



Full wwPDB EM Validation Report ⓘ

Nov 16, 2023 – 01:57 PM EST

PDB ID : 8UXF
EMDB ID : EMD-42762
Title : Structure of PKA phosphorylated human RyR2-R420W in the primed state
Authors : Miotto, M.C.; Marks, A.R.
Deposited on : 2023-11-09
Resolution : 3.13 Å (reported)
Based on initial model : 7UA5

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

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

A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

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

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

EMDB validation analysis : 0.0.1.dev70
Mogul : 1.8.5 (274361), CSD as541be (2020)
MolProbity : 4.02b-467
buster-report : 1.1.7 (2018)
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ : 1.9.9
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.36

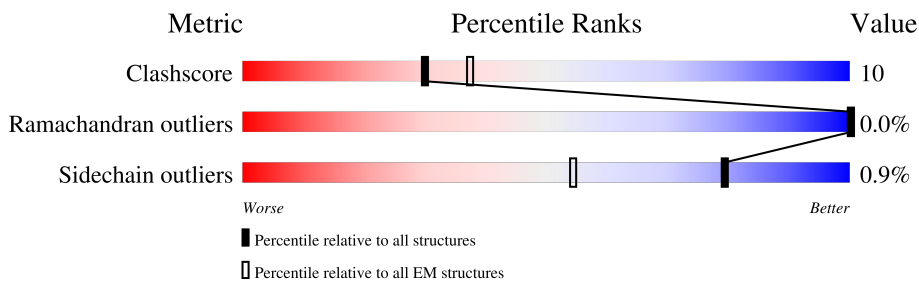
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

ELECTRON MICROSCOPY

The reported resolution of this entry is 3.13 Å.

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



Metric	Whole archive (#Entries)	EM structures (#Entries)
Clashscore	158937	4297
Ramachandran outliers	154571	4023
Sidechain outliers	154315	3826

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

Mol	Chain	Length	Quality of chain
1	A	4967	
1	B	4967	
1	C	4967	
1	D	4967	
2	E	108	
2	F	108	
2	G	108	
2	H	108	

2 Entry composition [i](#)

There are 4 unique types of molecules in this entry. The entry contains 138620 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a protein called Ryanodine receptor 2.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	A	4224	33774	21521	5743	6280	230	2	0
1	B	4224	33774	21521	5743	6280	230	2	0
1	C	4224	33774	21521	5743	6280	230	2	0
1	D	4224	33774	21521	5743	6280	230	2	0

There are 4 discrepancies between the modelled and reference sequences:

Chain	Residue	Modelled	Actual	Comment	Reference
A	420	TRP	ARG	variant	UNP Q92736
B	420	TRP	ARG	variant	UNP Q92736
C	420	TRP	ARG	variant	UNP Q92736
D	420	TRP	ARG	variant	UNP Q92736

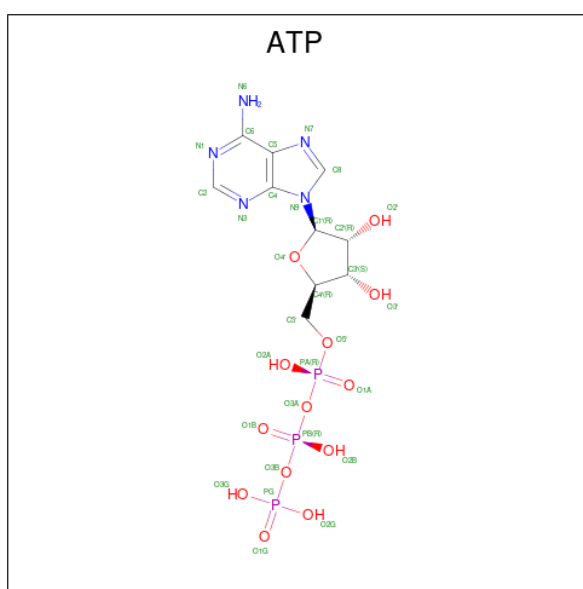
- Molecule 2 is a protein called Peptidyl-prolyl cis-trans isomerase FKBP1B.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
2	E	107	818	516	144	154	4	0	0
2	F	107	818	516	144	154	4	0	0
2	G	107	818	516	144	154	4	0	0
2	H	107	818	516	144	154	4	0	0

- Molecule 3 is ZINC ION (three-letter code: ZN) (formula: Zn) (labeled as "Ligand of Interest" by depositor).

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

- Molecule 4 is ADENOSINE-5'-TRIPHOSPHATE (three-letter code: ATP) (formula: $C_{10}H_{16}N_5O_{13}P_3$) (labeled as "Ligand of Interest" by depositor).



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

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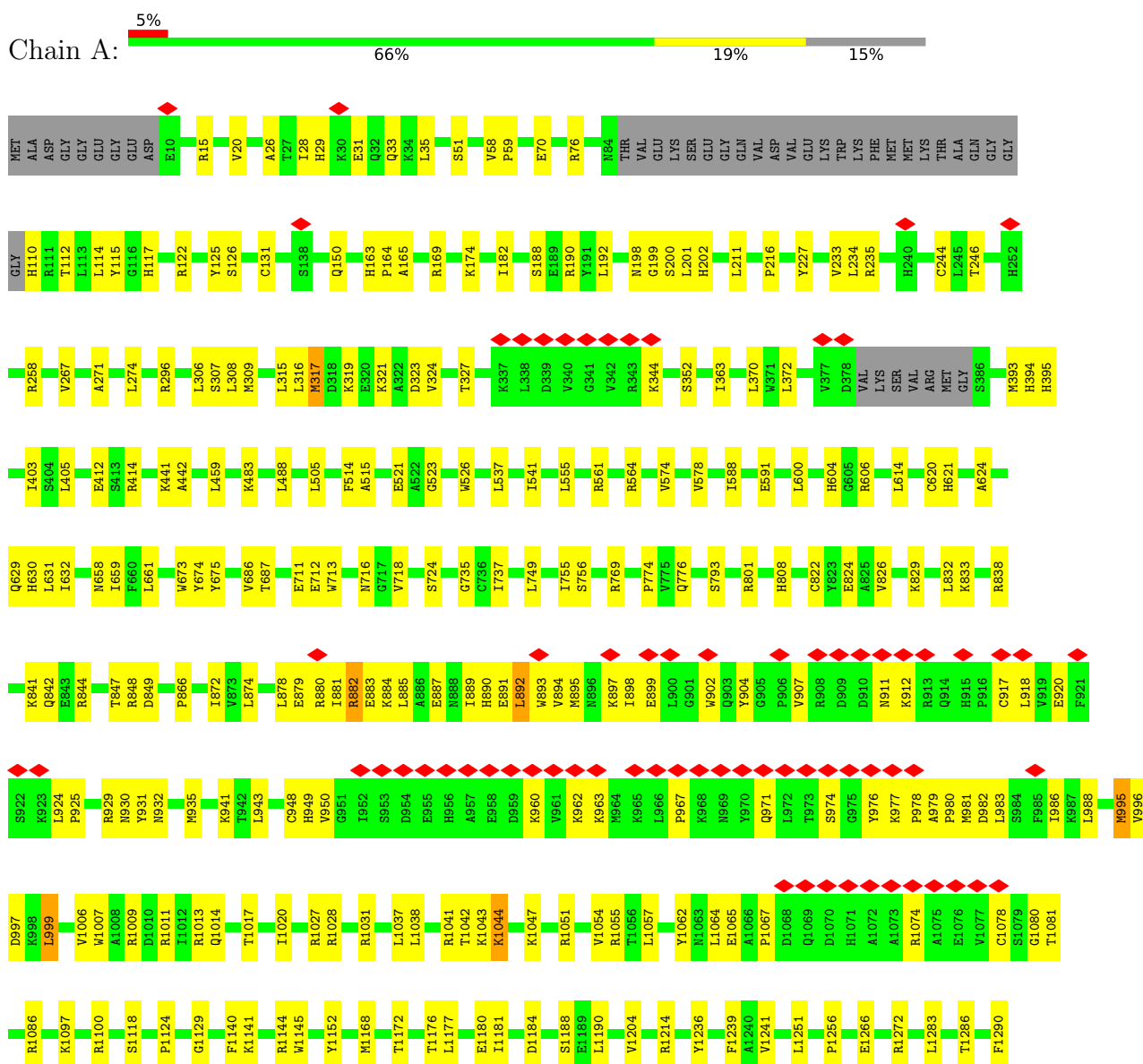
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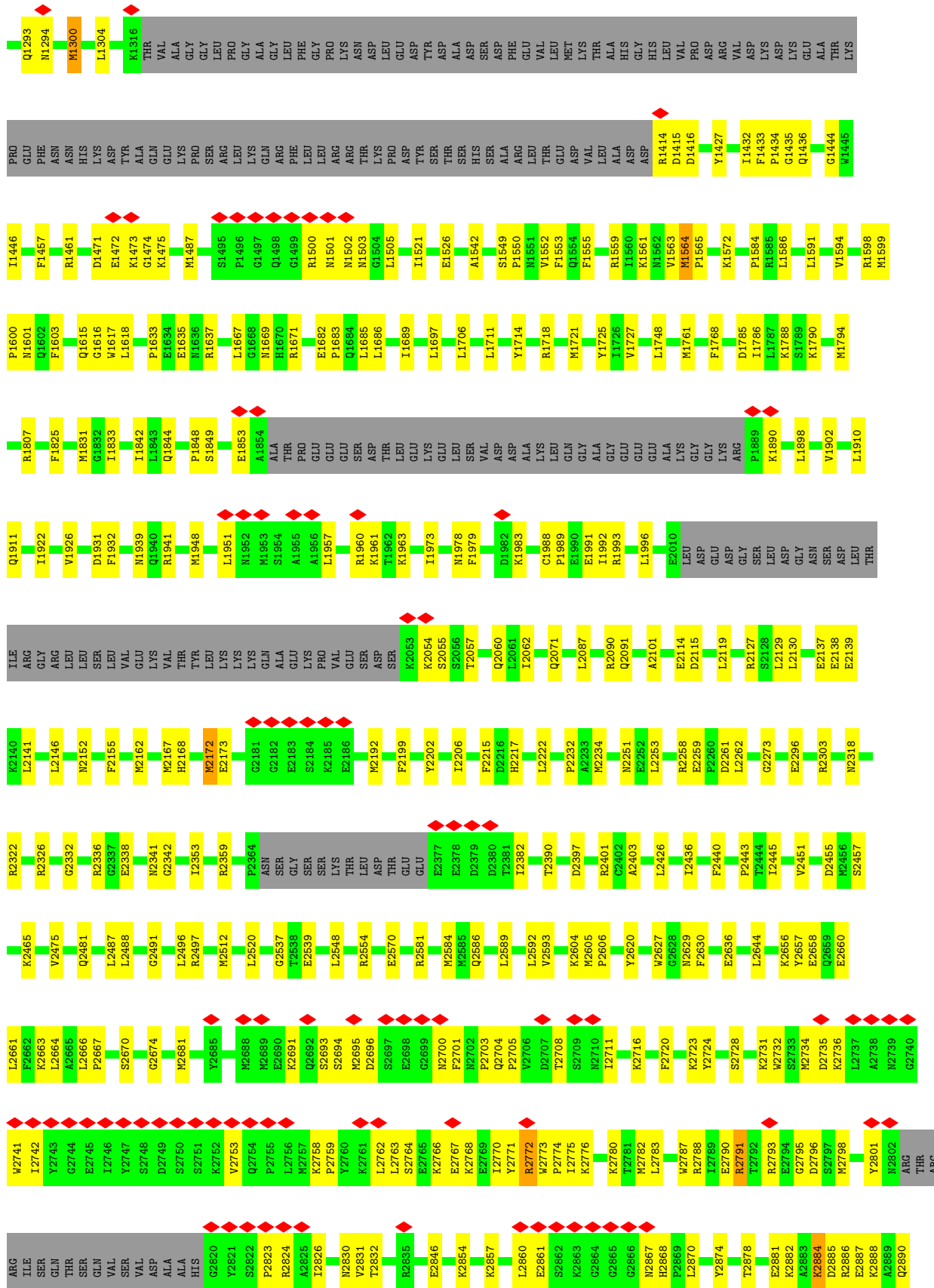
Mol	Chain	Residues	Atoms					AltConf
			Total	C	N	O	P	
4	D	1	31	10	5	13	3	0

3 Residue-property plots

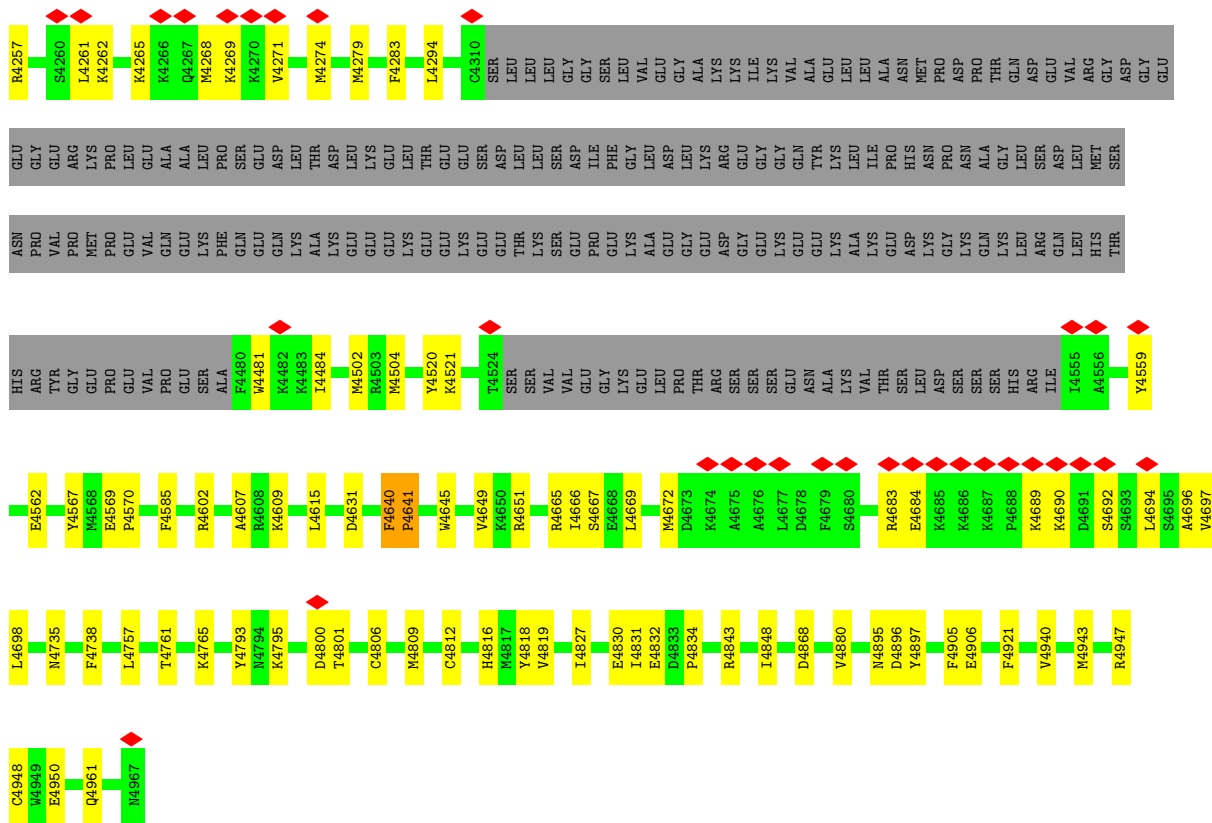
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and atom inclusion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

• Molecule 1: Ryanodine receptor 2

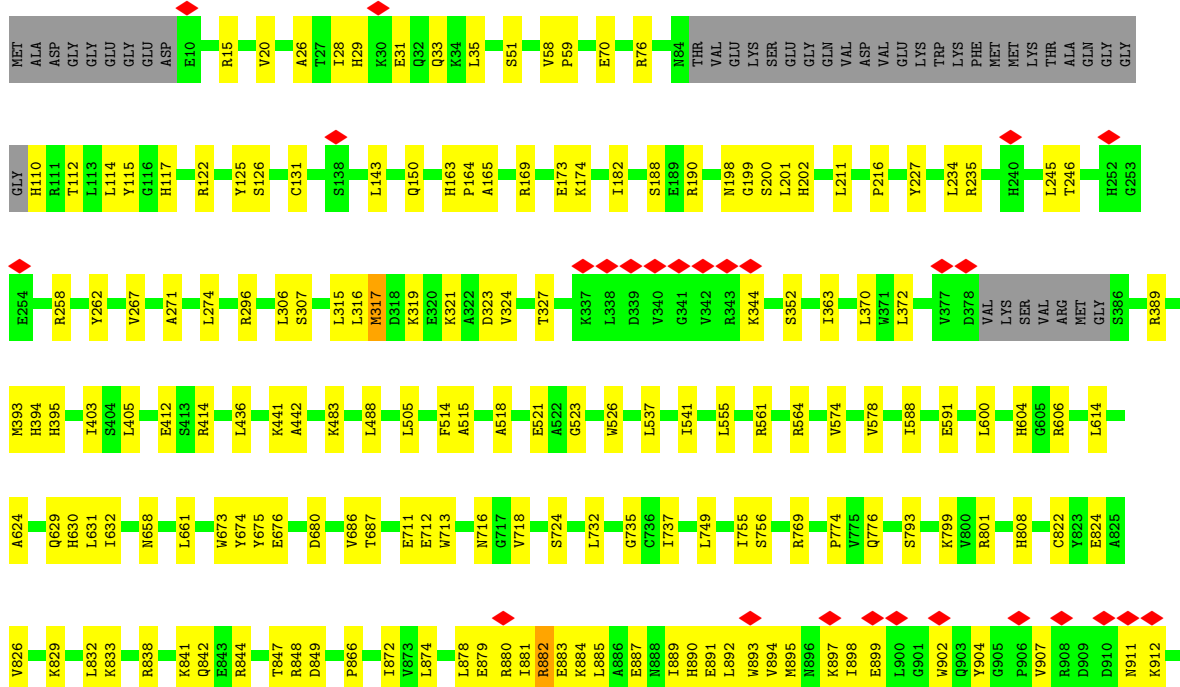


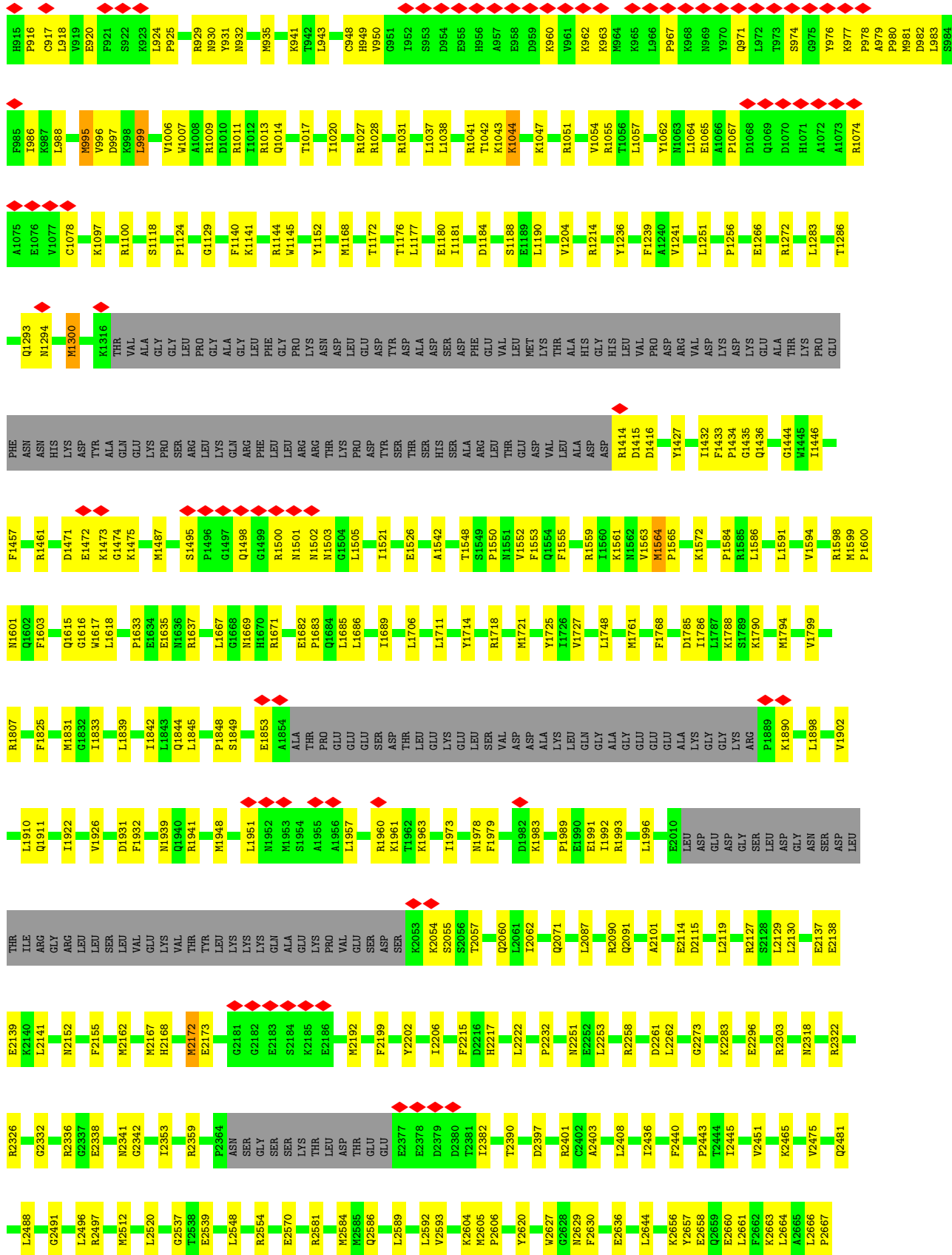


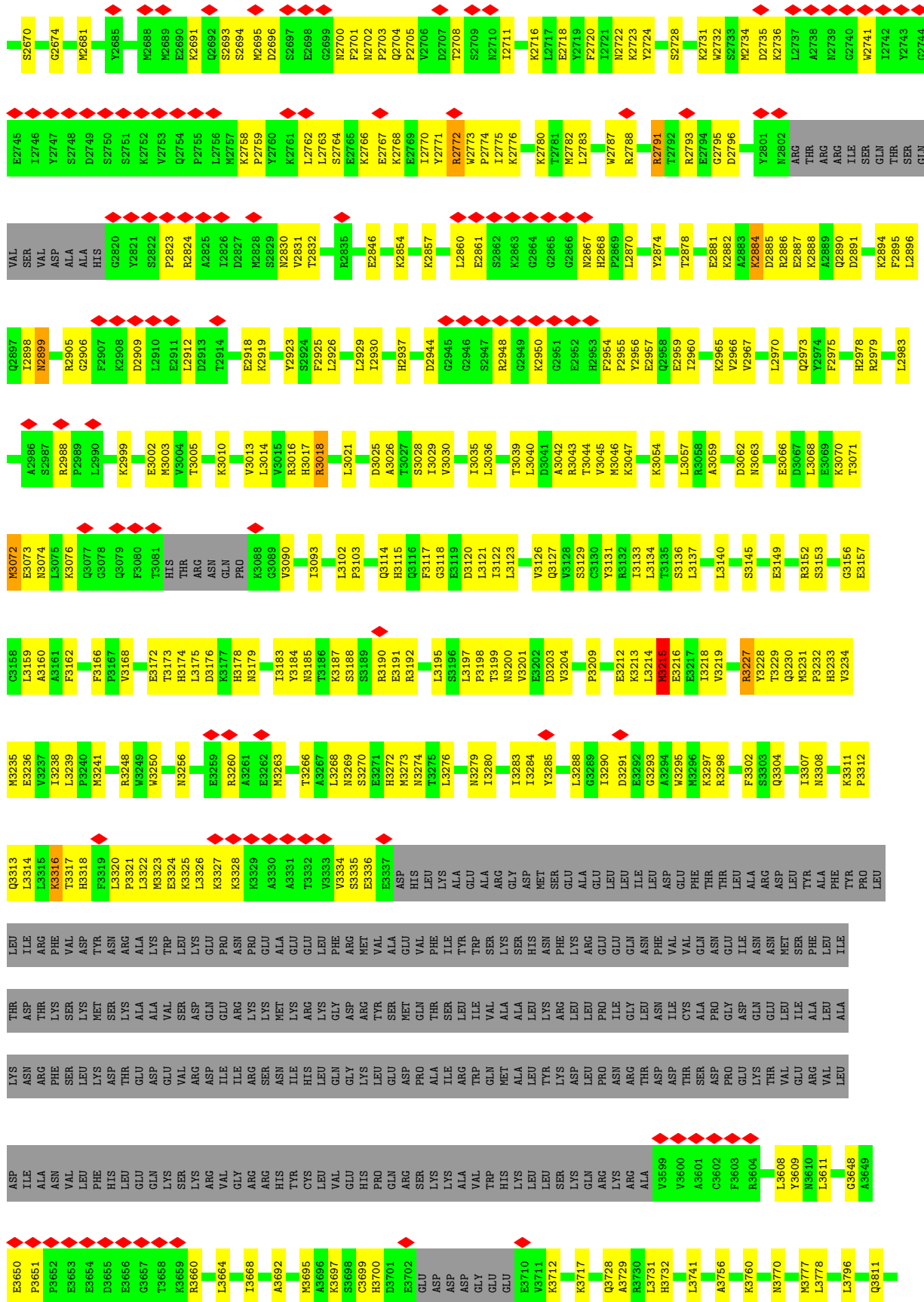
R4144	E4034	R3806	G3648	GLU	ILE	SER	PHE	M3231	G5156	E3069	H2978	D2891
S4155	Y4035	Q3811	A3649	ARG	ALA	PHE	LEU	P3232	G5157	K3070	H2979	K2894
Q4159	D4036	L3817	P3650	VAL	ALA	LEU	LEU	H3233	C9158	R3071	R2979	F2895
V4177	P4037	L3819	P3651	ASP	ALA	THR	LEU	M3234	L3159	M3072	L2983	L2896
M4178	D4038	G3818	E3652	ILE	ASN	THR	LEU	M3235	A3160	E3073	L2984	L2987
E4179	G4039	M3819	E3653	ALA	ARG	THR	LYS	E3236	A3161	M3074	L2988	M2899
S4182	K4040	V3820	E3654	ASN	PHE	THR	LYS	E3237	F3162	L3075	A2986	M2899
K4183	K4041	V3821	E3655	VAL	SER	SER	VAL	L3238	F3166	K3076	S2987	M2899
E4187	K4042	E3822	E3656	PHE	LYS	THR	ASP	L3239	F3167	Q3077	R2988	A2902
E4194	F4043	E3823	G3657	HIS	LYS	ASN	MET	M3241	Q3078	Q3079	K2999	R2905
H4195	F4044	G3824	T3658	LEU	THR	LYS	ARG	R3248	F3080	F3081	G2902	G2906
T4196	H4045	S3825	K3659	GLN	ASP	ALA	ALA	M3249	T3081	T3082	M3002	F2907
E4199	K4046	E3826	R3660	LYS	ASP	VAL	TRP	E3250	HIS	THR	K3010	K2908
M4200	Y4047	E3827	L3664	SER	VAL	SER	LEU	N3256	T3173	THR	V3013	D2909
S4209	D4048	E3828	I3668	LYS	ASP	ARG	LYS	E3259	H3174	ASN	L3014	E2911
ASP	F4049	M3829	I3669	ARG	ASP	GLN	LYS	R3260	D3176	ASN	V3015	L2912
LEU	H4050	L3830	A3692	VAL	ILE	GLU	GLU	R3260	H3177	PRD	R3016	L2914
ASN	Y4051	D3833	A3693	GLY	ILE	ASP	ASN	M3263	N3178	ASN	H3017	T2914
GLU	T4052	E3834	M3695	ARG	ARG	LYS	PRO	E3263	I3183	GLN	R3018	E2918
ALA	Q4060	F3835	H3696	ARG	SER	LYS	GLU	T3266	Y3184	GLU	L3021	Y2923
LEU	E4062	F3854	K3697	THR	ASN	MET	ALA	L3267	N3185	L3102	D3025	S2924
ASN	Y4063	Q3861	S3698	CYS	HIS	ARG	GLY	M3269	N3186	P3103	A3026	F2925
ARG	E4064	Q3861	H3700	VAL	LEU	LYS	LEU	E3270	T3187	L3104	S3028	L2926
SER	L4067	Q3864	D3701	HIS	GLY	ASP	PHE	S3271	K3187	Q3114	I3029	L2929
ALA	Y4068	Q3882	E3702	PRO	LEU	THR	VAL	S3271	E3189	Q3115	V3030	L2930
ASN	T4069	W3890	GLU	GLN	ASP	MET	GLU	H3272	S3196	H3116	L3033	H2937
LYS	D4072	Q3901	ASP	SER	PRO	GLN	VAL	T3275	L3195	E3118	H3034	D2944
GLU	E4074	Q3901	ASP	THR	ILE	LEU	ILE	L3276	L3197	D3120	I3035	G2945
GLU	Y4075	R3904	GLY	SER	ALA	LEU	THR	I3281	P3198	I3121	L3036	G2946
VAL	L4078	M3905	GLU	ALA	TRP	ILE	TRP	K3282	N3200	I3122	T3039	R2948
ARG	E4082	G3926	E3710	TRP	GLN	VAL	SER	I3283	E3202	L3123	L3040	G2949
GLU	F4083	R3939	HIS	VAL	MET	ALA	ALA	I3284	D3203	Q3127	D3041	K2950
GLY	K4085	G3946	LYS	LEU	LEU	ALA	SER	Y3285	E3204	V3126	R3042	G2951
PRO	H4088	F3947	LEU	LEU	TYR	LYS	ASN	L3288	V3204	Q3127	R3043	P2955
ARG	D4093	I3965	SER	SER	LYS	ARG	ARG	G3289	P3209	S3129	T3044	E2957
ALA	I4094	L3731	LYS	LYS	ASN	LEU	PHE	D3291	K3213	C3130	V3045	G2958
PHE	S4106	H3732	ARG	ARG	THR	LEU	ASN	E3292	L3214	Y3131	M3046	E2957
T4240	T4113	L3741	A3756	ASP	ASP	LEU	ASN	G3294	E3216	L3135	K3054	P2955
Y4250	Q4116	L3741	K3760	THR	THR	LEU	ILE	M3295	E3217	L3134	L3057	Y2956
T4254	T4117	A3756	N3770	SER	THR	LEU	VAL	W3295	I3218	S3136	R3058	G2957
L4255	F4118	A3756	N3770	ASP	THR	LEU	VAL	K3297	V3219	L3137	A3059	G2958
M4256	L4119	L3778	L3778	PRO	ASP	GLY	GLN	R3298	A3222	L3140	D3062	E2960
	E4120	L3778	L3778	GLU	GLY	ASP	GLN	F3502	R3227	S3145	N3063	I2960
	L4121	L3796	L3796	THR	THR	ASP	ASN	Q3303	Y3228	E3149	E3067	V2966
				VAL	VAL	LEU	LEU	Q3304	T3229	E3149	D3068	V2967
								I3307	Q3230	R3152		L2970
										S3153		Q2973
												V2974
												F2975

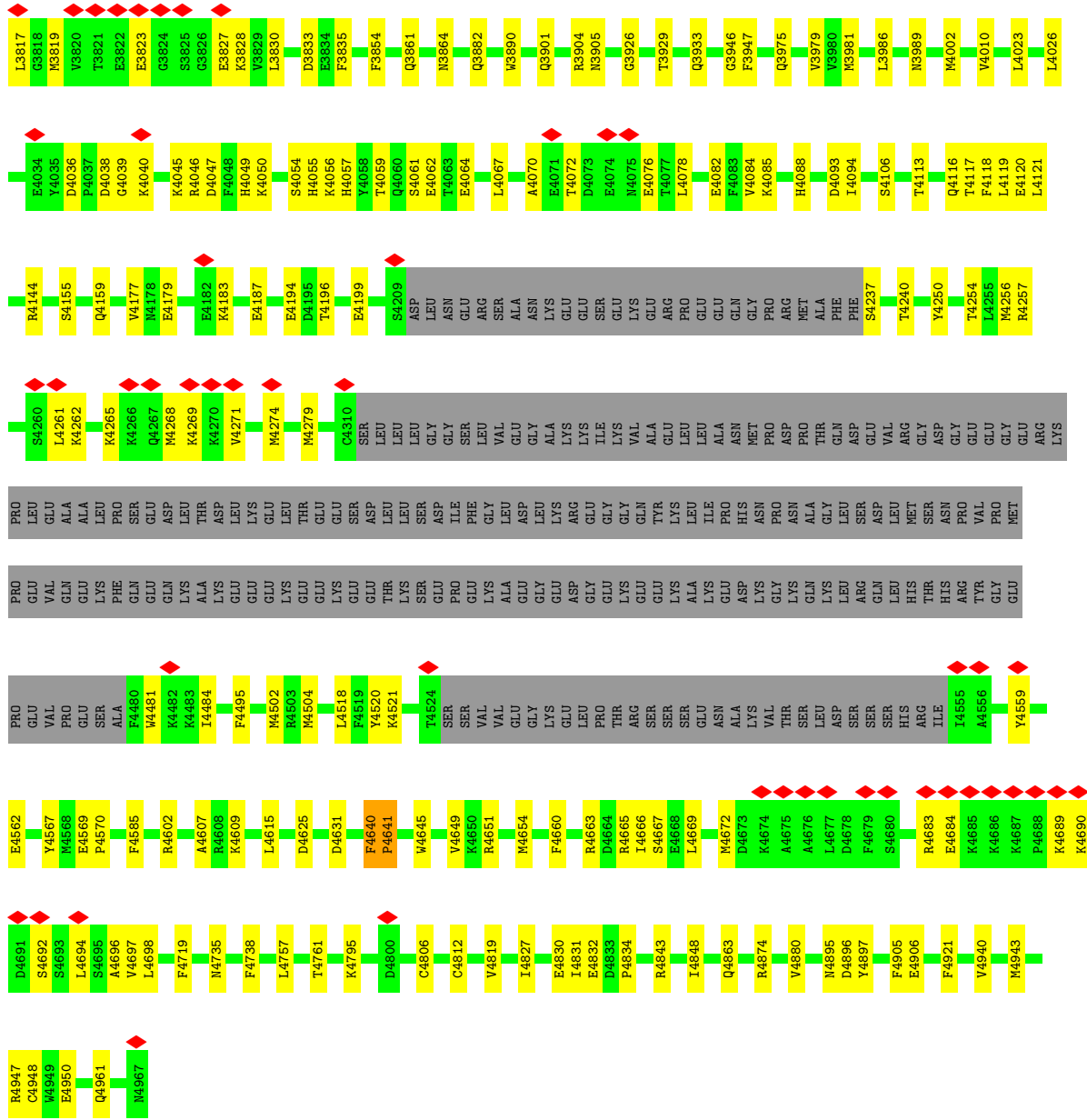


• Molecule 1: Ryanodine receptor 2

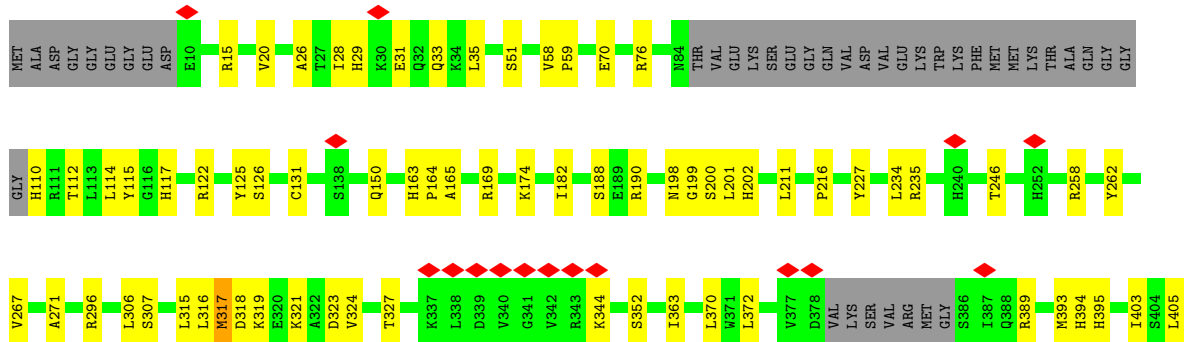


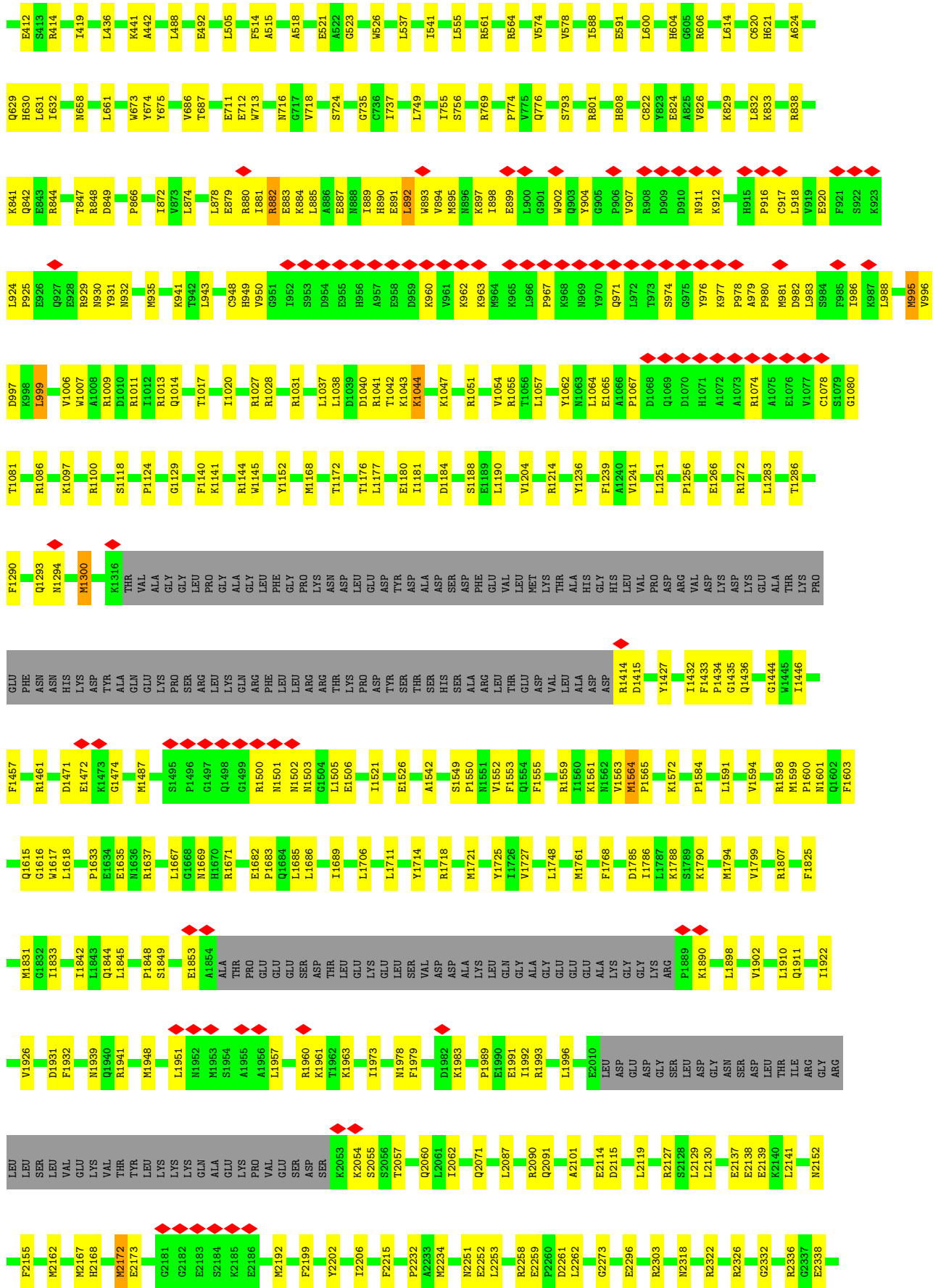


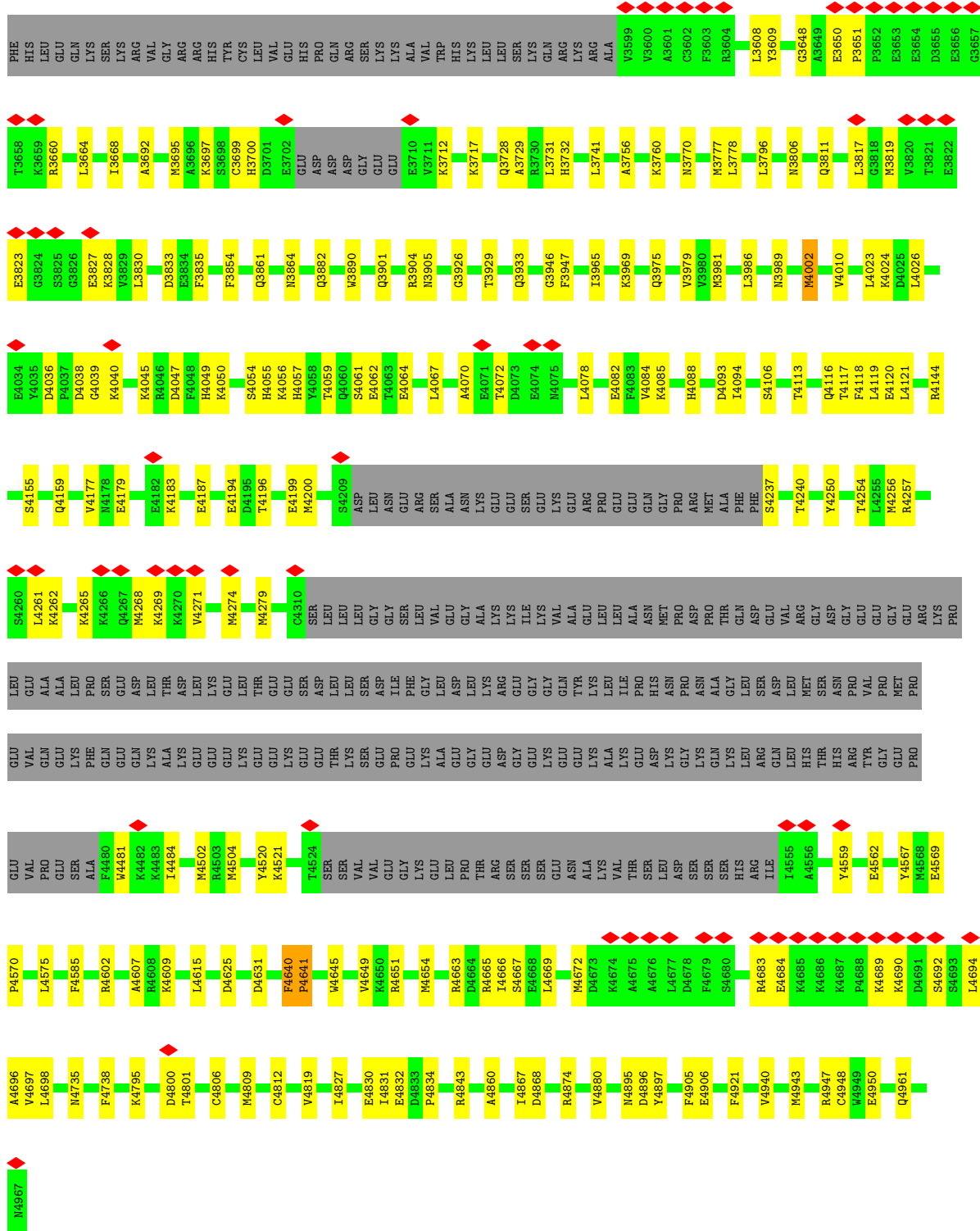




• Molecule 1: Ryanodine receptor 2

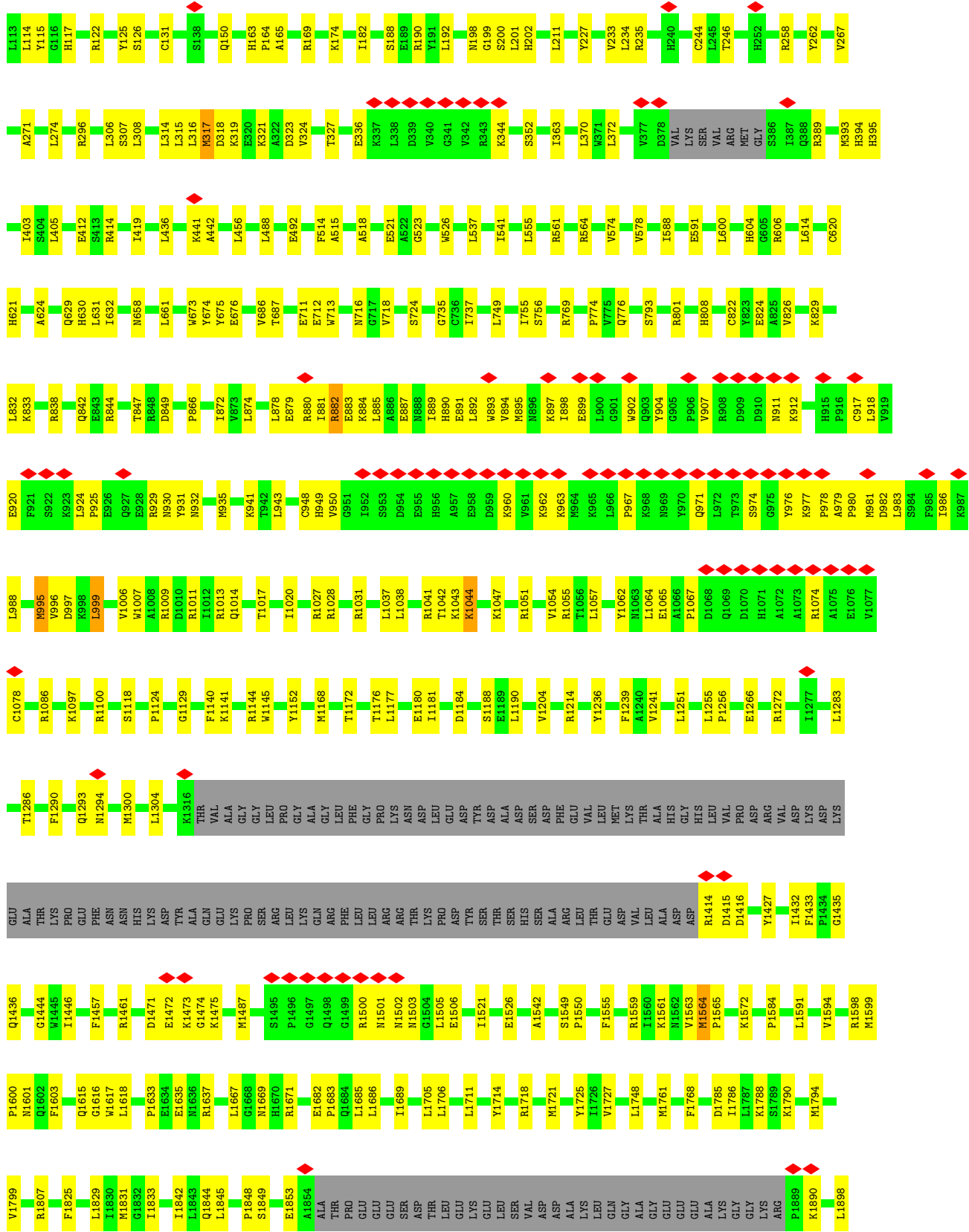


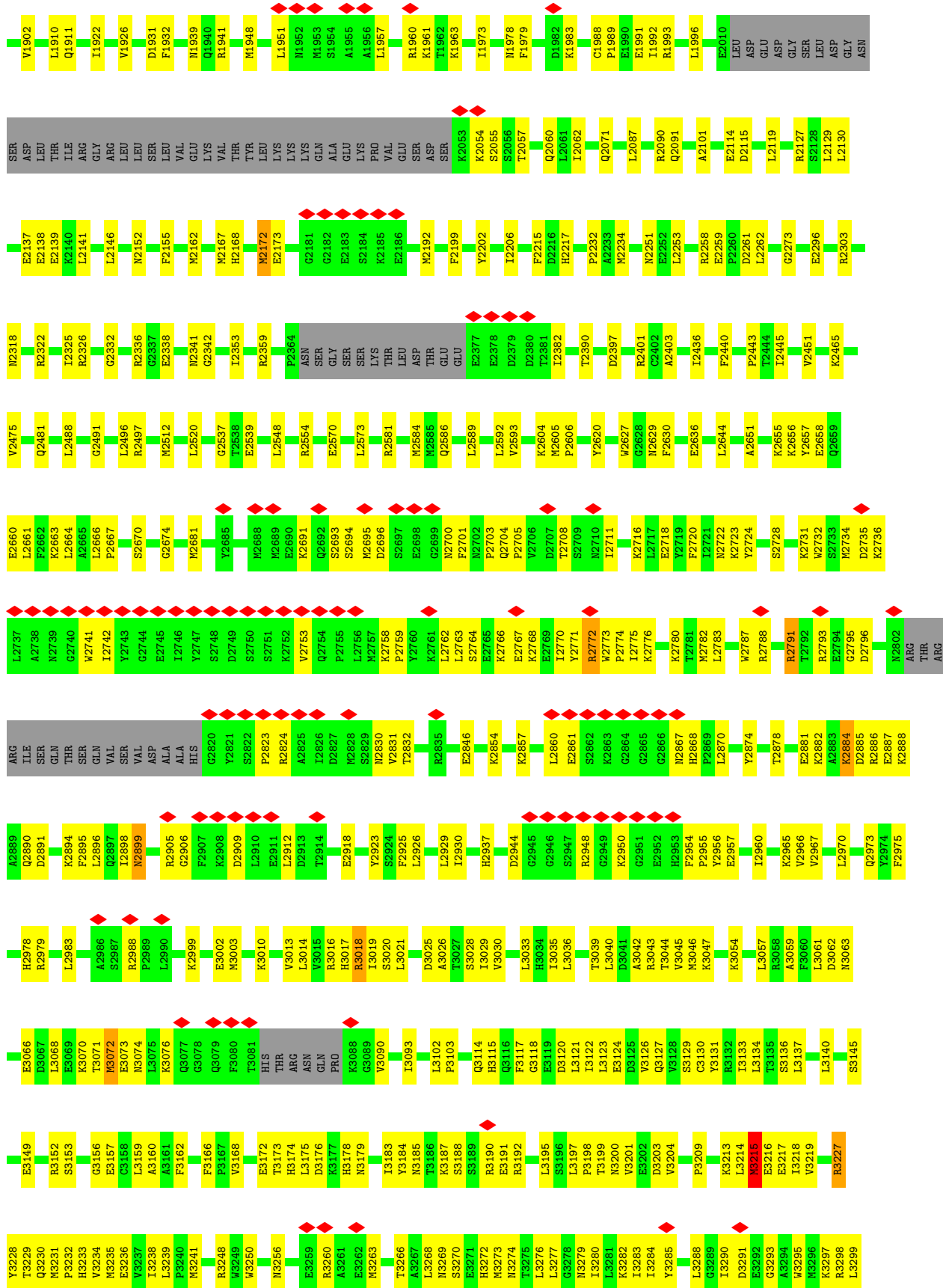




• Molecule 1: Ryanodine receptor 2

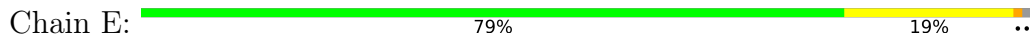








● Molecule 2: Peptidyl-prolyl cis-trans isomerase FKBP1B



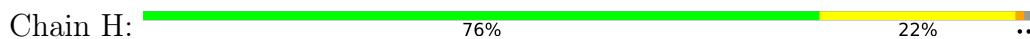
● Molecule 2: Peptidyl-prolyl cis-trans isomerase FKBP1B



● Molecule 2: Peptidyl-prolyl cis-trans isomerase FKBP1B



● Molecule 2: Peptidyl-prolyl cis-trans isomerase FKBP1B



4 Experimental information

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C4	Depositor
Number of particles used	102478	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	PHASE FLIPPING AND AMPLITUDE CORRECTION	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/\text{\AA}^2$)	58	Depositor
Minimum defocus (nm)	500	Depositor
Maximum defocus (nm)	1200	Depositor
Magnification	Not provided	
Image detector	GATAN K3 BIOQUANTUM (6k x 4k)	Depositor
Maximum map value	0.646	Depositor
Minimum map value	-0.013	Depositor
Average map value	0.011	Depositor
Map value standard deviation	0.031	Depositor
Recommended contour level	0.12	Depositor
Map size (\AA)	430.848, 430.848, 430.848	wwPDB
Map dimensions	512, 512, 512	wwPDB
Map angles ($^\circ$)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (\AA)	0.8415, 0.8415, 0.8415	Depositor

5 Model quality [i](#)

5.1 Standard geometry [i](#)

Bond lengths and bond angles in the following residue types are not validated in this section: 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	0.29	0/34516	0.49	2/46623 (0.0%)
1	B	0.29	0/34516	0.49	1/46623 (0.0%)
1	C	0.29	0/34516	0.49	2/46623 (0.0%)
1	D	0.29	0/34516	0.49	1/46623 (0.0%)
2	E	0.31	0/834	0.55	0/1123
2	F	0.31	0/834	0.55	0/1123
2	G	0.31	0/834	0.55	0/1123
2	H	0.31	0/834	0.55	0/1123
All	All	0.29	0/141400	0.49	6/190984 (0.0%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	A	0	2
1	B	0	2
1	C	0	2
1	D	0	2
All	All	0	8

There are no bond length outliers.

All (6) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	3215	MET	CB-CG-SD	5.58	129.15	112.40
1	C	3215	MET	CB-CG-SD	5.58	129.14	112.40
1	B	3215	MET	CB-CG-SD	5.58	129.12	112.40
1	D	3215	MET	CB-CG-SD	5.57	129.12	112.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	A	892	LEU	CB-CG-CD2	-5.03	102.45	111.00
1	C	892	LEU	CB-CG-CD2	-5.02	102.46	111.00

There are no chirality outliers.

All (8) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	A	3926	GLY	Peptide
1	A	4640	PHE	Peptide
1	B	3926	GLY	Peptide
1	B	4640	PHE	Peptide
1	C	3926	GLY	Peptide
1	C	4640	PHE	Peptide
1	D	3926	GLY	Peptide
1	D	4640	PHE	Peptide

5.2 Too-close contacts [i](#)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	A	33774	0	33452	689	0
1	B	33774	0	33452	685	0
1	C	33774	0	33452	679	0
1	D	33774	0	33452	694	0
2	E	818	0	821	14	0
2	F	818	0	821	17	0
2	G	818	0	821	17	0
2	H	818	0	821	16	0
3	A	1	0	0	0	0
3	B	1	0	0	0	0
3	C	1	0	0	0	0
3	D	1	0	0	0	0
4	A	62	0	24	0	0
4	B	62	0	24	0	0
4	C	62	0	24	0	0
4	D	62	0	24	0	0
All	All	138620	0	137188	2751	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 (2751) 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:B:3235:MET:HA	1:B:3239:LEU:HD13	1.41	1.03
1:D:3235:MET:HA	1:D:3239:LEU:HD13	1.41	1.02
1:C:3235:MET:HA	1:C:3239:LEU:HD13	1.41	1.02
1:A:3235:MET:HA	1:A:3239:LEU:HD13	1.41	1.02
1:B:3152:ARG:HH21	1:B:3236:GLU:HB3	1.39	0.88
1:C:3152:ARG:HH21	1:C:3236:GLU:HB3	1.39	0.87
1:A:3152:ARG:HH21	1:A:3236:GLU:HB3	1.39	0.86
1:A:4237:SER:N	1:A:4240:THR:HG1	1.74	0.85
1:C:4237:SER:N	1:C:4240:THR:HG1	1.74	0.85
2:H:50:ARG:HE	2:H:53:LYS:HZ3	1.24	0.84
1:D:3152:ARG:HH21	1:D:3236:GLU:HB3	1.39	0.84
2:F:50:ARG:HE	2:F:53:LYS:HZ3	1.25	0.84
1:D:4237:SER:N	1:D:4240:THR:HG1	1.75	0.84
1:A:3270:SER:HA	1:A:3273:MET:HE2	1.61	0.82
1:B:4237:SER:N	1:B:4240:THR:HG1	1.77	0.82
2:E:50:ARG:HE	2:E:53:LYS:HZ3	1.24	0.81
1:B:3270:SER:HA	1:B:3273:MET:HE2	1.62	0.81
2:G:50:ARG:HE	2:G:53:LYS:HZ3	1.24	0.80
1:A:3197:LEU:HD23	1:A:3199:THR:H	1.47	0.80
1:C:3270:SER:HA	1:C:3273:MET:HE2	1.61	0.80
1:D:3270:SER:HA	1:D:3273:MET:HE2	1.62	0.80
1:D:3197:LEU:HD23	1:D:3199:THR:H	1.47	0.80
1:B:3197:LEU:HD23	1:B:3199:THR:H	1.47	0.79
1:B:2251:ASN:HD22	1:B:3817:LEU:HD11	1.48	0.78
1:C:3197:LEU:HD23	1:C:3199:THR:H	1.47	0.78
1:D:2251:ASN:HD22	1:D:3817:LEU:HD11	1.48	0.78
1:A:2251:ASN:HD22	1:A:3817:LEU:HD11	1.48	0.78
1:B:4665:ARG:HH21	1:B:4666:ILE:HD13	1.50	0.76
1:C:4665:ARG:HH21	1:C:4666:ILE:HD13	1.50	0.76
1:C:924:LEU:HD12	1:C:925:PRO:HD2	1.68	0.75
1:C:2251:ASN:HD22	1:C:3817:LEU:HD11	1.48	0.75
1:D:4665:ARG:HH21	1:D:4666:ILE:HD13	1.50	0.74
1:A:924:LEU:HD12	1:A:925:PRO:HD2	1.68	0.74
1:D:924:LEU:HD12	1:D:925:PRO:HD2	1.68	0.74
1:A:4665:ARG:HH21	1:A:4666:ILE:HD13	1.50	0.74
1:C:894:VAL:HG12	1:C:897:LYS:HZ2	1.53	0.73
1:D:2693:SER:OG	1:D:2704:GLN:NE2	2.21	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2693:SER:OG	1:B:2704:GLN:NE2	2.21	0.73
1:A:2693:SER:OG	1:A:2704:GLN:NE2	2.21	0.73
1:C:2693:SER:OG	1:C:2704:GLN:NE2	2.21	0.73
1:B:924:LEU:HD12	1:B:925:PRO:HD2	1.68	0.73
1:B:3013:VAL:O	1:B:3018:ARG:NH2	2.22	0.73
1:D:3013:VAL:O	1:D:3018:ARG:NH2	2.22	0.73
1:A:4279:MET:HE2	1:B:4484:ILE:HA	1.69	0.73
1:A:988:LEU:HD12	1:A:1055:ARG:HD3	1.71	0.72
1:C:988:LEU:HD12	1:C:1055:ARG:HD3	1.71	0.72
1:C:3013:VAL:O	1:C:3018:ARG:NH2	2.22	0.72
1:A:3013:VAL:O	1:A:3018:ARG:NH2	2.22	0.72
1:D:894:VAL:HG12	1:D:897:LYS:HZ2	1.53	0.72
1:D:3269:ASN:HB3	1:D:3272:HIS:ND1	2.05	0.72
1:A:3269:ASN:HB3	1:A:3272:HIS:ND1	2.05	0.72
1:B:988:LEU:HD12	1:B:1055:ARG:HD3	1.71	0.71
1:D:1941:ARG:HH21	1:D:3609:TYR:HB2	1.55	0.71
1:A:1941:ARG:HH21	1:A:3609:TYR:HB2	1.55	0.71
1:C:4279:MET:HE2	1:D:4484:ILE:HA	1.70	0.71
1:A:2488:LEU:HD21	1:A:2548:LEU:HD22	1.72	0.71
1:D:988:LEU:HD12	1:D:1055:ARG:HD3	1.71	0.71
1:D:2488:LEU:HD21	1:D:2548:LEU:HD22	1.72	0.71
1:B:3269:ASN:HB3	1:B:3272:HIS:ND1	2.05	0.71
1:C:3269:ASN:HB3	1:C:3272:HIS:ND1	2.05	0.71
1:B:894:VAL:HG12	1:B:897:LYS:HZ2	1.56	0.70
1:B:1941:ARG:HH21	1:B:3609:TYR:HB2	1.55	0.70
1:C:1941:ARG:HH21	1:C:3609:TYR:HB2	1.55	0.70
1:C:3042:ALA:HB1	1:C:3121:LEU:HD13	1.73	0.70
1:B:3042:ALA:HB1	1:B:3121:LEU:HD13	1.73	0.70
1:C:2791:ARG:HH12	1:C:2795:GLY:HA3	1.57	0.70
1:D:2791:ARG:HH12	1:D:2795:GLY:HA3	1.57	0.70
1:D:894:VAL:HA	1:D:897:LYS:HG2	1.73	0.70
1:D:2723:LYS:HG2	1:D:2895:PHE:HZ	1.56	0.70
1:B:2791:ARG:HH12	1:B:2795:GLY:HA3	1.57	0.70
1:C:1038:LEU:O	1:C:1043:LYS:NZ	2.24	0.70
1:D:769:ARG:HG2	1:D:774:PRO:HA	1.74	0.70
1:A:363:ILE:HD11	1:A:403:ILE:HD13	1.74	0.70
1:A:894:VAL:HA	1:A:897:LYS:HG2	1.73	0.70
1:A:1038:LEU:O	1:A:1043:LYS:NZ	2.24	0.70
1:A:2791:ARG:HH12	1:A:2795:GLY:HA3	1.57	0.70
1:B:1038:LEU:O	1:B:1043:LYS:NZ	2.24	0.70
1:D:1038:LEU:O	1:D:1043:LYS:NZ	2.24	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4481:TRP:HA	1:A:4484:ILE:HG22	1.74	0.70
1:B:1129:GLY:HA3	1:B:1145:TRP:HB3	1.74	0.70
1:B:2979:ARG:HH22	1:B:2983:LEU:HD22	1.57	0.69
1:B:2723:LYS:HG2	1:B:2895:PHE:HZ	1.56	0.69
1:A:1129:GLY:HA3	1:A:1145:TRP:HB3	1.74	0.69
1:A:3042:ALA:HB1	1:A:3121:LEU:HD13	1.73	0.69
1:B:2488:LEU:HD21	1:B:2548:LEU:HD22	1.72	0.69
1:A:2979:ARG:HH22	1:A:2983:LEU:HD22	1.57	0.69
1:C:769:ARG:HG2	1:C:774:PRO:HA	1.74	0.69
1:C:2488:LEU:HD21	1:C:2548:LEU:HD22	1.72	0.69
1:D:3042:ALA:HB1	1:D:3121:LEU:HD13	1.73	0.69
2:G:22:THR:HG22	2:G:50:ARG:HG2	1.74	0.69
1:B:769:ARG:HG2	1:B:774:PRO:HA	1.74	0.69
1:A:894:VAL:HG12	1:A:897:LYS:HZ2	1.58	0.69
1:A:2723:LYS:HG2	1:A:2895:PHE:HZ	1.56	0.69
1:B:363:ILE:HD11	1:B:403:ILE:HD13	1.74	0.69
1:C:2723:LYS:HG2	1:C:2895:PHE:HZ	1.56	0.69
1:C:4481:TRP:HA	1:C:4484:ILE:HG22	1.74	0.69
1:C:894:VAL:HA	1:C:897:LYS:HG2	1.73	0.69
2:H:22:THR:HG22	2:H:50:ARG:HG2	1.74	0.69
1:D:4481:TRP:HA	1:D:4484:ILE:HG22	1.74	0.68
1:B:894:VAL:HA	1:B:897:LYS:HG2	1.73	0.68
1:C:2979:ARG:HH22	1:C:2983:LEU:HD22	1.57	0.68
1:D:363:ILE:HD11	1:D:403:ILE:HD13	1.74	0.68
2:E:22:THR:HG22	2:E:50:ARG:HG2	1.74	0.68
1:B:3650:GLU:OE1	1:B:3660:ARG:NH1	2.27	0.68
1:B:4481:TRP:HA	1:B:4484:ILE:HG22	1.74	0.68
1:C:1129:GLY:HA3	1:C:1145:TRP:HB3	1.74	0.68
1:B:2627:TRP:HB2	1:B:2630:PHE:HB2	1.76	0.68
1:C:363:ILE:HD11	1:C:403:ILE:HD13	1.74	0.68
1:D:2979:ARG:HH22	1:D:2983:LEU:HD22	1.57	0.68
1:D:3650:GLU:OE1	1:D:3660:ARG:NH1	2.27	0.68
1:A:3650:GLU:OE1	1:A:3660:ARG:NH1	2.27	0.68
1:B:363:ILE:HD13	1:B:372:LEU:HD23	1.75	0.68
1:C:3650:GLU:OE1	1:C:3660:ARG:NH1	2.27	0.68
1:D:1129:GLY:HA3	1:D:1145:TRP:HB3	1.74	0.68
1:D:3778:LEU:HD13	1:D:3854:PHE:HD1	1.59	0.68
2:F:22:THR:HG22	2:F:50:ARG:HG2	1.74	0.68
1:A:769:ARG:HG2	1:A:774:PRO:HA	1.74	0.68
1:D:1635:GLU:OE1	1:D:1637:ARG:NH1	2.28	0.67
1:C:2627:TRP:HB2	1:C:2630:PHE:HB2	1.76	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:2882:LYS:HD2	1:D:2886:ARG:HH21	1.60	0.67
1:A:2627:TRP:HB2	1:A:2630:PHE:HB2	1.76	0.67
1:C:3778:LEU:HD13	1:C:3854:PHE:HD1	1.59	0.67
1:A:4694:LEU:HD11	1:D:4268:MET:HG3	1.76	0.67
1:C:363:ILE:HD13	1:C:372:LEU:HD23	1.75	0.67
1:C:1009:ARG:HB2	1:C:1013:ARG:HH12	1.60	0.67
1:A:1635:GLU:OE1	1:A:1637:ARG:NH1	2.28	0.67
1:D:1009:ARG:HB2	1:D:1013:ARG:HH12	1.60	0.67
1:B:1009:ARG:HB2	1:B:1013:ARG:HH12	1.60	0.67
1:B:1433:PHE:O	1:B:1500:ARG:NH2	2.28	0.67
1:B:3778:LEU:HD13	1:B:3854:PHE:HD1	1.59	0.67
1:D:363:ILE:HD13	1:D:372:LEU:HD23	1.75	0.67
1:A:363:ILE:HD13	1:A:372:LEU:HD23	1.75	0.67
1:B:1635:GLU:OE1	1:B:1637:ARG:NH1	2.28	0.67
1:A:2882:LYS:HD2	1:A:2886:ARG:HH21	1.60	0.66
1:C:1635:GLU:OE1	1:C:1637:ARG:NH1	2.28	0.66
1:C:2882:LYS:HD2	1:C:2886:ARG:HH21	1.60	0.66
1:D:1433:PHE:O	1:D:1500:ARG:NH2	2.28	0.66
1:A:1009:ARG:HB2	1:A:1013:ARG:HH12	1.60	0.66
1:A:3778:LEU:HD13	1:A:3854:PHE:HD1	1.59	0.66
1:C:1433:PHE:O	1:C:1500:ARG:NH2	2.28	0.66
1:B:2882:LYS:HD2	1:B:2886:ARG:HH21	1.60	0.66
1:C:904:TYR:HB2	1:C:918:LEU:HD22	1.77	0.66
1:C:4072:THR:HG22	1:C:4078:LEU:HB3	1.78	0.66
1:D:4072:THR:HG22	1:D:4078:LEU:HB3	1.78	0.66
1:A:4484:ILE:HA	1:D:4279:MET:HE2	1.76	0.66
1:B:4268:MET:HA	1:B:4271:VAL:HG22	1.77	0.66
1:A:2830:ASN:HB2	1:B:1434:PRO:O	1.96	0.66
1:A:1433:PHE:O	1:A:1500:ARG:NH2	2.28	0.66
1:A:125:TYR:O	1:A:414:ARG:NH1	2.29	0.66
1:B:2604:LYS:NZ	1:B:2660:GLU:OE1	2.26	0.66
1:D:904:TYR:HB2	1:D:918:LEU:HD22	1.77	0.66
1:D:2627:TRP:HB2	1:D:2630:PHE:HB2	1.76	0.66
1:A:1768:PHE:O	2:E:83:TYR:OH	2.13	0.65
1:B:2657:TYR:OH	1:B:2663:LYS:NZ	2.30	0.65
1:B:4072:THR:HG22	1:B:4078:LEU:HB3	1.78	0.65
1:C:2657:TYR:OH	1:C:2663:LYS:NZ	2.30	0.65
1:C:4268:MET:HA	1:C:4271:VAL:HG22	1.77	0.65
1:A:904:TYR:HB2	1:A:918:LEU:HD22	1.77	0.65
1:A:4072:THR:HG22	1:A:4078:LEU:HB3	1.78	0.65
1:D:2657:TYR:OH	1:D:2663:LYS:NZ	2.30	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1503:ASN:HB2	1:D:2824:ARG:HH22	1.60	0.65
1:A:2657:TYR:OH	1:A:2663:LYS:NZ	2.30	0.65
1:B:904:TYR:HB2	1:B:918:LEU:HD22	1.77	0.65
1:B:2860:LEU:HD11	1:B:2867:ASN:HA	1.79	0.65
1:C:2860:LEU:HD11	1:C:2867:ASN:HA	1.79	0.65
1:D:125:TYR:O	1:D:414:ARG:NH1	2.29	0.65
1:C:3184:TYR:O	1:C:3192:ARG:NH2	2.30	0.65
1:D:963:LYS:HZ1	1:D:977:LYS:HD3	1.62	0.65
1:D:3025:ASP:O	1:D:3028:SER:OG	2.14	0.65
1:A:4268:MET:HA	1:A:4271:VAL:HG22	1.77	0.65
1:D:1432:ILE:HG22	1:D:1500:ARG:HH21	1.62	0.65
1:B:1432:ILE:HG22	1:B:1500:ARG:HH21	1.62	0.65
2:H:4:GLU:OE1	2:H:4:GLU:N	2.30	0.65
1:B:3179:ASN:O	1:B:3185:ASN:ND2	2.30	0.65
1:C:125:TYR:O	1:C:414:ARG:NH1	2.29	0.65
1:D:3184:TYR:O	1:D:3192:ARG:NH2	2.30	0.65
1:A:2232:PRO:HG3	1:A:2382:ILE:HD11	1.79	0.64
1:A:3184:TYR:O	1:A:3192:ARG:NH2	2.30	0.64
1:C:1911:GLN:OE1	1:C:2090:ARG:NH1	2.31	0.64
1:D:2860:LEU:HD11	1:D:2867:ASN:HA	1.78	0.64
1:B:3166:PHE:HE2	1:B:3168:VAL:HB	1.62	0.64
1:C:3166:PHE:HE2	1:C:3168:VAL:HB	1.62	0.64
1:C:4690:LYS:HG3	1:C:4692:SER:H	1.63	0.64
1:D:1911:GLN:OE1	1:D:2090:ARG:NH1	2.31	0.64
1:A:3166:PHE:HE2	1:A:3168:VAL:HB	1.62	0.64
1:B:2773:TRP:HB3	1:B:2774:PRO:HD3	1.79	0.64
1:C:2773:TRP:HB3	1:C:2774:PRO:HD3	1.79	0.64
1:C:3179:ASN:O	1:C:3185:ASN:ND2	2.30	0.64
1:A:1432:ILE:HG22	1:A:1500:ARG:HH21	1.62	0.64
1:A:1911:GLN:OE1	1:A:2090:ARG:NH1	2.31	0.64
1:A:2860:LEU:HD11	1:A:2867:ASN:HA	1.79	0.64
1:B:125:TYR:O	1:B:414:ARG:NH1	2.29	0.64
1:D:3227:ARG:HD3	1:D:3229:THR:H	1.63	0.64
1:D:4268:MET:HA	1:D:4271:VAL:HG22	1.77	0.64
1:A:3179:ASN:O	1:A:3185:ASN:ND2	2.30	0.64
1:B:1911:GLN:OE1	1:B:2090:ARG:NH1	2.31	0.64
1:C:1432:ILE:HG22	1:C:1500:ARG:HH21	1.62	0.64
2:G:4:GLU:OE1	2:G:4:GLU:N	2.30	0.64
1:B:963:LYS:HZ1	1:B:977:LYS:HD3	1.63	0.64
1:B:4690:LYS:HG3	1:B:4692:SER:H	1.63	0.64
1:C:2232:PRO:HG3	1:C:2382:ILE:HD11	1.79	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3227:ARG:HD3	1:A:3229:THR:H	1.63	0.63
1:A:4262:LYS:HG3	1:B:4698:LEU:HD13	1.78	0.63
1:D:2773:TRP:HB3	1:D:2774:PRO:HD3	1.79	0.63
1:B:3901:GLN:O	1:B:3905:ASN:ND2	2.28	0.63
1:C:4268:MET:HG3	1:D:4694:LEU:HD11	1.81	0.63
1:D:3179:ASN:O	1:D:3185:ASN:ND2	2.30	0.63
1:D:3166:PHE:HE2	1:D:3168:VAL:HB	1.62	0.63
2:F:4:GLU:OE1	2:F:4:GLU:N	2.29	0.63
1:C:3227:ARG:HD3	1:C:3229:THR:H	1.63	0.63
1:C:3127:GLN:O	1:C:3131:TYR:HD2	1.82	0.63
1:D:2232:PRO:HG3	1:D:2382:ILE:HD11	1.79	0.63
1:A:3127:GLN:O	1:A:3131:TYR:HD2	1.82	0.63
1:B:3127:GLN:O	1:B:3131:TYR:HD2	1.82	0.63
1:D:4690:LYS:HG3	1:D:4692:SER:H	1.63	0.63
2:G:26:HIS:CD2	2:G:105:LEU:HD11	2.34	0.63
1:A:2773:TRP:HB3	1:A:2774:PRO:HD3	1.79	0.63
1:A:4690:LYS:HG3	1:A:4692:SER:H	1.63	0.63
2:E:26:HIS:CD2	2:E:105:LEU:HD11	2.34	0.63
1:B:2232:PRO:HG3	1:B:2382:ILE:HD11	1.79	0.63
1:B:4279:MET:HE2	1:C:4484:ILE:HA	1.80	0.63
1:C:2604:LYS:NZ	1:C:2660:GLU:OE1	2.26	0.63
1:A:963:LYS:HZ1	1:A:977:LYS:HD3	1.63	0.63
1:D:3311:LYS:HB2	1:D:3314:LEU:HD13	1.80	0.63
1:A:2593:VAL:HG12	1:A:2644:LEU:HB2	1.81	0.62
1:B:3184:TYR:O	1:B:3192:ARG:NH2	2.30	0.62
1:D:3127:GLN:O	1:D:3131:TYR:HD2	1.82	0.62
1:D:2273:GLY:O	1:D:2336:ARG:NH2	2.32	0.62
2:F:26:HIS:CD2	2:F:105:LEU:HD11	2.34	0.62
1:A:2273:GLY:O	1:A:2336:ARG:NH2	2.32	0.62
1:A:4268:MET:HG3	1:B:4694:LEU:HD11	1.81	0.62
2:E:4:GLU:N	2:E:4:GLU:OE1	2.29	0.62
1:B:3134:LEU:HB3	1:B:3162:PHE:CE2	2.35	0.62
1:C:872:ILE:O	1:C:941:LYS:NZ	2.32	0.62
1:A:872:ILE:O	1:A:941:LYS:NZ	2.32	0.62
1:A:2586:GLN:NE2	1:A:2636:GLU:OE1	2.33	0.62
1:C:3025:ASP:O	1:C:3028:SER:OG	2.14	0.62
1:D:2593:VAL:HG12	1:D:2644:LEU:HB2	1.81	0.62
1:D:3325:LYS:HE3	1:D:3328:LYS:HD2	1.81	0.62
1:A:3134:LEU:HB3	1:A:3162:PHE:CE2	2.35	0.62
1:A:3325:LYS:HE3	1:A:3328:LYS:HD2	1.81	0.62
1:B:3311:LYS:HB2	1:B:3314:LEU:HD13	1.80	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2824:ARG:HH22	1:C:1503:ASN:HB2	1.65	0.62
1:B:3325:LYS:HE3	1:B:3328:LYS:HD2	1.81	0.62
1:C:3311:LYS:HB2	1:C:3314:LEU:HD13	1.80	0.62
1:A:3311:LYS:HB2	1:A:3314:LEU:HD13	1.80	0.62
1:B:3025:ASP:O	1:B:3028:SER:OG	2.14	0.62
2:H:26:HIS:CD2	2:H:105:LEU:HD11	2.34	0.62
1:B:2728:SER:HA	1:B:2731:LYS:HZ2	1.64	0.62
1:C:3134:LEU:HB3	1:C:3162:PHE:CE2	2.35	0.62
1:D:872:ILE:O	1:D:941:LYS:NZ	2.32	0.62
1:C:2593:VAL:HG12	1:C:2644:LEU:HB2	1.81	0.62
1:D:3043:ARG:NE	1:D:3120:ASP:OD2	2.27	0.62
1:D:3134:LEU:HB3	1:D:3162:PHE:CE2	2.35	0.62
1:B:872:ILE:O	1:B:941:LYS:NZ	2.32	0.61
1:B:3227:ARG:HD3	1:B:3229:THR:H	1.63	0.61
1:C:3325:LYS:HE3	1:C:3328:LYS:HD2	1.81	0.61
1:C:2273:GLY:O	1:C:2336:ARG:NH2	2.32	0.61
1:B:3016:ARG:HG2	1:B:3017:HIS:CD2	2.36	0.61
1:D:3016:ARG:HG2	1:D:3017:HIS:CD2	2.36	0.61
1:D:3901:GLN:O	1:D:3905:ASN:ND2	2.28	0.61
1:B:895:MET:SD	1:B:971:GLN:NE2	2.74	0.61
1:B:2273:GLY:O	1:B:2336:ARG:NH2	2.32	0.61
1:C:3901:GLN:O	1:C:3905:ASN:ND2	2.28	0.61
1:A:895:MET:SD	1:A:971:GLN:NE2	2.74	0.61
1:A:4665:ARG:HH22	1:A:4669:LEU:HD22	1.66	0.61
1:D:4187:GLU:OE2	1:D:4947:ARG:NH2	2.33	0.61
1:A:3016:ARG:HG2	1:A:3017:HIS:CD2	2.36	0.61
1:B:4665:ARG:HH22	1:B:4669:LEU:HD22	1.66	0.61
1:A:2824:ARG:HH22	1:B:1503:ASN:HB2	1.65	0.61
1:B:4609:LYS:HD2	1:B:4615:LEU:HD22	1.83	0.61
1:C:895:MET:SD	1:C:971:GLN:NE2	2.74	0.61
1:C:2586:GLN:NE2	1:C:2636:GLU:OE1	2.33	0.61
1:B:4187:GLU:OE2	1:B:4947:ARG:NH2	2.33	0.61
1:D:4609:LYS:HD2	1:D:4615:LEU:HD22	1.83	0.61
1:A:4609:LYS:HD2	1:A:4615:LEU:HD22	1.83	0.61
1:C:3016:ARG:HG2	1:C:3017:HIS:CD2	2.36	0.61
1:B:126:SER:HA	1:B:414:ARG:HH12	1.67	0.60
1:B:4010:VAL:HG11	1:B:4118:PHE:HZ	1.66	0.60
1:B:4874:ARG:NH1	1:C:4868:ASP:OD1	2.34	0.60
1:D:2831:VAL:HG12	1:D:2894:LYS:HD2	1.83	0.60
1:B:1910:LEU:HD13	1:B:2062:ILE:HG12	1.83	0.60
1:B:2593:VAL:HG12	1:B:2644:LEU:HB2	1.81	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:4010:VAL:HG11	1:C:4118:PHE:HZ	1.66	0.60
1:D:3313:GLN:HA	1:D:3316:LYS:NZ	2.17	0.60
1:A:3313:GLN:HA	1:A:3316:LYS:NZ	2.17	0.60
1:B:2831:VAL:HG12	1:B:2894:LYS:HD2	1.84	0.60
1:D:895:MET:SD	1:D:971:GLN:NE2	2.74	0.60
1:C:4187:GLU:OE2	1:C:4947:ARG:NH2	2.33	0.60
1:C:1239:PHE:O	1:C:1807:ARG:NH2	2.35	0.60
1:C:4665:ARG:HH22	1:C:4669:LEU:HD22	1.66	0.60
1:D:2586:GLN:NE2	1:D:2636:GLU:OE1	2.33	0.60
1:D:3697:LYS:HA	1:D:3700:HIS:CD2	2.37	0.60
1:A:3059:ALA:O	1:A:3063:ASN:ND2	2.35	0.60
1:A:4010:VAL:HG11	1:A:4118:PHE:HZ	1.66	0.60
1:C:3137:LEU:HB2	1:C:3159:LEU:HD13	1.84	0.60
1:C:3313:GLN:HA	1:C:3316:LYS:NZ	2.17	0.60
1:D:1239:PHE:O	1:D:1807:ARG:NH2	2.35	0.60
1:A:126:SER:HA	1:A:414:ARG:HH12	1.66	0.60
1:C:2831:VAL:HG12	1:C:2894:LYS:HD2	1.84	0.60
1:C:2202:TYR:O	1:C:2206:ILE:HG12	2.02	0.60
1:C:3697:LYS:HA	1:C:3700:HIS:CD2	2.36	0.60
1:D:2296:GLU:HG3	1:D:2390:THR:HG22	1.83	0.60
1:A:2831:VAL:HG12	1:A:2894:LYS:HD2	1.84	0.60
1:A:3697:LYS:HA	1:A:3700:HIS:CD2	2.37	0.60
1:C:2890:GLN:O	1:C:2894:LYS:HG2	2.02	0.60
1:C:4609:LYS:HD2	1:C:4615:LEU:HD22	1.83	0.60
1:A:2202:TYR:O	1:A:2206:ILE:HG12	2.02	0.59
1:A:4187:GLU:OE2	1:A:4947:ARG:NH2	2.33	0.59
1:B:2586:GLN:NE2	1:B:2636:GLU:OE1	2.33	0.59
1:B:3313:GLN:HA	1:B:3316:LYS:NZ	2.17	0.59
1:C:126:SER:HA	1:C:414:ARG:HH12	1.67	0.59
1:D:2604:LYS:NZ	1:D:2660:GLU:OE1	2.26	0.59
1:A:1054:VAL:HA	1:A:1057:LEU:HD12	1.84	0.59
1:A:3137:LEU:HB2	1:A:3159:LEU:HD13	1.84	0.59
1:B:2202:TYR:O	1:B:2206:ILE:HG12	2.02	0.59
1:C:1910:LEU:HD13	1:C:2062:ILE:HG12	1.83	0.59
1:D:2202:TYR:O	1:D:2206:ILE:HG12	2.02	0.59
1:A:1239:PHE:O	1:A:1807:ARG:NH2	2.35	0.59
1:B:2890:GLN:O	1:B:2894:LYS:HG2	2.02	0.59
1:B:3697:LYS:HA	1:B:3700:HIS:CD2	2.36	0.59
1:B:4268:MET:HG3	1:C:4694:LEU:HD11	1.83	0.59
1:D:4665:ARG:HH22	1:D:4669:LEU:HD22	1.66	0.59
1:A:2296:GLU:HG3	1:A:2390:THR:HG22	1.83	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:892:LEU:HD21	1:C:980:PRO:HD3	1.85	0.59
1:D:561:ARG:HB3	1:D:564:ARG:HD2	1.84	0.59
1:D:2436:ILE:HA	1:D:2465:LYS:HD3	1.85	0.59
1:B:3152:ARG:NH2	1:B:3236:GLU:HB3	2.16	0.59
1:C:949:HIS:ND1	1:C:1065:GLU:OE2	2.34	0.59
1:C:3288:LEU:HD11	1:C:3328:LYS:HD3	1.85	0.59
1:C:4010:VAL:HG11	1:C:4118:PHE:CZ	2.38	0.59
1:D:2884:LYS:HD2	1:D:2884:LYS:C	2.23	0.59
1:A:2436:ILE:HA	1:A:2465:LYS:HD3	1.85	0.59
1:A:2937:HIS:HB2	1:A:3014:LEU:HD21	1.85	0.59
1:B:1239:PHE:O	1:B:1807:ARG:NH2	2.35	0.59
1:C:3280:ILE:O	1:C:3284:ILE:HG12	2.03	0.59
1:A:188:SER:HB2	1:A:190:ARG:HH11	1.67	0.59
1:B:188:SER:HB2	1:B:190:ARG:HH11	1.67	0.59
1:B:561:ARG:HB3	1:B:564:ARG:HD2	1.84	0.59
1:B:2884:LYS:HD2	1:B:2884:LYS:C	2.23	0.59
1:B:3043:ARG:NE	1:B:3120:ASP:OD2	2.27	0.59
1:B:3175:LEU:HD12	1:B:3178:HIS:HD2	1.68	0.59
1:D:892:LEU:HD21	1:D:980:PRO:HD3	1.85	0.59
1:D:4010:VAL:HG11	1:D:4118:PHE:HZ	1.66	0.59
1:A:1910:LEU:HD13	1:A:2062:ILE:HG12	1.83	0.59
1:B:2436:ILE:HA	1:B:2465:LYS:HD3	1.85	0.59
1:B:3137:LEU:HB2	1:B:3159:LEU:HD13	1.84	0.59
1:B:3280:ILE:O	1:B:3284:ILE:HG12	2.03	0.59
1:C:2296:GLU:HG3	1:C:2390:THR:HG22	1.83	0.59
1:D:591:GLU:HG3	1:D:631:LEU:HD22	1.85	0.59
1:D:1910:LEU:HD13	1:D:2062:ILE:HG12	1.83	0.59
1:A:591:GLU:HG3	1:A:631:LEU:HD22	1.85	0.59
1:A:4237:SER:N	1:A:4240:THR:OG1	2.36	0.59
1:B:892:LEU:HD21	1:B:980:PRO:HD3	1.85	0.59
1:B:4010:VAL:HG11	1:B:4118:PHE:CZ	2.38	0.59
1:C:963:LYS:HZ1	1:C:977:LYS:HD3	1.67	0.59
1:D:188:SER:HB2	1:D:190:ARG:HH11	1.67	0.59
1:A:561:ARG:HB3	1:A:564:ARG:HD2	1.84	0.59
1:A:892:LEU:HD21	1:A:980:PRO:HD3	1.85	0.59
1:A:1825:PHE:CE1	1:A:1842:ILE:HG12	2.38	0.59
1:A:2604:LYS:NZ	1:A:2660:GLU:OE1	2.26	0.59
1:A:2890:GLN:O	1:A:2894:LYS:HG2	2.02	0.59
1:B:1009:ARG:HB2	1:B:1013:ARG:NH1	2.18	0.59
1:B:1100:ARG:HB3	1:B:1236:TYR:HA	1.85	0.59
1:B:2296:GLU:HG3	1:B:2390:THR:HG22	1.83	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1009:ARG:HB2	1:D:1013:ARG:NH1	2.18	0.59
1:D:4271:VAL:HB	1:D:4274:MET:SD	2.43	0.59
1:A:15:ARG:NH2	1:A:110:HIS:O	2.36	0.58
1:B:4196:THR:HA	1:B:4199:GLU:HG2	1.85	0.58
1:C:3175:LEU:HD12	1:C:3178:HIS:CD2	2.38	0.58
1:D:2890:GLN:O	1:D:2894:LYS:HG2	2.02	0.58
1:D:3137:LEU:HB2	1:D:3159:LEU:HD13	1.84	0.58
1:D:4010:VAL:HG11	1:D:4118:PHE:CZ	2.38	0.58
1:B:1825:PHE:CE1	1:B:1842:ILE:HG12	2.38	0.58
1:C:1100:ARG:HB3	1:C:1236:TYR:HA	1.85	0.58
1:D:983:LEU:O	1:D:1055:ARG:NH2	2.37	0.58
1:D:1825:PHE:CE1	1:D:1842:ILE:HG12	2.38	0.58
1:D:3280:ILE:O	1:D:3284:ILE:HG12	2.03	0.58
1:B:591:GLU:HG3	1:B:631:LEU:HD22	1.85	0.58
1:C:561:ARG:HB3	1:C:564:ARG:HD2	1.84	0.58
1:C:591:GLU:HG3	1:C:631:LEU:HD22	1.85	0.58
1:C:983:LEU:O	1:C:1055:ARG:NH2	2.37	0.58
1:C:1825:PHE:CE1	1:C:1842:ILE:HG12	2.38	0.58
1:C:2436:ILE:HA	1:C:2465:LYS:HD3	1.85	0.58
1:C:4196:THR:HA	1:C:4199:GLU:HG2	1.85	0.58
1:C:4271:VAL:HB	1:C:4274:MET:SD	2.43	0.58
1:D:3174:HIS:ND1	1:D:3175:LEU:HD23	2.18	0.58
1:A:2884:LYS:HD2	1:A:2884:LYS:C	2.23	0.58
1:D:114:LEU:HB2	1:D:117:HIS:CE1	2.39	0.58
1:D:962:LYS:HZ1	1:D:982:ASP:H	1.51	0.58
1:D:1100:ARG:HB3	1:D:1236:TYR:HA	1.85	0.58
1:D:3059:ALA:O	1:D:3063:ASN:ND2	2.35	0.58
1:A:3152:ARG:NH2	1:A:3236:GLU:HB3	2.16	0.58
1:A:3175:LEU:HD12	1:A:3178:HIS:CD2	2.38	0.58
1:A:4689:LYS:HZ3	1:A:4696:ALA:HB2	1.67	0.58
1:B:15:ARG:NH2	1:B:110:HIS:O	2.36	0.58
1:B:3174:HIS:ND1	1:B:3175:LEU:HD23	2.19	0.58
1:B:3288:LEU:HD11	1:B:3328:LYS:HD3	1.85	0.58
1:D:2791:ARG:HH12	1:D:2795:GLY:CA	2.17	0.58
1:B:114:LEU:HB2	1:B:117:HIS:CE1	2.39	0.58
1:C:114:LEU:HB2	1:C:117:HIS:CE1	2.39	0.58
1:C:3174:HIS:ND1	1:C:3175:LEU:HD23	2.19	0.58
1:D:126:SER:HA	1:D:414:ARG:HH12	1.66	0.58
1:D:889:ILE:O	1:D:893:TRP:HB2	2.04	0.58
1:D:3288:LEU:HD11	1:D:3328:LYS:HD3	1.85	0.58
1:A:114:LEU:HB2	1:A:117:HIS:CE1	2.38	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3280:ILE:O	1:A:3284:ILE:HG12	2.03	0.58
1:B:3175:LEU:HD12	1:B:3178:HIS:CD2	2.38	0.58
1:C:2824:ARG:HH22	1:D:1503:ASN:HB2	1.66	0.58
1:D:15:ARG:NH2	1:D:110:HIS:O	2.36	0.58
1:D:1054:VAL:HA	1:D:1057:LEU:HD12	1.84	0.58
1:C:188:SER:HB2	1:C:190:ARG:HH11	1.68	0.58
1:C:1009:ARG:HB2	1:C:1013:ARG:NH1	2.18	0.58
1:C:1054:VAL:HA	1:C:1057:LEU:HD12	1.84	0.58
1:C:2884:LYS:HD2	1:C:2884:LYS:C	2.23	0.58
1:C:2937:HIS:HB2	1:C:3014:LEU:HD21	1.85	0.58
1:D:3175:LEU:HD12	1:D:3178:HIS:HD2	1.68	0.58
1:A:3174:HIS:ND1	1:A:3175:LEU:HD23	2.19	0.58
1:A:3901:GLN:O	1:A:3905:ASN:ND2	2.28	0.58
1:B:983:LEU:O	1:B:1055:ARG:NH2	2.37	0.58
1:B:2937:HIS:HB2	1:B:3014:LEU:HD21	1.85	0.58
1:B:4106:SER:HB2	1:B:4119:LEU:HD11	1.86	0.58
1:B:4237:SER:N	1:B:4240:THR:OG1	2.36	0.58
1:B:4271:VAL:HB	1:B:4274:MET:SD	2.43	0.58
1:C:15:ARG:NH2	1:C:110:HIS:O	2.36	0.58
1:C:3901:GLN:OE1	1:C:3904:ARG:NH1	2.37	0.58
1:D:2937:HIS:HB2	1:D:3014:LEU:HD21	1.85	0.58
1:D:4196:THR:HA	1:D:4199:GLU:HG2	1.85	0.58
1:A:3175:LEU:HD12	1:A:3178:HIS:HD2	1.68	0.58
1:A:4106:SER:HB2	1:A:4119:LEU:HD11	1.86	0.58
1:B:2788:ARG:NH1	1:B:2905:ARG:O	2.37	0.58
1:B:3059:ALA:O	1:B:3063:ASN:ND2	2.35	0.58
1:D:26:ALA:HB3	1:D:33:GLN:HB3	1.86	0.58
1:D:2999:LYS:O	1:D:3002:GLU:HG3	2.04	0.58
1:D:3175:LEU:HD12	1:D:3178:HIS:CD2	2.38	0.58
1:A:1100:ARG:HB3	1:A:1236:TYR:HA	1.85	0.57
1:C:515:ALA:HB2	1:C:523:GLY:HA3	1.86	0.57
1:C:3059:ALA:O	1:C:3063:ASN:ND2	2.35	0.57
1:D:2788:ARG:NH1	1:D:2905:ARG:O	2.37	0.57
1:D:3045:VAL:O	1:D:3054:LYS:NZ	2.36	0.57
1:A:2791:ARG:HH12	1:A:2795:GLY:CA	2.17	0.57
1:A:2999:LYS:O	1:A:3002:GLU:HG3	2.04	0.57
1:A:3288:LEU:HD11	1:A:3328:LYS:HD3	1.85	0.57
1:B:1286:THR:OG1	1:B:1550:PRO:O	2.19	0.57
1:C:2788:ARG:NH1	1:C:2905:ARG:O	2.37	0.57
1:D:515:ALA:HB2	1:D:523:GLY:HA3	1.86	0.57
1:D:3152:ARG:NH2	1:D:3236:GLU:HB3	2.16	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2788:ARG:NH1	1:A:2905:ARG:O	2.37	0.57
1:C:889:ILE:O	1:C:893:TRP:HB2	2.04	0.57
1:C:2791:ARG:HH12	1:C:2795:GLY:CA	2.17	0.57
1:C:3175:LEU:HD12	1:C:3178:HIS:HD2	1.68	0.57
1:D:2728:SER:HA	1:D:2731:LYS:HZ2	1.69	0.57
1:D:3187:LYS:NZ	1:D:3191:GLU:HB3	2.19	0.57
1:A:983:LEU:O	1:A:1055:ARG:NH2	2.37	0.57
1:A:4010:VAL:HG11	1:A:4118:PHE:CZ	2.38	0.57
1:B:2658:GLU:HB3	1:B:2661:LEU:HB3	1.87	0.57
1:B:2999:LYS:O	1:B:3002:GLU:HG3	2.04	0.57
1:C:26:ALA:HB3	1:C:33:GLN:HB3	1.86	0.57
1:D:1521:ILE:HG22	1:D:1526:GLU:HG3	1.86	0.57
1:A:4196:THR:HA	1:A:4199:GLU:HG2	1.85	0.57
1:A:4271:VAL:HB	1:A:4274:MET:SD	2.43	0.57
1:D:2658:GLU:HB3	1:D:2661:LEU:HB3	1.87	0.57
1:D:2975:PHE:HB3	1:D:3039:THR:HG21	1.86	0.57
1:D:3901:GLN:OE1	1:D:3904:ARG:NH1	2.37	0.57
1:A:515:ALA:HB2	1:A:523:GLY:HA3	1.86	0.57
1:A:1521:ILE:HG22	1:A:1526:GLU:HG3	1.87	0.57
1:B:3901:GLN:OE1	1:B:3904:ARG:NH1	2.37	0.57
1:D:3160:ALA:N	1:D:3241:MET:HE1	2.20	0.57
1:D:3817:LEU:HD22	1:D:3819:MET:HG3	1.87	0.57
1:A:1009:ARG:HB2	1:A:1013:ARG:NH1	2.18	0.57
1:A:3200:ASN:HB2	1:A:3203:ASP:HB2	1.87	0.57
1:B:1054:VAL:HA	1:B:1057:LEU:HD12	1.84	0.57
1:B:1521:ILE:HG22	1:B:1526:GLU:HG3	1.87	0.57
1:C:2999:LYS:O	1:C:3002:GLU:HG3	2.04	0.57
1:C:3200:ASN:HB2	1:C:3203:ASP:HB2	1.87	0.57
1:D:1283:LEU:HB2	1:D:1555:PHE:HB2	1.87	0.57
1:A:3901:GLN:OE1	1:A:3904:ARG:NH1	2.37	0.57
1:A:4049:HIS:CD2	1:A:4067:LEU:HD11	2.40	0.57
1:B:555:LEU:HD21	1:B:578:VAL:HG11	1.86	0.57
1:B:889:ILE:O	1:B:893:TRP:HB2	2.04	0.57
1:B:3152:ARG:NH2	1:B:3233:HIS:O	2.37	0.57
1:B:3200:ASN:HB2	1:B:3203:ASP:HB2	1.87	0.57
1:C:2658:GLU:HB3	1:C:2661:LEU:HB3	1.87	0.57
1:C:3152:ARG:NH2	1:C:3236:GLU:HB3	2.16	0.57
1:C:3817:LEU:HD22	1:C:3819:MET:HG3	1.87	0.57
1:C:4049:HIS:CD2	1:C:4067:LEU:HD11	2.40	0.57
1:D:555:LEU:HD21	1:D:578:VAL:HG11	1.86	0.57
1:B:515:ALA:HB2	1:B:523:GLY:HA3	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:4093:ASP:OD1	1:C:4094:ILE:N	2.38	0.57
1:A:3045:VAL:O	1:A:3054:LYS:NZ	2.36	0.57
1:B:4049:HIS:CD2	1:B:4067:LEU:HD11	2.40	0.57
1:C:1521:ILE:HG22	1:C:1526:GLU:HG3	1.87	0.57
1:C:3187:LYS:NZ	1:C:3191:GLU:HB3	2.19	0.57
1:C:4106:SER:HB2	1:C:4119:LEU:HD11	1.86	0.57
1:D:2496:LEU:HD23	1:D:2520:LEU:HD13	1.87	0.57
1:D:3200:ASN:HB2	1:D:3203:ASP:HB2	1.87	0.57
1:D:4237:SER:N	1:D:4240:THR:OG1	2.36	0.57
1:A:889:ILE:O	1:A:893:TRP:HB2	2.04	0.56
1:B:1283:LEU:HB2	1:B:1555:PHE:HB2	1.87	0.56
1:A:555:LEU:HD21	1:A:578:VAL:HG11	1.86	0.56
1:A:2728:SER:HA	1:A:2731:LYS:HZ2	1.70	0.56
1:A:3890:TRP:HB3	1:B:76:ARG:HG2	1.86	0.56
1:B:1844:GLN:NE2	1:B:1853:GLU:OE1	2.37	0.56
1:B:2791:ARG:HH12	1:B:2795:GLY:CA	2.17	0.56
1:C:555:LEU:HD21	1:C:578:VAL:HG11	1.86	0.56
1:C:3035:ILE:O	1:C:3039:THR:HG23	2.05	0.56
1:C:3043:ARG:NE	1:C:3120:ASP:OD2	2.27	0.56
1:C:4237:SER:N	1:C:4240:THR:OG1	2.36	0.56
1:D:555:LEU:HD12	1:D:588:ILE:HD11	1.87	0.56
1:D:4084:VAL:O	1:D:4088:HIS:CB	2.54	0.56
1:A:3152:ARG:NH2	1:A:3233:HIS:O	2.37	0.56
1:A:3270:SER:O	1:A:3274:ASN:ND2	2.39	0.56
1:A:4084:VAL:O	1:A:4088:HIS:CB	2.54	0.56
1:A:4093:ASP:OD1	1:A:4094:ILE:N	2.38	0.56
1:B:2057:THR:HB	1:B:2060:GLN:HG3	1.86	0.56
1:B:2975:PHE:HB3	1:B:3039:THR:HG21	1.86	0.56
1:B:3172:GLU:OE1	1:B:3266:THR:OG1	2.22	0.56
1:B:3817:LEU:HD22	1:B:3819:MET:HG3	1.87	0.56
1:C:3227:ARG:NH1	1:C:3228:TYR:HB3	2.20	0.56
1:C:4177:VAL:HG11	1:C:4880:VAL:HA	1.87	0.56
1:D:1014:GLN:O	1:D:1027:ARG:NH2	2.39	0.56
1:D:3227:ARG:NH1	1:D:3228:TYR:HB3	2.20	0.56
1:D:4106:SER:HB2	1:D:4119:LEU:HD11	1.86	0.56
1:B:3122:ILE:HG13	1:B:3126:VAL:HG23	1.88	0.56
1:B:4177:VAL:HG11	1:B:4880:VAL:HA	1.87	0.56
1:C:1283:LEU:HB2	1:C:1555:PHE:HB2	1.87	0.56
1:C:2496:LEU:HD23	1:C:2520:LEU:HD13	1.87	0.56
1:C:2975:PHE:HB3	1:C:3039:THR:HG21	1.86	0.56
1:D:3035:ILE:O	1:D:3039:THR:HG23	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:4045:LYS:HD3	1:A:4072:THR:HG21	1.88	0.56
1:B:26:ALA:HB3	1:B:33:GLN:HB3	1.86	0.56
1:B:3270:SER:O	1:B:3274:ASN:ND2	2.39	0.56
1:B:4093:ASP:OD1	1:B:4094:ILE:N	2.38	0.56
1:D:891:GLU:HG3	1:D:976:TYR:CD2	2.41	0.56
1:A:1286:THR:OG1	1:A:1550:PRO:O	2.19	0.56
1:A:1788:LYS:HD2	1:A:1833:ILE:HG22	1.87	0.56
1:A:2658:GLU:HB3	1:A:2661:LEU:HB3	1.87	0.56
1:B:1014:GLN:O	1:B:1027:ARG:NH2	2.39	0.56
1:B:4045:LYS:HD3	1:B:4072:THR:HG21	1.88	0.56
1:B:4084:VAL:O	1:B:4088:HIS:CB	2.54	0.56
1:D:2999:LYS:O	1:D:3003:MET:HG2	2.06	0.56
1:D:3323:MET:HB3	1:D:3327:LYS:NZ	2.21	0.56
1:D:4045:LYS:HD3	1:D:4072:THR:HG21	1.88	0.56
1:A:26:ALA:HB3	1:A:33:GLN:HB3	1.86	0.56
1:A:3160:ALA:N	1:A:3241:MET:HE1	2.20	0.56
1:A:3817:LEU:HD22	1:A:3819:MET:HG3	1.87	0.56
1:B:894:VAL:HG12	1:B:897:LYS:NZ	2.21	0.56
1:C:1559:ARG:HD2	1:C:1565:PRO:HD3	1.88	0.56
1:C:2999:LYS:O	1:C:3003:MET:HG2	2.06	0.56
1:C:3270:SER:O	1:C:3274:ASN:ND2	2.39	0.56
1:D:2137:GLU:OE1	1:D:2137:GLU:N	2.32	0.56
1:D:3270:SER:O	1:D:3274:ASN:ND2	2.39	0.56
1:A:1014:GLN:O	1:A:1027:ARG:NH2	2.39	0.56
1:B:555:LEU:HD12	1:B:588:ILE:HD11	1.87	0.56
1:B:1006:VAL:O	1:B:1009:ARG:HG2	2.06	0.56
1:B:3323:MET:HB3	1:B:3327:LYS:NZ	2.21	0.56
1:C:891:GLU:HG3	1:C:976:TYR:CD2	2.41	0.56
1:C:2057:THR:HB	1:C:2060:GLN:HG3	1.86	0.56
1:C:3045:VAL:O	1:C:3054:LYS:NZ	2.36	0.56
1:D:1788:LYS:HD2	1:D:1833:ILE:HG22	1.87	0.56
1:D:4093:ASP:OD1	1:D:4094:ILE:N	2.38	0.56
1:A:4640:PHE:CD2	1:A:4641:PRO:HD3	2.41	0.56
1:B:1559:ARG:HD2	1:B:1565:PRO:HD3	1.88	0.56
1:B:3187:LYS:NZ	1:B:3191:GLU:HB3	2.19	0.56
1:B:3238:ILE:HA	1:B:3241:MET:HB2	1.88	0.56
1:C:555:LEU:HD12	1:C:588:ILE:HD11	1.87	0.56
1:C:3160:ALA:N	1:C:3241:MET:HE1	2.20	0.56
1:C:3293:GLY:HA3	1:C:3295:TRP:CZ3	2.41	0.56
1:A:894:VAL:HG12	1:A:897:LYS:NZ	2.21	0.56
1:A:4177:VAL:HG11	1:A:4880:VAL:HA	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:3152:ARG:NH2	1:D:3233:HIS:O	2.37	0.56
1:D:4177:VAL:HG11	1:D:4880:VAL:HA	1.87	0.56
1:A:3187:LYS:NZ	1:A:3191:GLU:HB3	2.20	0.55
1:A:4144:ARG:HB3	1:A:4961:GLN:HE22	1.72	0.55
1:B:2496:LEU:HD23	1:B:2520:LEU:HD13	1.87	0.55
1:B:4640:PHE:CD2	1:B:4641:PRO:HD3	2.41	0.55
1:C:1849:SER:O	1:C:2054:LYS:NZ	2.39	0.55
1:C:4045:LYS:HD3	1:C:4072:THR:HG21	1.88	0.55
1:D:4049:HIS:CD2	1:D:4067:LEU:HD11	2.40	0.55
1:A:2057:THR:HB	1:A:2060:GLN:HG3	1.86	0.55
1:A:3227:ARG:NH1	1:A:3228:TYR:HB3	2.20	0.55
1:A:3323:MET:HB3	1:A:3327:LYS:NZ	2.21	0.55
1:C:3238:ILE:HA	1:C:3241:MET:HB2	1.88	0.55
1:C:3323:MET:HB3	1:C:3327:LYS:NZ	2.21	0.55
1:C:4640:PHE:CD2	1:C:4641:PRO:HD3	2.41	0.55
1:D:2057:THR:HB	1:D:2060:GLN:HG3	1.86	0.55
1:A:1006:VAL:O	1:A:1009:ARG:HG2	2.06	0.55
1:C:1788:LYS:HD2	1:C:1833:ILE:HG22	1.87	0.55
1:C:3152:ARG:NH2	1:C:3233:HIS:O	2.37	0.55
1:C:4084:VAL:O	1:C:4088:HIS:CB	2.54	0.55
1:D:3293:GLY:HA3	1:D:3295:TRP:CZ3	2.41	0.55
2:H:24:VAL:HG12	2:H:105:LEU:HD12	1.89	0.55
1:A:891:GLU:HG3	1:A:976:TYR:CD2	2.41	0.55
1:A:949:HIS:ND1	1:A:1065:GLU:OE2	2.34	0.55
1:B:878:LEU:HA	1:B:881:ILE:HG22	1.88	0.55
1:B:1788:LYS:HD2	1:B:1833:ILE:HG22	1.87	0.55
1:B:3035:ILE:O	1:B:3039:THR:HG23	2.05	0.55
1:B:3293:GLY:HA3	1:B:3295:TRP:CZ3	2.41	0.55
1:B:4144:ARG:HB3	1:B:4961:GLN:HE22	1.72	0.55
1:C:894:VAL:HG12	1:C:897:LYS:NZ	2.21	0.55
1:D:1266:GLU:OE1	1:D:1266:GLU:N	2.30	0.55
1:D:1849:SER:O	1:D:2054:LYS:NZ	2.39	0.55
1:A:1266:GLU:OE1	1:A:1266:GLU:N	2.30	0.55
1:A:2496:LEU:HD23	1:A:2520:LEU:HD13	1.87	0.55
1:A:2975:PHE:HB3	1:A:3039:THR:HG21	1.86	0.55
1:A:3293:GLY:HA3	1:A:3295:TRP:CZ3	2.42	0.55
1:B:949:HIS:ND1	1:B:1065:GLU:OE2	2.34	0.55
1:C:878:LEU:HA	1:C:881:ILE:HG22	1.88	0.55
1:D:3172:GLU:OE1	1:D:3266:THR:OG1	2.22	0.55
1:D:3238:ILE:HA	1:D:3241:MET:HB2	1.88	0.55
1:D:4179:GLU:N	1:D:4179:GLU:OE2	2.40	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:4832:GLU:O	1:D:4843:ARG:NH1	2.38	0.55
1:B:3045:VAL:O	1:B:3054:LYS:NZ	2.36	0.55
1:B:4689:LYS:HZ3	1:B:4696:ALA:HB2	1.70	0.55
1:C:2703:PRO:HB2	1:C:2854:LYS:HG3	1.89	0.55
1:C:2728:SER:HA	1:C:2731:LYS:HZ2	1.71	0.55
1:C:3122:ILE:HG13	1:C:3126:VAL:HG23	1.88	0.55
1:D:1006:VAL:O	1:D:1009:ARG:HG2	2.06	0.55
1:D:4144:ARG:HB3	1:D:4961:GLN:HE22	1.72	0.55
2:G:24:VAL:HG12	2:G:105:LEU:HD12	1.89	0.55
1:A:555:LEU:HD12	1:A:588:ILE:HD11	1.87	0.55
1:A:3238:ILE:HA	1:A:3241:MET:HB2	1.88	0.55
1:B:2832:THR:HG21	1:C:1290:PHE:HE2	1.71	0.55
1:B:3227:ARG:NH1	1:B:3228:TYR:HB3	2.20	0.55
1:C:1014:GLN:O	1:C:1027:ARG:NH2	2.39	0.55
1:C:4179:GLU:N	1:C:4179:GLU:OE2	2.40	0.55
1:A:3043:ARG:NE	1:A:3120:ASP:OD2	2.27	0.55
1:A:4179:GLU:N	1:A:4179:GLU:OE2	2.40	0.55
1:B:4179:GLU:N	1:B:4179:GLU:OE2	2.40	0.55
1:D:894:VAL:HG12	1:D:897:LYS:NZ	2.21	0.55
1:A:2930:ILE:HG23	1:A:3010:LYS:NZ	2.22	0.55
1:A:3025:ASP:O	1:A:3028:SER:OG	2.14	0.55
1:A:3035:ILE:O	1:A:3039:THR:HG23	2.05	0.55
1:B:891:GLU:HG3	1:B:976:TYR:CD2	2.41	0.55
1:B:1427:TYR:HB2	1:B:1563:VAL:HG11	1.89	0.55
1:C:370:LEU:HD22	1:C:395:HIS:HA	1.89	0.55
1:D:4640:PHE:CD2	1:D:4641:PRO:HD3	2.41	0.55
1:A:1283:LEU:HB2	1:A:1555:PHE:HB2	1.87	0.55
1:A:1559:ARG:HD2	1:A:1565:PRO:HD3	1.88	0.55
1:A:3016:ARG:O	1:A:3018:ARG:NE	2.38	0.55
1:C:1844:GLN:NE2	1:C:1853:GLU:OE1	2.37	0.55
1:D:3166:PHE:CE2	1:D:3168:VAL:HB	2.42	0.55
1:A:629:GLN:OE1	1:A:1669:ASN:ND2	2.40	0.54
1:A:1290:PHE:HE2	1:D:2832:THR:HG21	1.72	0.54
1:A:2703:PRO:HB2	1:A:2854:LYS:HG3	1.89	0.54
1:A:3699:CYS:SG	1:A:3731:LEU:HD12	2.48	0.54
1:B:2930:ILE:HG23	1:B:3010:LYS:NZ	2.22	0.54
1:B:2999:LYS:O	1:B:3003:MET:HG2	2.06	0.54
1:D:370:LEU:HD22	1:D:395:HIS:HA	1.89	0.54
1:D:3122:ILE:HG13	1:D:3126:VAL:HG23	1.88	0.54
1:A:2772:ARG:HA	1:A:2775:ILE:HD12	1.90	0.54
1:B:2772:ARG:HA	1:B:2775:ILE:HD12	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1006:VAL:O	1:C:1009:ARG:HG2	2.06	0.54
1:C:2832:THR:HG21	1:D:1290:PHE:HE2	1.72	0.54
1:C:3166:PHE:CE2	1:C:3168:VAL:HB	2.42	0.54
1:C:4832:GLU:O	1:C:4843:ARG:NH1	2.38	0.54
1:D:2703:PRO:HB2	1:D:2854:LYS:HG3	1.89	0.54
1:D:2772:ARG:HA	1:D:2775:ILE:HD12	1.90	0.54
1:C:1768:PHE:O	2:G:83:TYR:OH	2.20	0.54
1:C:2129:LEU:HD11	1:C:2141:LEU:HB2	1.89	0.54
1:C:2930:ILE:HG23	1:C:3010:LYS:HZ3	1.72	0.54
1:D:3276:LEU:O	1:D:3280:ILE:HD12	2.08	0.54
1:A:2592:LEU:HD22	1:A:2606:PRO:HB3	1.90	0.54
1:A:3321:PRO:O	1:A:3325:LYS:HG2	2.08	0.54
1:B:2129:LEU:HD11	1:B:2141:LEU:HB2	1.89	0.54
1:B:3699:CYS:SG	1:B:3731:LEU:HD12	2.48	0.54
1:C:3276:LEU:O	1:C:3280:ILE:HD12	2.08	0.54
1:C:3699:CYS:SG	1:C:3731:LEU:HD12	2.48	0.54
1:D:2129:LEU:HD11	1:D:2141:LEU:HB2	1.89	0.54
2:F:24:VAL:HG12	2:F:105:LEU:HD12	1.89	0.54
1:A:1844:GLN:NE2	1:A:1853:GLU:OE1	2.37	0.54
1:A:4834:PRO:HB3	1:A:4843:ARG:HG2	1.89	0.54
2:E:24:VAL:HG12	2:E:105:LEU:HD12	1.89	0.54
1:B:2703:PRO:HB2	1:B:2854:LYS:HG3	1.89	0.54
1:B:3016:ARG:O	1:B:3018:ARG:NE	2.38	0.54
1:C:2772:ARG:HA	1:C:2775:ILE:HD12	1.89	0.54
1:C:3214:LEU:O	1:C:3218:ILE:HG12	2.08	0.54
1:D:878:LEU:HA	1:D:881:ILE:HG22	1.88	0.54
1:A:2129:LEU:HD11	1:A:2141:LEU:HB2	1.89	0.54
1:A:3276:LEU:O	1:A:3280:ILE:HD12	2.08	0.54
1:B:2704:GLN:O	1:B:2704:GLN:HG2	2.08	0.54
1:B:3297:LYS:HE3	1:B:3334:VAL:HG13	1.90	0.54
1:C:3016:ARG:O	1:C:3018:ARG:NE	2.38	0.54
1:C:3823:GLU:HG3	1:C:3827:GLU:H	1.73	0.54
1:C:4144:ARG:HB3	1:C:4961:GLN:HE22	1.72	0.54
1:D:1559:ARG:HD2	1:D:1565:PRO:HD3	1.88	0.54
1:D:2592:LEU:HD22	1:D:2606:PRO:HB3	1.90	0.54
1:D:2704:GLN:O	1:D:2704:GLN:HG2	2.08	0.54
1:D:3699:CYS:SG	1:D:3731:LEU:HD12	2.48	0.54
2:G:63:GLY:O	2:G:67:MET:HG3	2.07	0.54
1:A:878:LEU:HA	1:A:881:ILE:HG22	1.88	0.54
1:A:1427:TYR:HB2	1:A:1563:VAL:HG11	1.89	0.54
1:C:1427:TYR:HB2	1:C:1563:VAL:HG11	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:3297:LYS:HE3	1:C:3334:VAL:HG13	1.90	0.54
1:D:2930:ILE:HG23	1:D:3010:LYS:NZ	2.22	0.54
2:F:63:GLY:O	2:F:67:MET:HG3	2.07	0.54
1:B:629:GLN:OE1	1:B:1669:ASN:ND2	2.40	0.54
1:B:3276:LEU:O	1:B:3280:ILE:HD12	2.08	0.54
1:C:629:GLN:OE1	1:C:1669:ASN:ND2	2.40	0.54
1:C:3018:ARG:HG3	1:C:3021:LEU:HD22	1.90	0.54
1:C:3321:PRO:O	1:C:3325:LYS:HG2	2.08	0.54
1:C:4834:PRO:HB3	1:C:4843:ARG:HG2	1.89	0.54
1:D:629:GLN:OE1	1:D:1669:ASN:ND2	2.40	0.54
1:D:1272:ARG:HH12	1:D:1584:PRO:HA	1.72	0.54
1:D:1844:GLN:NE2	1:D:1853:GLU:OE1	2.37	0.54
1:A:1849:SER:O	1:A:2054:LYS:NZ	2.39	0.54
1:A:2704:GLN:HG2	1:A:2704:GLN:O	2.08	0.54
1:A:2930:ILE:HG23	1:A:3010:LYS:HZ3	1.73	0.54
1:A:4257:ARG:O	1:A:4261:LEU:HG	2.08	0.54
1:B:3321:PRO:O	1:B:3325:LYS:HG2	2.08	0.54
1:B:4832:GLU:O	1:B:4843:ARG:NH1	2.38	0.54
1:C:2592:LEU:HD22	1:C:2606:PRO:HB3	1.90	0.54
1:C:2895:PHE:HA	1:C:2898:ILE:HG22	1.90	0.54
1:C:4906:GLU:OE1	1:D:4183:LYS:HE3	2.08	0.54
1:D:3321:PRO:O	1:D:3325:LYS:HG2	2.08	0.54
1:A:112:THR:HG21	1:A:174:LYS:HD3	1.91	0.53
1:A:1251:LEU:HD23	1:A:1599:MET:HE2	1.90	0.53
1:A:2119:LEU:HB2	1:A:2152:ASN:HD22	1.73	0.53
1:A:2895:PHE:HA	1:A:2898:ILE:HG22	1.89	0.53
1:A:2999:LYS:O	1:A:3003:MET:HG2	2.06	0.53
1:B:3823:GLU:HG3	1:B:3827:GLU:H	1.73	0.53
1:C:1686:LEU:HD22	1:C:1790:LYS:NZ	2.24	0.53
1:C:2930:ILE:HG23	1:C:3010:LYS:NZ	2.22	0.53
1:D:2895:PHE:HA	1:D:2898:ILE:HG22	1.90	0.53
1:D:2930:ILE:HG23	1:D:3010:LYS:HZ3	1.74	0.53
1:D:4834:PRO:HB3	1:D:4843:ARG:HG2	1.89	0.53
1:A:3122:ILE:HG13	1:A:3126:VAL:HG23	1.88	0.53
1:B:1849:SER:O	1:B:2054:LYS:NZ	2.39	0.53
1:B:2895:PHE:HA	1:B:2898:ILE:HG22	1.90	0.53
1:B:3160:ALA:N	1:B:3241:MET:HE1	2.23	0.53
1:B:3214:LEU:O	1:B:3218:ILE:HG12	2.08	0.53
1:B:4257:ARG:O	1:B:4261:LEU:HG	2.08	0.53
1:D:112:THR:HG21	1:D:174:LYS:HD3	1.91	0.53
1:D:1685:LEU:O	1:D:1689:ILE:HG12	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:3198:PRO:HG2	1:D:3204:VAL:HA	1.91	0.53
2:H:63:GLY:O	2:H:67:MET:HG3	2.07	0.53
1:A:541:ILE:HD11	1:A:574:VAL:HG13	1.91	0.53
1:A:1685:LEU:O	1:A:1689:ILE:HG12	2.09	0.53
2:E:63:GLY:O	2:E:67:MET:HG3	2.07	0.53
1:B:3198:PRO:HG2	1:B:3204:VAL:HA	1.91	0.53
1:D:949:HIS:ND1	1:D:1065:GLU:OE2	2.34	0.53
1:D:2734:MET:HE1	1:D:2823:PRO:HB2	1.90	0.53
1:A:3166:PHE:CE2	1:A:3168:VAL:HB	2.42	0.53
1:A:3297:LYS:HE3	1:A:3334:VAL:HG13	1.90	0.53
1:A:4520:TYR:OH	1:A:4559:TYR:HA	2.09	0.53
1:B:4520:TYR:OH	1:B:4559:TYR:HA	2.09	0.53
1:C:3134:LEU:HB3	1:C:3162:PHE:HE2	1.74	0.53
1:C:4520:TYR:OH	1:C:4559:TYR:HA	2.09	0.53
1:D:1427:TYR:HB2	1:D:1563:VAL:HG11	1.89	0.53
1:D:3778:LEU:HD13	1:D:3854:PHE:CD1	2.41	0.53
1:D:4257:ARG:O	1:D:4261:LEU:HG	2.08	0.53
1:A:3214:LEU:O	1:A:3218:ILE:HG12	2.08	0.53
1:B:541:ILE:HD11	1:B:574:VAL:HG13	1.91	0.53
1:B:2592:LEU:HD22	1:B:2606:PRO:HB3	1.89	0.53
1:B:2691:LYS:O	1:B:2694:SER:OG	2.17	0.53
1:B:3134:LEU:HB3	1:B:3162:PHE:HE2	1.74	0.53
1:B:4834:PRO:HB3	1:B:4843:ARG:HG2	1.89	0.53
1:C:3068:LEU:O	1:C:3071:THR:OG1	2.25	0.53
1:D:3018:ARG:HG3	1:D:3021:LEU:HD22	1.90	0.53
1:A:370:LEU:HD22	1:A:395:HIS:HA	1.89	0.53
1:A:1272:ARG:HH12	1:A:1584:PRO:HA	1.73	0.53
1:A:1957:LEU:HA	1:A:1960:ARG:NH1	2.24	0.53
1:B:1686:LEU:HD22	1:B:1790:LYS:NZ	2.24	0.53
1:C:1685:LEU:O	1:C:1689:ILE:HG12	2.08	0.53
1:C:2704:GLN:HG2	1:C:2704:GLN:O	2.08	0.53
1:D:541:ILE:HD11	1:D:574:VAL:HG13	1.90	0.53
1:D:2440:PHE:CZ	1:D:2465:LYS:HE3	2.44	0.53
1:D:3214:LEU:O	1:D:3218:ILE:HG12	2.08	0.53
1:D:3297:LYS:HE3	1:D:3334:VAL:HG13	1.90	0.53
1:D:3882:GLN:HB2	1:D:3947:PHE:CE2	2.44	0.53
1:A:3198:PRO:HG2	1:A:3204:VAL:HA	1.91	0.53
1:A:4906:GLU:OE1	1:B:4183:LYS:HE3	2.09	0.53
1:B:3778:LEU:HD13	1:B:3854:PHE:CD1	2.41	0.53
1:C:3270:SER:HA	1:C:3273:MET:CE	2.37	0.53
1:C:3882:GLN:HB2	1:C:3947:PHE:CE2	2.44	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1957:LEU:HA	1:D:1960:ARG:NH1	2.24	0.53
1:D:2119:LEU:HB2	1:D:2152:ASN:HD22	1.73	0.53
1:A:1686:LEU:HD22	1:A:1790:LYS:NZ	2.24	0.53
1:A:2055:SER:HB2	1:A:2060:GLN:HB2	1.91	0.53
1:A:3068:LEU:O	1:A:3071:THR:OG1	2.25	0.53
1:A:3071:THR:HA	1:A:3074:ASN:HD21	1.74	0.53
1:A:4832:GLU:O	1:A:4843:ARG:NH1	2.38	0.53
1:B:112:THR:HG21	1:B:174:LYS:HD3	1.91	0.53
1:C:829:LYS:NZ	1:C:1037:LEU:HB3	2.24	0.53
1:C:1097:LYS:HA	1:C:1168:MET:HE1	1.90	0.53
1:A:2440:PHE:CZ	1:A:2465:LYS:HE3	2.44	0.53
1:A:2570:GLU:HG2	1:A:2605:MET:HG3	1.91	0.53
1:A:3172:GLU:OE1	1:A:3266:THR:OG1	2.22	0.53
1:B:370:LEU:HD22	1:B:395:HIS:HA	1.89	0.53
1:B:1685:LEU:O	1:B:1689:ILE:HG12	2.09	0.53
1:B:3166:PHE:CE2	1:B:3168:VAL:HB	2.42	0.53
1:B:4651:ARG:HH11	1:B:4651:ARG:HG2	1.74	0.53
1:C:2734:MET:HE1	1:C:2823:PRO:HB2	1.90	0.53
1:C:3198:PRO:HG2	1:C:3204:VAL:HA	1.91	0.53
1:D:829:LYS:NZ	1:D:1037:LEU:HB3	2.24	0.53
1:D:1686:LEU:HD22	1:D:1790:LYS:NZ	2.24	0.53
1:D:2570:GLU:HG2	1:D:2605:MET:HG3	1.91	0.53
1:D:3134:LEU:HB3	1:D:3162:PHE:HE2	1.74	0.53
1:D:3228:TYR:HA	1:D:3235:MET:CE	2.39	0.53
1:D:3697:LYS:HA	1:D:3700:HIS:NE2	2.24	0.53
1:D:3823:GLU:HG3	1:D:3827:GLU:H	1.73	0.53
1:A:514:PHE:HD2	1:A:526:TRP:HB2	1.74	0.53
1:A:3188:SER:OG	1:A:3191:GLU:OE1	2.28	0.53
1:B:3018:ARG:HG3	1:B:3021:LEU:HD22	1.90	0.53
1:B:3882:GLN:HB2	1:B:3947:PHE:CE2	2.44	0.53
1:C:112:THR:HG21	1:C:174:LYS:HD3	1.91	0.53
1:C:889:ILE:HA	1:C:892:LEU:HD12	1.91	0.53
1:C:1957:LEU:HA	1:C:1960:ARG:NH1	2.24	0.53
1:C:2119:LEU:HB2	1:C:2152:ASN:HD22	1.74	0.53
1:C:2440:PHE:CZ	1:C:2465:LYS:HE3	2.44	0.53
1:C:3228:TYR:HA	1:C:3235:MET:CE	2.39	0.53
1:D:3270:SER:HA	1:D:3273:MET:CE	2.37	0.53
1:A:2137:GLU:OE1	1:A:2137:GLU:N	2.32	0.52
1:A:2734:MET:HE1	1:A:2823:PRO:HB2	1.91	0.52
1:A:3778:LEU:HD13	1:A:3854:PHE:CD1	2.41	0.52
1:B:1957:LEU:HA	1:B:1960:ARG:NH1	2.24	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2055:SER:HB2	1:B:2060:GLN:HB2	1.91	0.52
1:B:2734:MET:HE1	1:B:2823:PRO:HB2	1.91	0.52
1:C:3183:ILE:HG23	1:C:3184:TYR:HD1	1.74	0.52
1:C:4257:ARG:O	1:C:4261:LEU:HG	2.08	0.52
1:D:2691:LYS:O	1:D:2694:SER:OG	2.17	0.52
1:A:4183:LYS:HE3	1:D:4906:GLU:OE1	2.09	0.52
1:B:35:LEU:HD11	1:B:201:LEU:HD13	1.92	0.52
1:B:1251:LEU:HD23	1:B:1599:MET:HE2	1.90	0.52
1:B:2119:LEU:HB2	1:B:2152:ASN:HD22	1.73	0.52
1:B:2570:GLU:HG2	1:B:2605:MET:HG3	1.91	0.52
1:B:3228:TYR:HA	1:B:3235:MET:CE	2.39	0.52
1:C:541:ILE:HD11	1:C:574:VAL:HG13	1.91	0.52
1:D:4520:TYR:OH	1:D:4559:TYR:HA	2.09	0.52
1:A:3228:TYR:HA	1:A:3235:MET:CE	2.39	0.52
1:B:370:LEU:HB2	1:B:393:MET:HE3	1.91	0.52
1:B:1272:ARG:HH12	1:B:1584:PRO:HA	1.72	0.52
1:B:2440:PHE:CZ	1:B:2465:LYS:HE3	2.44	0.52
1:B:3188:SER:OG	1:B:3191:GLU:OE1	2.27	0.52
1:C:2570:GLU:HG2	1:C:2605:MET:HG3	1.91	0.52
1:C:3697:LYS:HA	1:C:3700:HIS:NE2	2.24	0.52
1:D:3188:SER:OG	1:D:3191:GLU:OE1	2.27	0.52
1:A:165:ALA:HB1	1:A:211:LEU:HD22	1.92	0.52
1:B:3071:THR:HA	1:B:3074:ASN:HD21	1.74	0.52
1:B:3129:SER:O	1:B:3133:ILE:HG13	2.10	0.52
1:C:1118:SER:HB3	1:C:1204:VAL:HG11	1.92	0.52
1:C:1286:THR:OG1	1:C:1550:PRO:O	2.19	0.52
1:C:2691:LYS:O	1:C:2694:SER:OG	2.17	0.52
1:C:3314:LEU:O	1:C:3318:HIS:ND1	2.42	0.52
1:A:3018:ARG:HG3	1:A:3021:LEU:HD22	1.90	0.52
1:A:3697:LYS:HA	1:A:3700:HIS:NE2	2.24	0.52
1:B:514:PHE:HD2	1:B:526:TRP:HB2	1.74	0.52
1:C:4262:LYS:HG3	1:D:4698:LEU:HD13	1.91	0.52
1:D:35:LEU:HD11	1:D:201:LEU:HD13	1.92	0.52
1:D:889:ILE:HA	1:D:892:LEU:HD12	1.91	0.52
1:D:1118:SER:HB3	1:D:1204:VAL:HG11	1.92	0.52
1:A:35:LEU:HD11	1:A:201:LEU:HD13	1.91	0.52
1:B:3314:LEU:O	1:B:3318:HIS:ND1	2.42	0.52
1:C:35:LEU:HD11	1:C:201:LEU:HD13	1.92	0.52
1:C:4651:ARG:HG2	1:C:4651:ARG:HH11	1.74	0.52
1:D:4943:MET:HE1	1:D:4950:GLU:HB2	1.92	0.52
1:A:829:LYS:NZ	1:A:1037:LEU:HB3	2.24	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3314:LEU:O	1:A:3318:HIS:ND1	2.42	0.52
1:B:1768:PHE:O	2:F:83:TYR:OH	2.21	0.52
1:C:514:PHE:HD2	1:C:526:TRP:HB2	1.74	0.52
1:C:2055:SER:HB2	1:C:2060:GLN:HB2	1.91	0.52
1:C:2137:GLU:OE1	1:C:2137:GLU:N	2.32	0.52
1:D:3016:ARG:O	1:D:3018:ARG:NE	2.38	0.52
1:A:2168:HIS:O	1:A:2172:MET:HB2	2.10	0.52
1:A:3072:MET:SD	1:A:3136:SER:HA	2.50	0.52
1:A:3183:ILE:HG23	1:A:3184:TYR:HD1	1.74	0.52
1:B:889:ILE:HA	1:B:892:LEU:HD12	1.92	0.52
1:D:165:ALA:HB1	1:D:211:LEU:HD22	1.92	0.52
1:D:2759:PRO:HD2	1:D:2762:LEU:HD22	1.92	0.52
1:D:3183:ILE:HG23	1:D:3184:TYR:HD1	1.74	0.52
1:B:829:LYS:NZ	1:B:1037:LEU:HB3	2.24	0.52
1:B:1118:SER:HB3	1:B:1204:VAL:HG11	1.92	0.52
1:B:3183:ILE:HG23	1:B:3184:TYR:HD1	1.74	0.52
1:B:4518:LEU:HD12	1:C:4809:MET:HG3	1.91	0.52
1:C:1272:ARG:HH12	1:C:1584:PRO:HA	1.73	0.52
1:C:2455:ASP:OD2	1:C:2457:SER:OG	2.20	0.52
1:C:2759:PRO:HD2	1:C:2762:LEU:HD22	1.92	0.52
1:C:3071:THR:HA	1:C:3074:ASN:HD21	1.74	0.52
1:D:1041:ARG:O	1:D:1044:LYS:HG3	2.10	0.52
1:D:2055:SER:HB2	1:D:2060:GLN:HB2	1.91	0.52
1:D:4651:ARG:HG2	1:D:4651:ARG:HH11	1.75	0.52
1:A:624:ALA:HB2	1:A:1667:LEU:HD12	1.92	0.52
1:A:948:CYS:HA	1:A:1067:PRO:HD3	1.92	0.52
1:A:1097:LYS:HA	1:A:1168:MET:HE1	1.92	0.52
1:A:1502:ASN:OD1	1:A:1503:ASN:N	2.43	0.52
1:B:1097:LYS:HA	1:B:1168:MET:HE1	1.91	0.52
1:B:1501:ASN:OD1	1:B:1502:ASN:N	2.44	0.52
1:B:2701:PHE:CE2	1:B:2703:PRO:HG3	2.45	0.52
1:B:3697:LYS:HA	1:B:3700:HIS:NE2	2.24	0.52
1:C:1041:ARG:O	1:C:1044:LYS:HG3	2.10	0.52
1:C:1501:ASN:OD1	1:C:1502:ASN:N	2.44	0.52
1:C:3188:SER:OG	1:C:3191:GLU:OE1	2.27	0.52
1:C:3778:LEU:HD13	1:C:3854:PHE:CD1	2.41	0.52
1:C:4689:LYS:HZ3	1:C:4696:ALA:HB2	1.74	0.52
1:D:514:PHE:HD2	1:D:526:TRP:HB2	1.74	0.52
1:A:1041:ARG:O	1:A:1044:LYS:HG3	2.10	0.51
1:A:3070:LYS:O	1:A:3074:ASN:ND2	2.43	0.51
1:A:3882:GLN:HB2	1:A:3947:PHE:CE2	2.44	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:E:58:LYS:O	2:E:62:GLU:HG3	2.10	0.51
1:B:1502:ASN:OD1	1:B:1503:ASN:N	2.43	0.51
1:B:3070:LYS:O	1:B:3074:ASN:ND2	2.43	0.51
1:C:624:ALA:HB2	1:C:1667:LEU:HD12	1.92	0.51
1:C:3070:LYS:O	1:C:3074:ASN:ND2	2.43	0.51
1:D:370:LEU:HB2	1:D:393:MET:HE3	1.92	0.51
1:D:624:ALA:HB2	1:D:1667:LEU:HD12	1.92	0.51
1:D:2168:HIS:O	1:D:2172:MET:HB2	2.10	0.51
1:D:3071:THR:HA	1:D:3074:ASN:HD21	1.74	0.51
1:A:3823:GLU:HG3	1:A:3827:GLU:H	1.73	0.51
1:A:4651:ARG:HG2	1:A:4651:ARG:HH11	1.74	0.51
1:B:2119:LEU:HB2	1:B:2152:ASN:ND2	2.25	0.51
1:B:3072:MET:SD	1:B:3136:SER:HA	2.50	0.51
1:D:1176:THR:HG22	1:D:1181:ILE:HA	1.93	0.51
1:D:1501:ASN:OD1	1:D:1502:ASN:N	2.44	0.51
1:D:3314:LEU:O	1:D:3318:HIS:ND1	2.42	0.51
1:A:849:ASP:OD1	1:A:1214:ARG:NE	2.44	0.51
1:A:889:ILE:HA	1:A:892:LEU:HD12	1.92	0.51
1:A:1118:SER:HB3	1:A:1204:VAL:HG11	1.92	0.51
1:A:4569:GLU:HB3	1:A:4570:PRO:HD3	1.92	0.51
1:B:892:LEU:HD21	1:B:980:PRO:HG3	1.93	0.51
1:B:1041:ARG:O	1:B:1044:LYS:HG3	2.10	0.51
1:B:4569:GLU:HB3	1:B:4570:PRO:HD3	1.92	0.51
1:C:881:ILE:HG12	1:C:1062:TYR:CE1	2.45	0.51
1:C:881:ILE:HD12	1:C:884:LYS:HZ3	1.75	0.51
1:D:881:ILE:HG12	1:D:1062:TYR:CE1	2.46	0.51
1:D:3882:GLN:HE21	1:D:3946:GLY:HA3	1.75	0.51
1:A:307:SER:OG	1:A:315:LEU:O	2.28	0.51
1:A:1184:ASP:OD1	1:A:1188:SER:OG	2.29	0.51
1:A:1414:ARG:O	1:A:1561:LYS:NZ	2.44	0.51
1:A:3129:SER:O	1:A:3133:ILE:HG13	2.10	0.51
1:A:3882:GLN:HE21	1:A:3946:GLY:HA3	1.75	0.51
1:B:881:ILE:HG13	1:B:885:LEU:HD23	1.93	0.51
1:C:3129:SER:O	1:C:3133:ILE:HG13	2.10	0.51
1:D:3068:LEU:O	1:D:3071:THR:OG1	2.25	0.51
2:F:58:LYS:O	2:F:62:GLU:HG3	2.10	0.51
1:A:1176:THR:HG22	1:A:1181:ILE:HA	1.93	0.51
1:A:3270:SER:HA	1:A:3273:MET:CE	2.37	0.51
1:B:881:ILE:HG12	1:B:1062:TYR:CE1	2.46	0.51
1:B:3209:PRO:HB3	1:B:3213:LYS:HE2	1.93	0.51
1:C:1436:GLN:O	1:C:1500:ARG:NH2	2.43	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:4569:GLU:HB3	1:C:4570:PRO:HD3	1.93	0.51
1:D:163:HIS:HB2	1:D:182:ILE:HG23	1.93	0.51
1:D:849:ASP:OD1	1:D:1214:ARG:NE	2.44	0.51
1:D:1502:ASN:OD1	1:D:1503:ASN:N	2.43	0.51
1:A:1436:GLN:O	1:A:1500:ARG:NH2	2.43	0.51
1:A:3228:TYR:CE2	1:A:3232:PRO:HB3	2.46	0.51
1:B:948:CYS:HA	1:B:1067:PRO:HD3	1.92	0.51
1:B:2168:HIS:O	1:B:2172:MET:HB2	2.10	0.51
1:C:1176:THR:HG22	1:C:1181:ILE:HA	1.93	0.51
1:C:2701:PHE:CE2	1:C:2703:PRO:HG3	2.45	0.51
1:C:2824:ARG:NH2	1:D:1502:ASN:O	2.44	0.51
1:A:2701:PHE:CE2	1:A:2703:PRO:HG3	2.45	0.51
1:A:3209:PRO:HB3	1:A:3213:LYS:HE2	1.93	0.51
1:B:235:ARG:NH2	1:B:412:GLU:OE2	2.27	0.51
1:B:624:ALA:HB2	1:B:1667:LEU:HD12	1.92	0.51
1:B:995:MET:O	1:B:999:LEU:HD23	2.11	0.51
1:B:1414:ARG:O	1:B:1561:LYS:NZ	2.44	0.51
1:B:2793:ARG:HH21	1:B:2796:ASP:HB3	1.76	0.51
1:C:307:SER:HB3	1:C:327:THR:HG22	1.93	0.51
1:C:892:LEU:HD21	1:C:980:PRO:HG3	1.93	0.51
1:D:1436:GLN:O	1:D:1500:ARG:NH2	2.43	0.51
1:D:2119:LEU:HB2	1:D:2152:ASN:ND2	2.25	0.51
1:D:2723:LYS:HG2	1:D:2895:PHE:CZ	2.43	0.51
1:A:884:LYS:HA	1:A:887:GLU:OE1	2.11	0.51
1:A:995:MET:O	1:A:999:LEU:HD23	2.11	0.51
1:B:165:ALA:HB1	1:B:211:LEU:HD22	1.92	0.51
1:B:307:SER:HB3	1:B:327:THR:HG22	1.93	0.51
1:B:884:LYS:HA	1:B:887:GLU:OE1	2.11	0.51
1:B:1184:ASP:OD1	1:B:1188:SER:OG	2.29	0.51
1:B:3228:TYR:CE2	1:B:3232:PRO:HB3	2.46	0.51
1:B:3882:GLN:HE21	1:B:3946:GLY:HA3	1.75	0.51
2:H:58:LYS:O	2:H:62:GLU:HG3	2.10	0.51
1:A:2119:LEU:HB2	1:A:2152:ASN:ND2	2.25	0.51
1:A:3145:SER:O	1:A:3149:GLU:HG2	2.11	0.51
1:B:1176:THR:HG22	1:B:1181:ILE:HA	1.93	0.51
1:B:1266:GLU:OE1	1:B:1266:GLU:N	2.30	0.51
1:B:1598:ARG:NH2	1:B:1601:ASN:OD1	2.44	0.51
1:C:881:ILE:HG13	1:C:885:LEU:HD23	1.93	0.51
1:C:1502:ASN:OD1	1:C:1503:ASN:N	2.43	0.51
1:C:3145:SER:O	1:C:3149:GLU:HG2	2.11	0.51
1:C:3882:GLN:HE21	1:C:3946:GLY:HA3	1.74	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:58:LYS:O	2:G:62:GLU:HG3	2.10	0.51
1:A:1501:ASN:OD1	1:A:1502:ASN:N	2.44	0.51
1:A:1598:ARG:NH2	1:A:1601:ASN:OD1	2.44	0.51
1:C:2338:GLU:N	1:C:2338:GLU:OE1	2.44	0.51
1:D:3070:LYS:O	1:D:3074:ASN:ND2	2.43	0.51
1:D:3072:MET:SD	1:D:3136:SER:HA	2.50	0.51
1:A:881:ILE:HG13	1:A:885:LEU:HD23	1.93	0.50
1:A:920:GLU:OE1	1:A:974:SER:OG	2.25	0.50
1:A:2759:PRO:HD2	1:A:2762:LEU:HD22	1.92	0.50
1:A:2793:ARG:HH21	1:A:2796:ASP:HB3	1.76	0.50
1:B:1124:PRO:HD2	1:B:1594:VAL:HG23	1.93	0.50
1:B:1436:GLN:O	1:B:1500:ARG:NH2	2.43	0.50
1:B:2759:PRO:HD2	1:B:2762:LEU:HD22	1.92	0.50
1:B:4250:TYR:O	1:B:4254:THR:HG23	2.11	0.50
1:C:884:LYS:HA	1:C:887:GLU:OE1	2.11	0.50
1:C:995:MET:O	1:C:999:LEU:HD23	2.11	0.50
1:C:3072:MET:SD	1:C:3136:SER:HA	2.50	0.50
1:C:3209:PRO:HB3	1:C:3213:LYS:HE2	1.93	0.50
1:A:2884:LYS:O	1:A:2887:GLU:HG3	2.11	0.50
1:A:3134:LEU:HB3	1:A:3162:PHE:HE2	1.74	0.50
1:B:3145:SER:O	1:B:3149:GLU:HG2	2.11	0.50
1:C:163:HIS:HB2	1:C:182:ILE:HG23	1.93	0.50
1:C:948:CYS:HA	1:C:1067:PRO:HD3	1.92	0.50
1:C:1414:ARG:O	1:C:1561:LYS:NZ	2.44	0.50
1:C:1960:ARG:HA	1:C:1963:LYS:HG2	1.94	0.50
1:C:3228:TYR:CE2	1:C:3232:PRO:HB3	2.46	0.50
1:A:307:SER:HB3	1:A:327:THR:HG22	1.93	0.50
1:A:881:ILE:HG12	1:A:1062:TYR:CE1	2.45	0.50
1:A:882:ARG:NH1	1:A:883:GLU:HB2	2.27	0.50
1:A:4943:MET:HE1	1:A:4950:GLU:HB2	1.94	0.50
1:B:849:ASP:OD1	1:B:1214:ARG:NE	2.44	0.50
1:B:1006:VAL:HA	1:B:1009:ARG:NE	2.27	0.50
1:B:4502:MET:SD	1:B:4585:PHE:HB3	2.52	0.50
1:C:2119:LEU:HB2	1:C:2152:ASN:ND2	2.25	0.50
1:C:4502:MET:SD	1:C:4585:PHE:HB3	2.52	0.50
1:D:1414:ARG:O	1:D:1561:LYS:NZ	2.43	0.50
1:D:4502:MET:SD	1:D:4585:PHE:HB3	2.52	0.50
1:A:163:HIS:HB2	1:A:182:ILE:HG23	1.93	0.50
1:B:776:GLN:NE2	1:B:1472:GLU:OE2	2.45	0.50
1:C:1598:ARG:NH2	1:C:1601:ASN:OD1	2.44	0.50
1:C:2168:HIS:O	1:C:2172:MET:HB2	2.10	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:4806:CYS:HA	1:C:4812:CYS:HB2	1.93	0.50
1:A:2087:LEU:O	1:A:2091:GLN:HG2	2.12	0.50
1:A:4896:ASP:OD1	1:A:4897:TYR:N	2.45	0.50
1:C:165:ALA:HB1	1:C:211:LEU:HD22	1.92	0.50
1:C:323:ASP:OD1	1:C:324:VAL:N	2.45	0.50
1:C:776:GLN:NE2	1:C:1472:GLU:OE2	2.45	0.50
1:C:849:ASP:OD1	1:C:1214:ARG:NE	2.44	0.50
1:C:895:MET:O	1:C:899:GLU:HG2	2.12	0.50
1:C:963:LYS:HZ3	1:C:979:ALA:HB3	1.76	0.50
1:C:4943:MET:HE1	1:C:4950:GLU:HB2	1.94	0.50
1:D:882:ARG:NH1	1:D:883:GLU:HB2	2.27	0.50
1:D:1097:LYS:HA	1:D:1168:MET:HE1	1.93	0.50
1:D:3209:PRO:HB3	1:D:3213:LYS:HE2	1.93	0.50
1:A:776:GLN:NE2	1:A:1472:GLU:OE2	2.45	0.50
1:A:892:LEU:HD21	1:A:980:PRO:HG3	1.92	0.50
1:B:658:ASN:ND2	1:B:833:LYS:HG2	2.27	0.50
1:B:1960:ARG:HA	1:B:1963:LYS:HG2	1.94	0.50
1:B:2930:ILE:HG23	1:B:3010:LYS:HZ3	1.77	0.50
1:B:3234:VAL:HA	1:B:3238:ILE:HD12	1.94	0.50
1:C:1184:ASP:OD1	1:C:1188:SER:OG	2.29	0.50
1:C:2723:LYS:HG2	1:C:2895:PHE:CZ	2.43	0.50
1:C:2884:LYS:O	1:C:2887:GLU:HG3	2.11	0.50
1:D:884:LYS:HA	1:D:887:GLU:OE1	2.11	0.50
1:D:892:LEU:HD21	1:D:980:PRO:HG3	1.92	0.50
1:D:895:MET:O	1:D:899:GLU:HG2	2.12	0.50
1:D:1184:ASP:OD1	1:D:1188:SER:OG	2.29	0.50
1:D:1960:ARG:HA	1:D:1963:LYS:HG2	1.94	0.50
1:D:2701:PHE:CE2	1:D:2703:PRO:HG3	2.45	0.50
1:D:2884:LYS:O	1:D:2887:GLU:HG3	2.11	0.50
1:D:3129:SER:O	1:D:3133:ILE:HG13	2.10	0.50
1:A:658:ASN:ND2	1:A:833:LYS:HG2	2.26	0.50
1:C:1006:VAL:HA	1:C:1009:ARG:NE	2.27	0.50
1:C:3650:GLU:HB2	1:C:3651:PRO:HD3	1.94	0.50
1:D:2087:LEU:O	1:D:2091:GLN:HG2	2.12	0.50
1:D:2338:GLU:OE1	1:D:2338:GLU:N	2.44	0.50
1:D:4569:GLU:HB3	1:D:4570:PRO:HD3	1.93	0.50
1:A:3650:GLU:HB2	1:A:3651:PRO:HD3	1.94	0.50
1:A:4250:TYR:O	1:A:4254:THR:HG23	2.11	0.50
1:A:4502:MET:SD	1:A:4585:PHE:HB3	2.52	0.50
1:B:28:ILE:HG22	1:B:29:HIS:HD2	1.77	0.50
1:C:28:ILE:HG22	1:C:29:HIS:HD2	1.77	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1124:PRO:HD2	1:C:1594:VAL:HG23	1.93	0.50
1:C:4116:GLN:O	1:C:4120:GLU:HG2	2.12	0.50
1:D:3145:SER:O	1:D:3149:GLU:HG2	2.11	0.50
1:D:3228:TYR:CE2	1:D:3232:PRO:HB3	2.46	0.50
1:D:3650:GLU:HB2	1:D:3651:PRO:HD3	1.94	0.50
1:A:76:ARG:HG2	1:D:3890:TRP:HB3	1.93	0.50
1:A:235:ARG:NH2	1:A:412:GLU:OE2	2.27	0.50
1:B:2087:LEU:O	1:B:2091:GLN:HG2	2.12	0.50
1:B:2884:LYS:O	1:B:2887:GLU:HG3	2.11	0.50
1:B:3153:SER:O	1:B:3156:GLY:N	2.45	0.50
1:B:3650:GLU:HB2	1:B:3651:PRO:HD3	1.94	0.50
1:C:2087:LEU:O	1:C:2091:GLN:HG2	2.12	0.50
1:C:2629:ASN:OD1	1:C:2630:PHE:N	2.45	0.50
1:C:4896:ASP:OD1	1:C:4897:TYR:N	2.45	0.50
1:D:881:ILE:HG13	1:D:885:LEU:HD23	1.93	0.50
1:D:1006:VAL:HA	1:D:1009:ARG:NE	2.27	0.50
1:B:323:ASP:OD1	1:B:324:VAL:N	2.45	0.49
1:B:2137:GLU:OE1	1:B:2137:GLU:N	2.32	0.49
1:B:4943:MET:HE1	1:B:4950:GLU:HB2	1.94	0.49
1:C:15:ARG:HH21	1:C:110:HIS:HB3	1.77	0.49
1:C:2716:LYS:HD3	1:C:2791:ARG:HG3	1.94	0.49
1:C:4250:TYR:O	1:C:4254:THR:HG23	2.11	0.49
1:D:307:SER:HB3	1:D:327:THR:HG22	1.93	0.49
1:D:4250:TYR:O	1:D:4254:THR:HG23	2.11	0.49
1:A:1006:VAL:HA	1:A:1009:ARG:NE	2.27	0.49
1:A:1124:PRO:HD2	1:A:1594:VAL:HG23	1.93	0.49
1:A:1960:ARG:HA	1:A:1963:LYS:HG2	1.94	0.49
1:A:3234:VAL:HA	1:A:3238:ILE:HD12	1.94	0.49
2:E:24:VAL:HG22	2:E:48:LYS:HG2	1.94	0.49
1:B:882:ARG:NH1	1:B:883:GLU:HB2	2.27	0.49
1:B:2338:GLU:OE1	1:B:2338:GLU:N	2.44	0.49
1:B:2788:ARG:NH2	1:B:2906:GLY:O	2.45	0.49
1:C:1266:GLU:OE1	1:C:1266:GLU:N	2.30	0.49
1:D:323:ASP:OD1	1:D:324:VAL:N	2.45	0.49
1:D:948:CYS:HA	1:D:1067:PRO:HD3	1.92	0.49
1:D:4116:GLN:O	1:D:4120:GLU:HG2	2.12	0.49
1:D:4735:ASN:HB3	1:D:4738:PHE:CD2	2.47	0.49
1:A:1978:ASN:HB3	1:A:1983:LYS:NZ	2.27	0.49
1:A:2338:GLU:OE1	1:A:2338:GLU:N	2.44	0.49
1:B:163:HIS:HB2	1:B:182:ILE:HG23	1.93	0.49
1:B:4116:GLN:O	1:B:4120:GLU:HG2	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:4118:PHE:HA	1:B:4121:LEU:HD12	1.94	0.49
1:B:4896:ASP:OD1	1:B:4897:TYR:N	2.45	0.49
1:C:3044:THR:HA	1:C:3047:LYS:HZ3	1.77	0.49
1:C:3234:VAL:HA	1:C:3238:ILE:HD12	1.94	0.49
1:D:1598:ARG:NH2	1:D:1601:ASN:OD1	2.44	0.49
1:D:2788:ARG:NH2	1:D:2906:GLY:O	2.45	0.49
1:D:3284:ILE:HG21	1:D:3336:GLU:HG2	1.94	0.49
1:A:3284:ILE:HG21	1:A:3336:GLU:HG2	1.94	0.49
1:B:891:GLU:O	1:B:895:MET:HG2	2.13	0.49
1:B:1436:GLN:H	1:B:1500:ARG:HH22	1.60	0.49
1:B:4806:CYS:HA	1:B:4812:CYS:HB2	1.93	0.49
1:C:882:ARG:NH1	1:C:883:GLU:HB2	2.27	0.49
1:C:891:GLU:O	1:C:895:MET:HG2	2.13	0.49
1:D:658:ASN:ND2	1:D:833:LYS:HG2	2.27	0.49
1:D:995:MET:O	1:D:999:LEU:HD23	2.11	0.49
1:D:1251:LEU:HD23	1:D:1599:MET:HE2	1.95	0.49
1:D:4038:ASP:OD2	1:D:4039:GLY:N	2.46	0.49
1:D:4806:CYS:HA	1:D:4812:CYS:HB2	1.93	0.49
1:A:981:MET:N	1:A:981:MET:SD	2.86	0.49
1:B:2629:ASN:OD1	1:B:2630:PHE:N	2.45	0.49
1:C:307:SER:OG	1:C:315:LEU:O	2.28	0.49
1:C:981:MET:N	1:C:981:MET:SD	2.86	0.49
1:C:1727:VAL:HG11	1:C:1926:VAL:HG21	1.95	0.49
1:C:2793:ARG:HH21	1:C:2796:ASP:HB3	1.76	0.49
1:D:28:ILE:HG22	1:D:29:HIS:HD2	1.77	0.49
1:D:131:CYS:SG	1:D:150:GLN:HB2	2.53	0.49
1:A:1922:ILE:O	1:A:1926:VAL:HG23	2.13	0.49
1:A:2788:ARG:NH2	1:A:2906:GLY:O	2.45	0.49
1:A:4038:ASP:OD2	1:A:4039:GLY:N	2.46	0.49
1:A:4116:GLN:O	1:A:4120:GLU:HG2	2.12	0.49
1:B:4625:ASP:OD1	1:B:4625:ASP:N	2.44	0.49
1:B:4735:ASN:HB3	1:B:4738:PHE:CD2	2.47	0.49
1:C:131:CYS:SG	1:C:150:GLN:HB2	2.53	0.49
1:C:658:ASN:ND2	1:C:833:LYS:HG2	2.26	0.49
1:C:1436:GLN:H	1:C:1500:ARG:HH22	1.60	0.49
1:C:2788:ARG:NH2	1:C:2906:GLY:O	2.45	0.49
1:D:1768:PHE:O	2:H:83:TYR:OH	2.25	0.49
1:D:2261:ASP:OD1	1:D:2262:LEU:N	2.45	0.49
1:D:3234:VAL:HA	1:D:3238:ILE:HD12	1.94	0.49
2:G:24:VAL:HG22	2:G:48:LYS:HG2	1.94	0.49
1:A:164:PRO:HB3	1:A:169:ARG:HB2	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1436:GLN:H	1:A:1500:ARG:HH22	1.60	0.49
1:A:1457:PHE:HA	1:A:1461:ARG:HH12	1.78	0.49
1:A:2629:ASN:OD1	1:A:2630:PHE:N	2.45	0.49
1:A:4806:CYS:HA	1:A:4812:CYS:HB2	1.93	0.49
1:B:4084:VAL:O	1:B:4088:HIS:HB3	2.13	0.49
1:B:4265:LYS:O	1:B:4269:LYS:HG2	2.13	0.49
1:C:1978:ASN:HB3	1:C:1983:LYS:NZ	2.27	0.49
1:C:3157:GLU:HG3	1:C:3302:PHE:HZ	1.77	0.49
1:D:1124:PRO:HD2	1:D:1594:VAL:HG23	1.93	0.49
1:D:1922:ILE:O	1:D:1926:VAL:HG23	2.13	0.49
1:D:3317:THR:H	1:D:3320:LEU:HD12	1.78	0.49
1:D:4943:MET:HG2	1:D:4948:CYS:HB3	1.95	0.49
1:A:323:ASP:OD1	1:A:324:VAL:N	2.45	0.49
1:A:675:TYR:HB3	1:A:822:CYS:SG	2.53	0.49
1:A:895:MET:O	1:A:899:GLU:HG2	2.12	0.49
1:A:2691:LYS:O	1:A:2694:SER:OG	2.17	0.49
1:A:3187:LYS:O	1:A:3188:SER:OG	2.28	0.49
1:B:307:SER:OG	1:B:315:LEU:O	2.28	0.49
1:B:894:VAL:O	1:B:898:ILE:HG12	2.13	0.49
1:B:1017:THR:O	1:B:1028:ARG:HA	2.13	0.49
1:B:1922:ILE:O	1:B:1926:VAL:HG23	2.13	0.49
1:B:4640:PHE:CG	1:B:4641:PRO:HD3	2.48	0.49
1:C:675:TYR:HB3	1:C:822:CYS:SG	2.53	0.49
1:C:4943:MET:HG2	1:C:4948:CYS:HB3	1.95	0.49
1:D:891:GLU:O	1:D:895:MET:HG2	2.13	0.49
1:D:920:GLU:N	1:D:974:SER:OG	2.46	0.49
1:D:1051:ARG:O	1:D:1055:ARG:HG2	2.13	0.49
1:D:1978:ASN:HB3	1:D:1983:LYS:NZ	2.27	0.49
1:D:2629:ASN:OD1	1:D:2630:PHE:N	2.45	0.49
1:D:3157:GLU:HG3	1:D:3302:PHE:HZ	1.77	0.49
1:D:4896:ASP:OD1	1:D:4897:TYR:N	2.45	0.49
1:A:131:CYS:SG	1:A:150:GLN:HB2	2.53	0.49
1:A:891:GLU:O	1:A:895:MET:HG2	2.13	0.49
1:A:920:GLU:N	1:A:974:SER:OG	2.46	0.49
1:A:3070:LYS:O	1:A:3073:GLU:HG3	2.13	0.49
1:A:4809:MET:HG3	1:D:4518:LEU:HD12	1.95	0.49
1:A:4943:MET:HG2	1:A:4948:CYS:HB3	1.95	0.49
1:B:131:CYS:SG	1:B:150:GLN:HB2	2.53	0.49
1:B:981:MET:SD	1:B:981:MET:N	2.86	0.49
1:B:1727:VAL:HG11	1:B:1926:VAL:HG21	1.95	0.49
1:B:3157:GLU:HG3	1:B:3302:PHE:HZ	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:4047:ASP:HA	1:B:4050:LYS:HG2	1.95	0.49
1:C:1457:PHE:HA	1:C:1461:ARG:HH12	1.78	0.49
1:C:1685:LEU:HD22	1:C:1706:LEU:HB2	1.95	0.49
1:C:2167:MET:HE3	1:C:2199:PHE:HZ	1.77	0.49
1:C:2261:ASP:OD1	1:C:2262:LEU:N	2.46	0.49
1:C:3153:SER:O	1:C:3156:GLY:N	2.45	0.49
1:C:3317:THR:H	1:C:3320:LEU:HD12	1.78	0.49
1:C:4640:PHE:CG	1:C:4641:PRO:HD3	2.48	0.49
1:C:4735:ASN:HB3	1:C:4738:PHE:CD2	2.47	0.49
1:D:15:ARG:HH21	1:D:110:HIS:HB3	1.77	0.49
1:D:675:TYR:HB3	1:D:822:CYS:SG	2.53	0.49
1:D:776:GLN:NE2	1:D:1472:GLU:OE2	2.45	0.49
1:D:2716:LYS:HD3	1:D:2791:ARG:HG3	1.94	0.49
1:D:2918:GLU:HA	1:D:2923:TYR:CD1	2.48	0.49
1:D:3187:LYS:HZ2	1:D:3191:GLU:HB3	1.78	0.49
1:D:4640:PHE:CG	1:D:4641:PRO:HD3	2.48	0.49
1:A:1549:SER:HB2	1:D:2830:ASN:HB3	1.94	0.49
1:B:164:PRO:HB3	1:B:169:ARG:HB2	1.95	0.49
1:B:1790:LYS:O	1:B:1794:MET:HG3	2.13	0.49
1:B:4038:ASP:OD2	1:B:4039:GLY:N	2.46	0.49
1:B:4113:THR:O	1:B:4117:THR:HG23	2.13	0.49
1:C:370:LEU:HB2	1:C:393:MET:HE3	1.95	0.49
1:C:1051:ARG:O	1:C:1055:ARG:HG2	2.13	0.49
1:C:4038:ASP:OD2	1:C:4039:GLY:N	2.46	0.49
1:C:4113:THR:O	1:C:4117:THR:HG23	2.13	0.49
1:C:4118:PHE:HA	1:C:4121:LEU:HD12	1.94	0.49
1:D:1685:LEU:HD22	1:D:1706:LEU:HB2	1.95	0.49
1:D:3811:GLN:NE2	1:D:3828:LYS:HB3	2.28	0.49
1:D:4118:PHE:HA	1:D:4121:LEU:HD12	1.94	0.49
1:A:28:ILE:HG22	1:A:29:HIS:HD2	1.77	0.48
1:A:3811:GLN:NE2	1:A:3828:LYS:HB3	2.28	0.48
1:A:4113:THR:O	1:A:4117:THR:HG23	2.13	0.48
1:A:4118:PHE:HA	1:A:4121:LEU:HD12	1.94	0.48
1:B:920:GLU:OE1	1:B:974:SER:OG	2.25	0.48
1:B:1978:ASN:HB3	1:B:1983:LYS:NZ	2.27	0.48
1:B:2770:ILE:HG13	1:B:2771:TYR:CD1	2.48	0.48
1:B:3317:THR:H	1:B:3320:LEU:HD12	1.78	0.48
1:C:894:VAL:O	1:C:898:ILE:HG12	2.13	0.48
1:C:920:GLU:N	1:C:974:SER:OG	2.45	0.48
1:C:3284:ILE:HG21	1:C:3336:GLU:HG2	1.94	0.48
1:D:307:SER:OG	1:D:315:LEU:O	2.28	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:2341:ASN:OD1	1:D:2342:GLY:N	2.46	0.48
1:D:2770:ILE:HG13	1:D:2771:TYR:CD1	2.48	0.48
1:A:1727:VAL:HG11	1:A:1926:VAL:HG21	1.95	0.48
1:A:4047:ASP:HA	1:A:4050:LYS:HG2	1.95	0.48
1:B:675:TYR:HB3	1:B:822:CYS:SG	2.53	0.48
1:B:2318:ASN:HB3	1:B:2322:ARG:HH12	1.78	0.48
1:B:2581:ARG:HB2	1:B:2584:MET:HG3	1.96	0.48
1:C:1564:MET:CE	1:C:1565:PRO:HD2	2.43	0.48
1:C:2918:GLU:HA	1:C:2923:TYR:CD1	2.48	0.48
1:D:1017:THR:O	1:D:1028:ARG:HA	2.13	0.48
1:D:1564:MET:CE	1:D:1565:PRO:HD2	2.43	0.48
1:D:2793:ARG:HH21	1:D:2796:ASP:HB3	1.76	0.48
1:D:4265:LYS:O	1:D:4269:LYS:HG2	2.13	0.48
2:F:24:VAL:HG22	2:F:48:LYS:HG2	1.94	0.48
2:H:24:VAL:HG22	2:H:48:LYS:HG2	1.94	0.48
1:A:881:ILE:HG13	1:A:885:LEU:CD2	2.44	0.48
1:A:2167:MET:HE3	1:A:2199:PHE:HZ	1.78	0.48
1:A:2581:ARG:HB2	1:A:2584:MET:HG3	1.96	0.48
1:A:2918:GLU:HA	1:A:2923:TYR:CD1	2.48	0.48
1:A:4735:ASN:HB3	1:A:4738:PHE:CD2	2.47	0.48
1:B:2261:ASP:OD1	1:B:2262:LEU:N	2.46	0.48
1:B:2830:ASN:HB3	1:C:1549:SER:HB2	1.94	0.48
1:B:3070:LYS:O	1:B:3073:GLU:HG3	2.13	0.48
1:B:3284:ILE:HG21	1:B:3336:GLU:HG2	1.94	0.48
1:C:1017:THR:O	1:C:1028:ARG:HA	2.13	0.48
1:C:1922:ILE:O	1:C:1926:VAL:HG23	2.13	0.48
1:C:2341:ASN:OD1	1:C:2342:GLY:N	2.47	0.48
1:C:3070:LYS:O	1:C:3073:GLU:HG3	2.13	0.48
1:C:3811:GLN:NE2	1:C:3828:LYS:HB3	2.28	0.48
1:D:3070:LYS:O	1:D:3073:GLU:HG3	2.13	0.48
1:D:3187:LYS:O	1:D:3188:SER:OG	2.28	0.48
1:D:4047:ASP:HA	1:D:4050:LYS:HG2	1.94	0.48
1:A:258:ARG:NH1	1:A:317:MET:HA	2.28	0.48
1:A:894:VAL:O	1:A:898:ILE:HG12	2.13	0.48
1:A:1564:MET:CE	1:A:1565:PRO:HD2	2.43	0.48
1:A:2261:ASP:OD1	1:A:2262:LEU:N	2.46	0.48
1:A:2318:ASN:HB3	1:A:2322:ARG:HH12	1.78	0.48
1:A:2918:GLU:HG3	1:A:2923:TYR:CE1	2.49	0.48
1:A:3230:GLN:N	1:A:3230:GLN:OE1	2.46	0.48
1:A:3317:THR:H	1:A:3320:LEU:HD12	1.78	0.48
1:B:1051:ARG:O	1:B:1055:ARG:HG2	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:1446:ILE:HG12	1:C:1542:ALA:HB2	1.96	0.48
1:C:2318:ASN:HB3	1:C:2322:ARG:HH12	1.78	0.48
1:C:3231:MET:HE3	1:C:3233:HIS:HB2	1.95	0.48
1:C:3260:ARG:HD2	1:C:3260:ARG:O	2.14	0.48
1:D:164:PRO:HB3	1:D:169:ARG:HB2	1.95	0.48
1:D:866:PRO:HA	1:D:1009:ARG:NH2	2.28	0.48
1:D:894:VAL:O	1:D:898:ILE:HG12	2.13	0.48
1:D:2581:ARG:HB2	1:D:2584:MET:HG3	1.96	0.48
1:D:3260:ARG:HD2	1:D:3260:ARG:O	2.14	0.48
1:A:866:PRO:HA	1:A:1009:ARG:NH2	2.28	0.48
1:A:2723:LYS:HG2	1:A:2895:PHE:CZ	2.43	0.48
1:A:2768:LYS:O	1:A:2772:ARG:HG3	2.14	0.48
1:B:1446:ILE:HG12	1:B:1542:ALA:HB2	1.96	0.48
1:B:3811:GLN:NE2	1:B:3828:LYS:HB3	2.28	0.48
1:C:866:PRO:HA	1:C:1009:ARG:NH2	2.28	0.48
1:C:4047:ASP:HA	1:C:4050:LYS:HG2	1.95	0.48
1:D:1436:GLN:H	1:D:1500:ARG:HH22	1.60	0.48
1:D:1790:LYS:O	1:D:1794:MET:HG3	2.13	0.48
1:D:3153:SER:O	1:D:3156:GLY:N	2.45	0.48
1:D:3285:TYR:HA	1:D:3288:LEU:HD23	1.96	0.48
1:D:4084:VAL:O	1:D:4088:HIS:HB3	2.13	0.48
1:A:15:ARG:HH21	1:A:110:HIS:HB3	1.77	0.48
1:A:1017:THR:O	1:A:1028:ARG:HA	2.13	0.48
1:A:2770:ILE:HG13	1:A:2771:TYR:CD1	2.48	0.48
1:A:3153:SER:O	1:A:3156:GLY:N	2.45	0.48
1:B:15:ARG:HH21	1:B:110:HIS:HB3	1.77	0.48
1:B:895:MET:O	1:B:899:GLU:HG2	2.12	0.48
1:B:1457:PHE:HA	1:B:1461:ARG:HH12	1.78	0.48
1:B:3152:ARG:CZ	1:B:3233:HIS:HA	2.44	0.48
1:C:4265:LYS:O	1:C:4269:LYS:HG2	2.13	0.48
1:D:881:ILE:HG13	1:D:885:LEU:CD2	2.44	0.48
1:D:943:LEU:HD23	1:D:999:LEU:HD21	1.96	0.48
1:A:1790:LYS:O	1:A:1794:MET:HG3	2.13	0.48
1:A:2716:LYS:HD3	1:A:2791:ARG:HG3	1.94	0.48
1:A:4265:LYS:O	1:A:4269:LYS:HG2	2.13	0.48
1:A:4521:LYS:HE3	1:A:4562:GLU:HG3	1.96	0.48
1:B:1564:MET:CE	1:B:1565:PRO:HD2	2.43	0.48
1:B:4943:MET:HG2	1:B:4948:CYS:HB3	1.95	0.48
1:C:2581:ARG:HB2	1:C:2584:MET:HG3	1.96	0.48
1:C:2830:ASN:HB3	1:D:1549:SER:HB2	1.95	0.48
1:C:3285:TYR:HA	1:C:3288:LEU:HD23	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:2944:ASP:O	1:D:2948:ARG:NH1	2.47	0.48
1:D:4654:MET:HE2	1:D:4663:ARG:HH11	1.78	0.48
1:A:3152:ARG:CZ	1:A:3233:HIS:HA	2.44	0.48
1:A:3729:ALA:HA	1:A:3732:HIS:CD2	2.49	0.48
1:B:2918:GLU:HA	1:B:2923:TYR:CD1	2.48	0.48
1:B:3068:LEU:O	1:B:3071:THR:OG1	2.25	0.48
1:B:3729:ALA:HA	1:B:3732:HIS:CD2	2.49	0.48
1:C:881:ILE:HG13	1:C:885:LEU:CD2	2.44	0.48
1:C:2770:ILE:HG13	1:C:2771:TYR:CD1	2.48	0.48
1:D:885:LEU:O	1:D:889:ILE:HG12	2.14	0.48
1:D:2497:ARG:HH22	1:D:2878:THR:HB	1.79	0.48
1:D:3114:GLN:HE22	1:D:3115:HIS:CE1	2.32	0.48
1:D:3230:GLN:N	1:D:3230:GLN:OE1	2.46	0.48
1:D:3298:ARG:HB3	1:D:3302:PHE:HE1	1.79	0.48
1:D:3729:ALA:HA	1:D:3732:HIS:CD2	2.49	0.48
1:D:4113:THR:O	1:D:4117:THR:HG23	2.13	0.48
1:A:1502:ASN:O	1:D:2824:ARG:NH2	2.47	0.48
1:A:2341:ASN:OD1	1:A:2342:GLY:N	2.46	0.48
1:A:2497:ARG:HH22	1:A:2878:THR:HB	1.79	0.48
1:A:2798:MET:SD	1:B:1498:GLN:HG3	2.54	0.48
1:A:3260:ARG:HD2	1:A:3260:ARG:O	2.14	0.48
1:A:3304:GLN:HA	1:A:3307:ILE:HG12	1.95	0.48
1:A:4084:VAL:O	1:A:4088:HIS:HB3	2.13	0.48
1:A:4848:ILE:HD11	1:D:4818:TYR:HD1	1.79	0.48
1:B:1685:LEU:HD22	1:B:1706:LEU:HB2	1.95	0.48
1:B:2341:ASN:OD1	1:B:2342:GLY:N	2.46	0.48
1:B:3270:SER:HA	1:B:3273:MET:CE	2.37	0.48
1:C:842:GLN:HB2	1:C:1603:PHE:HB2	1.96	0.48
1:C:1957:LEU:O	1:C:1961:LYS:HG2	2.14	0.48
1:C:4026:LEU:HD12	1:C:4055:HIS:ND1	2.29	0.48
1:A:842:GLN:HB2	1:A:1603:PHE:HB2	1.96	0.48
1:A:943:LEU:HD23	1:A:999:LEU:HD21	1.96	0.48
1:B:3230:GLN:OE1	1:B:3230:GLN:N	2.46	0.48
1:B:3316:LYS:HE2	1:B:3316:LYS:HB2	1.54	0.48
1:C:2918:GLU:HG3	1:C:2923:TYR:CE1	2.49	0.48
1:C:3152:ARG:CZ	1:C:3233:HIS:HA	2.44	0.48
1:D:981:MET:N	1:D:981:MET:SD	2.86	0.48
1:D:1727:VAL:HG11	1:D:1926:VAL:HG21	1.95	0.48
1:D:2918:GLU:HG3	1:D:2923:TYR:CE1	2.49	0.48
1:D:3325:LYS:O	1:D:3328:LYS:HG2	2.14	0.48
1:D:4689:LYS:HZ3	1:D:4696:ALA:HB2	1.79	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:986:ILE:HG22	1:A:1055:ARG:NH1	2.29	0.47
1:B:2497:ARG:HH22	1:B:2878:THR:HB	1.79	0.47
1:B:2768:LYS:O	1:B:2772:ARG:HG3	2.14	0.47
1:B:3260:ARG:O	1:B:3260:ARG:HD2	2.14	0.47
1:B:4521:LYS:HE3	1:B:4562:GLU:HG3	1.96	0.47
1:C:943:LEU:HD23	1:C:999:LEU:HD21	1.96	0.47
1:C:3298:ARG:HB3	1:C:3302:PHE:HE1	1.79	0.47
1:C:3304:GLN:HA	1:C:3307:ILE:HG12	1.95	0.47
1:C:3325:LYS:O	1:C:3328:LYS:HG2	2.14	0.47
1:C:3729:ALA:HA	1:C:3732:HIS:CD2	2.49	0.47
1:C:4521:LYS:HE3	1:C:4562:GLU:HG3	1.96	0.47
1:C:4819:VAL:HG12	1:C:4830:GLU:HG3	1.96	0.47
1:D:258:ARG:NH1	1:D:317:MET:HA	2.28	0.47
1:D:986:ILE:HG22	1:D:1055:ARG:NH1	2.29	0.47
1:D:1957:LEU:O	1:D:1961:LYS:HG2	2.14	0.47
1:D:2318:ASN:HB3	1:D:2322:ARG:HH12	1.78	0.47
1:D:2768:LYS:O	1:D:2772:ARG:HG3	2.14	0.47
1:D:3238:ILE:O	1:D:3241:MET:HB2	2.14	0.47
1:A:317:MET:HG2	1:A:321:LYS:HE2	1.96	0.47
1:A:1051:ARG:O	1:A:1055:ARG:HG2	2.13	0.47
1:A:1931:ASP:OD1	1:A:1932:PHE:N	2.47	0.47
1:A:2139:GLU:HG3	1:A:2192:MET:HE3	1.96	0.47
1:A:3114:GLN:HE22	1:A:3115:HIS:CE1	2.32	0.47
1:A:3157:GLU:HG3	1:A:3302:PHE:HZ	1.77	0.47
1:A:4026:LEU:HD12	1:A:4055:HIS:ND1	2.29	0.47
1:B:2716:LYS:HD3	1:B:2791:ARG:HG3	1.94	0.47
1:B:2918:GLU:HG3	1:B:2923:TYR:CE1	2.49	0.47
1:B:4026:LEU:HD12	1:B:4055:HIS:ND1	2.29	0.47
1:C:164:PRO:HB3	1:C:169:ARG:HB2	1.95	0.47
1:C:258:ARG:NH1	1:C:317:MET:HA	2.28	0.47
1:C:1790:LYS:O	1:C:1794:MET:HG3	2.13	0.47
1:C:2768:LYS:O	1:C:2772:ARG:HG3	2.14	0.47
1:C:3172:GLU:OE1	1:C:3266:THR:OG1	2.22	0.47
1:C:3230:GLN:OE1	1:C:3230:GLN:N	2.46	0.47
1:D:3304:GLN:HA	1:D:3307:ILE:HG12	1.95	0.47
1:D:3313:GLN:HA	1:D:3316:LYS:HZ1	1.79	0.47
1:A:4818:TYR:HD1	1:B:4848:ILE:HD11	1.79	0.47
1:B:258:ARG:NH1	1:B:317:MET:HA	2.28	0.47
1:B:317:MET:HG2	1:B:321:LYS:HE2	1.96	0.47
1:B:881:ILE:HG13	1:B:885:LEU:CD2	2.44	0.47
1:B:920:GLU:N	1:B:974:SER:OG	2.46	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:1931:ASP:OD1	1:B:1932:PHE:N	2.47	0.47
1:B:3250:TRP:CE3	1:B:3268:LEU:HB3	2.50	0.47
1:B:3285:TYR:HA	1:B:3288:LEU:HD23	1.96	0.47
1:B:3313:GLN:HA	1:B:3316:LYS:HZ1	1.79	0.47
1:B:4819:VAL:HG12	1:B:4830:GLU:HG3	1.96	0.47
1:C:986:ILE:HG22	1:C:1055:ARG:NH1	2.29	0.47
1:C:1251:LEU:HD23	1:C:1599:MET:HE2	1.96	0.47
1:C:3187:LYS:O	1:C:3188:SER:OG	2.28	0.47
1:C:3250:TRP:CE3	1:C:3268:LEU:HB3	2.50	0.47
1:A:614:LEU:HD22	1:A:632:ILE:HG12	1.97	0.47
1:A:2705:PRO:HD2	1:A:2854:LYS:HD2	1.97	0.47
1:A:2720:PHE:CE1	1:A:2896:LEU:HA	2.49	0.47
1:A:4640:PHE:CG	1:A:4641:PRO:HD3	2.48	0.47
1:B:514:PHE:CD2	1:B:526:TRP:HB2	2.50	0.47
1:B:885:LEU:O	1:B:889:ILE:HG12	2.14	0.47
1:B:2705:PRO:HD2	1:B:2854:LYS:HD2	1.97	0.47
1:C:3238:ILE:O	1:C:3241:MET:HB2	2.14	0.47
1:D:614:LEU:HD22	1:D:632:ILE:HG12	1.97	0.47
1:D:620:CYS:HG	1:D:621:HIS:HD1	1.62	0.47
1:D:842:GLN:HB2	1:D:1603:PHE:HB2	1.96	0.47
1:D:1941:ARG:NH2	1:D:3609:TYR:HB2	2.27	0.47
1:A:370:LEU:HB2	1:A:393:MET:HE3	1.95	0.47
1:A:394:HIS:CD2	1:A:395:HIS:H	2.33	0.47
1:A:891:GLU:HB3	1:A:978:PRO:HB3	1.97	0.47
1:A:3325:LYS:O	1:A:3328:LYS:HG2	2.14	0.47
1:B:866:PRO:HA	1:B:1009:ARG:NH2	2.28	0.47
1:B:1957:LEU:O	1:B:1961:LYS:HG2	2.14	0.47
1:B:2723:LYS:HG2	1:B:2895:PHE:CZ	2.43	0.47
1:B:2732:TRP:HA	1:B:2735:ASP:OD1	2.15	0.47
1:C:317:MET:HG2	1:C:321:LYS:HE2	1.96	0.47
1:C:3114:GLN:HE22	1:C:3115:HIS:CE1	2.32	0.47
1:C:4084:VAL:O	1:C:4088:HIS:HB3	2.13	0.47
1:D:630:HIS:CE1	1:D:1671:ARG:HE	2.33	0.47
1:D:1457:PHE:HA	1:D:1461:ARG:HH12	1.78	0.47
1:A:514:PHE:CD2	1:A:526:TRP:HB2	2.50	0.47
1:A:885:LEU:O	1:A:889:ILE:HG12	2.14	0.47
1:B:3042:ALA:O	1:B:3046:MET:HG2	2.15	0.47
1:C:1500:ARG:HG3	1:C:1505:LEU:HB2	1.97	0.47
1:C:1714:TYR:CZ	1:C:1761:MET:HB2	2.50	0.47
1:C:1931:ASP:OD1	1:C:1932:PHE:N	2.47	0.47
1:D:2720:PHE:CE1	1:D:2896:LEU:HA	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1446:ILE:HG12	1:A:1542:ALA:HB2	1.96	0.47
1:A:1685:LEU:HD22	1:A:1706:LEU:HB2	1.95	0.47
1:A:1957:LEU:O	1:A:1961:LYS:HG2	2.14	0.47
1:A:3298:ARG:HB3	1:A:3302:PHE:HE1	1.79	0.47
1:A:4765:LYS:HD2	1:A:4765:LYS:HA	1.73	0.47
1:B:394:HIS:CD2	1:B:395:HIS:H	2.33	0.47
1:B:943:LEU:HD23	1:B:999:LEU:HD21	1.96	0.47
1:B:1725:TYR:HE1	1:B:2101:ALA:HB1	1.80	0.47
1:B:2720:PHE:CE1	1:B:2896:LEU:HA	2.49	0.47
1:B:2846:GLU:HB3	1:B:2874:TYR:CD2	2.50	0.47
1:B:2944:ASP:O	1:B:2948:ARG:NH1	2.47	0.47
1:B:3304:GLN:HA	1:B:3307:ILE:HG12	1.96	0.47
1:B:3325:LYS:O	1:B:3328:LYS:HG2	2.14	0.47
1:C:614:LEU:HD22	1:C:632:ILE:HG12	1.97	0.47
1:C:620:CYS:HG	1:C:621:HIS:HD1	1.62	0.47
1:C:1725:TYR:HE1	1:C:2101:ALA:HB1	1.80	0.47
1:C:3042:ALA:O	1:C:3046:MET:HG2	2.15	0.47
1:D:317:MET:HG2	1:D:321:LYS:HE2	1.96	0.47
1:D:394:HIS:CD2	1:D:395:HIS:H	2.33	0.47
1:D:891:GLU:HB3	1:D:978:PRO:HB3	1.97	0.47
1:D:897:LYS:HD3	1:D:902:TRP:HE3	1.80	0.47
1:D:1446:ILE:HG12	1:D:1542:ALA:HB2	1.96	0.47
1:A:2944:ASP:O	1:A:2948:ARG:NH1	2.47	0.47
1:B:614:LEU:HD22	1:B:632:ILE:HG12	1.97	0.47
1:B:891:GLU:HB3	1:B:978:PRO:HB3	1.97	0.47
1:B:1500:ARG:HG3	1:B:1505:LEU:HB2	1.97	0.47
1:B:3114:GLN:HE22	1:B:3115:HIS:CE1	2.32	0.47
1:B:3231:MET:HE3	1:B:3233:HIS:HB2	1.97	0.47
1:B:4683:ARG:NH1	1:B:4684:GLU:O	2.48	0.47
1:C:885:LEU:O	1:C:889:ILE:HG12	2.14	0.47
1:C:2705:PRO:HD2	1:C:2854:LYS:HD2	1.97	0.47
1:C:2732:TRP:HA	1:C:2735:ASP:OD1	2.15	0.47
1:D:920:GLU:OE1	1:D:974:SER:OG	2.25	0.47
1:D:3152:ARG:CZ	1:D:3233:HIS:HA	2.44	0.47
1:D:3250:TRP:CE3	1:D:3268:LEU:HB3	2.50	0.47
1:D:3861:GLN:HB3	1:D:3864:ASN:HD22	1.80	0.47
1:A:2732:TRP:HA	1:A:2735:ASP:OD1	2.15	0.47
1:A:3250:TRP:CE3	1:A:3268:LEU:HB3	2.50	0.47
1:A:3297:LYS:HZ2	1:A:3335:SER:H	1.62	0.47
1:B:986:ILE:HG22	1:B:1055:ARG:NH1	2.29	0.47
1:B:1714:TYR:CZ	1:B:1761:MET:HB2	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:3238:ILE:O	1:B:3241:MET:HB2	2.14	0.47
1:C:514:PHE:CD2	1:C:526:TRP:HB2	2.50	0.47
1:C:920:GLU:OE1	1:C:974:SER:OG	2.25	0.47
1:C:2497:ARG:HH22	1:C:2878:THR:HB	1.79	0.47
1:C:2944:ASP:O	1:C:2948:ARG:NH1	2.47	0.47
1:D:514:PHE:CD2	1:D:526:TRP:HB2	2.50	0.47
1:D:4521:LYS:HE3	1:D:4562:GLU:HG3	1.96	0.47
1:A:1500:ARG:HG3	1:A:1505:LEU:HB2	1.97	0.47
1:A:1725:TYR:HE1	1:A:2101:ALA:HB1	1.80	0.47
1:A:2801:TYR:OH	1:B:1495:SER:O	2.24	0.47
1:A:3238:ILE:O	1:A:3241:MET:HB2	2.14	0.47
1:A:3250:TRP:O	1:A:3256:ASN:ND2	2.49	0.47
1:B:1979:PHE:CZ	1:B:1996:LEU:HD23	2.50	0.47
1:C:891:GLU:HB3	1:C:978:PRO:HB3	1.97	0.47
1:C:2868:HIS:CD2	1:C:2870:LEU:HB2	2.50	0.47
1:C:4683:ARG:NH1	1:C:4684:GLU:O	2.48	0.47
1:D:1931:ASP:OD1	1:D:1932:PHE:N	2.47	0.47
1:D:4026:LEU:HD12	1:D:4055:HIS:ND1	2.29	0.47
1:A:59:PRO:HG3	1:A:296:ARG:CZ	2.45	0.46
1:A:630:HIS:CE1	1:A:1671:ARG:HE	2.33	0.46
1:A:1979:PHE:CZ	1:A:1996:LEU:HD23	2.50	0.46
1:A:3285:TYR:HA	1:A:3288:LEU:HD23	1.96	0.46
1:B:3298:ARG:HB3	1:B:3302:PHE:HE1	1.79	0.46
1:C:59:PRO:HG3	1:C:296:ARG:CZ	2.46	0.46
1:C:3090:VAL:HA	1:C:3093:ILE:HG12	1.98	0.46
1:C:3861:GLN:HB3	1:C:3864:ASN:HD22	1.80	0.46
1:C:4567:TYR:O	1:C:4570:PRO:HD2	2.15	0.46
1:C:4654:MET:HE2	1:C:4663:ARG:HH11	1.80	0.46
1:D:3316:LYS:O	1:D:3317:THR:OG1	2.31	0.46
1:D:4567:TYR:O	1:D:4570:PRO:HD2	2.15	0.46
1:D:4683:ARG:NH1	1:D:4684:GLU:O	2.48	0.46
1:D:4819:VAL:HG12	1:D:4830:GLU:HG3	1.96	0.46
1:A:2716:LYS:NZ	1:A:2791:ARG:HB2	2.30	0.46
1:B:59:PRO:HG3	1:B:296:ARG:CZ	2.45	0.46
1:B:842:GLN:HB2	1:B:1603:PHE:HB2	1.96	0.46
1:B:3187:LYS:O	1:B:3188:SER:OG	2.28	0.46
1:C:1979:PHE:CZ	1:C:1996:LEU:HD23	2.50	0.46
1:C:2716:LYS:NZ	1:C:2791:ARG:HB2	2.31	0.46
1:C:2720:PHE:CE1	1:C:2896:LEU:HA	2.49	0.46
1:C:4625:ASP:OD1	1:C:4625:ASP:N	2.44	0.46
1:D:258:ARG:HH12	1:D:317:MET:HA	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:2167:MET:HE3	1:D:2199:PHE:HZ	1.80	0.46
1:D:2705:PRO:HD2	1:D:2854:LYS:HD2	1.97	0.46
1:D:3250:TRP:O	1:D:3256:ASN:ND2	2.48	0.46
1:A:3042:ALA:O	1:A:3046:MET:HG2	2.15	0.46
1:A:4819:VAL:HG12	1:A:4830:GLU:HG3	1.96	0.46
1:B:630:HIS:CE1	1:B:1671:ARG:HE	2.33	0.46
1:C:3297:LYS:HZ2	1:C:3335:SER:H	1.62	0.46
1:C:3890:TRP:HB3	1:D:76:ARG:HG2	1.97	0.46
1:D:59:PRO:HG3	1:D:296:ARG:CZ	2.45	0.46
1:D:1286:THR:OG1	1:D:1550:PRO:O	2.19	0.46
1:D:1500:ARG:HG3	1:D:1505:LEU:HB2	1.97	0.46
1:D:2732:TRP:HA	1:D:2735:ASP:OD1	2.15	0.46
1:D:2846:GLU:HB3	1:D:2874:TYR:CD2	2.50	0.46
1:D:3042:ALA:O	1:D:3046:MET:HG2	2.15	0.46
2:G:9:SER:HB3	2:G:72:ARG:HB3	1.97	0.46
1:A:897:LYS:HD3	1:A:902:TRP:HE3	1.80	0.46
1:A:1172:THR:HB	1:A:1190:LEU:HD22	1.98	0.46
1:A:2857:LYS:HG2	1:A:2861:GLU:OE2	2.16	0.46
1:A:2925:PHE:HZ	1:A:2970:LEU:HD13	1.80	0.46
1:A:3861:GLN:HB3	1:A:3864:ASN:HD22	1.80	0.46
1:B:1172:THR:HB	1:B:1190:LEU:HD22	1.98	0.46
1:B:4567:TYR:O	1:B:4570:PRO:HD2	2.15	0.46
1:B:4863:GLN:HG2	1:C:4860:ALA:HB2	1.98	0.46
1:C:897:LYS:HD3	1:C:902:TRP:HE3	1.80	0.46
1:C:3072:MET:HE2	1:C:3072:MET:HB2	1.71	0.46
1:D:1714:TYR:CZ	1:D:1761:MET:HB2	2.50	0.46
1:D:3297:LYS:HZ2	1:D:3335:SER:H	1.61	0.46
2:H:9:SER:HB3	2:H:72:ARG:HB3	1.97	0.46
1:A:2926:LEU:HD21	1:A:2975:PHE:HZ	1.81	0.46
1:B:2857:LYS:HG2	1:B:2861:GLU:OE2	2.16	0.46
1:C:28:ILE:O	1:C:31:GLU:HG3	2.15	0.46
1:C:1172:THR:HB	1:C:1190:LEU:HD22	1.98	0.46
1:C:2846:GLU:HB3	1:C:2874:TYR:CD2	2.50	0.46
1:D:317:MET:HE2	1:D:317:MET:HB2	1.69	0.46
1:D:776:GLN:HG2	1:D:1472:GLU:HA	1.98	0.46
1:D:1725:TYR:HE1	1:D:2101:ALA:HB1	1.80	0.46
1:D:2857:LYS:HG2	1:D:2861:GLU:OE2	2.16	0.46
2:F:50:ARG:N	2:F:55:GLU:OE1	2.42	0.46
1:A:1682:GLU:HB3	1:A:1683:PRO:HD3	1.97	0.46
1:B:28:ILE:O	1:B:31:GLU:HG3	2.15	0.46
1:B:1682:GLU:HB3	1:B:1683:PRO:HD3	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:394:HIS:CD2	1:C:395:HIS:H	2.33	0.46
1:C:2772:ARG:O	1:C:2776:LYS:HG3	2.16	0.46
1:C:2925:PHE:HZ	1:C:2970:LEU:HD13	1.80	0.46
1:D:1172:THR:HB	1:D:1190:LEU:HD22	1.98	0.46
1:D:2716:LYS:NZ	1:D:2791:ARG:HB2	2.31	0.46
1:A:2846:GLU:HB3	1:A:2874:TYR:CD2	2.50	0.46
1:B:2776:LYS:HB3	1:B:2780:LYS:NZ	2.31	0.46
1:B:3250:TRP:O	1:B:3256:ASN:ND2	2.48	0.46
1:B:3861:GLN:HB3	1:B:3864:ASN:HD22	1.80	0.46
1:C:801:ARG:NH1	1:C:1615:GLN:O	2.40	0.46
1:C:3250:TRP:O	1:C:3256:ASN:ND2	2.49	0.46
1:D:441:LYS:HD2	1:D:442:ALA:H	1.81	0.46
1:D:1241:VAL:HG12	1:D:1807:ARG:HH12	1.81	0.46
1:D:2620:TYR:HB2	1:D:2627:TRP:HD1	1.81	0.46
1:D:2868:HIS:CD2	1:D:2870:LEU:HB2	2.50	0.46
1:D:2925:PHE:HZ	1:D:2970:LEU:HD13	1.80	0.46
2:F:9:SER:HB3	2:F:72:ARG:HB3	1.97	0.46
1:A:28:ILE:HG22	1:A:29:HIS:CD2	2.51	0.46
1:A:776:GLN:HG2	1:A:1472:GLU:HA	1.98	0.46
1:A:1714:TYR:CE2	1:A:1718:ARG:HD2	2.51	0.46
1:B:28:ILE:HG22	1:B:29:HIS:CD2	2.51	0.46
1:B:4689:LYS:NZ	1:B:4696:ALA:HB2	2.31	0.46
1:C:630:HIS:CE1	1:C:1671:ARG:HE	2.33	0.46
1:C:3692:ALA:HA	1:C:3695:MET:HE3	1.98	0.46
1:D:3090:VAL:HA	1:D:3093:ILE:HG12	1.98	0.46
1:D:3231:MET:HE3	1:D:3233:HIS:HB2	1.97	0.46
2:H:50:ARG:N	2:H:55:GLU:OE1	2.42	0.46
1:A:1714:TYR:CZ	1:A:1761:MET:HB2	2.50	0.46
1:A:4683:ARG:NH1	1:A:4684:GLU:O	2.48	0.46
1:A:4831:ILE:HG13	1:A:4843:ARG:NH2	2.31	0.46
1:B:2716:LYS:NZ	1:B:2791:ARG:HB2	2.31	0.46
1:B:2975:PHE:O	1:B:2979:ARG:HB3	2.16	0.46
1:B:3090:VAL:HA	1:B:3093:ILE:HG12	1.98	0.46
1:C:258:ARG:HH12	1:C:317:MET:HA	1.80	0.46
1:C:2620:TYR:HB2	1:C:2627:TRP:HD1	1.81	0.46
1:C:4827:ILE:O	1:C:4831:ILE:HG12	2.16	0.46
1:D:1682:GLU:HB3	1:D:1683:PRO:HD3	1.97	0.46
1:D:3692:ALA:HA	1:D:3695:MET:HE3	1.98	0.46
1:A:2481:GLN:NE2	1:A:2537:GLY:O	2.42	0.46
1:B:441:LYS:HD2	1:B:442:ALA:H	1.81	0.46
1:B:2772:ARG:O	1:B:2776:LYS:HG3	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:4827:ILE:O	1:B:4831:ILE:HG12	2.16	0.46
1:C:441:LYS:HD2	1:C:442:ALA:H	1.81	0.46
1:C:1241:VAL:HG12	1:C:1807:ARG:HH12	1.81	0.46
1:C:1682:GLU:HB3	1:C:1683:PRO:HD3	1.97	0.46
1:C:2857:LYS:HG2	1:C:2861:GLU:OE2	2.16	0.46
1:D:28:ILE:O	1:D:31:GLU:HG3	2.15	0.46
1:D:235:ARG:NH2	1:D:412:GLU:OE2	2.27	0.46
1:D:808:HIS:O	1:D:1616:GLY:HA2	2.16	0.46
1:D:997:ASP:HA	1:D:1047:LYS:HZ2	1.80	0.46
1:D:3981:MET:HE3	1:D:3981:MET:HB3	1.90	0.46
1:A:28:ILE:O	1:A:31:GLU:HG3	2.15	0.45
1:A:258:ARG:HH12	1:A:317:MET:HA	1.80	0.45
1:A:997:ASP:HA	1:A:1047:LYS:HZ2	1.79	0.45
1:A:4567:TYR:O	1:A:4570:PRO:HD2	2.15	0.45
1:B:1714:TYR:CE2	1:B:1718:ARG:HD2	2.51	0.45
1:B:2167:MET:HE3	1:B:2199:PHE:HZ	1.80	0.45
1:B:2926:LEU:HD21	1:B:2975:PHE:HZ	1.81	0.45
1:C:1714:TYR:CE2	1:C:1718:ARG:HD2	2.51	0.45
1:C:2445:ILE:HA	1:C:2451:VAL:HA	1.98	0.45
1:C:4689:LYS:NZ	1:C:4696:ALA:HB2	2.31	0.45
1:D:749:LEU:HD22	1:D:755:ILE:HD11	1.98	0.45
1:D:1444:GLY:HA3	1:D:1487:MET:HA	1.98	0.45
1:A:713:TRP:CE2	1:A:1600:PRO:HD3	2.52	0.45
1:A:808:HIS:O	1:A:1616:GLY:HA2	2.16	0.45
1:A:1241:VAL:HG12	1:A:1807:ARG:HH12	1.81	0.45
1:A:2957:GLU:HA	1:A:2960:ILE:HG22	1.98	0.45
1:A:2966:VAL:HG12	1:A:2970:LEU:HD23	1.99	0.45
1:A:4827:ILE:O	1:A:4831:ILE:HG12	2.16	0.45
1:B:713:TRP:CE2	1:B:1600:PRO:HD3	2.52	0.45
1:B:3076:LYS:NZ	1:B:3140:LEU:HD23	2.31	0.45
1:C:1444:GLY:HA3	1:C:1487:MET:HA	1.99	0.45
1:C:3122:ILE:HG12	1:C:3127:GLN:HG2	1.99	0.45
1:D:3323:MET:HB3	1:D:3327:LYS:HZ3	1.79	0.45
1:D:4831:ILE:HG13	1:D:4843:ARG:NH2	2.31	0.45
1:A:2670:SER:HB2	1:A:2973:GLN:HG2	1.98	0.45
1:A:2975:PHE:O	1:A:2979:ARG:HB3	2.16	0.45
1:B:1241:VAL:HG12	1:B:1807:ARG:HH12	1.81	0.45
1:C:606:ARG:HH21	1:C:1633:PRO:HD2	1.82	0.45
1:C:808:HIS:O	1:C:1616:GLY:HA2	2.16	0.45
1:C:2353:ILE:HG12	1:C:2359:ARG:HE	1.82	0.45
1:C:2975:PHE:O	1:C:2979:ARG:HB3	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:3076:LYS:NZ	1:C:3140:LEU:HD23	2.31	0.45
1:C:3187:LYS:HZ2	1:C:3191:GLU:HB3	1.81	0.45
1:D:1979:PHE:CZ	1:D:1996:LEU:HD23	2.51	0.45
1:D:3076:LYS:NZ	1:D:3140:LEU:HD23	2.31	0.45
1:A:198:ASN:OD1	1:A:199:GLY:N	2.50	0.45
1:A:2776:LYS:HB3	1:A:2780:LYS:NZ	2.31	0.45
1:A:3692:ALA:HA	1:A:3695:MET:HE3	1.97	0.45
1:A:3939:ARG:NH1	1:B:173:GLU:HG2	2.32	0.45
1:B:897:LYS:HD3	1:B:902:TRP:HE3	1.80	0.45
1:B:1043:LYS:O	1:B:1047:LYS:HB2	2.17	0.45
1:B:1444:GLY:HA3	1:B:1487:MET:HA	1.99	0.45
1:B:2353:ILE:HG12	1:B:2359:ARG:HE	1.82	0.45
1:C:713:TRP:CE2	1:C:1600:PRO:HD3	2.52	0.45
1:C:2926:LEU:HD21	1:C:2975:PHE:HZ	1.80	0.45
1:C:4874:ARG:NH1	1:D:4868:ASP:OD1	2.50	0.45
1:D:29:HIS:CE1	1:D:31:GLU:HG2	2.52	0.45
1:D:1031:ARG:HH11	1:D:1042:THR:HG21	1.81	0.45
1:D:1957:LEU:HA	1:D:1960:ARG:CZ	2.47	0.45
1:D:2772:ARG:O	1:D:2776:LYS:HG3	2.16	0.45
1:D:2926:LEU:HD21	1:D:2975:PHE:HZ	1.81	0.45
1:A:1957:LEU:HA	1:A:1960:ARG:CZ	2.47	0.45
1:A:3025:ASP:O	1:A:3029:ILE:HD12	2.17	0.45
1:A:3076:LYS:NZ	1:A:3140:LEU:HD23	2.31	0.45
1:B:258:ARG:HH12	1:B:317:MET:HA	1.80	0.45
1:B:907:VAL:HG11	1:B:912:LYS:HD3	1.98	0.45
1:B:2674:GLY:HA2	1:B:2978:HIS:CE1	2.52	0.45
1:B:4906:GLU:OE1	1:C:4183:LYS:HE3	2.17	0.45
1:C:2326:ARG:HD3	1:C:2326:ARG:HA	1.76	0.45
1:C:3025:ASP:O	1:C:3029:ILE:HD12	2.17	0.45
1:D:661:LEU:HD13	1:D:673:TRP:CD1	2.52	0.45
1:D:713:TRP:CE2	1:D:1600:PRO:HD3	2.52	0.45
1:D:2445:ILE:HA	1:D:2451:VAL:HA	1.98	0.45
1:D:2776:LYS:HB3	1:D:2780:LYS:NZ	2.31	0.45
1:D:2975:PHE:O	1:D:2979:ARG:HB3	2.16	0.45
1:D:3025:ASP:O	1:D:3029:ILE:HD12	2.17	0.45
1:D:3316:LYS:HE2	1:D:3316:LYS:HB2	1.53	0.45
1:A:2620:TYR:HB2	1:A:2627:TRP:HD1	1.81	0.45
1:A:2772:ARG:O	1:A:2776:LYS:HG3	2.16	0.45
1:A:3231:MET:HE3	1:A:3233:HIS:HB2	1.99	0.45
1:B:749:LEU:HD22	1:B:755:ILE:HD11	1.98	0.45
1:B:897:LYS:HE2	1:B:917:CYS:HB3	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2620:TYR:HB2	1:B:2627:TRP:HD1	1.81	0.45
1:B:2957:GLU:HA	1:B:2960:ILE:HG22	1.98	0.45
1:C:2776:LYS:HB3	1:C:2780:LYS:NZ	2.31	0.45
1:D:4667:SER:OG	1:D:4672:MET:O	2.34	0.45
1:A:712:GLU:OE1	1:A:1086:ARG:NH2	2.39	0.45
1:A:3122:ILE:HG12	1:A:3127:GLN:HG2	1.99	0.45
1:A:4262:LYS:HE3	1:B:4698:LEU:HD22	1.99	0.45
1:B:776:GLN:HG2	1:B:1472:GLU:HA	1.98	0.45
1:B:2670:SER:HB2	1:B:2973:GLN:HG2	1.99	0.45
1:B:4831:ILE:HG13	1:B:4843:ARG:NH2	2.31	0.45
1:C:997:ASP:HA	1:C:1047:LYS:HZ2	1.81	0.45
1:D:2670:SER:HB2	1:D:2973:GLN:HG2	1.98	0.45
1:D:3796:LEU:HD22	1:D:3835:PHE:HZ	1.82	0.45
1:A:271:ALA:HB2	1:A:488:LEU:HD22	1.99	0.45
1:A:674:TYR:CE1	1:A:756:SER:HB2	2.52	0.45
1:A:1444:GLY:HA3	1:A:1487:MET:HA	1.99	0.45
1:A:1500:ARG:HG3	1:A:1505:LEU:H	1.82	0.45
1:A:2868:HIS:CD2	1:A:2870:LEU:HB2	2.50	0.45
1:A:3042:ALA:HB3	1:A:3117:PHE:HD2	1.82	0.45
1:A:4795:LYS:HD2	1:A:4795:LYS:HA	1.81	0.45
1:B:674:TYR:CE1	1:B:756:SER:HB2	2.52	0.45
1:B:801:ARG:NH1	1:B:1615:GLN:O	2.40	0.45
1:B:1500:ARG:HG3	1:B:1505:LEU:H	1.82	0.45
1:B:2724:TYR:CD1	1:B:2895:PHE:HD1	2.35	0.45
1:C:756:SER:OG	1:C:769:ARG:HB2	2.17	0.45
1:C:776:GLN:HG2	1:C:1472:GLU:HA	1.98	0.45
1:C:2957:GLU:HA	1:C:2960:ILE:HG22	1.98	0.45
1:D:907:VAL:HG11	1:D:912:LYS:HD3	1.98	0.45
1:D:2353:ILE:HG12	1:D:2359:ARG:HE	1.82	0.45
1:D:2782:MET:HG2	1:D:2787:TRP:HE3	1.82	0.45
2:G:18:LYS:NZ	2:G:18:LYS:HB3	2.32	0.45
1:A:3090:VAL:HA	1:A:3093:ILE:HG12	1.98	0.45
1:A:3741:LEU:HD11	1:A:3777:MET:HG2	1.99	0.45
1:A:3796:LEU:HD22	1:A:3835:PHE:HZ	1.82	0.45
2:E:18:LYS:NZ	2:E:18:LYS:HB3	2.32	0.45
1:B:2445:ILE:HA	1:B:2451:VAL:HA	1.98	0.45
1:B:2868:HIS:CD2	1:B:2870:LEU:HB2	2.50	0.45
1:B:3042:ALA:HB3	1:B:3117:PHE:HD2	1.82	0.45
1:B:4055:HIS:CD2	1:B:4057:HIS:ND1	2.85	0.45
1:B:4654:MET:HE2	1:B:4663:ARG:HH11	1.82	0.45
1:B:4667:SER:OG	1:B:4672:MET:O	2.34	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:70:GLU:OE2	1:C:122:ARG:HD3	2.17	0.45
1:C:1144:ARG:HB3	1:C:1152:TYR:HB3	1.99	0.45
1:C:2674:GLY:HA2	1:C:2978:HIS:CE1	2.52	0.45
1:C:3316:LYS:O	1:C:3317:THR:OG1	2.31	0.45
1:D:1714:TYR:CE2	1:D:1718:ARG:HD2	2.51	0.45
1:D:4897:TYR:OH	1:D:4963:GLU:OE2	2.32	0.45
1:A:2758:LYS:HE2	1:A:2763:LEU:HA	1.99	0.45
1:A:4054:SER:O	1:A:4056:LYS:HG3	2.17	0.45
1:B:606:ARG:HH21	1:B:1633:PRO:HD2	1.82	0.45
1:B:808:HIS:O	1:B:1616:GLY:HA2	2.16	0.45
1:B:950:VAL:HA	1:B:1064:LEU:HA	1.99	0.45
1:B:1031:ARG:HH11	1:B:1042:THR:HG21	1.81	0.45
1:B:2481:GLN:NE2	1:B:2537:GLY:O	2.42	0.45
1:B:2925:PHE:HZ	1:B:2970:LEU:HD13	1.80	0.45
1:B:3796:LEU:HD22	1:B:3835:PHE:HZ	1.82	0.45
1:C:29:HIS:CE1	1:C:31:GLU:HG2	2.52	0.45
1:C:1031:ARG:HH11	1:C:1042:THR:HG21	1.81	0.45
1:C:2724:TYR:CD1	1:C:2895:PHE:HD1	2.35	0.45
1:D:801:ARG:NH1	1:D:1615:GLN:O	2.40	0.45
1:D:826:VAL:HG21	1:D:832:LEU:HB2	1.99	0.45
1:D:1144:ARG:HB3	1:D:1152:TYR:HB3	1.99	0.45
1:D:1785:ASP:OD1	1:D:1786:ILE:N	2.48	0.45
1:D:3122:ILE:HG12	1:D:3127:GLN:HG2	1.99	0.45
1:D:4827:ILE:O	1:D:4831:ILE:HG12	2.16	0.45
2:G:50:ARG:N	2:G:55:GLU:OE1	2.42	0.45
1:A:29:HIS:CE1	1:A:31:GLU:HG2	2.52	0.44
1:A:441:LYS:HD2	1:A:442:ALA:H	1.81	0.44
1:A:2353:ILE:HG12	1:A:2359:ARG:HE	1.82	0.44
1:A:2674:GLY:HA2	1:A:2978:HIS:CE1	2.52	0.44
1:A:4607:ALA:HB1	1:A:4649:VAL:HG21	1.99	0.44
1:B:661:LEU:HD13	1:B:673:TRP:CD1	2.52	0.44
1:B:2966:VAL:HG12	1:B:2970:LEU:HD23	1.99	0.44
1:C:28:ILE:HG22	1:C:29:HIS:CD2	2.51	0.44
1:C:370:LEU:HB2	1:C:393:MET:CE	2.47	0.44
1:C:749:LEU:HD22	1:C:755:ILE:HD11	1.98	0.44
1:C:826:VAL:HG21	1:C:832:LEU:HB2	1.99	0.44
1:C:1007:TRP:HE1	1:C:1011:ARG:NH1	2.16	0.44
1:C:3062:ASP:O	1:C:3066:GLU:OE1	2.35	0.44
1:C:3830:LEU:HB3	1:C:3833:ASP:OD2	2.18	0.44
1:C:4055:HIS:CD2	1:C:4057:HIS:ND1	2.85	0.44
1:C:4667:SER:OG	1:C:4672:MET:O	2.34	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:G:45:LYS:HA	2:G:46:PRO:HD3	1.82	0.44
1:A:661:LEU:HD13	1:A:673:TRP:CD1	2.52	0.44
1:A:2445:ILE:HA	1:A:2451:VAL:HA	1.98	0.44
1:A:4689:LYS:NZ	1:A:4696:ALA:HB2	2.31	0.44
1:B:2965:LYS:HA	1:B:2965:LYS:HD3	1.80	0.44
1:B:3062:ASP:O	1:B:3066:GLU:OE1	2.35	0.44
1:C:674:TYR:CE1	1:C:756:SER:HB2	2.52	0.44
1:C:2758:LYS:HE2	1:C:2763:LEU:HA	1.99	0.44
1:C:3323:MET:HB3	1:C:3327:LYS:HZ1	1.81	0.44
1:C:3796:LEU:HD22	1:C:3835:PHE:HZ	1.82	0.44
1:D:70:GLU:OE2	1:D:122:ARG:HD3	2.17	0.44
1:D:3044:THR:HA	1:D:3047:LYS:HZ3	1.82	0.44
1:D:3830:LEU:HB3	1:D:3833:ASP:OD2	2.18	0.44
2:F:18:LYS:NZ	2:F:18:LYS:HB3	2.32	0.44
2:H:18:LYS:NZ	2:H:18:LYS:HB3	2.32	0.44
1:A:537:LEU:O	1:A:541:ILE:HG12	2.18	0.44
1:A:756:SER:OG	1:A:769:ARG:HB2	2.17	0.44
1:A:881:ILE:HD12	1:A:884:LYS:HZ3	1.82	0.44
1:A:1043:LYS:O	1:A:1047:LYS:HB2	2.17	0.44
1:A:2724:TYR:CD1	1:A:2895:PHE:HD1	2.35	0.44
1:A:3313:GLN:HA	1:A:3316:LYS:HZ1	1.82	0.44
2:E:9:SER:HB3	2:E:72:ARG:HB3	1.97	0.44
1:B:1785:ASP:OD1	1:B:1786:ILE:N	2.48	0.44
1:B:3044:THR:HA	1:B:3047:LYS:NZ	2.32	0.44
1:B:3830:LEU:HB3	1:B:3833:ASP:OD2	2.18	0.44
1:C:1043:LYS:O	1:C:1047:LYS:HB2	2.17	0.44
1:D:2884:LYS:HD2	1:D:2885:ASP:N	2.33	0.44
2:F:12:ASP:OD1	2:F:13:GLY:N	2.51	0.44
1:A:370:LEU:HB2	1:A:393:MET:CE	2.48	0.44
1:A:749:LEU:HD22	1:A:755:ILE:HD11	1.98	0.44
1:A:907:VAL:HG11	1:A:912:LYS:HD3	1.98	0.44
1:A:1697:LEU:HD23	1:A:1697:LEU:HA	1.87	0.44
1:A:3044:THR:HA	1:A:3047:LYS:NZ	2.32	0.44
1:A:3882:GLN:NE2	1:A:3946:GLY:HA3	2.32	0.44
1:A:4056:LYS:HE3	1:B:4660:PHE:O	2.17	0.44
1:B:70:GLU:OE2	1:B:122:ARG:HD3	2.17	0.44
1:B:756:SER:OG	1:B:769:ARG:HB2	2.17	0.44
1:B:881:ILE:HD12	1:B:884:LYS:HZ3	1.82	0.44
1:B:4054:SER:O	1:B:4056:LYS:HG3	2.17	0.44
1:C:235:ARG:NH2	1:C:412:GLU:OE2	2.27	0.44
1:C:537:LEU:O	1:C:541:ILE:HG12	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:897:LYS:HE2	1:C:917:CYS:HB3	1.99	0.44
1:C:963:LYS:NZ	1:C:979:ALA:HB3	2.33	0.44
1:C:2139:GLU:HG3	1:C:2192:MET:HE3	1.99	0.44
1:D:28:ILE:HG22	1:D:29:HIS:CD2	2.51	0.44
1:D:370:LEU:HB2	1:D:393:MET:CE	2.47	0.44
1:D:537:LEU:O	1:D:541:ILE:HG12	2.18	0.44
1:D:606:ARG:HH21	1:D:1633:PRO:HD2	1.82	0.44
1:D:1991:GLU:HG2	1:D:1992:ILE:N	2.32	0.44
1:D:2139:GLU:HG3	1:D:2192:MET:HE3	1.98	0.44
1:D:3044:THR:HA	1:D:3047:LYS:NZ	2.32	0.44
1:A:962:LYS:NZ	1:A:982:ASP:H	2.16	0.44
1:A:1031:ARG:HH11	1:A:1042:THR:HG21	1.81	0.44
1:A:1991:GLU:HG2	1:A:1992:ILE:N	2.32	0.44
1:A:2826:ILE:HG23	1:B:1501:ASN:O	2.17	0.44
1:A:3184:TYR:CE1	1:A:3197:LEU:HD21	2.53	0.44
1:B:962:LYS:NZ	1:B:982:ASP:H	2.16	0.44
1:B:997:ASP:HA	1:B:1047:LYS:HZ2	1.83	0.44
1:B:1957:LEU:HA	1:B:1960:ARG:CZ	2.47	0.44
1:B:2884:LYS:HD2	1:B:2885:ASP:N	2.33	0.44
1:C:200:SER:O	1:C:202:HIS:HD2	2.01	0.44
1:C:661:LEU:HD13	1:C:673:TRP:CD1	2.52	0.44
1:C:1848:PRO:HG3	1:C:1890:LYS:HD2	2.00	0.44
1:C:3178:HIS:CE1	1:C:3263:MET:HA	2.53	0.44
1:C:4194:GLU:HG2	1:C:4645:TRP:HZ3	1.82	0.44
1:D:897:LYS:HE2	1:D:917:CYS:HB3	1.99	0.44
1:D:2397:ASP:O	1:D:2401:ARG:HG3	2.18	0.44
1:D:2957:GLU:HA	1:D:2960:ILE:HG22	1.98	0.44
1:D:3184:TYR:CE1	1:D:3197:LEU:HD21	2.53	0.44
1:D:3321:PRO:HA	1:D:3324:GLU:HG2	2.00	0.44
1:D:4054:SER:O	1:D:4056:LYS:HG3	2.17	0.44
1:D:4055:HIS:CD2	1:D:4057:HIS:ND1	2.85	0.44
1:D:4795:LYS:HD2	1:D:4795:LYS:HA	1.81	0.44
1:A:70:GLU:OE2	1:A:122:ARG:HD3	2.17	0.44
1:A:826:VAL:HG21	1:A:832:LEU:HB2	1.99	0.44
1:A:1572:LYS:HD2	1:A:1572:LYS:N	2.33	0.44
1:A:2884:LYS:HD2	1:A:2885:ASP:N	2.33	0.44
1:A:4294:LEU:HD22	1:B:4719:PHE:CE2	2.52	0.44
2:E:50:ARG:N	2:E:55:GLU:OE1	2.42	0.44
1:B:370:LEU:HB2	1:B:393:MET:CE	2.48	0.44
1:B:1007:TRP:HE1	1:B:1011:ARG:NH1	2.16	0.44
1:B:1991:GLU:HG2	1:B:1992:ILE:N	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2758:LYS:HE2	1:B:2763:LEU:HA	2.00	0.44
1:B:2782:MET:HG2	1:B:2787:TRP:HE3	1.82	0.44
1:B:3025:ASP:O	1:B:3029:ILE:HD12	2.17	0.44
1:B:3102:LEU:HB2	1:B:3103:PRO:HD3	2.00	0.44
1:B:3187:LYS:HZ3	1:B:3191:GLU:HB3	1.83	0.44
1:B:3981:MET:HE3	1:B:3981:MET:HB3	1.89	0.44
1:B:4607:ALA:HB1	1:B:4649:VAL:HG21	1.99	0.44
1:C:317:MET:HE2	1:C:317:MET:HB2	1.72	0.44
1:C:890:HIS:NE2	1:C:924:LEU:HD22	2.33	0.44
1:C:907:VAL:HG11	1:C:912:LYS:HD3	1.98	0.44
1:C:950:VAL:HA	1:C:1064:LEU:HA	1.99	0.44
1:C:1941:ARG:NH2	1:C:3609:TYR:HB2	2.27	0.44
1:C:3215:MET:CE	1:C:3215:MET:HA	2.48	0.44
1:D:115:TYR:CG	1:D:164:PRO:HG3	2.53	0.44
1:D:271:ALA:HB2	1:D:488:LEU:HD22	1.99	0.44
1:D:1293:GLN:O	1:D:1294:ASN:HB3	2.18	0.44
1:D:2674:GLY:HA2	1:D:2978:HIS:CE1	2.52	0.44
1:D:2758:LYS:HE2	1:D:2763:LEU:HA	2.00	0.44
2:G:12:ASP:OD1	2:G:13:GLY:N	2.51	0.44
2:G:25:VAL:HG12	2:G:104:LEU:HA	2.00	0.44
2:H:12:ASP:OD1	2:H:13:GLY:N	2.51	0.44
2:H:19:LYS:HB2	2:H:19:LYS:HE3	1.80	0.44
1:A:963:LYS:NZ	1:A:979:ALA:HB3	2.33	0.44
1:A:1293:GLN:O	1:A:1294:ASN:HB3	2.18	0.44
1:A:3062:ASP:O	1:A:3066:GLU:OE1	2.35	0.44
1:A:4055:HIS:CD2	1:A:4057:HIS:ND1	2.85	0.44
1:A:4667:SER:OG	1:A:4672:MET:O	2.34	0.44
2:E:12:ASP:OD1	2:E:13:GLY:N	2.51	0.44
1:B:537:LEU:O	1:B:541:ILE:HG12	2.18	0.44
1:B:1293:GLN:O	1:B:1294:ASN:HB3	2.18	0.44
1:B:2397:ASP:O	1:B:2401:ARG:HG3	2.18	0.44
1:B:3741:LEU:HD11	1:B:3777:MET:HG2	1.99	0.44
1:C:718:VAL:HG13	1:C:724:SER:OG	2.18	0.44
1:C:2397:ASP:O	1:C:2401:ARG:HG3	2.18	0.44
1:C:2670:SER:HB2	1:C:2973:GLN:HG2	1.98	0.44
1:C:3042:ALA:HB3	1:C:3117:PHE:HD2	1.82	0.44
1:D:756:SER:OG	1:D:769:ARG:HB2	2.17	0.44
1:D:890:HIS:NE2	1:D:924:LEU:HD22	2.33	0.44
1:D:963:LYS:NZ	1:D:979:ALA:HB3	2.33	0.44
1:D:1415:ASP:OD2	1:D:1559:ARG:NH2	2.51	0.44
1:D:2318:ASN:HB3	1:D:2322:ARG:NH1	2.33	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:3042:ALA:HB3	1:D:3117:PHE:HD2	1.82	0.44
1:D:3062:ASP:O	1:D:3066:GLU:OE1	2.35	0.44
1:D:3741:LEU:HD11	1:D:3777:MET:HG2	1.99	0.44
1:D:4194:GLU:HG2	1:D:4645:TRP:HZ3	1.82	0.44
1:D:4689:LYS:NZ	1:D:4696:ALA:HB2	2.31	0.44
1:A:1074:ARG:HD3	1:A:1078:CYS:HB2	2.00	0.44
1:B:115:TYR:CG	1:B:164:PRO:HG3	2.52	0.44
1:B:1572:LYS:N	1:B:1572:LYS:HD2	2.33	0.44
1:B:3297:LYS:HE2	1:B:3297:LYS:HA	2.00	0.44
1:B:4084:VAL:O	1:B:4088:HIS:HB2	2.18	0.44
1:C:962:LYS:NZ	1:C:982:ASP:H	2.16	0.44
1:C:1074:ARG:HD3	1:C:1078:CYS:HB2	2.00	0.44
1:C:3044:THR:HA	1:C:3047:LYS:NZ	2.32	0.44
1:C:3882:GLN:NE2	1:C:3946:GLY:HA3	2.32	0.44
1:C:4795:LYS:HA	1:C:4795:LYS:HD2	1.81	0.44
1:D:306:LEU:HA	1:D:316:LEU:HD23	2.00	0.44
1:D:1043:LYS:O	1:D:1047:LYS:HB2	2.17	0.44
1:D:1572:LYS:HD2	1:D:1572:LYS:N	2.33	0.44
1:D:2966:VAL:HG12	1:D:2970:LEU:HD23	1.99	0.44
1:D:3304:GLN:OE1	1:D:3308:ASN:ND2	2.47	0.44
1:D:4023:LEU:HG	1:D:4084:VAL:HG12	1.99	0.44
1:A:3026:ALA:O	1:A:3030:VAL:HG23	2.18	0.44
1:A:3118:GLY:O	1:A:3122:ILE:HG22	2.18	0.44
1:A:3304:GLN:OE1	1:A:3308:ASN:ND2	2.48	0.44
1:A:3830:LEU:HB3	1:A:3833:ASP:OD2	2.18	0.44
1:B:1711:LEU:HB3	1:B:1831:MET:SD	2.58	0.44
1:B:1718:ARG:HD3	1:B:1831:MET:HA	2.00	0.44
1:B:3122:ILE:HG12	1:B:3127:GLN:HG2	1.99	0.44
1:B:3178:HIS:CE1	1:B:3263:MET:HA	2.53	0.44
1:C:712:GLU:OE1	1:C:1086:ARG:NH2	2.39	0.44
1:C:801:ARG:HG2	1:C:1618:LEU:HA	2.00	0.44
1:C:2954:PHE:CE2	1:C:2956:TYR:HB2	2.53	0.44
1:C:2966:VAL:HG12	1:C:2970:LEU:HD23	1.99	0.44
1:C:3017:HIS:O	1:C:3018:ARG:HD3	2.18	0.44
1:C:3297:LYS:HA	1:C:3297:LYS:HE2	2.00	0.44
1:C:4831:ILE:HG13	1:C:4843:ARG:NH2	2.31	0.44
1:C:4867:ILE:HG12	1:D:4864:GLY:HA2	2.00	0.44
1:D:1007:TRP:HE1	1:D:1011:ARG:NH1	2.16	0.44
1:D:1500:ARG:HG3	1:D:1505:LEU:H	1.82	0.44
1:D:3215:MET:HA	1:D:3215:MET:CE	2.48	0.44
2:F:45:LYS:HA	2:F:46:PRO:HD3	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:H:25:VAL:HG12	2:H:104:LEU:HA	2.00	0.44
1:A:950:VAL:HA	1:A:1064:LEU:HA	1.99	0.43
1:A:1304:LEU:HD23	1:A:1304:LEU:HA	1.84	0.43
1:A:2332:GLY:O	1:A:2336:ARG:HG3	2.18	0.43
1:A:4194:GLU:HG2	1:A:4645:TRP:HZ3	1.82	0.43
1:B:306:LEU:HA	1:B:316:LEU:HD23	2.00	0.43
1:B:718:VAL:HG13	1:B:724:SER:OG	2.18	0.43
1:B:2332:GLY:O	1:B:2336:ARG:HG3	2.18	0.43
1:B:3215:MET:HA	1:B:3215:MET:CE	2.48	0.43
1:C:198:ASN:OD1	1:C:199:GLY:N	2.50	0.43
1:C:505:LEU:HD23	1:C:505:LEU:HA	1.85	0.43
1:C:1711:LEU:HB3	1:C:1831:MET:SD	2.58	0.43
1:C:1957:LEU:HA	1:C:1960:ARG:CZ	2.47	0.43
1:C:1991:GLU:HG2	1:C:1992:ILE:N	2.32	0.43
1:C:2884:LYS:HD2	1:C:2885:ASP:N	2.33	0.43
1:D:674:TYR:CE1	1:D:756:SER:HB2	2.52	0.43
1:D:718:VAL:HG13	1:D:724:SER:OG	2.18	0.43
1:D:1074:ARG:HH11	1:D:1078:CYS:H	1.66	0.43
1:D:1848:PRO:HG3	1:D:1890:LYS:HD2	2.00	0.43
1:D:4036:ASP:OD1	1:D:4040:LYS:NZ	2.52	0.43
2:F:25:VAL:HG12	2:F:104:LEU:HA	2.00	0.43
1:A:718:VAL:HG13	1:A:724:SER:OG	2.18	0.43
1:A:1144:ARG:HB3	1:A:1152:TYR:HB3	1.99	0.43
1:A:1435:GLY:H	1:A:1500:ARG:HH12	1.66	0.43
1:A:1711:LEU:HB3	1:A:1831:MET:SD	2.58	0.43
1:A:1898:LEU:HD23	1:A:1902:VAL:HG12	2.00	0.43
1:A:2832:THR:OG1	1:B:1548:THR:O	2.33	0.43
1:A:4283:PHE:HE2	1:B:4495:PHE:HE2	1.66	0.43
1:B:29:HIS:CE1	1:B:31:GLU:HG2	2.52	0.43
1:B:826:VAL:HG21	1:B:832:LEU:HB2	1.99	0.43
1:B:3017:HIS:O	1:B:3018:ARG:HD3	2.18	0.43
1:B:3184:TYR:CE1	1:B:3197:LEU:HD21	2.53	0.43
1:B:4602:ARG:NH1	1:B:4631:ASP:OD1	2.51	0.43
1:C:115:TYR:CG	1:C:164:PRO:HG3	2.53	0.43
1:C:271:ALA:HB2	1:C:488:LEU:HD22	1.99	0.43
1:C:306:LEU:HA	1:C:316:LEU:HD23	2.00	0.43
1:C:3026:ALA:O	1:C:3030:VAL:HG23	2.18	0.43
1:C:3102:LEU:HB2	1:C:3103:PRO:HD3	2.00	0.43
1:C:3321:PRO:HA	1:C:3324:GLU:HG2	1.99	0.43
1:D:3118:GLY:O	1:D:3122:ILE:HG22	2.18	0.43
1:D:3178:HIS:CE1	1:D:3263:MET:HA	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:4602:ARG:NH1	1:D:4631:ASP:OD1	2.51	0.43
1:D:4607:ALA:HB1	1:D:4649:VAL:HG21	1.99	0.43
1:A:234:LEU:HD13	1:A:405:LEU:HD22	2.00	0.43
1:A:306:LEU:HA	1:A:316:LEU:HD23	2.00	0.43
1:A:801:ARG:HG2	1:A:1618:LEU:HA	2.00	0.43
1:A:1718:ARG:HD3	1:A:1831:MET:HA	2.00	0.43
1:A:2318:ASN:HB3	1:A:2322:ARG:NH1	2.33	0.43
1:A:2782:MET:HG2	1:A:2787:TRP:HE3	1.82	0.43
1:A:2954:PHE:CE2	1:A:2956:TYR:HB2	2.53	0.43
1:A:3017:HIS:O	1:A:3018:ARG:HD3	2.18	0.43
1:B:234:LEU:HD13	1:B:405:LEU:HD22	2.00	0.43
1:B:891:GLU:HG3	1:B:976:TYR:HD2	1.82	0.43
1:B:1074:ARG:HH11	1:B:1078:CYS:H	1.66	0.43
1:B:1415:ASP:OD2	1:B:1559:ARG:NH2	2.51	0.43
1:B:1898:LEU:HD23	1:B:1902:VAL:HG12	2.00	0.43
1:B:2139:GLU:HG3	1:B:2192:MET:HE3	1.99	0.43
1:B:2954:PHE:CE2	1:B:2956:TYR:HB2	2.53	0.43
1:B:4036:ASP:OD1	1:B:4040:LYS:NZ	2.52	0.43
1:B:4085:LYS:HE3	1:B:4085:LYS:HB3	1.83	0.43
1:C:1500:ARG:HG3	1:C:1505:LEU:H	1.82	0.43
1:C:1979:PHE:HZ	1:C:1996:LEU:HD23	1.84	0.43
1:C:4054:SER:O	1:C:4056:LYS:HG3	2.17	0.43
1:D:1435:GLY:H	1:D:1500:ARG:HH12	1.66	0.43
1:D:1898:LEU:HD23	1:D:1902:VAL:HG12	2.00	0.43
1:A:1434:PRO:O	1:D:2830:ASN:HB2	2.18	0.43
1:A:1848:PRO:HG3	1:A:1890:LYS:HD2	2.00	0.43
1:A:2831:VAL:HG22	1:B:1435:GLY:HA2	2.00	0.43
1:A:3297:LYS:HE2	1:A:3297:LYS:HA	2.00	0.43
1:A:4023:LEU:HG	1:A:4084:VAL:HG12	1.99	0.43
1:B:271:ALA:HB2	1:B:488:LEU:HD22	1.99	0.43
1:B:1038:LEU:HD23	1:B:1043:LYS:HG2	2.01	0.43
1:B:1848:PRO:HG3	1:B:1890:LYS:HD2	2.00	0.43
1:B:1979:PHE:HZ	1:B:1996:LEU:HD23	1.83	0.43
1:B:2130:LEU:HD21	1:B:2173:GLU:HG3	2.00	0.43
1:B:3297:LYS:HZ2	1:B:3335:SER:H	1.67	0.43
1:B:4023:LEU:HG	1:B:4084:VAL:HG12	1.99	0.43
1:C:891:GLU:HG3	1:C:976:TYR:HD2	1.82	0.43
1:C:1785:ASP:OD1	1:C:1786:ILE:N	2.48	0.43
1:C:2728:SER:HA	1:C:2731:LYS:NZ	2.33	0.43
1:C:2791:ARG:HH12	1:C:2795:GLY:C	2.22	0.43
1:D:234:LEU:HD13	1:D:405:LEU:HD22	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:950:VAL:HA	1:D:1064:LEU:HA	1.99	0.43
1:D:1074:ARG:HD3	1:D:1078:CYS:HB2	2.00	0.43
1:D:2696:ASP:O	1:D:2700:ASN:HA	2.19	0.43
1:D:3017:HIS:O	1:D:3018:ARG:HD3	2.18	0.43
1:A:274:LEU:HD23	1:A:274:LEU:HA	1.90	0.43
1:A:1007:TRP:HE1	1:A:1011:ARG:NH1	2.16	0.43
1:A:2397:ASP:O	1:A:2401:ARG:HG3	2.18	0.43
1:A:2759:PRO:HG2	1:A:2762:LEU:HD13	2.01	0.43
1:A:2782:MET:HG2	1:A:2787:TRP:CE3	2.54	0.43
1:A:2909:ASP:OD2	1:A:2912:LEU:HG	2.19	0.43
1:A:4036:ASP:OD1	1:A:4040:LYS:NZ	2.52	0.43
1:A:4084:VAL:O	1:A:4088:HIS:HB2	2.18	0.43
1:B:801:ARG:HG2	1:B:1618:LEU:HA	2.00	0.43
1:B:2782:MET:HG2	1:B:2787:TRP:CE3	2.54	0.43
1:B:3323:MET:HB3	1:B:3327:LYS:HZ1	1.83	0.43
1:B:3695:MET:HB3	1:B:3731:LEU:HD11	2.00	0.43
1:B:3882:GLN:NE2	1:B:3946:GLY:HA3	2.33	0.43
1:C:686:VAL:HG13	1:C:687:THR:HG23	2.00	0.43
1:C:1293:GLN:O	1:C:1294:ASN:HB3	2.18	0.43
1:C:2481:GLN:NE2	1:C:2537:GLY:O	2.42	0.43
1:C:3741:LEU:HD11	1:C:3777:MET:HG2	1.99	0.43
1:D:58:VAL:HG13	1:D:319:LYS:HG2	2.00	0.43
1:D:874:LEU:HD23	1:D:879:GLU:OE1	2.19	0.43
1:D:2899:ASN:O	1:D:2899:ASN:ND2	2.52	0.43
1:D:2954:PHE:CE2	1:D:2956:TYR:HB2	2.53	0.43
1:D:3882:GLN:NE2	1:D:3946:GLY:HA3	2.32	0.43
1:A:891:GLU:HG3	1:A:976:TYR:HD2	1.82	0.43
1:A:897:LYS:HE2	1:A:917:CYS:HB3	1.99	0.43
1:A:1300:MET:HE2	1:A:1300:MET:HB3	1.81	0.43
1:A:1415:ASP:OD2	1:A:1559:ARG:NH2	2.51	0.43
1:B:1948:MET:HA	1:B:1951:LEU:HD23	2.00	0.43
1:B:2791:ARG:HH12	1:B:2795:GLY:C	2.22	0.43
1:C:880:ARG:HH12	1:C:881:ILE:HD13	1.84	0.43
1:C:1038:LEU:HD23	1:C:1043:LYS:HG2	2.01	0.43
1:C:1415:ASP:OD2	1:C:1559:ARG:NH2	2.51	0.43
1:C:2782:MET:HG2	1:C:2787:TRP:HE3	1.82	0.43
1:C:3184:TYR:CE1	1:C:3197:LEU:HD21	2.53	0.43
1:C:3986:LEU:O	1:C:3989:ASN:HB2	2.19	0.43
1:C:4602:ARG:NH1	1:C:4631:ASP:OD1	2.51	0.43
1:D:200:SER:O	1:D:202:HIS:HD2	2.01	0.43
1:D:686:VAL:HG13	1:D:687:THR:HG23	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:801:ARG:HG2	1:D:1618:LEU:HA	2.00	0.43
1:D:2909:ASP:OD2	1:D:2912:LEU:HG	2.19	0.43
1:A:115:TYR:CG	1:A:164:PRO:HG3	2.53	0.43
1:A:718:VAL:HG23	1:A:793:SER:HB3	2.01	0.43
1:A:2888:LYS:HA	1:A:2891:ASP:OD2	2.19	0.43
1:B:930:ASN:OD1	1:B:931:TYR:N	2.52	0.43
1:B:963:LYS:NZ	1:B:979:ALA:HB3	2.33	0.43
1:B:1074:ARG:HD3	1:B:1078:CYS:HB2	2.00	0.43
1:B:1939:ASN:ND2	1:B:1989:PRO:HD3	2.34	0.43
1:B:3026:ALA:O	1:B:3030:VAL:HG23	2.18	0.43
1:C:2332:GLY:O	1:C:2336:ARG:HG3	2.18	0.43
1:C:3695:MET:HB3	1:C:3731:LEU:HD11	2.00	0.43
1:C:3728:GLN:OE1	1:C:3770:ASN:ND2	2.52	0.43
1:C:4023:LEU:HG	1:C:4084:VAL:HG12	1.99	0.43
1:D:1718:ARG:HD3	1:D:1831:MET:HA	2.00	0.43
1:D:2215:PHE:CG	1:D:2253:LEU:HD22	2.54	0.43
1:D:2724:TYR:CD1	1:D:2895:PHE:HD1	2.35	0.43
1:D:2791:ARG:HH12	1:D:2795:GLY:C	2.22	0.43
1:D:3297:LYS:HE2	1:D:3297:LYS:HA	2.00	0.43
1:A:200:SER:O	1:A:202:HIS:HD2	2.01	0.43
1:A:606:ARG:HH21	1:A:1633:PRO:HD2	1.82	0.43
1:A:930:ASN:OD1	1:A:931:TYR:N	2.52	0.43
1:A:1074:ARG:HH11	1:A:1078:CYS:H	1.67	0.43
1:B:200:SER:O	1:B:202:HIS:HD2	2.01	0.43
1:B:1144:ARG:HB3	1:B:1152:TYR:HB3	1.99	0.43
1:C:911:ASN:OD1	1:C:912:LYS:N	2.52	0.43
1:C:1074:ARG:HH11	1:C:1078:CYS:H	1.67	0.43
1:C:1140:PHE:CD2	1:C:1141:LYS:HE3	2.54	0.43
1:C:1718:ARG:HD3	1:C:1831:MET:HA	2.00	0.43
1:C:1939:ASN:ND2	1:C:1989:PRO:HD3	2.34	0.43
1:C:2782:MET:HG2	1:C:2787:TRP:CE3	2.54	0.43
1:C:2909:ASP:OD2	1:C:2912:LEU:HG	2.19	0.43
1:C:3118:GLY:O	1:C:3122:ILE:HG22	2.18	0.43
1:C:3157:GLU:HG3	1:C:3302:PHE:CZ	2.54	0.43
1:D:1140:PHE:CD2	1:D:1141:LYS:HE3	2.54	0.43
1:D:1471:ASP:OD2	1:D:1474:GLY:N	2.51	0.43
1:D:2130:LEU:HD21	1:D:2173:GLU:HG3	2.00	0.43
1:D:2868:HIS:NE2	1:D:2870:LEU:HB2	2.34	0.43
1:A:505:LEU:HD23	1:A:505:LEU:HA	1.85	0.43
1:A:874:LEU:HD23	1:A:879:GLU:OE1	2.18	0.43
1:A:1948:MET:HA	1:A:1951:LEU:HD23	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2130:LEU:HD21	1:A:2173:GLU:HG3	2.00	0.43
1:A:2222:LEU:HD23	1:A:2222:LEU:HA	1.88	0.43
1:A:4793:TYR:HH	1:A:4816:HIS:CE1	2.36	0.43
1:B:246:THR:HG21	1:B:267:VAL:HG21	2.01	0.43
1:B:890:HIS:NE2	1:B:924:LEU:HD22	2.33	0.43
1:B:3118:GLY:O	1:B:3122:ILE:HG22	2.18	0.43
1:B:3611:LEU:HD23	1:B:3611:LEU:HA	1.89	0.43
1:B:3664:LEU:O	1:B:3668:ILE:HG13	2.19	0.43
1:B:3728:GLN:OE1	1:B:3770:ASN:ND2	2.52	0.43
1:B:3890:TRP:HB3	1:C:76:ARG:HG2	2.01	0.43
1:B:4194:GLU:HG2	1:B:4645:TRP:HZ3	1.82	0.43
1:B:4921:PHE:HE2	1:B:4940:VAL:HG11	1.84	0.43
1:C:711:GLU:OE1	1:C:716:ASN:ND2	2.52	0.43
1:C:874:LEU:HD23	1:C:879:GLU:OE1	2.18	0.43
1:C:1686:LEU:HD22	1:C:1790:LYS:HZ1	1.83	0.43
1:C:4607:ALA:HB1	1:C:4649:VAL:HG21	2.00	0.43
1:D:962:LYS:NZ	1:D:982:ASP:H	2.16	0.43
1:D:1475:LYS:HE3	1:D:1475:LYS:HB3	1.89	0.43
1:D:2589:LEU:O	1:D:2593:VAL:HG13	2.19	0.43
1:D:2782:MET:HG2	1:D:2787:TRP:CE3	2.54	0.43
1:A:58:VAL:HG13	1:A:319:LYS:HG2	2.00	0.43
1:A:880:ARG:HH12	1:A:881:ILE:HD13	1.84	0.43
1:A:890:HIS:NE2	1:A:924:LEU:HD22	2.33	0.43
1:A:1941:ARG:NH2	1:A:3609:TYR:HB2	2.27	0.43
1:A:3215:MET:HA	1:A:3215:MET:CE	2.48	0.43
1:A:3664:LEU:O	1:A:3668:ILE:HG13	2.19	0.43
1:B:686:VAL:HG13	1:B:687:THR:HG23	2.00	0.43
1:B:711:GLU:OE1	1:B:716:ASN:ND2	2.52	0.43
1:B:874:LEU:HD23	1:B:879:GLU:OE1	2.18	0.43
1:B:2929:LEU:HD21	1:B:2970:LEU:HD11	2.01	0.43
1:B:3321:PRO:HA	1:B:3324:GLU:HG2	2.00	0.43
1:C:246:THR:HG21	1:C:267:VAL:HG21	2.01	0.43
1:C:2130:LEU:HD21	1:C:2173:GLU:HG3	2.00	0.43
1:C:3312:PRO:HD2	1:C:3313:GLN:OE1	2.19	0.43
1:D:880:ARG:HH12	1:D:881:ILE:HD13	1.84	0.43
1:D:1979:PHE:HZ	1:D:1996:LEU:HD23	1.84	0.43
1:D:2332:GLY:O	1:D:2336:ARG:HG3	2.18	0.43
1:D:4689:LYS:HZ3	1:D:4693:SER:HB3	1.84	0.43
1:A:711:GLU:OE1	1:A:716:ASN:ND2	2.52	0.42
1:A:1038:LEU:HD23	1:A:1043:LYS:HG2	2.01	0.42
1:A:1979:PHE:HZ	1:A:1996:LEU:HD23	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2455:ASP:OD2	1:A:2457:SER:OG	2.20	0.42
1:A:2696:ASP:O	1:A:2700:ASN:HA	2.19	0.42
1:A:3321:PRO:HA	1:A:3324:GLU:HG2	2.00	0.42
1:A:3323:MET:HB3	1:A:3327:LYS:HZ3	1.83	0.42
1:A:4085:LYS:HB3	1:A:4085:LYS:HE3	1.83	0.42
1:B:600:LEU:HD12	1:B:604:HIS:CD2	2.54	0.42
1:B:1031:ARG:HD2	1:B:1042:THR:HG21	2.01	0.42
1:B:2589:LEU:O	1:B:2593:VAL:HG13	2.19	0.42
1:B:2868:HIS:NE2	1:B:2870:LEU:HB2	2.34	0.42
1:B:3122:ILE:HG12	1:B:3127:GLN:CG	2.49	0.42
1:B:3986:LEU:O	1:B:3989:ASN:HB2	2.19	0.42
1:C:234:LEU:HD13	1:C:405:LEU:HD22	2.00	0.42
1:C:718:VAL:HG23	1:C:793:SER:HB3	2.01	0.42
1:C:930:ASN:OD1	1:C:931:TYR:N	2.52	0.42
1:C:2318:ASN:HB3	1:C:2322:ARG:NH1	2.33	0.42
1:C:2696:ASP:O	1:C:2700:ASN:HA	2.19	0.42
1:C:3316:LYS:HB2	1:C:3316:LYS:HE2	1.54	0.42
1:C:3326:LEU:HD21	1:C:3336:GLU:HB2	2.01	0.42
1:D:712:GLU:OE1	1:D:1086:ARG:NH2	2.39	0.42
1:D:930:ASN:OD1	1:D:931:TYR:N	2.52	0.42
1:D:967:PRO:O	1:D:971:GLN:HG2	2.19	0.42
1:D:2759:PRO:HG2	1:D:2762:LEU:HD13	2.01	0.42
1:D:3026:ALA:O	1:D:3030:VAL:HG23	2.18	0.42
1:A:971:GLN:HE21	1:A:978:PRO:HD2	1.84	0.42
1:A:2791:ARG:HH12	1:A:2795:GLY:C	2.22	0.42
1:A:4602:ARG:NH1	1:A:4631:ASP:OD1	2.51	0.42
2:E:25:VAL:HG12	2:E:104:LEU:HA	2.00	0.42
1:B:274:LEU:HD23	1:B:274:LEU:HA	1.89	0.42
1:B:505:LEU:HD23	1:B:505:LEU:HA	1.85	0.42
1:B:880:ARG:HH12	1:B:881:ILE:HD13	1.84	0.42
1:B:983:LEU:HD11	1:B:1055:ARG:HG3	2.00	0.42
1:B:1300:MET:HE2	1:B:1300:MET:HB3	1.87	0.42
1:B:1564:MET:HE2	1:B:1565:PRO:HD2	2.00	0.42
1:B:2830:ASN:HB2	1:C:1434:PRO:O	2.19	0.42
1:C:3304:GLN:OE1	1:C:3308:ASN:ND2	2.48	0.42
1:D:971:GLN:HE21	1:D:978:PRO:HD2	1.84	0.42
1:D:1038:LEU:HD23	1:D:1043:LYS:HG2	2.01	0.42
1:D:2436:ILE:HG22	1:D:2491:GLY:HA3	2.02	0.42
1:D:3195:LEU:HD22	1:D:3197:LEU:HB2	2.01	0.42
1:D:3201:VAL:O	1:D:3204:VAL:HG12	2.19	0.42
1:D:3213:LYS:HA	1:D:3216:GLU:OE2	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:600:LEU:HD12	1:A:604:HIS:CD2	2.54	0.42
1:A:967:PRO:O	1:A:971:GLN:HG2	2.19	0.42
1:A:3312:PRO:HD2	1:A:3313:GLN:OE1	2.19	0.42
1:A:3695:MET:HB3	1:A:3731:LEU:HD11	2.00	0.42
1:B:1140:PHE:CD2	1:B:1141:LYS:HE3	2.54	0.42
1:B:1572:LYS:HD2	1:B:1572:LYS:H	1.84	0.42
1:B:2554:ARG:HH11	1:B:2554:ARG:HG3	1.85	0.42
1:B:3213:LYS:HA	1:B:3216:GLU:OE2	2.19	0.42
1:C:58:VAL:HG13	1:C:319:LYS:HG2	2.00	0.42
1:C:600:LEU:HD12	1:C:604:HIS:CD2	2.54	0.42
1:C:1471:ASP:OD2	1:C:1474:GLY:N	2.51	0.42
1:C:1948:MET:HA	1:C:1951:LEU:HD23	2.00	0.42
1:C:2868:HIS:NE2	1:C:2870:LEU:HB2	2.34	0.42
1:C:2874:TYR:CZ	1:C:2882:LYS:HD3	2.54	0.42
1:C:4084:VAL:O	1:C:4088:HIS:HB2	2.18	0.42
1:D:2888:LYS:HA	1:D:2891:ASP:OD2	2.19	0.42
1:D:3102:LEU:HB2	1:D:3103:PRO:HD3	2.00	0.42
1:A:246:THR:HG21	1:A:267:VAL:HG21	2.01	0.42
1:A:1140:PHE:CD2	1:A:1141:LYS:HE3	2.54	0.42
1:A:2155:PHE:HD1	1:A:2162:MET:HG3	1.85	0.42
1:A:2771:TYR:O	1:A:2774:PRO:HD2	2.20	0.42
1:A:3178:HIS:CE1	1:A:3263:MET:HA	2.53	0.42
1:A:3187:LYS:HZ3	1:A:3191:GLU:HB3	1.84	0.42
1:A:3201:VAL:O	1:A:3204:VAL:HG12	2.20	0.42
1:A:3326:LEU:HD21	1:A:3336:GLU:HB2	2.02	0.42
1:A:3712:LYS:O	1:A:3717:LYS:NZ	2.53	0.42
1:B:911:ASN:OD1	1:B:912:LYS:N	2.52	0.42
1:B:2138:GLU:HA	1:B:2141:LEU:HD12	2.02	0.42
1:B:2318:ASN:HB3	1:B:2322:ARG:NH1	2.33	0.42
1:B:2696:ASP:O	1:B:2700:ASN:HA	2.19	0.42
1:C:932:ASN:HA	1:C:935:MET:HG3	2.02	0.42
1:C:2403:ALA:HB2	1:C:2475:VAL:HG22	2.01	0.42
1:C:3195:LEU:HD22	1:C:3197:LEU:HB2	2.01	0.42
1:D:198:ASN:OD1	1:D:199:GLY:N	2.50	0.42
1:D:711:GLU:OE1	1:D:716:ASN:ND2	2.52	0.42
1:D:891:GLU:HG3	1:D:976:TYR:HD2	1.82	0.42
1:D:983:LEU:HD11	1:D:1055:ARG:HG3	2.00	0.42
1:D:1711:LEU:HB3	1:D:1831:MET:SD	2.58	0.42
1:D:3712:LYS:O	1:D:3717:LYS:NZ	2.53	0.42
1:D:3986:LEU:O	1:D:3989:ASN:HB2	2.19	0.42
1:A:996:VAL:HG21	1:A:1051:ARG:HA	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:2666:LEU:HB3	1:A:2667:PRO:HD3	2.02	0.42
1:B:58:VAL:HG13	1:B:319:LYS:HG2	2.00	0.42
1:B:227:TYR:CG	1:B:352:SER:HB3	2.55	0.42
1:B:718:VAL:HG23	1:B:793:SER:HB3	2.01	0.42
1:B:844:ARG:NH2	1:B:847:THR:HG21	2.35	0.42
1:B:1435:GLY:H	1:B:1500:ARG:HH12	1.66	0.42
1:B:2899:ASN:O	1:B:2899:ASN:ND2	2.52	0.42
1:B:3325:LYS:HE3	1:B:3325:LYS:HA	2.01	0.42
1:B:3712:LYS:O	1:B:3717:LYS:NZ	2.53	0.42
1:C:2436:ILE:HG22	1:C:2491:GLY:HA3	2.02	0.42
1:C:2888:LYS:HA	1:C:2891:ASP:OD2	2.19	0.42
1:D:718:VAL:HG23	1:D:793:SER:HB3	2.01	0.42
1:D:2155:PHE:HD1	1:D:2162:MET:HG3	1.85	0.42
1:D:2554:ARG:HH11	1:D:2554:ARG:HG3	1.85	0.42
1:D:4084:VAL:O	1:D:4088:HIS:HB2	2.18	0.42
1:D:4085:LYS:HE3	1:D:4085:LYS:HB3	1.83	0.42
1:A:2436:ILE:HG22	1:A:2491:GLY:HA3	2.02	0.42
1:A:2589:LEU:O	1:A:2593:VAL:HG13	2.19	0.42
1:A:2728:SER:HA	1:A:2731:LYS:NZ	2.33	0.42
1:A:3325:LYS:HE3	1:A:3325:LYS:HA	2.01	0.42
1:B:198:ASN:OD1	1:B:199:GLY:N	2.50	0.42
1:B:1979:PHE:CG	1:B:1993:ARG:HG2	2.55	0.42
1:B:2888:LYS:HA	1:B:2891:ASP:OD2	2.19	0.42
1:C:1435:GLY:H	1:C:1500:ARG:HH12	1.66	0.42
1:C:2589:LEU:O	1:C:2593:VAL:HG13	2.19	0.42
1:C:2711:ILE:HD11	1:C:2783:LEU:HG	2.02	0.42
1:C:2929:LEU:HD21	1:C:2970:LEU:HD11	2.01	0.42
1:C:3201:VAL:O	1:C:3204:VAL:HG12	2.20	0.42
1:C:3325:LYS:HE3	1:C:3325:LYS:HA	2.01	0.42
1:C:4036:ASP:OD1	1:C:4040:LYS:NZ	2.52	0.42
1:D:2666:LEU:HB3	1:D:2667:PRO:HD3	2.02	0.42
1:D:3325:LYS:HE3	1:D:3325:LYS:HA	2.01	0.42
1:A:686:VAL:HG13	1:A:687:THR:HG23	2.00	0.42
1:A:911:ASN:OD1	1:A:912:LYS:N	2.52	0.42
1:A:2146:LEU:HD23	1:A:2146:LEU:HA	1.87	0.42
1:A:2929:LEU:HD21	1:A:2970:LEU:HD11	2.01	0.42
1:A:3102:LEU:HB2	1:A:3103:PRO:HD3	2.00	0.42
1:A:3127:GLN:OE1	1:A:3183:ILE:HB	2.20	0.42
1:A:3213:LYS:HA	1:A:3216:GLU:OE2	2.19	0.42
1:B:881:ILE:O	1:B:885:LEU:HD23	2.20	0.42
1:B:932:ASN:HA	1:B:935:MET:HG3	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:996:VAL:HG21	1:B:1051:ARG:HA	2.02	0.42
1:B:2155:PHE:HD1	1:B:2162:MET:HG3	1.85	0.42
1:B:2408:LEU:HD23	1:B:2408:LEU:HA	1.90	0.42
1:B:2874:TYR:CZ	1:B:2882:LYS:HD3	2.54	0.42
1:B:2959:GLU:OE1	1:B:2959:GLU:N	2.53	0.42
1:B:3326:LEU:HD21	1:B:3336:GLU:HB2	2.02	0.42
1:B:4155:SER:O	1:B:4159:GLN:HG2	2.20	0.42
1:B:4262:LYS:HG3	1:C:4698:LEU:HD13	2.00	0.42
1:C:983:LEU:HD11	1:C:1055:ARG:HG3	2.01	0.42
1:C:2155:PHE:HD1	1:C:2162:MET:HG3	1.85	0.42
1:C:2554:ARG:HH11	1:C:2554:ARG:HG3	1.85	0.42
1:C:2708:THR:HB	1:C:2780:LYS:HB3	2.02	0.42
1:C:2759:PRO:HG2	1:C:2762:LEU:HD13	2.01	0.42
1:C:4155:SER:O	1:C:4159:GLN:HG2	2.20	0.42
1:D:1572:LYS:HD2	1:D:1572:LYS:H	1.85	0.42
1:D:1948:MET:HA	1:D:1951:LEU:HD23	2.00	0.42
1:D:2708:THR:HB	1:D:2780:LYS:HB3	2.01	0.42
1:A:844:ARG:NH2	1:A:847:THR:HG21	2.35	0.42
1:A:1572:LYS:HD2	1:A:1572:LYS:H	1.84	0.42
1:A:1939:ASN:ND2	1:A:1989:PRO:HD3	2.34	0.42
1:A:2215:PHE:CG	1:A:2253:LEU:HD22	2.54	0.42
1:A:2403:ALA:HB2	1:A:2475:VAL:HG22	2.01	0.42
1:A:2874:TYR:CZ	1:A:2882:LYS:HD3	2.54	0.42
1:A:3036:LEU:O	1:A:3040:LEU:HG	2.20	0.42
1:A:3756:ALA:O	1:A:3760:LYS:HG3	2.20	0.42
1:B:1064:LEU:HD23	1:B:1064:LEU:H	1.85	0.42
1:B:2403:ALA:HB2	1:B:2475:VAL:HG22	2.01	0.42
1:B:2909:ASP:OD2	1:B:2912:LEU:HG	2.19	0.42
1:B:3201:VAL:O	1:B:3204:VAL:HG12	2.20	0.42
1:C:844:ARG:NH2	1:C:847:THR:HG21	2.35	0.42
1:C:1064:LEU:H	1:C:1064:LEU:HD23	1.85	0.42
1:C:1572:LYS:H	1:C:1572:LYS:HD2	1.84	0.42
1:C:1572:LYS:HD2	1:C:1572:LYS:N	2.33	0.42
1:C:1979:PHE:CG	1:C:1993:ARG:HG2	2.55	0.42
1:C:2215:PHE:CG	1:C:2253:LEU:HD22	2.54	0.42
1:C:2965:LYS:HA	1:C:2965:LYS:HD3	1.80	0.42
1:C:3213:LYS:HA	1:C:3216:GLU:OE2	2.19	0.42
1:C:3290:ILE:HG22	1:C:3291:ASP:OD2	2.20	0.42
1:D:600:LEU:HD12	1:D:604:HIS:CD2	2.54	0.42
1:D:2138:GLU:HA	1:D:2141:LEU:HD12	2.02	0.42
1:D:3312:PRO:HD2	1:D:3313:GLN:OE1	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:3695:MET:HB3	1:D:3731:LEU:HD11	2.00	0.42
1:D:3756:ALA:O	1:D:3760:LYS:HG3	2.20	0.42
2:F:19:LYS:HB2	2:F:19:LYS:HE3	1.80	0.42
1:A:2937:HIS:HA	1:A:3014:LEU:HD11	2.02	0.42
1:A:3157:GLU:HG3	1:A:3302:PHE:CZ	2.54	0.42
1:A:4921:PHE:HE2	1:A:4940:VAL:HG11	1.84	0.42
1:B:829:LYS:HZ2	1:B:1037:LEU:HB3	1.85	0.42
1:B:967:PRO:O	1:B:971:GLN:HG2	2.19	0.42
1:B:3072:MET:HE2	1:B:3072:MET:HB2	1.66	0.42
1:C:1080:GLY:O	1:C:1081:THR:OG1	2.32	0.42
1:C:1898:LEU:HD23	1:C:1902:VAL:HG12	2.00	0.42
1:C:2959:GLU:OE1	1:C:2959:GLU:N	2.53	0.42
1:C:3664:LEU:O	1:C:3668:ILE:HG13	2.19	0.42
1:D:227:TYR:CG	1:D:352:SER:HB3	2.55	0.42
1:D:844:ARG:NH2	1:D:847:THR:HG21	2.35	0.42
1:D:911:ASN:OD1	1:D:912:LYS:N	2.52	0.42
1:D:2711:ILE:HD11	1:D:2783:LEU:HG	2.02	0.42
1:D:3036:LEU:O	1:D:3040:LEU:HG	2.20	0.42
1:D:3290:ILE:HG22	1:D:3291:ASP:OD2	2.20	0.42
1:D:3326:LEU:HD21	1:D:3336:GLU:HB2	2.01	0.42
1:D:3728:GLN:OE1	1:D:3770:ASN:ND2	2.52	0.42
1:D:4921:PHE:HE2	1:D:4940:VAL:HG11	1.84	0.42
1:A:309:MET:HE3	1:A:315:LEU:HB3	2.01	0.42
1:A:2138:GLU:HA	1:A:2141:LEU:HD12	2.02	0.42
1:B:735:GLY:O	1:B:737:ILE:HD12	2.20	0.42
1:B:824:GLU:HA	1:B:1020:ILE:HD12	2.02	0.42
1:B:841:LYS:O	1:B:848:ARG:NH2	2.53	0.42
1:B:1591:LEU:HD12	1:B:1591:LEU:HA	1.93	0.42
1:B:1748:LEU:HD11	1:B:1853:GLU:HG3	2.02	0.42
1:B:2215:PHE:CG	1:B:2253:LEU:HD22	2.54	0.42
1:B:2919:LYS:HB2	1:B:2919:LYS:HE3	1.87	0.42
1:B:3312:PRO:HD2	1:B:3313:GLN:OE1	2.19	0.42
1:C:1031:ARG:HD2	1:C:1042:THR:HG21	2.01	0.42
1:C:2138:GLU:HA	1:C:2141:LEU:HD12	2.02	0.42
1:C:4921:PHE:HE2	1:C:4940:VAL:HG11	1.84	0.42
1:D:932:ASN:HA	1:D:935:MET:HG3	2.02	0.42
1:D:1283:LEU:O	1:D:1555:PHE:N	2.49	0.42
1:D:2146:LEU:HD23	1:D:2146:LEU:HA	1.87	0.42
1:D:2326:ARG:HD3	1:D:2326:ARG:HA	1.76	0.42
1:D:2874:TYR:CZ	1:D:2882:LYS:HD3	2.54	0.42
1:D:3127:GLN:OE1	1:D:3183:ILE:HB	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:3664:LEU:O	1:D:3668:ILE:HG13	2.19	0.42
1:D:4061:SER:O	1:D:4064:GLU:HG3	2.20	0.42
1:D:4731:LEU:HD23	1:D:4731:LEU:HA	1.92	0.42
1:A:983:LEU:HD11	1:A:1055:ARG:HG3	2.00	0.41
1:A:2258:ARG:NE	1:A:2258:ARG:HA	2.35	0.41
1:A:2868:HIS:NE2	1:A:2870:LEU:HB2	2.34	0.41
1:A:3290:ILE:HG22	1:A:3291:ASP:OD2	2.20	0.41
1:A:4061:SER:O	1:A:4064:GLU:HG3	2.20	0.41
1:A:4155:SER:O	1:A:4159:GLN:HG2	2.20	0.41
1:B:674:TYR:OH	1:B:676:GLU:OE2	2.37	0.41
1:C:971:GLN:HE21	1:C:978:PRO:HD2	1.84	0.41
1:C:1721:MET:SD	1:C:2127:ARG:NH1	2.93	0.41
1:C:2114:GLU:HG2	1:C:2115:ASP:N	2.35	0.41
1:C:3036:LEU:O	1:C:3040:LEU:HG	2.20	0.41
1:C:3122:ILE:HG12	1:C:3127:GLN:CG	2.49	0.41
1:C:3717:LYS:HB2	1:C:3717:LYS:HE2	1.89	0.41
1:D:246:THR:HG21	1:D:267:VAL:HG21	2.01	0.41
1:D:881:ILE:O	1:D:885:LEU:HD23	2.20	0.41
1:D:1721:MET:SD	1:D:2127:ARG:NH1	2.93	0.41
1:D:1939:ASN:ND2	1:D:1989:PRO:HD3	2.34	0.41
1:D:2937:HIS:HA	1:D:3014:LEU:HD11	2.02	0.41
1:A:227:TYR:CG	1:A:352:SER:HB3	2.55	0.41
1:A:735:GLY:O	1:A:737:ILE:HD12	2.20	0.41
1:A:824:GLU:HA	1:A:1020:ILE:HD12	2.02	0.41
1:A:841:LYS:O	1:A:848:ARG:NH2	2.53	0.41
1:A:1748:LEU:HD11	1:A:1853:GLU:HG3	2.02	0.41
1:A:2554:ARG:HH11	1:A:2554:ARG:HG3	1.85	0.41
1:A:3728:GLN:OE1	1:A:3770:ASN:ND2	2.52	0.41
1:A:3986:LEU:O	1:A:3989:ASN:HB2	2.19	0.41
1:B:712:GLU:O	1:B:838:ARG:HG3	2.21	0.41
1:B:971:GLN:HE21	1:B:978:PRO:HD2	1.84	0.41
1:B:1721:MET:SD	1:B:2127:ARG:NH1	2.93	0.41
1:B:2711:ILE:HD11	1:B:2783:LEU:HG	2.02	0.41
1:B:2759:PRO:HG2	1:B:2762:LEU:HD13	2.01	0.41
1:B:2967:VAL:O	1:B:2970:LEU:HG	2.20	0.41
1:B:3127:GLN:OE1	1:B:3183:ILE:HB	2.20	0.41
1:B:3213:LYS:O	1:B:3216:GLU:HG2	2.20	0.41
1:C:2071:GLN:CD	1:C:3648:GLY:HA3	2.41	0.41
1:C:4061:SER:O	1:C:4064:GLU:HG3	2.20	0.41
1:C:4694:LEU:HA	1:C:4697:VAL:HG12	2.02	0.41
1:D:735:GLY:O	1:D:737:ILE:HD12	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:2172:MET:HG2	1:D:2217:HIS:HD2	1.85	0.41
1:D:2771:TYR:O	1:D:2774:PRO:HD2	2.20	0.41
1:D:4082:GLU:HA	1:D:4085:LYS:HE3	2.03	0.41
1:A:801:ARG:NH1	1:A:1615:GLN:O	2.40	0.41
1:A:963:LYS:HZ3	1:A:979:ALA:HB3	1.86	0.41
1:A:1686:LEU:HD22	1:A:1790:LYS:HZ1	1.85	0.41
1:A:2539:GLU:HA	1:A:2584:MET:HE1	2.02	0.41
1:A:4895:ASN:HA	1:A:4905:PHE:CD1	2.56	0.41
1:B:2114:GLU:HG2	1:B:2115:ASP:N	2.35	0.41
1:B:2436:ILE:HG22	1:B:2491:GLY:HA3	2.02	0.41
1:B:2771:TYR:O	1:B:2774:PRO:HD2	2.20	0.41
1:B:3157:GLU:HG3	1:B:3302:PHE:CZ	2.54	0.41
1:B:3692:ALA:HA	1:B:3695:MET:HE3	2.01	0.41
1:C:824:GLU:HA	1:C:1020:ILE:HD12	2.02	0.41
1:C:2258:ARG:NE	1:C:2258:ARG:HA	2.35	0.41
1:C:3213:LYS:O	1:C:3216:GLU:HG2	2.20	0.41
1:C:4651:ARG:HG2	1:C:4651:ARG:NH1	2.34	0.41
1:D:712:GLU:O	1:D:838:ARG:HG3	2.21	0.41
1:D:1255:LEU:HD12	1:D:1255:LEU:HA	1.93	0.41
1:D:2232:PRO:C	1:D:2234:MET:H	2.24	0.41
1:D:2403:ALA:HB2	1:D:2475:VAL:HG22	2.01	0.41
1:D:2605:MET:HB3	1:D:2606:PRO:HD3	2.02	0.41
1:D:4735:ASN:HB3	1:D:4738:PHE:HD2	1.86	0.41
1:A:114:LEU:HB2	1:A:117:HIS:ND1	2.35	0.41
1:A:1064:LEU:HD23	1:A:1064:LEU:H	1.85	0.41
1:A:2303:ARG:HE	1:A:2401:ARG:NE	2.19	0.41
1:A:2954:PHE:CD1	1:A:2955:PRO:HD2	2.56	0.41
1:A:3316:LYS:HE2	1:A:3316:LYS:HB2	1.54	0.41
1:A:4059:THR:OG1	1:A:4062:GLU:HG3	2.21	0.41
1:B:2539:GLU:HA	1:B:2584:MET:HE1	2.02	0.41
1:B:3290:ILE:HG22	1:B:3291:ASP:OD2	2.20	0.41
1:B:4059:THR:OG1	1:B:4062:GLU:HG3	2.21	0.41
1:B:4061:SER:O	1:B:4064:GLU:HG3	2.20	0.41
1:B:4651:ARG:HG2	1:B:4651:ARG:NH1	2.34	0.41
1:B:4694:LEU:HA	1:B:4697:VAL:HG12	2.02	0.41
1:C:2967:VAL:O	1:C:2970:LEU:HG	2.20	0.41
1:C:4056:LYS:HE3	1:D:4660:PHE:O	2.20	0.41
1:C:4082:GLU:HA	1:C:4085:LYS:HE3	2.03	0.41
1:D:192:LEU:HD12	1:D:192:LEU:HA	1.91	0.41
1:D:521:GLU:H	1:D:521:GLU:CD	2.24	0.41
1:D:996:VAL:HG21	1:D:1051:ARG:HA	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:4155:SER:O	1:D:4159:GLN:HG2	2.20	0.41
1:A:483:LYS:HE2	1:A:483:LYS:HB2	1.80	0.41
1:A:2604:LYS:HZ2	1:A:2664:LEU:HD22	1.85	0.41
1:A:2708:THR:HB	1:A:2780:LYS:HB3	2.02	0.41
1:A:4046:ARG:HG2	1:A:4076:GLU:OE2	2.21	0.41
1:B:114:LEU:HB2	1:B:117:HIS:ND1	2.35	0.41
1:B:2071:GLN:CD	1:B:3648:GLY:HA3	2.41	0.41
1:B:2172:MET:HG2	1:B:2217:HIS:HD2	1.86	0.41
1:B:2258:ARG:HA	1:B:2258:ARG:NE	2.35	0.41
1:B:2303:ARG:HE	1:B:2401:ARG:NE	2.19	0.41
1:B:2326:ARG:HA	1:B:2326:ARG:HD3	1.76	0.41
1:B:3195:LEU:HD22	1:B:3197:LEU:HB2	2.01	0.41
1:B:4055:HIS:O	1:B:4057:HIS:ND1	2.54	0.41
1:C:521:GLU:CD	1:C:521:GLU:H	2.24	0.41
1:C:735:GLY:O	1:C:737:ILE:HD12	2.20	0.41
1:C:2666:LEU:HB3	1:C:2667:PRO:HD3	2.02	0.41
1:C:4735:ASN:HB3	1:C:4738:PHE:HD2	1.85	0.41
1:D:1031:ARG:HD2	1:D:1042:THR:HG21	2.01	0.41
1:D:1064:LEU:HD23	1:D:1064:LEU:H	1.85	0.41
1:D:1748:LEU:HD11	1:D:1853:GLU:HG3	2.02	0.41
1:D:1979:PHE:CG	1:D:1993:ARG:HG2	2.55	0.41
1:D:2604:LYS:HZ2	1:D:2664:LEU:HD22	1.84	0.41
1:D:2878:THR:HG23	1:D:2881:GLU:H	1.86	0.41
1:D:3157:GLU:HG3	1:D:3302:PHE:CZ	2.54	0.41
1:A:521:GLU:H	1:A:521:GLU:CD	2.24	0.41
1:A:2172:MET:HG2	1:A:2217:HIS:HD2	1.86	0.41
1:A:2326:ARG:HA	1:A:2326:ARG:HD3	1.76	0.41
1:A:3173:THR:HA	1:A:3176:ASP:OD2	2.21	0.41
1:A:3195:LEU:HD22	1:A:3197:LEU:HB2	2.01	0.41
1:A:4055:HIS:O	1:A:4057:HIS:ND1	2.54	0.41
1:A:4694:LEU:HA	1:A:4697:VAL:HG12	2.02	0.41
1:B:801:ARG:HA	1:B:1617:TRP:O	2.20	0.41
1:B:1177:LEU:O	1:B:1180:GLU:HG3	2.21	0.41
1:B:1941:ARG:NH2	1:B:3609:TYR:HB2	2.27	0.41
1:B:2878:THR:HG23	1:B:2881:GLU:H	1.86	0.41
1:B:2937:HIS:HA	1:B:3014:LEU:HD11	2.02	0.41
1:B:3173:THR:HA	1:B:3176:ASP:OD2	2.21	0.41
1:B:3756:ALA:O	1:B:3760:LYS:HG3	2.20	0.41
1:B:4735:ASN:HB3	1:B:4738:PHE:HD2	1.85	0.41
1:C:2259:GLU:OE2	1:C:3806:ASN:ND2	2.54	0.41
1:C:3061:LEU:HD23	1:C:3061:LEU:HA	1.88	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:C:3127:GLN:OE1	1:C:3183:ILE:HB	2.20	0.41
1:C:3712:LYS:O	1:C:3717:LYS:NZ	2.53	0.41
1:C:4070:ALA:HB1	1:C:4078:LEU:HD13	2.03	0.41
1:D:274:LEU:HD23	1:D:274:LEU:HA	1.89	0.41
1:D:308:LEU:HD13	1:D:393:MET:HG3	2.03	0.41
1:D:881:ILE:HD12	1:D:884:LYS:HZ3	1.86	0.41
1:D:932:ASN:O	1:D:935:MET:HG3	2.21	0.41
1:D:977:LYS:HA	1:D:978:PRO:HD3	1.89	0.41
1:D:2481:GLN:NE2	1:D:2537:GLY:O	2.42	0.41
1:D:2929:LEU:HD21	1:D:2970:LEU:HD11	2.01	0.41
1:D:3033:LEU:HD23	1:D:3033:LEU:HA	1.86	0.41
1:D:3061:LEU:HD23	1:D:3061:LEU:HA	1.88	0.41
1:D:3611:LEU:HD23	1:D:3611:LEU:HA	1.89	0.41
1:A:712:GLU:O	1:A:838:ARG:HG3	2.21	0.41
1:A:801:ARG:HA	1:A:1617:TRP:O	2.20	0.41
1:A:881:ILE:O	1:A:885:LEU:HD23	2.20	0.41
1:A:2899:ASN:O	1:A:2899:ASN:ND2	2.52	0.41
1:A:4082:GLU:HA	1:A:4085:LYS:HE3	2.03	0.41
1:B:2708:THR:HB	1:B:2780:LYS:HB3	2.02	0.41
1:B:2728:SER:HA	1:B:2731:LYS:NZ	2.33	0.41
1:B:2954:PHE:CD1	1:B:2955:PRO:HD2	2.56	0.41
1:B:3036:LEU:O	1:B:3040:LEU:HG	2.20	0.41
1:B:4070:ALA:HB1	1:B:4078:LEU:HD13	2.03	0.41
1:C:841:LYS:O	1:C:848:ARG:NH2	2.53	0.41
1:C:967:PRO:O	1:C:971:GLN:HG2	2.20	0.41
1:C:996:VAL:HG21	1:C:1051:ARG:HA	2.02	0.41
1:C:2232:PRO:C	1:C:2234:MET:H	2.24	0.41
1:C:2604:LYS:HZ2	1:C:2664:LEU:HD22	1.86	0.41
1:C:3019:ILE:HG13	1:C:3020:SER:N	2.36	0.41
1:D:314:LEU:HD23	1:D:314:LEU:HA	1.93	0.41
1:D:879:GLU:HA	1:D:882:ARG:HD2	2.03	0.41
1:D:1988:CYS:HA	1:D:1989:PRO:HD3	1.95	0.41
1:D:4757:LEU:O	1:D:4761:THR:HG23	2.21	0.41
1:A:844:ARG:HH11	1:A:844:ARG:HG3	1.86	0.41
1:A:879:GLU:HA	1:A:882:ARG:HD2	2.03	0.41
1:A:1586:LEU:HD12	1:A:1586:LEU:HA	1.94	0.41
1:A:1785:ASP:OD1	1:A:1786:ILE:N	2.48	0.41
1:A:1979:PHE:CG	1:A:1993:ARG:HG2	2.55	0.41
1:A:2222:LEU:HD12	1:A:2261:ASP:HB2	2.03	0.41
1:A:2259:GLU:OE2	1:A:3806:ASN:ND2	2.54	0.41
1:A:2605:MET:HB3	1:A:2606:PRO:HD3	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:3122:ILE:HG12	1:A:3127:GLN:CG	2.50	0.41
1:A:4868:ASP:OD1	1:D:4874:ARG:NH1	2.53	0.41
1:B:20:VAL:HG12	1:B:216:PRO:HA	2.02	0.41
1:B:879:GLU:HA	1:B:882:ARG:HD2	2.03	0.41
1:B:1471:ASP:OD2	1:B:1474:GLY:N	2.51	0.41
1:B:2222:LEU:HD12	1:B:2261:ASP:HB2	2.03	0.41
1:B:3002:GLU:O	1:B:3005:THR:OG1	2.33	0.41
1:B:3929:THR:O	1:B:3933:GLN:HG2	2.21	0.41
1:C:227:TYR:CG	1:C:352:SER:HB3	2.55	0.41
1:C:436:LEU:HD13	1:C:518:ALA:HB2	2.03	0.41
1:C:881:ILE:O	1:C:885:LEU:HD23	2.20	0.41
1:C:1748:LEU:HD11	1:C:1853:GLU:HG3	2.02	0.41
1:C:2605:MET:HB3	1:C:2606:PRO:HD3	2.02	0.41
1:C:3279:ASN:O	1:C:3283:ILE:HG12	2.21	0.41
1:C:3756:ALA:O	1:C:3760:LYS:HG3	2.20	0.41
1:D:456:LEU:HD23	1:D:456:LEU:HA	1.96	0.41
1:D:2258:ARG:NE	1:D:2258:ARG:HA	2.35	0.41
1:D:2259:GLU:OE2	1:D:3806:ASN:ND2	2.54	0.41
1:D:2539:GLU:HA	1:D:2584:MET:HE1	2.03	0.41
1:D:3122:ILE:HG12	1:D:3127:GLN:CG	2.50	0.41
1:D:3965:ILE:HG22	1:D:3969:LYS:HE2	2.03	0.41
2:G:85:ALA:O	2:G:94:PRO:HB3	2.21	0.41
1:A:20:VAL:HG12	1:A:216:PRO:HA	2.02	0.41
1:A:459:LEU:HD23	1:A:459:LEU:HA	1.93	0.41
1:A:620:CYS:HG	1:A:621:HIS:HD1	1.68	0.41
1:A:658:ASN:HB2	1:A:832:LEU:HD12	2.03	0.41
1:A:891:GLU:HG3	1:A:976:TYR:CE2	2.56	0.41
1:A:932:ASN:HA	1:A:935:MET:HG3	2.02	0.41
1:A:1080:GLY:O	1:A:1081:THR:OG1	2.32	0.41
1:A:1177:LEU:O	1:A:1180:GLU:HG3	2.21	0.41
1:A:1721:MET:SD	1:A:2127:ARG:NH1	2.93	0.41
1:A:2711:ILE:HD11	1:A:2783:LEU:HG	2.02	0.41
1:A:2736:LYS:HE2	1:A:2741:TRP:HB3	2.03	0.41
1:A:3187:LYS:HZ2	1:A:3191:GLU:HB3	1.84	0.41
1:A:3323:MET:HB3	1:A:3327:LYS:HZ1	1.86	0.41
1:A:4070:ALA:HB1	1:A:4078:LEU:HD13	2.03	0.41
1:B:35:LEU:HD23	1:B:51:SER:HA	2.03	0.41
1:B:245:LEU:HD12	1:B:245:LEU:HA	1.96	0.41
1:B:317:MET:HE2	1:B:317:MET:HB2	1.75	0.41
1:B:1799:VAL:HG21	1:B:1845:LEU:HD22	2.03	0.41
1:B:1973:ILE:HB	1:B:3608:LEU:HD21	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2222:LEU:HD23	1:B:2222:LEU:HA	1.88	0.41
1:B:2283:LYS:HB3	1:B:2283:LYS:HE2	1.87	0.41
1:B:2694:SER:HA	1:B:2702:ASN:O	2.21	0.41
1:B:3279:ASN:O	1:B:3283:ILE:HG12	2.21	0.41
1:B:4093:ASP:OD1	1:B:4094:ILE:HG13	2.21	0.41
1:B:4895:ASN:HA	1:B:4905:PHE:CD1	2.56	0.41
1:C:317:MET:HB3	1:C:318:ASP:H	1.75	0.41
1:C:658:ASN:HB2	1:C:832:LEU:HD12	2.03	0.41
1:C:879:GLU:HA	1:C:882:ARG:HD2	2.03	0.41
1:C:1177:LEU:O	1:C:1180:GLU:HG3	2.21	0.41
1:C:1256:PRO:HB2	1:C:1591:LEU:HG	2.03	0.41
1:C:2694:SER:HA	1:C:2702:ASN:O	2.21	0.41
1:C:2736:LYS:HE2	1:C:2741:TRP:HB3	2.03	0.41
1:C:3929:THR:O	1:C:3933:GLN:HG2	2.21	0.41
1:C:3965:ILE:HG22	1:C:3969:LYS:HE2	2.03	0.41
1:C:4059:THR:OG1	1:C:4062:GLU:HG3	2.21	0.41
1:C:4895:ASN:HA	1:C:4905:PHE:CD1	2.56	0.41
1:D:317:MET:HB3	1:D:318:ASP:H	1.75	0.41
1:D:801:ARG:HA	1:D:1617:TRP:O	2.20	0.41
1:D:844:ARG:HG3	1:D:844:ARG:HH11	1.86	0.41
1:D:1304:LEU:HD23	1:D:1304:LEU:HA	1.84	0.41
1:D:1705:LEU:HD12	1:D:1705:LEU:HA	1.90	0.41
1:D:2071:GLN:CD	1:D:3648:GLY:HA3	2.41	0.41
1:D:2303:ARG:HE	1:D:2401:ARG:NE	2.19	0.41
1:D:3215:MET:O	1:D:3219:VAL:HG13	2.21	0.41
1:D:3279:ASN:O	1:D:3283:ILE:HG12	2.21	0.41
1:D:4070:ALA:HB1	1:D:4078:LEU:HD13	2.03	0.41
1:D:4093:ASP:OD1	1:D:4094:ILE:HG13	2.21	0.41
1:D:4651:ARG:HG2	1:D:4651:ARG:NH1	2.34	0.41
1:D:4895:ASN:HA	1:D:4905:PHE:CD1	2.56	0.41
2:F:85:ALA:O	2:F:94:PRO:HB3	2.21	0.41
1:A:713:TRP:HH2	1:A:1251:LEU:HD21	1.86	0.41
1:A:1471:ASP:OD2	1:A:1474:GLY:N	2.51	0.41
1:A:1552:VAL:HG12	1:A:1553:PHE:HD1	1.87	0.41
1:A:2071:GLN:CD	1:A:3648:GLY:HA3	2.41	0.41
1:A:2426:LEU:HD23	1:B:143:LEU:HD22	2.02	0.41
1:A:3279:ASN:O	1:A:3283:ILE:HG12	2.21	0.41
1:B:907:VAL:O	1:B:916:PRO:HD3	2.21	0.41
1:B:963:LYS:HD2	1:B:979:ALA:O	2.21	0.41
1:B:1256:PRO:HB2	1:B:1591:LEU:HG	2.03	0.41
1:B:1839:LEU:HD12	1:B:1839:LEU:HA	1.93	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2666:LEU:HB3	1:B:2667:PRO:HD3	2.02	0.41
1:B:2718:GLU:OE2	1:B:2722:ASN:ND2	2.54	0.41
1:B:4082:GLU:HA	1:B:4085:LYS:HE3	2.03	0.41
1:C:712:GLU:O	1:C:838:ARG:HG3	2.21	0.41
1:C:2878:THR:HG23	1:C:2881:GLU:H	1.86	0.41
1:C:2937:HIS:HA	1:C:3014:LEU:HD11	2.02	0.41
1:D:336:GLU:H	1:D:336:GLU:HG2	1.74	0.41
1:D:658:ASN:HB2	1:D:832:LEU:HD12	2.03	0.41
1:D:824:GLU:HA	1:D:1020:ILE:HD12	2.02	0.41
1:D:1415:ASP:OD1	1:D:1416:ASP:N	2.54	0.41
1:D:1686:LEU:HD22	1:D:1790:LYS:HZ2	1.84	0.41
1:D:1973:ILE:HB	1:D:3608:LEU:HD21	2.03	0.41
1:D:2114:GLU:HG2	1:D:2115:ASP:N	2.35	0.41
1:D:2718:GLU:OE2	1:D:2722:ASN:ND2	2.54	0.41
1:D:2967:VAL:O	1:D:2970:LEU:HG	2.20	0.41
1:D:4694:LEU:HA	1:D:4697:VAL:HG12	2.02	0.41
1:A:35:LEU:HD23	1:A:51:SER:HA	2.03	0.40
1:A:308:LEU:HD13	1:A:393:MET:HG3	2.03	0.40
1:A:2443:PRO:HD3	1:A:2512:MET:HG2	2.03	0.40
1:A:2878:THR:HG23	1:A:2881:GLU:H	1.86	0.40
1:A:2967:VAL:O	1:A:2970:LEU:HG	2.20	0.40
1:A:3215:MET:O	1:A:3219:VAL:HG13	2.21	0.40
1:A:4757:LEU:O	1:A:4761:THR:HG23	2.21	0.40
1:B:483:LYS:HE2	1:B:483:LYS:HB2	1.80	0.40
1:B:844:ARG:HH11	1:B:844:ARG:HG3	1.86	0.40
1:B:1552:VAL:HG12	1:B:1553:PHE:HD1	1.87	0.40
1:B:2605:MET:HB3	1:B:2606:PRO:HD3	2.02	0.40
1:B:2764:SER:HB3	1:B:2767:GLU:HG3	2.03	0.40
1:B:3187:LYS:HZ2	1:B:3191:GLU:HB3	1.85	0.40
1:B:4757:LEU:O	1:B:4761:THR:HG23	2.21	0.40
1:B:4795:LYS:HA	1:B:4795:LYS:HD2	1.81	0.40
1:C:35:LEU:HD23	1:C:51:SER:HA	2.03	0.40
1:C:1040:ASP:HA	1:C:1043:LYS:HZ3	1.85	0.40
1:C:1300:MET:HE2	1:C:1300:MET:HB3	1.86	0.40
1:C:1799:VAL:HG21	1:C:1845:LEU:HD22	2.03	0.40
1:C:2443:PRO:HD3	1:C:2512:MET:HG2	2.03	0.40
1:C:3274:ASN:HA	1:C:3277:LEU:HG	2.03	0.40
1:C:4575:LEU:HD23	1:C:4575:LEU:HA	1.91	0.40
1:D:114:LEU:HB2	1:D:117:HIS:ND1	2.35	0.40
1:D:674:TYR:OH	1:D:676:GLU:OE2	2.37	0.40
1:D:891:GLU:HG3	1:D:976:TYR:CE2	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:1829:LEU:HD12	1:D:1829:LEU:HA	1.97	0.40
1:D:2443:PRO:HD3	1:D:2512:MET:HG2	2.03	0.40
1:D:2716:LYS:HZ1	1:D:2791:ARG:HB2	1.86	0.40
2:G:19:LYS:HB2	2:G:19:LYS:HE3	1.80	0.40
1:A:233:VAL:HG12	1:A:274:LEU:HD22	2.04	0.40
1:A:244:CYS:SG	1:A:267:VAL:HG13	2.62	0.40
1:A:659:ILE:HD13	1:A:822:CYS:HB3	2.03	0.40
1:A:1031:ARG:HD2	1:A:1042:THR:HG21	2.01	0.40
1:A:1988:CYS:HA	1:A:1989:PRO:HD3	1.95	0.40
1:A:2114:GLU:HG2	1:A:2115:ASP:N	2.35	0.40
1:A:2764:SER:HB3	1:A:2767:GLU:HG3	2.03	0.40
1:A:3282:LYS:HA	1:A:3285:TYR:CD2	2.57	0.40
1:A:4800:ASP:OD1	1:A:4801:THR:N	2.55	0.40
1:B:658:ASN:HB2	1:B:832:LEU:HD12	2.03	0.40
1:B:732:LEU:HD23	1:B:732:LEU:HA	1.89	0.40
1:B:1586:LEU:HD12	1:B:1586:LEU:HA	1.94	0.40
1:B:3304:GLN:OE1	1:B:3308:ASN:ND2	2.48	0.40
1:B:3323:MET:HB3	1:B:3327:LYS:HZ3	1.86	0.40
1:B:3975:GLN:O	1:B:3979:VAL:HG23	2.21	0.40
1:C:114:LEU:HB2	1:C:117:HIS:ND1	2.35	0.40
1:C:419:ILE:HD13	1:C:492:GLU:HG3	2.03	0.40
1:C:891:GLU:HG3	1:C:976:TYR:CE2	2.56	0.40
1:C:963:LYS:HD2	1:C:979:ALA:O	2.21	0.40
1:C:2652:LEU:HD12	1:C:2652:LEU:HA	1.91	0.40
1:C:3074:ASN:OD1	1:C:3075:LEU:N	2.55	0.40
1:C:3213:LYS:HA	1:C:3216:GLU:CD	2.42	0.40
1:C:3213:LYS:O	1:C:3217:GLU:OE1	2.39	0.40
1:C:3319:PHE:O	1:C:3323:MET:HG2	2.21	0.40
1:C:4024:LYS:HB2	1:C:4088:HIS:CE1	2.57	0.40
1:C:4055:HIS:O	1:C:4057:HIS:ND1	2.54	0.40
1:D:436:LEU:HD13	1:D:518:ALA:HB2	2.03	0.40
1:D:1177:LEU:O	1:D:1180:GLU:HG3	2.21	0.40
1:D:1473:LYS:NZ	1:D:1475:LYS:HB2	2.36	0.40
1:D:1505:LEU:HD23	1:D:1506:GLU:N	2.37	0.40
1:D:2742:ILE:HG23	1:D:2753:VAL:HG23	2.04	0.40
1:D:2954:PHE:CD1	1:D:2955:PRO:HD2	2.56	0.40
1:D:3130:CYS:HB3	1:D:3162:PHE:CZ	2.56	0.40
1:D:3282:LYS:HA	1:D:3285:TYR:CD2	2.57	0.40
1:D:3929:THR:O	1:D:3933:GLN:HG2	2.21	0.40
1:A:892:LEU:HD21	1:A:980:PRO:CD	2.51	0.40
1:A:1272:ARG:HH22	1:A:1584:PRO:HA	1.87	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:A:1415:ASP:OD1	1:A:1416:ASP:N	2.54	0.40
1:A:1973:ILE:HB	1:A:3608:LEU:HD21	2.03	0.40
1:A:2232:PRO:C	1:A:2234:MET:H	2.24	0.40
1:A:2742:ILE:HG23	1:A:2753:VAL:HG23	2.03	0.40
1:A:3033:LEU:HD23	1:A:3033:LEU:HA	1.86	0.40
1:A:3213:LYS:O	1:A:3216:GLU:HG2	2.20	0.40
1:B:2443:PRO:HD3	1:B:2512:MET:HG2	2.03	0.40
1:B:3212:GLU:O	1:B:3216:GLU:OE1	2.40	0.40
1:C:801:ARG:HA	1:C:1617:TRP:O	2.20	0.40
1:C:907:VAL:O	1:C:916:PRO:HD3	2.21	0.40
1:C:962:LYS:HZ1	1:C:982:ASP:H	1.68	0.40
1:C:1505:LEU:HD23	1:C:1506:GLU:N	2.37	0.40
1:C:1973:ILE:HB	1:C:3608:LEU:HD21	2.03	0.40
1:C:2303:ARG:HE	1:C:2401:ARG:NE	2.19	0.40
1:C:2539:GLU:HA	1:C:2584:MET:HE1	2.02	0.40
1:C:2573:LEU:HD12	1:C:2573:LEU:HA	1.88	0.40
1:C:2651:ALA:O	1:C:2655:LYS:HB2	2.21	0.40
1:C:3130:CYS:HB3	1:C:3162:PHE:CZ	2.56	0.40
1:C:3981:MET:HE3	1:C:3981:MET:HB3	1.89	0.40
1:C:4002:MET:HB3	1:C:4002:MET:HE2	1.89	0.40
1:D:244:CYS:SG	1:D:267:VAL:HG13	2.62	0.40
1:D:419:ILE:HD13	1:D:492:GLU:HG3	2.03	0.40
1:D:1256:PRO:HB2	1:D:1591:LEU:HG	2.03	0.40
1:D:2736:LYS:HE2	1:D:2741:TRP:HB3	2.03	0.40
1:D:2764:SER:HB3	1:D:2767:GLU:HG3	2.03	0.40
1:D:2965:LYS:HA	1:D:2965:LYS:HD3	1.80	0.40
1:D:3019:ILE:HG13	1:D:3020:SER:N	2.36	0.40
1:D:3124:GLU:C	1:D:3126:VAL:H	2.25	0.40
1:D:3319:PHE:O	1:D:3323:MET:HG2	2.22	0.40
1:D:4575:LEU:HD23	1:D:4575:LEU:HA	1.90	0.40
1:A:192:LEU:HD12	1:A:192:LEU:HA	1.91	0.40
1:A:963:LYS:HD2	1:A:979:ALA:O	2.21	0.40
1:A:2790:GLU:O	1:A:2902:ALA:N	2.42	0.40
1:A:3130:CYS:HB3	1:A:3162:PHE:CZ	2.56	0.40
1:A:4038:ASP:HB3	1:A:4040:LYS:NZ	2.37	0.40
1:A:4196:THR:HG22	1:A:4200:MET:SD	2.62	0.40
1:A:4567:TYR:O	1:A:4567:TYR:CD2	2.75	0.40
1:A:4698:LEU:HD13	1:D:4262:LYS:HG3	2.03	0.40
1:B:680:ASP:N	1:B:799:LYS:O	2.54	0.40
1:B:891:GLU:HG3	1:B:976:TYR:CE2	2.56	0.40
1:B:1415:ASP:OD1	1:B:1416:ASP:N	2.54	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:B:2604:LYS:HZ2	1:B:2664:LEU:HD22	1.86	0.40
1:B:2693:SER:O	1:B:2702:ASN:HB3	2.22	0.40
1:B:3215:MET:O	1:B:3219:VAL:HG13	2.21	0.40
1:B:3322:LEU:O	1:B:3326:LEU:HG	2.22	0.40
1:C:20:VAL:HG12	1:C:216:PRO:HA	2.02	0.40
1:C:262:TYR:HB2	1:C:389:ARG:HG3	2.04	0.40
1:C:932:ASN:O	1:C:935:MET:HG3	2.21	0.40
1:C:2090:ARG:HE	1:C:2090:ARG:HB3	1.51	0.40
1:C:2771:TYR:O	1:C:2774:PRO:HD2	2.20	0.40
1:C:2954:PHE:CD1	1:C:2955:PRO:HD2	2.56	0.40
1:C:4196:THR:HG22	1:C:4200:MET:SD	2.62	0.40
1:D:233:VAL:HG12	1:D:274:LEU:HD22	2.04	0.40
1:D:262:TYR:HB2	1:D:389:ARG:HG3	2.04	0.40
1:D:963:LYS:HD2	1:D:979:ALA:O	2.21	0.40
1:D:1799:VAL:HG21	1:D:1845:LEU:HD22	2.03	0.40
1:D:2573:LEU:HD12	1:D:2573:LEU:HA	1.88	0.40
1:D:3213:LYS:O	1:D:3217:GLU:OE1	2.39	0.40
1:D:3274:ASN:HA	1:D:3277:LEU:HG	2.03	0.40
1:D:3322:LEU:O	1:D:3326:LEU:HG	2.22	0.40
1:D:4046:ARG:HG2	1:D:4076:GLU:OE2	2.21	0.40
1:A:1256:PRO:HB2	1:A:1591:LEU:HG	2.03	0.40
1:A:1473:LYS:NZ	1:A:1475:LYS:HB2	2.36	0.40
1:A:2487:LEU:HD12	1:A:2487:LEU:HA	1.94	0.40
1:A:2959:GLU:OE1	1:A:2959:GLU:N	2.53	0.40
1:A:3213:LYS:HA	1:A:3216:GLU:CD	2.42	0.40
1:A:3222:ALA:HA	1:A:3283:ILE:HG22	2.04	0.40
1:A:3965:ILE:HG22	1:A:3969:LYS:HE2	2.03	0.40
1:B:262:TYR:HB2	1:B:389:ARG:HG3	2.04	0.40
1:B:436:LEU:HD13	1:B:518:ALA:HB2	2.03	0.40
1:B:521:GLU:H	1:B:521:GLU:CD	2.24	0.40
1:B:1272:ARG:HH22	1:B:1584:PRO:HA	1.87	0.40
1:B:1473:LYS:NZ	1:B:1475:LYS:HB2	2.36	0.40
1:B:2736:LYS:HE2	1:B:2741:TRP:HB3	2.03	0.40
1:B:4046:ARG:HG2	1:B:4076:GLU:OE2	2.21	0.40
1:C:844:ARG:HG3	1:C:844:ARG:HH11	1.86	0.40
1:C:1552:VAL:HG12	1:C:1553:PHE:HD1	1.87	0.40
1:C:2252:GLU:HB2	1:C:3819:MET:SD	2.62	0.40
1:C:3124:GLU:C	1:C:3126:VAL:H	2.25	0.40
1:C:3215:MET:O	1:C:3219:VAL:HG13	2.21	0.40
1:C:3975:GLN:O	1:C:3979:VAL:HG23	2.21	0.40
1:C:4800:ASP:OD1	1:C:4801:THR:N	2.55	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:D:2322:ARG:HA	1:D:2325:ILE:HG12	2.04	0.40
1:D:2651:ALA:O	1:D:2655:LYS:HB2	2.21	0.40
1:D:3173:THR:HA	1:D:3176:ASP:OD2	2.21	0.40
1:D:3213:LYS:O	1:D:3216:GLU:HG2	2.20	0.40
1:D:3295:TRP:O	1:D:3299:LEU:HG	2.22	0.40
1:D:3994:THR:O	1:D:3998:GLN:HG3	2.22	0.40
1:D:4059:THR:OG1	1:D:4062:GLU:HG3	2.21	0.40
2:H:85:ALA:O	2:H:94:PRO:HB3	2.21	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
1	A	4198/4967 (84%)	4097 (98%)	99 (2%)	2 (0%)	100	100
1	B	4198/4967 (84%)	4099 (98%)	97 (2%)	2 (0%)	100	100
1	C	4198/4967 (84%)	4099 (98%)	97 (2%)	2 (0%)	100	100
1	D	4198/4967 (84%)	4098 (98%)	98 (2%)	2 (0%)	100	100
2	E	105/108 (97%)	102 (97%)	3 (3%)	0	100	100
2	F	105/108 (97%)	102 (97%)	3 (3%)	0	100	100
2	G	105/108 (97%)	103 (98%)	2 (2%)	0	100	100
2	H	105/108 (97%)	102 (97%)	3 (3%)	0	100	100
All	All	17212/20300 (85%)	16802 (98%)	402 (2%)	8 (0%)	100	100

All (8) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	A	2988	ARG
1	A	4641	PRO

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Mol	Chain	Res	Type
1	B	2988	ARG
1	B	4641	PRO
1	C	2988	ARG
1	C	4641	PRO
1	D	2988	ARG
1	D	4641	PRO

5.3.2 Protein sidechains [i](#)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
1	A	3708/4358 (85%)	3676 (99%)	32 (1%)	78	90
1	B	3708/4358 (85%)	3676 (99%)	32 (1%)	78	90
1	C	3708/4358 (85%)	3676 (99%)	32 (1%)	78	90
1	D	3708/4358 (85%)	3676 (99%)	32 (1%)	78	90
2	E	88/89 (99%)	86 (98%)	2 (2%)	50	75
2	F	88/89 (99%)	86 (98%)	2 (2%)	50	75
2	G	88/89 (99%)	86 (98%)	2 (2%)	50	75
2	H	88/89 (99%)	86 (98%)	2 (2%)	50	75
All	All	15184/17788 (85%)	15048 (99%)	136 (1%)	79	90

All (136) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	A	317	MET
1	A	344	LYS
1	A	882	ARG
1	A	929	ARG
1	A	960	LYS
1	A	995	MET
1	A	999	LEU
1	A	1044	LYS
1	A	1300	MET

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Mol	Chain	Res	Type
1	A	1564	MET
1	A	2172	MET
1	A	2656	LYS
1	A	2681	MET
1	A	2695	MET
1	A	2766	LYS
1	A	2772	ARG
1	A	2791	ARG
1	A	2884	LYS
1	A	2899	ASN
1	A	2950	LYS
1	A	3018	ARG
1	A	3057	LEU
1	A	3072	MET
1	A	3123	LEU
1	A	3190	ARG
1	A	3215	MET
1	A	3227	ARG
1	A	3248	ARG
1	A	3316	LYS
1	A	4002	MET
1	A	4256	MET
1	A	4504	MET
2	E	18	LYS
2	E	45	LYS
1	B	317	MET
1	B	344	LYS
1	B	882	ARG
1	B	929	ARG
1	B	960	LYS
1	B	995	MET
1	B	999	LEU
1	B	1044	LYS
1	B	1300	MET
1	B	1564	MET
1	B	2172	MET
1	B	2656	LYS
1	B	2681	MET
1	B	2695	MET
1	B	2766	LYS
1	B	2772	ARG
1	B	2791	ARG

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Mol	Chain	Res	Type
1	B	2884	LYS
1	B	2899	ASN
1	B	2950	LYS
1	B	3018	ARG
1	B	3057	LEU
1	B	3072	MET
1	B	3123	LEU
1	B	3190	ARG
1	B	3215	MET
1	B	3227	ARG
1	B	3248	ARG
1	B	3316	LYS
1	B	4002	MET
1	B	4256	MET
1	B	4504	MET
1	C	317	MET
1	C	344	LYS
1	C	882	ARG
1	C	929	ARG
1	C	960	LYS
1	C	995	MET
1	C	999	LEU
1	C	1044	LYS
1	C	1300	MET
1	C	1564	MET
1	C	2172	MET
1	C	2656	LYS
1	C	2681	MET
1	C	2695	MET
1	C	2766	LYS
1	C	2772	ARG
1	C	2791	ARG
1	C	2884	LYS
1	C	2899	ASN
1	C	2950	LYS
1	C	3018	ARG
1	C	3057	LEU
1	C	3072	MET
1	C	3123	LEU
1	C	3190	ARG
1	C	3215	MET
1	C	3227	ARG

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Mol	Chain	Res	Type
1	C	3248	ARG
1	C	3316	LYS
1	C	4002	MET
1	C	4256	MET
1	C	4504	MET
1	D	317	MET
1	D	344	LYS
1	D	882	ARG
1	D	929	ARG
1	D	960	LYS
1	D	995	MET
1	D	999	LEU
1	D	1044	LYS
1	D	1300	MET
1	D	1564	MET
1	D	2172	MET
1	D	2656	LYS
1	D	2681	MET
1	D	2695	MET
1	D	2766	LYS
1	D	2772	ARG
1	D	2791	ARG
1	D	2884	LYS
1	D	2899	ASN
1	D	2950	LYS
1	D	3018	ARG
1	D	3057	LEU
1	D	3072	MET
1	D	3123	LEU
1	D	3190	ARG
1	D	3215	MET
1	D	3227	ARG
1	D	3248	ARG
1	D	3316	LYS
1	D	4002	MET
1	D	4256	MET
1	D	4504	MET
2	F	18	LYS
2	F	45	LYS
2	G	18	LYS
2	G	45	LYS
2	H	18	LYS

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Mol	Chain	Res	Type
2	H	45	LYS

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (39) such sidechains are listed below:

Mol	Chain	Res	Type
1	A	29	HIS
1	A	604	HIS
1	A	658	ASN
1	A	2704	GLN
1	A	3111	HIS
1	A	3114	GLN
1	A	3178	HIS
1	A	3274	ASN
1	A	4055	HIS
2	E	26	HIS
1	B	29	HIS
1	B	658	ASN
1	B	2704	GLN
1	B	3111	HIS
1	B	3114	GLN
1	B	3178	HIS
1	B	3274	ASN
1	B	4055	HIS
1	C	29	HIS
1	C	604	HIS
1	C	658	ASN
1	C	2704	GLN
1	C	3111	HIS
1	C	3114	GLN
1	C	3178	HIS
1	C	3274	ASN
1	C	4055	HIS
1	D	29	HIS
1	D	604	HIS
1	D	658	ASN
1	D	2704	GLN
1	D	3111	HIS
1	D	3114	GLN
1	D	3178	HIS
1	D	3274	ASN
1	D	4055	HIS
2	F	26	HIS

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Mol	Chain	Res	Type
2	G	26	HIS
2	H	26	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 monosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 12 ligands modelled in this entry, 4 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
4	ATP	B	5002	-	26,33,33	0.62	0	31,52,52	0.80	2 (6%)
4	ATP	C	5003	-	26,33,33	0.59	0	31,52,52	0.74	2 (6%)
4	ATP	A	5003	-	26,33,33	0.59	0	31,52,52	0.73	2 (6%)
4	ATP	B	5003	-	26,33,33	0.60	0	31,52,52	0.74	2 (6%)
4	ATP	A	5002	-	26,33,33	0.62	0	31,52,52	0.80	2 (6%)
4	ATP	C	5002	-	26,33,33	0.63	0	31,52,52	0.81	2 (6%)
4	ATP	D	5002	-	26,33,33	0.62	0	31,52,52	0.81	2 (6%)
4	ATP	D	5003	-	26,33,33	0.60	0	31,52,52	0.73	2 (6%)

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
4	ATP	B	5002	-	-	6/18/38/38	0/3/3/3
4	ATP	C	5003	-	-	7/18/38/38	0/3/3/3
4	ATP	A	5003	-	-	7/18/38/38	0/3/3/3
4	ATP	B	5003	-	-	7/18/38/38	0/3/3/3
4	ATP	A	5002	-	-	7/18/38/38	0/3/3/3
4	ATP	C	5002	-	-	6/18/38/38	0/3/3/3
4	ATP	D	5002	-	-	6/18/38/38	0/3/3/3
4	ATP	D	5003	-	-	7/18/38/38	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(°)
4	C	5003	ATP	C5-C6-N6	2.31	123.87	120.35
4	B	5003	ATP	C5-C6-N6	2.30	123.84	120.35
4	C	5002	ATP	C5-C6-N6	2.29	123.84	120.35
4	A	5002	ATP	C5-C6-N6	2.28	123.82	120.35
4	D	5002	ATP	C5-C6-N6	2.27	123.81	120.35
4	D	5003	ATP	C5-C6-N6	2.27	123.80	120.35
4	A	5003	ATP	C5-C6-N6	2.27	123.80	120.35
4	B	5002	ATP	C5-C6-N6	2.24	123.76	120.35
4	C	5003	ATP	PB-O3B-PG	2.05	139.86	132.83
4	B	5003	ATP	PB-O3B-PG	2.04	139.84	132.83
4	A	5003	ATP	PB-O3B-PG	2.04	139.83	132.83
4	D	5003	ATP	PB-O3B-PG	2.03	139.81	132.83
4	C	5002	ATP	PB-O3B-PG	2.03	139.78	132.83
4	B	5002	ATP	PB-O3B-PG	2.01	139.73	132.83
4	A	5002	ATP	PB-O3B-PG	2.01	139.71	132.83
4	D	5002	ATP	PB-O3B-PG	2.00	139.70	132.83

There are no chirality outliers.

All (53) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
4	A	5002	ATP	C5'-O5'-PA-O1A
4	A	5003	ATP	C5'-O5'-PA-O1A
4	A	5003	ATP	C5'-O5'-PA-O2A

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Mol	Chain	Res	Type	Atoms
4	A	5003	ATP	O4'-C4'-C5'-O5'
4	B	5002	ATP	C5'-O5'-PA-O1A
4	B	5003	ATP	C5'-O5'-PA-O1A
4	B	5003	ATP	C5'-O5'-PA-O2A
4	B	5003	ATP	O4'-C4'-C5'-O5'
4	C	5002	ATP	C5'-O5'-PA-O1A
4	C	5003	ATP	C5'-O5'-PA-O1A
4	C	5003	ATP	C5'-O5'-PA-O2A
4	C	5003	ATP	O4'-C4'-C5'-O5'
4	D	5002	ATP	C5'-O5'-PA-O1A
4	D	5003	ATP	C5'-O5'-PA-O1A
4	D	5003	ATP	C5'-O5'-PA-O2A
4	D	5003	ATP	O4'-C4'-C5'-O5'
4	A	5003	ATP	C3'-C4'-C5'-O5'
4	B	5003	ATP	C3'-C4'-C5'-O5'
4	C	5003	ATP	C3'-C4'-C5'-O5'
4	D	5003	ATP	C3'-C4'-C5'-O5'
4	B	5003	ATP	PA-O3A-PB-O3B
4	D	5003	ATP	PA-O3A-PB-O3B
4	A	5002	ATP	PB-O3A-PA-O1A
4	B	5002	ATP	PB-O3A-PA-O1A
4	C	5002	ATP	PB-O3A-PA-O1A
4	D	5002	ATP	PB-O3A-PA-O1A
4	A	5003	ATP	PA-O3A-PB-O3B
4	C	5003	ATP	PA-O3A-PB-O3B
4	A	5002	ATP	PB-O3A-PA-O5'
4	A	5003	ATP	PB-O3A-PA-O5'
4	B	5002	ATP	PB-O3A-PA-O5'
4	B	5003	ATP	PB-O3A-PA-O5'
4	C	5002	ATP	PB-O3A-PA-O5'
4	C	5003	ATP	PB-O3A-PA-O5'
4	D	5002	ATP	PB-O3A-PA-O5'
4	D	5003	ATP	PB-O3A-PA-O5'
4	A	5002	ATP	C5'-O5'-PA-O3A
4	B	5002	ATP	C5'-O5'-PA-O3A
4	C	5002	ATP	C5'-O5'-PA-O3A
4	D	5002	ATP	C5'-O5'-PA-O3A
4	A	5002	ATP	C5'-O5'-PA-O2A
4	B	5002	ATP	C5'-O5'-PA-O2A
4	C	5002	ATP	C5'-O5'-PA-O2A
4	D	5002	ATP	C5'-O5'-PA-O2A
4	A	5002	ATP	PG-O3B-PB-O3A

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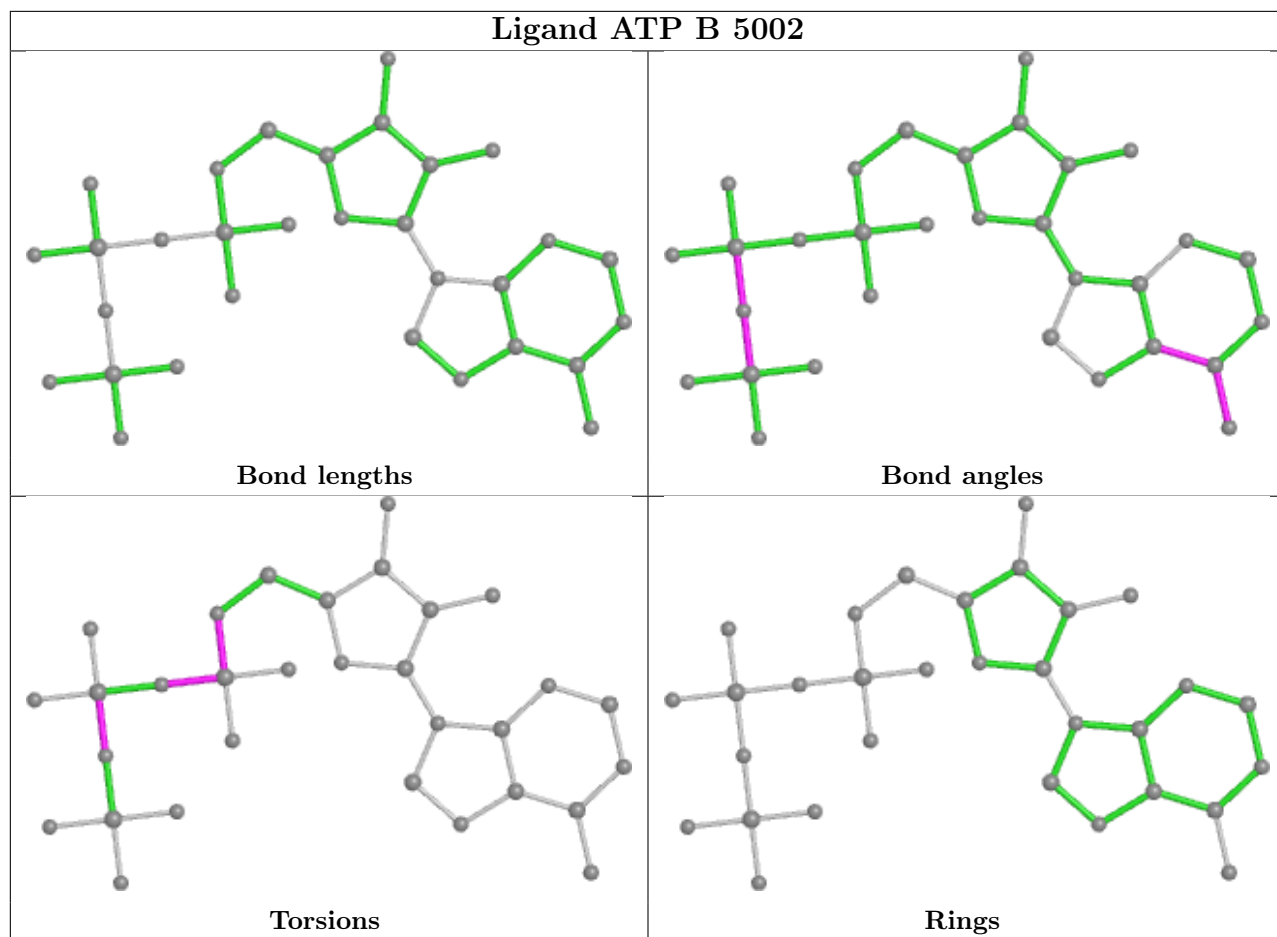
Continued from previous page...

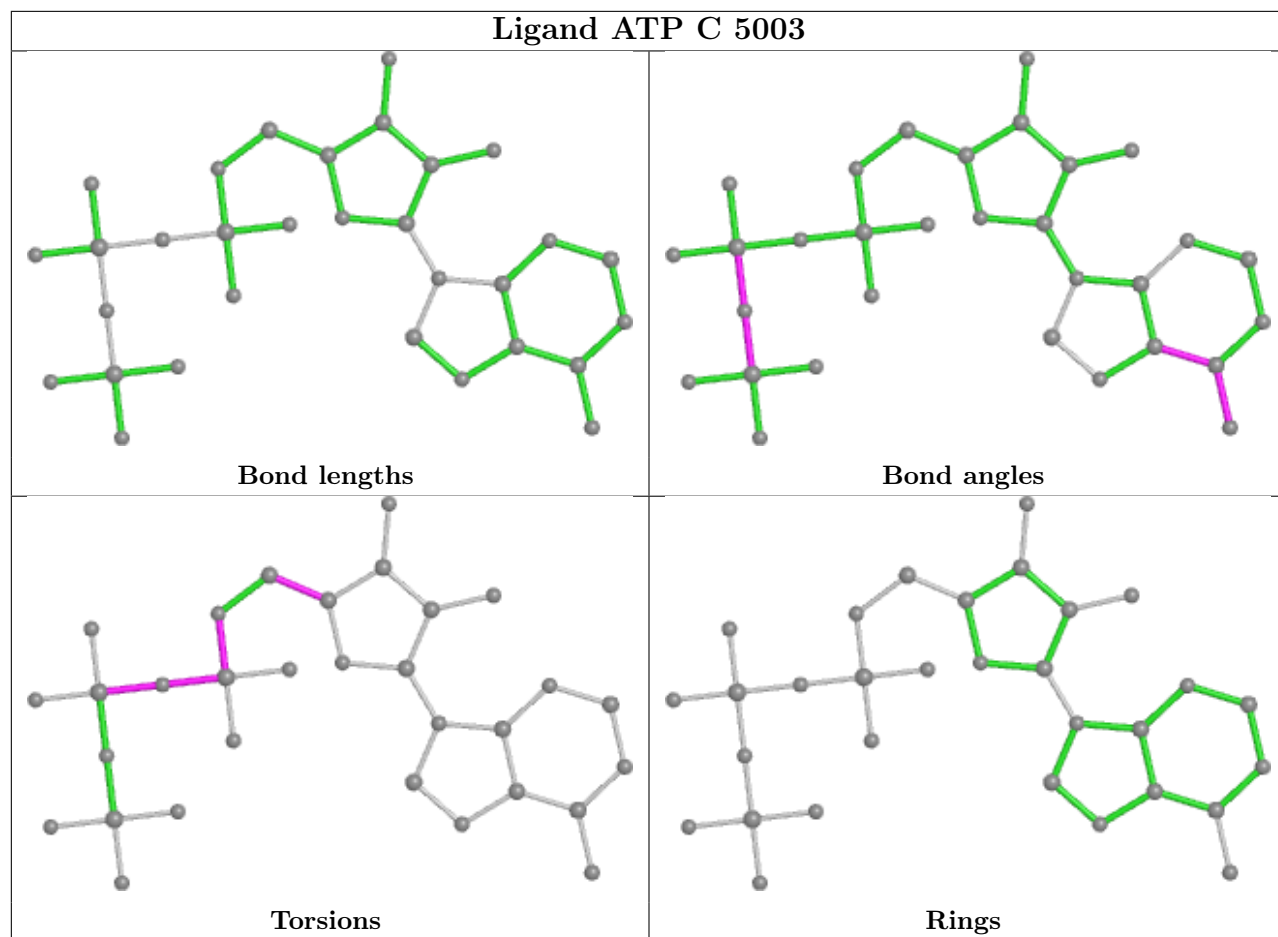
Mol	Chain	Res	Type	Atoms
4	B	5002	ATP	PG-O3B-PB-O3A
4	C	5002	ATP	PG-O3B-PB-O3A
4	D	5002	ATP	PG-O3B-PB-O3A
4	A	5003	ATP	C5'-O5'-PA-O3A
4	B	5003	ATP	C5'-O5'-PA-O3A
4	C	5003	ATP	C5'-O5'-PA-O3A
4	D	5003	ATP	C5'-O5'-PA-O3A
4	A	5002	ATP	PG-O3B-PB-O1B

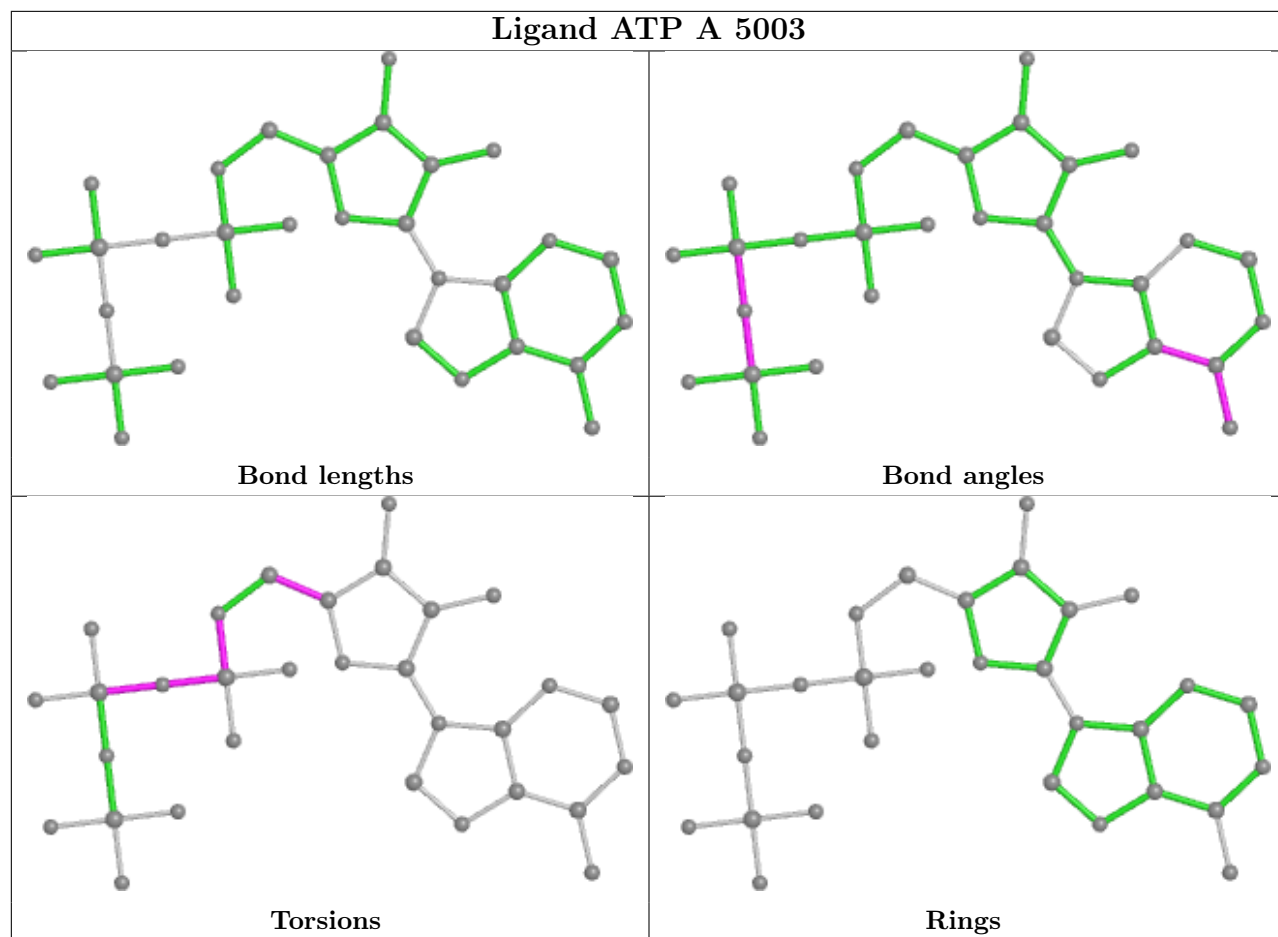
There are no ring outliers.

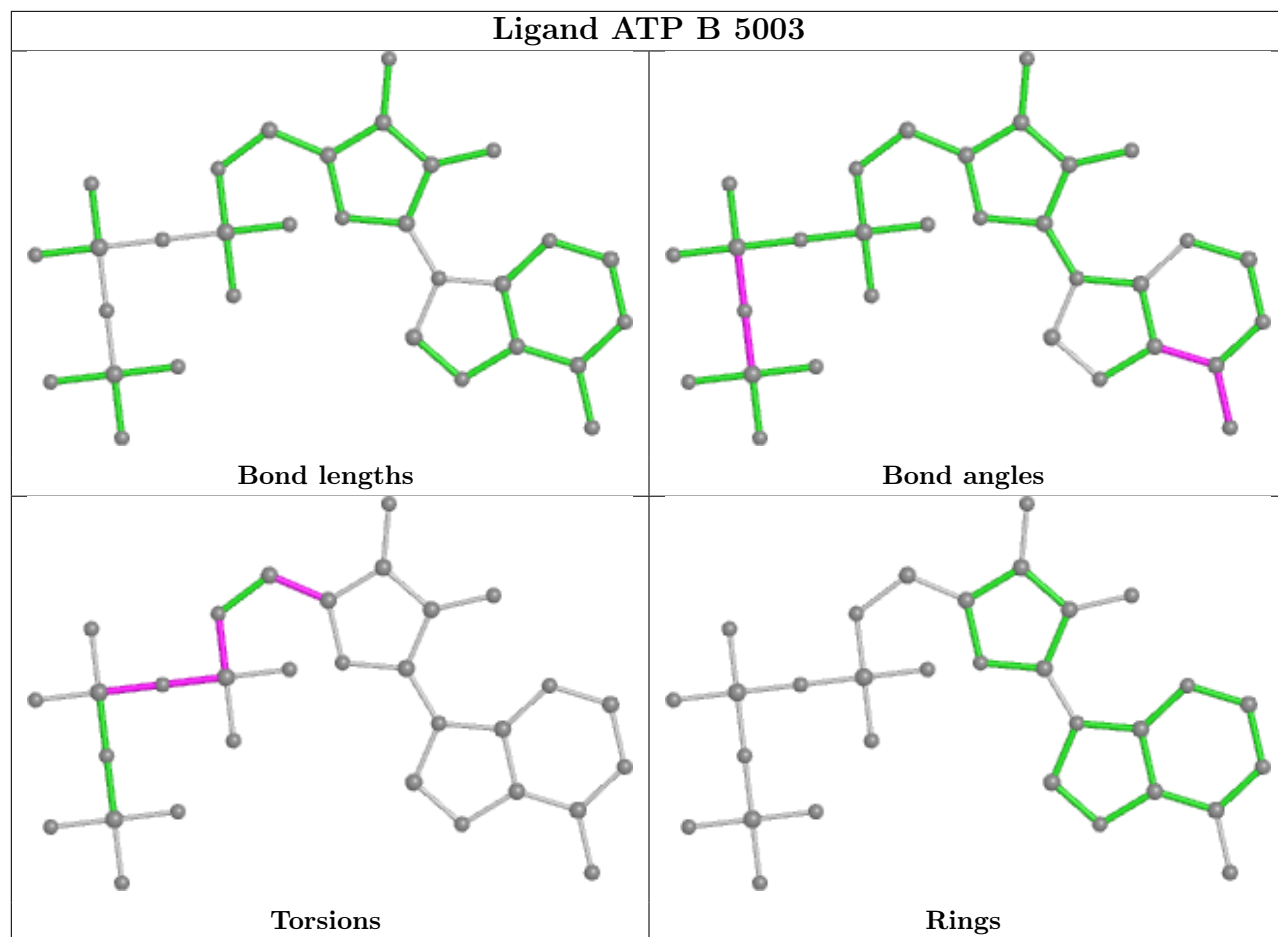
No monomer is involved in short contacts.

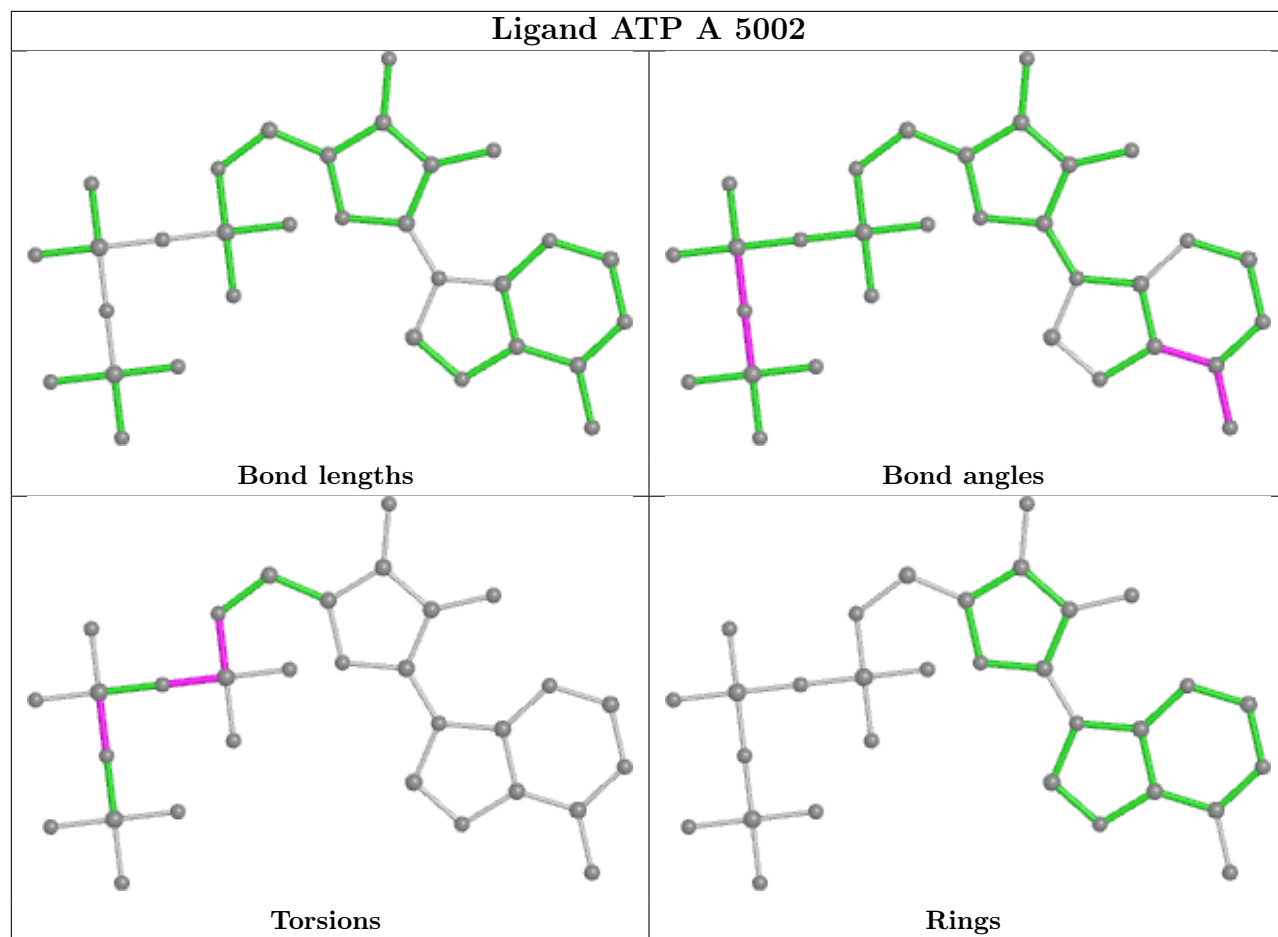
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included.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

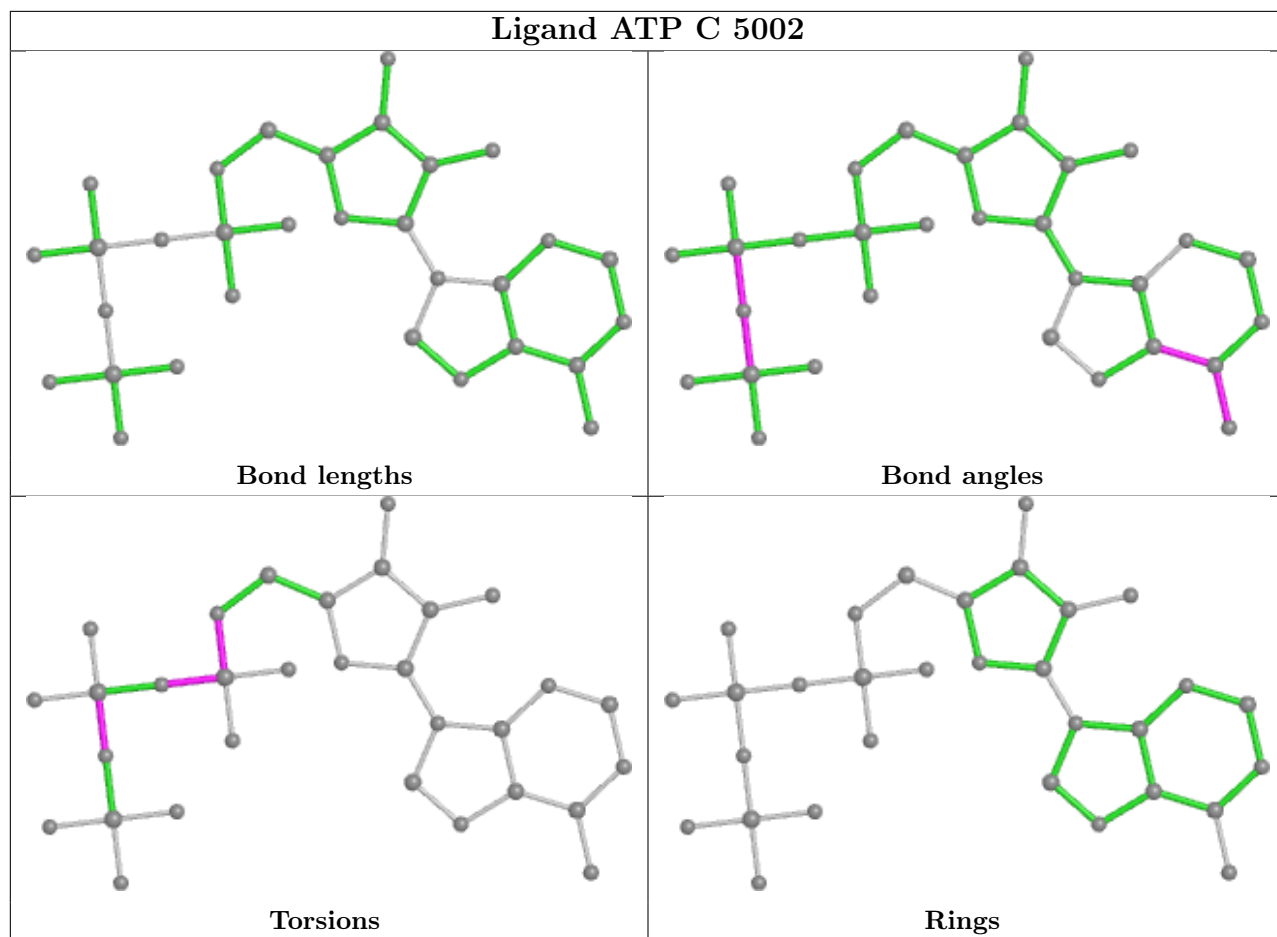


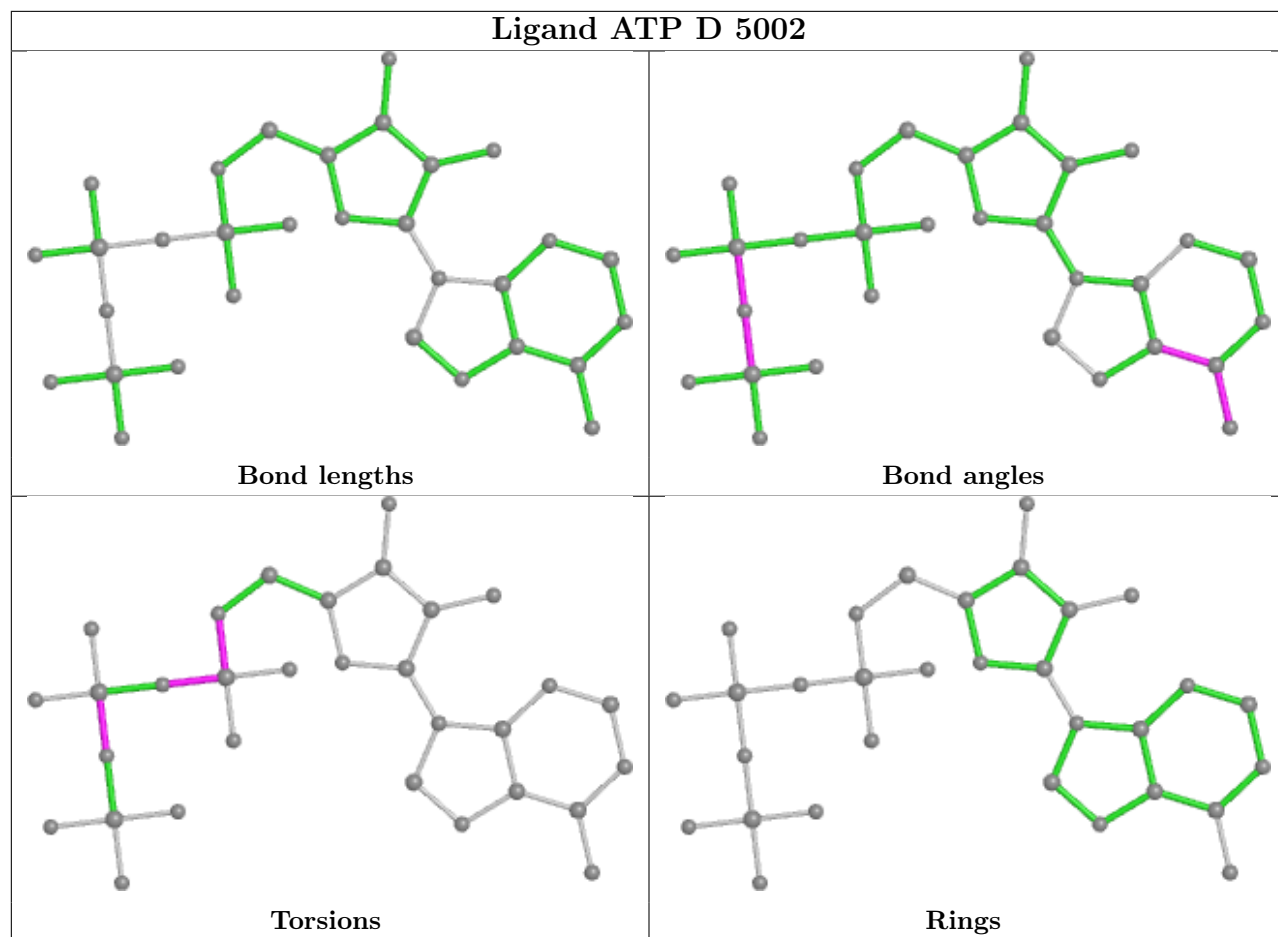


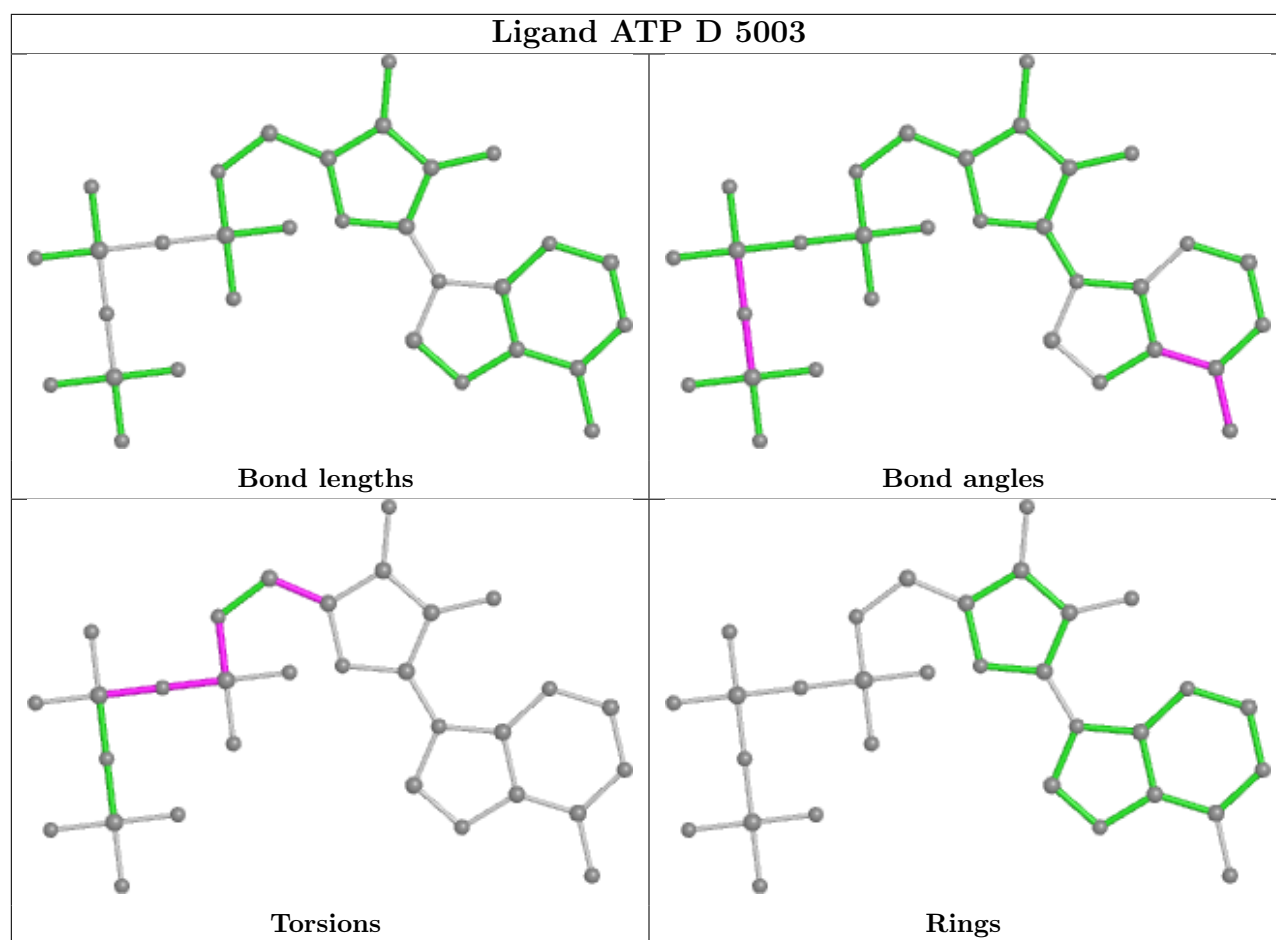












5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

6 Map visualisation [i](#)

This section contains visualisations of the EMDB entry EMD-42762. These allow visual inspection of the internal detail of the map and identification of artifacts.

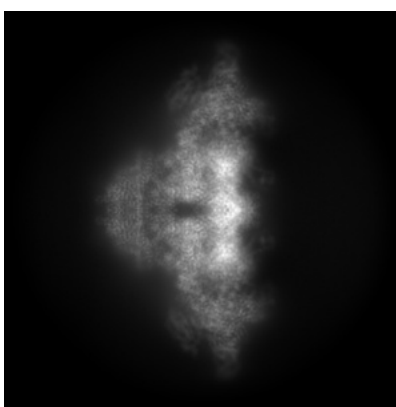
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections [i](#)

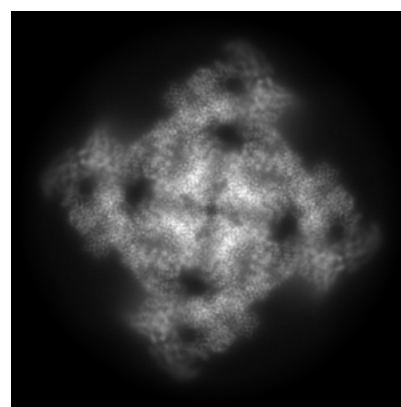
6.1.1 Primary map



X



Y

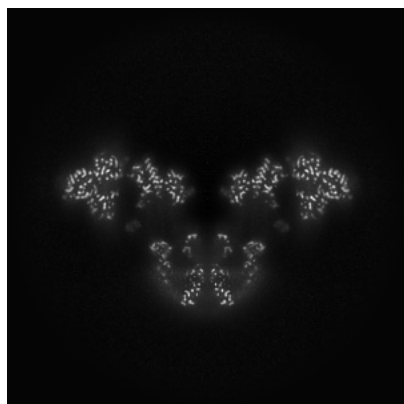


Z

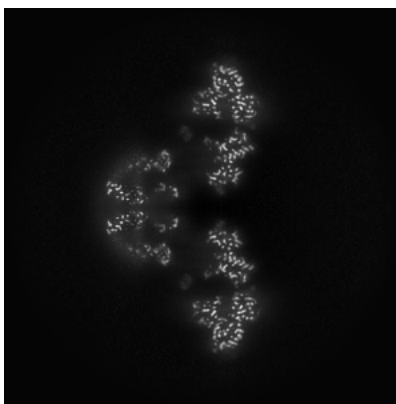
The images above show the map projected in three orthogonal directions.

6.2 Central slices [i](#)

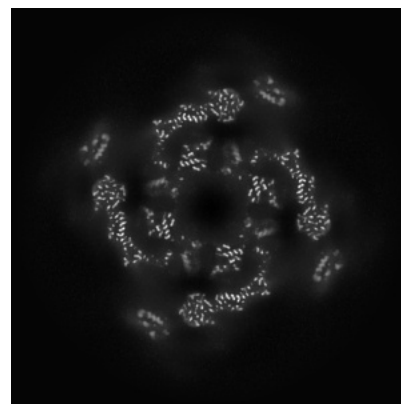
6.2.1 Primary map



X Index: 256



Y Index: 256

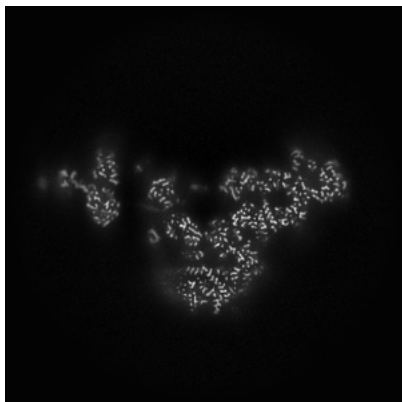


Z Index: 256

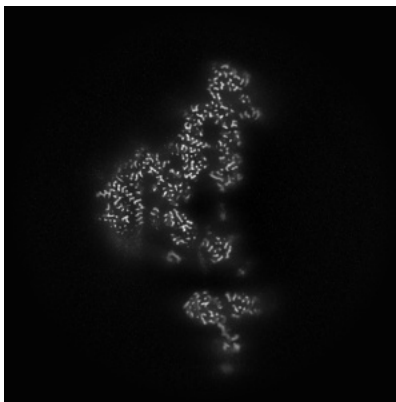
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices [i](#)

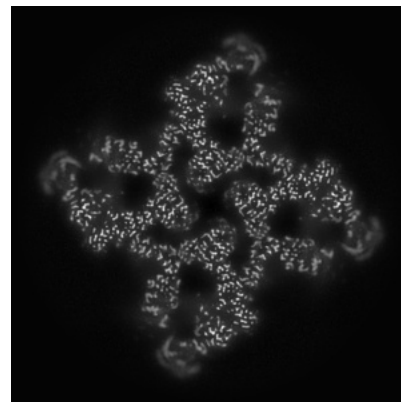
6.3.1 Primary map



X Index: 238



Y Index: 274

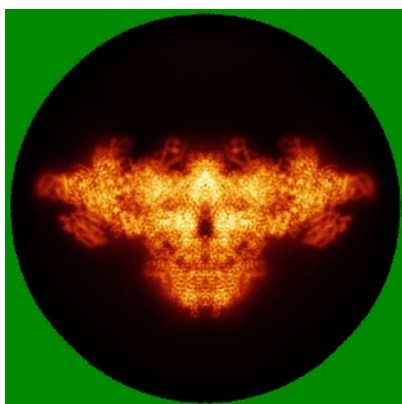


Z Index: 282

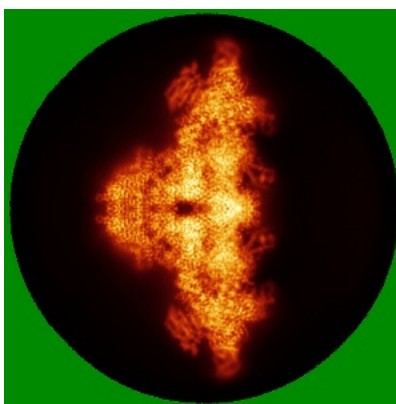
The images above show the largest variance slices of the map in three orthogonal directions.

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

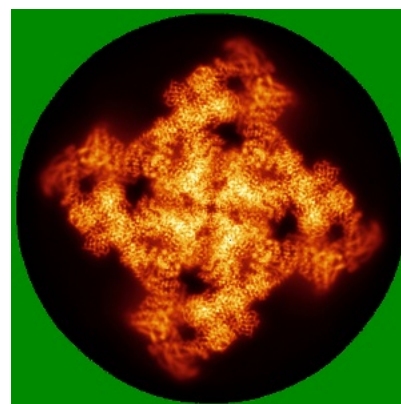
6.4.1 Primary map



X



Y

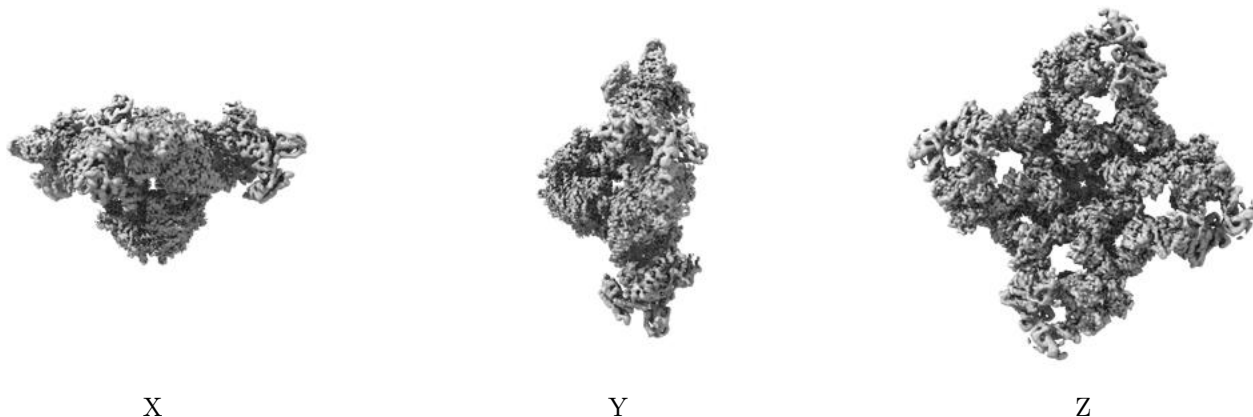


Z

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

6.5 Orthogonal surface views [i](#)

6.5.1 Primary map



The images above show the 3D surface view of the map at the recommended contour level 0.12. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

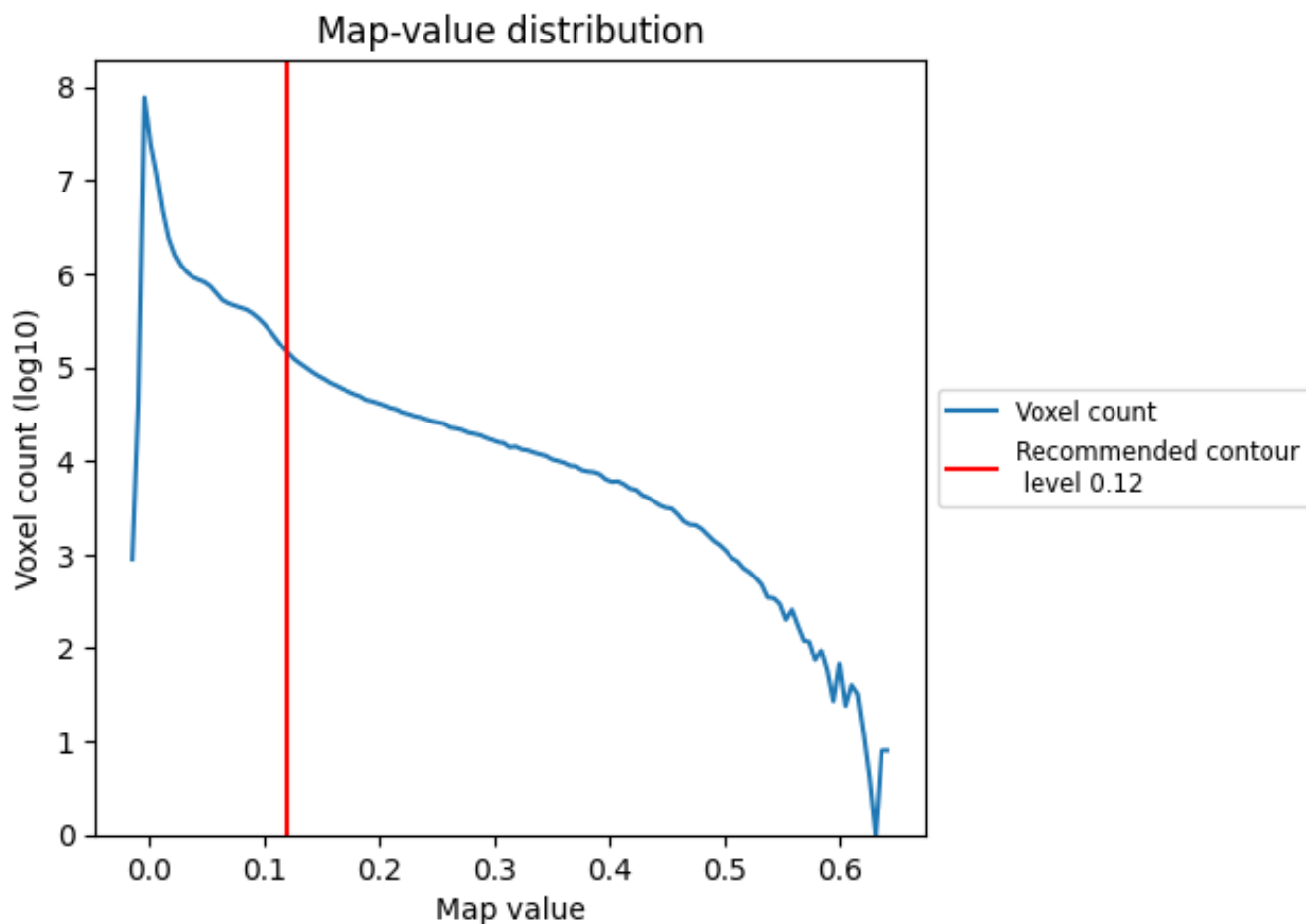
6.6 Mask visualisation [i](#)

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

7 Map analysis [i](#)

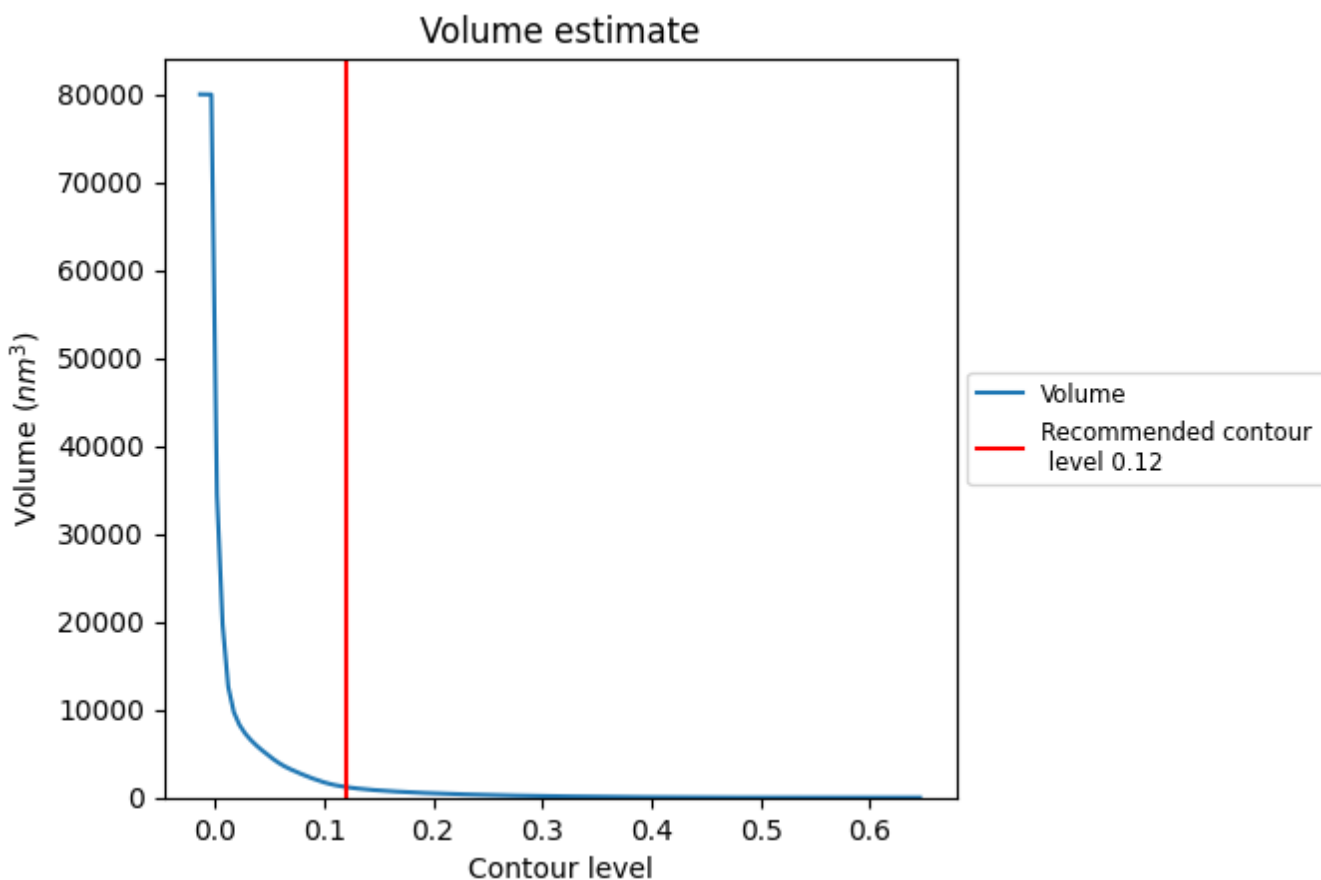
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution [i](#)



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

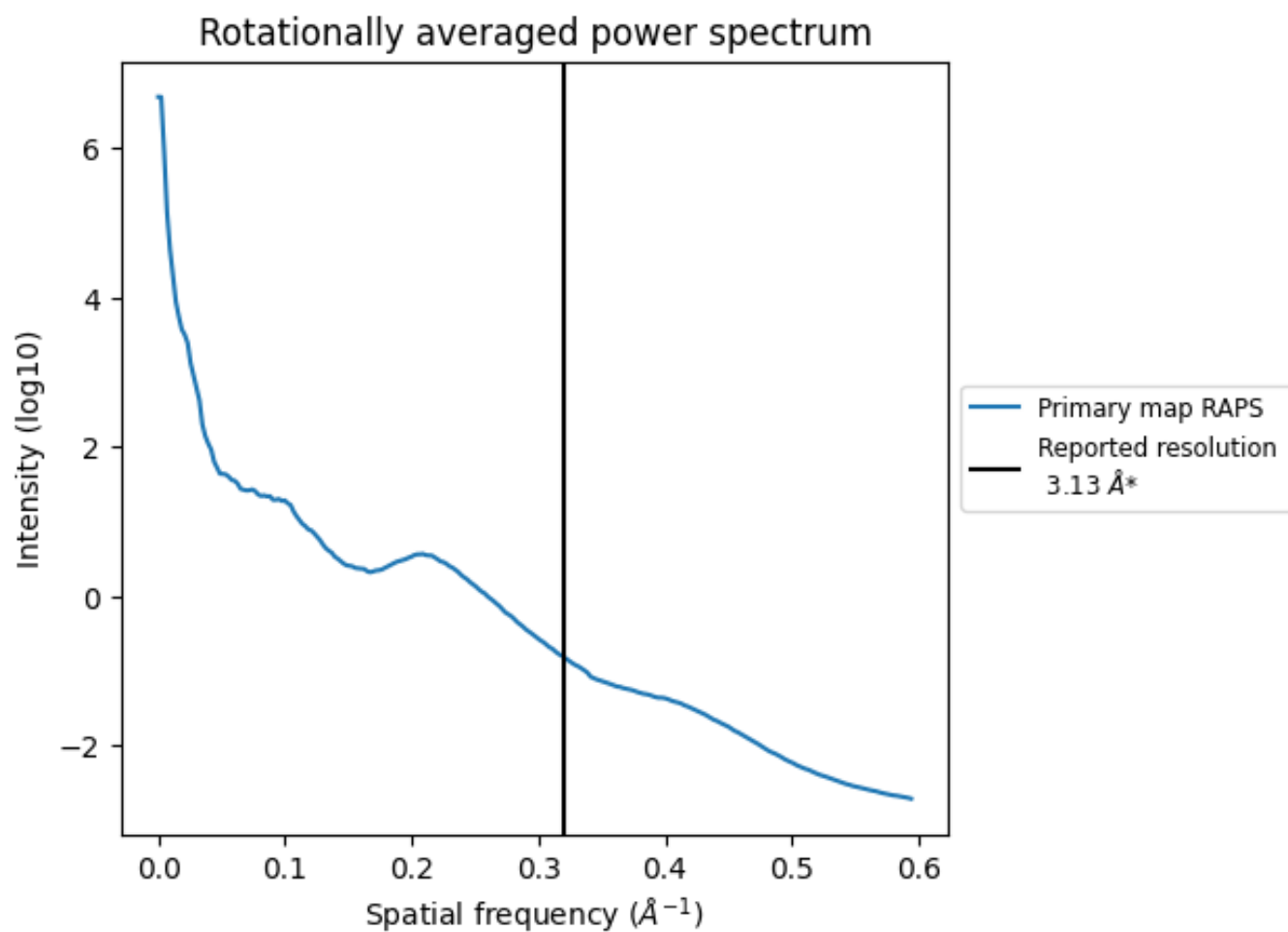
7.2 Volume estimate [i](#)



The volume at the recommended contour level is 1200 nm³; this corresponds to an approximate mass of 1084 kDa.

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

7.3 Rotationally averaged power spectrum [i](#)



*Reported resolution corresponds to spatial frequency of 0.319 Å⁻¹

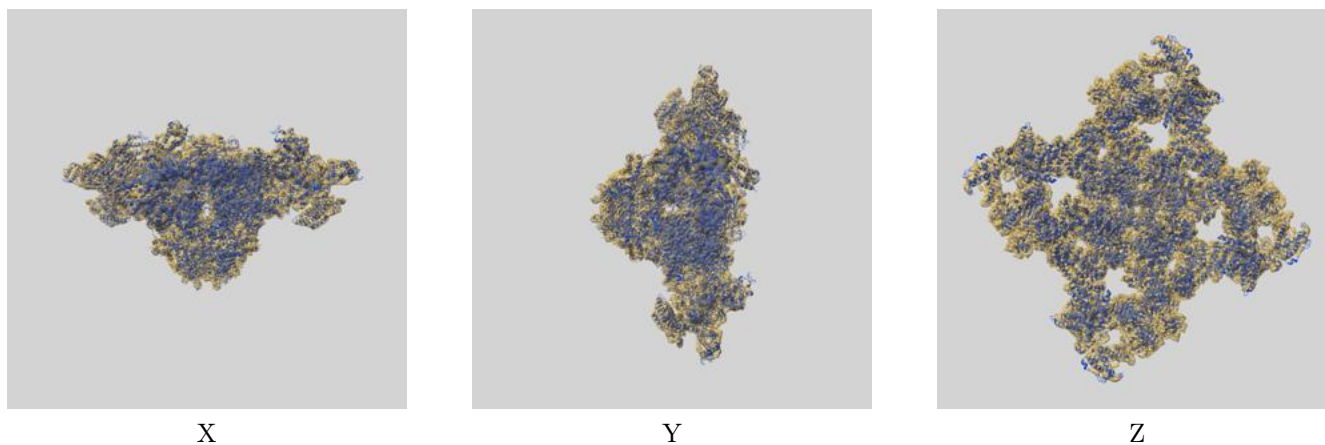
8 Fourier-Shell correlation

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

9 Map-model fit [i](#)

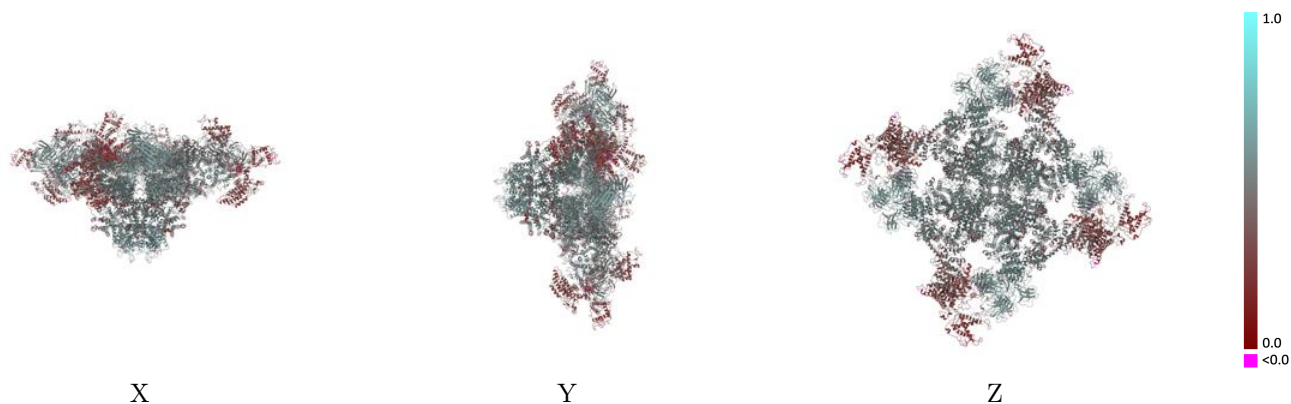
This section contains information regarding the fit between EMDB map EMD-42762 and PDB model 8UXF. Per-residue inclusion information can be found in section 3 on page 6.

9.1 Map-model overlay [i](#)



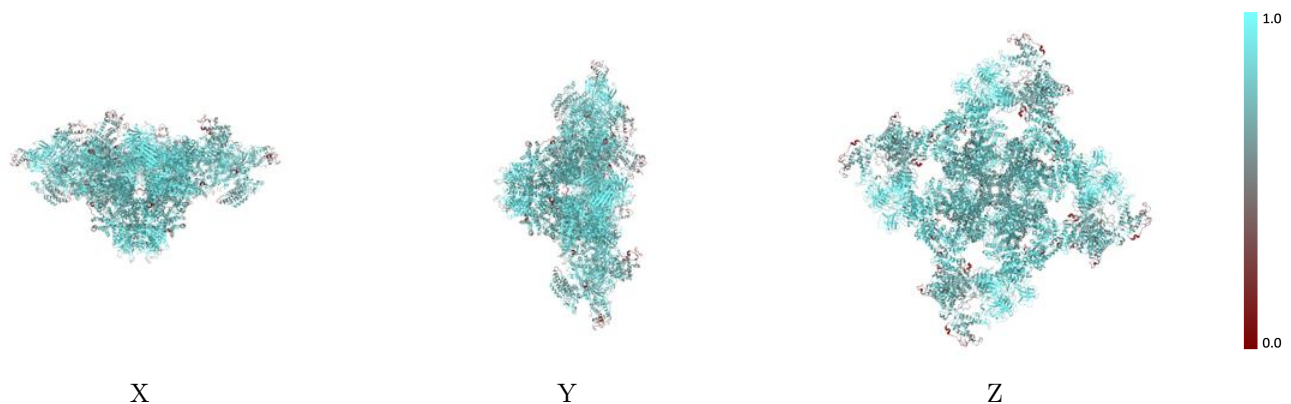
The images above show the 3D surface view of the map at the recommended contour level 0.12 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

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



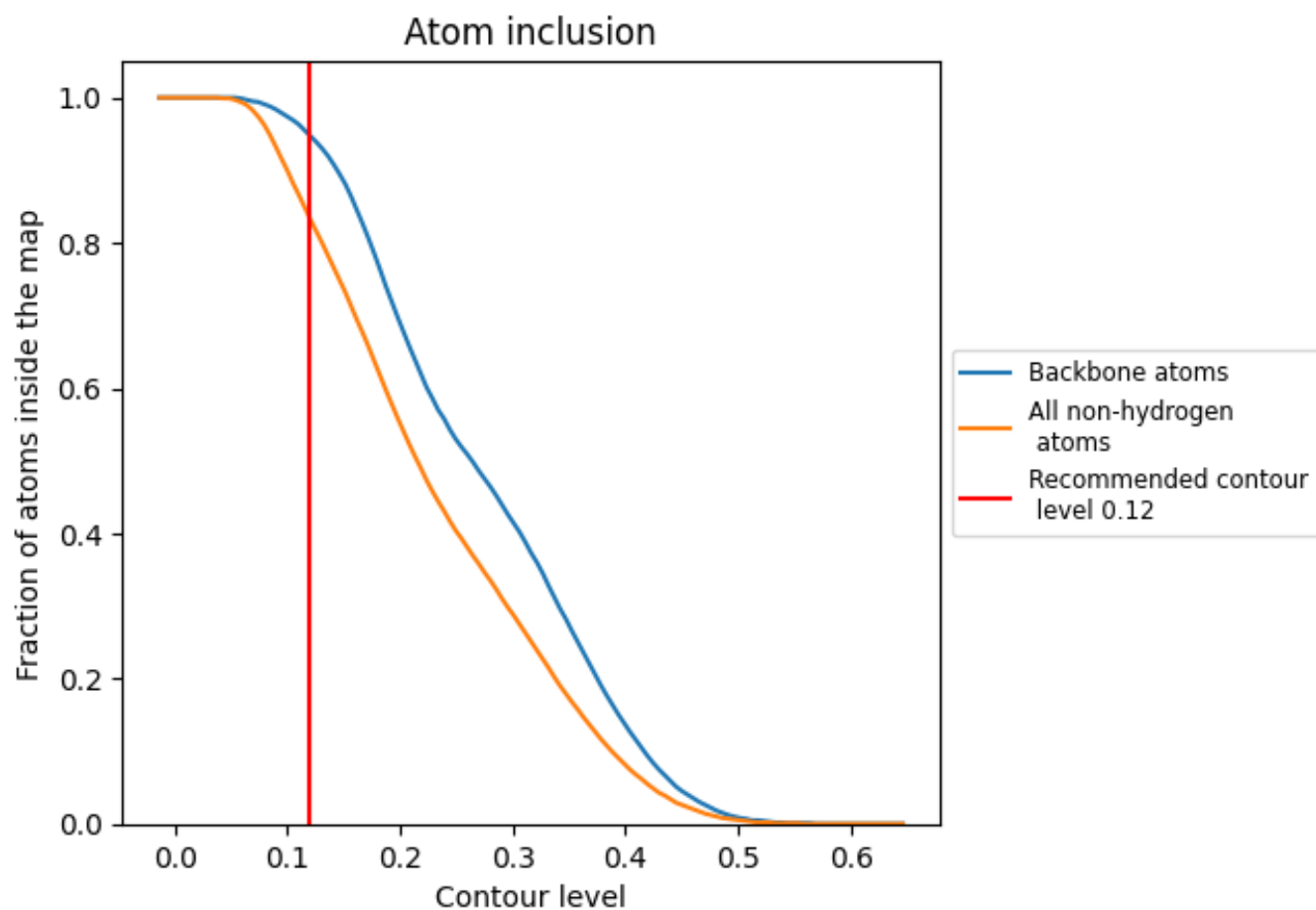
The images above show the model with each residue coloured according to its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions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

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



The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.12).



















9.4 Atom inclusion [i](#)



At the recommended contour level, 95% of all backbone atoms, 83% 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 (0.12) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	 0.8330	 0.4540
A	 0.8300	 0.4510
B	 0.8300	 0.4510
C	 0.8310	 0.4530
D	 0.8310	 0.4520
E	 0.9430	 0.5530
F	 0.9420	 0.5530
G	 0.9430	 0.5540
H	 0.9440	 0.5540

