VAL:HG13	1.88	0.56
1:D:3540:TYR:CE1	1:D:3549:VAL:HG11	2.40	0.56
1:D:3577:ARG:HA	1:D:3577:ARG:NH1	2.20	0.56
1:C:404:ILE:HG23	1:C:483:MET:HE3	1.88	0.56
1:C:1996:ARG:NH2	1:C:1999:ARG:HE	2.03	0.56
1:C:4902:GLU:O	1:C:4913:ARG:NH2	2.37	0.56
1:A:950:LEU:HD12	1:A:970:LEU:HD22	1.88	0.56
1:A:1947:CYS:SG	1:A:2127:GLN:NE2	2.76	0.56
1:A:1996:ARG:NH2	1:A:1999:ARG:HE	2.03	0.56
1:A:3377:GLU:HA	1:A:3380:ARG:HG2	1.88	0.56
1:B:3107:VAL:O	1:B:3111:ARG:NH1	2.39	0.56
1:C:1454:THR:OG1	1:C:1456:ASP:OD1	2.18	0.56
1:B:3762:ARG:NH2	1:B:4755:GLU:OE1	2.39	0.55
1:D:1996:ARG:NH2	1:D:1999:ARG:HE	2.03	0.55
1:D:2021:CYS:O	1:D:2028:ARG:NH2	2.39	0.55
1:C:618:GLN:OE1	1:C:1678:ASN:ND2	2.37	0.55
1:A:1156:THR:OG1	1:A:1157:GLU:OE1	2.19	0.55
1:A:1163:THR:HG22	1:A:1168:VAL:HA	1.87	0.55
1:D:2293:GLN:OE1	1:D:2293:GLN:N	2.29	0.55
1:D:2534:ALA:HA	1:D:2588:ARG:HH21	1.70	0.55
1:C:984:LEU:HD11	1:C:1055:PRO:HA	1.89	0.55
1:C:1168:VAL:HG11	1:C:1176:GLU:HG2	1.88	0.55
1:C:2310:CYS:HB3	1:C:2313:LEU:HB2	1.88	0.55
1:C:3762:ARG:NH2	1:C:4755:GLU:OE1	2.39	0.55
1:C:4966:ASP:OD1	1:C:4967:TYR:N	2.40	0.55
1:A:2021:CYS:O	1:A:2028:ARG:NH2	2.39	0.55
1:A:2577:ILE:H	1:A:2577:ILE:HD12	1.72	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1131:ARG:NH1	1:B:1178:ALA:O	2.39	0.55
1:B:2871:LEU:HD11	1:B:2937:VAL:HG23	1.88	0.55
1:D:1163:THR:HG22	1:D:1168:VAL:HA	1.87	0.55
1:D:3107:VAL:O	1:D:3111:ARG:NH1	2.39	0.55
1:C:2293:GLN:H	1:C:2293:GLN:CD	2.12	0.55
1:A:613:ALA:HB2	1:A:1676:LEU:HD12	1.87	0.55
1:B:950:LEU:HD12	1:B:970:LEU:HD22	1.88	0.55
1:D:950:LEU:HD12	1:D:970:LEU:HD22	1.88	0.55
1:D:4821:LYS:CD	1:D:4821:LYS:H	2.20	0.55
1:C:1131:ARG:NH1	1:C:1178:ALA:O	2.39	0.55
1:C:3533:ILE:HD13	1:C:3596:VAL:HG13	1.88	0.55
1:C:4821:LYS:H	1:C:4821:LYS:CD	2.20	0.55
1:C:4904:PRO:HB3	1:C:4913:ARG:HG2	1.88	0.55
1:A:3533:ILE:HD13	1:A:3596:VAL:HG13	1.88	0.55
1:B:2577:ILE:H	1:B:2577:ILE:HD12	1.72	0.55
1:B:2626:LEU:HD22	1:B:2640:PRO:HB3	1.88	0.55
1:D:404:ILE:HG23	1:D:483:MET:HE3	1.88	0.55
1:D:984:LEU:HD11	1:D:1055:PRO:HA	1.88	0.55
1:D:2165:LEU:HB2	1:D:2178:MET:HE2	1.89	0.55
1:C:4186:ALA:C	1:C:4188:ARG:HH22	2.14	0.55
1:A:1131:ARG:NH1	1:A:1178:ALA:O	2.39	0.55
1:A:1990:GLU:OE2	1:A:1994:ARG:NH2	2.40	0.55
1:B:4186:ALA:O	1:B:4188:ARG:NH2	2.38	0.55
1:B:4821:LYS:CD	1:B:4821:LYS:H	2.20	0.55
1:B:4966:ASP:OD1	1:B:4967:TYR:N	2.39	0.55
1:D:613:ALA:HB2	1:D:1676:LEU:HD12	1.87	0.55
1:D:2902:HIS:HB3	1:D:2905:LEU:HG	1.89	0.55
1:C:2626:LEU:HD22	1:C:2640:PRO:HB3	1.88	0.55
1:A:4904:PRO:HB3	1:A:4913:ARG:HG2	1.88	0.55
1:B:404:ILE:HG23	1:B:483:MET:HE3	1.88	0.55
1:B:1168:VAL:HG11	1:B:1176:GLU:HG2	1.88	0.55
1:B:2165:LEU:HB2	1:B:2178:MET:HE2	1.89	0.55
1:D:2577:ILE:HD12	1:D:2577:ILE:H	1.72	0.55
1:A:1454:THR:OG1	1:A:1456:ASP:OD1	2.18	0.55
1:A:2310:CYS:HB3	1:A:2313:LEU:HB2	1.88	0.55
1:A:3414:ARG:HE	1:A:3472:ALA:HB3	1.71	0.55
1:A:4186:ALA:C	1:A:4188:ARG:HH22	2.14	0.55
1:D:2626:LEU:HD22	1:D:2640:PRO:HB3	1.88	0.55
1:D:4966:ASP:OD1	1:D:4967:TYR:N	2.39	0.55
1:C:1154:ASP:OD1	1:C:1156:THR:OG1	2.25	0.55
1:C:2871:LEU:HD11	1:C:2937:VAL:HG23	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:2902:HIS:HB3	1:C:2905:LEU:HG	1.89	0.55
1:C:3531:ASP:O	1:C:3535:LEU:HG	2.07	0.55
1:A:404:ILE:HG23	1:A:483:MET:HE3	1.88	0.55
1:A:1168:VAL:HG11	1:A:1176:GLU:HG2	1.88	0.55
1:A:2165:LEU:HB2	1:A:2178:MET:HE2	1.89	0.55
1:A:2902:HIS:HB3	1:A:2905:LEU:HG	1.89	0.55
1:B:2638:LYS:HA	1:B:2698:MET:HE3	1.89	0.55
1:B:2902:HIS:HB3	1:B:2905:LEU:HG	1.89	0.55
1:D:1990:GLU:OE2	1:D:1994:ARG:NH2	2.40	0.55
1:D:3377:GLU:HA	1:D:3380:ARG:HG2	1.88	0.55
1:D:3414:ARG:HE	1:D:3472:ALA:HB3	1.71	0.55
1:C:5034:ASP:N	1:C:5034:ASP:OD1	2.32	0.55
1:A:1154:ASP:OD1	1:A:1156:THR:OG1	2.25	0.55
1:A:4966:ASP:OD1	1:A:4967:TYR:N	2.39	0.55
1:B:1990:GLU:OE2	1:B:1994:ARG:NH2	2.40	0.55
1:B:2967:MET:O	1:B:2970:SER:OG	2.19	0.55
1:D:1154:ASP:OD1	1:D:1156:THR:OG1	2.25	0.55
1:C:70:GLU:OE2	1:C:110:ARG:NE	2.32	0.55
1:C:2577:ILE:H	1:C:2577:ILE:HD12	1.72	0.55
1:A:2244:ARG:NH1	1:A:3858:MET:HE3	2.22	0.54
1:A:2626:LEU:HD22	1:A:2640:PRO:HB3	1.88	0.54
1:A:4006:ASP:N	1:A:4006:ASP:OD1	2.41	0.54
1:B:2210:VAL:O	1:B:2214:VAL:HG23	2.07	0.54
1:B:3533:ILE:HD13	1:B:3596:VAL:HG13	1.88	0.54
1:D:516:LYS:O	1:D:520:ASN:ND2	2.32	0.54
1:C:1990:GLU:OE2	1:C:1994:ARG:NH2	2.40	0.54
1:C:3271:GLU:OE2	1:C:3337:ARG:NH2	2.33	0.54
1:A:984:LEU:HD11	1:A:1055:PRO:HA	1.89	0.54
1:A:3271:GLU:OE2	1:A:3337:ARG:NH2	2.33	0.54
1:D:1131:ARG:NH1	1:D:1178:ALA:O	2.39	0.54
1:D:4186:ALA:C	1:D:4188:ARG:HH22	2.14	0.54
1:C:2244:ARG:NH1	1:C:3858:MET:HE3	2.22	0.54
1:C:2765:LYS:NZ	1:C:2859:PRO:O	2.39	0.54
1:B:196:MET:N	1:B:196:MET:HE3	2.23	0.54
1:B:2244:ARG:NH1	1:B:3858:MET:HE3	2.23	0.54
1:B:2310:CYS:HB3	1:B:2313:LEU:HB2	1.88	0.54
1:B:2765:LYS:NZ	1:B:2859:PRO:O	2.39	0.54
1:B:3377:GLU:HA	1:B:3380:ARG:HG2	1.88	0.54
1:B:4186:ALA:C	1:B:4188:ARG:HH22	2.14	0.54
1:D:2244:ARG:NH1	1:D:3858:MET:HE3	2.22	0.54
1:D:3271:GLU:OE2	1:D:3337:ARG:NH2	2.33	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:950:LEU:HD12	1:C:970:LEU:HD22	1.88	0.54
1:C:2165:LEU:HB2	1:C:2178:MET:HE2	1.89	0.54
1:C:3377:GLU:HA	1:C:3380:ARG:HG2	1.88	0.54
1:C:3563:VAL:HA	1:C:3569:LEU:HD23	1.90	0.54
1:B:571:SER:OG	1:B:573:GLU:OE1	2.19	0.54
1:B:3550:ARG:NE	1:B:3597:GLN:OE1	2.41	0.54
1:D:1062:GLN:NE2	1:D:1064:GLU:OE1	2.32	0.54
1:C:993:HIS:NE2	1:C:1022:VAL:O	2.39	0.54
1:A:993:HIS:NE2	1:A:1022:VAL:O	2.39	0.54
1:A:2210:VAL:O	1:A:2214:VAL:HG23	2.07	0.54
1:A:4821:LYS:CD	1:A:4821:LYS:H	2.20	0.54
1:B:984:LEU:HD11	1:B:1055:PRO:HA	1.88	0.54
1:B:1154:ASP:OD1	1:B:1156:THR:OG1	2.25	0.54
1:B:2449:GLU:OE1	1:B:2449:GLU:N	2.24	0.54
1:B:2736:ASP:OD1	1:B:2736:ASP:N	2.41	0.54
1:D:3563:VAL:HA	1:D:3569:LEU:HD23	1.90	0.54
1:C:2875:ALA:HB2	1:C:2927:LEU:HD22	1.90	0.54
1:A:2871:LEU:HD11	1:A:2937:VAL:HG23	1.89	0.54
1:B:1031:THR:O	1:B:1035:ASN:ND2	2.36	0.54
1:B:2736:ASP:O	1:B:2738:ARG:NH1	2.41	0.54
1:B:5034:ASP:N	1:B:5034:ASP:OD1	2.32	0.54
1:D:293:LEU:HD13	1:D:378:LEU:HD12	1.89	0.54
1:D:2638:LYS:HA	1:D:2698:MET:HE3	1.89	0.54
1:C:196:MET:N	1:C:196:MET:HE3	2.23	0.54
1:C:4006:ASP:N	1:C:4006:ASP:OD1	2.41	0.54
1:A:2736:ASP:OD1	1:A:2736:ASP:N	2.41	0.54
1:A:3563:VAL:HA	1:A:3569:LEU:HD23	1.90	0.54
1:A:4186:ALA:O	1:A:4188:ARG:NH2	2.38	0.54
1:D:4938:ASP:OD1	1:C:4944:ARG:NH2	2.41	0.54
1:B:384:MET:SD	1:B:384:MET:N	2.75	0.54
1:B:1996:ARG:NH2	1:B:1999:ARG:HE	2.03	0.54
1:B:4006:ASP:OD1	1:B:4006:ASP:N	2.40	0.54
1:B:4904:PRO:HB3	1:B:4913:ARG:HG2	1.88	0.54
1:D:3531:ASP:O	1:D:3535:LEU:HG	2.07	0.54
1:C:4039:MET:SD	1:C:4042:ARG:NH2	2.81	0.54
1:A:2638:LYS:HA	1:A:2698:MET:HE3	1.89	0.54
1:A:3768:SER:HA	1:A:3771:HIS:CD2	2.43	0.54
1:B:993:HIS:NE2	1:B:1022:VAL:O	2.39	0.54
1:B:3531:ASP:O	1:B:3535:LEU:HG	2.07	0.54
1:D:4039:MET:SD	1:D:4042:ARG:NH2	2.81	0.54
1:C:1977:TYR:CZ	1:C:1981:MET:HE3	2.43	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:3201:MET:HE3	1:C:3203:VAL:HG22	1.90	0.54
1:A:2967:MET:O	1:A:2970:SER:OG	2.19	0.54
1:A:3550:ARG:NE	1:A:3597:GLN:OE1	2.41	0.54
1:A:3719:ASP:H	1:A:3793:MET:HE3	1.73	0.54
1:A:4039:MET:SD	1:A:4042:ARG:NH2	2.81	0.54
1:B:3768:SER:HA	1:B:3771:HIS:CD2	2.43	0.54
1:D:2871:LEU:HD11	1:D:2937:VAL:HG23	1.88	0.54
1:A:196:MET:HE3	1:A:196:MET:N	2.23	0.53
1:A:384:MET:SD	1:A:384:MET:N	2.75	0.53
1:A:2751:LEU:O	1:A:2755:ILE:HG12	2.09	0.53
1:A:3201:MET:HE3	1:A:3203:VAL:HG22	1.90	0.53
1:A:3840:SER:OG	1:A:3877:ASP:OD1	2.24	0.53
1:B:4944:ARG:NH2	1:C:4938:ASP:OD1	2.40	0.53
1:D:2291:GLN:OE1	1:D:2292:GLU:N	2.31	0.53
1:D:2751:LEU:O	1:D:2755:ILE:HG12	2.09	0.53
1:D:3768:SER:HA	1:D:3771:HIS:CD2	2.43	0.53
1:C:1068:ARG:HH21	1:C:1071:ARG:HG3	1.73	0.53
1:C:1820:ARG:HA	1:C:1820:ARG:CZ	2.39	0.53
1:C:2638:LYS:HA	1:C:2698:MET:HE3	1.89	0.53
1:C:2736:ASP:O	1:C:2738:ARG:NH1	2.41	0.53
1:B:2875:ALA:HB2	1:B:2927:LEU:HD22	1.90	0.53
1:D:1116:GLY:HA3	1:D:1132:TRP:HB3	1.90	0.53
1:D:2736:ASP:O	1:D:2738:ARG:NH1	2.41	0.53
1:D:2827:ARG:NH2	1:D:2935:TYR:OH	2.42	0.53
1:D:2875:ALA:HB2	1:D:2927:LEU:HD22	1.90	0.53
1:B:293:LEU:HD13	1:B:378:LEU:HD12	1.89	0.53
1:B:618:GLN:OE1	1:B:1678:ASN:ND2	2.37	0.53
1:C:2210:VAL:O	1:C:2214:VAL:HG23	2.07	0.53
1:A:618:GLN:OE1	1:A:1678:ASN:ND2	2.37	0.53
1:A:1116:GLY:HA3	1:A:1132:TRP:HB3	1.90	0.53
1:A:2827:ARG:NH2	1:A:2935:TYR:OH	2.42	0.53
1:A:2924:GLN:O	1:A:2928:LYS:HG2	2.09	0.53
1:A:3822:ASP:OD1	1:A:3823:LYS:NZ	2.39	0.53
1:B:1820:ARG:CZ	1:B:1820:ARG:HA	2.38	0.53
1:B:2827:ARG:NH2	1:B:2935:TYR:OH	2.42	0.53
1:D:196:MET:N	1:D:196:MET:HE3	2.23	0.53
1:D:993:HIS:NE2	1:D:1022:VAL:O	2.39	0.53
1:D:1820:ARG:CZ	1:D:1820:ARG:HA	2.39	0.53
1:D:1947:CYS:SG	1:D:2127:GLN:NE2	2.76	0.53
1:D:2924:GLN:O	1:D:2928:LYS:HG2	2.09	0.53
1:C:23:GLN:NE2	1:C:203:ASN:OD1	2.41	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:921:ASN:HB3	1:C:924:MET:HE2	1.90	0.53
1:A:2736:ASP:O	1:A:2738:ARG:NH1	2.41	0.53
1:A:3110:LEU:HD23	1:A:3183:VAL:HG22	1.91	0.53
1:A:3531:ASP:O	1:A:3535:LEU:HG	2.07	0.53
1:B:35:LEU:HD11	1:B:189:LEU:HD13	1.91	0.53
1:B:3201:MET:HE3	1:B:3203:VAL:HG22	1.90	0.53
1:B:3384:LYS:HD2	1:B:3386:GLU:HB3	1.91	0.53
1:B:3719:ASP:H	1:B:3793:MET:HE3	1.73	0.53
1:B:4039:MET:SD	1:B:4042:ARG:NH2	2.81	0.53
1:D:921:ASN:HB3	1:D:924:MET:HE2	1.90	0.53
1:D:2194:HIS:O	1:D:2198:MET:HE2	2.09	0.53
1:C:293:LEU:HD13	1:C:378:LEU:HD12	1.89	0.53
1:A:2194:HIS:O	1:A:2198:MET:HE2	2.09	0.53
1:A:3384:LYS:HD2	1:A:3386:GLU:HB3	1.91	0.53
1:B:866:HIS:CG	1:B:941:MET:HE3	2.44	0.53
1:B:1977:TYR:CZ	1:B:1981:MET:HE3	2.43	0.53
1:B:2873:ALA:O	1:B:2876:GLU:HG3	2.09	0.53
1:D:2210:VAL:O	1:D:2214:VAL:HG23	2.07	0.53
1:D:3201:MET:HE3	1:D:3203:VAL:HG22	1.90	0.53
1:D:3550:ARG:NE	1:D:3597:GLN:OE1	2.41	0.53
1:D:4006:ASP:N	1:D:4006:ASP:OD1	2.40	0.53
1:C:4686:LEU:HD12	1:C:4690:GLU:HG3	1.91	0.53
1:A:23:GLN:NE2	1:A:203:ASN:OD1	2.41	0.53
1:B:3563:VAL:HA	1:B:3569:LEU:HD23	1.90	0.53
1:B:4759:ASP:O	1:B:4761:PRO:HD3	2.08	0.53
1:C:257:ARG:O	1:C:284:HIS:NE2	2.31	0.53
1:C:2827:ARG:NH2	1:C:2935:TYR:OH	2.42	0.53
1:C:3768:SER:HA	1:C:3771:HIS:CD2	2.43	0.53
1:C:3771:HIS:O	1:C:3815:LYS:NZ	2.38	0.53
1:A:293:LEU:HD13	1:A:378:LEU:HD12	1.89	0.53
1:A:1977:TYR:CZ	1:A:1981:MET:HE3	2.43	0.53
1:A:4818:MET:N	1:A:4818:MET:SD	2.82	0.53
1:B:2751:LEU:O	1:B:2755:ILE:HG12	2.09	0.53
1:B:3110:LEU:HD23	1:B:3183:VAL:HG22	1.91	0.53
1:B:3771:HIS:O	1:B:3815:LYS:NZ	2.38	0.53
1:B:4818:MET:N	1:B:4818:MET:SD	2.82	0.53
1:D:2873:ALA:O	1:D:2876:GLU:HG3	2.09	0.53
1:D:4759:ASP:O	1:D:4761:PRO:HD3	2.08	0.53
1:C:866:HIS:CG	1:C:941:MET:HE3	2.44	0.53
1:C:3840:SER:OG	1:C:3877:ASP:OD1	2.24	0.53
1:A:1820:ARG:HA	1:A:1820:ARG:CZ	2.39	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2293:GLN:OE1	1:A:2293:GLN:N	2.29	0.53
1:B:2661:TRP:HB3	1:B:2664:PHE:HB2	1.91	0.53
1:B:4686:LEU:HD12	1:B:4690:GLU:HG3	1.91	0.53
1:D:1977:TYR:CZ	1:D:1981:MET:HE3	2.43	0.53
1:C:1116:GLY:HA3	1:C:1132:TRP:HB3	1.90	0.53
1:C:4818:MET:SD	1:C:4818:MET:N	2.82	0.53
1:B:1116:GLY:HA3	1:B:1132:TRP:HB3	1.90	0.53
1:D:866:HIS:CG	1:D:941:MET:HE3	2.44	0.53
1:D:960:MET:HG3	1:D:961:MET:O	2.09	0.53
1:C:349:GLN:HB2	1:C:356:TRP:CZ3	2.44	0.53
1:C:2736:ASP:OD1	1:C:2736:ASP:N	2.41	0.53
1:C:2924:GLN:O	1:C:2928:LYS:HG2	2.09	0.53
1:C:3719:ASP:H	1:C:3793:MET:HE3	1.73	0.53
1:C:4759:ASP:O	1:C:4761:PRO:HD3	2.08	0.53
1:A:2986:VAL:HG22	1:A:2988:LYS:H	1.74	0.52
1:A:4759:ASP:O	1:A:4761:PRO:HD3	2.08	0.52
1:B:4627:MET:HE1	1:B:4629:TYR:CE2	2.45	0.52
1:D:23:GLN:NE2	1:D:203:ASN:OD1	2.41	0.52
1:D:3840:SER:OG	1:D:3877:ASP:OD1	2.24	0.52
1:D:4627:MET:HE1	1:D:4629:TYR:CE2	2.45	0.52
1:D:4818:MET:N	1:D:4818:MET:SD	2.82	0.52
1:C:2194:HIS:O	1:C:2198:MET:HE2	2.09	0.52
1:C:2641:LEU:HD12	1:C:2698:MET:HE1	1.91	0.52
1:C:2751:LEU:O	1:C:2755:ILE:HG12	2.08	0.52
1:C:3110:LEU:HD23	1:C:3183:VAL:HG22	1.91	0.52
1:C:4241:THR:HG22	1:C:4245:MET:HE3	1.91	0.52
1:C:4627:MET:HE1	1:C:4629:TYR:CE2	2.45	0.52
1:A:960:MET:HG3	1:A:961:MET:O	2.09	0.52
1:A:2694:GLU:HG2	1:A:2697:ARG:HH22	1.75	0.52
1:A:2875:ALA:HB2	1:A:2927:LEU:HD22	1.90	0.52
1:B:257:ARG:O	1:B:284:HIS:NE2	2.31	0.52
1:D:349:GLN:HB2	1:D:356:TRP:CZ3	2.45	0.52
1:D:3719:ASP:H	1:D:3793:MET:HE3	1.73	0.52
1:A:684:VAL:HG22	1:A:781:VAL:HG12	1.92	0.52
1:A:4241:THR:HG22	1:A:4245:MET:HE3	1.91	0.52
1:B:1068:ARG:HH21	1:B:1071:ARG:HG3	1.73	0.52
1:D:1068:ARG:HH21	1:D:1071:ARG:HG3	1.74	0.52
1:D:4686:LEU:HD12	1:D:4690:GLU:HG3	1.91	0.52
1:C:2873:ALA:O	1:C:2876:GLU:HG3	2.09	0.52
1:A:35:LEU:HD11	1:A:189:LEU:HD13	1.91	0.52
1:A:3811:GLU:OE1	1:A:3811:GLU:N	2.27	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4627:MET:HE1	1:A:4629:TYR:CE2	2.45	0.52
1:A:4944:ARG:NH2	1:B:4938:ASP:OD1	2.42	0.52
1:B:960:MET:HG3	1:B:961:MET:O	2.09	0.52
1:D:2736:ASP:OD1	1:D:2736:ASP:N	2.41	0.52
1:D:3110:LEU:HD23	1:D:3183:VAL:HG22	1.91	0.52
1:D:4241:THR:HG22	1:D:4245:MET:HE3	1.91	0.52
1:C:960:MET:HG3	1:C:961:MET:O	2.09	0.52
1:A:349:GLN:HB2	1:A:356:TRP:CZ3	2.45	0.52
1:A:4686:LEU:HD12	1:A:4690:GLU:HG3	1.91	0.52
1:A:4745:LEU:H	1:A:4745:LEU:HD12	1.73	0.52
1:B:23:GLN:NE2	1:B:203:ASN:OD1	2.41	0.52
1:B:349:GLN:HB2	1:B:356:TRP:CZ3	2.44	0.52
1:B:2641:LEU:HD12	1:B:2698:MET:HE1	1.91	0.52
1:D:684:VAL:HG22	1:D:781:VAL:HG12	1.92	0.52
1:B:921:ASN:HB3	1:B:924:MET:HE2	1.90	0.52
1:B:2694:GLU:HG2	1:B:2697:ARG:HH22	1.75	0.52
1:C:3709:ALA:HB2	1:C:3782:MET:HE2	1.91	0.52
1:A:866:HIS:CG	1:A:941:MET:HE3	2.44	0.52
1:A:2449:GLU:OE1	1:A:2449:GLU:N	2.24	0.52
1:A:2661:TRP:HB3	1:A:2664:PHE:HB2	1.91	0.52
1:A:2873:ALA:O	1:A:2876:GLU:HG3	2.09	0.52
1:D:35:LEU:HD11	1:D:189:LEU:HD13	1.91	0.52
1:D:2986:VAL:HG22	1:D:2988:LYS:H	1.74	0.52
1:C:35:LEU:HD11	1:C:189:LEU:HD13	1.91	0.52
2:F:11:ASP:OD2	2:F:12:GLY:N	2.43	0.52
1:B:684:VAL:HG22	1:B:781:VAL:HG12	1.92	0.52
1:B:4745:LEU:H	1:B:4745:LEU:HD12	1.73	0.52
1:D:228:ASP:OD1	1:D:228:ASP:N	2.43	0.52
1:D:3384:LYS:HD2	1:D:3386:GLU:HB3	1.91	0.52
1:D:3709:ALA:HB2	1:D:3782:MET:HE2	1.91	0.52
1:C:2967:MET:O	1:C:2970:SER:OG	2.19	0.52
1:C:4754:ASN:HB3	1:C:4756:ARG:HH21	1.75	0.52
1:A:1068:ARG:HH21	1:A:1071:ARG:HG3	1.73	0.52
1:B:2924:GLN:O	1:B:2928:LYS:HG2	2.09	0.52
1:D:1057:ASP:OD2	1:D:1057:ASP:N	2.43	0.52
1:D:2661:TRP:HB3	1:D:2664:PHE:HB2	1.91	0.52
1:D:4754:ASN:HB3	1:D:4756:ARG:HH21	1.75	0.52
1:A:921:ASN:HB3	1:A:924:MET:HE2	1.90	0.52
1:A:3226:GLU:C	1:A:3228:ALA:H	2.18	0.52
1:B:195:PHE:C	1:B:196:MET:HE3	2.35	0.52
1:B:2194:HIS:O	1:B:2198:MET:HE2	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2986:VAL:HG22	1:B:2988:LYS:H	1.74	0.52
1:B:3709:ALA:HB2	1:B:3782:MET:HE2	1.91	0.52
1:D:2694:GLU:HG2	1:D:2697:ARG:HH22	1.75	0.52
1:D:3382:GLU:OE2	1:D:3382:GLU:N	2.34	0.52
1:C:195:PHE:C	1:C:196:MET:HE3	2.35	0.52
2:G:2:VAL:HG11	2:G:61:GLU:HB2	1.92	0.51
1:B:182:LEU:HB3	1:B:198:THR:HG21	1.92	0.51
1:B:4241:THR:HG22	1:B:4245:MET:HE3	1.91	0.51
1:D:3130:THR:HA	1:D:3133:THR:HG22	1.91	0.51
1:C:2739:PRO:HG3	1:C:2888:ARG:HG2	1.92	0.51
1:C:4745:LEU:HD12	1:C:4745:LEU:H	1.73	0.51
1:A:195:PHE:C	1:A:196:MET:HE3	2.35	0.51
1:B:1289:LEU:HD12	1:B:1562:ILE:HD11	1.92	0.51
1:B:3811:GLU:OE1	1:B:3811:GLU:N	2.27	0.51
1:C:182:LEU:HB3	1:C:198:THR:HG21	1.92	0.51
1:C:684:VAL:HG22	1:C:781:VAL:HG12	1.92	0.51
1:C:3384:LYS:HD2	1:C:3386:GLU:HB3	1.91	0.51
1:A:2765:LYS:NZ	1:A:2859:PRO:O	2.39	0.51
1:B:2704:CYS:O	1:B:3008:GLN:NE2	2.44	0.51
1:D:195:PHE:C	1:D:196:MET:HE3	2.35	0.51
1:D:359:TYR:CZ	1:D:383:HIS:HD2	2.29	0.51
1:D:1156:THR:OG1	1:D:1157:GLU:OE1	2.19	0.51
1:D:4570:ALA:O	1:D:4574:ASN:ND2	2.41	0.51
1:C:2615:ARG:HB2	1:C:2618:MET:HE3	1.93	0.51
1:C:2694:GLU:HG2	1:C:2697:ARG:HH22	1.75	0.51
1:A:2641:LEU:HD12	1:A:2698:MET:HE1	1.91	0.51
1:A:4754:ASN:HB3	1:A:4756:ARG:HH21	1.75	0.51
1:B:4754:ASN:HB3	1:B:4756:ARG:HH21	1.75	0.51
1:D:961:MET:HG2	1:D:962:SER:N	2.25	0.51
1:D:1861:GLN:O	1:D:1865:MET:HE3	2.10	0.51
1:D:2690:LYS:HD3	1:D:2691:TYR:N	2.26	0.51
1:D:2739:PRO:HG3	1:D:2888:ARG:HG2	1.92	0.51
1:C:228:ASP:OD1	1:C:228:ASP:N	2.43	0.51
1:C:2293:GLN:OE1	1:C:2293:GLN:N	2.29	0.51
1:C:3550:ARG:NE	1:C:3597:GLN:OE1	2.41	0.51
1:C:3751:VAL:HG23	1:C:3755:GLU:HG2	1.93	0.51
1:A:3235:SER:OG	1:A:3237:GLU:OE1	2.29	0.51
1:B:728:ARG:NH2	1:B:1489:CYS:SG	2.84	0.51
1:C:359:TYR:CZ	1:C:383:HIS:HD2	2.29	0.51
1:C:990:GLU:HG3	1:C:1025:ARG:NH1	2.25	0.51
1:C:3235:SER:OG	1:C:3237:GLU:OE1	2.29	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1289:LEU:HD12	1:A:1562:ILE:HD11	1.92	0.51
1:B:3751:VAL:HG23	1:B:3755:GLU:HG2	1.93	0.51
1:C:1057:ASP:OD2	1:C:1057:ASP:N	2.43	0.51
1:B:1847:THR:O	1:B:1851:MET:HG3	2.11	0.51
1:D:1847:THR:O	1:D:1851:MET:HG3	2.11	0.51
1:D:2641:LEU:HD12	1:D:2698:MET:HE1	1.91	0.51
1:D:4745:LEU:H	1:D:4745:LEU:HD12	1.73	0.51
1:C:728:ARG:NH2	1:C:1489:CYS:SG	2.84	0.51
1:A:1861:GLN:O	1:A:1865:MET:HE3	2.10	0.51
1:A:2615:ARG:HB2	1:A:2618:MET:HE3	1.93	0.51
1:A:3130:THR:HA	1:A:3133:THR:HG22	1.91	0.51
1:A:4902:GLU:O	1:A:4913:ARG:NH2	2.37	0.51
1:B:990:GLU:HG3	1:B:1025:ARG:NH1	2.26	0.51
1:B:3130:THR:HA	1:B:3133:THR:HG22	1.91	0.51
1:D:633:LEU:HD13	1:D:1639:LEU:HD21	1.93	0.51
1:C:1847:THR:O	1:C:1851:MET:HG3	2.11	0.51
1:C:2660:GLY:HA3	1:C:2666:VAL:HG22	1.92	0.51
1:A:228:ASP:OD1	1:A:228:ASP:N	2.43	0.51
1:A:1847:THR:O	1:A:1851:MET:HG3	2.11	0.51
1:B:228:ASP:OD1	1:B:228:ASP:N	2.43	0.51
1:B:883:ALA:HB1	1:B:907:LEU:HD12	1.93	0.51
1:B:1156:THR:OG1	1:B:1157:GLU:OE1	2.19	0.51
1:B:1861:GLN:O	1:B:1865:MET:HE3	2.10	0.51
1:B:3226:GLU:C	1:B:3228:ALA:H	2.18	0.51
1:D:728:ARG:NH2	1:D:1489:CYS:SG	2.84	0.51
1:C:2690:LYS:HD3	1:C:2691:TYR:N	2.26	0.51
1:C:2986:VAL:HG22	1:C:2988:LYS:H	1.74	0.51
1:A:2173:GLN:OE1	1:A:2173:GLN:N	2.27	0.51
1:A:3709:ALA:HB2	1:A:3782:MET:HE2	1.91	0.51
2:H:11:ASP:OD2	2:H:12:GLY:N	2.44	0.51
1:B:1024:TYR:HB3	1:B:1025:ARG:NH1	2.26	0.51
1:B:2660:GLY:HA3	1:B:2666:VAL:HG22	1.92	0.51
1:D:1289:LEU:HD12	1:D:1562:ILE:HD11	1.92	0.51
1:D:3235:SER:OG	1:D:3237:GLU:OE1	2.29	0.51
1:C:1861:GLN:O	1:C:1865:MET:HE3	2.10	0.51
1:A:182:LEU:HB3	1:A:198:THR:HG21	1.92	0.50
1:A:728:ARG:NH2	1:A:1489:CYS:SG	2.84	0.50
1:A:2704:CYS:O	1:A:3008:GLN:NE2	2.44	0.50
1:A:4570:ALA:O	1:A:4574:ASN:ND2	2.41	0.50
1:D:990:GLU:HG3	1:D:1025:ARG:NH1	2.26	0.50
1:D:2660:GLY:HA3	1:D:2666:VAL:HG22	1.92	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:2704:CYS:O	1:C:3008:GLN:NE2	2.44	0.50
1:C:3130:THR:HA	1:C:3133:THR:HG22	1.91	0.50
1:C:3226:GLU:C	1:C:3228:ALA:H	2.18	0.50
1:A:648:ILE:HG23	1:A:814:ALA:HB3	1.93	0.50
1:A:2660:GLY:HA3	1:A:2666:VAL:HG22	1.92	0.50
1:A:2739:PRO:HG3	1:A:2888:ARG:HG2	1.92	0.50
1:A:2858:GLN:HB2	1:A:2859:PRO:HD3	1.94	0.50
1:B:359:TYR:CZ	1:B:383:HIS:HD2	2.29	0.50
1:B:4063:ASP:OD1	1:B:4064:MET:N	2.44	0.50
1:D:943:ASP:OD2	1:D:945:LYS:NZ	2.42	0.50
1:D:3226:GLU:C	1:D:3228:ALA:H	2.18	0.50
1:D:4902:GLU:O	1:D:4913:ARG:NH2	2.37	0.50
1:D:4967:TYR:OH	1:D:5033:GLU:OE2	2.24	0.50
1:C:1252:HIS:O	1:C:1275:ARG:NH1	2.45	0.50
1:C:2661:TRP:HB3	1:C:2664:PHE:HB2	1.91	0.50
1:C:4687:TYR:O	1:C:4691:GLN:NE2	2.45	0.50
1:A:633:LEU:HD13	1:A:1639:LEU:HD21	1.93	0.50
1:A:2690:LYS:HD3	1:A:2691:TYR:N	2.26	0.50
1:A:3765:TYR:CE2	1:A:4753:HIS:HA	2.46	0.50
1:A:4063:ASP:OD1	1:A:4064:MET:N	2.44	0.50
1:A:4934:GLY:HA3	1:D:4937:ILE:CD1	2.39	0.50
1:B:2858:GLN:HB2	1:B:2859:PRO:HD3	1.94	0.50
1:B:4968:PHE:O	1:B:4974:GLY:HA3	2.12	0.50
1:C:2858:GLN:HB2	1:C:2859:PRO:HD3	1.93	0.50
1:A:359:TYR:CZ	1:A:383:HIS:HD2	2.29	0.50
1:A:883:ALA:HB1	1:A:907:LEU:HD12	1.93	0.50
1:A:1252:HIS:O	1:A:1275:ARG:NH1	2.45	0.50
2:G:11:ASP:OD2	2:G:12:GLY:N	2.45	0.50
1:B:872:GLU:HG2	1:B:922:LEU:HD11	1.94	0.50
1:B:1726:SER:O	1:B:1729:SER:OG	2.30	0.50
1:B:2615:ARG:HB2	1:B:2618:MET:HE3	1.93	0.50
1:B:3840:SER:OG	1:B:3877:ASP:OD1	2.24	0.50
1:D:182:LEU:HB3	1:D:198:THR:HG21	1.92	0.50
1:D:864:PRO:HB2	1:D:866:HIS:CD2	2.47	0.50
1:A:990:GLU:HG3	1:A:1025:ARG:NH1	2.26	0.50
1:B:3235:SER:OG	1:B:3237:GLU:OE1	2.29	0.50
1:D:3751:VAL:HG23	1:D:3755:GLU:HG2	1.93	0.50
1:D:3765:TYR:CE2	1:D:4753:HIS:HA	2.47	0.50
1:C:2907:PRO:O	1:C:2910:THR:OG1	2.29	0.50
1:A:864:PRO:HB2	1:A:866:HIS:CD2	2.47	0.50
1:A:2102:VAL:HG13	1:A:2120:MET:HB2	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3182:TYR:HA	1:A:3185:LYS:HE3	1.94	0.50
1:A:4687:TYR:O	1:A:4691:GLN:NE2	2.45	0.50
1:A:4968:PHE:O	1:A:4974:GLY:HA3	2.12	0.50
1:B:864:PRO:HB2	1:B:866:HIS:CD2	2.47	0.50
1:B:2410:PRO:HB3	1:B:2415:ARG:HB3	1.93	0.50
1:B:2739:PRO:HG3	1:B:2888:ARG:HG2	1.92	0.50
1:B:3261:ALA:HB3	1:B:3266:MET:HE2	1.94	0.50
1:D:648:ILE:HG23	1:D:814:ALA:HB3	1.94	0.50
1:D:883:ALA:HB1	1:D:907:LEU:HD12	1.93	0.50
1:D:1252:HIS:O	1:D:1275:ARG:NH1	2.45	0.50
1:D:3105:LYS:O	1:D:3108:GLU:HG3	2.12	0.50
1:D:4687:TYR:O	1:D:4691:GLN:NE2	2.45	0.50
1:D:5013:MET:HE1	1:D:5020:ASP:HB2	1.93	0.50
1:C:648:ILE:HG23	1:C:814:ALA:HB3	1.93	0.50
1:C:864:PRO:HB2	1:C:866:HIS:CD2	2.47	0.50
1:A:1024:TYR:HB3	1:A:1025:ARG:NH1	2.26	0.50
1:A:3105:LYS:O	1:A:3108:GLU:HG3	2.12	0.50
1:B:633:LEU:HD13	1:B:1639:LEU:HD21	1.93	0.50
1:B:648:ILE:HG23	1:B:814:ALA:HB3	1.93	0.50
1:B:3765:TYR:CE2	1:B:4753:HIS:HA	2.47	0.50
1:B:4630:TYR:HH	1:C:4860:ARG:NH1	2.08	0.50
1:D:2704:CYS:O	1:D:3008:GLN:NE2	2.44	0.50
1:D:3182:TYR:HA	1:D:3185:LYS:HE3	1.94	0.50
1:C:872:GLU:HG2	1:C:922:LEU:HD11	1.94	0.50
1:C:943:ASP:OD2	1:C:945:LYS:NZ	2.42	0.50
1:C:1031:THR:HG22	1:C:1035:ASN:HD21	1.77	0.50
1:C:5013:MET:HE1	1:C:5020:ASP:HB2	1.93	0.50
1:A:2967:MET:O	1:A:2971:GLN:HG2	2.12	0.50
1:A:3261:ALA:HB3	1:A:3266:MET:HE2	1.94	0.50
1:A:3751:VAL:HG23	1:A:3755:GLU:HG2	1.93	0.50
2:E:18:ARG:NE	2:E:51:GLY:HA3	2.27	0.50
1:B:2967:MET:O	1:B:2971:GLN:HG2	2.12	0.50
1:B:3955:MET:HE3	1:B:4015:GLU:HG2	1.94	0.50
1:B:5013:MET:HE1	1:B:5020:ASP:HB2	1.93	0.50
1:D:2587:TYR:O	1:D:2590:SER:OG	2.24	0.50
1:D:2765:LYS:NZ	1:D:2859:PRO:O	2.39	0.50
1:D:4063:ASP:OD1	1:D:4064:MET:N	2.44	0.50
1:D:4689:THR:OG1	1:D:4690:GLU:OE1	2.26	0.50
1:C:883:ALA:HB1	1:C:907:LEU:HD12	1.93	0.50
1:C:1024:TYR:HB3	1:C:1025:ARG:NH1	2.26	0.50
1:C:2102:VAL:HG13	1:C:2120:MET:HB2	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:3955:MET:HE3	1:C:4015:GLU:HG2	1.94	0.50
1:D:2102:VAL:HG13	1:D:2120:MET:HB2	1.93	0.50
1:D:2632:ILE:HD12	1:D:2633:LEU:N	2.27	0.50
1:C:975:VAL:HG12	1:C:1044:ARG:HH11	1.77	0.50
1:C:1289:LEU:HD12	1:C:1562:ILE:HD11	1.92	0.50
1:C:2173:GLN:OE1	1:C:2173:GLN:N	2.27	0.50
1:C:2632:ILE:HD12	1:C:2633:LEU:N	2.27	0.50
1:C:4063:ASP:OD1	1:C:4064:MET:N	2.44	0.50
1:B:943:ASP:OD2	1:B:945:LYS:NZ	2.42	0.49
1:B:1057:ASP:OD2	1:B:1057:ASP:N	2.43	0.49
1:B:3182:TYR:HA	1:B:3185:LYS:HE3	1.94	0.49
1:D:1024:TYR:HB3	1:D:1025:ARG:NH1	2.26	0.49
1:D:1031:THR:HG22	1:D:1035:ASN:HD21	1.77	0.49
1:D:2173:GLN:OE1	1:D:2173:GLN:N	2.27	0.49
1:D:3880:PHE:HA	1:D:3883:ASP:OD2	2.12	0.49
1:C:2123:LEU:O	1:C:2127:GLN:HG2	2.12	0.49
1:C:3946:GLN:OE1	1:C:3949:ARG:NH1	2.30	0.49
2:E:2:VAL:HG11	2:E:61:GLU:HB2	1.93	0.49
1:B:4821:LYS:H	1:B:4821:LYS:HD3	1.77	0.49
1:D:2588:ARG:HH21	1:D:2589:LEU:HD23	1.78	0.49
1:D:2967:MET:O	1:D:2970:SER:OG	2.19	0.49
1:D:3822:ASP:OD1	1:D:3823:LYS:NZ	2.39	0.49
1:D:4016:LEU:O	1:D:4020:GLN:HG3	2.13	0.49
1:C:2386:ILE:O	1:C:2393:ASP:HB2	2.12	0.49
1:C:2588:ARG:HH21	1:C:2589:LEU:HD23	1.78	0.49
1:A:961:MET:HG2	1:A:962:SER:N	2.24	0.49
1:A:975:VAL:HG12	1:A:1044:ARG:HH11	1.77	0.49
1:A:2410:PRO:HB3	1:A:2415:ARG:HB3	1.93	0.49
1:A:3771:HIS:O	1:A:3815:LYS:NZ	2.38	0.49
1:A:3959:LYS:NZ	1:A:4022:ASP:OD2	2.43	0.49
1:A:4818:MET:O	1:A:4824:ARG:NH1	2.46	0.49
1:B:975:VAL:HG12	1:B:1044:ARG:HH11	1.77	0.49
1:B:3880:PHE:HA	1:B:3883:ASP:OD2	2.12	0.49
1:D:2615:ARG:HB2	1:D:2618:MET:HE3	1.93	0.49
1:D:2858:GLN:HB2	1:D:2859:PRO:HD3	1.94	0.49
1:D:3955:MET:HE3	1:D:4015:GLU:HG2	1.94	0.49
1:C:1947:CYS:SG	1:C:2127:GLN:NE2	2.76	0.49
1:C:2449:GLU:OE1	1:C:2449:GLU:N	2.24	0.49
1:A:2419:GLY:C	1:A:2423:MET:HE3	2.38	0.49
1:A:3862:ASP:OD1	1:A:3862:ASP:N	2.46	0.49
2:E:49:MET:HG2	2:E:52:LYS:HG2	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:2:VAL:HG11	2:F:61:GLU:HB2	1.94	0.49
1:D:257:ARG:O	1:D:284:HIS:NE2	2.31	0.49
1:D:1447:CYS:HB3	1:D:1555:LEU:HB3	1.94	0.49
1:D:2419:GLY:C	1:D:2423:MET:HE3	2.38	0.49
1:D:3535:LEU:O	1:D:3539:ARG:HG2	2.12	0.49
1:C:2244:ARG:HH12	1:C:3858:MET:HE3	1.78	0.49
1:C:2440:MET:HA	1:C:2440:MET:HE2	1.94	0.49
1:C:3261:ALA:HB3	1:C:3266:MET:HE2	1.94	0.49
1:C:3453:ARG:NH1	1:C:3453:ARG:HA	2.28	0.49
1:A:872:GLU:HG2	1:A:922:LEU:HD11	1.94	0.49
1:A:3390:GLY:O	1:A:3393:LEU:HD12	2.12	0.49
1:B:2386:ILE:O	1:B:2393:ASP:HB2	2.12	0.49
1:D:2440:MET:HE2	1:D:2440:MET:HA	1.95	0.49
1:D:3261:ALA:HB3	1:D:3266:MET:HE2	1.94	0.49
1:C:3434:LEU:HD23	1:C:3517:MET:HE1	1.95	0.49
1:C:3765:TYR:CE2	1:C:4753:HIS:HA	2.47	0.49
1:C:4016:LEU:O	1:C:4020:GLN:HG3	2.13	0.49
1:C:4821:LYS:H	1:C:4821:LYS:HD3	1.77	0.49
1:A:3442:PHE:CD1	1:A:3514:LEU:HD22	2.48	0.49
1:A:3453:ARG:NH1	1:A:3453:ARG:HA	2.28	0.49
1:A:4967:TYR:OH	1:A:5033:GLU:OE2	2.24	0.49
1:B:1252:HIS:O	1:B:1275:ARG:NH1	2.45	0.49
1:B:3183:VAL:O	1:B:3187:ARG:HG3	2.13	0.49
1:D:2386:ILE:O	1:D:2393:ASP:HB2	2.12	0.49
1:D:2967:MET:O	1:D:2971:GLN:HG2	2.12	0.49
1:C:274:LEU:HB3	1:C:339:ILE:HD12	1.95	0.49
1:C:2967:MET:O	1:C:2971:GLN:HG2	2.12	0.49
1:C:3182:TYR:HA	1:C:3185:LYS:HE3	1.94	0.49
1:B:1089:TYR:HD2	1:B:1152:MET:HG2	1.78	0.49
1:B:1447:CYS:HB3	1:B:1555:LEU:HB3	1.94	0.49
1:B:1668:ARG:HG3	1:B:1671:ARG:NH2	2.28	0.49
1:B:2440:MET:HE2	1:B:2440:MET:HA	1.95	0.49
1:B:2690:LYS:HD3	1:B:2691:TYR:N	2.26	0.49
1:B:3105:LYS:O	1:B:3108:GLU:HG3	2.12	0.49
1:B:4687:TYR:O	1:B:4691:GLN:NE2	2.45	0.49
1:D:872:GLU:HG2	1:D:922:LEU:HD11	1.94	0.49
1:D:2907:PRO:O	1:D:2910:THR:OG1	2.29	0.49
1:D:3159:ASP:OD1	1:D:3159:ASP:N	2.45	0.49
1:D:3604:TYR:O	1:D:3607:GLU:HG3	2.13	0.49
1:C:633:LEU:HD13	1:C:1639:LEU:HD21	1.93	0.49
1:C:2410:PRO:HB3	1:C:2415:ARG:HB3	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:2419:GLY:C	1:C:2423:MET:HE3	2.38	0.49
1:C:3105:LYS:O	1:C:3108:GLU:HG3	2.12	0.49
1:C:3183:VAL:O	1:C:3187:ARG:HG3	2.13	0.49
1:C:4818:MET:O	1:C:4824:ARG:NH1	2.46	0.49
1:A:3288:GLY:HA2	1:A:3303:PRO:HB3	1.94	0.49
1:B:1864:LYS:HE3	1:B:1872:THR:HG22	1.94	0.49
1:B:2123:LEU:O	1:B:2127:GLN:HG2	2.12	0.49
1:B:2632:ILE:HD12	1:B:2633:LEU:N	2.27	0.49
1:B:3434:LEU:HD23	1:B:3517:MET:HE1	1.95	0.49
1:B:3535:LEU:O	1:B:3539:ARG:HG2	2.12	0.49
1:B:3862:ASP:N	1:B:3862:ASP:OD1	2.46	0.49
1:D:1864:LYS:HE3	1:D:1872:THR:HG22	1.94	0.49
1:D:3054:VAL:HG12	1:D:3127:GLN:HE22	1.78	0.49
1:D:3357:HIS:O	1:D:3361:THR:HG23	2.13	0.49
1:D:3453:ARG:HA	1:D:3453:ARG:NH1	2.27	0.49
1:D:4818:MET:O	1:D:4824:ARG:NH1	2.46	0.49
1:D:4868:ASP:OD1	1:D:4870:ASP:N	2.46	0.49
1:C:3880:PHE:HA	1:C:3883:ASP:OD2	2.12	0.49
1:C:4570:ALA:O	1:C:4574:ASN:ND2	2.41	0.49
1:A:1031:THR:HG22	1:A:1035:ASN:HD21	1.77	0.49
1:A:1186:ASP:OD2	1:A:1186:ASP:N	2.35	0.49
1:A:2244:ARG:HH12	1:A:3858:MET:HE3	1.78	0.49
1:A:3183:VAL:O	1:A:3187:ARG:HG3	2.13	0.49
1:A:3880:PHE:HA	1:A:3883:ASP:OD2	2.12	0.49
1:A:4016:LEU:O	1:A:4020:GLN:HG3	2.13	0.49
1:B:1031:THR:HG22	1:B:1035:ASN:HD21	1.77	0.49
1:B:1286:MET:HE1	1:B:1553:PHE:HB3	1.95	0.49
1:B:2102:VAL:HG13	1:B:2120:MET:HB2	1.94	0.49
1:B:3390:GLY:O	1:B:3393:LEU:HD12	2.12	0.49
1:D:975:VAL:HG12	1:D:1044:ARG:HH11	1.77	0.49
1:D:2330:ARG:HB3	1:D:2330:ARG:NH1	2.28	0.49
1:C:571:SER:OG	1:C:573:GLU:OE1	2.19	0.49
1:C:1286:MET:HE1	1:C:1553:PHE:HB3	1.95	0.49
1:A:1057:ASP:OD2	1:A:1057:ASP:N	2.43	0.49
1:A:2588:ARG:HH21	1:A:2589:LEU:HD23	1.78	0.49
1:A:3357:HIS:O	1:A:3361:THR:HG23	2.13	0.49
1:B:274:LEU:HB3	1:B:339:ILE:HD12	1.95	0.49
1:B:3264:THR:OG1	1:B:3265:GLU:OE1	2.31	0.49
1:B:4570:ALA:O	1:B:4574:ASN:ND2	2.41	0.49
1:B:4818:MET:O	1:B:4824:ARG:NH1	2.46	0.49
1:D:2123:LEU:O	1:D:2127:GLN:HG2	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:2244:ARG:HH12	1:D:3858:MET:HE3	1.78	0.49
1:D:3208:PRO:HB2	1:D:3237:GLU:HG3	1.95	0.49
1:D:3390:GLY:O	1:D:3393:LEU:HD12	2.12	0.49
1:D:4968:PHE:O	1:D:4974:GLY:HA3	2.12	0.49
1:C:2297:LYS:O	1:C:2300:SER:OG	2.24	0.49
1:C:3390:GLY:O	1:C:3393:LEU:HD12	2.12	0.49
1:C:4968:PHE:O	1:C:4974:GLY:HA3	2.12	0.49
1:A:1089:TYR:HD2	1:A:1152:MET:HG2	1.78	0.48
1:A:1668:ARG:HG3	1:A:1671:ARG:NH2	2.28	0.48
1:A:1864:LYS:HE3	1:A:1872:THR:HG22	1.94	0.48
1:A:2330:ARG:HB3	1:A:2330:ARG:NH1	2.28	0.48
1:A:2632:ILE:HD12	1:A:2633:LEU:N	2.27	0.48
1:A:3159:ASP:OD1	1:A:3159:ASP:N	2.45	0.48
1:B:2588:ARG:HH21	1:B:2589:LEU:HD23	1.78	0.48
1:D:1025:ARG:NE	1:D:1025:ARG:H	2.11	0.48
1:D:1286:MET:HE1	1:D:1553:PHE:HB3	1.95	0.48
1:D:2690:LYS:HA	1:D:2690:LYS:HE2	1.95	0.48
1:D:3288:GLY:HA2	1:D:3303:PRO:HB3	1.94	0.48
1:C:1025:ARG:H	1:C:1025:ARG:NE	2.11	0.48
1:C:1447:CYS:HB3	1:C:1555:LEU:HB3	1.94	0.48
1:C:1820:ARG:HA	1:C:1820:ARG:NE	2.28	0.48
1:B:877:ASN:O	1:B:881:LEU:HG	2.13	0.48
1:B:2757:LYS:O	1:B:2761:TYR:HB2	2.13	0.48
1:D:70:GLU:OE2	1:D:110:ARG:NE	2.33	0.48
1:D:1668:ARG:HG3	1:D:1671:ARG:NH2	2.28	0.48
1:D:3434:LEU:HD23	1:D:3517:MET:HE1	1.95	0.48
1:C:961:MET:HG2	1:C:962:SER:N	2.24	0.48
1:A:2123:LEU:O	1:A:2127:GLN:HG2	2.12	0.48
1:A:3955:MET:HE3	1:A:4015:GLU:HG2	1.94	0.48
1:A:5013:MET:HE1	1:A:5020:ASP:HB2	1.93	0.48
2:H:2:VAL:HG11	2:H:61:GLU:HB2	1.95	0.48
2:F:49:MET:HG2	2:F:52:LYS:HG2	1.95	0.48
1:B:2419:GLY:C	1:B:2423:MET:HE3	2.38	0.48
1:D:384:MET:SD	1:D:384:MET:N	2.75	0.48
1:D:2410:PRO:HB3	1:D:2415:ARG:HB3	1.93	0.48
1:D:3412:LEU:HD11	1:D:3434:LEU:HD21	1.96	0.48
1:D:4188:ARG:HG2	1:D:4188:ARG:HH11	1.78	0.48
1:C:3357:HIS:O	1:C:3361:THR:HG23	2.13	0.48
1:C:3412:LEU:HD11	1:C:3434:LEU:HD21	1.96	0.48
1:C:4015:GLU:HA	1:C:4018:ASP:OD2	2.14	0.48
1:A:1260:MET:HE2	1:A:1260:MET:HA	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1820:ARG:HA	1:A:1820:ARG:NE	2.28	0.48
1:A:2198:MET:CG	1:A:2203:MET:HE2	2.43	0.48
1:A:2298:VAL:HG21	1:A:2334:PHE:HE2	1.79	0.48
1:A:2386:ILE:O	1:A:2393:ASP:HB2	2.12	0.48
1:A:2757:LYS:O	1:A:2761:TYR:HB2	2.13	0.48
1:B:961:MET:HG2	1:B:962:SER:N	2.24	0.48
1:B:2293:GLN:OE1	1:B:2293:GLN:N	2.29	0.48
1:B:2298:VAL:HG21	1:B:2334:PHE:HE2	1.79	0.48
1:B:3453:ARG:NH1	1:B:3453:ARG:HA	2.28	0.48
1:B:4868:ASP:OD1	1:B:4870:ASP:N	2.46	0.48
1:D:3183:VAL:O	1:D:3187:ARG:HG3	2.13	0.48
1:D:3261:ALA:HB1	1:D:3265:GLU:HG3	1.96	0.48
1:D:3539:ARG:HH11	1:D:3539:ARG:HA	1.79	0.48
1:C:2330:ARG:HB3	1:C:2330:ARG:NH1	2.28	0.48
1:C:3264:THR:OG1	1:C:3265:GLU:OE1	2.31	0.48
1:A:943:ASP:OD2	1:A:945:LYS:NZ	2.42	0.48
1:A:2440:MET:HE2	1:A:2440:MET:HA	1.95	0.48
1:A:4868:ASP:OD1	1:A:4870:ASP:N	2.46	0.48
2:E:11:ASP:OD2	2:E:12:GLY:N	2.46	0.48
1:B:2330:ARG:NH1	1:B:2330:ARG:HB3	2.28	0.48
1:B:3442:PHE:CD1	1:B:3514:LEU:HD22	2.48	0.48
1:D:1820:ARG:HA	1:D:1820:ARG:NE	2.28	0.48
1:D:4015:GLU:HA	1:D:4018:ASP:OD2	2.14	0.48
1:C:3288:GLY:HA2	1:C:3303:PRO:HB3	1.94	0.48
1:C:3535:LEU:O	1:C:3539:ARG:HG2	2.12	0.48
1:C:3604:TYR:O	1:C:3607:GLU:HG3	2.13	0.48
1:A:3535:LEU:O	1:A:3539:ARG:HG2	2.12	0.48
1:B:1025:ARG:H	1:B:1025:ARG:NE	2.12	0.48
1:B:2907:PRO:O	1:B:2910:THR:OG1	2.29	0.48
1:B:3288:GLY:HA2	1:B:3303:PRO:HB3	1.94	0.48
1:B:4016:LEU:O	1:B:4020:GLN:HG3	2.13	0.48
1:B:4188:ARG:HG2	1:B:4188:ARG:HH11	1.78	0.48
1:B:4937:ILE:CD1	1:C:4934:GLY:HA3	2.43	0.48
1:D:2020:ASP:OD1	1:D:2020:ASP:N	2.46	0.48
1:D:2298:VAL:HG21	1:D:2334:PHE:HE2	1.79	0.48
1:D:2967:MET:HE3	1:D:2970:SER:OG	2.14	0.48
1:D:3442:PHE:CD1	1:D:3514:LEU:HD22	2.48	0.48
1:C:1089:TYR:HD2	1:C:1152:MET:HG2	1.78	0.48
1:A:308:HIS:CE1	1:A:310:LYS:HB3	2.49	0.48
1:A:3371:LYS:NZ	1:A:3371:LYS:HB2	2.29	0.48
1:A:3412:LEU:HD11	1:A:3434:LEU:HD21	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4188:ARG:HG2	1:A:4188:ARG:HH11	1.78	0.48
1:B:3959:LYS:NZ	1:B:4022:ASP:OD2	2.43	0.48
1:D:3734:HIS:O	1:D:3736:GLU:HG3	2.14	0.48
1:D:3862:ASP:OD1	1:D:3862:ASP:N	2.46	0.48
1:D:4821:LYS:H	1:D:4821:LYS:HD3	1.77	0.48
1:C:227:MET:HA	1:C:227:MET:HE2	1.96	0.48
1:C:308:HIS:CE1	1:C:310:LYS:HB3	2.49	0.48
1:C:499:THR:HG23	1:C:502:HIS:H	1.79	0.48
1:C:3539:ARG:HA	1:C:3539:ARG:HH11	1.79	0.48
1:A:274:LEU:HB3	1:A:339:ILE:HD12	1.95	0.48
1:A:1447:CYS:HB3	1:A:1555:LEU:HB3	1.94	0.48
1:A:2273:LEU:HG	1:A:2330:ARG:HH12	1.79	0.48
1:A:3261:ALA:HB1	1:A:3265:GLU:HG3	1.95	0.48
1:A:3434:LEU:HD23	1:A:3517:MET:HE1	1.95	0.48
1:A:3604:TYR:O	1:A:3607:GLU:HG3	2.13	0.48
1:B:3208:PRO:HB2	1:B:3237:GLU:HG3	1.95	0.48
1:D:1260:MET:HE2	1:D:1260:MET:HA	1.95	0.48
1:D:2757:LYS:O	1:D:2761:TYR:HB2	2.13	0.48
1:C:1668:ARG:HG3	1:C:1671:ARG:NH2	2.28	0.48
1:C:2690:LYS:HE2	1:C:2690:LYS:HA	1.94	0.48
1:C:2757:LYS:O	1:C:2761:TYR:HB2	2.13	0.48
1:C:3054:VAL:HG12	1:C:3127:GLN:HE22	1.78	0.48
1:C:3261:ALA:HB1	1:C:3265:GLU:HG3	1.96	0.48
1:C:3442:PHE:CD1	1:C:3514:LEU:HD22	2.48	0.48
1:C:4868:ASP:OD1	1:C:4870:ASP:N	2.46	0.48
1:B:2244:ARG:HH12	1:B:3858:MET:HE3	1.78	0.48
1:B:2690:LYS:HE2	1:B:2690:LYS:HA	1.95	0.48
1:B:3371:LYS:HB2	1:B:3371:LYS:NZ	2.29	0.48
1:B:3604:TYR:O	1:B:3607:GLU:HG3	2.13	0.48
1:D:227:MET:HE2	1:D:227:MET:HA	1.96	0.48
1:D:308:HIS:CE1	1:D:310:LYS:HB3	2.49	0.48
1:C:815:VAL:O	1:C:1007:TYR:OH	2.27	0.48
1:C:2495:VAL:HG22	1:C:2498:HIS:CE1	2.49	0.48
1:C:4967:TYR:OH	1:C:5033:GLU:OE2	2.24	0.48
1:A:257:ARG:O	1:A:284:HIS:NE2	2.31	0.48
1:A:399:GLN:O	1:A:403:MET:HG3	2.14	0.48
1:A:1025:ARG:H	1:A:1025:ARG:NE	2.11	0.48
1:A:1286:MET:HE1	1:A:1553:PHE:HB3	1.95	0.48
1:A:1820:ARG:NH2	1:A:1922:LEU:O	2.47	0.48
1:A:2690:LYS:HA	1:A:2690:LYS:HE2	1.95	0.48
1:A:3539:ARG:HH11	1:A:3539:ARG:HA	1.79	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4821:LYS:H	1:A:4821:LYS:HD3	1.77	0.48
1:B:1260:MET:HA	1:B:1260:MET:HE2	1.95	0.48
1:B:2587:TYR:O	1:B:2590:SER:OG	2.24	0.48
1:B:3054:VAL:HG12	1:B:3127:GLN:HE22	1.78	0.48
1:B:3260:GLY:HA2	1:B:3325:ASN:ND2	2.29	0.48
1:B:4015:GLU:HA	1:B:4018:ASP:OD2	2.14	0.48
1:D:399:GLN:O	1:D:403:MET:HG3	2.14	0.48
1:D:815:VAL:O	1:D:1007:TYR:OH	2.27	0.48
1:D:2224:ARG:HG2	1:D:2225:PHE:CE2	2.49	0.48
1:C:275:ARG:HD2	1:C:328:LYS:HE2	1.96	0.48
1:C:3208:PRO:HB2	1:C:3237:GLU:HG3	1.95	0.48
1:A:499:THR:HG23	1:A:502:HIS:H	1.79	0.47
1:A:745:SER:HB2	1:A:758:ARG:HB2	1.96	0.47
1:A:2538:THR:HG23	1:A:2541:PHE:H	1.79	0.47
1:A:3054:VAL:HG12	1:A:3127:GLN:HE22	1.78	0.47
1:A:3208:PRO:HB2	1:A:3237:GLU:HG3	1.95	0.47
1:A:3260:GLY:HA2	1:A:3325:ASN:ND2	2.29	0.47
1:A:3623:LEU:O	1:A:3624:LEU:HD23	2.14	0.47
1:A:3734:HIS:O	1:A:3736:GLU:HG3	2.14	0.47
1:B:815:VAL:O	1:B:1007:TYR:OH	2.27	0.47
1:B:2298:VAL:HG21	1:B:2334:PHE:CE2	2.50	0.47
1:D:274:LEU:HB3	1:D:339:ILE:HD12	1.95	0.47
1:D:1089:TYR:HD2	1:D:1152:MET:HG2	1.78	0.47
1:D:1820:ARG:NH2	1:D:1922:LEU:O	2.47	0.47
1:D:2495:VAL:HG22	1:D:2498:HIS:CE1	2.49	0.47
1:D:2912:THR:OG1	1:D:2913:ALA:N	2.47	0.47
1:D:3623:LEU:O	1:D:3624:LEU:HD23	2.14	0.47
1:C:3260:GLY:HA2	1:C:3325:ASN:ND2	2.29	0.47
1:C:3755:GLU:HA	1:C:3758:MET:HB2	1.96	0.47
1:A:866:HIS:CD2	1:A:867:LEU:H	2.30	0.47
1:A:2912:THR:OG1	1:A:2913:ALA:N	2.47	0.47
1:B:499:THR:HG23	1:B:502:HIS:H	1.79	0.47
1:B:1820:ARG:HA	1:B:1820:ARG:NE	2.28	0.47
1:B:2912:THR:OG1	1:B:2913:ALA:N	2.47	0.47
1:B:3705:PHE:HA	1:B:3708:THR:HG22	1.97	0.47
1:D:275:ARG:HD2	1:D:328:LYS:HE2	1.96	0.47
1:D:877:ASN:O	1:D:881:LEU:HG	2.13	0.47
1:D:3593:VAL:O	1:D:3597:GLN:HG2	2.15	0.47
1:C:877:ASN:O	1:C:881:LEU:HG	2.14	0.47
1:C:1156:THR:OG1	1:C:1157:GLU:OE1	2.19	0.47
1:A:877:ASN:O	1:A:881:LEU:HG	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2495:VAL:HG22	1:A:2498:HIS:CE1	2.49	0.47
1:A:2867:LEU:HD21	1:A:2871:LEU:HB3	1.96	0.47
1:B:2198:MET:CG	1:B:2203:MET:HE2	2.43	0.47
1:B:3539:ARG:HA	1:B:3539:ARG:HH11	1.79	0.47
1:D:1726:SER:O	1:D:1729:SER:OG	2.30	0.47
1:C:1864:LYS:HE3	1:C:1872:THR:HG22	1.94	0.47
1:C:2867:LEU:HD21	1:C:2871:LEU:HB3	1.97	0.47
1:C:4640:GLU:HB3	1:C:4641:PRO:HD3	1.96	0.47
1:A:2298:VAL:HG21	1:A:2334:PHE:CE2	2.49	0.47
1:A:2967:MET:HE3	1:A:2970:SER:OG	2.14	0.47
1:A:3723:MET:HE2	1:A:3792:ALA:HB3	1.97	0.47
1:A:4015:GLU:HA	1:A:4018:ASP:OD2	2.14	0.47
1:A:4177:TYR:CE1	1:A:4199:GLU:HG3	2.49	0.47
1:B:308:HIS:CE1	1:B:310:LYS:HB3	2.49	0.47
1:B:399:GLN:O	1:B:403:MET:HG3	2.14	0.47
1:B:835:ARG:NH1	1:B:1093:GLU:OE1	2.48	0.47
1:B:2224:ARG:HG2	1:B:2225:PHE:CE2	2.49	0.47
1:B:2297:LYS:O	1:B:2300:SER:OG	2.24	0.47
1:B:2967:MET:HE3	1:B:2970:SER:OG	2.14	0.47
1:B:3946:GLN:OE1	1:B:3949:ARG:NH1	2.30	0.47
1:D:15:ARG:HH21	1:D:98:HIS:HB2	1.80	0.47
1:D:2302:LEU:HG	1:D:2363:CYS:HB3	1.96	0.47
1:D:3260:GLY:HA2	1:D:3325:ASN:ND2	2.29	0.47
1:D:3717:ASP:OD1	1:D:3717:ASP:N	2.47	0.47
1:D:3946:GLN:OE1	1:D:3949:ARG:NH1	2.30	0.47
1:C:745:SER:HB2	1:C:758:ARG:HB2	1.96	0.47
1:C:2273:LEU:HG	1:C:2330:ARG:HH12	1.79	0.47
1:C:3593:VAL:O	1:C:3597:GLN:HG2	2.14	0.47
1:C:3862:ASP:N	1:C:3862:ASP:OD1	2.46	0.47
1:C:4188:ARG:HH11	1:C:4188:ARG:HG2	1.78	0.47
1:A:15:ARG:HH21	1:A:98:HIS:HB2	1.80	0.47
1:A:747:CYS:HB3	1:A:808:TYR:CE2	2.49	0.47
1:A:2907:PRO:O	1:A:2910:THR:OG1	2.29	0.47
1:A:3263:TYR:N	1:A:3326:ASN:OD1	2.48	0.47
1:B:275:ARG:HD2	1:B:328:LYS:HE2	1.96	0.47
1:B:3412:LEU:HD11	1:B:3434:LEU:HD21	1.96	0.47
1:C:1820:ARG:NH2	1:C:1922:LEU:O	2.47	0.47
1:C:2198:MET:CG	1:C:2203:MET:HE2	2.43	0.47
1:C:2228:MET:HE2	1:C:2228:MET:HB2	1.67	0.47
1:C:2298:VAL:HG21	1:C:2334:PHE:HE2	1.79	0.47
1:A:923:GLN:O	1:A:927:GLU:HG2	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:F:35:LYS:HE2	1:B:636:ASN:HD21	1.79	0.47
1:B:745:SER:HB2	1:B:758:ARG:HB2	1.96	0.47
1:B:2273:LEU:HG	1:B:2330:ARG:HH12	1.79	0.47
1:D:2538:THR:HG23	1:D:2541:PHE:H	1.79	0.47
1:D:2867:LEU:HD21	1:D:2871:LEU:HB3	1.97	0.47
1:C:1186:ASP:OD2	1:C:1186:ASP:N	2.35	0.47
1:C:4177:TYR:CE1	1:C:4199:GLU:HG3	2.50	0.47
1:A:275:ARG:HD2	1:A:328:LYS:HE2	1.96	0.47
1:A:758:ARG:HG2	1:A:763:PRO:HA	1.97	0.47
1:A:2302:LEU:HG	1:A:2363:CYS:HB3	1.96	0.47
1:A:3504:SER:OG	1:A:3507:THR:OG1	2.29	0.47
1:A:3593:VAL:O	1:A:3597:GLN:HG2	2.14	0.47
1:A:3705:PHE:HA	1:A:3708:THR:HG22	1.97	0.47
1:B:227:MET:HE2	1:B:227:MET:HA	1.96	0.47
1:B:747:CYS:HB3	1:B:808:TYR:CE2	2.49	0.47
1:B:2020:ASP:OD1	1:B:2020:ASP:N	2.46	0.47
1:B:2495:VAL:HG22	1:B:2498:HIS:CE1	2.49	0.47
1:B:3261:ALA:HB1	1:B:3265:GLU:HG3	1.96	0.47
1:B:3357:HIS:O	1:B:3361:THR:HG23	2.13	0.47
1:B:3623:LEU:O	1:B:3624:LEU:HD23	2.14	0.47
1:B:3755:GLU:HA	1:B:3758:MET:HB2	1.96	0.47
1:B:4640:GLU:HB3	1:B:4641:PRO:HD3	1.97	0.47
1:D:923:GLN:O	1:D:927:GLU:HG2	2.15	0.47
1:D:2273:LEU:HG	1:D:2330:ARG:HH12	1.79	0.47
1:D:2298:VAL:HG21	1:D:2334:PHE:CE2	2.49	0.47
1:D:3376:GLU:OE1	1:D:3448:SER:OG	2.30	0.47
1:D:3962:PHE:CZ	1:D:4023:MET:HG3	2.50	0.47
1:D:4640:GLU:HB3	1:D:4641:PRO:HD3	1.97	0.47
1:C:399:GLN:O	1:C:403:MET:HG3	2.14	0.47
1:C:835:ARG:NH1	1:C:1093:GLU:OE1	2.48	0.47
1:C:1260:MET:HE2	1:C:1260:MET:HA	1.95	0.47
1:C:2967:MET:HE3	1:C:2970:SER:OG	2.14	0.47
1:C:3263:TYR:N	1:C:3326:ASN:OD1	2.48	0.47
1:A:835:ARG:NH1	1:A:1093:GLU:OE1	2.48	0.47
1:A:950:LEU:HD13	1:A:951:LYS:O	2.15	0.47
1:A:2534:ALA:HA	1:A:2588:ARG:NH2	2.30	0.47
1:A:3962:PHE:CZ	1:A:4023:MET:HG3	2.50	0.47
2:G:15:PHE:C	2:G:17:LYS:HZ3	2.23	0.47
1:B:923:GLN:O	1:B:927:GLU:HG2	2.15	0.47
1:D:984:LEU:HD21	1:D:1056:PRO:HD2	1.96	0.47
1:D:2228:MET:HE2	1:D:2228:MET:HB2	1.67	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:2768:PHE:O	1:D:2771:ILE:HG22	2.15	0.47
1:D:3371:LYS:HB2	1:D:3371:LYS:NZ	2.29	0.47
1:D:3723:MET:HE2	1:D:3792:ALA:HB3	1.97	0.47
1:D:4177:TYR:CE1	1:D:4199:GLU:HG3	2.49	0.47
1:C:984:LEU:HD21	1:C:1056:PRO:HD2	1.97	0.47
1:C:2020:ASP:OD1	1:C:2020:ASP:N	2.46	0.47
1:C:2265:LEU:HD23	1:C:2330:ARG:HH11	1.80	0.47
1:C:2298:VAL:HG21	1:C:2334:PHE:CE2	2.50	0.47
1:C:3623:LEU:O	1:C:3624:LEU:HD23	2.14	0.47
1:A:227:MET:HE2	1:A:227:MET:HA	1.96	0.47
1:B:950:LEU:HD13	1:B:951:LYS:O	2.15	0.47
1:B:2867:LEU:HD21	1:B:2871:LEU:HB3	1.97	0.47
1:B:3723:MET:HE2	1:B:3792:ALA:HB3	1.97	0.47
1:B:3962:PHE:CZ	1:B:4023:MET:HG3	2.50	0.47
1:D:745:SER:HB2	1:D:758:ARG:HB2	1.96	0.47
1:D:747:CYS:HB3	1:D:808:TYR:CE2	2.49	0.47
1:D:758:ARG:HG2	1:D:763:PRO:HA	1.97	0.47
1:D:3264:THR:OG1	1:D:3265:GLU:OE1	2.31	0.47
1:C:2285:GLU:HG2	1:C:3858:MET:HE2	1.97	0.47
1:C:2302:LEU:HG	1:C:2363:CYS:HB3	1.96	0.47
1:C:3705:PHE:HA	1:C:3708:THR:HG22	1.97	0.47
1:C:3734:HIS:O	1:C:3736:GLU:HG3	2.14	0.47
1:A:1107:PRO:HD2	1:A:1186:ASP:OD1	2.14	0.47
1:A:1297:PHE:CE2	1:A:1525:GLY:HA2	2.50	0.47
1:A:2768:PHE:O	1:A:2771:ILE:HG22	2.15	0.47
2:H:32:ASP:OD1	2:H:34:LYS:HG3	2.15	0.47
1:B:1297:PHE:CE2	1:B:1525:GLY:HA2	2.50	0.47
1:B:1465:ASP:OD1	1:B:1468:LYS:HG2	2.15	0.47
1:B:2768:PHE:O	1:B:2771:ILE:HG22	2.15	0.47
1:D:950:LEU:HD13	1:D:951:LYS:O	2.15	0.47
1:C:747:CYS:HB3	1:C:808:TYR:CE2	2.49	0.47
1:C:1107:PRO:HD2	1:C:1186:ASP:OD1	2.14	0.47
1:C:2534:ALA:HA	1:C:2588:ARG:NH2	2.30	0.47
1:C:3371:LYS:HB2	1:C:3371:LYS:NZ	2.29	0.47
1:C:3545:THR:HG22	1:C:3548:GLU:HG3	1.97	0.47
1:C:3723:MET:HE2	1:C:3792:ALA:HB3	1.97	0.47
1:A:2224:ARG:HG2	1:A:2225:PHE:CE2	2.49	0.46
1:A:3539:ARG:NH1	1:A:3542:LEU:HD12	2.30	0.46
1:B:758:ARG:HG2	1:B:763:PRO:HA	1.97	0.46
1:B:957:LYS:HD3	1:B:957:LYS:H	1.81	0.46
1:B:4177:TYR:CE1	1:B:4199:GLU:HG3	2.49	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:4902:GLU:O	1:B:4913:ARG:NH2	2.37	0.46
1:D:499:THR:HG23	1:D:502:HIS:H	1.79	0.46
1:D:3545:THR:HG22	1:D:3548:GLU:HG3	1.97	0.46
1:C:923:GLN:O	1:C:927:GLU:HG2	2.15	0.46
1:A:957:LYS:H	1:A:957:LYS:HD3	1.81	0.46
1:A:3755:GLU:HA	1:A:3758:MET:HB2	1.96	0.46
2:H:18:ARG:NE	2:H:51:GLY:HA3	2.30	0.46
1:B:1107:PRO:HD2	1:B:1186:ASP:OD1	2.14	0.46
1:B:1820:ARG:NH2	1:B:1922:LEU:O	2.47	0.46
1:B:2538:THR:HG23	1:B:2541:PHE:H	1.79	0.46
1:B:3593:VAL:O	1:B:3597:GLN:HG2	2.15	0.46
1:D:957:LYS:HD3	1:D:957:LYS:H	1.81	0.46
1:D:1107:PRO:HD2	1:D:1186:ASP:OD1	2.15	0.46
1:D:2285:GLU:HG2	1:D:3858:MET:HE2	1.97	0.46
1:D:3263:TYR:N	1:D:3326:ASN:OD1	2.48	0.46
1:D:3541:ALA:HA	1:D:3604:TYR:HE1	1.80	0.46
1:D:3547:GLU:HA	1:D:3550:ARG:NH1	2.31	0.46
1:D:3638:MET:SD	1:D:3639:THR:N	2.88	0.46
1:C:758:ARG:HG2	1:C:763:PRO:HA	1.97	0.46
1:C:2224:ARG:HG2	1:C:2225:PHE:CE2	2.49	0.46
1:A:328:LYS:HE3	1:A:328:LYS:HB3	1.72	0.46
1:A:1024:TYR:CZ	1:A:1032:LYS:HG3	2.51	0.46
1:A:1929:MET:HE2	1:A:1929:MET:HB3	1.75	0.46
1:A:3376:GLU:OE1	1:A:3448:SER:OG	2.30	0.46
1:A:3541:ALA:HA	1:A:3604:TYR:HE1	1.80	0.46
1:B:984:LEU:HD21	1:B:1056:PRO:HD2	1.97	0.46
1:B:3541:ALA:HA	1:B:3604:TYR:HE1	1.80	0.46
1:B:3547:GLU:HA	1:B:3550:ARG:NH1	2.31	0.46
1:D:835:ARG:NH1	1:D:1093:GLU:OE1	2.48	0.46
1:D:3535:LEU:O	1:D:3538:THR:OG1	2.29	0.46
1:D:3629:ARG:HA	1:D:3632:VAL:HG22	1.98	0.46
1:D:3755:GLU:HA	1:D:3758:MET:HB2	1.96	0.46
1:D:3955:MET:HG2	1:D:4019:LEU:HD22	1.97	0.46
1:C:957:LYS:H	1:C:957:LYS:HD3	1.81	0.46
1:C:3962:PHE:CZ	1:C:4023:MET:HG3	2.50	0.46
1:A:3629:ARG:HA	1:A:3632:VAL:HG22	1.98	0.46
1:A:4640:GLU:HB3	1:A:4641:PRO:HD3	1.96	0.46
1:D:3705:PHE:HA	1:D:3708:THR:HG22	1.97	0.46
1:C:2238:TYR:HD1	1:C:2238:TYR:O	1.99	0.46
1:C:3959:LYS:NZ	1:C:4022:ASP:OD2	2.43	0.46
1:A:1465:ASP:OD1	1:A:1468:LYS:HG2	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3547:GLU:HA	1:A:3550:ARG:NH1	2.31	0.46
1:B:1024:TYR:CZ	1:B:1032:LYS:HG3	2.51	0.46
1:D:144:GLU:HG3	1:D:175:SER:HB3	1.97	0.46
1:D:2238:TYR:O	1:D:2238:TYR:HD1	1.99	0.46
1:D:2265:LEU:HD23	1:D:2330:ARG:HH11	1.80	0.46
1:C:144:GLU:HG3	1:C:175:SER:HB3	1.97	0.46
1:C:866:HIS:CD2	1:C:941:MET:HE3	2.51	0.46
1:C:2538:THR:HG23	1:C:2541:PHE:H	1.79	0.46
1:C:2587:TYR:O	1:C:2590:SER:OG	2.24	0.46
1:C:3638:MET:SD	1:C:3639:THR:N	2.88	0.46
1:A:877:ASN:OD1	1:A:970:LEU:HG	2.16	0.46
1:A:2238:TYR:O	1:A:2238:TYR:HD1	1.99	0.46
1:A:3638:MET:SD	1:A:3639:THR:N	2.88	0.46
1:B:2238:TYR:O	1:B:2238:TYR:HD1	1.99	0.46
1:B:2302:LEU:HG	1:B:2363:CYS:HB3	1.97	0.46
1:B:3638:MET:SD	1:B:3639:THR:N	2.88	0.46
1:B:4967:TYR:OH	1:B:5033:GLU:OE2	2.24	0.46
1:D:877:ASN:OD1	1:D:970:LEU:HG	2.16	0.46
1:C:663:TYR:CD2	1:C:804:PRO:HB3	2.51	0.46
1:C:877:ASN:OD1	1:C:970:LEU:HG	2.16	0.46
1:C:3547:GLU:HA	1:C:3550:ARG:NH1	2.31	0.46
1:C:3717:ASP:N	1:C:3717:ASP:OD1	2.47	0.46
1:A:2285:GLU:HG2	1:A:3858:MET:HE2	1.97	0.46
1:B:2285:GLU:HG2	1:B:3858:MET:HE2	1.97	0.46
1:B:2534:ALA:HA	1:B:2588:ARG:NH2	2.30	0.46
1:B:3263:TYR:N	1:B:3326:ASN:OD1	2.48	0.46
1:B:3539:ARG:NH1	1:B:3542:LEU:HD12	2.30	0.46
1:B:4241:THR:O	1:B:4245:MET:HG3	2.16	0.46
1:D:990:GLU:HG3	1:D:1025:ARG:HH11	1.80	0.46
1:D:1297:PHE:CE2	1:D:1525:GLY:HA2	2.50	0.46
1:D:3082:LYS:HE2	1:D:3082:LYS:HB2	1.63	0.46
1:D:4934:GLY:HA3	1:C:4937:ILE:CD1	2.44	0.46
1:C:2912:THR:OG1	1:C:2913:ALA:N	2.47	0.46
1:C:3541:ALA:HA	1:C:3604:TYR:HE1	1.80	0.46
1:A:932:LEU:HD21	1:A:988:LEU:HD11	1.98	0.46
2:F:18:ARG:NE	2:F:51:GLY:HA3	2.31	0.46
1:B:3734:HIS:O	1:B:3736:GLU:HG3	2.14	0.46
1:D:2419:GLY:O	1:D:2423:MET:HE3	2.16	0.46
1:D:2668:SER:C	1:D:2670:GLU:H	2.24	0.46
1:D:2932:MET:HE3	1:D:2932:MET:HB2	1.84	0.46
1:C:950:LEU:HD13	1:C:951:LYS:O	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:2992:GLU:OE2	1:C:2996:LYS:NZ	2.42	0.46
1:C:3955:MET:HG2	1:C:4019:LEU:HD22	1.97	0.46
1:A:984:LEU:HD21	1:A:1056:PRO:HD2	1.96	0.46
1:A:990:GLU:HG3	1:A:1025:ARG:HH11	1.80	0.46
2:F:32:ASP:OD1	2:F:34:LYS:HG3	2.15	0.46
1:B:1648:MET:HE2	1:B:1648:MET:HB3	1.85	0.46
1:B:3224:PRO:HA	1:B:3227:ARG:NH1	2.31	0.46
1:D:663:TYR:CD2	1:D:804:PRO:HB3	2.51	0.46
1:D:1155:LEU:HD22	1:D:1184:ILE:HG12	1.98	0.46
1:D:3959:LYS:NZ	1:D:4022:ASP:OD2	2.43	0.46
1:C:2419:GLY:O	1:C:2423:MET:HE3	2.16	0.46
1:C:2768:PHE:O	1:C:2771:ILE:HG22	2.15	0.46
1:C:4241:THR:O	1:C:4245:MET:HG3	2.16	0.46
1:A:866:HIS:CD2	1:A:941:MET:HE3	2.51	0.46
2:G:18:ARG:NE	2:G:51:GLY:HA3	2.31	0.46
1:B:990:GLU:HG3	1:B:1025:ARG:HH11	1.81	0.46
1:B:2668:SER:C	1:B:2670:GLU:H	2.24	0.46
1:B:3765:TYR:CD2	1:B:4753:HIS:HA	2.51	0.46
1:B:3955:MET:HG2	1:B:4019:LEU:HD22	1.97	0.46
1:D:866:HIS:CD2	1:D:867:LEU:H	2.30	0.46
1:D:1423:ASP:OD1	1:D:1425:GLU:HG3	2.16	0.46
1:C:2101:MET:HE2	1:C:2101:MET:HB3	1.76	0.46
1:A:663:TYR:CD2	1:A:804:PRO:HB3	2.51	0.45
1:A:3285:TRP:HZ2	1:A:3348:ARG:HH21	1.64	0.45
1:B:144:GLU:HG3	1:B:175:SER:HB3	1.97	0.45
1:B:904:HIS:NE2	1:B:906:CYS:HB3	2.32	0.45
1:B:932:LEU:HD21	1:B:988:LEU:HD11	1.98	0.45
1:B:3003:LEU:HB2	1:B:3004:PRO:HD3	1.98	0.45
1:B:3285:TRP:HZ2	1:B:3348:ARG:HH21	1.64	0.45
1:D:932:LEU:HD21	1:D:988:LEU:HD11	1.98	0.45
1:D:1864:LYS:NZ	1:D:1871:PHE:O	2.45	0.45
1:D:3765:TYR:CD2	1:D:4753:HIS:HA	2.51	0.45
1:D:4769:MET:SD	1:D:4769:MET:N	2.79	0.45
1:C:990:GLU:HG3	1:C:1025:ARG:HH11	1.80	0.45
1:C:1475:THR:HG23	1:C:1483:VAL:HG13	1.98	0.45
1:A:2265:LEU:HD23	1:A:2330:ARG:HH11	1.80	0.45
1:A:2297:LYS:O	1:A:2300:SER:OG	2.24	0.45
1:A:3545:THR:HG22	1:A:3548:GLU:HG3	1.97	0.45
1:A:3717:ASP:OD1	1:A:3717:ASP:N	2.47	0.45
1:B:2228:MET:HB2	1:B:2228:MET:HE2	1.67	0.45
1:B:2265:LEU:HD23	1:B:2330:ARG:HH11	1.80	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2419:GLY:O	1:B:2423:MET:HE3	2.16	0.45
1:B:3545:THR:HG22	1:B:3548:GLU:HG3	1.97	0.45
1:D:866:HIS:CD2	1:D:941:MET:HE3	2.51	0.45
1:D:904:HIS:NE2	1:D:906:CYS:HB3	2.32	0.45
1:D:2765:LYS:HD3	1:D:2765:LYS:HA	1.81	0.45
1:D:3003:LEU:HB2	1:D:3004:PRO:HD3	1.98	0.45
1:C:460:GLN:N	1:C:463:GLU:OE2	2.41	0.45
1:C:1465:ASP:OD1	1:C:1468:LYS:HG2	2.15	0.45
1:C:3449:HIS:O	1:C:3453:ARG:HG2	2.17	0.45
1:C:3629:ARG:HA	1:C:3632:VAL:HG22	1.98	0.45
1:C:4186:ALA:C	1:C:4188:ARG:NH2	2.74	0.45
1:C:4675:LYS:HD2	1:C:4679:ARG:HH21	1.82	0.45
1:A:1648:MET:HE2	1:A:1648:MET:HB3	1.85	0.45
1:A:3003:LEU:HB2	1:A:3004:PRO:HD3	1.98	0.45
1:A:3872:GLU:HG3	1:A:3874:VAL:H	1.82	0.45
1:A:3955:MET:HG2	1:A:4019:LEU:HD22	1.97	0.45
1:A:4689:THR:OG1	1:A:4690:GLU:OE1	2.26	0.45
1:B:15:ARG:HH21	1:B:98:HIS:HB2	1.79	0.45
1:B:663:TYR:CD2	1:B:804:PRO:HB3	2.51	0.45
1:B:793:LEU:HD12	1:B:821:LEU:HD21	1.97	0.45
1:B:877:ASN:OD1	1:B:970:LEU:HG	2.16	0.45
1:B:3159:ASP:OD1	1:B:3159:ASP:N	2.45	0.45
1:B:3573:MET:CE	1:B:3577:ARG:HD3	2.46	0.45
1:B:3944:GLU:OE1	1:B:3946:GLN:N	2.48	0.45
1:D:1024:TYR:CZ	1:D:1032:LYS:HG3	2.51	0.45
1:D:1465:ASP:OD1	1:D:1468:LYS:HG2	2.15	0.45
1:D:2198:MET:CG	1:D:2203:MET:HE2	2.43	0.45
1:D:2534:ALA:HA	1:D:2588:ARG:NH2	2.30	0.45
1:D:3285:TRP:HZ2	1:D:3348:ARG:HH21	1.64	0.45
1:D:4186:ALA:C	1:D:4188:ARG:NH2	2.74	0.45
1:C:15:ARG:HH21	1:C:98:HIS:HB2	1.80	0.45
1:C:904:HIS:NE2	1:C:906:CYS:HB3	2.32	0.45
1:C:1297:PHE:CE2	1:C:1525:GLY:HA2	2.50	0.45
1:A:144:GLU:HG3	1:A:175:SER:HB3	1.97	0.45
1:A:1423:ASP:OD1	1:A:1425:GLU:HG3	2.16	0.45
1:A:3224:PRO:HA	1:A:3227:ARG:NH1	2.31	0.45
1:B:866:HIS:CD2	1:B:941:MET:HE3	2.51	0.45
1:B:943:ASP:HB2	1:B:1050:GLY:HA3	1.98	0.45
1:D:985:VAL:HG11	1:D:1040:CYS:HB2	1.98	0.45
1:D:3811:GLU:H	1:D:3811:GLU:CD	2.21	0.45
1:C:297:GLN:OE1	1:C:297:GLN:N	2.49	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:127:MET:CE	1:A:127:MET:H	2.30	0.45
1:A:904:HIS:NE2	1:A:906:CYS:HB3	2.32	0.45
1:A:2668:SER:C	1:A:2670:GLU:H	2.24	0.45
1:A:3552:PHE:C	1:A:3552:PHE:CD2	2.95	0.45
1:B:127:MET:CE	1:B:127:MET:H	2.30	0.45
1:B:202:MET:HE3	1:B:202:MET:HB3	1.83	0.45
1:B:985:VAL:HG11	1:B:1040:CYS:HB2	1.98	0.45
1:B:1155:LEU:HD22	1:B:1184:ILE:HG12	1.98	0.45
1:B:4675:LYS:HD2	1:B:4679:ARG:HH21	1.82	0.45
1:D:2902:HIS:CE1	1:D:2904:LEU:HB2	2.52	0.45
1:D:3162:GLN:NE2	1:D:3216:CYS:O	2.48	0.45
1:C:793:LEU:HD12	1:C:821:LEU:HD21	1.97	0.45
1:C:1024:TYR:CZ	1:C:1032:LYS:HG3	2.51	0.45
1:C:1726:SER:O	1:C:1729:SER:OG	2.30	0.45
1:C:3765:TYR:CD2	1:C:4753:HIS:HA	2.51	0.45
1:A:1726:SER:O	1:A:1729:SER:OG	2.30	0.45
1:A:3071:LEU:O	1:A:3075:LEU:HG	2.17	0.45
1:A:3765:TYR:CD2	1:A:4753:HIS:HA	2.51	0.45
1:A:4186:ALA:C	1:A:4188:ARG:NH2	2.74	0.45
1:B:169:LEU:HD23	1:B:169:LEU:HA	1.82	0.45
1:B:1423:ASP:OD1	1:B:1425:GLU:HG3	2.16	0.45
1:B:3376:GLU:OE1	1:B:3448:SER:OG	2.30	0.45
1:B:3629:ARG:HA	1:B:3632:VAL:HG22	1.98	0.45
1:D:2608:MET:HE3	1:D:2608:MET:HB3	1.84	0.45
1:D:3539:ARG:NH1	1:D:3542:LEU:HD12	2.31	0.45
1:D:3552:PHE:C	1:D:3552:PHE:CD2	2.95	0.45
1:D:3996:PHE:CD2	1:D:4020:GLN:HG2	2.52	0.45
1:C:274:LEU:HD23	1:C:274:LEU:HA	1.72	0.45
1:C:1423:ASP:OD1	1:C:1425:GLU:HG3	2.16	0.45
1:C:2902:HIS:CE1	1:C:2904:LEU:HB2	2.52	0.45
1:C:3224:PRO:HA	1:C:3227:ARG:NH1	2.31	0.45
1:C:3573:MET:CE	1:C:3577:ARG:HD3	2.46	0.45
1:C:3822:ASP:OD1	1:C:3823:LYS:NZ	2.39	0.45
1:A:943:ASP:HB2	1:A:1050:GLY:HA3	1.98	0.45
1:A:950:LEU:HD22	1:A:951:LYS:H	1.82	0.45
1:A:3996:PHE:CD2	1:A:4020:GLN:HG2	2.52	0.45
1:B:460:GLN:N	1:B:463:GLU:OE2	2.41	0.45
1:B:1299:GLN:NE2	1:B:1545:ASN:OD1	2.50	0.45
1:B:1547:LYS:NZ	1:B:1642:PRO:O	2.50	0.45
1:D:1087:ARG:HB3	1:D:1223:PHE:CD2	2.52	0.45
1:D:1299:GLN:NE2	1:D:1545:ASN:OD1	2.50	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:3449:HIS:O	1:D:3453:ARG:HG2	2.17	0.45
1:D:3872:GLU:HG3	1:D:3874:VAL:H	1.82	0.45
1:C:2224:ARG:H	1:C:2224:ARG:HD2	1.81	0.45
1:C:3062:PRO:HA	1:C:3065:VAL:HG22	1.99	0.45
1:C:3285:TRP:HZ2	1:C:3348:ARG:HH21	1.64	0.45
1:C:4232:GLU:HG2	1:C:5019:TRP:NE1	2.28	0.45
1:A:985:VAL:HG11	1:A:1040:CYS:HB2	1.98	0.45
1:A:2224:ARG:H	1:A:2224:ARG:HD2	1.81	0.45
1:A:3449:HIS:O	1:A:3453:ARG:HG2	2.17	0.45
1:A:3573:MET:CE	1:A:3577:ARG:HD3	2.46	0.45
1:A:3695:PRO:HB3	1:A:3699:HIS:HB3	1.99	0.45
1:B:274:LEU:HA	1:B:274:LEU:HD23	1.72	0.45
1:B:1087:ARG:HB3	1:B:1223:PHE:CD2	2.52	0.45
1:B:1186:ASP:OD2	1:B:1186:ASP:N	2.35	0.45
1:B:2224:ARG:H	1:B:2224:ARG:HD2	1.82	0.45
1:B:2258:LEU:HB3	1:B:2297:LYS:NZ	2.32	0.45
1:D:793:LEU:HD12	1:D:821:LEU:HD21	1.98	0.45
1:D:2258:LEU:HB3	1:D:2297:LYS:NZ	2.32	0.45
1:D:3573:MET:CE	1:D:3577:ARG:HD3	2.46	0.45
1:C:127:MET:CE	1:C:127:MET:H	2.30	0.45
1:C:328:LYS:HE3	1:C:328:LYS:HB3	1.72	0.45
1:C:2371:GLU:OE1	1:C:2371:GLU:HA	2.17	0.45
1:C:2577:ILE:HD12	1:C:2577:ILE:N	2.32	0.45
1:C:3003:LEU:HB2	1:C:3004:PRO:HD3	1.98	0.45
1:A:308:HIS:ND1	1:A:310:LYS:HB3	2.32	0.45
1:A:866:HIS:O	1:A:869:ARG:HG3	2.17	0.45
1:A:1808:ARG:HD3	1:A:1853:ILE:HG22	1.99	0.45
1:A:3062:PRO:HA	1:A:3065:VAL:HG22	1.99	0.45
1:A:4241:THR:O	1:A:4245:MET:HG3	2.16	0.45
1:B:451:TYR:CZ	1:B:474:ARG:HD2	2.52	0.45
1:B:866:HIS:O	1:B:869:ARG:HG3	2.17	0.45
1:B:1475:THR:HG23	1:B:1483:VAL:HG13	1.98	0.45
1:B:2902:HIS:CE1	1:B:2904:LEU:HB2	2.52	0.45
1:B:3062:PRO:HA	1:B:3065:VAL:HG22	1.99	0.45
1:B:3717:ASP:N	1:B:3717:ASP:OD1	2.47	0.45
1:B:3872:GLU:HG3	1:B:3874:VAL:H	1.82	0.45
1:B:4056:GLU:HG2	1:B:4166:LEU:HD13	1.99	0.45
1:D:1475:THR:HG23	1:D:1483:VAL:HG13	1.98	0.45
1:D:2371:GLU:OE1	1:D:2371:GLU:HA	2.17	0.45
1:D:3224:PRO:HA	1:D:3227:ARG:NH1	2.31	0.45
1:D:4241:THR:O	1:D:4245:MET:HG3	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:322:LYS:HA	1:C:322:LYS:HD2	1.77	0.45
1:C:451:TYR:CZ	1:C:474:ARG:HD2	2.52	0.45
1:C:879:HIS:NE2	1:C:921:ASN:HB2	2.32	0.45
1:C:932:LEU:HD21	1:C:988:LEU:HD11	1.98	0.45
1:C:938:HIS:H	1:C:1054:GLU:HB3	1.82	0.45
1:C:985:VAL:HG11	1:C:1040:CYS:HB2	1.98	0.45
1:C:3082:LYS:HB2	1:C:3082:LYS:HE2	1.63	0.45
1:C:3539:ARG:NH1	1:C:3542:LEU:HD12	2.30	0.45
1:A:879:HIS:NE2	1:A:921:ASN:HB2	2.32	0.45
1:A:938:HIS:H	1:A:1054:GLU:HB3	1.82	0.45
1:A:1155:LEU:HD22	1:A:1184:ILE:HG12	1.98	0.45
1:A:1170:MET:HE3	1:A:1170:MET:HB2	1.81	0.45
1:A:1475:THR:HG23	1:A:1483:VAL:HG13	1.98	0.45
1:A:1973:GLN:HG2	1:A:3642:TYR:HD2	1.82	0.45
1:A:2419:GLY:O	1:A:2423:MET:HE3	2.16	0.45
1:A:3756:LYS:HE3	1:A:3756:LYS:HB2	1.79	0.45
1:B:938:HIS:H	1:B:1054:GLU:HB3	1.82	0.45
1:D:274:LEU:HA	1:D:274:LEU:HD23	1.73	0.45
1:D:438:ILE:HG23	1:D:518:ILE:HD11	1.99	0.45
1:D:451:TYR:CZ	1:D:474:ARG:HD2	2.52	0.45
1:D:3062:PRO:HA	1:D:3065:VAL:HG22	1.99	0.45
1:D:3695:PRO:HB3	1:D:3699:HIS:HB3	1.99	0.45
1:D:3771:HIS:O	1:D:3815:LYS:NZ	2.38	0.45
1:C:438:ILE:HG23	1:C:518:ILE:HD11	1.99	0.45
1:C:1087:ARG:HB3	1:C:1223:PHE:CD2	2.52	0.45
1:C:1155:LEU:HD22	1:C:1184:ILE:HG12	1.98	0.45
1:C:1299:GLN:NE2	1:C:1545:ASN:OD1	2.50	0.45
1:C:3552:PHE:CD2	1:C:3552:PHE:C	2.95	0.45
1:C:4060:LYS:HD2	1:C:4060:LYS:HA	1.84	0.45
1:A:1087:ARG:HB3	1:A:1223:PHE:CD2	2.52	0.44
1:A:2902:HIS:CE1	1:A:2904:LEU:HB2	2.52	0.44
1:A:4217:PHE:O	1:A:4221:VAL:HG22	2.18	0.44
1:B:950:LEU:HD22	1:B:951:LYS:H	1.82	0.44
1:B:2577:ILE:HD12	1:B:2577:ILE:N	2.32	0.44
1:B:3449:HIS:O	1:B:3453:ARG:HG2	2.17	0.44
1:D:127:MET:H	1:D:127:MET:CE	2.30	0.44
1:D:950:LEU:HD22	1:D:951:LYS:H	1.82	0.44
1:C:2668:SER:C	1:C:2670:GLU:H	2.24	0.44
1:C:3872:GLU:HG3	1:C:3874:VAL:H	1.82	0.44
1:A:2186:MET:O	1:A:2192:TYR:OH	2.18	0.44
1:A:3579:LEU:HB2	1:A:3582:ARG:HG2	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:438:ILE:HG23	1:B:518:ILE:HD11	1.99	0.44
1:B:1078:GLU:OE2	1:B:1654:SER:OG	2.28	0.44
1:B:1973:GLN:HG2	1:B:3642:TYR:HD2	1.82	0.44
1:B:2173:GLN:OE1	1:B:2173:GLN:N	2.27	0.44
1:B:3535:LEU:O	1:B:3538:THR:OG1	2.29	0.44
1:B:3996:PHE:CD2	1:B:4020:GLN:HG2	2.51	0.44
1:B:4186:ALA:C	1:B:4188:ARG:NH2	2.74	0.44
1:D:575:LEU:HD22	1:D:609:CYS:HB2	1.99	0.44
1:D:1808:ARG:HD3	1:D:1853:ILE:HG22	2.00	0.44
1:A:935:LEU:HD21	1:A:987:ARG:NE	2.33	0.44
1:A:2384:ILE:O	1:A:2387:SER:OG	2.30	0.44
1:A:2624:ARG:CZ	1:A:2910:THR:HA	2.48	0.44
1:B:879:HIS:NE2	1:B:921:ASN:HB2	2.32	0.44
1:B:931:THR:O	1:B:935:LEU:HD13	2.17	0.44
1:B:1066:GLN:HB2	1:B:1071:ARG:HH12	1.81	0.44
1:B:3695:PRO:HB3	1:B:3699:HIS:HB3	1.99	0.44
1:B:4188:ARG:H	1:B:4188:ARG:CZ	2.31	0.44
1:D:873:LYS:HA	1:D:873:LYS:HD2	1.82	0.44
1:D:879:HIS:NE2	1:D:921:ASN:HB2	2.32	0.44
1:D:938:HIS:H	1:D:1054:GLU:HB3	1.82	0.44
1:D:1101:ARG:NH1	1:D:1115:LEU:O	2.48	0.44
1:D:2224:ARG:H	1:D:2224:ARG:HD2	1.81	0.44
1:D:2624:ARG:CZ	1:D:2910:THR:HA	2.48	0.44
1:C:894:GLY:HA3	1:C:903:LEU:HB3	2.00	0.44
1:C:950:LEU:HD22	1:C:951:LYS:H	1.82	0.44
1:C:2258:LEU:HB3	1:C:2297:LYS:NZ	2.32	0.44
1:C:3162:GLN:NE2	1:C:3216:CYS:O	2.48	0.44
1:C:4188:ARG:H	1:C:4188:ARG:CZ	2.31	0.44
1:C:4217:PHE:O	1:C:4221:VAL:HG22	2.18	0.44
1:A:194:SER:OG	1:A:195:PHE:N	2.51	0.44
1:A:1299:GLN:NE2	1:A:1545:ASN:OD1	2.50	0.44
1:A:1864:LYS:NZ	1:A:1871:PHE:O	2.45	0.44
1:B:3110:LEU:C	1:B:3112:LEU:H	2.26	0.44
1:B:3110:LEU:HD21	1:B:3186:LEU:HD12	2.00	0.44
1:D:571:SER:OG	1:D:573:GLU:OE1	2.19	0.44
1:D:2577:ILE:HD12	1:D:2577:ILE:N	2.32	0.44
1:C:202:MET:HE3	1:C:202:MET:HB3	1.83	0.44
1:C:308:HIS:ND1	1:C:310:LYS:HB3	2.32	0.44
1:C:866:HIS:O	1:C:869:ARG:HG3	2.17	0.44
1:C:1808:ARG:HD3	1:C:1853:ILE:HG22	1.99	0.44
1:C:1864:LYS:NZ	1:C:1871:PHE:O	2.45	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:3996:PHE:CD2	1:C:4020:GLN:HG2	2.51	0.44
1:A:793:LEU:HD12	1:A:821:LEU:HD21	1.97	0.44
1:A:872:GLU:O	1:A:876:GLU:HG3	2.17	0.44
1:A:4156:HIS:HA	1:A:4161:ARG:HH22	1.83	0.44
1:A:4675:LYS:HD2	1:A:4679:ARG:HH21	1.81	0.44
1:B:894:GLY:HA3	1:B:903:LEU:HB3	2.00	0.44
1:B:3552:PHE:C	1:B:3552:PHE:CD2	2.95	0.44
1:D:943:ASP:HB2	1:D:1050:GLY:HA3	1.98	0.44
1:D:3233:PRO:HB2	1:D:3238:GLU:HB2	1.99	0.44
1:D:3579:LEU:HB2	1:D:3582:ARG:HG2	1.99	0.44
1:D:4056:GLU:HG2	1:D:4166:LEU:HD13	1.99	0.44
1:C:2527:LEU:HD12	1:C:2527:LEU:HA	1.87	0.44
1:C:3110:LEU:HD21	1:C:3186:LEU:HD12	2.00	0.44
1:C:4689:THR:OG1	1:C:4690:GLU:OE1	2.26	0.44
1:A:1206:GLN:HA	1:A:1227:ALA:O	2.18	0.44
1:A:2173:GLN:O	1:A:2177:LEU:HD22	2.18	0.44
1:A:2258:LEU:HB3	1:A:2297:LYS:NZ	2.32	0.44
1:A:2371:GLU:HA	1:A:2371:GLU:OE1	2.17	0.44
1:A:3264:THR:OG1	1:A:3265:GLU:OE1	2.31	0.44
1:B:3071:LEU:O	1:B:3075:LEU:HG	2.17	0.44
1:B:3762:ARG:NH2	1:B:4755:GLU:HB2	2.33	0.44
1:D:866:HIS:O	1:D:869:ARG:HG3	2.17	0.44
1:D:2244:ARG:HH22	1:D:2283:ASN:HA	1.83	0.44
1:D:2477:PRO:HD3	1:D:2546:MET:HG2	2.00	0.44
1:D:2912:THR:HG23	1:D:2914:LYS:HG3	2.00	0.44
1:D:3110:LEU:HD21	1:D:3186:LEU:HD12	2.00	0.44
1:D:4675:LYS:HD2	1:D:4679:ARG:HH21	1.82	0.44
1:C:168:ASP:OD1	1:C:201:ASN:ND2	2.50	0.44
1:C:931:THR:O	1:C:935:LEU:HD13	2.17	0.44
1:C:1066:GLN:HB2	1:C:1071:ARG:HH12	1.81	0.44
1:C:1547:LYS:NZ	1:C:1642:PRO:O	2.50	0.44
1:C:2186:MET:O	1:C:2192:TYR:OH	2.18	0.44
1:A:438:ILE:HG23	1:A:518:ILE:HD11	2.00	0.44
1:A:3110:LEU:HD21	1:A:3186:LEU:HD12	2.00	0.44
1:A:3762:ARG:NH2	1:A:4755:GLU:HB2	2.33	0.44
2:H:84:ALA:O	2:H:93:PRO:HB3	2.18	0.44
1:B:872:GLU:O	1:B:876:GLU:HG3	2.17	0.44
1:B:2371:GLU:OE1	1:B:2371:GLU:HA	2.17	0.44
1:B:3941:ASP:OD1	1:B:3942:VAL:N	2.51	0.44
1:D:1547:LYS:NZ	1:D:1642:PRO:O	2.50	0.44
1:D:2297:LYS:O	1:D:2300:SER:OG	2.24	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:3071:LEU:O	1:D:3075:LEU:HG	2.17	0.44
1:D:3941:ASP:OD1	1:D:3942:VAL:N	2.51	0.44
1:D:4156:HIS:HA	1:D:4161:ARG:HH22	1.83	0.44
1:C:416:LYS:HB2	1:C:416:LYS:HE3	1.83	0.44
1:C:943:ASP:HB2	1:C:1050:GLY:HA3	1.98	0.44
1:C:1206:GLN:HA	1:C:1227:ALA:O	2.18	0.44
1:C:2244:ARG:HH22	1:C:2283:ASN:HA	1.83	0.44
1:C:3941:ASP:OD1	1:C:3942:VAL:N	2.51	0.44
1:A:950:LEU:HD22	1:A:951:LYS:N	2.33	0.44
1:A:1072:VAL:HG13	1:A:1193:SER:HB2	2.00	0.44
1:A:1547:LYS:NZ	1:A:1642:PRO:O	2.50	0.44
1:A:2020:ASP:OD1	1:A:2020:ASP:N	2.46	0.44
1:A:2462:PRO:HB2	1:A:2464:ASP:OD1	2.18	0.44
1:A:2823:ILE:HA	1:A:2937:VAL:HG12	2.00	0.44
1:A:3941:ASP:OD1	1:A:3942:VAL:N	2.51	0.44
1:A:4006:ASP:OD1	1:A:4009:GLN:NE2	2.51	0.44
1:A:4056:GLU:HG2	1:A:4166:LEU:HD13	1.99	0.44
1:B:2001:PRO:O	1:B:2005:GLN:HG3	2.18	0.44
1:B:2823:ILE:HA	1:B:2937:VAL:HG12	2.00	0.44
1:D:961:MET:HE3	1:D:961:MET:HB3	1.69	0.44
1:D:1072:VAL:HG13	1:D:1193:SER:HB2	2.00	0.44
1:D:2101:MET:HB3	1:D:2101:MET:HE2	1.76	0.44
1:D:2173:GLN:O	1:D:2177:LEU:HD22	2.18	0.44
1:D:2186:MET:O	1:D:2192:TYR:OH	2.18	0.44
1:C:749:ASP:O	1:C:753:PRO:HA	2.18	0.44
1:C:2477:PRO:HD3	1:C:2546:MET:HG2	2.00	0.44
1:C:3535:LEU:O	1:C:3538:THR:OG1	2.29	0.44
1:C:3695:PRO:HB3	1:C:3699:HIS:HB3	1.99	0.44
1:A:491:ILE:O	1:A:495:ASN:HB2	2.18	0.44
1:A:3852:LYS:HE3	1:A:3852:LYS:HB3	1.89	0.44
1:B:297:GLN:OE1	1:B:297:GLN:N	2.49	0.44
1:B:866:HIS:CD2	1:B:867:LEU:H	2.30	0.44
1:B:3087:ILE:HD13	1:B:3087:ILE:HA	1.88	0.44
1:B:3933:PHE:HD2	1:B:3951:PHE:CE2	2.36	0.44
1:D:297:GLN:OE1	1:D:297:GLN:N	2.49	0.44
1:D:308:HIS:ND1	1:D:310:LYS:HB3	2.32	0.44
1:D:2390:PRO:C	1:D:2392:ARG:H	2.26	0.44
1:D:3388:GLU:O	1:D:3392:LEU:HD22	2.18	0.44
1:D:4655:PHE:CZ	1:D:4659:ILE:HD11	2.53	0.44
1:C:1072:VAL:HG13	1:C:1193:SER:HB2	2.00	0.44
1:C:1973:GLN:HG2	1:C:3642:TYR:HD2	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:2173:GLN:O	1:C:2177:LEU:HD22	2.18	0.44
1:A:636:ASN:HD21	2:E:35:LYS:HE2	1.83	0.43
1:A:931:THR:O	1:A:935:LEU:HD13	2.17	0.43
1:A:3162:GLN:NE2	1:A:3216:CYS:O	2.48	0.43
1:A:3233:PRO:HB2	1:A:3238:GLU:HB2	1.99	0.43
1:B:194:SER:OG	1:B:195:PHE:N	2.51	0.43
1:B:1808:ARG:HD3	1:B:1853:ILE:HG22	1.99	0.43
1:D:931:THR:O	1:D:935:LEU:HD13	2.17	0.43
1:D:935:LEU:HD21	1:D:987:ARG:NE	2.33	0.43
1:D:1973:GLN:HG2	1:D:3642:TYR:HD2	1.82	0.43
1:D:2462:PRO:HB2	1:D:2464:ASP:OD1	2.18	0.43
1:C:194:SER:OG	1:C:195:PHE:N	2.51	0.43
1:C:950:LEU:HD22	1:C:951:LYS:N	2.33	0.43
1:C:1695:LEU:HB3	1:C:1810:LYS:NZ	2.33	0.43
1:C:1773:PRO:HA	1:C:1774:PRO:HD3	1.90	0.43
1:C:3388:GLU:O	1:C:3392:LEU:HD22	2.18	0.43
1:A:169:LEU:HD23	1:A:169:LEU:HA	1.82	0.43
1:A:451:TYR:CZ	1:A:474:ARG:HD2	2.52	0.43
1:A:1695:LEU:HB3	1:A:1810:LYS:NZ	2.33	0.43
1:A:1986:MET:N	1:A:1986:MET:SD	2.91	0.43
1:B:873:LYS:HA	1:B:873:LYS:HD2	1.82	0.43
1:B:935:LEU:HD21	1:B:987:ARG:NE	2.33	0.43
1:B:1008:SER:HB3	1:B:1017:ARG:HB3	2.00	0.43
1:B:1986:MET:N	1:B:1986:MET:SD	2.91	0.43
1:B:2390:PRO:C	1:B:2392:ARG:H	2.26	0.43
1:B:2462:PRO:HB2	1:B:2464:ASP:OD1	2.18	0.43
1:D:2001:PRO:O	1:D:2005:GLN:HG3	2.18	0.43
1:D:2290:LEU:HD12	1:D:2291:GLN:N	2.33	0.43
1:D:3538:THR:O	1:D:3542:LEU:HG	2.19	0.43
1:D:3756:LYS:HE3	1:D:3756:LYS:HB2	1.79	0.43
1:D:4722:ARG:HD3	1:D:4722:ARG:HA	1.89	0.43
1:C:218:HIS:HB3	1:C:392:ARG:NH1	2.33	0.43
1:C:491:ILE:O	1:C:495:ASN:HB2	2.17	0.43
1:C:876:GLU:OE2	1:C:918:ARG:NH1	2.51	0.43
1:C:1008:SER:HB3	1:C:1017:ARG:HB3	2.00	0.43
1:C:1923:GLU:OE2	1:C:1923:GLU:N	2.46	0.43
1:C:1970:GLN:HG2	1:C:3642:TYR:HA	2.00	0.43
1:C:2390:PRO:C	1:C:2392:ARG:H	2.26	0.43
1:C:3112:LEU:HD23	1:C:3112:LEU:HA	1.84	0.43
1:A:75:VAL:O	1:A:79:GLN:HG2	2.19	0.43
1:A:218:HIS:HB3	1:A:392:ARG:NH1	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:322:LYS:HA	1:A:322:LYS:HD2	1.77	0.43
1:A:575:LEU:HD22	1:A:609:CYS:HB2	1.99	0.43
1:A:876:GLU:OE2	1:A:918:ARG:NH1	2.51	0.43
1:A:2577:ILE:HD12	1:A:2577:ILE:N	2.32	0.43
1:A:3082:LYS:HE2	1:A:3082:LYS:HB2	1.63	0.43
1:A:3538:THR:O	1:A:3542:LEU:HG	2.19	0.43
1:A:3933:PHE:HD2	1:A:3951:PHE:CE2	2.36	0.43
2:E:84:ALA:O	2:E:93:PRO:HB3	2.19	0.43
1:B:75:VAL:O	1:B:79:GLN:HG2	2.19	0.43
1:B:491:ILE:O	1:B:495:ASN:HB2	2.17	0.43
1:B:749:ASP:O	1:B:753:PRO:HA	2.18	0.43
1:B:4156:HIS:HA	1:B:4161:ARG:HH22	1.83	0.43
1:B:4232:GLU:HG2	1:B:5019:TRP:NE1	2.28	0.43
1:B:4888:TYR:OH	1:C:4917:ASP:OD2	2.27	0.43
1:D:218:HIS:HB3	1:D:392:ARG:NH1	2.33	0.43
1:D:2258:LEU:O	1:D:2261:SER:OG	2.30	0.43
1:D:4006:ASP:OD1	1:D:4009:GLN:NE2	2.51	0.43
1:D:4188:ARG:H	1:D:4188:ARG:CZ	2.30	0.43
1:C:1986:MET:N	1:C:1986:MET:SD	2.91	0.43
1:C:3071:LEU:O	1:C:3075:LEU:HG	2.17	0.43
1:C:3110:LEU:C	1:C:3112:LEU:H	2.26	0.43
1:C:3453:ARG:HA	1:C:3453:ARG:CZ	2.49	0.43
1:A:749:ASP:O	1:A:753:PRO:HA	2.18	0.43
1:A:2001:PRO:O	1:A:2005:GLN:HG3	2.18	0.43
1:A:2244:ARG:HH22	1:A:2283:ASN:HA	1.83	0.43
1:A:3723:MET:HE3	1:A:3793:MET:CE	2.48	0.43
1:A:3944:GLU:OE1	1:A:3946:GLN:N	2.48	0.43
1:B:308:HIS:ND1	1:B:310:LYS:HB3	2.32	0.43
1:B:322:LYS:HA	1:B:322:LYS:HD2	1.77	0.43
1:B:1072:VAL:HG13	1:B:1193:SER:HB2	2.00	0.43
1:B:1206:GLN:HA	1:B:1227:ALA:O	2.18	0.43
1:B:1488:LYS:HE3	1:B:1488:LYS:HB2	1.83	0.43
1:B:2477:PRO:HD3	1:B:2546:MET:HG2	2.00	0.43
1:B:2519:LEU:HD13	1:B:2575:ARG:HG3	2.00	0.43
1:D:872:GLU:O	1:D:876:GLU:HG3	2.17	0.43
1:D:876:GLU:OE2	1:D:918:ARG:NH1	2.51	0.43
1:D:950:LEU:HD22	1:D:951:LYS:N	2.33	0.43
1:D:1206:GLN:HA	1:D:1227:ALA:O	2.18	0.43
1:D:1986:MET:N	1:D:1986:MET:SD	2.91	0.43
1:D:3110:LEU:C	1:D:3112:LEU:H	2.26	0.43
1:C:866:HIS:CD2	1:C:867:LEU:H	2.30	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:872:GLU:O	1:C:876:GLU:HG3	2.17	0.43
1:C:879:HIS:HA	1:C:882:TRP:NE1	2.34	0.43
1:C:2823:ILE:HA	1:C:2937:VAL:HG12	2.00	0.43
1:C:2912:THR:HG23	1:C:2914:LYS:HG3	2.00	0.43
1:C:3233:PRO:HB2	1:C:3238:GLU:HB2	1.99	0.43
1:C:4769:MET:SD	1:C:4769:MET:N	2.79	0.43
1:A:460:GLN:N	1:A:463:GLU:OE2	2.41	0.43
1:A:1101:ARG:NH1	1:A:1115:LEU:O	2.48	0.43
1:A:1970:GLN:HG2	1:A:3642:TYR:HA	2.00	0.43
1:A:4655:PHE:CZ	1:A:4659:ILE:HD11	2.53	0.43
1:B:1805:GLU:H	1:B:1805:GLU:CD	2.27	0.43
1:B:3233:PRO:HB2	1:B:3238:GLU:HB2	1.99	0.43
1:D:75:VAL:O	1:D:79:GLN:HG2	2.19	0.43
1:D:879:HIS:HA	1:D:882:TRP:NE1	2.34	0.43
1:D:894:GLY:HA3	1:D:903:LEU:HB3	2.00	0.43
1:D:1422:ASP:OD2	1:D:1568:LYS:NZ	2.39	0.43
1:D:2191:PHE:CE2	1:D:2242:ILE:HD11	2.54	0.43
1:C:1424:PRO:HA	1:C:1427:ILE:HG22	2.01	0.43
1:C:2462:PRO:HB2	1:C:2464:ASP:OD1	2.18	0.43
1:C:4056:GLU:HG2	1:C:4166:LEU:HD13	1.99	0.43
1:A:894:GLY:HA3	1:A:903:LEU:HB3	2.00	0.43
1:A:2290:LEU:HD12	1:A:2291:GLN:H	1.83	0.43
1:A:2390:PRO:C	1:A:2392:ARG:H	2.26	0.43
1:A:3528:THR:HG22	1:A:3569:LEU:HD21	2.00	0.43
1:A:3823:LYS:HA	1:A:3823:LYS:HD3	1.79	0.43
1:B:1983:ALA:O	1:B:1987:SER:OG	2.22	0.43
1:B:2290:LEU:HD12	1:B:2291:GLN:H	1.83	0.43
1:B:2624:ARG:CZ	1:B:2910:THR:HA	2.48	0.43
1:B:2637:ALA:C	1:B:2640:PRO:HD2	2.43	0.43
1:B:3538:THR:O	1:B:3542:LEU:HG	2.19	0.43
1:B:4006:ASP:OD1	1:B:4009:GLN:NE2	2.51	0.43
1:B:4217:PHE:O	1:B:4221:VAL:HG22	2.18	0.43
1:D:491:ILE:O	1:D:495:ASN:HB2	2.17	0.43
1:D:1695:LEU:HB3	1:D:1810:LYS:NZ	2.33	0.43
1:D:2823:ILE:HA	1:D:2937:VAL:HG12	2.00	0.43
1:D:4093:PHE:CE2	1:D:4097:MET:HG3	2.54	0.43
1:C:575:LEU:HD22	1:C:609:CYS:HB2	1.99	0.43
1:C:880:GLU:CD	1:C:910:PHE:HB3	2.44	0.43
1:C:2290:LEU:HD12	1:C:2291:GLN:N	2.33	0.43
1:C:2637:ALA:C	1:C:2640:PRO:HD2	2.44	0.43
1:C:3233:PRO:HG2	1:C:3239:MET:HA	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:3762:ARG:NH2	1:C:4755:GLU:HB2	2.33	0.43
1:C:3933:PHE:HD2	1:C:3951:PHE:CE2	2.36	0.43
1:C:4156:HIS:HA	1:C:4161:ARG:HH22	1.83	0.43
1:A:1066:GLN:HB2	1:A:1071:ARG:HH12	1.81	0.43
1:A:1078:GLU:OE2	1:A:1654:SER:OG	2.28	0.43
1:A:2191:PHE:CE2	1:A:2242:ILE:HD11	2.54	0.43
1:A:3388:GLU:O	1:A:3392:LEU:HD22	2.18	0.43
1:B:1695:LEU:HB3	1:B:1810:LYS:NZ	2.33	0.43
1:B:2173:GLN:O	1:B:2177:LEU:HD22	2.18	0.43
1:B:3106:MET:HE3	1:B:3110:LEU:HD22	2.01	0.43
1:B:3388:GLU:O	1:B:3392:LEU:HD22	2.18	0.43
1:B:4689:THR:OG1	1:B:4690:GLU:OE1	2.26	0.43
1:D:1820:ARG:O	1:D:1824:GLN:HG2	2.19	0.43
1:C:330:ASP:N	1:C:330:ASP:OD1	2.52	0.43
1:C:2624:ARG:CZ	1:C:2910:THR:HA	2.48	0.43
1:C:4006:ASP:OD1	1:C:4009:GLN:NE2	2.51	0.43
1:A:330:ASP:N	1:A:330:ASP:OD1	2.52	0.43
1:A:365:LYS:HE3	1:A:365:LYS:HB3	1.82	0.43
1:A:707:VAL:HG23	1:A:782:SER:HB3	2.01	0.43
1:A:2477:PRO:HD3	1:A:2546:MET:HG2	2.00	0.43
1:A:3087:ILE:HD13	1:A:3087:ILE:HA	1.88	0.43
1:B:950:LEU:HD22	1:B:951:LYS:N	2.33	0.43
1:B:2574:HIS:CD2	1:B:2574:HIS:H	2.36	0.43
1:B:2912:THR:HG23	1:B:2914:LYS:HG3	2.00	0.43
1:B:3528:THR:HG22	1:B:3569:LEU:HD21	2.00	0.43
1:B:4093:PHE:CE2	1:B:4097:MET:HG3	2.54	0.43
1:D:194:SER:OG	1:D:195:PHE:N	2.51	0.43
1:D:707:VAL:HG23	1:D:782:SER:HB3	2.01	0.43
1:D:1773:PRO:HA	1:D:1774:PRO:HD3	1.90	0.43
1:D:2519:LEU:HD13	1:D:2575:ARG:HG3	2.00	0.43
1:D:3944:GLU:OE1	1:D:3946:GLN:N	2.48	0.43
1:D:3969:ILE:HG21	1:D:3980:LEU:HD12	2.01	0.43
1:D:4184:MET:HE2	1:D:4184:MET:HA	2.01	0.43
1:D:4217:PHE:O	1:D:4221:VAL:HG22	2.18	0.43
1:C:384:MET:H	1:C:384:MET:CE	2.32	0.43
1:C:384:MET:SD	1:C:384:MET:N	2.75	0.43
1:C:1999:ARG:HG2	1:C:3635:CYS:HB3	2.01	0.43
1:C:2519:LEU:HD13	1:C:2575:ARG:HG3	2.00	0.43
1:C:2574:HIS:CD2	1:C:2574:HIS:H	2.36	0.43
1:C:3689:GLU:C	1:C:3691:GLU:H	2.27	0.43
1:C:4093:PHE:CE2	1:C:4097:MET:HG3	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:4184:MET:HA	1:C:4184:MET:HE2	2.01	0.43
1:A:1739:THR:O	1:A:1743[B]:ARG:HG3	2.19	0.43
1:A:2256:TYR:O	1:A:2256:TYR:HD2	2.02	0.43
1:A:2290:LEU:HD12	1:A:2291:GLN:N	2.33	0.43
1:A:2449:GLU:H	1:A:2449:GLU:CD	2.14	0.43
1:A:2637:ALA:C	1:A:2640:PRO:HD2	2.44	0.43
1:A:3110:LEU:C	1:A:3112:LEU:H	2.26	0.43
1:B:218:HIS:HB3	1:B:392:ARG:NH1	2.33	0.43
1:B:876:GLU:OE2	1:B:918:ARG:NH1	2.51	0.43
1:B:1999:ARG:HG2	1:B:3635:CYS:HB3	2.01	0.43
1:B:3234:ASN:OD1	1:B:3234:ASN:C	2.62	0.43
1:B:3689:GLU:C	1:B:3691:GLU:H	2.27	0.43
1:D:384:MET:H	1:D:384:MET:CE	2.32	0.43
1:D:462:GLU:OE1	1:D:3710:LEU:HD22	2.19	0.43
1:D:2209:GLU:C	1:D:2209:GLU:OE1	2.62	0.43
1:D:2973:PHE:CE1	1:D:2995:ILE:HG12	2.54	0.43
1:D:3233:PRO:HG2	1:D:3239:MET:HA	2.00	0.43
1:D:3933:PHE:HD2	1:D:3951:PHE:CE2	2.36	0.43
1:C:707:VAL:HG23	1:C:782:SER:HB3	2.01	0.43
1:C:3234:ASN:C	1:C:3234:ASN:OD1	2.62	0.43
1:A:879:HIS:HA	1:A:882:TRP:NE1	2.34	0.43
1:A:3234:ASN:OD1	1:A:3234:ASN:C	2.62	0.43
1:A:4093:PHE:CE2	1:A:4097:MET:HG3	2.54	0.43
1:A:4188:ARG:CZ	1:A:4188:ARG:H	2.31	0.43
1:B:1424:PRO:HA	1:B:1427:ILE:HG22	2.01	0.43
1:B:3082:LYS:HB2	1:B:3082:LYS:HE2	1.64	0.43
1:B:3969:ILE:HG21	1:B:3980:LEU:HD12	2.01	0.43
1:D:572:PRO:HA	1:D:575:LEU:HD13	2.01	0.43
1:D:749:ASP:O	1:D:753:PRO:HA	2.18	0.43
1:D:2173:GLN:H	1:D:2173:GLN:CD	2.22	0.43
1:D:2694:GLU:HA	1:D:2697:ARG:NH2	2.34	0.43
1:D:2992:GLU:OE2	1:D:2996:LYS:NZ	2.42	0.43
1:D:3234:ASN:C	1:D:3234:ASN:OD1	2.62	0.43
1:D:3762:ARG:NH2	1:D:4755:GLU:HB2	2.33	0.43
1:D:3940:LYS:O	1:D:4002:LYS:NZ	2.34	0.43
1:D:4232:GLU:HG2	1:D:5019:TRP:NE1	2.28	0.43
1:C:2191:PHE:CE2	1:C:2242:ILE:HD11	2.54	0.43
1:C:2514:ASN:OD1	1:C:2514:ASN:N	2.52	0.43
1:C:2677:LYS:HB3	1:C:2677:LYS:HE2	1.83	0.43
1:A:110:ARG:NH1	1:A:115:ARG:HB3	2.34	0.42
1:A:871:ARG:CZ	1:A:922:LEU:HD12	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1024:TYR:OH	1:A:1032:LYS:HG3	2.19	0.42
1:A:3246:LEU:O	1:A:3250:MET:HG2	2.19	0.42
1:A:4937:ILE:CD1	1:B:4934:GLY:HA3	2.46	0.42
1:B:707:VAL:HG23	1:B:782:SER:HB3	2.01	0.42
1:B:880:GLU:CD	1:B:910:PHE:HB3	2.44	0.42
1:B:1101:ARG:NH1	1:B:1115:LEU:O	2.48	0.42
1:B:4655:PHE:CZ	1:B:4659:ILE:HD11	2.53	0.42
1:C:462:GLU:OE1	1:C:3710:LEU:HD22	2.19	0.42
1:C:1805:GLU:CD	1:C:1805:GLU:H	2.27	0.42
1:C:2001:PRO:O	1:C:2005:GLN:HG3	2.18	0.42
1:C:3106:MET:HE3	1:C:3110:LEU:HD22	2.01	0.42
1:C:3538:THR:O	1:C:3542:LEU:HG	2.19	0.42
1:C:3695:PRO:HB3	1:C:3699:HIS:CG	2.54	0.42
1:C:4010:ILE:O	1:C:4014:LYS:HG3	2.19	0.42
1:A:1805:GLU:CD	1:A:1805:GLU:H	2.27	0.42
1:A:1820:ARG:O	1:A:1824:GLN:HG2	2.19	0.42
1:A:2519:LEU:HD13	1:A:2575:ARG:HG3	2.00	0.42
1:A:2538:THR:O	1:A:2542:SER:HB2	2.19	0.42
1:A:2574:HIS:CD2	1:A:2574:HIS:H	2.36	0.42
1:A:3946:GLN:OE1	1:A:3949:ARG:NH1	2.30	0.42
1:A:4184:MET:HE2	1:A:4184:MET:HA	2.01	0.42
1:B:330:ASP:OD1	1:B:330:ASP:N	2.52	0.42
1:B:879:HIS:HA	1:B:882:TRP:NE1	2.34	0.42
1:B:1970:GLN:HG2	1:B:3642:TYR:HA	2.00	0.42
1:B:2256:TYR:HD2	1:B:2256:TYR:O	2.02	0.42
1:B:2502:MET:H	1:B:2502:MET:HG2	1.71	0.42
1:B:2765:LYS:HZ1	1:B:2860:PRO:HA	1.84	0.42
1:B:3246:LEU:O	1:B:3250:MET:HG2	2.19	0.42
1:D:871:ARG:CZ	1:D:922:LEU:HD12	2.49	0.42
1:D:880:GLU:CD	1:D:910:PHE:HB3	2.44	0.42
1:D:901:LYS:HA	1:D:901:LYS:HD2	1.84	0.42
1:D:1970:GLN:HG2	1:D:3642:TYR:HA	2.00	0.42
1:D:2637:ALA:C	1:D:2640:PRO:HD2	2.44	0.42
1:C:75:VAL:O	1:C:79:GLN:HG2	2.18	0.42
1:C:176:SER:OG	1:C:178:ARG:NH1	2.48	0.42
1:C:1024:TYR:OH	1:C:1032:LYS:HG3	2.19	0.42
1:C:2538:THR:O	1:C:2542:SER:HB2	2.20	0.42
1:C:2694:GLU:HA	1:C:2697:ARG:NH2	2.35	0.42
1:C:3123:LYS:HG3	1:C:3125:VAL:H	1.84	0.42
1:C:4648:LEU:HD22	1:C:4803:HIS:CE1	2.54	0.42
1:A:572:PRO:HA	1:A:575:LEU:HD13	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:788:LYS:HE3	1:A:788:LYS:HB2	1.78	0.42
1:A:2256:TYR:O	1:A:2259:GLU:HG3	2.19	0.42
1:A:2912:THR:HG23	1:A:2914:LYS:HG3	2.00	0.42
1:A:3367:LYS:HE3	1:A:3367:LYS:HB2	1.85	0.42
1:A:3453:ARG:HA	1:A:3453:ARG:CZ	2.49	0.42
1:A:4010:ILE:O	1:A:4014:LYS:HG3	2.19	0.42
1:B:871:ARG:CZ	1:B:922:LEU:HD12	2.50	0.42
1:B:2191:PHE:CE2	1:B:2242:ILE:HD11	2.54	0.42
1:B:2244:ARG:HH22	1:B:2283:ASN:HA	1.83	0.42
1:B:2615:ARG:HG2	1:B:2664:PHE:HE1	1.85	0.42
1:B:3453:ARG:HA	1:B:3453:ARG:CZ	2.49	0.42
1:B:3465:ASN:C	1:B:3467:MET:H	2.28	0.42
1:B:3524:MET:H	1:B:3524:MET:HG3	1.69	0.42
1:B:3579:LEU:HB2	1:B:3582:ARG:HG2	1.99	0.42
1:B:4010:ILE:O	1:B:4014:LYS:HG3	2.19	0.42
1:D:110:ARG:NH1	1:D:115:ARG:HB3	2.34	0.42
1:D:856:VAL:H	1:D:991:ASN:ND2	2.17	0.42
1:D:947:GLU:OE1	1:D:1051:TYR:OH	2.37	0.42
1:D:2256:TYR:O	1:D:2259:GLU:HG3	2.19	0.42
1:D:2538:THR:O	1:D:2542:SER:HB2	2.19	0.42
1:D:3453:ARG:HA	1:D:3453:ARG:CZ	2.49	0.42
1:C:871:ARG:CZ	1:C:922:LEU:HD12	2.49	0.42
1:C:1739:THR:O	1:C:1743[B]:ARG:HG3	2.19	0.42
1:C:2516:ASP:OD1	1:C:2516:ASP:N	2.52	0.42
1:C:2973:PHE:CE1	1:C:2995:ILE:HG12	2.54	0.42
1:C:3246:LEU:O	1:C:3250:MET:HG2	2.19	0.42
1:C:3579:LEU:HB2	1:C:3582:ARG:HG2	1.99	0.42
1:C:3868:ARG:HH11	1:C:3870:ASN:HB3	1.85	0.42
1:C:4655:PHE:CZ	1:C:4659:ILE:HD11	2.53	0.42
1:A:2228:MET:HE2	1:A:2228:MET:HB2	1.67	0.42
1:A:2694:GLU:HA	1:A:2697:ARG:NH2	2.34	0.42
1:A:2782:ASP:N	1:A:2782:ASP:OD1	2.52	0.42
1:A:2973:PHE:CE1	1:A:2995:ILE:HG12	2.54	0.42
1:A:3201:MET:HE3	1:A:3203:VAL:CG2	2.49	0.42
1:A:3858:MET:HG3	1:A:3859:VAL:N	2.35	0.42
1:A:4161:ARG:CD	1:A:4161:ARG:H	2.33	0.42
1:A:4673:ARG:NH2	1:A:4698:LYS:HG3	2.35	0.42
2:G:84:ALA:O	2:G:93:PRO:HB3	2.18	0.42
1:B:462:GLU:OE1	1:B:3710:LEU:HD22	2.19	0.42
1:B:575:LEU:HD22	1:B:609:CYS:HB2	1.99	0.42
1:B:3137:LEU:HD23	1:B:3137:LEU:HA	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3263:TYR:HD1	1:B:3270:ILE:HD12	1.84	0.42
1:B:3822:ASP:OD1	1:B:3823:LYS:NZ	2.39	0.42
1:B:4161:ARG:CD	1:B:4161:ARG:H	2.33	0.42
1:B:4673:ARG:NH2	1:B:4698:LYS:HG3	2.35	0.42
1:D:1008:SER:HB3	1:D:1017:ARG:HB3	2.00	0.42
1:D:3201:MET:HE3	1:D:3203:VAL:CG2	2.49	0.42
1:D:3858:MET:HG3	1:D:3859:VAL:N	2.35	0.42
1:D:3868:ARG:HH11	1:D:3870:ASN:HB3	1.85	0.42
1:C:336:PRO:HA	1:C:337:PRO:HD3	1.90	0.42
1:C:797:HIS:CG	1:C:821:LEU:HD23	2.54	0.42
1:C:3540:TYR:CE1	1:C:3549:VAL:HG21	2.55	0.42
1:A:462:GLU:OE1	1:A:3710:LEU:HD22	2.19	0.42
1:A:1575:LEU:HD23	1:A:1575:LEU:HA	1.90	0.42
1:A:2282:ASP:HA	1:A:2341:VAL:HG13	2.01	0.42
1:A:3540:TYR:CE1	1:A:3549:VAL:HG21	2.55	0.42
1:A:3562:LYS:HE2	1:A:3562:LYS:HB2	1.92	0.42
2:F:84:ALA:O	2:F:93:PRO:HB3	2.18	0.42
1:B:110:ARG:NH1	1:B:115:ARG:HB3	2.34	0.42
1:B:384:MET:H	1:B:384:MET:CE	2.32	0.42
1:B:572:PRO:HA	1:B:575:LEU:HD13	2.01	0.42
1:B:1739:THR:O	1:B:1743[B]:ARG:HG3	2.19	0.42
1:B:1929:MET:HE2	1:B:1929:MET:HB3	1.76	0.42
1:B:2538:THR:O	1:B:2542:SER:HB2	2.20	0.42
1:B:2815:ALA:HB1	1:B:2881:ASN:ND2	2.35	0.42
1:D:69:LEU:HD21	1:D:202:MET:HE1	2.01	0.42
1:D:774:ASP:OD1	1:D:774:ASP:N	2.46	0.42
1:D:1024:TYR:OH	1:D:1032:LYS:HG3	2.19	0.42
1:D:2290:LEU:HD12	1:D:2291:GLN:H	1.83	0.42
1:D:2516:ASP:OD1	1:D:2516:ASP:N	2.52	0.42
1:D:3137:LEU:HD23	1:D:3137:LEU:HA	1.85	0.42
1:C:2290:LEU:HD12	1:C:2291:GLN:H	1.83	0.42
1:C:2318:TYR:HD2	1:C:2319:PRO:HD2	1.85	0.42
1:C:3263:TYR:HD1	1:C:3270:ILE:HD12	1.84	0.42
1:A:296:ASP:HB2	1:A:297:GLN:OE1	2.20	0.42
1:A:2209:GLU:C	1:A:2209:GLU:OE1	2.62	0.42
1:A:3106:MET:HE3	1:A:3110:LEU:HD22	2.01	0.42
1:A:3695:PRO:HB3	1:A:3699:HIS:CG	2.54	0.42
1:A:4060:LYS:HD2	1:A:4060:LYS:HA	1.84	0.42
2:E:11:ASP:OD2	2:E:11:ASP:C	2.62	0.42
1:B:638:ILE:HD11	1:B:1636:MET:HE3	2.01	0.42
1:B:1024:TYR:OH	1:B:1032:LYS:HG3	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2290:LEU:HD12	1:B:2291:GLN:N	2.33	0.42
1:B:4184:MET:HE2	1:B:4184:MET:HA	2.01	0.42
1:D:1805:GLU:H	1:D:1805:GLU:CD	2.27	0.42
1:D:2742:THR:HB	1:D:2814:LYS:HB3	2.01	0.42
1:D:3123:LYS:HG3	1:D:3125:VAL:H	1.84	0.42
1:D:3270:ILE:HA	1:D:3274:LEU:HD12	2.02	0.42
1:D:3695:PRO:HB3	1:D:3699:HIS:CG	2.54	0.42
1:C:1821:ASP:HB3	1:C:1837:GLN:HE22	1.85	0.42
1:C:2815:ALA:HB1	1:C:2881:ASN:ND2	2.35	0.42
1:A:638:ILE:HD11	1:A:1636:MET:HE3	2.01	0.42
1:A:950:LEU:HD11	1:A:970:LEU:HB3	2.01	0.42
2:E:79:ASP:OD1	2:E:80:TYR:HD1	2.02	0.42
1:B:1820:ARG:O	1:B:1824:GLN:HG2	2.19	0.42
1:B:2514:ASN:OD1	1:B:2514:ASN:N	2.52	0.42
1:B:3823:LYS:HA	1:B:3823:LYS:HD3	1.79	0.42
1:D:168:ASP:OD1	1:D:201:ASN:ND2	2.50	0.42
1:D:978:THR:O	1:D:982:THR:HG23	2.20	0.42
1:D:1066:GLN:HB2	1:D:1071:ARG:HH12	1.81	0.42
1:D:3540:TYR:CE1	1:D:3549:VAL:HG21	2.55	0.42
1:D:4158:PRO:HA	1:D:4161:ARG:HD3	2.01	0.42
1:D:4648:LEU:HD22	1:D:4803:HIS:CE1	2.54	0.42
1:C:937:CYS:N	1:C:1056:PRO:HG3	2.35	0.42
1:C:1820:ARG:O	1:C:1824:GLN:HG2	2.19	0.42
1:C:2256:TYR:HD2	1:C:2256:TYR:O	2.02	0.42
1:C:2615:ARG:HG2	1:C:2664:PHE:HE1	1.85	0.42
1:C:3376:GLU:OE1	1:C:3448:SER:OG	2.30	0.42
1:C:3400:VAL:HG23	1:C:3403:ARG:NH2	2.34	0.42
1:C:3823:LYS:HA	1:C:3823:LYS:HD3	1.79	0.42
1:C:4161:ARG:H	1:C:4161:ARG:CD	2.33	0.42
1:C:4541:TRP:HA	1:C:4544:LEU:HG	2.01	0.42
1:A:873:LYS:NZ	1:A:877:ASN:HB2	2.35	0.42
1:A:880:GLU:CD	1:A:910:PHE:HB3	2.44	0.42
1:A:2101:MET:HB3	1:A:2101:MET:HE2	1.76	0.42
1:A:2990:PRO:HG2	1:A:2991:HIS:CE1	2.55	0.42
2:G:49:MET:HG2	2:G:52:LYS:HG2	2.02	0.42
2:G:79:ASP:OD1	2:G:80:TYR:HD1	2.02	0.42
1:B:797:HIS:CG	1:B:821:LEU:HD23	2.54	0.42
1:B:2282:ASP:HA	1:B:2341:VAL:HG13	2.02	0.42
1:B:3023:LYS:HG3	1:B:3023:LYS:O	2.20	0.42
1:B:3107:VAL:HB	1:B:3111:ARG:HH22	1.85	0.42
1:B:3695:PRO:HB3	1:B:3699:HIS:CG	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3756:LYS:HE3	1:B:3756:LYS:HB2	1.79	0.42
1:B:4942:GLU:HA	1:B:4945:ASP:OD2	2.20	0.42
1:D:950:LEU:HD11	1:D:970:LEU:HB3	2.01	0.42
1:D:1739:THR:O	1:D:1743[B]:ARG:HG3	2.19	0.42
1:D:2514:ASN:N	1:D:2514:ASN:OD1	2.52	0.42
1:D:3528:THR:HG22	1:D:3569:LEU:HD21	2.00	0.42
1:C:572:PRO:HA	1:C:575:LEU:HD13	2.01	0.42
1:C:1926:LEU:O	1:C:1931:LEU:HD11	2.20	0.42
1:C:2209:GLU:C	1:C:2209:GLU:OE1	2.62	0.42
1:C:4673:ARG:NH2	1:C:4698:LYS:HG3	2.35	0.42
1:A:642:THR:OG1	1:A:1613:LEU:HD12	2.20	0.42
1:A:866:HIS:HD2	1:A:867:LEU:N	2.16	0.42
1:A:1008:SER:HB3	1:A:1017:ARG:HB3	2.00	0.42
1:A:1424:PRO:HA	1:A:1427:ILE:HG22	2.01	0.42
1:A:2765:LYS:NZ	1:A:2860:PRO:HA	2.35	0.42
1:A:2815:ALA:HB1	1:A:2881:ASN:ND2	2.35	0.42
1:A:3233:PRO:HG2	1:A:3239:MET:HA	2.00	0.42
1:A:4942:GLU:HA	1:A:4945:ASP:OD2	2.20	0.42
1:B:328:LYS:HE3	1:B:328:LYS:HB3	1.72	0.42
1:B:642:THR:OG1	1:B:1613:LEU:HD12	2.20	0.42
1:B:2186:MET:O	1:B:2192:TYR:OH	2.18	0.42
1:B:2256:TYR:O	1:B:2259:GLU:HG3	2.19	0.42
1:B:3036:LYS:O	1:B:3039:ILE:HG22	2.20	0.42
1:B:3621:HIS:C	1:B:3622:LYS:HG3	2.45	0.42
1:B:3723:MET:HE3	1:B:3793:MET:CE	2.48	0.42
1:D:197:GLN:H	1:D:197:GLN:HG3	1.74	0.42
1:D:642:THR:OG1	1:D:1613:LEU:HD12	2.20	0.42
1:D:797:HIS:CG	1:D:821:LEU:HD23	2.54	0.42
1:D:2464:ASP:OD1	1:D:2465:ASP:N	2.53	0.42
1:D:3723:MET:HE3	1:D:3793:MET:CE	2.48	0.42
1:C:700:GLU:OE2	1:C:1458:HIS:NE2	2.33	0.42
1:C:950:LEU:HD11	1:C:970:LEU:HB3	2.01	0.42
1:C:1648:MET:HE2	1:C:1648:MET:HB3	1.85	0.42
1:C:2229:VAL:HB	1:C:2267:MET:HE1	2.02	0.42
1:C:2256:TYR:O	1:C:2259:GLU:HG3	2.19	0.42
1:C:2282:ASP:HA	1:C:2341:VAL:HG13	2.01	0.42
1:A:69:LEU:HD21	1:A:202:MET:HE1	2.01	0.42
1:A:202:MET:HE3	1:A:202:MET:HB3	1.83	0.42
1:A:2229:VAL:HB	1:A:2267:MET:HE1	2.02	0.42
1:A:2871:LEU:HG	1:A:2927:LEU:HD21	2.02	0.42
1:A:3036:LYS:O	1:A:3039:ILE:HG22	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3123:LYS:HG3	1:A:3125:VAL:H	1.84	0.42
1:A:3969:ILE:HG21	1:A:3980:LEU:HD12	2.01	0.42
1:A:4816:ILE:HD12	1:A:4816:ILE:HA	1.95	0.42
2:G:11:ASP:OD2	2:G:11:ASP:C	2.63	0.42
2:F:11:ASP:OD2	2:F:11:ASP:C	2.63	0.42
1:B:2229:VAL:HB	1:B:2267:MET:HE1	2.02	0.42
1:B:2782:ASP:OD1	1:B:2782:ASP:N	2.52	0.42
1:B:2973:PHE:CE1	1:B:2995:ILE:HG12	2.54	0.42
1:B:3270:ILE:HA	1:B:3274:LEU:HD12	2.01	0.42
1:D:330:ASP:N	1:D:330:ASP:OD1	2.52	0.42
1:D:937:CYS:N	1:D:1056:PRO:HG3	2.35	0.42
1:D:1231[B]:GLN:H	1:D:1231[B]:GLN:HG3	1.61	0.42
1:D:1926:LEU:O	1:D:1931:LEU:HD11	2.20	0.42
1:D:1999:ARG:HG2	1:D:3635:CYS:HB3	2.01	0.42
1:D:2318:TYR:HD2	1:D:2319:PRO:HD2	1.85	0.42
1:D:3023:LYS:O	1:D:3023:LYS:HG3	2.20	0.42
1:D:3106:MET:HE3	1:D:3110:LEU:HD22	2.01	0.42
1:D:3689:GLU:C	1:D:3691:GLU:H	2.27	0.42
1:C:69:LEU:HD21	1:C:202:MET:HE1	2.01	0.42
1:C:296:ASP:HB2	1:C:297:GLN:OE1	2.20	0.42
1:C:638:ILE:HD11	1:C:1636:MET:HE3	2.01	0.42
1:C:2782:ASP:OD1	1:C:2782:ASP:N	2.52	0.42
1:C:3291:ALA:O	1:C:3293:PRO:HD3	2.20	0.42
1:C:3528:THR:HG22	1:C:3569:LEU:HD21	2.00	0.42
1:C:3868:ARG:NH1	1:C:3870:ASN:HB3	2.35	0.42
1:C:3950:ASN:HA	1:C:3953:LYS:HG2	2.02	0.42
1:A:274:LEU:HD23	1:A:274:LEU:HA	1.72	0.41
1:A:797:HIS:CG	1:A:821:LEU:HD23	2.54	0.41
1:A:1926:LEU:O	1:A:1931:LEU:HD11	2.20	0.41
1:A:1999:ARG:HG2	1:A:3635:CYS:HB3	2.01	0.41
1:A:2318:TYR:HD2	1:A:2319:PRO:HD2	1.85	0.41
1:A:3689:GLU:C	1:A:3691:GLU:H	2.27	0.41
1:A:3868:ARG:HH11	1:A:3870:ASN:HB3	1.85	0.41
1:A:4648:LEU:HD22	1:A:4803:HIS:CE1	2.54	0.41
1:B:296:ASP:HB2	1:B:297:GLN:OE1	2.20	0.41
1:B:950:LEU:HD11	1:B:970:LEU:HB3	2.01	0.41
1:B:1821:ASP:HB3	1:B:1837:GLN:HE22	1.85	0.41
1:B:1923:GLU:OE2	1:B:1923:GLU:N	2.46	0.41
1:B:2318:TYR:HD2	1:B:2319:PRO:HD2	1.85	0.41
1:B:2464:ASP:OD1	1:B:2465:ASP:N	2.53	0.41
1:B:3123:LYS:HG3	1:B:3125:VAL:H	1.84	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3640:PRO:HG2	1:B:3643:ASN:HB2	2.02	0.41
1:B:3950:ASN:HA	1:B:3953:LYS:HG2	2.02	0.41
1:D:296:ASP:HB2	1:D:297:GLN:OE1	2.20	0.41
1:D:2765:LYS:NZ	1:D:2860:PRO:HA	2.35	0.41
1:D:2990:PRO:HG2	1:D:2991:HIS:CE1	2.55	0.41
1:D:4161:ARG:H	1:D:4161:ARG:CD	2.33	0.41
1:D:4161:ARG:H	1:D:4161:ARG:HD2	1.85	0.41
1:D:4541:TRP:HA	1:D:4544:LEU:HG	2.01	0.41
1:D:4673:ARG:NH2	1:D:4698:LYS:HG3	2.35	0.41
1:D:4837:LEU:HD22	1:D:4932:ILE:HG23	2.02	0.41
1:C:110:ARG:NH1	1:C:115:ARG:HB3	2.34	0.41
1:C:879:HIS:HD2	1:C:882:TRP:HE1	1.68	0.41
1:C:935:LEU:HD21	1:C:987:ARG:NE	2.33	0.41
1:C:2819:TRP:C	1:C:2820:GLU:HG3	2.45	0.41
1:C:2871:LEU:HG	1:C:2927:LEU:HD21	2.02	0.41
1:C:3640:PRO:HG2	1:C:3643:ASN:HB2	2.02	0.41
1:C:4161:ARG:H	1:C:4161:ARG:HD2	1.85	0.41
1:A:937:CYS:N	1:A:1056:PRO:HG3	2.35	0.41
1:A:1180:ARG:C	1:A:1181:GLU:HG2	2.45	0.41
1:A:1690:ASP:OD2	1:A:1693:GLN:NE2	2.54	0.41
1:A:1821:ASP:HB3	1:A:1837:GLN:HE22	1.85	0.41
1:A:1997:GLU:O	1:A:2000:SER:OG	2.34	0.41
1:A:2615:ARG:HG2	1:A:2664:PHE:HE1	1.85	0.41
1:A:2742:THR:HB	1:A:2814:LYS:HB3	2.01	0.41
1:A:4158:PRO:HA	1:A:4161:ARG:HD3	2.01	0.41
1:A:4253:GLU:HG3	1:A:4557:ARG:NH2	2.36	0.41
2:H:79:ASP:OD1	2:H:80:TYR:HD1	2.03	0.41
2:G:35:LYS:HE2	1:C:636:ASN:HD21	1.85	0.41
1:B:69:LEU:HD21	1:B:202:MET:HE1	2.01	0.41
1:B:856:VAL:H	1:B:991:ASN:ND2	2.17	0.41
1:B:879:HIS:HD2	1:B:882:TRP:HE1	1.68	0.41
1:B:1180:ARG:C	1:B:1181:GLU:HG2	2.45	0.41
1:B:2209:GLU:OE1	1:B:2209:GLU:C	2.62	0.41
1:B:3868:ARG:NH1	1:B:3870:ASN:HB3	2.35	0.41
1:B:4137:ARG:NH2	1:B:4199:GLU:OE2	2.53	0.41
1:D:365:LYS:HB3	1:D:365:LYS:HE3	1.82	0.41
1:D:1658:ASP:OD1	1:D:1658:ASP:N	2.53	0.41
1:D:2256:TYR:O	1:D:2256:TYR:HD2	2.02	0.41
1:D:2782:ASP:N	1:D:2782:ASP:OD1	2.52	0.41
1:D:2871:LEU:HG	1:D:2927:LEU:HD21	2.02	0.41
1:D:3036:LYS:O	1:D:3039:ILE:HG22	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:3263:TYR:HD1	1:D:3270:ILE:HD12	1.84	0.41
1:C:1488:LYS:HB2	1:C:1488:LYS:HE3	1.83	0.41
1:C:2008:MET:HE1	1:C:2022:PRO:CD	2.50	0.41
1:C:3604:TYR:CD2	1:C:3604:TYR:C	2.98	0.41
1:A:1180:ARG:O	1:A:1181:GLU:HG2	2.20	0.41
1:A:2464:ASP:OD1	1:A:2465:ASP:N	2.53	0.41
1:A:2527:LEU:HD12	1:A:2527:LEU:HA	1.86	0.41
1:A:2537:ASP:OD2	1:A:2588:ARG:NH1	2.51	0.41
1:A:2587:TYR:O	1:A:2590:SER:OG	2.24	0.41
1:A:4735:GLU:H	1:A:4735:GLU:CD	2.28	0.41
2:H:23:VAL:HG22	2:H:47:LYS:HG2	2.03	0.41
1:B:873:LYS:NZ	1:B:877:ASN:HB2	2.35	0.41
1:B:2326:CYS:O	1:B:2330:ARG:HG3	2.20	0.41
1:B:2871:LEU:HG	1:B:2927:LEU:HD21	2.02	0.41
1:B:3233:PRO:HG2	1:B:3239:MET:HA	2.00	0.41
1:B:3367:LYS:HB2	1:B:3367:LYS:HE3	1.85	0.41
1:B:3390:GLY:HA2	1:B:3393:LEU:HG	2.03	0.41
1:B:3540:TYR:CE1	1:B:3549:VAL:HG21	2.55	0.41
1:B:4148:THR:HG21	1:B:4180:ARG:HH21	1.85	0.41
1:D:873:LYS:NZ	1:D:877:ASN:HB2	2.35	0.41
1:D:1249:PRO:HA	1:D:1250:PRO:HD3	1.99	0.41
1:D:2008:MET:HE1	1:D:2022:PRO:CD	2.50	0.41
1:D:2282:ASP:HA	1:D:2341:VAL:HG13	2.01	0.41
1:D:2574:HIS:CD2	1:D:2574:HIS:H	2.36	0.41
1:D:2785:LEU:C	1:D:2786:LYS:HG3	2.45	0.41
1:D:3107:VAL:HB	1:D:3111:ARG:HH22	1.85	0.41
1:D:3950:ASN:HA	1:D:3953:LYS:HG2	2.02	0.41
1:D:4047:MET:HE3	1:D:4047:MET:HB3	1.90	0.41
1:C:239:ASP:OD1	1:C:239:ASP:N	2.53	0.41
1:C:642:THR:OG1	1:C:1613:LEU:HD12	2.20	0.41
1:C:1180:ARG:C	1:C:1181:GLU:HG2	2.45	0.41
1:C:2608:MET:HB3	1:C:2608:MET:HE3	1.84	0.41
1:C:4253:GLU:HG3	1:C:4557:ARG:NH2	2.36	0.41
1:A:197:GLN:H	1:A:197:GLN:HG3	1.74	0.41
1:A:239:ASP:N	1:A:239:ASP:OD1	2.53	0.41
1:A:2516:ASP:OD1	1:A:2516:ASP:N	2.52	0.41
1:A:2871:LEU:HD11	1:A:2937:VAL:CG2	2.51	0.41
1:A:3230:LEU:HD23	1:A:3230:LEU:H	1.86	0.41
1:A:3270:ILE:HA	1:A:3274:LEU:HD12	2.02	0.41
1:A:3868:ARG:NH1	1:A:3870:ASN:HB3	2.35	0.41
1:A:4541:TRP:HA	1:A:4544:LEU:HG	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4917:ASP:OD2	1:D:4888:TYR:OH	2.28	0.41
1:B:239:ASP:OD1	1:B:239:ASP:N	2.53	0.41
1:B:921:ASN:O	1:B:924:MET:HE3	2.20	0.41
1:B:2694:GLU:HA	1:B:2697:ARG:NH2	2.35	0.41
1:B:4158:PRO:HA	1:B:4161:ARG:HD3	2.01	0.41
1:B:4950:VAL:HG12	1:B:4951:LYS:HE2	2.03	0.41
1:D:1424:PRO:HA	1:D:1427:ILE:HG22	2.01	0.41
1:D:1821:ASP:HB3	1:D:1837:GLN:HE22	1.85	0.41
1:D:2615:ARG:HG2	1:D:2664:PHE:HE1	1.85	0.41
1:D:2815:ALA:HB1	1:D:2881:ASN:ND2	2.35	0.41
1:D:3114:LYS:HD2	1:D:3125:VAL:HG11	2.02	0.41
1:D:3390:GLY:HA2	1:D:3393:LEU:HG	2.03	0.41
1:D:3594:ARG:CZ	1:D:3594:ARG:HB3	2.51	0.41
1:D:4010:ILE:O	1:D:4014:LYS:HG3	2.19	0.41
1:D:4148:THR:HG21	1:D:4180:ARG:HH21	1.86	0.41
1:C:856:VAL:H	1:C:991:ASN:ND2	2.17	0.41
1:C:3107:VAL:HB	1:C:3111:ARG:HH22	1.85	0.41
1:C:4119:GLU:HG2	1:C:4120:ASN:OD1	2.21	0.41
1:C:4148:THR:HG21	1:C:4180:ARG:HH21	1.85	0.41
1:A:297:GLN:OE1	1:A:297:GLN:N	2.49	0.41
1:A:3263:TYR:HD1	1:A:3270:ILE:HD12	1.84	0.41
1:A:3291:ALA:O	1:A:3293:PRO:HD3	2.21	0.41
1:A:3762:ARG:HH21	1:A:4755:GLU:HB2	1.85	0.41
1:B:935:LEU:HD11	1:B:987:ARG:NH2	2.36	0.41
1:B:1575:LEU:HD23	1:B:1575:LEU:HA	1.90	0.41
1:B:2516:ASP:N	1:B:2516:ASP:OD1	2.52	0.41
1:B:2990:PRO:HG2	1:B:2991:HIS:CE1	2.55	0.41
1:B:3201:MET:HE3	1:B:3203:VAL:CG2	2.49	0.41
1:B:3230:LEU:HD23	1:B:3230:LEU:H	1.86	0.41
1:B:3604:TYR:CD2	1:B:3604:TYR:C	2.99	0.41
1:B:4119:GLU:HG2	1:B:4120:ASN:OD1	2.20	0.41
1:B:4541:TRP:HA	1:B:4544:LEU:HG	2.01	0.41
1:B:4735:GLU:H	1:B:4735:GLU:CD	2.28	0.41
1:B:4885:PHE:O	1:B:4889:VAL:HG22	2.21	0.41
1:D:638:ILE:HD11	1:D:1636:MET:HE3	2.01	0.41
1:D:2482:ASP:OD1	1:D:2482:ASP:C	2.64	0.41
1:D:3246:LEU:O	1:D:3250:MET:HG2	2.19	0.41
1:D:3465:ASN:C	1:D:3467:MET:H	2.28	0.41
1:D:3621:HIS:C	1:D:3622:LYS:HG3	2.45	0.41
1:D:4119:GLU:HG2	1:D:4120:ASN:OD1	2.21	0.41
1:C:343:GLU:N	1:C:343:GLU:OE1	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:873:LYS:NZ	1:C:877:ASN:HB2	2.35	0.41
1:C:978:THR:O	1:C:982:THR:HG23	2.20	0.41
1:C:1101:ARG:NH1	1:C:1115:LEU:O	2.48	0.41
1:C:2418:LEU:HD23	1:C:2418:LEU:HA	1.92	0.41
1:C:2464:ASP:OD1	1:C:2465:ASP:N	2.53	0.41
1:C:2881:ASN:HA	1:C:2884:ASN:HD21	1.85	0.41
1:C:3501:ASP:OD1	1:C:3501:ASP:N	2.54	0.41
1:C:4158:PRO:HA	1:C:4161:ARG:HD3	2.01	0.41
1:A:924:MET:O	1:A:928:THR:HG23	2.21	0.41
1:A:935:LEU:HD11	1:A:987:ARG:NH2	2.36	0.41
1:A:2383:ALA:O	1:A:2386:ILE:HG13	2.20	0.41
1:A:3114:LYS:HD2	1:A:3125:VAL:HG11	2.02	0.41
1:A:3390:GLY:HA2	1:A:3393:LEU:HG	2.03	0.41
1:A:4137:ARG:NH2	1:A:4199:GLU:OE2	2.53	0.41
1:A:4933:GLN:HG2	1:A:4933:GLN:H	1.72	0.41
1:B:343:GLU:OE1	1:B:343:GLU:N	2.54	0.41
1:B:1180:ARG:O	1:B:1181:GLU:HG2	2.20	0.41
1:B:1469:VAL:HG13	1:B:1492:CYS:HB3	2.03	0.41
1:B:2224:ARG:H	1:B:2224:ARG:CD	2.34	0.41
1:B:2263:ILE:HD12	1:B:2263:ILE:HA	1.96	0.41
1:B:2383:ALA:O	1:B:2386:ILE:HG13	2.20	0.41
1:B:2482:ASP:OD1	1:B:2482:ASP:C	2.64	0.41
1:B:3757:GLU:N	1:B:3757:GLU:OE2	2.54	0.41
1:D:788:LYS:HE3	1:D:788:LYS:HB2	1.78	0.41
1:D:2326:CYS:O	1:D:2330:ARG:HG3	2.20	0.41
1:D:2819:TRP:C	1:D:2820:GLU:HG3	2.45	0.41
1:D:3501:ASP:OD1	1:D:3501:ASP:N	2.54	0.41
1:D:4186:ALA:O	1:D:4188:ARG:NH1	2.53	0.41
1:D:4942:GLU:HA	1:D:4945:ASP:OD2	2.20	0.41
1:C:275:ARG:HG3	1:C:338:GLU:CD	2.46	0.41
1:C:957:LYS:HB2	1:C:957:LYS:HE2	1.90	0.41
1:C:2326:CYS:O	1:C:2330:ARG:HG3	2.20	0.41
1:C:2742:THR:HB	1:C:2814:LYS:HB3	2.01	0.41
1:C:3201:MET:HE3	1:C:3203:VAL:CG2	2.49	0.41
1:C:3270:ILE:HA	1:C:3274:LEU:HD12	2.01	0.41
1:C:3547:GLU:HA	1:C:3550:ARG:HH12	1.85	0.41
1:C:3621:HIS:O	1:C:3622:LYS:HG3	2.21	0.41
1:C:3858:MET:HG3	1:C:3859:VAL:N	2.35	0.41
1:C:4137:ARG:NH2	1:C:4199:GLU:OE2	2.53	0.41
1:C:4837:LEU:HD22	1:C:4932:ILE:HG23	2.02	0.41
1:A:343:GLU:OE1	1:A:343:GLU:N	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:952:LYS:HD3	1:A:970:LEU:HA	2.03	0.41
1:A:978:THR:O	1:A:982:THR:HG23	2.20	0.41
1:A:2482:ASP:OD1	1:A:2482:ASP:C	2.64	0.41
1:A:2627:VAL:HG22	1:A:2678:LEU:HB2	2.02	0.41
1:A:3269:VAL:HA	1:A:3273:THR:HB	2.03	0.41
1:A:4218:ILE:O	1:A:4222:VAL:HG23	2.21	0.41
1:B:416:LYS:HE3	1:B:416:LYS:HB2	1.84	0.41
1:B:937:CYS:N	1:B:1056:PRO:HG3	2.35	0.41
1:B:2586:VAL:HG13	1:B:2607:LEU:HD13	2.03	0.41
1:B:2627:VAL:HG22	1:B:2678:LEU:HB2	2.02	0.41
1:B:2742:THR:HB	1:B:2814:LYS:HB3	2.01	0.41
1:B:2785:LEU:C	1:B:2786:LYS:HG3	2.45	0.41
1:B:2859:PRO:HA	1:B:2860:PRO:HD3	1.95	0.41
1:B:2932:MET:HE3	1:B:2932:MET:HB2	1.83	0.41
1:B:3731:LYS:HA	1:B:3734:HIS:NE2	2.36	0.41
1:B:4253:GLU:HG3	1:B:4557:ARG:NH2	2.36	0.41
1:B:4658:ILE:HD11	1:B:4792:LEU:O	2.21	0.41
1:D:2527:LEU:HA	1:D:2527:LEU:HD12	1.87	0.41
1:D:2859:PRO:HA	1:D:2860:PRO:HD3	1.95	0.41
1:D:3621:HIS:O	1:D:3622:LYS:HG3	2.21	0.41
1:D:3823:LYS:HD3	1:D:3823:LYS:HA	1.79	0.41
1:D:3868:ARG:NH1	1:D:3870:ASN:HB3	2.35	0.41
1:C:1733:GLU:HG2	1:C:2201:LEU:HD23	2.03	0.41
1:C:2990:PRO:HG2	1:C:2991:HIS:CE1	2.55	0.41
1:C:3465:ASN:C	1:C:3467:MET:H	2.28	0.41
1:C:3621:HIS:C	1:C:3622:LYS:HG3	2.45	0.41
1:C:4209:GLN:H	1:C:4209:GLN:CD	2.29	0.41
1:C:4658:ILE:HD11	1:C:4792:LEU:O	2.21	0.41
1:C:4950:VAL:HG12	1:C:4951:LYS:HE2	2.03	0.41
1:A:545:ASP:OD1	1:A:582:HIS:NE2	2.42	0.41
1:A:796:ARG:O	1:A:1619:ARG:NH2	2.53	0.41
1:A:1658:ASP:OD1	1:A:1658:ASP:N	2.53	0.41
1:A:1999:ARG:HG3	1:A:3635:CYS:O	2.21	0.41
1:A:2530:MET:HE3	1:A:2559:LEU:HD21	2.03	0.41
1:A:2677:LYS:HE2	1:A:2677:LYS:HB3	1.83	0.41
1:A:3950:ASN:HA	1:A:3953:LYS:HG2	2.02	0.41
1:A:4161:ARG:H	1:A:4161:ARG:HD2	1.85	0.41
1:A:4232:GLU:HG2	1:A:5019:TRP:NE1	2.28	0.41
1:B:2520:HIS:O	1:B:2524:VAL:HG22	2.21	0.41
1:B:2765:LYS:NZ	1:B:2860:PRO:HA	2.35	0.41
1:B:3621:HIS:O	1:B:3622:LYS:HG3	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3842:LEU:HB2	1:B:3929:SER:HB2	2.03	0.41
1:B:3868:ARG:HH11	1:B:3870:ASN:HB3	1.85	0.41
1:B:4218:ILE:O	1:B:4222:VAL:HG23	2.21	0.41
1:B:4648:LEU:HD22	1:B:4803:HIS:CE1	2.54	0.41
1:B:4904:PRO:CB	1:B:4913:ARG:HG2	2.51	0.41
1:D:176:SER:OG	1:D:178:ARG:NH1	2.48	0.41
1:D:343:GLU:OE1	1:D:343:GLU:N	2.54	0.41
1:D:921:ASN:O	1:D:924:MET:HE3	2.20	0.41
1:D:2530:MET:HE3	1:D:2559:LEU:HD21	2.03	0.41
1:D:2586:VAL:HG13	1:D:2607:LEU:HD13	2.03	0.41
1:D:2625:ARG:HH12	1:D:2629:ASP:CG	2.29	0.41
1:D:2627:VAL:HG22	1:D:2678:LEU:HB2	2.02	0.41
1:D:3230:LEU:H	1:D:3230:LEU:HD23	1.86	0.41
1:D:3547:GLU:HA	1:D:3550:ARG:HH12	1.85	0.41
1:D:3604:TYR:CD2	1:D:3604:TYR:C	2.98	0.41
1:D:3640:PRO:HG2	1:D:3643:ASN:HB2	2.02	0.41
1:D:3852:LYS:HE3	1:D:3852:LYS:HB3	1.89	0.41
1:C:951:LYS:HB3	1:C:971:ASP:HB3	2.03	0.41
1:C:961:MET:HB3	1:C:961:MET:HE3	1.69	0.41
1:C:1287:LEU:HD11	1:C:1599:MET:HE3	2.03	0.41
1:C:2212:VAL:HG11	1:C:2256:TYR:CE2	2.56	0.41
1:C:3158:LEU:HD23	1:C:3158:LEU:HA	1.92	0.41
1:C:4568:PHE:CD1	1:C:4568:PHE:C	2.99	0.41
1:C:4885:PHE:O	1:C:4889:VAL:HG22	2.21	0.41
1:A:1469:VAL:HG13	1:A:1492:CYS:HB3	2.03	0.41
1:A:2173:GLN:H	1:A:2173:GLN:CD	2.22	0.41
1:A:2326:CYS:O	1:A:2330:ARG:HG3	2.21	0.41
1:A:2514:ASN:OD1	1:A:2514:ASN:N	2.52	0.41
1:A:2520:HIS:O	1:A:2524:VAL:HG22	2.21	0.41
1:A:2586:VAL:HG13	1:A:2607:LEU:HD13	2.03	0.41
1:A:2785:LEU:C	1:A:2786:LYS:HG3	2.45	0.41
1:A:2932:MET:HE3	1:A:2932:MET:HB2	1.84	0.41
1:A:3158:LEU:HD23	1:A:3158:LEU:HA	1.91	0.41
1:A:3547:GLU:HA	1:A:3550:ARG:HH12	1.85	0.41
1:A:3594:ARG:CZ	1:A:3594:ARG:HB3	2.51	0.41
1:A:3621:HIS:C	1:A:3622:LYS:HG3	2.45	0.41
1:A:3842:LEU:HB2	1:A:3929:SER:HB2	2.03	0.41
1:A:4148:THR:HG21	1:A:4180:ARG:HH21	1.86	0.41
1:A:4186:ALA:O	1:A:4188:ARG:NH1	2.53	0.41
1:A:4931:ILE:HG23	1:D:4940:PHE:HE1	1.86	0.41
1:A:4950:VAL:HG12	1:A:4951:LYS:HE2	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:11:ASP:OD2	2:H:11:ASP:C	2.63	0.41
1:B:365:LYS:HB3	1:B:365:LYS:HE3	1.82	0.41
1:B:978:THR:O	1:B:982:THR:HG23	2.20	0.41
1:B:1231[B]:GLN:H	1:B:1231[B]:GLN:HG3	1.61	0.41
1:B:1287:LEU:HD11	1:B:1599:MET:HE3	2.03	0.41
1:B:1926:LEU:O	1:B:1931:LEU:HD11	2.20	0.41
1:B:1999:ARG:HG3	1:B:3635:CYS:O	2.21	0.41
1:B:2412:GLU:C	1:B:2414:ASN:H	2.29	0.41
1:B:2819:TRP:C	1:B:2820:GLU:HG3	2.45	0.41
1:B:3501:ASP:OD1	1:B:3501:ASP:N	2.54	0.41
1:B:3858:MET:HG3	1:B:3859:VAL:N	2.35	0.41
1:B:4112:LEU:O	1:B:4115:SER:OG	2.36	0.41
1:B:4823:LEU:HD23	1:B:4823:LEU:HA	1.94	0.41
1:B:4897:ILE:HD12	1:B:4897:ILE:HA	1.96	0.41
1:D:156:GLN:HG2	1:D:157:ARG:NH1	2.36	0.41
1:D:275:ARG:HG3	1:D:338:GLU:CD	2.46	0.41
1:D:460:GLN:N	1:D:463:GLU:OE2	2.41	0.41
1:D:924:MET:O	1:D:928:THR:HG23	2.21	0.41
1:D:952:LYS:HD3	1:D:970:LEU:HA	2.03	0.41
1:D:1170:MET:HE3	1:D:1170:MET:HB2	1.81	0.41
1:D:1180:ARG:O	1:D:1181:GLU:HG2	2.20	0.41
1:D:1180:ARG:C	1:D:1181:GLU:HG2	2.45	0.41
1:D:2224:ARG:H	1:D:2224:ARG:CD	2.34	0.41
1:D:2881:ASN:HA	1:D:2884:ASN:HD21	1.85	0.41
1:D:3227:ARG:O	1:D:3232:LEU:HB2	2.21	0.41
1:D:3762:ARG:HH21	1:D:4755:GLU:HB2	1.85	0.41
1:D:4240:ASP:OD2	1:D:4672:LYS:NZ	2.49	0.41
1:D:4950:VAL:HG12	1:D:4951:LYS:HE2	2.03	0.41
1:C:156:GLN:HG2	1:C:157:ARG:NH1	2.36	0.41
1:C:484:LEU:O	1:C:488:LEU:HG	2.21	0.41
1:C:901:LYS:HD2	1:C:901:LYS:HA	1.84	0.41
1:C:1055:PRO:HA	1:C:1056:PRO:HD3	1.98	0.41
1:C:1180:ARG:O	1:C:1181:GLU:HG2	2.20	0.41
1:C:1469:VAL:HG13	1:C:1492:CYS:HB3	2.03	0.41
1:C:2625:ARG:HH12	1:C:2629:ASP:CG	2.29	0.41
1:C:2632:ILE:HD12	1:C:2633:LEU:H	1.86	0.41
1:C:2765:LYS:NZ	1:C:2860:PRO:HA	2.35	0.41
1:C:2785:LEU:C	1:C:2786:LYS:HG3	2.45	0.41
1:C:3114:LYS:HD2	1:C:3125:VAL:HG11	2.02	0.41
1:C:3623:LEU:HG	1:C:3624:LEU:H	1.86	0.41
1:C:3756:LYS:HE3	1:C:3756:LYS:HB2	1.79	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:3762:ARG:HH21	1:C:4755:GLU:HB2	1.85	0.41
1:C:4735:GLU:H	1:C:4735:GLU:CD	2.28	0.41
1:C:4942:GLU:HA	1:C:4945:ASP:OD2	2.20	0.41
1:A:2008:MET:HE1	1:A:2022:PRO:CD	2.50	0.41
1:A:3501:ASP:N	1:A:3501:ASP:OD1	2.54	0.41
1:A:3621:HIS:O	1:A:3622:LYS:HG3	2.21	0.41
2:G:23:VAL:HG22	2:G:47:LYS:HG2	2.03	0.41
1:B:2881:ASN:HA	1:B:2884:ASN:HD21	1.85	0.41
1:B:3547:GLU:HA	1:B:3550:ARG:HH12	1.85	0.41
1:D:239:ASP:N	1:D:239:ASP:OD1	2.53	0.41
1:D:1943:LEU:HB2	1:D:2123:LEU:HD21	2.03	0.41
1:D:2212:VAL:HG11	1:D:2256:TYR:CE2	2.56	0.41
1:D:2520:HIS:O	1:D:2524:VAL:HG22	2.21	0.41
1:D:2867:LEU:CD2	1:D:2871:LEU:HB3	2.51	0.41
1:D:2871:LEU:HD11	1:D:2937:VAL:CG2	2.50	0.41
1:D:4218:ILE:O	1:D:4222:VAL:HG23	2.21	0.41
1:D:4253:GLU:HG3	1:D:4557:ARG:NH2	2.35	0.41
1:D:4658:ILE:HD11	1:D:4792:LEU:O	2.21	0.41
1:C:1099:GLU:CD	1:C:1125:ASN:HD21	2.29	0.41
1:C:2224:ARG:H	1:C:2224:ARG:CD	2.34	0.41
1:C:2482:ASP:OD1	1:C:2482:ASP:C	2.64	0.41
1:C:2586:VAL:HG13	1:C:2607:LEU:HD13	2.03	0.41
1:C:3227:ARG:O	1:C:3232:LEU:HB2	2.21	0.41
1:C:3230:LEU:HD23	1:C:3230:LEU:H	1.86	0.41
1:C:3390:GLY:HA2	1:C:3393:LEU:HG	2.03	0.41
1:C:3757:GLU:N	1:C:3757:GLU:OE2	2.54	0.41
1:C:3969:ILE:HG21	1:C:3980:LEU:HD12	2.01	0.41
1:A:1287:LEU:HD11	1:A:1599:MET:HE3	2.03	0.40
1:A:1634:LEU:HD23	1:A:1634:LEU:HA	1.91	0.40
1:A:2212:VAL:HG11	1:A:2256:TYR:CE2	2.56	0.40
1:A:2608:MET:HE3	1:A:2608:MET:HB3	1.84	0.40
1:A:2632:ILE:HD12	1:A:2633:LEU:H	1.86	0.40
1:A:3023:LYS:O	1:A:3023:LYS:HG3	2.20	0.40
1:A:3227:ARG:O	1:A:3232:LEU:HB2	2.21	0.40
1:A:3400:VAL:HG23	1:A:3403:ARG:NH2	2.34	0.40
1:A:3465:ASN:C	1:A:3467:MET:H	2.28	0.40
1:A:3604:TYR:CD2	1:A:3604:TYR:C	2.98	0.40
1:A:3757:GLU:OE2	1:A:3757:GLU:N	2.54	0.40
1:A:4209:GLN:H	1:A:4209:GLN:CD	2.29	0.40
1:A:4769:MET:SD	1:A:4769:MET:N	2.79	0.40
1:A:4837:LEU:HD22	1:A:4932:ILE:HG23	2.02	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1733:GLU:HG2	1:B:2201:LEU:HD23	2.03	0.40
1:B:1980:LEU:O	1:B:1980:LEU:HD13	2.21	0.40
1:B:2212:VAL:HG11	1:B:2256:TYR:CE2	2.56	0.40
1:B:3277:LEU:HD23	1:B:3277:LEU:HA	1.92	0.40
1:B:3623:LEU:HG	1:B:3624:LEU:H	1.86	0.40
1:B:4209:GLN:H	1:B:4209:GLN:CD	2.29	0.40
1:D:110:ARG:HD3	1:D:115:ARG:HH21	1.86	0.40
1:D:1287:LEU:HD11	1:D:1599:MET:HE3	2.03	0.40
1:D:2229:VAL:HB	1:D:2267:MET:HE1	2.02	0.40
1:D:2523:ASP:HB3	1:D:2578:MET:SD	2.62	0.40
1:D:3011:THR:OG1	1:D:3070:ILE:HD13	2.21	0.40
1:D:3291:ALA:O	1:D:3293:PRO:HD3	2.21	0.40
1:D:4568:PHE:CD1	1:D:4568:PHE:C	2.99	0.40
1:C:921:ASN:O	1:C:924:MET:HE3	2.20	0.40
1:C:2330:ARG:HA	1:C:2333:ASP:OD2	2.22	0.40
1:C:3036:LYS:O	1:C:3039:ILE:HG22	2.20	0.40
1:A:156:GLN:HG2	1:A:157:ARG:NH1	2.36	0.40
1:A:856:VAL:H	1:A:991:ASN:ND2	2.17	0.40
1:A:1031:THR:HG22	1:A:1035:ASN:ND2	2.36	0.40
1:A:1674:CYS:HA	1:A:1678:ASN:HB3	2.04	0.40
1:A:1943:LEU:HB2	1:A:2123:LEU:HD21	2.03	0.40
1:A:1983:ALA:O	1:A:1987:SER:OG	2.22	0.40
1:A:3107:VAL:HB	1:A:3111:ARG:HH22	1.85	0.40
1:A:3171:SER:O	1:A:3174:SER:OG	2.36	0.40
1:A:3640:PRO:HG2	1:A:3643:ASN:HB2	2.02	0.40
2:H:32:ASP:OD1	2:H:32:ASP:C	2.64	0.40
2:F:79:ASP:OD1	2:F:80:TYR:HD1	2.04	0.40
1:B:456:SER:O	1:B:459:LEU:HD12	2.22	0.40
1:B:484:LEU:O	1:B:488:LEU:HG	2.21	0.40
1:B:921:ASN:HB3	1:B:924:MET:CE	2.52	0.40
1:B:1773:PRO:HA	1:B:1774:PRO:HD3	1.90	0.40
1:B:2608:MET:HE3	1:B:2608:MET:HB3	1.84	0.40
1:B:2625:ARG:HH12	1:B:2629:ASP:CG	2.29	0.40
1:B:3291:ALA:O	1:B:3293:PRO:HD3	2.20	0.40
1:B:3400:VAL:HG23	1:B:3403:ARG:NH2	2.34	0.40
1:B:3878:ASP:N	1:B:3878:ASP:OD1	2.55	0.40
1:B:4837:LEU:HD22	1:B:4932:ILE:HG23	2.02	0.40
1:D:484:LEU:O	1:D:488:LEU:HG	2.21	0.40
1:D:1733:GLU:HG2	1:D:2201:LEU:HD23	2.03	0.40
1:D:2383:ALA:O	1:D:2386:ILE:HG13	2.20	0.40
1:D:3604:TYR:O	1:D:3608:GLN:HG2	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:3842:LEU:HB2	1:D:3929:SER:HB2	2.03	0.40
1:D:4137:ARG:NH2	1:D:4199:GLU:OE2	2.53	0.40
1:D:4735:GLU:H	1:D:4735:GLU:CD	2.28	0.40
1:C:891:TRP:HD1	1:C:902:ARG:HE	1.69	0.40
1:C:2967:MET:HE3	1:C:2967:MET:HA	2.03	0.40
1:C:3087:ILE:HD13	1:C:3087:ILE:HA	1.89	0.40
1:C:3731:LYS:HA	1:C:3734:HIS:NE2	2.36	0.40
1:C:4218:ILE:O	1:C:4222:VAL:HG23	2.21	0.40
1:C:4817:ALA:HB3	1:C:4818:MET:SD	2.62	0.40
1:A:62:LEU:HD12	1:A:62:LEU:HA	1.83	0.40
1:A:110:ARG:HD3	1:A:115:ARG:HH21	1.86	0.40
1:A:275:ARG:HG3	1:A:338:GLU:CD	2.46	0.40
1:A:384:MET:H	1:A:384:MET:CE	2.32	0.40
1:A:484:LEU:O	1:A:488:LEU:HG	2.21	0.40
1:A:2625:ARG:HH12	1:A:2629:ASP:CG	2.29	0.40
1:A:2819:TRP:C	1:A:2820:GLU:HG3	2.45	0.40
1:A:3535:LEU:O	1:A:3538:THR:OG1	2.29	0.40
1:A:4119:GLU:HG2	1:A:4120:ASN:OD1	2.21	0.40
1:B:879:HIS:HA	1:B:882:TRP:CE2	2.56	0.40
1:B:951:LYS:HB3	1:B:971:ASP:HB3	2.03	0.40
1:B:2173:GLN:H	1:B:2173:GLN:CD	2.22	0.40
1:B:2523:ASP:HB3	1:B:2578:MET:SD	2.62	0.40
1:B:2527:LEU:HD12	1:B:2527:LEU:HA	1.87	0.40
1:B:2530:MET:HE3	1:B:2559:LEU:HD21	2.03	0.40
1:B:4247:ILE:HA	1:B:4250:GLN:OE1	2.22	0.40
1:B:4568:PHE:CD1	1:B:4568:PHE:C	2.99	0.40
1:D:879:HIS:HA	1:D:882:TRP:CE2	2.56	0.40
1:D:935:LEU:HD11	1:D:987:ARG:NH2	2.36	0.40
1:D:1674:CYS:HA	1:D:1678:ASN:HB3	2.03	0.40
1:D:2412:GLU:C	1:D:2414:ASN:H	2.29	0.40
1:D:2754:PHE:HE2	1:D:2813:LEU:HD11	1.87	0.40
1:C:110:ARG:HD3	1:C:115:ARG:HH21	1.86	0.40
1:C:460:GLN:CD	1:C:462:GLU:H	2.29	0.40
1:C:1031:THR:HG22	1:C:1035:ASN:ND2	2.36	0.40
1:C:2383:ALA:O	1:C:2386:ILE:HG13	2.20	0.40
1:C:2520:HIS:O	1:C:2524:VAL:HG22	2.21	0.40
1:C:2599:GLN:O	1:C:2603:ILE:HG13	2.22	0.40
1:C:2867:LEU:CD2	1:C:2871:LEU:HB3	2.51	0.40
1:C:3457:ASN:HA	1:C:3460:VAL:HG22	2.03	0.40
1:C:3842:LEU:HB2	1:C:3929:SER:HB2	2.03	0.40
1:A:456:SER:O	1:A:459:LEU:HD12	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2888:ARG:O	1:A:2892:GLN:HG2	2.22	0.40
1:A:4247:ILE:HA	1:A:4250:GLN:OE1	2.22	0.40
1:A:4583:SER:HB3	1:A:4631:PHE:HE2	1.87	0.40
1:B:2867:LEU:CD2	1:B:2871:LEU:HB3	2.51	0.40
1:B:3011:THR:OG1	1:B:3070:ILE:HD13	2.21	0.40
1:D:1999:ARG:HG3	1:D:3635:CYS:O	2.21	0.40
1:D:2138:LEU:HD23	1:D:2138:LEU:HA	1.89	0.40
1:D:2330:ARG:HA	1:D:2333:ASP:OD2	2.22	0.40
1:D:2888:ARG:O	1:D:2892:GLN:HG2	2.22	0.40
1:D:3688:GLU:C	1:D:3690:VAL:H	2.29	0.40
1:C:952:LYS:HD3	1:C:970:LEU:HA	2.03	0.40
1:C:1943:LEU:HB2	1:C:2123:LEU:HD21	2.03	0.40
1:C:2198:MET:HE2	1:C:2198:MET:HB2	1.92	0.40
1:C:3594:ARG:HB3	1:C:3594:ARG:CZ	2.51	0.40
1:C:4247:ILE:HA	1:C:4250:GLN:OE1	2.22	0.40
1:A:879:HIS:HD2	1:A:882:TRP:HE1	1.68	0.40
1:A:921:ASN:O	1:A:924:MET:HE3	2.20	0.40
1:A:3011:THR:OG1	1:A:3070:ILE:HD13	2.21	0.40
1:A:3194:LEU:HD12	1:A:3194:LEU:HA	1.93	0.40
1:A:4544:LEU:HD12	1:A:4545:GLU:N	2.37	0.40
1:A:4658:ILE:HD11	1:A:4792:LEU:O	2.21	0.40
2:E:23:VAL:HG22	2:E:47:LYS:HG2	2.03	0.40
2:E:32:ASP:OD1	2:E:32:ASP:C	2.64	0.40
2:F:15:PHE:C	2:F:17:LYS:HZ3	2.29	0.40
1:B:232:THR:HG21	1:B:252:VAL:HG21	2.03	0.40
1:B:552:ASP:OD1	1:B:552:ASP:N	2.54	0.40
1:B:924:MET:O	1:B:928:THR:HG23	2.21	0.40
1:B:952:LYS:HD3	1:B:970:LEU:HA	2.03	0.40
1:B:2393:ASP:OD1	1:B:2418:LEU:N	2.55	0.40
1:B:3227:ARG:O	1:B:3232:LEU:HB2	2.21	0.40
1:D:232:THR:HG21	1:D:252:VAL:HG21	2.03	0.40
1:D:460:GLN:CD	1:D:462:GLU:H	2.29	0.40
1:D:1099:GLU:CD	1:D:1125:ASN:HD21	2.29	0.40
1:D:1648:MET:HE2	1:D:1648:MET:HB3	1.85	0.40
1:D:3269:VAL:HA	1:D:3273:THR:HB	2.03	0.40
1:D:3731:LYS:HA	1:D:3734:HIS:NE2	2.36	0.40
1:D:4209:GLN:H	1:D:4209:GLN:CD	2.29	0.40
1:C:935:LEU:HD11	1:C:987:ARG:NH2	2.36	0.40
1:C:1690:ASP:OD2	1:C:1693:GLN:NE2	2.54	0.40
1:C:2627:VAL:HG22	1:C:2678:LEU:HB2	2.02	0.40
1:C:2765:LYS:HA	1:C:2765:LYS:HD3	1.81	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:2856:ASN:ND2	1:C:2858:GLN:OE1	2.49	0.40
1:C:2888:ARG:O	1:C:2892:GLN:HG2	2.22	0.40
1:C:3011:THR:OG1	1:C:3070:ILE:HD13	2.21	0.40
1:C:3023:LYS:O	1:C:3023:LYS:HG3	2.20	0.40
1:C:3688:GLU:C	1:C:3690:VAL:H	2.29	0.40
1:C:3723:MET:HE3	1:C:3793:MET:CE	2.48	0.40
1:C:3878:ASP:OD1	1:C:3878:ASP:N	2.55	0.40
1:C:4544:LEU:HD12	1:C:4545:GLU:N	2.37	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%)	4235 (97%)	150 (3%)	0	100	100
1	B	4385/5037 (87%)	4235 (97%)	150 (3%)	0	100	100
1	C	4385/5037 (87%)	4236 (97%)	149 (3%)	0	100	100
1	D	4385/5037 (87%)	4235 (97%)	150 (3%)	0	100	100
2	E	105/108 (97%)	104 (99%)	1 (1%)	0	100	100
2	F	105/108 (97%)	103 (98%)	2 (2%)	0	100	100
2	G	105/108 (97%)	104 (99%)	1 (1%)	0	100	100
2	H	105/108 (97%)	103 (98%)	2 (2%)	0	100	100
All	All	17960/20580 (87%)	17355 (97%)	605 (3%)	0	100	100

There are no Ramachandran outliers to report.

5.3.2 Protein sidechains ⓘ

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	3836/4276 (90%)	3813 (99%)	23 (1%)	78	85
1	B	3836/4276 (90%)	3813 (99%)	23 (1%)	78	85
1	C	3836/4276 (90%)	3813 (99%)	23 (1%)	78	85
1	D	3836/4276 (90%)	3813 (99%)	23 (1%)	78	85
2	E	89/90 (99%)	85 (96%)	4 (4%)	24	56
2	F	89/90 (99%)	86 (97%)	3 (3%)	32	63
2	G	89/90 (99%)	85 (96%)	4 (4%)	24	56
2	H	89/90 (99%)	85 (96%)	4 (4%)	24	56
All	All	15700/17464 (90%)	15593 (99%)	107 (1%)	73	84

All (107) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	309	THR
1	A	866	HIS
1	A	945	LYS
1	A	1021	LEU
1	A	1636	MET
1	A	1929	MET
1	A	1931	LEU
1	A	1966	VAL
1	A	2169	GLN
1	A	2485	LEU
1	A	2862	LEU
1	A	2977	LEU
1	A	3569	LEU
1	A	3623	LEU
1	A	3751	VAL
1	A	3753	PHE
1	A	3756	LYS
1	A	3899	PHE
1	A	4164	LEU

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Mol	Chain	Res	Type
1	A	4695	ASP
1	A	4771	ILE
1	A	4937	ILE
1	A	4973	HIS
2	E	2	VAL
2	E	25	HIS
2	E	67	SER
2	E	85	THR
2	H	2	VAL
2	H	25	HIS
2	H	67	SER
2	H	85	THR
2	G	2	VAL
2	G	25	HIS
2	G	67	SER
2	G	85	THR
2	F	25	HIS
2	F	67	SER
2	F	85	THR
1	B	309	THR
1	B	866	HIS
1	B	945	LYS
1	B	1021	LEU
1	B	1636	MET
1	B	1929	MET
1	B	1931	LEU
1	B	1966	VAL
1	B	2169	GLN
1	B	2485	LEU
1	B	2862	LEU
1	B	2977	LEU
1	B	3569	LEU
1	B	3751	VAL
1	B	3752	SER
1	B	3753	PHE
1	B	3756	LYS
1	B	3899	PHE
1	B	4164	LEU
1	B	4695	ASP
1	B	4771	ILE
1	B	4937	ILE
1	B	4973	HIS

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Mol	Chain	Res	Type
1	D	309	THR
1	D	866	HIS
1	D	945	LYS
1	D	1021	LEU
1	D	1636	MET
1	D	1929	MET
1	D	1931	LEU
1	D	1966	VAL
1	D	2169	GLN
1	D	2485	LEU
1	D	2862	LEU
1	D	2977	LEU
1	D	3569	LEU
1	D	3623	LEU
1	D	3751	VAL
1	D	3753	PHE
1	D	3756	LYS
1	D	3899	PHE
1	D	4164	LEU
1	D	4695	ASP
1	D	4771	ILE
1	D	4937	ILE
1	D	4973	HIS
1	C	309	THR
1	C	866	HIS
1	C	945	LYS
1	C	1021	LEU
1	C	1636	MET
1	C	1929	MET
1	C	1931	LEU
1	C	1966	VAL
1	C	2169	GLN
1	C	2485	LEU
1	C	2862	LEU
1	C	2977	LEU
1	C	3569	LEU
1	C	3623	LEU
1	C	3751	VAL
1	C	3753	PHE
1	C	3756	LYS
1	C	3899	PHE
1	C	4164	LEU

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Mol	Chain	Res	Type
1	C	4695	ASP
1	C	4771	ILE
1	C	4937	ILE
1	C	4973	HIS

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (140) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	32	GLN
1	A	113	HIS
1	A	197	GLN
1	A	255	HIS
1	A	461	HIS
1	A	479	GLN
1	A	495	ASN
1	A	636	ASN
1	A	866	HIS
1	A	909	ASN
1	A	981	GLN
1	A	991	ASN
1	A	994	ASN
1	A	1229	ASN
1	A	1660	GLN
1	A	1760	HIS
1	A	1938	GLN
1	A	2169	GLN
1	A	2284	ASN
1	A	2933	ASN
1	A	2962	GLN
1	A	2971	GLN
1	A	3180	ASN
1	A	3214	ASN
1	A	3355	HIS
1	A	3461	GLN
1	A	3704	HIS
1	A	3766	GLN
1	A	3914	ASN
1	A	4009	GLN
1	A	4156	HIS
1	A	4223	ASN
1	A	4728	HIS
2	E	53	GLN

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Mol	Chain	Res	Type
2	E	94	HIS
2	H	65	GLN
2	G	94	HIS
2	F	94	HIS
1	B	32	GLN
1	B	113	HIS
1	B	197	GLN
1	B	255	HIS
1	B	461	HIS
1	B	495	ASN
1	B	533	ASN
1	B	636	ASN
1	B	866	HIS
1	B	909	ASN
1	B	981	GLN
1	B	991	ASN
1	B	1229	ASN
1	B	1300	HIS
1	B	1420	ASN
1	B	1660	GLN
1	B	1760	HIS
1	B	2003	GLN
1	B	2169	GLN
1	B	2253	HIS
1	B	2284	ASN
1	B	2933	ASN
1	B	2962	GLN
1	B	2971	GLN
1	B	3180	ASN
1	B	3214	ASN
1	B	3355	HIS
1	B	3461	GLN
1	B	3704	HIS
1	B	3766	GLN
1	B	3914	ASN
1	B	4009	GLN
1	B	4156	HIS
1	B	4223	ASN
1	B	4728	HIS
1	D	113	HIS
1	D	197	GLN
1	D	255	HIS

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Mol	Chain	Res	Type
1	D	461	HIS
1	D	479	GLN
1	D	495	ASN
1	D	636	ASN
1	D	866	HIS
1	D	909	ASN
1	D	991	ASN
1	D	994	ASN
1	D	1229	ASN
1	D	1300	HIS
1	D	1420	ASN
1	D	1660	GLN
1	D	1760	HIS
1	D	1938	GLN
1	D	2003	GLN
1	D	2029	GLN
1	D	2169	GLN
1	D	2284	ASN
1	D	2933	ASN
1	D	2962	GLN
1	D	2971	GLN
1	D	3180	ASN
1	D	3214	ASN
1	D	3355	HIS
1	D	3461	GLN
1	D	3704	HIS
1	D	3766	GLN
1	D	3914	ASN
1	D	4009	GLN
1	D	4156	HIS
1	D	4223	ASN
1	D	4728	HIS
1	C	113	HIS
1	C	197	GLN
1	C	255	HIS
1	C	461	HIS
1	C	479	GLN
1	C	495	ASN
1	C	636	ASN
1	C	866	HIS
1	C	909	ASN
1	C	991	ASN

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Mol	Chain	Res	Type
1	C	1229	ASN
1	C	1300	HIS
1	C	1660	GLN
1	C	1760	HIS
1	C	1938	GLN
1	C	2169	GLN
1	C	2253	HIS
1	C	2284	ASN
1	C	2933	ASN
1	C	2962	GLN
1	C	2971	GLN
1	C	3180	ASN
1	C	3355	HIS
1	C	3461	GLN
1	C	3704	HIS
1	C	3766	GLN
1	C	3914	ASN
1	C	4009	GLN
1	C	4156	HIS
1	C	4223	ASN
1	C	4547	GLN
1	C	4728	HIS

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
6	A1BD4	A	5304	-	11,11,11	1.06	0	11,15,15	3.93	4 (36%)
3	ATP	A	5301	-	32,33,33	0.35	0	48,52,52	0.38	0
6	A1BD4	B	5304	-	11,11,11	1.07	0	11,15,15	3.93	4 (36%)
6	A1BD4	D	5304	-	11,11,11	1.07	0	11,15,15	3.94	4 (36%)
6	A1BD4	C	5304	-	11,11,11	1.07	0	11,15,15	3.93	4 (36%)
3	ATP	C	5301	-	32,33,33	0.35	0	48,52,52	0.38	0
3	ATP	D	5301	-	32,33,33	0.35	0	48,52,52	0.38	0
3	ATP	B	5301	-	32,33,33	0.34	0	48,52,52	0.38	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
6	A1BD4	A	5304	-	-	-	0/2/2/2
3	ATP	A	5301	-	-	5/22/38/38	0/3/3/3
6	A1BD4	B	5304	-	-	-	0/2/2/2
6	A1BD4	D	5304	-	-	-	0/2/2/2
6	A1BD4	C	5304	-	-	-	0/2/2/2
3	ATP	C	5301	-	-	5/22/38/38	0/3/3/3
3	ATP	D	5301	-	-	5/22/38/38	0/3/3/3
3	ATP	B	5301	-	-	5/22/38/38	0/3/3/3

There are no bond length outliers.

All (16) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
6	B	5304	A1BD4	C3-C2-N2	-10.07	106.50	112.20
6	A	5304	A1BD4	C3-C2-N2	-10.04	106.52	112.20
6	D	5304	A1BD4	C3-C2-N2	-10.04	106.52	112.20
6	C	5304	A1BD4	C3-C2-N2	-10.04	106.52	112.20
6	D	5304	A1BD4	C2-N2-N1	5.35	111.37	102.58
6	A	5304	A1BD4	C2-N2-N1	5.34	111.35	102.58

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
6	B	5304	A1BD4	C2-N2-N1	5.33	111.34	102.58
6	C	5304	A1BD4	C2-N2-N1	5.33	111.34	102.58
6	D	5304	A1BD4	C3-C1-N1	4.43	110.94	106.99
6	C	5304	A1BD4	C3-C1-N1	4.40	110.91	106.99
6	A	5304	A1BD4	C3-C1-N1	4.39	110.91	106.99
6	B	5304	A1BD4	C3-C1-N1	4.36	110.88	106.99
6	D	5304	A1BD4	C1-N1-N2	-4.30	106.00	112.59
6	A	5304	A1BD4	C1-N1-N2	-4.29	106.03	112.59
6	B	5304	A1BD4	C1-N1-N2	-4.27	106.06	112.59
6	C	5304	A1BD4	C1-N1-N2	-4.27	106.06	112.59

There are no chirality outliers.

All (20) torsion outliers are listed below:

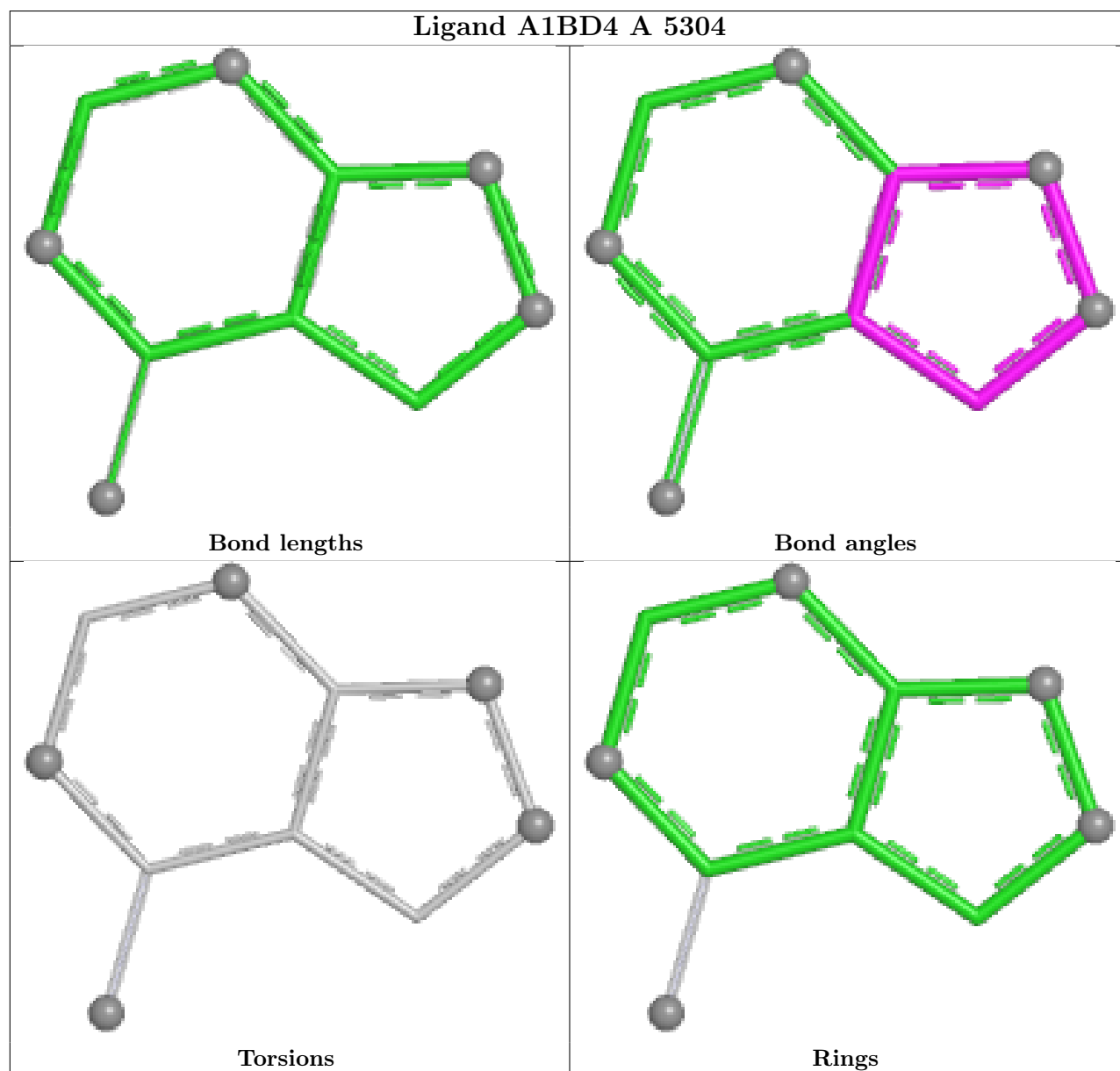
Mol	Chain	Res	Type	Atoms
3	A	5301	ATP	C5'-O5'-PA-O2A
3	A	5301	ATP	C5'-O5'-PA-O3A
3	B	5301	ATP	C5'-O5'-PA-O2A
3	B	5301	ATP	C5'-O5'-PA-O3A
3	D	5301	ATP	C5'-O5'-PA-O2A
3	D	5301	ATP	C5'-O5'-PA-O3A
3	C	5301	ATP	C5'-O5'-PA-O2A
3	C	5301	ATP	C5'-O5'-PA-O3A
3	A	5301	ATP	O4'-C1'-N9-C4
3	B	5301	ATP	O4'-C1'-N9-C4
3	D	5301	ATP	O4'-C1'-N9-C4
3	C	5301	ATP	O4'-C1'-N9-C4
3	A	5301	ATP	O4'-C1'-N9-C8
3	B	5301	ATP	O4'-C1'-N9-C8
3	D	5301	ATP	O4'-C1'-N9-C8
3	C	5301	ATP	O4'-C1'-N9-C8
3	A	5301	ATP	O4'-C4'-C5'-O5'
3	B	5301	ATP	O4'-C4'-C5'-O5'
3	D	5301	ATP	O4'-C4'-C5'-O5'
3	C	5301	ATP	O4'-C4'-C5'-O5'

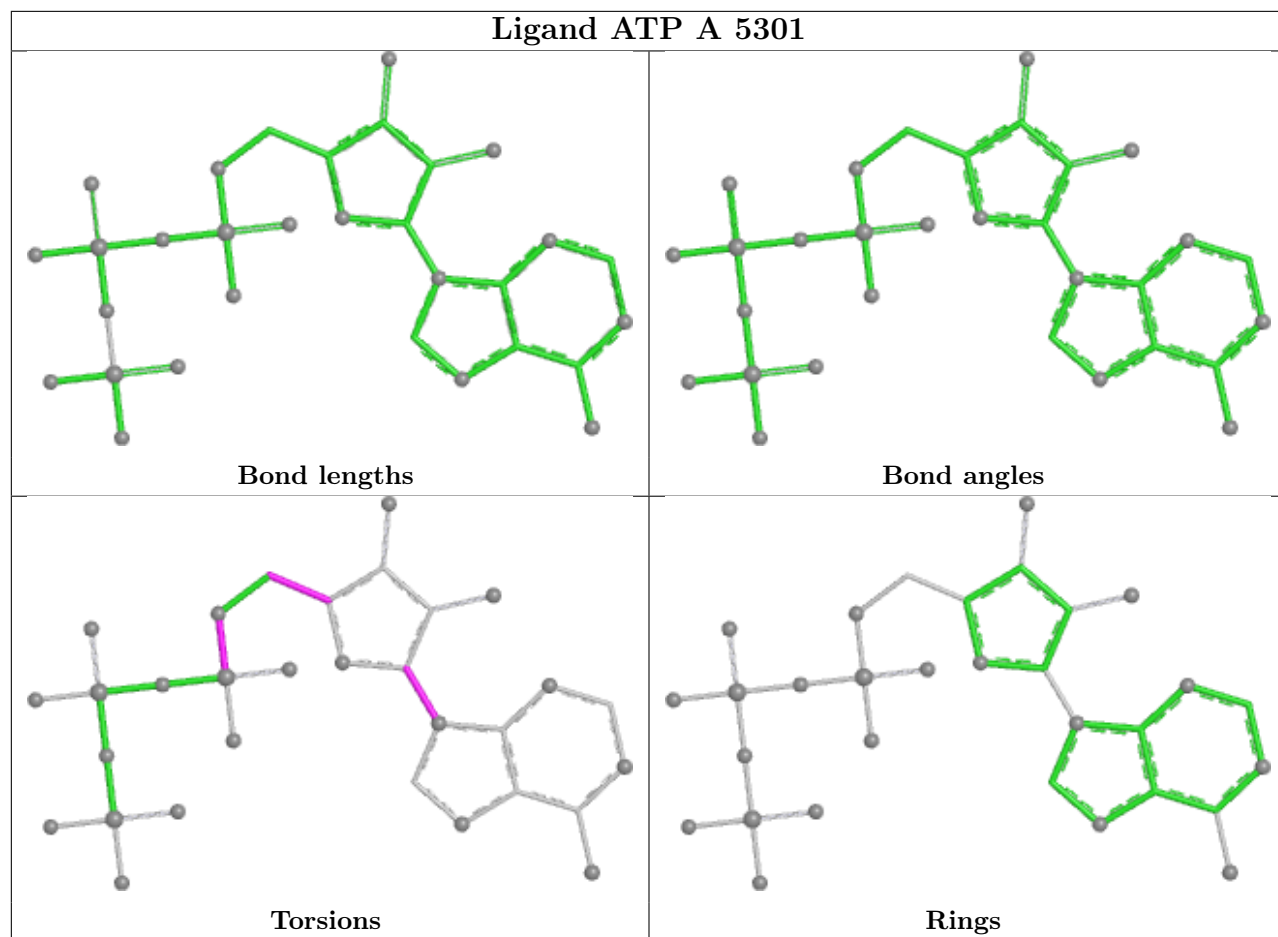
There are no ring outliers.

No monomer is involved in short contacts.

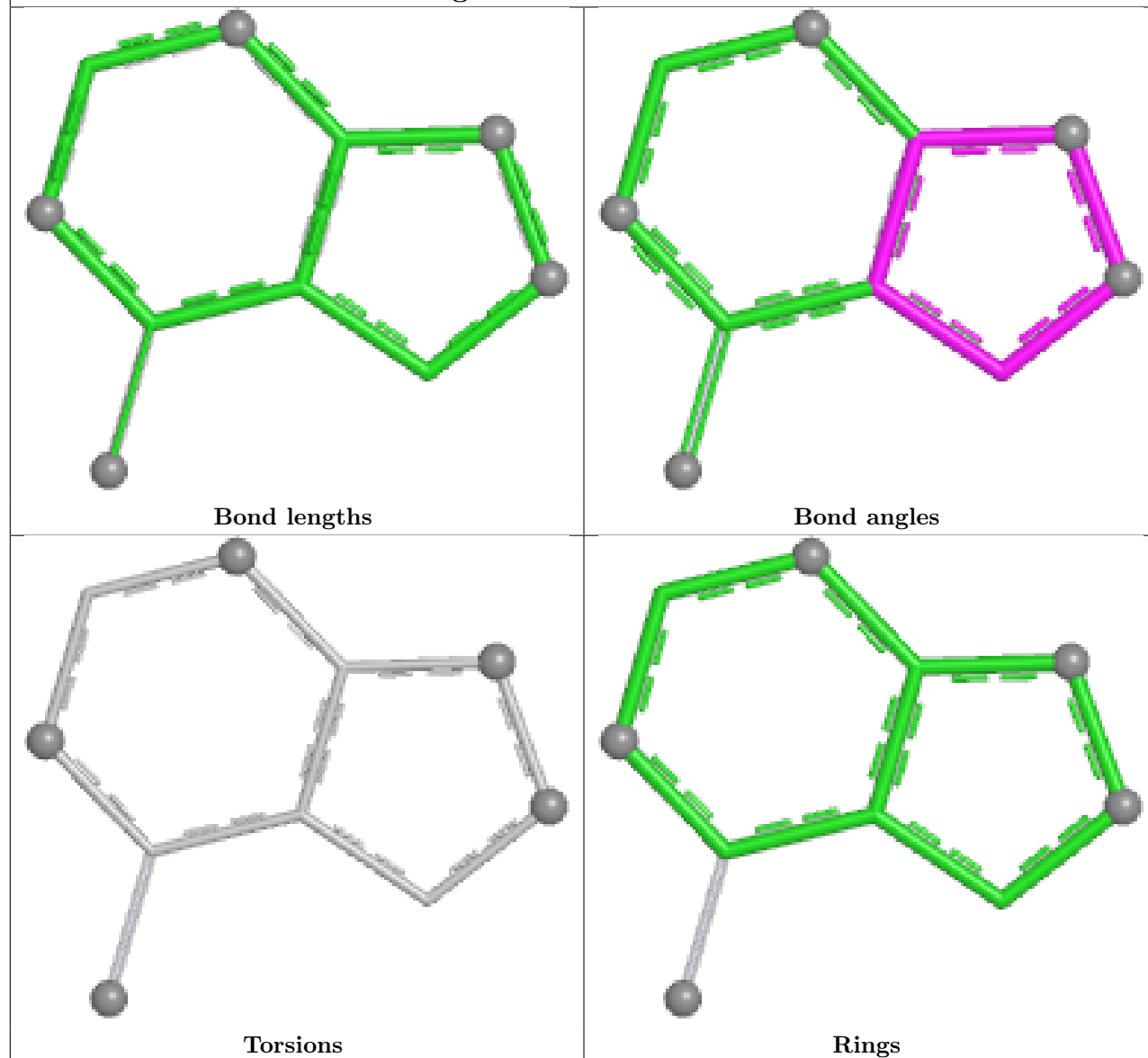
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will

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.

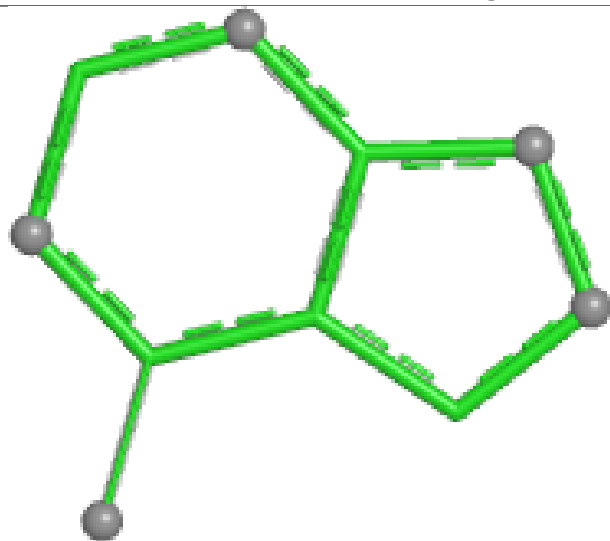




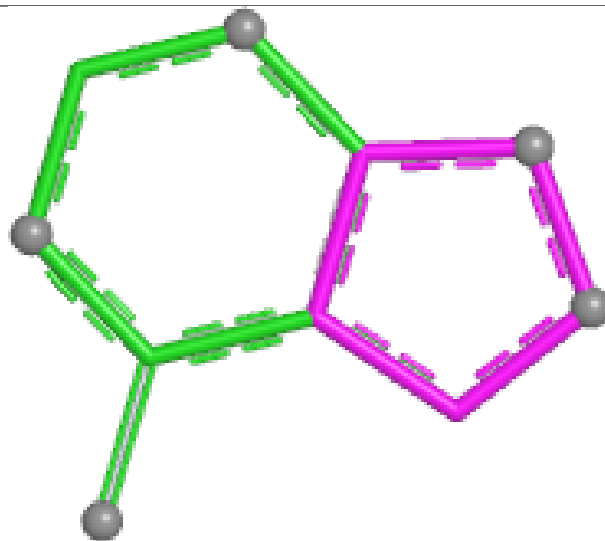
Ligand A1BD4 B 5304



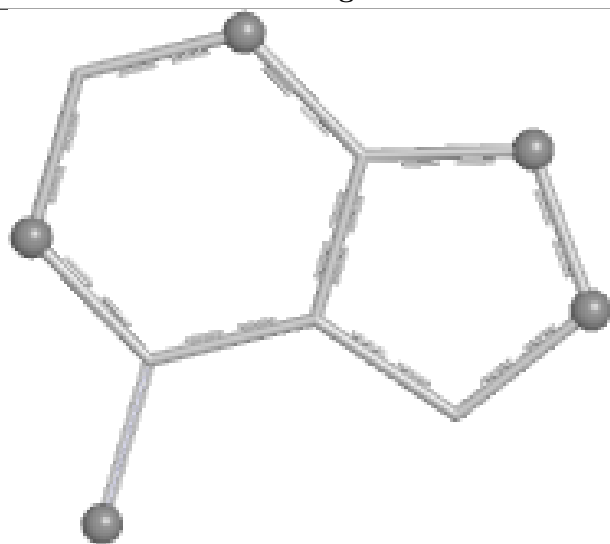
Ligand A1BD4 D 5304



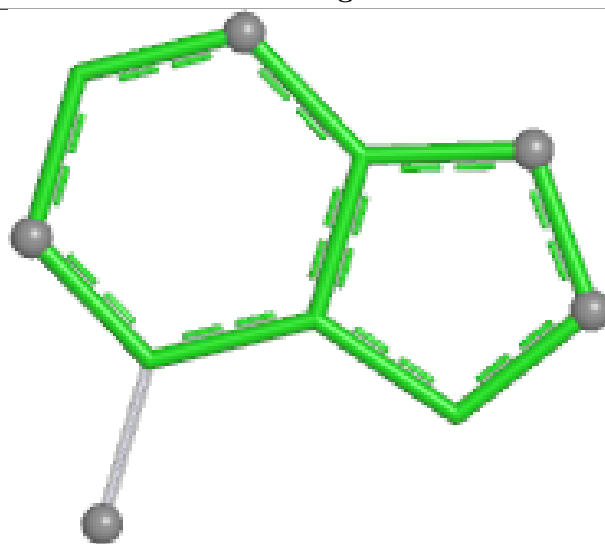
Bond lengths



Bond angles

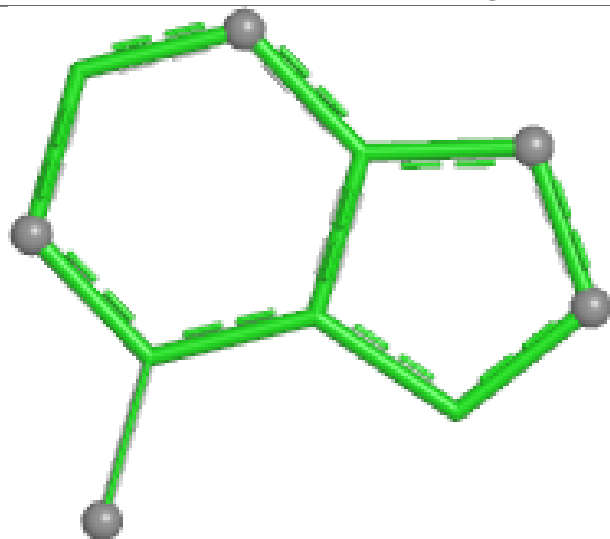


Torsions

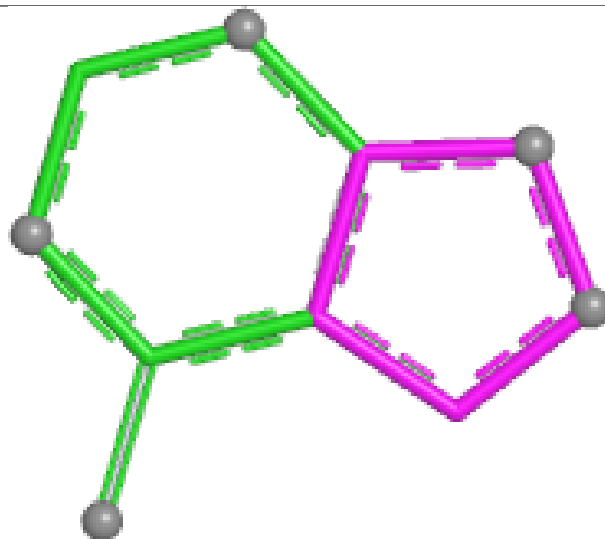


Rings

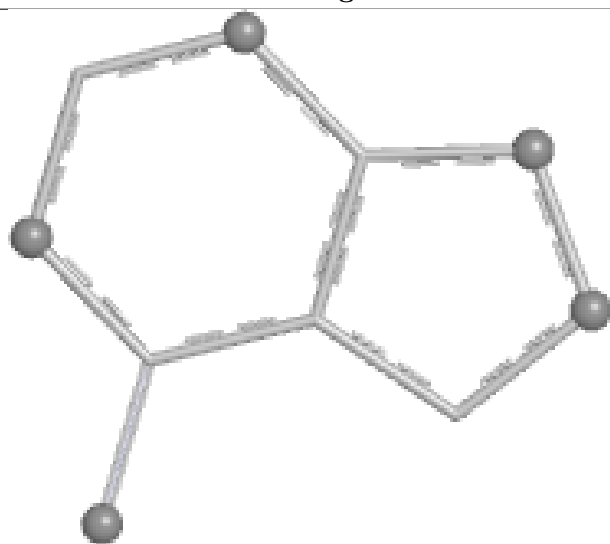
Ligand A1BD4 C 5304



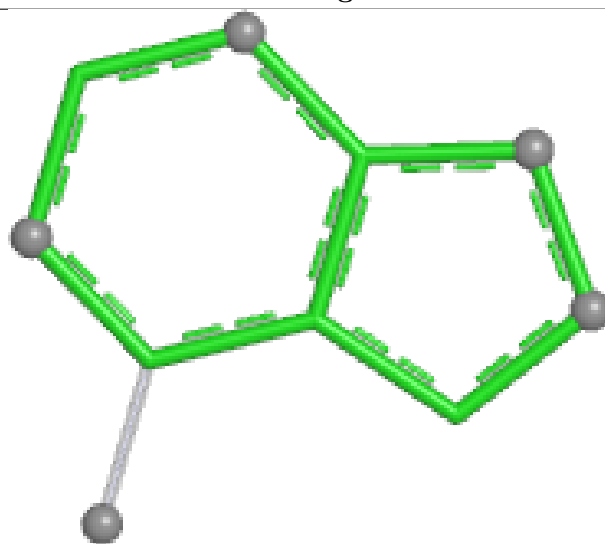
Bond lengths



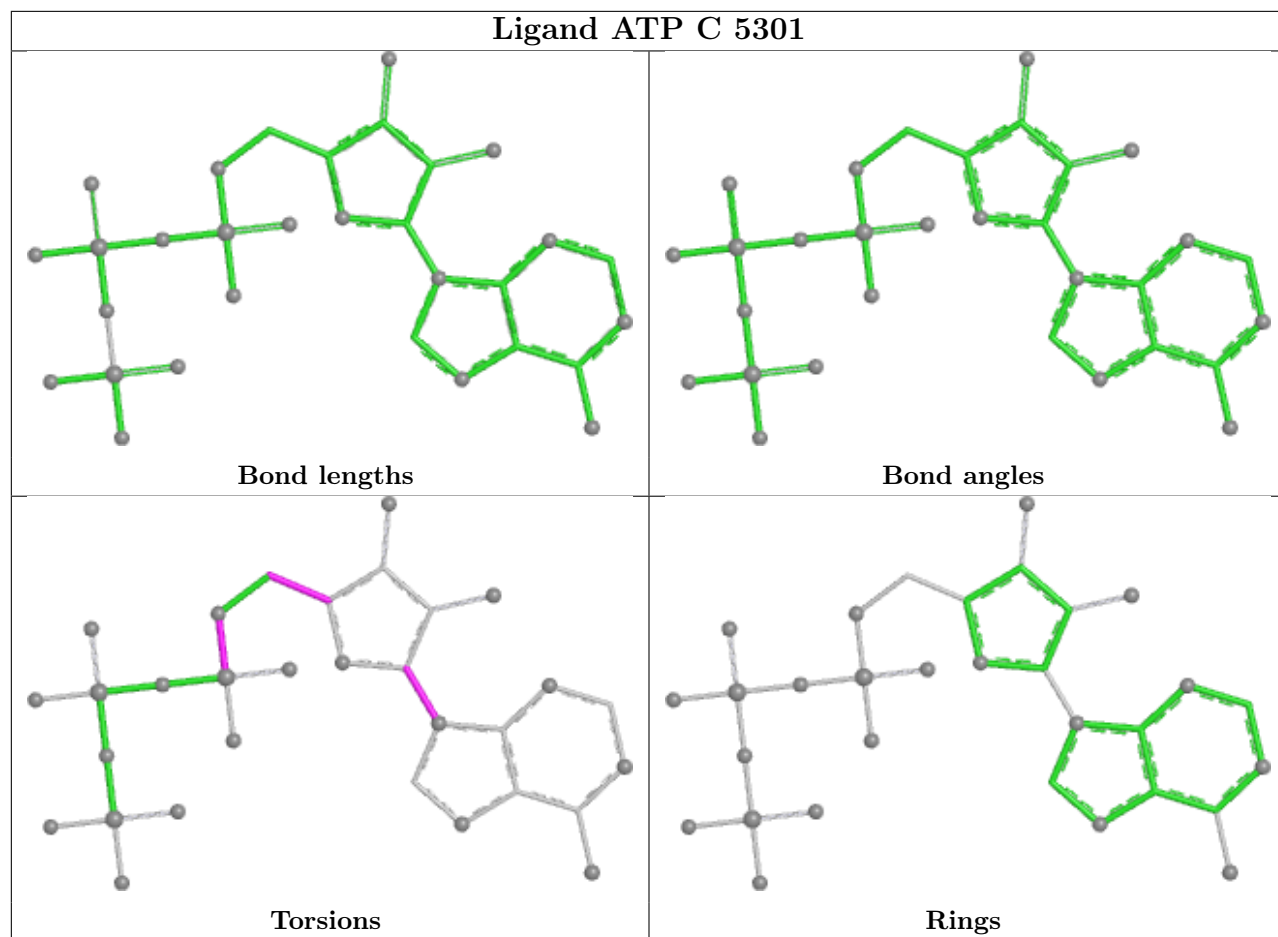
Bond angles

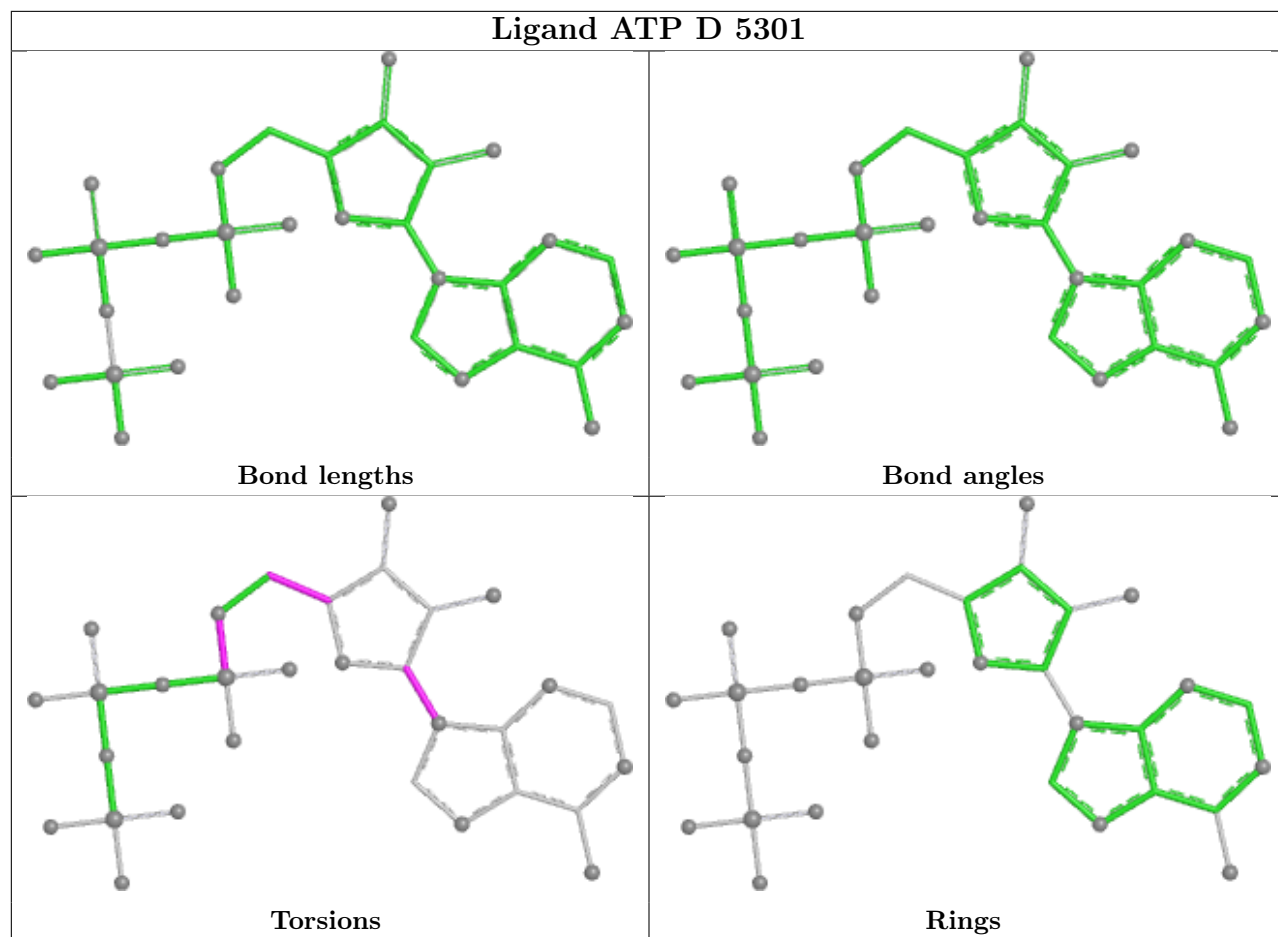


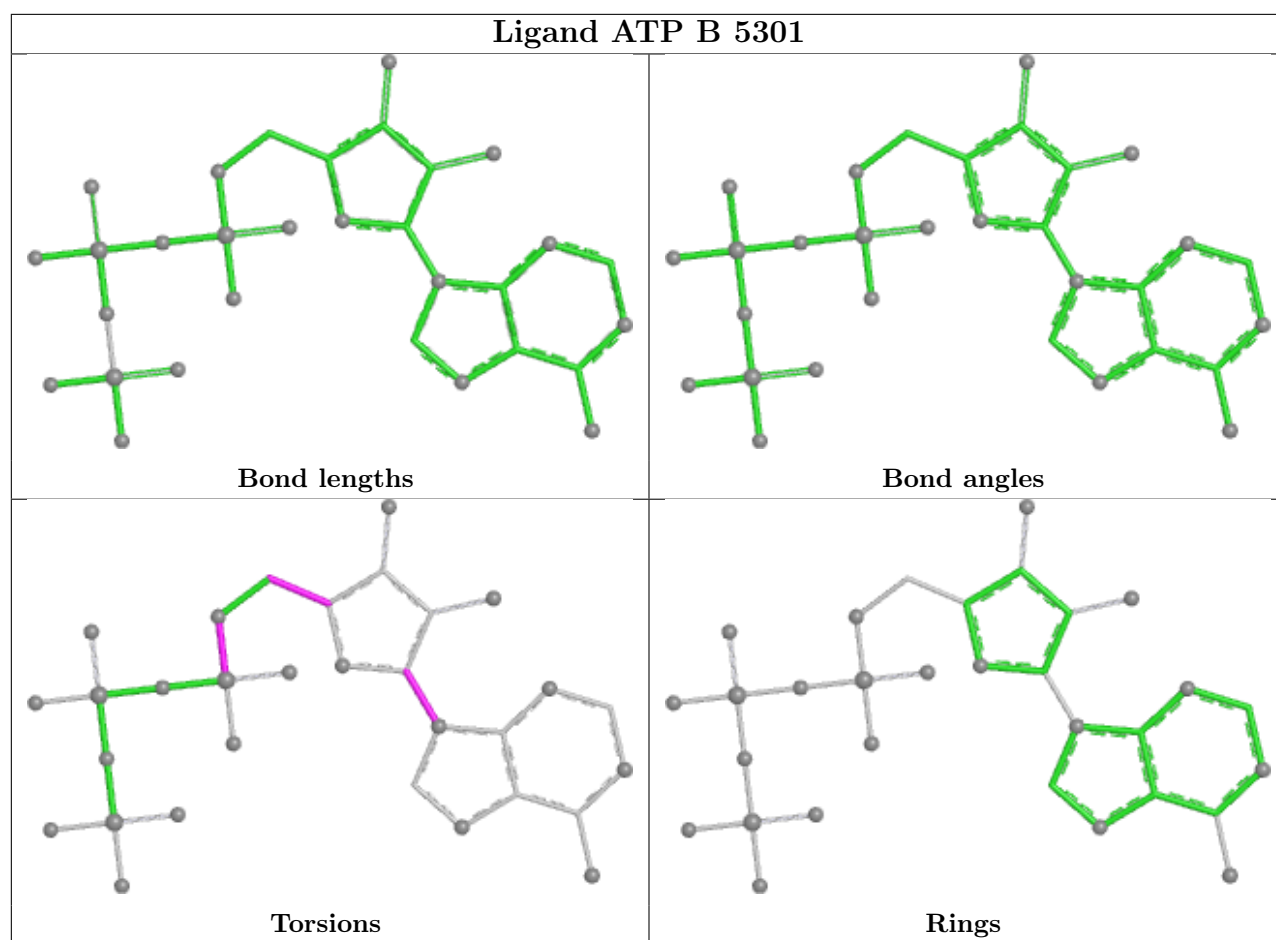
Torsions



Rings







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.

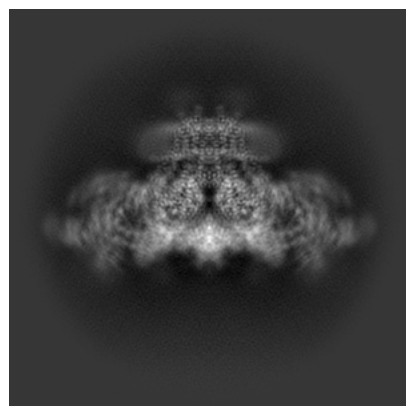
6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-47392. These allow visual inspection of the internal detail of the map and identification of artifacts.

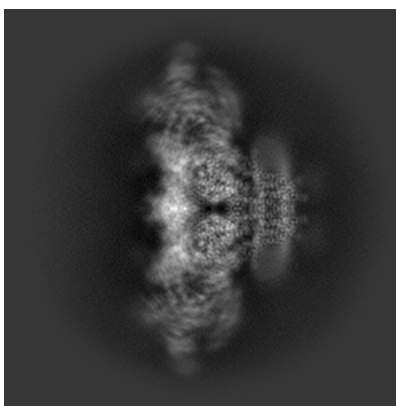
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections [i](#)

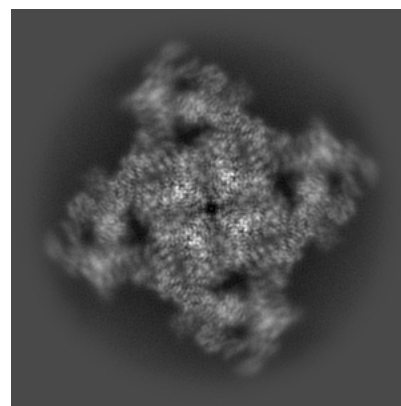
6.1.1 Primary map



X

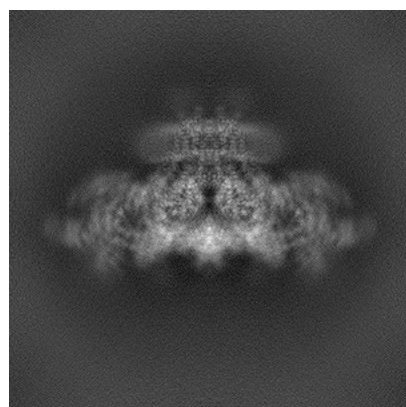


Y

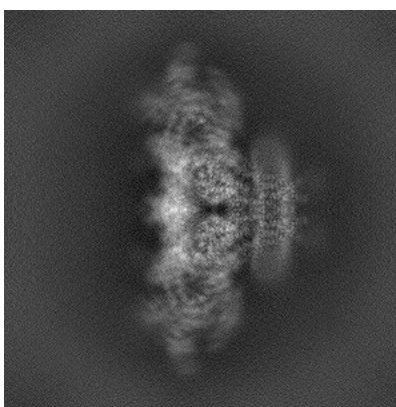


Z

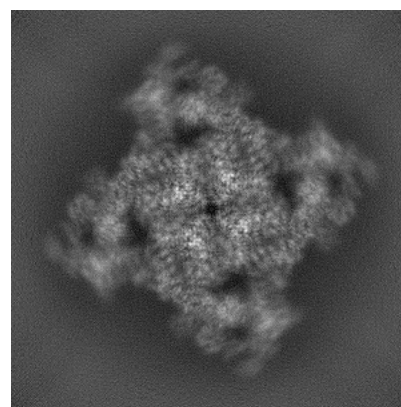
6.1.2 Raw map



X



Y

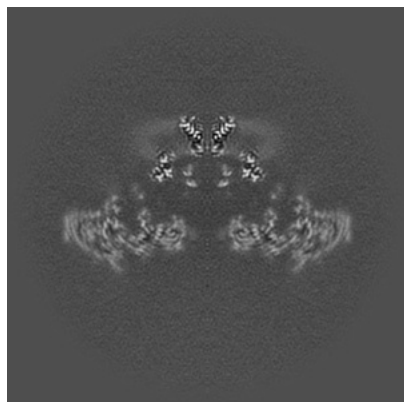


Z

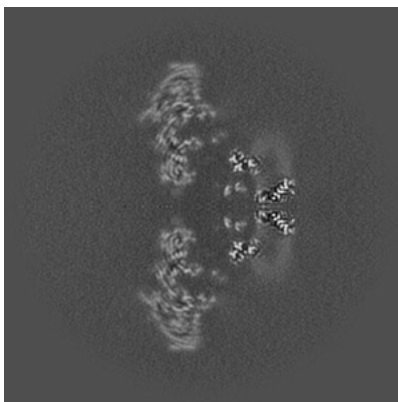
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

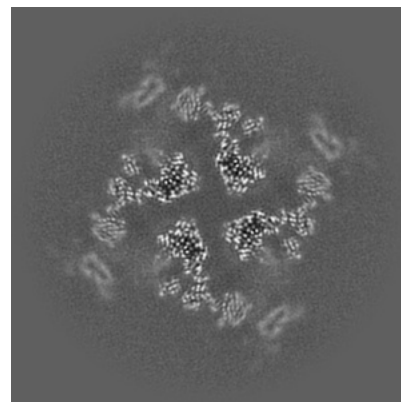
6.2.1 Primary map



X Index: 256

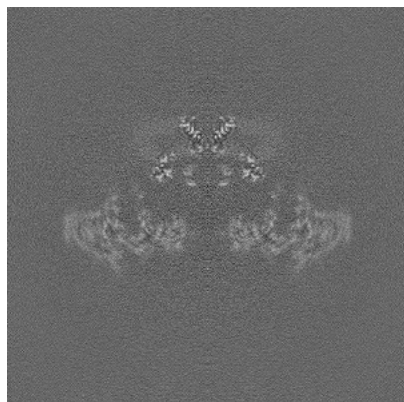


Y Index: 256

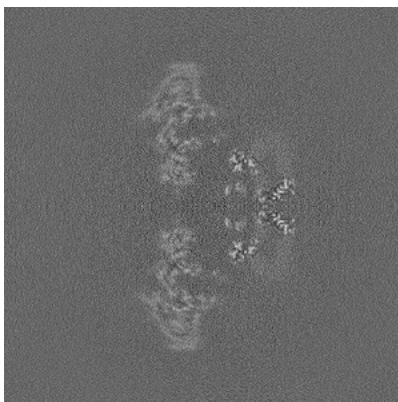


Z Index: 256

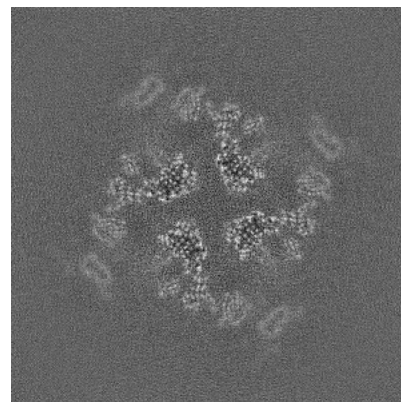
6.2.2 Raw map



X Index: 256



Y Index: 256

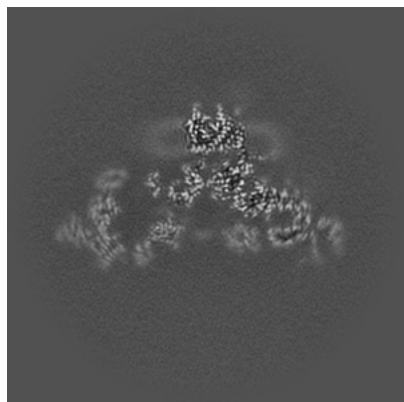


Z Index: 256

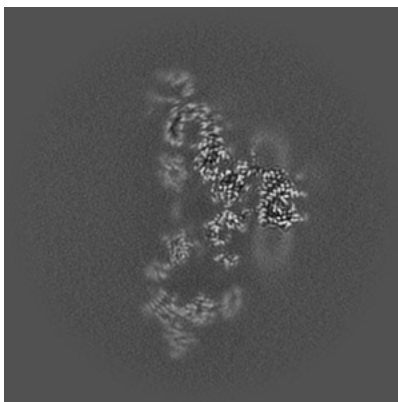
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

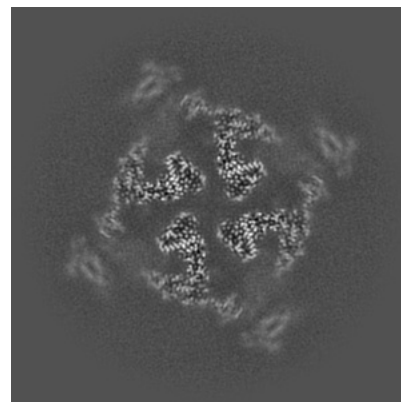
6.3.1 Primary map



X Index: 273

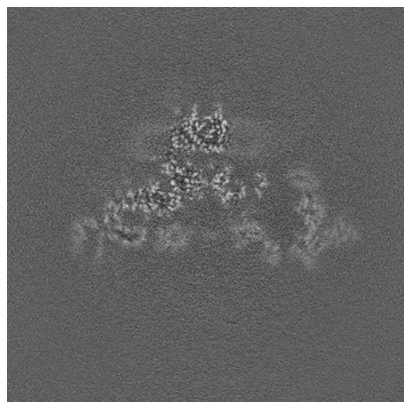


Y Index: 239

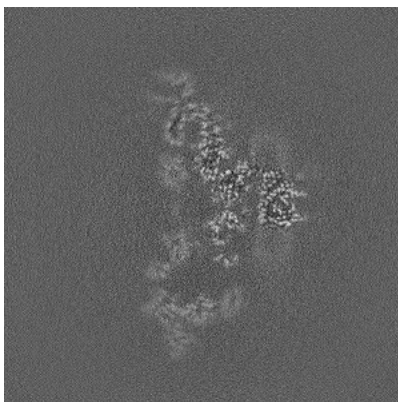


Z Index: 264

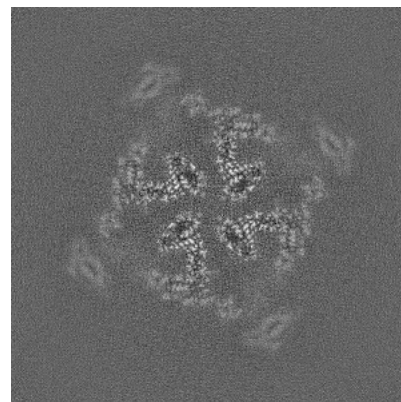
6.3.2 Raw map



X Index: 239



Y Index: 239

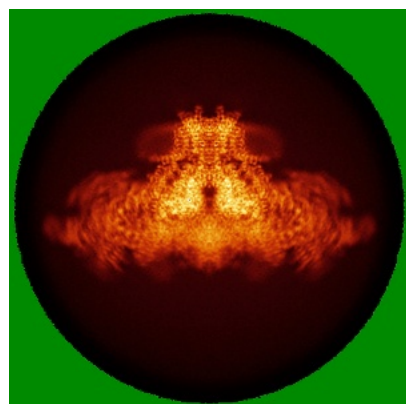


Z Index: 266

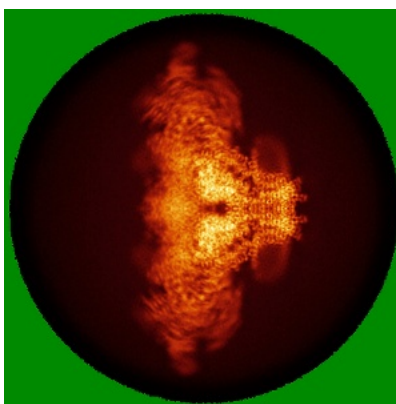
The images above show the largest variance slices of the map in three orthogonal directions.

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

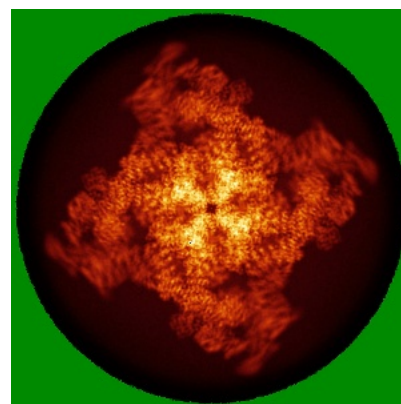
6.4.1 Primary map



X

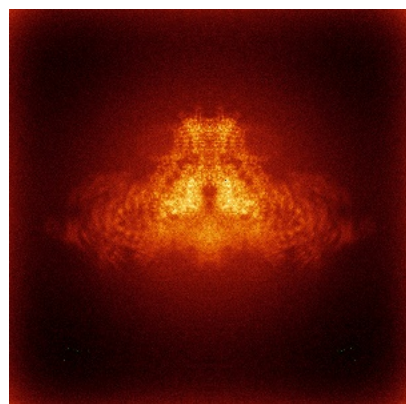


Y

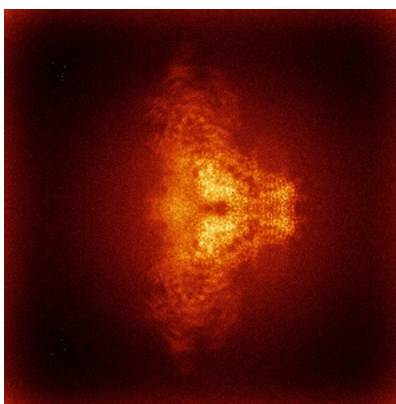


Z

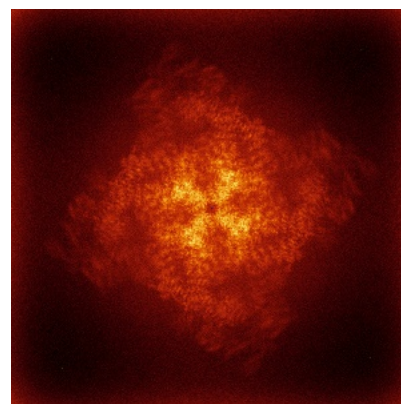
6.4.2 Raw map



X



Y

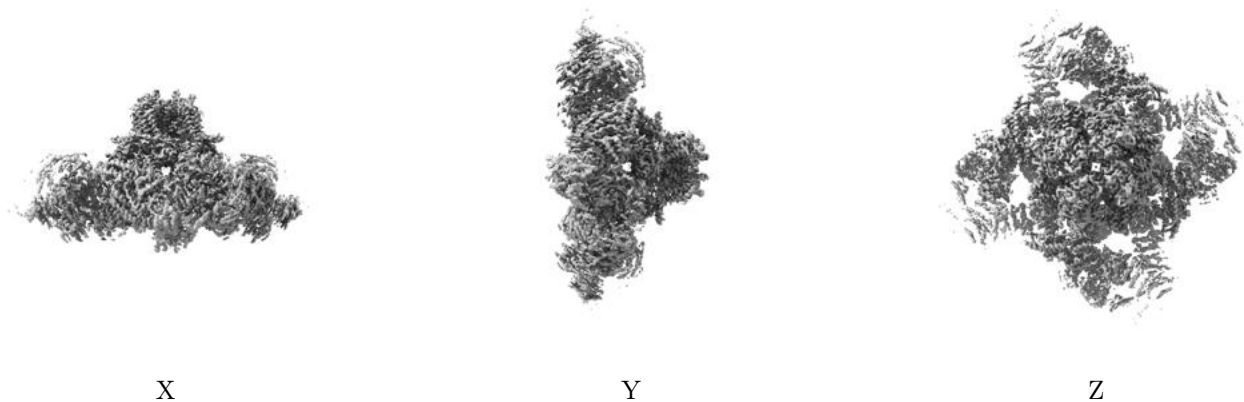


Z

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

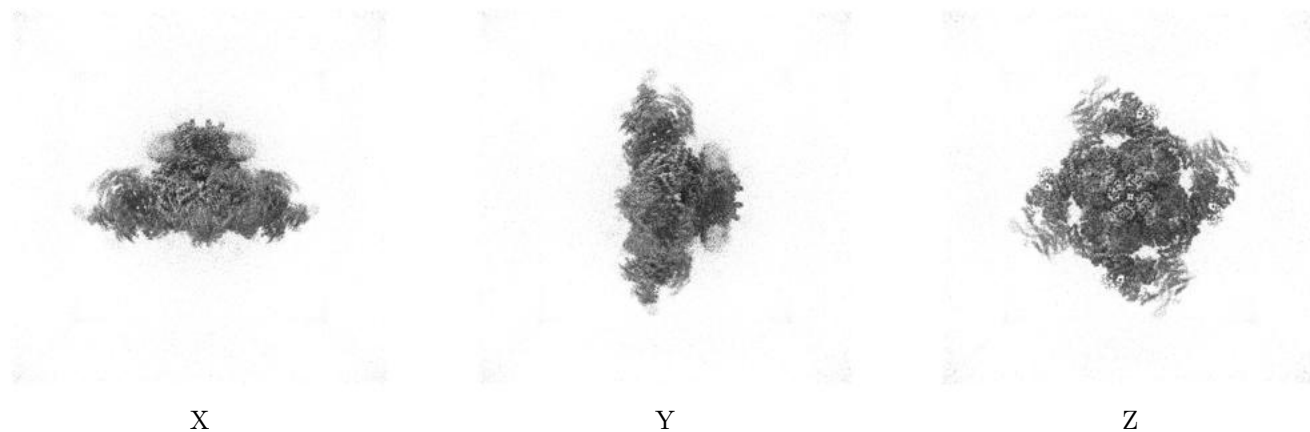
6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 0.1. 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.

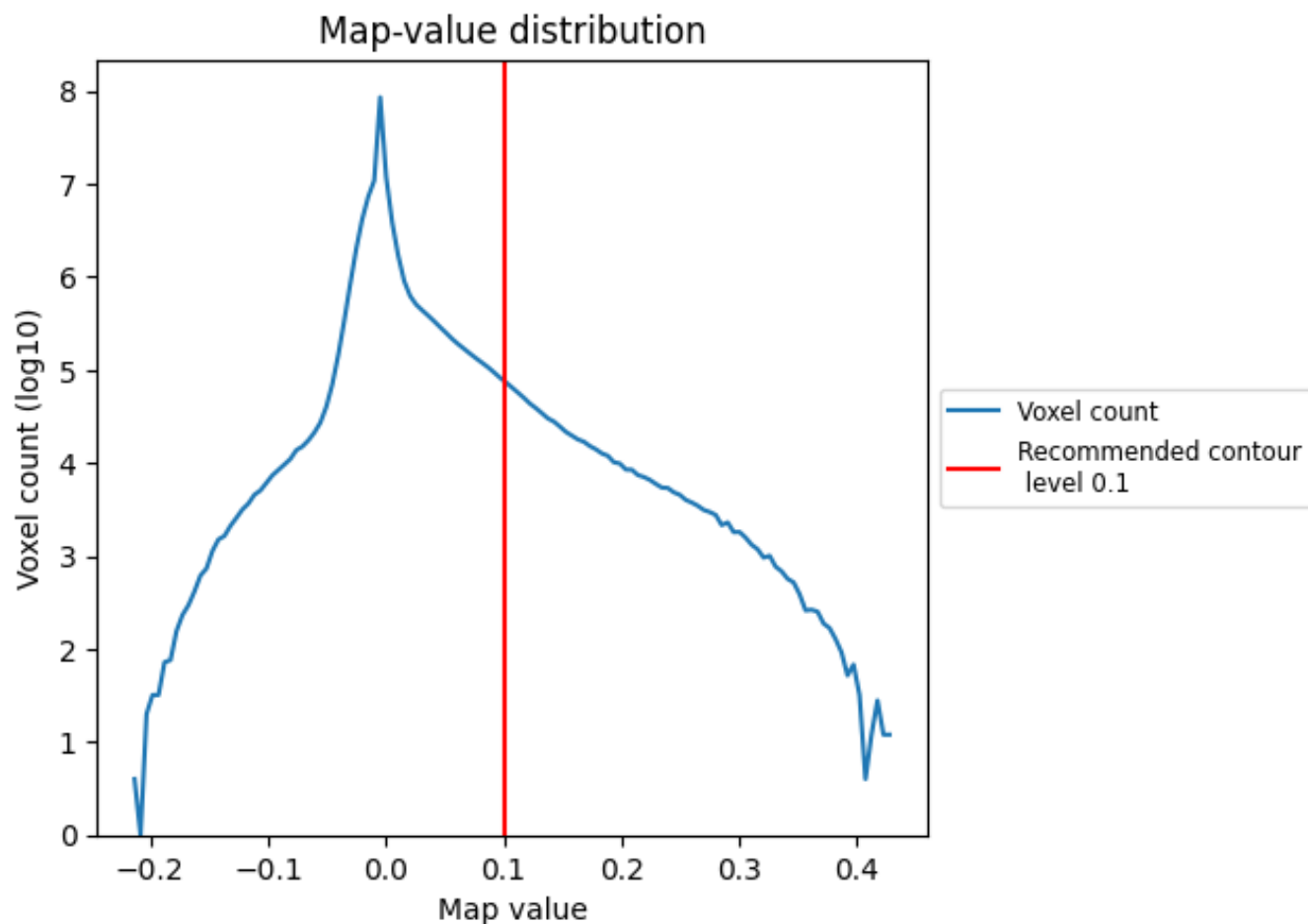
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

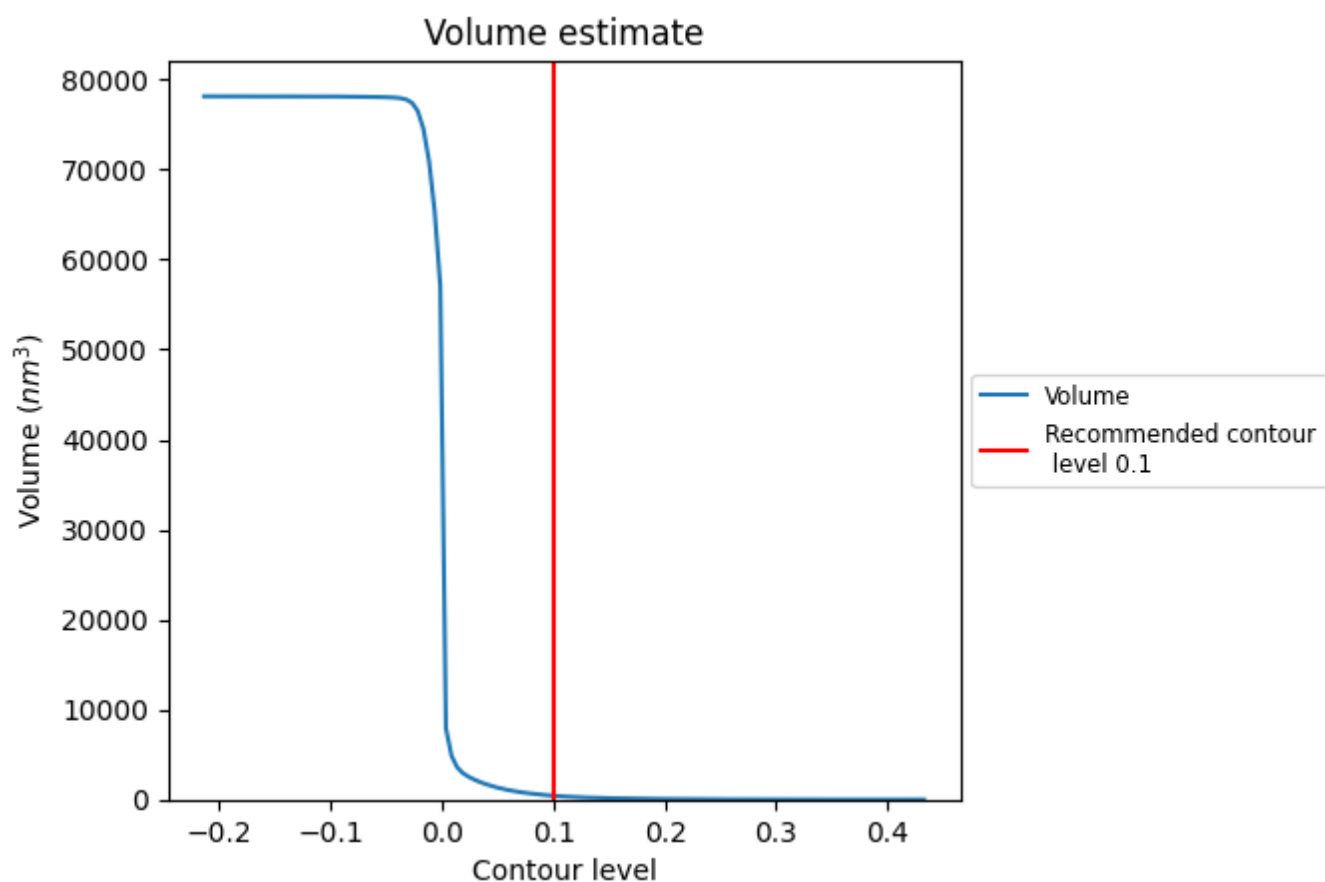
This section contains the results of statistical analysis of the map.

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.

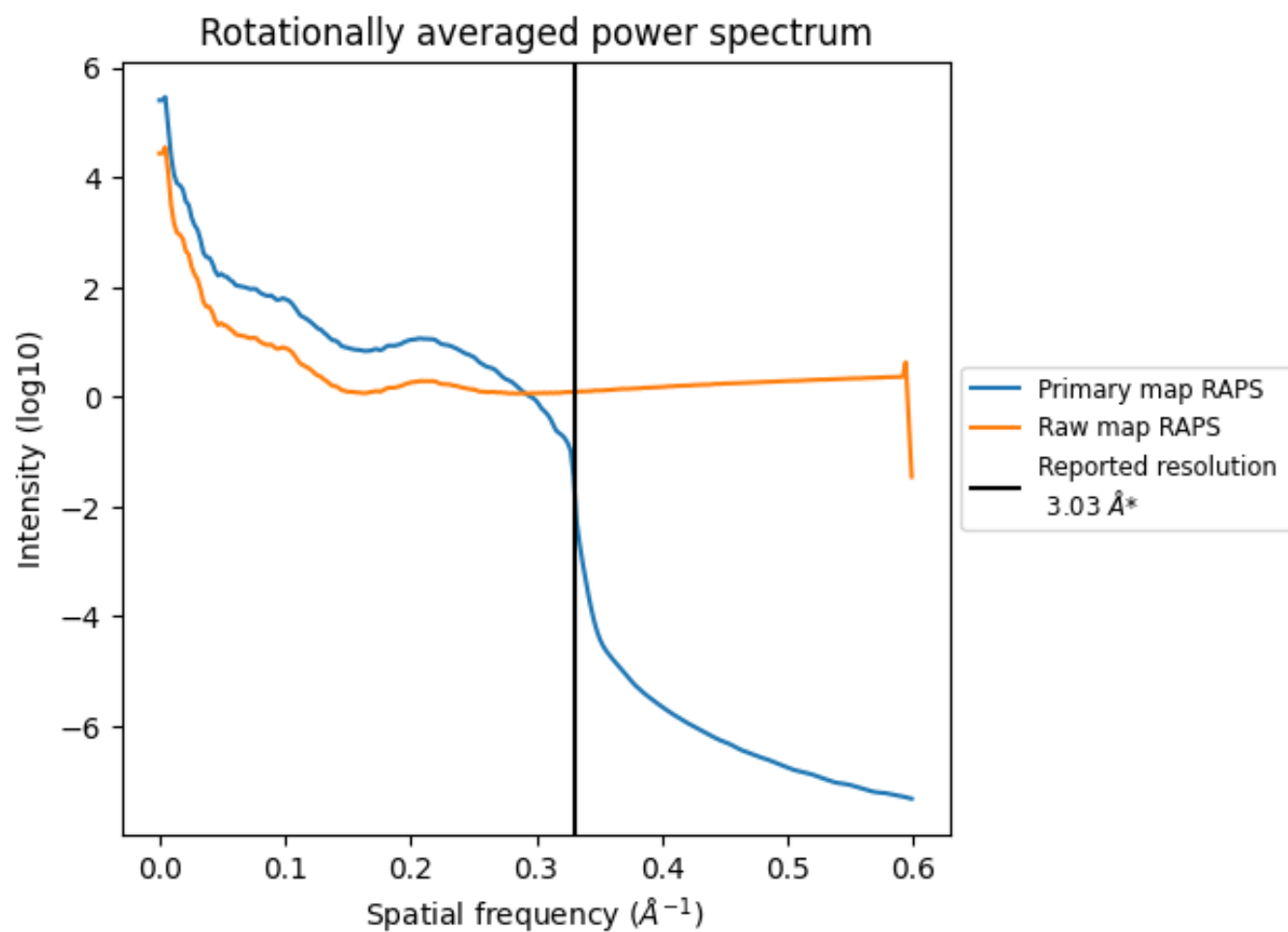
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 424 nm³; this corresponds to an approximate mass of 383 kDa.

The volume estimate graph shows how the enclosed volume varies with the contour level. The recommended contour level is shown as a vertical line and the intersection between the line and the curve gives the volume of the enclosed surface at the given level.

7.3 Rotationally averaged power spectrum ⓘ

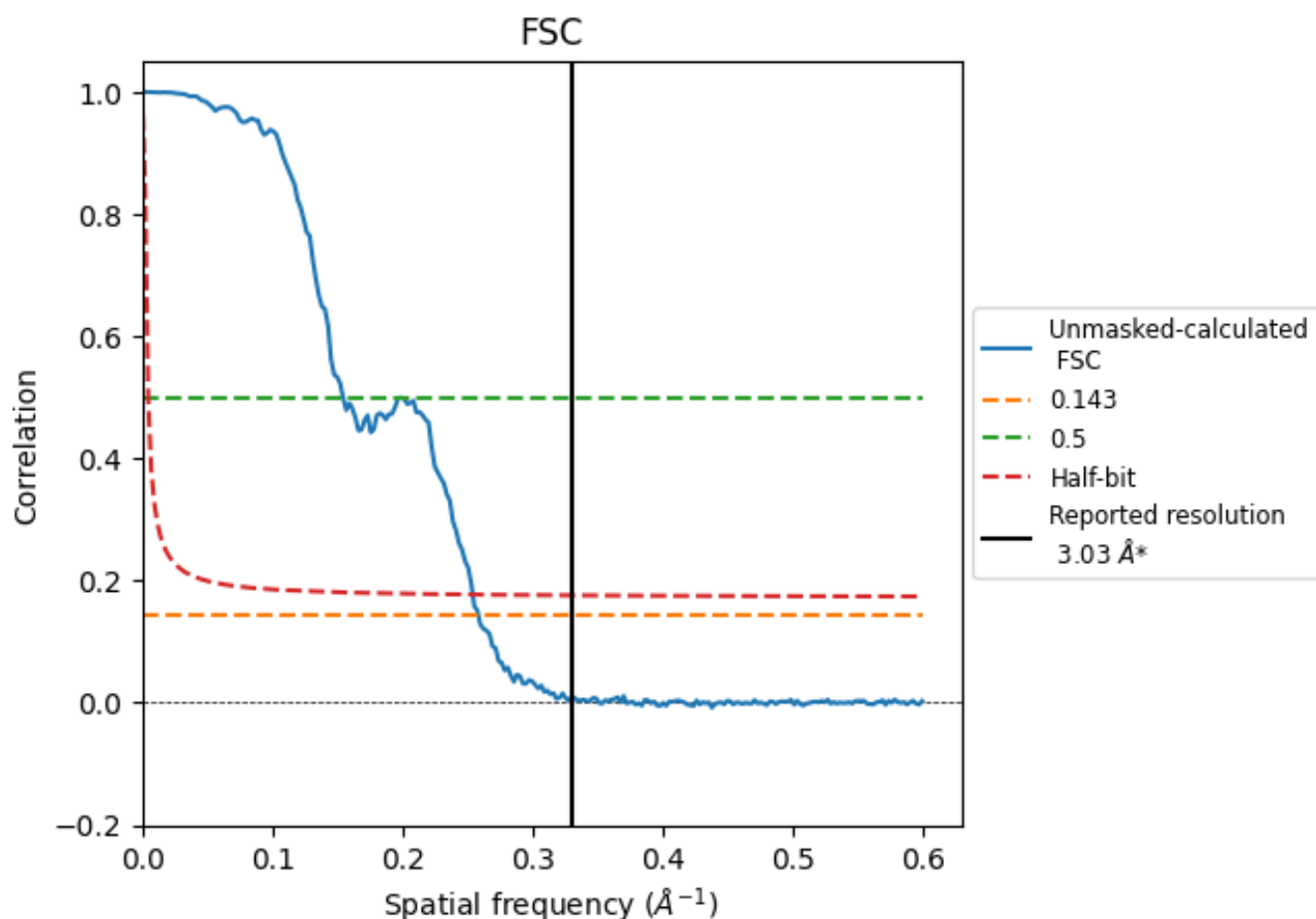


*Reported resolution corresponds to spatial frequency of 0.330 Å⁻¹

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 0.330 Å⁻¹

8.2 Resolution estimates [i](#)

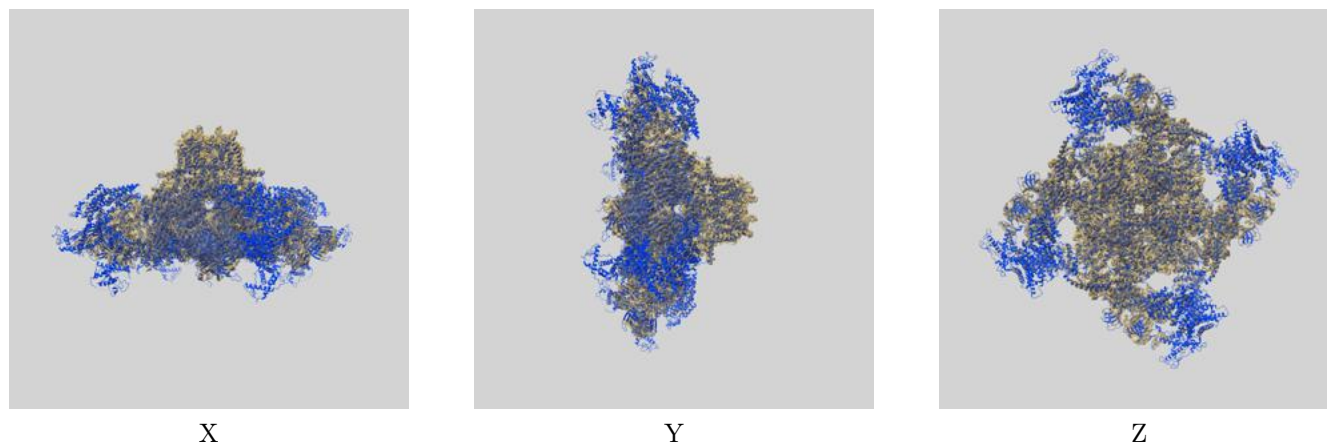
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	3.03	-	-
Author-provided FSC curve	-	-	-
Unmasked-calculated*	3.87	6.49	3.94

*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 3.87 differs from the reported value 3.03 by more than 10 %

9 Map-model fit [i](#)

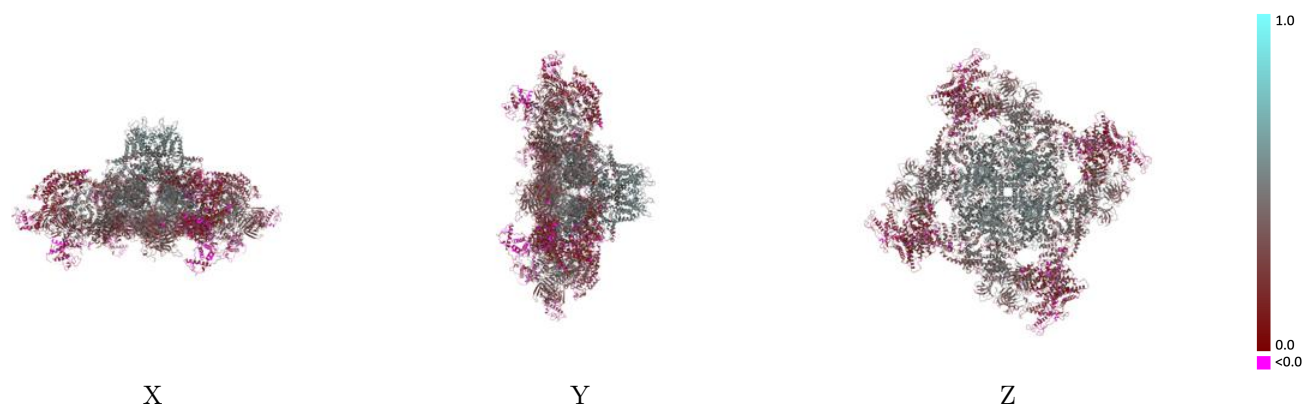
This section contains information regarding the fit between EMDB map EMD-47392 and PDB model 9E1F. Per-residue inclusion information can be found in section [3](#) on page [8](#).

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](#)

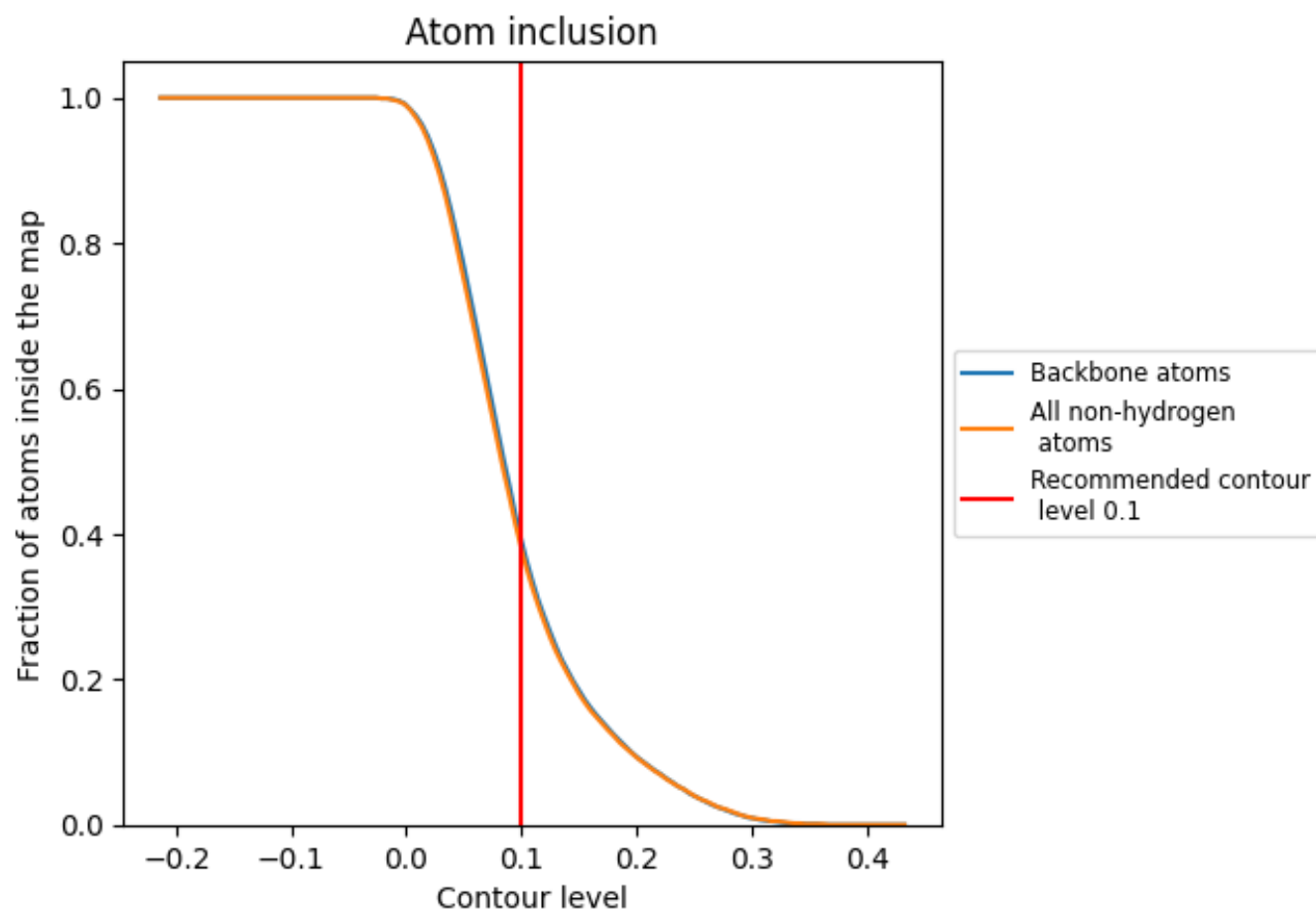


The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions at which atoms can be resolved. Low Q-score values may therefore be expected for many entries.

9.3 Atom inclusion mapped to coordinate model [i](#)

This section was not generated.

9.4 Atom inclusion [i](#)



At the recommended contour level, 39% of all backbone atoms, 38% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary ⓘ

The table lists the average atom inclusion at the recommended contour level (0.1) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.3790	0.3300
A	0.3890	0.3290
B	0.3890	0.3290
C	0.3890	0.3290
D	0.3890	0.3290
E	0.2370	0.3640
F	0.2380	0.3570
G	0.2380	0.3570
H	0.2400	0.3580

1.0

0.0

<0.0